

SEE SHEET 3 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.	U-4751	1	299

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

PERSONNEL

NCDOT:

J. LEE STONE

THEA WRIKE

JARED CRENSHAW

CATLIN:

COREY FUTRAL

SHAWN MCGUIRE

INVESTIGATED BY J.L. STONE P.G.

DRAWN BY DAVID MCPHERSON

CHECKED BY DEAN ARGENBRIGHT, LG

SUBMITTED BY DEAN ARGENBRIGHT, LG

DATE DECEMBER 2016

ROADWAY
SUBSURFACE INVESTIGATION

COUNTY NEW HANOVER
PROJECT DESCRIPTION SR 1409 (MILITARY CUTOFF RD)
TO US 17 IN WILMINGTON

INVENTORY

CONTENTS

LINE	STATION	SECTION 1 PLAN	SECTION 1 PROFILE	SECTION 2 CROSS SECTIONS
-L-	10+35 to 229+80	4-20	35-50	91-200
-Y-	10+95 to 31+93	5, 25-26	51-52	-
-Y1-	14+20 to 84+97	24-25, 6, 28-29	53-58	-
-Y1LPB-	10+00 to 24+40	6	59	-
-Y1RPA-	10+00 to 21+89	6-7	60	-
-Y1RPB-	10+00 to 32+12	6-7	61	201-202
-Y1RPD-	10+00 to 35+66	5, 27, 6	62	203-211
-Y3-	12+08 to 16+50	10	63	-
-Y4-	11+70 to 18+42	12	64	212-215
-Y5-	12+80 to 17+00	13	65	216-218
-Y6-	10+00 to 13+40	14	66	219-220
-Y8-	31+20 to 121+98	20-22, 31-34	67-73	221-227
-Y8LPB-	10+00 to 25+07	20	74	228-237
-Y8RPB-	29+50 to 33+03	20-21	75	238-240
-Y8RPC-	10+00 to 34+66	19-21	76	240
-Y8RPCA-	48+03 to 68+92	33, 21	77-78	241-249
-Y8RPD-	10+00 to 30+18	20, 22, 34	79	250-258
-Y8RPDB-	10+00 to 69+87	19-21, 33	80-84	259-284
-Y10-	10+00 to 12+50	28	66	-
-Y12-	10+00 to 12+55	11	66	285
-Y13-	11+50 to 25+95	29-30	85	-
-Y14-	10+00 to 12+22	30	86	-
-Y15-	10+00 to 12+50	30	86	-
-Y16-	10+00 to 13+10	6	86	-
-Y17-	10+42 to 17+10	6	86	-
-Y18-	12+25 to 12+85	18	87	-
-Y18-	17+81 to 19+33	18	87	-
-Y20-	10+00 to 11+50	4	87	-
-Y24-	10+55 to 16+73	6	87	-
-SRI-	10+39 to 19+47	6	88	-
-SR4-	10+00 to 34+59	17-18	89-90	286-299

REFERENCE: U-4751

PROJECT: 40191



DocuSigned by:

Joseph L. Stone

3/10/2017

SIGNATURE

DATE

SIGNATURE

DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

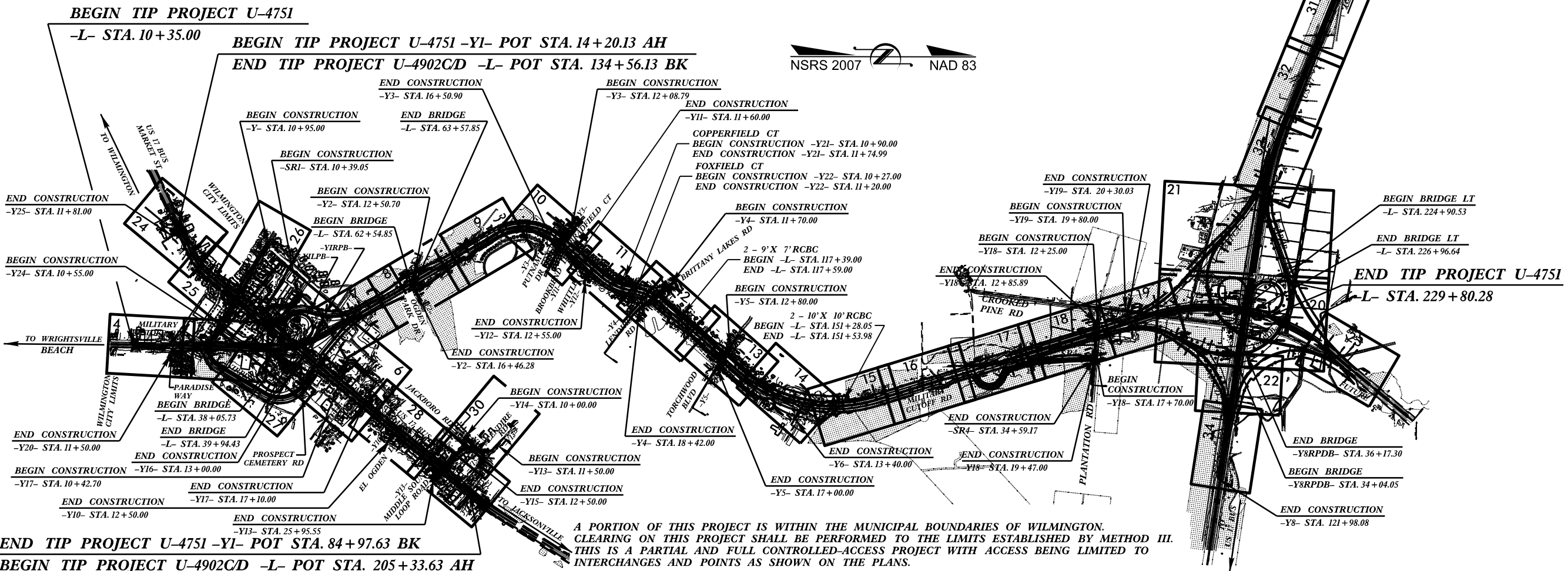
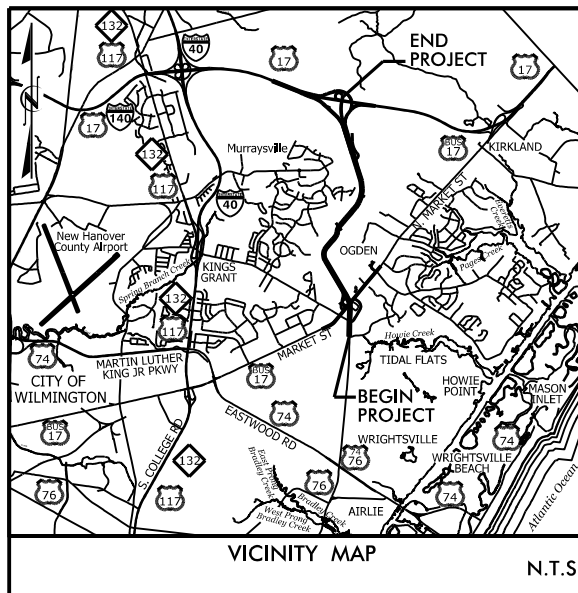
TIP PROJECT: U-4751

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NEW HANOVER COUNTY

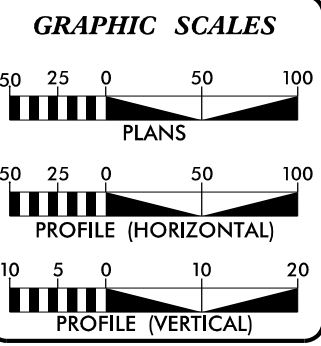
LOCATION: SR 1409 (MILITARY CUTOFF ROAD) TO US 17 IN WILMINGTON
TYPE OF WORK: GRADING, PAVING, DRAINAGE, RETAINING WALLS,
SIGNALS, STRUCTURES & CULVERTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4751	3	299
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40191.1.2		PE	
40191.2.1		RW	



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF WILMINGTON. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III. THIS IS A PARTIAL AND FULL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES AND POINTS AS SHOWN ON THE PLANS.

CONTRACT:



DESIGN DATA

ADT 2017 =	23,900
ADT 2037 =	49,100
K =	12%
D =	60%
T =	7%*
V =	50 MPH
* (TTST = 3% + DUAL 4%)	
FUNC CLASS =	ARTERIAL/FREEWAY
STATEWIDE TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-4751 =	5.394 MILES
LENGTH STRUCTURE TIP PROJECT U-4751 =	0.103 MILES
TOTAL LENGTH OF TIP PROJECT U-4751 =	5.497 MILES

PLANS PREPARED FOR THE NCDOT BY:

STV 100 Years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

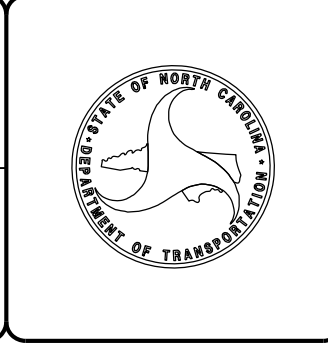
2012 STANDARD SPECIFICATIONS	JOHN N. JOHNSON, PE PROJECT ENGINEER
RIGHT OF WAY DATE: APRIL 17, 2015	SEAN C. STEPHENS, EI PROJECT DESIGNER
LETTING DATE: OCTOBER 17, 2017	GARY LOVERING, PE PROJECT ENGINEER NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.



WBS PROJECT: 40191.1.2
 TIP NUMBER: U-4751
 F.A. PROJECT: HPNHS-1409(7)
 COUNTY: NEW HANOVER

DESCRIPTION: SR 1409 (Military Cutoff Rd) to US 17 in Wilmington

SUBJECT: Geotechnical Inventory Report

PROJECT DESCRIPTION

The proposed project is located in New Hanover County immediately north of the city of Wilmington. The proposed roadway and bridges will extend Military Cutoff Road from Market Street to the US 17 Wilmington Bypass.

A geotechnical field investigation was conducted by NCDOT personnel with the assistance of CATLIN Engineers and Scientists (CATLIN) and Mid-Atlantic Drilling (MAD) personnel from May 2014 through July 2015. Standard penetration test borings were advanced using hollow-stem augers in addition to mud rotary drilling techniques under the direct supervision of a North Carolina Licensed Well Contractor with a Central Mine Equipment (CME) 550 or a CME 45 drilling rig equipped with an automatic hammer. Standard penetration testing was conducted in general accordance with American Society for Testing and Materials (ASTM) D-1586-84, "Penetration Test and Split Barrel Sampling of Soils" or American Association of State Highway and Transportation Officials (AASHTO) Standard Method T206-81. Cone Penetrometer Test (CPT) borings in addition to hand-augered borings were advanced across the entire project site to augment the SPT data. Cone Penetrometer Test borings were advanced with a track mounted Hogentogler pushing system. A total of approximately 577 borings totaling roughly 6,270 vertical feet were advanced during this investigation.

Representative soil samples were collected for visual classification in the field and selected samples were submitted for laboratory analysis by NCDOT Materials and Tests Unit Soils Laboratory located in Raleigh, North Carolina. Samples were prepared and analyzed in accordance with one or more of the following AASHTO Standards as modified by NCDOT:

- T 87-86(Dry Preparation of Disturbed Soil)
- T 88-93(Particle Size Analysis)
- T 89-94(Liquid Limit)
- T 90-94(Plastic Limit)
- T 265-93 (Soil Moisture Content)
- T 267 (Organic Content)

Proposed SPT and hand-auger drilling locations as well as drilled locations were determined in the field by NCDOT personnel. CATLIN and MAD personnel used Global Positioning System (GPS) technology to locate CPT borings and some SPT borings. All horizontal locations were recorded to the nearest foot and are presented in the North Carolina State Plane (NCSP), North American Datum 1983 (NAD 83). Vertical control was measured to the nearest 0.1 foot and referenced to the National Geodetic Vertical Datum 1988 (NGVD88). All measurements were recorded and reported in United States Survey Feet (US Ft).

The following alignments were investigated. Plan sheets, subsurface profiles, and selected cross sections of the alignment are included in this report.

<u>Line</u>	<u>Station (±)</u>
-L-	10+35 to 229+80
-Y-	10+95 to 31+93
-Y1-	14+20 to 84+97
-Y1LPB-	10+00 to 24+40
-Y1RPA-	10+00 to 21+89
-Y1RPB-	10+00 to 32+12
-Y1RPD-	10+00 to 35+66
-Y3-	12+08 to 16+50
-Y4-	11+70 to 18+42
-Y5-	12+80 to 17+00
-Y6-	10+00 to 13+40
-Y8-	31+20 to 121+98
-Y8LPB-	10+00 to 25+07
-Y8RPB-	29+50 to 33+03
-Y8RPC-	10+00 to 34+66
-Y8RPCA-	48+03 to 68+92
-Y8RPD-	10+00 to 30+18
-Y8RPDB-	10+00 to 69+87
-Y10-	10+00 to 12+50
-Y12-	10+00 to 12+55
-Y13-	11+50 to 25+95
-Y14-	10+00 to 12+22
-Y15-	10+00 to 12+50
-Y16-	10+00 to 13+10
-Y17-	10+42 to 17+10
-Y18-	12+25 to 12+85
-Y18-	17+70 to 19+47
-Y20-	10+00 to 11+50
-Y24-	10+55 to 16+73
-SR1-	10+39 to 19+47
-SR4-	10+00 to 34+59

The project reportedly will consist of 5.497 miles of roadway and bridges.

AREAS OF SPECIAL GEOTECHNICAL INTEREST

- 1) **GROUNDWATER:** As a large portion of this project is located within identified wetlands with relatively low topography, seasonal high groundwater, or the potential for groundwater related construction problems may exist. Groundwater within six (6) feet of natural ground was noted at the following sections:

<u>Line</u>	<u>Station (±)</u>
-L-	35+00 to 229+80
-Y-	22+00 to 25+00
-Y1-	29+00 to 31+00
-Y1-	35+00 to 45+00
-Y1-	77+00 to 84+97
-Y1LPB-	10+00 to 13+00
-Y1LPB-	29+00 to 32+12
-Y1RPB-	10+00 to 25+00
-Y1RPD-	10+00 to 15+50
-Y1RPD-	19+00 to 21+00
-Y1RPD-	23+00 to 27+00
-Y1RPD-	33+00 to 35+66
-Y4-	15+00 to 18+42
-Y5-	12+80 to 17+00
-Y6-	10+00 to 13+40
-Y8-	31+20 to 121+98
-Y8LPB-	10+00 to 25+07
-Y8RPB-	29+50 to 33+03
-Y8RPC-	10+00 to 34+66
-Y8RPCA-	48+03 to 68+92
-Y8RPD-	10+00 to 30+18
-Y8RPDB-	10+00 to 69+87
-Y12-	10+00 to 12+55
-Y13-	11+50 to 25+95
-Y14-	10+00 to 12+22
-Y17-	11+00 to 14+50
-Y18-	12+25 to 12+85
-Y18-	17+81 to 19+33
-Y24-	13+50 to 15+40
-SR4-	10+00 to 34+59

Standing water was noted in the majority of drainage ditches along and intersecting the -L- line from approximate station 49+00 to the end of the project.

Ponds with depths of up to 12 feet were noted along the following sections:

<u>Line</u>	<u>Station (±)</u>	<u>Offset (±)</u>
-L-	112+57 to 116+33	40ft RT
-L-	120+53 to 121+18	85ft RT
-L-	121+60 to 126+20	90ft RT
-L-	126+40 to 127+55	90ft RT
-L-	128+50 to 145+00	20ft RT to 120ft RT

The ponds are retention ponds associated with the drainage system of the heavily developed area through which this project traverses.

- 2) **COHESIVE SOILS:** Clay soils which may have the potential to cause embankment/subgrade and or slope stability problems during construction was encountered within portions of this project at the following sections:

<u>Line</u>	<u>Station (±)</u>
-L-	63+25 to 64+74
-L-	113+00 to 117+90
-L-	131+10 to 133+90
-L-	138+34 to 145+90
-L-	208+90 to 211+00
-L-	219+00 to 231+00
-Y6-	10+00 to 13+40
-Y8LPB-	10+00 to 19+90
-Y8RPC-	24+15 to 29+90
-Y8RPD-	12+18 to 22+88
-Y8RPDB-	25+10 to 44+90

- 3) **ORGANIC SOILS:** Organic material that may cause construction related issues was identified at the following sections on the project:

<u>Line</u>	<u>Station ±</u>
-L-	23+12 to 28+58
-L-	49+10 to 135+15
-L-	135+67 to 146+53
-L-	148+45 to 219+47
-L-	220+80 to 229+80
-Y1RPA-	10+00 to 12+13
-Y1RPB-	10+00 to 18+59
-Y1RPD-	10+69 to 29+52
-Y3-	12+08 to 16+50
-Y4-	11+70 to 18+42
-Y5-	12+80 to 17+00
-Y6-	10+00 to 13+40
-Y8-	40+39 to 79+52
-Y8-	85+84 to 106+91
-Y8LPB-	10+00 to 25+07
-Y8RPB-	29+50 to 33+03
-Y8RPC-	10+00 34+66
-Y8RPCA-	48+03 to 68+92
-Y8RPD-	10+00 to 28+28
-Y8RPDB-	10+00 to 69+87
-Y12-	10+00 to 12+55
-Y18-	17+81 to 19+47
-SR4-	10+00 to 34+59

Material within the identified organic soil areas was characterized into two predominant types which consisted of very loose to loose, brown to black sand with trace to moderate organics and very soft/very loose, muck and very soft/loose to medium stiff/medium dense, sandy silt to silty sand with trace to moderate organics.

A total of 43 samples were submitted for organic analysis. Laboratory analysis of select soils revealed reported organic concentrations ranging from 0.4% to 74.6% with an average of 9.3%. The highest reported organic concentrations were as follows:

<u>Line</u>	<u>Station / Offset</u>	<u>Sample Depth</u>	<u>Percent Organic</u>
-L-	114+00 / 35ft RT	3.7-5.2 ft.	63.5%
-L-	120+00 / 40ft RT	0.0-4.5 ft.	74.6%

- 4) WATER WELLS: No water wells were identified within the proposed construction limits. Potable water is supplied to residences in the vicinity by a public water supply. Well buffers were noted for two municipal production wells that are located immediately adjacent to the project corridor at the following locations:

<u>Line</u>	<u>Station (+)</u>	<u>Offset (+)</u>
-L-	139+12	210ft RT
-L-	139+42	215ft RT

Water supply wells may be present along the project corridors that were not detected.

PHYSIOGRAPHY AND GEOLOGY

The project is located within the eastern most portion of the North Carolina Coastal Plain physiographic province. Geology in the vicinity of Wilmington is dominated by Undivided Coastal Plain (U.C.P.) materials which are noted as Quaternary Surficial Deposits on the Geologic Map of North Carolina. Coastal Plain materials are described as sand, clay, gravel, and peat deposits which were deposited in marine, fluvial, eonian, and lacustrine environments. Sediments of the Castle Hayne and Peedee Formations are reported to underlay the U.C.P. deposits in the vicinity of Wilmington.

Land use in the area is primarily residential, commercial, and undeveloped wetland and light agriculture. The land surface in the project vicinity is dominated by flat terrain typical of coastal environments with land surface elevations ranging from approximately 25 to 50 feet with elevations increasing to the north. Numerous underground and overhead utilities exist in the vicinity of the proposed project. The project is primarily drained by surficial runoff to stormwater systems and drainage ditches.

GROUNDWATER

Groundwater data was collected from open boreholes, where possible, during the field investigation conducted during May 2014 and August 2015

Measured groundwater elevations (24 hour measurements) ranged from elevation 29.5 feet to 41.4 feet with an average elevation of 38.7 feet. Twenty-four hour depth to groundwater measurements ranged from 0.1 feet to 12.4 feet (below existing land surface), with an average depth to water of 3.8 feet. Formational material in which groundwater was typically observed was found to be predominantly sandy material with an assumed moderate to high permeability.

SOIL PROPERTIES

Soils encountered at the project site include roadway embankment, artificial fill, undivided coastal plain sediments, and Castle Hayne Formation sediments.

Roadway Embankment soils were identified beneath and adjacent to existing roadways and consists of loose to medium dense, sand and silty sand (A-3 and A-2-4).

Artificial fill consisting of muck to very loose to loose sand and silty sand with trace to moderate organic content was encountered adjacent to many of the numerous drainage ditches.

The dominant undivided coastal plain (U.C.P.) material encountered consisted of very loose to dense sand to silty sand (A-3 and A-2-4). The sand was encountered from land surface, or below the organic materials to an approximate elevation of zero to 15 feet.

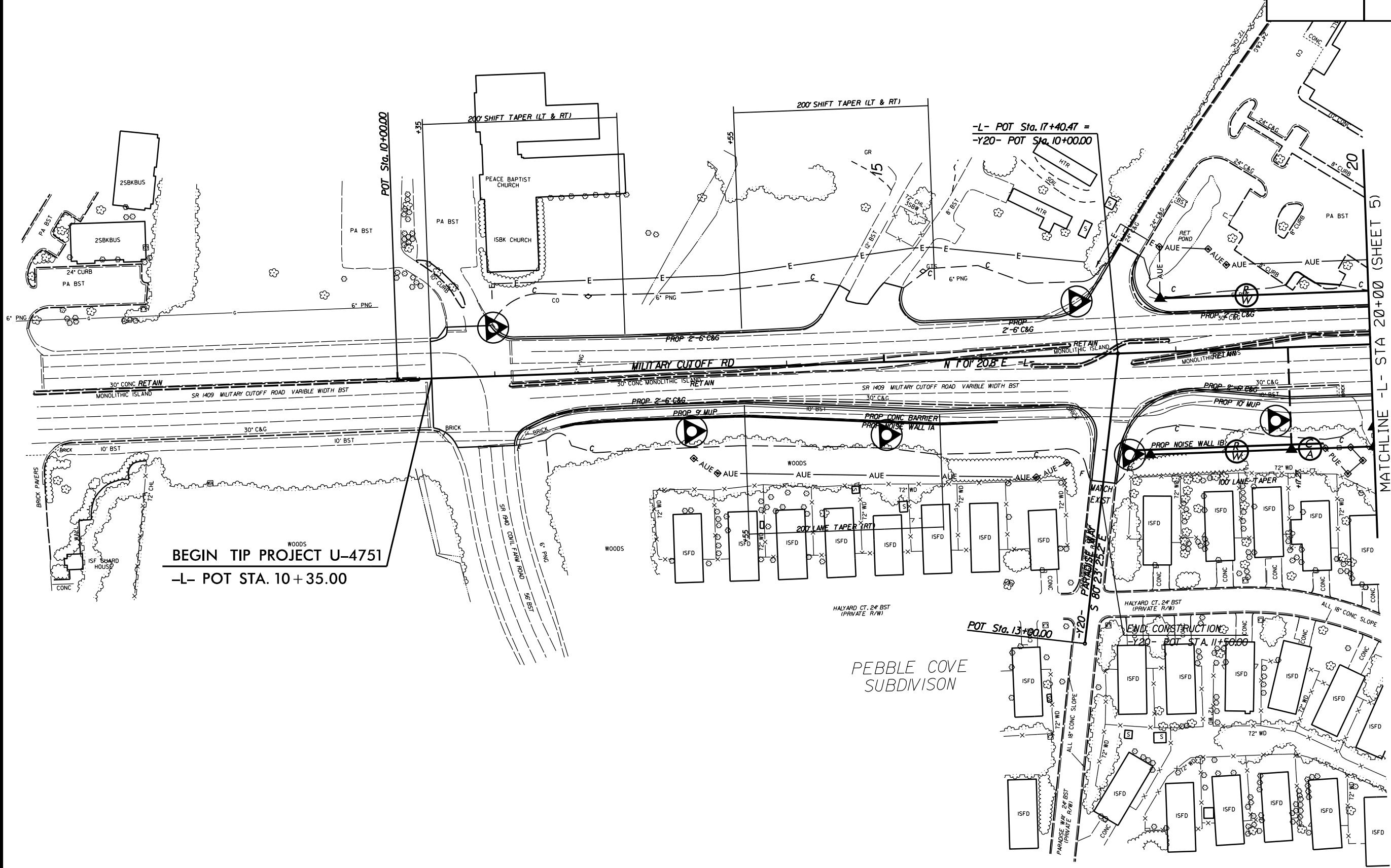
Castle Hayne Formation material consisting of very soft to medium stiff sandy clay, clay, and silts was identified below the U.C.P. sands. The fine material was 10 to 20 feet thick on average and is underlain by soft to hard, sandy limestone.

PROJECT REFERENCE NO.	SHEET NO.
U-4751	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

REVISIONS
 2015-08-12 - R/W REVISION (CEG) - ADDED AVE MONUMENTS ON PARCEL 4 AND CORRECTED STATION OFFSET CALLOUT AT PARCEL 4.

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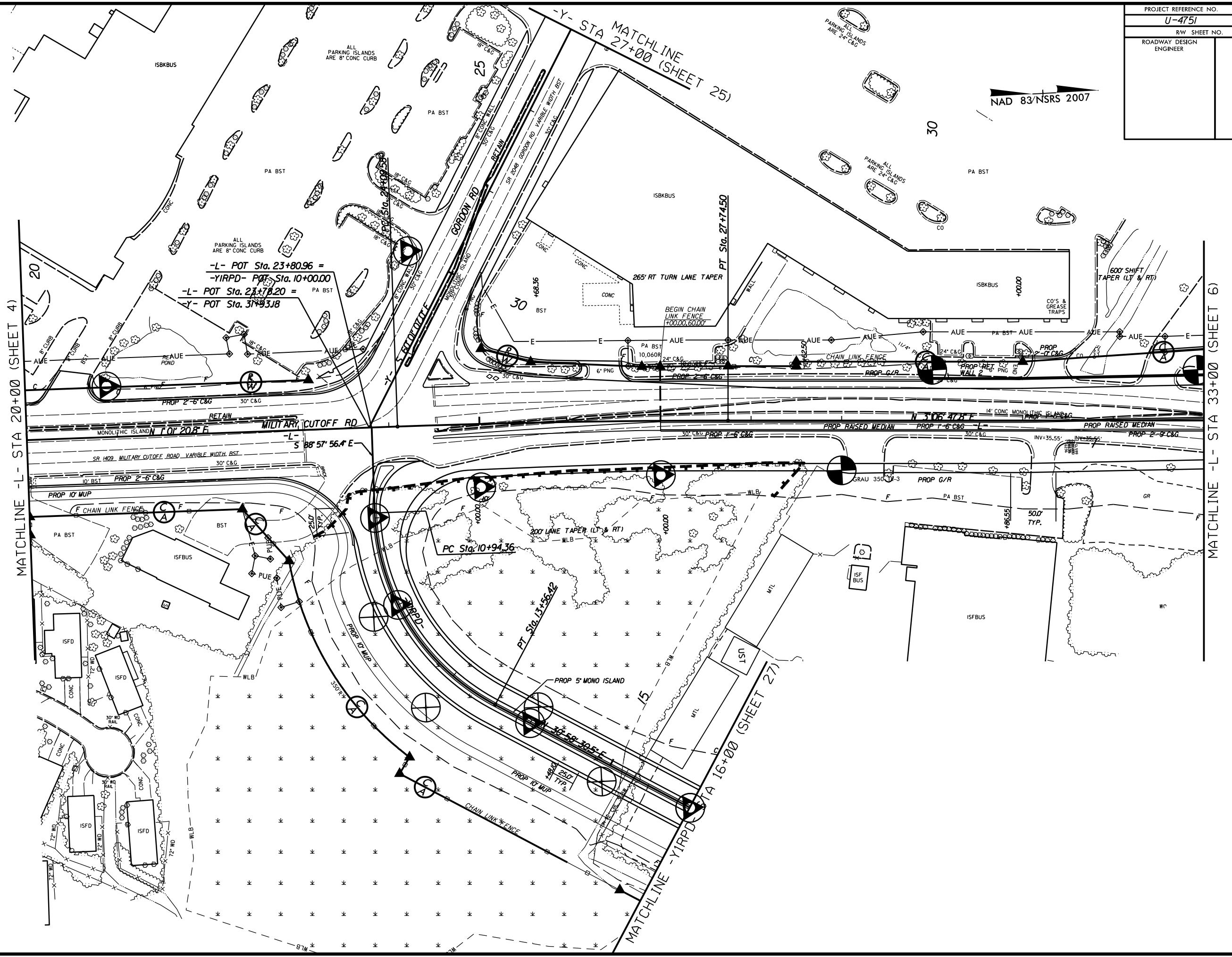
BEGIN TIP PROJECT U-4751
 -L- POT STA. 10+35.00

PEBBLE COVE
SUBDIVISION

MATCHLINE -L- STA 20+00 (SHEET 5)

PROJECT REFERENCE NO.	SHEET NO.
U-4751	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007



-L- POT Sta. 23+80.96 =
 -YIRPD- POT Sta. 10+00.00
 -L- POT Sta. 21+78.20 =
 -Y- POT Sta. 31+93.18

PC Sta. 10+94.36

PT Sta. 13+56.42

PT Sta. 16+00

2015-08-12 - R/W REVISION (CEG) - ADJUSTED MONUMENT AT PARCEL 3, ADDED STATION OFFSET AT PARCEL 10.

REVISIONS

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MATCHLINE -L- STA 20+00 (SHEET 4)

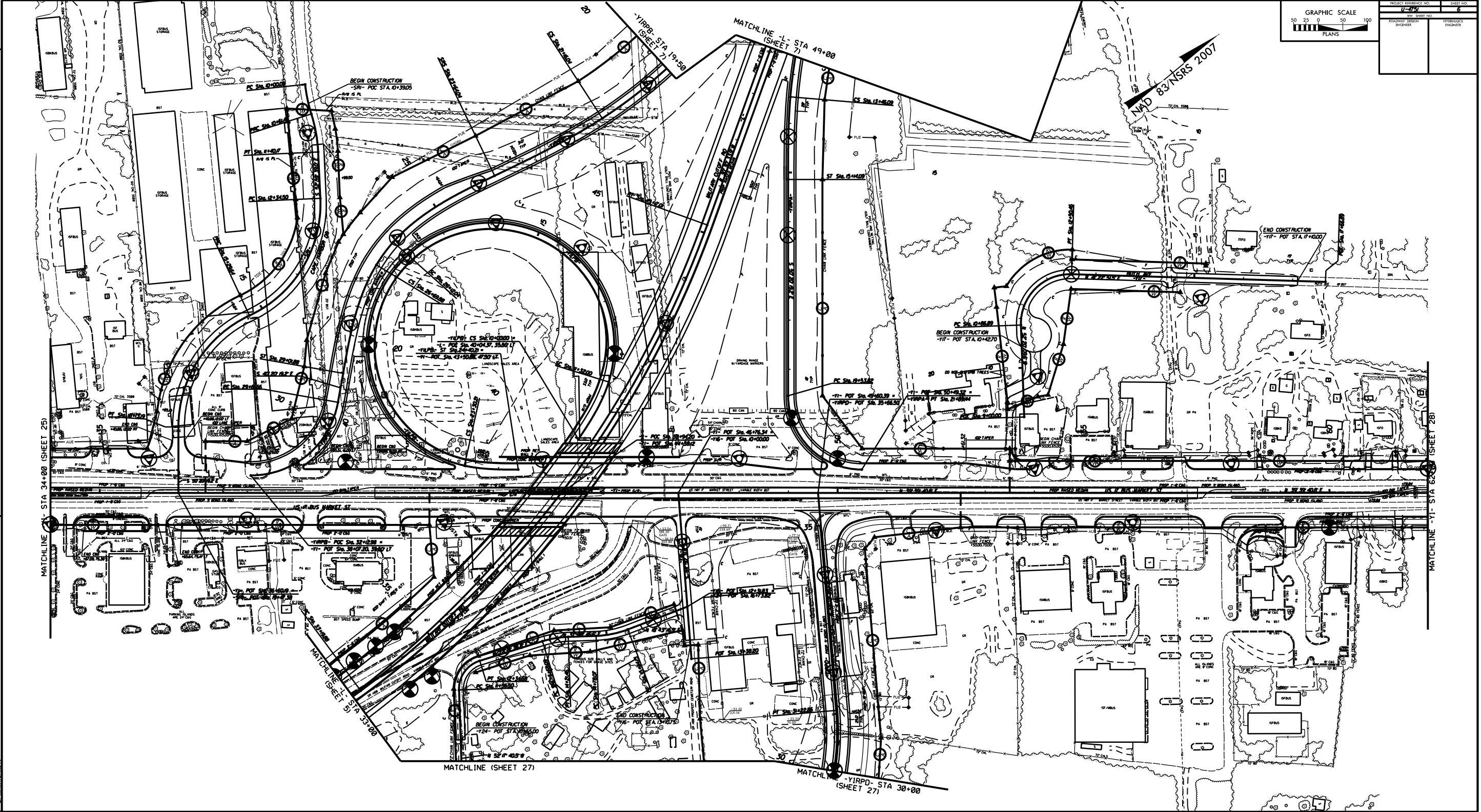
MATCHLINE -L- STA 33+00 (SHEET 6)

-Y- STA MATCHLINE 27+00 (SHEET 25)

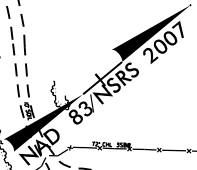
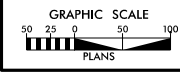
MATCHLINE -YIRPD- STA 16+00 (SHEET 27)

REVISIONS

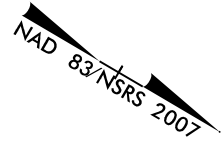
2007-04-14 - NEW REVISION (R2) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R3) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R4) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R5) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R6) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R7) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R8) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R9) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.
 2007-04-14 - NEW REVISION (R10) - ADDED TIE TO PARCEL 13 TO ENDPOINTS CONSTRUCTION LIMITS FROM STA. 27+00 TO 27+00 RT AND STATIONS TO 01+00 RT.



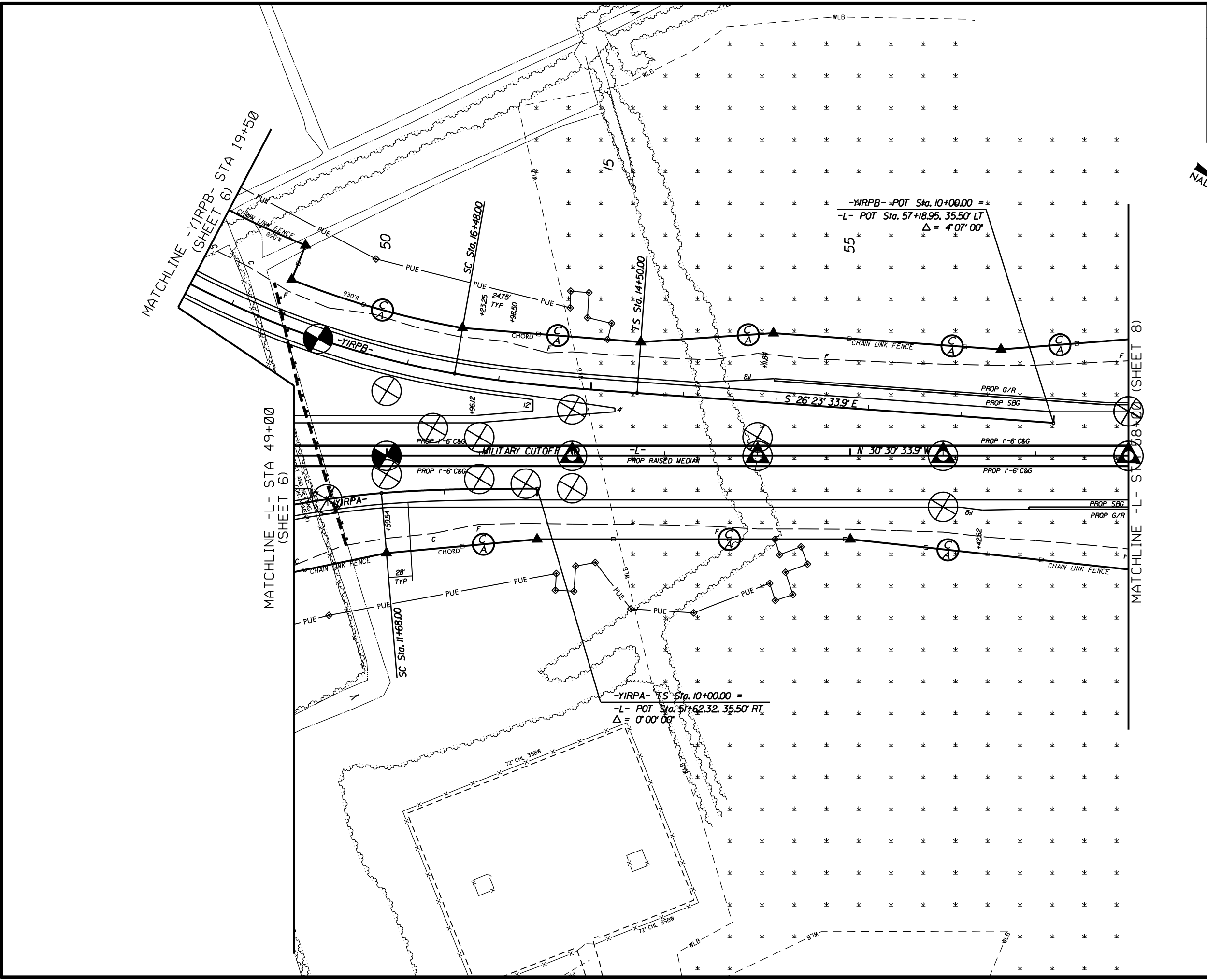
PROJECT REFERENCE NO.	12-074	SHEET NO.	6
ROADWAY DESIGN ENGINEER		HYDRAULIC ENGINEER	



PROJECT REFERENCE NO.	SHEET NO.
U-4751	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS
 2015-08-12 - R/W REVISION (CEG) - ADJUSTED MONUMENT AT PARCEL 37.
 16-NOV-2016 13:39
 C:\ProJec\es\NCDOT\U4751_GEO_FDWY_DOT\CADD_08\DOTCH\Site\Sub\U4751_GEO_rvw_07.dgn
 12:00 PM 11/16/2016



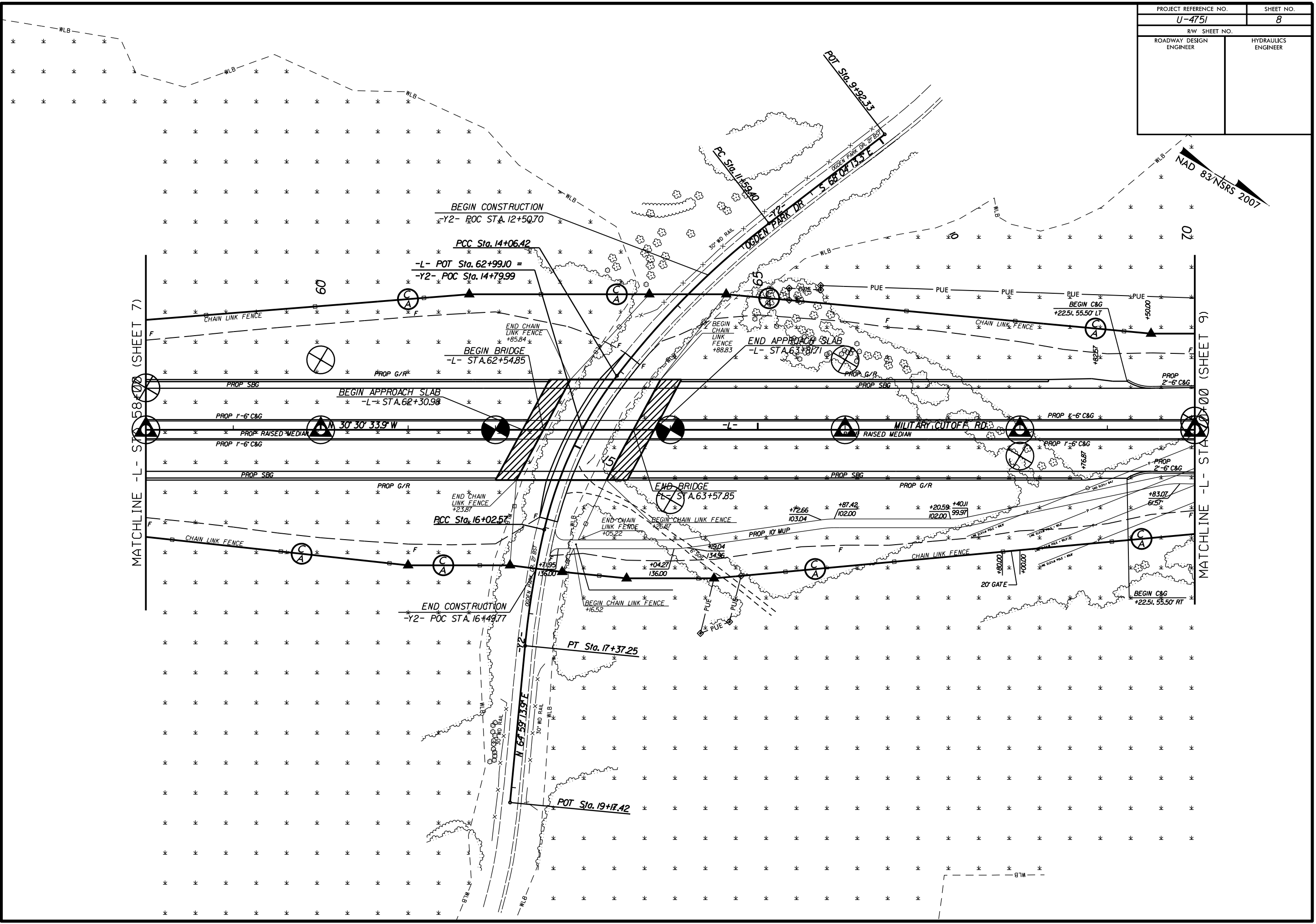
$$\begin{aligned}
 & -YIRPB- POT Sta. 10+00.00 = \\
 & -L- POT Sta. 57+18.95, 35.50' LT \\
 & \Delta = 4' 07' 00''
 \end{aligned}$$

$$\begin{aligned}
 & -YIRPA- YS Sta. 10+00.00 = \\
 & -L- POT Sta. 51+62.32, 35.50' RT \\
 & \Delta = 0' 00' 00''
 \end{aligned}$$

PROJECT REFERENCE NO. U-4751	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

2015-11-05 - R/W REVISION (SCS) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 38.

16-NOV-2016 13:39
C:\p\projec\scs\DOT\U4751\GEO\FD\RD\DOT\CADD_GEO\TECH\Site\Sub\U4751_GEO_rvw_08.dgn
12:00 AM



NAD 83/NSRS 2007

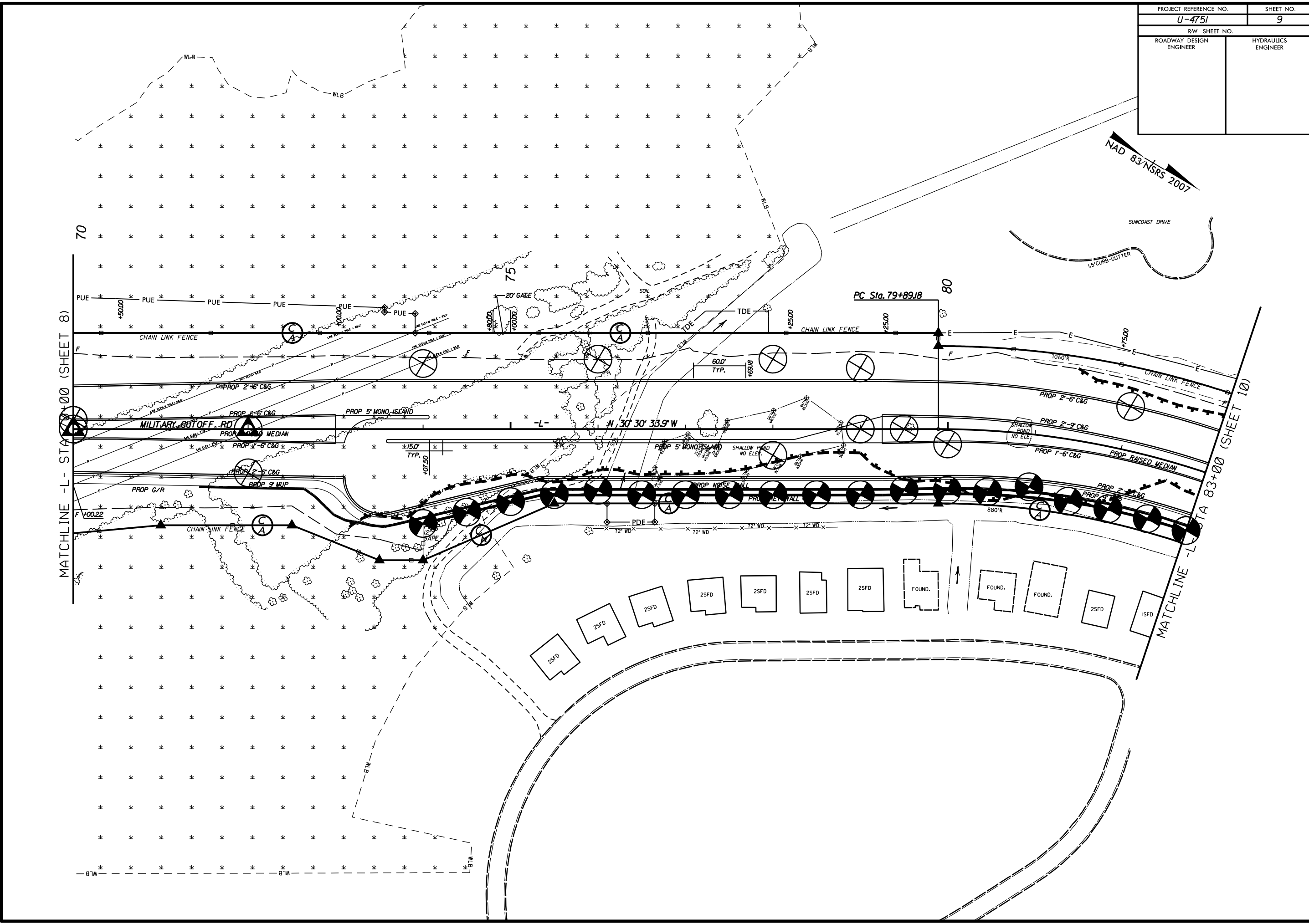
MATCHLINE -L- STA. 58+00.00 (SHEET 7)

MATCHLINE -L- STA. 70+00.00 (SHEET 9)

PROJECT REFERENCE NO.	SHEET NO.
U-4751	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

2015-08-12 - RAW REVISION (CEG) - ADDED PROPERTY LINES FOR PARCEL 41, 41A, 41B, & 41C. UPDATED PROPERTY OWNER INFORMATION ON PARCEL 41, 41A, 41B, 41C, 46, 47, & 48.
 2015-10-21 - RAW REVISION (SCS) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 39. ADDED PARCEL 41 AND CHANGED PARCEL 41 TO PARCEL 41D.
 2015-11-06 - RAW REVISION (SOS) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 38.

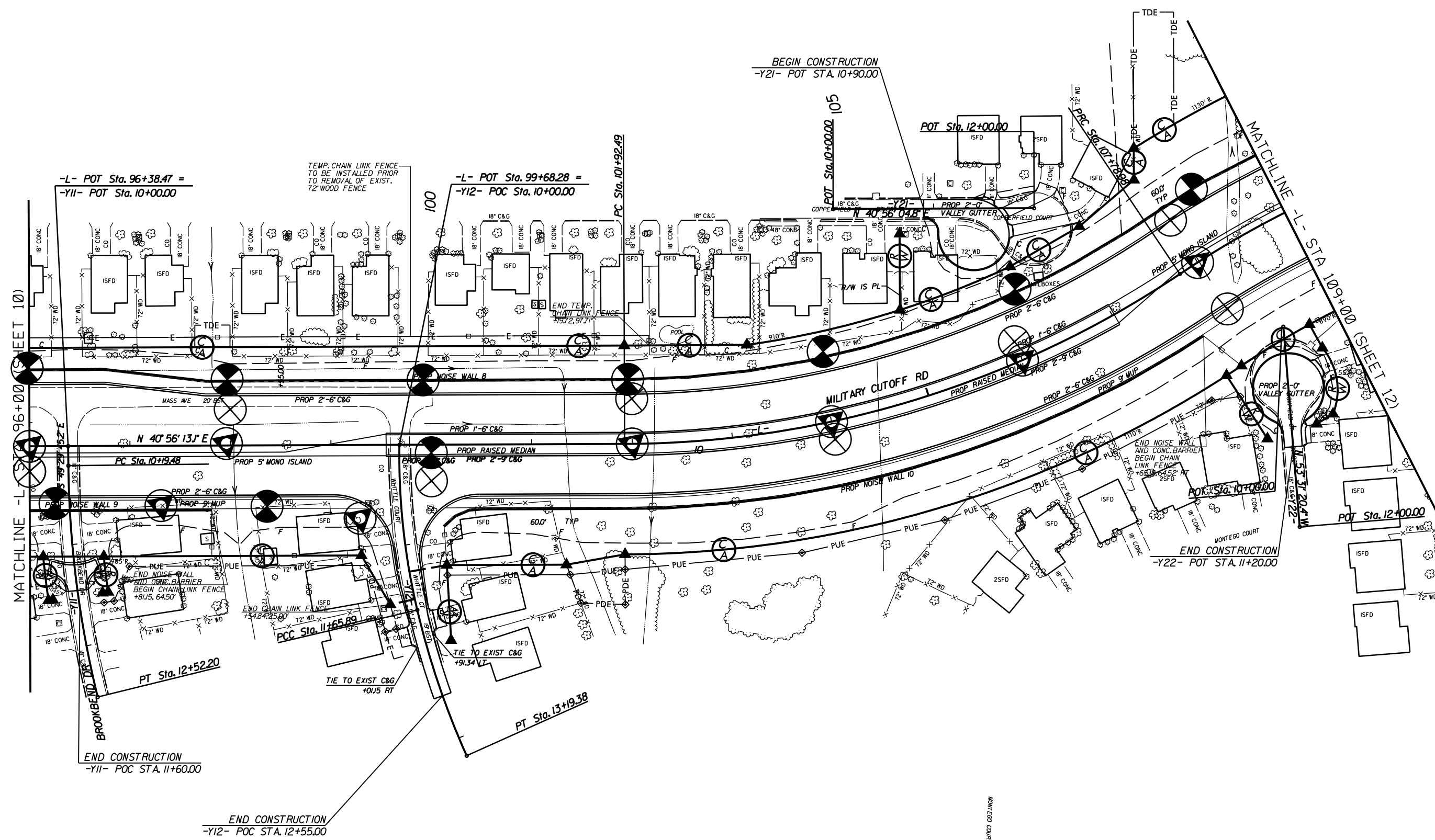


16-NOV-2016 13:39
 C:\p-c\proj\15\DOT\U4751\GEO\FD\DWY-DOT\CADD-CR...
 15-11-2016 13:39

PROJECT REFERENCE NO.	SHEET NO.
U-4751	11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

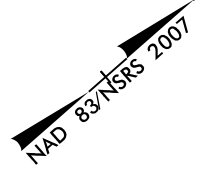


REVISIONS
 2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 73, 74, 75, 77, 82, 90, 91, 95, 96, 99, 101, & 102. ADDED STATION OFFSET AT PARCEL 84 AND 103.

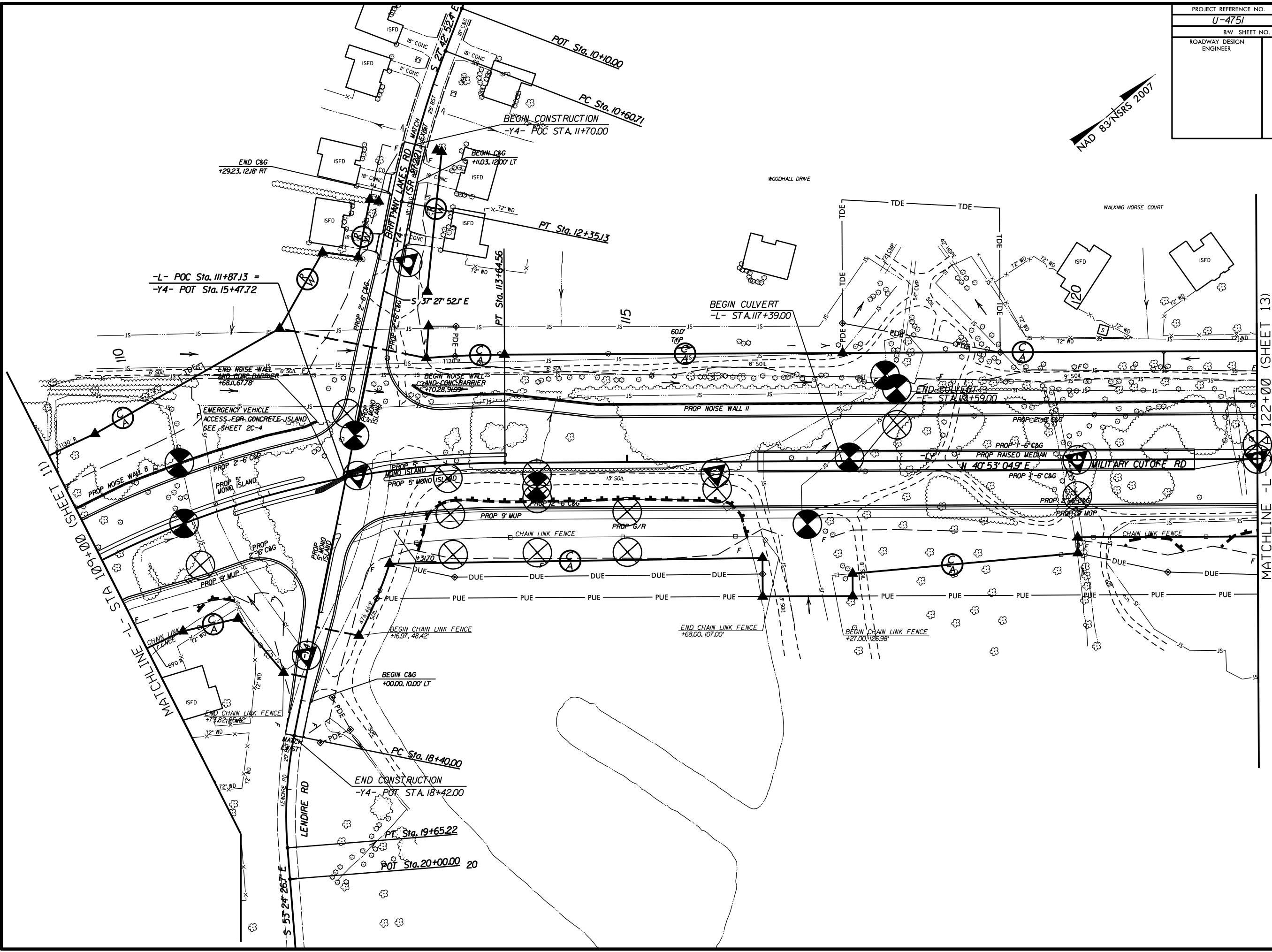


16-NOV-2016 13:39
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 105 & 106. ADDED HOUSE ON PARCEL 104. MOVED MONUMENTS AT PARCEL 104.
 2015-11-05 - R/W REVISION (CEG) - UPDATED PROPERTY LINES AND PROPERTY OWNER INFORMATION ON PARCEL 905. CREATING PARCELS 242, 243, AND 244.
 16-NOV-2016 13:39
 C:\p\o\j\c\15\DOT\U4751\GEO\FD.WY_DOT\CADD_08\DOT\U4751\GEO\FD.WY_DOT\U4751\GEO\INV_12.dgn
 15-NOV-2016 13:39
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MATCHLINE - L- STA 10+00 (SHEET 11) | MATCHLINE - L- STA 122+00 (SHEET 13)

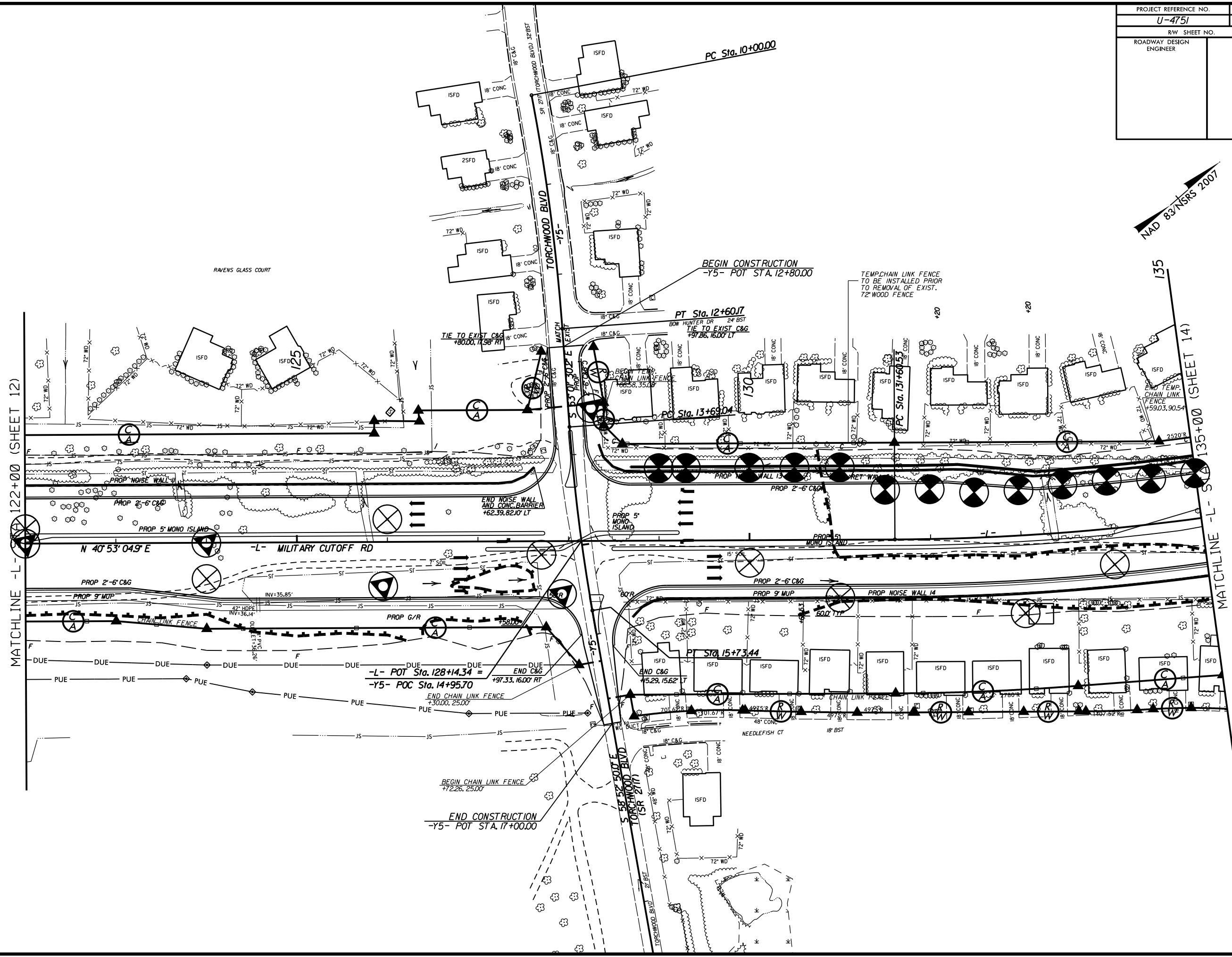
PROJECT REFERENCE NO.	SHEET NO.
U-4751	13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCELS 114, 116, 123, 125, 127, 129, & 130, ADDED PUE MONUMENT AT PARCEL 115, ADDED STATION OFFSET AT PARCEL 115 & 116, CHANGED PARCEL 131 TO PARCEL 114, ADDED HOUSE TO PARCEL 116.

2015-11-05 - R/W REVISION (CEG) - CHANGED PARCEL 905 TO 243, UPDATED PROPERTY OWNER INFORMATION ON PARCEL 243.

16-NOV-2016 13:39
C:\ProJec\GIS\DOT\U4751\GEO_FDWY_DOT\CADD_08\DOTCH\Site&Sub\U4751\GEO_iny_13.dgn
13.dgn

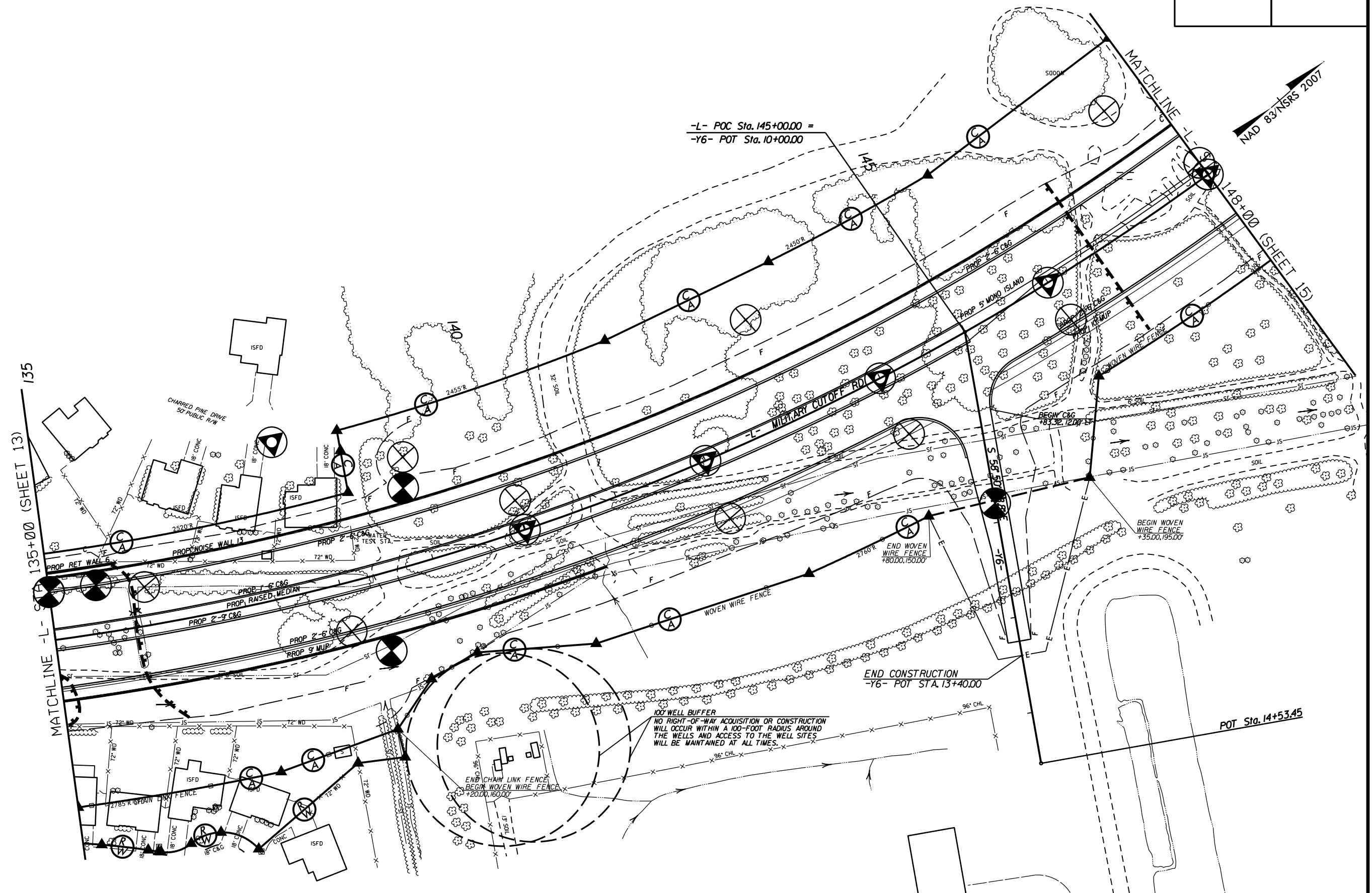


PROJECT REFERENCE NO.	SHEET NO.
U-4751	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COURTNEY PINES HOA
DB 4889 PG 328
MB 48 PG 180

REVISIONS
 2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 142, CHANGED PARCEL 137 TO PARCEL 144, ADDED STATION OFFSET AT PARCEL 140 & 145
 2015-10-21 - R/W REVISION (SCS) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 145.

16-NOV-2016 13:39
 C:\ProJec\GIS\DOT\U4751\GEO_FDWY_DOT\CADD_08\DOTCH\Site&Sub\U4751\GEO_rwy_14.dgn
 14 - MATCHLINE



-L- POC Sta. 145+00.00 =
-Y6- POT Sta. 10+00.00

END CONSTRUCTION
-Y6- POT STA. 13+40.00

100' WELL BUFFER
NO RIGHT-OF-WAY ACQUISITION OR CONSTRUCTION
WILL OCCUR WITHIN A 100-FOOT RADIUS AROUND
THE WELLS AND ACCESS TO THE WELL SITES
WILL BE MAINTAINED AT ALL TIMES.

POT Sta. 14+53.45

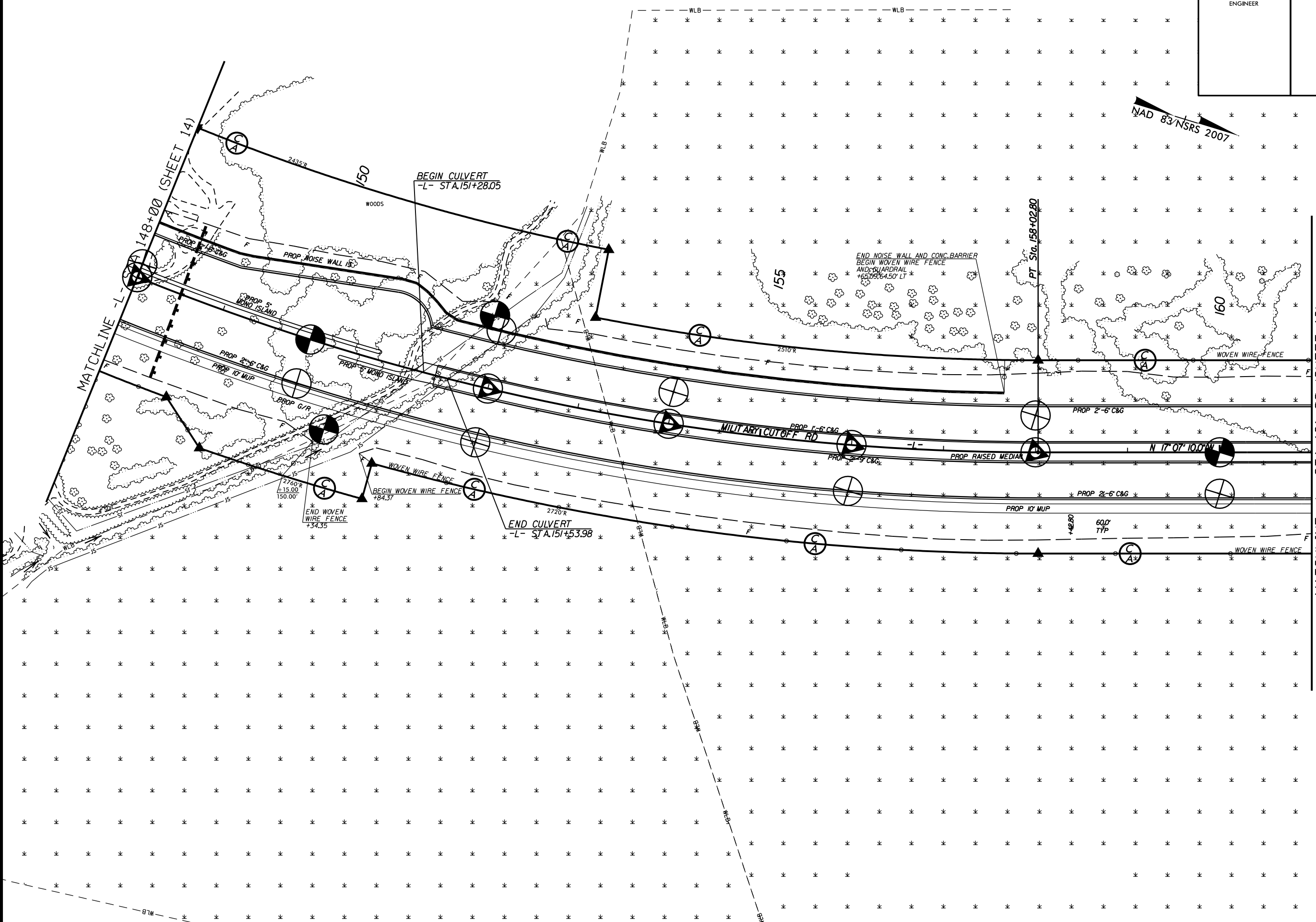


MATCHLINE -L- STA 135+00 (SHEET 13)

MATCHLINE -L- STA 148+00 (SHEET 15)

PROJECT REFERENCE NO.	SHEET NO.
U-4751	15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007



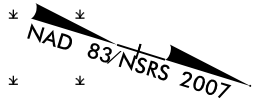
MATCHLINE -L- STA. 148+00 (SHEET 14)

MATCHLINE -L- STA. 161+00 (SHEET 16)

REVISIONS
2015-08-12 - R/W REVISION (CEG) - ADJUSTED MONUMENT AT PARCEL 148.

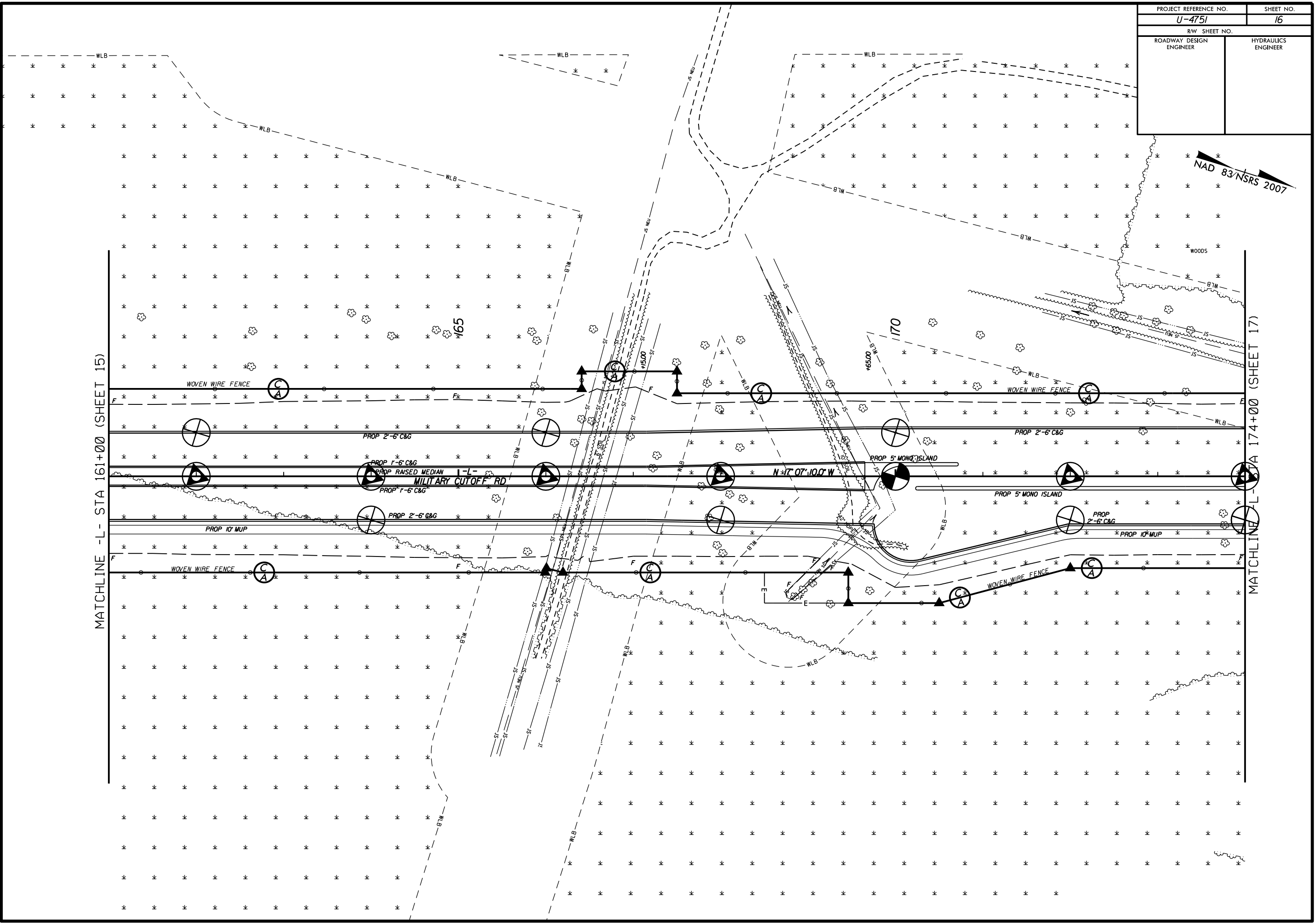
15-NOV-2016 13:39
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15-NOV-2016 13:39
C:\ProJec\GIS\DOT\U4751\GEO\FD\WY_DOT\CADD\G01\DOT\U4751_GEO_FDWY_DOT\CADD_G01\DOT\U4751_GEO_FDWY_DOT\U4751_GEO_FDWY_DOT.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4751	16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS
 2015-08-12 - R/W REVISION (CEG) - ADJUSTED C/A RIGHT OF WAY TO ELIMINATE CLAIM ON PARCEL 150.

16-NOV-2016 13:39
 C:\ProJec\GIS\DOT\U4751_GEO_FDWY_DOT\CADD_GEDTECH\Site\Sub\U4751_GEO_inv_16.dgn
 16-11-2016 13:39



MATCHLINE -L- STA 161+00 (SHEET 15)

MATCHLINE -L- STA 174+00 (SHEET 17)

#65

#170

WOVEN WIRE FENCE

WOVEN WIRE FENCE

PROP 2'-6" C&G

PROP 2'-6" C&G

PROP 1'-6" C&G

PROP 5' MONO ISLAND

PROP 1'-6" C&G

PROP 5' MONO ISLAND

PROP 10' MUP

PROP 2'-6" C&G

PROP 2'-6" C&G

PROP 10' MUP

WOVEN WIRE FENCE

WOVEN WIRE FENCE

87M

87M

87M

87M

87M

87M

87M

87M

87M

87M

87M

87M

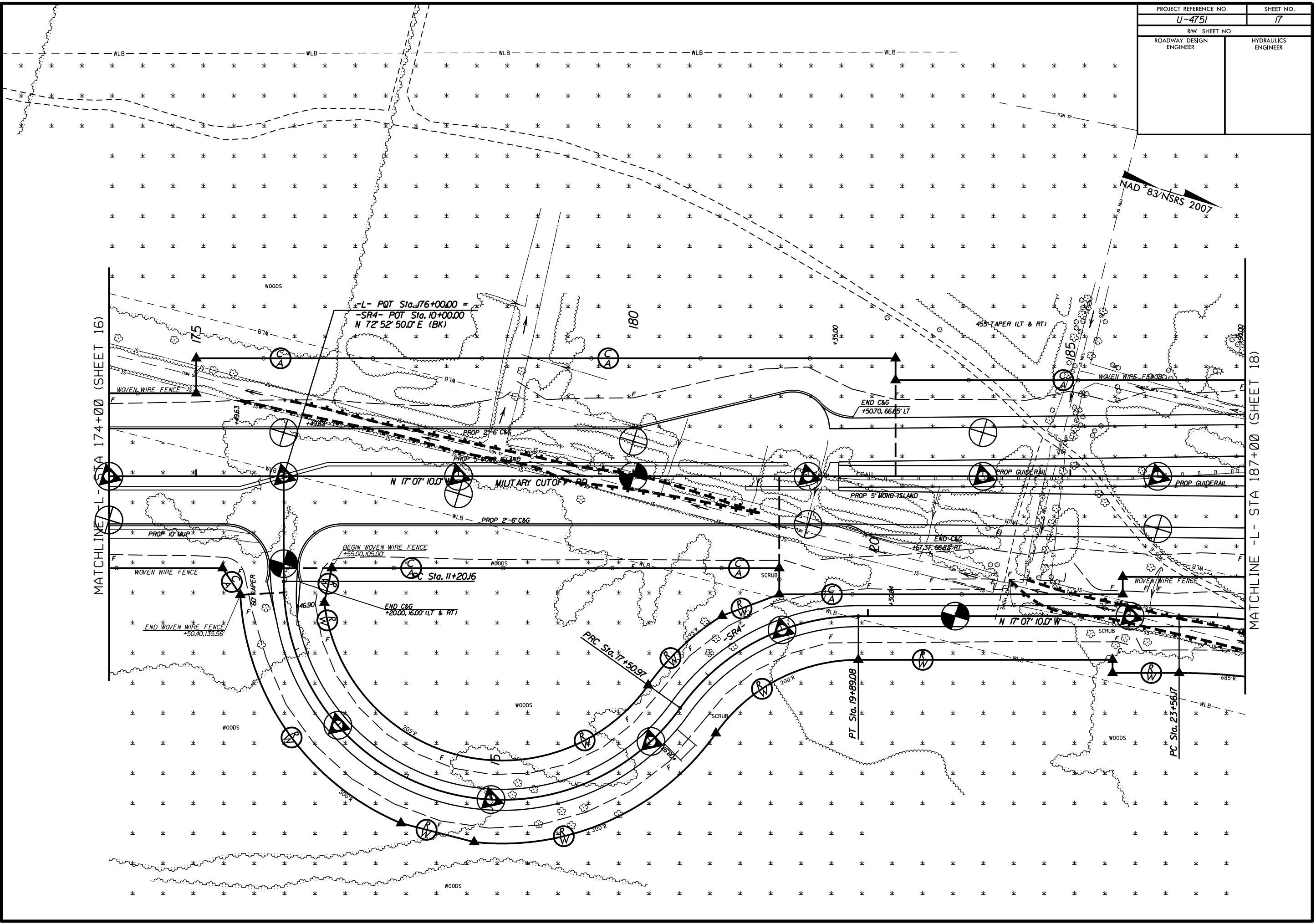
87M

87M

PROJECT REFERENCE NO.	SHEET NO.
U-4751	17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS
 2015-08-12 - R/W REVISION (CEG) - ADDED STATION OFFSET AT PARCEL 148, ADJUSTED C/A RIGHT OF WAY TO ELIMINATE CLAIM ON PARCEL 152.

16-NOV-2016 13:39
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 17



MATCHLINE -L- STA 174+00 (SHEET 16)

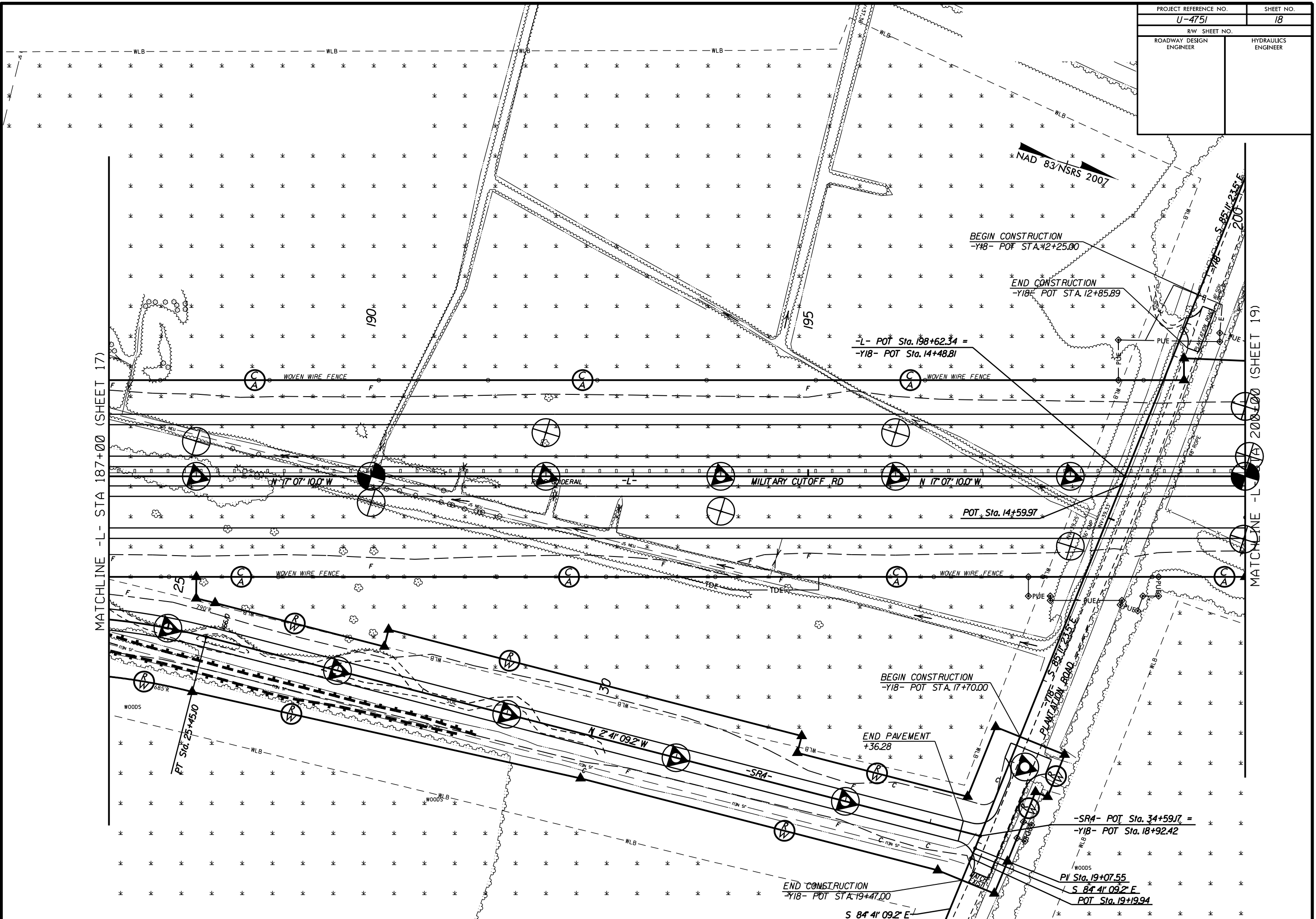
MATCHLINE -L- STA 187+00 (SHEET 18)

NAD 83/NSRS 2007

PROJECT REFERENCE NO.	SHEET NO.
U-4751	18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS
 2015-08-12 - R/W REVISION (CEG) - AT PARCEL 156 REMOVED TDE INSIDE OF THE PUE. CORRECTED STATION OFFSET AT PARCEL 915.

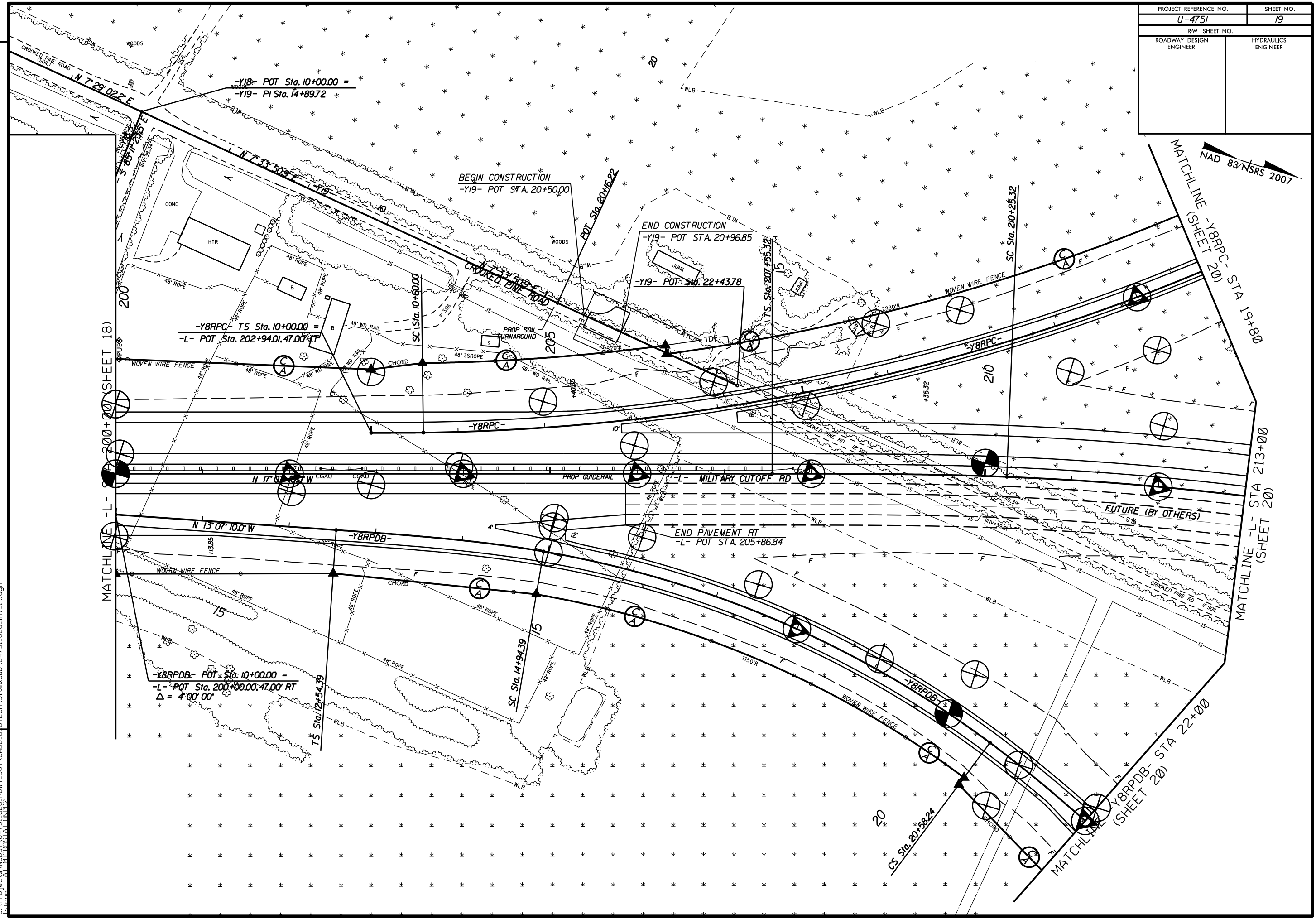
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 18-NOV-2016 13:39
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS
 2015-08-12 - R/W REVISION (CEG) - COMBINED PARCEL 156 & 157 TO BE PARCEL 156, ADJUSTED MONUMENT AT PARCEL 95, SHIFTED TURNAROUND AND TCE NORTH TO ELIMINATE PARCEL 158.

16-NOV-2016 13:39
 C:\p\projec\156\DOT\U4751\GEO\RDWY_DOT\CADD_C8\DOT\SITE\te&Sub\U4751_GEO_rvw_19.dgn



MATCHLINE -YBRPC- STA 19+80
 NAD 83/NSRS 2007

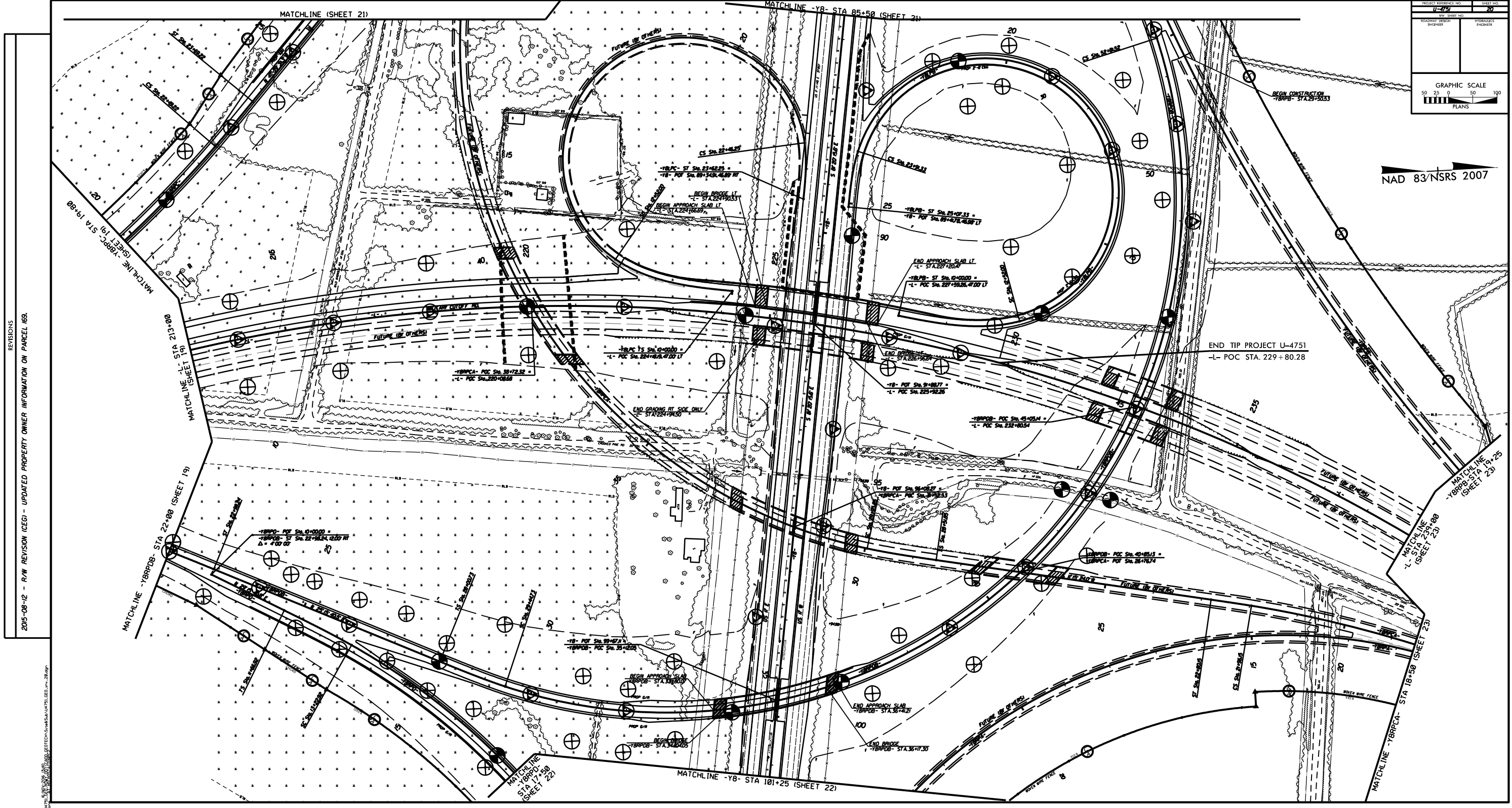
MATCHLINE -L- STA 213+00 (SHEET 20)

MATCHLINE -YBRPDB- STA 22+00 (SHEET 20)

MATCHLINE -L- STA 200+00 (SHEET 18)

PROJECT REFERENCE NO.	14-471	SHEET NO.	20
ROADWAY DESIGN ENGINEER		HYDRAULIC ENGINEER	
GRAPHIC SCALE			
PLANS			

NAD 83/NSRS 2007

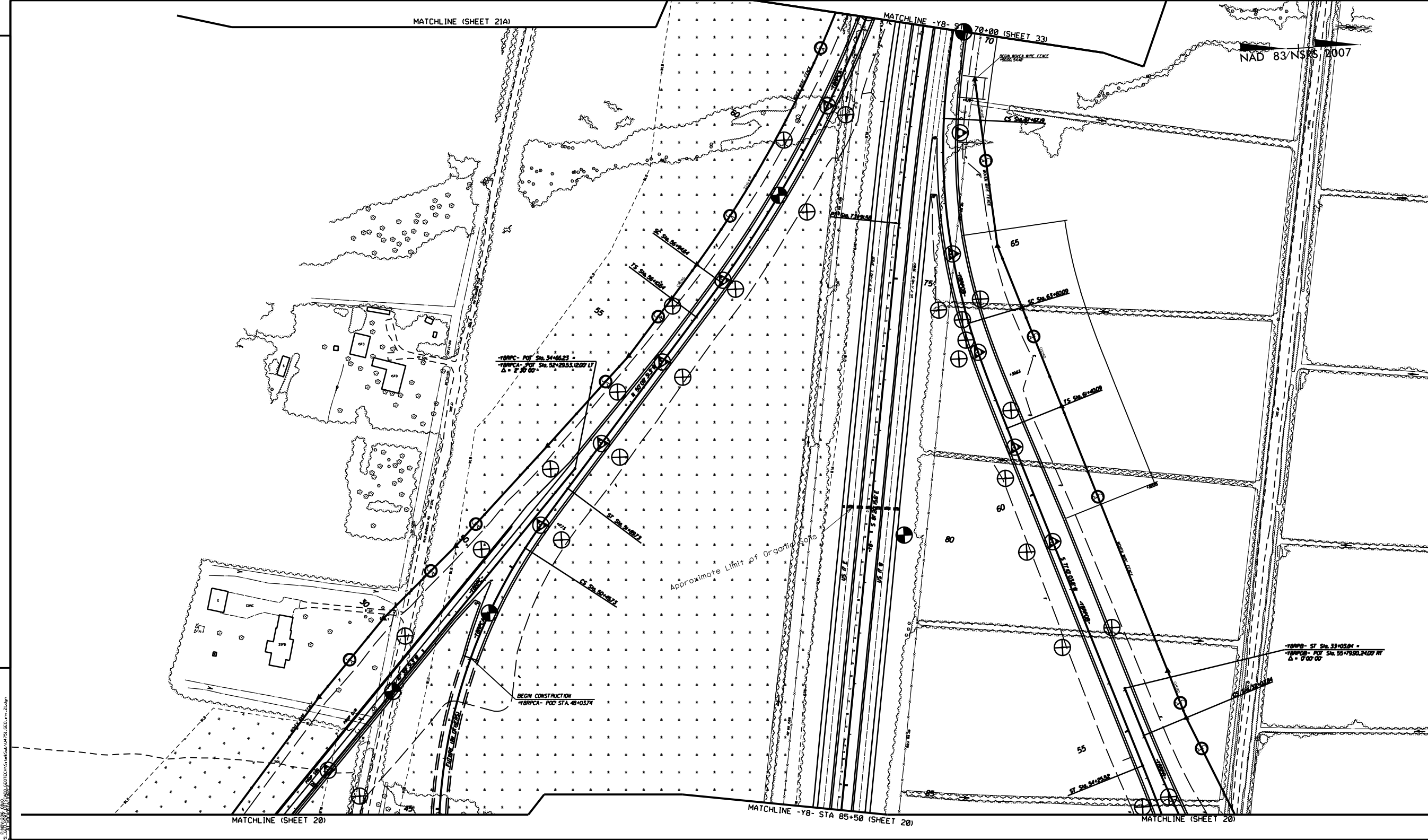


2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 169.

REVISIONS

C:\PROJECTS\14-471\14-471-20.dwg

REVISIONS
2015-08-12- R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 174, ADJUSTED MONUMENT AT PARCEL 173, ADDED PARCEL 240 & 241, UPDATED PROPERTY LINES.

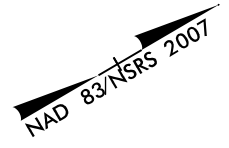


PROJECT REFERENCE NO.	SHEET NO.
11-01	2
REV. SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GRAPHIC SCALE
50 25 0 50 100
PLANS

DATE PLOTTED: 2015-08-12 10:00 AM
PLOTTER: HP DesignJet 2400

PROJECT REFERENCE NO.	SHEET NO.
U-4751	22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS
 2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 169.

16-NOV-2016 13:40
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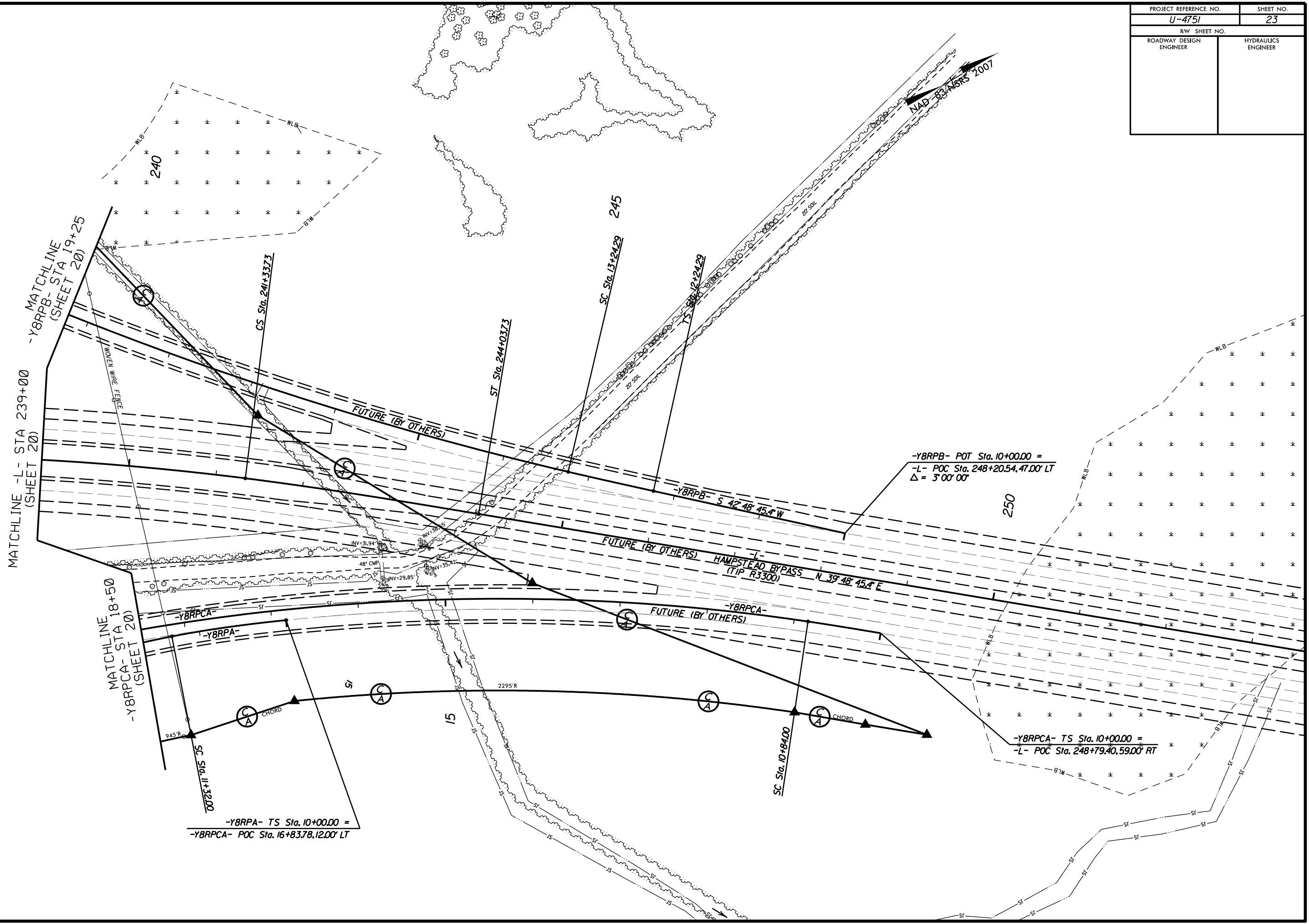


PROJECT REFERENCE NO.	SHEET NO.
U-4751	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

2015-08-12 - R/W REVISION (CEG) - ADJUSTED MONUMENT AT PARCEL 170.

16-NOV-2016 13:40
 C:\p\o\j\c\15\DOT\U4751\GEO_FDWY_DOT\CADD\08\DOT\U4751_GEO_FDWY_DOT\U4751_GEO.in\23.dgn
 15-11-2015 10:00 AM



-Y8RPA- TS Sta. 10+00.00 =
 -Y8RPCA- POC Sta. 16+8378.1200' LT

-Y8RPB- POT Sta. 10+00.00 =
 -L- POC Sta. 248+20.54, 47.00' LT
 Δ = 3' 00' 00"

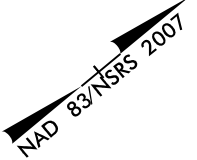
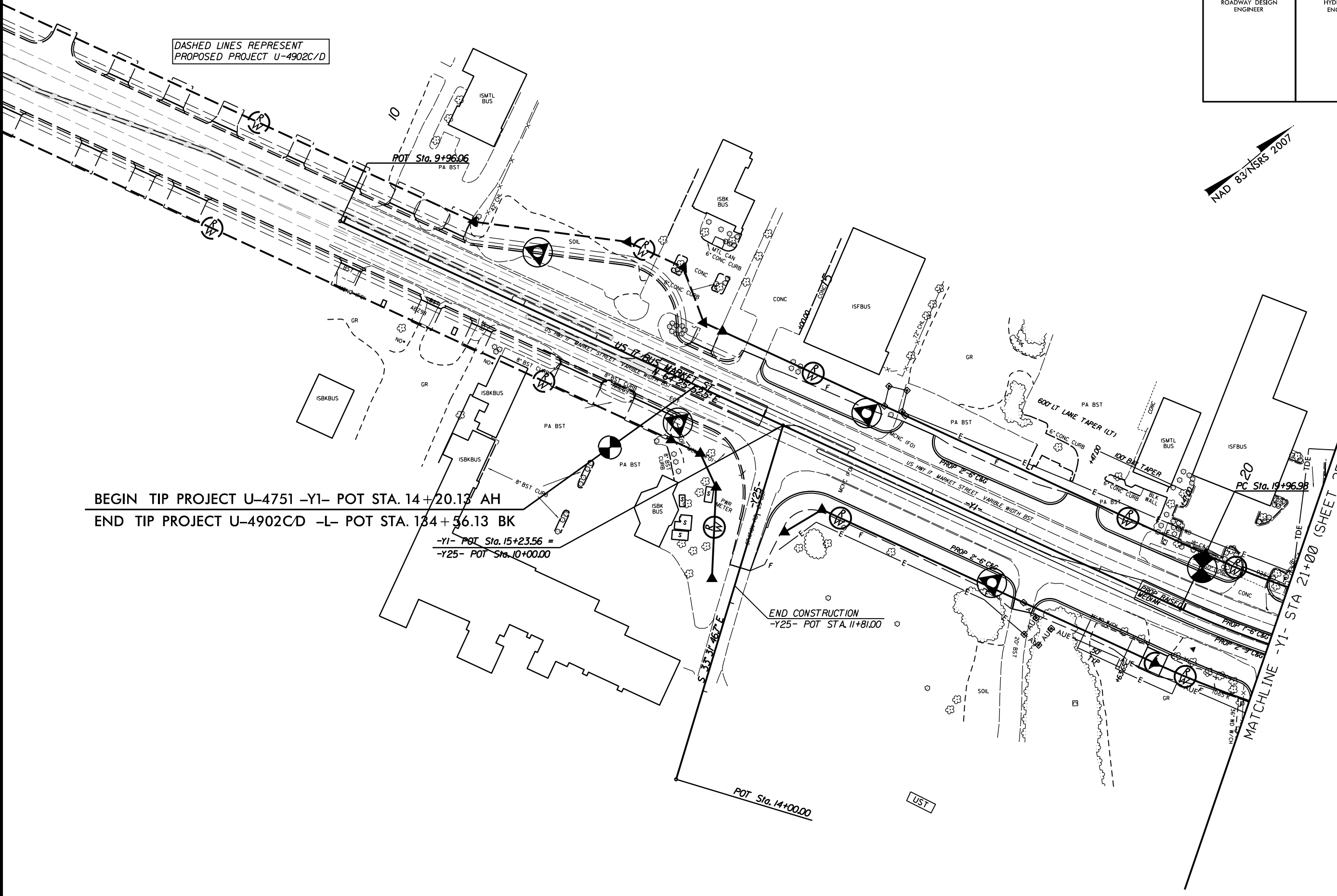
-Y8RPCA- TS Sta. 10+00.00 =
 -L- POC Sta. 248+79.40, 59.00' RT

PROJECT REFERENCE NO.	SHEET NO.
U-4751	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS
 2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 181 & 183 CORRECTED A/E STATION OFFSET AT PARCEL 180, ADDED MONUMENT AT PARCEL 178A, INCREASED DRIVES TO 36" WITH 20" RADIUS ON PARCEL 181.
 2015-09-28 - R/W REVISION (SCS) - REVISED A/E ON PARCEL 180 AND 181.

16-NOV-2016 13:40
 C:\ProJec\GIS\DOT\U4751\GEO_RDWY_DOT\CADD_08\DOTCH\Site&Sub\U4751\GEO_rnv_24.dgn
 AT: MERRITT STATION

DASHED LINES REPRESENT
PROPOSED PROJECT U-4902C/D



BEGIN TIP PROJECT U-4751 -Y1- POT STA. 14+20.13 AH
 END TIP PROJECT U-4902C/D -L- POT STA. 134+56.13 BK

-Y1- POT Sta. 15+23.56 =
 -Y25- POT Sta. 10+00.00

END CONSTRUCTION
 -Y25- POT STA. 11+81.00

MATCHLINE -Y1- STA 21+00 (SHEET 25)

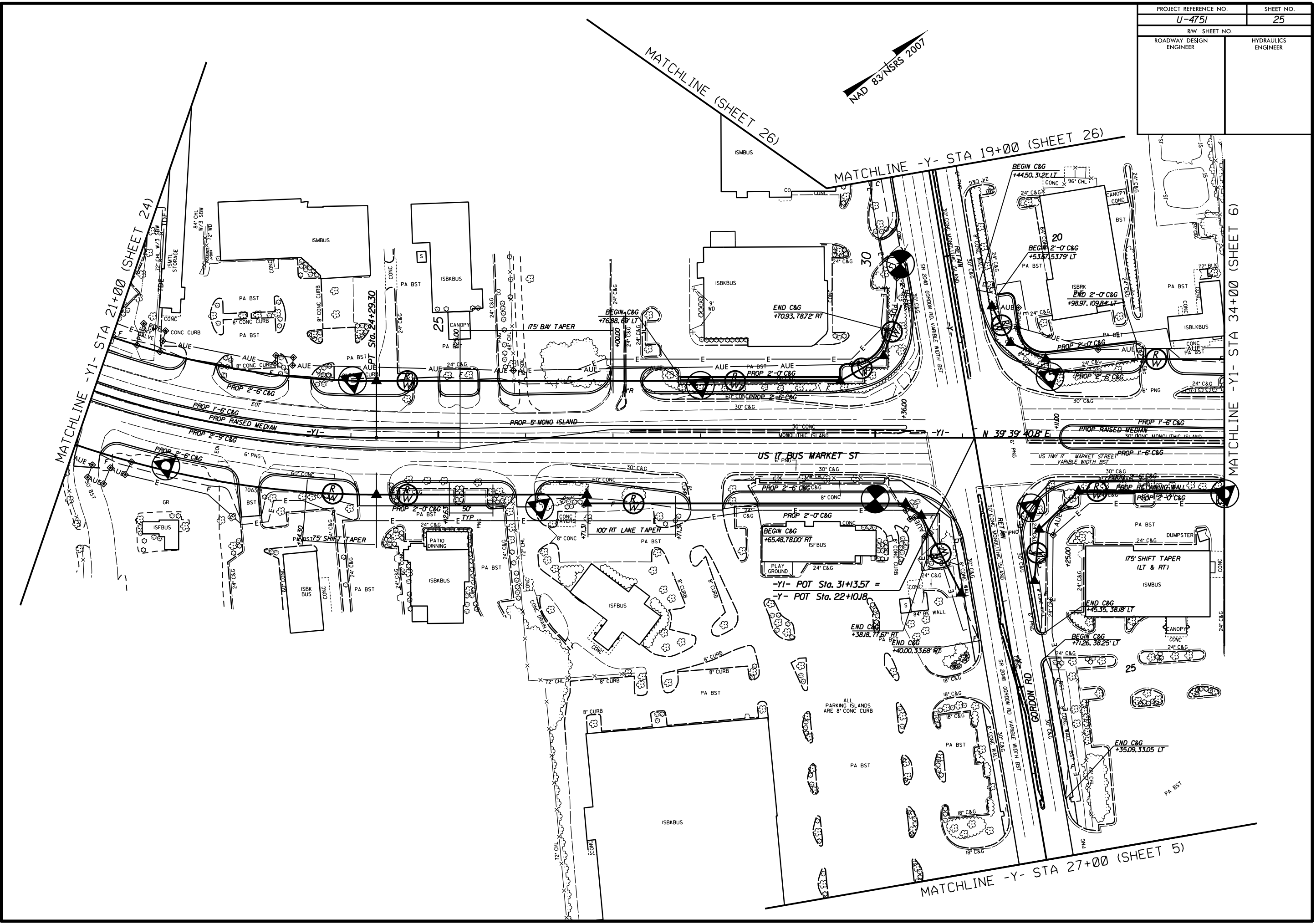
PROJECT REFERENCE NO.	SHEET NO.
U-4751	25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

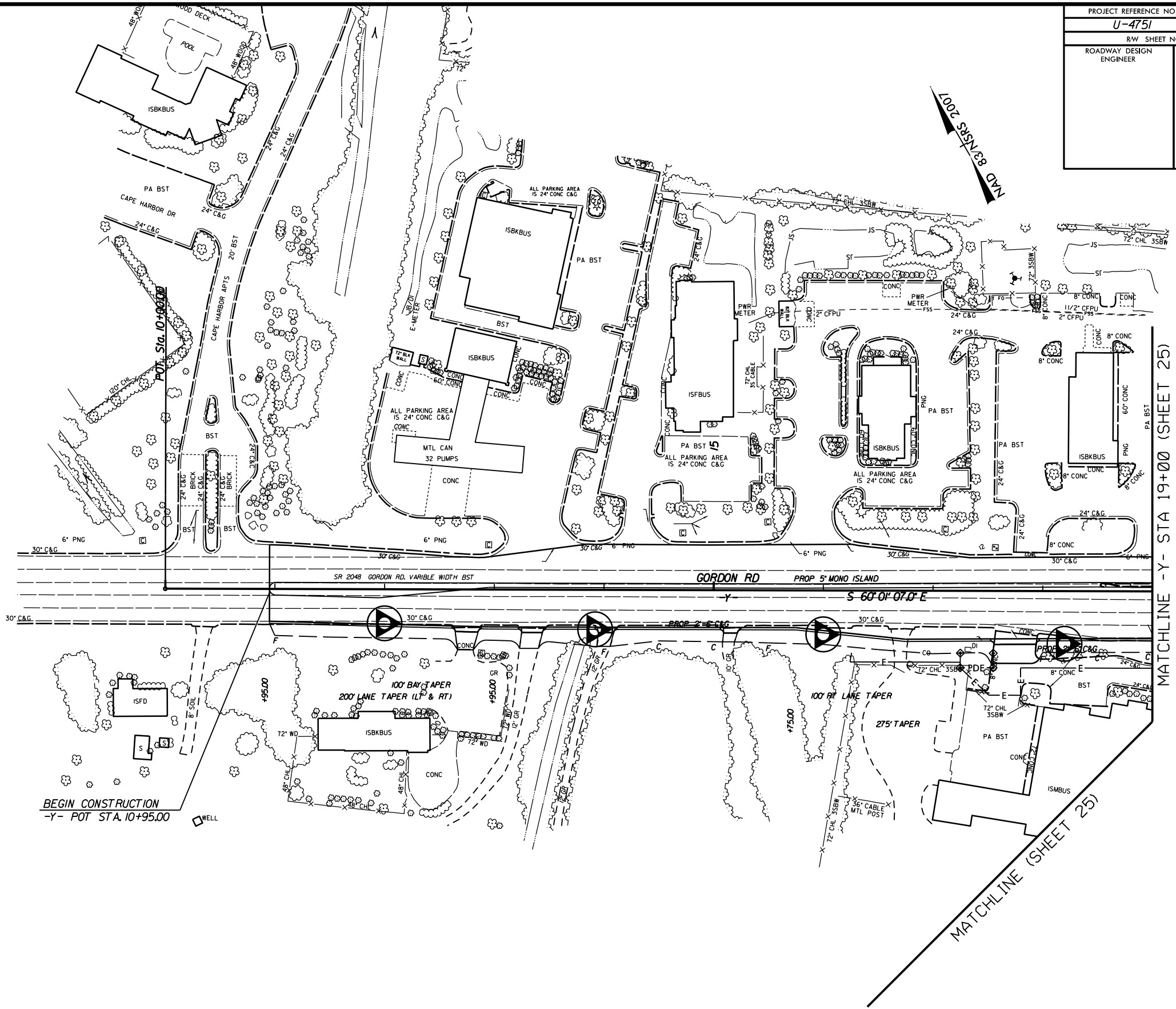
2015-07-31 - R/W REVISION (SCS) - REVISED TCE AVE AND PROPOSED ROW LINES, MONUMENTS, AND STATION OFFSETS AT PARCEL 3 & 8. REVISED CHANNELIZATION CURB IN THE PARKING LOTS FOR PARCELS 3 & 8.

2015-08-12 - R/W REVISION (SCS) - UPDATED OWNER INFORMATION ON PARCELS 183 & 187. CHANGED AVE STATION OFFSET TO A ROW STATION OFFSET AT PARCEL 192. ADDED PROPERTY LINES TO PARCEL 8. PORTION OF PARCEL 8 ADDED TO PARCEL 3.

16-NOV-2016 13:40
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



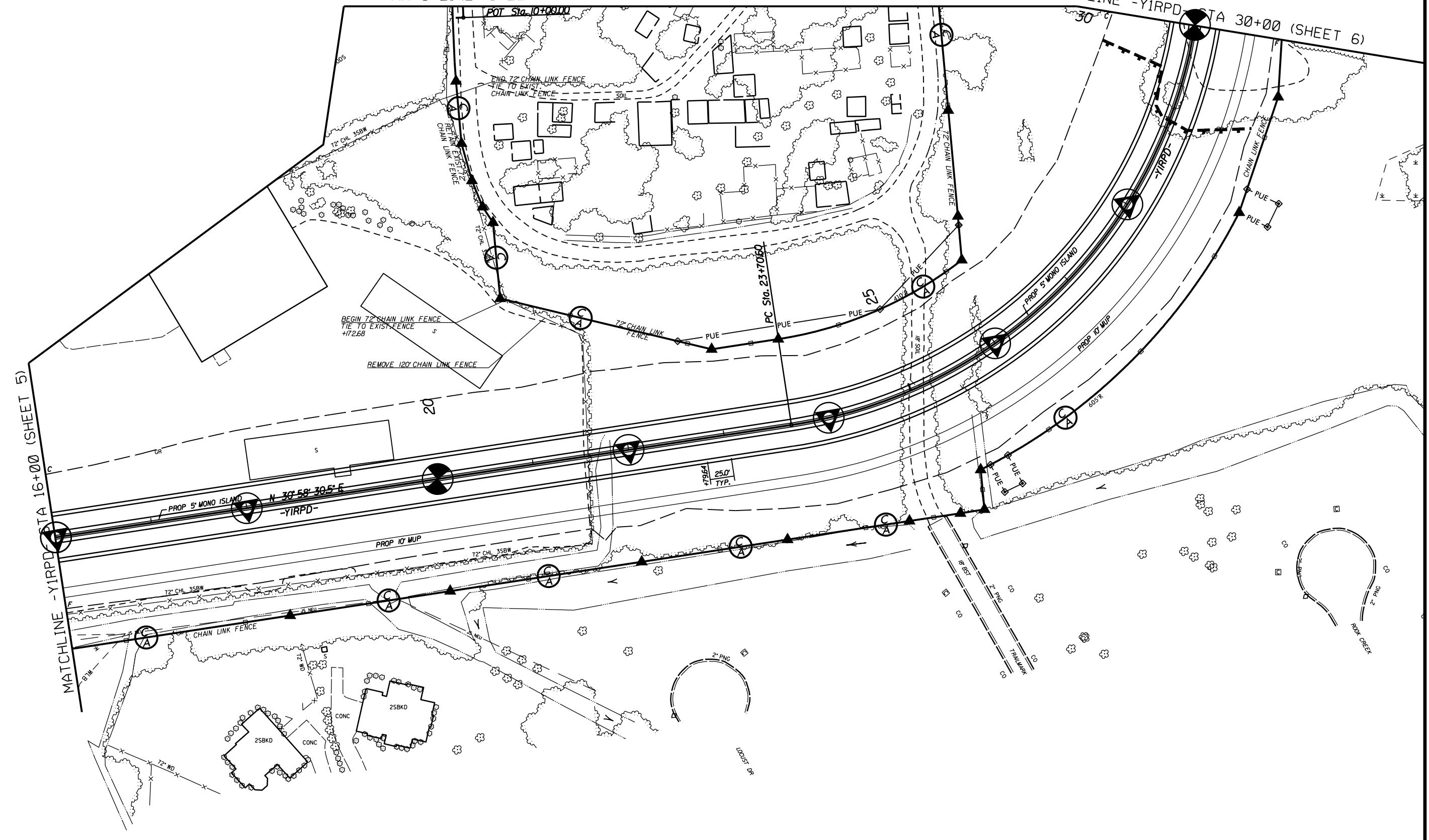
16-NOV-2016 13:40
 C:\ProJec\GIS\DOT\U4751_GEO_FDWY_DOT\CADD_GEO\TECH\Site&Sub\U4751_GEO_rnv_26.dgn
 16-NOV-2016 13:40

PROJECT REFERENCE NO. U-4751	SHEET NO. 27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE (SHEET 6)

MATCHLINE -YIRPD STA 30+00 (SHEET 6)



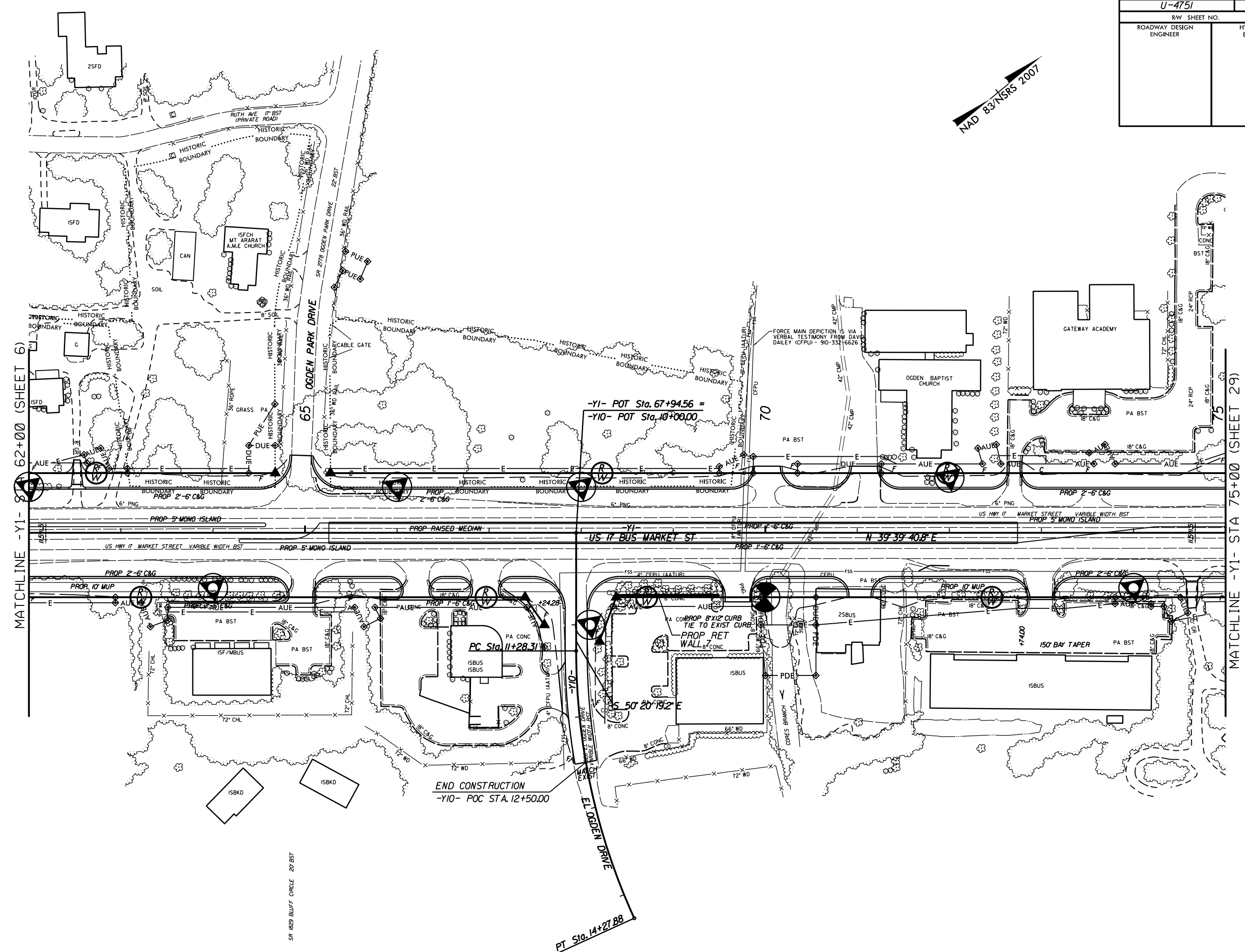
2015-08-12 - R/W REVISION (CEG) - MODIFIED C/A EASEMENT, MONUMENTS, AND STATION OFFSETS AT PARCEL 12.13.200 & 907. ADDED C/A MONUMENT AT PARCEL 13 & 901.
 REVISIONS
 16-NOV-2016 13:40
 C:\ProJec\16\DOT\U4751\GEO\FD\WY_DOT\CADD_G8\DOTCH\Site\Sub\U4751_GEO_rvw_27.dgn
 16-NOV-2016 13:40
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	28
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS
 2015-06-15 - RAW REVISION (SCS) - CHANGED THE TCE TO AUE ON PARCEL 206 ALONG -Y1- RT.
 2015-08-12 - RAW REVISION (CEG) - EXTENDED AUE LINE TO MONUMENT AT PARCEL 206, ADDED MONUMENT AT PARCEL 201.
 2015-09-28 - RAW REVISION (SCS) - UPDATED PARCEL INFORMATION ON PARCELS 204, 205 AND 212.
 2015-10-21 - RAW REVISION (SCS) - UPDATED PARCEL INFORMATION ON PARCELS 21E AND 21F.
 2015-11-05 - RAW REVISION (SCS) - ADDED DRIVEWAY ACCESS ON PARCEL 208.

15-NOV-2016 13:40
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MATCHLINE -Y1- STA 62+00 (SHEET 6)

MATCHLINE -Y1- STA 75+00 (SHEET 29)

-Y1- POT Sta. 67+94.56 =
 -Y10- POT Sta. 10+00.00

END CONSTRUCTION
 -Y10- POC STA. 12+50.00

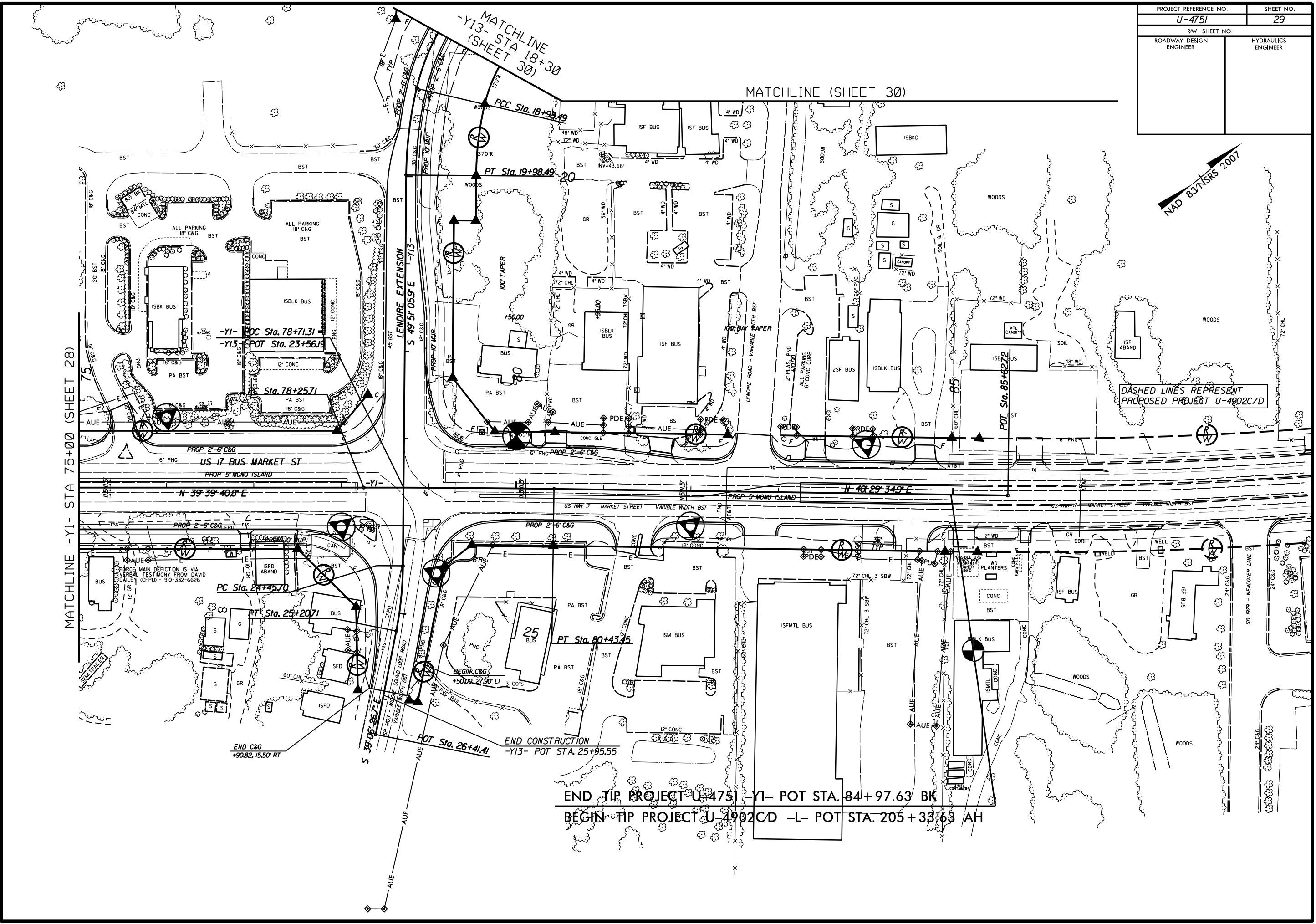
PT. STA. 14+27.88

PROJECT REFERENCE NO.	SHEET NO.
U-4751	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

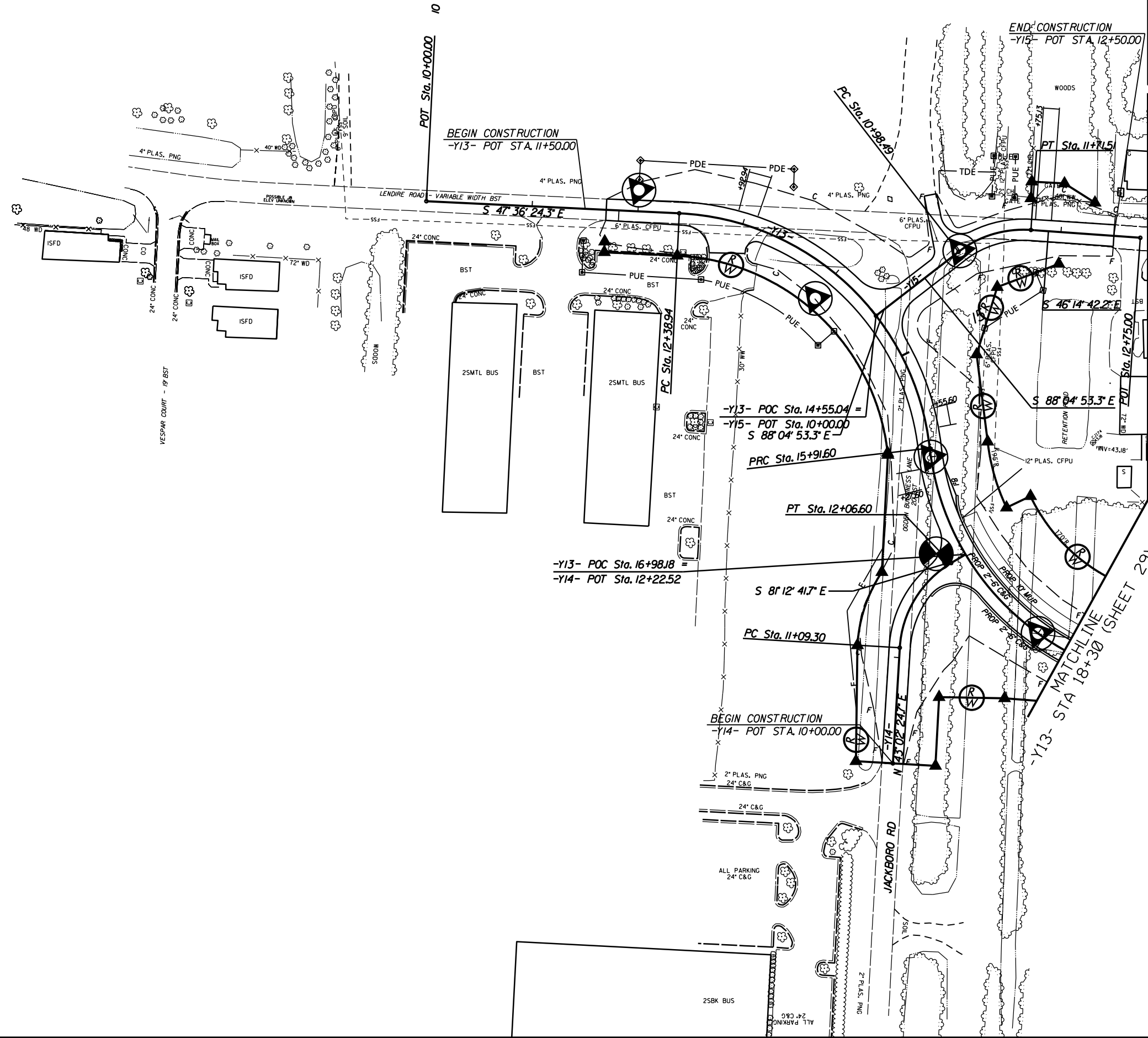
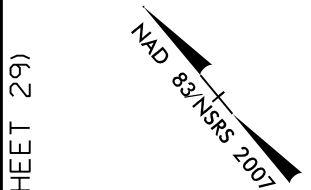
2015-05-14 - R/W REVISION (SCS) - ADDED PDE TO PARCELS 219, 220, 222, AND 223 TO ENCOMPASS DRAINAGE STR. NOS 2945, 2955, 2957, AND 2949 ALONG -Y1- LT.
 2015-08-12 - R/W REVISION (CEG) - UPDATED PROPERTY OWNER INFORMATION ON PARCEL 211, 214, 221, 222, & 223. ADDED MISSING PDE LINE AT PARCEL 220. CORRECTED TCE AND STATION OFFSET AT PARCEL 211 & 214. COMBINED PARCEL 211 & 213 TO BE PARCEL 211. UPDATED STATION OFFSET AT PARCEL 218.
 2015-09-28 - R/W REVISION (SCS) - UPDATED PARCEL INFORMATION ON PARCELS 212, 216, AND 218.
 2015-11-05 - R/W REVISION (SCS) - PROVIDED ADDITIONAL DRIVEWAY ACCESS AND ADDED PDE, PUE, AND AUE ON PARCEL 221. ADDED PARCEL 242 DUE TO ADDITIONAL AUE ON PARCEL 221.

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END TIP PROJECT U-4751 -Y1- POT STA. 84+97.63 BK
 BEGIN TIP PROJECT U-4902CD -L- POT STA. 205+33.63 AH

PROJECT REFERENCE NO. U-4751	SHEET NO. 30
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



REVISIONS
 2015-05-14 - R/W REVISION (SCS) - ADDED PUE TO PARCEL 220 FROM -Y15- STA.10+74 TO 11+79 RT.
 REVISED PUE ON PARCEL 99 FROM -Y13- STA.12+70 TO 14+40 RT.

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MATCHLINE (SHEET 29)

MATCHLINE (SHEET 29)
 -Y13- STA 18+30 (SHEET 29)

POT Sta. 10+00.00

BEGIN CONSTRUCTION
 -Y13- POT STA. 11+50.00

END CONSTRUCTION
 -Y15- POT STA. 12+50.00

-Y13- POC Sta. 14+55.04 =
 -Y15- POT Sta. 10+00.00
 S 88° 04' 53.3" E

-Y13- POC Sta. 16+98.18 =
 -Y14- POT Sta. 12+22.52

BEGIN CONSTRUCTION
 -Y14- POT STA. 10+00.00

S 81° 12' 41.7" E

PC Sta. 11+09.30

PT Sta. 12+06.60

PRC Sta. 15+91.60

FC Sta. 12+38.94

PC Sta. 10+98.49

POT Sta. 12+75.00

PT Sta. 11+11.5

JACKBORO RD

VESPAR COURT - 19' BST

LENDIRE ROAD - VARIABLE WIDTH BST

S 41° 36' 24.3" E

25MTL BUS

25MTL BUS

25BK BUS

ALL PARKING
 24' C&G

ALL PARKING
 24' C&G

2' PLAS. PNG

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

24' C&G

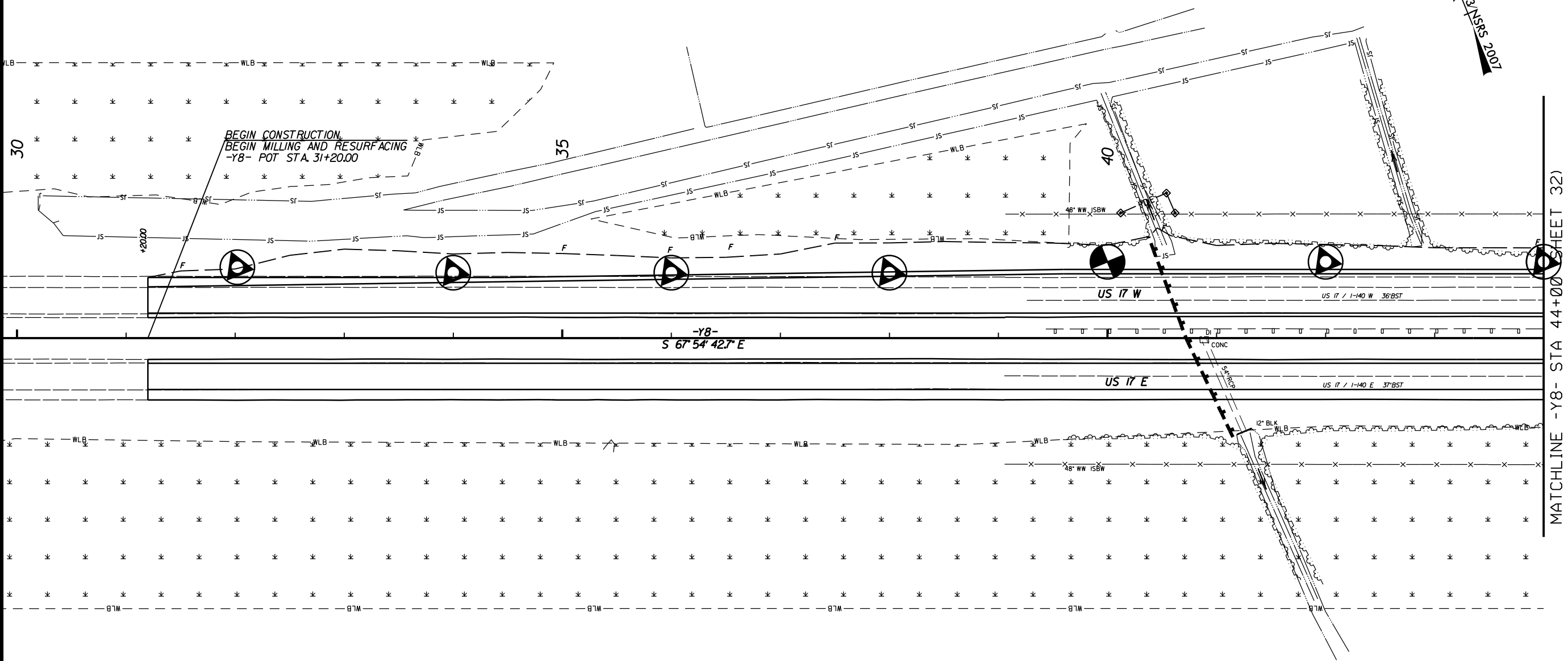
24' C&G

24' C&G

24' C&G

PROJECT REFERENCE NO. U-4751	SHEET NO. 31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

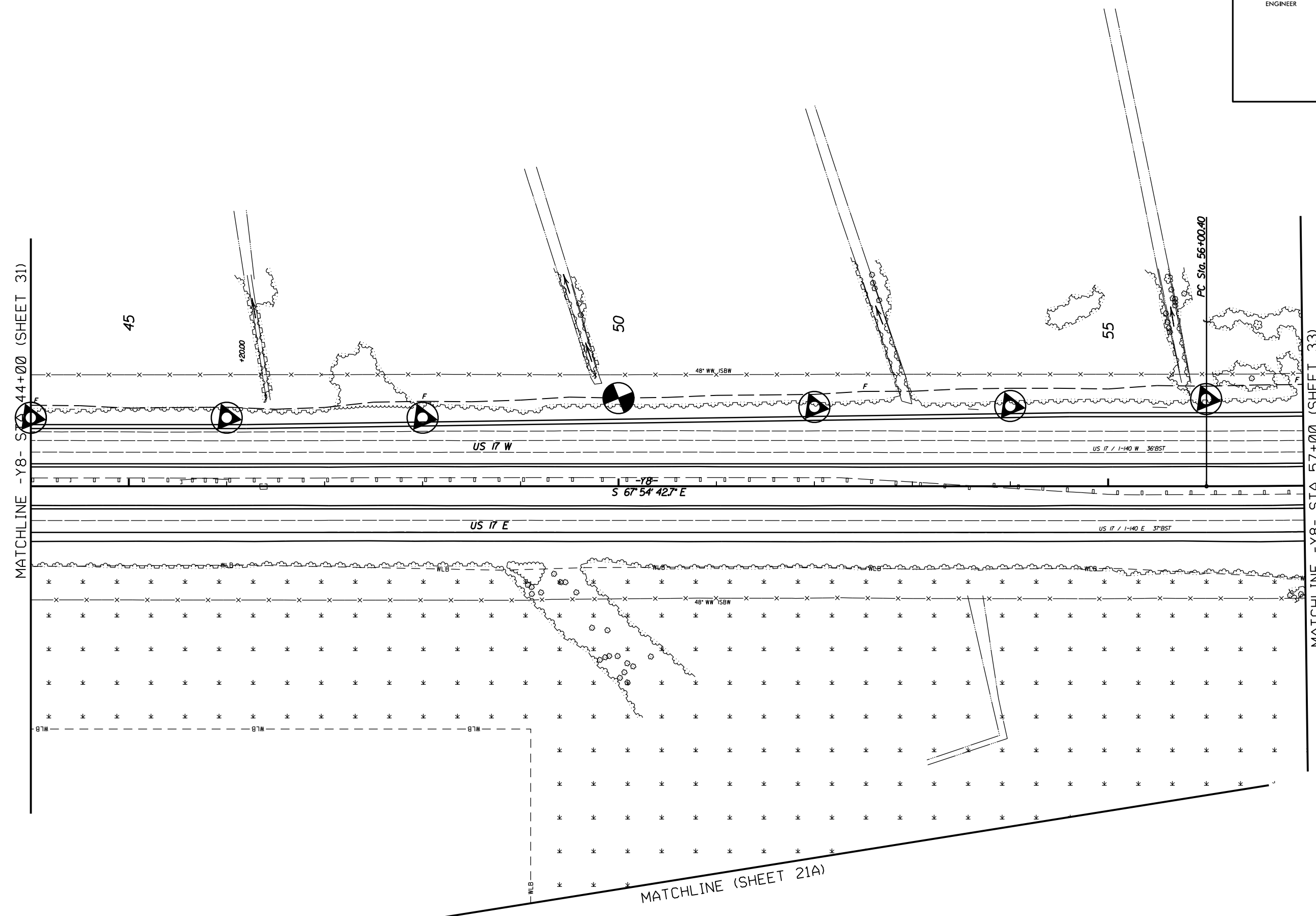
NAD 83 NRS 2007



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PROJECT REFERENCE NO. U-4751	SHEET NO. 32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83 NRS 2007



MATCHLINE (SHEET 21A)

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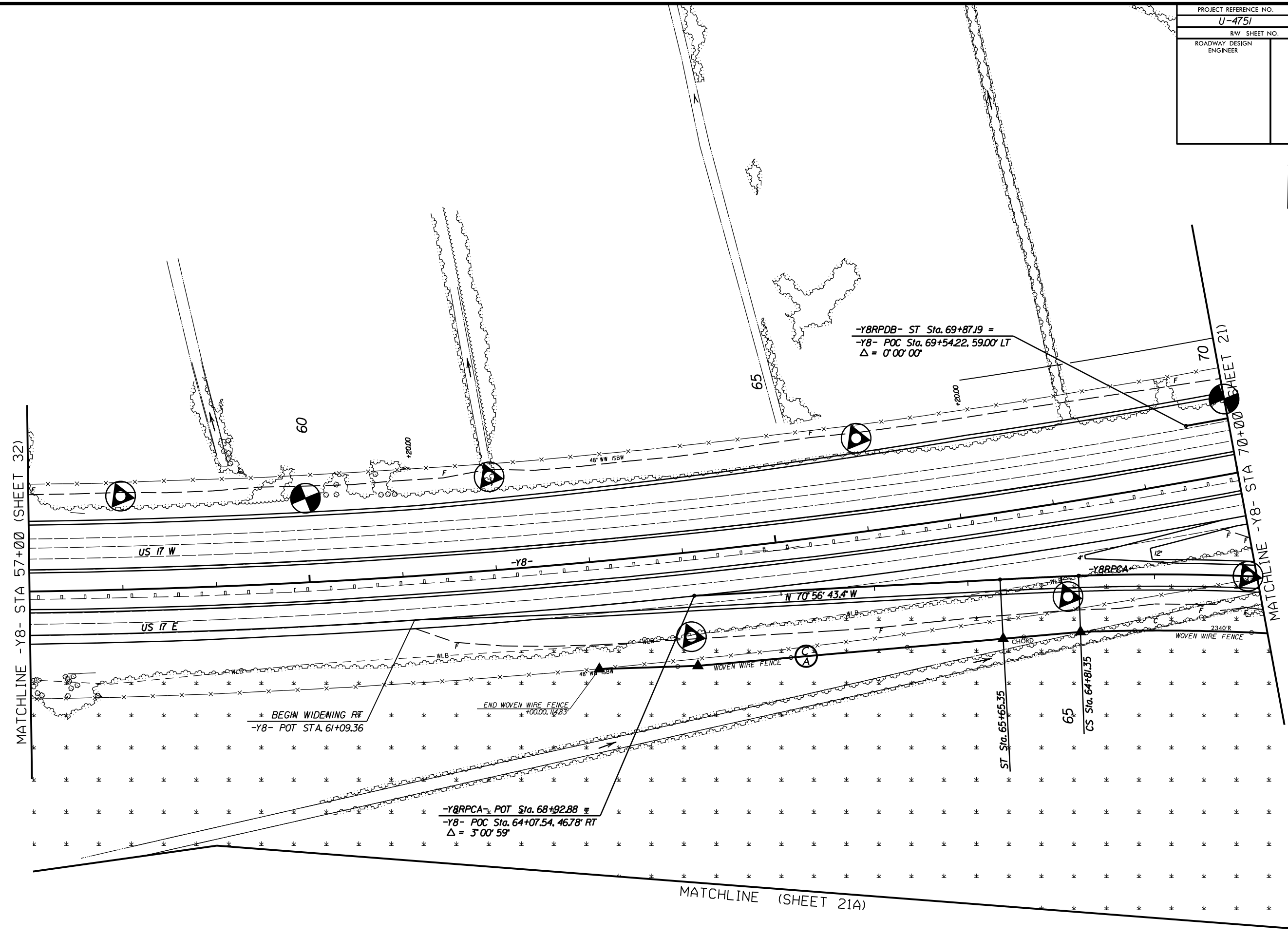
PROJECT REFERENCE NO.	SHEET NO.
U-4751	33
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

REVISIONS

2015-08-12 - R/W REVISION (CEG) - ADDED STATION OFFSET AT PARCEL 170. ADDED PARCELS 231 & 232.

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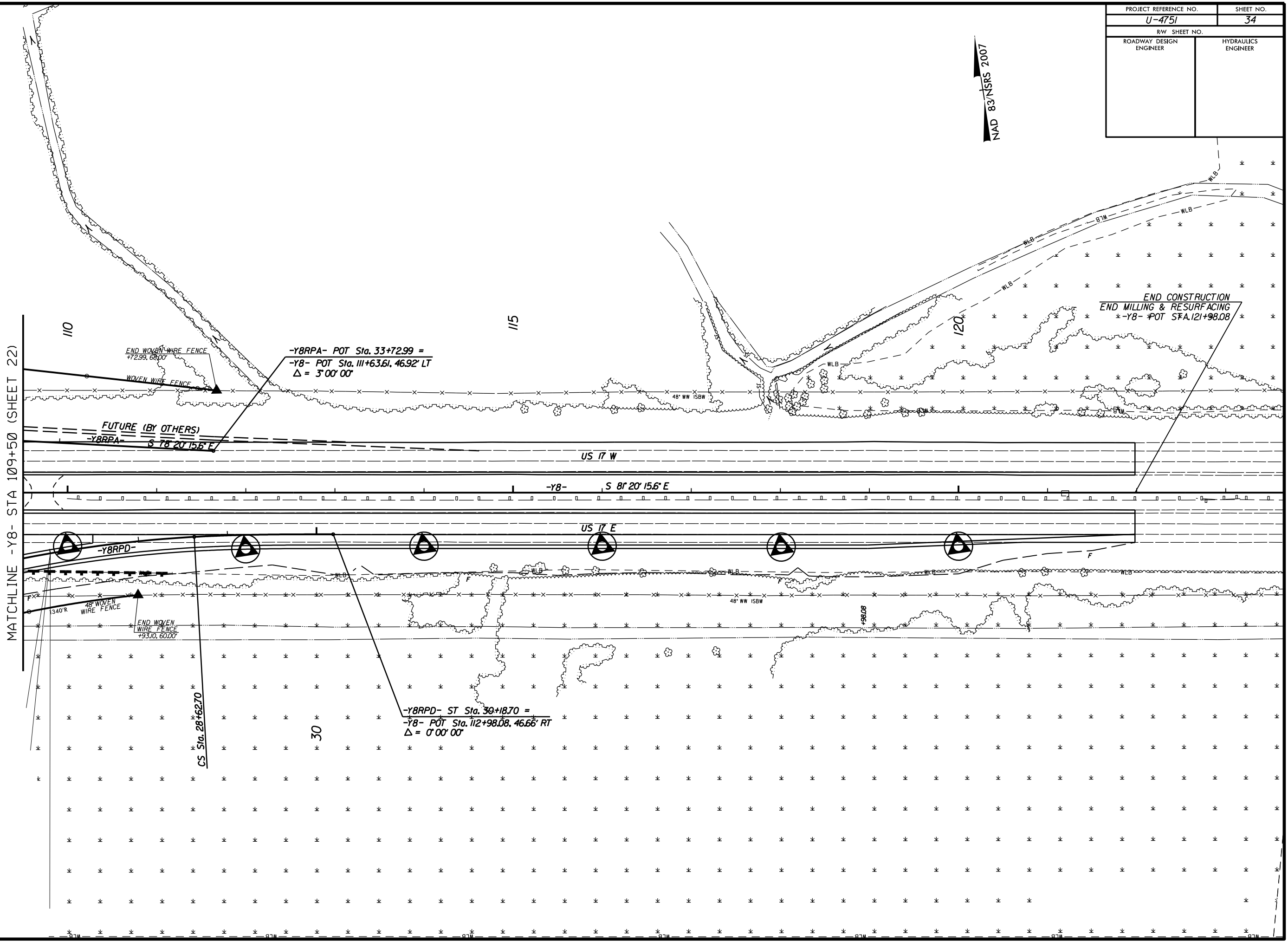
MATCHLINE -Y8- STA 57+00 (SHEET 32)

MATCHLINE -Y8- STA 70+00 (SHEET 21)

MATCHLINE (SHEET 21A)

PROJECT REFERENCE NO.	SHEET NO.
U-4751	34
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83 NSRS 2007



REVISIONS
2015-08-12 - R/W REVISION (CEG) - ADDED STATION OFFSETS AT PARCEL ITO.

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MATCHLINE -Y8- STA 109+50 (SHEET 22)

110

115

120

-Y8RPA- POT Sta. 33+72.99 =
-Y8- POT Sta. 111+63.61, 46.92' LT
Δ = 3' 00" 00"

FUTURE (BY OTHERS)
-Y8RPA- S 78° 20' 15.6" E

US 17 W

-Y8- S 81° 20' 15.6" E

US 17 E

340' R
48' WOVEN WIRE FENCE
END WOVEN WIRE FENCE +93.10, 60.00'

CS Sta. 28+62.70

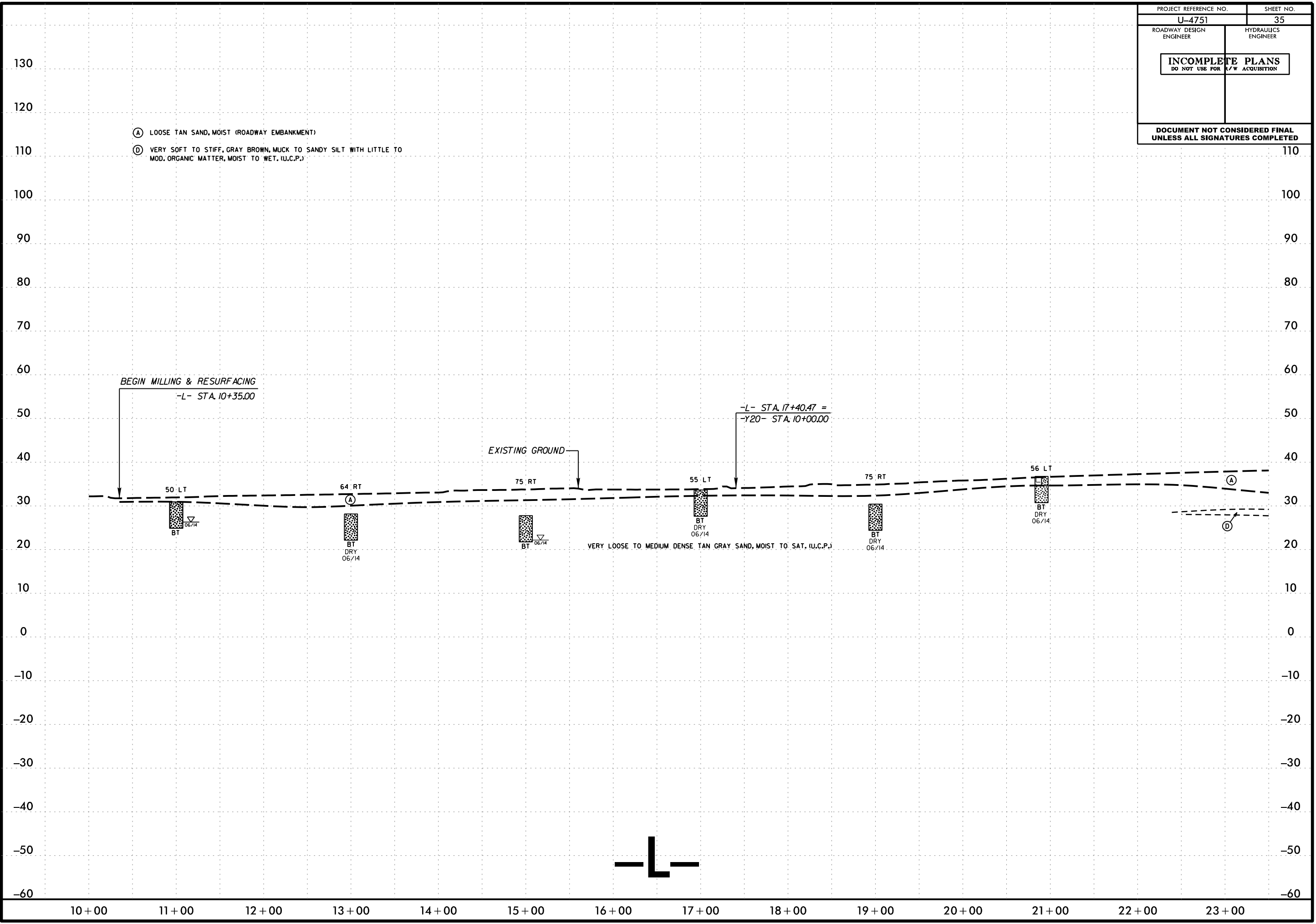
30

-Y8RPD- ST Sta. 30+18.70 =
-Y8- POT Sta. 112+98.08, 46.66' RT
Δ = 0' 00" 00"

END CONSTRUCTION
END MILLING & RESURFACING
-Y8- POT STA. 121+98.08

PROJECT REFERENCE NO. U-4751	SHEET NO. 35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
- (D) VERY SOFT TO STIFF, GRAY BROWN, MUCK TO SANDY SILT WITH LITTLE TO MOD. ORGANIC MATTER, MOIST TO WET. (U.C.P.)



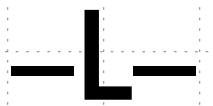
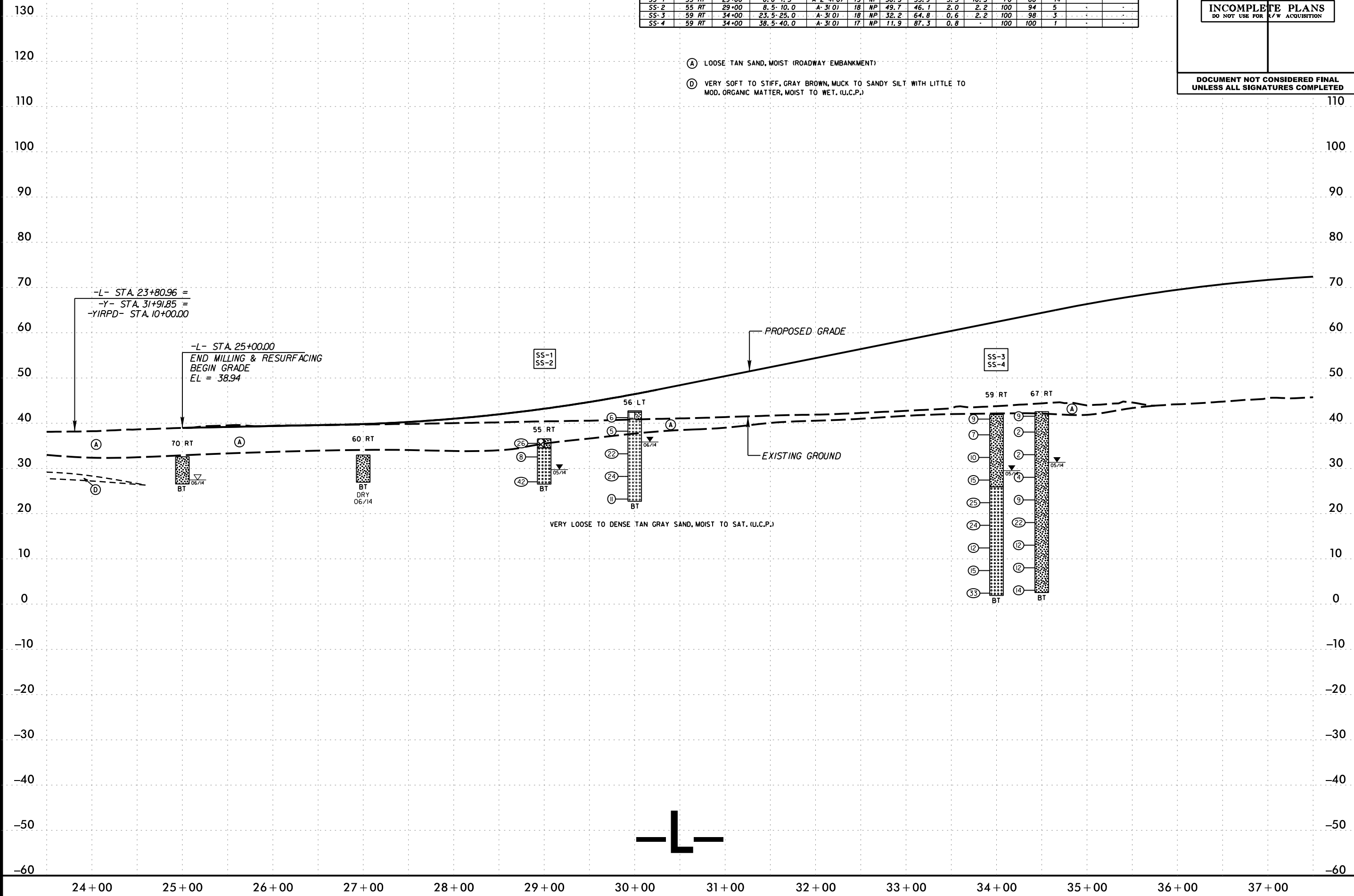
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C SAND	F SAND	SILT	CLAY	10	40			200
SS-1	55 RT	29+00	0.0-1.5	A-2-4(0)	13	NP	30.3	53.9	5.5	10.3	70	60	14	-	-
SS-2	55 RT	29+00	8.5-10.0	A-3(0)	18	NP	49.7	46.1	2.0	2.2	100	94	5	-	-
SS-3	59 RT	34+00	23.5-25.0	A-3(0)	18	NP	32.2	64.8	0.6	2.2	100	98	3	-	-
SS-4	59 RT	34+00	38.5-40.0	A-3(0)	17	NP	11.9	87.3	0.8	-	100	100	1	-	-

PROJECT REFERENCE NO. U-4751	SHEET NO. 36
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

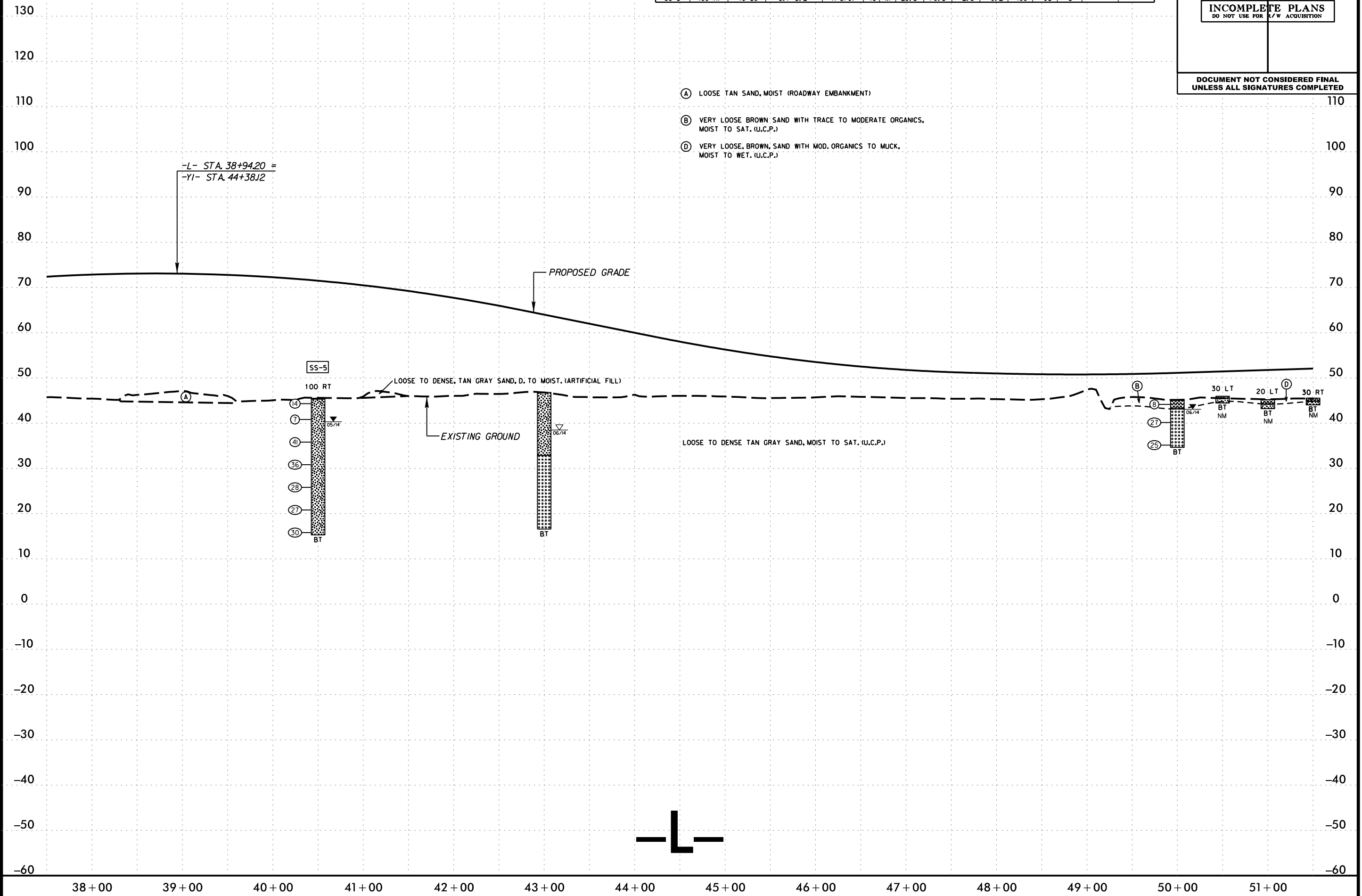
- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
- (D) VERY SOFT TO STIFF, GRAY BROWN, MUCK TO SANDY SILT WITH LITTLE TO MOD. ORGANIC MATTER, MOIST TO WET. (U.C.P.)



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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
							C SAND	F SAND	SILT	CLAY	10	40	200		
SS-5	100 RT	40+50	3.7-5.2	A-3(0)	16	NP	26.5	70.5	2.8	0.2	100	95	5	-	-

PROJECT REFERENCE NO. U-4751	SHEET NO. 37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
- (B) VERY LOOSE BROWN SAND WITH TRACE TO MODERATE ORGANICS, MOIST TO SAT. (U.C.P.)
- (D) VERY LOOSE, BROWN, SAND WITH MOD. ORGANICS TO MUCK, MOIST TO WET. (U.C.P.)

-L- STA. 38+94.20 =
 -YI- STA. 44+38.12

SS-5

100 RT

LOOSE TO DENSE, TAN GRAY SAND, D. TO MOIST. (ARTIFICIAL FILL)

EXISTING GROUND

PROPOSED GRADE

LOOSE TO DENSE TAN GRAY SAND, MOIST TO SAT. (U.C.P.)

30 LT

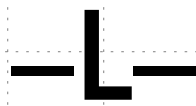
BT NM

20 LT

BT NM

30 RT

BT NM

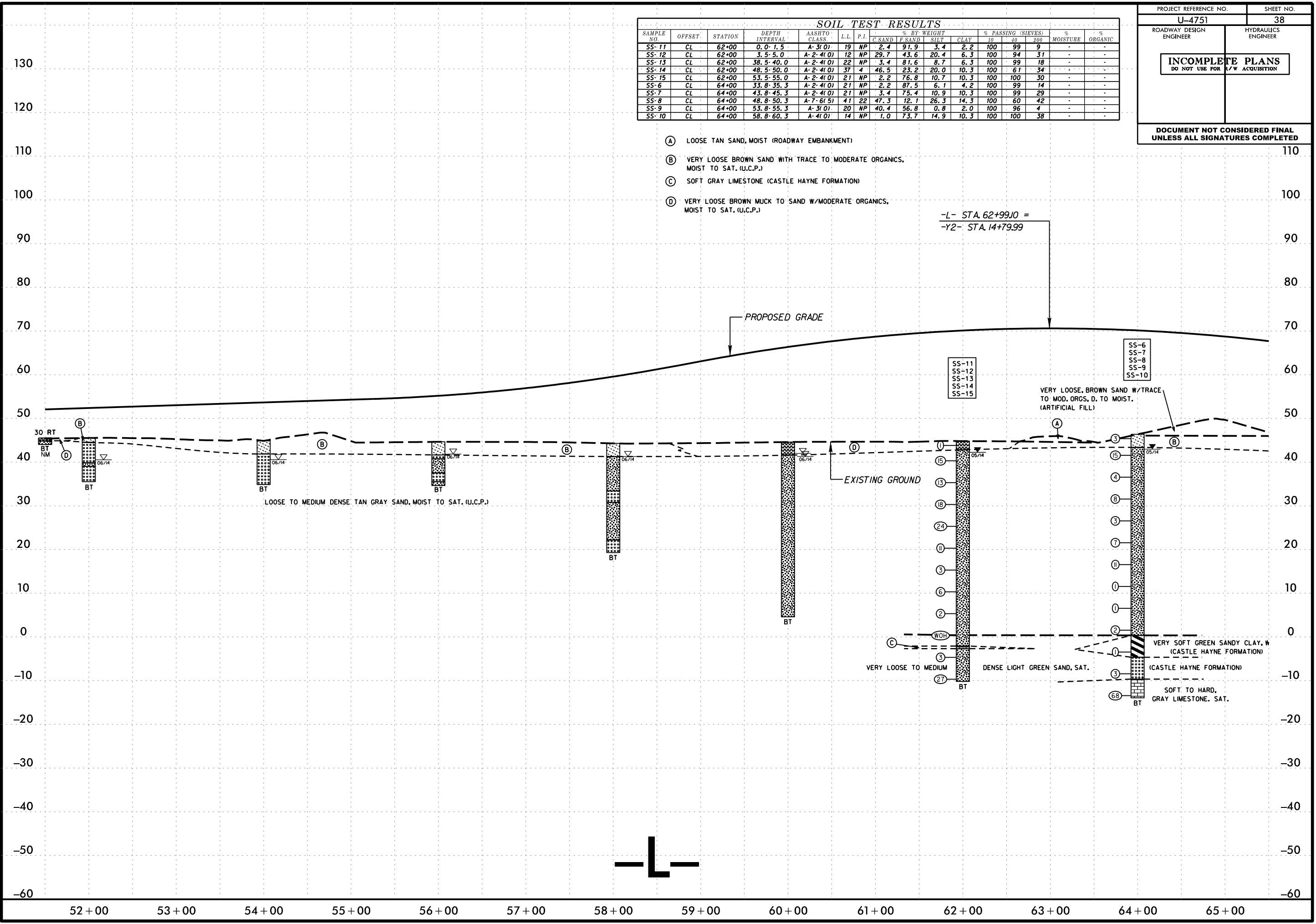


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-11	CL	62+00	0.0-1.5	A-3(0)	19	NP	2.4	91.9	3.4	2.2	100	99	9	-	-
SS-12	CL	62+00	3.5-5.0	A-2-4(0)	12	NP	29.7	43.6	20.4	6.3	100	94	31	-	-
SS-13	CL	62+00	38.5-40.0	A-2-4(0)	22	NP	3.4	81.6	8.7	6.3	100	99	18	-	-
SS-14	CL	62+00	48.5-50.0	A-2-4(0)	37	4	46.5	23.2	20.0	10.3	100	61	34	-	-
SS-15	CL	62+00	53.5-55.0	A-2-4(0)	21	NP	2.2	76.8	10.7	10.3	100	100	30	-	-
SS-6	CL	64+00	33.8-35.3	A-2-4(0)	21	NP	2.2	87.5	6.1	4.2	100	99	14	-	-
SS-7	CL	64+00	43.8-45.3	A-2-4(0)	21	NP	3.4	75.4	10.9	10.3	100	99	29	-	-
SS-8	CL	64+00	48.8-50.3	A-7-6(5)	41	22	47.3	12.1	26.3	14.3	100	60	42	-	-
SS-9	CL	64+00	53.8-55.3	A-3(0)	20	NP	40.4	56.8	0.8	2.0	100	96	4	-	-
SS-10	CL	64+00	58.8-60.3	A-4(0)	14	NP	1.0	73.7	14.9	10.3	100	100	38	-	-

PROJECT REFERENCE NO. U-4751	SHEET NO. 38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
- (B) VERY LOOSE BROWN SAND WITH TRACE TO MODERATE ORGANICS, MOIST TO SAT. (U.C.P.)
- (C) SOFT GRAY LIMESTONE (CASTLE HAYNE FORMATION)
- (D) VERY LOOSE BROWN MUCK TO SAND W/MODERATE ORGANICS, MOIST TO SAT. (U.C.P.)

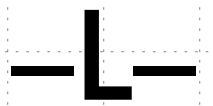
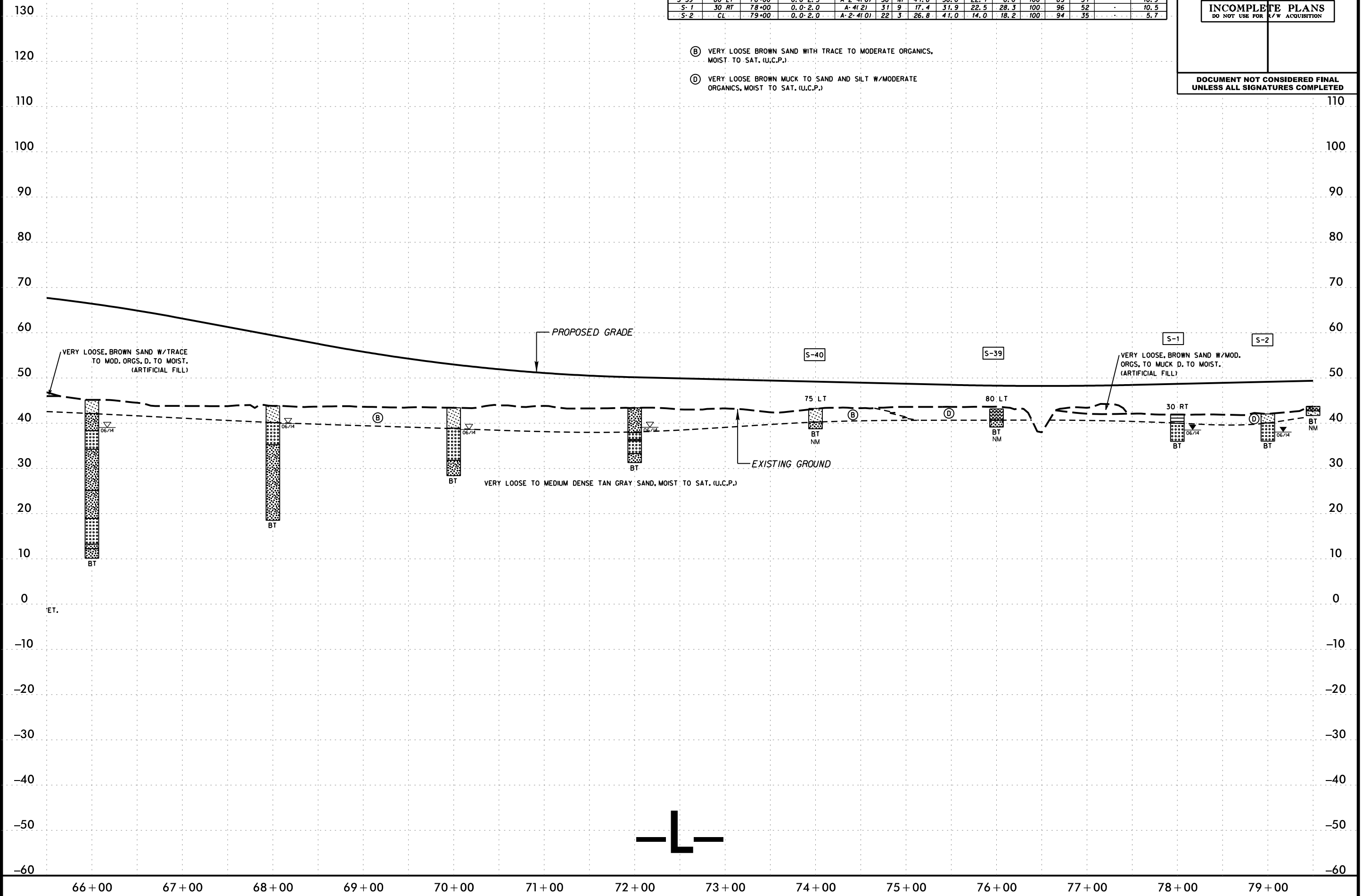


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-40	75 LT	74+00	0.0-3.0	A-2-4(0)	26	NP	32.8	37.0	12.1	18.0	100	89	34	-	7.4
S-39	80 LT	76+00	0.0-2.5	A-2-4(0)	36	NP	41.8	30.0	22.1	6.0	100	83	31	-	10.9
S-1	30 RT	78+00	0.0-2.0	A-4(2)	31	9	17.4	31.9	22.5	28.3	100	96	52	-	10.5
S-2	CL	79+00	0.0-2.0	A-2-4(0)	22	3	26.8	41.0	14.0	18.2	100	94	35	-	5.7

PROJECT REFERENCE NO. U-4751	SHEET NO. 39
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

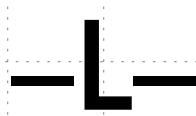
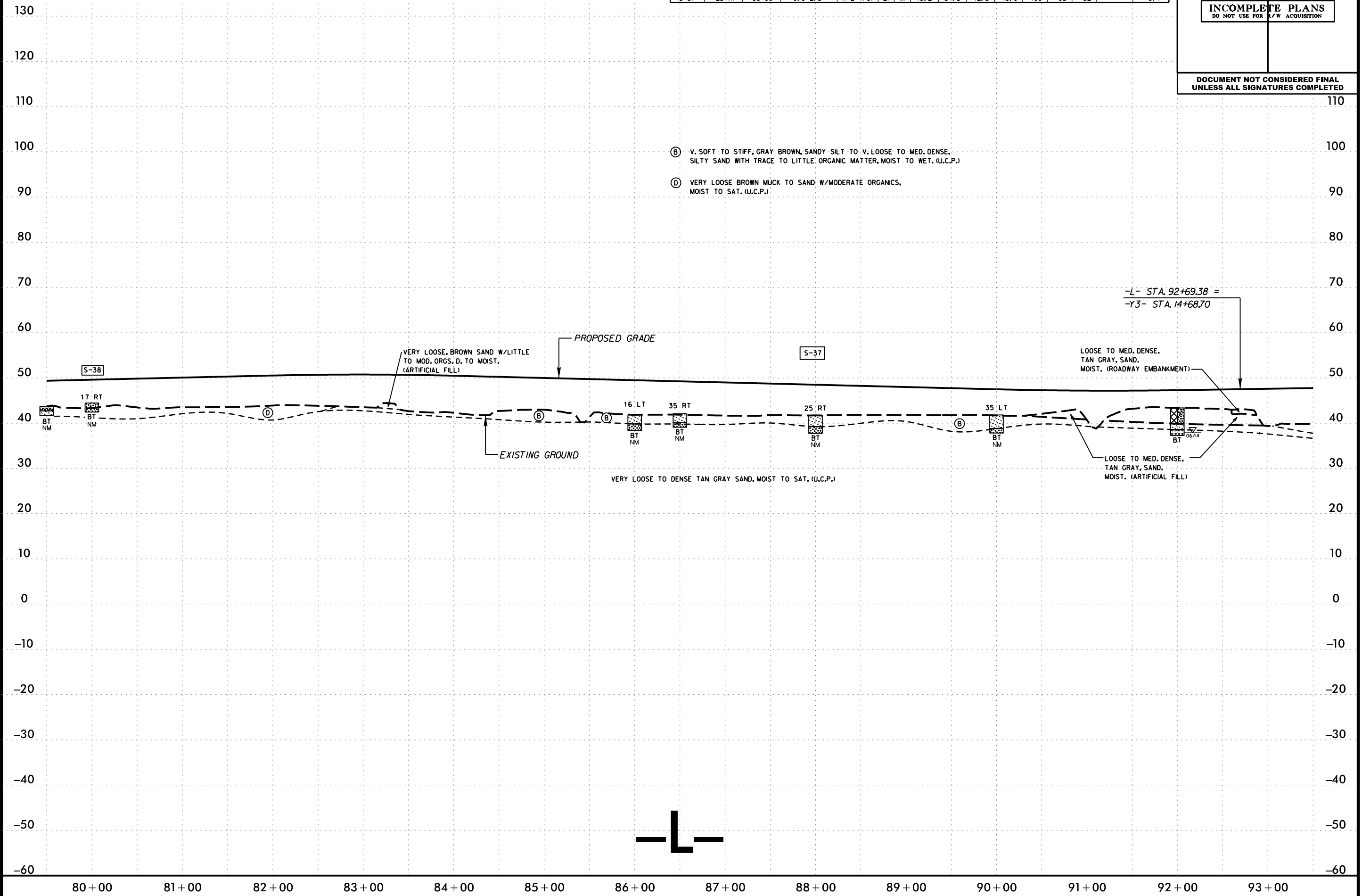
- ⓑ VERY LOOSE BROWN SAND WITH TRACE TO MODERATE ORGANICS, MOIST TO SAT. (U.C.P.)
- ⓓ VERY LOOSE BROWN MUCK TO SAND AND SILT W/MODERATE ORGANICS, MOIST TO SAT. (U.C.P.)



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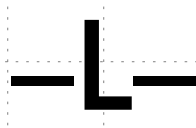
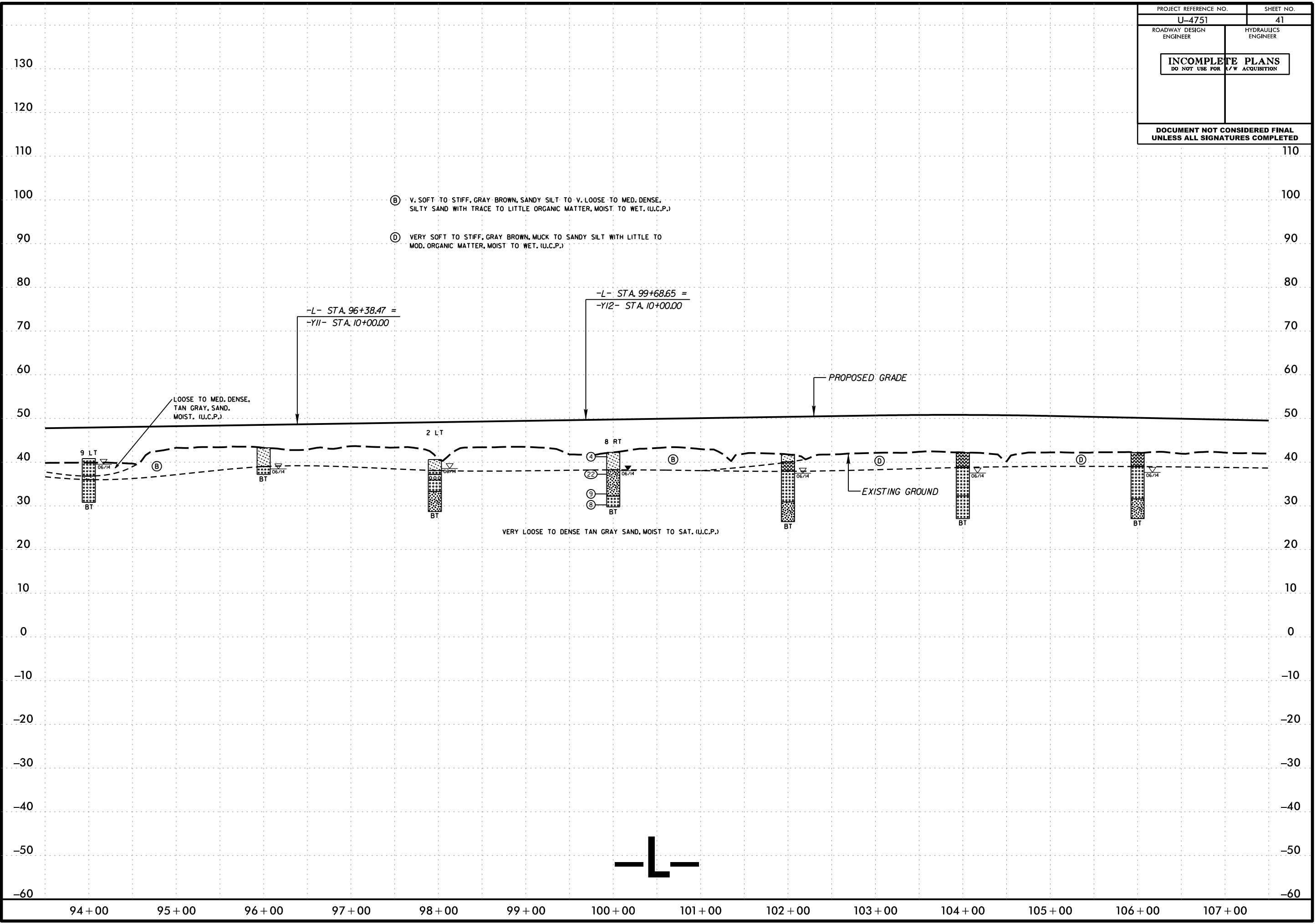
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C SAND	F SAND	SILT	CLAY	10	40			200
S-38	17 RT	80+00	0.0-2.0	A-2-4(0)	14	NP	23.2	65.3	5.5	6.0	100	95	13	-	1.9
S-37	25 RT	88+00	0.0-2.5	A-2-4(0)	27	NP	18.2	51.3	12.5	18.0	100	95	32	-	6.4

PROJECT REFERENCE NO. U-4751	SHEET NO. 40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PROJECT REFERENCE NO. U-4751	SHEET NO. 41
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

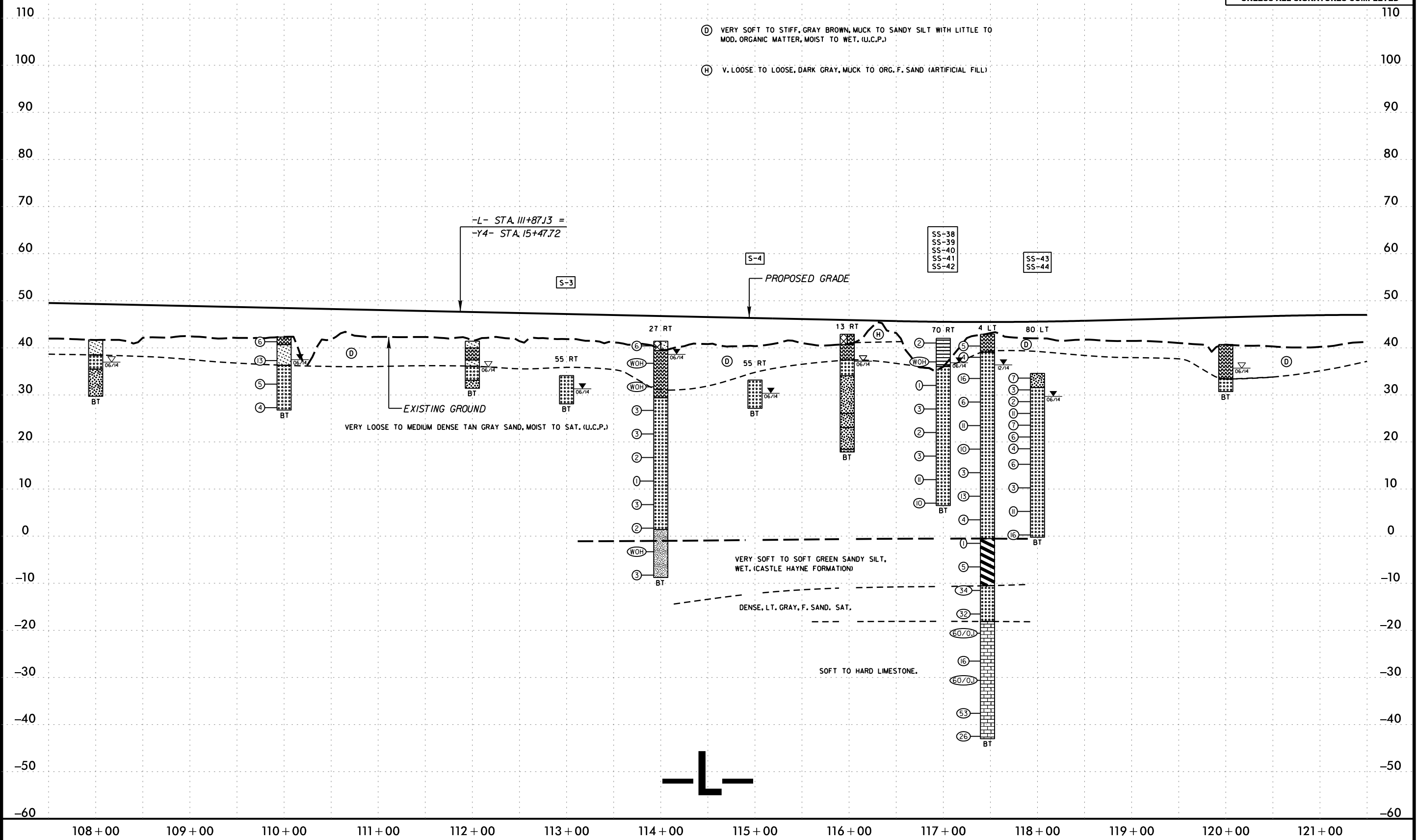
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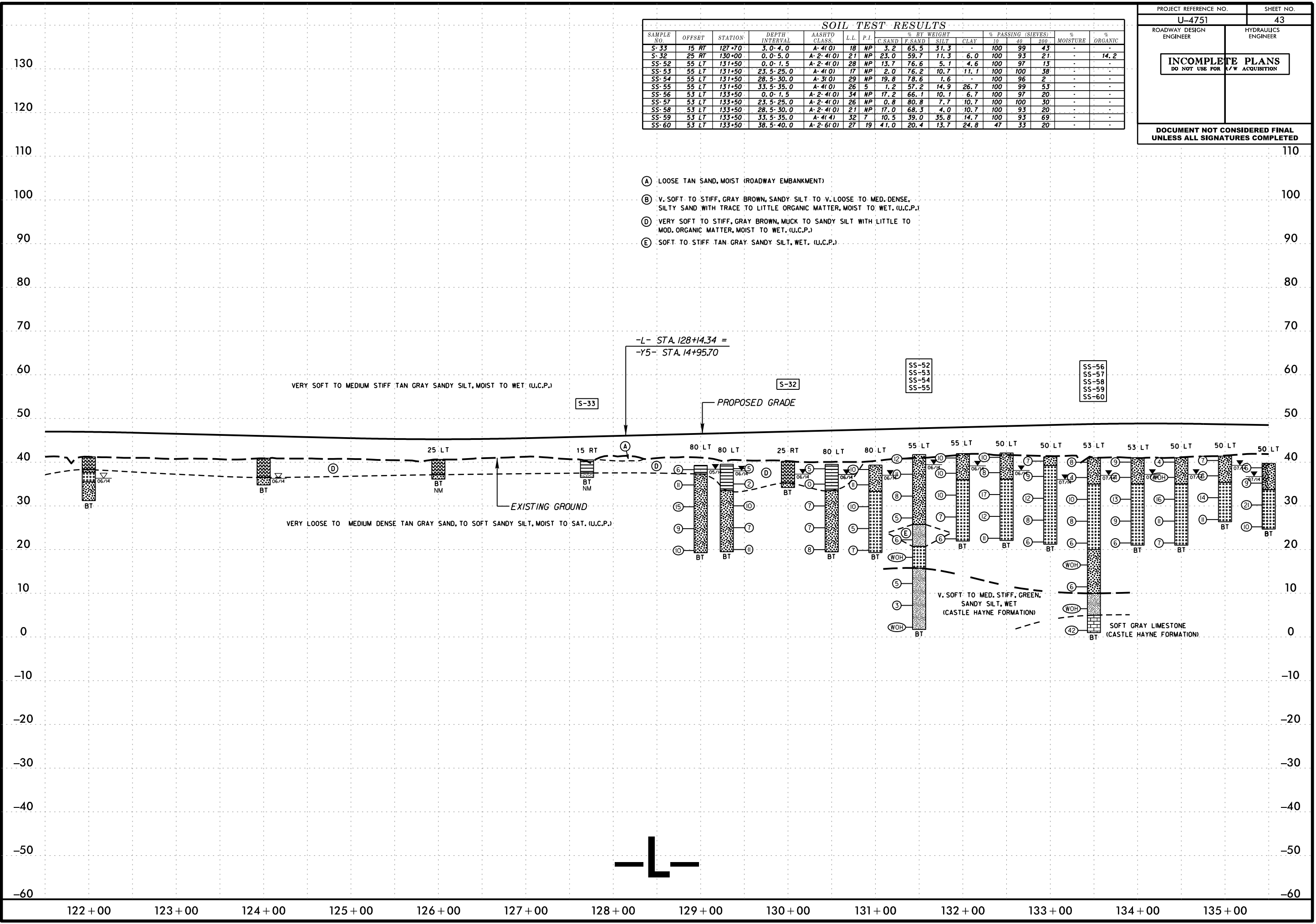
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-3	55 RT	113+00	0.0-1.0	A-3(0)	23	NP	31.1	66.6	1.3	1.0	100	97	3	-	0.4
S-4	55 RT	115+00	0.0-6.0	A-3(0)	18	NP	25.1	73.0	0.7	1.2	100	99	2	-	-
SS-38	70 RT	117+00	0.0-1.5	A-4(0)	21	2	11.5	56.7	12.1	19.7	100	98	36	-	-
SS-39	70 RT	117+00	4.0-5.5	A-4(0)	21	2	11.7	55.7	10.9	21.7	99	98	36	-	-
SS-40	70 RT	117+00	9.0-10.5	A-3(0)	19	NP	42.1	52.1	2.2	3.6	100	92	6	-	-
SS-41	70 RT	117+00	19.0-20.5	A-3(0)	16	NP	24.1	75.3	0.6	-	100	99	1	-	-
SS-42	70 RT	117+00	29.0-30.5	A-3(0)	19	NP	1.2	96.4	0.8	1.6	100	100	5	-	-
SS-43	80 LT	118+00	0.0-1.5	A-2-4(0)	30	NP	21.8	57.8	16.0	4.4	100	95	25	-	-
SS-44	80 LT	118+00	5.0-6.5	A-3(0)	16	NP	29.7	68.1	1.0	1.2	99	97	4	-	-

PROJECT REFERENCE NO. U-4751	SHEET NO. 42
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	10	40	200			
S-33	15 RT	127+70	3.0-4.0	A-4(0)	18	NP	3.2	65.5	31.3	-	100	99	43	-	-
S-32	25 RT	130+00	0.0-5.0	A-2-4(0)	21	NP	23.0	59.7	11.3	6.0	100	93	21	-	14.2
SS-52	55 LT	131+50	0.0-1.5	A-2-4(0)	28	NP	13.7	76.6	5.1	4.6	100	97	13	-	-
SS-53	55 LT	131+50	23.5-25.0	A-4(0)	17	NP	2.0	76.2	10.7	11.1	100	100	38	-	-
SS-54	55 LT	131+50	28.5-30.0	A-3(0)	29	NP	19.8	78.6	1.6	-	100	96	2	-	-
SS-55	55 LT	131+50	33.5-35.0	A-4(0)	26	5	1.2	57.2	14.9	26.7	100	99	53	-	-
SS-56	53 LT	133+50	0.0-1.5	A-2-4(0)	34	NP	17.2	66.1	10.1	6.7	100	97	20	-	-
SS-57	53 LT	133+50	23.5-25.0	A-2-4(0)	26	NP	0.8	80.8	7.7	10.7	100	100	30	-	-
SS-58	53 LT	133+50	28.5-30.0	A-2-4(0)	21	NP	17.0	68.3	4.0	10.7	100	93	20	-	-
SS-59	53 LT	133+50	33.5-35.0	A-4(4)	32	7	10.5	39.0	35.8	14.7	100	93	69	-	-
SS-60	53 LT	133+50	38.5-40.0	A-2-6(0)	27	19	41.0	20.4	13.7	24.8	47	33	20	-	-

- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
- (B) V. SOFT TO STIFF, GRAY BROWN, SANDY SILT TO V. LOOSE TO MED. DENSE, SILTY SAND WITH TRACE TO LITTLE ORGANIC MATTER, MOIST TO WET. (U.C.P.)
- (D) VERY SOFT TO STIFF, GRAY BROWN, MUCK TO SANDY SILT WITH LITTLE TO MOD. ORGANIC MATTER, MOIST TO WET. (U.C.P.)
- (E) SOFT TO STIFF TAN GRAY SANDY SILT, WET. (U.C.P.)

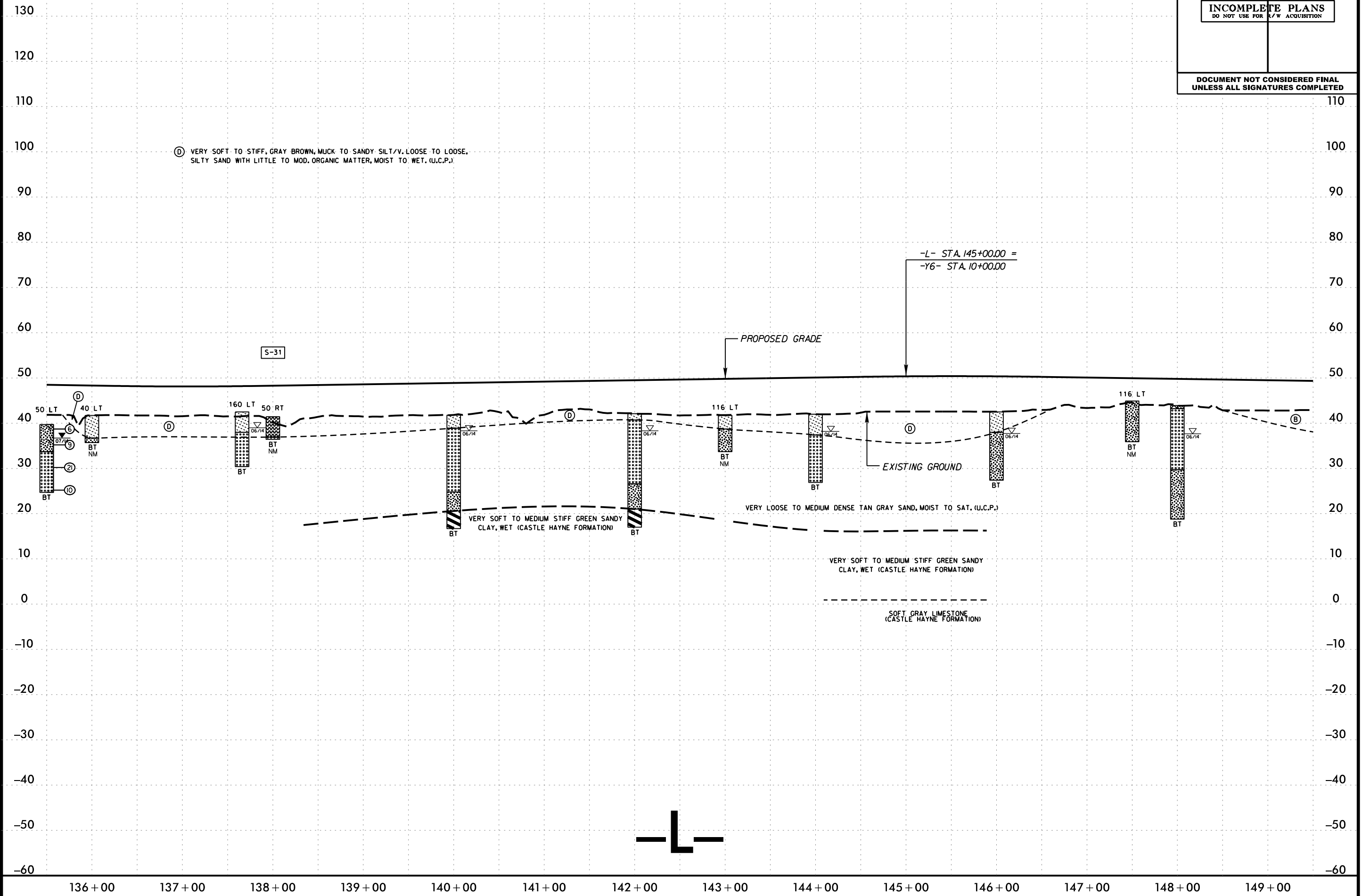


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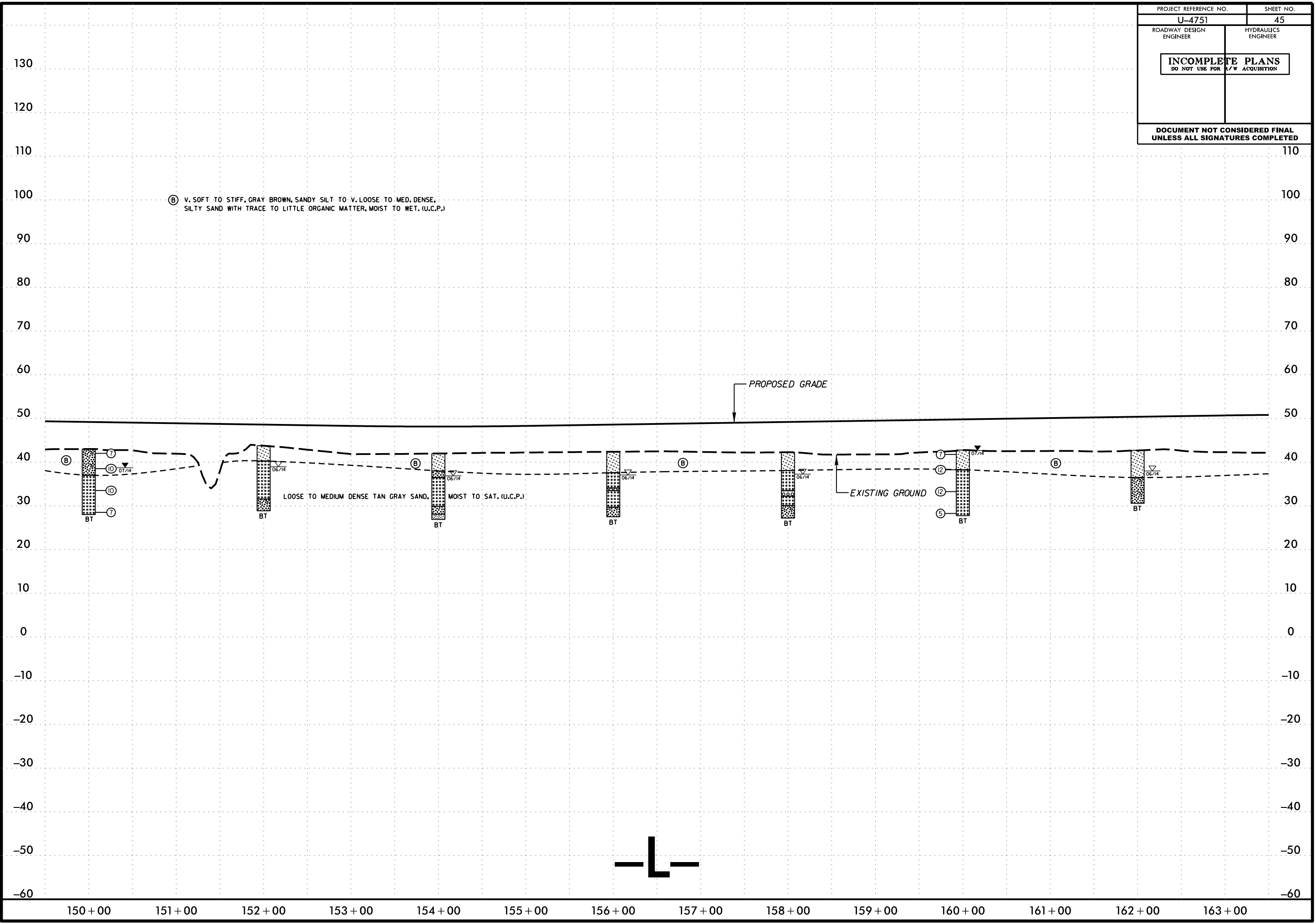
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-31	50 RT	138+00	0.0-4.5	A-2-4(0)	21	NP	9.0	71.1	11.9	8.0	100	98	25	-	12.4

PROJECT REFERENCE NO. U-4751	SHEET NO. 44
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



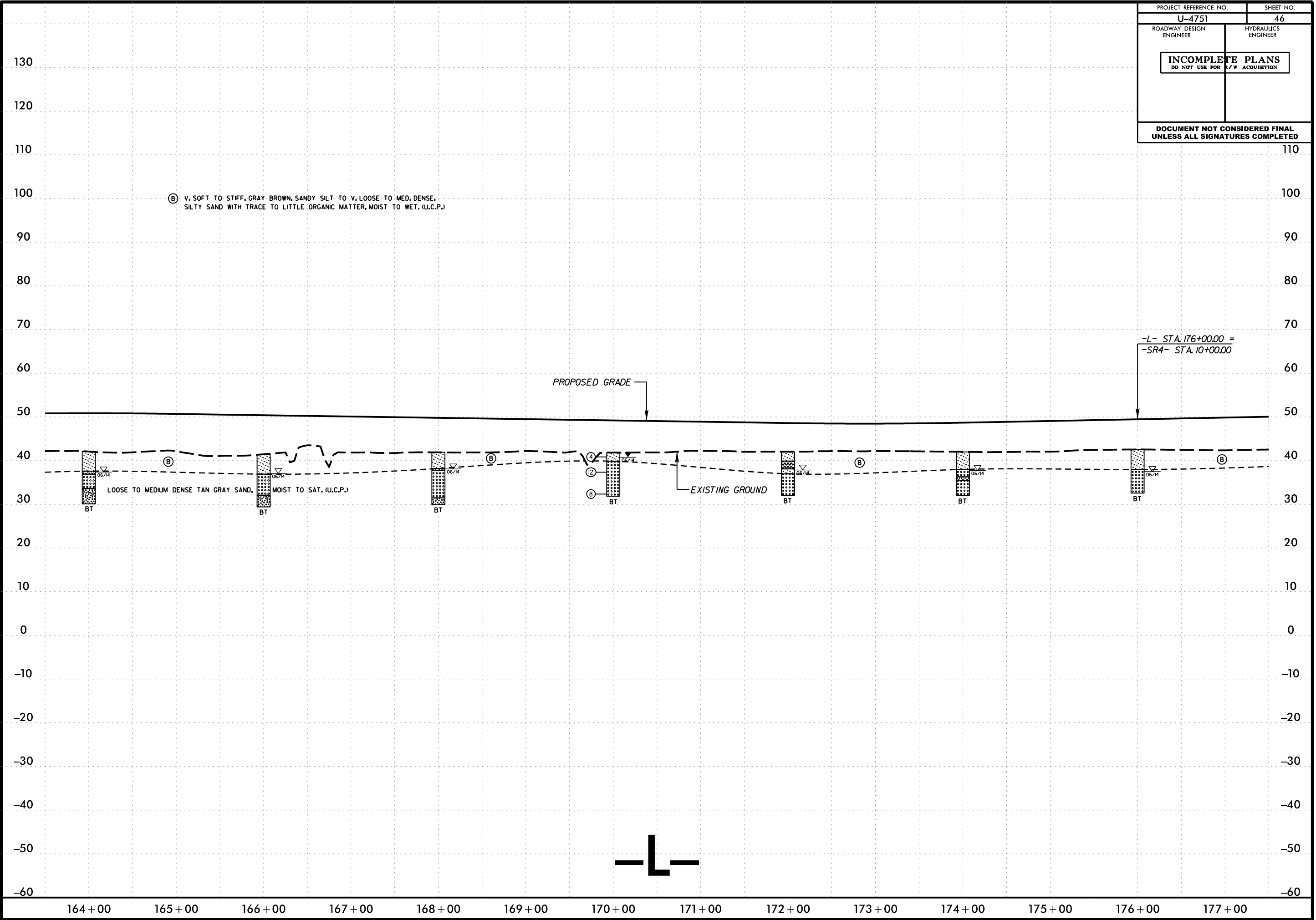
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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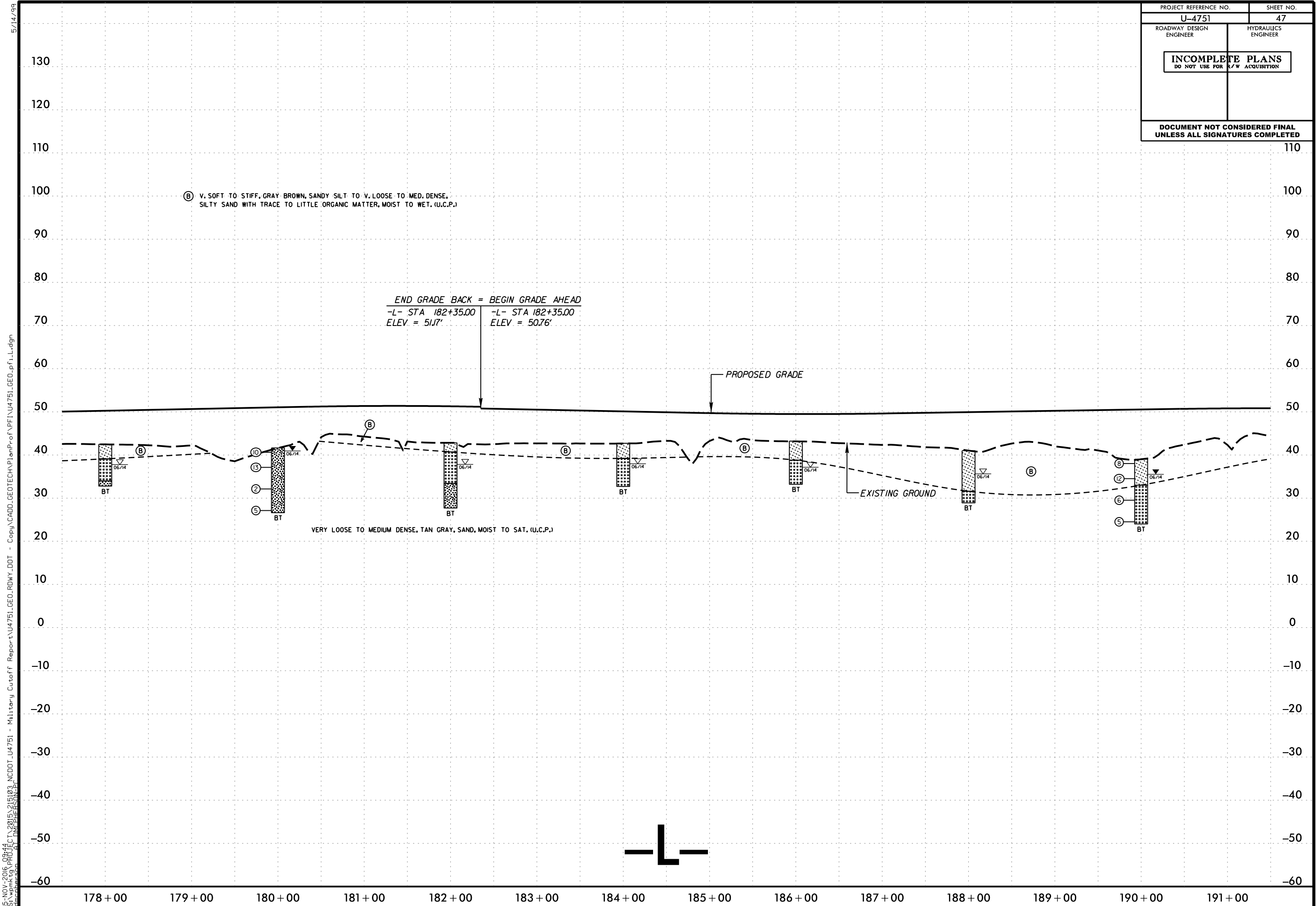


PROJECT REFERENCE NO. U-4751	SHEET NO. 46
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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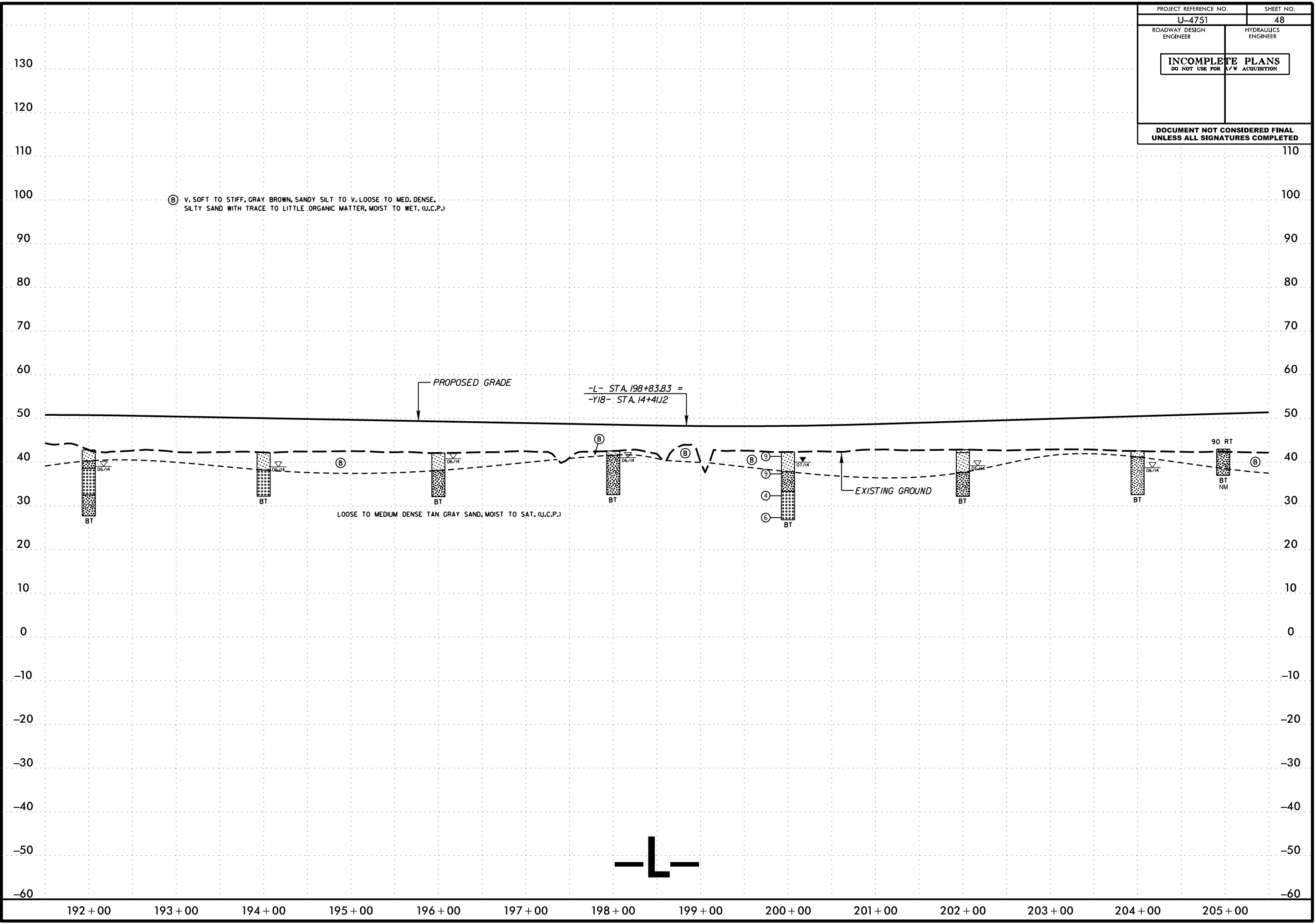
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U-4751	47
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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PROJECT REFERENCE NO.	SHEET NO.
U-4751	48
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

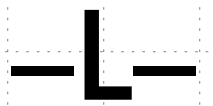
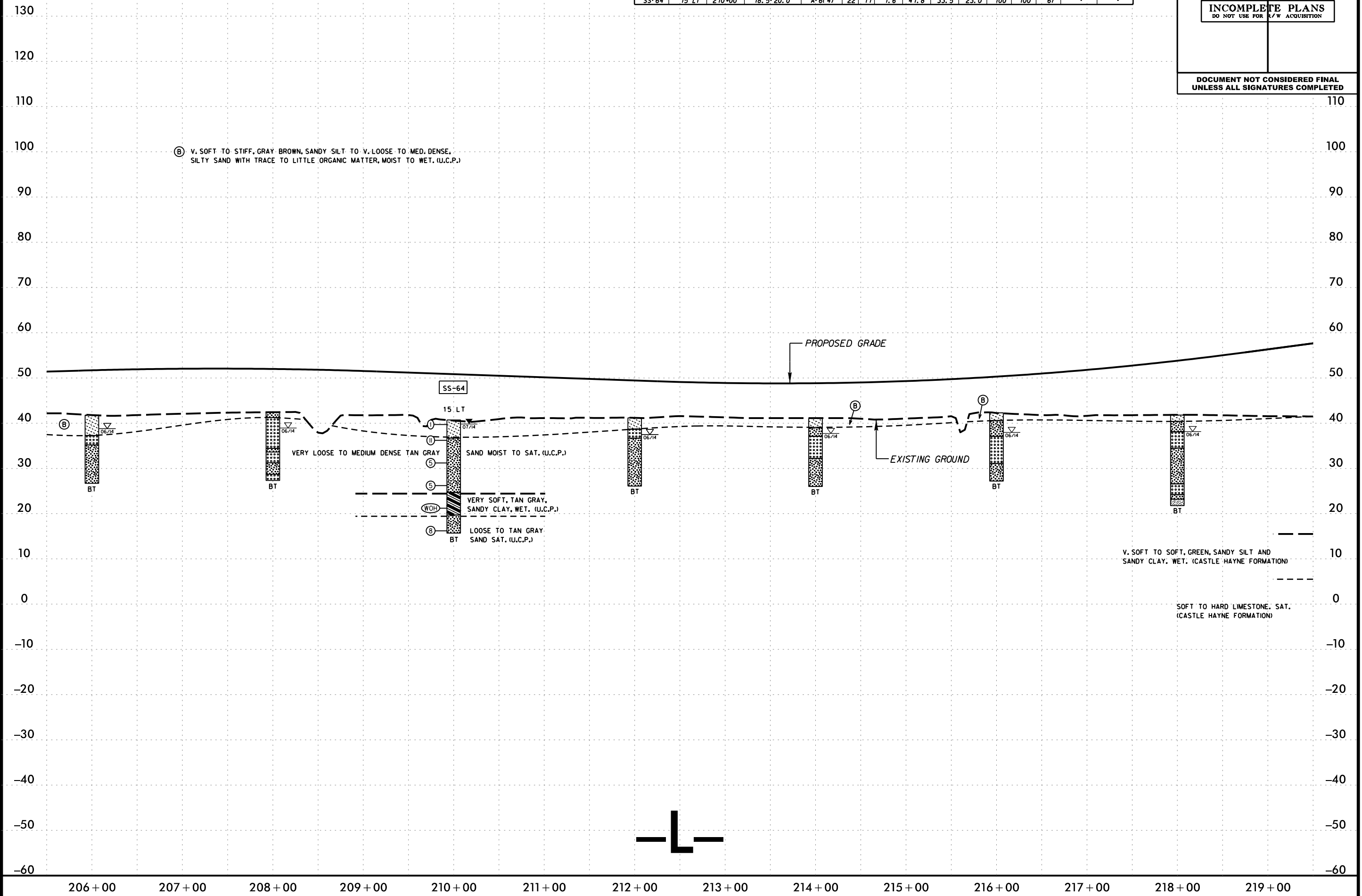
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	#10	#40	#200		
SS-64	15 LT	210+00	18.5-20.0	A-6(4)	22	11	1.6	41.8	33.5	23.0	100	100	67	-	-

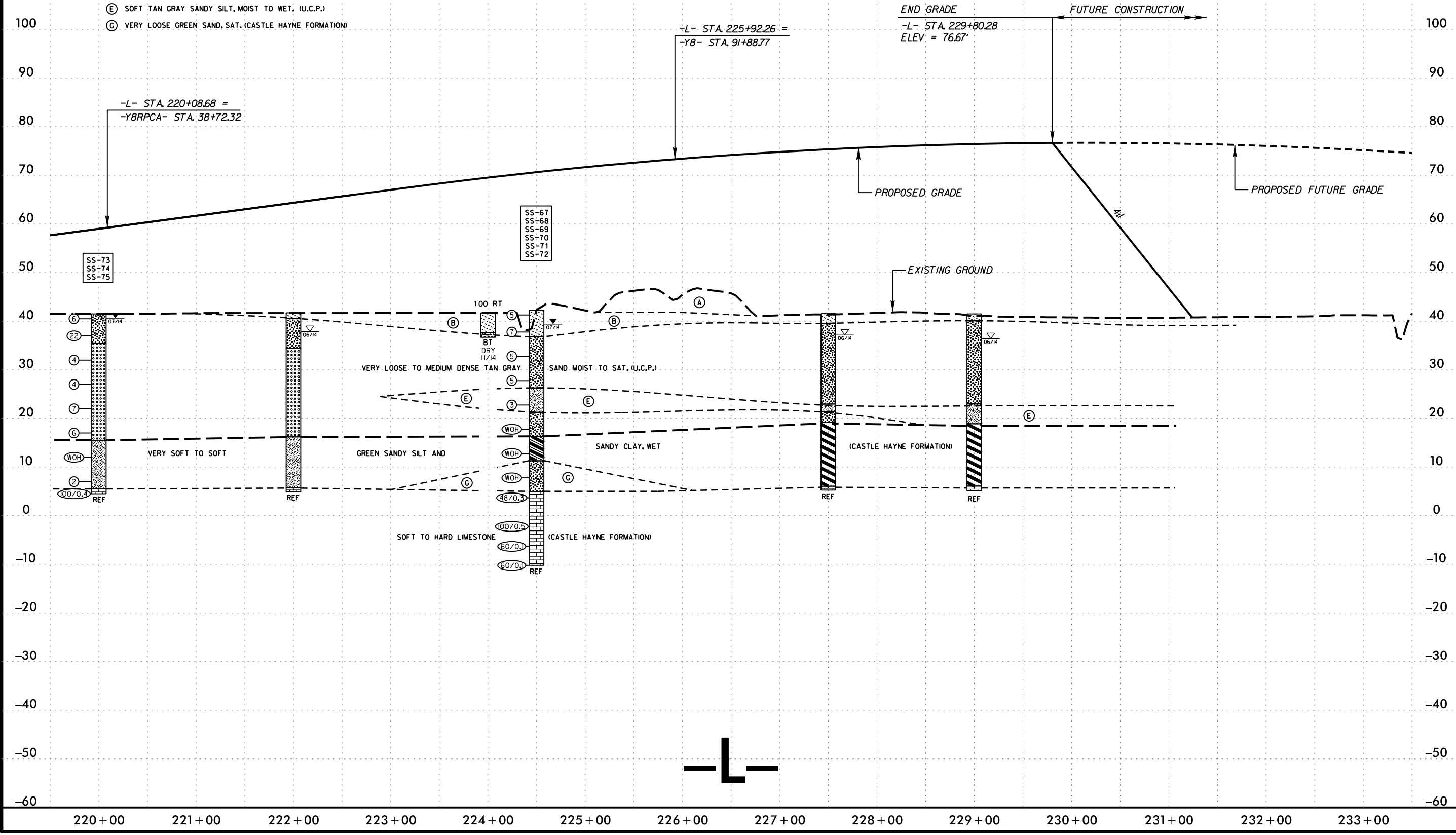
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C SAND	F SAND	SILT	CLAY	10	40	200		
SS-73	CL	220+00	0.0-1.5	A-2-4(0)	18	NP	15.6	66.5	6.9	11.1	100	97	22	-	-
SS-74	CL	220+00	28.5-30.0	A-4(7)	31	9	8.1	28.3	50.9	12.7	100	95	83	-	-
SS-75	CL	220+00	36.6-37.0	***	-	-	-	-	-	-	-	-	-	-	-
SS-67	CL	224+50	18.5-20.0	A-4(2)	26	6	9.9	30.7	16.8	42.6	100	98	61	-	-
SS-68	CL	224+50	23.5-25.0	A-2-4(0)	19	7	11.7	62.8	6.5	19.0	100	97	31	-	-
SS-69	CL	224+50	28.5-30.0	A-6(7)	32	11	12.3	29.3	46.9	11.5	100	91	77	-	-
SS-70	CL	224+50	33.5-35.0	A-2-4(0)	19	1	50.7	34.7	5.3	9.3	100	78	20	-	-
SS-71	CL	224+50	37.3-38.6	A-1-a(0)	18	NP	60.0	21.0	2.2	16.8	37	20	8	-	-
SS-72	CL	224+50	43.5-44.5	A-1-a(0)	15	NP	61.8	20.6	2.8	14.7	32	16	6	-	-

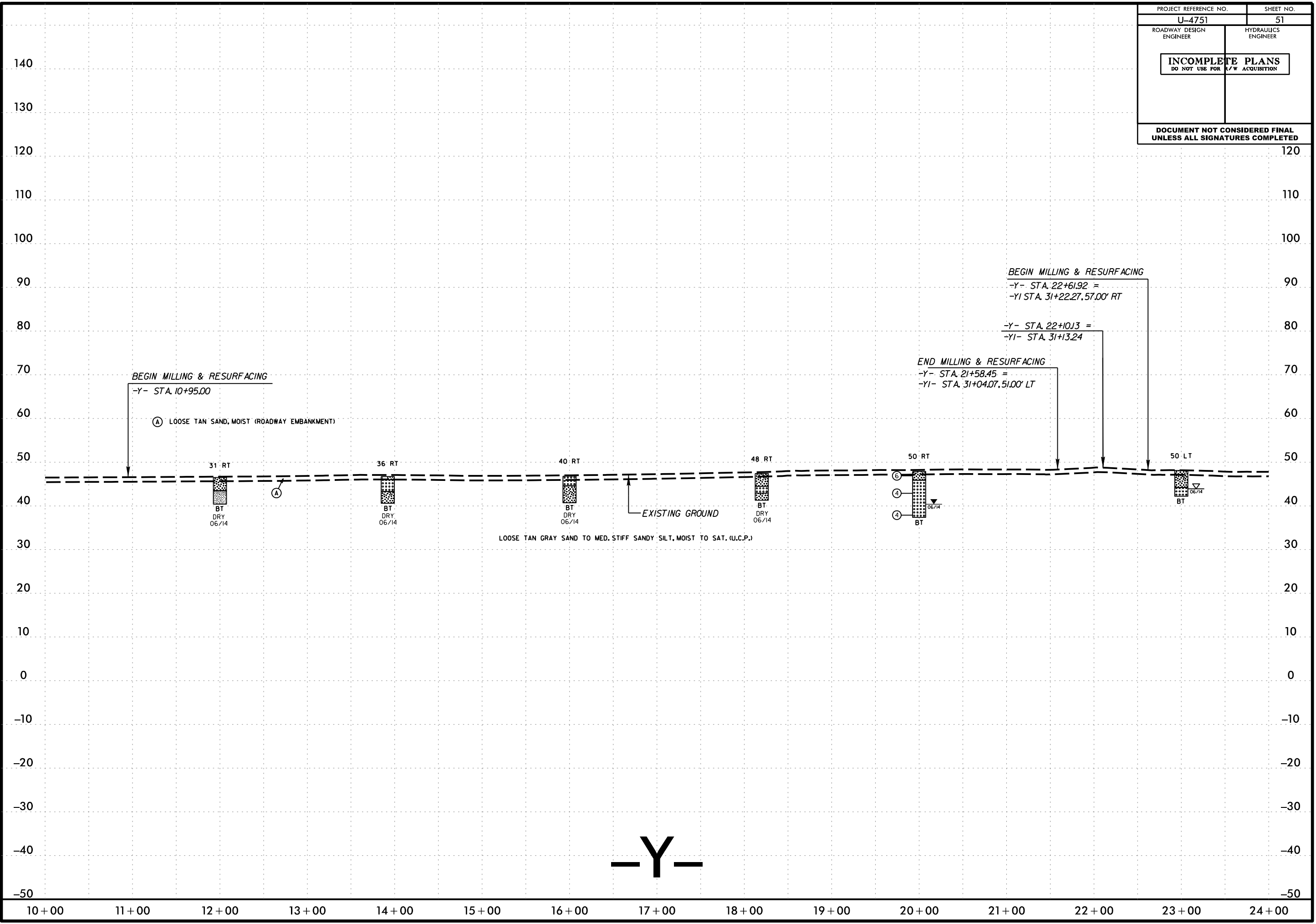
- *** - INSUFFICIENT MATERIAL TO TEST SAMPLE
- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
 - (B) V. SOFT TO STIFF, GRAY BROWN, SANDY SILT TO V. LOOSE TO MED. DENSE, SILTY SAND WITH TRACE TO LITTLE ORGANIC MATTER, MOIST TO WET. (U.C.P.)
 - (E) SOFT TAN GRAY SANDY SILT, MOIST TO WET. (U.C.P.)
 - (G) VERY LOOSE GREEN SAND, SAT. (CASTLE HAYNE FORMATION)

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PROJECT REFERENCE NO. U-4751	SHEET NO. 51
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

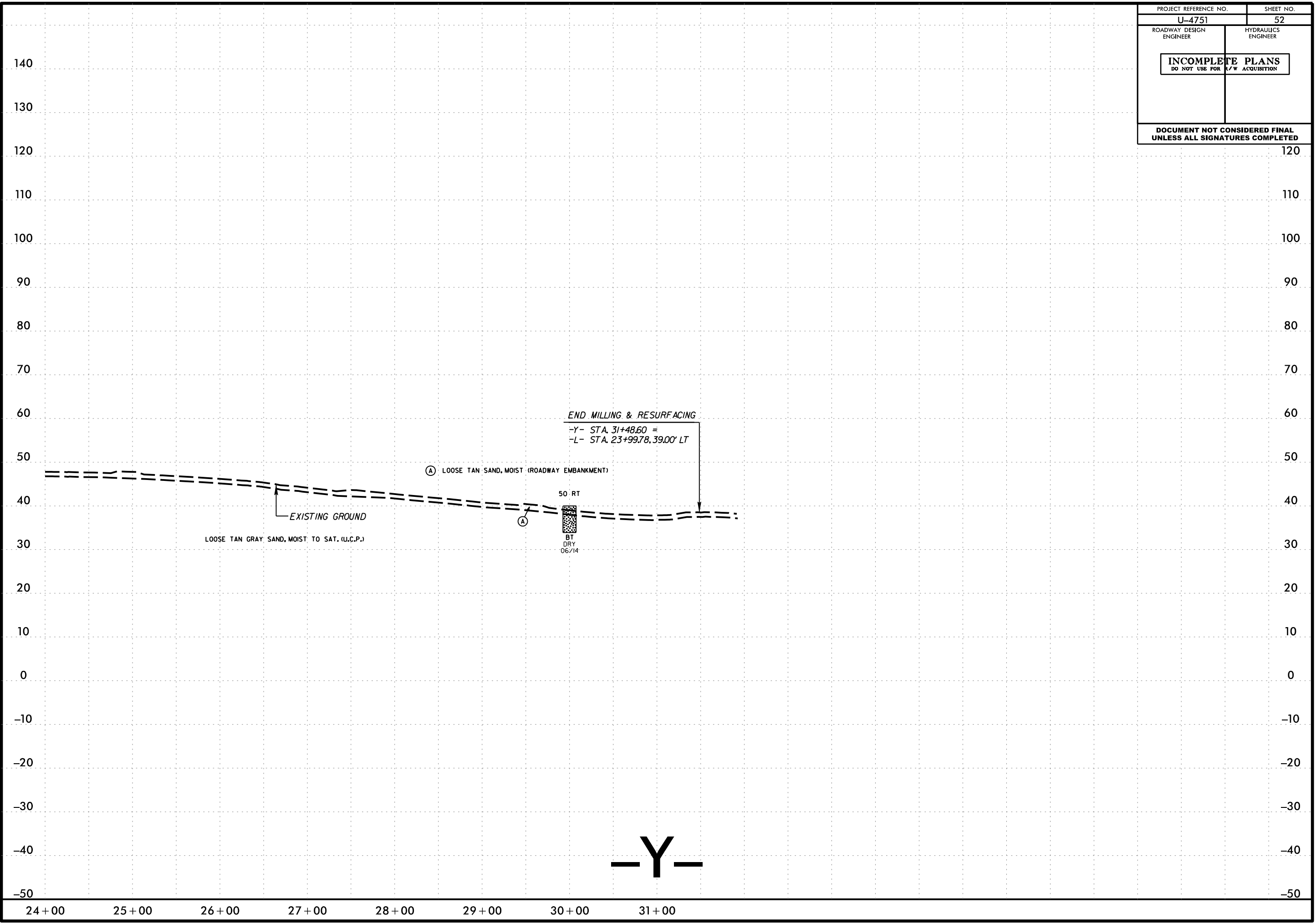
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PROJECT REFERENCE NO. U-4751	SHEET NO. 52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

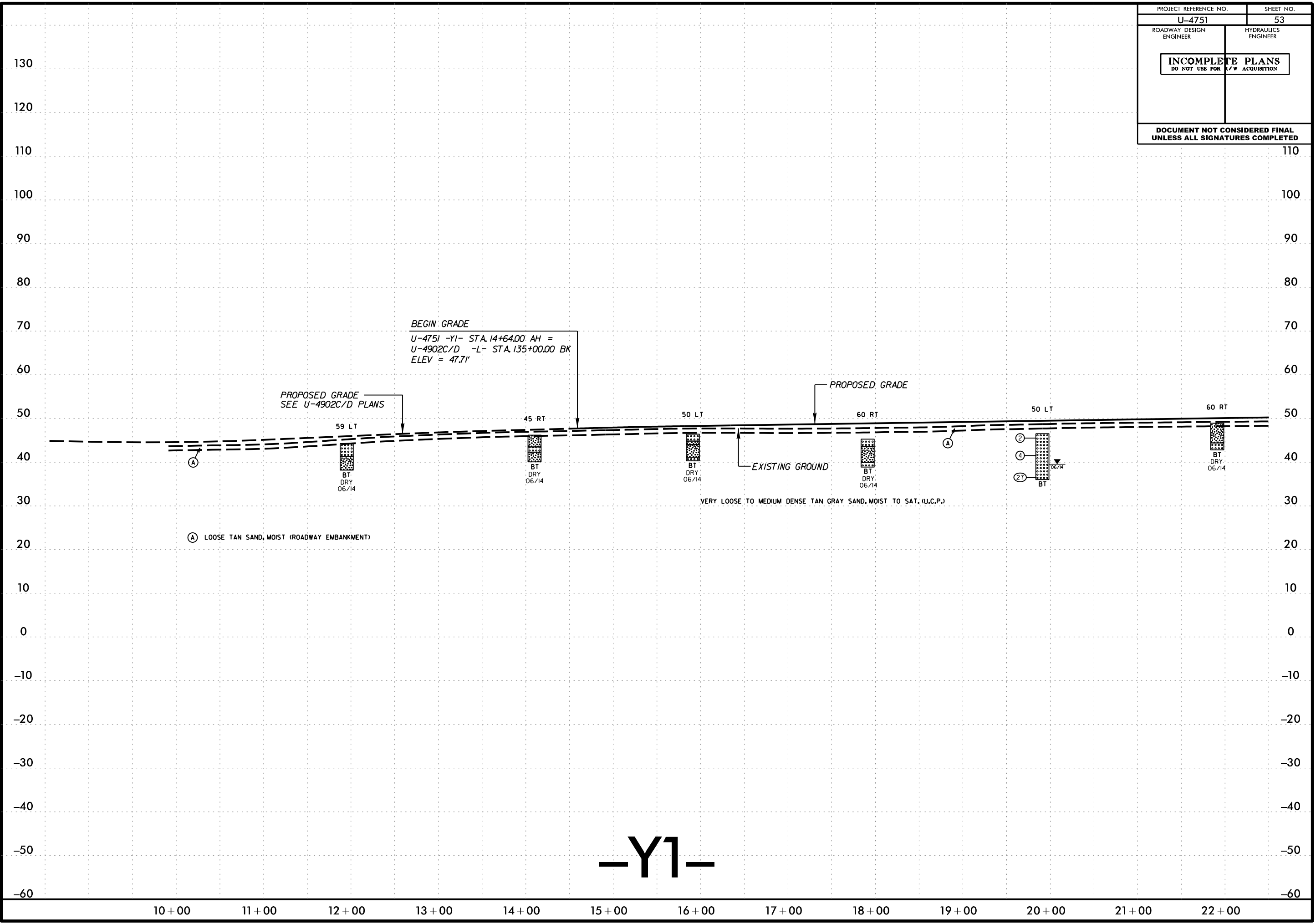
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PROJECT REFERENCE NO. U-4751	SHEET NO. 53
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

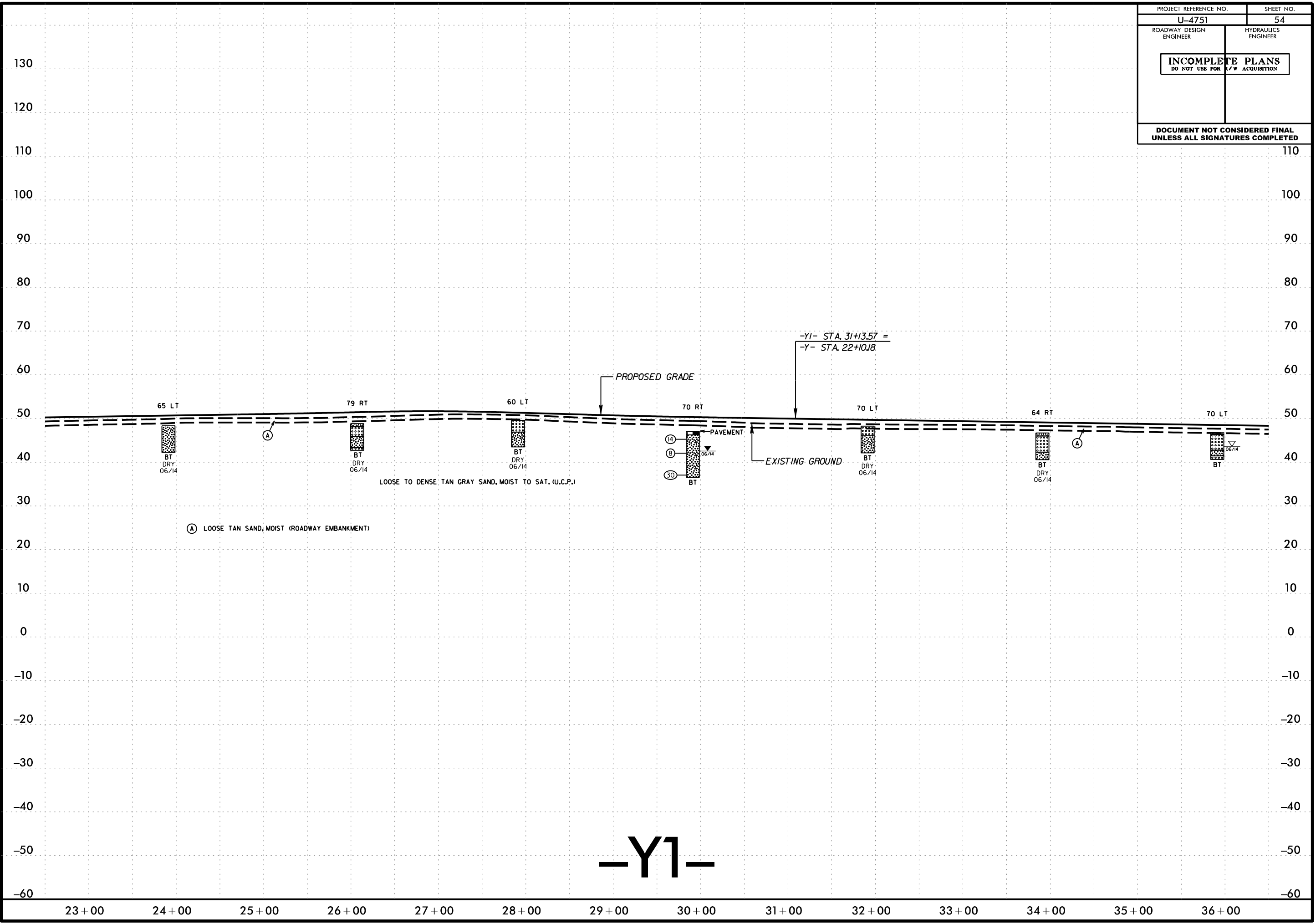
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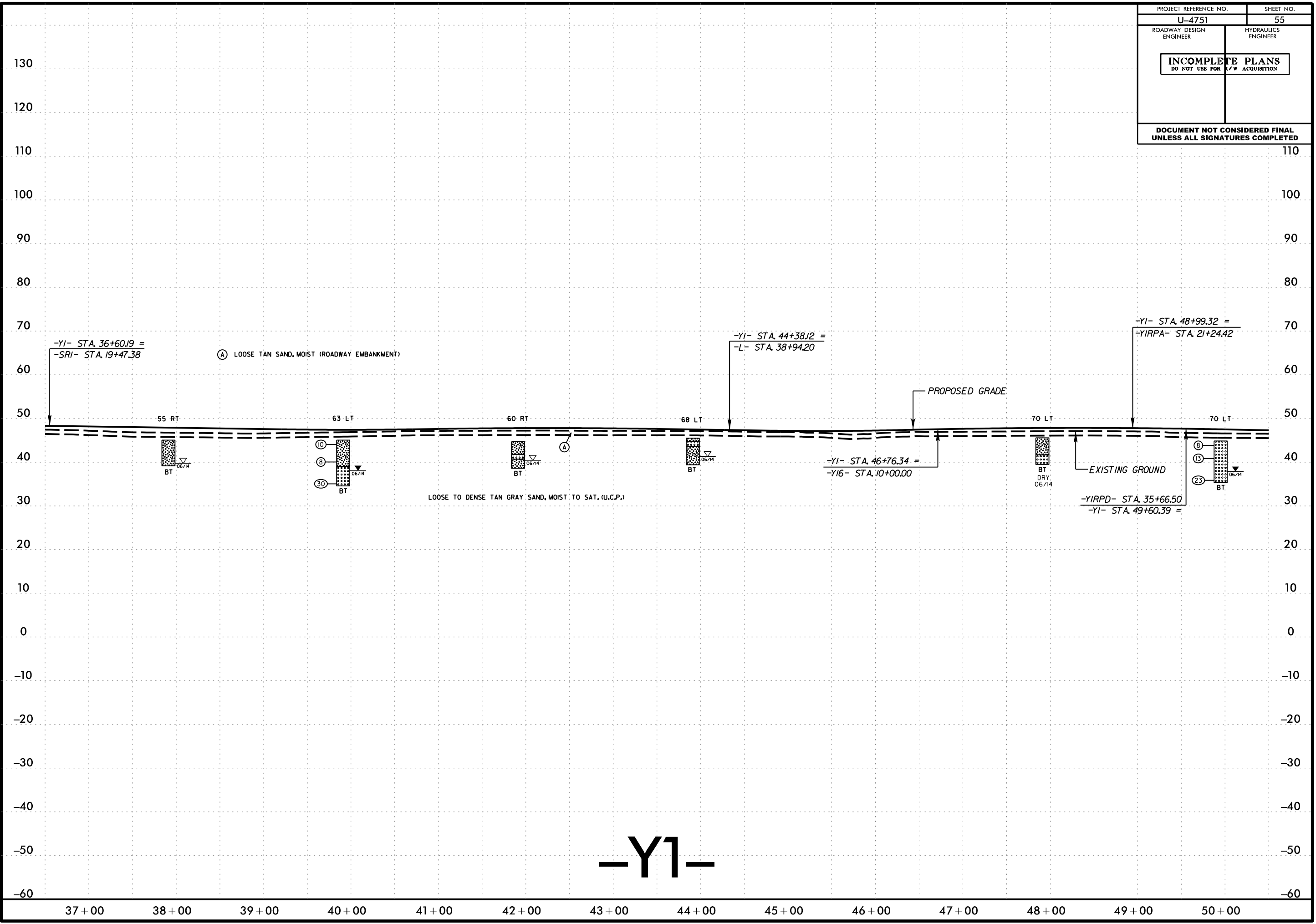
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	55
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

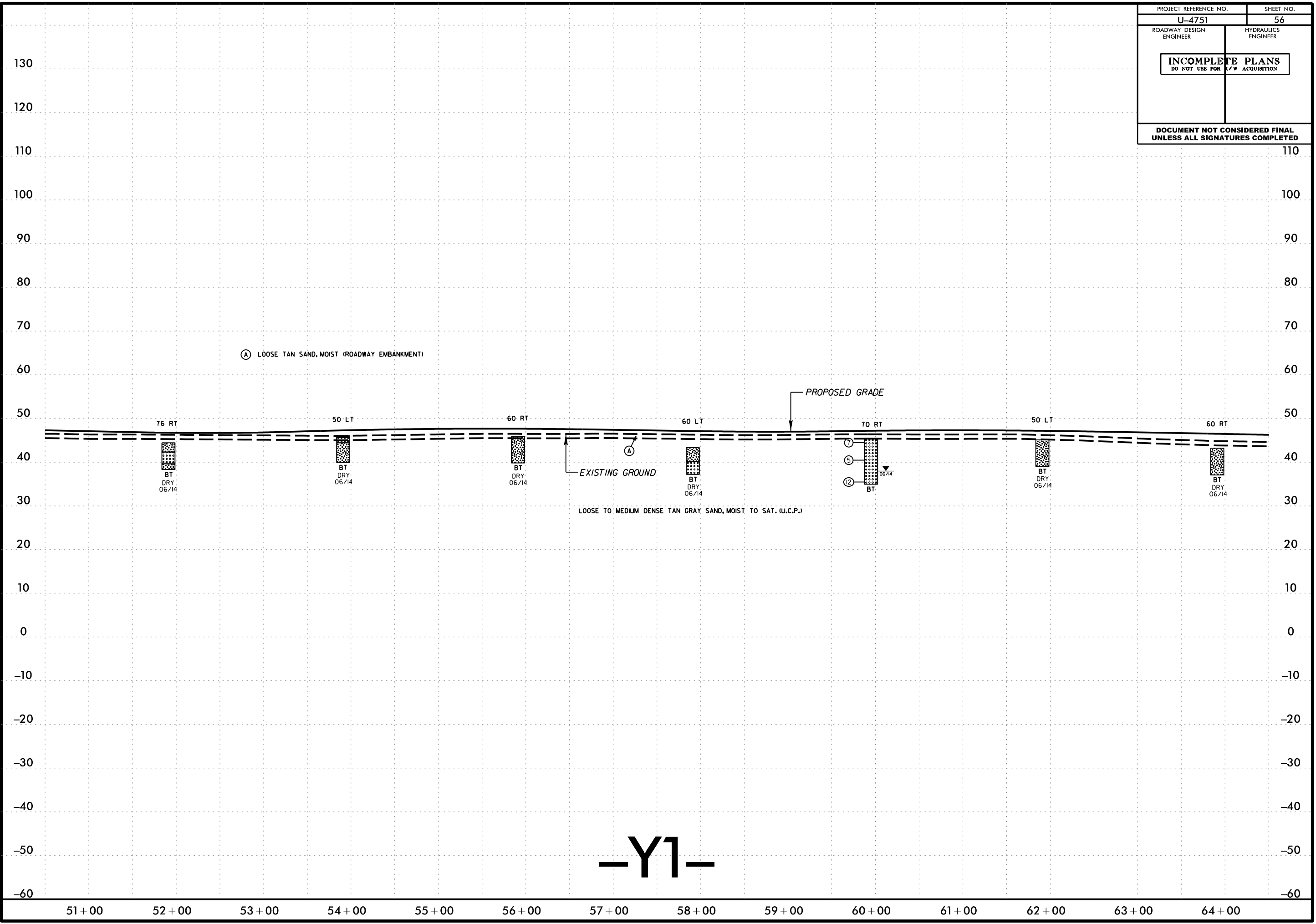
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-Y1-

PROJECT REFERENCE NO. U-4751	SHEET NO. 56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

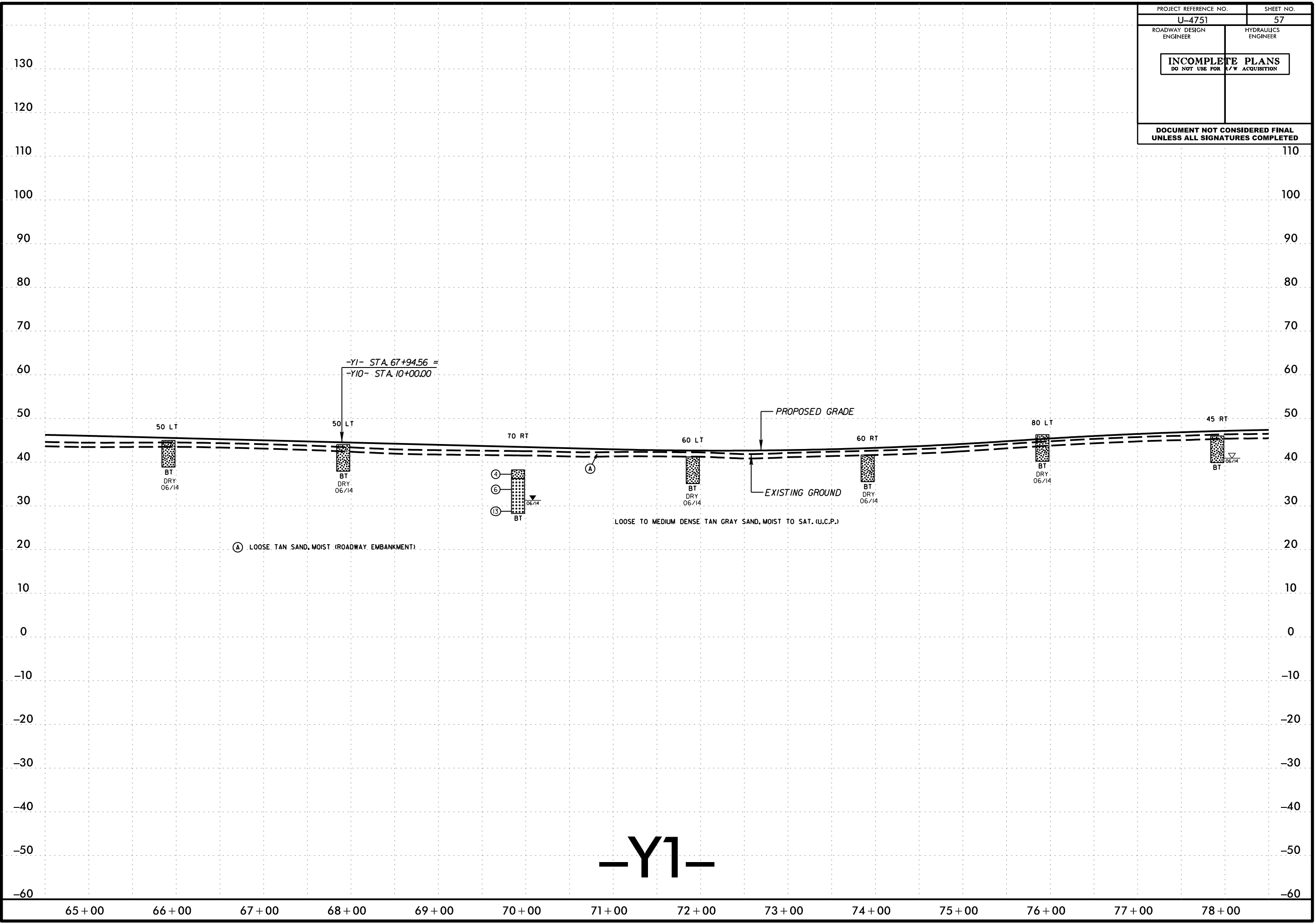
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PROJECT REFERENCE NO. U-4751	SHEET NO. 57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

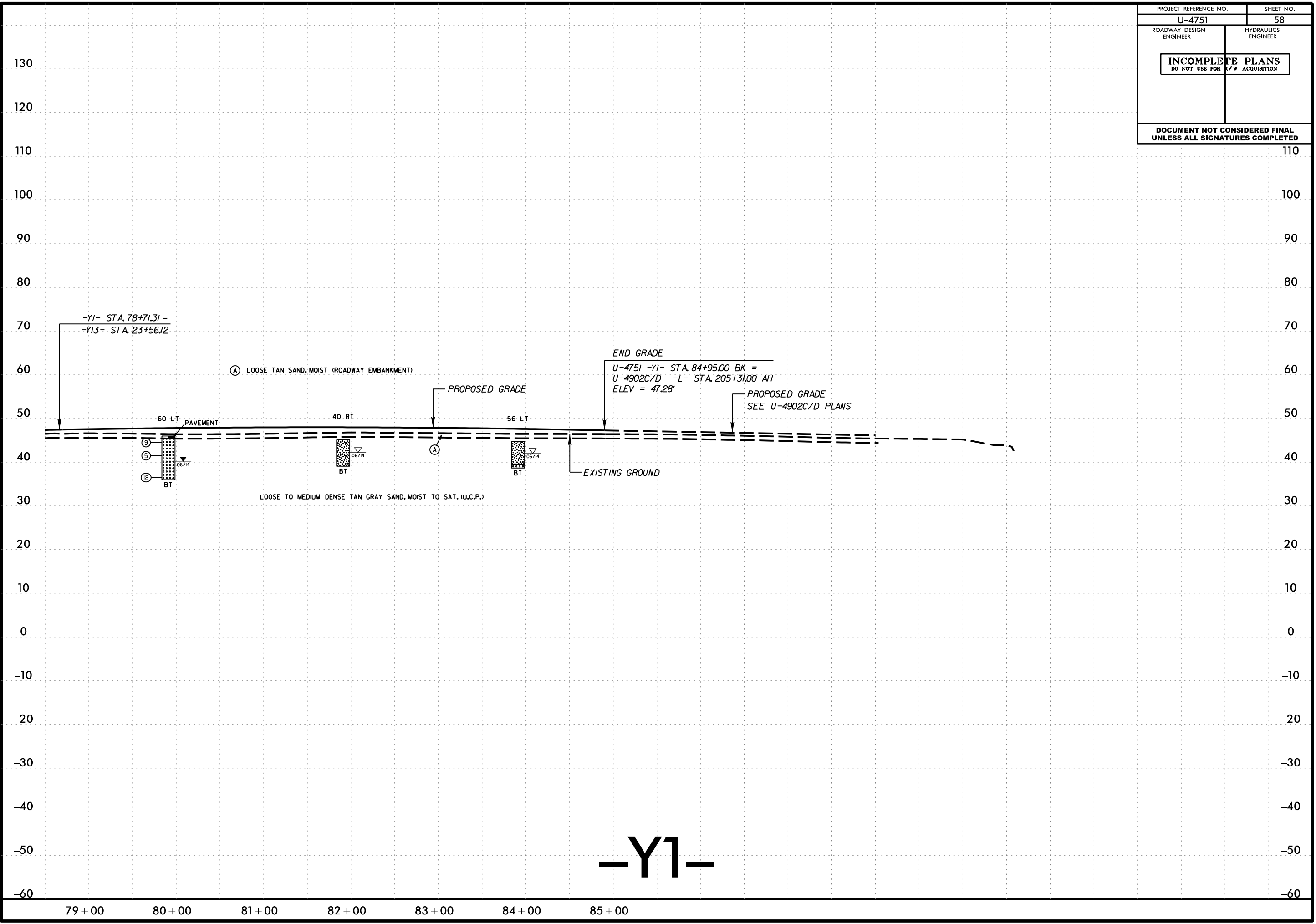
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PROJECT REFERENCE NO. U-4751	SHEET NO. 58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

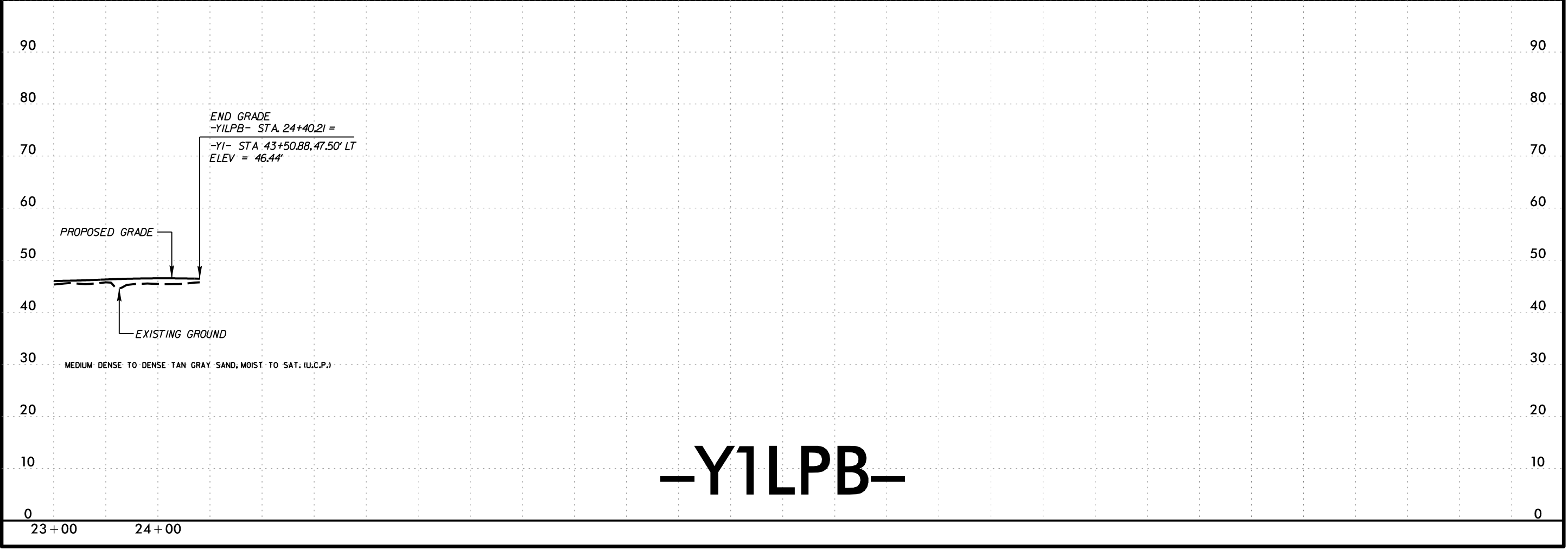
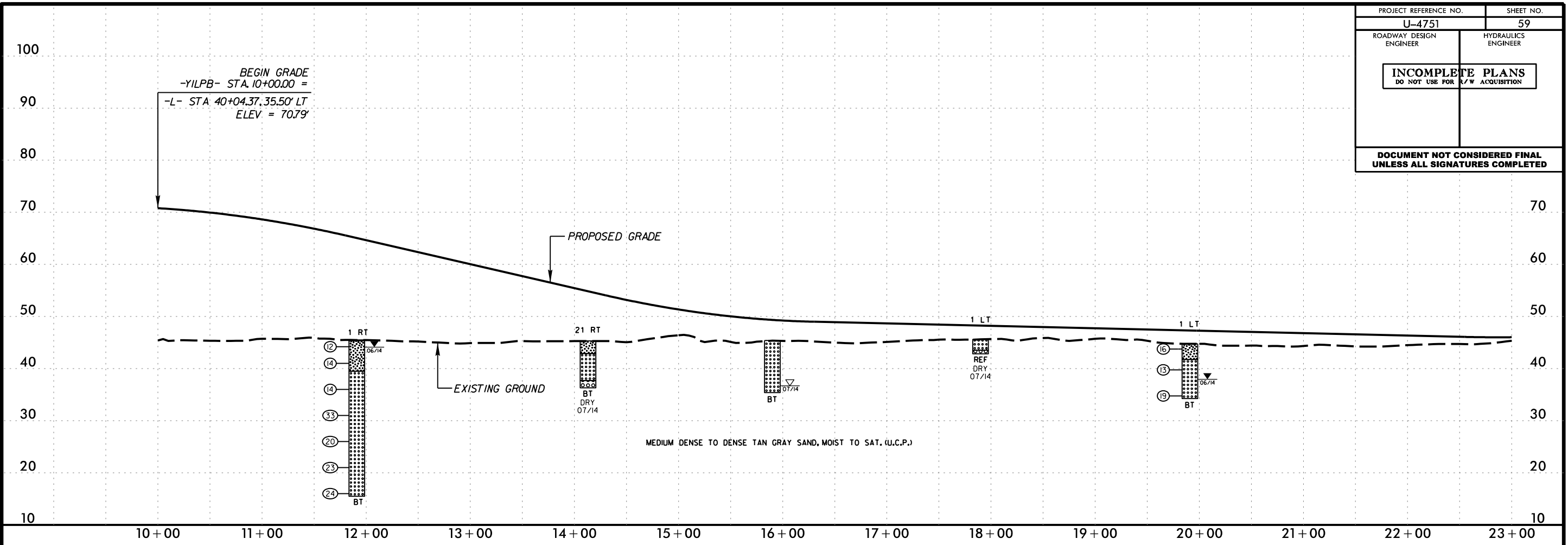
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	59
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

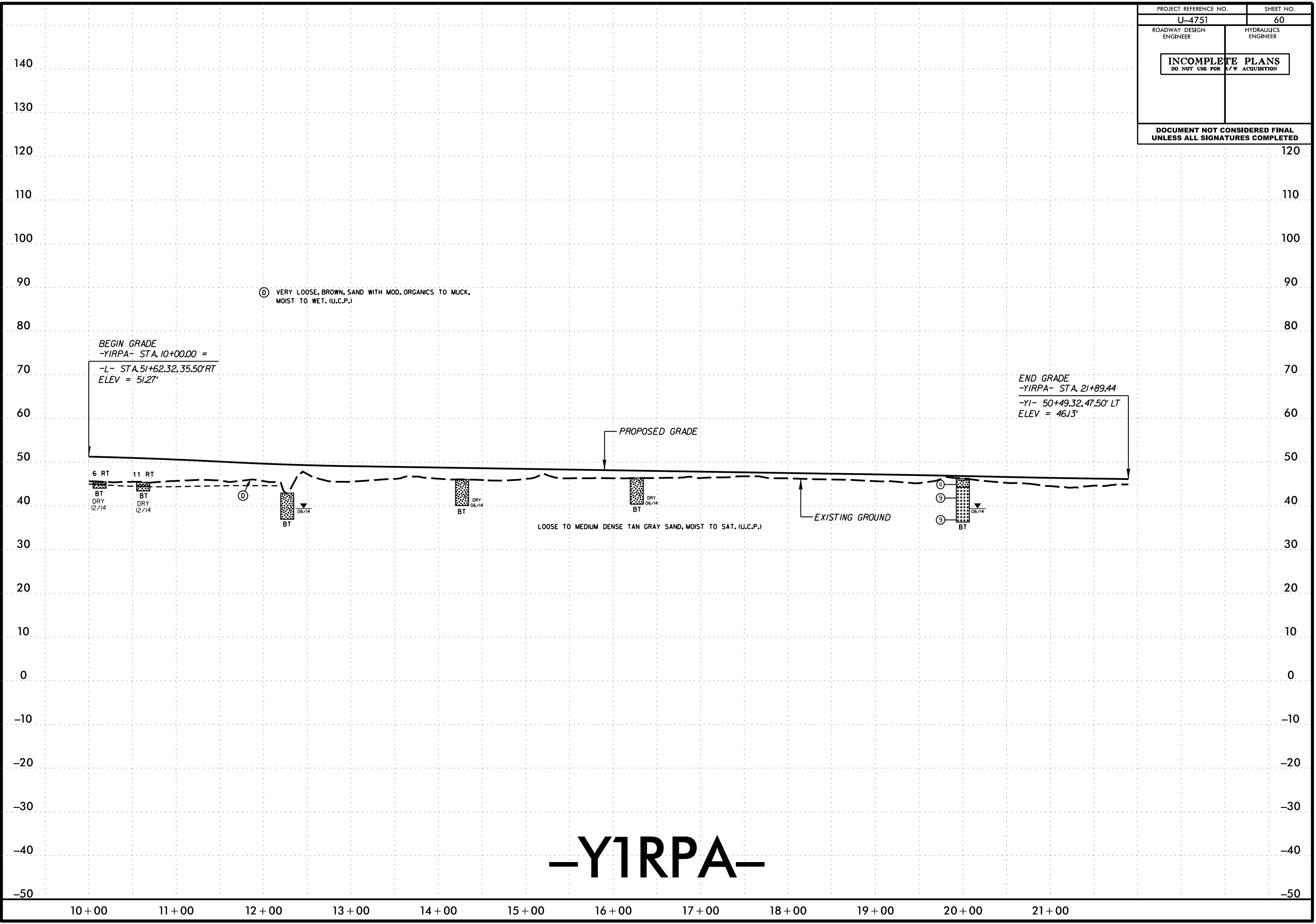
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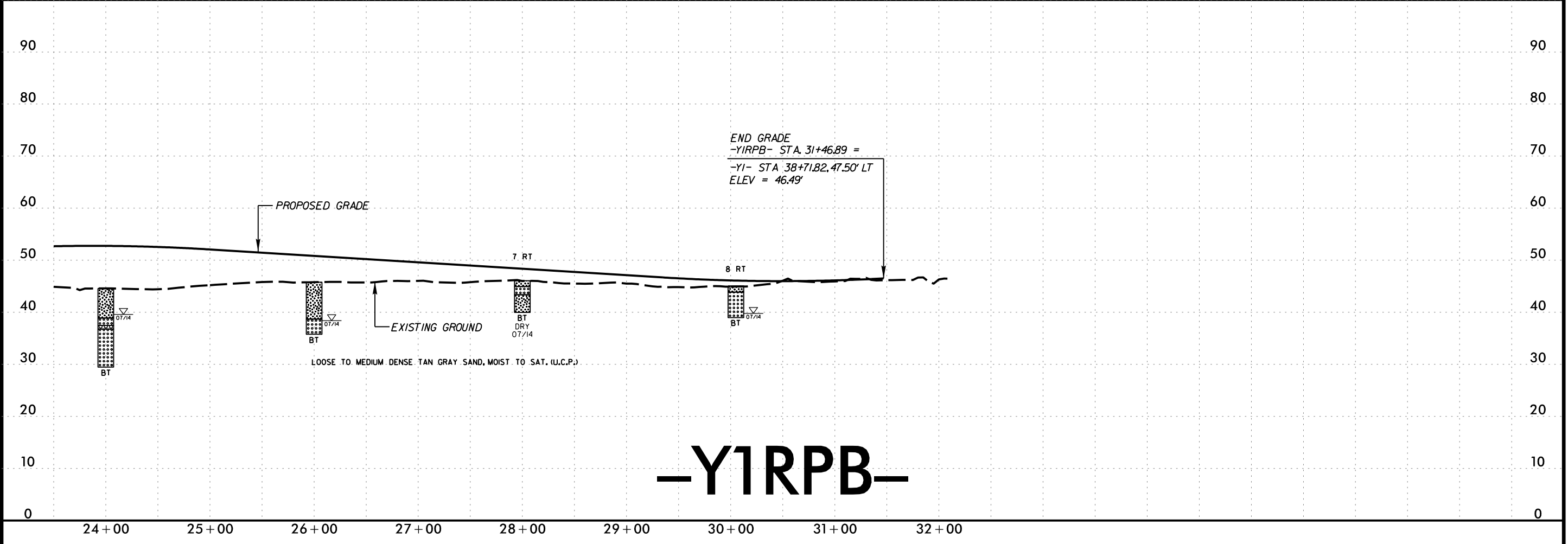
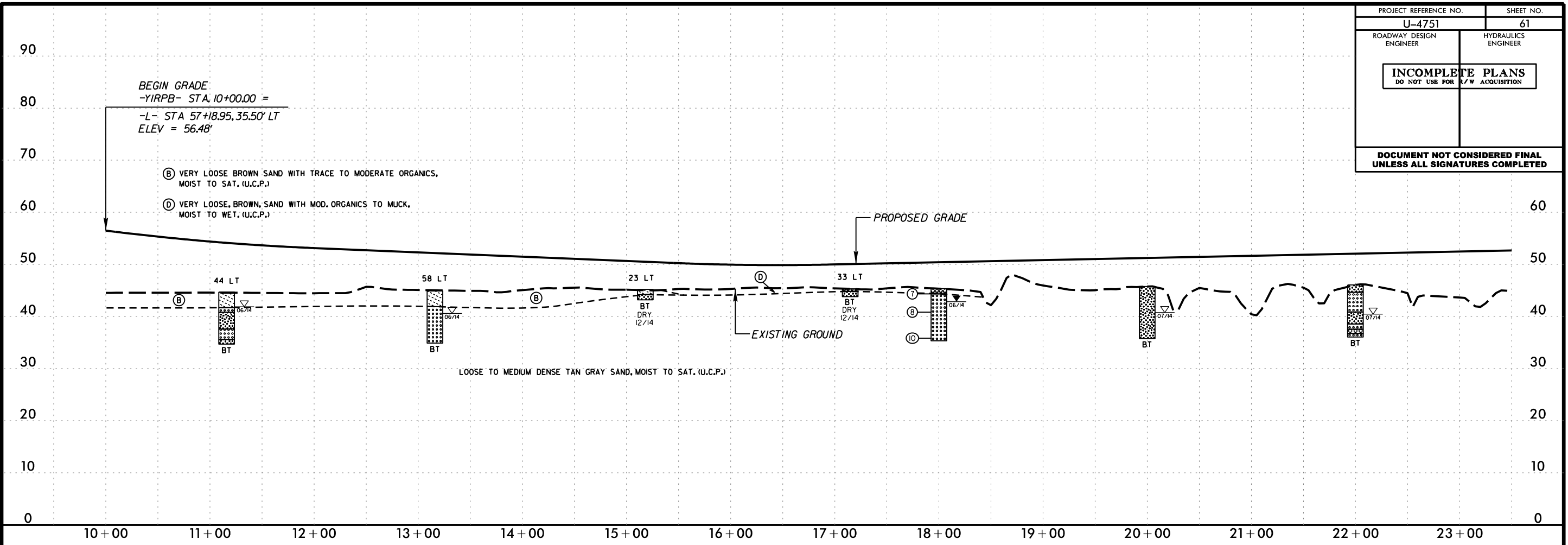
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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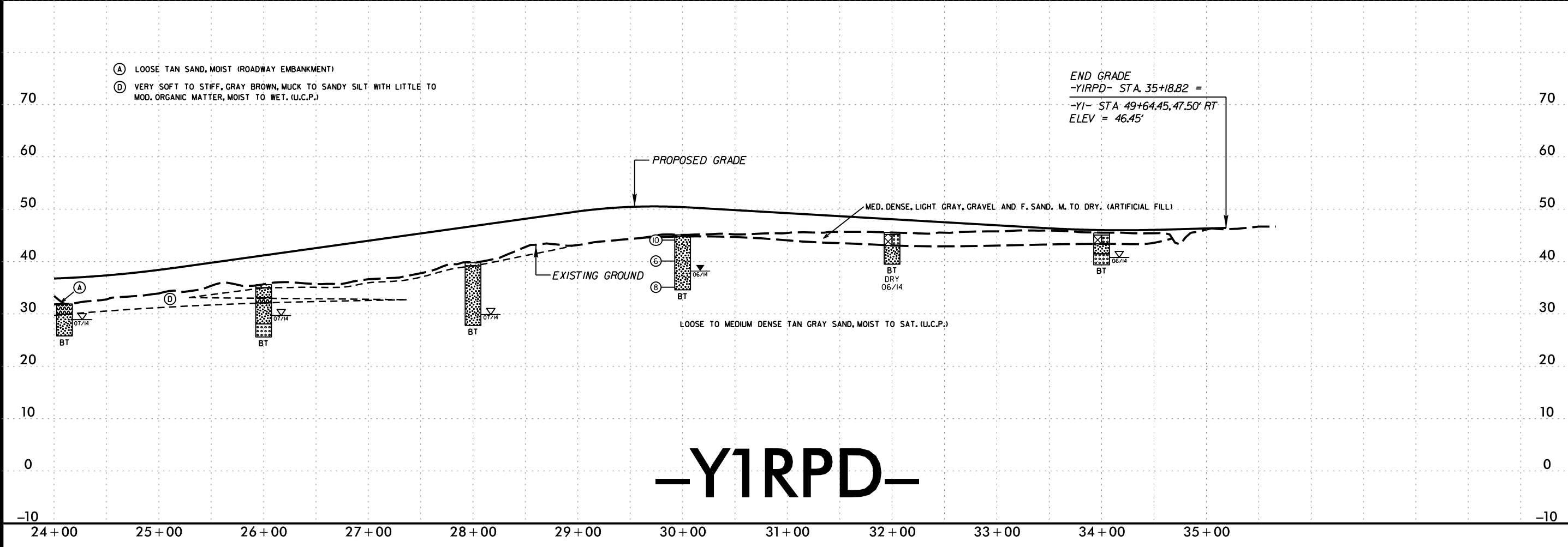
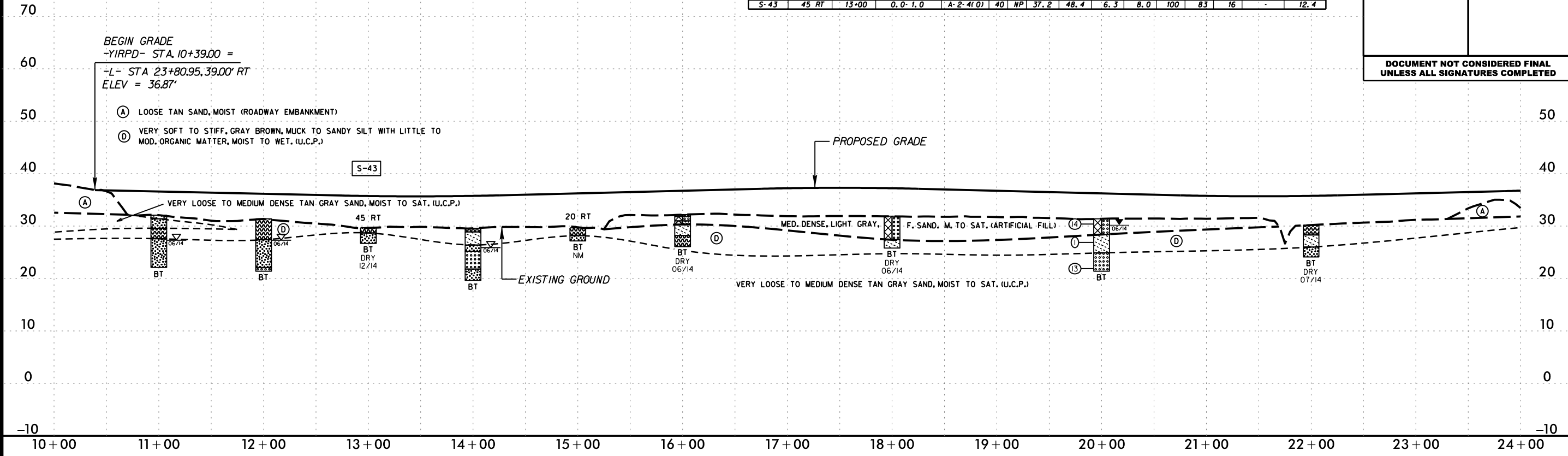
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U-4751	61
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INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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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
							C.SAND	F.SAND	SILT	CLAY	10	40		
S-43	45 RT	13+00	0.0-1.0	A-2-4(0)	40	NP	37.2	48.4	6.3	8.0	100	83	16	12.4

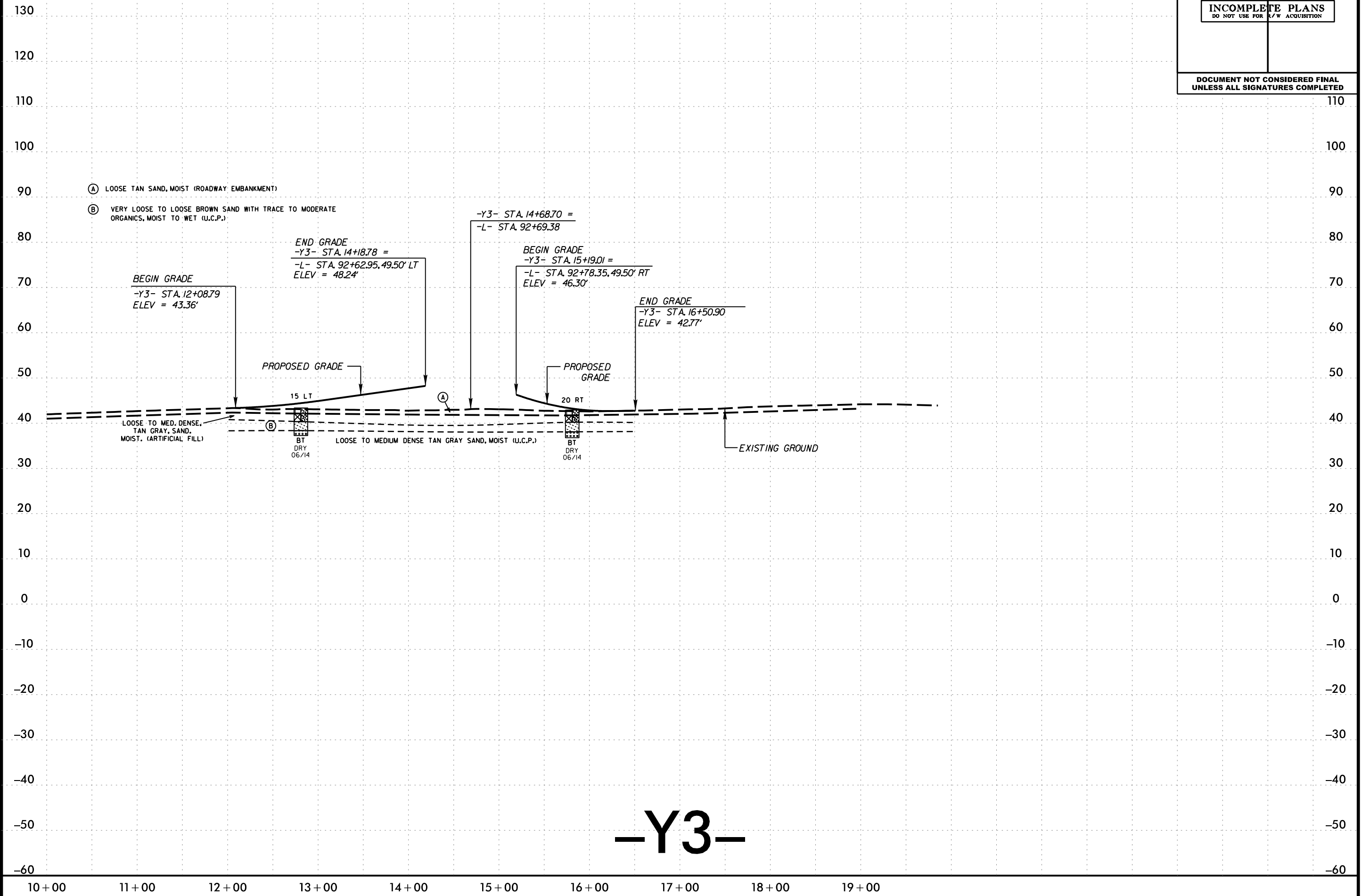


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PROJECT REFERENCE NO. U-4751	SHEET NO. 63
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



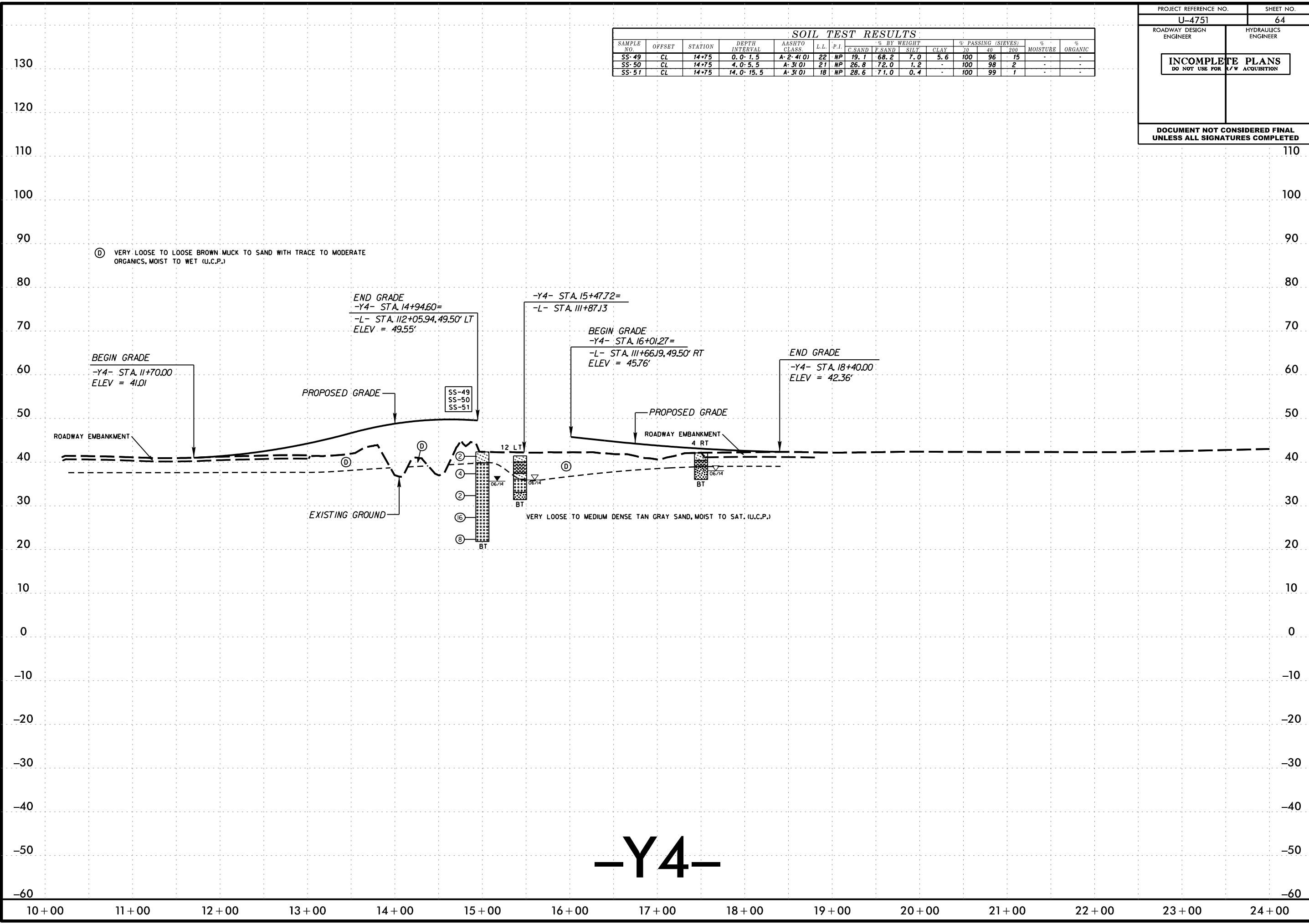
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C SAND	F SAND	SILT	CLAY	10	40			200
SS-49	CL	14+75	0.0-1.5	A-2-4(0)	22	NP	19.1	68.2	7.0	5.6	100	96	15	-	-
SS-50	CL	14+75	4.0-5.5	A-3(0)	21	NP	26.8	72.0	1.2	-	100	98	2	-	-
SS-51	CL	14+75	14.0-15.5	A-3(0)	18	NP	28.6	71.0	0.4	-	100	99	1	-	-

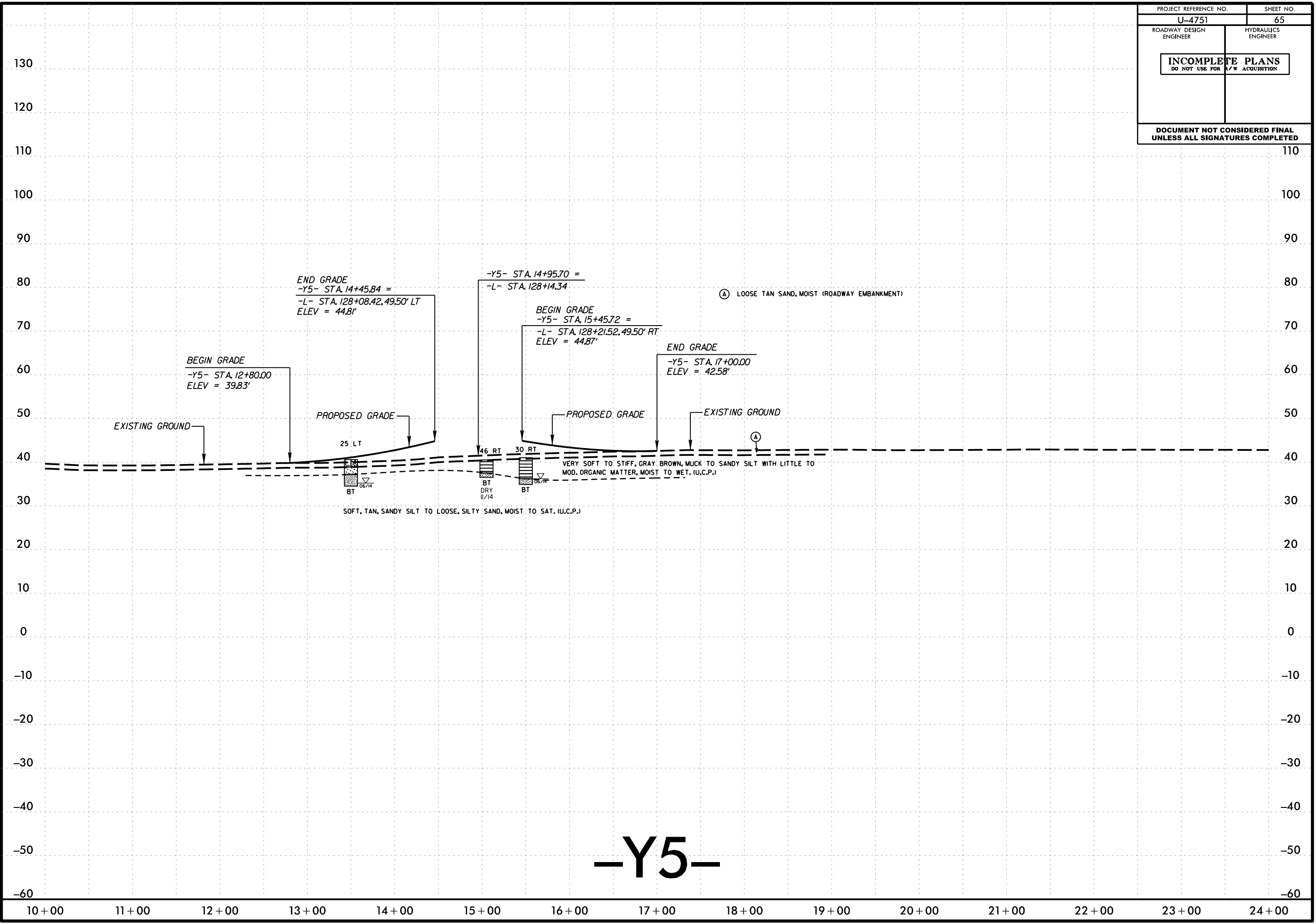
PROJECT REFERENCE NO. U-4751	SHEET NO. 64
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-Y4-

PROJECT REFERENCE NO. U-4751	SHEET NO. 65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

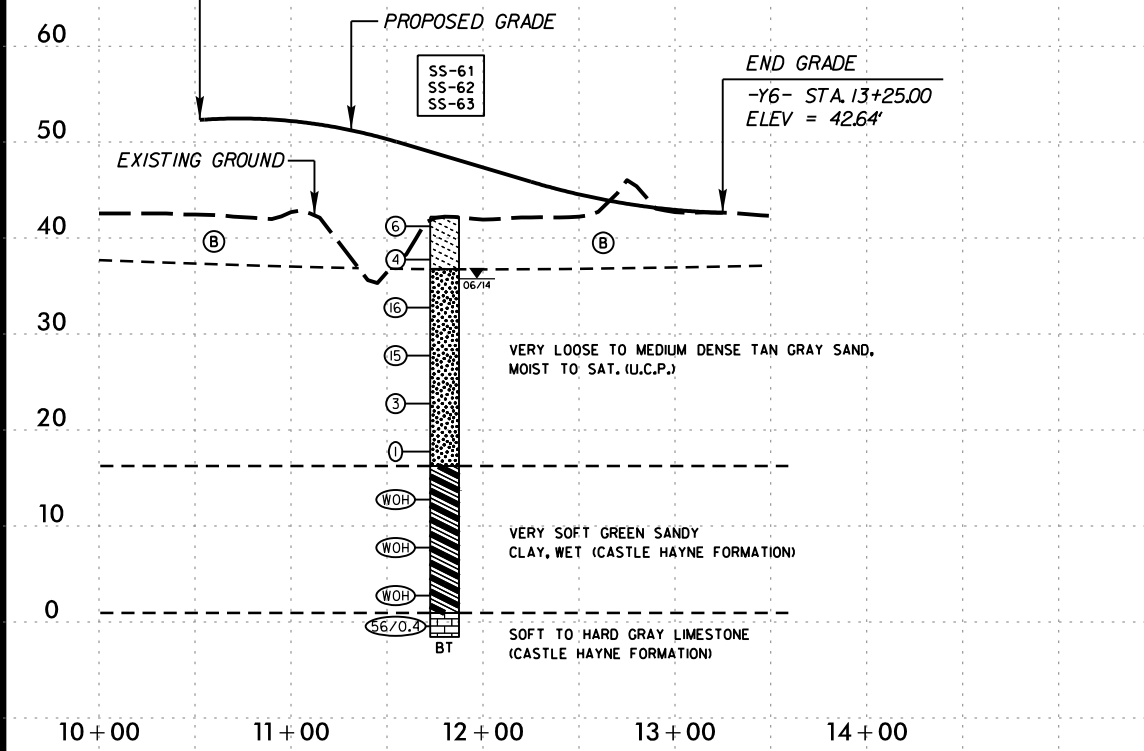
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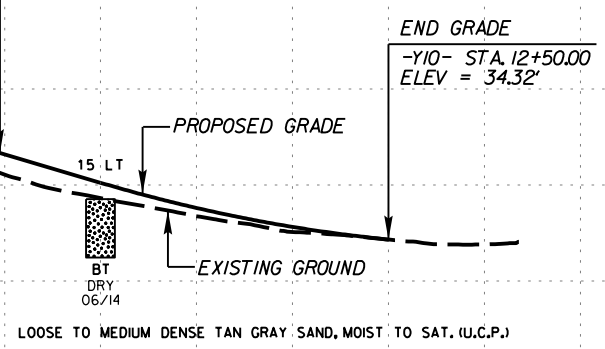
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	CLAY	#10	#40			#200
SS-61	CL	11+80	23.5-25.0	A-2-4(0)	24	7	1.0	85.0	5.3	10.7	100	100	29	-	-
SS-62	CL	11+80	28.5-30.0	A-6(1)	27	16	21.2	48.5	20.6	9.7	100	88	36	-	-
SS-63	CL	11+80	41.3-42.7	A-2-4(0)	22	7	49.7	23.4	7.1	19.8	33	21	10	-	-

BEGIN GRADE
-Y6- STA. 10+52.51=
-L- STA. 145+00.00, 49.50' RT
ELEV = 52.31'

(B) V. SOFT TO STIFF, GRAY BROWN, SANDY SILT TO V. LOOSE TO MED. DENSE, SILTY SAND WITH TRACE TO LITTLE ORGANIC MATTER, MOIST TO WET. (U.C.P.)



BEGIN GRADE
-Y10- STA. 10+47.50=
-Y1- STA. 67+94.56, 47.50' RT
ELEV = 43.35'

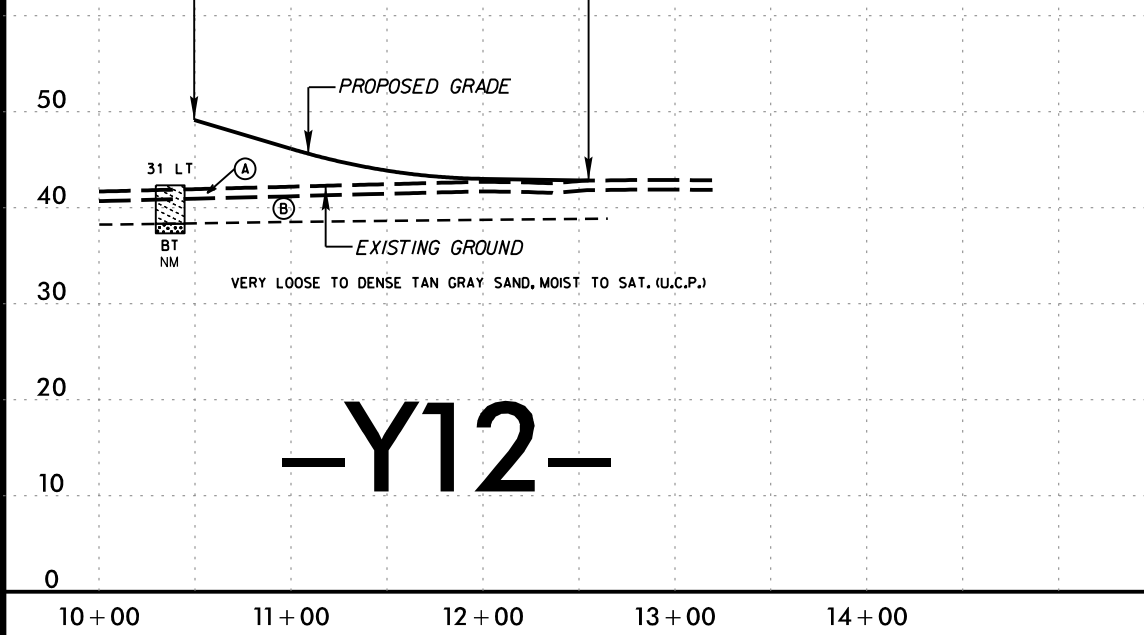


-Y6-

-Y10-

- (A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
- (B) V. SOFT TO STIFF, GRAY BROWN, SANDY SILT TO V. LOOSE TO MED. DENSE, SILTY SAND WITH TRACE TO LITTLE ORGANIC MATTER, MOIST TO WET. (U.C.P.)

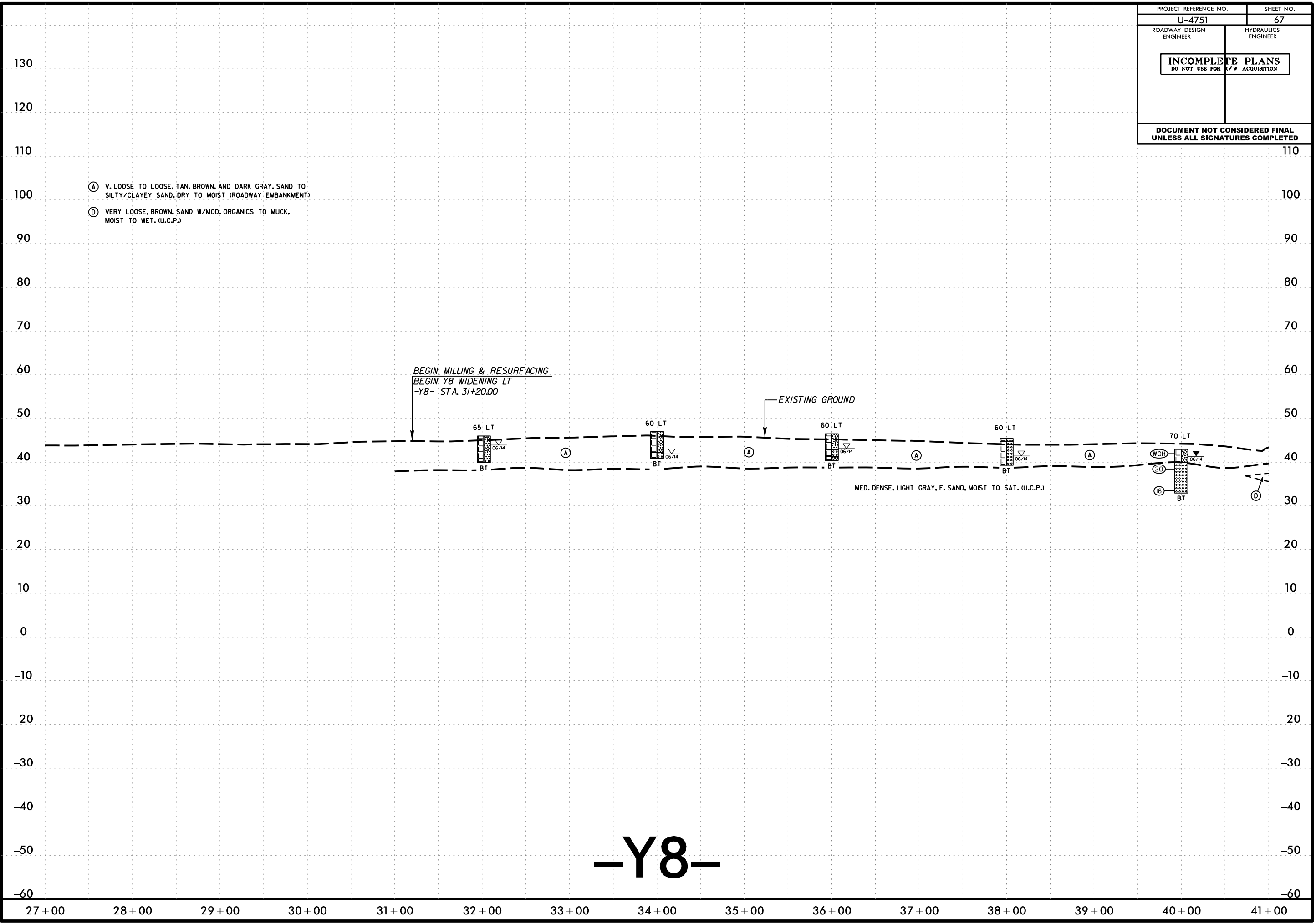
-Y12- STA. 10+49.52 =
-L- STA. 99+69.11, 49.50' RT
END GRADE
-Y12- STA. 12+55.00
ELEV = 42.84'



-Y12-

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PROJECT REFERENCE NO. U-4751	SHEET NO. 67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-Y8-

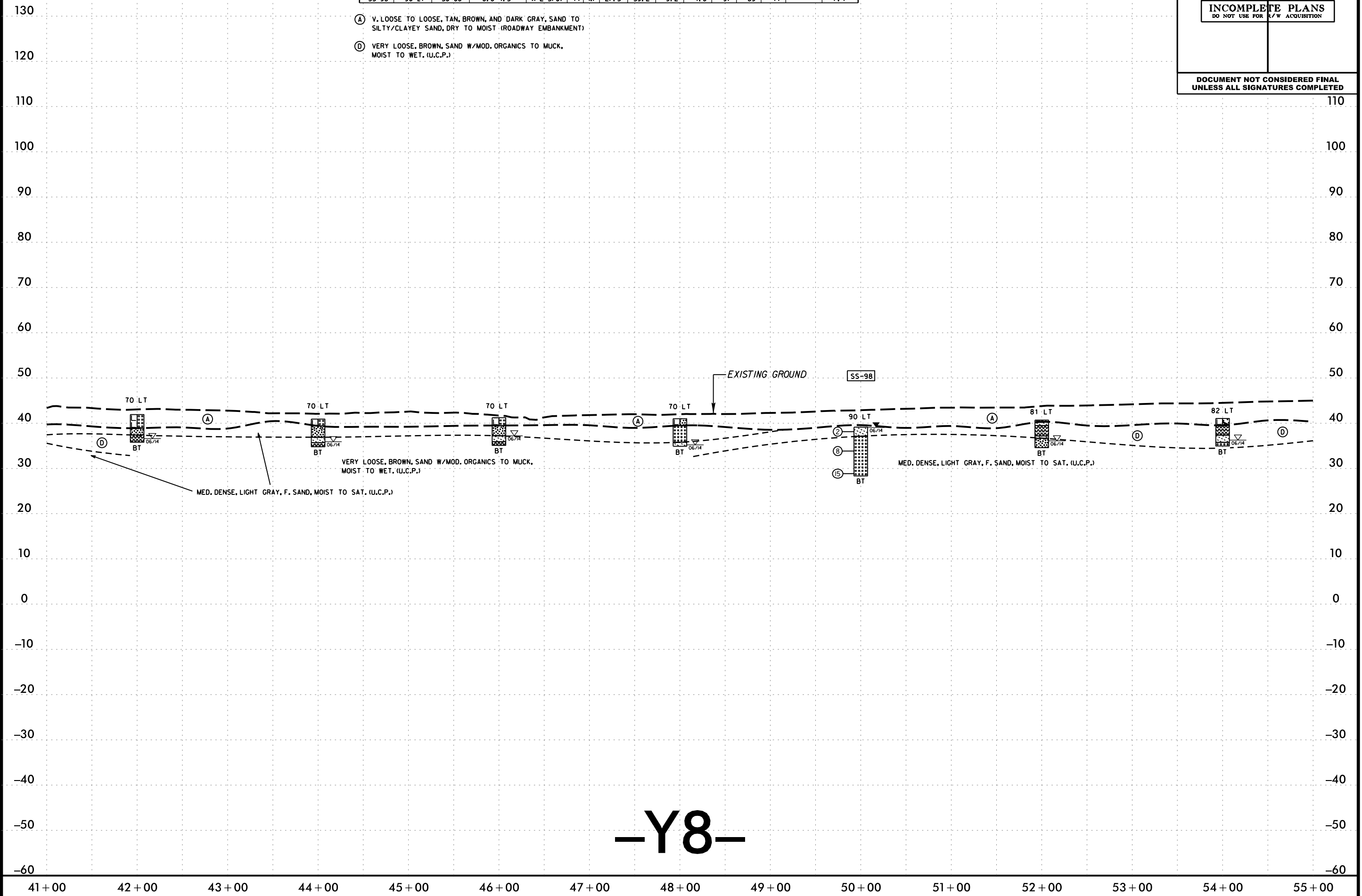
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-98	90 LT	50+00	0.0-1.5	A-2-5(0)	41	NP	27.5	59.2	9.2	4.0	97	89	14	-	7.4

- Ⓐ V. LOOSE TO LOOSE, TAN, BROWN, AND DARK GRAY, SAND TO SILTY/CLAYEY SAND, DRY TO MOIST (ROADWAY EMBANKMENT)
- Ⓓ VERY LOOSE, BROWN, SAND W/MOD. ORGANICS TO MUCK, MOIST TO WET. (U.C.P.)

PROJECT REFERENCE NO. U-4751	SHEET NO. 68
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



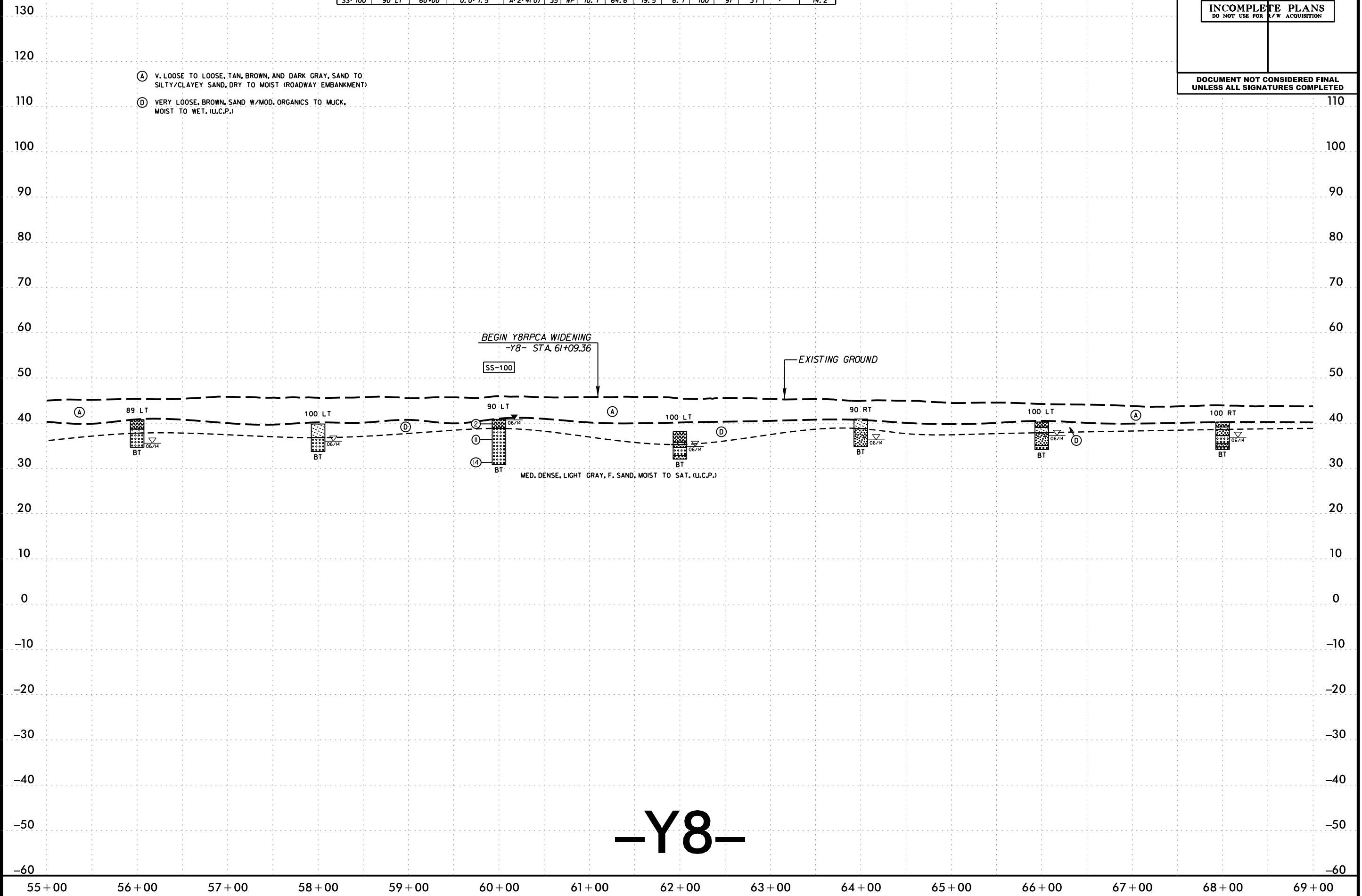
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-100	90 LT	60+00	0.0-1.5	A-2-4(0)	35	NP	10.1	64.6	19.5	6.1	100	97	31	-	14.2

PROJECT REFERENCE NO. U-4751	SHEET NO. 69
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

- (A) V. LOOSE TO LOOSE, TAN, BROWN, AND DARK GRAY, SAND TO SILTY/CLAYEY SAND, DRY TO MOIST (ROADWAY EMBANKMENT)
- (D) VERY LOOSE, BROWN, SAND W/MOD. ORGANICS TO MUCK, MOIST TO WET. (U.C.P.)

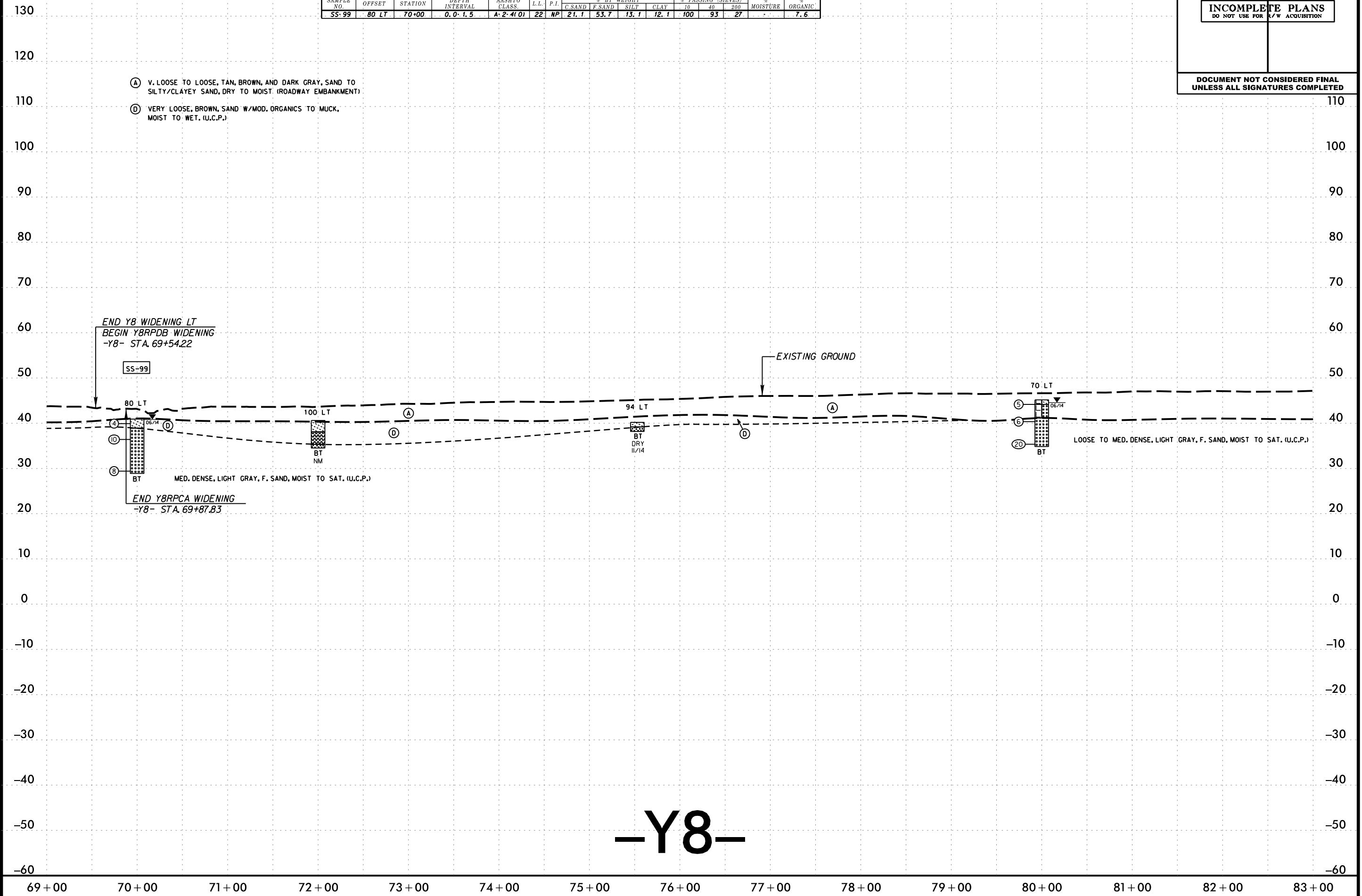


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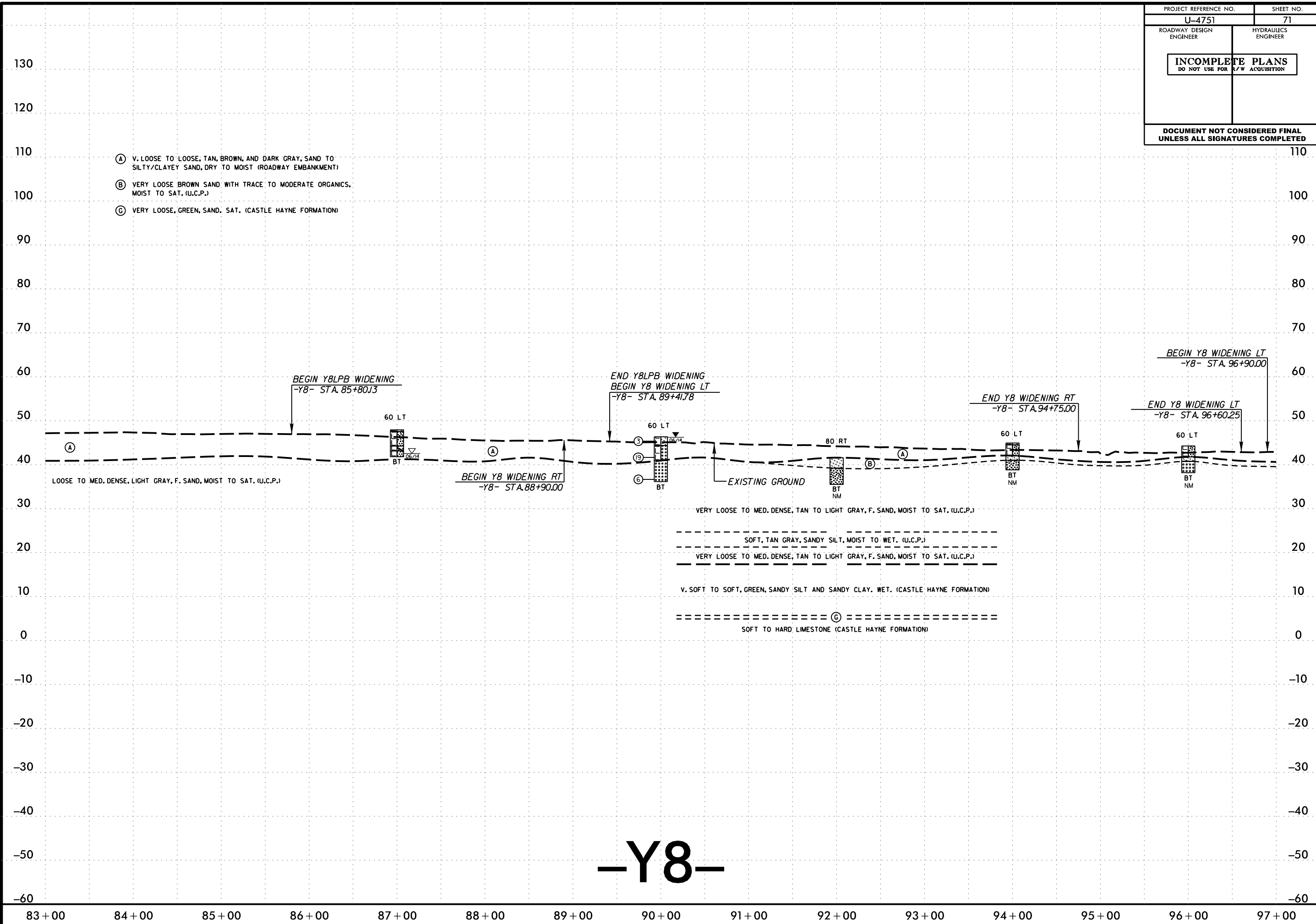
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U-4751	70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-99	80 LT	70+00	0.0-1.5	A-2-4(0)	22	NP	21.1	53.7	13.1	12.1	100	93	27		7.6



-Y8-

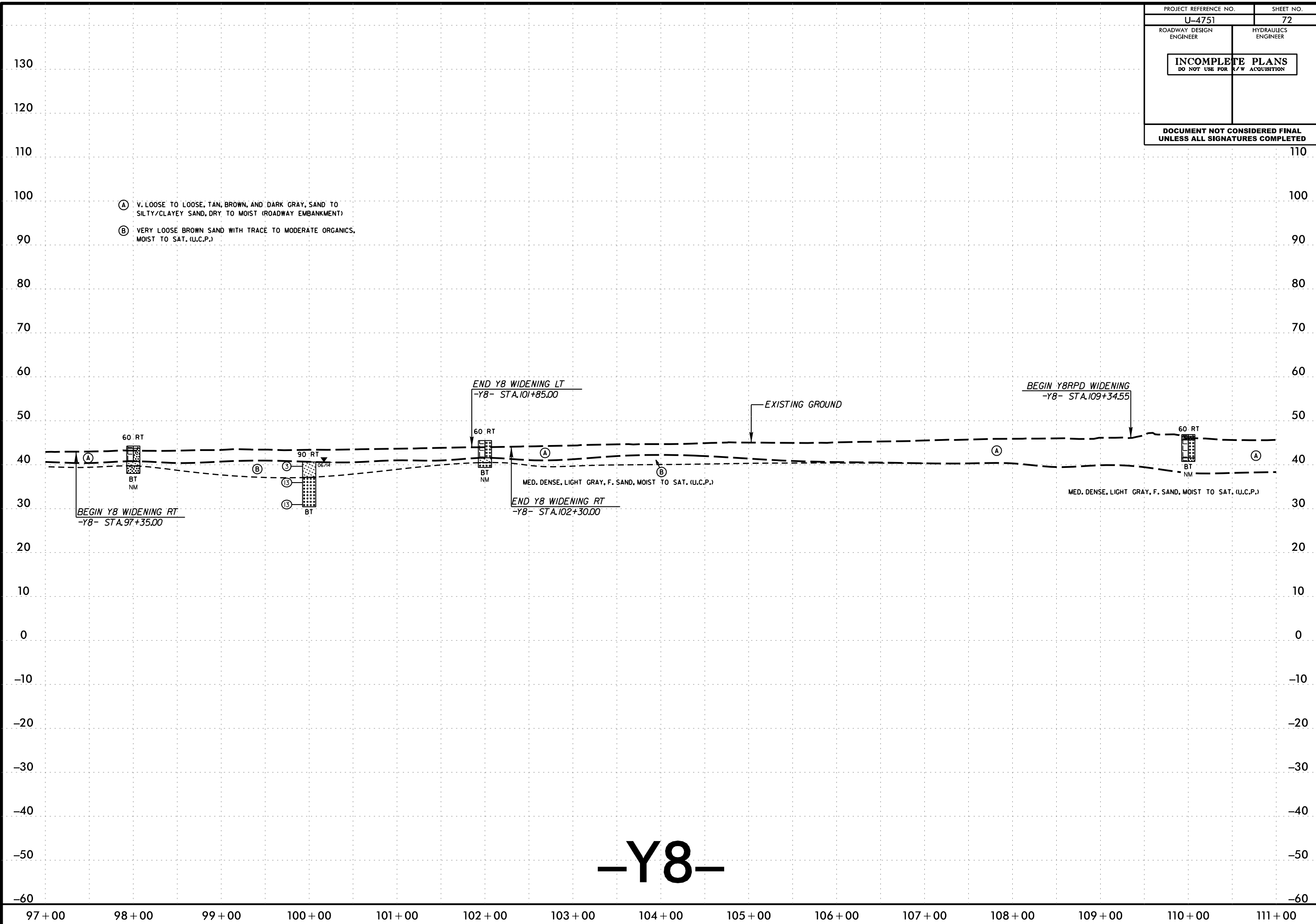
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U-4751	71
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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PROJECT REFERENCE NO. U-4751	SHEET NO. 72
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

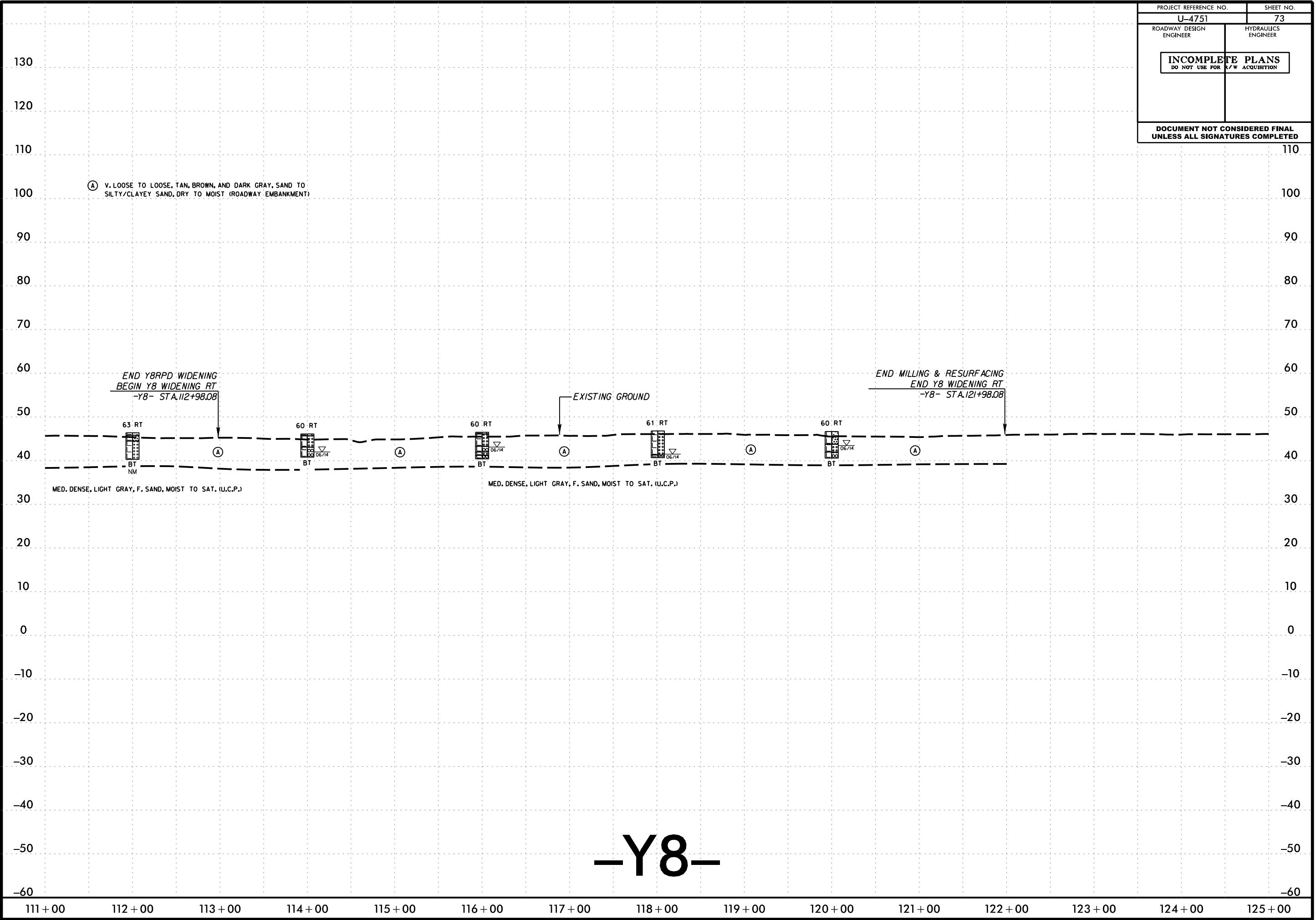


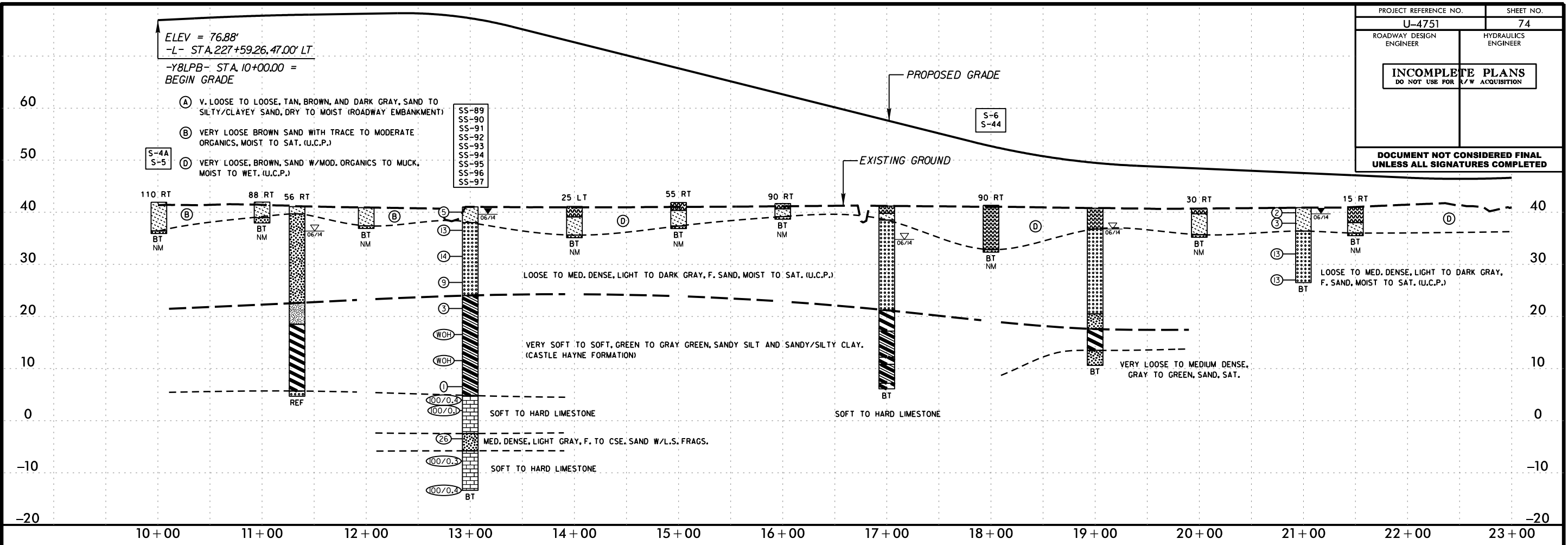
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PROJECT REFERENCE NO. U-4751	SHEET NO. 73
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

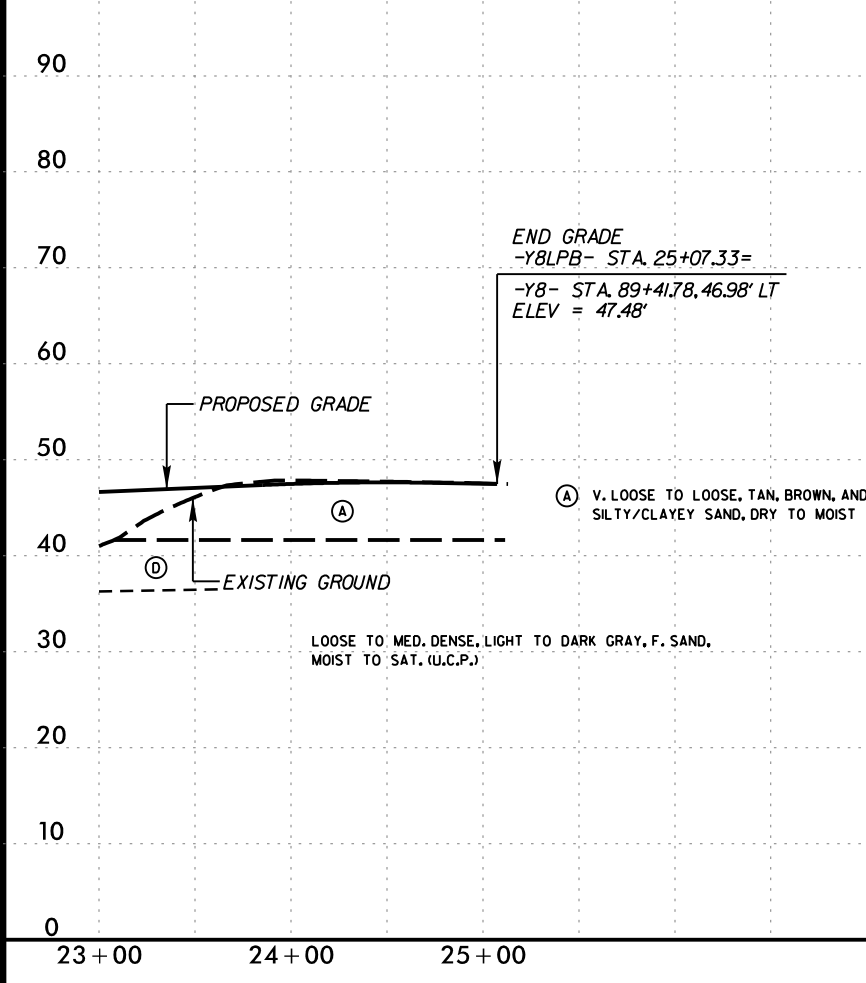
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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-4A	110 RT	10+00	0.0-2.0	A-2-4(0)	18	NP	14.9	69.5	8.0	7.6	100	97	20	-	5.7
S-5	110 RT	10+00	2.0-5.5	A-2-4(0)	16	NP	14.9	68.1	9.4	7.6	100	98	20	-	-
SS-89	CL	13+00	0.0-1.5	A-2-4(0)	16	NP	13.3	64.0	10.5	12.1	100	97	26	-	-
SS-90	CL	13+00	18.5-20.0	A-6(7)	36	21	3.6	53.1	12.9	30.3	100	99	51	-	-
SS-91	CL	13+00	28.5-30.0	A-6(13)	34	15	3.6	18.2	47.9	30.3	100	98	90	-	-
SS-92	CL	13+00	33.5-35.0	A-2-4(0)	21	4	47.7	28.4	10.8	13.1	100	82	26	-	-
SS-93	CL	13+00	36.2-37.1	A-2-4(0)	23	8	54.3	21.0	10.5	14.1	34	20	9	-	-
SS-94	CL	13+00	38.5-39.1	A-1-0(0)	14	NP	66.3	18.4	5.3	10.1	51	24	9	-	-
SS-95	CL	13+00	43.5-45.0	A-1-0(0)	16	NP	65.8	19.2	7.0	8.1	85	41	14	-	-
SS-96	CL	13+00	48.5-48.8	A-1-0(0)	12	NP	51.7	32.3	7.9	8.1	37	23	7	-	-
SS-97	CL	13+00	53.5-54.9	A-2-4(0)	16	NP	31.3	37.4	18.2	13.1	88	72	32	-	-
S-6	90 RT	18+00	0.0-8.5	A-4(0)	17	NP	22.3	36.9	21.1	19.7	100	95	44	-	-
S-4A	90 RT	18+00	0.0-8.5	A-5(0)	7	NP	42.4	23.9	5.1	28.5	100	75	36	-	-

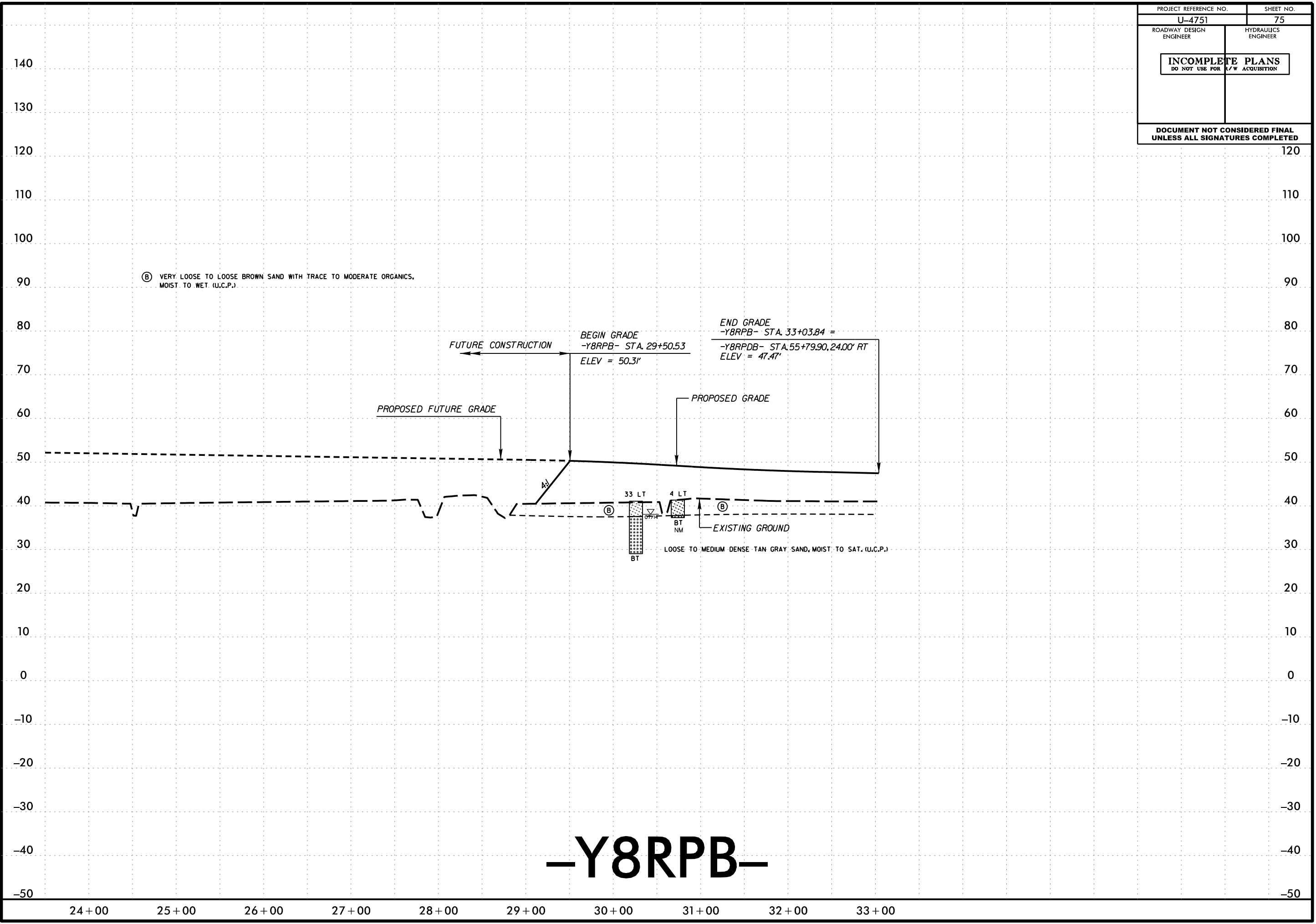


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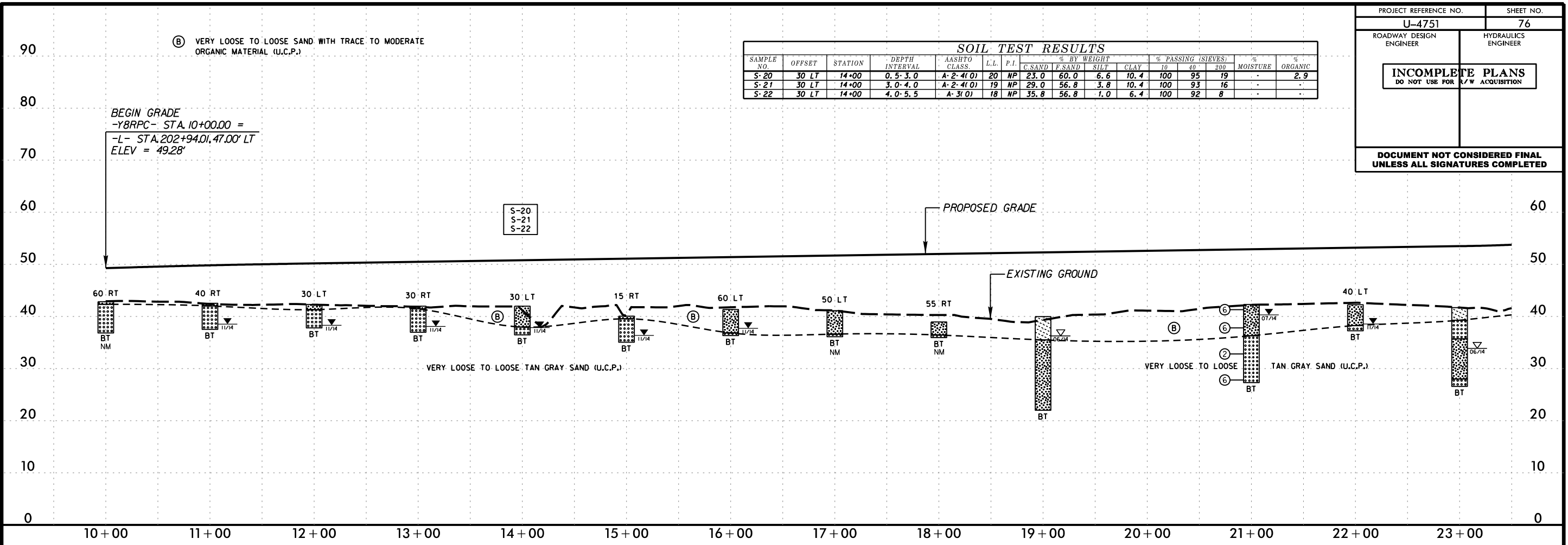
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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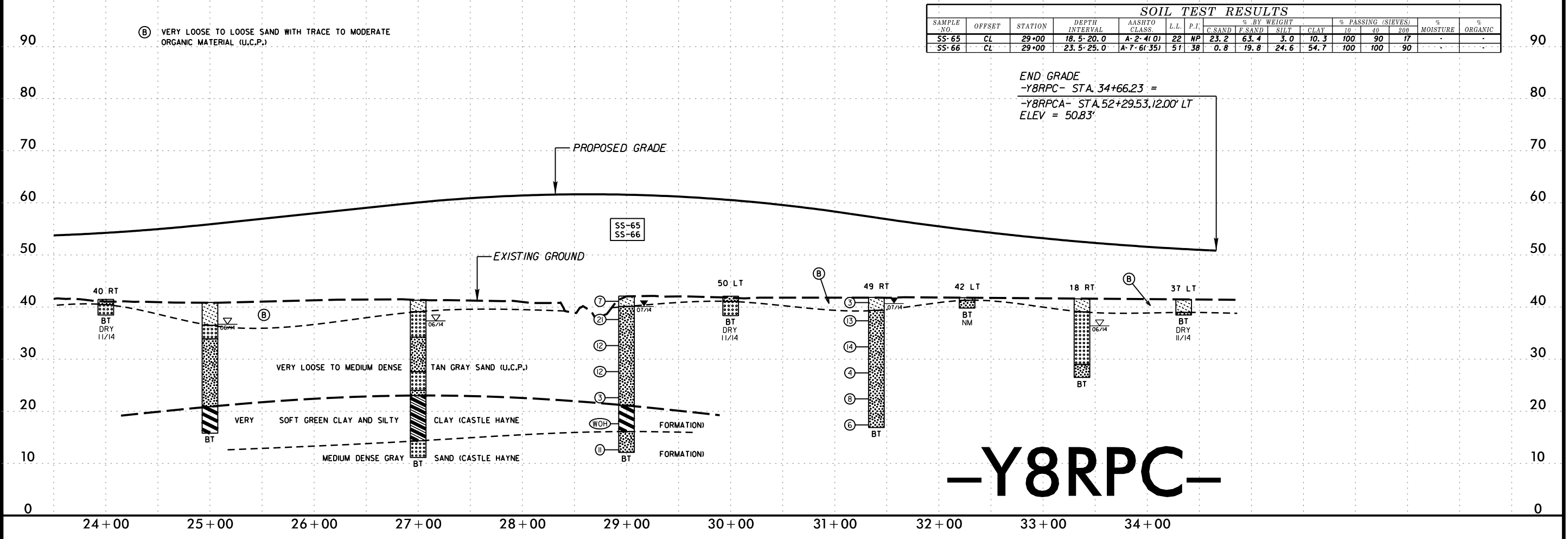


-Y8RPB-

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-20	30 LT	14+00	0.5-3.0	A-2-4(0)	20	NP	23.0	60.0	6.6	10.4	100	95	19	-	2.9
S-21	30 LT	14+00	3.0-4.0	A-2-4(0)	19	NP	29.0	56.8	3.8	10.4	100	93	16	-	-
S-22	30 LT	14+00	4.0-5.5	A-3(0)	18	NP	35.8	56.8	1.0	6.4	100	92	8	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-65	CL	29+00	18.5-20.0	A-2-4(0)	22	NP	23.2	63.4	3.0	10.3	100	90	17	-	-
SS-66	CL	29+00	23.5-25.0	A-7-6(35)	51	38	0.8	19.8	24.6	54.7	100	100	90	-	-

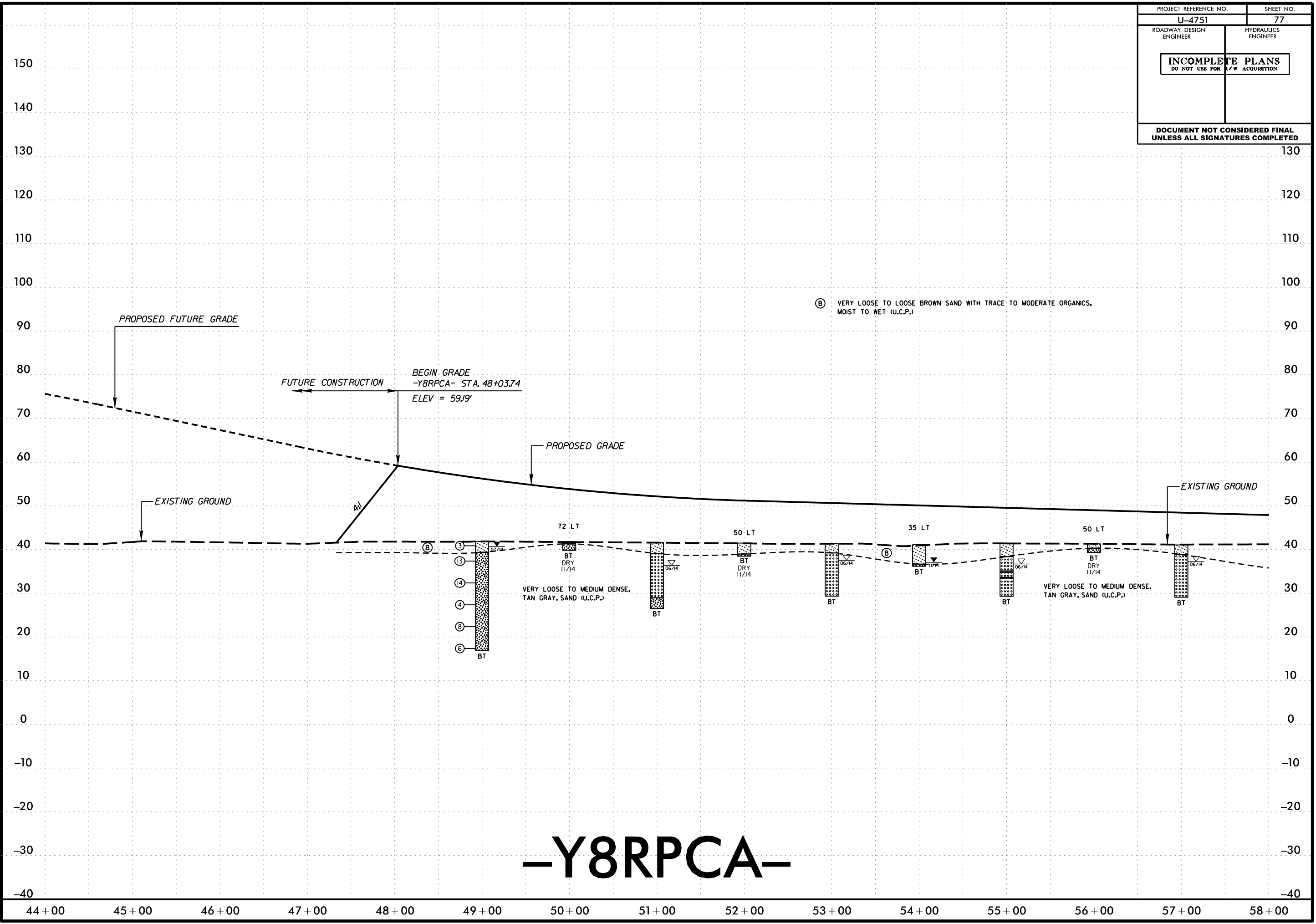


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PROJECT REFERENCE NO. U-4751	SHEET NO. 77
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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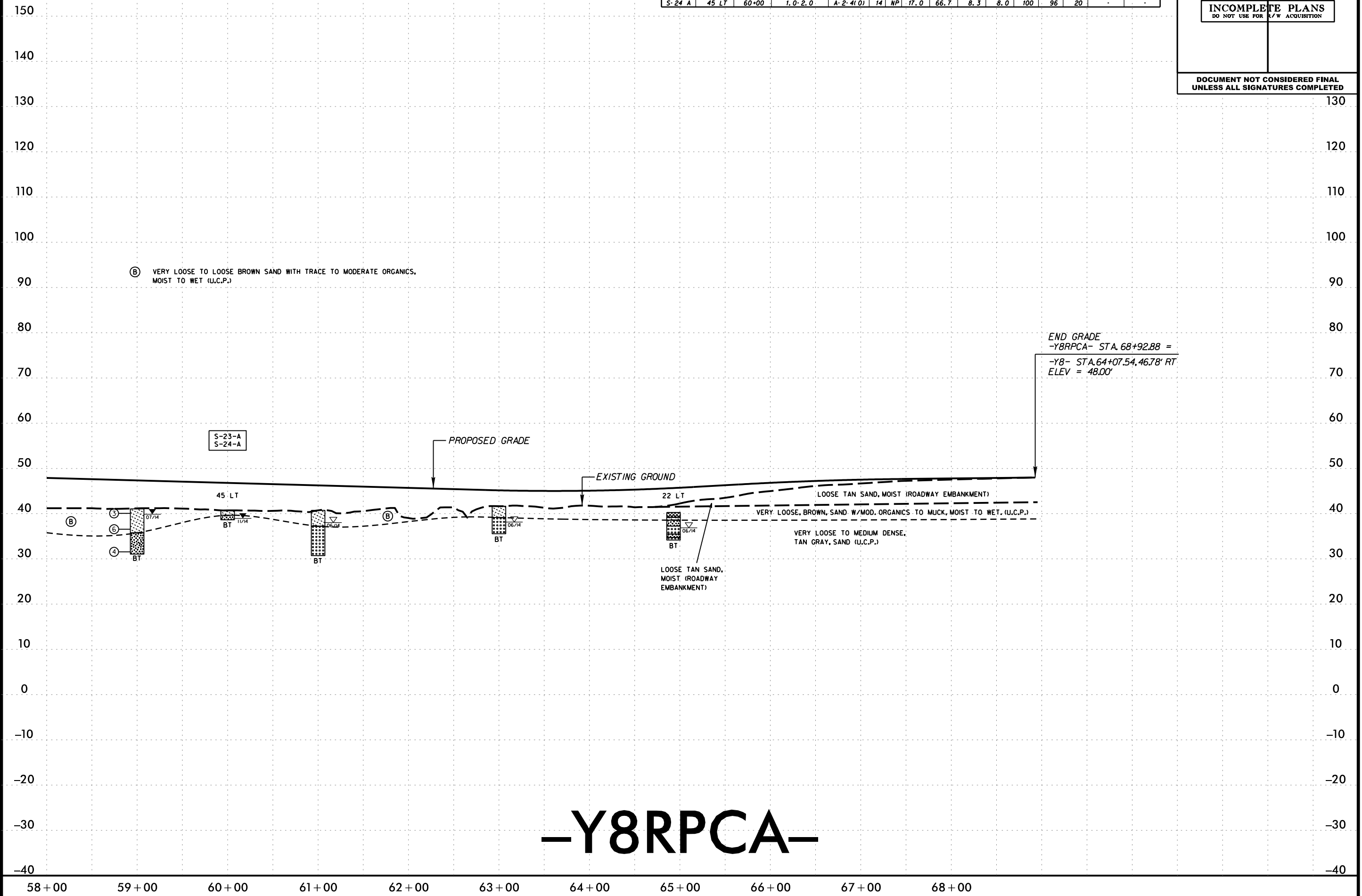


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-23-A	45 LT	60+00	0.0-1.0	A-2-4(0)	11	NP	19.2	69.5	5.3	6.0	100	95	15	-	-
S-24-A	45 LT	60+00	1.0-2.0	A-2-4(0)	14	NP	17.0	66.7	8.3	8.0	100	96	20	-	-

PROJECT REFERENCE NO. U-4751	SHEET NO. 78
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Ⓑ VERY LOOSE TO LOOSE BROWN SAND WITH TRACE TO MODERATE ORGANICS, MOIST TO WET (U.C.P.)

S-23-A
S-24-A

PROPOSED GRADE

EXISTING GROUND

45 LT

22 LT

LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

VERY LOOSE, BROWN, SAND W/MOD. ORGANICS TO MUCK, MOIST TO WET. (U.C.P.)

VERY LOOSE TO MEDIUM DENSE, TAN GRAY, SAND (U.C.P.)

LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

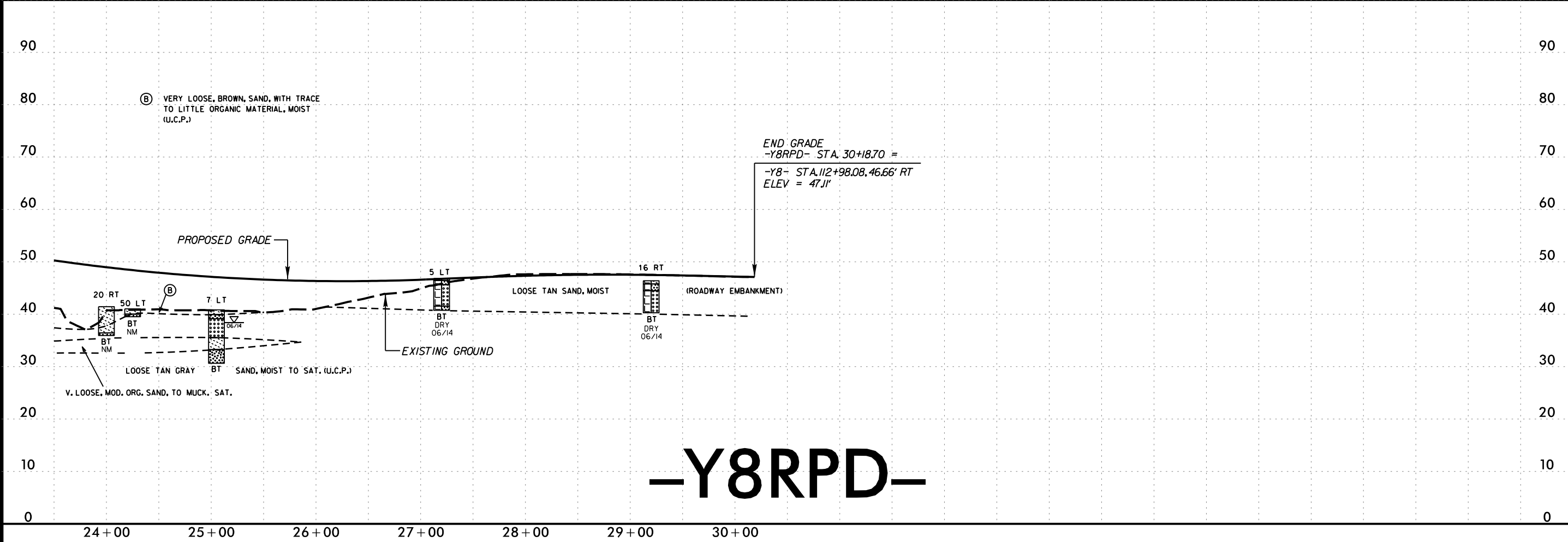
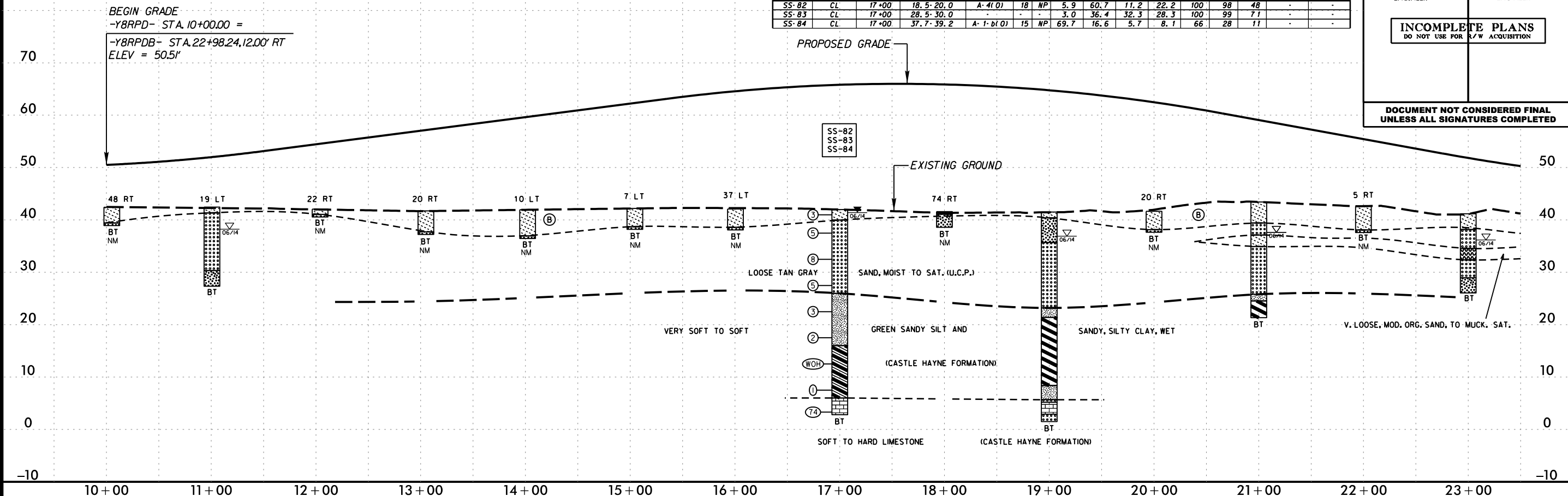
END GRADE
-Y8RPCA- STA. 68+92.88 =
-Y8- STA. 64+07.54, 46.78' RT
ELEV = 48.00'

58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00

5/28/99

PROJECT REFERENCE NO. U-4751	SHEET NO. 79
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	#10	#40	#200		
SS-82	CL	17+00	18.5-20.0	A-4(0)	18	NP	5.9	60.7	11.2	22.2	100	98	48	-
SS-83	CL	17+00	28.5-30.0	-	-	-	3.0	36.4	32.3	28.3	100	99	71	-
SS-84	CL	17+00	37.7-39.2	A-1-b(0)	15	NP	69.7	16.6	5.7	8.1	66	28	11	-



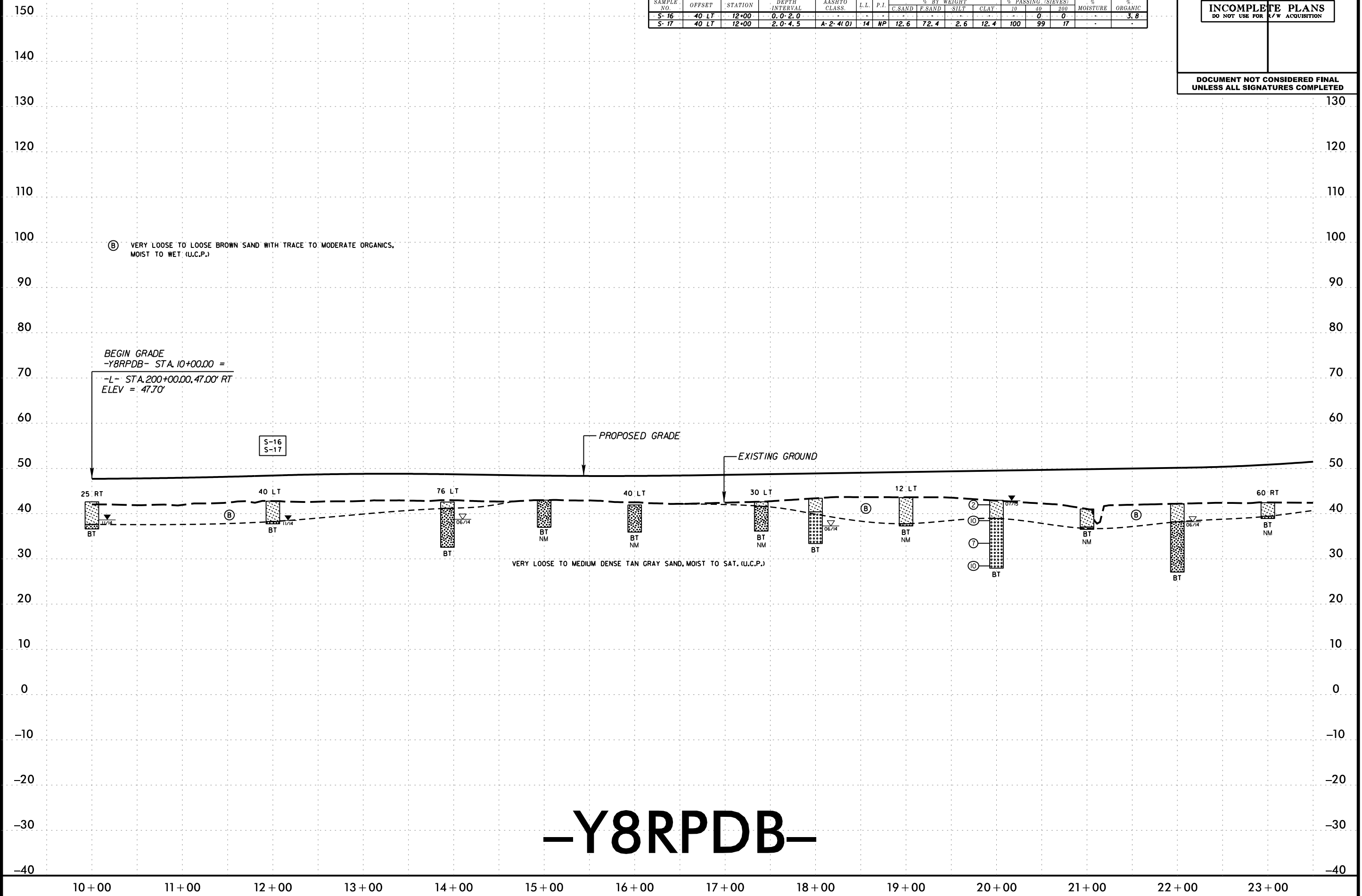
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	80
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-16	40 LT	12+00	0.0-2.0	-	-	-	-	-	-	-	0	0	-	3.8	
S-17	40 LT	12+00	2.0-4.5	A-2-4(0)	14	NP	12.6	72.4	2.6	12.4	100	99	17	-	

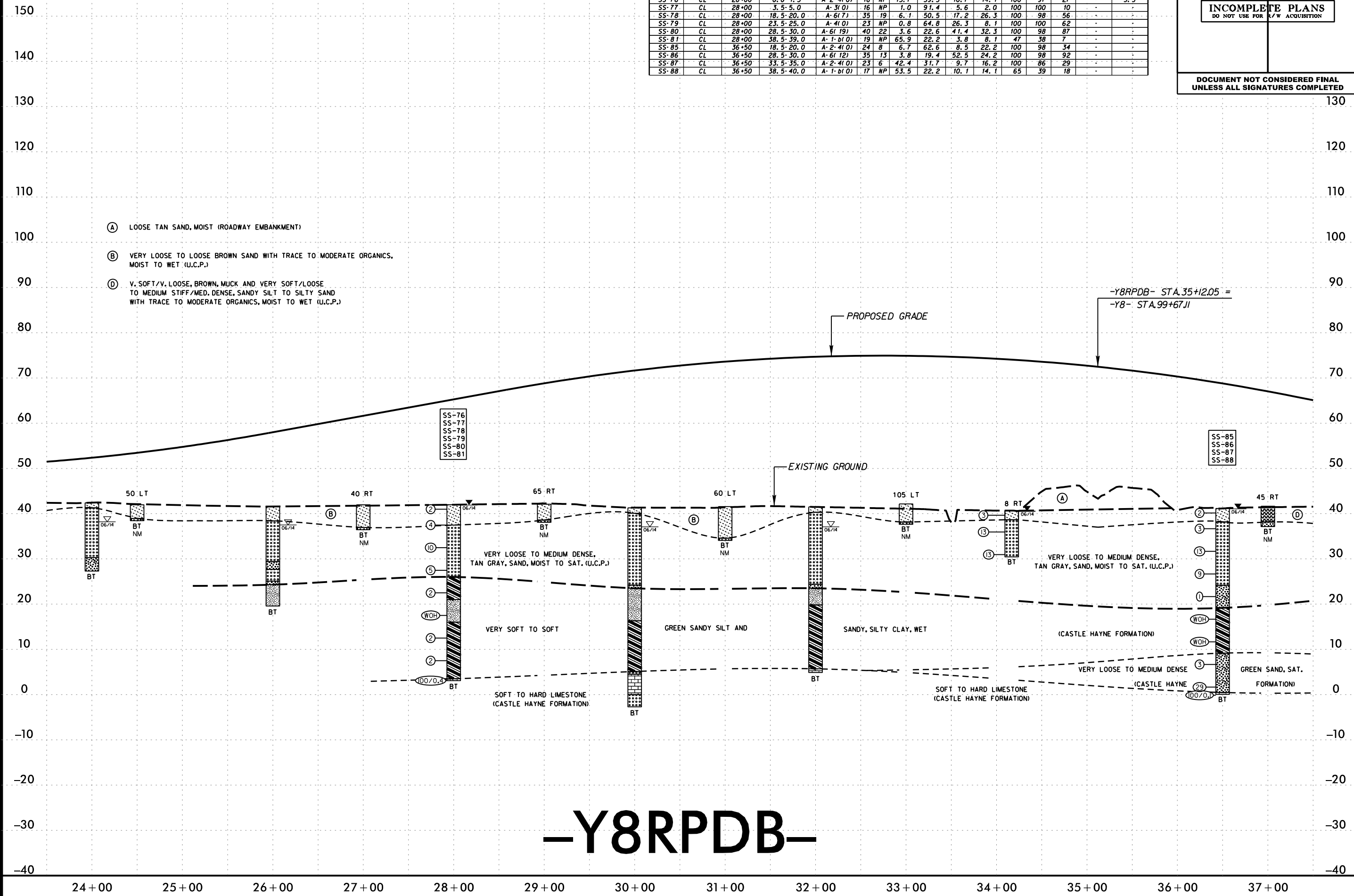


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PROJECT REFERENCE NO.	SHEET NO.
U-4751	81
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

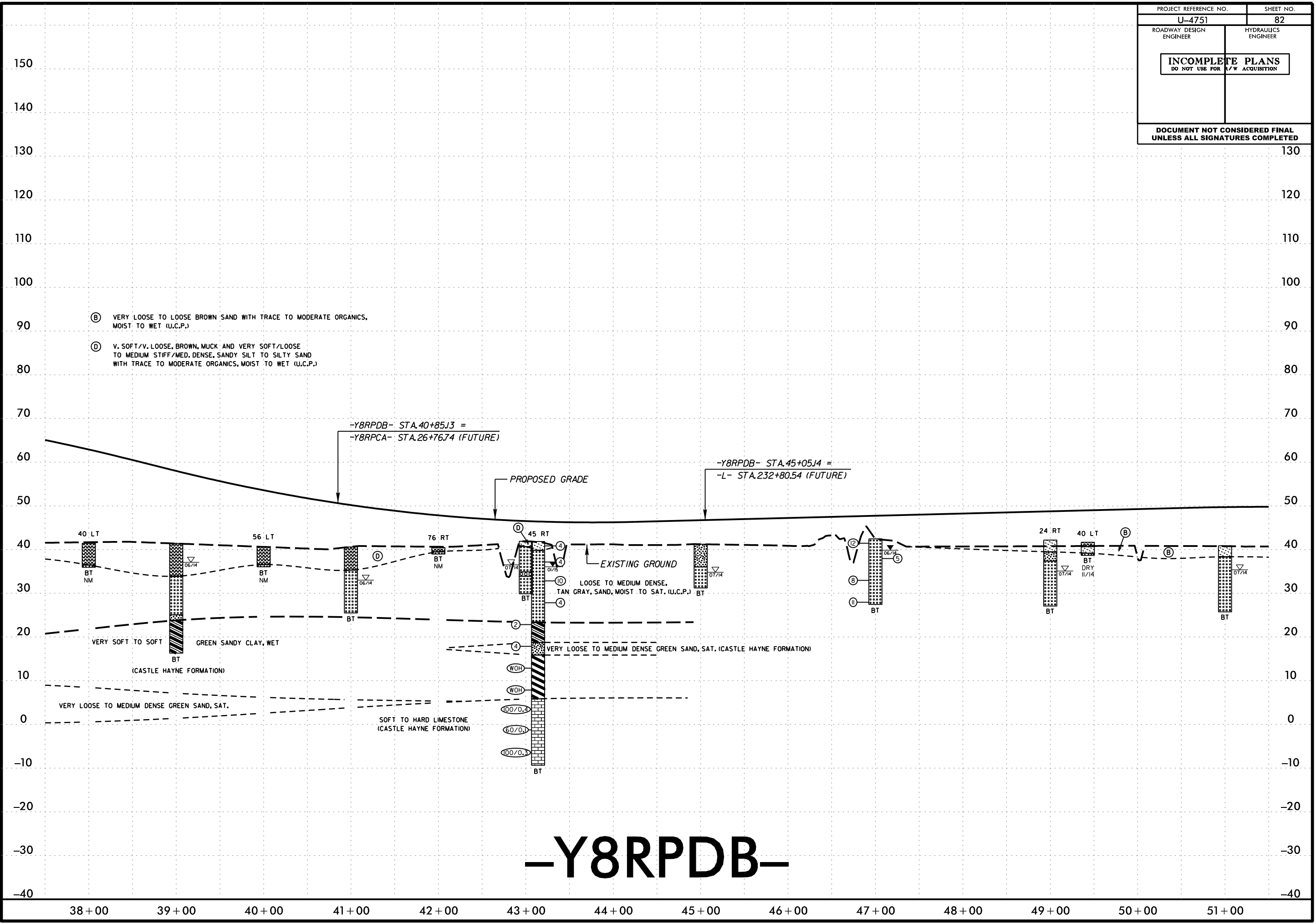
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C SAND	F SAND	SILT	CLAY	10	40	200		
SS-76	CL	28+00	0.0-1.5	A-2-4(0)	16	NP	15.7	59.5	10.7	14.1	100	97	27	-	5.5
SS-77	CL	28+00	3.5-5.0	A-3(0)	16	NP	1.0	91.4	5.6	2.0	100	100	10	-	-
SS-78	CL	28+00	18.5-20.0	A-6(7)	35	19	6.1	50.5	17.2	26.3	100	98	56	-	-
SS-79	CL	28+00	23.5-25.0	A-4(0)	23	NP	0.8	64.8	26.3	8.1	100	100	62	-	-
SS-80	CL	28+00	28.5-30.0	A-6(19)	40	22	3.6	22.6	41.4	32.3	100	98	87	-	-
SS-81	CL	28+00	38.5-39.0	A-1-b(0)	19	NP	65.9	22.2	3.8	8.1	47	38	7	-	-
SS-85	CL	36+50	18.5-20.0	A-2-4(0)	24	8	6.7	62.6	8.5	22.2	100	98	34	-	-
SS-86	CL	36+50	28.5-30.0	A-6(12)	35	13	3.8	19.4	52.5	24.2	100	98	92	-	-
SS-87	CL	36+50	33.5-35.0	A-2-4(0)	23	6	42.4	31.7	9.7	16.2	100	86	29	-	-
SS-88	CL	36+50	38.5-40.0	A-1-b(0)	17	NP	53.5	22.2	10.1	14.1	65	39	18	-	-



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PROJECT REFERENCE NO. U-4751	SHEET NO. 82
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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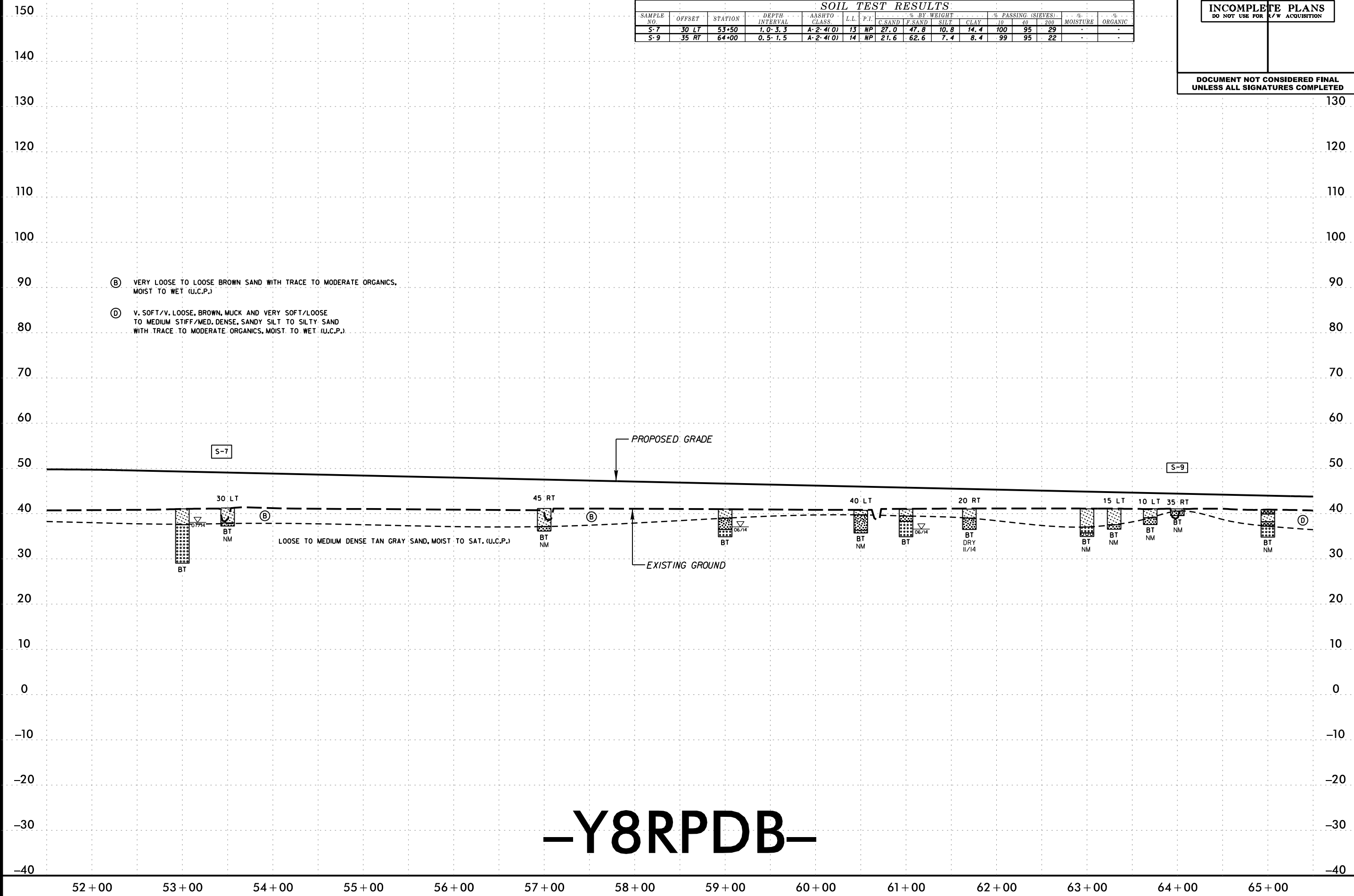


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PROJECT REFERENCE NO. U-4751	SHEET NO. 83
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

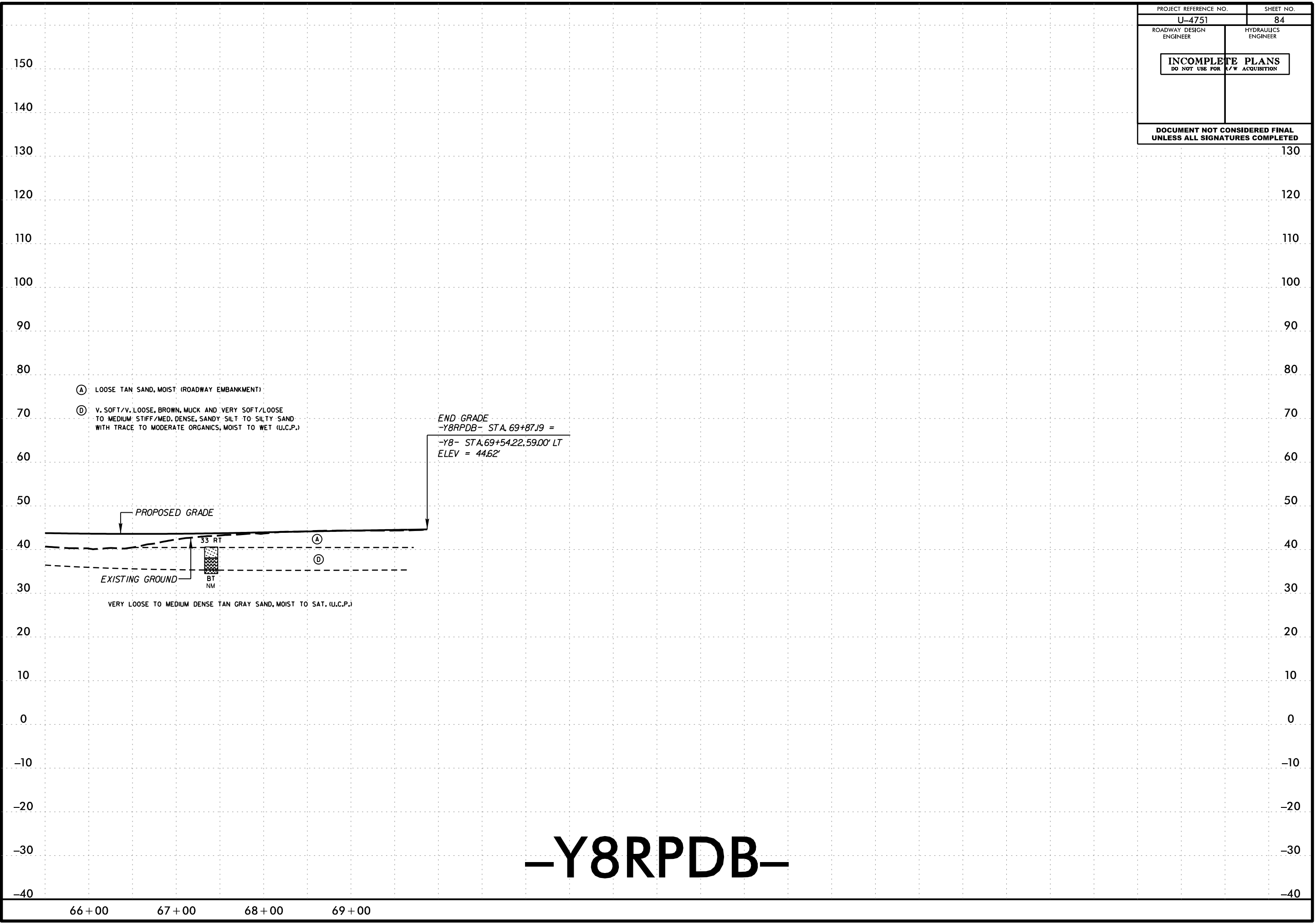
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	LL	P.I.	% BY WEIGHT				% PASSING (SIEVES)			MOISTURE	ORGANIC
							C SAND	F SAND	SILT	CLAY	#10	#40	#200		
S-7	30 LT	53+50	1.0-3.3	A-2-4(0)	13	NP	27.0	47.8	10.8	14.4	100	95	29	-	-
S-9	35 RT	64+00	0.5-1.5	A-2-4(0)	14	NP	21.6	62.6	7.4	8.4	99	95	22	-	-



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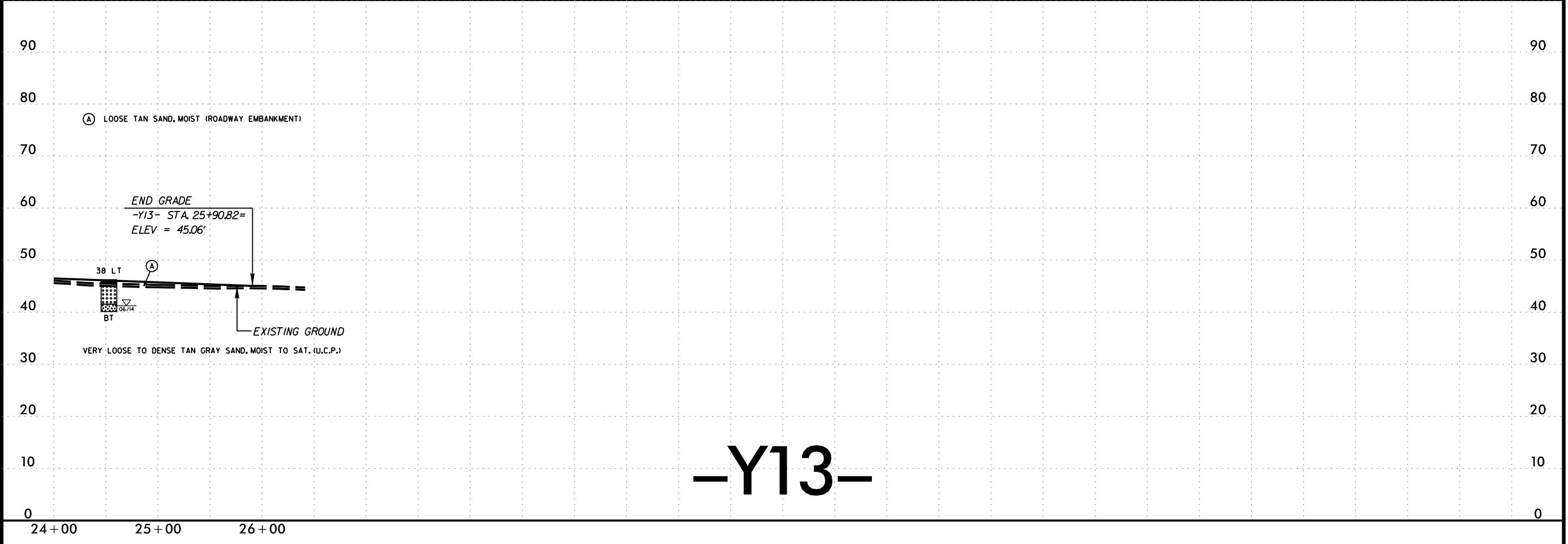
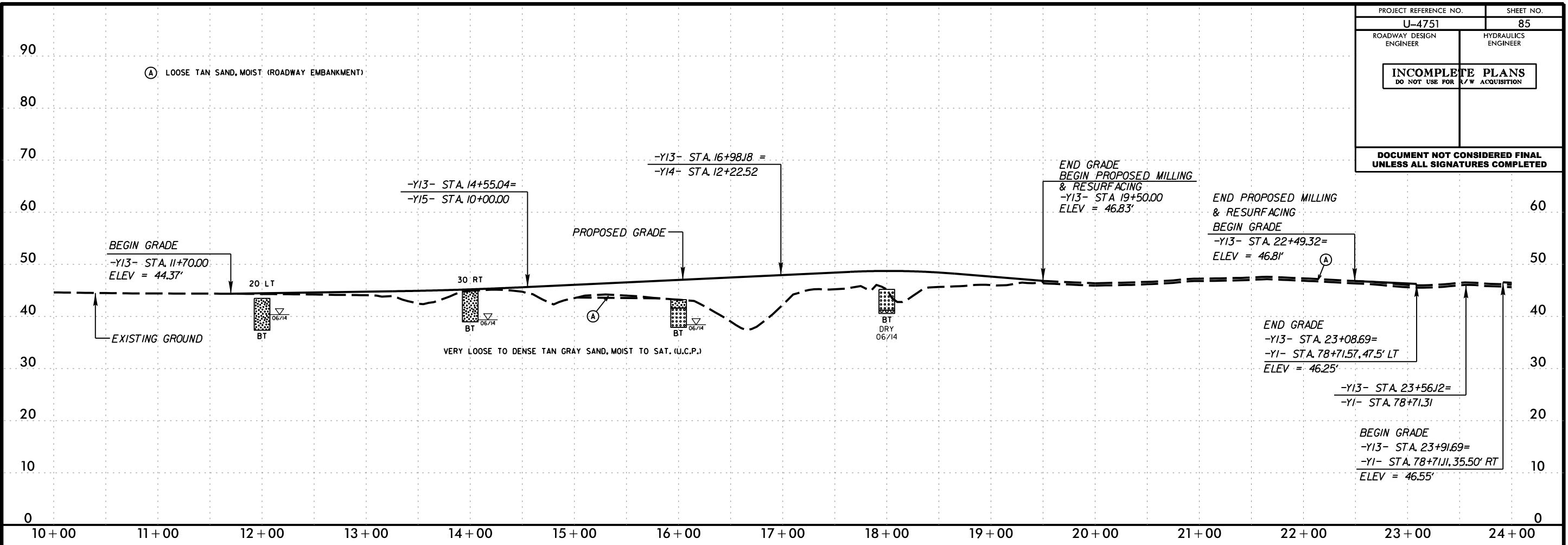
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U-4751	84
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INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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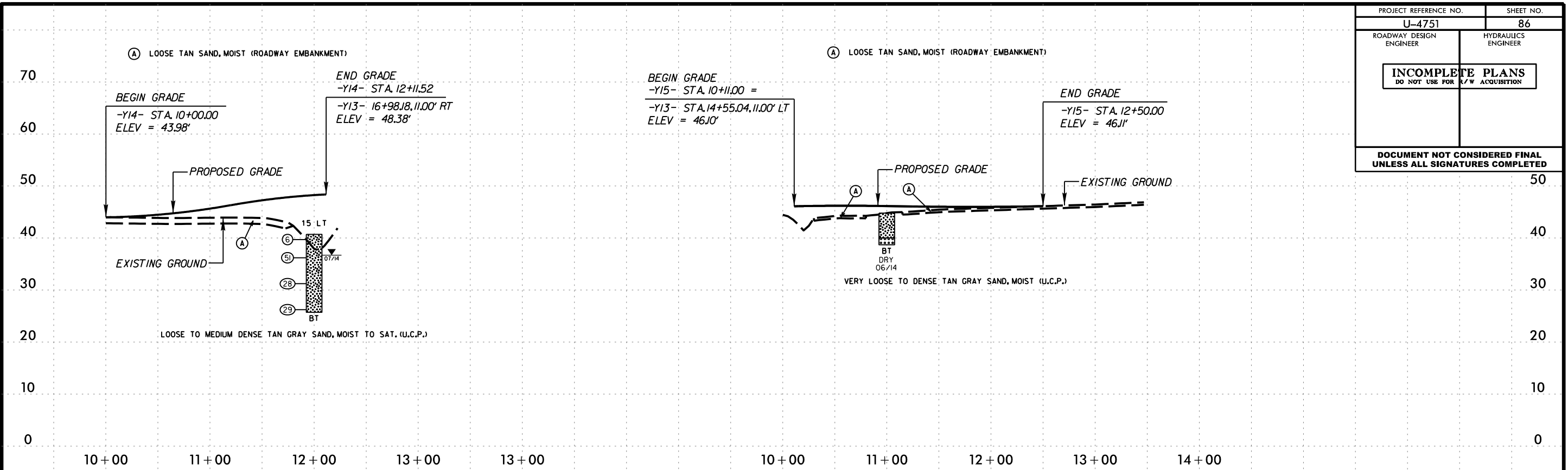
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	85
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



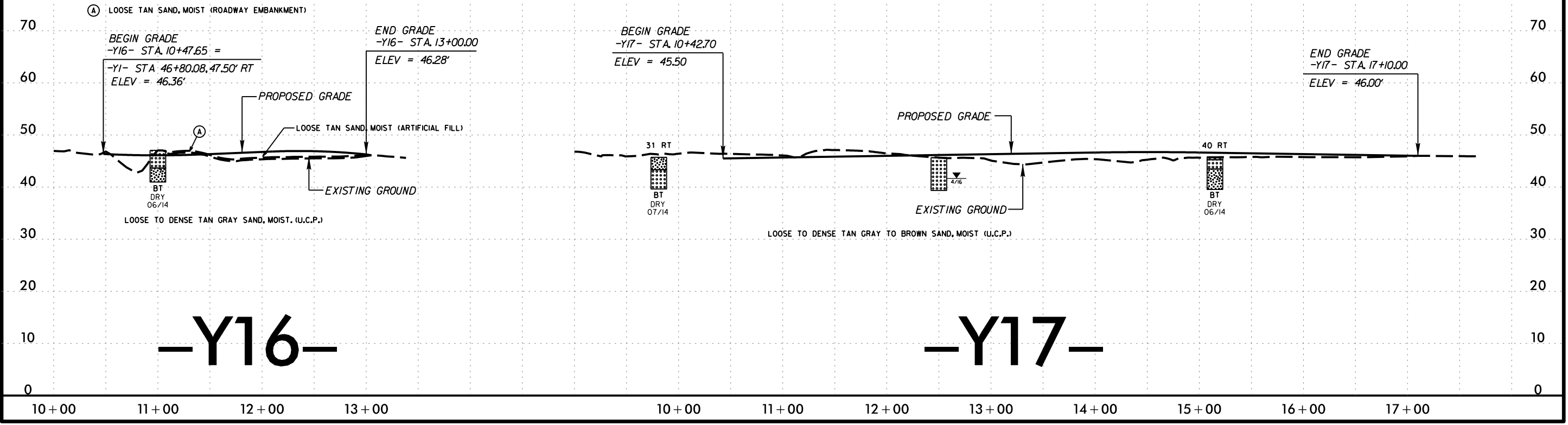
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PROJECT REFERENCE NO.	SHEET NO.
U-4751	86
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-Y14-

-Y15-



-Y16-

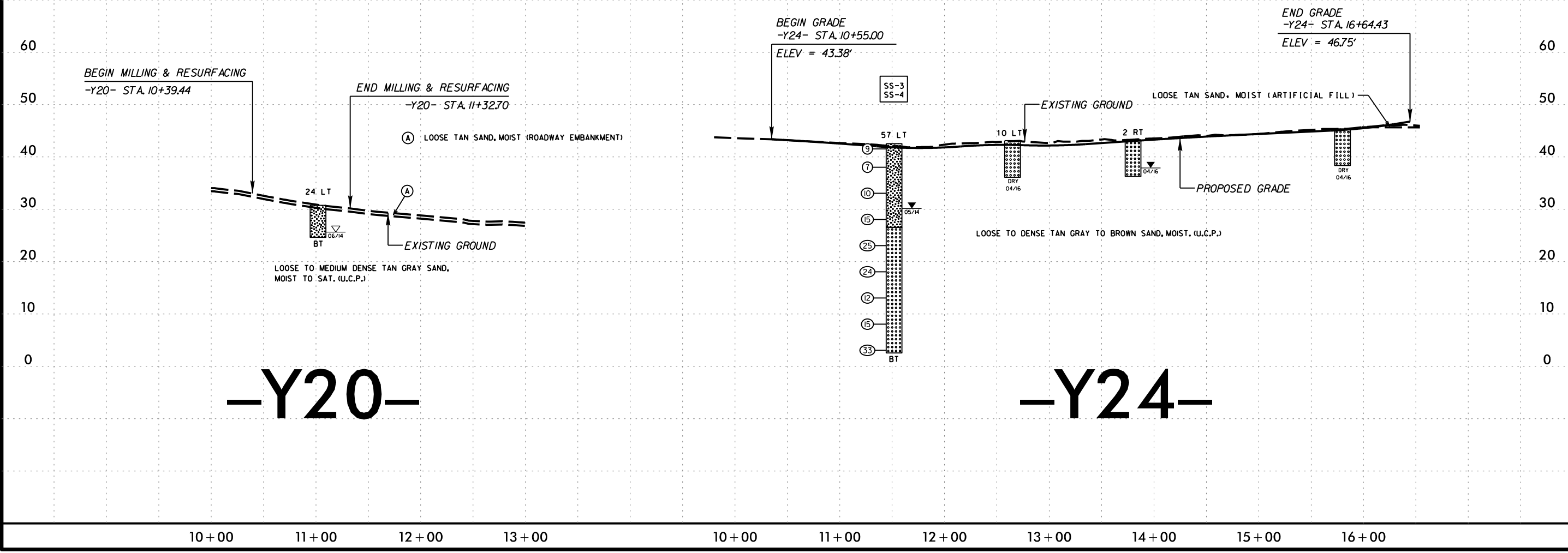
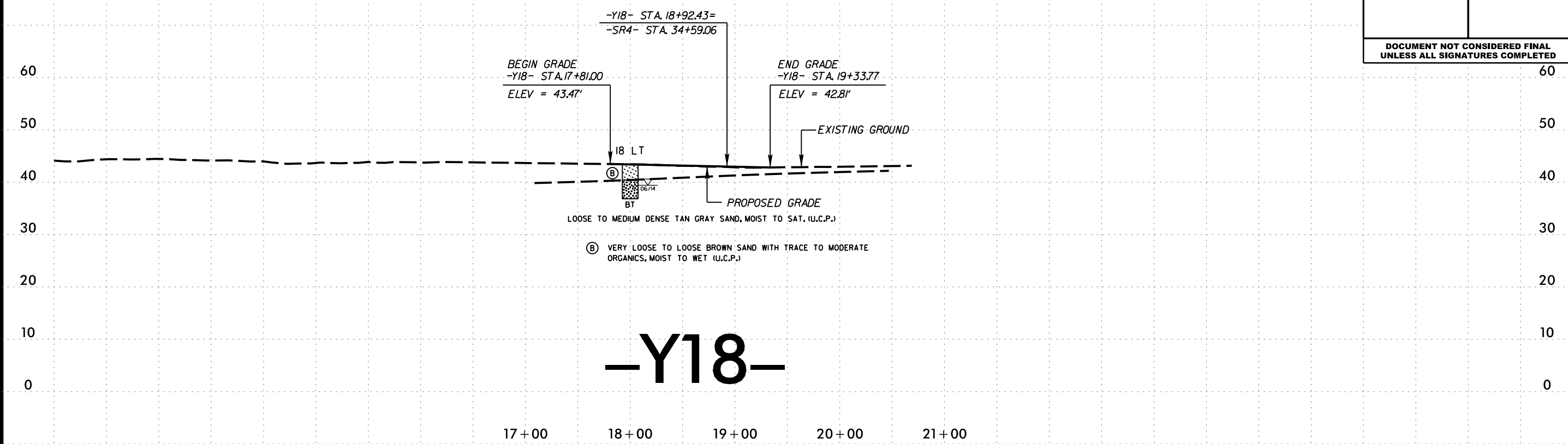
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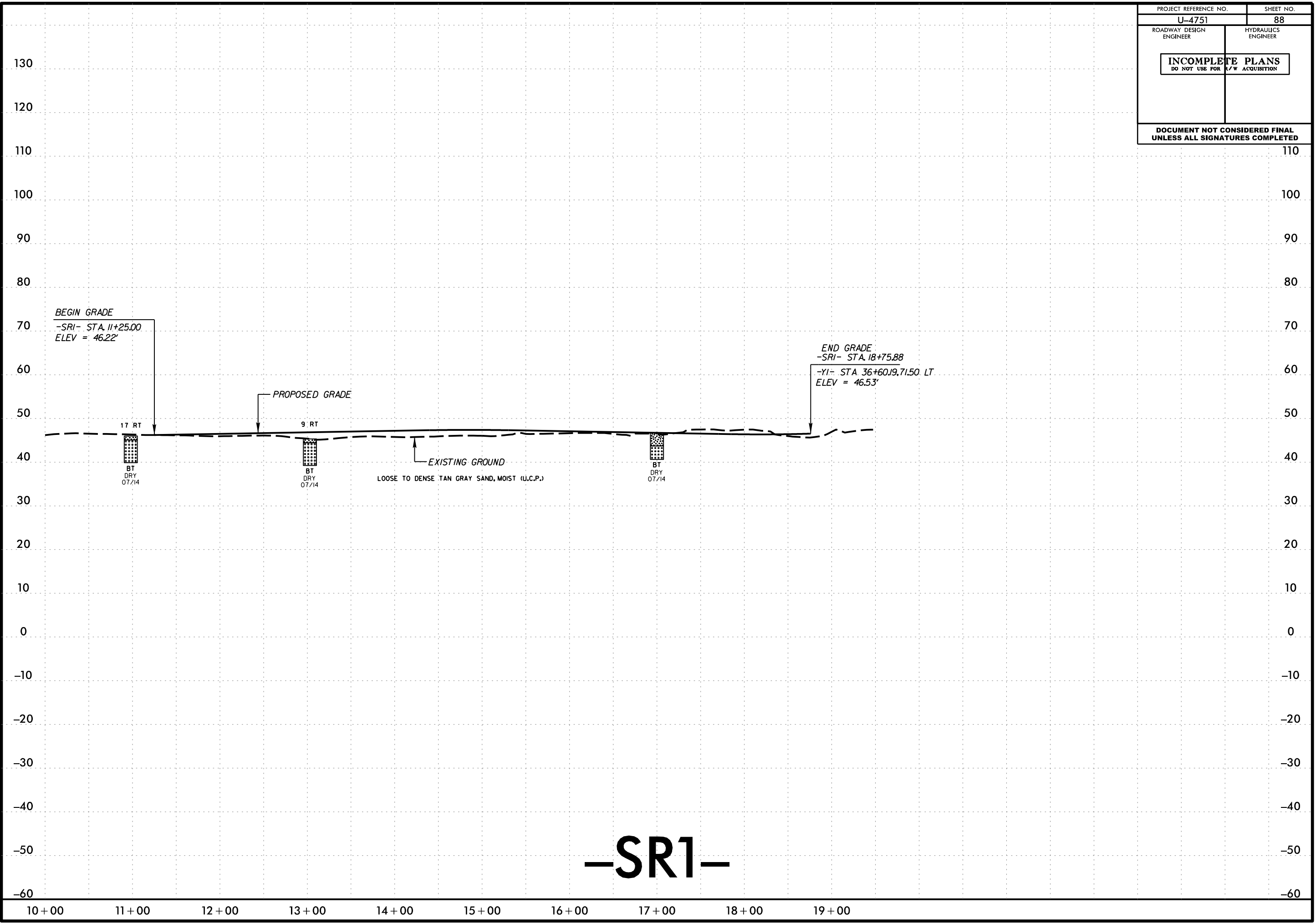
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-3	57 LT	11+72	23.5-25.0	A-3(0)	18	NP	32.2	64.8	0.6	2.2	100	98	3	-	-
SS-4	57 LT	11+72	38.5-40.0	A-3(0)	17	NP	11.9	87.3	0.8	-	100	100	7	-	-

PROJECT REFERENCE NO. U-4751	SHEET NO. 87
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



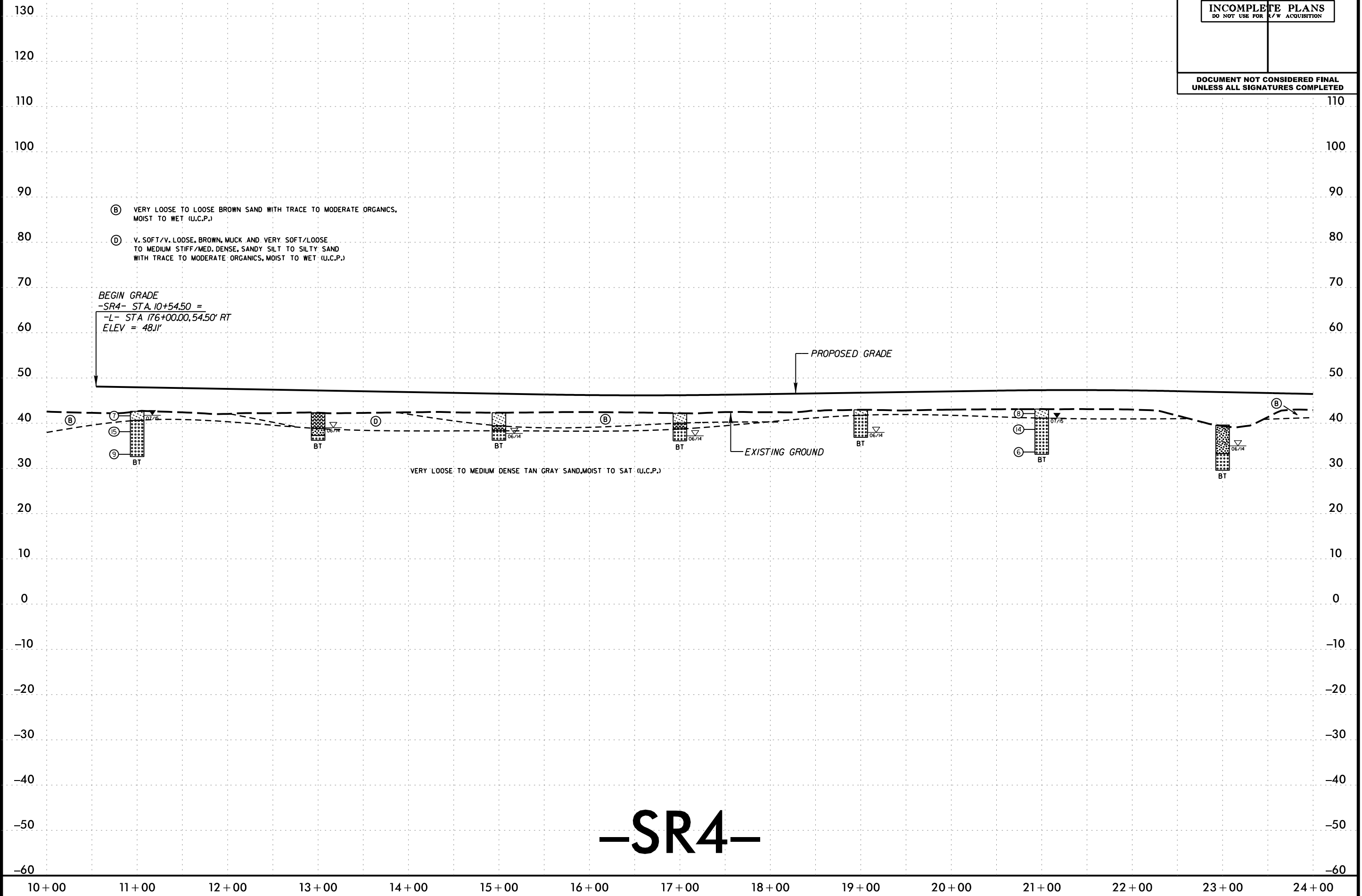
PROJECT REFERENCE NO. U-4751	SHEET NO. 88
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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PROJECT REFERENCE NO. U-4751	SHEET NO. 89
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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- ⓑ VERY LOOSE TO LOOSE BROWN SAND WITH TRACE TO MODERATE ORGANICS, MOIST TO WET (U.C.P.)
- ⓓ V. SOFT/V. LOOSE, BROWN MUCK AND VERY SOFT/LOOSE TO MEDIUM STIFF/MED. DENSE, SANDY SILT TO SILTY SAND WITH TRACE TO MODERATE ORGANICS, MOIST TO WET (U.C.P.)

BEGIN GRADE
 -SR4- STA. 10+54.50 =
 -L- STA 176+00.00, 54.50' RT
 ELEV = 48.11'

VERY LOOSE TO MEDIUM DENSE TAN GRAY SAND, MOIST TO SAT (U.C.P.)

-SR4-

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PROJECT REFERENCE NO.	SHEET NO.
U-4751	90
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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