

REFERENCE: R-5930

PROJECT: 48548

SEE SHEET 3 FOR PLAN SHEET LAYOUT  
AT TIME OF INVESTIGATION

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5930	1	

**CONTENTS**

LINE	STATION	PLAN	PROFILE	CROSS SECTIONS
-L-	17+00 to 165+33	4-15	17-21	23-69
-YILPA-	10+00 to 11+40	5		70
-Y9-	10+00 to 15+00	10	22	70
-Y11-	10+68 to 40+80	15-16		71-77

**APPENDICES**

APPENDIX	TITLE	SHEETS
A	LABORATORY TEST RESULTS	79-81

# ROADWAY SUBSURFACE INVESTIGATION

COUNTY CHATHAM  
PROJECT DESCRIPTION CHATHAM PARK WAY - NEW  
LOCATION ROADWAY FROM NORTH OF SUTTLES  
ROAD TO US 15/501

## 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) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

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

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

- NOTES:
- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
  - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

M. STANBURY, PG

M. AKLAND

SUBTERRA EXP.

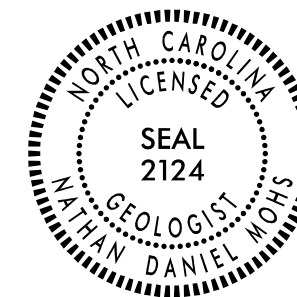
INVESTIGATED BY N. MOHS, LG

DRAWN BY C. STEPHENS

CHECKED BY S. JOHNSON, PE, PG

SUBMITTED BY N. MOHS, LG

DATE MARCH 2023



DocuSigned by:  
Nathan Mohs, LG 03/20/2023

631A2760587444C3 SIGNATURE DATE

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED 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...

SOIL LEGEND AND AASHTO CLASSIFICATION table with columns for GENERAL CLASS, GRANULAR MATERIALS, SILT-CLAY MATERIALS, ORGANIC MATERIALS, and various classification symbols.

CONSISTENCY OR DENSENESS table with columns for PRIMARY SOIL TYPE, COMPACTNESS OR CONSISTENCY, RANGE OF STANDARD PENETRATION RESISTANCE, and RANGE OF UNCONFINED COMPRESSIVE STRENGTH.

TEXTURE OR GRAIN SIZE table with columns for U.S. STD. SIEVE SIZE OPENING (MM), BOULDER (BLDR.), COBBLE (COB.), GRAVEL (GR.), COARSE SAND (CSE. SD.), FINE SAND (F SD.), SILT (SL.), and CLAY (CL.).

SOIL MOISTURE - CORRELATION OF TERMS table with columns for SOIL MOISTURE SCALE (ATTERBERG LIMITS), FIELD MOISTURE DESCRIPTION, and GUIDE FOR FIELD MOISTURE DESCRIPTION.

PLASTICITY table with columns for PLASTICITY INDEX (PI), PLASTIC RANGE (PL), OPTIMUM MOISTURE SHRINKAGE LIMIT, and DRY STRENGTH.

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

GRADATION

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

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

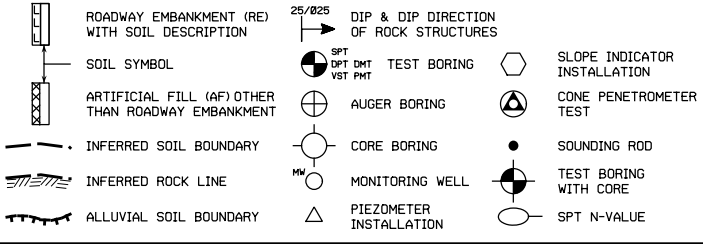
MINERALOGICAL COMPOSITION
MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY
SLIGHTLY COMPRESSIBLE
MODERATELY COMPRESSIBLE
HIGHLY COMPRESSIBLE

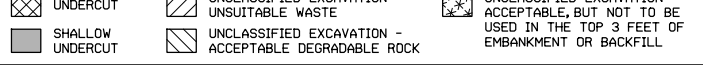
PERCENTAGE OF MATERIAL table with columns for ORGANIC MATERIAL, GRANULAR SOILS, SILT - CLAY SOILS, and OTHER MATERIAL.

GROUND WATER symbols and descriptions: WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING, STATIC WATER LEVEL AFTER 24 HOURS, PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA, SPRING OR SEEP.

MISCELLANEOUS SYMBOLS



RECOMMENDATION SYMBOLS



ABBREVIATIONS

- List of abbreviations: AR - AUGER REFUSAL, BT - BORING TERMINATED, CL - CLAY, CPT - CORE PENETRATION TEST, CSE - COARSE, DMT - DILATOMETER TEST, DPT - DYNAMIC PENETRATION TEST, e - VOID RATIO, F - FINE, FOSS. - FOSSILIFEROUS, FRAC. - FRACTURED, FRACTURES, FRAGS. - FRAGMENTS, HI. - HIGHLY, MED. - MEDIUM, MICA. - MICACEOUS, MOD. - MODERATELY, NP - NON PLASTIC, ORG. - ORGANIC, PMT - PRESSUREMETER TEST, SAP. - SAPROLITIC, SD. - SAND, SANDY, SL. - SILT, SILTY, SLI. - SLIGHTLY, TCR - TRICONE REFUSAL, w - MOISTURE CONTENT, V - VERY, VST - VANE SHEAR TEST, WEA. - WEATHERED, UNIT WEIGHT, DRY UNIT WEIGHT, SAMPLE ABBREVIATIONS: S - BULK, SS - SPLIT SPOON, ST - SHELBY TUBE, RS - ROCK, RT - RECOMPACTED TRIAXIAL, CBR - CALIFORNIA BEARING RATIO.

EQUIPMENT USED ON SUBJECT PROJECT

Form with checkboxes for equipment: DRILL UNITS (CME-45C, CME-55, CME-550, VANE SHEAR TEST, PORTABLE HOIST, D-50), ADVANCING TOOLS (CLAY BITS, 6" CONTINUOUS FLIGHT AUGER, 8" HOLLOW AUGERS, HARD FACED FINGER BITS, TUNG-CARBIDE INSERTS, CASING w/ ADVANCER, TRICONE STEEL TEETH, TRICONE TUNG-CARB., CORE BIT), HAMMER TYPE (AUTOMATIC, MANUAL), CORE SIZE (-B, -H, -N), HAND TOOLS (POST HOLE DIGGER, HAND AUGER, SOUNDING ROD, VANE SHEAR TEST).

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL...

WEATHERED ROCK (WR)
NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.

CRYSTALLINE ROCK (CR)
FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.

NON-CRYSTALLINE ROCK (NCR)
FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLITE, SLATE, SANDSTONE, ETC.

COASTAL PLAIN SEDIMENTARY ROCK (CP)
COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH: ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.): ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY.
SLIGHT (SLI.): ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH.
MODERATE (MOD.): SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS.
MODERATELY SEVERE (MOD. SEV.): ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED.
SEVERE (SEV.): ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED.
VERY SEVERE (V SEV.): ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED.
COMPLETE: ROCK REDUCED TO SOIL.

ROCK HARDNESS

VERY HARD: CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK.
HARD: CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY.
MODERATELY HARD: CAN BE SCRATCHED BY KNIFE OR PICK.
MEDIUM HARD: CAN BE GROoved OR GOUGED 0.05 INCHES DEEP.
SOFT: CAN BE GROoved OR GOUGED READILY BY KNIFE OR PICK.
VERY SOFT: CAN BE CARVED WITH KNIFE.

FRACTURE SPACING

Table mapping Fracture Spacing (VERY WIDE, WIDE, MODERATELY CLOSE, CLOSE, VERY CLOSE) to Spacing (MORE THAN 10 FEET, 3 TO 10 FEET, 1 TO 3 FEET, 0.16 TO 1 FOOT, LESS THAN 0.16 FEET) and Bedding (VERY THICKLY BEDDED, THICKLY BEDDED, THINLY BEDDED, VERY THINLY BEDDED, THICKLY LAMINATED, THINLY LAMINATED).

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.
FRIABLE: RUBBING WITH FINGER FREES NUMEROUS GRAINS.
MODERATELY INDURATED: GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE.
INDURATED: GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE.
EXTREMELY INDURATED: SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE.

TERMS AND DEFINITIONS

- ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.
AQUIFER - A WATER BEARING FORMATION OR STRATA.
ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND.
ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS.
ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED.
CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL.
CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL.
DIKE - A TABULAR BODY OF IGNEOUS ROCK.
DIP - THE ANGLE AT WHICH A STRATUM IS INCLINED.
DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP.
FAULT - A FRACTURE OR FRACTURE ZONE.
FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
FLOAT - ROCK FRAGMENTS ON SURFACE.
FLOOD PLAIN (FP) - LAND BORDERING A STREAM.
FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT.
JOINT - FRACTURE IN ROCK.
LEDGE - A SHELF-LIKE RIDGE OR PROJECTION.
LENS - A BODY OF SOIL OR ROCK THAT THINS OUT.
MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS.
PERCHED WATER - WATER MAINTAINED ABOVE NORMAL GROUND WATER LEVEL.
RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE.
ROCK QUALITY DESIGNATION (RQD) - MEASURE OF ROCK QUALITY.
SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS RELIC STRUCTURE.
SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK.
SLICKENSIDE - POLISHED AND STRIATED SURFACE.
STANDARD PENETRATION TEST (SPT) - NUMBER OF BLOWS PER FOOT.
STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED.
STRATA ROCK QUALITY DESIGNATION (SROD) - MEASURE OF ROCK QUALITY.
TOPSOIL (TS) - SURFACE SOILS CONTAINING ORGANIC MATTER.

BENCH MARK: ELEVATIONS DETERMINED FROM FILE R5930\_LS\_TIN.TIN DATED 4/20/2020
ELEVATION: FEET

NOTES:
FIAD - FILLED IMMEDIATELY AFTER DRILLING

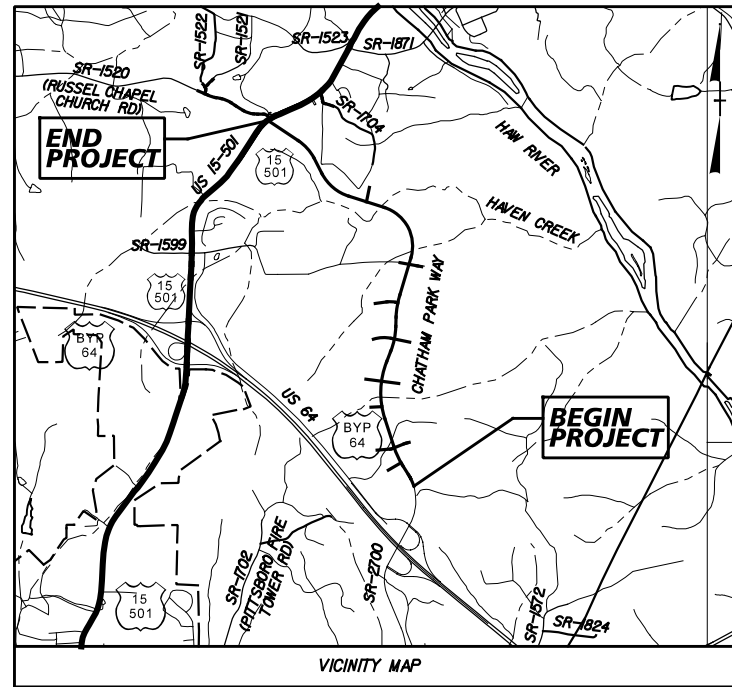
SEE SHEET 1A FOR INDEX OF SHEETS  
SEE SHEET 1B FOR CONVENTIONAL PLAN SHEET SYMBOLS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**CHATHAM COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5930	3	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
48548.1.1		PE	
48548.2.1		RW & UTIL	
48548.3.1		CONST.	

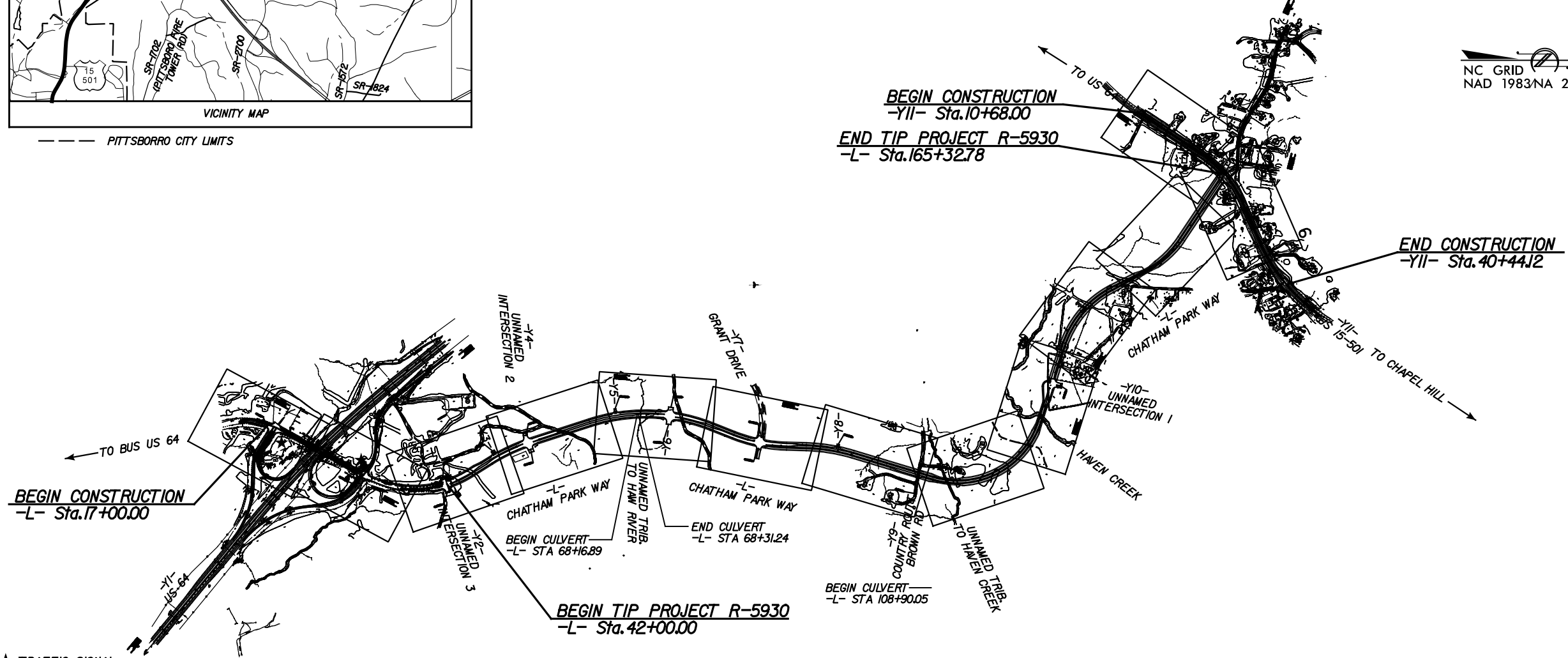
**TIP PROJECT: R-5930**



VICINITY MAP  
--- PITTSBORO CITY LIMITS

**LOCATION: CHATHAM PARK WAY FROM US 64 TO US 15-501**

**TYPE OF WORK: GRADING, DRAINAGE, CULVERTS, PAVING, SIGNALS, AND RETAINING WALLS**

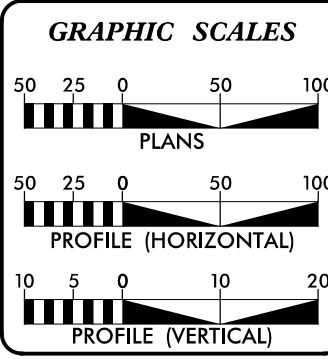


★ TRAFFIC SIGNAL

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III  
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT:**



**R-5930 DESIGN DATA**

ADT 2024 = 0  
ADT 2045 = 30000  
K = 8%  
D = 65  
T = 5%\*  
V = 50 MPH  
\* (TTST 2% + DUAL 3%)  
FUNCTIONAL CLASSIFICATION:  
URBAN ARTERIAL  
SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT R-5930	=	2.326 MILES
LENGTH STRUCTURE TIP PROJECT R-5930	=	0.010 MILES
TOTAL LENGTH TIP PROJECT R-5930	=	2.336 MILES

PLANS PREPARED FOR THE NCDOT BY:

**Kimley»Horn**

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
NOVEMBER 18, 2022

**LETTING DATE:**  
JUNE 18, 2024

VANCE W. BLANTON, P.E.  
PROJECT ENGINEER

TYLER G. SPRING, P.E.  
PROJECT DESIGN ENGINEER

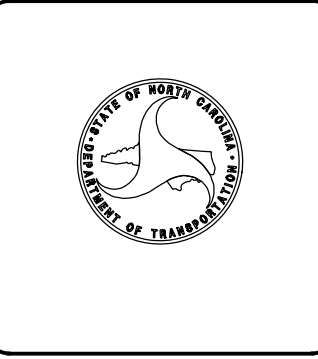
JEFFREY L. TEAGUE, P.E.  
PROJECT MANAGER  
NCDOT HIGHWAY DIVISION 8

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



March 15, 2023

STATE PROJECT: 48548.1.1 (R-5930)  
 PROJECT ID: 39995  
 COUNTY: Chatham  
 DESCRIPTION: Chatham Park Way - New Location Roadway from North of Suttles Rd. U.S 15/501  
 SUBJECT: Geotechnical Report – Inventory

**Project Description**

This project consists of extending Chatham Park Way (-L-) north from US 64 Bypass to US 15/501 (-Y11-). The project crosses Country Rountt Brown Road (-Y9-). US 15/501 (-Y11-) will be widened to accommodate the new intersection with -L-.

The geotechnical field investigation was conducted from September to October 2022. Standard Penetration Tests were performed with a track mounted D-50 with an automatic hammer along the project alignments. Borings performed in the existing roadway were filled and patched immediately after drilling (FIAD). Several hand augers were also performed along -L-, -Y9-, and -Y1LPA-- in areas of shallow cut/fill. A pavement design investigation was also conducted along US 15/501 (-Y11-). Representative soil samples were collected for visual classification in the field and submitted for laboratory analysis by Terracon, Inc. in Raleigh, NC and ICE, PLLC in Columbia, SC.

The following alignments, totaling 1.8 miles, were investigated. Subsurface cross-sections of these alignments are included in this report:

<u>Line</u>	<u>Stations</u>
-L-	42+00 to 165+33
-Y9-	10+00 to 15+00
-Y11-	10+68 to 40+80
-Y1LPA-	10+00 to 11+40

**Physiography and Geology**

The project is in the rolling terrain of Chatham County, North Carolina. The alignment runs through woods, farmland, and few homes.

Geologically, the project lies within the Carolina Slate Belt. The rocks of the Carolina Slate Belt are classified generally as Meta-Volcanic and are believed to have been formed as lava and pyroclastic flows associated with an arc of volcanic islands formed during the collision of ancient North America and Africa during the formation of Pangea.

The geology of the project area consists of residual soils and partially weathered rock which are the weathered remains of parent material, and crystalline meta-volcanic rock.

**Soil Properties**

Soils encountered at the project site include roadway embankment and residual soils.

Roadway embankment underlies portions of the existing lanes of US 15/501 and the surrounding surface roads. Due to the area topography portions of the roadway were graded and paved. Where encountered roadway embankment soils range from 1.5 to 3.5 feet thick. These soils mainly consist of dry to moist, sandy clay and clayey sand (AASHTO classifications of A-2-6 and A-6).

Residual soils are found at the ground surface and immediately below the embankment soils. These soils mainly consist of dry to moist, soft to very stiff, sandy silt, sandy clay, silty clay (AASHTO classifications of A-4, A-6, and A-7-5/A-7-6), and loose to dense, silty sand (A-2-4). Some of the A-7 soils exhibit a PI of 26 or more and are classified as highly plastic.

**Groundwater**

Groundwater was only encountered at -L- Station 124+38, in a dry creek bed, at a depth of 3.7 Feet. The investigation was conducted during a period of relatively low rainfall. Numerous ephemeral stream beds cross the project alignment, and all were dry during the time of investigation. Seasonal fluctuations in groundwater elevations can be expected.

**Areas of Special Geotechnical Interest**

1. Highly Plastic Clays: Highly plastic clay (PI>25) was encountered on the project at the following locations:

<u>Line</u>	<u>Stations</u>	<u>Offset</u>
-L-	45+75 to 48+25	RT
-L-	57+75 to 64+25	LT & RT
-L-	67+00	LT
-L-	71+00	LT & RT
-L-	78+25 to 79+75	LT
-L-	85+75 to 88+75	LT & RT
-L-	89+06	LT & RT
-L-	92+25 to 102+25	LT & RT
-L-	115+75 to 120+25	LT & RT
-L-	145+75 to 147+25	LT & RT
-L-	154+93	LT & RT
-L-	156+25 to 158+25	LT & RT
-L-	161+75 to 163+75	LT & RT
-Y11-	12+30 to 13+75	RT
-Y11-	18+75 to 22+25	RT
-Y11-	23+07	RT
-Y11-	33+03	RT

2. Crystalline Rock: The following areas exhibit crystalline rock within 6.0 feet of proposed grade:

<u>Line</u>	<u>Station</u>	<u>Offset</u>
-L-	47+00	RT

3. Weathered Rock: The following areas exhibit weathered rock within 6.0 feet of proposed grade:

<u>Line</u>	<u>Station</u>	<u>Offset</u>
-L-	73+00	LT & RT
-L-	75+00	LT
-L-	78+50 to 80+00	LT & RT

4. Wells: Wells are present on the project at the following locations:

<u>Line</u>	<u>Stations</u>	<u>Offset</u>
-L-	15+78	120' RT
-L-	101+73	450' RT
-L-	108+65	156' LT
-L-	135+80	364' RT
-L-	144+91	204' RT
-L-	149+04	503' RT
-L-	158+39	189' RT
-Y11-	26+99	336' LT
-Y11-	35+84	230' RT
-Y11-	44+34	213' RT

5. Septic Fields: Approximate locations of septic fields were noted by property owners at the following locations:

<u>Line</u>	<u>Station</u>	<u>Offset</u>
-L-	110+30	LT
-L-	145+00	RT

6. Retention Basins: Retention basins are present on the project at the following locations:

<u>Line</u>	<u>Station</u>	<u>Offset</u>
-L-	29+25	112' RT
-L-	30+00	134' LT

Prepared by,

*Nathan Mohs*

Nathan Mohs, LG  
Engineering Geologist Manager

5/14/99

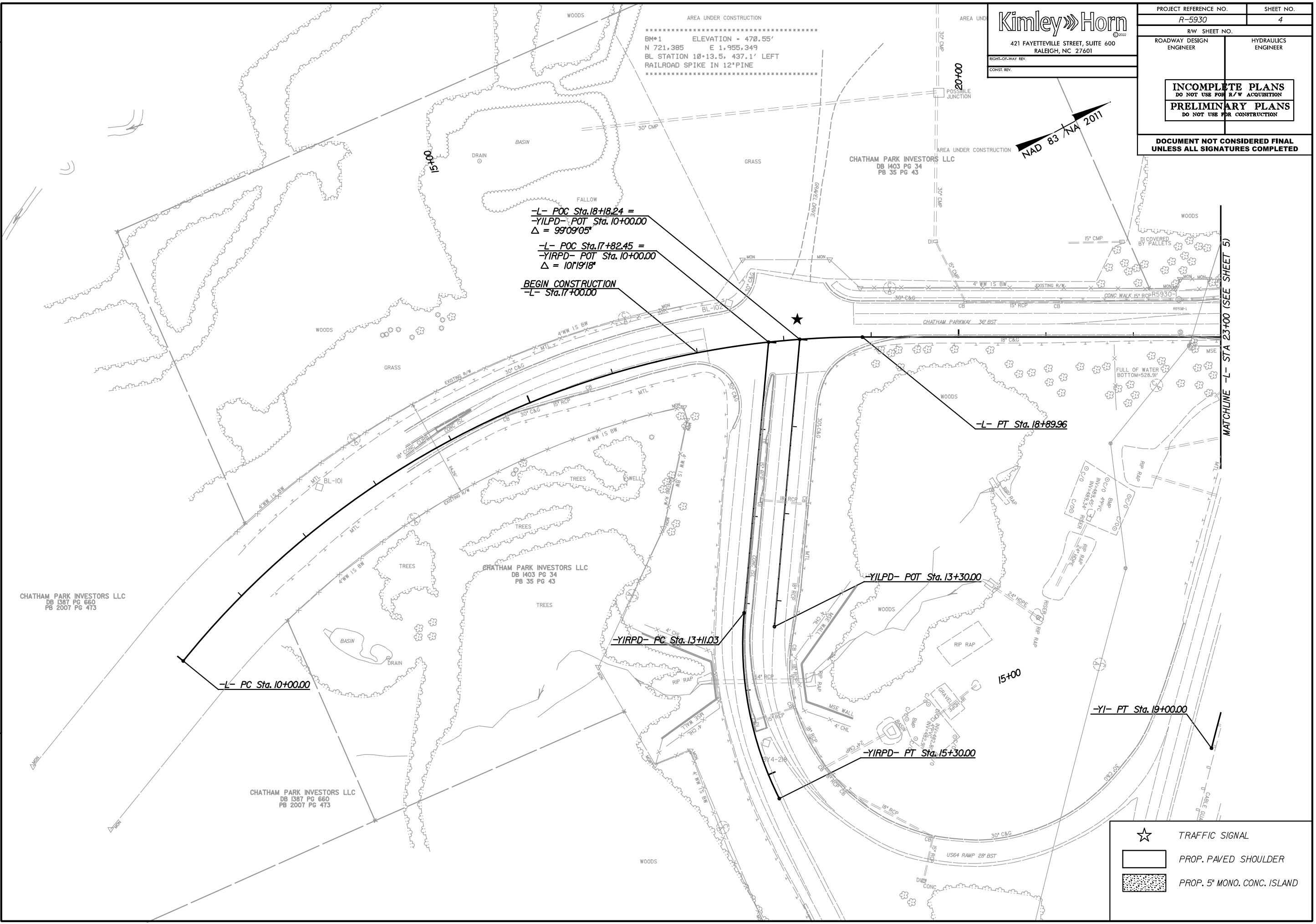
REVISIONS

3/13/2023

PROJECT REFERENCE NO. R-5930	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p><b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION</p> <p><b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION</p>	
<p><b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b></p>	

**Kimley** Horn  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601  
RIGHT-OF-WAY REV.  
 CONST. REV.

AREA UNDER CONSTRUCTION  
 BM\*1 ELEVATION = 470.55'  
 N 721.385 E 1,955.349  
 BL STATION 10+13.5, 437.1' LEFT  
 RAILROAD SPIKE IN 12" PINE



-L- POC Sta. 18+18.24 =  
 -YILPD- POT Sta. 10+00.00  
 $\Delta = 99^{\circ}09'05''$   
 -L- POC Sta. 17+82.45 =  
 -YIRPD- POT Sta. 10+00.00  
 $\Delta = 101^{\circ}19'18''$   
**BEGIN CONSTRUCTION**  
 -L- Sta. 17+00.00

NAD 83  $\backslash$  N 2011

- TRAFFIC SIGNAL
- PROP. PAVED SHOULDER
- PROP. 5' MONO. CONC. ISLAND

5/14/99

3/13/2023

REVISIONS

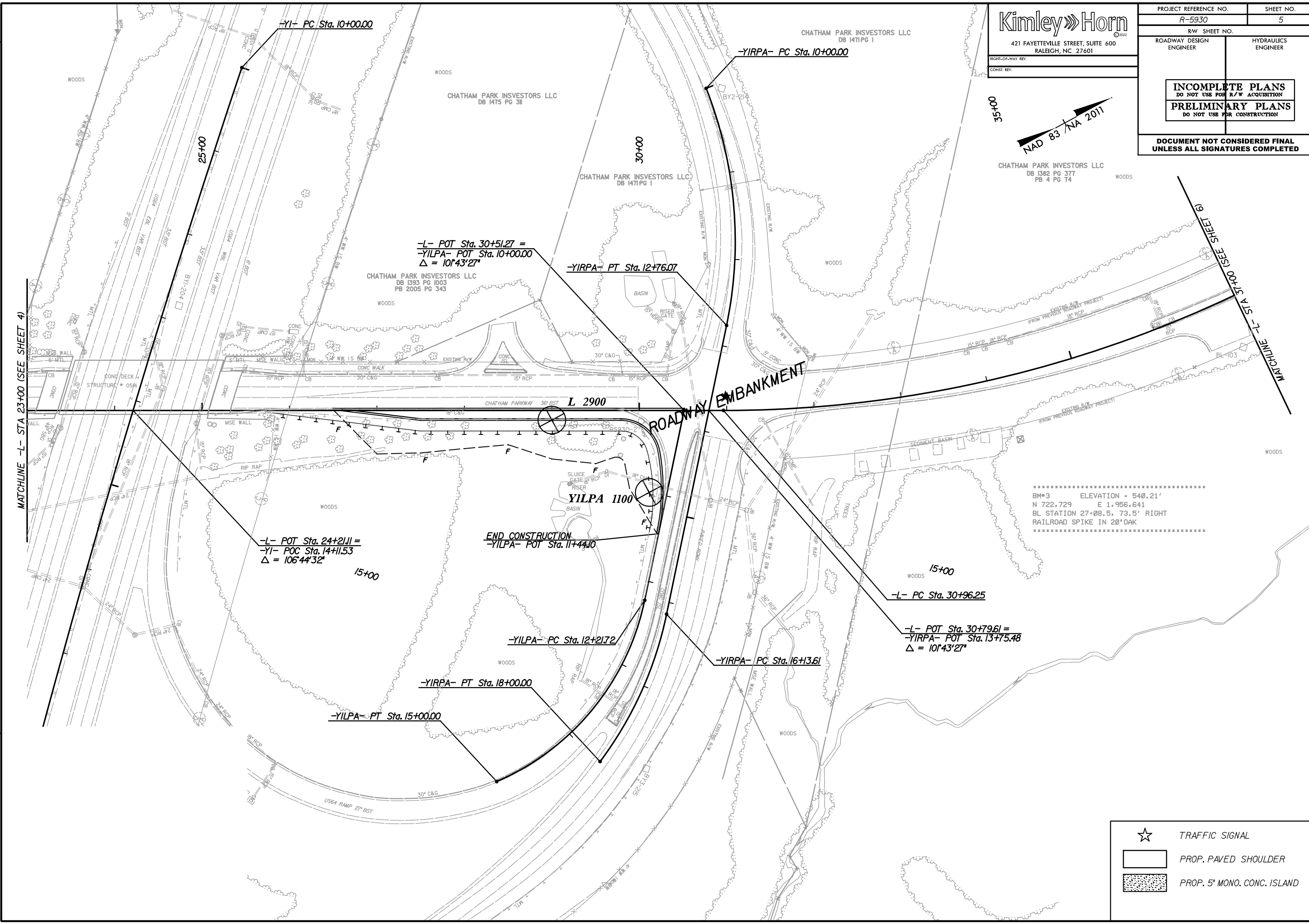
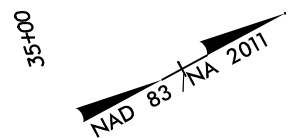
MATCHLINE -L- STA 23+00 (SEE SHEET 4)

MATCHLINE -L- STA 37+00 (SEE SHEET 5)

**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
 CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 5
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	



.....  
 BM\*3 ELEVATION - 540.21'  
 N 722.729 E 1.956.641  
 BL STATION 27+08.5, 73.5' RIGHT  
 RAILROAD SPIKE IN 20' OAK  
 .....

- ★ TRAFFIC SIGNAL
- ▭ PROP. PAVED SHOULDER
- ▨ PROP. 5' MONO. CONC. ISLAND

5/14/99

REVISIONS

3/13/2023

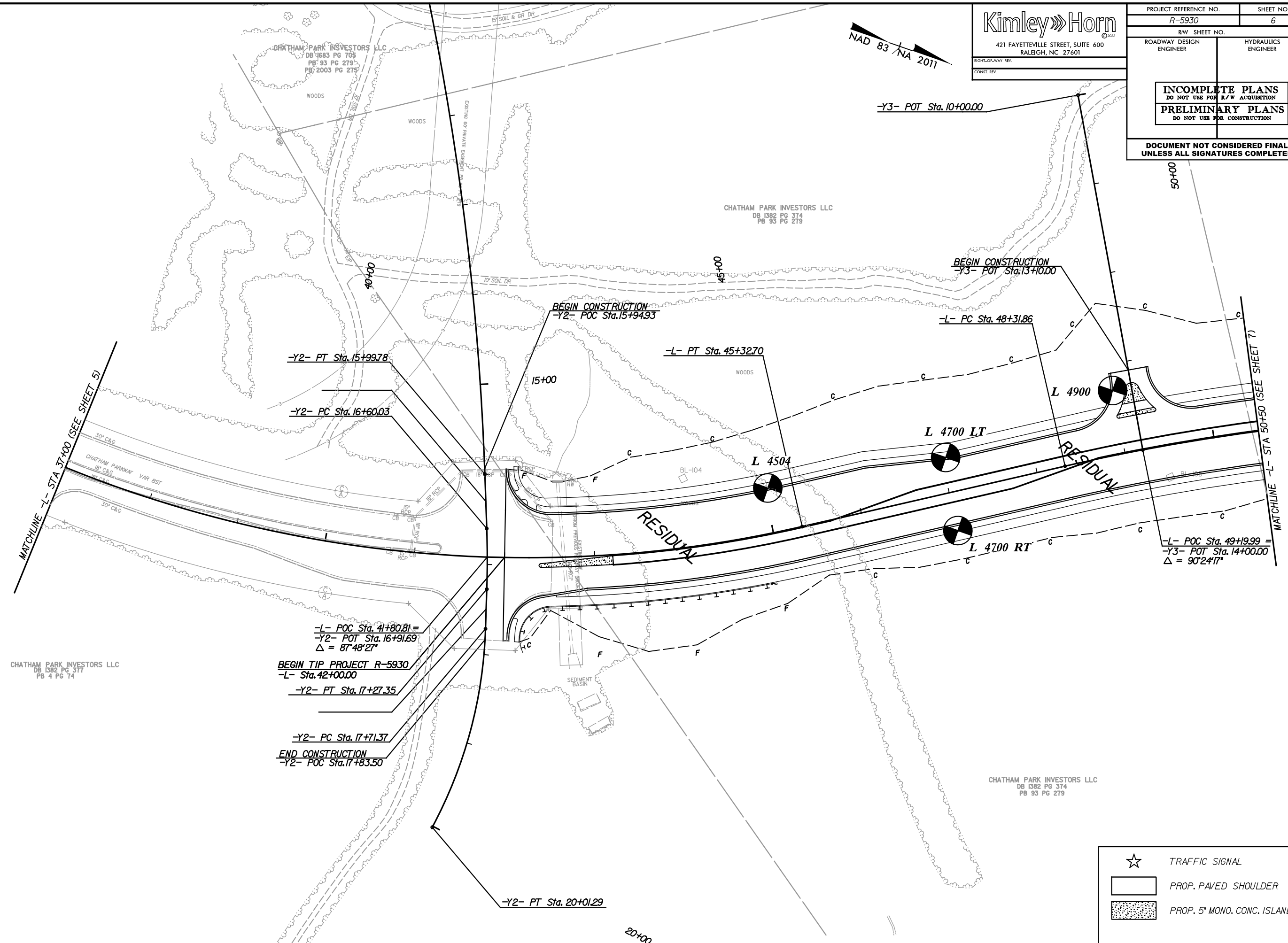
Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
CONST. REV.

NAD 83 / NA 2011

PROJECT REFERENCE NO. R-5930	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	



MATCHLINE -L- STA 37+00 (SEE SHEET 5)

30" C&G  
CHATHAM PARKWAY VAR EST  
18" C&G  
30" C&G

CHATHAM PARK INVESTORS LLC  
DB 1382 PG 377  
PB 4 PG 74

-L- POC Sta. 41+80.81 =  
-Y2- POT Sta. 16+91.69  
 $\Delta = 87'48'27"$

**BEGIN TIP PROJECT R-5930**  
-L- Sta. 42+00.00

-Y2- PT Sta. 17+27.35

-Y2- PC Sta. 17+71.37

**END CONSTRUCTION**  
-Y2- POC Sta. 17+83.50

-Y2- PT Sta. 20+01.29

☆	TRAFFIC SIGNAL
▭	PROP. PAVED SHOULDER
▨	PROP. 5' MONO. CONC. ISLAND

-L- POC Sta. 49+19.99 =  
-Y3- POT Sta. 14+00.00  
 $\Delta = 90'24'17"$

MATCHLINE -L- STA 50+50 (SEE SHEET 7)



5/14/99

1005

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

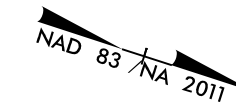
R-5930 7

RW SHEET NO. HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

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

**DOCUMENT NOT CONSIDERED FINAL**  
**UNLESS ALL SIGNATURES COMPLETED**



CHATHAM PARK INVESTORS LLC  
DB 1384 PG 133

60+00

-Y4- POT Sta. 10+00.00

10+00

-Y4- PC Sta. 13+60.47  
BEGIN CONSTRUCTION  
-Y4- PC Sta. 13+73.00

55+00

-Y4- PT Sta. 14+34.40

L 5100 LT

RESIDUAL

L 5300

L 5500

L 5903

L 6300 LT

L 5100

L 5097 RT

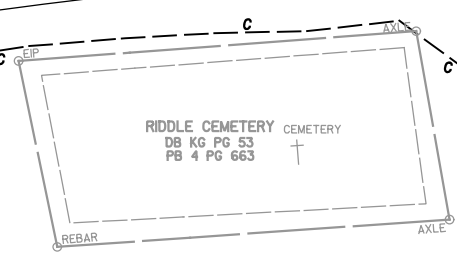
L 5703

L 6100

L 6300 RT

MATCHLINE -L- STA 50+50 (SEE SHEET 6)

MATCHLINE -L- STA 64+00 (SEE SHEET 8)



-L- POC Sta. 53+66.87 =  
-Y4- POT Sta. 14+71.35  
 $\Delta = 87^{\circ}09'38''$   
CHATHAM PARK INVESTORS LLC END CONSTRUCTION  
DB 1382 PG 374  
PB 93 PG 279  
-Y4- POC Sta. 15+62.00

-L- PT Sta. 53+99.25

-Y4- PC Sta. 17+67.12

-Y4- PT Sta. 18+39.32

-Y4- POT Sta. 19+00.00

CHATHAM PARK INVESTORS LLC  
DB 1384 PG 133

- TRAFFIC SIGNAL
- PROP. PAVED SHOULDER
- PROP. 5' MONO. CONC. ISLAND

REVISIONS

3/13/2023

5/14/99

\*\*\*\*\*  
BM#5 ELEVATION = 480.21'  
N 725.736 E 1,955.112  
BL STATION 60+02.8, 601.0' LEFT  
RAILROAD SPIKE IN 12" PINE  
\*\*\*\*\*

GRANTHAM VIRGINIA MERRITT TRUSTEE  
DB 138 PG 453  
PB 2001PG 491

CHATHAM PARK INVESTORS LLC  
DB 1567 PG 800  
PB 2001PG 223

Kimley Horn

421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

R-5930 B

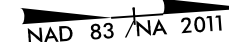
RW SHEET NO.

ROADWAY DESIGN  
ENGINEER

HYDRAULICS  
ENGINEER

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

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

-Y6- POT Sta. 10+00.00  NAD 83 / NA 2011

15-501 EAST LLC  
DB 1963 PG 998

CHATHAM PARK INVESTORS LLC  
DB 1384 PG 133

-Y5- POT Sta. 10+00.00

65+00

BEGIN CONSTRUCTION  
-Y5- POT Sta. 12+05.00

-L- POC Sta. 65+35.80 =  
-Y5- POT Sta. 13+00.00  
 $\Delta = 96^{\circ}45'00''$

BEGIN CONSTRUCTION  
-Y6- POT Sta. 13+21.00

75+00

REVISIONS

MATCHLINE -L- STA 64+00 (SEE SHEET 7)

BL-108

L 6500

L 6705

L 6816

L 6788

L 6816B

L 6861 RT

L 6855 LT

L 6888

L 6892

L 6950

L 7113

L 7300

L 7500 RT

L 7700

RESIDUAL L 7505 LT

RESIDUAL

RESIDUAL

-L- POC Sta. 72+34.69 =  
-Y6- POT Sta. 14+27.28  
 $\Delta = 90^{\circ}00'00''$




END CONSTRUCTION  
-Y6- POT Sta. 15+39.00

CHATHAM PARK INVESTORS LLC  
DB 1384 PG 133

CHATHAM PARK INVESTORS LLC  
DB 1567 PG 800  
PB 2001PG 223

15-501 EAST LLC  
DB 1963 PG 998

-Y6- POT Sta. 19+00.00

-  TRAFFIC SIGNAL
-  PROP. PAVED SHOULDER
-  PROP. 5' MONO. CONC. ISLAND

3/13/2023

5/14/99

REVISIONS

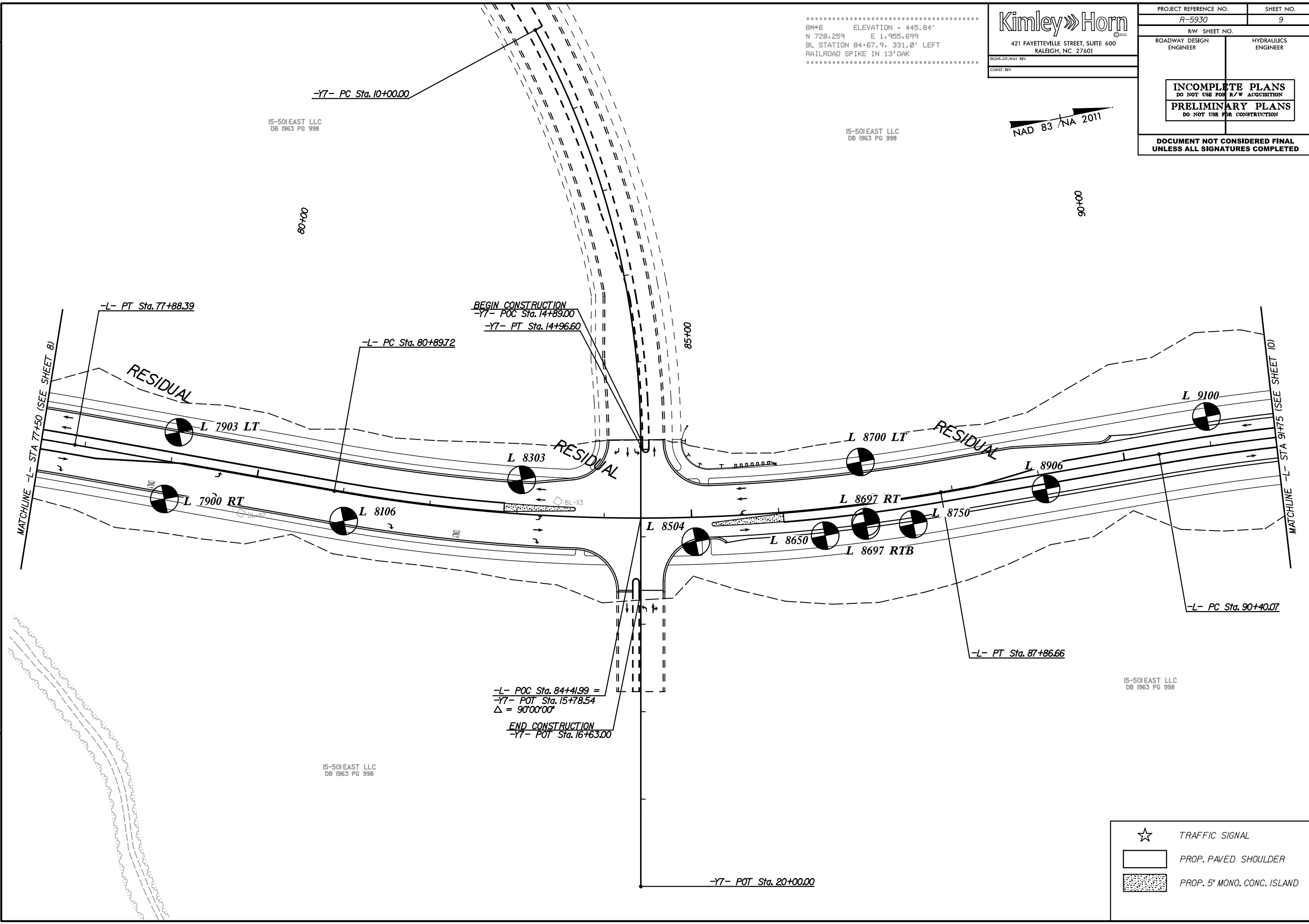
3/13/2023

\*\*\*\*\*  
 BM\*6 ELEVATION = 445.84'  
 N 728.259 E 1,955.699  
 BL STATION 84+67.9, 331.0' LEFT  
 RAILROAD SPIKE IN 13' OAK  
 \*\*\*\*\*

**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
 CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	



**BEGIN CONSTRUCTION**  
 -Y7- POC Sta. 14+89.00  
 -Y7- PT Sta. 14+96.60

-L- POC Sta. 84+41.99 =  
 -Y7- POT Sta. 15+78.54  
 $\Delta = 90^{\circ}00'00''$   
**END CONSTRUCTION**  
 -Y7- POT Sta. 16+63.00

	TRAFFIC SIGNAL
	PROP. PAVED SHOULDER
	PROP. 5' MONO. CONC. ISLAND

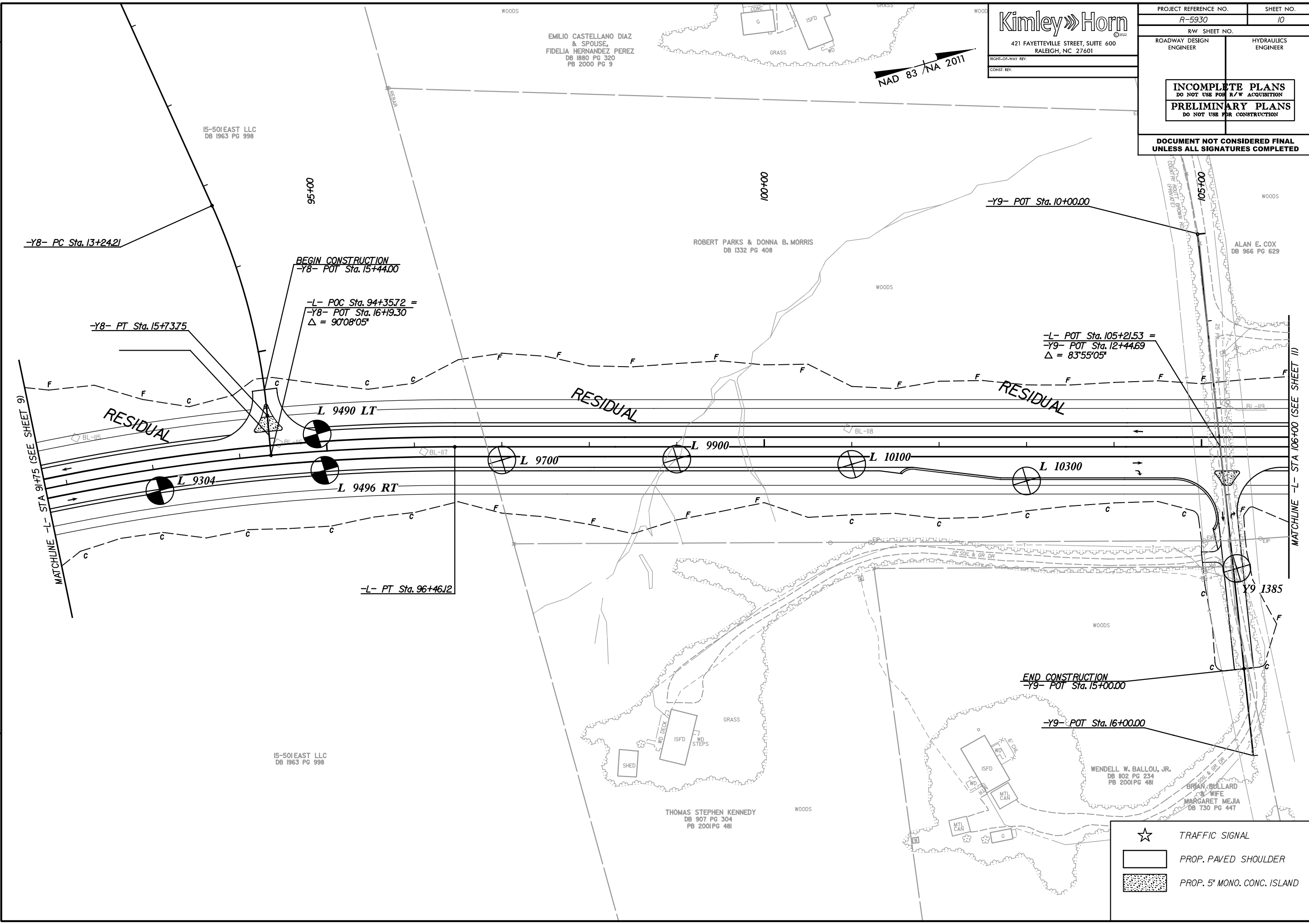
5/14/99

3/13/2023

**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
 CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	



REVISIONS

MATCHLINE -L- STA 91+75 (SEE SHEET 9)

MATCHLINE -L- STA 106+00 (SEE SHEET 11)

☆ TRAFFIC SIGNAL

▭ PROP. PAVED SHOULDER

▨ PROP. 5' MONO. CONC. ISLAND

5/14/99

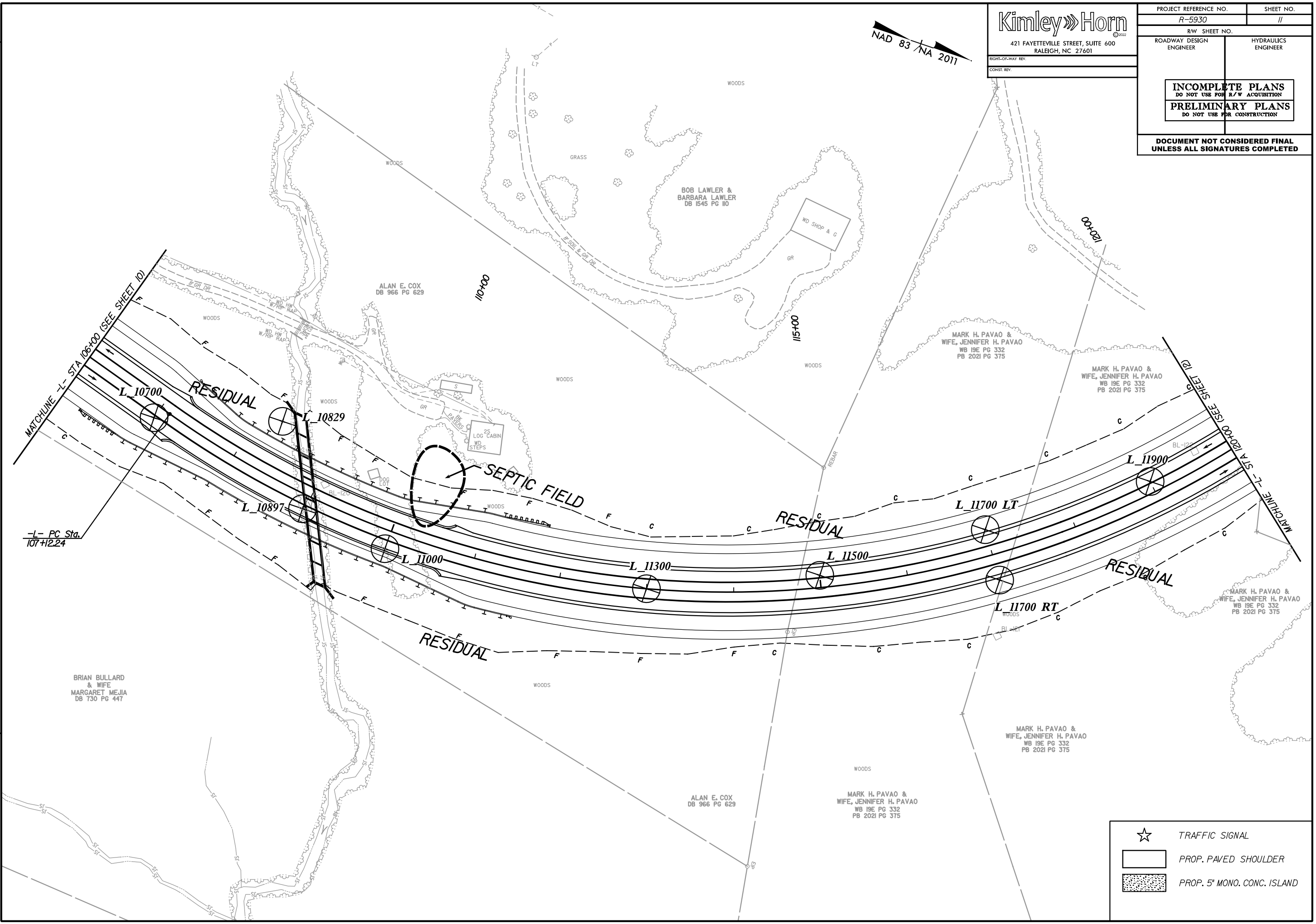
NAD 83 NA 2011

**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
 CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

REVISIONS



☆ TRAFFIC SIGNAL

▭ PROP. PAVED SHOULDER

▨ PROP. 5' MONO. CONC. ISLAND

3/13/2023

5/14/99

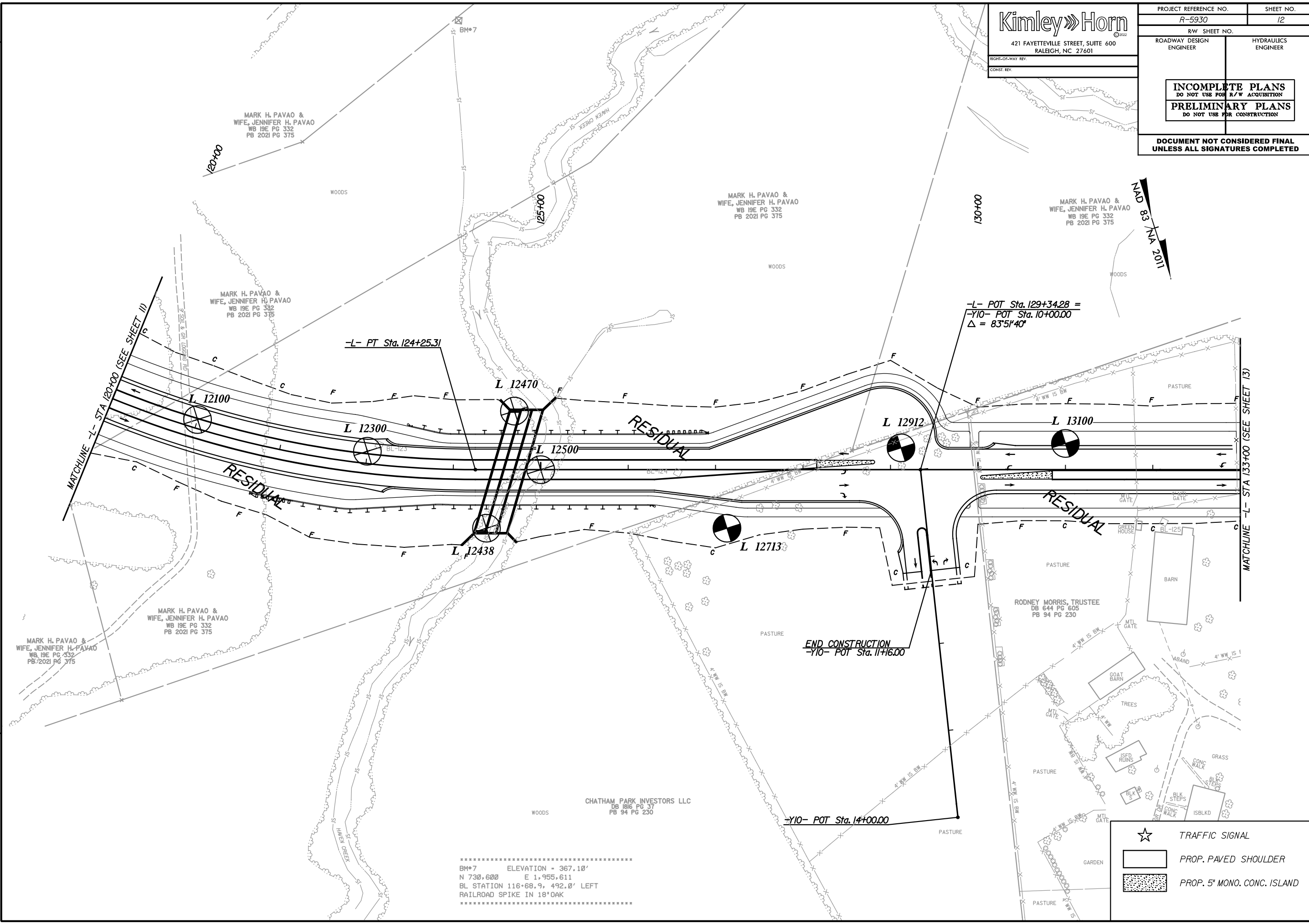
3/13/2023

**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
 CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

REVISIONS



\*\*\*\*\*  
 BM\*7 ELEVATION = 367.10'  
 N 730.600 E 1,955.611  
 BL STATION 116+68.9, 492.0' LEFT  
 RAILROAD SPIKE IN 18" OAK  
 \*\*\*\*\*

5/14/99

LEE M. PAVAO &  
MARK H. PAVAO & WIFE,  
JENNIFER H. PAVAO  
DB 723 PG 944  
PB 97 PG 241  
PB 30 PG 8

RODNEY MORRIS, TRUSTEE  
DB 644 PG 605  
PB 94 PG 230

L 13700

L 13500

L 13900

L 14100

L 14352

L 14500

-L- PC Sta. 134+32.29

-L- PT Sta. 144+21.54

RODNEY MORRIS, TRUSTEE  
DB 644 PG 605  
PB 94 PG 230

RODNEY MORRIS  
DB 492 PG 93

KATIE B. COOPER  
DB 388 PG 241

KATIE B. COOPER  
DB 620 PG 1038

RODNEY MORRIS  
DB 427 PG 412  
PB A PG 638

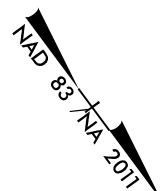
JOHN SLATER MORRIS  
& WIFE  
SHERRY SUZANNE MORRIS  
DB 168 PG 1017  
PB 18 PG 48

LIBRON RODNEY MORRIS  
& WIFE  
YVONNE M. MORRIS  
DB 620 PG 882  
PB 93 PG 271

**Kimley»Horn**  
421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



REVISIONS

MATCHLINE -L- STA 133+00 (SEE SHEET 12)

MATCHLINE -L- STA 146+50 (SEE SHEET 14)

\*\*\*\*\*  
 BM\*8 ELEVATION = 423.40'  
 N 732.383 E 954.368  
 BL STATION 137+94.0, 408.5' RIGHT  
 RAILROAD SPIKE IN 15" PINE  
 \*\*\*\*\*

☆	TRAFFIC SIGNAL
▭	PROP. PAVED SHOULDER
▨	PROP. 5' MONO. CONC. ISLAND

3/13/2023

5/14/99

REVISIONS

3/13/2023

Kimley»Horn

421 FAYETTEVILLE STREET, SUITE 600  
RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
CONST. REV.

PROJECT REFERENCE NO. SHEET NO.

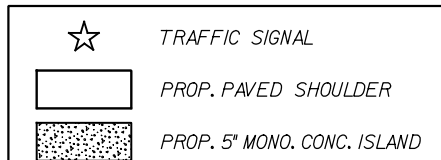
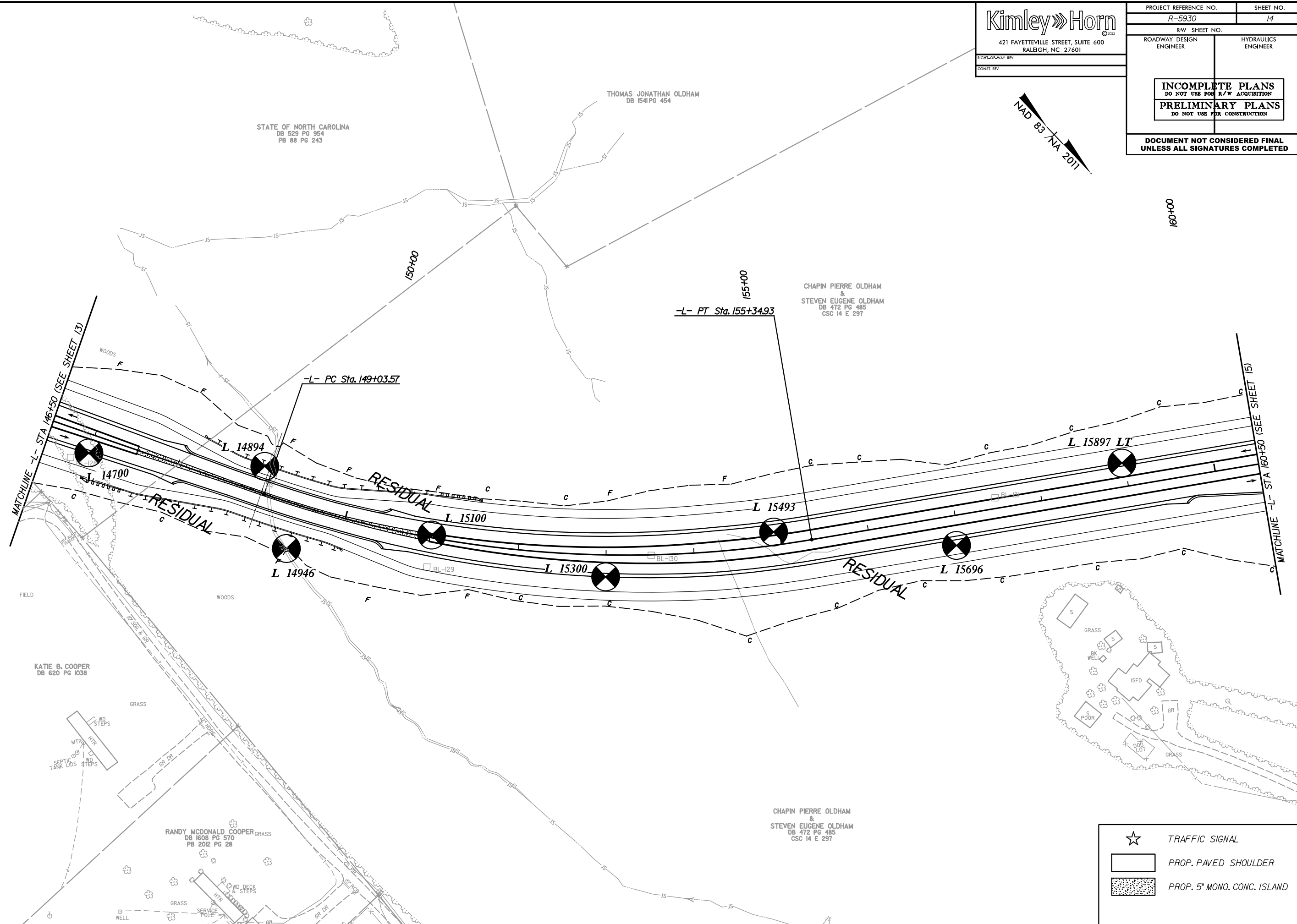
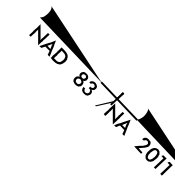
R-5930 14

RW SHEET NO.

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

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

**DOCUMENT NOT CONSIDERED FINAL**  
**UNLESS ALL SIGNATURES COMPLETED**



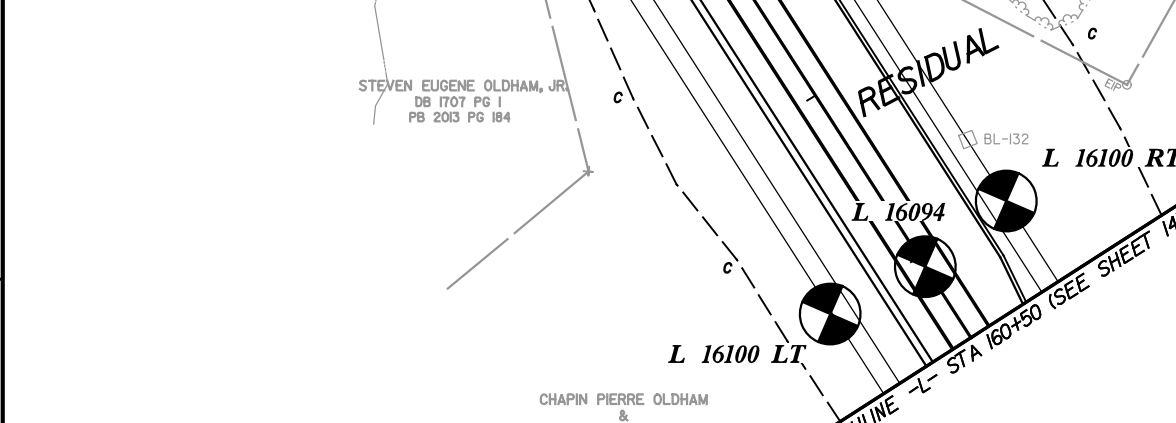
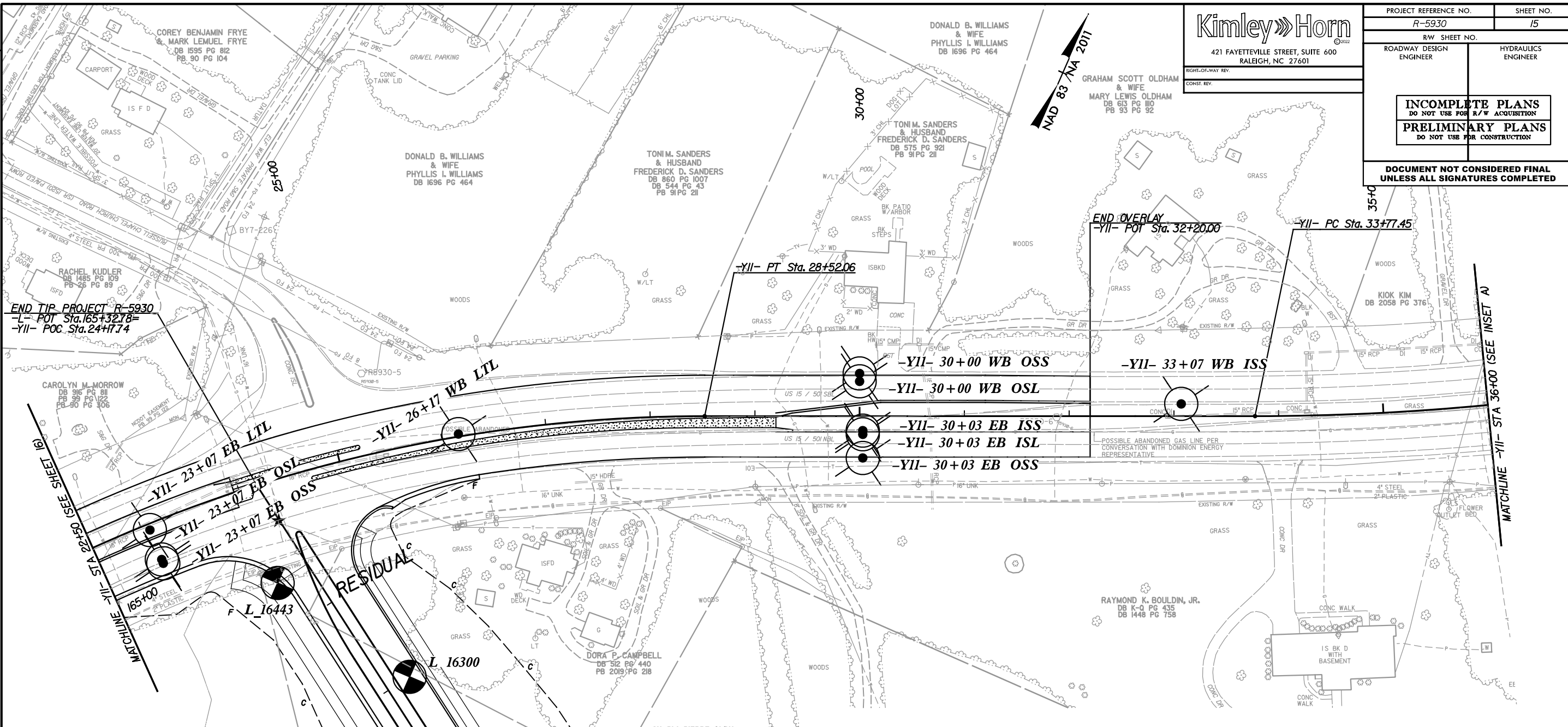


5/14/2023

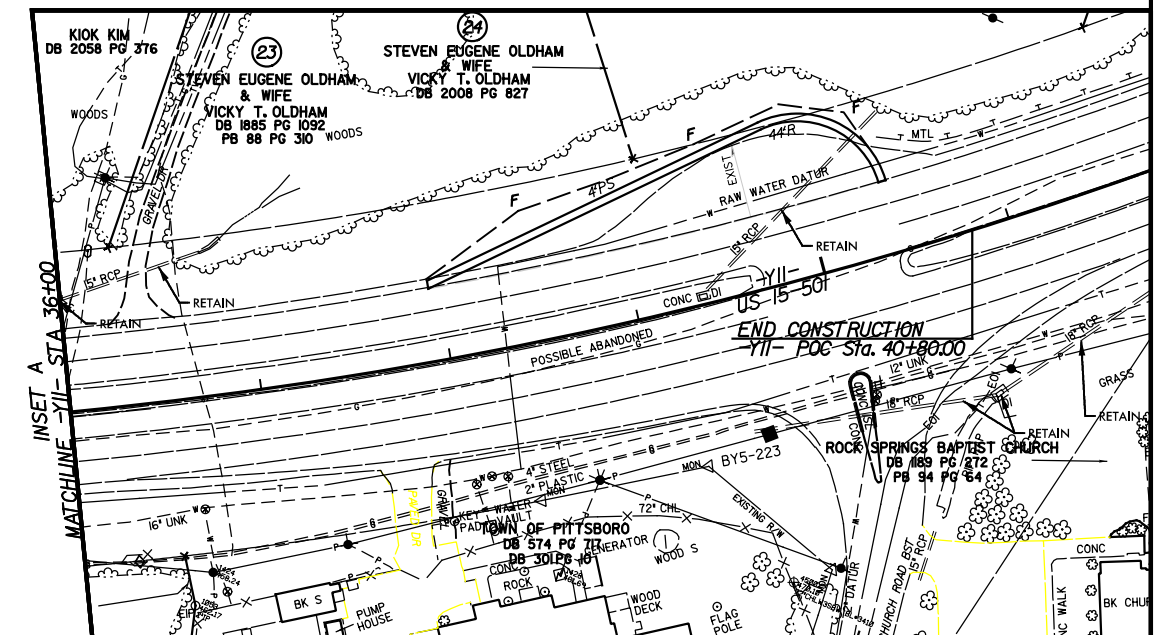
**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

PROJECT REFERENCE NO. R-5930	SHEET NO. 15
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

REVISIONS



2025 AVERAGE DAILY TRAFFIC	-Y11- (15-501)			
DHV = 8%	4600	300	900	2100
DIR = 55%	10000	2700	1500	2800
TTST = 1%				
DUAL = 3%				
-L- (CPW)	4100	1000	18700	
DHV = 8%	6800	800	23500	
DIR = 55%				
TTST = 1%				
DUAL = 2%				
-L- (CPW)				
DHV = 8%				
DIR = 65%				
TTST = 1%				
DUAL = 3%				
-Y11- (15-501)				



- ★ TRAFFIC SIGNAL
- PROP. PAVED SHOULDER
- ▨ PROP. 5" MONO. CONC. ISLAND

SEE SHEET 22 FOR -L- PROFILE  
 SEE SHEET 24 FOR -Y11- PROFILE  
 SEE SHEETS 2D-1 TO 2D-3 FOR DRAINAGE DETAILS

3/14/2023

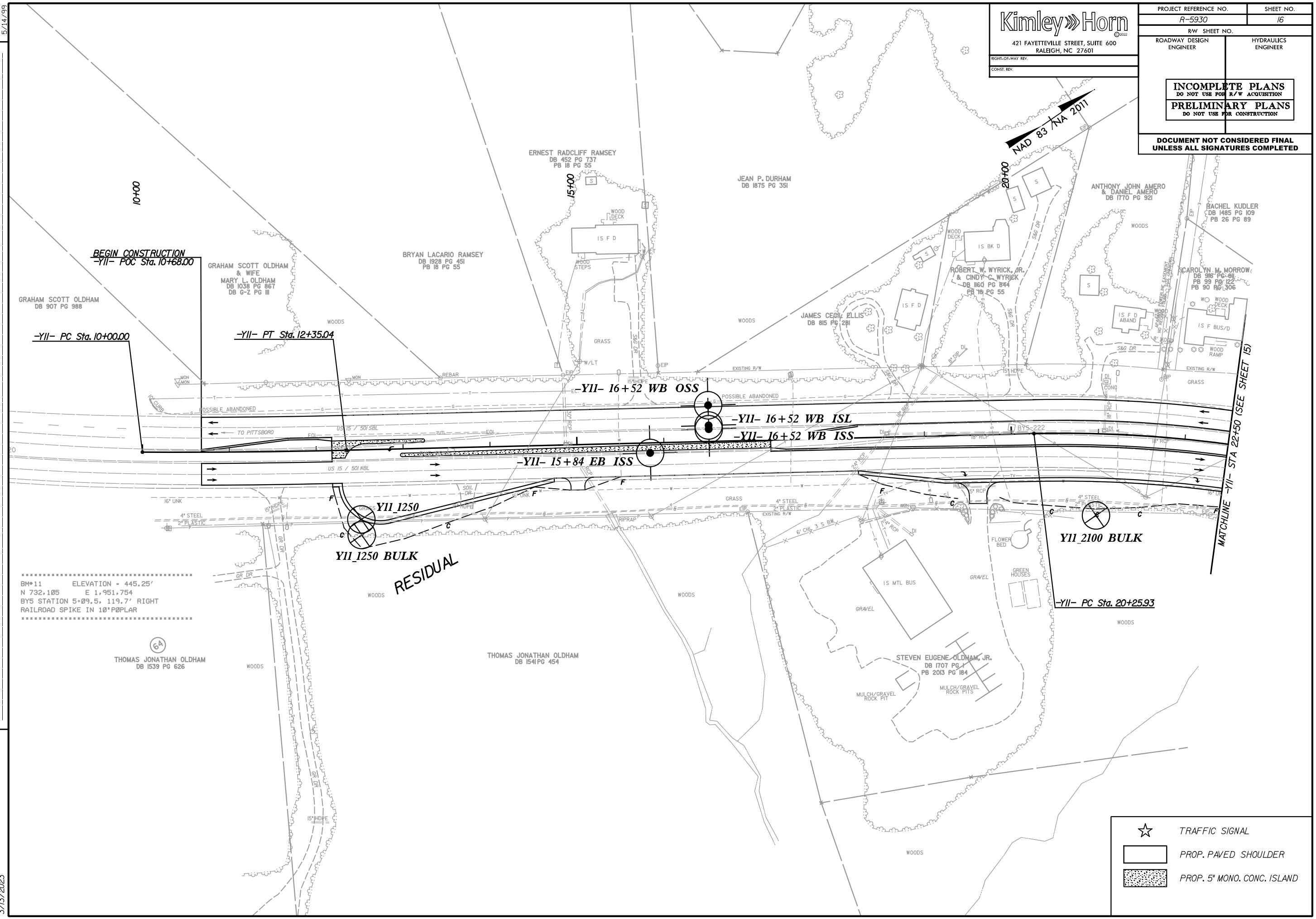
5/14/99

**Kimley Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

RIGHT-OF-WAY REV.  
 CONST. REV.

PROJECT REFERENCE NO. R-5930	SHEET NO. 16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

REVISIONS



**BEGIN CONSTRUCTION**  
-YII- POC Sta. 10+68.00

-YII- PC Sta. 10+00.00

-YII- PT Sta. 12+35.04

-YII- 16+52 WB OSS

-YII- 16+52 WB ISL

-YII- 16+52 WB ISS

-YII- 15+84 EB ISS

YII 1250

YII 1250 BULK  
RESIDUAL

YII 2100 BULK

-YII- PC Sta. 20+25.93

MATCHLINE -YII- STA 22+50 (SEE SHEET 15)

\*\*\*\*\*  
 BM#11 ELEVATION = 445.25'  
 N 732.105 E 1.951.754  
 BY5 STATION 5+09.5, 119.7' RIGHT  
 RAILROAD SPIKE IN 10" POPLAR  
 \*\*\*\*\*

THOMAS JONATHAN OLDHAM  
 DB 1539 PG 626

THOMAS JONATHAN OLDHAM  
 DB 1541 PG 454

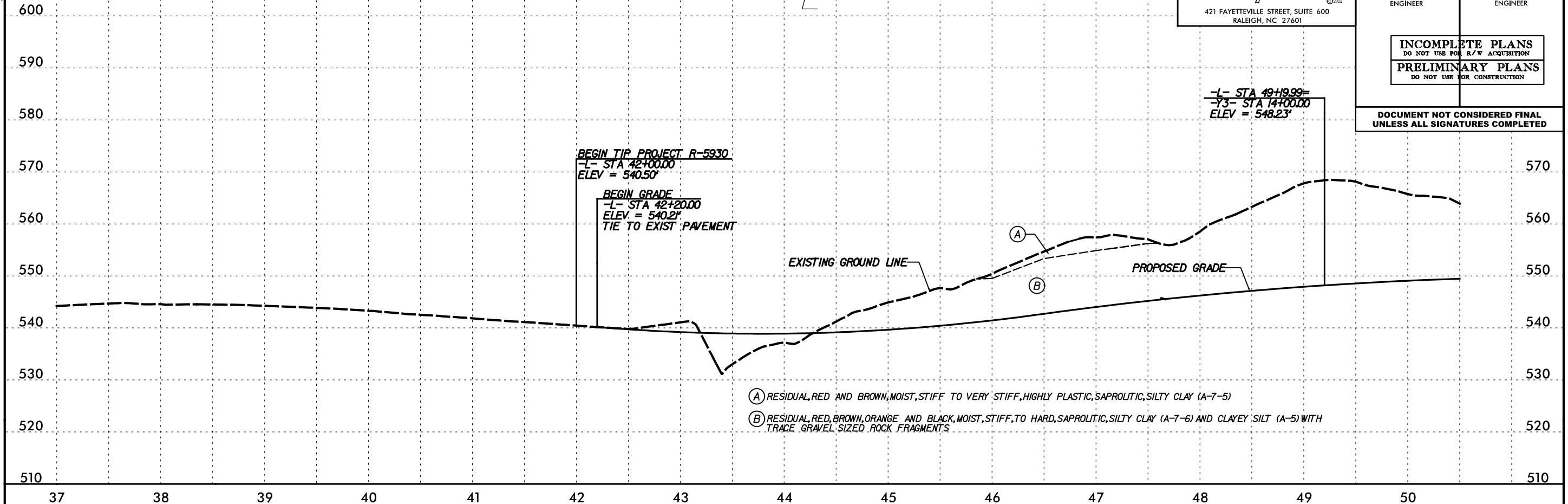
STEVEN EUGENE OLDHAM, JR.  
 DB 1707 PG 184  
 PB 2013 PG 184

☆	TRAFFIC SIGNAL
▭	PROP. PAVED SHOULDER
▨	PROP. 5' MONO. CONC. ISLAND

3/13/2023

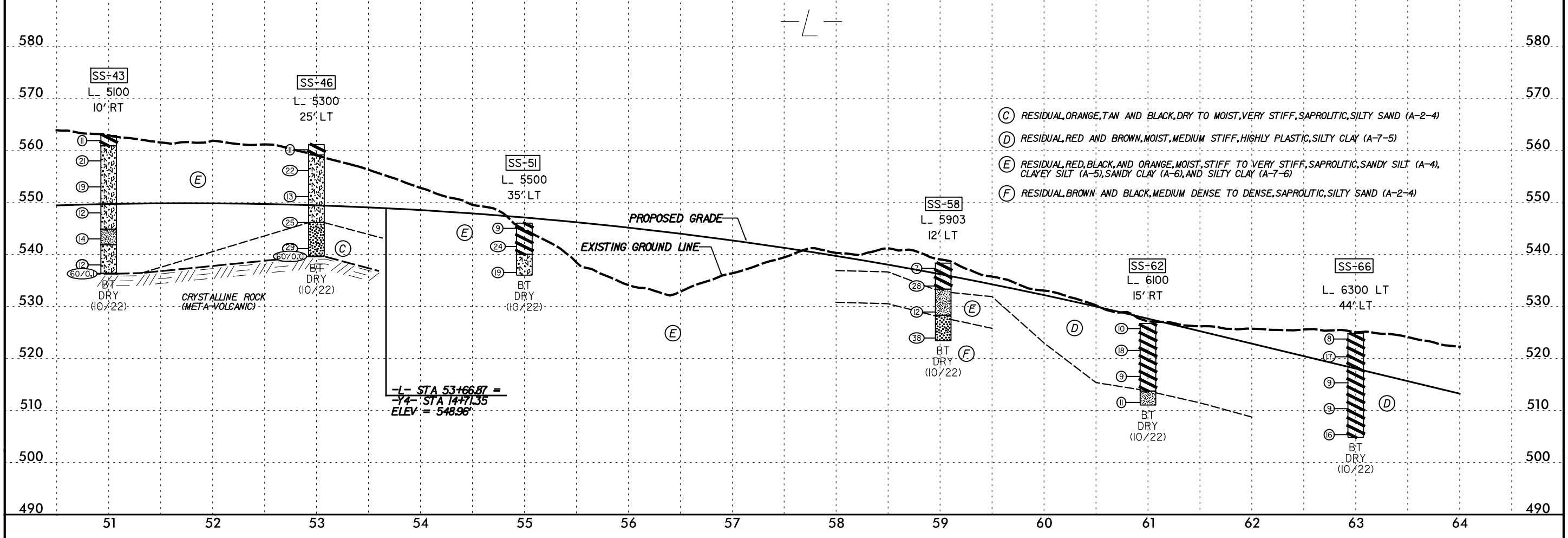
5/14/99

PROJECT REFERENCE NO. R-5930	SHEET NO. 17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



- (A) RESIDUAL RED AND BROWN, MOIST, STIFF TO VERY STIFF, HIGHLY PLASTIC, SAPROLITIC, SILTY CLAY (A-7-5)
- (B) RESIDUAL RED, BROWN, ORANGE AND BLACK, MOIST, STIFF TO HARD, SAPROLITIC, SILTY CLAY (A-7-6) AND CLAYEY SILT (A-5) WITH TRACE GRAVEL SIZED ROCK FRAGMENTS

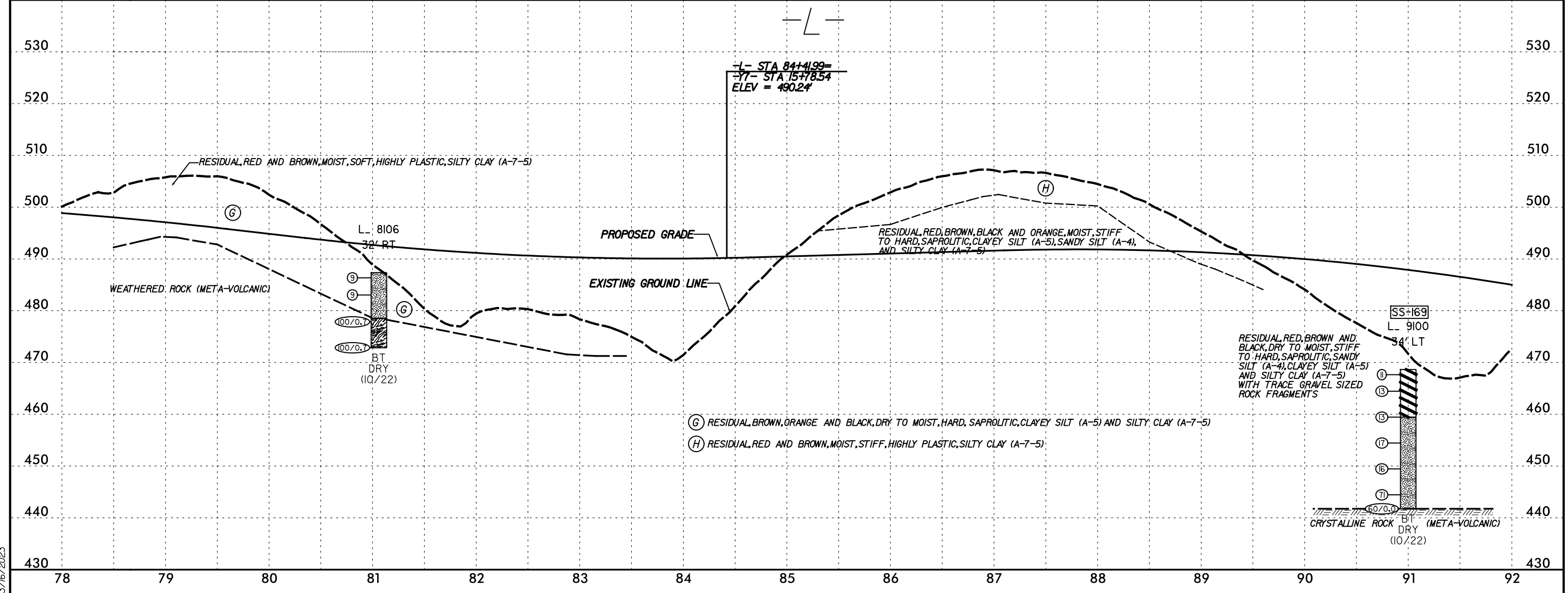
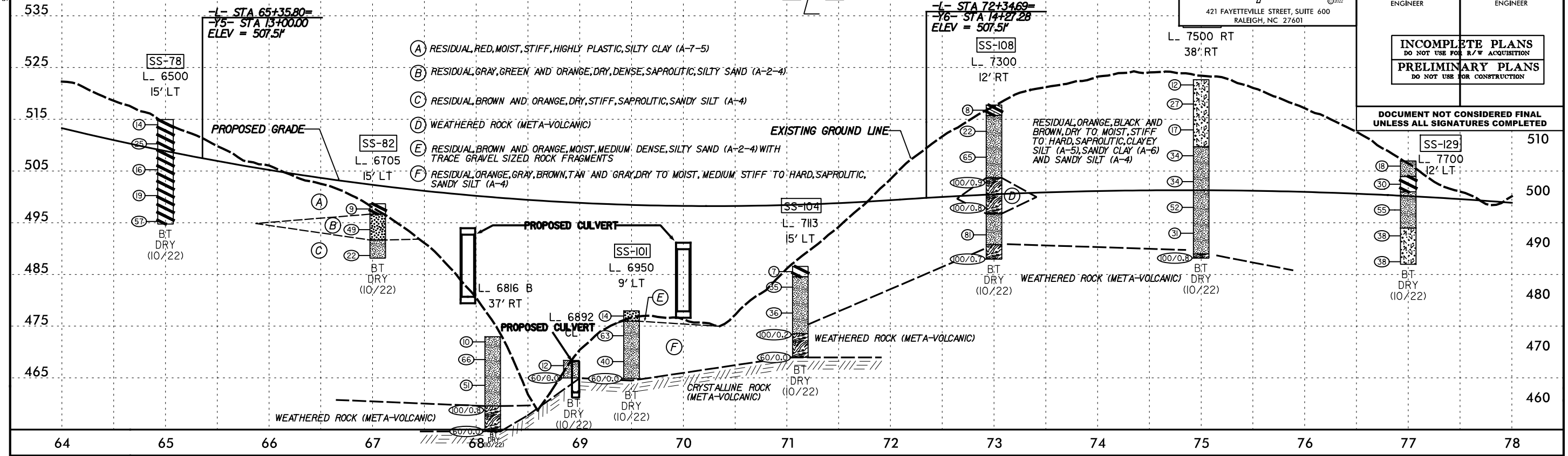
3/14/2023



- (C) RESIDUAL, ORANGE, TAN AND BLACK, DRY TO MOIST, VERY STIFF, SAPROLITIC, SILTY SAND (A-2-4)
- (D) RESIDUAL, RED AND BROWN, MOIST, MEDIUM STIFF, HIGHLY PLASTIC, SILTY CLAY (A-7-5)
- (E) RESIDUAL, RED, BLACK, AND ORANGE, MOIST, STIFF TO VERY STIFF, SAPROLITIC, SANDY SILT (A-4), CLAYEY SILT (A-5), SANDY CLAY (A-6), AND SILTY CLAY (A-7-6)
- (F) RESIDUAL, BROWN AND BLACK, MEDIUM DENSE TO DENSE, SAPROLITIC, SILTY SAND (A-2-4)

5/14/99

PROJECT REFERENCE NO. R-5930	SHEET NO. 18
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

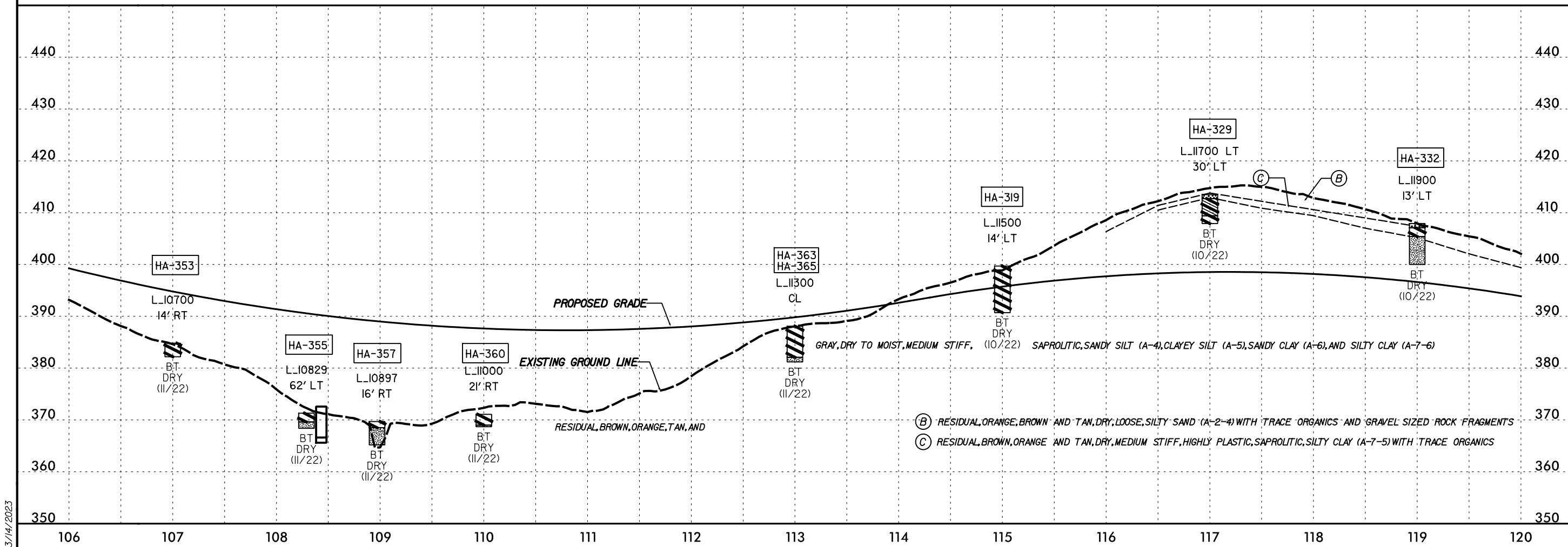
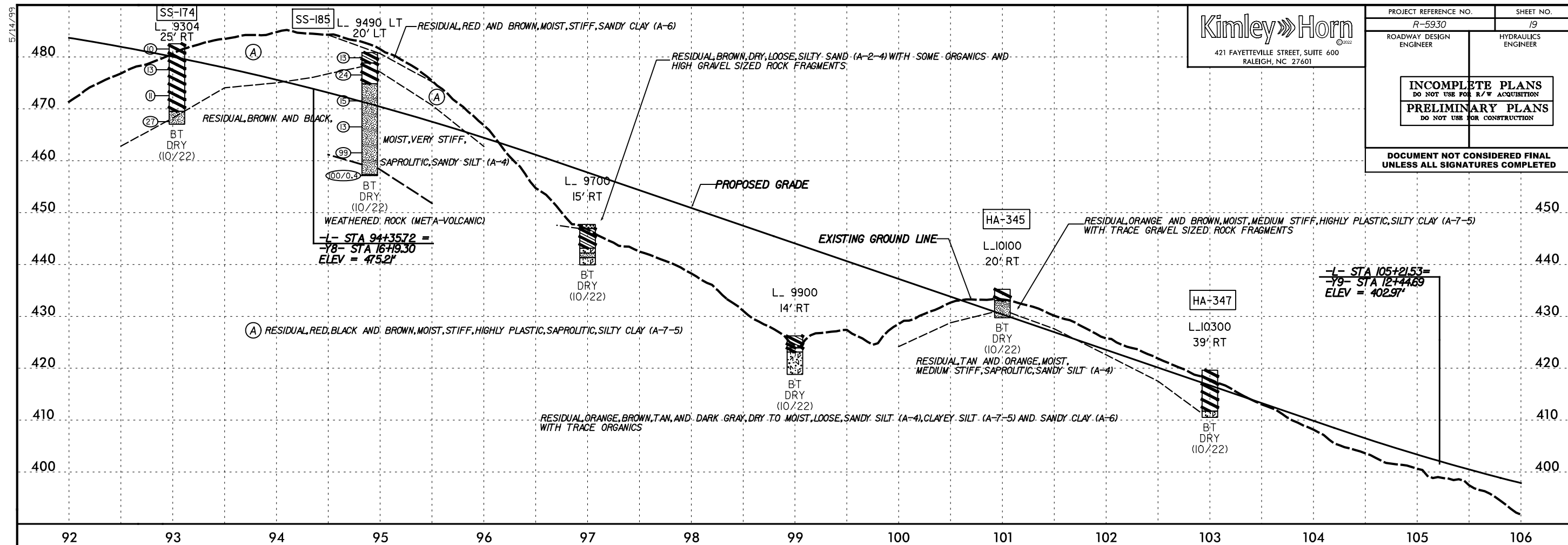


3/16/2023

5/14/99



PROJECT REFERENCE NO. R-5930	SHEET NO. 19
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



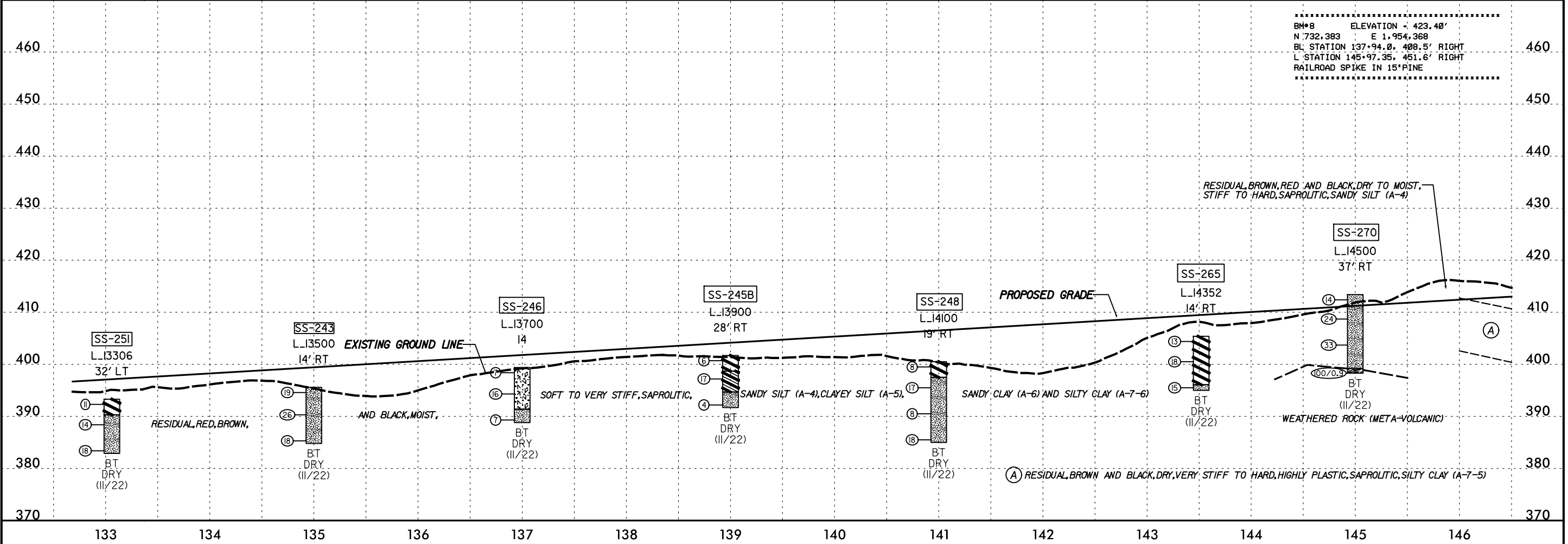
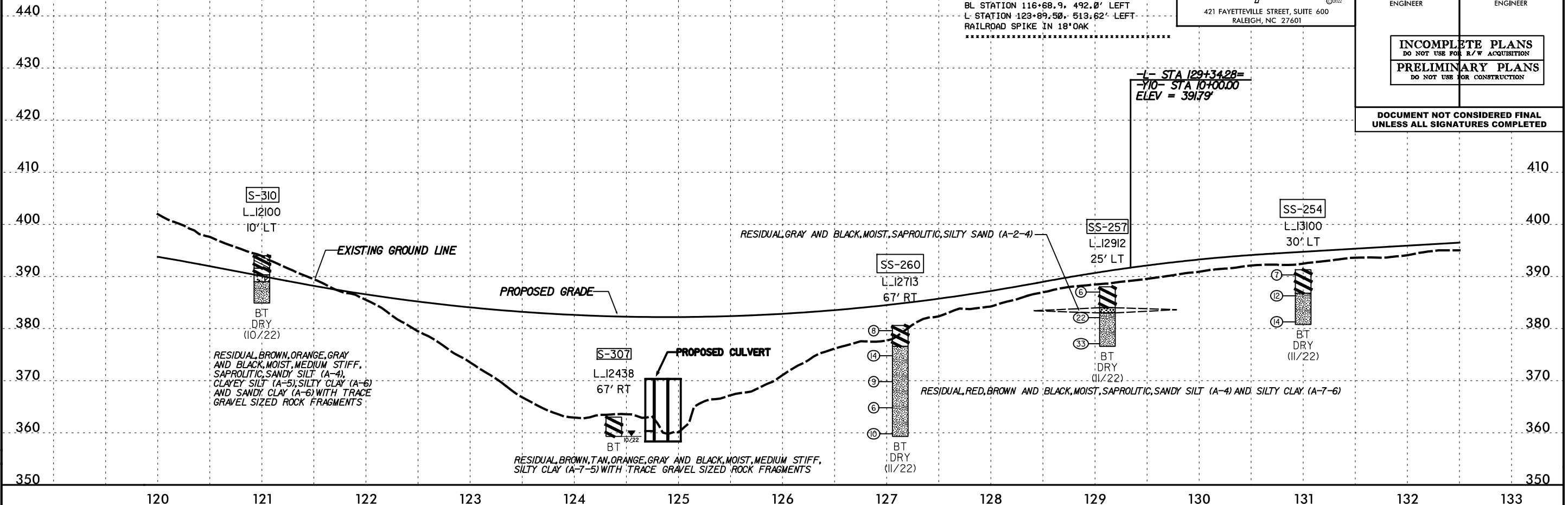
3/14/2023

5/14/99

BM\*7 ELEVATION = 367.10'  
 N 730.600 E 1,955.611  
 BL STATION 116+68.9, 492.0' LEFT  
 L STATION 123+89.50, 513.62' LEFT  
 RAILROAD SPIKE IN 18' OAK



PROJECT REFERENCE NO. R-5930	SHEET NO. 20
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



BM\*8 ELEVATION = 423.40'  
 N 732.383 E 1,954.368  
 BL STATION 137+94.0, 408.5' RIGHT  
 L STATION 145+97.35, 451.6' RIGHT  
 RAILROAD SPIKE IN 15' PINE

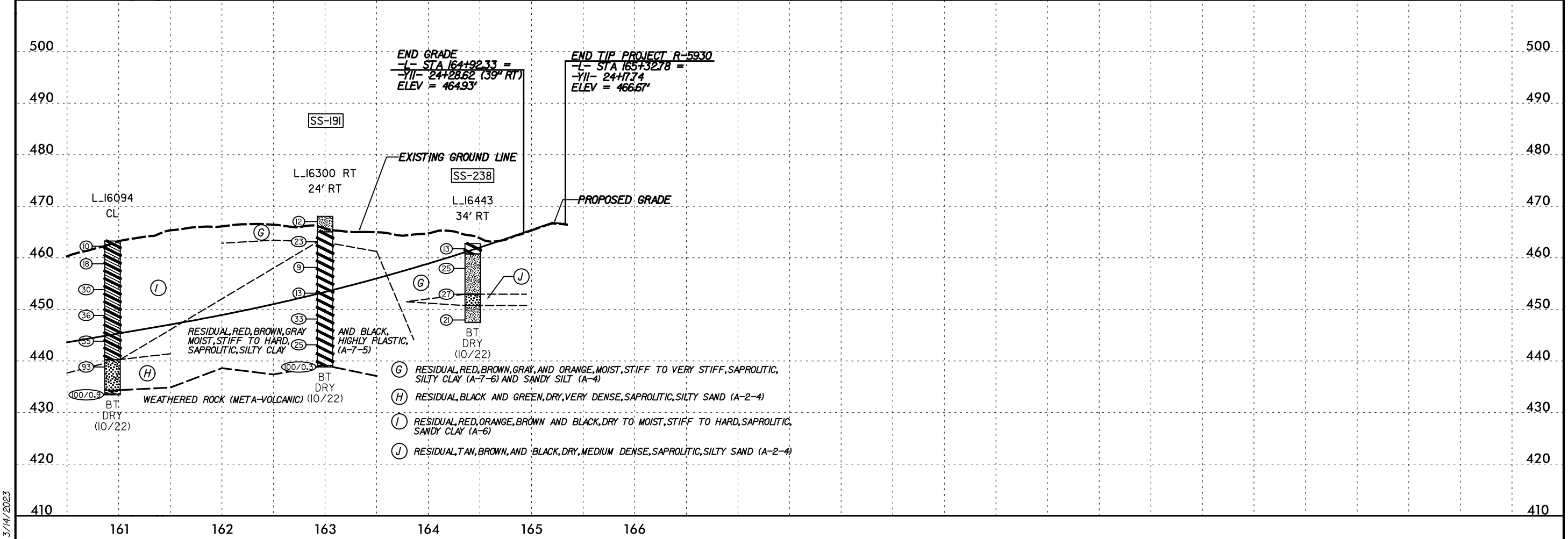
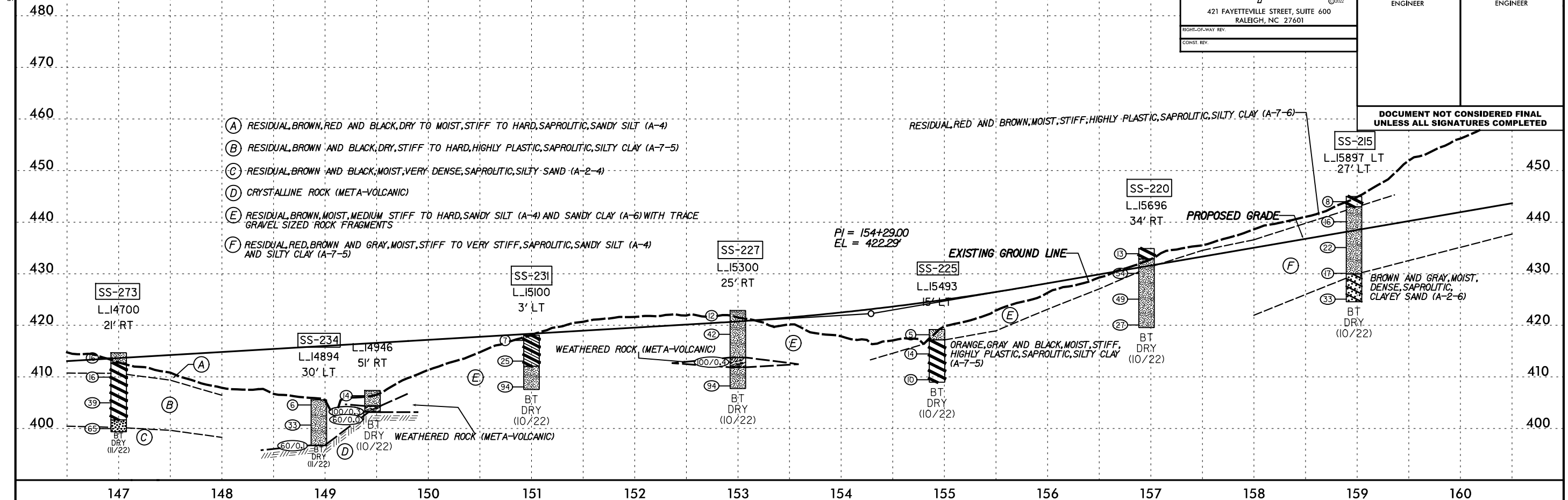
3/15/2023

5/14/99

**Kimley»Horn**  
 421 FAYETTEVILLE STREET, SUITE 600  
 RALEIGH, NC 27601

PROJECT REFERENCE NO. R-5930	SHEET NO. 21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

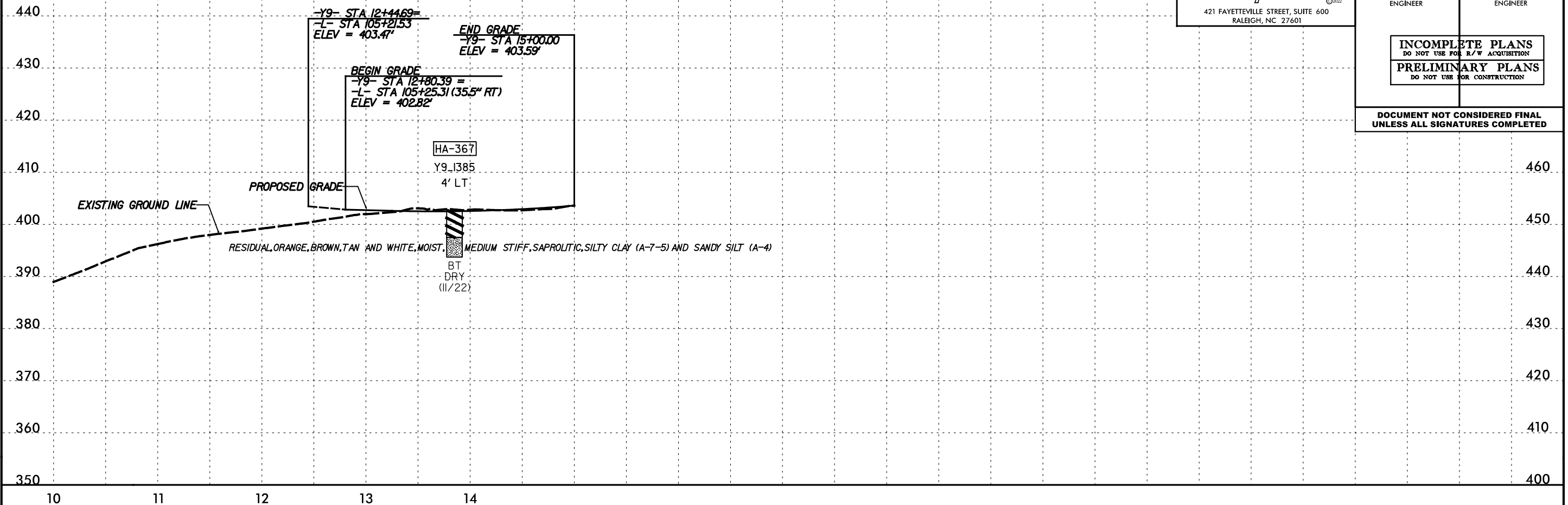


3/14/2023

5/14/99

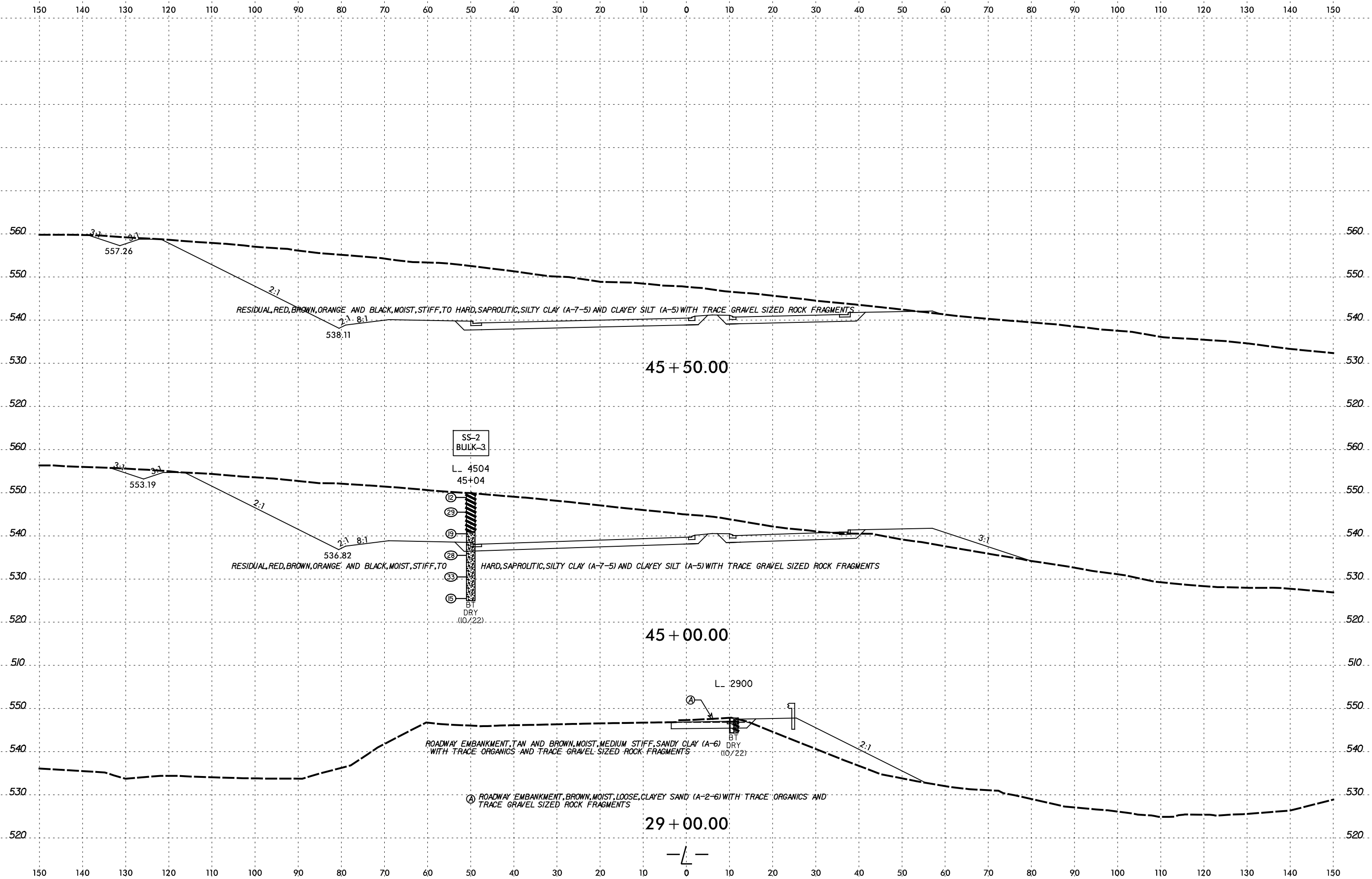


PROJECT REFERENCE NO. R-5930	SHEET NO. 22
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	

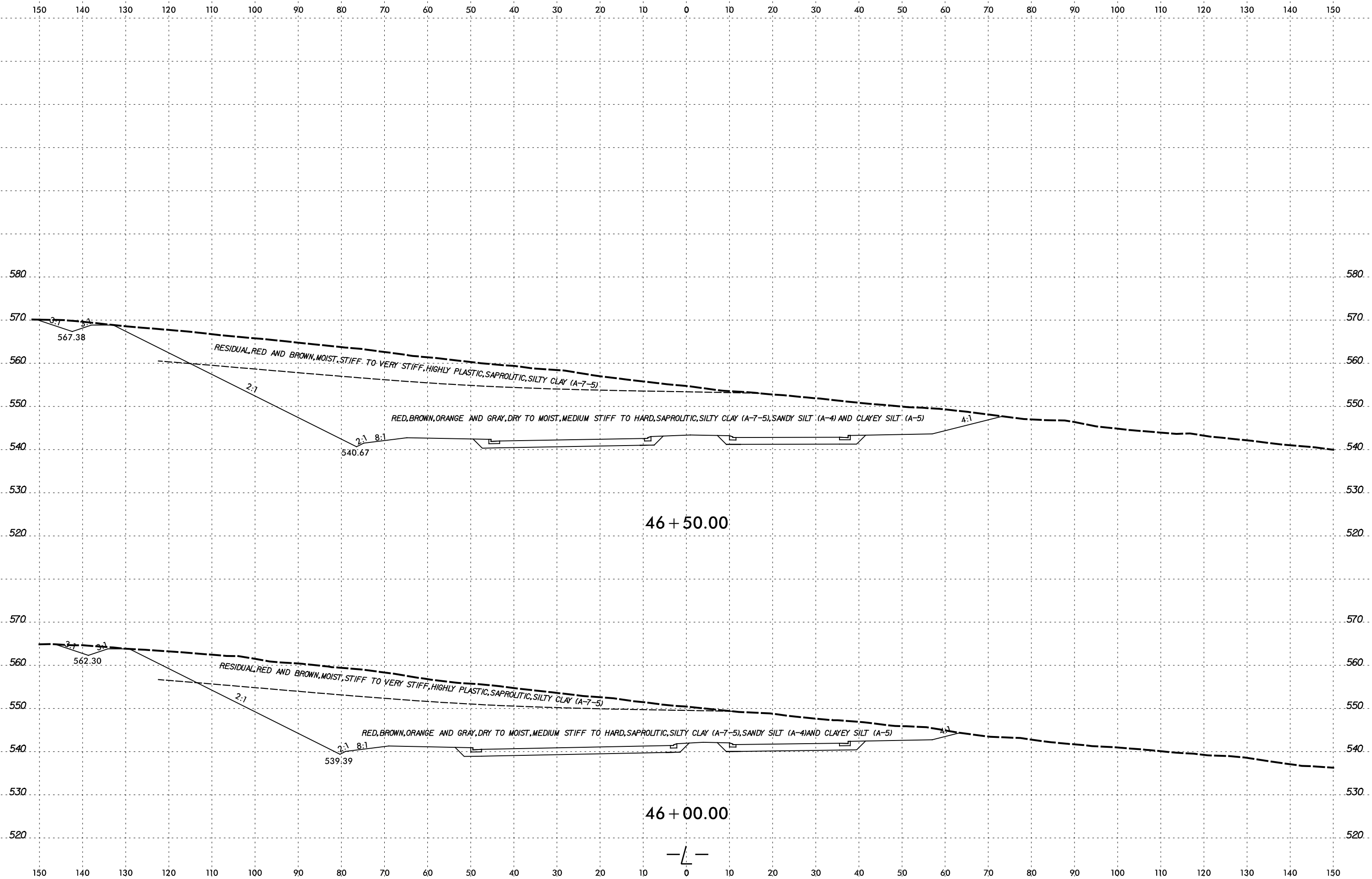


3/14/2023

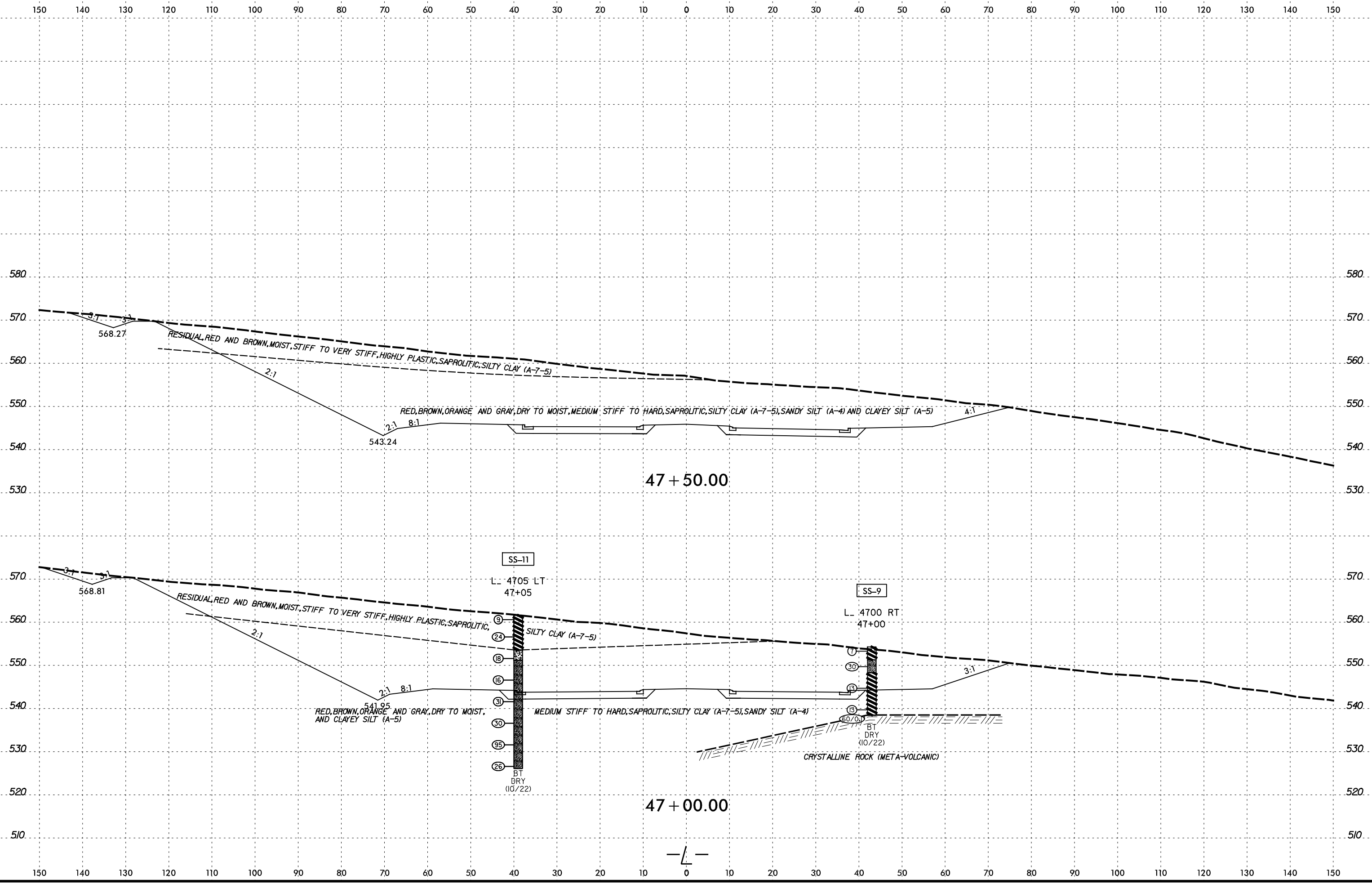




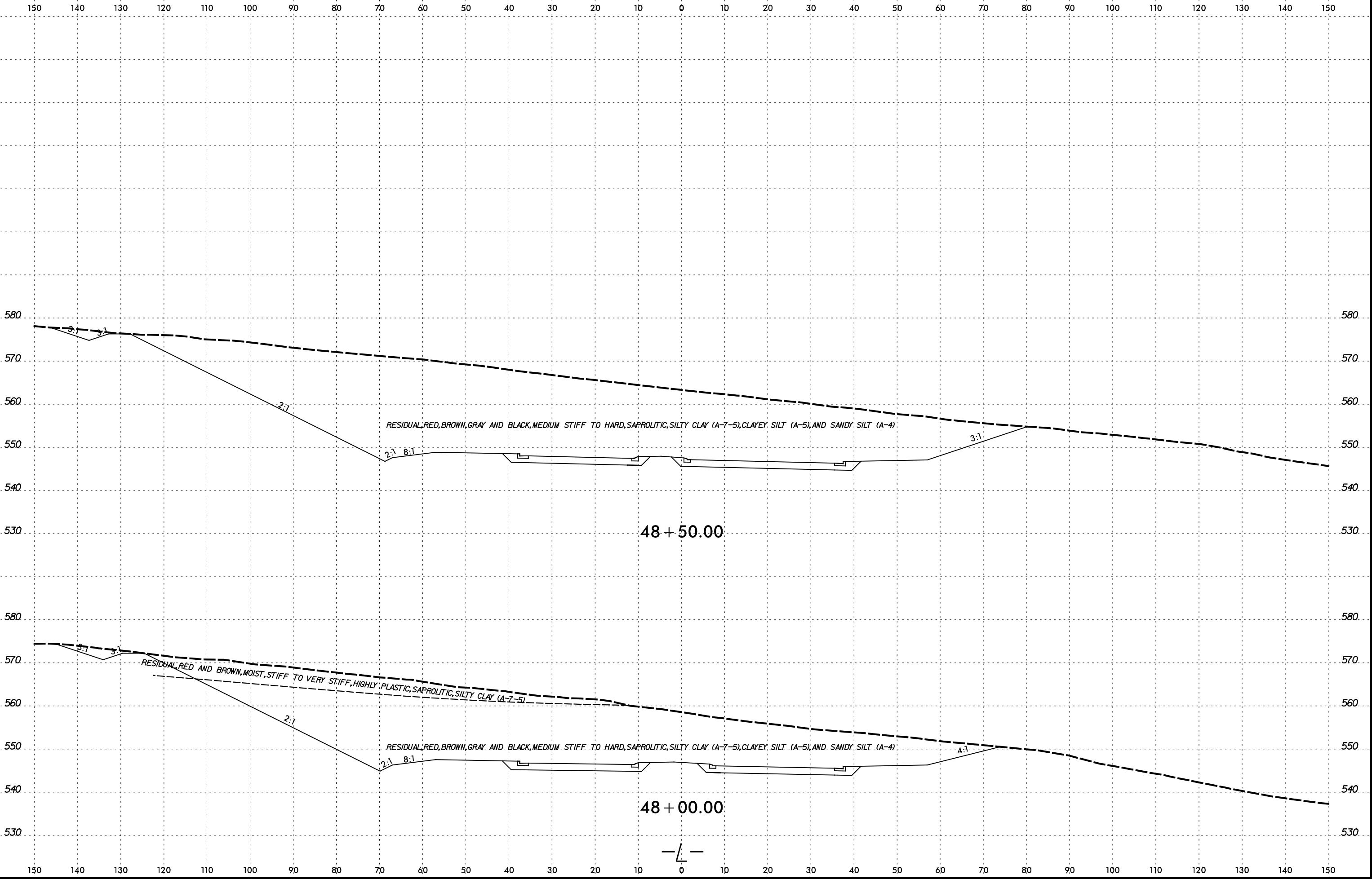
10:23:19 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSL.dgn  
 connor.stephens



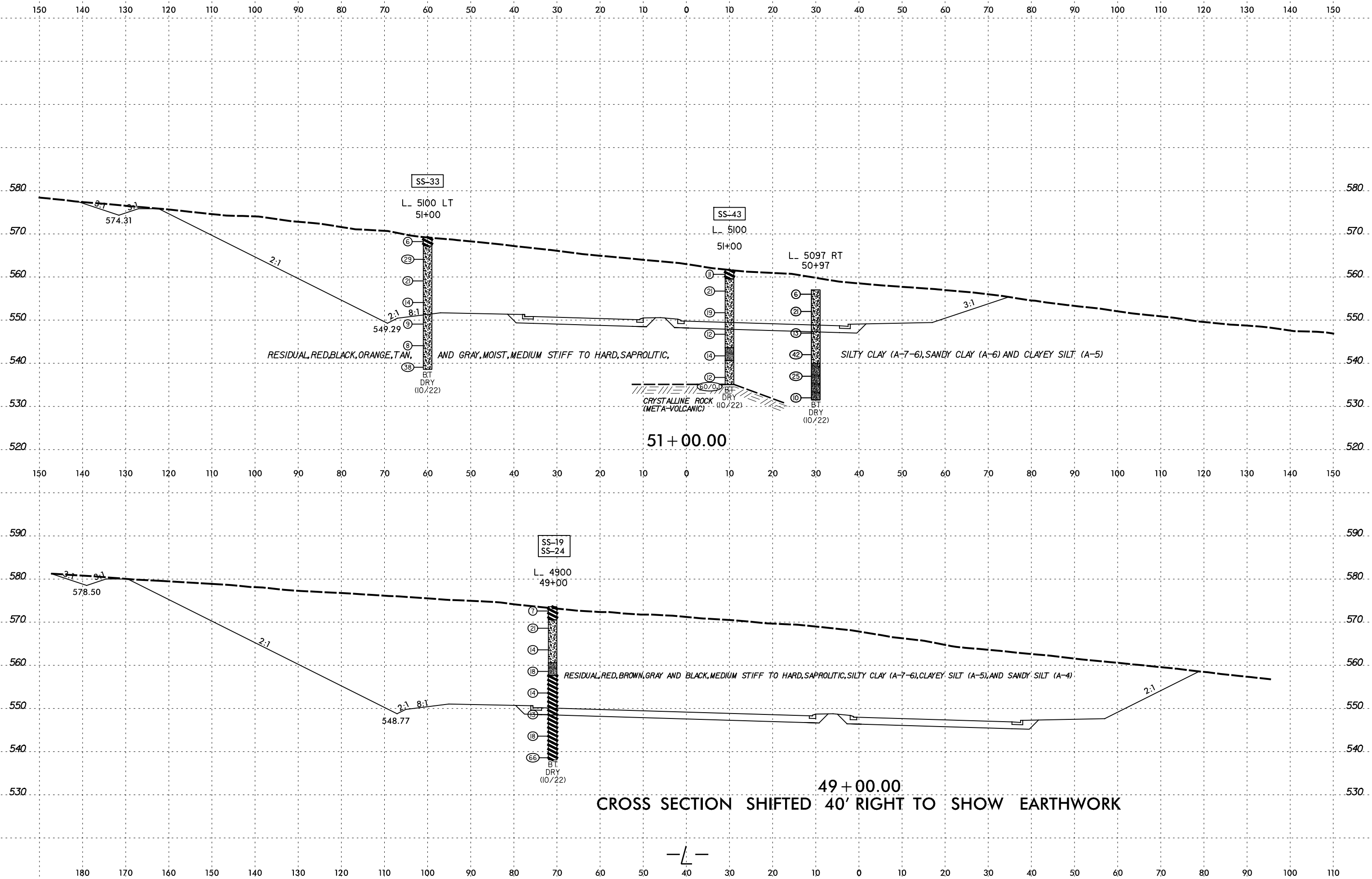
10:23:20 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\_GEO\TECH\sec\R5930\_GEO\_RDWY\_XSL.dgn  
 connor.stephens



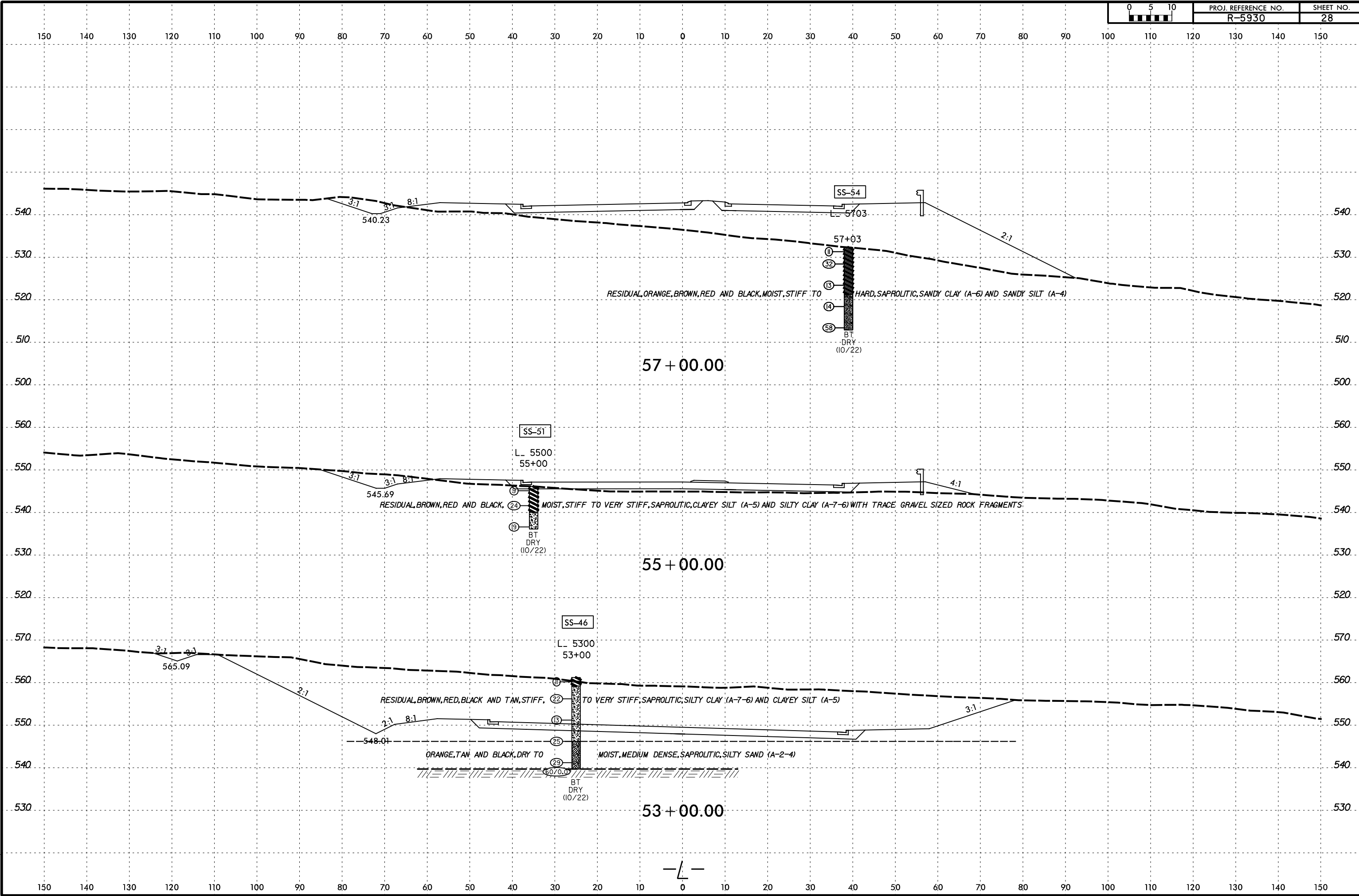
10:23:22 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens



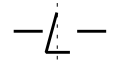
6/23/16

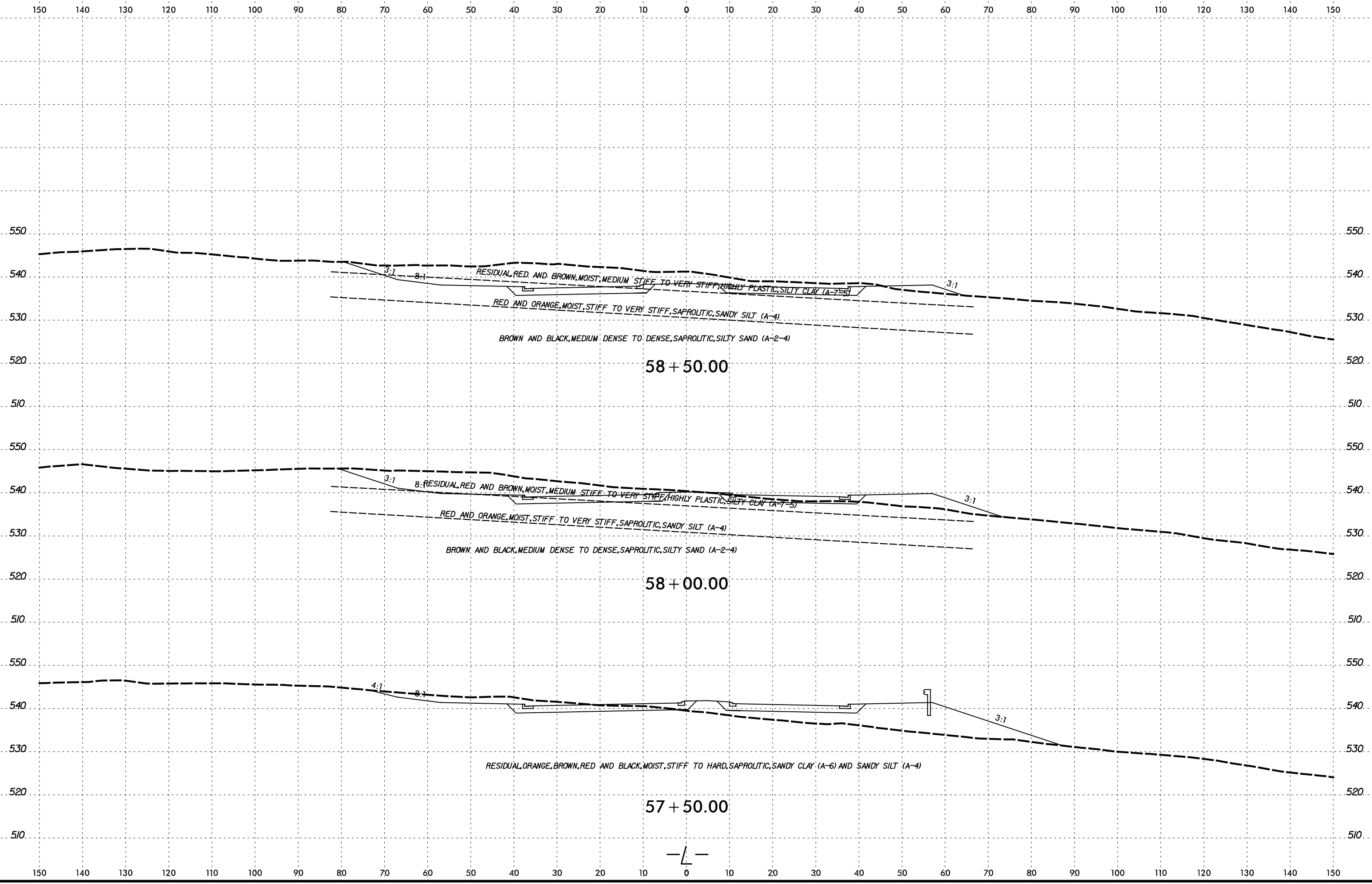


10:23:26 AM R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\SEC\R5930\_GEO\_RDWY\_XSI.L.dgn connor.stephens



10:23:27 AM R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\SS-R5930\_GEO\_RDWY\_XSI.L.dgn connor.stephens



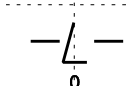


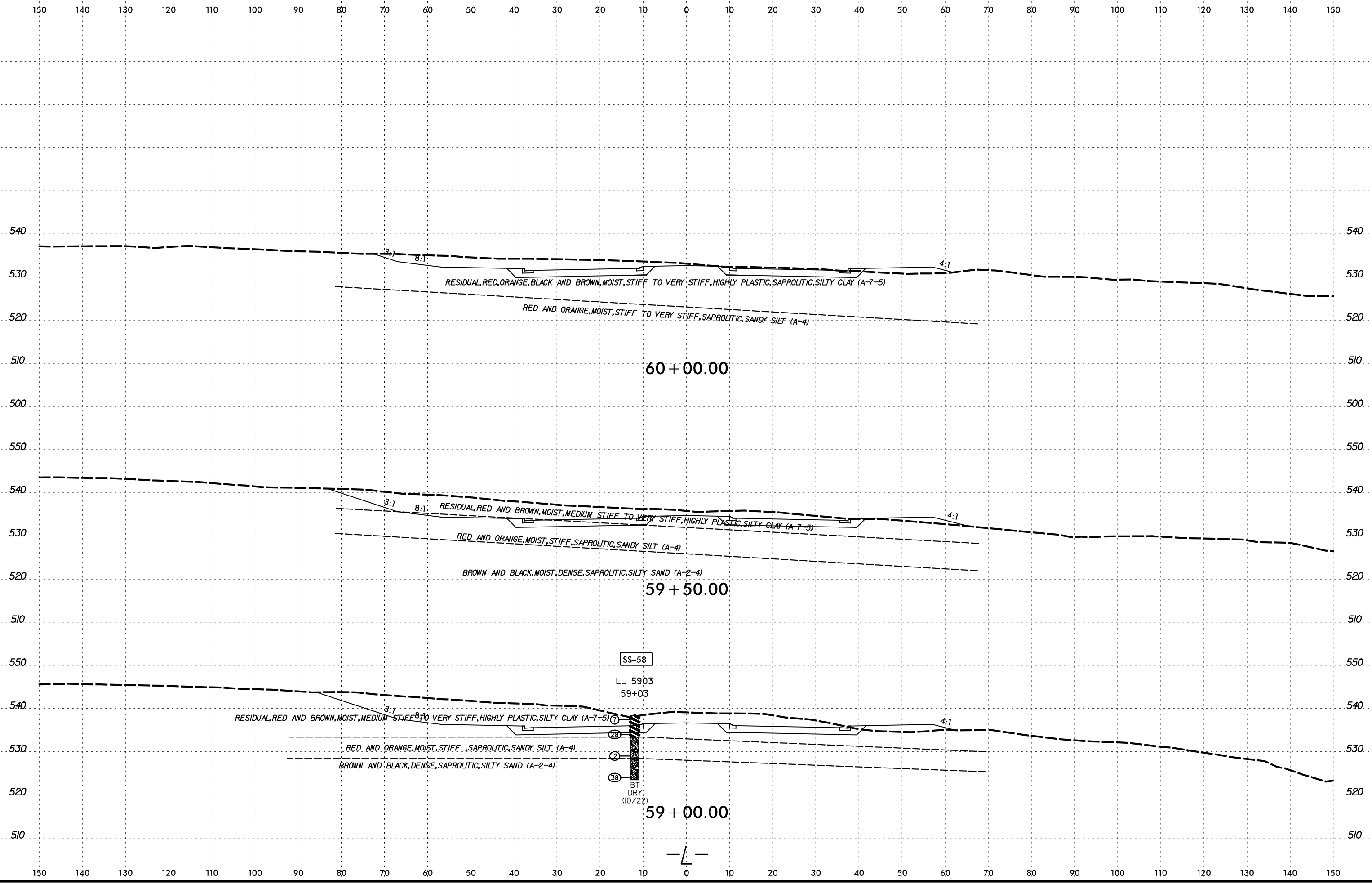
10:23:29 AM R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn connor.stephens

58 + 50.00

58 + 00.00

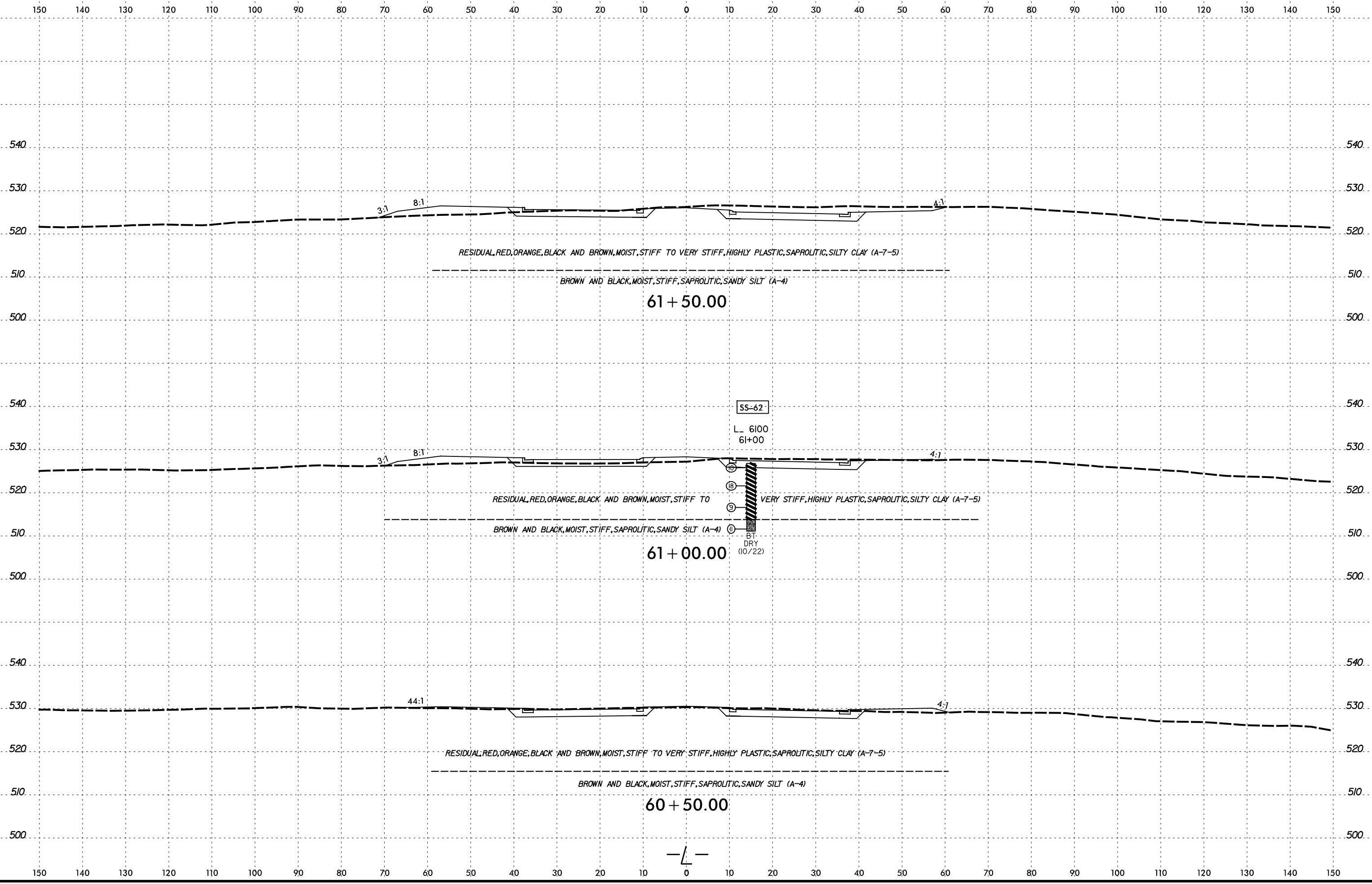
57 + 50.00



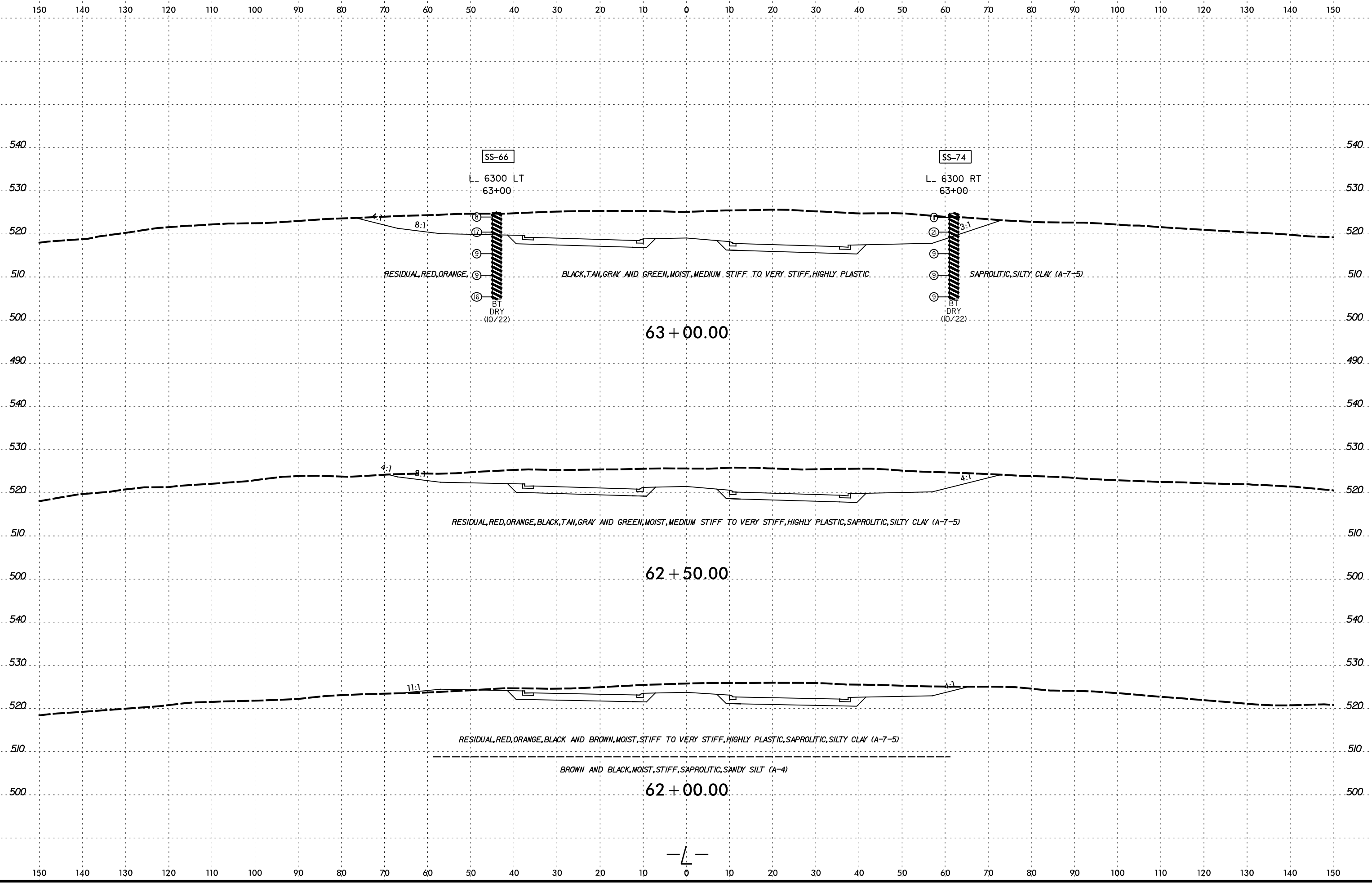


I:\0231\AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens

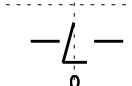


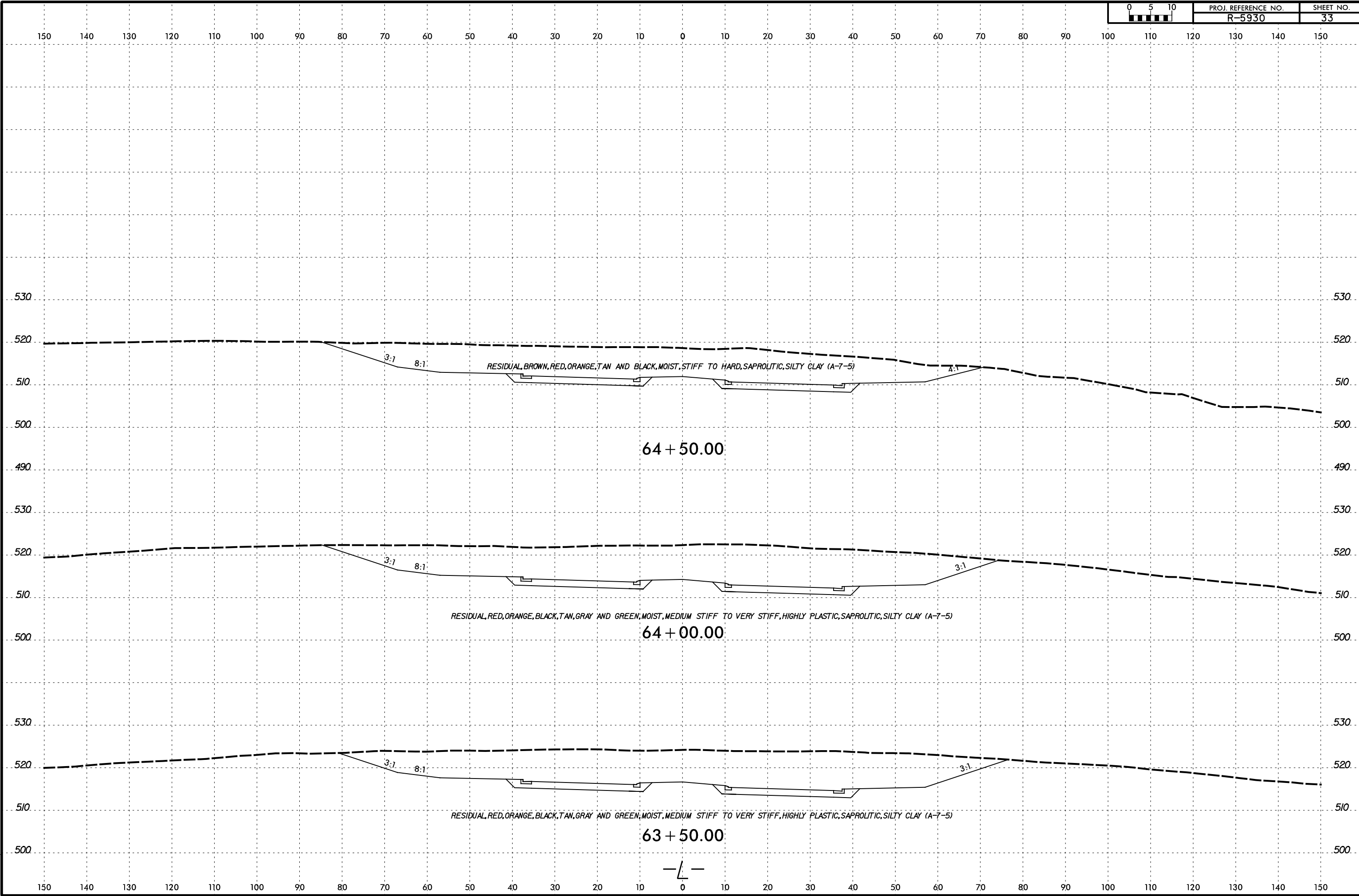


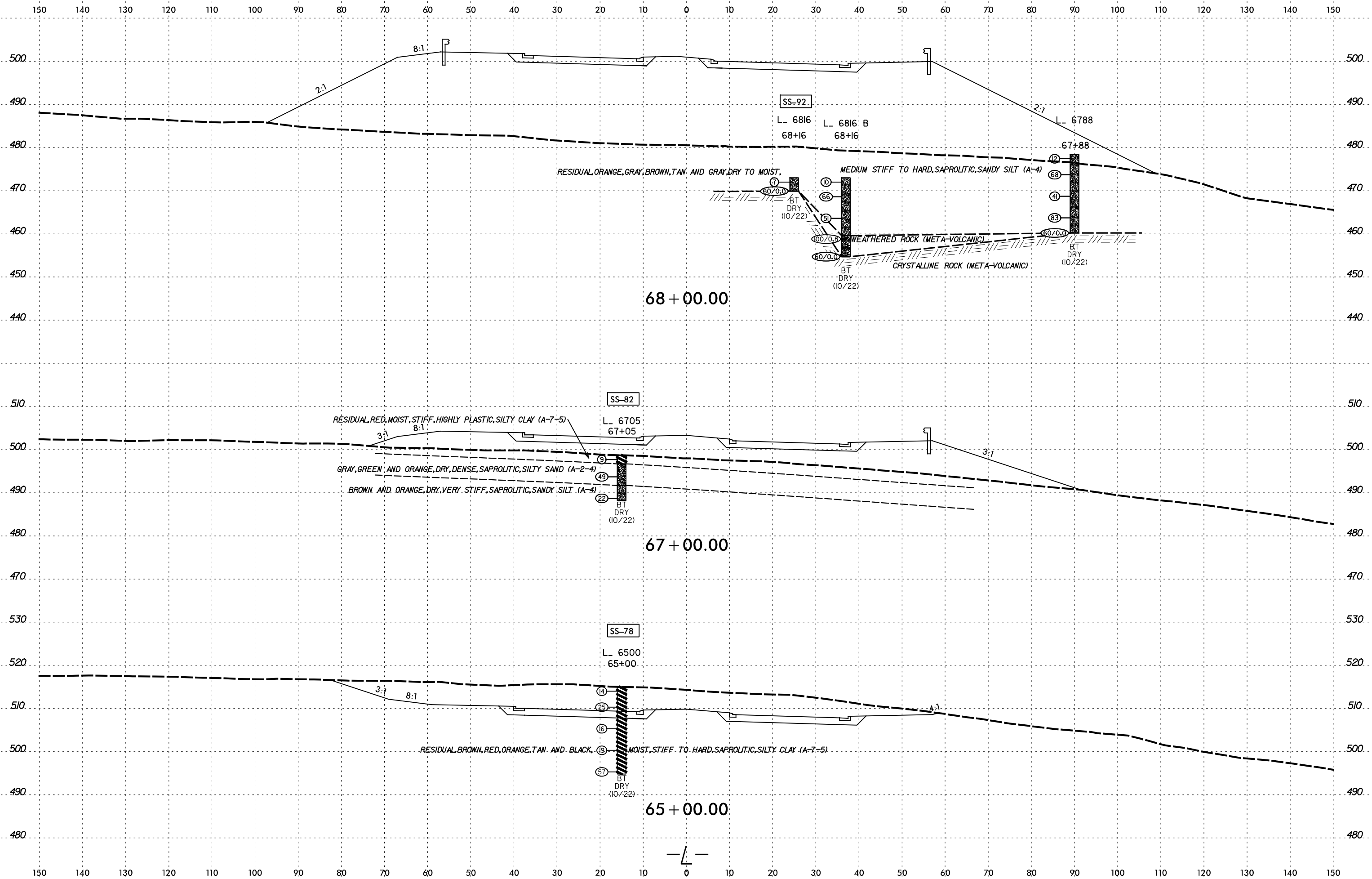
I:\023133 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens



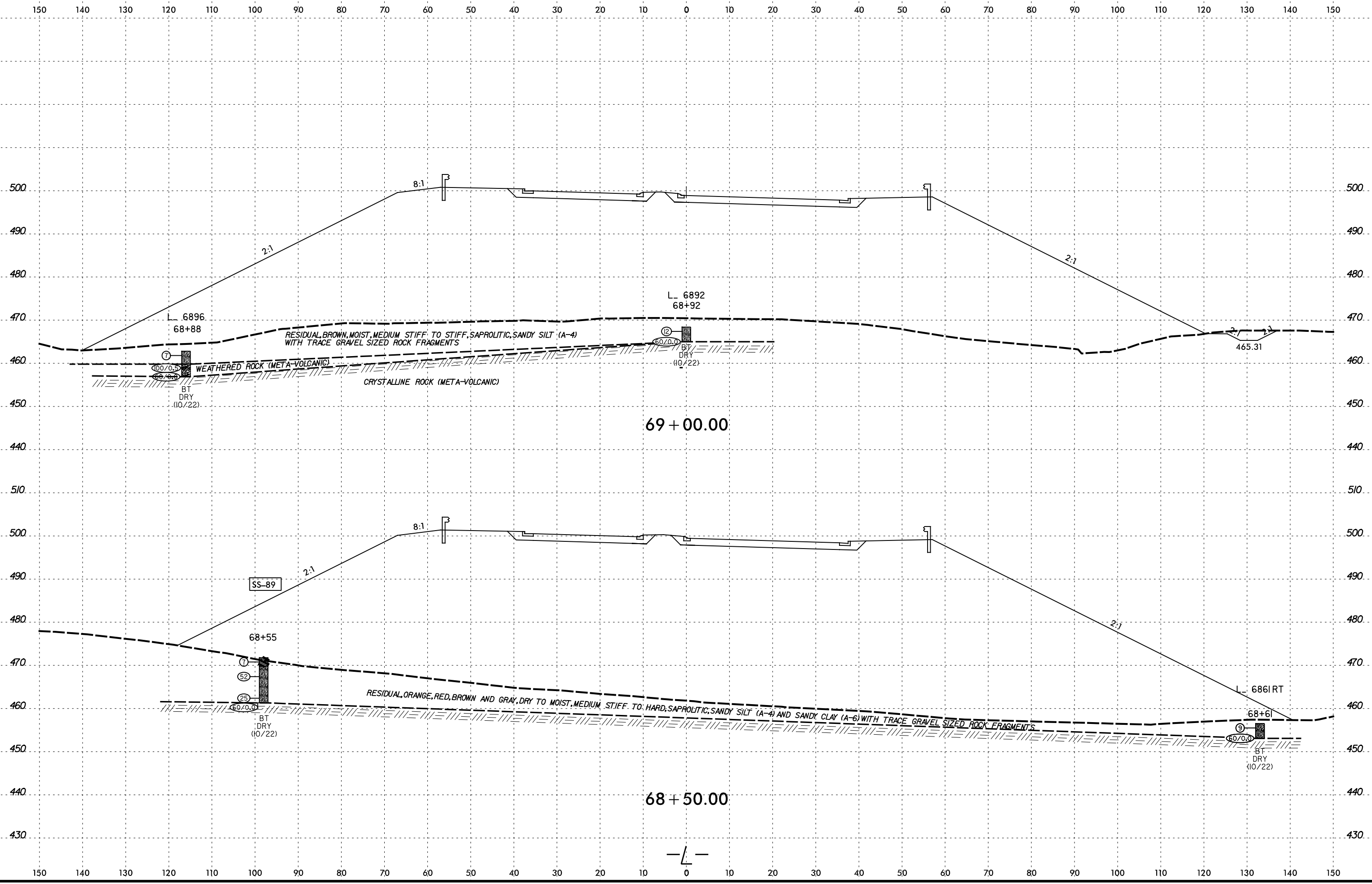
10:23:35 AM R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn connor.stephens



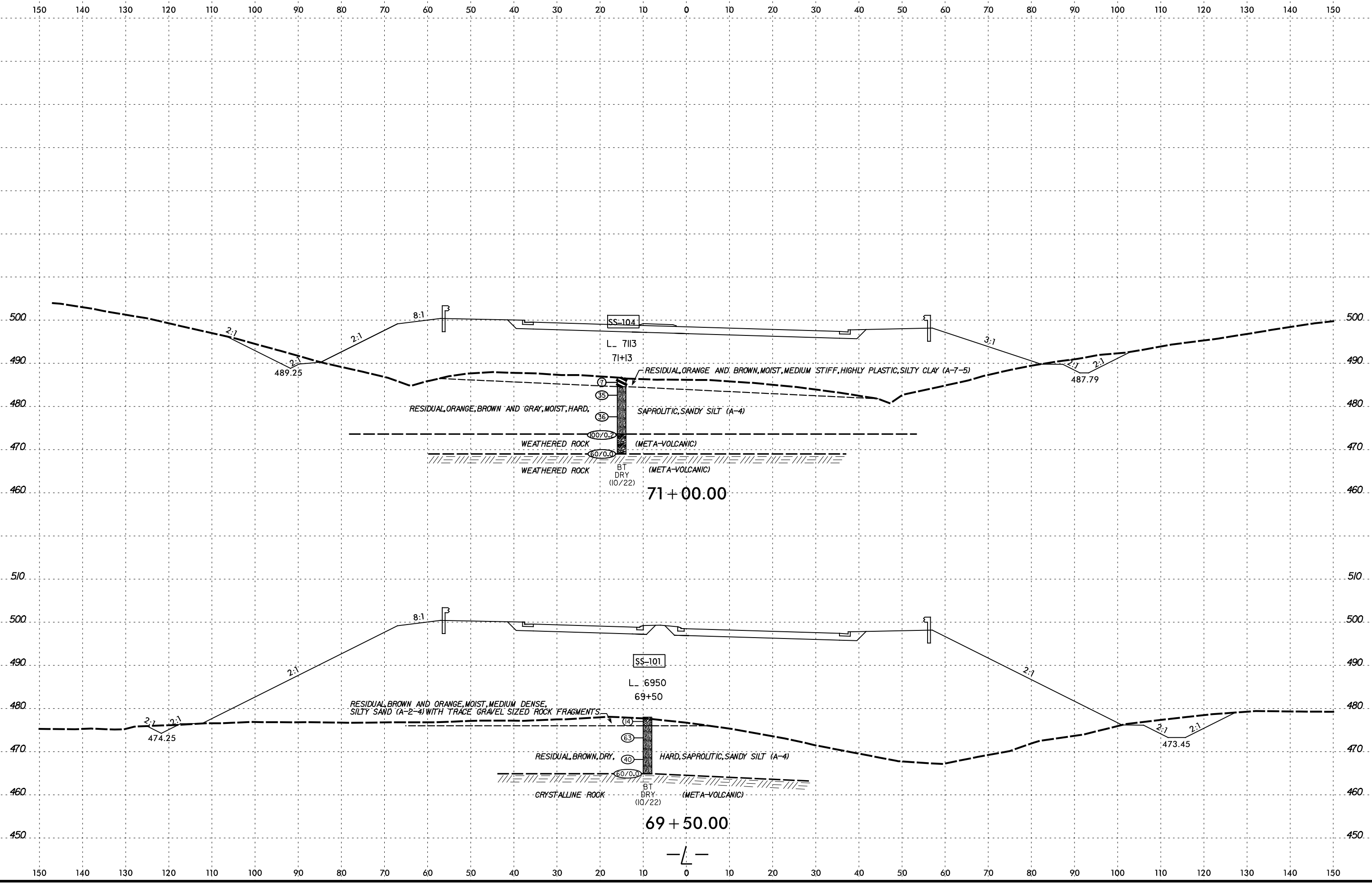


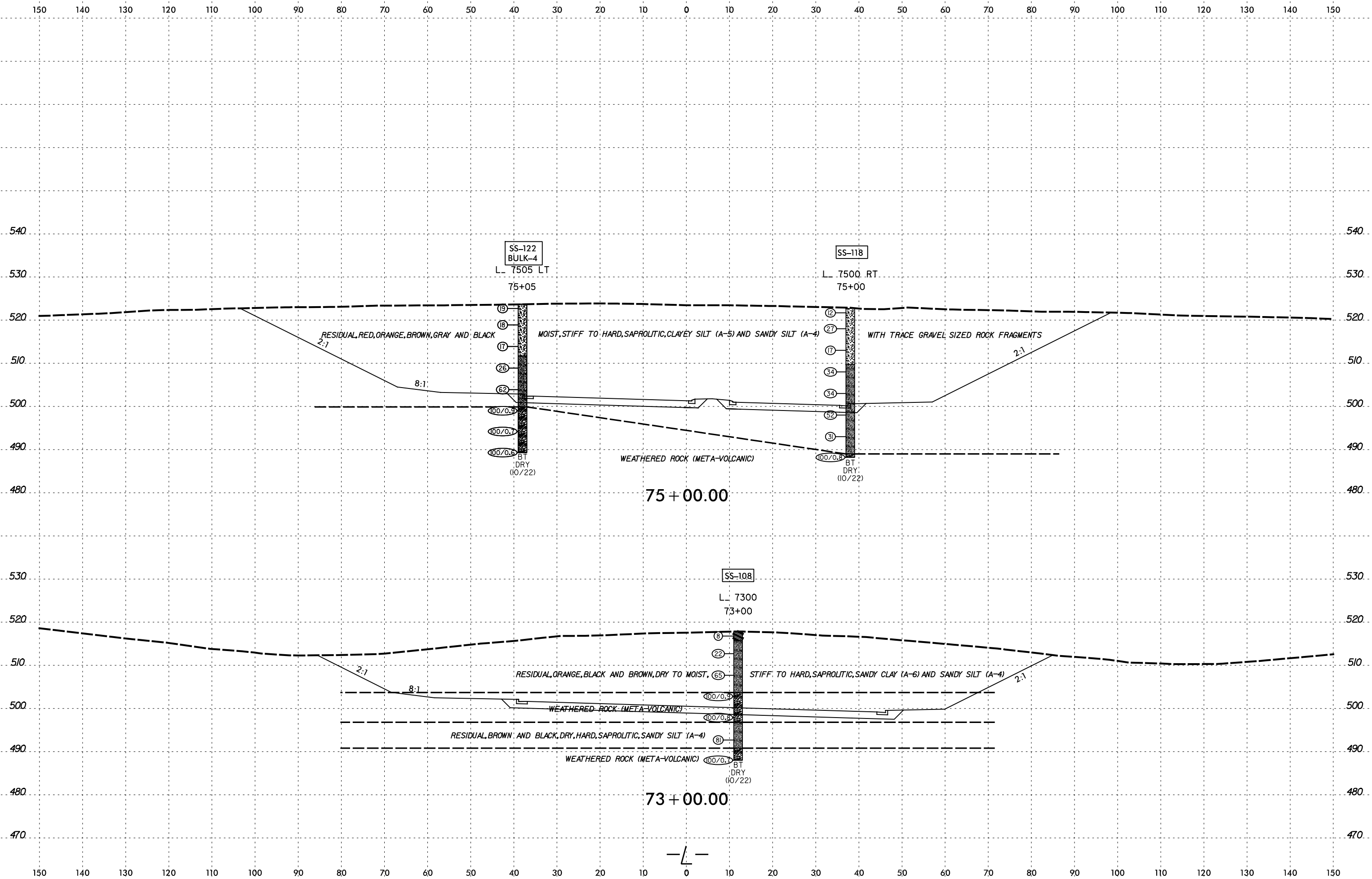


10:23:38 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

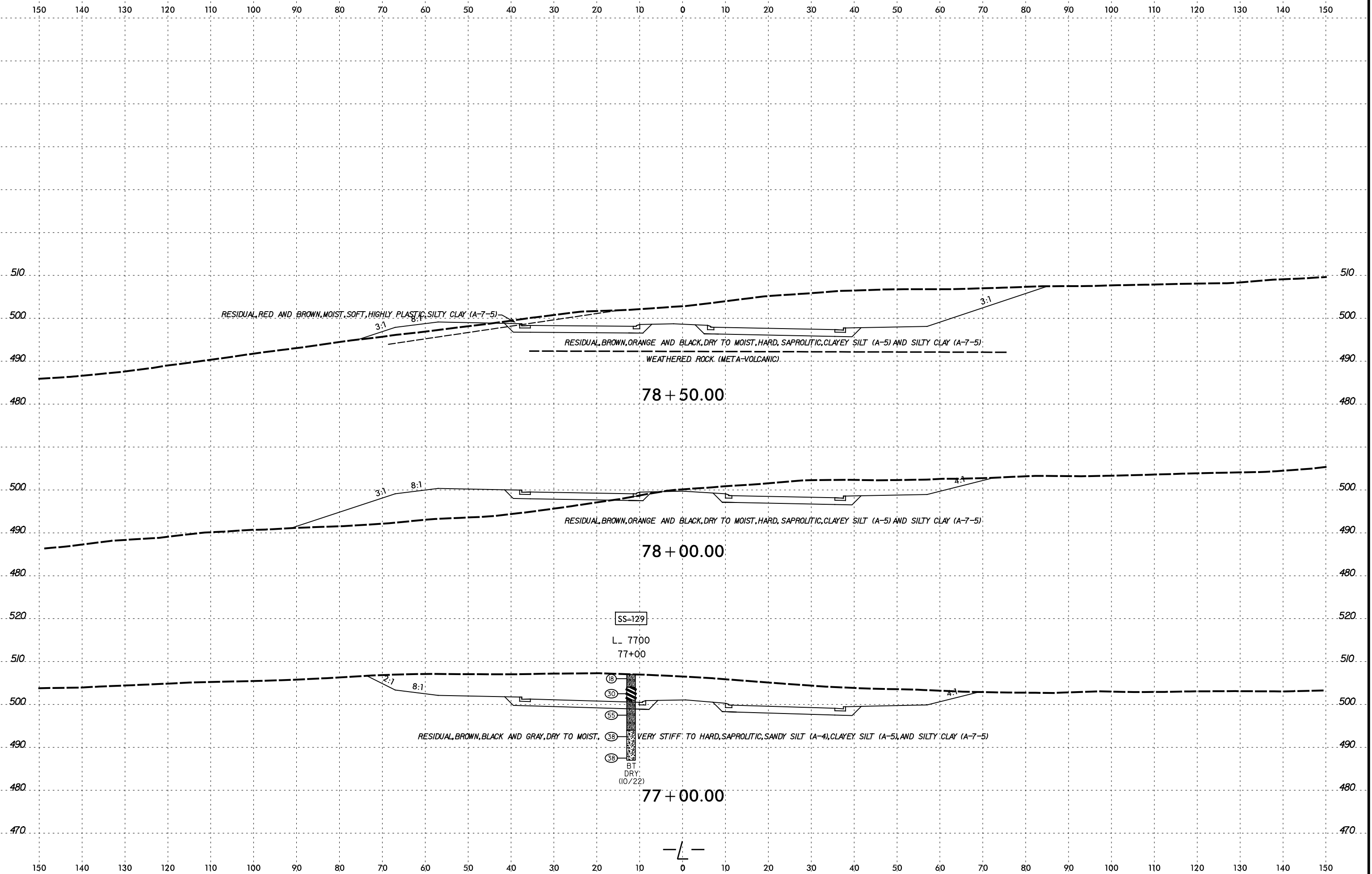


10:23:40 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSL.dgn  
 connor.stephens



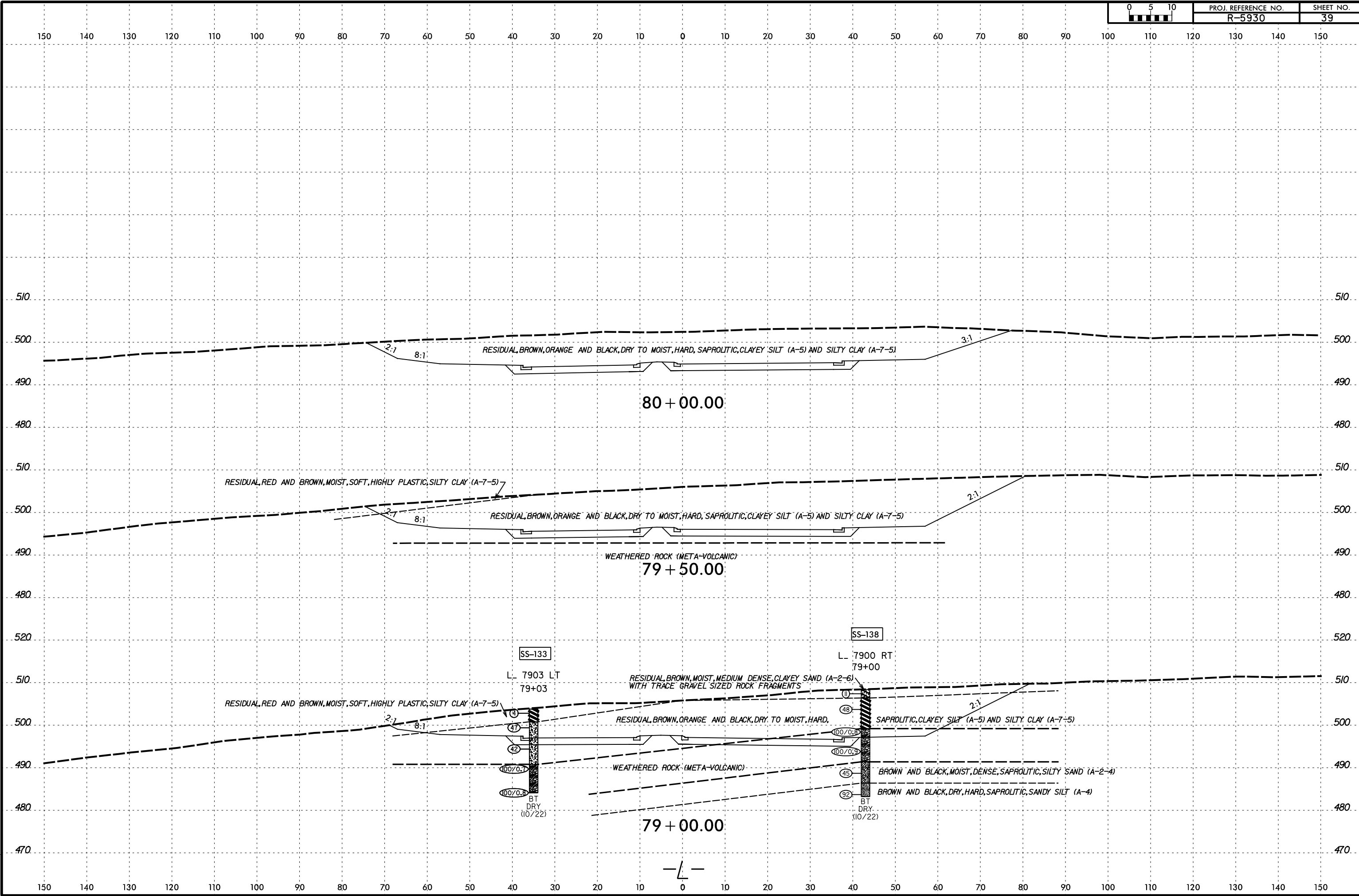


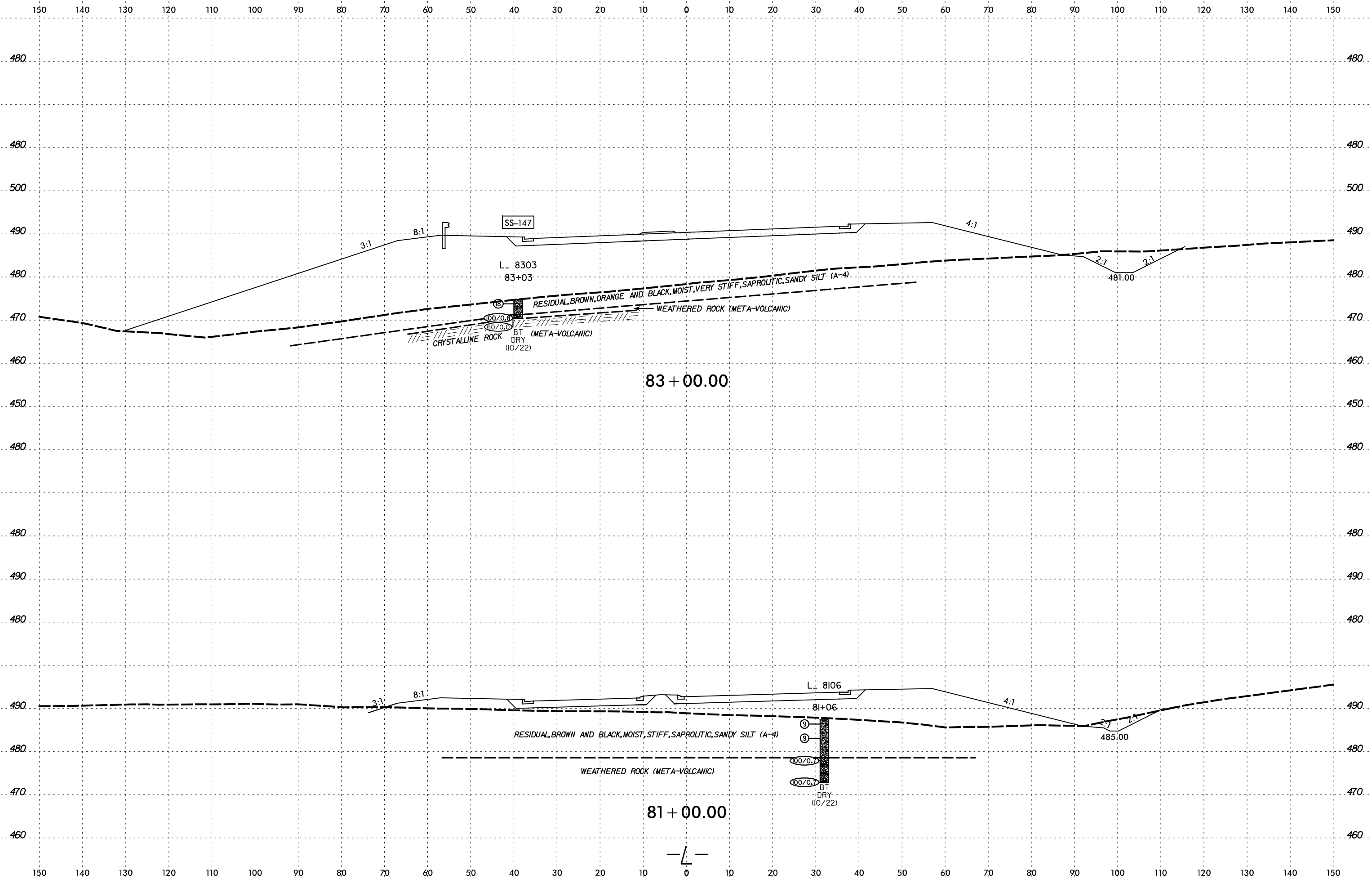
I:\023143 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens



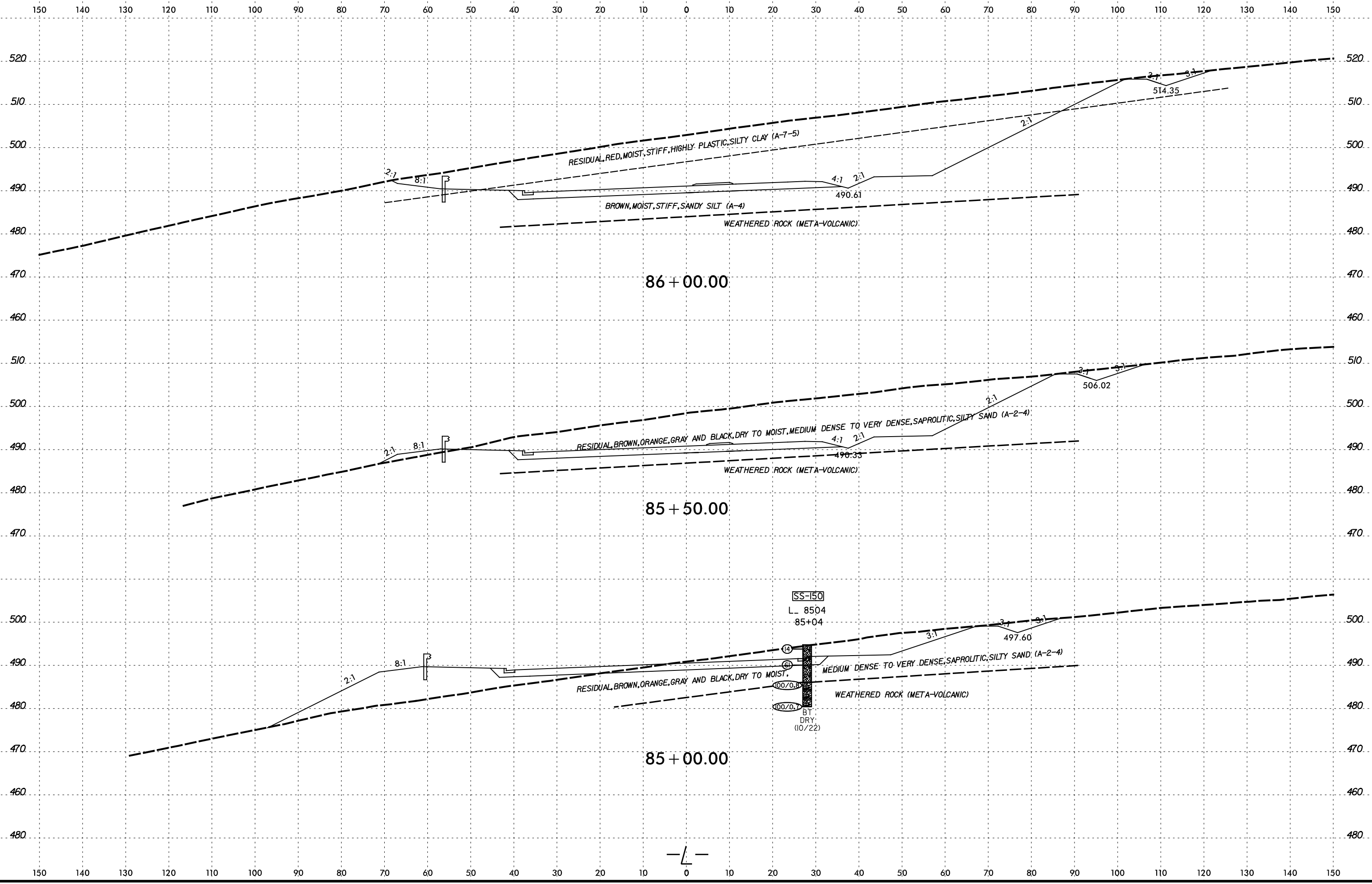
I093145 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens



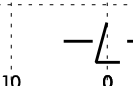


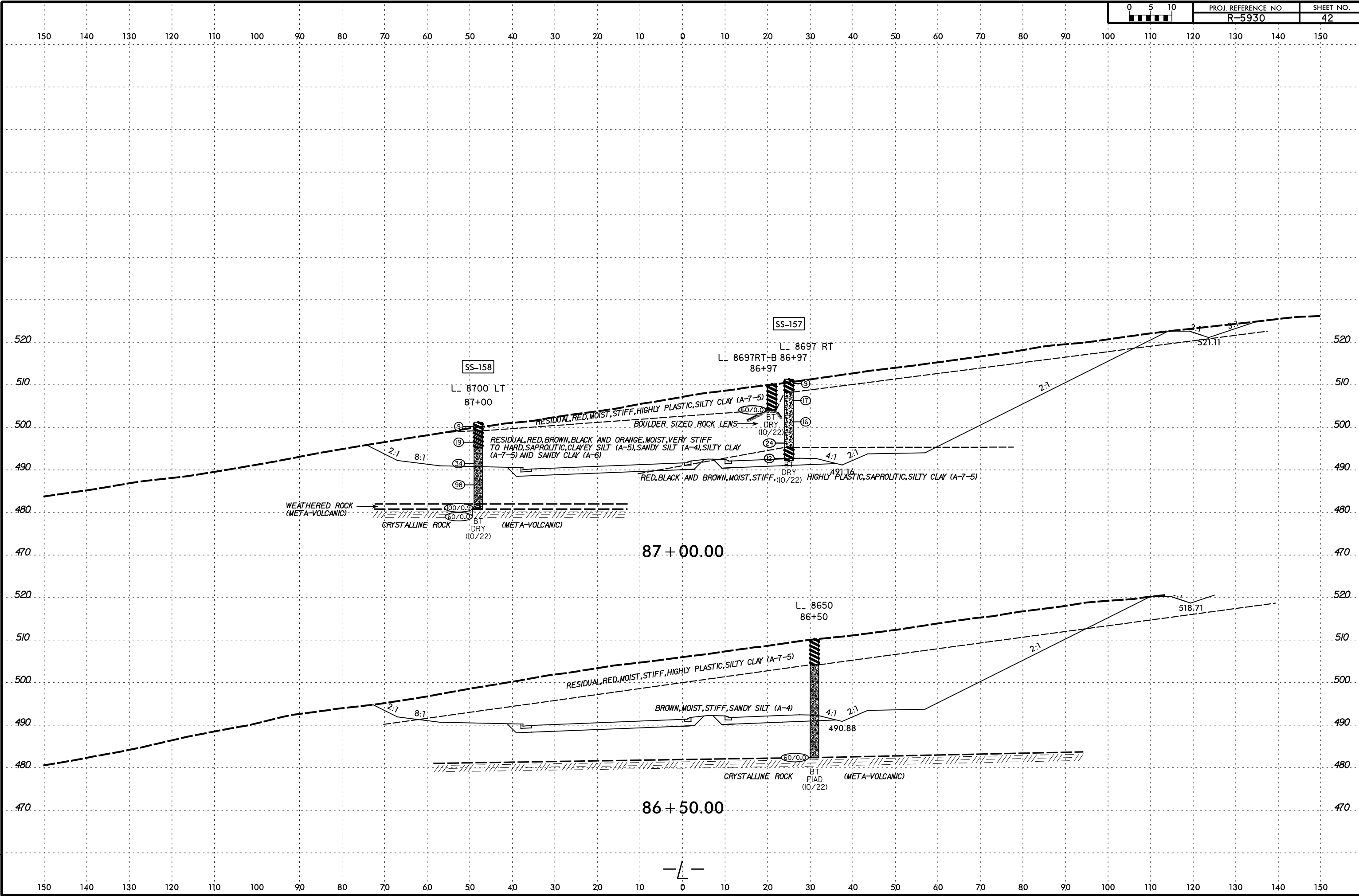


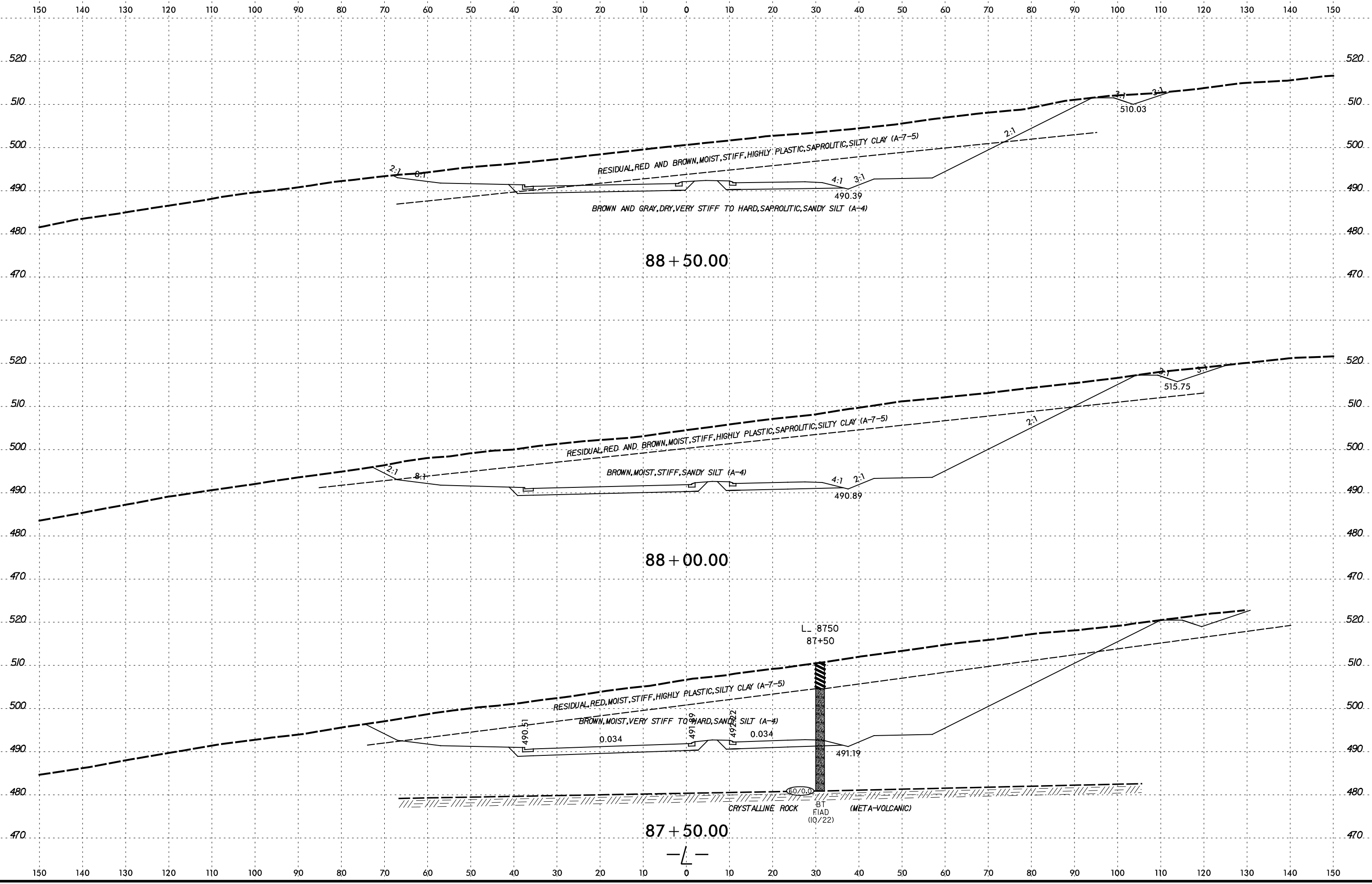
10:23:49 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens

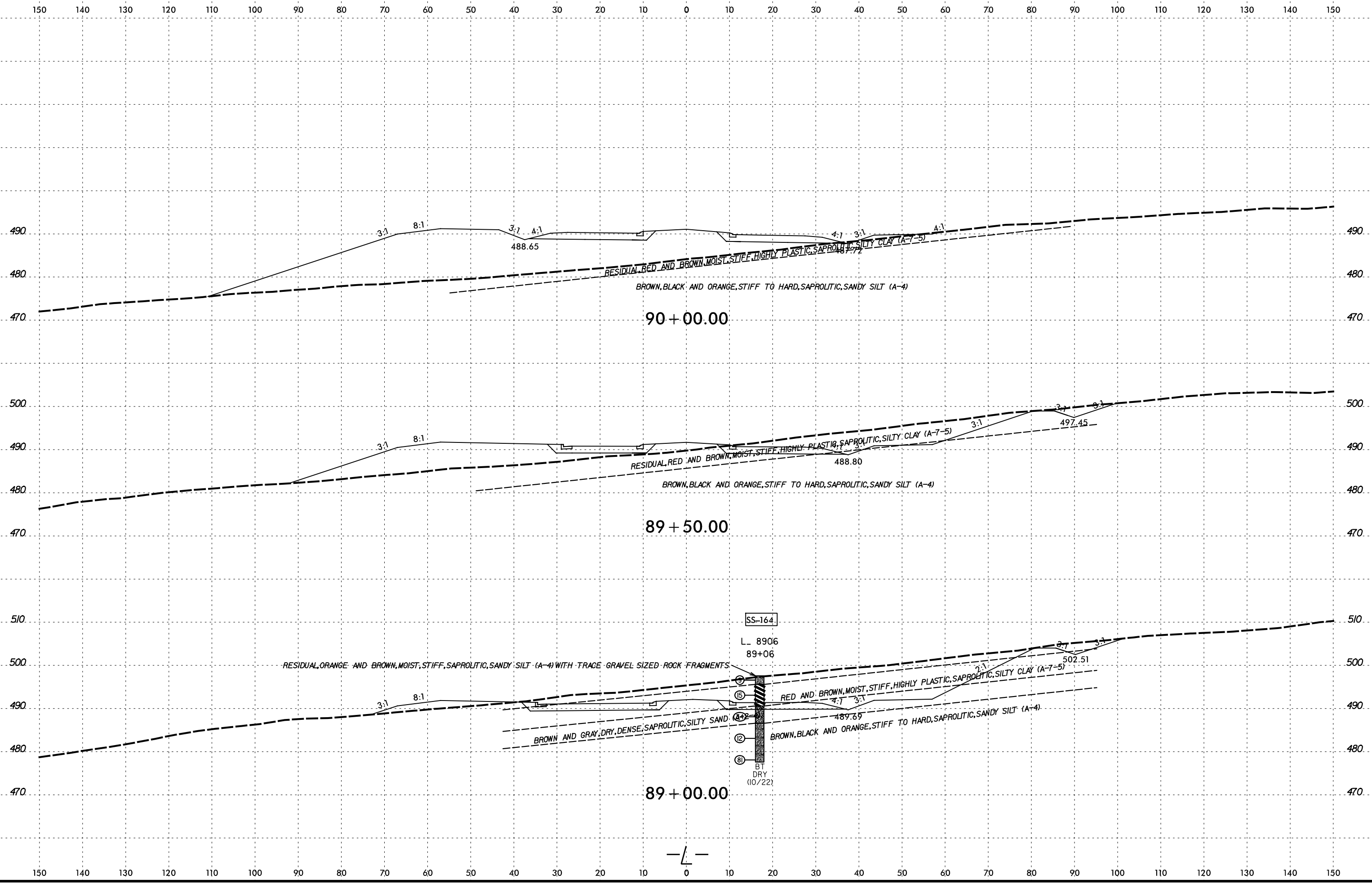


I:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 10/23/16 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

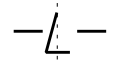


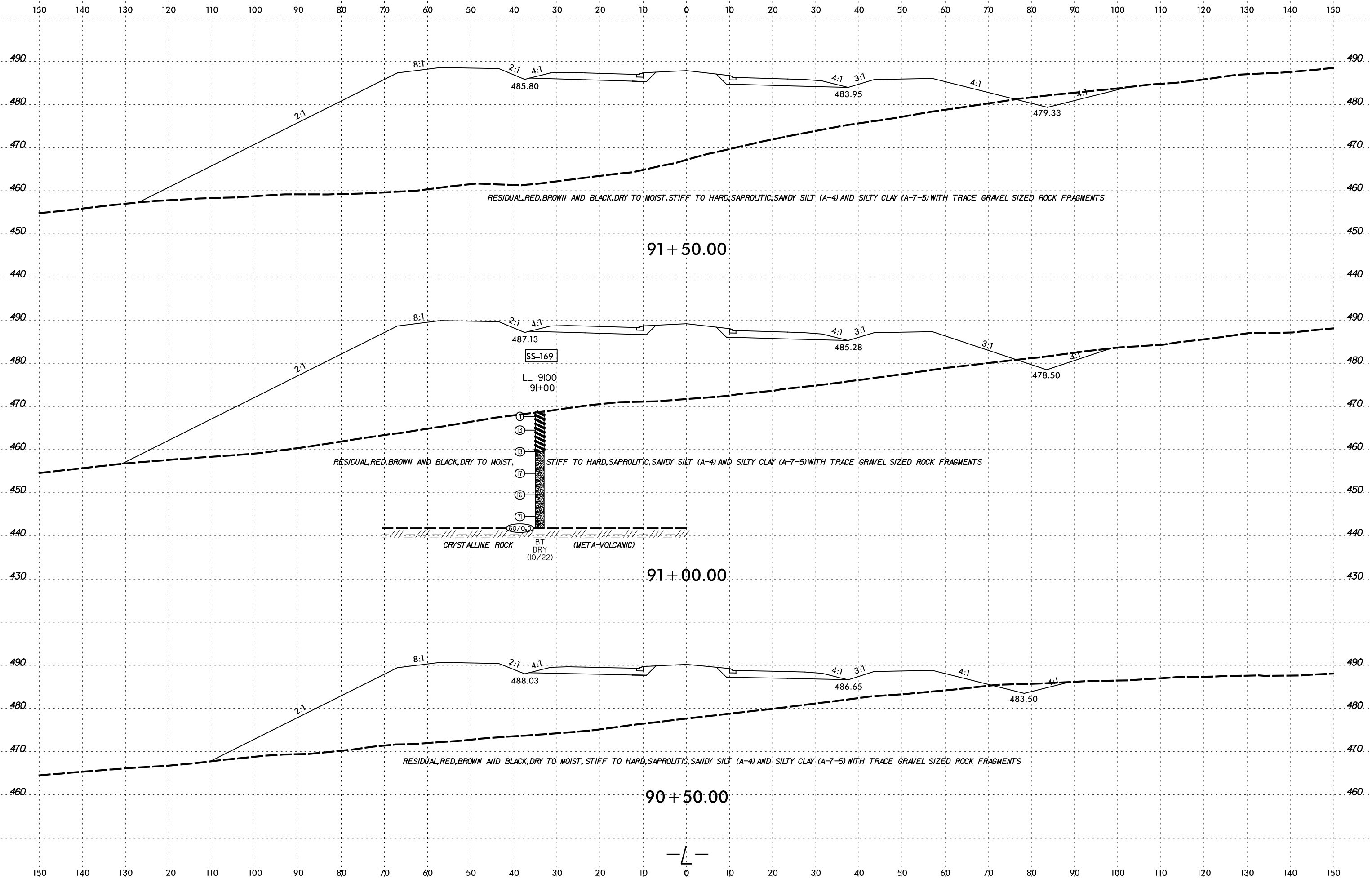




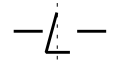


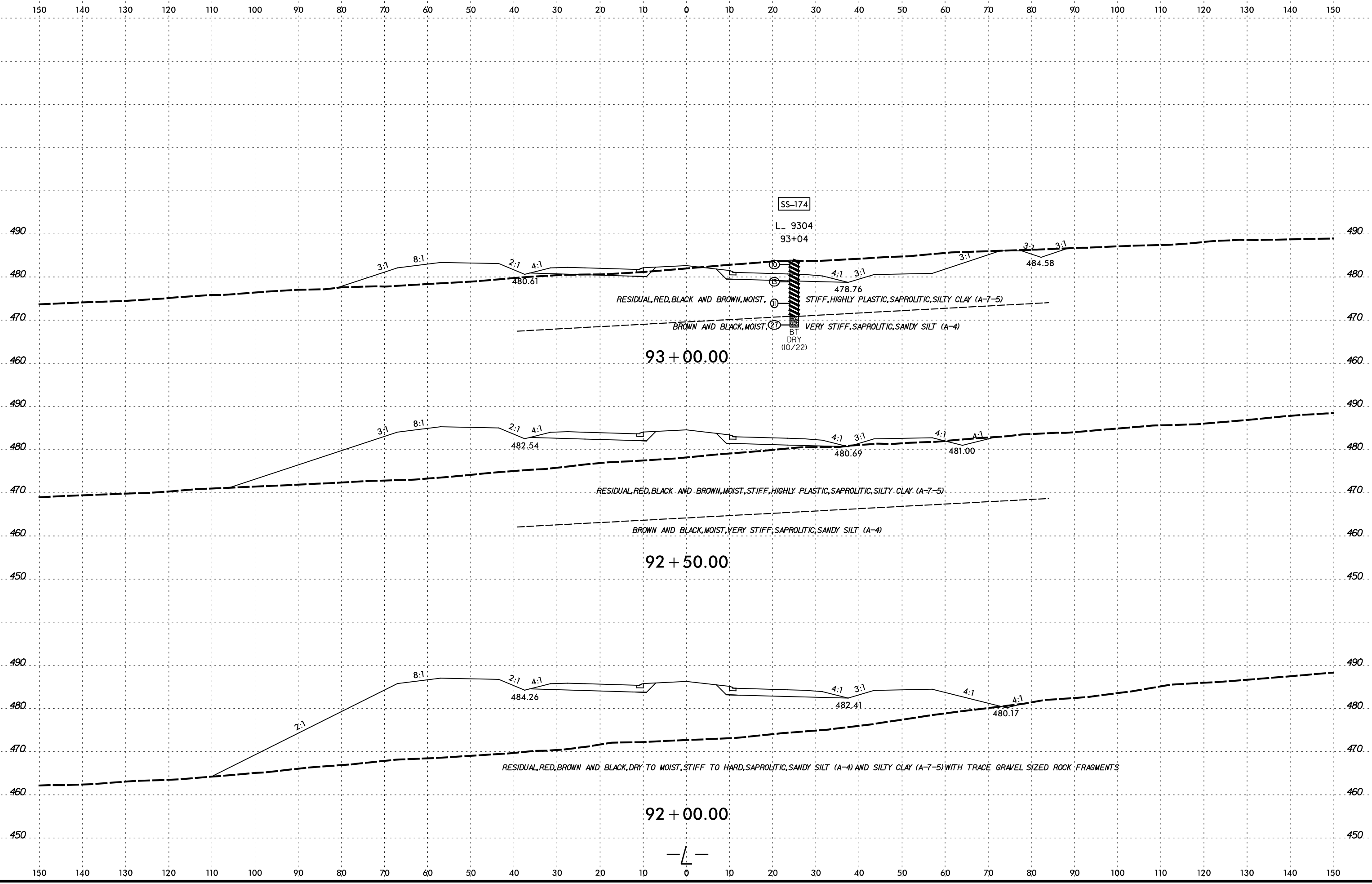
I:\23456 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens



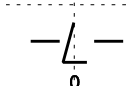


10:23:58 AM R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn connor.stephens

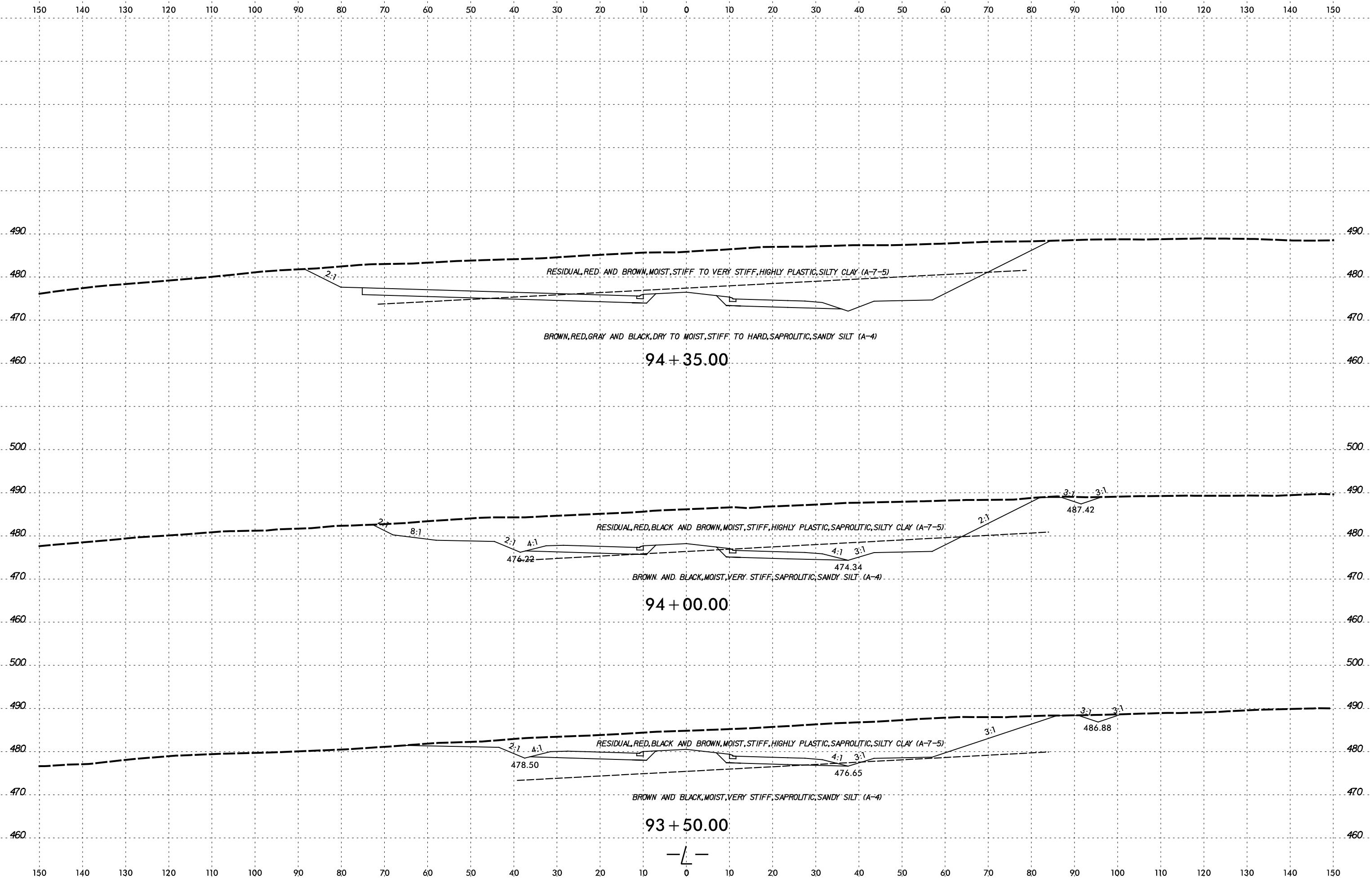




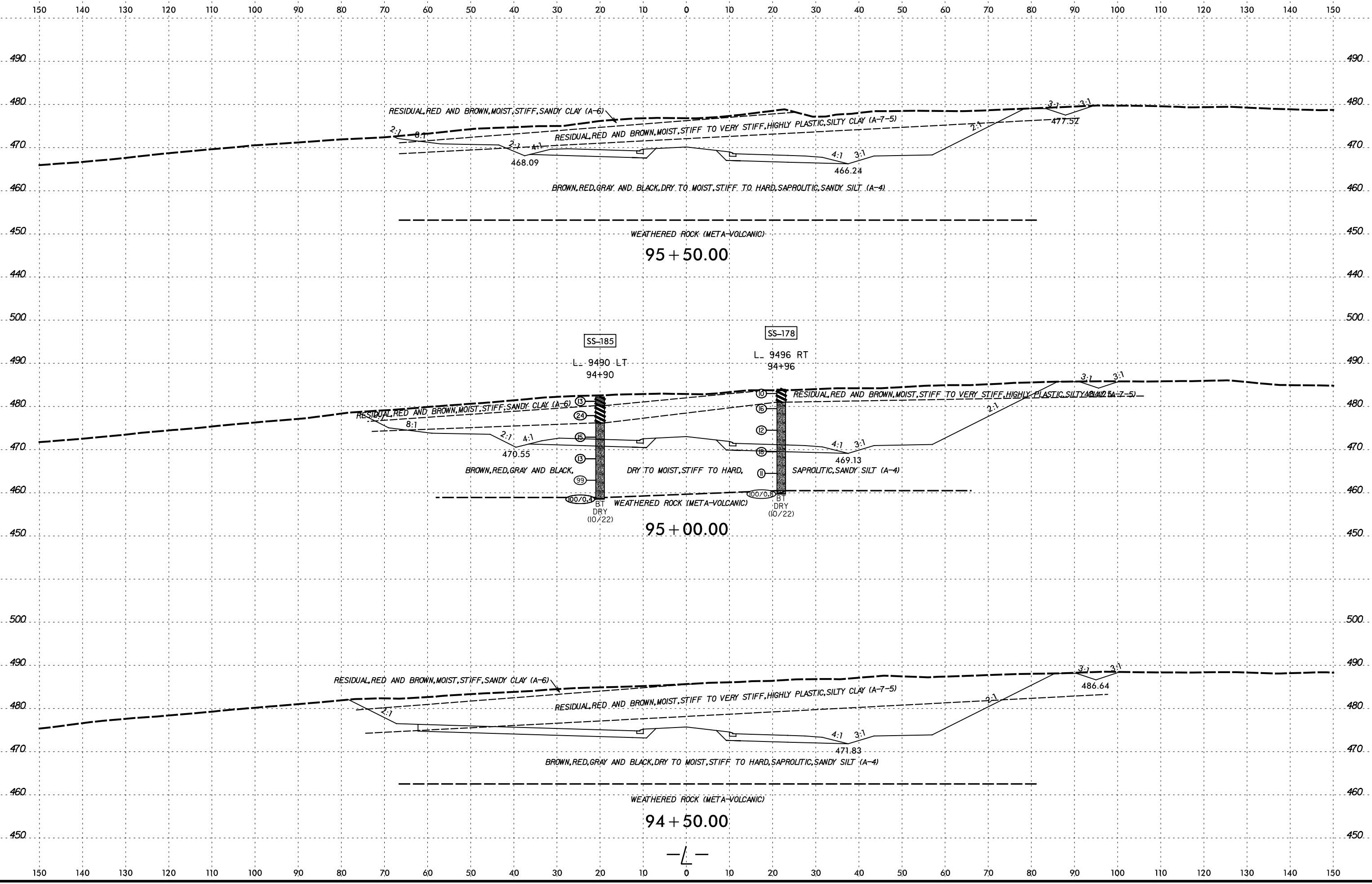
10:24:00 AM R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn connor.stephens



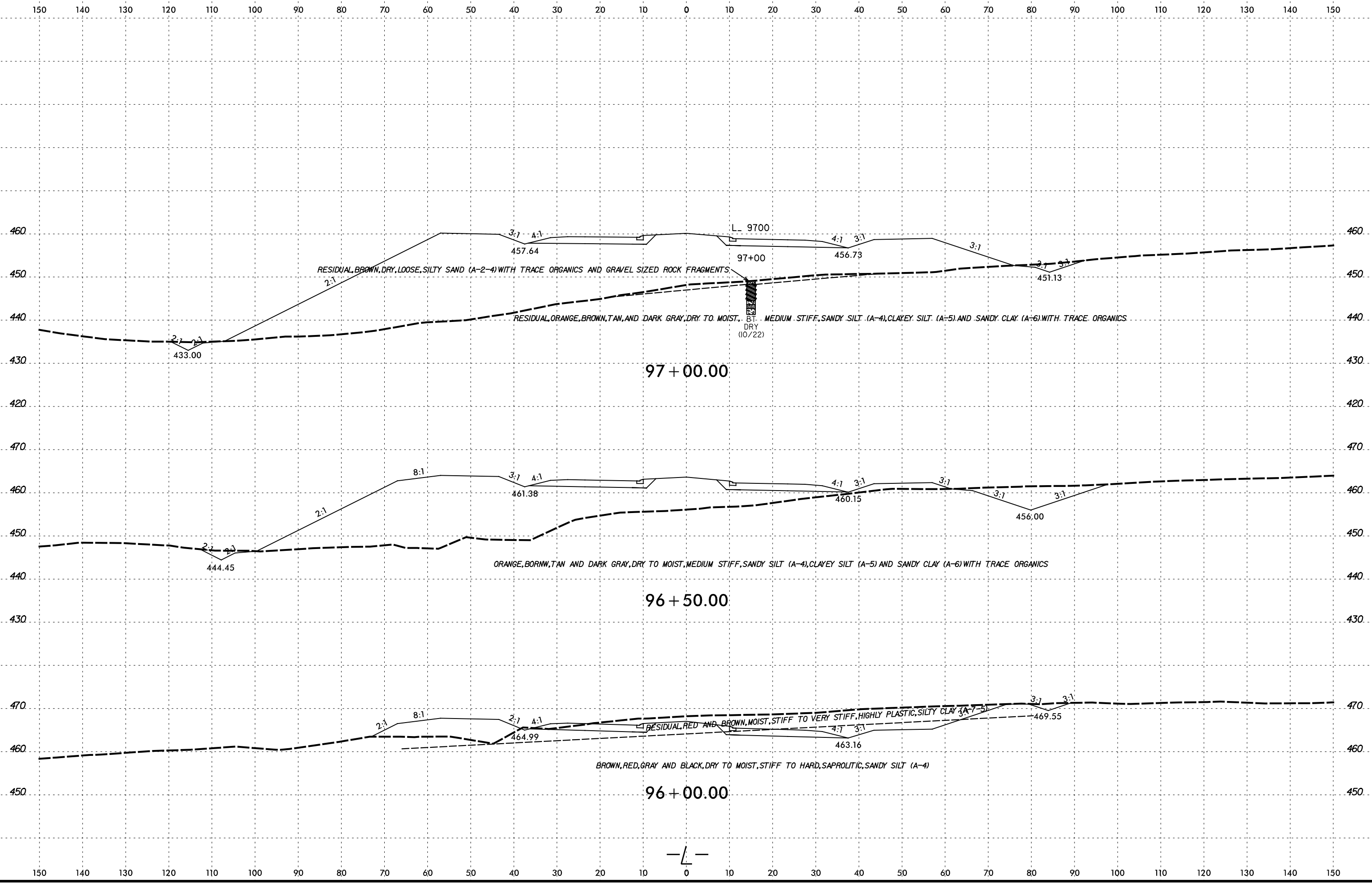




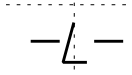
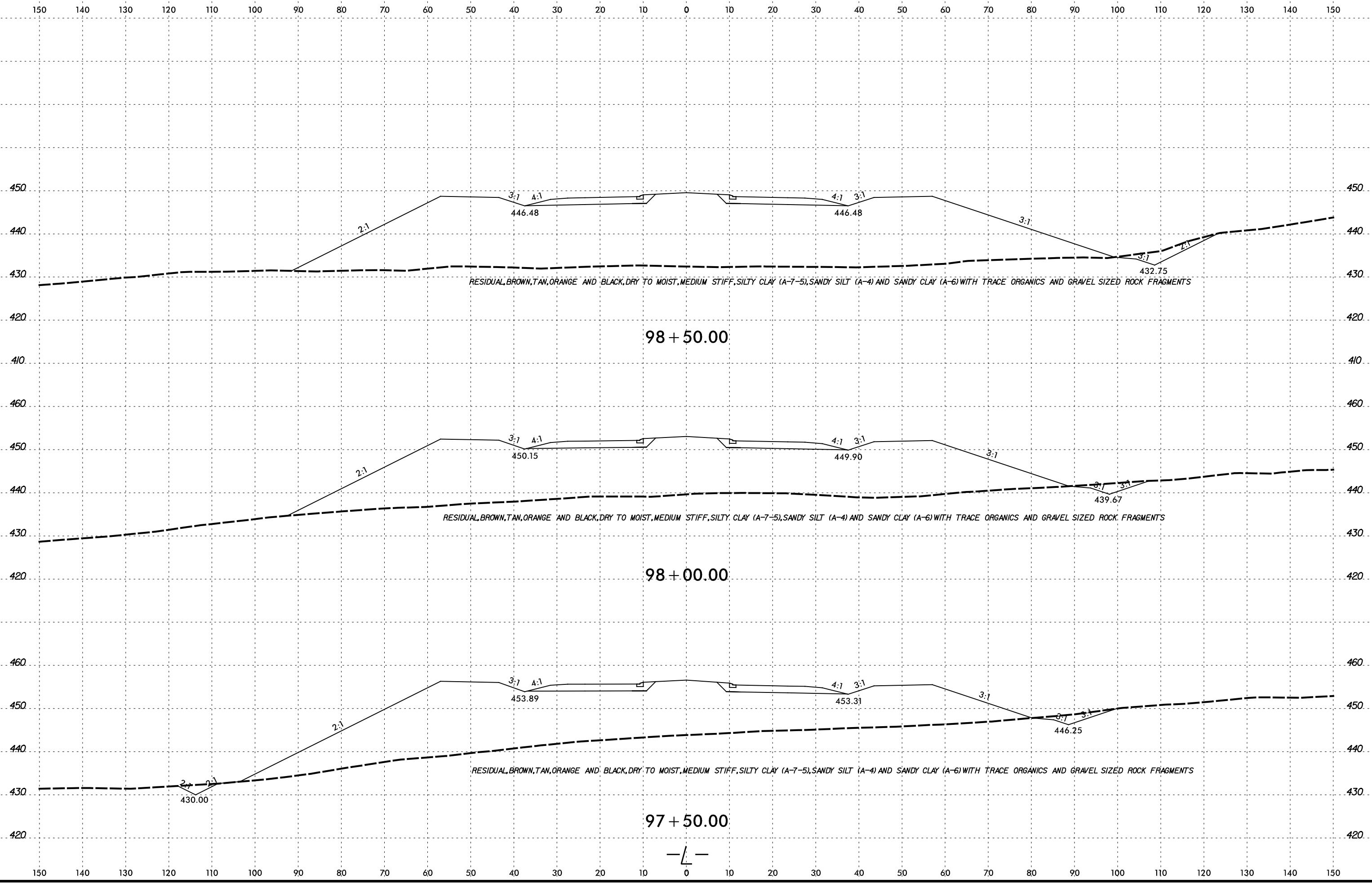
I:\2401\AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens

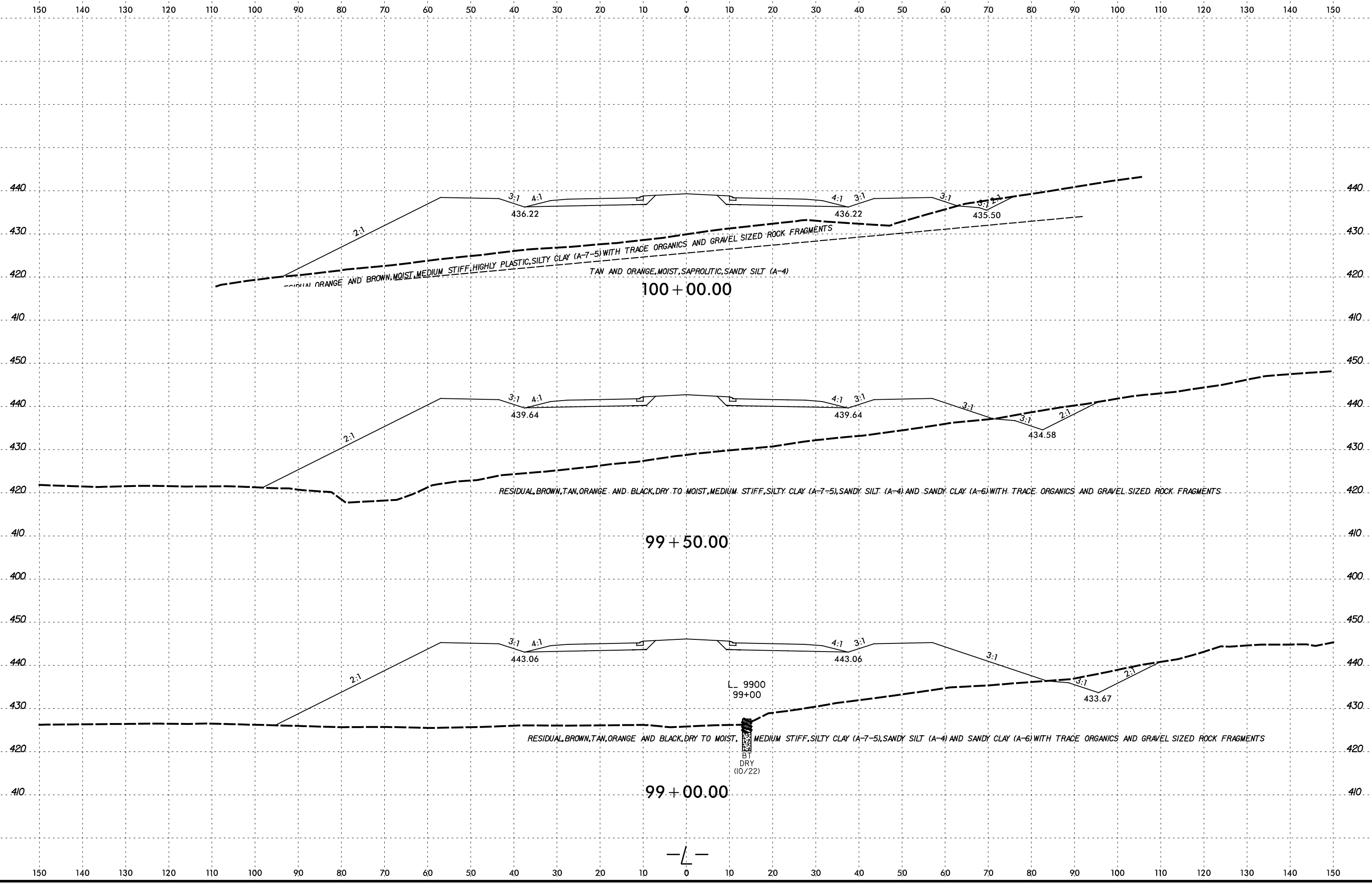


I02403 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

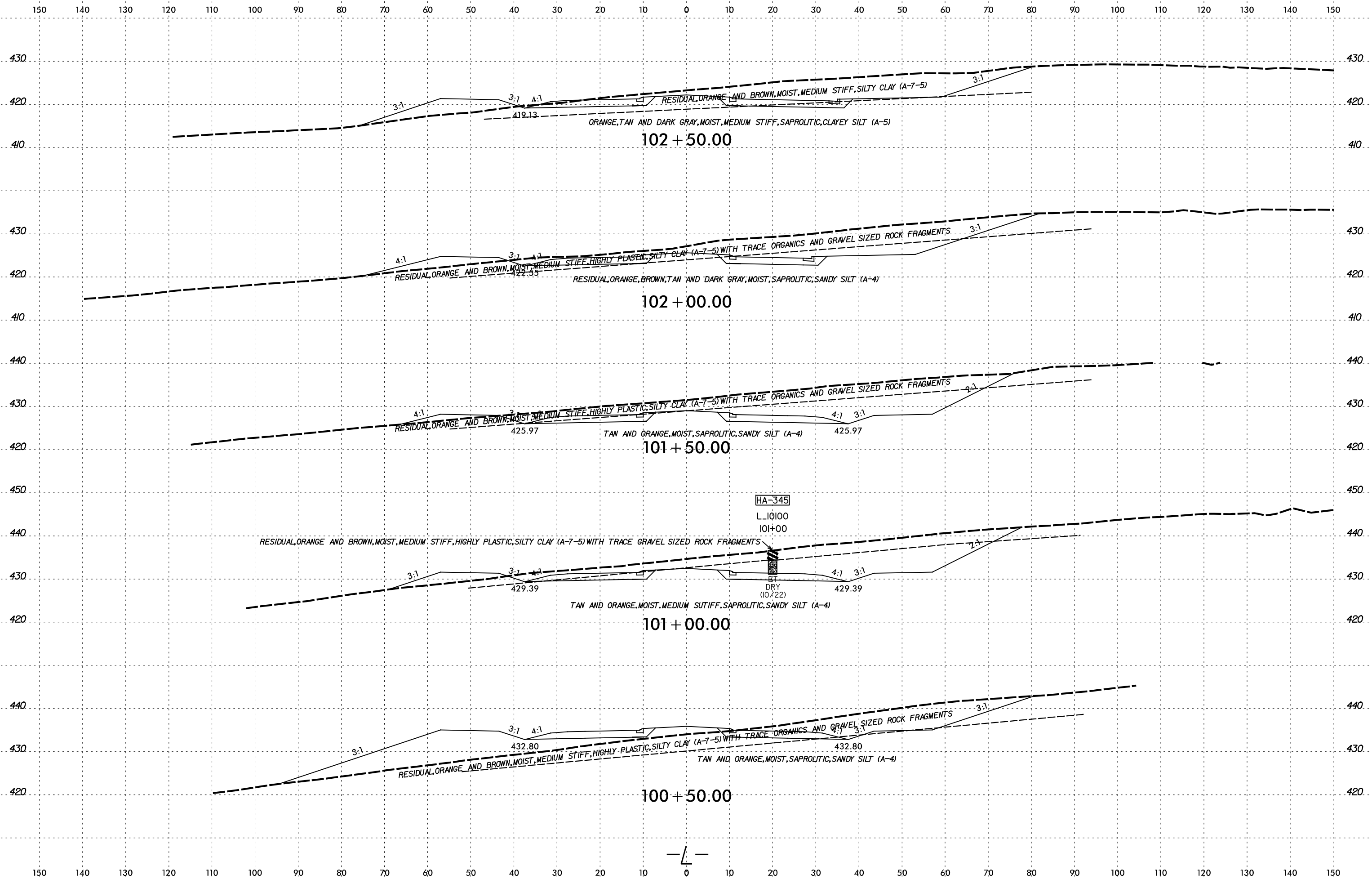


10:24:05 AM R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn connor.stephens



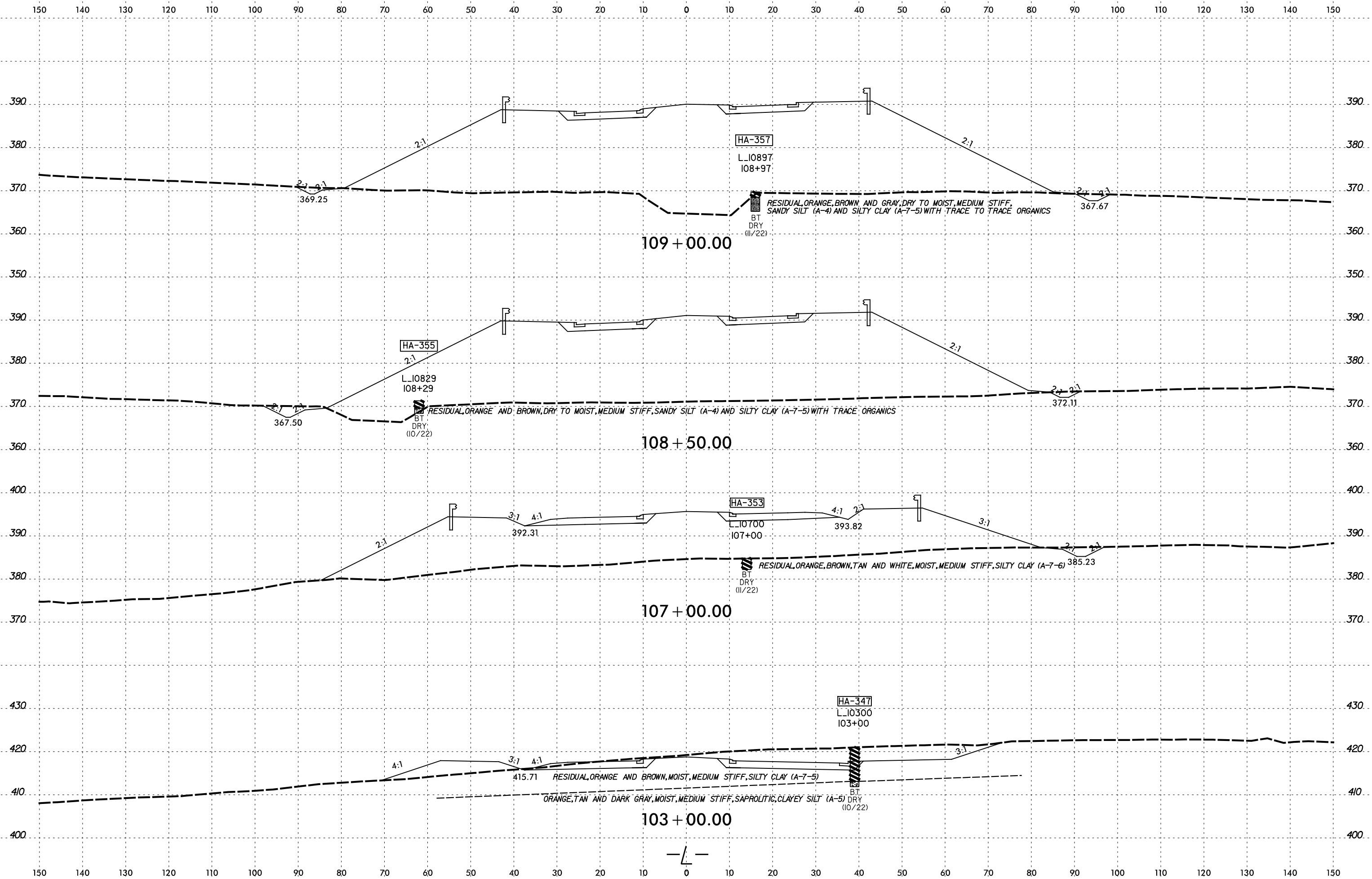


10:24:08 AM R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSL.dgn connor.stephens

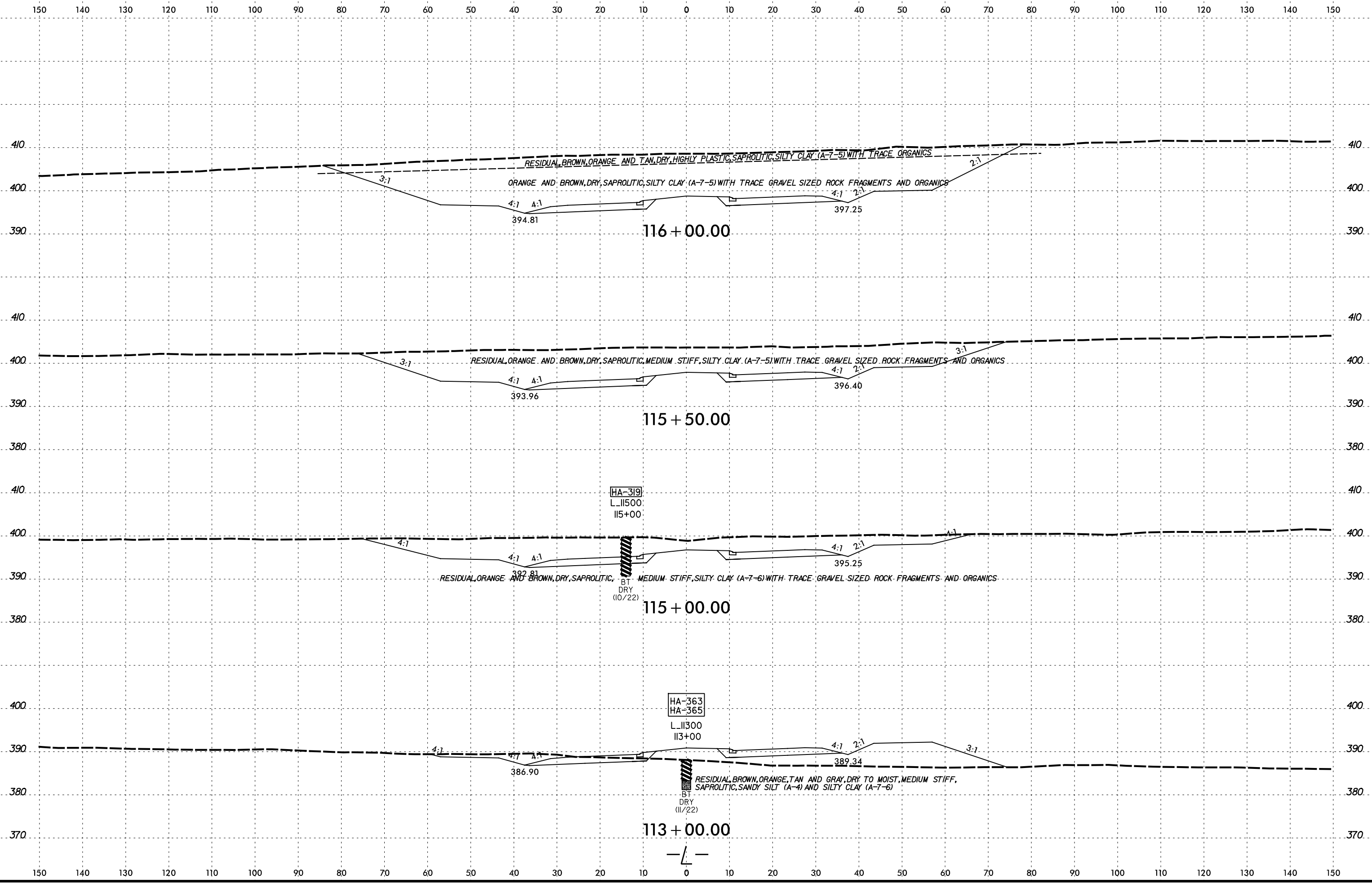


10:24:00 AM R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn connor.stephens





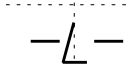
10:24:12 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens



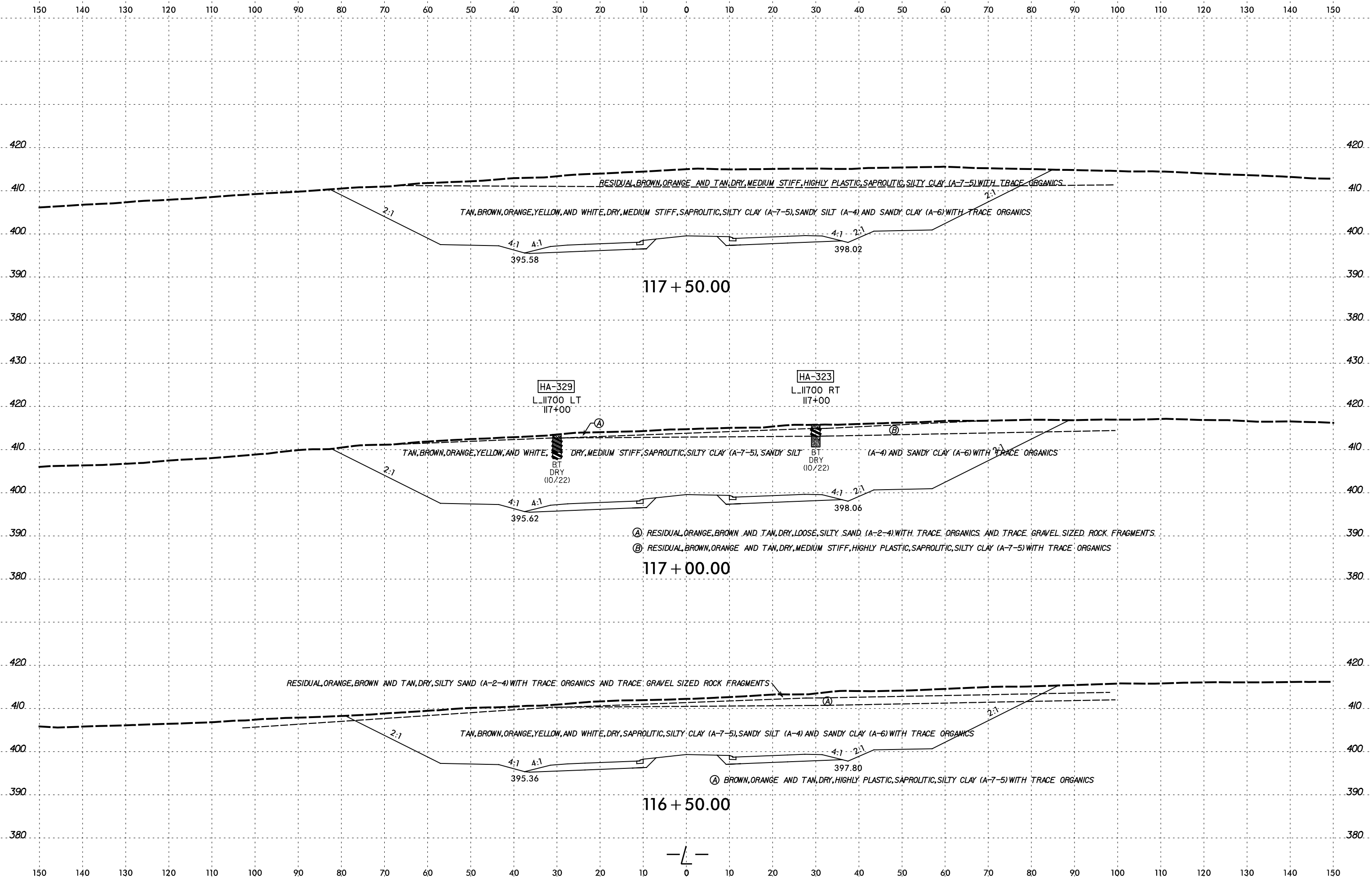
I024146 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

HA-319  
L\_11500  
115+00

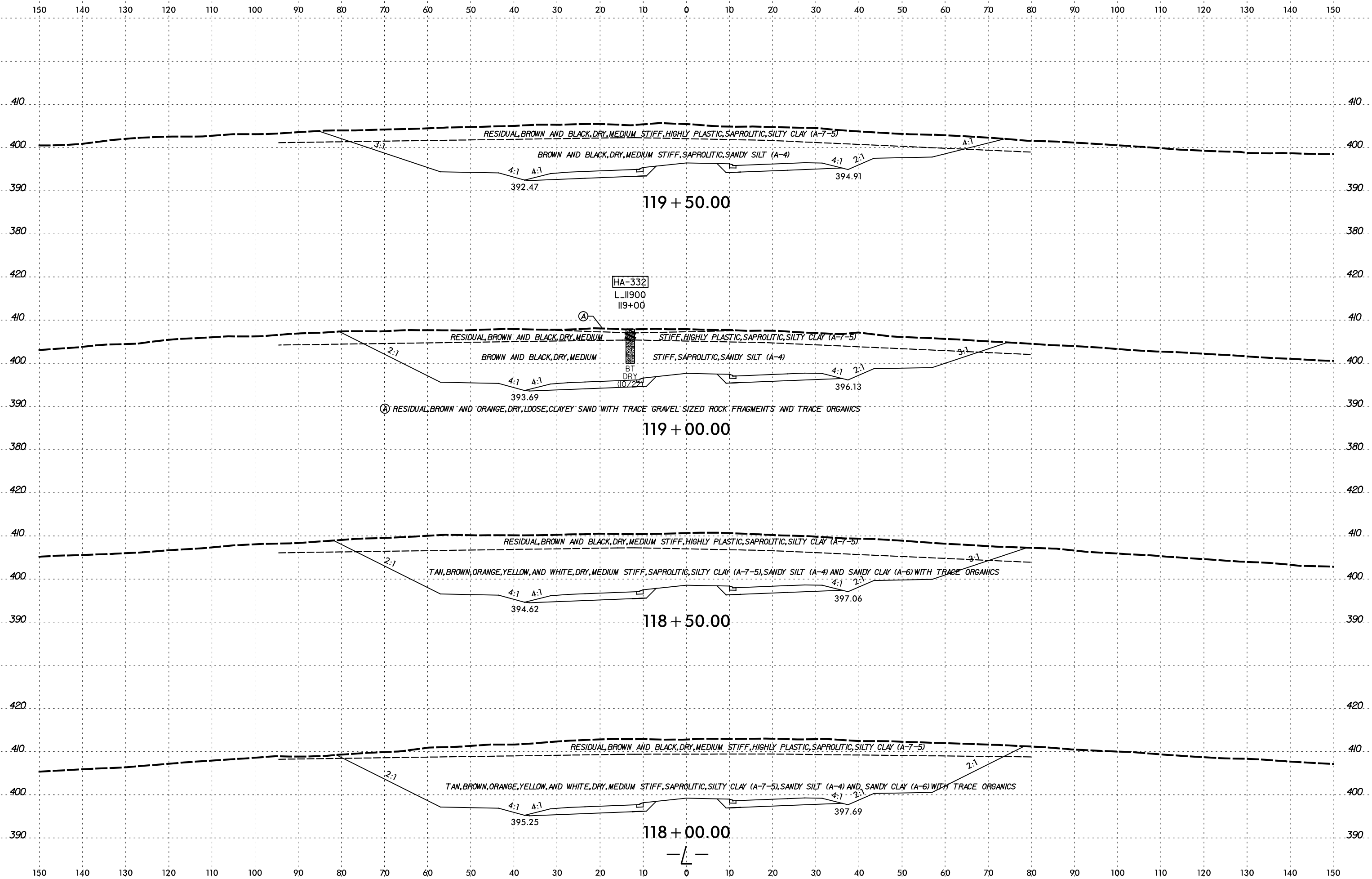
HA-363  
HA-365  
L\_11300  
113+00

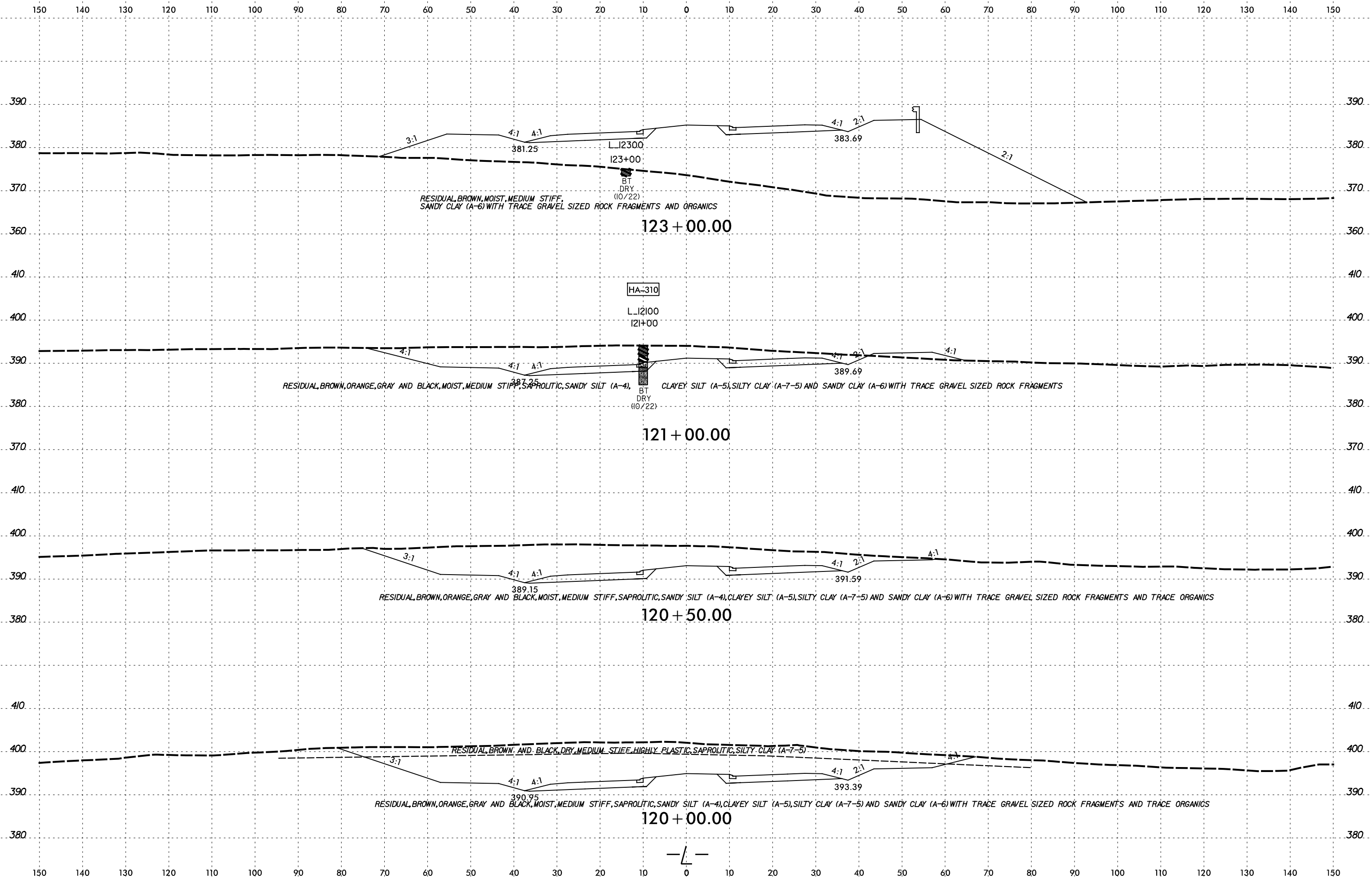




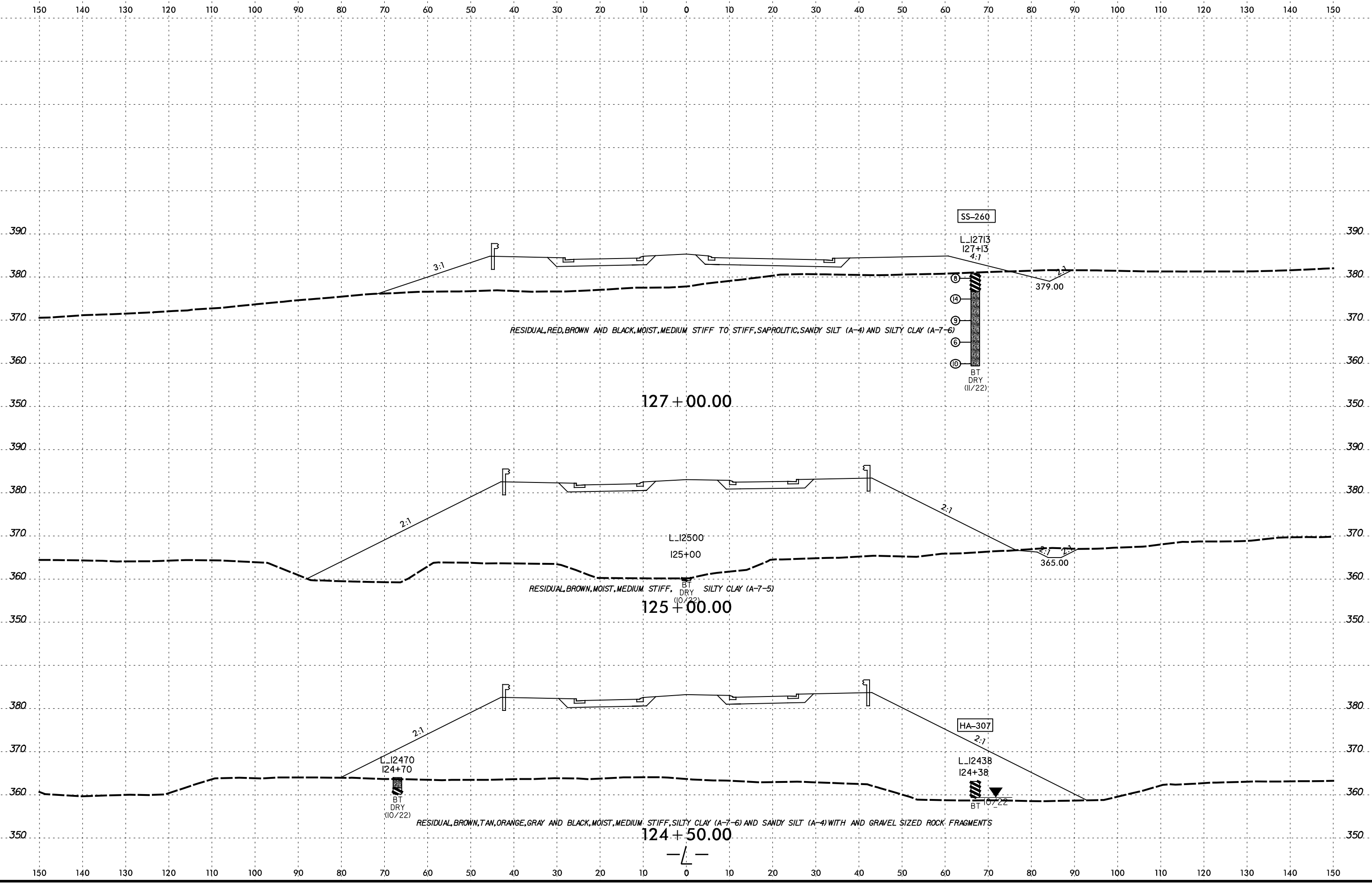


I02416 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

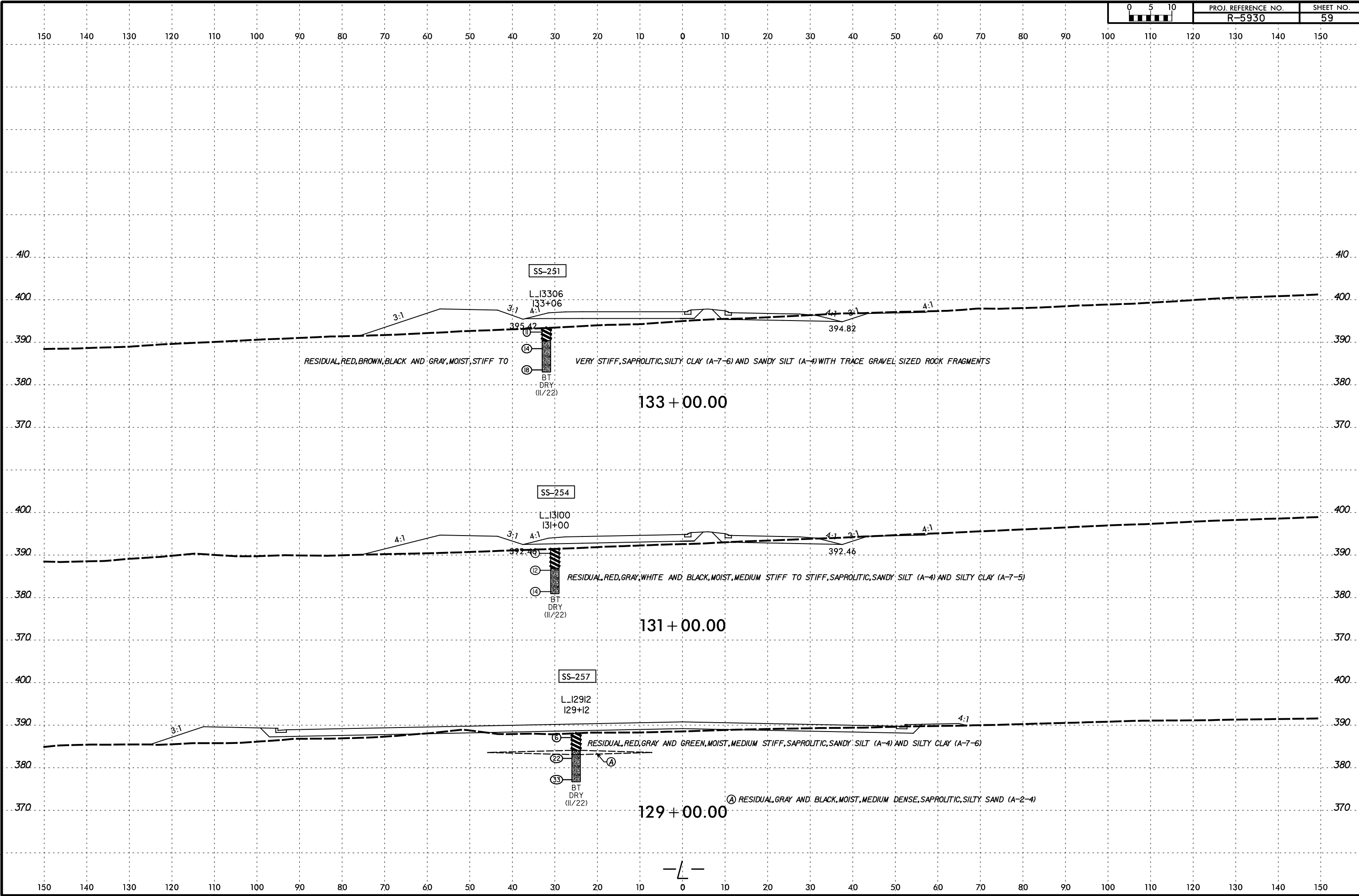


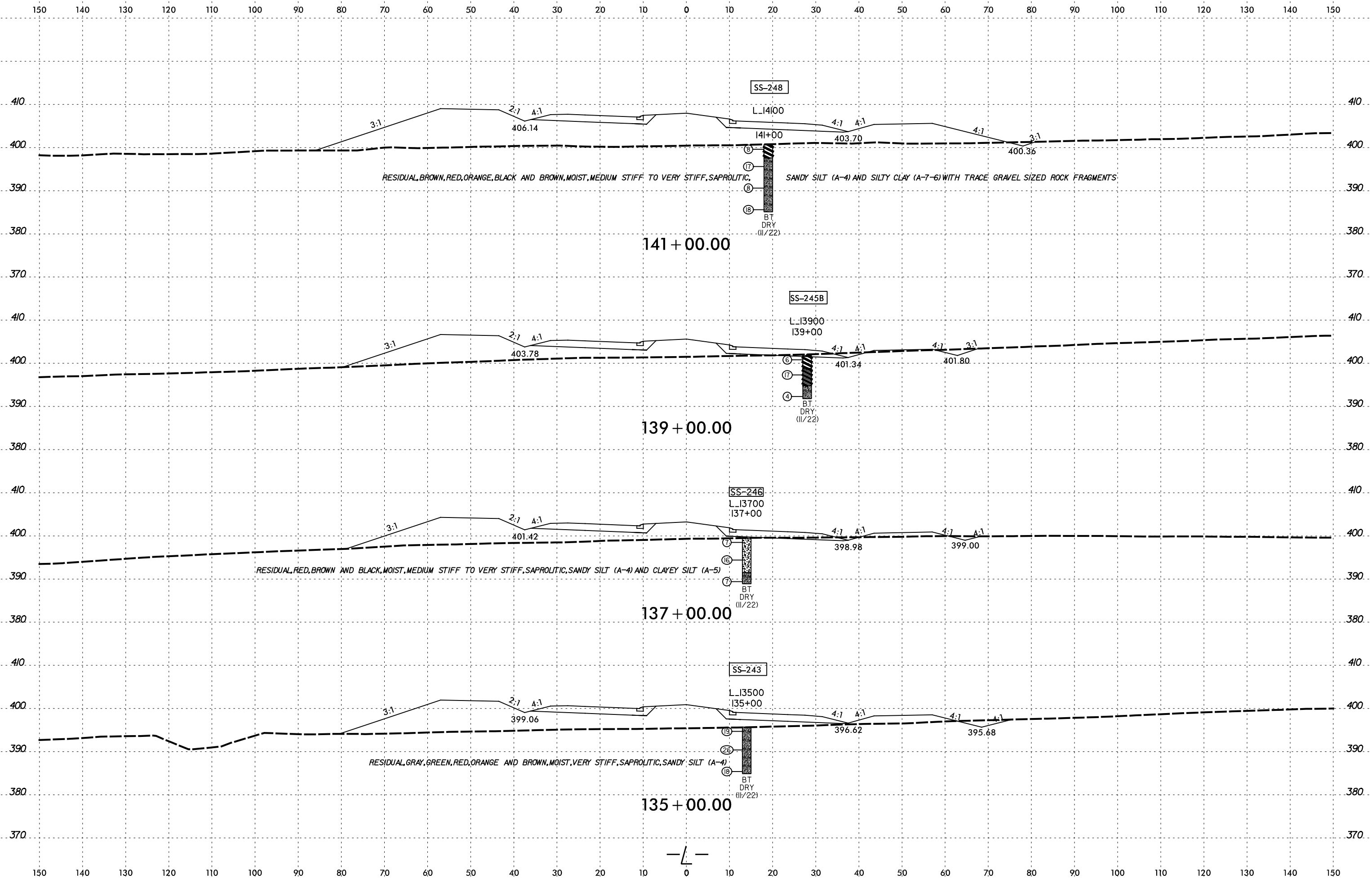


10:24:19 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.Lldgn  
 connor.stephens

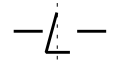


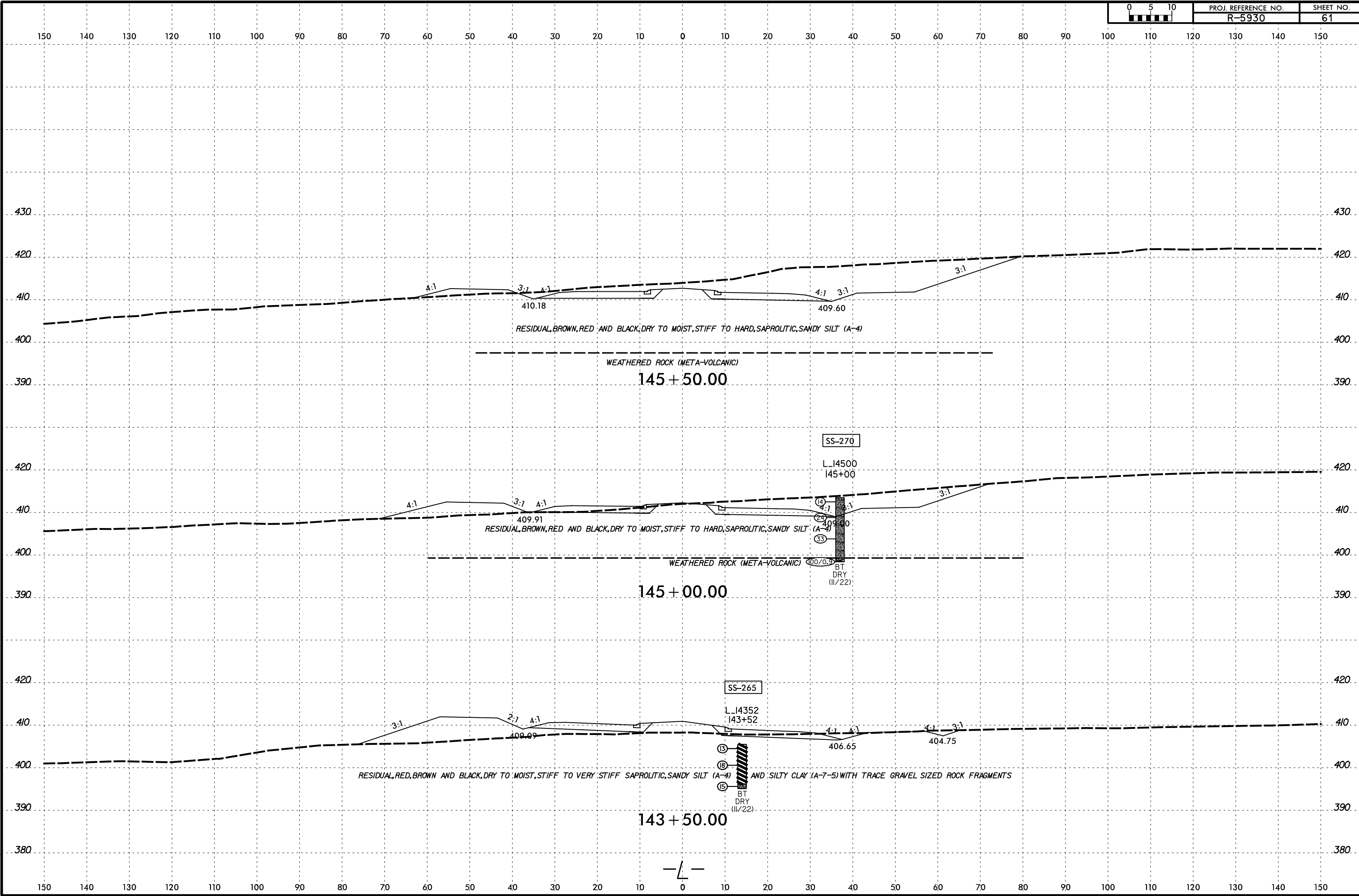
I:\2421\AM R\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn connor.stephens

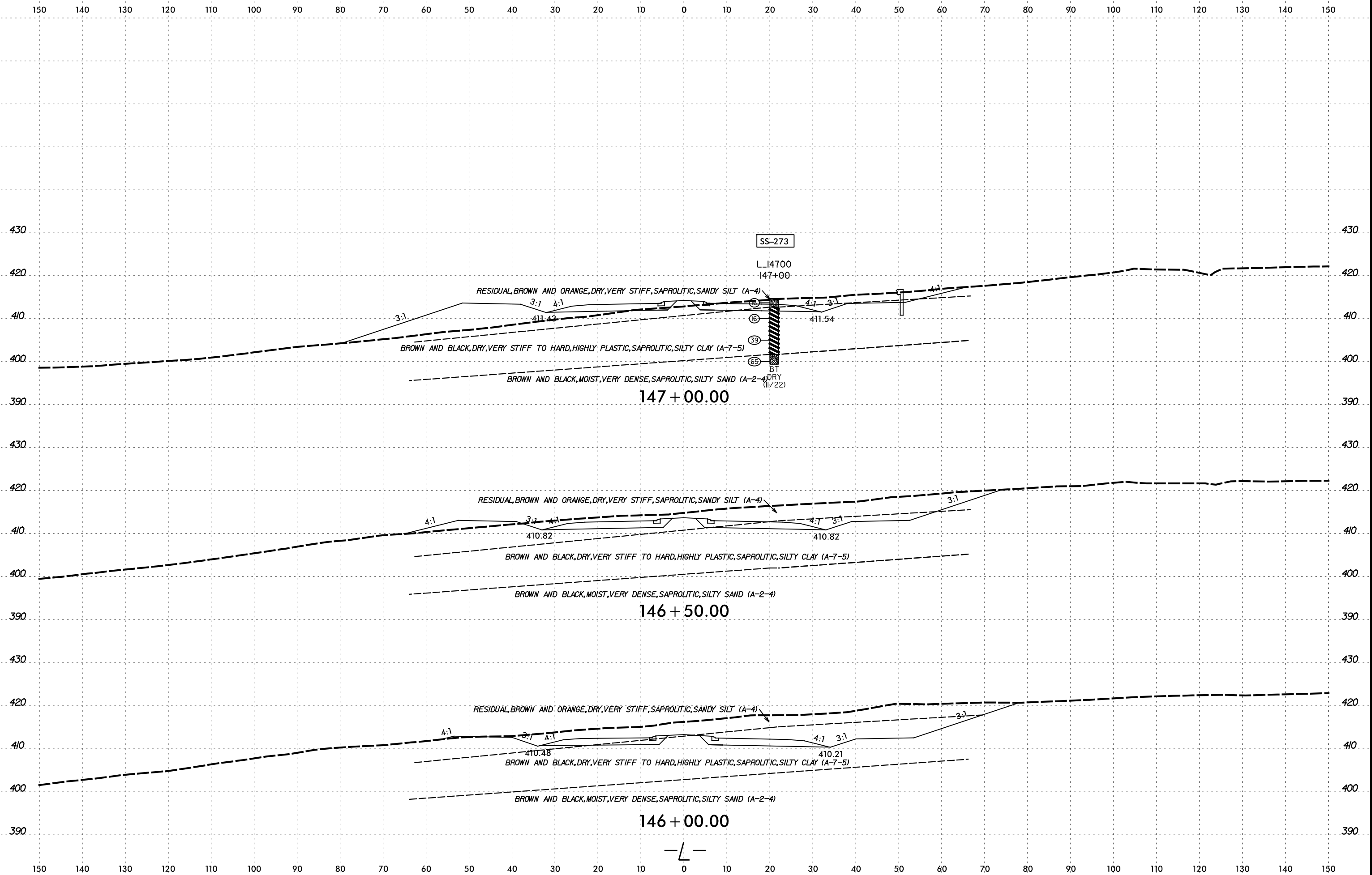




I:\4358 AM  
R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
connor.stephens

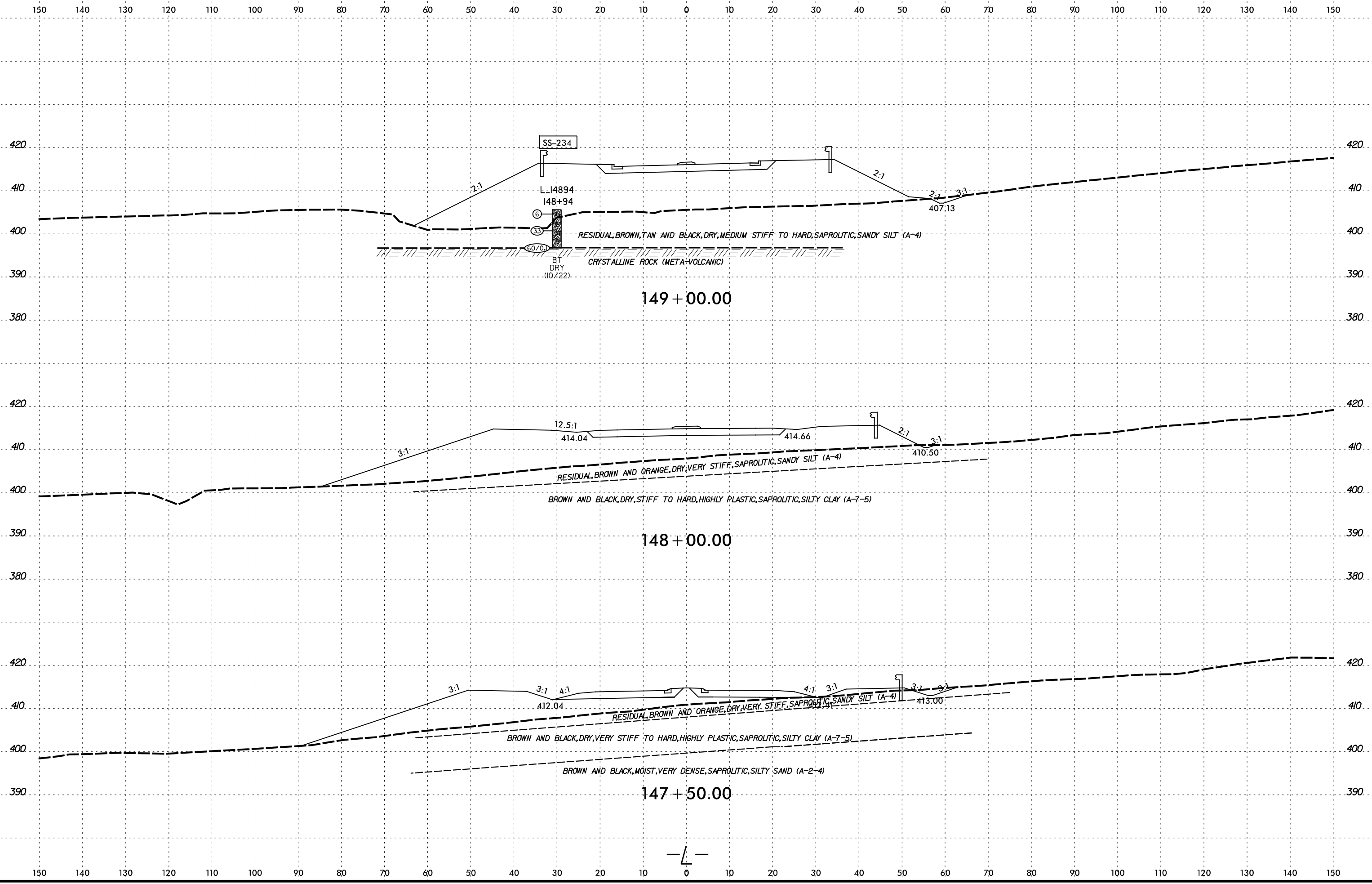




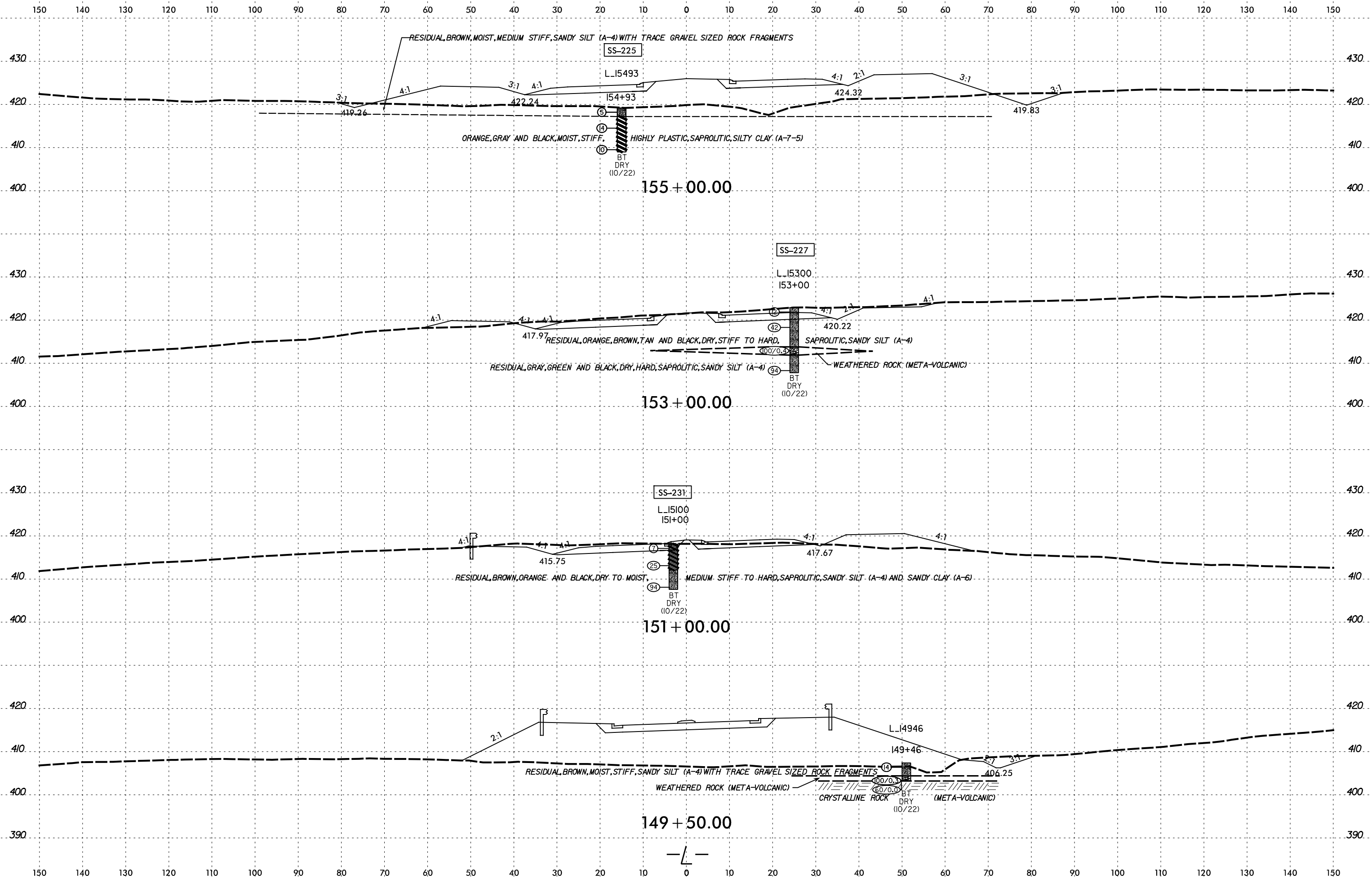


I02429 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\_GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.Lldgn  
 connor.stephens

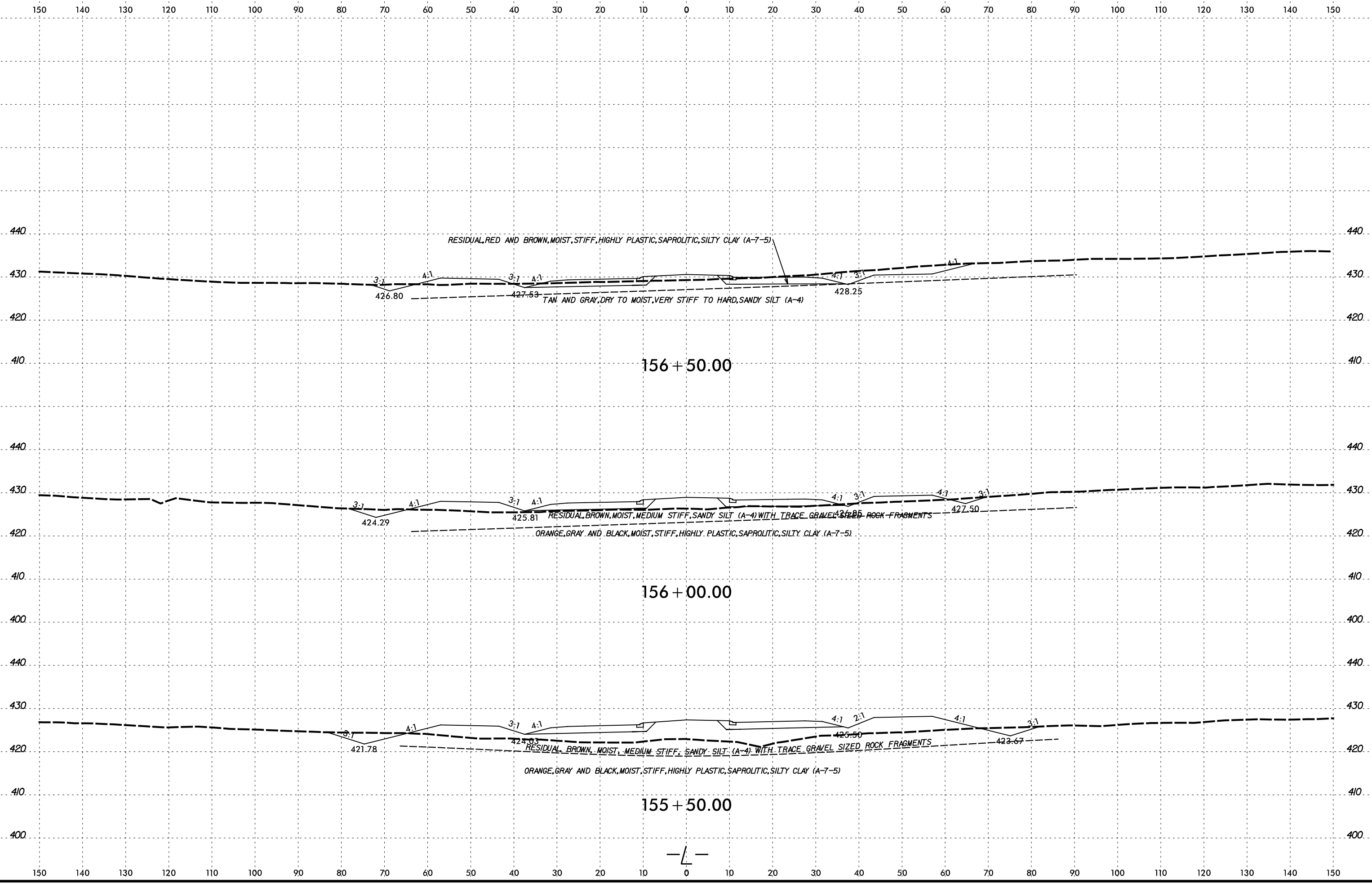


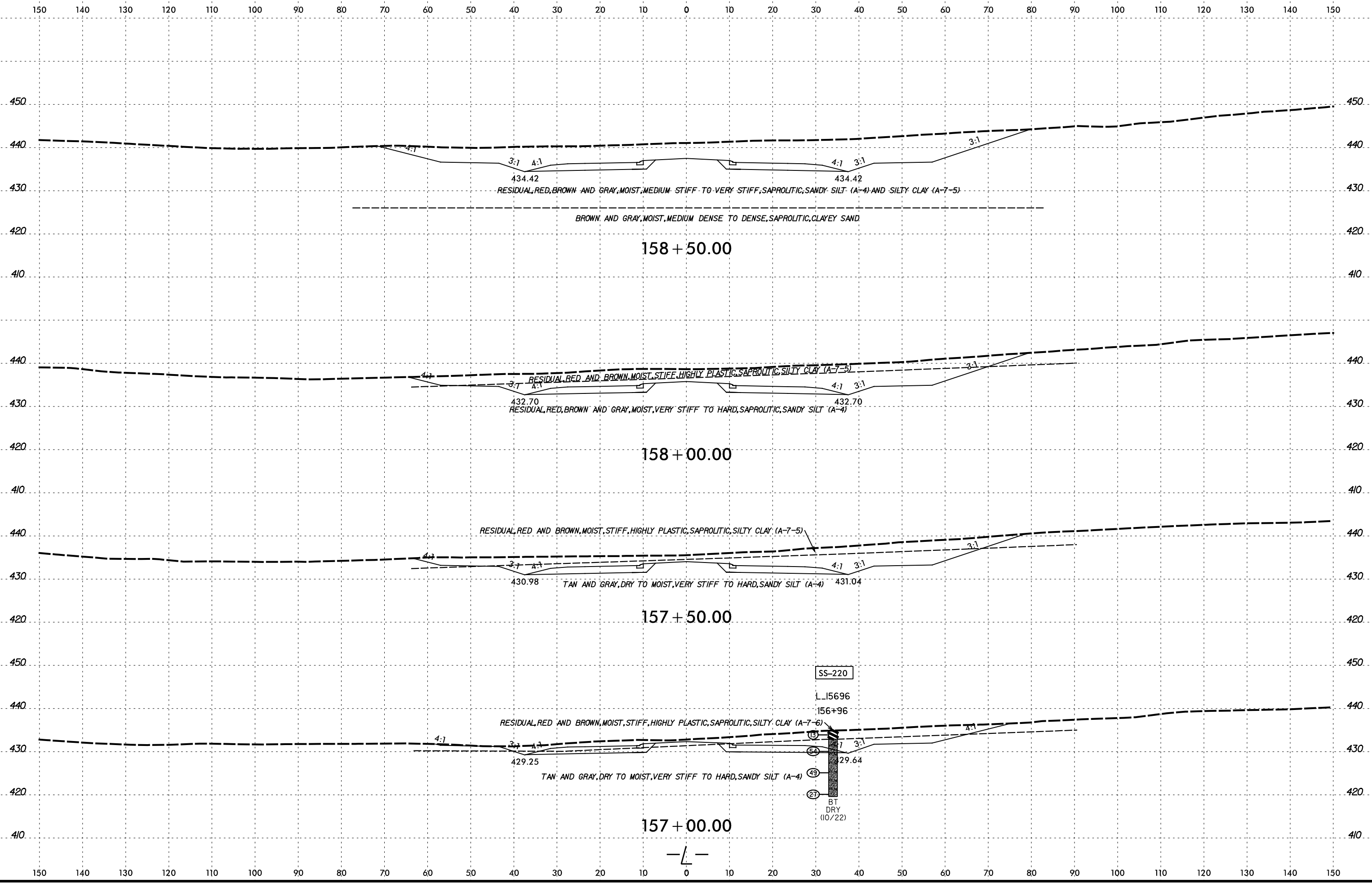


I02431.dwg  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

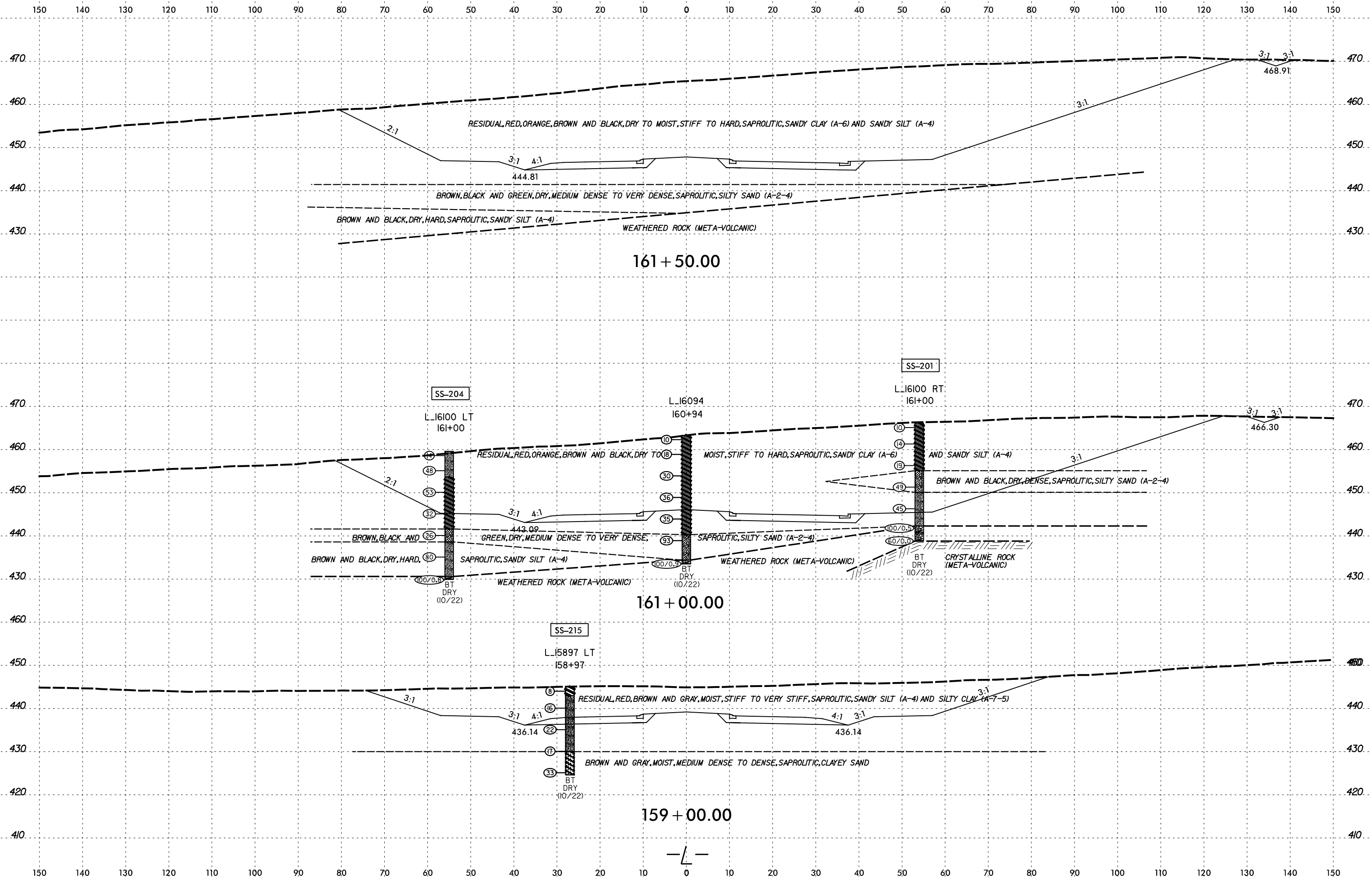


I:\2433 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens

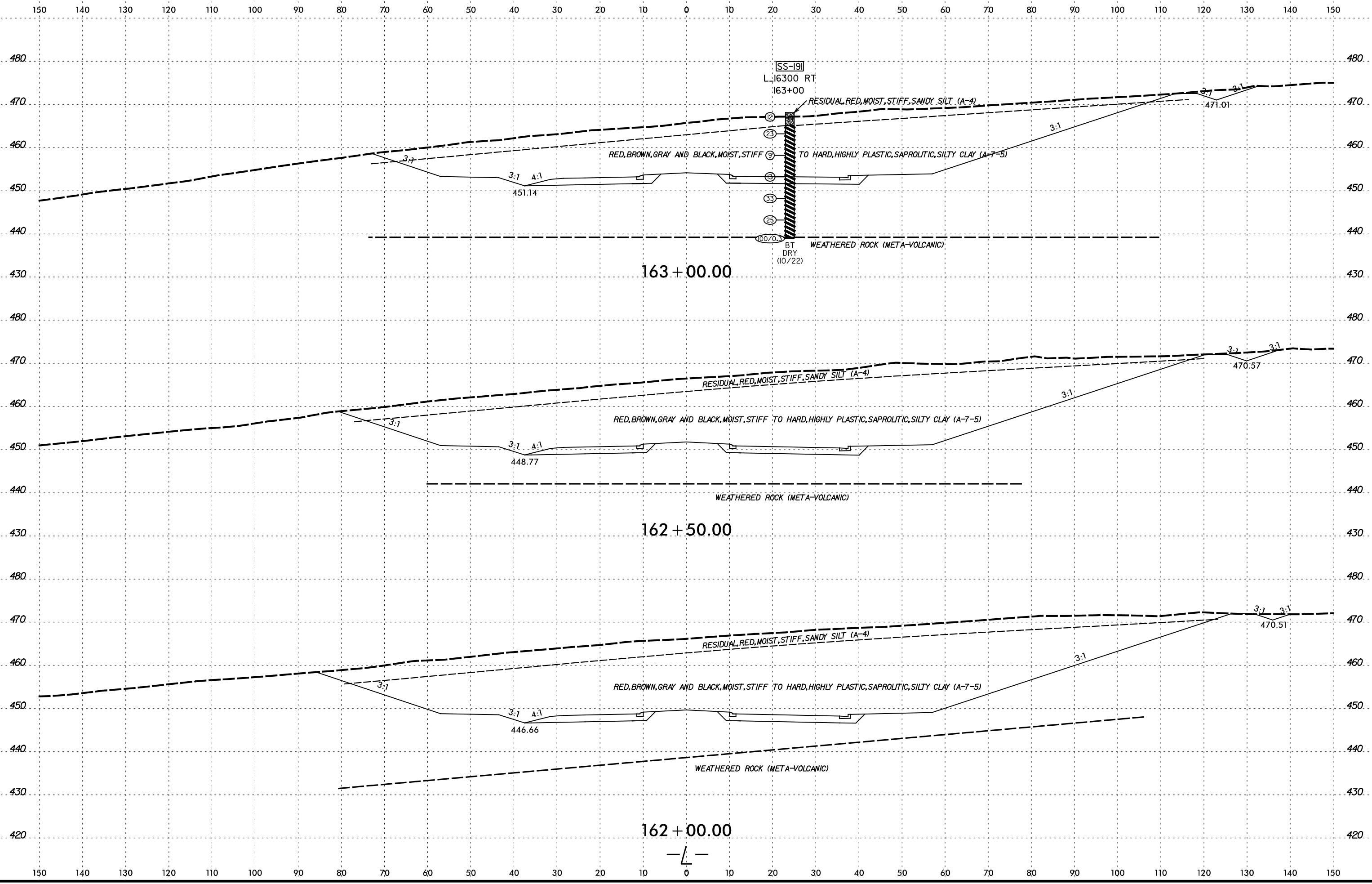




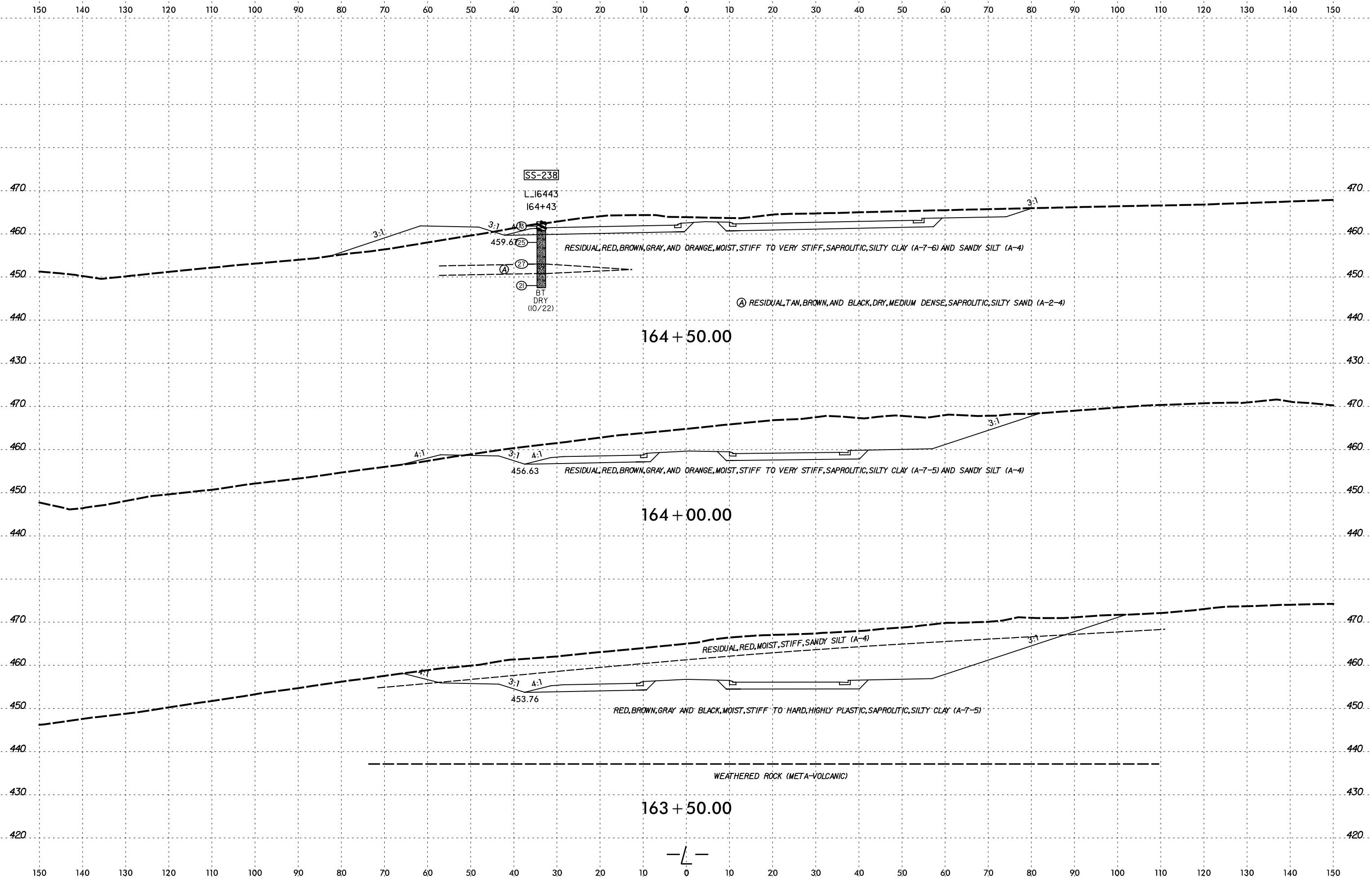
I:\2437 AM  
 R:\Projects\20-7011 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens



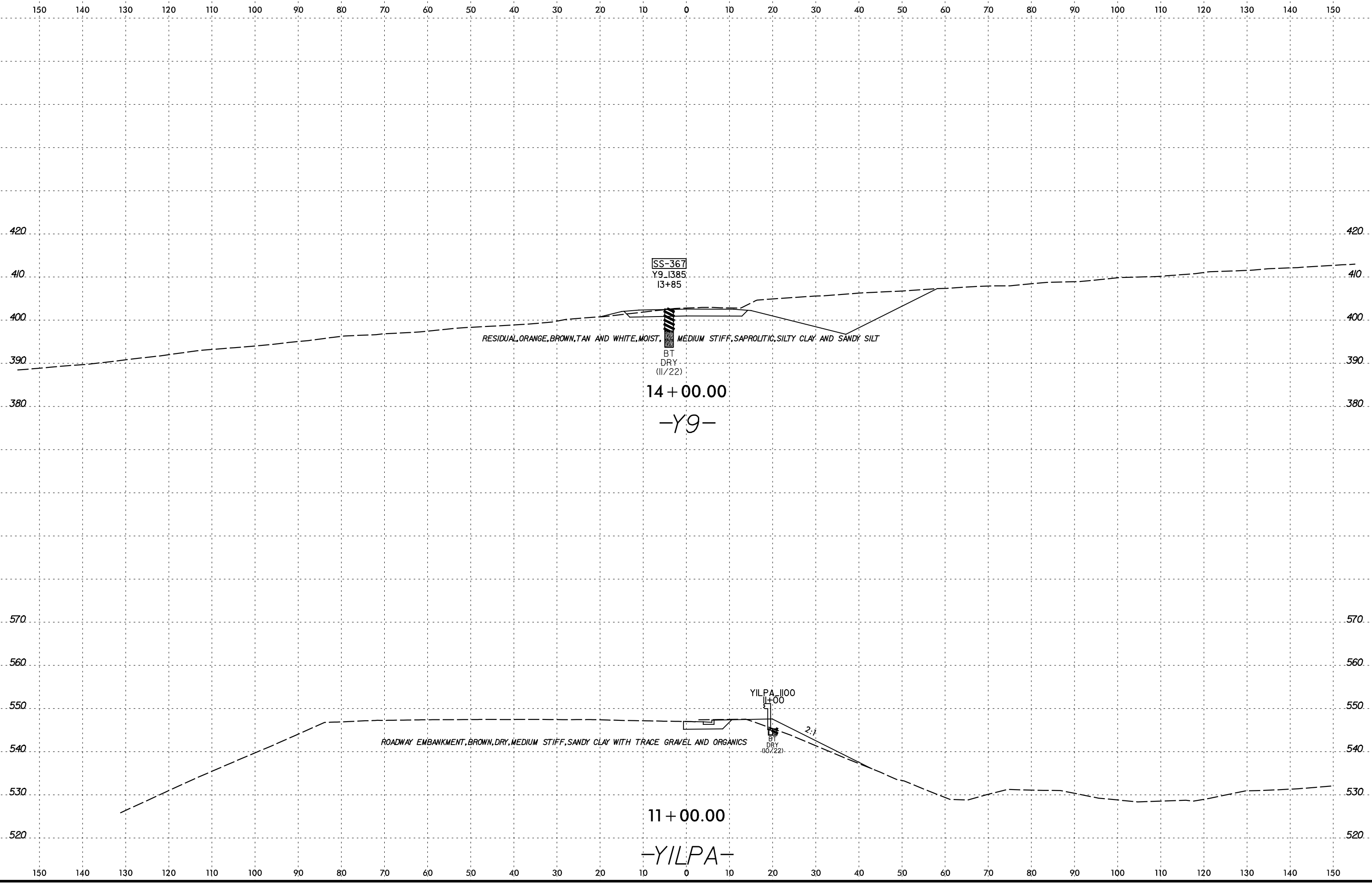
I:\2439 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens



I:\2457 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L.dgn  
 connor.stephens



I:\2459 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens

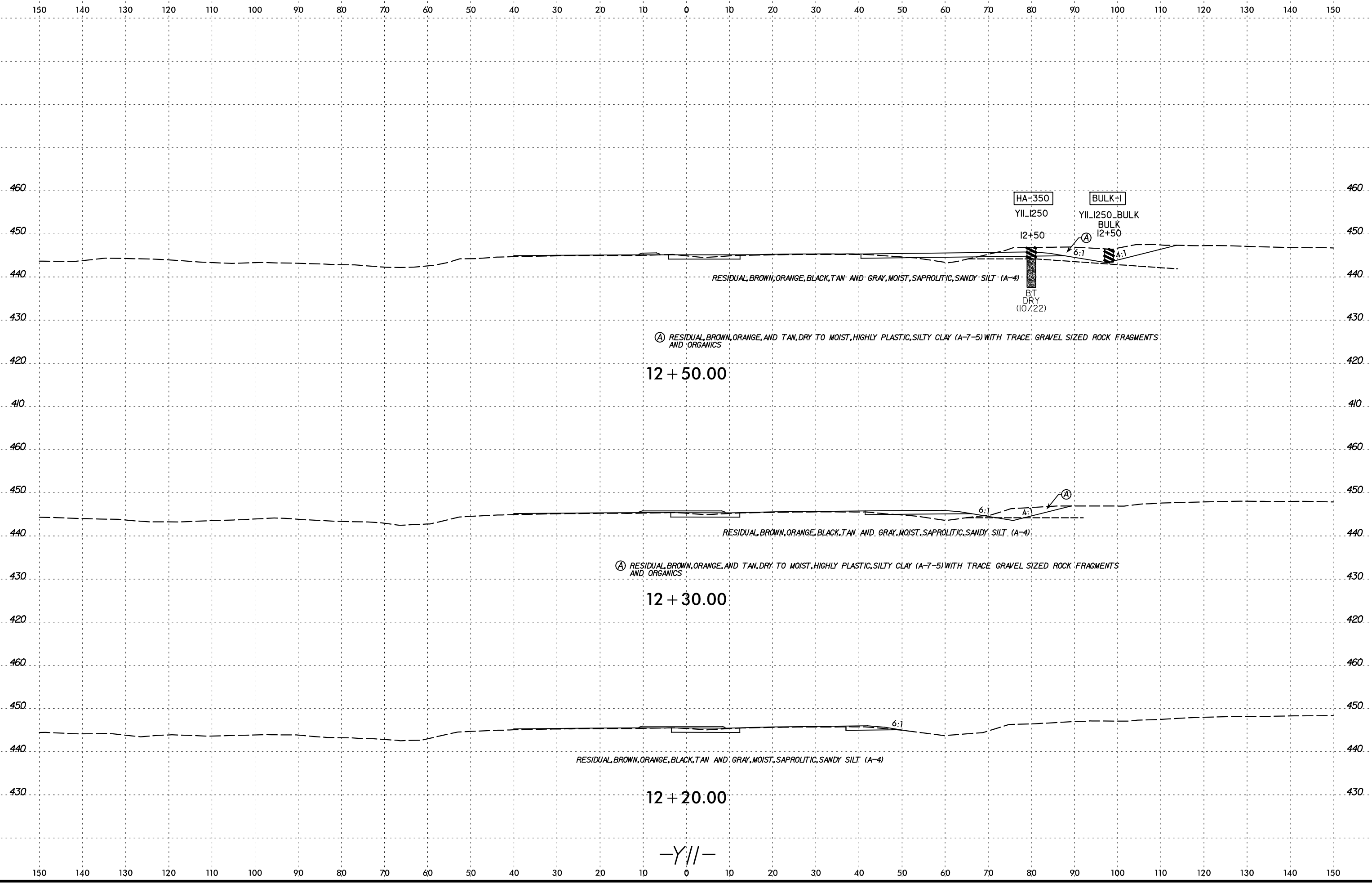


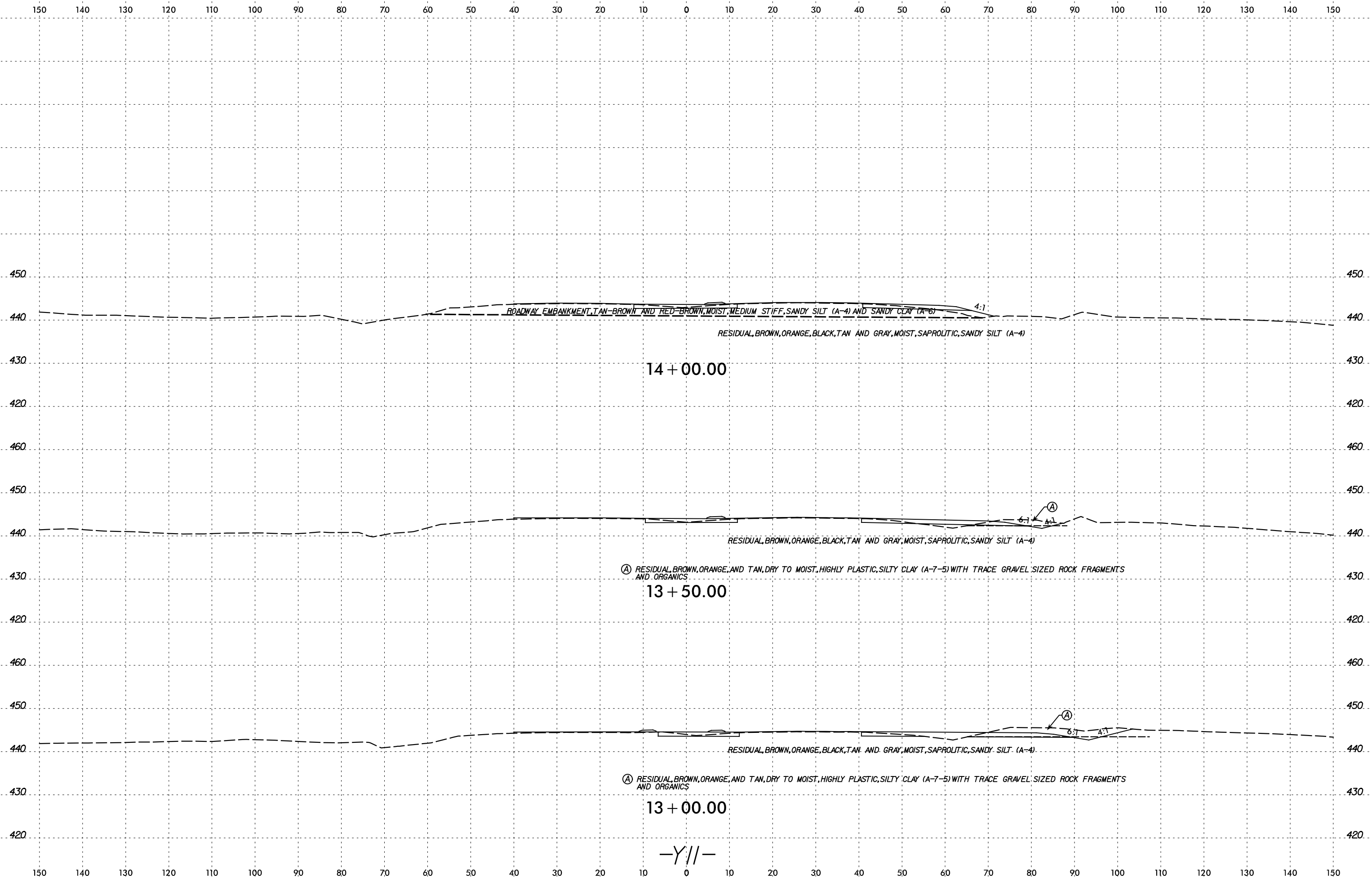
I:\24\1\AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens

14 + 00.00  
-Y9-

11 + 00.00  
-YILPA-

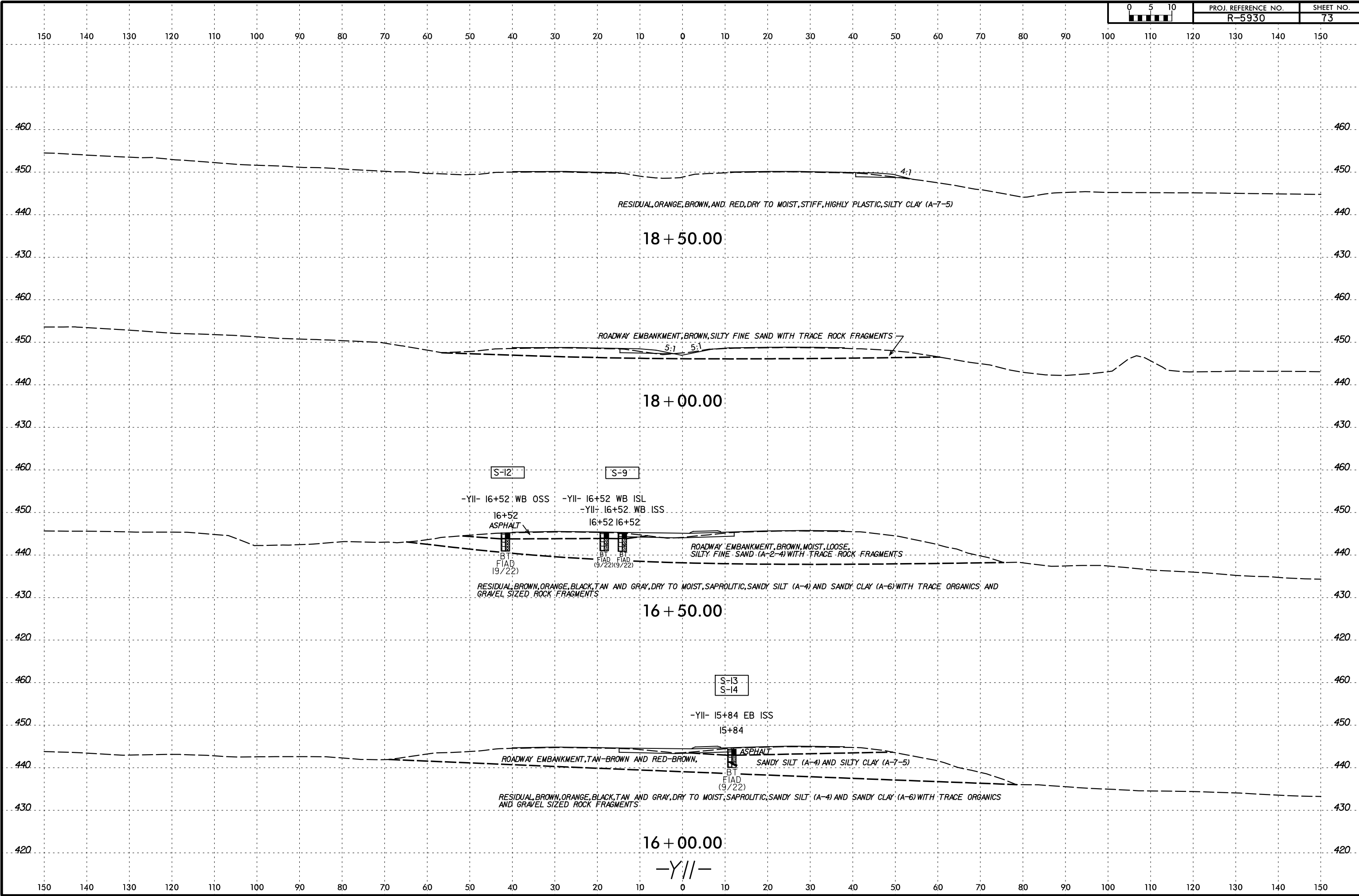


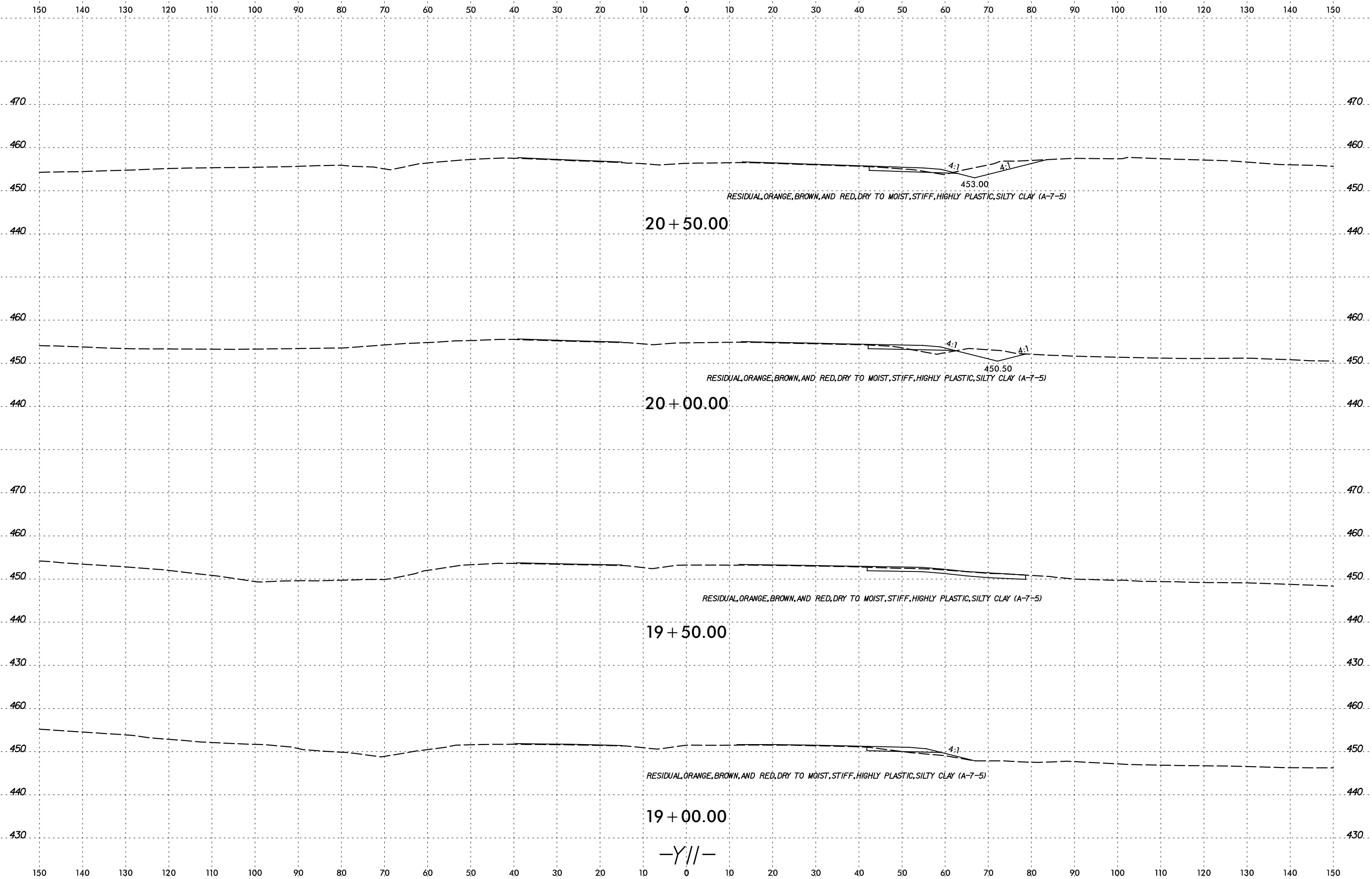




10:24:45 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSI.L\dgn  
 connor.stephens

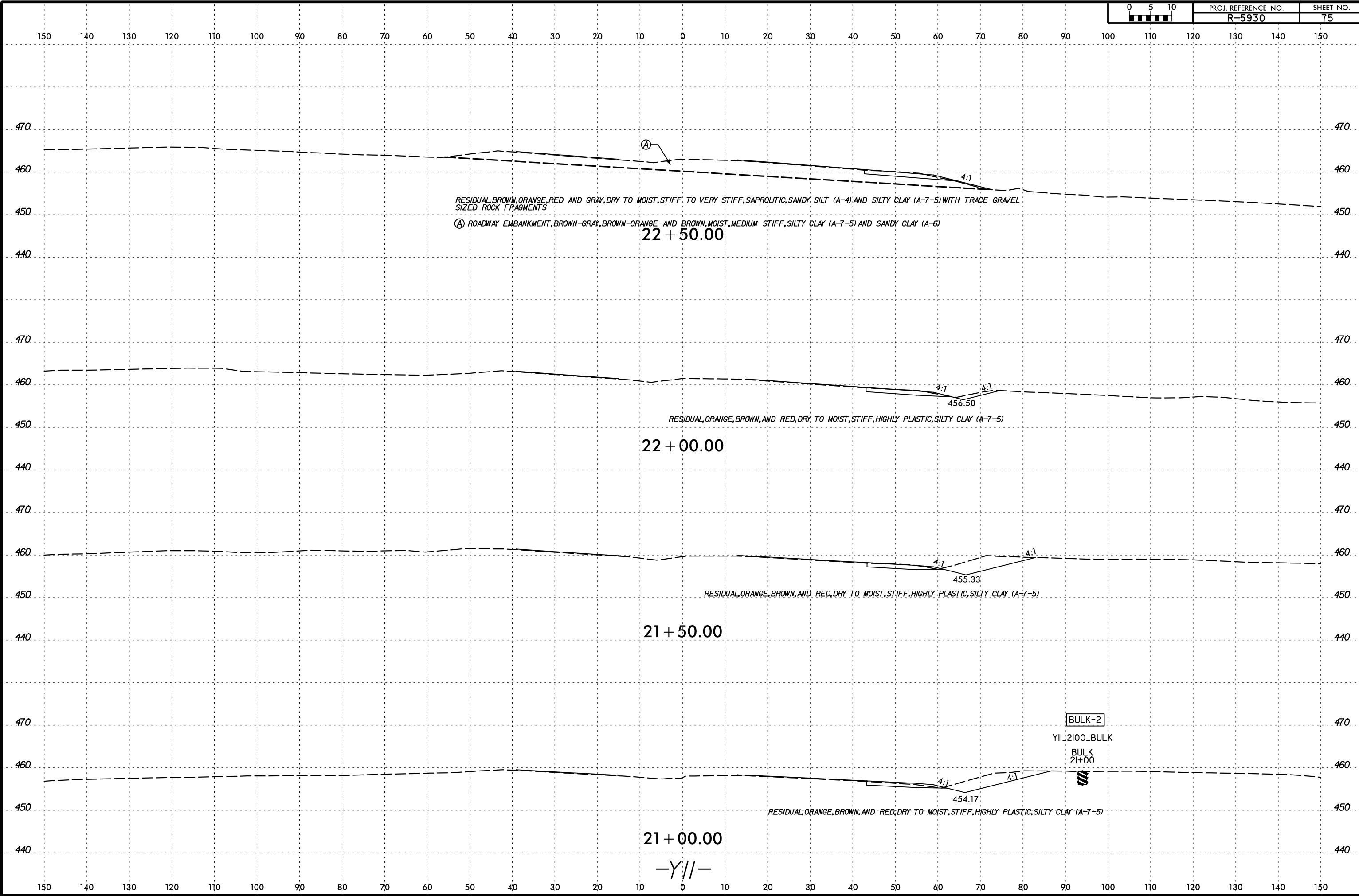
-Y//-

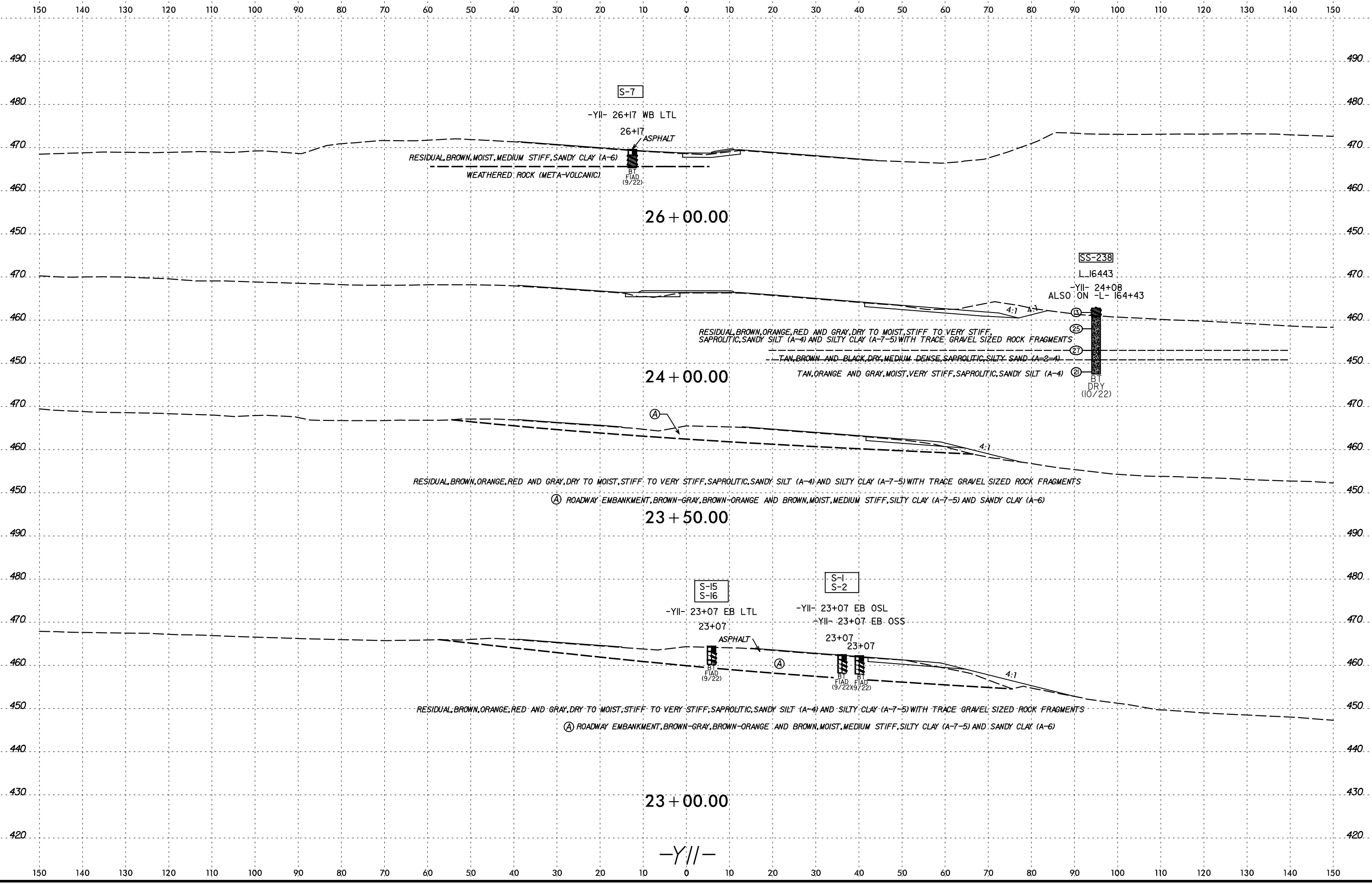


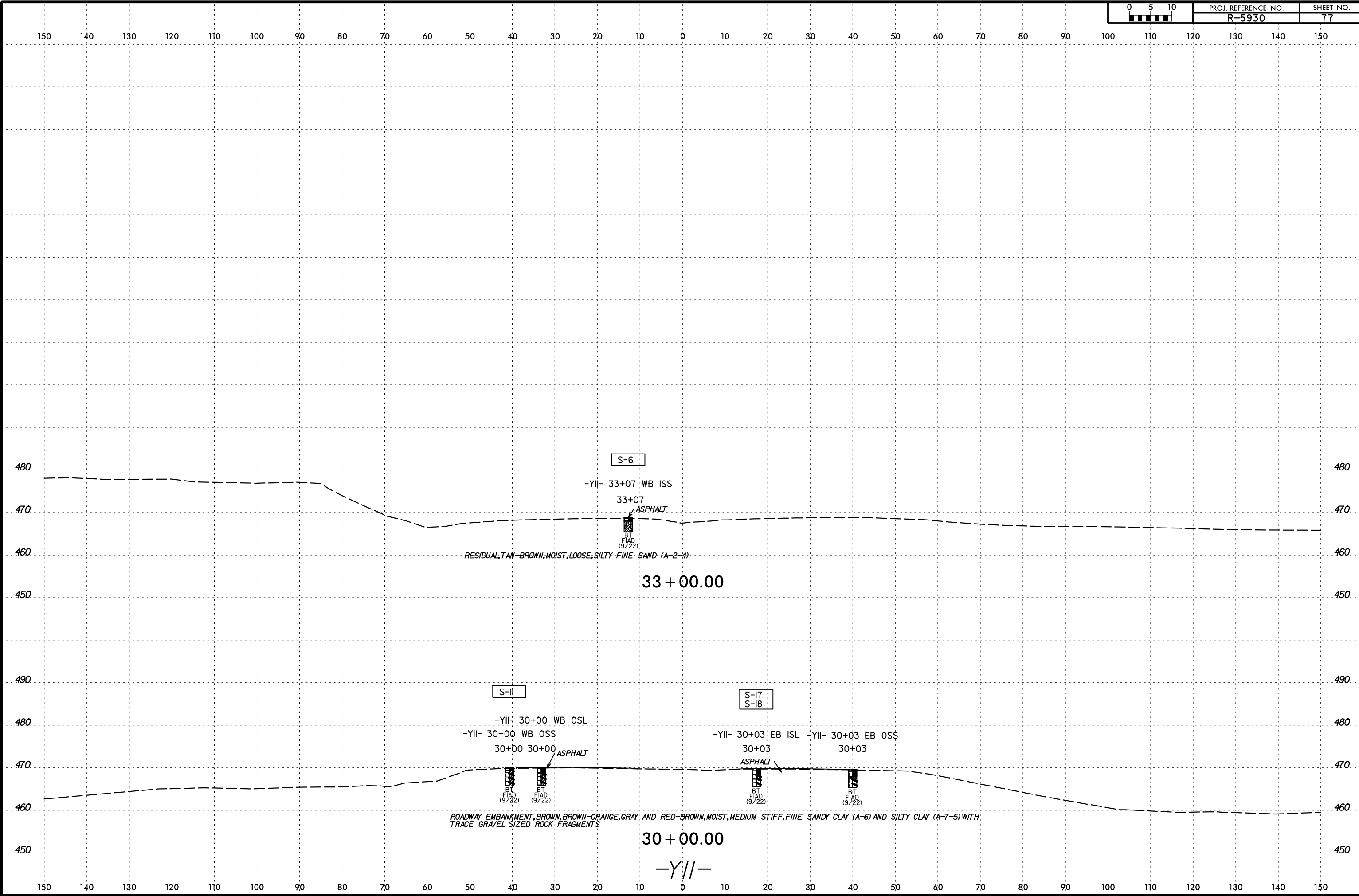


I:\2449 AM  
 R:\Projects\20-70\11 R5930 Chatham Park Way\CADD\GEO\TECH\sec\R5930\_GEO\_RDWY\_XSL.dgn  
 connor.stephens

-Y//-







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

***SUBSURFACE INVESTIGATION***

*APPENDIX A  
LABORATORY TESTING SUMMARY*

**REFERENCE: R-5930**

**PROJECT: 48548**



### Laboratory Testing Summary

**Project Number:** 48548.1.1

**TIP Number:** R-5930

**City/County/State:** Pittsboro, Chatham County, North Carolina

**Description:** Chatham Park Way New Location Roadway from North of Suttles Road to US 15/501

Boring No.	Sample No.	Station	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
								Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
L_4504	SS-2	45+04	50 LT	3.4-4.9	A-7-5(14)	64	17	12.1	22	22	53.9	0.6	85.1	78.5	66.9	31.0%	-
L_4700 RT	SS-9	47+00	43 RT	8.6-10.1	A-7-5(17)	50	17	3.6	9	36.1	51.3	0.6	92.8	90.9	83.8	28.4%	-
L_4705 LT	SS-11	47+05	39 LT	0.0-1.5	A-7-5(29)	63	30	4	4.5	32	59.5	0.8	90.4	88	83.9	26.6%	-
L_4900	SS-19	49+00	71 LT	0.0-1.5	A-7-6(14)	43	17	5.5	5.6	43.6	45.3	4	87.6	84.2	79.4	22.2%	-
L_4900	SS-24	49+00	71 LT	24.0-25.5	A-7-5(16)	55	10	1.8	5	41.7	51.5	0	99	98.2	94	37.5%	-
L_5100 LT	SS-33	51+00	60 LT	0.0-1.5	A-7-6(19)	49	20	4.2	5.2	41.6	49	5.3	91.2	89.2	84	20.7%	-
L_5100	SS-43	51+00	10 RT	13.9-15.4	A-5(12)	52	7	2.9	11.5	51.5	34.1	0	99.4	97.9	90	29.3%	-
L_5300	SS-46	53+00	25 LT	0.0-1.5	A-7-6(20)	51	23	4.3	4.6	28.6	62.5	3.7	86.7	84.1	80.1	20.8%	-
L_5500	SS-51	55+00	35 LT	0.0-1.5	A-7-6(11)	45	16	6.6	7.2	36.5	49.7	2.2	79.5	76	70	21.4%	-
L_5703	SS-54	57+03	39 RT	0.0-1.5	A-6(10)	40	16	8.7	5	38	48.3	11.4	79.5	73.6	69.9	16.3%	-
L_5903	SS-58	59+03	12 LT	0.0-1.5	A-7-5(43)	75	38	3.3	4.1	11	81.6	0.4	98.8	96.6	92.6	33.7%	-
L_6100	SS-62	61+00	15 RT	0.0-1.5	A-7-5(47)	75	40	1.8	2.5	23.6	72.1	0.4	98.7	97.5	95.2	27.3%	-
L_6300 LT	SS-66	63+00	44 LT	0.0-1.5	A-7-5(34)	68	33	6.9	6	19	68.1	0.2	97.8	92.6	86.8	29.4%	-
L_6300 RT	SS-74	63+00	62 RT	8.4-9.4	A-7-5(35)	72	26	1.3	4	16.9	77.8	0	99.9	99.1	96	30.4%	-
L_6500	SS-78	65+00	15 LT	3.7-5.2	A-7-5(18)	50	15	1.1	11.3	35.5	52.1	0	100	99.4	91.7	21.0%	-
L_6705	SS-82	67+05	15 LT	0.0-1.5	A-7-5(31)	60	28	3.9	5.2	24.8	66.1	0.2	98.6	95.9	91.2	24.5%	-
L_6816	SS-92	68+16	25 RT	0.0-1.5	A-4(5)	34	8	19.5	10.6	30.2	39.7	3.1	96.5	81.1	70.1	17.0%	-
L_6855 LT	SS-89	68+55	98 LT	0.0-1.5	A-6(7)	34	11	9.2	8.9	34.2	47.7	13.7	85.1	79.3	71.9	18.0%	-
L_6950	SS-101	69+50	9 LT	0.0-1.5	not enough material			20.4	10.5	39.5	29.6	14.4	67.9	55.8	48.9	16.8%	-
L_7113	SS-104	71+13	15 LT	0.0-1.5	A-7-5(35)	62	30	2.4	3.9	25.5	68.2	0	100	98.3	94.9	24.8%	-
L_7300	SS-108	73+00	12 RT	0.0-1.5	not enough material										23.2%	-	
L_7500 RT	SS-118	75+00	38 RT	18.7-20.2	A-4(3)	32	7	15.8	29.7	37.2	17.3	0	99.8	90.5	62.2	19.3%	-
L_7505 LT	SS-122	75+05	38 LT	0.0-1.5	A-5(11)	47	7	4.7	3.9	14.6	76.8	0.9	98.3	94.4	91.1	25.8%	-
L_7700	SS-129	77+00	12 LT	3.5-5.0	A-7-5(9)	50	18	12.5	10.1	36.9	40.5	20.8	72	65.8	57.5	14.9%	-
L_7900 RT	SS-138	79+00	43 RT	3.7-5.2	A-7-5(8)	49	19	18.5	15	33.6	32.9	2.6	78.7	68.9	54.9	16.1%	-
L_7903 LT	SS-133	79+03	35 LT	0.0-1.5	A-7-5(18)	67	30	9.9	16.5	14.7	58.9	7	77.9	72.5	61.3	31.7%	-
L_8303	SS-147	83+03	39 LT	0.0-1.5	A-4(0)	29	7	20.2	15.7	34.5	29.6	13.3	63.2	52.7	43.7	16.4%	-
L_8504	SS-150	85+04	28 RT	3.7-5.2	A-4(1)	30	4	25.7	12.4	34.5	27.4	2.5	86.1	66.9	56.1	13.7%	-
L_8697 RT	SS-157	86+97	25 RT	17.6-19.1	A-7-5(59)	93	56	1.3	3.4	4.7	90.6	0	91.8	91.4	88.3	46.5%	-
L_8700 LT	SS-158	87+00	48 LT	0.0-1.5	A-7-5(27)	66	32	5.3	8.8	13.4	72.5	1.6	85.5	82.1	75.9	27.5%	-
L_8906	SS-164	89+06	17 RT	3.5-5.0	A-7-5 (32)	73	26	2.3	8.9	7.1	81.7	0	100	99.1	90.8	33.9%	-
L_9100	SS-169	91+00	34 LT	3.2-4.7	A-7-5 (26)	61	24	4.4	9.1	17.3	69.2	0.3	99.6	97.1	88.4	28.0%	-
L_9304	SS-174	93+04	25 RT	0.0-1.5	A-7-5 (27)	57	26	3.3	5.1	20.1	71.5	4.7	95.2	92.8	88.8	24.7%	-
L_9490 LT	SS-185	94+90	20 LT	3.3-4.8	A-7-5 (34)	73	28	1.3	6.5	17.1	75.1	0	96.7	96	91.5	28.4%	-
L_9496 RT	SS-178	94+96	22 RT	0.0-1.5	A-7-5 (45)	80	40	1.5	3	11.7	83.8	0.2	94.1	93.3	90.7	33.0%	-
L_10100	HA-345	101+00	20 RT	0.0-2.2	A-7-5(26)	70	30	4.9	6.9	34	54.2	3.4	84.6	81.8	76.1	32.0%	-

### Laboratory Testing Summary

Project Number: 48548.1.1

TIP Number: R-5930

City/County/State: Pittsboro, Chatham County, North Carolina

Description: Chatham Park Way New Location Roadway from North of Suttles Road to US 15/501

Boring No.	Sample No.	Station	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
								Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
L_10300	HA-347	103+00	39 RT	0.0-0.8	A-7-5(17)	49	19	9	8.6	36.8	45.6	4.5	93.3	87.4	79	24.9%	-
L_10700	HA-353	107+00	14 RT	0.0-0.8	A-7-6(11)	42	13	10.8	9.8	40	39.4	0.9	98.4	90.4	80.6	30.9%	-
L_10829	HA-355	108+29	62 LT	0.0-0.6	A-7-5(10)	44	14	12.2	15.5	39.4	33.4	5	93.6	86.3	71.4	25.8%	-
L_10897	HA-357	108+97	16 RT	0.0-0.7	A-7-6(10)	41	12	8	13.3	41.7	37	4.6	92.2	87	76.1	23.1%	-
L_11000	HA-360	110+00	21 RT	0.0-0.5	A-7-5(11)	49	15	18.5	10.8	37.7	33	0	95.8	81.9	69.9	29.7%	-
L_11300	HA-363	113+00	0	0.0-0.8	A-7-6(12)	41	13	9.2	9.1	43.3	38.4	0.5	98.3	92.3	82.5	28.4%	-
L_11300	HA-365	113+00	0	4.9-5.5	A-7-5(2)	47	6	33.2	17.6	18.8	30.4	0.9	94.9	71.3	49.7	21.9%	-
L_11500	HA-319	115+00	14 LT	0.6-0.9	A-7-6(20)	50	21	4.5	5.4	40.6	49.5	2.6	90.8	87.9	83.3	20.2%	-
L_11700 LT	HA-329	117+00	30 LT	4.2-4.6	A-7-5(18)	51	15	2.8	8	41.5	47.7	0	99.4	98.2	90.5	22.0%	-
L_11700 RT	HA-323	117+00	30 RT	1.0-1.6	A-7-5(34)	68	33	2.9	6.8	30	60.3	0.2	94	92.2	86.9	27.2%	-
L_11900	HA-332	119+00	13 LT	0.9-1.3	A-7-5(40)	78	33	3.5	4.1	23.6	68.8	0.1	97.7	95.4	91.4	35.2%	-
L_12100	HA-310	121+00	10 LT	2.8-3.3	A-7-5 (29)	68	23	3.9	6.1	15.2	74.8	0	99.9	97.6	91.5	33.5%	-
L_12438	HA-307	124+38	67 RT	3.3-3.6	A-7-6 (14)	42	17	3.4	15.8	34.7	46.1	1.8	94.9	93.7	80.5	32.1%	-
L_12713	SS-260	127+13	67 RT	0.0-1.5	A-7-6(23)	51	22	4.4	6.5	29.7	59.4	0.7	98.8	96.1	89.7	-	-
L_12912	SS-257	129+12	25 LT	0.0-1.5	A-7-6(19)	49	21	5.3	7.7	31.7	55.3	1.6	93	89.7	82.9	-	-
L_13100	SS-254	131+00	30 LT	0.0-1.5	A-7-5(27)	56	24	1.6	3.7	29.3	65.4	0	96.7	95.8	92.9	-	-
L_13306	SS-251	133+06	32 LT	0.0-1.5	A-7-6(16)	46	18	5.9	7.7	27.3	59.1	3.4	90.2	86.6	79.7	-	-
L_13500	SS-243	135+00	14 RT	4.3-5.8	A-4(1)	33	1	13.1	18.2	43.9	242.8	0.2	97.3	89.1	71.3	-	-
L_13700	SS-246	137+00	14 RT	4.1-5.6	A-5(5)	46	7	22.7	19	30.9	27.4	0	98.9	84.3	61.6	35.9%	-
L_13900	SS-245B	139+00	28 RT	0.0-1.5	A-7-6(18)	47	20	5.5	7.1	28.3	59.1	0.9	92.8	89.6	82.9	-	-
L_14100	SS-248	141+00	19 RT	0.0-1.5	A-7-6(13)	42	17	9.2	8.7	34.9	47.2	1.3	91.8	85.9	77.2	-	-
L_14352	SS-265	143+52	14 RT	0.0-1.5	A-7-5(22)	60	22	5.1	8.1	26.6	60.2	3.1	90.5	87.4	80.5	-	-
L_14500	SS-270	145+00	37 RT	8.7-10.3	A-4(7)	39	10	27.7	25.3	33.5	13.5	0.2	92.4	76.5	74.4	-	-
L_14700	SS-273	147+00	21 RT	3.7-5.3	A-7-5(19)	60	28	5.4	11.6	38.8	44.2	2.4	77.7	75.2	67.5	-	-
L_14894	SS-234	148+94	30 LT	0.0-1.5	A-4 (1)	27	4	20.4	13.6	43.3	22.7	3.4	90	74	63.5	14.3%	-
L_15100	SS-231	151+00	3 LT	0.0-1.5	A-6 (9)	35	13	10.8	10.5	35.5	43.2	2	92.3	83.8	75.9	19.0%	-
L_15300	SS-227	153+00	25 RT	0.0-1.5	A-4 (5)	39	7	18.4	13.9	32.4	35.3	0	96.8	83.7	69.2	14.1%	-
L_15493	SS-225	154+93	15 LT	3.7-5.2	A-7-5 (32)	67	29	5.1	7.4	31.4	56.1	0.7	98.5	95.2	88.2	33.4%	-
L_15696	SS-220	156+96	34 RT	0.0-1.5	A-7-6 (36)	74	47	6.5	5.3	19.1	69.1	0.9	81.9	77.7	73.5	21.7%	-
L_15897 LT	SS-215	158+97	27 LT	0.0-1.5	A-7-5 (22)	56	25	8.4	7.7	22.6	61.3	4.8	92.8	86.7	79.9	26.3%	-
L_16100 LT	SS-204	161+00	55 LT	8.5-10.0	A-6 (10)	40	11	5.2	14.8	52.2	27.8	0.2	5	92.3	81.9	8.8%	-
L_16100 RT	SS-201	161+00	54 RT	18.8-20.3	A-4 (1)	40	8	35.6	21.2	24.9	18.3	0	92.7	68	44.2	16.6%	-
L_16300 RT	SS-191	163+00	24 RT	3.9-5.4	A-7-5 (37)	78	27	1.1	3.3	15.3	80.3	0	97.3	96.8	94	29.9%	-
Y11_1250	HA-350	12+50	80 RT	0.0-0.7	A-7-5(16)	48	17	8.5	8.7	39.1	43.7	0	96.6	90.5	82.4	18.4%	-
Y9_1385	HA-367	13+85	4 LT	0.0-0.5	A-7-5(24)	53	23	5.3	6.3	29.6	58.8	0.2	97.1	93.5	87.6	31.6%	-
Y11_2408	SS-238	24+08	95 RT	0.0-1.5	A-7-6 (12)	44	19	17.9	9.3	5.8	67	1	92.3	77.7	70	17.8%	-

Laboratory Testing Summary

Project Number: 48548.1.1  
 TIP Number: R-5930  
 City/County/State: Pittsboro, Chatham County, North Carolina  
 Description: Chatham Park Way New Location Roadway from North of Suttles Road to US 15/501

Boring No.	Sample No.	Station	Offset (feet)	Depth Interval (feet)	AASHTO Class.	L.L.	P.I.	% by Weight				% Retained #4 Sieve	% Passing (sieves)			% Moisture	% Organic
								Coarse Sand	Fine Sand	Silt	Clay		#10	#40	#200		
-Y11- 15+84 EB ISS	S-13	15+84	12 RT	1.4-3.0	A-4 (1)	28	8	23.1	26.7	29.7	20.5	5.0	82	71	46	12.8%	-
-Y11- 15+84 EB ISS	S-14	15+84	12 RT	3.0-4.3	A-7-6 (15)	45	21	11.2	15.7	27.7	45.4	2.0	95	87	74	23.7%	-
-Y11- 23+07 EB LTL	S-15	23+07	6 RT	1.3-3.3	A-7-6 (26)	57	32	10.9	9.8	25.5	53.8	1.0	95	87	78	27.1%	-
-Y11- 23+07 EB LTL	S-16	23+07	6 RT	3.3-4.3	A-6 (6)	37	16	23.2	17.3	25.1	34.4	8.0	85	71	54	38.6%	-
-Y11- 23+07 EB OSL	S-1	23+07	36 RT	1.2-2.5	A-7-6 (25)	56	27	5.4	11.7	31.0	51.9	2.0	96	92	84	28.1%	-
-Y11- 23+07 EB OSL	S-2	23+07	36 RT	2.5-4.3	A-7-5 (24)	57	27	4.5	12.8	28.5	54.2	2.0	93	90	82	30.1%	-
-Y11- 30+03 EB ISL	S-17	30+03	17 RT	1.5-2.5	A-6 (1)	32	12	20.2	17.1	34.7	28.0	7.0	59	51	40	19.6	-
-Y11- 30+03 EB ISL	S-18	30+03	17 RT	2.5-4.3	A-7-6 (30)	63	34	10.0	7.2	26.1	56.7	2.0	95	87	81	25.8%	-
-Y11- 16+52 WB OSS	S-12	16+52	42 LT	1.4-4.3	A-1-b (0)	25	6	45.2	21.8	20.7	12.3	21.0	65	43	24	7.3%	-
-Y11- 16+52 WB ISS	S-9	16+52	14 LT	1.3-4.3	A-2-4 (0)	25	6	45.6	20.6	18.2	15.6	16.0	70	46	26	9.3%	-
-Y11- 26+17 WB LTL	S-7	26+17	13 LT	1.4-4.0	A-6 (2)	37	17	32.8	16.4	22.8	28.0	28.0	68	51	37	12.2%	-
-Y11- 30+00 WB OSS	S-11	30+00	41 LT	0.7-4.3	A-6 (4)	36	14	21.0	14.0	32.4	32.6	11.0	70	59	49	18.0%	-
-Y11- 33+07 WB ISS	S-6	33+07	13 LT	0.8-3.3	A-2-4 (0)	30	9	32.3	16.3	29.8	21.6	24.0	64	47	35	7.2%	-
Y11_12+50	Bulk 1	12+50	98 RT	0.0-3.0	A-7-5 (22)	66	29	4.0	6.5	15.6	73.9	3	78	76	71	33.7%	-
Y11_21+00	Bulk 2	21+00	94 RT	0.0-3.0	A-7-5 (45)	79	40	2.6	4.5	15.0	77.9	0	95	94	90	39.1%	-
L_45+00	Bulk 3	45+00	50 LT	0.0-3.0	A-4 (5)	38	8	15.1	14.6	46.8	23.5	0	89	79	66	13.3%	-
L_75+00	Bulk 4	75+00	38 LT	0.0-3.0	A-7-6 (11)	44	20	15.2	18	27.4	39.4	1	90	80	65	20.5%	-