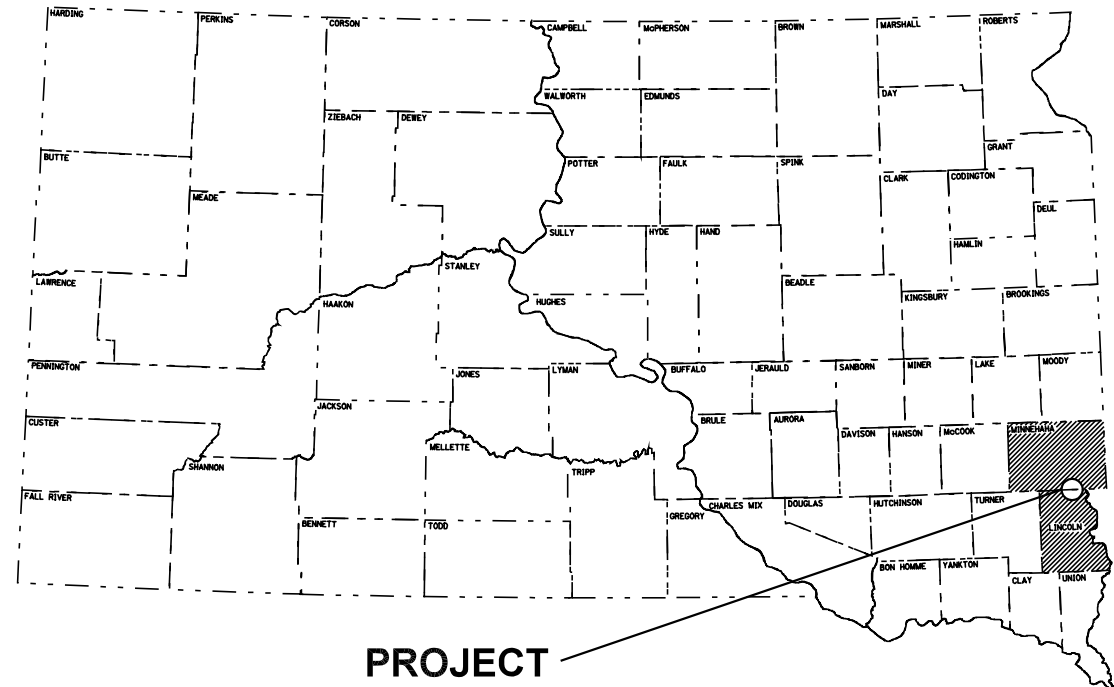


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PLOTTED FROM - TRM111118



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT P 0011(30)69
SD HIGHWAY 11
LINCOLN & MINNEHAHA COUNTIES
WIDENING FOR TURN LANES
PCN 00YD

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	1	56

Plotting Date: 21-MAR-2007

INDEX OF SHEETS

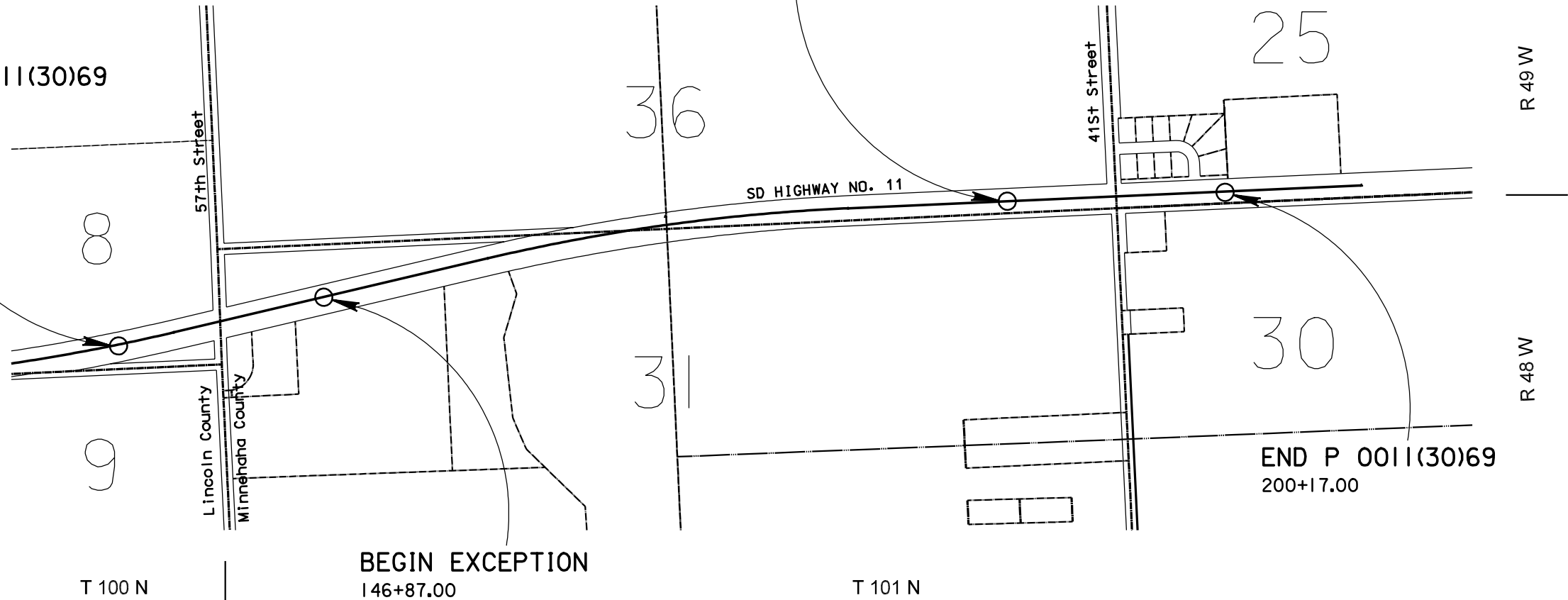
Sheet 1	Title Sheet
Sheet 2	Estimate of Quantities
Sheet 3	Typical Grading Section
Sheet 4	Typical Surfacing Section
Sheet 5	Rates of Materials, Table of Materials Quantities & Table of Additional Quantities
Sheets 6 to 11 (Incl.)	Plan Notes
Sheets 12 to 14 (Incl.)	Traffic Control
Sheet 15	Horizontal Alignment Data
Sheets 16 to 18 (Incl.)	Plan & Profile Layouts
Sheet 19	Corner Radii Detail
Sheet 20	Layout for Cold Milling
Sheets 21 & 22	Erosion Control Layouts
Sheets 23 to 26 (Incl.)	Standard Plates
Sheets 27 to 56 (Incl.)	Cross Sections



SIoux FALLS

END EXCEPTION
187+45.00

BEGIN P 0011(30)69
134+22.00



SCALES

	RURAL	SUBURBAN	URBAN
PLAN	1"=200'	1"=100'	1"=40'
PROFILE,	HORIZONTAL: 1"=200'	1"=100'	1"=40'
	VERTICAL: 1"=20'	1"=20'	1"=10'
CROSS SECTIONS	HORIZONTAL: 1"=40'	1"=20'	1"=20'
	VERTICAL: 1"=20'	1"=10'	1"=10'

DESIGN DESIGNATION

ADT (2006)	4200
ADT (2026)	5185
DHV	565
D	50%
T DHV	2.0%
T ADT	4.3%
V	70 mph

STORM WATER PERMIT

Major Stream: Big Sioux River
Area Disturbed: 3 Acres
Project Area: 10 Acres

GROSS LENGTH	6595.00 FEET	1.249 MILES
LENGTH OF EXCEPTIONS	4058.00 FEET	0.769 MILES
NET LENGTH	2537.00 FEET	0.480 MILES

PLOT NAME - TITL00YD

FILE - U:\REGIONAL\DESIGN\PRJ2007\LINC00YD\TITL00YD.DGN

ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E1690	Remove Sediment	100.0	CuYd
110E1693	Remove Erosion Control Wattle	695	Ft
110E1700	Remove Silt Fence	93	Ft
110E7510	Remove Pipe End Section for Reset	6	Each
120E0010	Unclassified Excavation	2,129	CuYd
120E0600	Contractor Furnished Borrow	3,858	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
260E1010	Base Course	1,887.0	Ton
260E1030	Base Course, Salvaged	3,747.0	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	3,591.0	Ton
320E1200	Asphalt Concrete Composite	2,118.0	Ton
332E0010	Cold Milling Asphalt Concrete	1,958	SqYd
450E0122	18" RCP Class 2, Furnish	12	Ft
450E0130	18" RCP, Install	12	Ft
450E0142	24" RCP Class 2, Furnish	34	Ft
450E0150	24" RCP, Install	34	Ft
450E0212	54" RCP Class 2, Furnish	22	Ft
450E0220	54" RCP, Install	22	Ft
450E0416	24" RCP Bend, Furnish	1	Each
450E0417	24" RCP Bend, Install	1	Each
450E9001	Reset Pipe End Section	6	Each
634E0010	Flagging	200	Hour
634E0020	Pilot Car	100	Hour
634E0100	Traffic Control	1,088	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	1.400	Mile
730E0204	Type C Permanent Seed Mixture	54	Lb
732E0100	Mulching	6.0	Ton
734E0154	12" Diameter Erosion Control Wattle	695	Ft
734E0604	High Flow Silt Fence	93	Ft
734E0610	Mucking Silt Fence	38	CuYd
734E0620	Repair Silt Fence	47	Ft

SPECIFICATIONS

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

PLOT SCALE - 160,000000:1,000000

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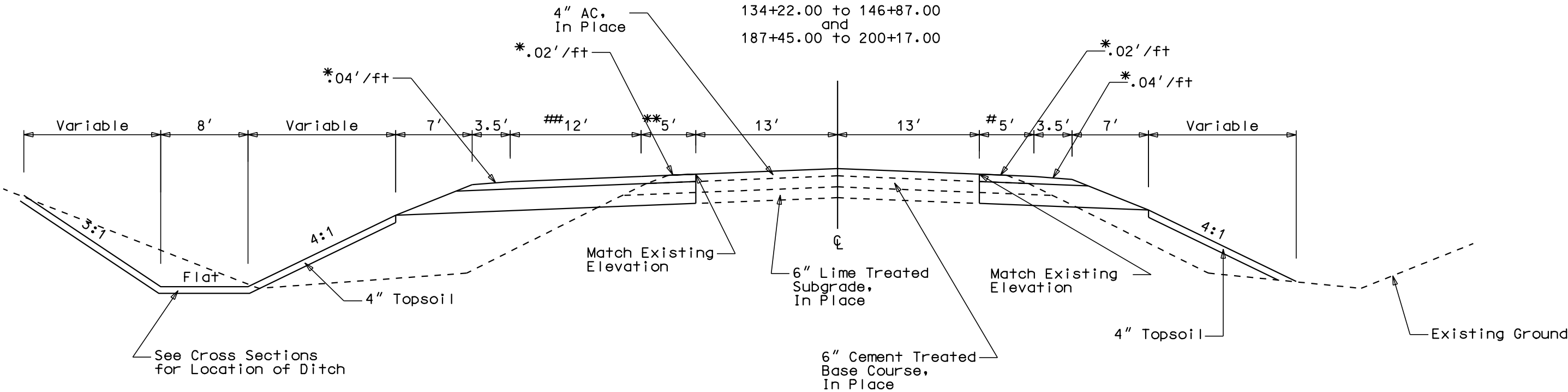
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0011(30)69	3	56

Plotting Date: 22-MAR-2007

TYPICAL GRADING SECTION

SD11

* Match Existing Superelevation
from 134+52 to 139+54



Transitions:

** From 0' at 134+22.00 to 5' at 138+12.00
From 5' at 142+97.00 to 0' at 146+87.00
From 0' at 187+45.00 to 5' at 191+35.00
From 5' at 196+27.00 to 0' at 200+17.00

From 0' at 134+22.00 to 5' at 138+12.00
From 5' at 142+97.00 to 0' at 146+87.00
From 0' at 187+45.00 to 5' at 191+35.00
From 5' at 196+26.00 to 0' at 200+17.00

From 12' at 194+27.00 to 12' at 196+27.00
From 12' at 196+27.00 to 0' 197+47.00

PLOT NAME - TYP

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PLOT SCALE - 6.24241211.000000

PLOTTED FROM - TRM111118

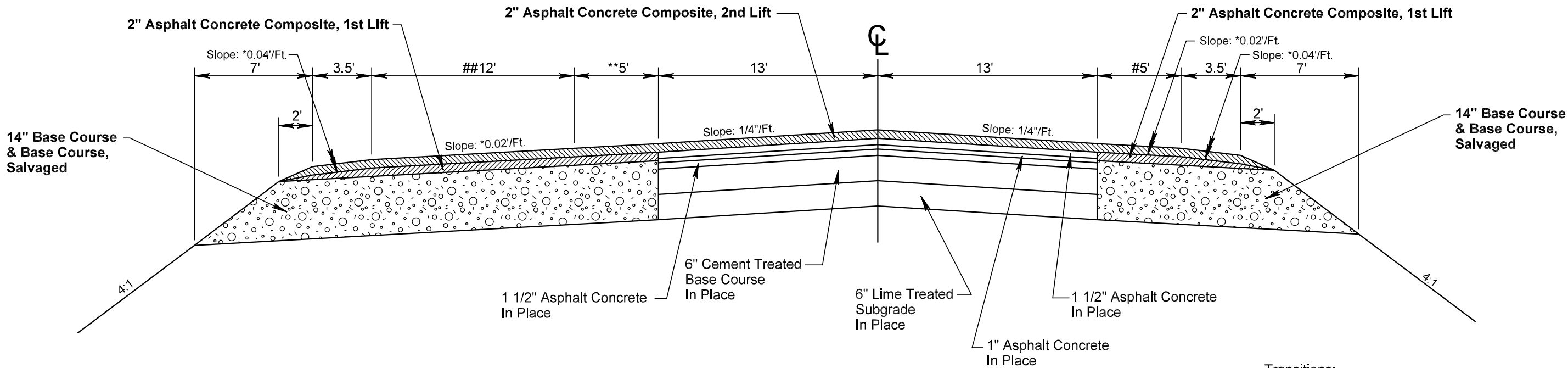
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	4	56

Plotting Date: 21-MAR-2007

TYPICAL SURFACING SECTION

STA. 134+22 TO STA. 146+87
STA. 187+45 TO STA. 200+17

* Match Existing Superelevation from
Sta. 134+52 to Sta. 139+54



Transitions:

- ** Sta. 134+22 to Sta. 138+12 (0' to 5')
Sta. 142+97 to Sta. 146+87 (5' to 0')
Sta. 187+45 to Sta. 191+35 (0' to 5')
Sta. 196+27 to Sta. 200+17 (5' to 0')
- # Sta. 134+22 to Sta. 138+12 (0' to 5')
Sta. 142+97 to Sta. 146+87 (5' to 0')
Sta. 187+45 to Sta. 191+35 (0' to 5')
Sta. 196+26 to Sta. 200+17 (5' to 0')
- ## Sta. 194+27 to Sta. 196+27 (12')
Sta. 196+27 to Sta. 197+47 (12' to 0')

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RATES OF MATERIALS

Section 1
@ 57th St.
Sta. 134+22.00 to Sta. 146+87.00

The Estimate of quantities is based on the following quantities of materials per station.

BASE COURSE AND BASE COURSE, SALVAGED	
Crushed Aggregate	138.27 Tons
ASPHALT CONCRETE COMPOSITE 1ST LIFT (ONE SHOULDER)	
Crushed Aggregate	4.02 Tons

The exact proportions of these materials will be determined on construction.

ASPHALT CONCRETE COMPOSITE 2ND LIFT	
Crushed Aggregate	43.17 Tons

The exact proportions of these materials will be determined on construction.

RATES OF MATERIALS

Section 2
@ 41st St.
Sta. 187+45.00 to Sta. 200+17.00

The Estimate of quantities is based on the following quantities of materials per station.

BASE COURSE AND BASE COURSE, SALVAGED	
Crushed Aggregate	138.27 Tons
ASPHALT CONCRETE COMPOSITE 1ST LIFT (ONE SHOULDER)	
Crushed Aggregate	4.02 Tons

The exact proportions of these materials will be determined on construction.

ASPHALT CONCRETE COMPOSITE 2ND LIFT	
Crushed Aggregate	43.17 Tons

The exact proportions of these materials will be determined on construction.

TABLE OF MATERIALS QUANTITIES

	BASE COURSE AND BASE COURSE, COURSE, SALVAGED	COLD MILLING ASPHALT CONCRETE	ASPHALT CONCRETE COMPOSITE
SECT.	Ton	SqYd	Ton
1	1749	-	648
2	1759	-	651
Subtotals:	3508	-	1299
Additional Quantities:	2126	1958	819
Totals:	5634	1958	2118

TABLE OF ADDITIONAL QUANTITIES

	BASE COURSE AND BASE COURSE, COURSE, SALVAGED	COLD MILLING ASPHALT CONCRETE	ASPHALT CONCRETE COMPOSITE 1ST LIFT	ASPHALT CONCRETE COMPOSITE 2ND LIFT
LOCATION				
WITHIN RIGHT-OF-WAY	Ton	SqYd	Ton	Ton
Mainline Transitions	Width			
Sec. 1 134+22 to 138+12	0' to 10'	169	-	24
Sec. 1 138+12 to 142+97	10'	419	-	60
Sec. 1 142+97 to 146+87	10' to 0'	169	-	24
Sec. 2 187+45 to 191+35	0' to 10'	169	-	24
Sec. 2 191+35 to 196+27	10'	425	-	61
Sec. 2 196+27 to 200+17	10' to 0'	169	-	24
Sec. 2 194+27 to 196+27	12'	250	-	36
Sec. 2 196+27 to 197+47	12' to 0'	62	-	9
Begin/End Section/Project	-	924	-	-
Resurface to End of Radius				
4 Intersecting Streets	274	1034	-	295
Pads				
2 Farm Entrances	20	-	-	-
TOTALS:	2126	1958	262	557

NOTES:

The tonnage shown above for Base Course and Base Course, Salvaged Asphalt Mix is based on a compacted depth of 14 inches for Mainline Transitions and 2 inches for other locations.

The tonnage shown above for Asphalt Concrete Composite - 1st Lift is based on a compacted depth of 2 inches.
The tonnage shown above for Asphalt Concrete Composite - 2nd Lift is based on a compacted depth of 2 inches except for Intersecting Streets where it is based on compacted depth of 4 inches.

The above quantities are included in the Estimate of Quantities.

UTILITIES

Fiber optic cable exists along the project. The approximate location is shown in the plans.

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

COMPLETION DATE

All work shall be completed on or before June 29, 2007.

SURFACING THICKNESS DIMENSIONS

Plans tonnage will be applied even though the thickness may vary from that shown on the plans.

At those locations where material must be placed to achieve a required elevation, plans tonnage may be varied to achieve the required elevation.

WASTE DISPOSAL SITE

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

Construction/demolition debris may not be disposed of within the State (Right-of-Way) ROW.

All construction/demolition debris generated by this project shall be cleaned up and disposed of by the Contractor.

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 Engineer.

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

1. Construction/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/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. 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.
2. 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.

WASTE DISPOSAL SITE (CONTINUED)

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.

Cost for 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 contract unit prices for the various items.

WATER QUALITY

Surface Water Quality Standards

The Contractor is advised that the South Dakota Surface Water Quality Standards, administered by the Department of Environment and Natural Resources (DENR), apply to this project.

Surface Water Discharge Permit

If construction dewatering is required, the Contractor is required to obtain a Surface Water Discharge Permit from DENR. Contact DENR (Surface Water Program) at (605) 773-3351.

Storm Water Construction Permit

The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the DENR 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, and are the responsibility of the Contractor.

SHRINKAGE FACTOR: Embankment +35%

GRADING OPERATIONS

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

The Contractor shall not withdraw water directly from streams in watersheds of the James, Vermillion, and Big Sioux Rivers without prior approval from the SDDOT Environmental Office, contact Dave Graves at (605) 773-5727. Water may be obtained from other sources not directly connected to these streams such as stock dams, wetlands, or wells. This note does not relieve the Contractor of his/her responsibility to obtain the necessary permits from other agencies such as DENR (South Dakota Department of Environment and Natural Resources) and COE (Corps of Engineers).

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

GRADING OPERATIONS (CONTINUED)

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

Generally, all shallow inlet and outlet ditches as noted on the plan sheets shall be cut with a 10-foot wide bottom with 5:1 backslopes. However, the Engineer may direct the Contractor to adjust the ditch width for proper alignment with the drainage structure.

Temporary fence and/or permanent fence shall be placed ahead of the grading operation unless otherwise directed by the Engineer.

On superelevated curves the grade referred to on the profile is the centerline grade elevation prior to calculating superelevation.

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to	Station	Excavation	* Contractor Furnished Borrow	Total Excavation
		(CuYd)	(CuYd)	(CuYd)
134+22 L	146+87 L	0	985	985
134+22 R	146+87 R	20	551	551
187+45 L	200+17 L	182	1299	1481
187+45 R	200+17 R	27	1023	1050
Totals:		229	3858	4067
Excavation		229		
Undercut		0		
Salvaged Asphalt Mix and Granular Base Material (from cut sections)		1900		
Salvaged Asphalt Mix and Granular Base Material (from fill sections)		0		
Unclassified Excavation		2129		

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

When plan quantities are used for payment, the Unclassified Excavation quantity above shall be used for final payment. If final cross sections are taken in the field, add all of the above items using the following procedures:

The Excavation quantities from individual balances and the table above have been reduced by the volume of in place surfacing that will be removed.

CONTRACTOR FURNISHED BORROW

The Contractor shall provide a suitable site for Contractor Furnished Borrow material.

The borrow material shall be approved by the Engineer.

Cost for water shall be incidental to the contract unit price per cubic yard for Contractor Furnished Borrow.

The basis for payment for Contractor Furnished Borrow will be plans quantity.

PERMANENT SEEDING AND MULCHING (CONTINUED)

Type C Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Flintlock, Rodan, Rosanna	16
Canada Wildrye	Mandan	2
Total:		18

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

The areas to be seeded and mulched are estimated at 3 acres.

DRILLS

In addition to the drills specified in Section 730 of the Standard Specifications, other types of drills including no-till drills will be allowed as long as the seed is planted at a depth of ¼” to ½”.

EROSION CONTROL WATTLE

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

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

The erosion control wattle provided shall be from the list shown below:

Product	Manufacturer
AEC Premier Straw Wattles	American Excelsior Company Arlington, TX Phone: 1-800-777-7645 www.amerexcel.com
Straw Logs	Western Excelsior Corporation Mancos, CO Phone: 1-800-833-8573 www.westernexcelsior.com
Earth Saver Rice Straw Wattles	R.H. Dyck Inc. Winters, CA Phone: 1-530-795-4751 www.earth-savers.com
Stenlog	ECB Bioproducts St. Andrews, MB Phone: 1-866-317-3346 www.erosioncontrolblanket.com

CONTRACTOR FURNISHED BORROW (CONTINUED)

The Contractor is responsible for obtaining all required permits and clearances for the borrow site.

To obtain State Historic Preservation Office (SHPO) clearance, a cultural resources survey may need to be conducted by a qualified archaeologist. The Contractor shall arrange and pay for this survey. In lieu of a cultural resources survey, the Contractor could request a literature search on the site (contact Jim Donohue, State Archaeological Research Center (1-605-394-1937) for the literature search) and provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that no artifacts have been found on the site.

To facilitate prompt SHPO response, the Contractor should submit either a cultural resources survey report or the results of the literature search, a legal description of the site, a topographical map with the site clearly marked, along with evidence of prior site disturbance to: Dave Graves, SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (1-605-773-5727). Allow 30 days from the date this information is submitted to the Environmental Engineer for SHPO approval.

Restoration of the Contractor furnished borrow site shall be the responsibility of the Contractor.

SALVAGE AND STOCKPILE ASPHALT MIX AND GRANULAR BASE MATERIAL

An estimated 3591 Tons (1900 Cubic Yards) of asphalt mix and granular base material shall be salvaged from the shoulders and stockpiled at a site satisfactory to the Engineer.

The quantity of salvage asphalt mix and granular base material may vary from the plans. No adjustment will be made to the contract unit price for variations of the quantity of Salvage and Stockpile Asphalt Mix and Granular Base Material.

It shall be the Contractor's responsibility to stockpile the material in such a manner that the material remains granular and reusable.

If the stockpile solidifies, it shall be the Contractor's responsibility and cost to grind/crush the material back to usable form.

BASE COURSE, SALVAGED

Base Course, Salvaged shall be obtained from the stockpile(s) provided by the Contractor and may be used without further testing.

If necessary, water shall be added to the Base Course, Salvaged to bring the material to ±2% of optimum moisture at the time of compaction.

Material obtained from Salvage and Stockpile Asphalt Mix and Granular Base Material and Cold Milling Asphalt Concrete operations shall be used as Base Course, Salvaged provided it meets the specifications outlined in Sections 270.2 and 332.2 of the Standard Specifications, respectively.

Base Course, Salvaged placed on the mainline and/or shoulders shall be compacted according to Section 260.3.B of the Standard Specifications.

WATER FOR COMPACTION

Cost of water for compaction of the Base Course, Salvaged shall be incidental to the contract unit prices for the various contract items. The moisture required at the time of compaction will be 6%± unless otherwise directed by the Engineer.

COLD MILLING ASPHALT CONCRETE

Cold Milling Asphalt Concrete operations ahead of asphalt concrete laydown will be limited by particular job conditions and be subject to approval of the Engineer.

The requirement for a traveling stringline shall be waived.

If resurfacing as per the typical section cannot be placed immediately after cold milling at project ends etc, then temporary asphalt mix ramps shall be placed as directed by the Engineer. Cost for placing and removing the temporary ramps shall be incidental to the contract unit prices for the various items.

All intersecting roads or streets shall be milled to a 2” depth. In addition to the 2” milling, the asphalt streets shall be milled an additional 2” (4” total) at the end of their new radius tapering 10’ away to 0” (2” total).

COLD MILLING TAPERS

In order to construct the new surfacing flush with the asphalt concrete, it will be necessary to taper the depth of cold milling according to the layout for Cold Milling Tapers.

The surface shall be milled full roadway width.

Cost for this work shall be included in the contract unit price per square yard for Cold Milling Asphalt Concrete.

Taper depth of Cold Milling at locations shown below:

STA	LOCATION	SIZE
134+21.93	Begin Project	80’ long X 26’ wide
146+86.79	Begin Exception	80’ long X 26’ wide
187+45.30	End Exception	80’ long X 26’ wide
200+16.55	End Project	80’ long X 26’ wide

ASPHALT CONCRETE COMPOSITE

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements of the Standard Specifications or Special Provisions for Class E, Type 1; Class G, Type 1; Asphalt Concrete Class Q-LVT; Asphalt Concrete Class Q-MVT; Asphalt Concrete Class Q-HVT; Asphalt Concrete Superpave 12.5 mm; Class Q2 Asphalt Concrete; Class Q3 Asphalt Concrete or Class Q4 Asphalt Concrete specifications.

All other requirements in the Standard Specifications for Asphalt Concrete Composite shall apply.

The asphalt binder used in the mixture shall be PG 58-28, PG 64-22, PG 64-28 or PG 64-34 Asphalt Binder.

PERMANENT SEEDING AND MULCHING

The areas to be seeded and mulched include all disturbed areas within the right-of-way resulting from the work required by this contract.

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.

South Dakota native grown seed is an acceptable alternative to any of the seed varieties listed below. South Dakota native grown seeds used as an alternative shall conform to the same specification and requirements for that individual seed type.

TABLE OF EROSION CONTROL WATTLE

Station	L/R	Diameter (Inch)	Quantity (Ft)
134+22	R	12	50
134+22	L	12	25
136+22	R	12	50
136+22	L	12	25
138+22	R	12	50
138+22	L	12	25
143+00	R	12	50
143+00	L	12	25
188+00	R	12	50
188+00	L	12	35
189+50	R	12	50
189+50	L	12	25
191+00	R	12	50
191+00	L	12	25
192+50	R	12	50
192+50	L	12	20
195+00	R	12	35
195+00	L	12	10
196+50	R	12	35
196+50	L	12	10
Total:			695

HIGH FLOW SILT FENCE

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

<http://www.state.sd.us/Applications/HC54ApprovedProducts/main.asp>

High 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 734.05 for details.

TABLE OF HIGH FLOW SILT FENCE

Station	L/R	Quantity (Ft)
141+06	L	21
141+89	R	18
194+08	R	18
194+18	L	18
198+76	L	18
Total:		93

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. Quantities for all silt fence left in place will be deducted from the quantity for the bid item Remove Silt Fence.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP 350 crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

Sufficient traffic control devices have been included in these plans to sign two workspaces. If the Contractor elects to work on additional sites simultaneously, the cost for additional traffic control shall be incidental to the contract unit price per unit for Traffic Control.

TEMPORARY PAVEMENT MARKING

Temporary road markers may be used. If used, the Contractor shall remove and dispose of them after Permanent Pavement Marking is applied. Method of removal shall be nondestructive to the road surface and shall be accomplished within one week of completion of the Permanent Pavement Marking.

Cost for furnishing, applying, uncovering, removing and disposing of the Temporary Road Markers shall be included in the contract unit price per foot for Temporary Pavement Marking.

In the absence of other traffic control, Flagger symbol signs (W20-7a) and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights shall be positioned on the roadway shoulder in advance of workers for both directions of traffic during the installation and removal of temporary road markers. The traffic control device used shall be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1), a Workers symbol sign (W21-1a) or a BE PREPARED TO STOP (W3-4) warning sign shall be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work shall be approved by the Engineer.

Cost for the traffic control to install and remove the Temporary Road Markers shall be incidental to the contract unit price per foot for Temporary Pavement Marking.

PERMANENT PAVEMENT MARKING

State forces will apply permanent pavement marking paint. The Contractor shall notify the Mitchell Region Traffic Office at least two weeks in advance of project completion to allow scheduling of permanent pavement marking application.

STORM WATER POLLUTION PREVENTION PLAN

(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** 10 Acres **(4.2 1.b.)**
 - **Total Area To Be Disturbed** 3 Acres **(4.2 1.b.)**
 - **Existing Vegetative Cover (%)** 60%
 - **Soil Properties:** AASHTO Soil Classification A6 & A7 **(4.2 1. d.)**
 - **Name of Receiving Water Body/Bodies** Big Sioux River **(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.)

 - **Special sequencing requirements** (see sheet).
 - **Install stabilized construction entrance(s).**
 - **Install perimeter protection where runoff sheets from the site.**
 - **Install channel and ditch bottom protection.**
 - **Clearing and grubbing.**
 - **Remove and store topsoil.**
 - **Stabilize disturbed areas.**
 - **Install utilities, storm sewers, curb and gutter.**
 - **Install inlet and culvert protection after completing storm drainage and other utility installations.**
 - **Complete final grading.**
 - **Complete final paving and sealing of concrete.**
 - **Complete traffic control installation and protection devices.**
 - **Reseed areas disturbed by removal activities.**

- ❖ **EROSION AND SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))**

(Check all that apply)

 - **Stabilization Practices (See Detail Plan Sheets)**
 - ☒ Temporary or Permanent Seeding
 - ☐ Sodding
 - ☐ Planting
 - ☒ Mulching (Straw or Cellulose Fiber)
 - ☐ Erosion Control Blankets or Mats
 - ☐ Vegetation Buffer Strips
 - ☐ Roughened Surface (e.g. tracking)
 - ☐ Gabions-Gabion Mattress
 - ☐ Other

- **Structural Temporary Erosion and Sediment Controls**
 - ☒ Silt Fence
 - ☐ Straw Bale Check
 - ☐ Temporary Berm
 - ☐ Temporary Slope Drain
 - ☒ Straw Wattles or Rolls
 - ☐ Diversion Channels/Swales
 - ☐ Channel Liners (TRM)
 - ☐ Stone Rip Rap Sheet
 - ☐ Rock Check Dams
 - ☐ Sediment Traps/Basins
 - ☐ Inlet Protection
 - ☐ Outlet Protection
 - ☐ Surface Inlet Protection
 - ☐ Curb Inlet Protection
 - ☐ Stabilized Construction Entrances
 - ☐ 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 Section 3 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.

- **Maintenance and Inspection Practices(Continued)**
 - 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, 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.

➤ **Product Specific Practices (6.8) (Continued)**

- 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 Response (4.2 2 c.(2)) (Continued)**

- 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 reportable spill is a quantity of 25 gallons or more or any spill of oil which: 1) violates water quality standards, 2) produces a "sheen" on a surface water, or 3) causes a sludge or emulsion must be reported immediately to the National Response Center .
 - Any spill of oil or hazardous substance to waters of the State must be reported immediately by telephone to the SD DENR.

❖ **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.

Dave Graves

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: Fax:

➤ **SDDOT Project Engineer**

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

➤ **SD DENR Contact Spill Reporting**

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

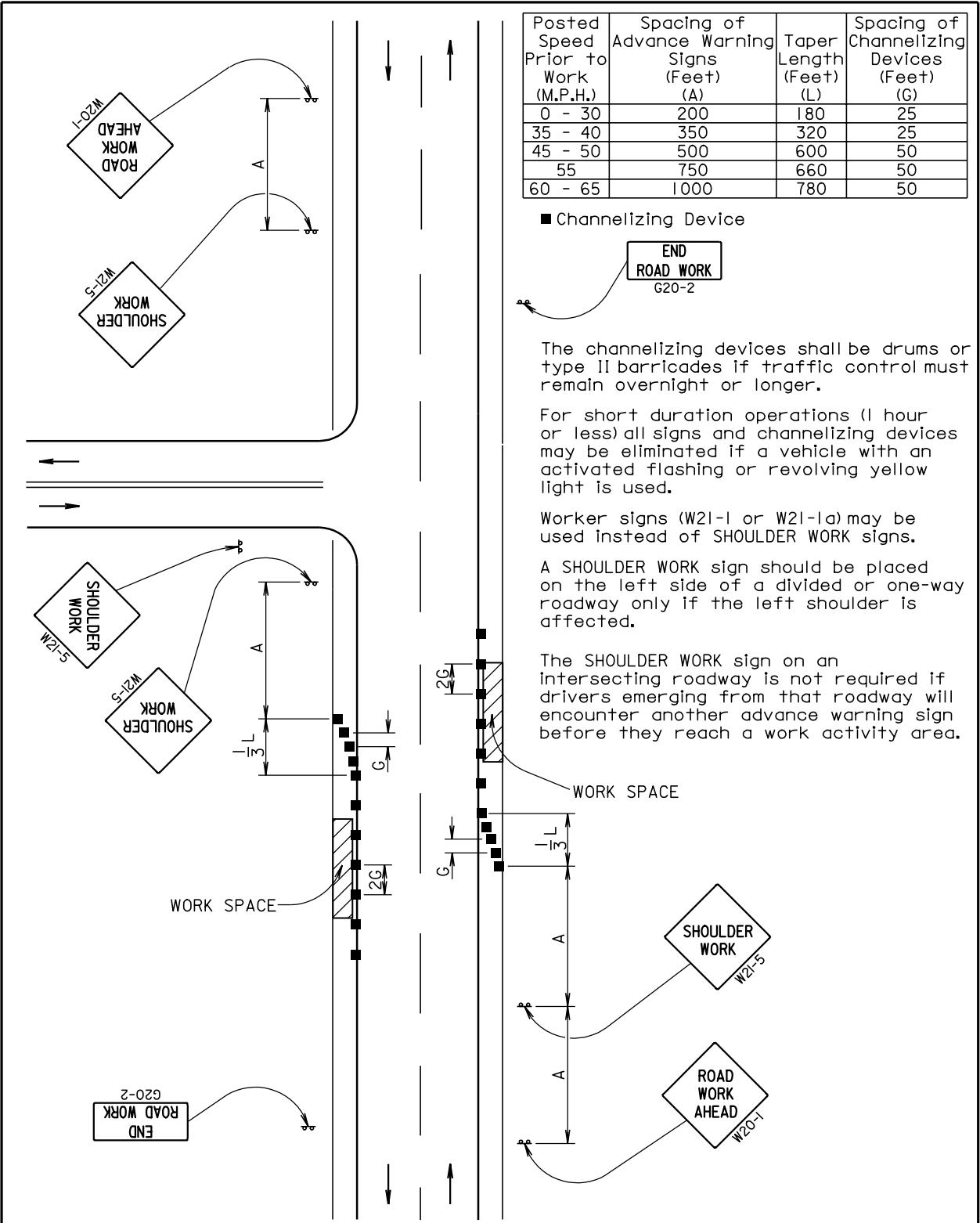
➤ **SD DENR Contact for Hazardous Materials.**

- (605) 773-3153

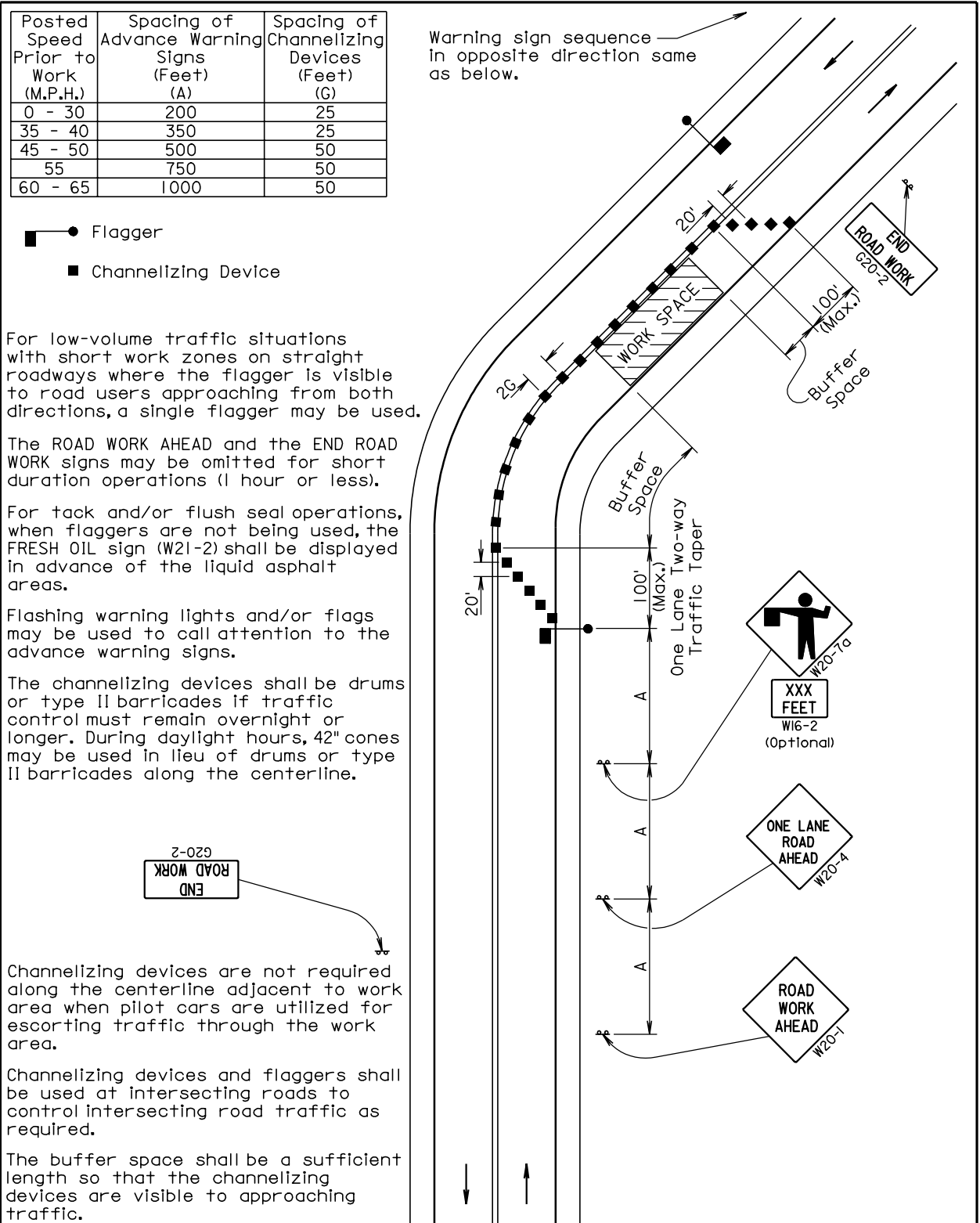
➤ **National Response Center Hotline**

- (800) 424-8802.

Plotting Date: 05-MAR-2007

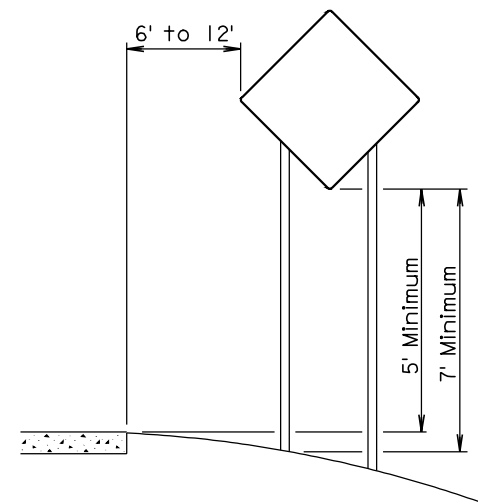


July 1, 2005

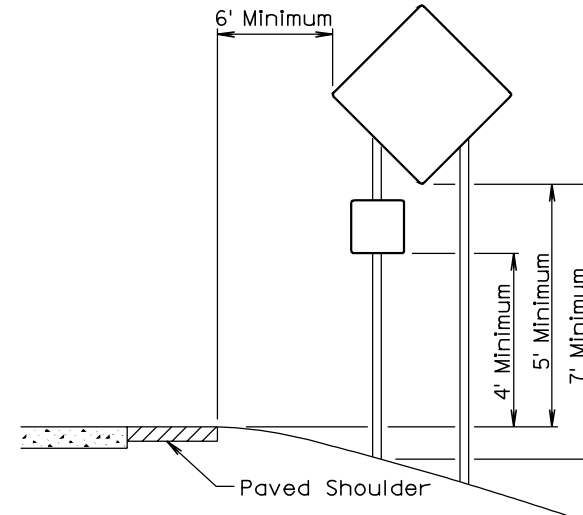


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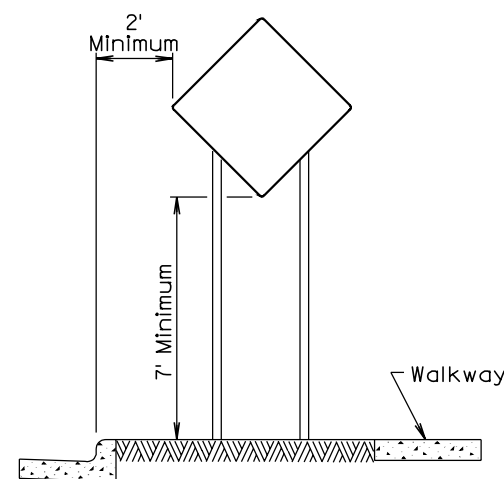
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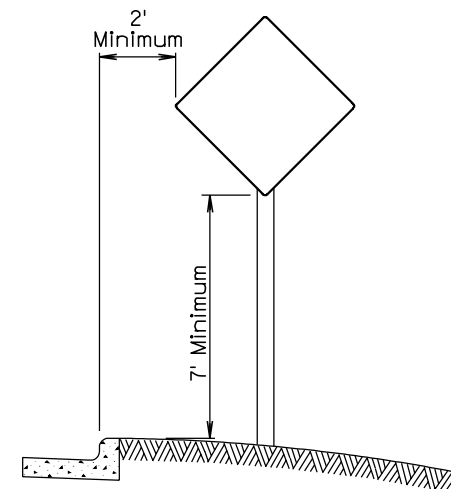
RURAL DISTRICT



RURAL DISTRICT WITH
SUPPLEMENTAL PLATE



URBAN DISTRICT



URBAN DISTRICT

December 23, 2003

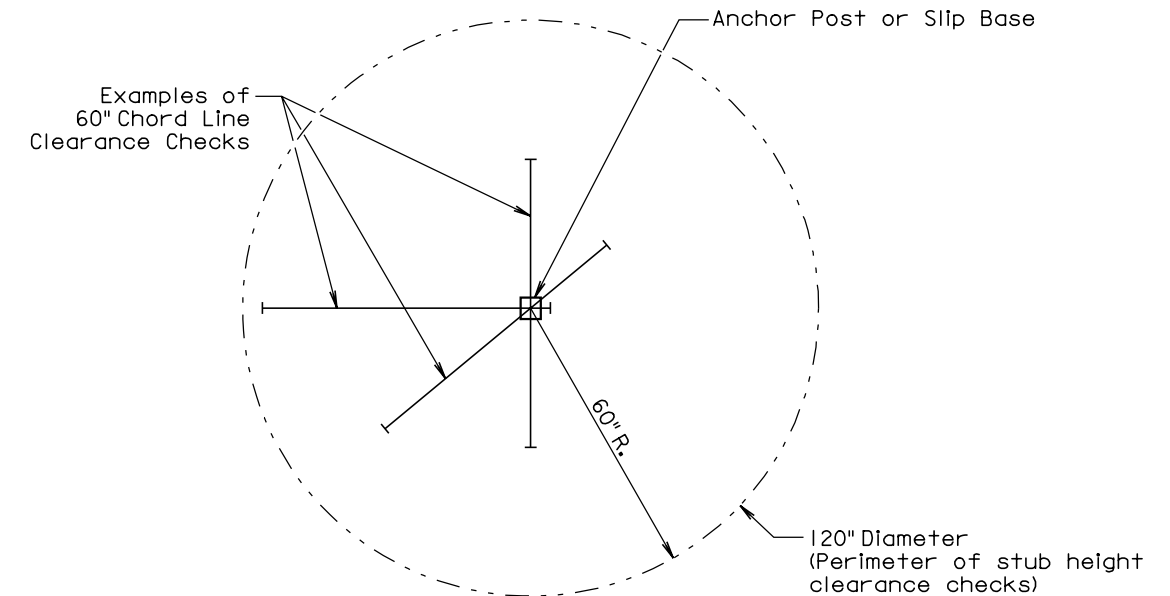
Published Date: 1st Qtr. 2007

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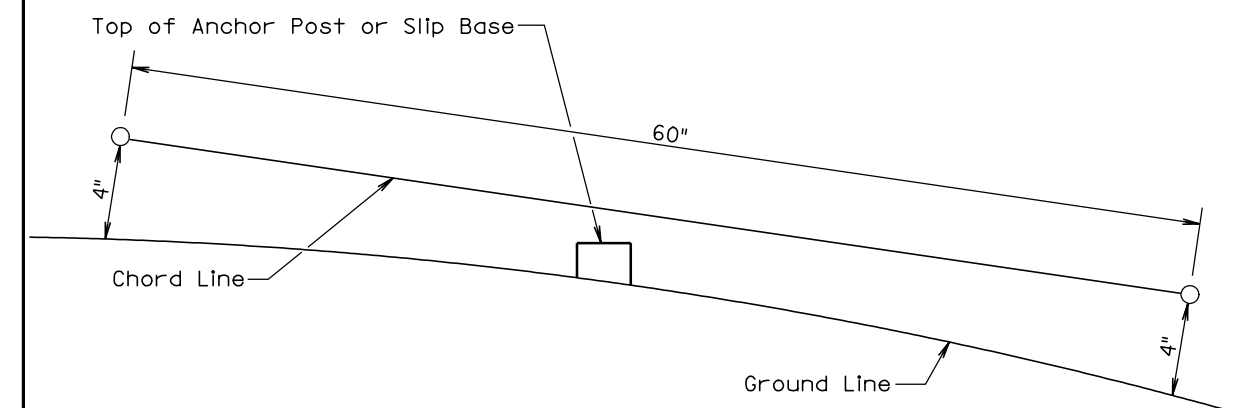
BREAKAWAY SIGN SUPPORTS
(Typical Construction Signing)

PLATE NUMBER
634.85

Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

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

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

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

July 1, 2005

Published Date: 1st Qtr. 2007

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BREAKAWAY SUPPORT STUB CLEARANCE

PLATE NUMBER
634.99

Sheet 1 of 1

ITEMIZED LIST FOR TRAFFIC CONTROL

SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS	
E5-1	36" x 32"	EXIT GORE SIGN	8	24	136	
G20-2	36" x 18"	END ROAD WORK		17		
R1-1	48" x 48"	STOP		34		
R1-2	48" x 48"	YIELD		34		
R2-1	30" x 36"	SPEED LIMIT ____		23		
R2-5a	30" x 36"	REDUCED SPEED AHEAD		23		
R4-7	24" x 30"	KEEP RIGHT (SYMBOL)		18		
R5-1	48" x 48"	DO NOT ENTER		34		
R5-1a	48" x 36"	WRONG WAY		29		
R10-6	24" x 36"	STOP HERE ON RED		20		
R11-2	48" x 30"	ROAD CLOSED	8	27	272	
R11-3a	60" x 30"	ROAD CLOSED ____ MILES AHEAD LOCAL TRAFFIC ONLY		30		
R11-4	60" x 30"	ROAD CLOSED TO THRU TRAFFIC		30		
SW12-1b	120" x 60"	HIGHWAY WORKERS GIVE'EM A BRAKE		80		
W1-1	48" x 48"	LEFT OR RIGHT TURN ARROW		34		
W1-2	48" x 48"	LEFT OR RIGHT CURVE ARROW		34		
W1-3	48" x 48"	REVERSE TURN SIGN (LEFT OR RIGHT)		34		
W1-4a	48" x 48"	REVERSE CURVE SIGN (LEFT OR RIGHT)		34		
W3-1a	48" x 48"	STOP AHEAD (SYMBOL)		34		
W3-2a	48" x 48"	YIELD AHEAD (SYMBOL)		34		
W3-3	48" x 48"	SIGNAL AHEAD (SYMBOL)		34		
W3-5	48" x 48"	SPEED REDUCTION (____ MPH)		34		
W4-1	48" x 48"	MERGE (SYMBOL)		34		
W4-2	48" x 48"	LEFT OR RIGHT LANE ENDS (SYMBOL)		34		
W5-2	48" x 48"	NARROW BRIDGE		34		
W5-3	48" x 48"	ONE LANE BRIDGE		34		
W7-3a	30" x 24"	NEXT ____ MILES		18		
W8-1	36" x 36"	BUMP		27		
W8-6	48" x 48"	TRUCK CROSSING		34		
W8-7	36" x 36"	LOOSE GRAVEL		27		
W8-9a	48" x 48"	SHOULDER DROP-OFF		34		
W8-11	48" x 48"	UNEVEN LANES		34		
W13-1	24" x 24"	ADVISORY SPEED PLATE		16		
W20-1	48" x 48"	ROAD WORK AHEAD		34		136
W20-2	48" x 48"	DETOUR AHEAD		34		
W20-3	48" x 48"	ROAD CLOSED AHEAD		34		272
W20-4	48" x 48"	ONE LANE ROAD AHEAD	34			
W20-5	48" x 48"	LT. OR RT. LANE CLOSED AHEAD	34	272		
W20-7a	48" x 48"	FLAGGER	34			
W20-7b	48" x 48"	BE PREPARED TO STOP	34	272		
W21-1a	48" x 48"	WORKERS (SYMBOL)	34			
W21-2	36" x 36"	FRESH OIL	27			
W21-3	48" x 48"	ROAD MACHINERY AHEAD	34			
W21-5	48" x 48"	SHOULDER WORK	34			
W21-5a	48" x 48"	RIGHT SHOULDER CLOSED	34			
W21-5b	48" x 48"	RIGHT SHOULDER CLOSED AHEAD	34			
SPECIAL	30" x 24"	FINES DOUBLED	18			
*****	12" x 36"	TYPE III OBJECT MARKER	15			
*****	*****	TYPE III BARRICADE - 8 FT. SINGLE SIDED	40			
*****	*****	TYPE III BARRICADE - 8 FT. DOUBLE SIDED	56			
TOTAL UNITS			1088			

HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	15	56

SD Highway 11 Alignment

TYPE	Station		Northing (Y)	Easting (X)
POB	100+00.00		442989.2935	2945904.9308
		TL= 1654.9596 N 2^41'00" W		
PC	116+54.96		444642.4387	2945827.4555
PI	127+16.53	Dc= 0^30'00"L Delta= 10^35'05"	445702.8409	2945777.7594
PT	137+72.05		446736.0712	2945534.1253
		TL= 1895.6756 N 13^16'04" W		
PC	156+67.73		448581.1467	2945099.0593
PI	167+41.68	Dc= 0^30'00"R Delta= 10^42'27"	449626.4298	2944852.5832
PT	178+09.37		450699.3071	2944804.6059
		TL= 3020.4027 N 2^33'38" W		
POE	208+29.77		453716.6943	2944669.6734

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/96) SF = 0999957052

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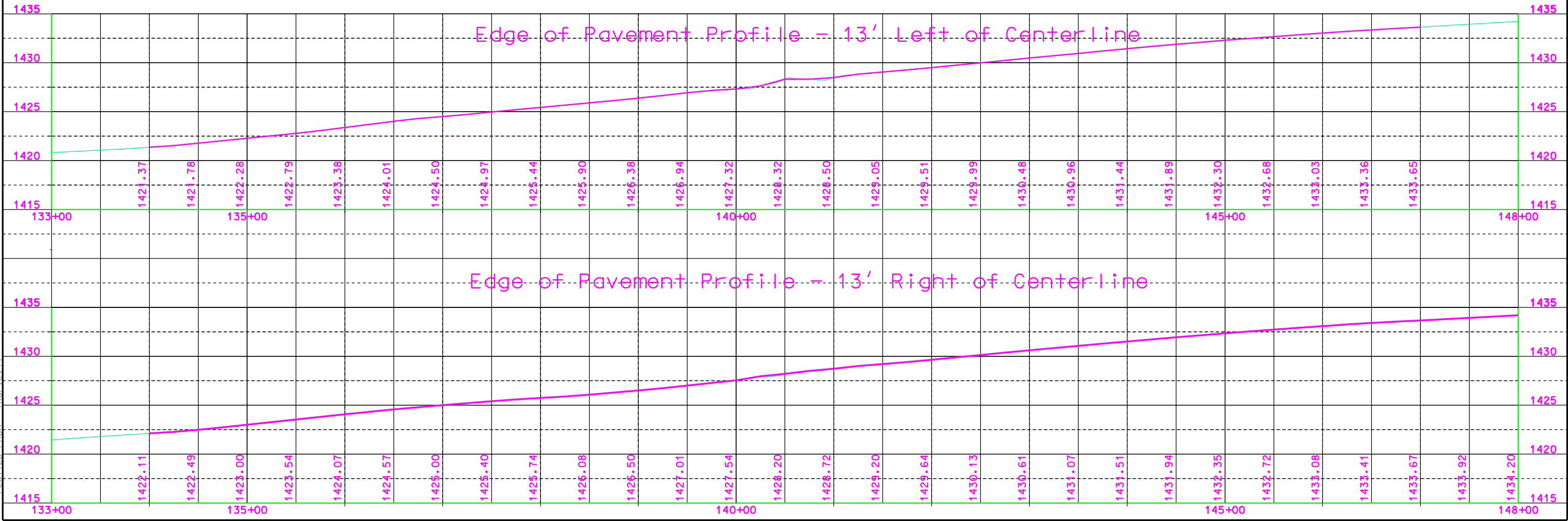
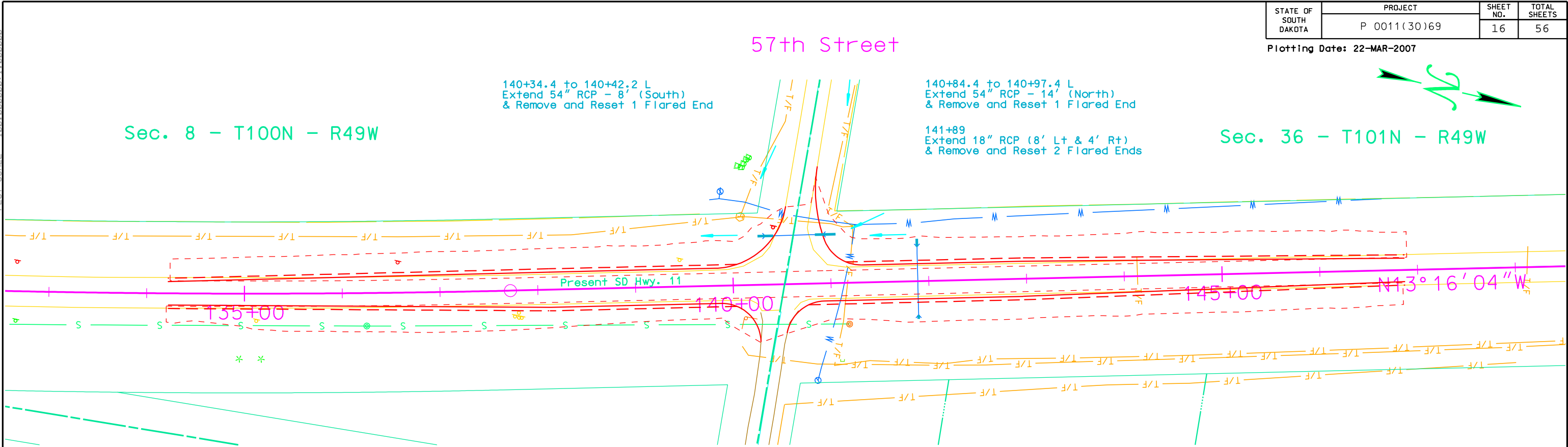
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PLOT NAME - 133

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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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Plotting Date: 22-MAR-2007



PLOT SCALE - 100,000,000:1,000,000

PLOTTED FROM - TRSF12144

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	17	56

Plotting Date: 22-MAR-2007

193+24.6 to 193+50.2 L
Extend 24" RCP - 26' (South)
& Remove and Reset 1 Flared End

194+06.2 to 194+17.7 L
Extend 24" RCP - 12' (North)
with 24"-8' RC Pipe
& 1-24"-20° RC Bend
& Remove and Reset 1 Flared End

41st Street Sec. 25 - T101N - R49W



Sec. 36 - T101N - R49W

Present SD Hwy. 11

N2°33'38"W

195+00

200+00

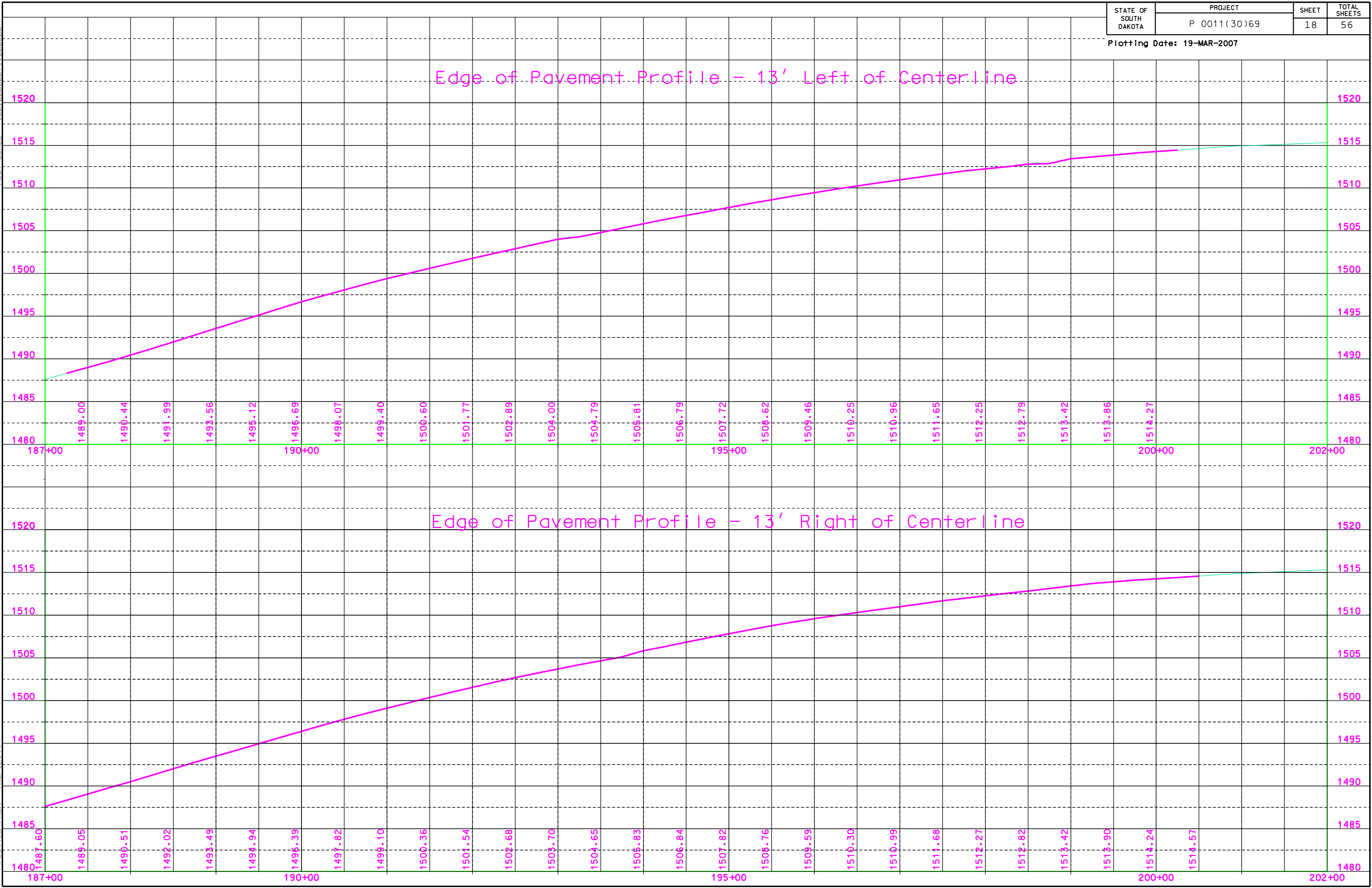
190+00

Sec. 31 - T101N - R48W

Sec. 30 - T101N - R48W

PLOT NAME - 187

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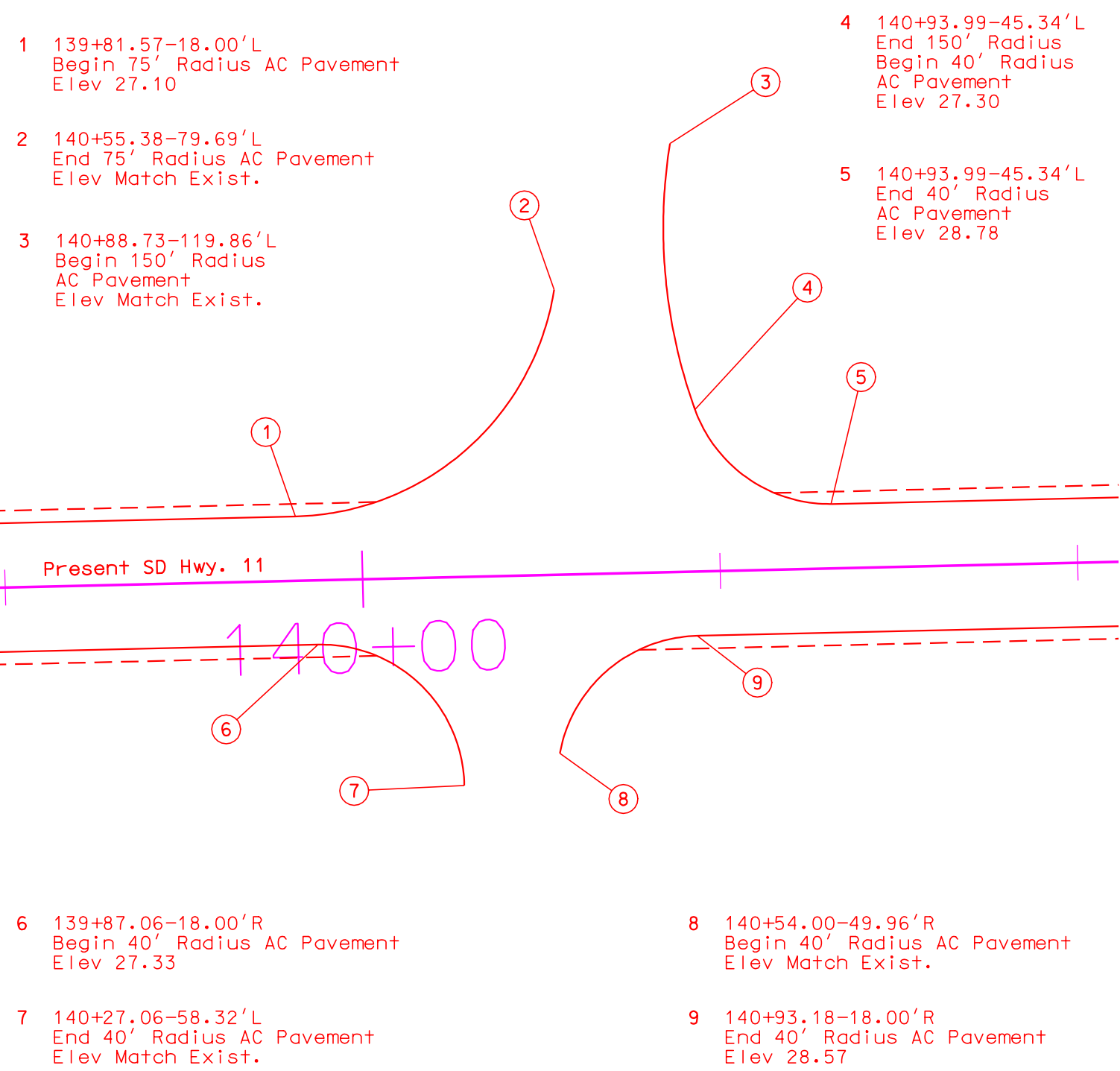
Corner Radii Detail

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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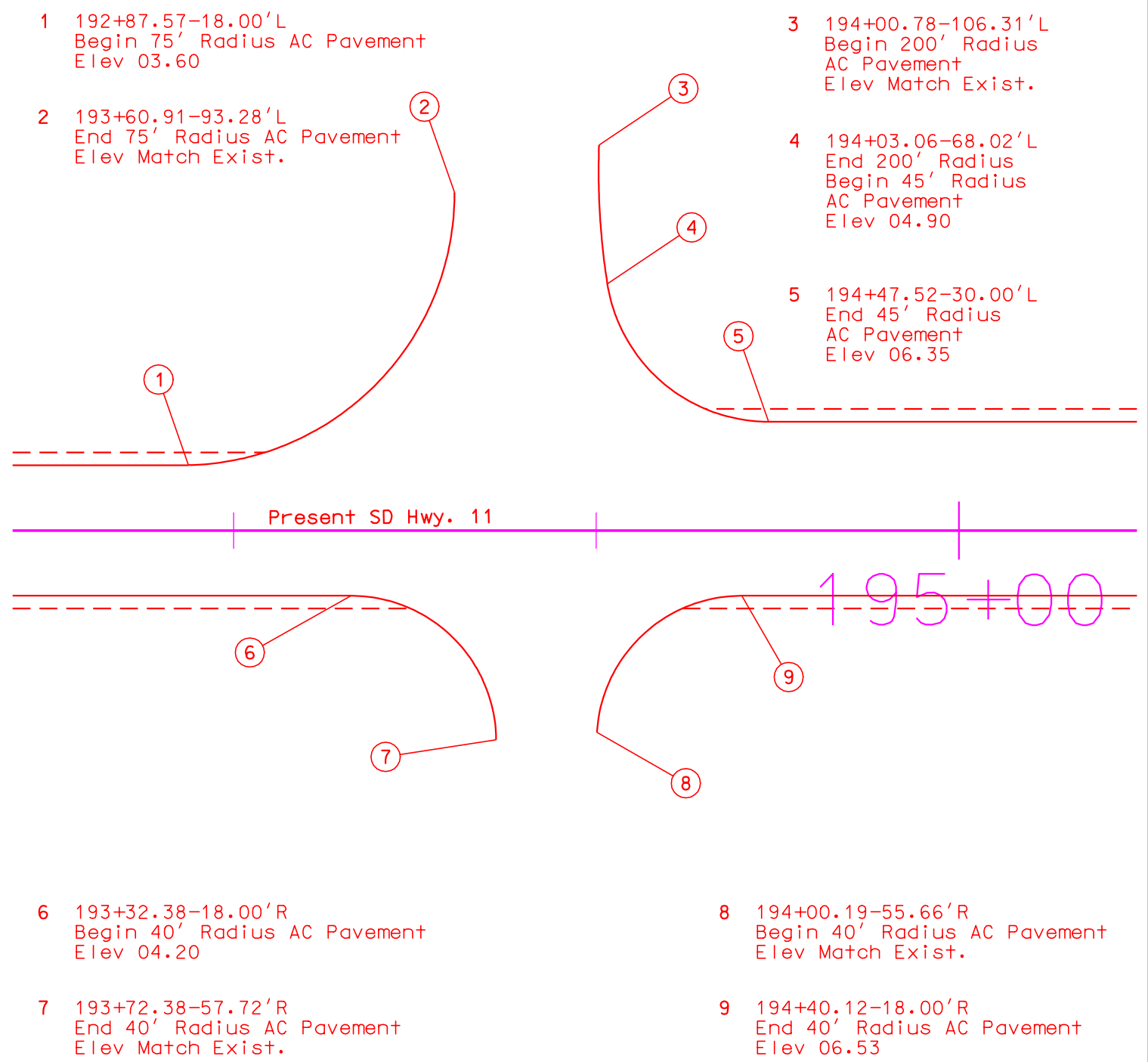
Plotting Date: 22-MAR-2007



57th Street



41st Street



PLOT NAME - CORNER RADII
FILE - U:\RD\PR\N\MINN07\N\CORNER RADII.DGN

PLOT SCALE - 1.000002:1.000000

PLOTTED FROM - TRM111118

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	20	56

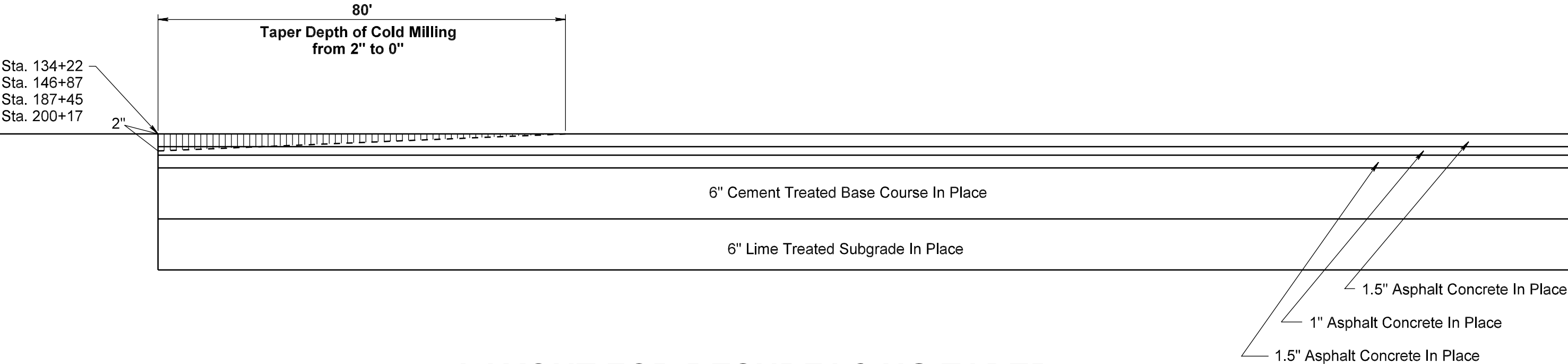
Plotting Date: 21-MAR-2007

PLOT NAME - MILL00YD

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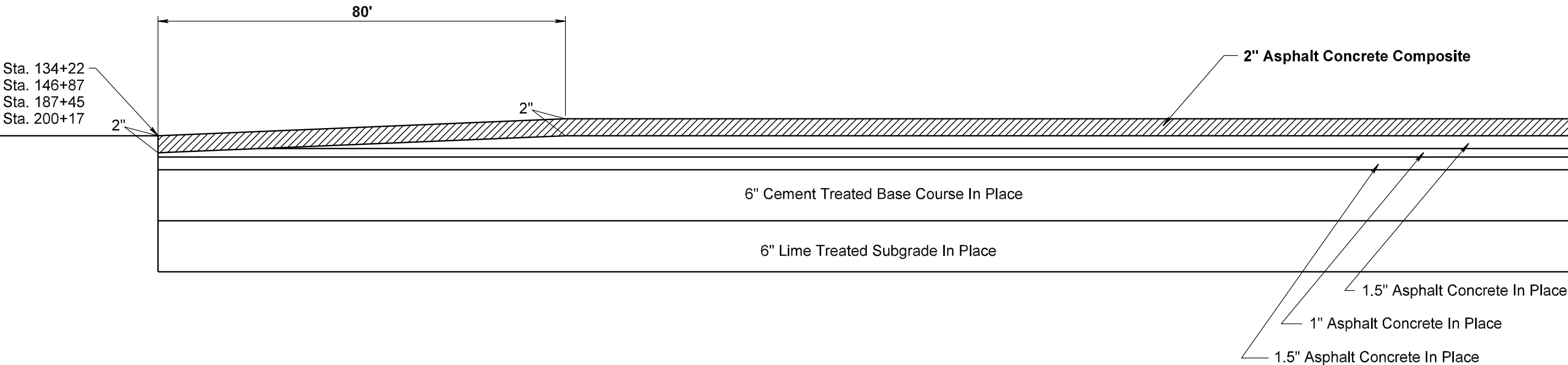
LAYOUT FOR COLD MILLING TAPER

AT Sta. 134+22, Sta. 146+87, Sta. 187+45 & Sta. 200+17



LAYOUT FOR RESURFACING TAPER

AT Sta. 134+22, Sta. 146+87, Sta. 187+45 & Sta. 200+17



PLOT SCALE - 80.000000:1.000000

PLOTTED FROM - TRM111118

57th ST. EROSION CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	21	56

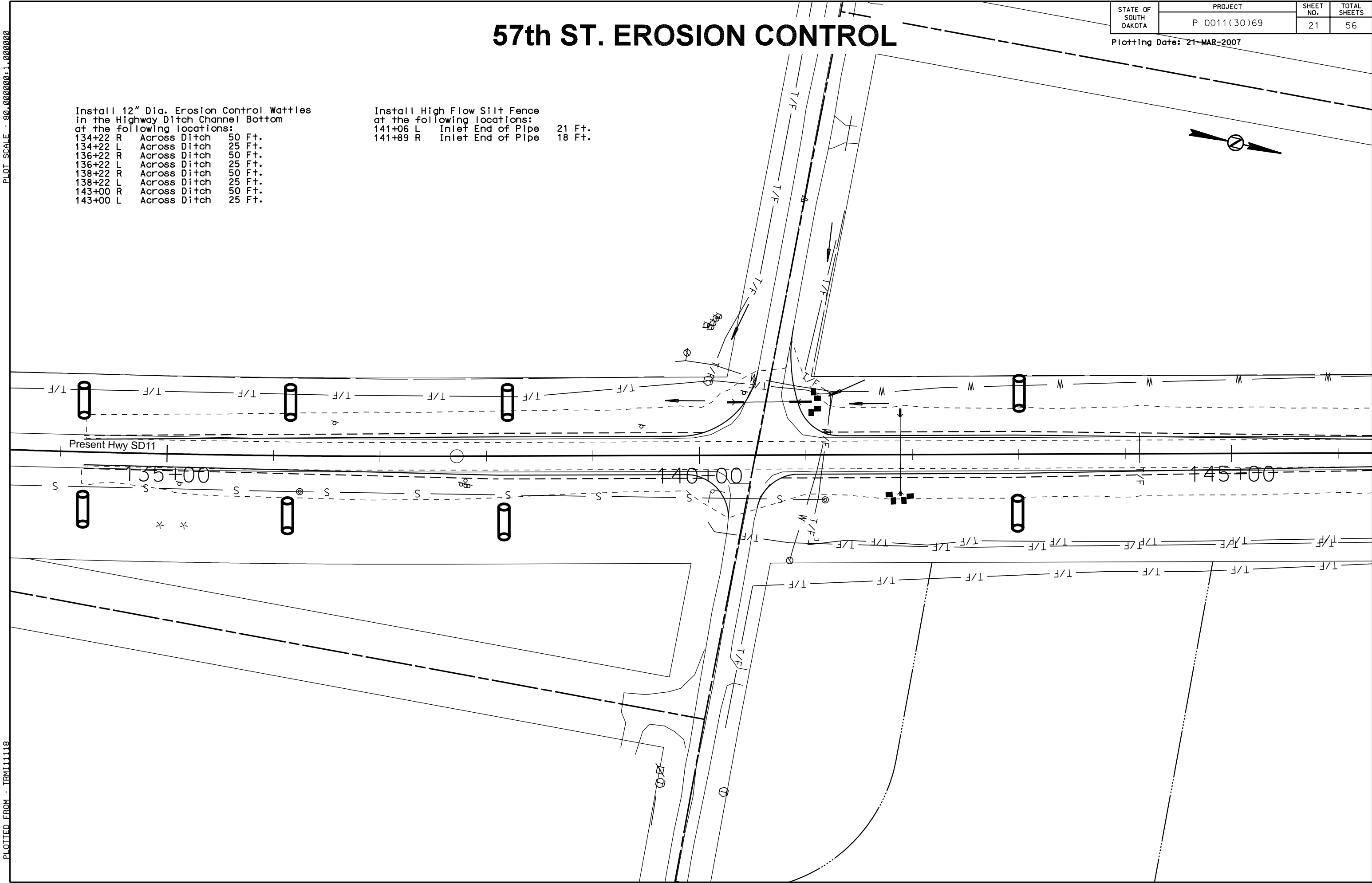
Plotting Date: 21-MAR-2007

Install 12" Dia. Erosion Control Wattles
in the Highway Ditch Channel Bottom
at the following locations:

134+22 R	Across Ditch	50 Ft.
134+22 L	Across Ditch	25 Ft.
136+22 R	Across Ditch	50 Ft.
136+22 L	Across Ditch	25 Ft.
138+22 R	Across Ditch	50 Ft.
138+22 L	Across Ditch	25 Ft.
143+00 R	Across Ditch	50 Ft.
143+00 L	Across Ditch	25 Ft.

Install High Flow Silt Fence
at the following locations:

141+06 L	Inlet End of Pipe	21 Ft.
141+89 R	Inlet End of Pipe	18 Ft.



FILE - U:\REGION\DESIGN\PRJ2007\LINC00YD\EROSIONCONTROL00YD.DGN PLOT NAME - ECL00YD57TH

PLOT SCALE - 80.000000:1.000000

PLOTTED FROM - TRM111118

41st ST. EROSION CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	22	56

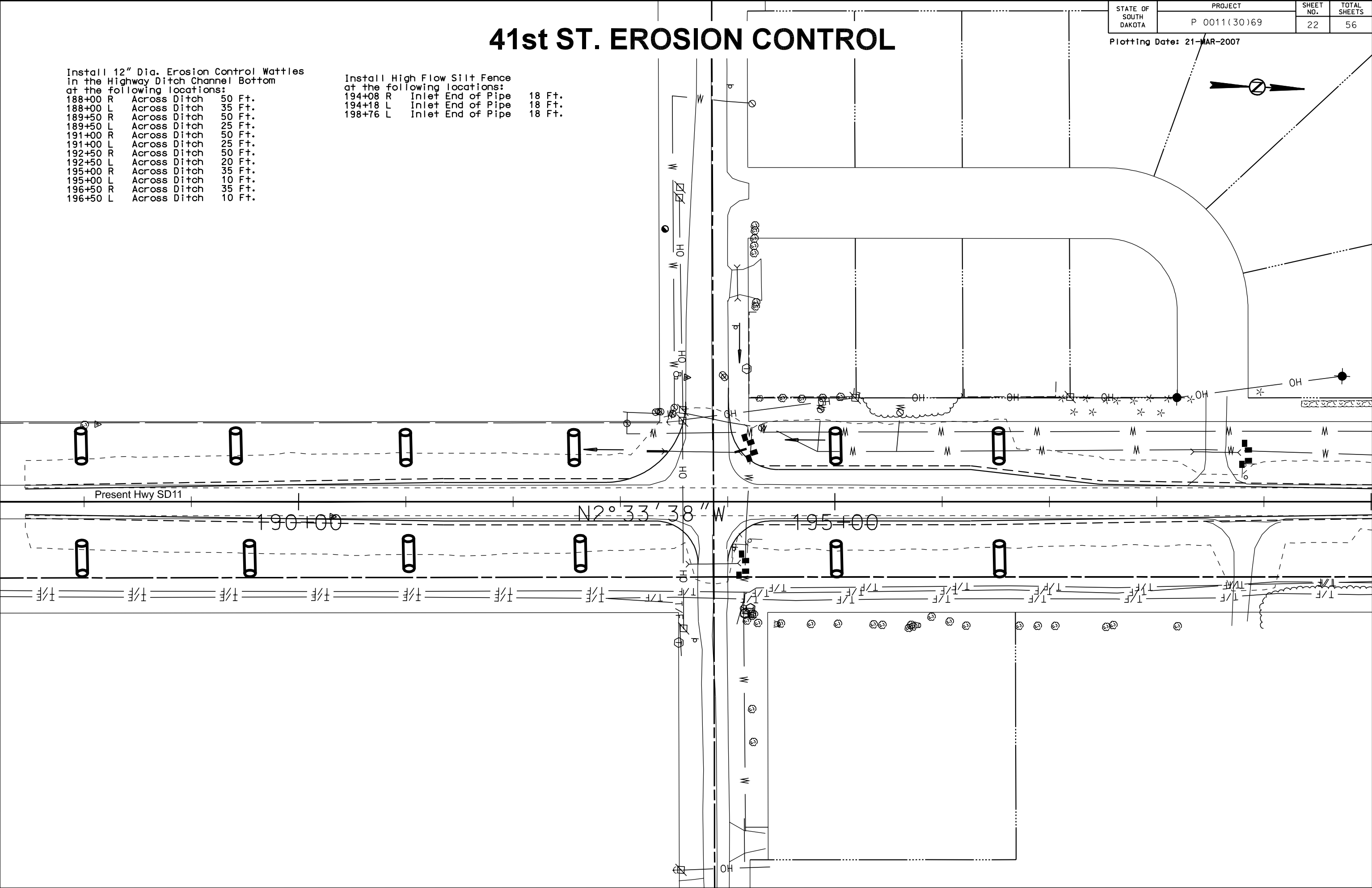
Plotting Date: 21-MAR-2007

Install 12" Dia. Erosion Control Wattles
in the Highway Ditch Channel Bottom
at the following locations:

188+00 R	Across Ditch	50 Ft.
188+00 L	Across Ditch	35 Ft.
189+50 R	Across Ditch	50 Ft.
189+50 L	Across Ditch	25 Ft.
191+00 R	Across Ditch	50 Ft.
191+00 L	Across Ditch	25 Ft.
192+50 R	Across Ditch	50 Ft.
192+50 L	Across Ditch	20 Ft.
195+00 R	Across Ditch	35 Ft.
195+00 L	Across Ditch	10 Ft.
196+50 R	Across Ditch	35 Ft.
196+50 L	Across Ditch	10 Ft.

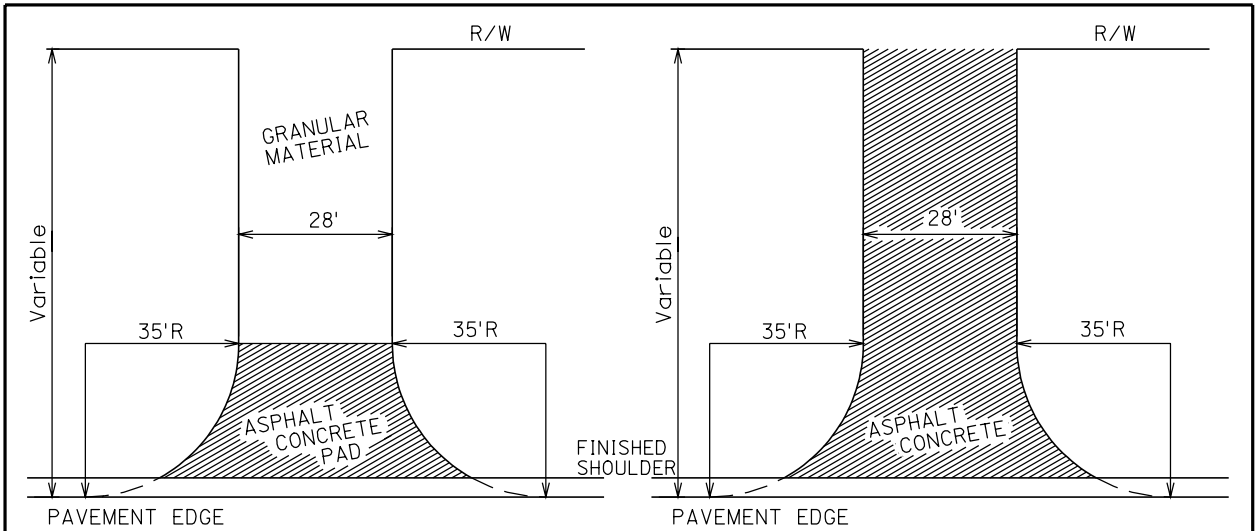
Install High Flow Silt Fence
at the following locations:

194+08 R	Inlet End of Pipe	18 Ft.
194+18 L	Inlet End of Pipe	18 Ft.
198+76 L	Inlet End of Pipe	18 Ft.



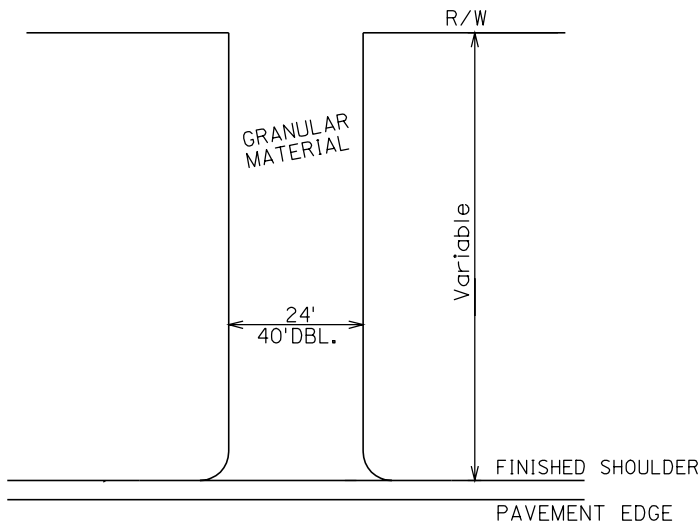
FILE - U:\REGION\DESIGN\PRJ2007\L INC\00YD\EROSIONCONTROL\00YD.DGN PLOT NAME - EC00YD41ST

Plotting Date: 21-MAR-2007



INTERSECTING ROAD
NO ASPHALT CONCRETE SURFACING
BEYOND R/W

INTERSECTING ROAD
ASPHALT CONCRETE SURFACING
BEYOND R/W



ENTRANCE

The surfacing details shown on this sheet are provided as a guide for surfacing these facilities. The precise construction limits for situations other than the standards shown will be determined by the Engineer, at the time of construction.

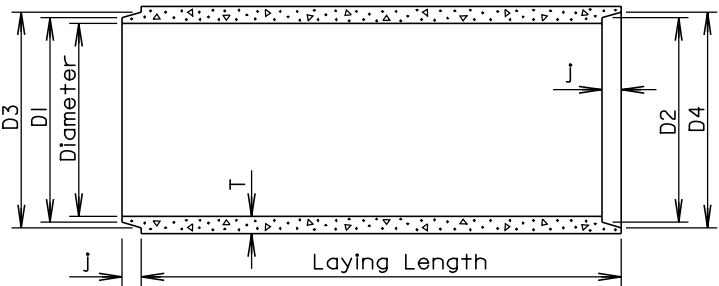
ROADWAY WITH SHOULDER

March 31, 2000

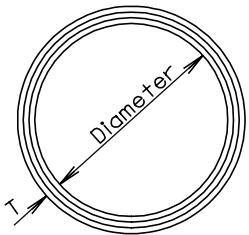
Published Date: 1st Qtr. 2007	S D D O T	SURFACING OF INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 320.04
			Sheet 1 of 1

TOLERANCES IN DIMENSIONS

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



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

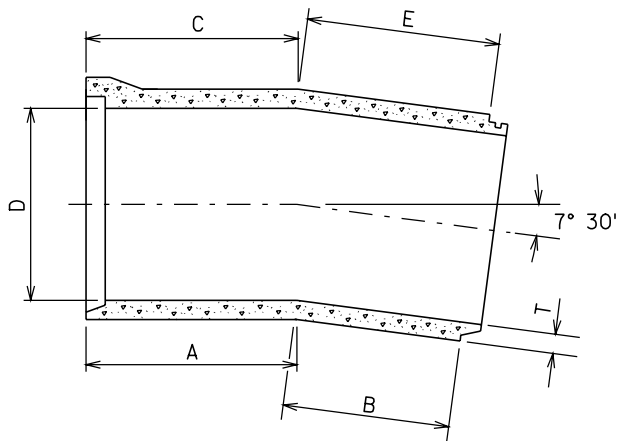
Construction of R.C.P. shall conform to the requirements of Section 990 of the Standard Specifications for Roads and Bridges.

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

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

March 31, 2000

Published Date: 1st Qtr. 2007	S D D O T	REINFORCED CONCRETE PIPE	PLATE NUMBER 450.01
			Sheet 1 of 1

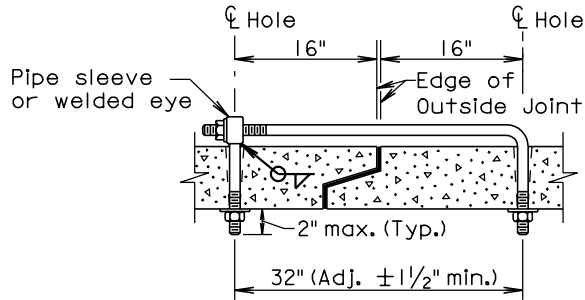


GENERAL NOTE:
Centerline laying length: 4'-0
Radius of Curve: 30.5'

D (in.)	T (in.)	A (in.)	B (in.)	C (in.)	E (in.)	Weight of Section (lbs.)
12	2	36 ¹⁵ / ₃₂	10 ¹⁵ / ₃₂	37 ¹⁷ / ₃₂	11 ¹⁷ / ₃₂	368
15	2 ¹ / ₄	36 ¹ / ₂	10 ¹ / ₄	37 ³ / ₄	11 ¹ / ₂	508
18	2 ¹ / ₂	24 ¹ / ₂	22	26	23 ¹ / ₂	672
21	2 ³ / ₄	24 ¹ / ₂	21 ³ / ₄	26 ¹ / ₄	23 ¹ / ₂	856
24	3	25 ¹ / ₃₂	21 ¹ / ₃₂	26 ³ / ₃₂	22 ³ / ₃₂	1060
27	3 ¹ / ₄	25 ¹ / ₃₂	20 ²⁵ / ₃₂	27 ⁷ / ₃₂	22 ³ / ₃₂	1288
30	3 ¹ / ₂	25 ¹ / ₃₂	20 ¹⁷ / ₃₂	27 ¹⁵ / ₃₂	22 ³ / ₃₂	1536
33	3 ³ / ₄	24 ¹⁵ / ₁₆	20 ⁷ / ₁₆	27 ⁹ / ₁₆	23 ¹ / ₁₆	1808
36	4	24 ¹³ / ₁₆	20 ⁵ / ₁₆	27 ¹¹ / ₁₆	23 ³ / ₁₆	2096
42	4 ¹ / ₂	24 ²⁷ / ₃₂	19 ²⁷ / ₃₂	28 ⁵ / ₃₂	23 ⁵ / ₃₂	2740
48	5	24 ¹⁹ / ₃₂	19 ¹⁹ / ₃₂	28 ¹³ / ₃₂	23 ¹³ / ₃₂	3468
54	5 ¹ / ₂	24 ⁵ / ₈	19 ¹ / ₈	29 ¹¹ / ₃₂	23 ³ / ₈	4280
60	6	24 ²¹ / ₃₂	18 ²¹ / ₃₂	29 ¹¹ / ₃₂	23 ¹¹ / ₃₂	5184
66	6 ¹ / ₂	24 ¹¹ / ₁₆	18 ³ / ₁₆	29 ¹³ / ₁₆	23 ⁵ / ₁₆	6168
72	7	24 ¹ / ₈	18 ¹ / ₈	29 ⁷ / ₈	23 ⁷ / ₈	7240
84	8	24 ¹ / ₄	17 ¹ / ₄	30 ³ / ₄	23 ³ / ₄	9640
96	9	23 ⁵ / ₁₆	17 ⁵ / ₁₆	30 ¹¹ / ₁₆	24 ¹¹ / ₁₆	12400

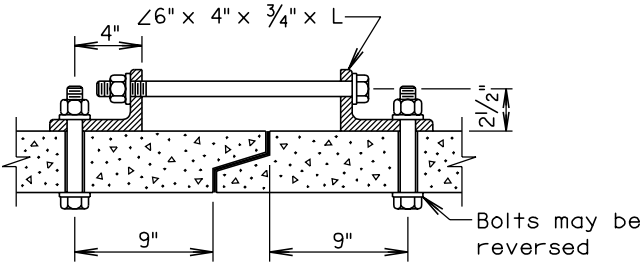
March 31,2000

Published Date: 1st Qtr. 2007	S D D O T	REINFORCED CONCRETE PIPE LONG RADIUS BEND	PLATE NUMBER 450.04
			Sheet 1 of 1



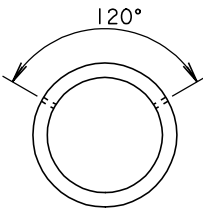
ADJUSTABLE EYE BOLT TIE

GENERAL NOTES:
Tie bolts to be furnished with 2 washers and 2 nuts except for the 9/16" rod which has unthreaded legs.
Use 9/16" rod diameter and 5/8" thread diameter for pipe wall thickness of 2" to 3/4".
Use 11/16" rod diameter and 3/4" thread diameter for pipe wall thickness of 3/2" to 6 1/2".
Use 29/32" rod diameter and 1" thread diameter for pipe wall thickness of 7" and larger.

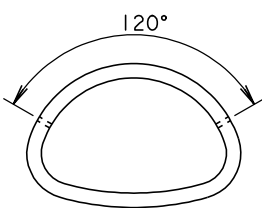


ANGLE AND BOLT TIE

GENERAL NOTES:
L = 4" for 3/4" Bolt. L = 6" for 1" Bolt.
Use 3/4" Tie Bolts for pipe diameters less than 48".



END VIEW
"CIRCULAR"



END VIEW
"ARCH"

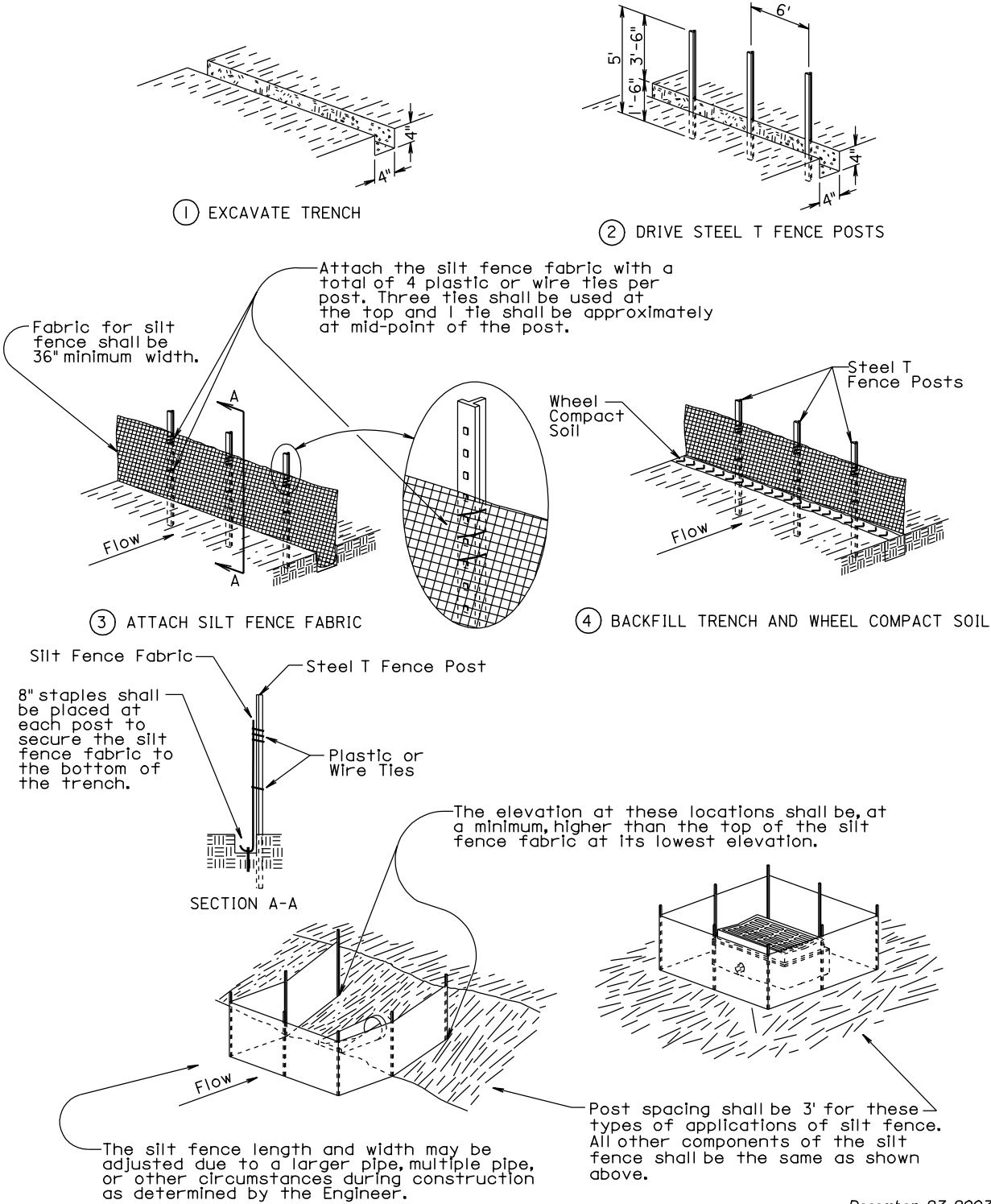
GENERAL NOTES:
In lieu of Tie Bolts detailed above, Tecktonius Fasteners or other type Tie Bolt connections may be installed if approved by the Engineer.
There will be no separate measurement or payment for Tie Bolts.
The cost of the Tie Bolts shall be incidental to the contract unit price per Foot for the corresponding Bid Item for R.C.P. and/or R.C.P. Arch.
The first three Sections (both inlet and outlet) on R.C.P. and R.C.P. Arch up to and including the 78" diameter or equivalent pipe shall be tied with Tie Bolts. Pipe sizes above 78" diameter or equivalent diameter shall have all Sections tied. Each End Section is considered as one section.

March 31, 2000

Published Date: 1st Qtr. 2007	S D D O T	TIE BOLTS FOR R.C.P. END SECTIONS	PLATE NUMBER 450.18
			Sheet 1 of 1

Plotting Date: 21-MAR-2007

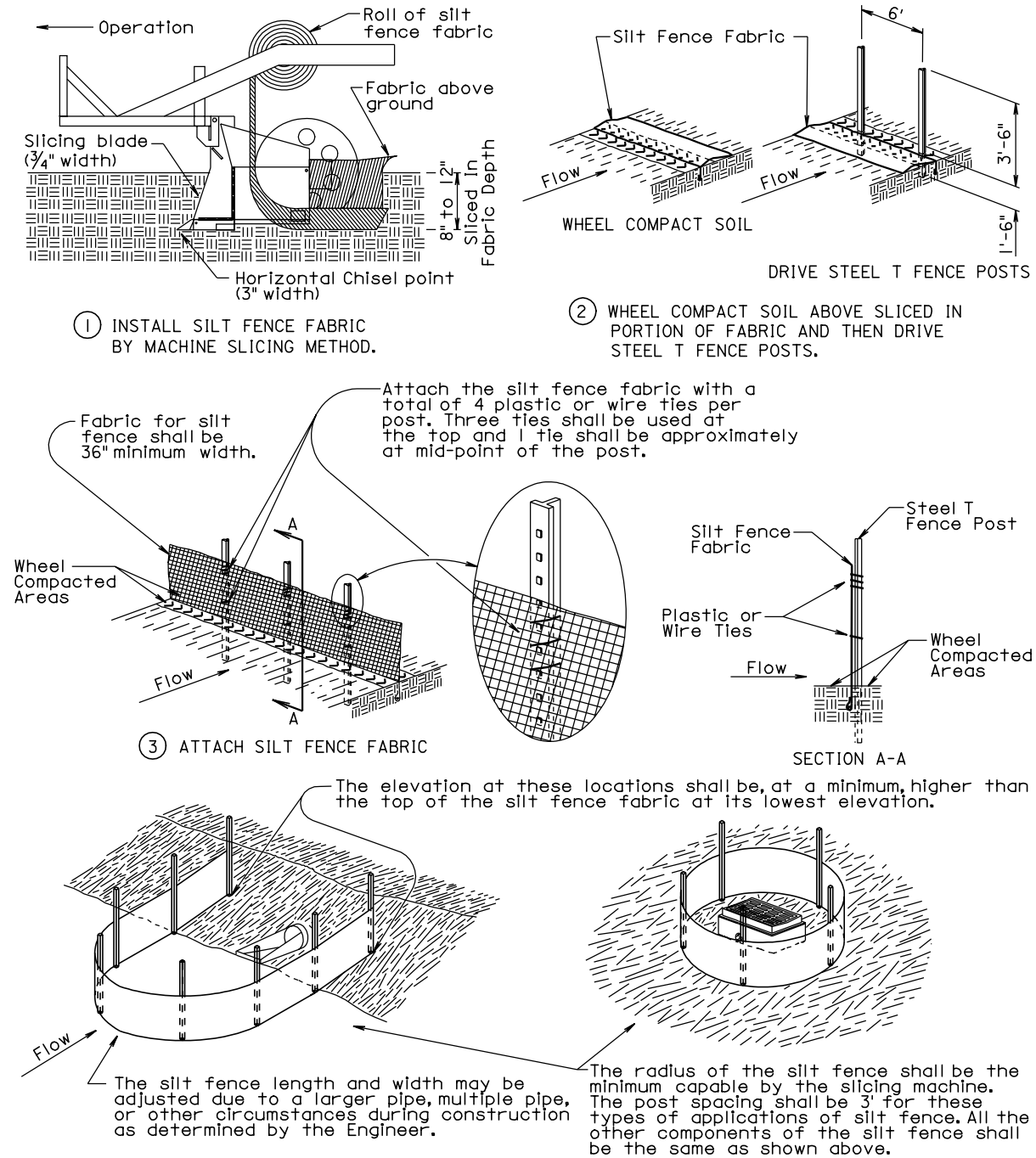
MANUAL HIGH FLOW SILT FENCE INSTALLATION



December 23, 2003

Published Date: 1st Qtr. 2007	S D D O T	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION

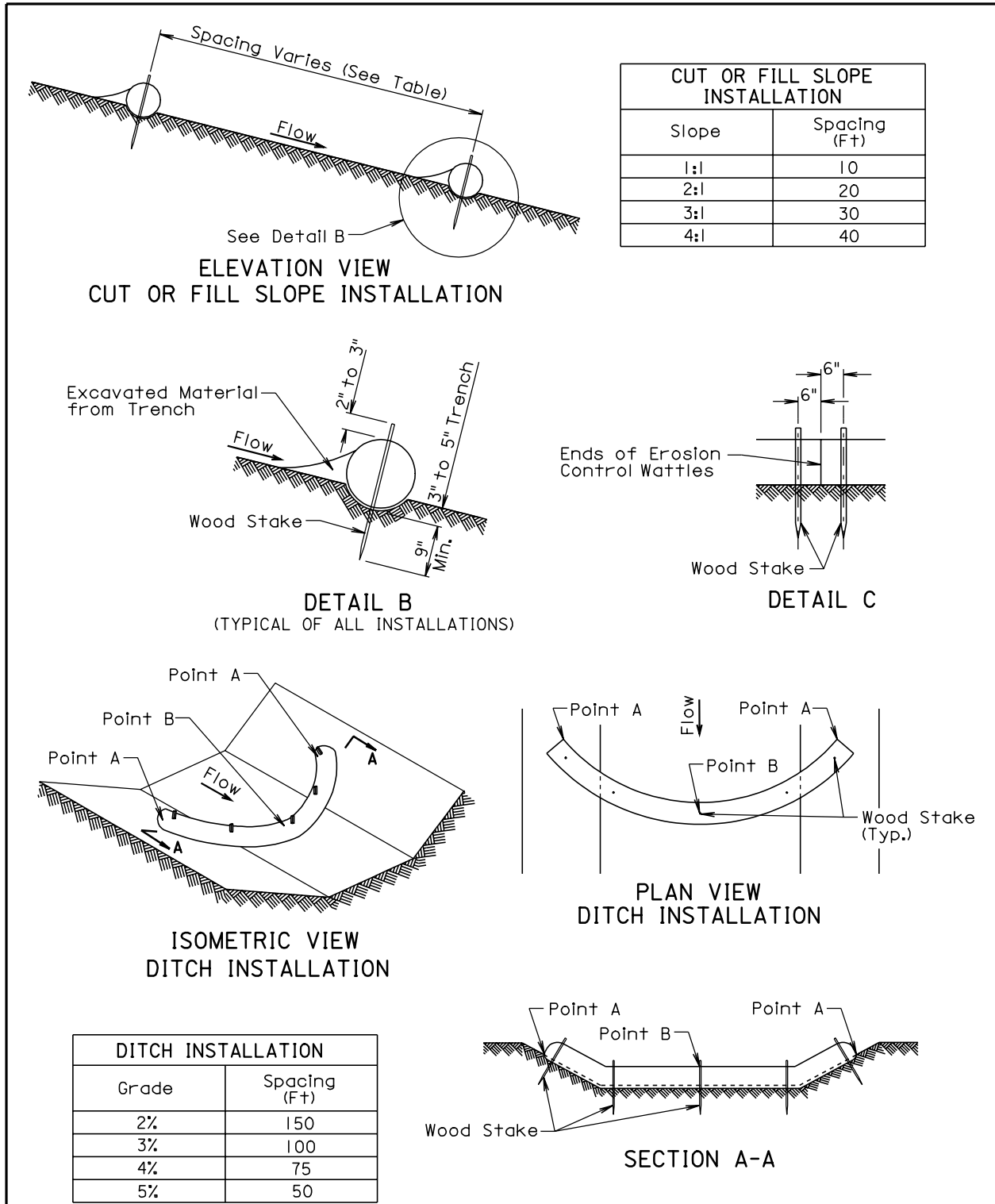


GENERAL NOTE:

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

Published Date: 1st Qtr. 2007	S D D O T	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2



December 23, 2004

GENERAL NOTES:

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

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

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

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

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

The Contractor and Engineer shall inspect the erosion control wattles once every week and within 24 hours after every rainfall event greater than 1/2". The Contractor shall remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

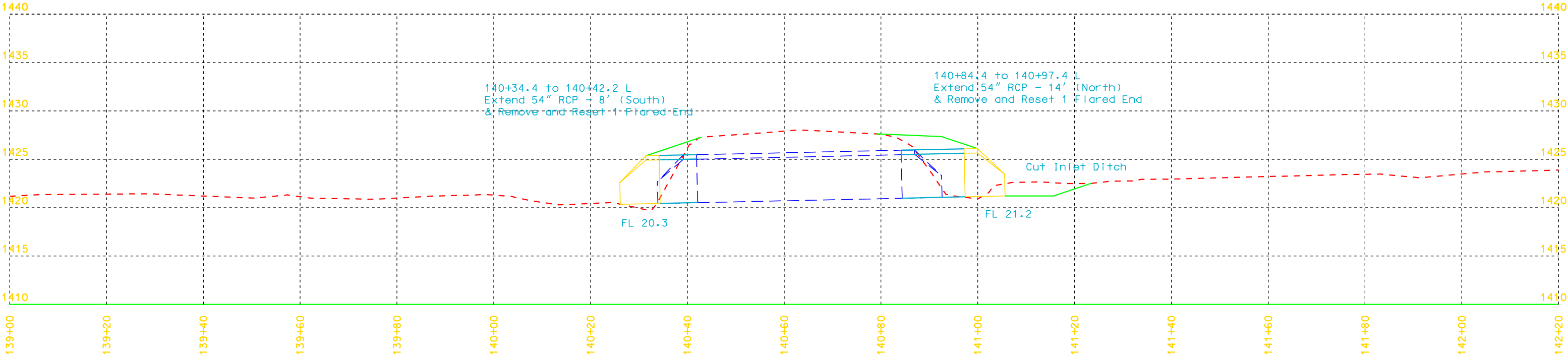
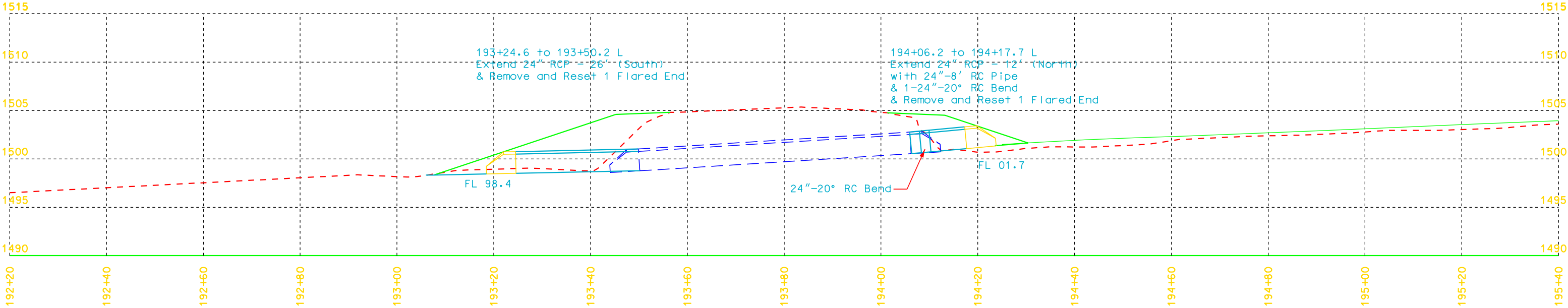
Sediment removal, disposal, or necessary shaping shall be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping shall be incidental to the contract unit price per cubic yard for "Remove Sediment".

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

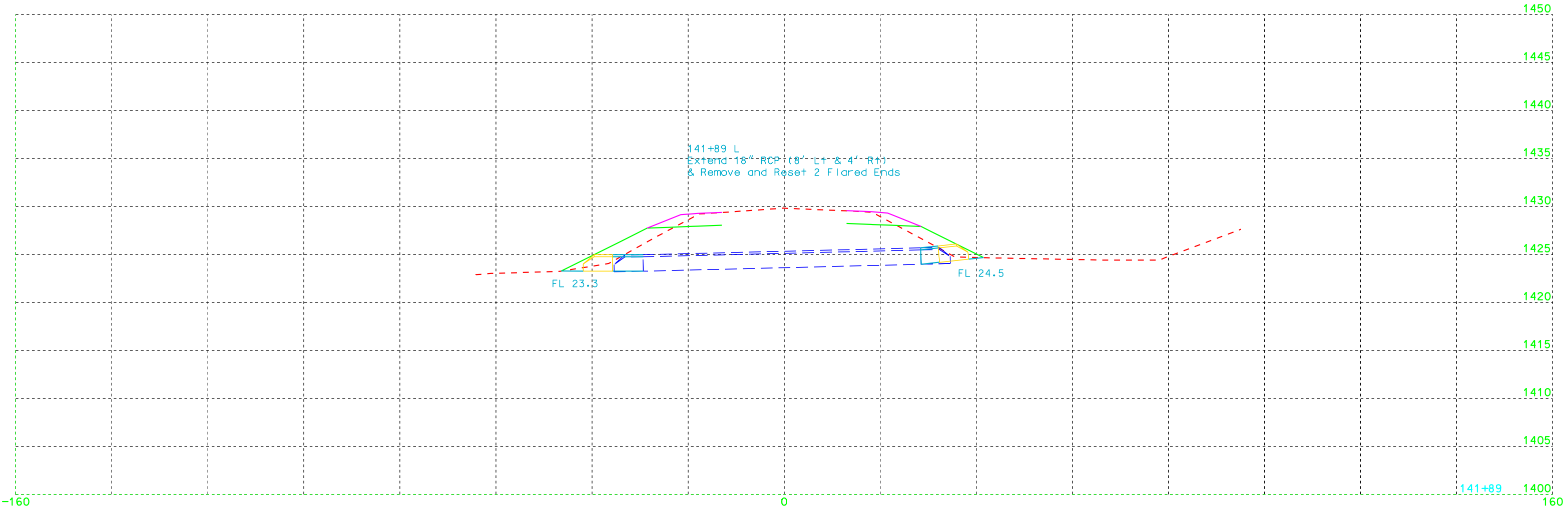
All costs for removing the erosion control wattle from the project including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

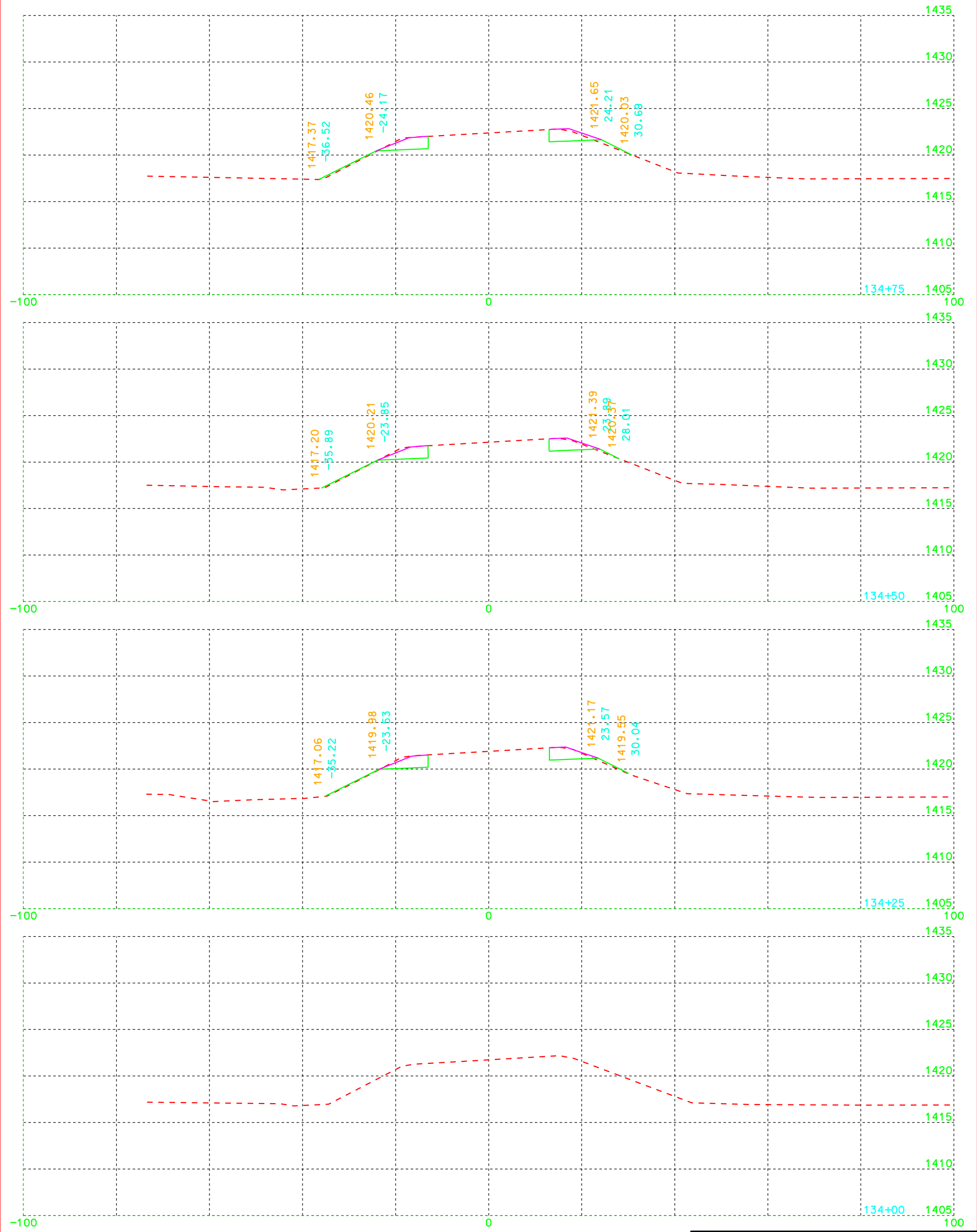
December 23, 2004

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	27	56



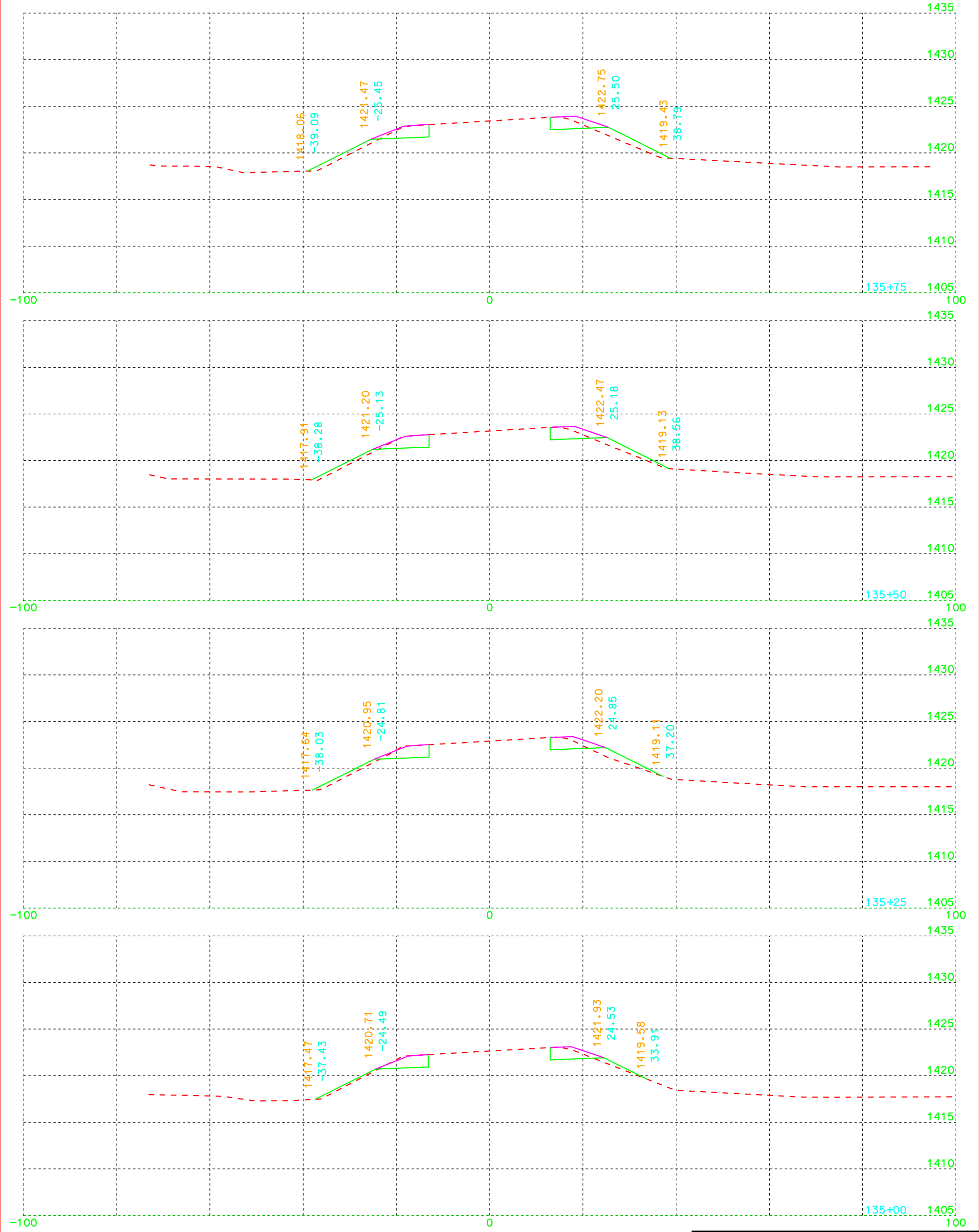
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	28	56

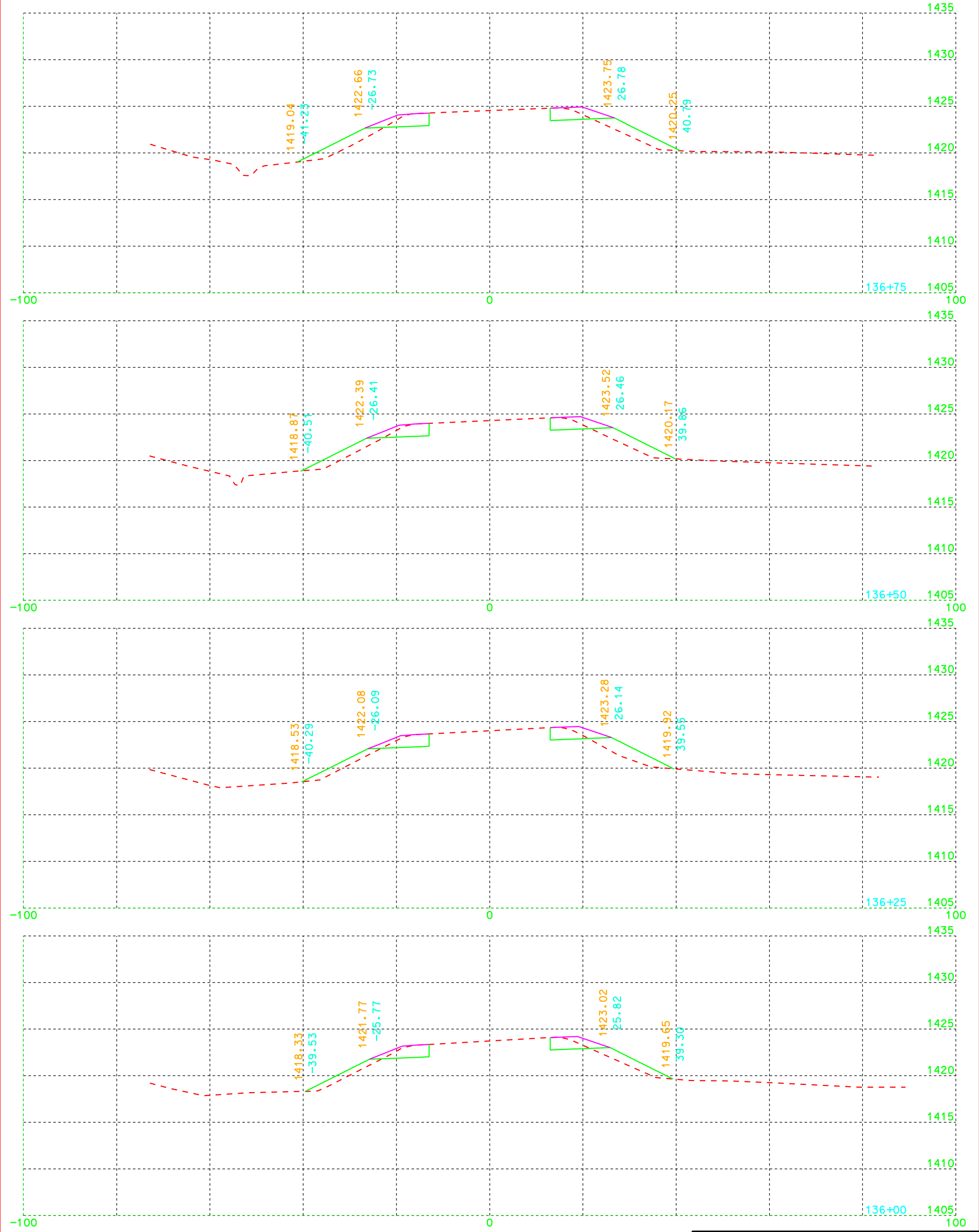


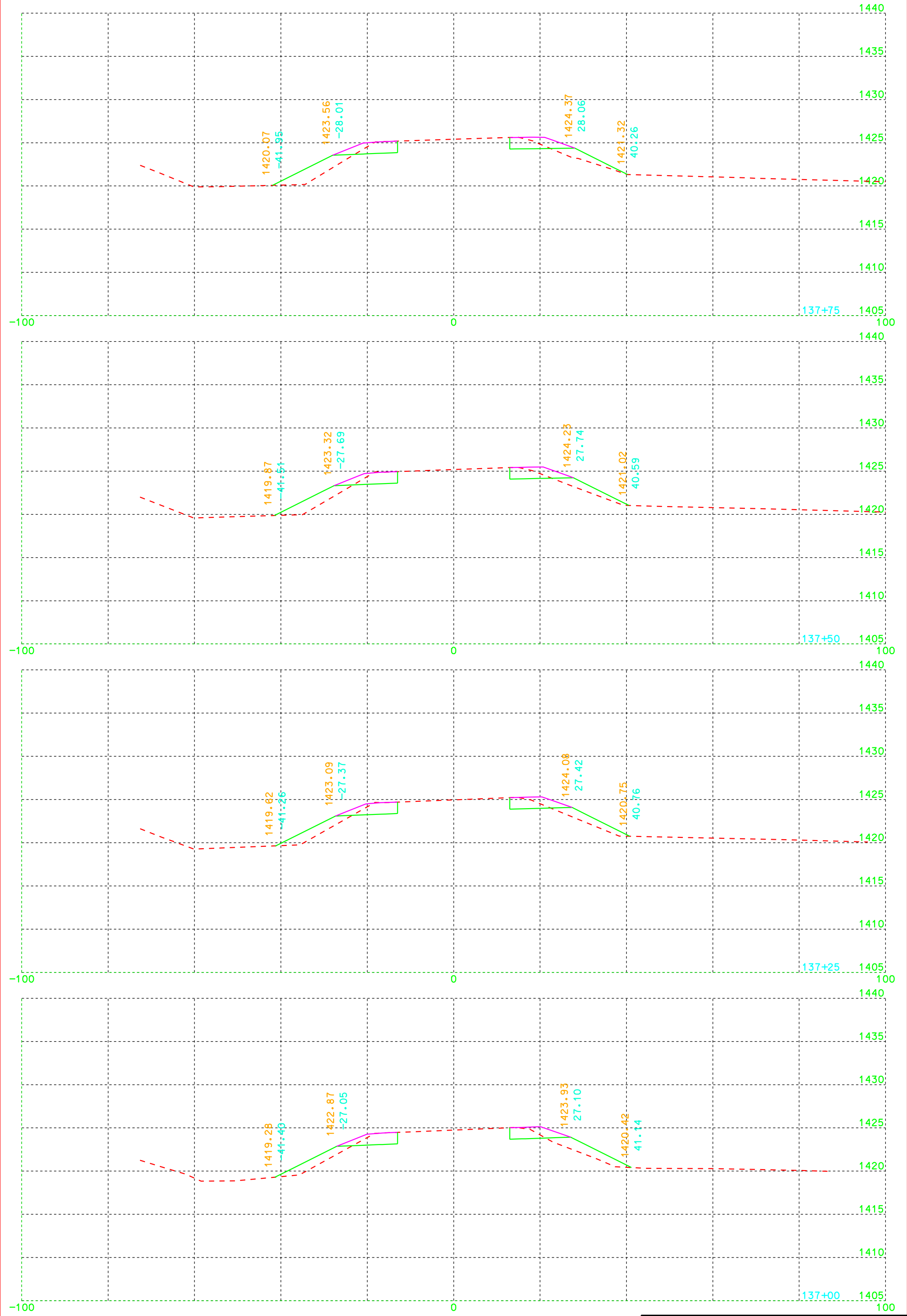


Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69		
		29	56

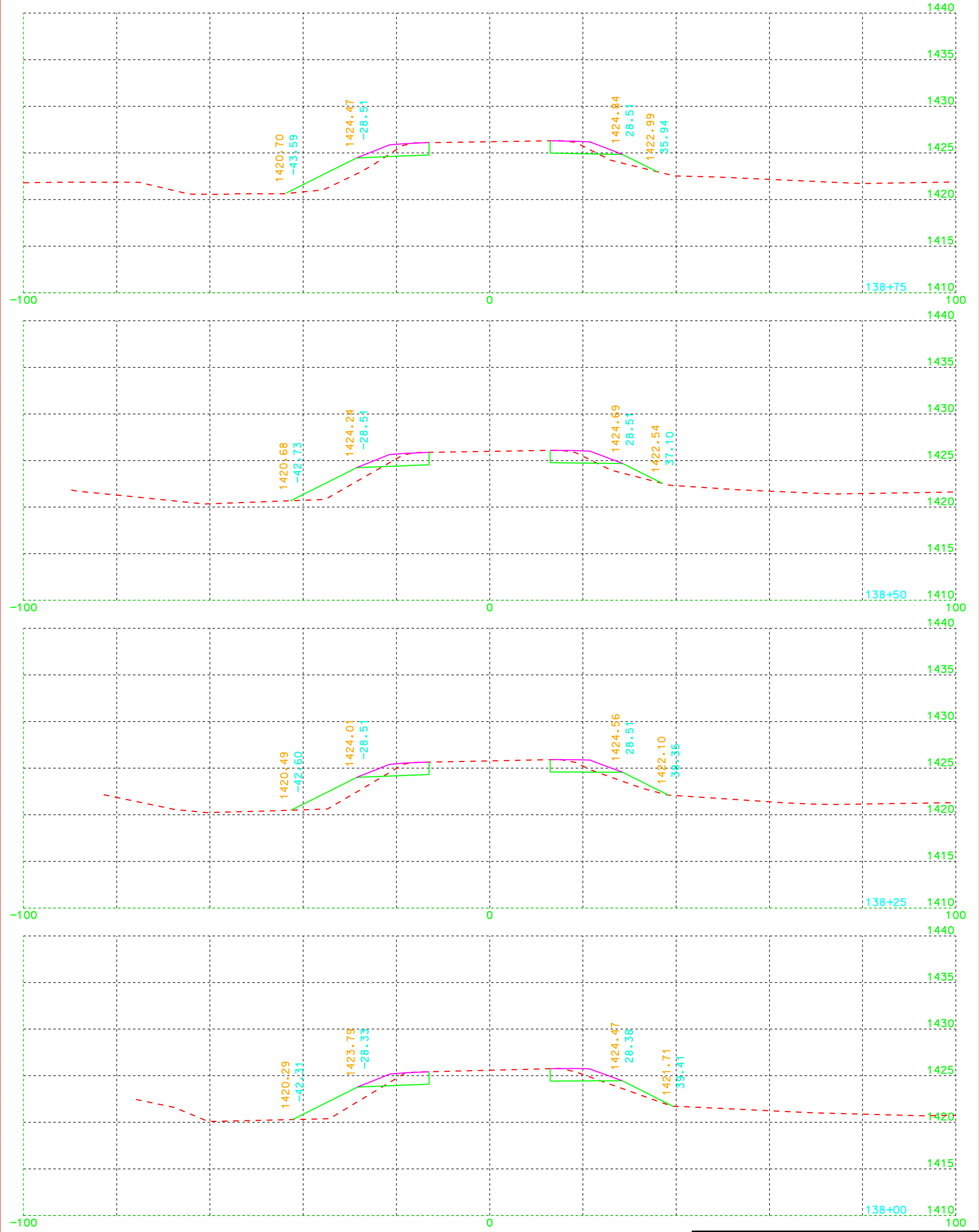






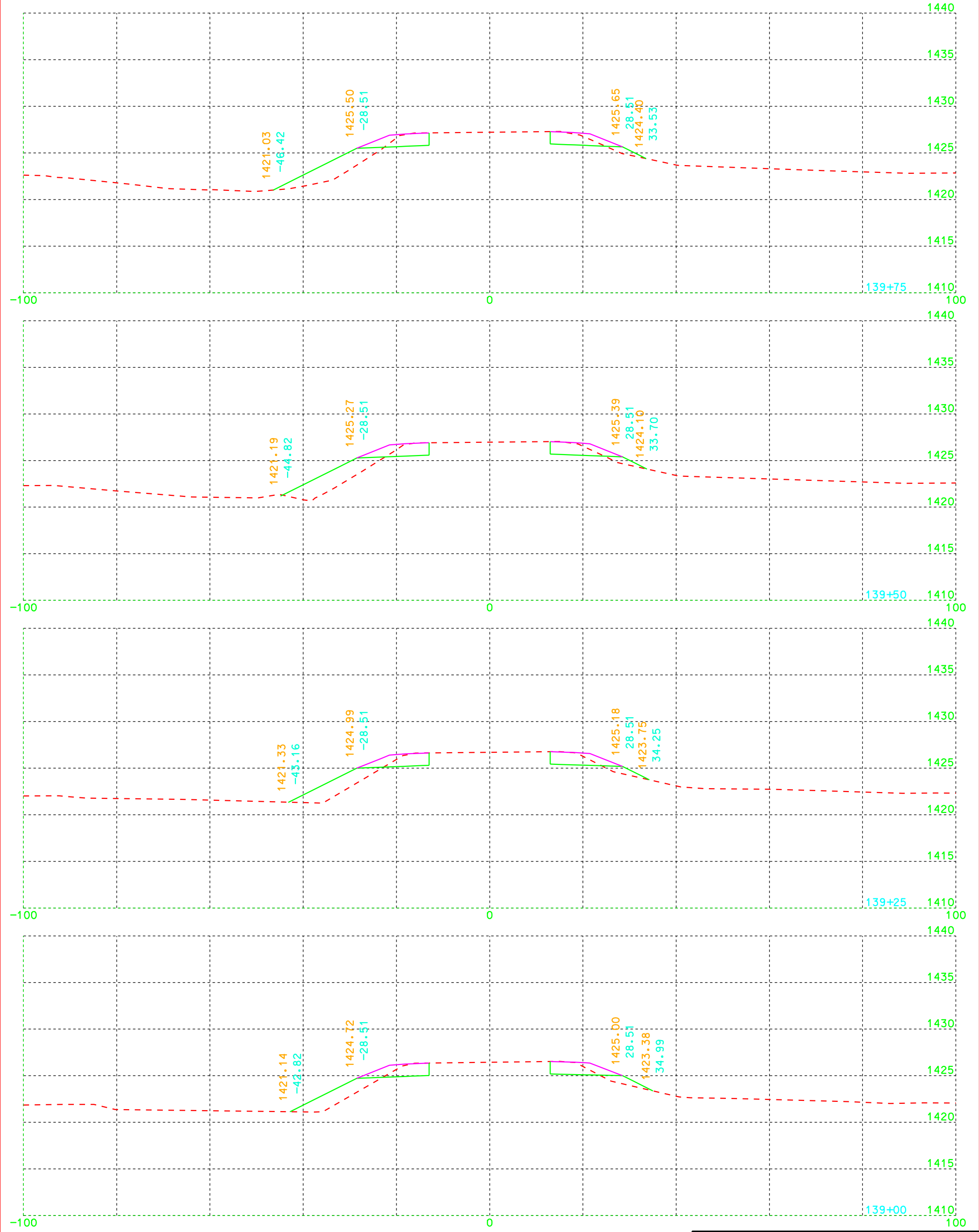
Plotting Date: 27-MAR-2007

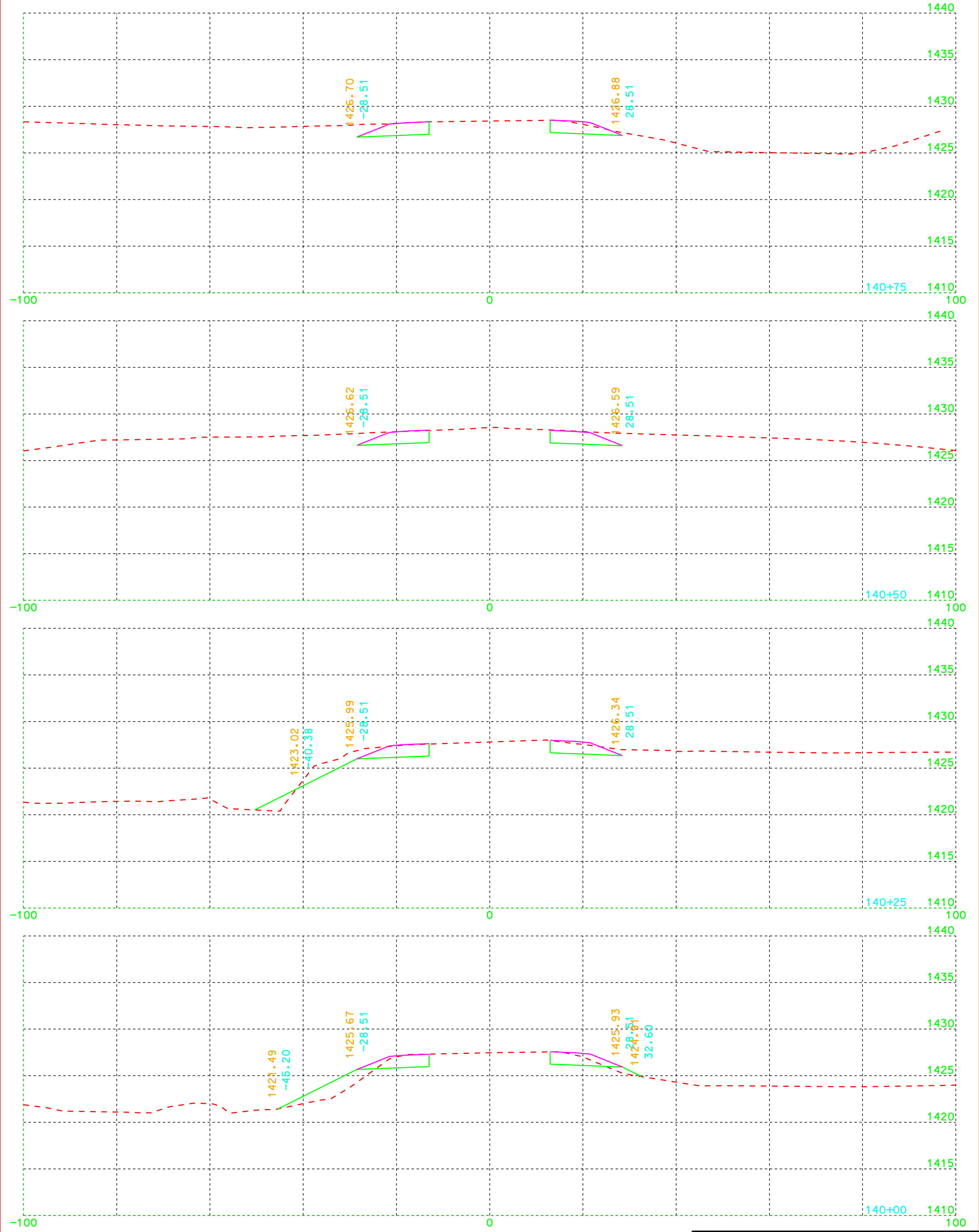
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	P 0011(30)69		
		32	56



Plotting Date: 27-MAR-2007

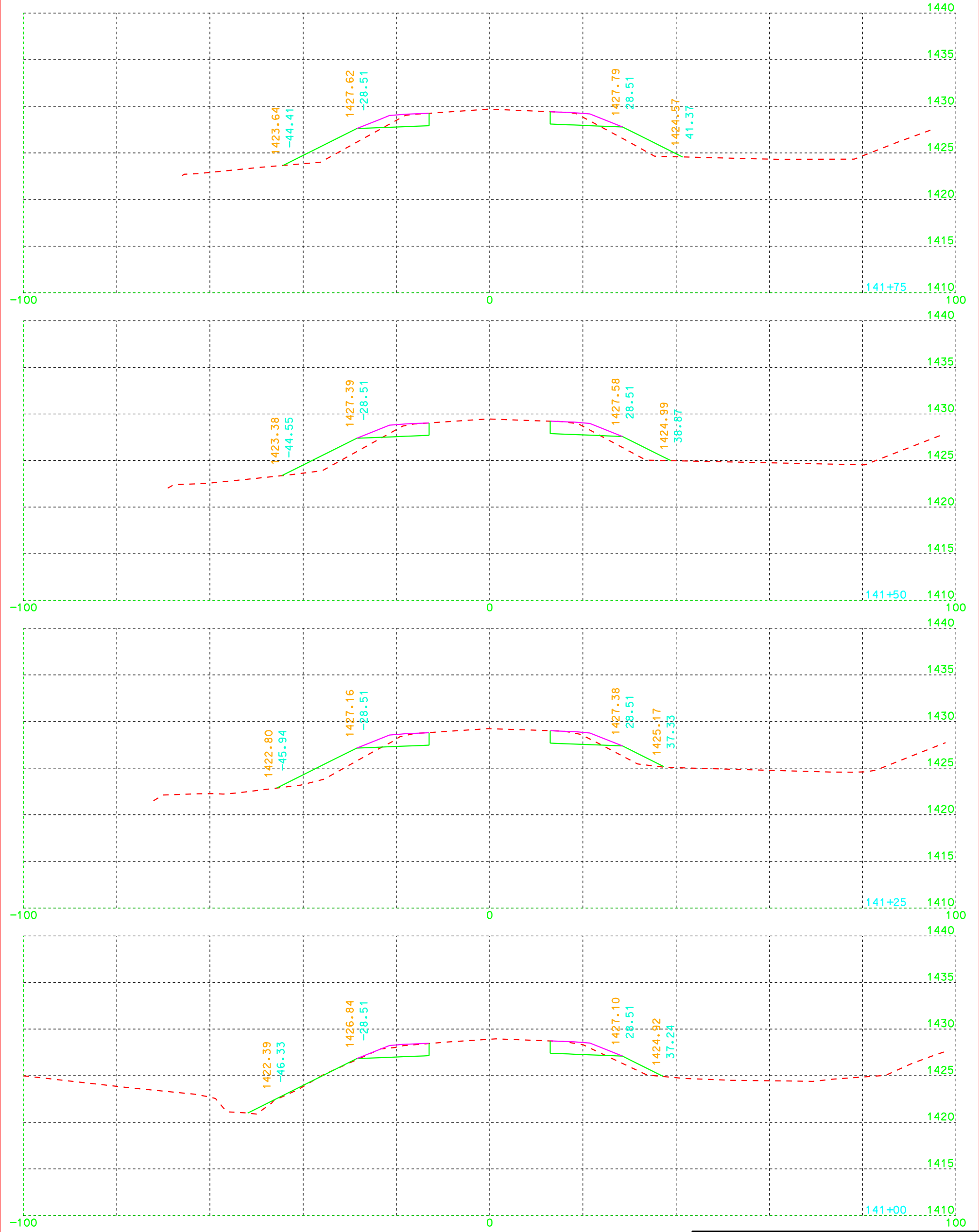
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	P 0011(30)69	33	56





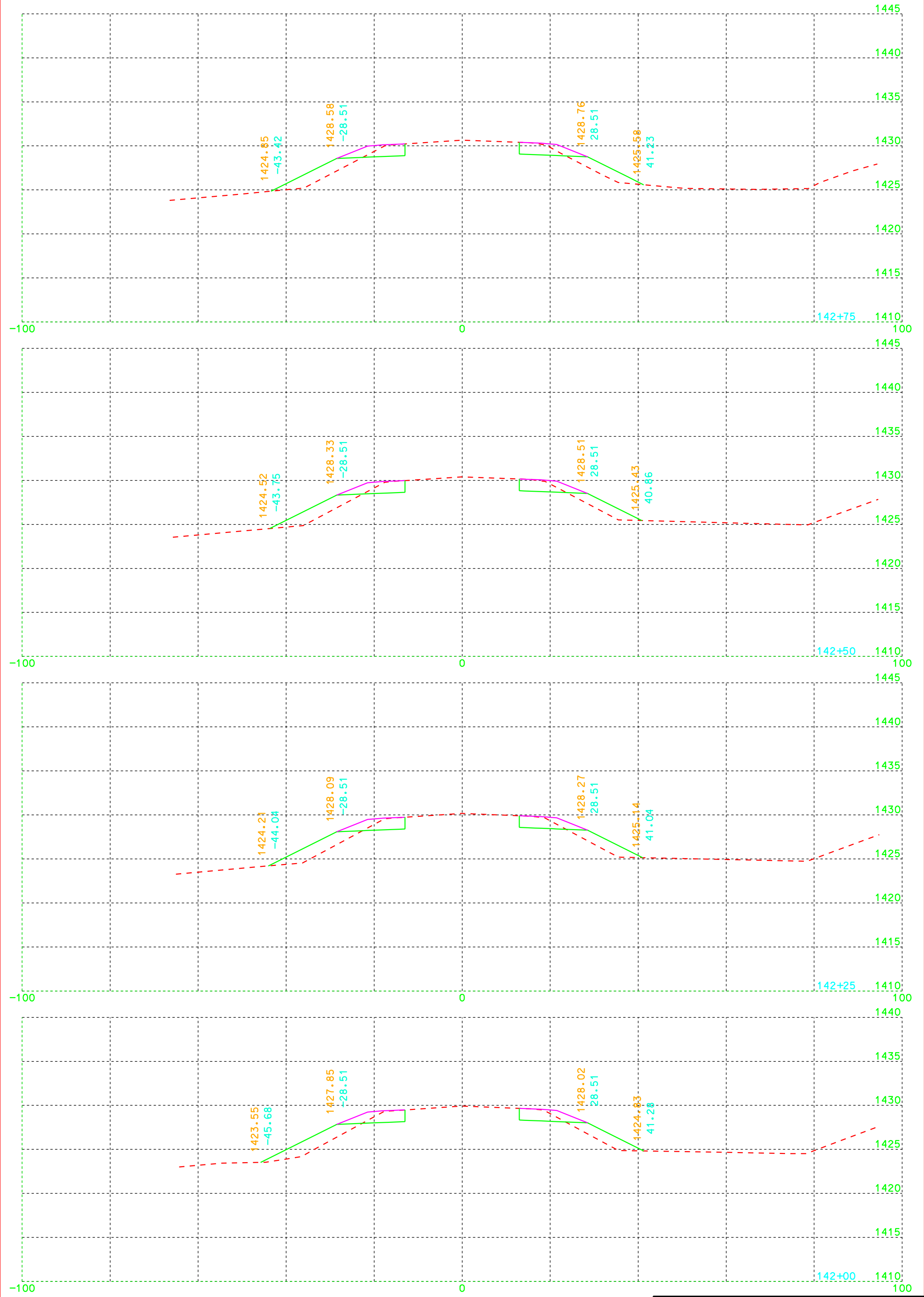
Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO. 35	TOTAL SHEETS 56
	P 0011(30)69		



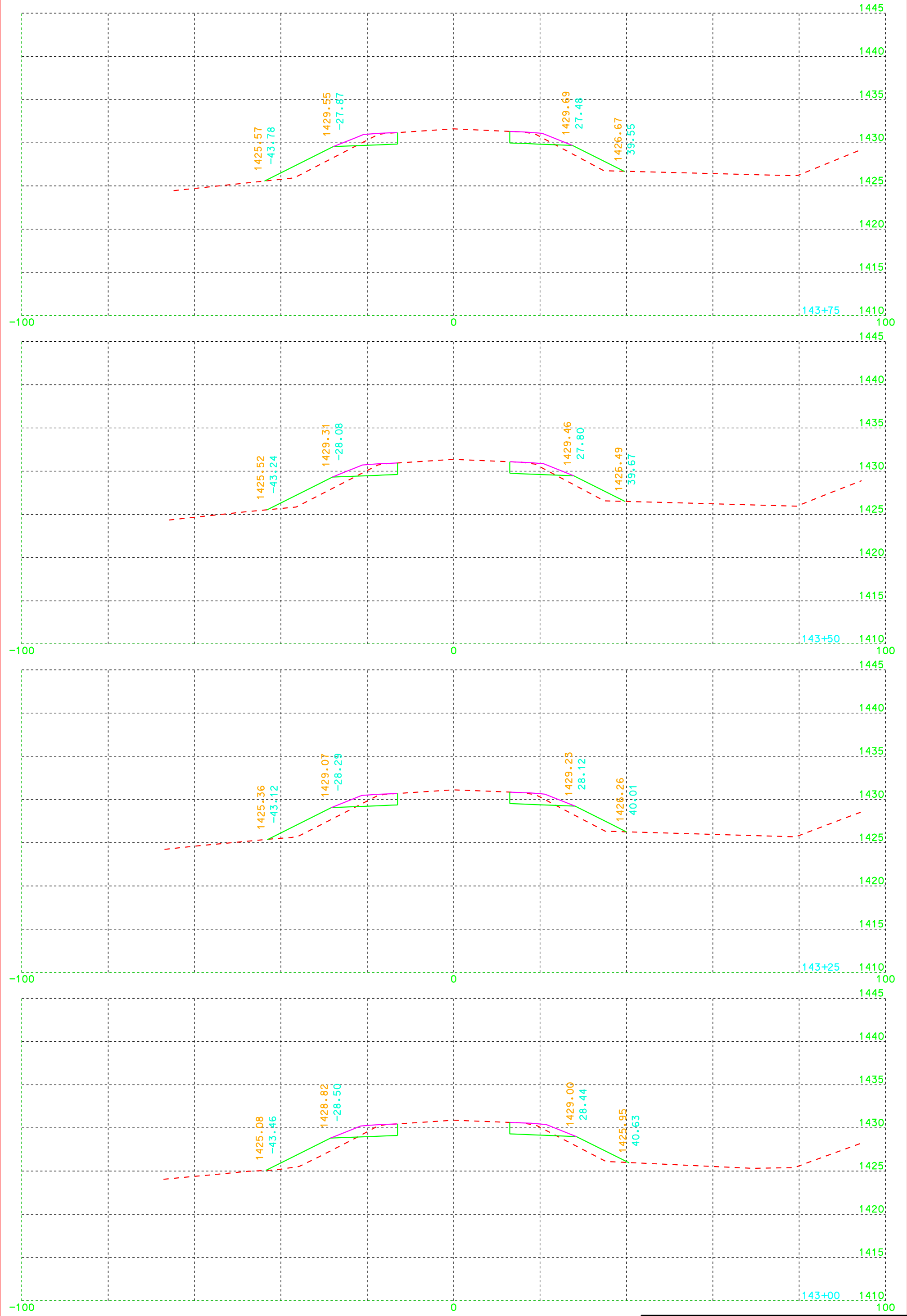
Plotting Date: 27-MAR-2007

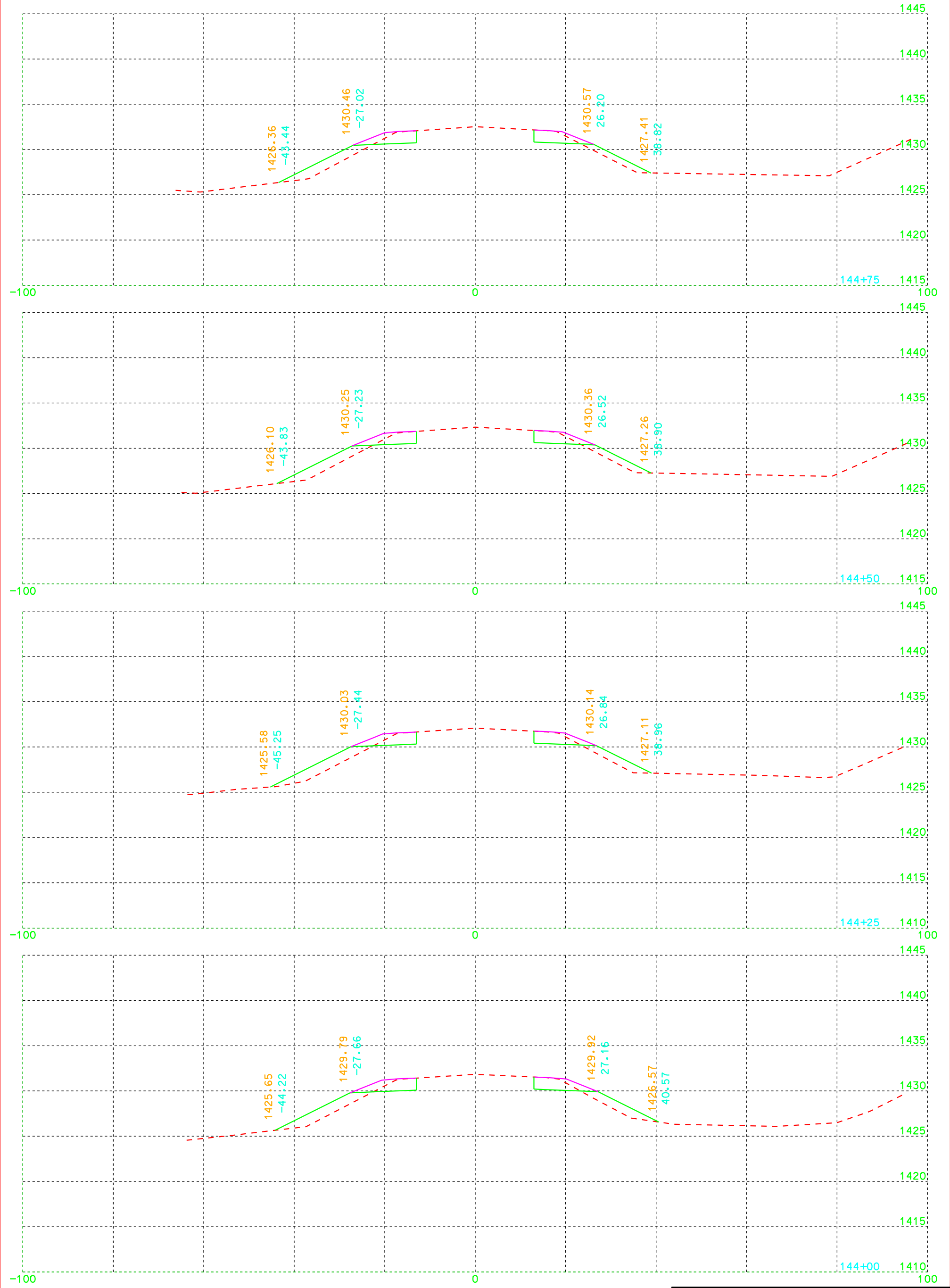
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	P 0011(30)69	36	56



Plotting Date: 27-MAR-2007

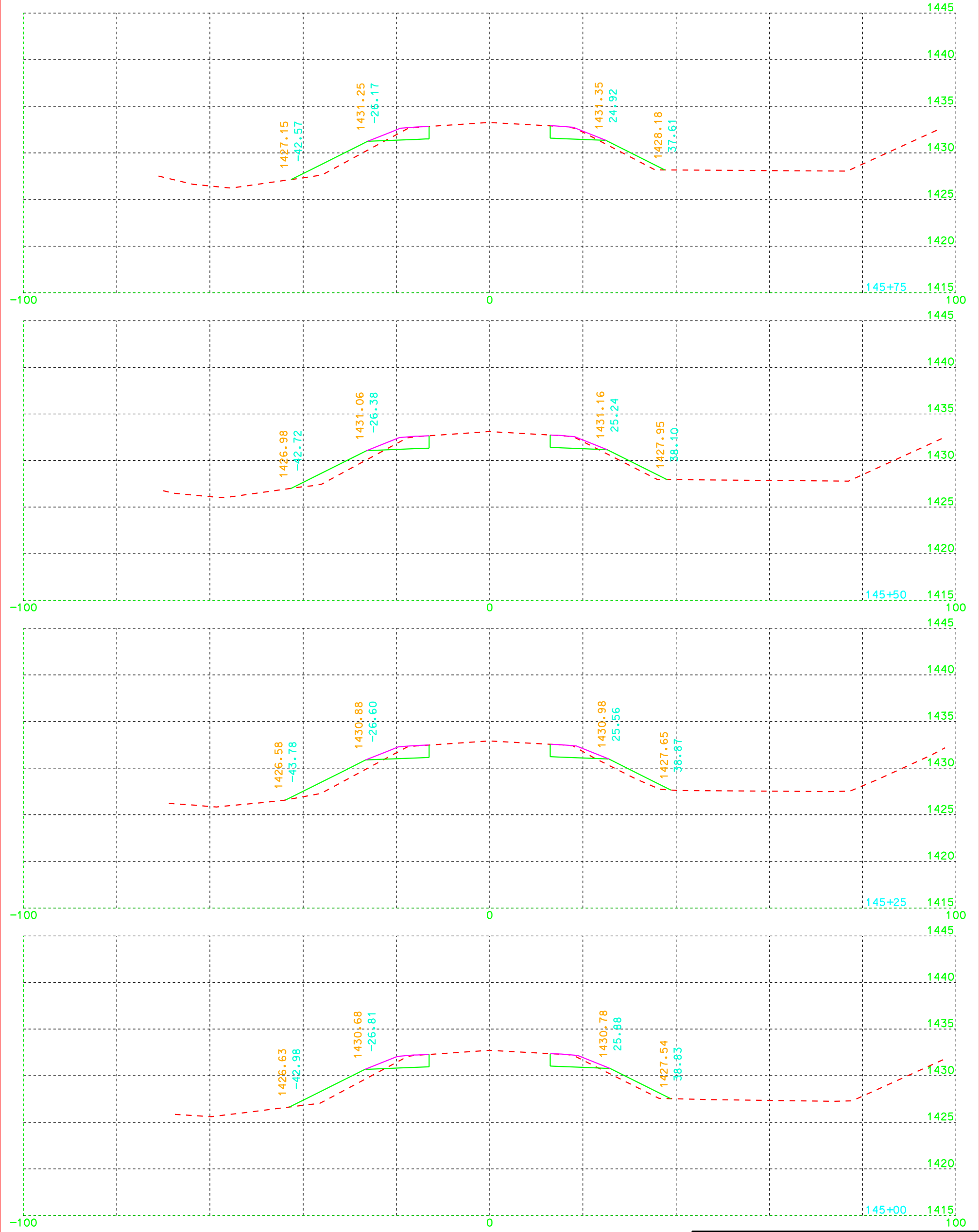
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	37	56

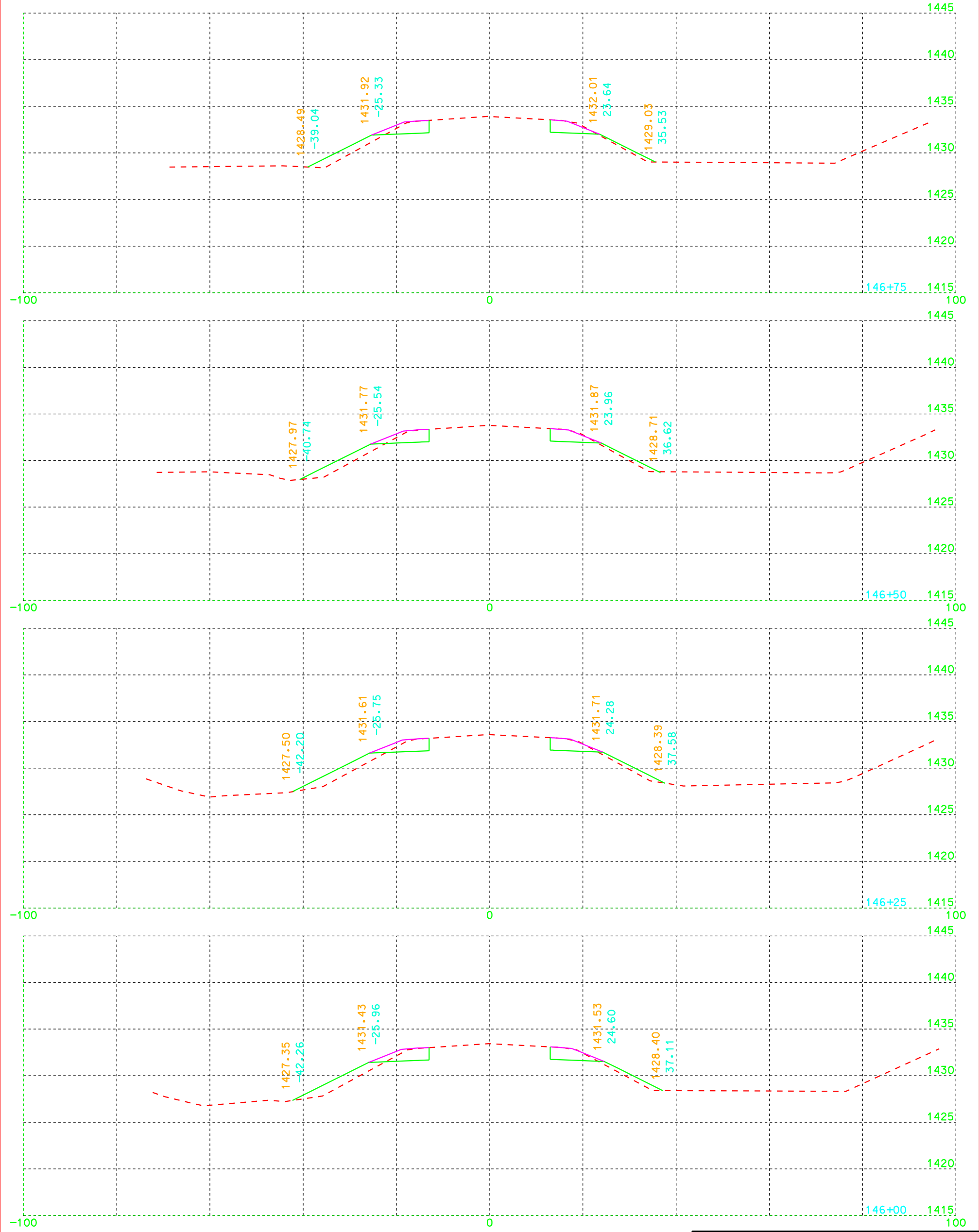




Plotting Date: 27-MAR-2007

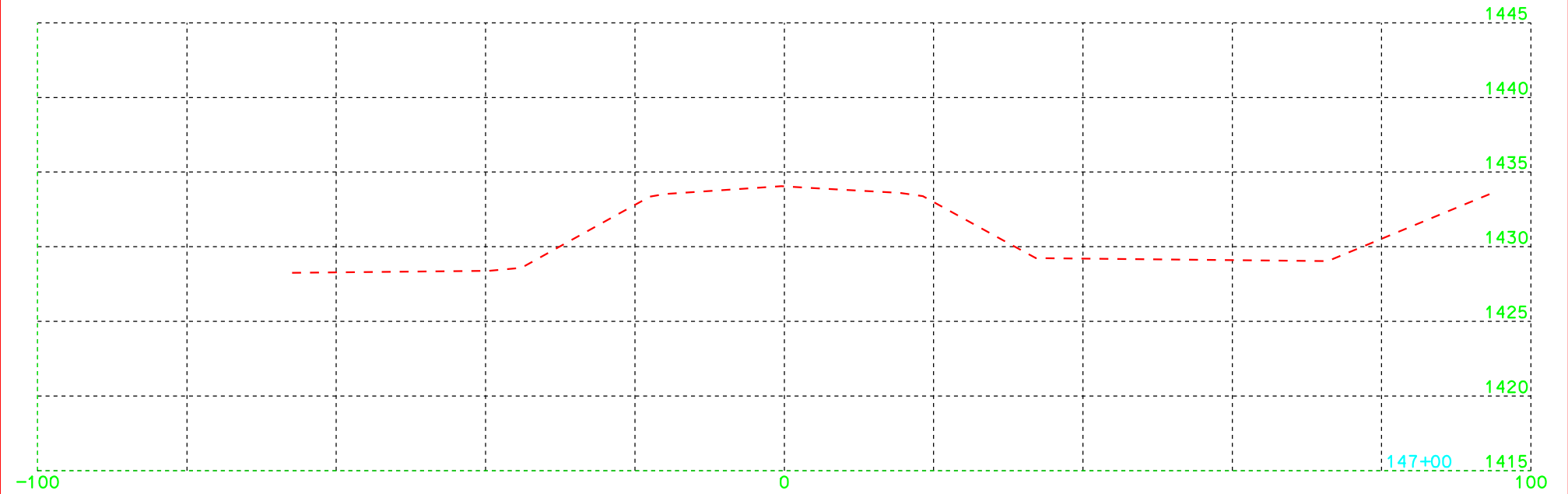
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	39	56





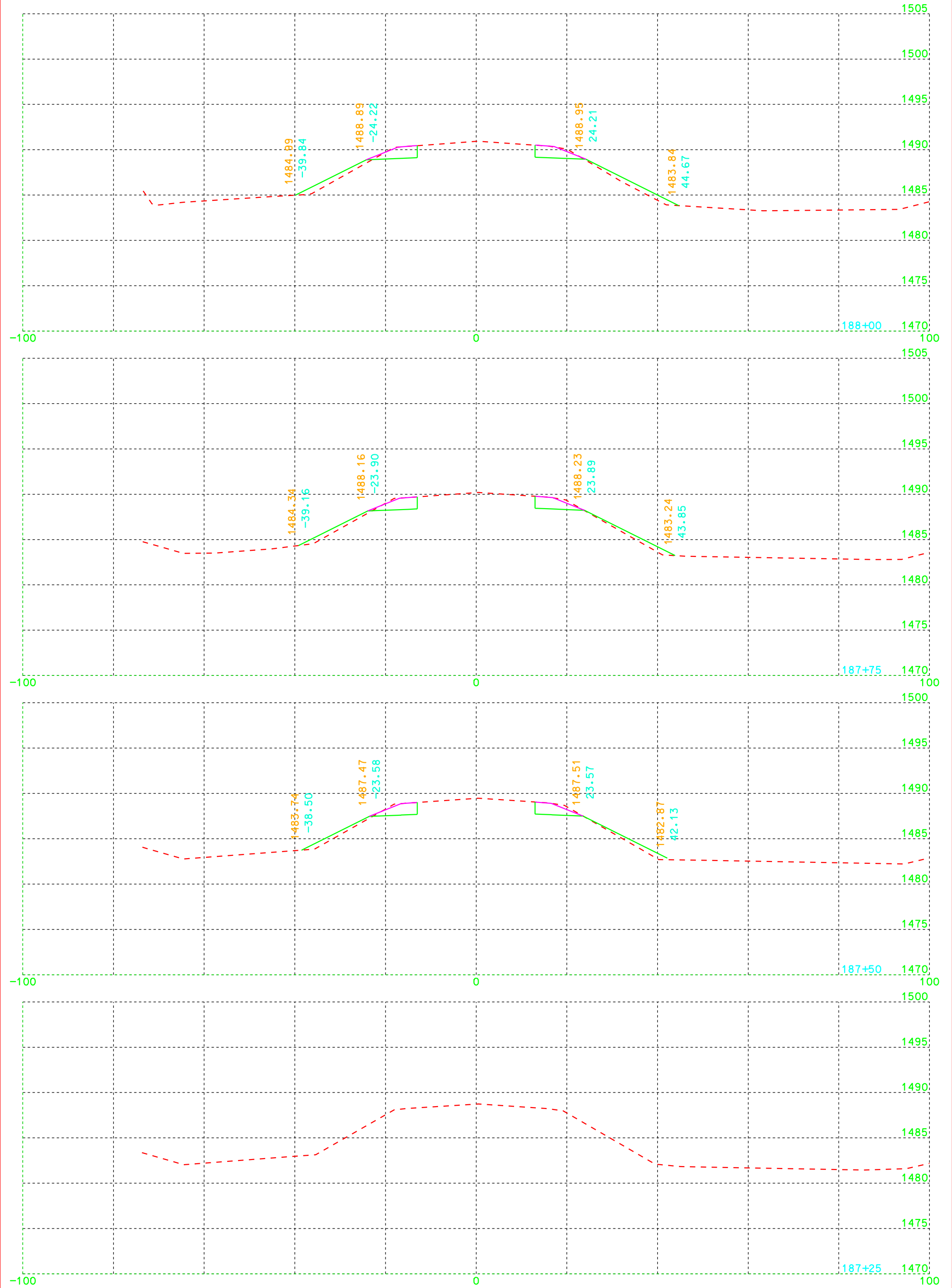
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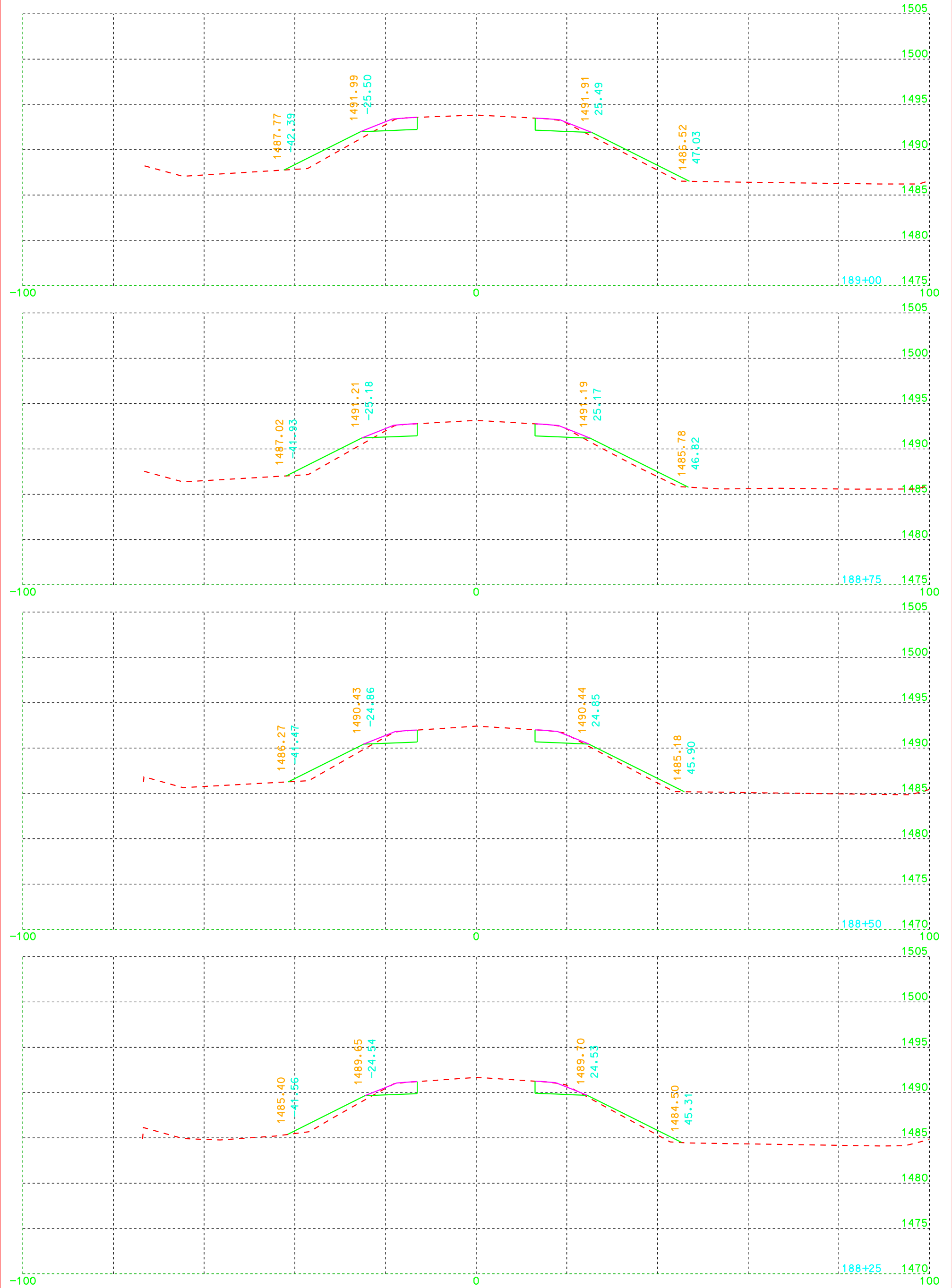
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	41	56



Plotting Date: 27-MAR-2007

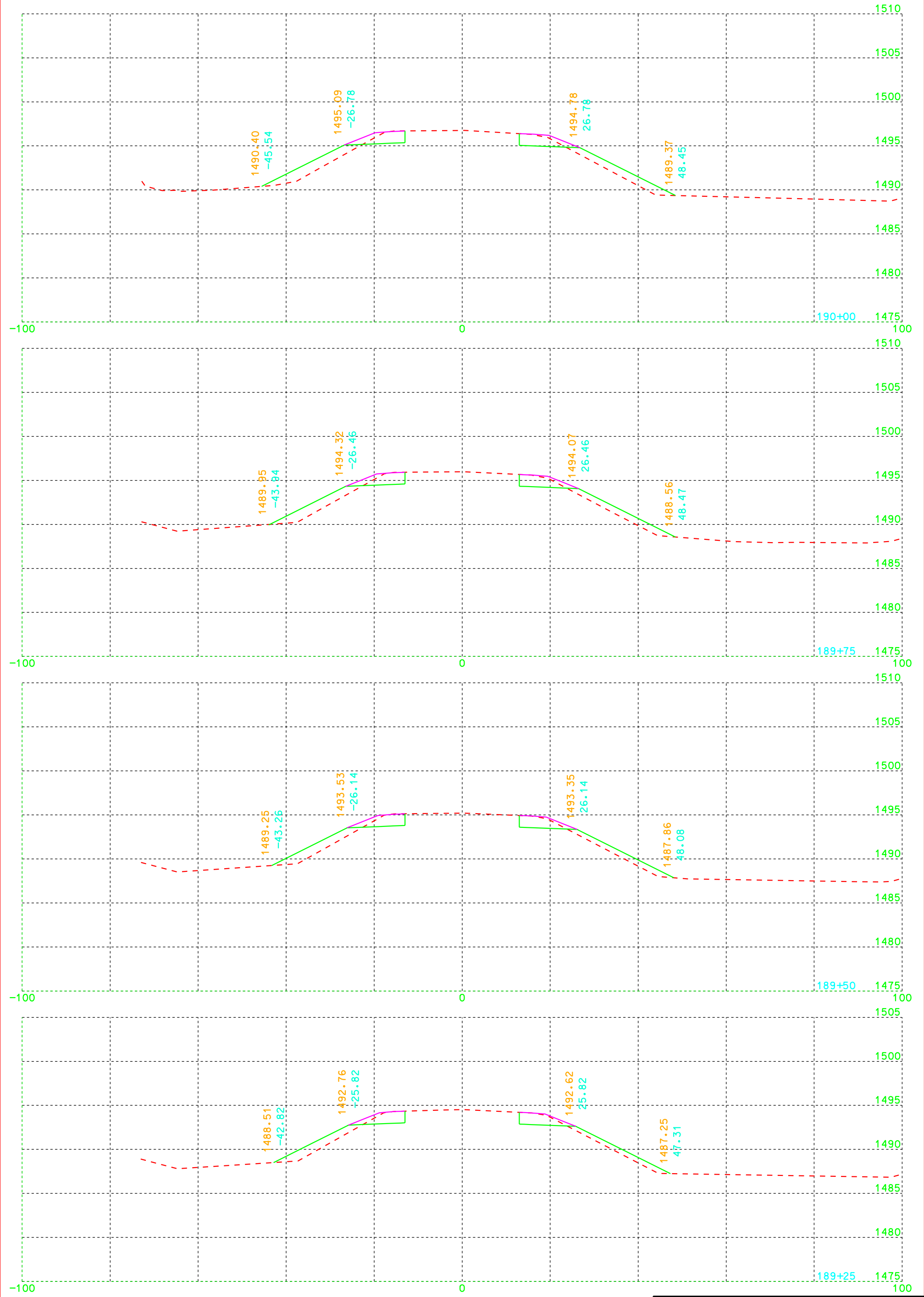
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	42	56





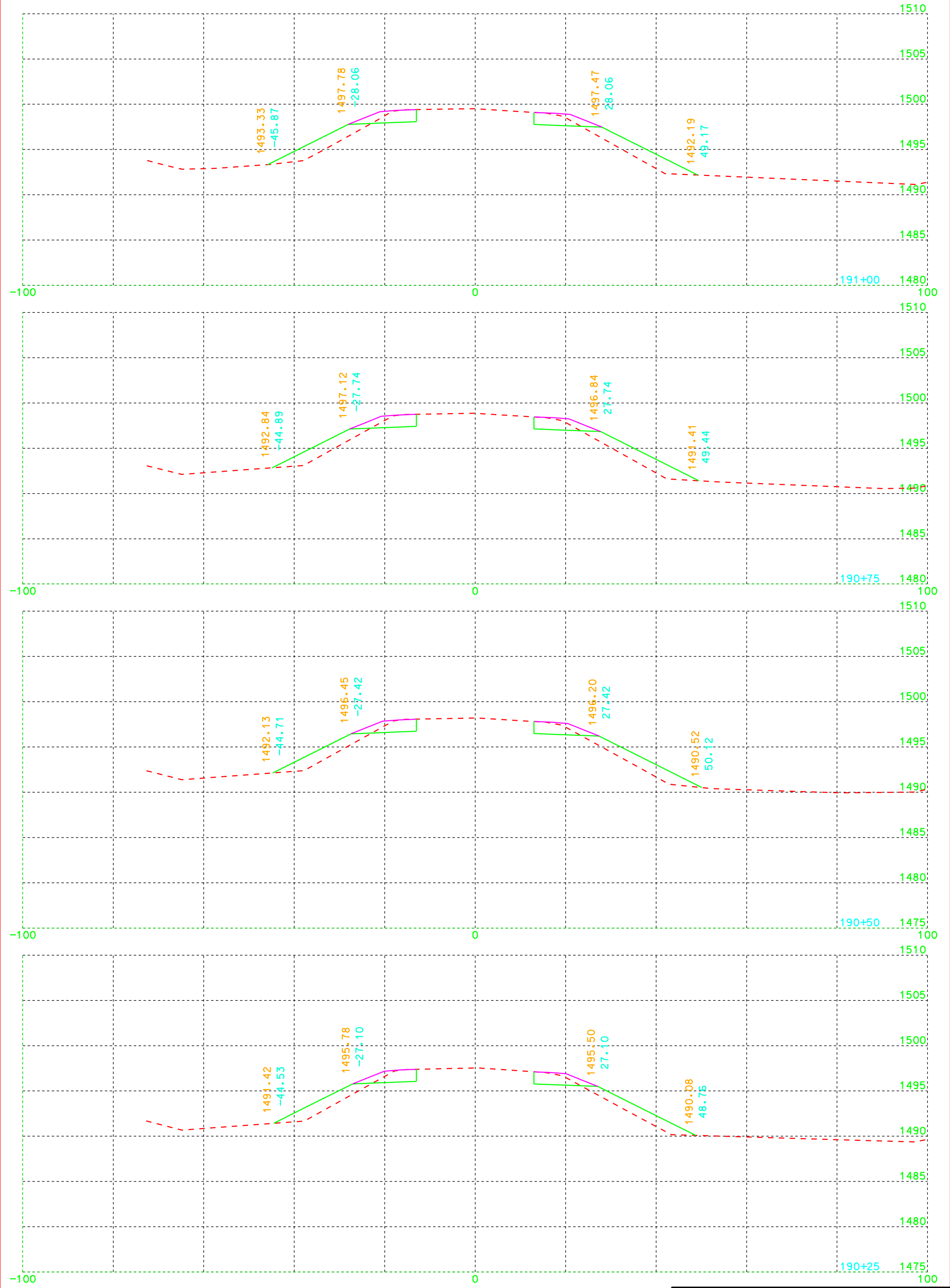
Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69		



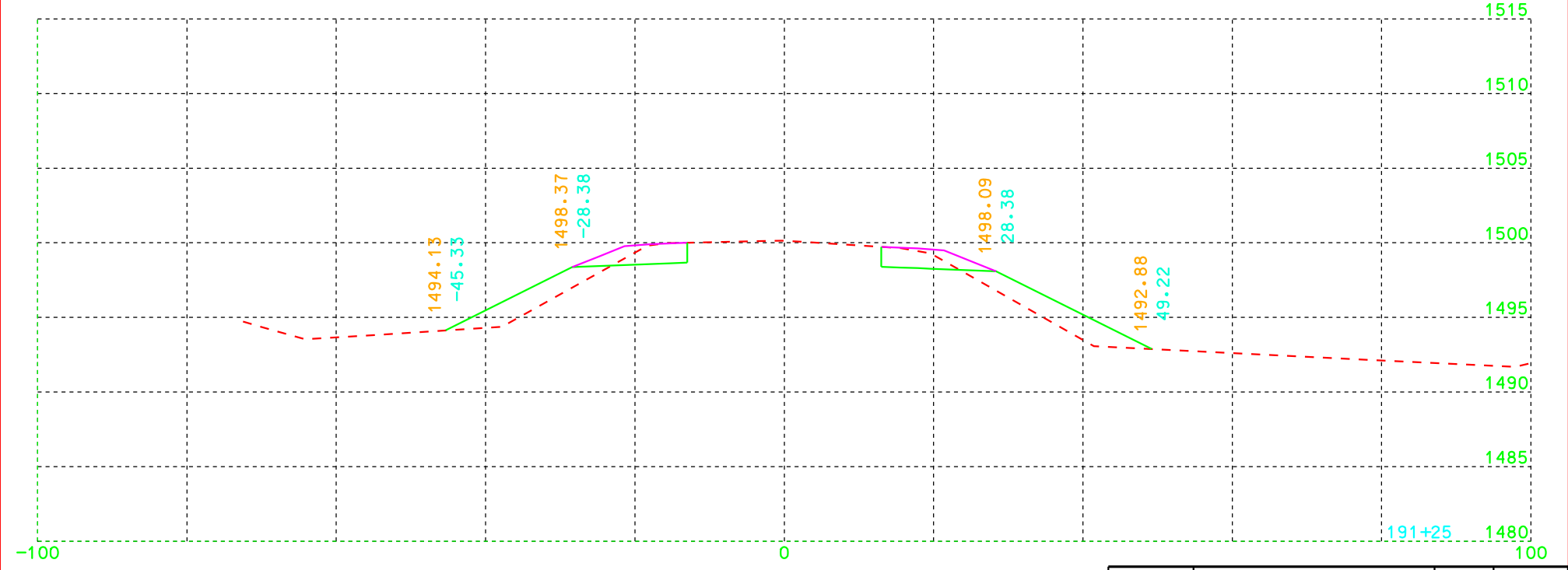
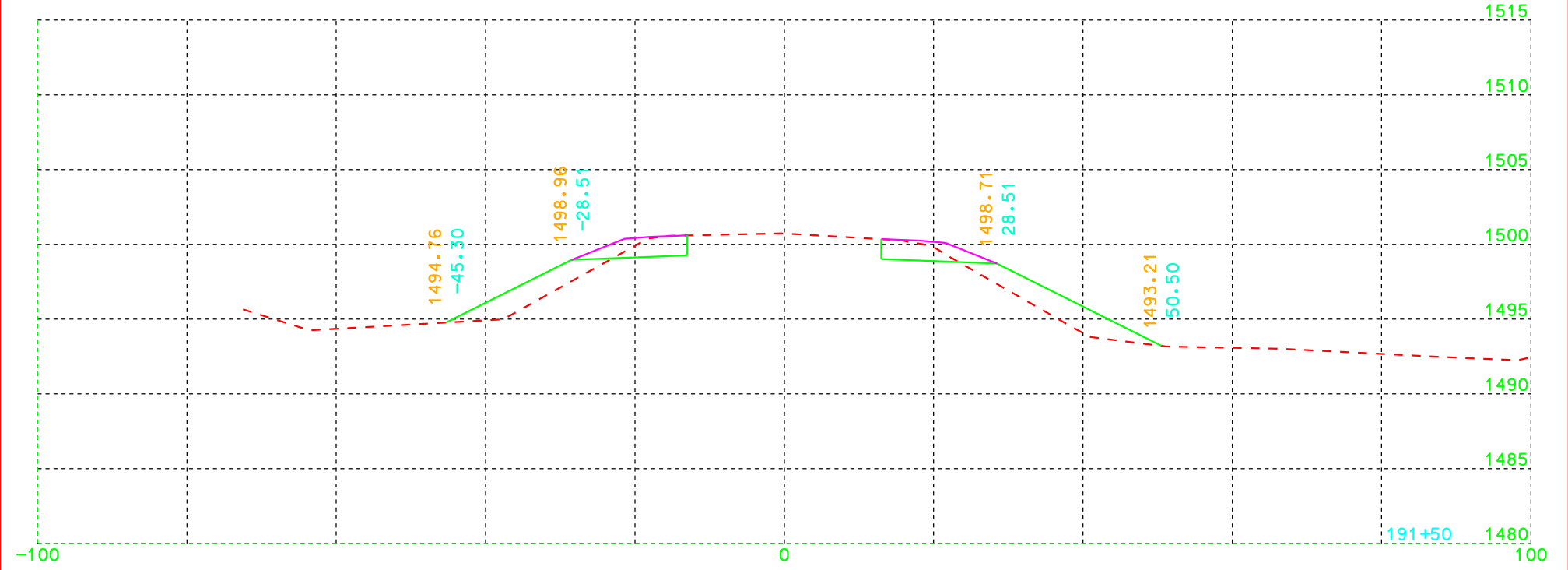
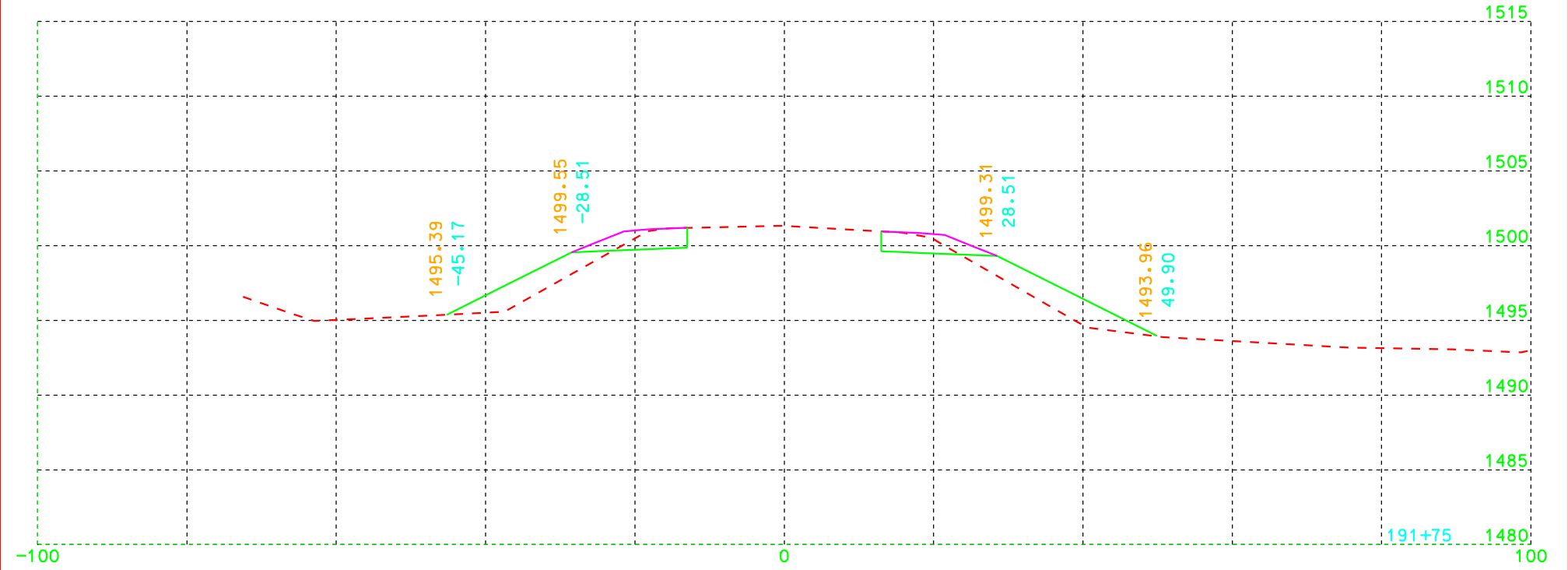
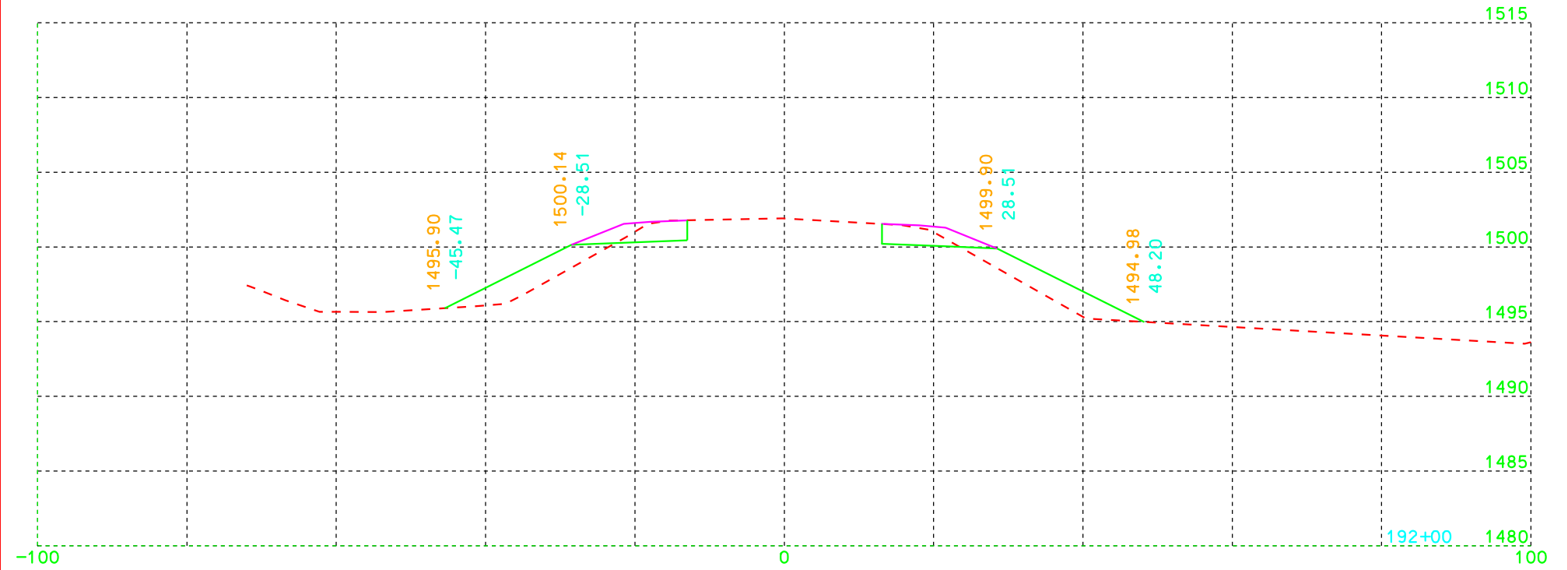
Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO. 45	TOTAL SHEETS 56
	P 0011(30)69		



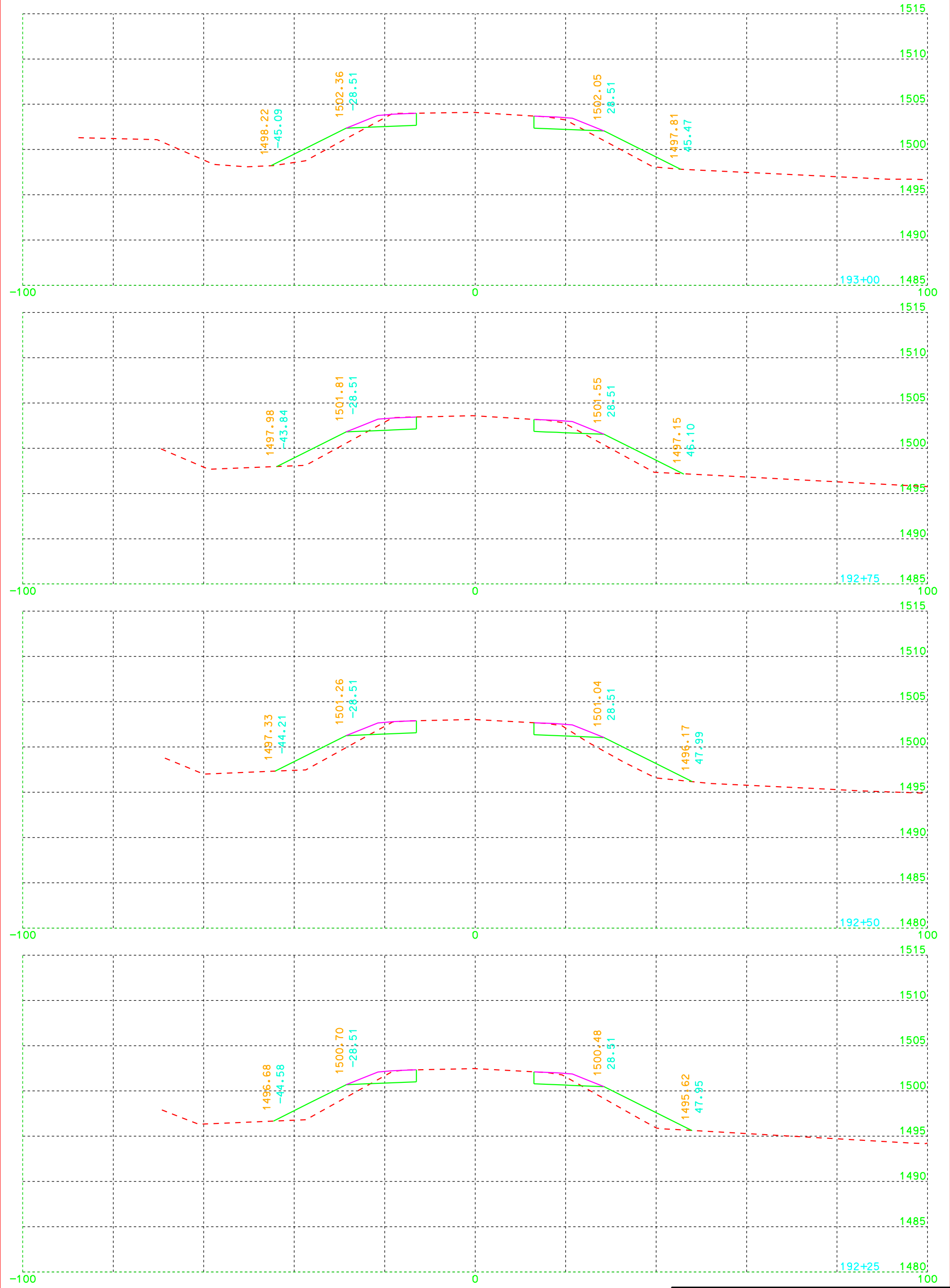
Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69		
		46	56



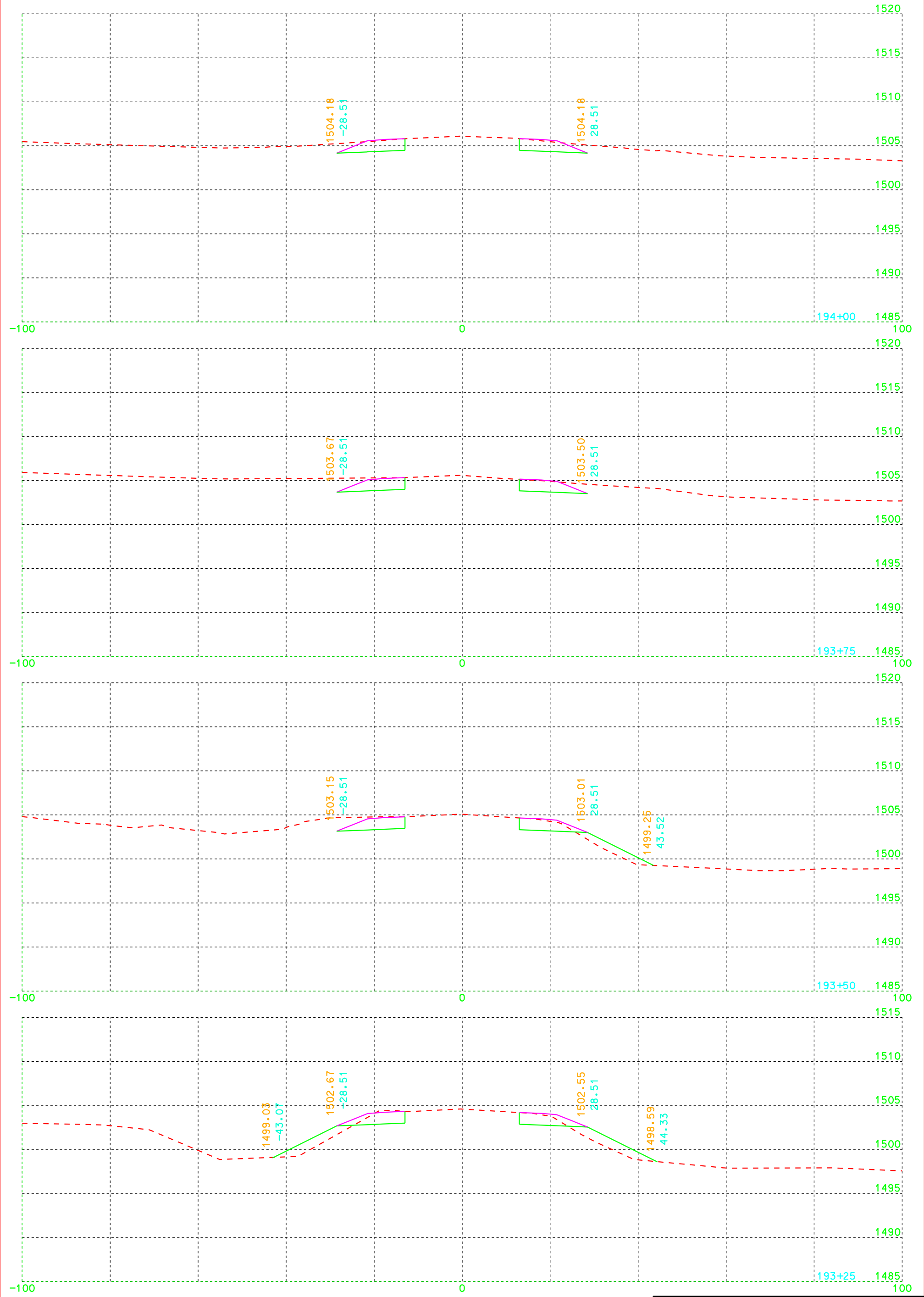
Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO. 47	TOTAL SHEETS 56
	P 0011(30)69		



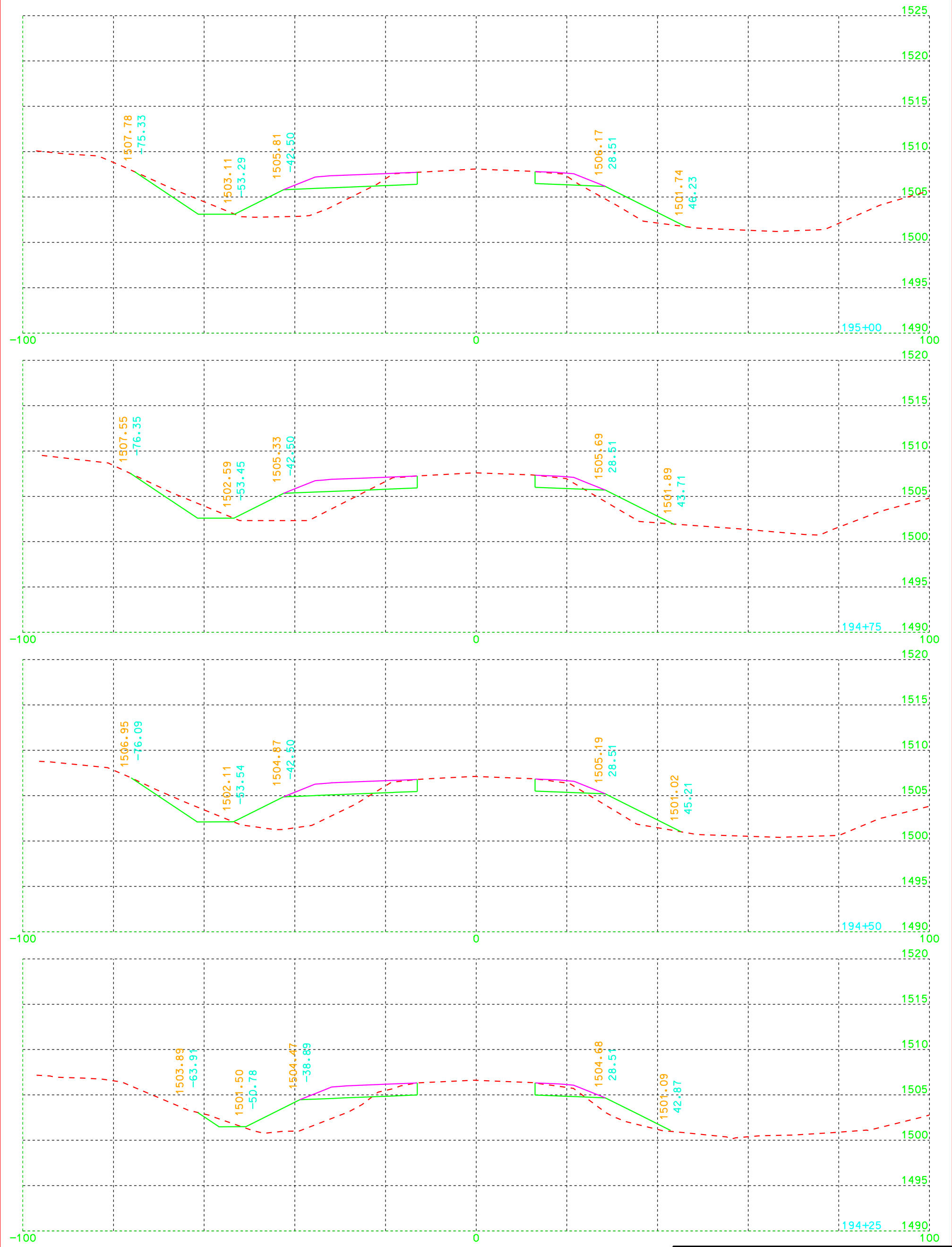
Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69		
		48	56



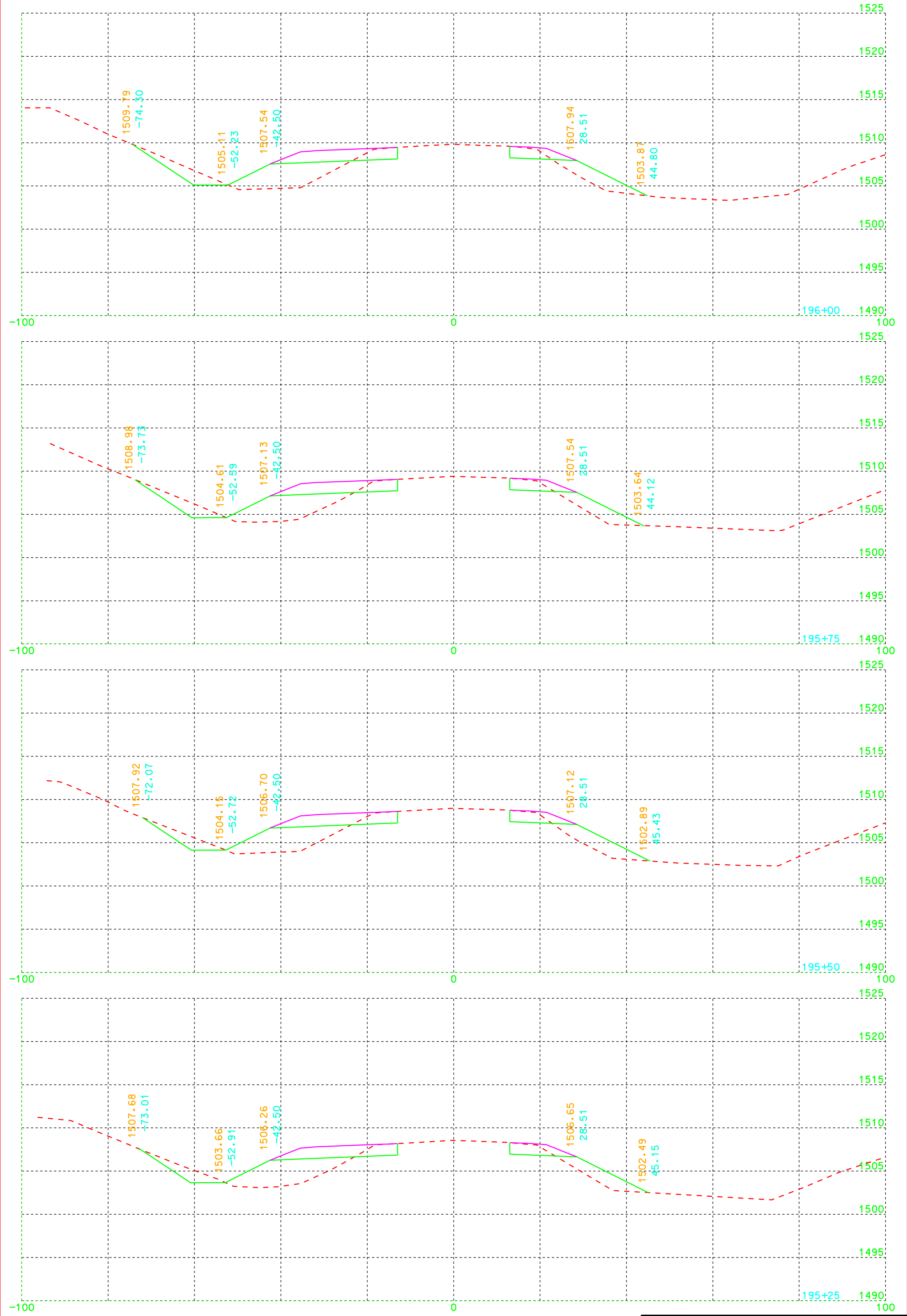
Plotting Date: 27-MAR-2007

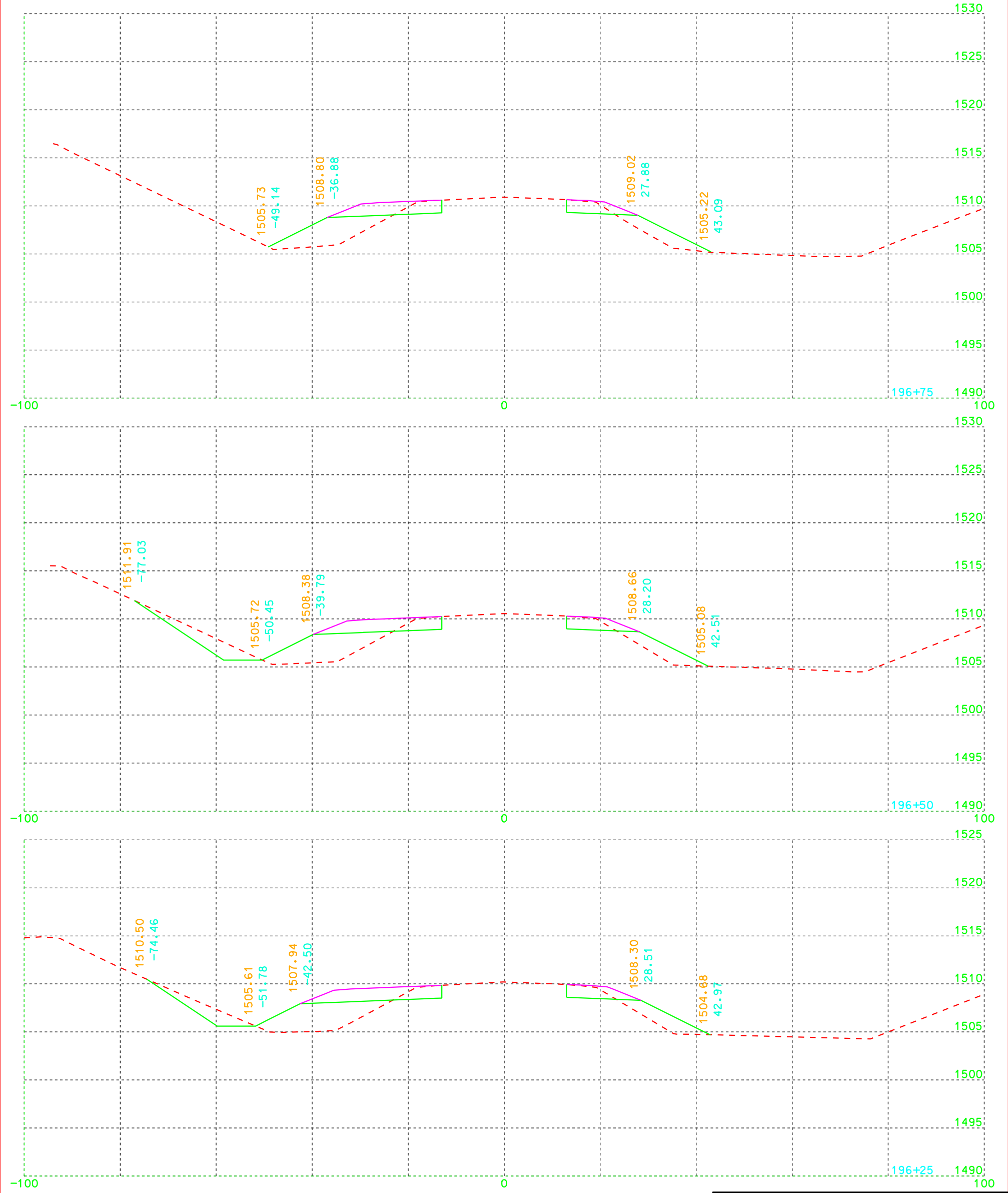
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	49	56



Plotting Date: 27-MAR-2007

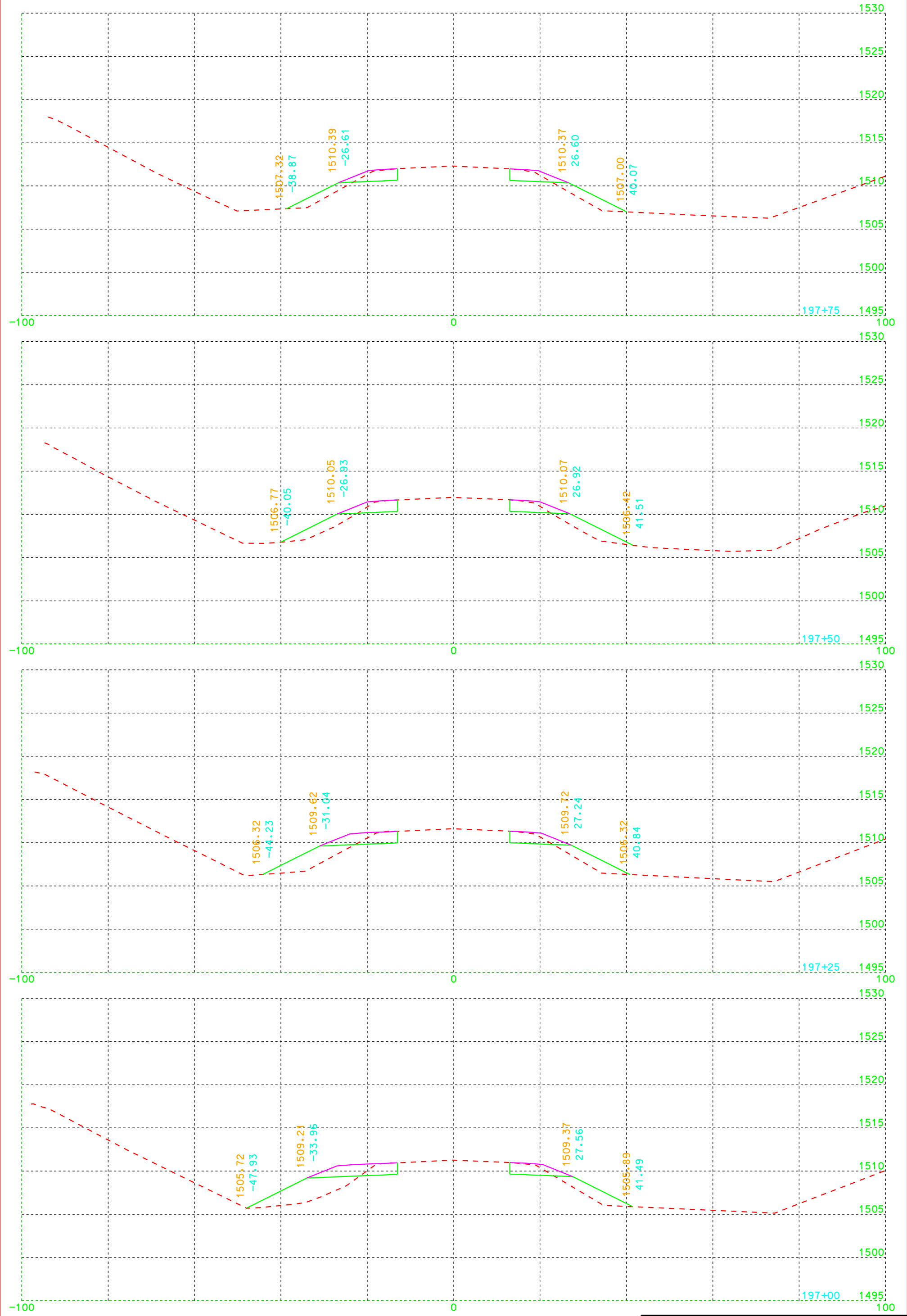
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	50	56

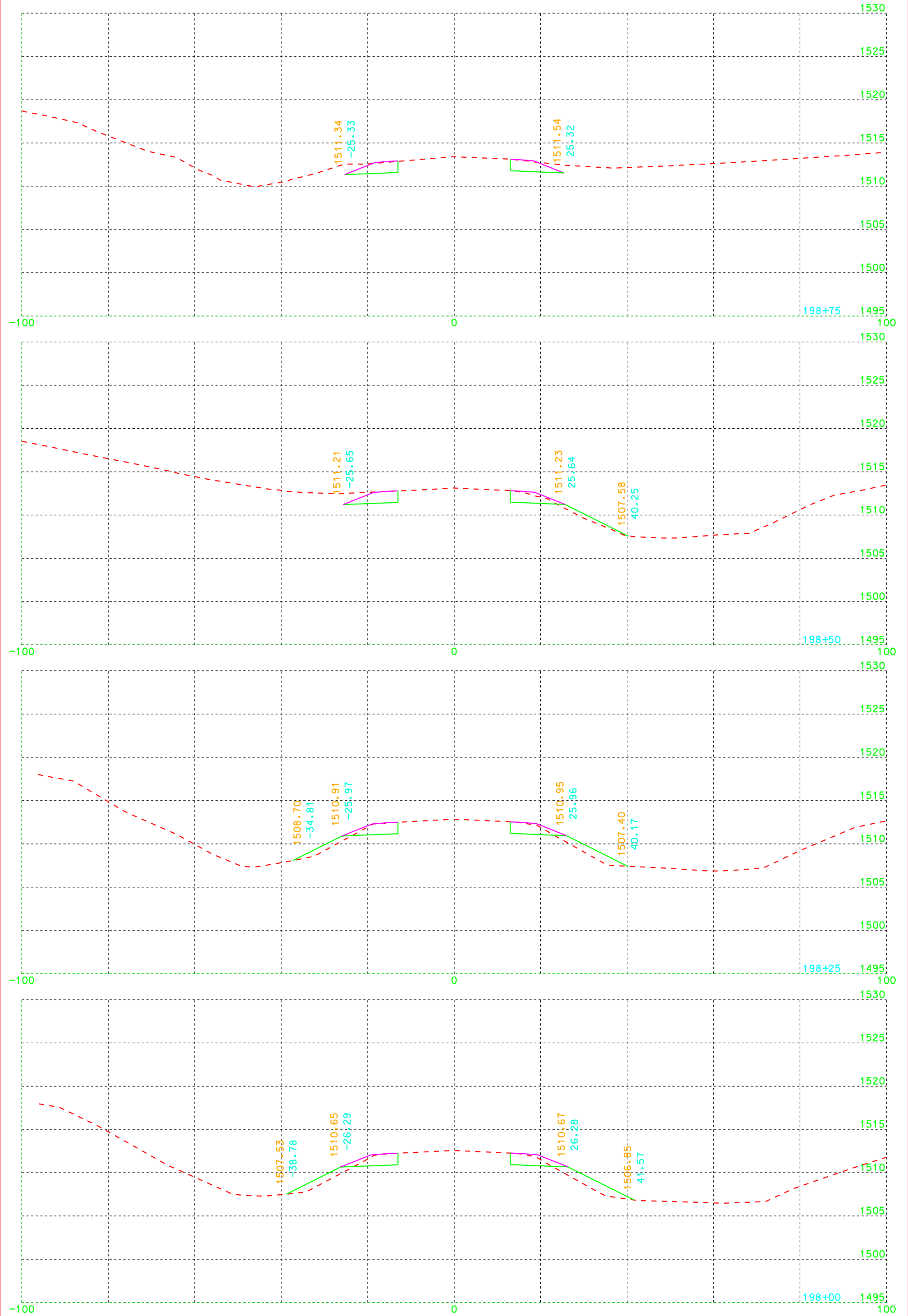


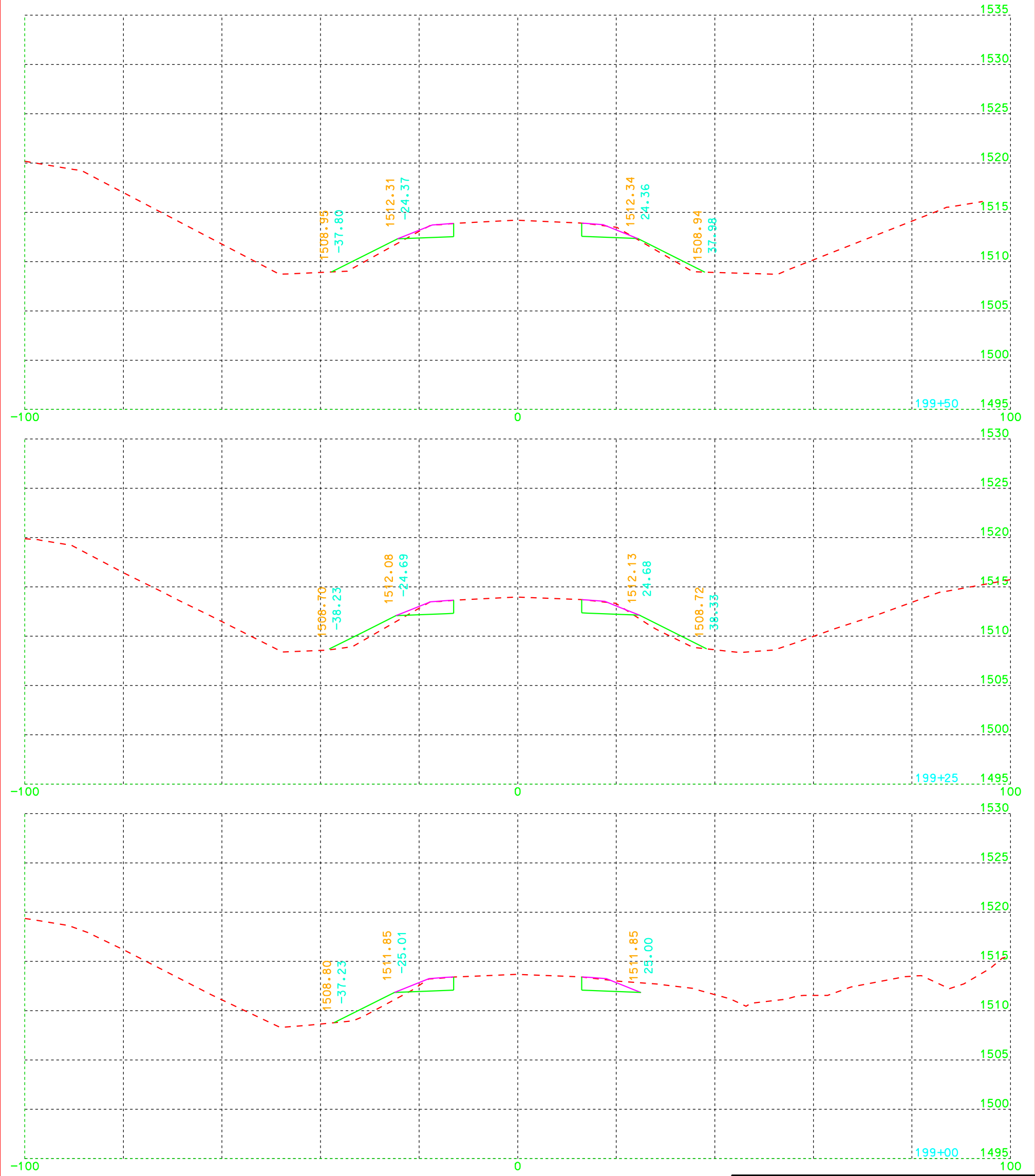


Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P 0011(30)69	52	56







Plotting Date: 27-MAR-2007

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO. 55	TOTAL SHEETS 56
	P 0011(30)69		

