

SEE SHEET 3 FOR PLAN SHEET LAYOUT  
AT TIME OF INVESTIGATION

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4709	1	12

CONTENTS

LINE	STATION	PLAN	PROFILE
-L-	10+50 TO 50+00	5-7	10, 11
-Y-	10+50 TO 39+00	5, 8, 9	10, 11

**ROADWAY  
SUBSURFACE INVESTIGATION**

COUNTY CUMBERLAND

PROJECT DESCRIPTION SR 1112 (ROCKFISH RD.) FROM  
WEST OF SR 1115 (GOLFVIEW RD.) TO NC 59  
(MAIN ST.) AND SR 1115 FROM SR 1112 TO NC 59

**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 1919 TOT-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:

1. 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.
2. 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

N.O. MOORE

A.N. KINTNER

D.G. PINTER

INVESTIGATED BY N.O. MOORE

DRAWN BY A.N. KINTNER

CHECKED BY N.O. MOORE

SUBMITTED BY N.T. ROBERSON

DATE JULY 2019

REFERENCE: U-4709

PROJECT: 39073



DocuSigned by:

*Nicholas O'Neil Moore* 7/31/2019

8636AEA7851411

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 ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 208, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

Table with columns for General Class, Group Class, Symbol, % Passing, Material Passing, Group Index, Usual Types of Major Materials, Gen. Rating as Subgrade, and Soil Legend symbols for Granular, Silty-clay, and Organic materials.

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

CONSISTENCY OR DENSENESS

Table mapping Primary Soil Type to Consistency (Very Loose to Very Dense) and Range of Unconfined Compressive Strength (0.25 to > 4 tons/ft²).

TEXTURE OR GRAIN SIZE

Table showing U.S. Std. Sieve Size (4 to 270) and corresponding grain size ranges for Boulder, Cobble, Gravel, Coarse Sand, Fine Sand, Silt, and Clay.

SOIL MOISTURE - CORRELATION OF TERMS

Table correlating Soil Moisture Scale (Liquid Limit, Plastic Limit, Optimum Moisture Shrinkage Limit) with Field Moisture Description (Saturated, Wet, Moist, Dry).

PLASTICITY

Table showing Plasticity Index (PI) ranges (0-5 to 26 or more) and corresponding Dry Strength (Very Low to High).

COLOR

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

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. 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.

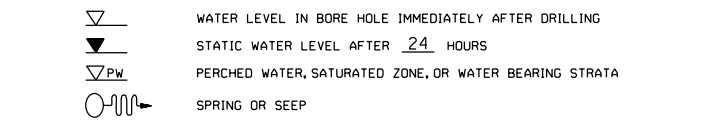
COMPRESSIBILITY

Slightly Compressible (LL < 31), Moderately Compressible (LL = 31 - 50), Highly Compressible (LL > 50).

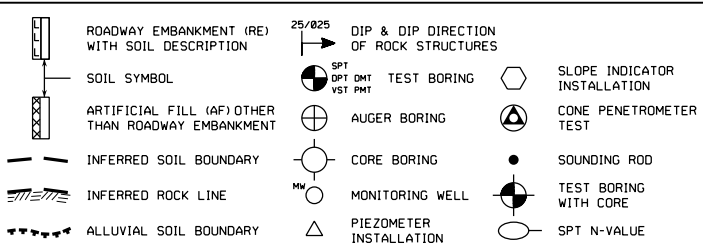
PERCENTAGE OF MATERIAL

Table showing percentages for Organic Material, Granular Soils, Silty-clay Soils, and Other Material (Trace, Little, Moderately, Highly Organic).

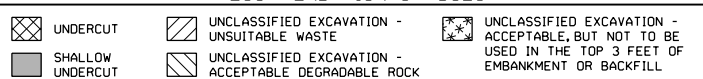
GROUND WATER



MISCELLANEOUS SYMBOLS



RECOMMENDATION SYMBOLS



ABBREVIATIONS

Table of abbreviations for Auger Refusal, Boring Terminated, Clay, Cone Penetration Test, Coarse, Dilatometer Test, Dynamic Penetration Test, Void Ratio, Fine, Fossiliferous, Fractured, Fragments, Highly, Medium, Micaceous, Moderately, Non Plastic, Organic, Pressuremeter Test, Saprolite, Sand, Silty, Slightly, Tricone Refusal, Moisture Content, Very, Vane Shear Test, Weathered, Unit Weight, Dry Unit Weight, Sample Abbreviations (S, SS, ST, RS, RT, CBR), and Ratios.

EQUIPMENT USED ON SUBJECT PROJECT

Checklist for equipment used on project, including Drill Units (CME-45C, CME-55, CME-550, Vane Shear Test, Portable Hoist), Advancing Tools (Clay Bits, Continuous Flight Auger, Hollow Augers, Hard Faced Finger Bits, Tung-Carbide Inserts, Casing, Tricone, Core Bit), Hammer Type (Automatic, Manual), Core Size (-B, -H, -N), and 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. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

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

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

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

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

WEATHERING

Table describing weathering levels: Fresh, Very Slight (IV SLI), Slight (SLI), Moderate (MOD), Moderately Severe (MOD. SEV.), Severe (SEV.), Very Severe (V SEV.), and Complete. Includes descriptions of rock appearance and strength changes.

ROCK HARDNESS

Table describing rock hardness levels: Very Hard, Hard, Moderately Hard, Medium Hard, Soft, and Very Soft. Includes descriptions of scratchability and testing methods.

FRACTURE SPACING

Table mapping Fracture Spacing (Very Wide to Very Close) to Bedding Thickness (Very Thickly Bedded to Thinly Laminated).

INDURATION

Table describing induration levels: Friable, Moderately Indurated, Indurated, and Extremely Indurated. Includes descriptions of material behavior and testing requirements.

TERMS AND DEFINITIONS

Table of definitions for terms: Alluvium, Aquifer, Arenaceous, Argillaceous, Artesian, Calcareous, Colluvium, Core Recovery, Dike, Dip, Dip Direction, Fault, Fissile, Float, Flood Plain, Formation, Joint, Ledger, Lens, Mottled, Perched Water, Residual Soil, Rock Quality Designation, Saprolite, Sill, Slickenside, Standard Penetration Test, Strata Rock Quality Designation, and Topsoil.

BENCH MARK:

ELEVATION: FEET

NOTES:

ROADWAY BORING ELEVATIONS TAKEN FROM TIN FILE U4709-1s.tin.tin DATED 1/21/2019.

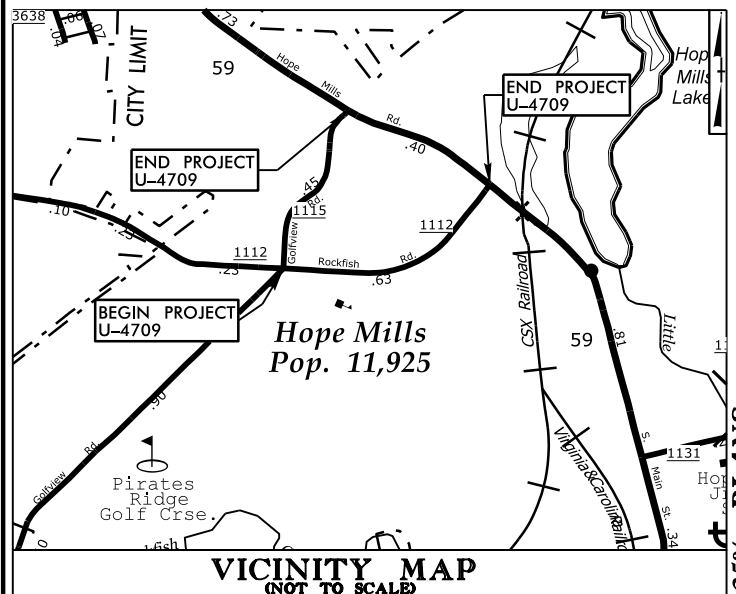
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**TIP PROJECT: U-4709**

**CONTRACT:**

See Sheet 1B For Conventional symbols



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**CUMBERLAND COUNTY**

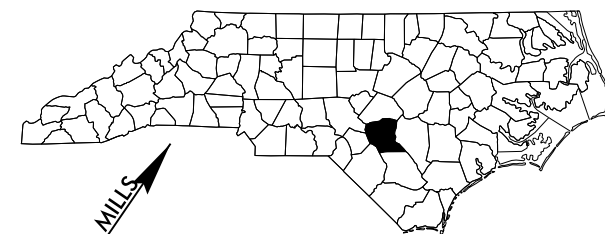
**LOCATION:** SR 1112 (ROCKFISH ROAD) FROM WEST OF SR 1115 (GOLFVIEW ROAD) TO NC 59 (MAIN STREET) AND SR 1115 (GOLFVIEW ROAD) FROM SR 1112 (ROCKFISH ROAD) TO NC 59 (MAIN STREET)

**TYPE OF WORK:** GRADING, DRAINAGE, AND PAVING

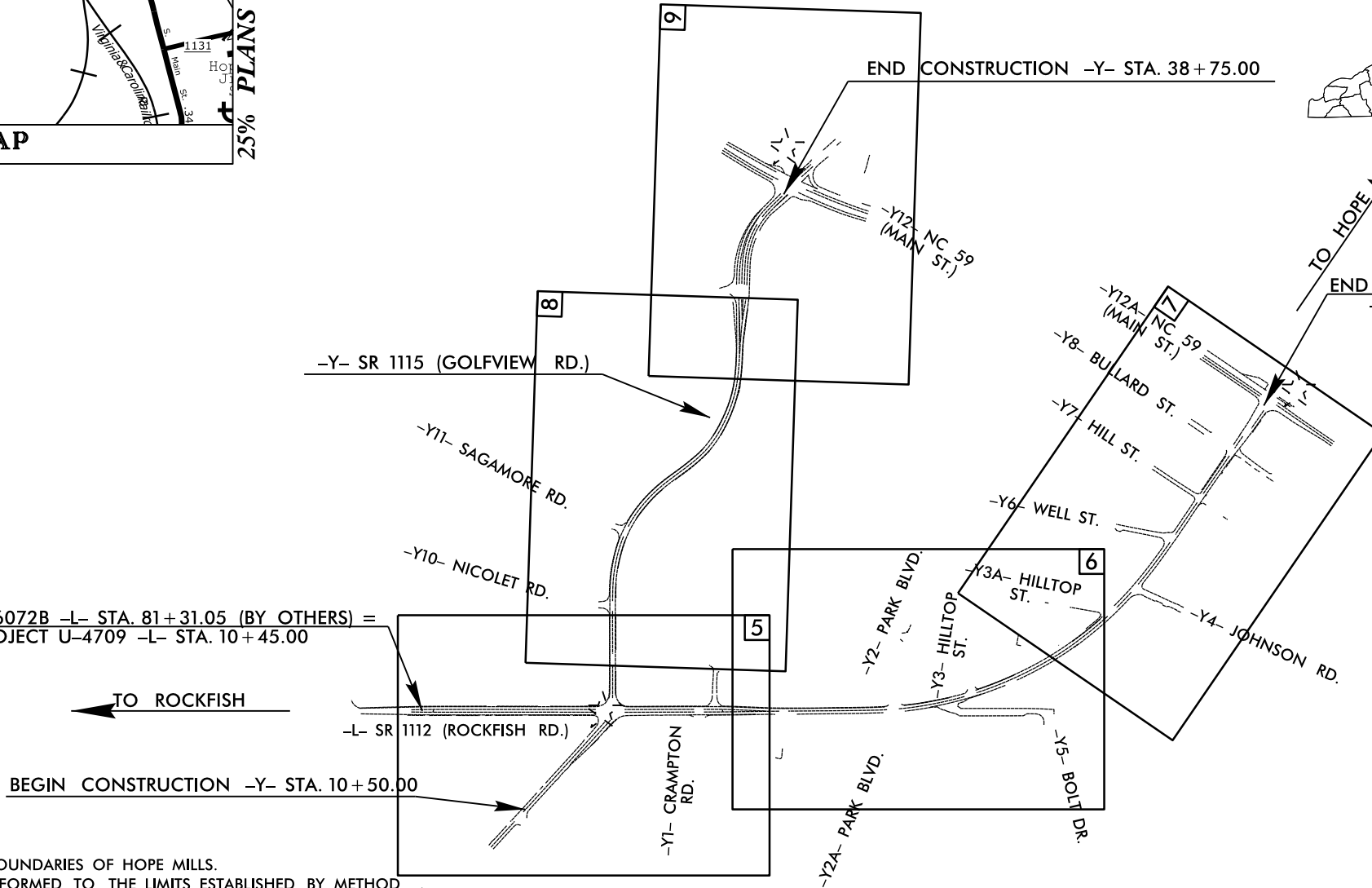
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4709	3	12
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
39073.1.1	N/A	PE	



EXISTING SIGNAL

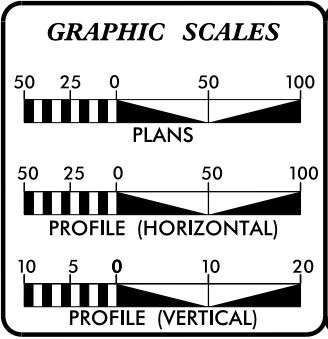


END TIP PROJECT U-6072B -L- STA. 81+31.05 (BY OTHERS) =  
BEGIN TIP PROJECT U-4709 -L- STA. 10+45.00



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF HOPE MILLS.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
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**DESIGN DATA**

ADT 2017 =	10000
ADT 2040 =	13200
K =	9 %
D =	55 %
T =	4 % *
V =	40 MPH
* TTST = 1% DUAL = 3%	
FUNC CLASS =	MINOR ARTERIAL
	"REGIONAL TIER"

**PROJECT LENGTH**

LENGTH -L- ROADWAY TIP PROJECT U-4709 = 0.748 MILES  
TOTAL LENGTH TIP PROJECT U-4709 = 0.748 MILES

Plans Prepared For NCDOT By:

**SEPI**  
ENGINEERING & CONSTRUCTION  
1025 Wade Avenue  
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Fax: 919-789-9591  
License: C-2197

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MAY 2020

LETTING DATE:  
MAY 2022

STEVEN L. SCOTT, PE  
PROJECT ENGINEER

ROBBIE KIRK, PE  
PROJECT DESIGN ENGINEER

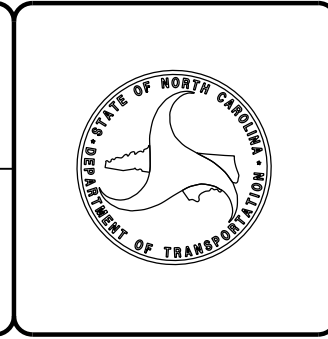
SEAN MATUSZEWSKI, PE  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

July 22, 2019

STATE PROJECT: 39073.1.1 (U-4709)  
FEDERAL PROJECT:  
COUNTY: CUMBERLAND

DESCRIPTION: Widening of SR 1112 (Rockfish Road) From SR 1115 (Golfview Road) To NC 59 (Main Street) And Widening of SR 1115 (Golfview Road) From SR 1112 (Rockfish Road) To NC 59 (Main Street)

SUBJECT: Geotechnical Report – Inventory

The Geotechnical Engineering Unit has completed a subsurface investigation for this project and presents the following inventory.

**Project Description**

This project consists of widening of SR 1112 (Rockfish Road) from SR 1115 (Golfview Road) to NC 59 (Main Street) and widening of SR 1115 (Golfview Road) from SR 1112 (Rockfish Road) to NC 59 (Main Street).

A geotechnical investigation was conducted during June of 2019. Thirty-four hand auger borings were performed by the Geotechnical Engineering Unit. Representative soil samples were collected for visual classification in the field.

The following alignments, totaling 1.318 miles, were investigated. Subsurface plans and profiles of these alignments are included in this report.

<u>Line</u>	<u>Stations</u>
-L-	10+50 to 50+00
-Y-	10+50 to 39+00

**Physiography and Geology**

The project is located within the city limits of Hope Mills, and within the Coastal Plain physiographic province of North Carolina. The site consists of Tertiary-aged sands of the Coastal Plain. The topography is a mostly flat. The widening project consists of a mixture of small businesses, single-family homes and woods.

**Soils Properties**

Soils encountered during this investigation are roadway embankment and undivided coastal plain.

Roadway Embankment soils are present throughout the entire project. These soils primarily consist of gray-brown, moist, very loose to loose, silty sand (A-2-4).

Coastal Plain soils are also present throughout the entire project. These soils are characterized by tan-orange, moist, very loose to loose, silty sand (A-2-4).

**Groundwater**

Groundwater measurements were taken in June of 2019 during average rainfall conditions. Groundwater was not present in any borings.

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL ENGINEERING UNIT  
1589 MAIL SERVICE CENTER  
RALEIGH NC 27699-1589

Telephone: 919-707-6850  
Fax: 919-250-4237  
Customer Service: 1-877-368-4968

Website: [www.ncdot.gov](http://www.ncdot.gov)

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

8/17/99  
2017 NO BUILD ADT  
2040 BUILD ADT  
SR 1115 GOLFVIEW ROAD  
12400  
16000  
SR 1112 ROCKFISH RD 10000 13200 3200 4600 1600 4600 8800 SR 1112 ROCKFISH RD 800 2400 800 2000  
2017 NO BUILD ADT  
2040 BUILD ADT  
SR 1115 GOLFVIEW ROAD  
9600  
11200  
SR 1115 GOLFVIEW ROAD  
2017 NO BUILD ADT  
2040 BUILD ADT

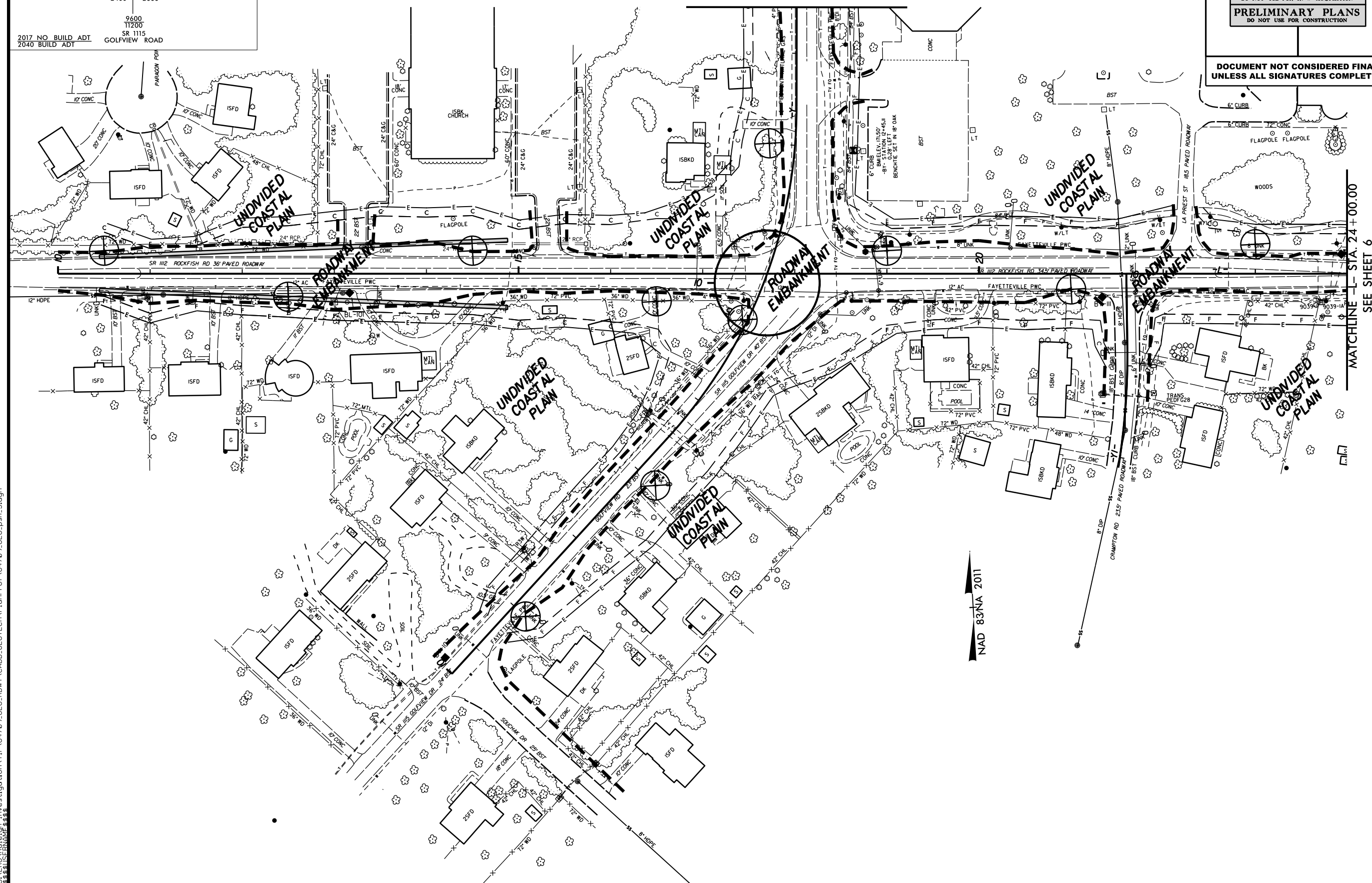


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PROJECT REFERENCE NO. <b>U-4709</b>	SHEET NO. <b>5</b>
R/W SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

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

MATCHLINE -Y- STA. 18+50.00  
SEE SHEET 8



MATCHLINE -L- STA. 24+00.00  
SEE SHEET 6

2017 NO BUILD ADT  
2040 BUILD ADT  
SR 1115 GOLFVIEW ROAD  
12400  
16000  
SR 1112 ROCKFISH RD 10000 13200 3200 4600 1600 4600 8800 SR 1112 ROCKFISH RD 800 2400 800 2000  
2017 NO BUILD ADT  
2040 BUILD ADT  
SR 1115 GOLFVIEW ROAD  
9600  
11200  
SR 1115 GOLFVIEW ROAD  
2017 NO BUILD ADT  
2040 BUILD ADT



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PROJECT REFERENCE NO. SHEET NO.

U-4709 7

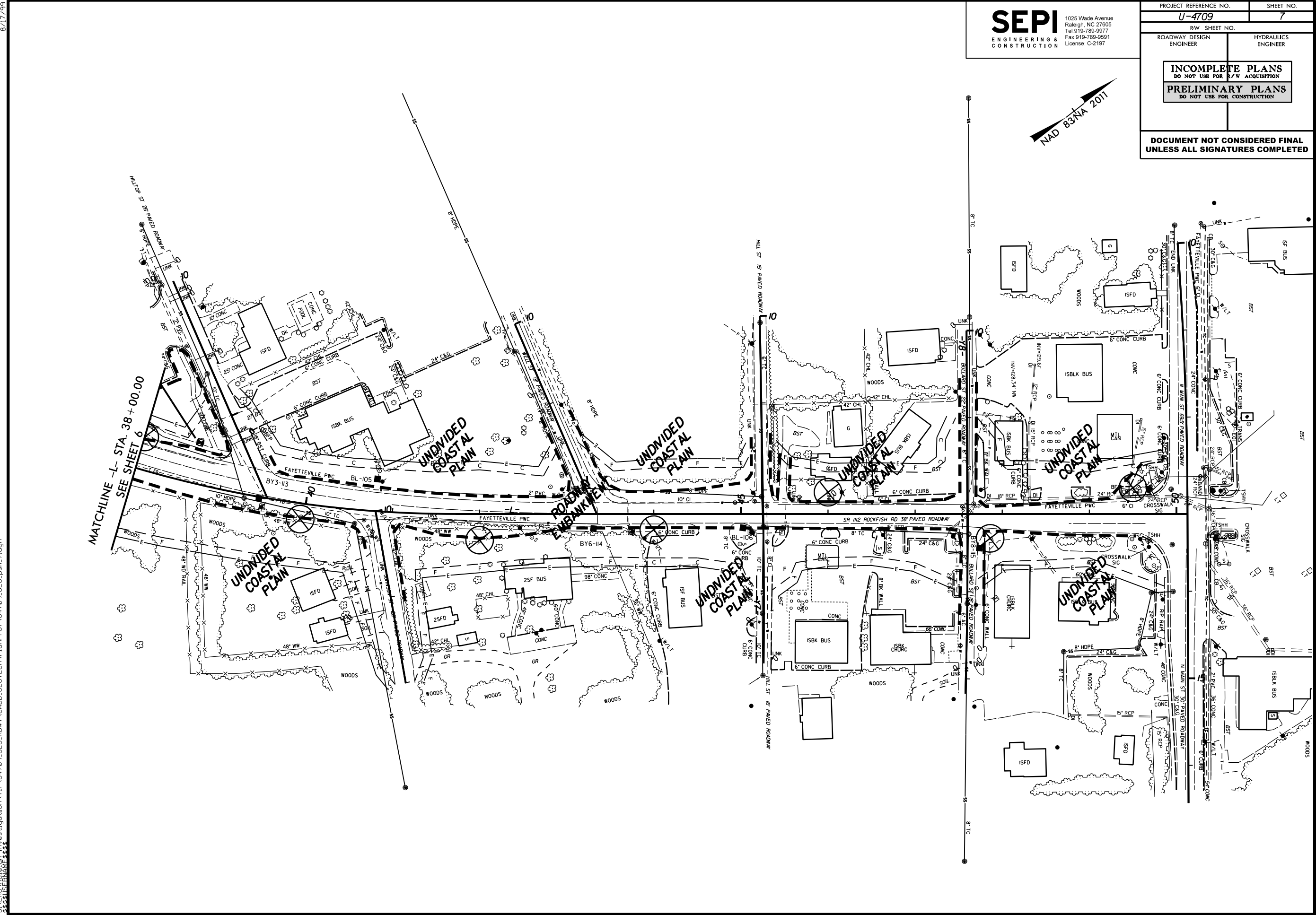
R/W SHEET NO. HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

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**PRELIMINARY PLANS**  
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MATCHLINE -L- STA 38+00.00  
SEE SHEET 6

UNDIVIDED COASTAL PLAIN

UNDIVIDED COASTAL PLAIN

UNDIVIDED COASTAL PLAIN

UNDIVIDED COASTAL PLAIN

UNDIVIDED COASTAL PLAIN

UNDIVIDED COASTAL PLAIN

UNDIVIDED COASTAL PLAIN

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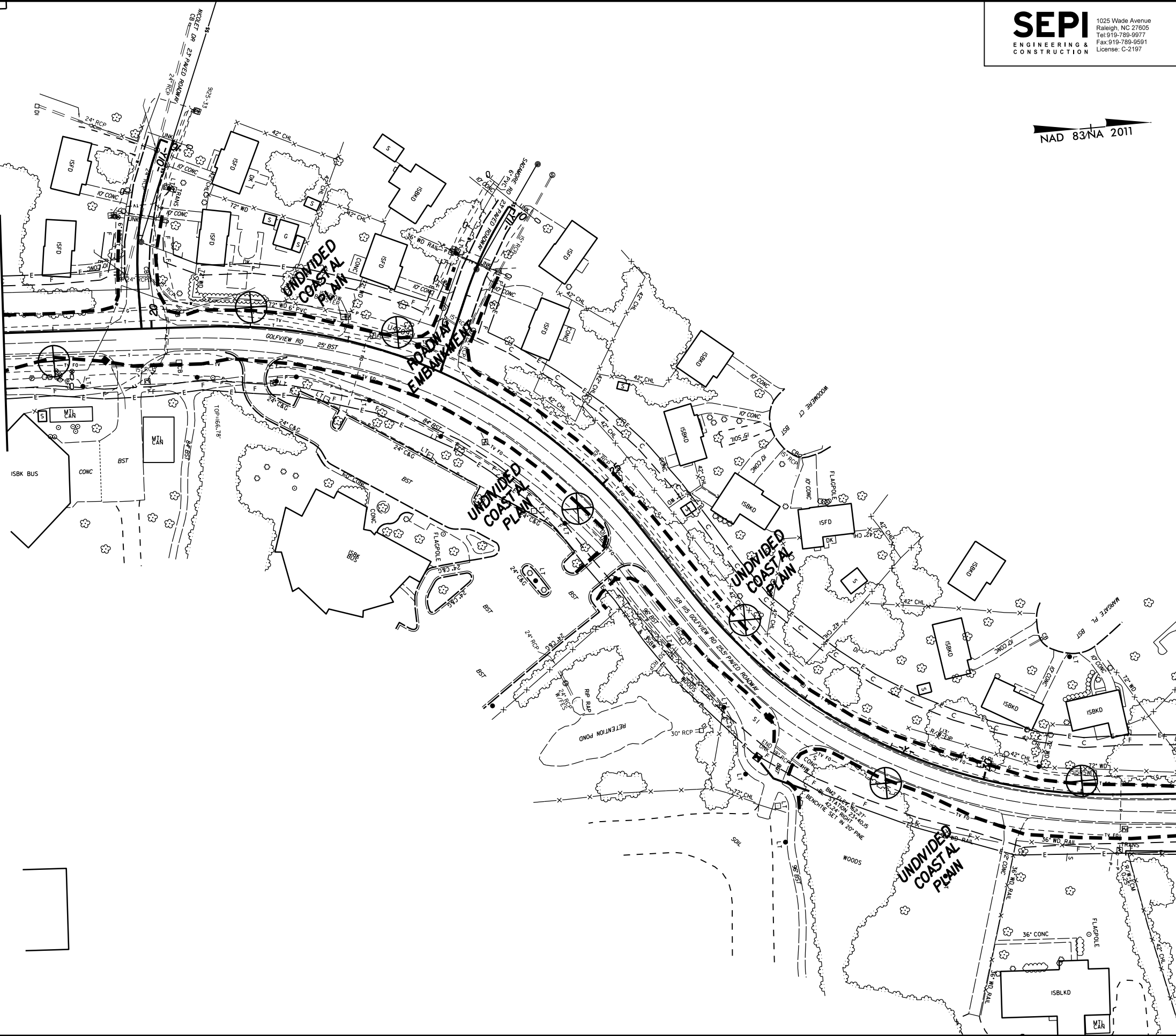
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PROJECT REFERENCE NO. <b>U-4709</b>		SHEET NO. <b>8</b>	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION			
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

NAD 83/NA 2011

MATCHLINE -Y- STA. 18 + 50.00  
SEE SHEET 5



MATCHLINE -Y- STA. 32 + 00.00  
SEE SHEET 9

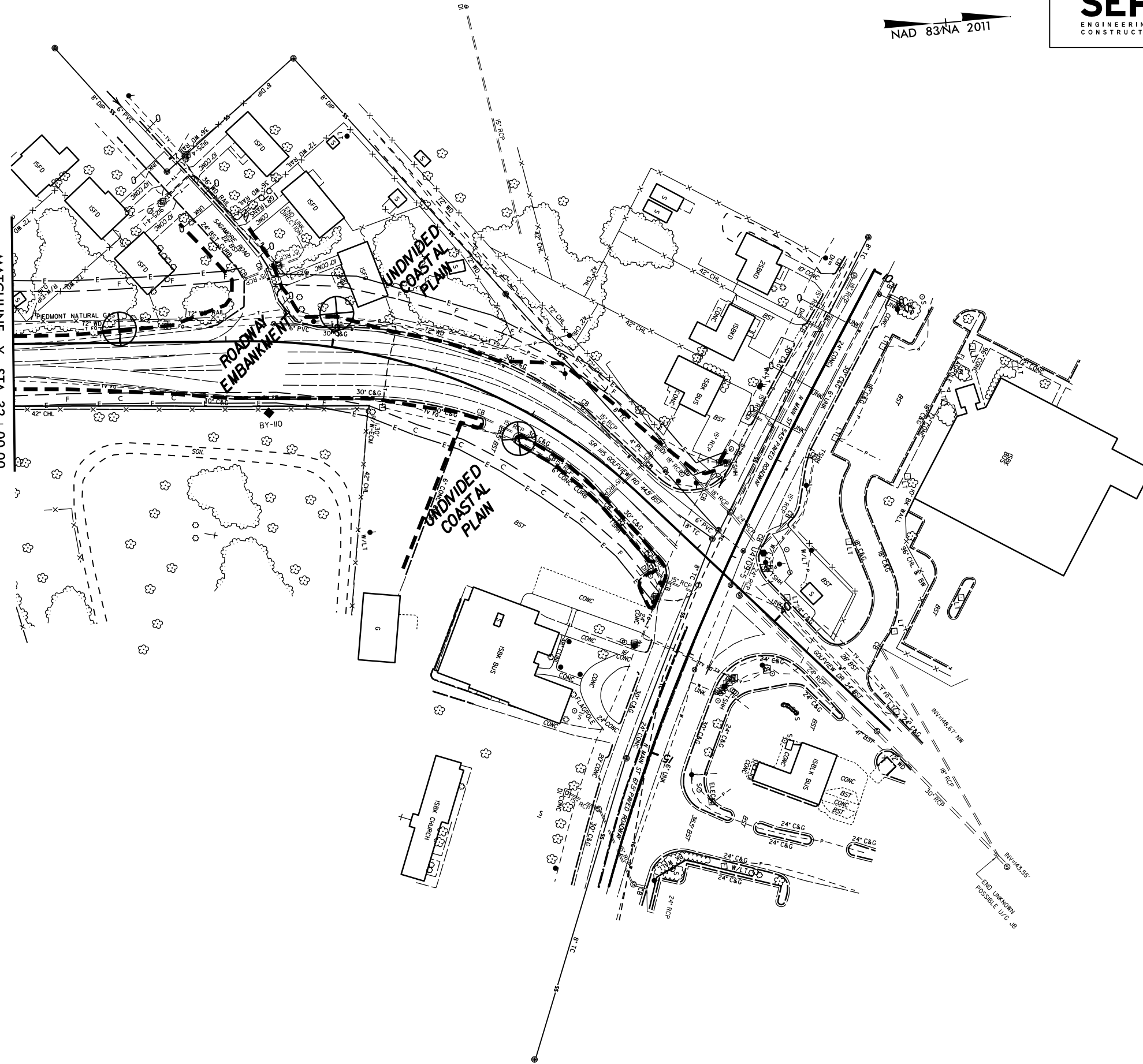
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NAD 83/NA 2011

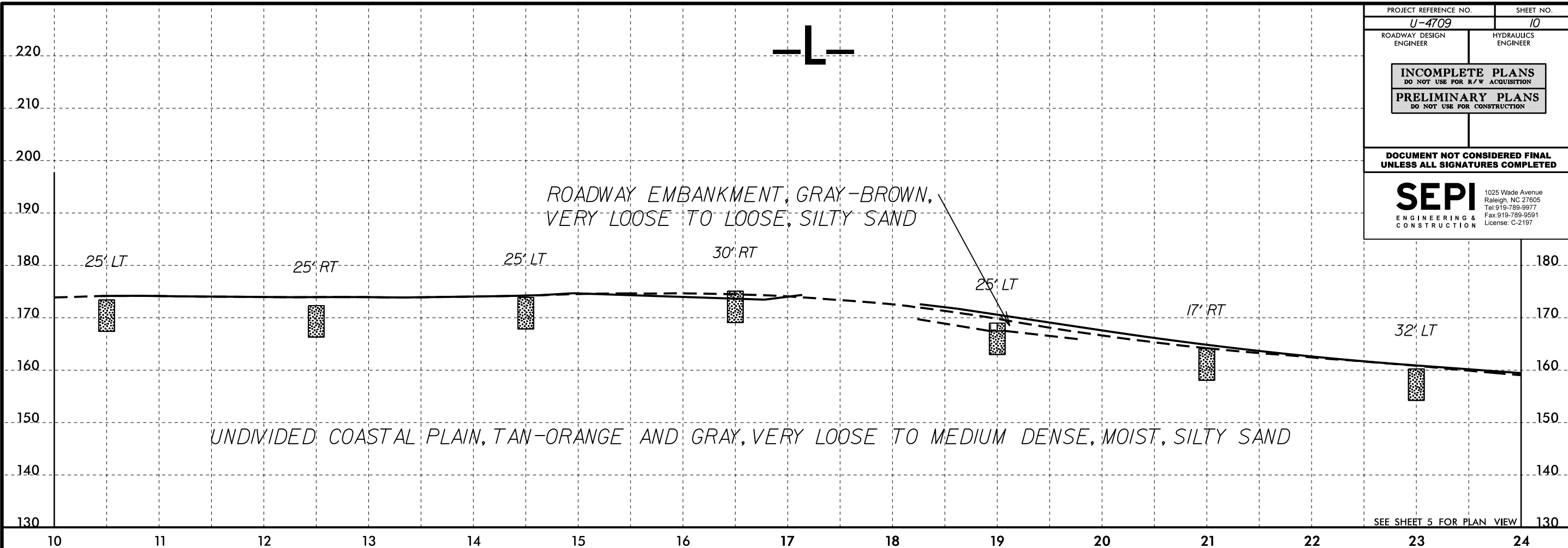
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CONSTRUCTION

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PROJECT REFERENCE NO. <b>U-4709</b>		SHEET NO. <b>9</b>	
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>			

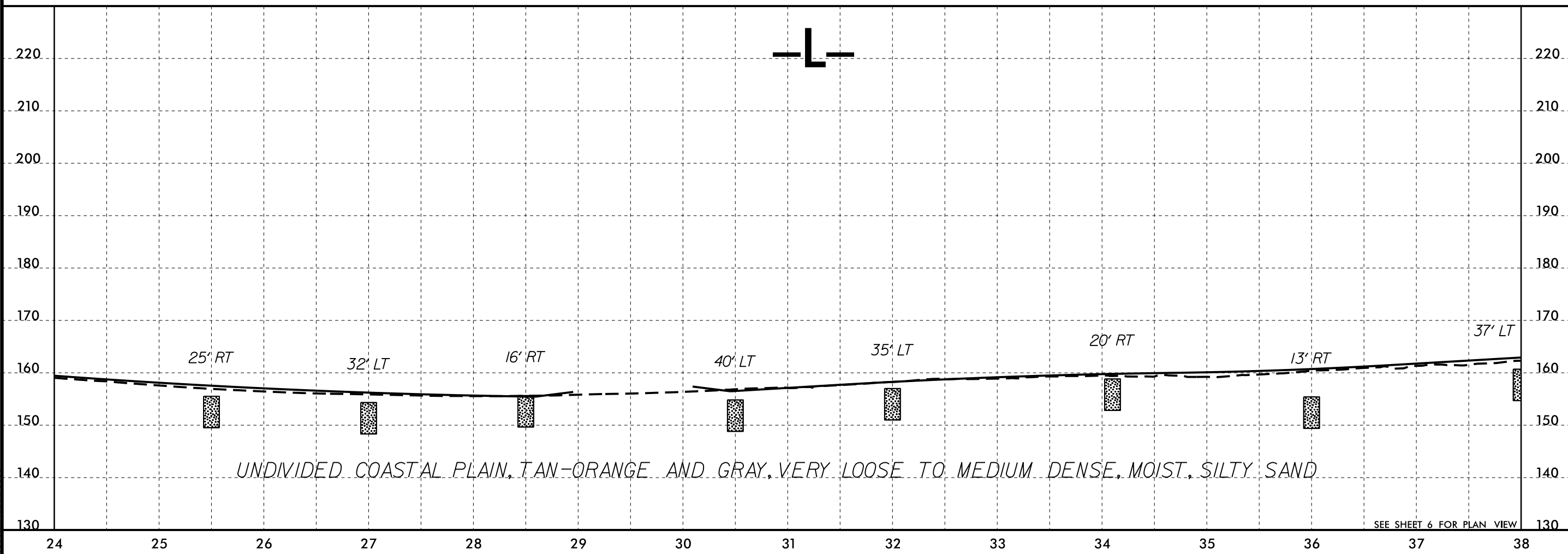
5/28/99

PROJECT REFERENCE NO. <i>U-4709</i>	SHEET NO. <i>10</i>
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	
<b>SEPI</b> ENGINEERING & CONSTRUCTION	
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SEE SHEET 5 FOR PLAN VIEW

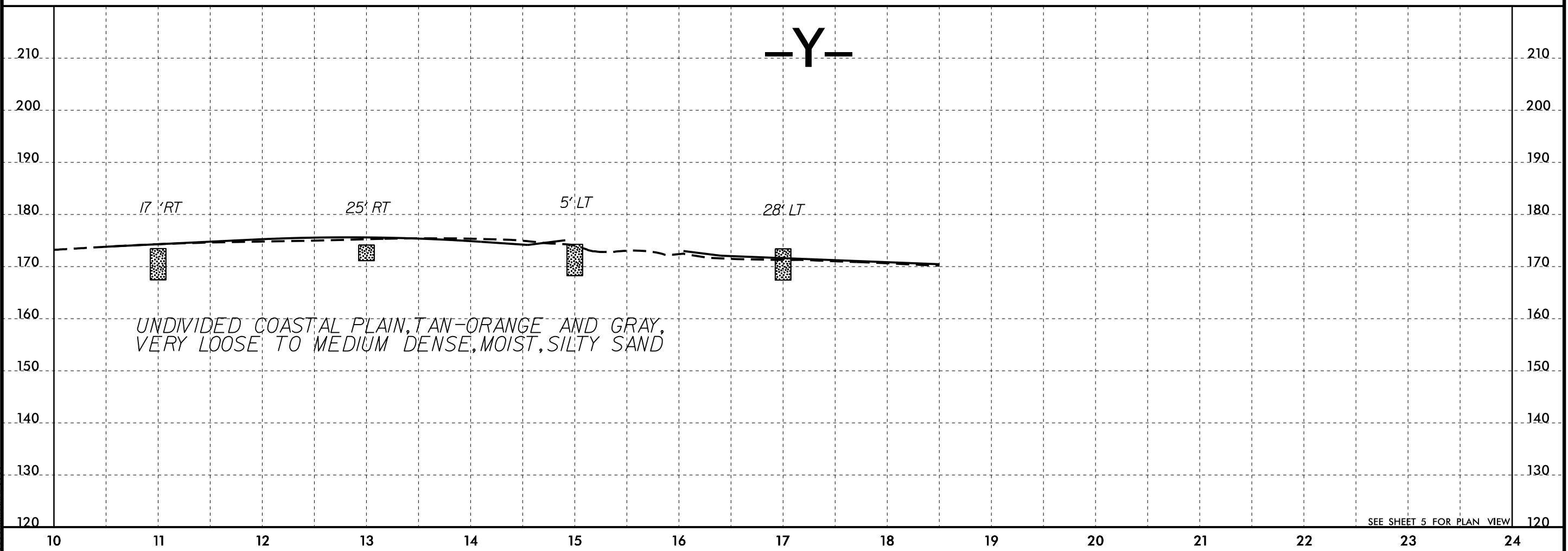
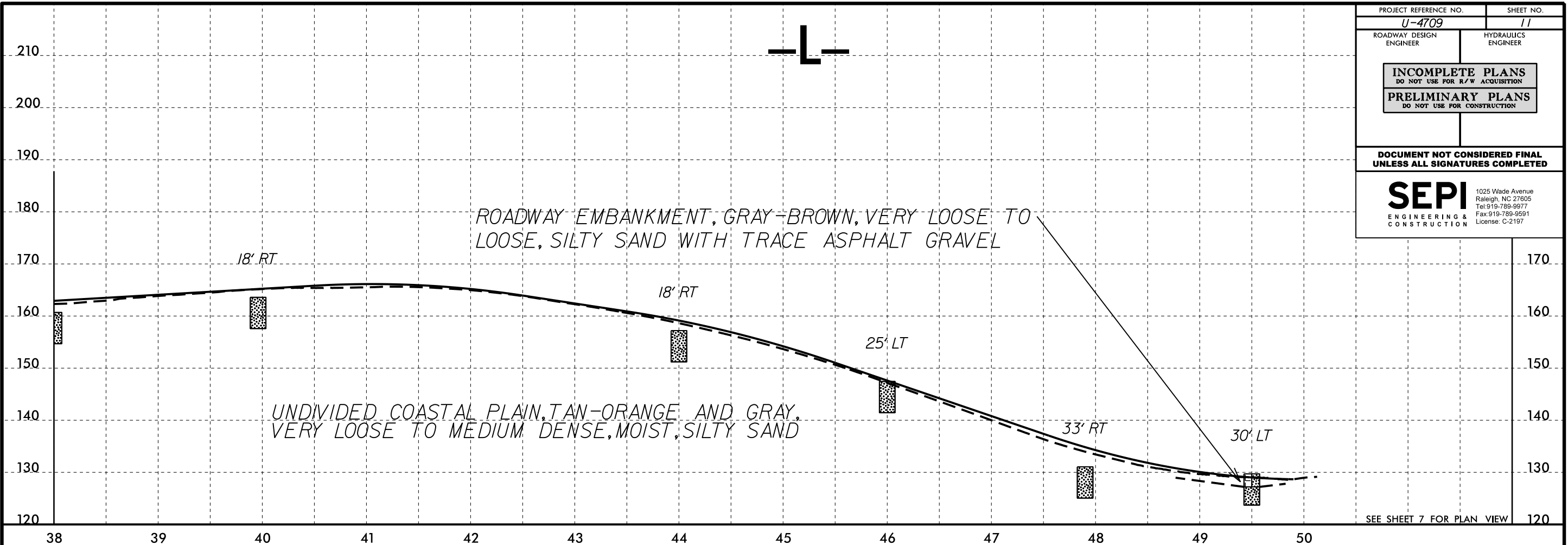
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SEE SHEET 6 FOR PLAN VIEW

5/28/99

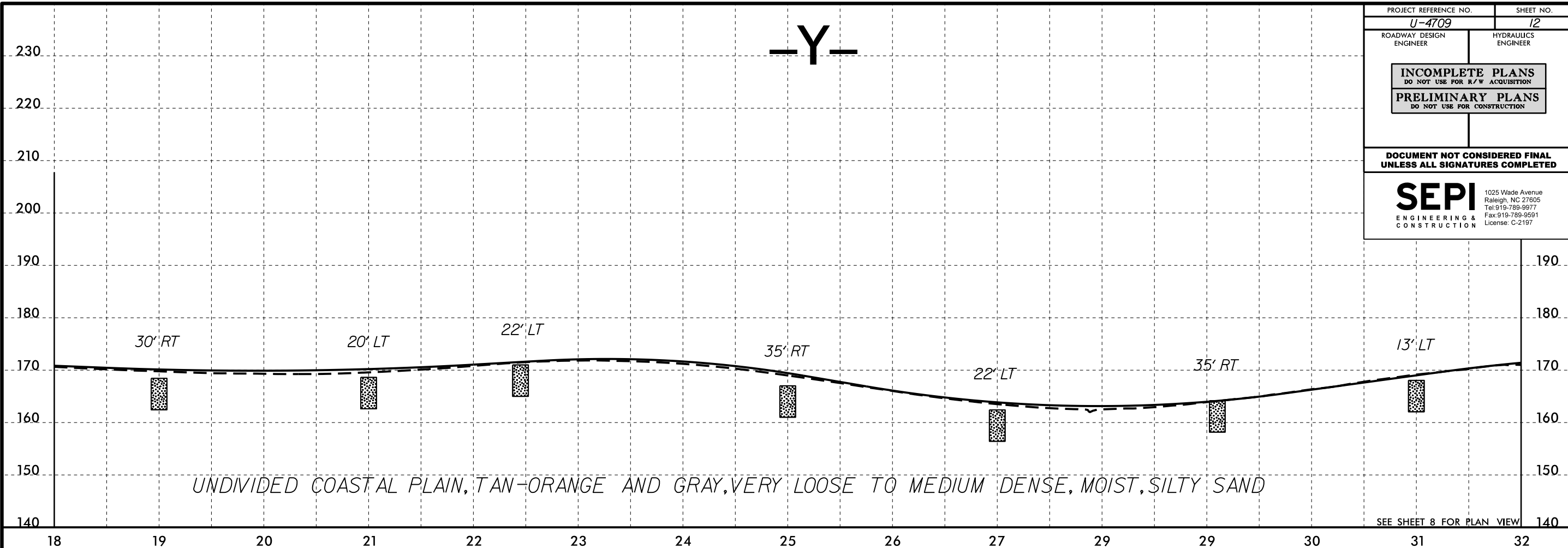
PROJECT REFERENCE NO. <i>U-4709</i>	SHEET NO. <i>11</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	
<b>SEPI</b> ENGINEERING & CONSTRUCTION <small>1025 Wade Avenue Raleigh, NC 27605 Tel: 919-799-9977 Fax: 919-799-9991 License: C-2197</small>	



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5/28/99

PROJECT REFERENCE NO. <i>U-4709</i>	SHEET NO. <i>12</i>
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	
<b>SEPI</b> ENGINEERING & CONSTRUCTION <small>1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9991 License: C-2197</small>	



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