

PLOT SCALE - 1:8750

PLOTTED FROM - TRM11115

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT 081-272
EAST OF US HIGHWAY 81
BROOKINGS COUNTY

FILL DRAWDOWN DITCH &
SALVAGE RIPRAP

PCN I3KJ

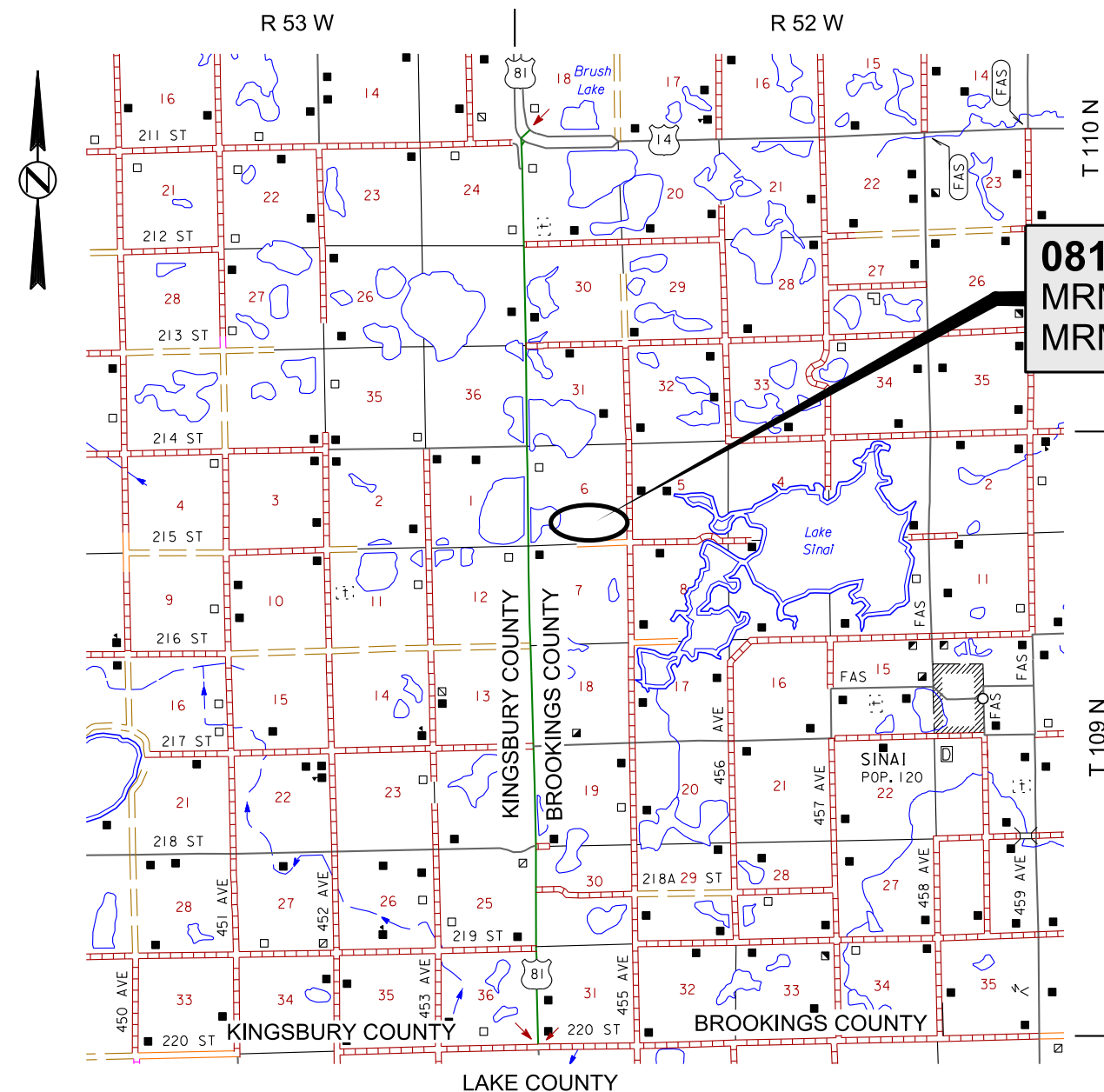
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|--------------------------------|---------|-------|-----------------|
| | 081-272 | 1 | 33 |

Plotting Date: 07/22/2014

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PROJECT



STORM WATER PERMIT

Receiving Waters:
Lake Sinai

Area Disturbed: 3.85 Acres
Total Project Area: 6.4 Acres
Latitude: 44.272339 (Google Maps)
Longitude: -97.117596 (Google Maps)

PLOT NAME - 1

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ESTIMATE OF QUANTITIES

| Bid Item Number | Item | Quantity | Unit |
|-----------------|--------------------------------------|----------|------|
| 009E0010 | Mobilization | Lump Sum | LS |
| 110E1700 | Remove Silt Fence | 1,780 | Ft |
| 110E5451 | Salvage Riprap | 575.0 | Ton |
| 110E5500 | Salvage Pipe | 160 | Ft |
| 120E0010 | Unclassified Excavation | 9,460 | CuYd |
| 120E6100 | Water for Embankment | 80.0 | MGal |
| 230E0010 | Placing Topsoil | 1,460 | CuYd |
| 230E0020 | Placing Contractor Furnished Topsoil | 610 | CuYd |
| 250E0020 | Incidental Work, Grading | Lump Sum | LS |
| 730E0212 | Type G Permanent Seed Mixture | 100 | Lb |
| 732E0100 | Mulching | 7.7 | Ton |
| 734E0101 | Type 1 Erosion Control Blanket | 270 | SqYd |
| 734E0602 | Low Flow Silt Fence | 1,520 | Ft |
| 734E0610 | Mucking Silt Fence | 106 | CuYd |
| 734E0630 | Floating Silt Curtain | 300 | Ft |

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

| | | | |
|--------------------------------|---------|-------|-----------------|
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COMMITMENT C: WATER SOURCE

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

COMMITMENT D2: SURFACE WATER DISCHARGE

Lake Sinai 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.

Action Taken/Required:

If construction dewatering is required, the Contractor shall obtain a Temporary Discharge Permit from the DENR and provide a copy to the Project Engineer. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit.

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance.

Action Taken/Required:

The DENR and the US Environmental Protection Agency (EPA) have issued separate general permits for the discharge of storm water runoff. The DENR permit applies to discharges on state land and the EPA permit applies to discharges on federal or reservation land. The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project start by the DOT Environmental Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start. The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

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

A major component of the storm water construction permits is development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is a joint effort and responsibility of the SDDOT and the Contractor. Erosion control measures and best management practices will be implemented in accordance with the SWPPP. The SWPPP is a dynamic document and is to be available on-site at all times.

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

SDDOT:
<http://sddot.com/transportation/highways/environmental/stormwater/Default.aspx>

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

EPA: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Contractor Certification Form:

The “Department of Environmental and Natural Resources – Contractor Certification Form” (SD EForm – 2110LDV1-ContractorCertification.pdf) shall be completed by the Contractor or their certified Erosion Control Supervisor after the award of the contract. Work may not begin on the project until this form is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

The online form can be found at:
<http://denr.sd.gov/des/sw/eforms/E2110LDV1-ContractorCertification.pdf>

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall 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 State ROW.

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

The waste disposal site(s) shall 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 Project Engineer.

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

- Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating “No Dumping Allowed”.
- Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall 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) shall be incidental to the various contract items.

ENVIRONMENTAL COMMITMENTS

| | | | |
|--------------------------------|---------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
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COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. 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; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on 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 shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). 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.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the US Army Corps of Engineers for the permanent actions associated with this project.

Action Taken/Required:

The Contractor shall comply with all requirements contained in the Section 404 permit.

The Contractor shall also be responsible for obtaining a Section 404 permit for any dredge, excavation, or fill activities associated with staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands or waters of the United States.

PLOT SCALE - 1:2000

PLOTTED FROM - TRM1INT16



SITE MAP

| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|--------------------------------|---------|-------|-----------------|
| | 081-272 | 5 | 33 |

Plotting Date: 07/17/2018

1/4 Line

Sec. 6 - T109N - R52W

SITE 1

1/4 Line

SITE 2

455th Avenue

Section Line

215th Street

PLOT NAME - 2

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UTILITIES

The Contractor shall 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 shall 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.

PLANS QUANTITIES

Plans quantities will be applied even though the fill and cut may vary from what is shown in these plans.

ON SITE MEETING

Prior to starting work it is required that the Contractor has an on-site meeting with landowners and The Department of Transportation personnel.

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 fill in the drawdown ditch is included in the Table of Excavation.

If significant changes to the cross sections are necessary during construction, the Engineer shall contact the Designer for the proposed change.

TABLE OF EXCAVATION QUANTITIES

| Site 1 | | Excavation (CuYd) |
|------------|---------|----------------------|
| Station to | Station | |
| 0+00 | 12+50 | 8000 |

TABLE OF UNCLASSIFIED EXCAVATION

| | |
|----------------------|------|
| Excavation at Site 1 | 8000 |
| Topsoil at Site 1 | 1460 |
| Total | 9460 |

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.

UNCLASSIFIED EXCAVATION

Compaction of the material reused from Unclassified Excavation shall be to the satisfaction of the Engineer.

PLACING TOPSOIL

The thickness will be approximately 4 inches within the project disturbed limits.

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

| Station | to | Station | Topsoil (CuYd) |
|---------|----|---------|-------------------|
| Site 1 | | | |
| 0+00 | | 12+50 | 1460 |
| Total: | | | 1460 |

PLACING CONTRACTOR FURNISHED TOPSOIL

It is anticipated that a larger volume of topsoil will be needed for the new grade than can be salvaged from the existing grade. The Contractor will be required to furnish and place 4 inches of topsoil on newly graded areas at Site 1 and in the area of Site 2 where the drainage fabric is removed.

| Station | to | Station | Contractor Furnished Topsoil (CuYd) |
|---------|----|---------|--|
| Site 1 | | | |
| 0+00 | | 12+50 | 490 |
| Site 2 | | | |
| 0+69 | | 3+09 | 120 |
| Total: | | | 610 |

All costs to furnish and place the topsoil shall be incidental to the contract unit price per cubic yard for "Placing Contractor Furnished Topsoil".

SALVAGE RIPRAP

The Contractor shall salvage existing riprap from Site 1 and Site 2.

SITE 1

Existing Riprap at Site 1 consist of one rock check dam near the opening of the drawdown ditch, riprap sparsely scattered on top of drainage fabric throughout the drawdown ditch and riprap at the inlet and outlet sides of the gated pipe culverts.

SITE 2

Existing Riprap is sparsely scattered on top of drainage fabric in the west ditch along the section line road. The location in which the riprap shall be removed is shown in the plan sheets.

The South Dakota Department of Transportation will provide trucks to haul riprap off the work site. The Contractor will be responsible for loading the salvaged riprap into the Department's trucks. The Contractor shall contact the Sioux Falls Area Engineer, Travis Dressen one week prior to salvaging the riprap to coordinate with the Department.

Cost to salvage the riprap will be included in the contract unit price per ton for Salvage Riprap.

SALVAGE PIPE & CANAL GATES

Pipe Culvert and Canal Gates shall be salvaged at Site 1. The Department of Transportation will haul these items away after the Contractor has removed them. The Contractor will be responsible for loading the salvaged pipe and canal gates onto the Department's trucks. Care shall be taken not to damage these items.

Cost to salvage the 36" CM pipe culverts and Canal Gates at Site 1 shall be included in the contract unit price per foot for Salvage Pipe.

INCIDENTAL WORK, GRADING

| Station | Remarks |
|----------------|--|
| Site 1 | |
| 0+00 to 12+00 | Remove Drainage Fabric (6,300± SqYds) |
| 10+92 | Remove Steel I-Beam Walkway |
| Site 2 | |
| 0+69 to 3+09 L | Remove Drainage Fabric (880± SqYds) |

FERTILIZING

Application of fertilizer will not be required on this project.

DRILLS

In addition to the drills specified in Section 730 of the Specifications, other types of drills including no-till drills will be allowed as long as they have baffles, partitions, agitators, or augers which keep the seed distributed throughout the seed box and the seed is planted at a depth of ¼” to ½”.

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits and areas where the drainage fabric has been removed.

The areas to be seeded and mulched are estimated at 3.85 acres

All permanent seed shall be planted in the topsoil at a depth of ¼” to ½”.

All seed broadcast must be raked or dragged in (incorporated) within the top ¼” to ½” of topsoil when possible. This requirement may be waived by the Engineer during construction when raking or dragging is deemed not feasible by conventional methods.

The varieties listed for seed mixtures are preferred varieties.

Native harvest seed will be allowed.

Type G Permanent Seed Mixture shall consist of the following:

| Grass Species | Variety | Pure Live Seed (PLS) (Pounds/Acre) |
|--|---|------------------------------------|
| Western Wheatgrass | Flintlock, Rodan, Rosana | 7 |
| Switchgrass | Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer | 3 |
| Indiangrass | Holt, Tomahawk | 3 |
| Big Bluestem | Bison, Bonilla, Champ, Pawnee, Sunnyview | 3 |
| Oats or Spring Wheat: April through May; Winter Wheat: August through November | | 10 |
| Total: | | 26 |

MULCHING (GRASS HAY OR STRAW)

Bales with noxious weed contamination will be rejected and the Contractor will be required to remove the contaminated bales from the project.

LOW FLOW SILT FENCE

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

<http://sddot.com/business/certification/products/Default.aspx>

Low flow silt fence shall 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.

The Table of Low Flow Silt Fence has a quantity of Low Flow Silt fence to border the north side of the disturbed area of Site 1. Silt Fence currently exists in this approximate location. The existing silt fence shall remain in place if it does not interfere with grading or seeding work. The quantity included in Estimate is to completely replace this length if needed.

TABLE OF LOW FLOW SILT FENCE

| Station | L/R | Location | Quantity (Ft) |
|----------------|-----|-----------------------------------|---------------|
| Site 1 | | | |
| -1+20 to 13+50 | L | Adjacent to disturbed work limits | 1520 |
| Total: | | | 1520 |

MUCKING SILT FENCE

Mucking silt fence shall consist of removing muck trapped by the silt fence and spreading the material evenly over the adjacent area to conform to the existing grade.

REMOVE SILT FENCE

Silt fence shall be removed when vegetation is established. Some or all of the silt fence may be left on the project until vegetation is established.

It is noted that some silt fence that exists on the project. The quantity included in the Estimate of Quantities includes removal of the silt fence entirely and 25 percent of the newly placed silt fence.

FLOATING SILT CURTAIN

Floating silt curtains shall be installed at locations noted in the table and at locations determined by the Engineer during construction.

The Contractor shall determine the water depth and other waterway characteristics such as stream flow velocity and seek technical advice from the manufacturer before ordering the floating silt curtain so that the floating silt curtain installed is the correct type for the individual sites.

The Contractor shall install the floating silt curtain according to the manufacturer's installation instructions or as directed by the Engineer.

The Contractor shall maintain the floating silt curtains for the duration of the project to ensure continuous protection of the waterway.

A list of known manufacturers of floating silt curtain is shown below for informational purpose. Contractors may also use Engineer approved floating silt curtain from manufacturers that are not included in the list.

| | |
|---|--|
| ABASCO, LLC Houston, TX Phone: 1-800-242-7745 www.abasco.net | Aer-Flo, Inc. Bradenton, FL Phone: 1-800-823-7356 www.aerflo.com |
| American Boom and Barrier Corp. Cape Canaveral, FL Phone: 1-800-843-2110 www.abbcoboom.com | ENVIRO-USA, LLC Cocoa, FL Phone: 1-321-222-9551 www.enviro-usa.com |
| Elastec/American Marine, Inc. Carmi, IL Phone: 1-618-382-2525 www.turbiditycurtains.com | Geo-Synthetics, LLC (GSI) Waukesha, WI Phone: 1-800-444-5523 www.geosynthetics.com |
| Parker Systems, Inc. Chesapeake, VA Phone: 1-866-472-7537 www.parkersystemsinc.com | |

TABLE OF FLOATING SILT CURTAIN

| Station | to | Station | L/R | Quantity (Ft) |
|---------------|----|---------|-----|---------------|
| Site 1 | | | | |
| -1+50 | | 1+50 | L | 300 |
| Total: | | | | 300 |

EROSION CONTROL BLANKET

Erosion control blanket shall be installed 16 feet wide at the locations noted in the table and at locations determined by the Engineer during construction.

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

<http://sddot.com/business/certification/products/Default.aspx>

The Contractor shall install erosion control blanket according to the manufacturer's installation instructions.

TABLE OF EROSION CONTROL BLANKET

| Location | Location | Type | Quantity (SqYd) |
|---------------|---|-------|--------------------|
| Site 1 | | | |
| Lake Edge | On fill at the mouth of filled in drawdown ditch | 1 | 270 |
| | | Total | 270 |

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

- ❖ **SITE DESCRIPTION (4.2 1)**

➤ **Project Limits: See Title Sheet (4.2 1.b)**

➤ **Project Description: See Title Sheet (4.2 1.a.)**

➤ **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**

➤ **Major Soil Disturbing Activities** (check all that apply)

☐ Clearing and grubbing

☒ Excavation/borrow

☒ Grading and shaping

☒ Filling

☐ Cutting and filling

☐ Other (describe):

➤ **Total Project Area 6.4 (4.2 1.b.)**

➤ **Total Area To Be Disturbed 3.85 (4.2 1.b.)**

➤ **Existing Vegetative Cover (%) 60**

➤ **Soil Properties: AASHTO Soil Classification A6 and A7 (4.2 1. d.)**

➤ **Name of Receiving Water Body/Bodies Lake Sinai (4.2 1.e.)**
- ❖ **ORDER OF CONSTRUCTION ACTIVITIES (4.2 1.c.)**

(Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.)

➤ **Install perimeter protection where runoff sheets from the site.**

➤ **Remove and store topsoil.**

➤ **Salvage Riprap.**

➤ **Remove drainage fabric**

➤ **Complete final grading and place topsoil.**

➤ **Reseed areas disturbed by grading and removal activities.**
- ❖ **EROSION AND SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))**

(Check all that apply)

➤ **Stabilization Practices (See Detail Plan Sheets)**

☐ Temporary Seeding (Cover Crop Seeding)

☒ Permanent Seeding

☐ Sodding

☐ Planting (Woody Vegetation for Soil Stabilization)

☒ Mulching (Grass Hay or Straw)

☐ Hydraulic Mulch (Wood Fiber Mulch)

☐ Soil Stabilizer

☐ Bonded Fiber Matrix

☒ Erosion Control Blankets or Mats

☐ Vegetation Buffer Strips

☐ Roughened Surface (e.g. tracking)

☐ Dust Control

☐ Other:

➤ **Structural Temporary Erosion and Sediment Controls**

☐ Silt Fence

☐ Floating Silt Curtain

☐ Straw Bale Check

☐ Temporary Berm

☐ Temporary Slope Drain

☐ Straw Wattles or Rolls

☐ Turf Reinforcement Mat

- ☐ Rip Rap

☐ Gabions

☐ Rock Check Dams

☐ Sediment Traps/Basins

☐ Inlet Protection

☐ Outlet Protection

☐ Surface Inlet Protection (Area Drain)

☐ Curb Inlet Protection

☐ Stabilized Construction Entrances

☐ Entrance/Exit Equipment Tire Wash

☐ Interceptor Ditch

☐ Concrete Washout Area

☐ Temporary Diversion Channel

☐ Work Platform

☐ Temporary Water Barrier

☐ Temporary Water Crossing

☐ 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.

➤ **Storm Water Management (4.2 2.b., (1) and (2))**

Storm water management will be handled by temporary controls outlined in “EROSION AND SEDIMENT CONTROLS” above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Permanent controls will be shown on the plans and noted as permanent.

➤ **Other Storm Water Controls (4.2 2.c., (1) and (2))**

Waste Disposal

All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. 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 in the field office. The general contractor’s representative responsible for the conduct of work on the site will be responsible for seeing 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 individual designated as the contractor’s on-site representative 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 in a timely manner by a licensed waste management contractor or as required by any local regulations.

- ❖ **Maintenance and Inspection (4.2 3. and 4.2 4.)**

➤ **Maintenance and Inspection Practices**

Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.

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 in order 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 ½ 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 site superintendent are responsible for inspections. Maintenance, 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.

❖ **Non-Storm Water Discharges (3.0)**

The following non-storm water 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.

❖ **Materials Inventory (4.2. 2.c.(2))**

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 headings “EROSION AND SEDIMENT CONTROLS” and “SPILL PREVENTION” (check all that apply).

➤ ☐ Concrete and Portland Cement

➤ ☐ Detergents

➤ ☐ Paints

➤ ☐ Metals

➤ ☐ Bituminous Materials

➤ ☐ Petroleum Based Products

➤ ☐ Cleaning Solvents

➤ ☐ Wood

➤ ☐ Cure

➤ ☐ Texture

➤ ☐ Chemical Fertilizers

➤ ☐ Other:

Spill Prevention (4.2 2.c.(2))

➤ **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 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.
- Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

▪ Hazardous Materials

- Products will be kept in original containers unless the container is not resealable.
- 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 storm water system or storm water 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 storm water runoff.

➤ **Product Specific Practices (6.8)**

▪ 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 storm water. 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 areas on the site. These areas must be self contained and not connected to any storm water outlet of the site. Upon completion of construction washout areas will be properly stabilized.

➤ **Spill Control Practices (4.2 2 c.(2))**

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 clean up 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 clean up 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. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.

➤ **Spill Response (4.2 2 c.(2))**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens storm water 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 SD DENR.
- Personnel with primary responsibility for spill response and clean up 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.

❖ **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 DENR immediately **if any one of the following** conditions exists:
 - The discharge threatens or is in a position to threaten the waters of the state (surface water or ground water).
 - The discharge causes an immediate danger to human health or safety.
 - The discharge exceeds 25 gallons.
 - The discharge causes a sheen on surface water.
 - The discharge of any substance that exceeds the ground water quality standards of ARSD (Administrative Rules of South Dakota) chapter 74:51:01.
 - The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:51:01.
 - The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
 - The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

To report a release or spill, call DENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call State Radio Communications at 605-773-3231. Reporting the release to DENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases. DENR recommends that spills also be reported to the National Response Center at (800) 424-8802.

❖ **Construction Changes (4.4)**

When changes are made to the construction project that will require alterations in the temporary erosion controls of the site, the Storm Water Pollution Prevention Plan (SWPPP) will be amended to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP plan (DOT 298) and drawings to reflect the needed changes. Copies of changes will be routed per DOT 298. Copies of forms and the SWPPP will be retained in a designated place for review over the course of the project.

❖ **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 6.7.1.C.)

➤ **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**

➤ **Contractor Information:**

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

➤ **Erosion Control Supervisor**

- Name:
- Address:
- 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:

➤ **SD DENR Contact Spill Reporting**

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

➤ **SD DENR Contact for Hazardous Materials.**

- (605) 773-3153

➤ **National Response Center Hotline**

- (800) 424-8802.

CONTROL DATA

| | | | |
|--------------------------------|---------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 081-272 | 12 | 33 |

| HORIZONTAL AND VERTICAL CONTROL POINTS | | | | | | |
|--|--------------------|-----------|---|-------------|--------------|-----------|
| POINT | LOCATION | OFFSET | DESCRIPTION | NORTHING | EASTING | ELEVATION |
| Base1 | Site 1 12+70.28 | 1299.68 L | In 215 Street. ROW approximately 2125 feet west of the southeast corner of Sec 6 – T109N – R52W | 171973.9470 | 2723530.3370 | 1776.7760 |
| CP1 | na | na | In 455 Avenue ROW approximately 931 feet south of the southeast corner of Sec 6 – T109N – R52W | 171149.1930 | 2725717.8040 | 1792.2190 |
| CP2 | na | na | In 455 Avenue ROW approximately 1946 feet north of the southeast corner of Sec 6 – T109N – R52W | 174024.5020 | 2725577.7120 | 1794.6330 |
| | | | | | | |

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone (NAD 83/88);
Geoid 03; SF = 0.99993778
The elevations shown on this sheet are based on NAVD 88.

HORIZONTAL ALIGNMENT DATA

| Site 1 | | | | Site 2 | | | | | |
|--------|----------|--------------------------|------------|-------------|------|---------|-------------------------|------------|-------------|
| Type | Station | | Northing | Easting | Type | Station | | Northing | Easting |
| POB | 0+00.00 | | 173161.365 | 2722869.978 | POB | 0+00.00 | | 172902.322 | 2725641.435 |
| | | TL= 13.14 N 79°59'53" E | | | | | TL= 427.92 N 1°16'33" W | | |
| PI | 0+13.14 | | 173163.648 | 2722882.923 | POE | 4+27.92 | | 173330.136 | 2725631.907 |
| | | TL= 18.94 N 59°09'13" E | | | | | | | |
| PI | 0+32.09 | | 173173.36 | 2722899.185 | | | | | |
| | | TL= 40.97 N 40°42'58" E | | | | | | | |
| PI | 0+73.05 | | 173204.412 | 2722925.909 | | | | | |
| | | TL= 56.38 N 56°41'46" E | | | | | | | |
| PI | 1+29.43 | | 173235.368 | 2722973.028 | | | | | |
| | | TL= 23.88 N 60°29'58" E | | | | | | | |
| PI | 1+53.31 | | 173247.125 | 2722993.808 | | | | | |
| | | TL= 25.05 N 59°43'44" E | | | | | | | |
| PI | 1+78.36 | | 173259.754 | 2723015.445 | | | | | |
| | | TL= 23.70 N 59°34'50" E | | | | | | | |
| PI | 2+02.06 | | 173271.756 | 2723035.886 | | | | | |
| | | TL= 12.29 N 51°18'16" E | | | | | | | |
| PI | 2+14.35 | | 173279.437 | 2723045.475 | | | | | |
| | | TL= 24.40 N 58°12'03" E | | | | | | | |
| PI | 2+38.75 | | 173292.294 | 2723066.212 | | | | | |
| | | TL= 59.07 N 51°07'25" E | | | | | | | |
| PI | 2+97.82 | | 173329.367 | 2723112.196 | | | | | |
| | | TL= 58.24 N 52°06'16" E | | | | | | | |
| PI | 3+56.05 | | 173365.138 | 2723158.153 | | | | | |
| | | TL= 63.83 N 62°39'15" E | | | | | | | |
| PI | 4+19.88 | | 173394.459 | 2723214.85 | | | | | |
| | | TL= 72.91 N 79°29'44" E | | | | | | | |
| PI | 4+92.80 | | 173407.752 | 2723286.541 | | | | | |
| | | TL= 72.61 S 88°37'34" E | | | | | | | |
| PI | 5+65.41 | | 173406.011 | 2723359.133 | | | | | |
| | | TL= 64.41 S 82°36'56" E | | | | | | | |
| PI | 6+29.83 | | 173397.732 | 2723423.013 | | | | | |
| | | TL= 81.78 S 81°38'10" E | | | | | | | |
| PI | 7+11.61 | | 173385.836 | 2723503.925 | | | | | |
| | | TL= 62.56 S 78°06'52" E | | | | | | | |
| PI | 7+74.17 | | 173372.951 | 2723565.145 | | | | | |
| | | TL= 52.29 S 72°55'33" E | | | | | | | |
| PI | 8+26.46 | | 173357.597 | 2723615.134 | | | | | |
| | | TL= 86.58 S 66°53'44" E | | | | | | | |
| PI | 9+13.04 | | 173323.624 | 2723694.765 | | | | | |
| | | TL= 72.52 S 65°41'44" E | | | | | | | |
| PI | 9+85.56 | | 173293.774 | 2723760.862 | | | | | |
| | | TL= 101.04 S 63°22'10" E | | | | | | | |
| PI | 10+86.60 | | 173248.485 | 2723851.182 | | | | | |
| | | TL= 129.61 S 67°04'19" E | | | | | | | |
| PI | 12+16.21 | | 173197.993 | 2723970.551 | | | | | |
| | | TL= 86.11 S 67°50'14" E | | | | | | | |
| POE | 13+02.32 | | 173165.509 | 2724050.3 | | | | | |

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone (NAD 83/88);
Geoid 03; SF = 0.99993778
The elevations shown on this sheet are based on NAVD 88.

PLOT SCALE - 1:200

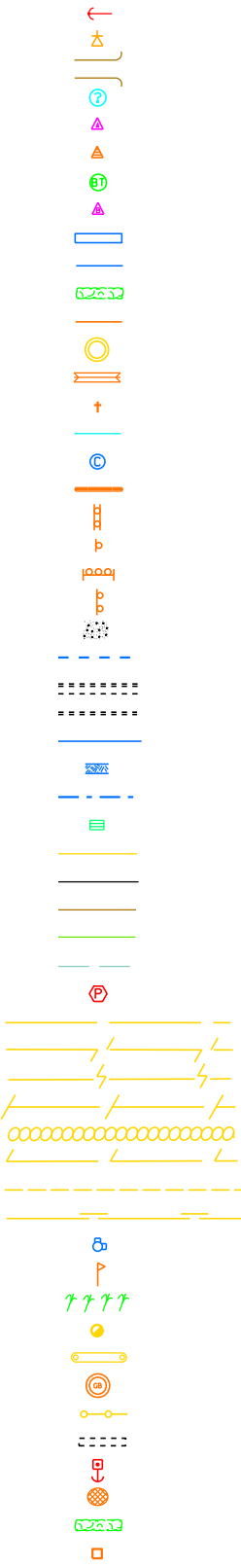
PLOTTED FROM - TRMINT16

EXISTING TOPOGRAPHY SYMBOLOGY AND LEGEND

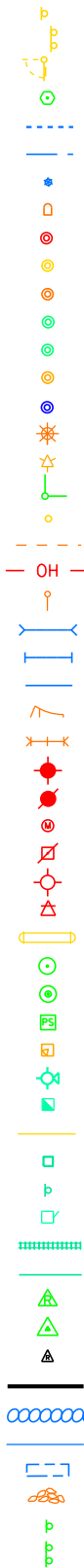
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|--------------------------------|---------|-------|-----------------|
| | 081-272 | 14 | 33 |

Plotting Date: 07/17/2014

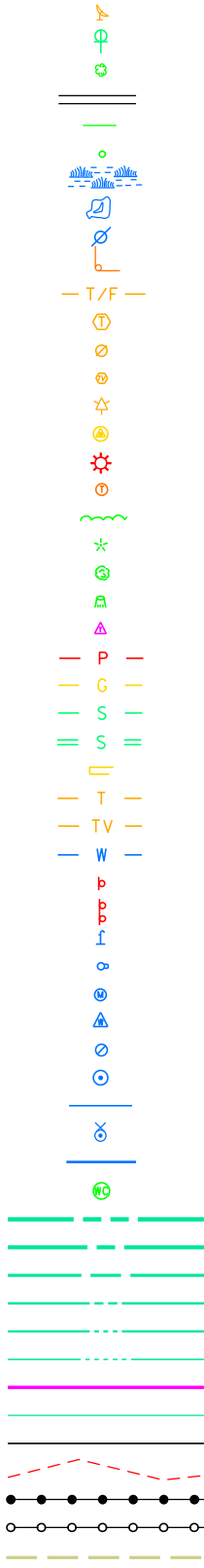
Anchor
Antenna
Approach
Assumed Corner
Azimuth Marker
Bbq Grill/ Fireplace
Bearing Tree
Bench Mark
Box Culvert
Bridge
Brush
Buildings
Bulk Tank
Cattle Guard
Cemetery
Centerline
Cistern
Clothes Line
Commercial Sign Double Face
Commercial Sign One Post
Commercial Sign Overhead
Commercial Sign Two Post
Concrete Symbol
Creek Edge
Curb/Gutter
Curb
Dam Grade/Dike/Levee
Ditch Block
Drainage Profile
Drop Inlet
Edge Of Asphalt
Edge Of Concrete
Edge Of Gravel
Edge Of Other
Edge Of Shoulder
Elec. Trans./Power Jct. Box
Fence Barbwire
Fence Chainlink
Fence Electric
Fence Misc.
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
Hedge
Highway R.O.W. Marker



Information Sign One Post
Information Sign Two Post
Interstate Close Gate
Iron Pin
Irrigation Ditch
Lake Edge
Lawn Sprinkler
Mailbox
Manhole Electric
Manhole Gas
Manhole Misc
Manhole Sanitary Sewer
Manhole Storm Sewer
Manhole Telephone
Manhole Water
Merry-Go-Round
Microwave Radio Tower
Misc. Property Corner
Misc. Post
Overhang Or Encroachment
Overhead Utility Line
Parking Meter
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 R.O.W. 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
Route Sign One Post
Route Sign Two Post



Satellite Dish
Septic Tank
Shrub Tree
Sidewalk
Sign Face
Sign Post
Slough Or Marsh
Spring
Stream Gauge
Street Marker
Telephone Fiber Optics
Telephone Junction Box
Telephone Pole
Television Cable Jct Box
Television Tower
Test Wells/Bore Holes
Traffic Signal
Trash Barrel
Tree Belt
Tree Coniferous
Tree Deciduous
Tree Stumps
Triangulation Station
Underground Electric Line
Underground Gas Line
Underground Sanitary Sewer
Underground Storm Sewer
Underground Tank
Underground Telephone Line
Underground Television Cable
Underground Water Line
Warning Sign One Post
Warning Sign Two Post
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
R. O. W. Line
New R. O. W. Line
Cut and Fill Limits
Control of Access
New Control of Access
Proposed ROW
(After Property Disposal)



PLOT NAME - 3

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PLOT SCALE - 1:100

PLOTTED FROM - TRM1INT16



0+00 to 12+50
Fill in drawdown ditch
and restore to original grade.
(See Cross Sections)

0+00 to 12+00
Salvage All Existing Rirprap
(500 Tons approx.)

0+00 to 12+00
Remove Existing Drainage Fabric
(6,300 SqYds approx.)
(Incidental work)

10+90 to 11+70' R
Salvage Existing TWIN 36"-80' CMP

10+90
Salvage 2 Exsiting 36" Canal Gates

10+92
Remove Steel I-Beam walkway
(Incidental Work)

Silt Fence in Place
(May be removed if it
interferes with grading
operations but shall be
replaced)

Silt Fence in Place
(Shall be removed to
accomplish grading work)

1/4 Line

Sec. 6 - T109N - R52W

SITE 1

| | | | |
|--------------------------------|---------|-------|-----------------|
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Plotting Date: 07/17/2014

PLOT NAME - 4

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PLOT SCALE - 1:100

PLOTTED FROM - TRMINT16



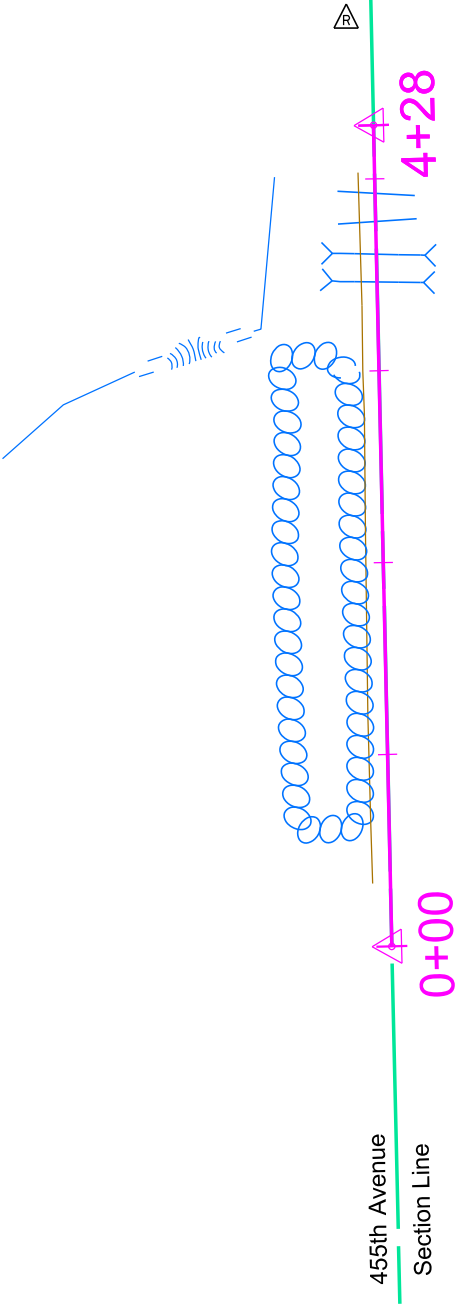
SITE 2

| | | | |
|--------------------------------|---------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 081-272 | 16 | 33 |

Plotting Date: 07/17/2014

0+69 to 3+09 L
Salvage All Existing Rirprap
(25 Tons approx.)

0+69 to 3+09 L
Remove Existing Drainage Fabric
(880 SqYds approx.)
(Incidental work)



PLOT NAME - 5

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PLOT SCALE - 1:200

PLOTTED FROM - TRM1INT16

PLOT NAME - 6

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| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|--------------------------------|---------|-------|-----------------|
| | 081-272 | 17 | 33 |

Plotting Date: 07/17/2014

SYMOLOGY FOR BEST MANAGEMENT PRACTICES

EROSION AND SEDIMENT CONTROL LEGEND

| | |
|--|---|
| | STORM WATER DISCHARGE POINT |
| | LOW FLOW SILT FENCE |
| | HIGH FLOW SILT FENCE |
| | HIGH FLOW SILT FENCE AT PIPE INLET |
| | SILT TRAP |
| | SEDIMENT CONTROL AT INLET BEFORE PLACEMENT OF SURFACING |
| | TEMPORARY SEDIMENT BARRIER |
| | TEMPORARY WATER BARRIER |
| | FLOATING SILT CURTAIN |
| | SEDIMENT FILTER BAGS |
| | TRIANGULAR SILT BARRIERS |
| | EROSION CONTROL WATTLES ON SLOPES |
| | EROSION CONTROL WATTLES AT INLETS |
| | EROSION CONTROL WATTLES IN DITCHES |
| | EROSION BALES |
| | SURFACE ROUGHENING |
| | SOIL STABILIZER / TEMPORARY MULCH / DUST CONTROL |
| | CUT INTERCEPTOR DITCH |
| | TEMPORARY SLOPE DRAIN |
| | SEDIMENT CONTROL AT INLET AFTER PLACEMENT OF SURFACING |
| | HYDRAULIC STRAW MULCH / FIBER MULCHING / BONDED FIBER MATRIX / FIBER REINFORCED MATRIX |
| | ROCK CHECK DAM |
| | SODDING |
| | 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 |
| | SYNTHETIC CHANNEL PROTECTION |
| | TYPE 1 SEDIMENT TRAP |
| | TYPE 2 SEDIMENT TRAP |
| | TYPE 3 SEDIMENT TRAP |

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.

| | | | |
|--|---|--|---|
| | TOPSOIL STOCKPILES | | ON-SITE CONSTRUCTION MATERIAL STORAGE AREAS |
| | BORROW AREAS | | SPILL KIT |
| | STABILIZED CONSTRUCTION ENTRANCES | | WORK PLATFORM |
| | VEGETATED BUFFER STRIPS | | |
| | CONCRETE WASHOUTS | | |
| | ASPHALT PLANT SITES | | |
| | CONCRETE PLANT SITES | | |
| | VEHICLE AND EQUIPMENT PARKING, FUELING, AND MAINTENANCE AREAS | | |
| | DUMPSTER OR OTHER TRASH AND DEBRIS CONTAINERS | | |

EROSION AND SEDIMENT CONTROL PLAN

| | | | |
|--------------------------------|---------|-------|-----------------|
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Plotting Date: 07/17/2014

SITE 1

Install Floating Silt Curtain
at the following locations:
-1+50 to 1+50 - 300 FT

Install Type 1 Erosion Control Blanket
on disturbed lake edge
2 - 16' wide by 75' long = 270 SqYds

Install Low Flow Silt Fence
at the following locations:
-1+20 to 13+50 Adjacent to the north edge of disturbed area 1520 FT

Silt Fence in Place
(May be removed if it
interferes with grading
operations but shall be
replaced)

Silt Fence in Place
(Shall be removed to
accomplish grading work)

Sec. 6 - T109N - R52W

1/4 Line

PLOT SCALE - 1:1000

PLOTTED FROM - TRM1INT16

PLOT NAME - 7

FILE - ... \BROK13K\NEROSION_13KJ.DGN

PLOT SCALE - 1:200

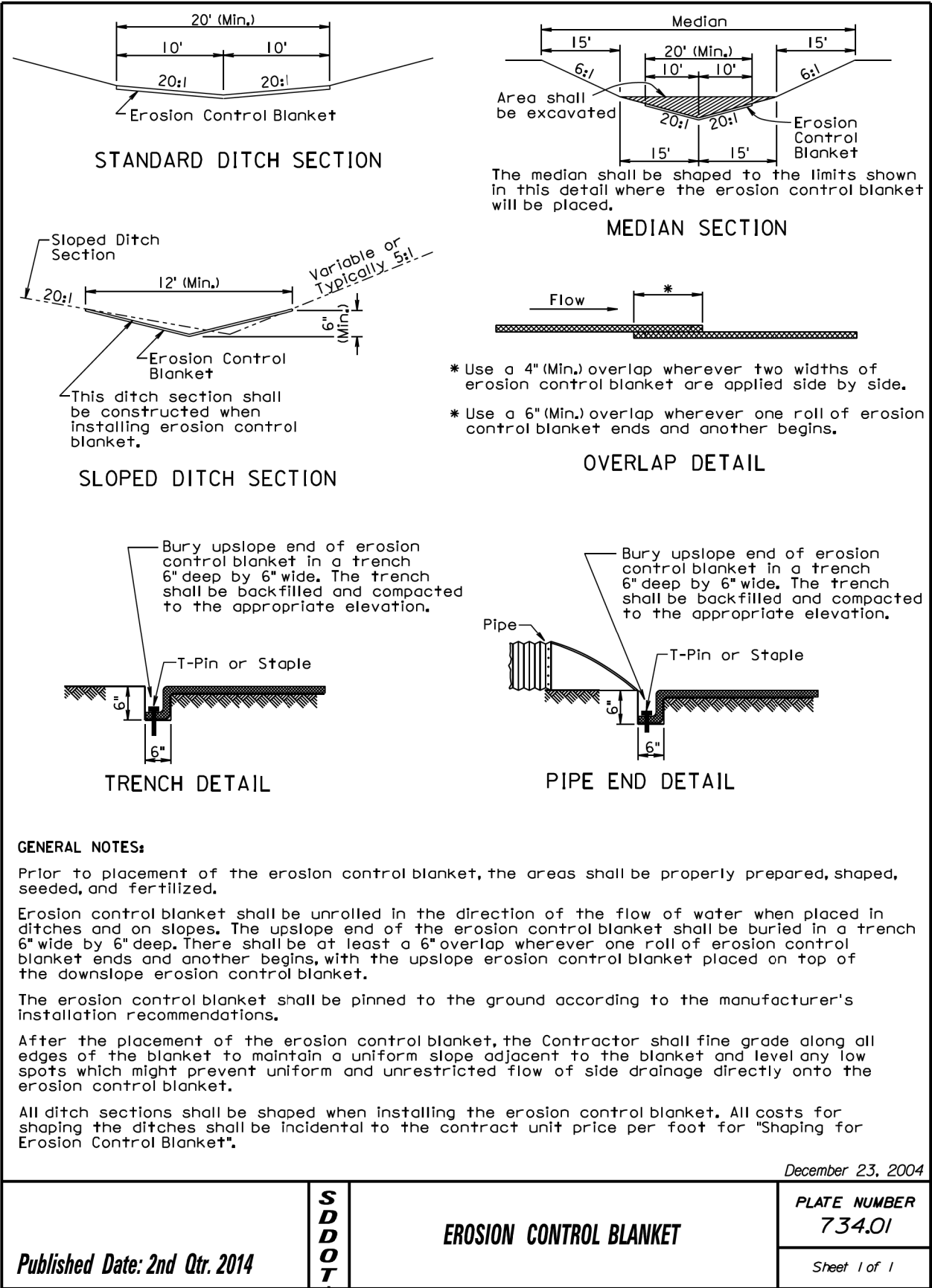
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| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|--------------------------------|---------|-------|-----------------|
| | 081-272 | 19 | 33 |

Plotting Date: 07/17/2014

PLOT NAME - 8

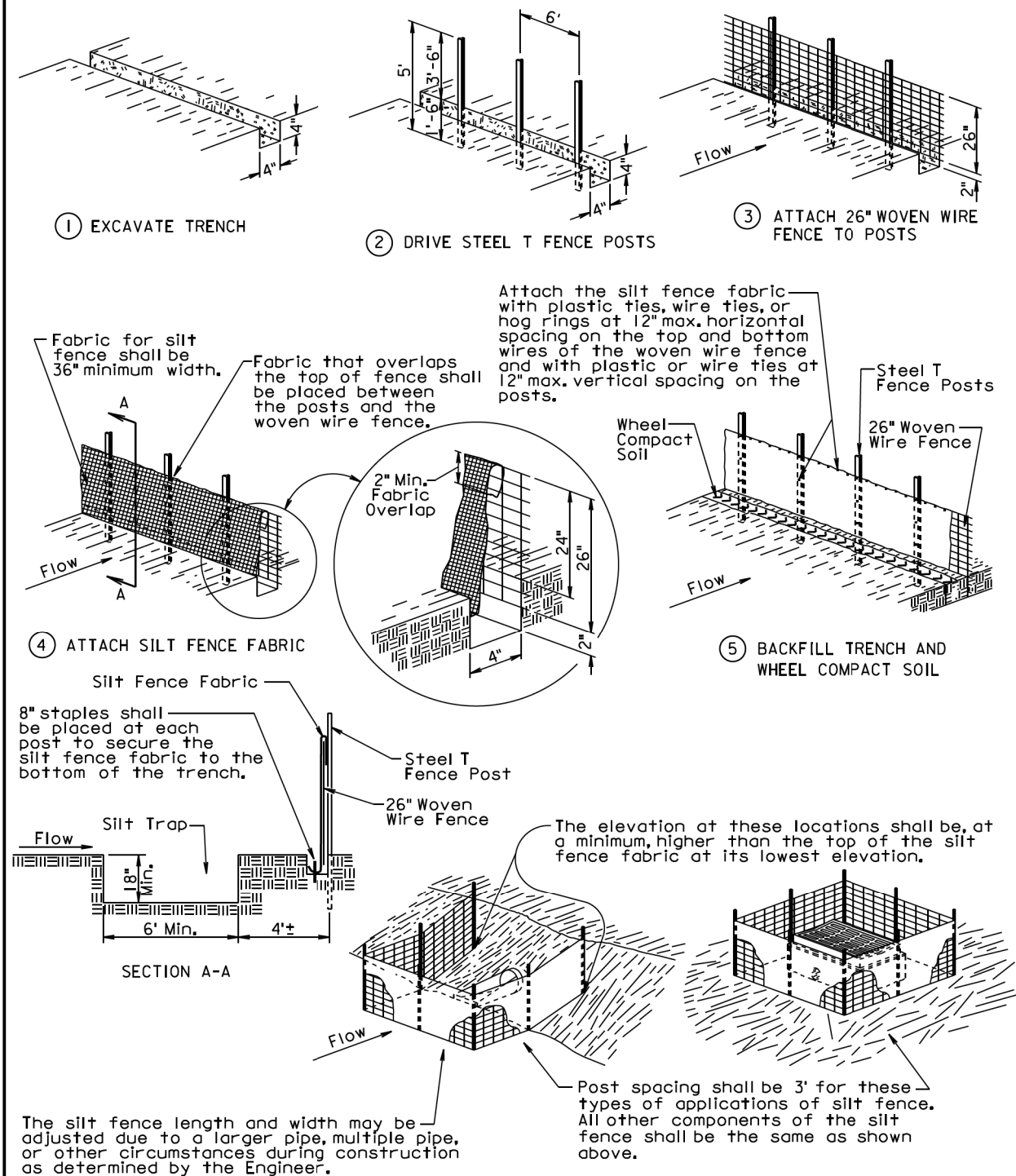
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| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|-----------------------|---------|-------|--------------|
| | 081-272 | 20 | 33 |

Plotting Date: 07/17/2014

MANUAL LOW FLOW SILT FENCE INSTALLATION

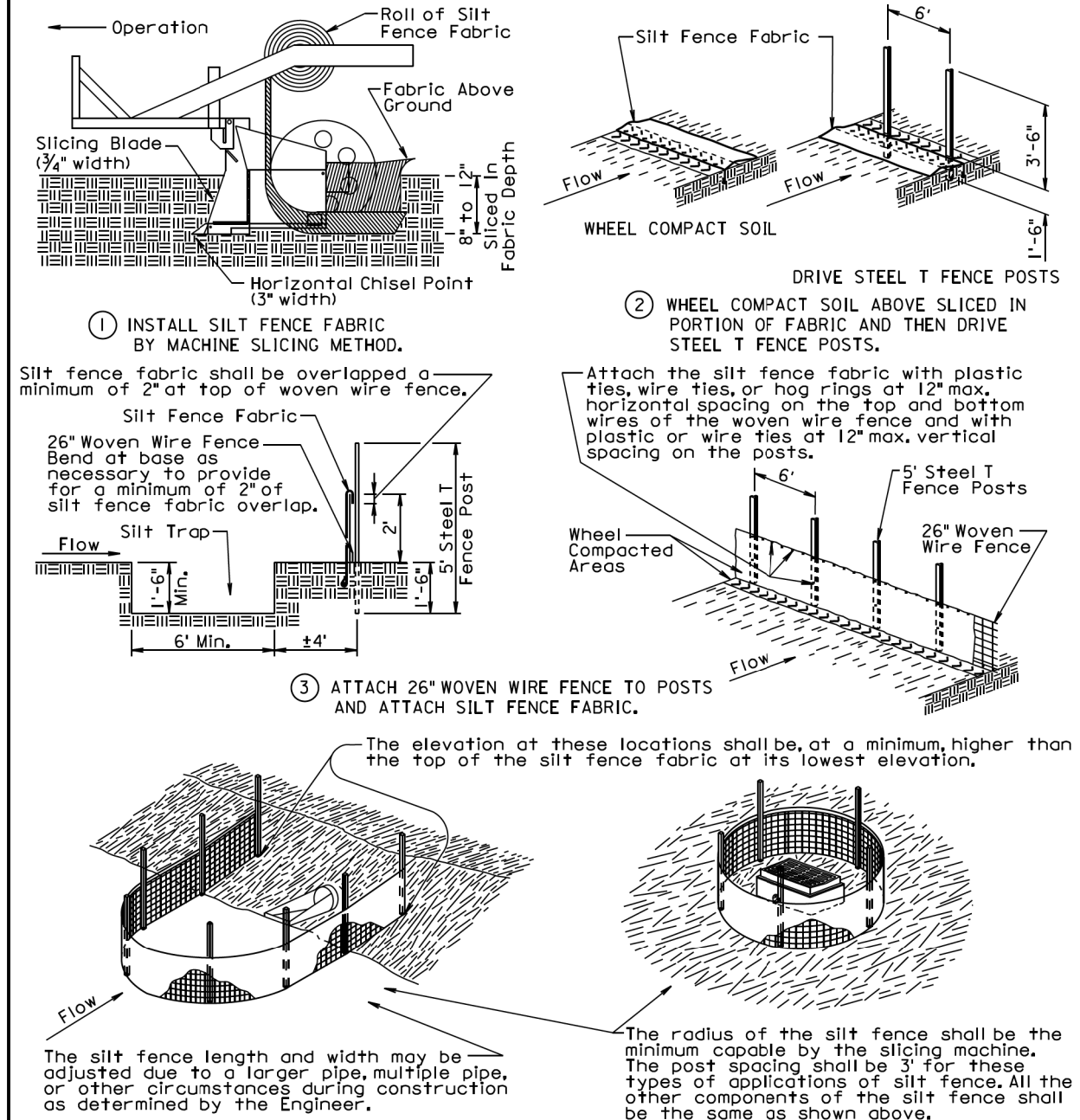


December 23, 2003

| | | |
|-----------------------|--------------------------------------|------------------------|
| S D D O T | LOW FLOW SILT FENCE AND SILT TRAP | PLATE NUMBER 734.04 |
| | | Sheet 1 of 2 |

Published Date: 2nd Qtr. 2014

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION



GENERAL NOTES:

A silt trap shall be provided when specified by a plan note. All costs for constructing the silt trap shall 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 shall be provided on top of the extra length of silt fence fabric to prevent underflow.

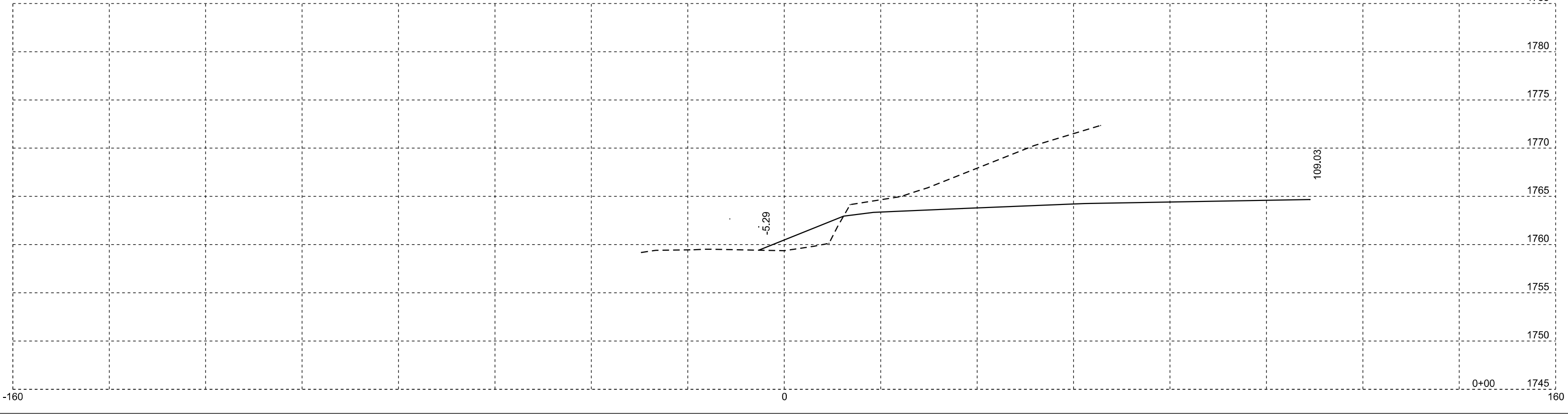
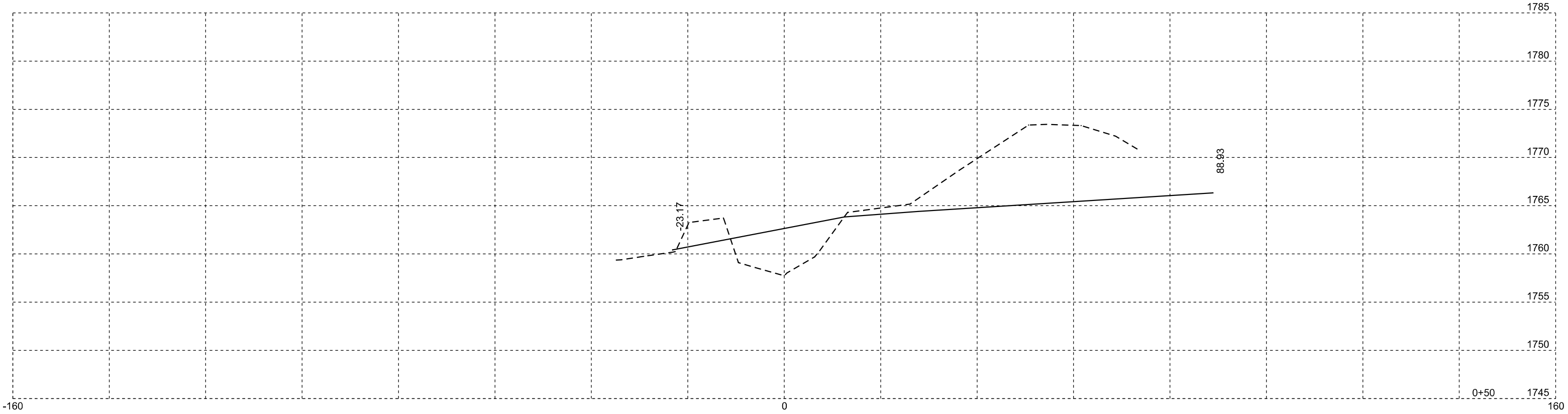
December 23, 2003

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| S D D O T | LOW FLOW SILT FENCE AND SILT TRAP | PLATE NUMBER 734.04 |
| | | Sheet 2 of 2 |

Published Date: 2nd Qtr. 2014

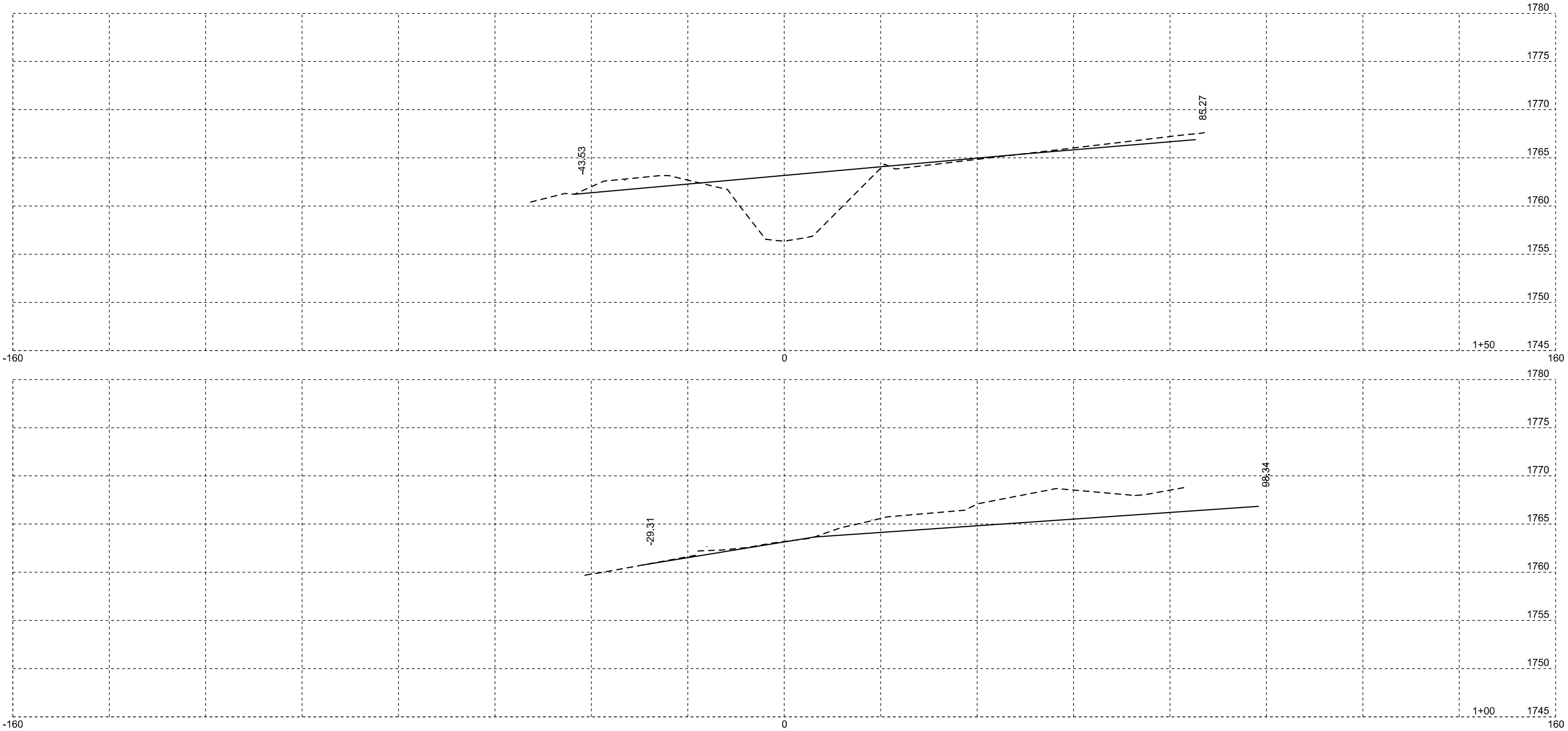
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Site 1



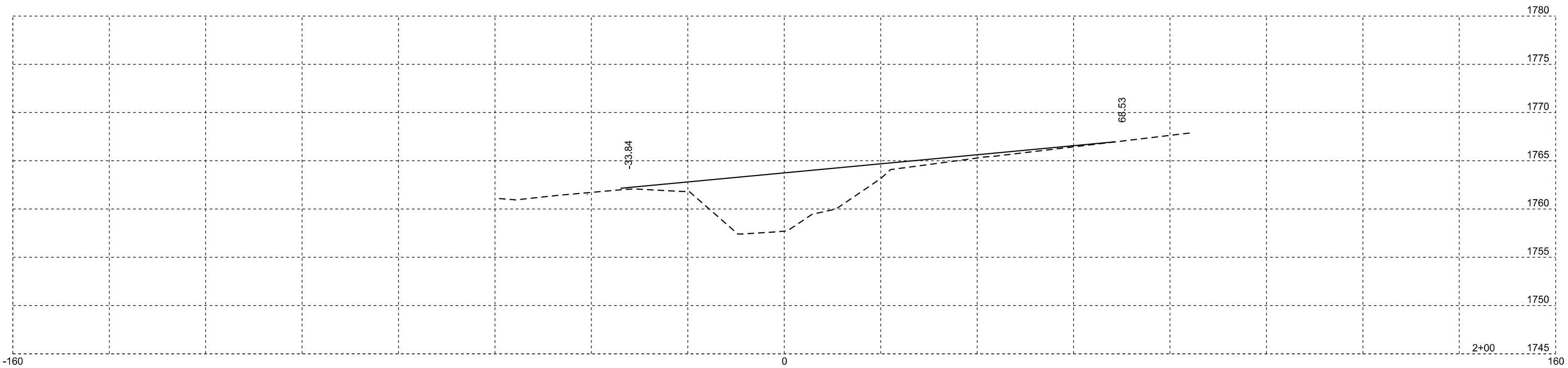
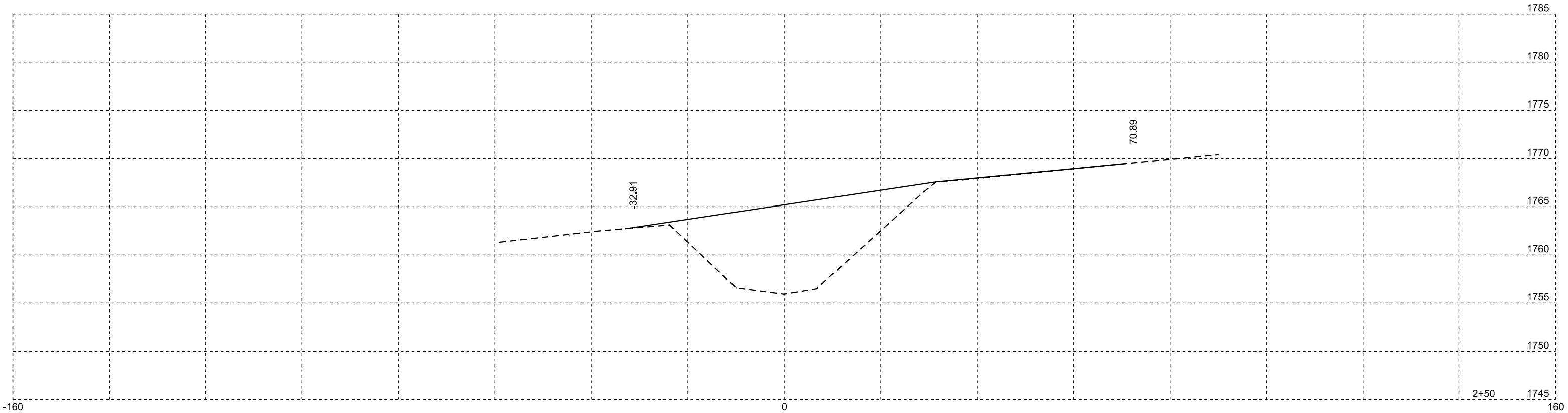
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Site 1



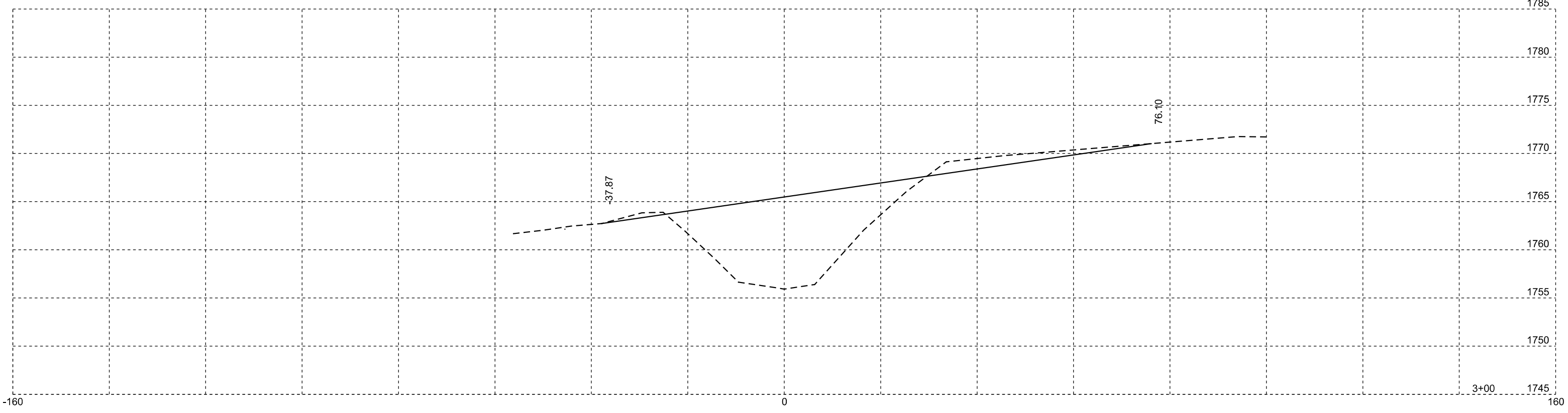
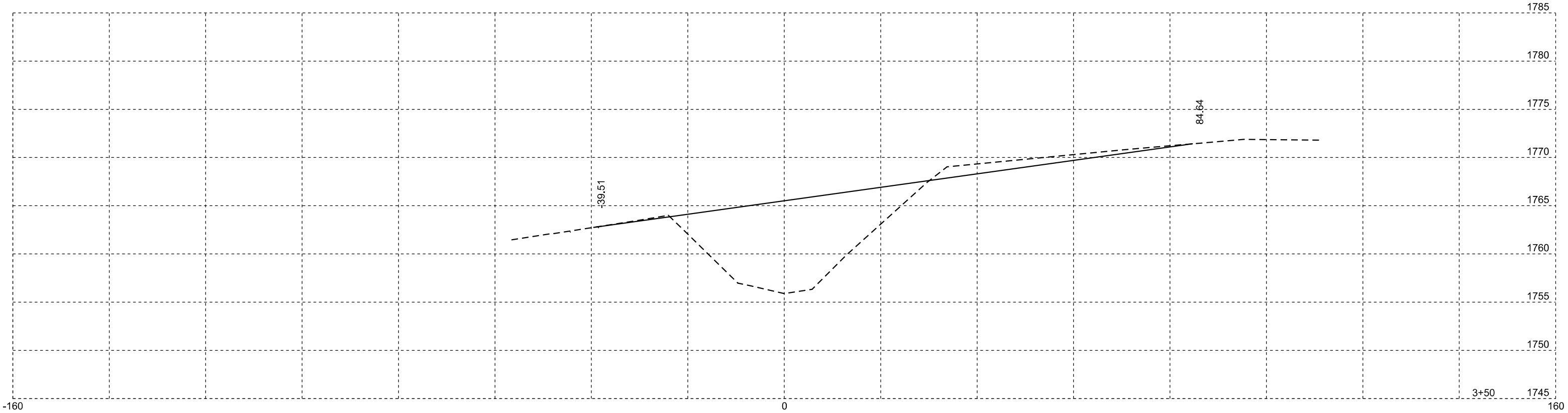
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Site 1



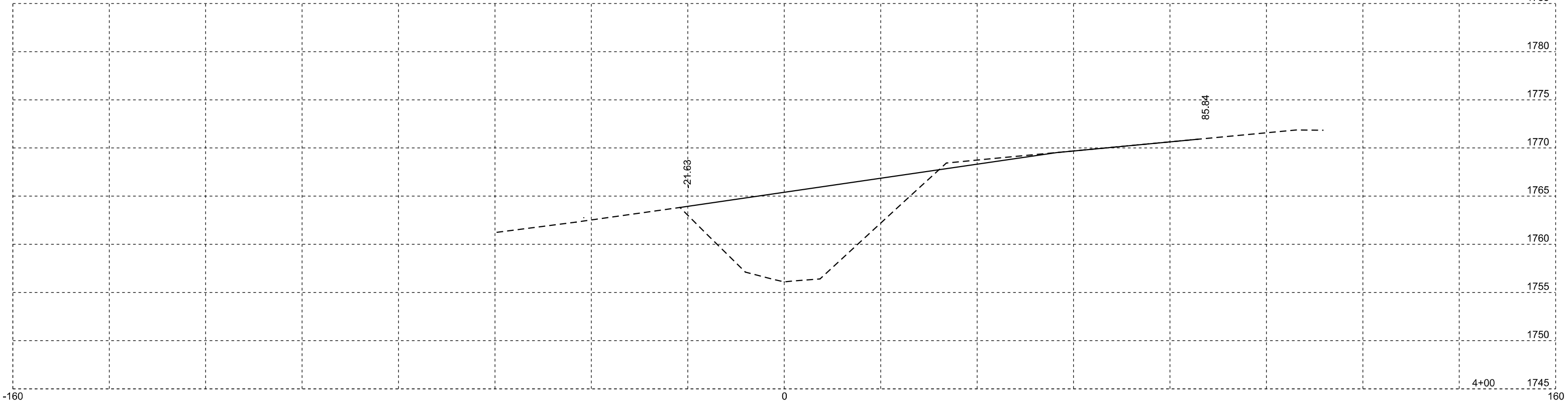
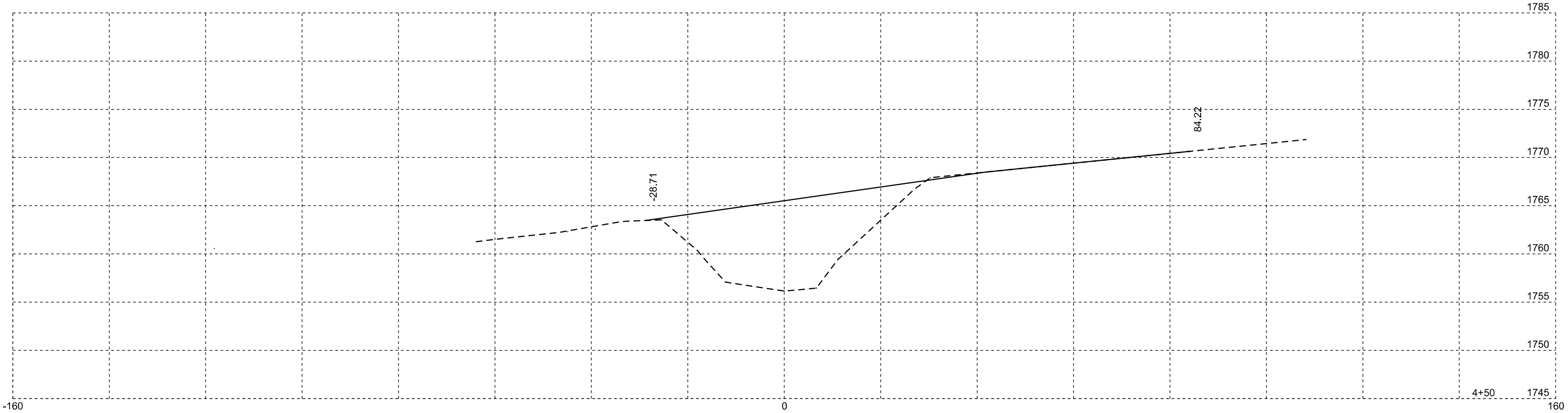
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Site 1

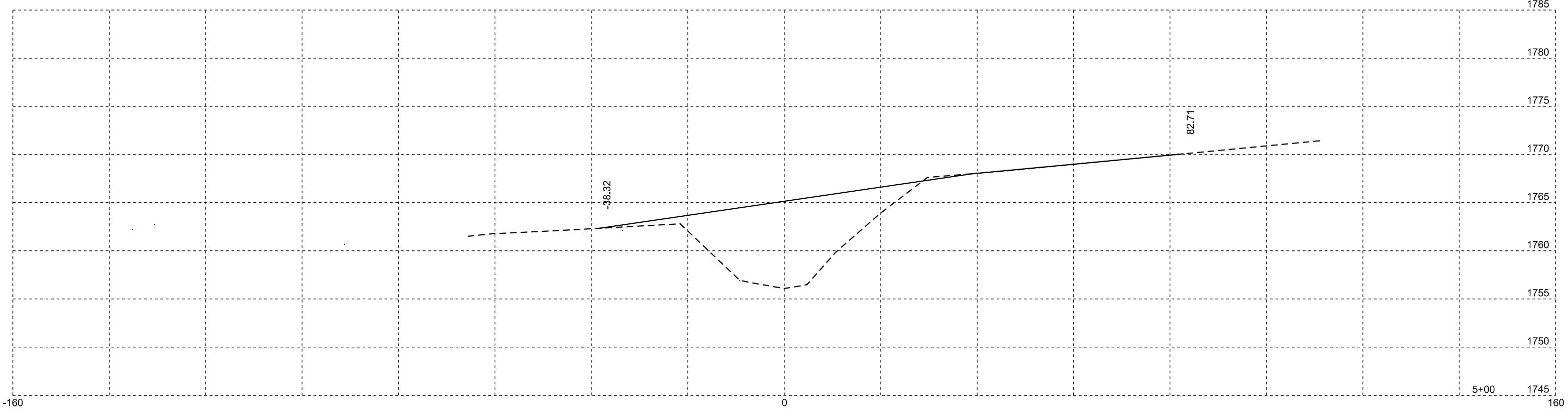
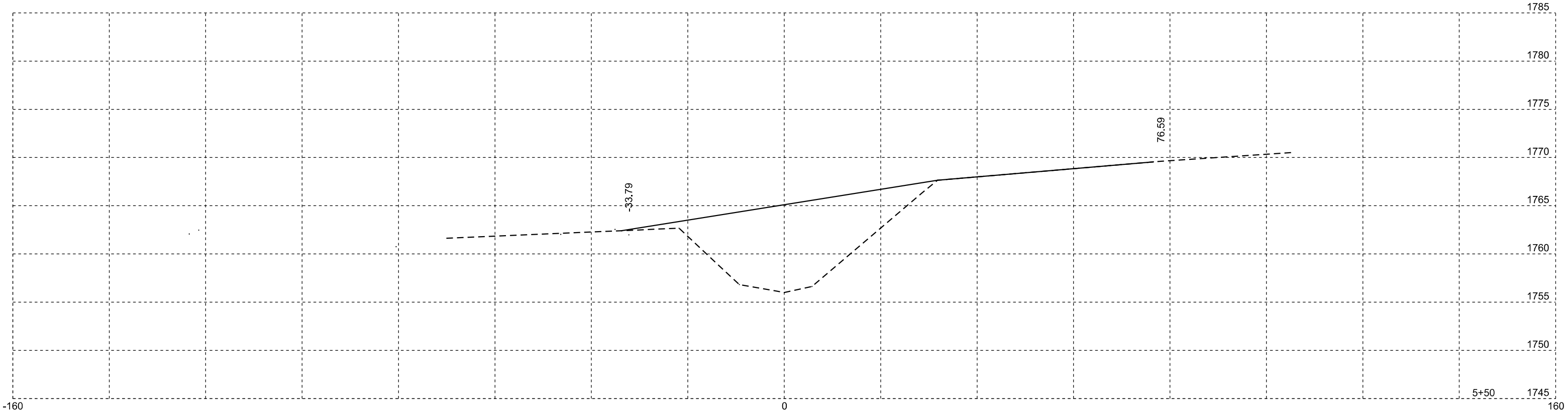


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Site 1

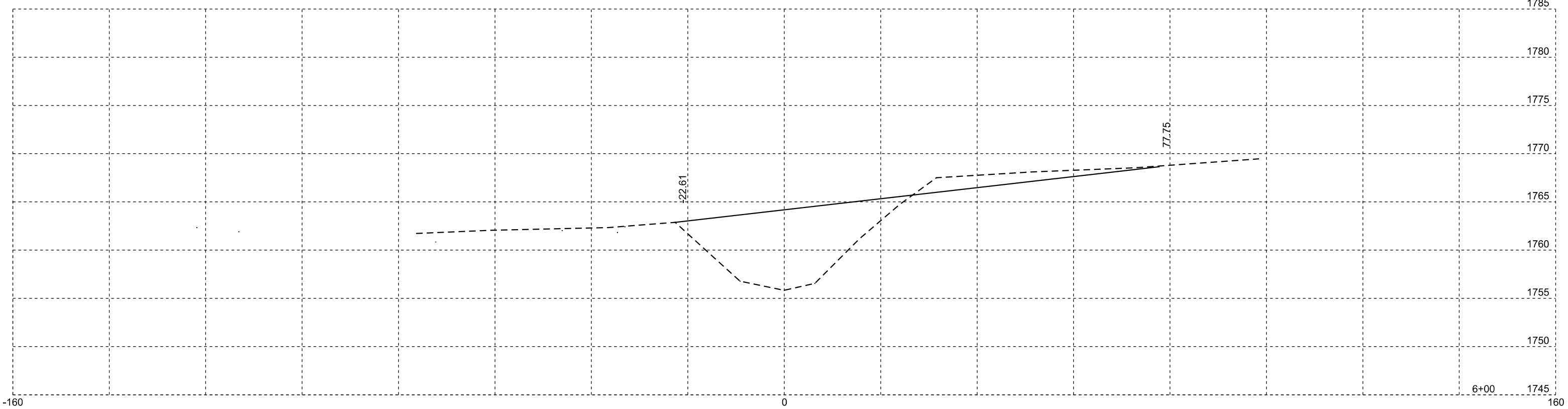
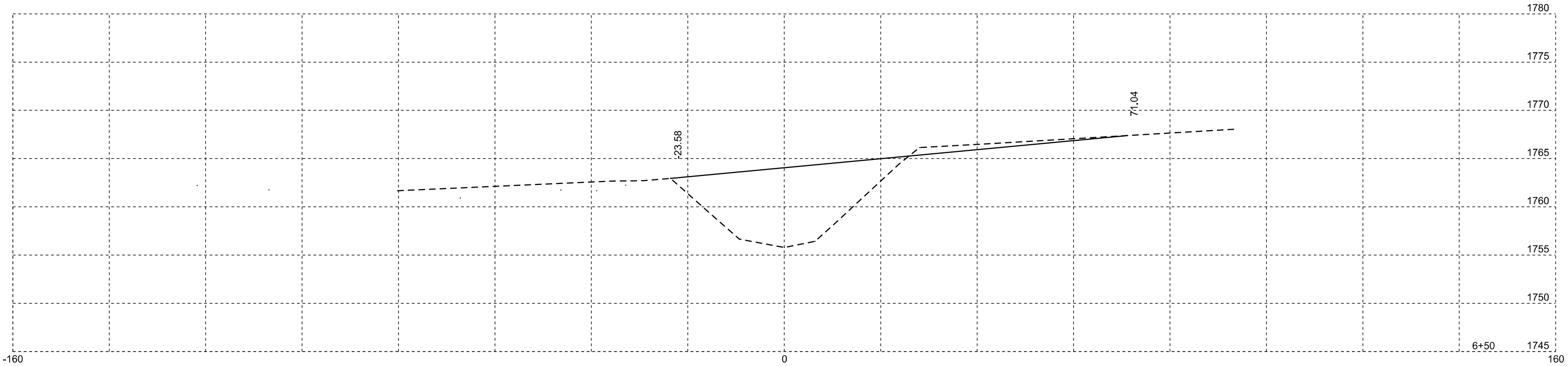


Site 1



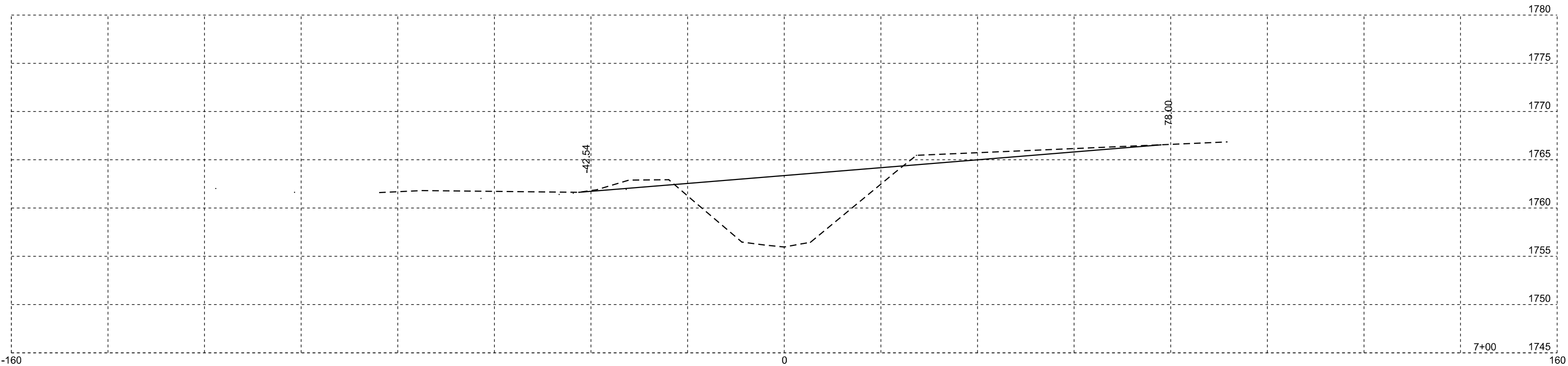
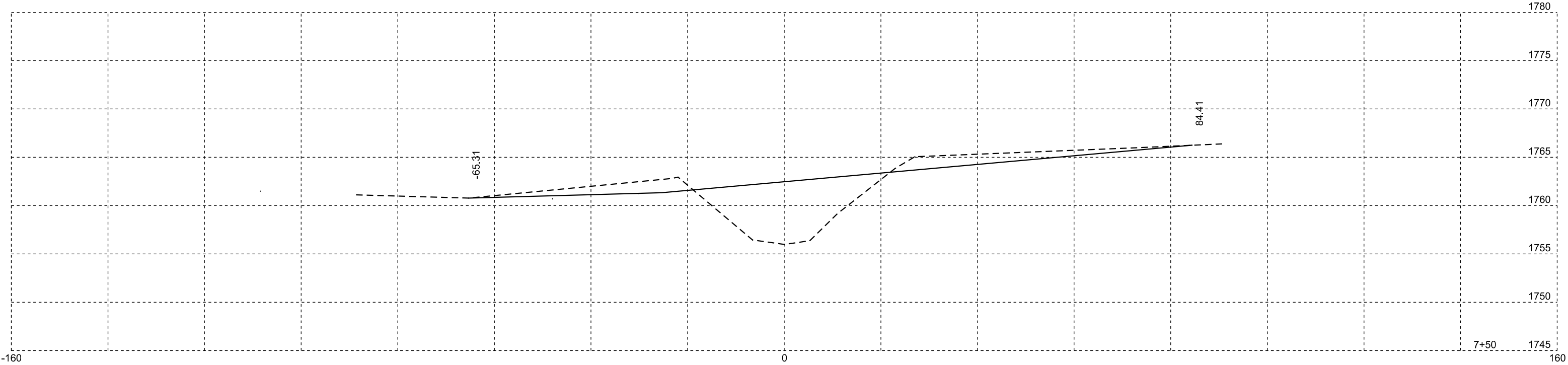
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Site 1



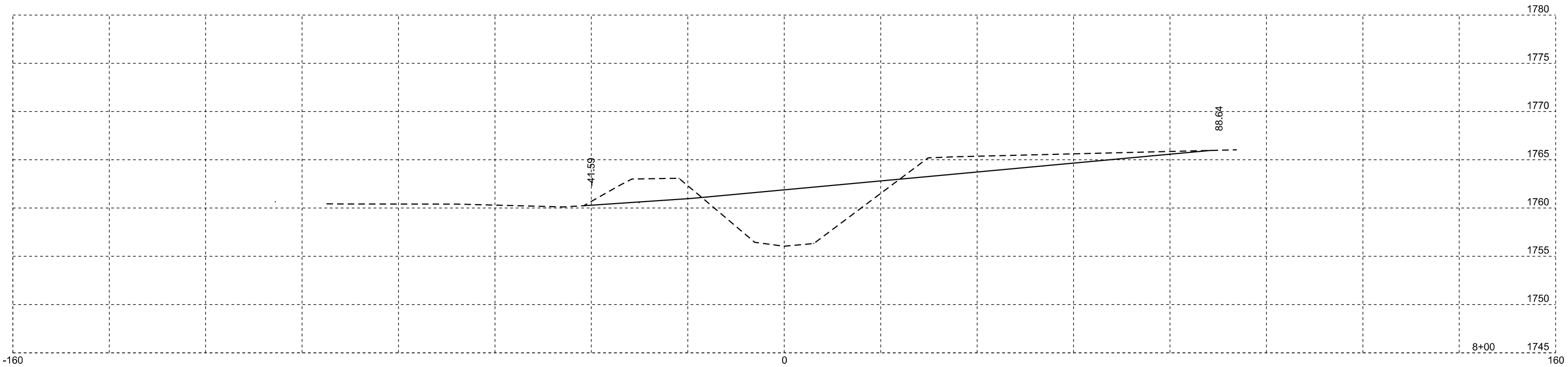
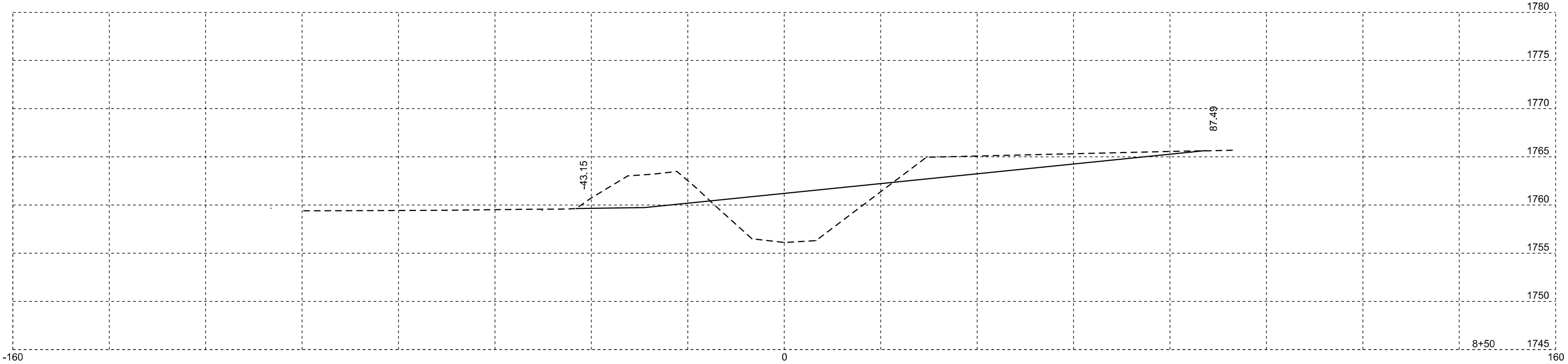
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Site 1



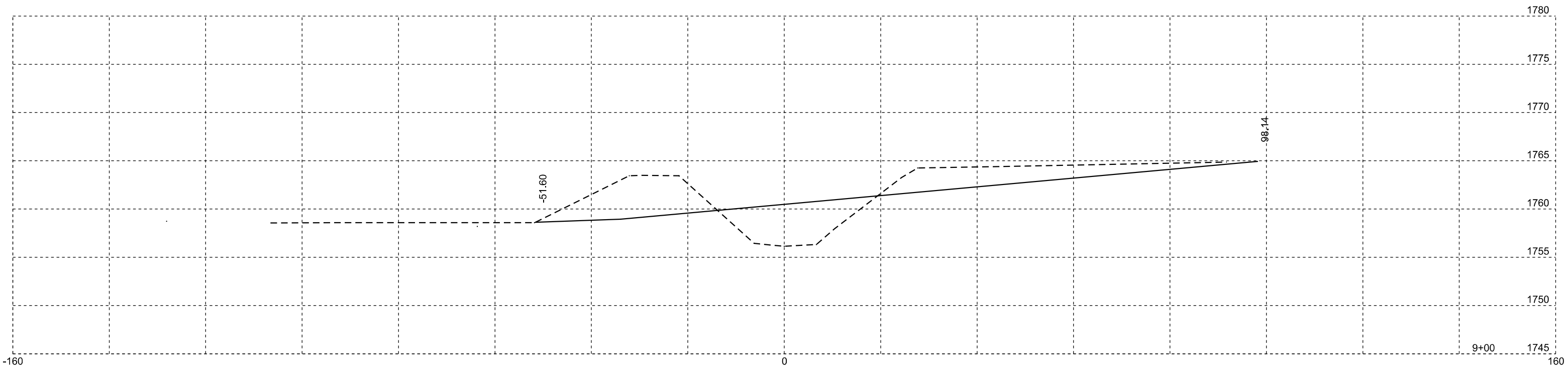
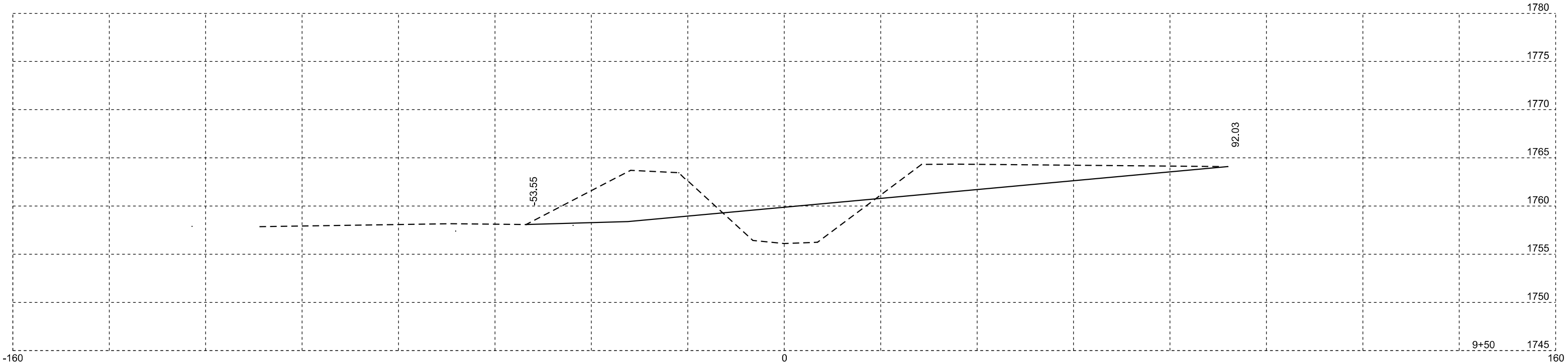
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Site 1



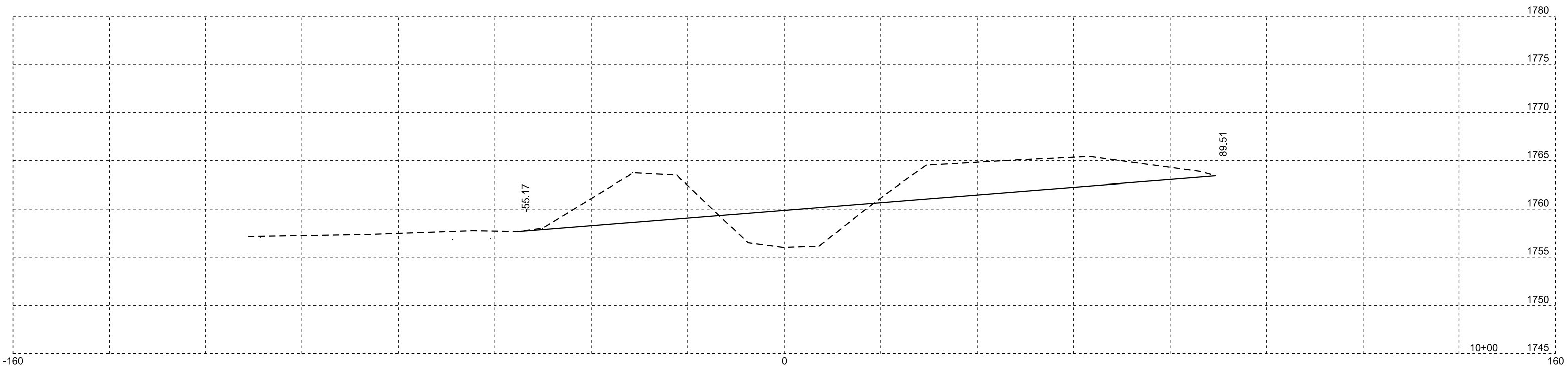
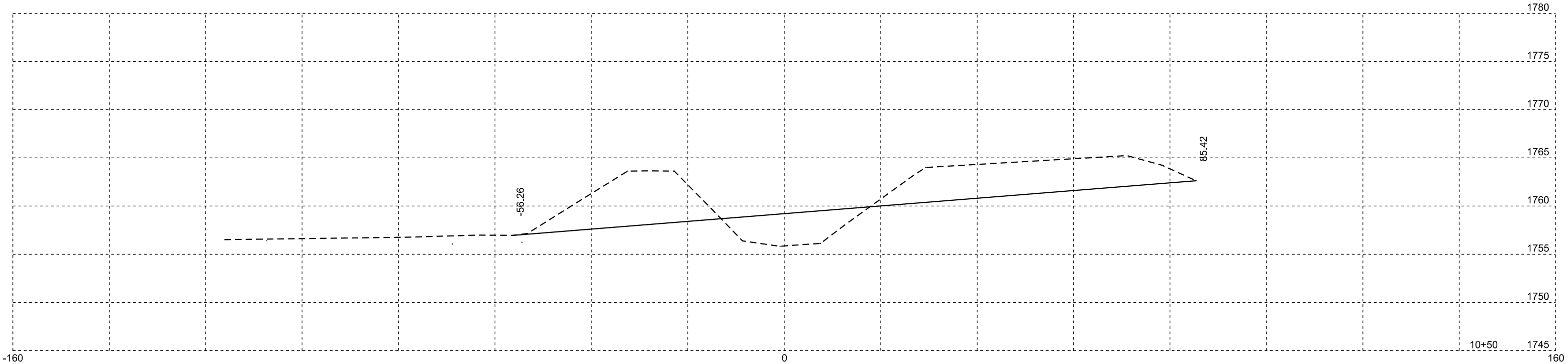
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Site 1



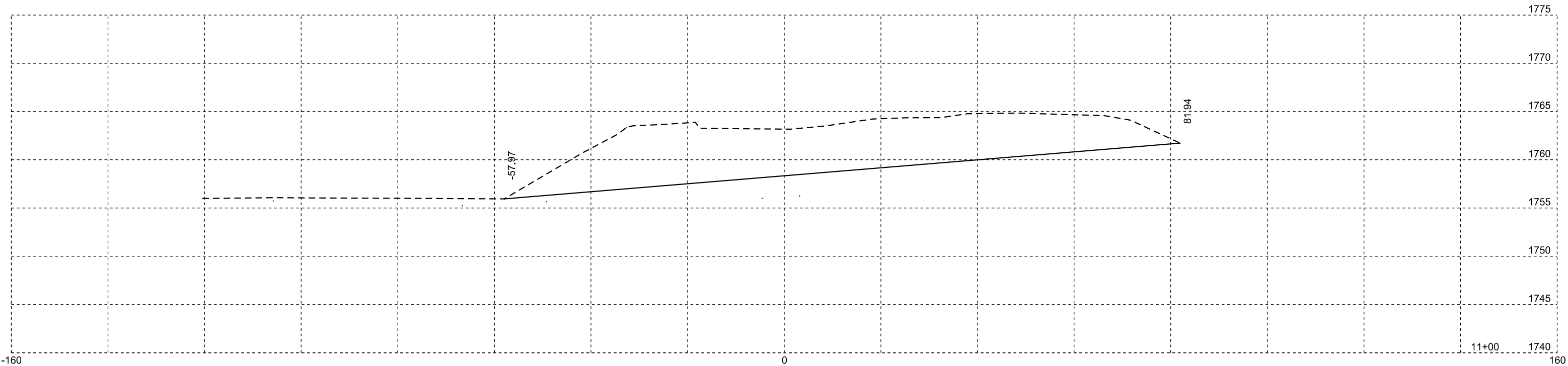
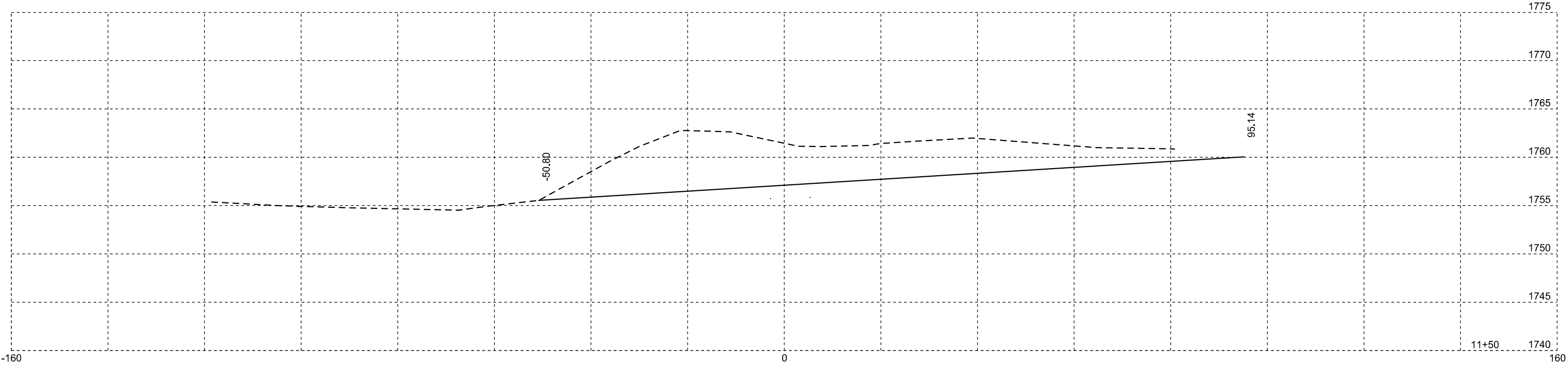
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Site 1



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| STATE OF SOUTH DAKOTA | PROJECT | SHEET NO. | TOTAL SHEETS |
| | 081-272 | 32 | 33 |

Site 1



Site 1

