STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	35801.1.1 (U-3810)	1	189

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
35801.1.1	STP-1406(4)	P.E.
		R/W & UTIL.

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

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

ROADWAY SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 35801.1.1 (U-3810) F.A. PROJ. STP-1406(4)

COUNTY ONSLOW

PROJECT DESCRIPTION SR 1406 (PINEY GREEN ROAD) FROM US 17 (MARINE BOULEVARD) TO NC 24 (FREEDOM WAY)

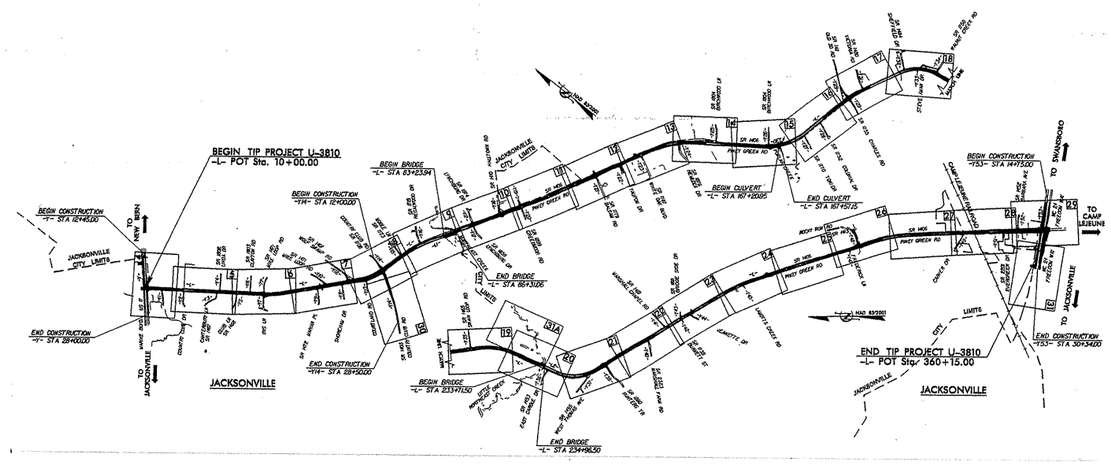
INVENTORY

CONTENTS

LINE	STATION	PLAN	PROFILE
-L-	10+00-358+68	4-31	32-56
-Y-	12+60-27+00	4	57
-Y1-	10+00-11+00	4	57
-Y2-	10+00-11+15	5	58
-Y3-	10+00-11+25	5	58
-Y4-	13+35-14+56	5	58
-Y5-	10+00-11+10	6	58
-Y6-	13+35-14+54	6	59
-Y7-	12+80-16+75	6	59
-Y9-	10+00-11+61	7	59
-Y10-	16+60-18+18	7	59
-Y11-	10+00-11+35	7	60
-Y12-	15+56-18+23	7	60
-Y13-	10+00-13+00	8	60
-Y14-	12+00-27+00	8,30	61
-Y15-	12+60-13+87	8	61
-Y16-	10+75-11+97	9	62
-Y17-	12+45-14+43	10	62
-Y18-	12+35-14+62	10	62
-Y19-	10+80-12+43	11	62
-Y20-	10+00-11+30	11	63
-Y21-	10+00-11+50	12	63
-Y22-	10+00-11+60	12	63
-Y23-	10+00-11+20	13	63
-Y24-	10+00-11+40	14	64
-Y25-	11+90-13+08	14	64
-Y26-	11+45-12+88	15	64
-Y27-	10+00-11+40	16	64
-Y28-	10+00-11+18	16	65
-Y29-	11+73-20+83	17	65
-Y31-	10+95-12+16	17	66
-Y32-	13+00-14+61	18	66
-Y33-	10+00-11+10	18	66
-Y34-	13+20-14+62	18	66
-Y35-	12+90-14+07	19	67
-Y36-	10+00-11+24	20	67
-Y37-	10+00-11+50	21	67
-Y39-	10+00-13+70	21	67
-Y40-	10+00-11+44	22	68
-Y41-	13+11-14+40	22	68
-Y42-	10+00-11+15	23	68
-Y43-	11+30-12+97	23	68
-Y44-	10+00-11+38	23	69
-Y45-	10+00-11+50	24	69
-Y47-	10+00-11+72	26	69
-Y48-	19+20-23+43	26	69
-Y49-	10+00-11+30	28	70
-Y51-	10+00-11+30	28	70
-Y52-	10+35-11+53	29	70
-Y53-	14+75-30+34	29,31	71

ADDENDUM

- Refer to the following Inventory Addendum as well as this Inventory.
- Refer to the preceding Inventory as well as this Inventory Addendum.
- Refer to the Earthwork Balance Sheet for the preceding Inventory, which includes the alignment in this Inventory Addendum.
- Refer to the following Inventory Addendum as well as this Inventory.
- Refer to the preceding Inventory as well as this Inventory Addendum.
- Refer to the Earthwork Balance Sheet for the preceding Inventory, which includes the alignment in this Inventory Addendum.



CAUTION NOTICE

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

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (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 THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

PERSONNEL

CMW
TCB
JRS
RES
JME
S&ME PERSONNEL

CROSS SECTIONS	STATION	SHEET
-L-	11+00-79+00	72-99
-L-	93+50-118+00	99-110
-L-	120+00-165+00	110-129
-L-	175+50-178+00	129-130
-L-	186+50-196+00	130-134
-L-	198+50-204+00	134-136
-L-	207+00-210+50	137-138
-L-	213+50-218+50	138-140
-L-	276+00-279+50	141-142
-L-	285+00	142
-L-	317+00-319+00	142-143
-L-	321+00	143

CROSS SECTIONS	STATION	SHEET
-Y-	15+00-26+50	144-148
-Y1-	10+53-11+00	149
-Y2-	11+00	150
-Y3-	10+67-11+00	151
-Y4-	13+50-13+88	152
-Y5-	10+67-11+00	153
-Y6-	13+50-13+86	154
-Y7-	12+80-16+75	155-156
-Y9-	10+67-11+50	157
-Y10-	17+01-17+50	158
-Y11-	10+67-11+00	159
-Y12-	16+00-17+00	160
-Y14-	12+00-27+00	161-166

CROSS SECTIONS	STATION	SHEET
-Y15-	11+00-11+33	167
-Y16-	11+00-11+33	168
-Y19-	10+80-11+65	169
-Y20-	10+75-11+30	170
-Y21-	10+84-11+50	171
-Y22-	10+72-11+60	172
-Y23-	10+67-11+20	173
-Y24-	10+90-11+04	174
-Y25-	11+90-12+40	175
-Y29-	12+00-20+50	176-178
-Y31-	10+95-11+50	179
-Y32-	13+00-13+89	180
-Y33-	10+60-11+00	181

CROSS SECTIONS	STATION	SHEET
-Y35-	12+90-13+39	182
-Y42-	10+73-11+00	183
-Y43-	11+58-12+08	184
-Y45-	10+60-11+50	185
-Y49-	10+62-11+30	186
-Y53-	15+00-30+00	187-189

APPENDIX I
112 CPT LOGS

INVESTIGATED BY J.L. STONE
CHECKED BY D.N. ARGENBRIGHT
SUBMITTED BY D.N. ARGENBRIGHT
DATE APRIL, 2008

NORTH CAROLINA LICENSED SEAL 2007 GEOLOGIST JOSEPH L. STONE 4-20-09

DRAWN BY: C.R. SUMNER, J.L. STONE

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

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

CONTRACT: C202887 ID: U-3810

PROJECT REFERENCE NO.	SHEET NO.
U-3810	2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE:

VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2				A-4	A-5	A-6	A-7	A-1, A-2 A-3	A-4, A-5 A-6, A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5 A-7-6			
SYMBOL														
% PASSING # 10	50 MX											GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
# 40	30 MX	50 MX	51 MN											
# 200	15 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN			
LIQUID LIMIT	6 MX		NP	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
PLASTIC INDEX				10 MX	10 MX	11 MN	11 MN	10 MX	10 MX	11 MN	11 MN			
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	No MX			
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS		CLAYEY SOILS				
GEN. RATING AS A SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT^2)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	<4 4 TO 10 10 TO 30 30 TO 50 >50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	<2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 >30	<0.25 0.25 TO 0.50 0.5 TO 1.0 1 TO 2 2 TO 4 >4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE MM: 305 | 75 | 2.0 | 0.25 | 0.05 | 0.005
GRAIN SIZE IN.: 12 | 3

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT PLASTIC RANGE (PI) PL — PLASTIC LIMIT	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
OM — OPTIMUM MOISTURE SL — SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NONPLASTIC	0-5	VERY LOW
LOW PLASTICITY	6-15	SLIGHT
MED. PLASTICITY	16-25	MEDIUM
HIGH PLASTICITY	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED)
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS; ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LIQUID LIMIT LESS THAN 31
MODERATELY COMPRESSIBLE	LIQUID LIMIT EQUAL TO 31-50
HIGHLY COMPRESSIBLE	LIQUID LIMIT GREATER THAN 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%
MODERATELY ORGANIC	5 - 10%	12 - 20%
HIGHLY ORGANIC	>10%	>20%

OTHER MATERIAL	
TRACE	1 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 DIP & DIP DIRECTION OF ROCK STRUCTURES
- SOUNDING ROD
- SPT CPT DPT DMT VST PMT TEST BORING
- AUGER BORING
- CORE BORING
- MW MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- SPT N-VALUE
- REF SPT REFUSAL

SAMPLE DESIGNATIONS
- S - BULK SAMPLE
- SS - SPLIT SPOON SAMPLE
- ST - SHELBY TUBE SAMPLE
- RS - ROCK SAMPLE
- RT - RECOMPACTED TRIAXIAL SAMPLE
- CBR - CALIFORNIA BEARING RATIO SAMPLE

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [ ] MOBILE B-__
- [ ] BK-51
- [ ] CME-45C
- [ ] CME-750
- [ ] PORTABLE HOIST
- [X] CME-750
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [X] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [ ] CASING [ ] W/ ADVANCER
- [X] TRICONE 2 15/16 " STEEL TEETH
- [ ] TRICONE ____ " TUNG.-CARB.
- [ ] CORE BIT
- [ ] _____

HAMMER TYPE:
- [X] AUTOMATIC
- [ ] MANUAL

CORE SIZE:
- [ ] -B_____
- [ ] -N_____
- [ ] -H_____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [X] HAND AUGER
- [ ] SOUNDING ROD
- [X] VANE SHEAR TEST
- [X] DCP TEST

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.
ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, YIELDS SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, YIELDS SPT N VALUES < 100 BPF*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD	CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
HARD	CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
MODERATELY HARD	CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
VERY SOFT	CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FEET
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	> 4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION. AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK: _
_
_ ELEVATION: _ FT.

NOTES:
_

CPT BORING

UNDIVIDED C.P. = UNDIVIDED COASTAL PLAIN

REVISED 02/23/06

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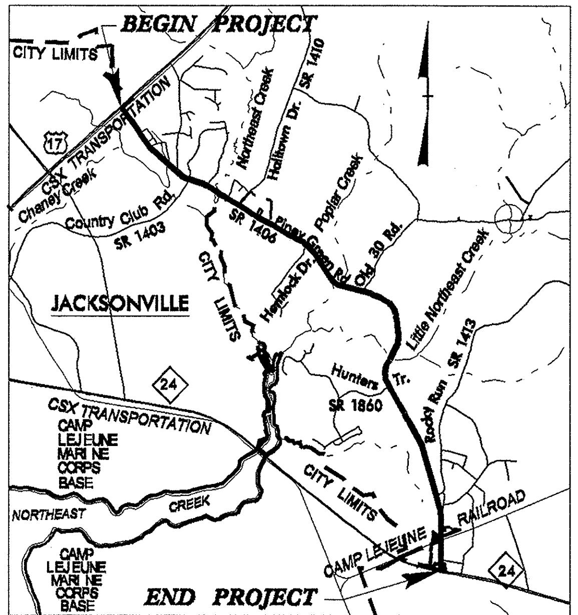
crsumner AT GEG240339

TIP PROJECT: U-3810

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3810	2A	189

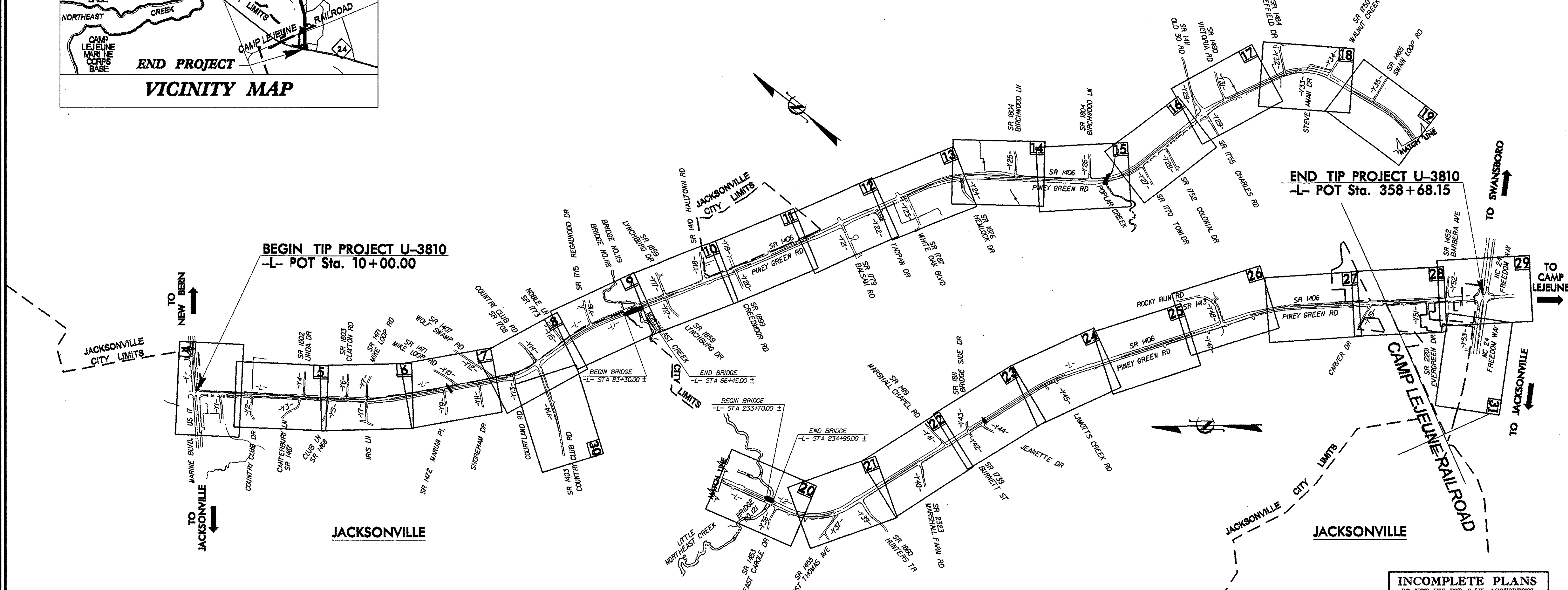
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
35801.1.1	STP-1406(4)	PE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW COUNTY

LOCATION: SR 1406 (PINEY GREEN ROAD) FROM US 17 (MARINE BOULEVARD) TO NC 24 (FREEDOM WAY)

TYPE OF WORK: WIDENING, GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS, CULVERTS AND STRUCTURES



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

PORTIONS OF THIS PROJECT ARE WITHIN THE MUNICIPAL BOUNDRIES OF JACKSONVILLE.
NOTES: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD .

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2005 = 24,000
ADT 2030 = 35,300
DHV = 7 %
D ≐ 60 %
T = 5 % *
V = 50 MPH

* TTST 1 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. U-3810 = 6.604 MILES +/-
LENGTH STRUCTURES TIP PROJ. U-3810 = 0.083 MILES +/-
TOTAL LENGTH OF TIP PROJ. U-3810 = 6.521 MILES +/-

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 2009

LETTING DATE:
MARCH 15, 2011

ROGER D. THOMAS, PE
PROJECT ENGINEER

SAMUEL L. ST.CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

P.E.
STATE HIGHWAY DESIGN ENGINEER

2B

Quantities are approximate only. The Resident Engineer will recross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid.

EARTHWORK BALANCE SHEET (ALTERNATE 1)

Volumes in Cubic Yards

PROJECT TIP # U-3810 COUNTY Onslow DATE 7/12/2012

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. 25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
L LT	10+47.31	40+00.00	457		6392	0	457	10109		6392	3717	12636	12179	0	6392	6392
L RT	10+47.31	40+00.00	569		5350	0	569	8345		5350	2995	10431	9862	0	5350	5350
Y	12+45.00	19+92.33	1492		1017	0	1492	1748		1017	731	2185	693	0	1017	1017
Y	21+50.00	28+00.00	462		865	0	462	1411		865	546	1764	1302	0	865	865
Y1	10+37.83	11+00.00	0		62	0	0	115		62	53	144	144	0	62	62
Y2	10+37.50	11+15.00	25		141	0	25	176		141	35	220	195	0	141	141
Y3	10+37.50	11+25.00	23		148	0	23	220		148	72	275	252	0	148	148
Y4	13+35.00	14+18.83	27		158	0	27	257		158	99	321	294	0	158	158
Y5	10+37.50	11+10.00	17		128	0	17	198		128	70	248	231	0	128	128
Y6	13+35.00	14+16.58	4		175	0	4	230		175	55	288	284	0	175	175
Y7	12+80.00	14+18.83	38		210	0	38	298		210	88	373	335	0	210	210
Y7	14+77.70	16+75.00	148		131	0	148	576		131	445	720	572	0	131	131
	SUBTOTAL		3262		14777	0	3262	23683		14777	8906	29605	26343	0	14777	14777
L LT	40+00.00	65+50.00	720		790	23	697	5709		790	4919	7136	6439	0	813	813
L RT	40+00.00	65+50.00	1408		4768	1076	332	20506		4768	15738	25633	25301	0	5844	5844
Y9	10+37.50	11+61.00	153		201	0	153	279		201	78	349	196	0	201	201
Y10	16+60.00	17+81.12	76		98	0	76	327		98	229	409	333	0	98	98
Y11	10+37.50	11+35.00	0		22	0	0	435		22	413	544	544	0	22	22
Y12	15+56.93	17+85.89	280		355	0	280	835		355	480	1044	764	0	355	355
Y13	10+40.95	13+00.00	14		0	0	14	2615		0	2615	3269	3255	0	0	0
	SUBTOTAL		2651		6234	1099	1552	30706		6234	24472	38384	36832	0	7333	7333
L LT	65+50.00	83+23.94	3350		507	0	3350	2219		507	1712	2774	0	576	507	1083
L RT	65+50.00	83+23.94	4189		2759	0	4189	11695		2759	8936	14619	10430	0	2759	2759
	SUBTOTAL		7539		3266	0	7539	13914		3266	10648	17393	10430	576	3266	3842
L LT	86+31.06	110+00.00	404		594	0	404	5778		594	5184	7223	6819	0	594	594
L RT	86+31.06	110+00.00	449		3519	244	205	10622		3519	7103	13278	13073	0	3763	3763
Y14	12+00.00	15+10.11	63		241	0	63	324		241	83	405	342	0	241	241
Y14	15+92.21	28+50.00	4936		1710	0	4936	5072		1710	3362	6340	1404	0	1710	1710
Y15	12+60.00	13+46.26	18		94	0	18	151		94	57	189	171	0	94	94
Y16	10+75.00	11+59.38	264		46	0	264	135		46	89	169	0	95	46	141
Y17	12+45.00	12+97.08	3		0	0	3	19		0	19	24	21	0	0	0
Y17	13+72.23	14+43.00	10		0	0	10	11		0	11	14	4	0	0	0
Y18	12+35.00	14+23.67	16		0	0	16	507		0	507	634	618	0	0	0
Y19	10+80.00	12+06.22	267		132	0	267	157		132	25	196	0	71	132	203
Y20	10+49.57	11+30.00	27		114	0	27	144		114	30	180	153	0	114	114
	SUBTOTAL		6457		6450	244	6213	22920		6450	16470	28652	22605	166	6694	6860

2C

EARTHWORK BALANCE SHEET (ALTERNATE 1)

Volumes in Cubic Yards

PROJECT TIP # U-3810 COUNTY Onslow DATE 7/12/2012

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. 25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
L LT	110+00.00	140+00.00	247		1672	36	211	8470		1672	6798	10588	10377	0	1708	1708
L RT	110+00.00	140+00.00	1436		7876	392	1044	16936		7876	9060	21170	20126	0	8268	8268
Y21	10+49.50	11+50.00	10		117	0	10	141		117	24	176	166	0	117	117
Y22	10+37.50	11+60.00	341		184	0	341	196		184	12	245	0	96	184	280
Y23	10+37.50	11+20.00	11		86	9	2	143		86	57	179	177	0	95	95
	SUBTOTAL		2045		9935	437	1608	25886		9935	15951	32358	30846	96	10372	10468
L LT	140+00.00	167+21.87	200		1694	0	200	10341		1694	8647	12926	12726	0	1694	1694
L RT	140+00.00	167+21.87	812		5962	0	812	17592		5962	11630	21990	21178	0	5962	5962
Y24	10+37.50	11+40.00	71		173	0	71	240		173	67	300	229	0	173	173
DR1	13+10.00	13+88.45	3		0	0	3	97		0	97	121	118	0	0	0
Y25	11+90.00	12+70.61	27		52	0	27	94		52	42	118	91	0	52	52
Y26	11+45.00	12+51.27	29		0	0	29	186		0	186	233	204	0	0	0
DET	10+50.00	14+91.06	63		0	0	63	1877		0	1877	2346	2283	0	0	0
	SUBTOTAL		1205		7881	0	1205	30427		7881	22546	38034	36829	0	7881	7881
L LT	167+56.22	200+00.00	16940		2264	13	16927	6882		2264	4618	8603	0	8324	2277	10601
L RT	167+56.22	200+00.00	610		1274	32	578	6046		1274	4772	7558	6980	0	1306	1306
Y27	10+37.98	11+40.00	0		0	0	0	151		0	151	189	189	0	0	0
Y28	10+37.50	11+18.00	22		0	0	22	62		0	62	78	56	0	0	0
Y29	11+73.00	17+18.84	1445		1705	0	1445	2740		1705	1035	3425	1980	0	1705	1705
Y29	17+93.88	20+83.00	290		0	0	290	261		0	261	326	36	0	0	0
Y31	10+95.00	11+79.49	0		101	0	0	139		101	38	174	174	0	101	101
	SUBTOTAL		19307		5344	45	19262	16281		5344	10937	20353	9415	8324	5389	13713
L LT	200+00.00	233+71.50	747		2237	0	747	22340		2237	20103	27925	27178	0	2237	2237
L RT	200+00.00	233+71.50	642		710	0	642	7550		710	6840	9438	8796	0	710	710
Y32	13+00.00	14+24.03	38		45	0	38	130		45	85	163	125	0	45	45
Y33	10+37.57	11+10.00	103		294	0	103	306		294	12	383	280	0	294	294
Y34	13+20.00	14+24.66	8		0	0	8	135		0	135	169	161	0	0	0
Y35	12+90.00	13+69.81	19		95	0	19	187		95	92	234	215	0	95	95
	SUBTOTAL		1557		3381	0	1557	30648		3381	27267	38312	36755	0	3381	3381
L LT	234+96.50	265+00.00	1495		1876	0	1495	10176		1876	8300	12720	11225	0	1876	1876
L RT	234+96.50	265+00.00	86		0	0	86	4856		0	4856	6070	5984	0	0	0
Y36	10+40.25	11+24.00	1		0	0	1	123		0	123	154	153	0	0	0
Y37	10+37.51	11+50.00	54		0	0	54	256		0	256	320	266	0	0	0
Y39	10+49.50	13+70.00	722		0		722	143		0	143	179	0	543	0	543
Y40	10+39.68	11+44.00	0		24	0		123		24	99	154	154	0	24	24
	SUBTOTAL		2358		1900	0	2358	15677		1900	13777	19597	17782	543	1900	2443
L LT	265+00.00	295+00.00	1159		764	0	1159	14182		764	13418	17728	16569	0	764	764
L RT	265+00.00	295+00.00	124		36	0	124	6479		36	6443	8099	7975	0	36	36
Y41	13+11.00	14+01.70	1		0	0	1	139		0	139	174	173	0	0	0
Y42	10+37.76	11+15.00	47		33	0	47	60		33	27	75	28	0	33	33
Y43	11+32.00	12+59.33	227		65	0	227	177		65	112	221	0	6	65	71
Y44	10+37.50	11+38.00	0		0	0	0	50		0	50	63	63	0	0	0
Y45	10+37.50	11+10.00	90		80	0	90	110		80	30	138	48	0	80	80
	SUBTOTAL		1648		978	0	1648	21197		978	20219	26498	24856	6	978	984

2D

EARTHWORK BALANCE SHEET (ALTERNATE 1)

Volumes in Cubic Yards

PROJECT TIP # U-3810 COUNTY Onslow DATE 7/12/2012

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. 25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
L LT	295+00.00	320+00.00	153		578	0	153	10387		578	9809	12984	12831	0	578	578
L RT	295+00.00	320+00.00	81		252	0	81	7419		252	7167	9274	9193	0	252	252
Y47	10+39.74	11+00.00	5		0	0	5	114		0	114	143	138	0	0	0
Y48	18+50.00	23+05.70	61		0	0	61	373		0	373	466	405	0	0	0
	SUBTOTAL		300		830	0	300	18293		830	17463	22867	22567	0	830	830
L LT	320+00.00	342+00.00	6086		0	0	6086	5062		0	5062	6328	242	0	0	0
L RT	320+00.00	342+00.00	3337		0	0	3337	4028		0	4028	5035	1698	0	0	0
Y49	10+37.50	11+30.00	11		0	0	11	47		0	47	59	48	0	0	0
	SUBTOTAL		9434		0	0	9434	9137		0	9137	11422	1988	0	0	0
L LT	342+00.00	357+50.00	3756		0	0	3756	1512		0	1512	1890	0	1866	0	1866
L RT	342+00.00	357+50.00	672		0	0	672	1307		0	1307	1634	962	0	0	0
Y51	10+49.50	11+30.00	2		0	0	2	51		0	51	64	62	0	0	0
Y52	10+35.00	11+15.64	19		0	0	19	106		0	106	133	114	0	0	0
Y53	20+00.00	30+34.25	433		537	0	433	1015		537	478	1269	836	0	537	537
	SUBTOTAL		4882		537	0	4882	3991		537	3454	4990	1974	1866	537	2403
PROJECT SUBTOTAL			62645		61513	1825	60820	262760		61513	201247	328465	279222	11577	63338	74915
ADDITIONAL UNDERCUT (PER GEOTECH)					700			700		700		875	875		700	700
SHOULDER MATERIAL								1290				1613	1613			0
WASTE IN LIEU OF BORROW													-11577	-11577		-11577
SELECT GRANUALR MATERIAL								-62213			-62213	-77766	-77766			0
PROJECT TOTAL			62645		62213	1825	60820	202537		62213	139034	253187	192367	0	64038	64038
EST 5% TO REPLACE TOP SOIL ON BORROW PIT													9618			
GRAND TOTAL			62645										201985			
SAY			**63,300**										**204,000**			

EST. DDE = 10,120 CU. YDS.

PER GEOTECHNICAL RECOMMENDATIONS:

EST. SHALLOW UNDERCUT (CONTINGENCY) = 12,500 CY

EST. CLASS IV SUBGRADE STABILIZATION = 23,650 TONS

*** EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.**

Quantities are approximate only. The Resident Engineer will recross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid.

2E

EARTHWORK BALANCE SHEET (ALTERNATE 2)

Volumes in Cubic Yards

PROJECT TIP # U-3810 COUNTY Onslow DATE 7/12/2012

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. 25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
L LT	10+47.31	40+00.00	457		6392	0	457	10109		6392	3717	12636	12179	0	6392	6392
L RT	10+47.31	40+00.00	569		5334	0	569	8332		5334	2998	10415	9846	0	5334	5334
Y	12+45.00	19+92.33	1492		1017	0	1492	1748		1017	731	2185	693	0	1017	1017
Y	21+50.00	28+00.00	462		865	0	462	1411		865	546	1764	1302	0	865	865
Y1	10+37.83	11+00.00	0		62	0	0	115		62	53	144	144	0	62	62
Y2	10+37.50	11+15.00	25		141	0	25	176		141	35	220	195	0	141	141
Y3	10+37.50	11+25.00	23		148	0	23	220		148	72	275	252	0	148	148
Y4	13+35.00	14+18.83	27		158	0	27	257		158	99	321	294	0	158	158
Y5	10+37.50	11+10.00	17		128	0	17	198		128	70	248	231	0	128	128
Y6	13+35.00	14+16.58	4		175	0	4	230		175	55	288	284	0	175	175
Y7	12+80.00	14+18.83	38		210	0	38	298		210	88	373	335	0	210	210
Y7	14+77.70	16+75.00	148		131	0	148	576		131	445	720	572	0	131	131
	SUBTOTAL		3262		14761	0	3262	23670		14761	8909	29589	26327	0	14761	14761
L LT	40+00.00	65+50.00	720		790	23	697	5708		790	4918	7135	6438	0	813	813
L RT	40+00.00	65+50.00	1328		4615	1018	310	20597		4615	15982	25746	25436	0	5633	5633
Y9	10+37.50	11+61.00	153		201	0	153	279		201	78	349	196	0	201	201
Y10	16+60.00	17+81.12	76		98	0	76	327		98	229	409	333	0	98	98
Y11	10+37.50	11+35.00	0		22	0	0	435		22	413	544	544	0	22	22
Y12	15+56.93	17+85.89	280		355	0	280	835		355	480	1044	764	0	355	355
Y13	10+40.95	13+00.00	14		0	0	14	2615		0	2615	3269	3255	0	0	0
	SUBTOTAL		2571		6081	1041	1530	30796		6081	24715	38496	36966	0	7122	7122
L LT	65+50.00	83+23.94	3350		507	0	3350	2210		507	1703	2763	0	587	507	1094
L RT	65+50.00	83+23.94	4189		2751	0	4189	11846		2751	9095	14808	10619	0	2751	2751
	SUBTOTAL		7539		3258	0	7539	14056		3258	10798	17571	10619	587	3258	3845
L LT	86+31.06	110+00.00	404		554	0	404	6039		554	5485	7549	7145	0	554	554
L RT	86+31.06	110+00.00	348		3434	198	150	10898		3434	7464	13623	13473	0	3632	3632
Y14	12+00.00	15+10.11	63		241	0	63	324		241	83	405	342	0	241	241
Y14	15+92.21	28+50.00	4936		1710	0	4936	5072		1710	3362	6340	1404	0	1710	1710
Y15	12+60.00	13+46.26	18		94	0	18	151		94	57	189	171	0	94	94
Y16	10+75.00	11+59.38	264		46	0	264	135		46	89	169	0	95	46	141
Y17	12+45.00	12+97.08	3		0	0	3	19		0	19	24	21	0	0	0
Y17	13+72.23	14+43.00	10		0	0	10	11		0	11	14	4	0	0	0
Y18	12+35.00	14+23.67	16		0	0	16	507		0	507	634	618	0	0	0
Y19	10+80.00	12+06.22	267		132	0	267	157		132	25	196	0	71	132	203
Y20	10+49.57	11+30.00	27		114	0	27	144		114	30	180	153	0	114	114
	SUBTOTAL		6356		6325	198	6158	23457		6325	17132	29323	23331	166	6523	6689

EARTHWORK BALANCE SHEET (ALTERNATE 2)

Volumes in Cubic Yards

2F

PROJECT TIP # U-3810 COUNTY Onslow DATE 7/12/2012

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. 25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
L LT	110+00.00	140+00.00	253		1672	37	216	8626		1672	6954	10783	10567	0	1709	1709
L RT	110+00.00	140+00.00	1240		7632	332	908	17082		7632	9450	21353	20445	0	7964	7964
Y21	10+49.50	11+50.00	10		117	0	10	141		117	24	176	166	0	117	117
Y22	10+37.50	11+60.00	341		184	0	341	196		184	12	245	0	96	184	280
Y23	10+37.50	11+20.00	11		86	9	2	143		86	57	179	177	0	95	95
	SUBTOTAL		1855		9691	378	1477	26188		9691	16497	32736	31355	96	10069	10165
L LT	140+00.00	167+21.87	200		1520	0	200	10358		1520	8838	12948	12748	0	1520	1520
L RT	140+00.00	167+21.87	812		5464	0	812	17763		5464	12299	22204	21392	0	5464	5464
Y24	10+37.50	11+40.00	71		173	0	71	240		173	67	300	229	0	173	173
DR1	13+10.00	13+88.45	3		0	0	3	97		0	97	121	118	0	0	0
Y25	11+90.00	12+70.61	27		52	0	27	94		52	42	118	91	0	52	52
Y26	11+45.00	12+51.27	29		0	0	29	186		0	186	233	204	0	0	0
DET	10+50.00	14+91.06	63		0	0	63	1877		0	1877	2346	2283	0	0	0
	SUBTOTAL		1205		7209	0	1205	30615		7209	23406	38270	37065	0	7209	7209
L LT	167+56.22	200+00.00	16704		2264	13	16691	6988		2264	4724	8735	0	7956	2277	10233
L RT	167+56.22	200+00.00	609		1274	32	577	6046		1274	4772	7558	6981	0	1306	1306
Y27	10+37.98	11+40.00	0		0	0	0	151		0	151	189	189	0	0	0
Y28	10+37.50	11+18.00	22		0	0	22	62		0	62	78	56	0	0	0
Y29	11+73.00	17+18.84	1445		1705	0	1445	2740		1705	1035	3425	1980	0	1705	1705
Y29	17+93.88	20+83.00	290		0	0	290	261		0	261	326	36	0	0	0
Y31	10+95.00	11+79.49	0		101	0	0	139		101	38	174	174	0	101	101
	SUBTOTAL		19070		5344	45	19025	16387		5344	11043	20485	9416	7956	5389	13345
L LT	200+00.00	233+71.50	747		1802	0	747	22459		1802	20657	28074	27327	0	1802	1802
L RT	200+00.00	233+71.50	642		710	0	642	7550		710	6840	9438	8796	0	710	710
Y32	13+00.00	14+24.03	38		45	0	38	130		45	85	163	125	0	45	45
Y33	10+37.57	11+10.00	103		294	0	103	306		294	12	383	280	0	294	294
Y34	13+20.00	14+24.66	8		0	0	8	135		0	135	169	161	0	0	0
Y35	12+90.00	13+69.81	19		95	0	19	187		95	92	234	215	0	95	95
	SUBTOTAL		1557		2946	0	1557	30767		2946	27821	38461	36904	0	2946	2946
L LT	234+96.50	265+00.00	1495		119	0	1495	10176		119	10057	12720	11225	0	119	119
L RT	234+96.50	265+00.00	86		0	0	86	4869		0	4869	6086	6000	0	0	0
Y36	10+40.25	11+24.00	1		0	0	1	123		0	123	154	153	0	0	0
Y37	10+37.51	11+50.00	54		0	0	54	256		0	256	320	266	0	0	0
Y39	10+49.50	13+70.00	722		0	0	722	143		0	143	179	0	543	0	543
Y40	10+39.68	11+44.00	0		24	0	0	123		24	99	154	154	0	24	24
	SUBTOTAL		2358		143	0	2358	15690		143	15547	19613	17798	543	143	686
L LT	265+00.00	295+00.00	1159		710	0	1159	14820		710	14110	18525	17366	0	710	710
L RT	265+00.00	295+00.00	124		36	0	124	6479		36	6443	8099	7975	0	36	36
Y41	13+11.00	14+01.70	1		0	0	1	139		0	139	174	173	0	0	0
Y42	10+37.76	11+15.00	47		33	0	47	60		33	27	75	28	0	33	33
Y43	11+32.00	12+59.33	227		65	0	227	177		65	112	221	0	6	65	71
Y44	10+37.50	11+38.00	0		0	0	0	50		0	50	63	63	0	0	0
Y45	10+37.50	11+10.00	90		80	0	90	110		80	30	138	48	0	80	80
	SUBTOTAL		1648		924	0	1648	21835		924	20911	27295	25653	6	924	930

2G

EARTHWORK BALANCE SHEET (ALTERNATE 2)

Volumes in Cubic Yards

PROJECT TIP # U-3810 COUNTY Onslow DATE 7/12/2012

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. 25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
L LT	295+00.00	320+00.00	153		578	0	153	10819		578	10241	13524	13371	0	578	578
L RT	295+00.00	320+00.00	81		252	0	81	7419		252	7167	9274	9193	0	252	252
Y47	10+39.74	11+00.00	5		0	0	5	114		0	114	143	138	0	0	0
Y48	18+50.00	23+05.70	61		0	0	61	373		0	373	466	405	0	0	0
	SUBTOTAL		300		830	0	300	18725		830	17895	23407	23107	0	830	830
L LT	320+00.00	342+00.00	6086		0	0	6086	5062		0	5062	6328	242	0	0	0
L RT	320+00.00	342+00.00	3337		0	0	3337	4028		0	4028	5035	1698	0	0	0
Y49	10+37.50	11+30.00	11		0	0	11	47		0	47	59	48	0	0	0
	SUBTOTAL		9434		0	0	9434	9137		0	9137	11422	1988	0	0	0
L LT	342+00.00	357+50.00	3756		0	0	3756	1512		0	1512	1890	0	1866	0	1866
L RT	342+00.00	357+50.00	672		0	0	672	1307		0	1307	1634	962	0	0	0
Y51	10+49.50	11+30.00	2		0	0	2	51		0	51	64	62	0	0	0
Y52	10+35.00	11+15.64	19		0	0	19	106		0	106	133	114	0	0	0
Y53	20+00.00	30+34.25	433		537	0	433	1015		537	478	1269	836	0	537	537
	SUBTOTAL		4882		537	0	4882	3991		537	3454	4990	1974	1866	537	2403
PROJECT SUBTOTAL			62037		58049	1662	60375	265314		58049	207265	331658	282503	11220	59711	70931
ADDITIONAL UNDERCUT (PER GEOTECH)					700			700		700		875	875		700	700
SHOULDER MATERIAL								1290				1613	1613			0
WASTE IN LIEU OF BORROW																
SELECT GRANULAR MATERIAL								-58749			-58,749	-73436	-73,436			0
PROJECT TOTAL			62037		58749	1662	60375	208555		58749	148516	260710	200335	0	60411	60411
EST 5% TO REPLACE TOP SOIL ON BORROW PIT													10017			
GRAND TOTAL			62037										210352			
SAY			**62,700**										**212,500**			

EST. DDE = 10,120 CU. YDS.

PER GEOTECHNICAL RECOMMENDATIONS:

EST. SHALLOW UNDERCUT (CONTINGENCY) = 12,500 CY

EST. CLASS IV SUBGRADE STABILIZATION = 23,650 TONS

*** EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.**

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

April 20, 2009

STATE PROJECT: 35801.1.1 (U-3810)
F.A. PROJECT: STP-1406(4)
COUNTY: Onslow
DESCRIPTION: SR 1406 (Piney Green Rd.) from US 17 to NC 24 (Freedom Way)

SUBJECT: Geotechnical Inventory

Project Description

The project area lies in the city of Jacksonville, beginning at the intersection of SR 1406 (Piney Green Rd.) and US 17 and extending approximately 6 miles south east along Piney Green Rd. to the intersection of Piney Green Rd. and NC 24. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork for this project was conducted from July through October of 2008. SPT borings were advanced with a CME-750 drill machine with an automatic hammer. Cone Penetration Test borings were completed with a Vertek cone penetration machine mounted on a Diedrich ATV using a 1.75" diameter cone. Hand auger borings were also completed. Representative soil samples were collected for visual classification in the field and for laboratory analysis by the Materials and Tests Unit.

The following alignments, totaling 6.6 miles were investigated. Subsurface profiles and selected cross sections of these alignments are included in this report.

Line	Station(±)
-L-	10+00 to 358+68
-Y-	12+60 to 27+00
-Y1-	10+00 to 11+00
-Y2-	10+00 to 11+15
-Y3-	10+00 to 11+25
-Y4-	13+35 to 14+56
-Y5-	10+00 to 11+10
-Y6-	13+35 to 14+54
-Y7-	12+80 to 16+75
-Y9-	10+00 to 11+61
-Y10-	16+60 to 18+18
-Y11-	10+00 to 11+35
-Y12-	15+56 to 18+23
-Y13-	10+00 to 13+00
-Y14-	12+00 to 27+00
-Y15-	12+60 to 13+87
-Y16-	10+75 to 11+97
-Y17-	12+45 to 14+43
-Y18-	12+35 to 14+62
-Y19-	10+80 to 12+43
-Y20-	10+00 to 11+30
-Y21-	10+00 to 11+50
-Y22-	10+00 to 11+50
-Y23-	10+00 to 11+20
-Y24-	10+00 to 11+40
-Y25-	11+90 to 13+08
-Y26-	11+45 to 12+88
-Y27-	10+00 to 11+40
-Y28-	10+00 to 11+18
-Y29-	11+73 to 20+83
-Y31-	10+95 to 12+16
-Y32-	13+00 to 14+61
-Y33-	10+00 to 11+10
-Y34-	13+20 to 14+62
-Y35-	12+90 to 14+07
-Y36-	10+00 to 11+24
-Y37-	10+00 to 11+50
-Y39-	10+00 to 13+70
-Y40-	10+00 to 11+44
-Y41-	13+11 to 14+40
-Y42-	10+00 to 11+15
-Y43-	11+30 to 12+97
-Y44-	10+00 to 11+38
-Y45-	10+00 to 11+50
-Y47-	10+00 to 11+72
-Y48-	19+20 to 23+43
-Y49-	10+00 to 11+30
-Y51-	10+00 to 11+30
-Y52-	10+35 to 11+53
-Y53-	14+75 to 30+34

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

TELEPHONE: 919-250-4088
FAX: 919-250-4237

WEBSITE: WWW.DOH.DOT.STATE.NC.US

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

Areas of Special Geotechnical Interest

1) The following sections contain cohesive soils which have the potential to cause embankment/subgrade stability and/or long term settlement problems:

Line	Station(±)
-L-	10+00 to 79+47
-L-	86+30 to 165+52
-L-	175+67 to 177+85
-L-	186+57 to 192+36
-L-	198+56 to 219+40
-L-	246+47 to 249+68
-L-	270+25 to 299+56
-L-	314+19 to 319+45
-L-	322+53 to 325+54
-L-	332+23 to 339+54
-L-	340+43 to 343+52
-Y-	12+60 to 27+00
-Y1-	10+37 to 11+00
-Y2-	10+37 to 11+15
-Y3-	10+37 to 11+25
-Y4-	13+35 to 14+56
-Y5-	10+37 to 11+10
-Y6-	13+35 to 14+16
-Y7-	12+80 to 16+75
-Y9-	10+37 to 11+61
-Y10-	16+60 to 17+84
-Y11-	10+37 to 11+35
-Y12-	15+56 to 17+85
-Y13-	10+40 to 11+60
-Y14-	12+00 to 27+00
-Y16-	10+75 to 11+59
-Y17-	12+45 to 14+49
-Y18-	12+35 to 14+62
-Y19-	10+80 to 12+43
-Y20-	10+49 to 11+30
-Y21-	10+49 to 11+50
-Y22-	10+37 to 11+60
-Y23-	10+37 to 11+20
-Y24-	10+37 to 11+40
-Y25-	11+90 to 13+80
-Y29-	11+73 to 20+83
-Y31-	10+95 to 11+79
-Y32-	13+00 to 14+24
-Y33-	10+37 to 11+10
-Y34-	13+20 to 14+62
-Y35-	12+90 to 13+69
-Y42-	10+37 to 11+15
-Y43-	11+30 to 12+59
-Y44-	10+37 to 11+38
-Y45-	10+37 to 11+50
-Y47-	10+39 to 11+21
-Y48-	21+51 to 22+49
-Y49-	10+37 to 11+30
-Y53-	14+75 to 18+36
-Y53-	21+88 to 22+38
-Y53-	25+73 to 30+34

2) The following sections were found to exhibit seasonal high ground water.

Line	Station(±)
-L-	12+00 to 52+00
-L-	70+00 to 78+00
-L-	80+00 to 97+00
-L-	102+00 to 124+00
-L-	129+00 to 134+50
-L-	146+00 to 152+00
-L-	156+00 to 164+00
-L-	168+00 to 199+50
-L-	203+50 to 214+00
-L-	240+00 to 316+00
-L-	321+00 to 358+68
-Y-	12+60 to 27+00
-Y1-	10+37 to 11+00
-Y2-	10+37 to 11+15
-Y3-	10+37 to11+25
-Y4-	13+35 to 14+56
-Y5-	10+37 to 11+10
-Y6-	13+35 to 14+16
-Y7-	12+80 to 16+75
-Y10-	16+60 to 7+84
-Y11-	10+37 to 11+35
-Y14-	22+50 to 24+00
-Y15-	12+60 to 13+46
-Y16-	10+75 to 11+59
-Y17-	13+50 to 14+44
-Y31-	10+95 to 11+79
-Y32-	13+00 to 14+24
-Y33-	10+37 to 11+10
-Y36-	10+40 to 11+24
-Y39-	10+49 to 13+70
-Y40-	10+39 to 11+44
-Y41-	13+11 to 14+01
-Y42-	10+37 to 11+15
-Y43-	11+30 to 12+59
-Y48-	19+20 to 23+05
-Y49-	10+37 to 11+30

Physiography and Geology

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Elevations ranged from -4± feet below sea level along the bed of Northeast Creek to 46± feet above sea level along the existing SR 1406 embankment.

Surficial soils in this area are generally classified as undivided coastal plain sediments.

Ground Water

Ground water data was collected from July through October 2008, during a time of below normal precipitation. Ground water elevations ranged from -2± feet below sea level to 41± feet above sea level.

Soils

Soils within this project area have been divided into two categories, undivided coastal plain soils and roadway embankment soils.

Soils classified as undivided coastal plain are comprised of 2± to 21± feet of soft to very stiff sandy clayey silt and clayey sandy silt, (A-5, A-4), 2± to17± feet of very soft to very stiff sandy and silty clay (A-6, A-7-6,), and 1± to 30± feet of very loose to dense sand (A-2-4, A-3.) Moisture samples collected within the cohesive soils ranged from 17% to 42%, and Dynamic Cone Penetration tests returned CBR values ranging from 4 to 30.

Soils identified as roadway embankment are comprised of 1± to 11± feet of medium dense to very dense sand (A-2-4, A-3) and 1± to 2± feet of medium stiff to very stiff clayey sandy silt (A-4). These soils were encountered along the existing SR 1406 corridor and associated intersecting roads.

Culvert at -L- Station 51+68

Natural ground elevations range from 10± feet at the bottom of the stream to 20± feet along the adjacent floodplain. Borings completed in the vicinity show approximately 5+ feet of medium stiff clayey sandy silt present in the subsurface. During this investigation groundwater was measured at an elevation of 19± feet.

Culvert at -L- Station 167+39

Natural ground elevations range from -7± feet at the bottom of the stream to 2± feet along the adjacent floodplain. Borings completed in the vicinity show approximately 11+ feet of very loose to dense sand present in the subsurface. During this investigation groundwater was measured at an elevation of 1± foot.

Culvert at -L- Station 274+68

Natural ground elevations range from 10± feet at the bottom of the stream to 16± feet along the adjacent floodplain. Borings completed in the vicinity show approximately 3± feet

of medium stiff silty clay underlain by 8+ feet of very loose to medium dense sand. During this investigation groundwater was measured at an elevation of 10± feet.

Culvert at -L- Station 329+70

Natural ground elevations range from 24± feet at the bottom of the stream to 31± feet along the adjacent floodplain. Borings completed in the vicinity show approximately 5+ feet of loose to medium dense sand present in the subsurface. During this investigation groundwater was measured at an elevation of 29± feet.

Respectfully Submitted,

Joseph L. Stone, P.G.
Project Engineering Geologist

ATTACHMENT(S): DCP LOGS (4 SHEETS)

CONE PENETROMETER RESULTS
NC - DOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	35801.1.1
PROJECT ID	U-3810
ROUTE	SR 1406
COUNTY	ONSLOW

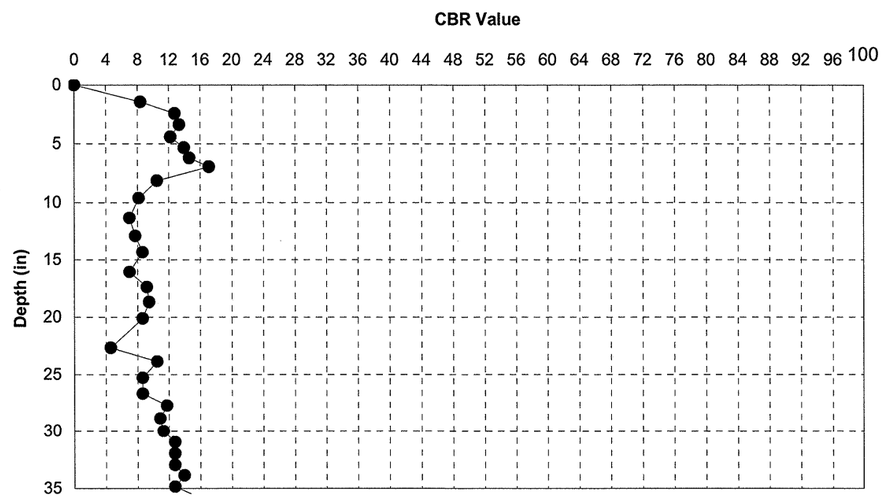
GEOLOGIST	TCB
GEOTECHS	0.0

FILE	0.0

121+00 RAW
35' Rt FILL
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg.	#DIV/0!
Max CBR	0.0
Min CBR	0.0

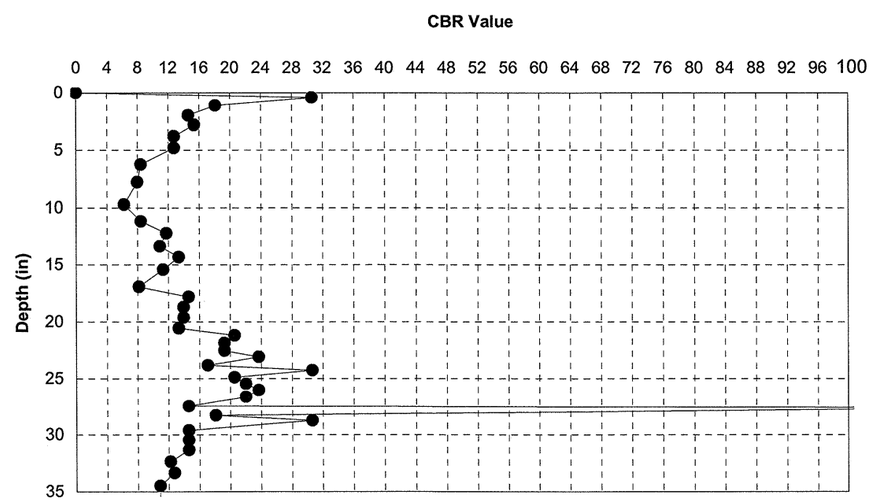
Interval 0.0 to 44.9	
# of Values	41
Avg CBR	12.9
Wghtd Avg.	11.4
Max CBR	37.9
Min CBR	4.6



145+00 RAW
30' Rt FILL
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg.	#DIV/0!
Max CBR	0.0
Min CBR	0.0

Interval 0.0 to 43.9	
# of Values	47
Avg CBR	17.4
Wghtd Avg.	13.5
Max CBR	100+
Min CBR	6.2



CONE PENETROMETER RESULTS
NC - DOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	35801.1.1
PROJECT ID	U-3810
ROUTE	SR 1406
COUNTY	ONSLOW

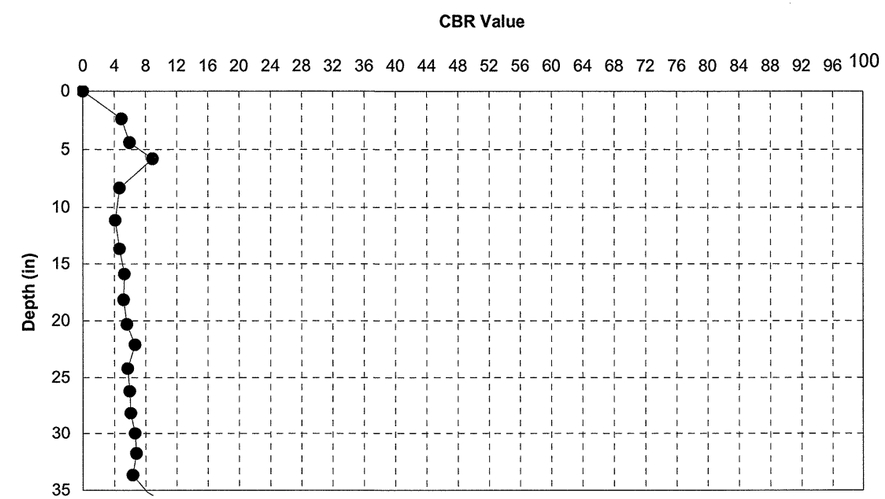
GEOLOGIST	TCB
GEOTECHS	0.0

FILE	0.0

189+00 RAW
50' Rt FILL
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg.	#DIV/0!
Max CBR	0.0
Min CBR	0.0

Interval 0.0 to 42.9	
# of Values	22
Avg CBR	6.5
Wghtd Avg.	6.2
Max CBR	10.9
Min CBR	4.1



CONE PENETROMETER RESULTS
NC - DOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	35801.1.1
PROJECT ID	U-3810
ROUTE	SR 1406
COUNTY	ONSLOW

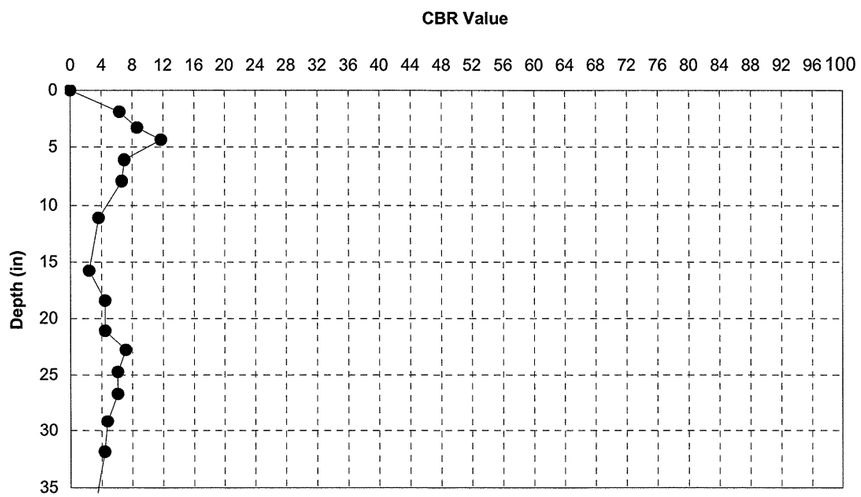
GEOLOGIST	TCB
GEOTECHS	0.0

FILE	0.0

15+50 RAW
45' Lt CUT
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg.	#DIV/0!
Max CBR	0.0
Min CBR	0.0

Interval 0.0 to 42.9	
# of Values	17
Avg CBR	5.5
Wghtd Avg.	4.7
Max CBR	11.8
Min CBR	2.4



CONE PENETROMETER RESULTS
NC - DOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	35801.1.1
PROJECT ID	U-3810
ROUTE	SR 1406
COUNTY	ONSLOW

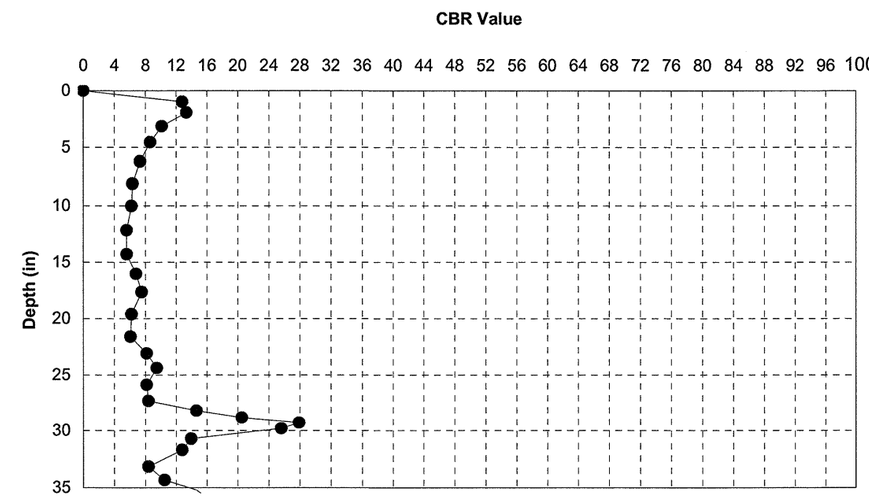
GEOLOGIST	TCB
GEOTECHS	0.0

FILE	0.0

77+00 RAW
55' Lt FILL
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg.	#DIV/0!
Max CBR	0.0
Min CBR	0.0

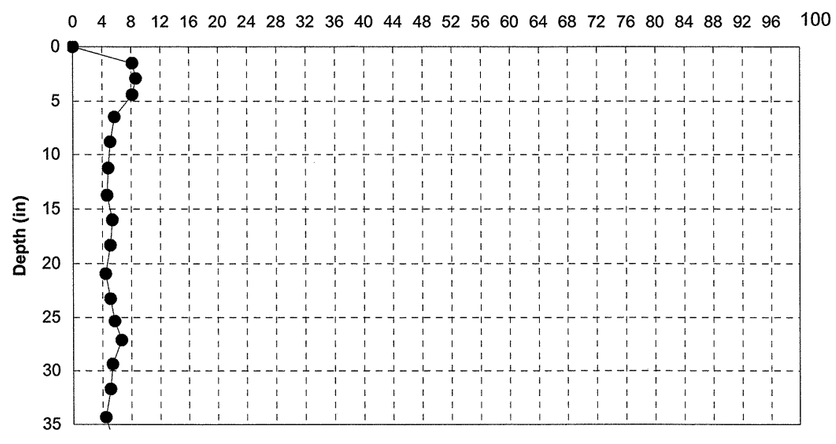
Interval 0.0 to 44.3	
# of Values	44
Avg CBR	19.9
Wghtd Avg.	12.4
Max CBR	90.0
Min CBR	5.6



48+50 RAW
17' Rt FILL
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg.	#DIV/0!
Max CBR	0.0
Min CBR	0.0

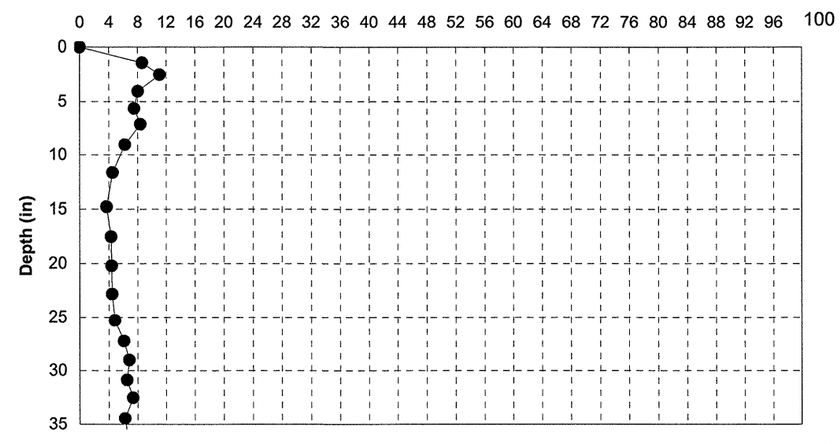
Interval 0.0 to 42.9	
# of Values	20
Avg CBR	5.8
Wghtd Avg.	5.6
Max CBR	8.6
Min CBR	4.5



100+00 RAW
45' Rt FILL
Datum = GRD LVL 10/06/08

Interval 0.0 to 0.0	
# of Values	0
Avg CBR	#DIV/0!
Wghtd Avg	#DIV/0!
Max CBR	0.0
Min CBR	0.0

Interval 0.0 to 44.6	
# of Values	22
Avg CBR	6.3
Wghtd Avg.	5.9
Max CBR	11.1
Min CBR	3.7



PROJECT REFERENCE NO.	SHEET NO.
U-3810	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

BEGIN TIP PROJECT U-3810
-L- STA. 10+00.00

NAD 83/2001

-BL- 1 POT 5+00.00 =
-BY- PINC 16+87.77 =
-Y- POT STA 21+36.96
61.12' RT

NCDOT GPS U3810-6
-BY- PINC 21+38.04 =
-Y- POT STA 25+87.21
56.05' RT

END CONSTRUCTION
-Y- STA. 27+00.00

END RESURFACING
-YSB- Sta. 24+66.00

-L- POT Sta. 10+00.00 =
-Y- POT Sta. 20+55.88

-L- POT Sta. 13+98.66 =
-Y1- POT Sta. 10+00.00

-BL- 2 PINC 9+81.98 =
-BY1- POT 5+00.00 =
-L- POT STA 14+27.21
31.27' RT

-Y1- POT Sta. 11+09.24

END CONSTRUCTION
-Y1- STA. 11+00.00

-BY1- 76 POT 11+30.19 =
-L- POT STA 14+66.46
660.24' RT

MATCH TO INSET -Y- STA. 16+00.00

MATCH TO SHEET 5 -L- STA. 17+00.00

JACKSONVILLE CITY LIMITS

SUNSET ACRES DB 007 PG 021

C D W HOLDINGS LLC DB 1231 PG 462

C D W HOLDINGS LLC DB 2176 PG 691

C D W HOLDINGS LLC DB 1231 PG 457

C D W HOLDINGS LLC DB 1231 PG 457 0.54 ACRE TRACT

M H C PROPERTIES, LLC TRACT TWO DB 1643 PG 745 TRACT FIVE DB 1643 PG 745

WILLIAM T. HUMPHREY, ET UX DB 582 PG 362 MB 043 PG 135

A. G. LEE OIL COMPANY, INC. DB 813 PG 225 DB 530 PG 310 DB 936 PG 155

ARLINE K. COLLINS, ET AL DB 1218 PG 445 MB 23 PG 158 SLIDE C-266

DARYLL L. THOMPSON DB 1629 PG 146

MARINE FEDERAL CREDIT UNION DB 1339 PG 686 MB 034 PG 99

UNITED PENTECOSTAL CHURCH DB 475 PG 60

UNITED PENTECOSTAL CHURCH OF JACKSONVILLE DB 736 PG 362 DB 475 PG 060 MB 36 PG 122 SLIDE J-87

ARLINE K. COLLINS DB 271 PG 426 DB 856 PG 283

INSET

-BY- 71 PINC 09+99.67 =
-Y- POT STA 14+49.60
92.85' RT

CITY OF JACKSONVILLE DB 2578 PG 353

MB 25 PG 10 SLIDE D-197

JUANITA HUMPHREY DB 350 PG 190 MB 038 PG 192

CRAIG B. HUMPHREY DB 1376 PG 286 MB 35 PG 11

MATCH TO -Y- STA. 16+00.00

BEGIN CONSTRUCTION
-Y- STA. 12+60.00

2005 ADT / 2030 ADT	SERVICE ROAD	DHV = 7% DIR = 65% TTST = 1% DUAL = 2%
DHV = 10% DIR = 50% TTST = 2% DUAL = 5%	1400 / 2300	
-Y- US 17 MARINE BLVD.	900 / 1600	300 / 500 — 15400 / 34000 — -Y- US 17
26000 / 42100	13000 / 13000	3000 / 6000 — DHV = 10% DIR = 65% TTST = 2% DUAL = 5%
		16200 / 19200
DHV = 7% DIR = 55% TTST = 1% DUAL = 2%	-L- PINEY GREEN ROAD (SR 1406)	

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/2001

MATCH TO SHEET 4

MATCH TO SHEET 6

-L- STA. 17+00.00

-L- STA. 31+00.00

-BY4- 82 POT 5+00.00

-Y4- POT Sta. 10+00.00

-L- POT Sta. 27+70.41 =
-Y4- POT Sta. 14+56.33

-L- POT Sta. 26+97.24 =
-Y3- POT Sta. 10+00.00

-BL- 3 PINC 15+16.26 =
-BY2- POT 5+00.00 =
-L- POT STA 19+58.56
24.63' LT

-BL- 4 PINC 23+45.70 =
-BY3- POT 5+00.00 =
-BY4- POT 9+39.86 =
-L- POT STA 27+88.00
22.95' LT

-L- POT Sta. 19+27.24 =
-Y2- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y4- STA. 13+35.00

END CONSTRUCTION
-Y2- STA. 11+15.00

END CONSTRUCTION
-Y3- STA. 11+25.00

-Y2- POT Sta. 12+87.02

-BY2- 78 POT 8+55.47

-BY3- 81 POT 10+25.86

-BY3- 80 PINC 6+63.55 =
-Y3- POC STA 11+17.50
11.27' LT

-Y3- PC Sta. 11+04.92

-Y3- PT Sta. 11+95.29

-Y3- POT Sta. 13+20.34

-Y5- POT Sta. 14+43.96

-BY5- 85 POT 9+06.65 =
-Y5- POT STA 14+37.49
14.91' LT

-Y3- -Y3-
PI Sta 11+54.80 11+54.90
Δ = 60°55'00" 60°55'00.0" (RT)
D = 67°24'00" 67°24'24.5"
L = 90.37' 90.37'
T = 49.99' 49.99'
R = 85.00' 85.00'
SE = SEE PLANS

WILLIAM T. HUMPHREY, ET UX
DB 1322 PG 983

ARLINE K. COLLINS, ET AL
DB 1211 PG 445
MB 23 PG 158
SLIDE C-266

EVAN A. HARPER, ET UX
DB 2694 PG 443

THOMAS G. COLLINS ET AL
DB 1340 PG 98

MALVIN E. COLLINS ET UX
DB 247 PG 453
DB 271 PG 371

FRANCIS L. BRISCOE, ET UX
DB 628 PG 758

JOAN L. TRUMAN
DB 1476 PG 739

CANDICE L. HARRIS, ET VIR
DB 1272 PG 126

C. L. JONES BUILDING, INC.
DB 2722 PG 078

PHILIP H. MINIX
DB 2519 PG 508
MB 006 PG 041

PATRICIA R. GARNER
DB 474 PG 341

TREVER P. TULLY, ET UX
DB 977 PG 241

JOSEPH C. SINK, ET UX
DB 718 PG 677
MB 6 PG 74

HELEN K. BASDEN, ET VIR
DB 1026 PG 750
MB 6 PG 74

JERRY M. MORTON, ET UX
DB 1094 PG 168
MB 6 PG 74

HENRY O'NEIL BROOKS, ET UX
DB 1619 PG 345
MB 6 PG 74

ABBY K. MORTON
DB 735 PG 818
MB 6 PG 74

SAMUEL G. MURRAY, ET UX
DB 2564 PG 495
MB 6 PG 74

JIMMY W. ROWE, ET UX
DB 381 PG 646
MB 6 PG 74

HANS J. MILLER, ET UX
DB 785 PG 812
MB 6 PG 74

EDGAR S. BANKHEAD, ET UX
DB 604 PG 617
MB 6 PG 74

PHILLIP L. GURGANUS, ET UX
DB 1322 PG 812
MB 6 PG 74

TERRY L. TRENCHARD, ET UX
DB 1154 PG 565
MB 6 PG 74

DONALD J. COLEMAN, ET UX
DB 357 PG 72
MB 6 PG 74

JOSEPH WHITE
DB 2610 PG 435
MB 6 PG 74

MARY ELIZABETH O'BRIEN
DB 1437 PG 320
MB 6 PG 74

SHARON CALLOWAY PAULTER
DB 2221 PG 590
MB 6 PG 74

ROY C. TOOTLE, ET UX
DB 1668 PG 718
MB 6 PG 74

ROY C. TOOTLE, ET UX
DB 716 PG 393
MB 6 PG 74

PRISCILLA A. HORN
DB 1654 PG 913
MB 6 PG 74

DONALD E. SUMMERS, ET UX
DB 2422 PG 409
MB 6 PG 74

JAMES E. CAMPBELL
DB 2104 PG 443
MB 6 PG 74

JOSEPH A. FRANCIS, ET UX
DB 346 PG 36
MB 6 PG 74

EUGENE C. STOUT
DB 1591 PG 723
MB 6 PG 74

2'-6" CHANNELIZATION AREA

100' LEFT TURN TAPER

PROP. 2'-6" C&G

PROP. 1'-6" C&G

Proposed Conc. 5" Monolithic Island

JACKSONVILLE CITY LIMITS

COUNTRY CLUB DR

CANTERBURY LN

LINDA DR

REVISIONS

8/17/99

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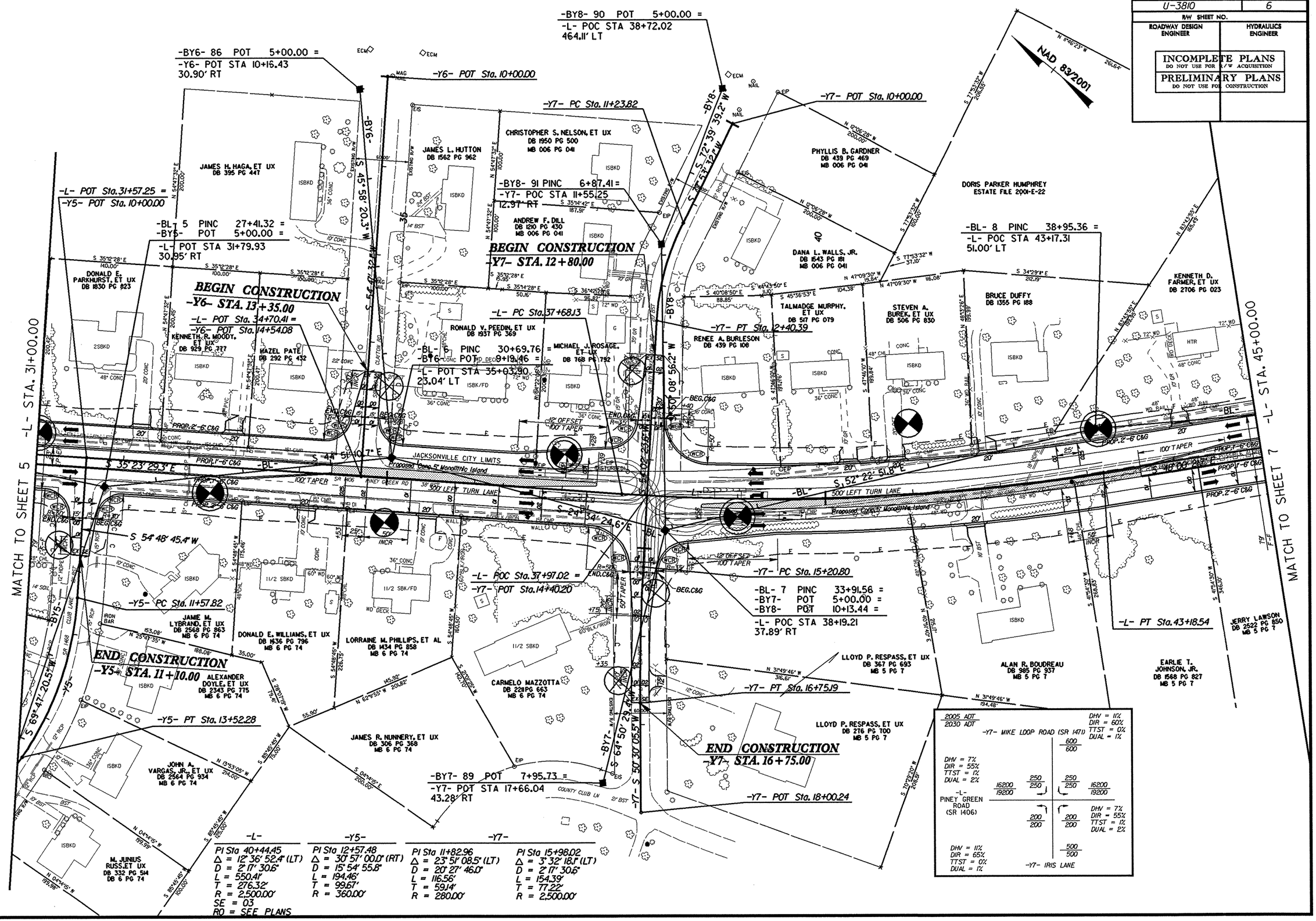
PROJECT REFERENCE NO.	SHEET NO.
U-3810	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



-L-	-Y5-	-Y7-	
PI Sta 40+44.45	PI Sta 12+57.48	PI Sta 11+82.96	PI Sta 15+98.02
Δ = 12° 36' 52.4" (LT)	Δ = 30° 57' 00.0" (RT)	Δ = 23° 51' 08.5" (LT)	Δ = 3° 32' 18.1" (LT)
D = 2° 17' 30.6"	D = 15° 54' 55.8"	D = 20° 27' 46.0"	D = 2° 17' 30.6"
L = 550.41'	L = 194.46'	L = 116.56'	L = 154.39'
T = 276.32'	T = 99.67'	T = 59.14'	T = 77.22'
R = 2,500.00'	R = 360.00'	R = 280.00'	R = 2,500.00'
SE = 03			
RO = SEE PLANS			

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001

MATCH TO SHEET 6 -L- STA. 45+00.00

MATCH TO SHEET 8 -L- STA. 59+00.00

-BY10- 96 POT 5+00.00 =
-Y10- POT STA 12+44.88
14.30' LT

-BY12- 102 PINC 11+04.45 =
-Y12- POT STA 15+85.01
14.18' LT

BEGIN CONSTRUCTION
-Y10- STA. 16+60.00

BEGIN CONSTRUCTION
-Y12- PC STA. 15+56.93

-Y10- PC Sta. 14+43.94

-Y10- PT Sta. 16+39.22

-Y10- PC Sta. 17+05.33

-Y10- PT Sta. 17+84.60

-BL- 9 PINC 46+11.18 =
-BY9- POT 5+00.00 =
-BY10- POT 11+65.28 =
-L- POT STA 50+31.29
0.68' RT

-BY10- 97 PINC 9+31.49 =
-Y10- POT STA 16+75.01
13.33' LT

-L- POT Sta. 56+58.07
-Y11- POT Sta. 10+00.00

-L- POT Sta. 50+71.07 =
-Y9- POT Sta. 10+00.00

-L- POT Sta. 52+63.00 =
-Y10- POT Sta. 18+18.63

-L- POT Sta. 58+01.0645
-Y12- POT Sta. 18+23.39

-Y12- PT Sta. 17+80.36

-BL- 10 PINC 52+77.01 =
-BY11- POT 5+00.00 =
-BY12- POT 12+88.72 =
-L- POT STA 56+94.60
57.24' LT

-BY9- 94 PINC 7+30.03 =
-Y9- POT STA 12+23.97
15.28' LT

-Y9- PC Sta. 12+54.91

END CONSTRUCTION
-Y9- STA. 11+61.00

END CONSTRUCTION
-Y11- STA. 11+35.00

-Y11- POT Sta. 13+52.01

-BY11- 100 POT 9+66.90 =
-L- POT STA 56+38.96
406.34' RT

-Y9- PT Sta. 14+49.45

-BY9- 95 POT 9+76.25 =
-Y9- POT STA 14+64.60
20.58' LT

2005 ADT / 2030 ADT	-Y12- WOLF SWAMP ROAD (SR 1407)	
	DHV = 7% DIR = 70% TTST = 2% DUAL = 4%	3600 / 4600
-L- PINEY GREEN ROAD (SR 1406)	16200 / 19200 — 800 / 1000 — 2800 / 3600 — 18200 / 21600	
	DHV = 7% DIR = 55% TTST = 1% DUAL = 2%	DHV = 7% DIR = 60% TTST = 1% DUAL = 3%

-Y9-
PI Sta 13+54.25
Δ = 28° 34' 50.0" (RT)
D = 14° 41' 28.4"
L = 194.54'
T = 99.34'
R = 390.00'

-Y10-
PI Sta 15+41.75
Δ = 8° 21' 00.0" (RT)
D = 4° 16' 32.9"
L = 195.28'
T = 97.82'
R = 1,340.00'

PI Sta 17+47.18
Δ = 45° 25' 06.3" (RT)
D = 57° 17' 44.8"
L = 79.27'
T = 41.85'
R = 100.00'
SE = SEE PLANS

-Y12-
PI Sta 16+74.98
Δ = 45° 43' 17.5" (RT)
D = 20° 27' 46.0"
L = 223.44'
T = 118.05'
R = 280.00'
SE = SEE PLANS

REVISIONS

8/17/99

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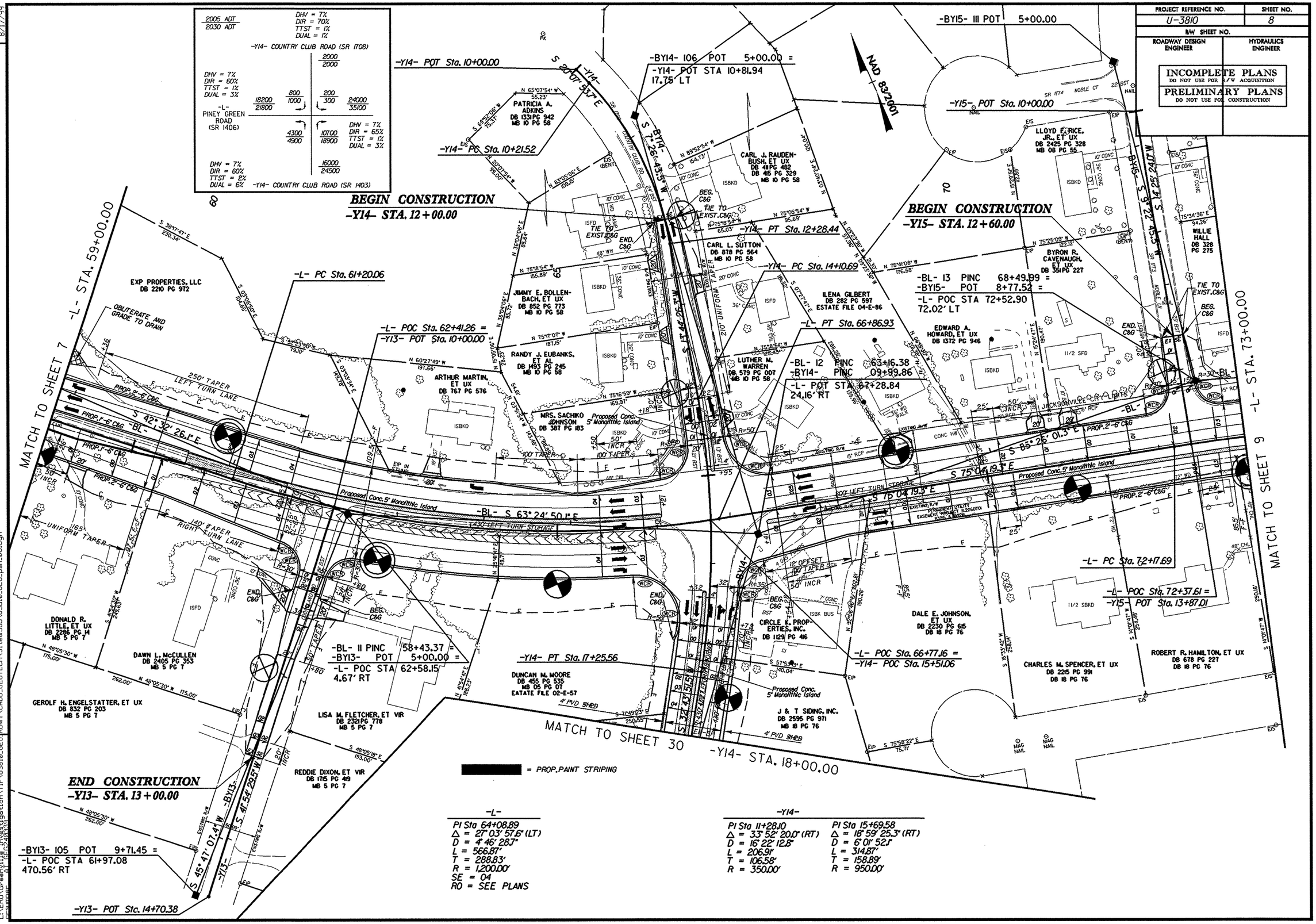
PROJECT REFERENCE NO.	SHEET NO.
U-3810	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



-L-

PI Sta 64+08.89
Δ = 27° 03' 57.6" (LT)
D = 4° 46' 28.7"
L = 566.87'
T = 288.83'
R = 1,200.00'
SE = 04
RO = SEE PLANS

-Y14-

PI Sta 11+28.10	PI Sta 15+69.58
Δ = 33° 52' 20.0" (RT)	Δ = 18° 59' 25.3" (RT)
D = 16° 22' 12.8"	D = 6° 01' 52.1"
L = 206.91'	L = 314.87'
T = 106.58'	T = 158.89'
R = 350.00'	R = 950.00'

REVISIONS

8/17/99

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Filename

PROJECT REFERENCE NO.	SHEET NO.
U-3810	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/2001

-BY16- 113 POT 5+00.00

BEGIN CONSTRUCTION
-Y16- STA. 10+75.00

-LI- POC Sta. 77+62.58 =
-Y16- POT Sta. 11+73.44

-Y16- POT Sta. 10+00.00

-BL- 14 PINC 74+01.72 =
-BY16- POT 8+71.21 =
-L- POC STA 77+91.75
79.19' LT

-BL- 15 PINC 79+38.66 =
-L- POT STA 83+17.75
0.26' LT

-BL- 16 PINC 82+55.97 =
-L- POT STA 86+35.00
5.62' RT

-L- POC Sta. 77+59.90 =
-Y16- POT Sta. 11+97.17

-LI- PC Sta. 76+92.21 =
-L- POC Sta. 76+92.21 23.50 LT

-LI- PT Sta. 81+42.31

-L- PT Sta. 80+67.29

BEGIN BRIDGE
-L- +/-STA 83+30.00

END BRIDGE
-L- +/-STA 86+45.00

BRIDGE #118 OVER NORTHEAST CREEK OVERFLOW
BRIDGE #119 OVER NORTHEAST CREEK
PROJECT 8.2260701 (B-3215)
CONC DECKS, BENTS, RAILS, PILINGS, GUARDRAILS ETC.

RETAIN EXISTING BRIDGES

MATCH TO SHEET 8 -L- STA. 73+00.00

MATCH TO SHEET 10 -L- STA. 87+00.00

-L-
PI Sta 76+45.36
Δ = 16°13' 34.3" (RT)
D = 1° 54' 35.5"
L = 849.60'
T = 427.66'
R = 3,000.00'
SE = 03
RO = SEE PLANS

-LI-
PI Sta 79+17.56
Δ = 7° 09' 48.7" (RT)
D = 1° 35' 29.6"
L = 450.10'
T = 225.34'
R = 3,600.00'
SE = 03
RO = SEE PLANS

= PROP. PAINT STRIPING

REVISIONS

8/17/99

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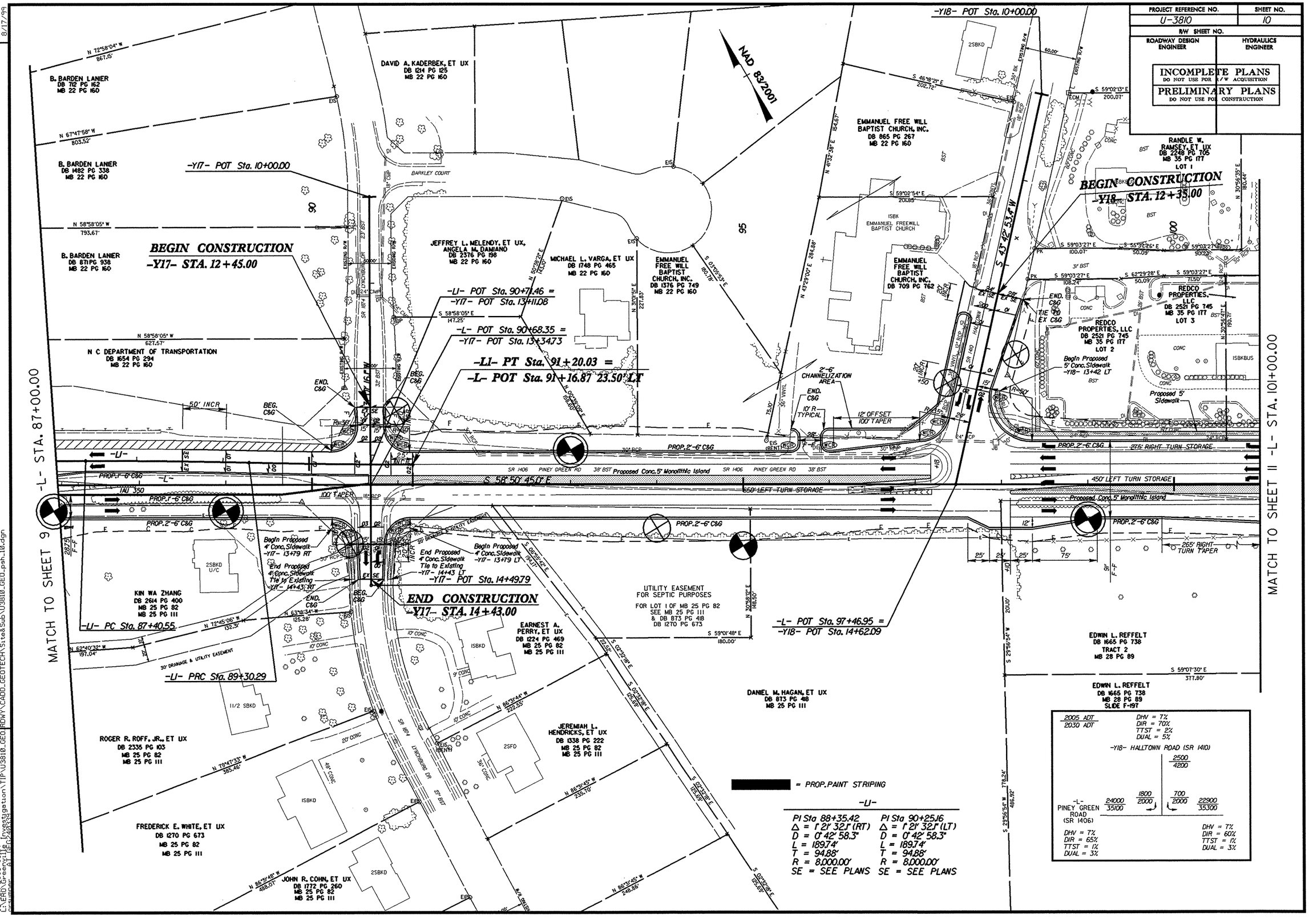
PROJECT REFERENCE NO.	SHEET NO.
U-3810	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001

MATCH TO SHEET 10 -L- STA. 101+00.00

MATCH TO SHEET 12 -L- STA. 115+00.00

GEORGE A. HOWARD, JR., et ux
DB 1915 PG 065
MB 33 PG 181

HIGHLAND CROSSING, LLC
DB 1700 PG 632
MB 35 PG 177
LOT 5

HOWARD AND SONS RENTALS
DB 2795 PG 007
MB 35 PG 177
LOT 6

HOWARD AND SONS RENTALS
DB 1817 PG 807

GEORGE A. HOWARD, JR., et ux
DB 2091 PG 925
MB 29 PG 191

REDCO PROPERTIES, LLC
DB 2521 PG 745
MB 35 PG 177
LOT 3

BAILEY AND ASSOCIATES, INC.
DB 1413 PG 545
MB 35 PG 177
LOT 4

EDWIN L. REFFELT
DB 1665 PG 738
TRACT 2
MB 28 PG 89

EDWIN L. REFFELT
DB 1665 PG 738
MB 28 PG 89
SLIDE F-197

EMMANUEL FREE WILL BAPTIST CHURCH
DB 1903 PG 241
MB 27 PG 196

HARVEST PRESBYTERIAN CHURCH OF JACKSONVILLE (PCA), INC.
DB 1836 PG 277
MB 34 PG 62

-Y19- POT Sta. 10+00.00

-BY19- 121 POT 5+00.00 =
-Y19- POT STA 10+07.89
51.33' LT

BEGIN CONSTRUCTION
-Y19- STA. 10+80.00

-L- POT Sta. 102+79.46 =
-Y19- POT Sta. 12+43.72

-BL- 20 PINC 105+17.56 =
-L- POC STA 108+75.70
51.64' LT

-L- PC Sta. 105+15.13

-L- PT Sta. 111+68.66

-L- POT Sta. 102+80.13 =
-Y20- POT Sta. 10+00.00

-BY20- 124 PINC 7+67.36 =
-Y20- POT STA 10+55.05
25.48' RT

END CONSTRUCTION
-Y20- STA. 11+30.00

-Y20- POT Sta. 13+77.27

-BY20- 125 POT 11+79.72

-L-
PI Sta 108+41.97
Δ = 3° 07' 13.4" (LT)
D = 0° 28' 38.9"
L = 653.53'
T = 326.85'
R = 12,000.00'
SE = NC

2005 ADT
2030 ADT

-Y19- HIGHLAND CROSSING SHOPPING CENTER

DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 3%

DHV = 7%
DIR = 60%
TTST = 1%
DUAL = 3%

-L-
PINEY GREEN ROAD
(SR 1406)

DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 3%

DHV = 7%
DIR = 70%
TTST = 1%
DUAL = 1%

-Y20- CREEDMOOR ROAD (SR 1899)

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/2001

2005 ADT / 2030 ADT
DHV = 10%
DIR = 50%
TTST = 1%
DUAL = 3%

WHITE OAK HIGH SCHOOL

-L- PINEY GREEN ROAD (SR 1406)

21700 / 34700	1200 / 1200	800 / 800	20100 / 32200
	1300 / 2300	100 / 200	
		2100 / 2100	
		1500 / 2600	

DHV = 7%, DIR = 55%, TTST = 1%, DUAL = 3%

DHV = 7%, DIR = 55%, TTST = 1%, DUAL = 3%

DHV = 7%, DIR = 60%, TTST = 1%, DUAL = 1%

-Y21- BALSAM ROAD (SR 1779)

GEORGE A. HOWARD, JR., et ux
DB 2091 PG 925
MB 29 PG 191

JACKSONVILLE CITY LIMITS

MATCH TO SHEET 11 -L- STA. 115+00.00

MATCH TO SHEET 13 -L- STA. 129+00.00

-L- POT Sta. 121+82.96 =
-Y21- POT Sta. 10+00.00

-BL- 22 PINC 118+62.86 =
-BY21- POT 5+00.00 =
-L- POT STA 122+12.31
66.21' LT

-L- POT Sta. 128+33.46 =
-Y22LT- POT Sta. 10+00.00
-L- POT Sta. 128+12.96 =
-Y22- POT Sta. 10+00.00

-L- POT Sta. 127+92.46 =
-Y22RT- POT Sta. 10+00.00

-BL- 23 PINC 124+36.42 =
-BY22- POT 5+00.00 =
-L- POT STA 127+85.88
66.04' LT

ISBK
WHITE OAK HIGH SCHOOL

ONSLOW COUNTY
DB 2633 PG 765

SUMMERSILL CEMETERY

Begin Proposed 10' Conc. Sidewalk -L- 118+40 LT

End Proposed 10' Conc. Sidewalk -L- 121+48 LT

Begin Proposed 10' Conc. Sidewalk -L- 122+00 LT

END C&G

BEG. C&G

12' OFFSET 100' TAPER

Proposed 10' Sidewalk

450' RIGHT TURN STORAGE

450' LEFT TURN STORAGE

SR 1406 PINEY GREEN RD 38' BST

Proposed Conc. 5' Monolithic Island

CHANNELIZATION AREA

BEG. C&G TIE TO EXIST. GUTTER

TIE TO EXIST. GUTTER

NCDOT GPS U3810-4
-BL- 21 PINC 112+57.73 =
-L- POT STA 116+13.34
19.91' RT

CAROLINA TELEPHONE AND TELEGRAPH COMPANY
DB 837 PG 727

KEYSTONE CONTRACTORS, INC.
DB 1204 PG 848
MB 19 PG 65

RAMON R. ROSARIO, ET UX
DB 724 PG 324

LESLIE ALLEN, ET VIR
DB 2369 PG 975

HOWARD F. ESLICK, ET UX
DB 638 PG 9499

JENNIFER PARKHURST & ROBERT E. MULLINS, JR.
DB 2050 PG 276

BEATRICE A. GEORGE
DB 1215 PG 243

MARY G. THAXTON
DB 631 PG 283

ERIC C. NUNEZ, ET UX
DB 898 PG 527

LINDA F. HORNAGE
DB 1531 PG 713

PHILIP G. GRIFFITH, ET AL
DB 1616 PG 807

WILLIE L. BURNS
DB 1372 PG 709

LESLEY D. EXUM
DB 1238 PG 506

HARVEST PRESBYTERIAN CHURCH OF JACKSONVILLE (PCA), INC.
DB 1836 PG 277
MB 34 PG 62

END CONSTRUCTION
-Y21- STA. 11+50.00

KEVIN LILBURN
DB 1521 PG 76
MB 18 PG 29

VINSON D. HARRELL, ET UX
DB 2239 PG 890
MB 18 PG 29

ANDREW J. MAY, ET UX
DB 1292 PG 943

PINEY GREEN CONSTRUCTION COMPANY, INC.
DB 1989 PG 838

MB 21 PG 240
SLIDE B-268

LAURA K. SCHOFIELD
DB 962 PG 420

KEVIN D. WARD
DB 2295 PG 374

BRITT BLANKENSHIP & CYNTHIA JOHNSTON
DB 2853 PG 776

MB 22 PG 10
SLIDE B-287

RUBY PREE
DB 2827 PG 736

DONALD WARNICK, ET UX
DB 1192 PG 782
MB 18 PG 29

MICHAEL LE & PHUONG NGUYEN
DB 2595 PG 484
MB 40 PG 28

JOYCE MAXEY
DB 1651 PG 279

CAROLYN D. ROSADO
DB 1283 PG 764
DB 1439 PG 449

Proposed 5' Sidewalk

Begin Proposed 5' Conc. Sidewalk -Y22- 11+39 LT

-BY22- 129 POT PK 8+27.81

-Y22RT- POT Sta. 12+42.85

-Y22- POT Sta. 12+42.84

END CONSTRUCTION
-Y22- STA. 11+60.00

-Y22LT- POT Sta. 12+42.83

-BY21- 127 POT 11+06.09 =
-Y21- POT STA 15+37.79
21.13' RT

REVISIONS

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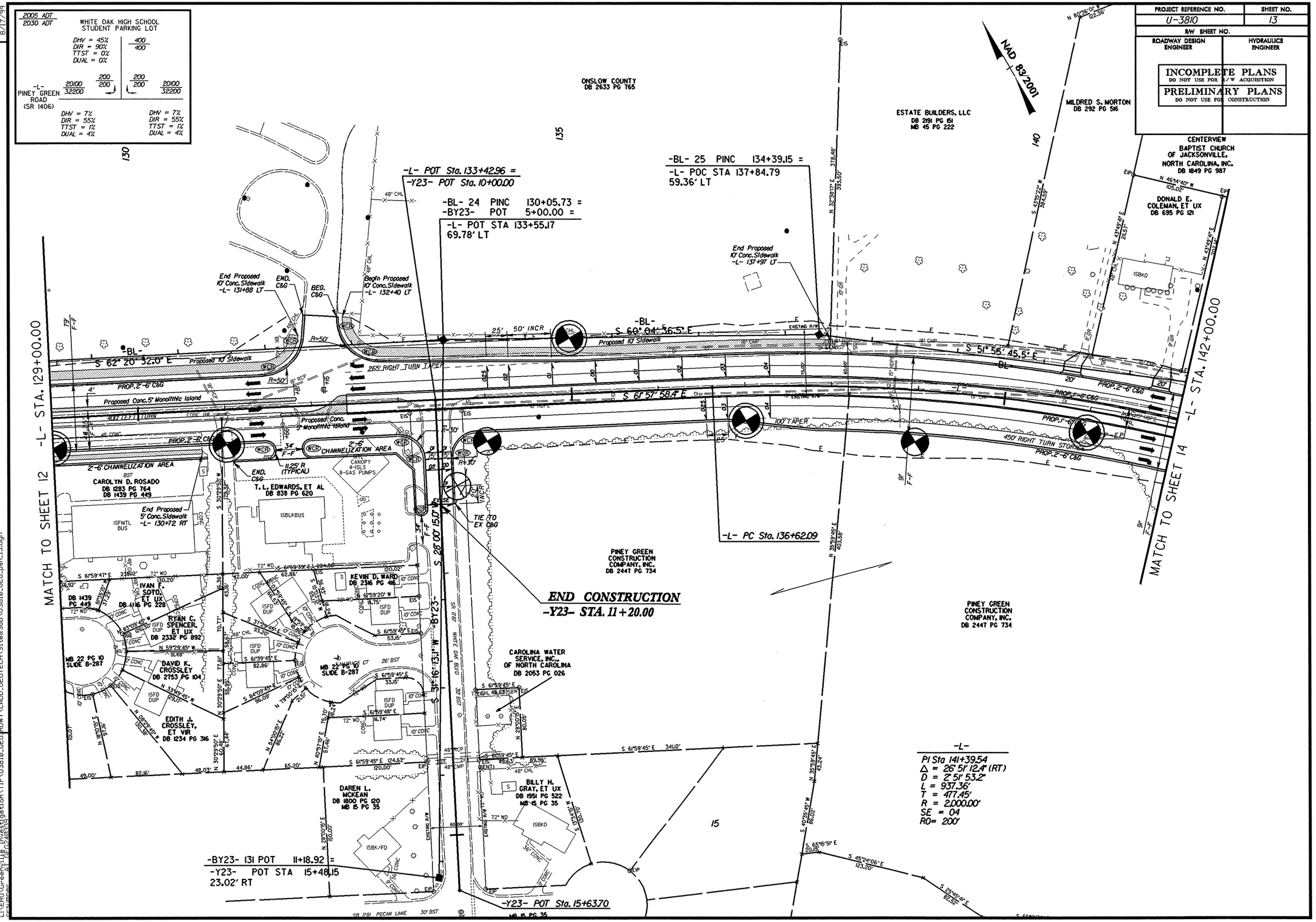
PROJECT REFERENCE NO.	SHEET NO.
U-3810	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



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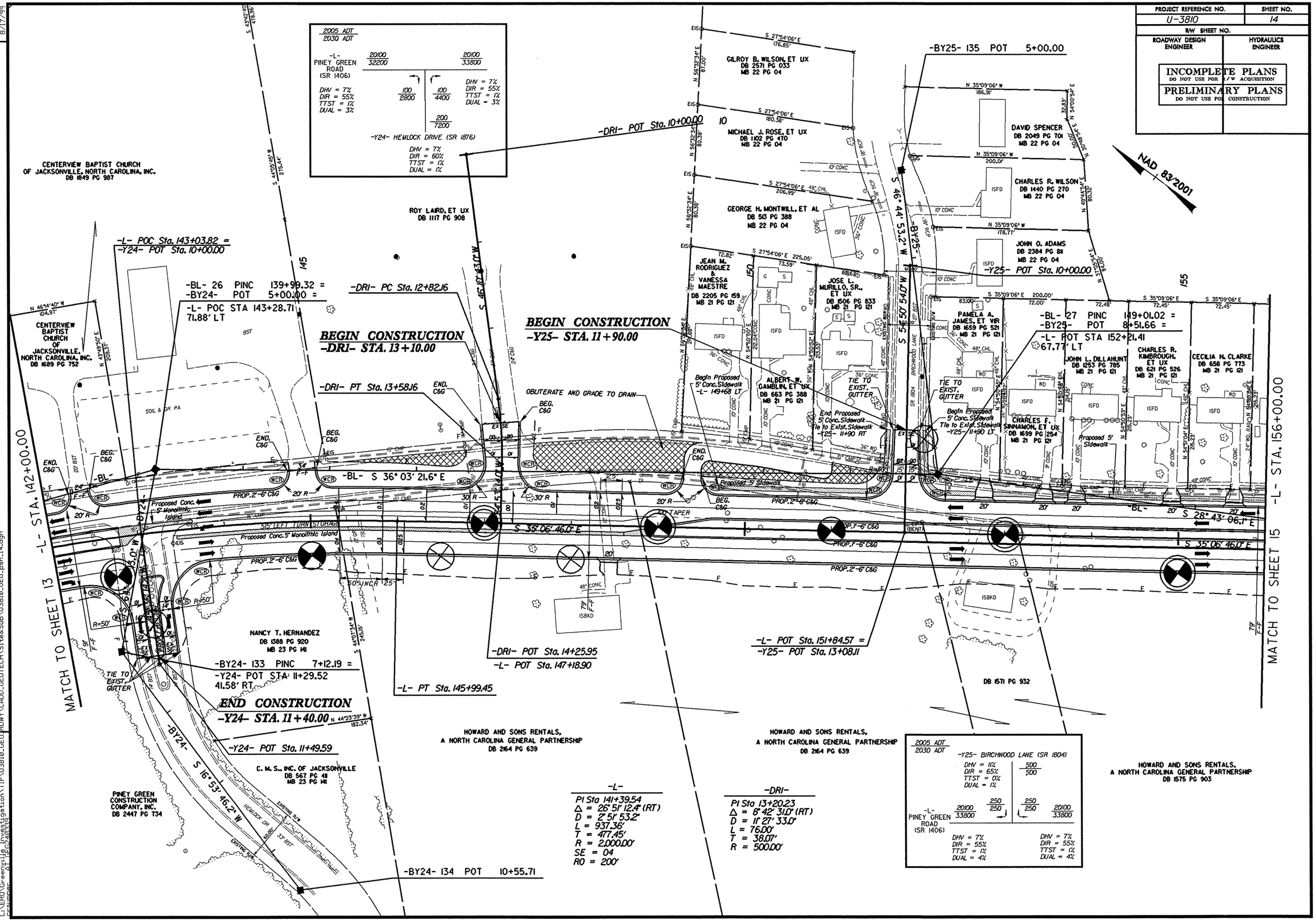
PROJECT REFERENCE NO.	SHEET NO.
U-3810	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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PROJECT REFERENCE NO.	SHEET NO.
U-3810	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

NAD 83/2001

-BY26- 137 POT 5+00.00

-Y26- POT Sta. 10+00.00

BEGIN CONSTRUCTION
-Y26- STA. 11+45.00

MATCH TO SHEET 14

MATCH TO SHEET 16

-L- STA. 156+00.00

-L- STA. 170+00.00

-BL- 28 PINC 155+17.45 =
-L- POT STA 158+34.01
0.88' RT

-L- PC Sta. 162+75.46

-L- POC Sta. 164+00.49 =
-Y26- POT Sta. 12+88.84

-BL- 29 PINC 160+68.90 =
-BY26- POT 9+31.29 =
-L- POC STA 163+85.44
1.40' RT

-BL- 30 PINC 163+93.35 =
-L- POC STA 167+07.14
23.24' RT

-L-
PI Sta 168+42.34
Δ = 41° 24' 17.2" (LT)
D = 3° 49' 11.0"
L = 1,083.97'
T = 566.87'
R = 1,500.00'
SE = 04
RO = 200'

CLIFTON CAIN, ET UX DB 1043 PG 563 MB 21 PG 121
LUIS E. LOPEZ DB 1458 PG 120 MB 21 PG 121
WILLIS J. BRINTON, ET UX DB 1425 PG 443 MB 21 PG 121
WILLIAM C. FARNELL, ET UX DB 836 PG 765 MB 21 PG 121
DANIEL L. WOTRING, ET UX DB 949 PG 797 MB 21 PG 121
HOWARD CEMETERY
CRAIG J. RIPPLE, ET UX DB 2674 PG 305 MB 21 PG 121
JAMES T. CASS, ET UX DB 2525 PG 532 MB 21 PG 121
WILLIAM FORRESTER, ET UX DB 2520 PG 143 MB 21 PG 121
CLINT L. HILLER, ET UX DB 2051 PG 485 MB 21 PG 121
MARTIN J. ESTRADA, ET UX DB 788 PG 934 MB 22 PG 05
NAOMI R. HESS DB 1824 PG 490 MB 22 PG 05
CHRISTOPHER DAVIS, ET UX DB 1543 PG 975 MB 22 PG 05
GARY C. WILCOX, ET UX DB 658 PG 767 MB 21 PG 121
MICHAEL T. DEMARK, ET UX DB 2154 PG 780 MB 21 PG 121
JEFFERY D. WILSON DB 923 PG 157 MB 22 PG 05
JAMES E. GRANT, III, ET UX DB 2446 PG 052 MB 22 PG 05
MONTEITH L. SUGGS, ET UX DB 2686 PG 480 MB 22 PG 05
KENNETH W. DIXON, ET UX DB 795 PG 899
KENNETH W. DIXON, ET UX DB 587 PG 680
C. M. S., INC. OF JACKSONVILLE DB 567 PG 411 MB 21 PG 121
W.R. WILLIS DB 1209 PG 547 MB 33 PG 55
POPLAR CREEK
HOWARD AND SONS RENTALS, A NORTH CAROLINA GENERAL PARTNERSHIP DB 1575 PG 903
HOWARD AND SONS RENTALS, A NORTH CAROLINA GENERAL PARTNERSHIP DB 1556 PG 959
HOWARD AND SONS RENTALS, A NORTH CAROLINA GENERAL PARTNERSHIP DB 1610 PG 063
HOWARD AND SONS RENTALS, A NORTH CAROLINA GENERAL PARTNERSHIP DB 1456 PG 592

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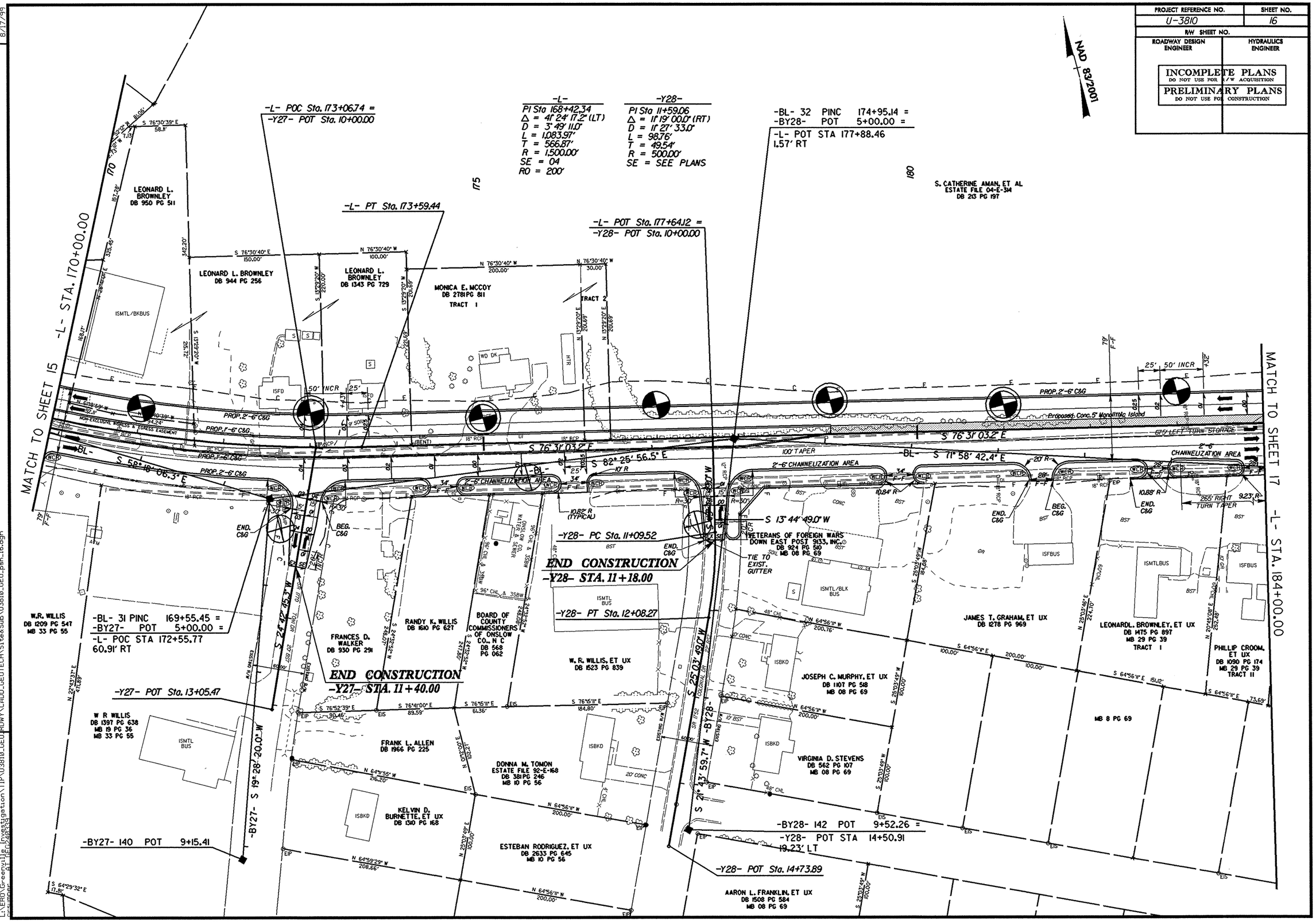
PROJECT REFERENCE NO.	SHEET NO.
U-3810	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



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PROJECT REFERENCE NO.	SHEET NO.
U-3810	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001

2005 ADT
2030 ADT
-Y29- OLD 30 ROAD (SR 1411)
DHV = 7%
DIR = 60%
TTST = 2%
DUAL = 5%
3600 / 8400

DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 3%
-L- PINEY GREEN ROAD (SR 1406)
3200 / 7400
20100 / 33800
200 / 800
16900 / 27000
600 / 600
400 / 400
DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 2%
1200 / 1200
DHV = 7%
DIR = 50%
TTST = 1%
DUAL = 3%
-Y29- CHARLES ROAD (SR 1755)

BEGIN CONSTRUCTION
-Y29- STA. 11+73.00

-Y29- PC Sta. 12+33.58

-Y29- PT Sta. 16+16.18

-Y31- POT Sta. 10+00.00

-BY31- 149 POT 5+00.00

BEGIN CONSTRUCTION
-Y31- STA. 10+95.00

-BY29- 145 PINC 15+53.18 =
-Y29- POT STA 15+99.17
96.64' RT

-L- POC Sta. 186+36.55 =
-Y29- POT Sta. 17+56.36

-Y29- PC Sta. 17+59.54

-BL- 33 PINC 182+53.61 =
-BY29- POT 17+71.19 =
-BY30- POT 5+00.00 =
-L- POC STA 185+46.13
60.77' RT

-L- PC Sta. 184+81.45

END CONSTRUCTION
-Y29- STA. 20+83.00

-Y29- PT Sta. 21+53.08

-L- PT Sta. 190+81.72

-L- POC Sta. 190+37.05 =
-Y31- POT Sta. 12+16.99

-BL- 34 PINC 187+75.59 =
-BY31- POT 9+80.78 =
-L- POC STA 190+63.61
32.56' LT

-BL- 35 PINC 192+91.38 =
-L- POT STA 195+75.70
27.38' RT

-Y29-	-Y29-	-L-
PI Sta 14+27.82	PI Sta 19+56.84	PI Sta 187+83.03
Δ = 24° 21' 25.1" (LT)	Δ = 10° 14' 56.8" (RT)	Δ = 13° 45' 25.7" (RT)
D = 6° 48' 38.3"	D = 2° 28' 15.7"	D = 2° 17' 30.6"
PI Sta 18+87.82	PI Sta 23+56.84	PI Sta 190+83.03
Δ = 29° 20' 25.1" (LT)	Δ = 19° 14' 56.8" (RT)	Δ = 13° 45' 25.7" (RT)
D = 6° 00' 38.3"	D = 2° 30' 00"	D = 2° 50' 00"
L = 382.60'	L = 393.54'	L = 600.37'
T = 194.23'	T = 197.30'	T = 300.08'
R = 900.00'	R = 2,200.00'	R = 2,500.00'
SE = 04	SE = SEE PLANS	SE = 03
RO = SEE PLANS		RO = 150'

= PROP. PAINT STRIPING

MATCH TO SHEET 16 -L- STA. 184+00.00

MATCH TO SHEET 18 -L- STA. 198+00.00

S. CATHERINE AMAN, ET AL ESTATE FILE 04-E-314 DB 213 PG 197

S. CATHERINE AMAN DB 1007 PG 746

LUIS A. RIVERA, ET AL DB 1477 PG 336

JACOB P. CUNNINGHAM DB 2246 PG 405

KATHERINE L. CATO DB 343 PG 462

JOHN W. SIMMA, ET UX DB 363 PG 426

AARON E. MATTHEWS DB 2774 PG 571

MICHAEL V. TARAVELLA, ET UX DB 2750 PG 378

GREGORY ALLEN DB 1924 PG 298

EDWARDS PROPERTY GROUP, LLC DB 1909 PG 407

ANTHONY H. MARTIN DB 920 PG 074

HOYT T. MARTIN DB 332 PG 494

CATHERINE S. AMAN DB 200 PG 40

SCOT E. CONKLIN DB 1162 PG 967

DAVID K. BULLOCK, ET UX DB 1162 PG 967

SHIRLEY A. MAYFIELD DB 1341 PG 632

JAMES E. BENEFIELD, ET UX DB 800 PG 607

STEVEN C. TAYLOR DB 2617 PG 802

EARL F. HAYDEL, JR., ET UX DB 1562 PG 828

BADER OTHMAN DB 2793 PG 519

ELAINE H. MURPHY DB 1178 PG 293

NICHOLUS BLACKMON, ET UX DB 2465 PG 555 MB 08 PG 69

WHITE OAK RIVER ROAD INVESTMENTS, LLC DB 2250 PG 498

WHITE OAK RIVER ROAD INVESTMENTS, LLC DB 2284 PG 193 MB 30 PG 44

BARBARA A. HANSEN, ET VIR DB 1212 PG 261 MB 30 PG 44

WHITE OAK RIVER ROAD INVESTMENTS, LLC DB 1485 PG 307 MB 30 PG 44

ANN AVERY MCLELLAN, ET VIR DB 1337 PG 504

RAYMOND L. MOORE, ET UX DB 333 PG 300

RAYMOND L. MOORE, ET UX DB 405 PG 590

REVISIONS

8/17/99

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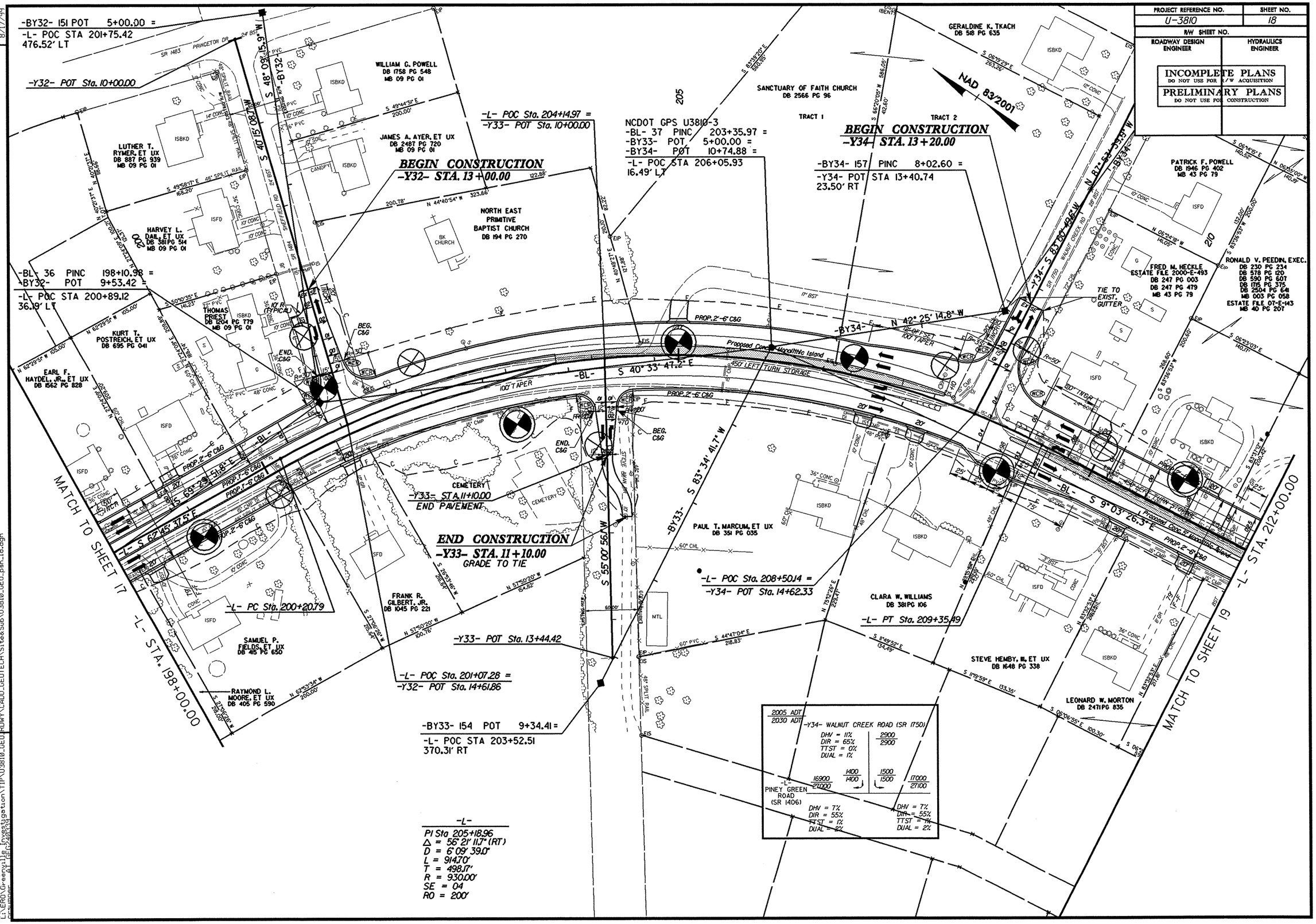

PROJECT REFERENCE NO.
U-3810
SHEET NO.
18
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-BY32- 151 POT 5+00.00 =
-L- POC STA 201+75.42
476.52' LT
-Y32- POT Sta. 10+00.00
-L- POC Sta. 204+14.97 =
-Y33- POT Sta. 10+00.00
NCDOT GPS U3810-3
-BL- 37 PINC 203+35.97 =
-BY33- POT 5+00.00 =
-BY34- POT 10+74.88 =
-L- POC STA 206+05.93
16.49' LT
BEGIN CONSTRUCTION
-Y32- STA. 13+00.00
BEGIN CONSTRUCTION
-Y34- STA. 13+20.00
-BY34- 157 PINC 8+02.60 =
-Y34- POT STA 13+40.74
23.50' RT
NAD 83/2001
-BL- 36 PINC 198+10.98 =
-BY32- POT 9+53.42 =
-L- POC STA 200+89.12
36.19' LT
WILLIAM C. POWELL
DB 1758 PG 548
MB 09 PG 01
JAMES A. AYER, ET UX
DB 2487 PG 720
MB 09 PG 01
LUTHER T. RYMER, ET UX
DB 887 PG 939
MB 09 PG 01
HARVEY L. DAIL, ET UX
DB 381 PG 514
MB 09 PG 01
NORTH EAST PRIMITIVE BAPTIST CHURCH
DB 194 PG 270
THOMAS PRIEST
DB 1204 PG 779
MB 09 PG 01
KURT T. POSTREICH, ET UX
DB 695 PG 041
EARL F. HAYDEL, JR., ET UX
DB 1562 PG 828
SANCTUARY OF FAITH CHURCH
DB 2566 PG 96
TRACT 1
TRACT 2
GERALDINE K. TKACH
DB 518 PG 635
PATRICK F. POWELL
DB 1946 PG 402
MB 43 PG 79
FRED M. HECKLE
ESTATE FILE 2000-E-493
DB 247 PG 003
DB 247 PG 479
MB 43 PG 79
RONALD V. PEEDIN, EXEC.
DB 230 PG 234
DB 578 PG 120
DB 590 PG 607
DB 1715 PG 375
DB 2504 PG 641
MB 003 PG 058
ESTATE FILE 07-E-143
MB 40 PG 207
TIE TO EXIST. GUTTER
-BL- S 40° 33' 47.2" E
-BY34- N 42° 25' 14.8" W
-BL- S 9° 03' 26.3" E
-BY33- S 83° 34' 41.7" W
-BY33- S 55° 00' 56.1" W
-BY34- N 87° 53' 39.9" W
-BY32- S 48° 09' 15.9" W
-BY32- S 40° 15' 08.7" W
-BY34- S 83° 00' 49.6" W
-L- S 62° 45' 37.5" E
-L- S 69° 29' 51.8" E
-L- PC Sta. 200+20.79
-Y33- STA. 11+10.00
END PAVEMENT
END CONSTRUCTION
-Y33- STA. 11+10.00
GRADE TO TIE
-Y33- POT Sta. 13+44.42
-L- POC Sta. 201+07.28 =
-Y32- POT Sta. 14+61.86
-L- POC Sta. 208+50.14 =
-Y34- POT Sta. 14+62.33
-L- PT Sta. 209+35.49
-L- STA. 198+00.00
-L- STA. 212+00.00
MATCH TO SHEET 17
MATCH TO SHEET 19
CEMETERY
FRANK R. GILBERT, JR.
DB 1045 PG 221
SAMUEL P. FIELDS, ET UX
DB 415 PG 650
RAYMOND L. MOORE, ET UX
DB 405 PG 590
PAUL T. MARCUM, ET UX
DB 351 PG 035
CLARA W. WILLIAMS
DB 381 PG 106
STEVE HEMBY, III, ET UX
DB 1648 PG 338
LEONARD W. MORTON
DB 2471 PG 835
-BY33- 154 POT 9+34.41 =
-L- POC STA 203+52.51
370.31' RT
2005 ADT
2030 ADT
-Y34- WALNUT CREEK ROAD (SR 1750)
DHV = 11%
DIR = 65%
TTST = 0%
DUAL = 1%
2900
2900
1400
1400
1500
1500
16900
27000
17000
27100
-L-
PINEY GREEN ROAD (SR 1406)
DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 2%
DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 2%
-L-
PI Sta 205+18.96
Δ = 56° 21' 11.7" (RT)
D = 6° 09' 39.0"
L = 914.70'
T = 498.17'
R = 930.00'
SE = 04
RO = 200'
REVISIONS
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PROJECT REFERENCE NO.	SHEET NO.
U-3810	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001

-BY35- 159 POT 5+00.00

-Y35- POT Sta. 10+00.00

NCDOT GPS U3810-2
-BL- 39 PINC 220+48.57 =
-L- POC STA 223+18.25
14.67' LT

BEGIN CONSTRUCTION
-Y35- STA. 12+90.00

-BL- 38 PINC 213+74.77 =
-BY35- POT 9+49.62 =
-L- POT STA 216+44.76
5.71' LT

-L- POT Sta. 216+81.94 =
-Y35- POT Sta. 14+07.31

-L- PC Sta. 218+82.74

-L- STA. 212+00.00

-L- STA. 226+00.00

MATCH TO SHEET 18

MATCH TO SHEET 20

RONALD V. PEEDIN, EXEC.
DB 230 PG 234
DB 578 PG 120
DB 590 PG 607
DB 1715 PG 375
DB 2504 PG 641
MB 003 PG 058
ESTATE FILE 07-E-143
MB 40 PG 207

TIMOTHY O. CARR, ET UX
DB 1623 PG 703
DB 1715 PG 371
MB 40 PG 207

WILLIAM P. REED
DB 421 PG 028
DB 662 PG 001
DB 662 PG 003
DB 1097 PG 944
DB 1715 PG 369
MB 40 PG 207

TIMOTHY O. CARR, ET UX
DB 1408 PG 605
DB 2179 PG 645
MB 03 PG 58
MB 35 PG 139

TERRY J. LYONS
DB 1000 PG 186
DB 1282 PG 966

EVELYN L. WHITE
DB 224 PG 218
DB 280 PG 672

LEONARD W. MORTON
DB 2471PG 835

TIMOTHY O. CARR, ET UX
DB 1972 PG 501

TIMOTHY O. CARR, ET UX
DB 1365 PG 143

MICHAEL E. SMEN
DB 1147 PG 136

NANNIE M. GERRITY
DB 401 PG 004

LINDA G. AMES, ET VIR
DB 1750 PG 588

JEFFREY T. SANTIAGO
DB 2319 PG 034
MB 042 PG 239
TRACT L

TOMMY MORTON, JR., ET UX
DB 900 PG 793
MB 23 PG 90

TOMMY MORTON, JR., ET UX
DB 900 PG 793
MB 23 PG 90

TIMOTHY O. CARR, ET UX
MB 042 PG 239
SLIDE K-143
TRACT K
16.289 AC.
COMBINED WITH LOT 8, 17.420 AC.

-L-
PI Sta 223+26.73
Δ = 32° 58' 36.4" (RT)
D = 3° 49' 11.0"
L = 863.33'
T = 443.99'
R = 1,500.00'
SE = 04
RO = 200'

REVISIONS

8/17/99

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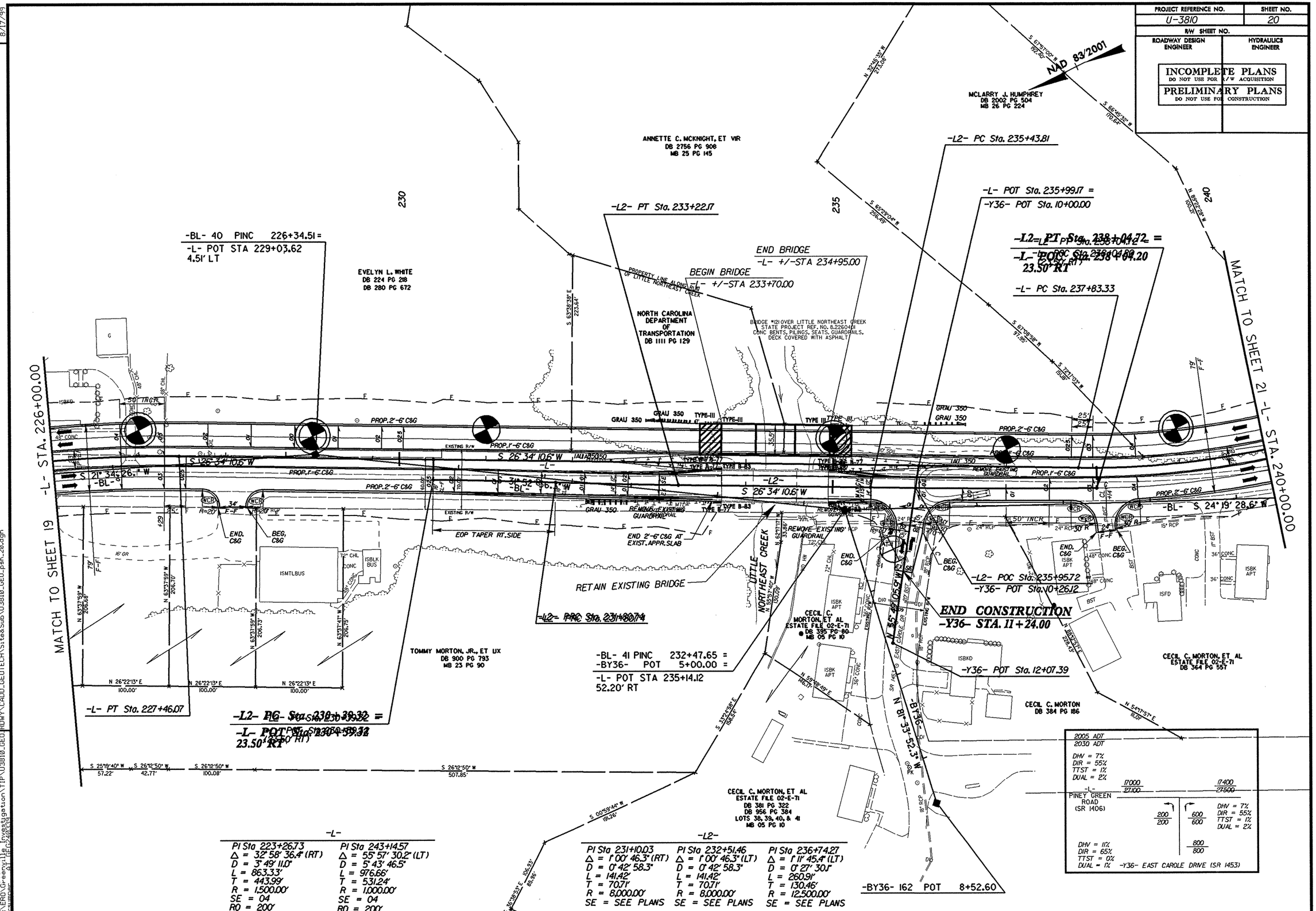
pwmoore AT ncdot.gov

PROJECT REFERENCE NO.	SHEET NO.
U-3810	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



REVISIONS

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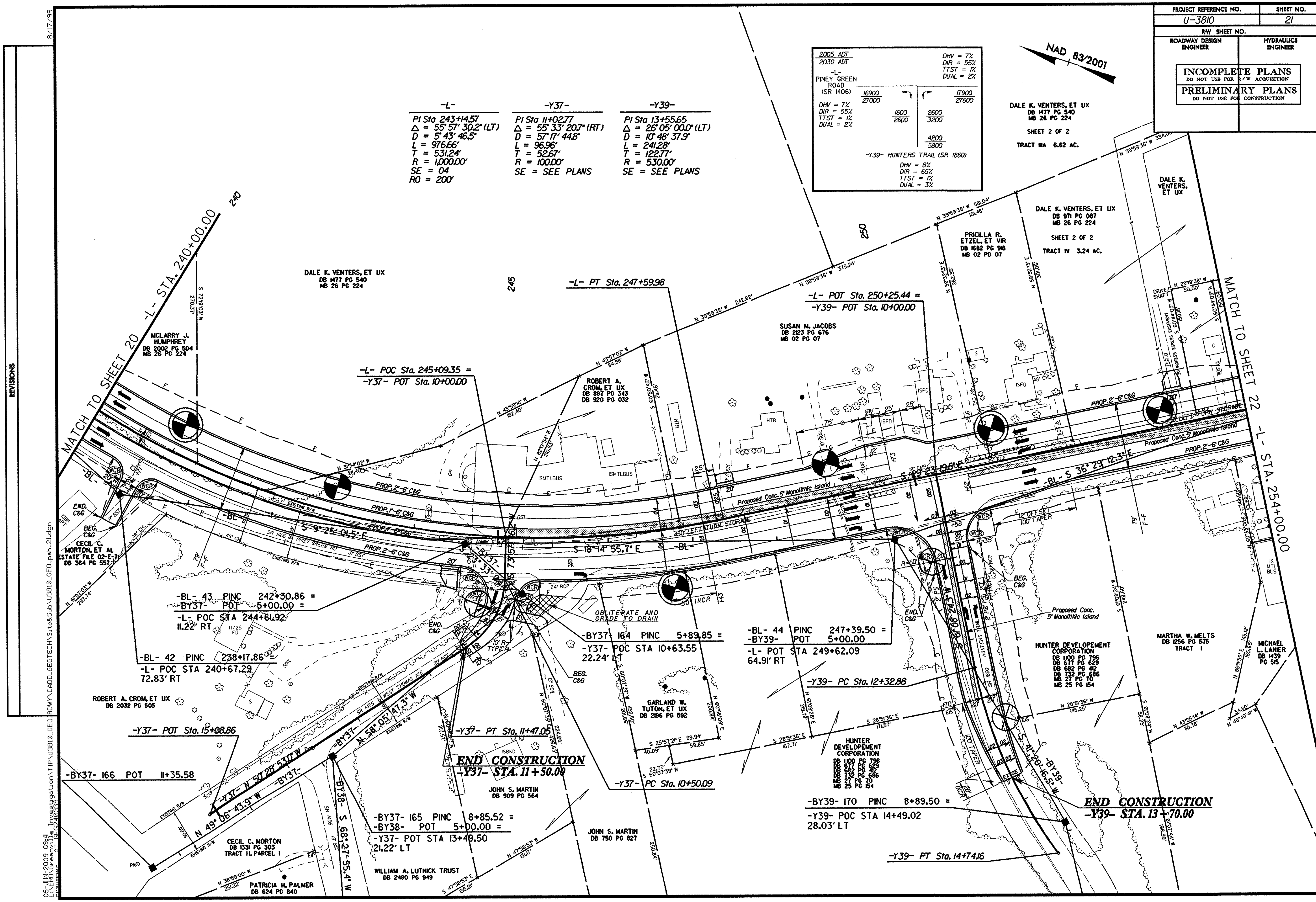
PROJECT REFERENCE NO. U-3810
SHEET NO. 21
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
NAD 83/2001
8/17/99
REVISIONS
-L-
PI Sta 243+14.57
Δ = 55° 57′ 30.2″ (LT)
D = 5° 43′ 46.5″
L = 976.66′
T = 531.24′
R = 1,000.00′
SE = 04
RO = 200′
-Y37-
PI Sta 11+02.77
Δ = 55° 33′ 20.7″ (RT)
D = 57° 17′ 44.8″
L = 96.96′
T = 52.67′
R = 100.00′
SE = SEE PLANS
-Y39-
PI Sta 13+55.65
Δ = 26° 05′ 00.0″ (LT)
D = 10° 48′ 37.9″
L = 241.28′
T = 122.77′
R = 530.00′
SE = SEE PLANS
2005 ADT / 2030 ADT
-L- PINEY GREEN ROAD (SR 1406)
DHV = 7% DIR = 55% TTST = 1% DUAL = 2%
16900/27000 1600/2600 2600/3200 17900/27600 4200/5800
-Y39- HUNTERS TRAIL (SR 1860)
DHV = 8% DIR = 65% TTST = 1% DUAL = 3%
MATCH TO SHEET 20 -L- STA. 240+00.00
MATCH TO SHEET 22 -L- STA. 254+00.00
DALE K. VENTERS, ET UX DB 1477 PG 540 MB 26 PG 224
DALE K. VENTERS, ET UX DB 1477 PG 540 MB 26 PG 224 SHEET 2 OF 2 TRACT IIIA 6.62 AC.
DALE K. VENTERS, ET UX DB 971 PG 087 MB 26 PG 224 SHEET 2 OF 2 TRACT IV 3.24 AC.
DALE K. VENTERS, ET UX
PRICILLA R. ETZEL, ET VIR DB 1682 PG 918 MB 02 PG 07
SUSAN M. JACOBS DB 2123 PG 676 MB 02 PG 07
MCLARRY J. HUMPHREY DB 2002 PG 504 MB 26 PG 224
ROBERT A. CROM, ET UX DB 887 PG 343 DB 920 PG 032
CECIL C. MORTON, ET AL ESTATE FILE 02-E-71 DB 364 PG 557
ROBERT A. CROM, ET UX DB 2032 PG 505
CECIL C. MORTON DB 1331 PG 303 TRACT II, PARCEL I
PATRICIA H. PALMER DB 624 PG 840
WILLIAM A. LUTNICK TRUST DB 2480 PG 949
JOHN S. MARTIN DB 909 PG 564
JOHN S. MARTIN DB 750 PG 827
GARLAND W. TUTON, ET UX DB 2196 PG 592
HUNTER DEVELOPEMENT CORPORATION DB 1100 PG 796 DB 677 PG 629 DB 682 PG 412 DB 732 PG 686 MB 27 PG 70 MB 25 PG 154
MARTHA W. MELTS DB 1256 PG 575 TRACT I
MICHAEL L. LANIER DB 1439 PG 515
-L- POC Sta. 245+09.35 = -Y37- POT Sta. 10+00.00
-L- PT Sta. 247+59.98
-L- POT Sta. 250+25.44 = -Y39- POT Sta. 10+00.00
-BL- 43 PINC 242+30.86 = -BY37- POT 5+00.00 = -L- POC STA 244+61.92 11.22′ RT
-BL- 42 PINC 238+17.86 = -L- POC STA 240+67.29 72.83′ RT
-BY37- 164 PINC 5+89.85 = -Y37- POC STA 10+63.55 22.24′ LT
-BL- 44 PINC 247+39.50 = -BY39- POT 5+00.00 = -L- POT STA 249+62.09 64.91′ RT
-Y39- PC Sta. 12+32.88
-Y37- POT Sta. 15+08.86
-BY37- 166 POT 11+35.58
-Y37- PT Sta. 11+47.05
END CONSTRUCTION -Y37- STA. 11+50.00
-Y37- PC Sta. 10+50.09
-BY37- 165 PINC 8+85.52 = -BY38- POT 5+00.00 = -Y37- POT STA 13+49.50 21.22′ LT
-BY39- 170 PINC 8+89.50 = -Y39- POC STA 14+49.02 28.03′ LT
END CONSTRUCTION -Y39- STA. 13+70.00
-Y39- PT Sta. 14+74.16
-BL- S 9° 25′ 01.5″ E
S 18° 14′ 55.7″ E
S 29° 23′ 19.6″ E
-BL- S 36° 29′ 12.3″ E
-Y37- N 50° 28′ 53.0″ W
N 49° 06′ 43.9″ W
N 58° 05′ 47.3″ W
-BY38- S 68° 27′ 55.4″ W
S 61° 08′ 24.3″ W
-BY39- S 41° 20′ 16.5″ W
Proposed Conc. 5″ Monolithic Island
450′ LEFT TURN STORAGE
OBLITERATE AND GRADE TO DRAIN
12′ OFFSET 100′ TAPER
PROP. 2′-6″ C&G
PROP. 1′-6″ C&G
SR 1406 PINEY GREEN RD
SR 1455 WEST THOMAS AVE
SR 1456
HUNTERS TRAIL SR 1860
EXISTING R/W
END. C&G
BEG. C&G
10′ R TYPICAL
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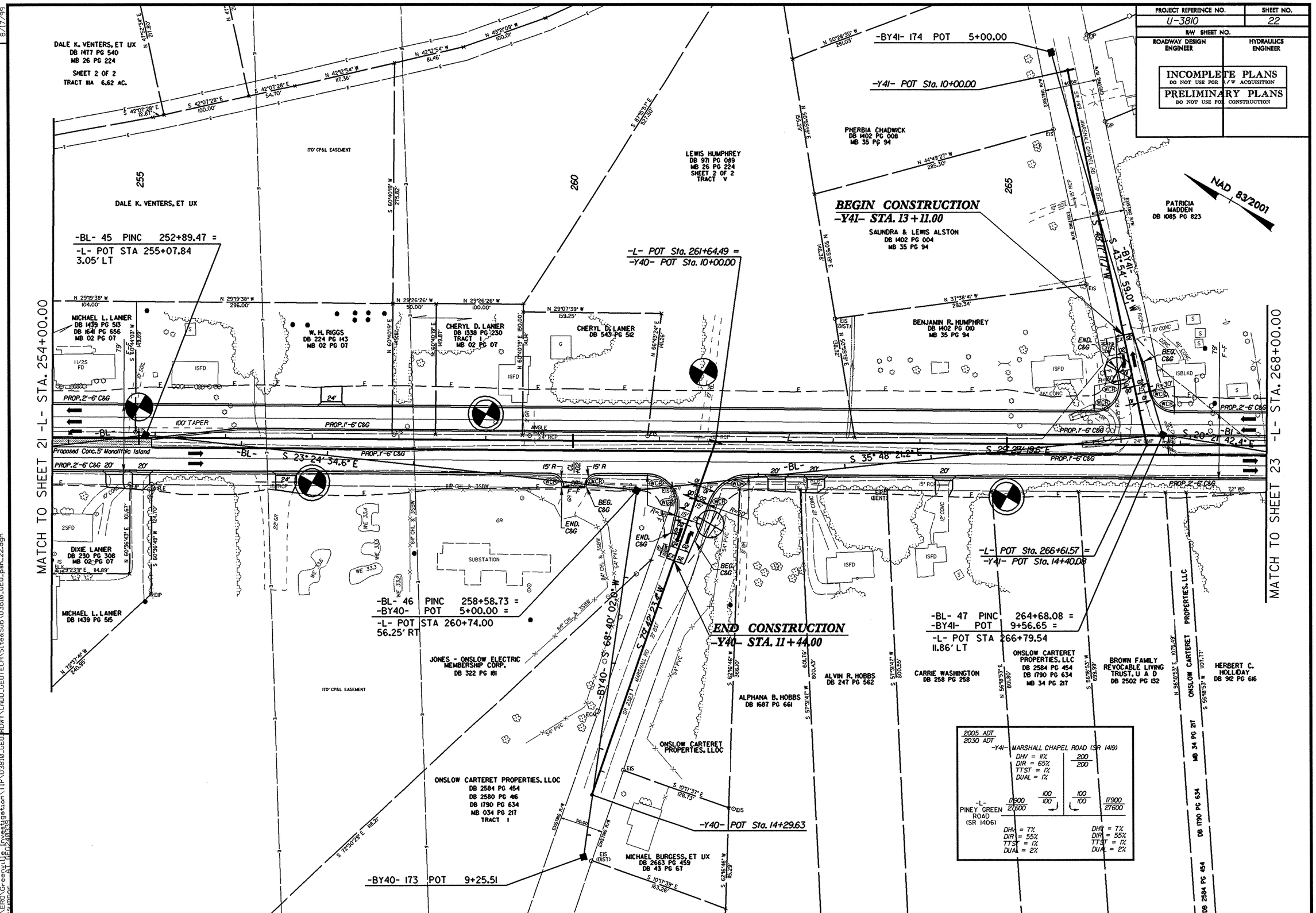

PROJECT REFERENCE NO.
U-3810
SHEET NO.
22
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/2001
MATCH TO SHEET 21 -L- STA. 254+00.00
MATCH TO SHEET 23 -L- STA. 268+00.00
DALE K. VENTERS, ET UX
DB 1477 PG 540
MB 26 PG 224
SHEET 2 OF 2
TRACT IIIA 6.62 AC.
DALE K. VENTERS, ET UX
-BL- 45 PINC 252+89.47 =
-L- POT STA 255+07.84
3.05' LT
LEWIS HUMPHREY
DB 971 PG 089
MB 26 PG 224
SHEET 2 OF 2
TRACT V
PHERBIA CHADWICK
DB 1402 PG 008
MB 35 PG 94
-BY41- 174 POT 5+00.00
-Y41- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y41- STA. 13+11.00
SAUNDRA & LEWIS ALSTON
DB 1402 PG 004
MB 35 PG 94
PATRICIA MADDEN
DB 1085 PG 823
-L- POT Sta. 261+64.49 =
-Y40- POT Sta. 10+00.00
MICHAEL L. LANIER
DB 1439 PG 513
DB 1641 PG 656
MB 02 PG 07
W. H. RIGGS
DB 224 PG 143
MB 02 PG 07
CHERYL D. LANIER
DB 1338 PG 230
TRACT I
MB 02 PG 07
CHERYL D. LANIER
DB 543 PG 512
BENJAMIN R. HUMPHREY
DB 1402 PG 010
MB 35 PG 94
PROP. 2'-6" C&G
100' TAPER
PROP. 1'-6" C&G
Proposed Conc. 5" Monolithic Island
S 23° 24' 34.6" E
S 35° 48' 21.2" E
S 29° 23' 19.6" E
S 20° 21' 42.4" E
DIXIE LANIER
DB 230 PG 308
MB 02 PG 07
MICHAEL L. LANIER
DB 1439 PG 515
SUBSTATION
-BL- 46 PINC 258+58.73 =
-BY40- POT 5+00.00 =
-L- POT STA 260+74.00
56.25' RT
END CONSTRUCTION
-Y40- STA. 11+44.00
-L- POT Sta. 266+61.57 =
-Y41- POT Sta. 14+40.08
-BL- 47 PINC 264+68.08 =
-BY41- POT 9+56.65 =
-L- POT STA 266+79.54
11.86' LT
JONES - ONSLOW ELECTRIC MEMBERSHIP CORP.
DB 322 PG 181
ALPHANA B. HOBBS
DB 1687 PG 661
ALVIN R. HOBBS
DB 247 PG 562
CARRIE WASHINGTON
DB 258 PG 258
ONSLOW CARTERET PROPERTIES, LLC
DB 2584 PG 454
DB 1790 PG 634
MB 34 PG 217
BROWN FAMILY REVOCABLE LIVING TRUST, U A D
DB 2502 PG 132
HERBERT C. HOLLIDAY
DB 912 PG 616
ONSLOW CARTERET PROPERTIES, LLC
DB 2584 PG 454
DB 2580 PG 416
DB 1790 PG 634
MB 034 PG 217
TRACT I
ONSLOW CARTERET PROPERTIES, LLOC
-Y40- POT Sta. 14+29.63
MICHAEL BURGESS, ET UX
DB 2663 PG 459
DB 43 PG 67
-BY40- 173 POT 9+25.51
2005 ADT
2030 ADT
-Y41- MARSHALL CHAPEL ROAD (SR 1419)
DHV = 11%
DIR = 65%
TTST = 1%
DUAL = 1%
200
200
-L- PINEY GREEN ROAD (SR 1406)
17900
27600
100
100
DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 2%
REVISIONS
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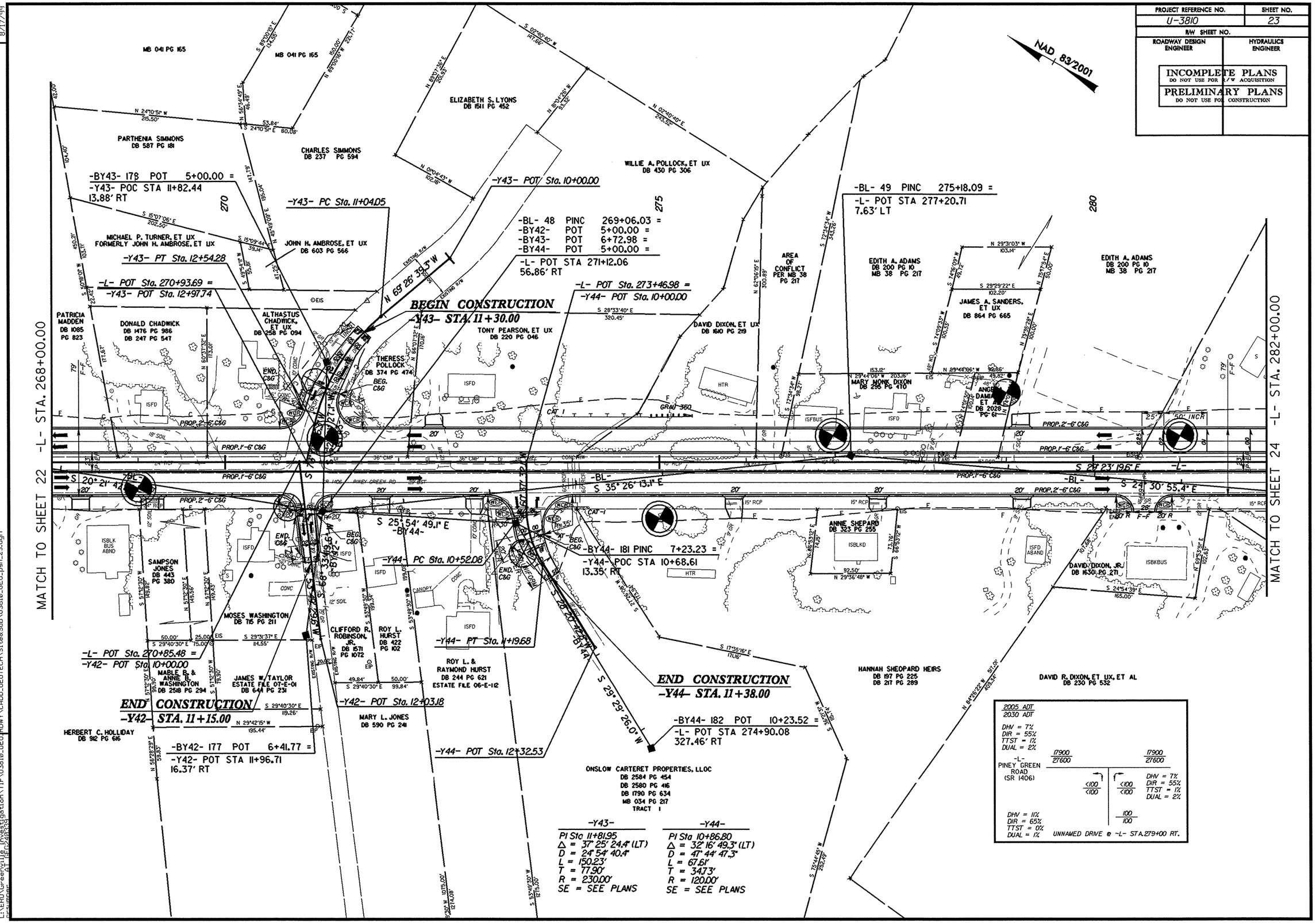

PROJECT REFERENCE NO.
U-3810
SHEET NO.
23
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/2001
MATCH TO SHEET 22 -L- STA. 268+00.00
MATCH TO SHEET 24 -L- STA. 282+00.00
BEGIN CONSTRUCTION
-Y43- STA. 11+30.00
END CONSTRUCTION
-Y42- STA. 11+15.00
END CONSTRUCTION
-Y44- STA. 11+38.00
-BY43- 178 POT 5+00.00 =
-Y43- POC STA 11+82.44
13.88' RT
-Y43- PC Sta. 11+04.05
-Y43- POT Sta. 10+00.00
-BL- 48 PINC 269+06.03 =
-BY42- POT 5+00.00 =
-BY43- POT 6+72.98 =
-BY44- POT 5+00.00 =
-L- POT STA 271+12.06
56.86' RT
-BL- 49 PINC 275+18.09 =
-L- POT STA 277+20.71
7.63' LT
-Y43- PT Sta. 12+54.28
-L- POT Sta. 270+93.69 =
-Y43- POT Sta. 12+97.74
-L- POT Sta. 273+46.98 =
-Y44- POT Sta. 10+00.00
-Y44- PC Sta. 10+52.08
-Y44- PT Sta. 11+19.68
-Y42- POT Sta. 12+03.18
-Y44- POT Sta. 12+32.53
-BY42- 177 POT 6+41.77 =
-Y42- POT STA 11+96.71
16.37' RT
-BY44- 181 PINC 7+23.23 =
-Y44- POC STA 10+68.61
13.35' RT
-BY44- 182 POT 10+23.52 =
-L- POT STA 274+90.08
327.46' RT
-L- POT Sta. 270+85.48 =
-Y42- POT Sta. 10+00.00
S 35° 26' 13.1" E
S 29° 23' 19.6" E
S 24° 30' 55.4" E
S 25° 54' 49.1" E
S 29° 29' 26.0" W
N 69° 26' 39.3" W
PARTHENIA SIMMONS DB 587 PG 181
CHARLES SIMMONS DB 237 PG 594
ELIZABETH S. LYONS DB 1511 PG 452
WILLIE A. POLLOCK, ET UX DB 430 PG 306
MICHAEL P. TURNER, ET UX FORMERLY JOHN H. AMBROSE, ET UX
JOHN H. AMBROSE, ET UX DB 603 PG 566
PATRICIA MADDEN DB 1085 PG 823
DONALD CHADWICK DB 1476 PG 986 DB 247 PG 547
ALTHASTUS CHADWICK, ET UX DB 258 PG 094
THERESS POLLOCK DB 374 PG 474
TONY PEARSON, ET UX DB 220 PG 046
DAVID DIXON, ET UX DB 1610 PG 219
AREA OF CONFLICT PER MB 38 PG 217
EDITH A. ADAMS DB 200 PG 10 MB 38 PG 217
JAMES A. SANDERS, ET UX DB 864 PG 665
MARY MONK DIXON DB 295 PG 470
ANNIE SHEPARD DB 323 PG 255
DAVID DIXON, JR. DB 1630 PG 271
SAMPSON JONES DB 443 PG 380
MOSES WASHINGTON DB 715 PG 211
CLIFFORD R. ROBINSON, JR. DB 1571 PG 1072
ROY L. HURST DB 422 PG 102
ROY L. & RAYMOND HURST DB 244 PG 621 ESTATE FILE 06-E-112
MABLE B. & ANNIE B. WASHINGTON DB 2518 PG 294
JAMES W. TAYLOR ESTATE FILE 07-E-01 DB 644 PG 231
MARY L. JONES DB 590 PG 241
HERBERT C. HOLLIDAY DB 912 PG 616
HANNAH SHEOPARD HEIRS DB 197 PG 225 DB 217 PG 289
DAVID R. DIXON, ET UX, ET AL DB 230 PG 532
ONSLOW CARTERET PROPERTIES, LLOC DB 2584 PG 454 DB 2580 PG 416 DB 1790 PG 634 MB 034 PG 217 TRACT 1
-Y43-
PI Sta 11+81.95
Δ = 37° 25' 24.4" (LT)
D = 24° 54' 40.4"
L = 150.23'
T = 77.90'
R = 230.00'
SE = SEE PLANS
-Y44-
PI Sta 10+86.80
Δ = 32° 16' 49.3" (LT)
D = 47° 44' 47.3"
L = 67.61'
T = 34.73'
R = 120.00'
SE = SEE PLANS
2005 ADT
2030 ADT
DHV = 7%
DIR = 55%
TTST = 1%
DUAL = 2%
-L- PINEY GREEN ROAD (SR 1406)
17900
27600
DHV = 11%
DIR = 65%
TTST = 0%
DUAL = 1%
UNNAMED DRIVE @ -L- STA. 279+00 RT.
REVISIONS
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PROJECT REFERENCE NO.	SHEET NO.
U-3810	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/2001

EDITH A. ADAMS
DB 200 PG 10
MB 38 PG 217

BETSY J. ALBRIGHT
DB 200 PG 10
MB 38 PG 217

TORRIE JONES
DB 200 PG 10
MB 38 PG 217

EDITH ADAMS, ET VIR
DB 1797 PG 595

-BL- 50 PINC 285+12.82 =
-BY45- POT 5+00.00 =
-L- POC STA 287+20.01
45.37' RT

-L- POC Sta. 287+39.40 =
-Y45- POT Sta. 10+00.00

-L- PT Sta. 289+98.27

-BL- 51 PINC 293+24.46 =
-BY46- POT 5+00.00 =
-L- POT STA 295+32.89
15.73' LT

MATCH TO SHEET 23 -L- STA. 282+00.00

MATCH TO SHEET 25 -L- STA. 296+00.00

-L- PC Sta. 282+81.50

-Y45- PC Sta. 10+50.58

-Y45- PT Sta. 10+87.09

-BY45- 184 POT 6+09.35 =
-Y45- POT STA 11+48.93
18.91' RT

-Y45- POT Sta. 11+59.22

END CONSTRUCTION
-Y45- STA. 11+50.00

-BY46- 186 POT 7+39.48 =
-L- POT STA 295+19.82
223.39' RT

EDITH A. ADAMS
SPECIAL PROCEEDING 95-SP-350
MB 38 PG 217
LOTS 1 & 2

DAVID R. DIXON, ET UX, ET AL
DB 230 PG 532

WILLIAM L. AMBROSE, ET UX
DB 2367 PG 380
TRACT 3

VANIE PARKER
DB 212 PG 554

VANIE PARKER
DB 213 PG 49

VANIE L. PARKER
DB 653
PG 476

CHAD EVERETT FONVILLE
DB 1096 PG 126

MARY FONVILLE
DB 835 PG 455

EDITH A. ADAMS
DB 1356 PG 695
MB 34 PG 140
TRACT 1

TRACT 2
MB 34 PG 140
SLIDE J-41

AMBROSE CEMETERY
MB 38 PG 217

ROGER MOORE, ET UX
DB 322 PG 25

ROSA FONVILLE
DB 1247 PG 959
MB 30 PG 14
TRACT A

JOHN MOLLETT
DB 192
PG 569

SR 1406 PINEY GREEN RD

Proposed Conc. 5' Monolithic Island

300' U TURN STORAGE

300' LEFT TURN STORAGE

700' TAPER

PROPERTY LINE ALONG RUN OF TWOMOTTS CREEK

-L-	-Y45-
PI Sta 286+41.60	PI Sta 10+69.16
Δ = 13° 41' 21.6" (RT)	Δ = 26° 08' 50.0" (LT)
D = 1° 54' 35.5"	D = 71° 37' 11.0"
L = 716.77'	L = 36.51'
T = 360.10'	T = 18.58'
R = 3,000.00'	R = 80.00'
SE = 03	SE = SEE PLANS
RO = 150'	

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/2001

MATCH TO SHEET 24 -L- STA. 296+00.00

MATCH TO SHEET 26 -L- STA. 310+00.00

THOMAS R. KNOWLES, ET UX
DB 2422 PG 916

THOMAS R. KNOWLES, ET UX
DB 2487 PG 145

NEW TESTAMENT CHRISTIAN CHURCHES
DB 2668 PG 617

WILLIE J. WHITE, ET UX
DB 1991 PG 795

BIBLICAL HOUSE OF GOD
DB 1164 PG 942

MICHAEL FOYE
DB 2921 PG 766

ANGELA DAMIANO, ET UX
DB 2059 PG 662

FLOYD MURPHEY
DB 1642 PG 1086

SYLVESTER HOWARD, ET UX
DB 874 PG 410

HARPER BRINSON, ET UX
DB 210 PG 246

MALLIE BURNETT DAVIS
DB 886 PG 246

THELMA BURNETT MILBOURNE
DB 610 PG 25

DIANE GLASPIE WALKER, ET AL
DB 2700 PG 631

HARUKO S. KOSTELLO
DB 2671 PG 939

WILLIE J. WHITE, ET UX
DB 1991 PG 795

JAMES McDOWELL, ET UX
DB 342 PG 107

MARVEL H. McDOWELL
DB 342 PG 108

TOMMY L. ADAMS, ET UX
DB 2305 PG 264

BILLY LEE ADAMS, ET AL
DB 916 PG 466

BILLIE L. ADAMS, ET AL
DB 1101 PG 160

CYNTHIA AMBROSE
DB 2596 PG 440

MILDRED AVERY
DB 835 PG 157

DAVID DIXON, ET UX
DB 947 PG 310

-BL- 52 PINC 304+28.06 =
-L- POT STA 306+34.84
44.74' RT

-BL- S 12° 33' 30.1" E

-BL- S 20° 07' 24.2" E

S 15° 41' 58.0" E

SR 1406 PINEY GREEN RD

Proposed Conc. 5" Monolithic Island

END C&G

BEG. C&G

ISBLK CHURCH

ISFD

ISBKD

HTR

WD RAMP

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001

BEGIN CONSTRUCTION
-Y48- STA. 19+20.00

-Y48-	-L-
PI Sta 19+24.09	PI Sta 324+44.05
Δ = 84° 38' 19.9" (RT)	Δ = 15° 07' 57.2" (RT)
D = 17° 54' 17.8"	D = 1° 54' 35.5"
L = 412.71'	L = 792.34'
T = 291.38'	T = 398.49'
R = 320.00'	R = 3,000.00'

2005 ADT / 2030 ADT	DHV = 7% DIR = 60% TTST = 2% DUAL = 4%
-Y48- ROCKY RUN ROAD (SR 1413)	7100 / 10100
-L- PINEY GREEN ROAD (SR 1406)	3100 / 5000
	4000 / 5100
	18800 / 27700
17900 / 27600	
DHV = 7% DIR = 55% TTST = 1% DUAL = 2%	DHV = 7% DIR = 60% TTST = 1% DUAL = 3%

-BY48- 187 POT 5+00.00 =
-Y48- POT STA 13+62.98
17.49' LT

-BY48- 188 PINC 10+54.95 =
-Y48- POC STA 19+18.47
29.84' LT

-Y48- PC Sta. 16+32.72

-Y48- PT Sta. 21+05.43

-BL- 53 PINC 314+57.42 =
-BY47- POT 5+00.00 =
-BY48- POT 14+63.31 =
-L- POT STA 316+61.12
34.66' LT

-BL- 54 PINC 319+34.94 =
-L- POC STA 321+32.63
47.92' RT

-L- POT Sta. 313+64.00 =
-Y47- POT Sta. 10+00.00

-BY47- 208 PINC 8+17.20
-Y47- POT STA 10+50.47
8.86' LT

-L- POT Sta. 315+91.47 =
-Y48- POT Sta. 23+43.20

-L- PC Sta. 320+45.56

END CONSTRUCTION
-Y47- STA. 11+72.00

-BY47- 209 POT 9+66.14
-Y47- POT STA 11+97.76
8.28' RT

MATCH TO SHEET 25 -L- STA. 310+00.00

MATCH TO SHEET 27 -L- STA. 324+00.00

THOMAS L. LITTLETON DB 833 PG 513 MB 007 PG 078 TRACT 2 25.52 AC.
RONALD L. SANDERS DB 1071 PG 179 MB 21 PG 144 TRACT 1
CARY ONEAL WHITE DB 363 PG 649
THOMAS LITTLETON EASTSIDE AUTO SALVAGE DB 2403 PG 768 MB 44 PG 111
W. RANDOLPH THOMAS DB 1285 PG 738 MB 29 PG 46
ROBERT J. JONES HEIRS DB 312 PG 672 PER MB 29 PG 46
GEORGE WASHINGTON LIVING HEIRS
STAR REALTY, INC DB 865 PG 620
CALVIN RAY MILLS, ET UX DB 463 PG 192
SYLVESTER HOWARD, ET UX DB 835 PG 737
MARIE S. WILLIAMS DB 1612 PG 586 MB 29 PG 46
HORACE L. HAMS ESTATE FILE PG 98E 12
PHILLIP DEAVER DB 867 PG 11
THELMA FELTON DB 560 PG 424 MB 41 PG 8
MILDERD AVERY DB 842 PG 768
MOSE L. HAIRSTON, ET UX DB 1498 PG 509
DAVID DIXON, ET UX DB 947 PG 310
DOROTHY L. WRIGHT DB 384 PG 479
CARY O'NEAL WHITE DB 297 PG 78
ANDREW G. ROBERTS, ET UX DB 387 PG 67
ANDREW G. ROBERTS, ET UX DB 297 PG 78
PAULINE RAY BURTON DB 570 PG 770
TRUSTEES OF PROVIDENCE HOLINESS CHURCH DB 387 PG 93
ALFRED SHARPLESS, ET UX DB 387 PG 649
ALICE H. KOONCE ESTATE FILE PG 98E 12
HORACE L. HAMS, ET UX DB 2439 PG 65

REVISIONS

8/17/99

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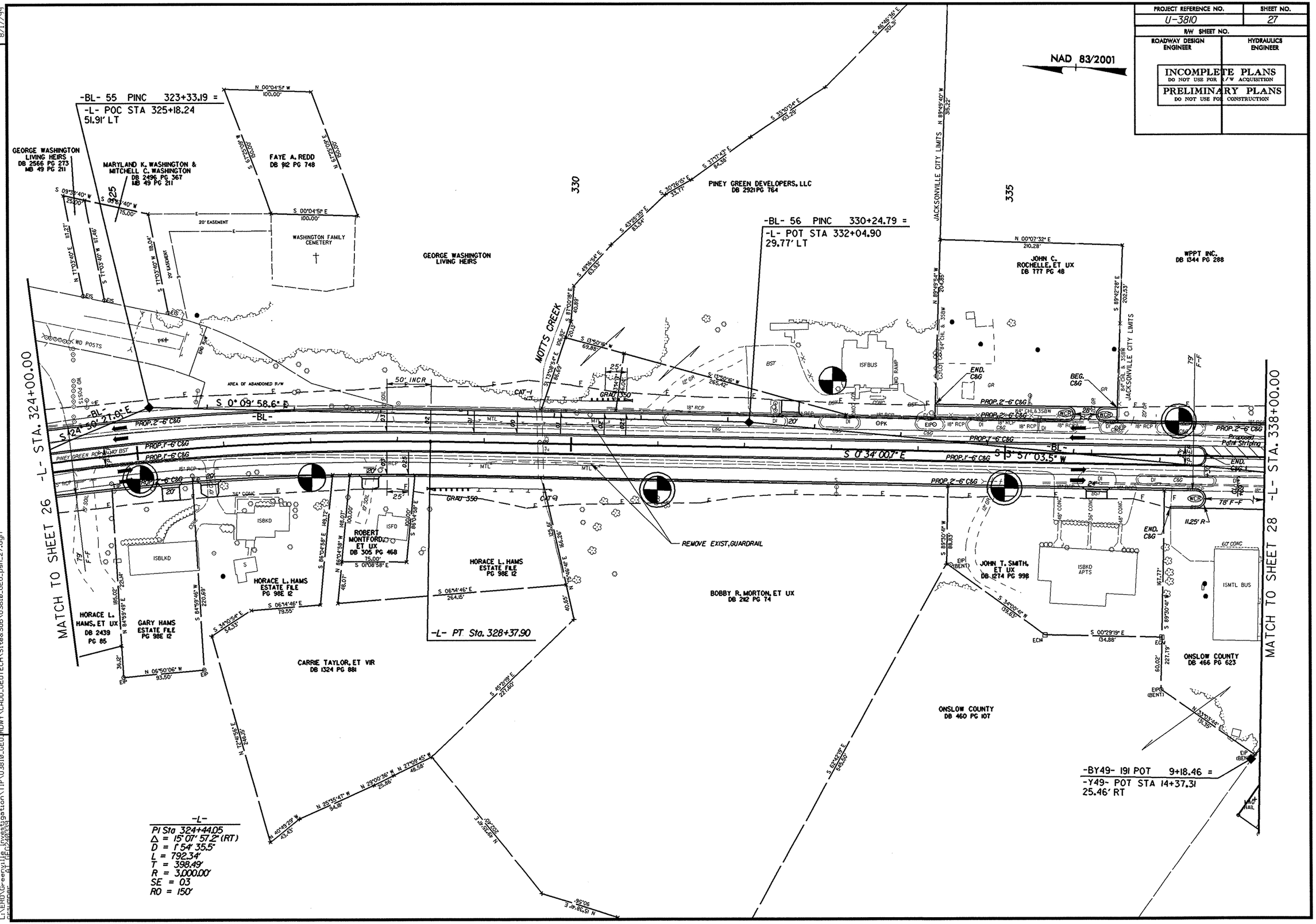
PROJECT REFERENCE NO.	SHEET NO.
U-3810	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001



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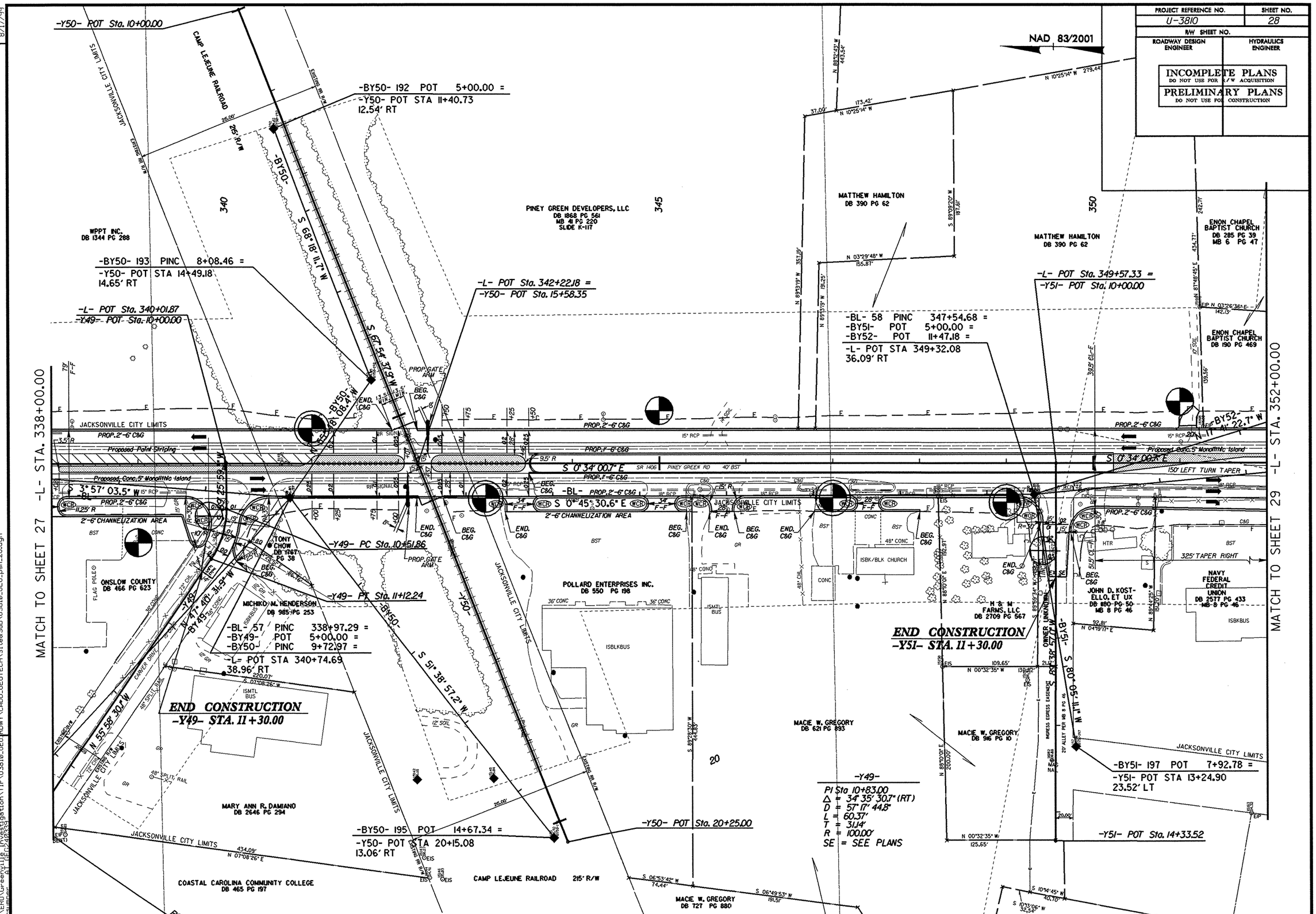

PROJECT REFERENCE NO.
U-3810
SHEET NO.
28
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
NAD 83/2001
-Y50- POT Sta. 10+00.00
CAMP LEJEUNE RAILROAD 215' R/W
-BY50- 192 POT 5+00.00 =
-Y50- POT STA 11+40.73
12.54' RT
-BY50- S 68° 18' 11.7" W
S 67° 54' 37.9" W
WPPT INC.
DB 1344 PG 288
-BY50- 193 PINC 8+08.46 =
-Y50- POT STA 14+49.18
14.65' RT
-L- POT Sta. 340+01.87
-Y49- POT Sta. 10+00.00
-L- POT Sta. 342+22.18 =
-Y50- POT Sta. 15+58.35
PINEY GREEN DEVELOPERS, LLC
DB 1868 PG 561
MB 41 PG 220
SLIDE K-117
MATTHEW HAMILTON
DB 390 PG 62
-L- POT Sta. 349+57.33 =
-Y51- POT Sta. 10+00.00
-BL- 58 PINC 347+54.68 =
-BY51- POT 5+00.00 =
-BY52- POT 11+47.18 =
-L- POT STA 349+32.08
36.09' RT
ENON CHAPEL BAPTIST CHURCH
DB 285 PG 39
MB 6 PG 47
ENON CHAPEL BAPTIST CHURCH
DB 190 PG 469
MATCH TO SHEET 27 -L- STA. 338+00.00
MATCH TO SHEET 29 -L- STA. 352+00.00
JACKSONVILLE CITY LIMITS
PROP. 2'-6" C&G
Proposed Paint Striping
Proposed Conc. 5' Monolithic Island
PROP. 1'-6" C&G
S 0° 34' 00.7" E
SR 1406 PINEY GREEN RD 40' BST
150' LEFT TURN TAPER
S 3° 57' 03.5" W
-BL-
2'-6" CHANNELIZATION AREA
S 0° 45' 30.6" E
-Y49- PC Sta. 10+51.86
-Y49- PT Sta. 11+12.24
TONY CHOW
DB 1767 PG 38
ONSLOW COUNTY
DB 466 PG 623
MICHIKO M. HENDERSON
DB 985 PG 253
-BL- 57 PINC 338+97.29 =
-BY49- POT 5+00.00 =
-BY50- PINC 9+72.97 =
-L- POT STA 340+74.69
38.96' RT
END CONSTRUCTION
-Y49- STA. 11+30.00
POLLARD ENTERPRISES INC.
DB 550 PG 198
ISBLKBUS
ISMTL BUS
ISBK/BLK CHURCH
H & M FARMS, LLC
DB 2709 PG 567
END CONSTRUCTION
-Y51- STA. 11+30.00
JOHN D. KOSTELLO, ET UX
DB 880 PG 50
MB 8 PG 46
NAVY FEDERAL CREDIT UNION
DB 2577 PG 433
MB 8 PG 46
325' TAPER RIGHT
-BY51- S 80° 05' 11.1" W
MACIE W. GREGORY
DB 621 PG 893
MACIE W. GREGORY
DB 916 PG 10
-BY51- 197 POT 7+92.78 =
-Y51- POT STA 13+24.90
23.52' LT
-Y49-
PI Sta 10+83.00
Δ = 34° 35' 30.7" (RT)
D = 57° 17' 44.8"
L = 60.37'
T = 31.14'
R = 100.00'
SE = SEE PLANS
-Y51- POT Sta. 14+33.52
-Y50- POT Sta. 20+25.00
-BY50- 195 POT 14+67.34 =
-Y50- POT STA 20+15.08
13.06' RT
MARY ANN R. DAMIANO
DB 2646 PG 294
COASTAL CAROLINA COMMUNITY COLLEGE
DB 465 PG 197
CAMP LEJEUNE RAILROAD 215' R/W
MACIE W. GREGORY
DB 727 PG 880
REVISIONS
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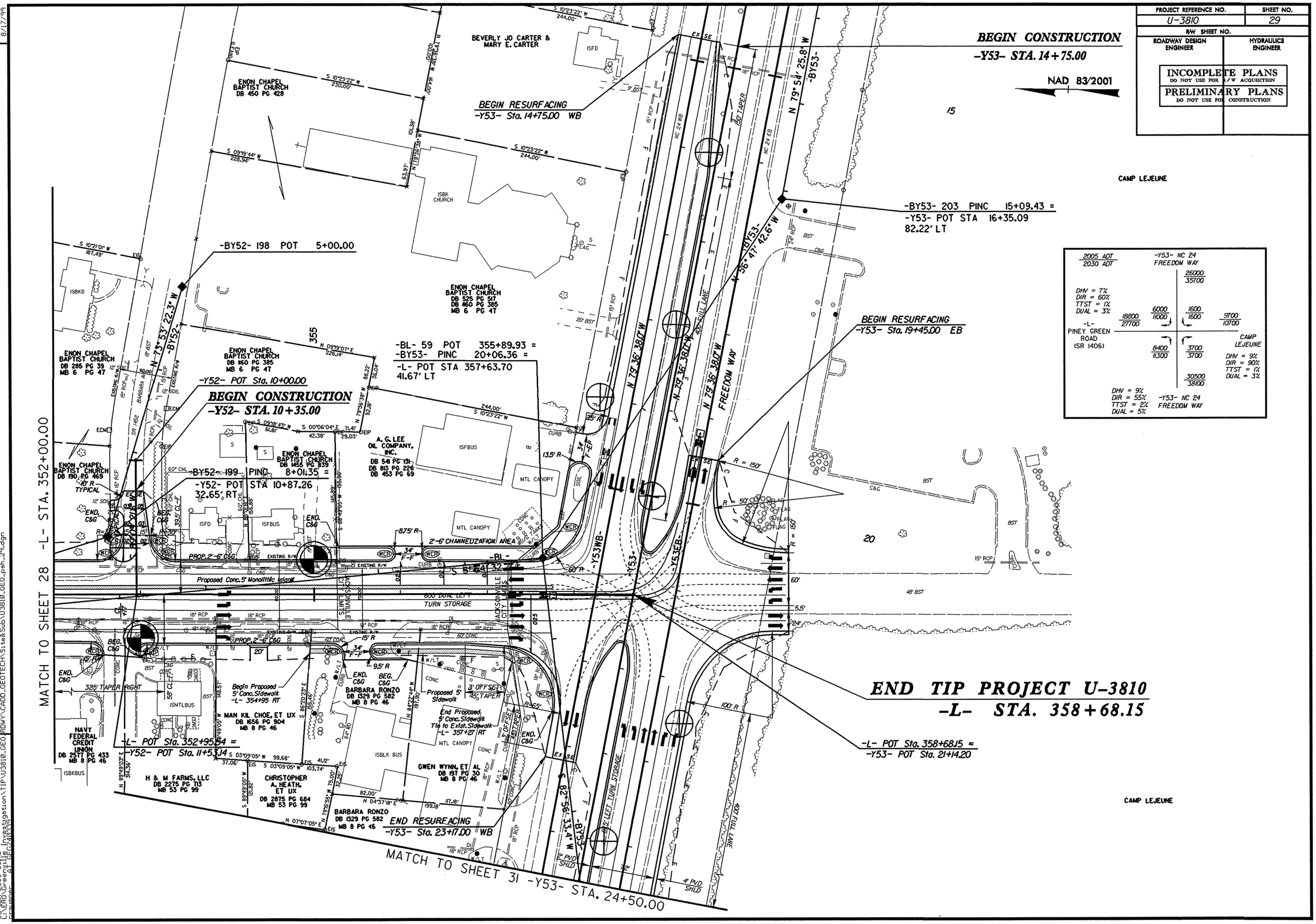
PROJECT REFERENCE NO.	SHEET NO.
U-3810	29
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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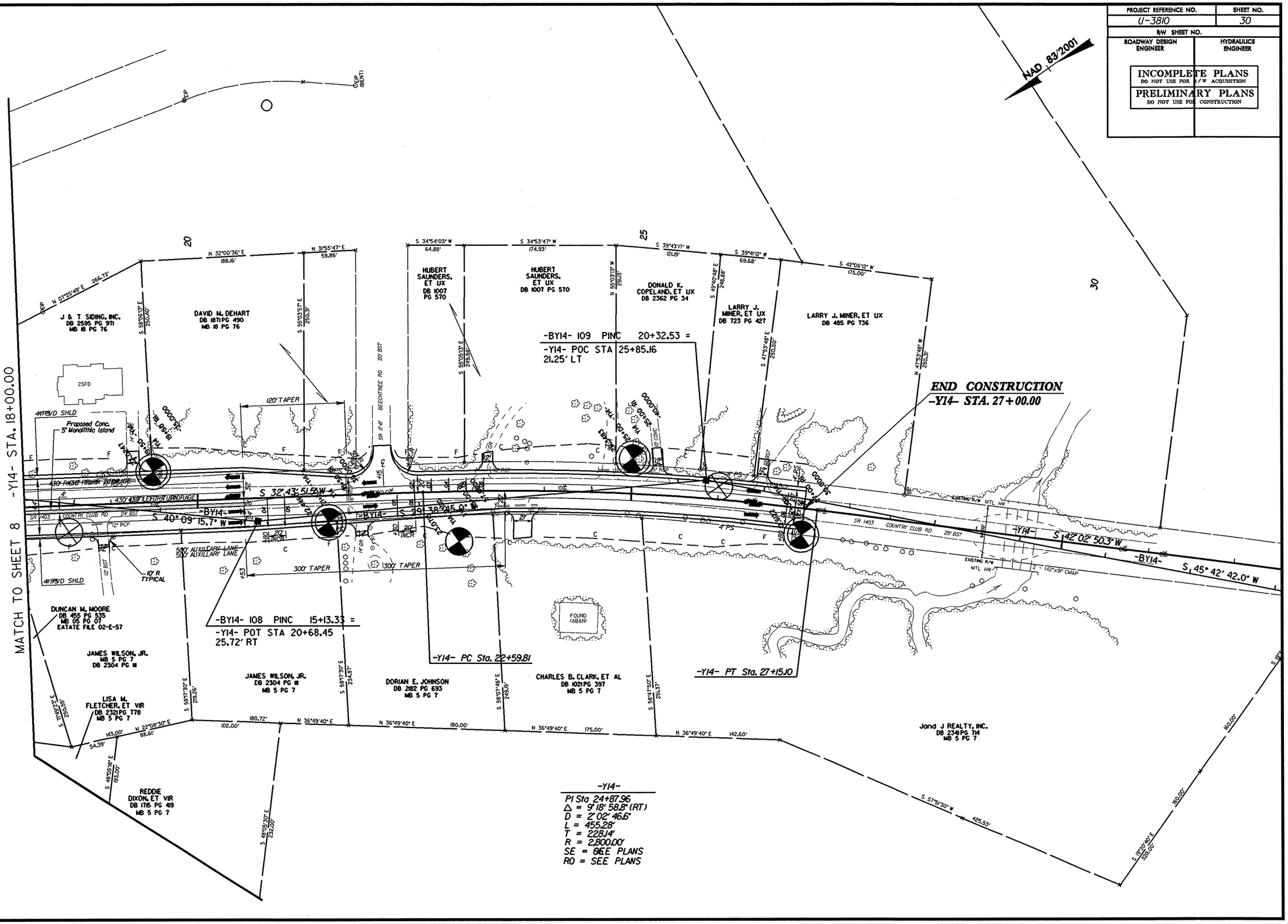
PROJECT REFERENCE NO.	SHEET NO.
U-3810	30
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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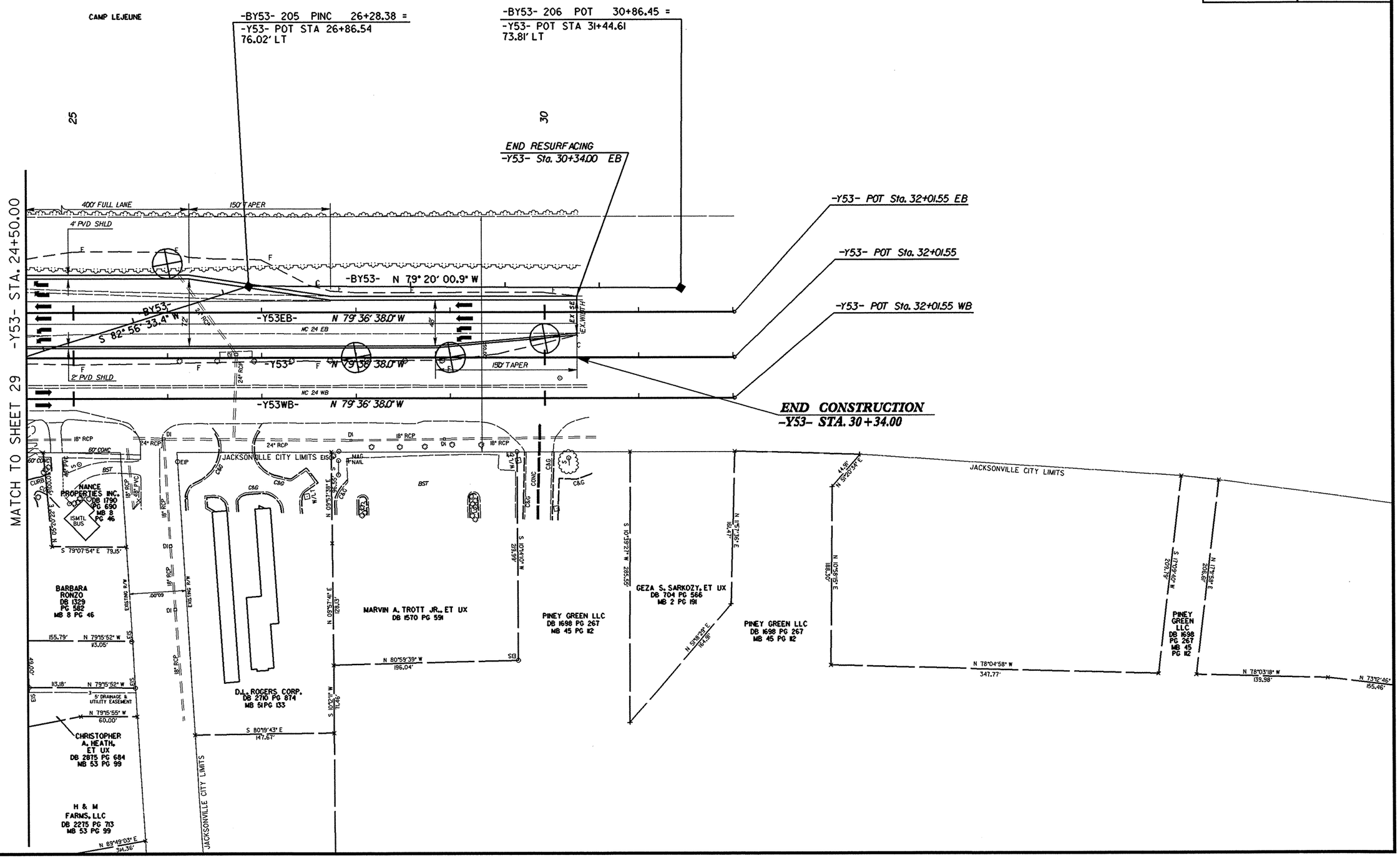
PROJECT REFERENCE NO.	SHEET NO.
U-3810	31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NAD 83/2001



REVISIONS

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Documents: AT_1.dgn,AT_2.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-3810	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

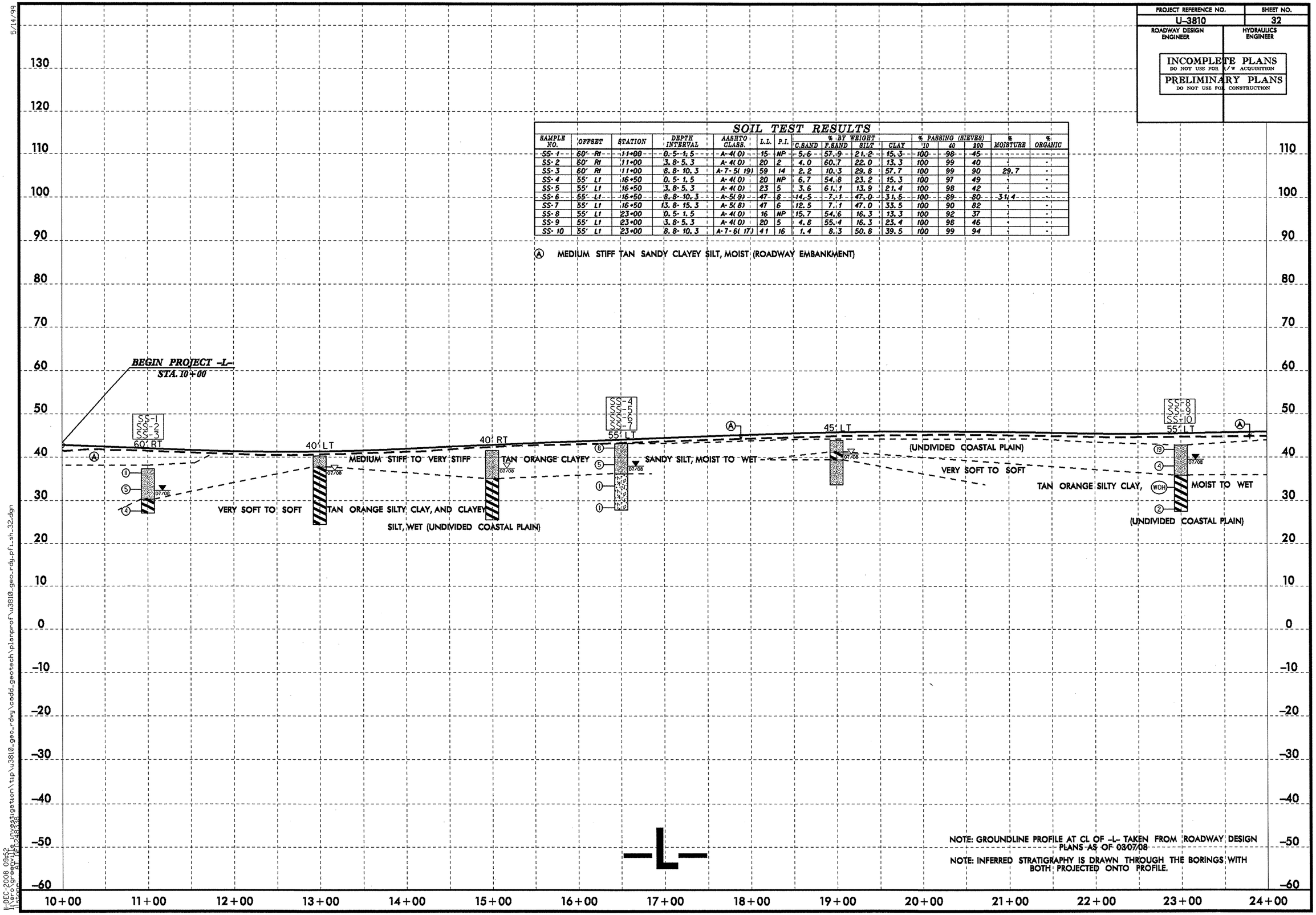
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-1	60' Rt	11+00	0.5-1.5	A-4(0)	15	NP	5.6	57.9	21.2	15.3	100	98	45	-	-
SS-2	60' Rt	11+00	3.8-5.3	A-4(0)	20	2	4.0	60.7	22.0	13.3	100	99	40	-	-
SS-3	60' Rt	11+00	8.8-10.3	A-7-5(19)	59	14	2.2	10.3	29.8	57.7	100	99	90	29.7	-
SS-4	55' Lt	16+50	0.5-1.5	A-4(0)	20	NP	6.7	54.8	23.2	15.3	100	97	49	-	-
SS-5	55' Lt	16+50	3.8-5.3	A-4(0)	23	5	3.6	61.1	13.9	21.4	100	98	42	-	-
SS-6	55' Lt	16+50	8.8-10.3	A-5(9)	47	8	14.5	7.1	47.0	31.5	100	89	80	31.4	-
SS-7	55' Lt	16+50	13.8-15.3	A-5(8)	47	6	12.5	7.1	47.0	33.5	100	90	82	-	-
SS-8	55' Lt	23+00	0.5-1.5	A-4(0)	16	NP	15.7	54.6	16.3	13.3	100	92	37	-	-
SS-9	55' Lt	23+00	3.8-5.3	A-4(0)	20	5	4.8	55.4	16.3	23.4	100	98	46	-	-
SS-10	55' Lt	23+00	8.8-10.3	A-7-6(17)	41	16	1.4	8.3	50.8	39.5	100	99	94	-	-

Ⓐ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

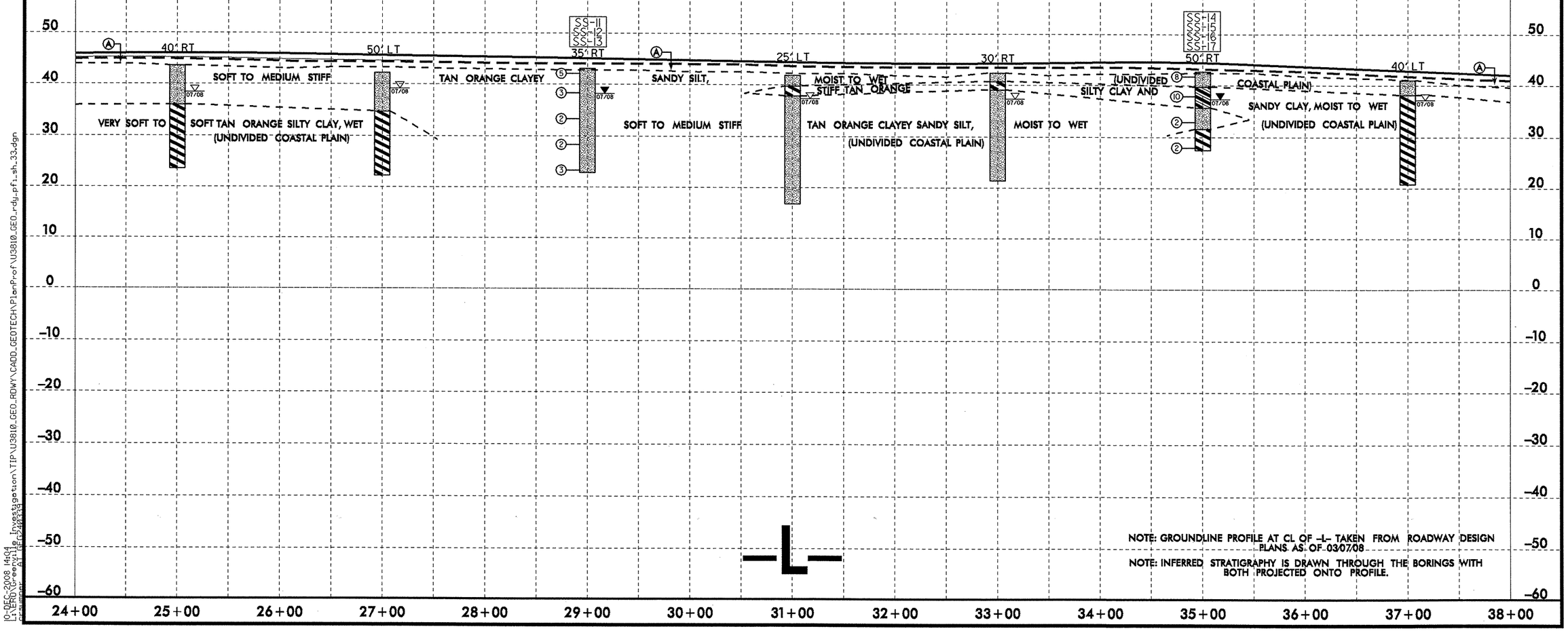
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-11	35' Rt	29+00	0.5-1.5	A-4(0)	17	8	6.3	58.9	17.5	17.3	100	99	43	-	-
SS-12	35' Rt	29+00	3.8-5.3	A-4(1)	29	7	7.9	47.4	15.3	29.4	100	97	50	-	-
SS-13	35' Rt	29+00	13.8-15.3	A-4(3)	28	8	6.7	31.9	32.1	29.4	100	96	67	-	-
SS-14	50' Rt	35+00	0.5-1.5	A-4(0)	17	NP	9.7	56.7	16.3	17.3	100	97	40	-	-
SS-15	50' Rt	35+00	3.8-5.3	A-6(2)	27	12	7.7	52.8	10.1	29.4	100	98	43	12.9	-
SS-16	50' Rt	35+00	8.8-10.3	A-4(0)	23	NP	3.8	64.9	12.0	19.3	100	99	47	-	-
SS-17	50' Rt	35+00	13.8-15.3	A-7-6(15)	44	15	6.6	7.4	50.6	35.3	100	95	88	-	-

Ⓐ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

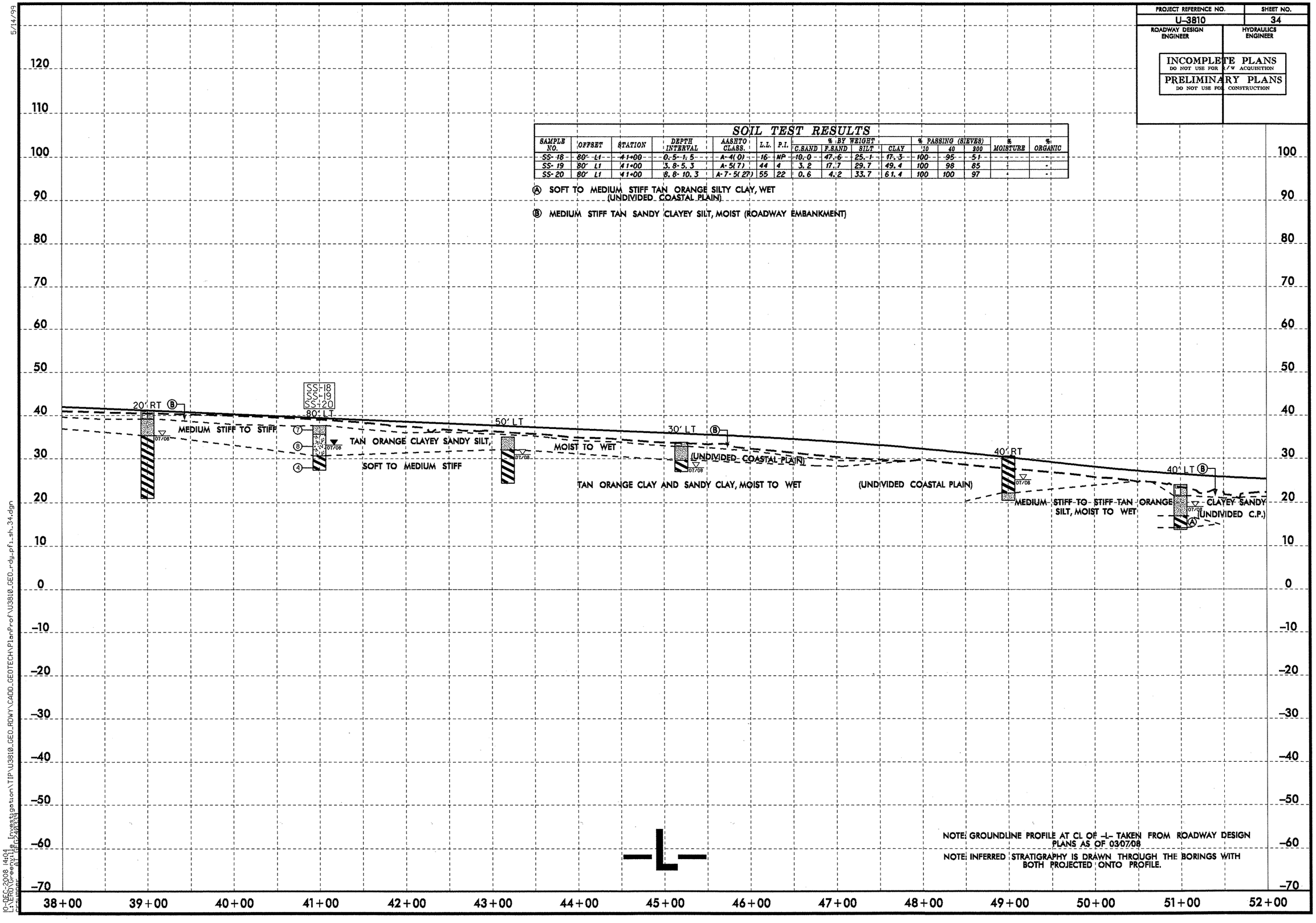
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-18	80' LT	41+00	0.5-1.5	A-4(0)	16	NP	10.0	47.6	25.1	17.3	100	95	51	-	-
SS-19	80' LT	41+00	3.8-5.3	A-5(7)	44	4	3.2	17.7	29.7	49.4	100	98	85	-	-
SS-20	80' LT	41+00	8.8-10.3	A-7-5(27)	55	22	0.6	4.2	33.7	61.4	100	100	97	-	-

Ⓐ SOFT TO MEDIUM STIFF TAN ORANGE SILTY CLAY, WET (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

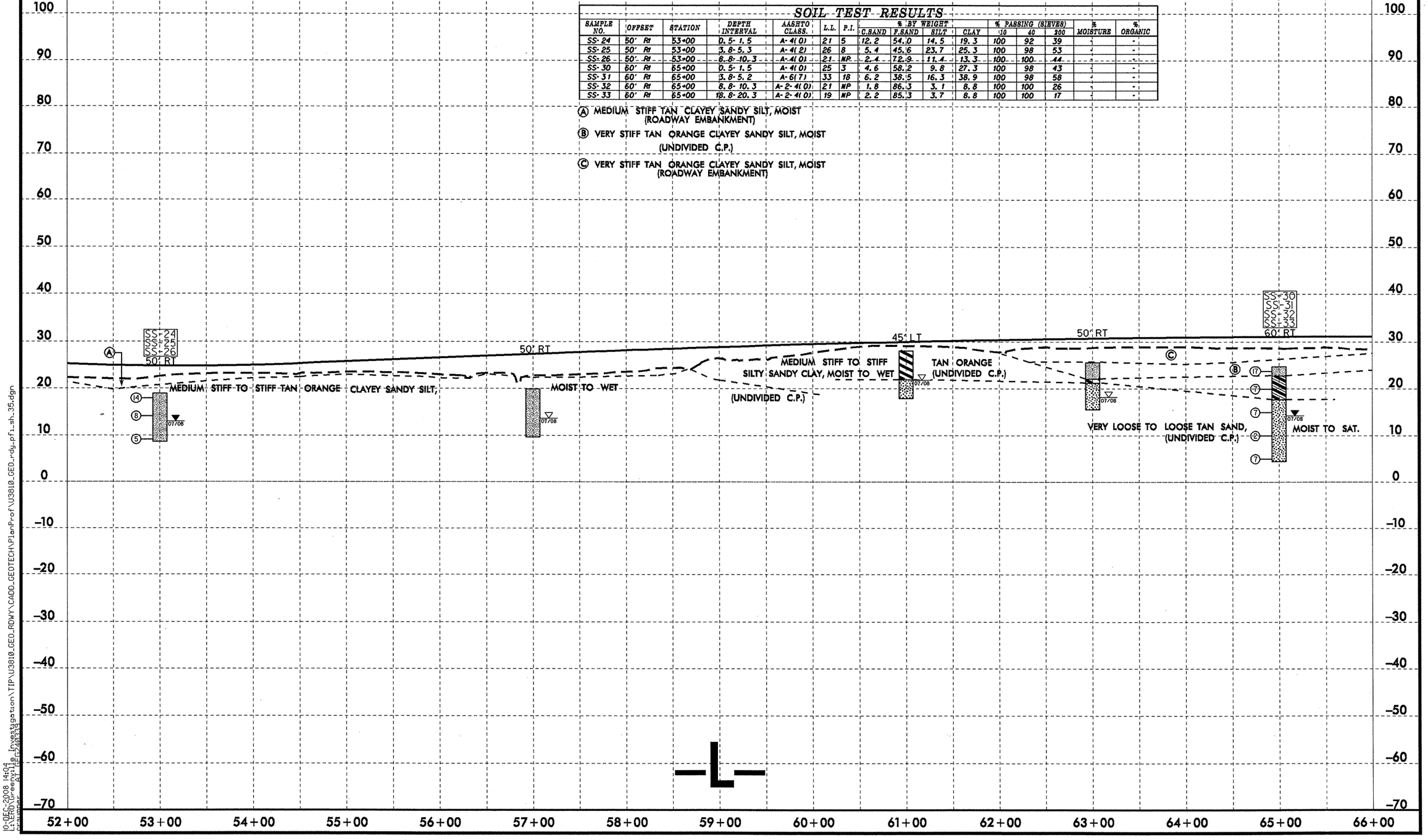
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-24	50' Rt	53+00	0.5-1.5	A-4(0)	21	5	12.2	54.0	14.5	19.3	100	92	39	-	-
SS-25	50' Rt	53+00	3.8-5.3	A-4(2)	26	8	5.4	45.6	23.7	25.3	100	98	53	-	-
SS-26	50' Rt	53+00	8.8-10.3	A-4(0)	21	NP	2.4	72.9	11.4	13.3	100	100	44	-	-
SS-30	60' Rt	65+00	0.5-1.5	A-4(0)	25	3	4.6	58.2	9.8	27.3	100	98	43	-	-
SS-31	60' Rt	65+00	3.8-5.2	A-6(7)	33	18	6.2	38.5	16.3	38.9	100	98	58	-	-
SS-32	60' Rt	65+00	8.8-10.3	A-2-4(0)	21	NP	1.8	86.3	3.1	8.8	100	100	26	-	-
SS-33	60' Rt	65+00	18.8-20.3	A-2-4(0)	19	NP	2.2	85.3	3.7	8.8	100	100	17	-	-

(A) MEDIUM STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)

(B) VERY STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED C.P.)

(C) VERY STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



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PROJECT REFERENCE NO.	SHEET NO.
U-3810	36
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

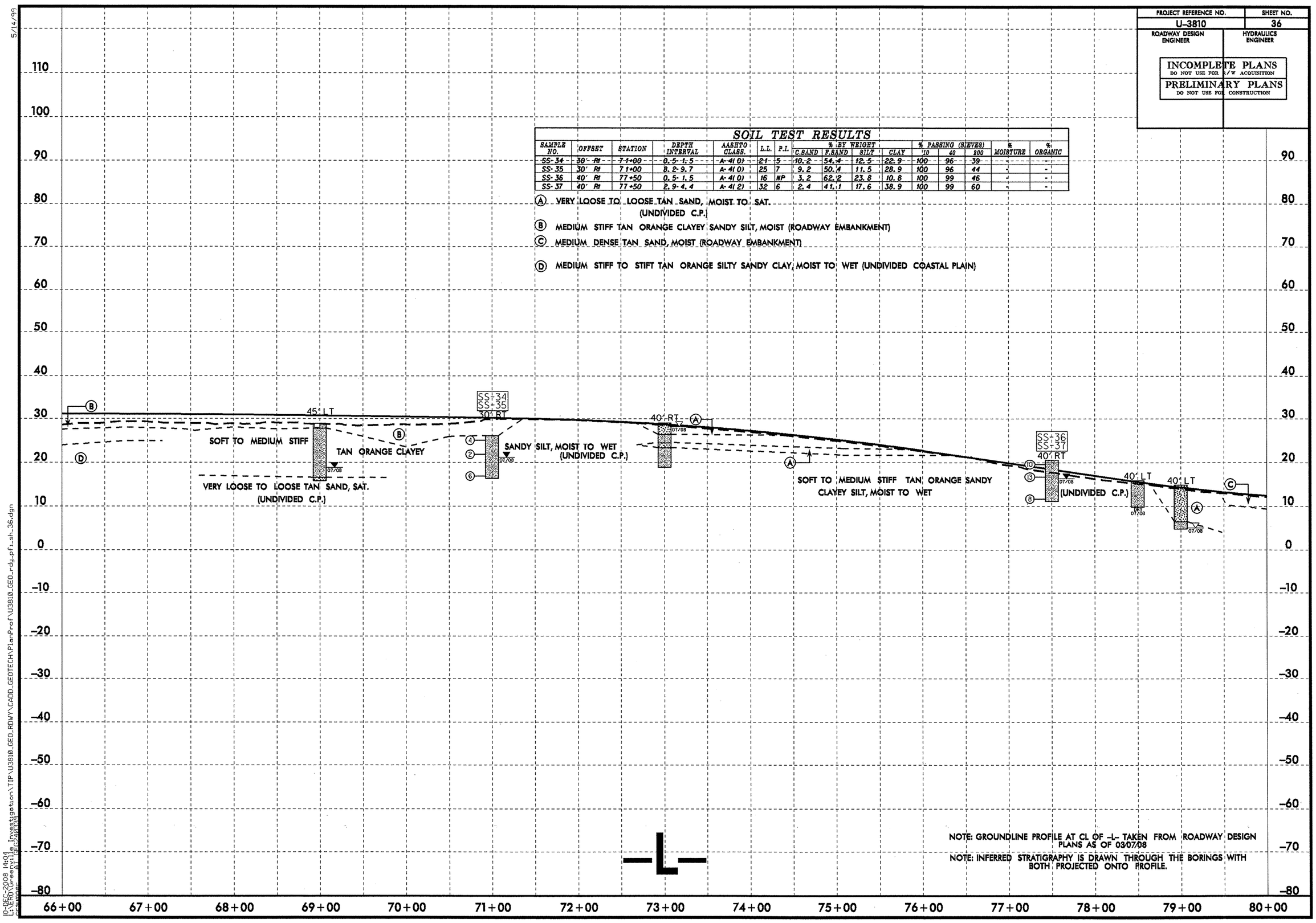
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-34	30' Rt	71+00	0.5-1.5	A-4(0)	21	5	10.2	54.4	12.5	22.9	100	96	39	-	-
SS-35	30' Rt	71+00	8.2-9.7	A-4(0)	25	7	9.2	50.4	11.5	28.9	100	96	44	-	-
SS-36	40' Rt	77+50	0.5-1.5	A-4(0)	16	NP	3.2	62.2	23.8	10.8	100	99	46	-	-
SS-37	40' Rt	77+50	2.9-4.4	A-4(2)	32	6	2.4	41.1	17.6	38.9	100	99	60	-	-

(A) VERY LOOSE TO LOOSE TAN SAND, MOIST TO SAT. (UNDIVIDED C.P.)

(B) MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)

(C) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

(D) MEDIUM STIFF TO STIFT TAN ORANGE SILTY SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

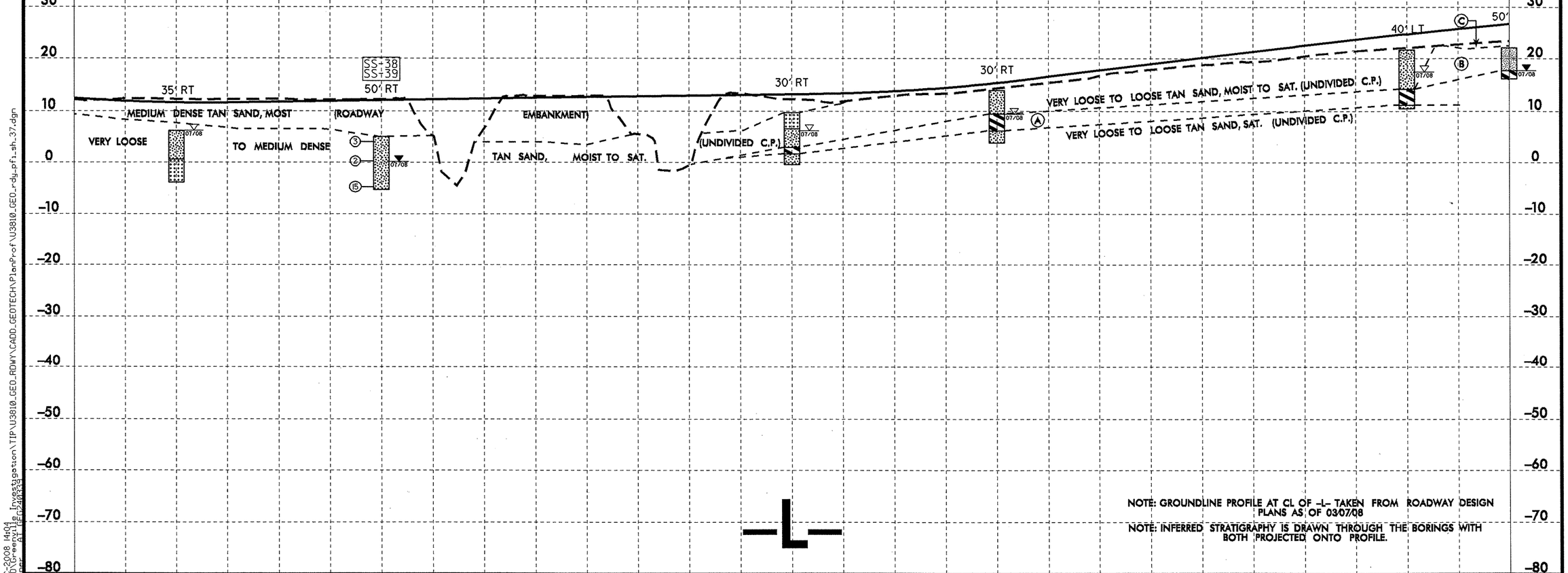
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-38	50' Rt	83+00	0.5-1.5	A-2-4(0)	19	NP	9.6	78.4	5.1	6.8	100	98	15	-	-
SS-39	50' Rt	83+00	3.8-5.3	A-2-4(0)	15	NP	6.2	82.4	6.5	4.8	100	100	17	-	-

(A) SOFT TO MEDIUM STIFF TAN ORANGE CLAY, WET (UNDIVIDED COASTAL PLAIN)

(B) MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

(C) MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

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Lawson, Brian L. HEPC24/8332

PROJECT REFERENCE NO.	SHEET NO.
U-3810	38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

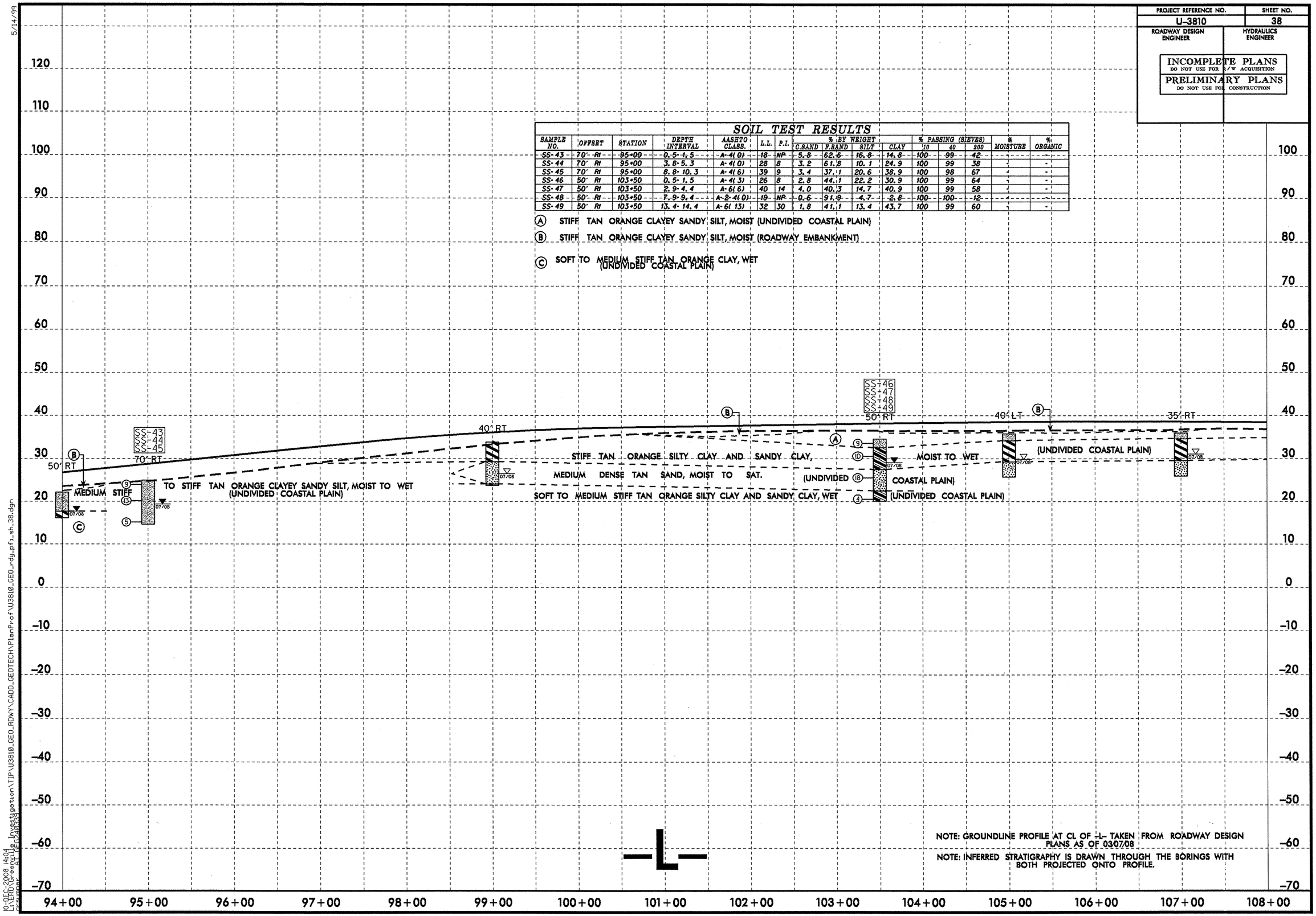
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-43	70' Rt	95+00	0.5-1.5	A-4(0)	18	NP	5.8	62.6	16.8	14.8	100	99	42	-	-
SS-44	70' Rt	95+00	3.8-5.3	A-4(0)	28	8	3.2	61.8	10.1	24.9	100	99	38	-	-
SS-45	70' Rt	95+00	8.8-10.3	A-4(6)	39	9	3.4	37.1	20.6	38.9	100	98	67	-	-
SS-46	50' Rt	103+50	0.5-1.5	A-4(3)	26	8	2.8	44.1	22.2	30.9	100	99	64	-	-
SS-47	50' Rt	103+50	2.9-4.4	A-6(6)	40	14	4.0	40.3	14.7	40.9	100	99	58	-	-
SS-48	50' Rt	103+50	7.9-9.4	A-2-4(0)	19	NP	0.6	91.9	4.7	2.8	100	100	12	-	-
SS-49	50' Rt	103+50	13.4-14.4	A-6(13)	32	30	1.8	41.1	13.4	43.7	100	99	60	-	-

(A) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

(B) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)

(C) SOFT TO MEDIUM STIFF TAN ORANGE CLAY, WET (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	39
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

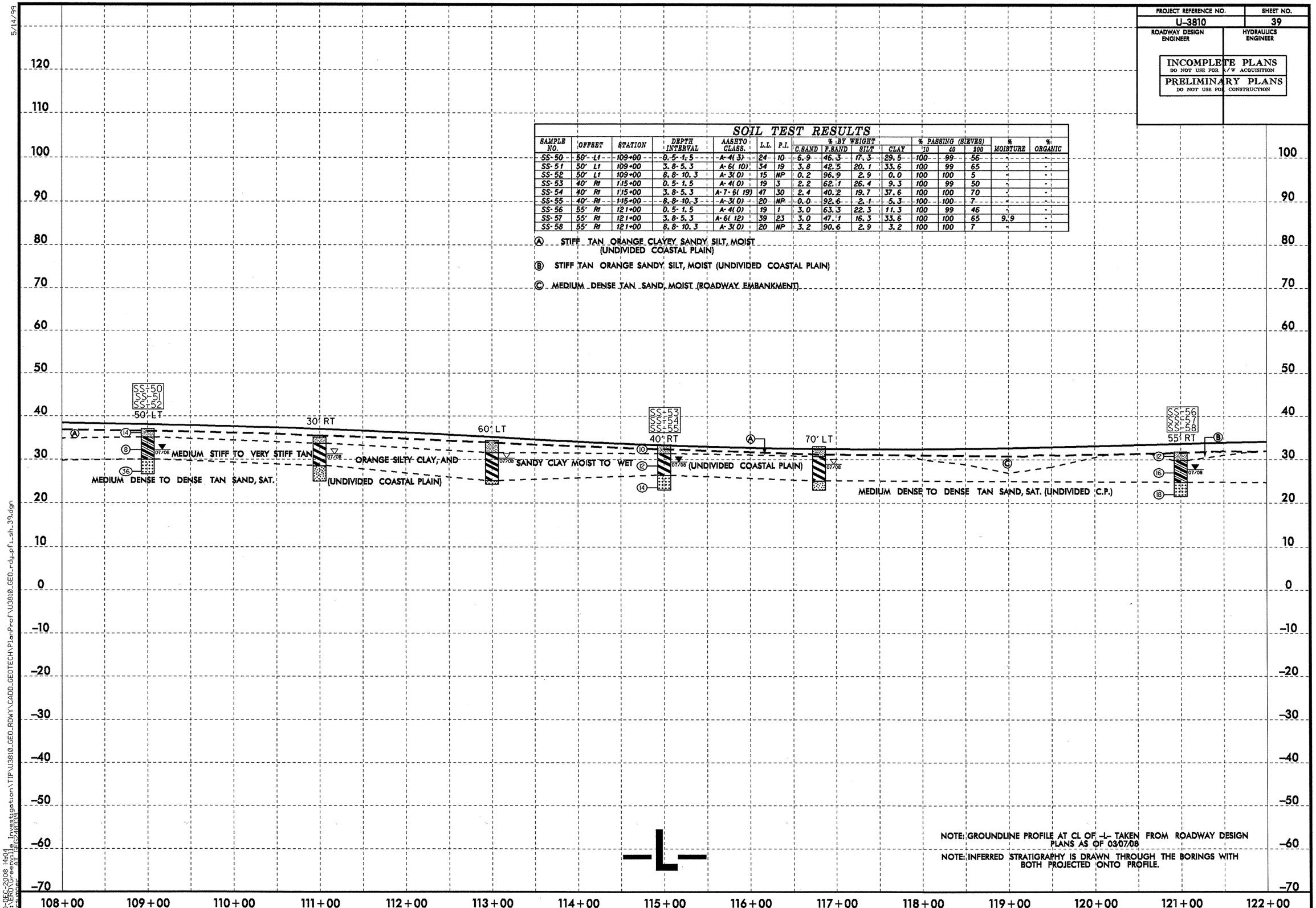
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	40	200	% MOISTURE	% ORGANIC
SS-50	50' LT	109+00	0.5-1.5	A-4(3)	24	10	6.9	46.3	17.3	29.5	100	99	56	-	-
SS-51	50' LT	109+00	3.8-5.3	A-6(10)	34	19	3.8	42.5	20.1	33.6	100	99	65	-	-
SS-52	50' LT	109+00	8.8-10.3	A-3(0)	15	NP	0.2	96.9	2.9	0.0	100	100	5	-	-
SS-53	40' RT	115+00	0.5-1.5	A-4(0)	19	3	2.2	62.1	26.4	9.3	100	99	50	-	-
SS-54	40' RT	115+00	3.8-5.3	A-7-6(19)	47	30	2.4	40.2	19.7	37.6	100	100	70	-	-
SS-55	40' RT	115+00	8.8-10.3	A-3(0)	20	NP	0.0	92.6	2.1	5.3	100	100	7	-	-
SS-56	55' RT	121+00	0.5-1.5	A-4(0)	19	1	3.0	63.3	22.3	11.3	100	99	46	-	-
SS-57	55' RT	121+00	3.8-5.3	A-6(12)	39	23	3.0	47.1	16.3	33.6	100	100	65	9.9	-
SS-58	55' RT	121+00	8.8-10.3	A-3(0)	20	NP	3.2	90.6	2.9	3.2	100	100	7	-	-

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ STIFF TAN ORANGE SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓒ MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

SOIL TEST RESULTS

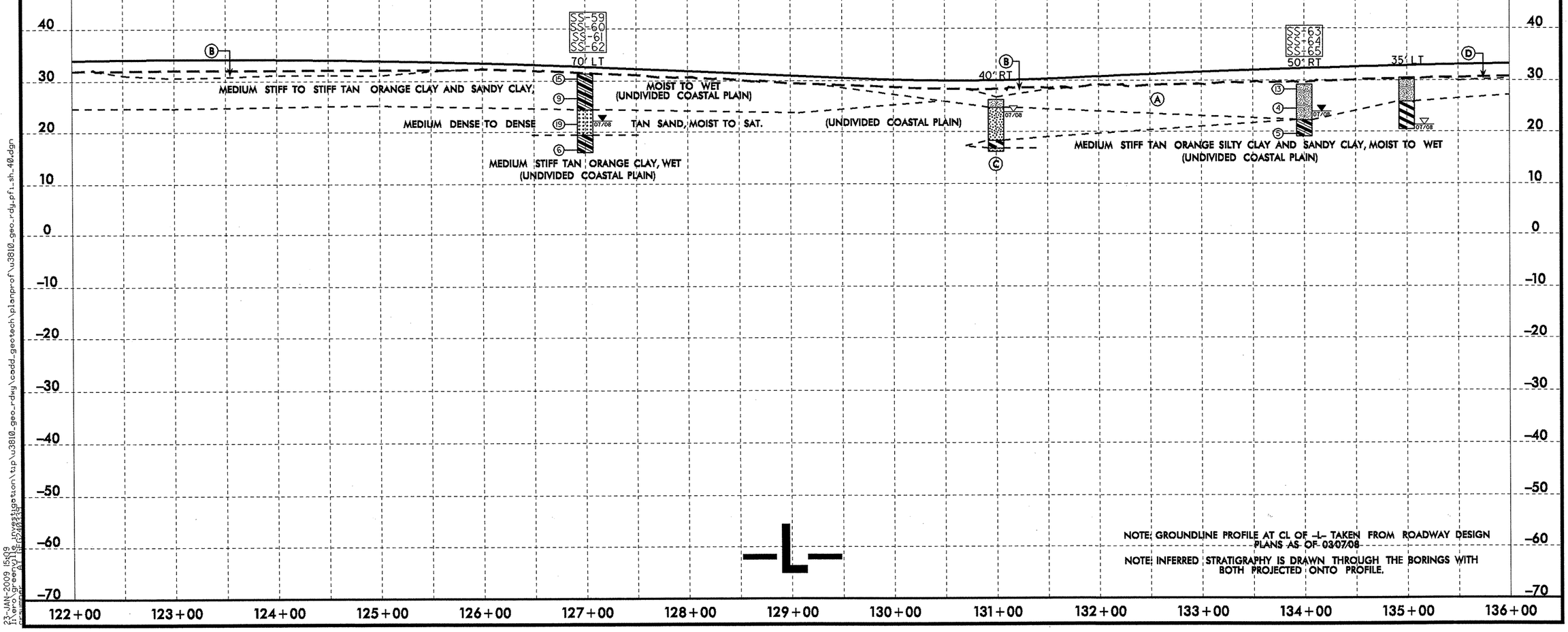
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-59	70' Lt	127+00	0.5-1.5	A-6(4)	26	13	2.6	53.2	16.5	27.5	100	99	55	-	-
SS-60	70' Lt	127+00	3.8-5.3	A-6(7)	36	19	7.9	44.3	16.3	31.5	100	99	53	-	-
SS-61	70' Lt	127+00	8.8-10.3	A-3(0)	19	NP	2.2	89.8	2.7	5.3	100	100	9	-	-
SS-62	70' Lt	127+00	13.8-15.3	A-6(4)	33	11	3.6	58.6	14.3	23.5	100	99	56	-	-
SS-63	50' Rt	134+00	0.5-1.5	A-4(0)	19	3	6.5	57.0	17.1	19.4	100	100	47	-	-
SS-64	50' Rt	134+00	3.7-5.2	A-4(0)	18	2	9.4	54.8	17.8	18.1	100	99	47	-	-
SS-65	50' Rt	134+00	8.7-10.3	A-6(4)	31	11	3.4	46.9	17.6	32.1	100	99	61	-	-

(A) MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

(B) DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

(C) MEDIUM DENSE TO DENSE TAN SAND, SAT. (UNDIVIDED COASTAL PLAIN)

(D) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	41
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

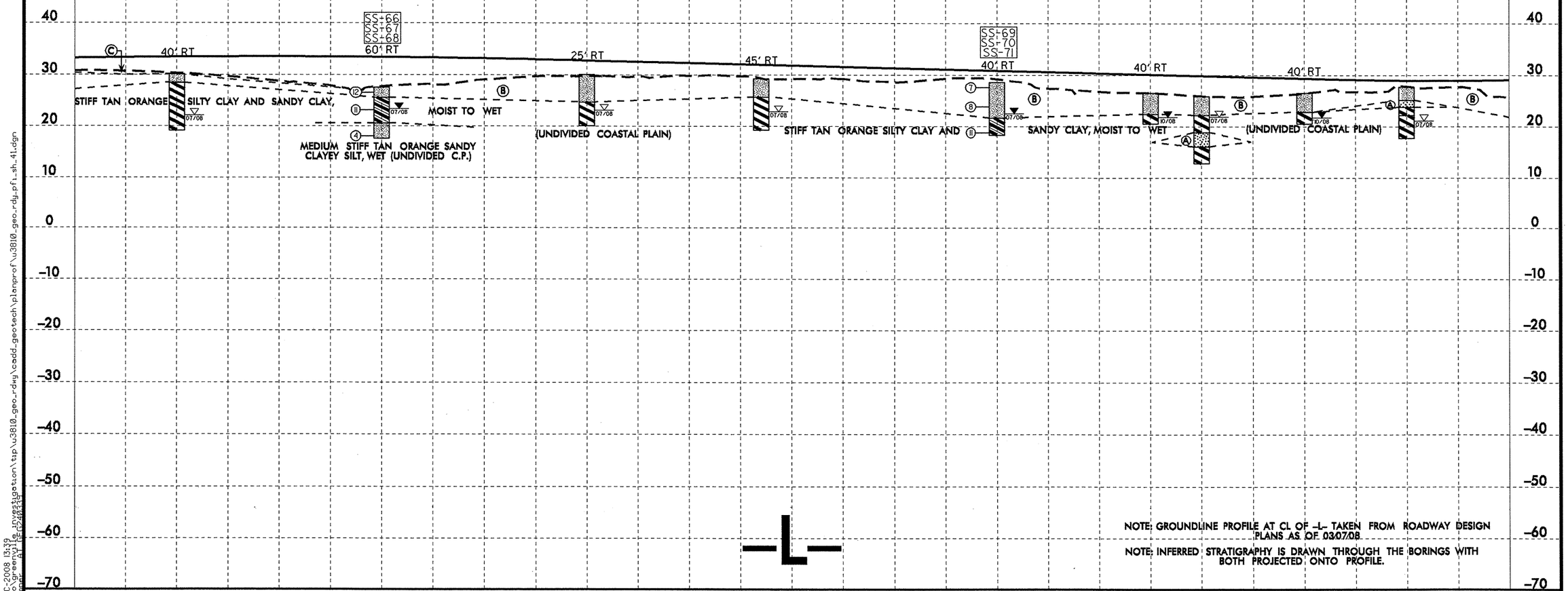
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-66	60' Rt	139+00	0.5-1.5	A-4(0)	21	3	7.2	48.9	31.8	12.0	100	99	58	-	-
SS-67	60' Rt	139+00	3.5-5.0	A-6(7)	32	15	6.0	40.7	19.2	34.1	100	100	64	-	-
SS-68	60' Rt	139+00	8.5-10.0	A-4(0)	24	4	17.5	46.5	24.0	12.0	100	92	40	-	-
SS-69	40' Rt	145+00	0.5-1.5	A-4(0)	23	1	2.2	43.9	27.8	26.1	100	99	70	-	-
SS-70	40' Rt	145+00	4.3-5.3	A-4(2)	28	10	9.8	48.8	10.6	30.8	100	99	48	-	-
SS-71	40' Rt	145+00	8.8-10.3	A-6(2)	30	12	13.7	45.1	10.4	30.8	100	94	47	-	-

Ⓐ MEDIUM DENSE TO DENSE TAN SAND, SAT. (UNDIVIDED C.P.)

Ⓑ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)

Ⓒ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08.

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

16-DEC-2008 13:39
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PROJECT REFERENCE NO.	SHEET NO.
U-3810	42
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

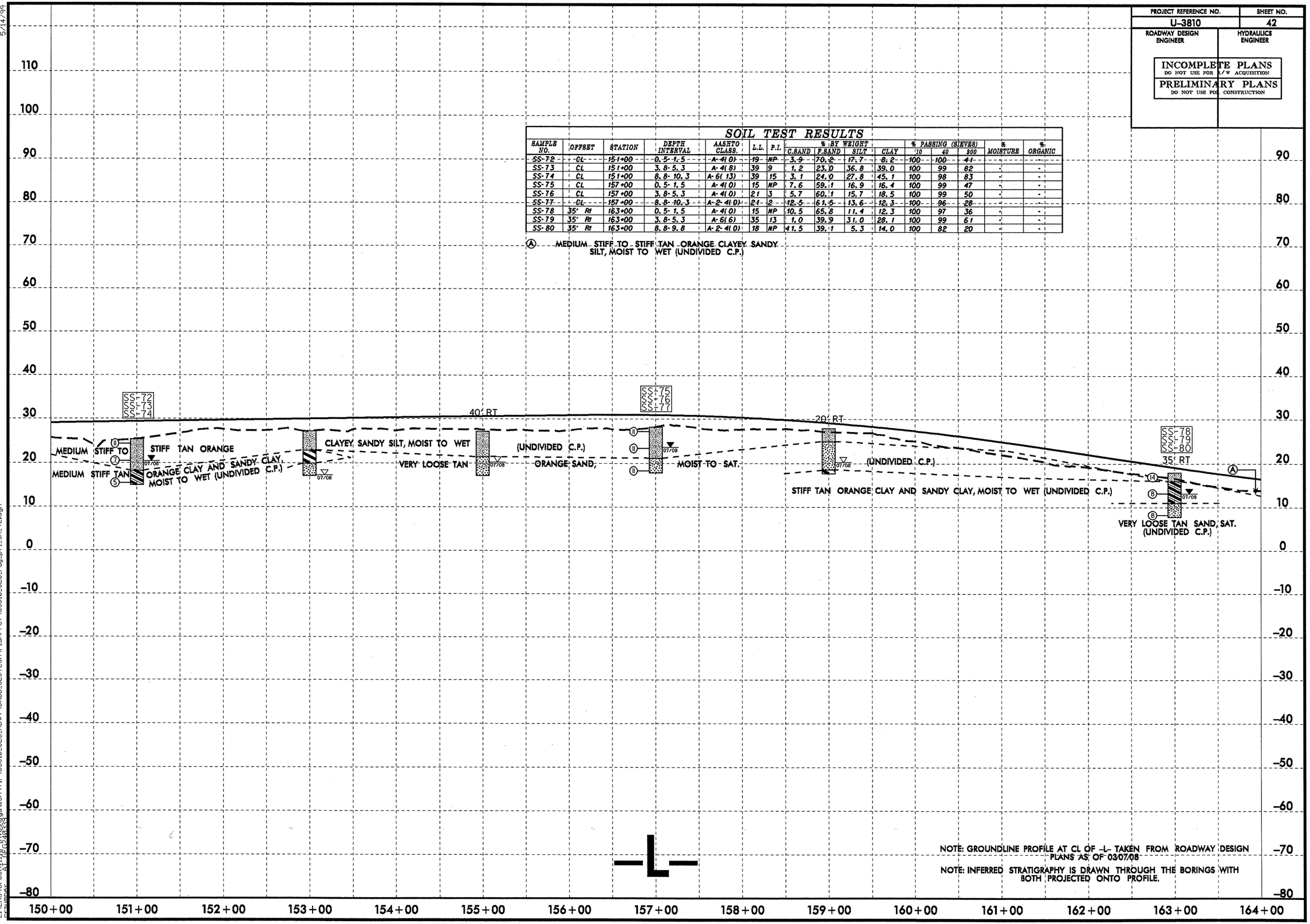
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-72	CL	151+00	0.5-1.5	A-4(0)	19	NP	3.9	70.2	17.7	8.2	100	100	41	-	-
SS-73	CL	151+00	3.8-5.3	A-4(8)	39	9	1.2	23.0	36.8	39.0	100	99	82	-	-
SS-74	CL	151+00	8.8-10.3	A-6(13)	39	15	3.1	24.0	27.8	45.1	100	98	83	-	-
SS-75	CL	157+00	0.5-1.5	A-4(0)	15	NP	7.6	59.1	16.9	16.4	100	99	47	-	-
SS-76	CL	157+00	3.8-5.3	A-4(0)	21	3	5.7	60.1	15.7	18.5	100	99	50	-	-
SS-77	CL	157+00	8.8-10.3	A-2-4(0)	21	2	12.5	61.5	13.6	12.3	100	96	28	-	-
SS-78	35' Rt	163+00	0.5-1.5	A-4(0)	15	NP	10.5	65.8	11.4	12.3	100	97	36	-	-
SS-79	35' Rt	163+00	3.8-5.3	A-6(6)	35	13	1.0	39.9	31.0	28.1	100	99	61	-	-
SS-80	35' Rt	163+00	8.8-9.8	A-2-4(0)	18	NP	41.5	39.1	5.3	14.0	100	82	20	-	-

(A) MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

10-DEC-2008 14:04
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Engineer: Alice Rodgers

PROJECT REFERENCE NO.	SHEET NO.
U-3810	43
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

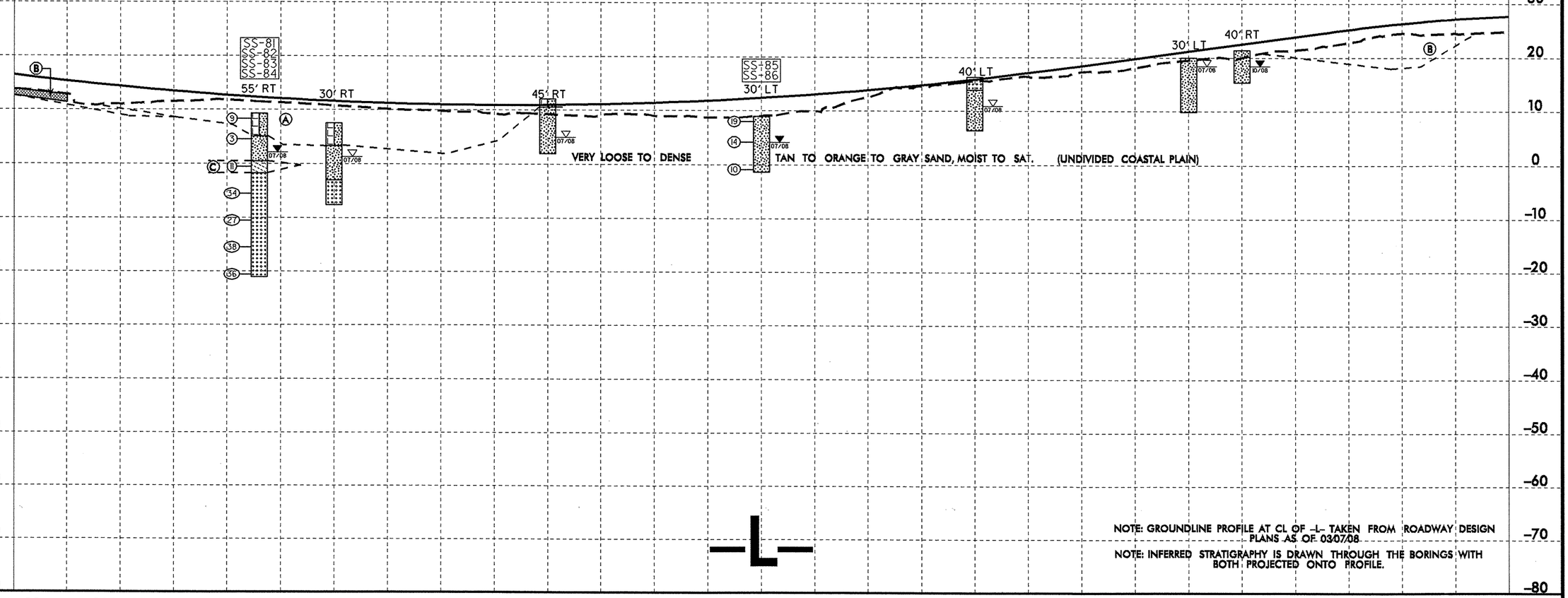
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-81	55' Rt	166+30	0.5-1.5	A-2-4(0)	16	NP	13.8	67.6	8.5	10.0	99	94	22	-	-
SS-82	55' Rt	166+30	8.8-10.3	A-2-4(0)	22	3	15.2	56.2	26.6	2.0	98	93	33	4.1	-
SS-83	55' Rt	166+30	13.8-15.3	A-3(0)	19	NP	8.6	86.5	4.9	0.0	100	99	7	-	-
SS-84	55' Rt	166+30	18.8-20.3	A-3(0)	16	NP	8.2	87.5	2.3	2.0	100	100	5	-	-
SS-85	30' Lt	171+00	0.5-1.5	A-2-4(0)	19	2	22.7	38.3	19.0	20.1	69	59	30	-	-
SS-86	30' Lt	171+00	3.8-5.3	A-2-4(0)	17	NP	9.6	80.2	4.1	6.0	100	98	16	-	-

(A) LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

(B) MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)

(C) MEDIUM DENSE TAN BROWN SAND WITH LITTLE ORGANIC MATTER, SAT (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08.

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	44
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

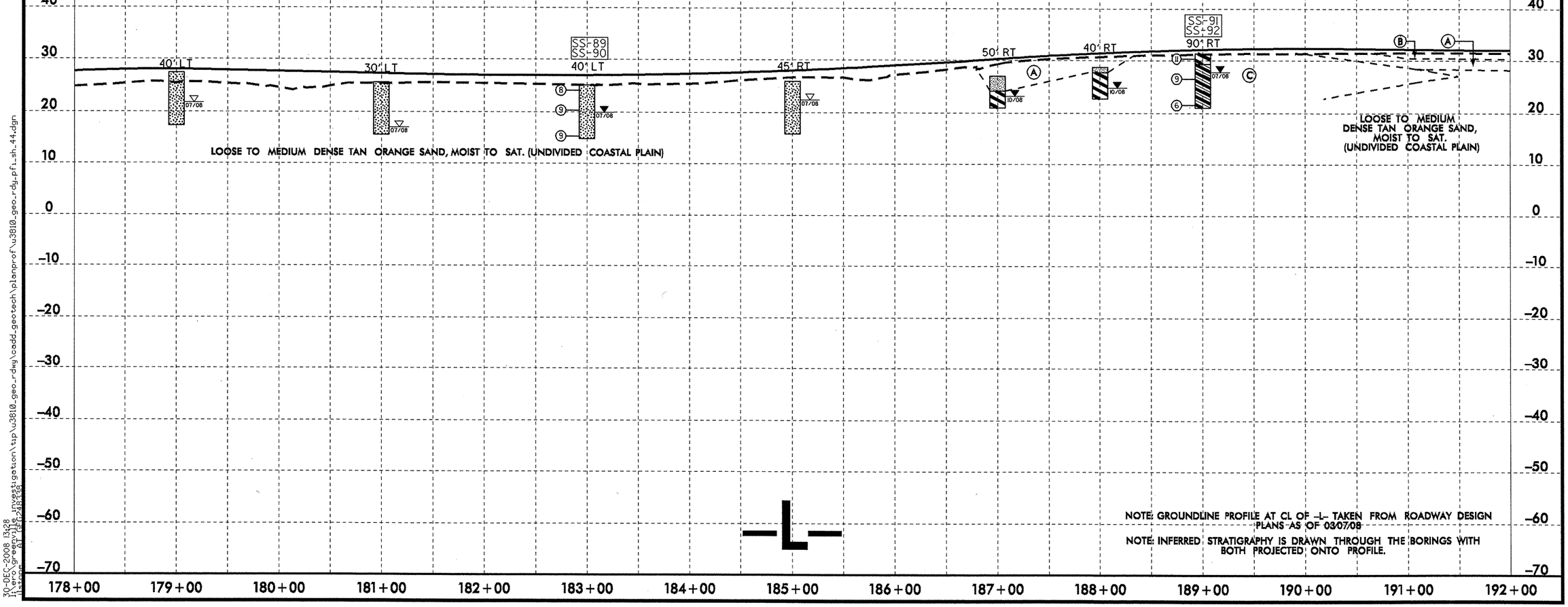
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-89	40' -L-	183+00	0.5-1.5	A-2-4(0)	16	NP	1.0	79.2	11.7	8.0	100	99	27	-	-
SS-90	40' L1	183+00	3.8-5.3	A-2-4(0)	26	10	10.0	63.8	18.2	8.0	100	99	30	-	-
SS-91	90' Rt	189+00	0.5-1.5	A-7-6(7)	47	32	8.0	60.0	26.0	6.0	100	99	40	-	-
SS-92	90' Rt	189+00	3.8-5.3	A-6(11)	33	14	7.2	61.8	2.9	28.1	100	99	37	-	-

(A) VERY STIFF TAN ORANGE SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

(B) VERY STIFF TAN ORANGE SANDY SILT, MOIST (ROADWAY EMBANKMENT)

(C) MEDIUM STIFF TAN ORANGE SILTY CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	45
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-95	50' Lt	201+00	0.5-1.5	A-4(0)	19	NP	4.2	65.3	12.4	18.1	100	99	44	-	-
SS-96	50' Lt	201+00	3.7-5.2	A-4(2)	29	9	1.6	64.9	11.4	22.2	100	100	53	-	-
SS-97	50' Lt	201+00	8.7-10.2	A-4(0)	22	2	0.8	64.9	12.2	22.2	100	100	47	-	-

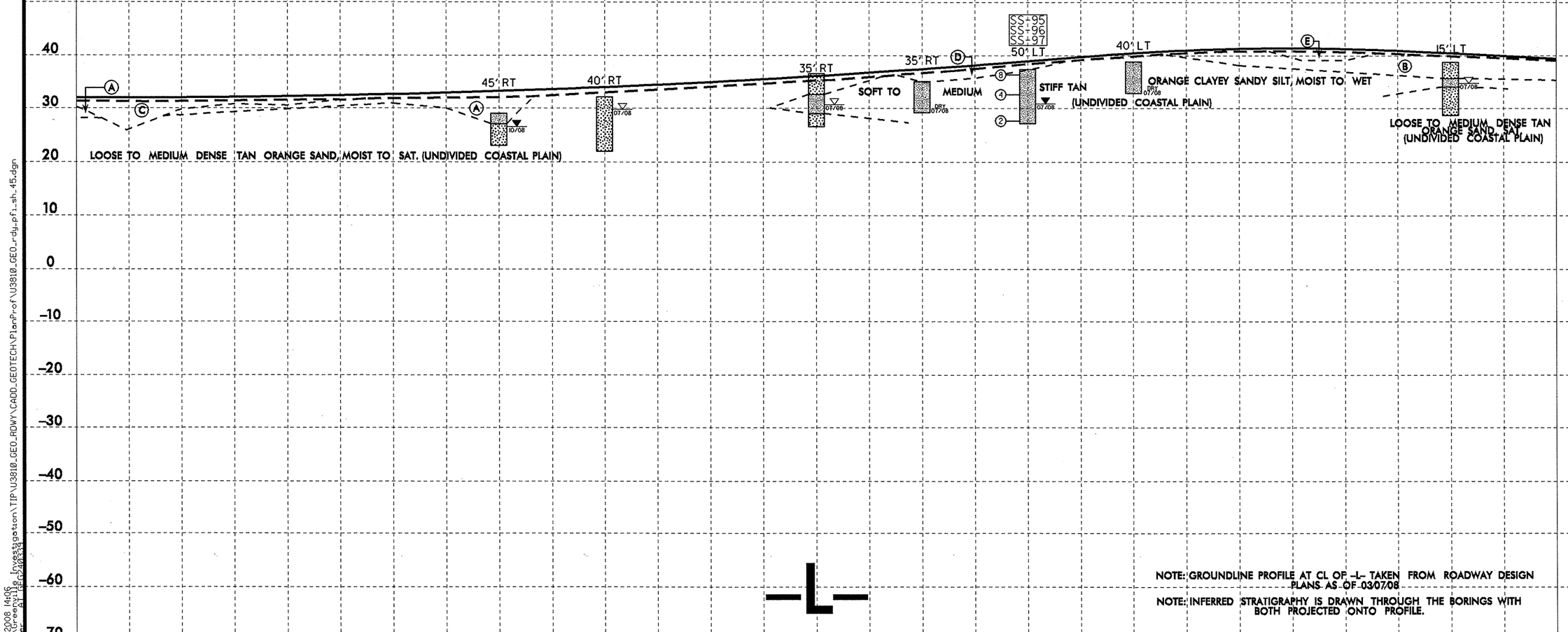
(A) VERY STIFF TAN ORANGE SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

(B) VERY LOOSE TAN ORANGE SAND, MOIST (UNDIVIDED C.P.)

(C) VERY SITFF TAN ORANGE SANDY SILT, MOIST (ROADWAY EMBANKMENT)

(D) MEDIUM STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)

(E) DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	46
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

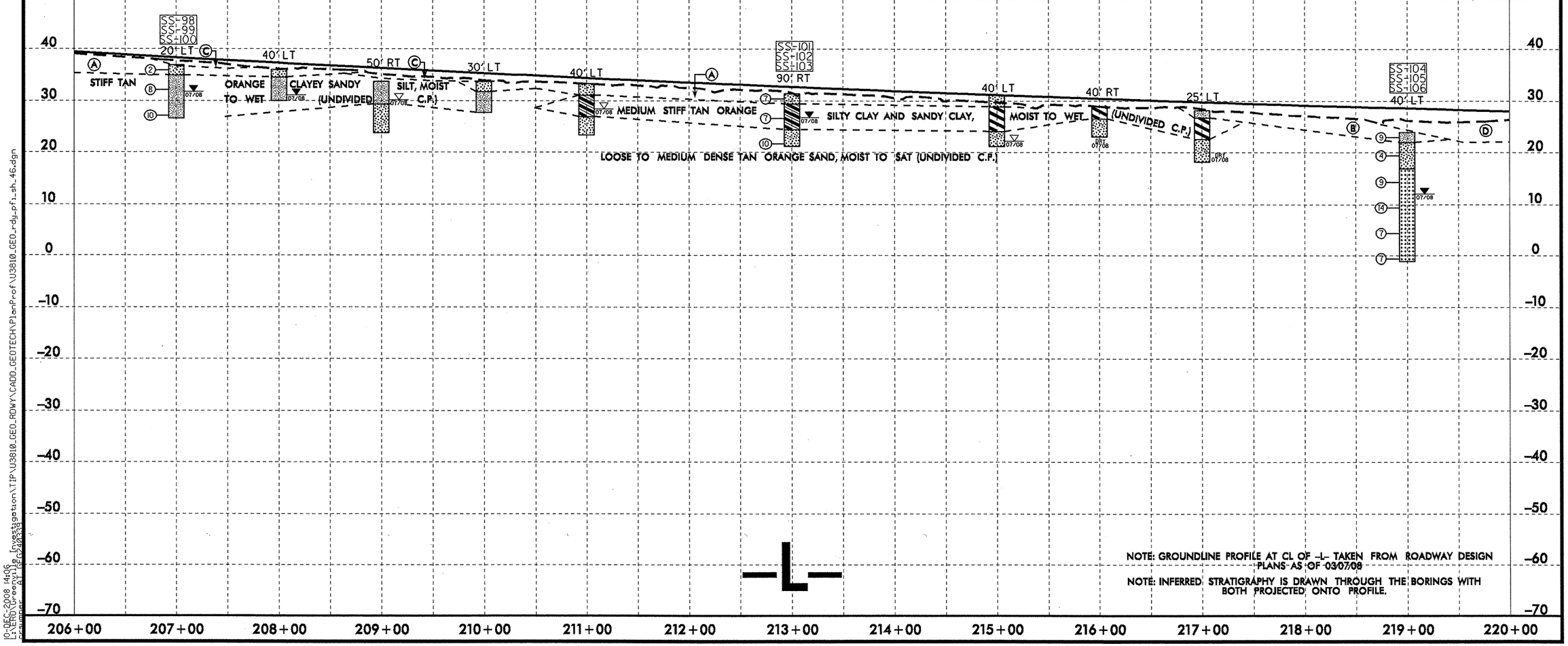
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-98	20' LT	207+00	0.5-1.5	A-2-4(0)	18	NP	9.7	62.4	3.7	24.2	99	96	33	-	-
SS-99	20' LT	207+00	3.8-5.3	A-4(1)	29	6	6.4	55.0	8.4	30.2	100	99	48	-	-
SS-100	20' LT	207+00	8.8-10.3	A-4(0)	23	1	1.2	65.5	15.2	18.1	100	100	50	-	-
SS-101	90' RT	213+00	0.5-1.5	A-2-4(0)	16	NP	8.9	67.7	13.4	10.1	100	98	27	-	-
SS-102	90' RT	213+00	3.8-5.3	A-6(9)	36	19	3.6	48.5	17.6	30.2	100	99	62	-	-
SS-103	90' RT	213+00	8.8-10.3	A-2-4(0)	19	NP	8.9	74.1	4.9	12.1	100	98	23	-	-
SS-104	40' LT	219+00	0.5-1.5	A-4(1)	21	9	12.1	54.6	21.2	12.1	100	96	43	-	-
SS-105	40' LT	219+00	3.5-5.0	A-2-4(0)	16	NP	7.7	78.1	4.1	10.1	100	98	24	-	-
SS-106	40' LT	219+00	13.5-15.0	A-3(0)	19	NP	5.0	89.8	5.1	0.0	100	99	6	-	-

(A) VERY LOOSE TO LOOSE TAN ORANGE SAND, MOIST (UNDIVIDED C.P.)

(B) STIFF TAN SANDY SILT, MOIST (UNDIVIDED C.P.)

(C) DENSE TAN SANDY AND STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)

(D) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	47
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

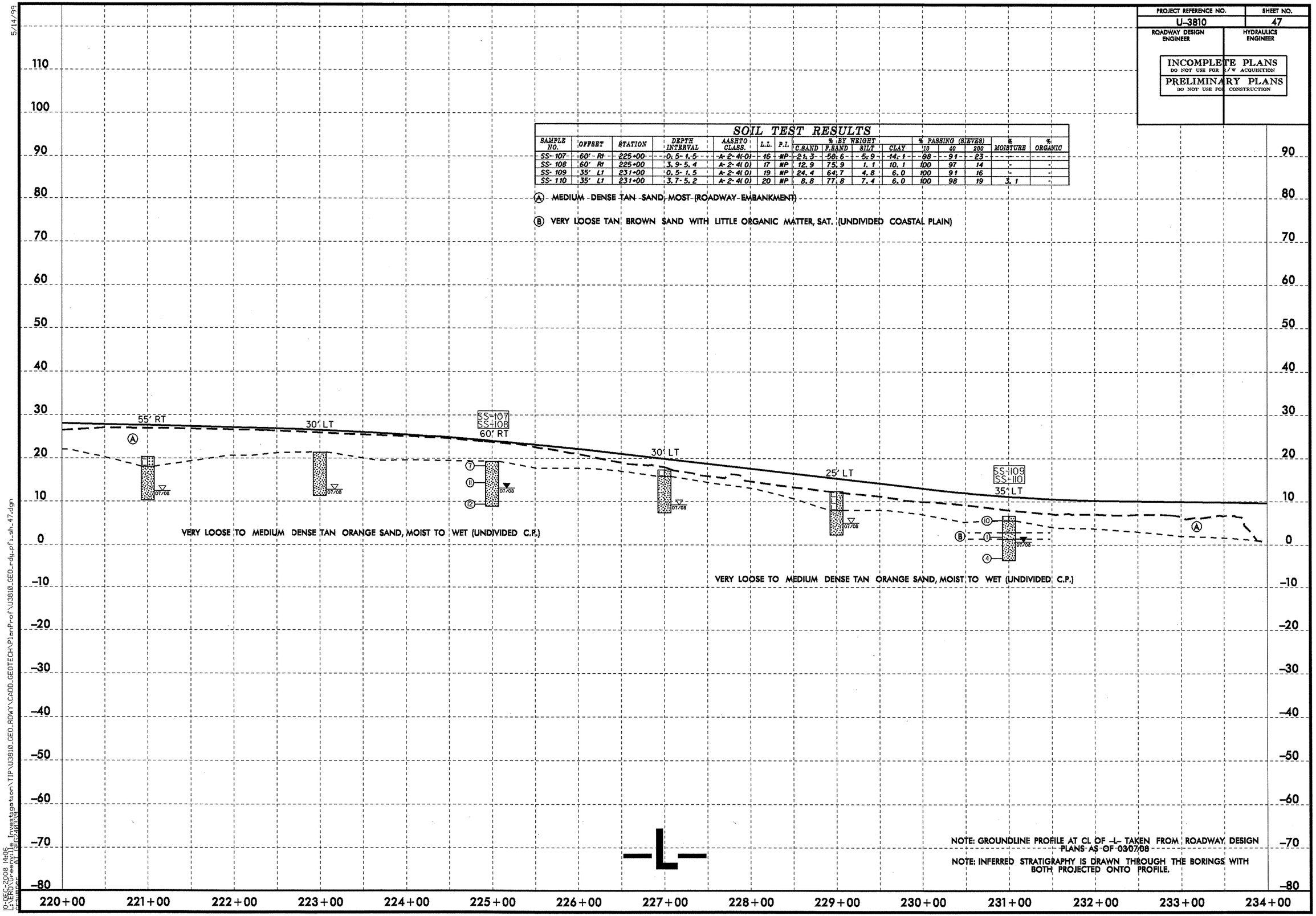
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-107	60' Rt	225+00	0.5-1.5	A-2-4(0)	16	NP	21.3	58.6	5.9	14.1	98	91	23	-	-
SS-108	60' Rt	225+00	3.9-5.4	A-2-4(0)	17	NP	12.9	75.9	1.1	10.1	100	97	14	-	-
SS-109	35' Lt	231+00	0.5-1.5	A-2-4(0)	19	NP	24.4	64.7	4.8	6.0	100	91	16	-	-
SS-110	35' Lt	231+00	3.7-5.2	A-2-4(0)	20	NP	8.8	77.8	7.4	6.0	100	98	19	3.1	-

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

(B) VERY LOOSE TAN BROWN SAND WITH LITTLE ORGANIC MATTER, SAT. (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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USER: dlcarroll

PROJECT REFERENCE NO.	SHEET NO.
U-3810	48
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

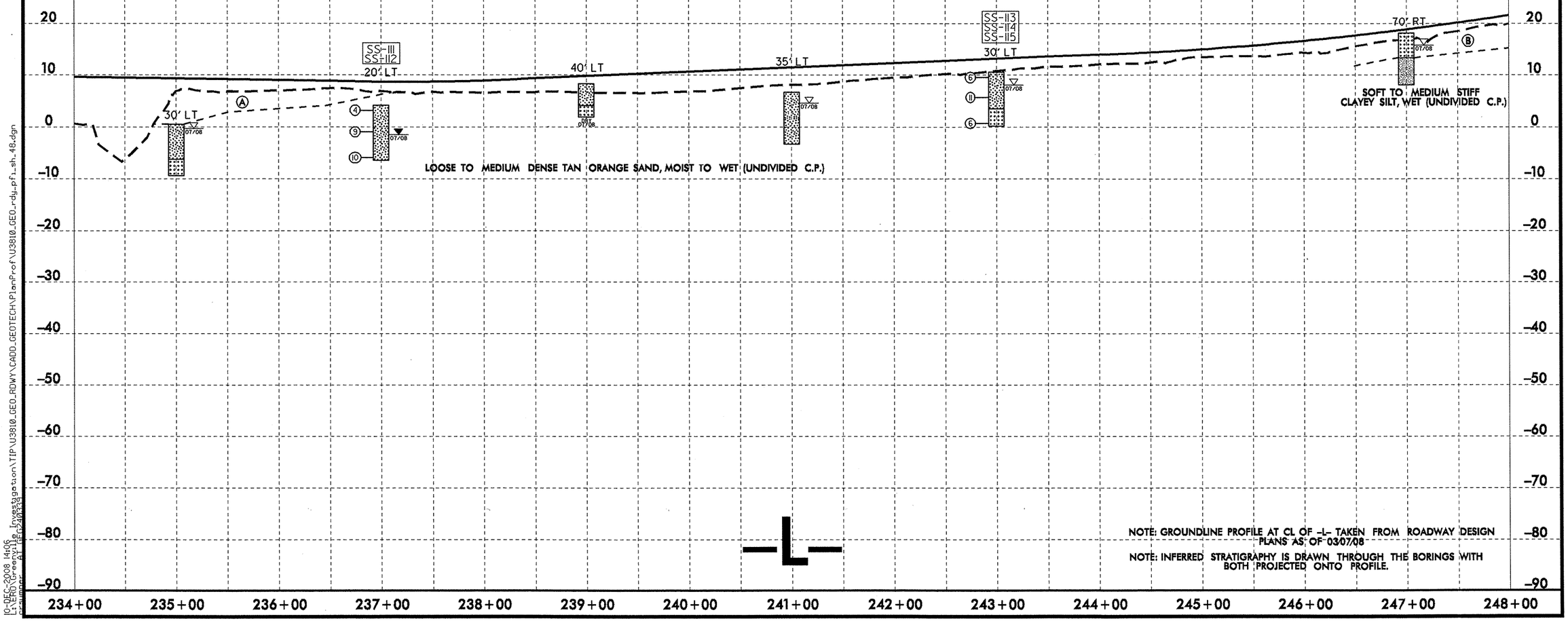
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-111	20' Lt	237+00	0.5-1.5	A-2-4(0)	19	NP	18.2	68.5	5.2	8.0	99	93	15	-	-
SS-112	20' Lt	237+00	4.2-5.7	A-2-4(0)	16	NP	19.2	72.3	6.4	2.0	100	92	12	-	-
SS-113	30' Lt	243+00	0.5-1.5	A-2-4(0)	19	NP	8.0	73.7	12.2	6.0	99	97	25	-	-
SS-114	30' Lt	243+00	3.8-5.3	A-2-4(0)	16	NP	54.5	35.7	3.8	6.0	99	74	12	-	-
SS-115	30' Lt	243+00	8.8-10.3	A-3(0)	15	NP	2.2	91.6	4.2	2.0	100	99	7	-	-

(A) MEDIUM DENSE TAN SAND, MOST (ROADWAY EMBANKMENT)

(B) VERY LOOSE TO LOOSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	49
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

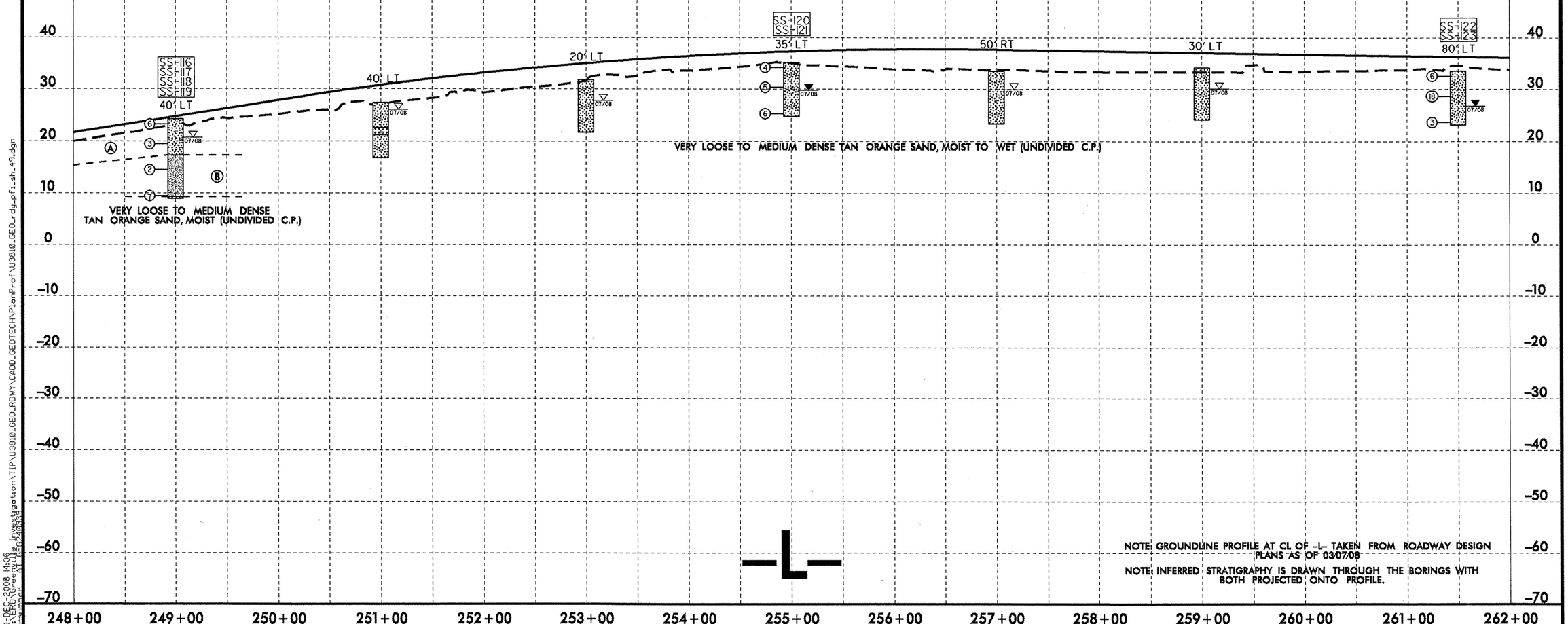
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-116	40' -L1-	249+00	0.5-1.5	A-2-4(0)	18	NP	8.2	77.0	8.8	6.0	100	98	20	-	-
SS-117	40' L1	249+00	3.8-5.3	A-2-4(0)	15	NP	19.2	65.7	9.0	6.0	100	94	18	-	-
SS-118	40' L1	249+00	8.8-10.3	A-4(9)	40	9	6.0	11.6	50.3	32.1	100	96	86	25.7	-
SS-119	40' L1	249+00	14.8-15.3	A-2-4(0)	16	NP	32.7	54.5	4.8	8.0	100	87	17	-	-
SS-120	35' L1	255+00	0.5-1.5	A-2-4(0)	25	NP	6.6	85.8	5.6	2.0	100	98	12	-	-
SS-121	35' -L1-	255+00	8.8-10.3	A-2-4(0)	19	NP	1.0	84.4	8.6	6.0	100	100	18	-	-
SS-122	80' L1	261+50	0.5-1.5	A-2-4(0)	21	NP	4.6	78.6	12.8	4.0	100	98	30	-	-
SS-123	80' L1	261+50	3.8-5.3	A-2-4(0)	19	NP	4.8	81.6	7.6	6.0	100	100	23	-	-

Ⓐ VERY LOOSE TO LOOSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

Ⓑ SOFT TO MEDIUM STIFF CLAYEY SILT, WET (UNDIVIDED C.P.)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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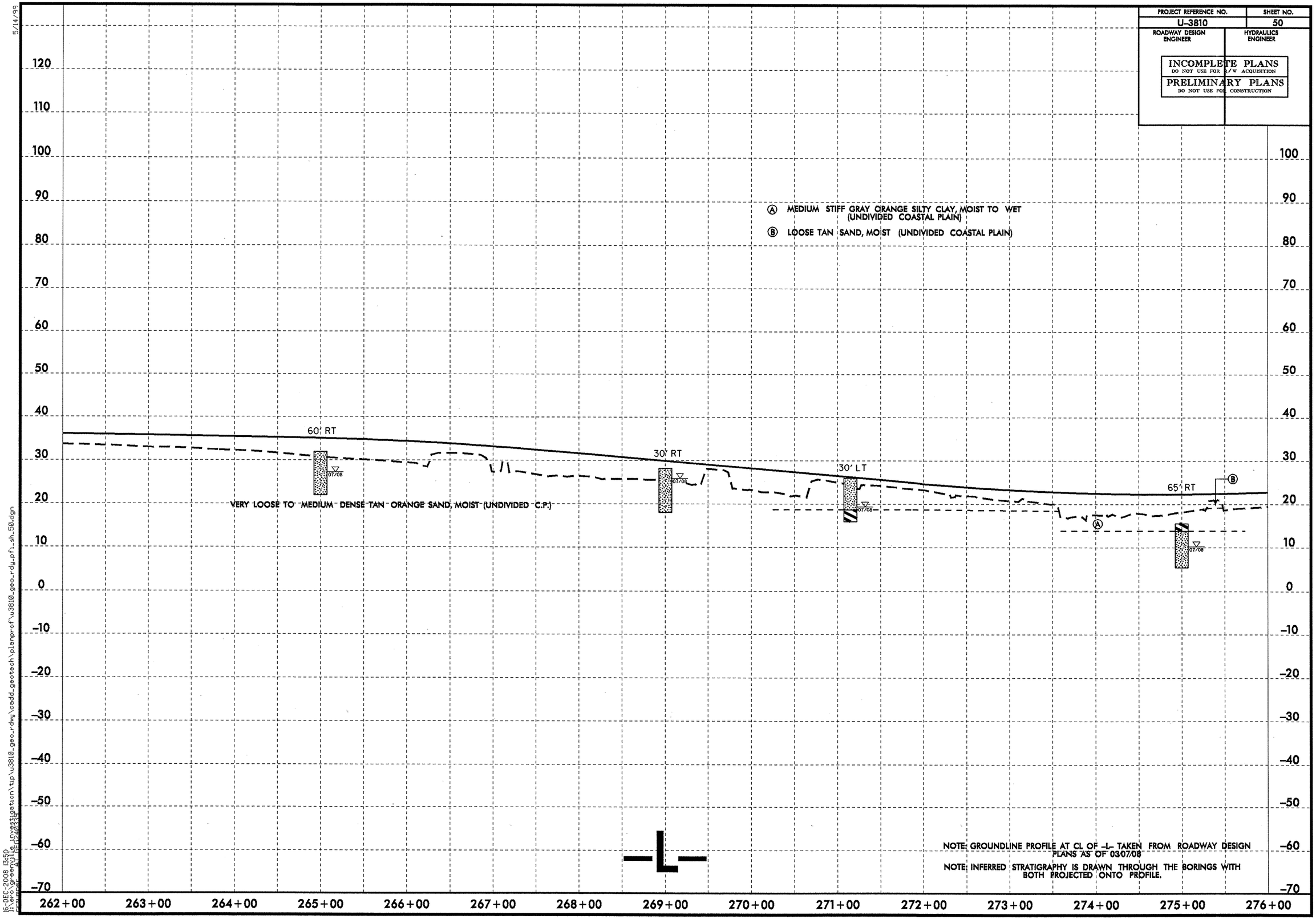
PROJECT REFERENCE NO.	SHEET NO.
U-3810	50
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	51
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

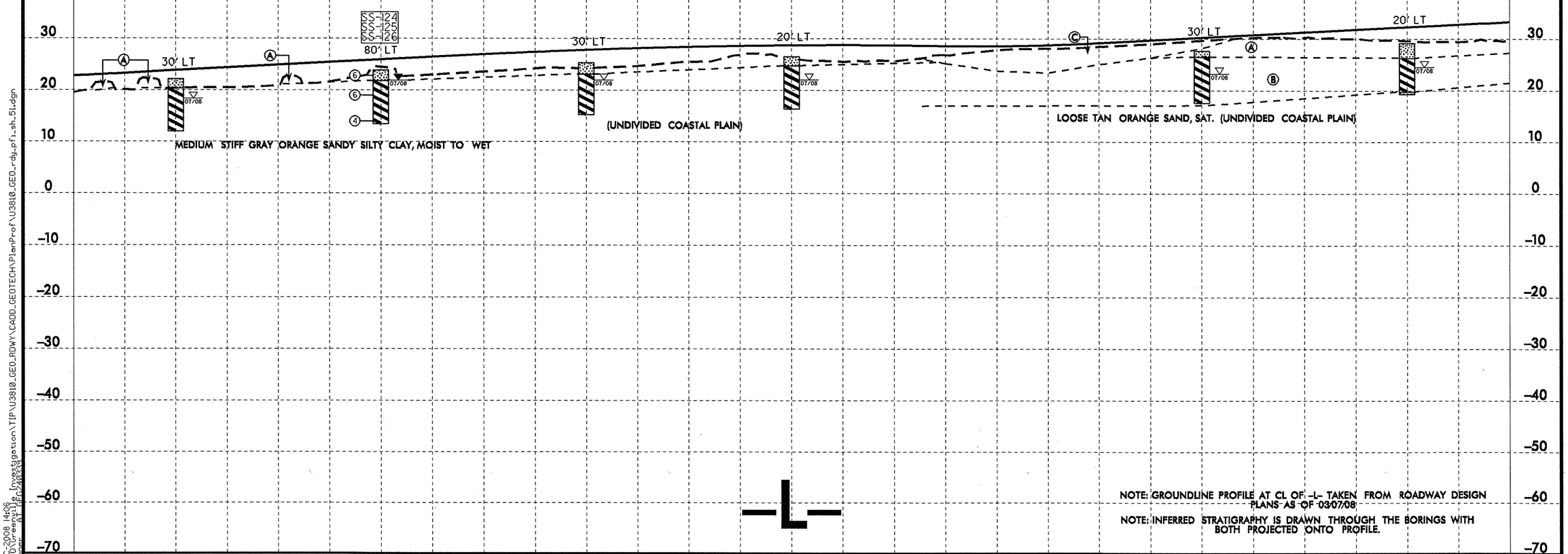
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-124	80' Lt	279+00	0.5-1.5	A-2-4(0)	20	NP	9.5	66.1	15.9	8.5	99	95	34	-	-
SS-125	80' Lt	279+00	3.8-5.3	A-7-5(12)	43	13	0.4	33.3	27.6	38.7	100	100	82	-	-
SS-126	80' Lt	279+00	8.8-10.3	A-7-6(14)	43	15	1.4	25.2	32.7	40.7	100	99	84	-	-

Ⓐ LOOSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF GRAY ORANGE SANDY SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓒ LOOSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

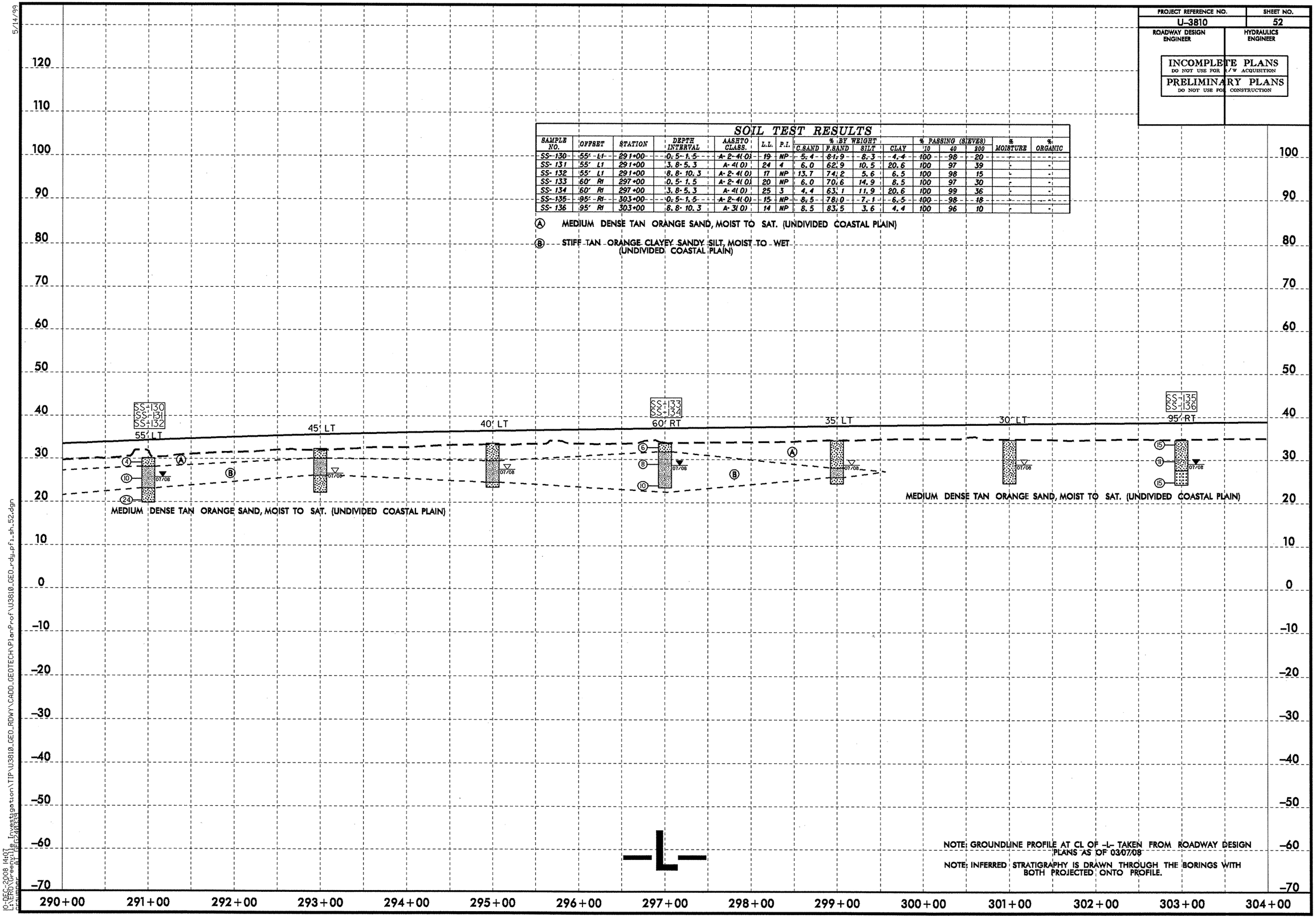
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-130	55' -L-	291+00	0.5-1.5	A-2-4(0)	19	NP	5.4	81.9	8.3	4.4	100	98	20	-	-
SS-131	55' L1	291+00	3.8-5.3	A-4(0)	24	4	6.0	62.9	10.5	20.6	100	97	39	-	-
SS-132	55' L1	291+00	8.8-10.3	A-2-4(0)	17	NP	13.7	74.2	5.6	6.5	100	98	15	-	-
SS-133	60' Rt	297+00	0.5-1.5	A-2-4(0)	20	NP	6.0	70.6	14.9	8.5	100	97	30	-	-
SS-134	60' Rt	297+00	3.8-5.3	A-4(0)	25	3	4.4	63.1	11.9	20.6	100	99	36	-	-
SS-135	95' Rt	303+00	0.5-1.5	A-2-4(0)	15	NP	8.5	78.0	7.1	6.5	100	98	18	-	-
SS-136	95' Rt	303+00	8.8-10.3	A-3(0)	14	NP	8.5	83.5	3.6	4.4	100	96	10	-	-

(A) MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

(B) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	53
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

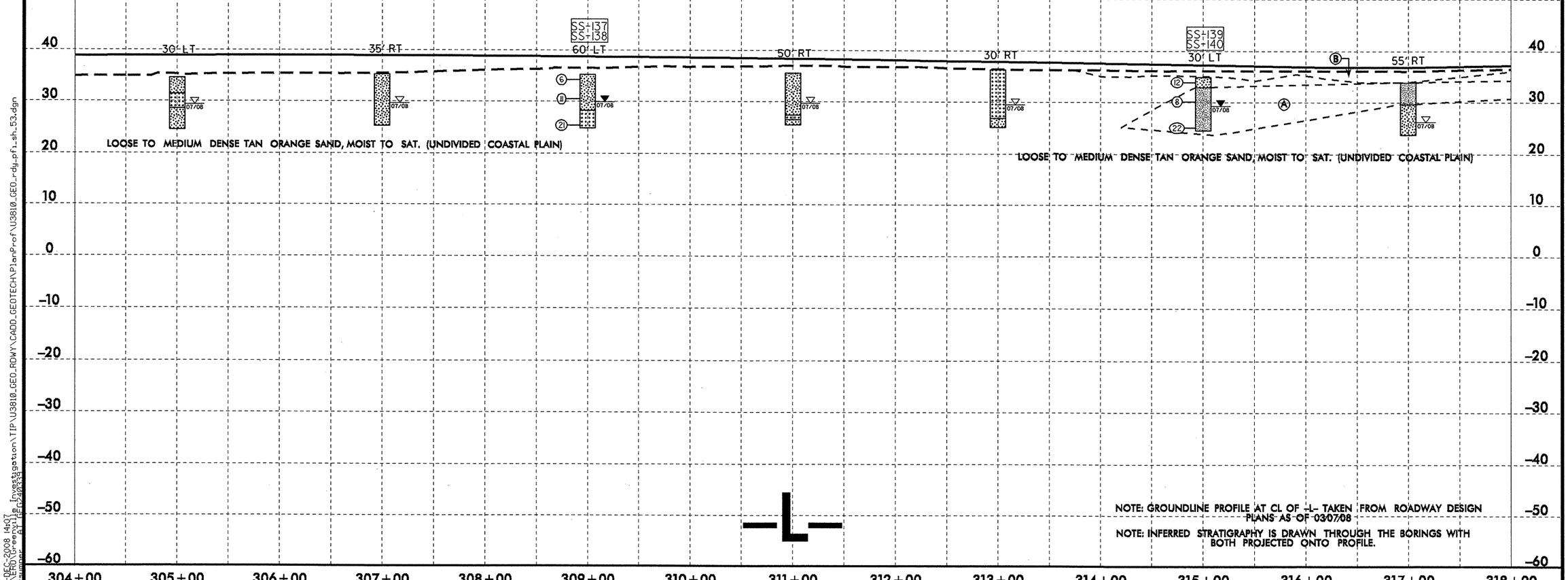
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-137	60' LT	309+00	0.5-1.5	A-2-4(0)	16	NP	13.9	73.2	8.5	4.4	100	97	15	-	-
SS-138	60' LT	309+00	8.8-10.3	A-3(0)	15	NP	6.7	89.7	3.2	0.4	100	100	4	-	-
SS-139	30' LT	315+00	0.5-1.5	A-2-4(0)	18	NP	8.4	70.7	12.4	8.4	99	96	28	-	-
SS-140	30' LT	315+00	3.8-5.3	A-4(0)	30	9	9.4	60.3	9.8	20.4	100	97	37	-	-

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ LOOSE MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT. (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

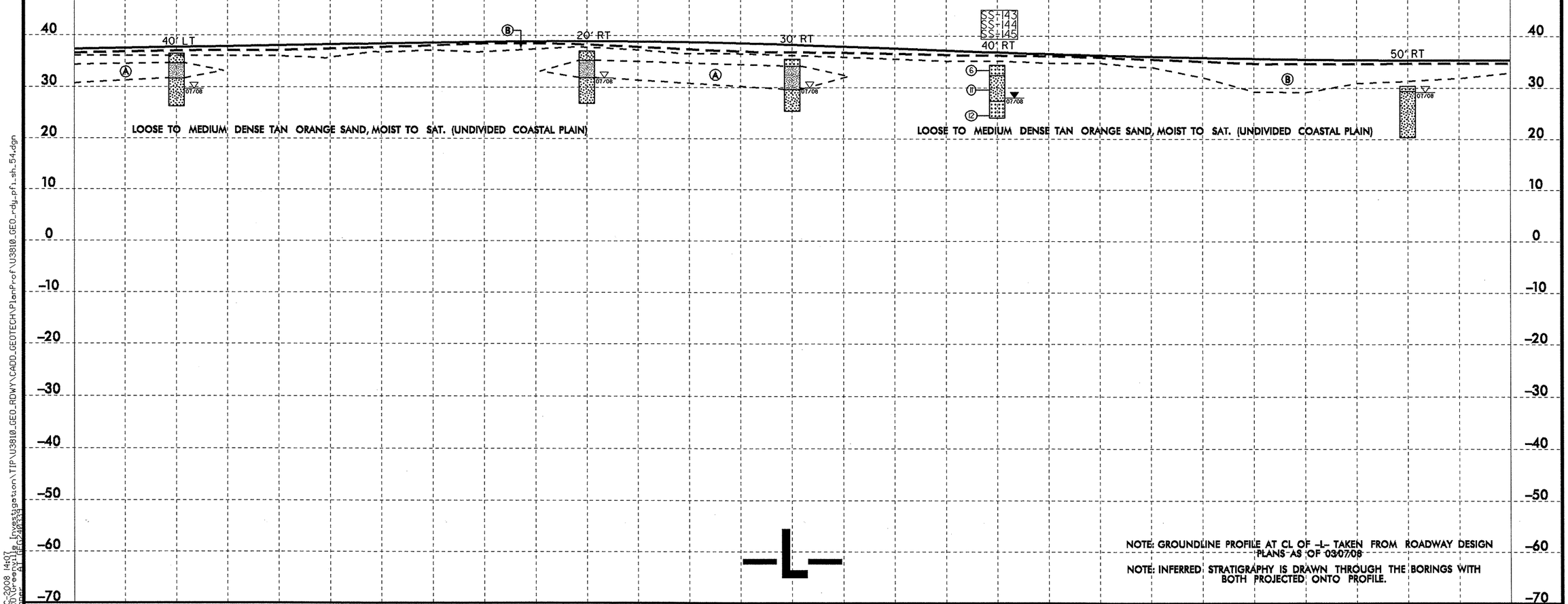
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-143	40' Rt	327+00	0.5-1.5	A-3(0)	19	NP	15.4	76.6	1.6	6.4	100	95	9	-	-
SS-144	40' Rt	327+00	3.8-5.3	A-2-4(0)	19	NP	2.0	73.7	9.8	14.4	100	100	30	-	-
SS-145	40' Rt	327+00	8.8-10.3	A-3(0)	18	NP	0.4	93.4	3.8	2.4	100	100	8	-	-

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM DENSE TAN ORANGE SAND, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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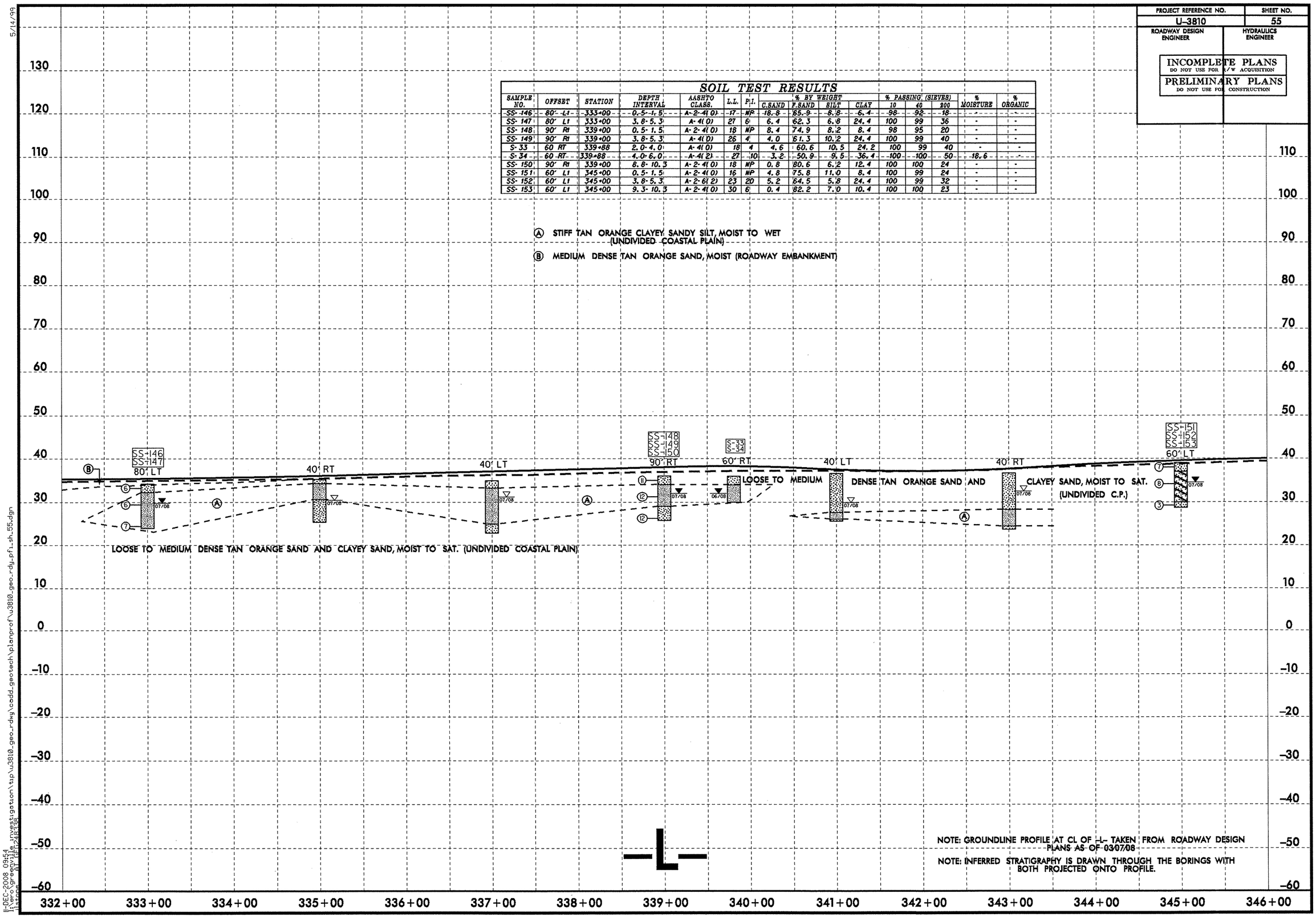
PROJECT REFERENCE NO.	SHEET NO.
U-3810	55
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-146	80' L1	333+00	0.5-1.5	A-2-4(0)	17	NP	18.8	65.9	8.8	6.4	98	92	18	-	-
SS-147	80' L1	333+00	3.8-5.3	A-4(0)	27	6	6.4	62.3	6.8	24.4	100	99	36	-	-
SS-148	90' Rt	339+00	0.5-1.5	A-2-4(0)	18	NP	8.4	74.9	8.2	8.4	98	95	20	-	-
SS-149	90' Rt	339+00	3.8-5.3	A-4(0)	26	4	4.0	61.3	10.2	24.4	100	99	40	-	-
S-33	60 RT	339+88	2.0-4.0	A-4(0)	18	4	4.6	60.6	10.5	24.2	100	99	40	-	-
S-34	60 RT	339+88	4.0-6.0	A-4(2)	27	10	3.2	50.9	9.5	36.4	100	100	50	18.6	-
SS-150	90' Rt	339+00	8.8-10.3	A-2-4(0)	18	NP	0.8	80.6	6.2	12.4	100	100	24	-	-
SS-151	60' L1	345+00	0.5-1.5	A-2-4(0)	16	NP	4.8	75.8	11.0	8.4	100	99	24	-	-
SS-152	60' L1	345+00	3.8-5.3	A-2-6(2)	23	20	5.2	64.5	5.8	24.4	100	99	32	-	-
SS-153	60' L1	345+00	9.3-10.3	A-2-4(0)	30	6	0.4	82.2	7.0	10.4	100	100	23	-	-



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PROJECT REFERENCE NO.	SHEET NO.
U-3810	56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

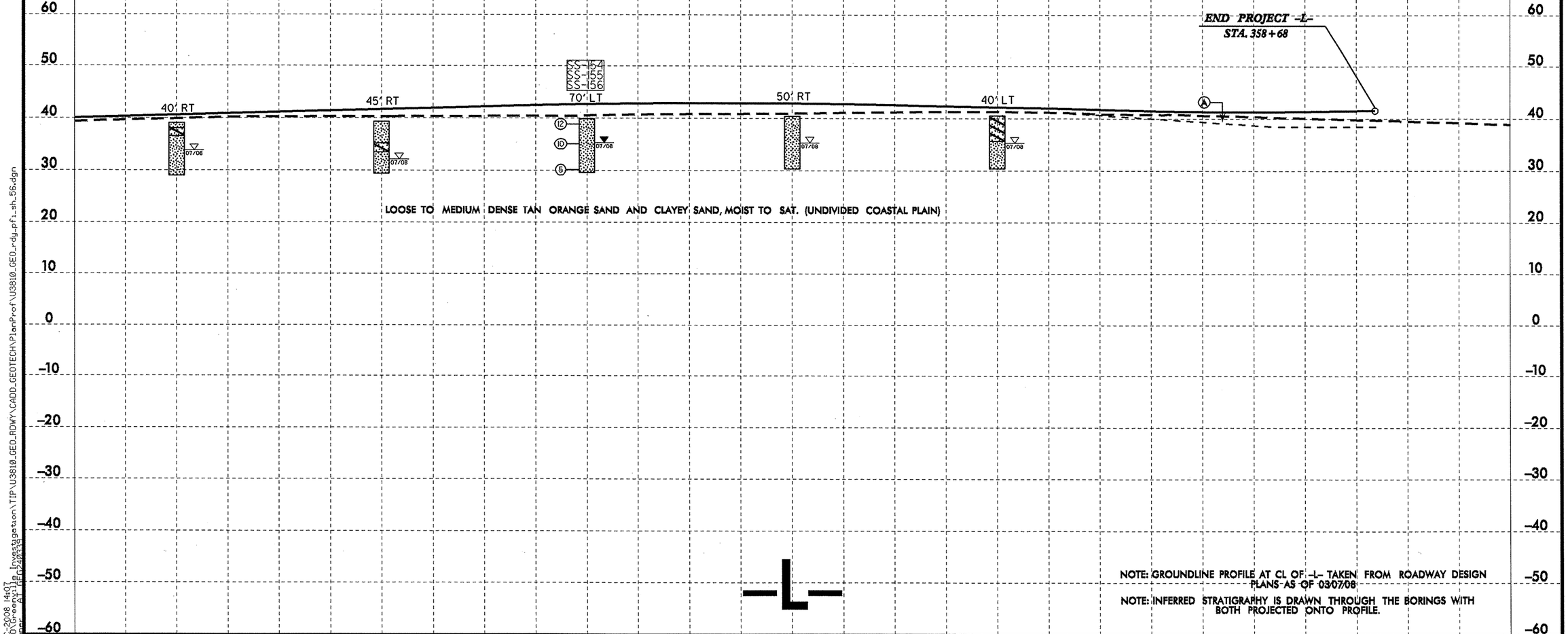
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-154	70' LT	351+00	0.5-1.5	A-2-4(0)	20	2	4.0	64.8	11.3	19.8	100	99	34	-	-
SS-155	70' LT	351+00	3.8-5.3	A-2-4(0)	28	9	4.4	64.8	2.8	27.9	100	99	33	-	-
SS-156	70' LT	351+00	8.8-10.3	A-2-4(0)	21	NP	0.0	78.8	9.5	11.7	100	100	30	-	-

Ⓐ DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -L- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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Current Active Plan Area

PROJECT REFERENCE NO.	SHEET NO.
U-3810	57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y-

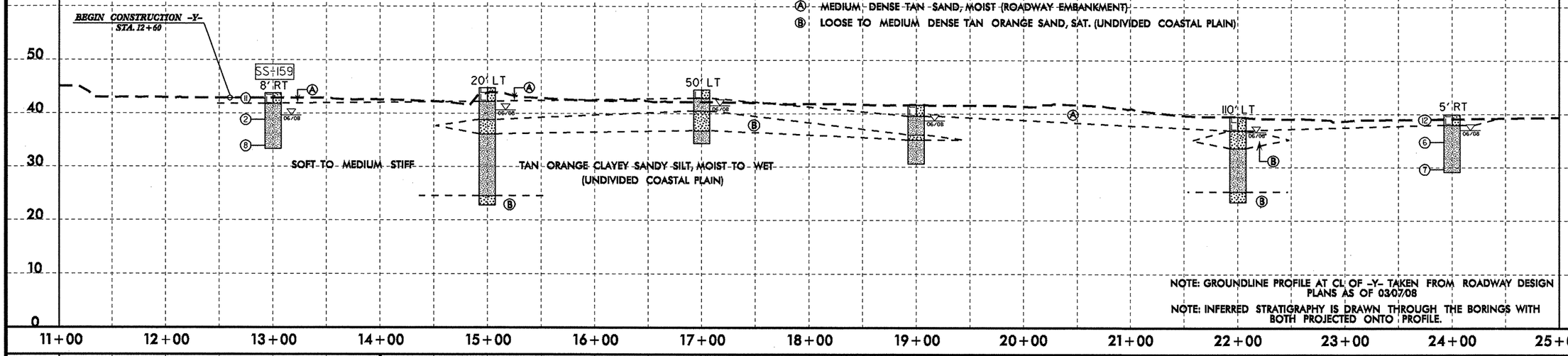
US 17 (MARINE BLVD.)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-159	8' Rt	13+00	4.0-5.5	A-4(4)	27	10	7.1	39.4	21.6	31.9	100	97	64	-	-

Ⓐ MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

Ⓑ LOOSE TO MEDIUM DENSE TAN ORANGE SAND, SAT. (UNDIVIDED COASTAL PLAIN)

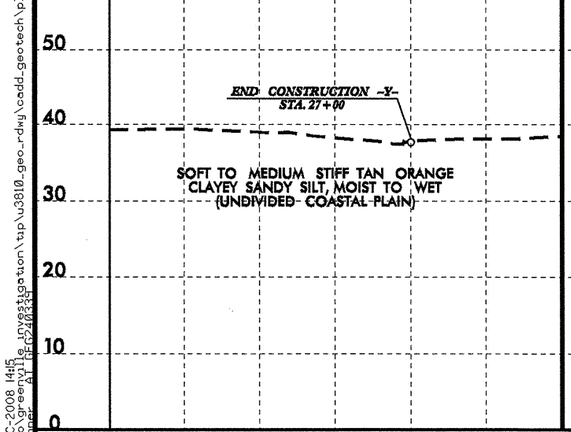


NOTE: GROUNDLINE PROFILE AT CL OF -Y- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y-

US 17 (MARINE BLVD.)

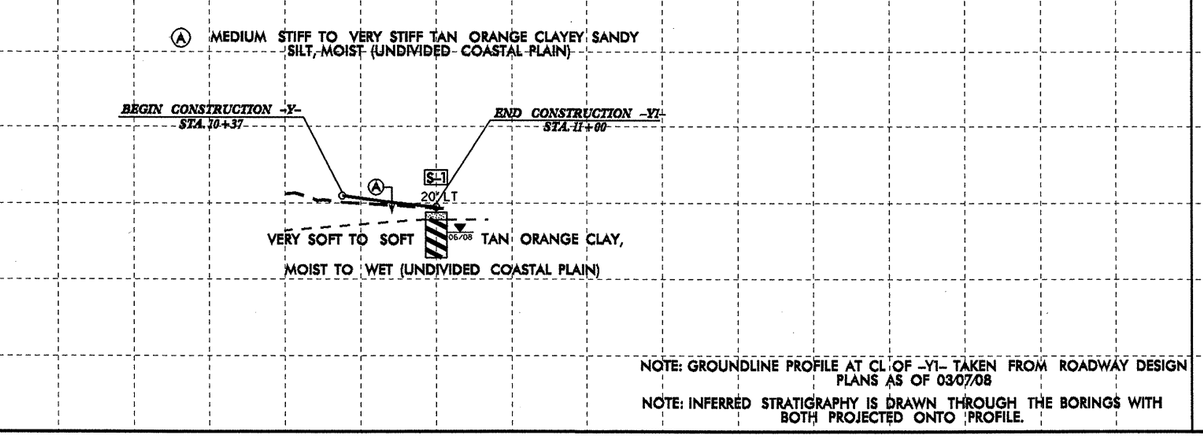


-Y1-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	#40	#200	% MOISTURE	% ORGANIC
S-1	20' LT	11+00	1.0-3.5	NOT ENOUGH SAMPLE										21.8	

Ⓐ MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -Y1- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

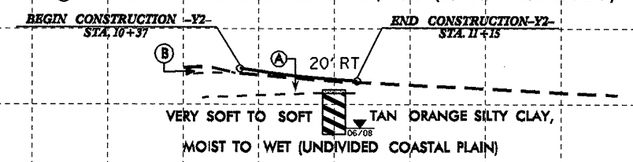
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y2-

COUNTRY CLUB DR.

Ⓐ MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y2- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

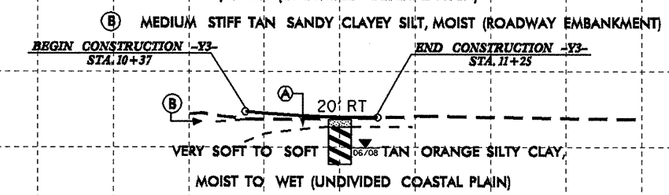
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y3-

CANTERBURY LN (SR 1467)

Ⓐ SOFT TO MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y3- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y4-

LINDA DR. (SR 1802)

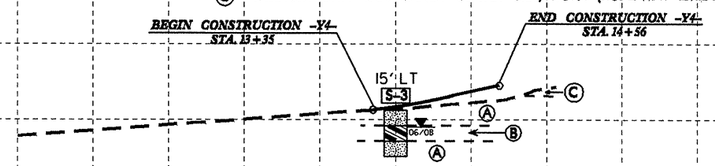
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-3	15' LT	13+50	2.0-4.0	NOT ENOUGH SAMPLE										22.5	

Ⓐ SOFT TO MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ VERY SOFT TO SOFT TAN ORANGE SANDY CLAY, WET (UNDIVIDED COASTAL PLAIN)

Ⓒ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y4- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

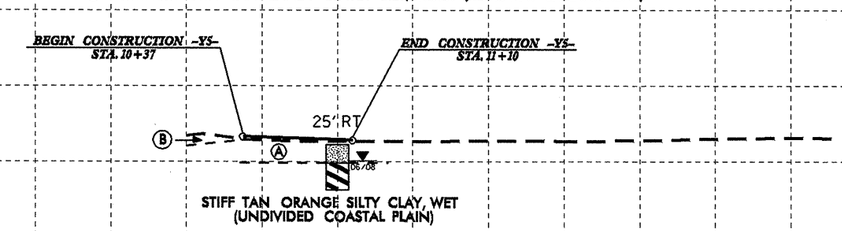
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y5-

CLUB LN (SR 1468)

Ⓐ SOFT TO MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y5- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	59
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

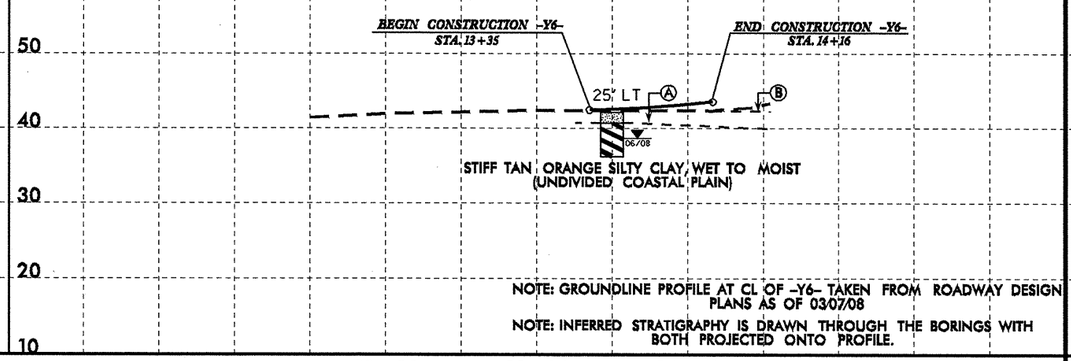
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y6-

CLAYTON RD (SR 1803)

Ⓐ SOFT TO MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TAN SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y6- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y7-

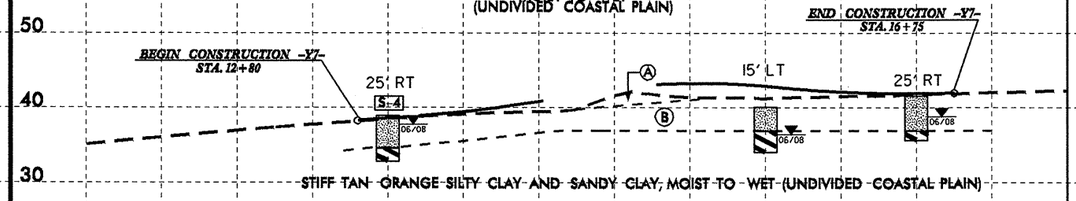
MIKE LOOP RD (SR1471)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-4	25' RT	13+00	0.5-6.0				NOT ENOUGH SAMPLE							25.0	

Ⓐ MEDIUM STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)

Ⓑ SOFT TO MEDIUM STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -Y7- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

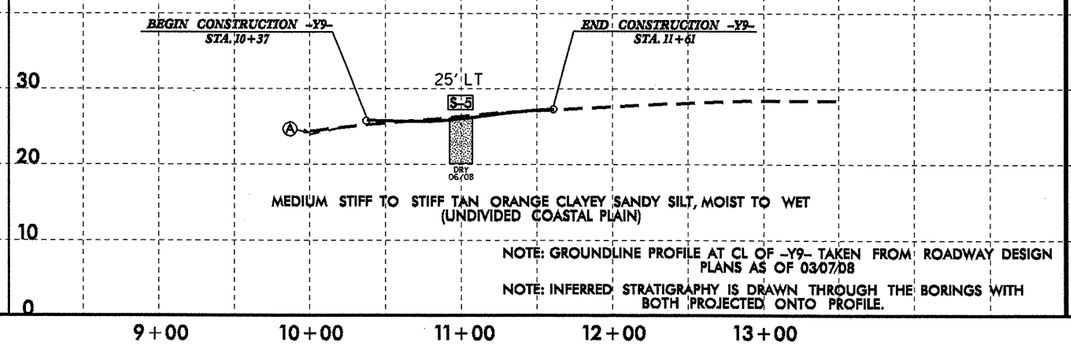
-Y9-

MARIAN PL (SR 1472)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-5	25' LT	11+00	1.0-6.0				NOT ENOUGH SAMPLE							36.7	

Ⓐ MEDIUM STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



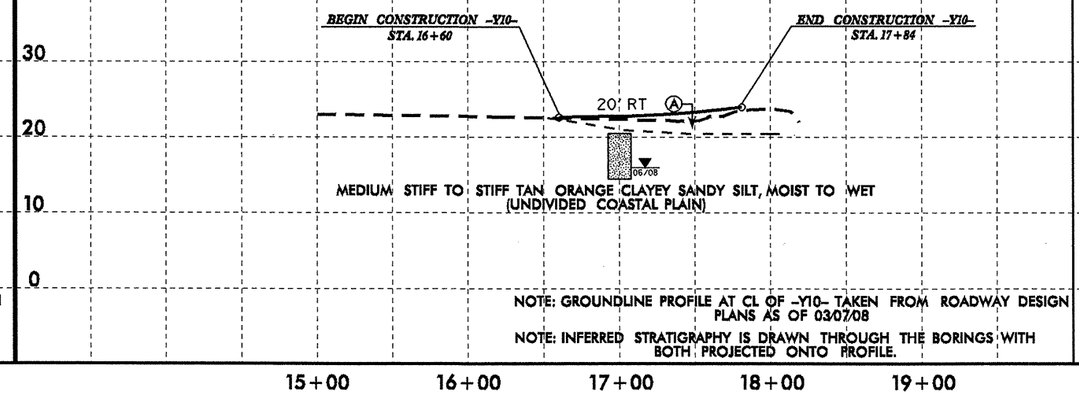
NOTE: GROUNDLINE PROFILE AT CL OF -Y9- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y10-

MIKE LOOP RD (SR 1471)

Ⓐ MEDIUM STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y10- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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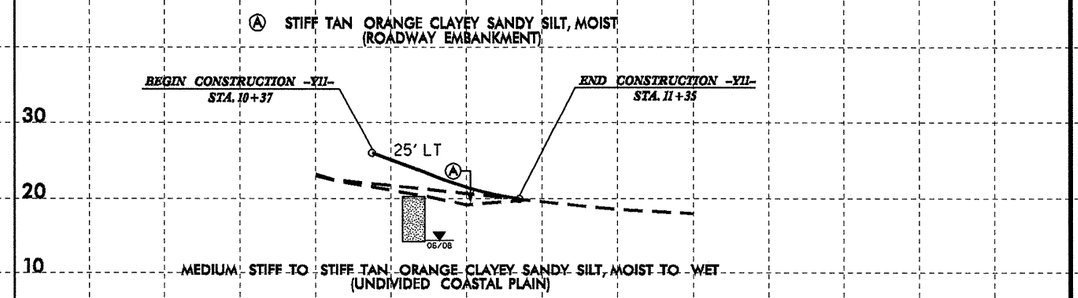
PROJECT REFERENCE NO.	SHEET NO.
U-3810	60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y11-

SHOREHAM DR



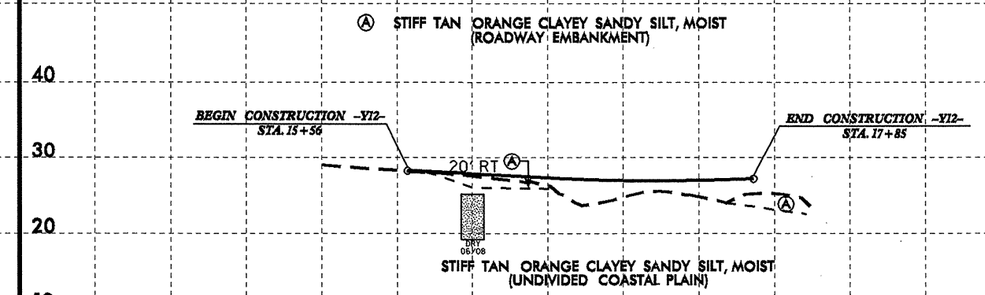
NOTE: GROUNDLINE PROFILE AT CL OF -Y11- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

10+00 11+00 12+00

-Y12-

WOLF SWAMP RD (SR 1407)



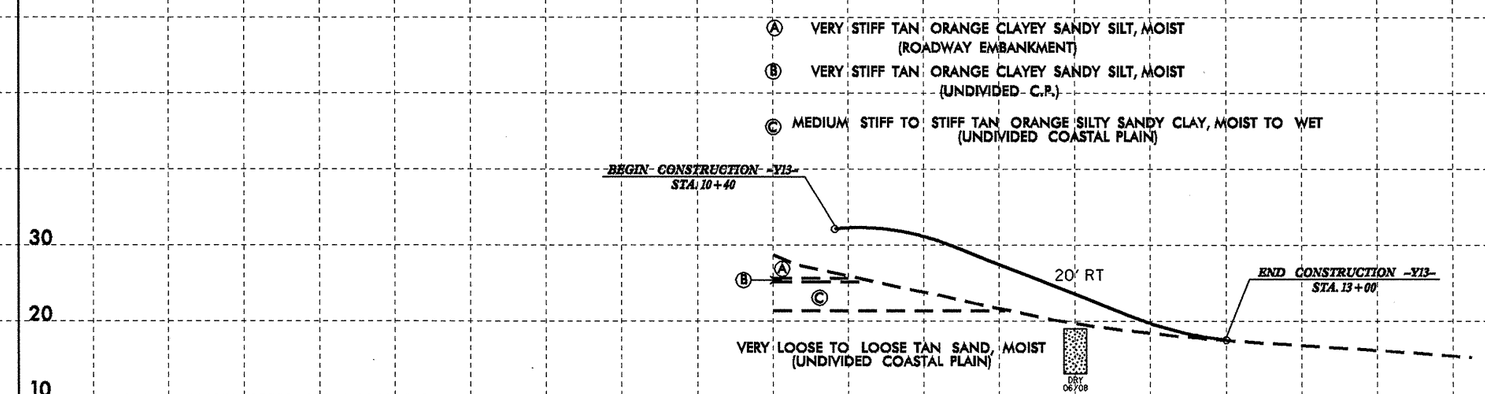
NOTE: GROUNDLINE PROFILE AT CL OF -Y12- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

15+00 16+00 17+00 18+00

-Y13-

COURTLAND RD



NOTE: GROUNDLINE PROFILE AT CL OF -Y13- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	61
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y14-

COUNTRY CLUB RD (SR 1403)

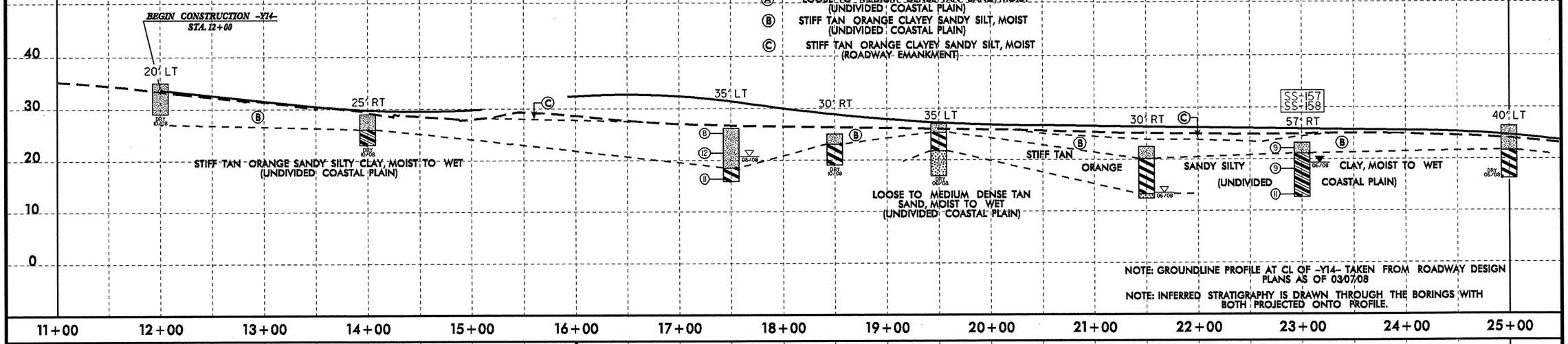
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-157	57' Rt	23+00	0.5-1.5	A-4(1)	30	10	3.8	60.4	9.9	25.9	100	99	41	-	-
SS-158	57' Rt	23+00	3.9-5.4	A-6(13)	26	20	2.6	17.8	25.5	54.1	100	99	82	-	-

(A) LOOSE TO MEDIUM DENSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)

(B) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

(C) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMANKMENT)



NOTE: GROUNDLINE PROFILE AT CL OF -Y14- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

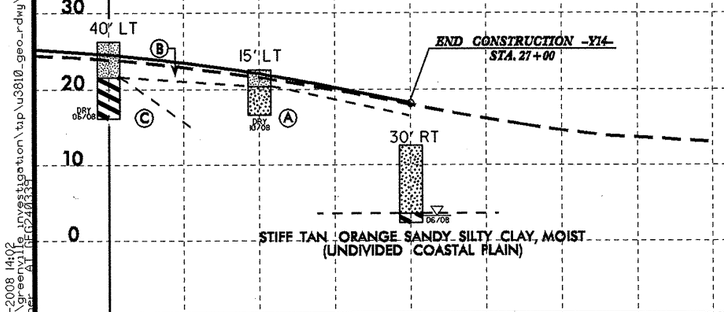
-Y14-

COUNTRY CLUB RD (SR 1403)

(A) LOOSE TO MEDIUM DENSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)

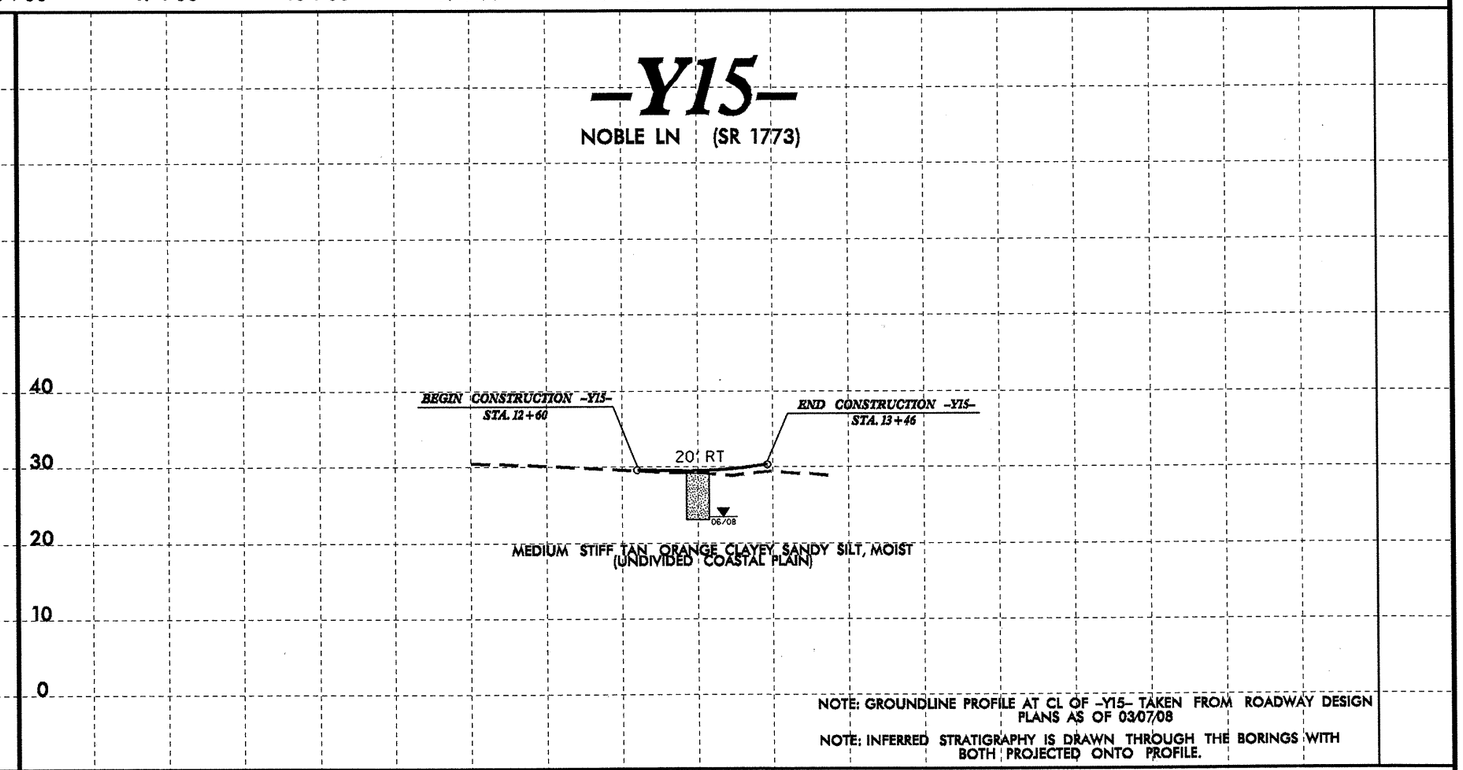
(B) STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

(C) STIFF TAN ORANGE SANDY SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



-Y15-

NOBLE LN (SR 1773)



NOTE: GROUNDLINE PROFILE AT CL OF -Y15- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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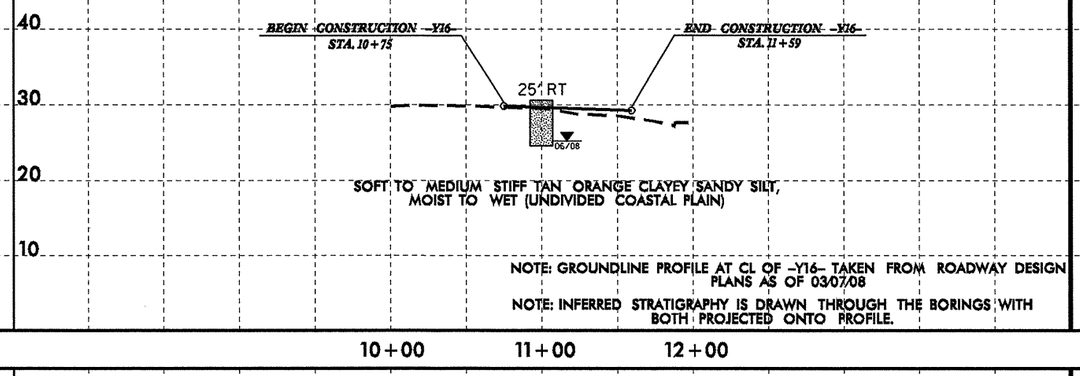
PROJECT REFERENCE NO.	SHEET NO.
U-3810	62
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y16-

REGALWOOD DR (SR 1715)



NOTE: GROUNDLINE PROFILE AT CL OF -Y16- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

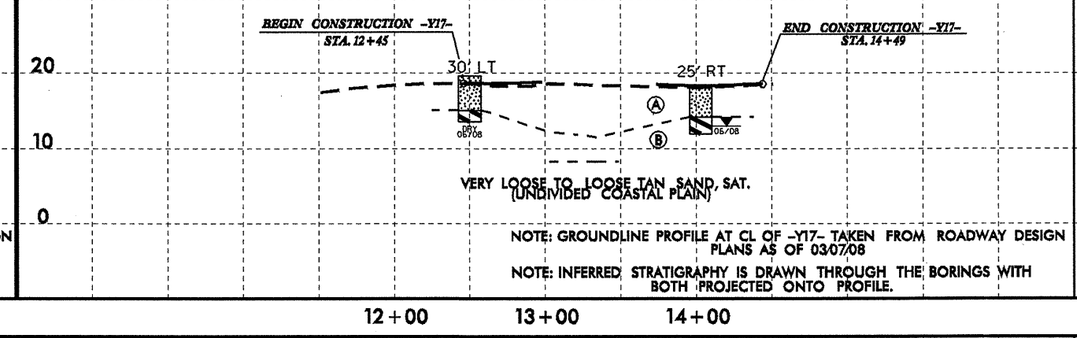
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y17-

LYNCHBURG DR (SR 1859)

Ⓐ VERY LOOSE TO LOOSE TAN SAND, MOIST (UNDIVIDED C.P.)

Ⓑ SOFT TO MEDIUM STIFF TAN ORANGE SILTY CLAY, MOIST TO WET (UNDIVIDED C.P.)



NOTE: GROUNDLINE PROFILE AT CL OF -Y17- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

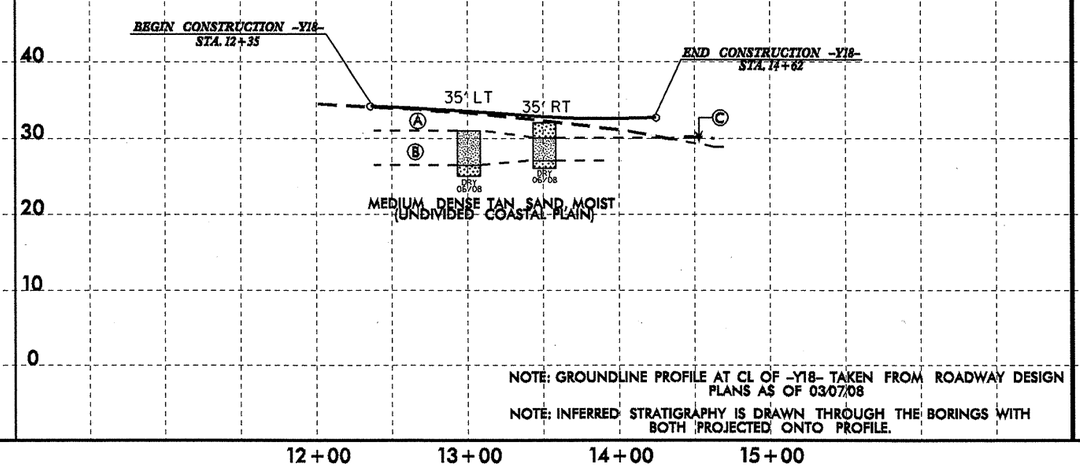
-Y18-

HALLTOWN RD (SR 1410)

Ⓐ MEDIUM DENSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓒ STIFF TAN ORANGE SILTY CLAY AND SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

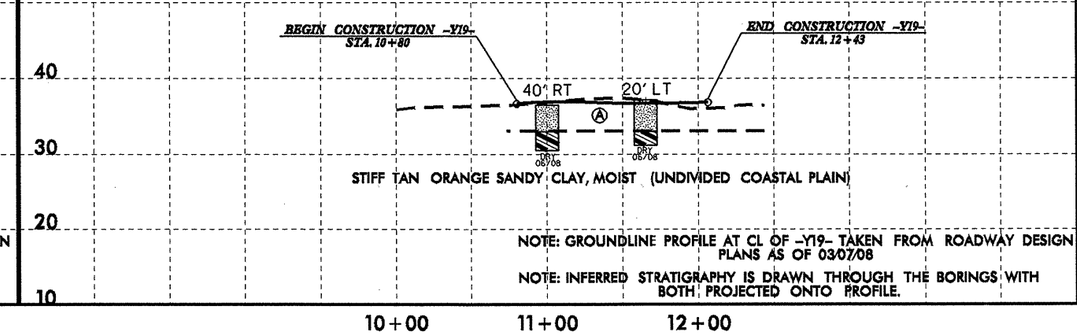


NOTE: GROUNDLINE PROFILE AT CL OF -Y18- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y19-

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -Y19- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	63
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

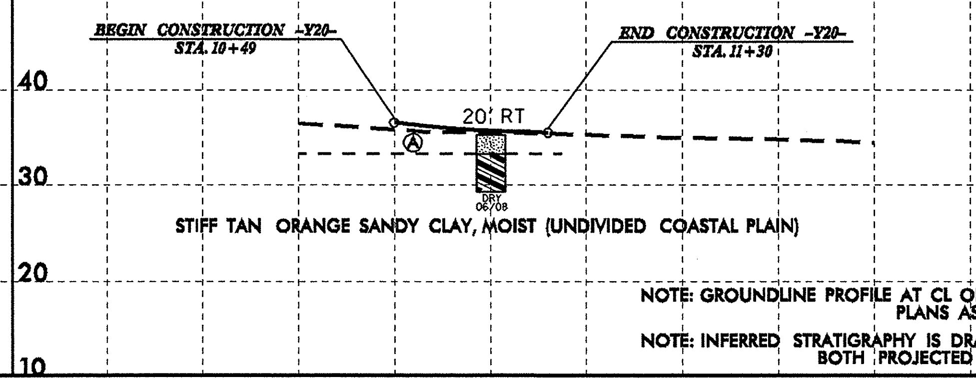
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y20-

CREEDMOOR RD (SR 1899)

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



STIFF TAN ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y20- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

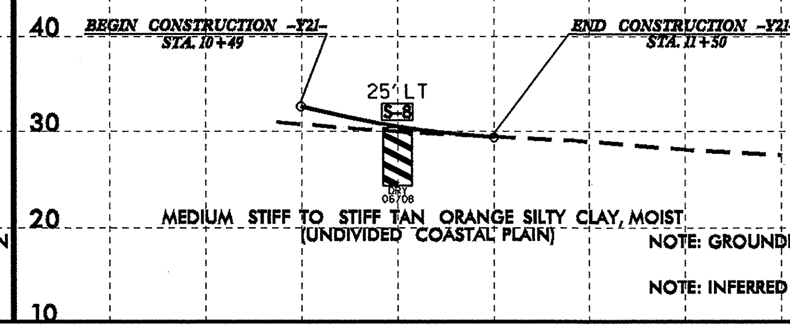
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y21-

BALSAM RD (SR 1779)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-8	25' LT	11+00	1.0-6.0	NOT ENOUGH SAMPLE										24.9	



MEDIUM STIFF TO STIFF TAN ORANGE SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y21- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y22-

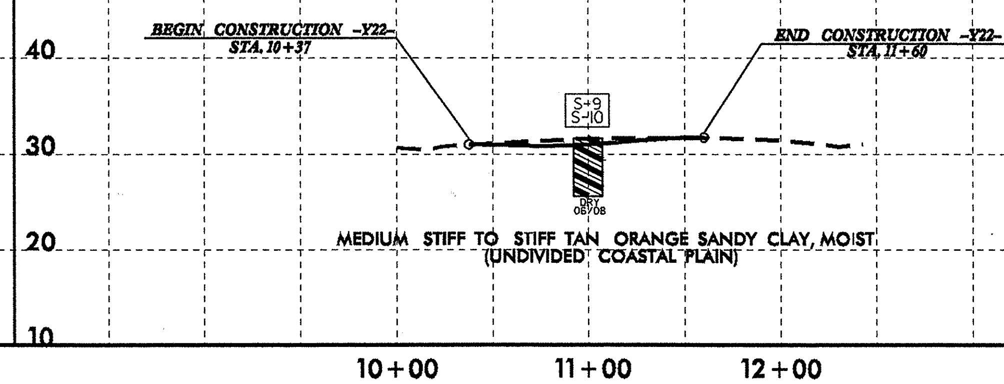
YOAPAN DR

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-9	CL	11+00	1.0-4.0	A-6(4)	32	12	2.0	50.2	15.1	32.7	100	100	57	-	-
S-10	CL	11+00	4.0-6.0	A-6(9)	37	15	4.1	38.0	19.2	38.8	100	100	70	20.5	-

NOTE: GROUNDLINE PROFILE AT CL OF -Y22- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



MEDIUM STIFF TO STIFF TAN ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

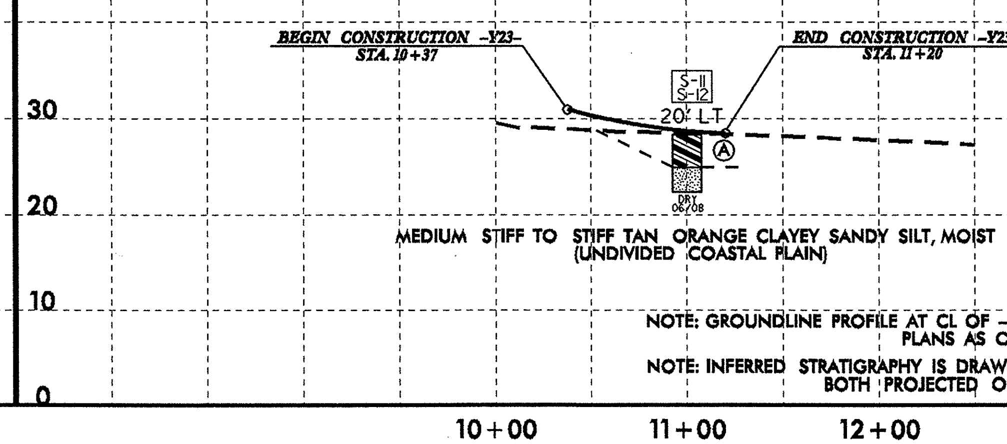
-Y23-

WHITE OAK BLVD (SR 1787)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-11	20 LT	11+00	0.0-3.5	A-6(7)	37	18	6.1	45.5	7.6	40.8	100	100	54	17.6	-
S-12	20 LT	11+00	3.5-6.0	A-4(0)	20	3	8.8	59.8	11.0	20.4	100	100	40	-	-

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)



MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y23- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	64
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

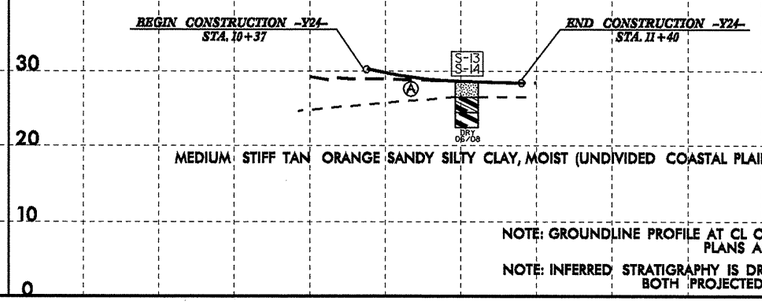
-Y24-

HEMLOCK DR (SR 1876)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-13	CL	11+04	2.0-4.0	A-6(8)	32	11	1.6	30.2	35.5	32.7	100	100	80	-	-
S-14	CL	11+04	4.0-6.0	A-7-6(21)	48	20	0.8	15.3	30.8	53.1	100	100	90	33.6	-

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -Y24- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

10+00 11+00 12+00

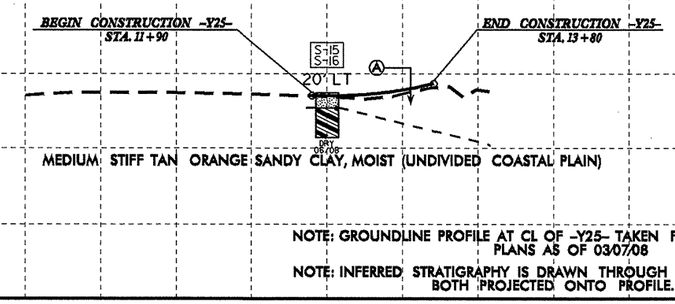
-Y25-

BIRCHWOOD LN (SR 1804)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-15	20 LT	12+00	0.0-2.0	A-4(0)	18	1	4.1	59.6	28.2	8.2	100	99	47	-	-
S-16	20 LT	12+00	2.0-6.0	A-6(9)	35	16	1.2	37.1	22.9	38.8	100	100	69	-	-

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



NOTE: GROUNDLINE PROFILE AT CL OF -Y25- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

11+00 12+00 13+00

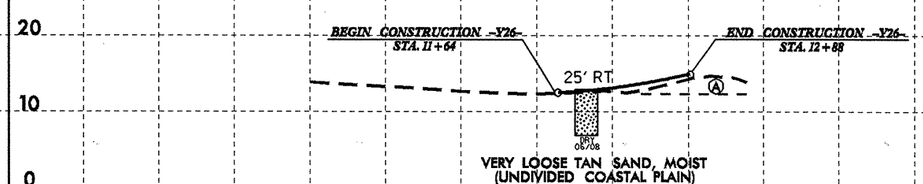
-Y26-

BIRCHWOOD LN (SR 1804)

NOTE: GROUNDLINE PROFILE AT CL OF -Y26- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)



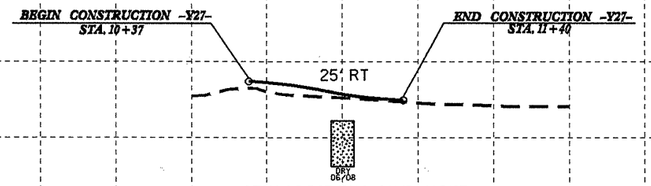
11+00 12+00 13+00

-Y27-

TONI DR (SR 1770)

NOTE: GROUNDLINE PROFILE AT CL OF -Y27- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.



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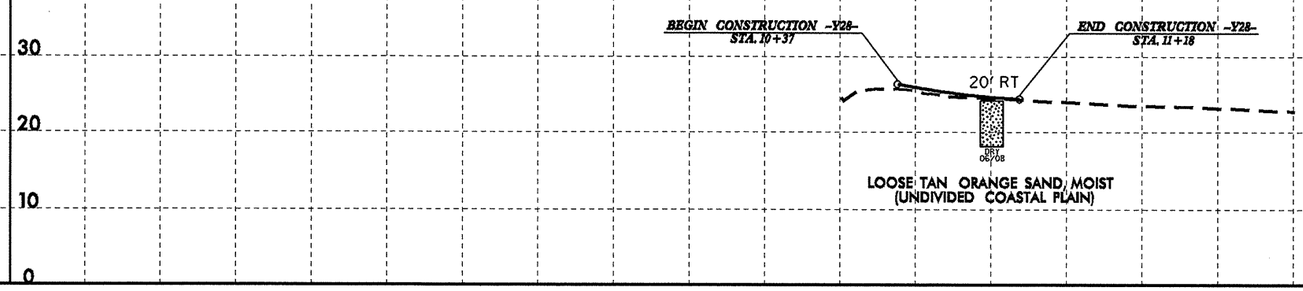
PROJECT REFERENCE NO.	SHEET NO.
U-3810	65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y28-

COLONIAL DR (SR 1752)



NOTE: GROUNDLINE PROFILE AT CL OF -Y28- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

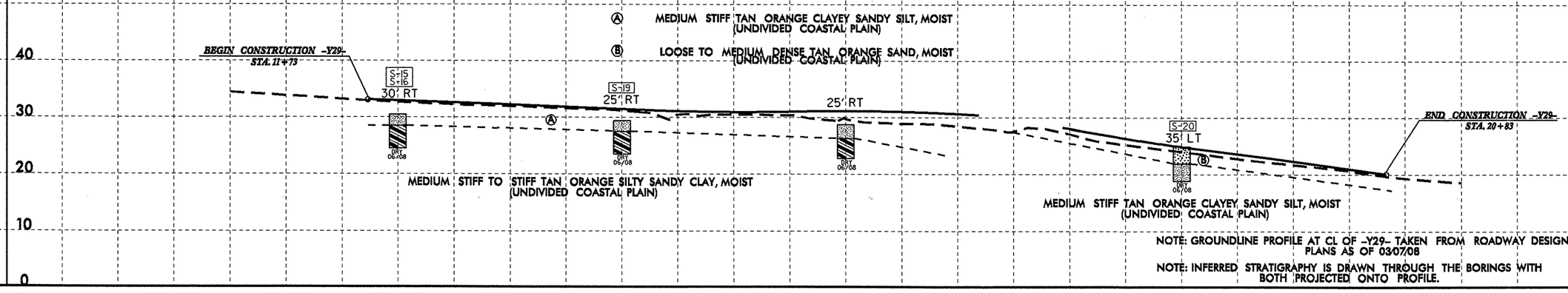
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y29-

OLD 30 RD (SR 1411)/CHARLES RD (SR 1755)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-15	30 RT	12+00	0.0-2.0	A-4(0)	18	1	4.1	59.6	28.2	8.2	100	99	47	-	-
S-16	30 RT	12+00	2.0-6.0	A-6(9)	35	16	1.2	37.1	22.9	38.8	100	100	69	-	-
S-19	25 RT	14+00	2.0-6.0	A-6(5)	34	16	4.6	46.5	8.5	40.4	100	99	53	21.0	-
S-20	35 LT	19+00	3.0-6.0	A-4(0)	23	6	2.4	62.6	10.7	24.2	100	100	43	-	-



NOTE: GROUNDLINE PROFILE AT CL OF -Y29- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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Assumed Datum

PROJECT REFERENCE NO.	SHEET NO.
U-3810	66
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y31-

VICTORIA RD (SR 1480)

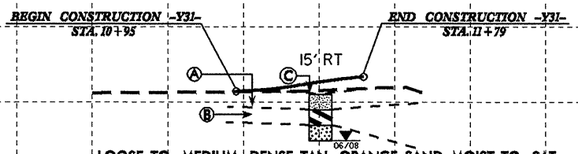
NOTE: GROUNDLINE PROFILE AT CL OF -Y31- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

Ⓐ VERY STIFF TAN ORANGE SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF TO STIFF TAN ORANGE SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓒ VERY STIFF TAN ORANGE SANDY SILT, MOIST (ROADWAY EMBANKMENT)



LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

-Y32-

SHEFFIELD DR (SR 1484)

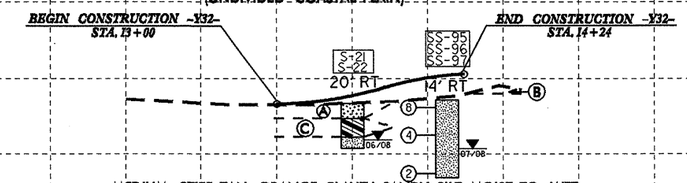
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-21	20' RT	13+50	2.0-4.5	A-6(8)	38	21	3.6	51.3	10.7	34.3	100	99	54	22.6	-
S-22	20' RT	13+50	4.5-6.0	A-4(2)	28	8	0.4	59.2	14.1	26.3	100	100	56	-	-
SS-95	14' RT	14+13	0.5-1.5	A-4(0)	19	NP	4.2	65.3	12.4	18.1	100	99	44	-	-
SS-96	14' RT	14+13	3.7-5.2	A-4(2)	29	9	1.6	64.9	11.4	22.2	100	100	53	-	-
SS-97	14' LT	14+13	8.7-10.2	A-4(0)	22	2	0.8	64.9	12.2	22.2	100	100	47	-	-

Ⓐ VERY LOOSE TAN ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

Ⓒ MEDIUM STIFF TAN ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)



MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y32- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y33-

STEVE AMAN DR

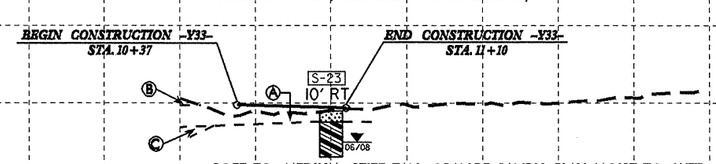
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-23	10' RT	11+00	1.5-6.0	A-6(7)	38	17	4.4	47.5	9.7	38.4	100	99	56	-	-

Ⓐ VERY LOOSE TAN ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

Ⓒ SOFT TO MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



SOFT TO MEDIUM STIFF TAN ORANGE SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

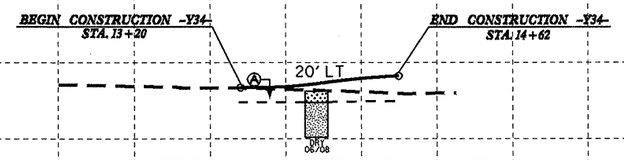
NOTE: GROUNDLINE PROFILE AT CL OF -Y33- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y34-

WALNUT CREEK RD

Ⓐ VERY LOOSE TO LOOSE TAN ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)



STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y34- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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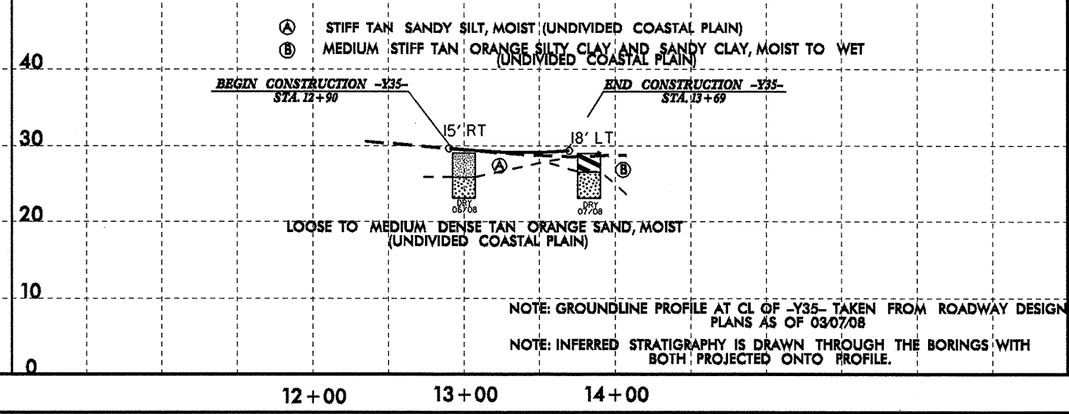
PROJECT REFERENCE NO.	SHEET NO.
U-3810	67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y35-

SWAIN LOOP RD (SR 1465)

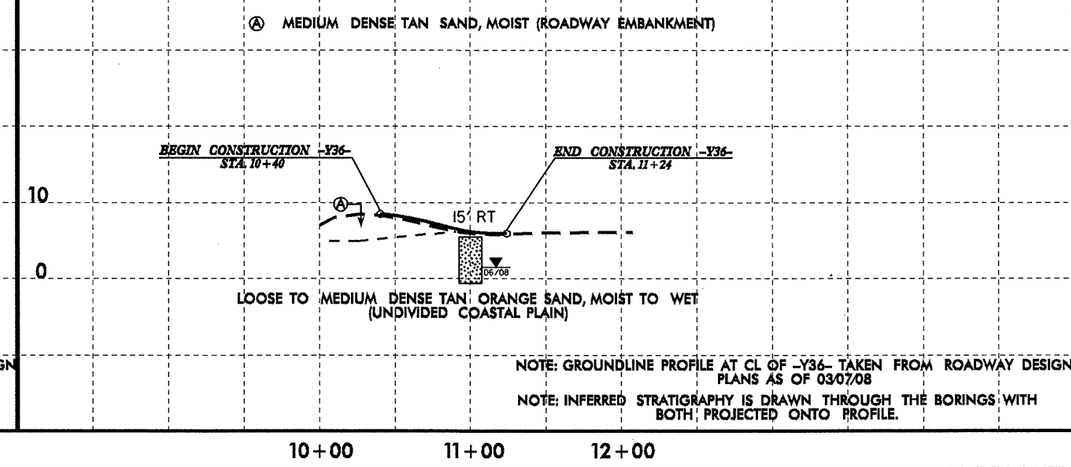


NOTE: GROUNDLINE PROFILE AT CL OF -Y35- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y36-

EAST CAROLE DR (SR 1453)



NOTE: GROUNDLINE PROFILE AT CL OF -Y36- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

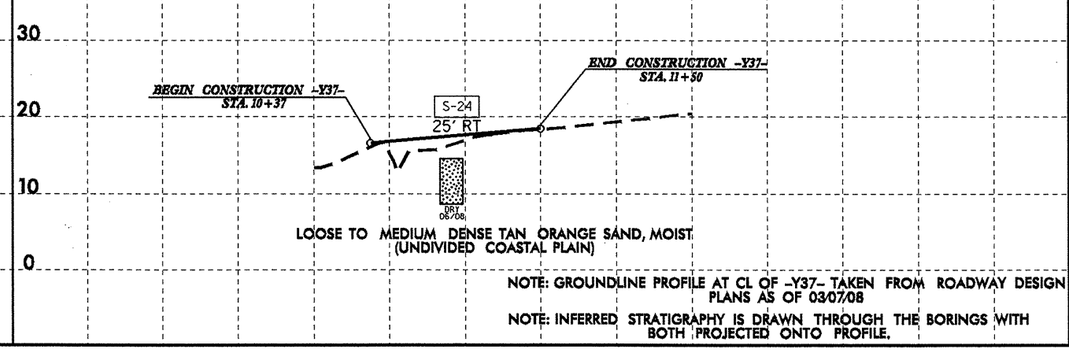
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y37-

WEST THOMAS AVE (SR 1455)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-24	25 RT	10+91	0.0-6.0	A-2-4(0)	21	NP	8.9	79.4	4.6	7.1	100	99	16	-	-



NOTE: GROUNDLINE PROFILE AT CL OF -Y37- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

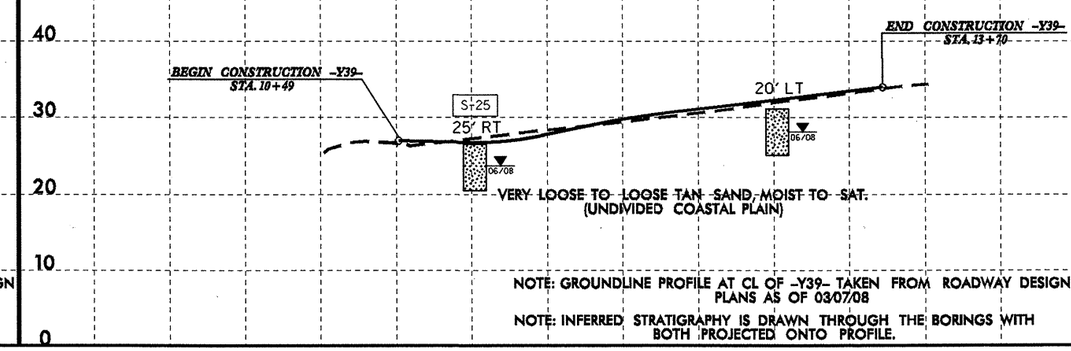
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y39-

HUNTERS TR (SR 1860)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-25	25 RT	11+00	1.0-2.0	A-2-4(0)	28	NP	13.8	70.8	9.3	6.1	100	98	18	42.9	-



NOTE: GROUNDLINE PROFILE AT CL OF -Y39- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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PROJECT REFERENCE NO.	SHEET NO.
U-3810	68
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

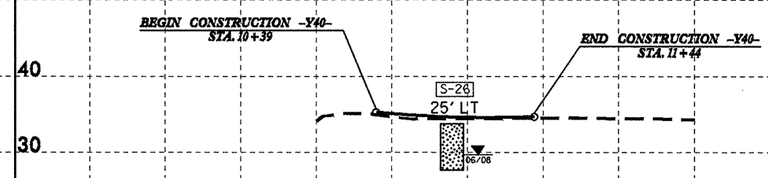
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y40-

MARSHALL FARM RD (SR 2323)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-26	25 LT	10+90	0.0-5.0	A-2-4(0)	20	NP	2.8	56.4	26.7	14.1	100	100	32	-	-



VERY LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT.
(UNDIVIDED COASTAL PLAIN)

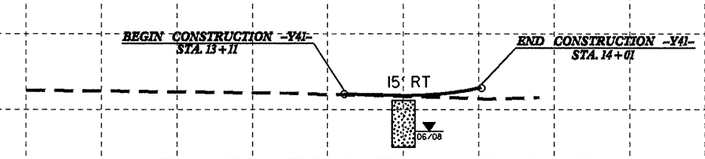
NOTE: GROUNDLINE PROFILE AT CL OF -Y40- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

10+00 11+00 12+00

-Y41-

MARSHALL CHAPEL RD (SR 1419)



VERY LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT.
(UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y41- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

12+00 13+00 14+00

-Y42-

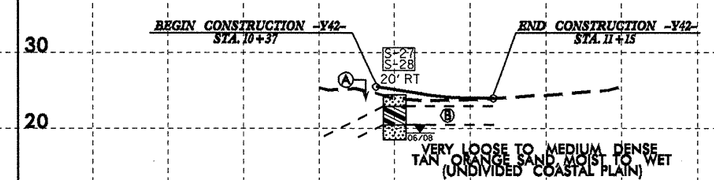
BURNETT ST (SR 1739)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-27	20 RT	10+50	1.5-4.0	A-6(3)	28	11	0.8	56.8	12.1	30.3	100	100	51	24.5	-
S-28	20 RT	10+50	4.0-6.0	A-2-4(0)	20	NP	0.8	86.4	2.7	10.1	100	100	15	-	-

Ⓐ VERY LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST
(UNDIVIDED COASTAL PLAIN)

Ⓑ MEDIUM STIFF GRAY ORANGE SANDY CLAY, MOIST
(UNDIVIDED COASTAL PLAIN)



VERY LOOSE TO MEDIUM DENSE
TAN ORANGE SAND MOIST TO WET
(UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y42- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

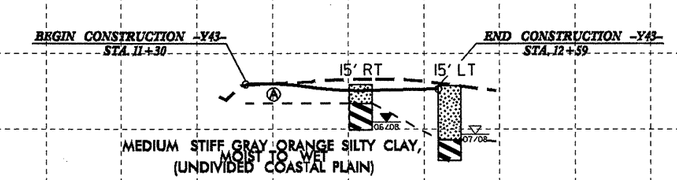
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

10+00 11+00 12+00

-Y43-

BRIDGE SIDE DR (SR 1811)

Ⓐ VERY LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST
(UNDIVIDED COASTAL PLAIN)



MEDIUM STIFF GRAY ORANGE SILTY CLAY,
MOIST TO WET
(UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y43- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

10+00 11+00 12+00 13+00 14+00

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11-DEC-2008 10:41
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AT GEO248338

PROJECT REFERENCE NO.	SHEET NO.
U-3810	69
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

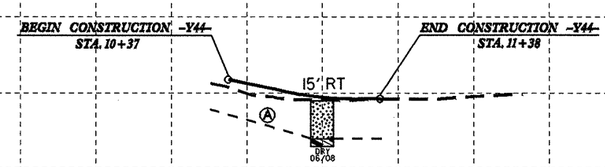
-Y44-

JEANETTE DR

NOTE: GROUNDLINE PROFILE AT CL OF -Y44- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

Ⓐ VERY LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)



MEDIUM STIFF GRAY ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

30 20 10 0

10+00 11+00 12+00

-Y45-

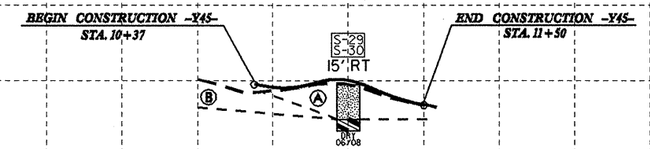
LAMOTTS CREEK RD

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-29	15' RT	11+00	0.0-4.5	A-4(0)	27	7	6.1	61.8	7.9	24.2	100	97	44	-	-
S-30	15' RT	11+00	4.5-6.0	A-6(13)	40	23	1.2	42.2	18.2	38.4	100	100	68	24.1	-

Ⓐ MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ LOOSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)



MEDIUM STIFF GRAY ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y45- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

40 30 20 10 0

10+00 11+00 12+00

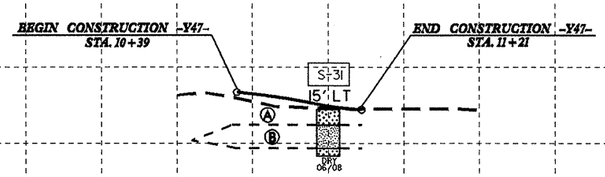
-Y47-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-31	15' LT	11+00	2.0-5.0	A-4(1)	29	10	6.1	59.4	6.3	28.3	100	98	40	21.0	-

Ⓐ LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y47- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

40 30 20 10 0

10+00 11+00 12+00

-Y48-

ROCKY RUN RD (SR 1413)

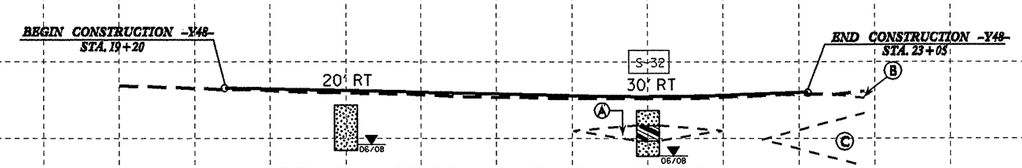
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-32	30' RT	22+00	2.0-4.0	A-6(1)	27	12	9.5	57.8	8.5	24.2	100	97	39	-	-

Ⓐ STIFF TAN ORANGE SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ LOOSE MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT. (ROADWAY EMBANKMENT)

Ⓒ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



LOOSE TO MEDIUM DENSE TAN ORANGE SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

NOTE: GROUNDLINE PROFILE AT CL OF -Y48- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

40 30 20 10

19+00 20+00 21+00 22+00 23+00

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10-DEC-2008 14:21
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PROJECT REFERENCE NO.	SHEET NO.
U-3810	70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

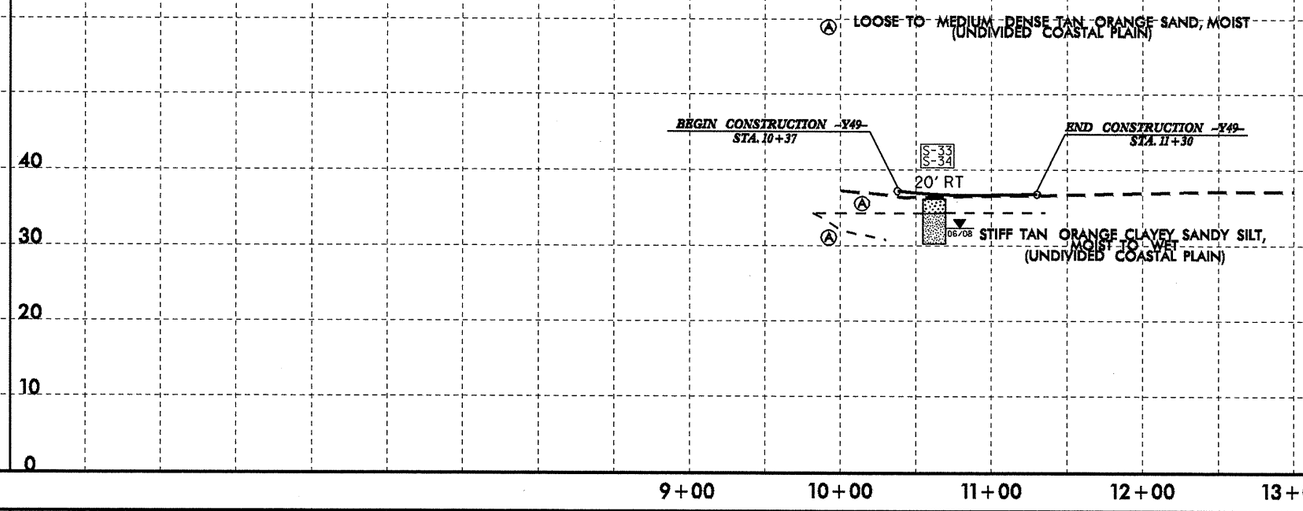
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y49-

CARVER DR

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-33	20 RT	10+62	2.0-4.0	A-4(0)	18	4	4.6	60.6	10.5	24.2	100	99	40	-	-
S-34	20 RT	10+62	4.0-6.0	A-4(2)	27	10	3.2	50.9	9.5	36.4	100	100	50	18.6	-



NOTE: GROUNDLINE PROFILE AT CL OF -Y49- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

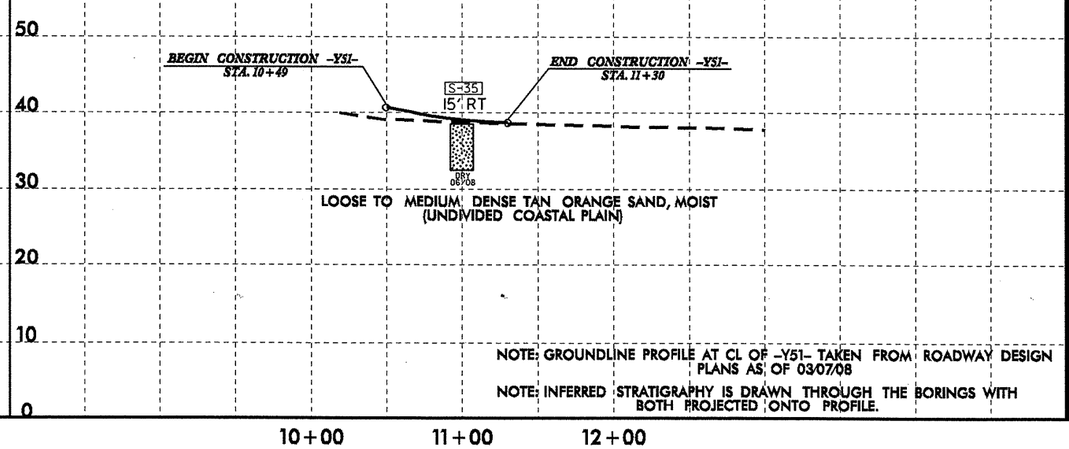
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y51-

EVERGREEN DR (SR 2201)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-35	15 RT	11+00	2.0-4.5	A-2-4(0)	26	8	3.4	63.2	7.1	26.3	100	100	35	-	-

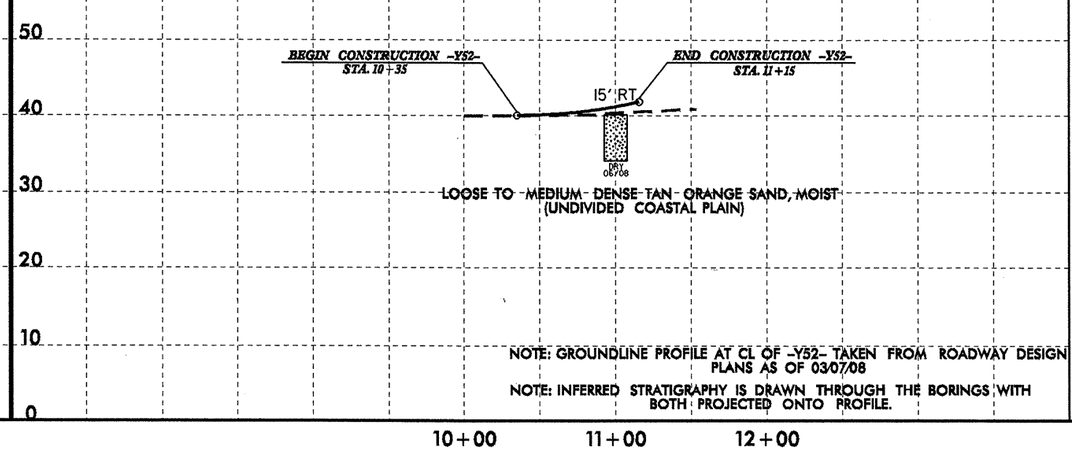


NOTE: GROUNDLINE PROFILE AT CL OF -Y51- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

-Y52-

BARBERA AVE (SR 1452)



NOTE: GROUNDLINE PROFILE AT CL OF -Y52- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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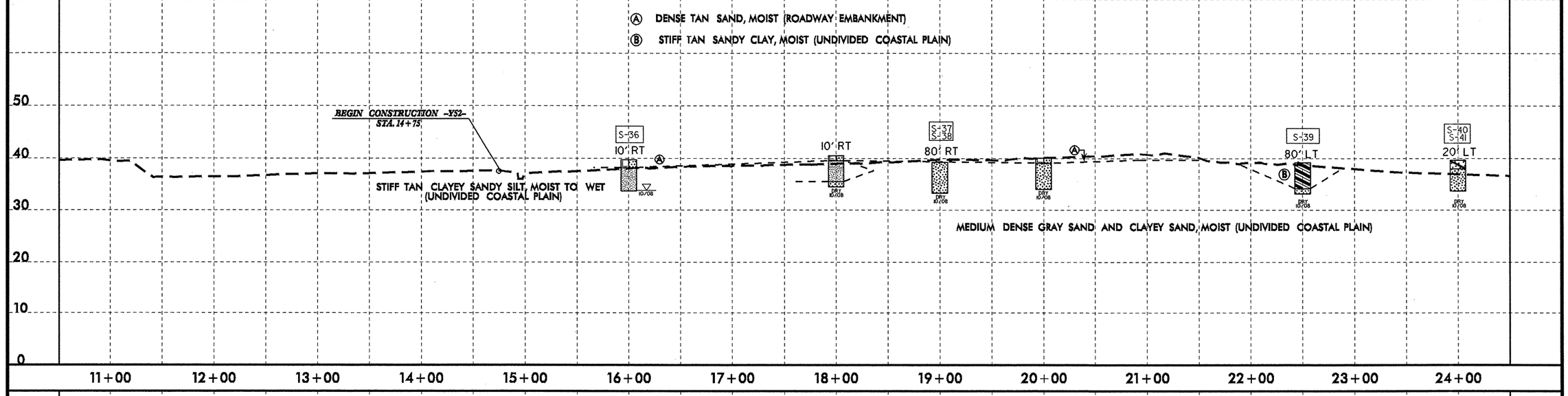
PROJECT REFERENCE NO.	SHEET NO.
U-3810	71
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

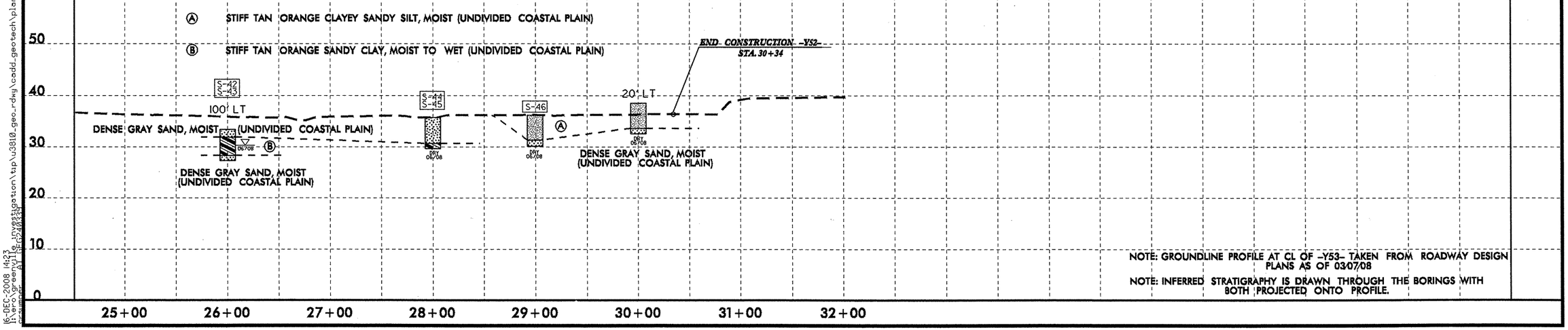
-Y53-

FREEDOM WAY (NC 24)



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-36	10 RT	16+00	1.5-6.0	A-4(0)	19	7	6.5	56.8	10.5	26.3	100	99	40	17.3	-
S-37	80 RT	19+00	2.0-4.5	A-2-4(0)	25	9	8.5	62.6	2.6	26.3	100	99	31	-	-
S-38	80 RT	19+00	4.5-6.0	A-2-4(0)	23	NP	0.6	80.4	4.8	14.1	100	100	22	-	-
S-39	80 LT	22+50	0.5-5.0	A-6(1)	33	14	6.1	58.4	1.2	34.3	100	100	37	20.3	-
S-40	20 LT	24+00	0.0-1.7	A-2-6(0)	27	12	5.9	61.0	4.8	28.3	100	100	35	18.9	-
S-41	20 LT	24+00	1.7-6.0	A-2-4(0)	21	NP	0.1	90.5	2.3	7.1	100	100	12	-	-
S-42	100 LT	26+00	1.5-5.0	A-6(2)	26	11	4.0	51.5	8.1	36.4	100	100	46	27.4	-
S-43	100 LT	26+00	5.0-6.0	A-2-4(0)	21	5	8.8	65.6	3.4	22.2	100	99	28	-	-
S-44	CL	28+00	2.0-5.0	A-2-4(0)	27	7	9.5	62.8	3.4	24.2	100	98	30	22.5	-
S-45	CL	28+00	5.0-6.0	A-6(2)	23	11	4.0	51.1	10.5	34.3	100	100	47	-	-
S-46	CL	29+00	0.0-5.0	A-4(0)	25	7	6.1	60.8	7.1	26.3	100	100	38	-	-



NOTE: GROUNDLINE PROFILE AT CL OF -Y53- TAKEN FROM ROADWAY DESIGN PLANS AS OF 03/07/08

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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16-DEC-2008 14:23
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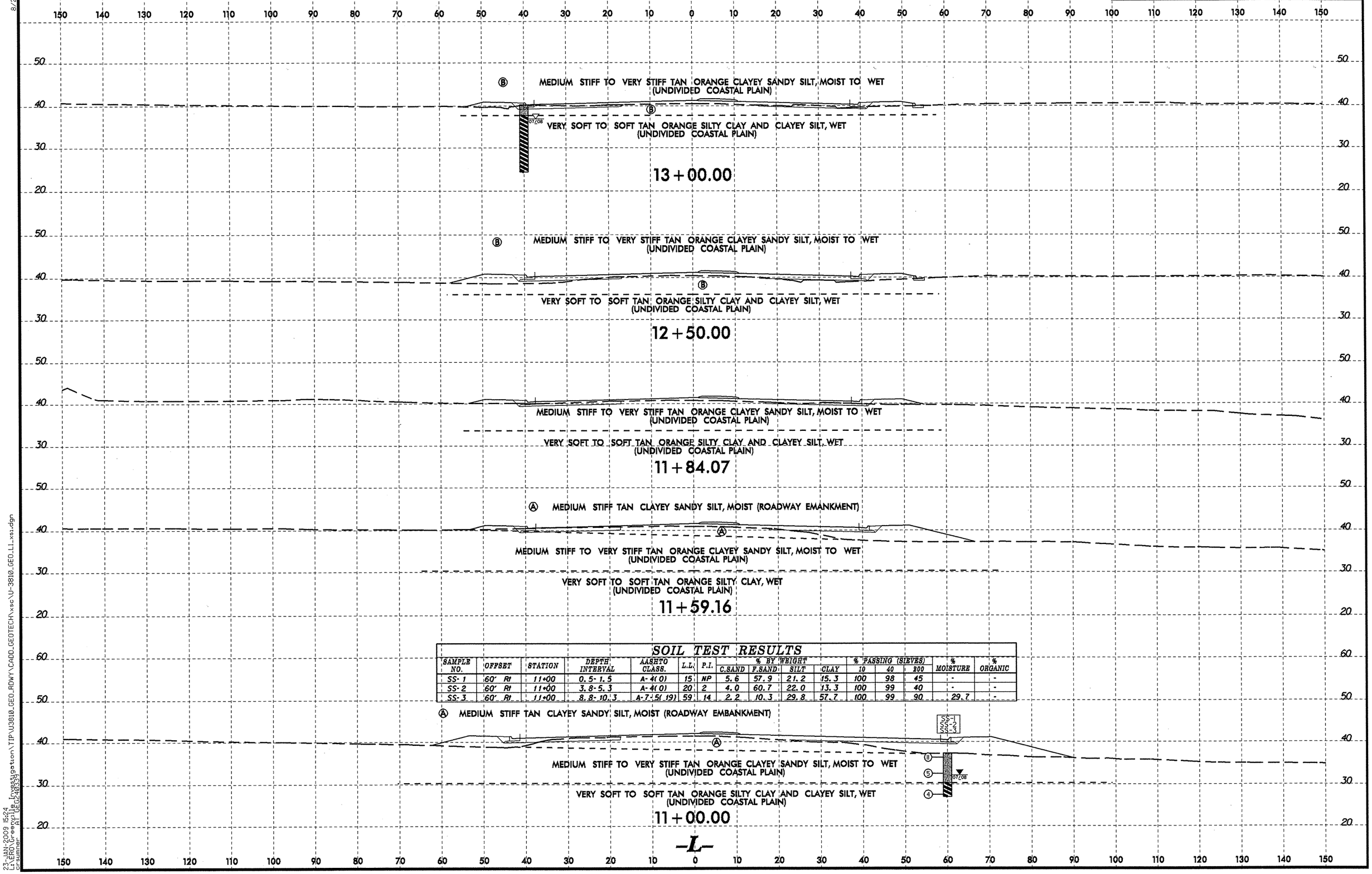
PROJ. REFERENCE NO.	SHEET NO.
U-3810	72

0 5 10



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-1	60' Rt	11+00	0.5-1.5	A-4(0)	15	NP	5.6	57.9	21.2	15.3	100	98	45	-	-
SS-2	60' Rt	11+00	3.8-5.3	A-4(0)	20	2	4.0	60.7	22.0	13.3	100	99	40	-	-
SS-3	60' Rt	11+00	8.8-10.3	A-7-5(19)	59	14	2.2	10.3	29.8	57.7	100	99	90	29.7	-

8/23/99

23-JAN-2009 15:24
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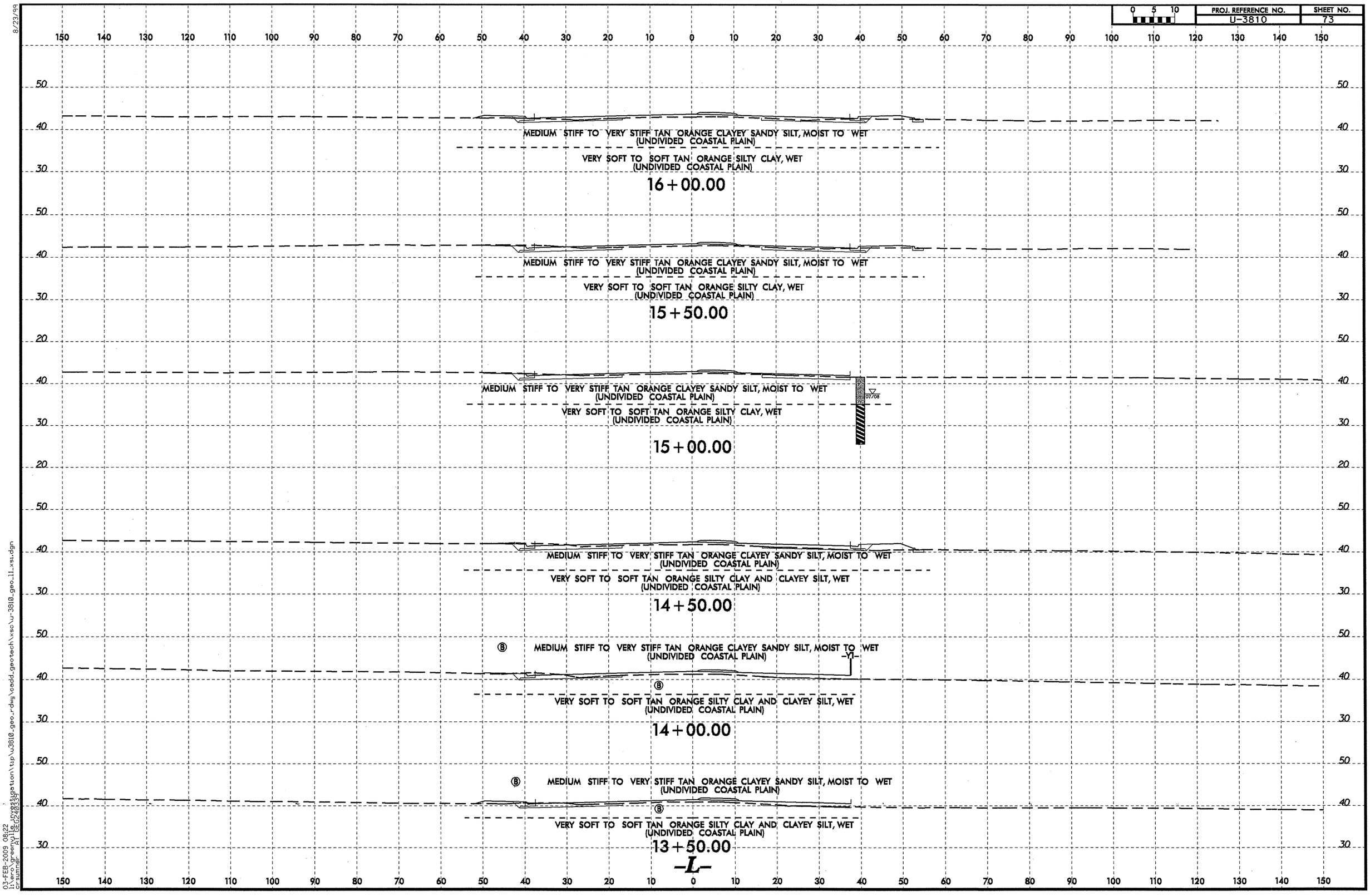

8/23/99

03-FEB-2009 08:22
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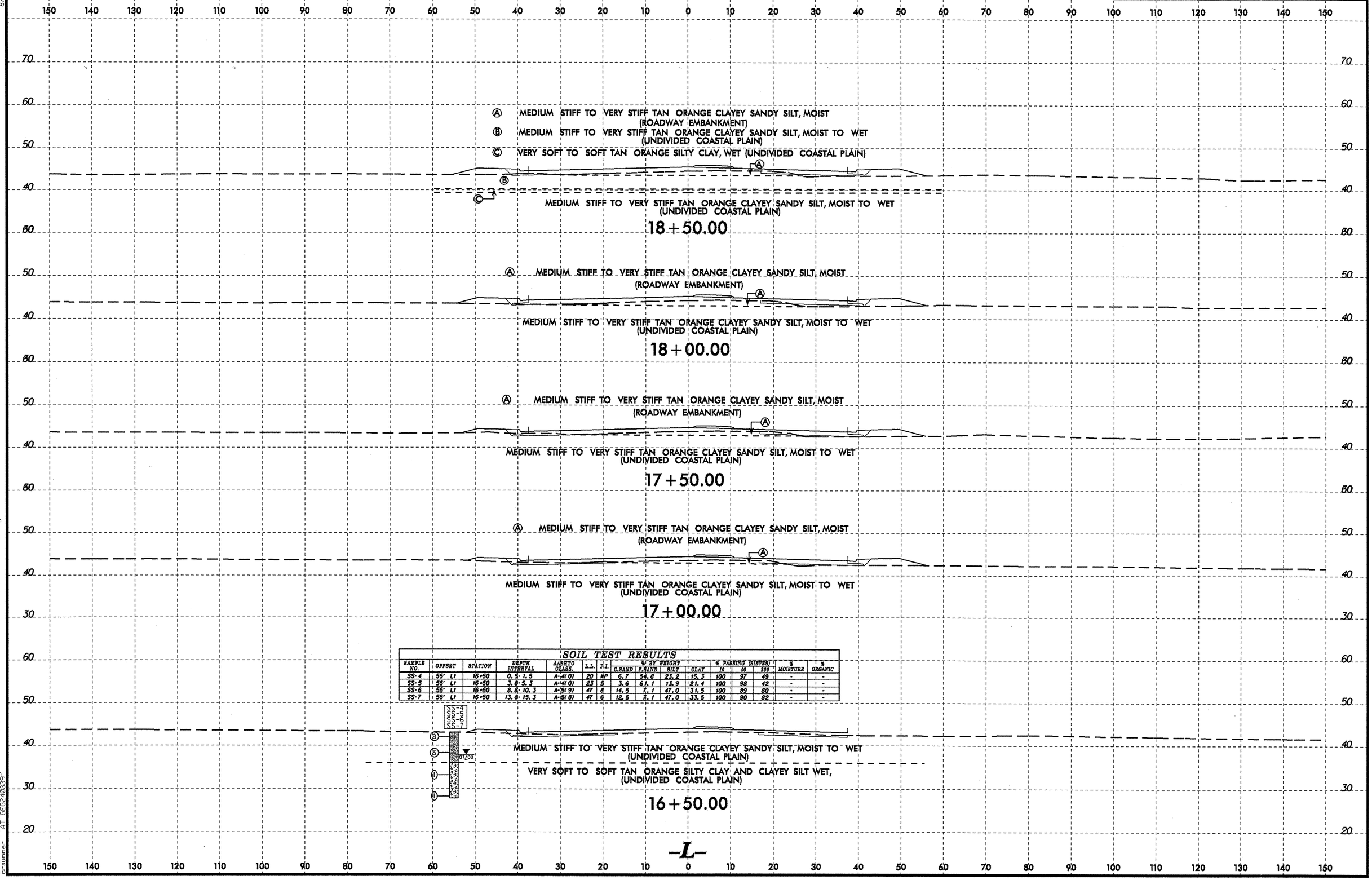

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-4	55' LT	16+50	0.5-1.5	A-4(0)	20	NP	6.7	54.8	23.2	15.3	100	97	49	-	-
SS-5	55' LT	16+50	3.8-5.3	A-4(0)	23	5	3.6	61.1	13.9	21.4	100	98	42	-	-
SS-6	55' LT	16+50	8.8-10.3	A-5(9)	47	8	14.5	7.1	47.0	31.5	100	89	80	-	-
SS-7	55' LT	16+50	13.8-15.3	A-5(8)	47	6	12.5	7.1	47.0	33.5	100	90	82	-	-

8/23/99
23-JAN-2009 15:21
LEGEND-Creek
Summer
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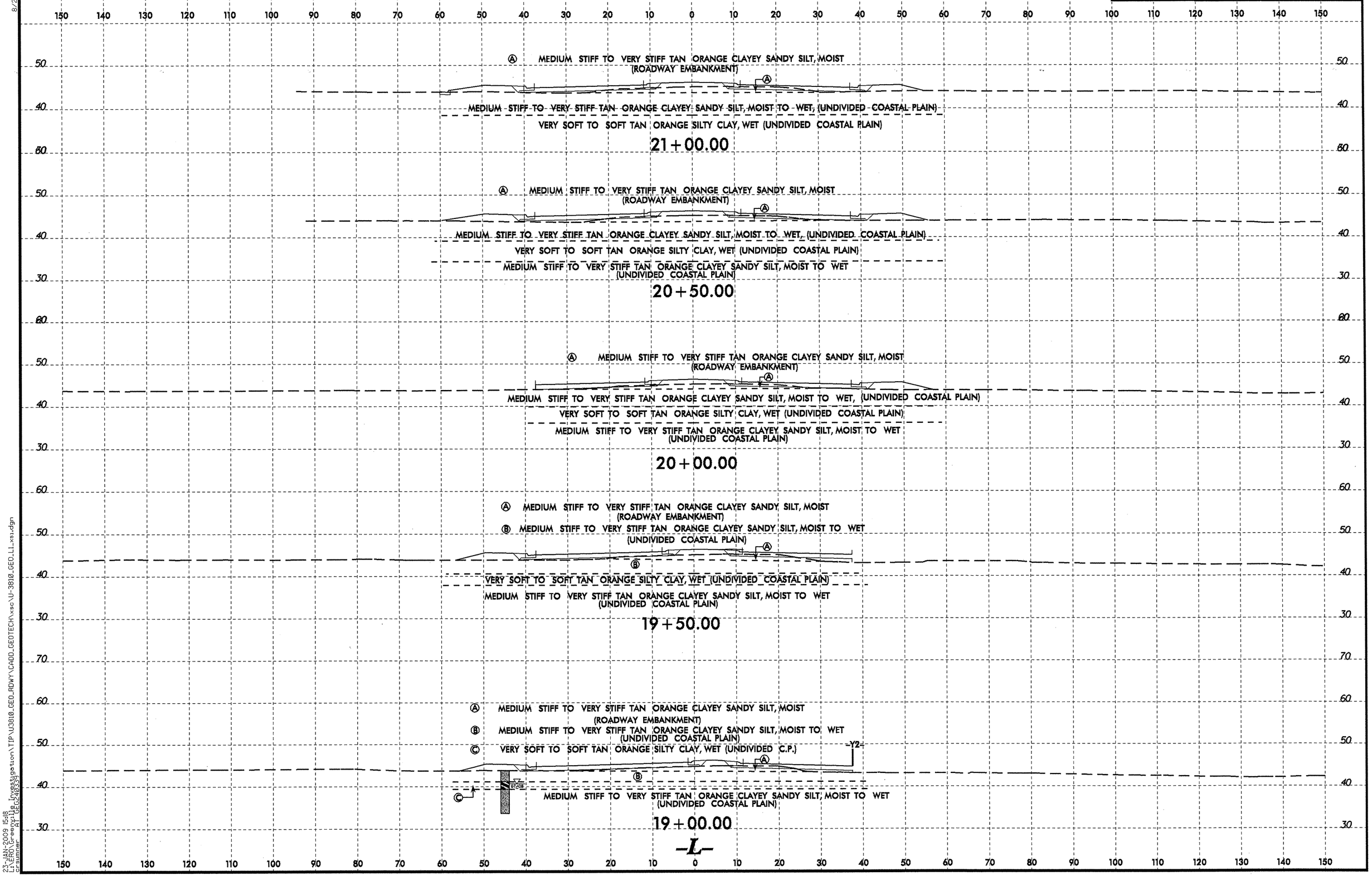
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	U-3810	75



8/23/99

23-JAN-2009 15:18
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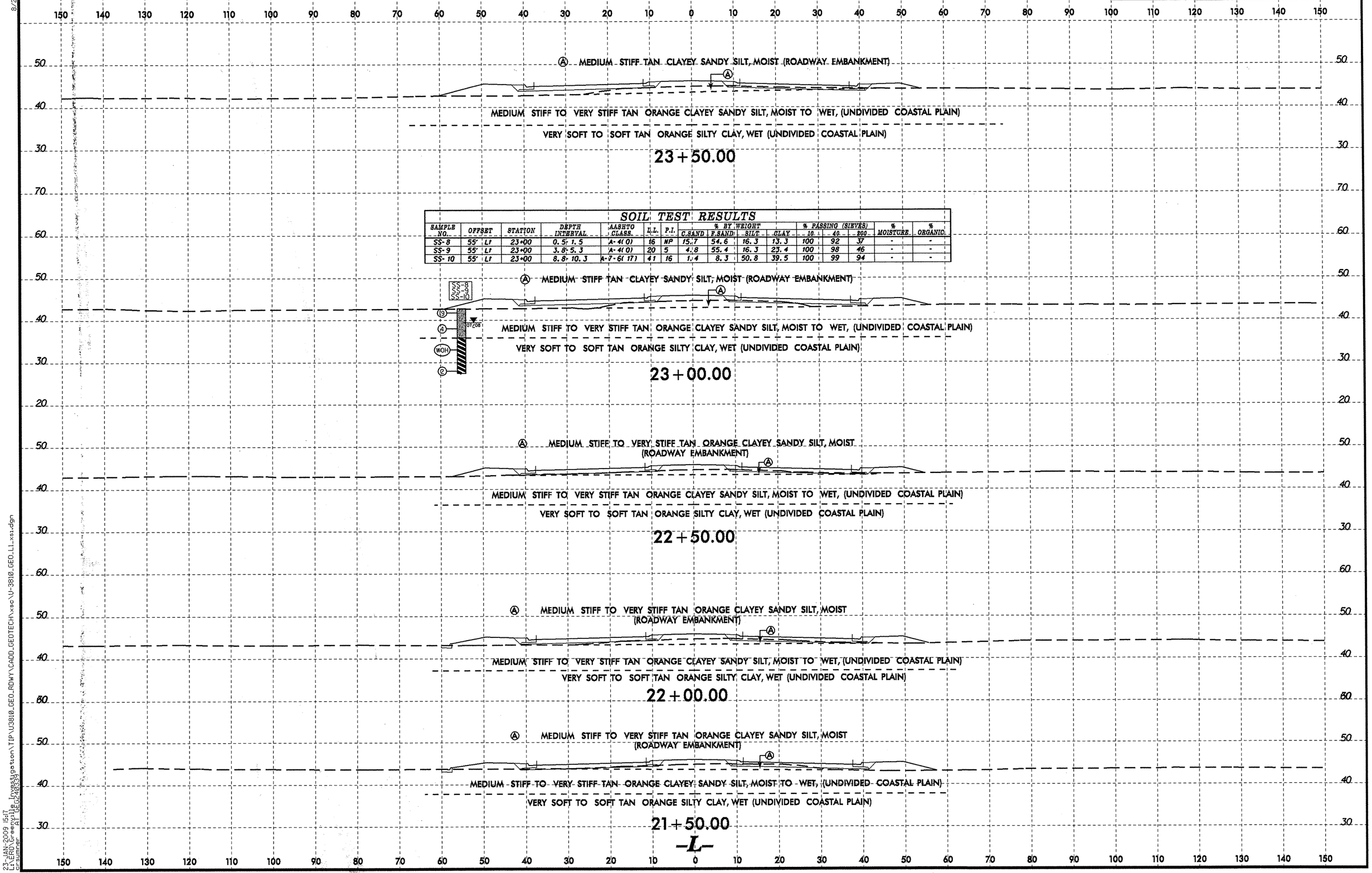
PROJ. REFERENCE NO.	SHEET NO.
U-3810	76



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-8	55' Lt	23+00	0.5-1.5	A-4(0)	16	NP	15.7	54.6	16.3	13.3	100	92	37	-	-
SS-9	55' Lt	23+00	3.8-5.3	A-4(0)	20	5	4.8	55.4	16.3	23.4	100	98	46	-	-
SS-10	55' Lt	23+00	8.8-10.3	A-7-6(17)	41	16	1.4	8.3	50.8	39.5	100	99	94	-	-

8/23/99
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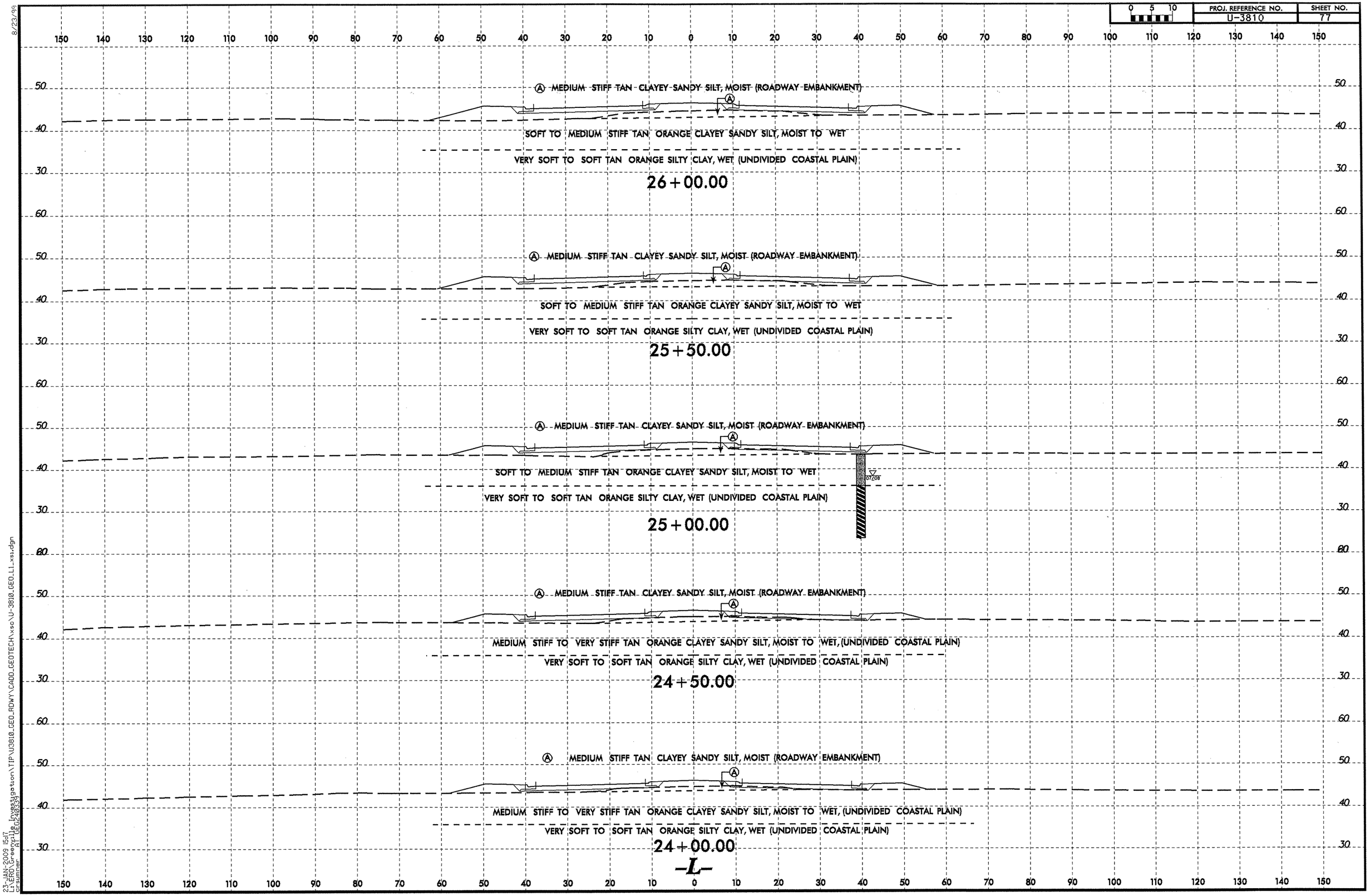

8/23/99

23-JAN-2009 15:17
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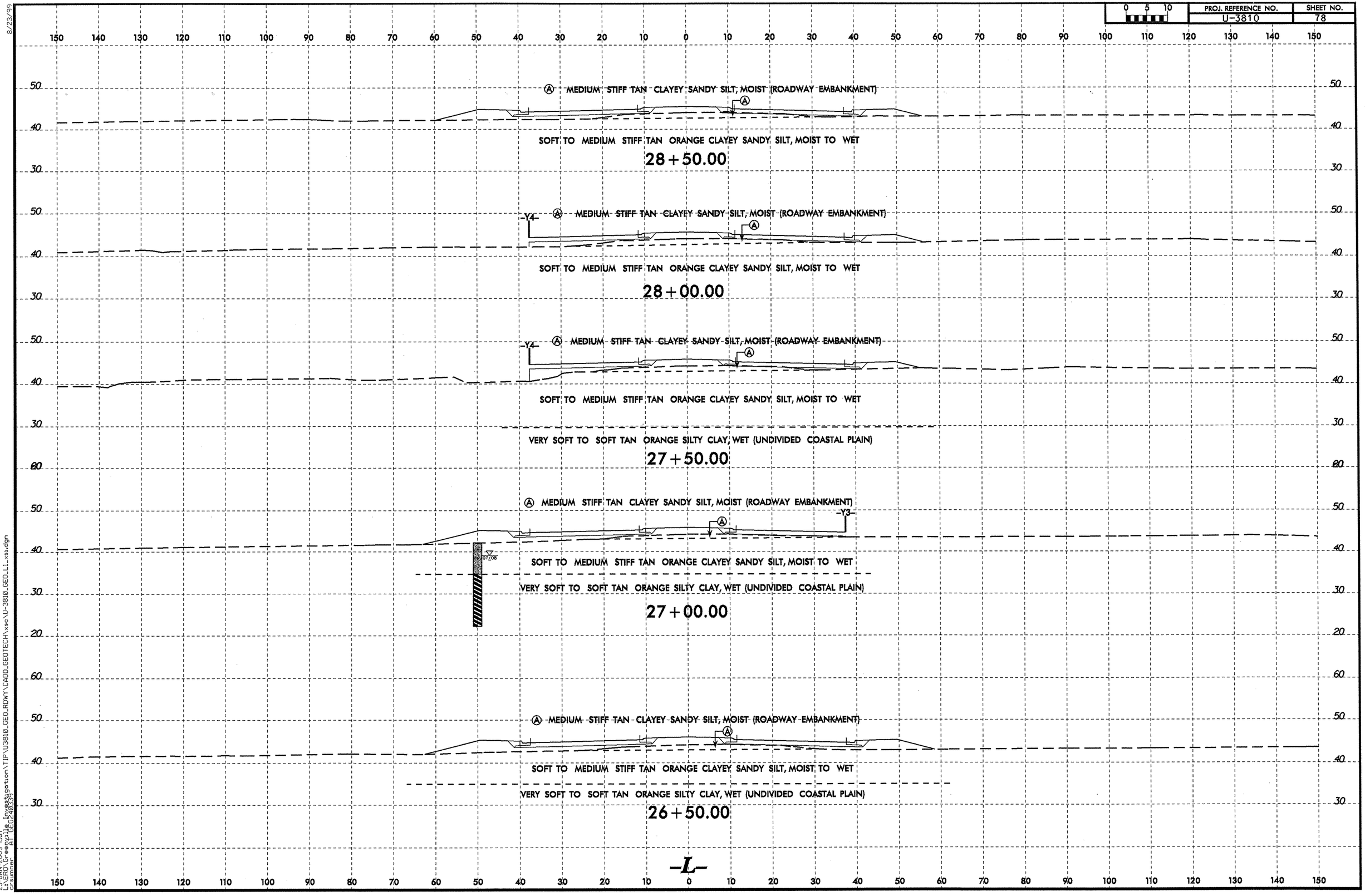

8/23/99

23-JAN-2009 15:17
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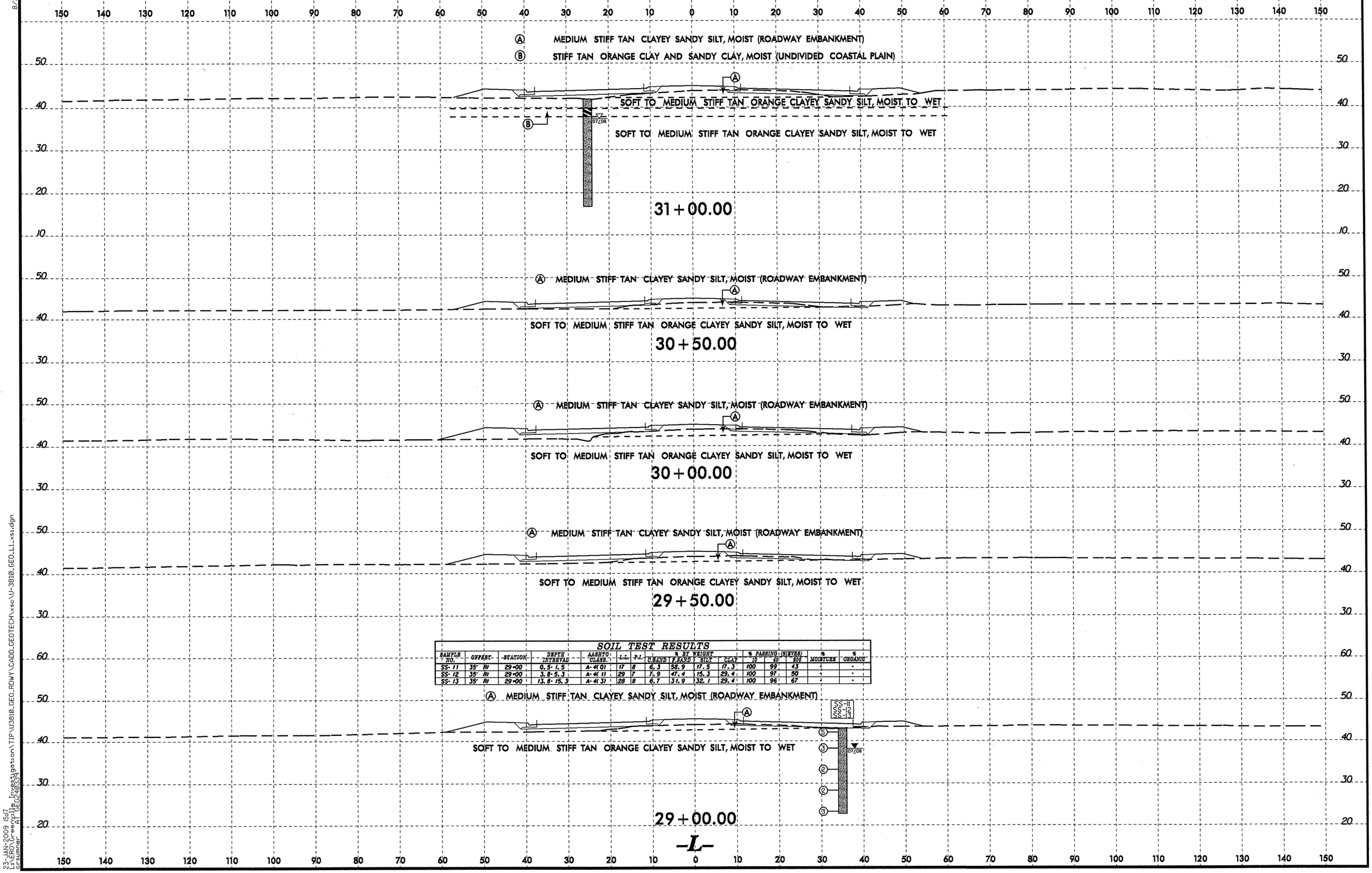
crsumner AT GEO240339



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-11	35'	Rt	29+00	0.5-1.5	A-4(0)	17	8	6.3	58.9	17.5	17.3	100	99	43	-	-
SS-12	35'	Rt	29+00	3.8-5.3	A-4(11)	29	7	7.9	47.4	15.3	29.4	100	97	50	-	-
SS-13	35'	Rt	29+00	13.8-15.3	A-4(3)	28	8	6.7	31.9	32.1	29.4	100	96	67	-	-

8/23/99
23-JAN-2009 15:17
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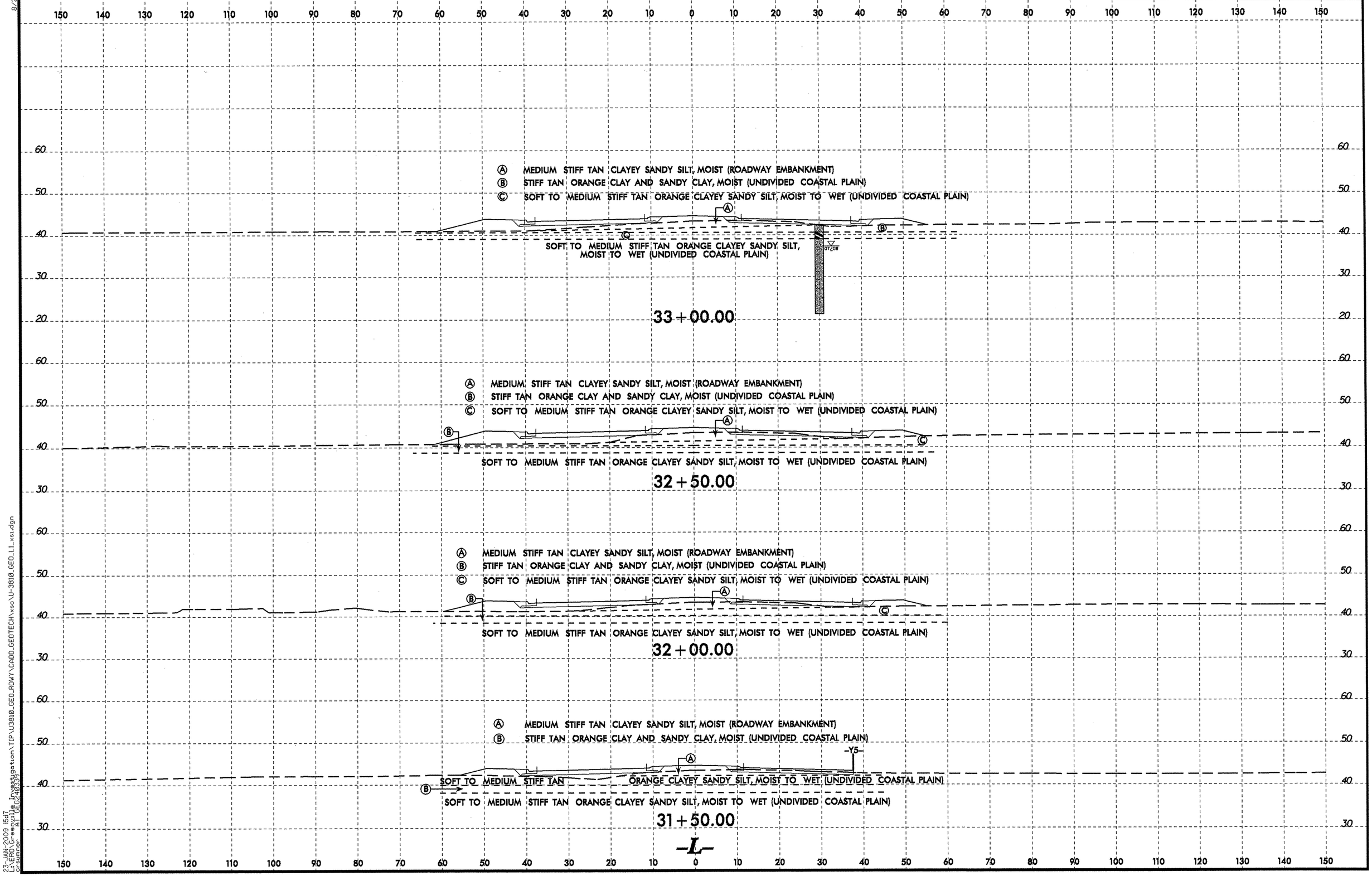

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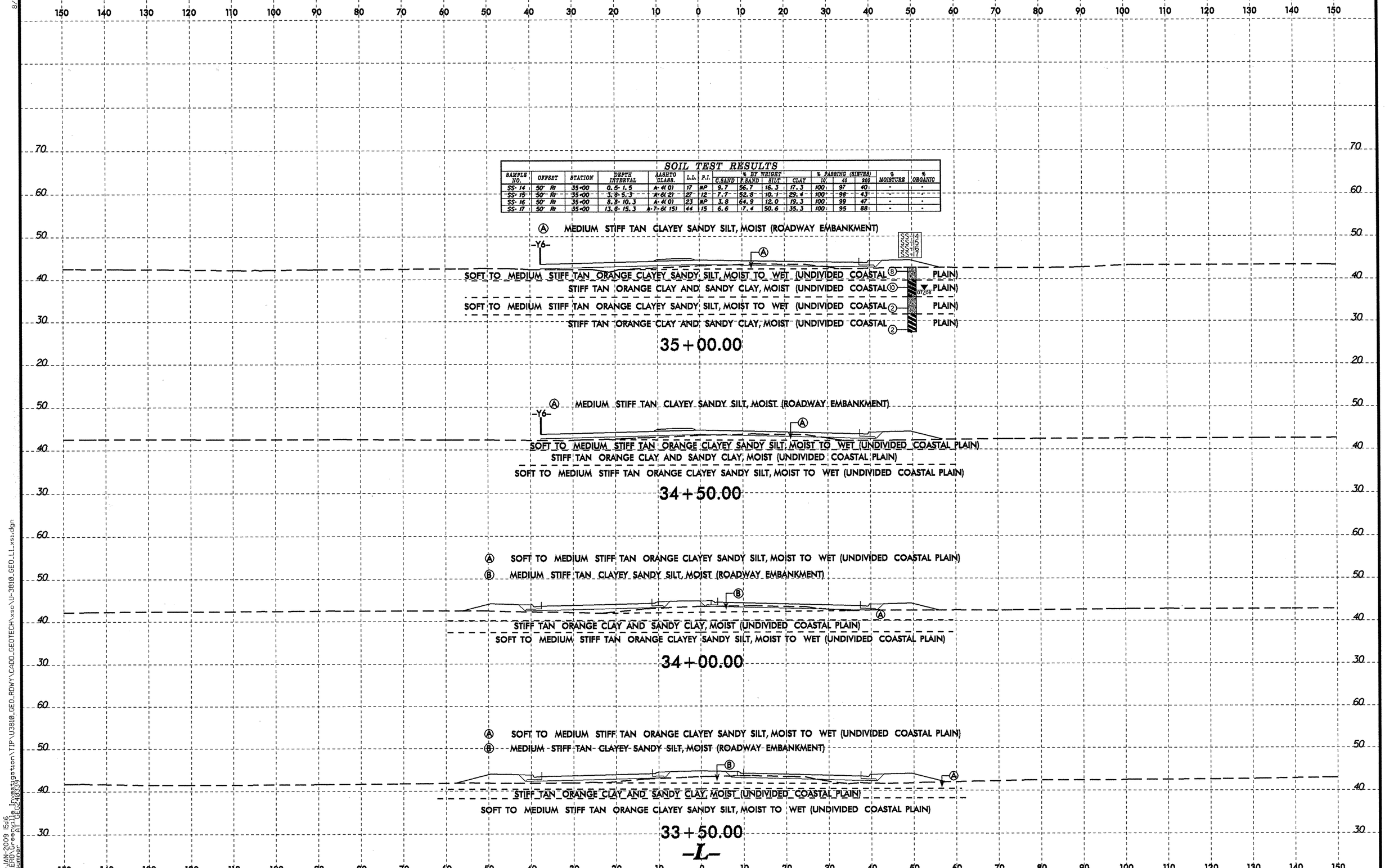
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-14	50' Rt	35+00	0.0-1.5	A-4(0)	17	NP	9.7	56.7	16.3	17.3	100	97	40	-	-
SS-15	50' Rt	35+00	3.0-5.3	A-6(2)	27	12	7.7	52.8	10.1	29.4	100	96	43	-	-
SS-16	50' Rt	35+00	8.8-10.3	A-4(0)	23	NP	3.8	64.9	12.0	19.3	100	99	47	-	-
SS-17	50' Rt	35+00	13.8-15.3	A-7-6(15)	44	15	6.6	17.4	50.6	35.3	100	95	88	-	-



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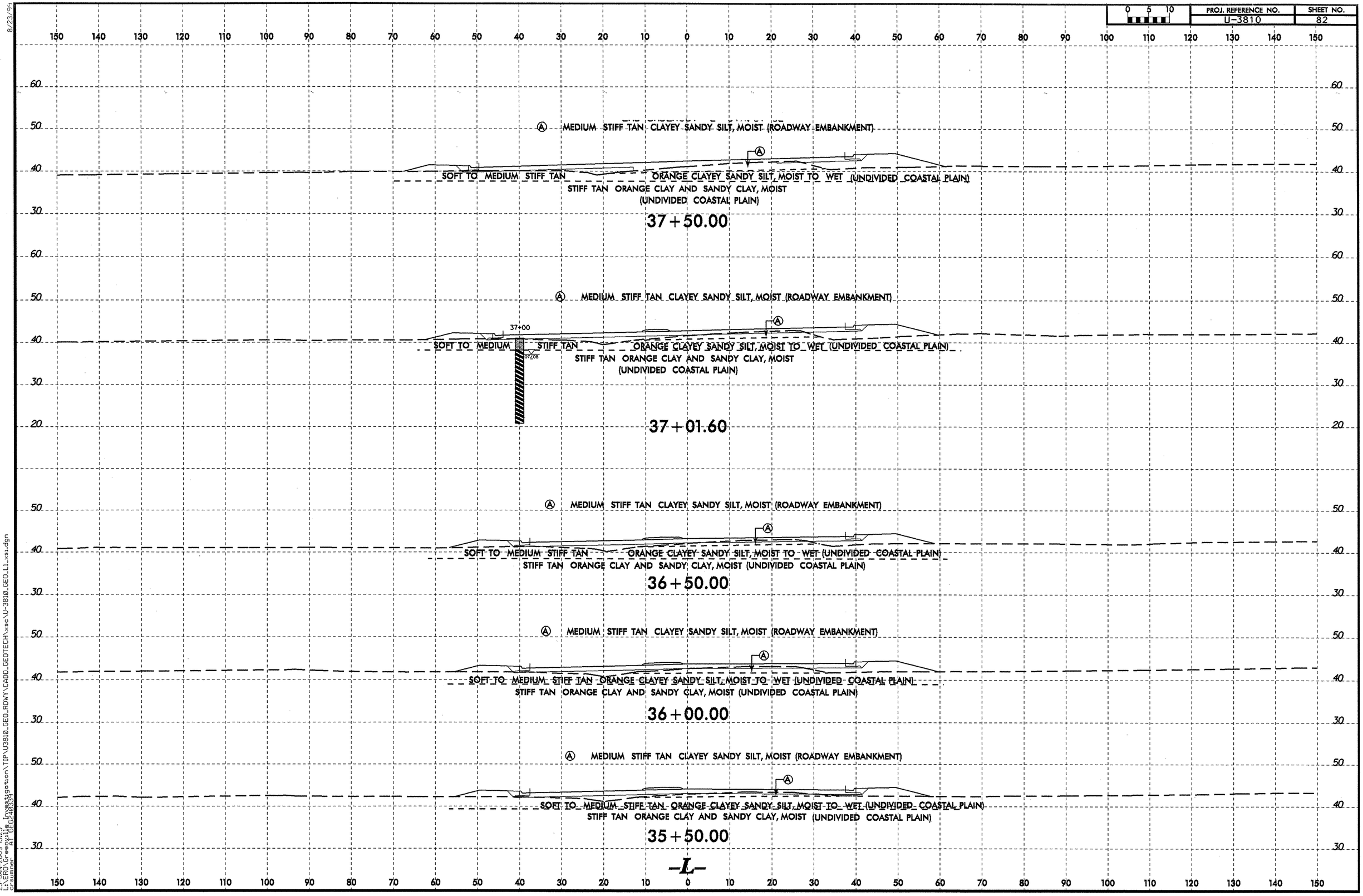

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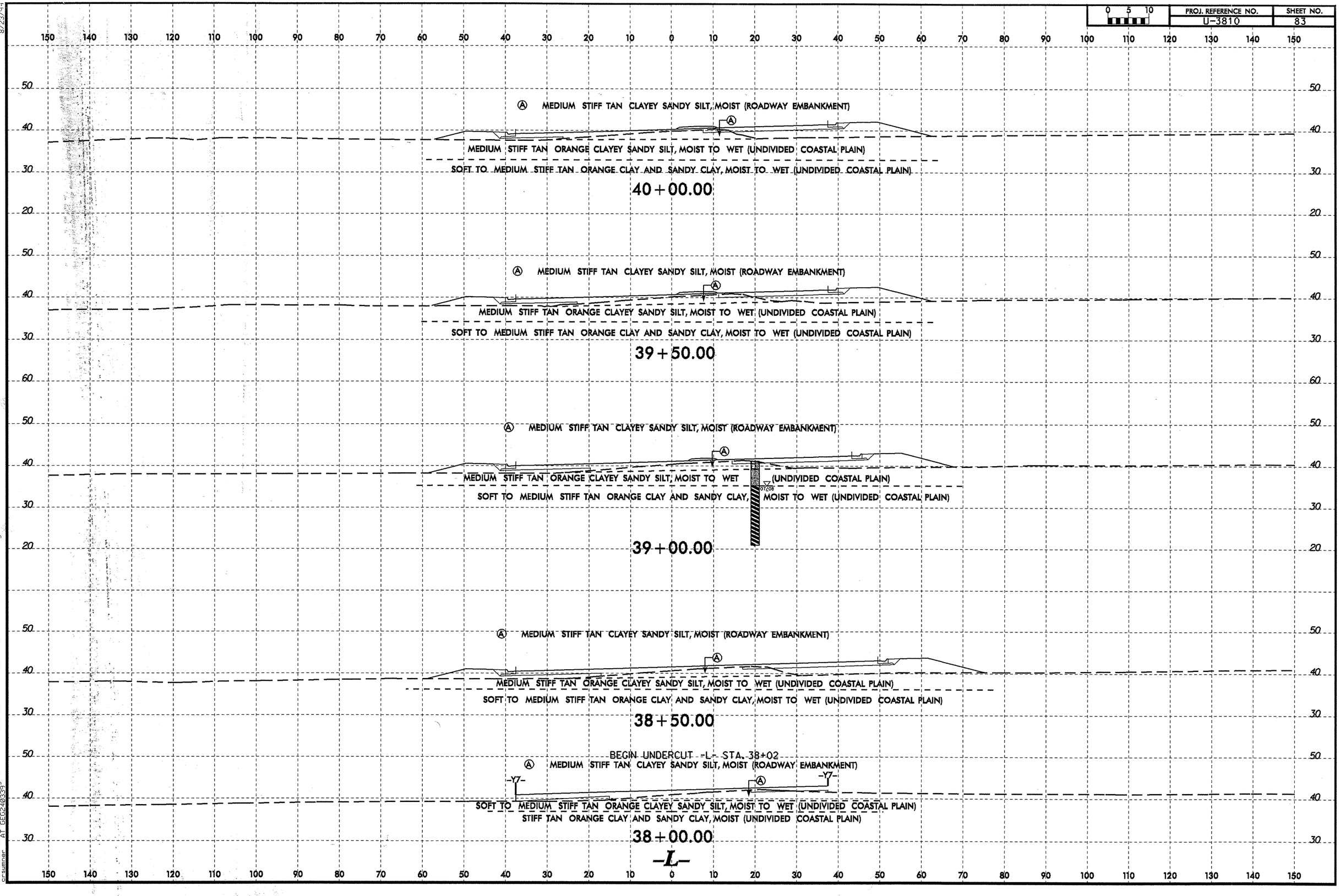
PROJ. REFERENCE NO.	SHEET NO.
U-3810	83



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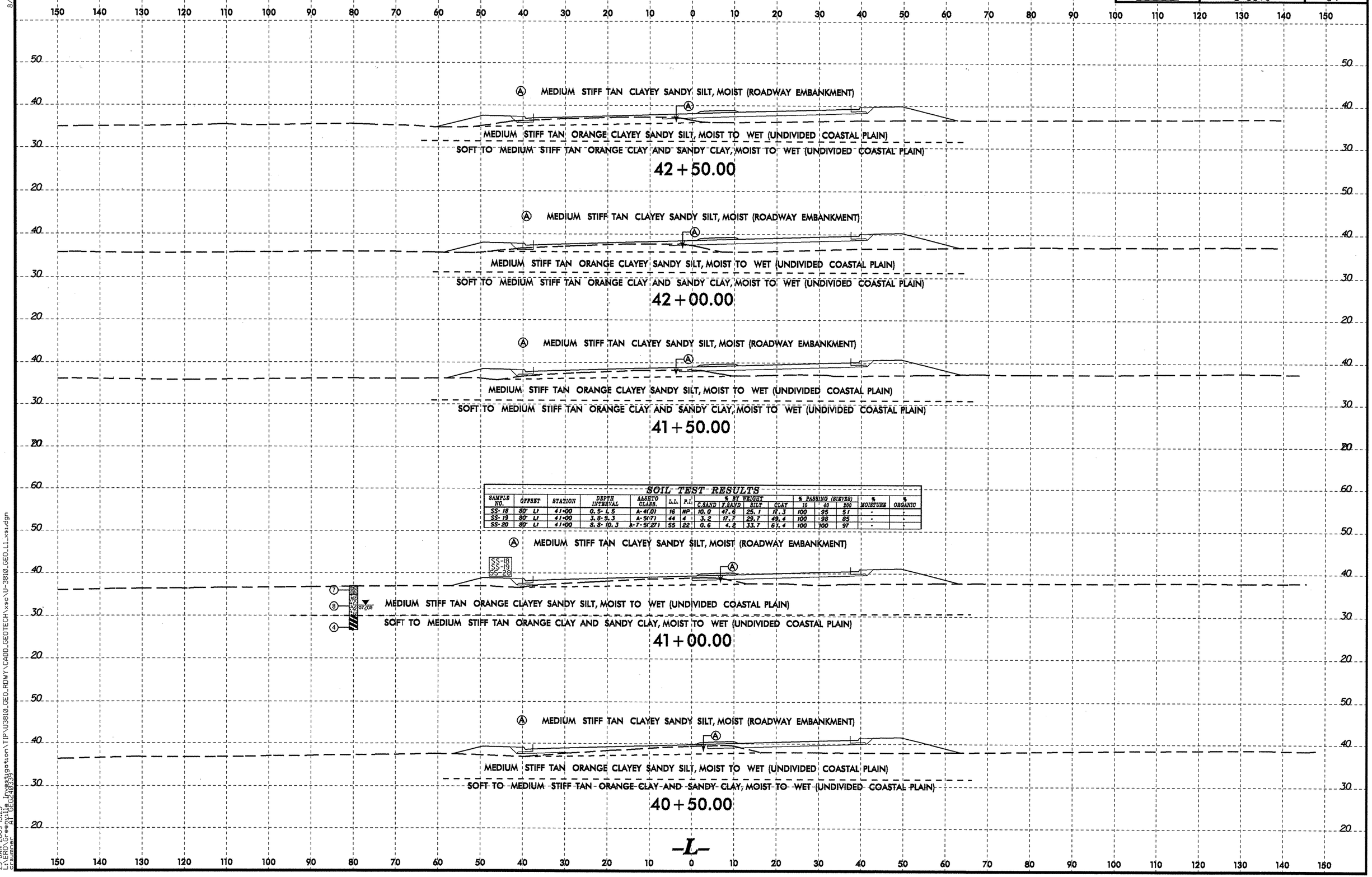

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-18	80' LT	41+00	0.5-1.5	A-4(0)	16	NP	10.0	47.6	25.1	12.3	100	95	51	-	-
SS-19	80' LT	41+00	3.8-5.3	A-5(7)	44	4	3.2	17.7	29.7	49.4	100	98	85	-	-
SS-20	80' LT	41+00	8.8-10.3	A-7-5(27)	55	22	0.6	4.2	33.7	61.4	100	100	97	-	-

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LISCOMBE, Greg
Crsumner
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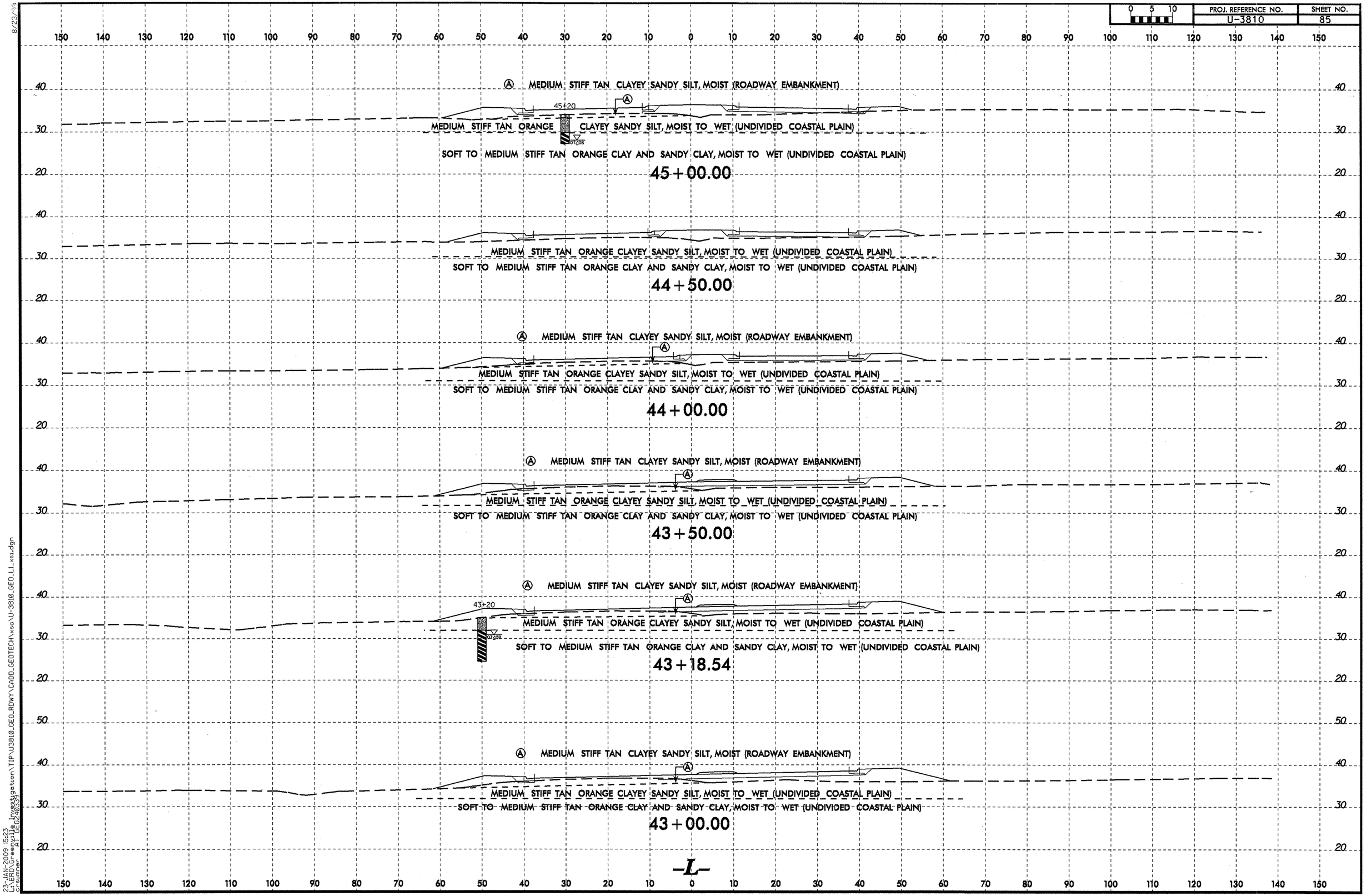

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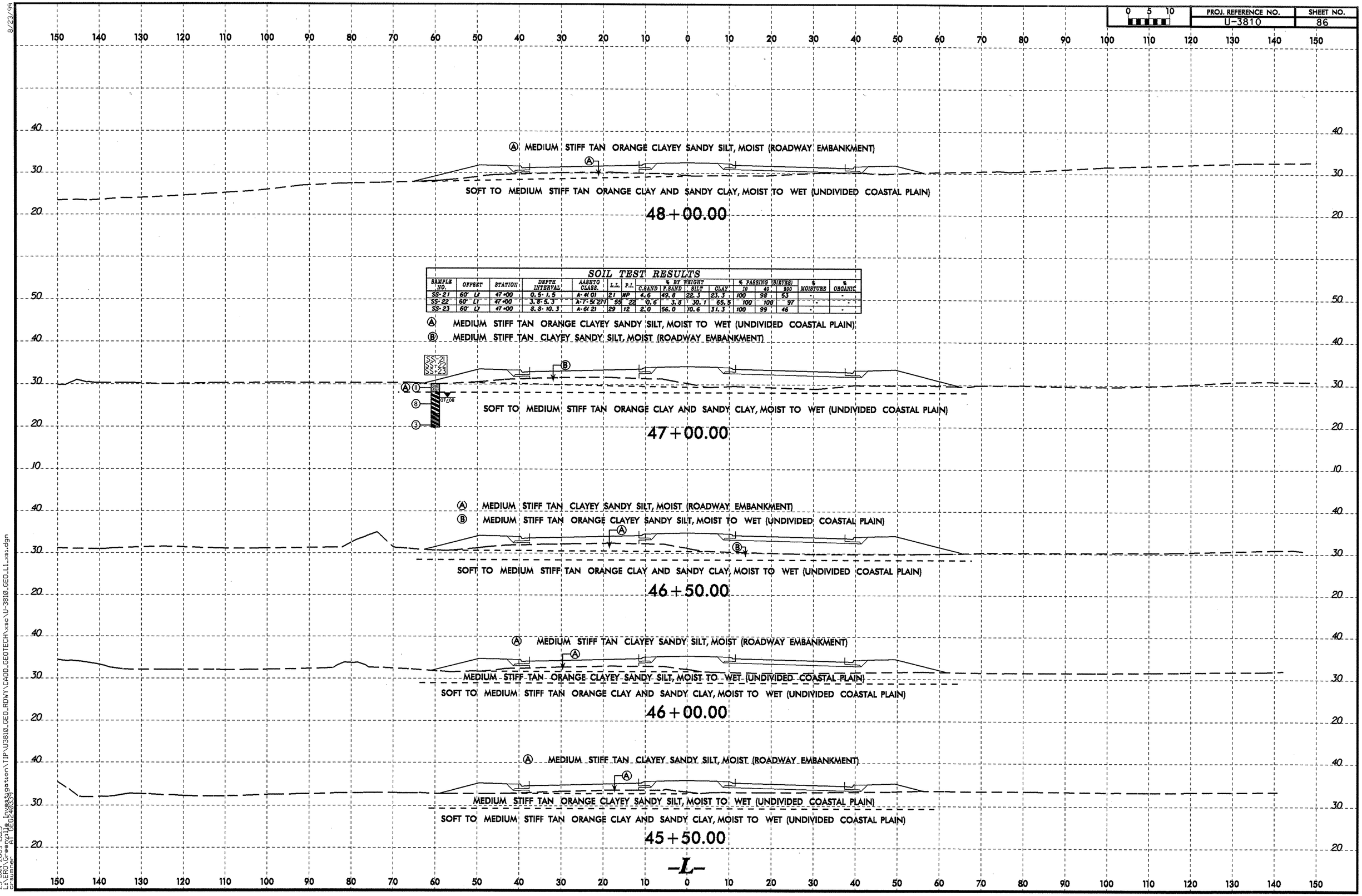
PROJ. REFERENCE NO.	SHEET NO.
U-3810	86



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-21	60' LT	47+00	0.5-1.5	A-4(0)	21	NP	4.6	49.6	22.3	23.3	100	98	53	-	-
SS-22	60' LT	47+00	3.8-5.3	A-7-5(27)	55	22	0.6	3.8	30.1	65.5	100	100	97	-	-
SS-23	60' LT	47+00	8.8-10.3	A-6(2)	29	12	2.0	56.0	10.6	31.3	100	99	46	-	-

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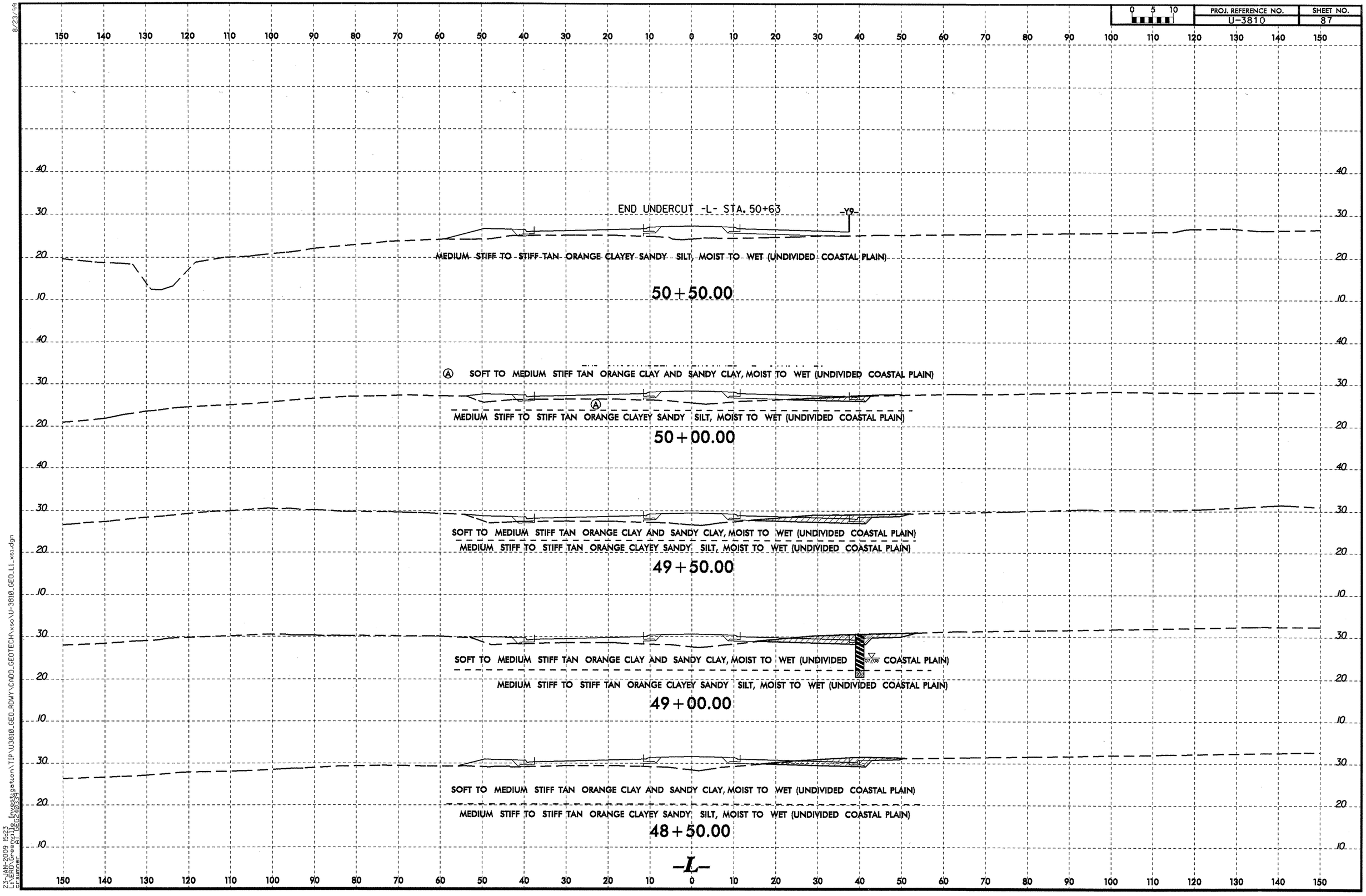
PROJ. REFERENCE NO.	SHEET NO.
U-3810	87



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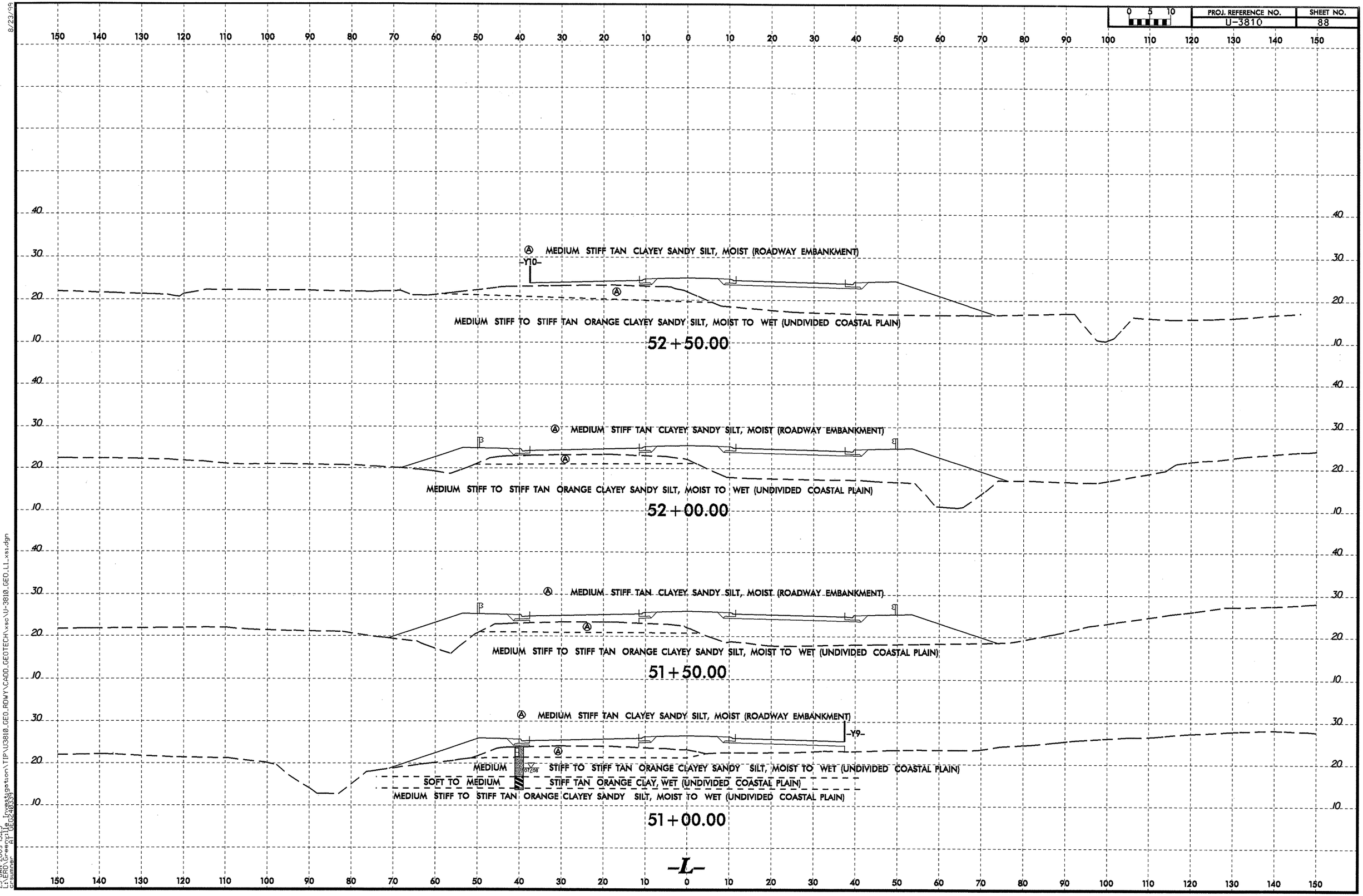

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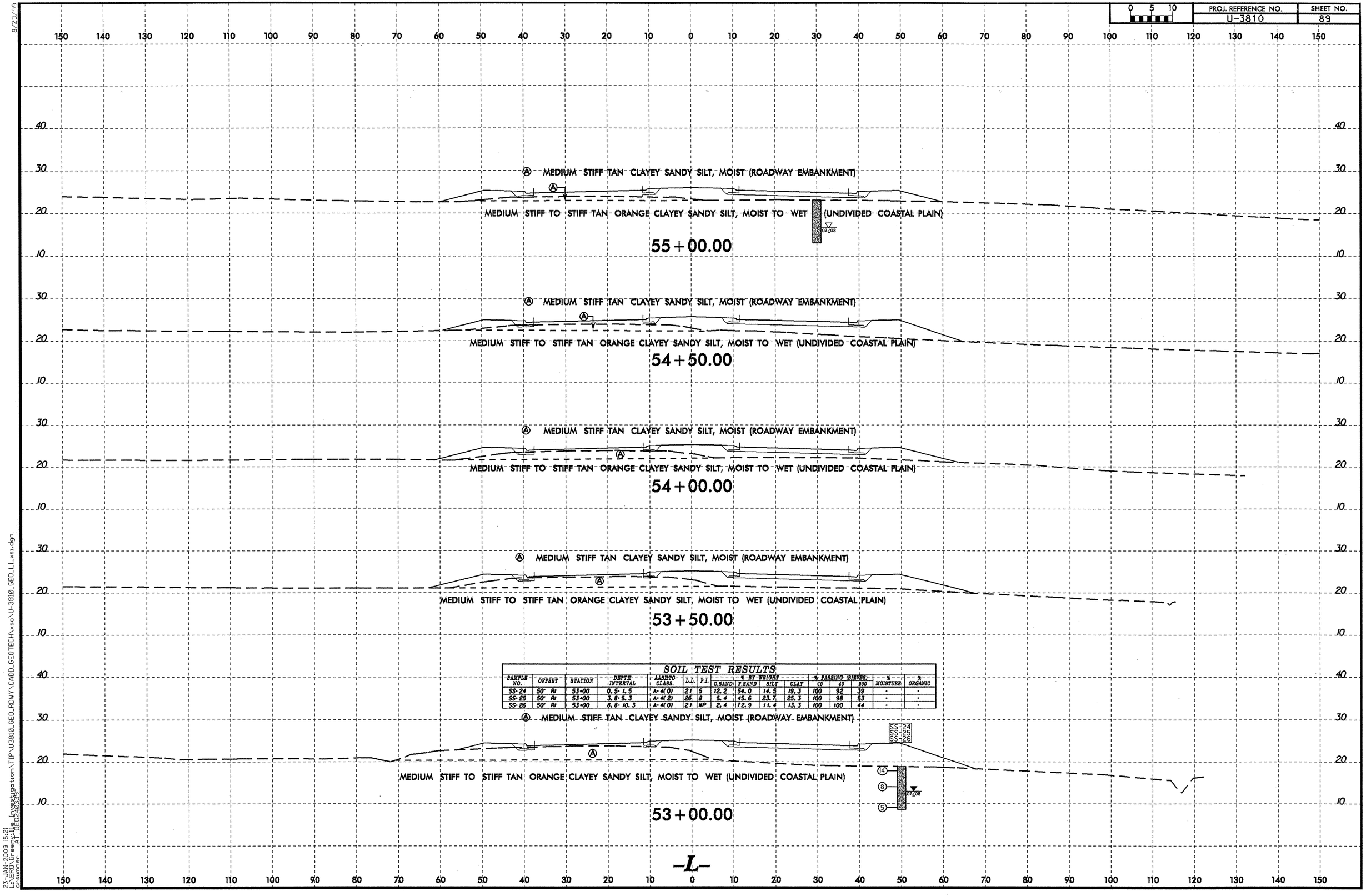

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 30	40	200	% MOISTURE	% ORGANIC
SS-24	50' Rt	53+00	0.5-1.5	A-4(0)	21	5	12.2	54.0	14.5	19.3	100	92	39	-	-
SS-25	50' Rt	53+00	3.8-5.3	A-4(2)	26	8	5.4	45.6	23.7	25.3	100	98	53	-	-
SS-26	50' Rt	53+00	8.8-10.3	A-4(0)	21	NP	2.4	72.9	11.4	13.3	100	100	44	-	-

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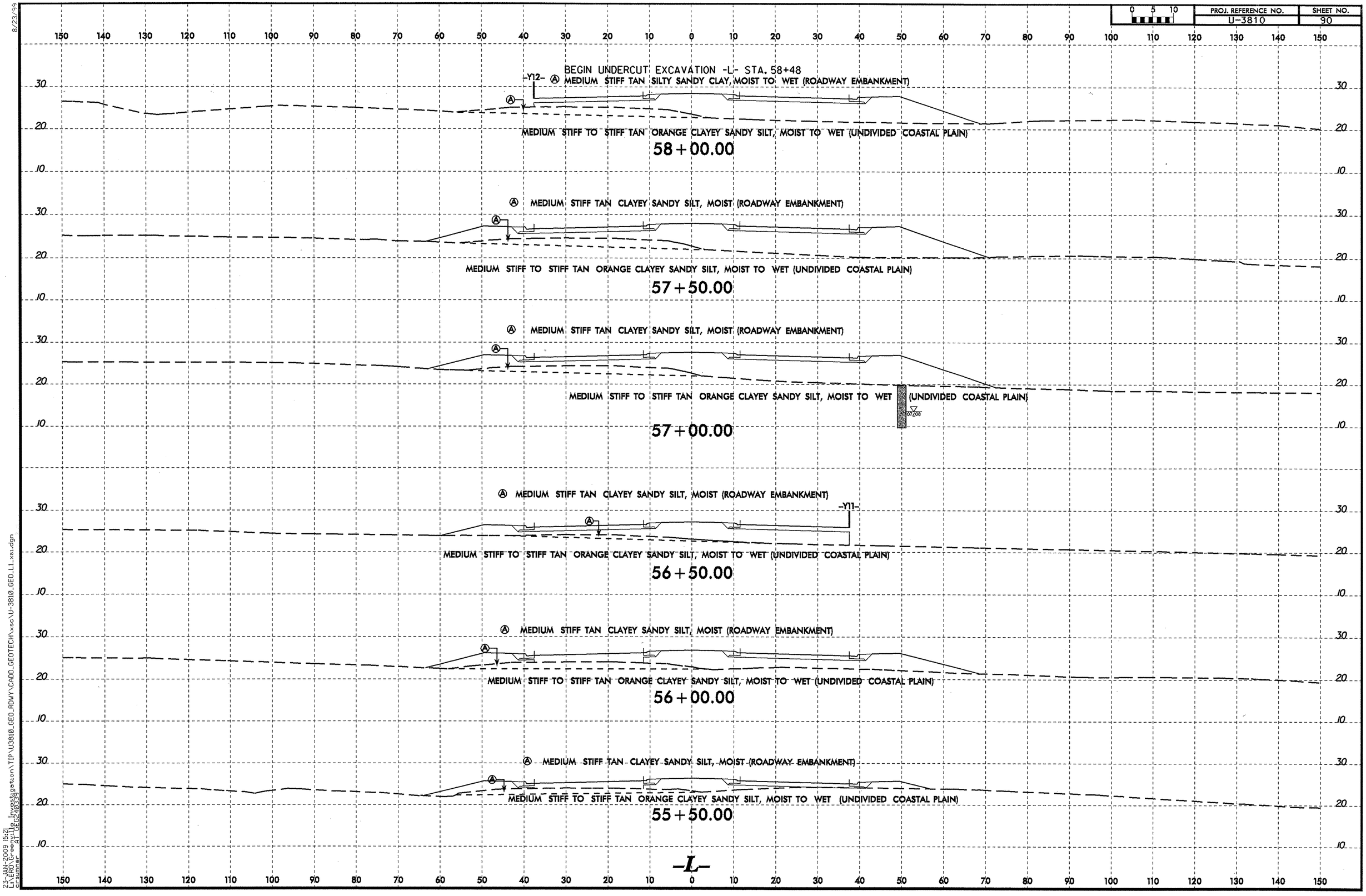

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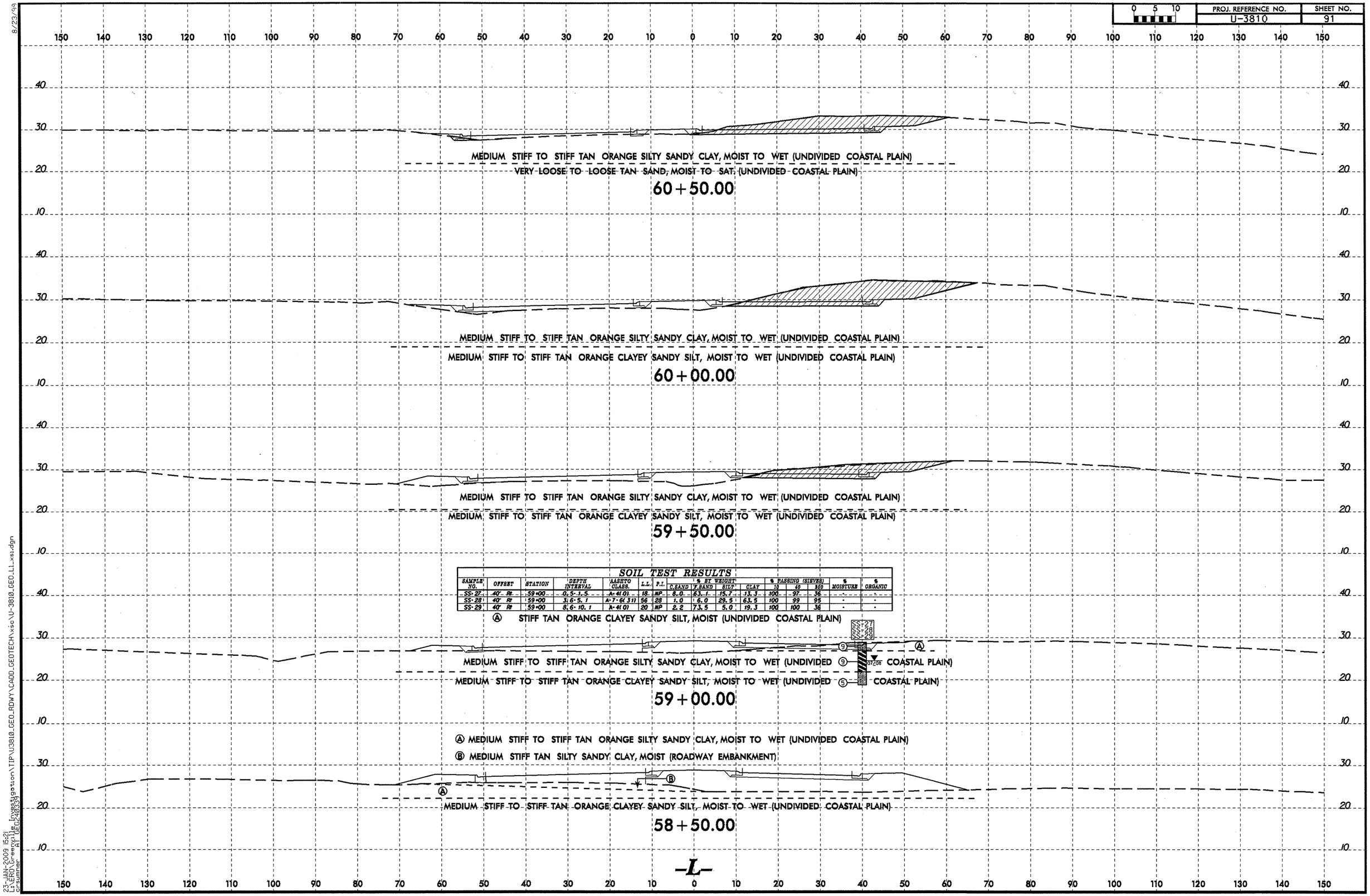
PROJ. REFERENCE NO. U-3810 | SHEET NO. 91



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-27	40' Rt	59+00	0.5-1.5	A-4(0)	18	NP	8.0	63.1	15.7	13.3	100	97	36	-	-
SS-28	40' Rt	59+00	3.6-5.1	A-7-6(31)	56	28	1.0	6.0	29.5	63.5	100	99	95	-	-
SS-29	40' Rt	59+00	8.6-10.1	A-4(0)	20	NP	2.2	73.5	5.0	19.3	100	100	36	-	-

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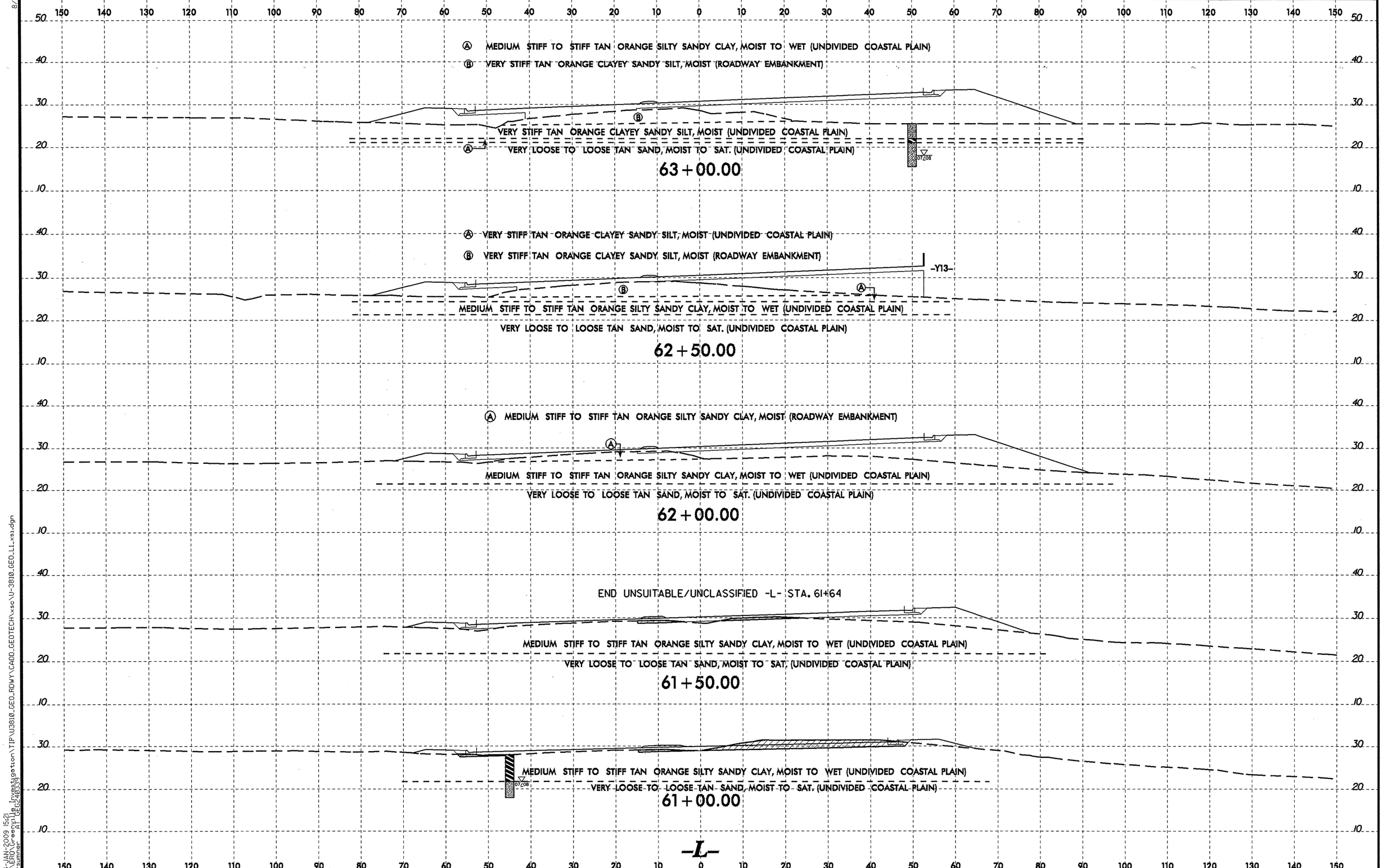
crsumner AT GEO240339

PROJ. REFERENCE NO.	SHEET NO.
U-3810	92



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TIP: U3810 GEOTECH

PROJ. REFERENCE NO.	SHEET NO.
U-3810	93

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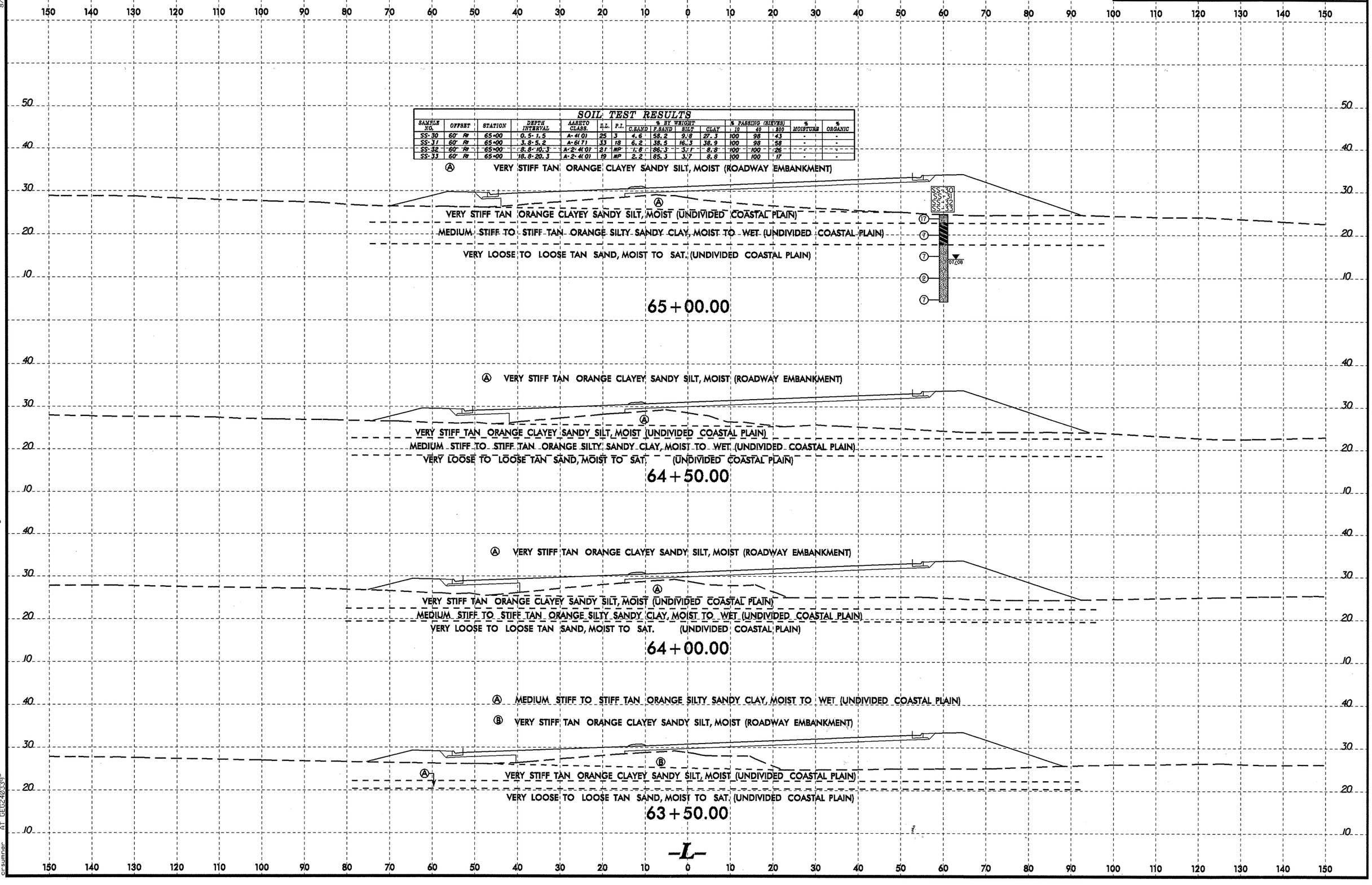
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-30	60' Rt	65+00	0.5-1.5	A-4(0)	25	3	4.6	58.2	9.8	27.3	100	98	43	-	-
SS-31	60' Rt	65+00	3.8-5.2	A-6(7)	33	18	6.2	38.5	16.3	38.9	100	98	58	-	-
SS-32	60' Rt	65+00	8.8-10.3	A-2-4(0)	21	NP	1.6	86.3	3.1	8.8	100	100	26	-	-
SS-33	60' Rt	65+00	18.8-20.3	A-2-4(0)	19	NP	2.2	85.3	3.7	8.8	100	100	17	-	-



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PROJ. REFERENCE NO.	SHEET NO.
U-3810	94

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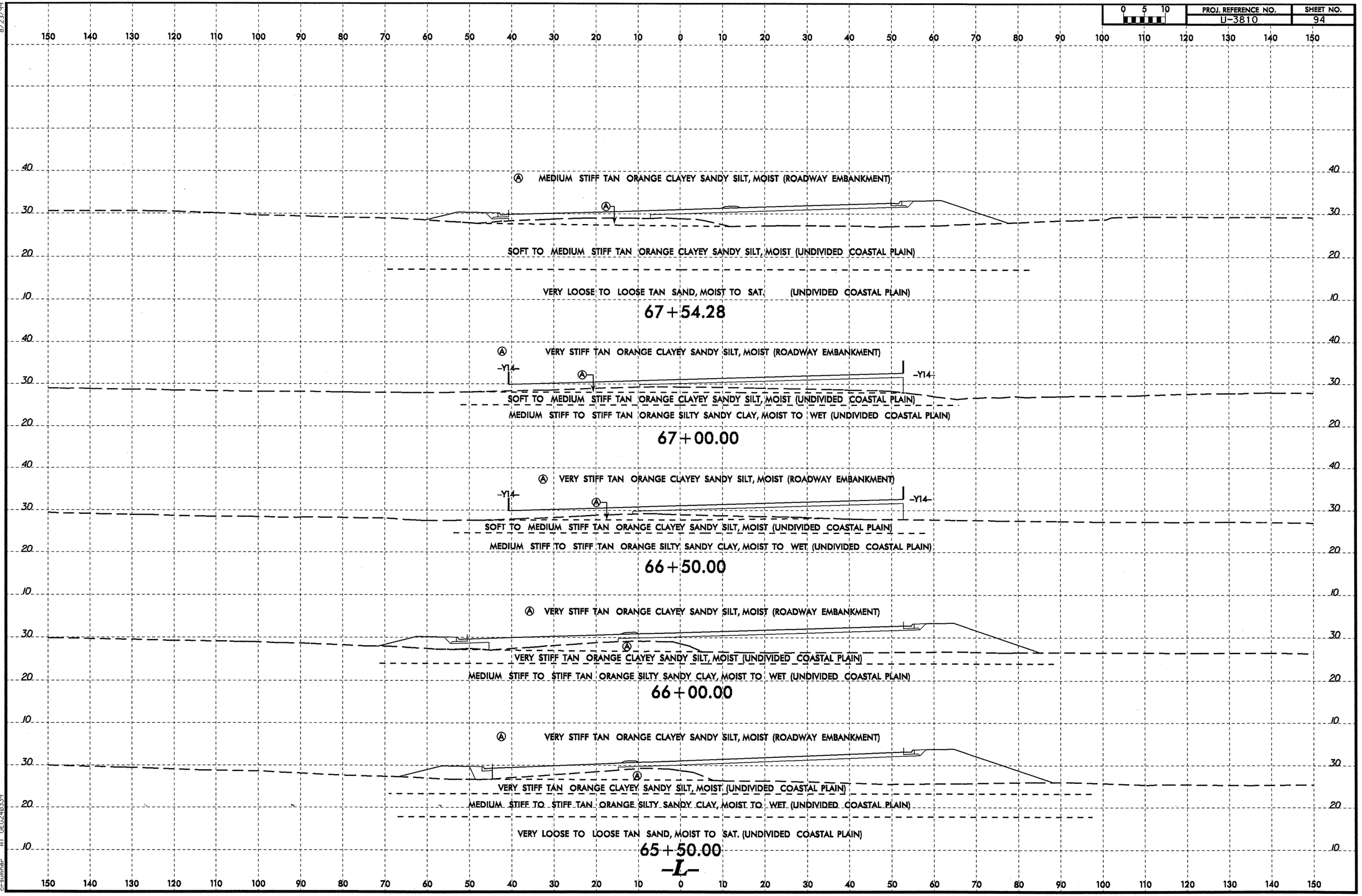

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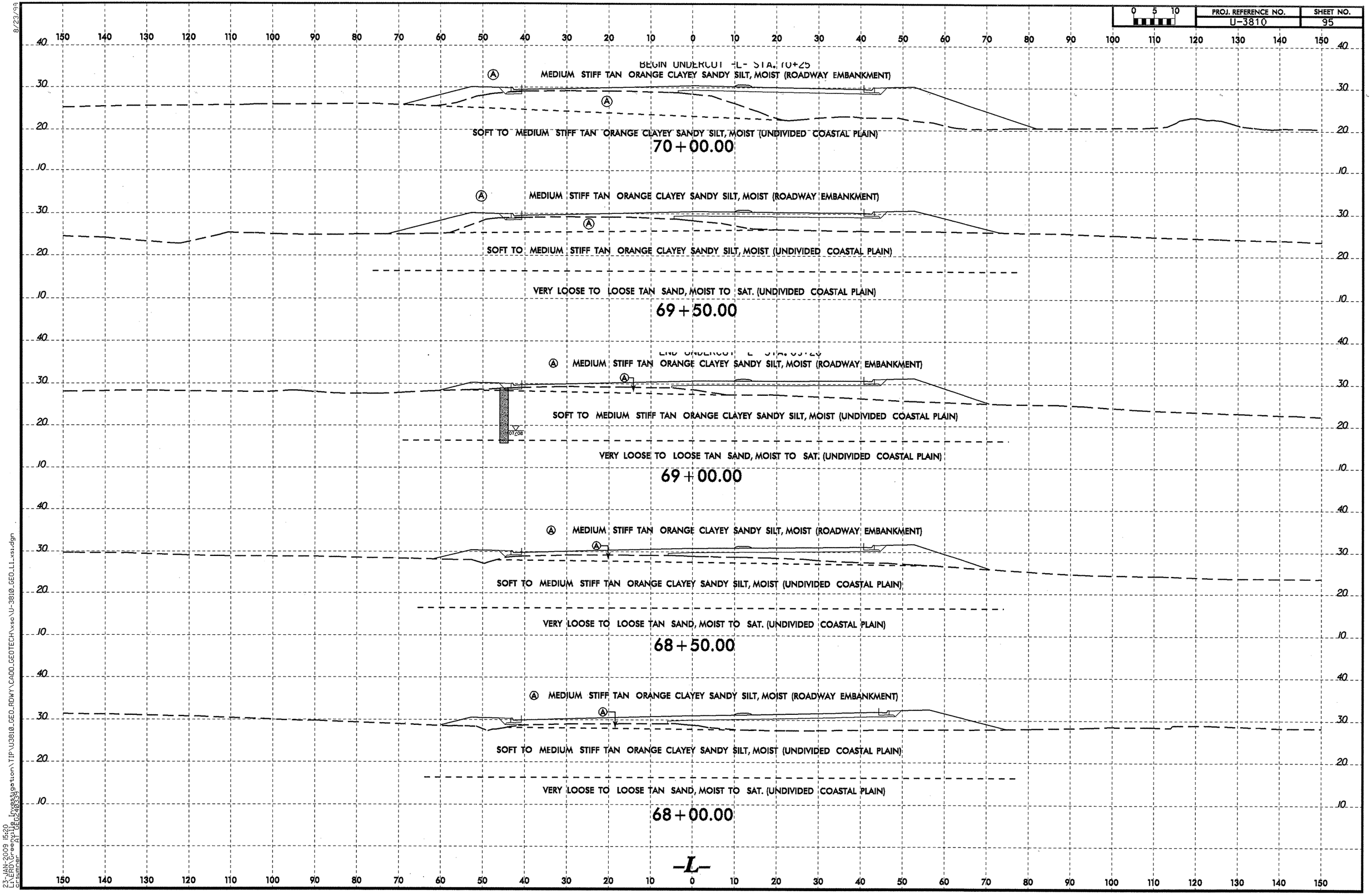

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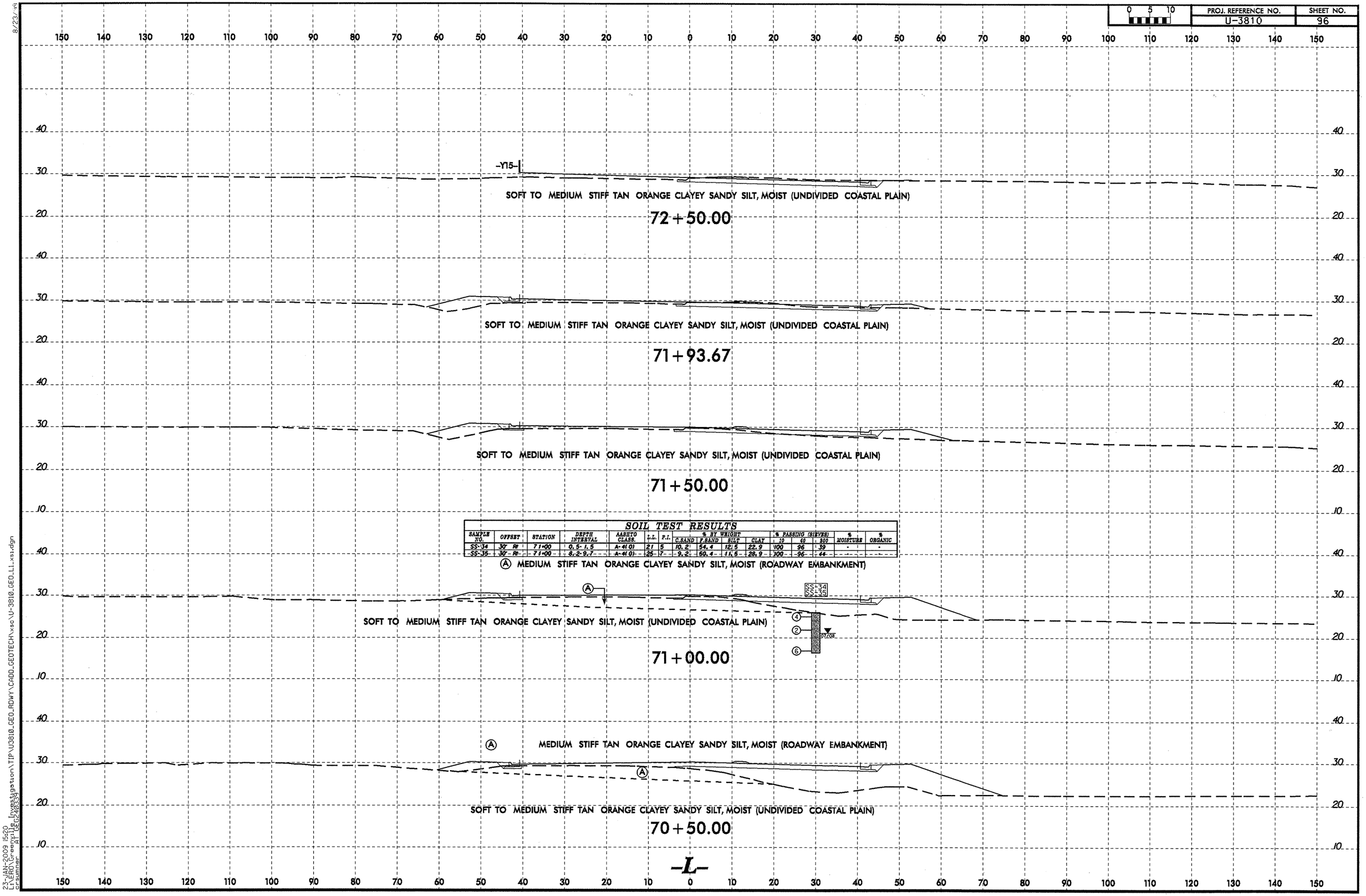

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-34	30' RT	71+00	0.5-1.5	A-4(0)	21	5	10.2	54.4	12.5	22.9	100	96	39	-	-
SS-35	30' RT	71+00	8.2-9.7	A-4(0)	25	7	9.2	50.4	11.5	28.9	100	96	44	-	-

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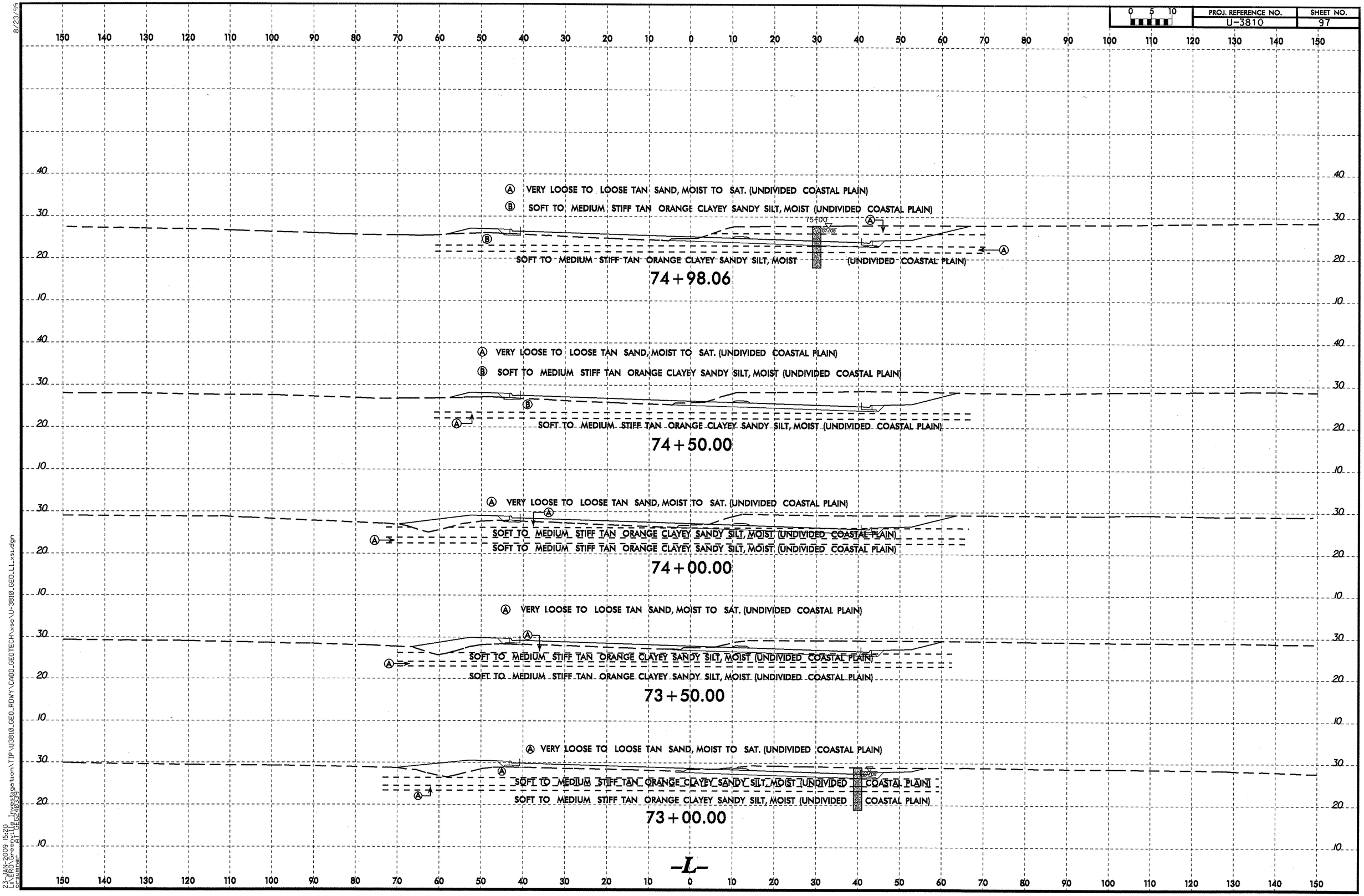

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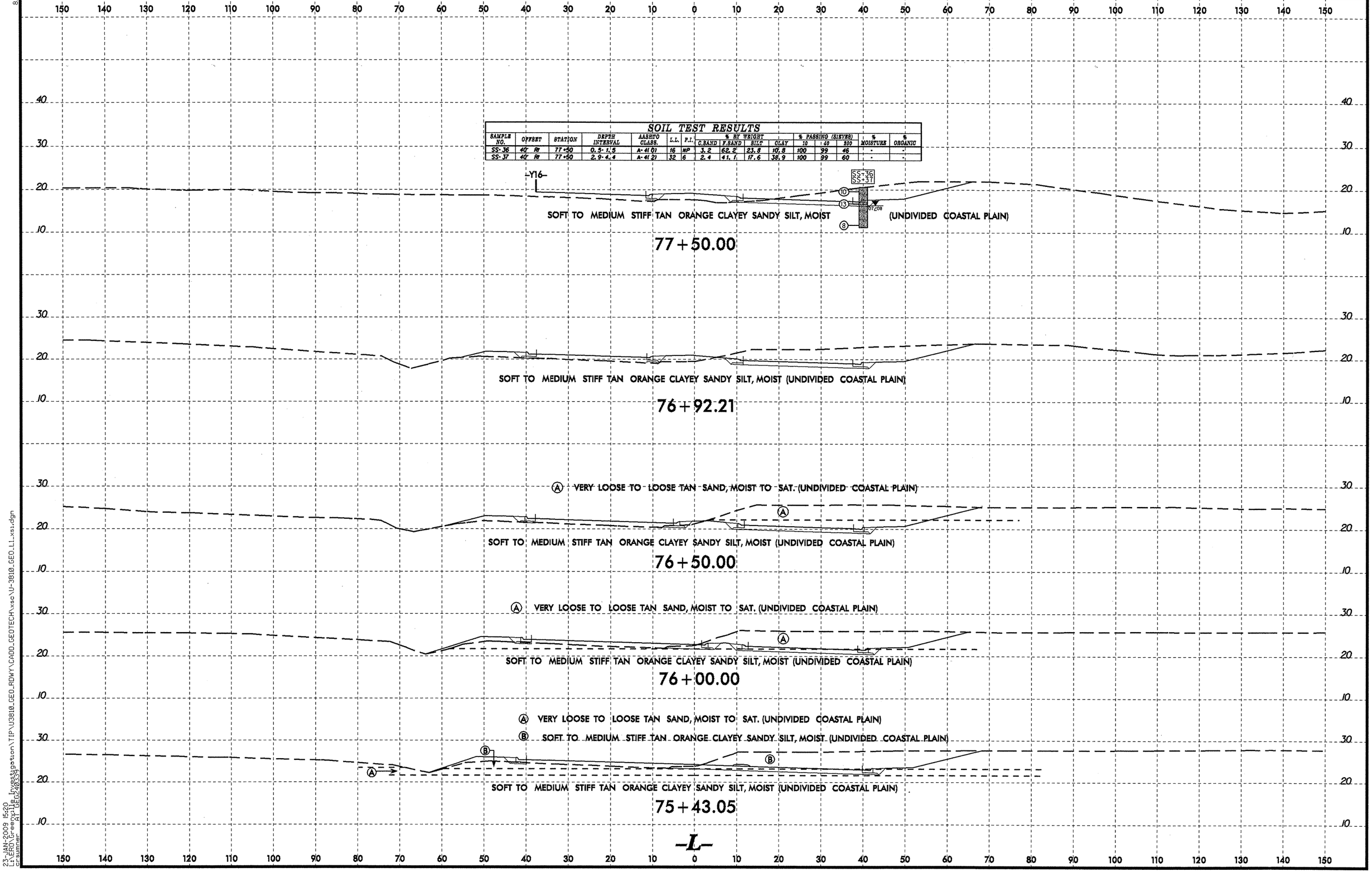
PROJ. REFERENCE NO.	SHEET NO.
U-3810	98

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-36	40' Rt	77+50	0.5-1.5	A-4(0)	16	NP	3.2	62.2	23.8	10.8	100	99	46	-	-
SS-37	40' Rt	77+50	2.9-4.4	A-4(2)	32	6	2.4	41.1	17.6	38.9	100	99	60	-	-



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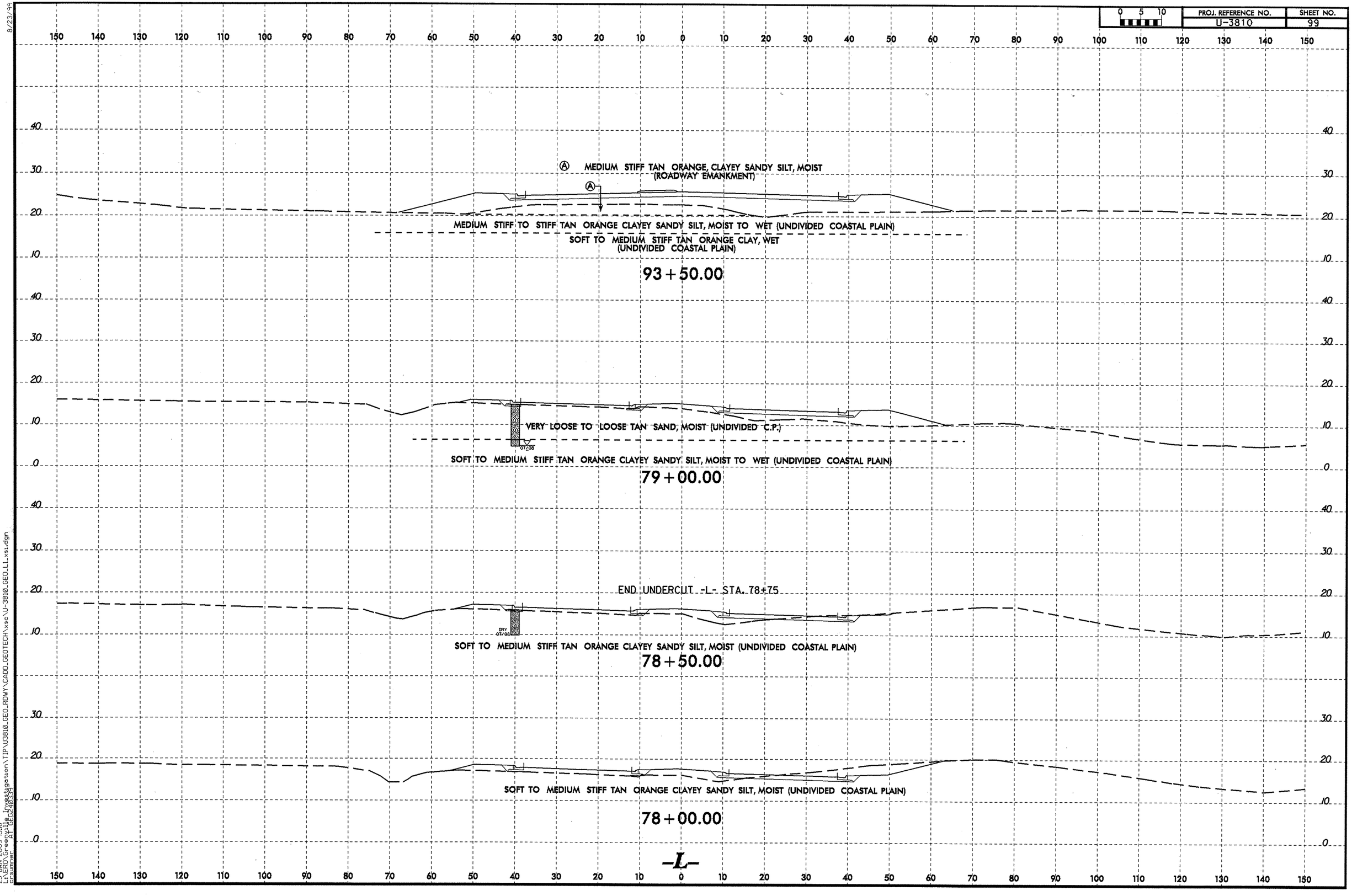

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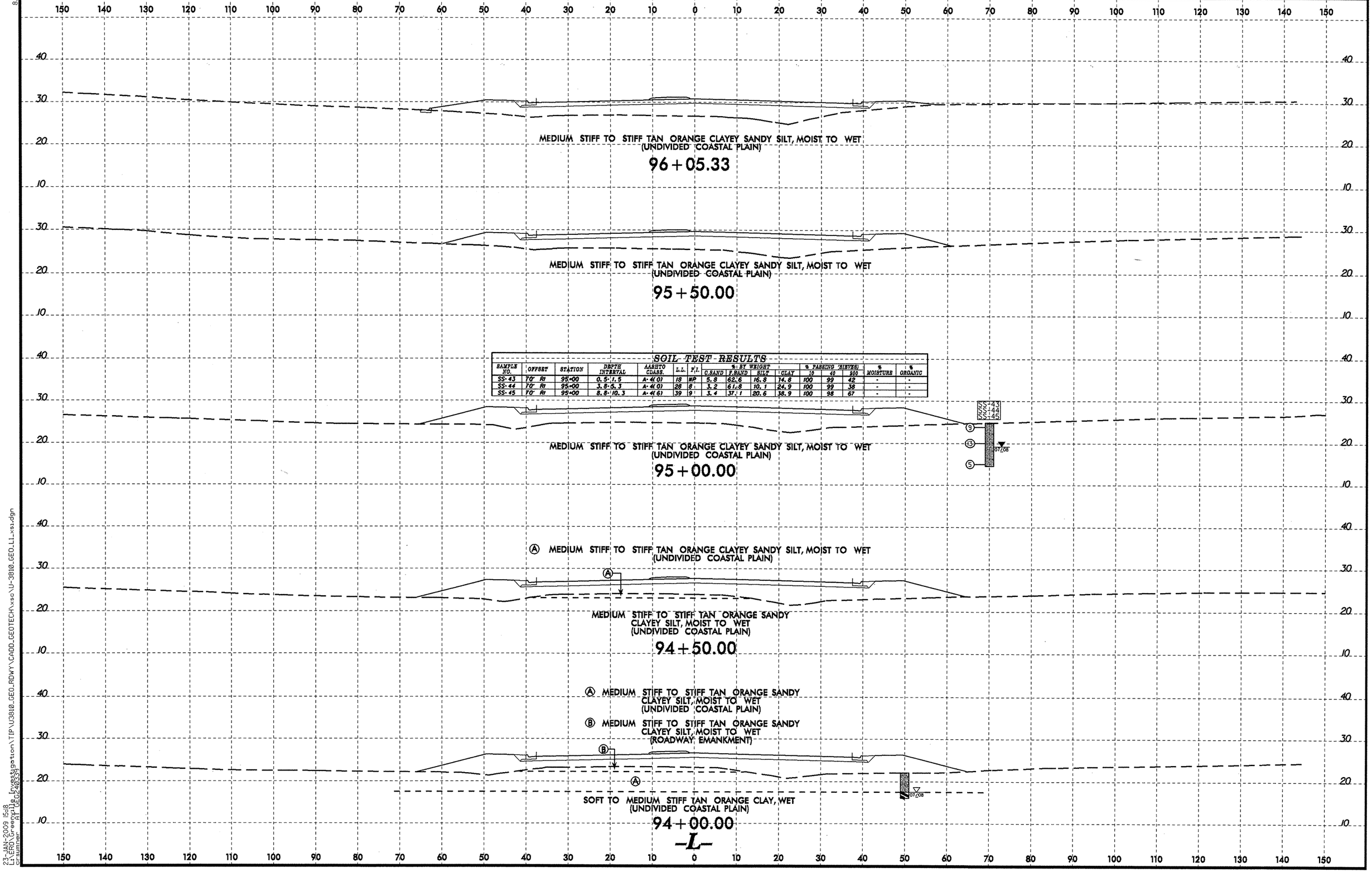
PROJ. REFERENCE NO.	SHEET NO.
U-3810	100



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-43	70' Rt	95+00	0.5-1.5	A-4(0)	18	NP	5.8	62.6	16.8	14.8	100	99	42	-	-
SS-44	70' Rt	95+00	3.8-5.3	A-4(0)	28	8	3.2	61.8	10.1	24.9	100	99	38	-	-
SS-45	70' Rt	95+00	8.8-10.3	A-4(6)	39	9	3.4	37.1	20.6	38.9	100	98	67	-	-

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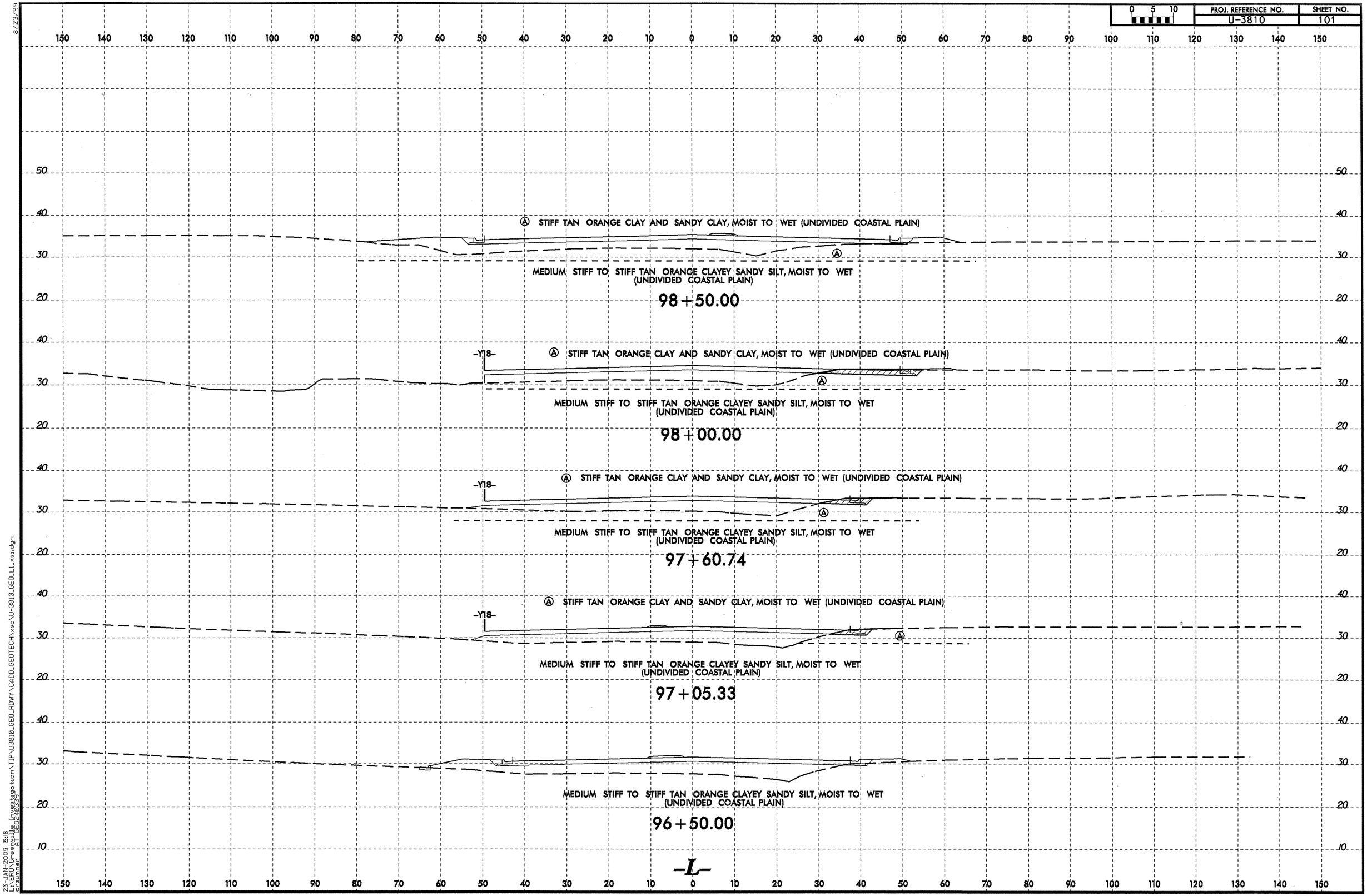

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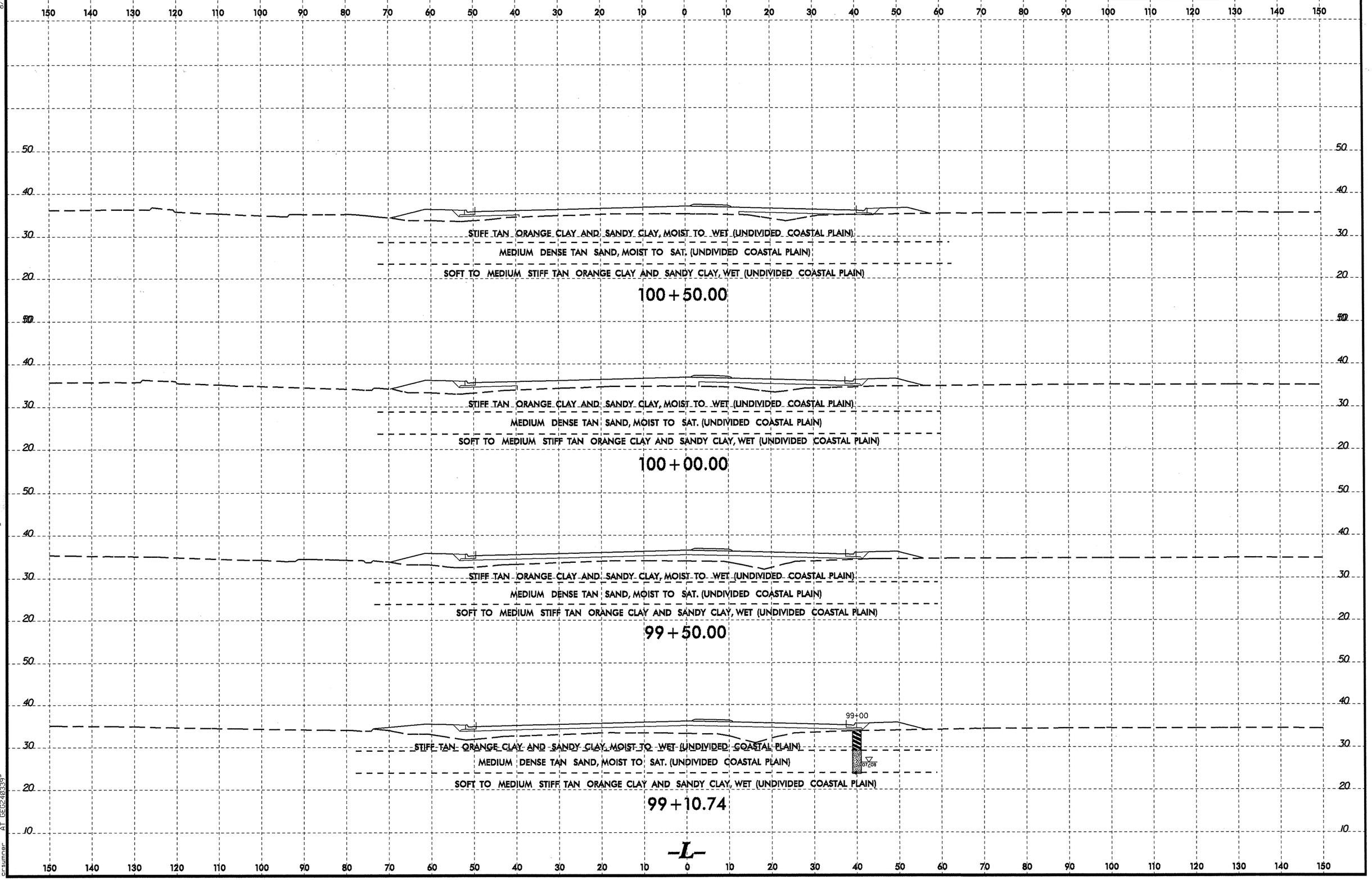

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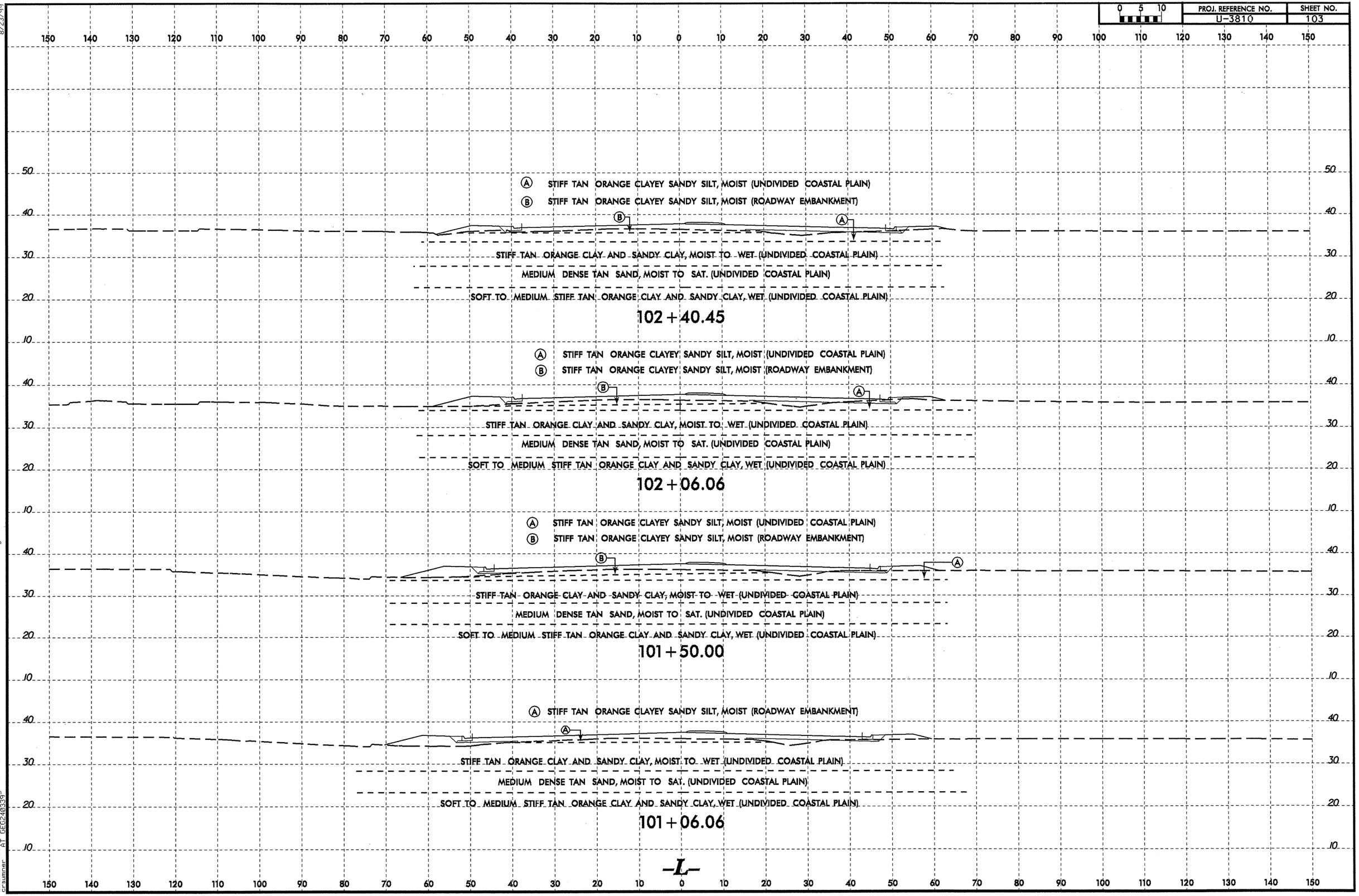
PROJ. REFERENCE NO.	SHEET NO.
U-3810	103



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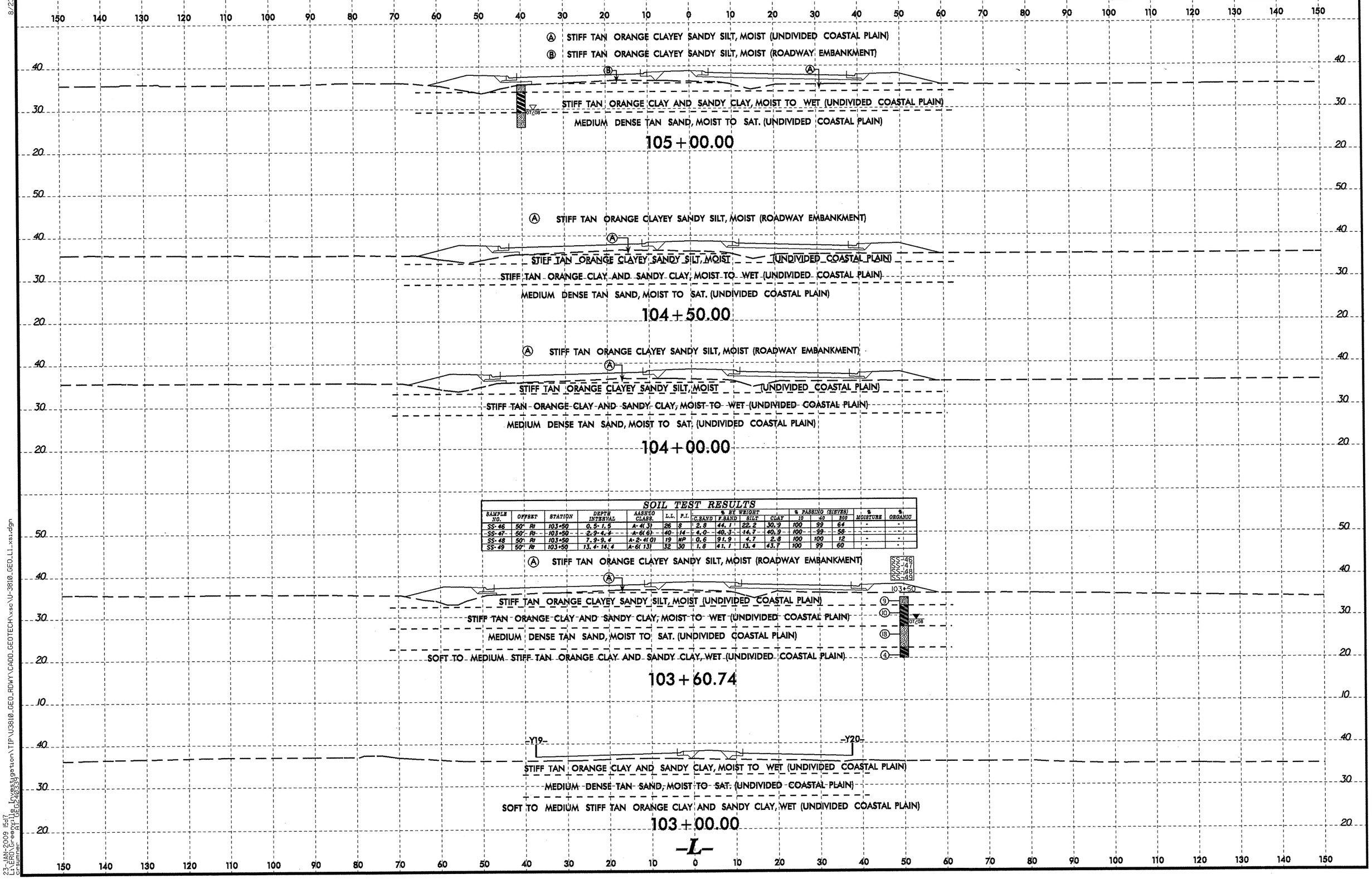
crsumner AT GEO240339

PROJ. REFERENCE NO.	SHEET NO.
U-3810	104



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-46	50' Rt	103+50	0.5-1.5	A-4(3)	26	8	2.8	44.1	22.2	30.9	100	99	64	-	-
SS-47	50' Rt	103+50	2.9-4.4	A-6(6)	40	14	4.0	40.3	14.7	40.9	100	99	58	-	-
SS-48	50' Rt	103+50	7.9-9.4	A-2-4(0)	19	NP	0.6	91.9	4.7	2.8	100	100	12	-	-
SS-49	50' Rt	103+50	13.4-14.4	A-6(13)	32	30	1.8	41.1	13.4	43.7	100	99	60	-	-

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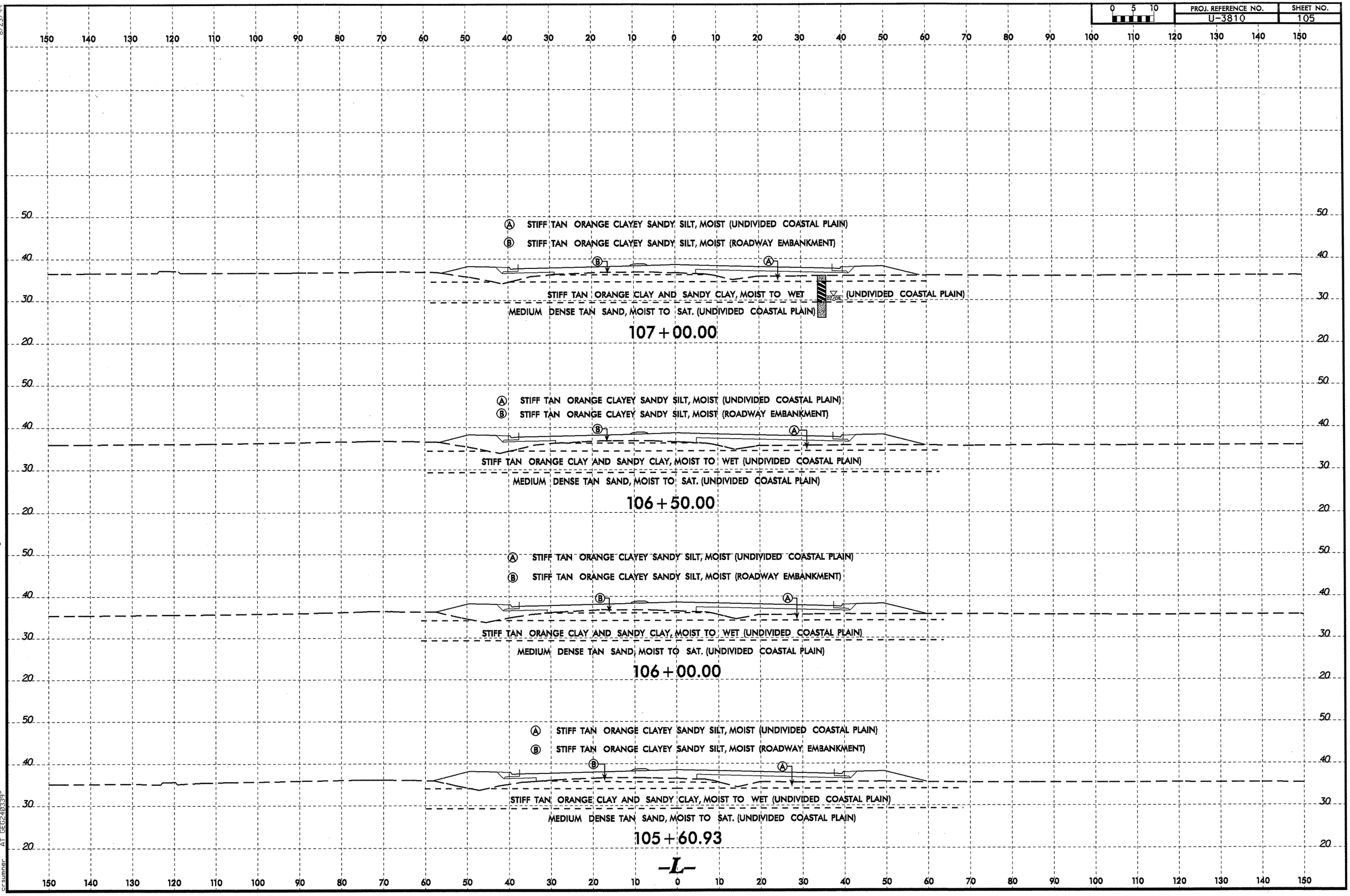
crsumner AT GEO240339



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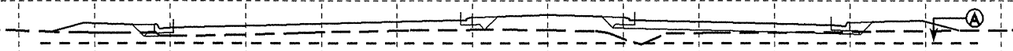
crsumner AT GEO240339

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

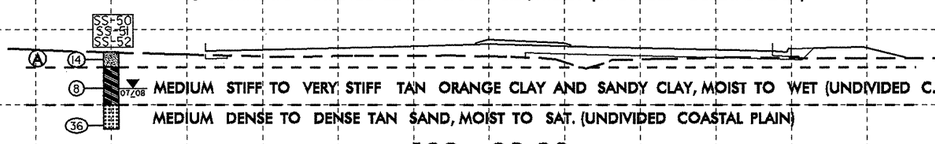
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

109+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-50	50' LT	109+00	0.5-1.5	A-4(3)	24	10	6.9	46.3	17.3	29.5	100	99	56	-	-
SS-51	50' LT	109+00	3.8-5.3	A-6(10)	34	19	3.8	42.5	20.1	33.6	100	99	65	-	-
SS-52	50' LT	109+00	8.8-10.3	A-3(0)	15	NP	0.2	96.9	2.9	0.0	100	100	5	-	-

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

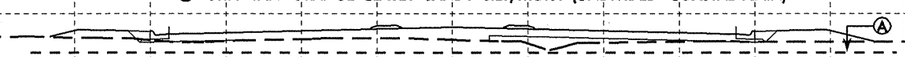


MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED C.P.)

MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

109+00.00

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

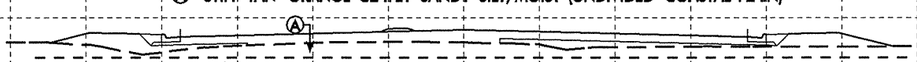


MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

108+50.00

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)



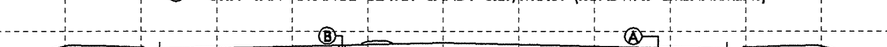
STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

MEDIUM DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

108+00.00

Ⓐ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)

Ⓑ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

MEDIUM DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)

107+50.00

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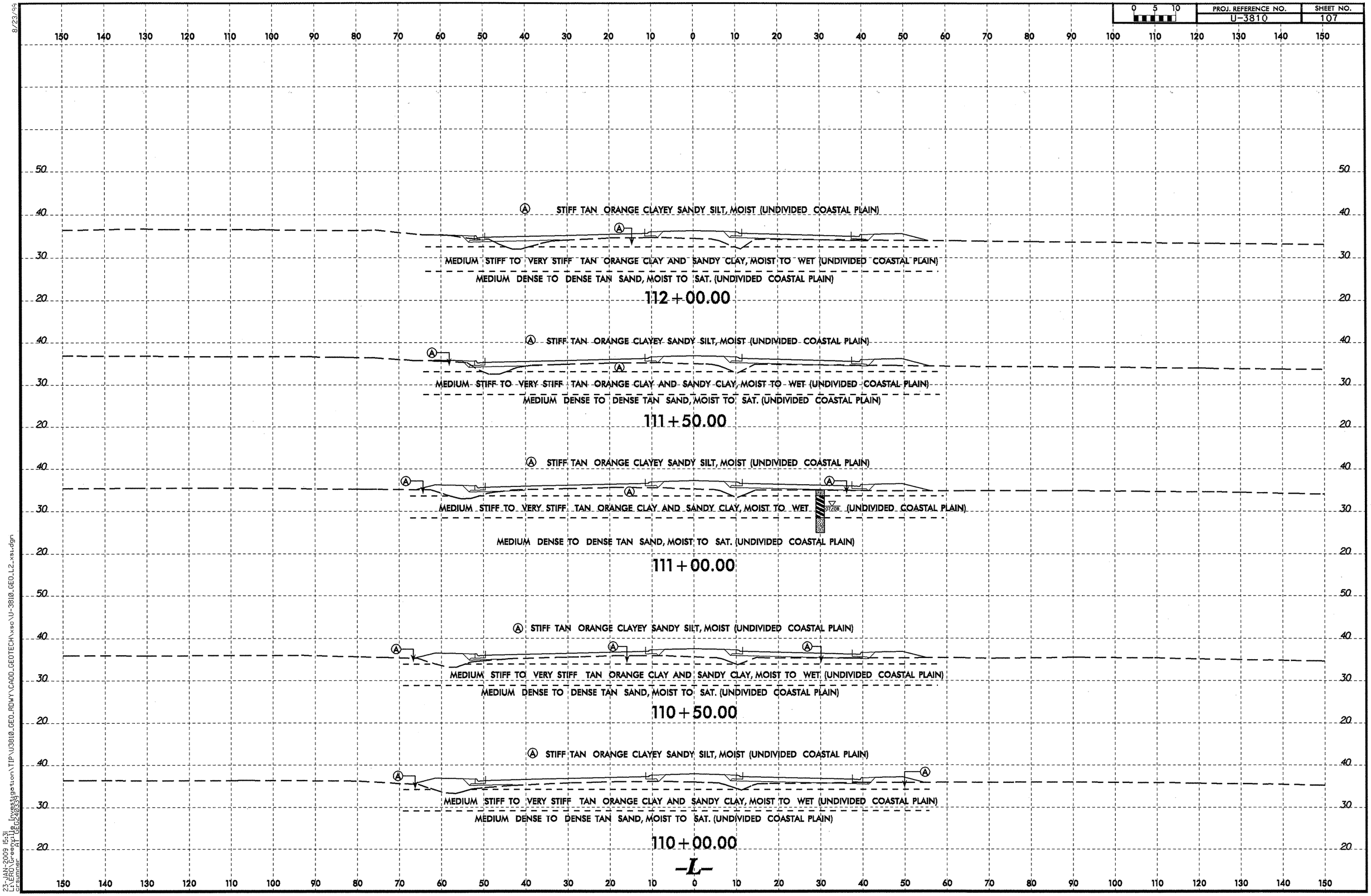
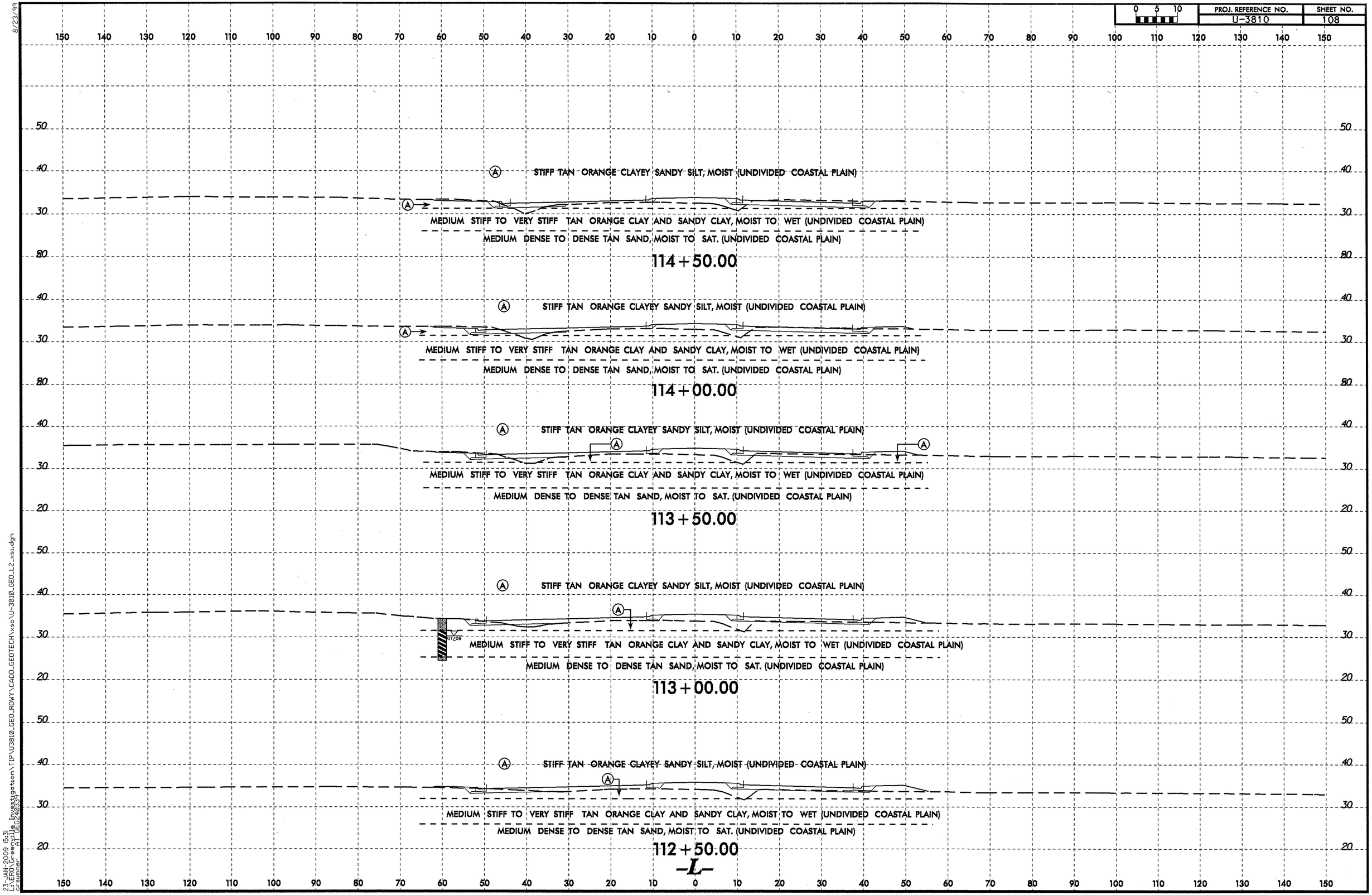


PROJ. REFERENCE NO.
U-3810
SHEET NO.
107
STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)
112+00.00
STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)
111+50.00
STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)
111+00.00
STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)
110+50.00
STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
MEDIUM STIFF TO VERY STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED COASTAL PLAIN)
110+00.00
-L-



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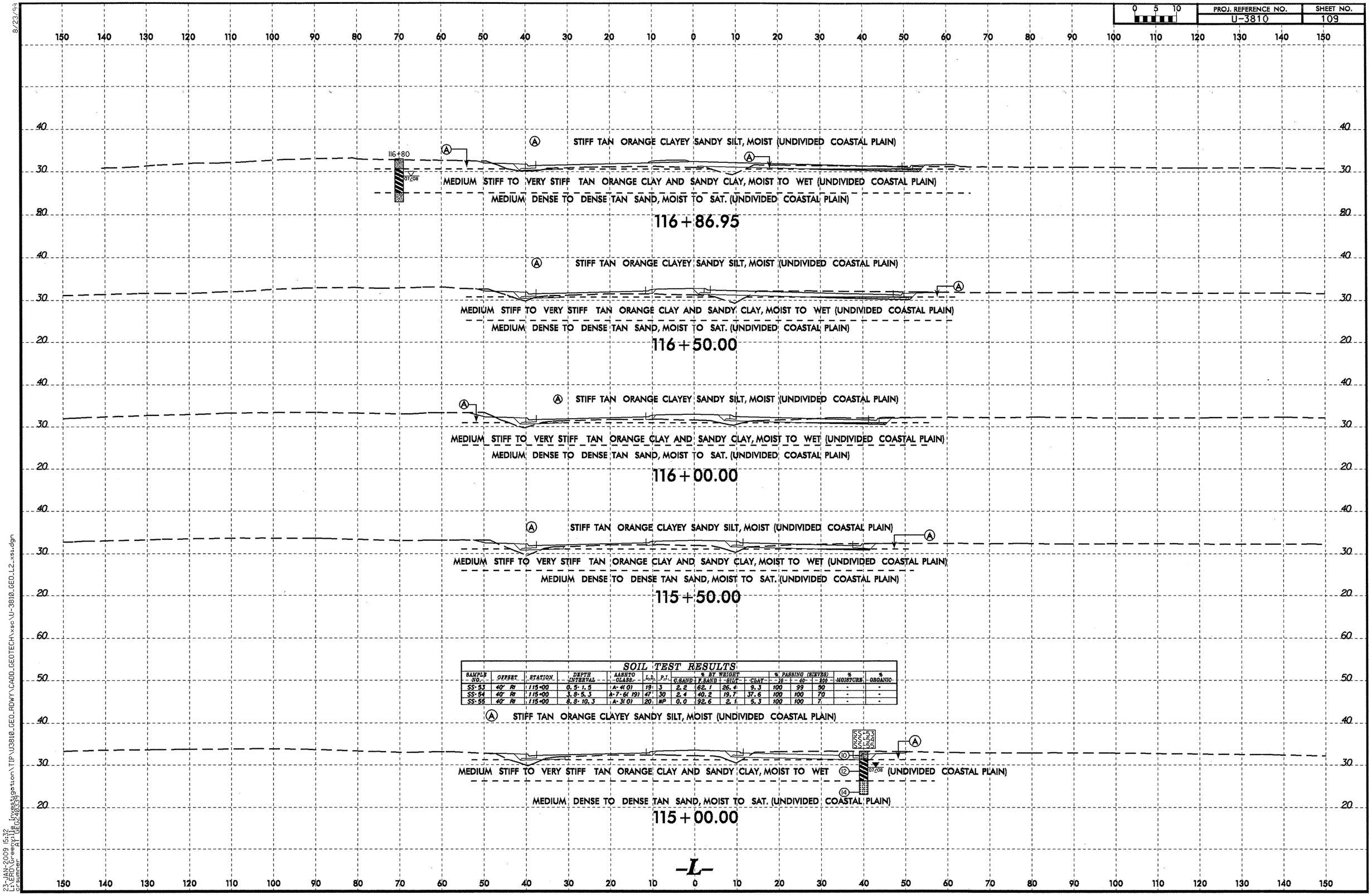
cesumner



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-53	40' Rt	115+00	0.5-1.5	A-4(0)	19	3	2.2	62.1	26.4	9.3	100	99	50	-	-
SS-54	40' Rt	115+00	3.8-5.3	A-7-6(19)	47	30	2.4	40.2	19.7	37.6	100	100	70	-	-
SS-55	40' Rt	115+00	8.8-10.3	A-3(0)	20	NP	0.0	92.6	2.1	5.3	100	100	7	-	-

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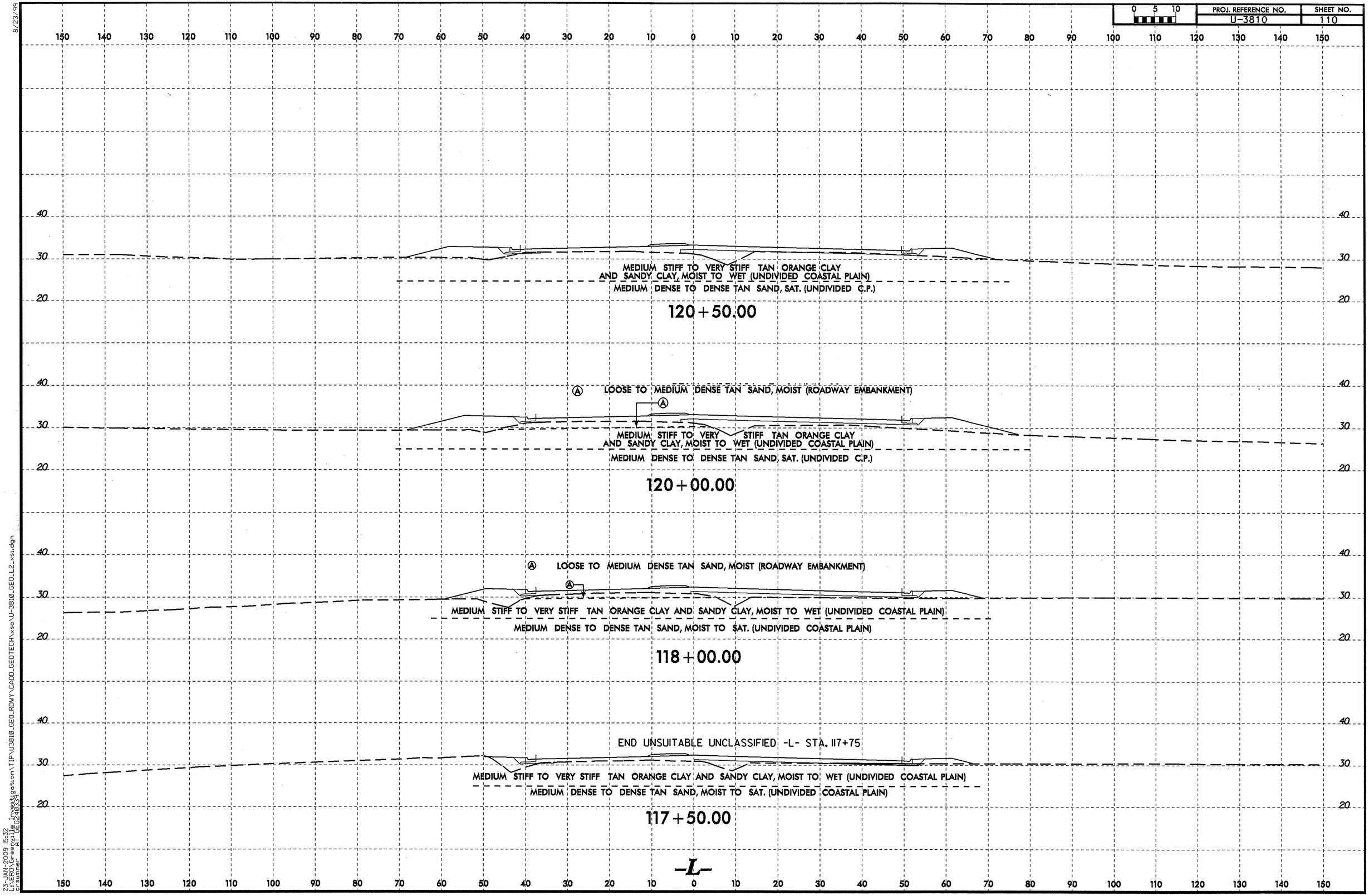
cbsumner
ATLGEOPAK33



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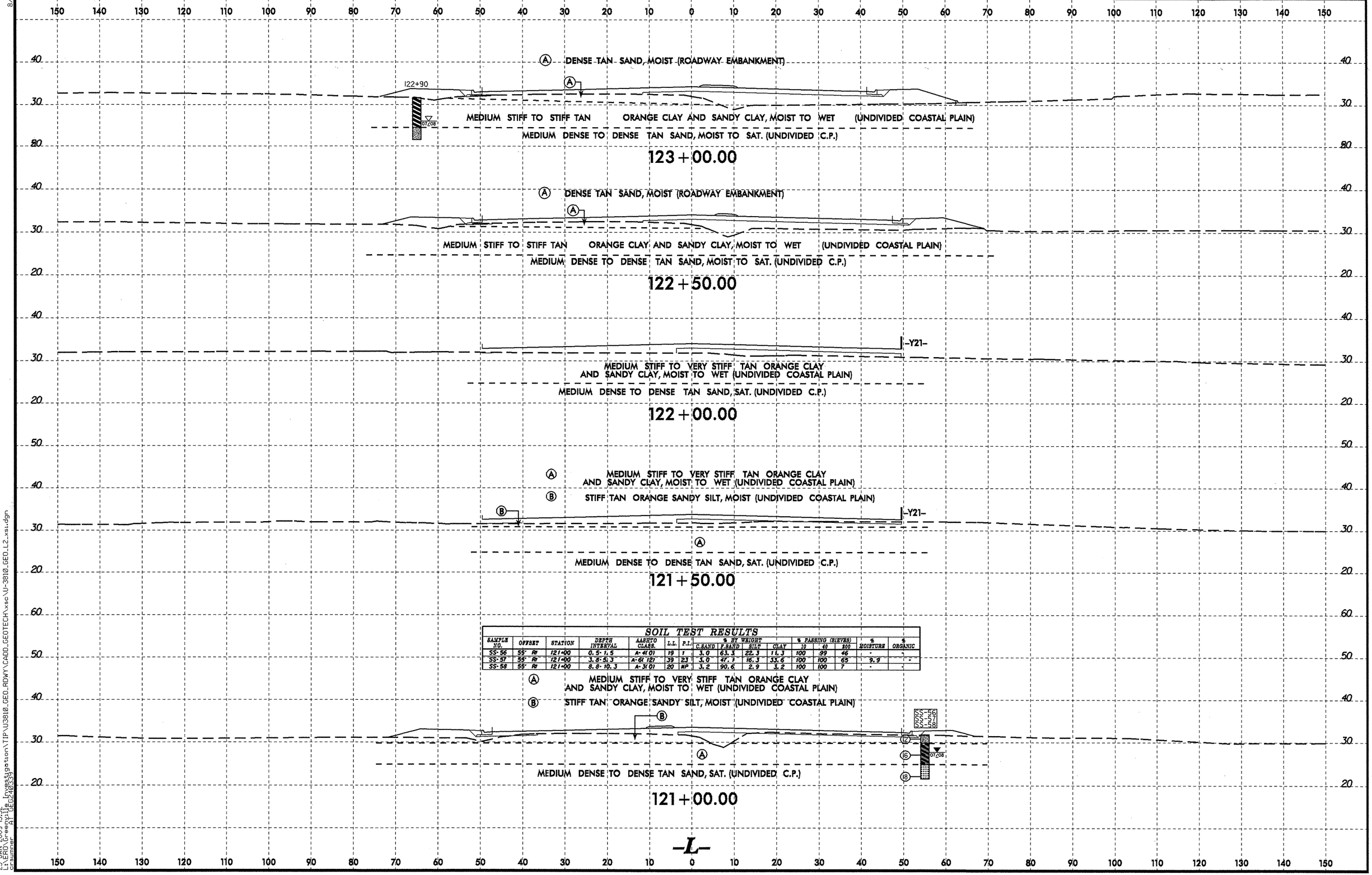
crsumner AT GEG240339



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-56	55' Rt	121+00	0.5-1.5	A-4(0)	19	1	3.0	63.3	22.3	11.3	100	99	46	-	-
SS-57	55' Rt	121+00	3.8-5.3	A-6(12)	39	23	3.0	47.1	16.3	33.6	100	100	65	9.9	-
SS-58	55' Rt	121+00	8.8-10.3	A-3(0)	20	NP	3.2	90.6	2.9	3.2	100	100	7	-	-

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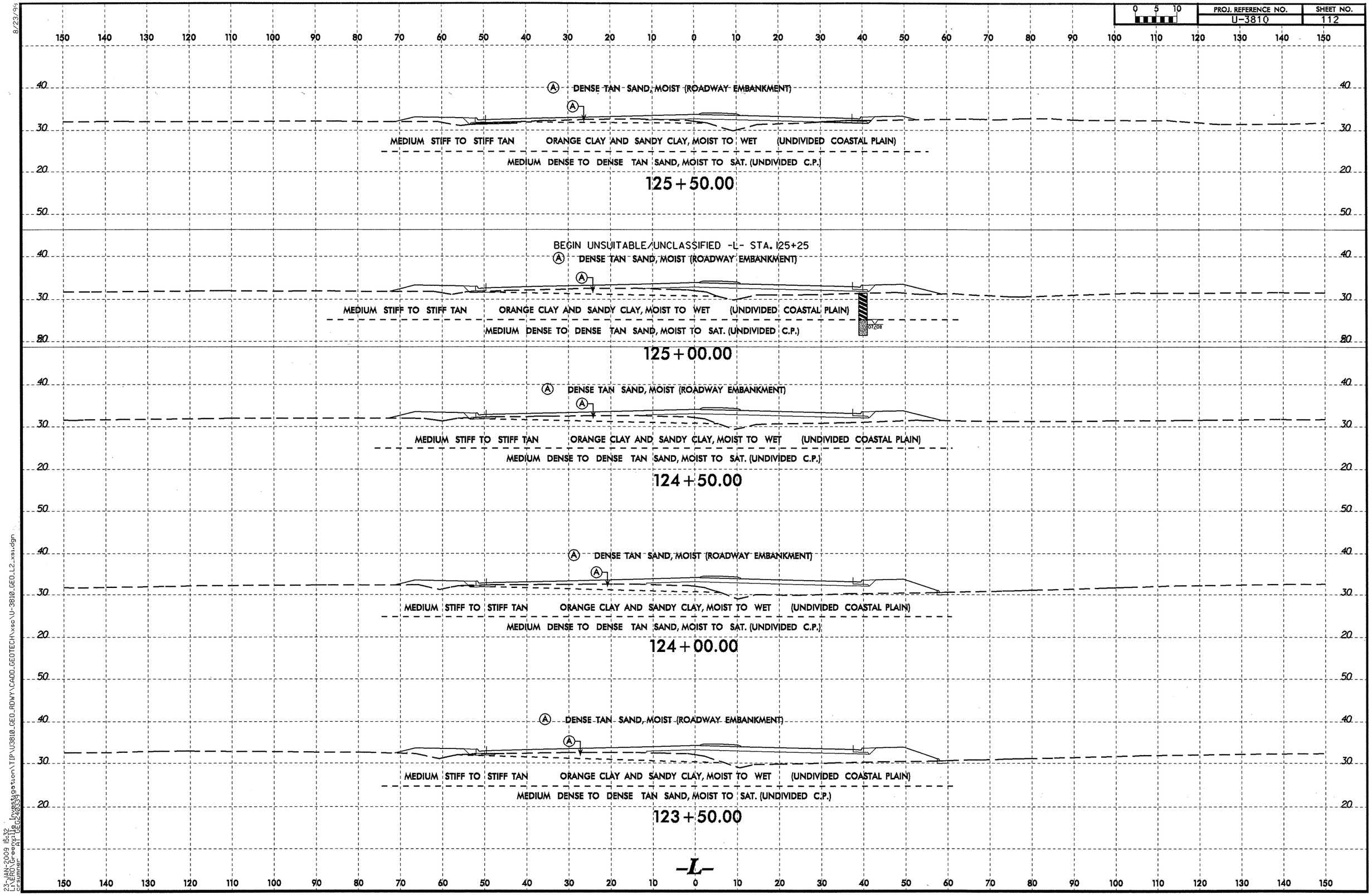
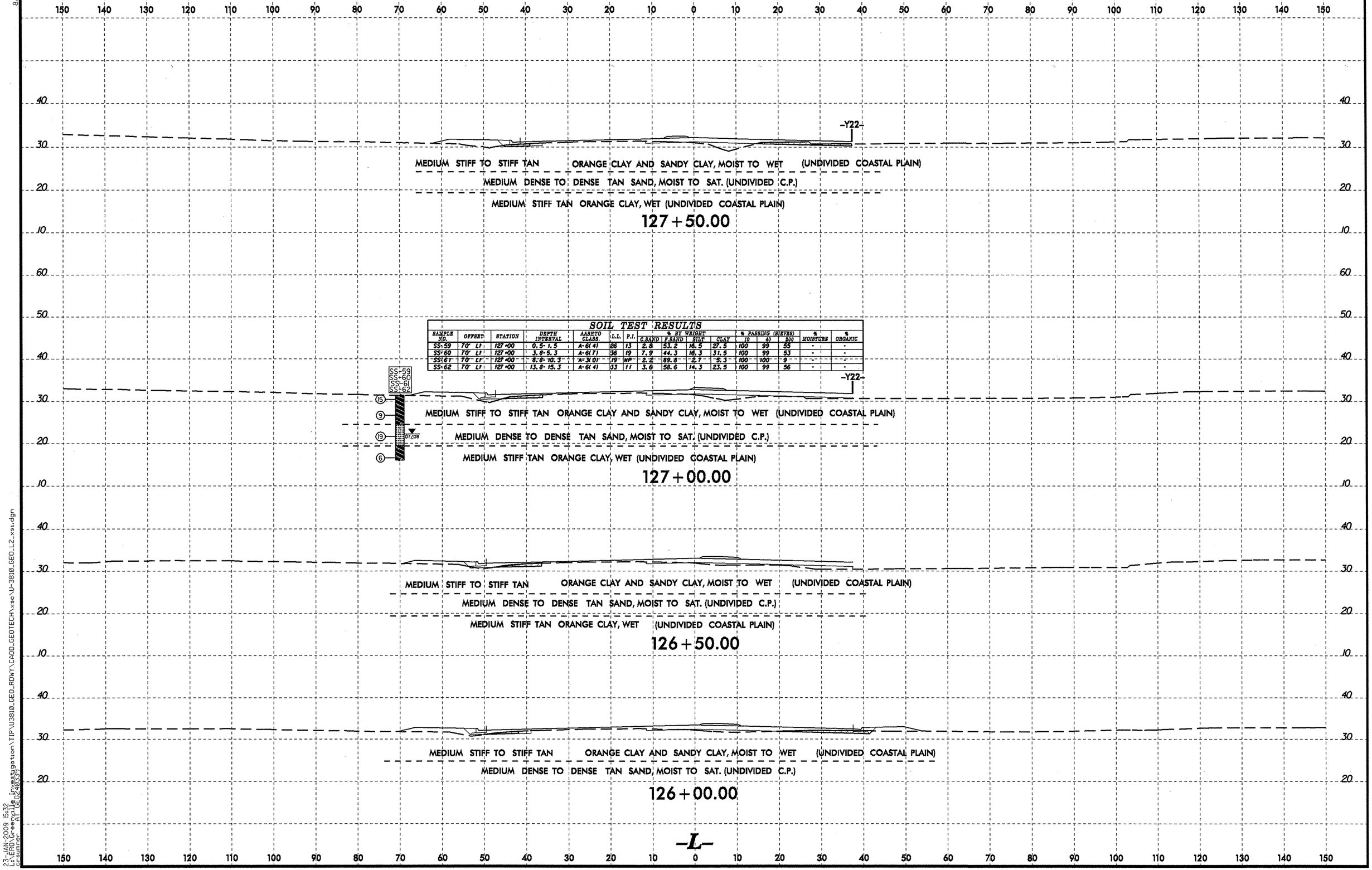


PROJ. REFERENCE NO.
U-3810
SHEET NO.
112
0 5 10
DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
MEDIUM STIFF TO STIFF TAN
ORANGE CLAY AND SANDY CLAY, MOIST TO WET
(UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED C.P.)
125+50.00
BEGIN UNSUITABLE/UNCLASSIFIED -L- STA. 125+25
DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
MEDIUM STIFF TO STIFF TAN
ORANGE CLAY AND SANDY CLAY, MOIST TO WET
(UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED C.P.)
125+00.00
DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
MEDIUM STIFF TO STIFF TAN
ORANGE CLAY AND SANDY CLAY, MOIST TO WET
(UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED C.P.)
124+50.00
DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
MEDIUM STIFF TO STIFF TAN
ORANGE CLAY AND SANDY CLAY, MOIST TO WET
(UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED C.P.)
124+00.00
DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)
MEDIUM STIFF TO STIFF TAN
ORANGE CLAY AND SANDY CLAY, MOIST TO WET
(UNDIVIDED COASTAL PLAIN)
MEDIUM DENSE TO DENSE TAN SAND, MOIST TO SAT. (UNDIVIDED C.P.)
123+50.00
-L-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-59	70' LT	127+00	0.5-1.5	A-6(4)	26	13	2.8	53.2	16.5	27.5	100	99	55	-	-
SS-60	70' LT	127+00	3.8-5.3	A-6(7)	36	19	7.9	44.3	16.3	31.5	100	99	53	-	-
SS-61	70' LT	127+00	8.8-10.3	A-3(0)	19	NP	2.2	89.8	2.7	5.3	100	100	9	-	-
SS-62	70' LT	127+00	13.8-15.3	A-6(4)	33	11	3.6	58.6	14.3	23.5	100	99	56	-	-

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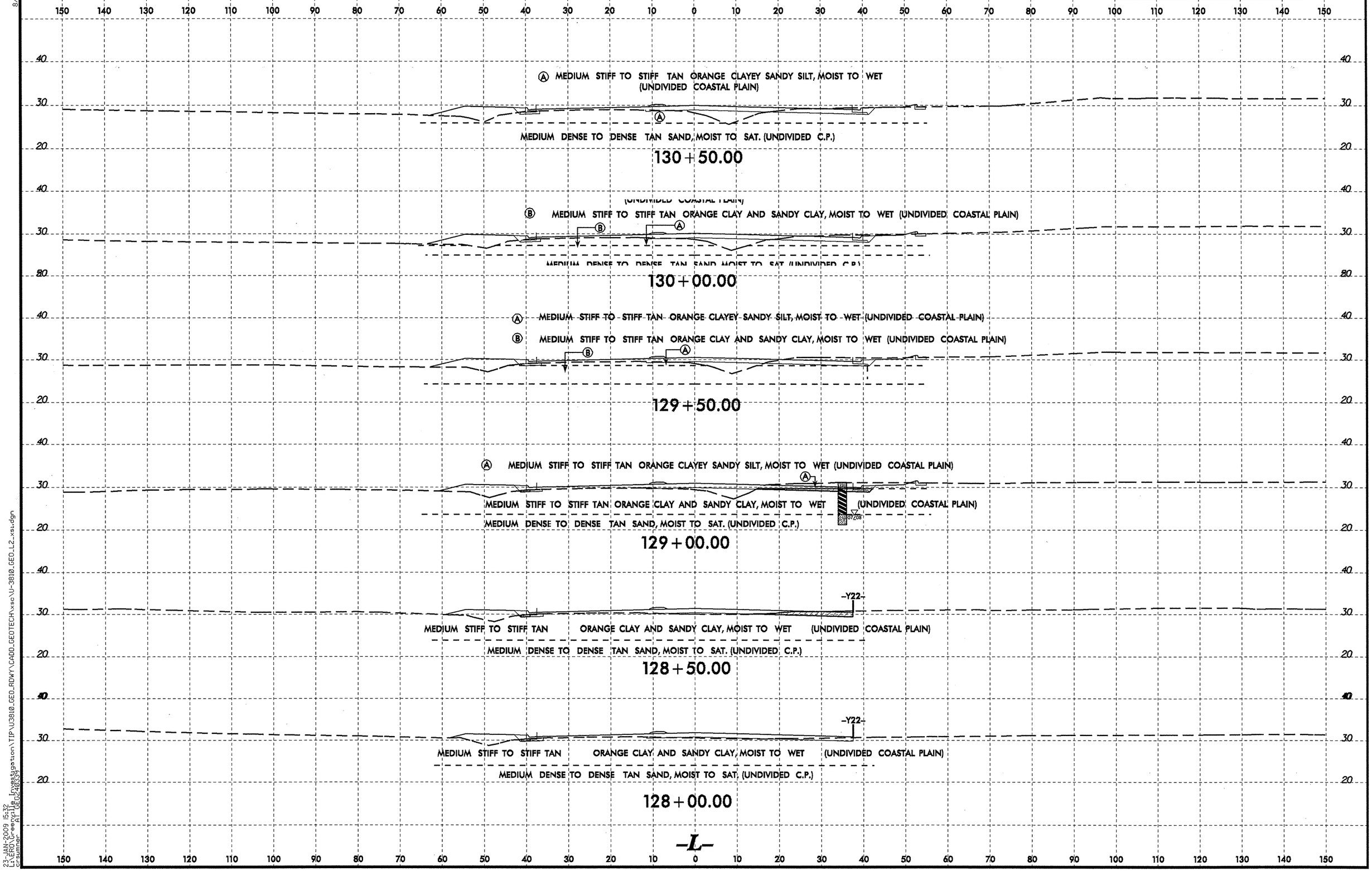

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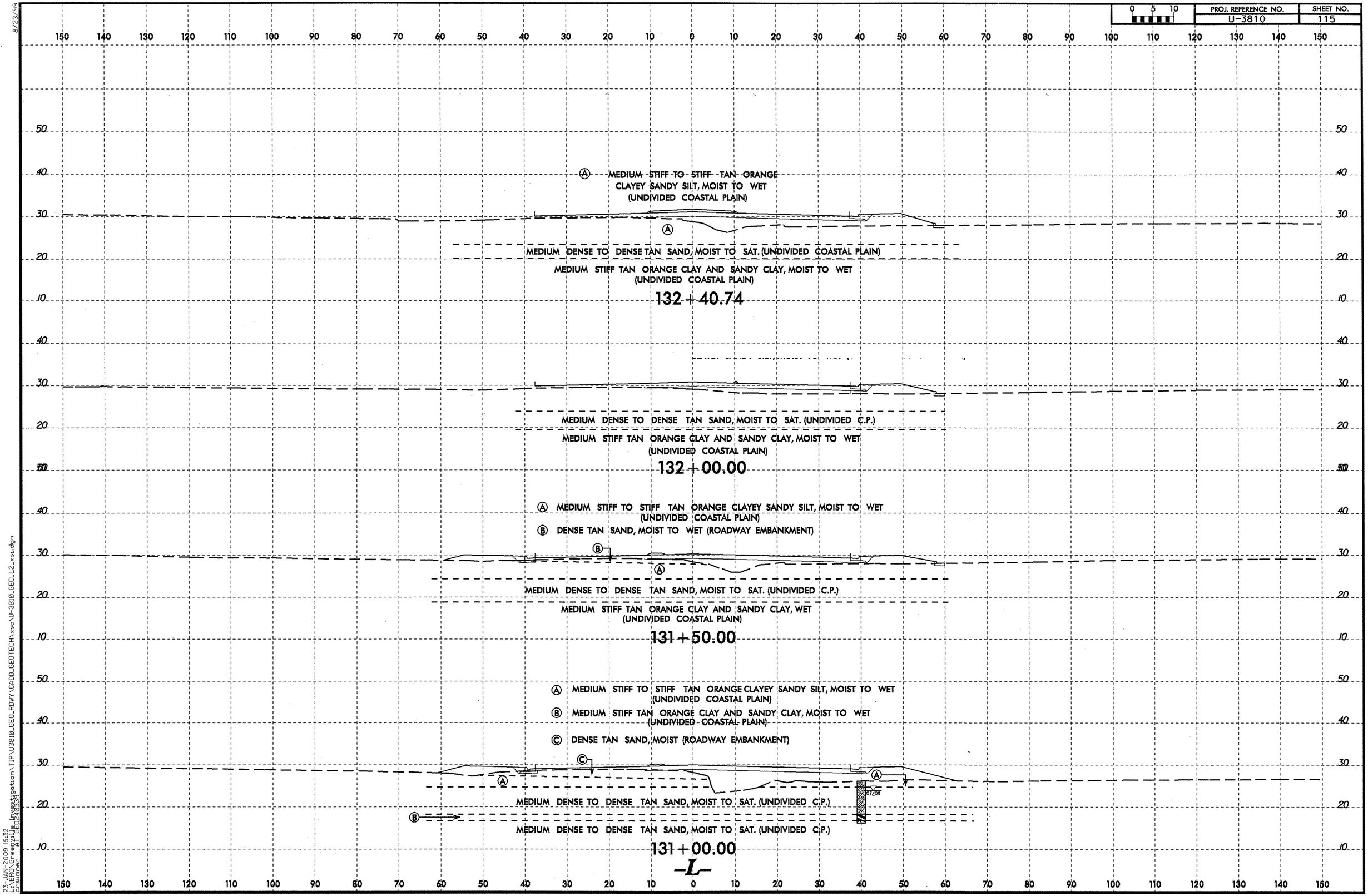

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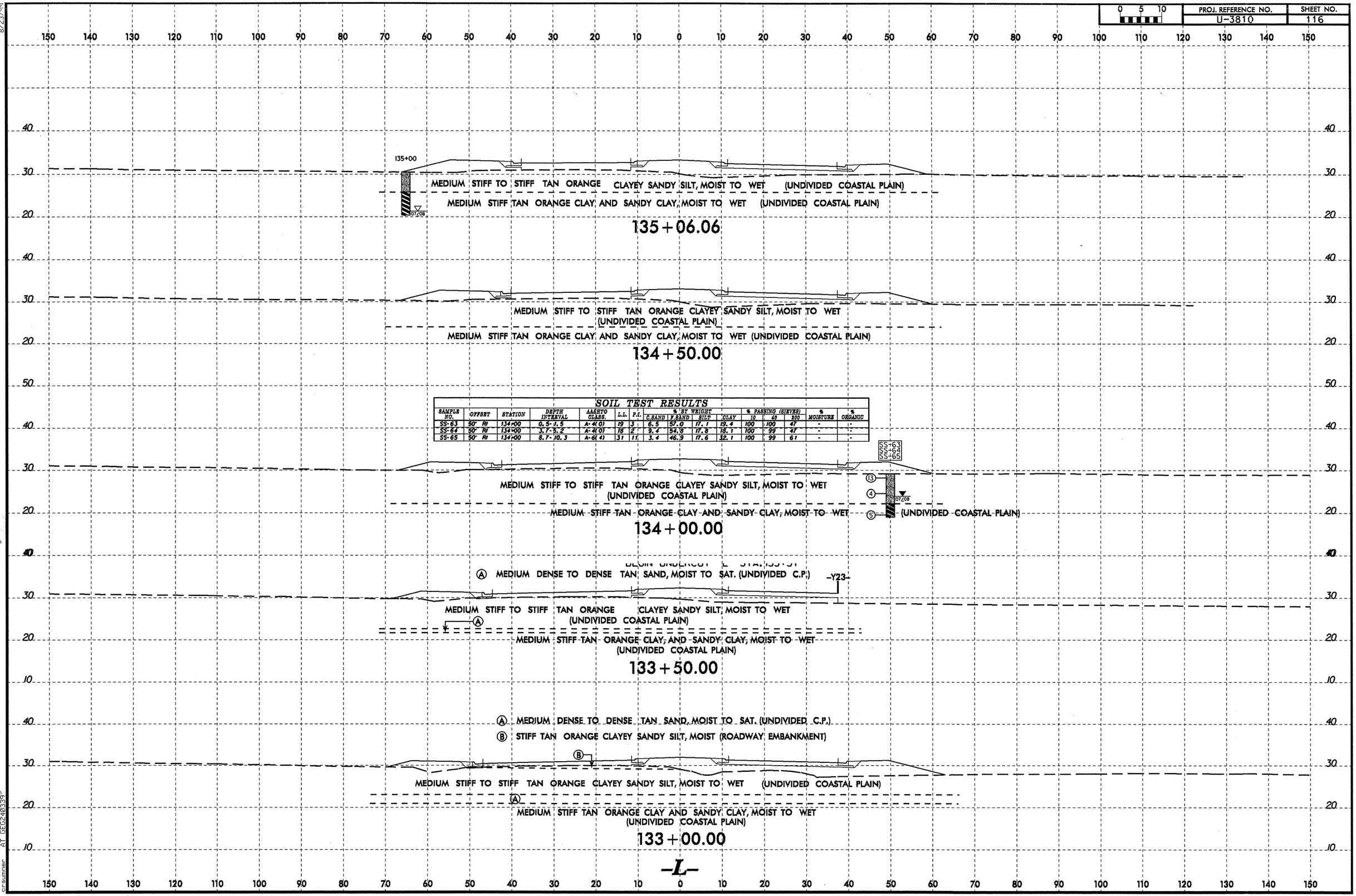

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-63	50' Rt	134+00	0.5-1.5	A-4(0)	19	3	6.5	57.0	17.1	19.4	100	100	47	-	-
SS-64	50' Rt	134+00	3.7-5.2	A-4(0)	18	2	9.4	54.9	17.8	18.1	100	99	47	-	-
SS-65	50' Rt	134+00	8.7-10.3	A-6(4)	31	11	3.4	46.9	17.6	32.1	100	99	61	-	-

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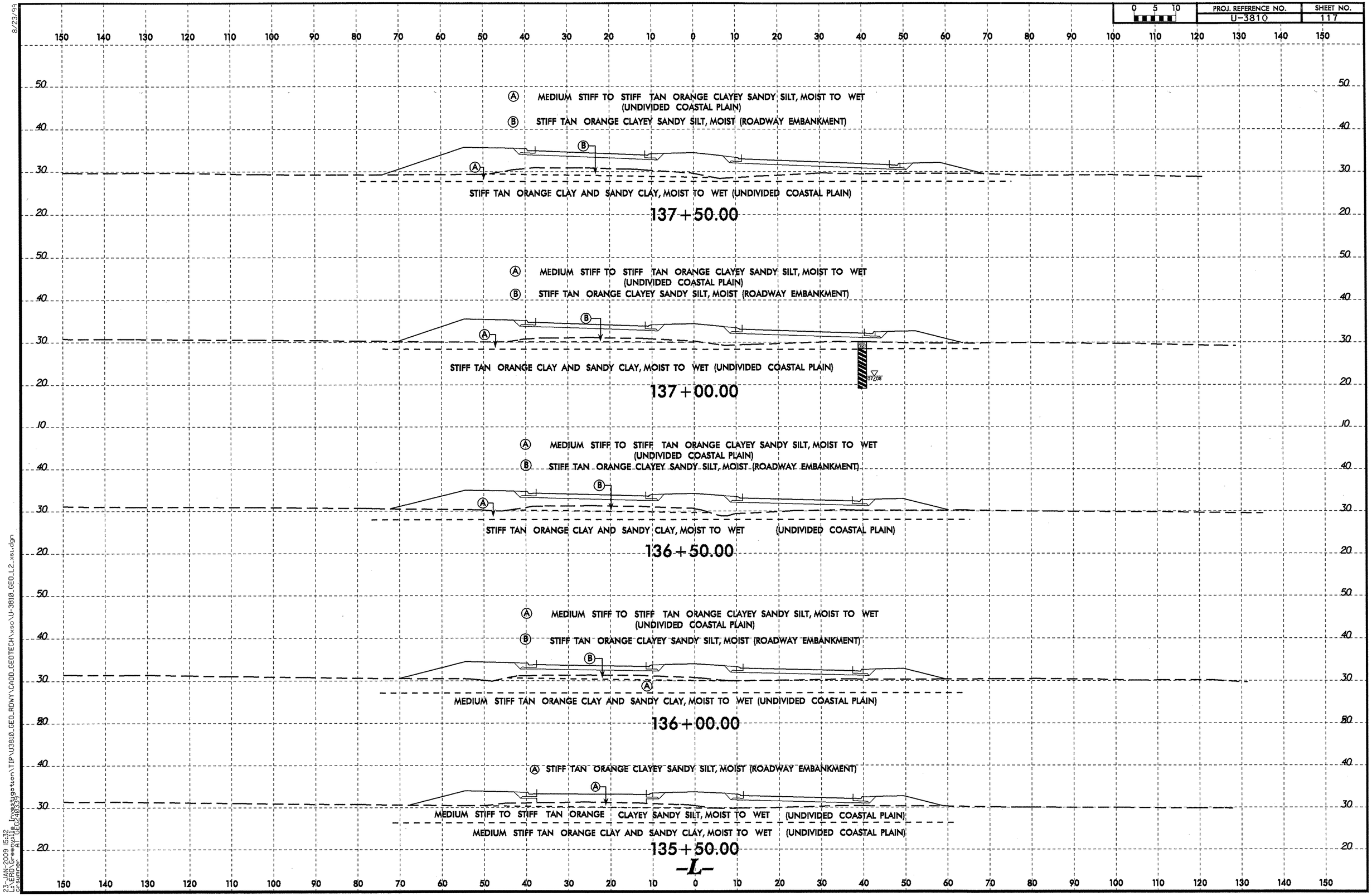

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PROJ. REFERENCE NO.	SHEET NO.
U-3810	118

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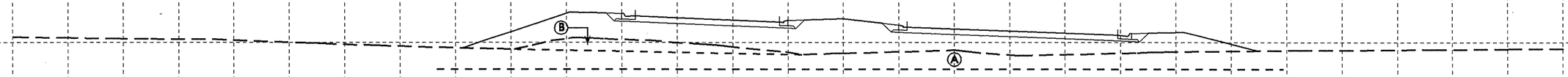
Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

MEDIUM STIFF TAN ORANGE SANDYCLAYEY SILT, WET (UNDIVIDED C.P.)

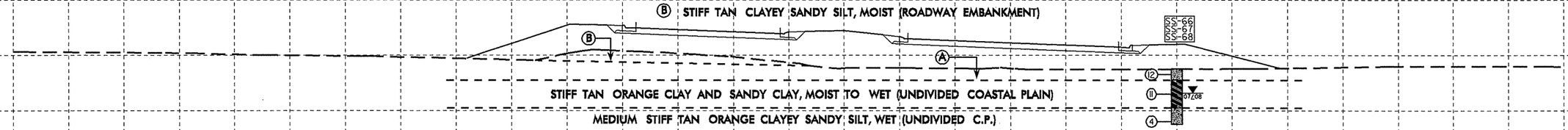
139+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-66	60' Rt	139+00	0.5-1.5	A-4(0)	21	3	7.2	48.9	31.8	12.0	100	99	58	-	-
SS-67	60' Rt	139+00	3.5-5.0	A-6(7)	32	15	6.0	40.7	19.2	34.1	100	100	64	-	-
SS-68	60' Rt	139+00	8.5-10.0	A-4(0)	24	4	17.5	46.5	24.0	12.0	100	92	40	-	-

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



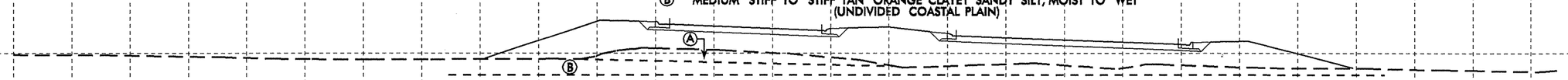
STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, WET (UNDIVIDED C.P.)

139+00.00

Ⓐ STIFF TAN CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT

Ⓑ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



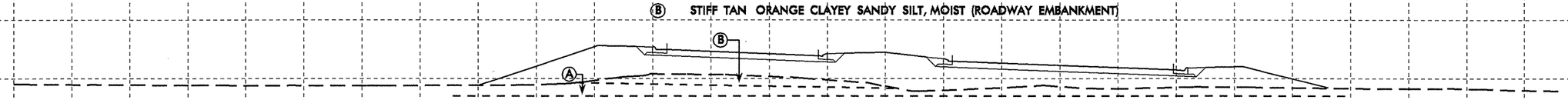
STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

MEDIUM STIFF TAN ORANGE CLAYEY SANDY SILT, WET (UNDIVIDED COASTAL PLAIN)

138+40.06

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

Ⓑ STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST (ROADWAY EMBANKMENT)



STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

138+00.00

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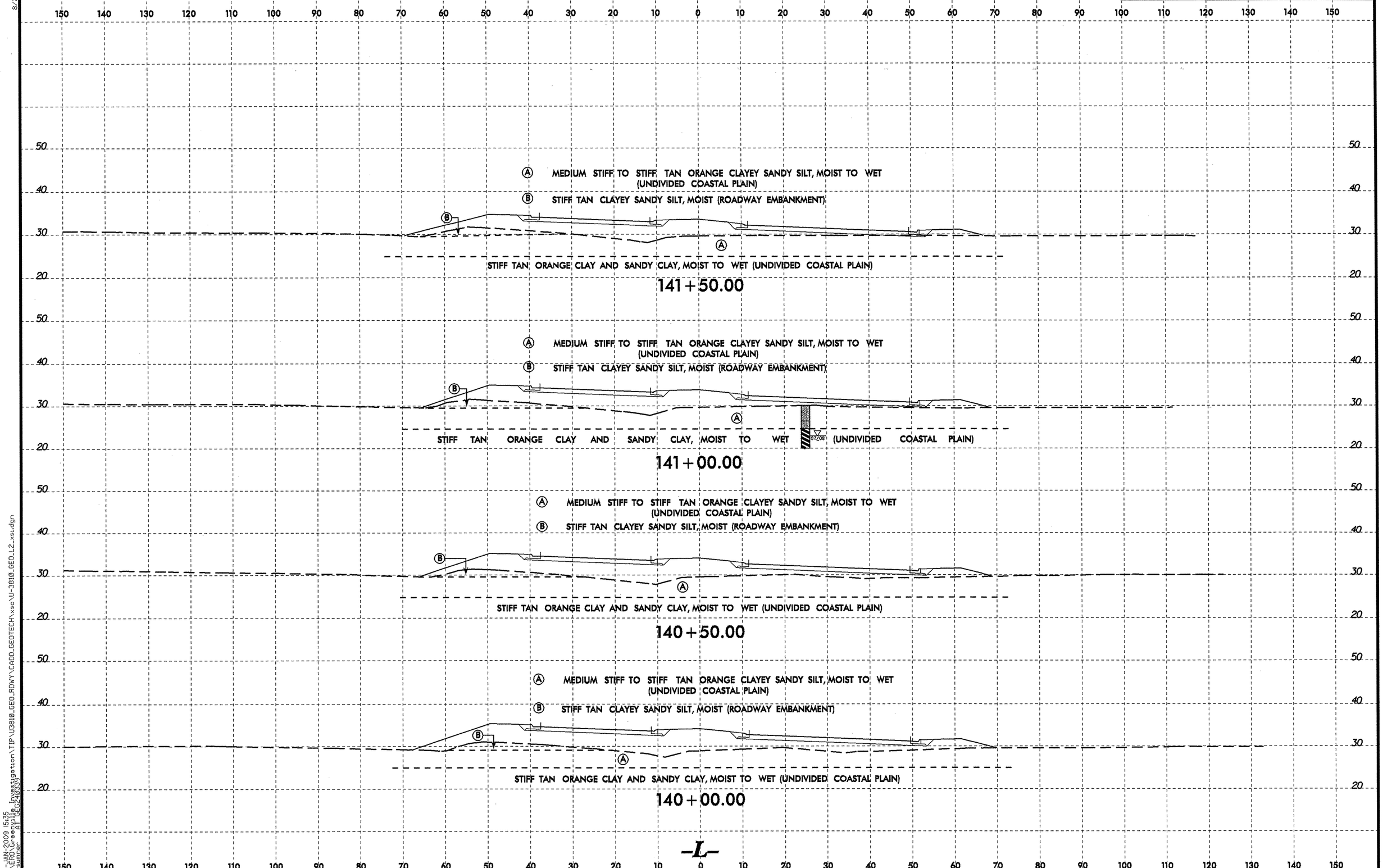

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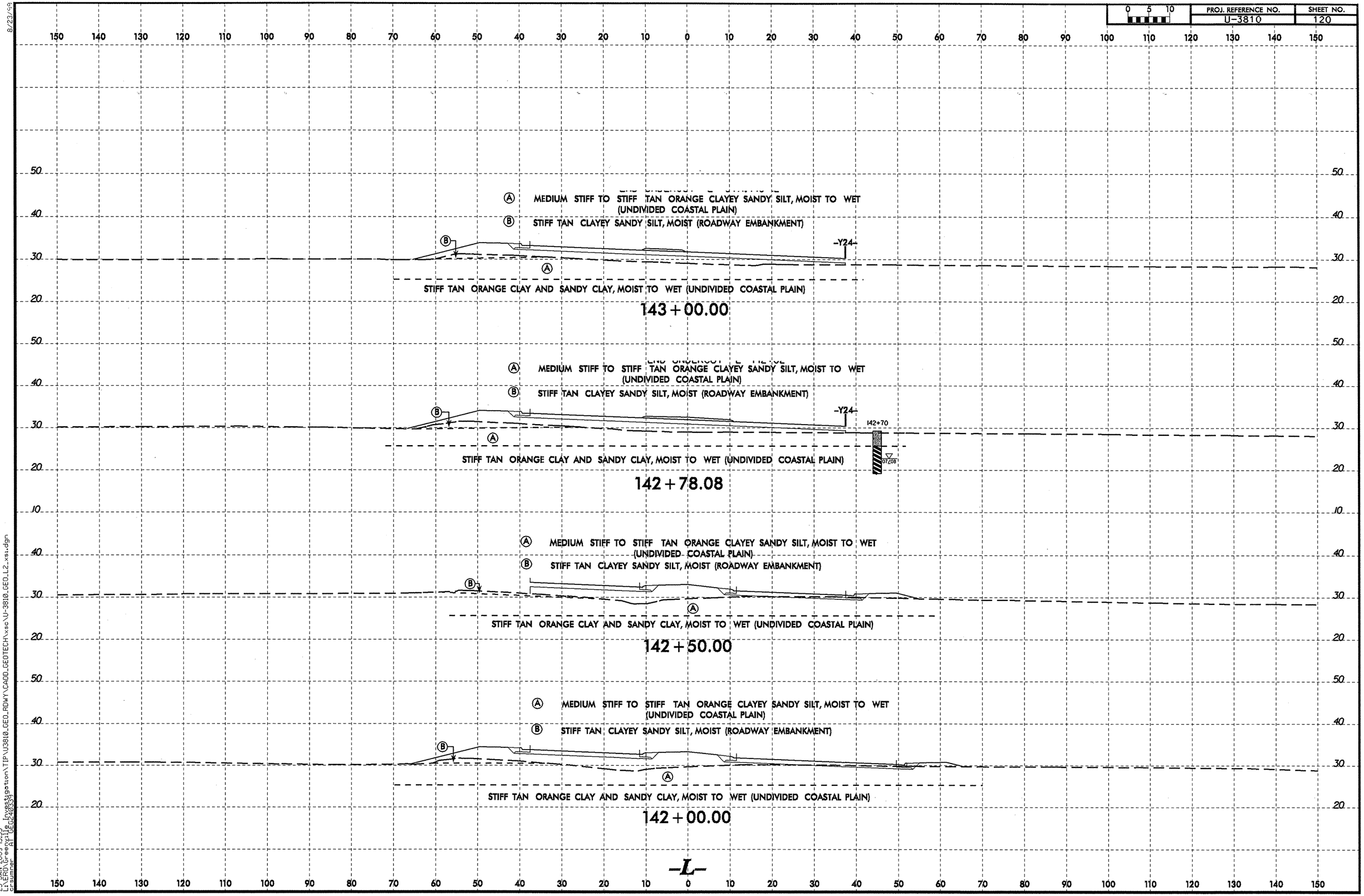

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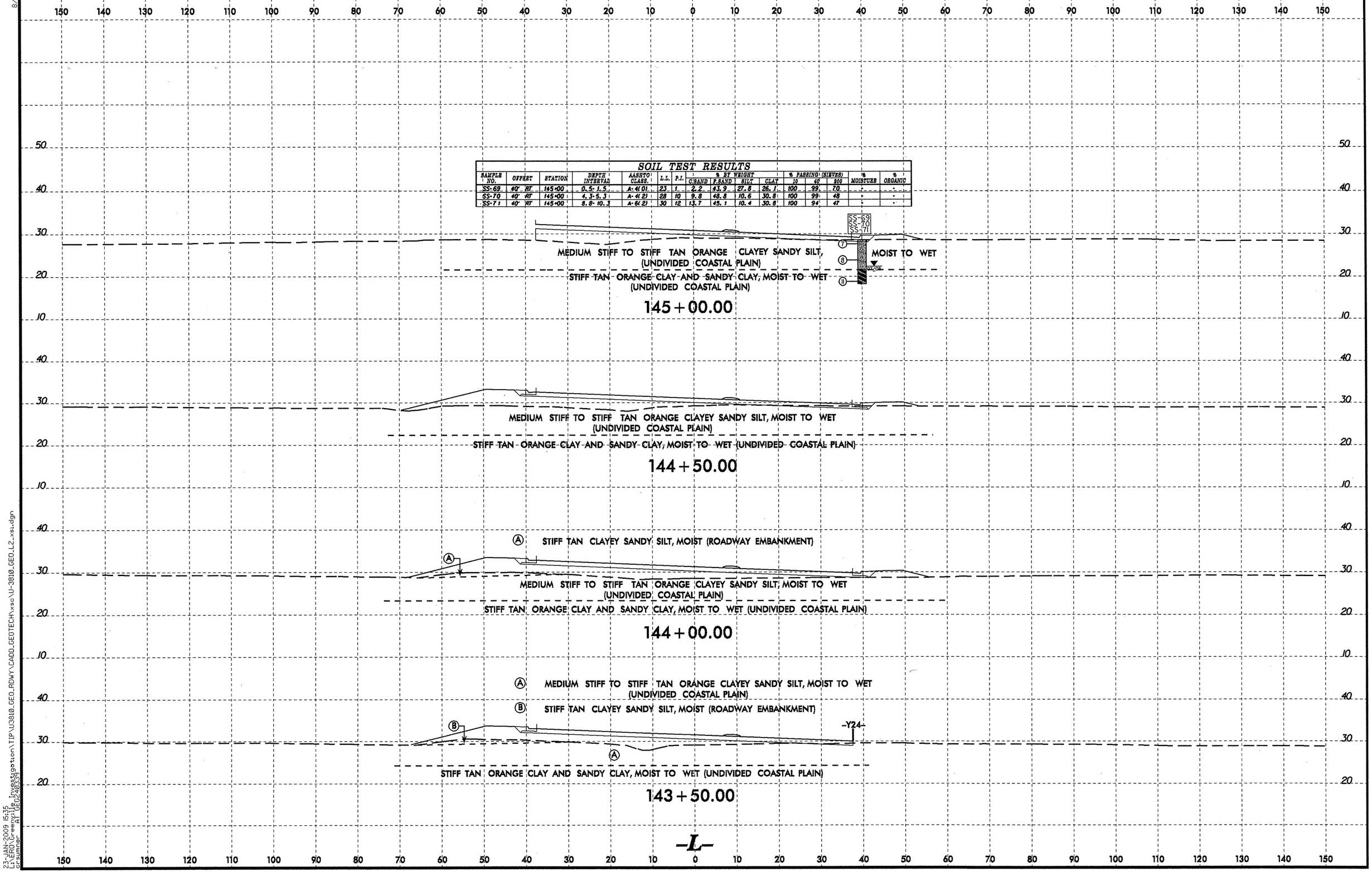
crsumner AT GEO240339

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-69	40' RT	145+00	0.5-1.5	A-4(0)	23	1	2.2	43.9	27.8	26.1	100	99	70	-	-
SS-70	40' RT	145+00	4.3-5.3	A-4(2)	28	10	9.8	48.8	10.6	30.8	100	99	48	-	-
SS-71	40' RT	145+00	8.8-10.3	A-6(2)	30	12	13.7	45.1	10.4	30.8	100	94	47	-	-



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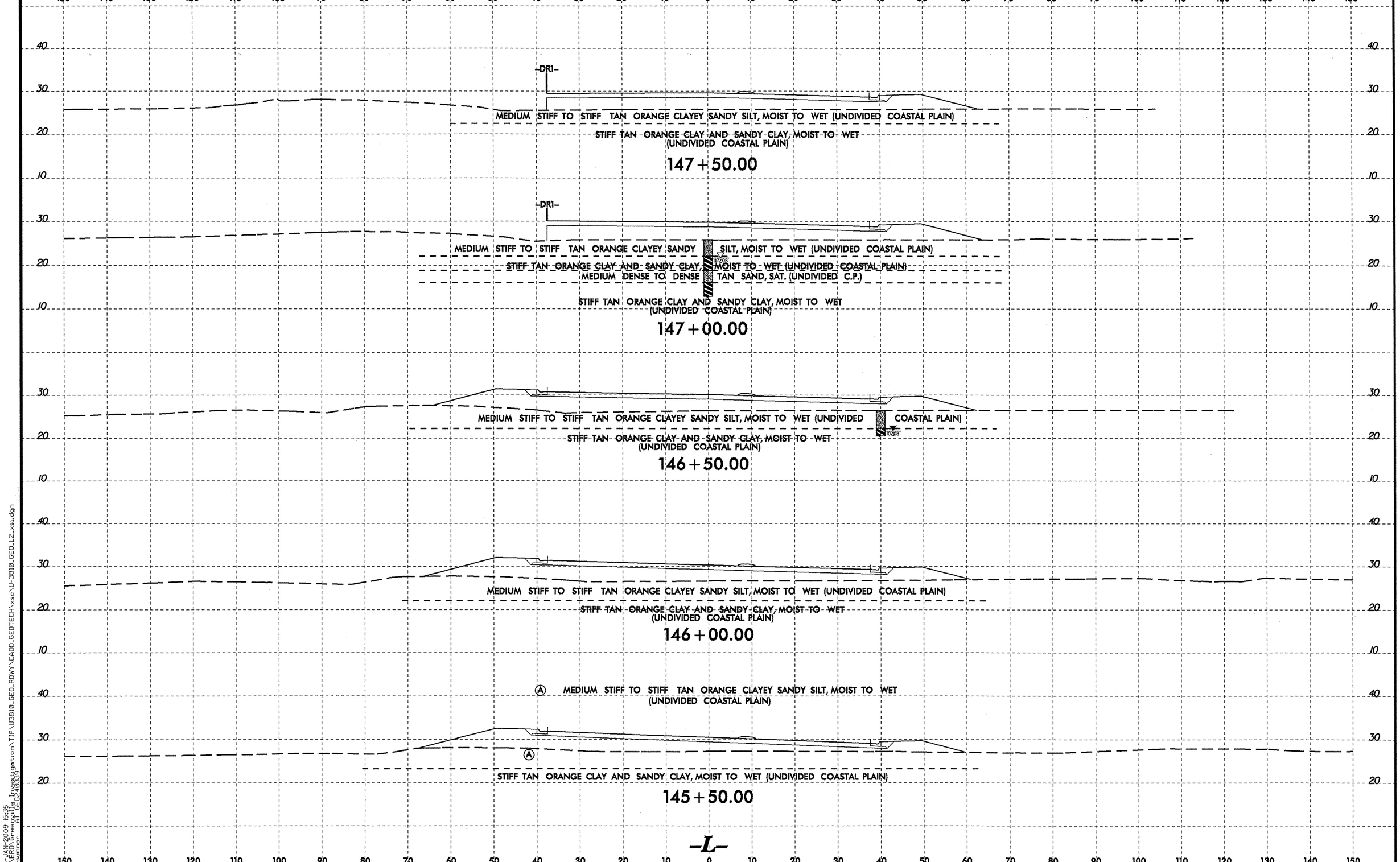

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PROJ. REFERENCE NO.	SHEET NO.
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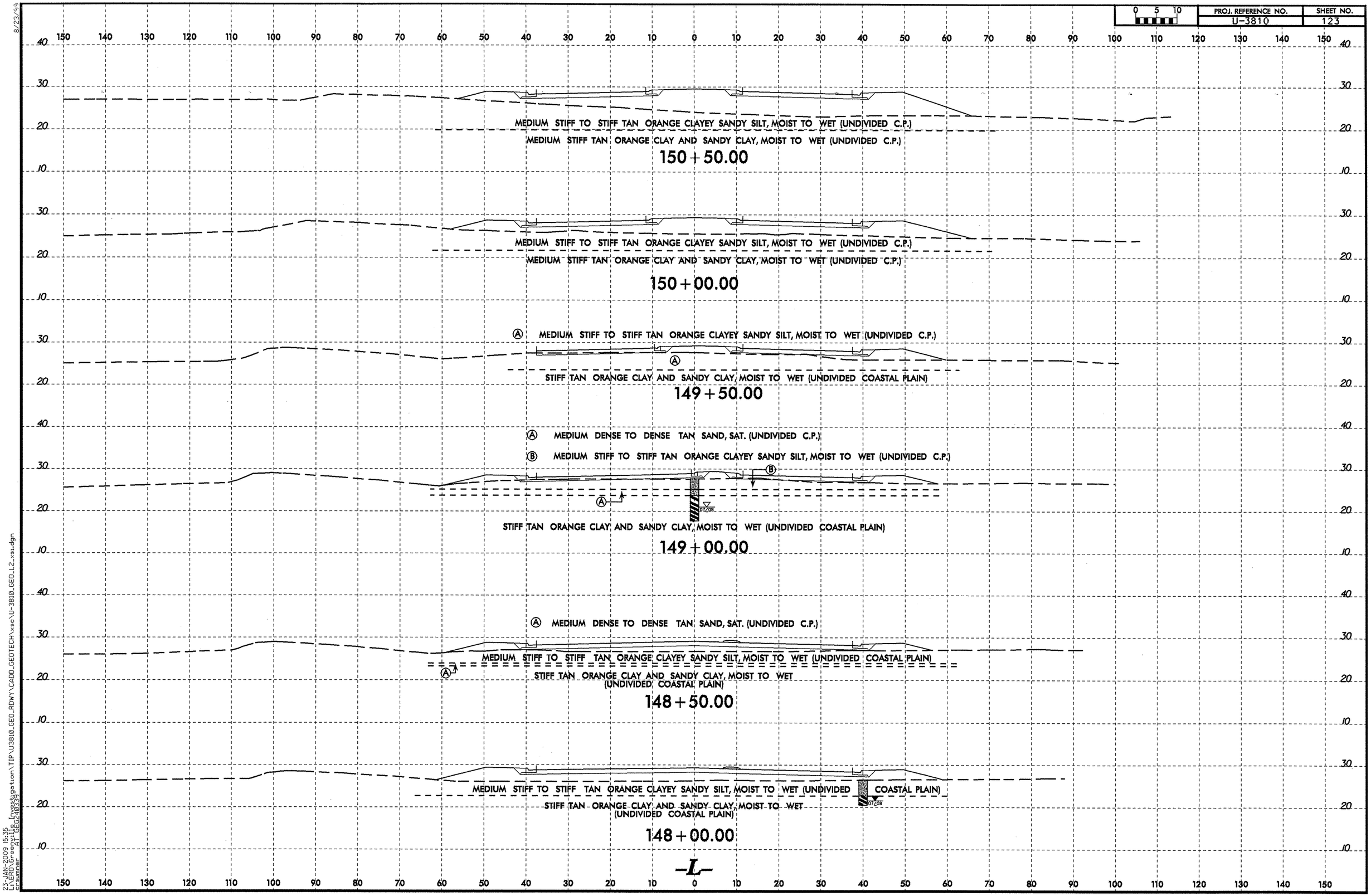

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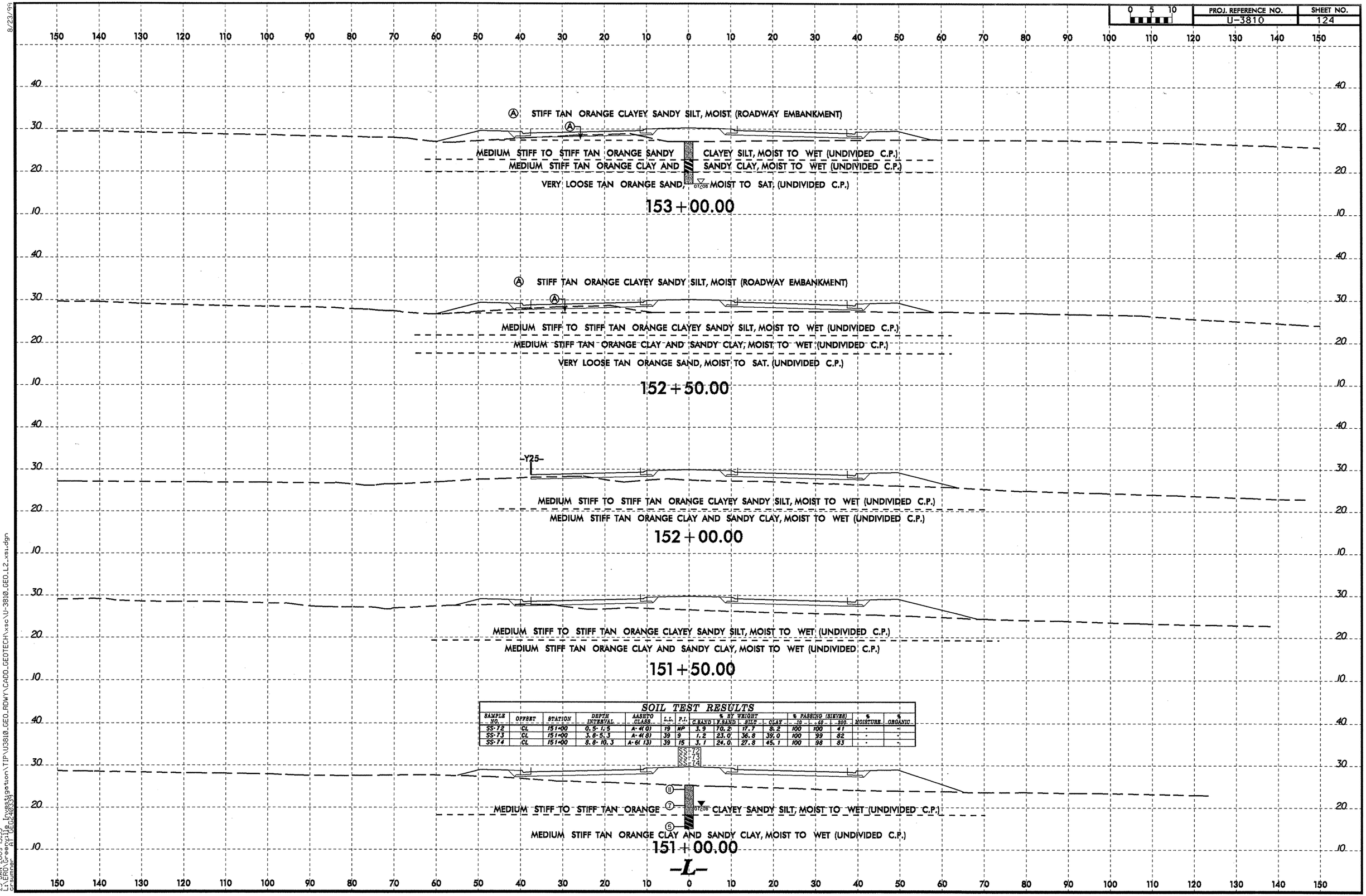

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-72	CL	151+00	0.5-1.5	A-4(0)	19	NP	3.9	70.2	17.7	8.2	100	100	41	-	-
SS-73	CL	151+00	3.8-5.3	A-4(8)	39	9	1.2	23.0	36.8	39.0	100	99	82	-	-
SS-74	CL	151+00	8.8-10.3	A-6(13)	39	15	3.1	24.0	27.8	45.1	100	98	83	-	-

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
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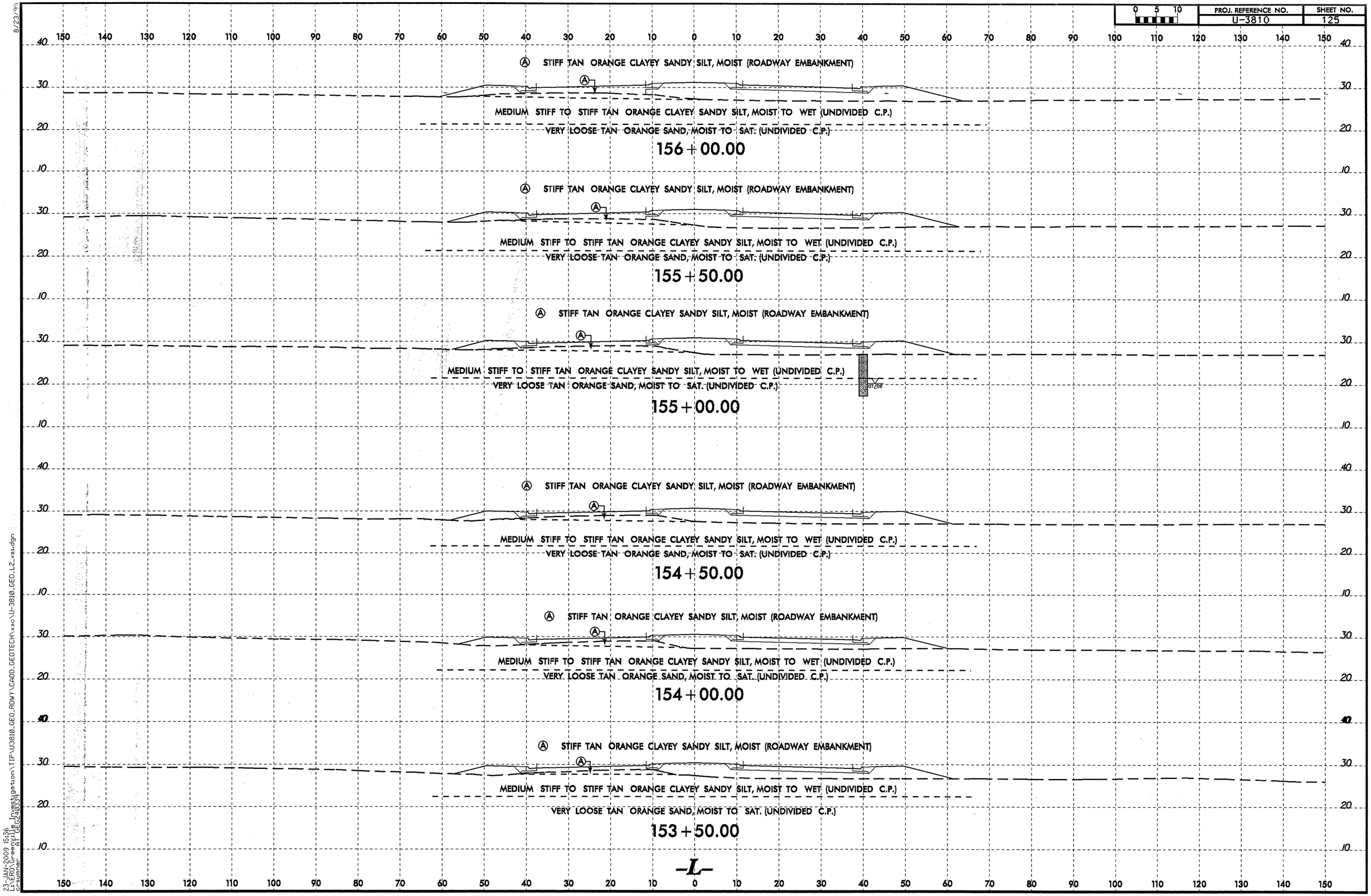

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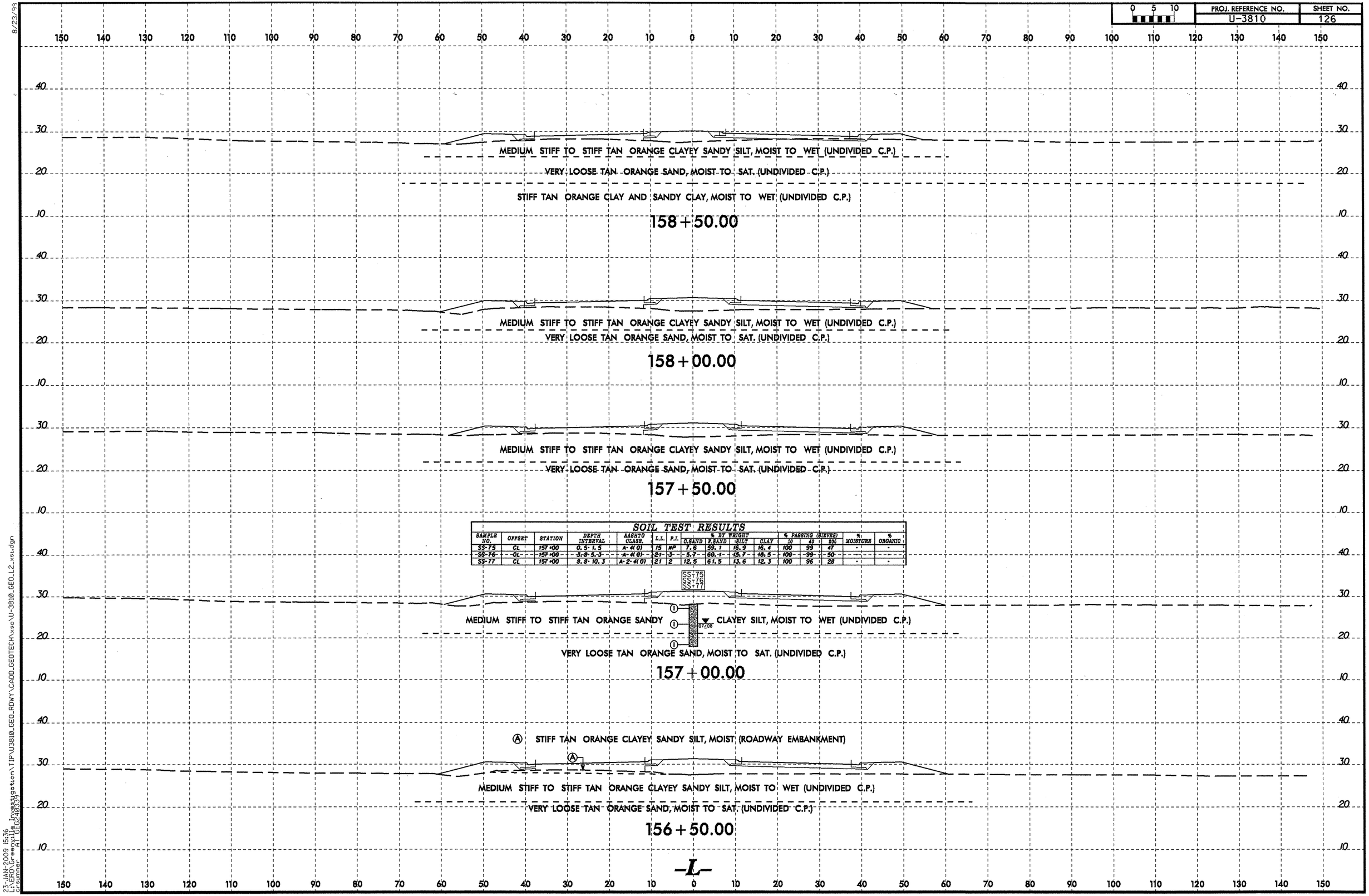

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	#200	% MOISTURE	% ORGANIC
SS-75	CL	157+00	0.5-1.5	A-4(0)	15	NP	7.6	59.1	16.9	16.4	100	99	47	-	-
SS-76	CL	157+00	3.8-5.3	A-4(0)	21	3	5.7	60.1	15.7	18.5	100	99	50	-	-
SS-77	CL	157+00	8.8-10.3	A-2-4(0)	21	2	12.5	61.5	13.6	12.3	100	96	28	-	-

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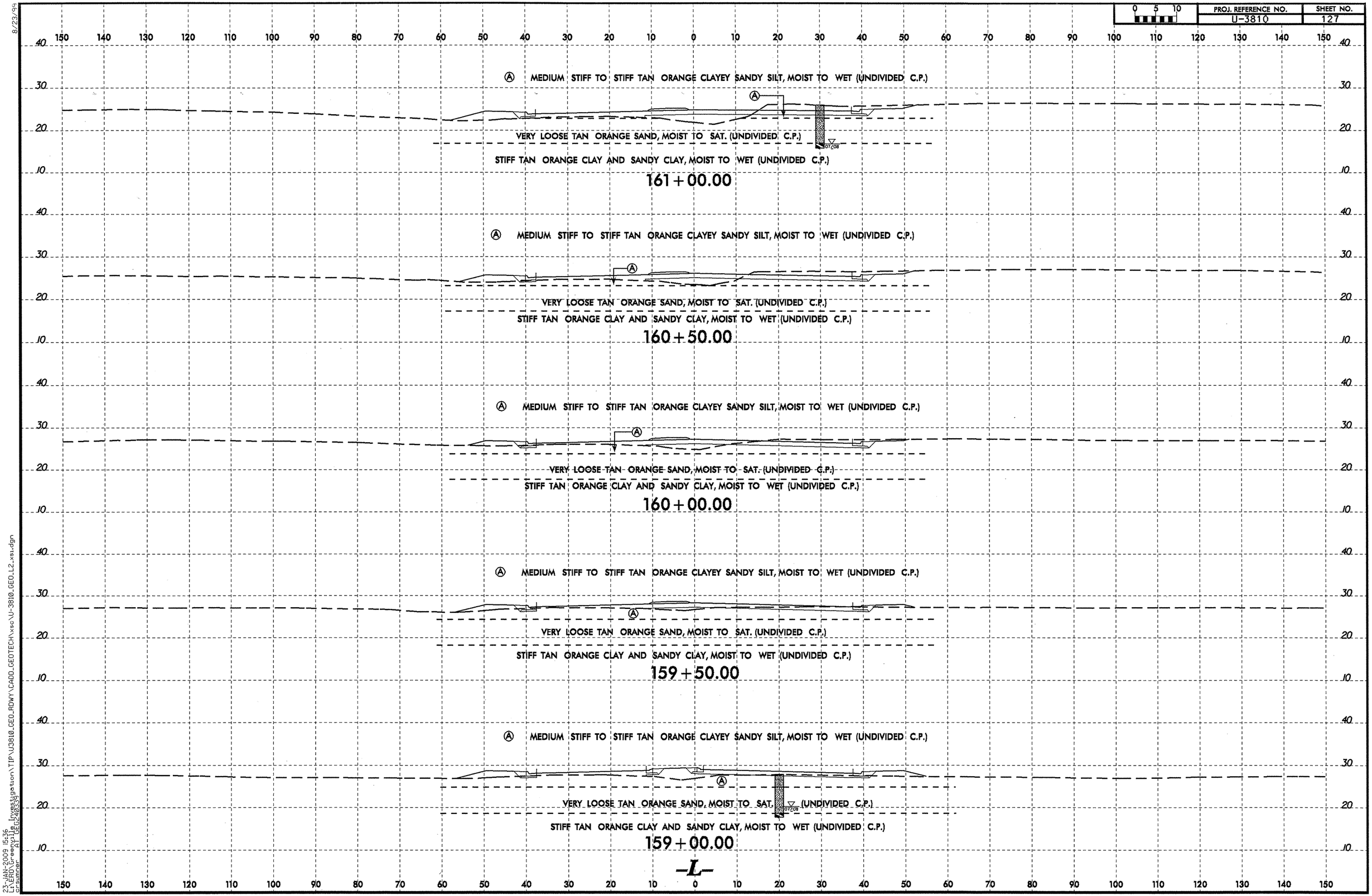
PROJ. REFERENCE NO.	SHEET NO.
U-3810	127

0 5 10



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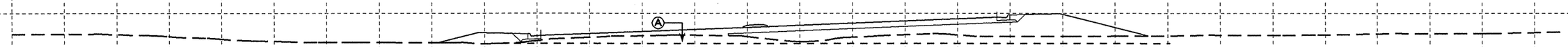
Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)



STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED C.P.)

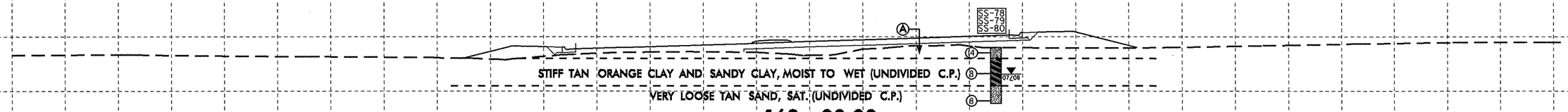
VERY LOOSE TAN SAND, SAT. (UNDIVIDED C.P.)

163 + 50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-78	35' RT	163+00	0.5-1.5	A-4(0)	15	NP	10.5	65.8	11.4	12.3	100	97	36	-	-
SS-79	35' RT	163+00	3.8-5.3	A-6(6)	35	13	1.0	39.9	31.0	28.1	100	99	61	-	-
SS-80	35' RT	163+00	8.8-9.8	A-2-4(0)	18	NP	41.5	39.1	5.3	14.0	100	82	20	-	-

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)



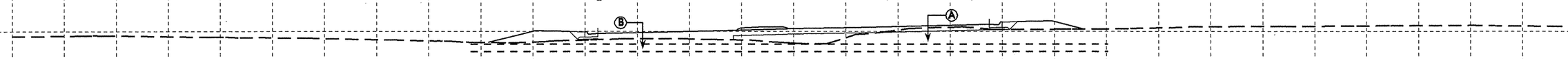
STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED C.P.)

VERY LOOSE TAN SAND, SAT. (UNDIVIDED C.P.)

163 + 00.00

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)

Ⓑ VERY LOOSE TAN ORANGE SAND, MOIST TO SAT. (UNDIVIDED C.P.)



STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED C.P.)

VERY LOOSE TAN SAND, SAT. (UNDIVIDED C.P.)

162 + 50.00

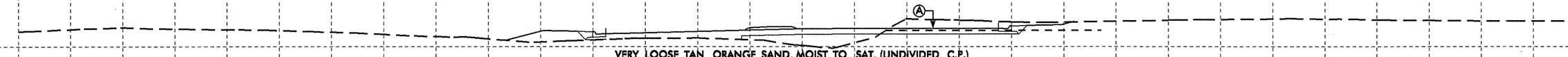
Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)

VERY LOOSE TAN ORANGE SAND, MOIST TO SAT. (UNDIVIDED C.P.)

STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED C.P.)

162 + 00.00

Ⓐ MEDIUM STIFF TO STIFF TAN ORANGE CLAYEY SANDY SILT, MOIST TO WET (UNDIVIDED C.P.)



VERY LOOSE TAN ORANGE SAND, MOIST TO SAT. (UNDIVIDED C.P.)

STIFF TAN ORANGE CLAY AND SANDY CLAY, MOIST TO WET (UNDIVIDED C.P.)

161 + 50.00

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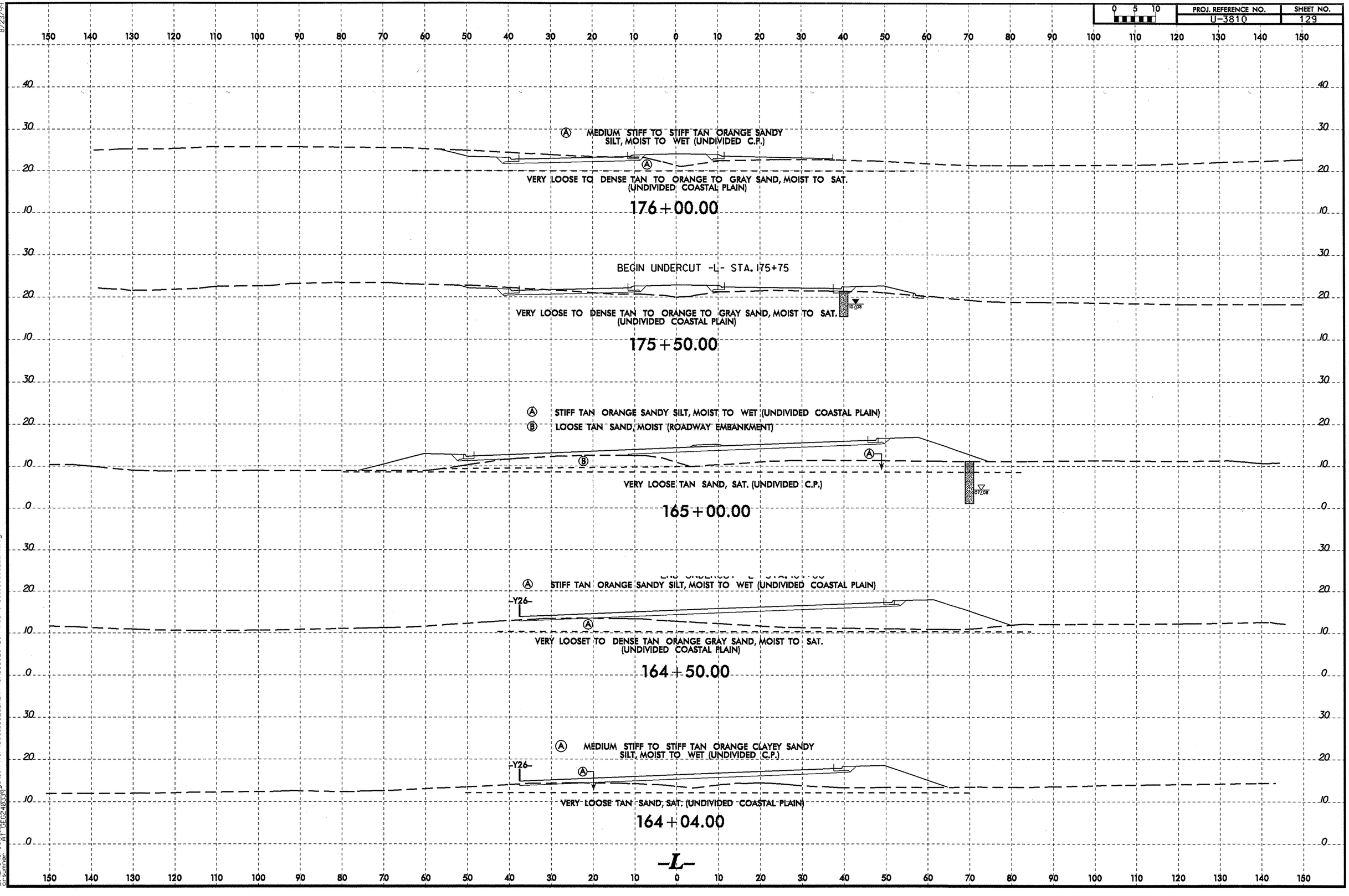

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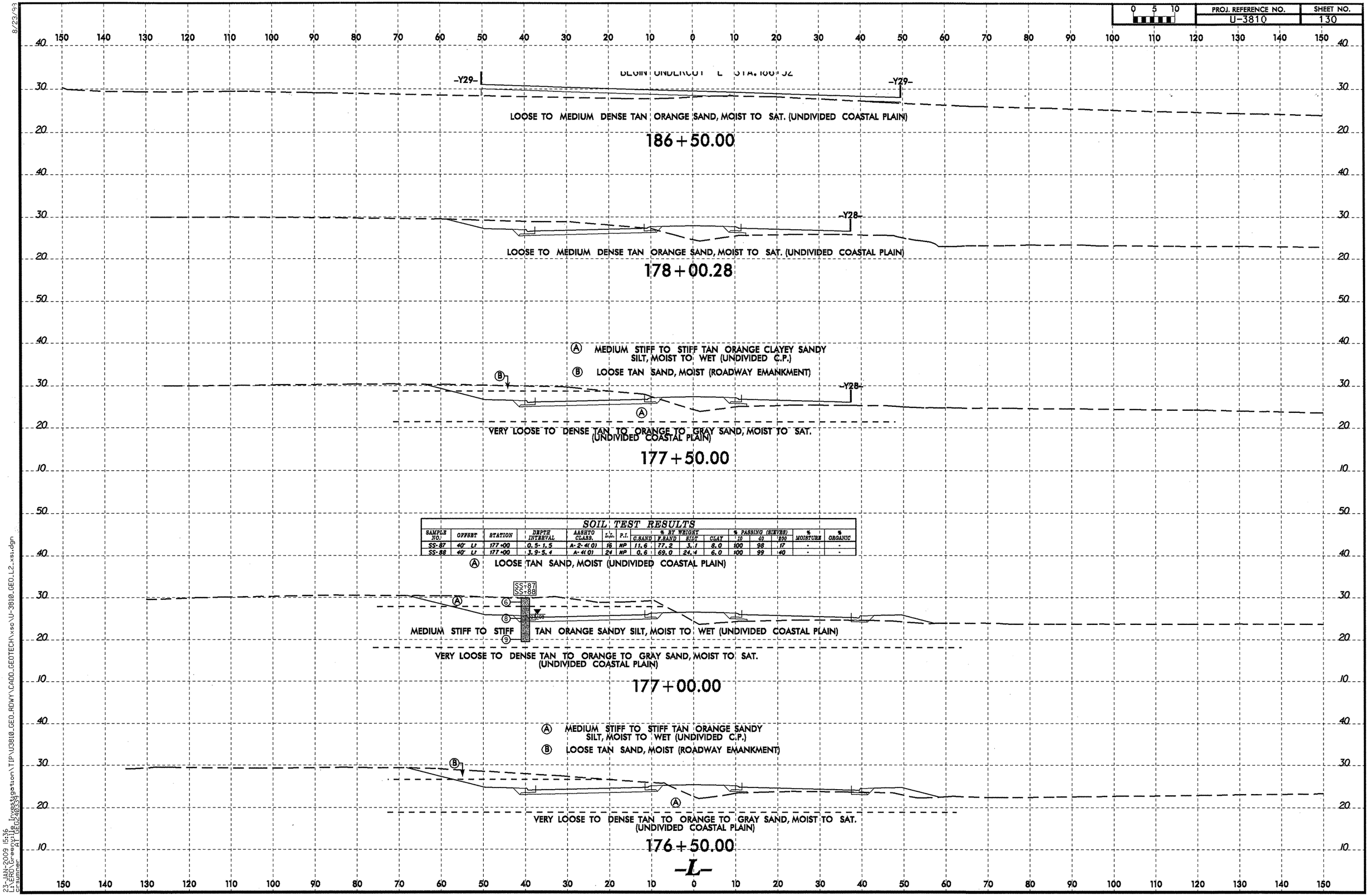

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-87	40' Lt	177+00	0.5-1.5	A-2-4(0)	16	NP	11.6	77.2	3.1	8.0	100	98	17	-	-
SS-88	40' Lt	177+00	3.9-5.4	A-4(0)	24	NP	0.6	69.0	24.4	6.0	100	99	40	-	-

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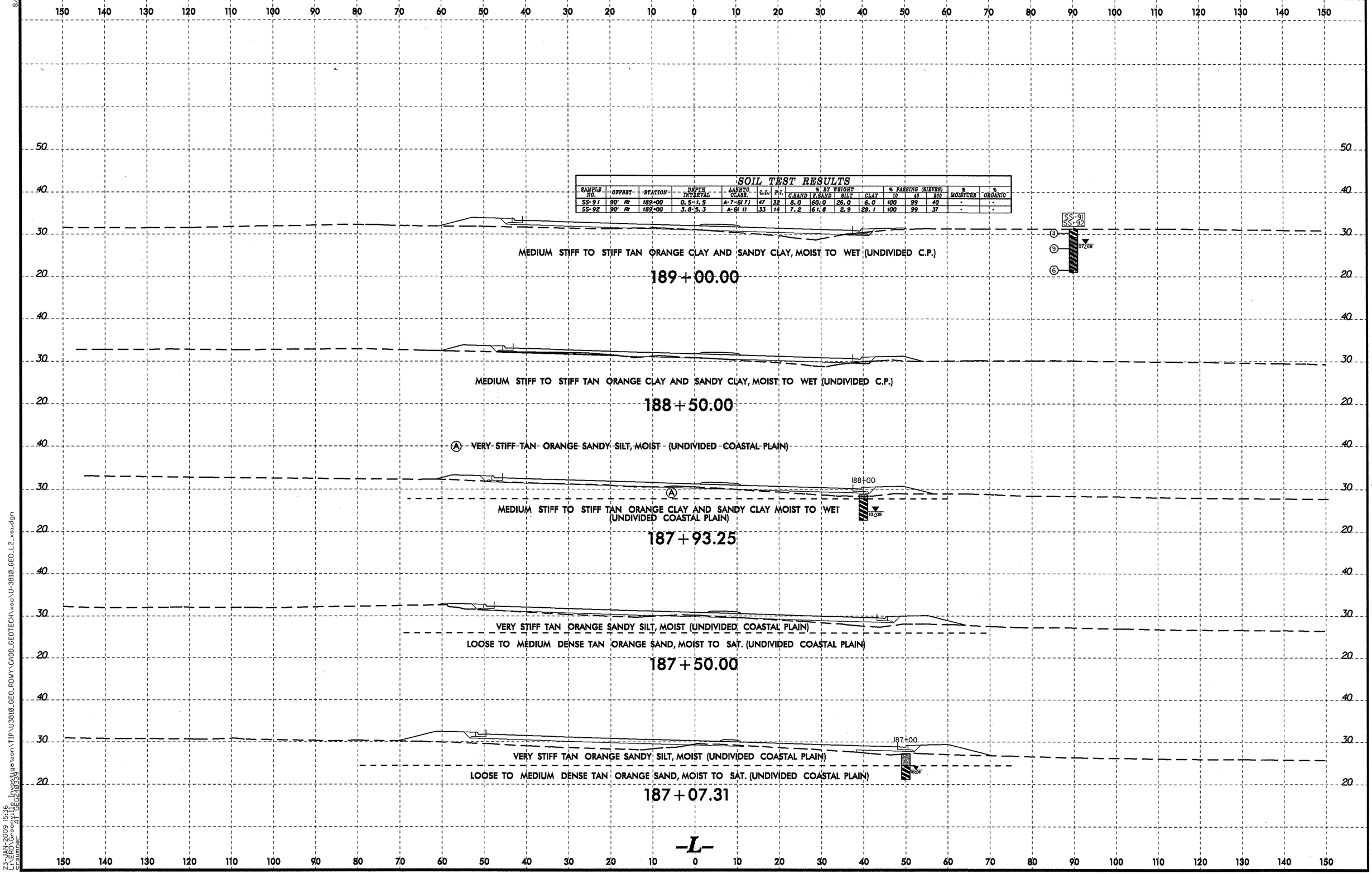
U-3810	131



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-91	90' Rt	189+00	0.5-1.5	A-7-6(7)	47	32	8.0	60.0	26.0	6.0	100	99	40	-	-
SS-92	90' Rt	189+00	3.8-5.3	A-6(1)	33	14	7.2	61.8	2.9	28.1	100	99	37	-	-

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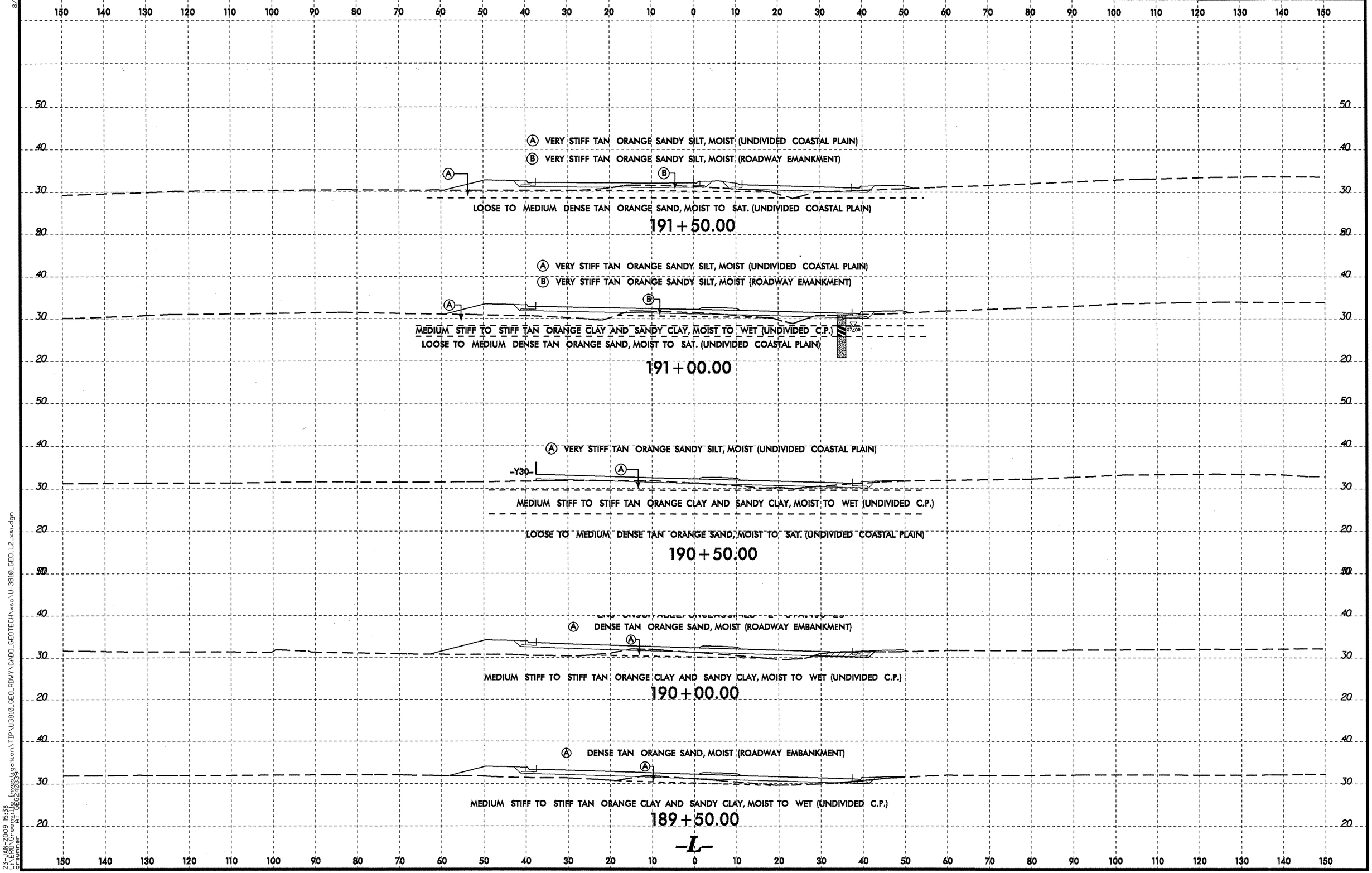

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U-3810	133

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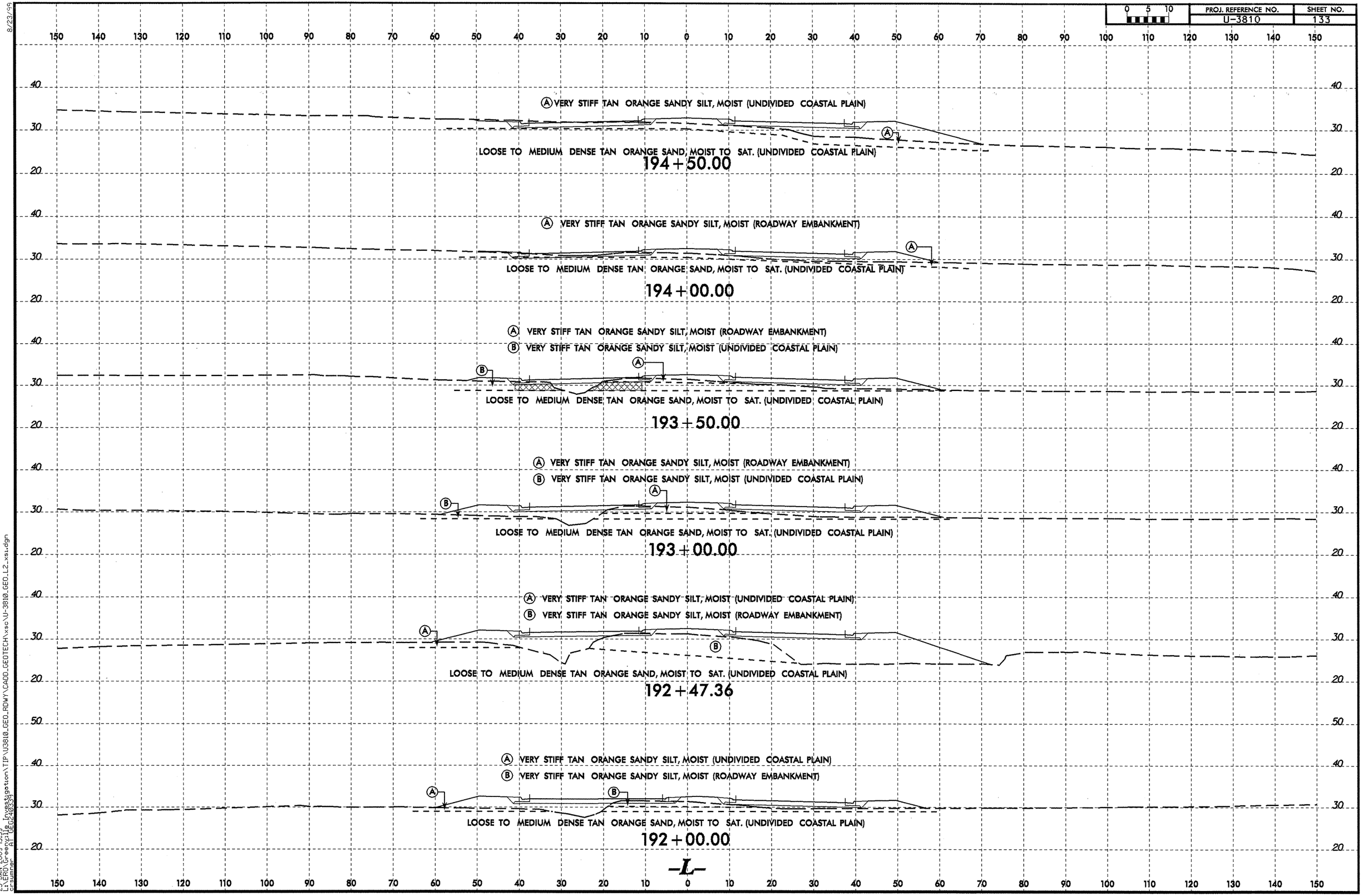

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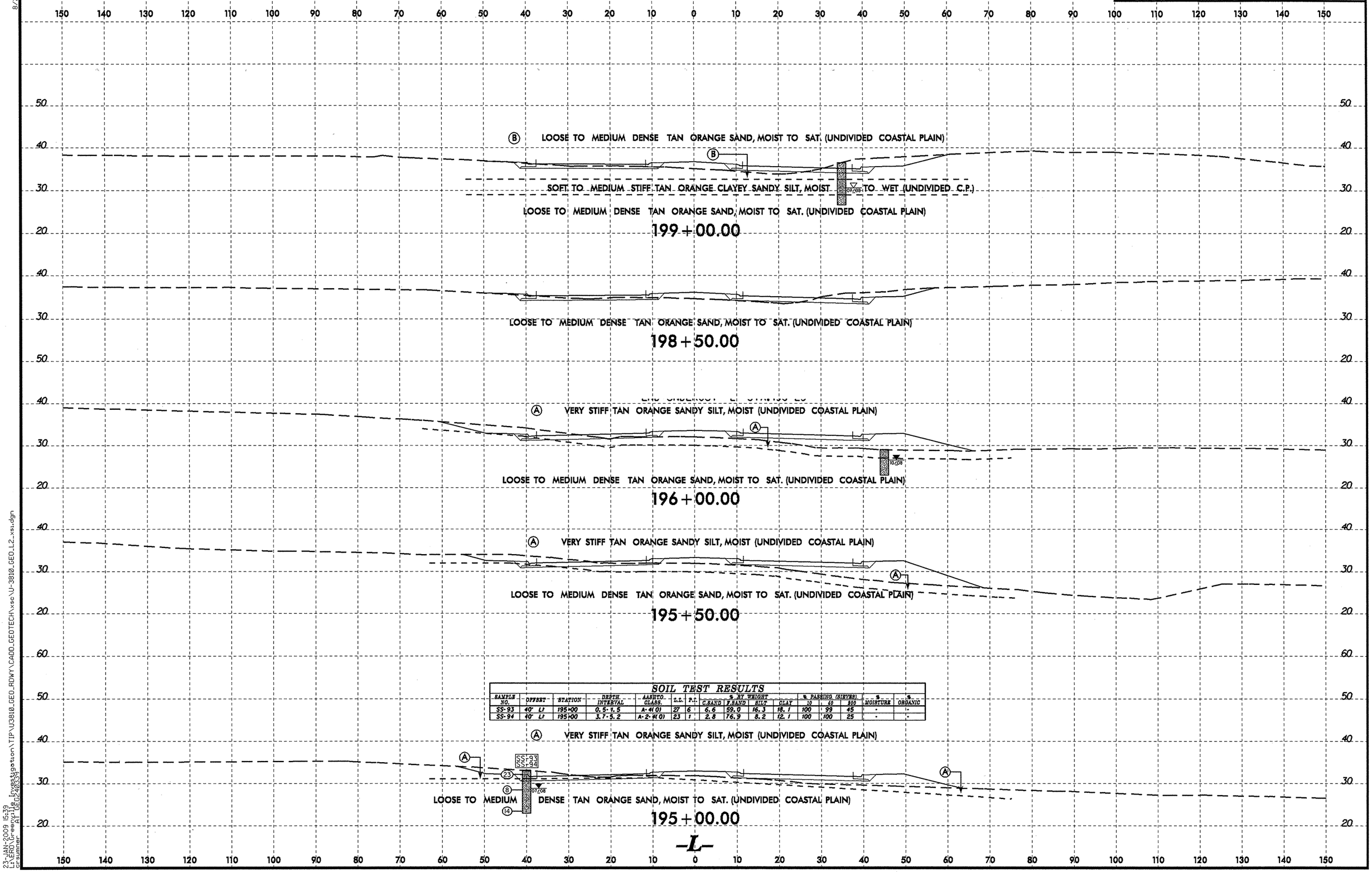

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-93	40' Lt	195+00	0.5-1.5	A-4(0)	27	6	6.6	59.0	16.3	18.1	100	99	45	-	-
SS-94	40' Lt	195+00	3.7-5.2	A-2-4(0)	23	1	2.8	76.9	8.2	12.1	100	100	25	-	-

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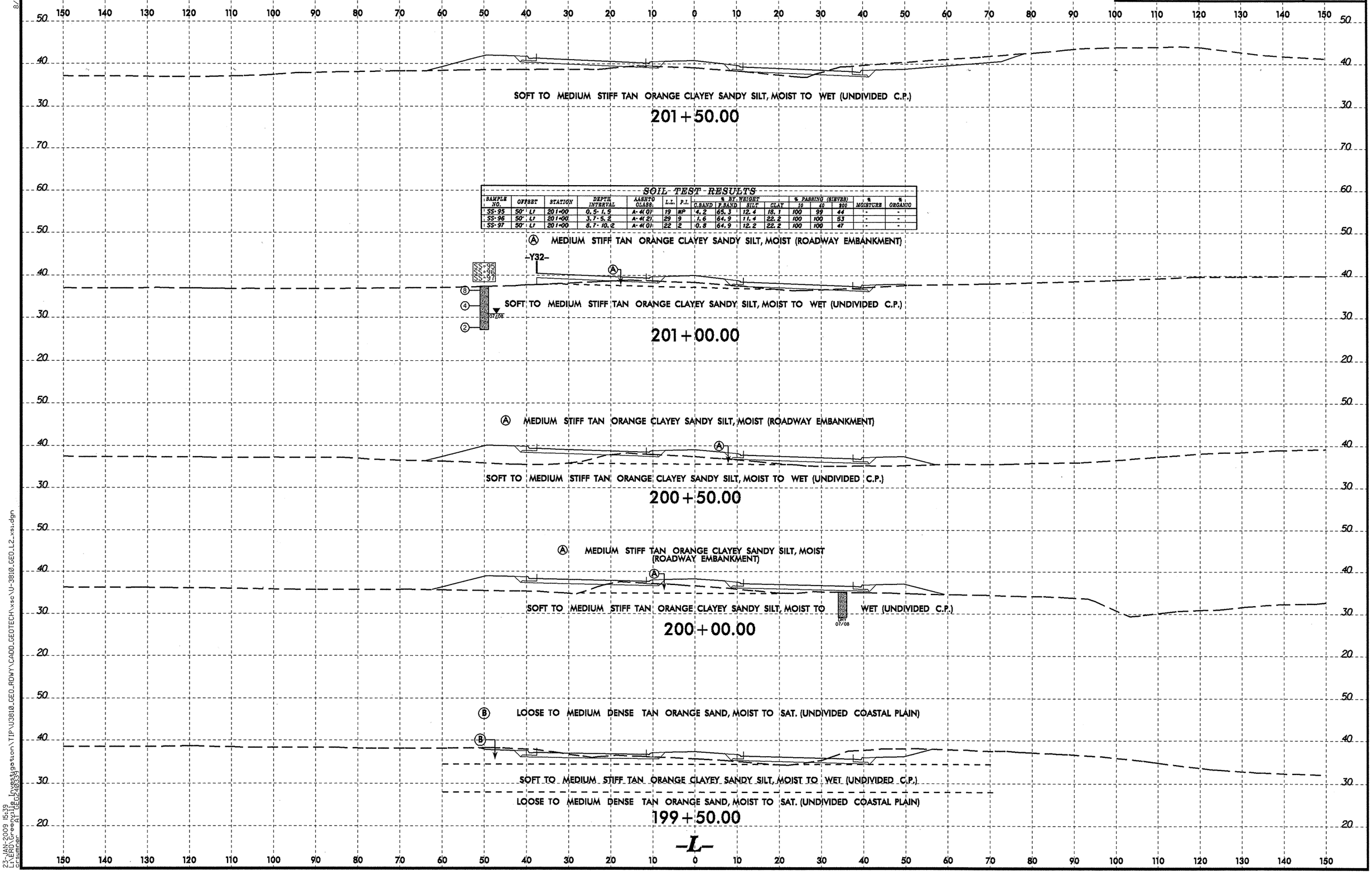

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-95	50' LT	201+00	0.5-1.5	A-4(0)	19	NP	4.2	65.3	12.4	18.1	100	99	44	-	-
SS-96	50' LT	201+00	3.7-5.2	A-4(2)	29	9	1.6	64.9	11.4	22.2	100	100	53	-	-
SS-97	50' LT	201+00	8.7-10.2	A-4(0)	22	2	0.8	64.9	12.2	22.2	100	100	47	-	-

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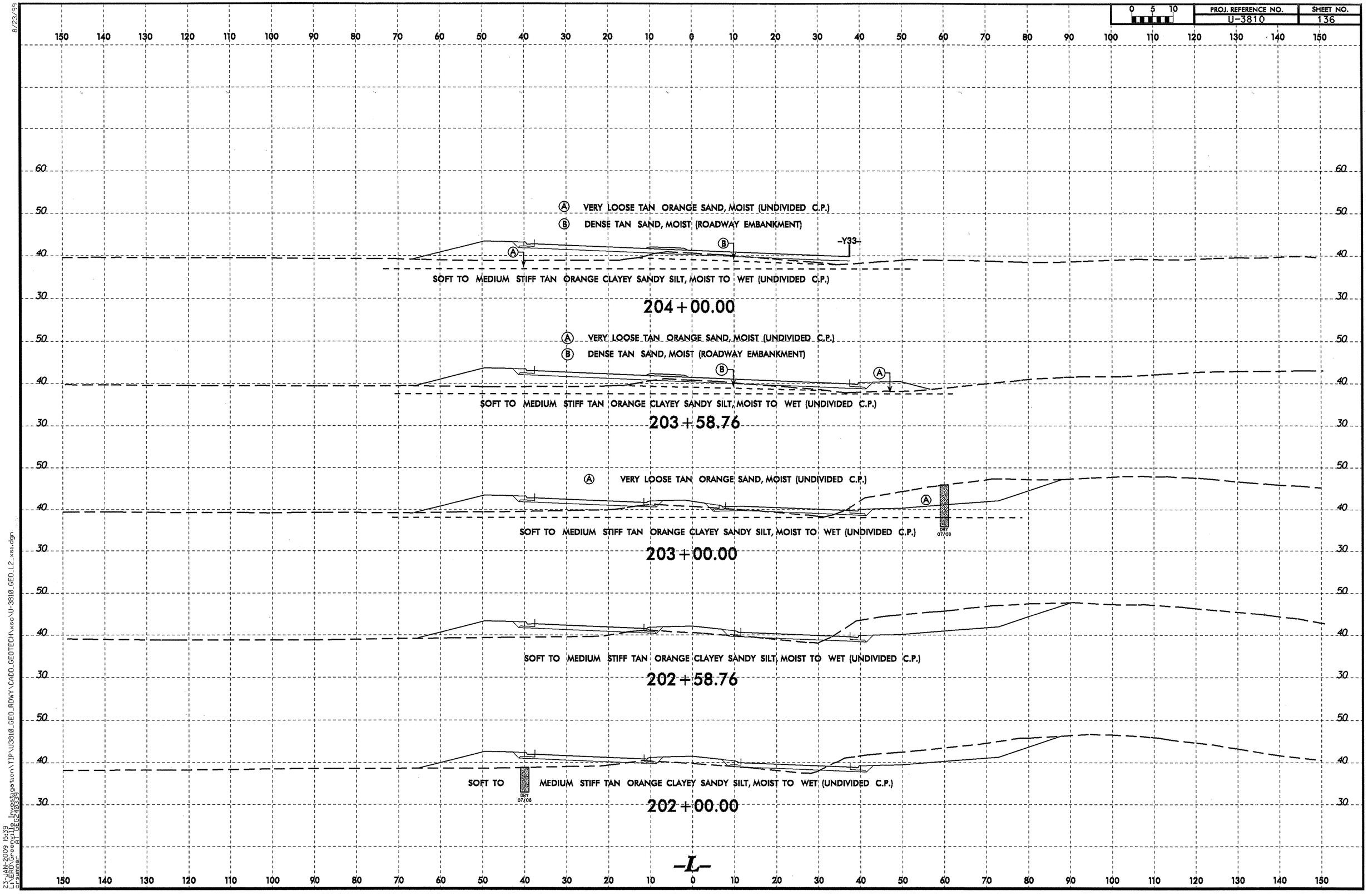

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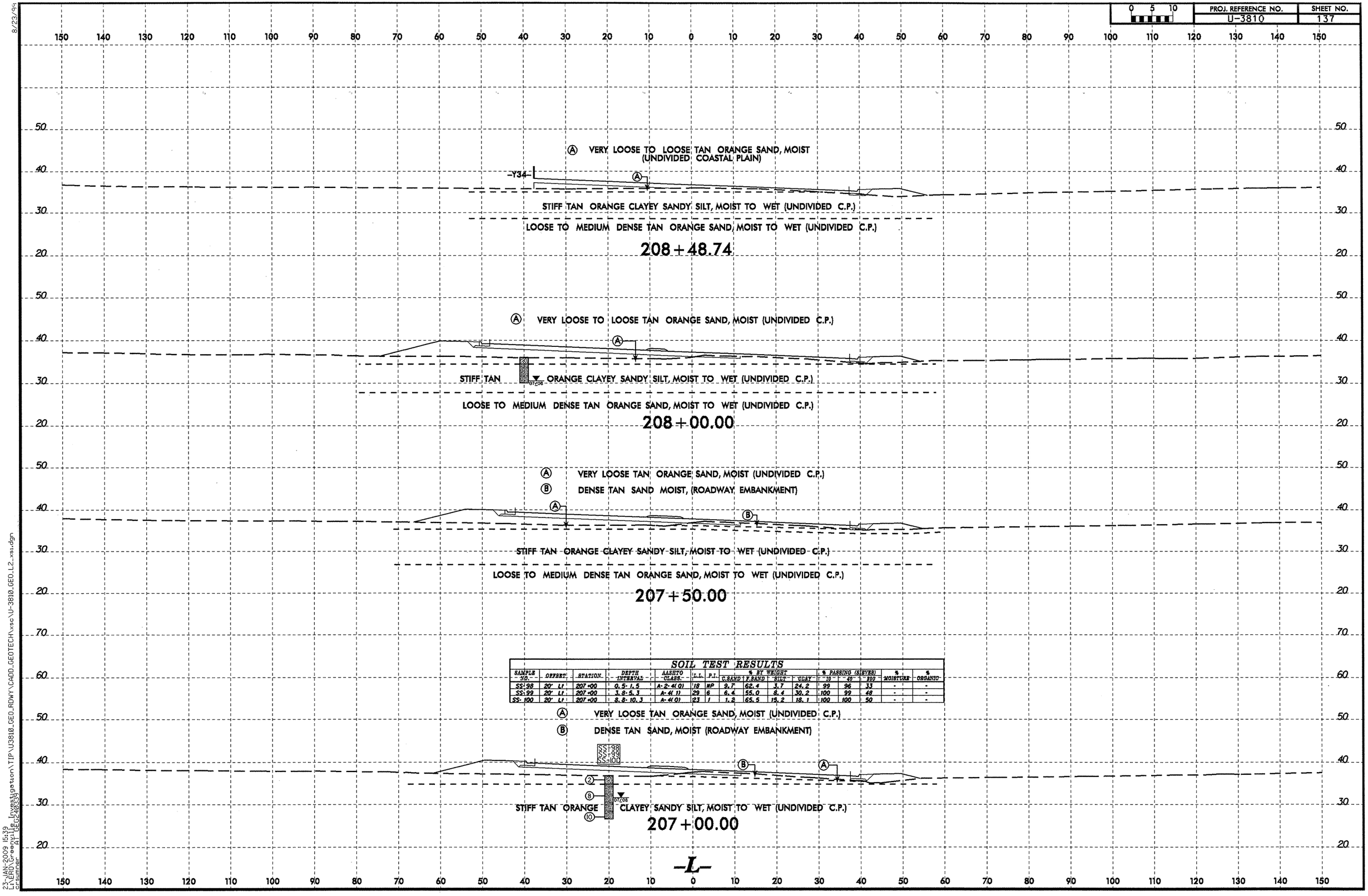

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-98	20' Lt	207+00	0.5-1.5	A-2-4(0)	18	NP	9.7	62.4	3.7	24.2	99	96	33	-	-
SS-99	20' Lt	207+00	3.8-5.3	A-4(1)	29	6	6.4	55.0	8.4	30.2	100	99	48	-	-
SS-100	20' Lt	207+00	8.8-10.3	A-4(0)	23	1	1.2	65.5	15.2	18.1	100	100	50	-	-

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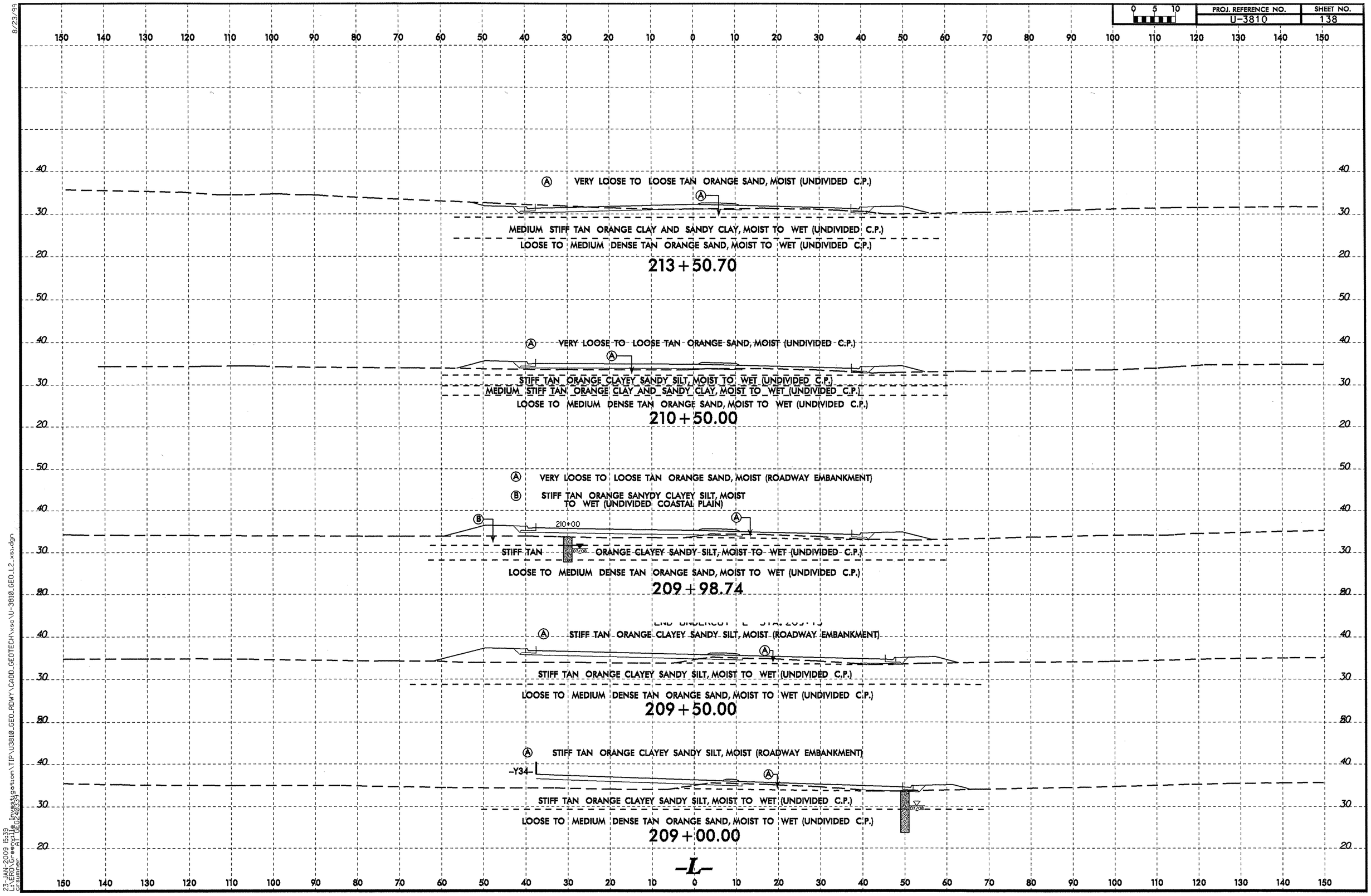

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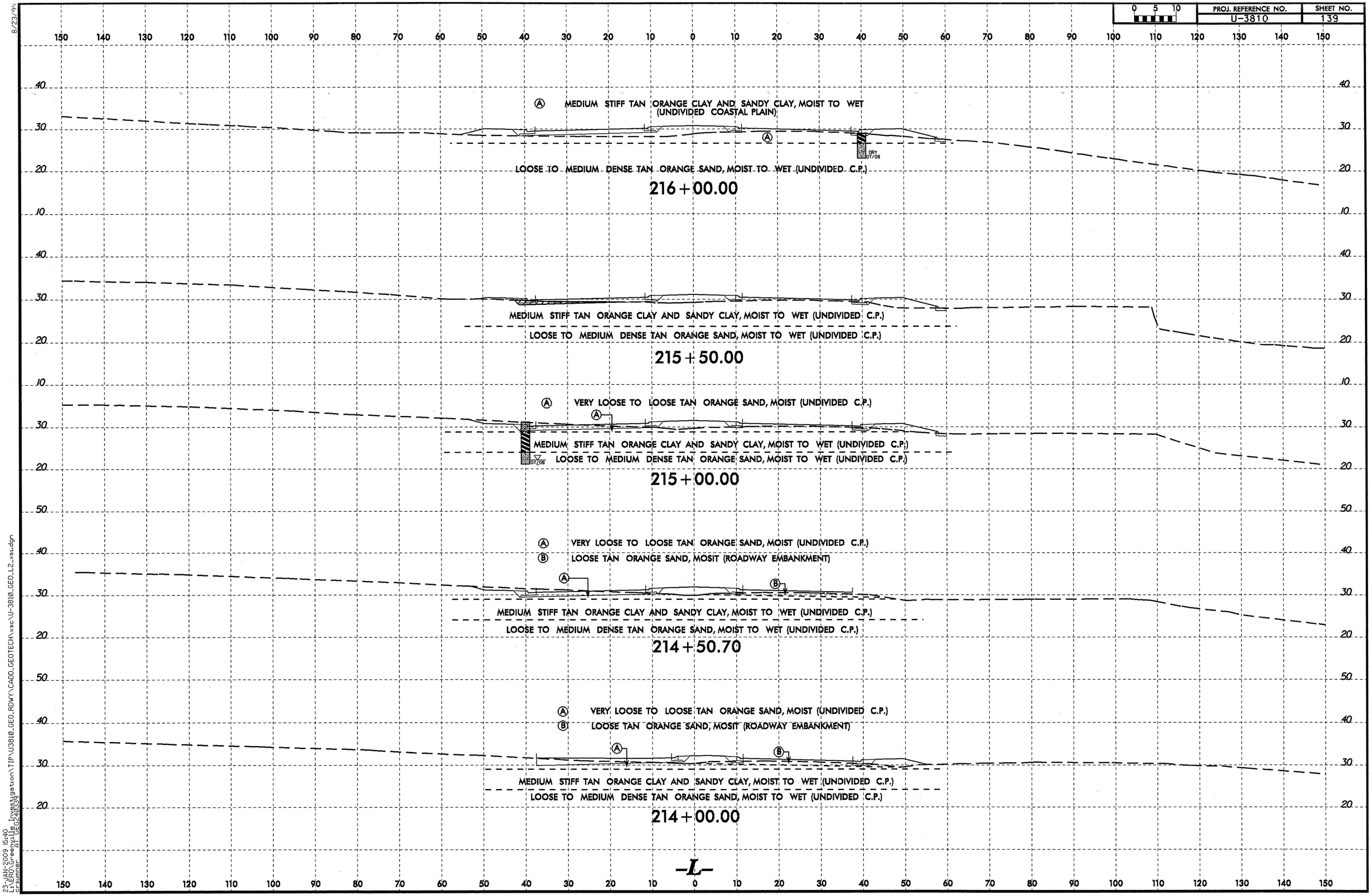

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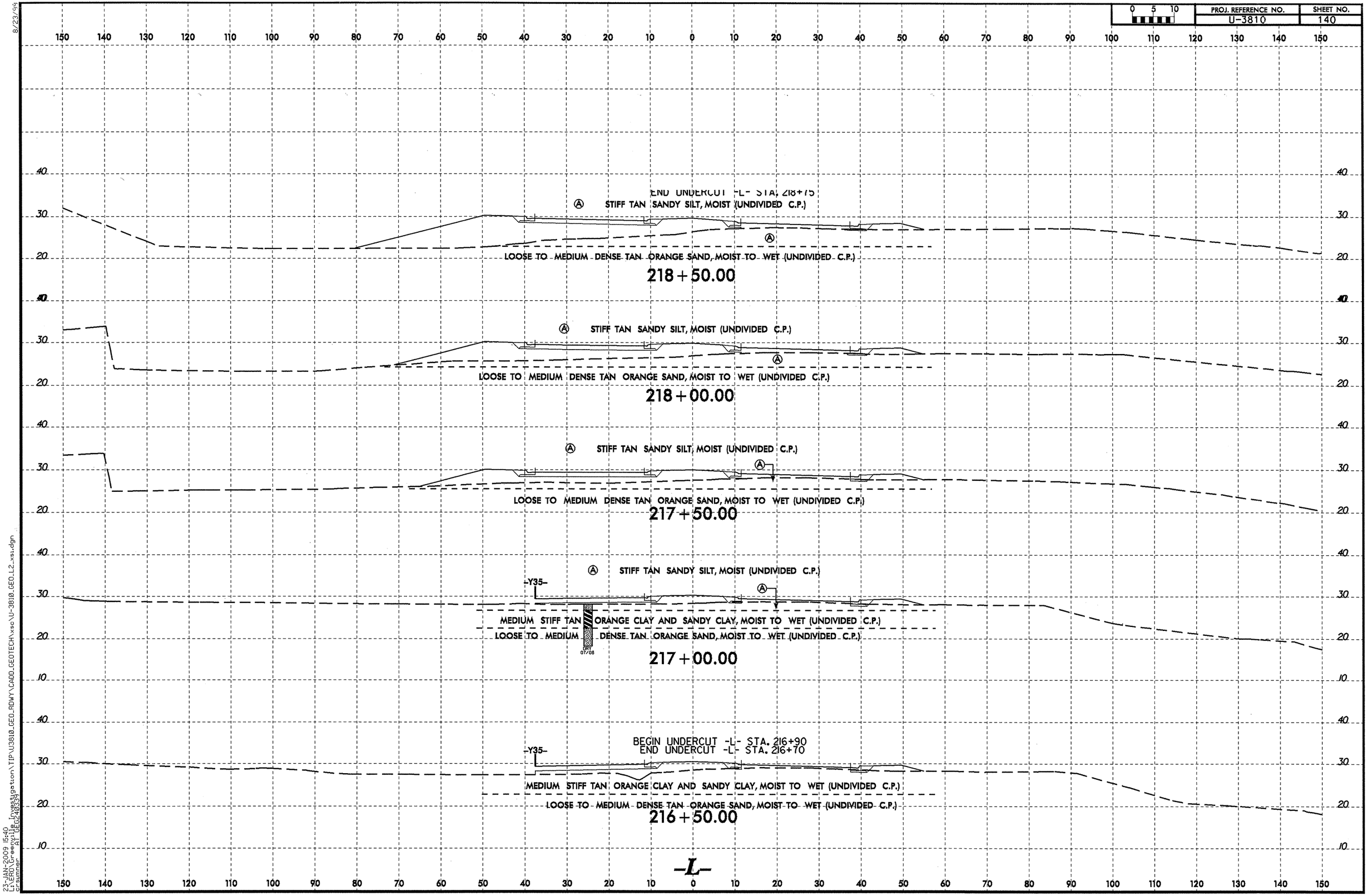

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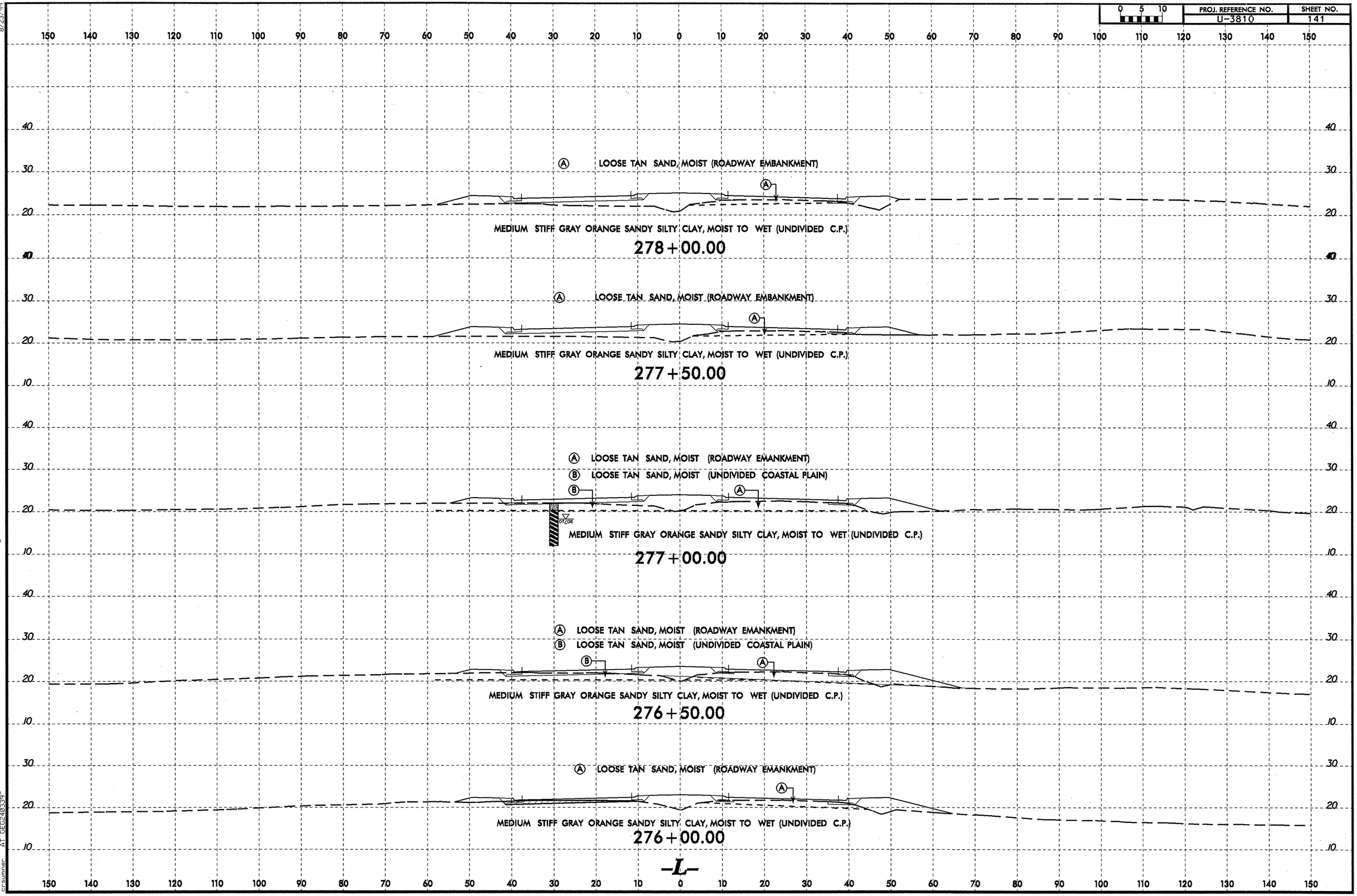

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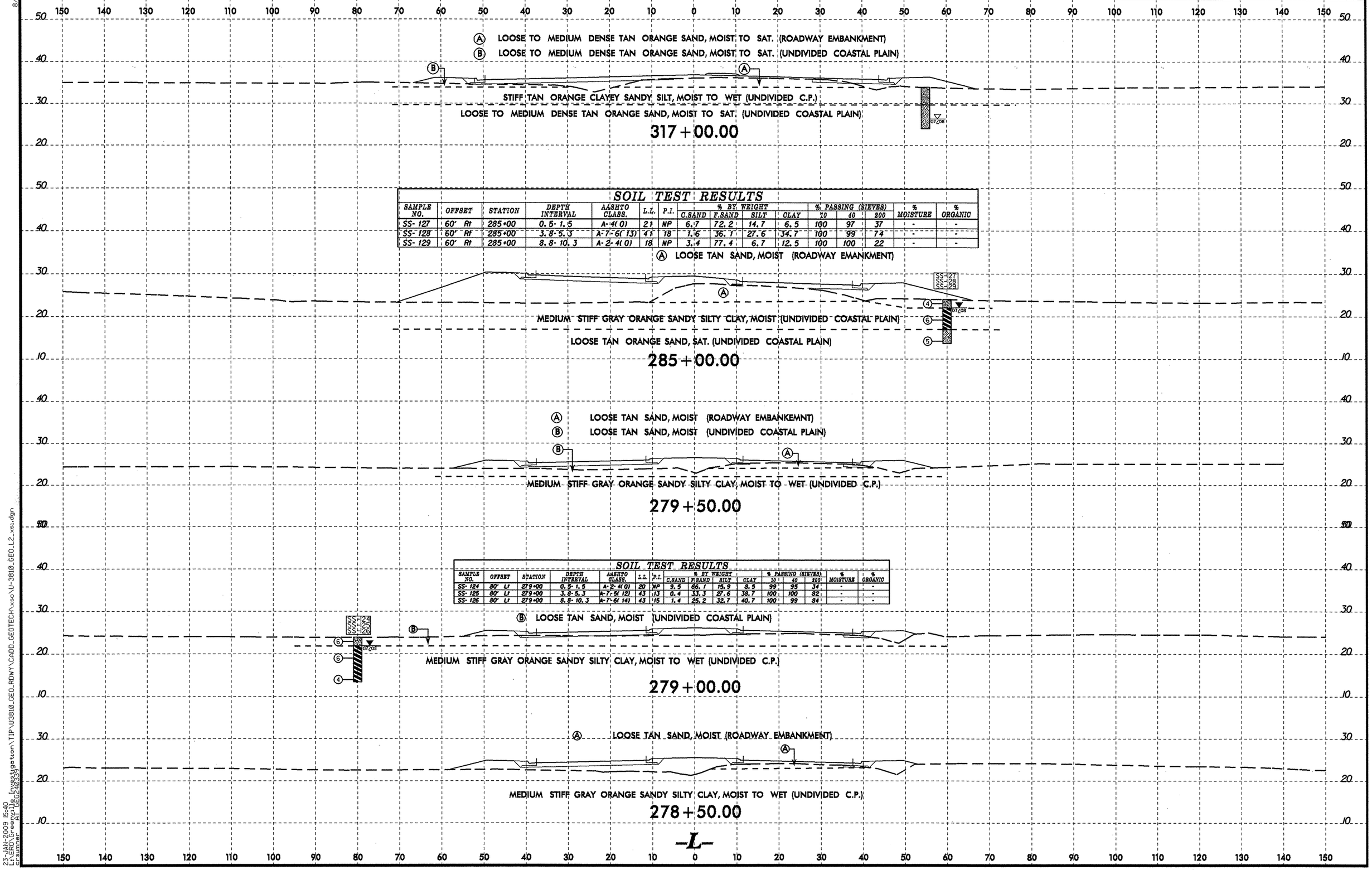

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-127	60' Rt	285+00	0.5-1.5	A-4(0)	21	NP	6.7	72.2	14.7	6.5	100	97	37	-	-
SS-128	60' Rt	285+00	3.8-5.3	A-7-6(13)	41	18	1.6	36.1	27.6	34.7	100	99	74	-	-
SS-129	60' Rt	285+00	8.8-10.3	A-2-4(0)	18	NP	3.4	77.4	6.7	12.5	100	100	22	-	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-124	80' Lt	279+00	0.5-1.5	A-2-4(0)	20	NP	9.5	66.1	15.9	8.5	99	95	34	-	-
SS-125	80' Lt	279+00	3.8-5.3	A-7-5(12)	43	13	0.4	33.3	27.6	38.7	100	100	82	-	-
SS-126	80' Lt	279+00	8.8-10.3	A-7-6(14)	43	15	1.4	25.2	32.7	40.7	100	99	84	-	-

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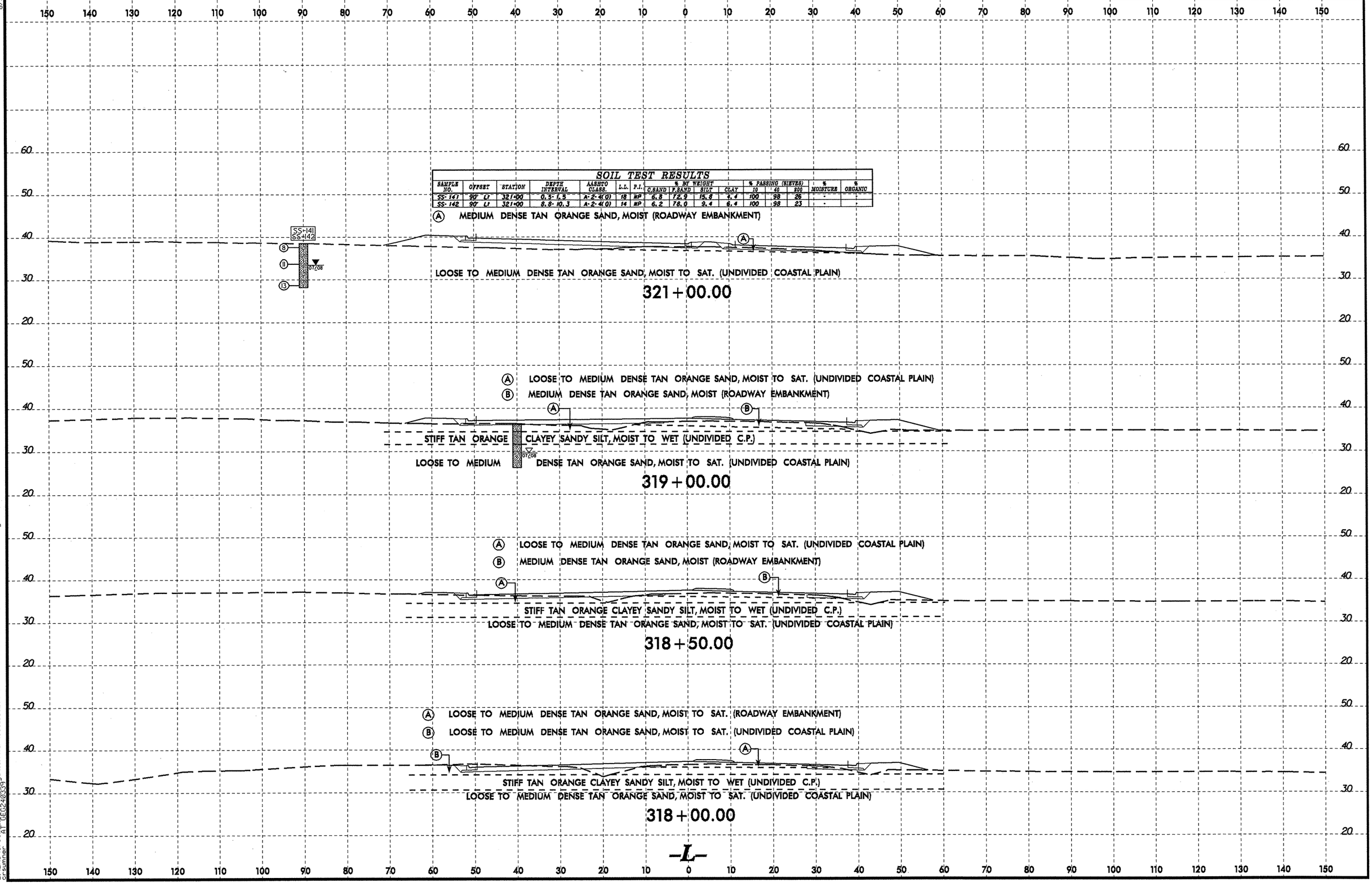
cpsumner
ATT1 (2CA0433)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-141	90' Lt	321+00	0.5-1.5	A-2-4(0)	18	NP	6.8	72.9	15.8	4.4	100	98	26	-	-
SS-142	90' Lt	321+00	8.8-10.3	A-2-4(0)	14	NP	6.2	76.0	9.4	6.4	100	98	23	-	-



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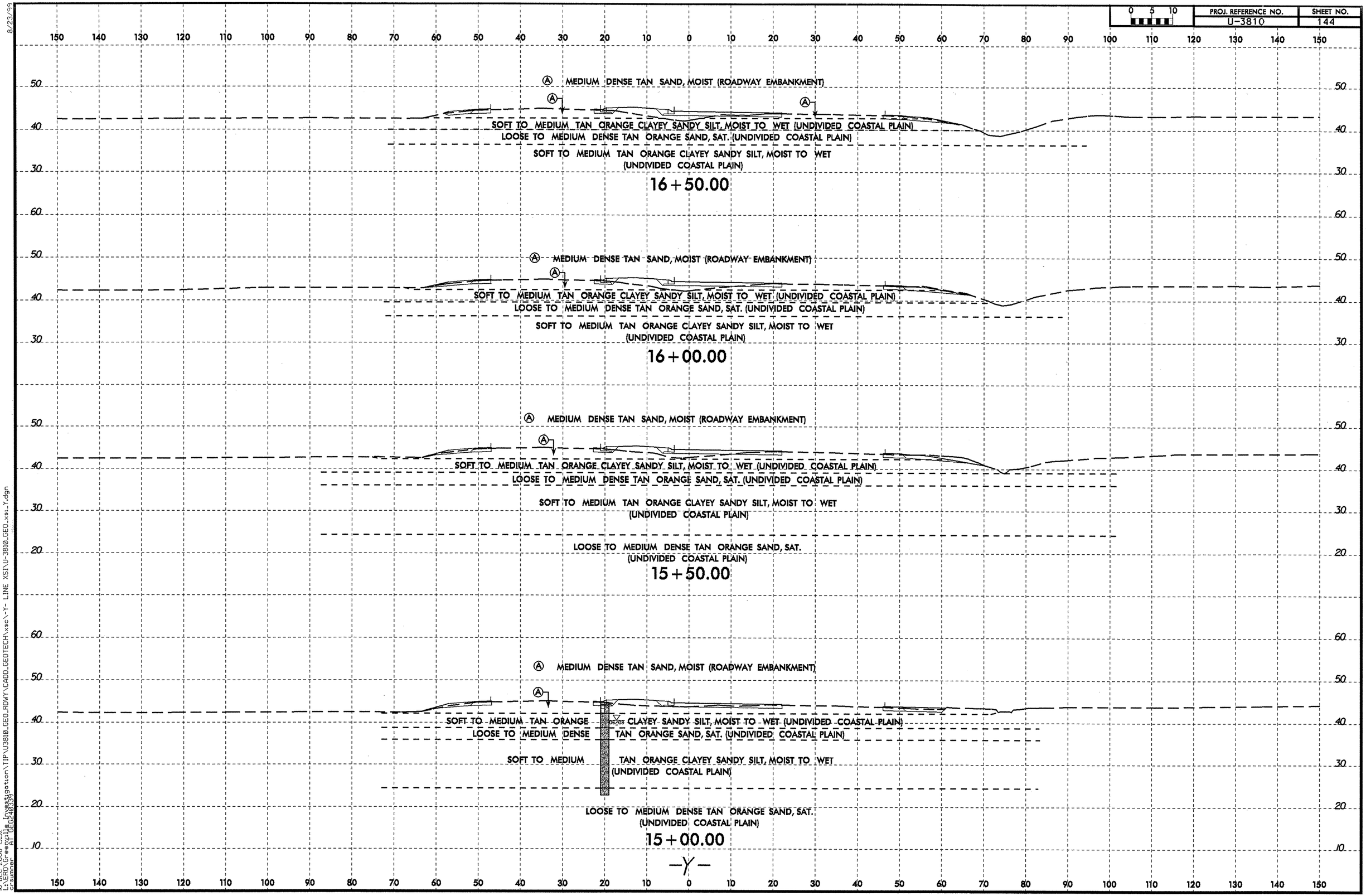
PROJ. REFERENCE NO.	SHEET NO.
U-3810	144



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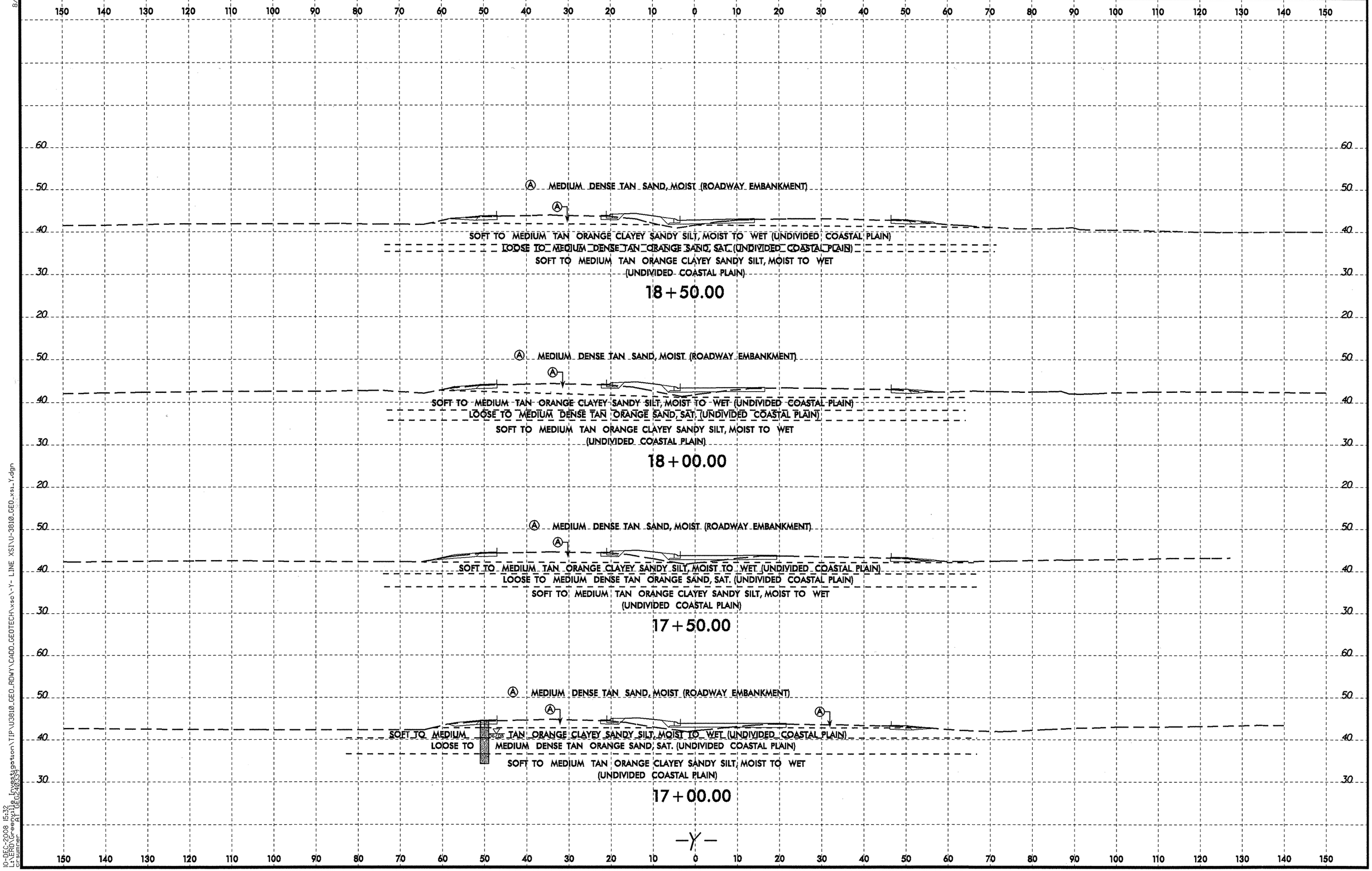

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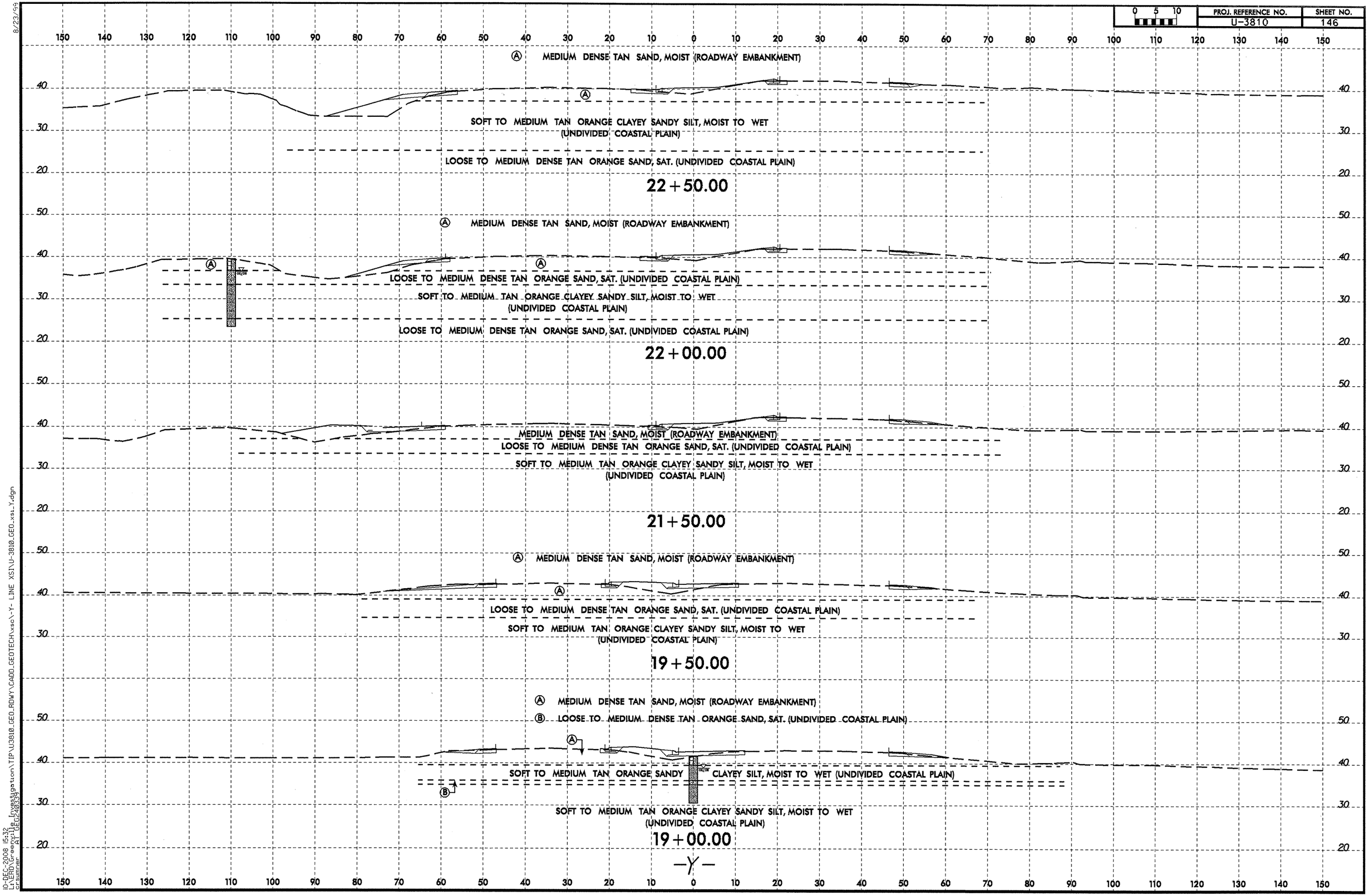

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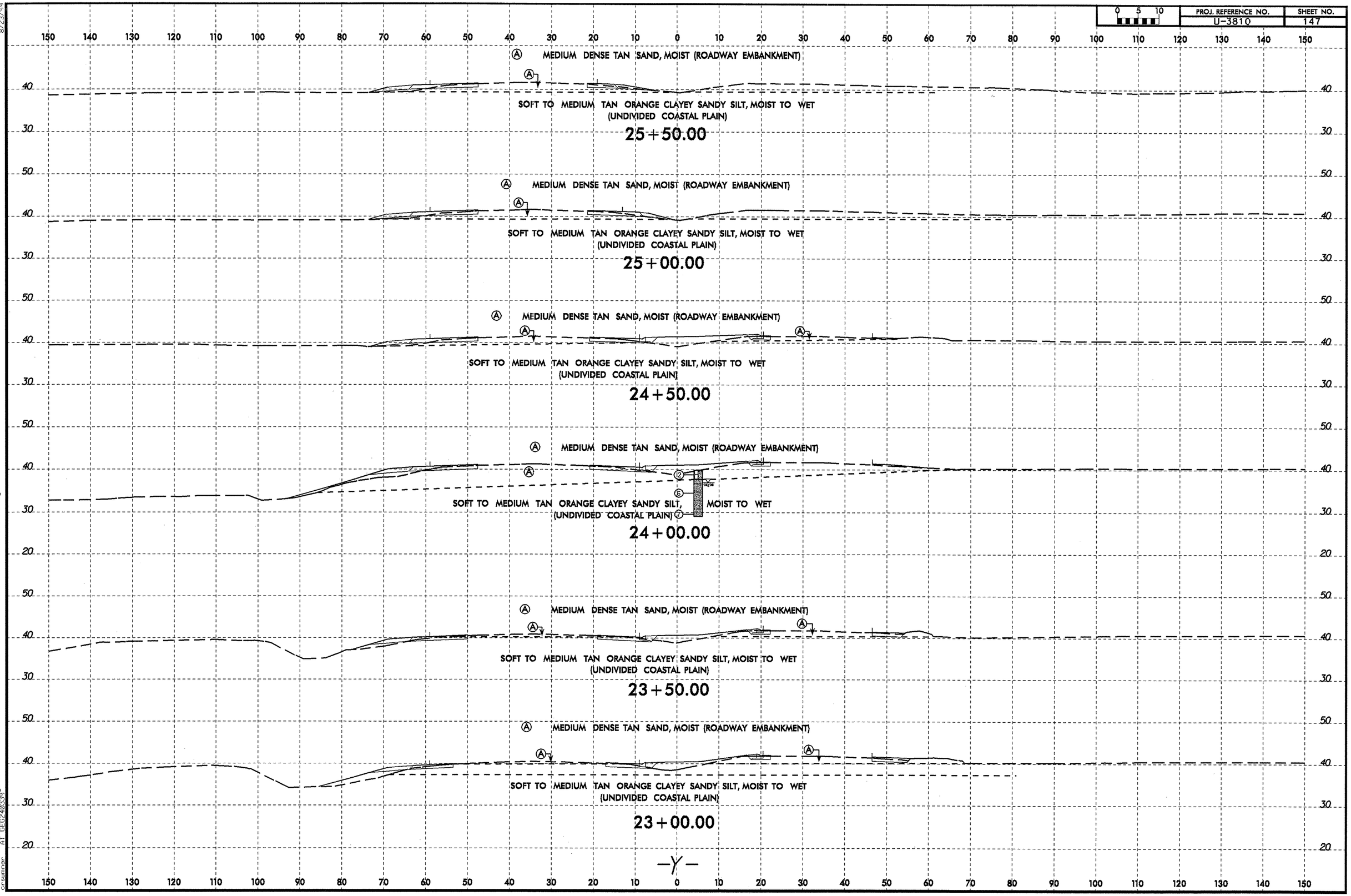

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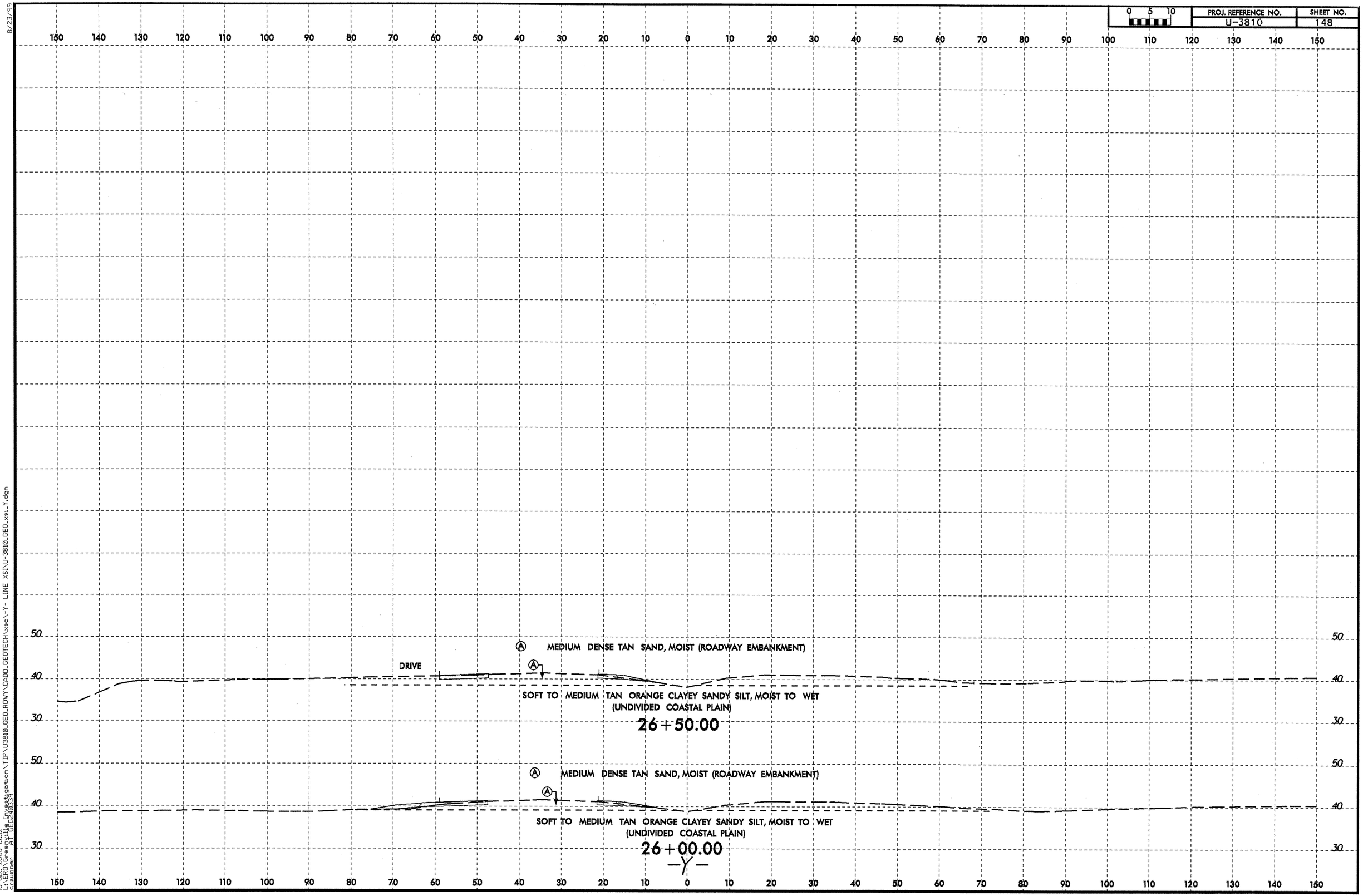

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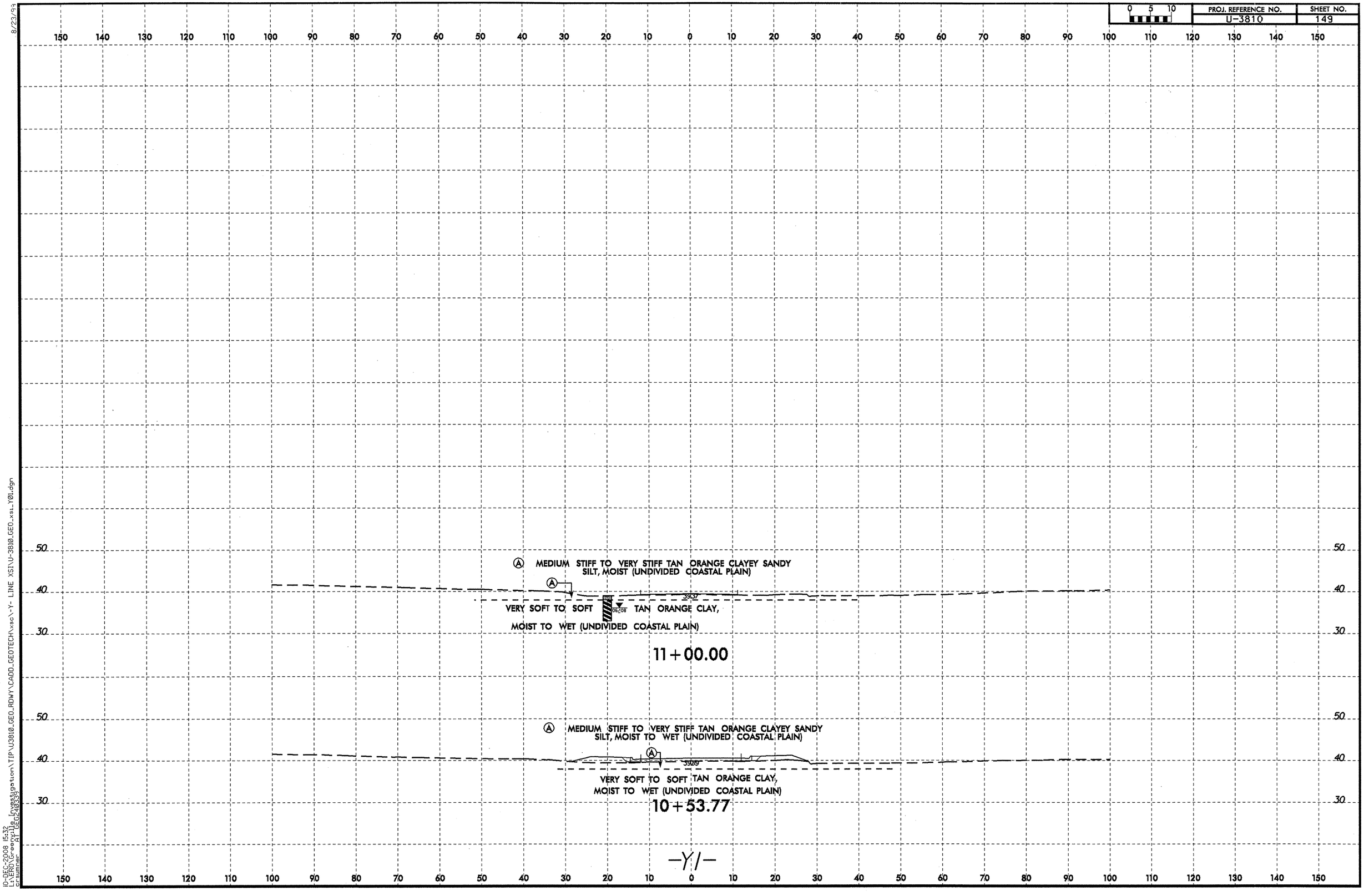

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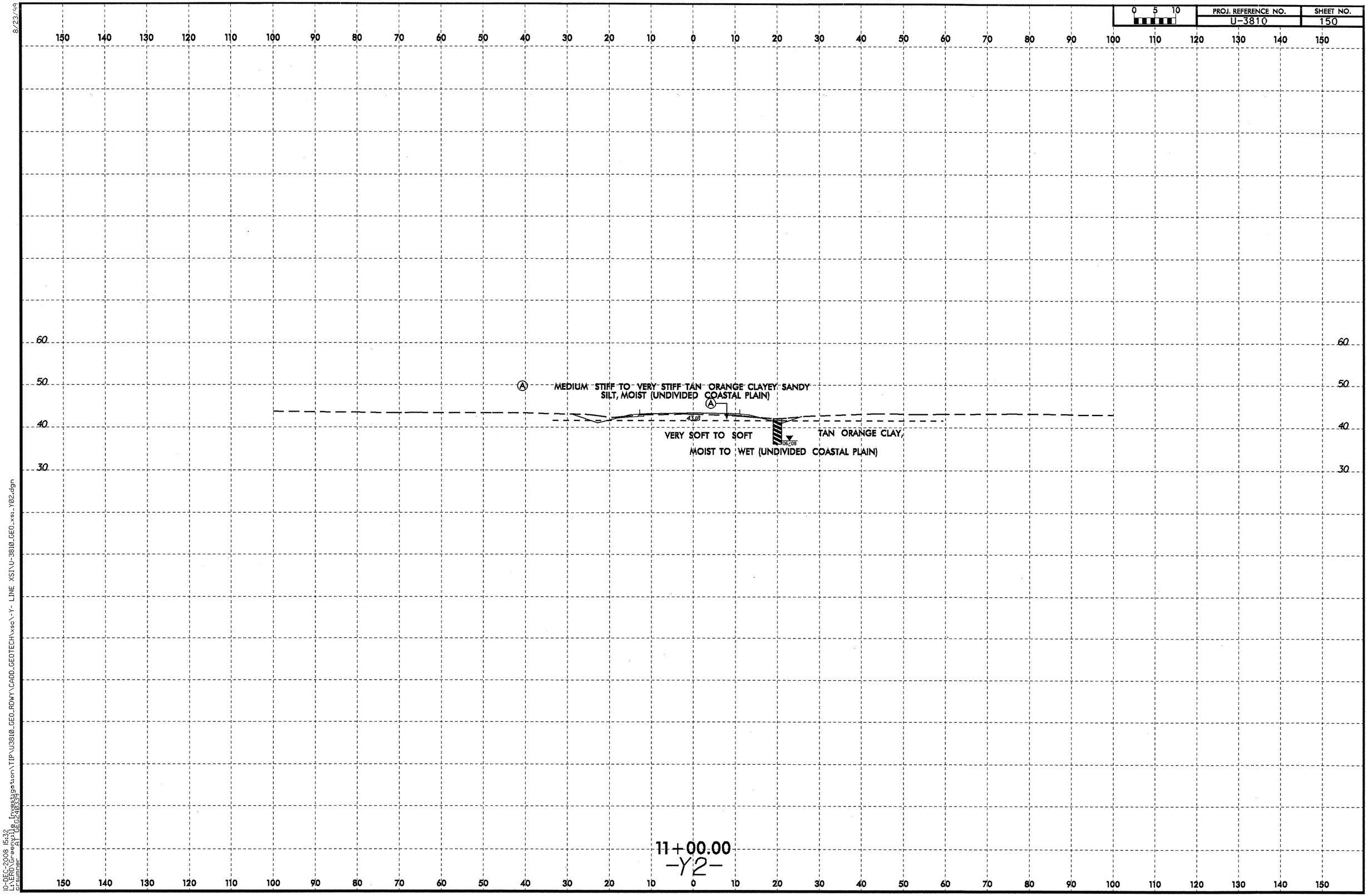

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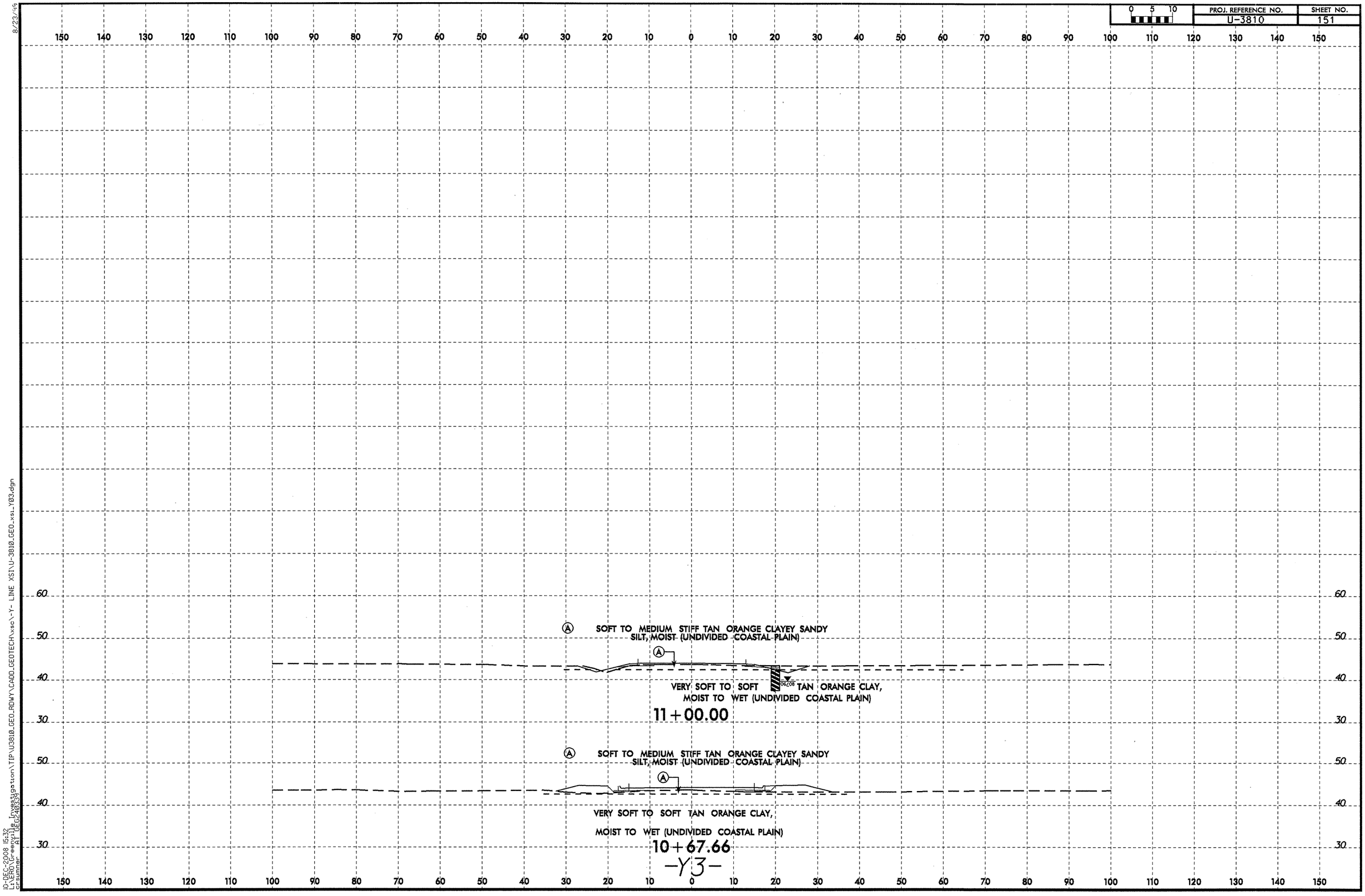

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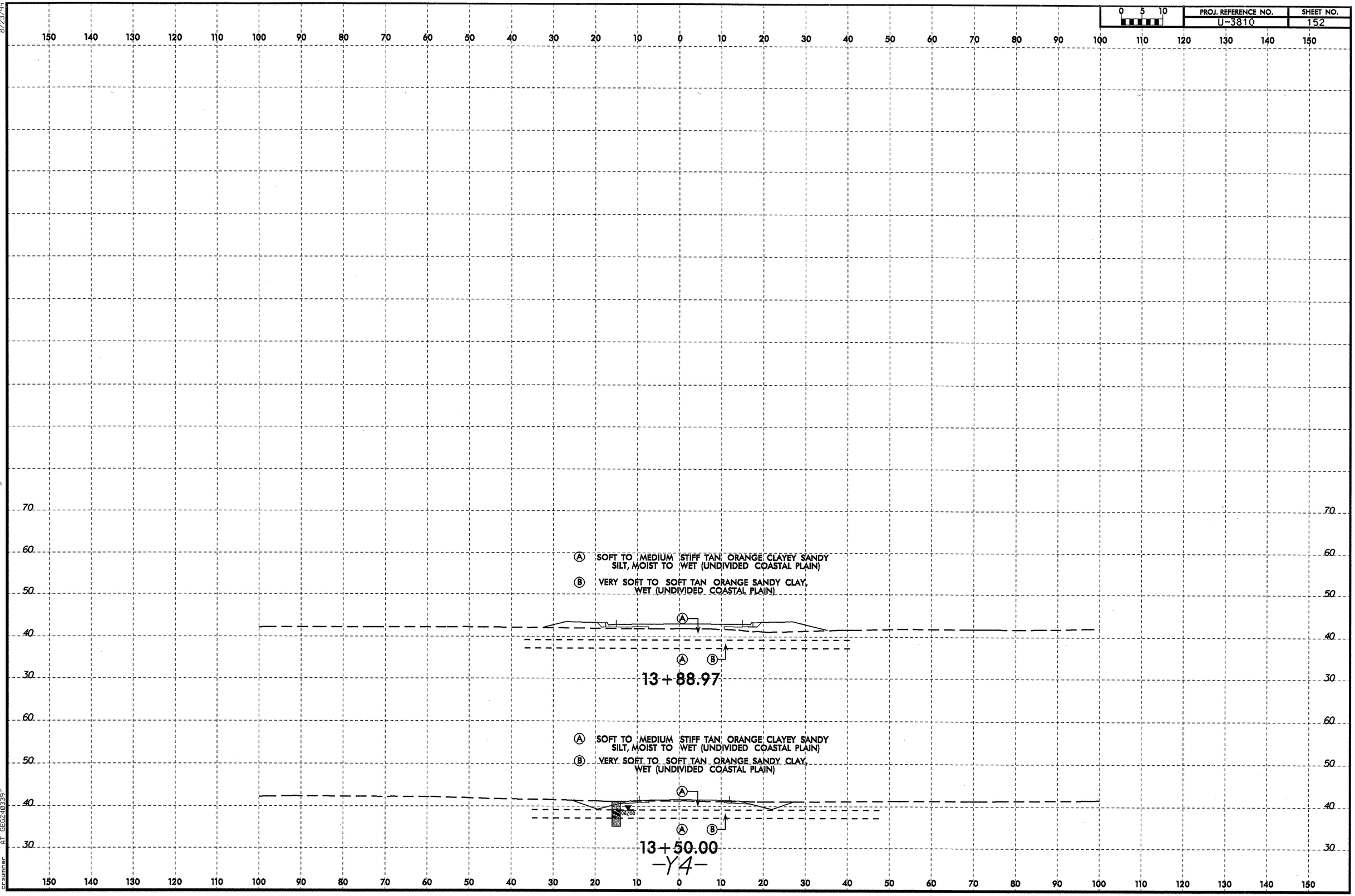

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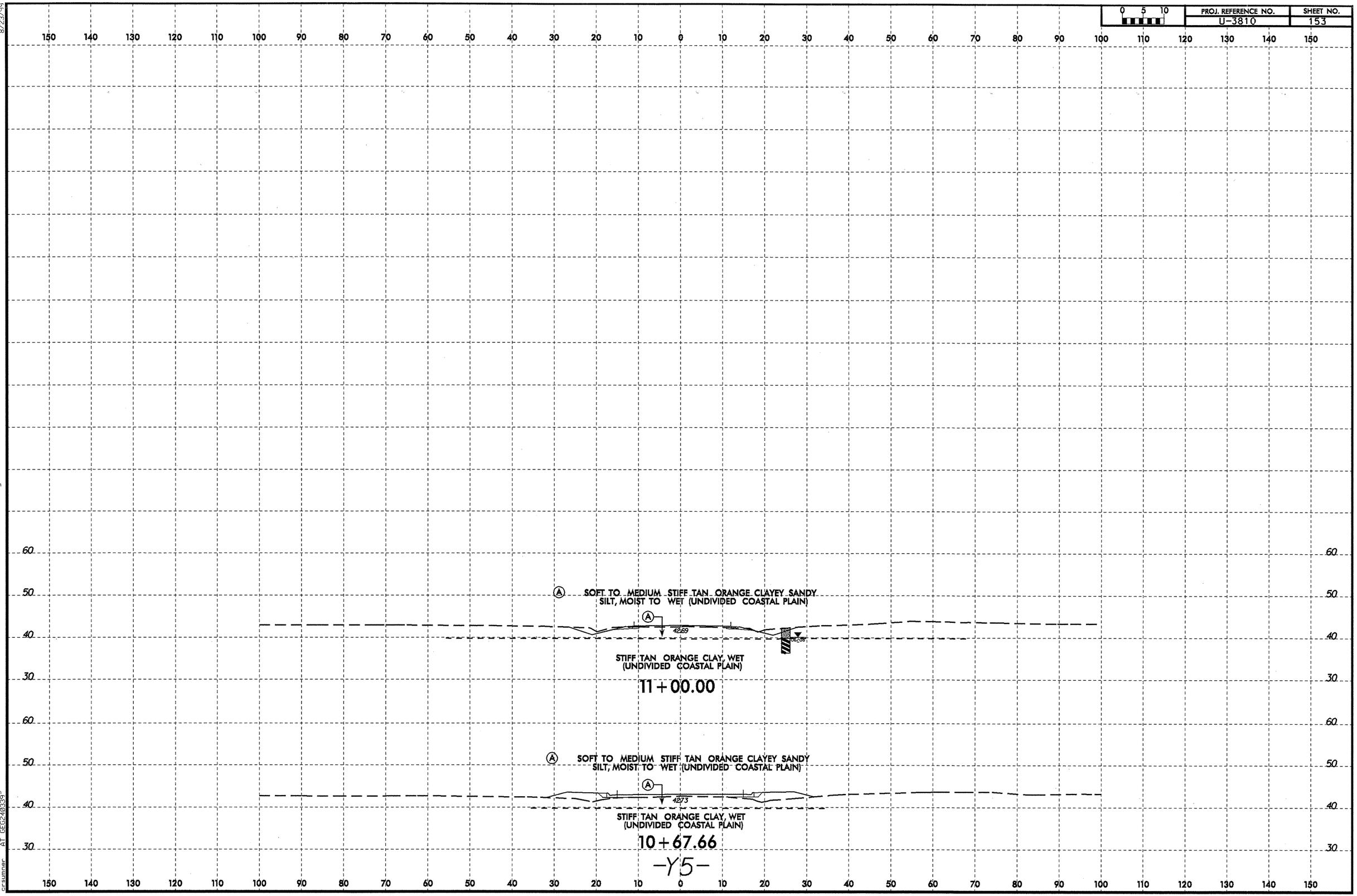

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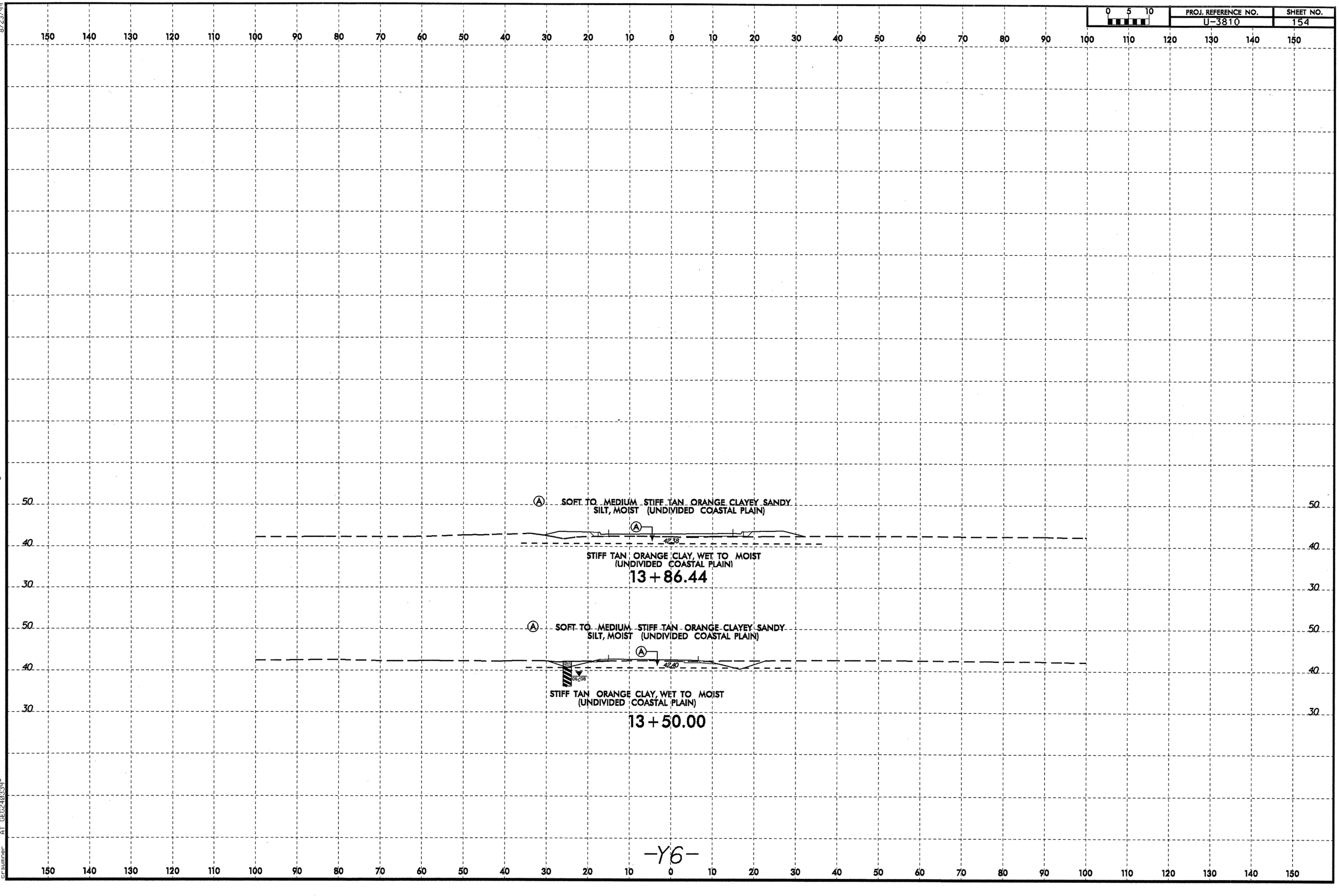

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PROJ. REFERENCE NO.	SHEET NO.
U-3810	155

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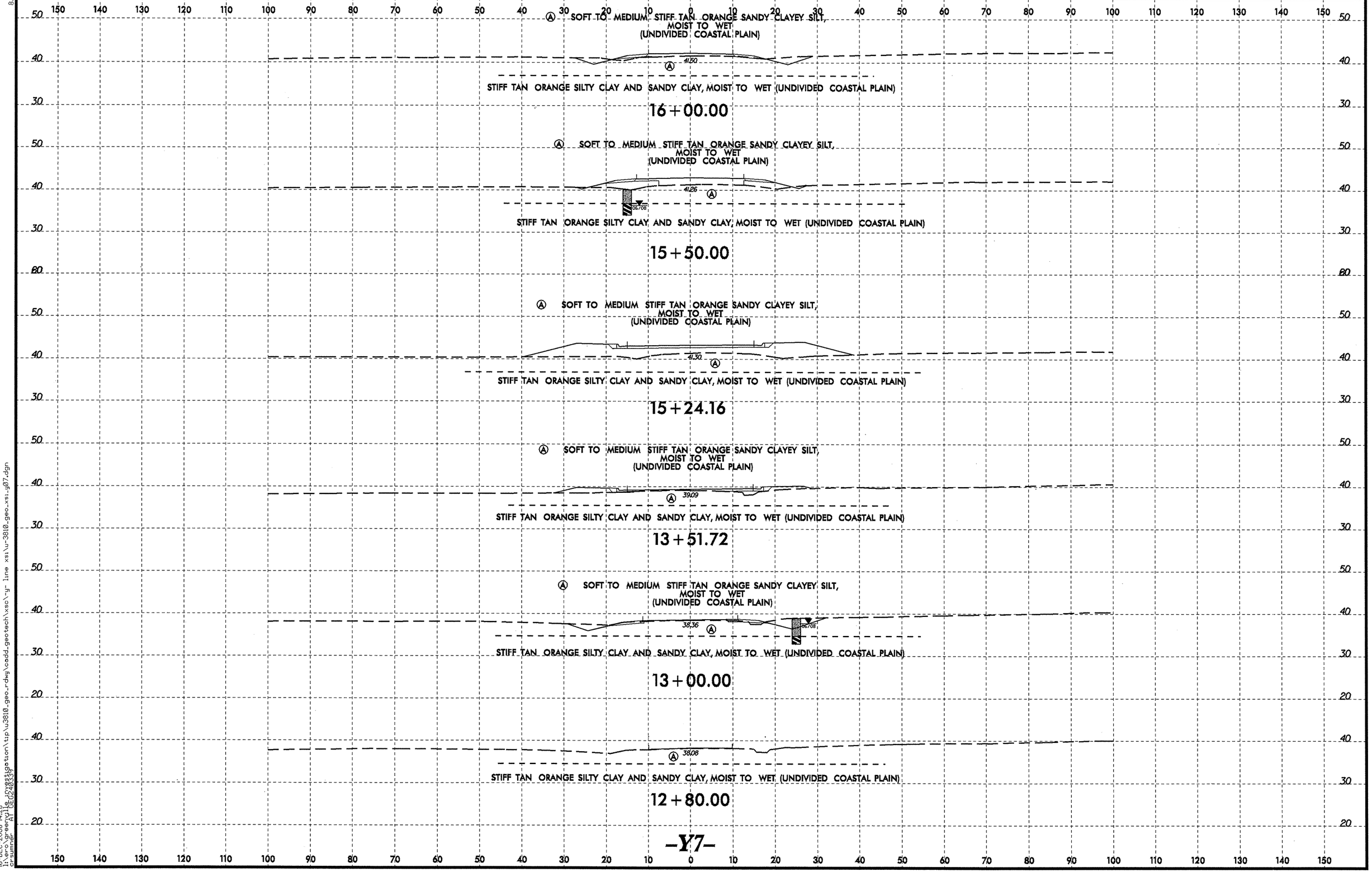

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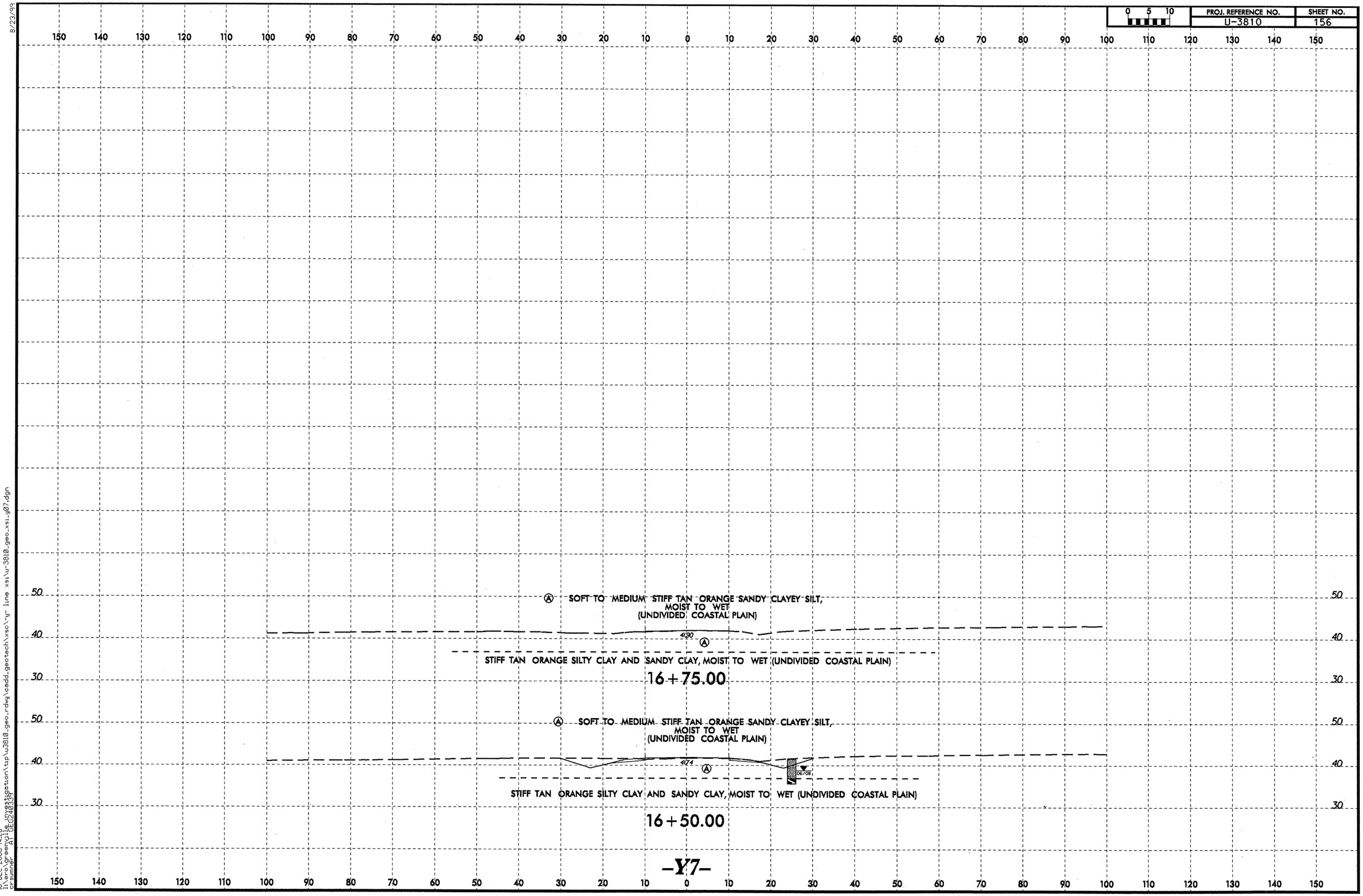
AT DEC/2008/57



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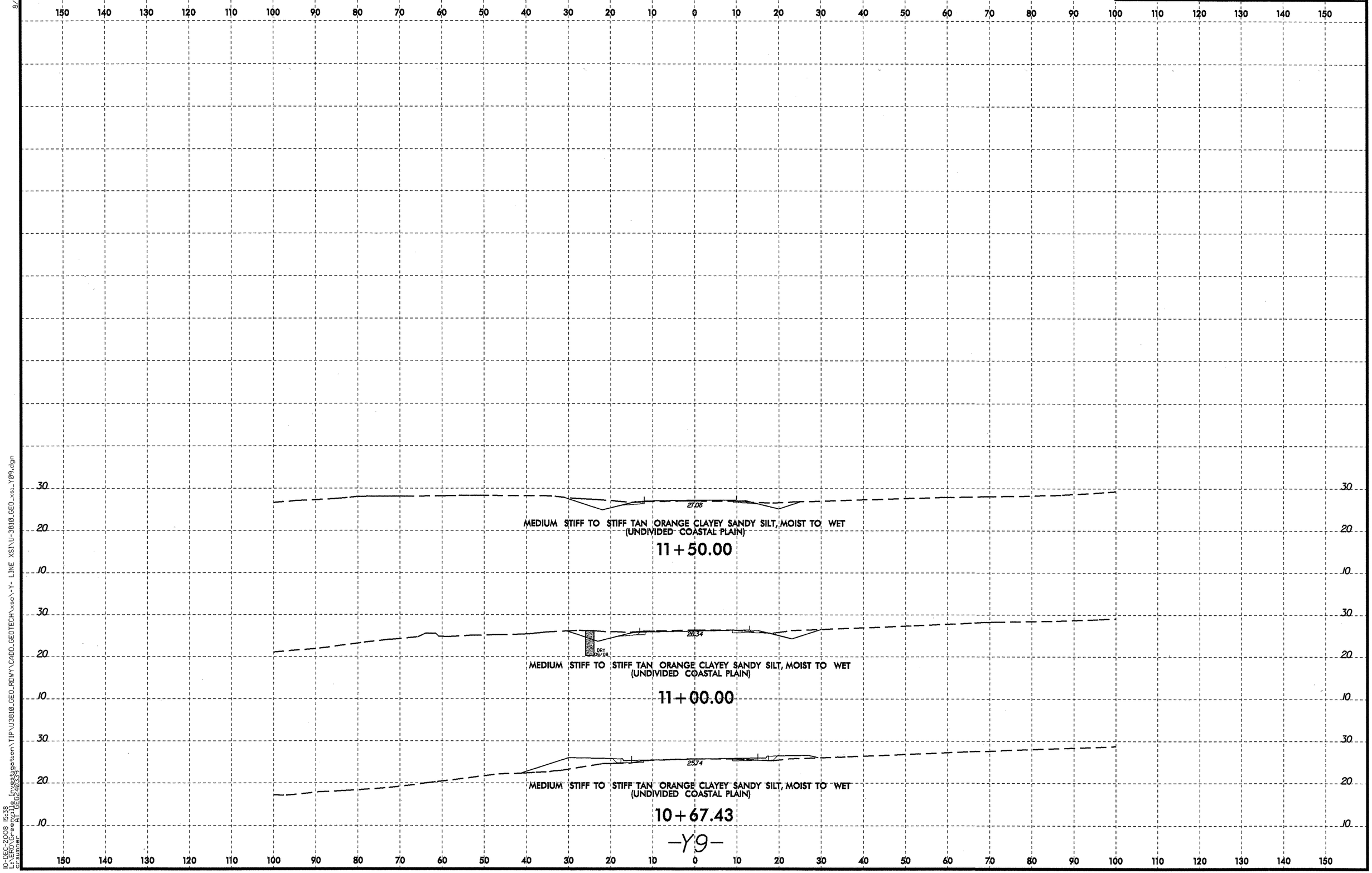

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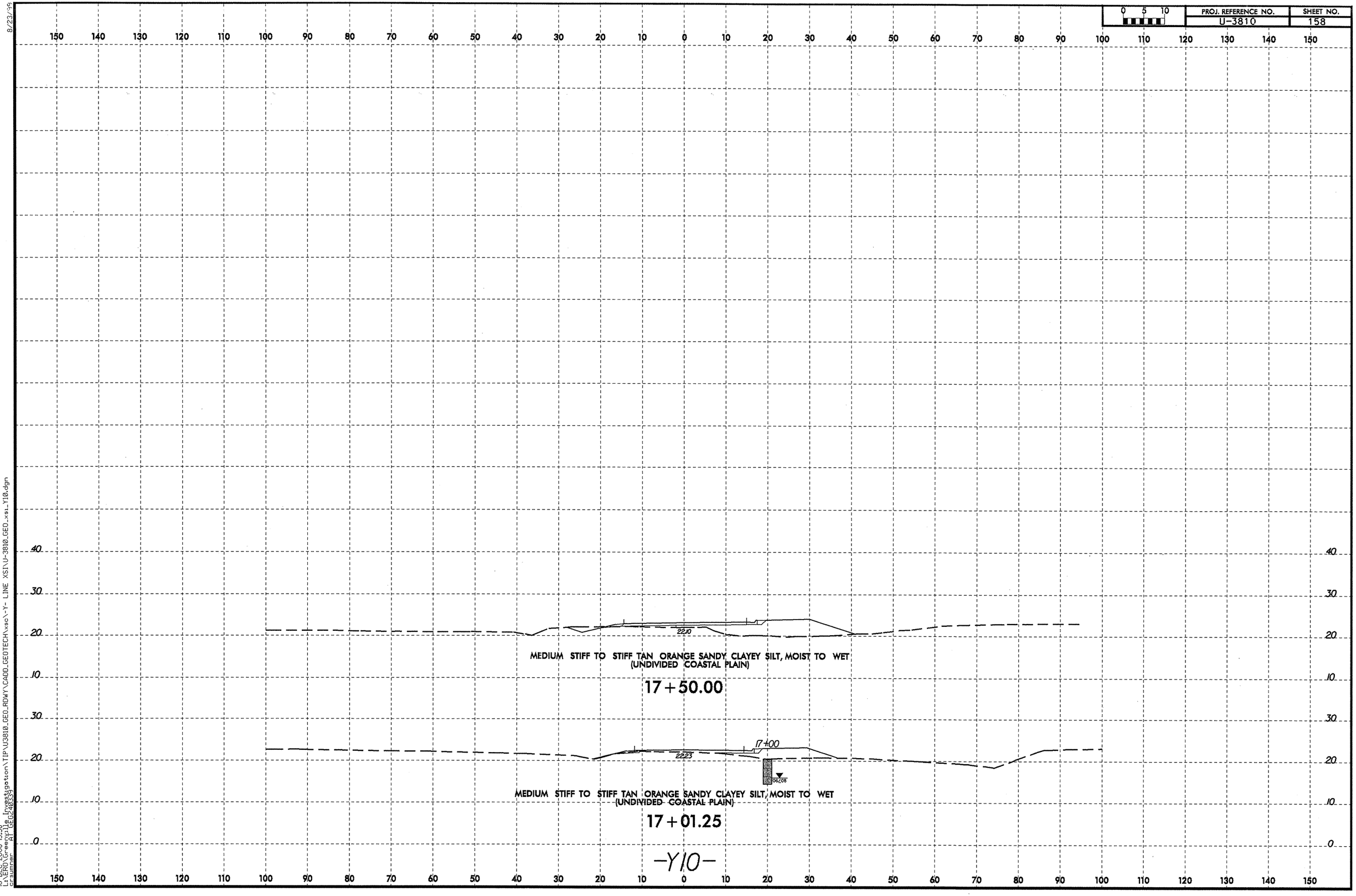

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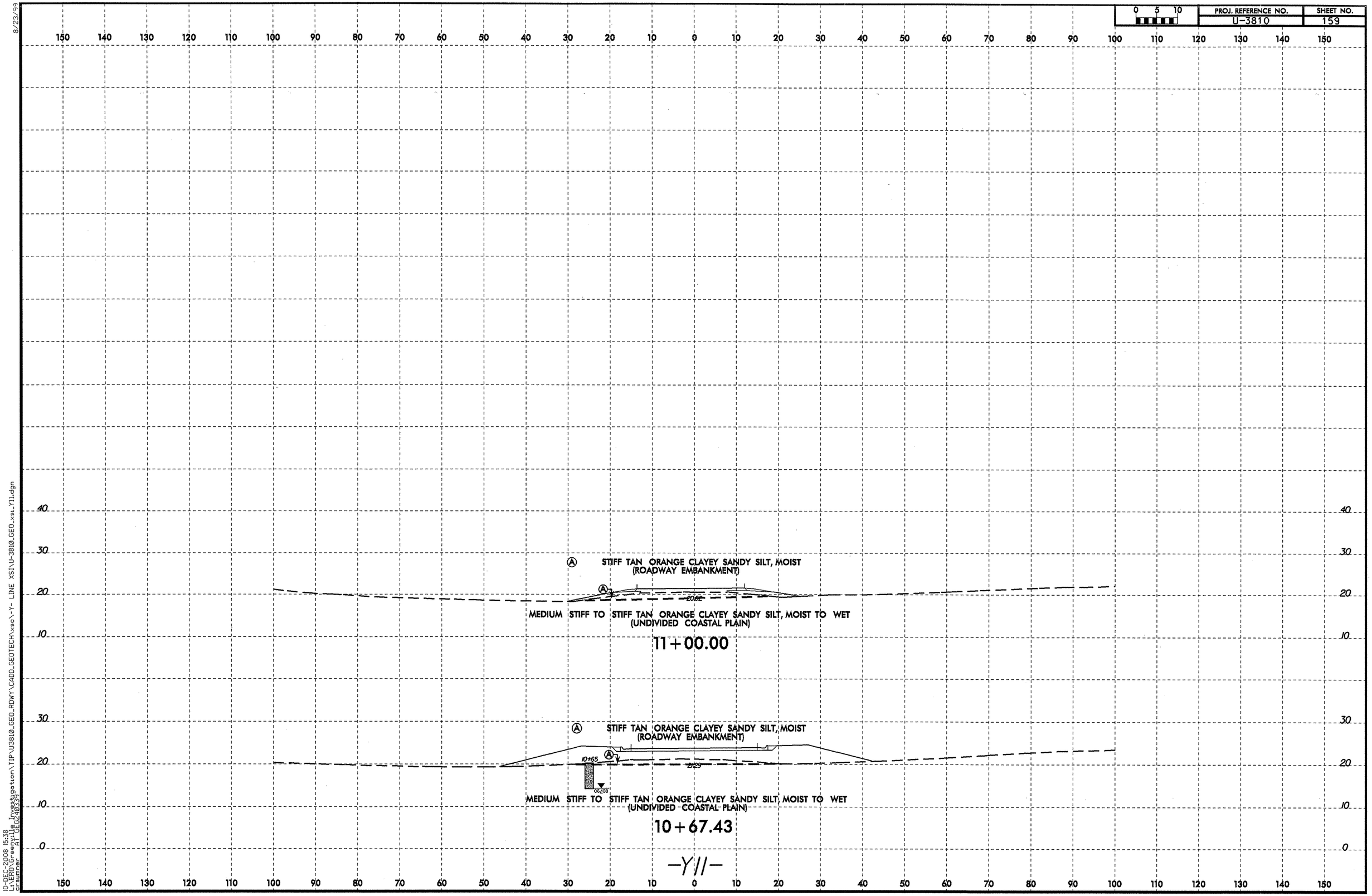

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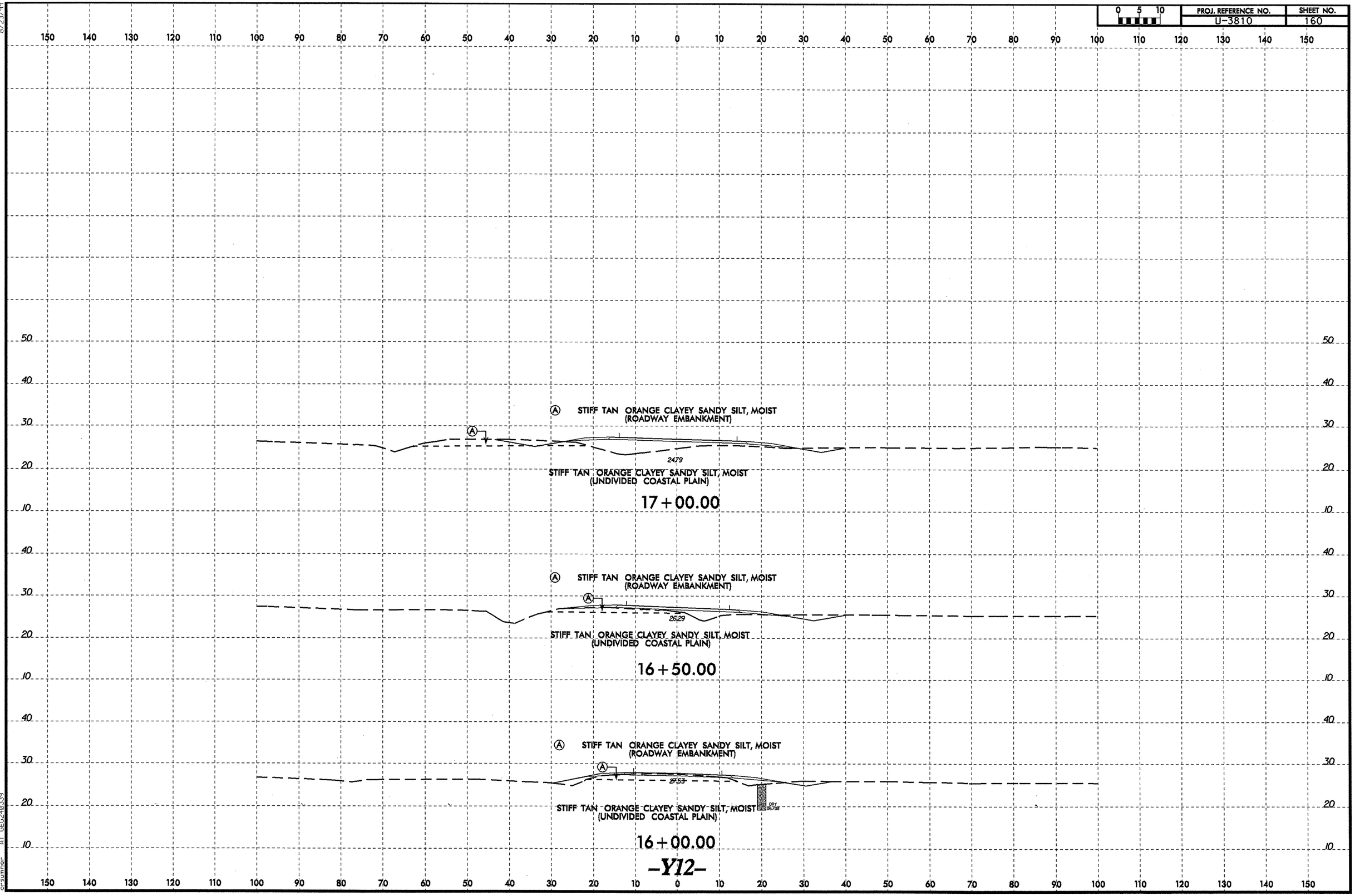

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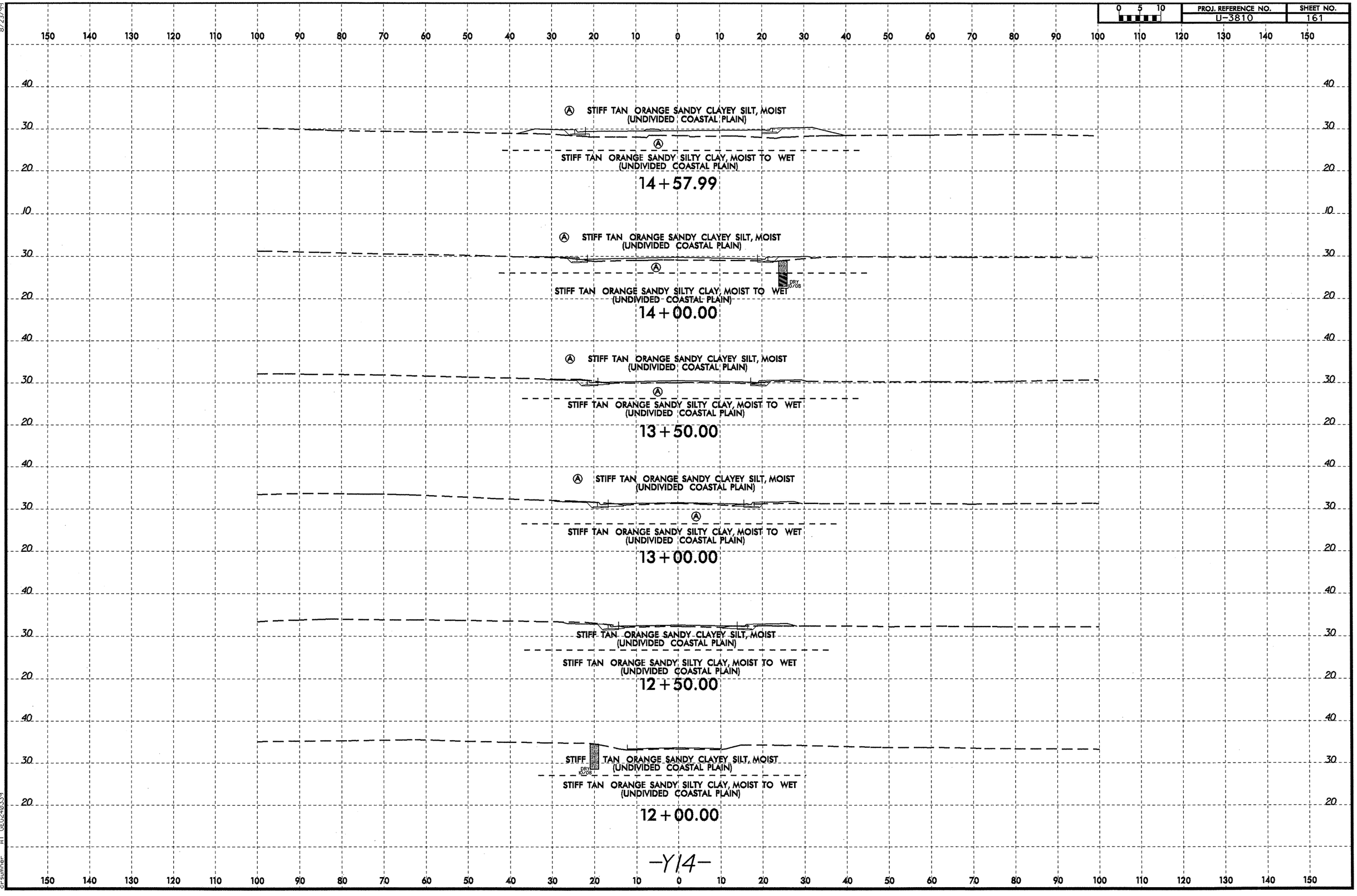

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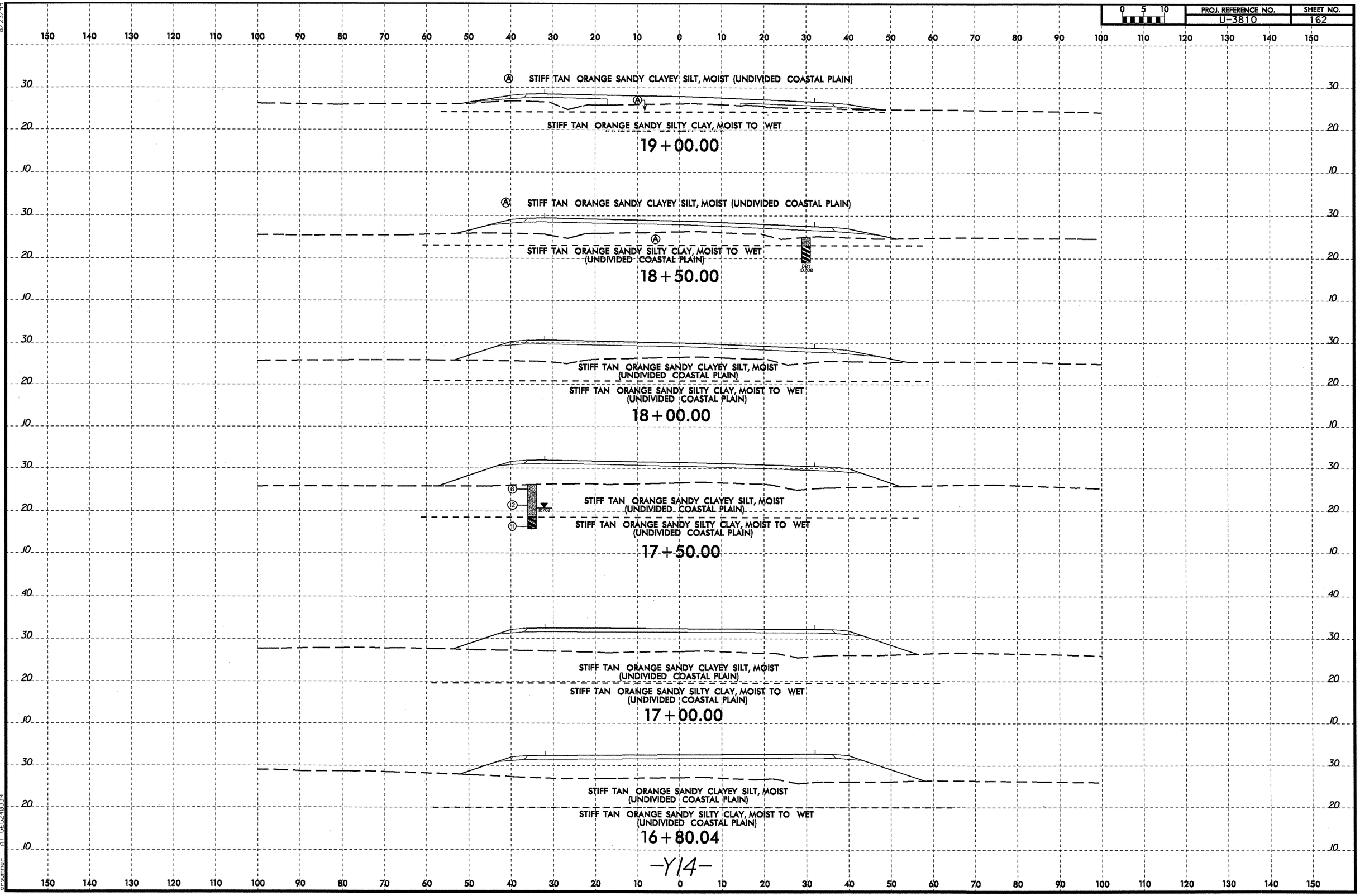

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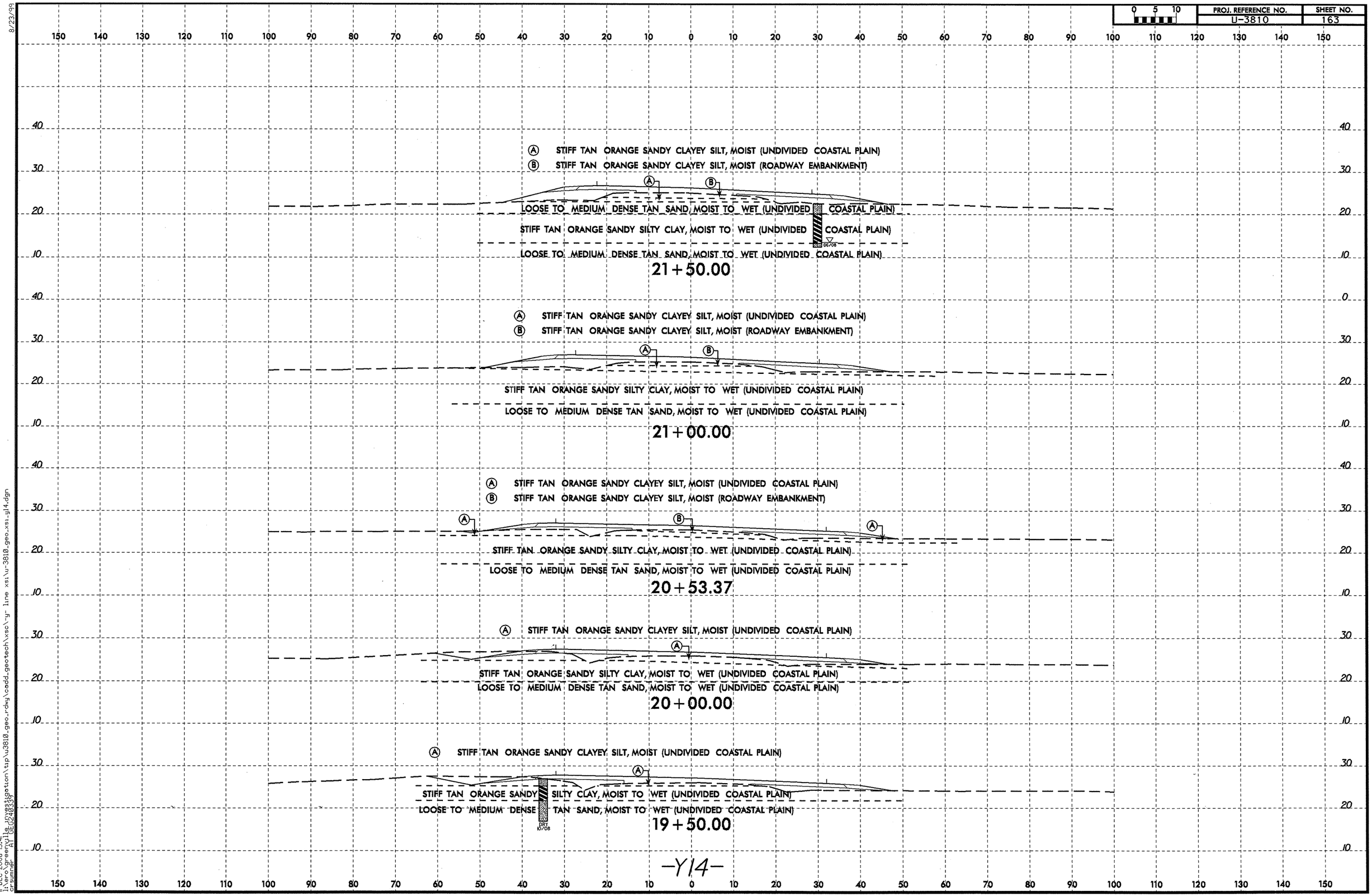

PROJ. REFERENCE NO.
U-3810
SHEET NO.
163
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Ⓑ STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)
LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
STIFF TAN ORANGE SANDY SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
21+50.00
Ⓐ STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
Ⓑ STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (ROADWAY EMBANKMENT)
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LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
21+00.00
Ⓐ STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
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STIFF TAN ORANGE SANDY SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
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Ⓐ STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
STIFF TAN ORANGE SANDY SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
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Ⓐ STIFF TAN ORANGE SANDY CLAYEY SILT, MOIST (UNDIVIDED COASTAL PLAIN)
STIFF TAN ORANGE SANDY SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
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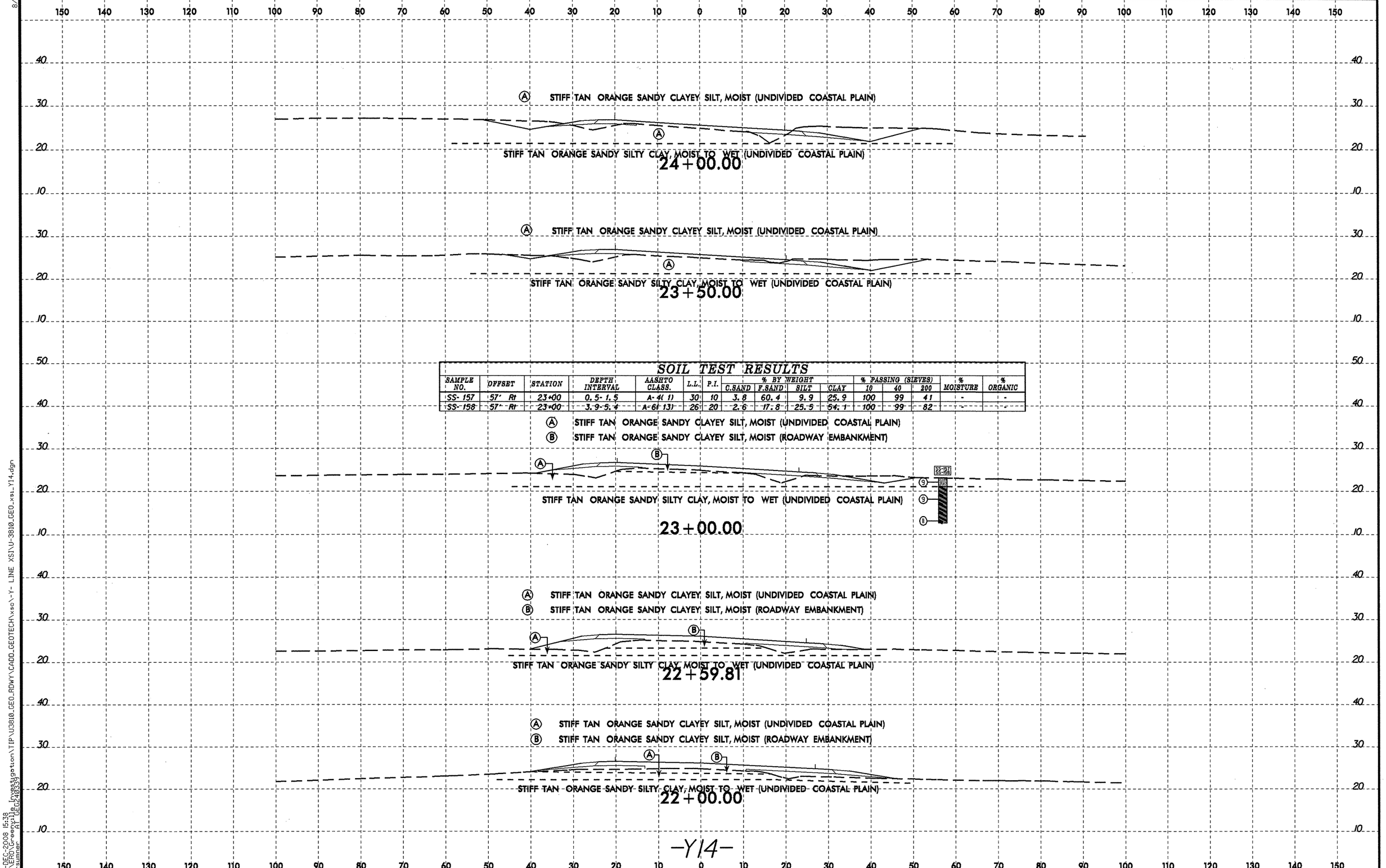
PROJ. REFERENCE NO.	SHEET NO.
U-3810	164



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-157	57' Rt	23+00	0.5-1.5	A-4(1)	30	10	3.8	60.4	9.9	25.9	100	99	41	-	-
SS-158	57' Rt	23+00	3.9-5.4	A-6(13)	26	20	2.6	17.8	25.5	54.1	100	99	82	-	-

8/23/99

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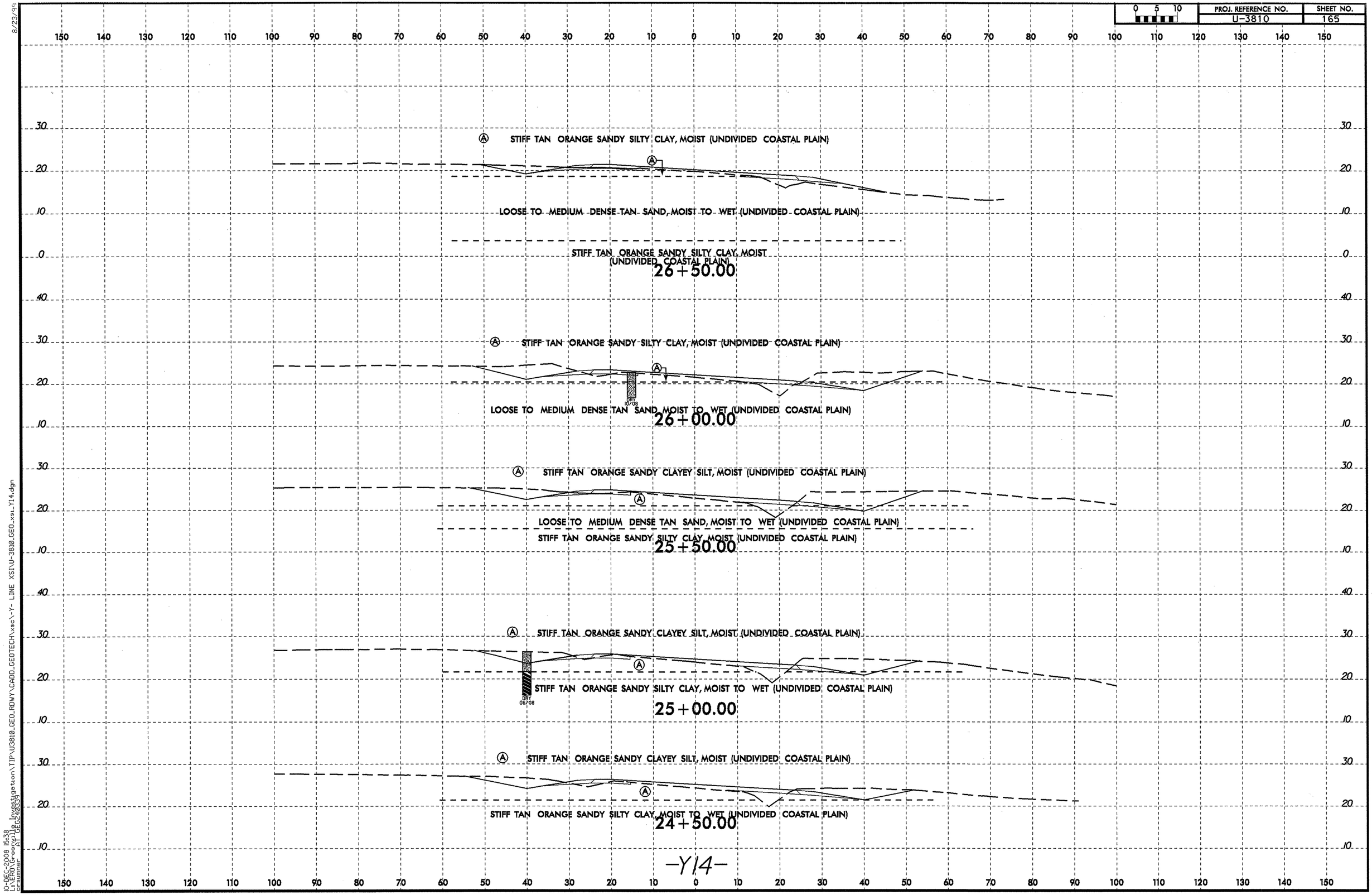

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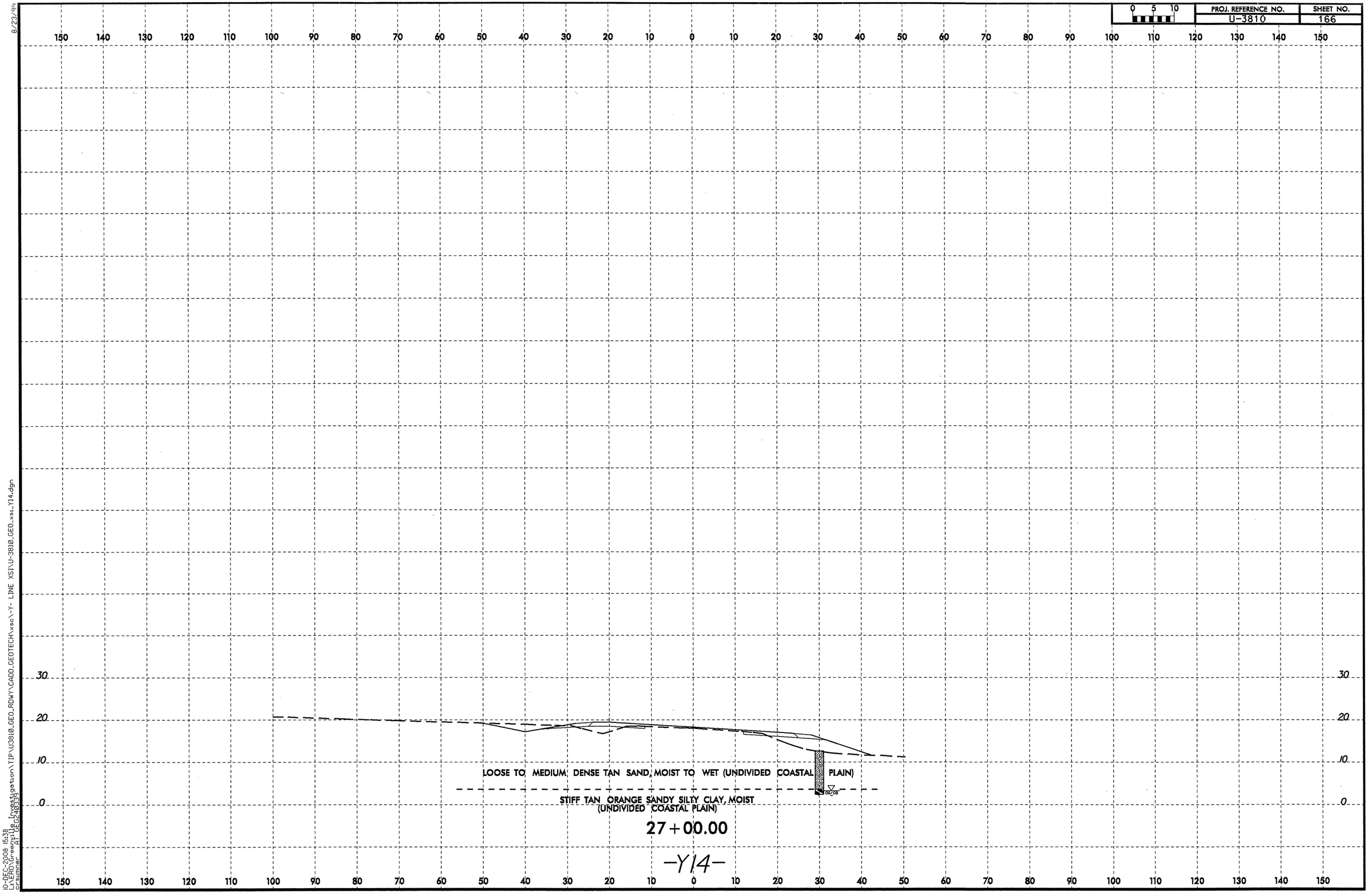

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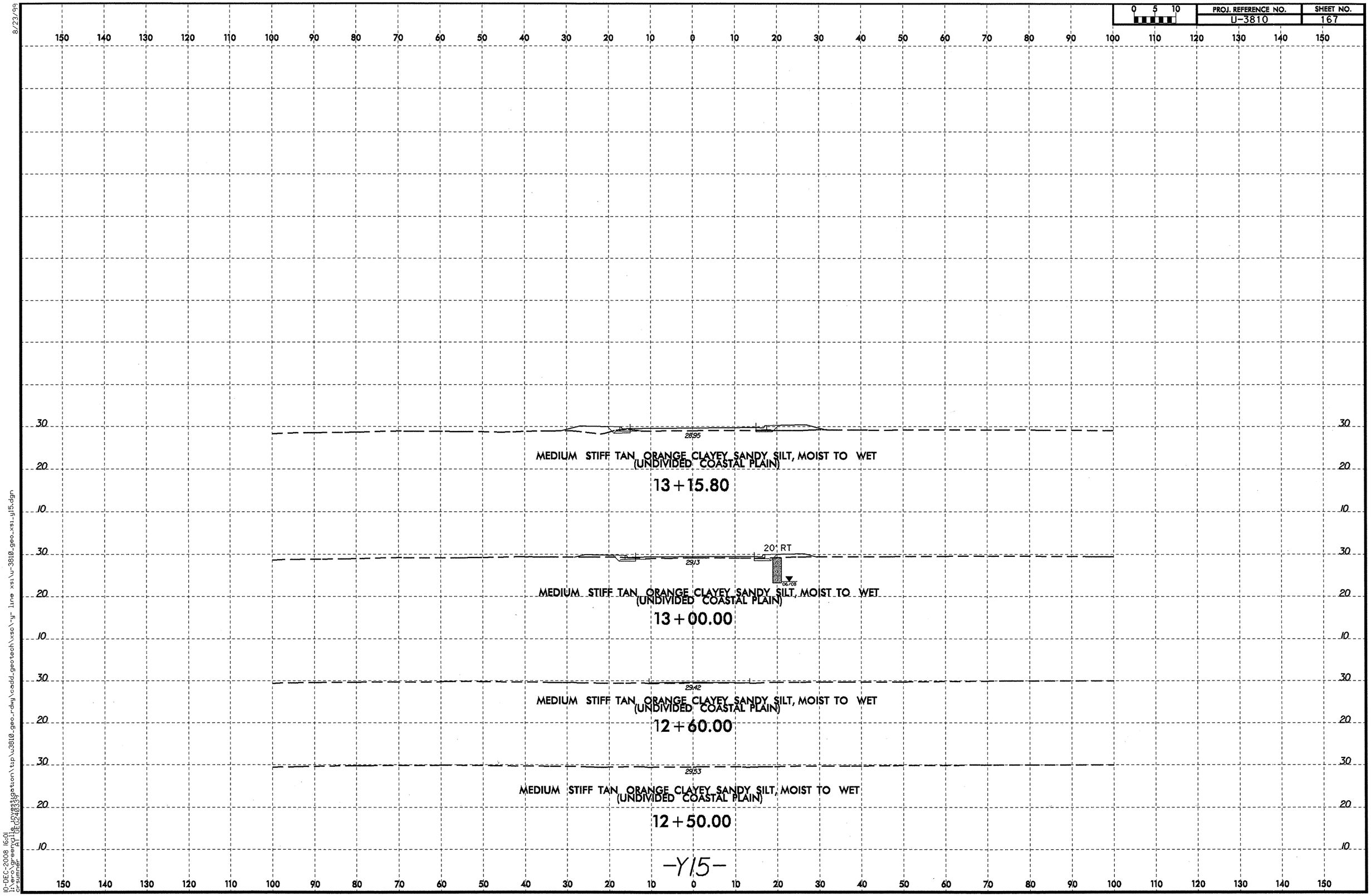

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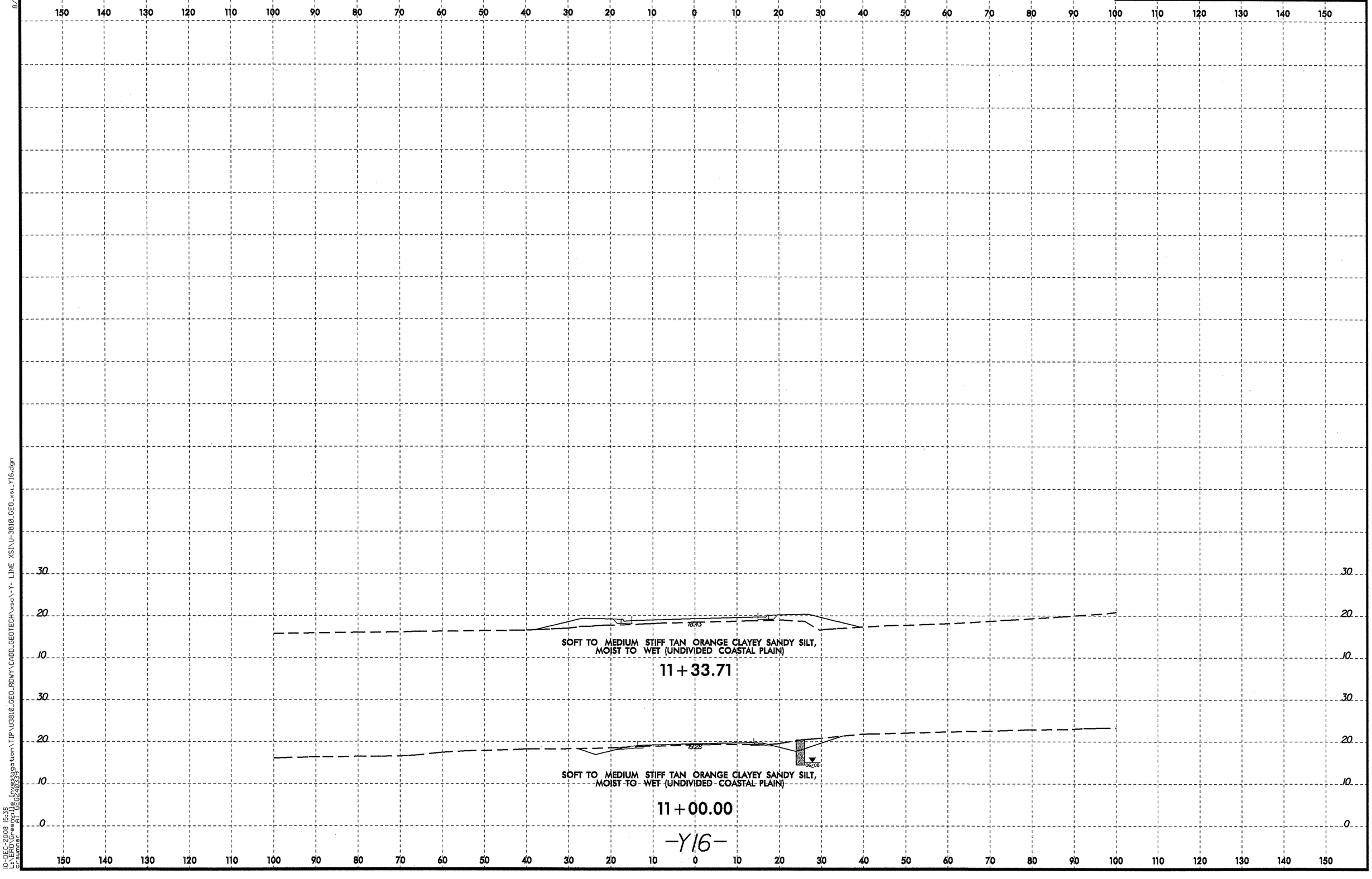

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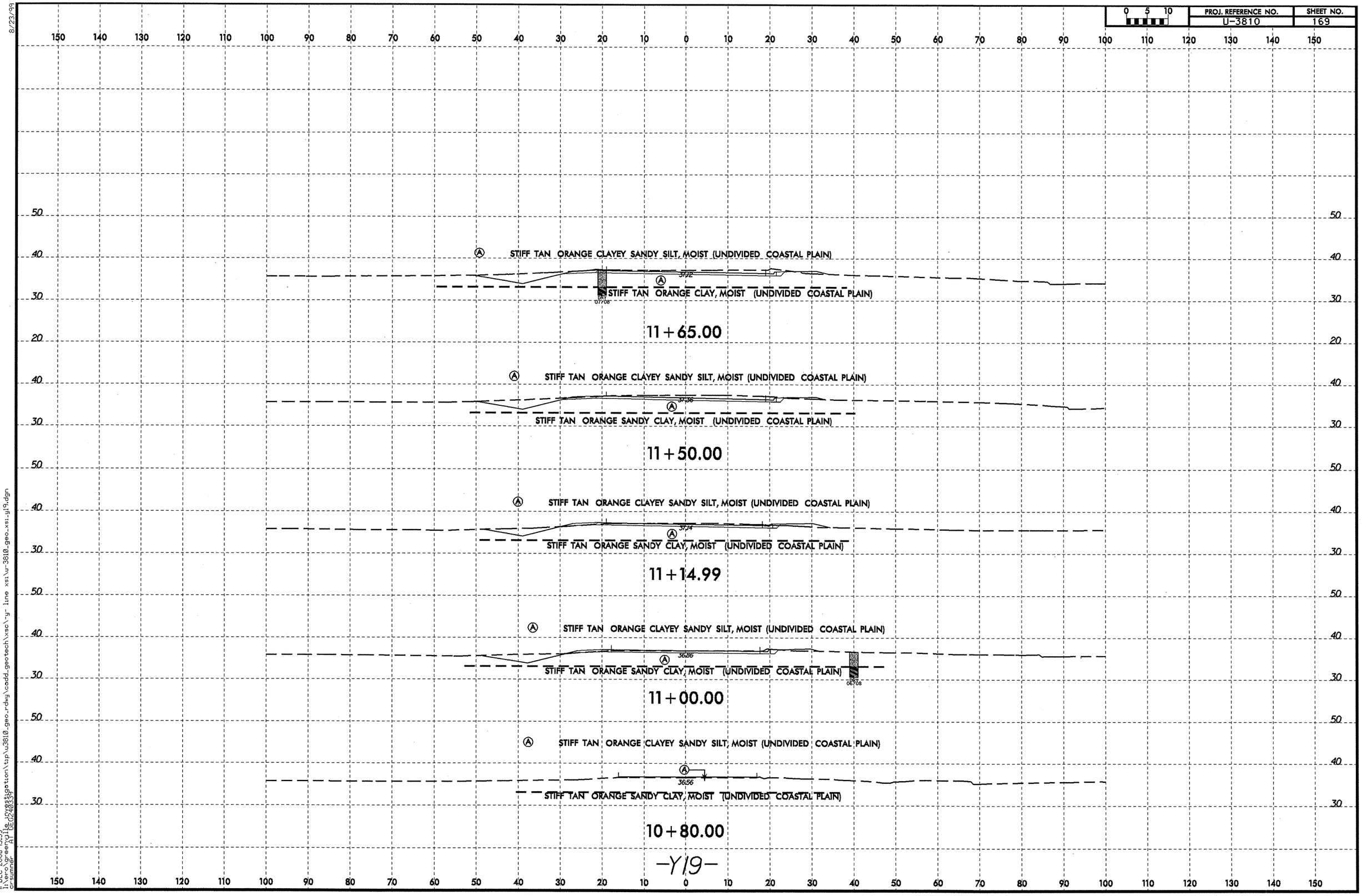

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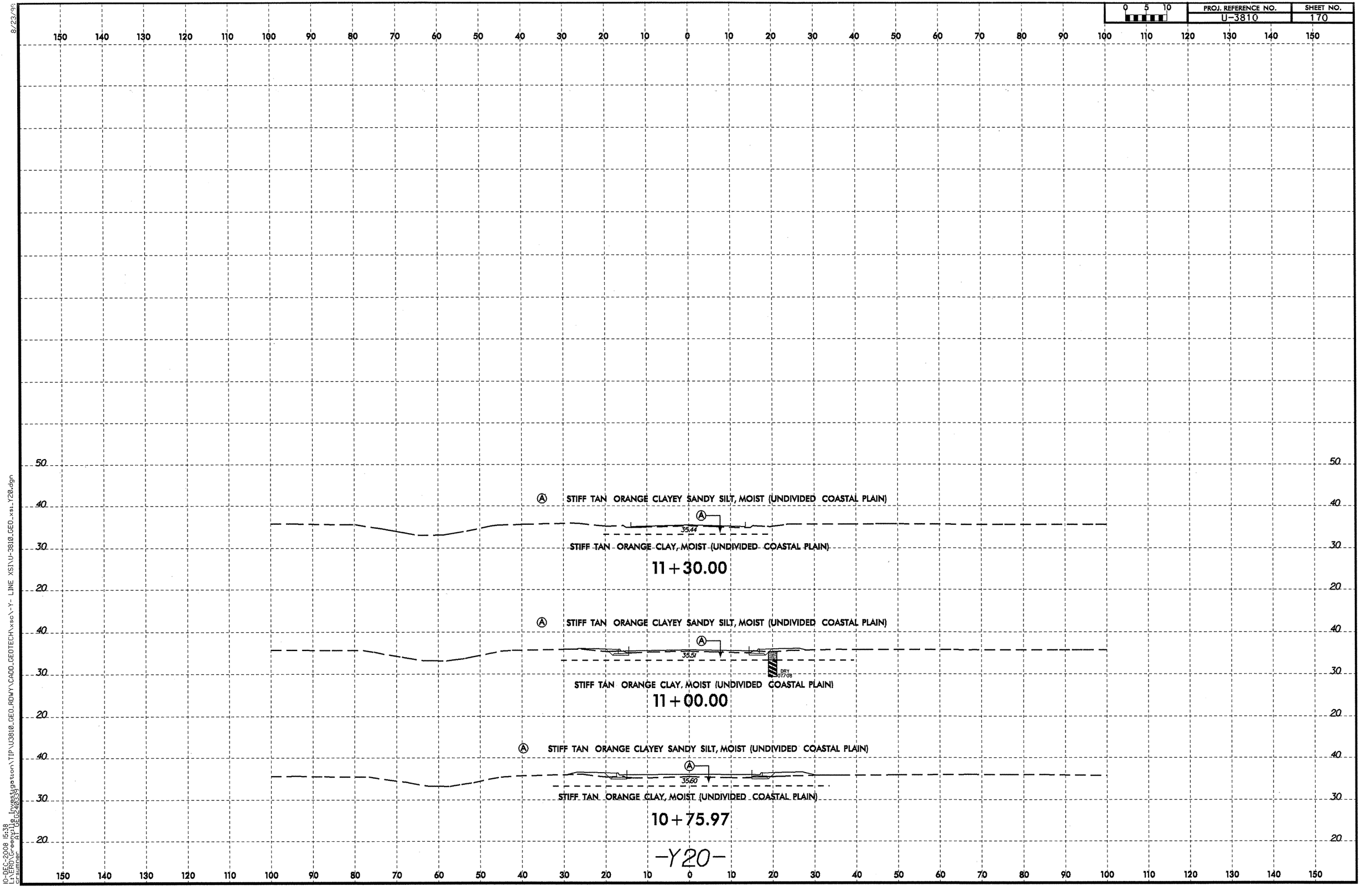

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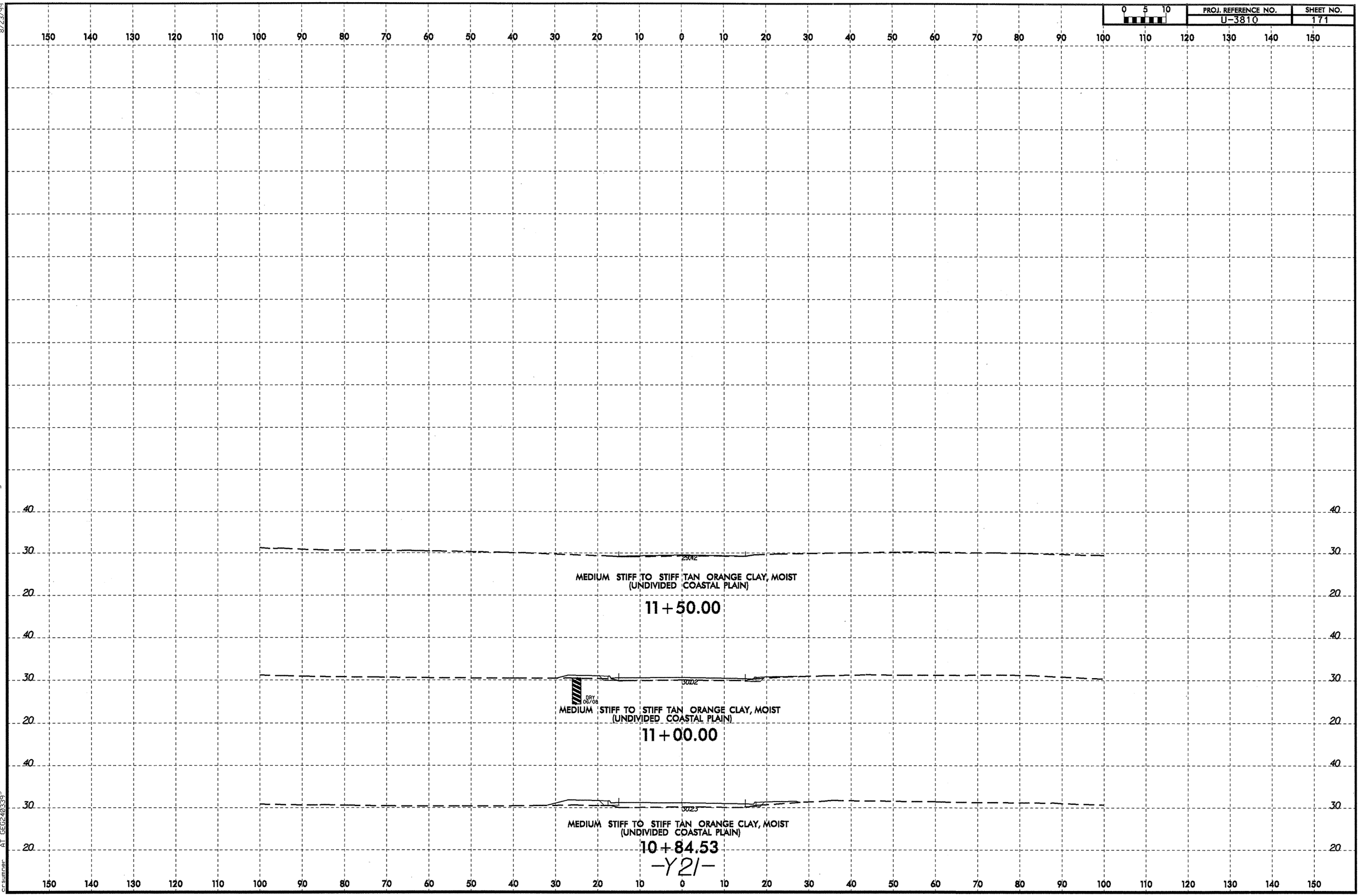

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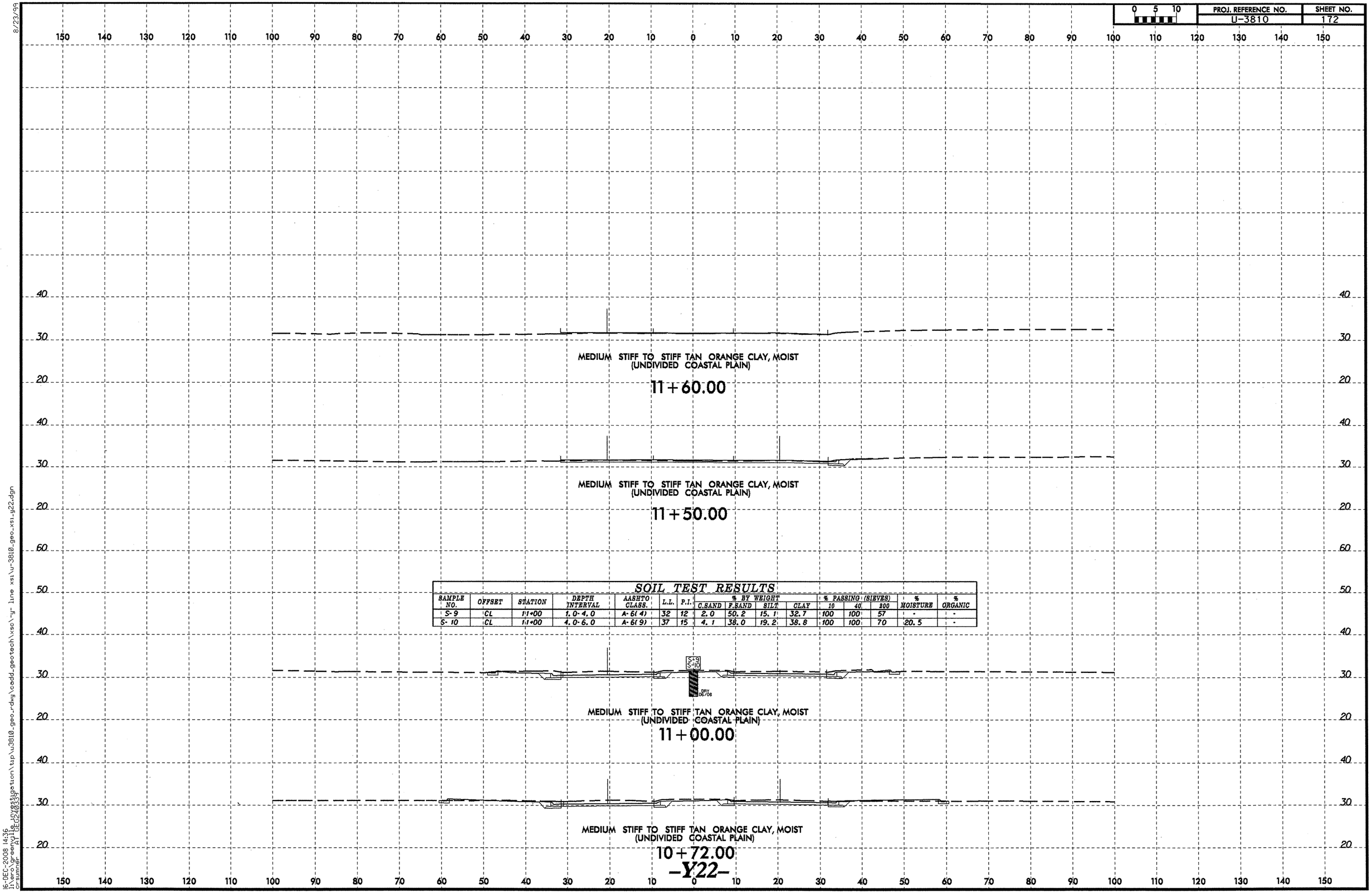
PROJ. REFERENCE NO.	SHEET NO.
U-3810	172



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-9	CL	11+00	1.0-4.0	A-6(4)	32	12	2.0	50.2	15.1	32.7	100	100	57	-	-
S-10	CL	11+00	4.0-6.0	A-6(9)	37	15	4.1	38.0	19.2	38.8	100	100	70	20.5	-

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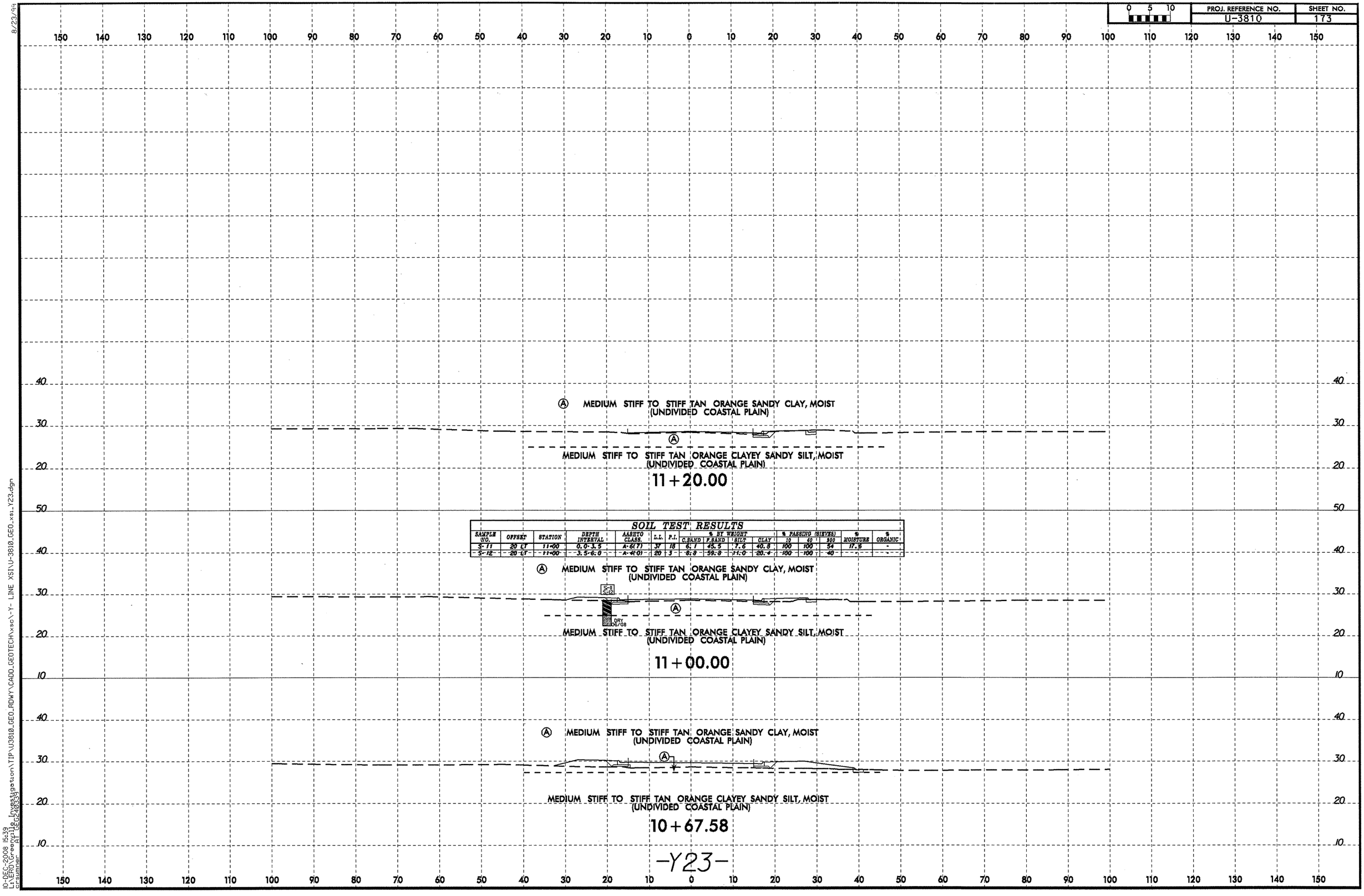

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	60	200	% MOISTURE	% ORGANIC
S-11	20 LT	11+00	0.0-3.5	A-6(7)	37	18	6.1	45.5	7.6	40.8	100	100	54	17.8	-
S-12	20 LT	11+00	3.5-6.0	A-4(0)	20	3	8.8	59.8	11.0	20.4	100	100	40	-	-

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PROJ. REFERENCE NO.	SHEET NO.
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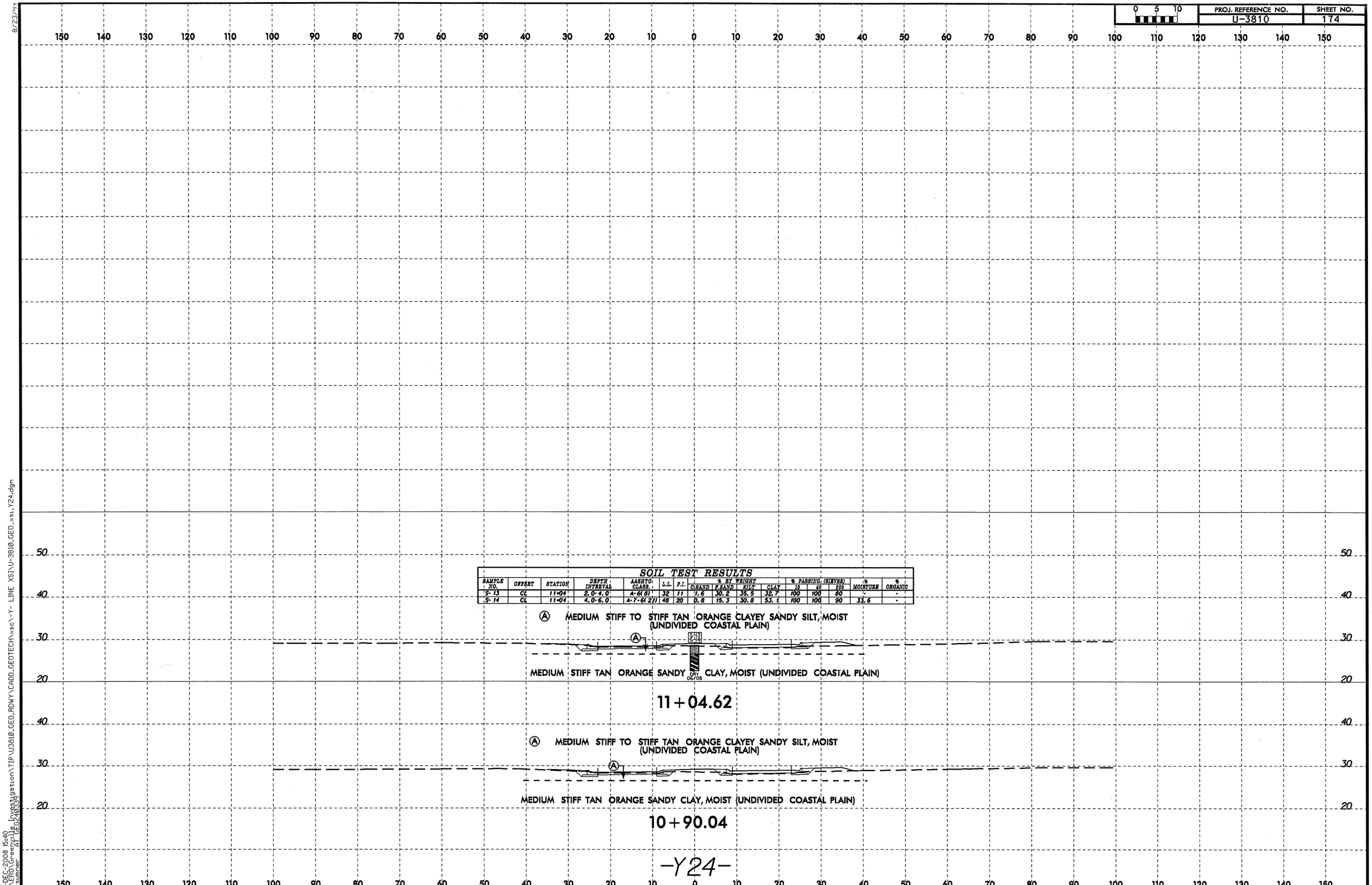

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-13	CL	11+04	2.0-4.0	A-6(8)	32	11	1.6	30.2	35.5	32.7	100	100	80	-	-
S-14	CL	11+04	4.0-6.0	A-7-6(21)	48	20	0.8	15.3	30.8	53.1	100	100	90	33.6	-

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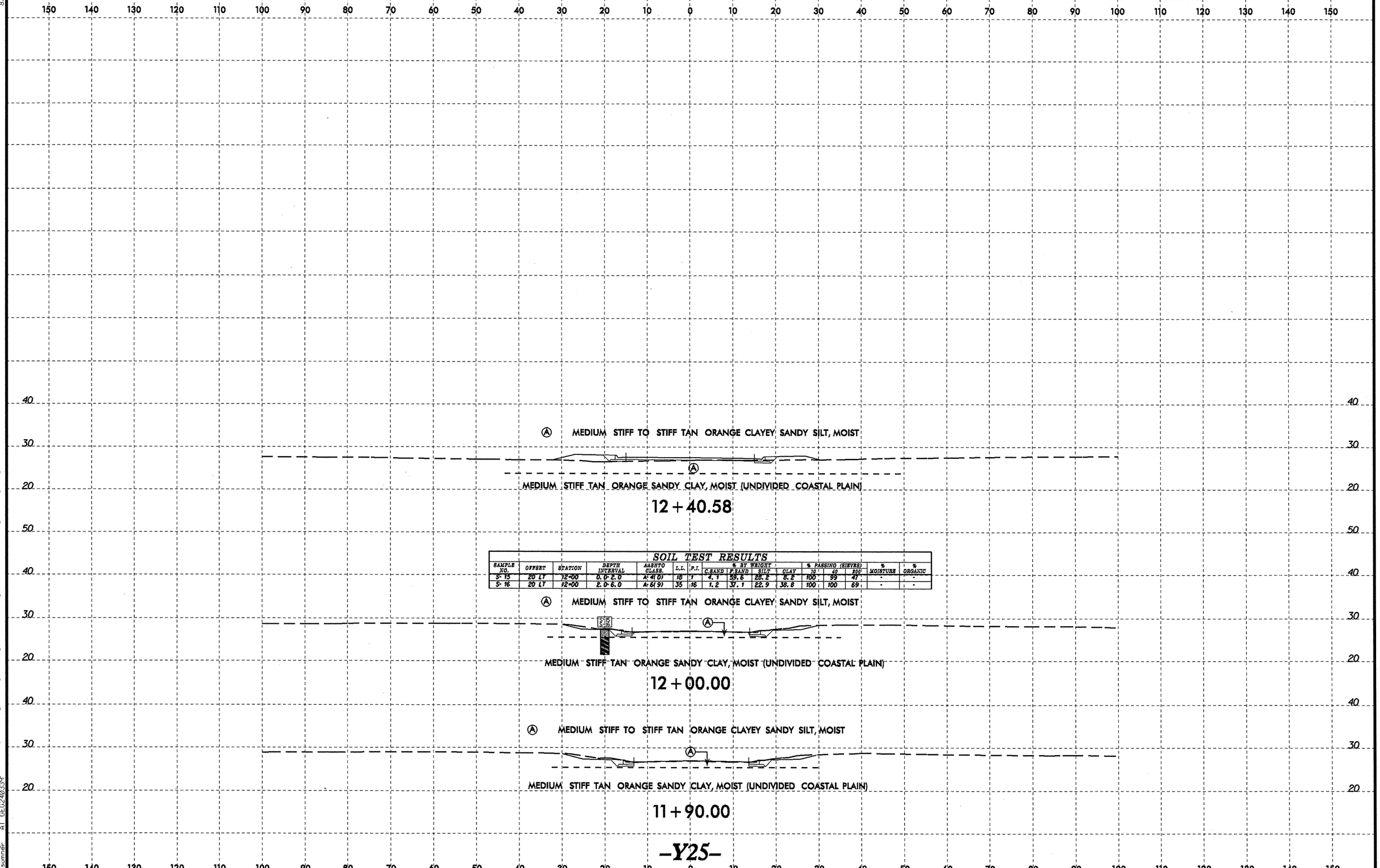

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-15	20 LT	12+00	0.0-2.0	A-4(0)	18	1	4.1	59.6	28.2	8.2	100	99	47	-	-
S-16	20 LT	12+00	2.0-6.0	A-6(9)	35	16	1.2	37.1	22.9	38.8	100	100	69	-	-

PROJ. REFERENCE NO.	SHEET NO.
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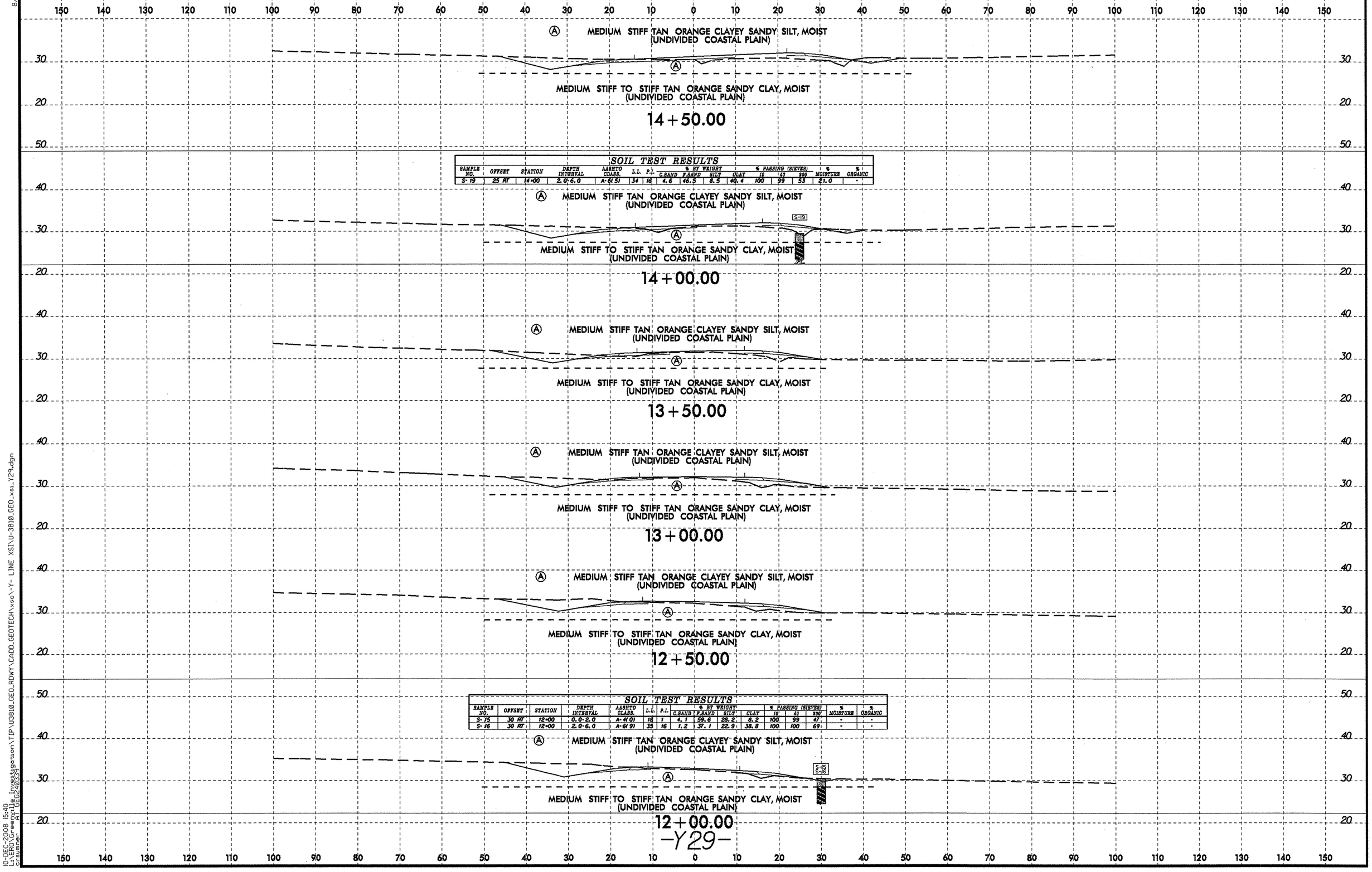

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-19	25 RT	14+00	2.0-6.0	A-6(5)	34	16	4.6	46.5	8.5	40.4	100	99	53	21.0	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-15	30 RT	12+00	0.0-2.0	A-4(0)	18	1	4.1	59.6	28.2	8.2	100	99	47	-	-
S-16	30 RT	12+00	2.0-6.0	A-6(9)	35	16	1.2	37.1	22.9	38.8	100	100	69	-	-

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PROJ. REFERENCE NO.	SHEET NO.
U-3810	177

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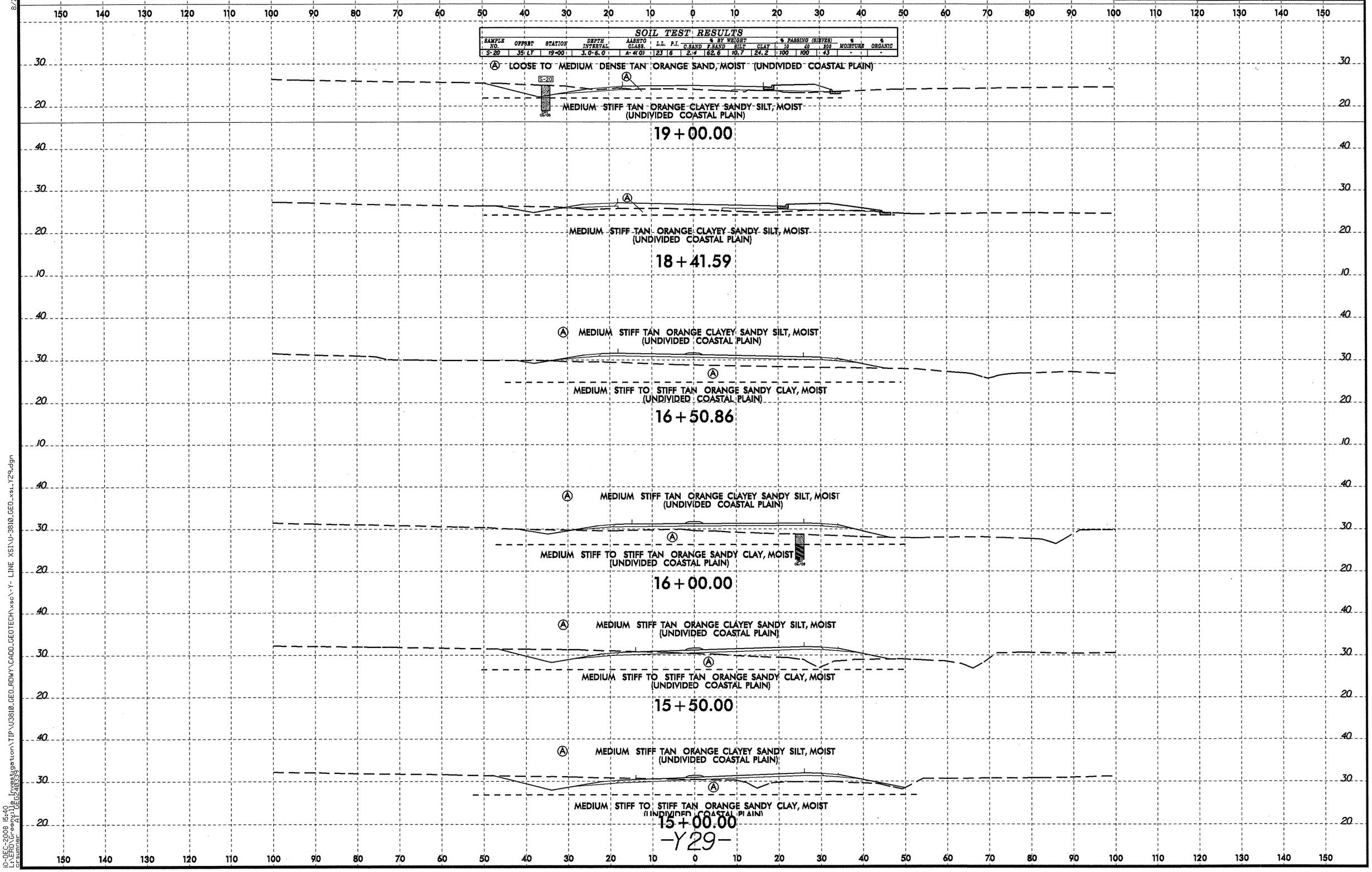
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-20	35' LT	19+00	3.0-6.0	A-4(0)	23	6	2.4	62.6	10.7	24.2	100	100	43	-	-



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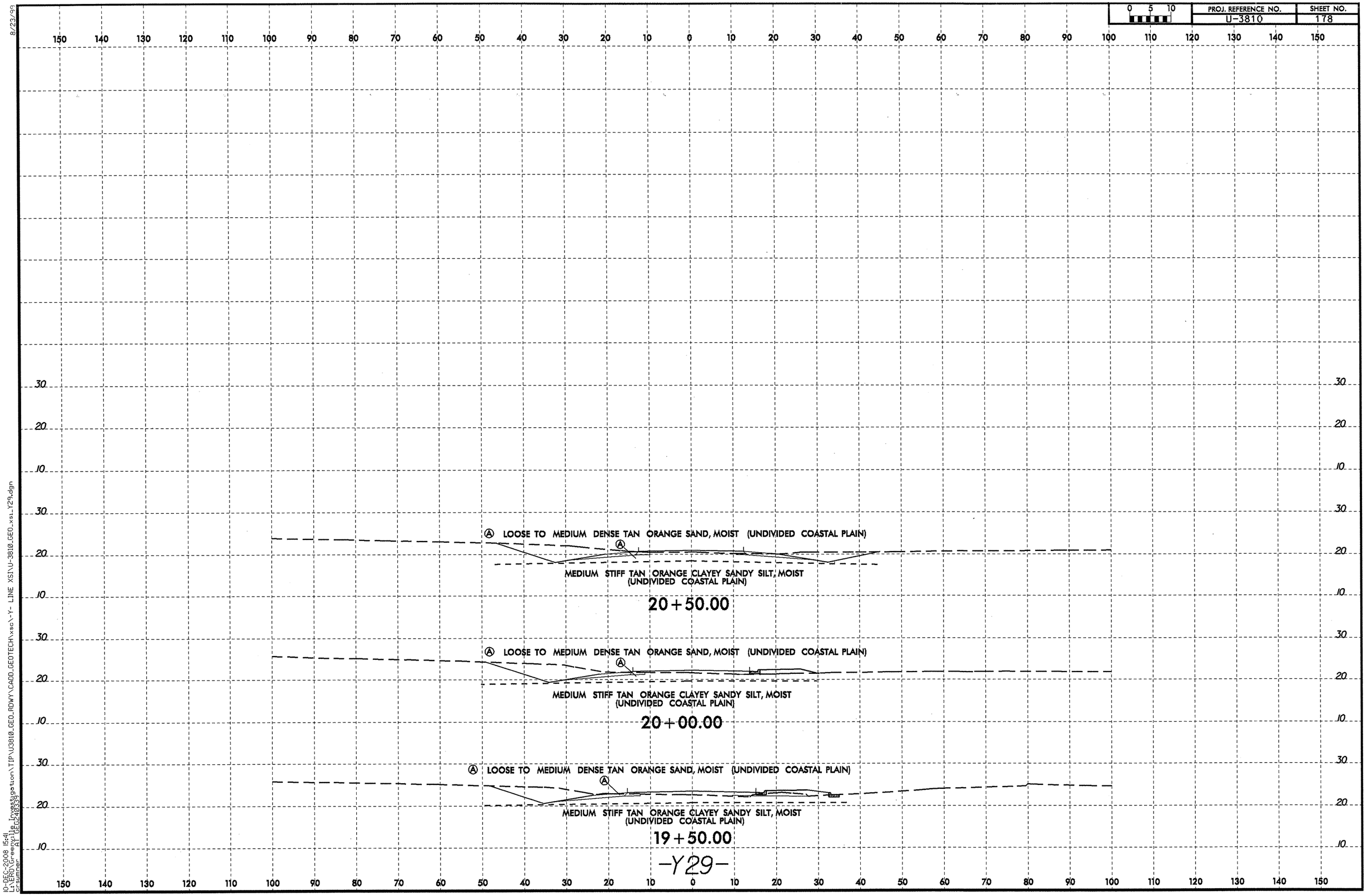

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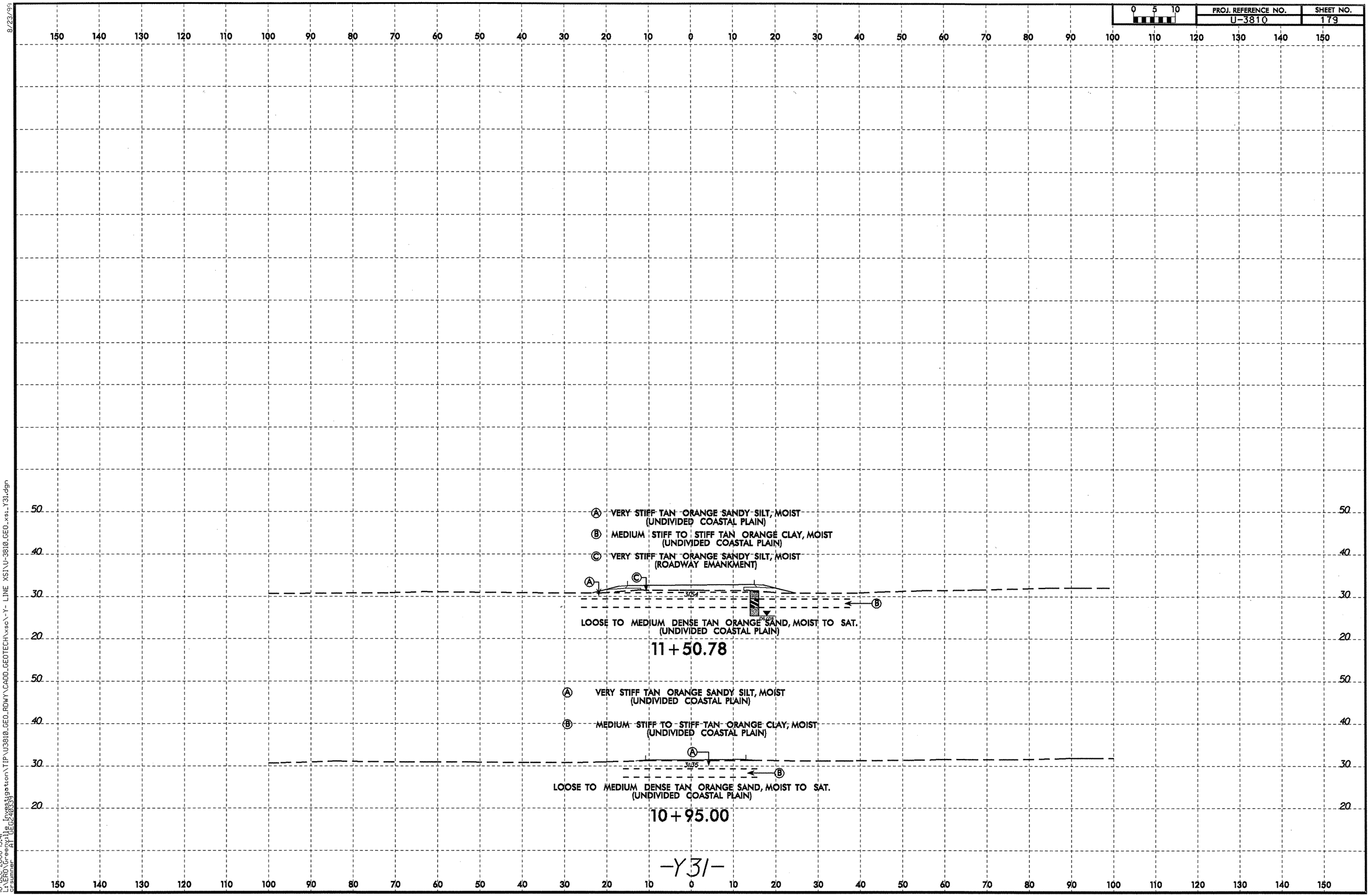

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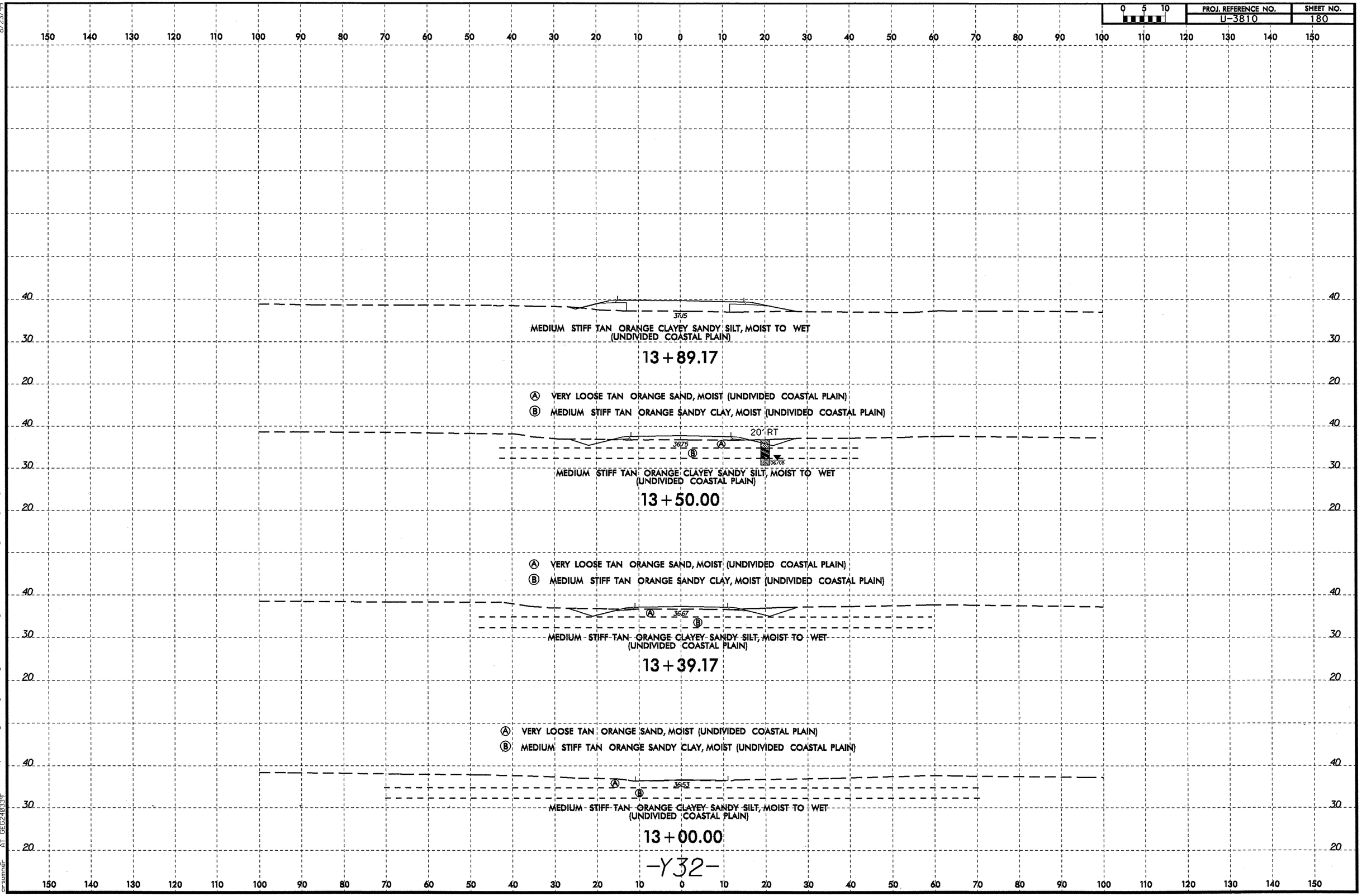

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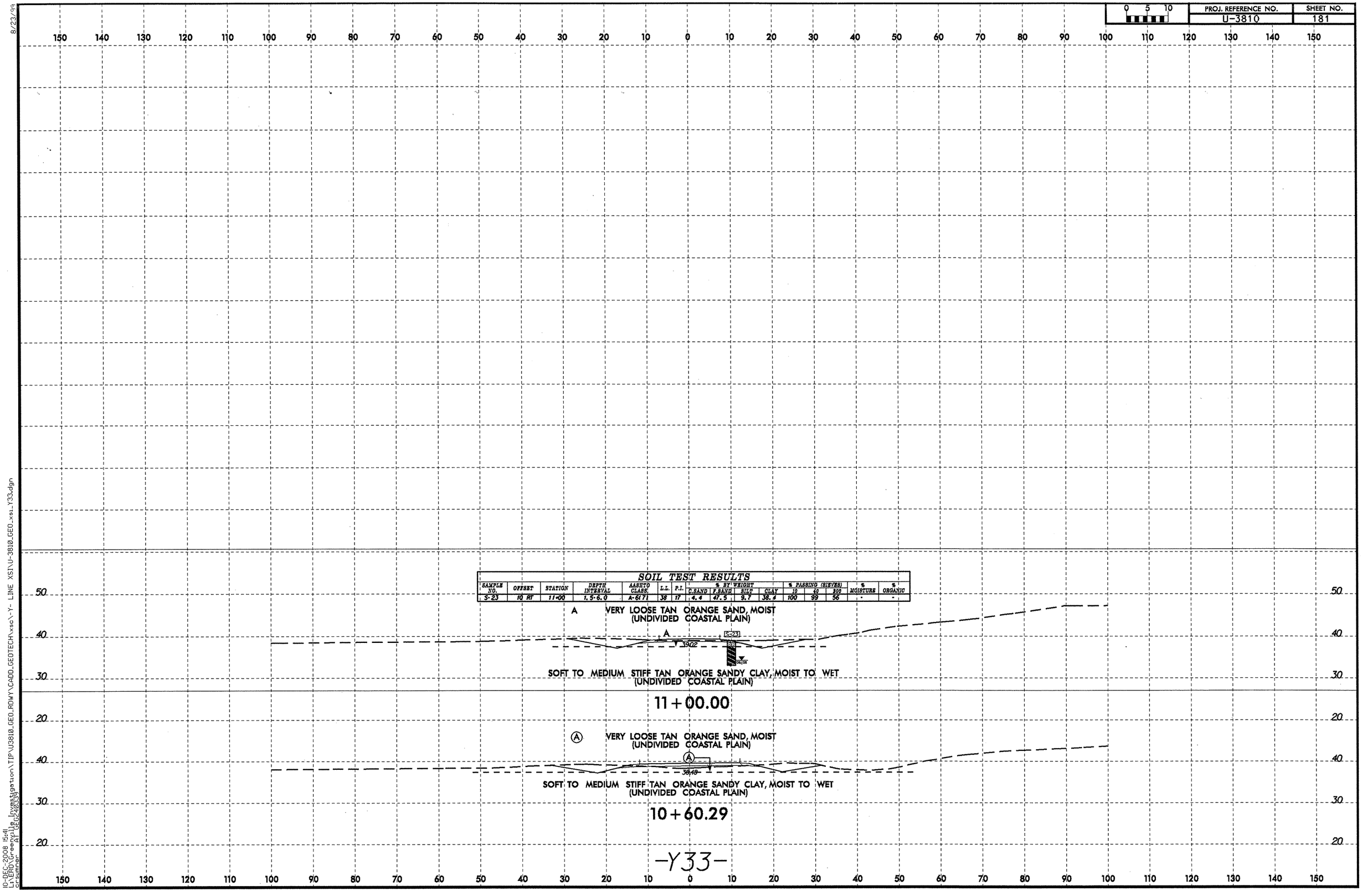

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-23	10 RT	11+00	1.5-6.0	A-6(7)	38	17	4.4	47.5	9.7	38.4	100	99	56	-	-

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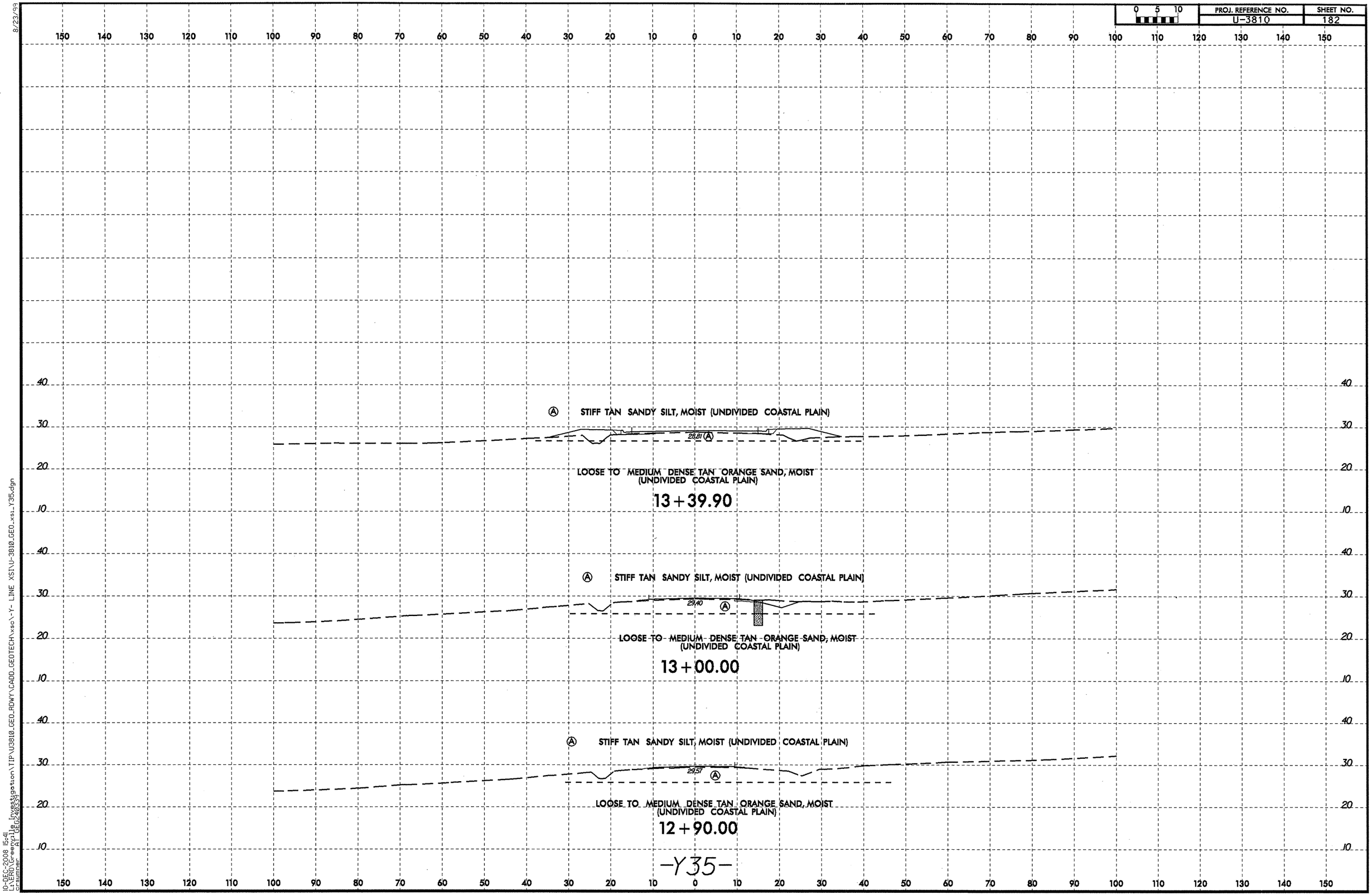

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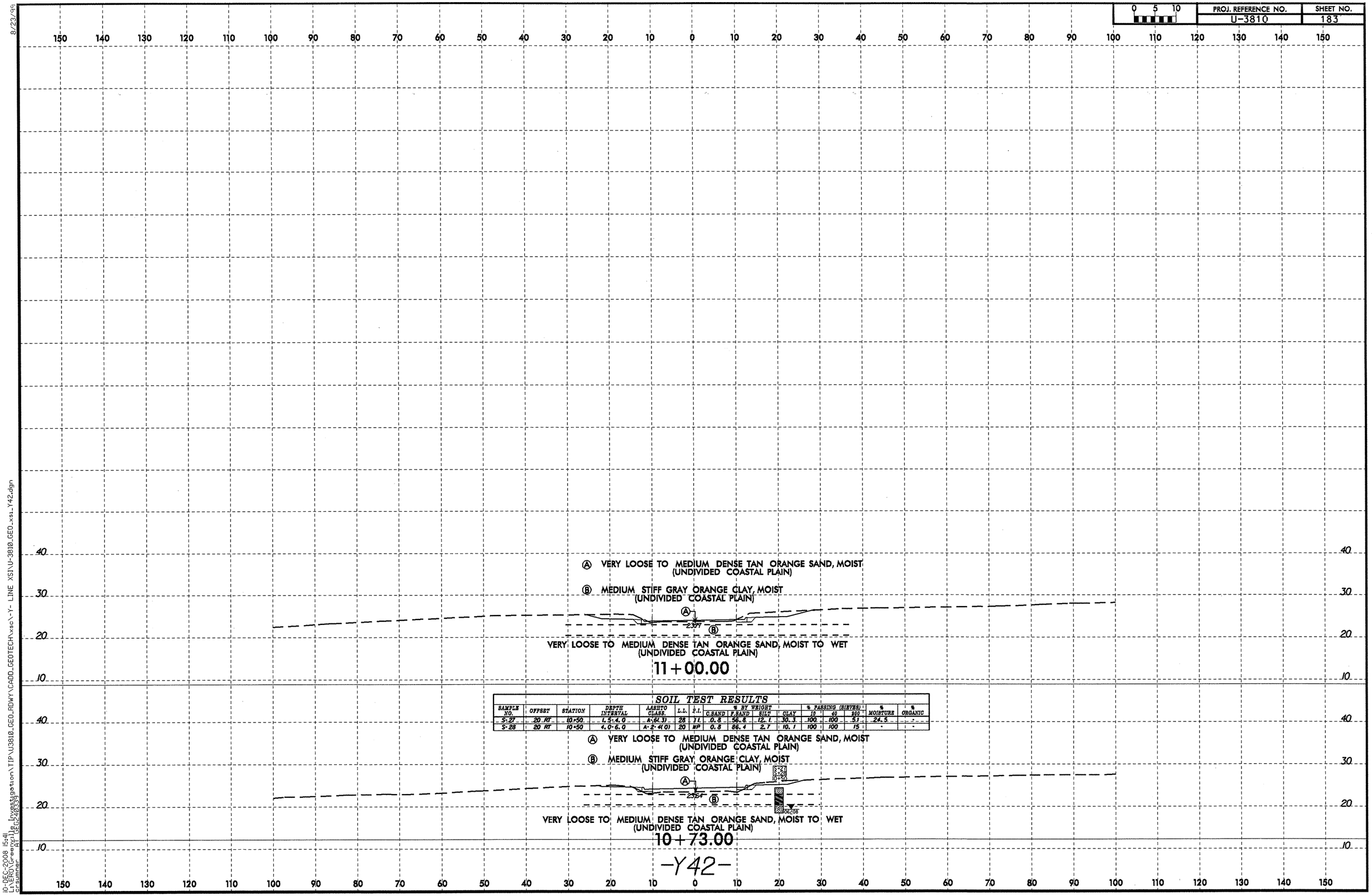
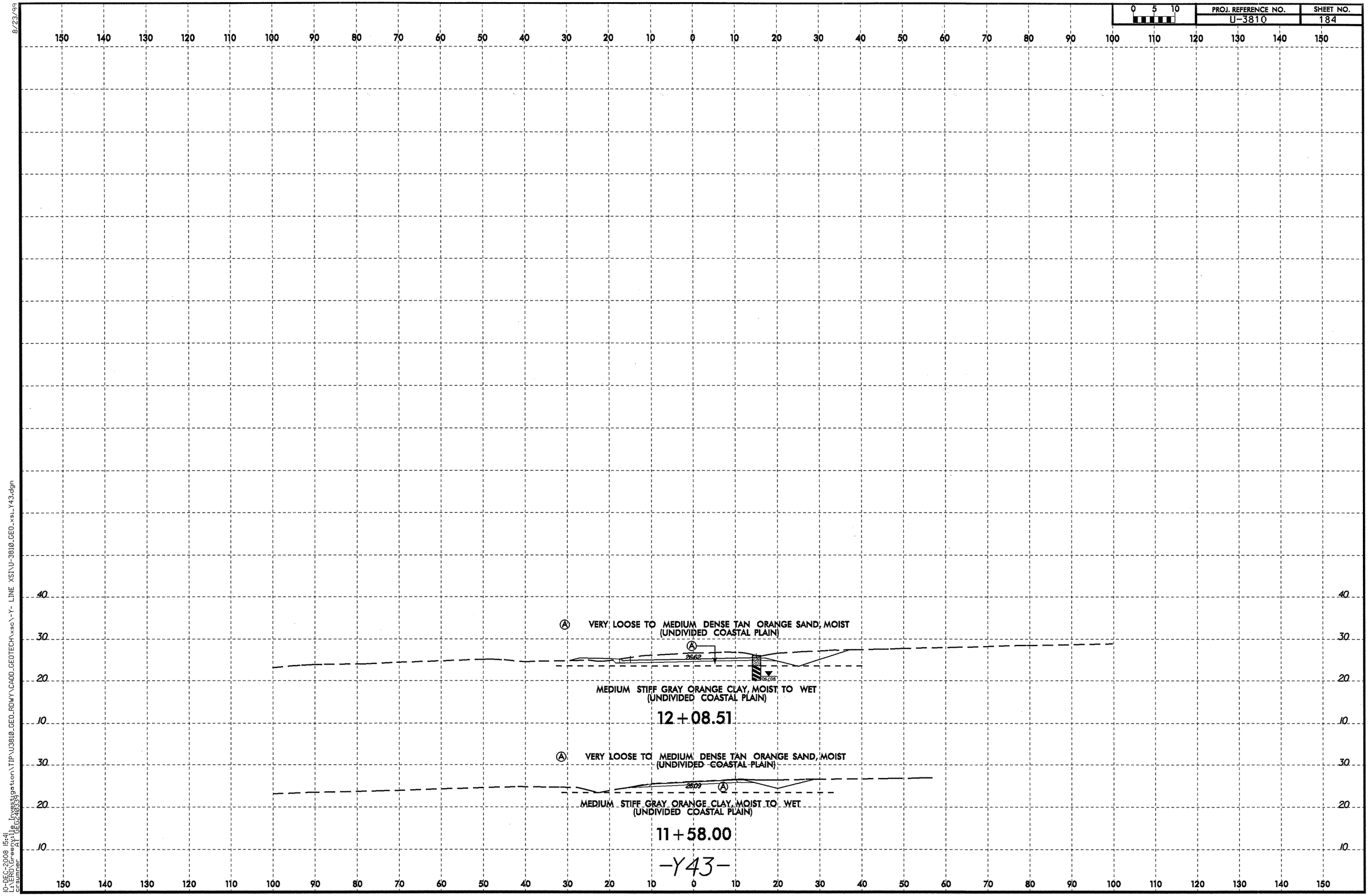


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-27	20 RT	10+50	1.5-4.0	A-6(3)	28	11	0.8	58.8	12.1	30.3	100	100	51	24.5	-
S-28	20 RT	10+50	4.0-6.0	A-2-4(0)	20	NP	0.8	86.4	2.7	10.1	100	100	15	-	-



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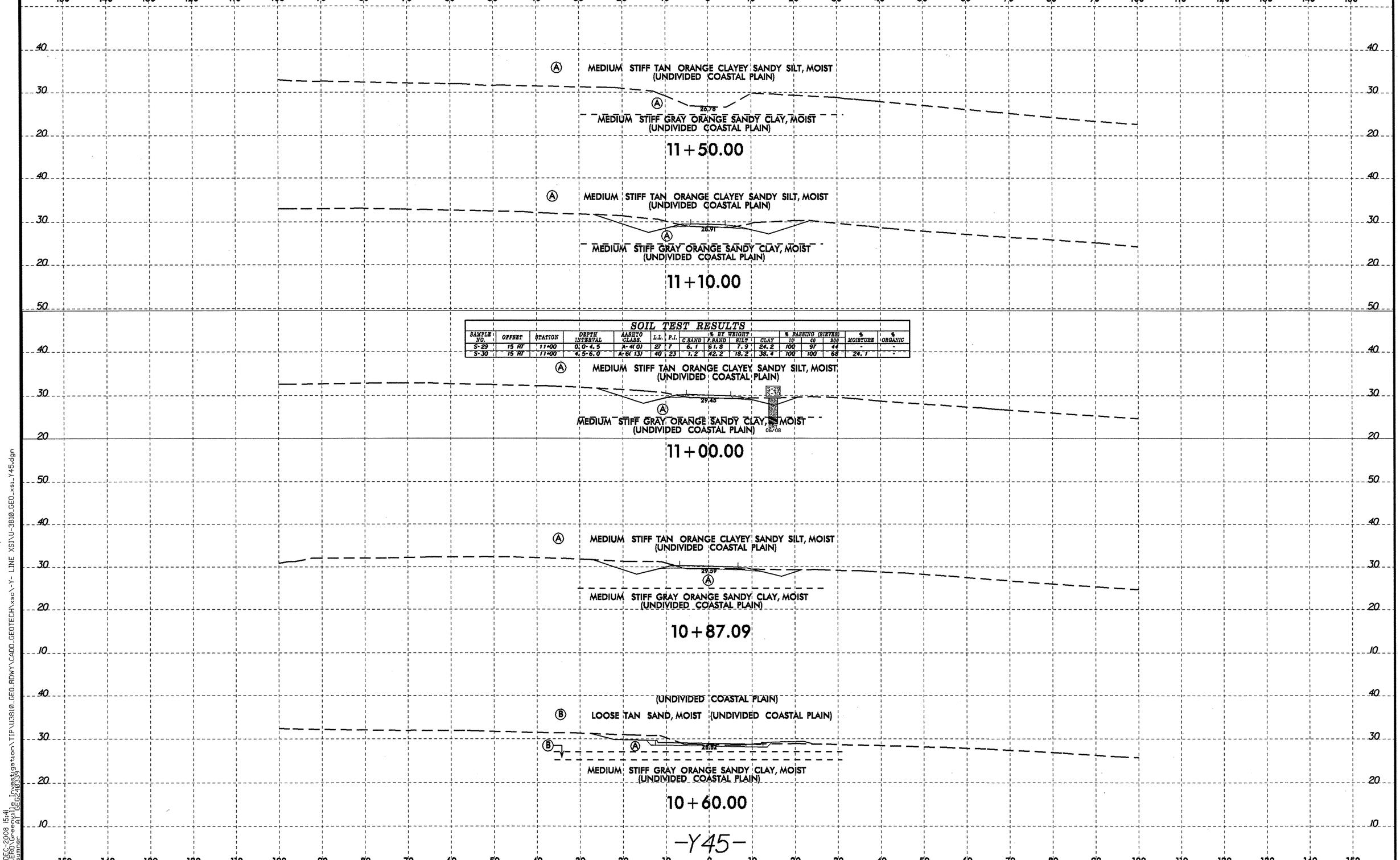
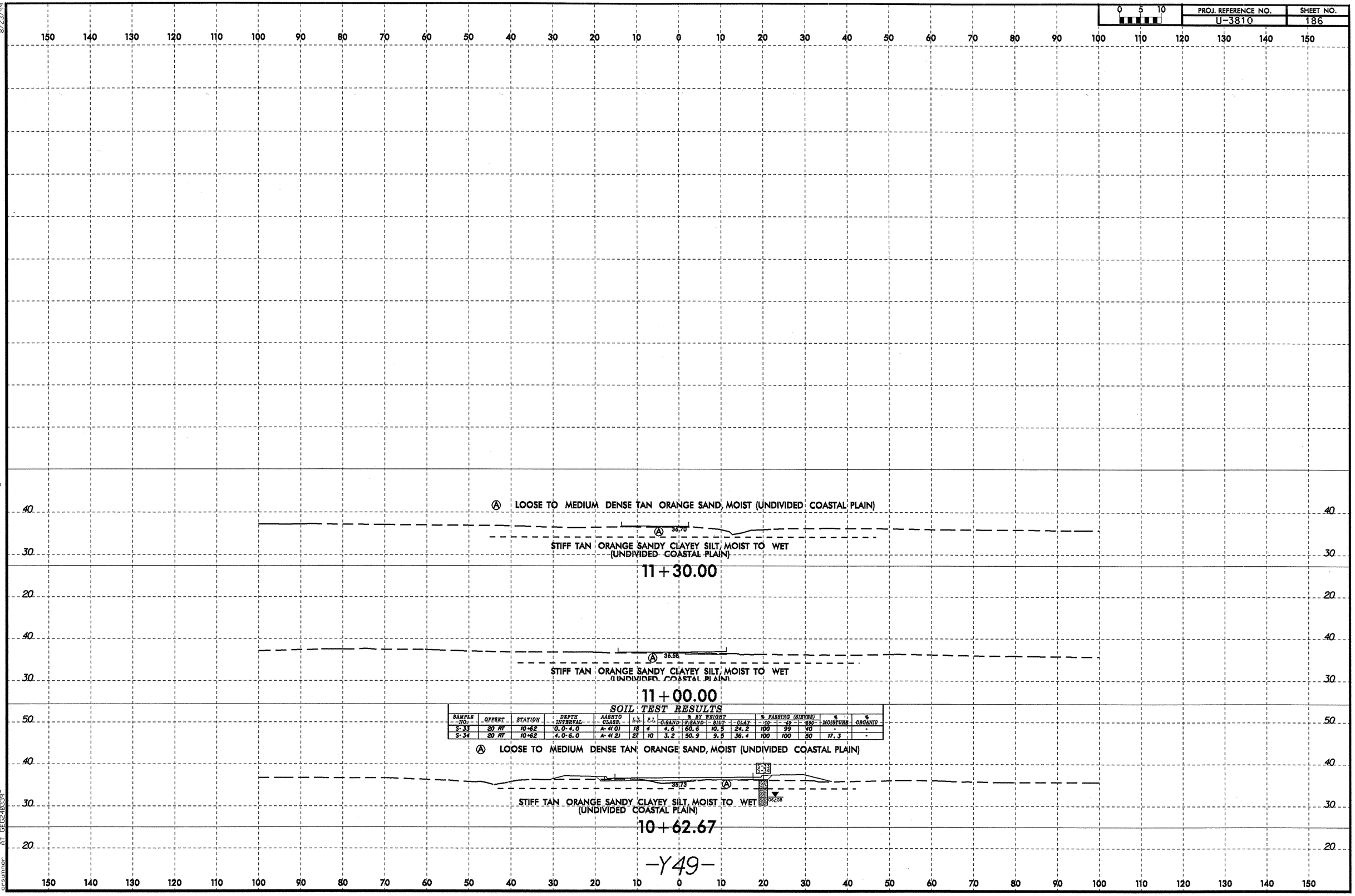


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-29	15 RT	11+00	0.0-4.5	A-4(0)	27	7	6.1	51.8	7.9	24.2	100	97	44	-	-
S-30	15 RT	11+00	4.5-6.0	A-6(13)	40	23	1.2	42.2	18.2	38.4	100	100	68	24.1	-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-33	20 RT	10+62	0.0-4.0	A-4(0)	18	4	4.6	60.6	10.5	24.2	100	99	40	-	-
S-34	20 RT	10+62	4.0-6.0	A-4(2)	27	10	3.2	50.9	9.5	36.4	100	100	50	17.3	-

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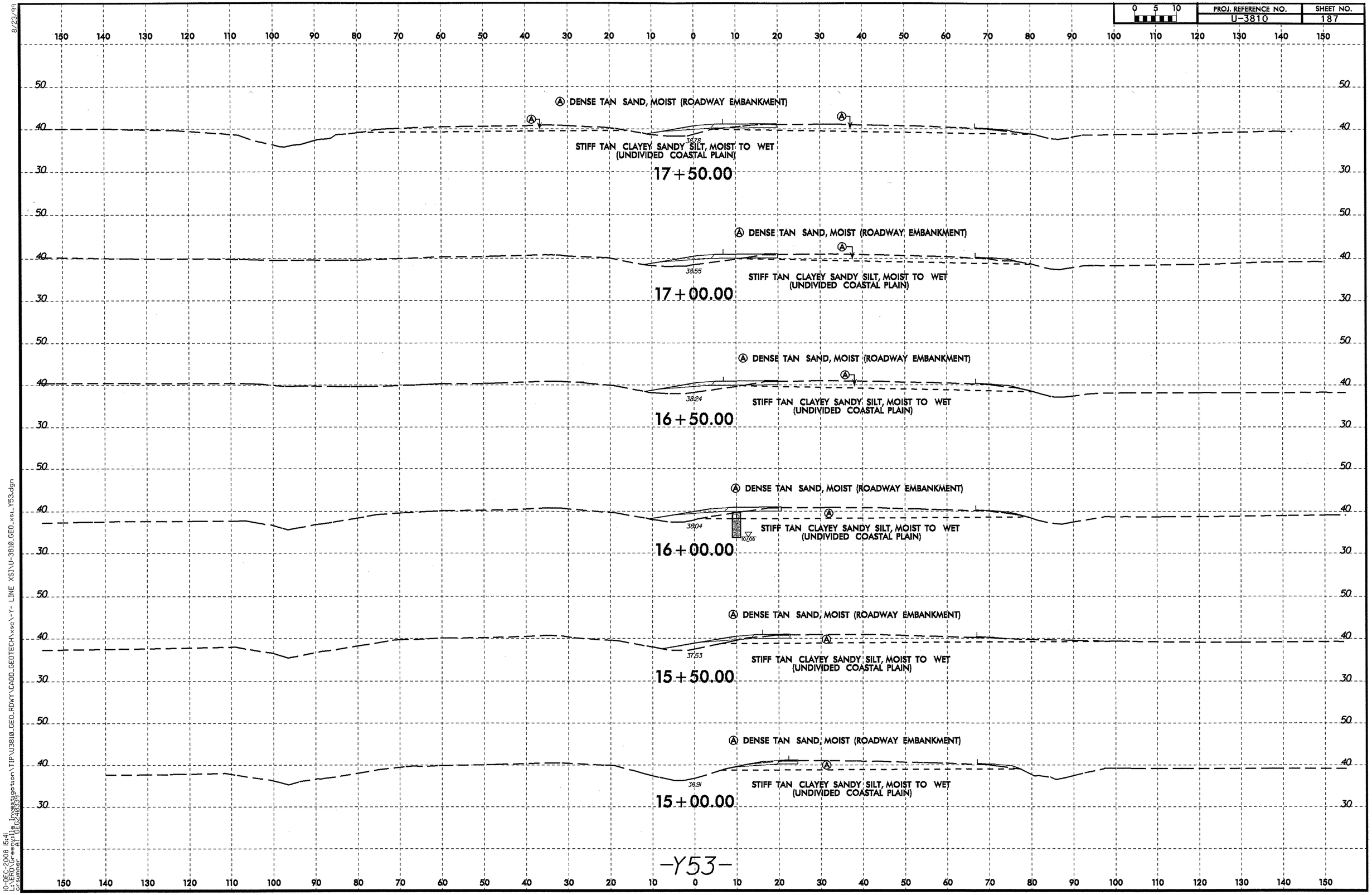

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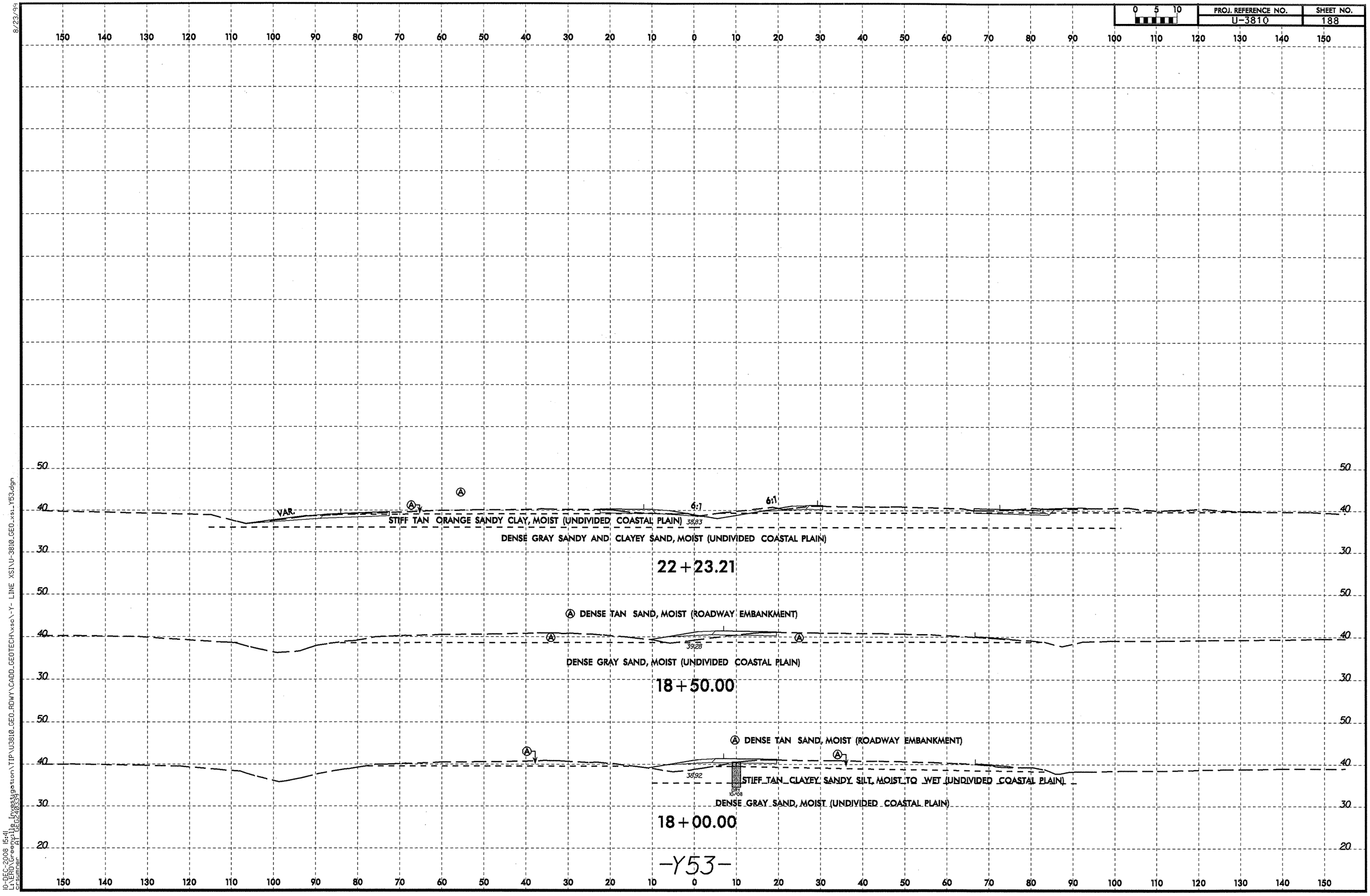

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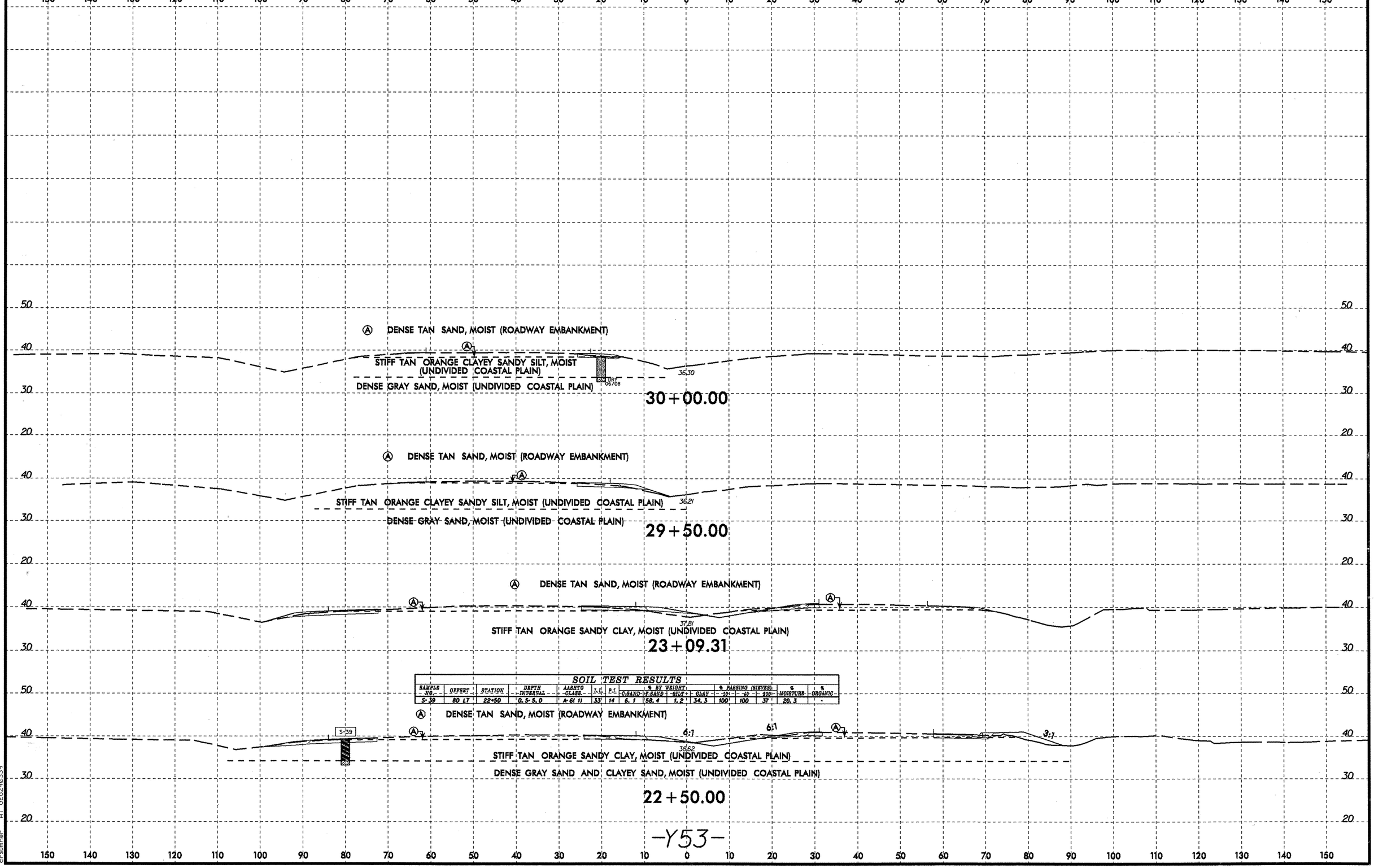


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C-SAND	F-SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
S-39	80 LT	22+50	0.5-5.0	A-6(1)	33	14	6.1	58.4	1.2	34.3	100	100	37	20.3	-

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	35801.1.1 (U-3810)	1	7

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
35801.1.1	STP-1406(4)	P.E.
		R/W & UTIL.

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

CONTENTS

LINE	STATION	PLAN
-Y53-	14+75-30+34	4-5

CROSS SECTIONS	STATION	SHEET
-Y53-	22+23 TO 23+09	6
-Y53-	28+50 TO 30+00	7

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

ROADWAY SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 35801.1.1 (U-3810) F.A. PROJ. STP-1406(4)

COUNTY ONSLOW

PROJECT DESCRIPTION SR 1406 (PINEY GREEN ROAD) FROM US 17 (MARINE BOULEVARD) TO NC 24 (FREEDOM WAY)

INVENTORY- ADDENDUM

CAUTION NOTICE

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

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

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

PERSONNEL

CMW

TCB

JRS

RES

JME

S&ME PERSONNEL

INVESTIGATED BY J.L. STONE

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE JULY 2009

NORTH CAROLINA LICENSED SEAL 2007 GEOLOGIST JOSEPH L. STONE

CONTRACT: ID: U-3810

DRAWN BY: C.R. SUMNER, J.L. STONE

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

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

PROJECT REFERENCE NO.	SHEET NO.
U-3810	2 OF 7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE:

VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)								SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2					A-4	A-5	A-6	A-7	A-1, A-2 A-3	A-4, A-5 A-6, A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7					A-7-5 A-7-6			
SYMBOL															
% PASSING # 10	50 MX												GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
# 40	30 MX	50 MX	51 MN												
# 200	15 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN				
LIQUID LIMIT	6 MX		NP	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN		SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
PLASTIC INDEX				10 MX	10 MX	11 MN	11 MN	10 MX	10 MX	11 MN	11 MN				
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	No MX				
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS		CLAYEY SOILS					
GEN. RATING AS A SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR					FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT^2)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	<4 4 TO 10 10 TO 30 30 TO 50 >50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	<2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 >30	<0.25 0.25 TO 0.50 0.5 TO 1.0 1 TO 2 2 TO 4 >4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE MM: 305 | 75 | 2.0 | 0.25 | 0.05 | 0.005
GRAIN SIZE IN.: 12 | 3

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT PLASTIC RANGE (PI) PL — PLASTIC LIMIT	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
OM — OPTIMUM MOISTURE SL — SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NONPLASTIC	0-5	VERY LOW
LOW PLASTICITY	6-15	SLIGHT
MED. PLASTICITY	16-25	MEDIUM
HIGH PLASTICITY	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED)
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LIQUID LIMIT LESS THAN 31
MODERATELY COMPRESSIBLE	LIQUID LIMIT EQUAL TO 31-50
HIGHLY COMPRESSIBLE	LIQUID LIMIT GREATER THAN 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%
MODERATELY ORGANIC	5 - 10%	12 - 20%
HIGHLY ORGANIC	>10%	>20%

OTHER MATERIAL	
TRACE	1 - 10%
LITTLE	10 - 20%
SOME	20 - 35%
HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 DIP & DIP DIRECTION OF ROCK STRUCTURES
- SOUNDING ROD
- SPT CPT DPT DMT VST PMT TEST BORING
- AUGER BORING
- CORE BORING
- MW MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- SPT N-VALUE
- REF SPT REFUSAL

SAMPLE DESIGNATIONS
S - BULK SAMPLE
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
RS - ROCK SAMPLE
RT - RECOMPACTED TRIAXIAL SAMPLE
CBR - CALIFORNIA BEARING RATIO SAMPLE

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [ ] MOBILE B-__
- [ ] BK-51
- [ ] CME-45C
- [ ] CME-750
- [ ] PORTABLE HOIST
- [X] CME-750
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [X] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [ ] CASING [ ] W/ ADVANCER
- [X] TRICONE 2 15/16 " STEEL TEETH
- [ ] TRICONE __ " TUNG.-CARB.
- [ ] CORE BIT
- [ ] _____

HAMMER TYPE:
- [X] AUTOMATIC
- [ ] MANUAL

CORE SIZE:
- [ ] -B_____
- [ ] -N_____
- [ ] -H_____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [X] HAND AUGER
- [ ] SOUNDING ROD
- [X] VANE SHEAR TEST
- [X] DCP TEST

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.
ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, YIELDS SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, YIELDS SPT N VALUES < 100 BPF*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD	CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
HARD	CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
MODERATELY HARD	CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
VERY SOFT	CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FEET
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	> 4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION. AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK: _
_
_ ELEVATION: _ FT.

NOTES:
_

CPT BORING

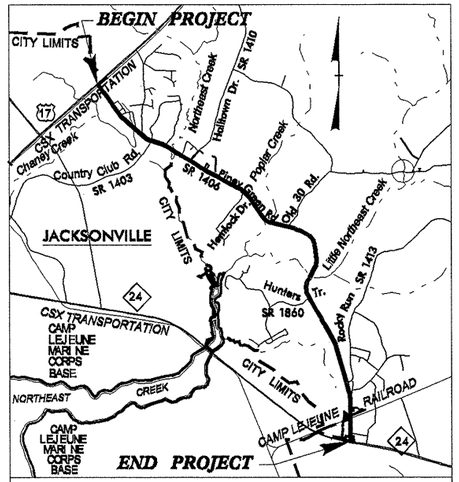
UNDIVIDED C.P. = UNDIVIDED COASTAL PLAIN

REVISED 02/23/06

09/08/99

TIP PROJECT: U-3810

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

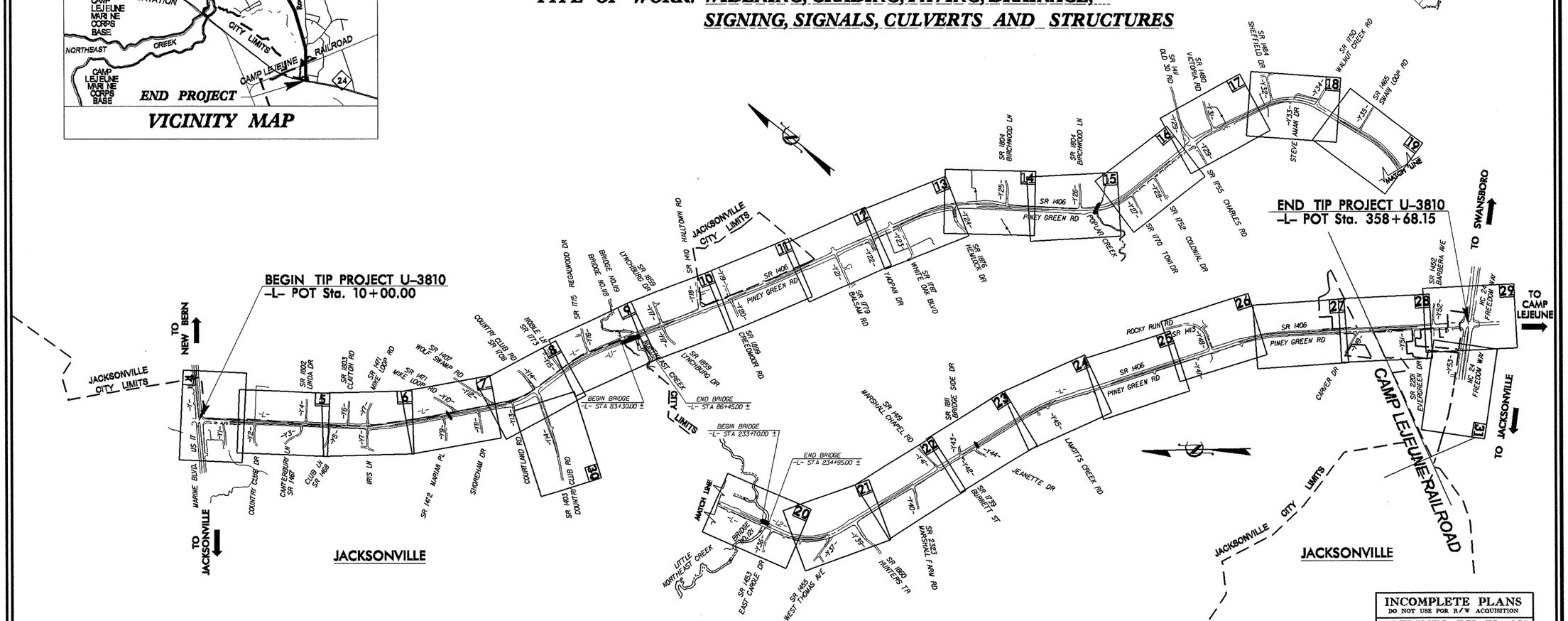
ONSLOW COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3810	2A	7

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
35801.1.1	STP-1406(4)	PE

LOCATION: SR 1406 (PINEY GREEN ROAD) FROM US 17 (MARINE BOULEVARD) TO NC 24 (FREEDOM WAY)

TYPE OF WORK: WIDENING, GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS, CULVERTS AND STRUCTURES



PORTIONS OF THIS PROJECT ARE WITHIN THE MUNICIPAL BOUNDRIES OF JACKSONVILLE.
NOTES: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD .

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

CONTRACT:

GRAPHIC SCALES

50 25 0 50 100 — PLANS

50 25 0 50 100 — PROFILE (HORIZONTAL)

10 5 0 10 20 — PROFILE (VERTICAL)

DESIGN DATA

ADT 2005 = 24,000
ADT 2030 = 35,300
DHV = 7 %
D = 60 %
T = 5 % *
V = 50 MPH

* TTST 1 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJ. U-3810 = 6.604 MILES +/-
LENGTH STRUCTURES TIP PROJ. U-3810 = 0.083 MILES +/-
TOTAL LENGTH OF TIP PROJ. U-3810 = 6.521 MILES +/-

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JULY 2009

LETTING DATE: MARCH 15, 2011

ROGER D. THOMAS, PE
PROJECT ENGINEER

SAMUEL L. ST.CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
P.E.
STATE HIGHWAY DESIGN ENGINEER

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EARTHWORK BALANCE SHEET

Note: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

PROJECT REFERENCE NO.	SHEET NO.
U-3810	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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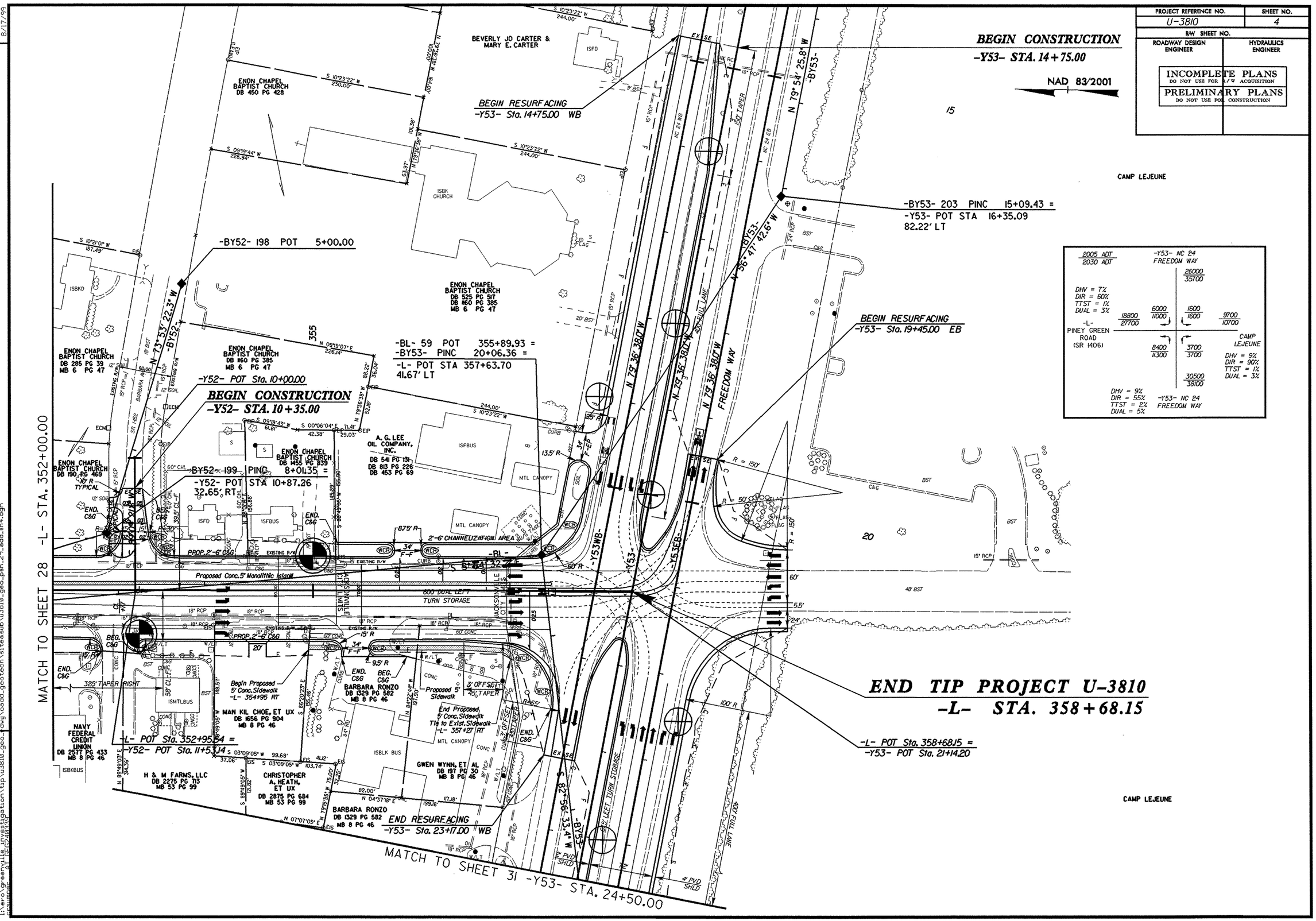
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



REVISIONS

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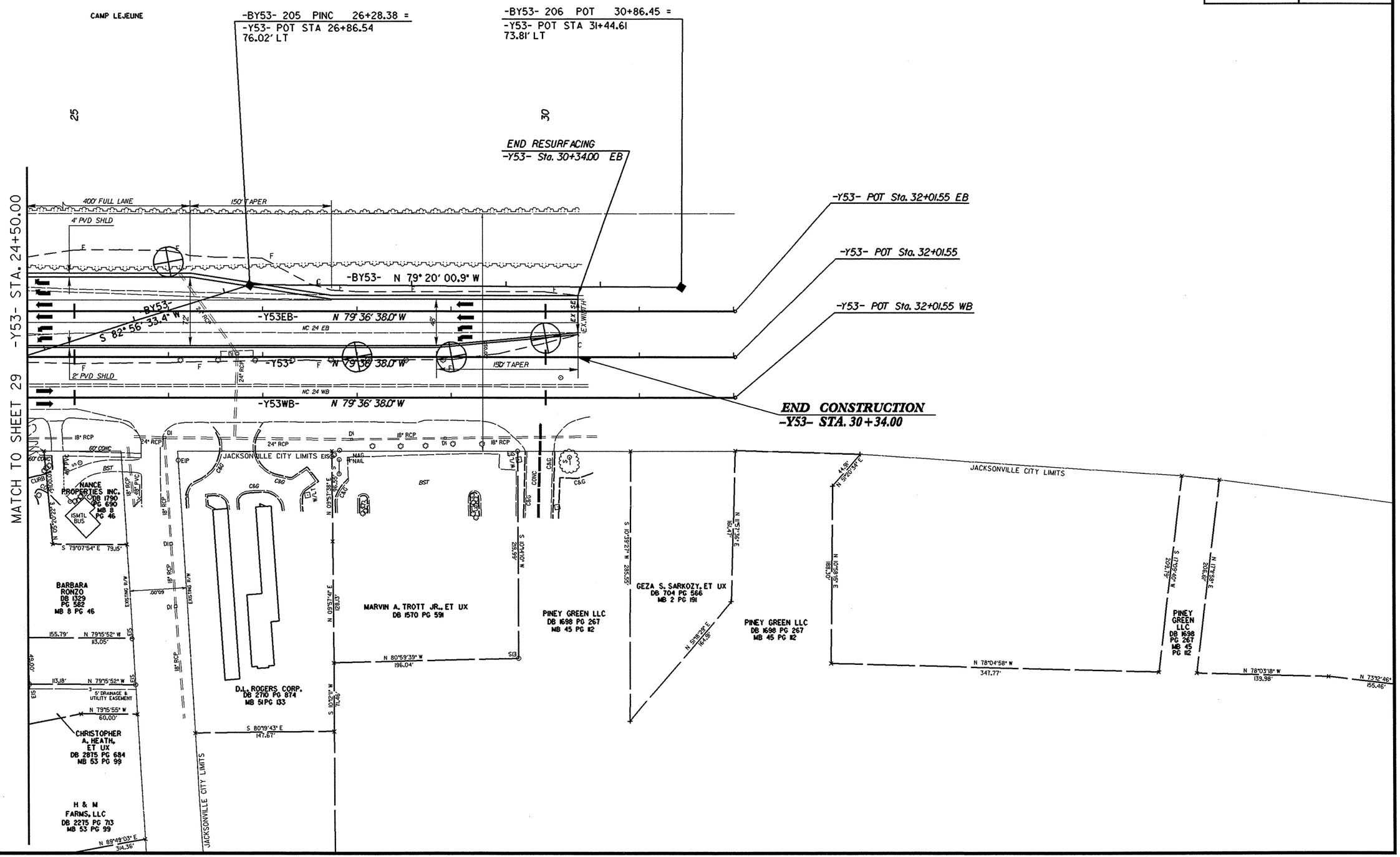
U-3810	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83/2001



REVISIONS

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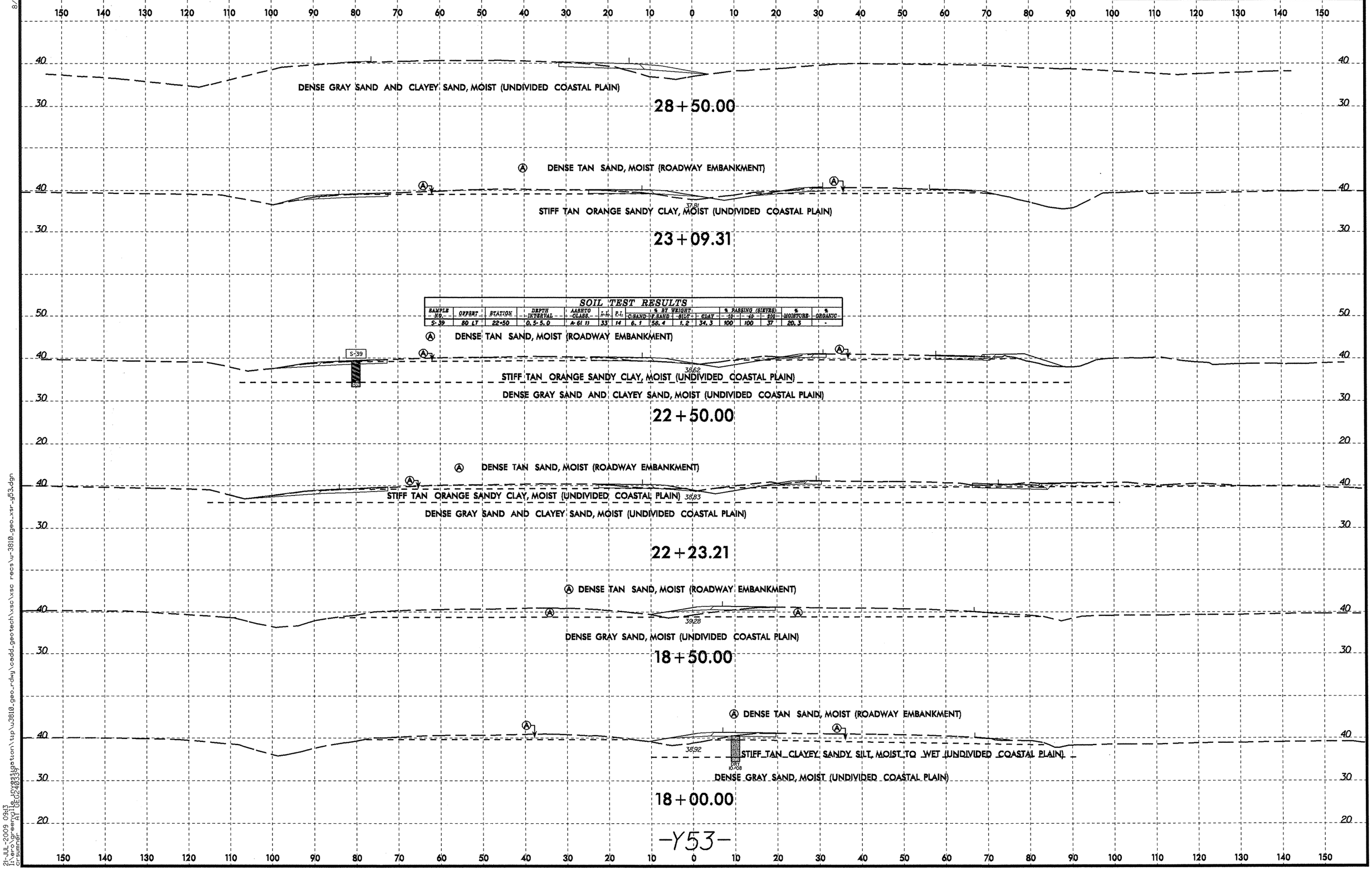
U-3810	6



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-39	80 LT	22+50	0.5-5.0	A-6(11)	33	14	6.1	58.4	1.2	34.3	100	100	37	20.3	-

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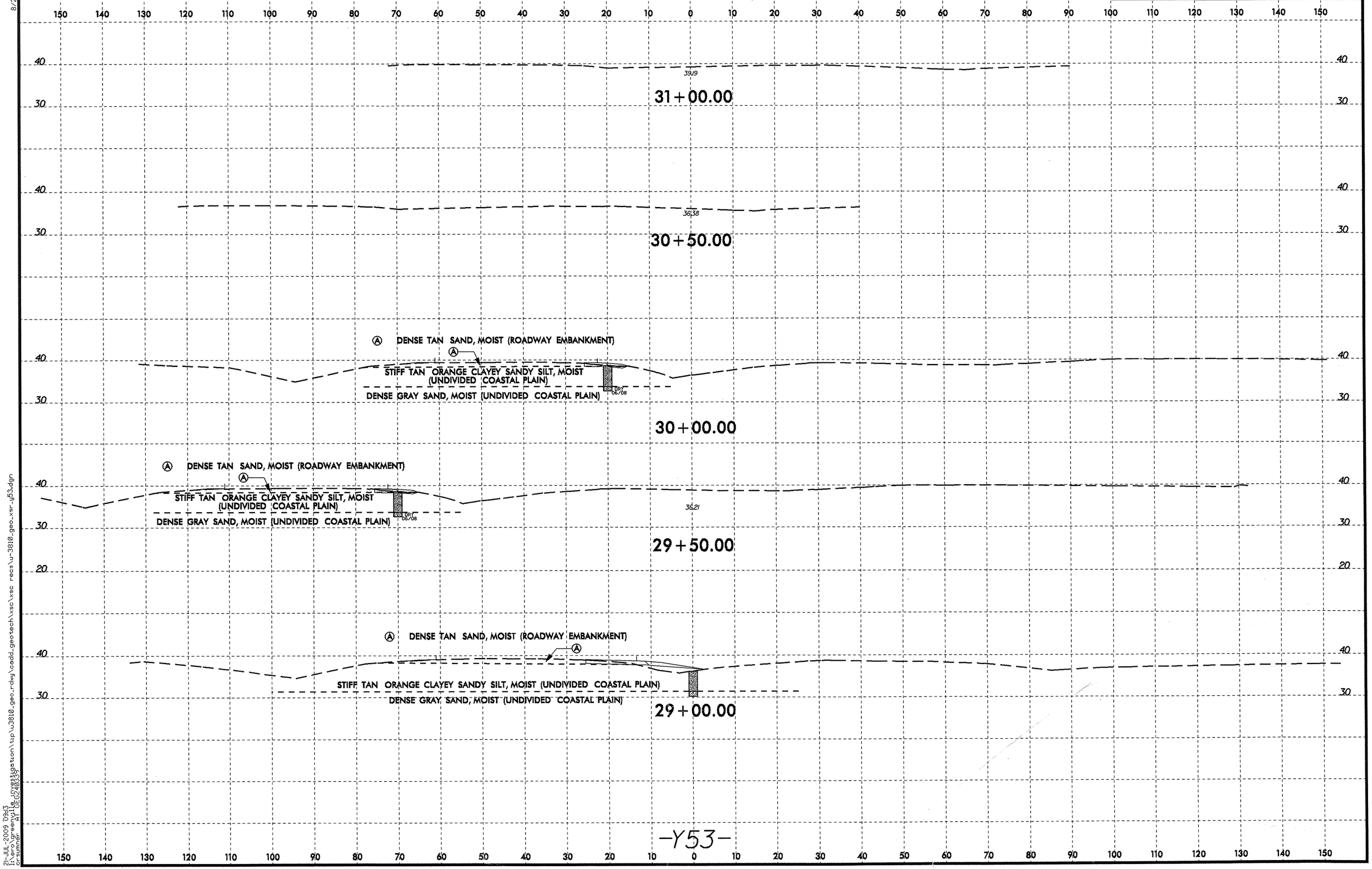

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