

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. 34802.1.1(U-2412B) F.A. PROJ. STP-4121(1)
 COUNTY GUILFORD
 PROJECT DESCRIPTION GREENSBORO/HIGH POINT ROAD FROM WEST OF VICKERY CHAPEL ROAD TO HILLTOP ROAD

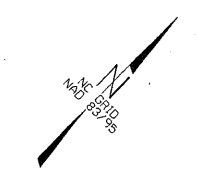
INVENTORY

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.

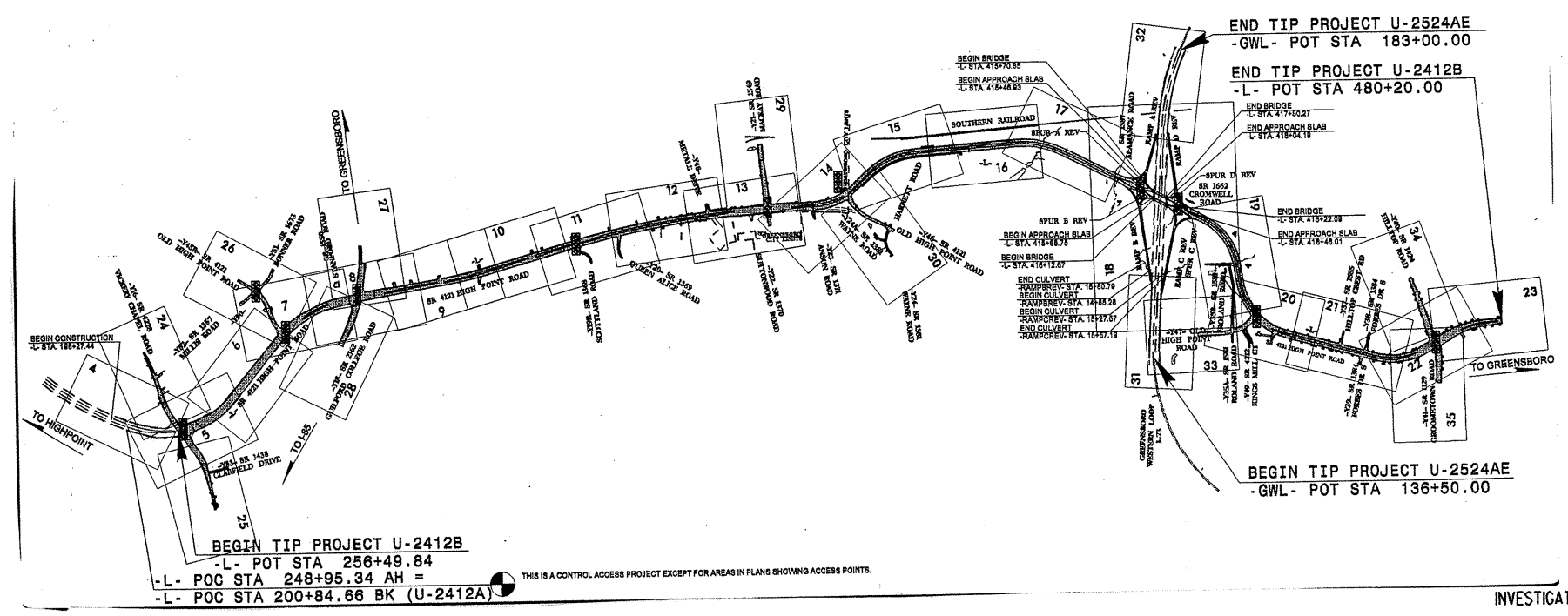
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND 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.



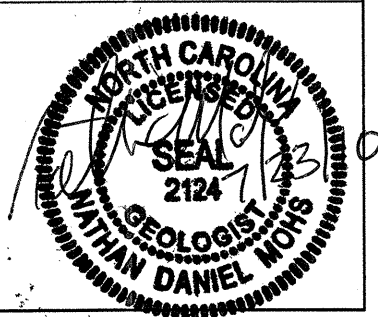
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INVESTIGATED BY N.D. MOHS
 CHECKED BY N.D. MOHS
 SUBMITTED BY N.T. ROBERSON
 DATE JULY, 2010



CONTRACT: C202881C202881A ID: U-2412B & U-2524AE

DRAWN BY: C.D. CZAJKA, T.T. WALKER, N.D. MOHS

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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.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

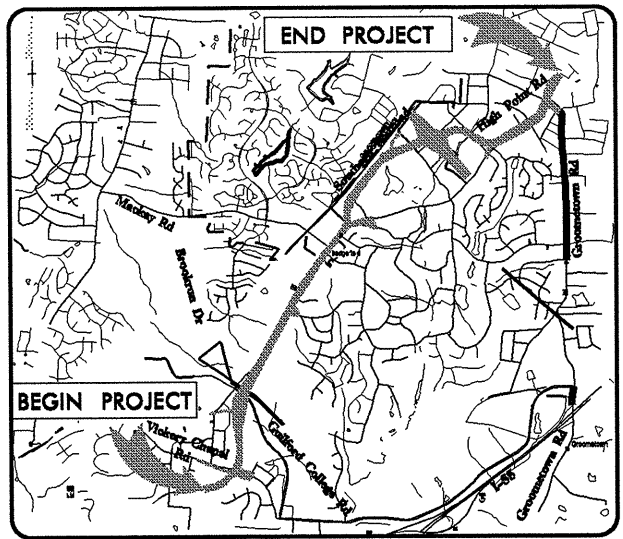
SOIL DESCRIPTION	GRADATION	ROCK DESCRIPTION	TERMS AND DEFINITIONS																																																																																																																																																																																																																																																																																																																																																																																																																						
<p>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:</p> <p style="text-align: center;"><i>VERY STIFF, GRAY-SILTY CLAY, MOST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i></p>	<p>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.</p> <p style="text-align: center;">ANGULARITY OF GRAINS</p> <p>THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.</p>	<p>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 60 BLOWS PER FOOT. 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:</p>	<p>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 DISLOADED 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 (ROD) - 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 60 BLOWS PER FOOT. STRATA CORE RECOVERY (SCREC) - 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.</p>																																																																																																																																																																																																																																																																																																																																																																																																																						
<p style="text-align: center;">SOIL LEGEND AND AASHTO CLASSIFICATION</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <th rowspan="2">GENERAL CLASS.</th> <th colspan="6">GRANULAR MATERIALS (<= 35% PASSING #200)</th> <th colspan="6">SILT-CLAY MATERIALS (> 35% PASSING #200)</th> <th colspan="3">ORGANIC MATERIALS</th> </tr> <tr> <th>A-1</th> <th>A-2</th> <th>A-3</th> <th>A-4</th> <th>A-5</th> <th>A-6</th> <th>A-7</th> <th>A-8</th> <th>A-9</th> <th>A-10</th> <th>A-11</th> <th>A-12</th> <th>A-13</th> <th>A-14</th> <th>A-15</th> <th>A-16</th> </tr> <tr> <th>GROUP CLASS.</th> <td colspan="2">A-1-a</td> <td colspan="2">A-1-b</td> <td colspan="2">A-2-1</td> <td colspan="2">A-2-5</td> <td colspan="2">A-2-6</td> <td colspan="2">A-2-7</td> <td colspan="2">A-4</td> <td colspan="2">A-5</td> <td colspan="2">A-6</td> <td colspan="2">A-7-5</td> <td colspan="2">A-7-6</td> <td colspan="2">A-8</td> <td colspan="2">A-9</td> <td colspan="2">A-10</td> <td colspan="2">A-11</td> <td colspan="2">A-12</td> <td colspan="2">A-13</td> <td colspan="2">A-14</td> <td colspan="2">A-15</td> <td colspan="2">A-16</td> </tr> <tr> <th>SYMBOL</th> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> <td colspan="2">[Symbol]</td> </tr> <tr> <th>% PASSING</th> <td colspan="2">10</td> <td colspan="2">40</td> <td colspan="2">60</td> <td colspan="2">75</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> <td colspan="2">100</td> </tr> <tr> <th>LIQUID LIMIT PLASTIC INDEX</th> <td colspan="2">6 MX</td> <td colspan="2">NP</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> <td colspan="2">40 MX</td> <td colspan="2">41 MN</td> </tr> <tr> <th>GROUP INDEX</th> <td colspan="2">0</td> <td colspan="2">0</td> <td colspan="2">0</td> <td colspan="2">4 MX</td> <td colspan="2">8 MX</td> <td colspan="2">12 MX</td> <td colspan="2">16 MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> <td colspan="2">No MX</td> </tr> <tr> <th>USUAL TYPES OF MAJOR MATERIALS</th> <td colspan="2">STONE FRAGS GRAVEL AND SAND</td> <td colspan="2">FINE SAND</td> <td colspan="2">SILTY OR CLAYEY GRAVEL AND SAND</td> <td colspan="2">SILTY SOILS</td> <td colspan="2">CLAYEY SOILS</td> <td colspan="2">SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER</td> <td colspan="2">GRANULAR SOILS</td> <td colspan="2">SILT-CLAY SOILS</td> <td colspan="2">MUCK, PEAT</td> <td colspan="2">HIGHLY ORGANIC SOILS</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <th>GEN. RATINGS AS A SUBGRADE</th> <td colspan="6">EXCELLENT TO GOOD</td> <td colspan="6">FAIR TO POOR</td> <td colspan="2">FAIR TO POOR</td> <td colspan="2">POOR</td> <td colspan="2">UNSATISFACTORY</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table> <p>PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30</p>	GENERAL CLASS.	GRANULAR MATERIALS (<= 35% PASSING #200)						SILT-CLAY MATERIALS (> 35% PASSING #200)						ORGANIC MATERIALS			A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11	A-12	A-13	A-14	A-15	A-16	GROUP CLASS.	A-1-a		A-1-b		A-2-1		A-2-5		A-2-6		A-2-7		A-4		A-5		A-6		A-7-5		A-7-6		A-8		A-9		A-10		A-11		A-12		A-13		A-14		A-15		A-16		SYMBOL	[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		[Symbol]		% PASSING	10		40		60		75		100		100		100		100		100		100		100		100		100		100		100		100		100		100		100		LIQUID LIMIT PLASTIC INDEX	6 MX		NP		40 MX		41 MN		40 MX		41 MN		40 MX		41 MN		40 MX		41 MN		40 MX		41 MN		40 MX		41 MN		40 MX		41 MN		40 MX		41 MN		GROUP INDEX	0		0		0		4 MX		8 MX		12 MX		16 MX		No MX		No MX		No MX		No MX		No MX		No MX		No MX		No MX		No MX		No 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		SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		GRANULAR SOILS		SILT-CLAY SOILS		MUCK, PEAT		HIGHLY ORGANIC SOILS																GEN. RATINGS AS A SUBGRADE	EXCELLENT TO GOOD						FAIR TO POOR						FAIR TO POOR		POOR		UNSATISFACTORY																<p style="text-align: center;">MINERALOGICAL COMPOSITION</p> <p>MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.</p> <p style="text-align: center;">COMPRESSIBILITY</p> <p>SLIGHTLY COMPRESSIBLE LIQUID LIMIT LESS THAN 31 MODERATELY COMPRESSIBLE LIQUID LIMIT EQUAL TO 31-50 HIGHLY COMPRESSIBLE LIQUID LIMIT GREATER THAN 50</p> <p style="text-align: center;">PERCENTAGE OF MATERIAL</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <th></th> <th>ORGANIC MATERIAL</th> <th>GRANULAR SOILS</th> <th>SILT-CLAY SOILS</th> <th>OTHER MATERIAL</th> </tr> <tr> <td>TRACE OF ORGANIC MATTER</td> <td>2 - 3%</td> <td>3 - 5%</td> <td>3 - 5%</td> <td>TRACE</td> </tr> <tr> <td>LITTLE ORGANIC MATTER</td> <td>3 - 5%</td> <td>5 - 12%</td> <td>5 - 12%</td> <td>LITTLE</td> </tr> <tr> <td>MODERATELY ORGANIC</td> <td>5 - 10%</td> <td>12 - 20%</td> <td>12 - 20%</td> <td>SOME</td> </tr> <tr> <td>HIGHLY ORGANIC</td> <td>>10%</td> <td>>20%</td> <td>>20%</td> <td>HIGHLY</td> </tr> </table> <p style="text-align: center;">GROUND WATER</p> <p>▽ 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</p> <p style="text-align: center;">MISCELLANEOUS SYMBOLS</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td>[Symbol] ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION</td> <td>[Symbol] SPT TEST BORING</td> <td>[Symbol] SAMPLE DESIGNATIONS</td> </tr> <tr> <td>[Symbol] SOIL SYMBOL</td> <td>[Symbol] AUGER BORING</td> <td>S - BULK SAMPLE</td> </tr> <tr> <td>[Symbol] ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT</td> <td>[Symbol] CORE BORING</td> <td>SS - SPLIT SPOON SAMPLE</td> </tr> <tr> <td>[Symbol] INFERRED SOIL BOUNDARY</td> <td>[Symbol] MONITORING WELL</td> <td>ST - SHELBY TUBE SAMPLE</td> </tr> <tr> <td>[Symbol] INFERRED ROCK LINE</td> <td>[Symbol] PIEZOMETER INSTALLATION</td> <td>RS - ROCK SAMPLE</td> </tr> <tr> <td>[Symbol] ALLUVIAL SOIL BOUNDARY</td> <td>[Symbol] SLOPE INDICATOR INSTALLATION</td> <td>RT - RECOMPACTED TRIAXIAL SAMPLE</td> </tr> <tr> <td>[Symbol] DIP & DIP DIRECTION OF ROCK STRUCTURES</td> <td>[Symbol] SPT N-VALUE</td> <td>CBR - CALIFORNIA BEARING RATIO SAMPLE</td> </tr> <tr> <td>[Symbol] SOUNDING ROD</td> <td>[Symbol] SPT REFUSAL</td> <td></td> </tr> </table> <p style="text-align: center;">ABBREVIATIONS</p> <table border="1" style="width: 100%; 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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 GROUDED 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 GROUDED 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.</p> <p style="text-align: center;">ROCK HARDNESS</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <th>TERM</th> <th>SPACING</th> <th>TERM</th> <th>THICKNESS</th> </tr> <tr> <td>VERY WIDE</td> <td>MORE THAN 10 FEET</td> <td>VERY THICKLY BEDDED</td> <td>> 4 FEET</td> </tr> <tr> <td>WIDE</td> <td>3 TO 10 FEET</td> <td>THICKLY BEDDED</td> <td>1.5 - 4 FEET</td> </tr> <tr> <td>MODERATELY CLOSE</td> <td>1 TO 3 FEET</td> <td>THINLY BEDDED</td> <td>0.16 - 1.5 FEET</td> </tr> <tr> <td>CLOSE</td> <td>0.16 TO 1 FEET</td> <td>VERY THINLY BEDDED</td> <td>0.03 - 0.16 FEET</td> </tr> <tr> <td>VERY CLOSE</td> <td>LESS THAN 0.16 FEET</td> <td>THICKLY LAMINATED</td> <td>0.008 - 0.03 FEET</td> </tr> <tr> <td></td> <td></td> <td>THINLY LAMINATED</td> <td>< 0.008 FEET</td> </tr> </table> <p style="text-align: center;">INDURATION</p> <p>FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.</p> <p>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.</p>	TERM	SPACING	TERM	THICKNESS	VERY WIDE	MORE THAN 10 FEET	VERY THICKLY BEDDED	> 4 FEET	WIDE	3 TO 10 FEET	THICKLY BEDDED	1.5 - 4 FEET	MODERATELY CLOSE	1 TO 3 FEET	THINLY BEDDED	0.16 - 1.5 FEET	CLOSE	0.16 TO 1 FEET	VERY THINLY BEDDED	0.03 - 0.16 FEET	VERY CLOSE	LESS THAN 0.16 FEET	THICKLY LAMINATED	0.008 - 0.03 FEET			THINLY LAMINATED	< 0.008 FEET	<p style="text-align: center;">BENCH MARK:</p> <p style="text-align: right;">ELEVATION: _____ FT.</p> <p>NOTES:</p>
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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2412B	2A	158
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34802.1.1	STP-4121(1)	P.E.	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

**LOCATION: SR 421 (GREENSBORO /HIGH POINT ROAD)
FROM WEST OF VICKERY CHAPEL ROAD TO
HILLTOP ROAD**
TYPE OF WORK: GRADING, PAVING AND DRAINAGE



VICINITY MAP



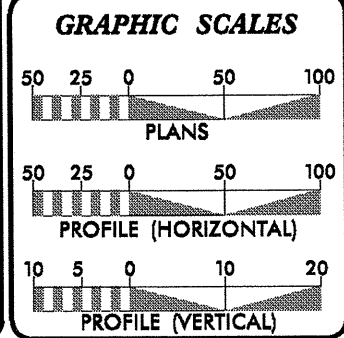
BEGIN TIP PROJECT U-2412B
-L- POC STA 248+87.10 AH =
-L- POC STA 200+84.66 BK

END TIP PROJECT U-2412B
-L- POT STA 480+20.00

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

TIP PROJECT: U-2412B

CONTRACT:



DESIGN DATA

ADT 2006 =	22,900
ADT 2030 =	37,900
DHV =	11 %
D =	60 %
T =	6 % *
V =	50 MPH
* TTST 4	* DUAL 2%
FUNC CLASS RURAL FREEWAY	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-2412B =	4.345 MILES
LENGTH STRUCTURE TIP PROJECT U-2412B =	0.036 MILES
TOTAL LENGTH TIP PROJECT U-2412B =	4.381 MILES

NCDOT CONTACT: B. DOUG TAYLOR, P.E.
PROJECT ENGINEER ROADWAY DESIGN

Prepared in the Office of:
PB
121 WEST TRADE STREET
SUITE 1950
CHARLOTTE, NC 28202

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: FEBRUARY 20, 2009	DANIEL H. BRIDGES, P.E. PROJECT ENGINEER
LETTING DATE: AUGUST 16, 2011	CHRIS DAVIS, P.E. PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

STATE DESIGN ENGINEER _____ P.E.

**DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

15-JUL-2010 10:47 I:\Vero\Road\gh\Invest\gation\TIP\U2412B_GEO_RDWY\CADD_GEO\TECH\PlanProf\U-2412b-geo-t-sh.dgn



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

EUGENE A. CONTI, JR.
SECRETARY

July 20, 2010

STATE PROJECT: 34802.1.1 (U-2412B)
FEDERAL PROJECT: STP-4121 (1)
COUNTIES: Guilford
DESCRIPTION: Greensboro/High Point Road from west of Vickery Chapel Road to Hilltop Road
SUBJECT: Geotechnical Report - Inventory

Project Description

This project consists of widening and the relocation (6-lane roadway) of SR 4121 (Greensboro/High Point Road) from west of Vickery Chapel Road to Hilltop Road. Also proposed are the widening and partial relocating of the -Y- lines on the project. There will be a major interchange with ramps and spurs where -L- (SR 4121) crosses the existing Greensboro Western Loop. The proposed project is 4.4 miles.

The geotechnical investigation was conducted during April and October of 2008 by the NCDOT Geotechnical Engineering Unit, with drilling support provided by the consultants S&ME. Three drill machines, a B-57 and BK-51, with manual hammers, and a CME-550 with an automatic hammer, were used during the investigation. Standard Penetration Tests were performed at selected locations and additional borings were advanced using continuous flight augers. Representative soil samples were collected for visual classification in the field and selected samples were submitted for laboratory analysis by the Materials and Tests Unit. Bulk samples were also collected for CBR testing.

The following alignments, totaling 8.6 miles, were investigated. Subsurface profiles and/or cross sections of these alignments are included in this report.

<u>Line</u>	<u>Stations</u>
-L-	248+95 to 480+20
-Y16-	19+65 to 47+45
-Y18-	14+50 to 29+86
-Y19R-	10+00 to 13+98
-Y20-	10+00 to 14+00
-Y21-	10+75 to 23+70
-Y22-	10+00 to 14+38
-Y24-	10+00 to 14+50
-Y35A-	10+00 to 12+43
-Y35B-	11+00 to 22+96

-Y38-	10+24 to 13+50
-Y40-	11+50 to 21+91
-Y41-	10+00 to 16+05
-Y45R-	12+00 to 23+97
-Y46-	10+00 to 19+20
-Y47-	18+00 to 24+09
-Y48-	10+30 to 12+00
-Y49-	10+31 to 13+34
-RAMPA-	10+00 to 26+15
-SPURA-	17+55 to 23+41
-RAMPB-	10+00 to 27+73
-SPURB-	21+38 to 27+58
-RAMPC-	10+00 to 29+18
-SPURC-	19+44 to 26+64
-RAMPD-	10+00 to 25+43
-SPURD-	19+95 to 25+39

Areas of Special Geotechnical Interest

- 1) Highly Plastic Clays: Highly plastic clays (PI > 25) were encountered on the project at the following locations:

<u>Line</u>	<u>Stations and Offsets</u>
-L-	250+00 to 266+00, LT to RT
-L-	286+00 to 288+00, LT to RT
-L-	290+00 to 300+50, LT to RT
-L-	306+00 to 318+00, LT to RT
-L-	326+00 to 376+50, LT to RT
-L-	384+00 to 390+00, LT to RT
-L-	392+00 to 394+00, LT to RT
-L-	396+50 to 398+00, LT to RT
-L-	400+50 to 406+50, LT to RT
-L-	424+00 to 428+00, LT to RT
-L-	433+00 to 436+50, LT to RT
-L-	438+00 to 480+20, LT to RT
-Y16-	21+00 to 30+50, LT to RT
-Y16-	33+00, CL
-Y16-	38+00 to 46+80, LT to RT
-Y18-	26+50 to 28+00, LT to RT
-Y20-	10+54 to 14+00, LT to RT
-Y21-	13+30 to 23+10, LT to RT
-Y22-	10+00 to 11+52, LT to RT
-Y24-	10+00 to 14+50, LT to RT
-Y35A-	10+30 to 11+60, LT to RT
-Y35B-	11+00 to 17+50, LT to RT
-Y35B-	23+00 to 23+85, LT to RT
-Y38-	10+30 to 12+97, LT to RT
-Y40-	17+00 to 18+00, LT to RT
-Y41-	10+00 to 16+05, LT to RT
-Y45R-	23+00, CL

-Y46-	10+00 to 19+20, LT to RT
-Y47-	18+00 to 21+50, LT to RT
-Y47-	23+50 to 24+00, LT to RT
-Y48-	10+30 to 12+00, LT to RT
-Y49-	10+31 to 13+34, LT to RT
-RAMPA-	21+50, RT
-SPURA-	17+61 to 23+00, LT to RT
-RAMPB-	16+00 to 18+50, LT to RT
-SPURD-	19+96 to 25+42, LT to RT

A discussion of these highly plastic clay soils is located below in the section titled "Soil Properties".

- 2) Water wells: Several water wells were found within or in close proximity to the proposed right of way at the following locations:

<u>Line</u>	<u>Stations and Offsets (ft)</u>
-Y16-	10+70, 110 RT
-Y16-	40+46, 143 LT
-SPURC-	24+87, 51 RT
-SPURC-	26+39, 54 RT

- 3) Ponds: A pond is present within the proposed right of way at the following location:

<u>Line</u>	<u>Stations and Offsets (ft)</u>
-L-	274+50 to 274+80, 20 RT

- 4) Artificial Fill: Several areas of artificial fill occur at the following locations:

<u>Line</u>	<u>Station</u>	<u>Offset (ft)</u>
-L-	266+57 to 271+00	100 LT to 100 +/-RT
-L-	274+25 to 277+70	123 LT to 80 +/-RT
-L-	279+50 to 281+20	35 LT to 135 RT
-L-	280+00 to 281+00	30 LT to 130 LT
-L-	282+90 to 285+05	70 LT to 120 RT
-L-	307+24 to 309+34	5 RT to 50 RT
-L-	310+70 to 318+50	26 LT to 200 RT
-L-	318+70 to 321+20	24 LT to 94 RT
-L-	337+80 to 338+50	40 LT to 100 +/-RT
-L-	420+00 to 424+00	CL
-L-	462+79 to 463+24	30 LT
-RAMPA-	15+10 to 15+90	15 LT to 75 RT
-RAMPC-	19+87 to 22+33	30 LT to 30 RT
-SPURC-	19+44 to 26+64	30 LT to 30 RT

Physiography and Geology

The project is located in the gently rolling terrain of the Piedmont Physiographic Province. A mixture of businesses, single-family dwellings, and woods are located along the project corridor.

Geologically, the project is located within the Carolina Slate Belt. Soils within the Slate Belt are derived from the underlying metamorphosed granite, diorite, and gabbro intrusions. Rocks in the Carolina Slate Belt are generally foliated and trend in a northeasterly direction.

Soil Properties

Soils encountered during this investigation are separated into four categories based on origin. They consist of roadway embankment, artificial fill, alluvial, and residual soils.

Roadway Embankment soils are present along the existing roadways (-L-, -Y16-, -Y18-, -Y35B-, -Y38-, -Y40-, and -Y41-, -Y47-, -Y49-, -Y52-, -Y53-) on the project. These soils consist of tan-brown, red-brown to brown, moist, medium stiff to very stiff, sandy silt (A-4), and sandy and silty clay (A-6, A-7-6). Minor amounts of gray to brown, moist, medium dense, coarse sand (A-1-b) are present. They are derived from regional and nearby sources appropriate for embankment construction.

Artificial Fill soils are present in several areas throughout the project. These areas are listed in "Areas of Special Geotechnical Interest." Artificial fill soils occur on the ground surface in piles, and as fill material in low areas. The majority of these fills are construction debris. These fill areas contain wood debris including stumps and construction type wood. Soils in these areas exhibit plasticity indexes greater than 36. These areas also show poor compaction. Large areas of artificial fill along -L- consist of tan to brown, very soft to stiff, moist to saturated, sandy clay, silty clay and clayey silt (A-6, A-7-6, and A-5). Along -RPC- and -SPC- the artificial fill is at a construction yard that has been graded to allow storage of construction equipment. This material consists of gray to brown, moist, to wet, medium stiff to stiff, sandy silt and sandy clay (A-4, A-6).

Alluvial soils occur where streams cross the project corridor. These soils consist primarily of brown to gray, soft to medium stiff, moist to wet, sandy clay (A-6) and tan-brown, soft, moist to saturated, silty clay (A-7-6).


Residual soils are derived from the weathering of underlying metamorphosed granite, diorite, and gabbro intrusions. These soils consist of gray, orange, red to red brown and tan-brown to yellow-brown, moist to wet, medium stiff to very stiff, sandy and silty clay (A-6, A-7-6), and tan-brown, gray and white, moist to wet, soft to very stiff, sandy silt (A-4/A-5). Smaller amounts of tan, brown, white and yellow-tan, dry to moist, medium dense to very dense, silty sand (A-2-4). The surficial residual, silty clays exhibit moderate to high plastic indices from 11 to 77. Residual soils grade into weathered rock that retains the relict characteristics of the metamorphosed intrusions.

Rock Properties

Weathered rock occurs below the ground surface in some areas of the project. Weathered rock in the Carolina Slate Belt is derived from the underlying metamorphosed granite, diorite, and gabbro intrusions.

Groundwater

Groundwater was encountered in some borings throughout the project corridor, but is not expected to cause any construction related problems. Prior to and during this investigation, Guilford County was under severe drought conditions.

Prepared by, 
Nathan Mohs, LG
Project Geologic Engineer

U-2412 B/U-2524AE EARTHWORK BALANCE SHEET

GUILFORD COUNTY
DATE: 04/05/12 COMPILED BY: S.HAYNES

STATION to STATION	UNCLASSIFIED EXCAVATION (CY)					EMBANKMENT (CY)				BORROW	ROCK	EARTH	TOTAL WASTE	
	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNSUITABLE EXCAV.	UNDERCUT EXCAV.	SUITABLE EARTH	TOTAL	ROCK	EARTH	EMBANK +20%		SUITABLE WASTE	UNSUIT WASTE		
-L- Sta 257+00.00 TO 278+50.00	35046		13091	23105	21955	56501		56501	67801	45846			36196	36196
-Y16- Sta. 21+79.00 to 46+80.00	37440		4545	1501	32895	18466		18466	22159			10736	6046	16782
-Y45R- STA. 13+00.00 TO 23+00.00	5507				5507	2385		2385	2862			2645		2645
-Y50- STA. 10+24.38 TO 14+00.00	556				556	371		371	445			111		111
-Y51-STA. 9+53.27 TO 13+78.08	20				20	1876		1876	2251	2231				
-Y52-STA. 13+25.00 TO 14+80.00	291				291							291		291
-Y53-STA. 10+23.21 TO 13+25.00	41				41	1071		1071	1285	1244				
TOTAL Summary No. 1	78901		17636	24606	61265	80670		80670	96803	49321		13783	42242	56025
-L- STA. 278+50.00 TO 291+50.00	32743		10457	4227	22286	10501		10501	12601			9685	14684	24369
-Y18- STA. 14+50.00 TO 29+85.75	1441				1441	1500		1500	1800	359				
TOTAL Summary No. 2	34184		10457	4227	23727	12001		12001	14401	359		9685	14684	24369
-L- STA. 291+50.00 TO 321+50.00	15815		15071	2796	744	42840		42840	51408	50664			17867	17867
TOTAL Summary No. 3	15815		15071	2796	744	42840		42840	51408	50664			17867	17867
-L- STA 321+50.00 TO 351+50.00	10078		9842	8	236	20650		20650	24780	24544			9850	9850
-Y19R- STA. 10+53.66 TO 13+97.76	74				74	3493		3493	4192	4118				
-Y20- STA. 10+55.10 TO 14+00.00	428		328		100	31		31	37			63	328	391
-Y48- STA. 10+30.00 TO 11+46.39	31				31	9		9	11			20		20
-Y22- STA. 10+59.66 TO 11+52.30	10				10	16		16	19	9				
TOTAL Summary No. 4	10621		10170	8	451	24199		24199	29039	28671		83	10178	10261
-L- STA. 351+50.00 TO 381+50.00	12634		8615	2072	4019	62377		62377	74852	70833			10687	10687
-Y21- STA. 11+00.00 TO 23+10.00	1029		1014		15	158		158	190	175			1014	1014
-Y23- STA 10+67.08 TO 12+00.00	181				181	59		59	71			110		110
-Y46- STA 10+53.00 TO 19+20.00	2881		2831	28	50	2931		2931	3517	3467			2859	2859
-Y24- STA. 10+19.36 TO 14+50.00	594				594	363		363	436			158		158
-Y24A- STA. 10+11.00 TO 12+09.84	265				265	14		14	17			248		248
TOTAL Summary No. 5	17584		12460	2100	5124	65902		65902	79083	74475		516	14560	15076
-L- Sta 381+50.00 TO 400+00.00	27749		21427	8038	6322	30877		30877	37052	30730			29465	29465
TOTAL Summary No. 6	27749		21427	8038	6322	30877		30877	37052	30730			29465	29465

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.

U-2412 B/U-2524AE EARTHWORK BALANCE SHEET

GUILFORD COUNTY
DATE: 04/05/12 COMPILED BY: S.HAYNES

STATION to STATION	UNCLASSIFIED EXCAVATION (CY)					EMBANKMENT (CY)				ROCK EARTH				
	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNSUITABLE EXCAV.	UNDERCUT EXCAV.	SUITABLE EARTH	TOTAL	ROCK	EARTH	EMBANK +20%	BORROW	SUITABLE WASTE	EARTH SUITABLE WASTE	UNSUIT WASTE	TOTAL WASTE
-L- Sta 400+00.00 TO 415+91.76 (BEGIN BRIDGES)	116056		9889		106167	39852		39852	47822			58345	9889	68234
-GWL- STA 136+50.00 TO 183+00.00 (LT)	38011				38011	969		969	1163			36848		36848
-GWL- STA 136+50.00 TO 183+00.00 (RT)	51167				51167	645		645	774			50393		50393
RAMPAREV STA. 15+10.16 TO 22+00.00	7780				7780	16457		16457	19748	11968				
SPURAREV STA. 21+00.00 TO 22+00.00	2109				2109	39		39	47			2062		2062
RAMPBREV STA. 13+90.04 TO 25+50.00						17753		17753	21304	21304				
SPURBREV STA. 25+00.00 TO 26+75.00						3360		3360	4032	4032				
TOTAL Summary No.7	215123		9889		205234	79075		79075	94890	37304		147648	9889	157537
-L- Sta 418+01.18 (END BRIDGES) TO 448+00.00	32171		19011	12419	13160	77945		77945	93534	80374			31430	31430
RAMPCREV STA. 14+40.41 TO 24+75.00	4417				4417	29151		29151	34981	30564				
SPURCREV STA 23+50.00 TO 25+00.00						6380		6380	7656	7656				
RAMPDREV STA.15+22.08 TO 23+50.00	34302				34302	2914		2914	3497			30805		30805
SPURDREV STA. 23+25.00 TO 24+75.00						4303		4303	5164	5164				
-Y35B- STA 10+45.77 TO 23+84.84	1575		470	48	1105	2862		2862	3434	2329			518	518
-Y47- STA 14+60.00 TO 23+55.84	1876				1876	1807		1807	2168	292				
-Y35A- STA 10+21.02 TO 11+55.00	152		152	61		61		61	73	73			213	213
-Y49- STA 10+31.25 TO 13+34.42	1412				1412	47		47	56			1356		1356
TOTAL Summary No. 8	75905		19633	12528	56272	125470		125470	150563	126452		32161	32161	64322
-L- Sta 448+00.00 TO 470+00.00 (LT)	8179		6745	24	1434	1077		1077	1292			142	6769	6911
-Y37- STA 11+00.00 TO 12+96.98	413				413							413		413
-Y38- STA 10+30.00 TO 12+96.84	833		826		7	4		4	5			2	826	828
-Y40- STA. 11+50.00 TO 21+26.42	1324				1324	761		761	913			411		411
TOTAL Summary No. 9	10749		7571	24	3178	1842		1842	2210			968	7595	8563
-L- Sta 448+00.00 TO 470+00.00 (RT)	1703		724		979	1791		1791	2149	1170			724	724
-Y39- STA 10+53.00 TO 11+79.80	136				136							136		136
-Y41 STA. 10+65.10 TO 16+05.00	508				508	187		187	224			284		284
TOTAL Summary No. 10	2347		724		1623	1978		1978	2373	1170		420	724	1144
-L- Sta 470+00.00 TO 480+20.00 (LT)	588		133		455	663		663	796	341			133	133
TOTAL Summary No. 11	588		133		455	663		663	796	341			133	133
-L- Sta 470+00.00 TO 480+20.00 (RT)	622		221	2	401	1738		1738	2086	1685			223	223
TOTAL Summary No. 12	622		221	2	401	1738		1738	2086	1685			223	223

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.

U-2412 B/U-2524AE EARTHWORK BALANCE SHEET

GUILFORD COUNTY
DATE: 04/05/12 COMPILED BY: S.HAYNES

STATION to STATION	UNCLASSIFIED EXCAVATION (CY)					EMBANKMENT (CY)				BORROW	ROCK	EARTH	TOTAL	
	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNSUITABLE EXCAV.	UNDERCUT EXCAV.	SUITABLE EARTH	TOTAL	ROCK	EARTH	EMBANK +20%		ROCK SUITABLE WASTE	EARTH SUITABLE WASTE		UNSUIT WASTE
SUBTOTAL U-2412 B	490188		125392	54329	364796	467255		467255	560704	401172		205264	179721	384985
Additional earthwork for pav't alt (asphalt base) material for shoulder construction	-23690				-23690	14100		14100	16920	40610				
loss to clearing & grubbing	-20350				-20350					20,350				
additional undercut				8150		8150		8150	9780	9780		8150	8150	
waste in lieu of borrow										-205264		-205264	-205264	
Select Granular Material in Lieu of Borrow									-55550	-55550				
PROJECT TOTAL	446148		125392	62479	320756	505385		505385	550910	230154			187871	187871
5% to replace topsoil on borrow pit										11,508				
GRAND TOTAL	446148			62479						241662				
SAY	446200			62500						241700				
drainage ditch excavation (est.)				4630	CY									
Est. shallow undercut by stations				24200	CY									
Est. Shallow undercut contingency				1500	CY									
Total shallow undercut				25700	CY									
Class IV subgrade stabilization				48650	TONS									
Select granular material				60850	CY									
Pavement Structure Volume				65300	CY									

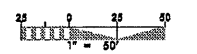
FOR ALTERNATIVE 2 PAVEMENT DESIGN

SUBTOTAL U-2412 B	490188		125392	54329	364796	467255		467255	560704	401172		205264	179721	384985
material for shoulder construction						15880		15880	19056	19056				
loss to clearing & grubbing	-20350				-20350					20,350				
additional undercut				8150		8150		8150	9780	9780		8150	8150	
waste in lieu of borrow										-205264		-205264	-205264	
Select Granular Material in Lieu of Borrow									-55550	-55550				
PROJECT TOTAL	469838		125392	62479	344446	491285		491285	533990	189544			187871	187871
5% to replace topsoil on borrow pit										9,477				
GRAND TOTAL	469838			62479						199021				
SAY	469900			62500						199100				
drainage ditch excavation (est.)				4630	CY									
Est. shallow undercut by stations				24200	CY									
Est. Shallow undercut contingency				1500	CY									
Total shallow undercut				25700	CY									
Class IV subgrade stabilization				48650	TONS									
Select granular material				60850	CY									
Pavement Structure Volume				88400	CY									

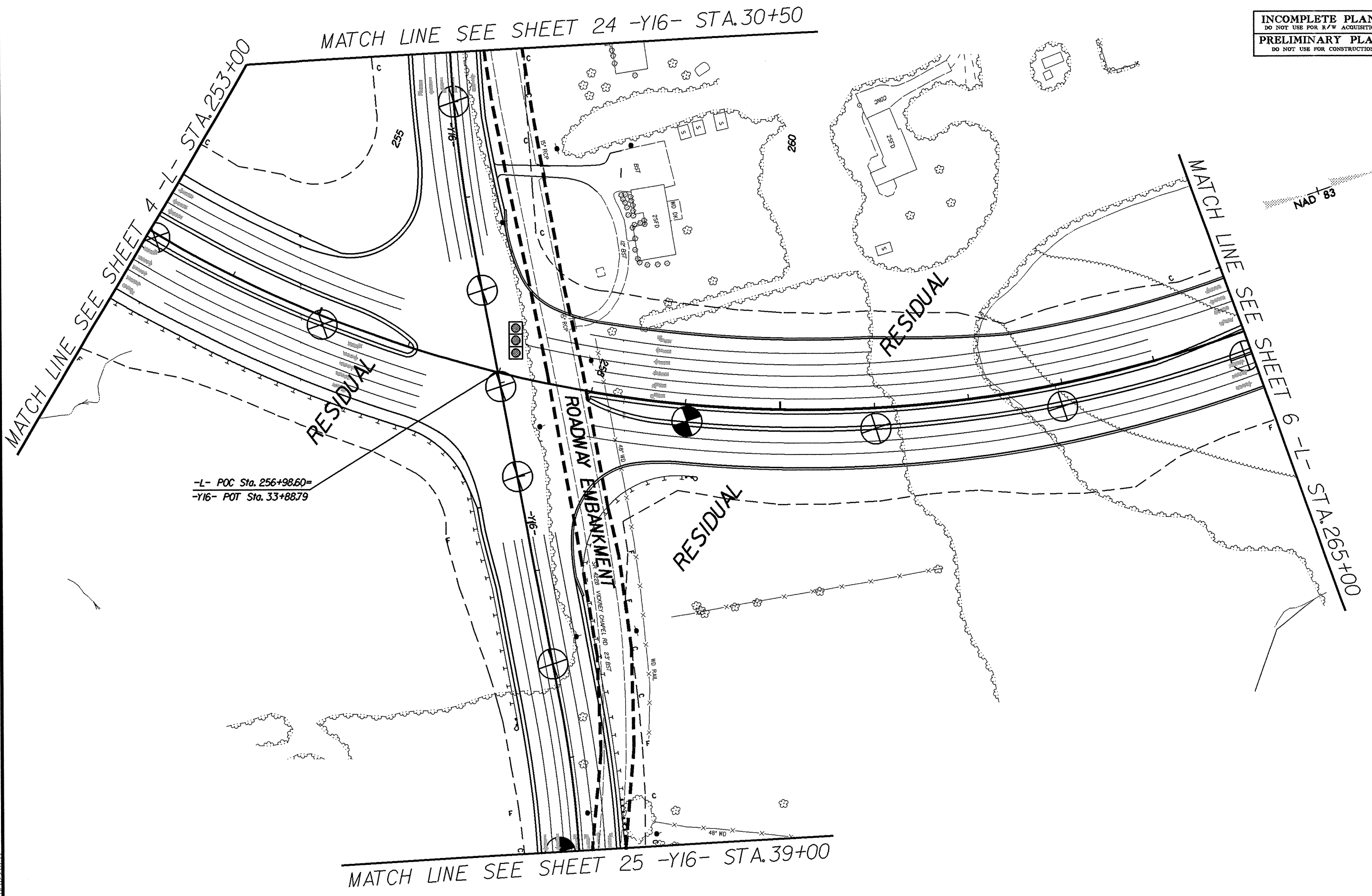
NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

8/17/99
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PROJECT REFERENCE NO.	SHEET NO.
U-2412B	05



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



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MATCH LINE SEE SHEET 4 -L- STA.253+00

MATCH LINE SEE SHEET 6 -L- STA.265+00

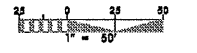
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-Y16- POT Sta. 33+88.79

MATCH LINE SEE SHEET 25 -Y16- STA.39+00

8/17/99

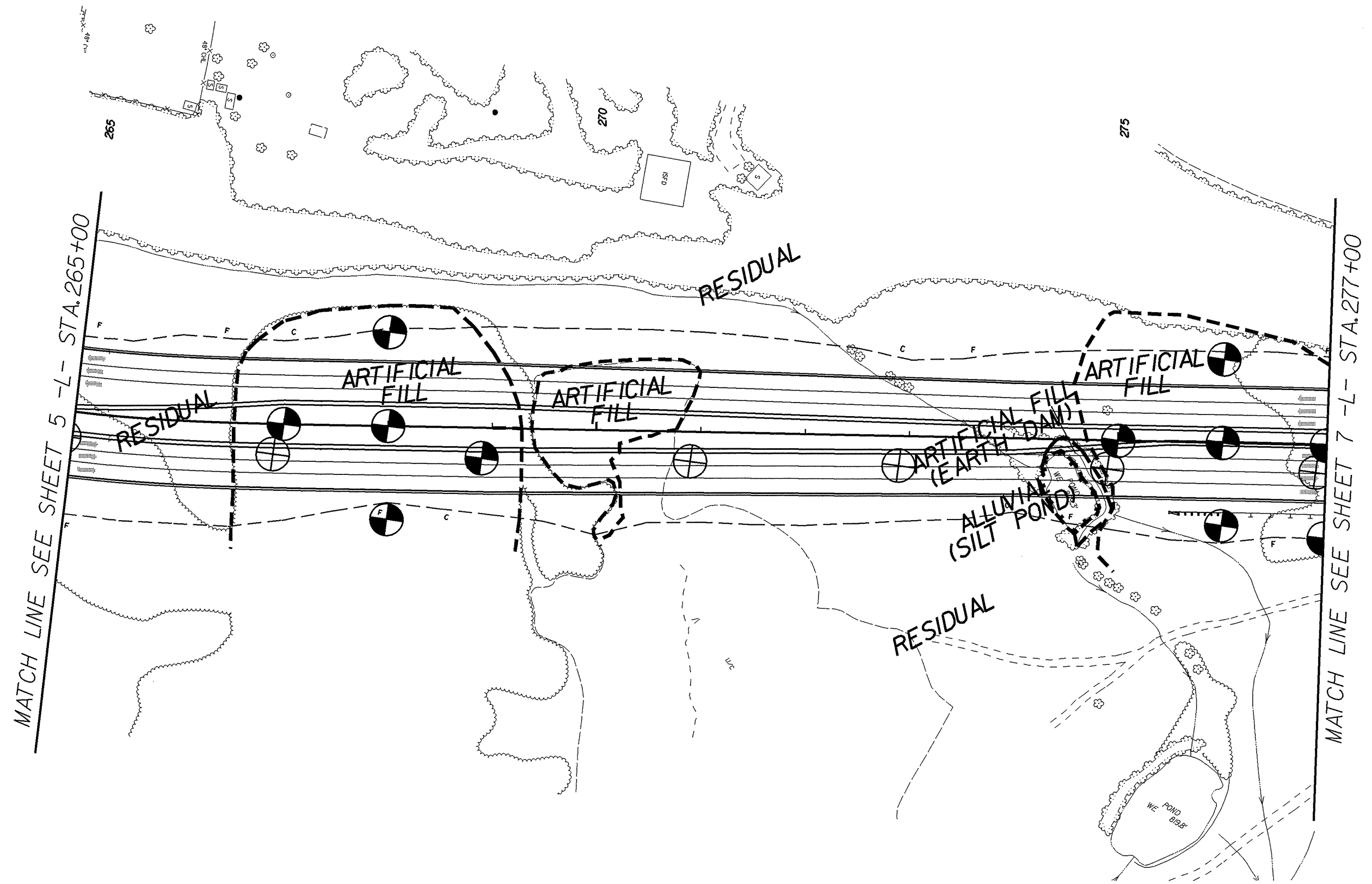
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PROJECT REFERENCE NO. U-2412B	SHEET NO. 06
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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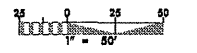


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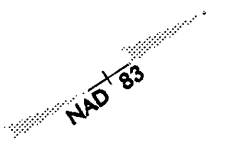
MATCH LINE SEE SHEET 7 -L- STA. 277+00

8/17/99
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PROJECT REFERENCE NO. U-2412B	SHEET NO. 07
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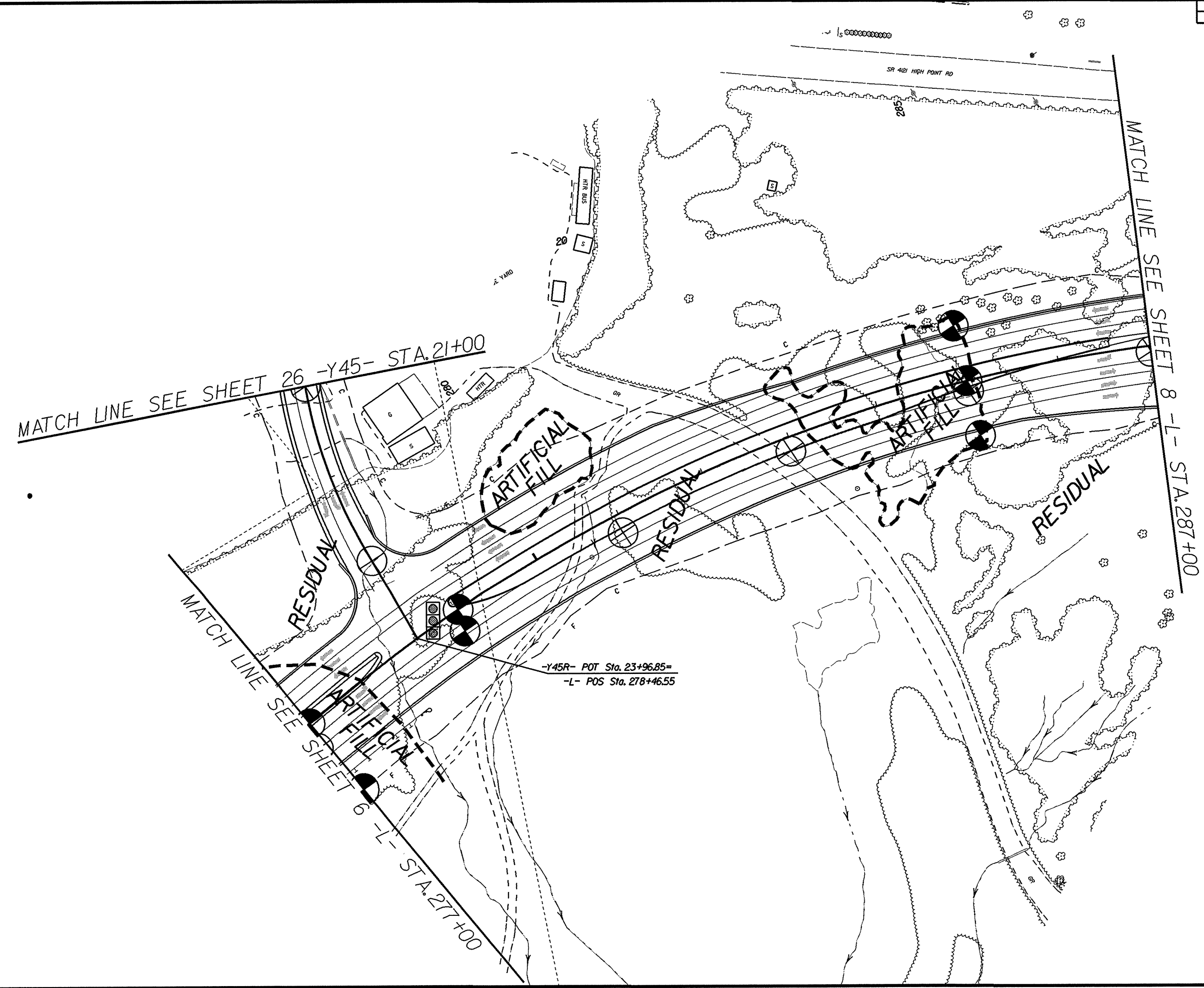
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DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



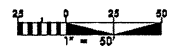
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MATCH LINE SEE SHEET 6 -L- STA. 277+00

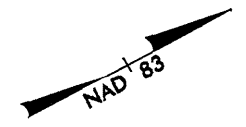
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-Y45R- POT Sta. 23+96.85=
-L- POS Sta. 278+46.55

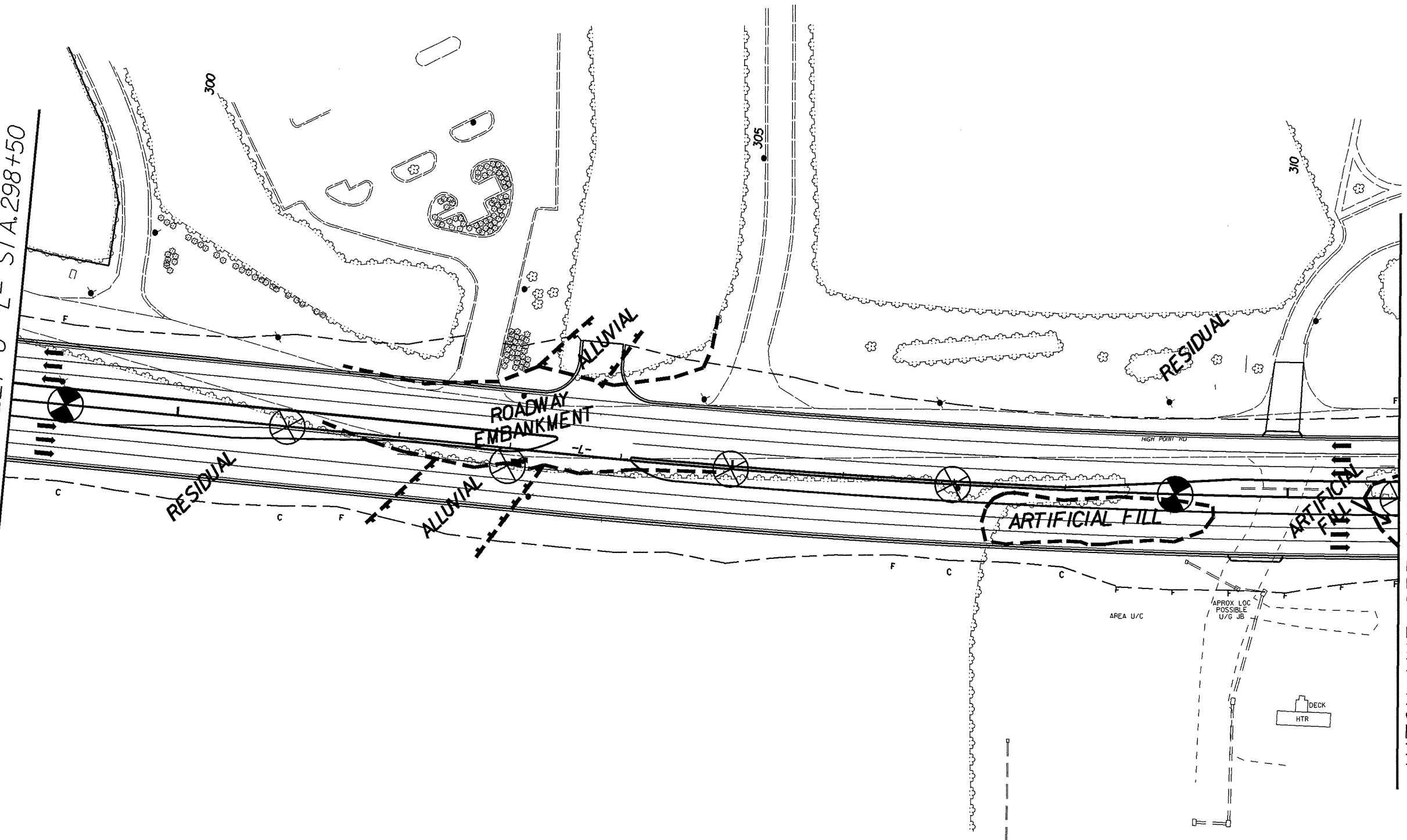


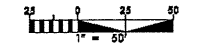
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DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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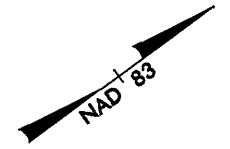
MATCH LINE SEE SHEET 10 -L- STA. 311+00





INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SEE SHEET 11-L- STA. 334+00

MATCH LINE SEE SHEET 13 -L- STA. 344+00

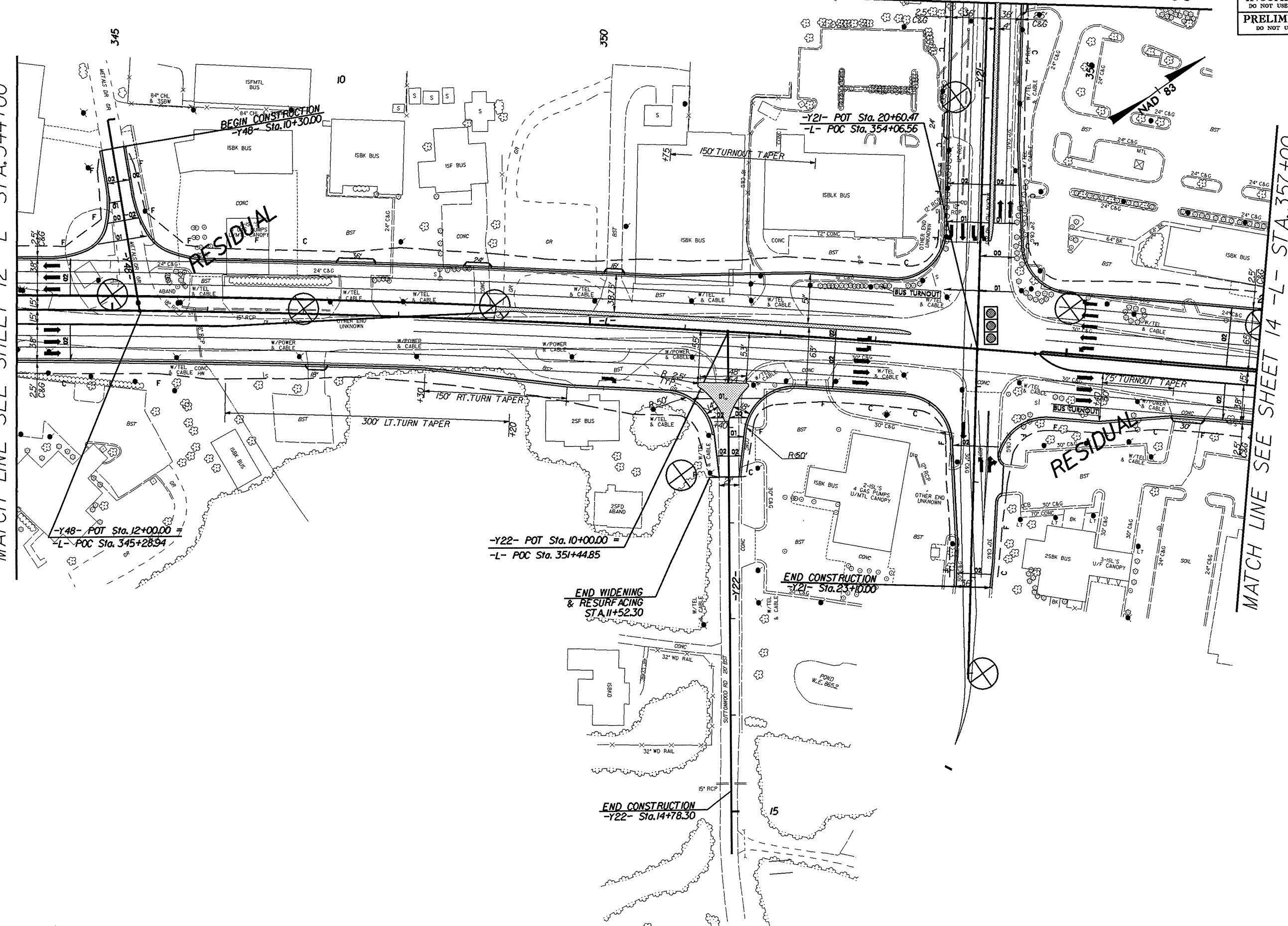


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

MATCH LINE SEE SHEET 29 -Y21- STA.17+00

MATCH LINE SEE SHEET 12 -L- STA.344+00

MATCH LINE SEE SHEET 14 -L- STA.357+00



BEGIN CONSTRUCTION
-Y48- Sta. 10+30.00

-Y21- POT Sta. 20+60.41
-L- POC Sta. 354+06.56

-Y48- POT Sta. 12+00.00
-L- POC Sta. 345+28.94

-Y22- POT Sta. 10+00.00
-L- POC Sta. 351+44.85

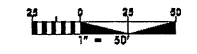
END WIDENING
& RESURFACING
STA. 11+52.30

END CONSTRUCTION
-Y21- Sta. 23+10.00

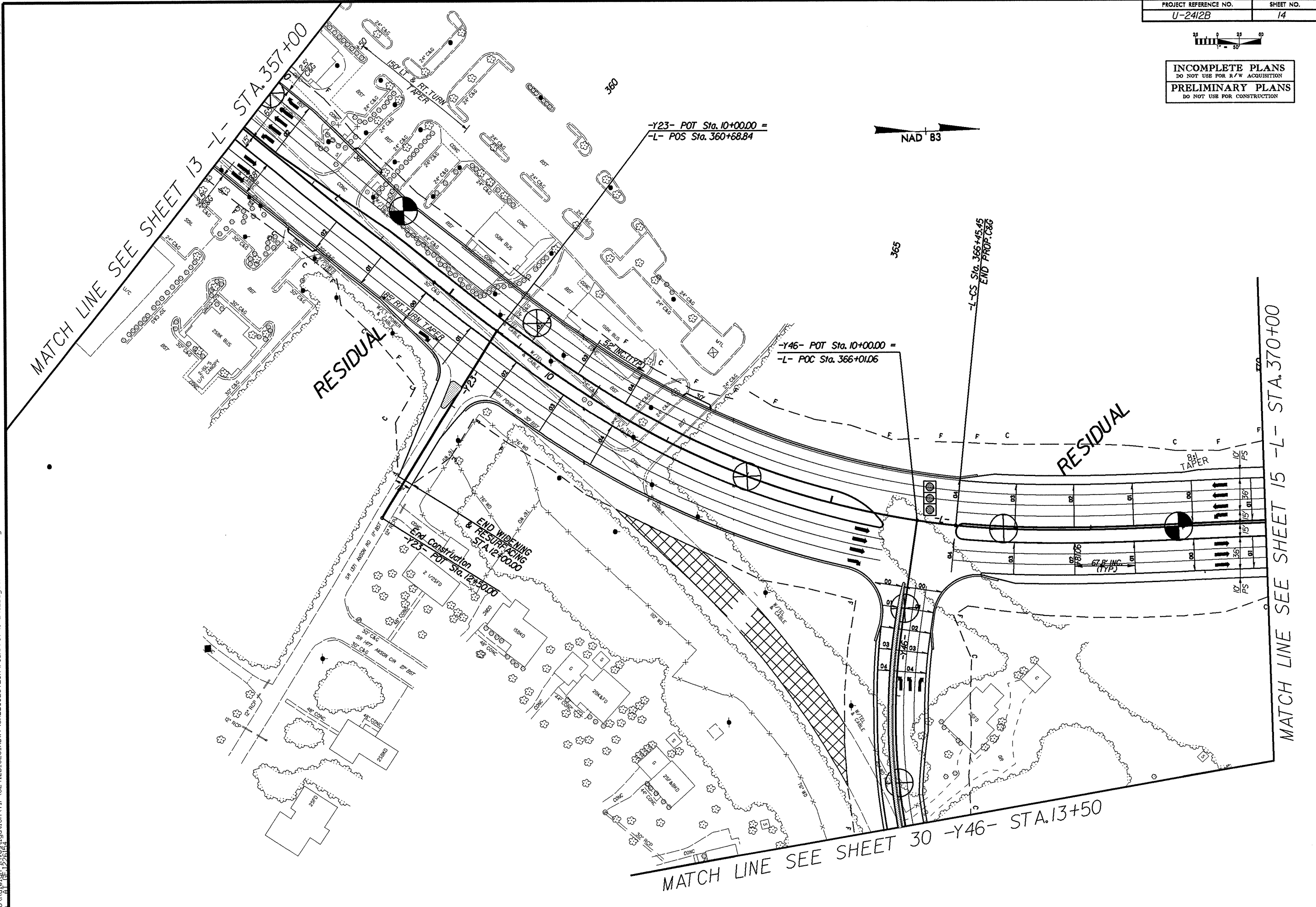
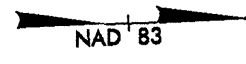
END CONSTRUCTION
-Y22- Sta. 14+78.30

8/17/99

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



MATCH LINE SEE SHEET 13 -L- STA. 357+00

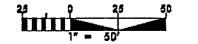
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MATCH LINE SEE SHEET 30 -Y46- STA. 13+50

8/17/99

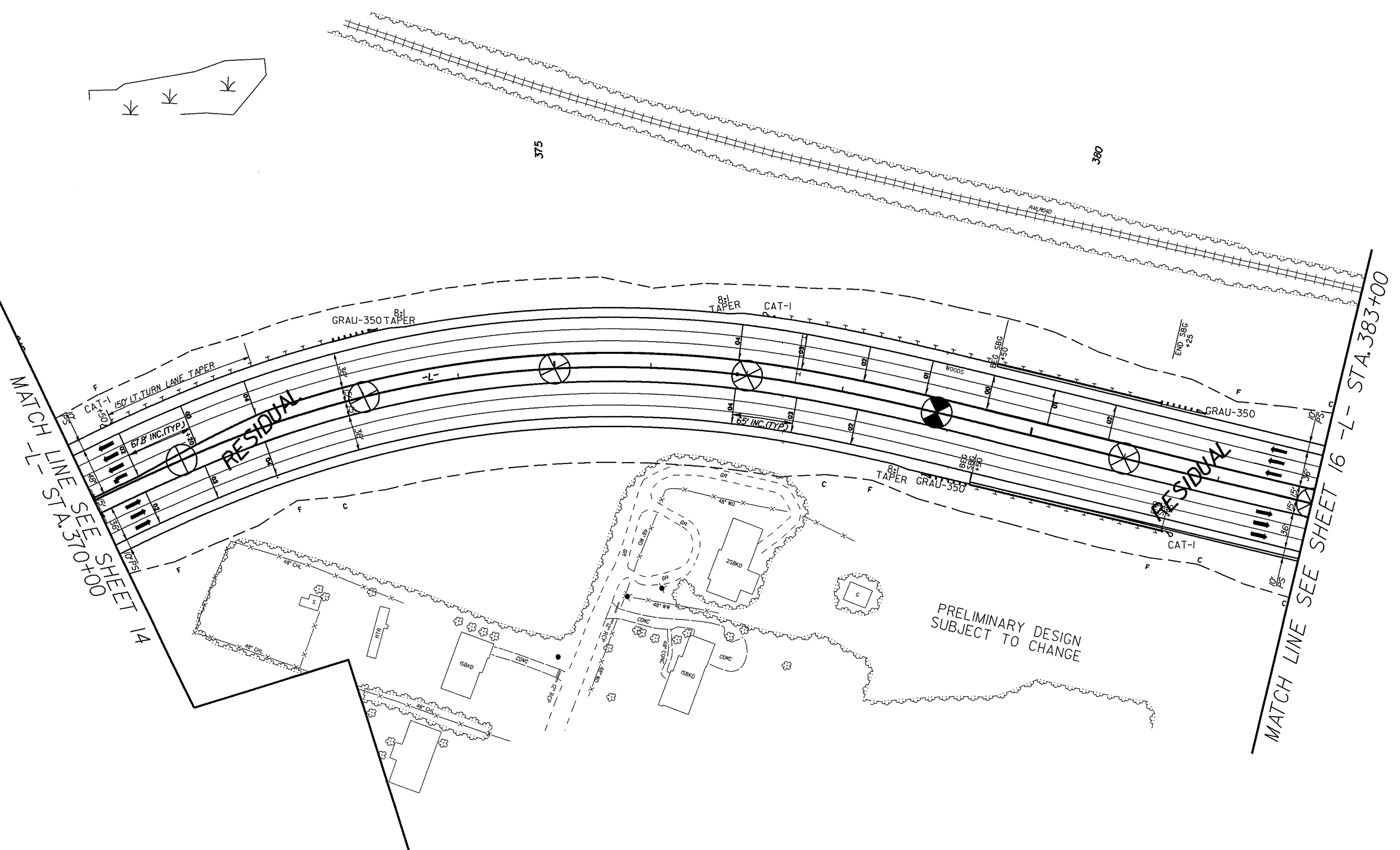
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8/17/99



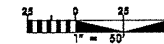
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DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

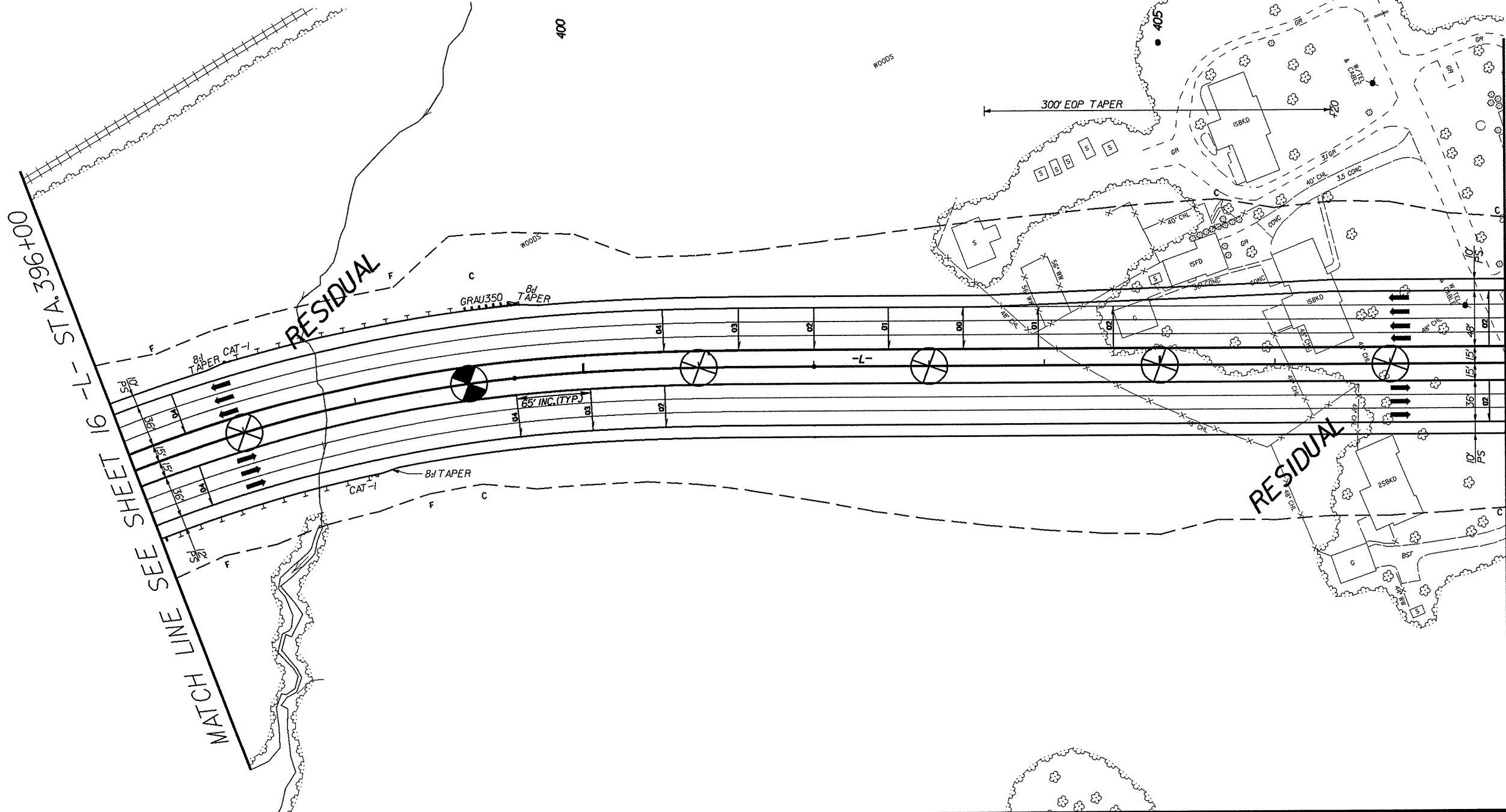


PRELIMINARY DESIGN
SUBJECT TO CHANGE

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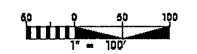


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

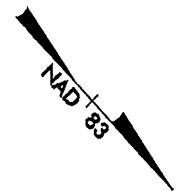


MATCH LINE SEE SHEET 16 -L- STA. 396+00

MATCH LINE SEE SHEET 18 -L- STA. 408+00



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

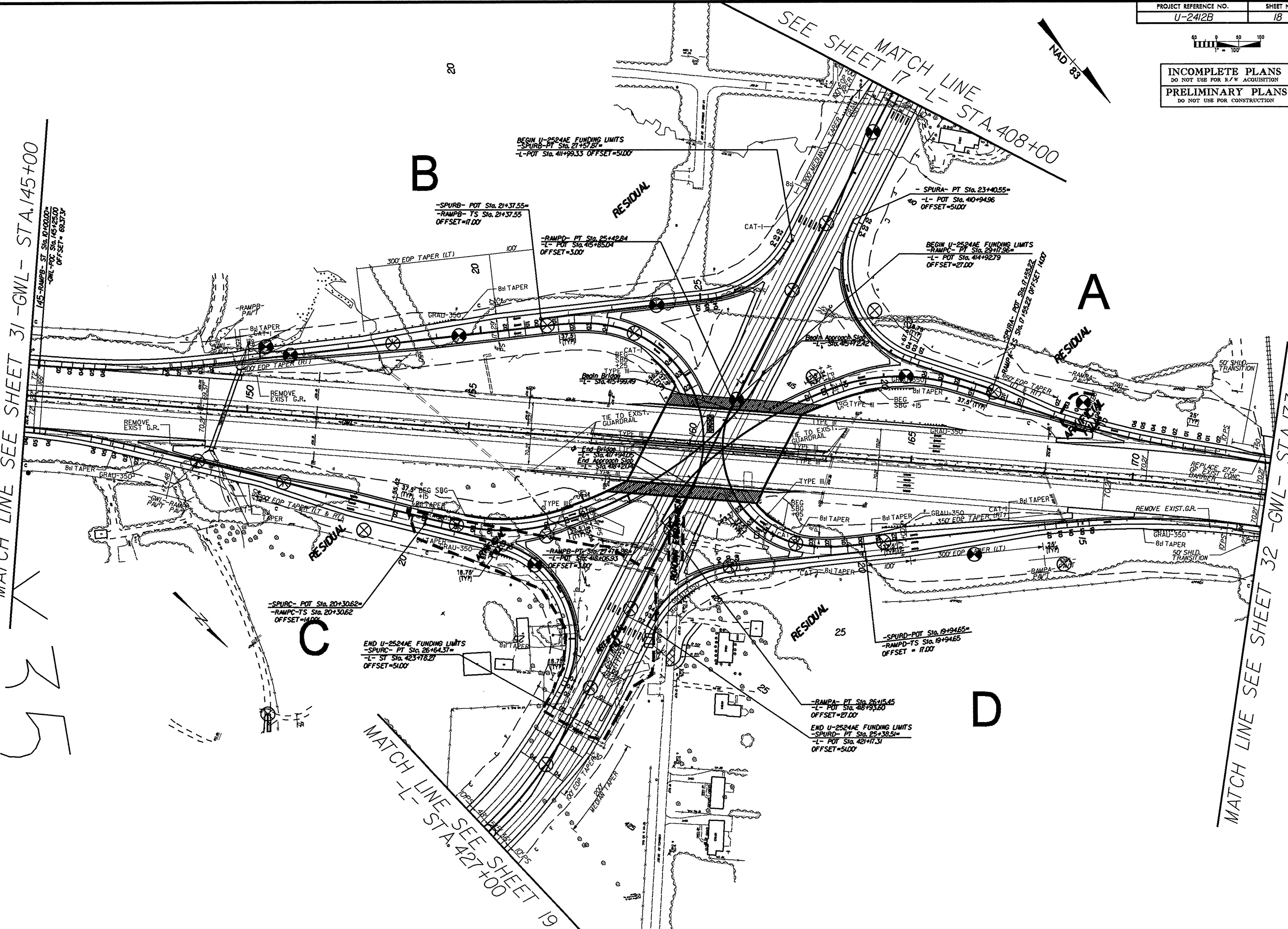


8/17/99

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MATCH LINE SEE SHEET 31 -GWL- STA. 145+00
 52X

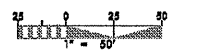
MATCH LINE SEE SHEET 32 -GWL- STA. 173+00



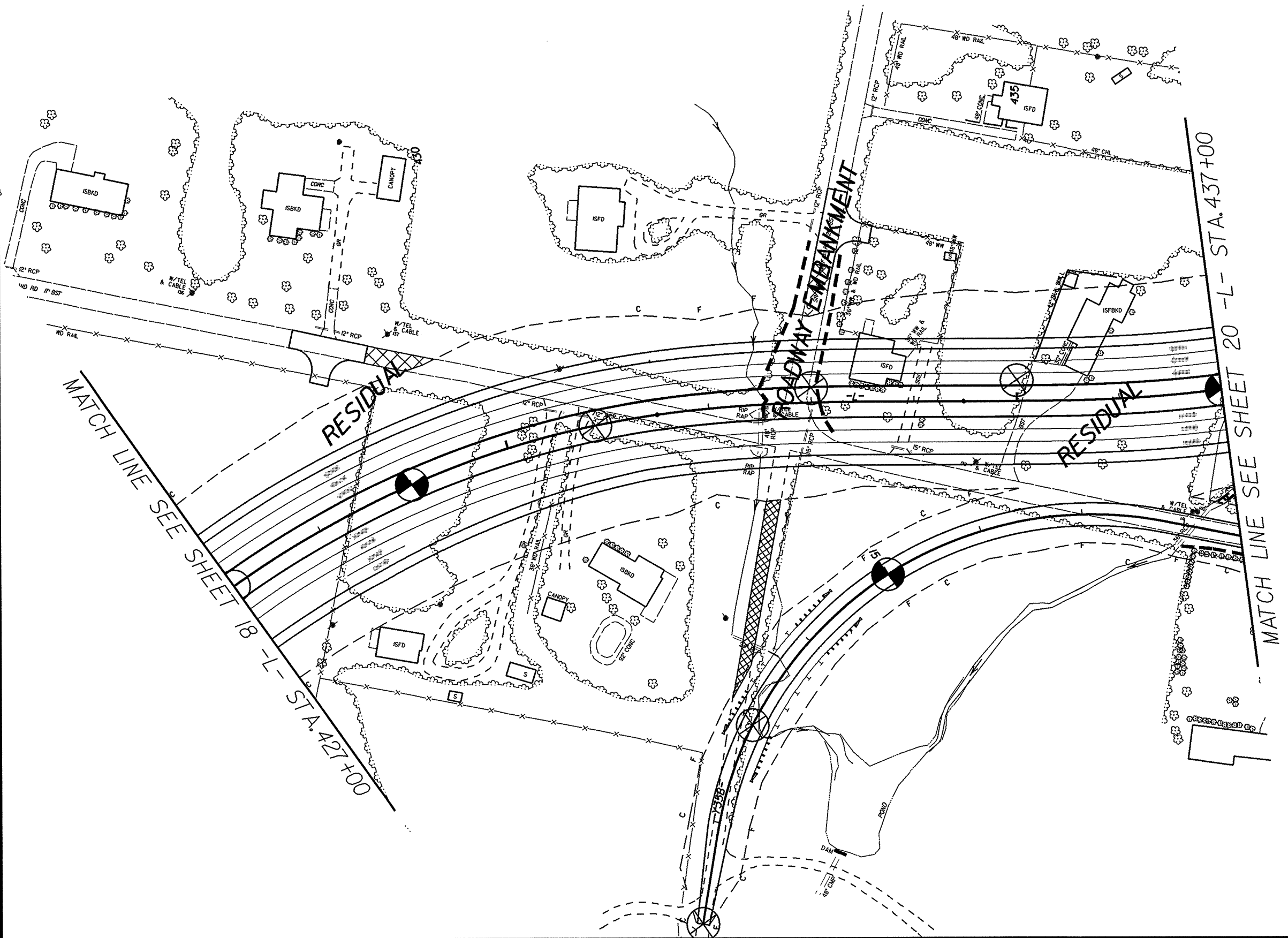
8/17/99

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PROJECT REFERENCE NO. U-2412B	SHEET NO. 19
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



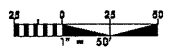
NO. 10

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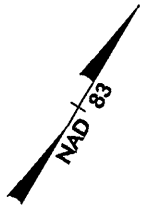
8/17/99

07:44:20 13138 L:\ERD\04\station\TIP\U2412B_GEO_RDW\1\CADD_GEO\TECHN\Plan\U-2412B-geo-uv020L-20.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-2412B	20



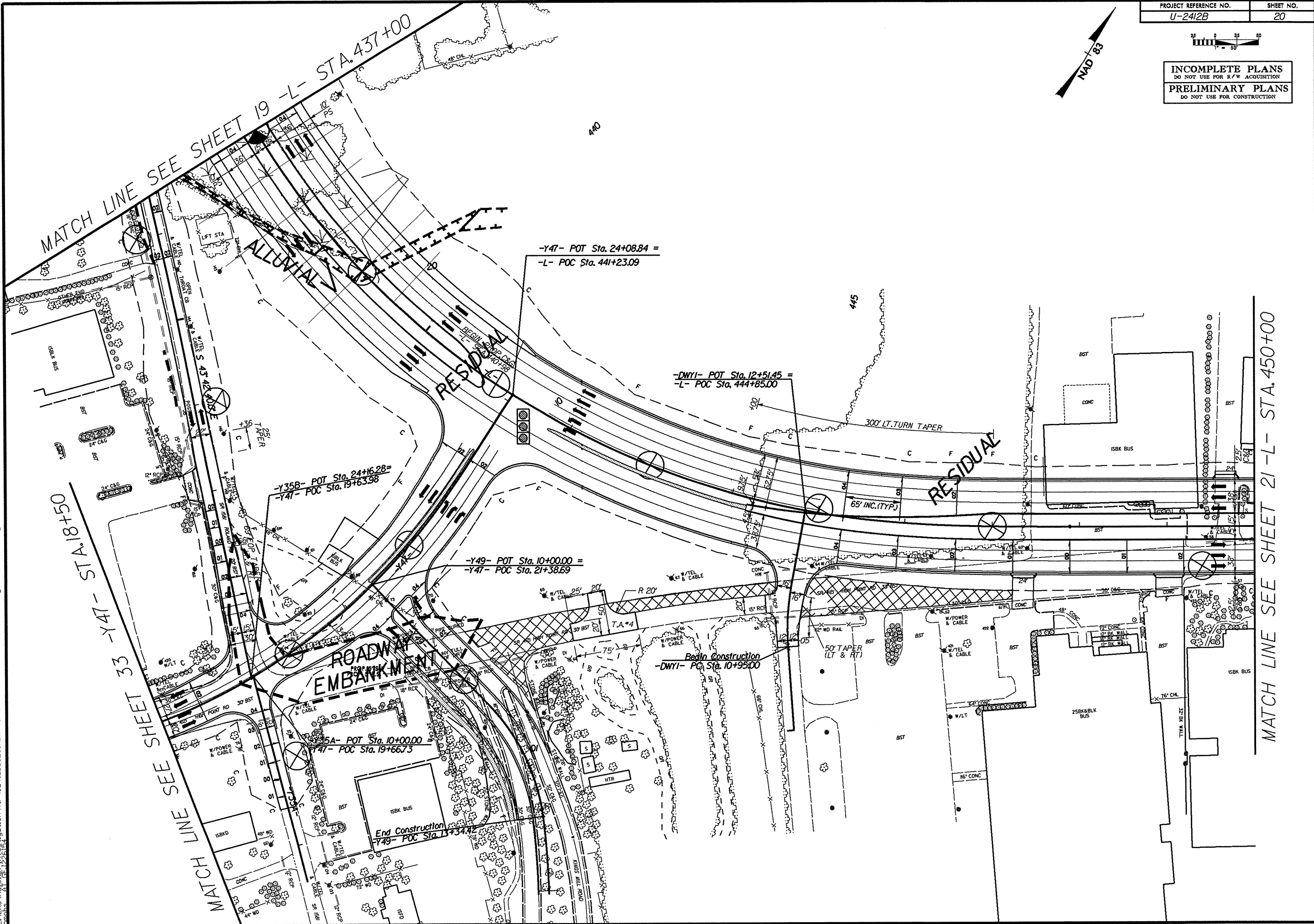
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SEE SHEET 19 -L- STA. 437+00

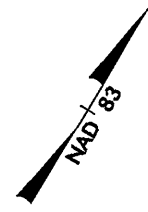
MATCH LINE SEE SHEET 33 -Y47- STA. 18+50

MATCH LINE SEE SHEET 21 -L- STA. 450+00



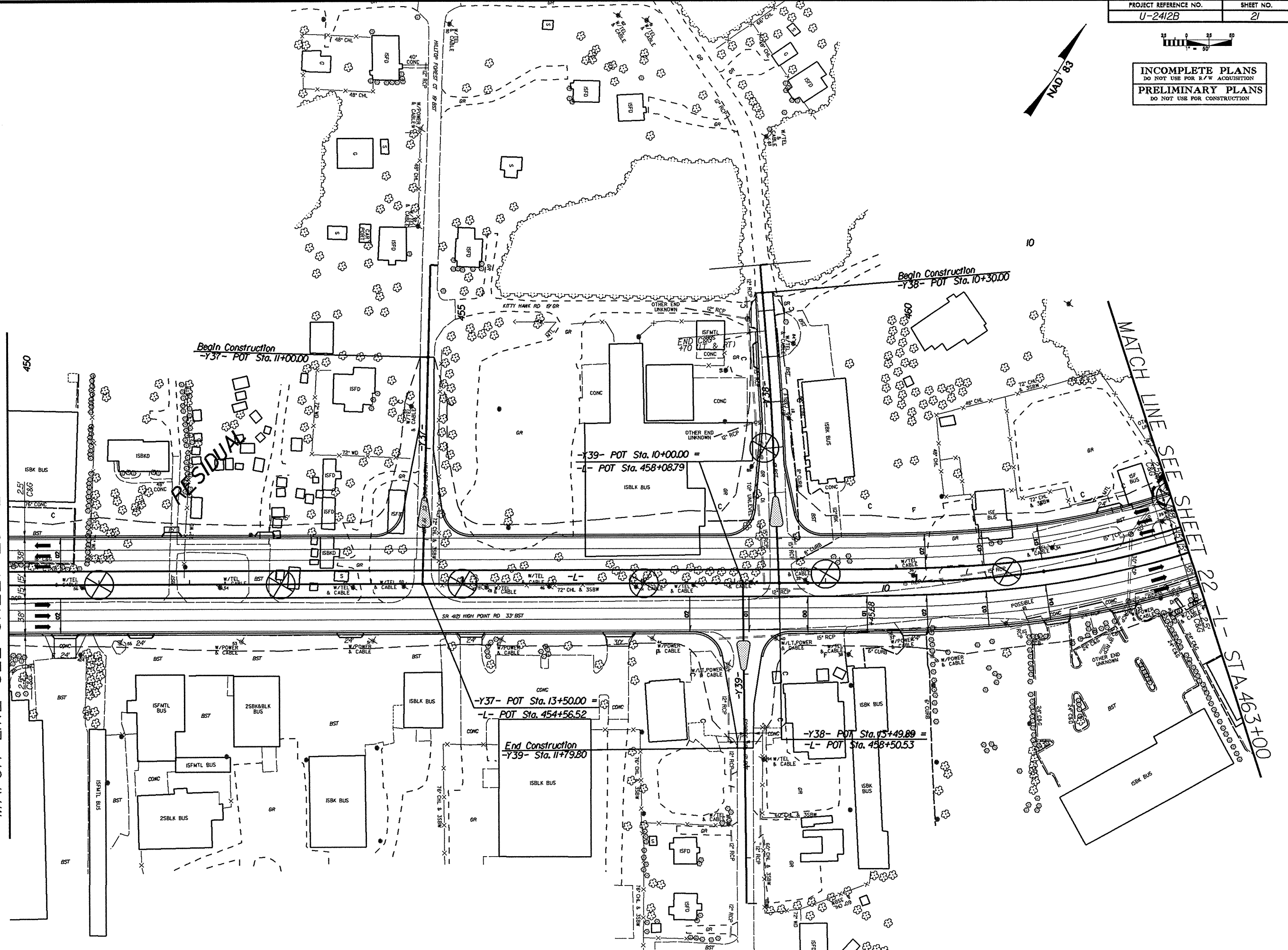


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SEE SHEET 20 - L - STA. 450+00

MATCH LINE SEE SHEET 21 - L - STA. 463+00



Begin Construction
-Y37- POT Sta. 11+00.00

Begin Construction
-Y38- POT Sta. 10+30.00

-Y39- POT Sta. 10+00.00 =
-L- POT Sta. 458+08.79

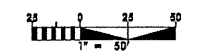
-Y37- POT Sta. 13+50.00 =
-L- POT Sta. 454+56.52

End Construction
-Y39- Sta. 11+79.80

-Y38- POT Sta. 15+49.89 =
-L- POT Sta. 458+50.53

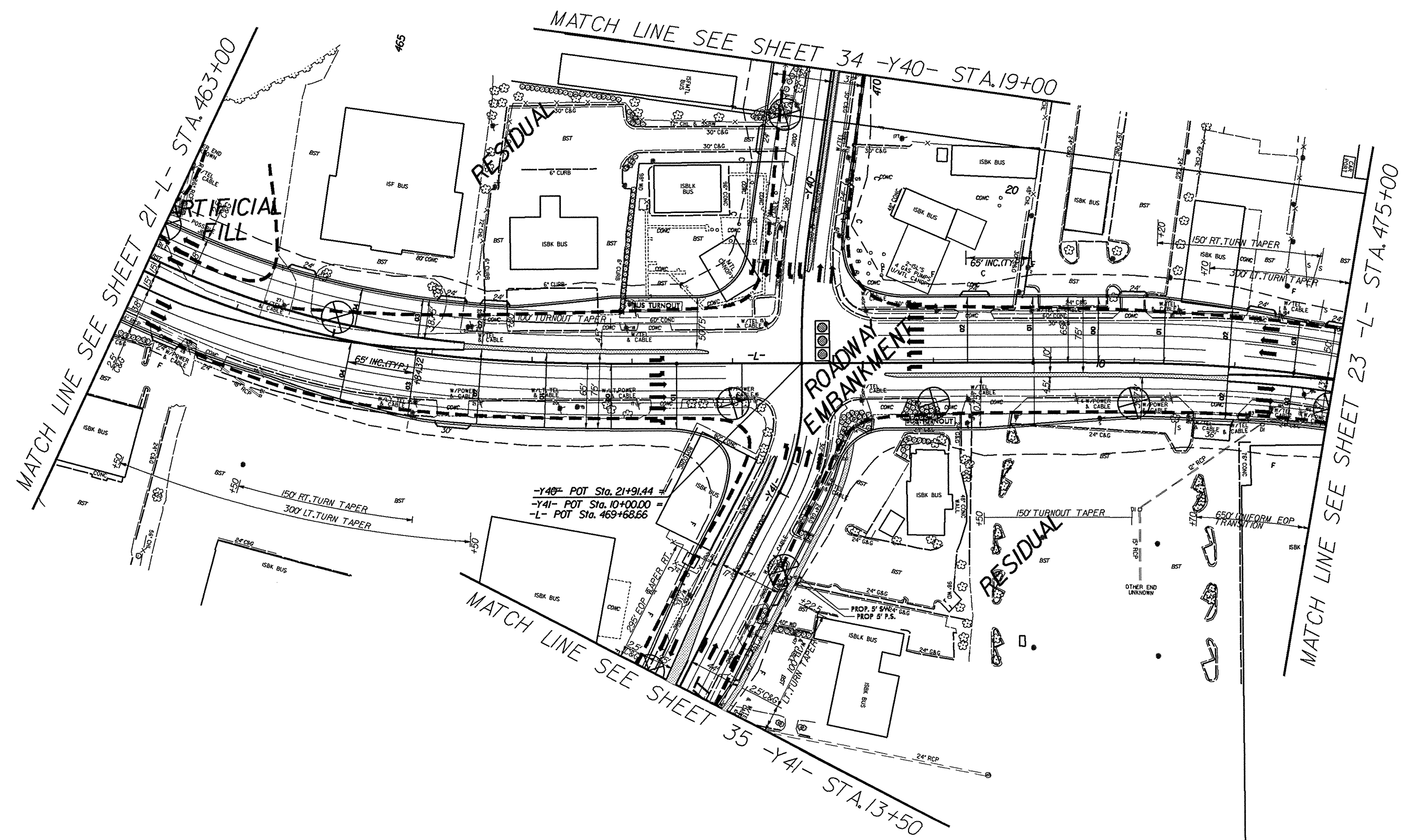
8/17/99

97-JUL-2010 13:38
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99
 Q:\JUL-2000\13138\1\LEVERON\Road\Geo\RDW\Y\CADD\GEOTECH\PI\anProf\U-2412B_GEO.gao.in\022.22.dgn
 13:58
 11/12/2000 11:26:11 AM



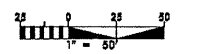
-Y40- POT Sta. 21+91.44 =
 -Y41- POT Sta. 10+00.00 =
 -L- POT Sta. 469+68.66

MATCH LINE SEE SHEET 21 -L- STA. 463+00

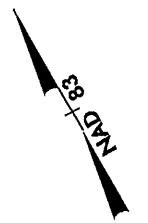
MATCH LINE SEE SHEET 34 -Y40- STA. 19+00

MATCH LINE SEE SHEET 35 -Y41- STA. 13+50

MATCH LINE SEE SHEET 23 -L- STA. 475+00

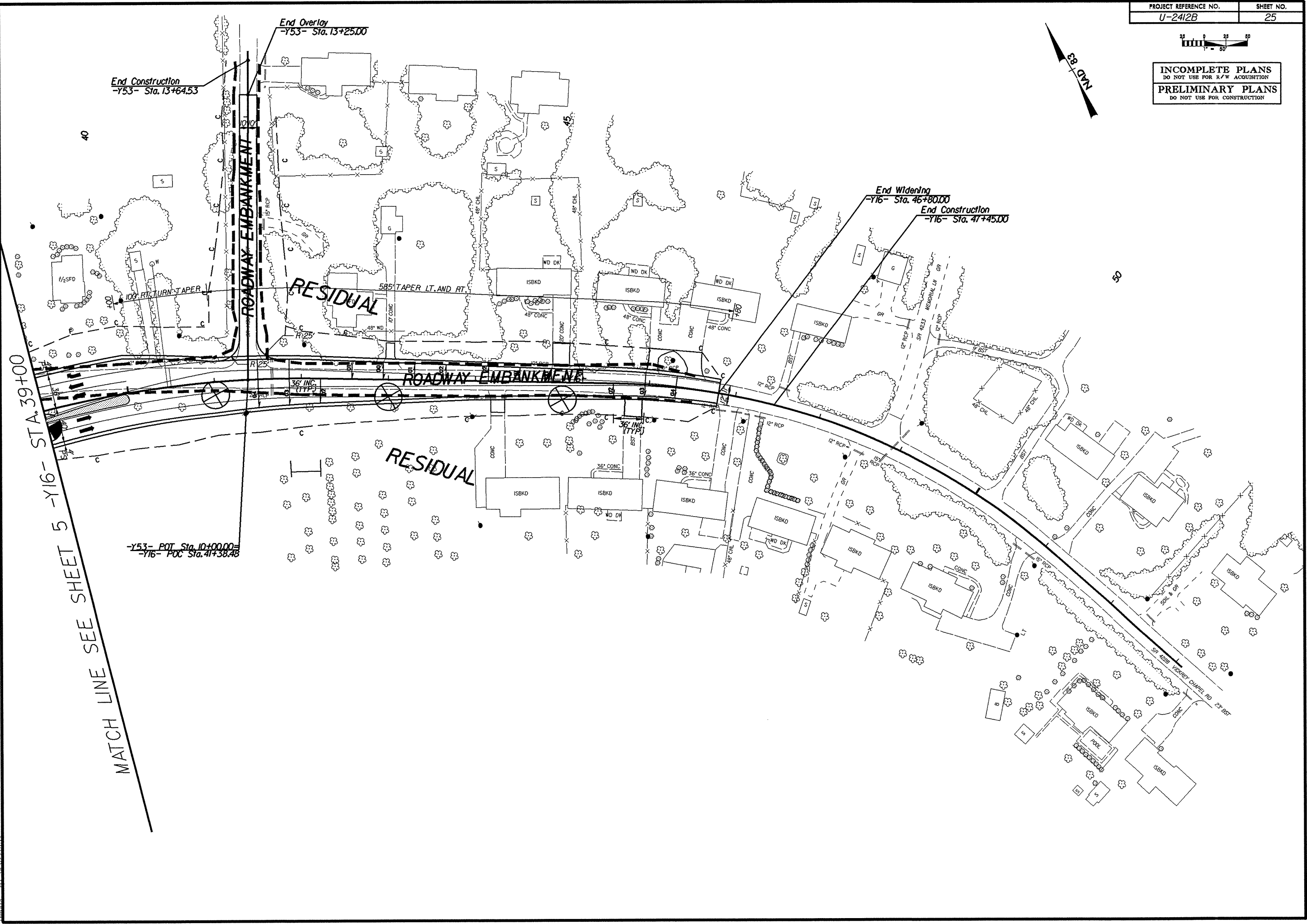


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



8/17/99

07-JUL-2010 13:38
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 mmas



End Construction
-Y53- Sta. 13+64.53

End Overlay
-Y53- Sta. 13+25.00

End Widening
-Y16- Sta. 46+80.00

End Construction
-Y16- Sta. 47+45.00

STA. 39+00

-Y16- STA. 41+00.00

MATCH LINE SEE SHEET 5

-Y53- POT. Sta. 10+00.00
-Y16- POC. Sta. 41+38.48

ROADWAY EMBANKMENT

ROADWAY EMBANKMENT

RESIDUAL

RESIDUAL

MATCH LINE SEE SHEET 5

585' TAPER LT. AND RT.

SR 1228 VIKING CHAPEL RD 23' BSY

100' RT. TURN TAPER

MEMORIAL LN. DR

36" CONC (TYP)

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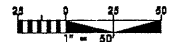
36" CONC

36" CONC

36" CONC

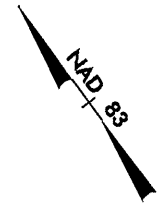
36" CONC

36" CONC

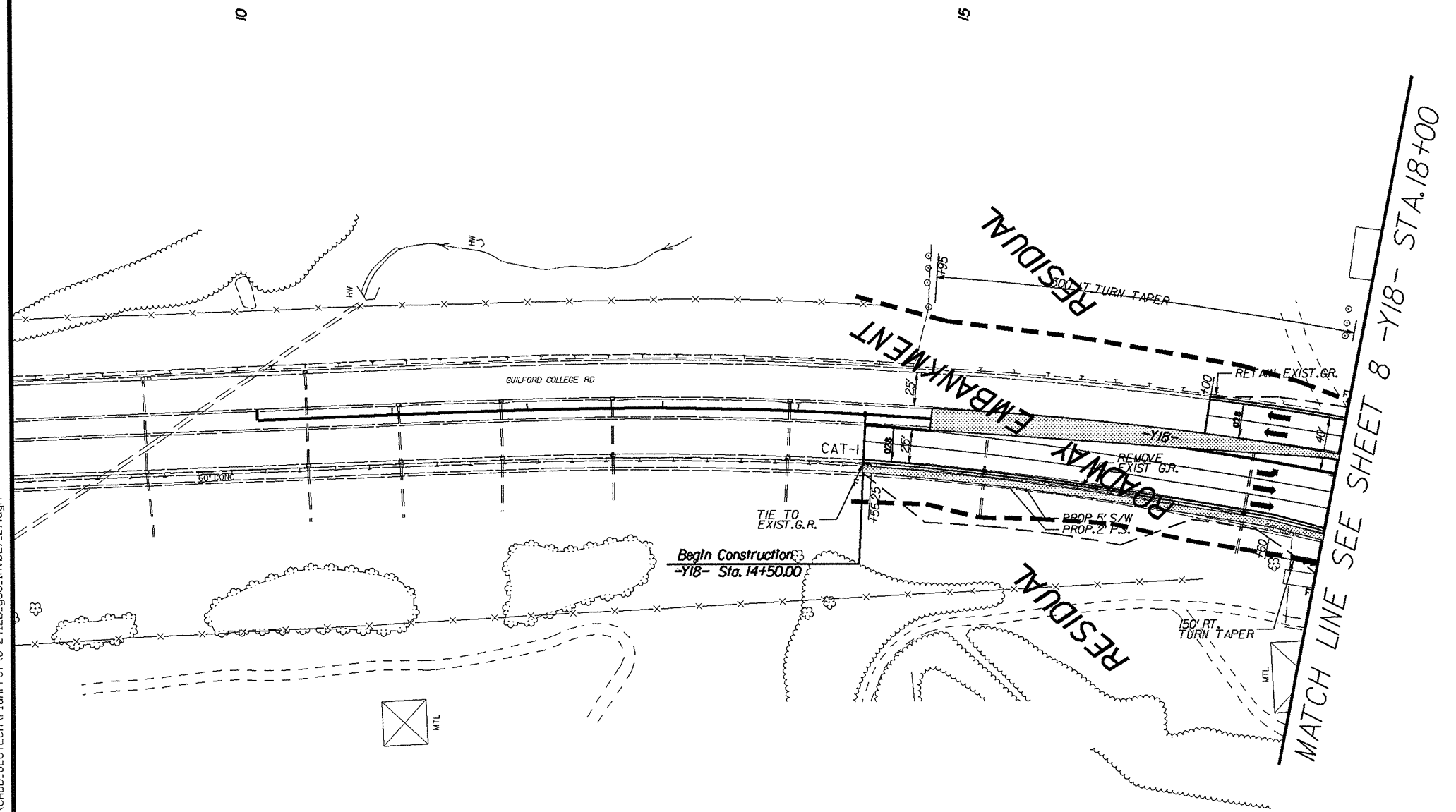


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

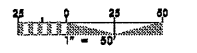


8/17/99
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 mch3 AT 11/22/14



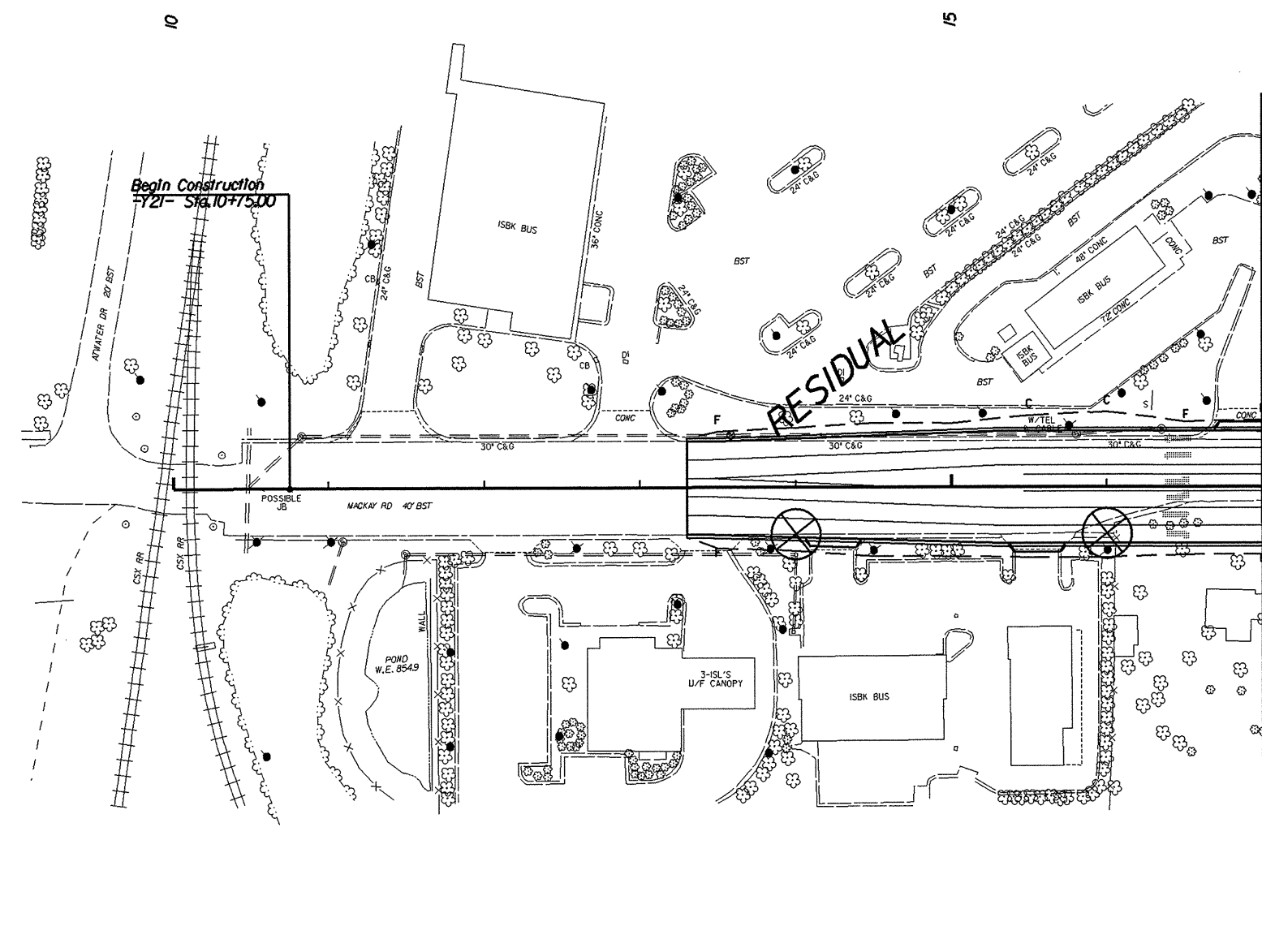
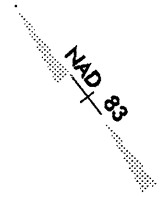
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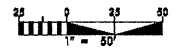


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH LINE SEE SHEET 13 -Y2I- STA.17+00



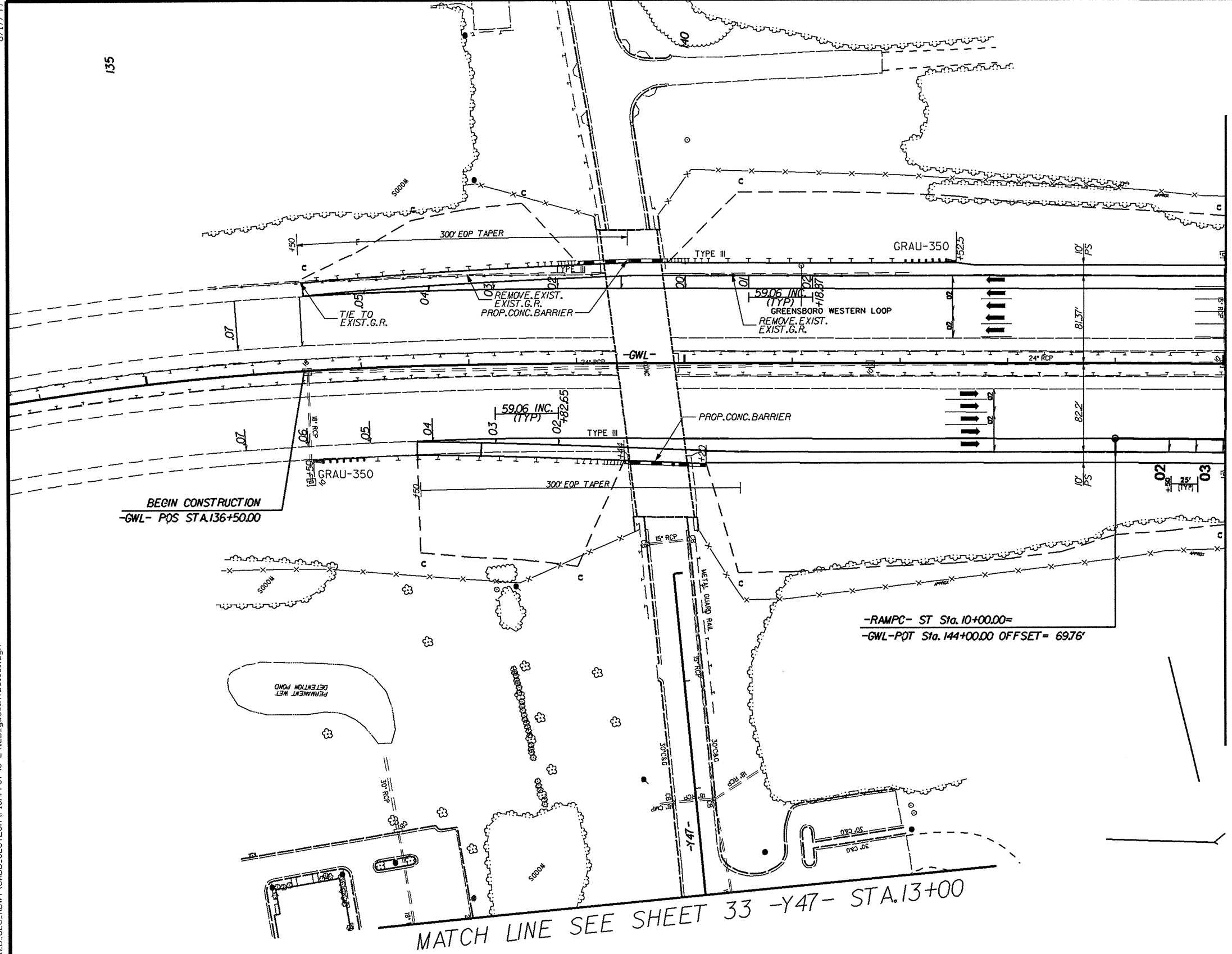
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DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



8/17/99

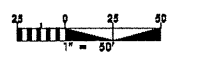
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MATCH LINE SEE SHEET 18 -GWL- STA. 145+00

MATCH LINE SEE SHEET 33 -Y47- STA. 13+00

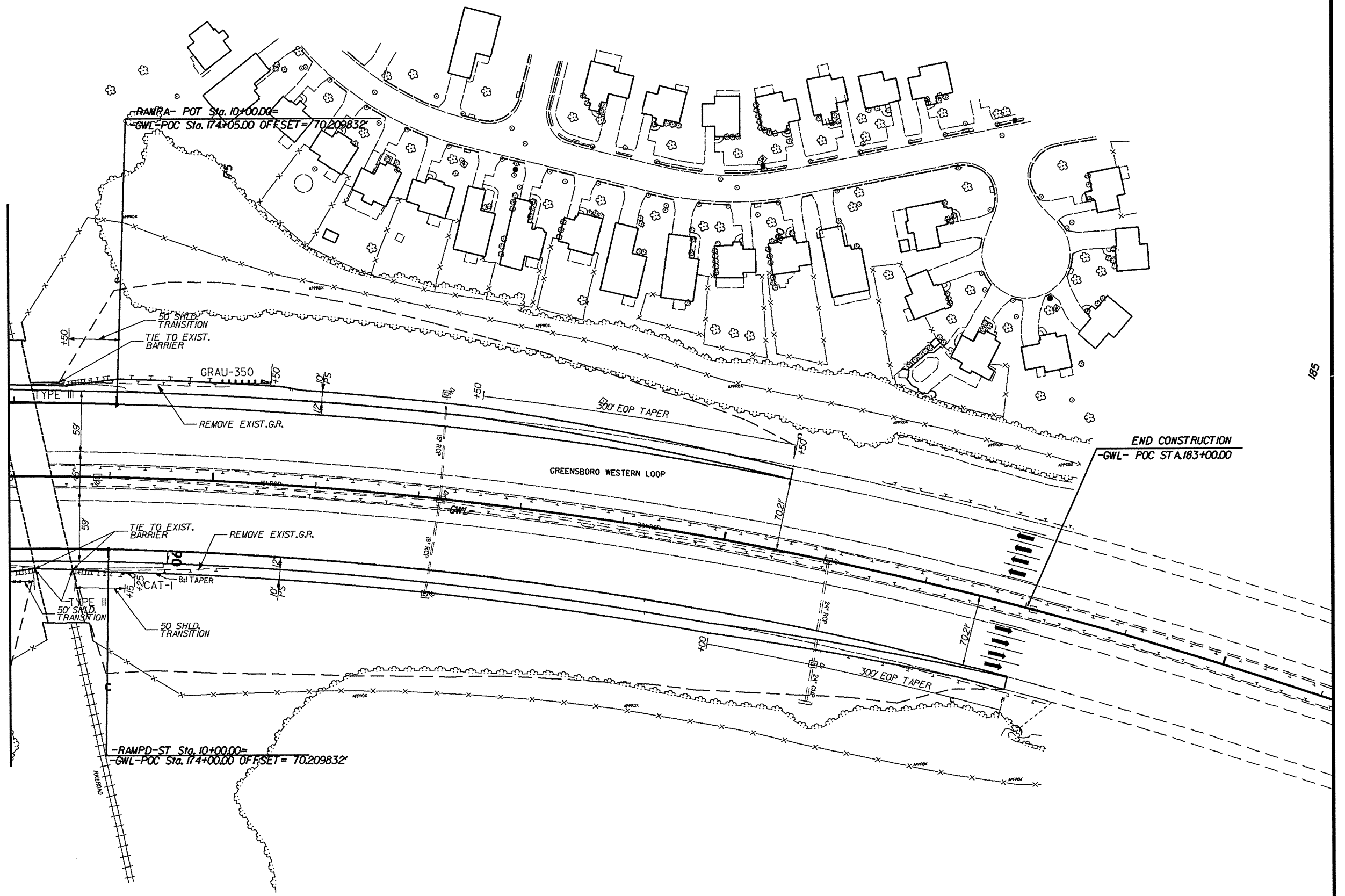
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INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

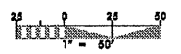


MATCH LINE SEE SHEET 18 -GWL- STA.173+00



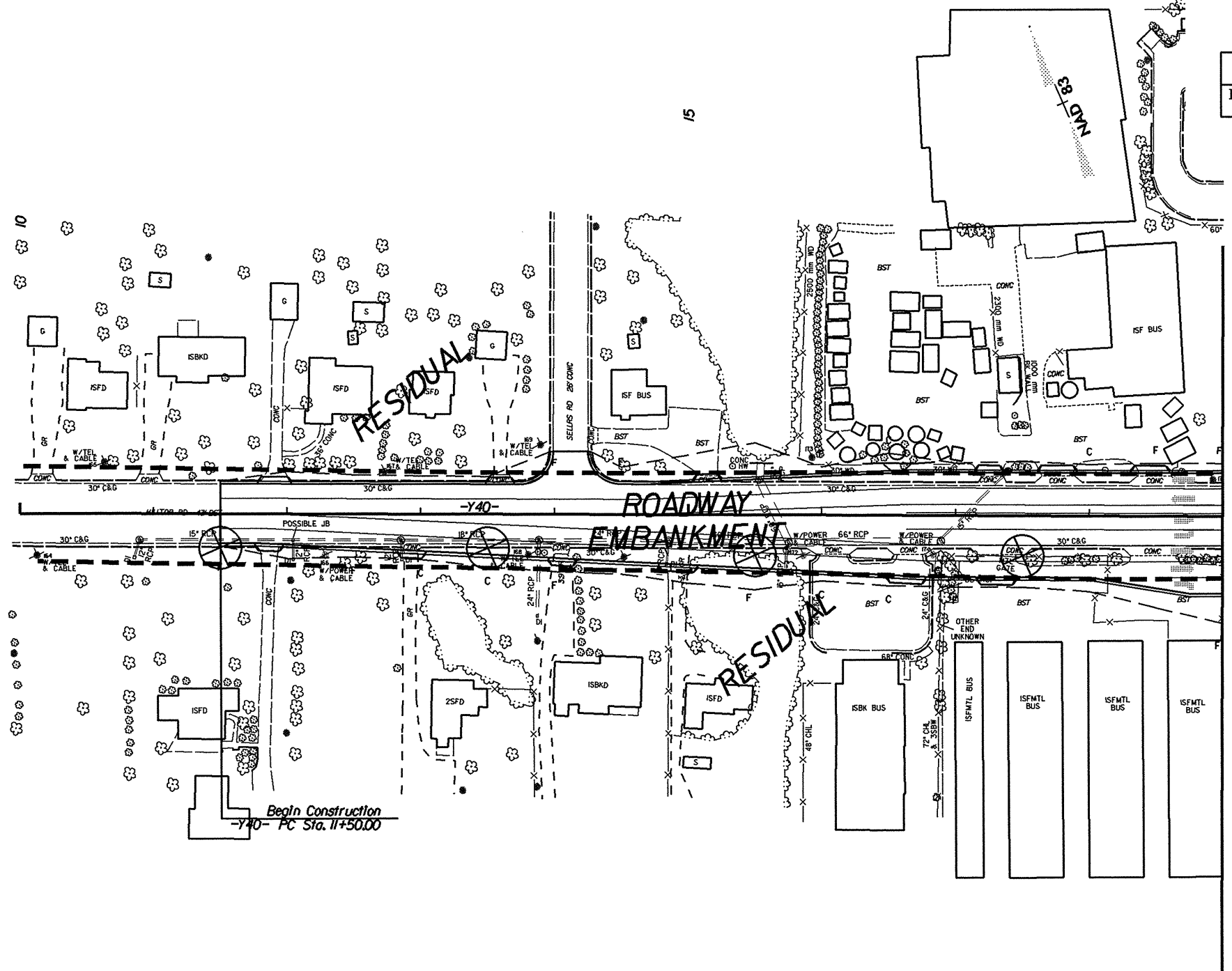
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mch

185



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

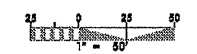


MATCH LINE SEE SHEET 22 -Y40- STA.19+00

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2412B	35

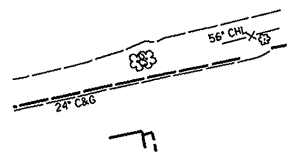
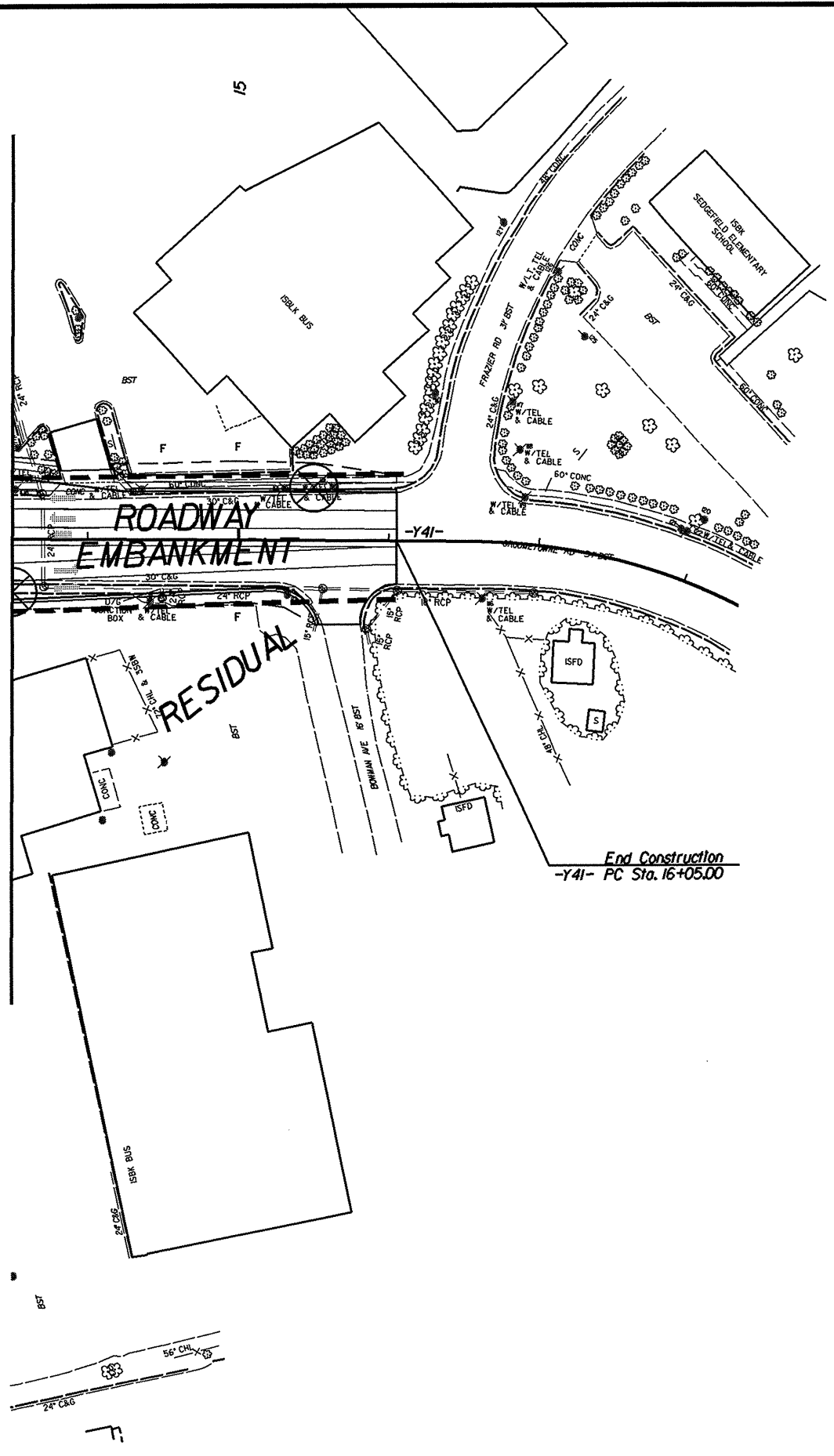


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83

MATCH LINE SEE SHEET 22 -Y4I- STA.13+50

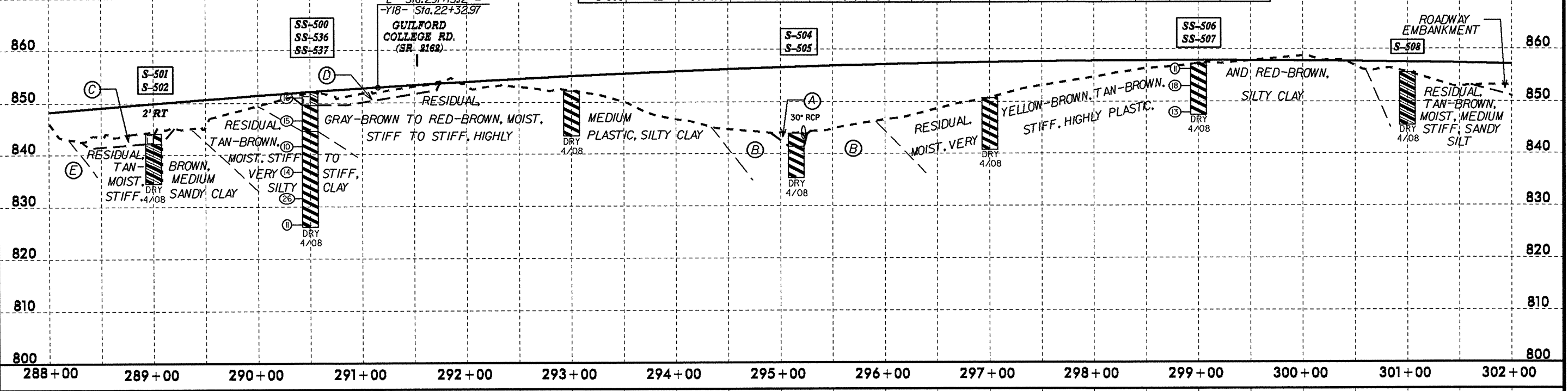


5/28/99

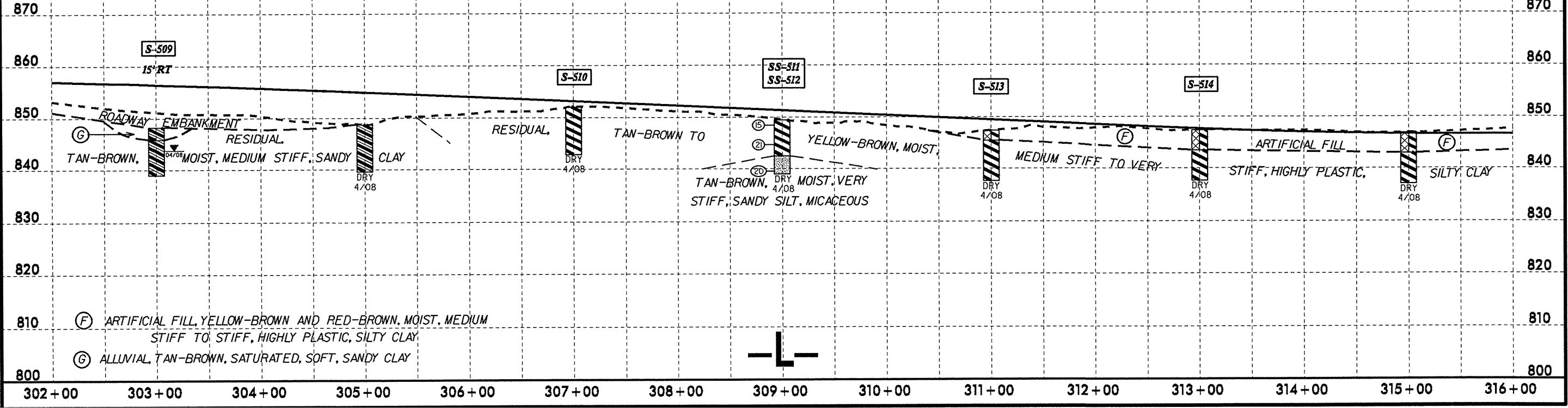
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- (A) ALLUVIAL TAN-BROWN, WET, SOFT, HIGHLY PLASTIC, SILTY CLAY
- (B) RESIDUAL TAN-BROWN, MOIST, MEDIUM STIFF, SILTY CLAY
- (C) ROADWAY EMBANKMENT, TAN-BROWN, MOIST, VERY STIFF, SILTY CLAY (FORMER LOCATION OF GRANDOVER PARKWAY)
- (D) ROADWAY EMBANKMENT, TAN-BROWN, MOIST, VERY STIFF, SANDY CLAY
- (E) RESIDUAL RED-BROWN, MOIST, MEDIUM STIFF, MODERATE TO HIGH PLASTICITY, SILTY CLAY

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40			200
S-501	CL	289+00	0.0-5.0	A-7-6(9)	43	21	23.9	20.9	24.7	30.4	93	80	55	-	-
S-502	CL	289+00	5.0-9.7	A-6(6)	36	14	21.9	22.3	27.4	28.4	97	85	58	-	-
SS-500	CL	290+50	0.0-1.5	A-6(4)	33	15	30.0	21.7	19.9	28.4	96	78	50	-	-
SS-536	CL	290+50	4.4-5.9	A-7-6(12)	46	28	31.3	15.9	18.3	34.6	99	80	55	18.3	-
SS-537	CL	290+50	9.4-10.9	A-7-5(27)	64	22	1.4	11.2	56.9	30.5	100	99	92	-	-
S-504	CL	295+15	0.0-2.5	A-7-6(13)	50	27	31.2	11.0	11.2	46.7	99	79	58	26.6	-
S-505	CL	295+15	2.5-8.6	A-7-6(5)	41	21	42.0	12.0	9.5	36.5	95	67	45	-	-
SS-506	CL	299+00	0.0-1.5	A-7-5(90)	112	77	1.2	2.8	18.9	77.1	100	99	97	-	-
SS-507	CL	299+00	3.2-6.7	A-7-5(33)	87	44	2.4	4.3	26.4	66.9	100	99	95	-	-
S-508	CL	301+00	0.0-10.0	A-6(2)	35	14	39.4	21.5	18.9	20.3	97	72	41	-	-

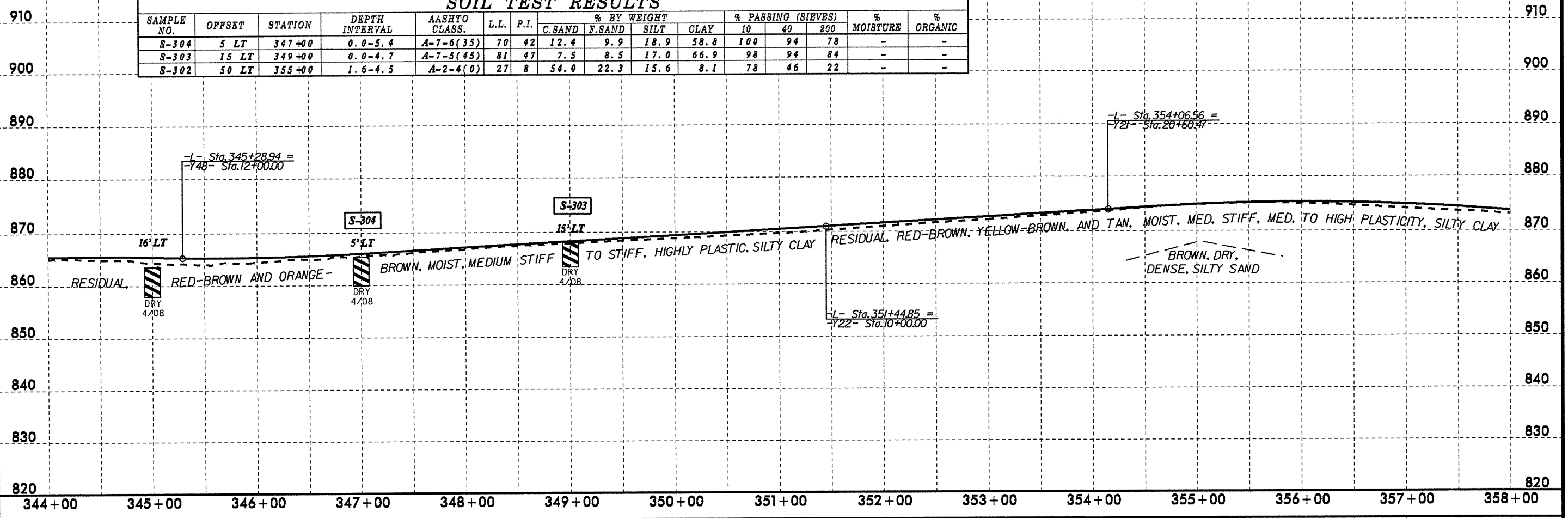


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40			200
S-509	15 RT	303+00	0.0-2.5	A-6(4)	35	15	32.5	19.9	19.3	28.4	97	78	50	-	-
S-510	CL	307+00	0.0-4.5	A-7-6(18)	55	36	26.2	16.8	12.4	44.6	100	86	59	22.1	-
SS-511	CL	309+00	0.0-1.5	A-7-6(24)	65	43	25.4	14.6	13.4	46.7	100	86	62	26.5	-
SS-512	CL	309+00	8.9-10.4	A-6(3)	40	9	26.6	28.4	26.8	18.3	100	87	50	-	-
S-513	CL	311+00	2.0-9.7	A-7-5(28)	67	31	15.2	6.5	17.4	60.9	100	91	79	-	-
S-514	CL	313+00	0.0-4.0	A-7-6(17)	57	34	23.1	16.0	16.2	44.6	93	80	59	-	-

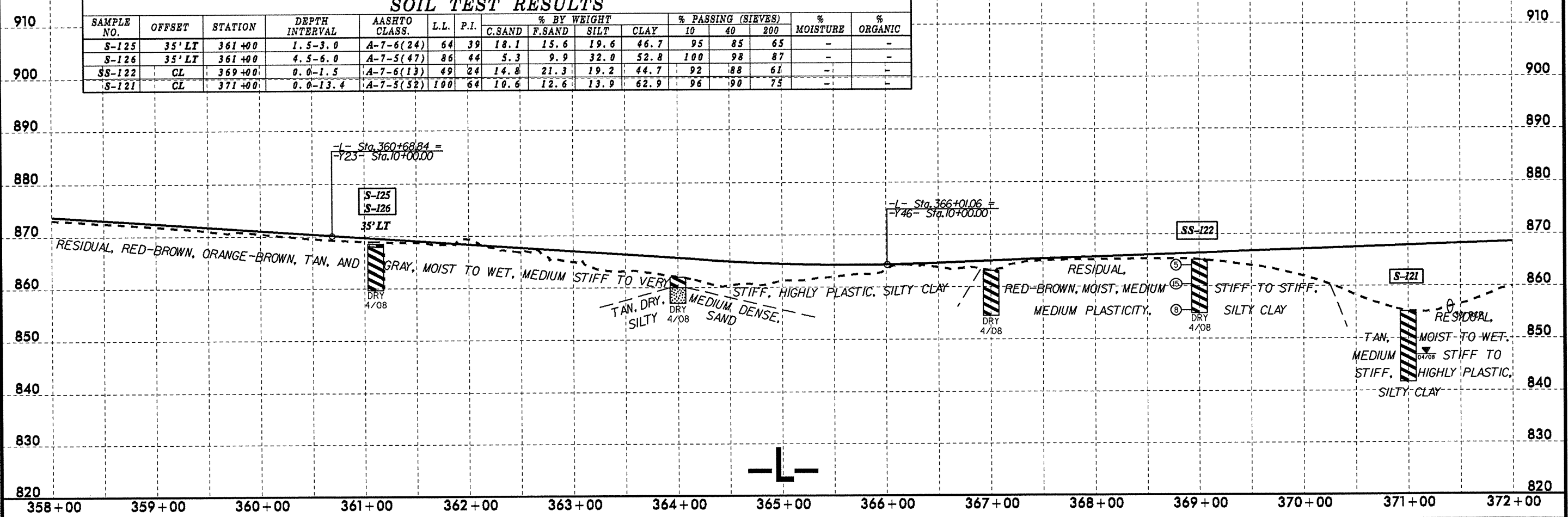


5/28/99

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-304	5 LT	347+00	0.0-5.4	A-7-6(35)	70	42	12.4	9.9	18.9	58.8	100	94	78	-	-
S-303	15 LT	349+00	0.0-4.7	A-7-5(45)	81	47	7.5	8.5	17.0	66.9	98	94	84	-	-
S-302	50 LT	355+00	1.6-4.5	A-2-4(0)	27	8	54.0	22.3	15.6	8.1	78	46	22	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-125	35' LT	361+00	1.5-3.0	A-7-6(24)	64	39	18.1	15.6	19.6	46.7	95	85	65	-	-
S-126	35' LT	361+00	4.5-6.0	A-7-5(47)	86	44	5.3	9.9	32.0	52.8	100	98	87	-	-
SS-122	CL	369+00	0.0-1.5	A-7-6(13)	49	24	14.8	21.3	19.2	44.7	92	88	61	-	-
S-121	CL	371+00	0.0-13.4	A-7-5(52)	100	64	10.6	12.6	13.9	62.9	96	90	75	-	-

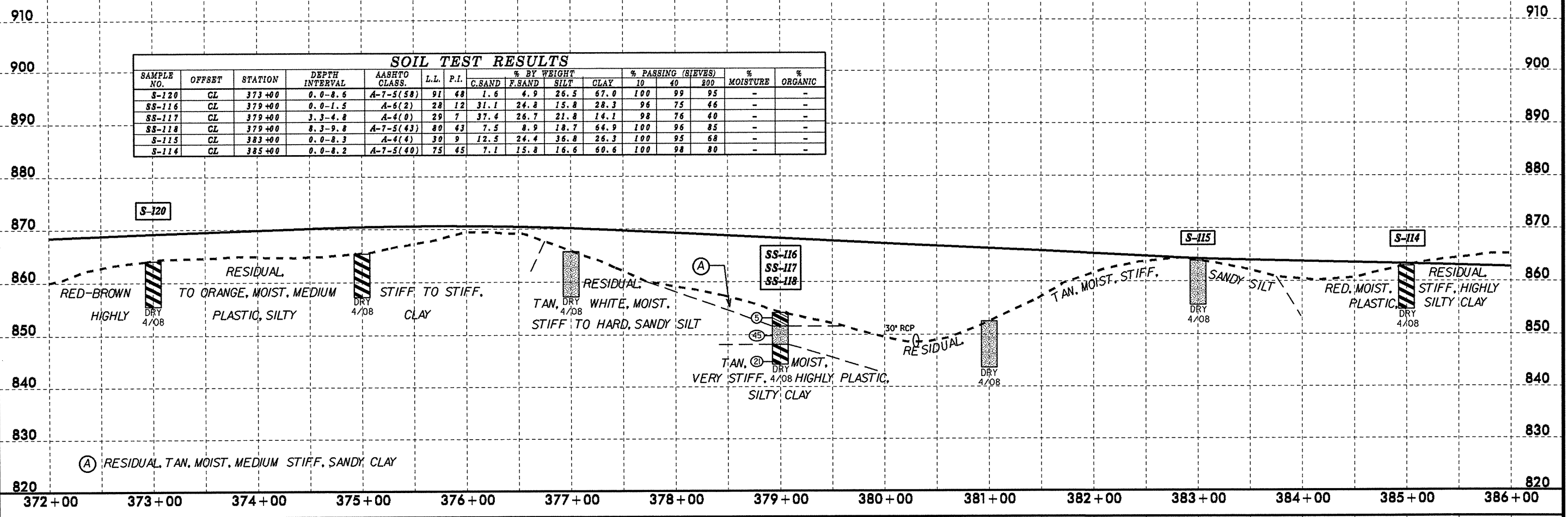


07-JUL-2010 13:57
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 Date: 5/28/99

5/28/99

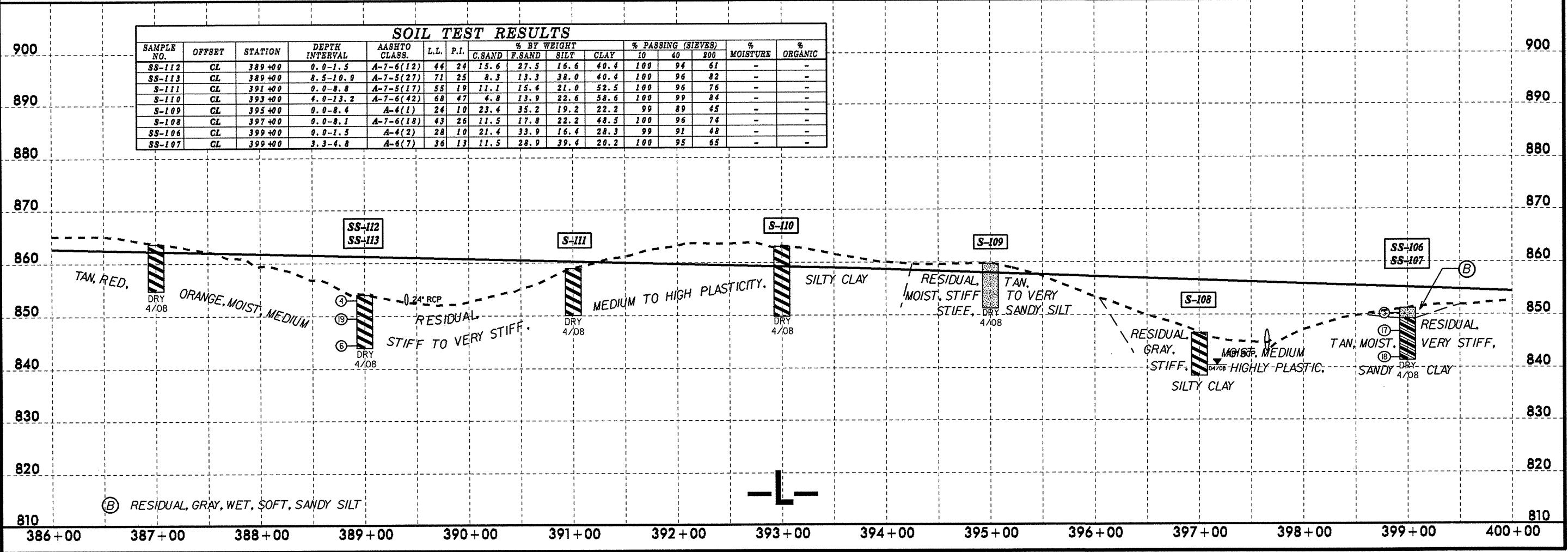
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-120	CL	373+00	0.0-8.6	A-7-5(58)	91	48	1.6	4.9	26.5	67.0	100	99	95	-	-
SS-116	CL	379+00	0.0-1.5	A-6(2)	28	12	31.1	24.8	15.8	28.3	96	75	46	-	-
SS-117	CL	379+00	3.3-4.8	A-4(0)	29	7	37.4	26.7	21.8	14.1	98	76	40	-	-
SS-118	CL	379+00	8.3-9.8	A-7-5(43)	80	43	7.5	8.9	18.7	64.9	100	96	85	-	-
S-115	CL	383+00	0.0-8.3	A-4(4)	30	9	12.5	24.4	36.8	26.3	100	95	68	-	-
S-114	CL	385+00	0.0-8.2	A-7-5(40)	75	45	7.1	15.8	16.6	60.6	100	98	80	-	-



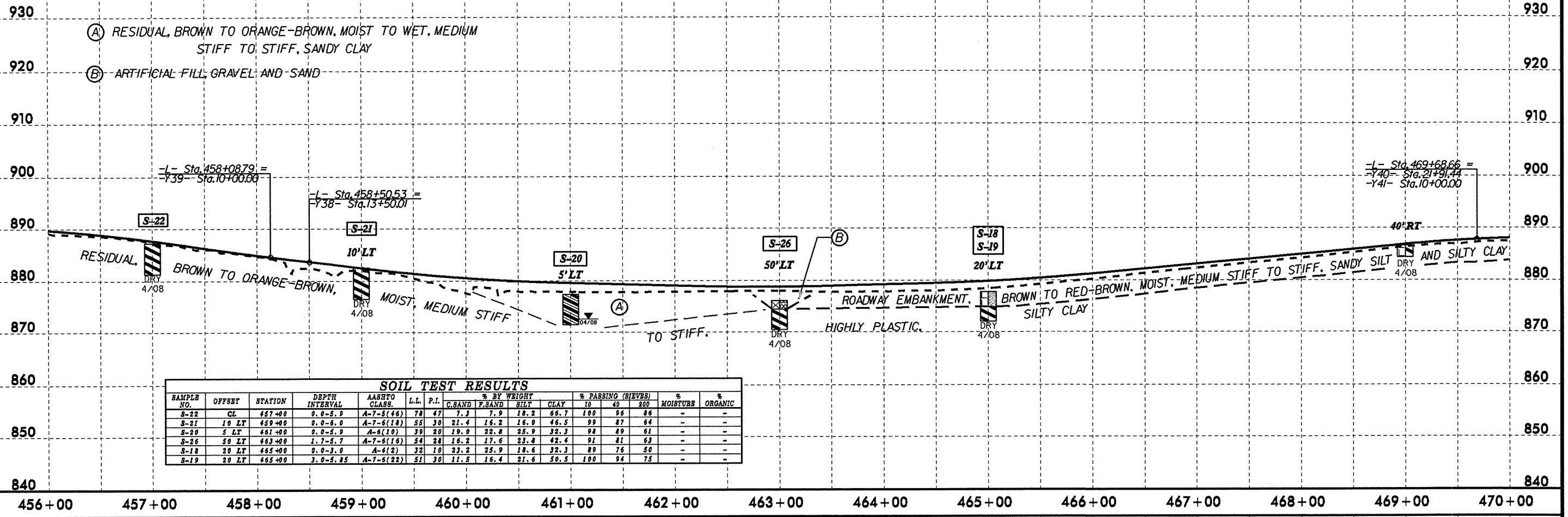
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-112	CL	389+00	0.0-1.5	A-7-6(12)	44	24	15.6	27.5	16.6	40.4	100	94	61	-	-
SS-113	CL	389+00	8.5-10.0	A-7-5(27)	71	25	8.3	13.3	38.0	40.4	100	96	82	-	-
S-111	CL	391+00	0.0-8.8	A-7-5(17)	55	19	11.1	15.4	21.0	52.5	100	96	76	-	-
S-110	CL	393+00	4.0-13.2	A-7-6(42)	68	47	4.8	13.9	22.6	58.6	100	99	84	-	-
S-109	CL	395+00	0.0-8.4	A-4(1)	24	10	23.4	35.2	19.2	22.2	99	89	45	-	-
S-108	CL	397+00	0.0-8.1	A-7-6(18)	43	25	11.5	17.8	22.2	48.5	100	96	74	-	-
SS-106	CL	399+00	0.0-1.5	A-4(2)	28	10	21.4	33.9	16.4	28.3	99	91	48	-	-
SS-107	CL	399+00	3.3-4.8	A-6(7)	36	13	11.5	28.9	39.4	20.2	100	95	65	-	-

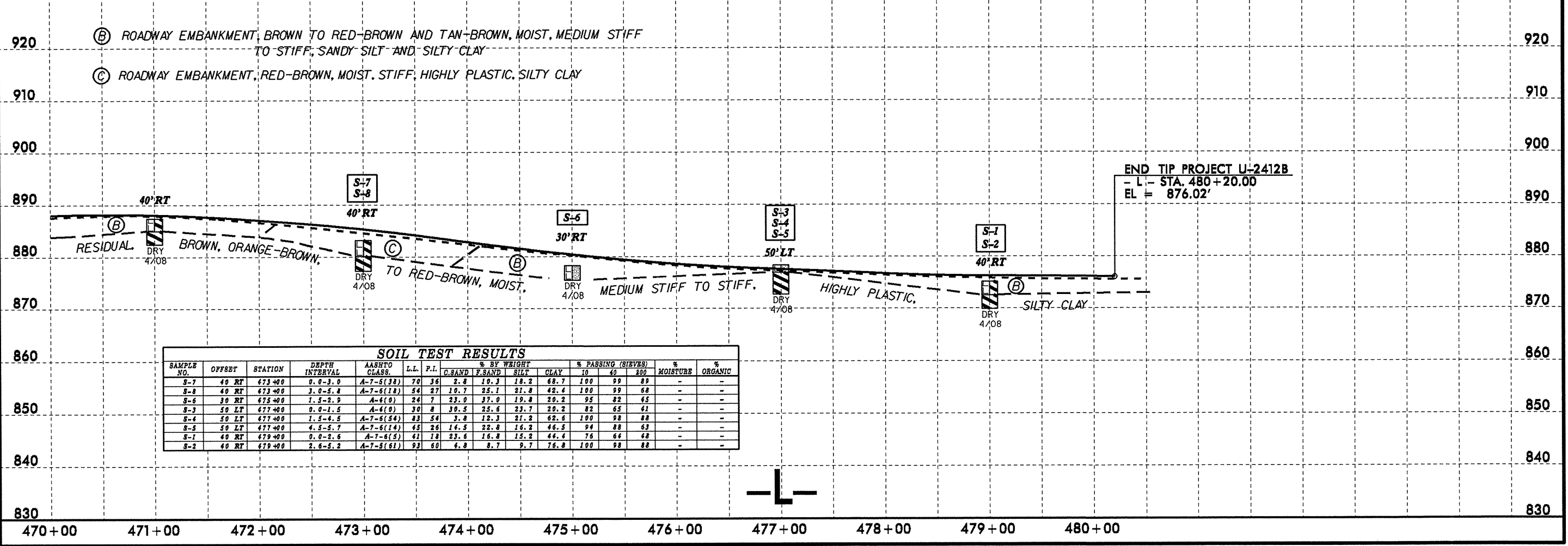


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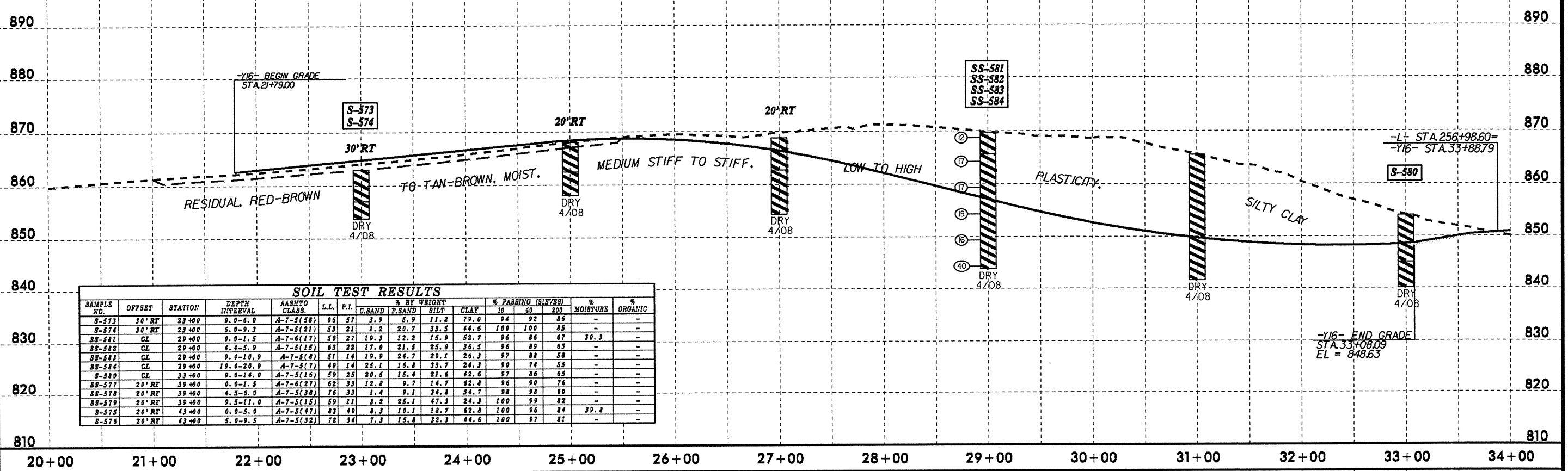


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-22	CL	457+00	0.0-5.9	A-7-S(46)	78	47	7.3	7.9	18.2	66.7	100	96	86	-	-
S-21	10' LT	459+00	0.0-6.0	A-7-S(18)	55	30	21.4	16.2	16.0	46.5	99	87	64	-	-
S-20	5' LT	461+00	0.0-5.9	A-6(10)	39	20	19.0	22.8	25.9	32.3	94	89	61	-	-
S-26	50' LT	463+00	1.7-5.7	A-7-S(16)	54	28	16.2	17.6	23.8	42.4	91	81	63	-	-
S-18	20' LT	465+00	0.0-3.0	A-6(2)	32	10	23.2	25.9	18.6	32.3	89	76	50	-	-
S-19	20' LT	465+00	3.0-5.85	A-7-S(22)	51	30	11.5	16.4	21.6	50.5	100	94	75	-	-

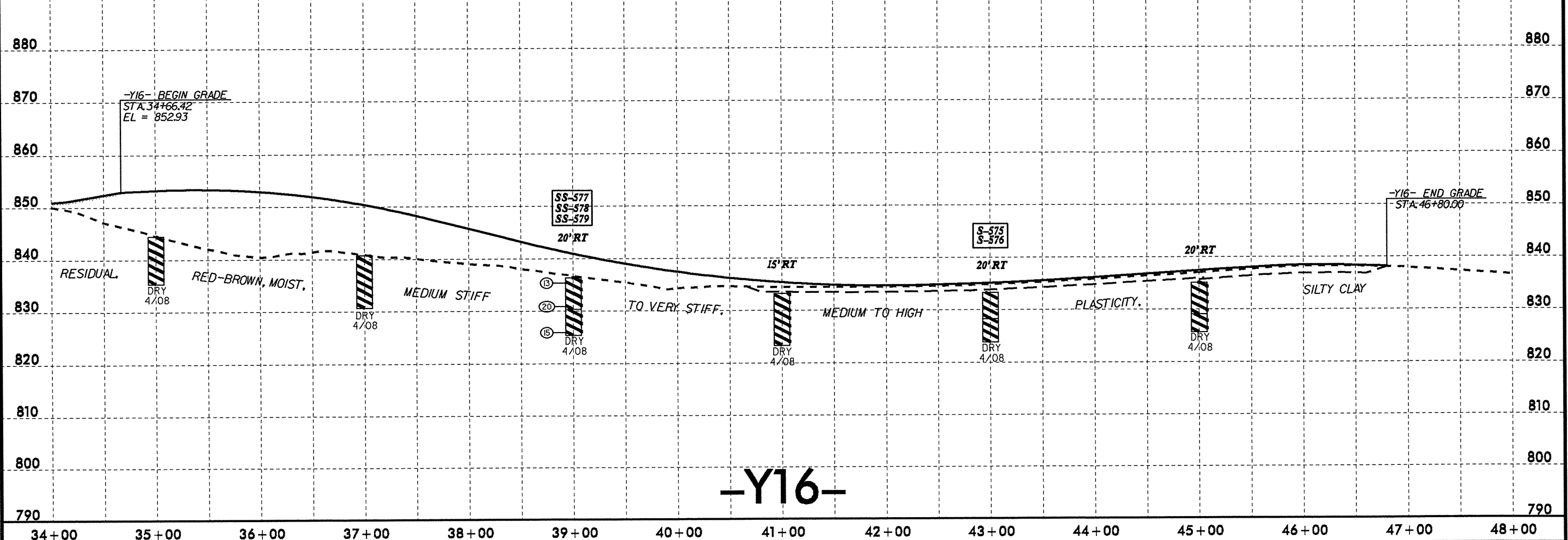


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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-7	40' RT	473+00	0.0-3.0	A-7-S(38)	70	36	2.8	10.3	18.2	68.7	100	99	89	-	-
S-8	40' RT	473+00	3.0-5.8	A-7-S(18)	54	27	10.7	25.1	21.8	42.4	100	99	68	-	-
S-6	30' RT	475+00	1.5-2.9	A-6(9)	24	7	23.0	37.0	19.8	20.2	95	82	65	-	-
S-3	50' LT	477+00	0.0-1.5	A-6(9)	30	8	30.5	25.6	23.7	20.2	82	65	61	-	-
S-4	50' LT	477+00	1.5-4.5	A-7-S(54)	83	54	3.8	12.3	21.2	62.6	100	98	88	-	-
S-5	50' LT	477+00	4.5-5.7	A-7-S(14)	45	26	14.5	22.8	16.2	46.5	94	88	63	-	-
S-1	40' RT	479+00	0.0-2.6	A-7-S(5)	41	18	23.6	16.8	15.2	44.4	76	64	68	-	-
S-2	40' RT	479+00	2.6-5.2	A-7-S(61)	93	60	6.8	8.7	9.7	76.8	100	98	88	-	-

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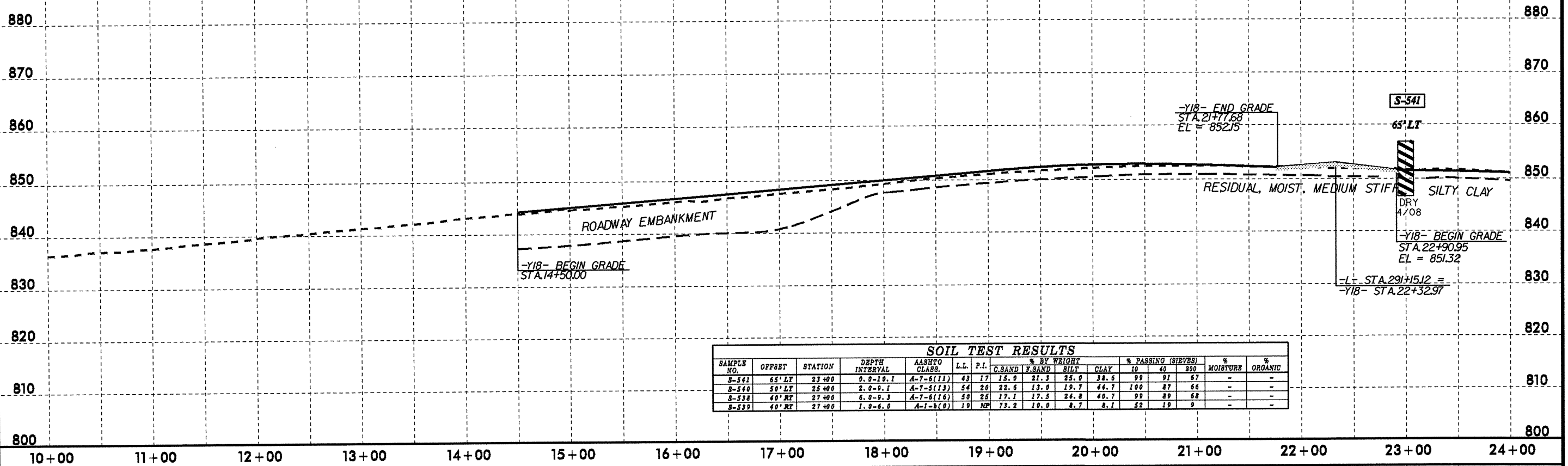


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-573	30' RT	23+00	0.0-5.0	A-7-5(58)	56	57	3.9	5.9	11.2	79.0	94	92	86	-	-
S-574	30' RT	23+00	6.0-9.3	A-7-5(21)	53	21	1.2	20.7	33.5	44.6	100	100	85	-	-
SS-581	CL	29+00	0.0-1.5	A-7-6(17)	50	27	19.3	12.2	15.9	52.7	96	86	67	30.3	-
SS-582	CL	29+00	4.4-5.9	A-7-5(15)	63	22	17.0	21.5	25.0	36.5	96	85	63	-	-
SS-583	CL	29+00	9.4-10.9	A-7-5(8)	51	14	19.9	24.7	29.1	26.3	97	88	58	-	-
SS-584	CL	29+00	19.4-20.9	A-7-5(7)	49	14	25.1	16.8	33.7	24.3	90	74	55	-	-
S-580	CL	33+00	9.0-14.0	A-7-5(16)	59	25	20.5	15.4	21.6	42.6	97	86	65	-	-
SS-577	20' RT	39+00	0.0-1.5	A-7-6(27)	62	33	12.8	9.7	14.7	62.8	96	90	76	-	-
SS-578	20' RT	39+00	4.5-5.0	A-7-5(38)	76	33	1.4	9.1	34.4	54.7	98	98	90	-	-
SS-579	20' RT	39+00	9.5-11.0	A-7-5(15)	59	11	3.2	25.1	47.3	24.3	100	99	82	-	-
S-575	20' RT	43+00	0.0-5.0	A-7-5(47)	83	49	8.3	10.1	18.7	62.8	100	96	84	39.8	-
S-576	20' RT	43+00	5.0-9.5	A-7-5(32)	72	34	7.3	15.8	32.3	44.6	100	97	81	-	-



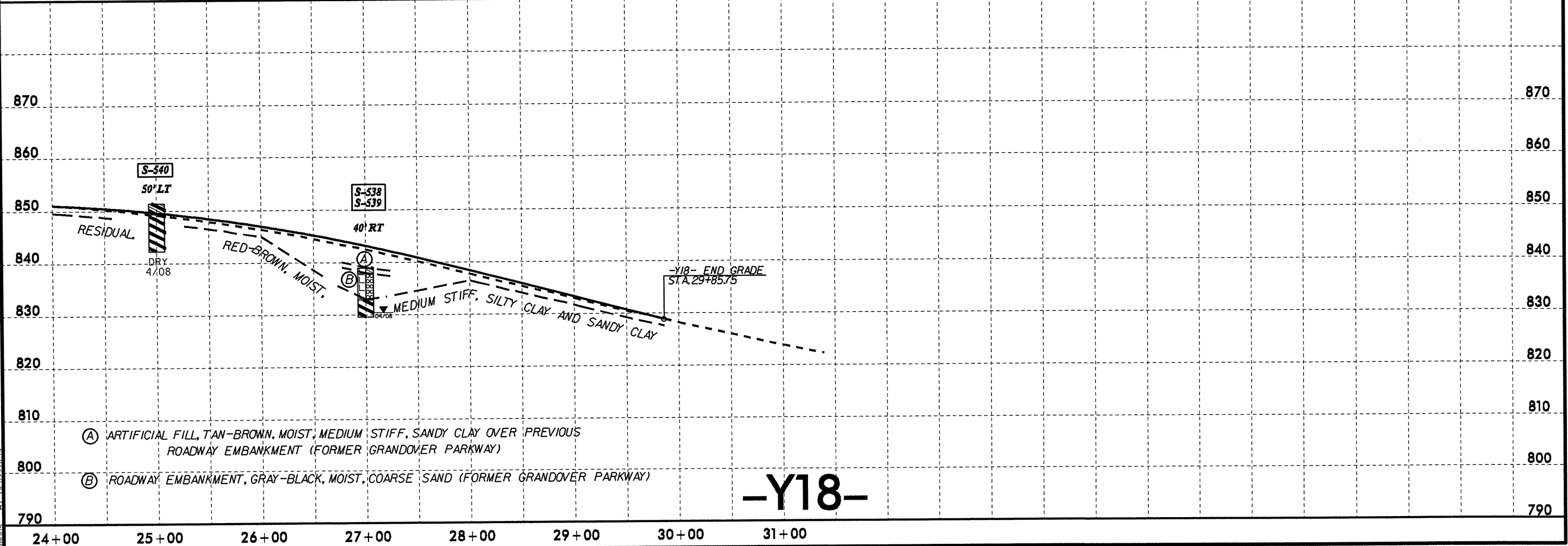
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC	
							G.SAND	F.SAND	SILT	CLAY	10	200			
S-541	65' LT	23+00	0.0-10.1	A-7-6(11)	43	17	15.0	21.3	25.0	38.5	99	91	67	-	-
S-540	50' LT	25+00	2.0-9.1	A-7-5(13)	54	20	22.0	13.0	19.7	44.7	100	87	66	-	-
S-538	40' RT	27+00	6.0-9.3	A-7-6(16)	50	25	17.1	17.5	26.0	40.7	99	89	68	-	-
S-539	40' RT	27+00	1.0-6.0	A-1-3(0)	19	NP	73.2	10.0	8.7	8.1	52	19	9	-	-

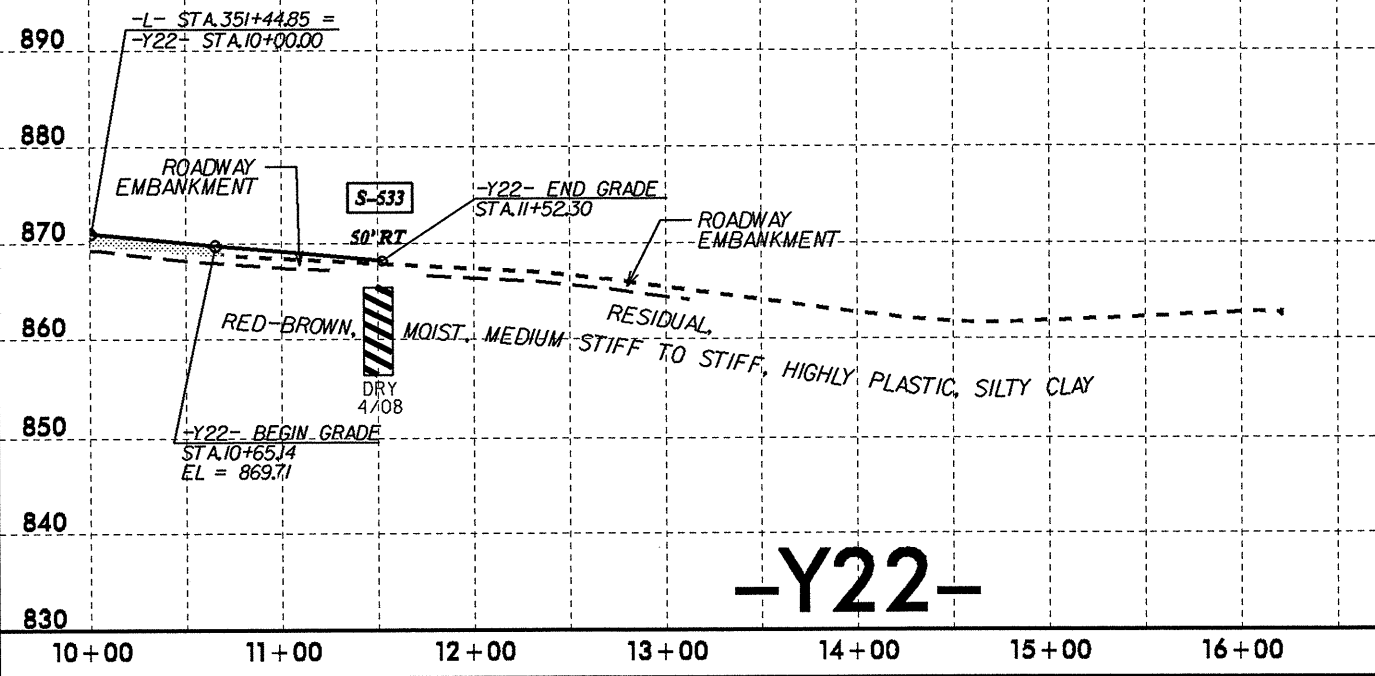
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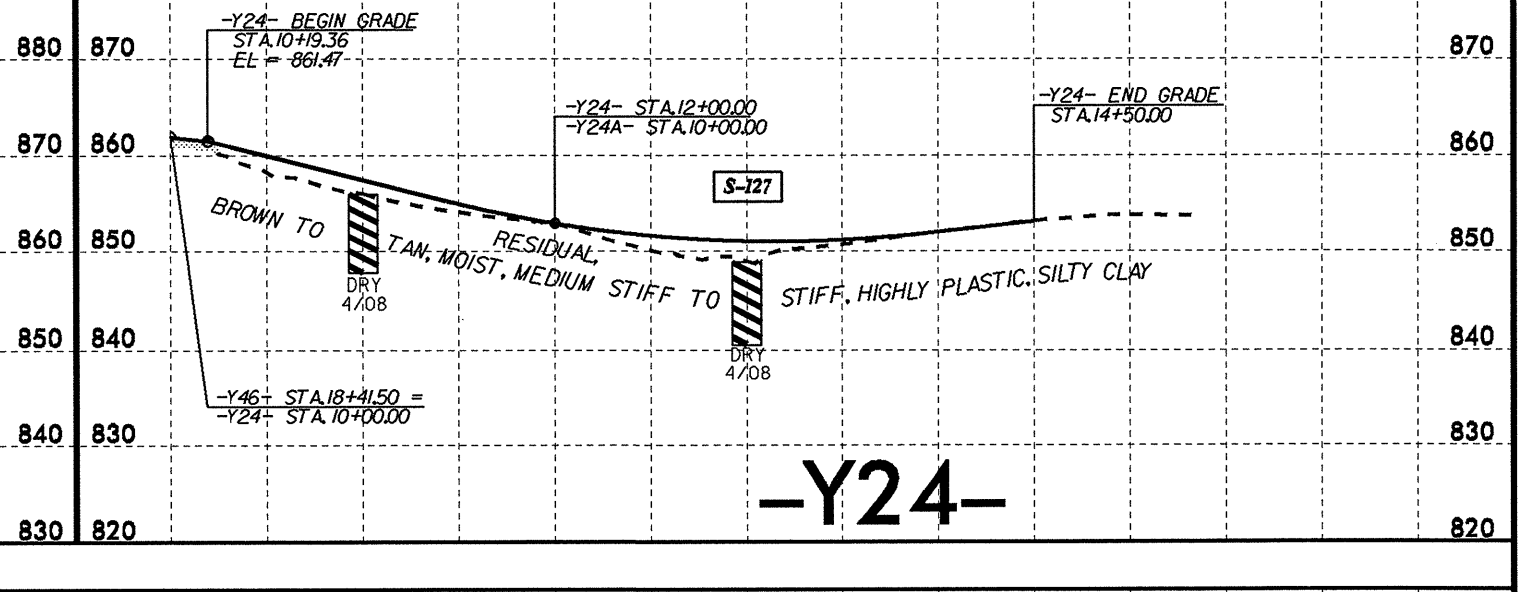
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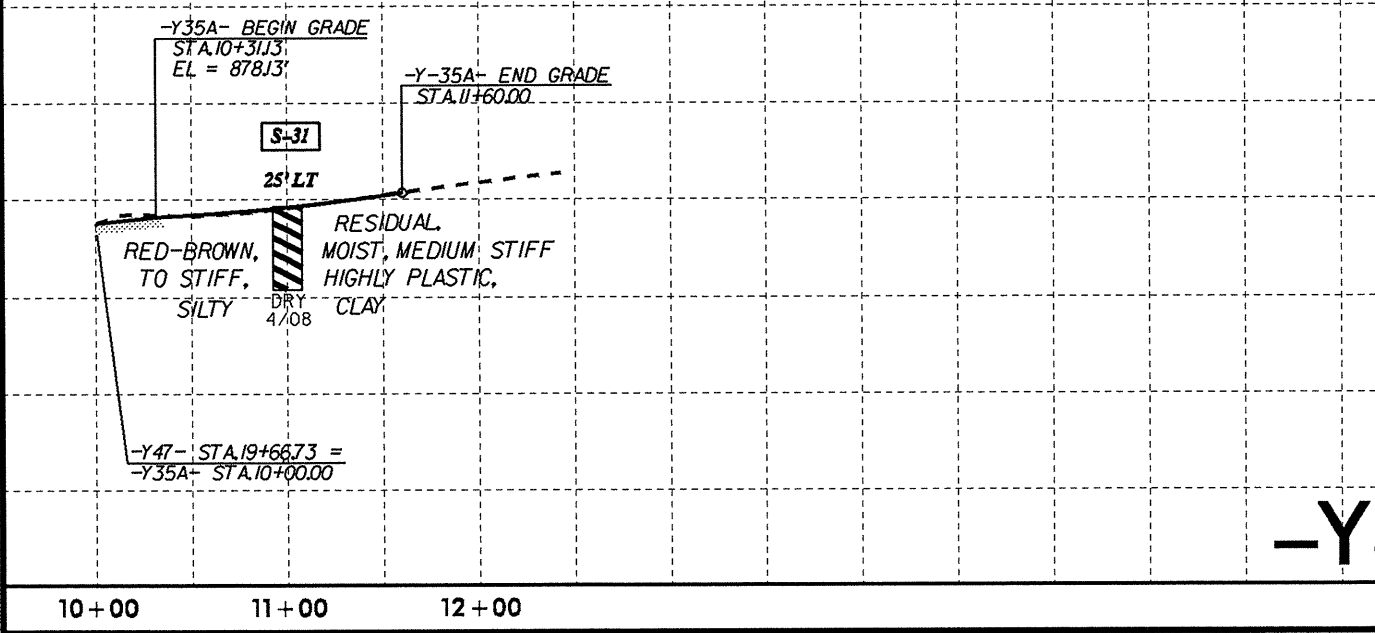
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-533	50' RT	11+50	0.0-9.1	A-7-6(19)	54	32	18.7	18.3	18.3	44.7	100	91	65	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-127	CL	13+00	0.0-8.3	A-7-6(13)	46	26	12.6	29.4	17.4	40.6	98	90	60	-	-



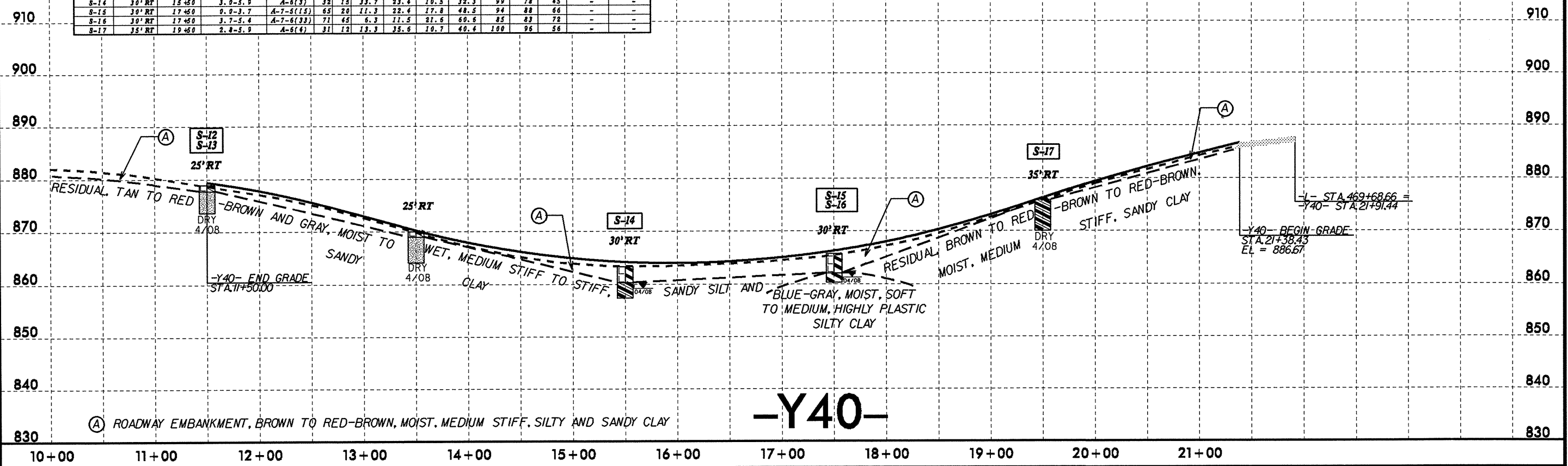
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-31	25' LT	11+00	0.0-8.3	A-7-3(+45)	80	40	3.4	6.7	21.2	68.7	100	99	91	-	-



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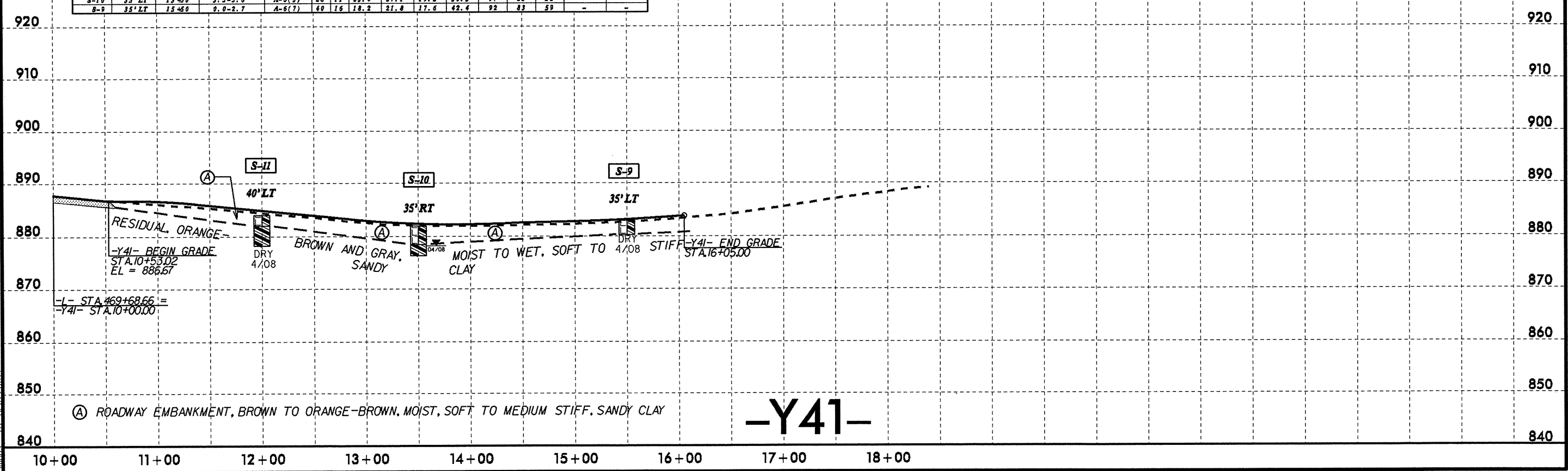
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-12	25' RT	11+50	0.0-1.2	A-6(3)	36	19	31.9	21.4	10.3	36.4	72	63	39	-	-
S-13	25' RT	11+50	1.2-5.4	A-6(1)	25	10	31.1	25.9	10.7	32.3	92	81	45	-	-
S-14	30' RT	15+50	3.0-5.9	A-6(3)	32	15	33.7	23.4	10.5	32.3	99	78	45	-	-
S-15	30' RT	17+50	0.0-3.7	A-7-S(15)	65	20	11.3	11.5	17.8	48.5	94	88	66	-	-
S-16	30' RT	17+50	3.7-5.4	A-7-S(33)	71	45	6.3	11.5	21.6	69.6	85	83	72	-	-
S-17	35' RT	19+50	2.4-5.9	A-6(4)	31	12	13.3	35.6	10.7	40.4	100	96	56	-	-



(A) ROADWAY EMBANKMENT, BROWN TO RED-BROWN, MOIST, MEDIUM STIFF, SILTY AND SANDY CLAY

-Y40-

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-11	40' LT	12+00	2.0-5.8	A-6(28)	40	29	0.8	4.2	22.2	72.7	100	100	97	-	-
S-10	35' LT	13+50	3.5-5.6	A-6(3)	28	11	23.4	27.1	19.2	30.3	97	85	52	-	-
S-9	35' LT	15+50	0.0-2.7	A-6(7)	40	16	18.2	21.8	17.6	42.4	92	83	59	-	-

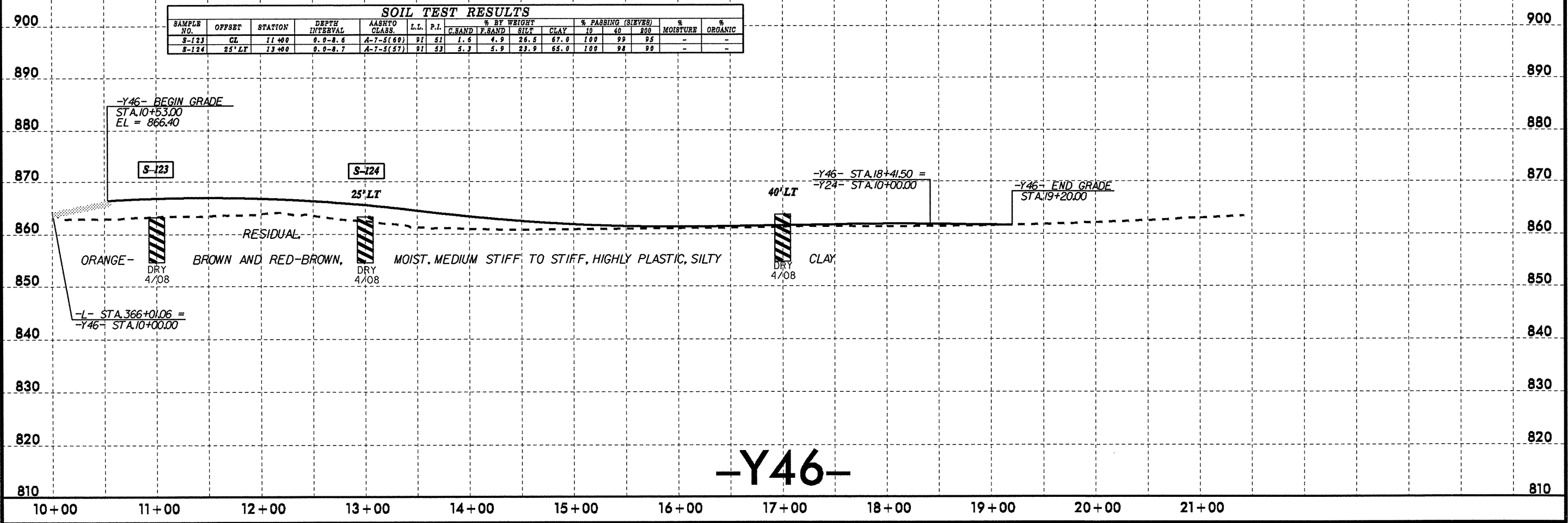
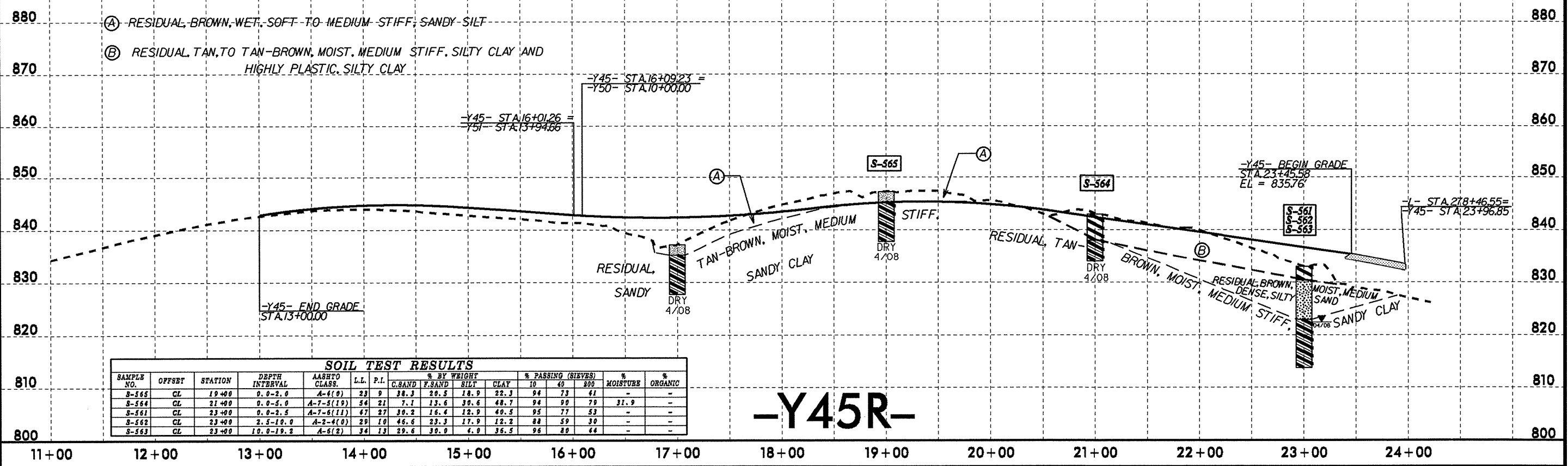


(A) ROADWAY EMBANKMENT, BROWN TO ORANGE-BROWN, MOIST, SOFT TO MEDIUM STIFF, SANDY CLAY

-Y41-

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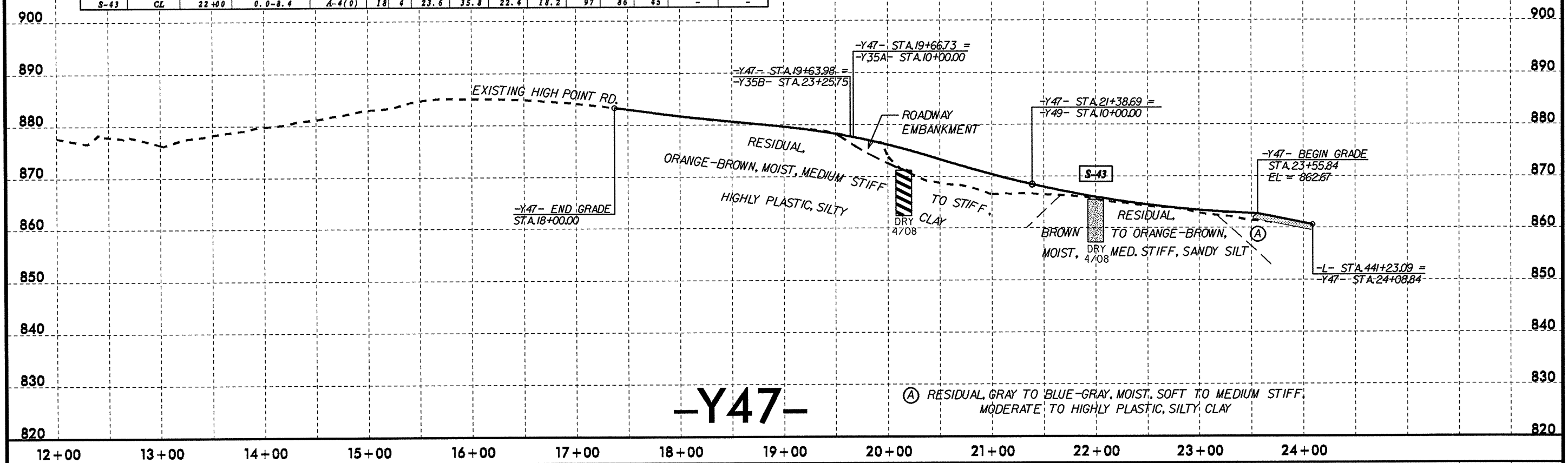
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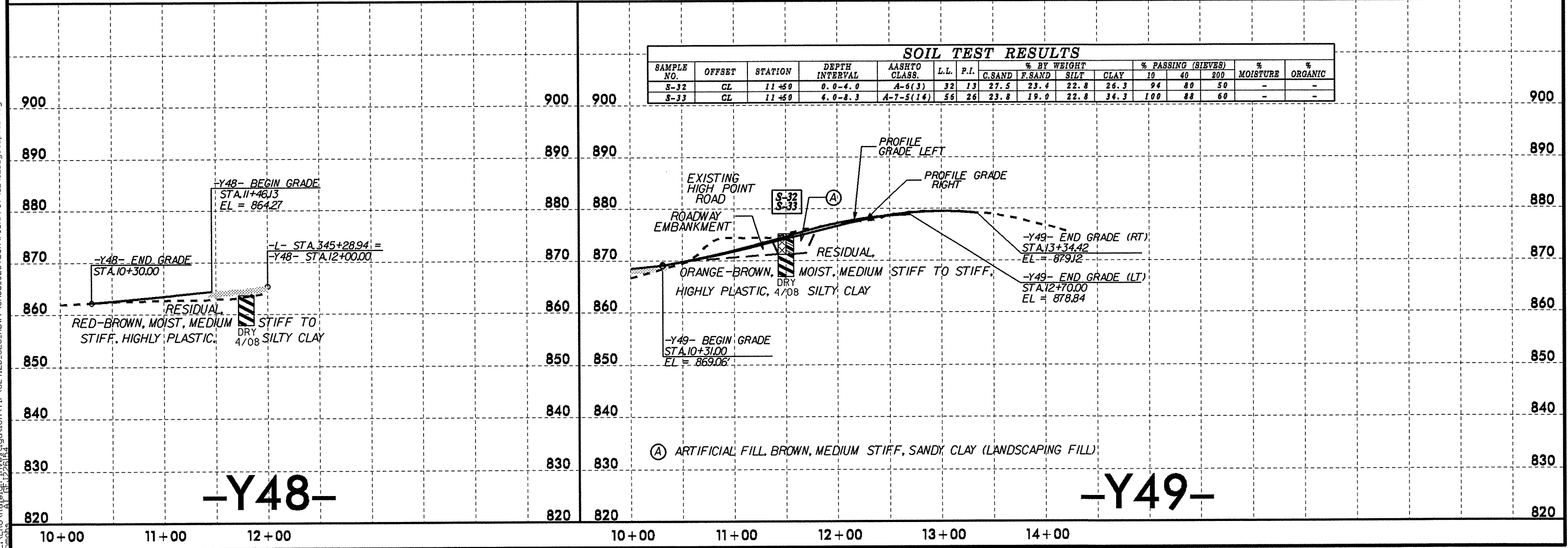
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-43	CL	22+00	0.0-8.4	A-4(0)	18	4	23.6	35.8	22.4	18.2	97	86	45	-	-



-Y47-

(A) RESIDUAL GRAY TO BLUE-GRAY, MOIST, SOFT TO MEDIUM STIFF, MODERATE TO HIGHLY PLASTIC, SILTY CLAY

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-32	CL	11+50	0.0-4.0	A-6(3)	32	13	27.5	23.4	22.8	26.3	94	80	50	-	-
S-33	CL	11+50	4.0-8.3	A-7-5(14)	56	26	23.8	19.0	22.8	34.3	100	88	60	-	-



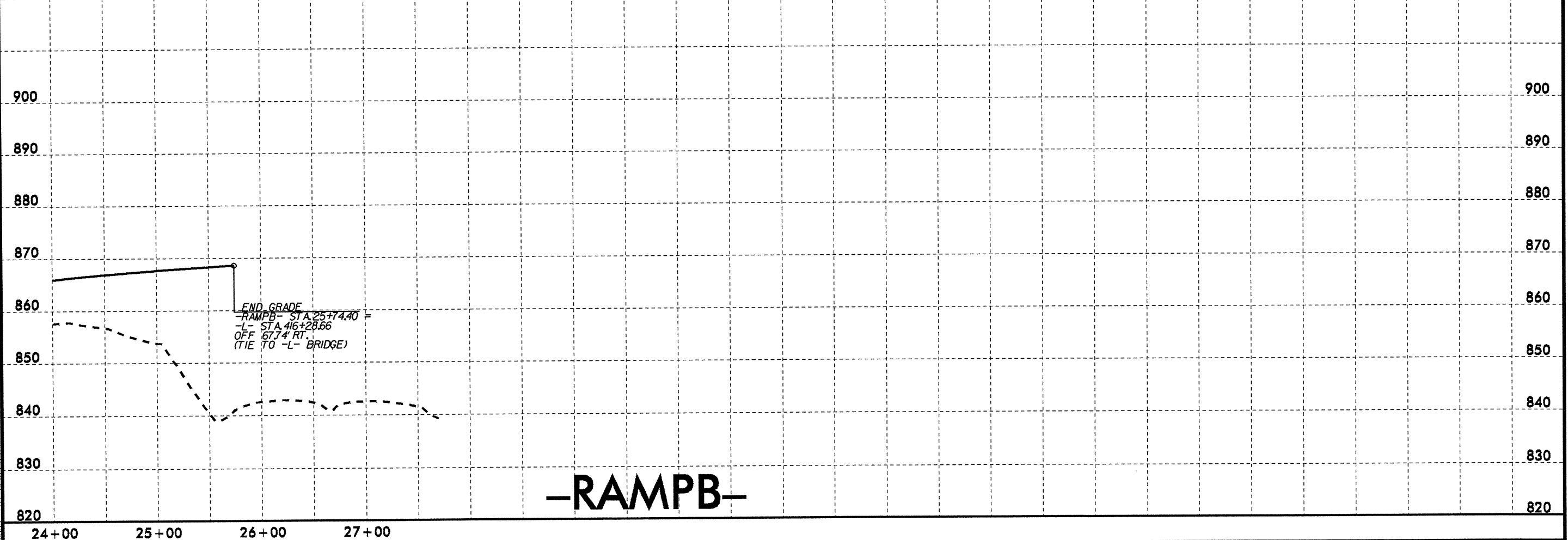
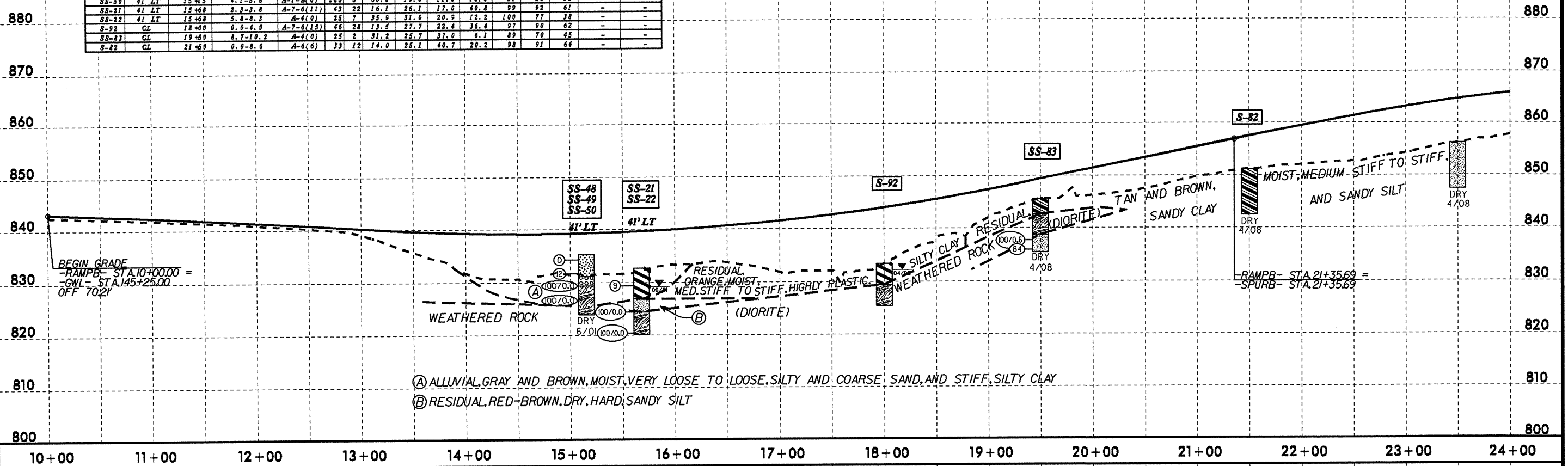
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-Y49-

(A) ARTIFICIAL FILL BROWN, MEDIUM STIFF, SANDY CLAY (LANDSCAPING FILL)

5/28/99

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	60		
SS-48	4' LT	15+45	0.0-1.5	A-2-(4)0	25	3	23.0	50.0	18.0	10.0	96	32	-	-
SS-49	4' LT	15+45	2.6-4.1	A-2-(4)0	29	NP	66.0	40.0	6.0	8.0	83	14	-	-
SS-50	4' LT	15+45	4.1-5.6	A-1-(8)0	266	6	60.0	19.0	11.0	10.0	51	26	12	-
SS-21	4' LT	15+88	2.3-3.8	A-7-(11)	43	22	16.1	26.1	17.0	40.8	99	61	-	-
SS-22	4' LT	15+88	5.4-8.3	A-4(0)	25	7	35.9	31.0	20.9	12.2	100	77	38	-
S-92	CL	18+80	0.0-4.0	A-7-(15)	46	28	13.5	27.7	22.4	36.4	97	90	62	-
SS-83	CL	19+80	8.7-10.2	A-4(0)	25	2	31.2	25.7	37.0	6.1	89	70	45	-
S-82	CL	21+80	0.0-8.6	A-6(6)	33	12	14.0	25.1	40.7	20.2	98	91	64	-

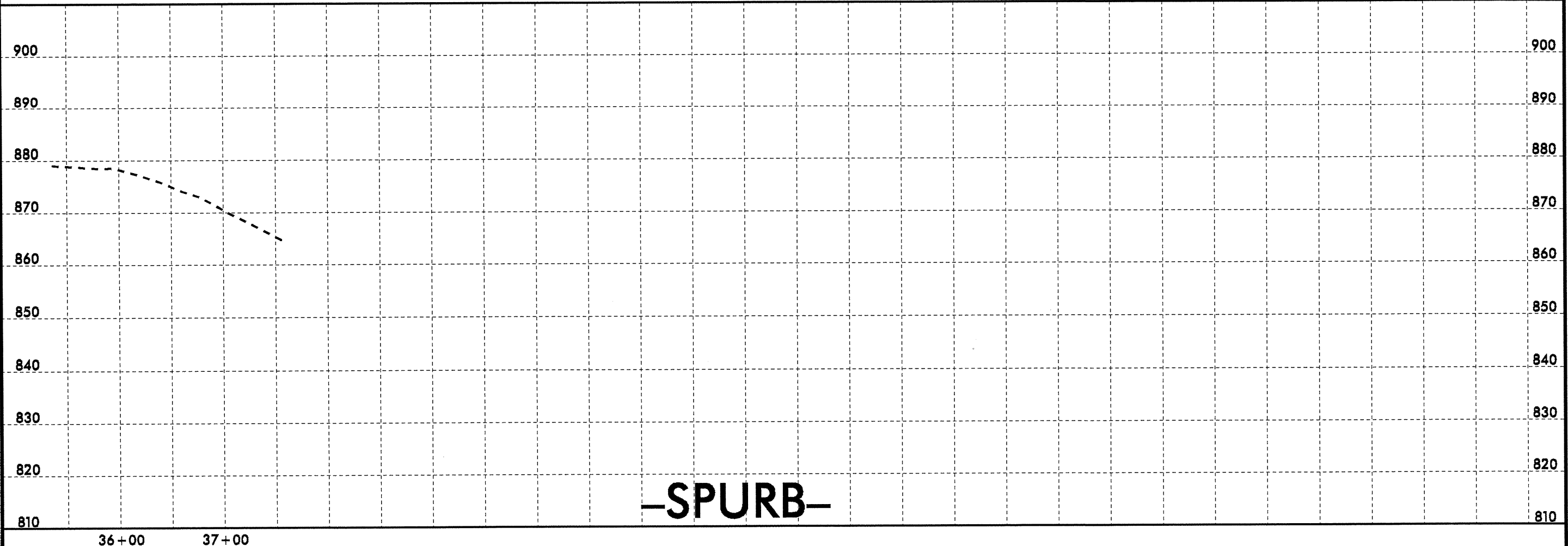
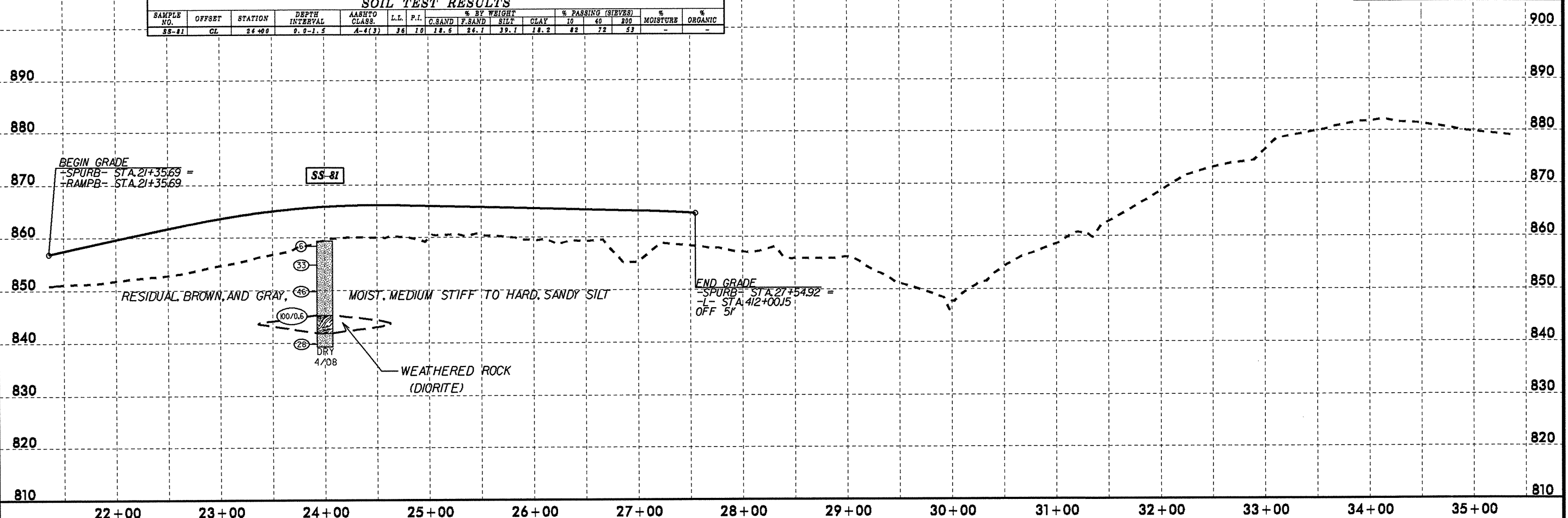


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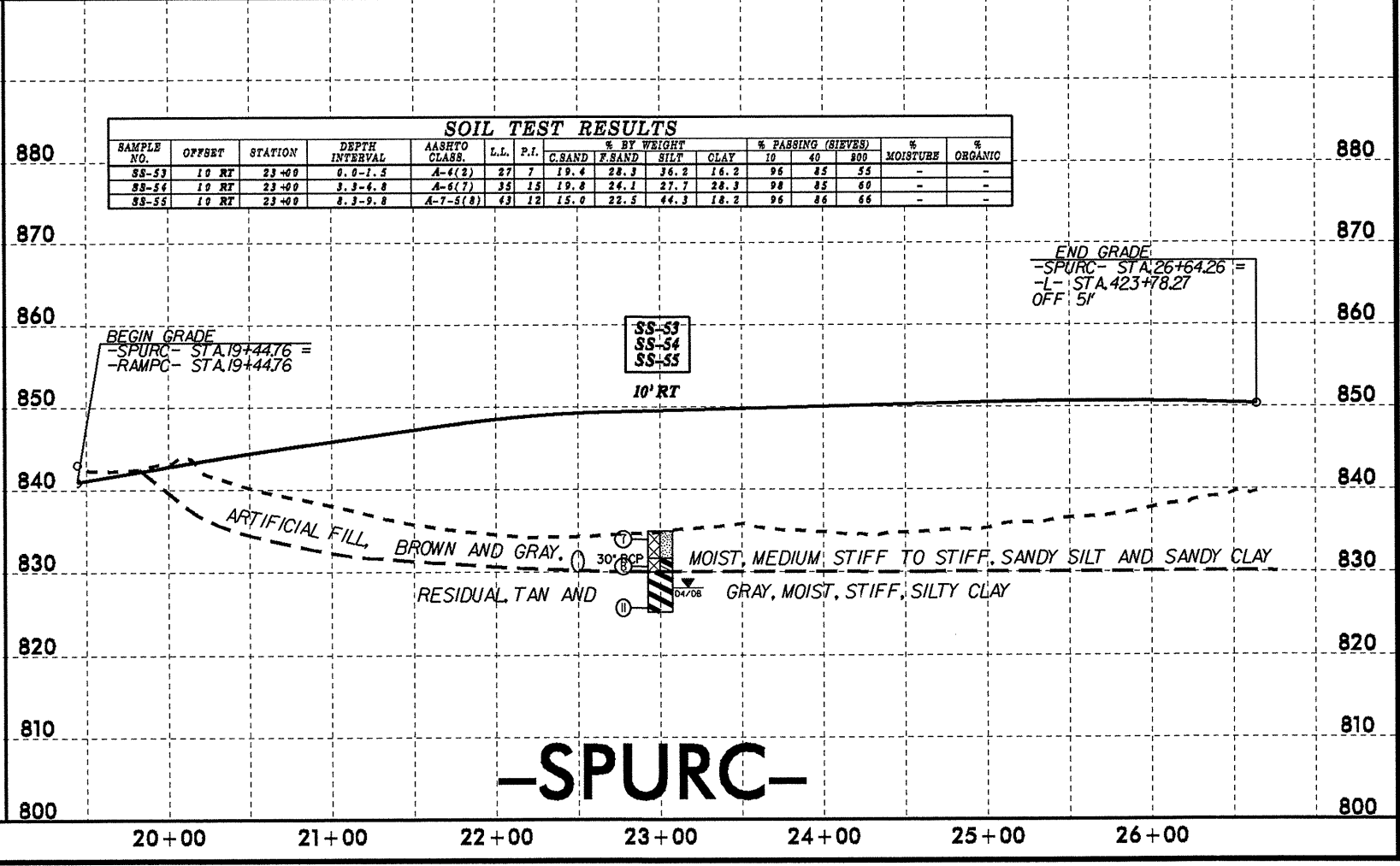
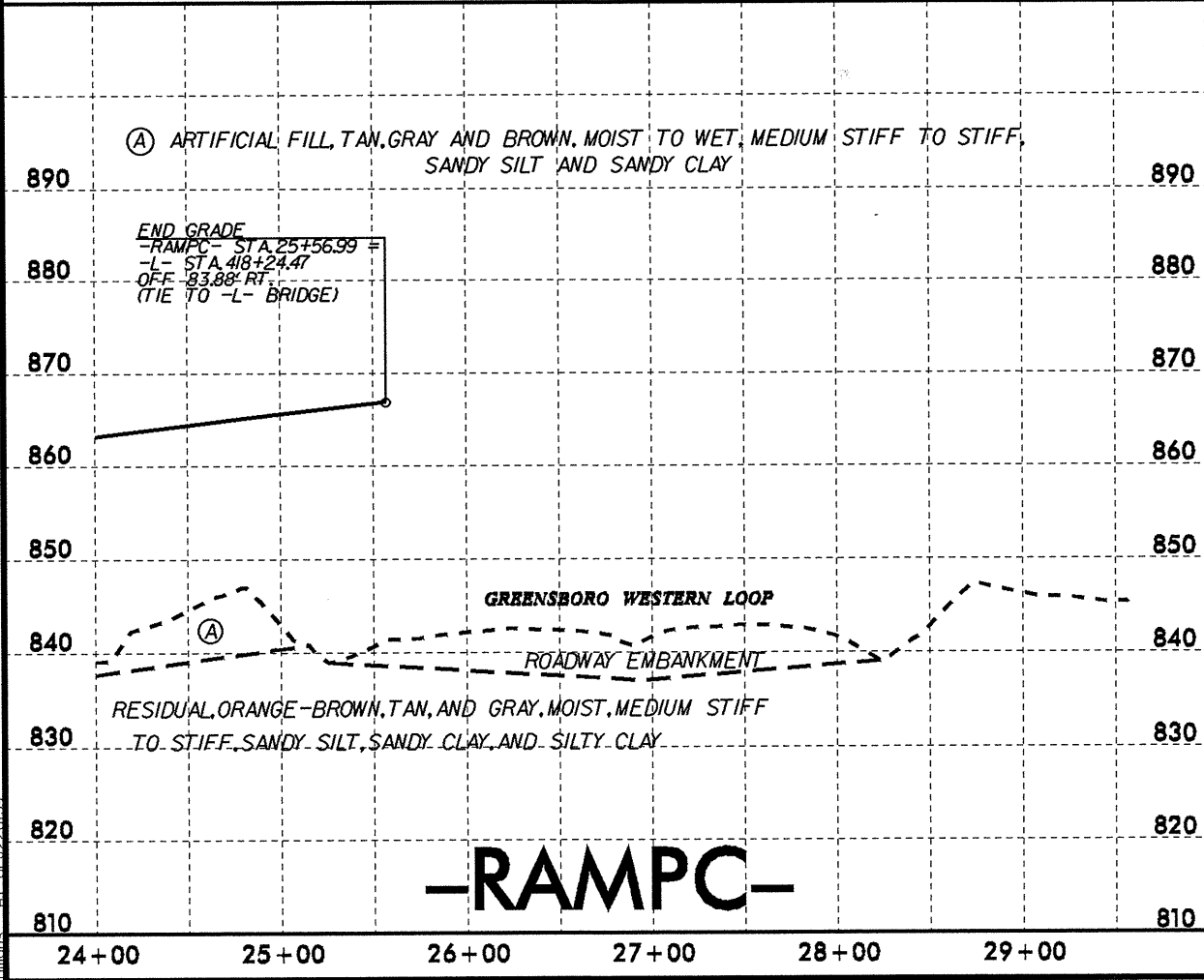
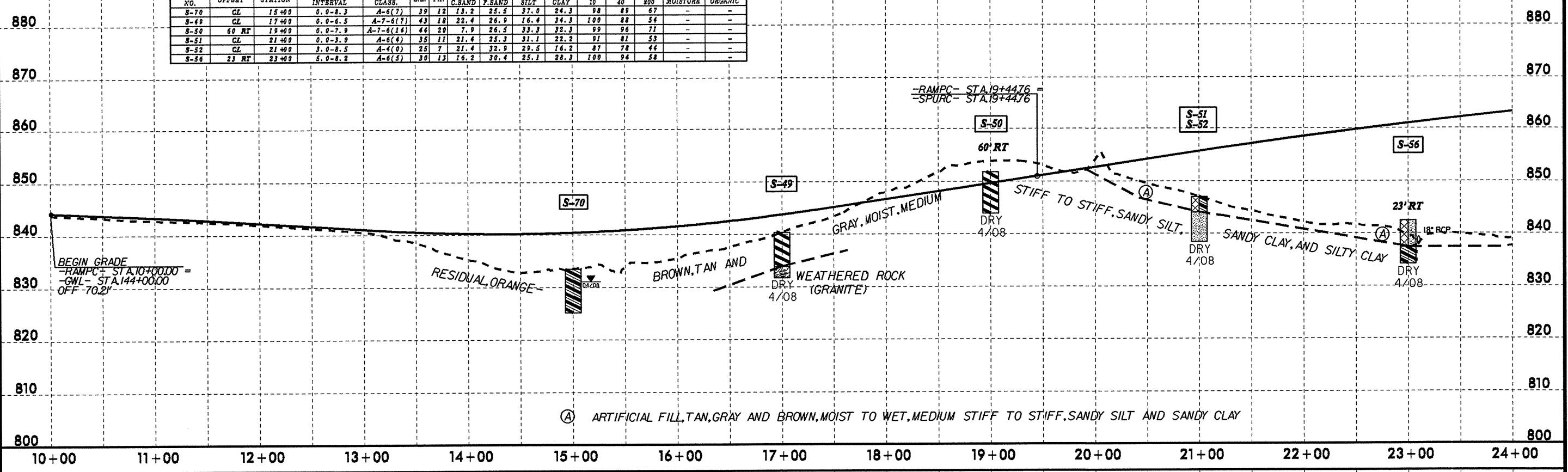
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-81	CL	24+06	0.0-1.5	A-4(3)	38	10	18.6	26.1	39.1	19.2	82	72	53	-	-



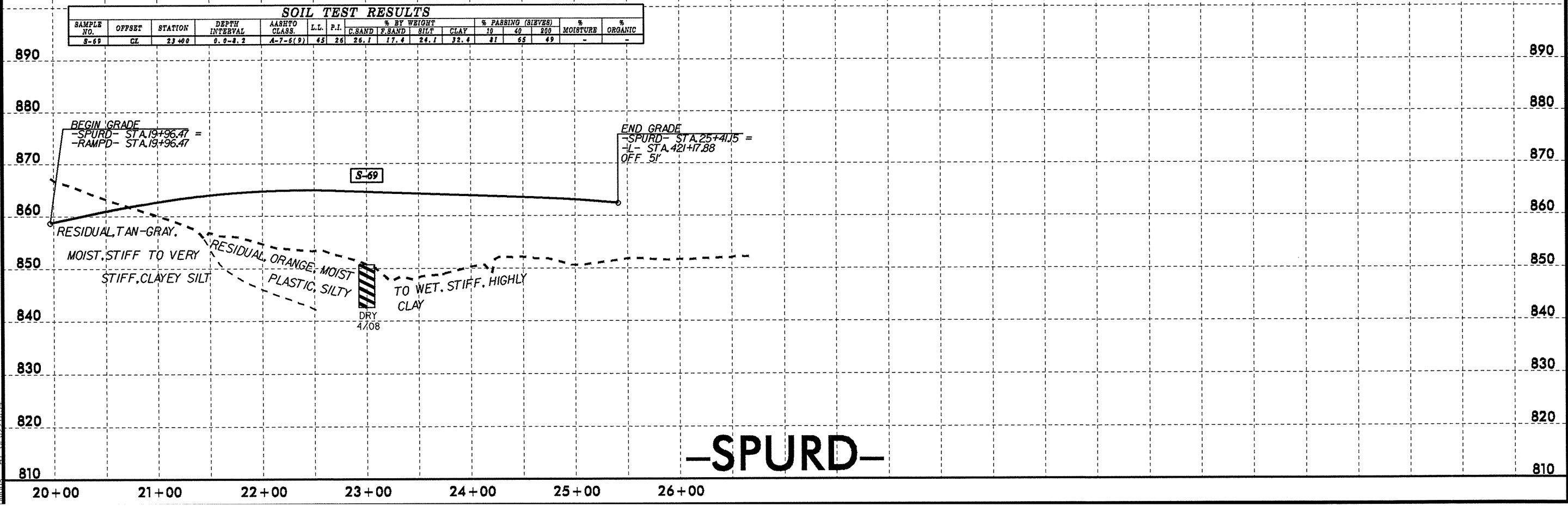
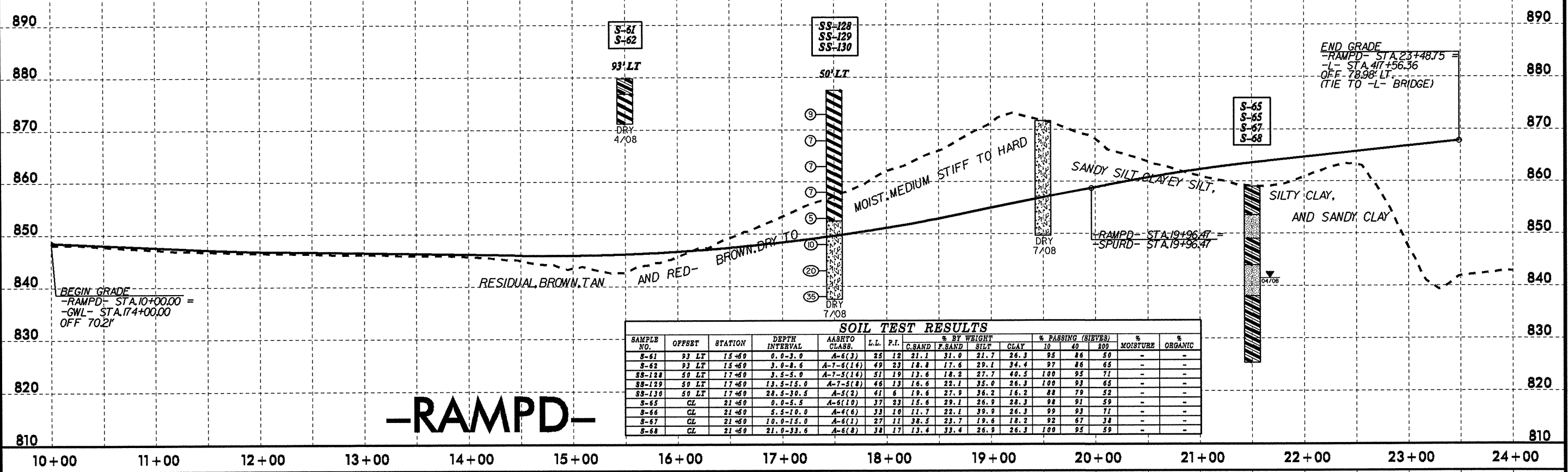
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-70	CL	15+00	0.0-3.3	A-6(7)	39	12	13.2	25.5	37.0	24.3	98	89	67	-	-
S-49	CL	17+00	0.0-6.5	A-7-6(7)	43	18	22.4	26.9	16.4	34.3	100	88	54	-	-
S-50	60' RT	19+00	0.0-7.9	A-7-6(16)	44	20	7.9	26.5	33.3	32.3	99	96	71	-	-
S-51	CL	21+00	0.0-3.9	A-6(4)	35	11	21.4	25.3	31.1	22.2	91	81	53	-	-
S-52	CL	21+00	3.0-8.5	A-4(0)	25	7	21.4	32.9	29.5	16.2	87	78	44	-	-
S-56	23' RT	23+00	5.0-8.2	A-6(5)	30	13	16.2	30.4	25.1	28.3	100	94	58	-	-

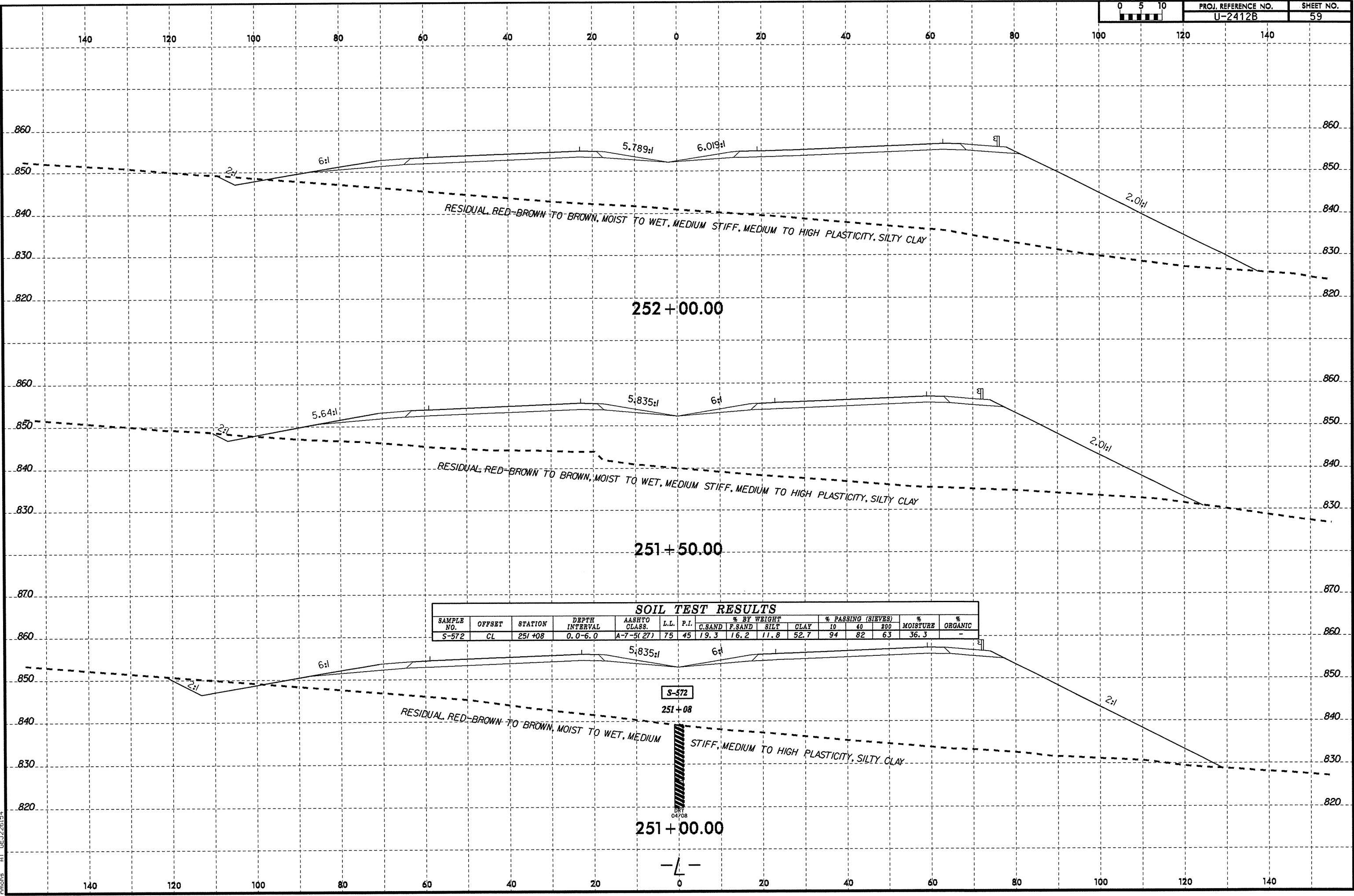


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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-53	10' RT	23+00	0.0-7.5	A-4(2)	27	7	19.4	28.3	36.2	16.2	96	85	55	-	-
SS-54	10' RT	23+00	3.3-6.8	A-6(7)	35	15	19.8	24.1	27.7	28.3	98	85	60	-	-
SS-55	10' RT	23+00	6.3-9.8	A-7-5(8)	43	12	15.0	22.5	44.3	18.2	96	86	66	-	-

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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-572	CL	251+08	0.0-6.0	A-7-5(27)	75	45	19.3	16.2	11.8	52.7	94	82	63	36.3	-

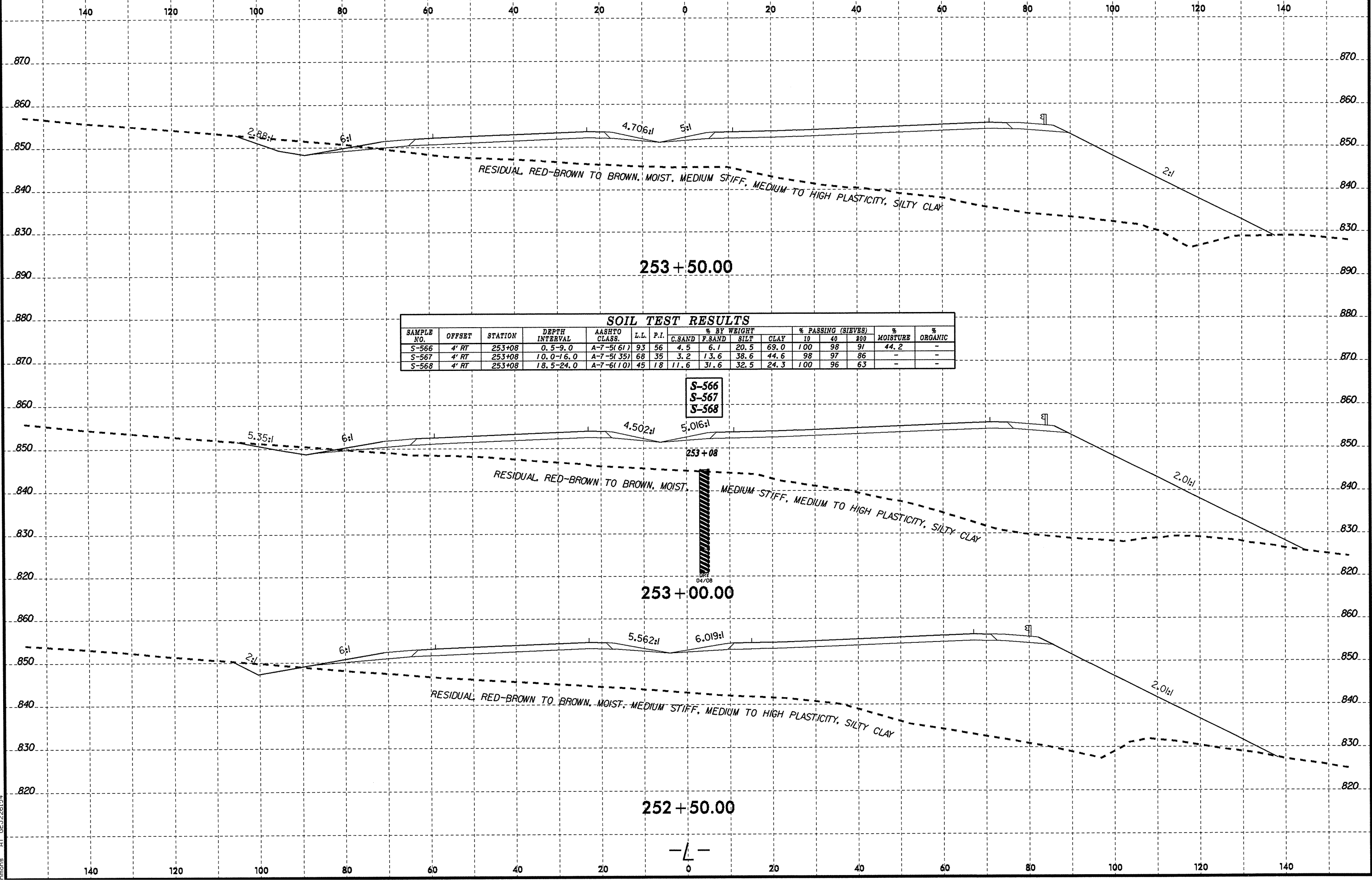
S-572

251+08

251+00.00

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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-566	4' RT	253+08	0.5-9.0	A-7-5(61)	93	56	4.5	6.1	20.5	69.0	100	98	91	44.2	-
S-567	4' RT	253+08	10.0-16.0	A-7-5(35)	68	35	3.2	13.6	38.6	44.6	98	97	86	-	-
S-568	4' RT	253+08	18.5-24.0	A-7-6(10)	45	18	11.6	31.6	32.5	24.3	100	96	63	-	-

S-566
 S-567
 S-568

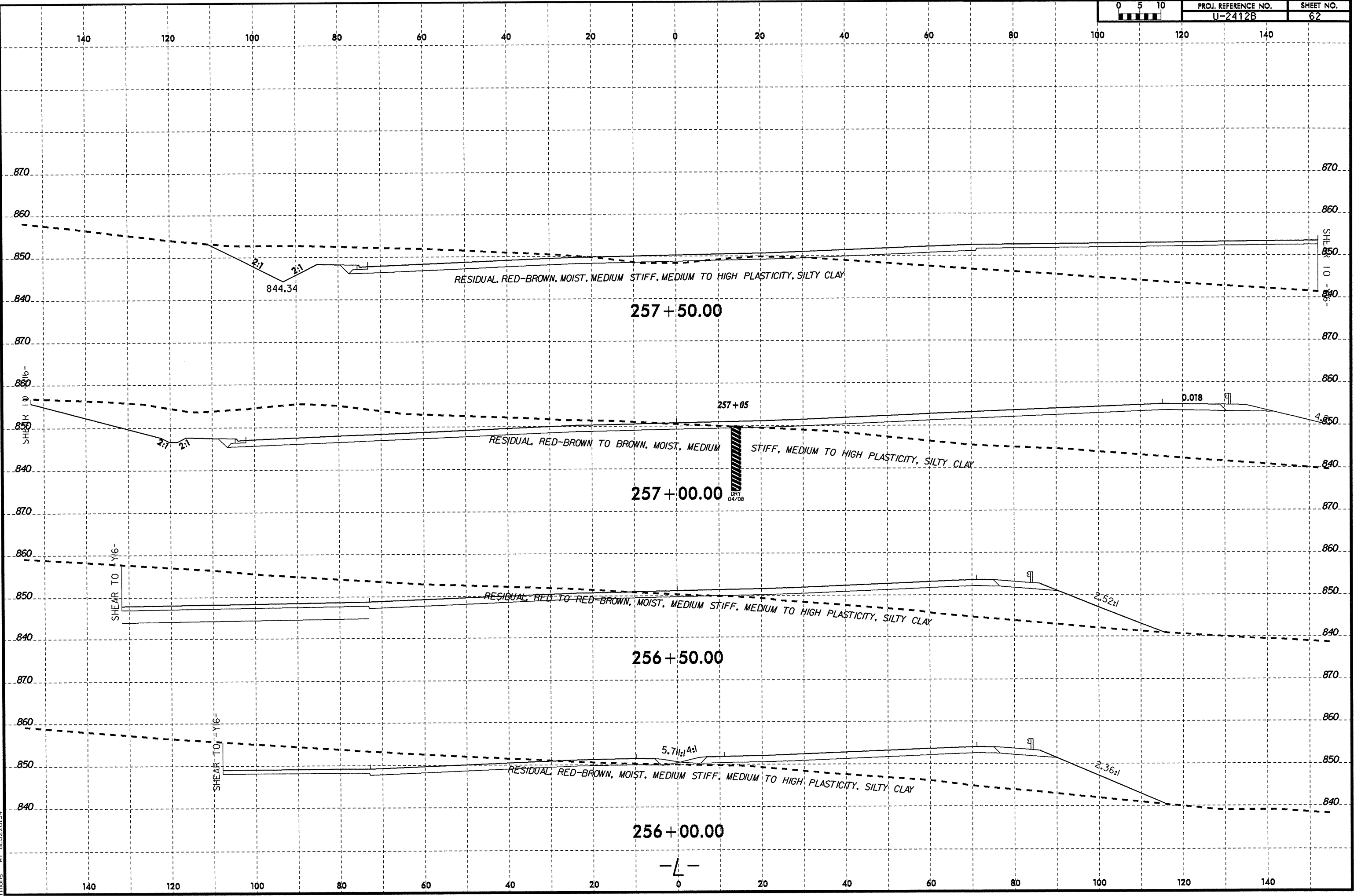
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253+00.00

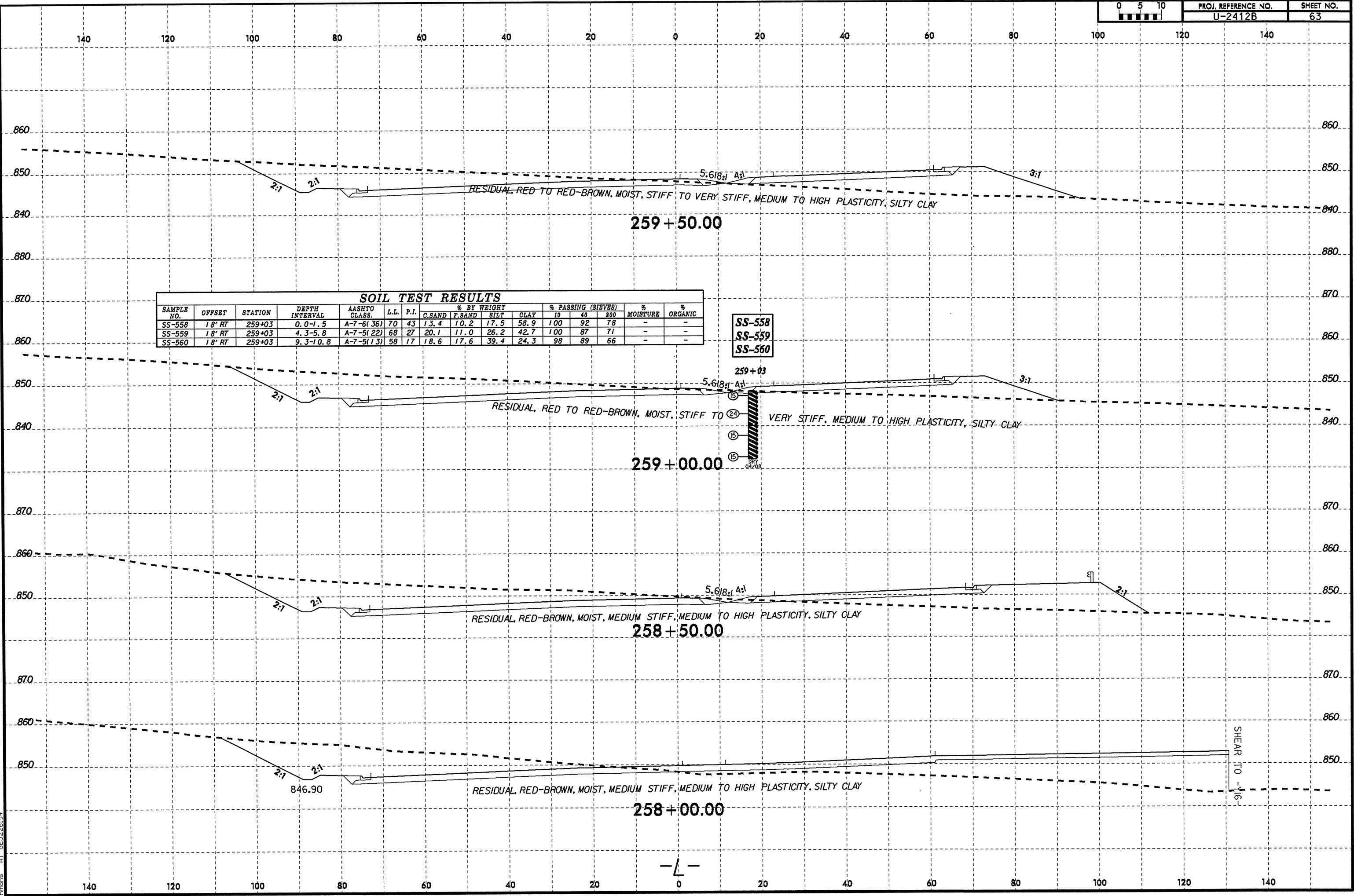
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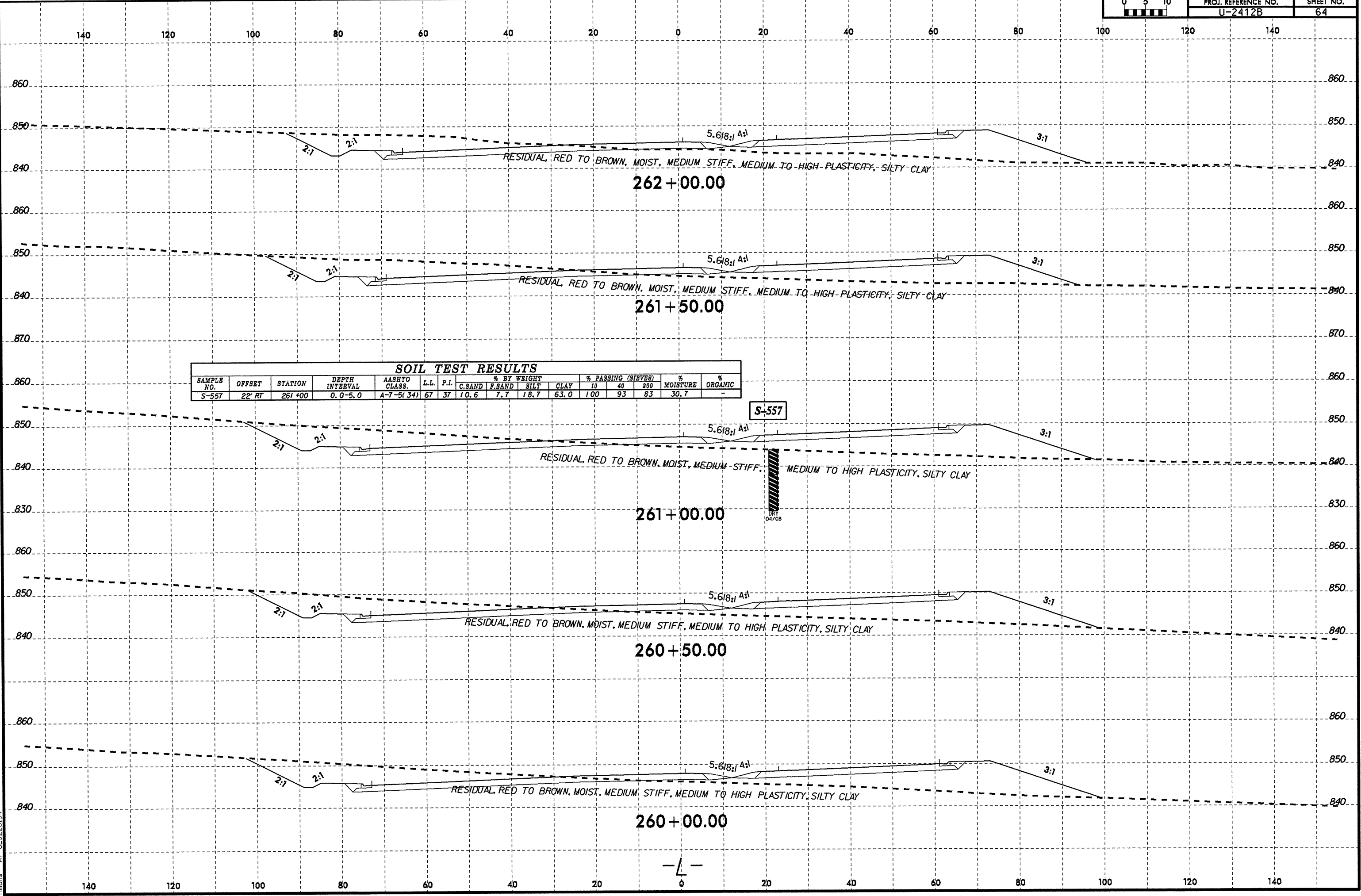
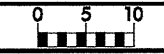
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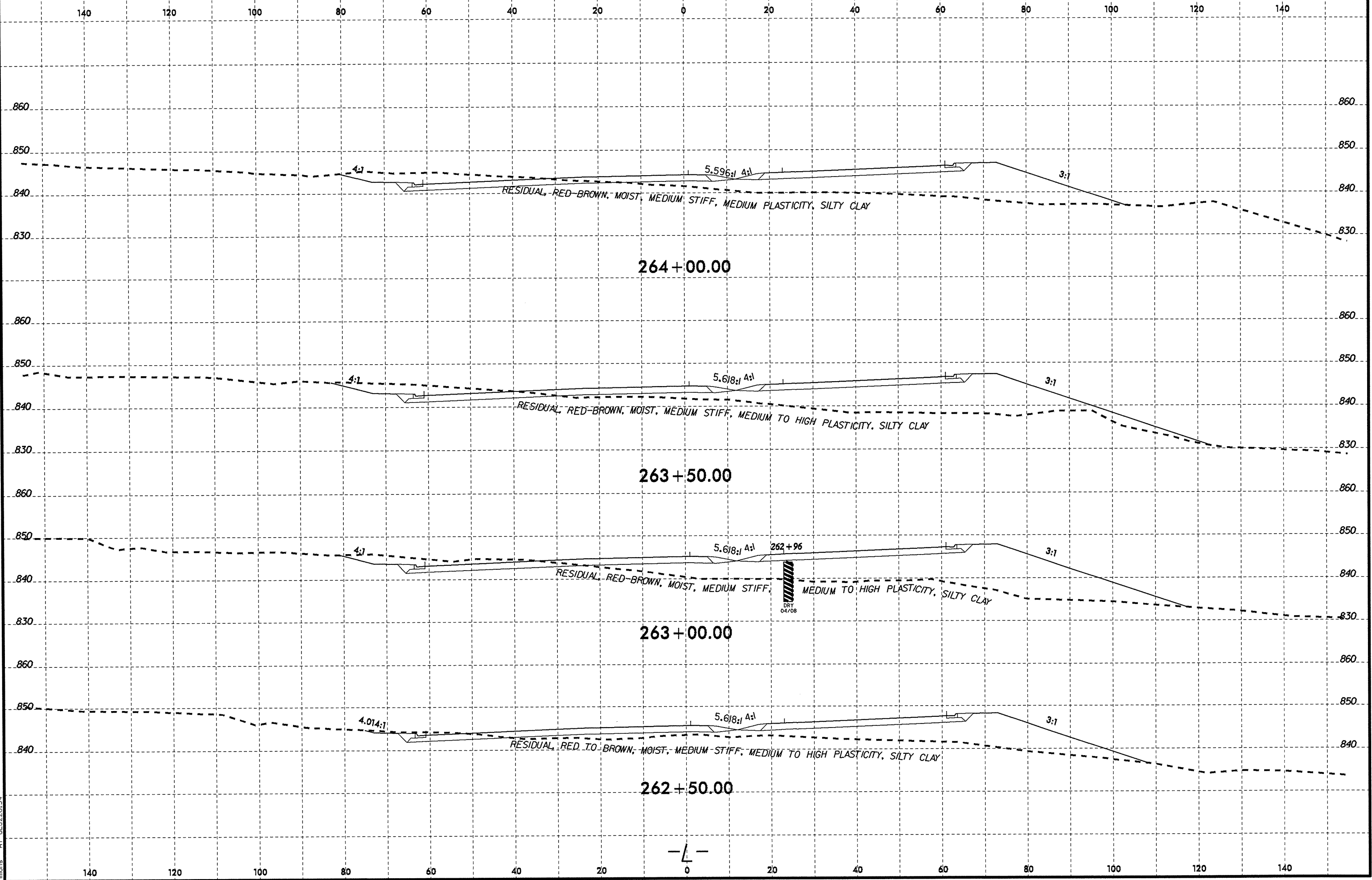
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-557	22' RT	261+00	0.0-5.0	A-7-5(34)	67	37	10.6	7.7	18.7	63.0	100	93	83	30.7	-

S-557

DRY
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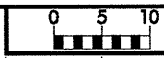
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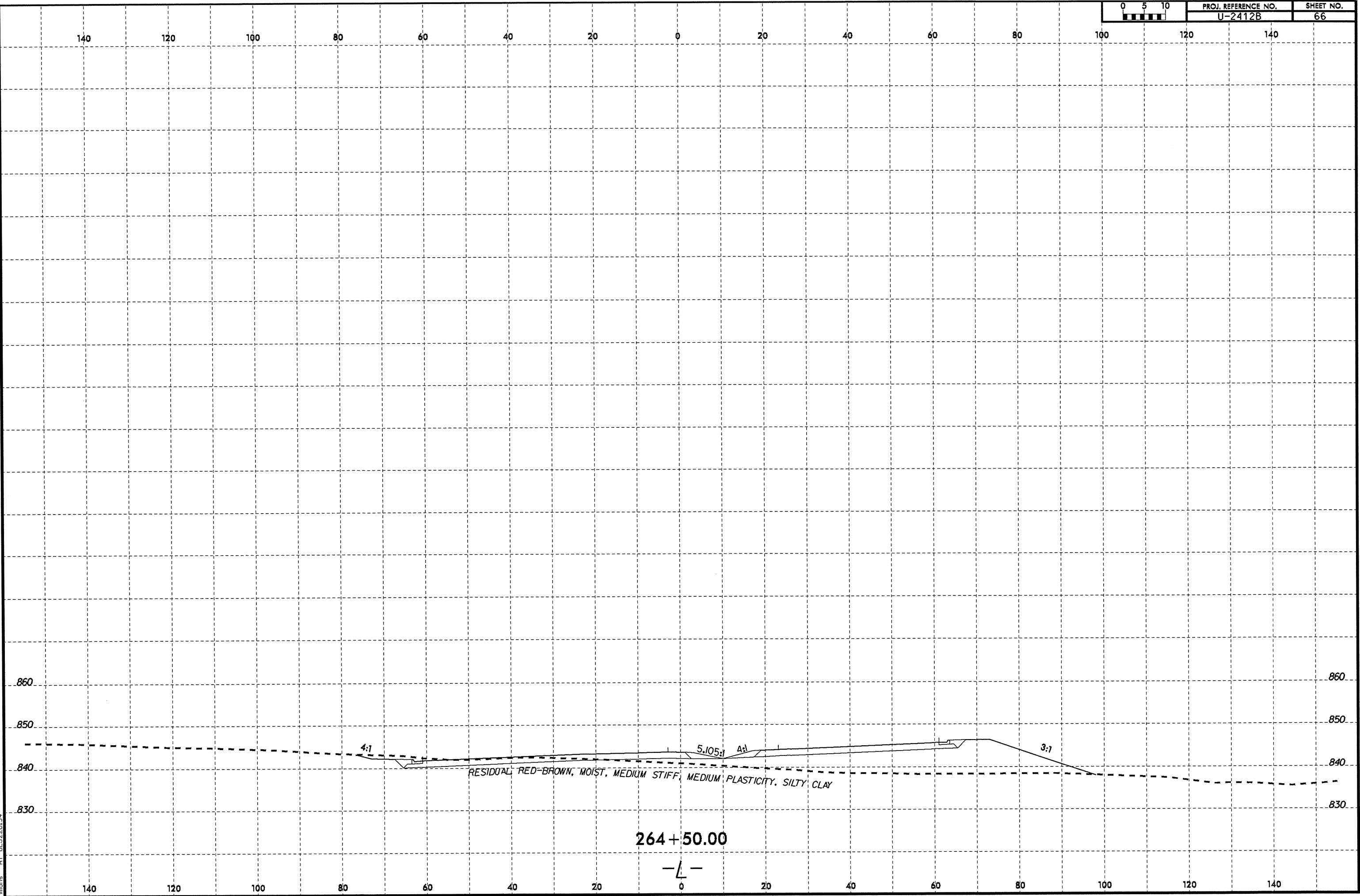


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U-2412B	66



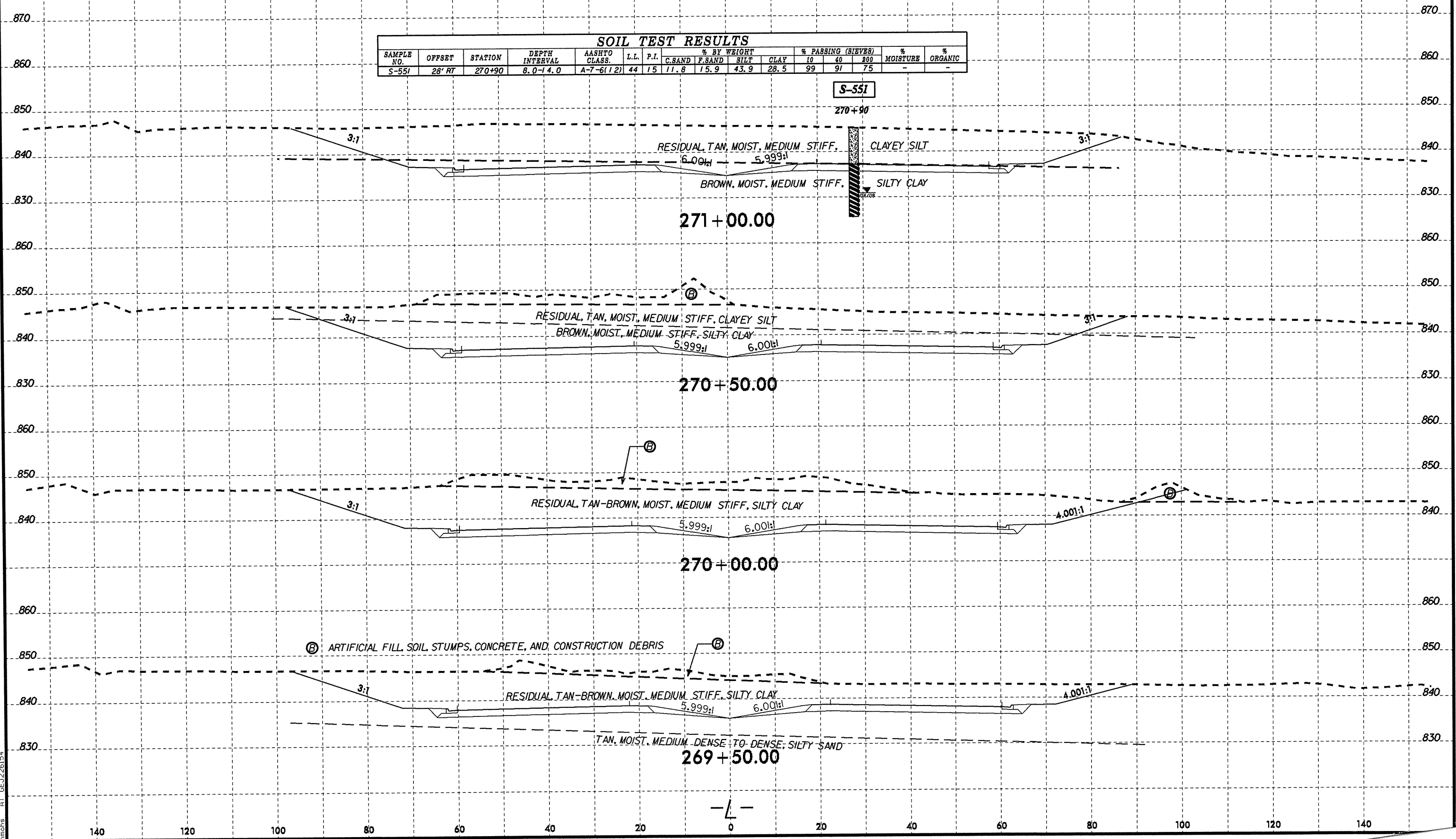
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264+50.00

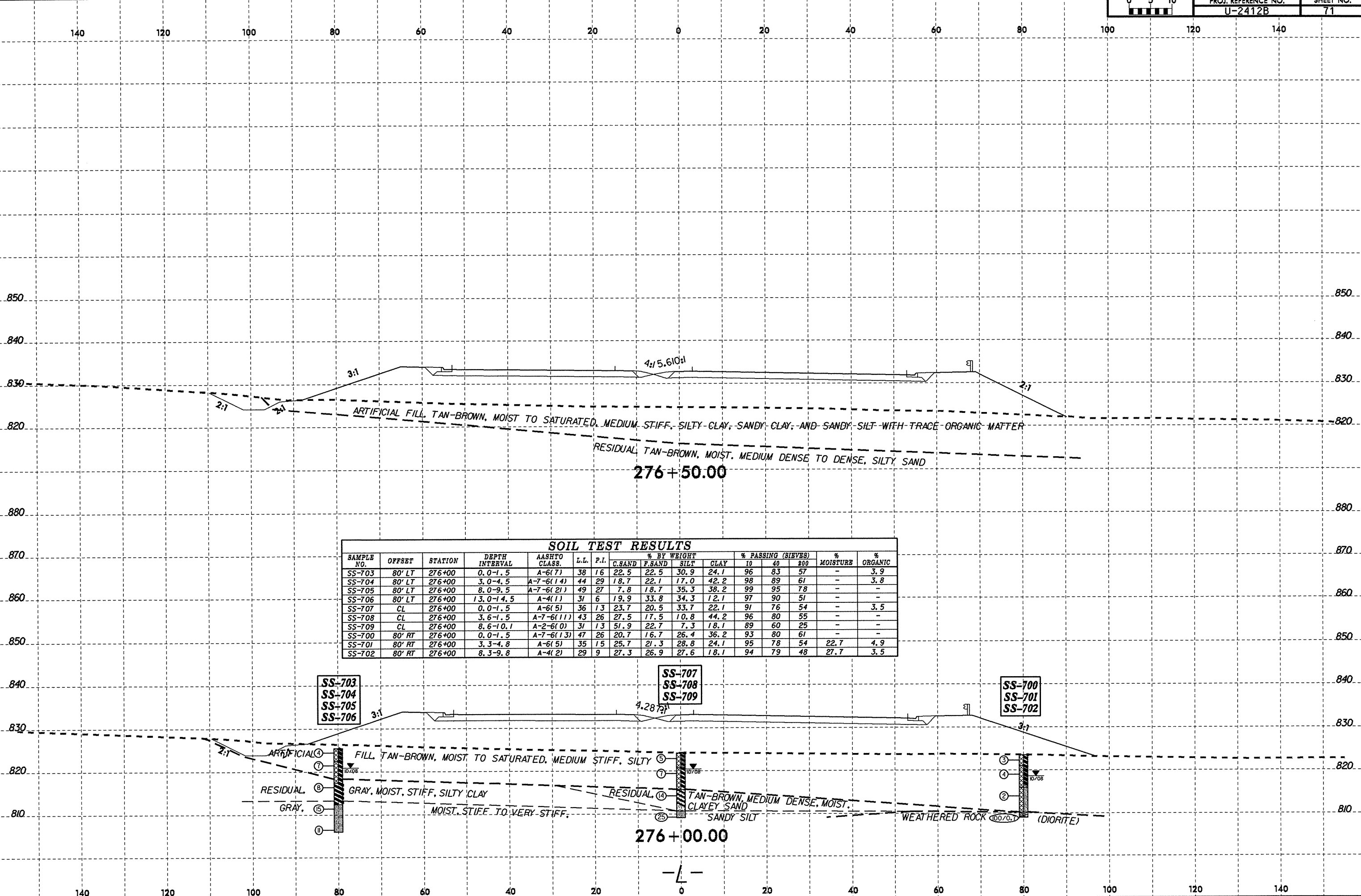
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-551	28' RT	270+90	8.0-14.0	A-7-6(1/2)	44	15	11.8	15.9	43.9	28.5	99	91	75	-	-



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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-703	80' LT	276+00	0.0-1.5	A-6(7)	38	16	22.5	22.5	30.9	24.1	96	83	57	-	3.9
SS-704	80' LT	276+00	3.0-4.5	A-7-6(14)	44	29	18.7	22.1	17.0	42.2	98	89	61	-	3.8
SS-705	80' LT	276+00	8.0-9.5	A-7-6(21)	49	27	7.8	18.7	35.3	38.2	99	95	78	-	-
SS-706	80' LT	276+00	13.0-14.5	A-4(1)	31	6	19.9	33.8	34.3	12.1	97	90	51	-	-
SS-707	CL	276+00	0.0-1.5	A-6(5)	36	13	23.7	20.5	33.7	22.1	91	76	54	-	3.5
SS-708	CL	276+00	3.6-1.5	A-7-6(11)	43	26	27.5	17.5	10.8	44.2	96	80	55	-	-
SS-709	CL	276+00	8.6-10.1	A-2-6(0)	31	13	51.9	22.7	7.3	18.1	89	60	25	-	-
SS-700	80' RT	276+00	0.0-1.5	A-7-6(13)	47	26	20.7	16.7	26.4	36.2	93	80	61	-	-
SS-701	80' RT	276+00	3.3-4.8	A-6(5)	35	15	25.7	21.3	28.8	24.1	95	78	54	22.7	4.9
SS-702	80' RT	276+00	8.3-9.8	A-4(2)	29	9	27.3	26.9	27.6	18.1	94	79	48	27.7	3.5

SS-703
 SS-704
 SS-705
 SS-706

SS-707
 SS-708
 SS-709

SS-700
 SS-701
 SS-702

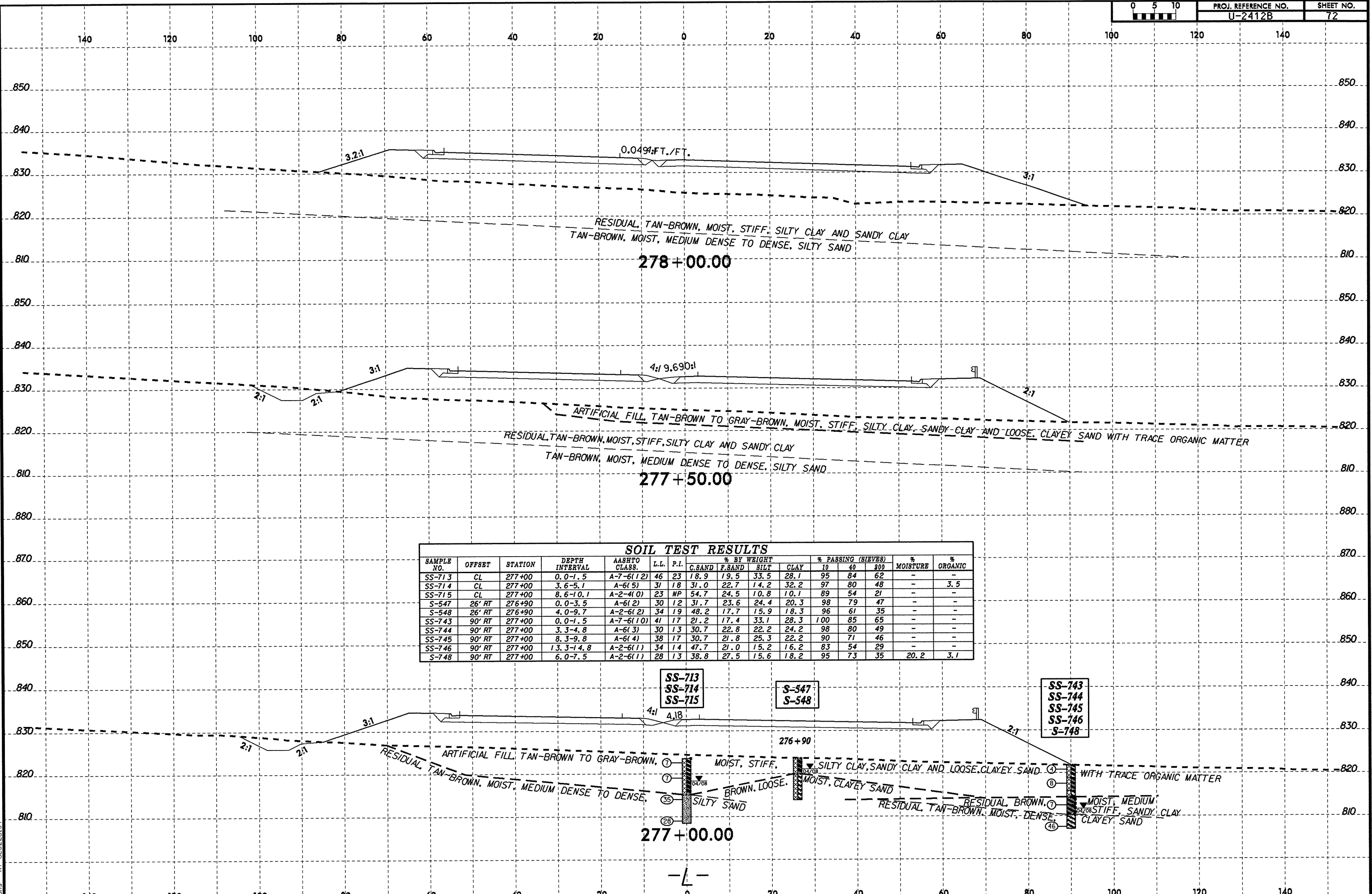
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 RESIDUAL GRAY, MOIST, STIFF, SILTY CLAY
 GRAY, MOIST, STIFF TO VERY STIFF

RESIDUAL TAN-BROWN, MEDIUM DENSE, MOIST, CLAYEY SAND
 SANDY SILT

WEATHERED ROCK (DIORITE)

276+00.00

8/23/99
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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-713	CL	277+00	0.0-1.5	A-7-6(12)	46	23	18.9	19.5	33.5	28.1	95	84	62	-	-
SS-714	CL	277+00	3.6-5.1	A-6(5)	31	18	31.0	22.7	14.2	32.2	97	80	48	-	3.5
SS-715	CL	277+00	8.6-10.1	A-2-4(0)	23	NP	54.7	24.5	10.8	10.1	89	54	21	-	-
S-547	26' RT	276+90	0.0-3.5	A-6(2)	30	12	31.7	23.6	24.4	20.3	98	79	47	-	-
S-548	26' RT	276+90	4.0-9.7	A-2-6(2)	34	19	48.2	17.7	15.9	18.3	96	61	35	-	-
SS-743	90' RT	277+00	0.0-1.5	A-7-6(10)	41	17	21.2	17.4	33.1	28.3	100	85	65	-	-
SS-744	90' RT	277+00	3.3-4.8	A-6(3)	30	13	30.7	22.8	22.2	24.2	98	80	49	-	-
SS-745	90' RT	277+00	8.3-9.8	A-6(4)	38	17	30.7	21.8	25.3	22.2	90	71	46	-	-
SS-746	90' RT	277+00	13.3-14.8	A-2-6(1)	34	14	47.7	21.0	15.2	16.2	83	54	29	-	-
S-748	90' RT	277+00	6.0-7.5	A-2-6(1)	28	13	38.8	27.5	15.6	18.2	95	73	35	20.2	3.1

SS-713
 SS-714
 SS-715

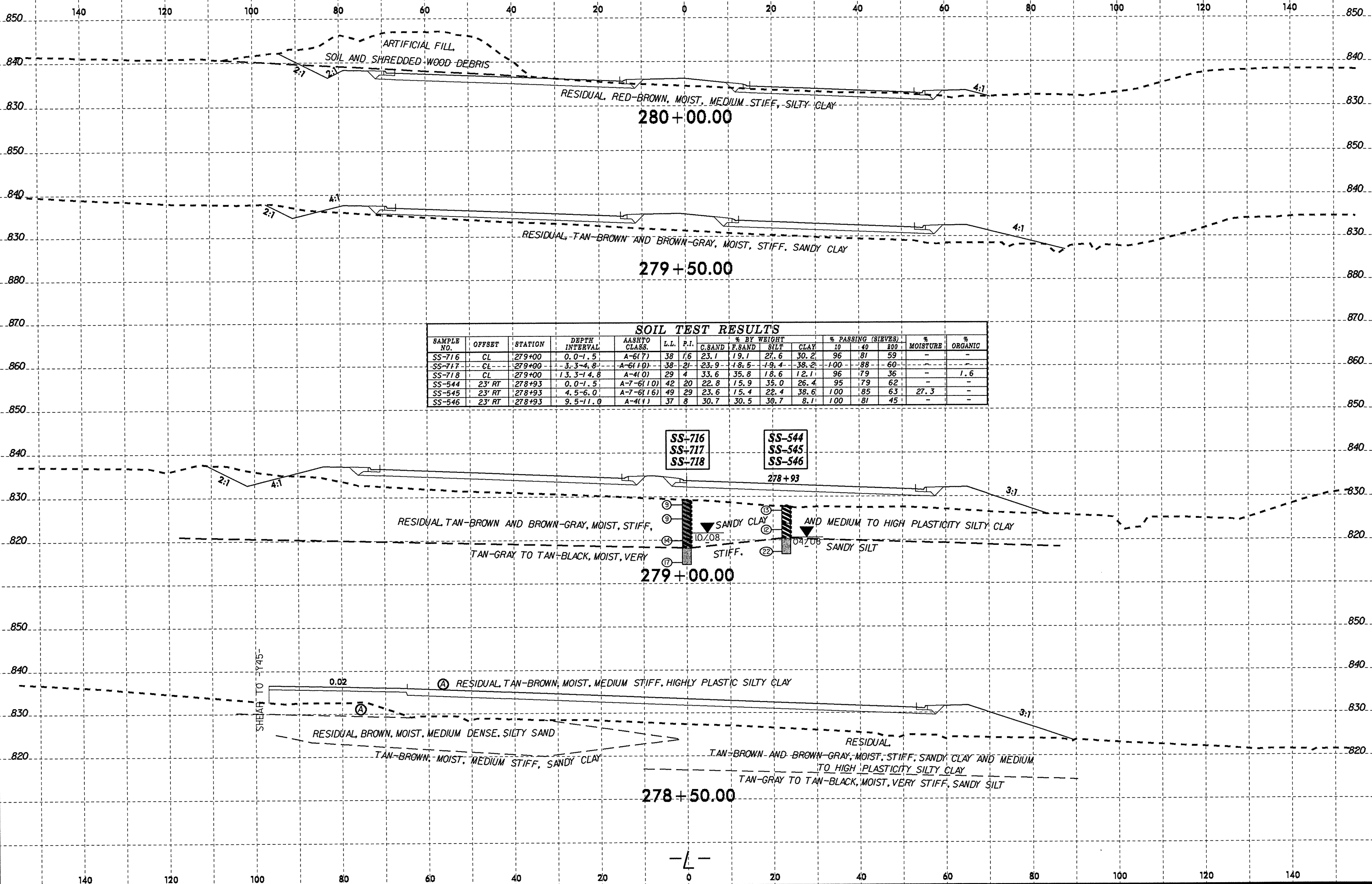
S-547
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SS-743
 SS-744
 SS-745
 SS-746
 S-748

277+00.00

276+90

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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-716	CL	279+00	0.0-1.5	A-6(7)	38	16	23.1	19.1	27.6	30.2	96	81	59	-	-
SS-717	CL	279+00	3.3-4.8	A-6(10)	38	21	23.9	18.5	19.4	38.2	100	88	60	-	-
SS-718	CL	279+00	13.3-14.8	A-4(1)	29	4	33.6	35.8	18.6	12.1	96	79	36	-	1.6
SS-544	23' RT	278+93	0.0-1.5	A-7-6(10)	42	20	22.8	15.9	35.0	26.4	95	79	62	-	-
SS-545	23' RT	278+93	4.5-6.0	A-7-6(16)	49	29	23.6	15.4	22.4	38.6	100	85	63	27.3	-
SS-546	23' RT	278+93	9.5-11.0	A-4(1)	37	8	30.7	30.5	30.7	8.1	100	81	45	-	-

SS-716
SS-717
SS-718

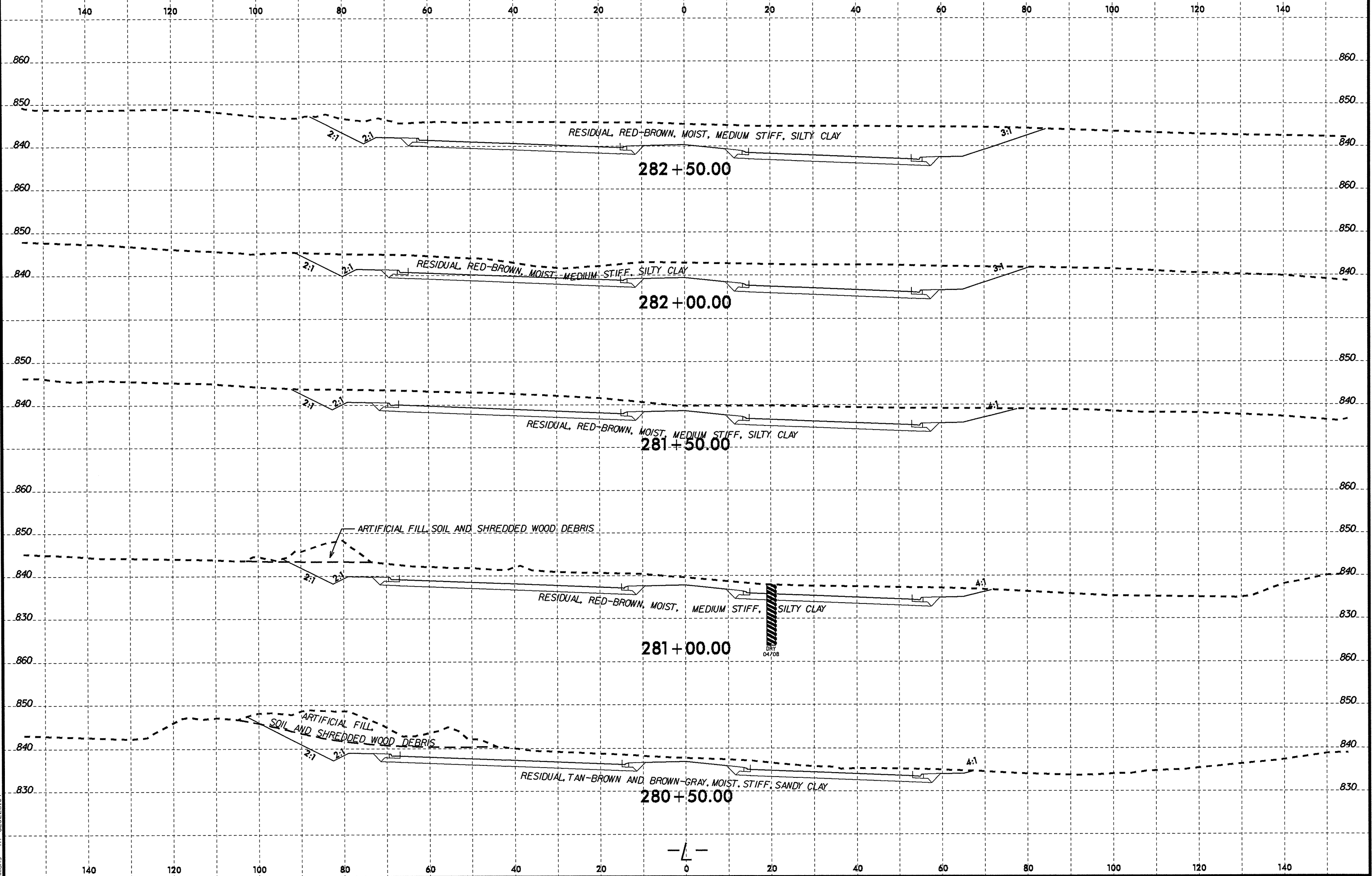
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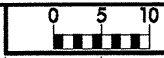
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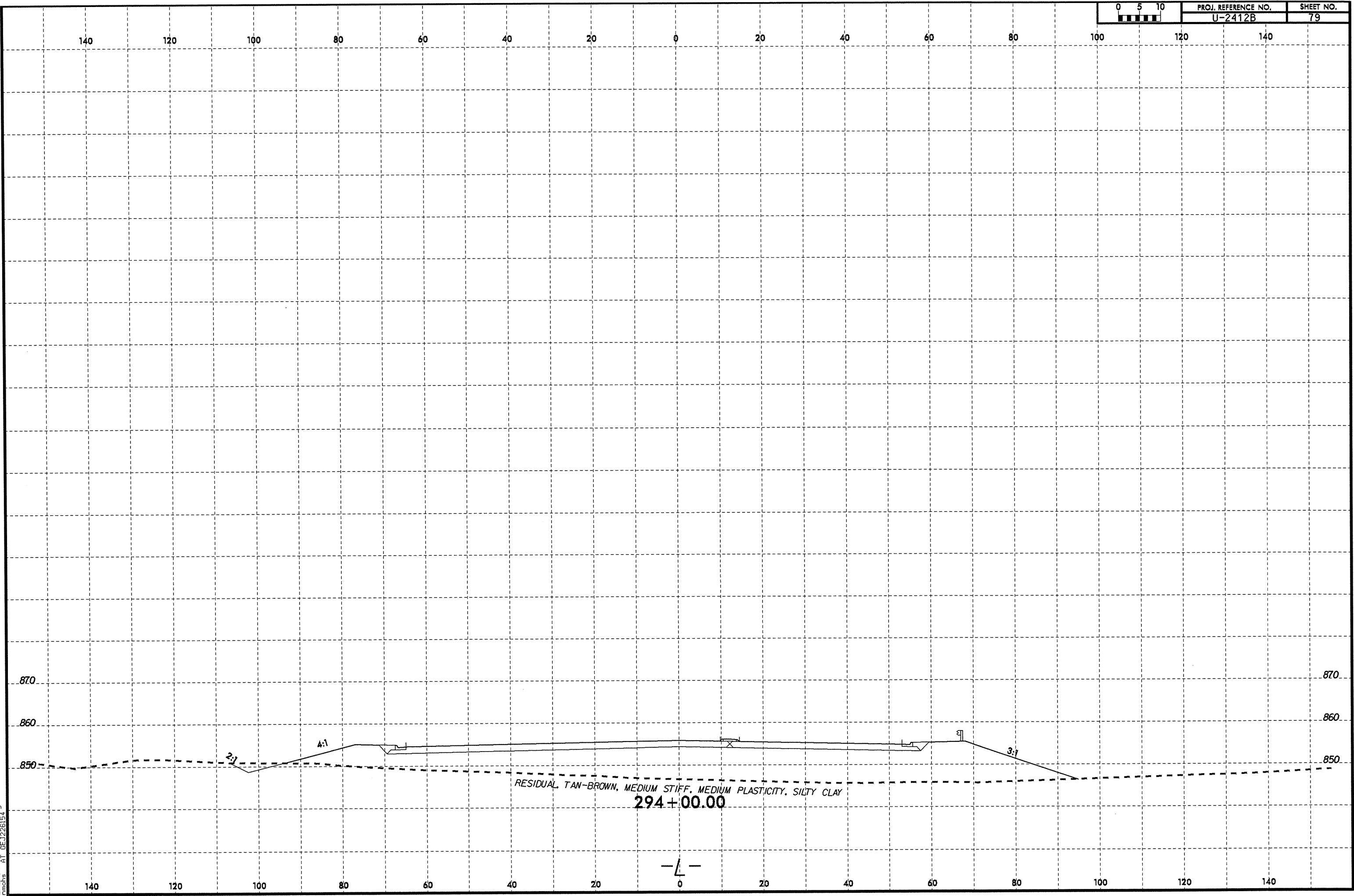


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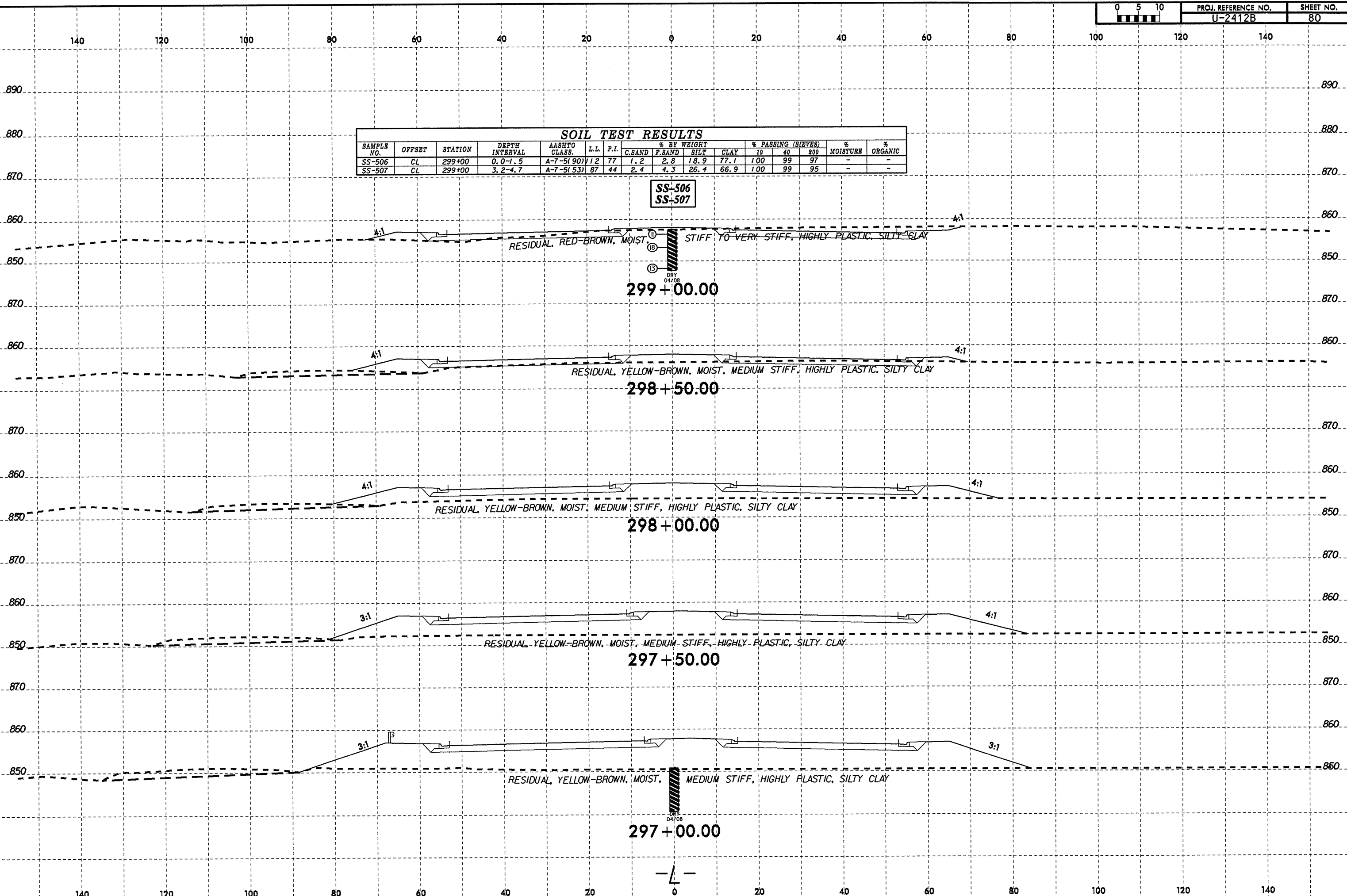


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-506	CL	299+00	0.0-1.5	A-7-5(90)	12	77	1.2	2.8	18.9	77.1	100	99	97	-	-
SS-507	CL	299+00	3.2-4.7	A-7-5(53)	87	44	2.4	4.3	26.4	66.9	100	99	95	-	-

SS-506
SS-507



RESIDUAL RED-BROWN, MOIST STIFF TO VERY STIFF, HIGHLY PLASTIC, SILTY CLAY

299+00.00

RESIDUAL YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY

298+50.00

RESIDUAL YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY

298+00.00

RESIDUAL YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY

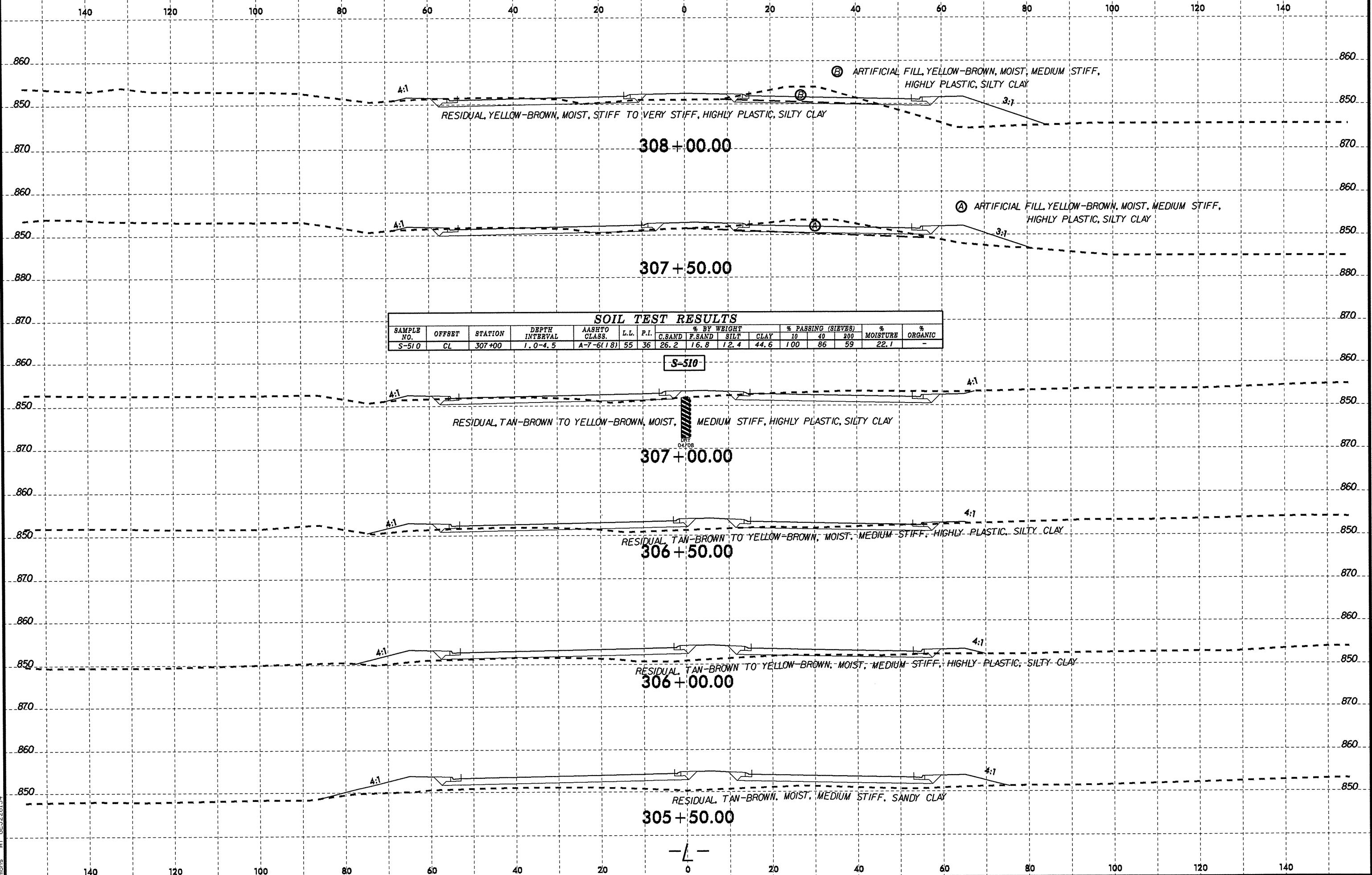
297+50.00

RESIDUAL YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY

297+00.00

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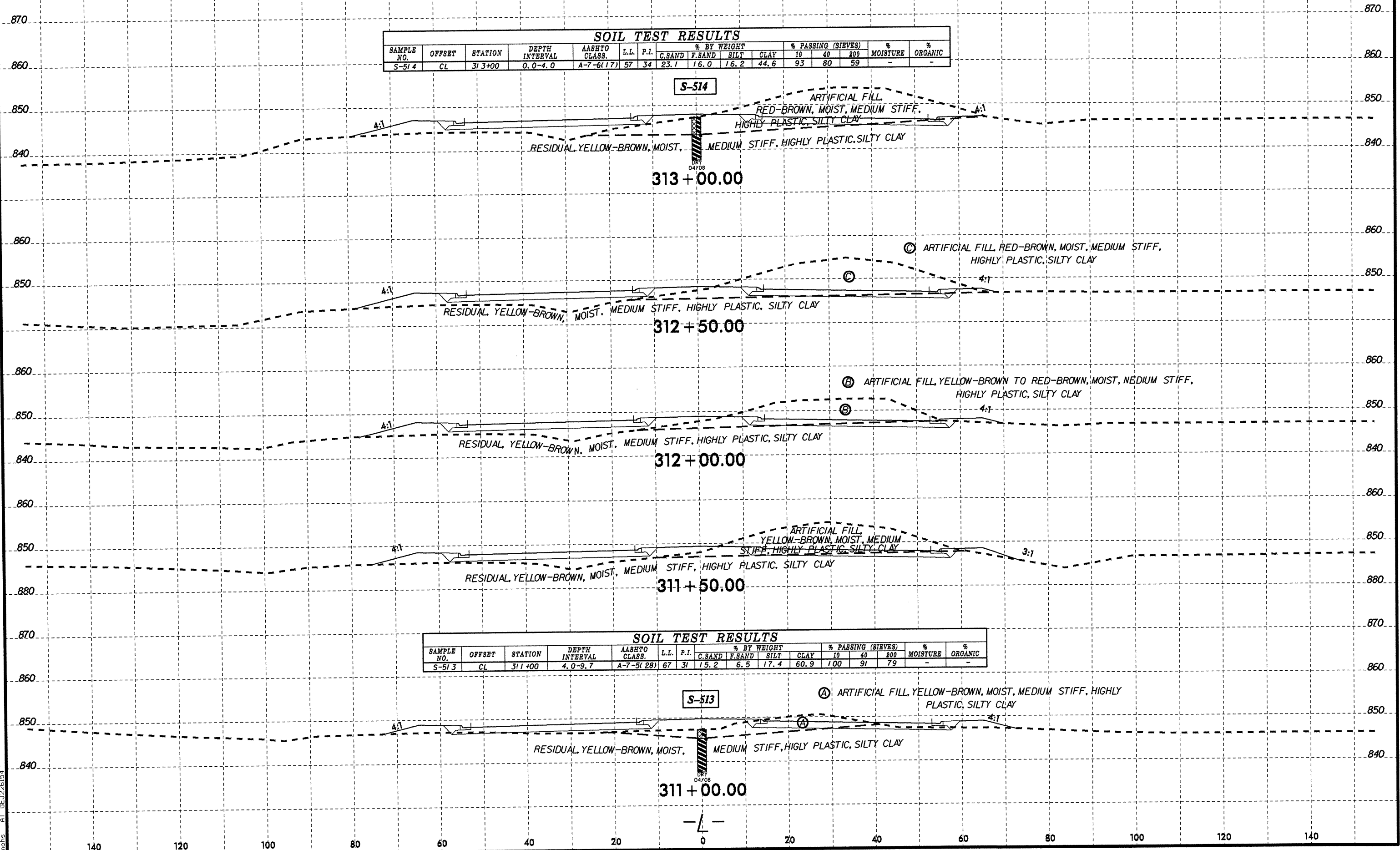
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-510	CL	307+00	1.0-4.5	A-7-6(18)	55	36	26.2	16.8	12.4	44.6	100	86	59	22.1	-

S-510

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SOIL TEST RESULTS															
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							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-514	CL	313+00	0.0-4.0	A-7-6(17)	57	34	23.1	16.0	16.2	44.6	93	80	59	-	-



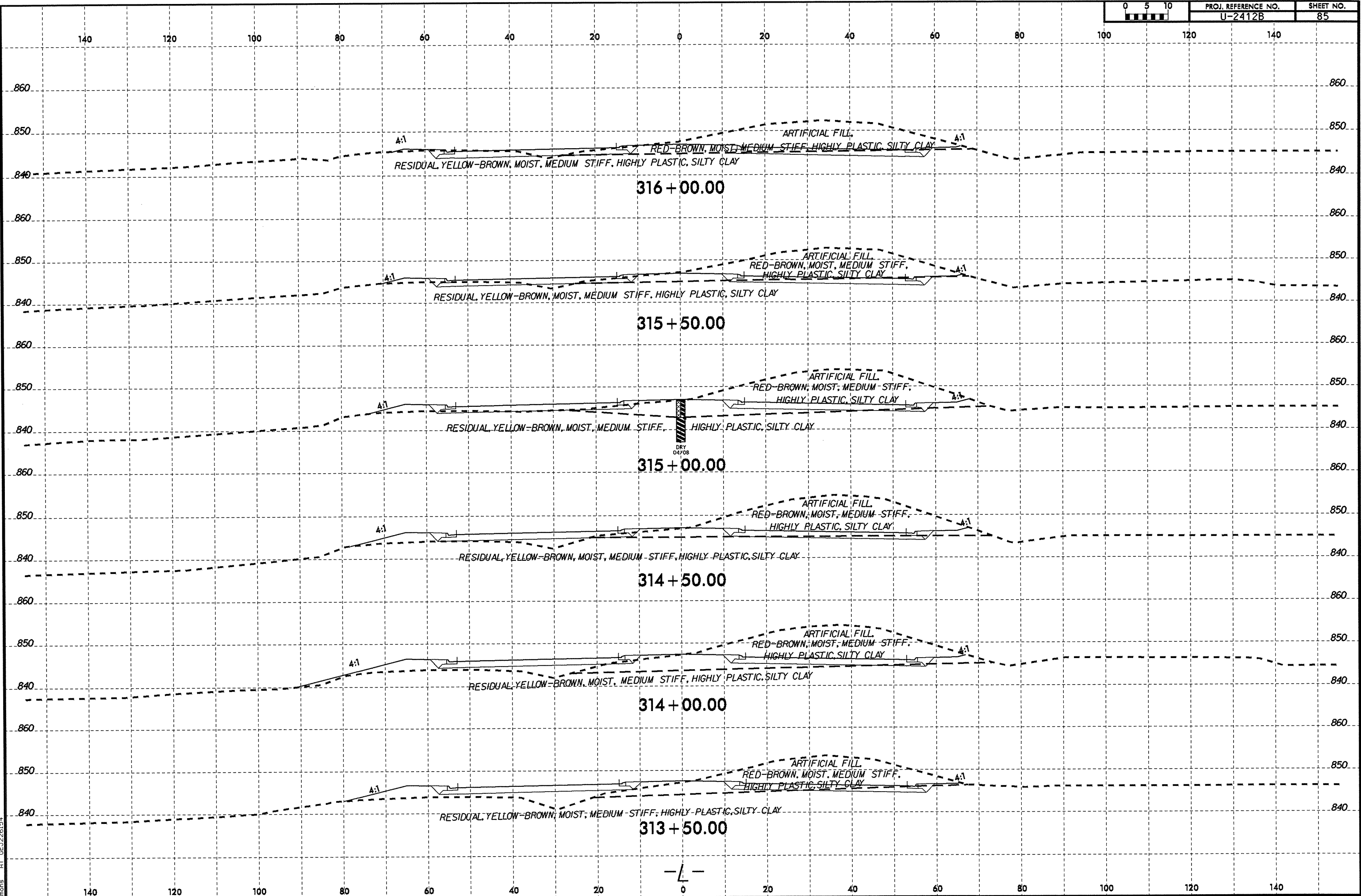
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-513	CL	311+00	4.0-9.7	A-7-5(28)	67	31	15.2	6.5	17.4	60.9	100	91	79	-	-

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315 + 50.00

315 + 00.00

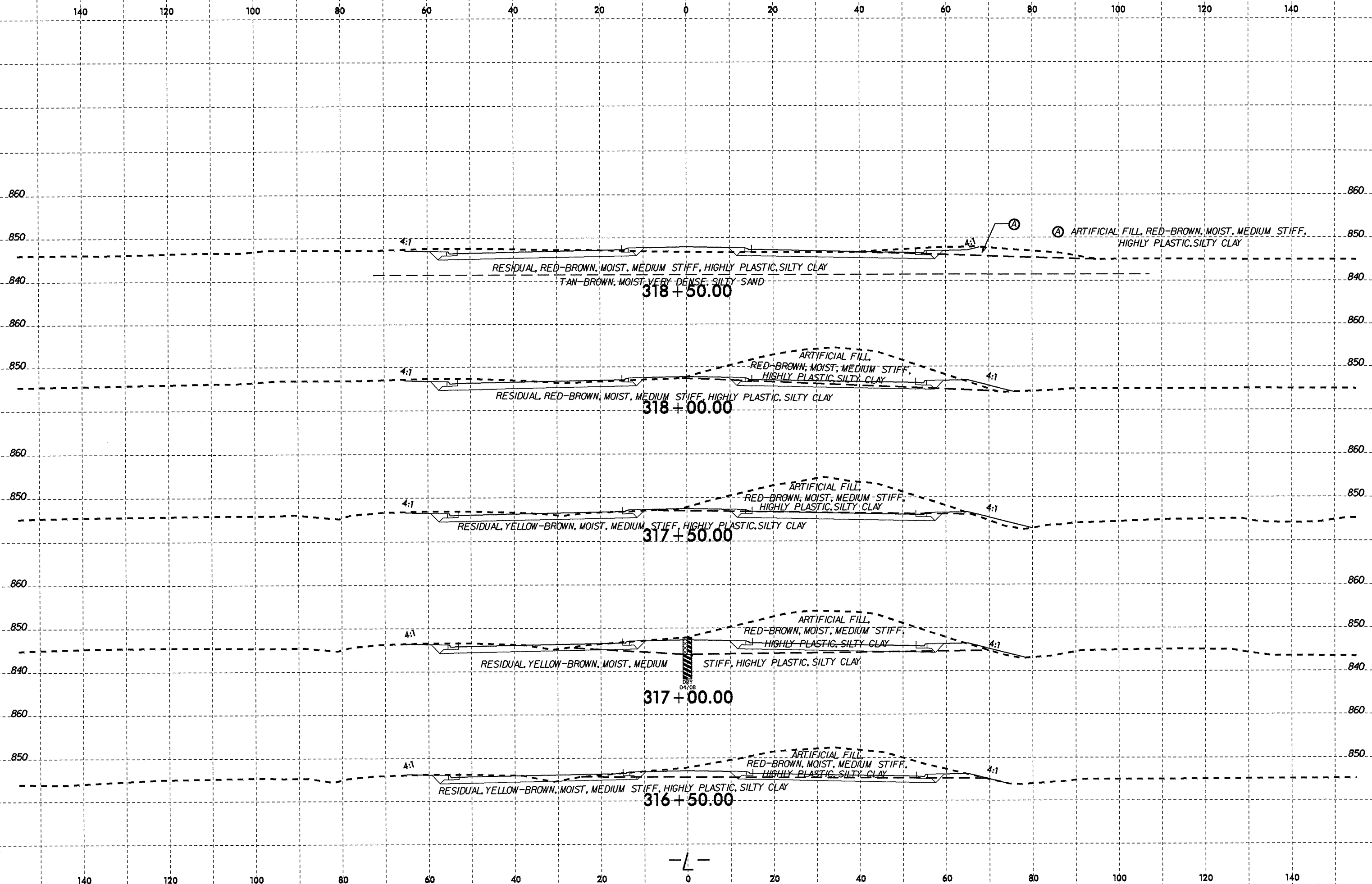
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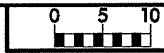
B/23/99



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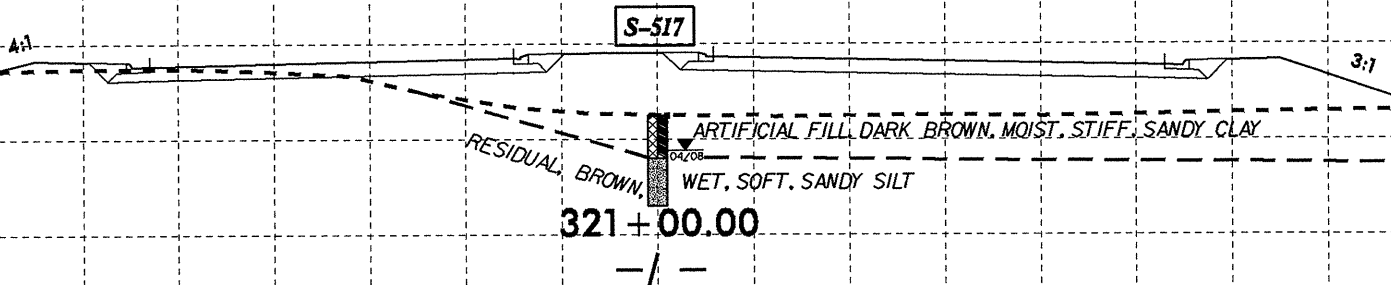
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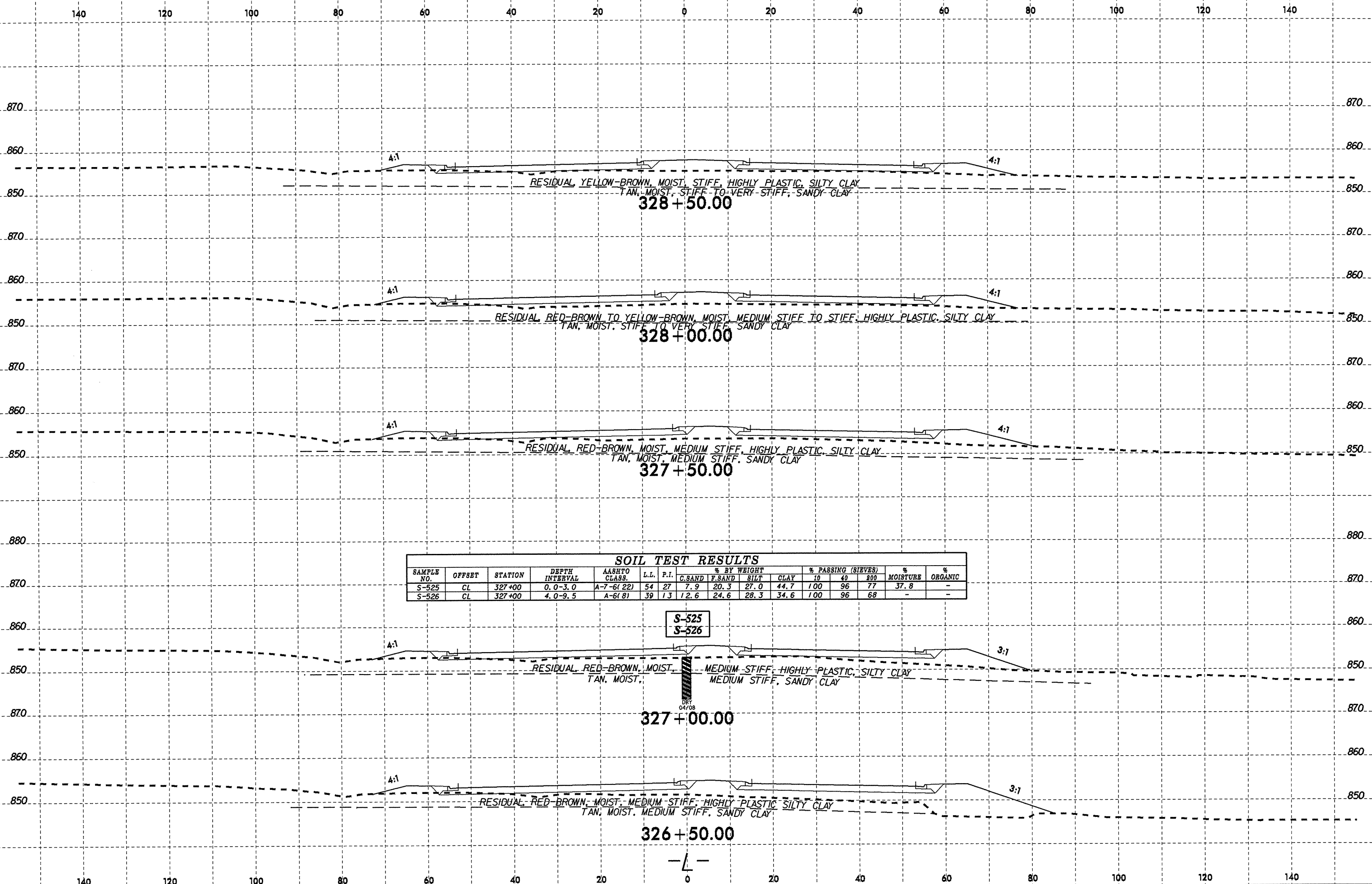
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-517	CL	321+00	4.5-9.5	A-4(0)	22	6	26.0	32.9	20.9	20.3	98	85	46	-	-



870 860 850 840 870 860 850 840 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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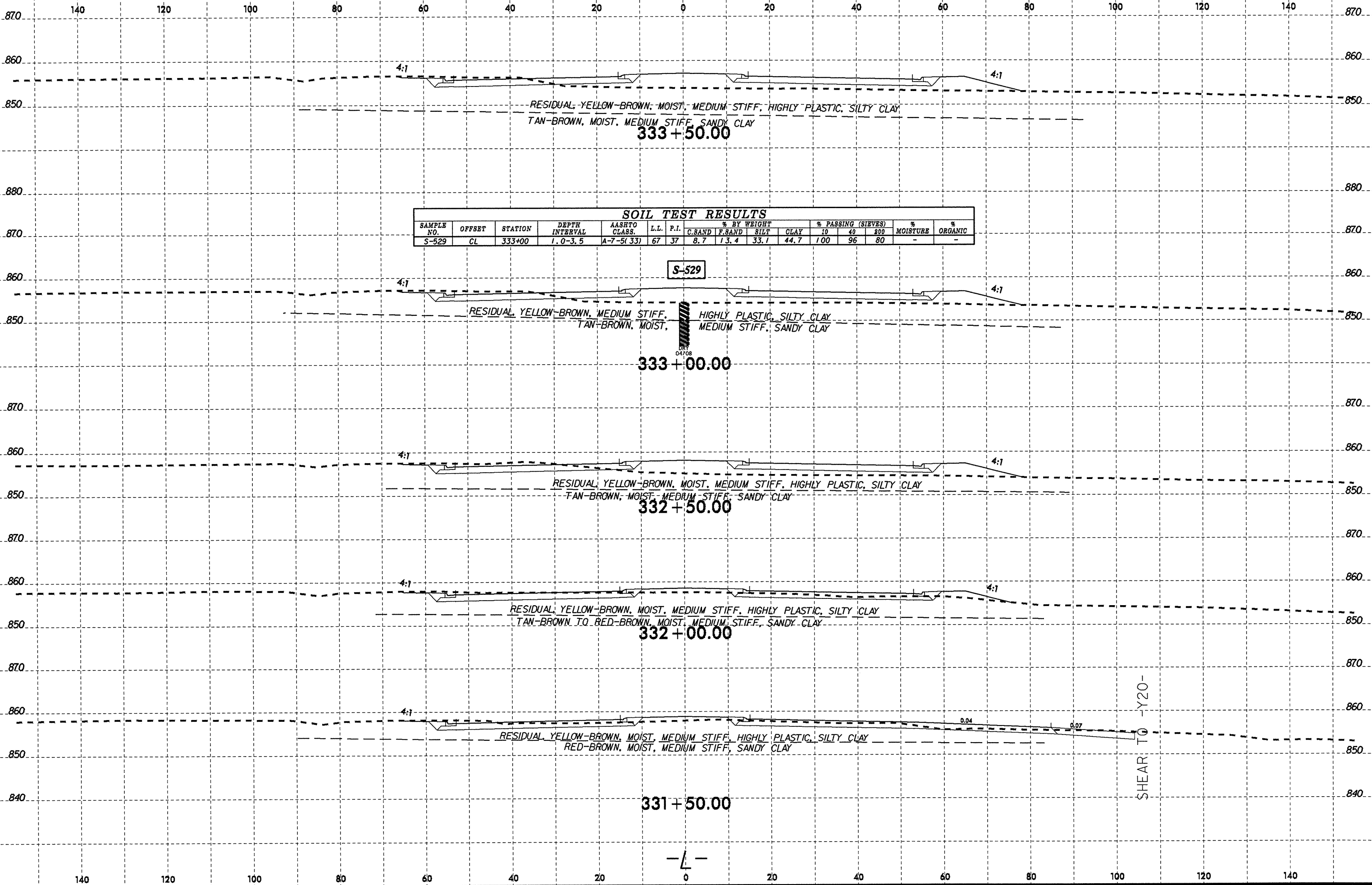
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-525	CL	327+00	0.0-3.0	A-7-6(22)	54	27	7.9	20.3	27.0	44.7	100	96	77	37.8	-
S-526	CL	327+00	4.0-9.5	A-6(8)	39	13	12.6	24.6	28.3	34.6	100	96	68	-	-

S-525
S-526

04/08



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-529	CL	333+00	1.0-3.5	A-7-5(33)	67	37	8.7	13.4	33.1	44.7	100	96	80	-	-

S-529

333+00.00

332+50.00

332+00.00

331+50.00

-L-

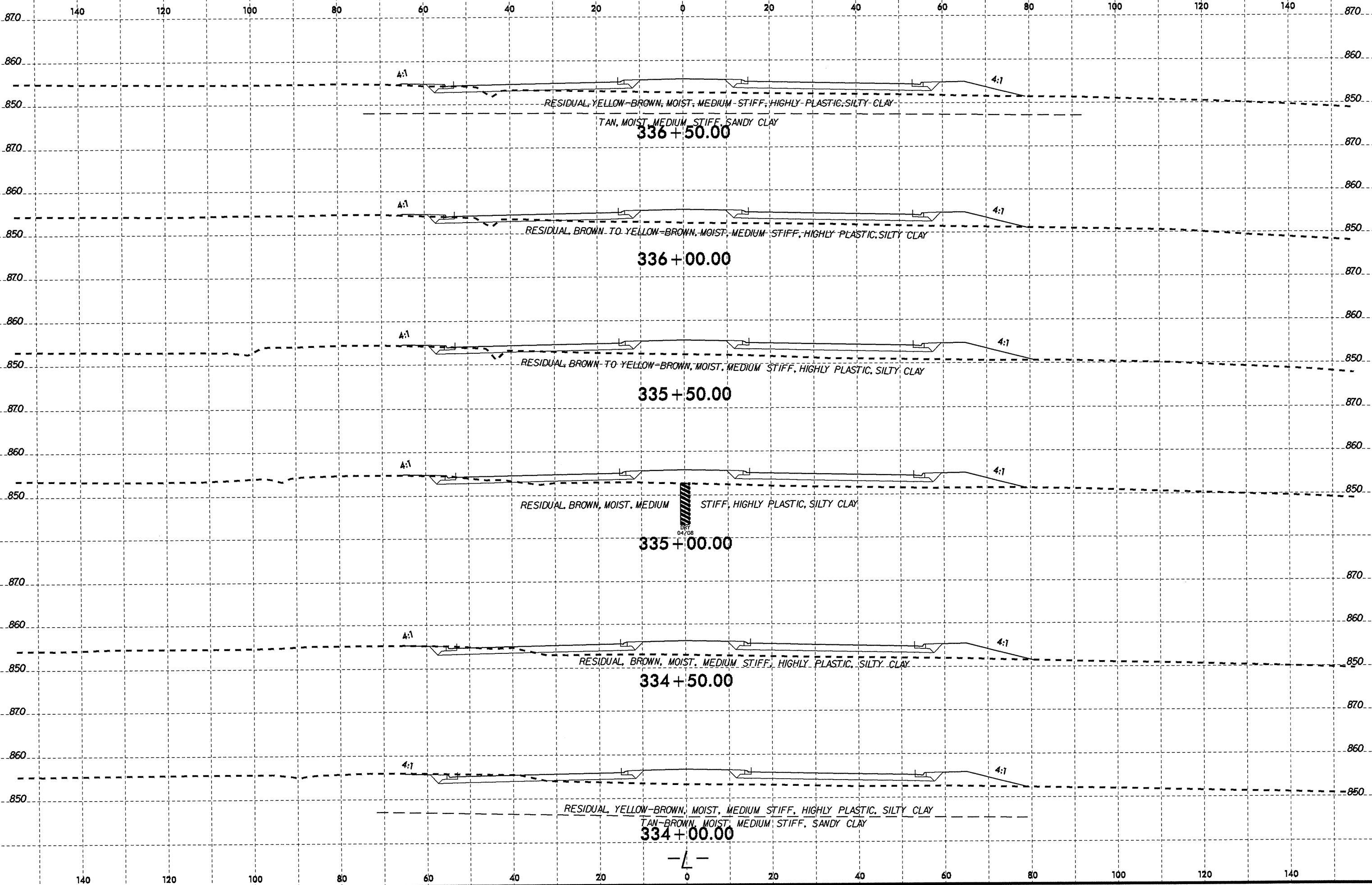
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PROJ. REFERENCE NO.
U-2412B

SHEET NO.
92



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8/23/99

336 + 50.00

336 + 00.00

335 + 50.00

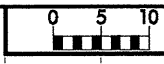
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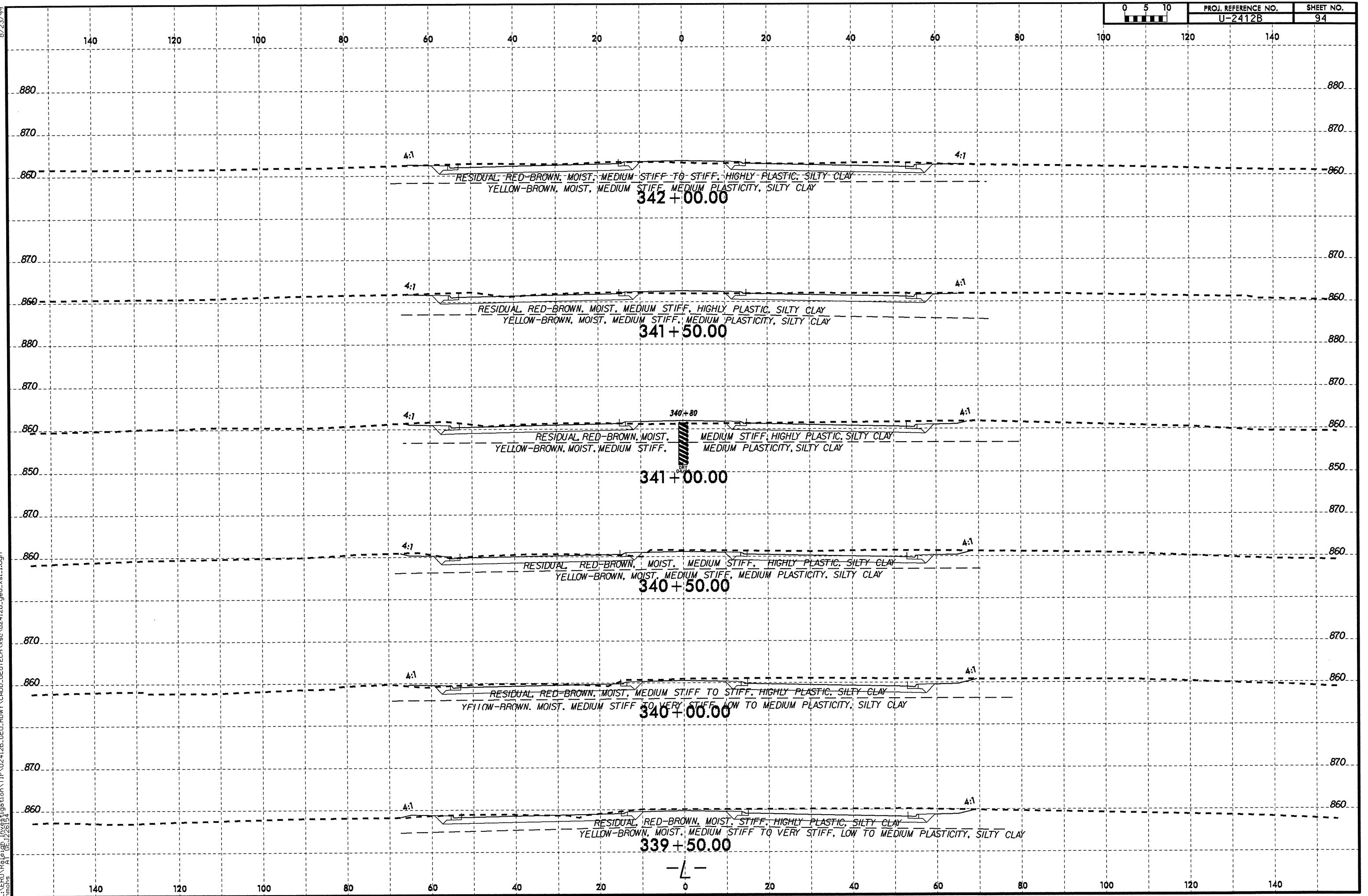
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-L-

8/23/98



PROJ. REFERENCE NO. U-2412B SHEET NO. 94



RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY
YELLOW-BROWN, MOIST, MEDIUM STIFF, MEDIUM PLASTICITY, SILTY CLAY

342+00.00

RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
YELLOW-BROWN, MOIST, MEDIUM STIFF, MEDIUM PLASTICITY, SILTY CLAY

341+50.00

RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
YELLOW-BROWN, MOIST, MEDIUM STIFF, MEDIUM PLASTICITY, SILTY CLAY

341+00.00

RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
YELLOW-BROWN, MOIST, MEDIUM STIFF, MEDIUM PLASTICITY, SILTY CLAY

340+50.00

RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY
YELLOW-BROWN, MOIST, MEDIUM STIFF TO VERY STIFF, LOW TO MEDIUM PLASTICITY, SILTY CLAY

340+00.00

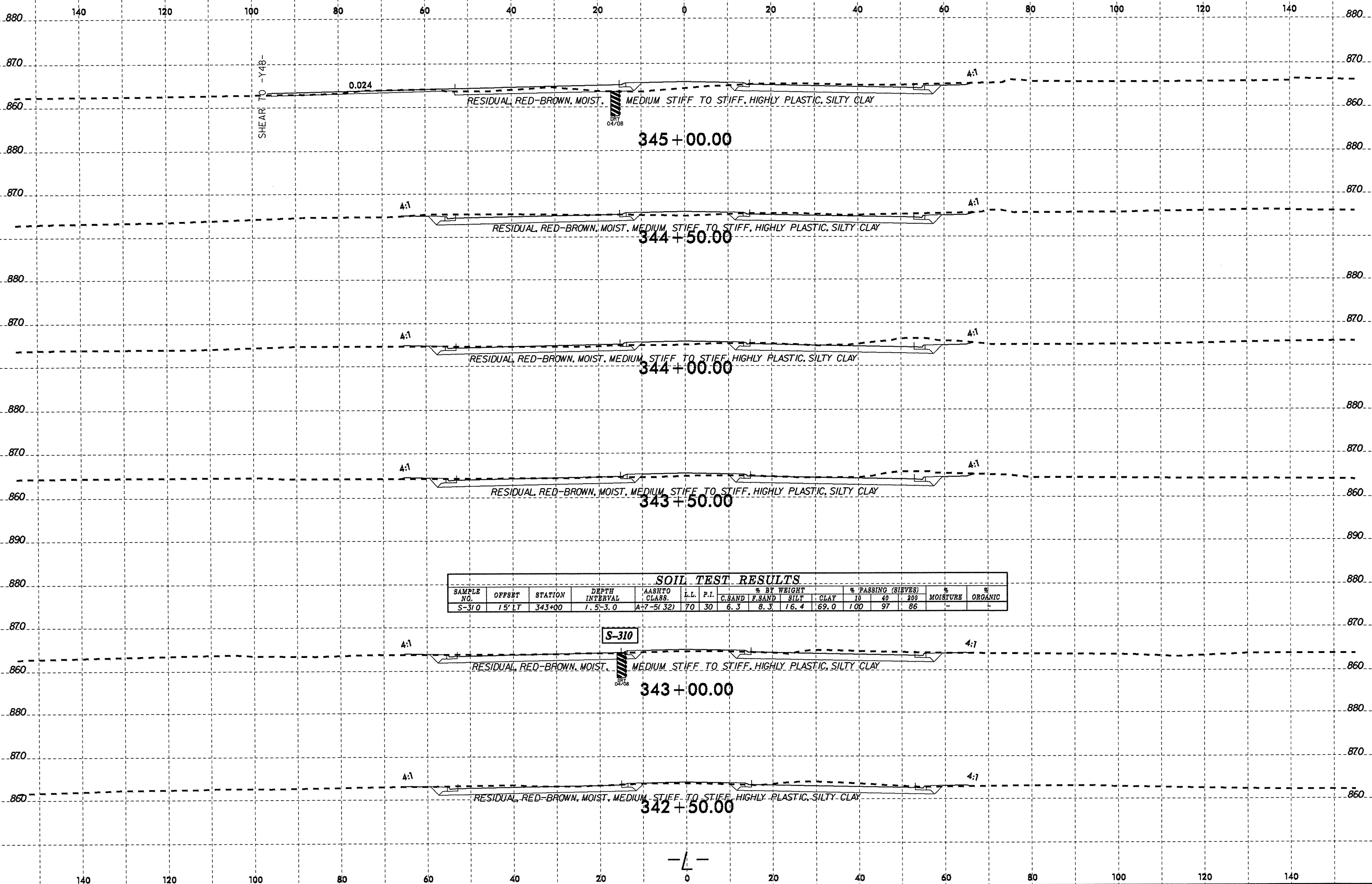
RESIDUAL, RED-BROWN, MOIST, STIFF, HIGHLY PLASTIC, SILTY CLAY
YELLOW-BROWN, MOIST, MEDIUM STIFF TO VERY STIFF, LOW TO MEDIUM PLASTICITY, SILTY CLAY

339+50.00

-L-

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8/23/99

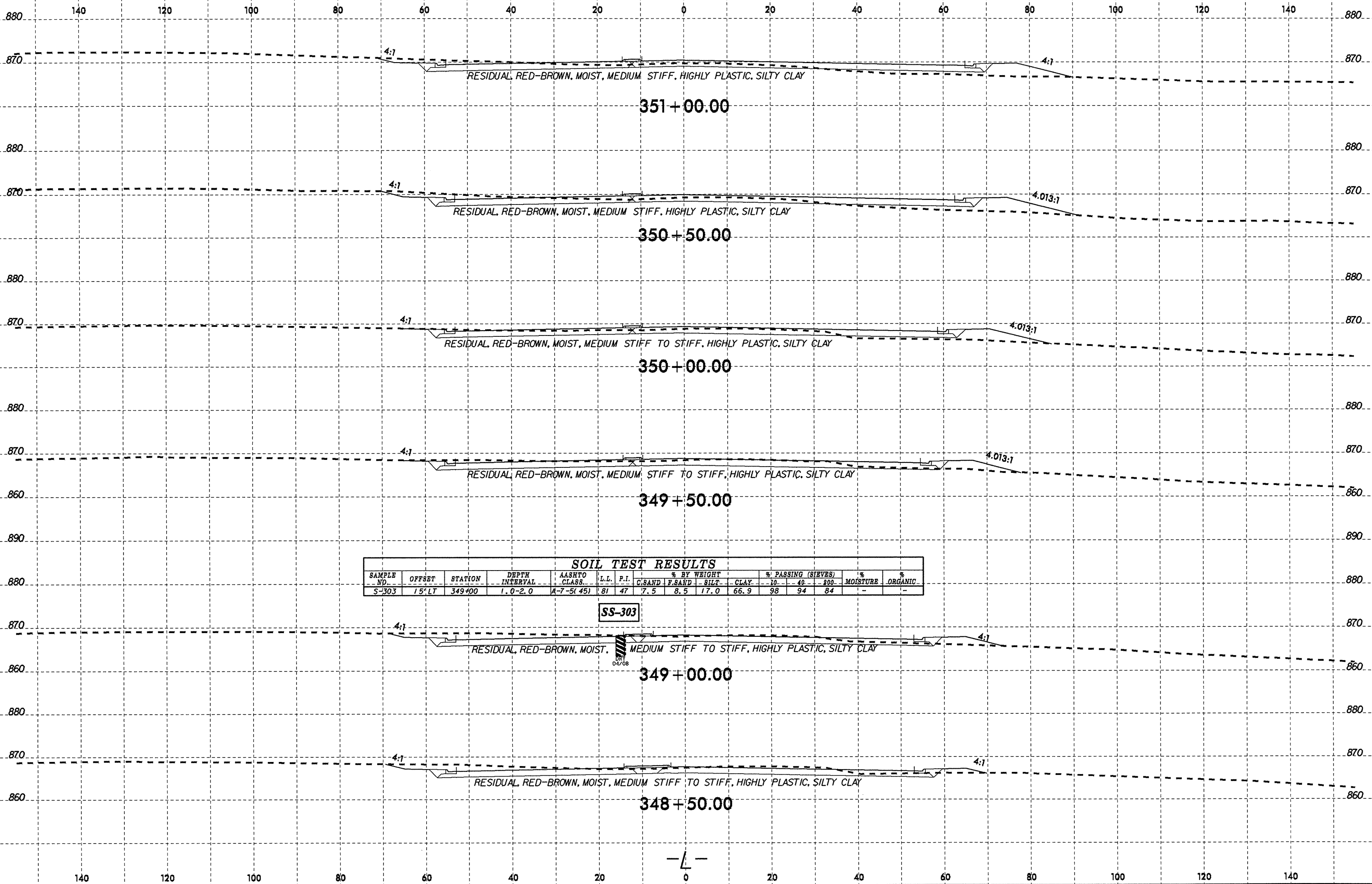


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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-310	15' LT	343+00	1.5'-3.0'	A-7-5(32)	70	30	6.3	8.3	16.4	69.0	100	97	86	-	-

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8/23/99



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-303	15' LT	349+00	1.0-2.0	A-7-5(45)	81	47	7.5	8.5	17.0	66.9	98	94	84	-	-

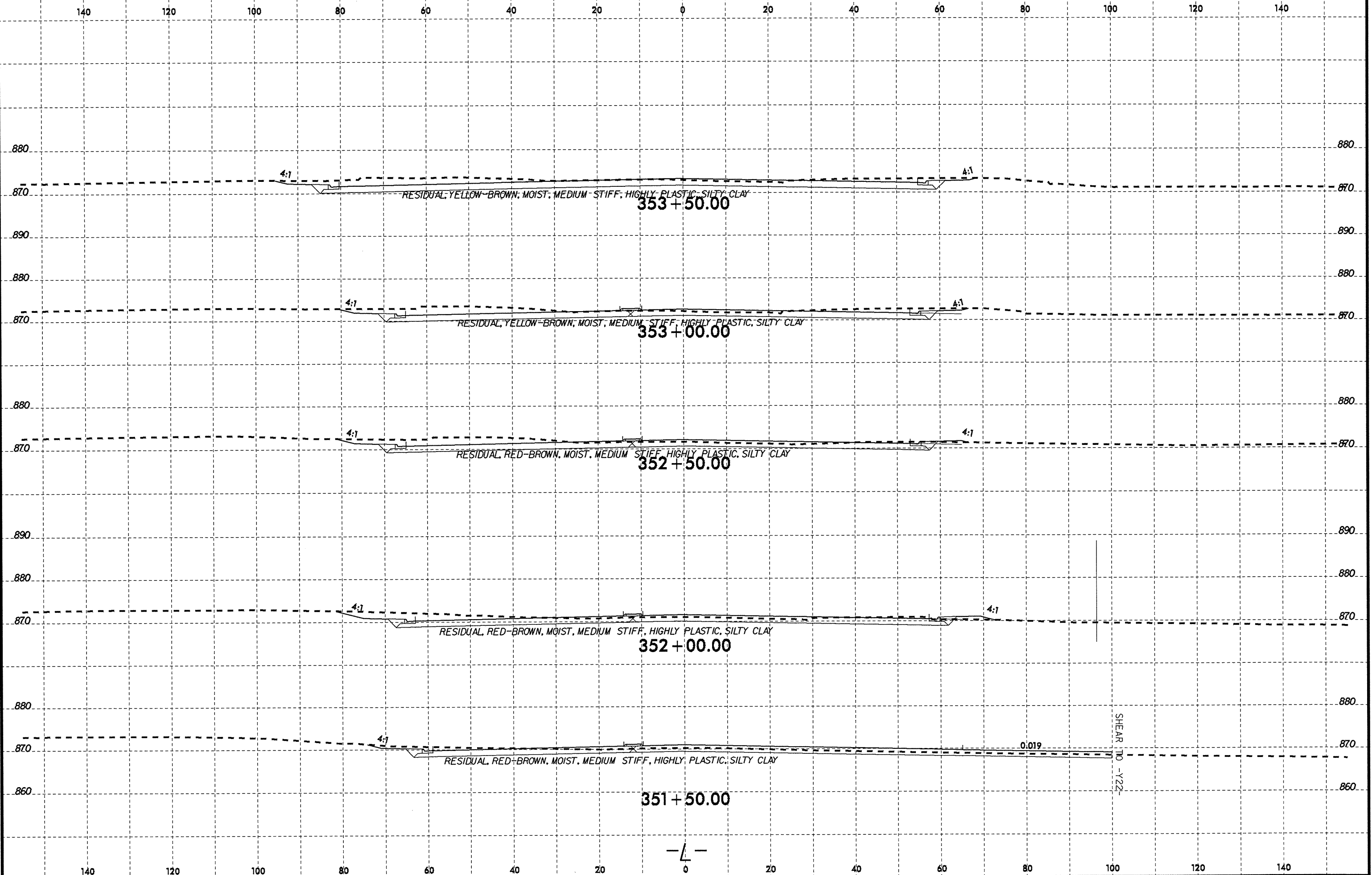
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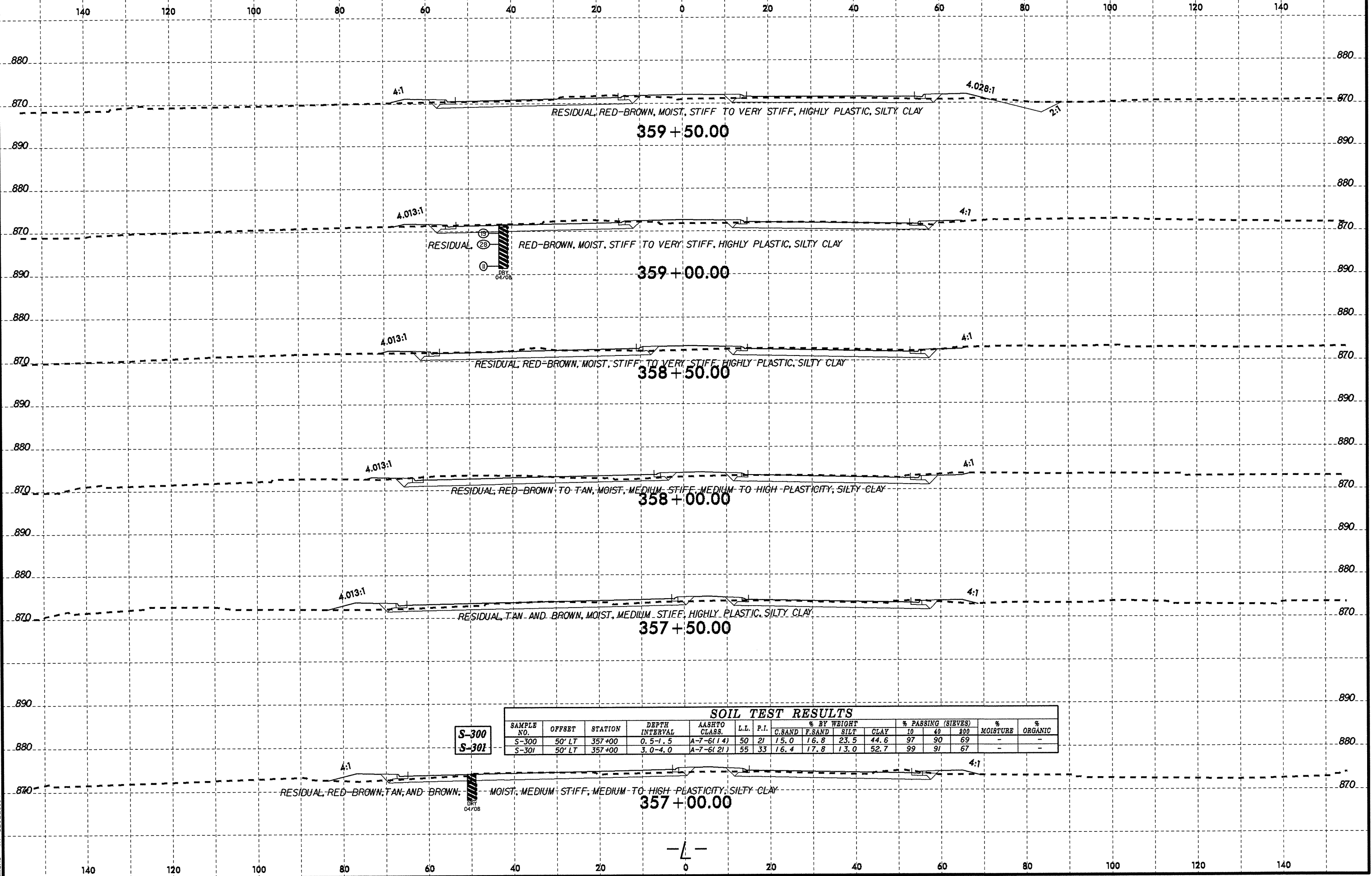
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8/23/99
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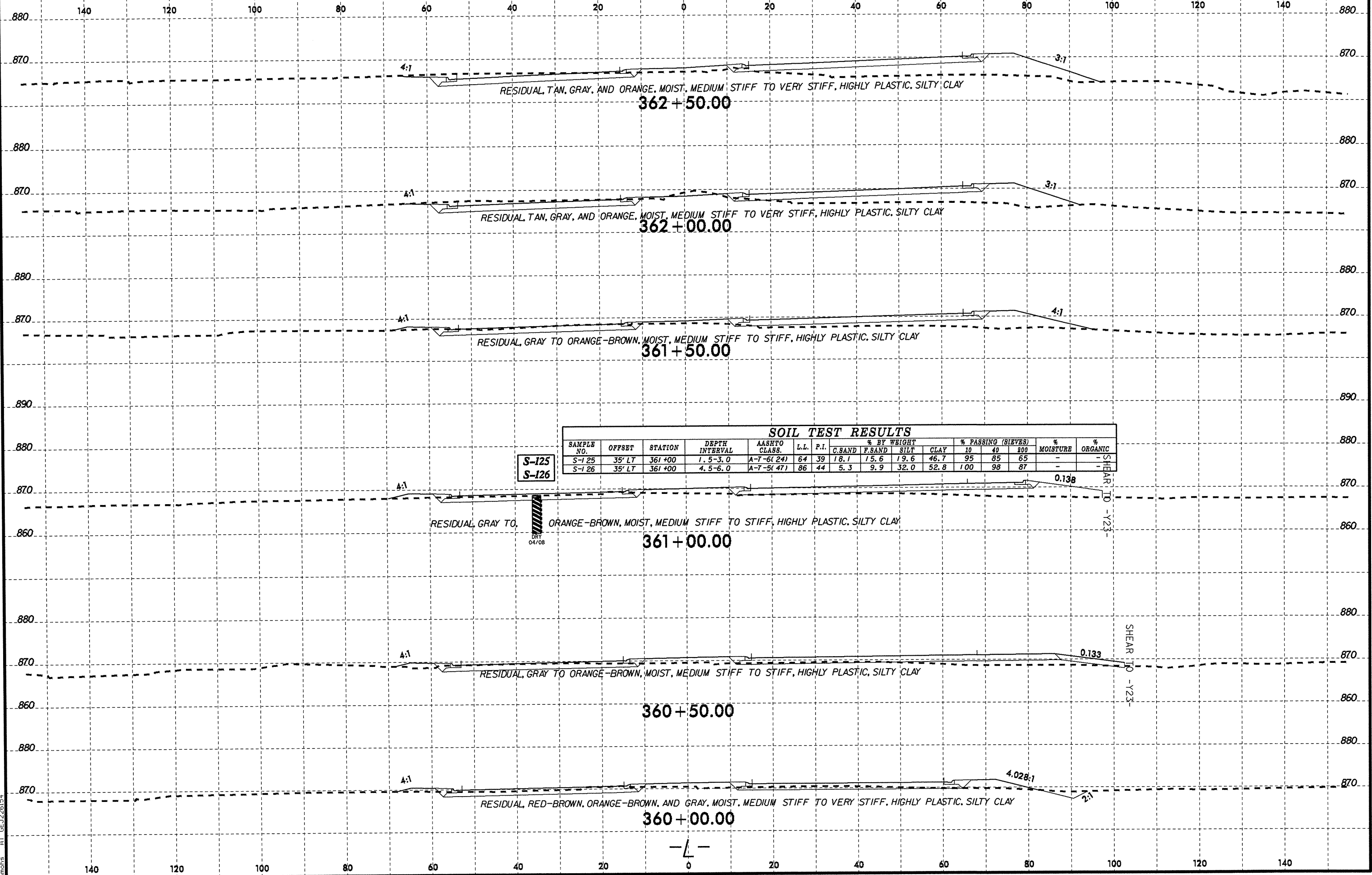


S-300
S-301

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-300	50' LT	357+00	0.5-1.5	A-7-6(14)	50	21	15.0	16.8	23.5	44.6	97	90	69	-	-
S-301	50' LT	357+00	3.0-4.0	A-7-6(21)	55	33	16.4	17.8	13.0	52.7	99	91	67	-	-

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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-125	35' LT	361+00	1.5-3.0	A-7-6(24)	64	39	18.1	15.6	19.6	46.7	95	85	65	-	-
S-126	35' LT	361+00	4.5-6.0	A-7-5(47)	86	44	5.3	9.9	32.0	52.8	100	98	87	-	-

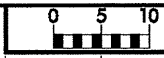
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S-126



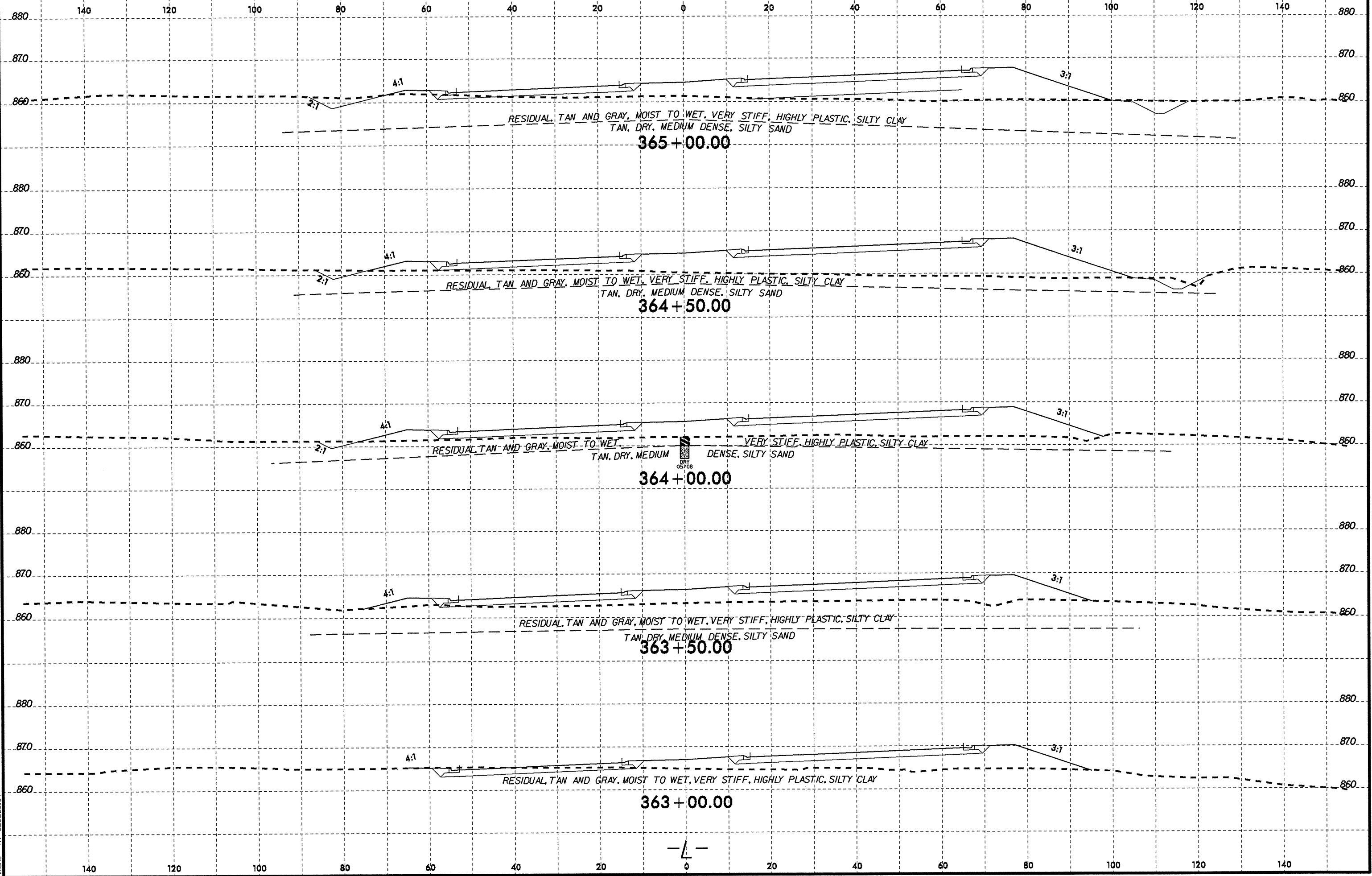
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PROJ. REFERENCE NO.	SHEET NO.
U-2412B	102

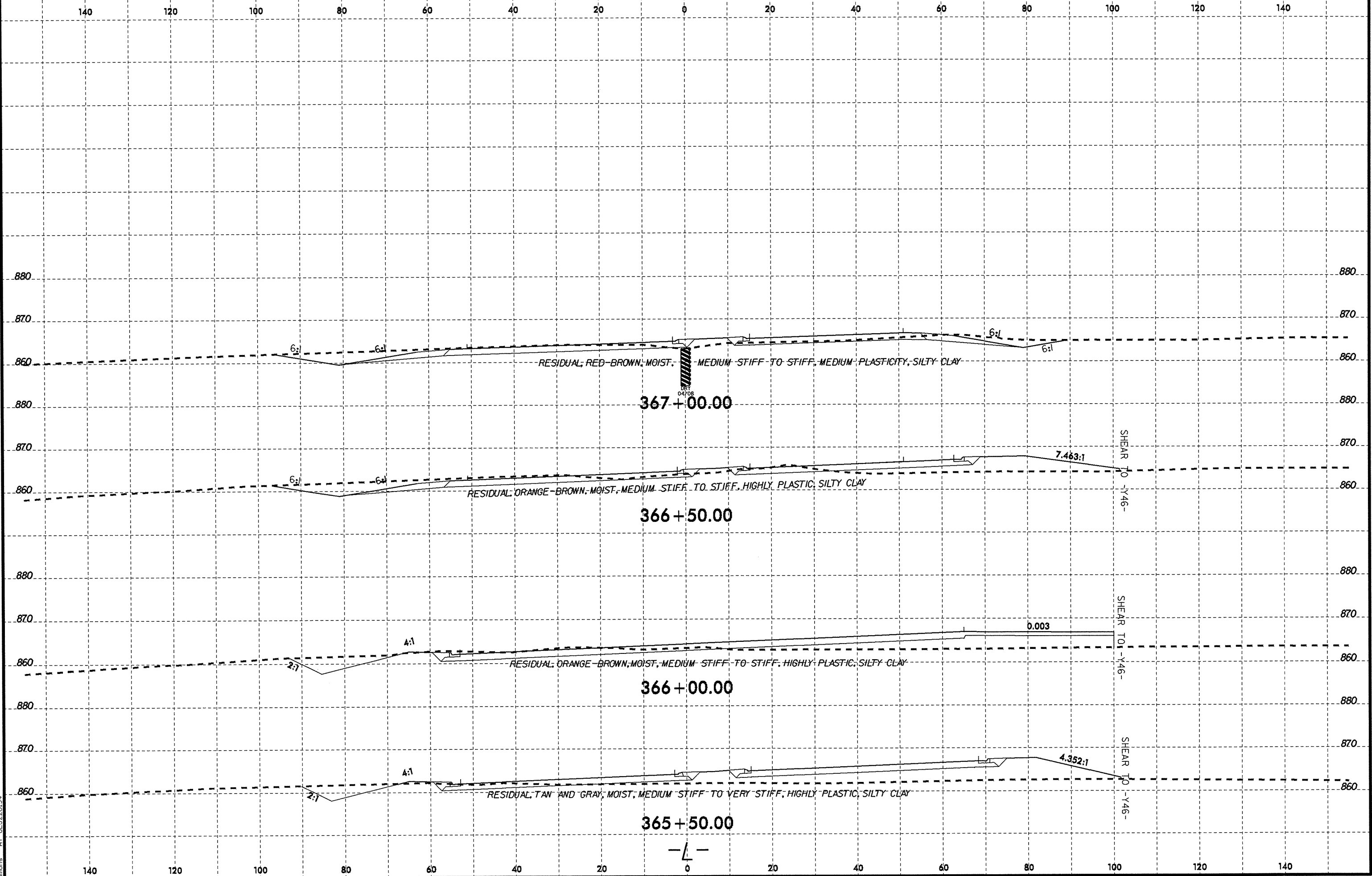


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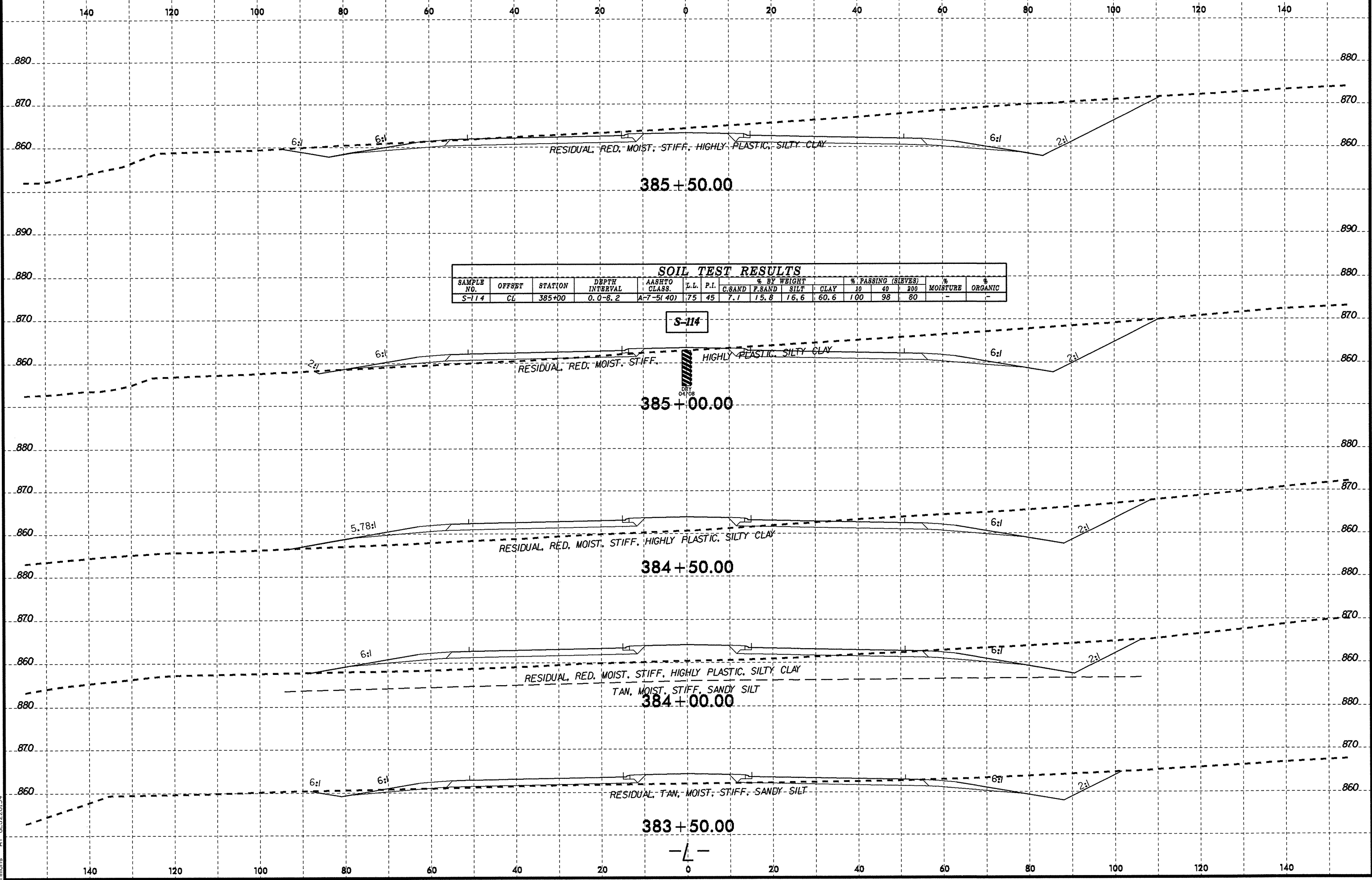


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U-2412B	103



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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G.SAND	F.SAND	SILT	CLAY	10	40	200		
S-114	CL	385+00	0.0-8.2	A-7-(5) (40)	75	45	7.1	15.8	16.6	60.6	100	98	80	-	-

S-114

385+00.00

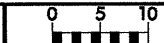
384+50.00

384+00.00

383+50.00

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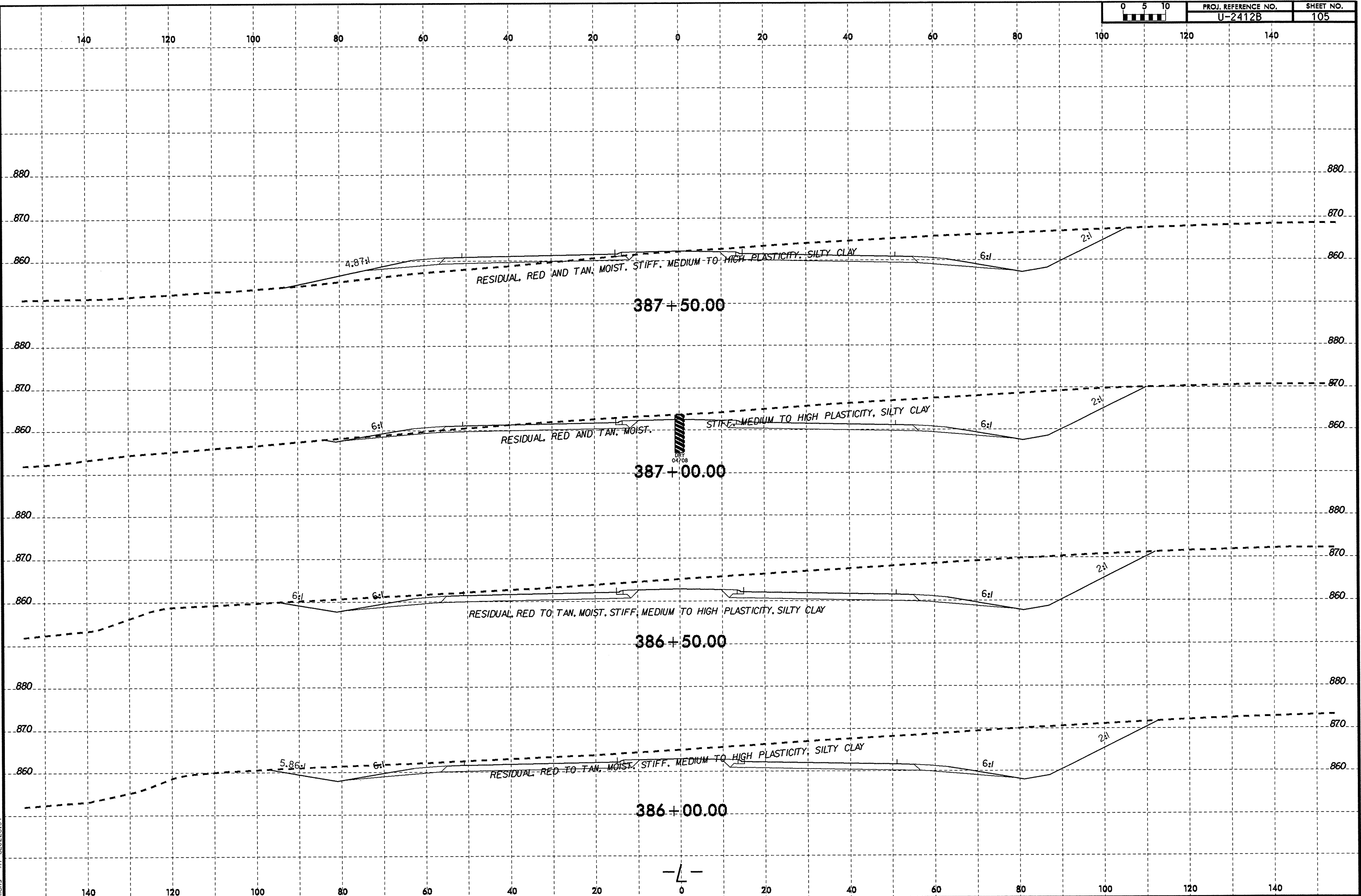
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880 880

870 870

860 860

880 880

870 870

860 860

880 880

870 870

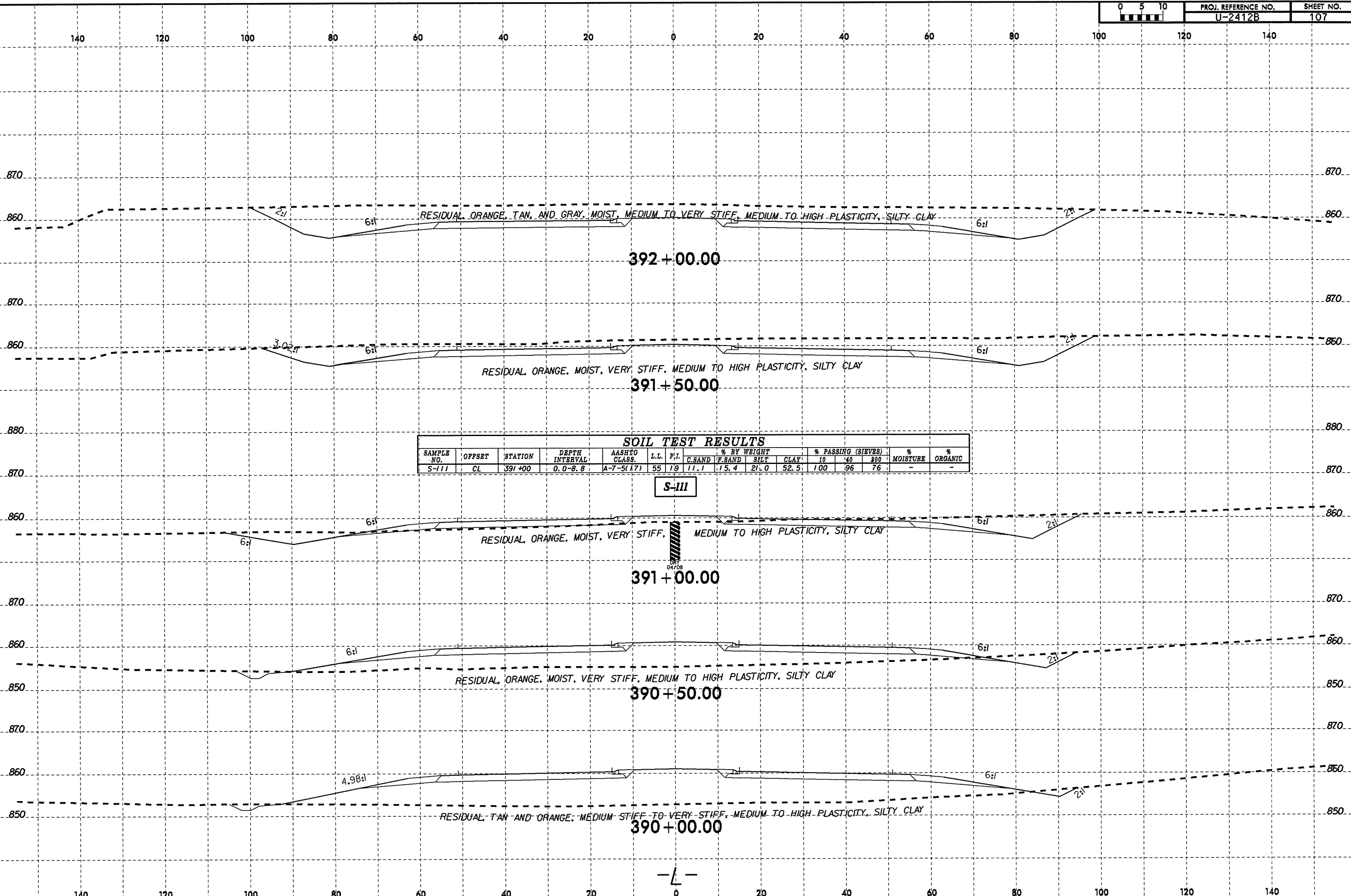
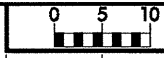
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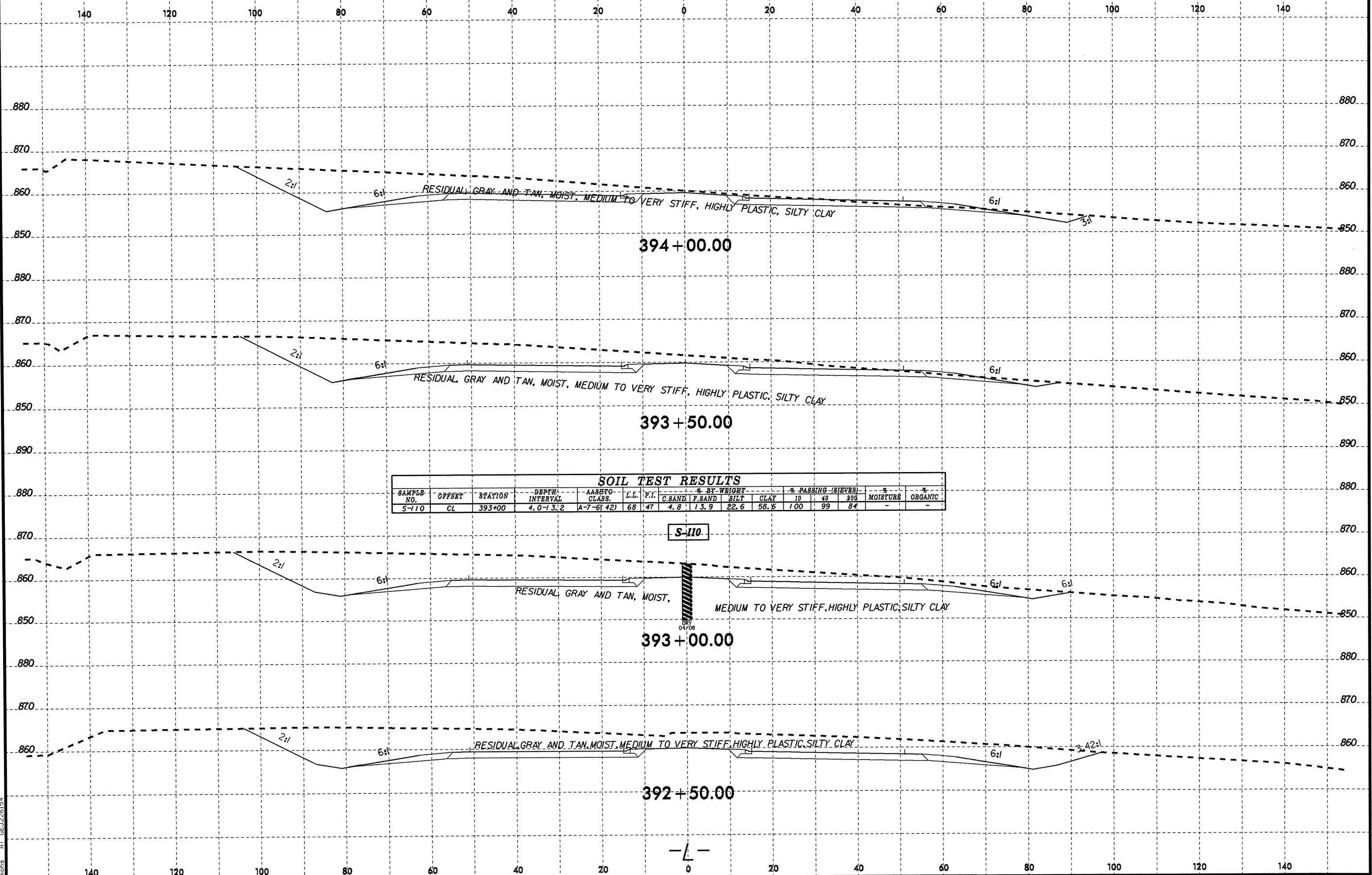


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-111	CL	391+00	0.0-8.8	A-7-5(17)	55	19	11.1	15.4	21.0	52.5	100	96	76	-	-

S-111

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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-110	CL	393+00	4.0-13.2	A-7-6(42)	68	47	4.8	13.9	22.6	58.6	100	99	84	-	-

S-110



393+00.00

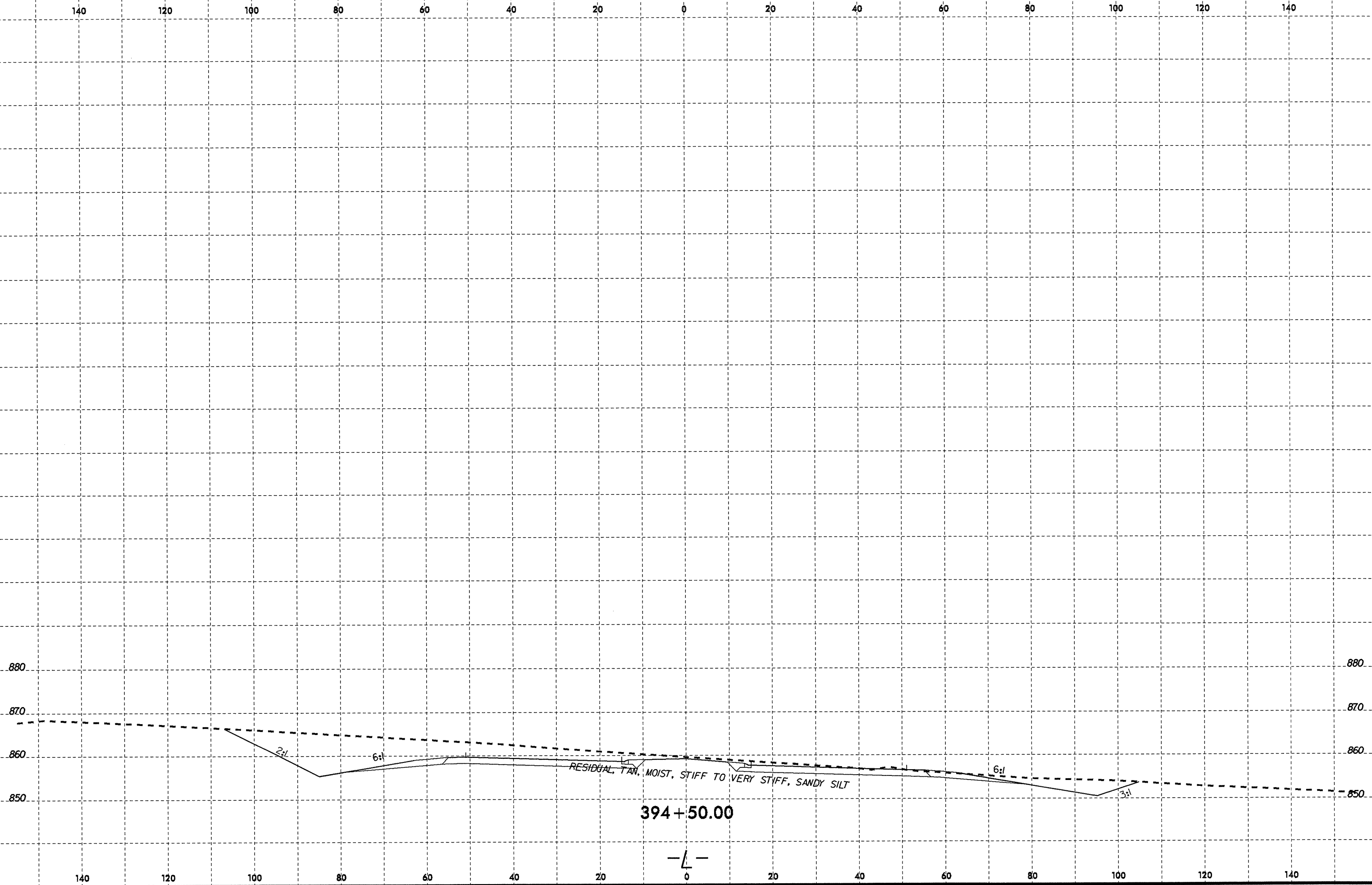
392+50.00

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PROJ. REFERENCE NO.	SHEET NO.
U-2412B	109



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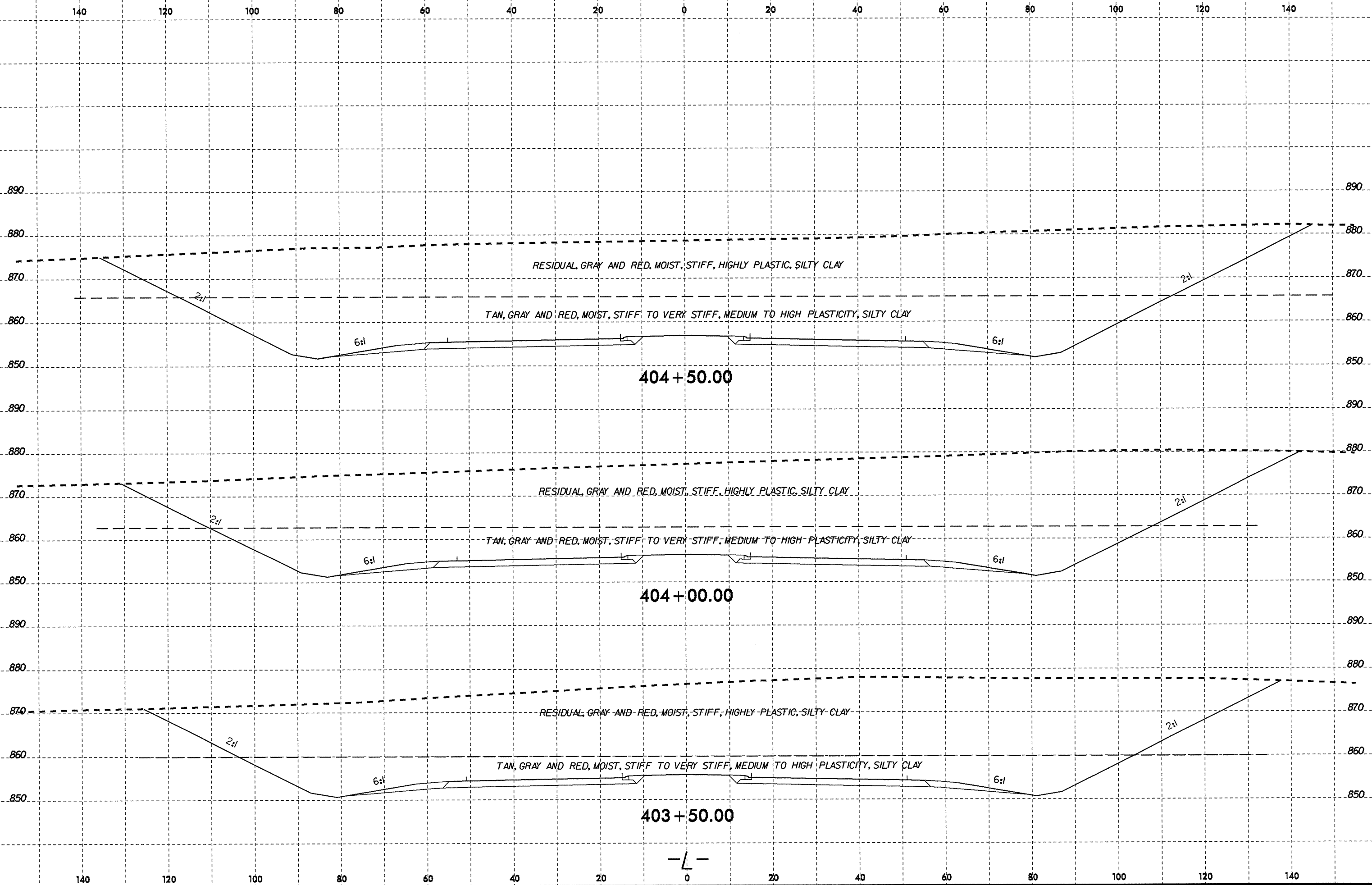
394+50.00

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8/23/99



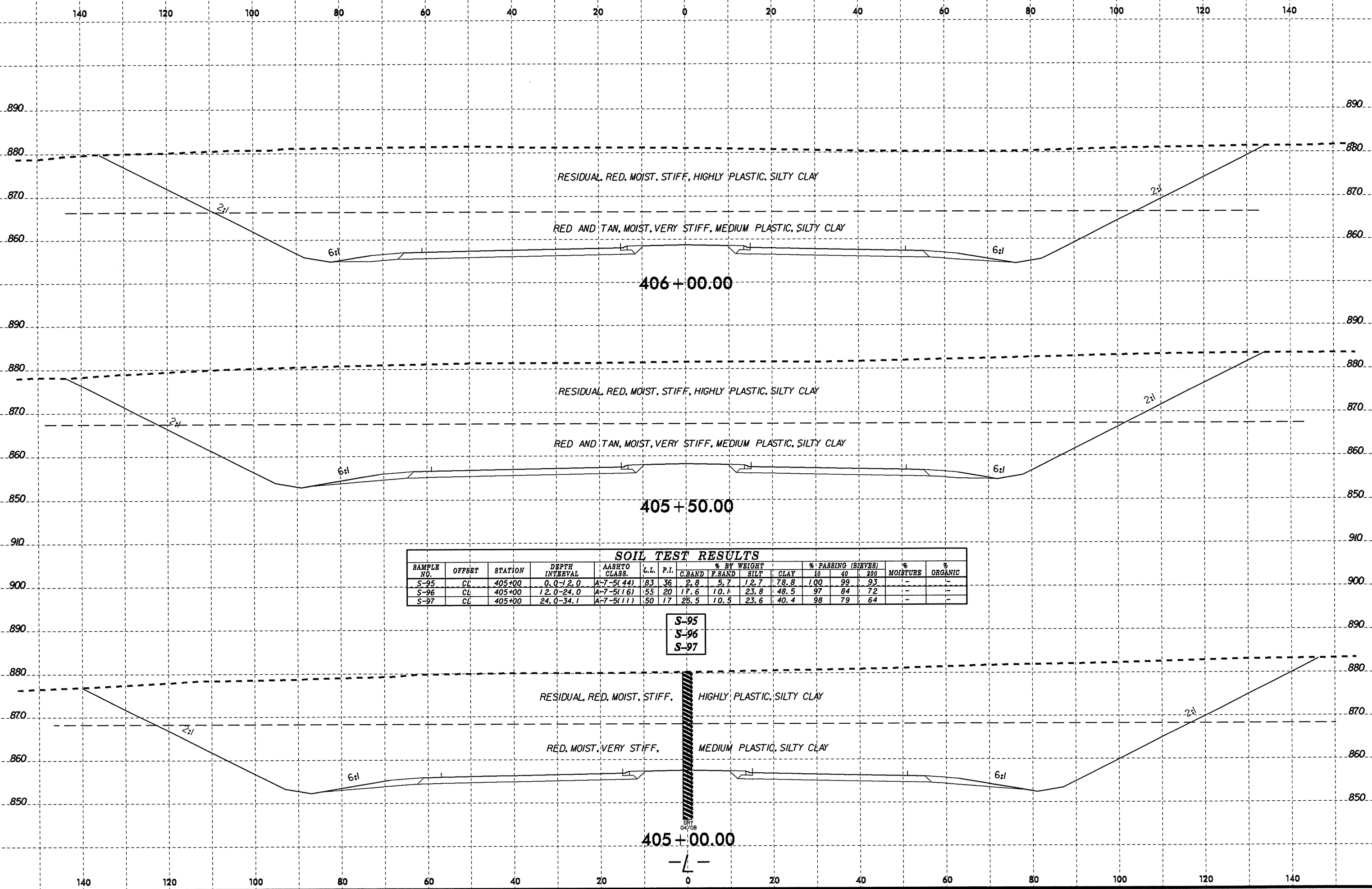
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U-2412B	111



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8/23/99



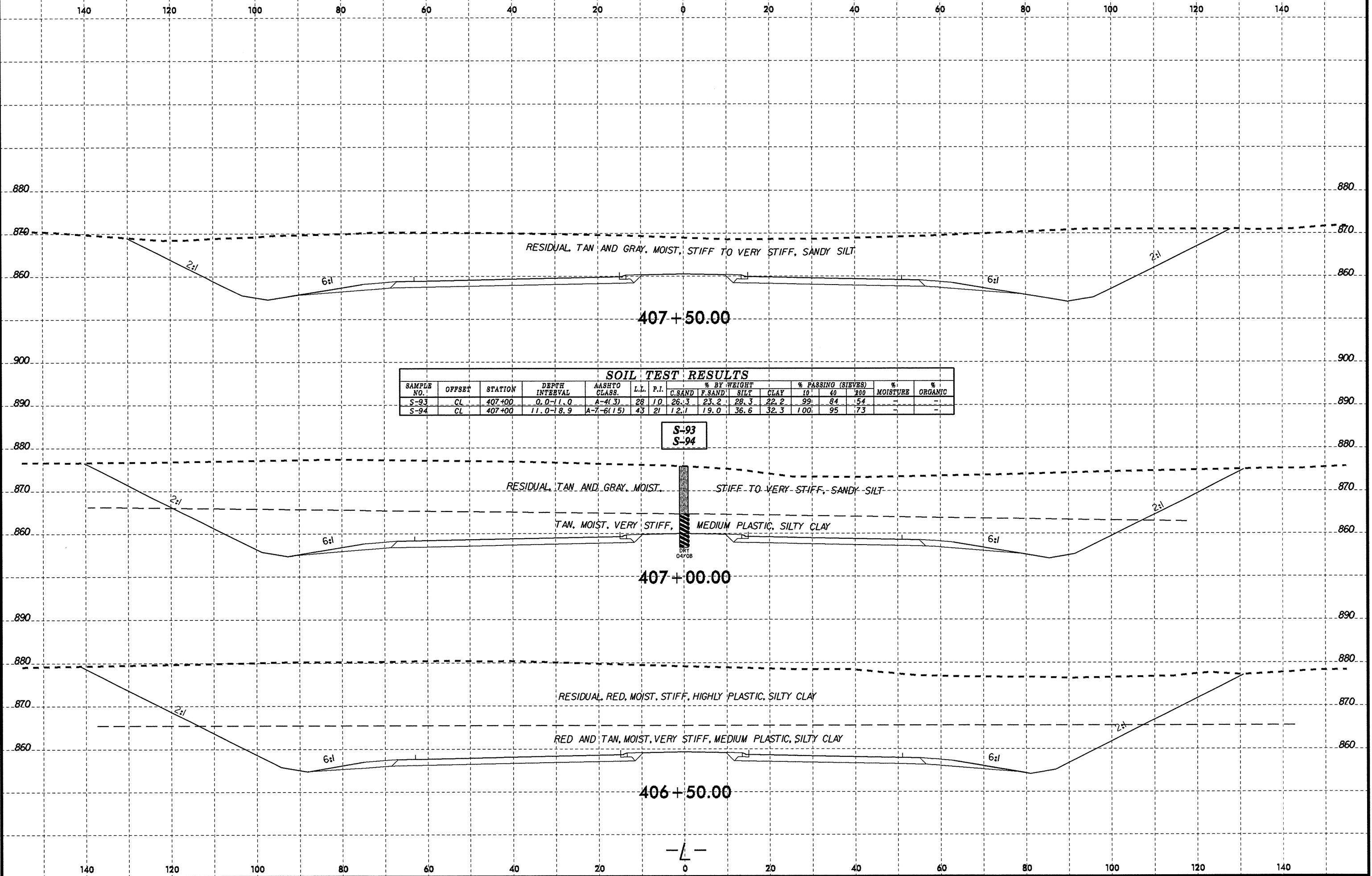
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-95	CL	405+00	0.0-12.0	A-7-5(44)	83	36	2.8	5.7	12.7	78.8	100	99	93	-	-
S-96	CL	405+00	12.0-24.0	A-7-5(16)	55	20	17.6	10.1	23.8	48.5	97	84	72	-	-
S-97	CL	405+00	24.0-34.1	A-7-5(11)	50	17	25.5	10.5	23.6	40.4	98	79	64	-	-

S-95
S-96
S-97

04/08

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8/23/99
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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-93	CL	407+00	0.0-11.0	A-4(3)	28	10	26.3	23.2	28.3	22.2	99	84	54	-	-
S-94	CL	407+00	11.0-18.9	A-7-6(15)	43	21	12.1	19.0	36.6	32.3	100	95	73	-	-

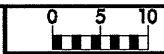
S-93
S-94

407+00.00

406+50.00

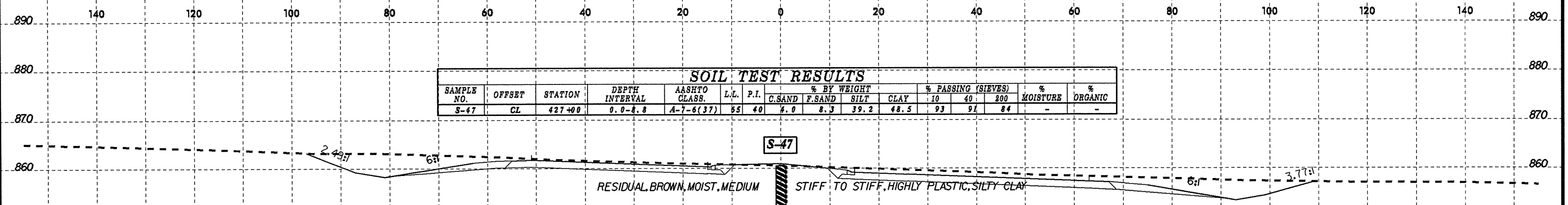
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8/23/99



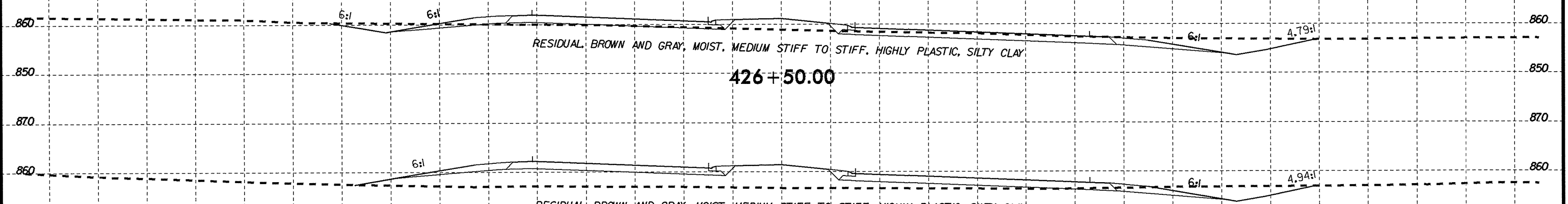
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U-2412B	114

SOIL TEST RESULTS															
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-47	CL	427+00	0.0-8.8	A-7-6(37)	65	40	6.0	8.3	39.2	48.5	93	91	84	-	-



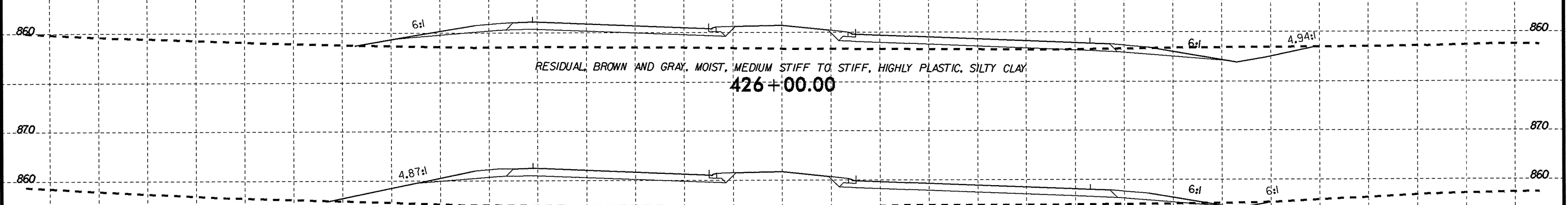
427+00.00

SOIL TEST RESULTS															
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-48	CL	426+50	0.0-8.8	A-7-6(37)	65	40	6.0	8.3	39.2	48.5	93	91	84	-	-



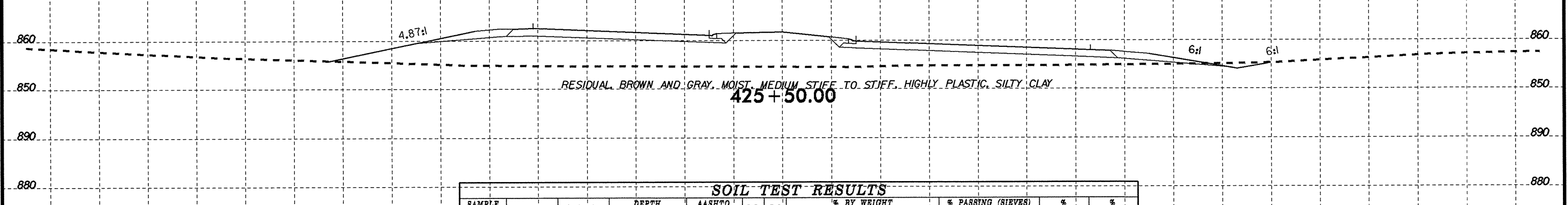
426+50.00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-49	CL	426+00	0.0-8.8	A-7-6(37)	65	40	6.0	8.3	39.2	48.5	93	91	84	-	-



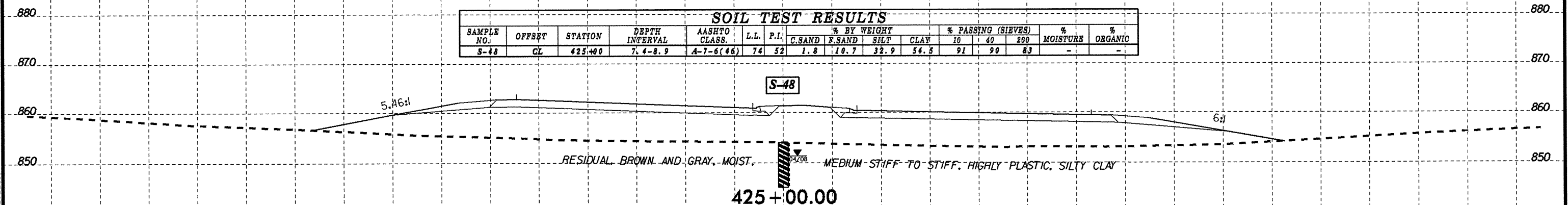
426+00.00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-50	CL	425+50	0.0-8.8	A-7-6(37)	65	40	6.0	8.3	39.2	48.5	93	91	84	-	-



425+50.00

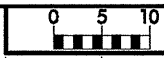
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-51	CL	425+00	0.0-8.8	A-7-6(37)	65	40	6.0	8.3	39.2	48.5	93	91	84	-	-



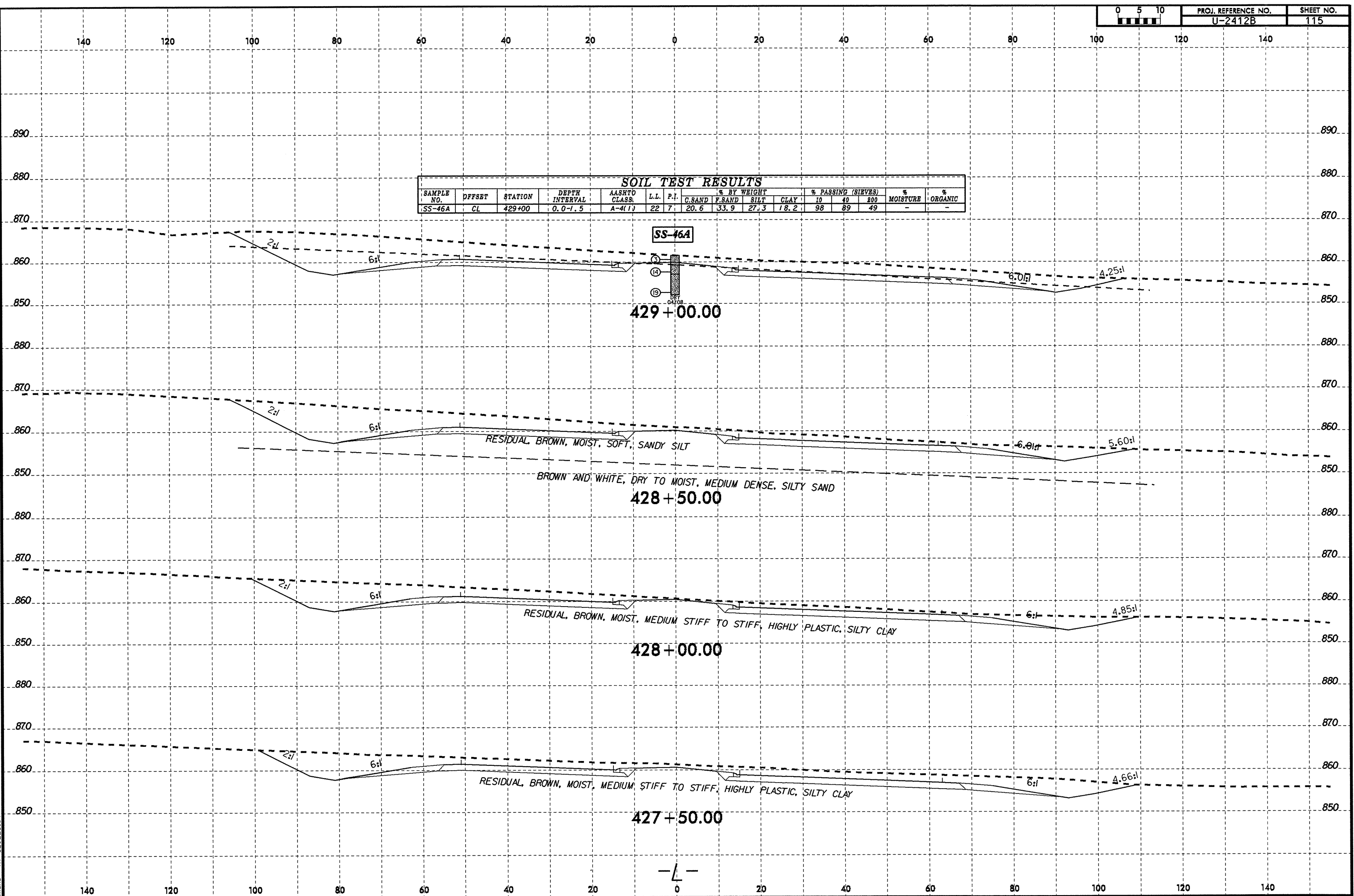
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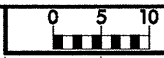


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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-46A	CL	429+00	0.0-1.5	A-4(1)	22	7	20.6	33.9	27.3	18.2	98	89	49	-	-

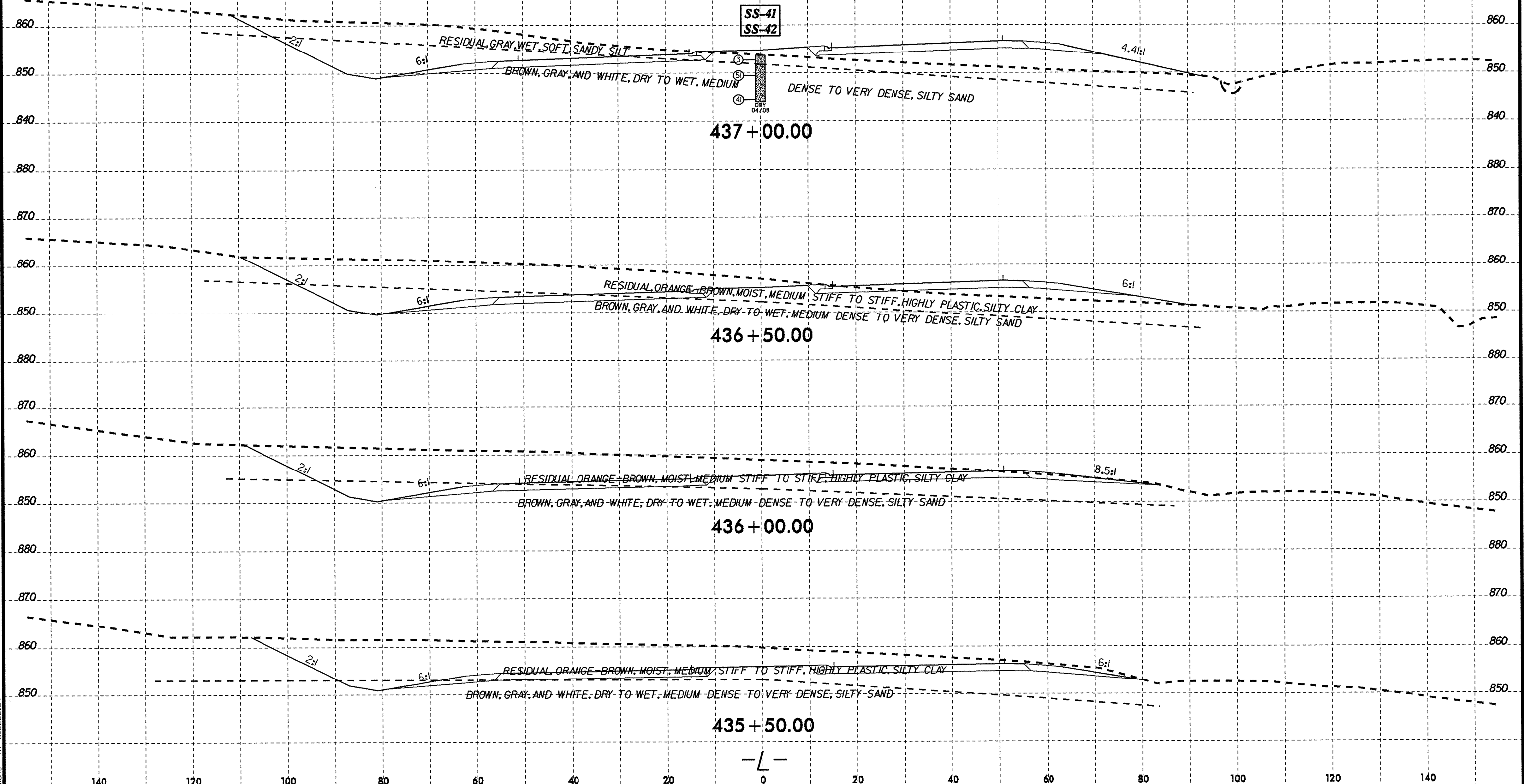


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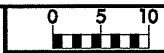


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-41	CL	437+00	0.0-1.5	A-4(0)	24	8	31.9	33.3	16.6	18.2	99	83	38	-	-
SS-42	CL	437+00	3.3-4.8	A-2-4(0)	25	6	47.5	28.3	14.1	10.1	98	70	27	-	-

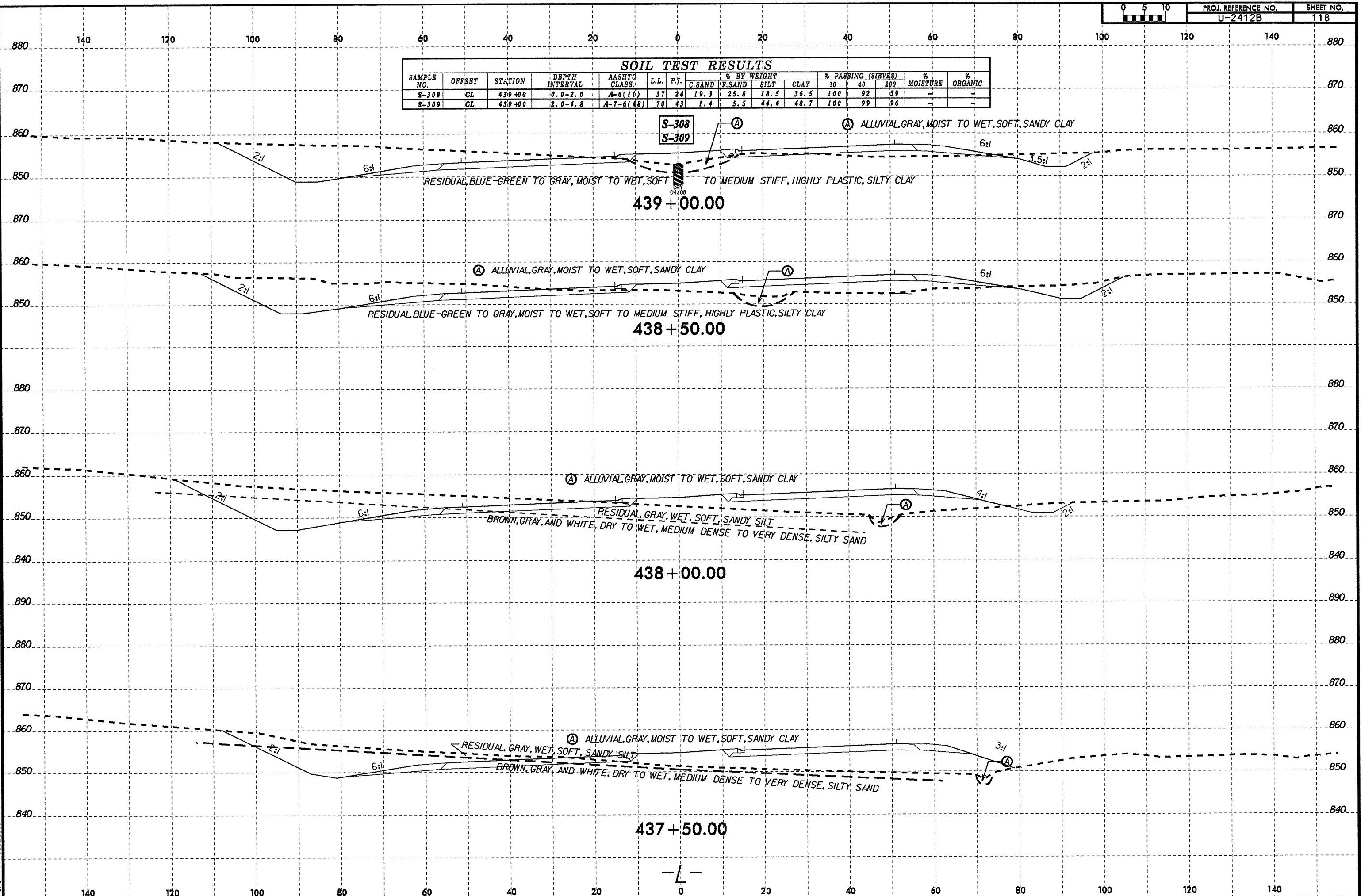


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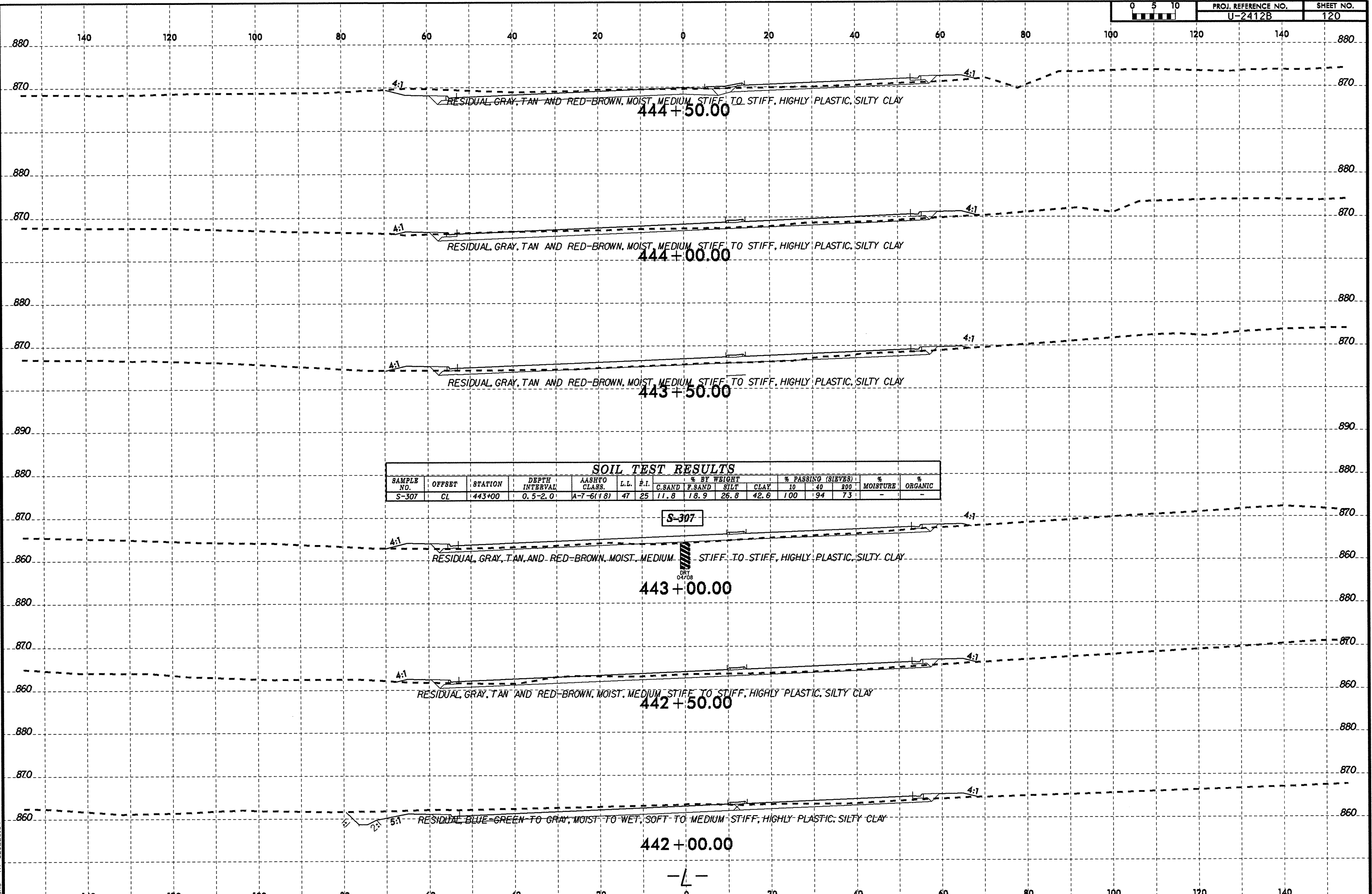
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-308	CL	439+00	0.0-2.0	A-6(11)	37	24	19.3	25.8	18.5	36.5	100	92	59	-	-
S-309	CL	439+00	2.0-4.8	A-7-6(48)	70	43	1.4	5.5	44.6	48.7	100	99	96	-	-



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SOIL TEST RESULTS

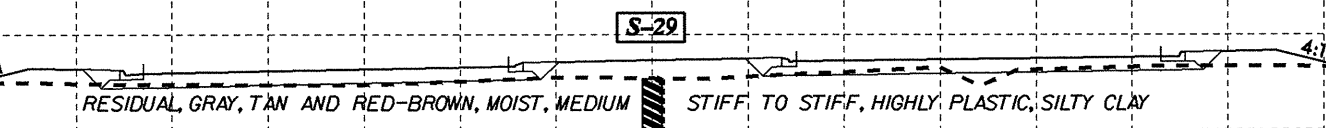
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-307	CL	443+00	0.5-2.0	A-7-6(18)	47	25	11.8	18.9	26.8	42.6	100	94	73	-	-

S-307

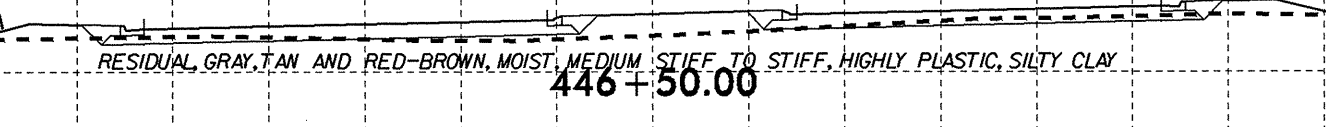
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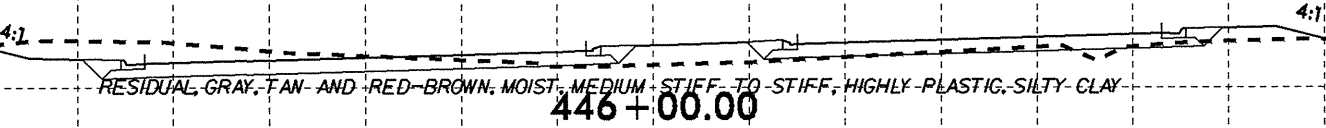
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-29	CL	447+00	0.0-8.8	A-7-5(30)	71	40	13.9	17.2	20.4	48.5	100	94	72	-	-



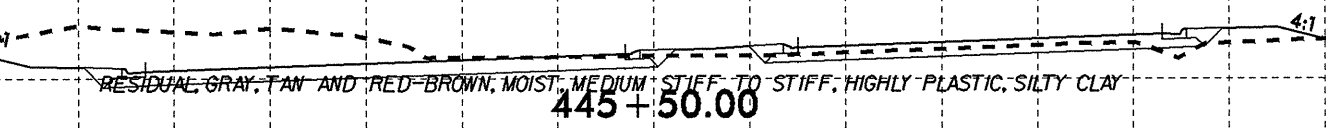
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446+50.00

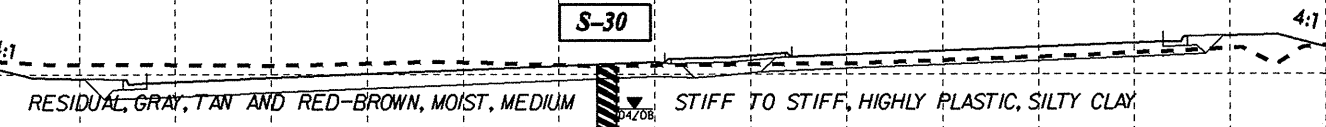


446+00.00



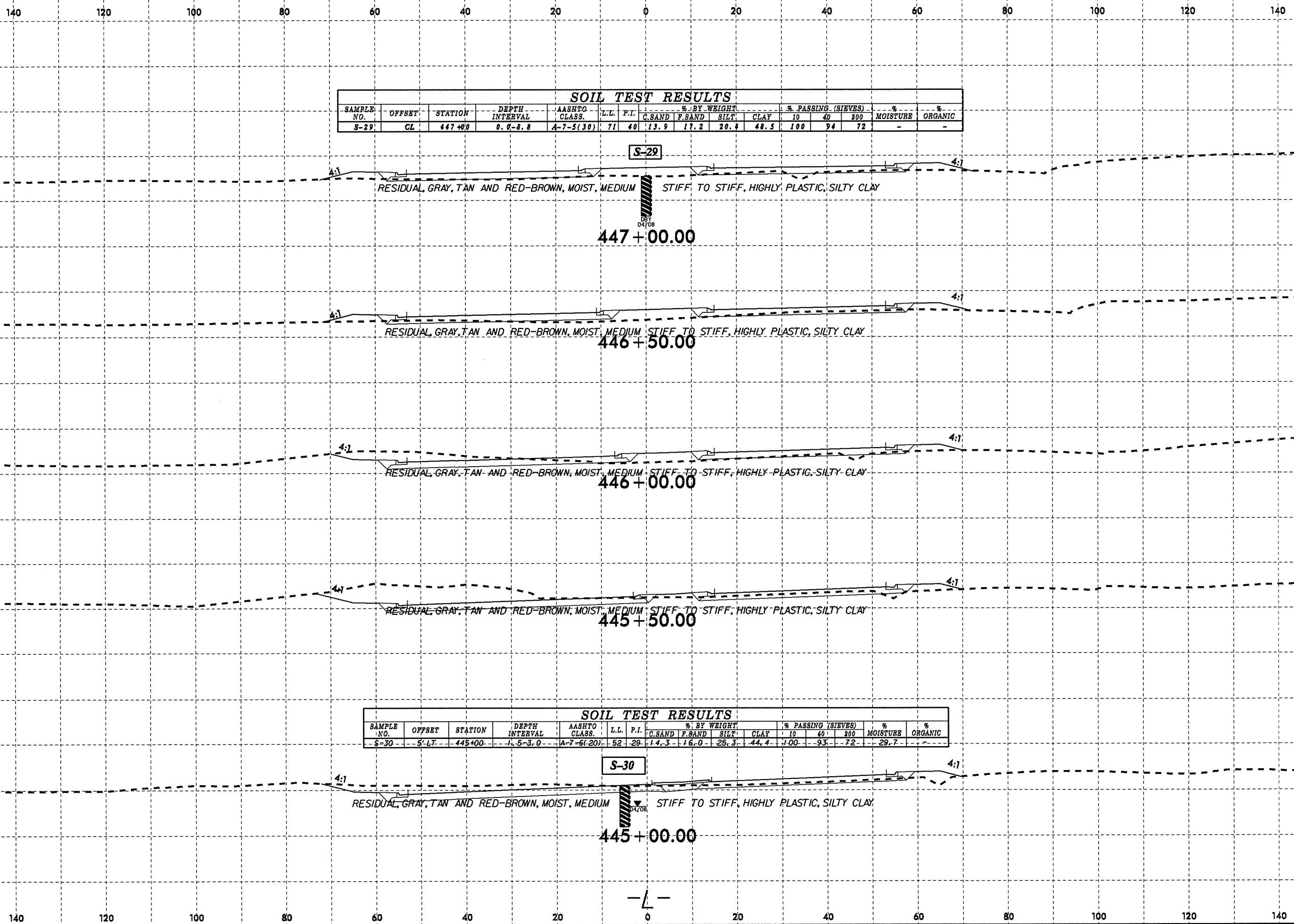
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-30	5'-LT	445+00	1.5-3.0	A-7-6(20)	52	29	14.3	16.0	25.3	44.4	100	93	72	29.7	-

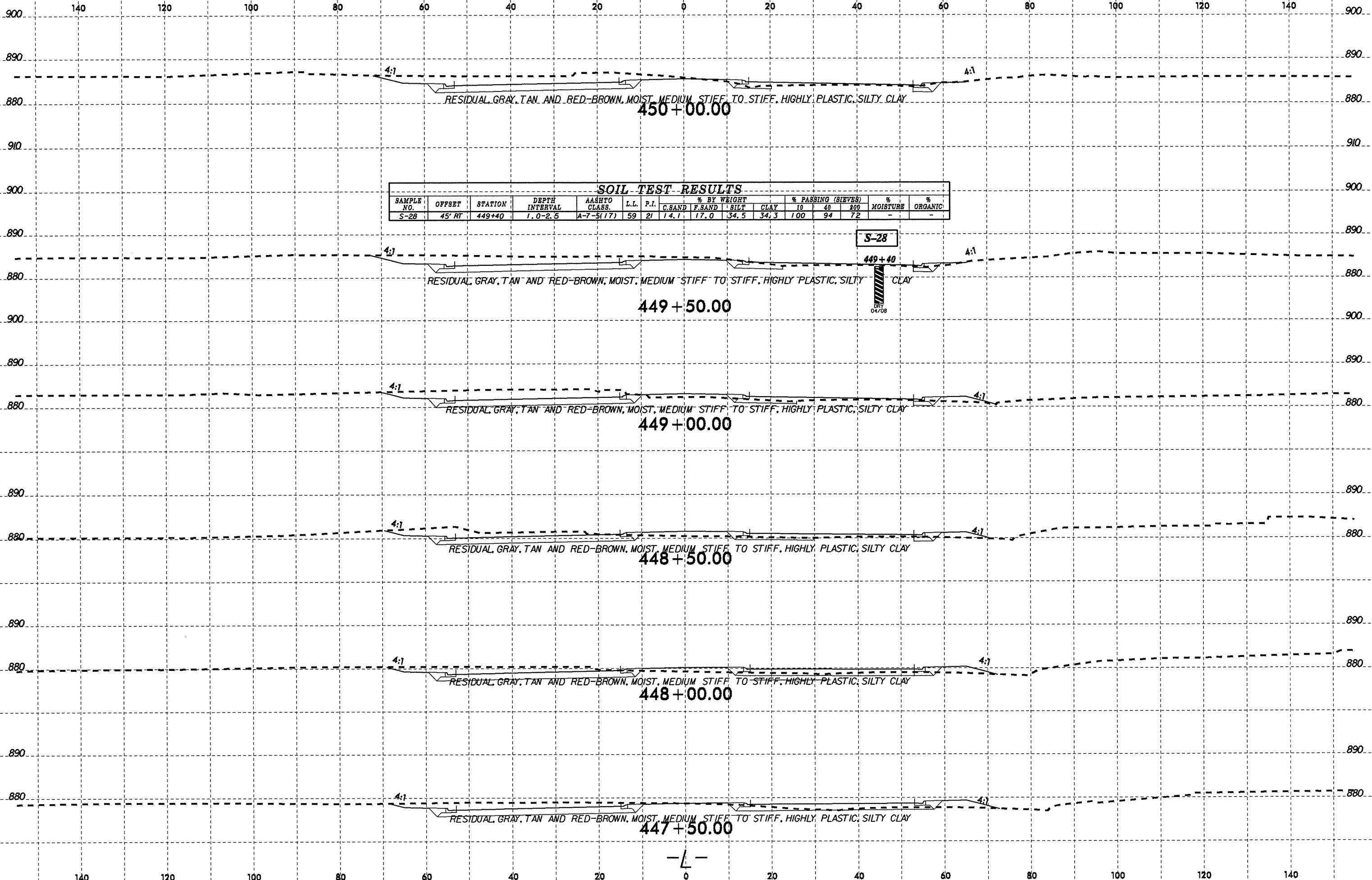
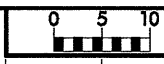


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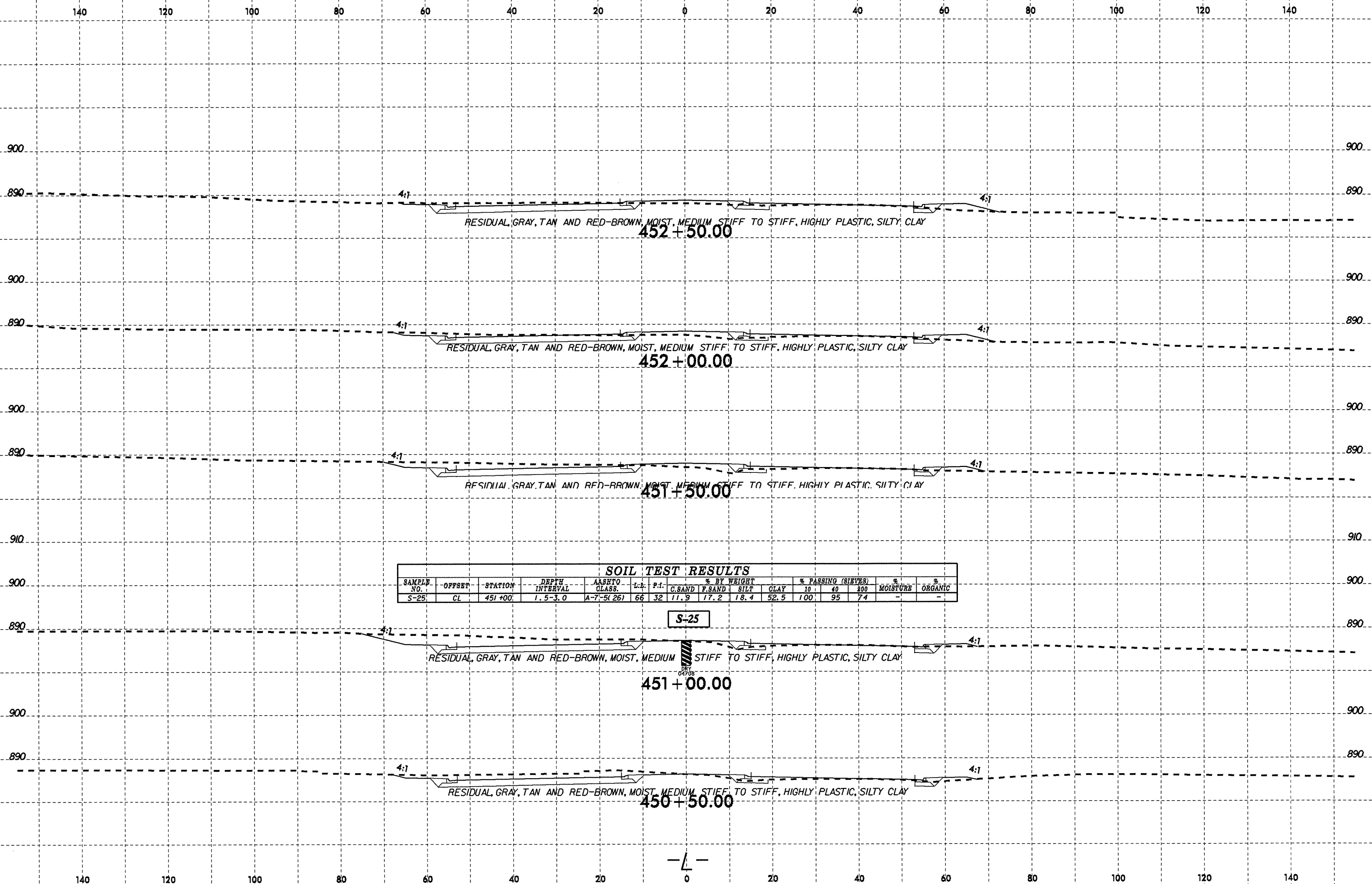
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.BAND	SILT	CLAY	10	40	200		
S-28	45' RT	449+40	1.0-2.5	A-7-5(17)	59	21	14.1	17.0	34.5	34.3	100	94	72	-	-

S-28
04/08

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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-25	CL	451+00	1.5-3.0	A-7-5(26)	66	32	11.9	17.2	18.4	52.5	100	95	74	-	-

S-25

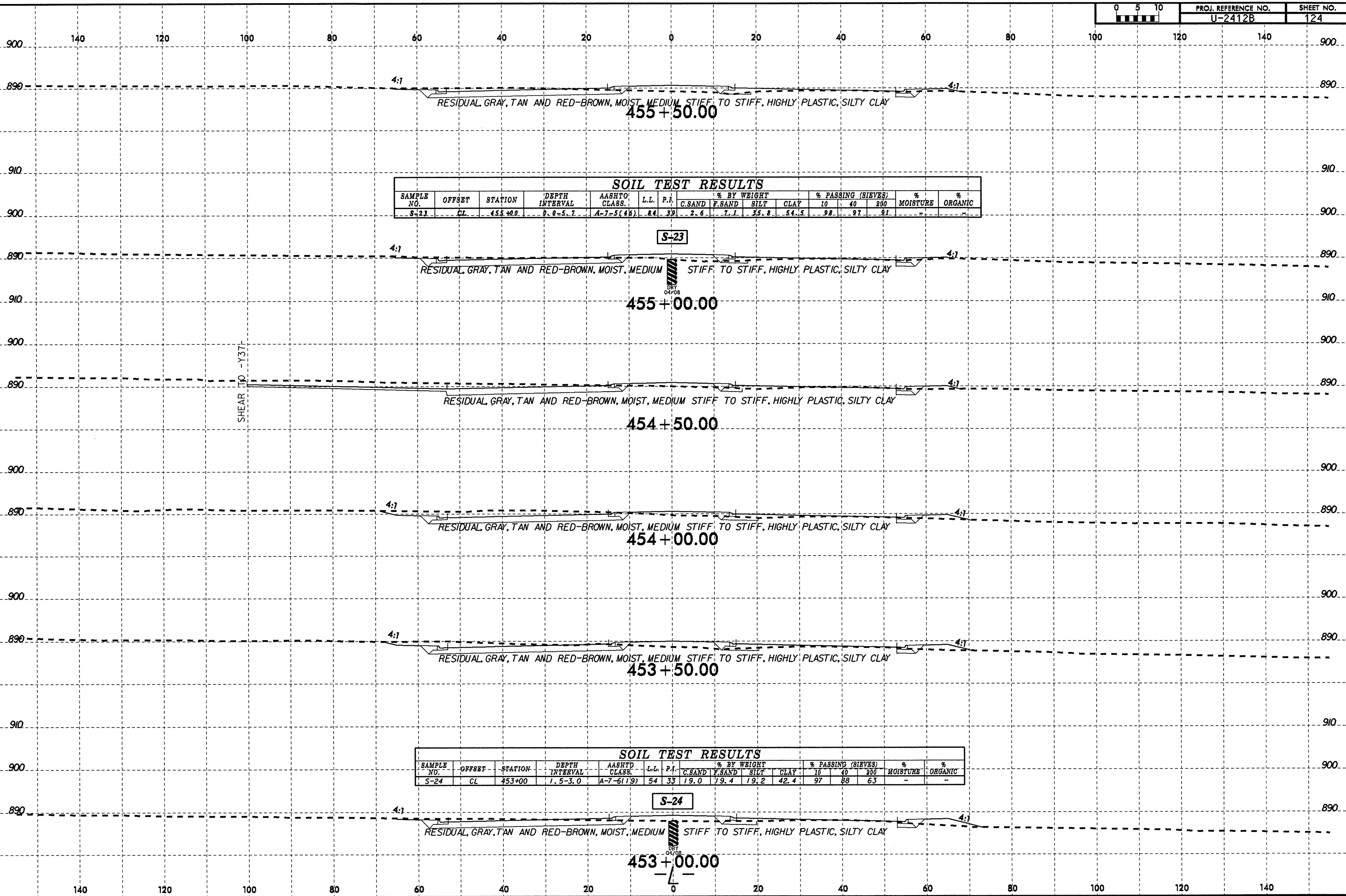
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451+50.00

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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-23	CL	455+00	0.0-5.7	A-7-5(48)	84	39	2.6	7.1	35.8	54.5	98	97	91	-	-

S-23

RESIDUAL, GRAY, TAN AND RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

RESIDUAL, GRAY, TAN AND RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

RESIDUAL, GRAY, TAN AND RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

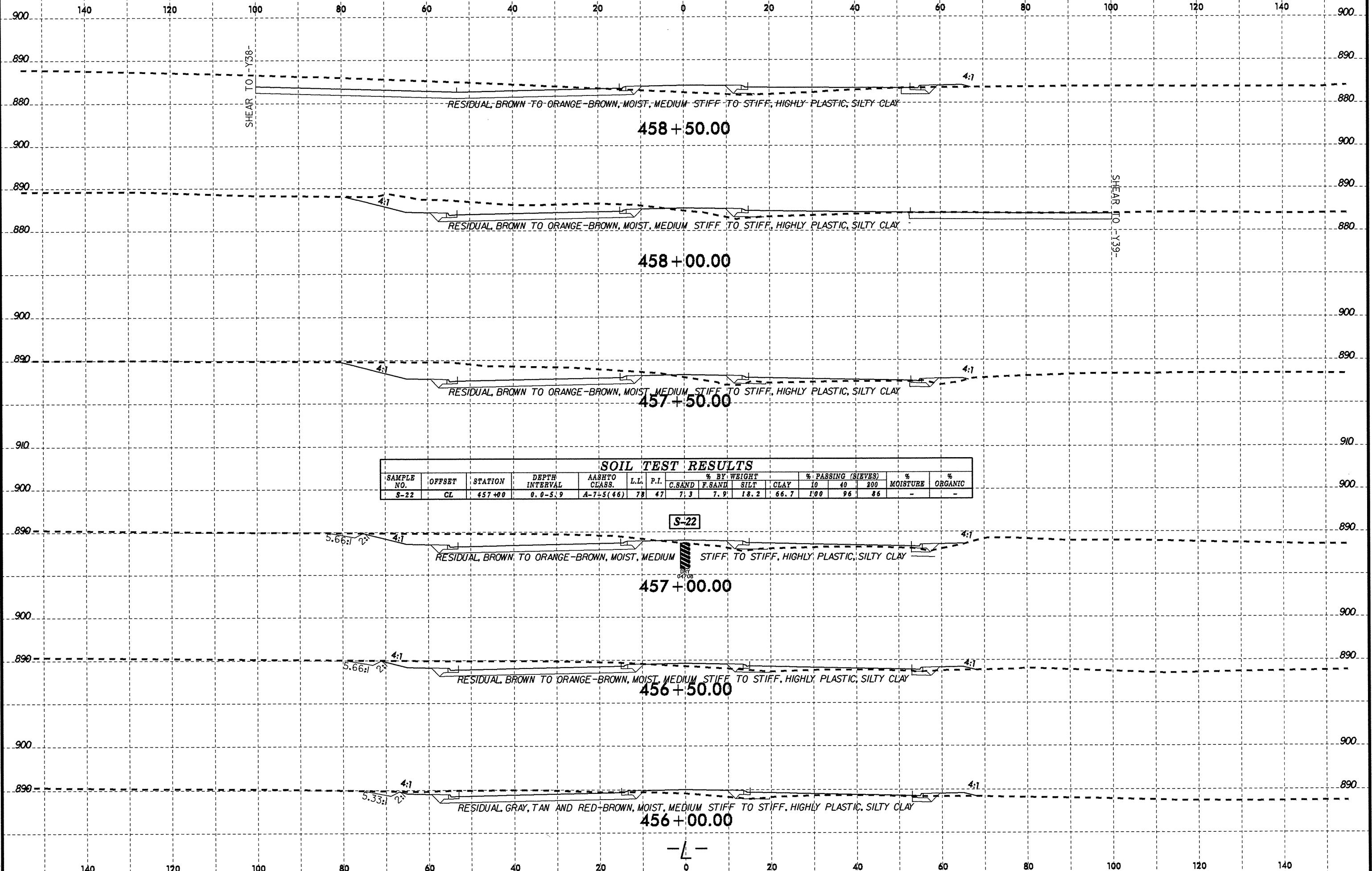
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-24	CL	453+00	1.5-3.0	A-7-6(19)	54	33	19.0	19.4	19.2	42.4	97	88	63	-	-

S-24

RESIDUAL, GRAY, TAN AND RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

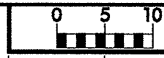
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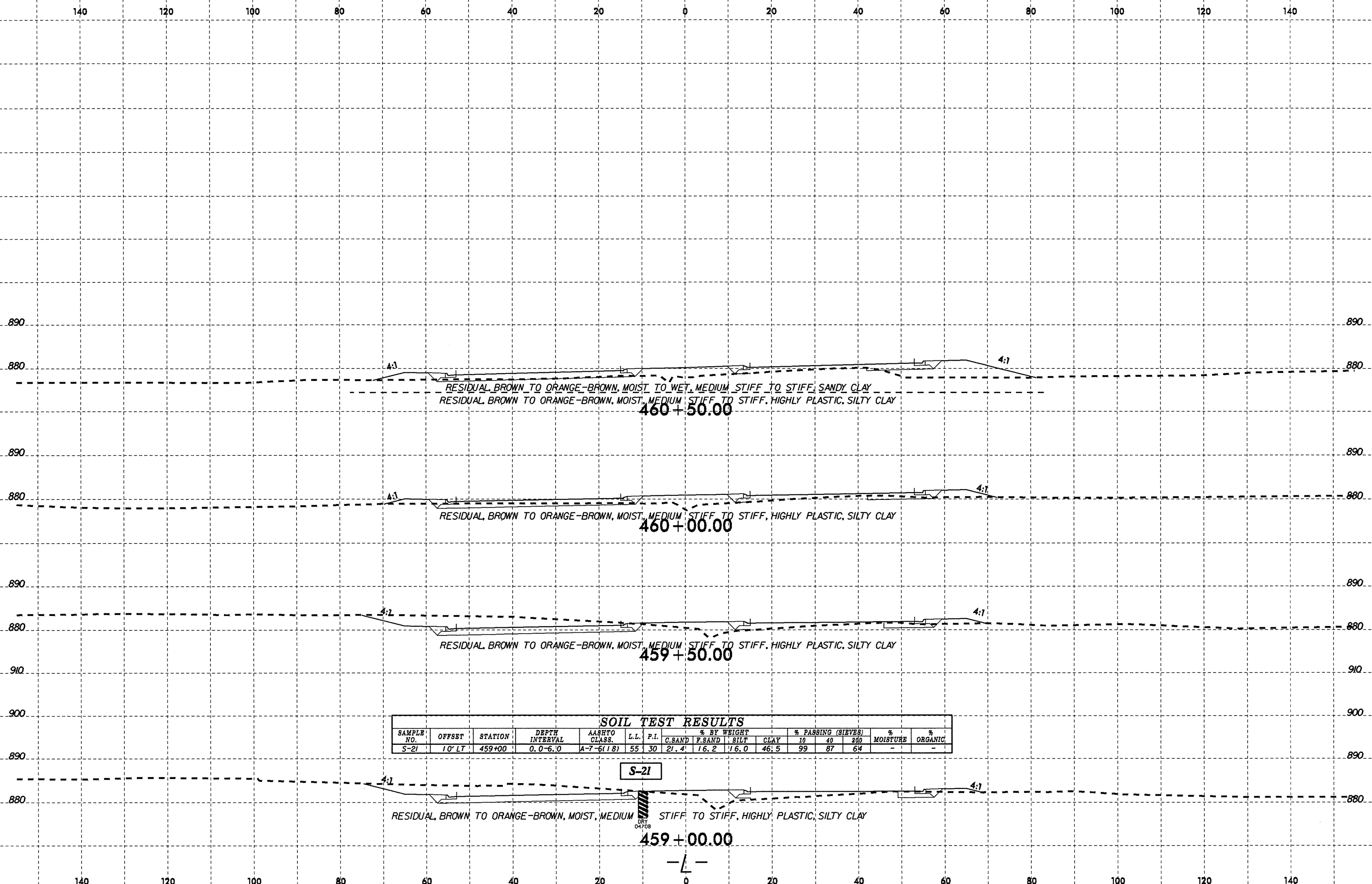
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-22	CL	457+00	0.0-5.9	A-7-5(46)	78	47	7.3	7.9	18.2	66.7	100	96	86	-	-

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8/23/99



PROJ. REFERENCE NO. U-2412B SHEET NO. 126



RESIDUAL BROWN TO ORANGE-BROWN, MOIST TO WET, MEDIUM STIFF TO STIFF, SANDY CLAY
RESIDUAL BROWN TO ORANGE-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

460+50.00

RESIDUAL BROWN TO ORANGE-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

460+00.00

RESIDUAL BROWN TO ORANGE-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

459+50.00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-21	10' LT	459+00	0.0-6.0	A-7-6(118)	55	30	21.4	16.2	16.0	46.5	99	87	64	-	-

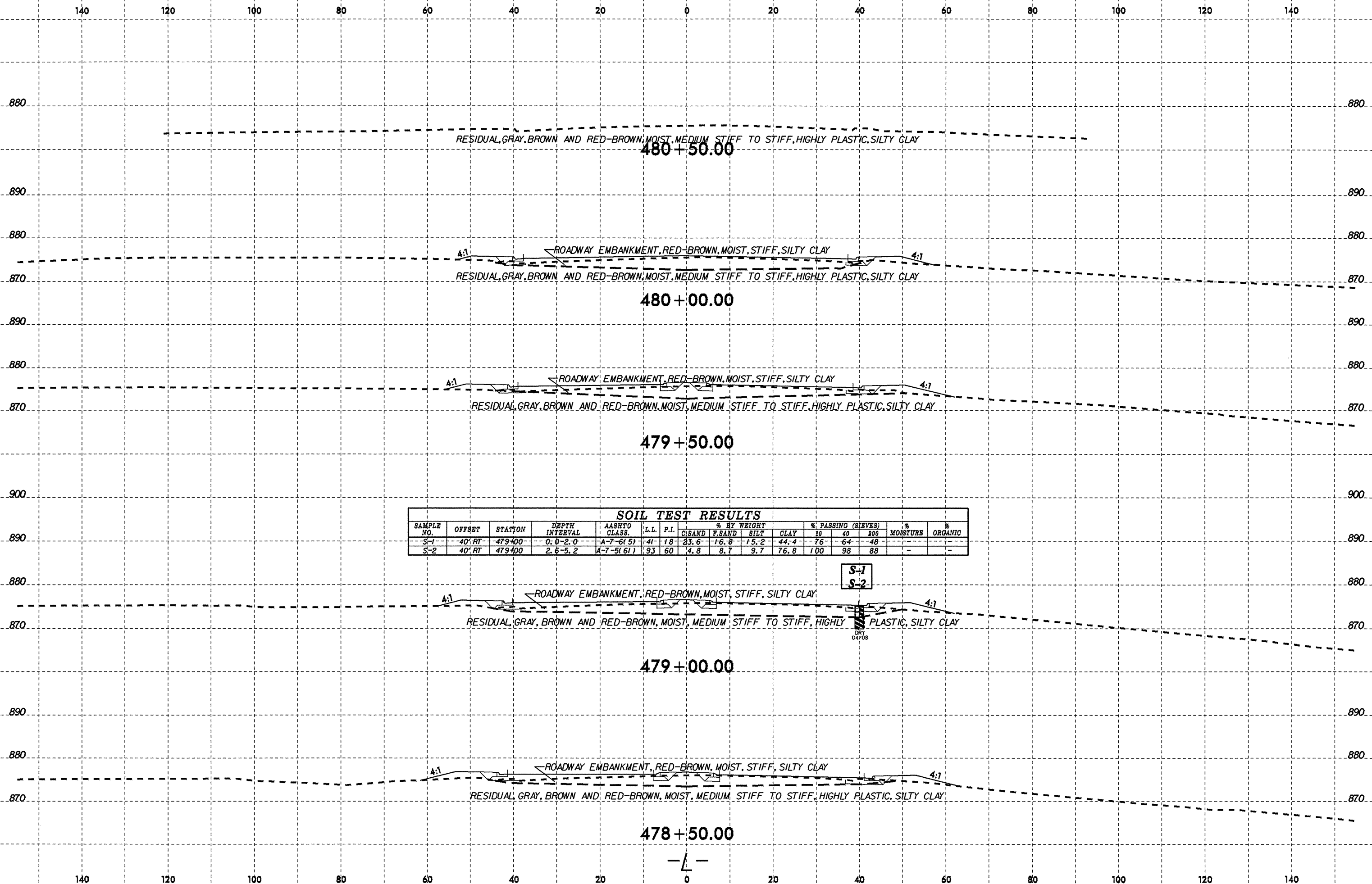
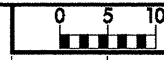
S-21

RESIDUAL BROWN TO ORANGE-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

459+00.00

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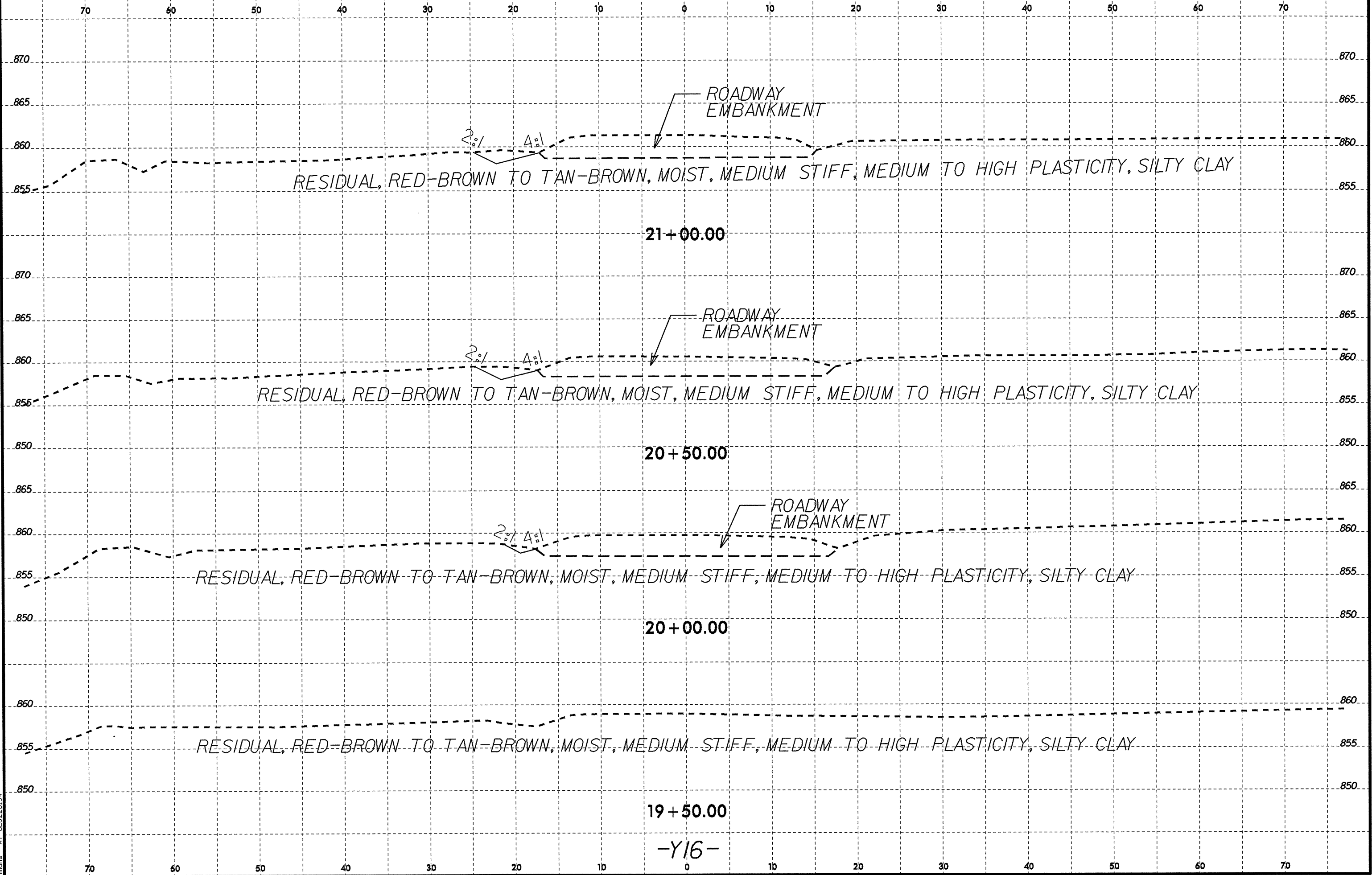
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-1	40' RT	479+00	0.0-2.0	A-7-6(5)	41	18	23.6	16.8	15.2	44.4	76	64	48	-	-
S-2	40' RT	479+00	2.6-5.2	A-7-5(61)	93	60	4.8	8.7	9.7	76.8	100	98	88	-	-

S-1
S-2

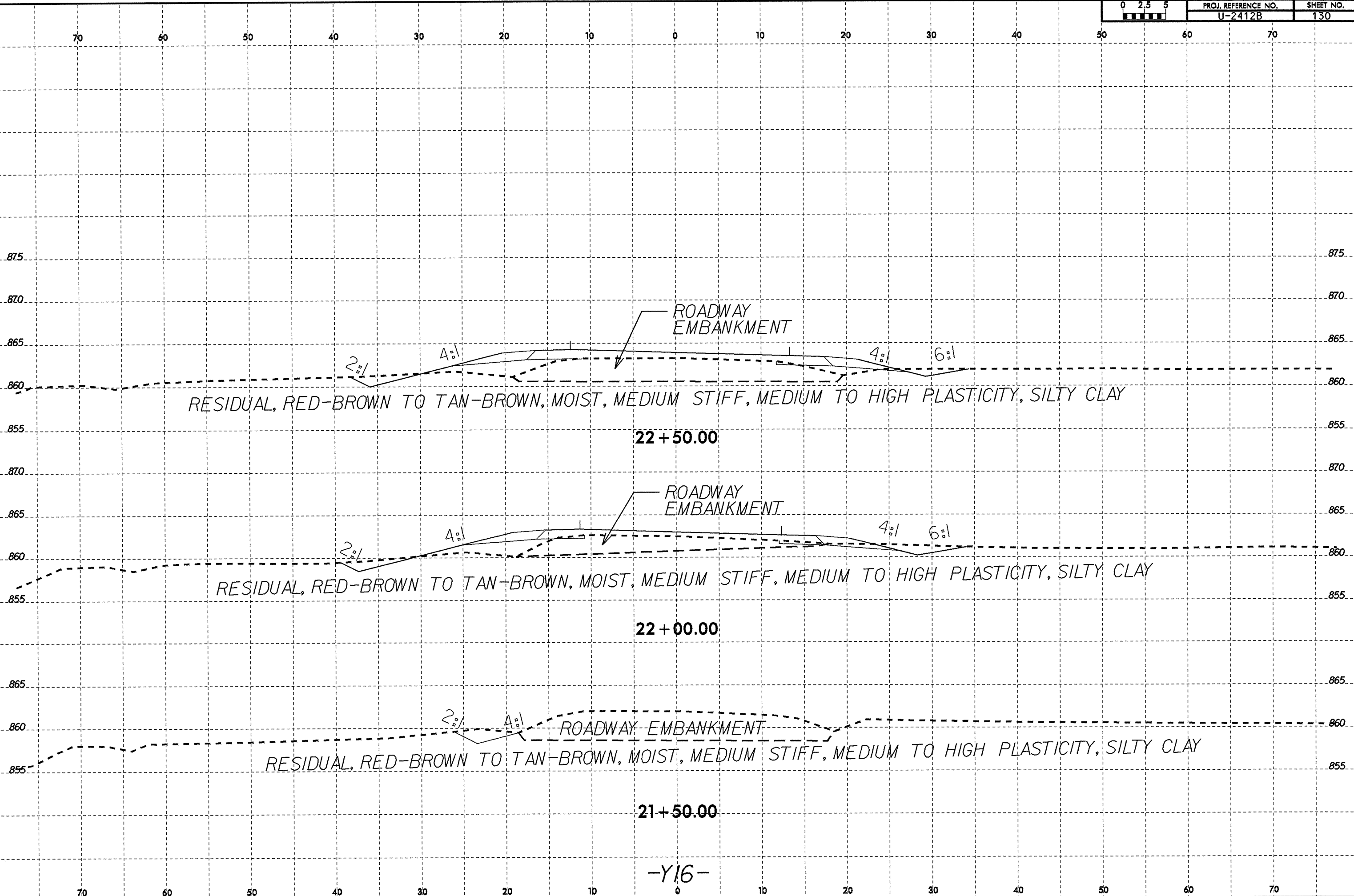
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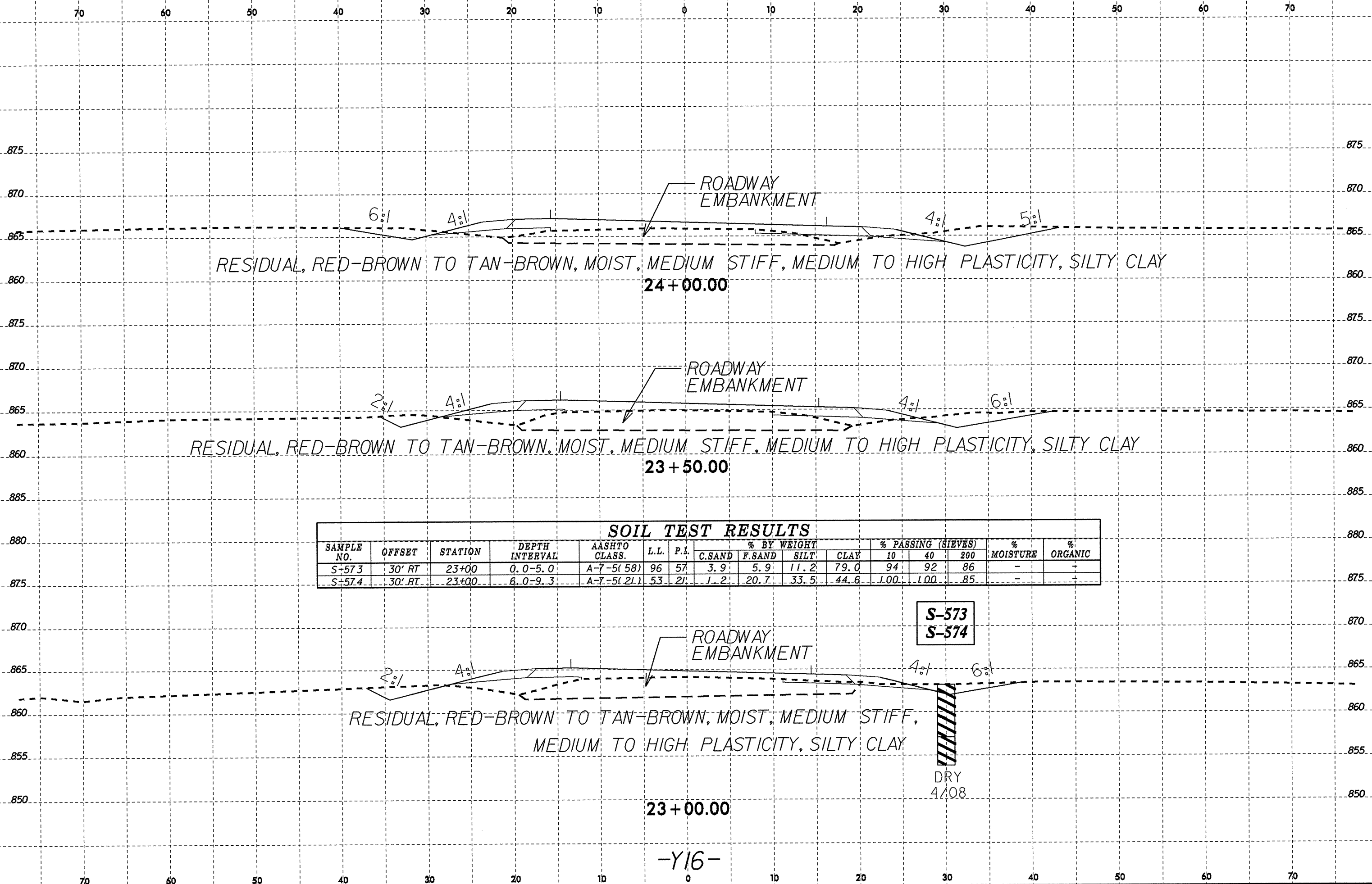
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RESIDUAL, RED-BROWN TO TAN-BROWN, MOIST, MEDIUM STIFF, MEDIUM TO HIGH PLASTICITY, SILTY CLAY
24 + 00.00

RESIDUAL, RED-BROWN TO TAN-BROWN, MOIST, MEDIUM STIFF, MEDIUM TO HIGH PLASTICITY, SILTY CLAY
23 + 50.00

RESIDUAL, RED-BROWN TO TAN-BROWN, MOIST, MEDIUM STIFF,
 MEDIUM TO HIGH PLASTICITY, SILTY CLAY

SOIL TEST RESULTS

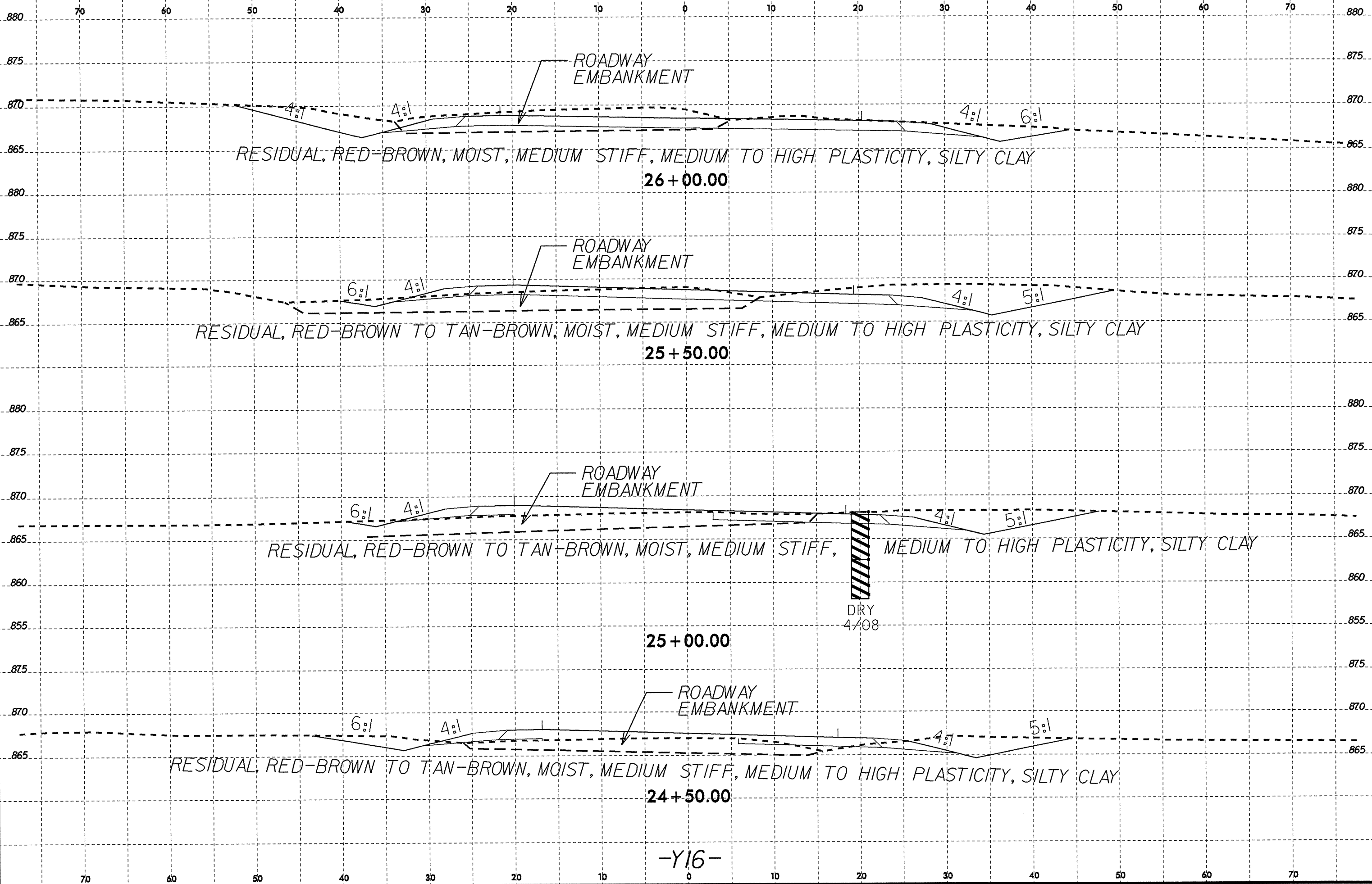
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							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-573	30' RT	23+00	0.0-5.0	A-7-5(58)	96	57	3.9	5.9	11.2	79.0	94	92	86	-	-
S-574	30' RT	23+00	6.0-9.3	A-7-5(21)	53	21	1.2	20.7	33.5	44.6	100	100	85	-	-

S-573
S-574

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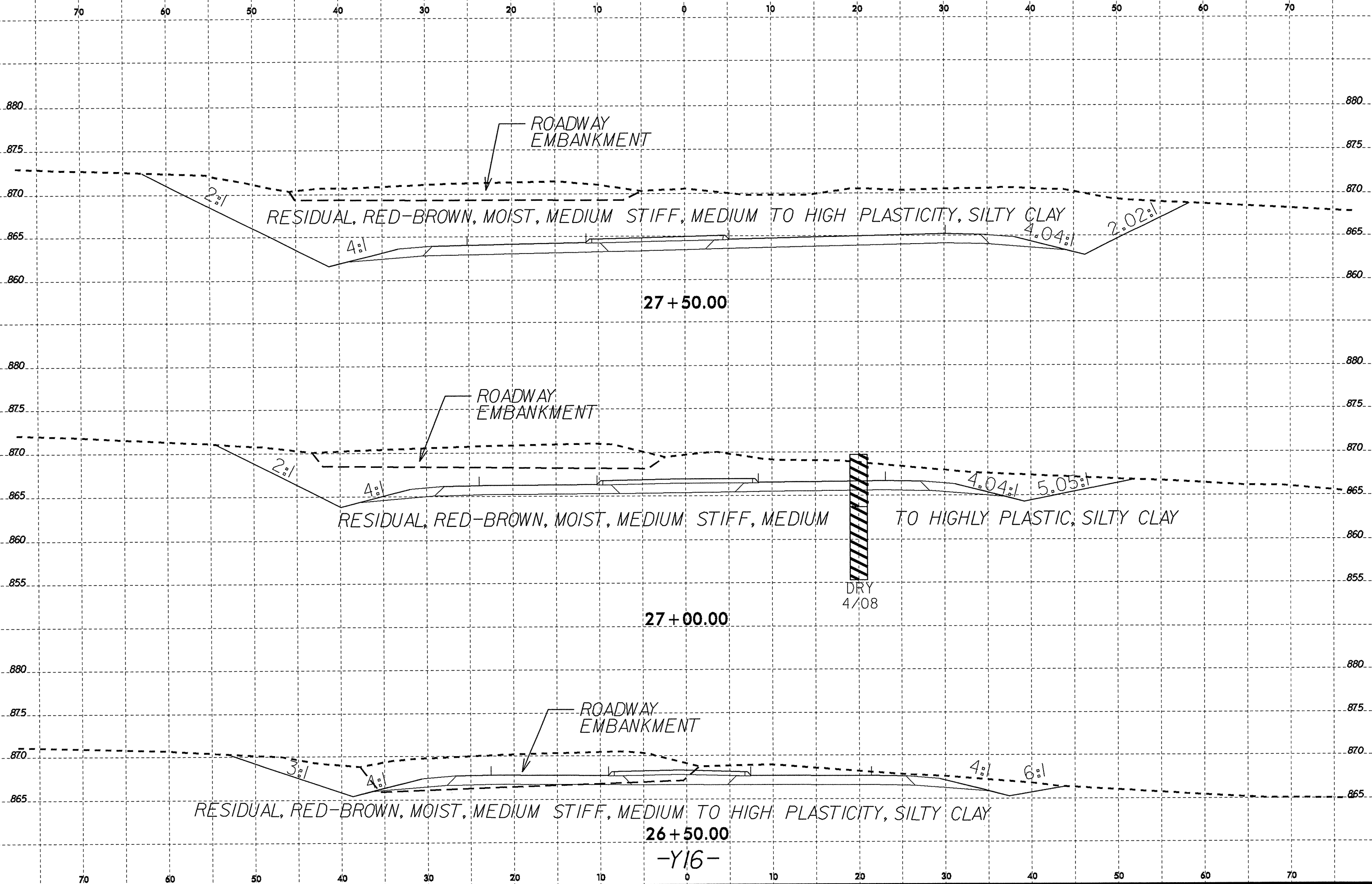
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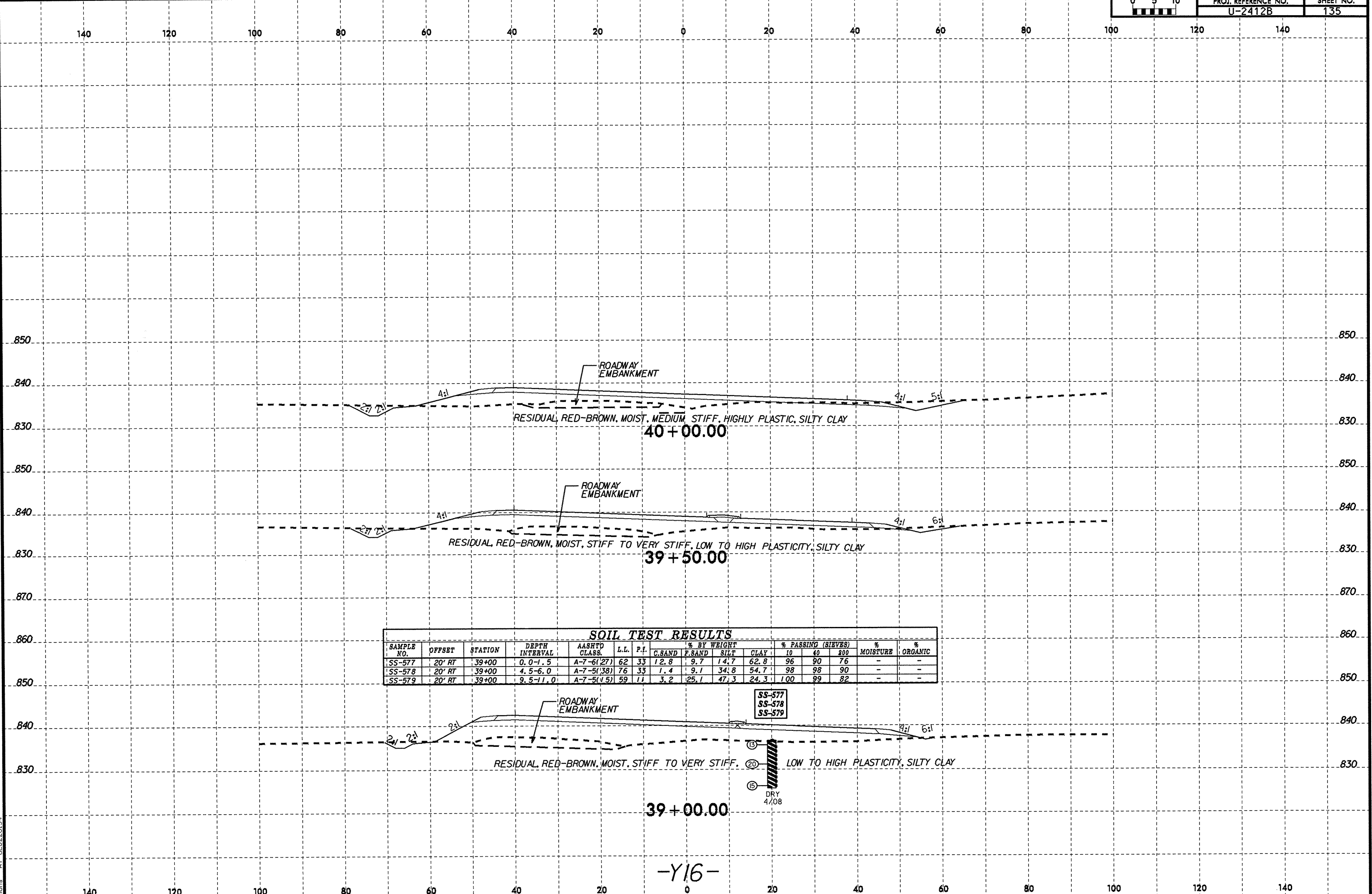
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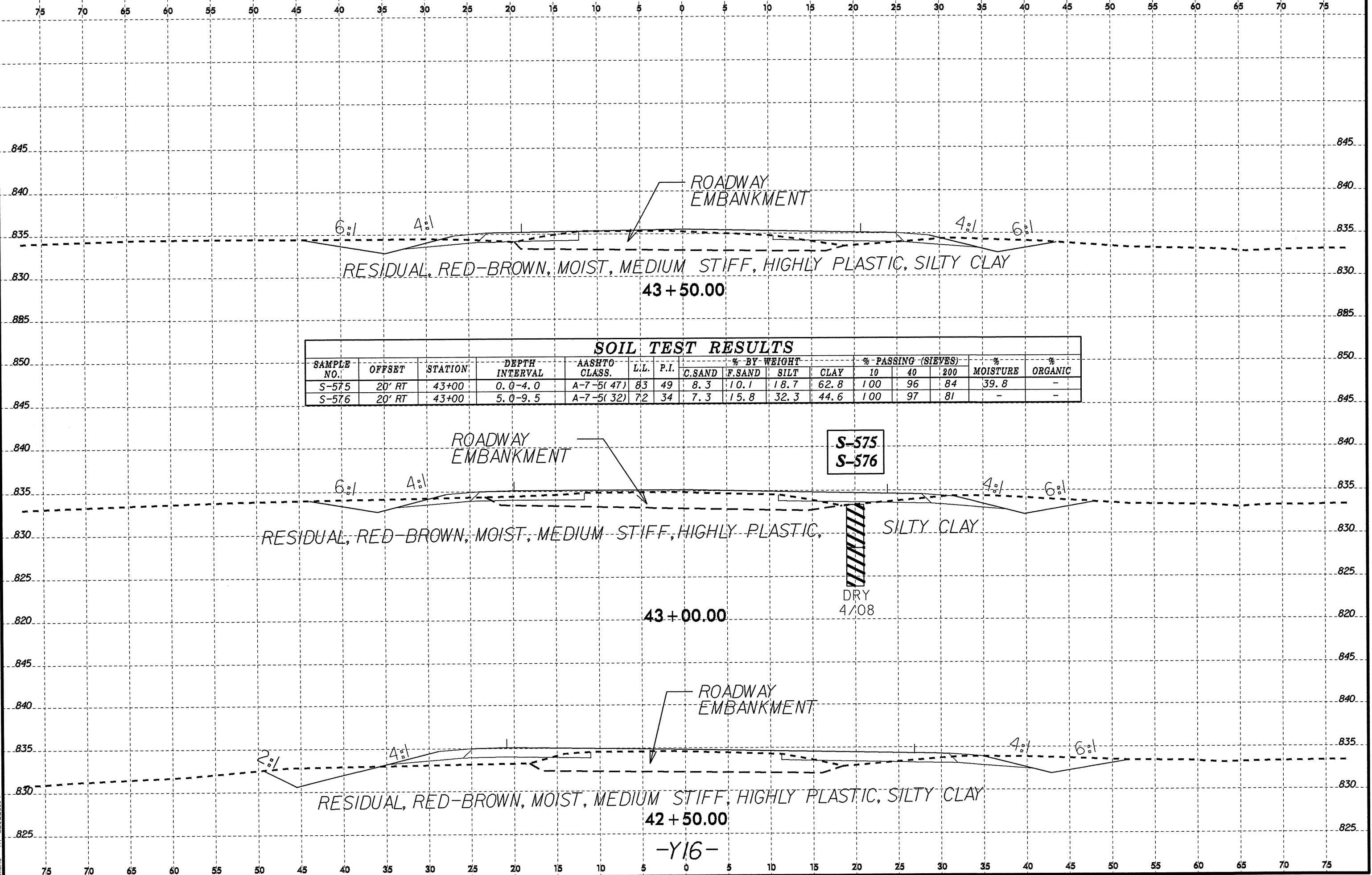


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-577	20' RT	39+00	0.0-1.5	A-7-6(27)	62	33	12.8	9.7	14.7	62.8	96	90	76	-	-
SS-578	20' RT	39+00	4.5-6.0	A-7-5(38)	76	33	1.4	9.1	34.8	54.7	98	98	90	-	-
SS-579	20' RT	39+00	9.5-11.0	A-7-5(45)	59	11	3.2	25.1	47.3	24.3	100	99	82	-	-

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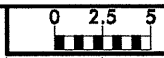


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-575	20' RT	43+00	0.0-4.0	A-7-5(47)	83	49	8.3	10.1	18.7	62.8	100	96	84	39.8	-
S-576	20' RT	43+00	5.0-9.5	A-7-5(32)	72	34	7.3	15.8	32.3	44.6	100	97	81	-	-

S-575
S-576

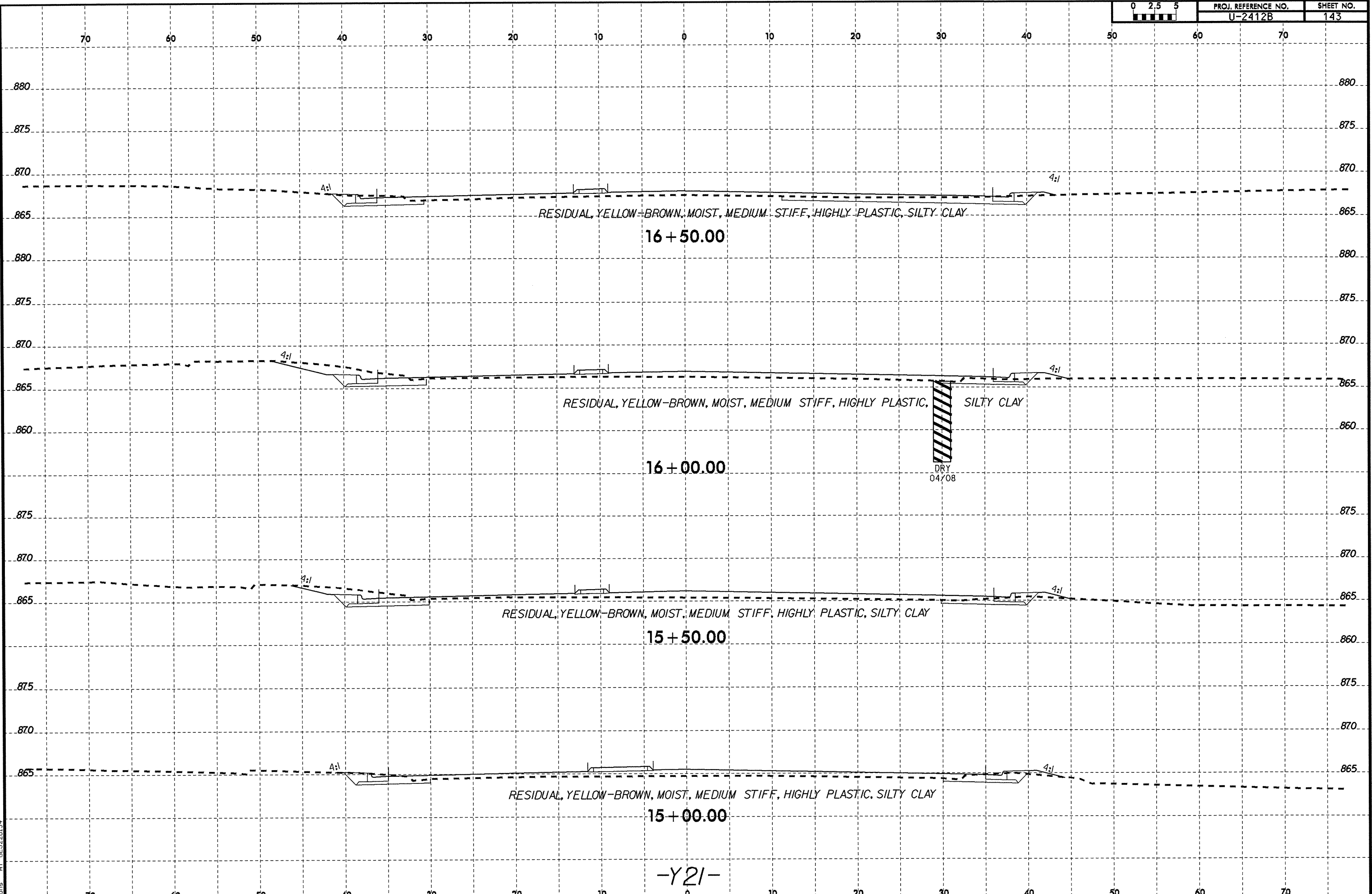
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PROJ. REFERENCE NO.
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SHEET NO.
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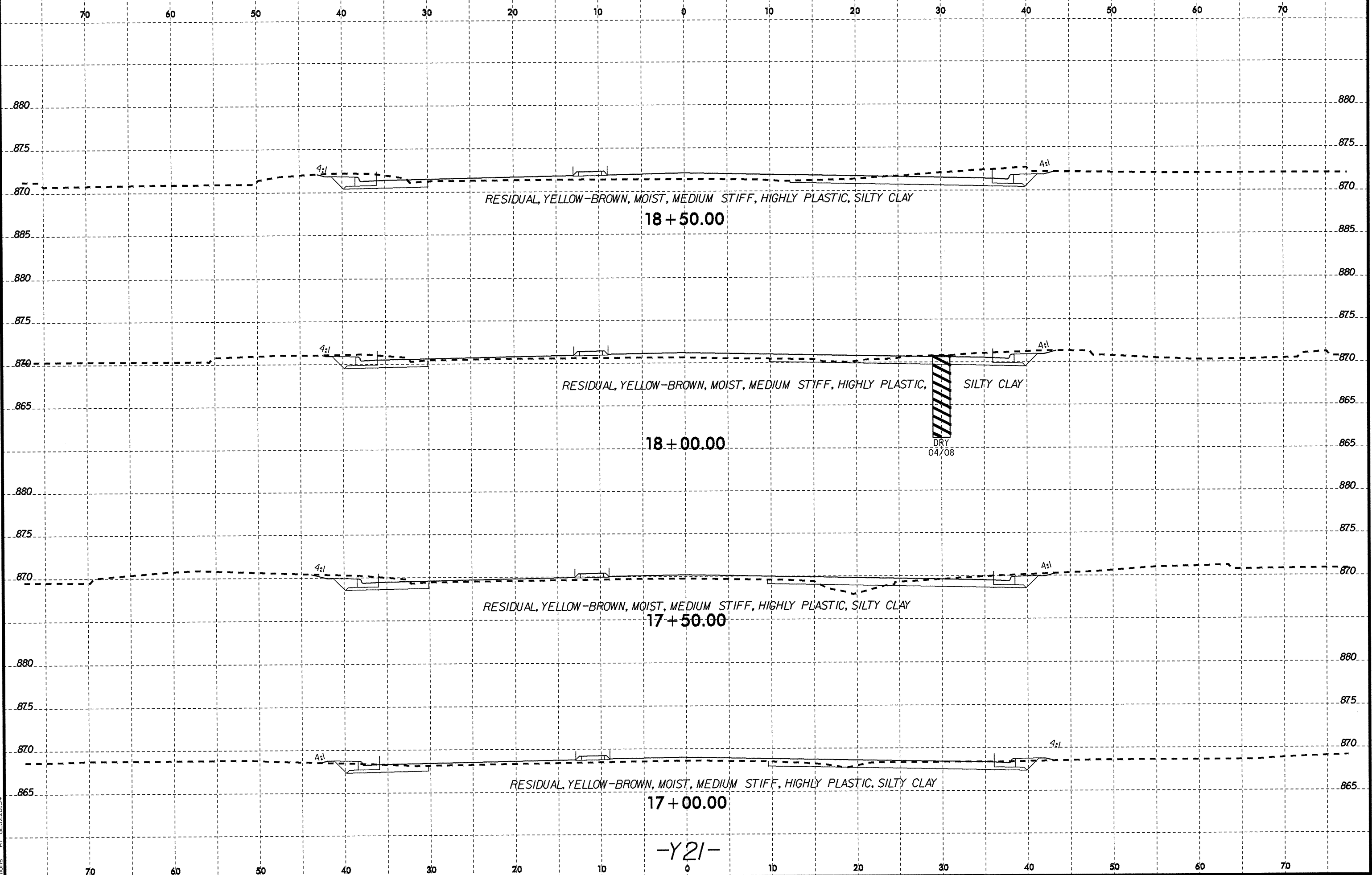
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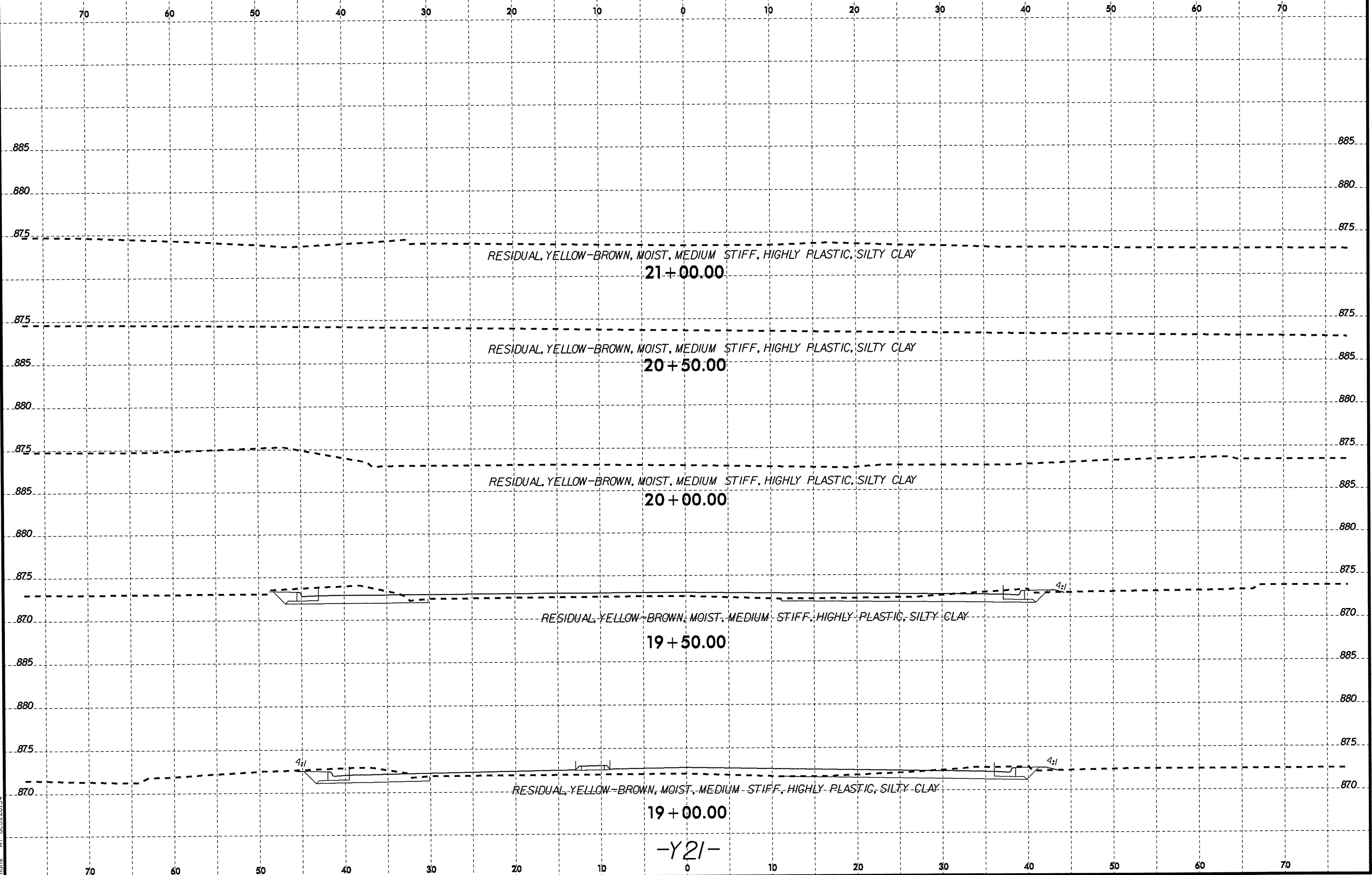
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1/26/10



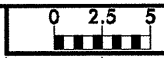
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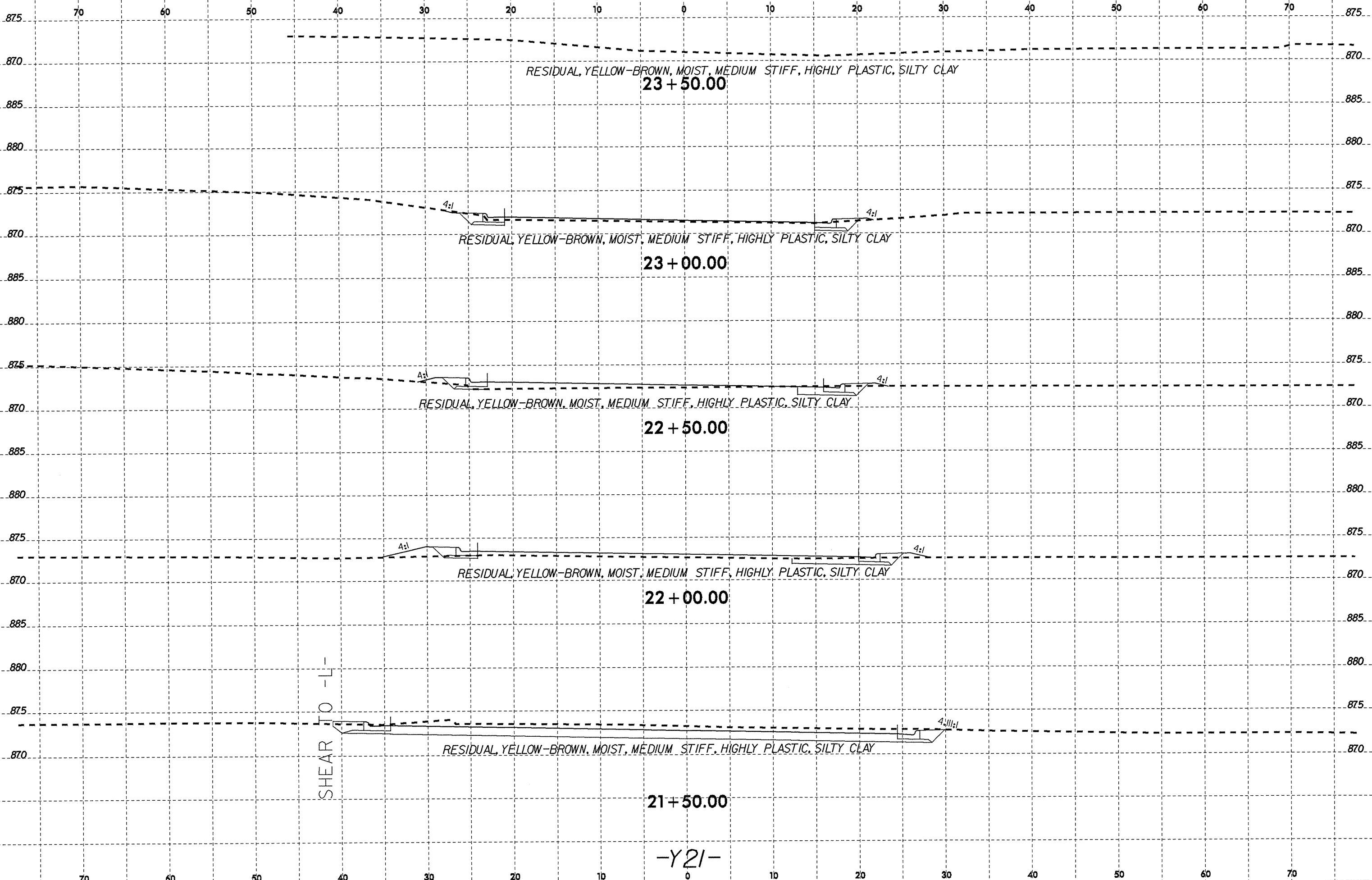


-Y21-

8/23/99



PROJ. REFERENCE NO.	SHEET NO.
U-2412B	146



RESIDUAL, YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
23 + 50.00

RESIDUAL, YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
23 + 00.00

RESIDUAL, YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
22 + 50.00

RESIDUAL, YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
22 + 00.00

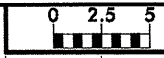
RESIDUAL, YELLOW-BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY
21 + 50.00

SHEAR TO -L-

-Y21-

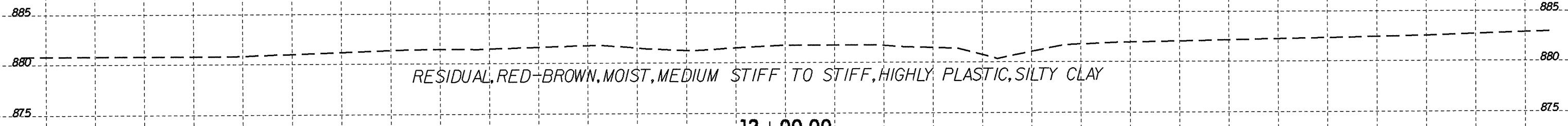
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8/23/99



PROJ. REFERENCE NO.	SHEET NO.
U-2412B	148

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70



RESIDUAL, RED-BROWN, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

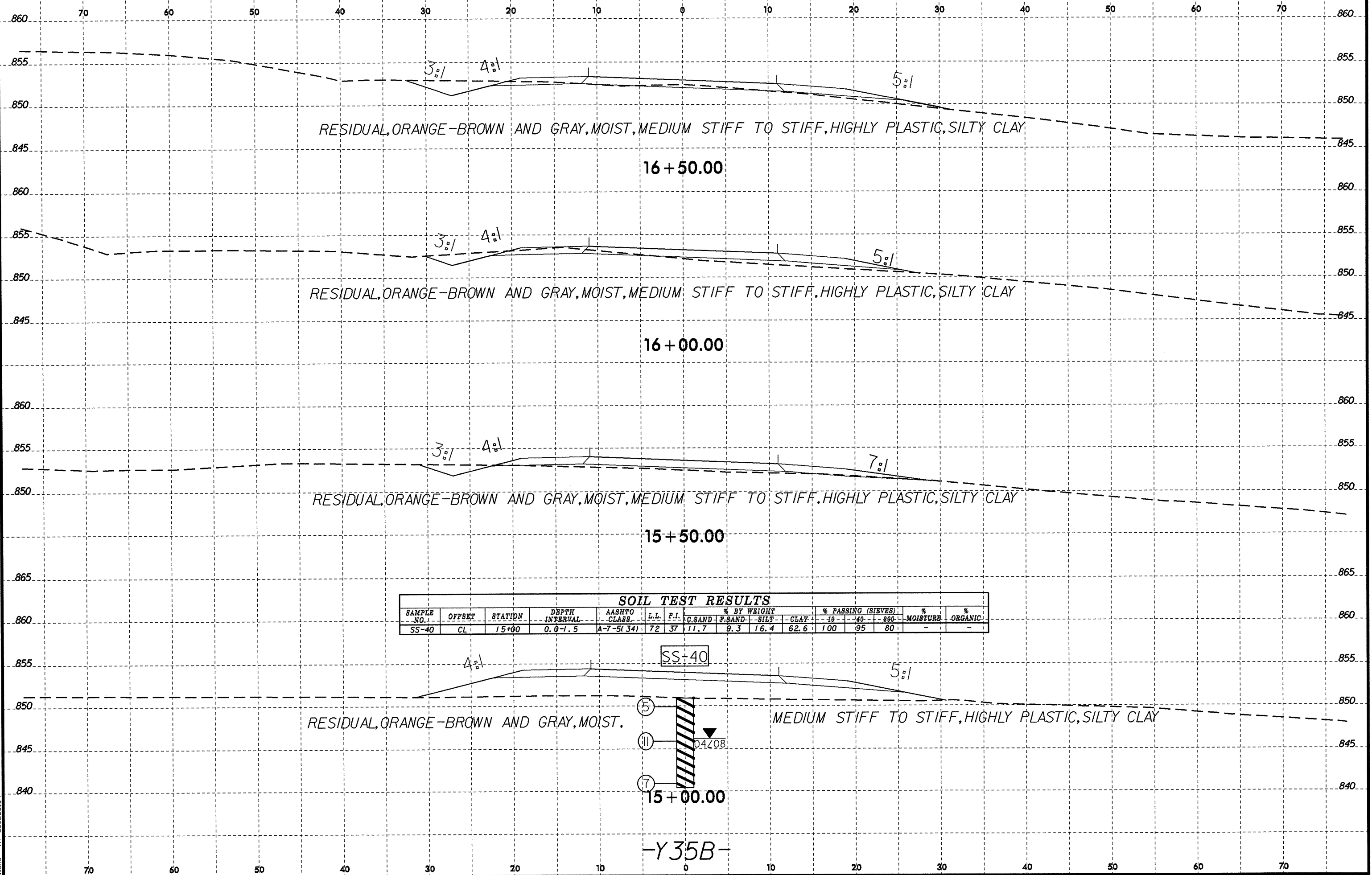
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-Y35A-

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RESIDUAL, ORANGE-BROWN AND GRAY, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

16 + 50.00

RESIDUAL, ORANGE-BROWN AND GRAY, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

16 + 00.00

RESIDUAL, ORANGE-BROWN AND GRAY, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

15 + 50.00

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-40	CL	15+00	0.0-1.5	A-7-5(34)	72	37	11.7	9.3	16.4	62.6	100	95	80	-	-

SS-40

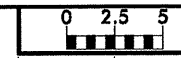
RESIDUAL, ORANGE-BROWN AND GRAY, MOIST,

MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY

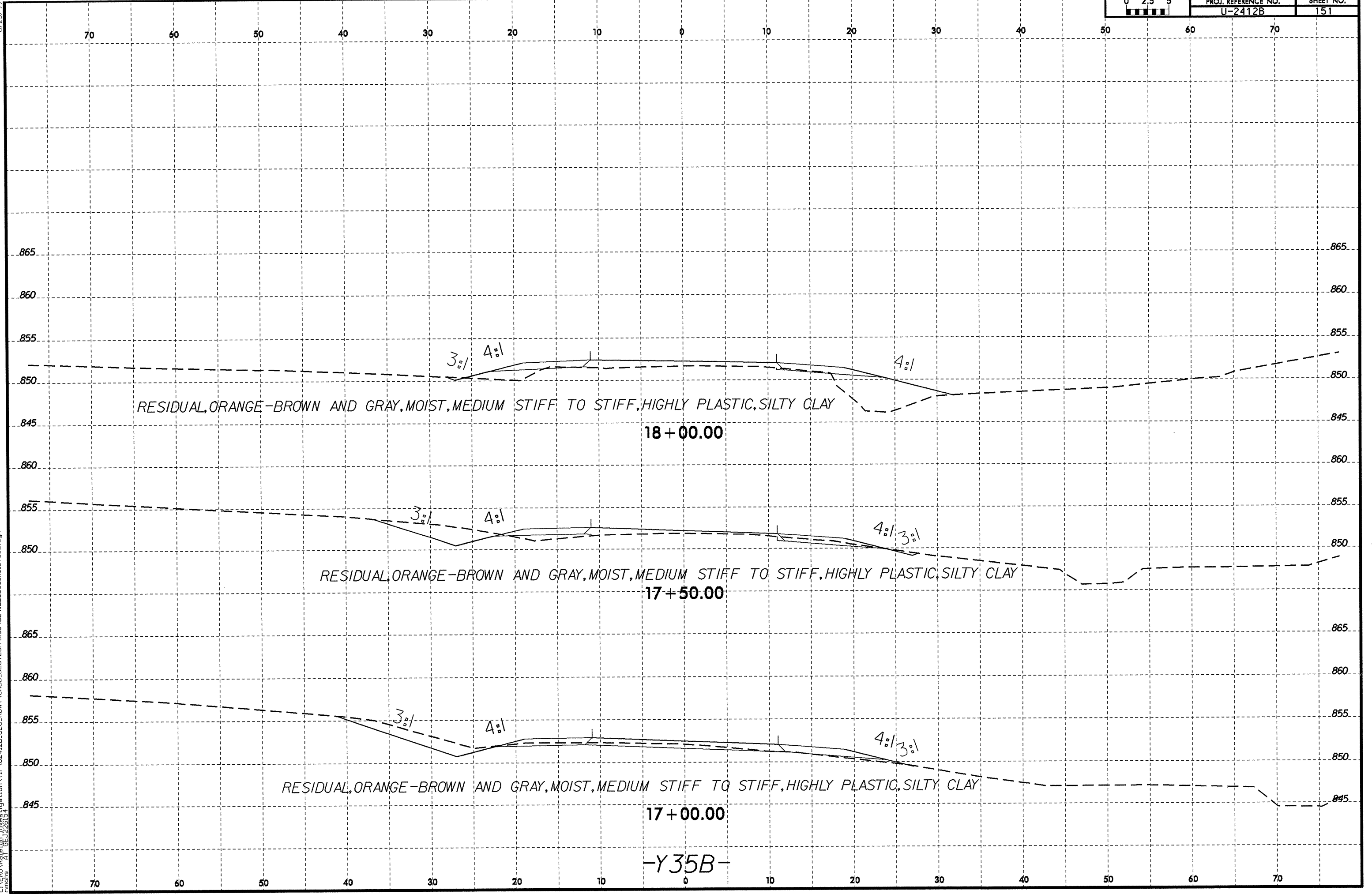
15 + 00.00

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8/23/99



PROJ. REFERENCE NO.	SHEET NO.
U-2412B	151



RESIDUAL, ORANGE-BROWN AND GRAY, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY
 18 + 00.00

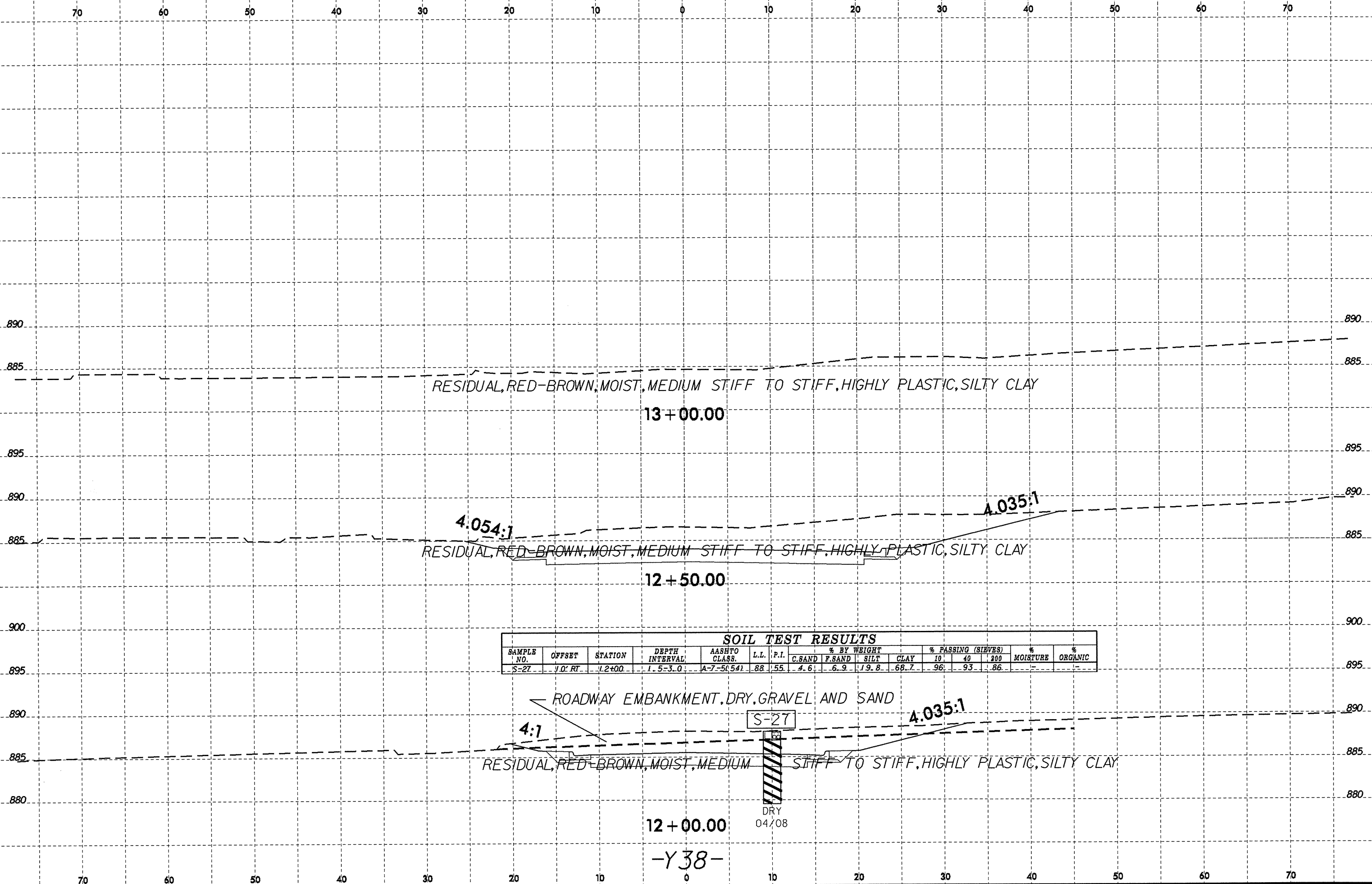
RESIDUAL, ORANGE-BROWN AND GRAY, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY
 17 + 50.00

RESIDUAL, ORANGE-BROWN AND GRAY, MOIST, MEDIUM STIFF TO STIFF, HIGHLY PLASTIC, SILTY CLAY
 17 + 00.00

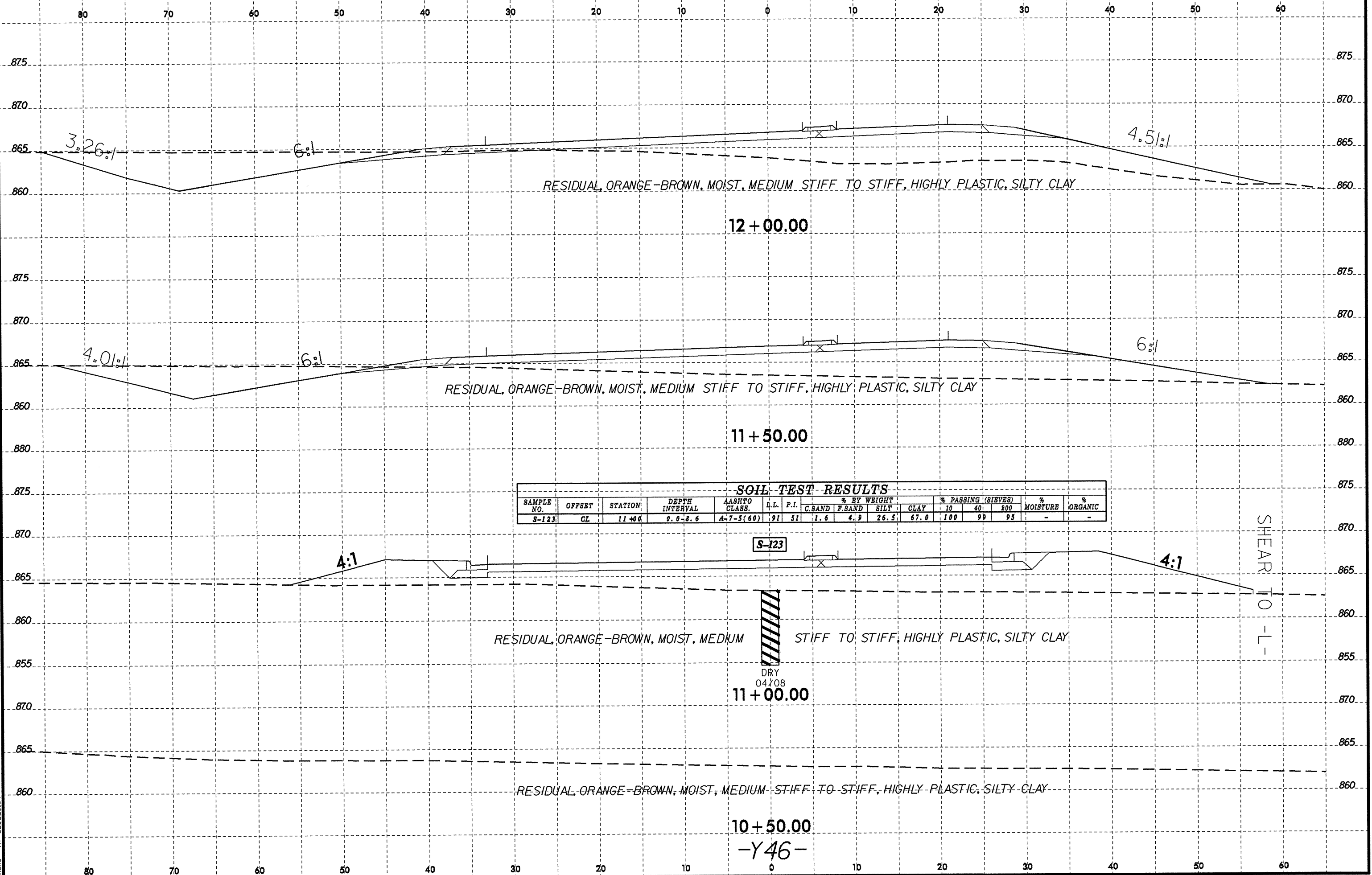
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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHUTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-123	CL	11+00	0.0-3.6	A-7-3(60)	91	51	1.6	4.9	26.5	67.0	100	99	95	-	-

S-123

DRY
04708

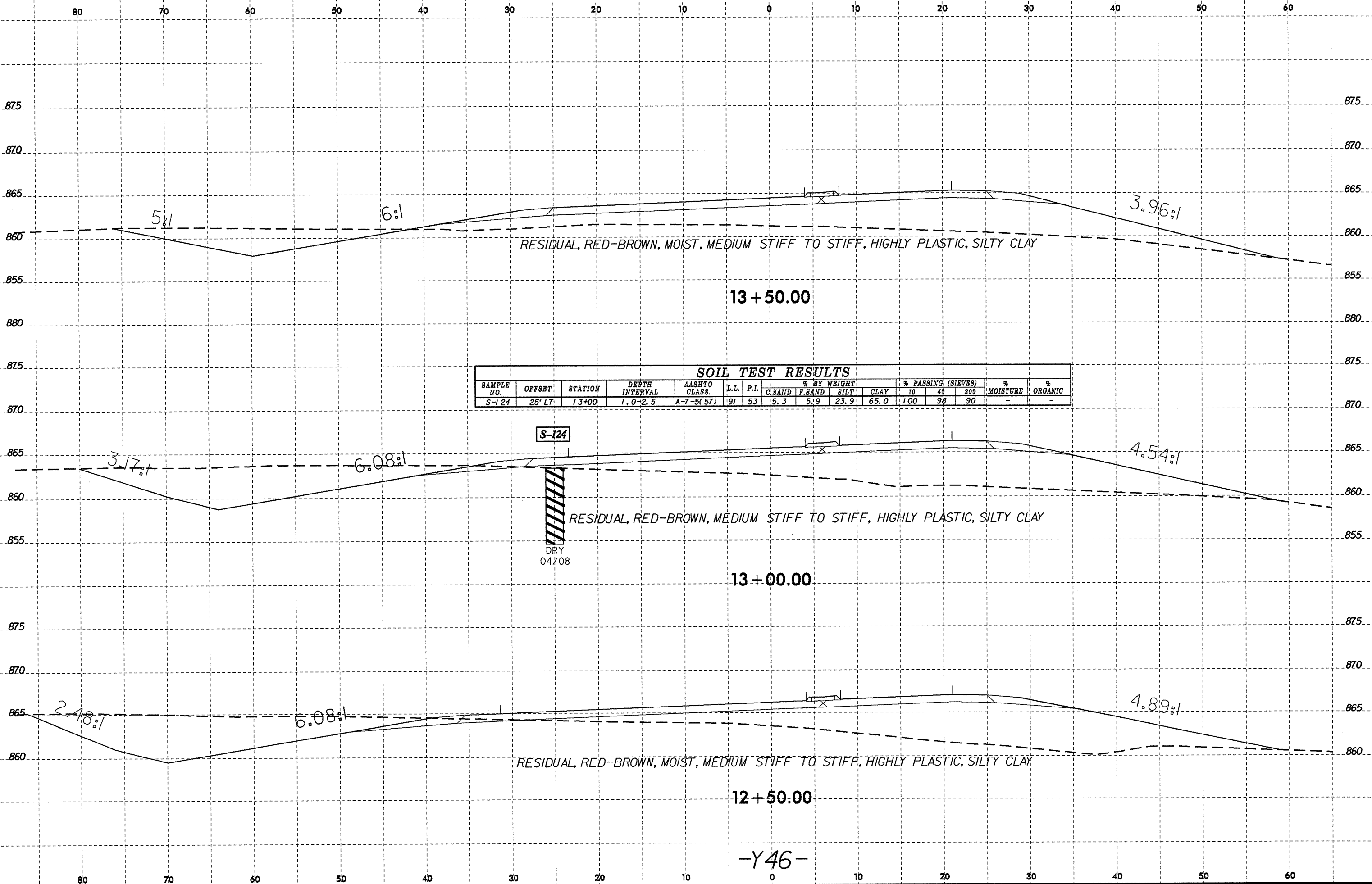
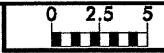
11+00.00

10+50.00

-Y46-

SHEAR TO -L-

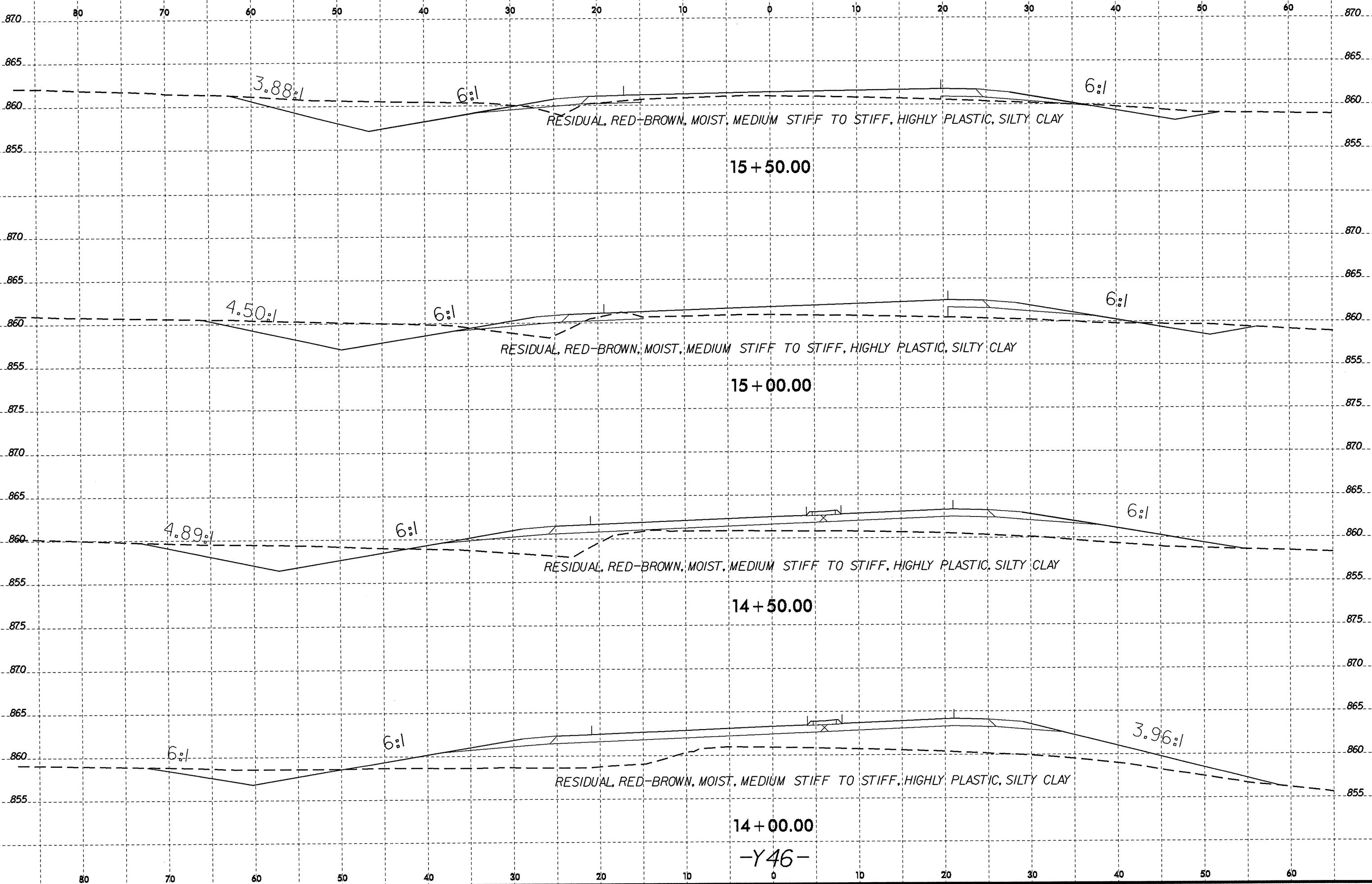
8/23/99



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-124	25' LT	13+00	1.0-2.5	A-7-5(57)	91	53	5.3	5.9	23.9	65.0	100	98	90	-	-

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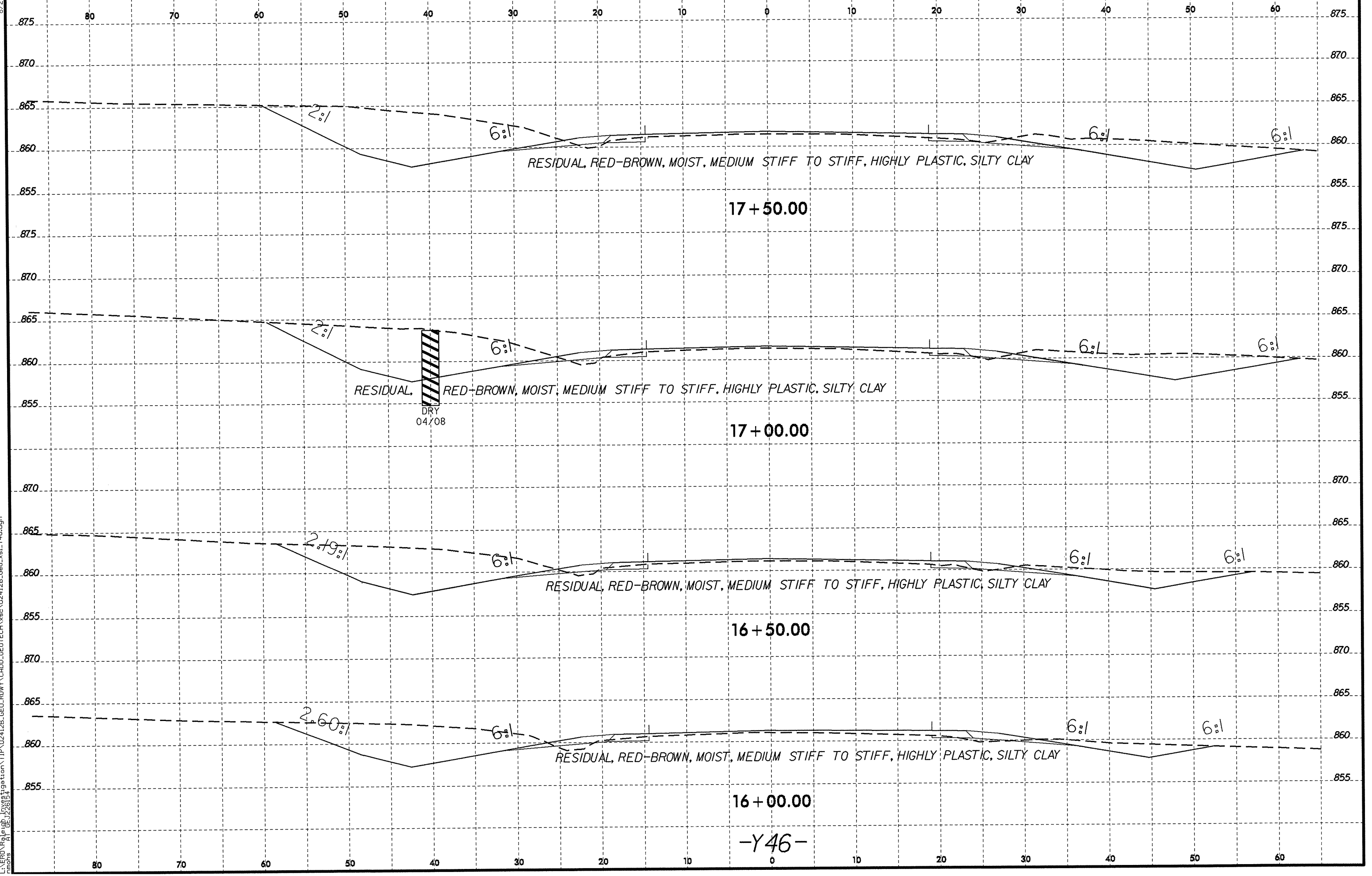
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15 + 50.00
15 + 00.00
14 + 50.00
14 + 00.00
-Y46-

8/23/99



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17+50.00

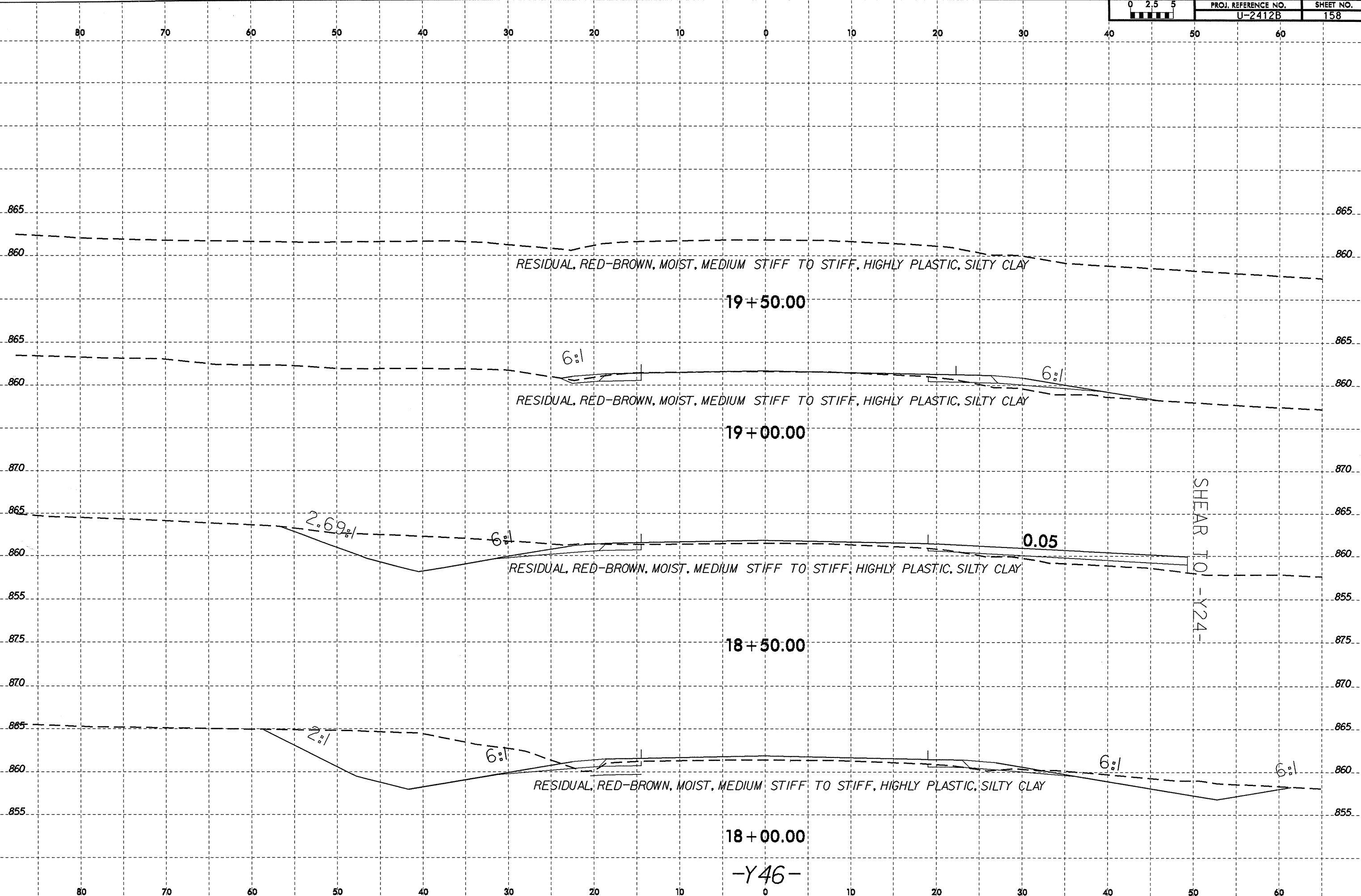
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16+50.00

16+00.00

-Y46-

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mmchs



-Y46-