

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | I-4928 | 1 | 52 |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 41188.1.1 | IMS-85-1(106)3 | P.E. | |
| 41188.2.1 | IMS-85-1(106)3 | RAW UTIL. | |
| 41188.3.FS1 | IMS-85-1(106)3 | CONST. | |

CONTENTS

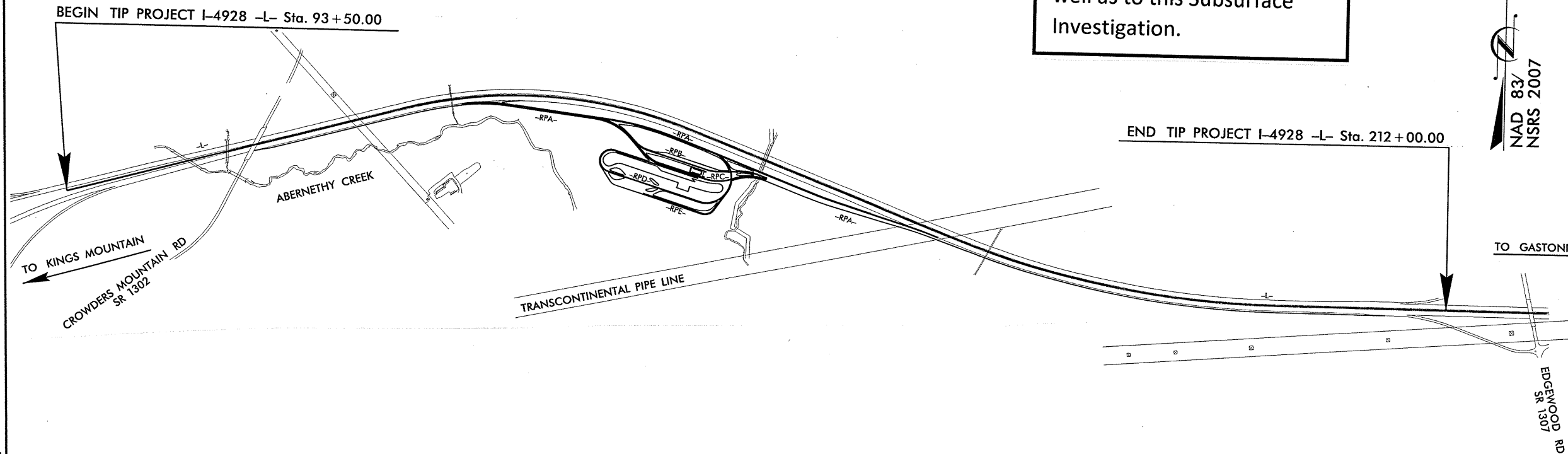
| LINE | STATION | PLAN | PROFILE | XSECT |
|---------|------------------------|------|---------|-------|
| -L- | 109+00.00 to 220+38.04 | 4-13 | | 23-48 |
| -RPA- | 10+00.00 to 51+44.45 | 6-8 | 14-16 | 23-30 |
| -RPB- | 10+00.00 to 25+57.57 | 7 | 17-18 | 27-29 |
| -RPC- | 10+00.00 to 22+10.27 | 7 | 19 | 27-29 |
| -RPD- | 10+00.00 to 34+54.80 | 7 | 20-21 | 49-50 |
| -RPE- | 10+00.00 to 17+95.89 | 7 | 22 | |
| SAMPLES | | 51 | | |

ROADWAY
SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 41188.1.1 (I-4928) F.A. PROJ. IMS-85-1(106)3
COUNTY GASTON
PROJECT DESCRIPTION NEW I-85 NBL WEIGH STATION FROM SR 1302 (CROWDERS MOUNTAIN RD) TO SR 1307 (EDGEWOOD RD)

INVENTORY

This project contains 1
ADDENDUM. Refer to it as
well as to this Subsurface
Investigation.

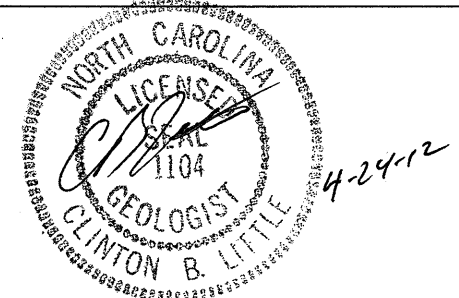


ID: I-4928

CONTRACT: C203357

PERSONNEL
C.G. MURRAY
J.E. ESTEP
M.R. MOORE

INVESTIGATED BY **J.P. ROGERS**
CHECKED BY **C.B. LITTLE**
SUBMITTED BY **C.B. LITTLE**
DATE **FEBRUARY 2012**



DRAWN BY: **J.K. McClure / J.P. ROGERS**

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

09/08/99

See Sheet 1-A For Index of Sheets

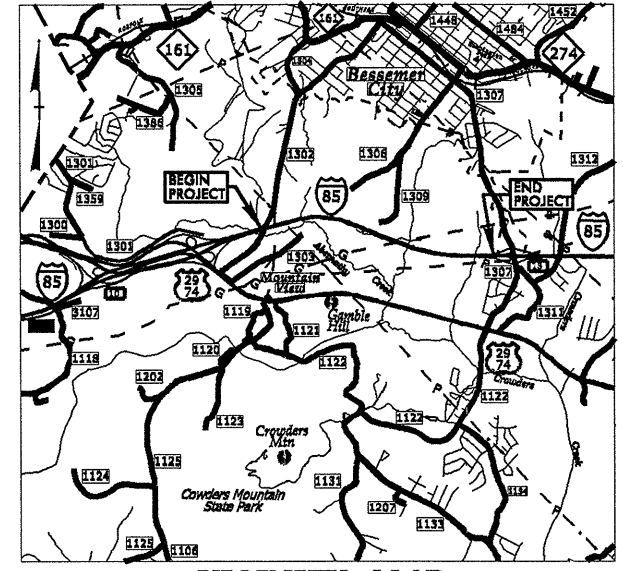
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GASTON COUNTY

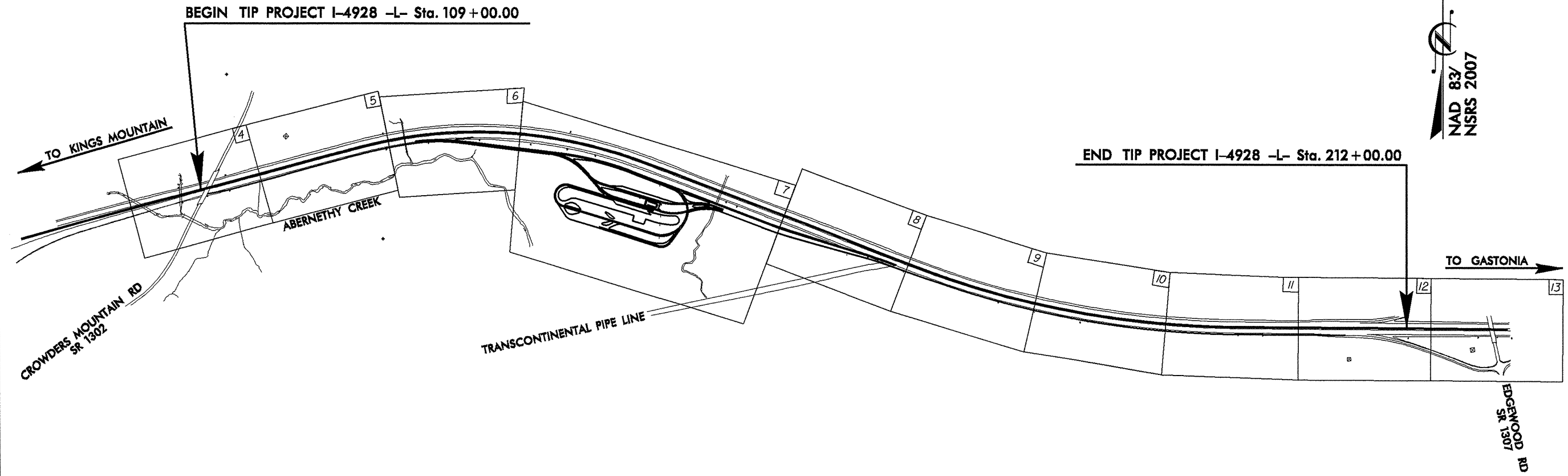
LOCATION: I-85 FROM SR 1302 (CROWDERS MOUNTAIN RD)
TO SR 1307 (EDGEWOOD ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES,
WIDENING, PAVEMENT, SIGNING, WEIGH STATION BUILDINGS, STATIC SCALES,
COMMERCIAL VEHICLE INFORMATION SYSTEMS NETWORKS (CVISN)
WEIGH-IN-MOTION (WIM) SCALE SYSTEM, & LIGHTING

| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATS PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | I-4928 | 2A | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 41188.1.1 | IMS-85-1(106)3 | P.E. | |
| 41188.2.1 | | R/W | |
| 41188.3.1 | | CONST. | |
| | | | |
| | | | |



VICINITY MAP

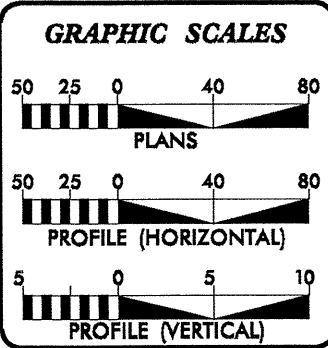


NAD 83/
NSRS 2007

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: I-4928

CONTRACT:



DESIGN DATA

| | |
|------------|----------|
| ADT 2014 = | 74,224 |
| ADT 2035 = | 98,500 |
| DHV = | 10 % |
| D = | 55 % |
| T = | 23 % * |
| V = | 70 MPH |
| * TTST 18% | DUAL 5 % |

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-4928 = 1.951 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: July 19, 2012

LETTING DATE: February 18, 2014

Christopher K. Haire, PE
PROJECT ENGINEER

Mohammed E. Mahjoub, EI
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

21-FEB-2012 09:11 C:\Projects\14928_GEO\ROWY_GASTON\CADD_GEO\TECH\PlanPr of \14928_GEO_Inv_002A_RDYTSH_GASTON.dgn Imclore AT GER257466

EARTHWORK SUMMARIES

Volumes in Cubic Yard

PROJECT_I-4928

COUNTY Gaston

DATE 10/22/2013

SHEET _____ OF _____ SHEETS

| LINE | STATION | STATION | TOTAL EXCAV. (UNCL.) | ROCK EXCAV. | UNDERCUT | UNSUIT. EXCAV. | SUITABLE EXCAV. | TOTAL EMB. | ROCK EMB. | EARTH EMB. | EMBANK. +15% | BORROW | SUITABLE WASTE | UNSUIT. WASTE | TOTAL WASTE | |
|------------------------------------|-----------|-----------|---------------------------------------|-------------|----------|----------------|-----------------|---------------|-------------|---------------|---------------|---------------|----------------|---------------|---------------|--|
| -L- | 109+00.00 | 139+00.00 | 73650 | 2450 | | | 71200 | 16475 | 2450 | 13413 | 17874 | | 55776 | | 55776 | |
| -L- | 139+00.00 | 169+00.00 | 43954 | | | | 43954 | 116425 | | 116425 | 133889 | 89935 | | | | |
| -L- | 169+00.00 | 196+00.00 | 92320 | | | | 92320 | 1956 | | 1956 | 2249 | | 90071 | | 90071 | |
| -L- | 196+00.00 | 212+00.00 | 6397 | | | | 6397 | 2845 | | 2845 | 3272 | | 3125 | | 3125 | |
| -RPB- | 13+15.70 | 21+95.70 | 2523 | | | | 2523 | 40980 | | 40980 | 47127 | 44604 | | | | |
| -RPD- | 13+04.68 | 29+26.53 | 35 | | | | 35 | 183905 | | 183905 | 211491 | 211456 | | | | |
| -RPA- | 22+80.16 | | FILL FOR DITCH RT OF STATION 22+80.16 | | | | | 600 | | 600 | 690 | 690 | | | | |
| TOTAL | | | 218879 | 2450 | | | 216429 | 363186 | 2450 | 360124 | 416592 | 346685 | 148972 | | 148972 | |
| WASTE TO BE USED IN LIEU OF BORROW | | | | | | | | | | | | -148972 | -148972 | | -148972 | |
| SHOULDER MATERAIL | | | | | | | | 7060 | | 7060 | 8119 | 8119 | | | | |
| LOSS DUE TO CLEARING AND GRUBBING | | | -8250 | | | | -8250 | | | | | 8250 | | | | |
| PROJECT TOTAL | | | 210629 | 2450 | | | 208179 | 370246 | 2450 | 367184 | 424711 | 214082 | | | | |
| 5% TO RELACE TOPSOIL ON BORROW PIT | | | | | | | | | | | | 10705 | | | | |
| GRAND TOTAL | | | 210629 | 2450 | | | 208179 | 370246 | 2450 | 367184 | 424711 | 224787 | | | | |
| SAY | | | 210,900.00 | | | | | | | | | 225,000.00 | | | | |

PAVMENT STRUCTURE VOLUME 11,000 CUYD



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PURDUE
GOVERNOR

Eugene A. Conti, Jr.
SECRETARY

March 2, 2012

STATE PROJECT: 41188.1.1 (I-4928)
FEDERAL PROJECT: IMS-85-1(106)3
COUNTY: Gaston
DESCRIPTION: I-85 Weigh Station Cleveland-Gaston Counties
SUBJECT: Geotechnical Report – Inventory

PROJECT DESCRIPTION

This project is located in southwestern Gaston County near the Town of Kings Mountain. The project begins approximately 3 miles east of the Cleveland County/Gaston county border. The proposed Weigh Station and associated ramps are all located off of Northbound I-85 between the Crowders Mountain Road overpass and the diamond interchange at Edgewood Road. The Trans-Continental Pipeline between Texas and New Jersey cross under I-85 within the project corridor. In addition, a new sewer line is currently under construction in an area adjacent to the pipeline. The following alignments were investigated:

- L- Station 109+00.00 to 220+38.04 (2.11 miles)
- Ramp A 10+00.00 to 51+44.45 (0.78 miles)
- Ramp B 10+00.00 to 25+57.57 (0.48 miles)
- Ramp C 10+00.00 to 22+10.27 (0.42 miles)
- Ramp D 10+00.00 to 34+54.80 (0.65 miles)
- Ramp E 10+00.00 to 17+95.89 (0.34 miles)

The total length of lines investigated is 4.78 miles. The field investigation was conducted in December 2011 and January 2012. All borings were conducted with a CME-550X drill machine with an automatic hammer. Standard Penetration Tests were performed utilizing Hollow Stem Augers with carbide insert teeth in the head stem. 92 soil samples were submitted to the Materials and Tests Unit for laboratory analysis.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
1589 MAIL SERVICE CENTER
RALEIGH NC 27699-1589

TELEPHONE: 919-707-6850
FAX: 919-250-4237
WEBSITE:
www.ncdot.gov/doh/preconstruct/highway/geotech

LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

AREAS OF SPECIAL GEOTECHNICAL INTEREST

Crystalline Rock: Crystalline rock was encountered within 10' of grade at the following location:

| Line | Station(s) | Offset |
|------|------------------|----------------|
| -L- | 134+25 to 137+00 | 100 to 280 Rt. |

The -L- line stationing listed above also corresponds to Ramp A Stations 17+45 to 19+00, centerline. Therefore, the rock will be shown on the Ramp A profile in addition to the -L- line cross-sections. Rock outcrops are visible on the surface at or near Station 16+70 Ramp A.

Alluvial Soils: Abernathy Creek and an unnamed tributary serve as the primary drainage for this project. In the beginning stages of the project, Abernathy Creek flows in an easterly direction adjacent to the toe of the existing I-85 NBL Roadway Fill. The unnamed tributary flows north to south and crosses under I-85 before joining Abernathy Creek. Alluvial soils from the unnamed tributary are what we encountered within the project corridor during the investigation phase of this project. These soils were encountered at the following location:

Station 34+00 to 36+75 Ramp A, right: Alluvial soils in this segment are up to 10.0' deep and consist primarily of sandy silt (A-4), and silty and coarse sand (A-2-4, A-1-a) with gravel. A small deposit of silty clay (A-6) was encountered in a boring performed on the western side of the unnamed tributary (13+75, RPD, left). Groundwater, where encountered, was between elevations 724' and 744'. Alluvial deposits are marginally thicker on the eastern side of the unnamed tributary. Maximum fill heights over these deposits are approximately 45'.

SOIL PROPERTIES

Residual Soils

All residual soils on the project are derived from the quartz sericite schist (Zbt) rocks encountered within the project corridor. Crystalline and severely weathered crystalline rock was encountered in the cut between Stations 16+70 to 22+70 Ramp A. Please refer to sheet 14 of the attached inventory plans for a graphical depiction of the Ramp A profile through this area. The dominant residual soil type encountered is silty clay (A-7-6, A-7-5). Silty sand (A-2-4, A-2-5) and sandy silt (A-4, A-5) are also present within the project corridor, but in lesser concentrations.

Respectfully submitted,

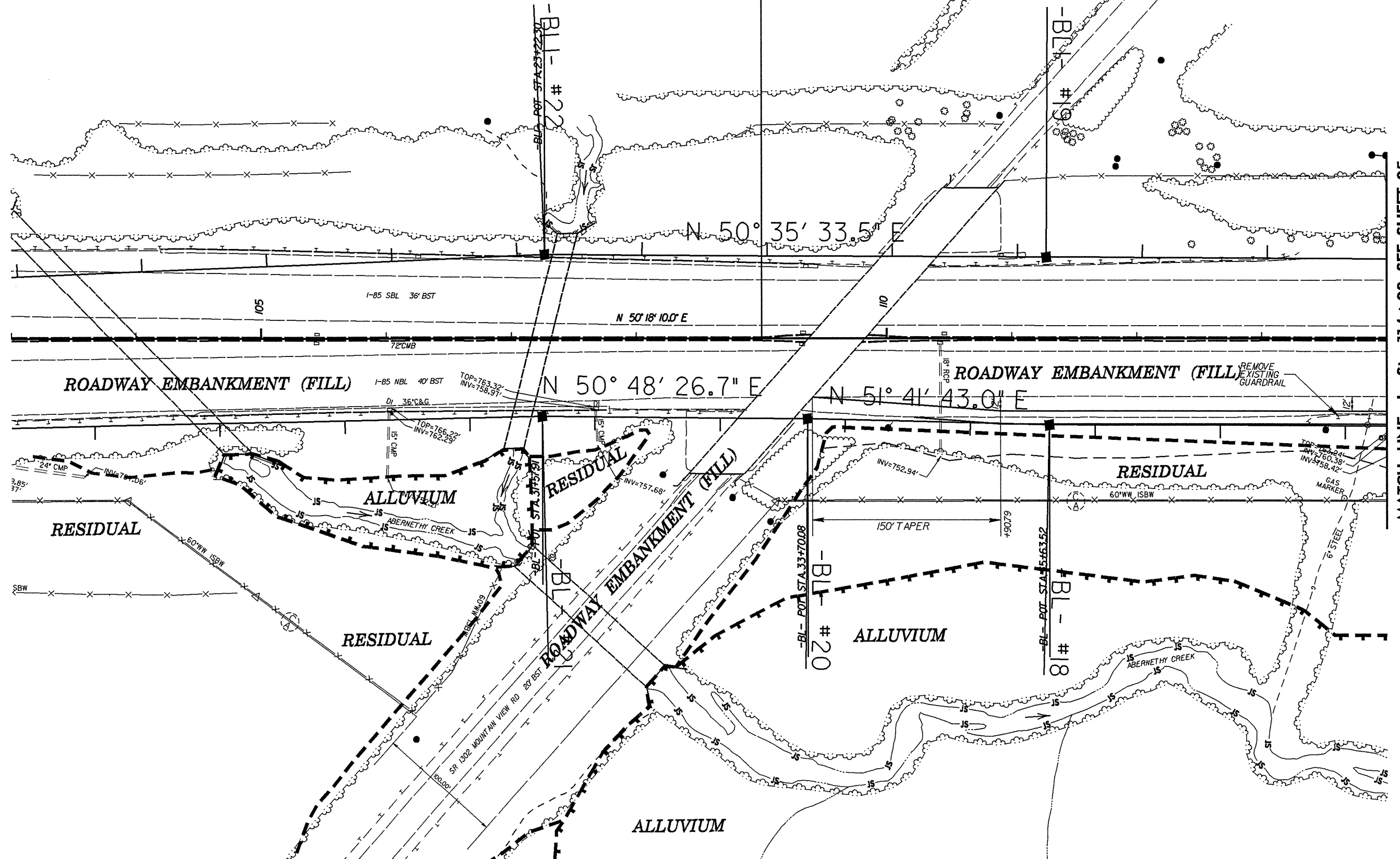
John P. Rogers
Project Geological Engineer

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 Objects
 1:1
 14928

| | |
|---|---------------------|
| PROJECT REFERENCE NO. | SHEET NO. |
| I-4928 | 4 |
| R/W SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



-L- Sta. 109+00.00 BEGIN TIP PROJECT I-4928



MATCH LINE -L- Sta. 114+00 SEE SHEET 05

REVISIONS

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14928_GEO_INV_005.dwg

-L-

| | | |
|--------------------------------|------------------------------------|--------------------------------|
| PIs Sta 122+88.34 | PI Sta 134+81.75 | PIs Sta 146+15.85 |
| $\theta s = 1^{\circ}49'48.6"$ | $\Delta = 32^{\circ}20'00.0"$ (RT) | $\theta s = 1^{\circ}49'48.6"$ |
| LS = 245.00' | D = 1^{\circ}29'38.5" | LS = 245.00' |
| LT = 163.34' | L = 2164.18' | LT = 163.34' |
| ST = 81.67' | T = 1111.75' | ST = 81.67' |
| | R = 3,835.00' | |

| | |
|--|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 5 |
| R/W SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

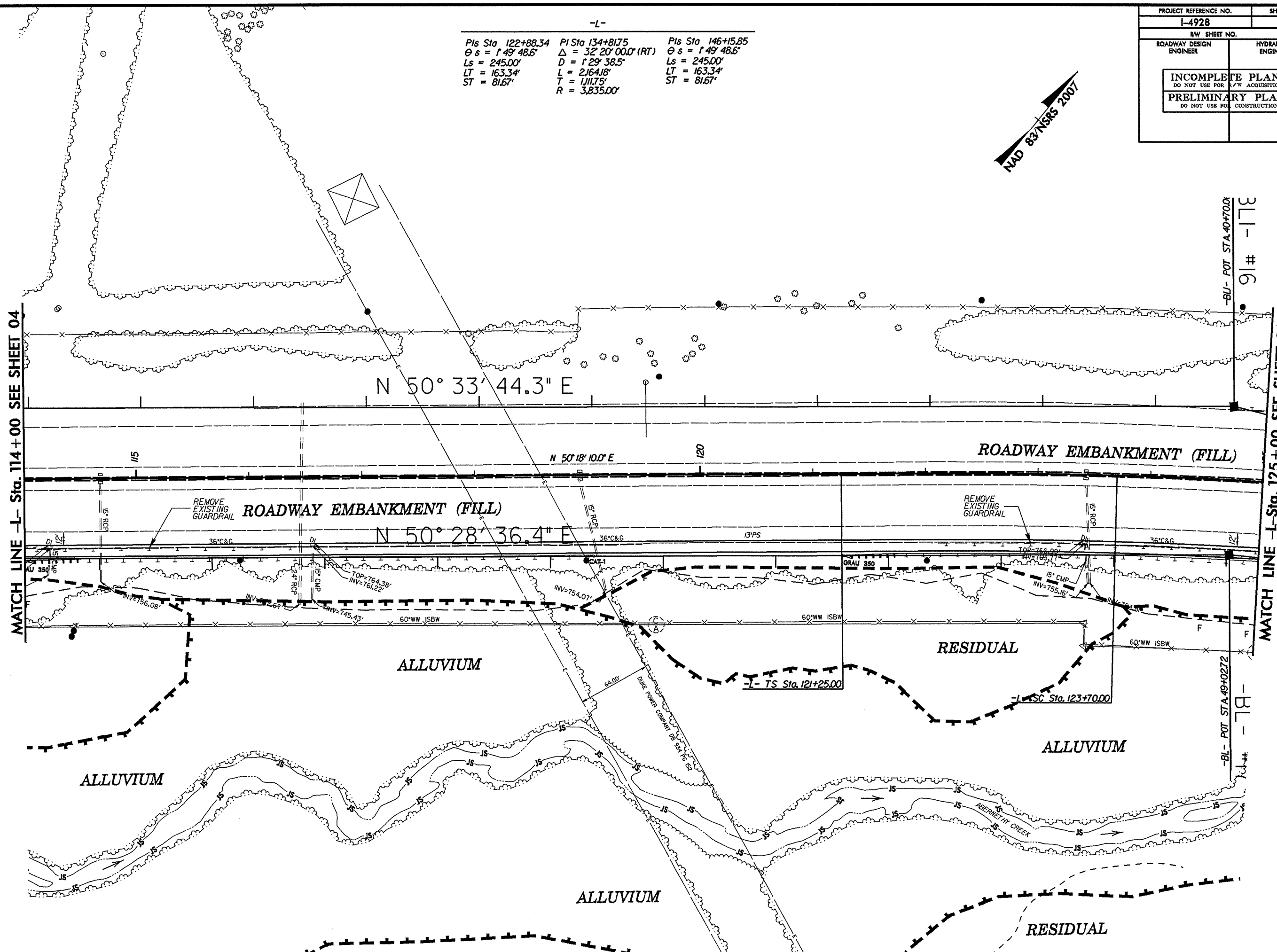


MATCH LINE -L- Sta. 114+00 SEE SHEET 04

MATCH LINE -L- Sta. 125+00 SEE SHEET 06

-BU- POT STA. 40+70.00
91# -173

-BL- POT STA. 49+02.72



REVISIONS

8/17/99

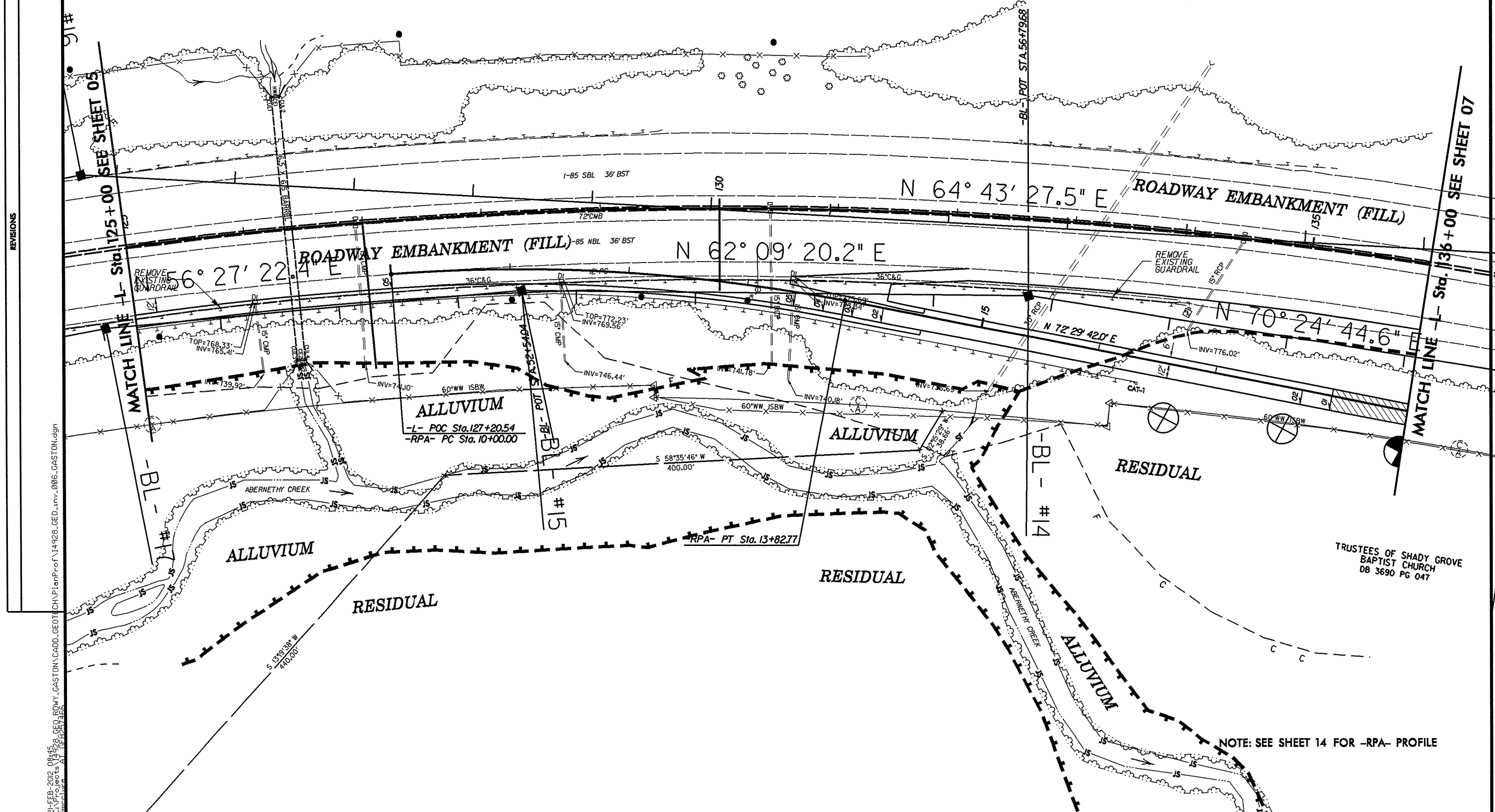
-L-

| | | |
|-----------------------------------|---------------------------------------|-----------------------------------|
| PIs Sta 122+88.34 | PI Sta 134+81.75 | PIs Sta 146+15.85 |
| $\theta s = 1^{\circ} 49' 48.6''$ | $\Delta = 32^{\circ} 20' 00.0''$ (RT) | $\theta s = 1^{\circ} 49' 48.6''$ |
| LS = 245.00' | D = 1^{\circ} 29' 38.5'' | LS = 245.00' |
| LT = 163.34' | L = 2,164.18' | LT = 163.34' |
| ST = 81.67' | T = 1,111.75' | ST = 81.67' |
| | R = 3,835.00' | |

-RPA-

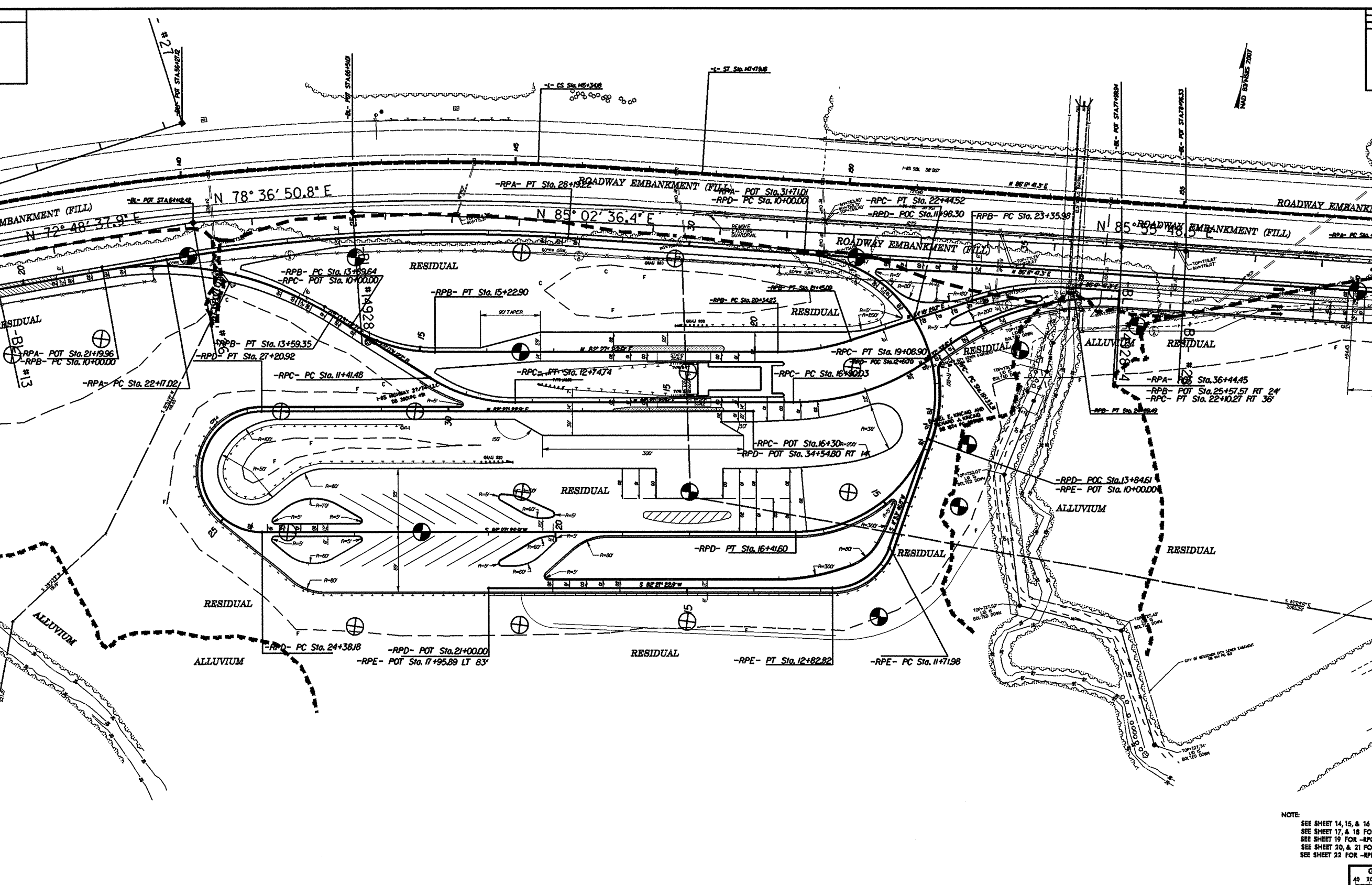
| |
|---------------------------------------|
| PI Sta 11+92.50 |
| $\Delta = 15^{\circ} 07' 29.6''$ (RT) |
| D = 3^{\circ} 57' 05.2'' |
| L = 382.77' |
| T = 192.50' |
| R = 1,450.00' |

| | |
|--|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 6 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



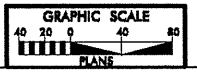
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REVISIONS



| | |
|------------------|-------|
| PROJECT NUMBER | 1-272 |
| BY | ... |
| DATE | ... |
| SCALE | ... |
| PROJECT TITLE | ... |
| PREPARED BY | ... |
| CHECKED BY | ... |
| DATE | ... |
| PROJECT LOCATION | ... |
| PROJECT NUMBER | ... |
| BY | ... |
| DATE | ... |
| SCALE | ... |
| PROJECT TITLE | ... |
| PREPARED BY | ... |
| CHECKED BY | ... |
| DATE | ... |
| PROJECT LOCATION | ... |

NOTE:
 SEE SHEET 14, 15, & 16 FOR -RPA- PROFILE
 SEE SHEET 17, & 18 FOR -RPS- PROFILE
 SEE SHEET 19 FOR -RPC- PROFILE
 SEE SHEET 20, & 21 FOR -RPD- PROFILE
 SEE SHEET 22 FOR -RPE- PROFILE



8/17/99

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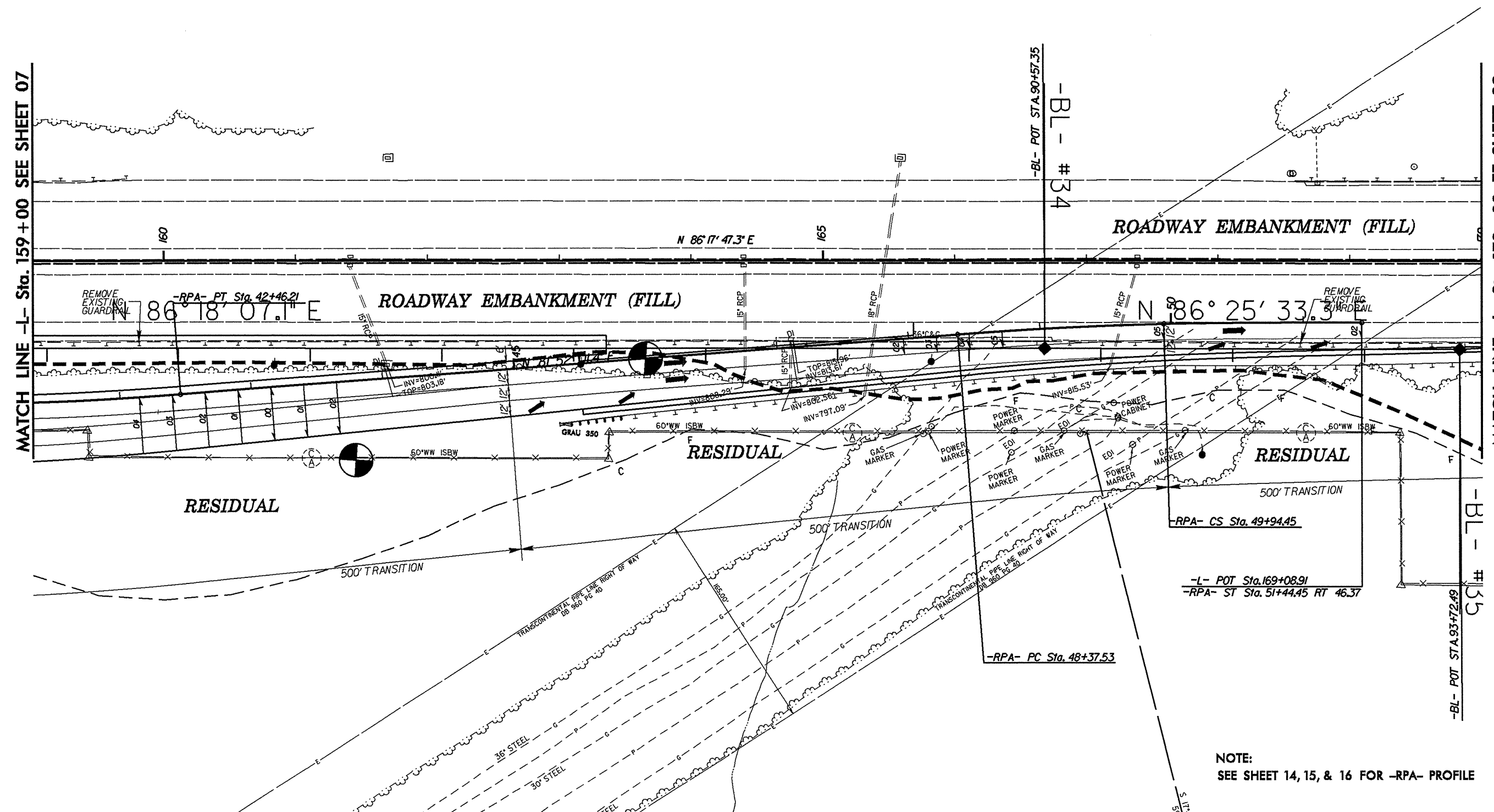
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| PROJECT REFERENCE NO. | SHEET NO. |
| 1-4928 | 8 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

| | | |
|------------------------------|---------------------------|-------------------------------|
| -RPA- | | -L- |
| PI Sta 49+16.01 | PIs Sta 50+44.46 | PI Sta 184+26.48 |
| $\Delta = 2' 59' 49.3" (RT)$ | $\Theta s = 1' 25' 56.6"$ | $\Delta = 20' 30' 35.3" (LT)$ |
| $D = 1' 54' 35.5"$ | $Ls = 150.00'$ | $D = 0' 44' 57.7"$ |
| $L = 156.92'$ | $LT = 100.00'$ | $L = 2736.99'$ |
| $T = 78.48'$ | $ST = 50.00'$ | $T = 1383.30'$ |
| $R = 3,000.00'$ | | $R = 7,646.00'$ |

NAD 83/N/SMS 2007

MATCH LINE -L- Sta. 159+00 SEE SHEET 07

MATCH LINE -L- Sta. 170+00 EE SHEET 09

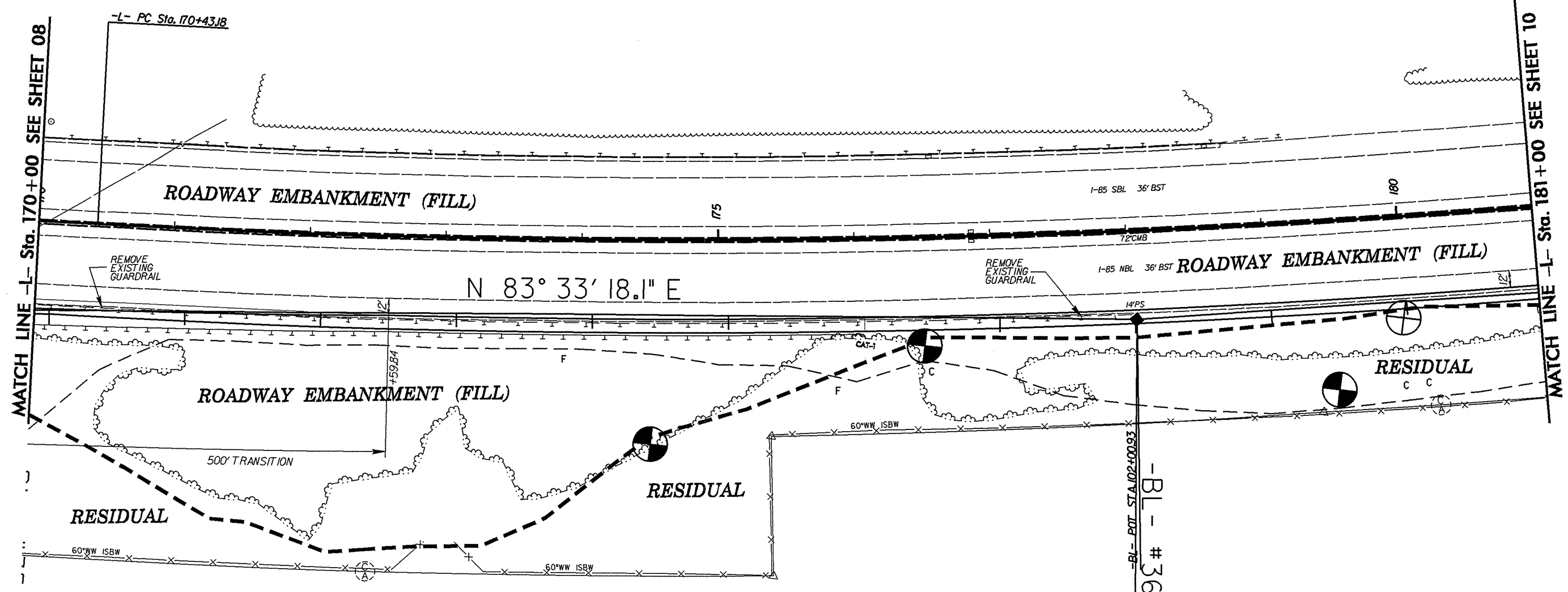


NOTE:
SEE SHEET 14, 15, & 16 FOR -RPA- PROFILE

| | |
|---|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 9 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

NAD 83/NSRS 2007

-L-
 PI Sta 184+26.48
 $\Delta = 20^{\circ} 30' 35.3" (LT)$
 $D = 0^{\circ} 44' 57.7"$
 $L = 2,736.99'$
 $T = 1,383.30'$
 $R = 7,646.00'$



MATCH LINE -L- Sta. 170+00 SEE SHEET 08

MATCH LINE -L- Sta. 181+00 SEE SHEET 10

-BL- #36
 -BL- POT STA 102+00.93

REVISIONS

8/17/99

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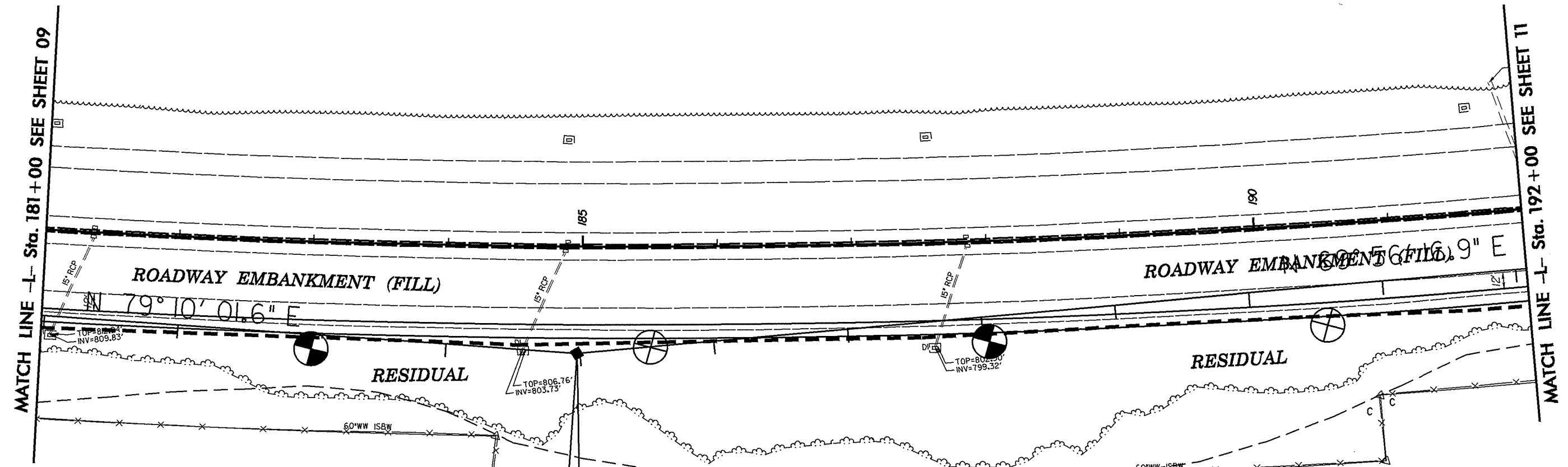
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REVISIONS

-L-
 PI Sta 184+26.48
 $\Delta = 20^{\circ} 30' 35.3" (LT)$
 $D = 0^{\circ} 44' 57.7"$
 $L = 2,736.99'$
 $T = 1,383.30'$
 $R = 7,646.00'$

| | |
|---|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 10 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

NAD 83/NSRS 2007



MATCH LINE -L- Sta. 181+00 SEE SHEET 09

MATCH LINE -L- Sta. 192+00 SEE SHEET 11

ROADWAY EMBANKMENT (FILL)

ROADWAY EMBANKMENT (FILL) 6.9% E

$79^{\circ} 10' 01.6" E$

RESIDUAL

RESIDUAL

TOP=806.76'
INV=803.73'

TOP=802.40'
INV=799.32'

61-7 PPT STA 188+87.88

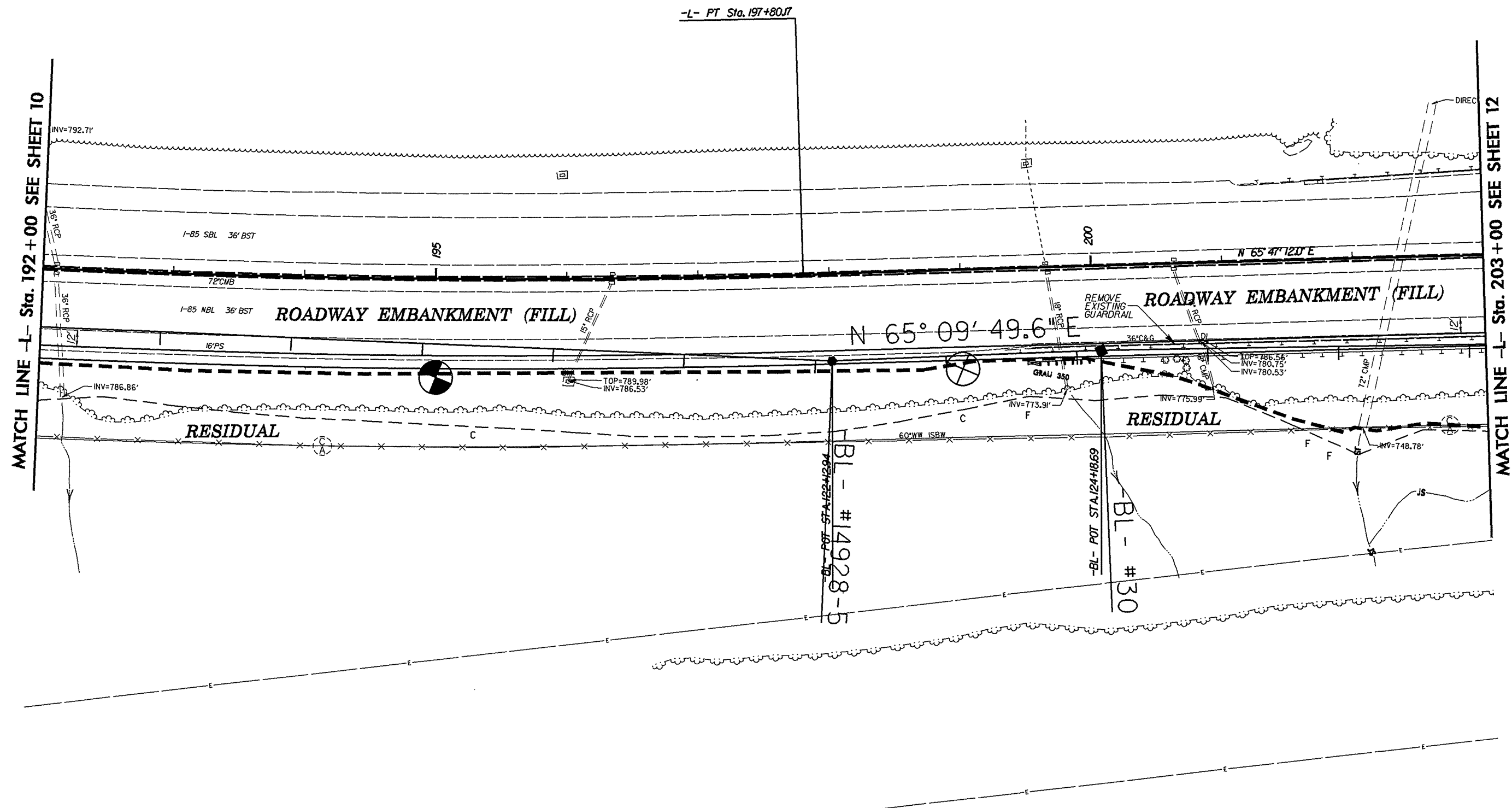
I-85 HIGHWAY 27/74 LLC
DB 390/PG 491

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 14928_GED

| | |
|---|---------------------|
| PROJECT REFERENCE NO. | SHEET NO. |
| I-4928 | 11 |
| RAW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

-L-
 PI Sta 184+26.48
 $\Delta = 20' 30' 35.3" (LT)$
 $D = 0' 44' 57.7"$
 $L = 2,736.99'$
 $T = 1,383.30'$
 $R = 7,646.00'$

NAD 83 NSRS 2007



REVISIONS

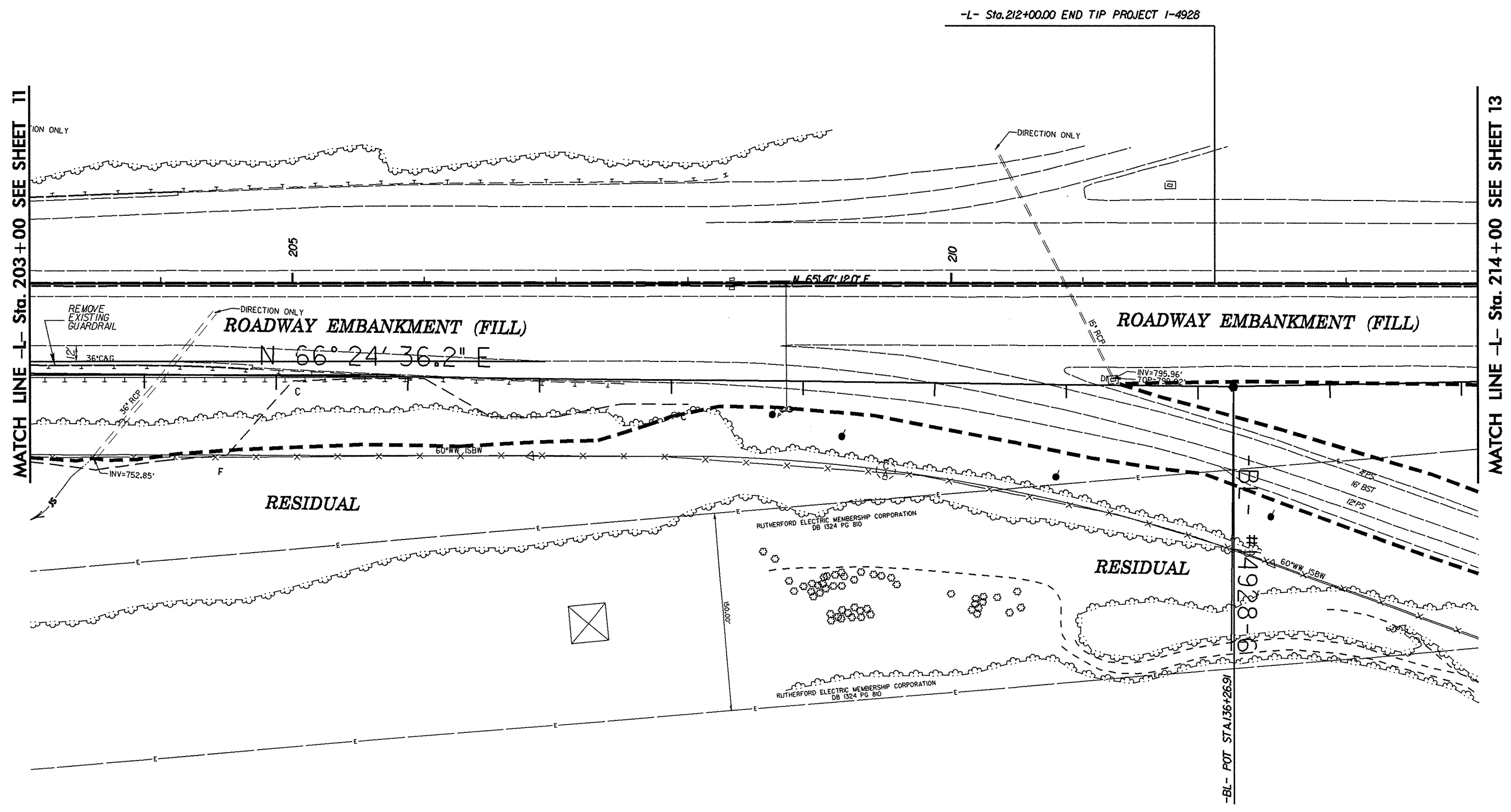
MATCH LINE -L- Sta. 192 + 00 SEE SHEET 10

MATCH LINE -L- Sta. 203 + 00 SEE SHEET 12

8/17/99

21-FEB-2012 08:52
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| | | | |
|--|--|------------------------|--|
| PROJECT REFERENCE NO. 1-4928 | | SHEET NO. 12 | |
| RW SHEET NO. | | | |
| ROADWAY DESIGN ENGINEER | | HYDRAULICS ENGINEER | |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | | | |



REVISIONS

MATCH LINE -L- Sta. 203+00 SEE SHEET 11

MATCH LINE -L- Sta. 214+00 SEE SHEET 13

#14928-6
-BL- POT STA. 136+26.91

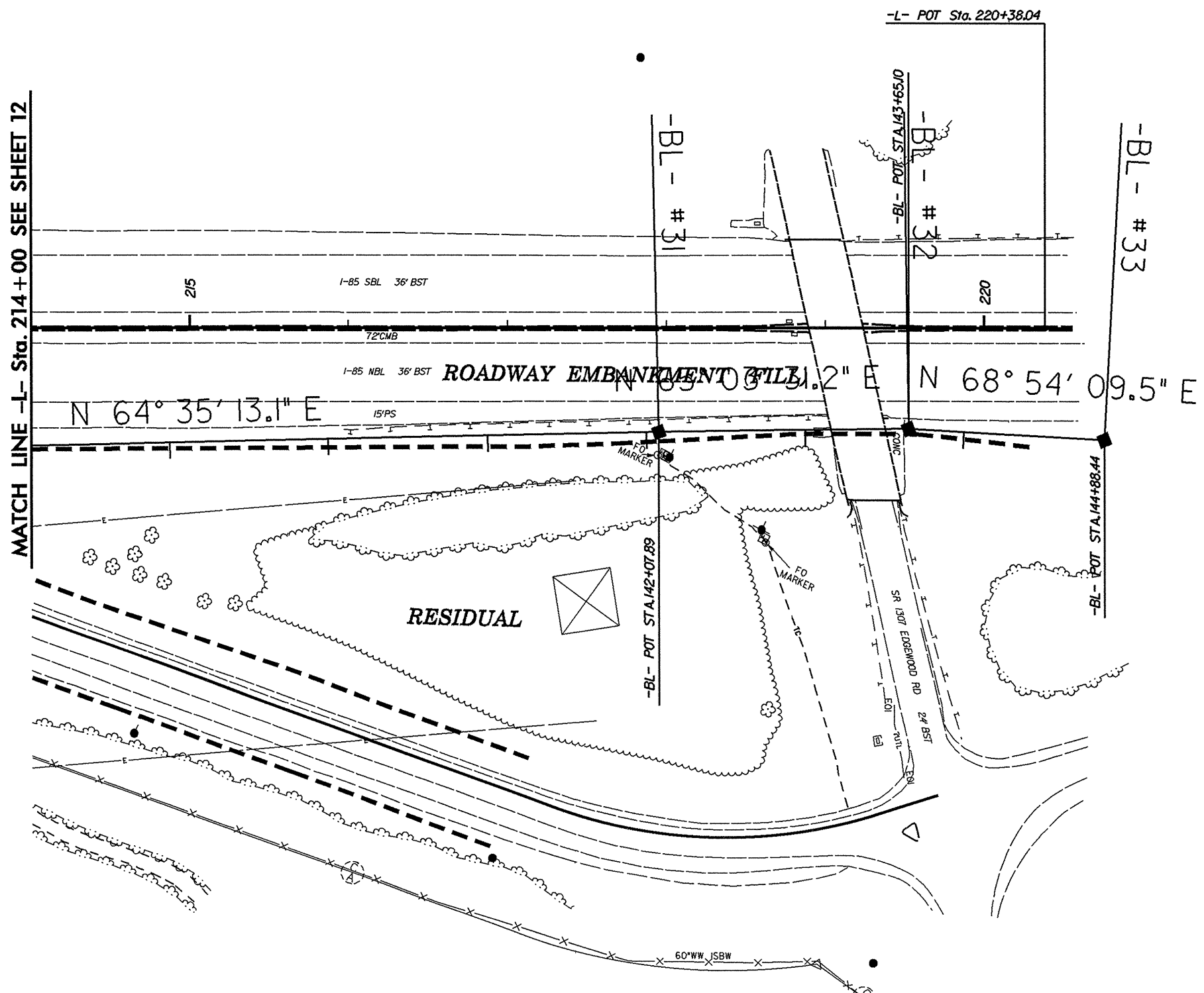
8/17/99

21-FEB-2012 08:53 C:\p\projects\14928\GASTON\ROADWAY\GASTON\CADD\GEO\CH\Plan\Prof\14928_GEO.inv_013.GASTON.dgn

REVISIONS

| | |
|---|---------------------|
| PROJECT REFERENCE NO. | SHEET NO. |
| I-4928 | 13 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

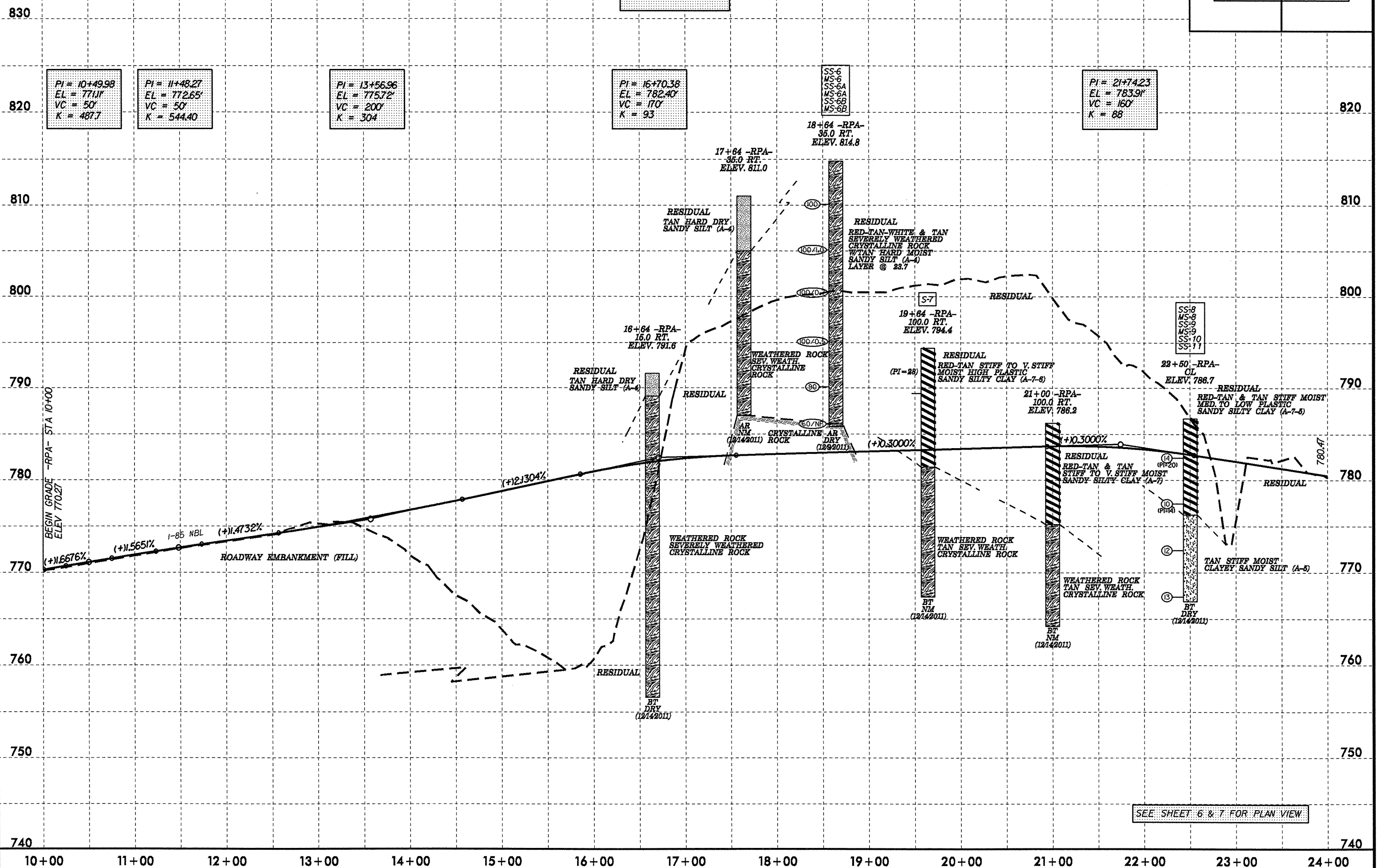
NAD 83 N58S 2007



5/14/99

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| PROJECT REFERENCE NO. 1-4928 | SHEET NO. 14 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



-RPA-

PI = 10+49.98
 EL = 771.11'
 VC = 50'
 K = 487.7

PI = 11+48.27
 EL = 772.65'
 VC = 50'
 K = 544.40

PI = 13+56.96
 EL = 775.72'
 VC = 200'
 K = 304

PI = 16+70.38
 EL = 782.40'
 VC = 170'
 K = 93

SS-6
 MS-6
 SS-6A
 MS-6A
 SS-6B
 MS-6B

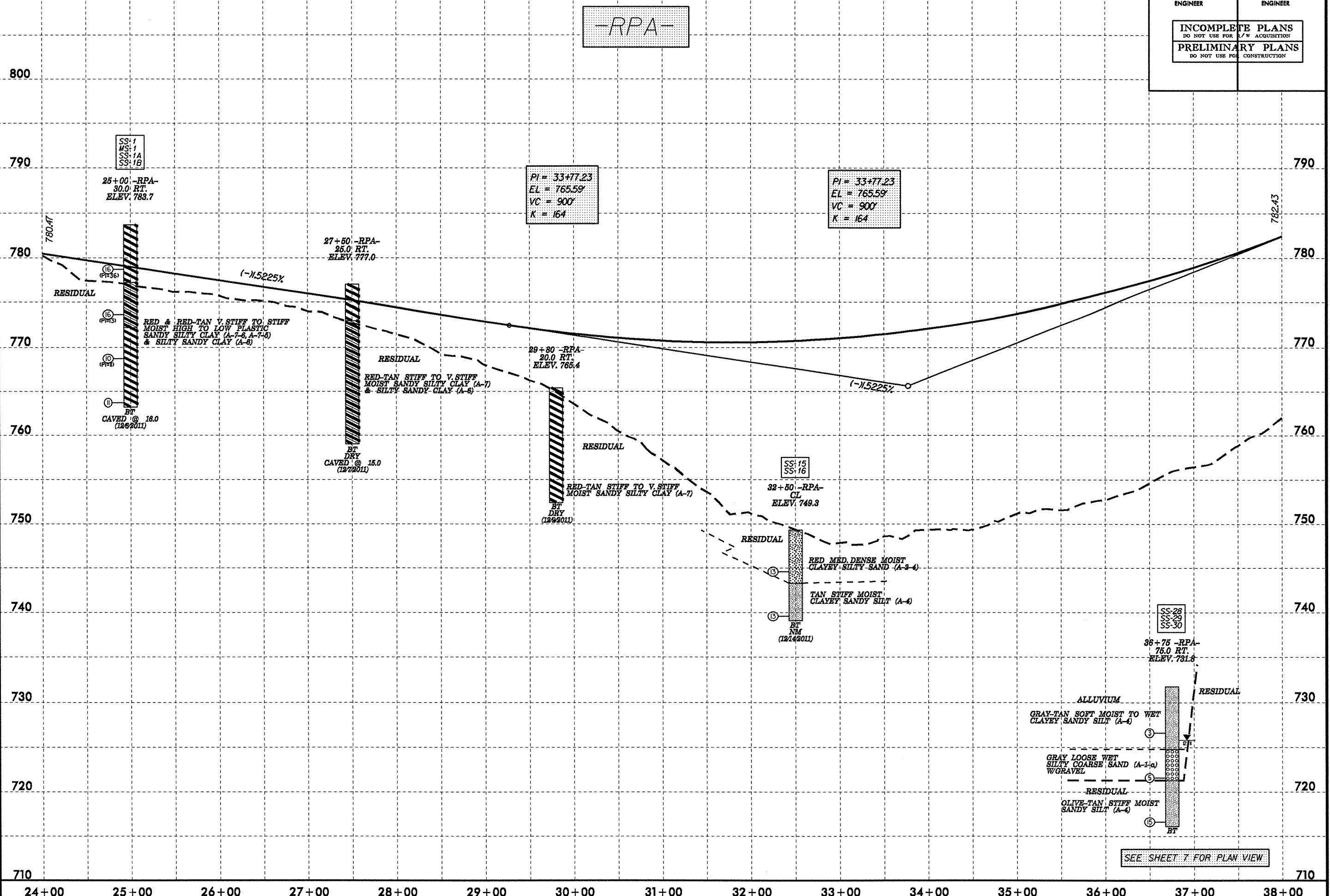
PI = 21+74.23
 EL = 783.91'
 VC = 160'
 K = 88

SS-8
 MS-8
 SS-9
 MS-9
 SS-10
 MS-10
 SS-11

SEE SHEET 6 & 7 FOR PLAN VIEW.

5/14/99
 2-FEB-2012 08:57
 C:\P\Projects\14928\GEO\GASTON\CADD\GEO\TECH\PI\anP\o\14928_GEO_p\1_RPA_015.dgn

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|---|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 15 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



-RPA-

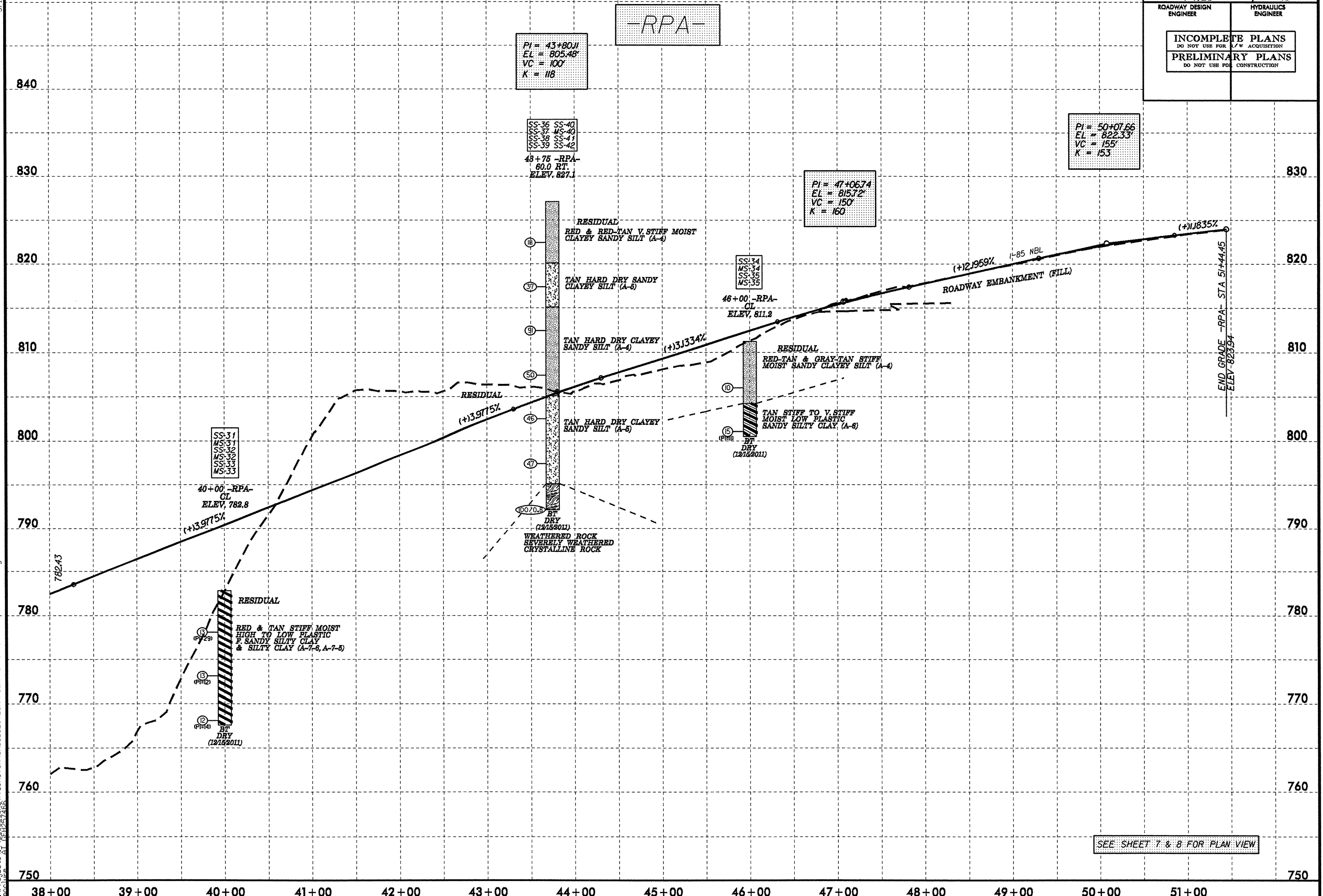
PI = 33+77.23
 EL = 765.59
 VC = 900
 K = 164

PI = 33+77.23
 EL = 765.59
 VC = 900
 K = 164

SEE SHEET 7 FOR PLAN VIEW

5/14/99
 21-FEB-2012 09:58
 C:\Projects\14928\14928-GED_Plan\Pro\14928-GED_pf1_RPA_016.dgn

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|---|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 16 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



PI = 43+80.11
 EL = 805.48'
 VC = 100'
 K = 118

SS-36 SS-40
 SS-37 MS-43
 SS-38 SS-41
 SS-39 SS-42
 43+75 -RPA-
 60.0 RT.
 ELEV. 827.1

PI = 47+06.74
 EL = 815.72'
 VC = 150'
 K = 160

PI = 50+07.66
 EL = 822.33'
 VC = 155'
 K = 153

SS-31
 MS-31
 SS-32
 MS-32
 SS-33
 MS-33

40+00 -RPA-
 CL
 ELEV. 782.8

SS-34
 MS-34
 SS-35
 MS-35

46+00 -RPA-
 CL
 ELEV. 811.2

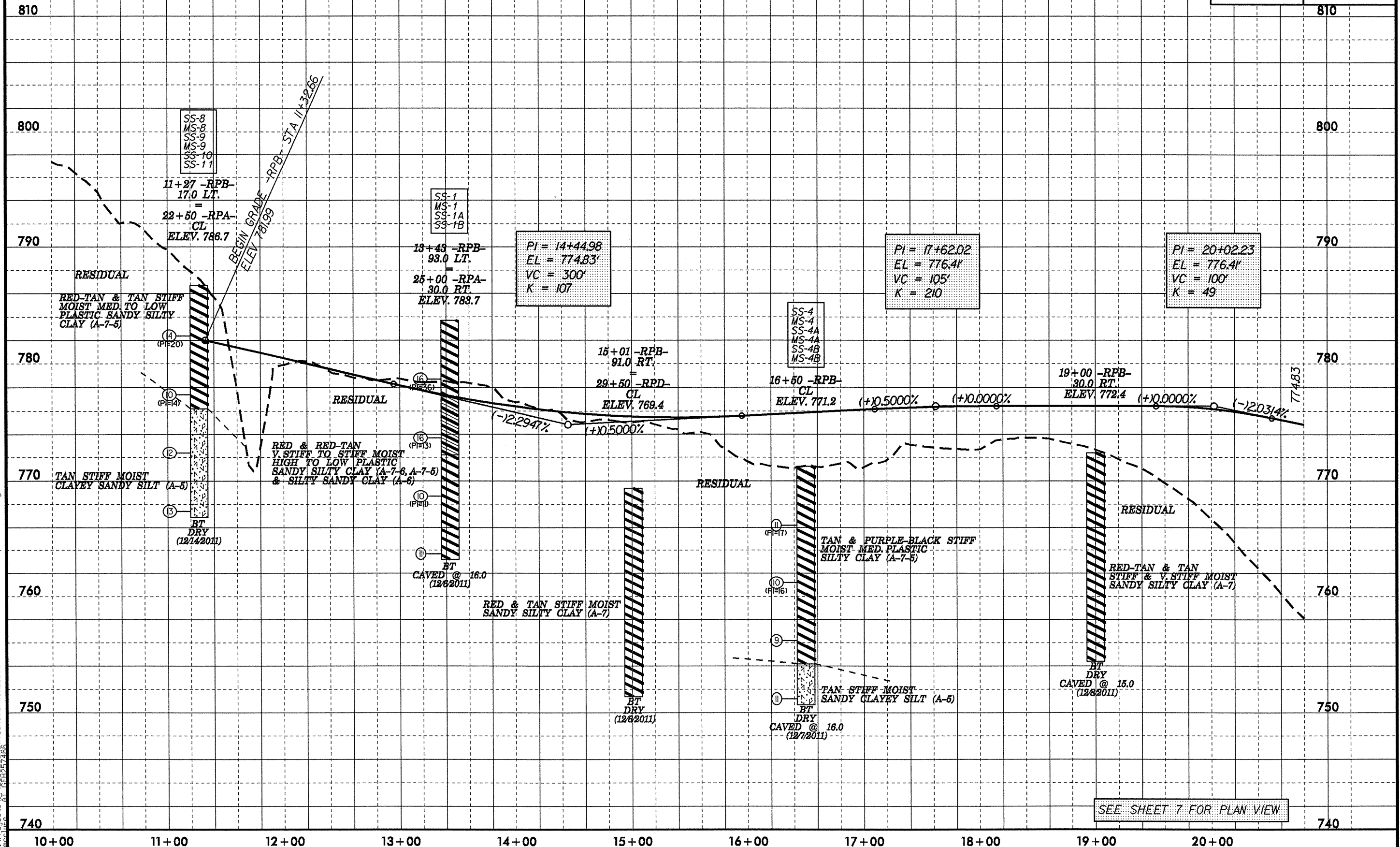
BT
 DRY
 (12/15/2011)

BT
 DRY
 (12/15/2011)

SEE SHEET 7 & 8 FOR PLAN VIEW

5/14/09
 2-FEB-2012 09:55
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|---|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 17 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



-RPB-

PI = 14+44.98
 EL = 774.83'
 VC = 300'
 K = 107

PI = 17+62.02
 EL = 776.41'
 VC = 105'
 K = 210

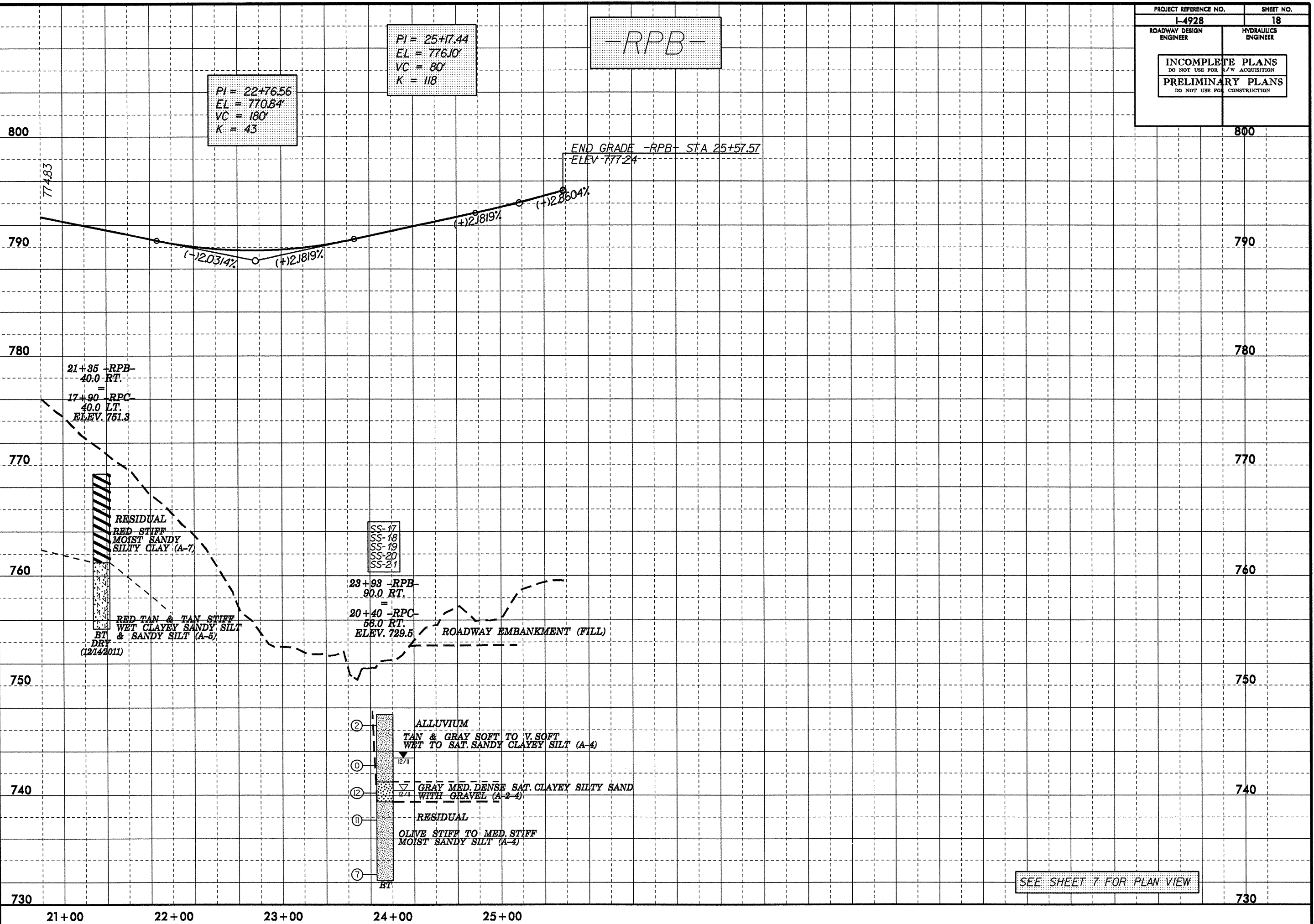
PI = 20+02.23
 EL = 776.41'
 VC = 100'
 K = 49

SEE SHEET 7 FOR PLAN VIEW

5/14/99

21-FEB-2002 09:05:06 GEO_RDWY_GASTON.CADD_GEO TECH\Plan\Prof\14928_GEO.pfl.RPB.018.dgn

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| PROJECT REFERENCE NO. I-4928 | SHEET NO. 18 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

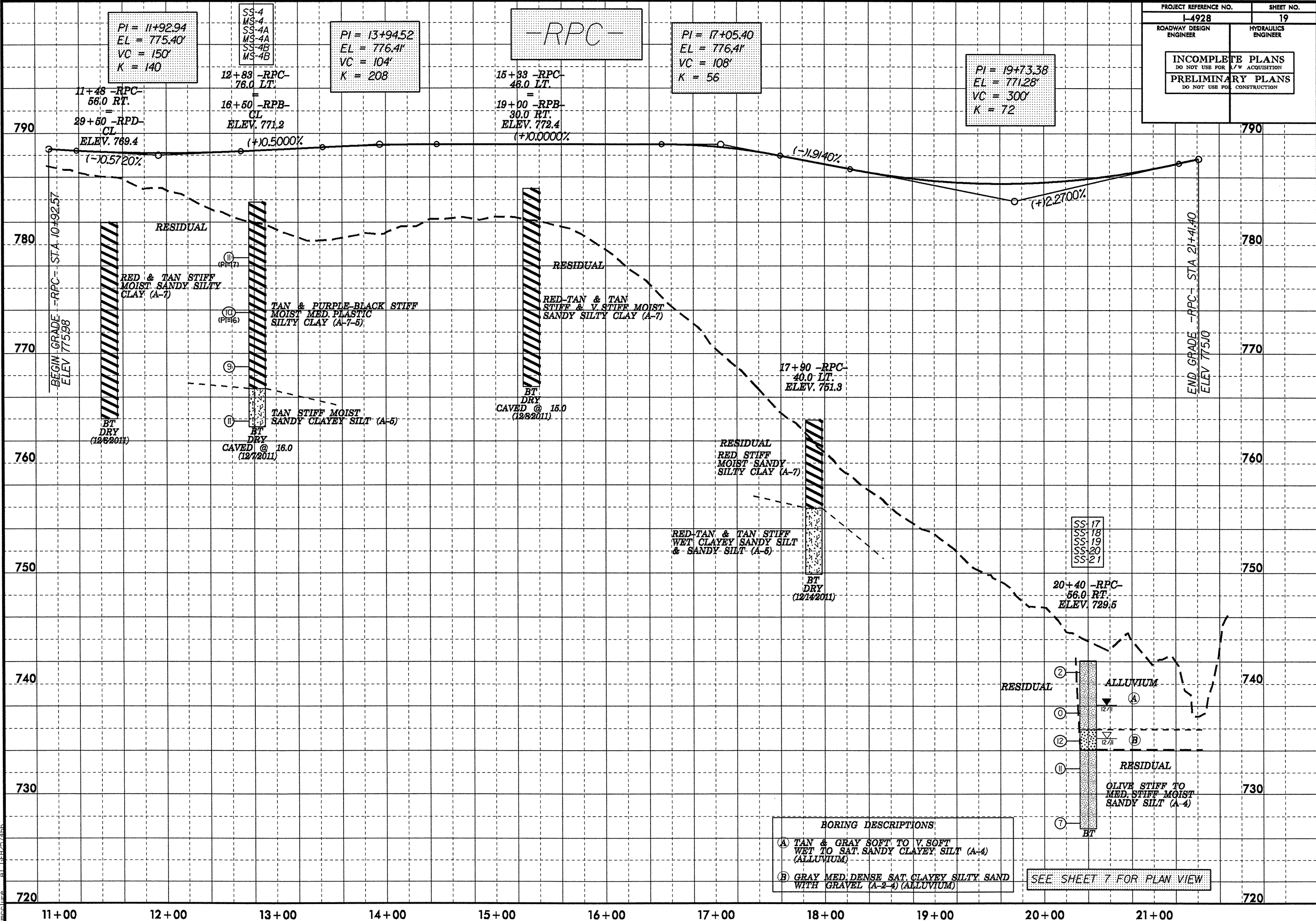


SEE SHEET 7 FOR PLAN VIEW

5/14/99

2-FEB-2002 09:05 C:\VF\act\014928.GEO_RDWY_GASTON\CADD_GEO\TECH\PlanPof\14928_GEO_pf1.RPC_019.dgn

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|---|------------------------|
| PROJECT REFERENCE NO. L-4928 | SHEET NO. 19 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



PI = 11+92.94
 EL = 775.40'
 VC = 150'
 K = 140

SS-4
 MS-4
 SS-4A
 MS-4A
 SS-4B
 MS-4B

PI = 13+94.52
 EL = 776.41'
 VC = 104'
 K = 208

-RPC-

PI = 17+05.40
 EL = 776.41'
 VC = 108'
 K = 56

PI = 19+73.38
 EL = 771.28'
 VC = 300'
 K = 72

11+48 -RPC-
 56.0 RT.

12+83 -RPC-
 76.0 LT.

15+33 -RPC-
 46.0 LT.

(+2.2700%)

29+60 -RPD-
 CL
 ELEV. 769.4

16+50 -RPB-
 CL
 ELEV. 771.2

19+00 -RPB-
 30.0 RT.
 ELEV. 772.4

END GRADE -RPC- STA 21+41.40
 ELEV 751.0

BEGIN GRADE -RPC- STA 10+92.57
 ELEV 775.98

RESIDUAL
 RED & TAN STIFF
 MOIST SANDY SILTY
 CLAY (A-7)

TAN & PURPLE-BLACK STIFF
 MOIST MED PLASTIC
 SILTY CLAY (A-7-5)

RESIDUAL
 RED-TAN & TAN
 STIFF & V STIFF MOIST
 SANDY SILTY CLAY (A-7)

17+90 -RPC-
 40.0 LT.
 ELEV. 751.3

BT
 DRY
 (12/8/2011)

TAN STIFF MOIST
 SANDY CLAYEY SILT (A-5)

BT
 DRY
 CAVED @ 15.0
 (12/8/2011)

RESIDUAL
 RED STIFF
 MOIST SANDY
 SILTY CLAY (A-7)

RED-TAN & TAN STIFF
 WET CLAYEY SANDY SILT
 & SANDY SILT (A-5)

BT
 DRY
 (12/14/2011)

SS-17
 SS-18
 SS-19
 SS-20
 SS-21

20+40 -RPC-
 56.0 RT.
 ELEV. 729.5

RESIDUAL

ALLUVIUM

RESIDUAL

OLIVE STIFF TO
 MED. STIFF MOIST
 SANDY SILT (A-4)

BORING DESCRIPTIONS:
 (A) TAN & GRAY SOFT TO V SOFT
 WET TO SAT. SANDY CLAYEY SILT (A-4)
 (ALLUVIUM)
 (B) GRAY MED. DENSE SAT. CLAYEY SILTY SAND
 WITH GRAVEL (A-2-4) (ALLUVIUM)

SEE SHEET 7 FOR PLAN VIEW

11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00

720

730

740

750

760

770

780

790

720

730

740

750

760

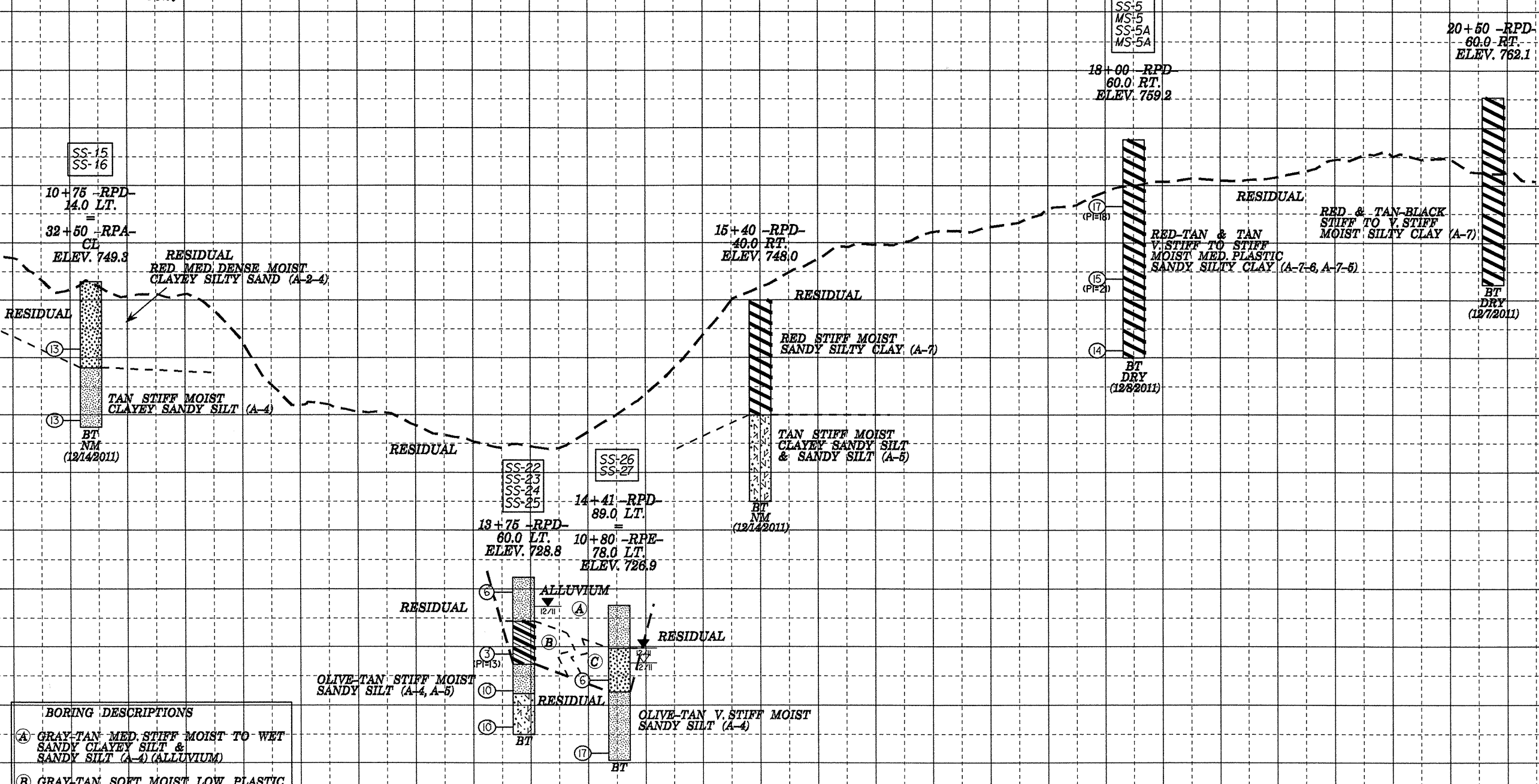
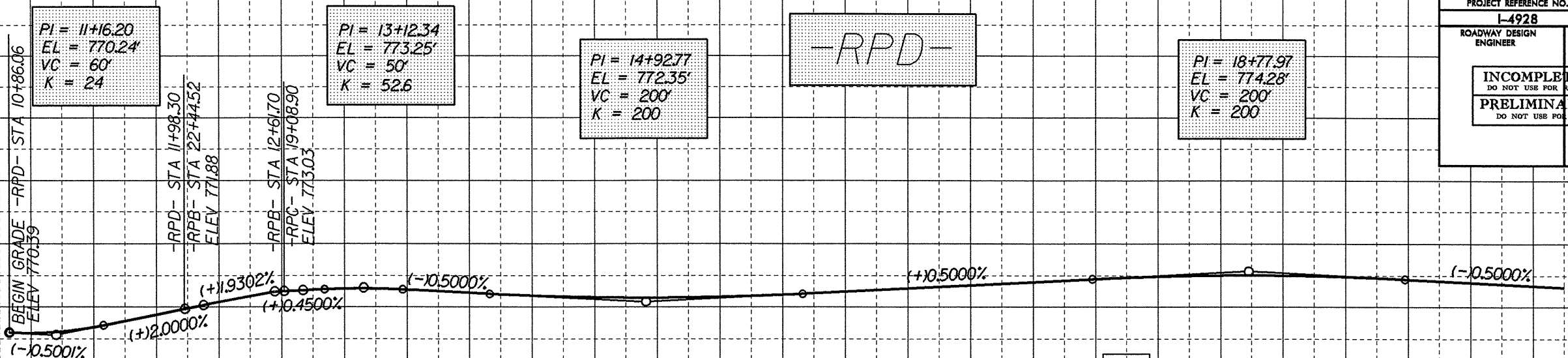
770

780

790

5/14/99
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|--|---------------------|
| PROJECT REFERENCE NO. 1-4928 | SHEET NO. 20 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



| BORING DESCRIPTIONS | |
|---------------------|--|
| (A) | GRAY-TAN MED. STIFF MOIST TO WET SANDY CLAYEY SILT & SANDY SILT (A-4) (ALLUVIUM) |
| (B) | GRAY-TAN SOFT MOIST LOW PLASTIC SANDY SILTY CLAY (A-5) (ALLUVIUM) |
| (C) | GRAY LOOSE WET SILTY SAND (A-2-4) (ALLUVIUM) |

SEE SHEET 7 FOR PLAN VIEW

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00

5/14/99
2-FEB-2012 09:38
C:\Projects\14928\GEO\RDY_GASTON\CADD_GEO\TECH\Plan\Prof\14928_GEO_pf.LRPD_021.dgn

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|--|--|---------------------|--|
| PROJECT REFERENCE NO. L-4928 | | SHEET NO. 21 | |
| ROADWAY DESIGN ENGINEER | | HYDRAULICS ENGINEER | |
| INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION | | | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | | | |

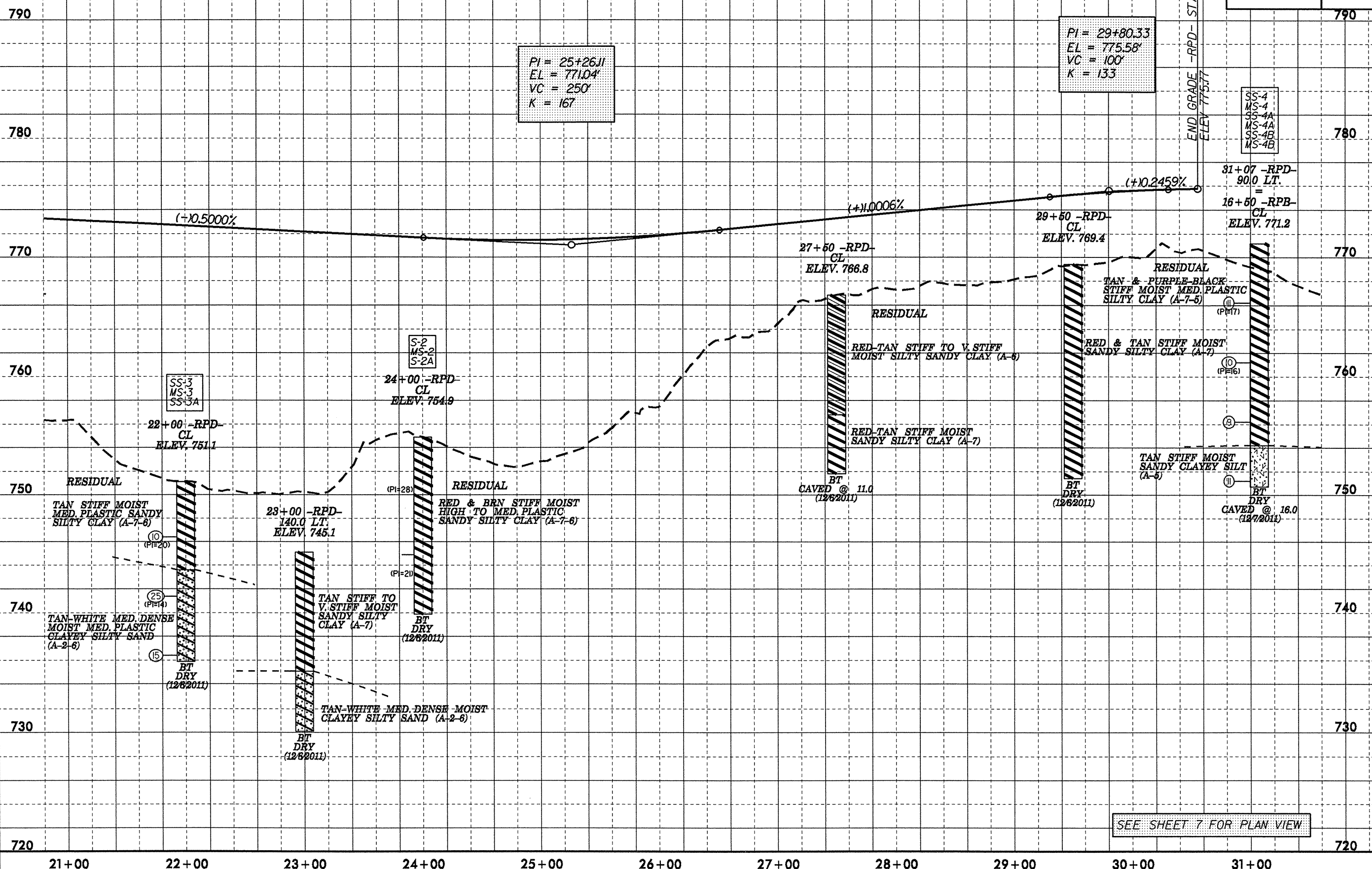
-RPD-

PI = 25+26.1
EL = 771.04'
VC = 250'
K = 167

PI = 29+80.33
EL = 775.58'
VC = 100'
K = 133

SS-4
MS-4
SS-4A
MS-4A
SS-4B
MS-4B

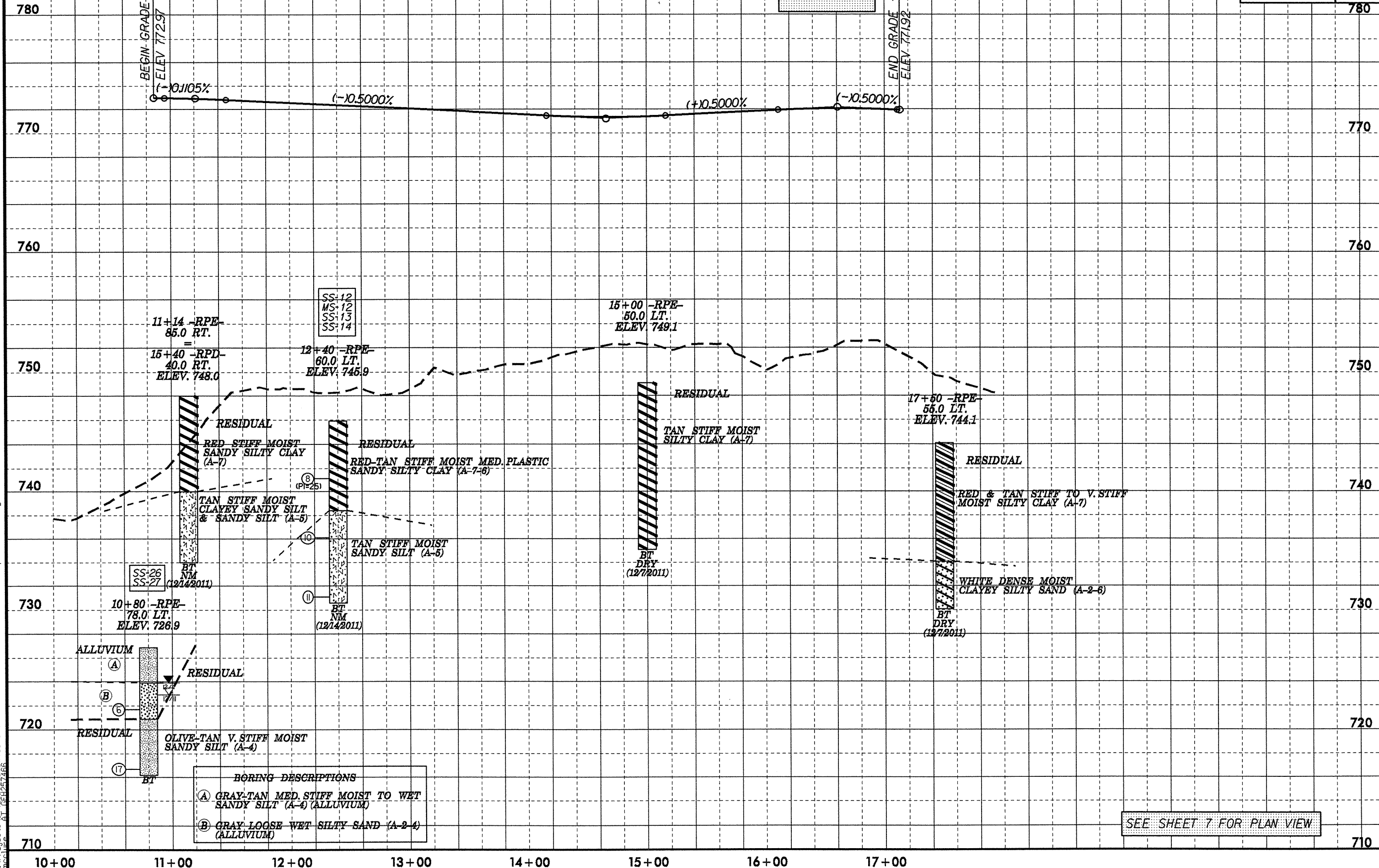
END GRADE -RPD- STA 30+55.27
ELEV 775.77



SEE SHEET 7 FOR PLAN VIEW

5/14/99
 2-FEB-2012 09:03
 C:\VP\Projects\14928\14928.GEO\TECH\PLAN\PROF\14928_GEO_pf_L_RPE_022.dgn

| | |
|---|---------------------|
| PROJECT REFERENCE NO. I-4928 | SHEET NO. 22 |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |



PI = 11+20.97
 EL = 772.94'
 VC = 51.6'
 K = 1325

-RPE-

PI = 14+66.01
 EL = 771.21'
 VC = 100'
 K = 100

PI = 16+60.70
 EL = 772.18'
 VC = 100'
 K = 100

BEGIN GRADE -RPE- STA 1086.05
 ELEV 772.97

END GRADE -RPE- STA 1712.97
 ELEV 771.92

11+14 -RPE-
 85.0 RT.
 15+40 -RPD-
 40.0 RT.
 ELEV. 748.0

SS-12
 MS-12
 SS-13
 SS-14

12+40 -RPE-
 60.0 LT.
 ELEV. 745.9

15+00 -RPE-
 50.0 LT.
 ELEV. 749.1

17+50 -RPE-
 55.0 LT.
 ELEV. 744.1

ALLUVIUM
 (A)
 (B)
 (C)
 RESIDUAL
 (D)
 BT

10+80 -RPE-
 78.0 LT.
 ELEV. 726.9

SS-26
 SS-27
 (12/14/2011)

(P=25)
 (10)
 (11)
 BT
 NM
 (12/14/2011)

BT
 DRY
 (12/7/2011)

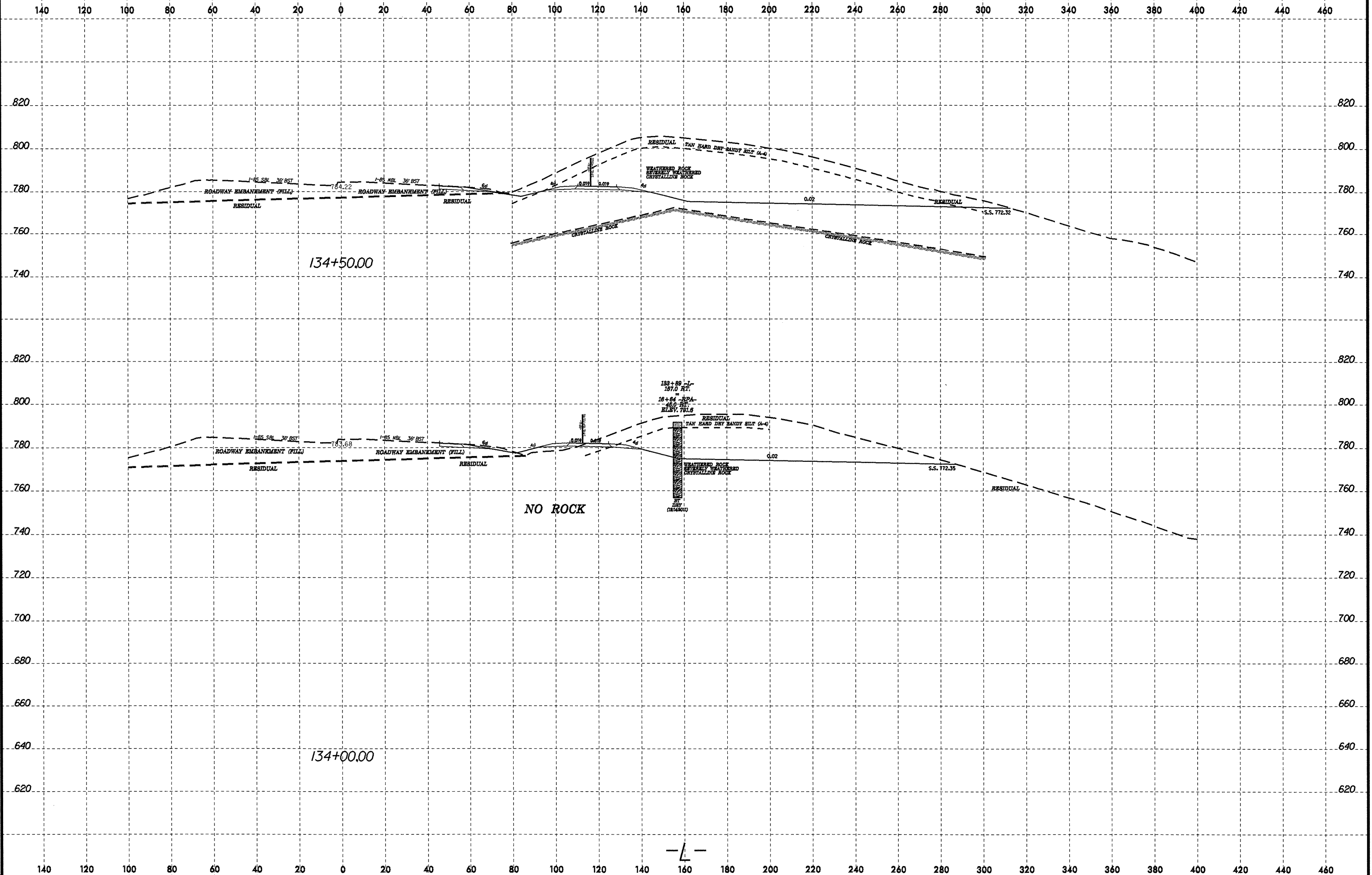
BT
 DRY
 (12/7/2011)

BORING DESCRIPTIONS

| | |
|-----|--|
| (A) | GRAY-TAN MED. STIFF MOIST TO WET SANDY SILT (A-4) (ALLUVIUM) |
| (B) | GRAY LOOSE WET SILTY SAND (A-2-4) (ALLUVIUM) |

SEE SHEET 7 FOR PLAN VIEW

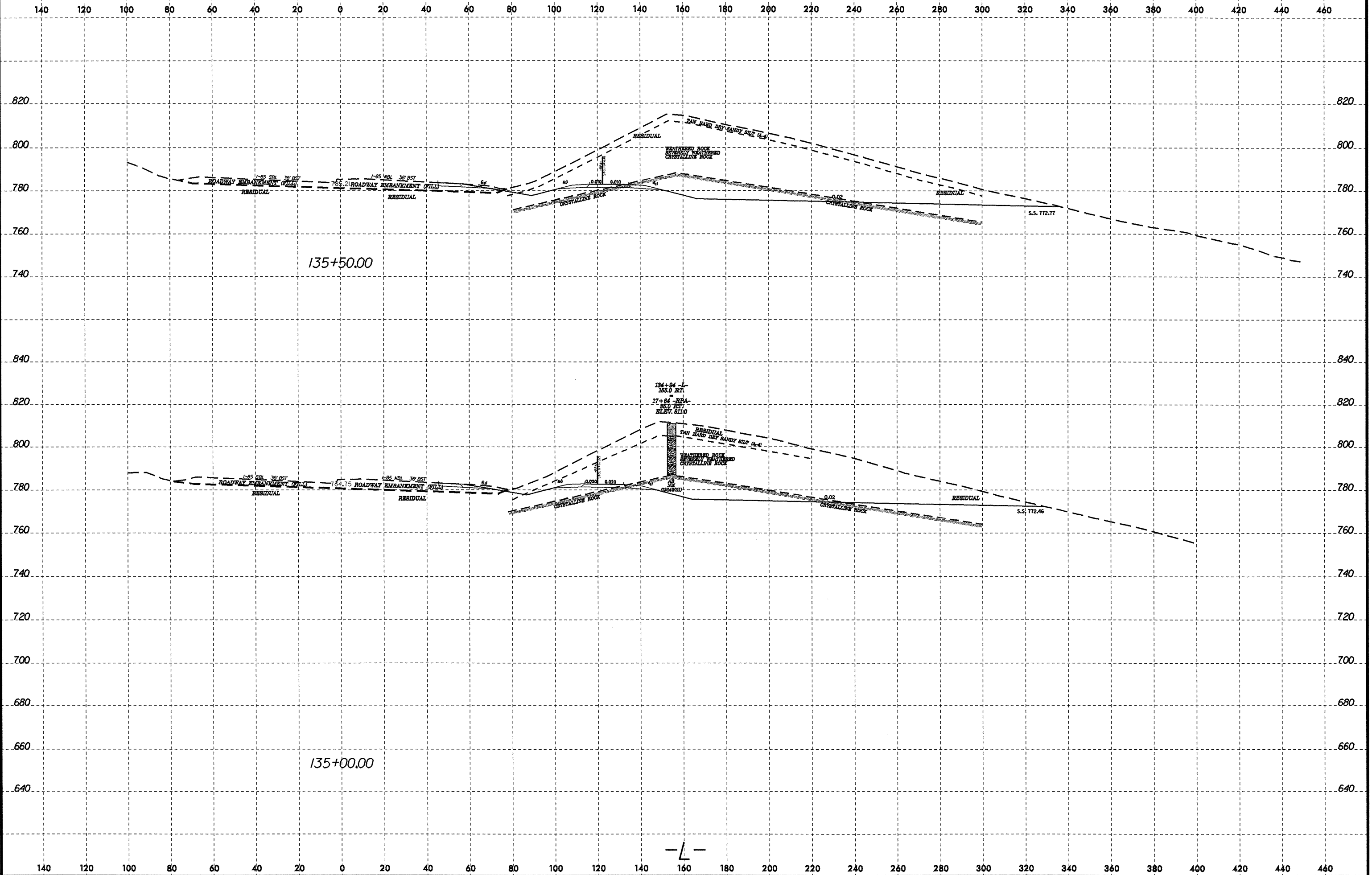
8/23/99



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8/23/99

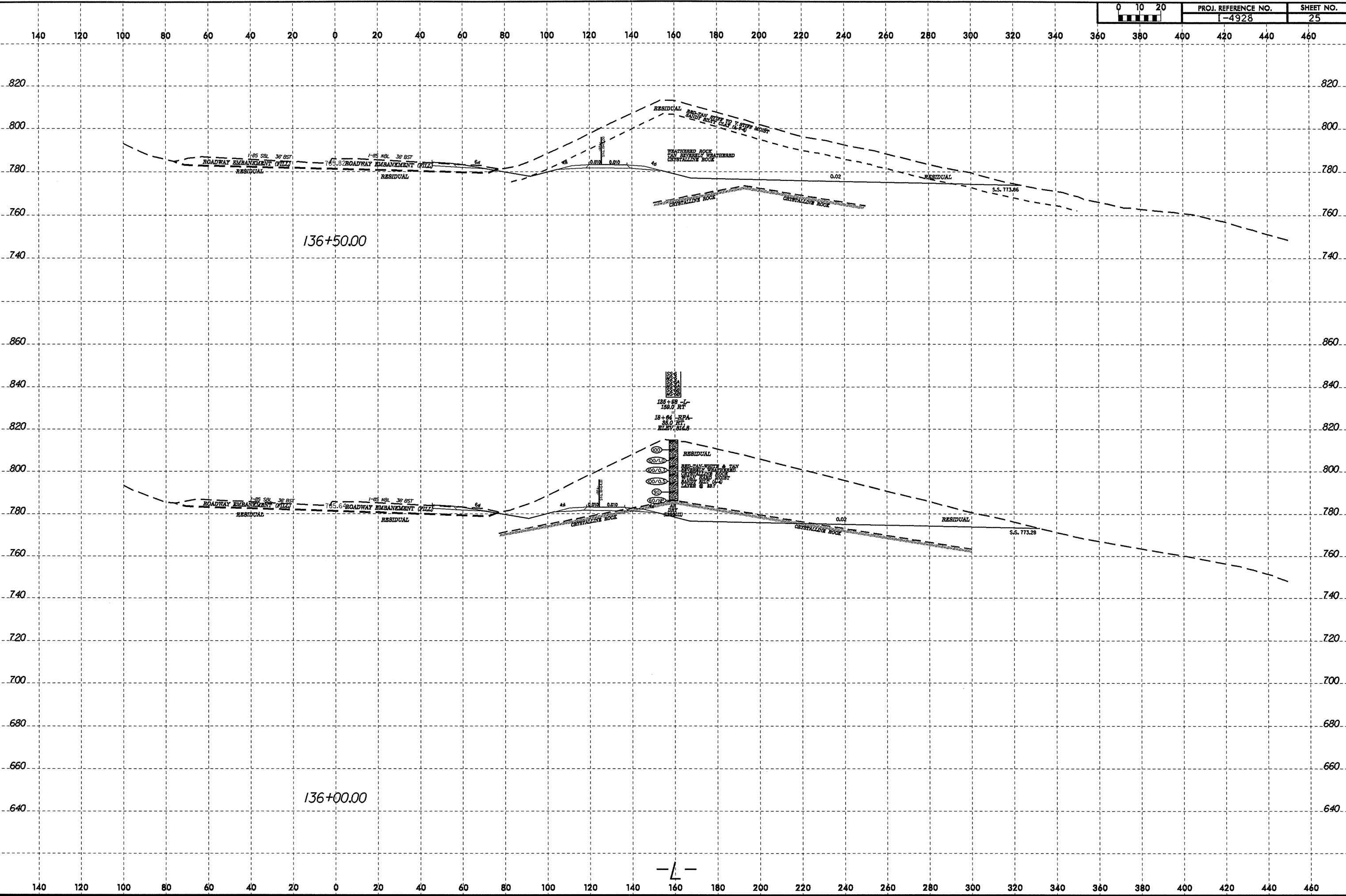
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| | 1-4928 | 24 |



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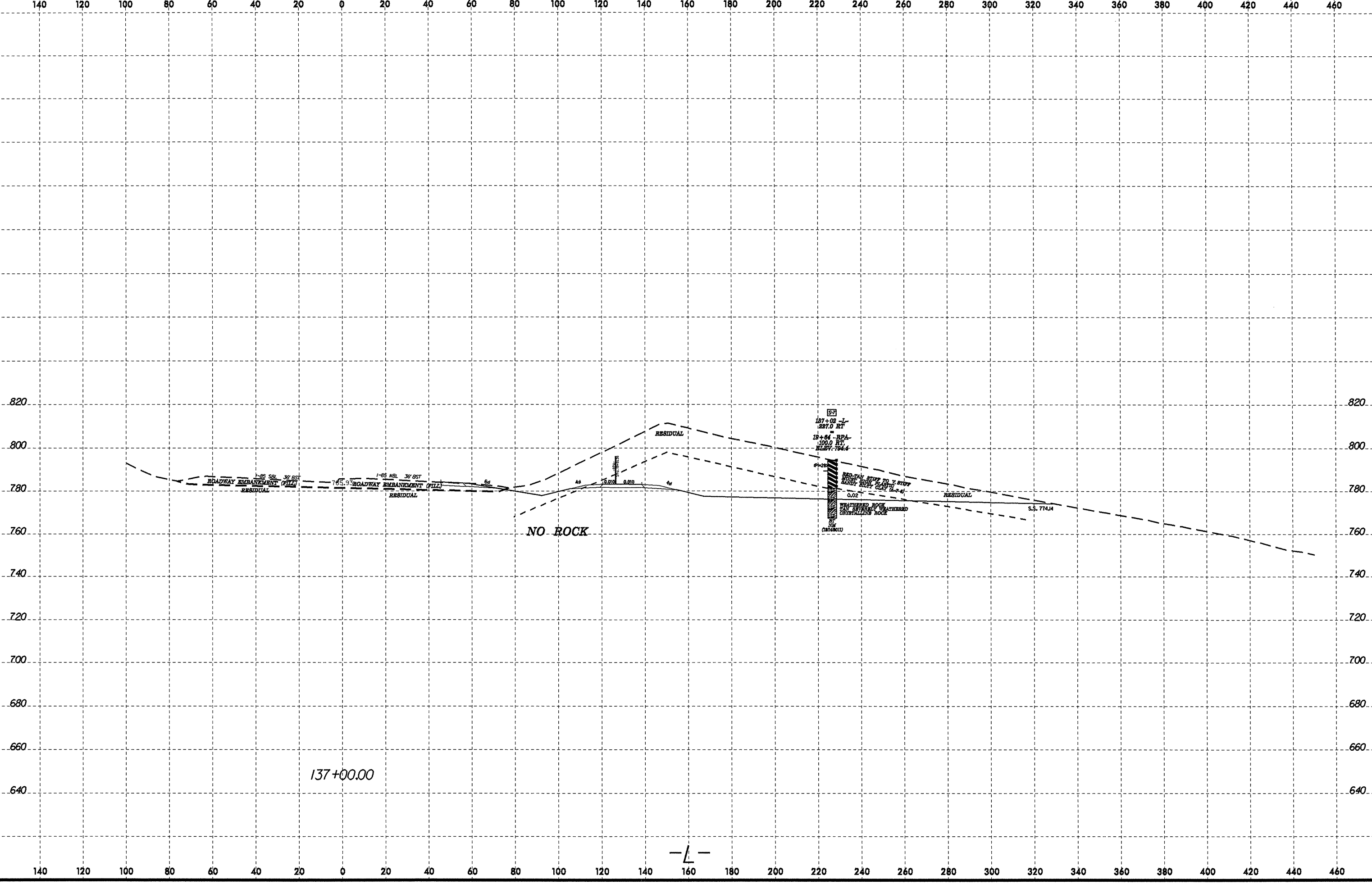


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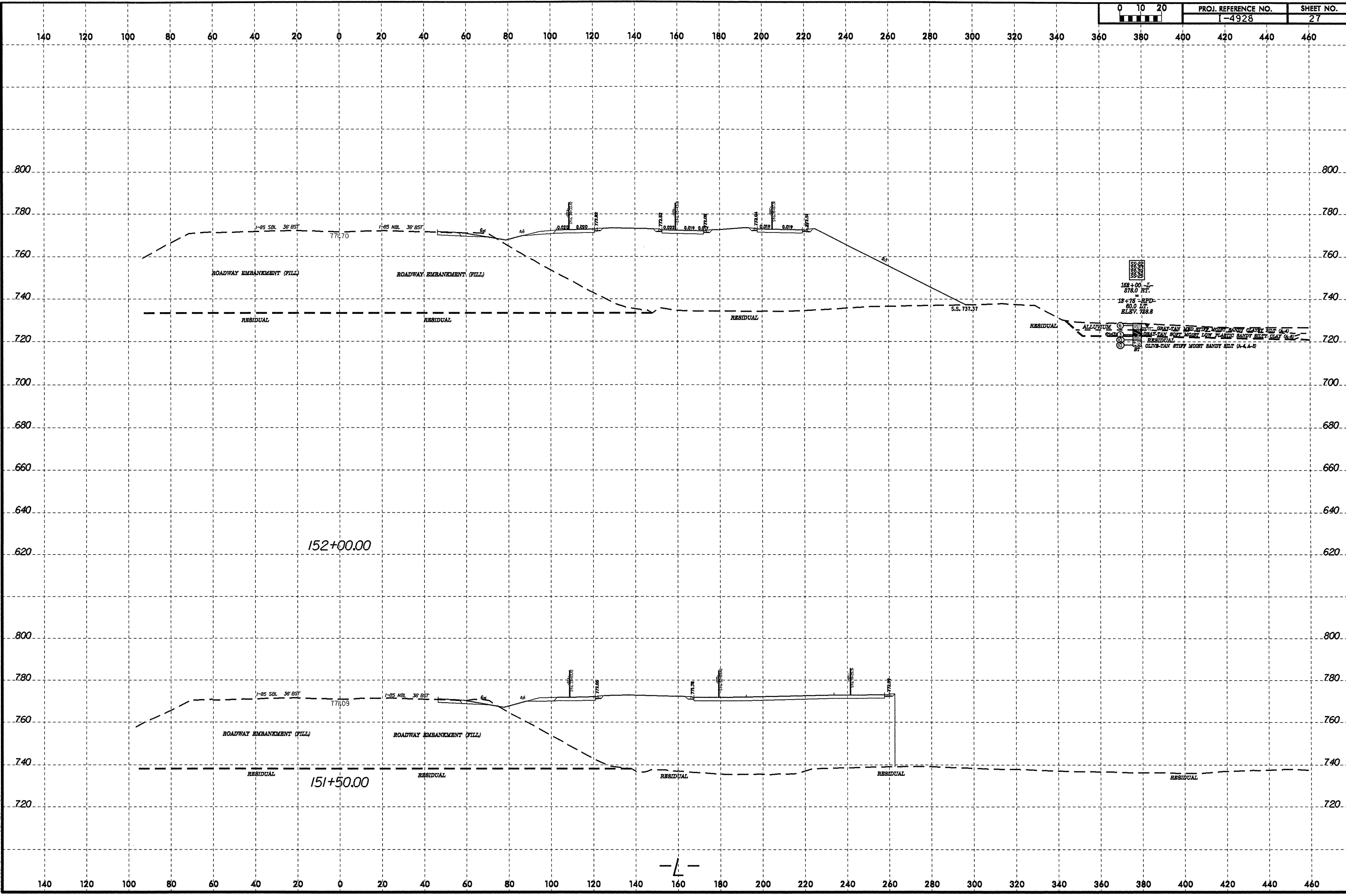
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| | 1-4928 | 26 |



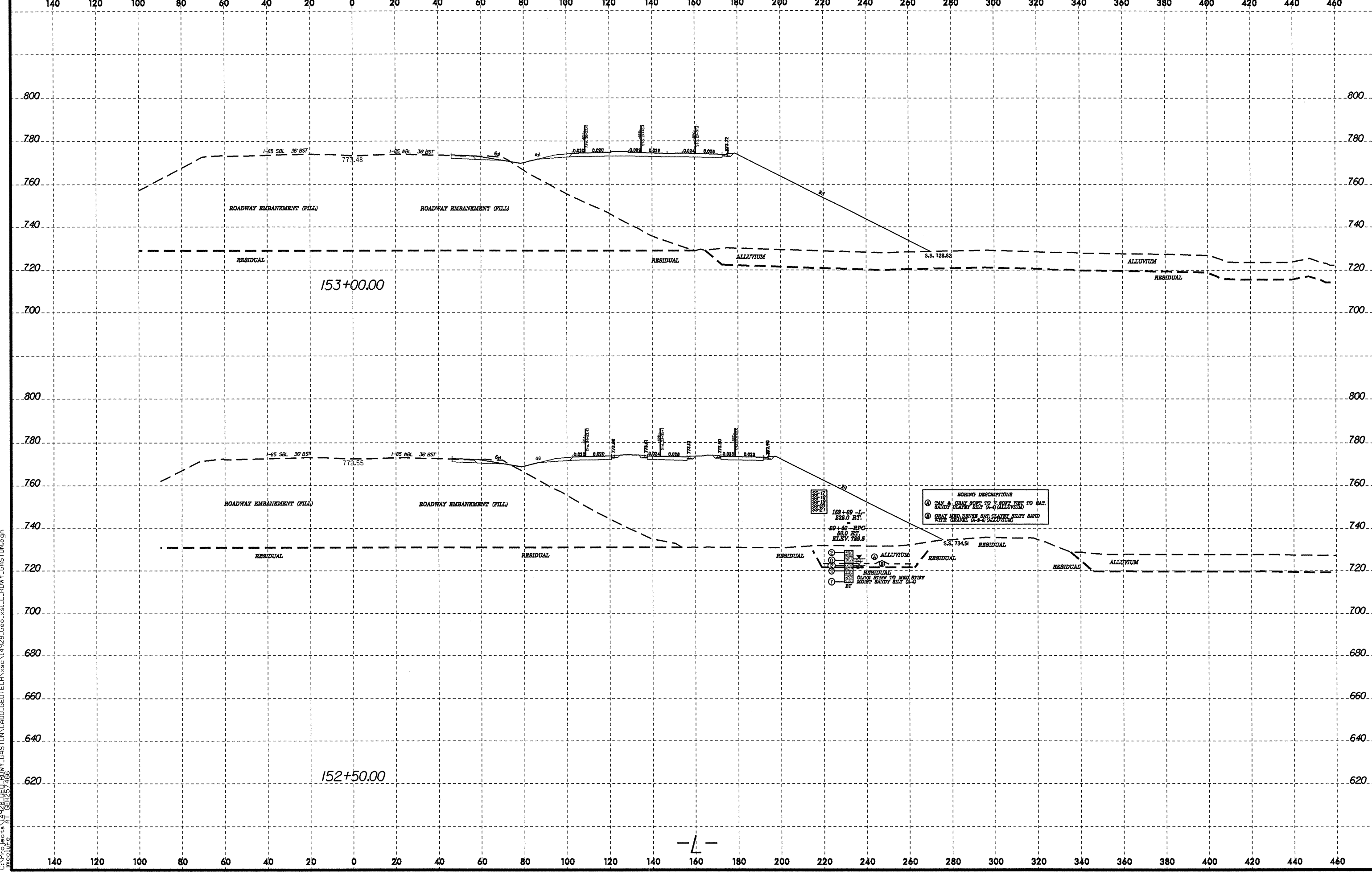
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8/23/99



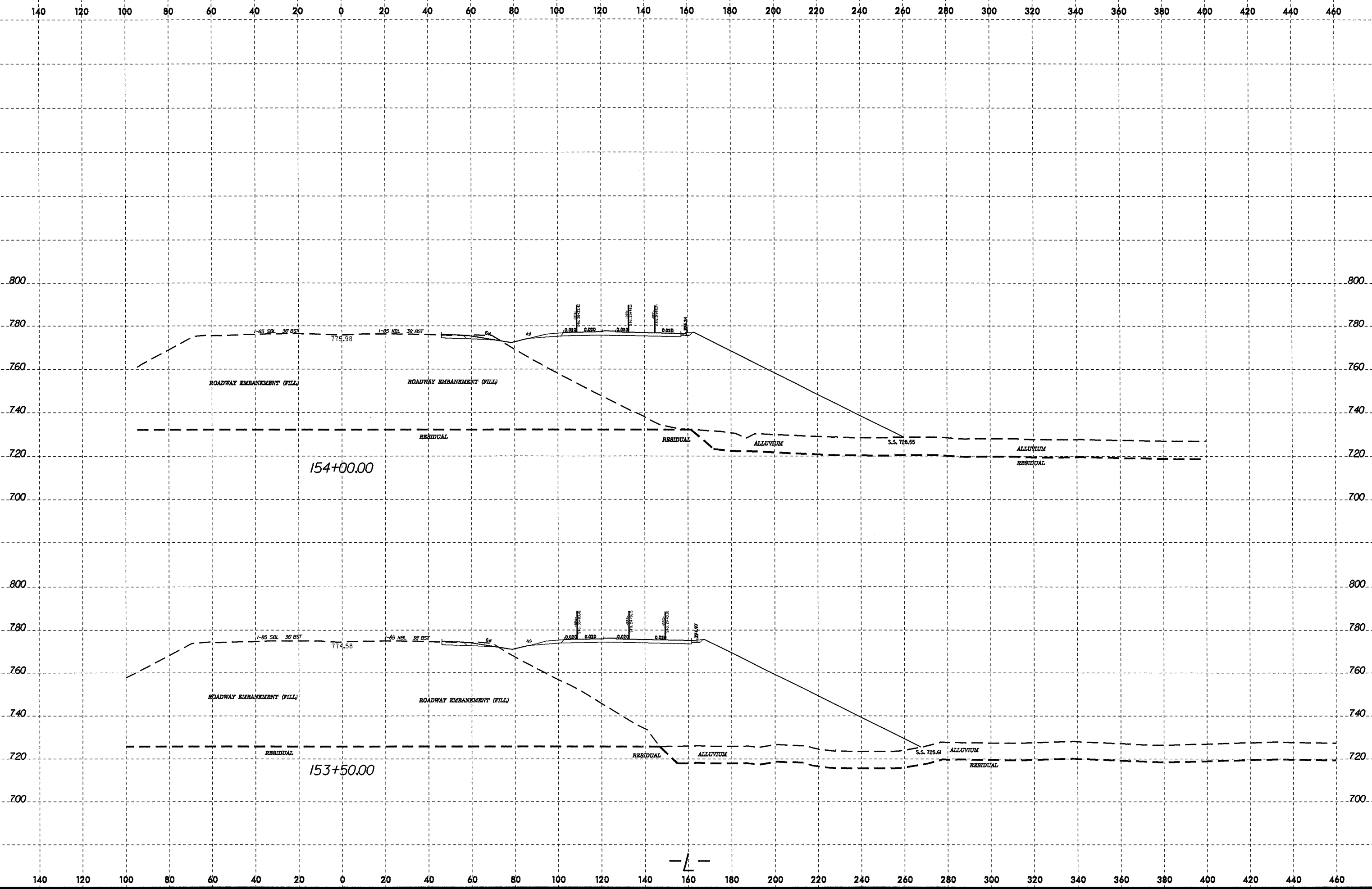
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imc\jpe

8/23/99



21-FEB-2002 09:58
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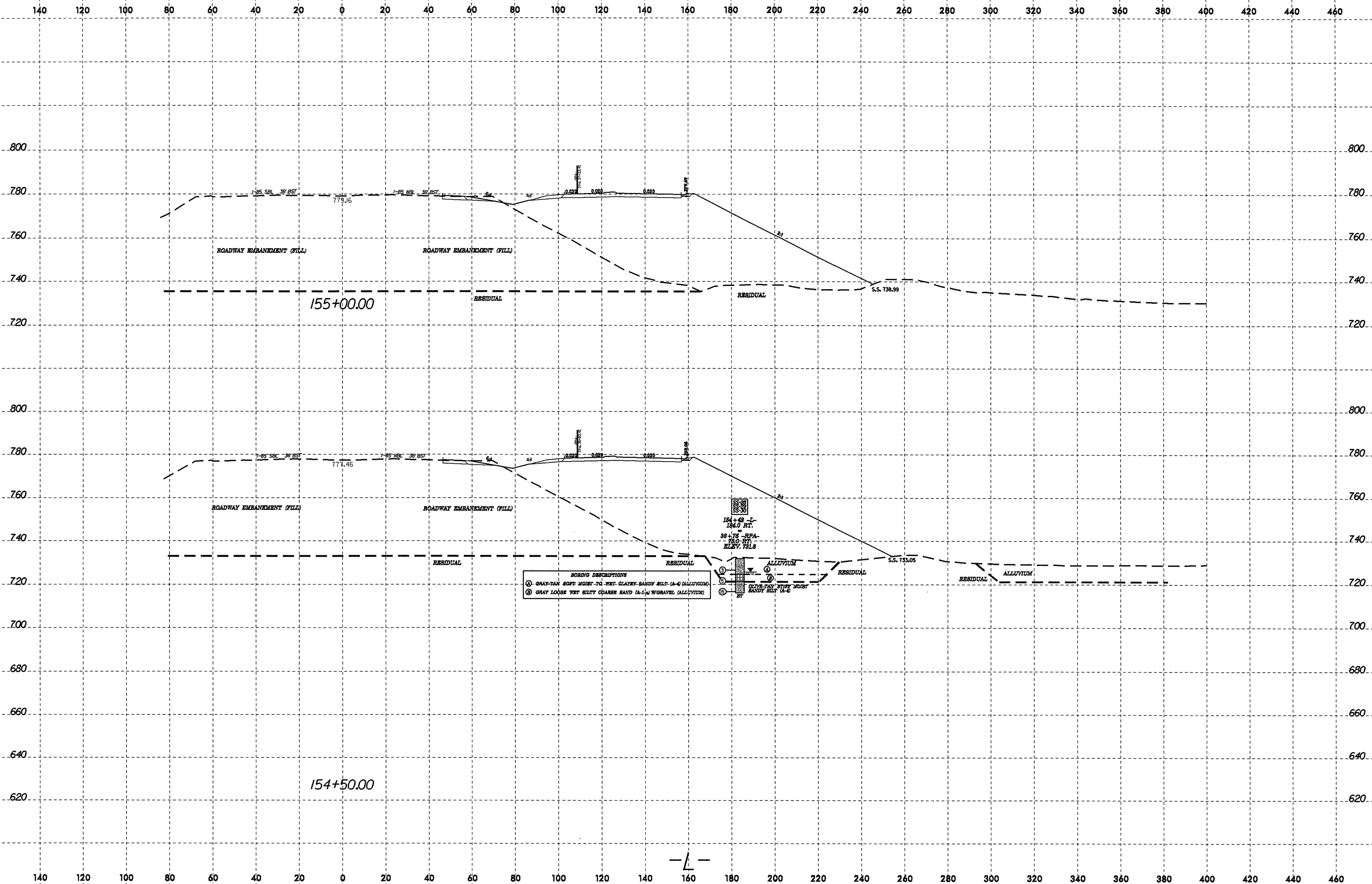
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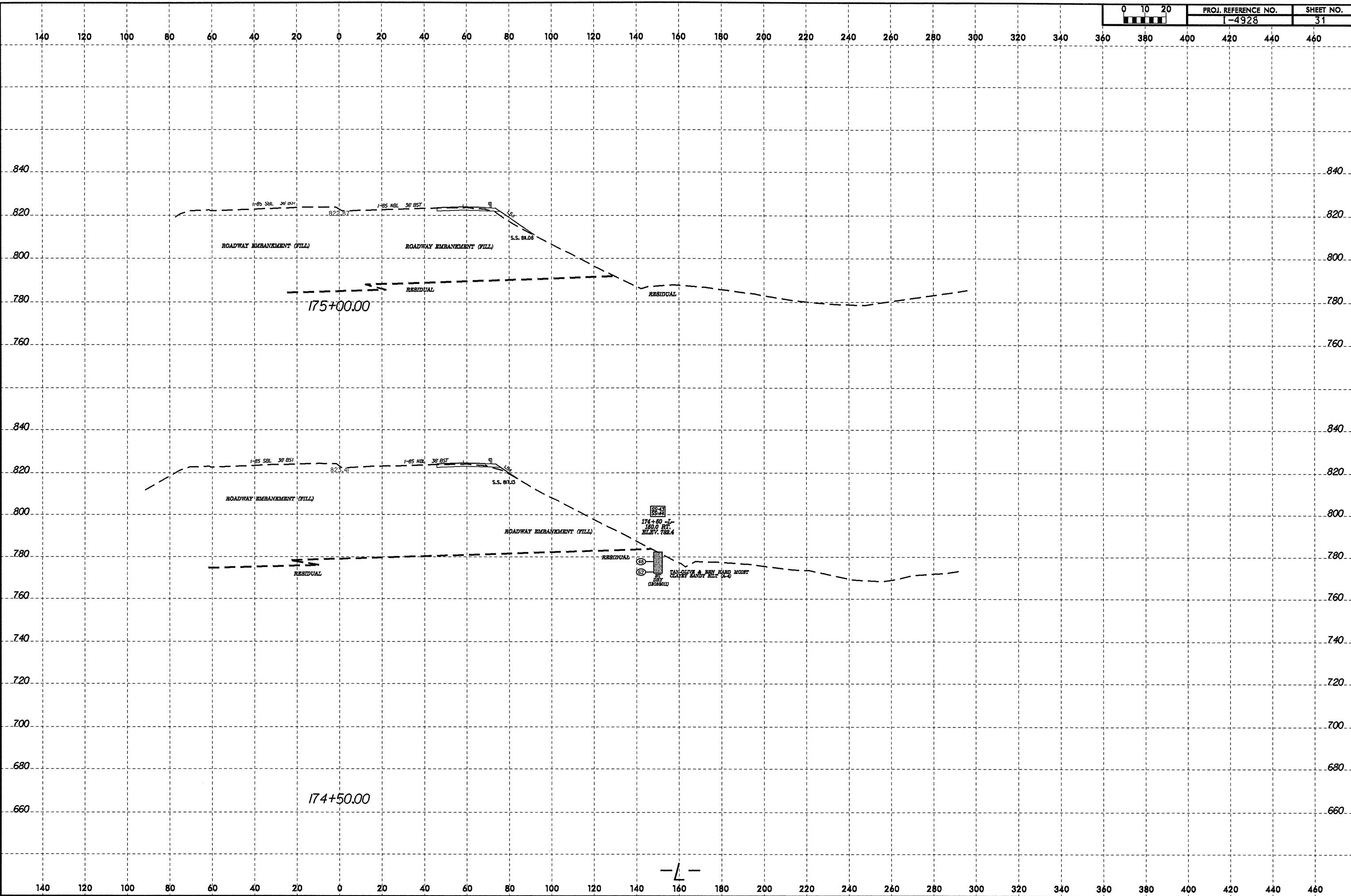
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8/23/99



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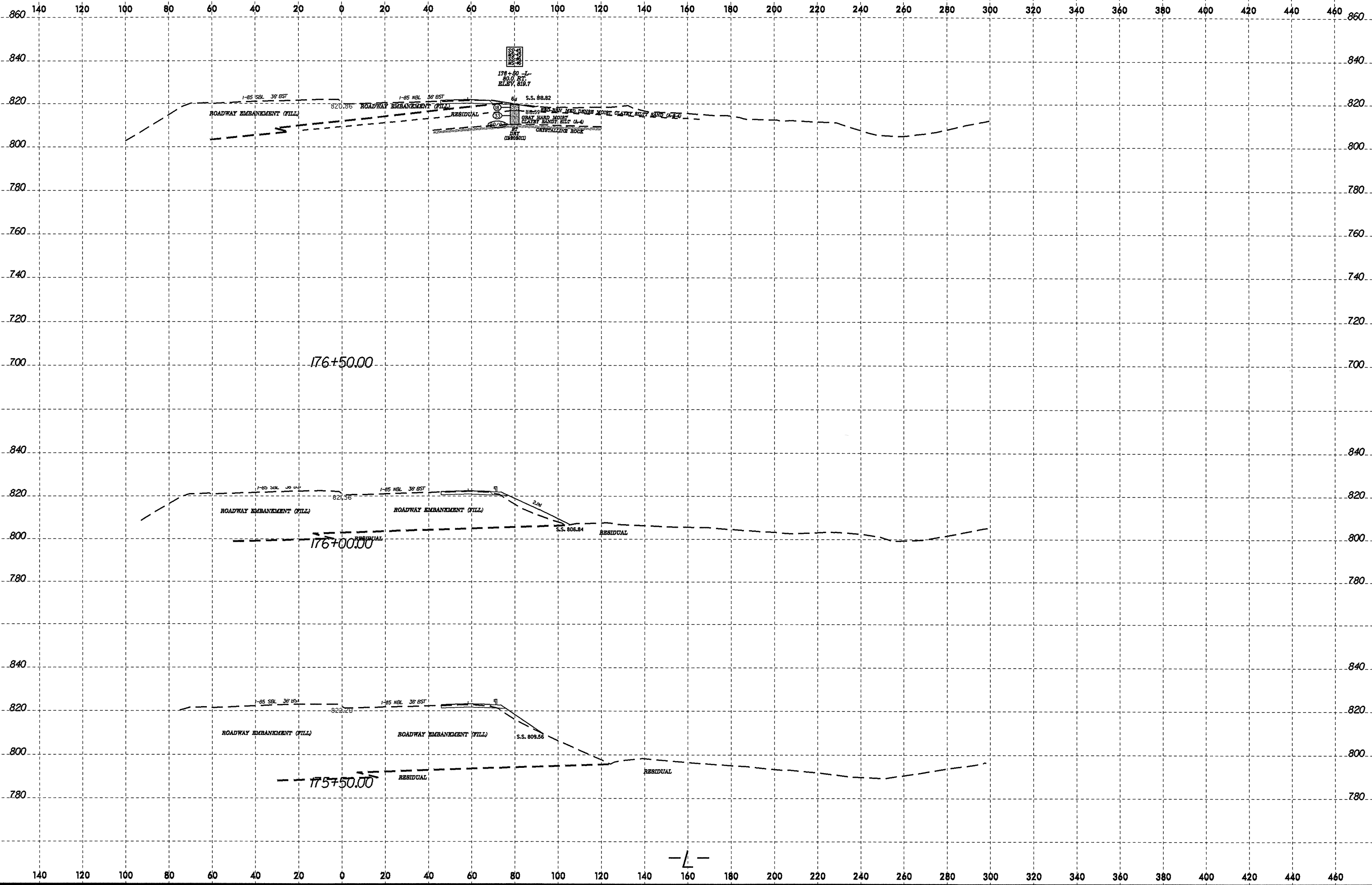
8/23/99



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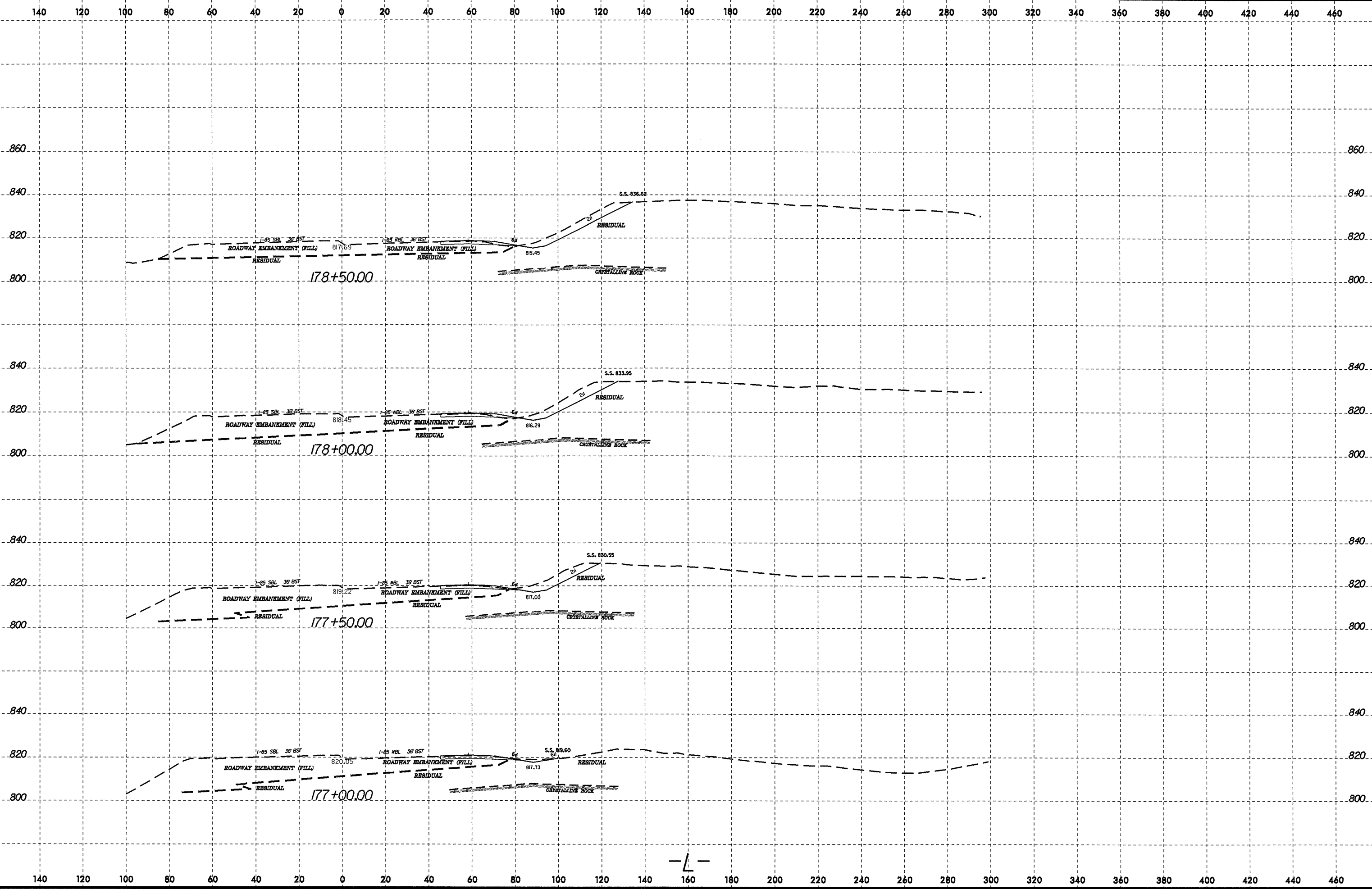
8/23/09

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| | 1-4928 | 32 |



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8/23/99

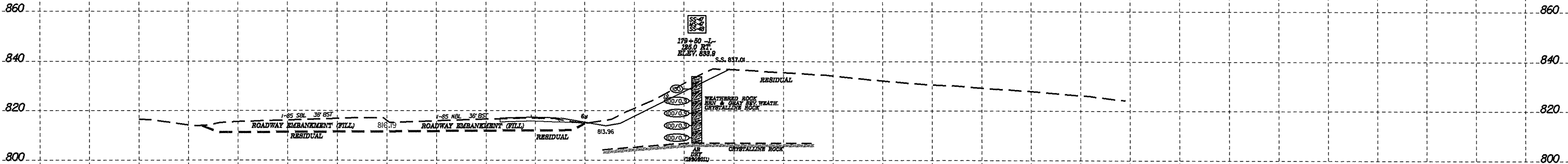


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Misc\lrf

-L-

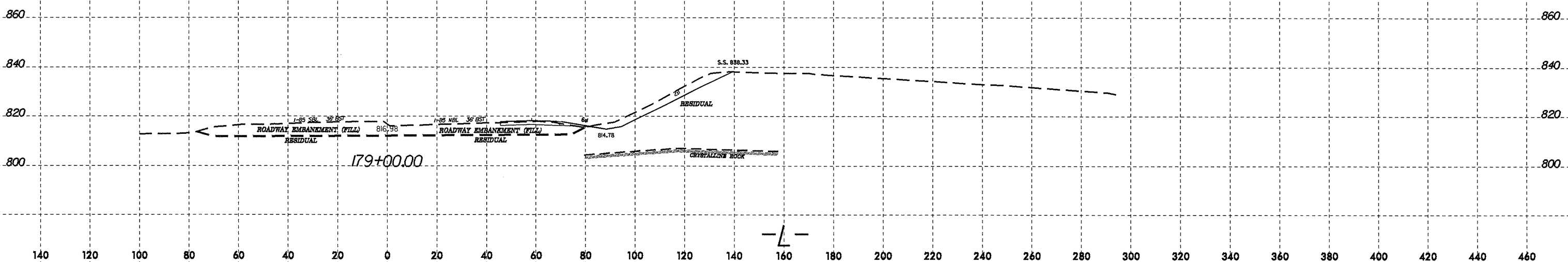
8/23/99

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460



860
840
820
800
780
760
740
720
700

179+50.00



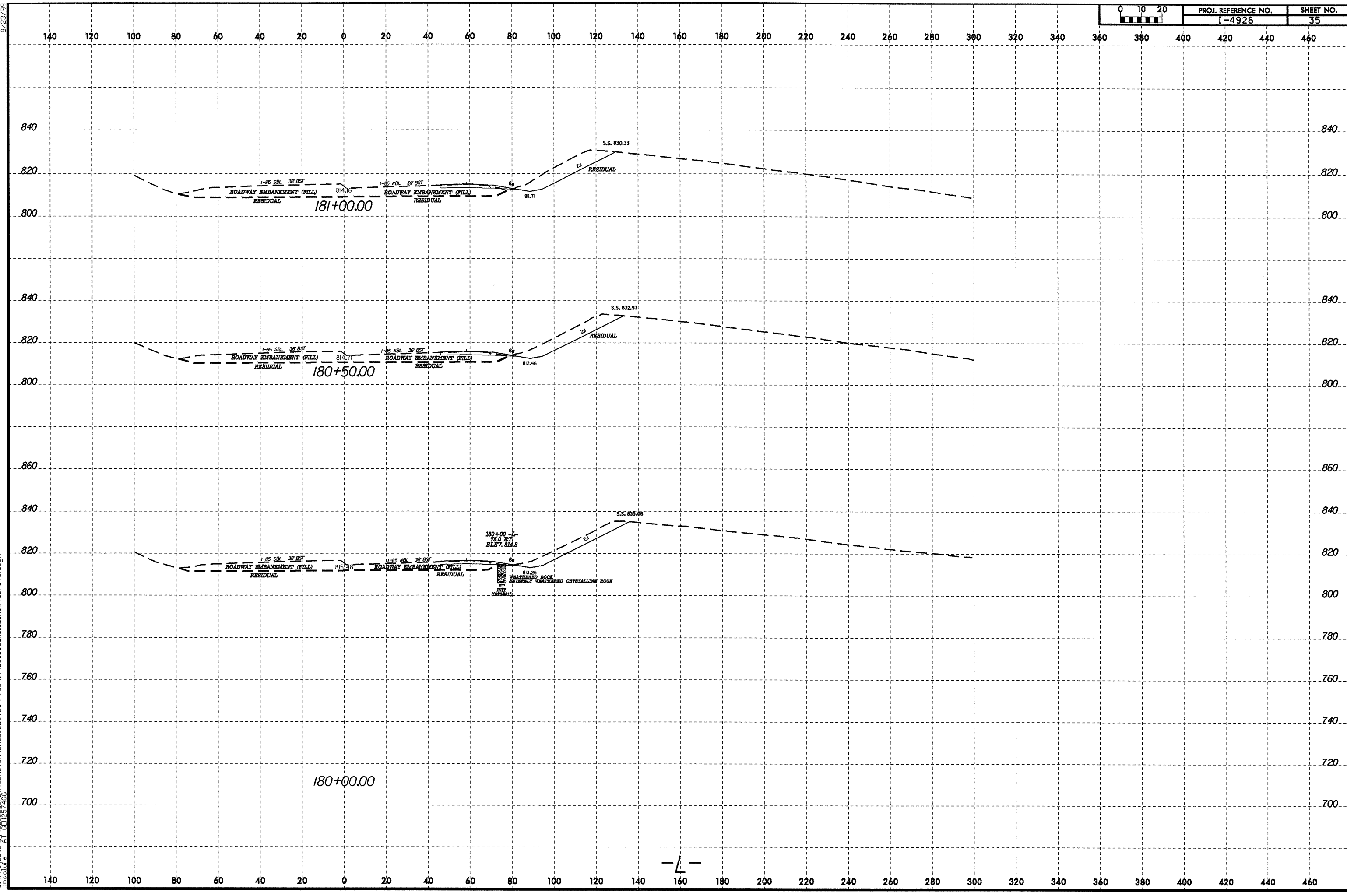
860
840
820
800

179+00.00

2\FEB-2012 10:00
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-L-

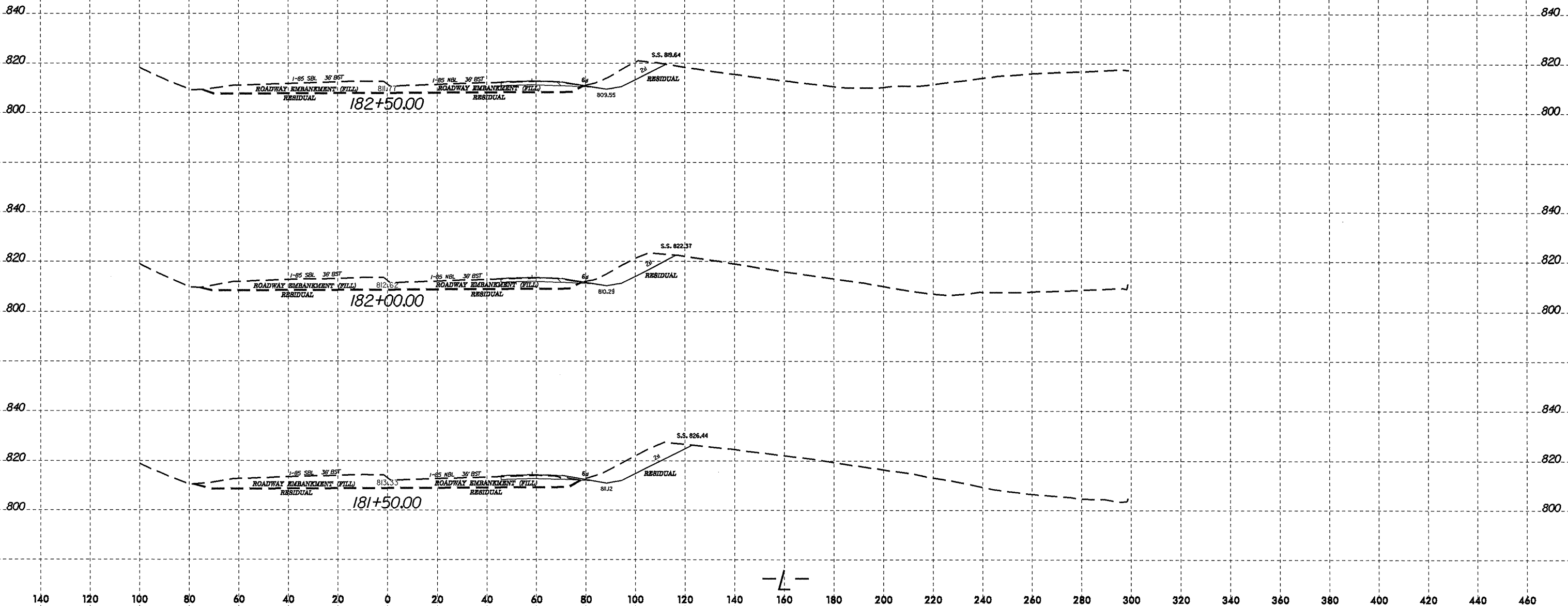
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21-FEB-2012 10:00
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 imcc@lure

8/23/99

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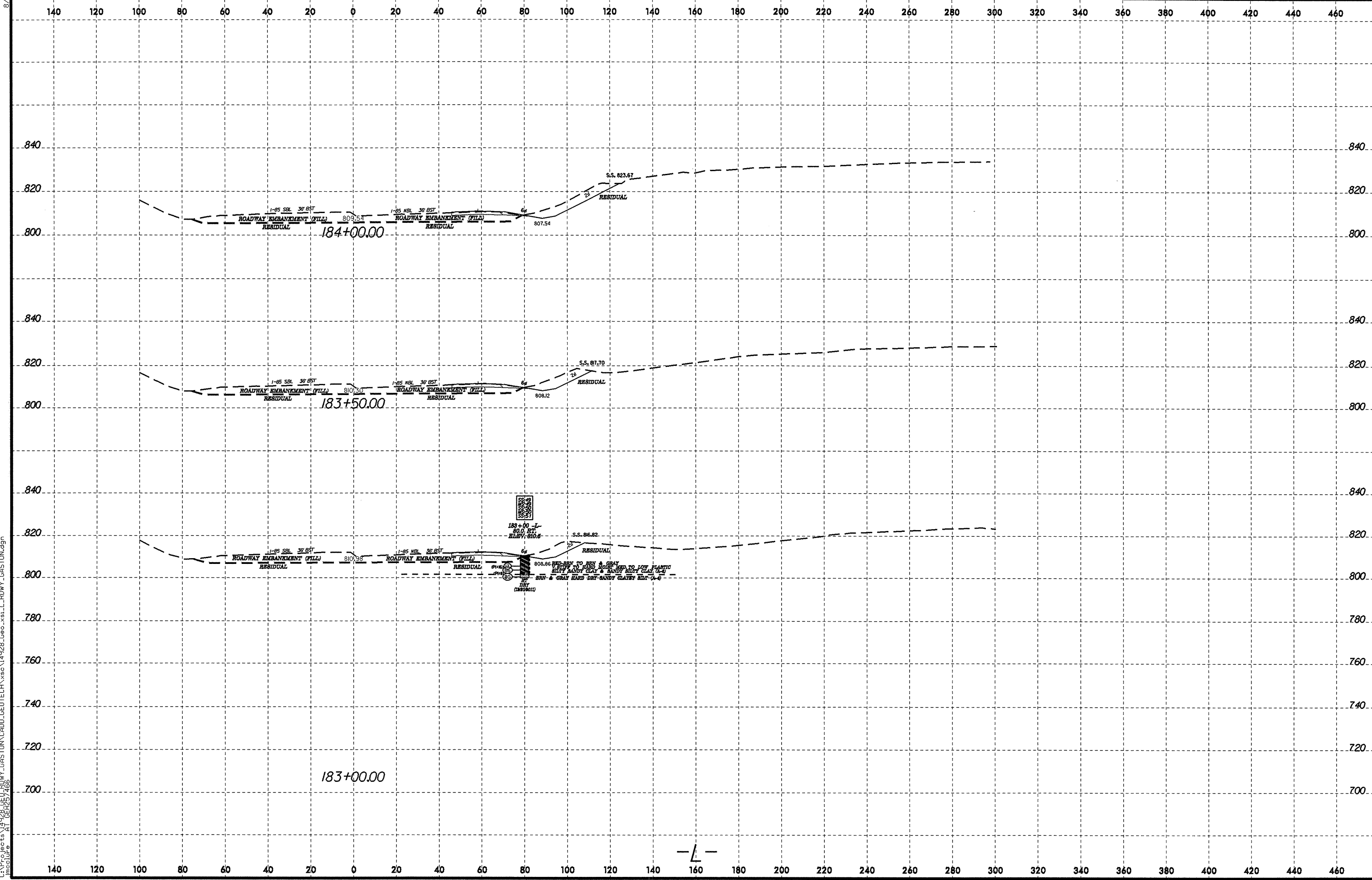


2\FEB-2012 10:01 C:\P\4928_GEO\ROWY_GASTON\CADD\GEO\GASTON\GASTON\GASTON.dgn
 1-85 SBL 36' BST
 ROADWAY EMBANKMENT (FILL)
 RESIDUAL

-L-

8/23/99

| | | |
|---------|---------------------|-----------|
| 0 10 20 | PROJ. REFERENCE NO. | SHEET NO. |
| | 1-4928 | 37 |

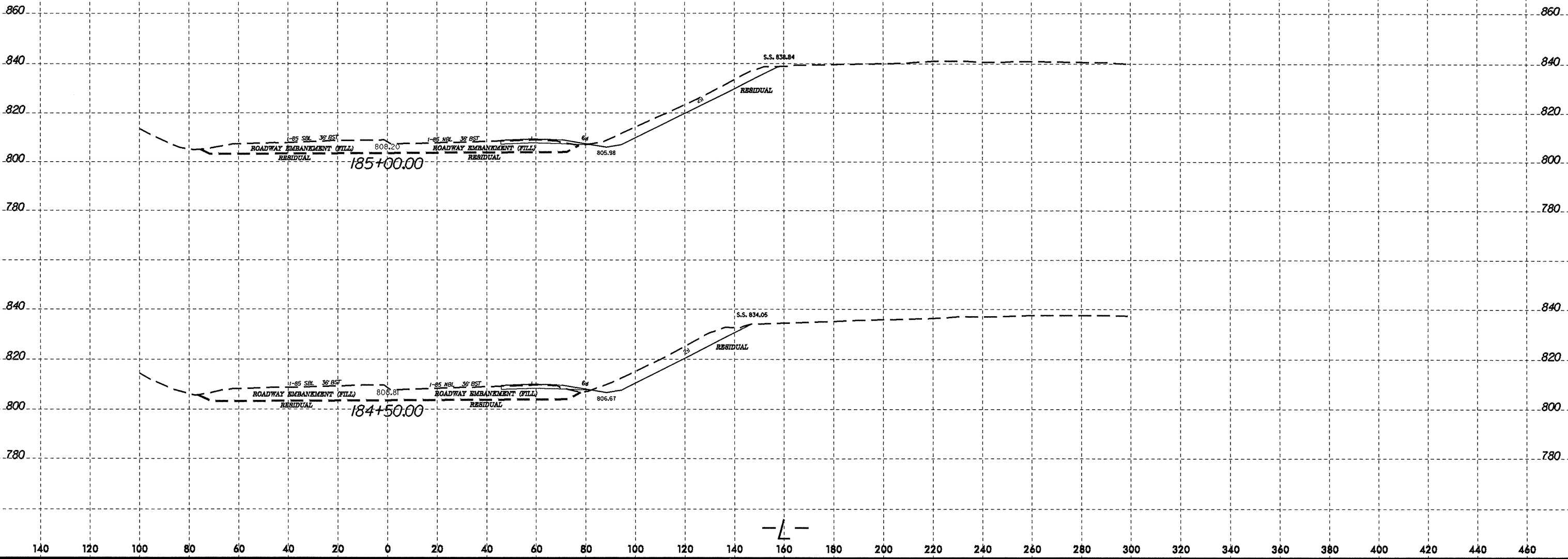


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8/23/99

| | | |
|---------|---------------------|-----------|
| 0 10 20 | PROJ. REFERENCE NO. | SHEET NO. |
| | 1-4928 | 38 |

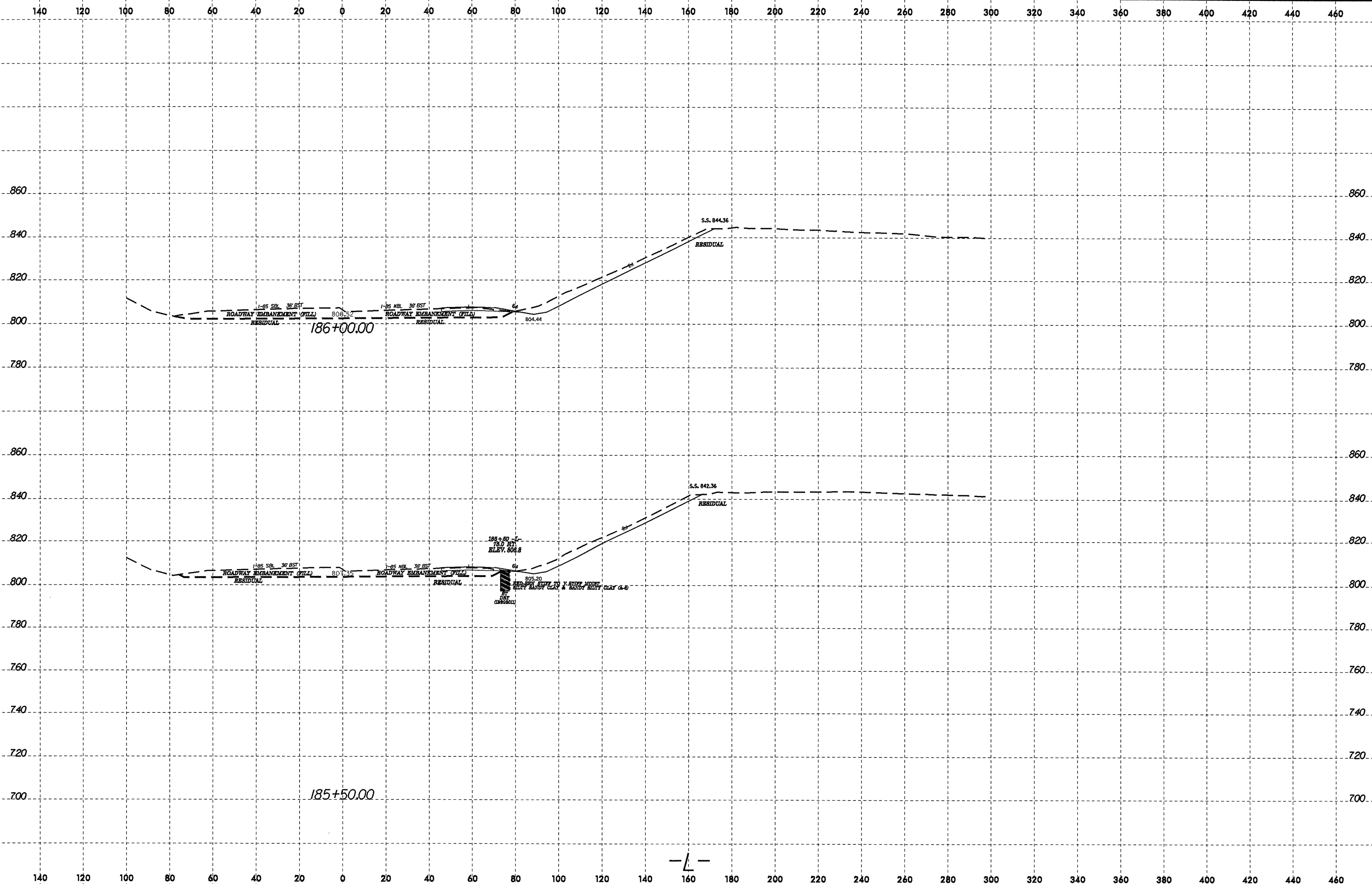
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8/23/99

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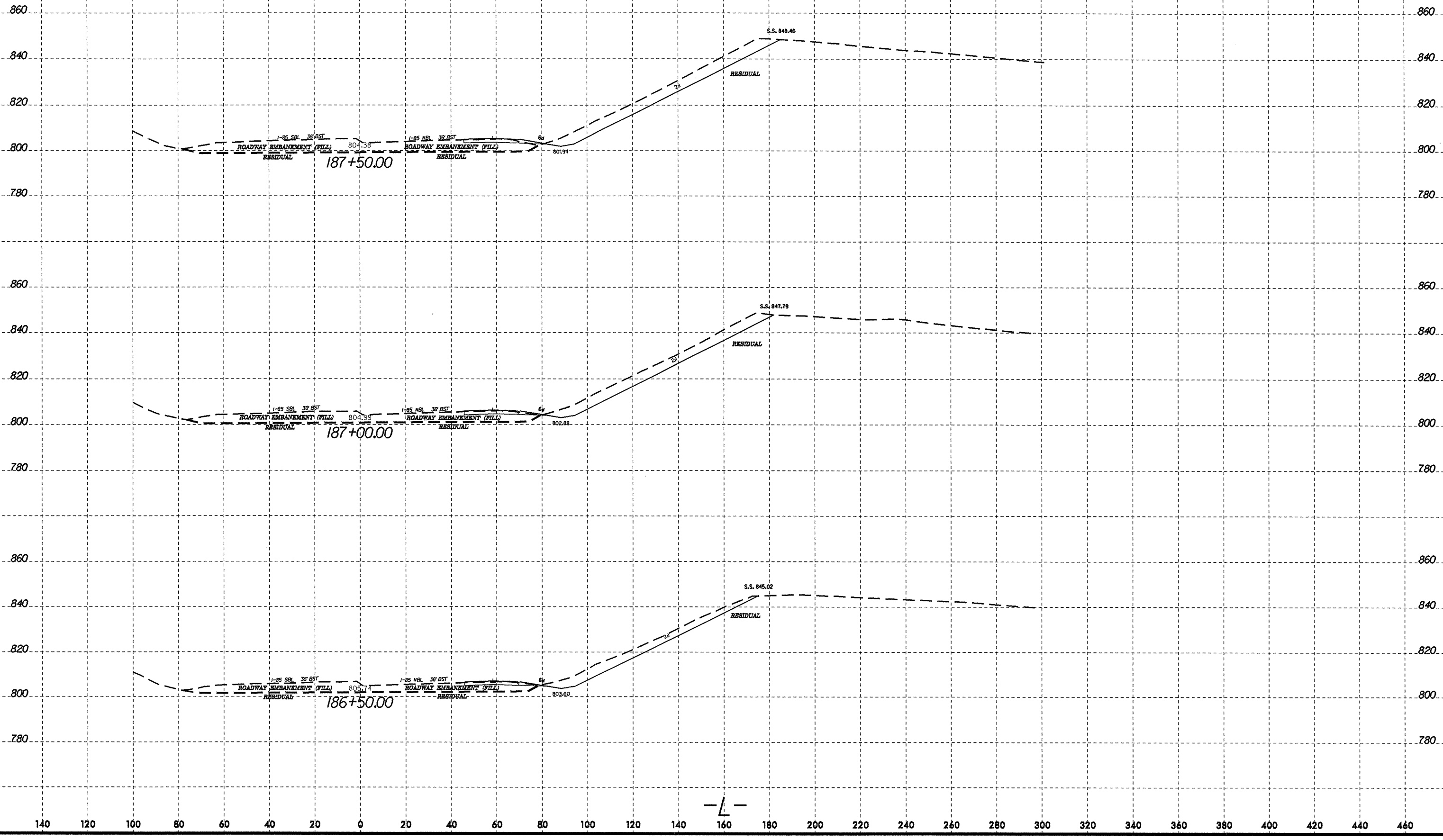


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8/23/99

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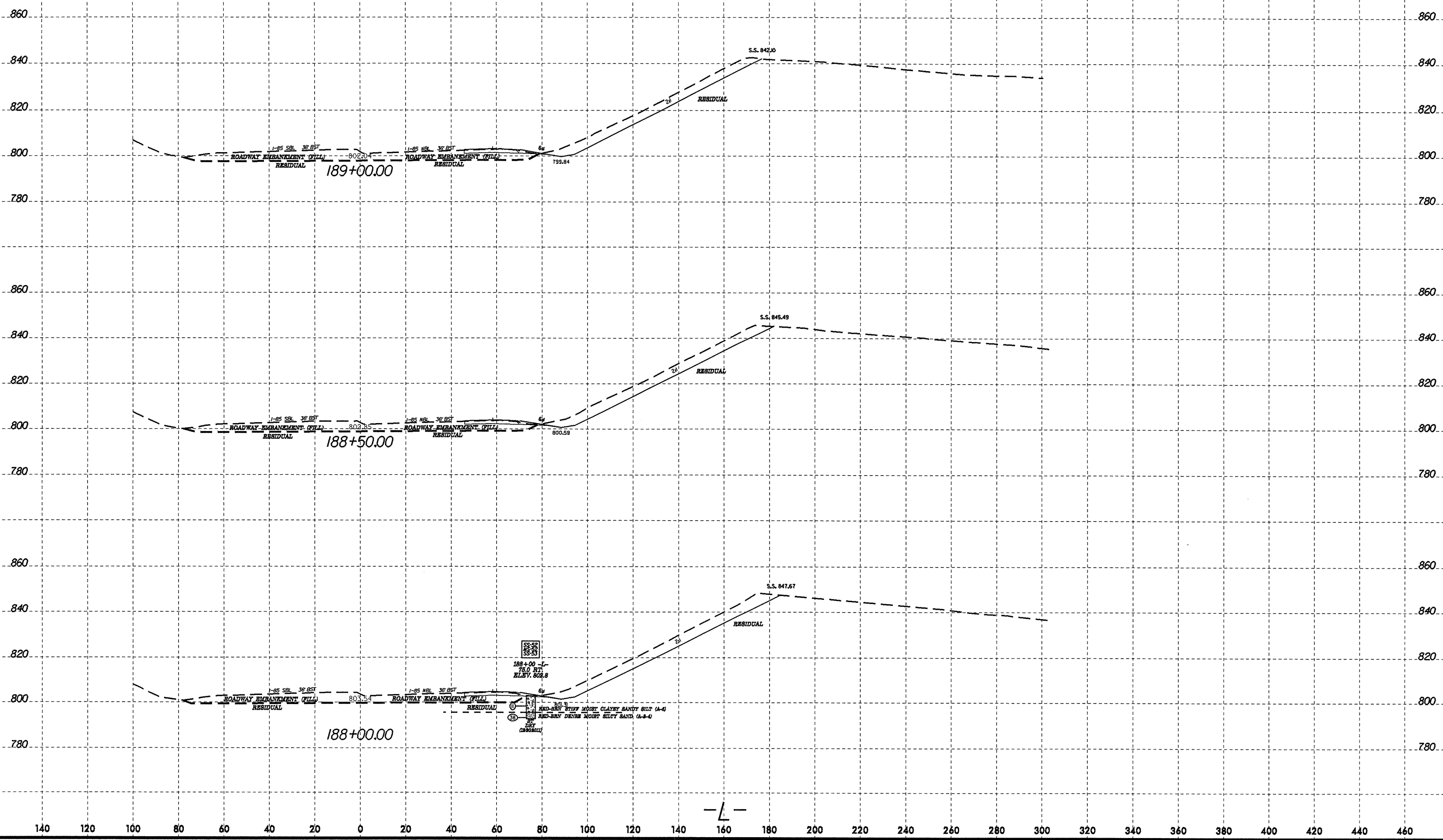


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2/FEB/2012 10:02
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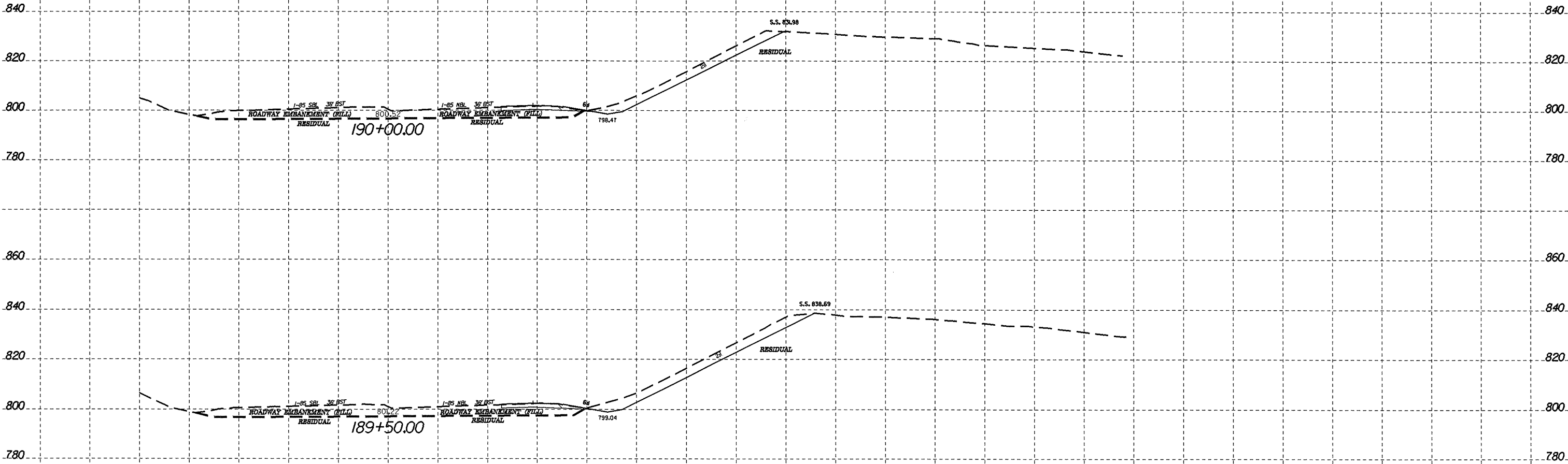
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8/23/99

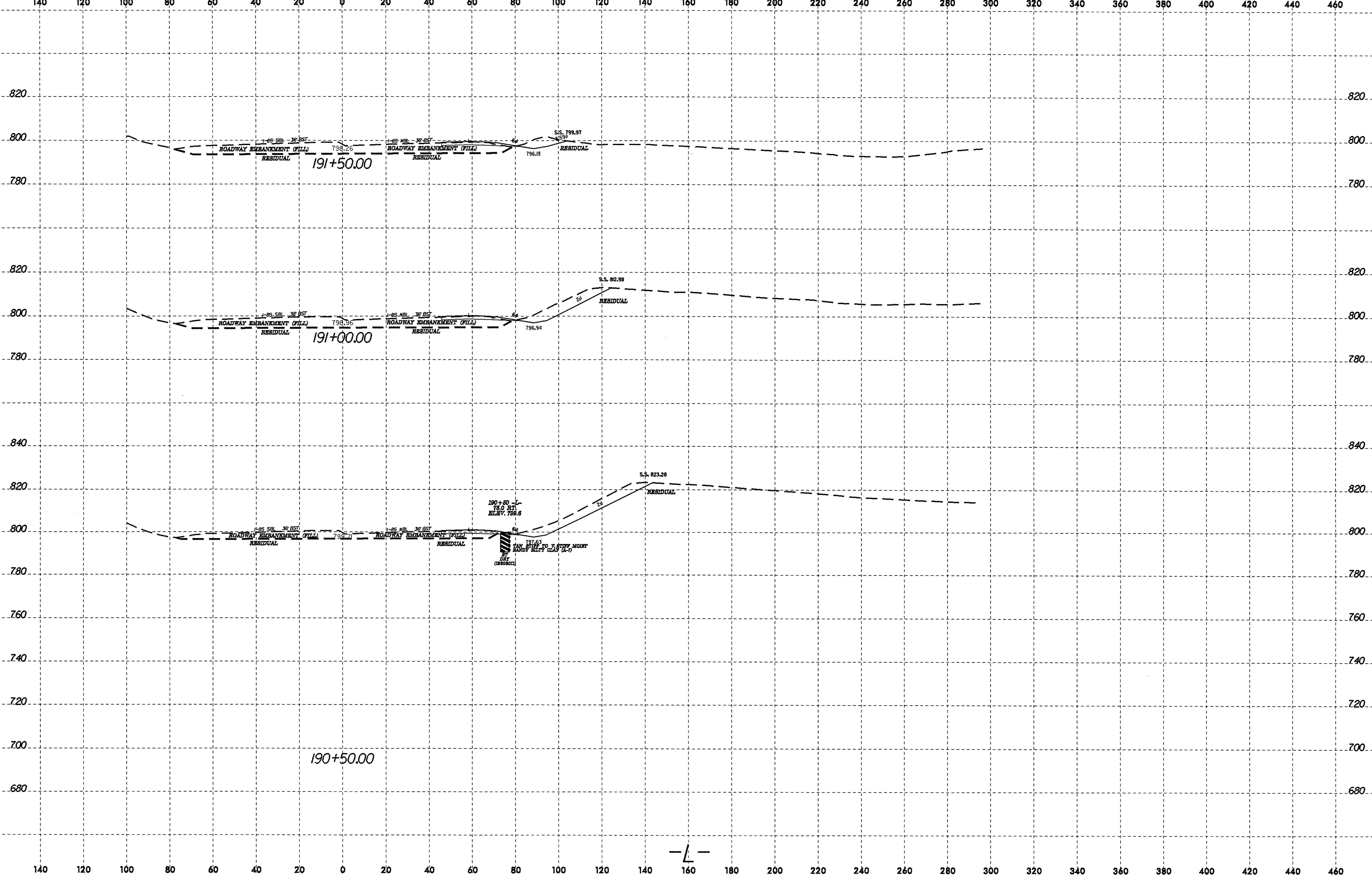
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8/23/99

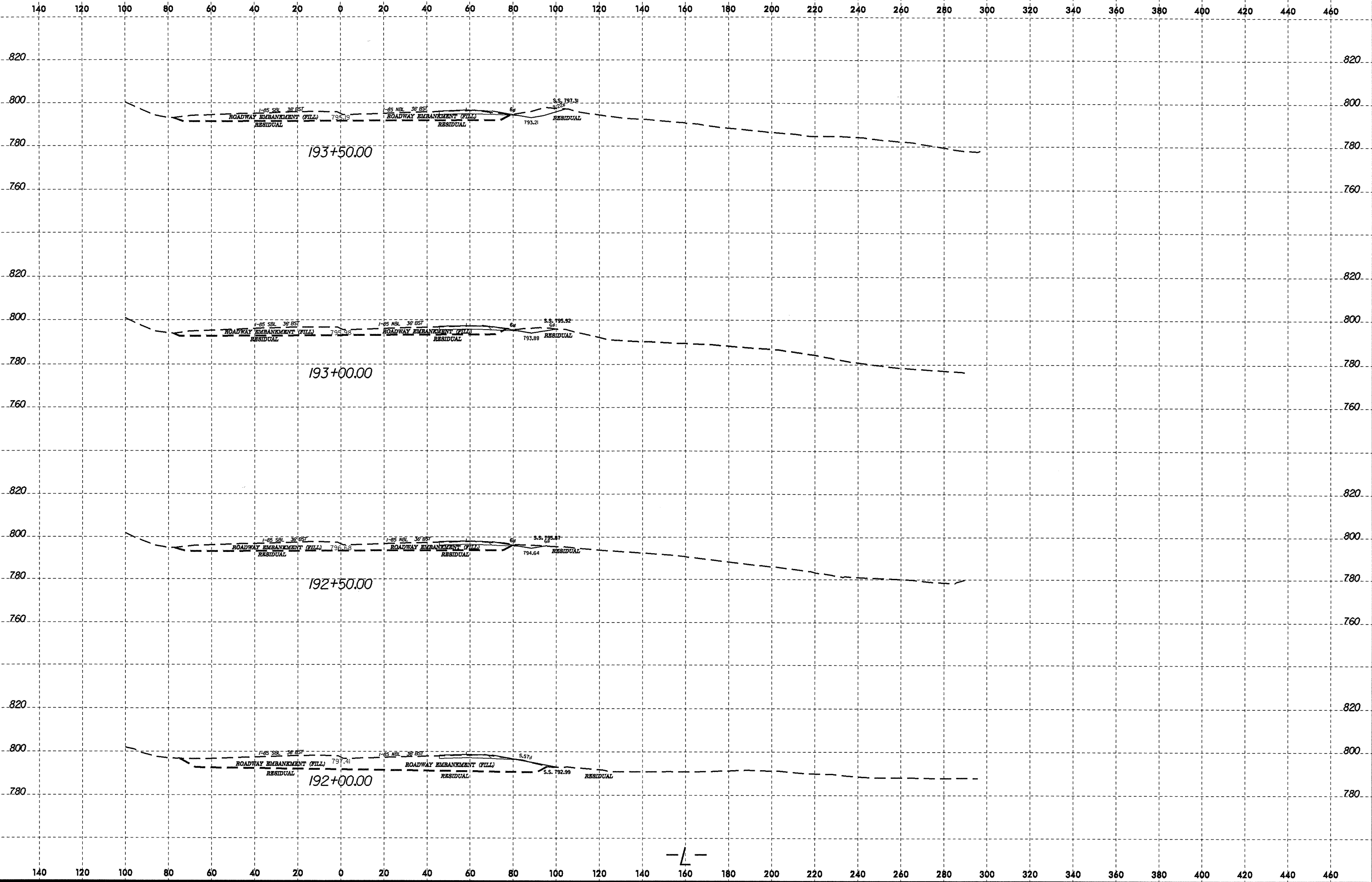


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8/23/99

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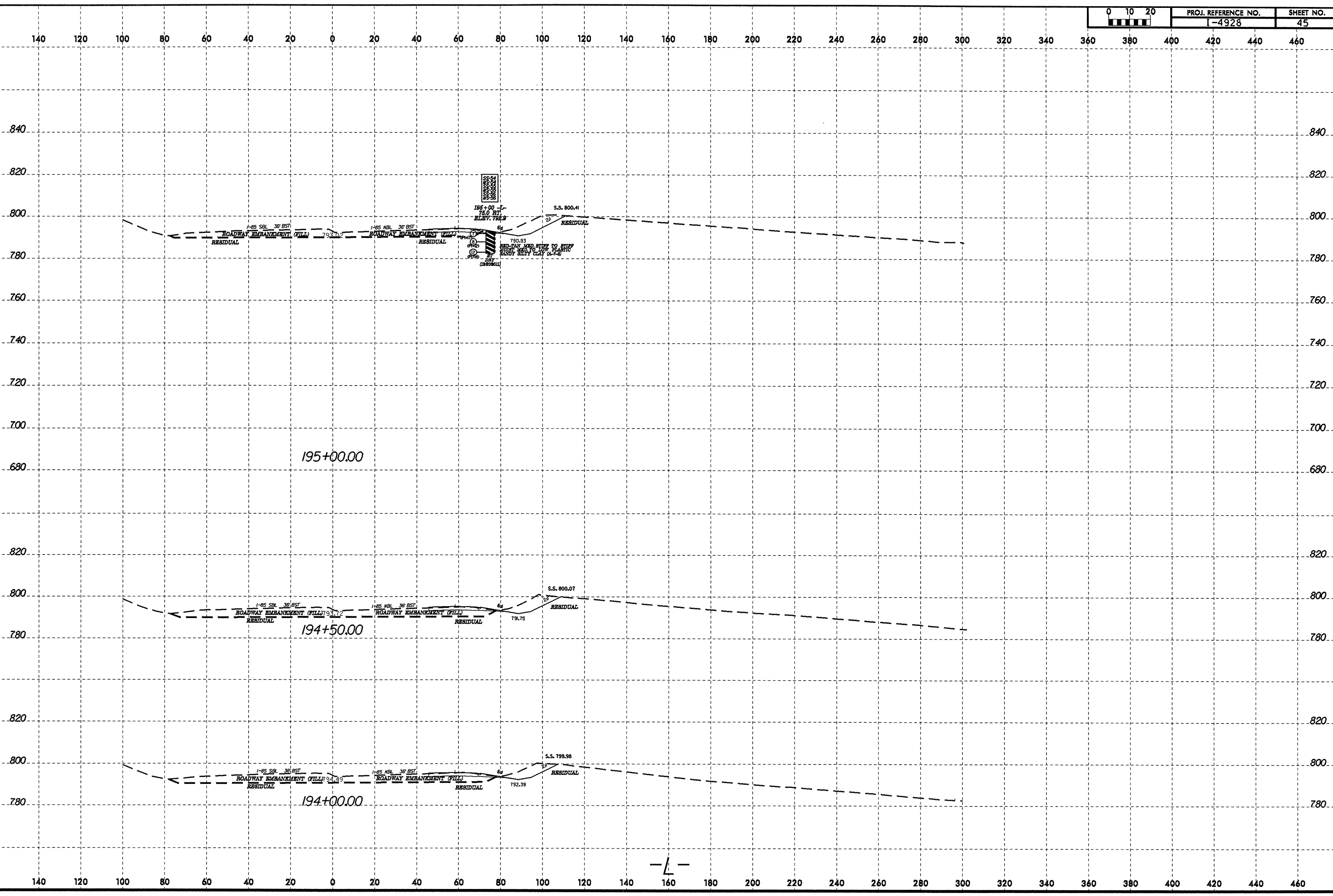


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8/23/99

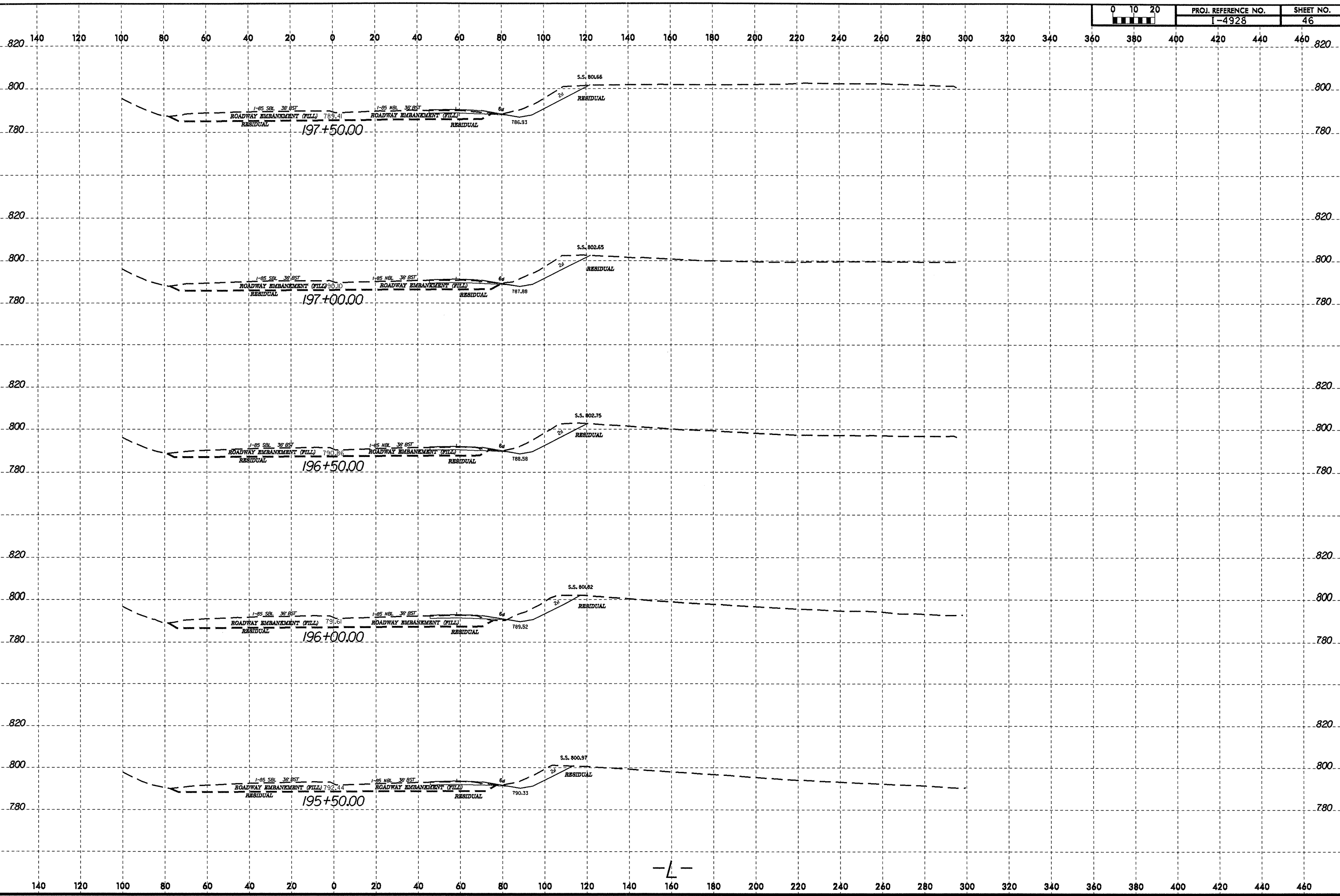
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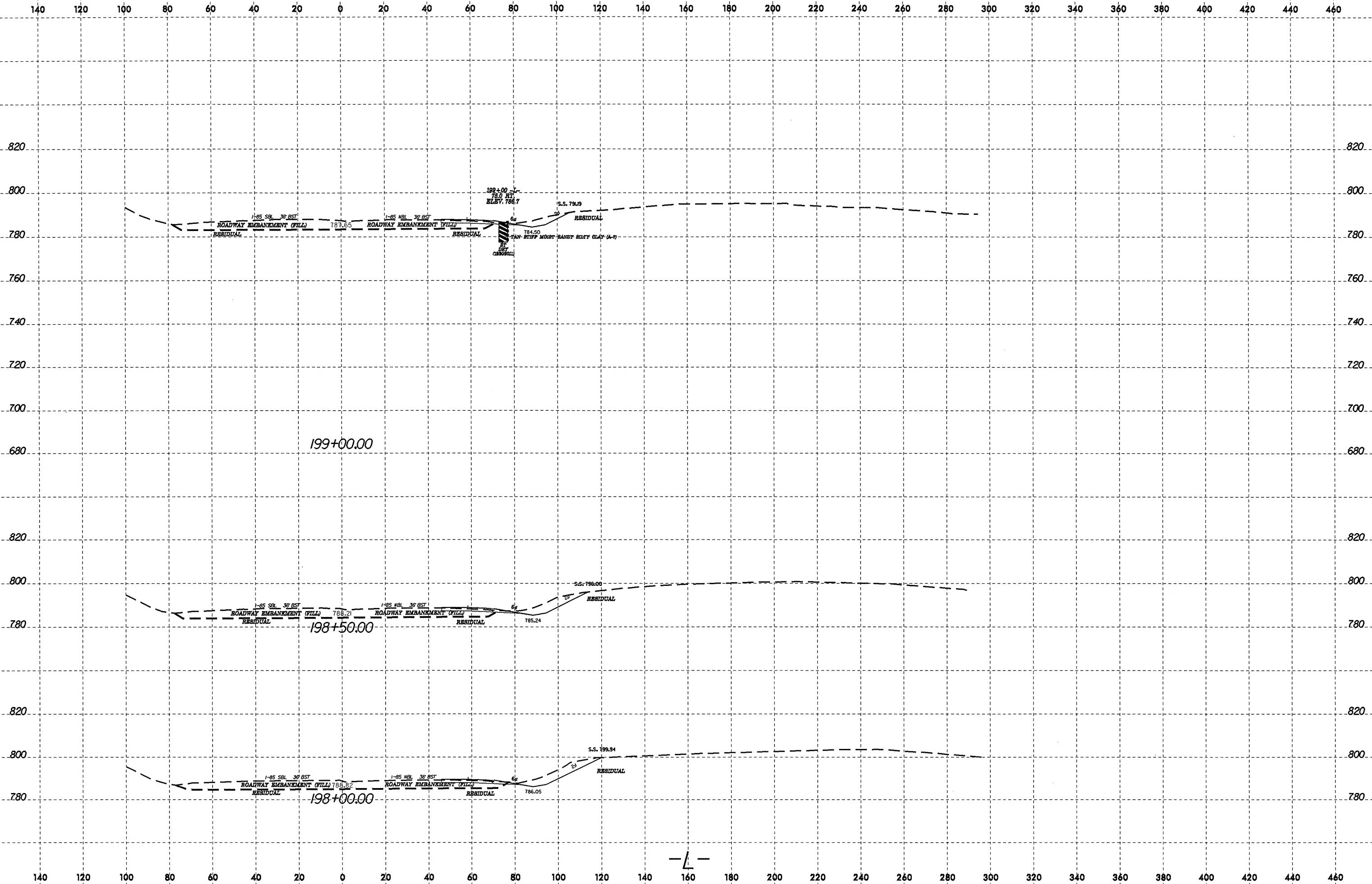
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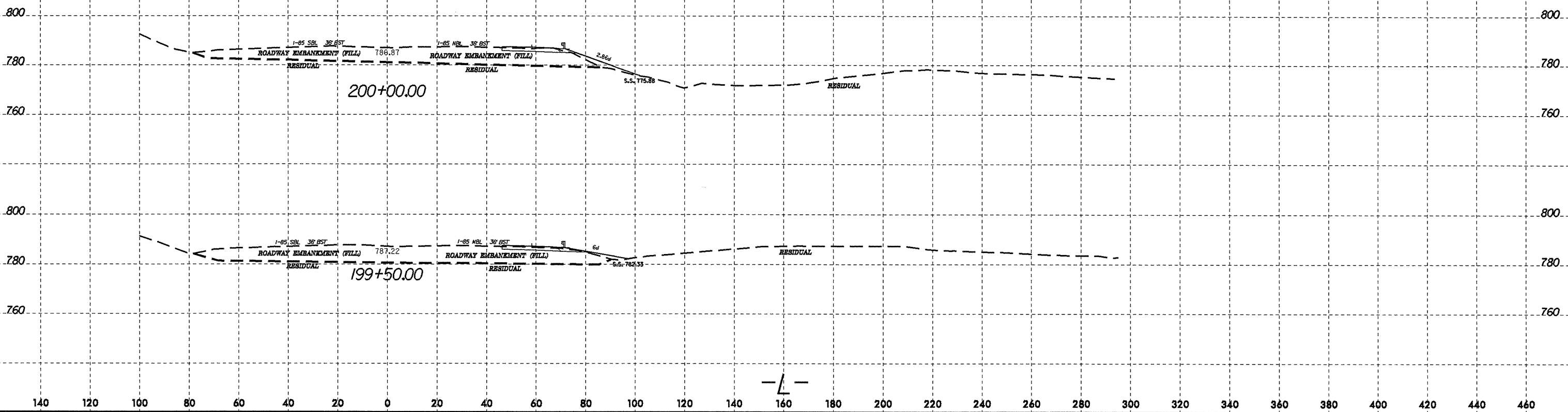


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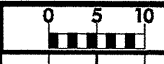
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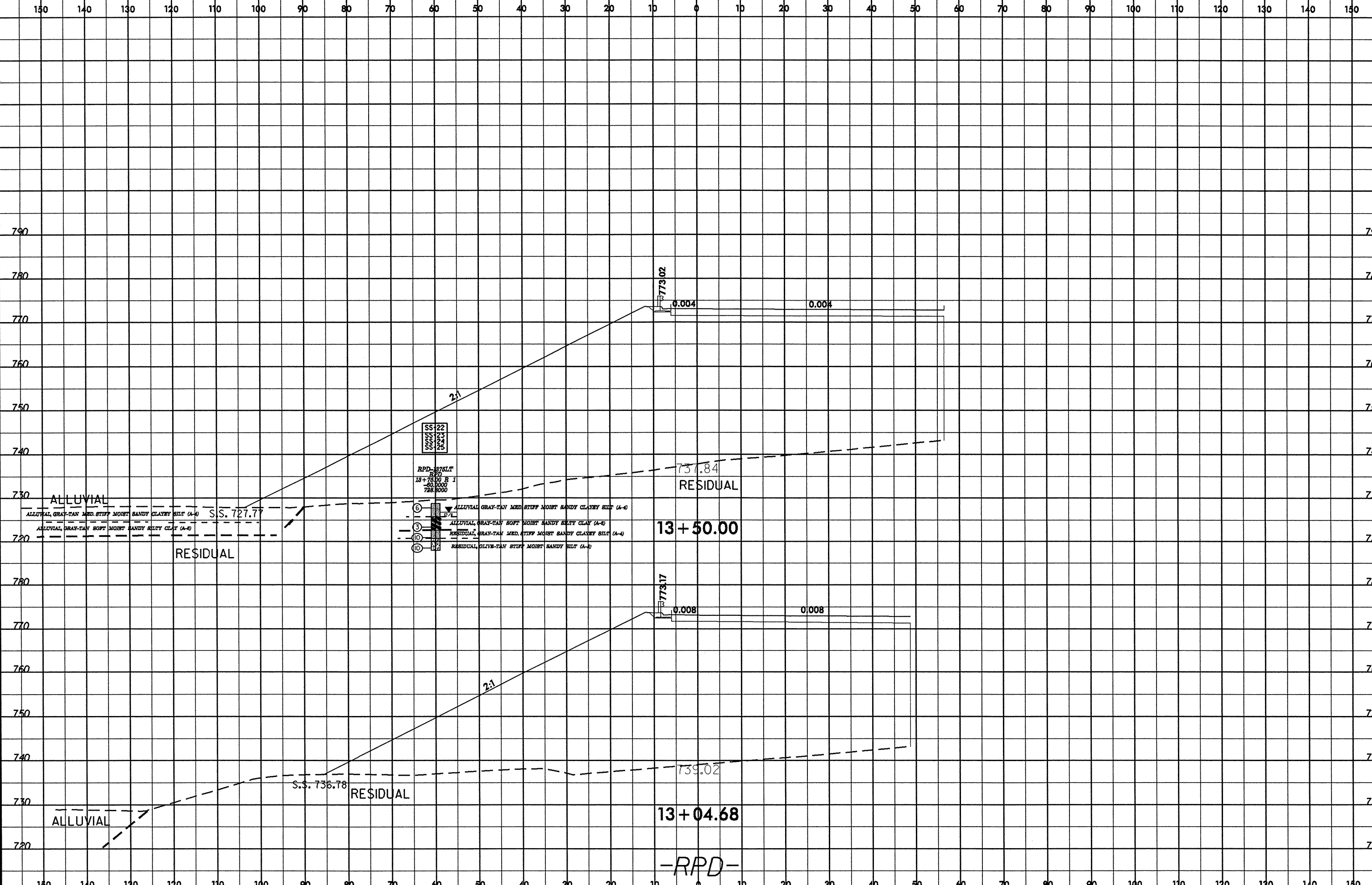
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 AT 6/25/99

-L-

8/23/99



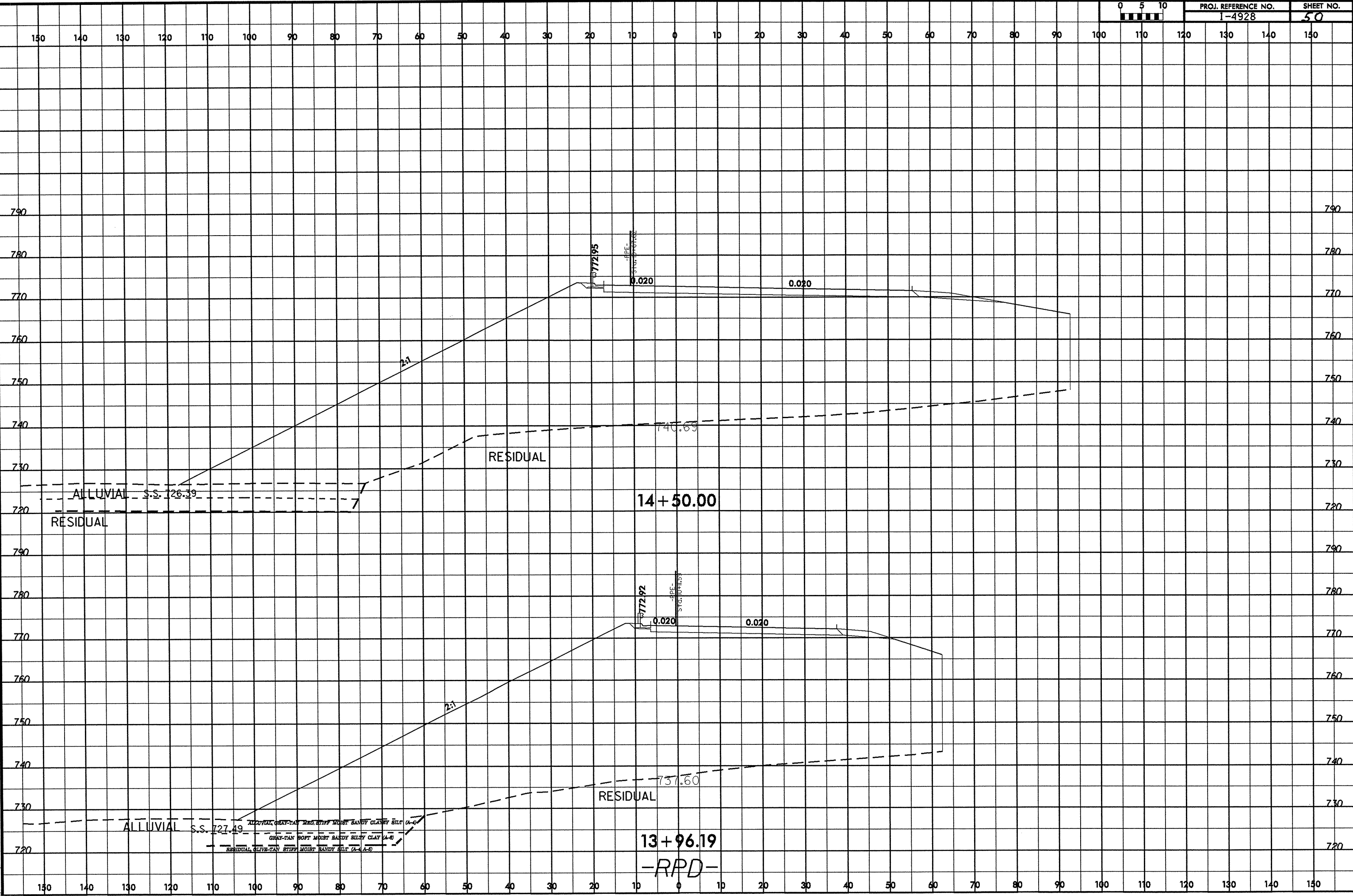
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8/23/99
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John C. Coker



ALLUVIAL S.S. 726.39
RESIDUAL

14+50.00

ALLUVIAL S.S. 727.49
RESIDUAL OLIVE-TAN STIFF MOIST SANDY SILT (A-A-D)
GRAY-TAN SOFT MOIST SANDY SILTY CLAY (A-B)
ALLUVIAL GRAY-TAN MED. STIFF MOIST SANDY CLAYEY SILT (A-A)

13+96.19

-RPD-

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|---------------------|--------------|
| N.C. | 41188.1.1 (I-4928) | 1 | 27 |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 41188.1.1 | IMS-85-1(106)3 | P.E. R/W & UTIL. | |
| | | | |
| | | | |
| | | | |

CONTENTS

| LINE | STATION | PLAN | PROFILE | XSECT |
|----------------|-----------------|------|---------|-------|
| -L- | 176+00 - 200+00 | 4-6 | 7-26 | |
| SAMPLE RESULTS | | 27 | | |

ROADWAY
SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 41188.1.1 (I-4928) F.A. PROJ. IMS-85-1(106)3
COUNTY GASTON
PROJECT DESCRIPTION I-85 NBL WEIGH STATION FROM SR 1302
(CROWDER'S MOUNTAIN RD.) TO SR 1307 (EDGEWOOD RD.)

*INVENTORY /BORROW INVESTIGATION

*THIS IS AN ADDENDUM TO INVENTORY REPORT DATED MARCH 2, 2012.
ADDITIONAL BORINGS WERE REQUESTED FOR BORROW INVESTIGATION.

CAUTION NOTICE

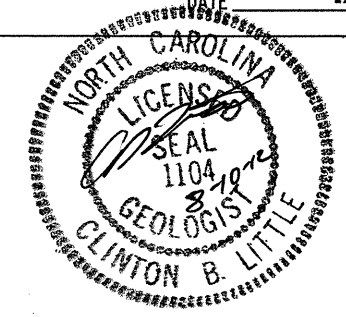
THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (ON-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

PERSONNEL
J. K. STICKNEY
C. L. SMITH

INVESTIGATED BY J. P. ROGERS
CHECKED BY C. B. LITTLE
SUBMITTED BY C. B. LITTLE
DATE AUGUST 2012



DRAWN BY: C. E. BURRIS

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

CONTRACT: ID: I-4928

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

PROJECT REFERENCE NO.
41188.LI (I-4928)
SHEET NO.
2

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

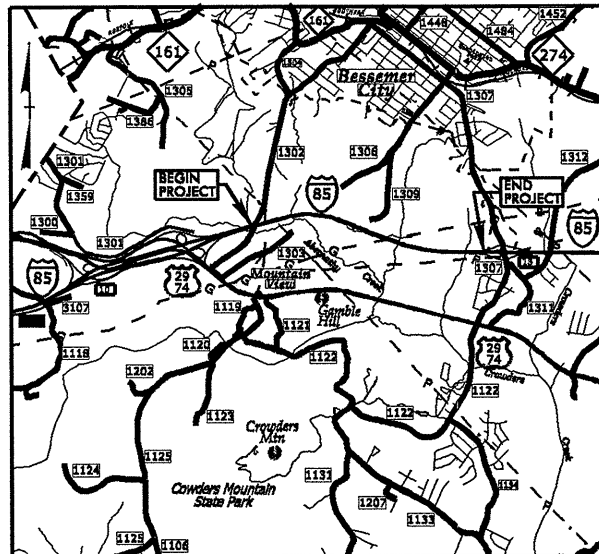
SOIL DESCRIPTION: SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS... GRADATION: WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE... ROCK DESCRIPTION: HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL... TERMS AND DEFINITIONS: ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER... SOIL LEGEND AND AASHTO CLASSIFICATION: GENERAL CLASS., GROUP CLASS., SYMBOL, % PASSING... CONSISTENCY OR DENSENESS: PRIMARY SOIL TYPE, COMPACTNESS OR CONSISTENCY... TEXTURE OR GRAIN SIZE: U.S. STD. SIEVE SIZE OPENING (MM)... SOIL MOISTURE - CORRELATION OF TERMS: SOIL MOISTURE SCALE (ATTERBERG LIMITS), FIELD MOISTURE DESCRIPTION... PLASTICITY: NONPLASTIC, LOW PLASTICITY, MED. PLASTICITY, HIGH PLASTICITY... COLOR: DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS... EQUIPMENT USED ON SUBJECT PROJECT: DRILL UNITS, ADVANCING TOOLS, HAMMER TYPE, CORE SIZE, HAND TOOLS, FRACTURE SPACING, BEDDING, INDURATION.

02-AUG-2012 11:46 C:\projects\14928_GEO_RDWY_GASTON\cadd\CADD_GEO\TECH\PlanProf\14928_GEO_0riginalTsh_RDWY_Gaston.dgn
 09/08/99
 09/08/99

CONTRACT: TIP PROJECT: I-4928

CONTRACT: TIP PROJECT: I-4928

See Sheet 1-A For Index of Sheets



VICINITY MAP

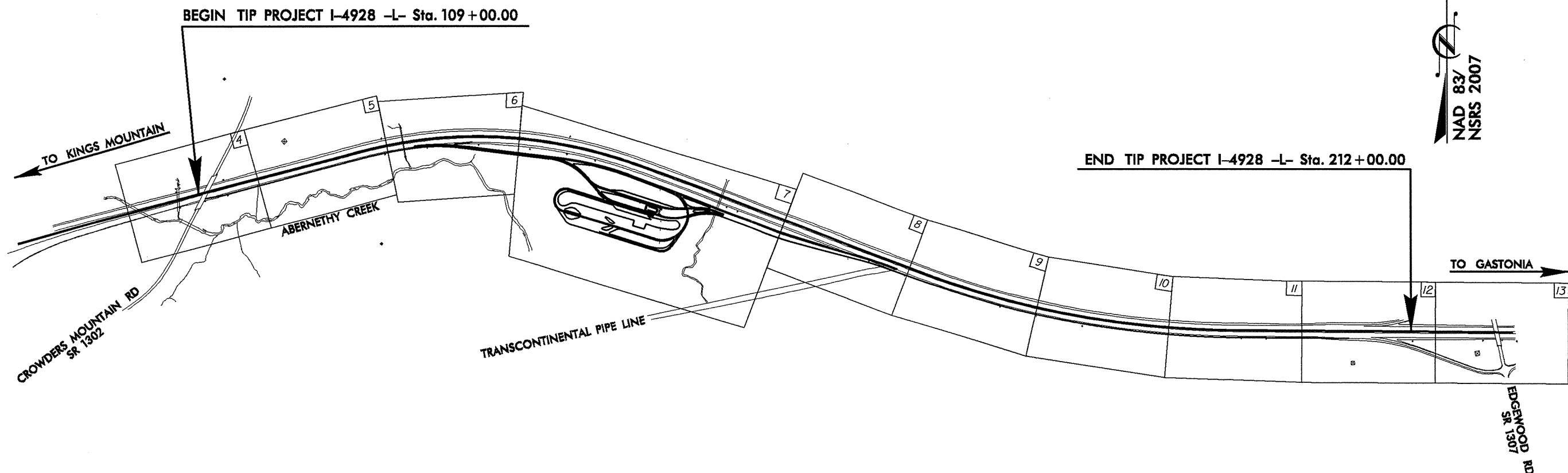
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GASTON COUNTY

**LOCATION: NEW I-85 NBL WEIGH STATION FROM SR 1302
(CROWDERS MOUNTAIN RD) TO SR 1307 (EDGEWOOD ROAD)**

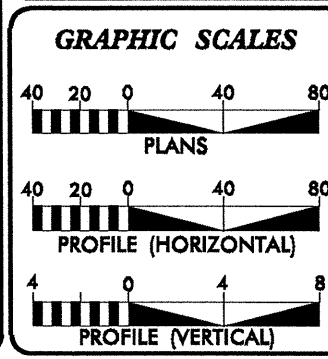
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURES,
WIDENING, PAVEMENT, SIGNING, WEIGH STATION BUILDINGS, STATIC SCALES,
COMMERCIAL VEHICLE INFORMATION SYSTEMS NETWORKS (CVISN)
WEIGH-IN-MOTION (WIM) SCALE SYSTEM, & LIGHTING**

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | I-4928 | 2A | 27 |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| 41188.1.1 | IMS-85-1(106)3 | P.E. | |
| 41188.2.1 | | R/W | |
| 41188.3.1 | | CONST. | |
| | | | |
| | | | |
| | | | |



NOTE:
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

| | |
|------------|----------|
| ADT 2014 = | 74,224 |
| ADT 2035 = | 98,500 |
| DHV = | 10 % |
| D = | 55 % |
| T = | 23 % * |
| V = | 70 MPH |
| * TTST 18% | DUAL 5 % |

PROJECT LENGTH

| | |
|-------------------------------------|-------------|
| LENGTH ROADWAY TIP PROJECT I-4928 = | 1.951 MILES |
| TOTAL LENGTH TIP PROJECT I-4928 = | 1.951 MILES |

Prepared In the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
September 20, 2012

LETTING DATE:
February 18, 2014

Christopher K. Haire, PE
PROJECT ENGINEER

Mohammed E. Mahjoub, EI
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

P.E.

| | |
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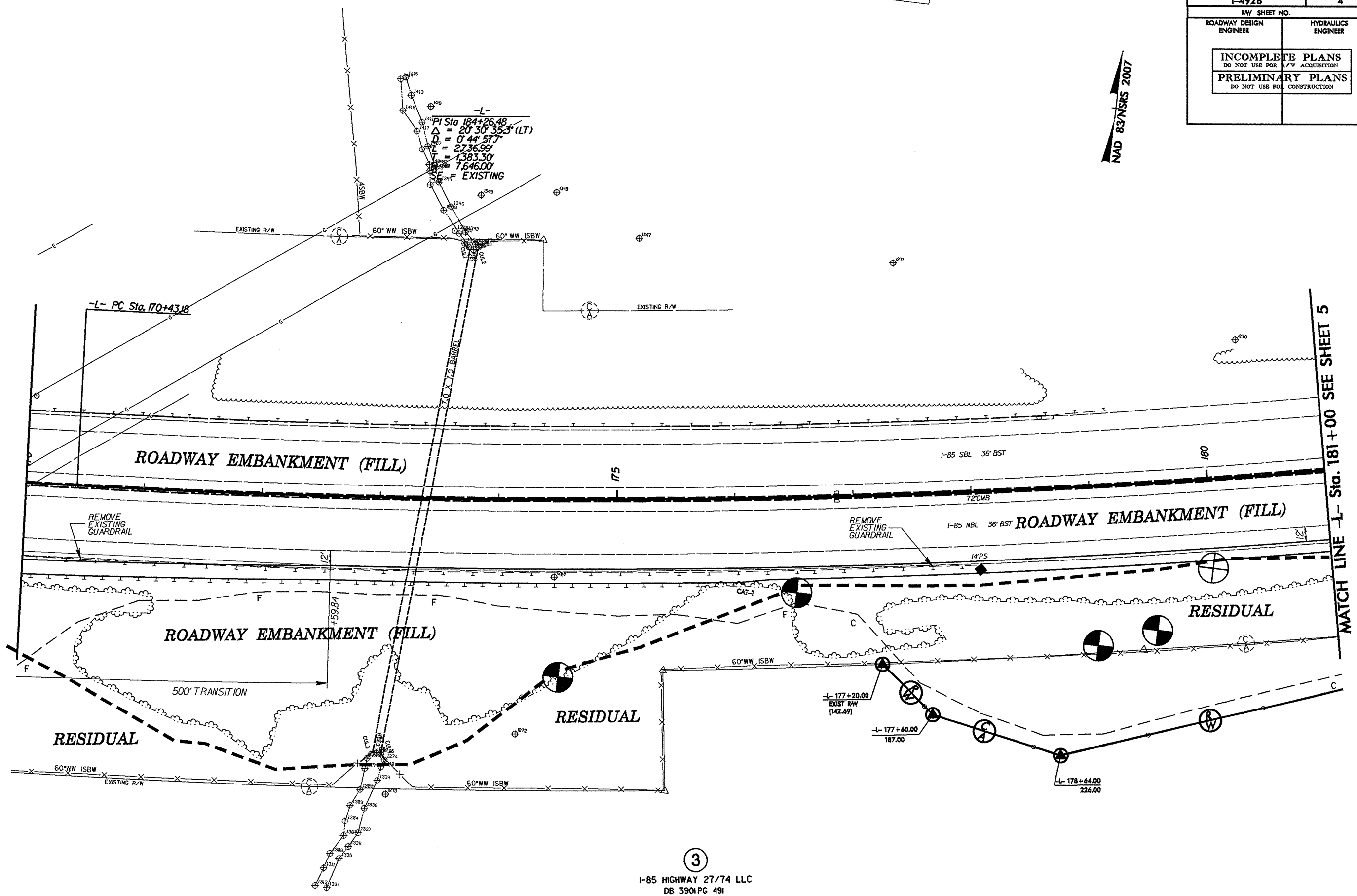
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 8/17/99

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| PROJECT REFERENCE NO. | SHEET NO. |
| I-4928 | 4 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

NAD 83/NSRS 2007



MATCH LINE -L- Sta. 181+00 SEE SHEET 5

③
 I-85 HIGHWAY 27/74 LLC
 DB 3901PG 491

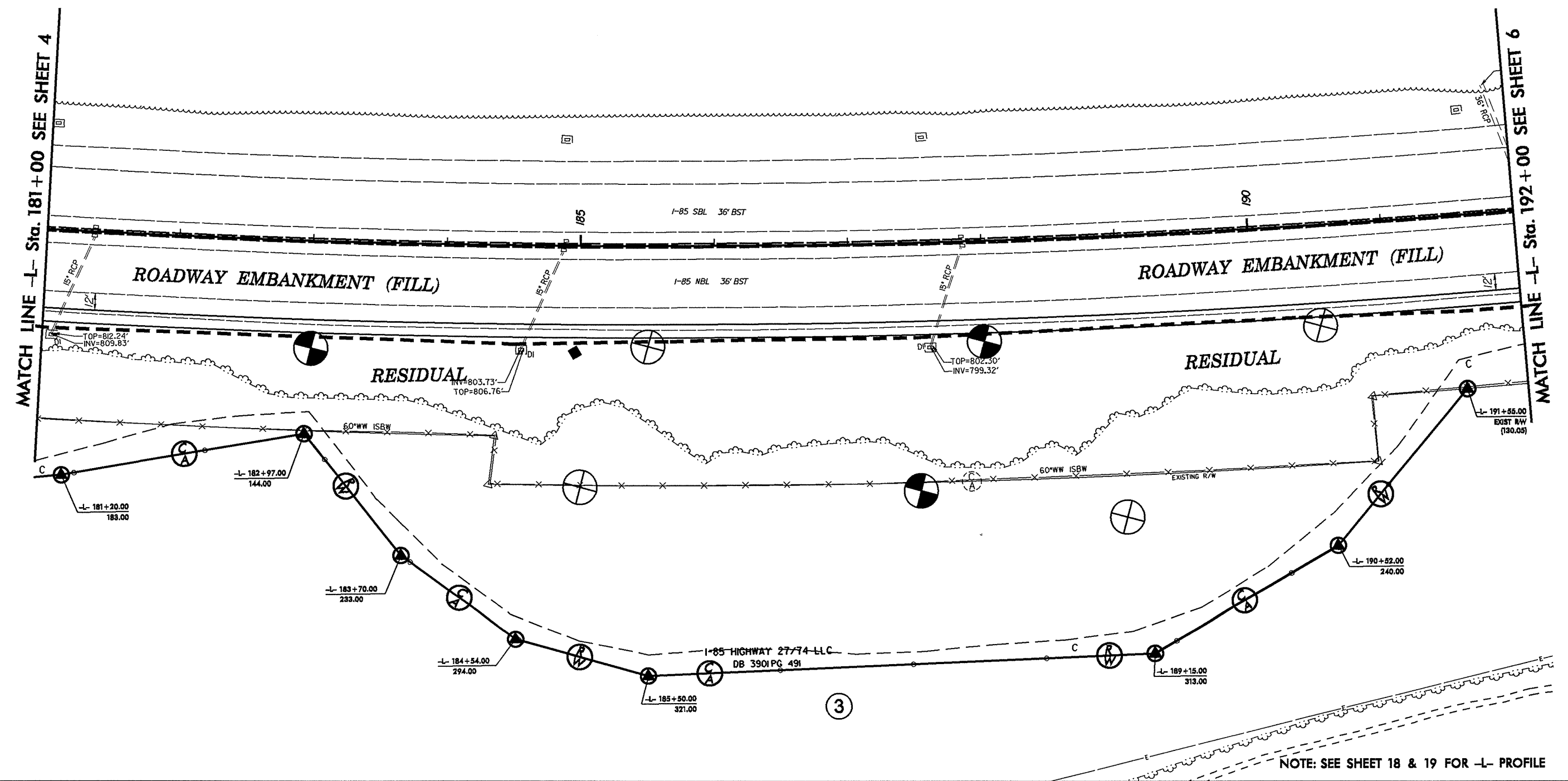
NOTE: SEE SHEET 18 FOR -L- PROFILE

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| I-4928 | 5 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |
| INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION | |
| PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION | |

-L-
PI Sta 184+26.48
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 $D = 0' 44' 57.7"$
 $L = 2,736.98'$
 $T = 1,383.30'$
 $R = 7,646.00'$
SE = EXISTING

NAD 83/NSRS 2007



NOTE: SEE SHEET 18 & 19 FOR -L- PROFILE

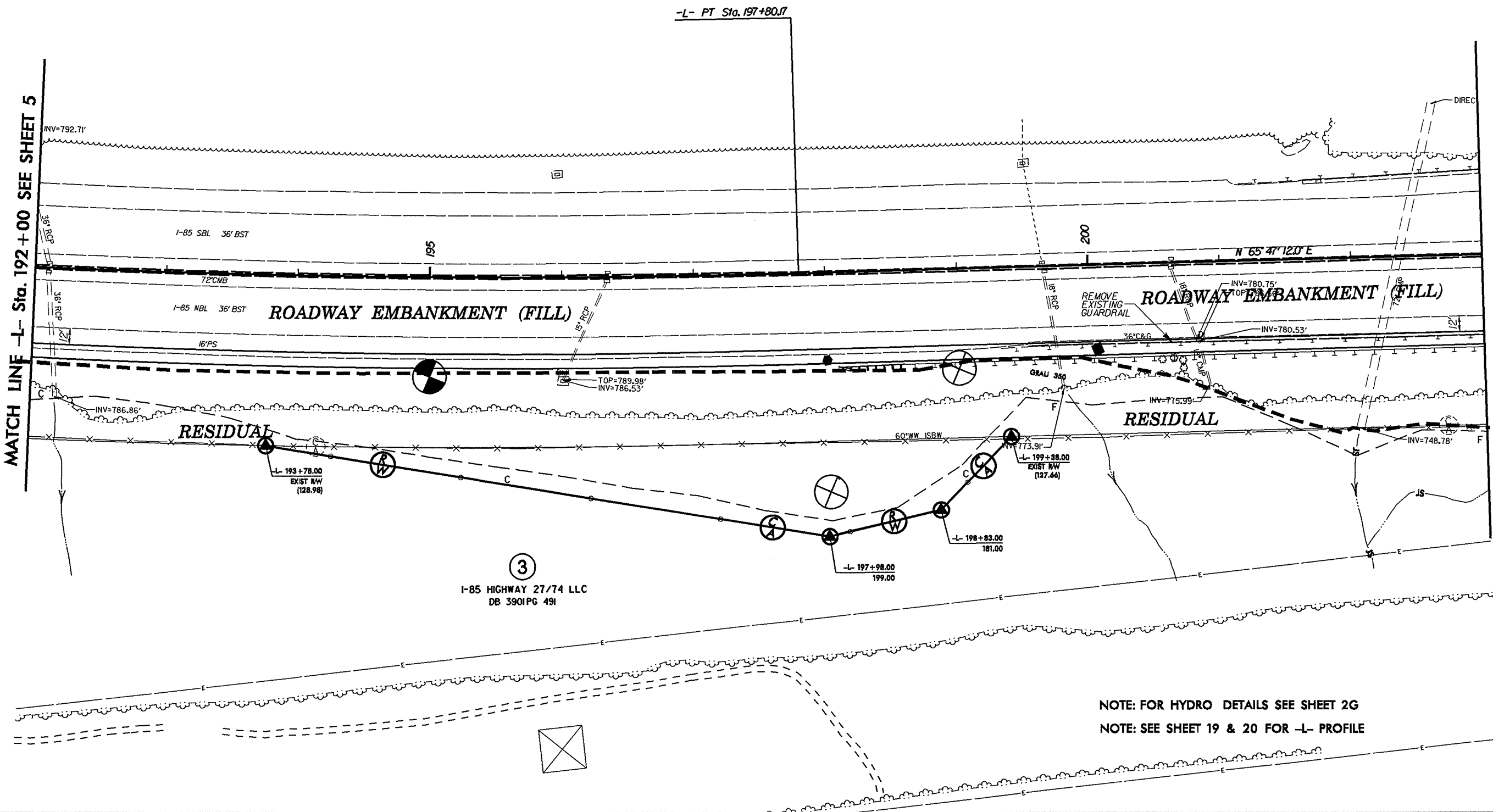
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| RW SHEET NO. | | | |
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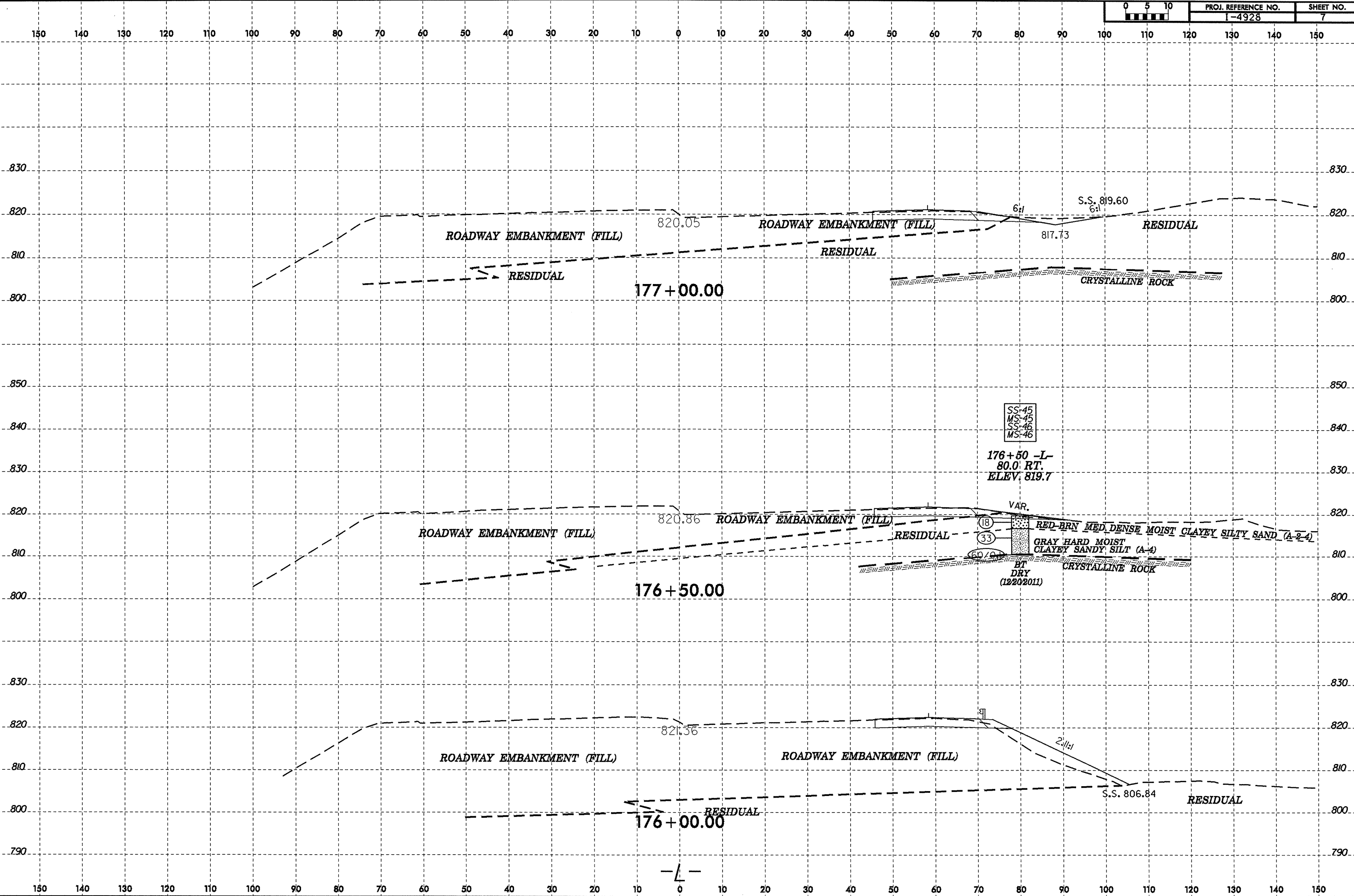
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 SE = EXISTING

NAD 83 N85° 2007

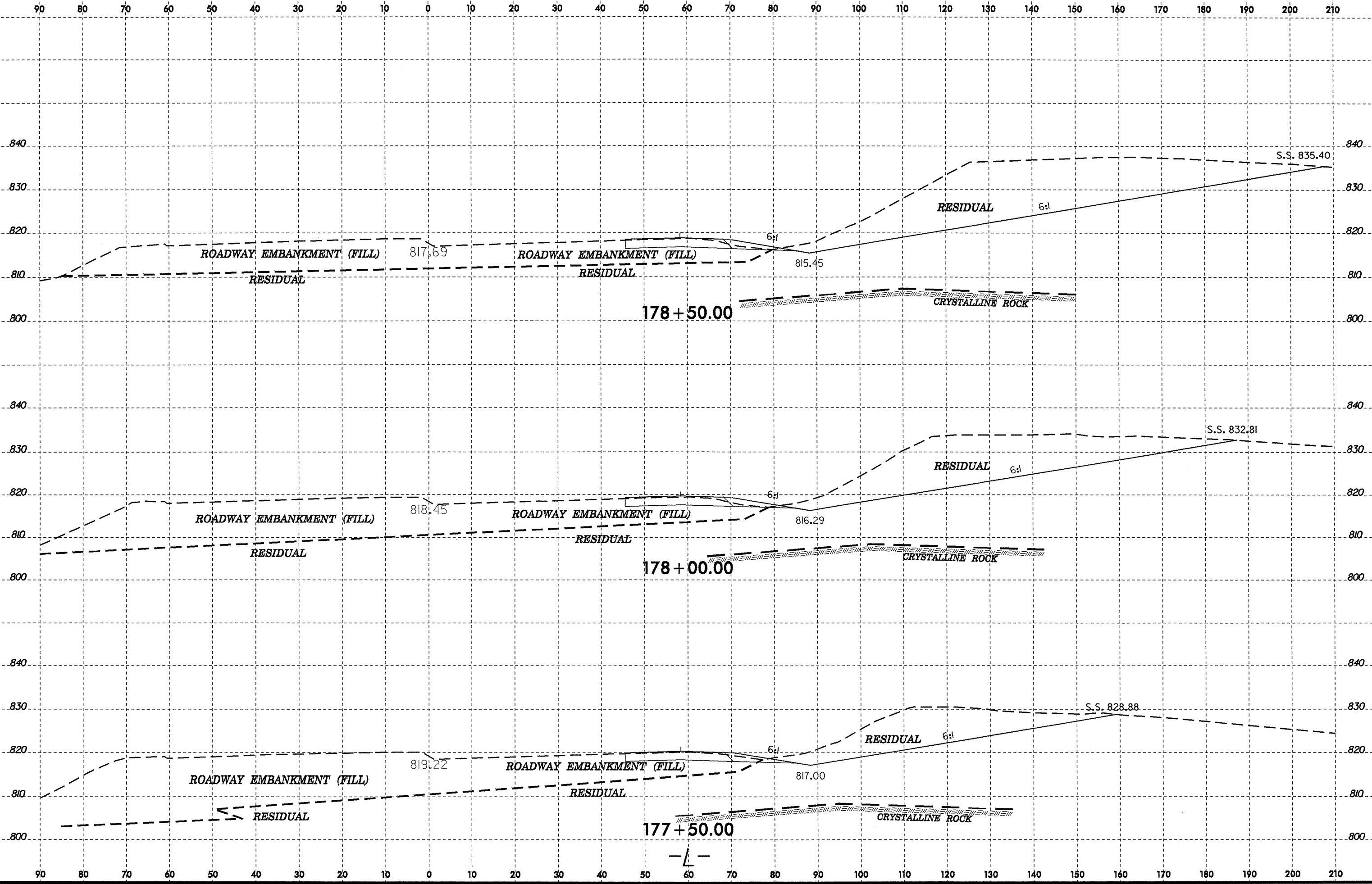


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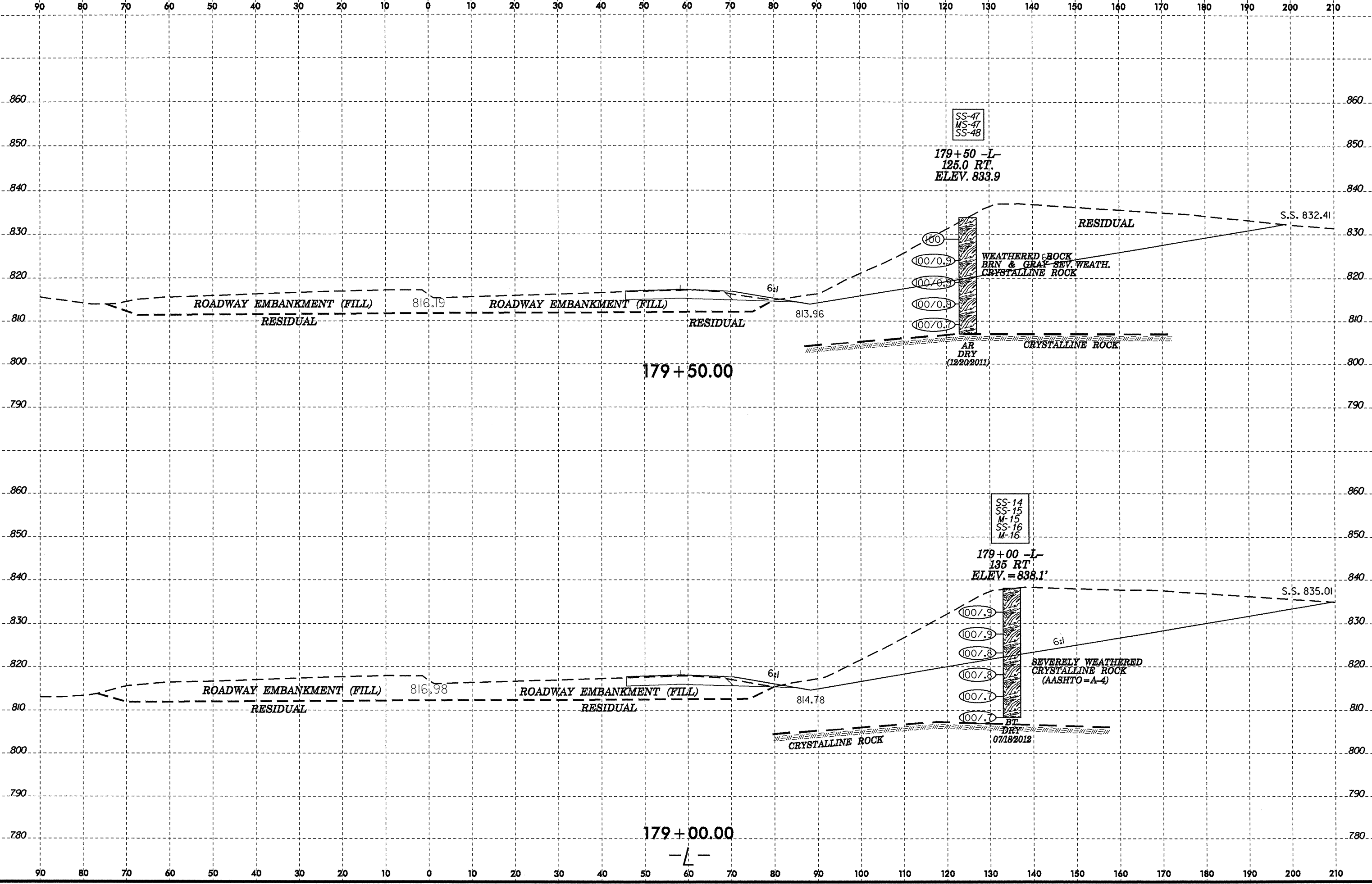


8/23/99

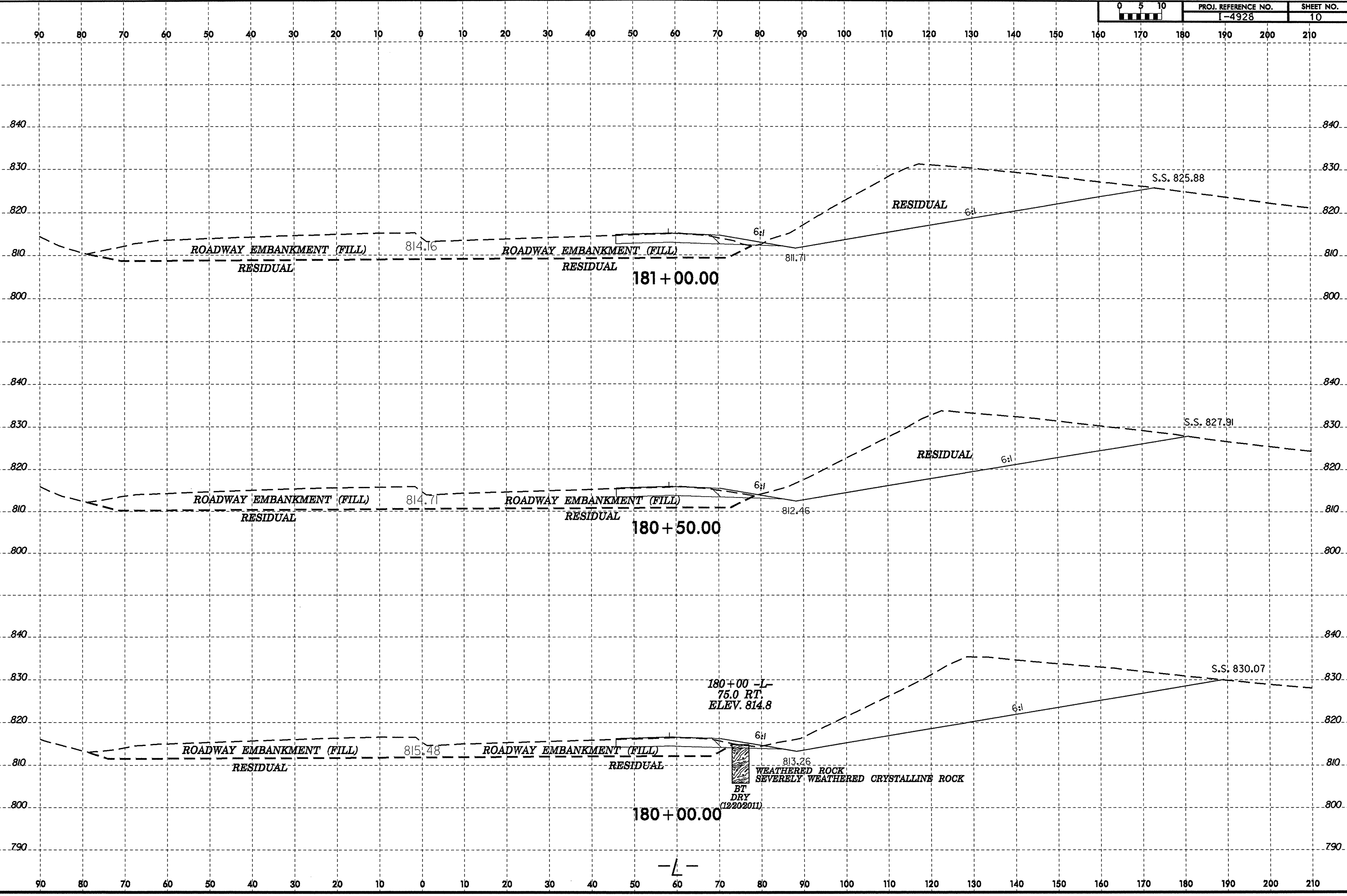
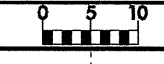


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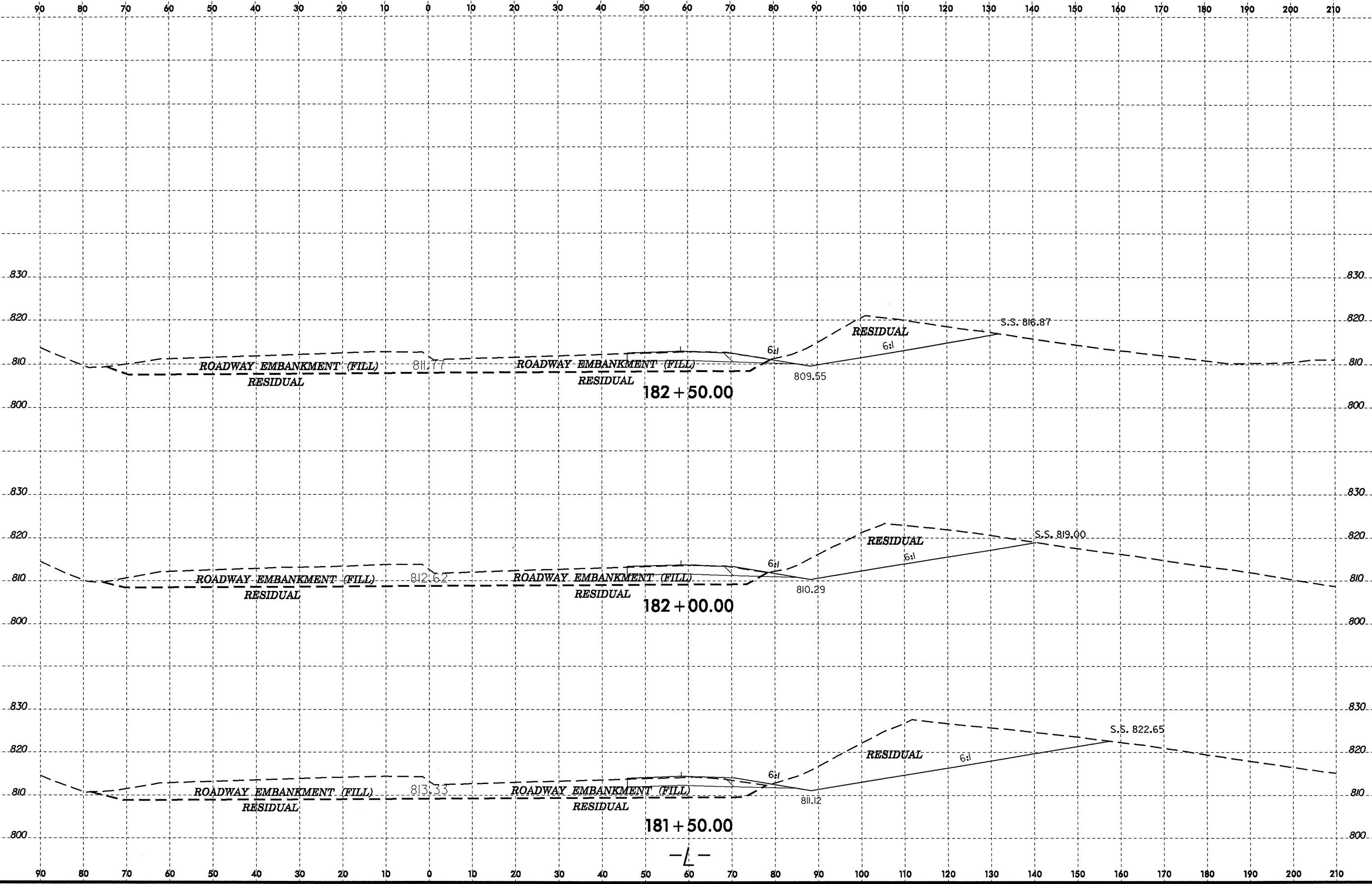
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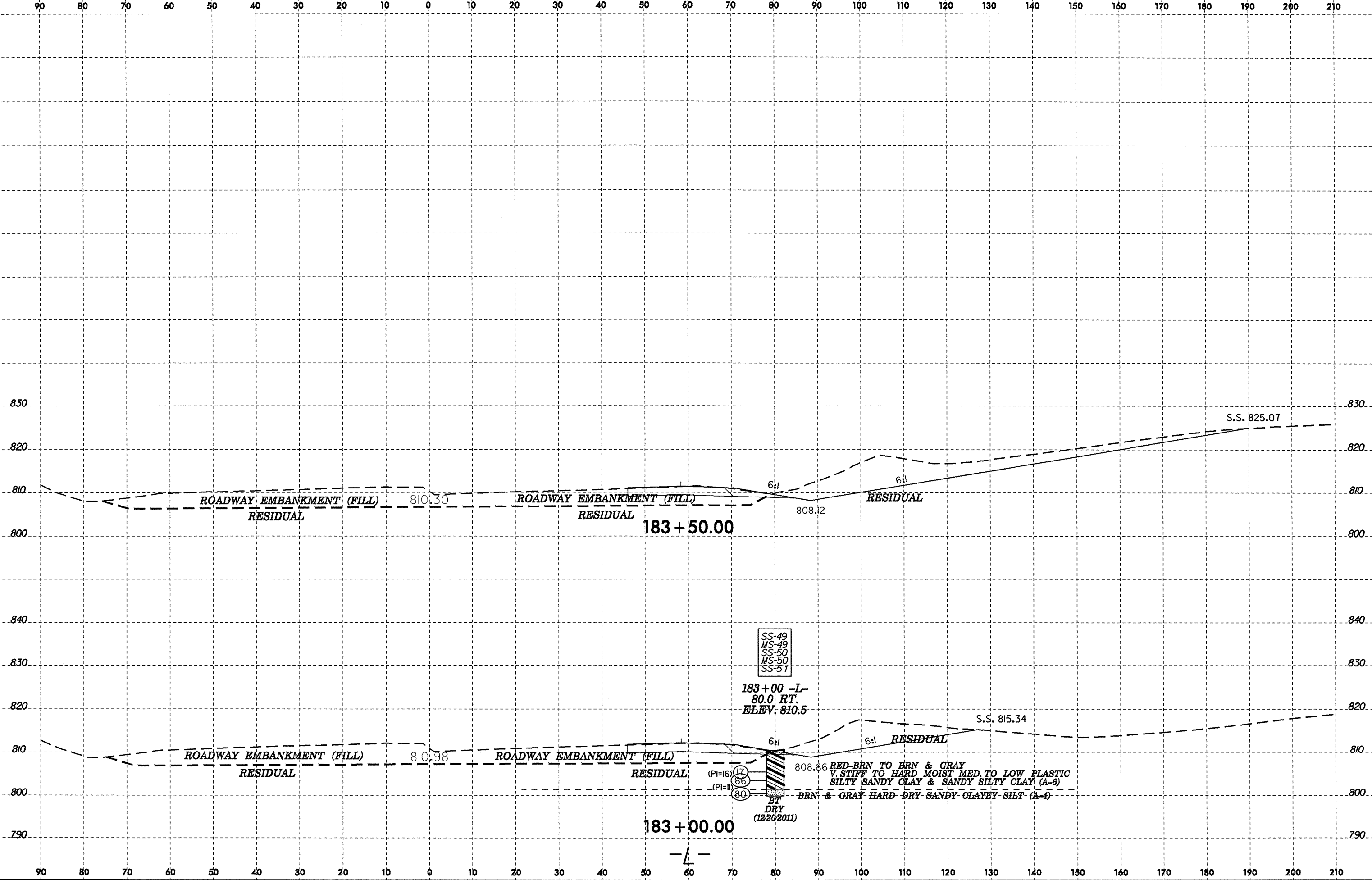
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8/23/99
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GASTONREY



8/23/99
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cburns



ROADWAY EMBANKMENT (FILL)
RESIDUAL

ROADWAY EMBANKMENT (FILL)
RESIDUAL

183+50.00

SS-49
MS-49
SS-50
MS-50
SS-51

183+00 -L-
80.0 RT.
BLEV: 810.5

ROADWAY EMBANKMENT (FILL)
RESIDUAL

ROADWAY EMBANKMENT (FILL)
RESIDUAL

183+00.00

(PI=I)
(PI=II)
BT
DRY
(12/20/2011)

RED-BRN TO BRN & GRAY
V. STIFF TO HARD MOIST MED. TO LOW PLASTIC
SILTY SANDY CLAY & SANDY SILTY CLAY (A-6)
BRN & GRAY HARD DRY SANDY CLAYEY SILT (A-4)

808.86
808.12
808.12

S.S. 815.34

6:1
6:1
RESIDUAL

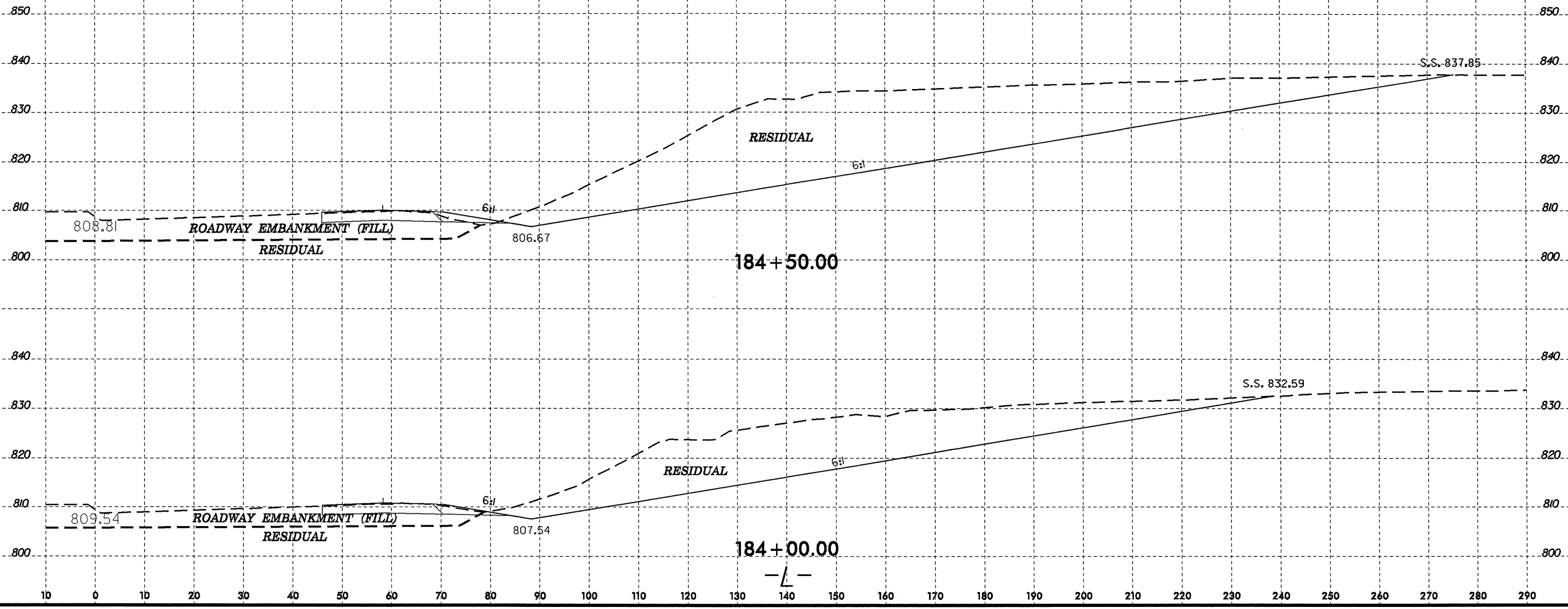
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8/23/99



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| I-4928 | 13 |

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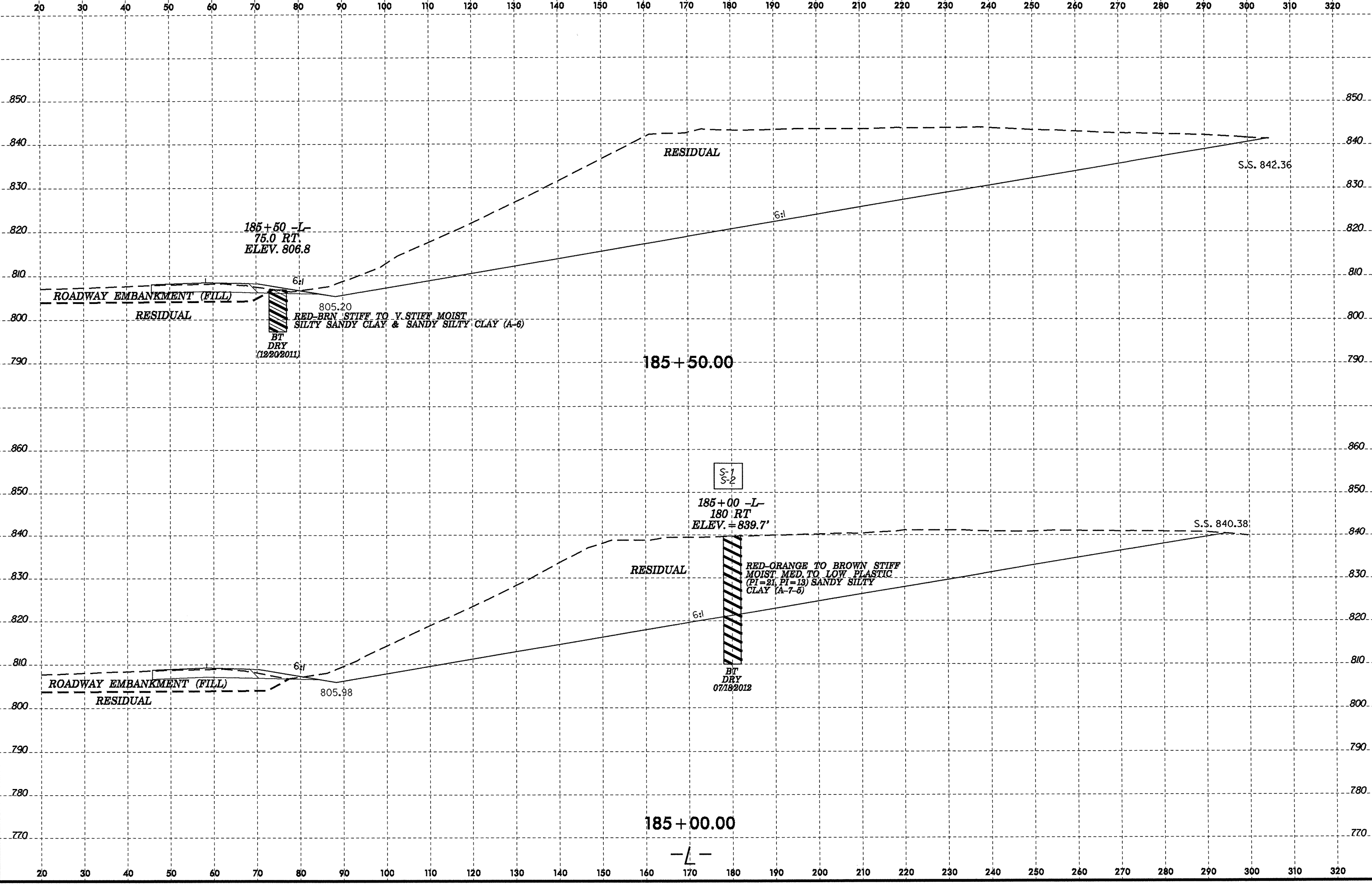


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8/23/99

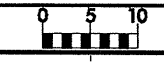


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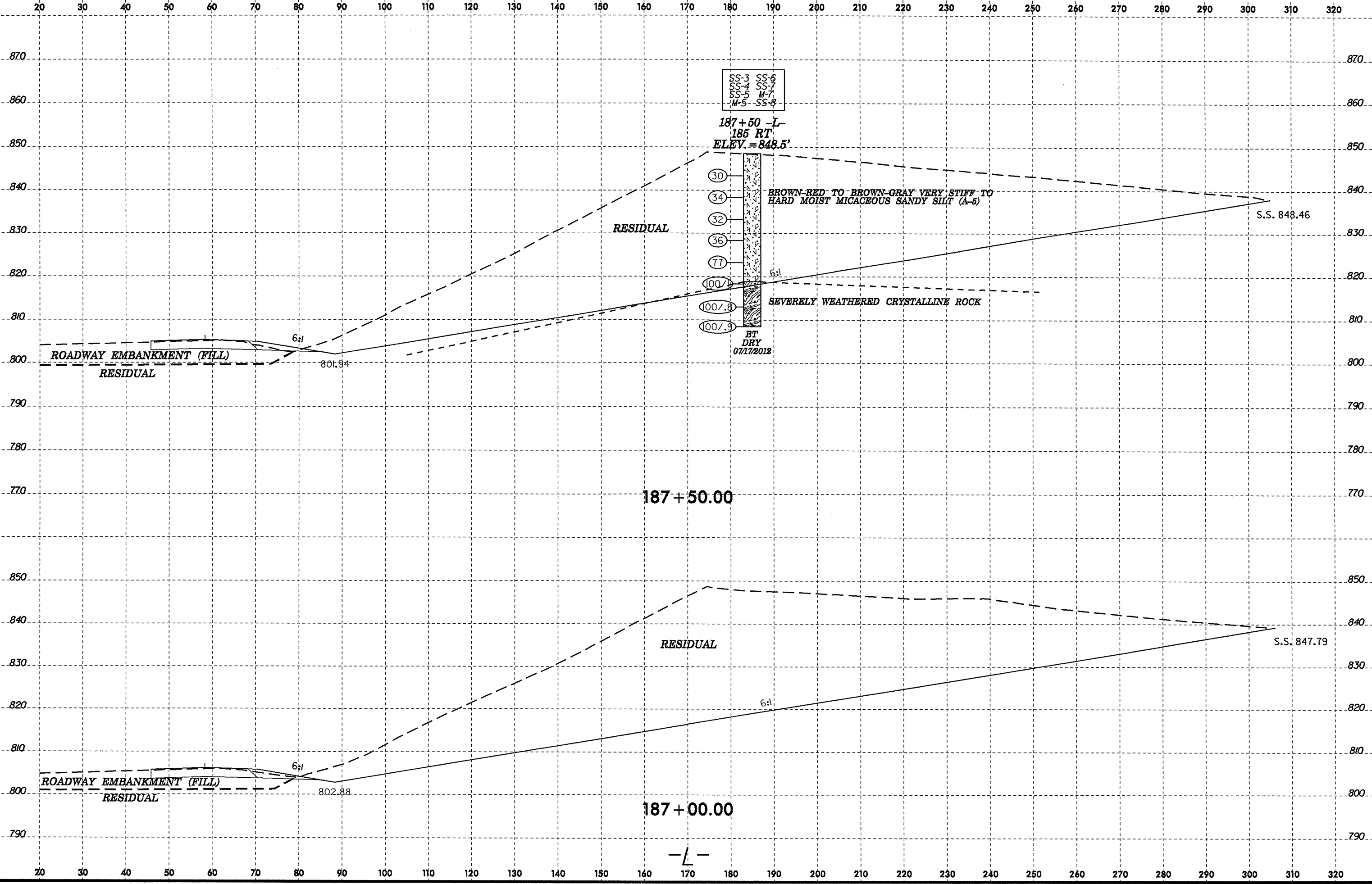


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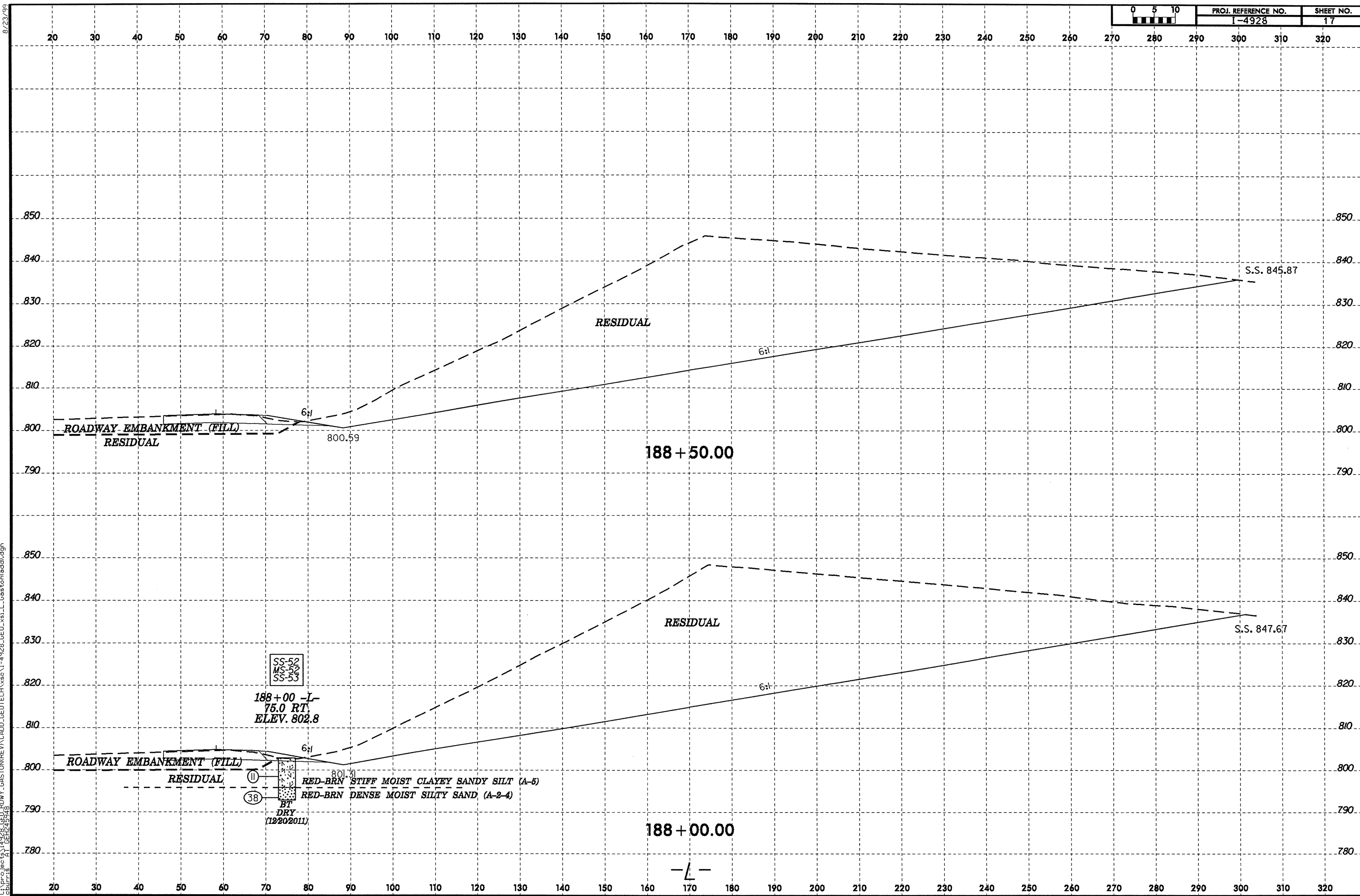
8/23/99



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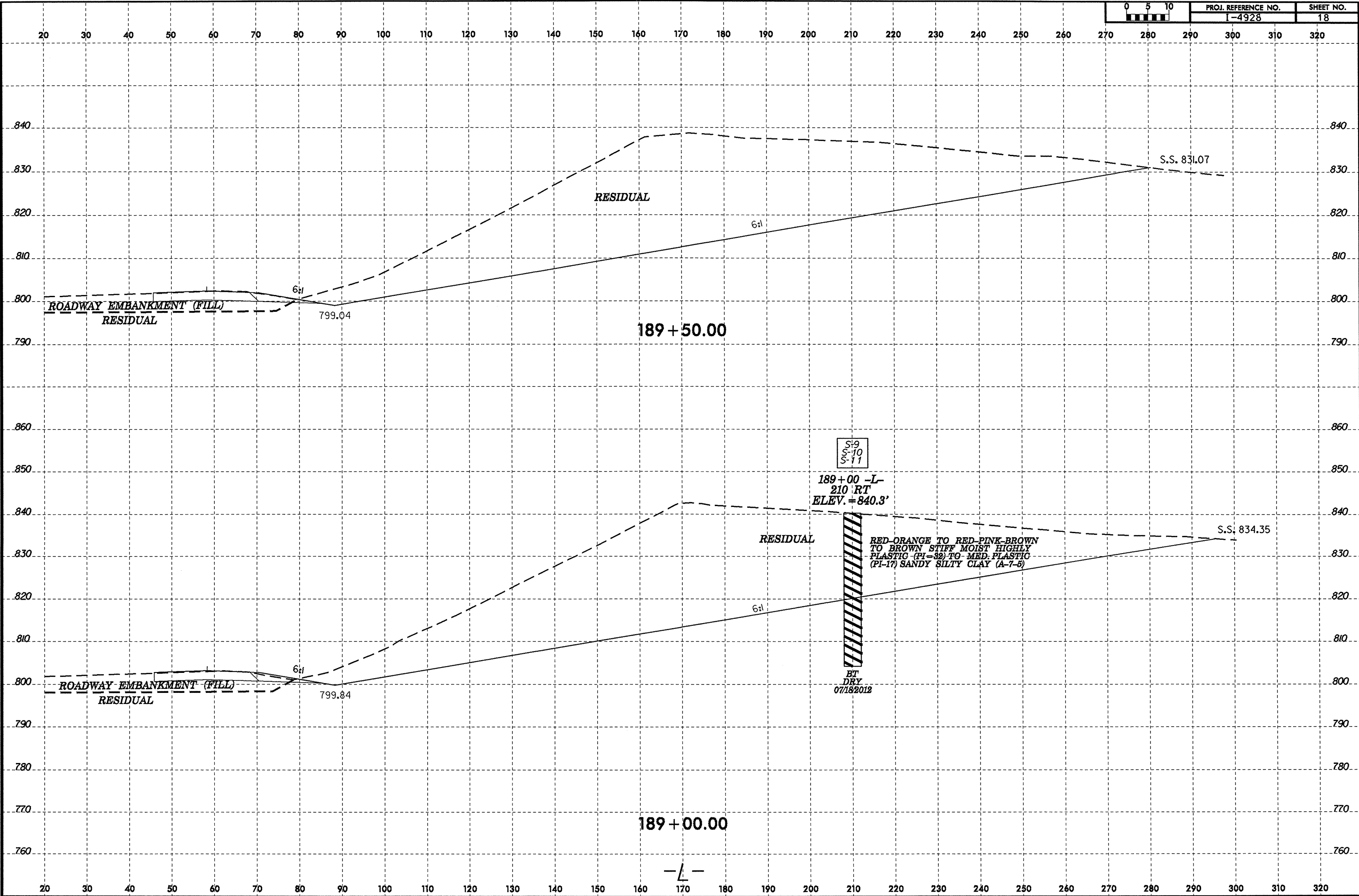


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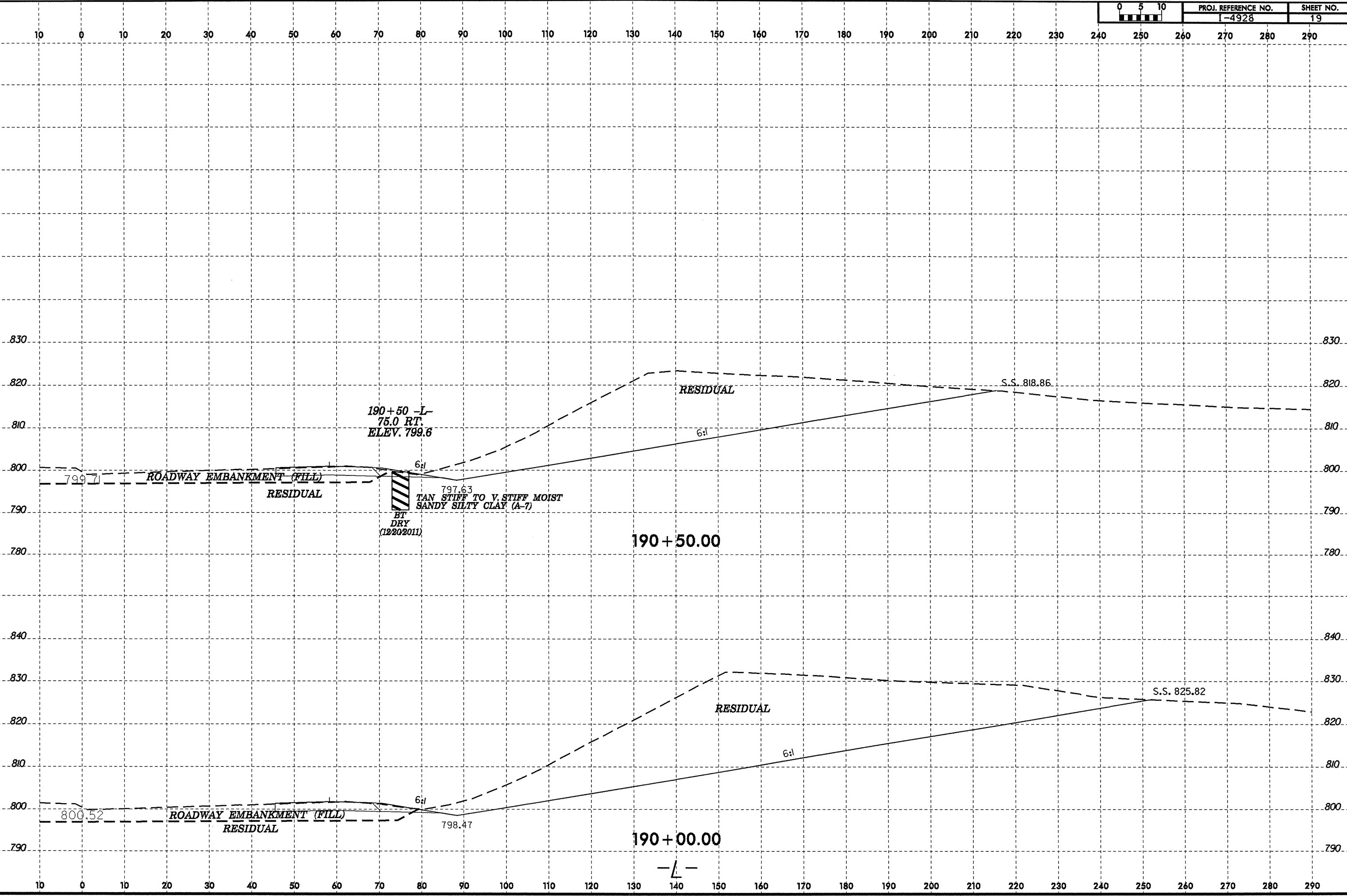
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8/23/99



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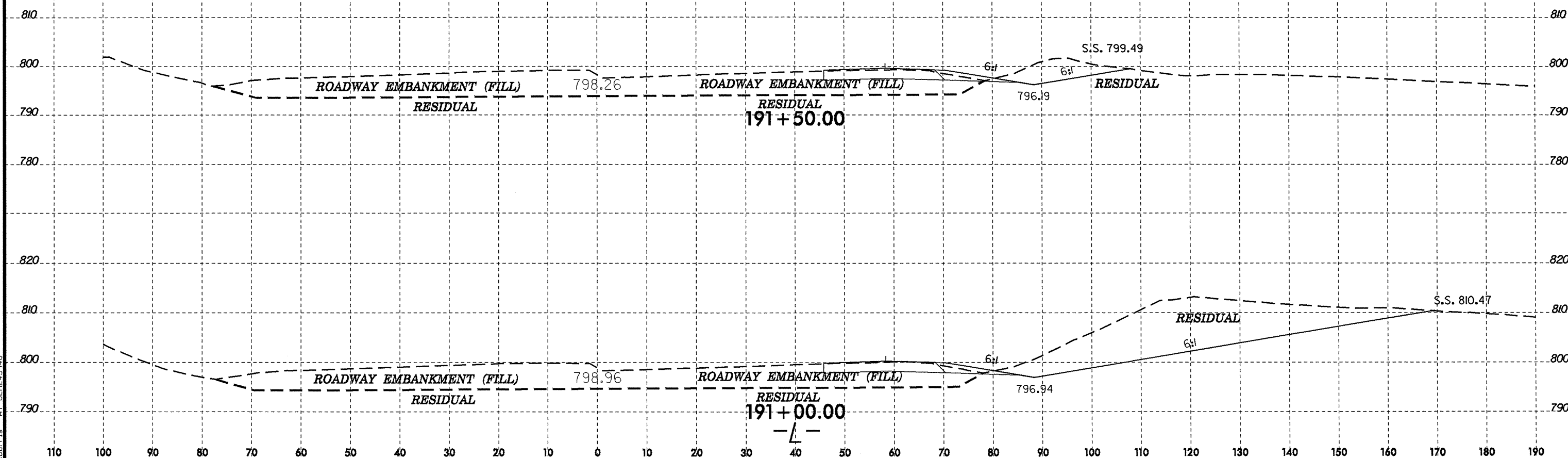
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8/23/99

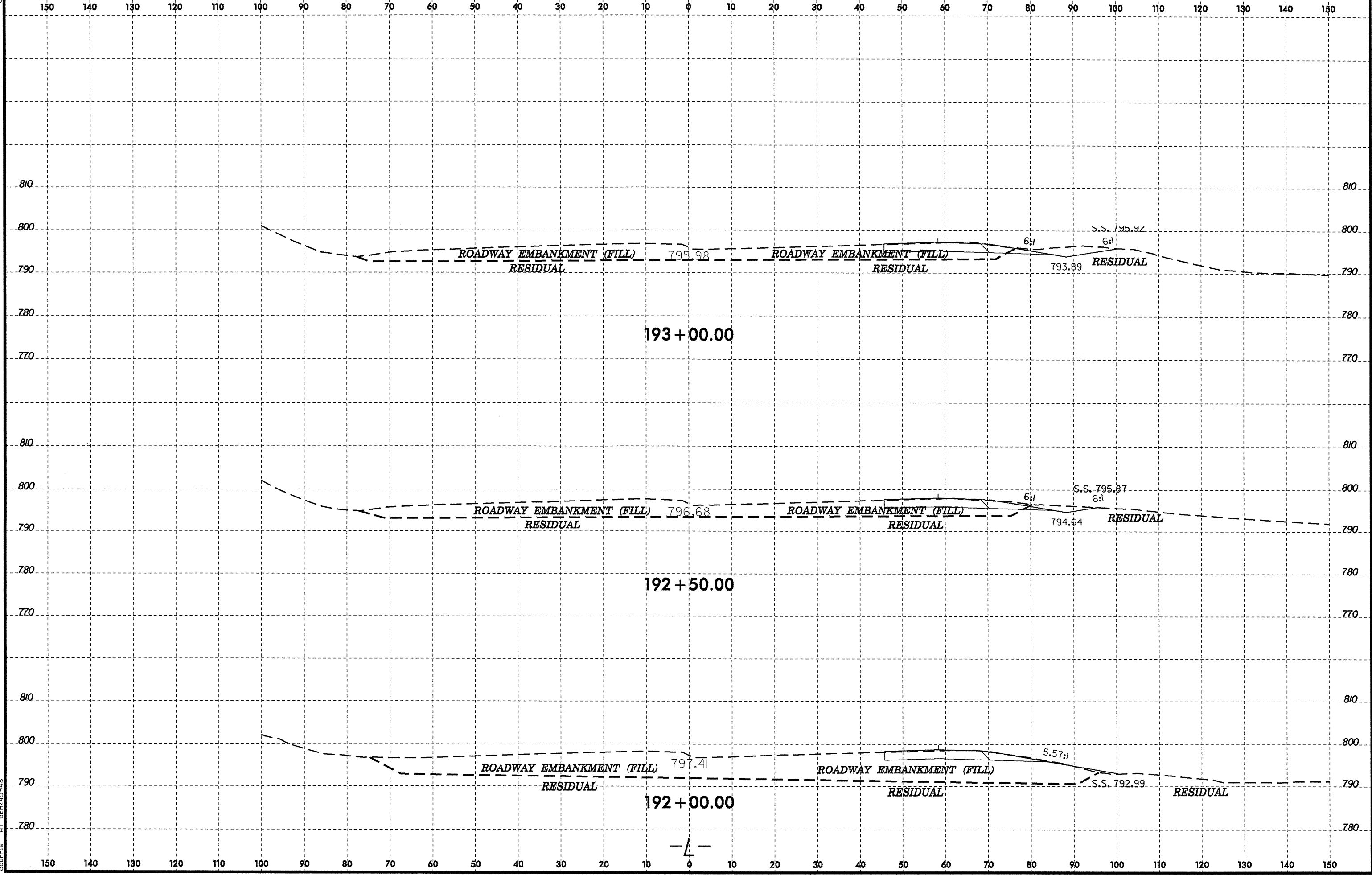
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DATE: 8/23/99



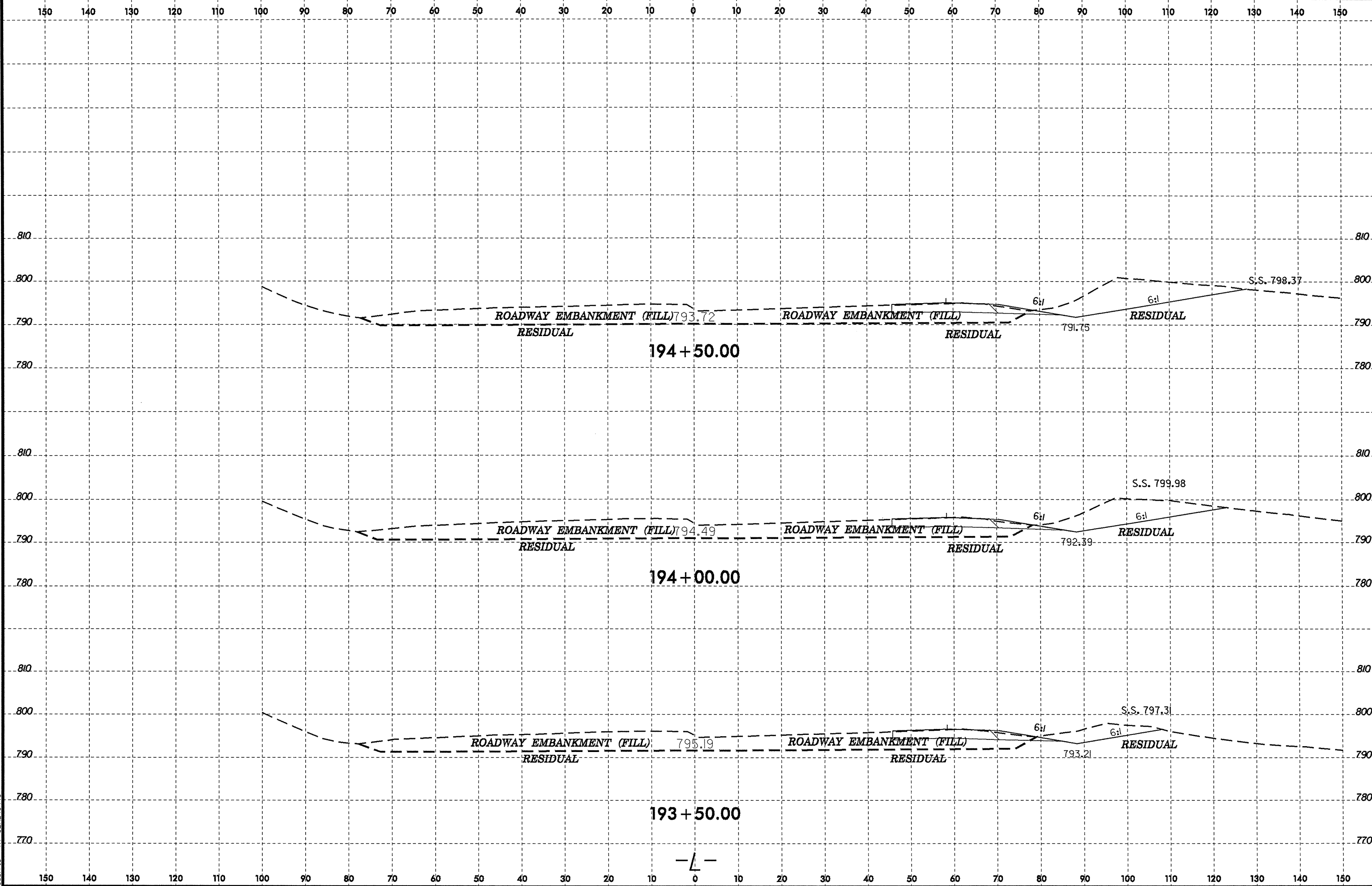
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cburns

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| | -4928 | 21 |



-L-

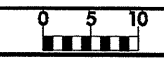
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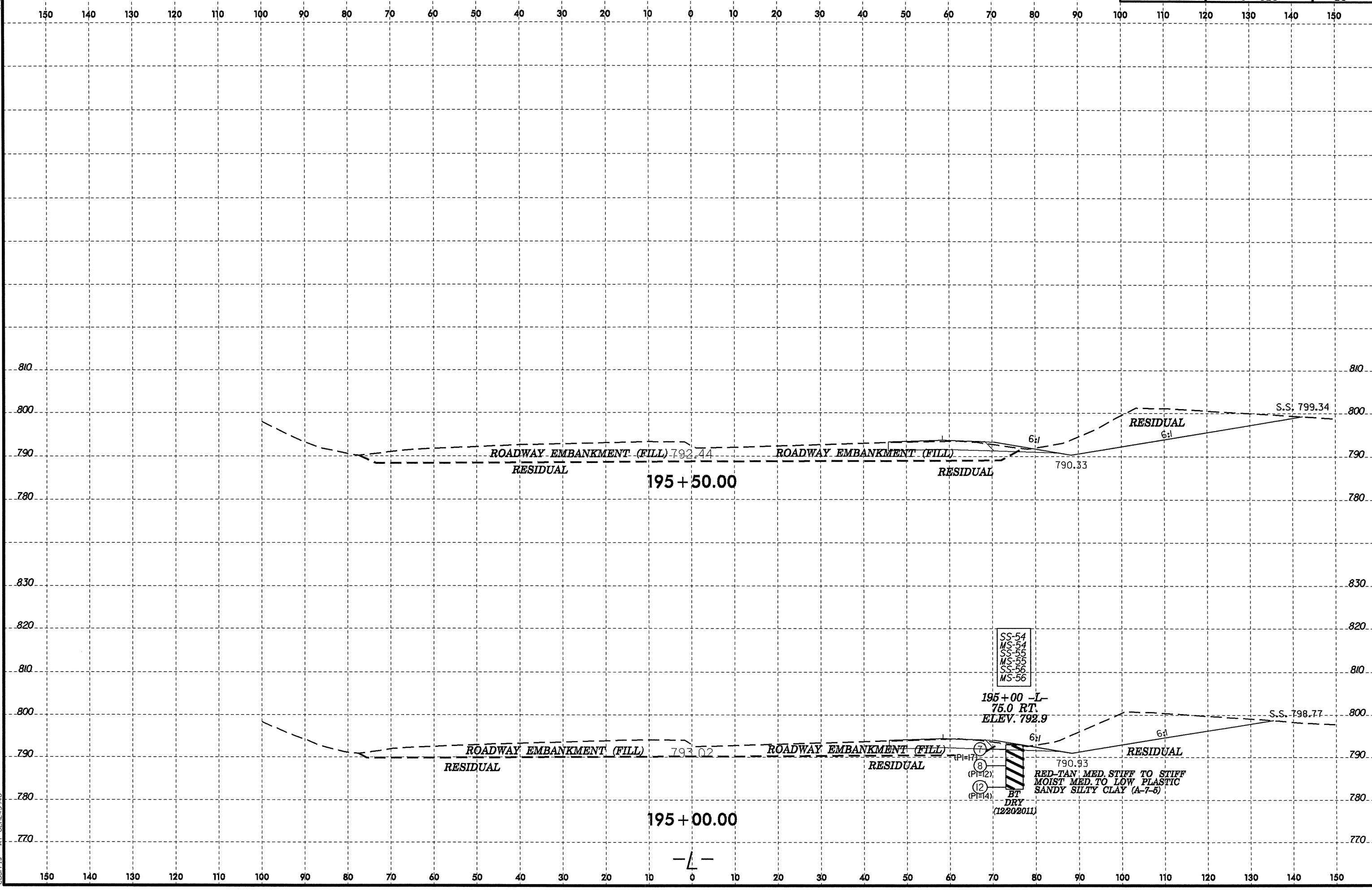
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obirris AT GEH245948

-L-

8/23/99



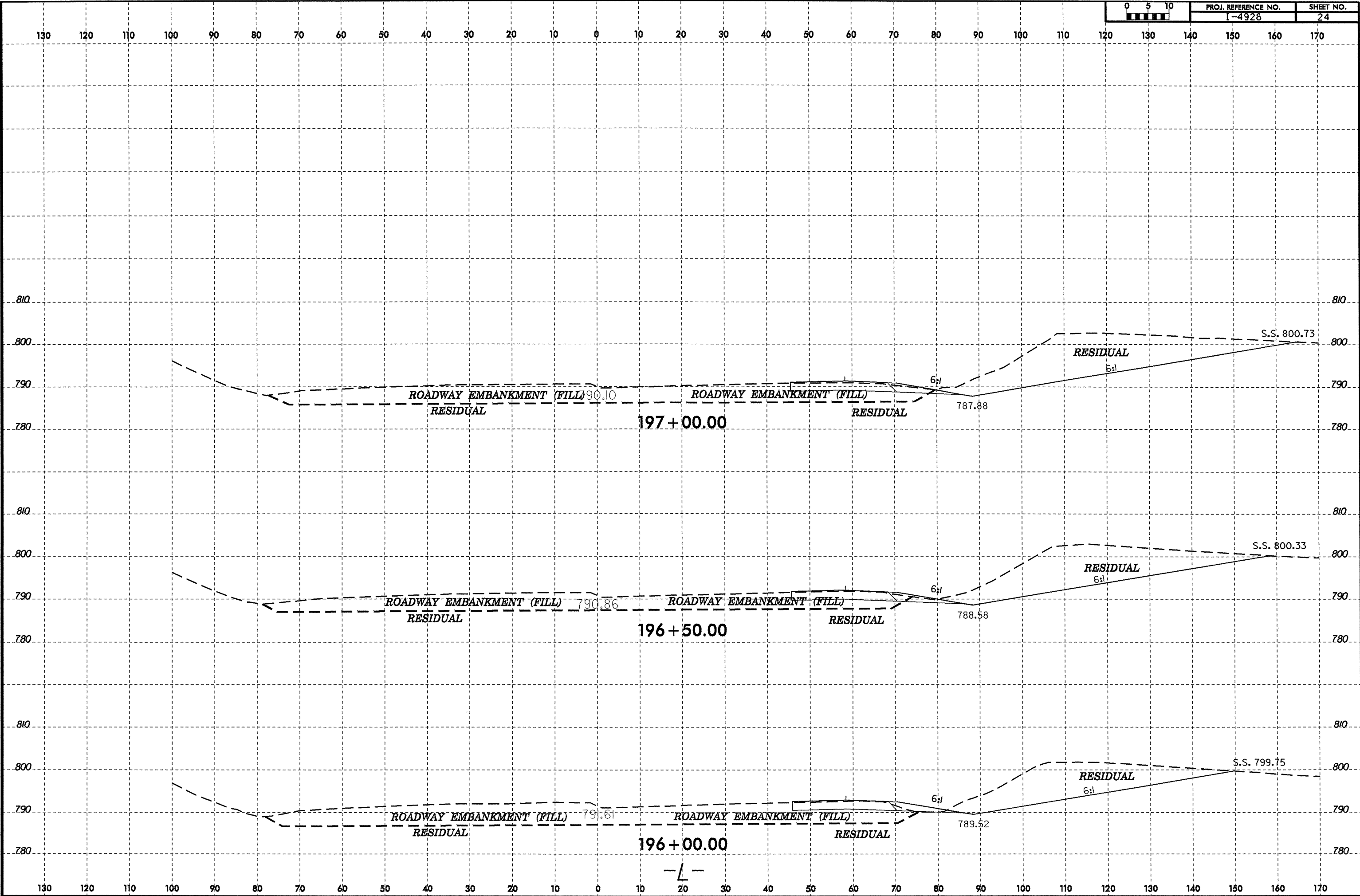
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8/23/99

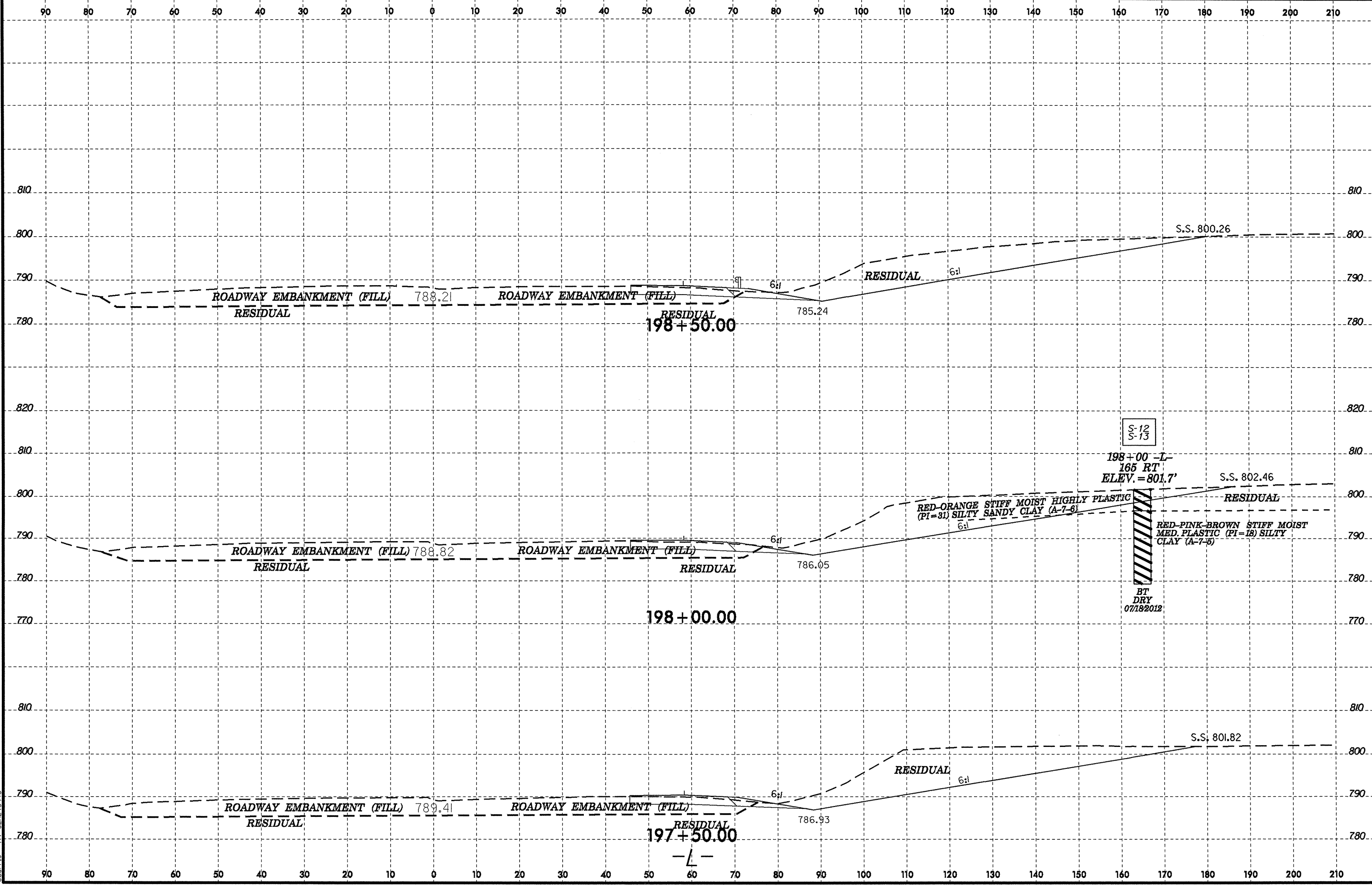
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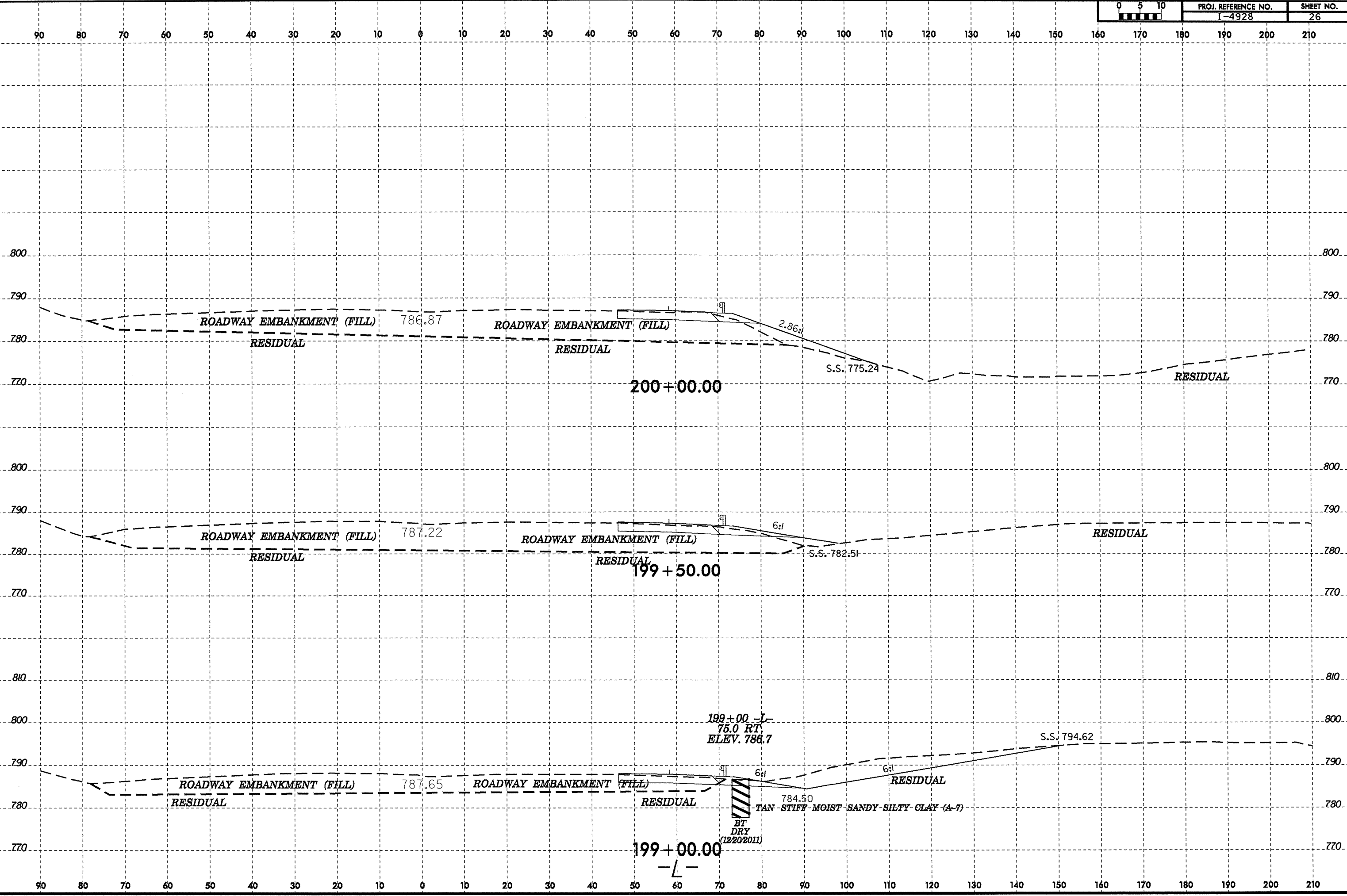
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| SOIL TEST RESULTS | | | | | | | | | | | | | | | | |
|--------------------------|---------|---------|----------------|---------------|------|------|-------------|--------|------|------|--------------------|-----|-----|------------|-----------|-------------------|
| SAMPLE NO. | OFFSET | STATION | DEPTH INTERVAL | AASHTO CLASS. | L.L. | P.I. | % BY WEIGHT | | | | % PASSING (SIEVES) | | | % MOISTURE | % ORGANIC | Line or Boring ID |
| | | | | | | | C.SAND | F.SAND | SILT | CLAY | 10 | 40 | 200 | | | |
| S-1 | 180' RT | 185+00 | 0.0-4.0 | A-7-5(19) | 52 | 21 | 5.4 | 19.9 | 24.6 | 50.2 | 96 | 92 | 81 | - | - | L |
| S-2 | 180' RT | 185+00 | 4.0-29.7 | A-7-5(14) | 52 | 13 | 4.4 | 34.5 | 41.0 | 20.1 | 100 | 97 | 80 | - | - | L |
| SS-3 | 185' RT | 187+50 | 4.6-5.6 | A-5(0) | 42 | NP | 6.2 | 61.0 | 24.8 | 8.0 | 100 | 98 | 57 | - | - | L |
| SS-4 | 185' RT | 187+50 | 9.6-10.6 | A-5(1) | 43 | NP | 5.4 | 56.2 | 30.4 | 8.0 | 100 | 98 | 64 | - | - | L |
| SS-5 | 185' RT | 187+50 | 14.6-15.6 | A-5(2) | 48 | NP | 7.8 | 54.0 | 28.2 | 10.0 | 100 | 96 | 61 | - | - | L |
| SS-6 | 185' RT | 187+50 | 19.6-20.6 | A-5(1) | 43 | 4 | 15.2 | 49.5 | 27.2 | 8.0 | 100 | 91 | 52 | - | - | L |
| SS-7 | 185' RT | 187+50 | 24.6-25.6 | A-5(2) | 44 | 5 | 13.4 | 51.4 | 27.2 | 8.0 | 99 | 91 | 52 | - | - | L |
| SS-8 | 185' RT | 187+50 | 29.6-30.6 | A-4(0) | 37 | NP | 21.1 | 44.3 | 26.6 | 8.0 | 96 | 84 | 45 | - | - | L |
| S-9 | 210' RT | 189+00 | 0.0-5.0 | A-7-5(36) | 70 | 32 | 3.2 | 10.8 | 25.8 | 60.2 | 100 | 98 | 90 | - | - | L |
| S-10 | 210' RT | 189+00 | 5.0-25.0 | A-7-5(21) | 60 | 17 | 1.4 | 18.7 | 45.8 | 34.1 | 100 | 99 | 89 | - | - | L |
| S-11 | 210' RT | 189+00 | 25.0-36.0 | A-7-5(16) | 52 | 17 | 8.4 | 17.5 | 38.0 | 36.1 | 99 | 93 | 79 | - | - | L |
| S-12 | 165 RT | 198+00 | 0.0-5.0 | A-7-6(23) | 57 | 31 | 10.0 | 15.4 | 24.4 | 50.2 | 90 | 84 | 72 | - | - | L |
| S-13 | 165 RT | 198+00 | 5.0-22.4 | A-7-5(23) | 54 | 18 | 0.4 | 8.0 | 51.5 | 40.1 | 100 | 100 | 97 | - | - | L |
| SS-14 | 135' RT | 179+00 | 4.6-5.5 | A-4(5) | 35 | 7 | 8.0 | 28.7 | 47.2 | 16.0 | 98 | 94 | 73 | - | - | L |
| SS-15 | 135' RT | 179+00 | 14.1-14.9 | A-4(5) | 38 | 7 | 14.2 | 24.7 | 47.0 | 14.0 | 96 | 88 | 67 | - | - | L |
| SS-16 | 135' RT | 179+00 | 24.1-24.8 | A-4(1) | 34 | 3 | 23.9 | 26.9 | 41.2 | 8.0 | 96 | 81 | 55 | - | - | L |
| M-5 | 185' RT | 187+50 | 14.6-15.6 | | | | | | | | | | | 16.7 | - | L |
| M-7 | 185' RT | 187+50 | 24.6-25.6 | | | | | | | | | | | 11.2 | - | L |
| M-15 | 135' RT | 179+00 | 14.1-14.9 | | | | | | | | | | | 8.4 | - | L |
| M-16 | 135' RT | 179+00 | 24.1-24.8 | | | | | | | | | | | 9.2 | - | L |