

REFERENCE: U-3609B

PROJECT: 39026

CROSS SECTIONS

LINE	STATION	SHEETS
-L-	66+00.00 - 67+50.00	4,5
-L-	74+00.00 - 76+00.00	6,7
-L-	76+50.00 - 80+00.00	7-9
-L-	89+50.00 - 92+00.00	10,11
-L-	119+00.00 - 122+50.00	12-14
-Y10-	11+00.00 - 13+50.00	15,16

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
ROADWAY
SUBSURFACE INVESTIGATION

COUNTY WAYNE
PROJECT DESCRIPTION U.S. 13 (BERKELEY BOULEVARD)
FROM SR 1003 (NEW HOPE ROAD) TO SR 1572
(SAULSTON ROAD)

RECOMMENDATIONS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3609B	1	16

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) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT 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 (IN-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 THE 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.

- 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
GOODNIGHT, D.J.

INVESTIGATED BY FALCON ENG.

DRAWN BY HUNSBERGER, W.S.

CHECKED BY CROCKETT, S. C.

SUBMITTED BY FALCON ENG.

DATE SEPTEMBER 2025



Signed by: W Scott Hunsberger 9/3/2025
222D785613A34B9...
SIGNATURE DATE

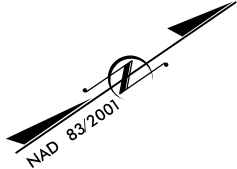
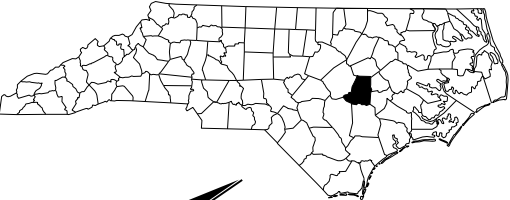
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

DATE: 1-XX-17

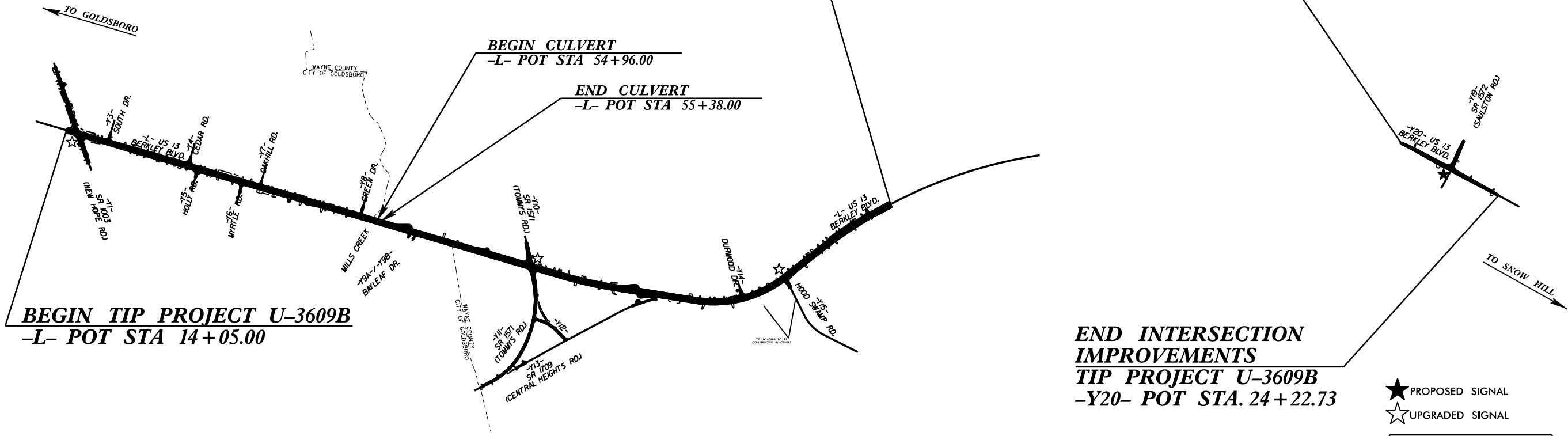
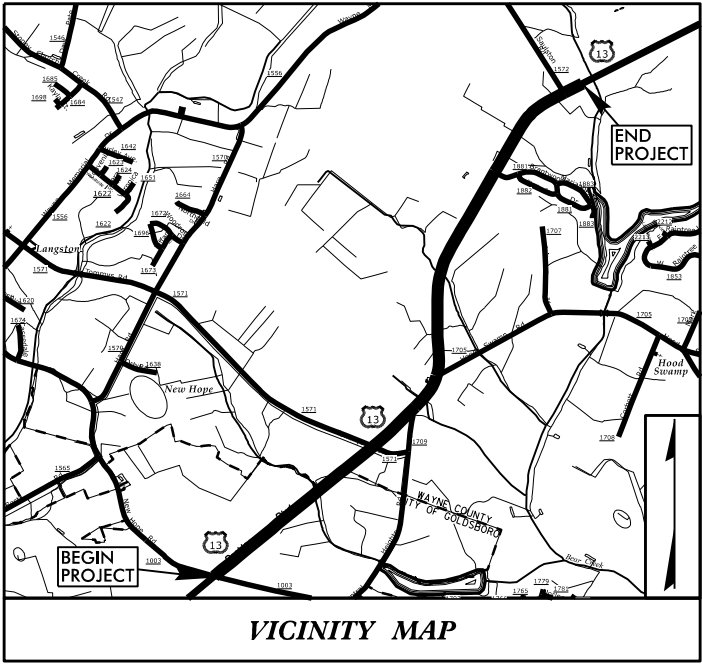
See Sheet 1A For Index of Sheets

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3609B	3	16
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
39026.1.2		PE	
39026.2.2		UTIL., RW	



TIP PROJECT: U-3609B

CONTRACT:



BEGIN TIP PROJECT U-3609B
-L- POT STA 14+05.00

END TIP PROJECT U-3609B
-L- POT STA 125+00.00

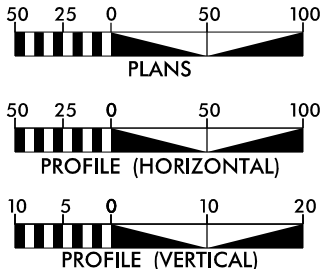
BEGIN INTERSECTION IMPROVEMENTS
TIP PROJECT U-3609B
-Y20- POC STA. 10+25.00

END INTERSECTION IMPROVEMENTS
TIP PROJECT U-3609B
-Y20- POT STA. 24+22.73

- ★ PROPOSED SIGNAL
- ☆ UPGRADED SIGNAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 16,000
ADT 2040 = 18,600
K = 9 %
D = 55 %
T = 3 % *
V = 50/60 MPH
* TTST = 1% DUAL = 2%
FUNC CLASS = PRINCIPAL
AND MINOR ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-3609B = 1.829 miles
LENGTH STRUCTURES TIP PROJECT U-3609B = 0.008 miles
TOTAL LENGTH TIP PROJECT U-3609B = 1.837 miles



Prepared In the Office of:



MI ENGINEERING
1011 SCHUBERT DRIVE, SUITE 100
RALEIGH, NC 27609
(919) 851-5858
FIRM PE NUMBER: P-0671

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
2/21/2020
LETTING DATE:
7/16/2024

KATRINA N. HAZEL, P.E.
PROJECT ENGINEER

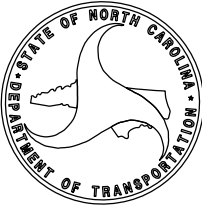
ADDISON GAINES, P.E.
NCDOT DIVISION 4

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: _____ P.E.



6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-3609B	4

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-45	67+00	28 FT RT	3.0'-6.0'	A-7-6	42	26	39	20	5	36	100	79	43	20	-

ROADWAY EMBANKMENT

S-45

UCP: TAN, MOIST, SILTY SAND WITH TRACE ROOTLETS

UCP: TAN AND GRAY, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

BT

07/19

67 + 00.00

BEGIN UNSUITABLE UNCLASSIFIED EXCAVATION AT STA. 66+75
BEGIN SHALLOW UNDERCUT AT STA. 66+75

ROADWAY EMBANKMENT

UCP: TAN BROWN AND GRAY, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

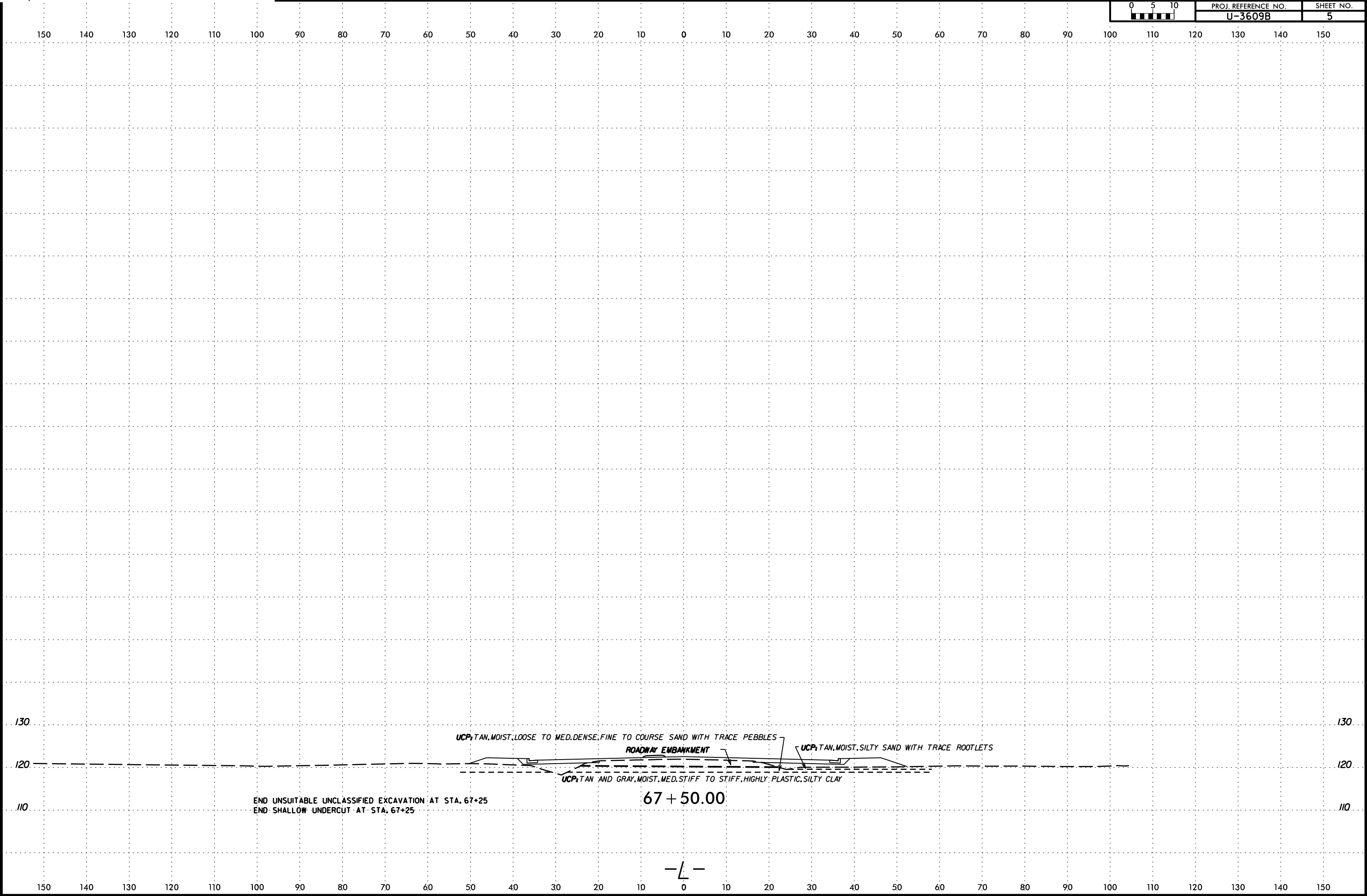
66 + 50.00

-L-

6/23/16

01-AUG-2023 08:26
I:\Projects\2023\020021\00 Stantec U-3609B Project Split\U3609B_GEO_ROW\Y CADD_GEOTECH\asc\U3609B_GEO_L.xpl - RECS.dgn
Geotechnical AT CADD

	PROJ. REFERENCE NO.	SHEET NO.
	U-3609B	5

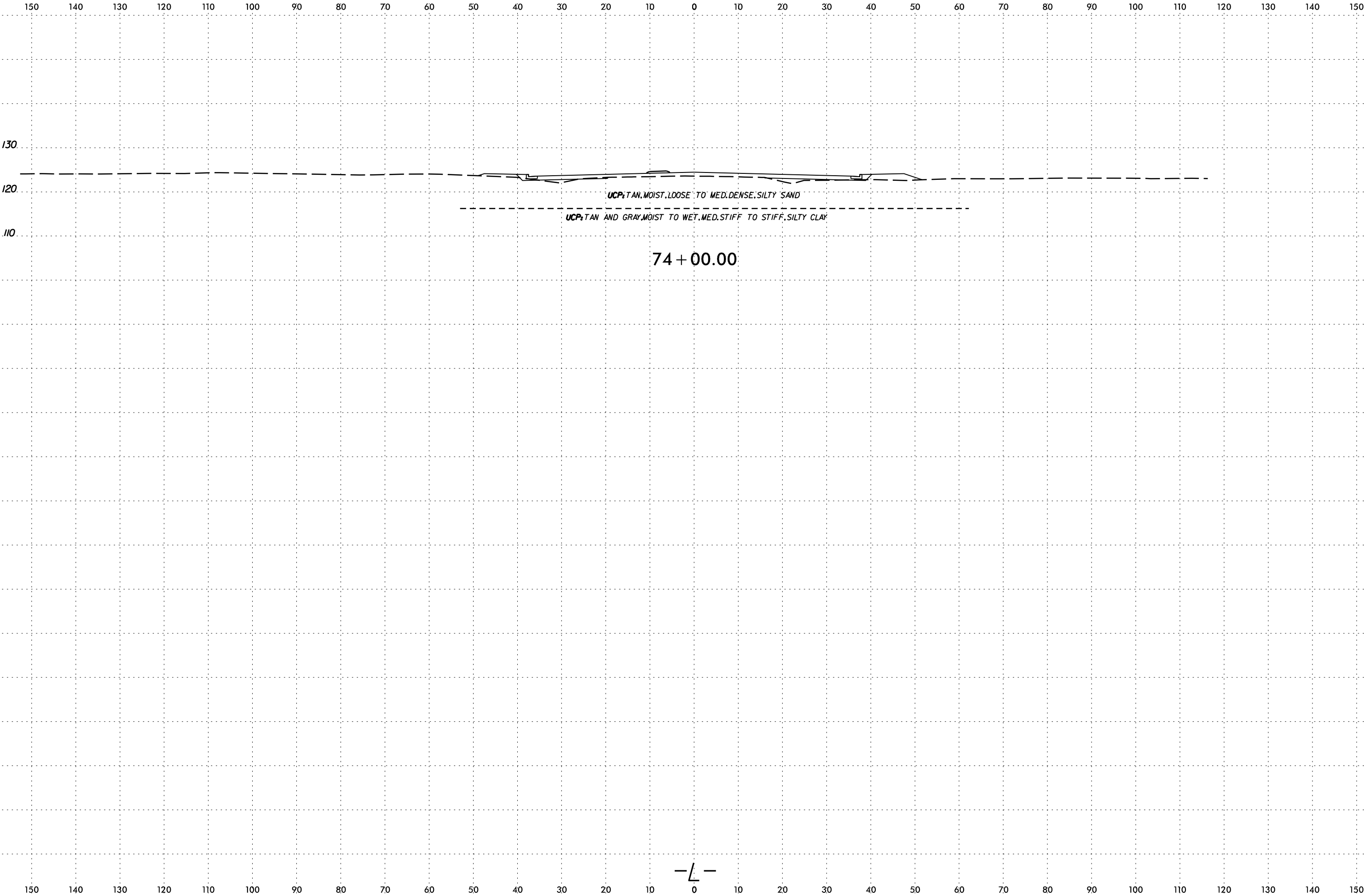


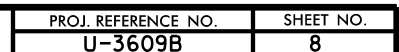
6/23/16



PROJ. REFERENCE NO.
U-3609B

SHEET NO.
6





The image displays four cross-section diagrams of a roadway embankment, labeled with station numbers: 78+50.00, 78+00.00, 77+50.00, and 77+00.00. Each diagram shows the embankment profile, existing ground line, and proposed roadway grade. The diagrams are labeled with station numbers and include a title block at the top left. The title block contains the following information: S-51, 34 FT LT, 78+51, 2.0'-5.0', A-7-6, 50, 31, 43, 13, 0, 44, 100, 78, 46, 20, -.

At station 78+50.00, the embankment is labeled "ROADWAY EMBANKMENT" and "UCP: TAN AND GRAY, MOIST. MED. STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY". The existing ground is labeled "UCP: GRAY, SAT. LOOSE TO MED. DENSE, CLAYEY SAND". The station number "78+50.00" is prominently displayed in the center.

At station 78+00.00, the embankment is labeled "ROADWAY EMBANKMENT" and "UCP: TAN AND GRAY, MOIST. MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY CLAY". The station number "78+00.00" is prominently displayed in the center.

At station 77+50.00, the embankment is labeled "ROADWAY EMBANKMENT" and "UCP: TAN AND GRAY, MOIST. MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY CLAY". The station number "77+50.00" is prominently displayed in the center.

At station 77+00.00, the embankment is labeled "ROADWAY EMBANKMENT" and "UCP: TAN AND GRAY, MOIST. MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY CLAY". The station number "77+00.00" is prominently displayed in the center. Below the station number, the text "BEGIN UNSUITABLE UNCLASSIFIED EXCAVATION AT STA. 77+00" and "BEGIN SHALLOW UNDERCUT AT STA. 77+00" is visible.

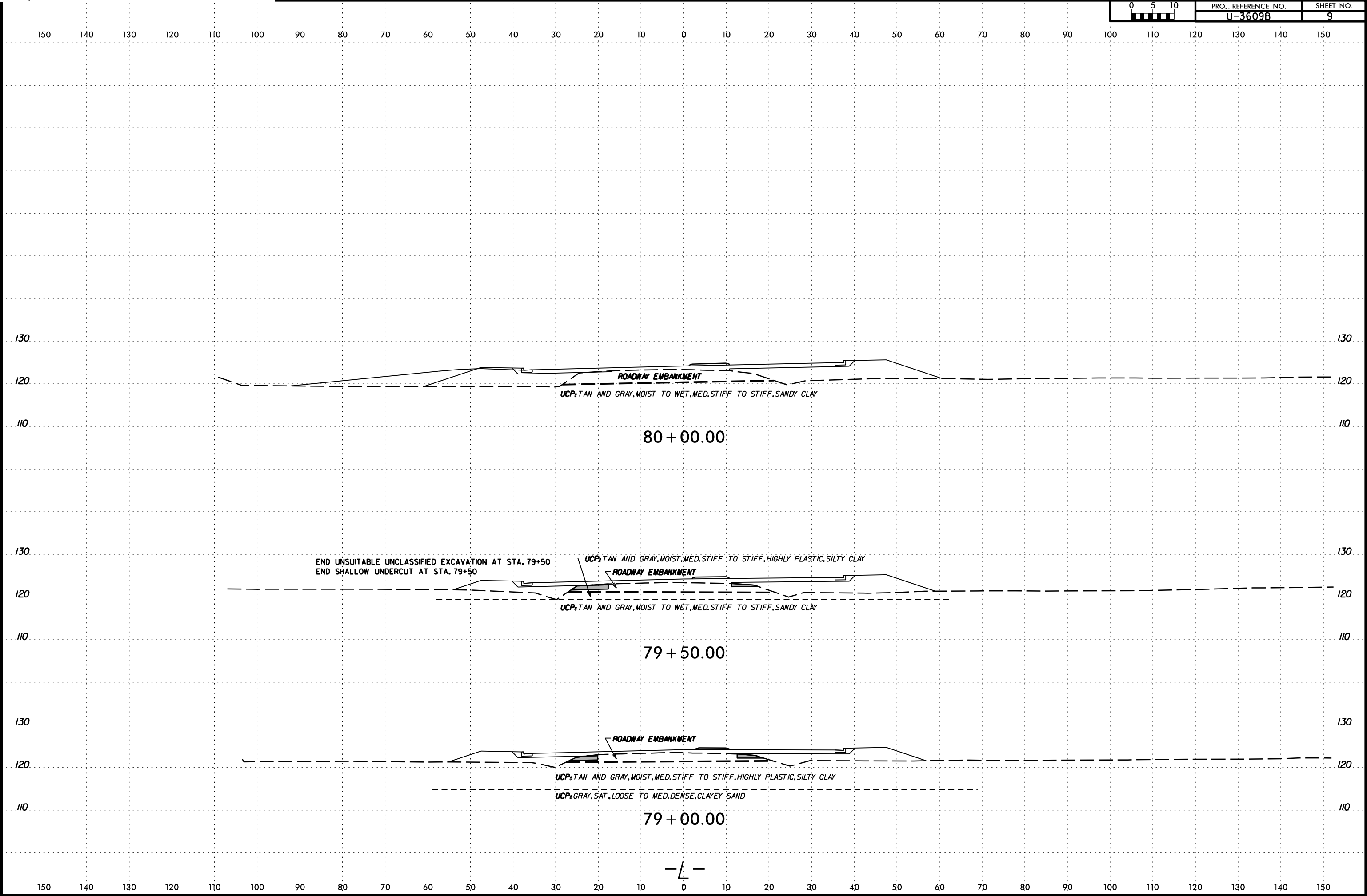
The diagrams are plotted on a grid with stationing on the horizontal axis (0 to 150) and elevation on the vertical axis (110 to 130). The embankment profile is shown as a solid line, the existing ground as a dashed line, and the proposed roadway grade as a solid line with a dashed centerline.

0-AUG-2023 08:27
 ; Projects\2023\G23021.00 Støntek U-3609B GEO.L\xp1 - RECS.dgn
 ; CADD machine

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-3609B	9

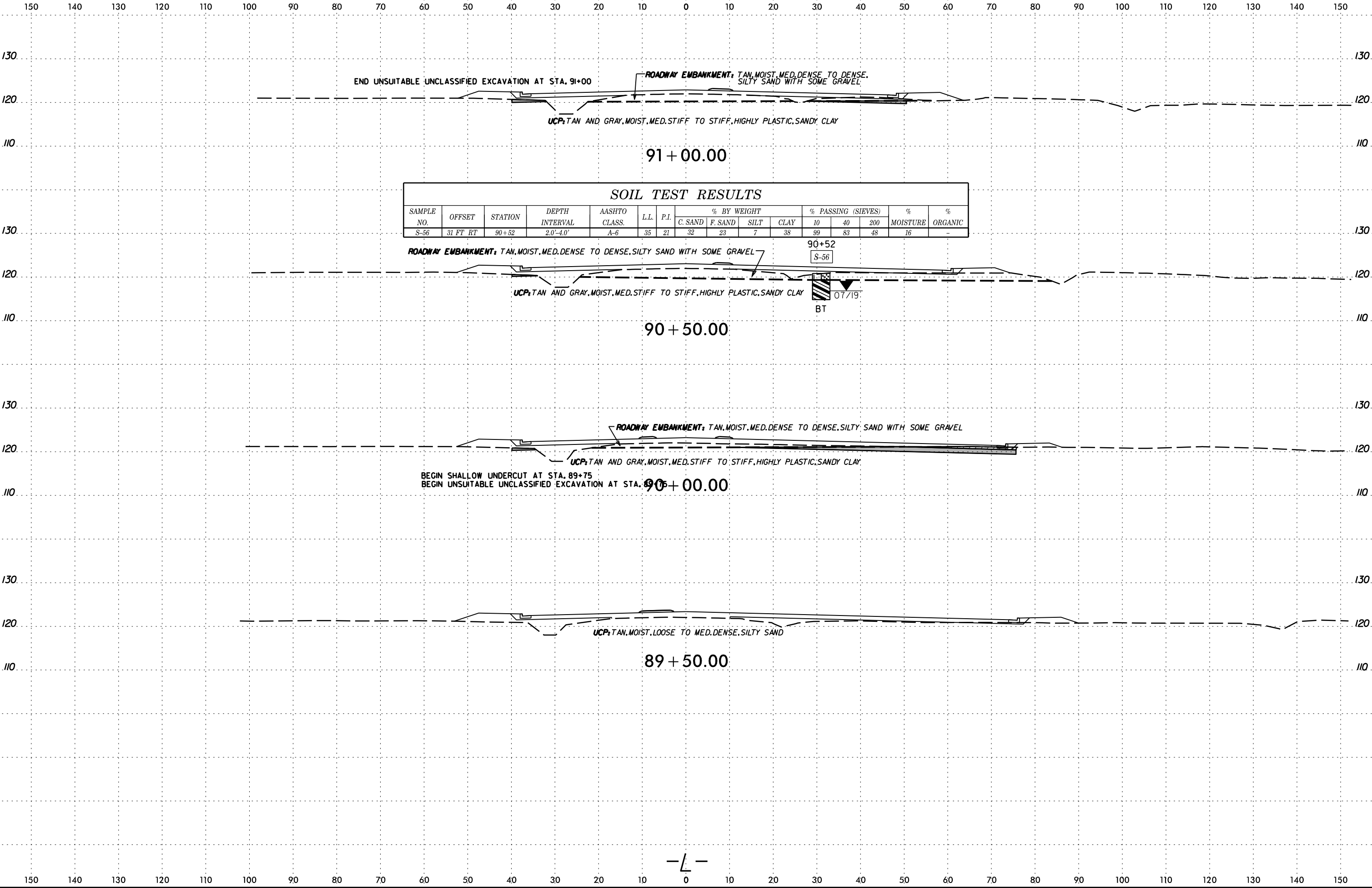


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cadline AT CAD10

6/23/16



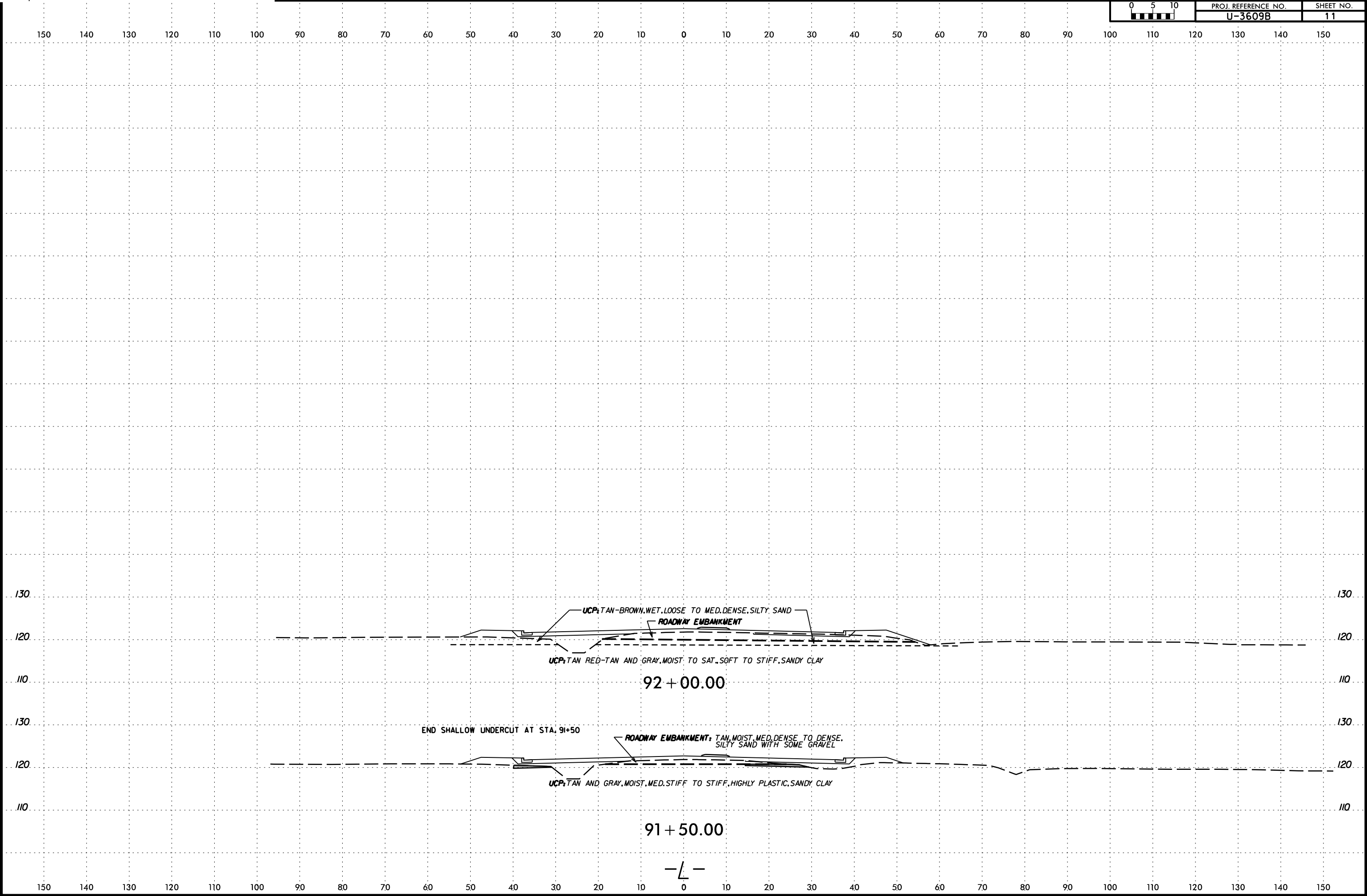
PROJ. REFERENCE NO.	SHEET NO.
U-3609B	10



6/23/16

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cadmline AT CAD10

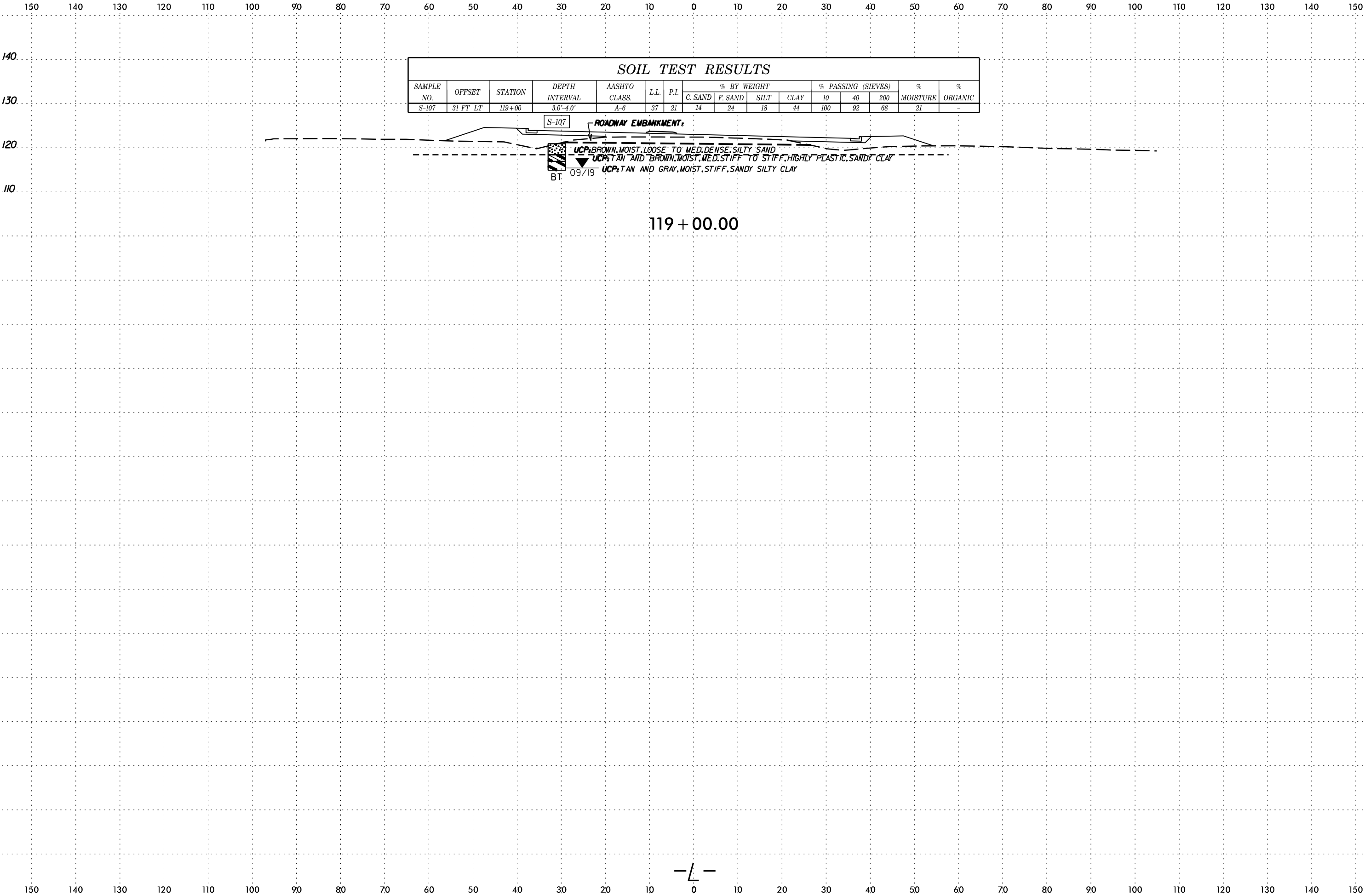
	PROJ. REFERENCE NO.	SHEET NO.
	U-3609B	11



6/23/16



PROJ. REFERENCE NO.	SHEET NO.
U-3609B	12



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-107	31 FT LT	119+00	3.0'-4.0'	A-6	37	21	14	24	18	44	100	92	68	21	-

S-107

ROADWAY EMBANKMENT:

UCP, BROWN, MOIST, LOOSE TO MED. DENSE, SILTY SAND
UCP, TAN AND BROWN, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY CLAY
UCP, TAN AND GRAY, MOIST, STIFF, SANDY SILTY CLAY

BT

09/19

119 + 00.00

-L-

6/23/16



PROJ. REFERENCE NO.
U-3609B

SHEET NO.
13

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-80	34 FT RT	121+00	1.0'-3.0'	A-7-6	48	28	3	33	19	45	100	99	74	23	-

ROADWAY EMBANKMENT

UCP, TAN-RED AND GRAY, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY SILTY CLAY

S-80

BT 07/19

121 + 00.00

ROADWAY EMBANKMENT

UCP, TAN-RED AND GRAY, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY SILTY CLAY

120 + 50.00

ROADWAY EMBANKMENT

UCP, TAN-RED AND GRAY, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY SILTY CLAY

120 + 00.00

ROADWAY EMBANKMENT

BROWN, MOIST, LOOSE TO MED. DENSE, SILTY SAND WITH TRACE ORGANICS AND GRAVEL

UCP, TAN AND BROWN, MOIST, MED. STIFF TO STIFF, HIGHLY PLASTIC, SANDY CLAY

UCP, TAN AND GRAY, MOIST, STIFF, SANDY SILTY CLAY

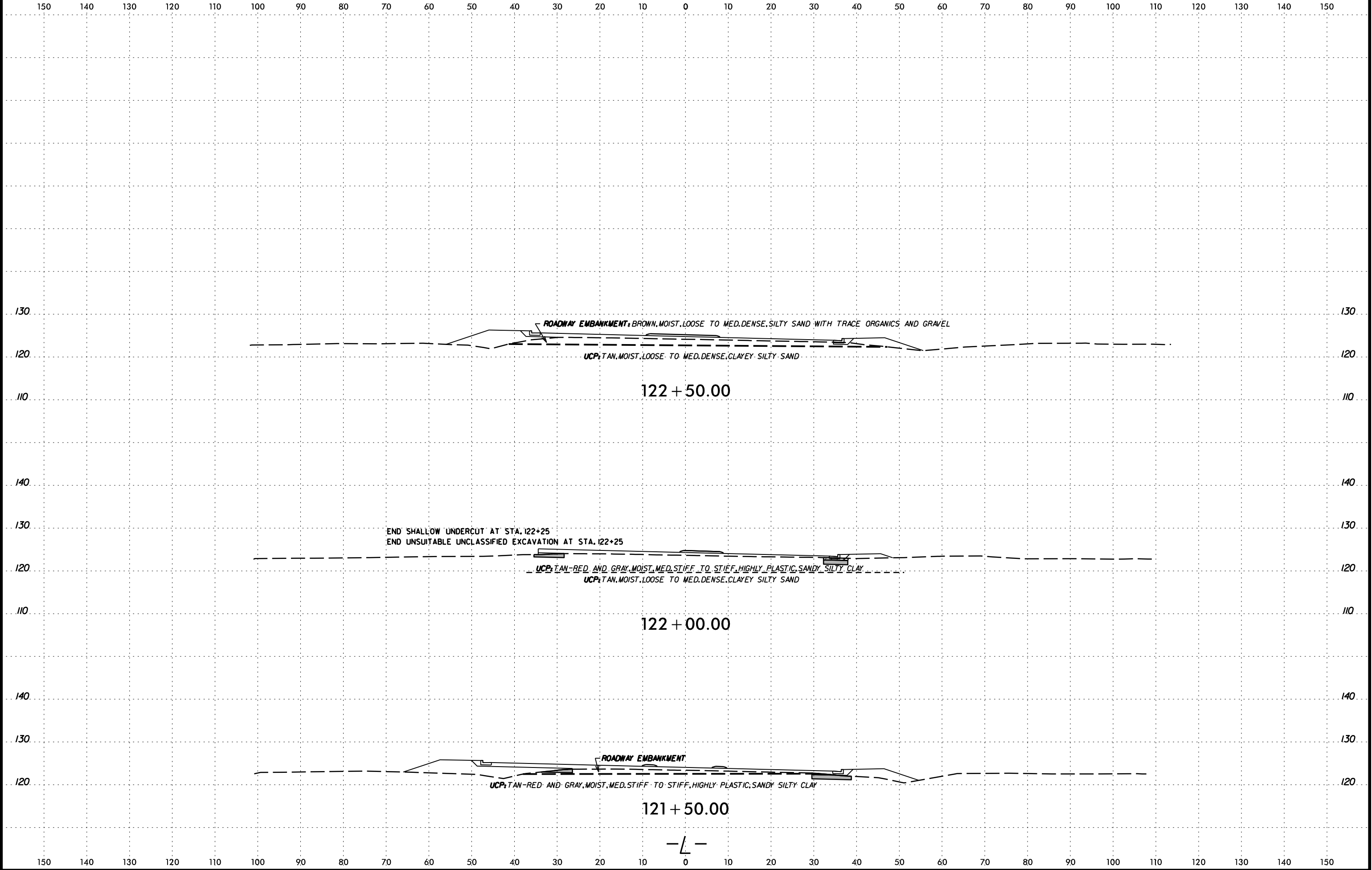
BEGIN SHALLOW UNDERCUT AT STA. 119+25

BEGIN UNSUITABLE UNCLASSIFIED EXCAVATION AT STA. 119+25

119 + 50.00

-L-

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6/23/16
Stantec U-3609B
CADD



6/23/16



PROJ. REFERENCE NO.
U-3609B

SHEET NO.
15

