STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2507A	1	63

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
34811.1.1	STP-5238(2)	PE
34811.2.3	STPDA-5238(4)	RW, UTIL
34811.3.5	STPDA-5238(5)	CONST.

ID: U-2507A

CONTRACT: C202849

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

CONTENTS

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

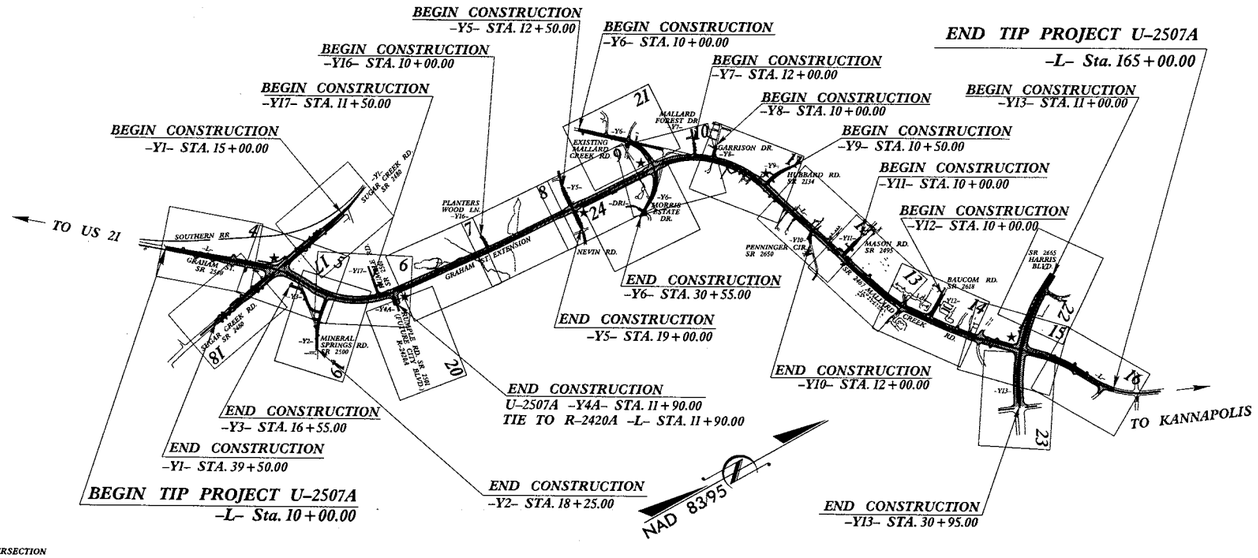
ROADWAY SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 34811.1.1 F.A. PROJ. STP-5238(2)

COUNTY MECKLENBURG

PROJECT DESCRIPTION CHARLOTTE - SR 2467 (MALLARD CREEK RD.) FROM GRAHAM STREET EXTENSION TO SR 2665 (HARRIS BLVD.)

INVENTORY



★ SIGNALIZED INTERSECTION

CAUTION NOTICE

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

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

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

PERSONNEL

J. K. STICKNEY

C. L. SMITH

M. MAULDIN

INVESTIGATED BY J. E. BEVERLY

CHECKED BY C. B. LITTLE

SUBMITTED BY C. B. LITTLE

DATE OCTOBER 2008

NORTH CAROLINA LICENSED SEAL 11041 GEOLOGIST CLINTON B. LITTLE 12-10-08

DRAWN BY: E. BEVERLY

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

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

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

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

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

SOIL LEGEND AND AASHTO CLASSIFICATION

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

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

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT²)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE	<4	N/A
	LOOSE	4 TO 10	
	MEDIUM DENSE	10 TO 30	
	DENSE	30 TO 50	
	VERY DENSE	>50	
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT	<2	<0.25
	SOFT	2 TO 4	0.25 TO 0.50
	MEDIUM STIFF	4 TO 8	0.5 TO 1.0
	STIFF	8 TO 15	1 TO 2
	VERY STIFF	15 TO 30	2 TO 4
	HARD	>30	>4

TEXTURE OR GRAIN SIZE

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

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

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

SOIL MOISTURE - CORRELATION OF TERMS

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

PLASTICITY

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

COLOR

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

GRADATION

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

ANGULARITY OF GRAINS

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

MINERALOGICAL COMPOSITION

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

COMPRESSIBILITY

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

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL	
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE	1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE	10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME	20 - 35%
HIGHLY ORGANIC	>10%	>20%	HIGHLY	35% AND ABOVE

GROUND WATER

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

MISCELLANEOUS SYMBOLS

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

SAMPLE DESIGNATIONS

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

ABBREVIATIONS

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

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [ ] MOBILE B-___
- [ ] BK-51
- [ ] CME-45C
- [X] CME-550
- [ ] PORTABLE HOIST
- [ ] _____
- [ ] _____

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

HAMMER TYPE:
- [X] AUTOMATIC [ ] MANUAL

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

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

ROCK DESCRIPTION

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

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

WEATHERING

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

ROCK HARDNESS

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

FRACTURE SPACING

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

BEDDING

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

INDURATION

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

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

TERMS AND DEFINITIONS

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

AQUIFER - A WATER BEARING FORMATION OR STRATA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BENCH MARK:

ELEVATION: FT.

NOTES:

REVISED 02/23/06

09/08/99

TIP PROJECT: U-2507A

CONTRACT:

See Sheet 1-A For Index of Sheets

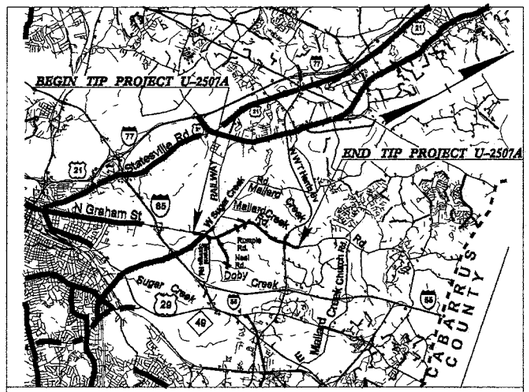
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

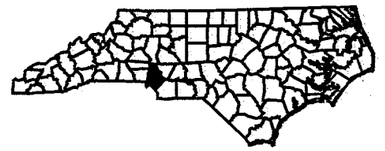
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2507A	2A	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
34811.1.1	STP-5238(2)	PE	

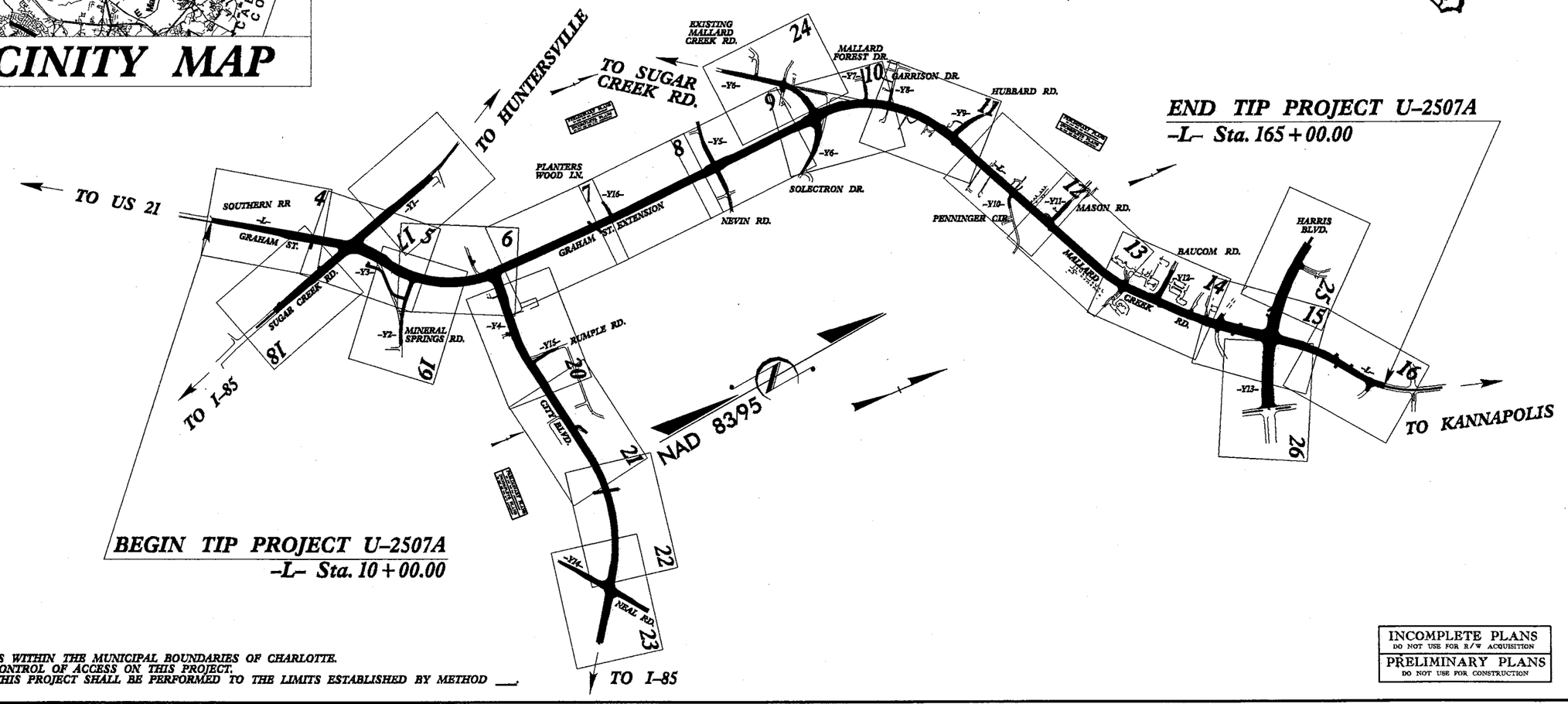
LOCATION: CHARLOTTE – SR 2467 (MALLARD CREEK ROAD) FROM GRAHAM STREET EXTENSION TO SR 2665 (HARRIS BOULEVARD)

TYPE OF WORK: GRADING, DRAINAGE, AND PAVING



VICINITY MAP





END TIP PROJECT U-2507A
-L- Sta. 165+00.00

BEGIN TIP PROJECT U-2507A
-L- Sta. 10+00.00

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CHARLOTTE.
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ___.

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

GRAPHIC SCALES

PLANS 50 25 0 50 100
PROFILE (HORIZONTAL) 50 25 0 50 100
PROFILE (VERTICAL) 50 25 0 50 100

DESIGN DATA

ADT 2010 = 32850
ADT 2030 = 45600
DHV = 10 %
D = 55 %
T = 8 % *
V = 50 MPH

* TTST 2 DUAL 6

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT U-2507A = 2.94 MILES

LENGTH OF STRUCTURE TIP PROJECT U-2507A = 0.00 MILES

TOTAL LENGTH OF TIP PROJECT U-2507A = 2.94 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 15, 2008

LETTING DATE:
AUGUST 17, 2010

TONY HOUSER, PE
PROJECT ENGINEER

JASON TALLEY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE:

ROADWAY DESIGN ENGINEER

SIGNATURE:

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

30-OCT-2008 13:21
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

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

LYNDO TIPPETT
SECRETARY

August 18, 2008

STATE PROJECT:	34811.1.1 (U-2507A)
F.A. PROJECT:	STP – 5238(2)
COUNTY:	Mecklenburg
DESCRIPTION:	Charlotte – SR 2467 (Mallard Creek Rd.) from Graham Street Extension to SR 2665 (Harris Blvd.)
SUBJECT:	Geotechnical Report - Inventory

This report presents the findings of the Geotechnical Investigation for the proposed widening of SR 2467 (Mallard Creek Rd.). Beginning and ending station limits, which define this segment of the project, are from -L- 10+00 to 165+00.

The project begins slightly south of the intersection with Sugar Creek Rd. and essentially trends to the north until ending just past the intersection with Harris Blvd. Distance traversed from beginning to end is 2.94 miles.

The geotechnical field investigation for this project was conducted in December of 2007. An ATV mounted CME 550X drill machine with automatic drop hammer was utilized to perform test borings along the proposed corridor. The following survey lines are addressed in this inventory report:

Line	Station
-L-	10+00 – 165+00
-Y1-	15+00 – 39+50
-Y2-	10+55 – 18+25
-Y3-	10+12 – 16+25
-Y4-	Note - Drilled but was later sent to URS Consultants by the City of Charlotte for redesign.
-Y5-	12+50 – 19+00
-Y6-	10+00 – 29+25
-Y7-	12+00 – 13+74
-Y8-	10+00 – 11+65
-Y9-	10+00 – 14+21
-Y10-	10+44.3 – 12+00
-Y11-	10+00 – 13+43
-Y12-	10+00 – 13+63
-Y13-	11+00 – 30+95

Sheet 3

-Y14-	10+00 – 22+00
-Y15-	10+50 – 13+51
-Y16-	10+00 – 11+87

Areas of Special Geotechnical Interest:

1. *Groundwater:*

Groundwater was not encountered in any of our borings during the course of this investigation.

2. *Non-Crystalline Rock:*

No rock was encountered during the course of this investigation.

3. *High PI Soils:* (Based on PI's of 26 or greater)

The majority of soils along the project corridor are clays. High PI sandy silty and/or silty sandy clays (A-7-5, A-7-6) were encountered at several locations along the project corridor. Noted occurrences of high PI clay soils within 3 feet of proposed grade are listed as follows:

Station Location	AASHTO Soil Type	High PI Value/Range (16+)
-L- 28+00 – 44+00	A-7-5	33 – 52
-L- 75+50 – 81+50	A-7-5	27 – 33
-L- 102+00 – 111+00	A-7-5	30
-L- 113+00 – 130+00	A-7-5	26 – 49

4. *Alluvial Soils / Pond(s):*

The only significant alluvial feature for this project occurs between -L- stations 49+00 – 65+50. This low topographic feature contains 2 ponds, a creek, and some local drainage features. The 1st pond lies outside the construction limits left of -L- stations 49+00 to 53+00 and therefore should be of no consequence. The second pond also lies left of proposed -L- and encroaches onto the construction limits between stations 63+80 and 65+40. Alluvial soils within the entire area are comprised of soft to very stiff sandy silty clay (A-7-6, A-6). The plasticity index values of alluvial soils range from 16 to 36.

5. *Uncompacted (Artificial) Fill:*

The area between -L- stations 67+00 – 73+50 is the site of an artificial fill formed as a result of clearing for adjacent residential construction. Two borings were performed through the fill and encountered up to 20 feet of medium stiff to very stiff sandy silty clay (A-7-5, A-6). A significant amount of wood debris from trees, construction debris, etc., is mixed in with the soil. Another small artificial fill area associated with the burial of a sewer line was encountered as it bisects the project at station 63+00. No borings or soil data was obtained along the sewer pipe fill.

Physiography/Geology:

The project area is in Mecklenburg County in an area of downtown Charlotte. The topography along the project corridor is flat and is surrounded by roads and business structures. Approximate elevation range is 680 – 830 feet along the project.

Geologically this site lies in the Piedmont Physiographic Province, is part of the Charlotte Belt, and contains residual soils derived from the underlying granitic parent rock (DOg).

Soil Properties:

1. *Residual Soils:*
These soils are derived from in place weathering of parent materials. They occur in a variety of consistencies, classifications, and stratigraphic sequences. Residual soils are further subdivided into clays, silts, and sands.

Clays are by and large the predominant soil type encountered throughout the project. These soils are described primarily as medium stiff to very stiff sandy silty and/or silty sandy clay in the AASHTO classifications of A-7-5, A-7-6, and A-6. Clay soils appear well drained with a plasticity index ranging from 11 to 52. Corresponding liquid limit ranges are between 39 and 98.

Silts were encountered infrequently and occur as subsoils with an A-4 AASHTO Classification. They are best described as dense sandy silt.

Sands were only encountered twice on this project and in each instance they occur as subsoils. These soils are described as medium dense clayey silty sand and belong to the A-2-4 AASHTO Classification.

2. *Alluvial Soils:*

Alluvial soils originate from water transportation and deposition in a floodplain environment. These soils are primarily confined to one area of the project and are comprised of soft to very stiff sandy silty clay (A-7-5) and stiff clayey sandy silt (A-4).

3. *Fill Soils:*

No borings were performed in any roadway fill materials. Roadway fill soils are present beneath existing roadway segments and connecting -Y- lines but traffic and utilities made boring in and adjacent to the roadway unfeasible. An uncompacted (artificial) fill between -L- stations 67+00 – 73+50 is the result of clearing for adjacent residential construction. Two borings were performed along the top of the uncompacted berm and encountered medium stiff to very stiff sandy silty clay (A-7-5, A-6) with wood debris.

Rock Properties:

Rock was not encountered during the course of this investigation.

Sheet 3A

Wells:

During the course of this investigation only one well was noted within proposed construction limits. Location of this well is right of -L- station 45+25. It is possible there are additional wells that went undetected.

Respectfully Submitted,

J.E. Beverly, Project Geo-Engineer

3B

Earthwork Balance Sheet

Volumes in Cubic Yards

PROJECT U-2507A COUNTY: Mecklenburg DATE: Mar-12 COMPILED BY: T.B. Roach SHEET 1 OF 4 SHEETS

DATE: Jun-13 CHECKED BY: J.L. Teague

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
PHASE I															
-L- (LT) STA. 20+75.00	-L- (LT) STA. 26+00.00	195				195	727		727	872	677				
-Y1- (RT) STA. 15+00.00	-Y1- (RT) STA. 27+50.00	738				738	779		779	935	197				
-L- (RT) STA. 10+00.00	-L- (RT) STA. 26+00.00	3,837				3,837	160		160	192			3,645		3,645
-Y1- (RT) STA. 29+00.00	-Y1- (RT) STA. 39+50.00	453				453	200		200	240			213		213
	SUBTOTAL	5,223				5,223	1,866		1,866	2,239	874		3,858		3,858
-L- (LT) STA. 29+50.00	-L- (LT) STA. 31+50.00	494		1,246	494		1,407		1,407	1,688	1,688			1,740	1,740
-L- STA. 31+50.00	-L- STA. 35+00.00	1		1,322	1		7,076		7,076	8,491	8,491			1,323	1,323
-L- STA. 35+00.00	-L- STA. 42+50.00	499		3,924	499		11,565		11,565	13,878	13,878			4,423	4,423
-Y2- STA. 10+55.00	-Y2- STA. 15+00.00	8				8	5,409		5,409	6,491	6,483				
-Y2- (LT) STA. 15+00.00	-Y2- (LT) STA. 18+25.00	73				73	41		41	49			24		24
-Y3- STA. 10+12.00	-Y3- STA. 11+50.00						1,021		1,021	1,225	1,225				
-Y3- (RT) STA. 11+50.00	-Y3- (RT) STA. 12+25.00						61		61	73	73				
	SUBTOTAL	1,075		6,492	994	81	26,580		26,580	31,895	31,838		24	7,486	7,510
-L- STA. 45+00.00	-L- STA. 73+50.00	16,392		2,297	14,753	1,639	67,298		67,298	80,758	79,119			17,050	17,050
-Y4A- STA. 10+43.18	-Y4A- STA. 11+90.00	817				817	107		107	128			689		689
-Y16- STA. 10+00.00	-Y16- STA. 11+90.52	636				636	3		3	4			632		632
-Y5- (RT) STA. 12+50.00	-Y5- (RT) STA. 15+00.00	48				48	18		18	22			26		26
-Y5- (RT) STA. 16+50.00	-Y5- (RT) STA. 19+00.00	33				33	33		33	40	7				
	SUBTOTAL	17,926		2,297	14,753	3,173	67,459		67,459	80,952	79,126		1,347	17,050	18,397
-Y5- (LT) STA. 12+50.00	-Y5- (LT) STA. 15+00.00	54				54	19		19	23			31		31
-Y5- (LT) STA. 16+50.00	-Y5- (LT) STA. 19+00.00	18				18	28		28	34	16				
-L- STA. 74+50.00	-L- STA. 78+50.00	9,922				9,922							9,922		9,922
	SUBTOTAL	9,994				9,994	47		47	57	16		9,953		9,953
-L- STA. 84+00.00	-L- STA. 91+50.00	5,611				5,611	10,841		10,841	13,009	7,398				
-Y6- (RT) STA. 18+00.00	-Y6- (RT) STA. 19+50.00	58				58	183		183	220	162				
-Y6- (LT) STA. 10+00.00	-Y6- (LT) STA. 17+25.00	79				79	532		532	638	559				
-Y6- (LT) STA. 17+25.00	-Y6- (LT) STA. 19+50.00	287				287	217		217	260			27		27
-Y6- STA. 19+50.00	-Y6- STA. 22+25.00	3,354				3,354	64		64	77			3,277		3,277
-Y6- STA. 23+75.00	-Y6- STA. 30+55.00	694				694	6,749		6,749	8,099	7,405				
-DR1- STA. 10+12.00	-DR1- STA. 10+88.00	260				260	104		104	125			135		135
	SUBTOTAL	10,343				10,343	18,690		18,690	22,428	15,524		3,439		3,439
-L- (RT) STA. 91+50.00	-L- (RT) STA. 94+50.00	1,140				1,140							1,140		1,140
-L- (RT) STA. 94+50.00	-L- (RT) STA. 101+00.00	671				671	400		400	480			191		191
	SUBTOTAL	1,811				1,811	400		400	480			1,331		1,331
	SHEET TOTAL	46,372		8,789	15,747	30,625	115,042		115,042	138,051	127,378		19,952	24,536	44,488

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

3C

Earthwork Balance Sheet

Volumes in Cubic Yards

PROJECT U-2507A COUNTY: Mecklenburg DATE: Mar-12 DATE: Jun-13 COMPILED BY: T.B. Roach CHECKED BY: J.L. Teague

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
PHASE I (CONTINUED)															
-L- (RT) STA. 101+00.00	-L- (RT) STA. 114+50.00	632				632	6,352		6,352	7,622	6,990				
-Y10- STA. 10+44.30	-Y10- STA. 12+00.00	138				138	76		76	91			47		47
	SUBTOTAL	770				770	6,428		6,428	7,713	6,990		47		47
-L- (RT) STA. 114+50.00	-L- (RT) STA. 144+00.00	3,604			613	2,991	5,800		5,800	6,960	3,969			613	613
-L- (RT) STA. 144+00.00	-L- (RT) STA. 149+00.00	258				258	237		237	284	26				
-Y13- (RT) STA. 11+00.00	-Y13- (RT) STA. 22+50.00	3,767				3,767	181		181	217			3,550		3,550
-Y13- (RT) STA. 23+50.00	-Y13- (RT) STA. 30+95.00	786				786	801		801	961	175				
	SUBTOTAL	8,415			613	7,802	7,019		7,019	8,422	4,170		3,550	613	4,163
-Y13- (LT) STA. 11+00.00	-Y13- (LT) STA. 22+50.00	178				178	1,687		1,687	2,024	1,846				
-Y13- (LT) STA. 23+50.00	-Y13- (LT) STA. 30+95.00	263				263	342		342	410	147				
-L- (RT) STA. 151+00.00	-L- (RT) STA. 165+00.00	1,497				1,497	825		825	990			507		507
	SUBTOTAL	1,938				1,938	2,854		2,854	3,424	1,993		507		507
-L- (LT) STA. 97+00.00	-L- (LT) STA. 104+72.00	412				412	2,333		2,333	2,800	2,388				
-Y9- (RT) STA. 10+50.00	-Y9- (RT) STA. 14+80.16	19				19	166		166	199	180				
-Y9- (LT) STA. 10+50.00	-Y9- (LT) STA. 14+80.16	33				33	144		144	173	140				
-L- (LT) STA. 104+72.00	-L- (LT) STA. 120+15.00	887				887	1,522		1,522	1,826	939				
	SUBTOTAL	1,351				1,351	4,165		4,165	4,998	3,647				
-Y11- (RT) STA. 10+00.00	-Y11- (RT) STA. 13+43.04	93				93	225		225	270	177				
-Y11- (LT) STA. 10+00.00	-Y11- (LT) STA. 13+43.04	20				20	489		489	587	567				
-L- (LT) STA. 120+15.00	-L- (LT) STA. 130+50.00	197				197	6,369		6,369	7,643	7,446				
	SUBTOTAL	310				310	7,083		7,083	8,500	8,190				
-L- (LT) STA. 136+00.00	-L- (LT) STA. 140+25.00	998				998	223		223	268			730		730
-Y12- (RT) STA. 10+00.00	-Y12- (RT) STA. 13+63.92	1,472				1,472	12		12	14			1,458		1,458
-Y12- (LT) STA. 10+00.00	-Y12- (LT) STA. 13+63.92	1,326				1,326	102		102	122			1,204		1,204
	SUBTOTAL	3,796				3,796	337		337	404			3,392		3,392
	SHEET TOTAL	16,580			613	15,967	27,886		27,886	33,461	24,990		7,496	613	8,109
	SUBTOTAL PHASE I	62,952		8,789	16,360	46,592	142,928		142,928	171,512	152,368		27,448	25,149	52,597
WASTE TO BE USED IN LIEU OF BORROW											-27,448		-27,448		-27,448
	TOTAL PHASE I	62,952		8,789	16,360	46,592	142,928		142,928	171,512	124,920		0	25,149	25,149

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

Earthwork Balance Sheet

3D

Volumes in Cubic Yards

PROJECT U-2507A COUNTY: Mecklenburg DATE: Mar-12 COMPILED BY: T.B. Roach SHEET 3 OF 4 SHEETS

DATE: Jun-13 CHECKED BY: J.L. Teague

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
PHASE II															
-L- (LT) STA 10+00.00	-L- (LT)STA. 20+75.00	575				575	396		396	475			100		100
-Y1- (LT) STA. 15+00.00	-Y1- (LT) STA. 26+50.00	316				316	293		293	352	36				
-Y1- (LT) STA. 28+00.00	-Y1- (LT) STA. 39+50.00	1,030				1,030	447		447	536			494		494
-L- STA. 27+50.00	-L- STA. 29+50.00	2,681		1,456	2,035	646	1,460		1,460	1,752	1,106			3,491	3,491
	SUBTOTAL	4,602		1,456	2,035	2,567	2,596		2,596	3,115	1,142		594	3,491	4,085
-L- (RT) STA. 29+50.00	-L- (RT) STA. 31+50.00	1,191		931	787	404	1,004		1,004	1,205	801			1,718	1,718
-Y2- (RT) STA. 15+00.00	-Y2- (RT) STA. 18+25.00	73				73	41		41	49			24		24
-Y3- (RT) STA. 12+25.00	-Y3- (RT) STA. 16+55.00	315				315	156		156	187			128		128
-Y3- (LT) STA. 11+50.00	-Y3- (LT) STA. 16+55.00	394				394	232		232	278			116		116
	SUBTOTAL	1,973		931	787	1,186	1,433		1,433	1,719	801		268	1,718	1,986
-L- STA. 42+50.00	-L- STA. 45+00.00	173		714		173	3,172		3,172	3,806	3,633			714	714
-Y17- STA. 11+50.00	-Y17- STA. 13+87.32	297				297	336		336	403	106				
-L- STA. 78+50.00	-L- STA. 84+00.00	1,205				1,205	16,233		16,233	19,480	18,275				
-Y6- (RT) STA. 10+00.00	-Y6- (RT) STA. 18+00.00	549				549	196		196	235			314		314
	SUBTOTAL	2,224		714		2,224	19,937		19,937	23,924	22,014		314	714	1,028
-L- (LT) STA. 91+50.00	-L- (LT) STA. 93+50.00	172				172	184		184	221	49				
-Y7- (RT) STA. 12+00.00	-Y7- (RT) STA. 13+78.49	27				27	72		72	86	59				
-Y7- (LT) STA. 12+00.00	-Y7- (LT) STA. 13+78.49	22				22	68		68	82	60				
-L- (LT) STA. 93+50.00	-L- (LT) STA. 96+19.00	80				80	187		187	224	144				
-Y8- STA. 10+00.00	-Y8- STA. 11+68.59	235				235	18		18	22			213		213
-L- (LT) STA. 96+19.00	-L- (LT) STA. 97+00.00						317		317	380	380				
	SUBTOTAL	536				536	846		846	1,015	692		213		213
-L- (LT) STA. 130+50.00	-L- (LT) STA. 136+00.00	1,990				1,990	8		8	10			1,980		1,980
-L- (LT) STA. 140+25.00	-L- (LT) STA. 149+00.00	475				475	101		101	121			354		354
-L- (LT) STA. 151+00.00	-L- (LT) STA. 165+00.00	942				942	1,080		1,080	1,296	354				
	SUBTOTAL	3,407				3,407	1,189		1,189	1,427	354		2,334		2,334
-L- (MED) STA. 94+00.00	-L- (MED) STA. 103+55.50	39				39	997		997	1,196	1,157				
-L- (MED) STA. 105+96.00	-L- (MED) STA. 118+97.50	31				31	990		990	1,188	1,157				
	SUBTOTAL	70				70	1,987		1,987	2,384	2,314				
	SHEET TOTAL	12,812		3,101	2,822	9,990	27,988		27,988	33,584	27,317		3,723	5,923	9,646

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

Earthwork Balance Sheet

3E

Volumes in Cubic Yards

PROJECT U-2507A COUNTY: Mecklenburg DATE: Mar-12 DATE: Jun-13 COMPILED BY: T.B. Roach CHECKED BY: J.T. Teague

STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
		TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. +20%		ROCK	SUITABLE	UNSUIT.	TOTAL
PHASE II (CONTINUED)															
-L- (MED) STA. 121+30.00	-L- (MED) STA. 135+04.50	7				7	1,519		1,519	1,823	1,816				
-L- (MED) STA. 137+19.76	-L- (MED) STA. 143+36.25	14				14	341		341	409	395				
-L- (MED) STA. 154+31.00	-L- (MED) STA. 162+90.00	84				84	697		697	836	752				
	SUBTOTAL	105				105	2,557		2,557	3,068	2,963				
-Y13- (MED) STA. 11+00.00	-Y13- (MED) STA. 21+61.50	373				373	215		215	258			115		115
-Y13- (MED) STA. 24+21.21	-Y13- (MED) STA. 30+50.00	320				320	793		793	952	632				
	SUBTOTAL	693				693	1,008		1,008	1,210	632		115		115
	SUBTOTAL PHASE II	13,610		3,101	2,822	10,788	31,553		31,553	37,862	30,912		3,838	5,923	9,761
WASTE TO BE USED IN LIEU OF BORROW											-3,838		-3,838		-3,838
	TOTAL PHASE II	13,610		3,101	2,822	10,788	31,553		31,553	37,862	27,074		0	5,923	5,923
PHASE III															
-L- (MED) STA. 93+50.00	-L- (MED) STA. 94+00.00	2				2	12		12	14	12				
-L- (MED) STA. 129+87.00	-L- (MED) STA. 132+00.00	9				9	128		128	154	145				
	SUBTOTAL	11				11	140		140	168	157				
	SUBTOTAL PHASE III	11				11	140		140	168	157				
	TOTAL PHASE III	11				11	140		140	168	157				
	PHASE I - III TOTALS	76,573		11,890	19,182	57,391	174,621		174,621	209,542	152,151			31,072	31,072
MATERIAL FOR SHOULDER CONSTRUCTION							3,200		3,200	3,840	3,840				
LOSS DUE TO CLEARING & GRUBBING		-32,800				-32,800					32,800				
ADDITIONAL UNDERCUT				4,110			4,110		4,110	4,932	4,932			4,110	4,110
	PROJECT TOTALS	43,773		16,000	19,182	24,591	181,931		181,931	218,314	193,723			35,182	35,182
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT											9,687				
	GRAND TOTALS	43,773		16,000							203,410				35,182
	SAY	45,000		16,500							205,000				

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

EST. DDE = 2,200 CY

EST. SHALLOW UNDERCUT BY STATIONS -L- STA. 117+00 TO -L- STA. 122+00 = 1,450 CY

CLASS IV SUBGRADE STABILIZATION = 4,000 TONS *(BACKFILL MATERIAL TO REPLACE SHALLOW UNDERCUT EXCAVATION)*

SELECT GRANULAR MATERIAL = 3,000 CY

PAVEMENT STRUCTURE VOLUME = 18,000 CY

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

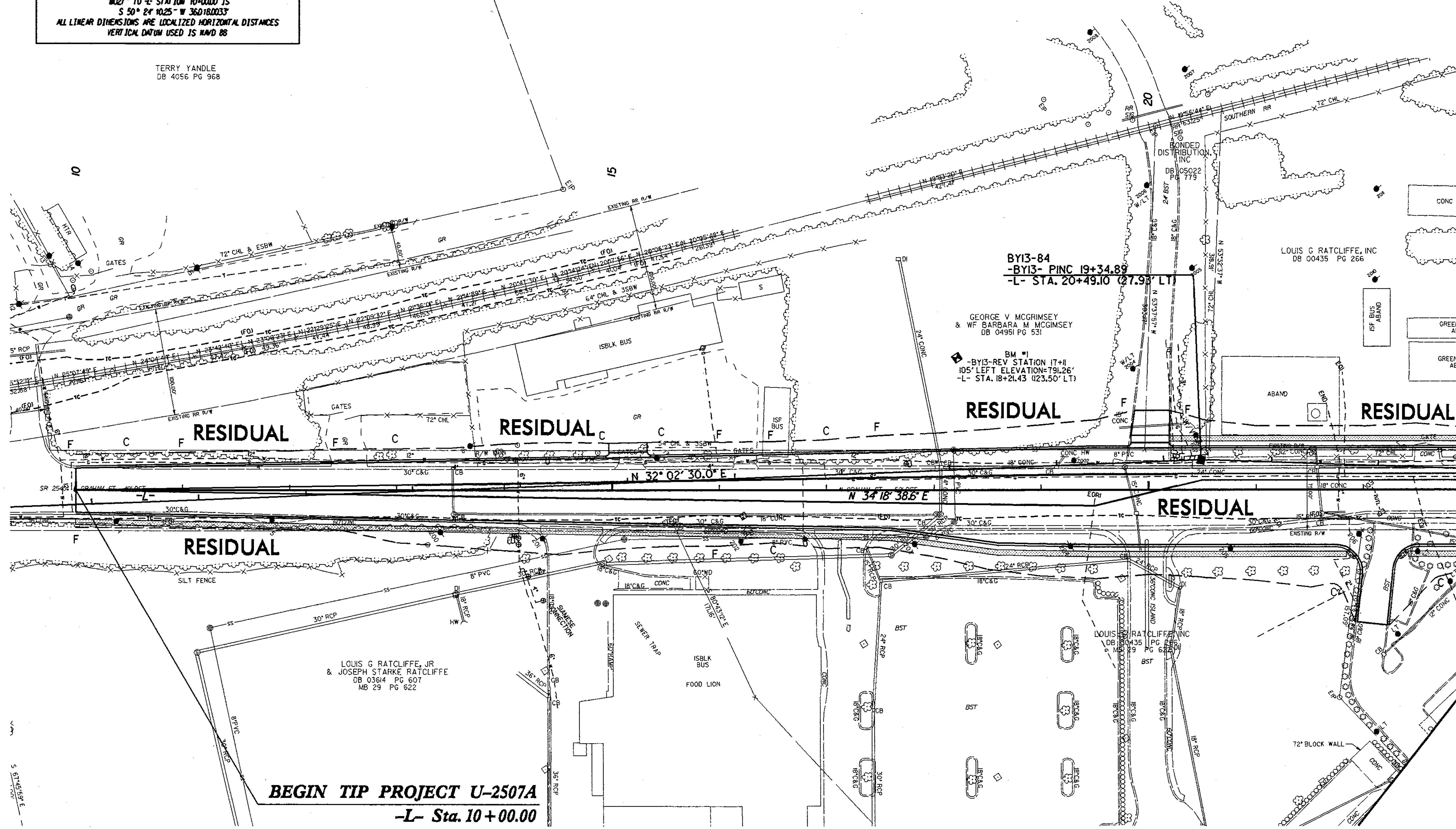
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT
IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
NCGS FOR MONUMENT "MO27"
WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF
NORTHING: 587670.249(ft) EASTING: 1490742.183(ft)
"MO27" TO -L- STATION 10+00.00 IS
(GROUND TO GRID) IS: 0.99984104
THE N.C. LAMBERT GRID BEARING AND
LOCALIZED HORIZONTAL GROUND DISTANCE FROM
"MO27" TO -L- STATION 10+00.00 IS
S 50° 24' 10.25" W 3601.80033'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88



BEGIN TIP PROJECT U-2507A
-L- Sta. 10+00.00

MATCH TO SHEET 5
-L- STA. 23+00

(hatched)	PROP CONC SIDEWALK
(chevrons)	PROP PAINT STRIPING

FOR -L- PROFILE, SEE SHEET NO. 27

WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR.
SEE TRAFFIC CONTROL PLANS FOR LOCATION.

CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

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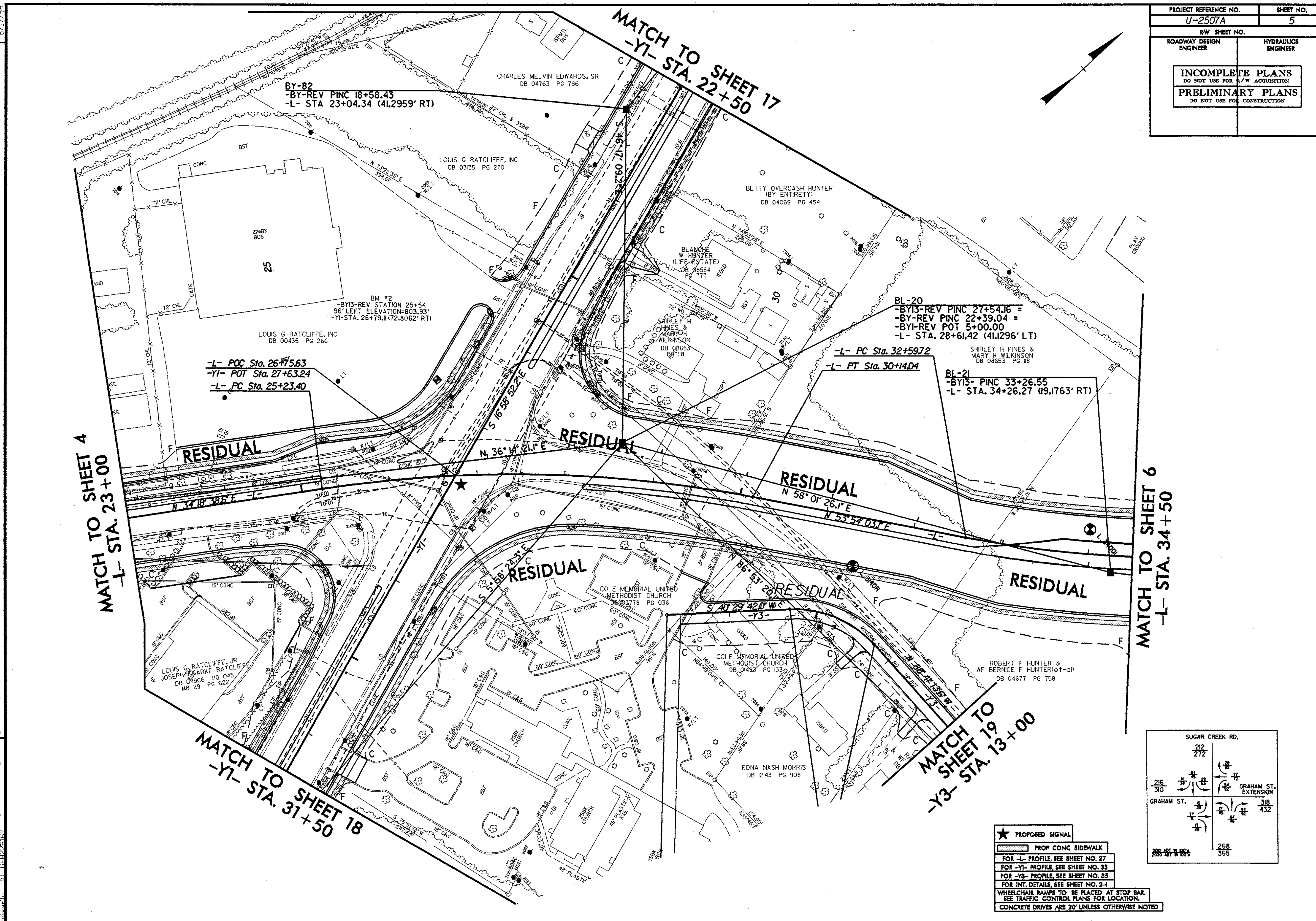

PROJECT REFERENCE NO. U-2507A
SHEET NO. 5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
MATCH TO SHEET 17 -Y1- STA. 22+50
MATCH TO SHEET 4 -L- STA. 23+00
MATCH TO SHEET 6 -L- STA. 34+50
MATCH TO SHEET 18 -Y1- STA. 31+50
MATCH TO SHEET 19 -Y3- STA. 13+00
BY-82
-BY-REV PINC 18+58.43
-L- STA 23+04.34 (41.2959' RT)
BM #2
-BY13-REV STATION 25+54
96' LEFT ELEVATION=803.93'
-Y1-STA. 26+79.11 (72.8062' RT)
-L- POC Sta. 26+75.63
-Y1- POT Sta. 27+63.24
-L- PC Sta. 25+23.40
BL-20
-BY13-REV PINC 27+54.16 =
-BY-REV PINC 22+39.04 =
-BY1-REV POT 5+00.00
-L- STA. 28+61.42 (41.1296' LT)
-L- PC Sta. 32+59.72
-L- PT Sta. 30+14.04
BL-21
-BY13- PINC 33+26.55
-L- STA. 34+26.27 (19.1763' RT)
CHARLES MELVIN EDWARDS, SR
DB 04763 PG 796
LOUIS G RATCLIFFE, INC
DB 03135 PG 270
LOUIS G RATCLIFFE, INC
DB 00435 PG 266
BETTY OVERCASH HUNTER
(BY ENTIRETY)
DB 04069 PG 454
BLANCHE W HUNTER (LIFE ESTATE)
DB 08554 PG 777
SHIRLEY H HINES & MARY H WILKINSON
DB 08653 PG 118
COLE MEMORIAL UNITED METHODIST CHURCH
DB 03778 PG 036
COLE MEMORIAL UNITED METHODIST CHURCH
DB 01493 PG 133
LOUIS G RATCLIFFE, JR & JOSEPHINE CLARKE RATCLIFFE
DB 09966 PG 045
MB 29 PG 622
ROBERT F HUNTER & WF BERNICE F HUNTER(et-al)
DB 04677 PG 758
EDNA NASH MORRIS
DB 12143 PG 908
RESIDUAL
N 36° 14' 21.1" E
N 34° 18' 38.5" E
N 58° 01' 26.1" E
N 53° 54' 03.1" E
S 16° 58' 52.2" E
S 40° 29' 42.0" W
SUGAR CREEK RD.
GRAHAM ST.
GRAHAM ST. EXTENSION
PROPOSED SIGNAL
PROP CONC SIDEWALK
FOR -L- PROFILE, SEE SHEET NO. 27
FOR -Y1- PROFILE, SEE SHEET NO. 33
FOR -Y3- PROFILE, SEE SHEET NO. 35
FOR INT. DETAILS, SEE SHEET NO. 2-I
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED
REVISIONS
8/17/99
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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

MATCH TO SHEET 5
-L- STA. 34+50

MATCH TO SHEET 19
-Y2- STA. 12+00

MATCH TO SHEET 7
-L- STA. 47+00

MATCH TO SHEET 20
-Y4- STA. 13+00

DERITA PRESBYTERIAN CHURCH
DB 3054 PG 183

CHARLOTTE MECKLENBURG
BOARD OF EDUCATION
NO DEED FOUND

DB 2655 PG 292

BY2-53
-BY2-REV PINC 13+50.84
-L- STA. 42+59.86 (429.5283' LT)

BL-115
-BL- PINC 33+20.48
-L- STA. 45+89.67 (121.1392' RT)

-L- POC Sta. 35+00.00
-Y2- POT Sta. 10+00.00

-L- PT Sta. 44+92.00

-L- POC Sta. 44+85.00
-Y4- POT Sta. 10+00.00

S 78° 40' 58" E

N 49° 36' 30.8" E

N 22° 33' 36.5" E

N 33° 54' 20.9" E

N 5° 09' 21.9" E

N 0° 24' 36.2" W

S 36° 41' 21.0" E

RESIDUAL

-L-

BM #3
-BY13-REV STATION 36+51
41' RIGHT ELEVATION=823.54'
-L- STA. 37+24.73 (114.9455' RT)

BL-22
-BY13- PINC 37+09.29
-L- STA. 37+87.58 (92.9848' RT)

BL-114
-BL- POT 29+56.62 =
-BY2-REV PINC 18+91.34 =
-BY13-REV PINC 42+02.31
-L- STA. 42+46.85 (110.8563' RT)

BY2-54
-BY2-REV PINC 21+95.11
-Y4- STA. 12+56.53 (18.5332' LT)

RACHEL HALL
& HSB GEORGE HALL
DB 10469 PG 238

AMERICAN LEGION
POST #345
DB 01427 PG 130

CHARLOTTE MECKLENBURG
BOARD OF EDUCATION
NO DEED FOUND

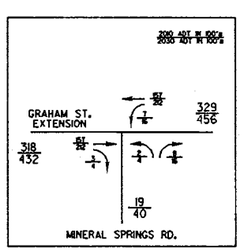
DERITA LODGE #715
DB 03723 PG 137

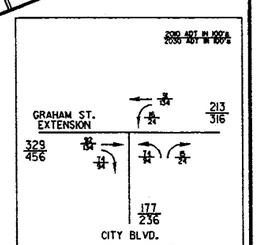
JOHN LUKEVICS
DB 11719 PG 033

GEORGE W RAWDON, SR
& WF LILLIAN RAWDON
DB 10097 PG 206
MB 1166 PG 695

MEREDITH R RAWDON
DB 10097 PG 206
MB 1166 PG 695

-L- CURVE DATA
PI Sta 39+26.55
Δ = 54° 18' 39.4" (LT)
D = 4° 24' 26.5"
L = 1,232.28'
T = 666.83'
R = 1,300.00'
SE = 0.04
RO = 216'





★ PROPOSED SIGNAL
PROP PAINT STRIPING
PROP CONC SIDEWALK
PROP PVMT REMOVAL
FOR -L- PROFILE, SEE SHEET NO. 27 & 28
FOR -Y4- PROFILE, SEE SHEET NO. 35
FOR -Y2- PROFILE, SEE SHEET NO. 34
FOR INT. DETAILS, SEE SHEET NOS. 2-J & 2-K
FOR JUGHANDLE DETAIL, SEE SHEET NO. 2
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

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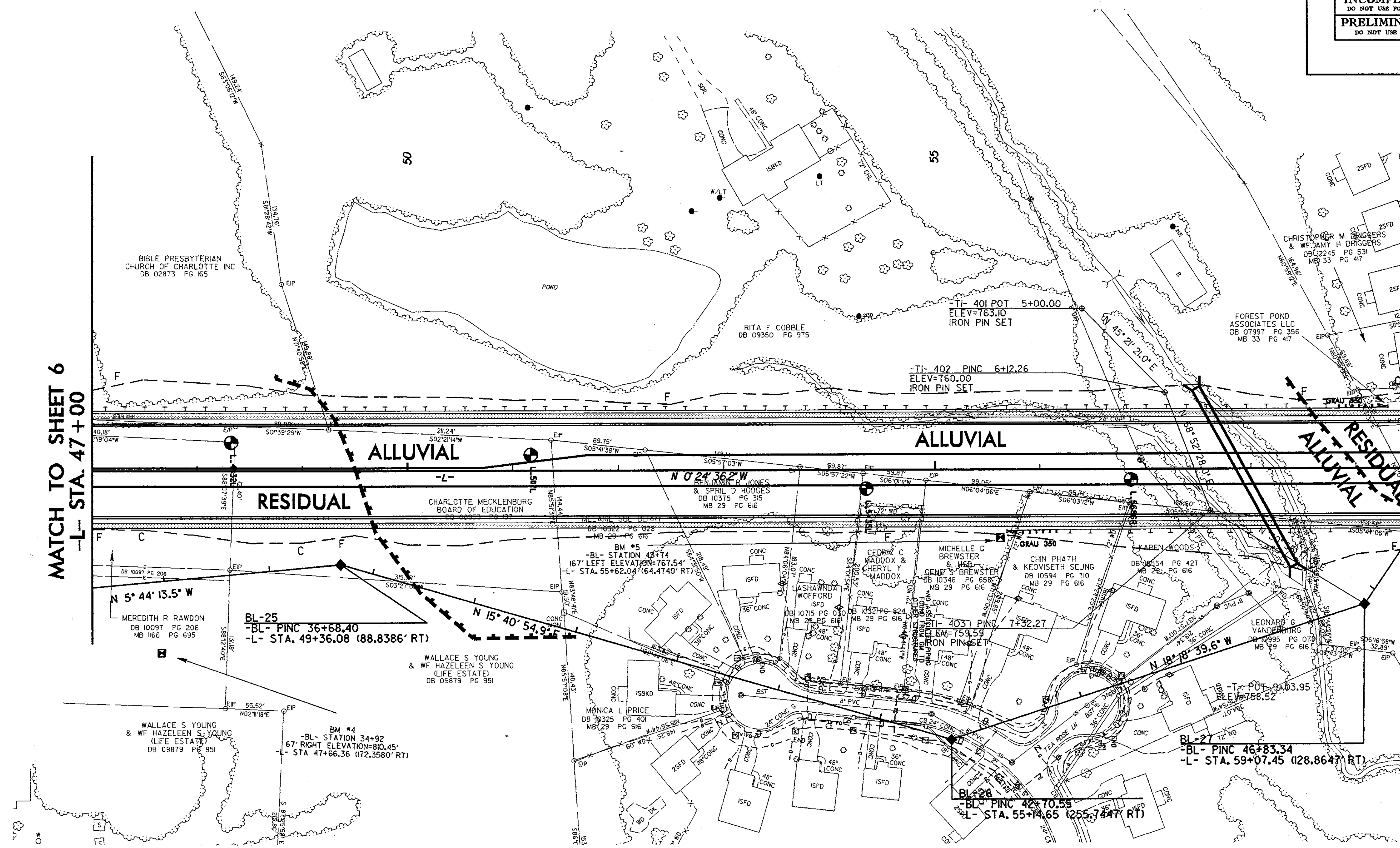
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

REVISIONS



PROP CONC SIDEWALK

FOR -L- PROFILE, SEE SHEET NO. 28

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

MATCH TO SHEET 7
-L- STA. 59+50

MATCH TO SHEET 9
-L- STA. 71+50

BEGIN CONSTRUCTION
-Y16- Sta. 10+00.00
-Y16- PC Sta. 10+20.85
-Y16- PT Sta. 11+89.67

BL-29
-BL- PINC 51+26.23
-L- STA. 62+98.90 (16.6160' RT)

BL-30
-BL- PINC 56+10.41
-L- STA. 67+83.00 (7.7695' RT)

BL-31
-BL- PINC 59+60.30
-L- STA. 71+52.56 (7.3776' LT)

BL-119
-BL- PINC 48+00.04
-L- STA. 59+74.13 (33.0925' RT)
N 55° 33' 55.6" W

-L- POC Sta. 60+32.00
-Y16- POT Sta. 12+30.02
-L- PC Sta. 60+26.93
-L- PT Sta. 62+87.64

BM-16
-BL- STATION 52+82
70' RIGHT ELEVATION=765.981'
-L- STA. 64+35.58 (84.6252' RT)

RESIDUAL
ALLUVIAL
ALLUVIAL
RESIDUAL
ARTIFICIAL FILL

N 4° 23' 26.8" W
-L-
N 3° 56' 47.7" W
N 2° 53' 58.8" W
N 5° 22' 51.0" W

FOREST POND HOMEOWNERS ASSOCIATION
DB 10834 PG 103
MB 28 PG 700

FOREST POND HOMEOWNERS ASSOCIATION
DB 10834 PG 103
MB 27 PG 522

FOREST POND ASSOCIATES LLC
DB 10834 PG 103
MB 29 PG 435

FOREST POND ASSOCIATES LLC
DB 07997 PG 358
MB 33 PG 417

KEYSTONE BUILDERS RESOURCE GROUP OF CHARLOTTE LLC
DB 11417 PG 975
MB 33 PG 417

KEYSTONE BUILDERS RESOURCE GROUP OF CHARLOTTE LLC
DB 11417 PG 975
MB 33 PG 417

CHRISTOPHER M DRIGGERS & WF AMY H DRIGGERS
DB 16245 PG 2931
MB 33 PG 417

*NO ASSOCIATED PIPING FOUND FOR WM'S IN THIS AREA.

-Y16- CURVE DATA	-L- CURVE DATA
PI Sta 11+05.82	PI Sta 61+57.31
Δ = 16° 07' 16.7" (RT)	Δ = 2° 29' 22.5" (LT)
D = 9° 32' 57.5"	D = 0° 57' 17.7"
L = 168.82'	L = 260.71'
T = 84.97'	T = 130.38'
R = 600.00'	R = 6,000.00'
SE = SEE PLANS	SE = 0.02
RO = SEE PLANS	RO = 108'

PROP CONC SIDEWALK
FOR -L- PROFILE, SEE SHEET NO. 27, 28, & 29

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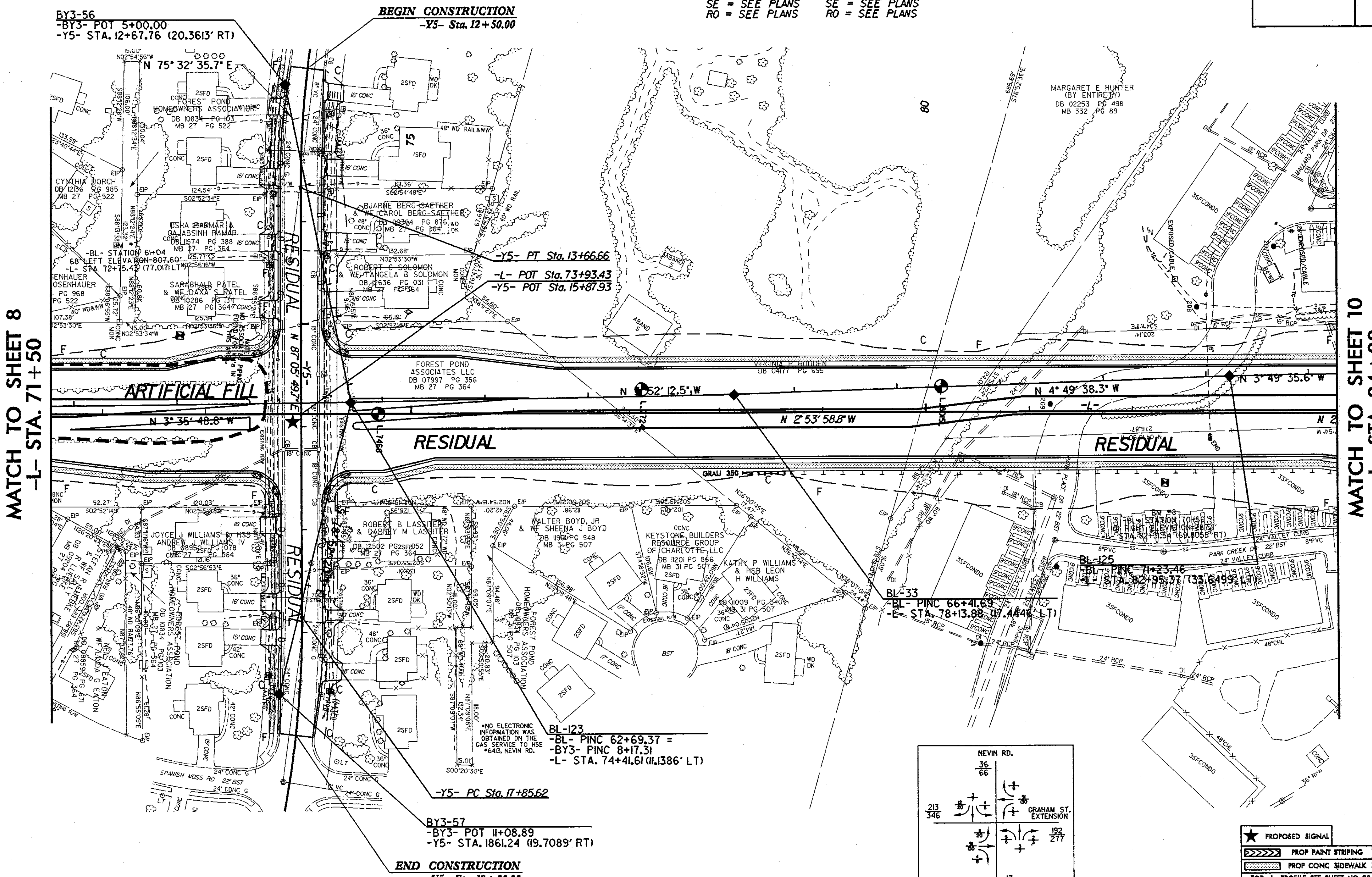
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y5- CURVE DATA

PI Sta 12+50.06	PI Sta 19+54.93
Δ = 13° 25′ 25.1″ (LT)	Δ = 19° 13′ 09.9″ (RT)
D = 5° 43′ 46.5″	D = 5° 43′ 46.5″
L = 234.29′	L = 335.44′
T = 117.68′	T = 169.31′
R = 1,000.00′	R = 1,000.00′
SE = SEE PLANS	SE = SEE PLANS
RO = SEE PLANS	RO = SEE PLANS



BEGIN CONSTRUCTION
-Y5- Sta. 12+50.00
BY3-56
-BY3- POT 5+00.00
-Y5- STA. 12+67.76 (20.3613′ RT)
N 75° 32′ 35.7″ E
FOREST POND HOMEOWNERS ASSOCIATION
CYNTHIA DORCH
USHA PARMAR & GAJABSINH PAMAR
SARABHAI PATEL & WF DAXA S PATEL
BJARNE BERG-SAETHER & WF CAROL BERG-SAETHER
ROBERT C SOLOMON & WF ANGELA B SOLOMON
-Y5- PT Sta. 13+66.66
-L- POT Sta. 73+93.43
-Y5- POT Sta. 15+87.93
-BL- STATION 61+04
68′ LEFT ELEVATION=807.60′
-L- STA 72+75.43 (77.0171 LT)
MARGARET E HUNTER (BY ENTIRETY)
DB 02253 PG 498
MB 332 PG 89
FOREST POND ASSOCIATES LLC
DB 07997 PG 356
MB 27 PG 364
VIRGINIA P BOUDEN
ARTIFICIAL FILL
RESIDUAL
N 3° 35′ 48.8″ W
N 87° 05′ 49.7″ E
N 2° 53′ 58.8″ W
N 4° 49′ 38.3″ W
N 3° 49′ 35.6″ W
-Y5-
-L-
ROBERT B LASSITER & DABNEY M LASSITER
WALTER BOYD, JR & WF SHEENA J BOYD
KEYSTONE BUILDERS RESOURCE GROUP OF CHARLOTTE LLC
KATHY P WILLIAMS & HSB LEON H WILLIAMS
JOYCE J WILLIAMS & HSB ANDREW J WILLIAMS IV
BL-33
-BL- PINC 66+41.69
-L- STA. 78+13.88 (7.4446′ LT)
BL-125
-BL- PINC 71+23.46
-L- STA. 82+95.37 (33.6499′ LT)
BL-123
-BL- PINC 62+69.37 =
-BY3- PINC 8+17.31
-L- STA. 74+41.61 (11.1386′ LT)
*NO ELECTRONIC INFORMATION WAS OBTAINED ON THE GAS SERVICE TO HSE #6413, NEVIN RD.
-Y5- PC Sta. 17+85.62
BY3-57
-BY3- POT 11+08.89
-Y5- STA. 1861.24 (19.7089′ RT)
END CONSTRUCTION
-Y5- Sta. 19+00.00
SPANISH MOSS RD
PARK CREEK DR
MATCH TO SHEET 8
-L- STA. 71+50
MATCH TO SHEET 10
-L- STA. 84+00
NEVIN RD.
GRAHAM ST. EXTENSION

★	PROPOSED SIGNAL
	PROP PAINT STRIPING
	PROP CONC SIDEWALK

FOR -L- PROFILE, SEE SHEET NO. 29
FOR -Y5- PROFILE, SEE SHEET NO. 37
FOR INT. DETAILS, SEE SHEET NO. 2-L
MATCH CONCRETE DRIVES TO EXISTING
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.

REVISIONS

8/17/99

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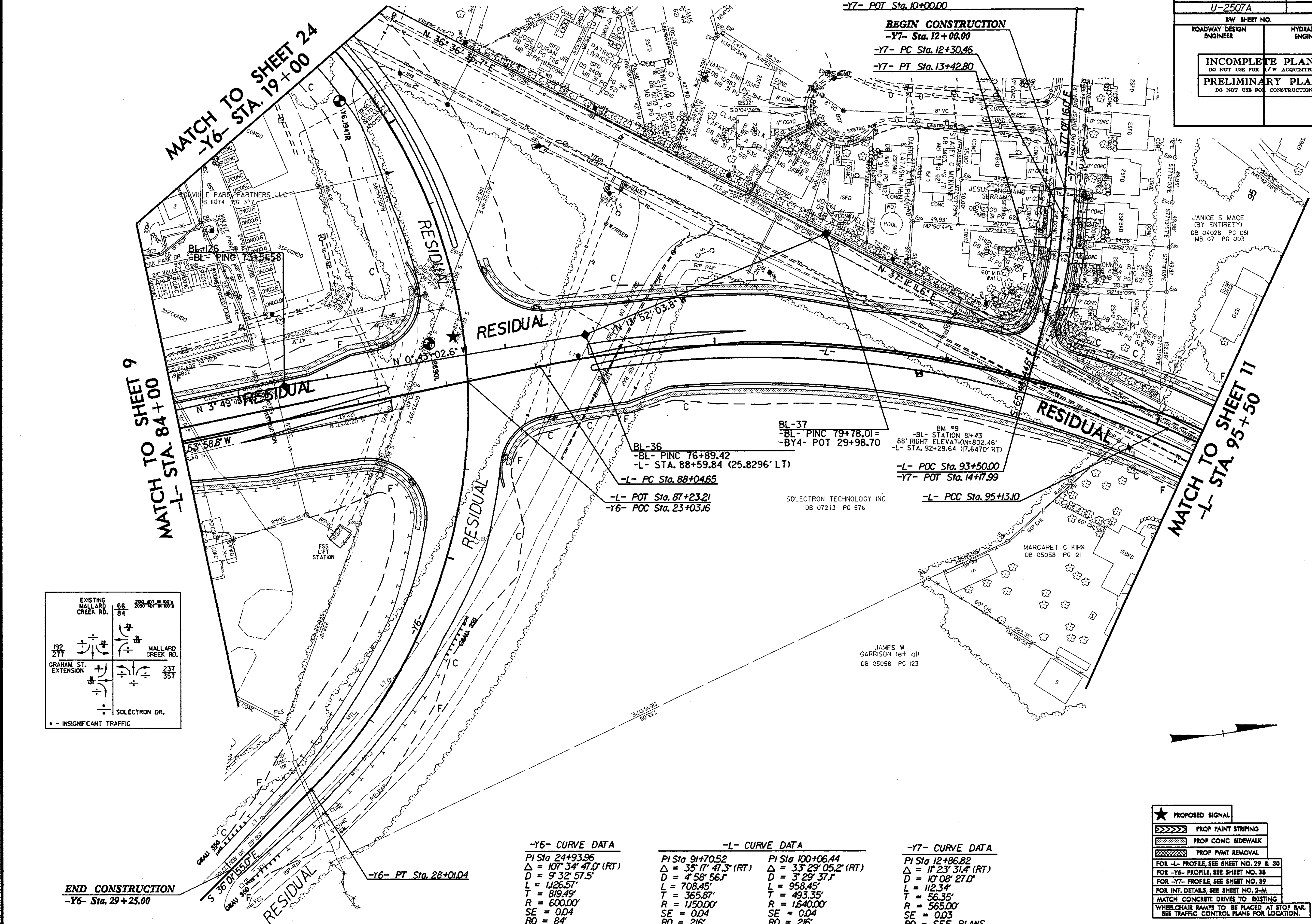
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION



MATCH TO SHEET 24
-Y6- STA. 19+00
MATCH TO SHEET 9
-L- STA. 84+00
MATCH TO SHEET 11
-L- STA. 95+50
-Y7- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y7- Sta. 12+00.00
-Y7- PC Sta. 12+30.46
-Y7- PT Sta. 13+42.80
RESIDUAL
BL-126
-BL- PINC 73+51.58
BL-36
-BL- PINC 76+89.42
-L- STA. 88+59.84 (25.8296' LT)
BL-37
-BL- PINC 79+78.01 =
-BY4- POT 29+98.70
BM #9
-BL- STATION 81+43
88' RIGHT ELEVATION=802.46'
-L- STA. 92+29.64 (17.6470' RT)
-L- POC Sta. 93+50.00
-Y7- POT Sta. 14+17.99
-L- PCC Sta. 95+13.10
-L- PC Sta. 88+04.65
-L- POT Sta. 87+23.21
-Y6- POC Sta. 23+03.16
SOLECTRON TECHNOLOGY INC
DB 07273 PG 576
JANICE S MACE
(BY ENTIRETY)
DB 04028 PG 051
MB 07 PG 003
MARGARET G KIRK
DB 05058 PG 121
JAMES W
GARRISON (et al)
DB 05058 PG 123
COLVILLE PARIS PARTNERS LLC
DB 11074 PG 377
FSS
LIFT
STATION
-Y6- PT Sta. 28+01.04
END CONSTRUCTION
-Y6- Sta. 29+25.00
EXISTING MALLARD CREEK RD.
MALLARD CREEK RD.
GRAHAM ST. EXTENSION
SOLECTRON DR.
• - INSIGNIFICANT TRAFFIC

-Y6- CURVE DATA
PI Sta 24+93.96
Δ = 107° 34' 47.0" (RT)
D = 9° 32' 57.5"
L = 1,126.57'
T = 819.49'
R = 600.00'
SE = 0.04
RO = 84'

-L- CURVE DATA	
PI Sta 91+70.52	PI Sta 100+06.44
Δ = 35° 17' 47.3" (RT)	Δ = 33° 29' 05.2" (RT)
D = 4° 58' 56.1"	D = 3° 29' 37.1"
L = 708.45'	L = 958.45'
T = 365.87'	T = 493.35'
R = 1,150.00'	R = 1,640.00'
SE = 0.04	SE = 0.04
RO = 216'	RO = 216'

-Y7- CURVE DATA
PI Sta 12+86.82
Δ = 11° 23' 31.4" (RT)
D = 10° 08' 27.0"
L = 112.34'
T = 56.35'
R = 565.00'
SE = 0.03
RO = SEE PLANS

★ PROPOSED SIGNAL

PROP PAINT STRIPING

PROP CONC SIDEWALK

PROP PVMT REMOVAL

FOR -L- PROFILE, SEE SHEET NO. 29 & 30

FOR -Y6- PROFILE, SEE SHEET NO. 38

FOR -Y7- PROFILE, SEE SHEET NO. 39

FOR INT. DETAILS, SEE SHEET NO. 2-M

MATCH CONCRETE DRIVES TO EXISTING

WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.

REVISIONS

8/17/99

10-JUN-2008 13:42

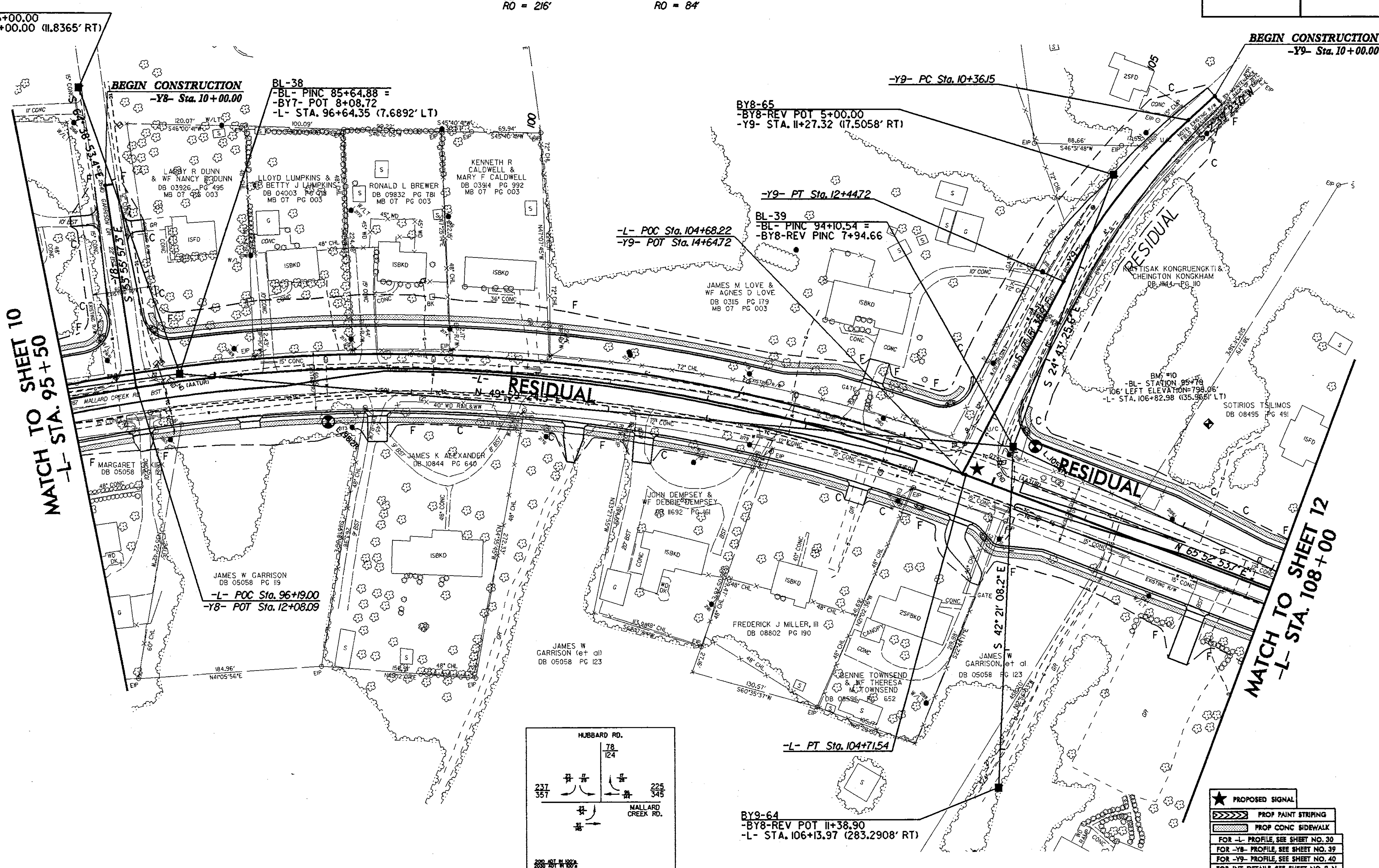
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L- CURVE DATA
PI Sta 100+06.44
Δ = 33°29'05.2" (RT)
D = 3°29'37.1"
L = 958.45'
T = 493.35'
R = 1,640.00'
SE = 0.04
RO = 216'

-Y9- CURVE DATA
PI Sta 11+41.50
Δ = 19°55'01.9" (LT)
D = 9°32'57.5"
L = 208.57'
T = 105.35'
R = 600.00'
SE = 0.04
RO = 84'



BY7-62
-BY7- POT 5+00.00
-Y8- STA. 10+00.00 (11.8365' RT)
BEGIN CONSTRUCTION
-Y8- Sta. 10+00.00
BL-38
-BL- PINC 85+64.88 =
-BY7- POT 8+08.72
-L- STA. 96+64.35 (7.6892' LT)
BEGIN CONSTRUCTION
-Y9- Sta. 10+00.00
-Y9- PC Sta. 10+36.15
BY8-65
-BY8-REV POT 5+00.00
-Y9- STA. 11+27.32 (17.5058' RT)
-Y9- PT Sta. 12+44.72
BL-39
-BL- PINC 94+10.54 =
-BY8-REV PINC 7+94.66
-L- POC Sta. 104+68.22
-Y9- POT Sta. 14+64.72
LARRY R DUNN & WF NANCY B DUNN DB 03926 PG 495 MB 07 PG 003
LLOYD LUMPKINS & WF BETTY J LUMPKINS DB 04003 PG 718 MB 07 PG 003
RONALD L BREWER DB 09832 PG 781 MB 07 PG 003
KENNETH R CALDWELL & MARY F CALDWELL DB 03914 PG 992 MB 07 PG 003
JAMES M LOVE & WF AGNES D LOVE DB 03115 PG 179 MB 07 PG 003
RESIDUAL
MALLARD CREEK RD
MATCH TO SHEET 10
-L- STA. 95+50
MARGARET KIRK DB 05058
JAMES K ALEXANDER DB 10844 PG 640
JAMES W GARRISON DB 05058 PG 119
-L- POC Sta. 96+19.00
-Y8- POT Sta. 12+08.09
JAMES W GARRISON (et al) DB 05058 PG 123
JOHN DEMPSEY & WF DEBBIE DEMPSEY DB 11692 PG 161
FREDERICK J MILLER, III DB 08802 PG 190
JENNIE TOWNSEND & WF THERESA M TOWNSEND DB 08595 PG 652
JAMES W GARRISON, et al DB 05058 PG 123
-L- PT Sta. 104+71.54
BY9-64
-BY8-REV POT 11+38.90
-L- STA. 106+13.97 (283.2908' RT)
BM #10
-BL- STATION 95+79
106' LEFT ELEVATION=798.06'
-L- STA. 106+82.98 (135.9651' LT)
TISAK KONGRUENGKTI & CHEINGTON KONGKHAM DB 11143 PG 110
SOTIRIOS TSILIMOS DB 08495 PG 491
N 65°52'53.7" E
S 42°21'08.2" E
S 24°43'25.6" E
MATCH TO SHEET 12
-L- STA. 108+00
HUBBARD RD.
MALLARD CREEK RD.

★	PROPOSED SIGNAL
	PROP PAINT STRIPING
	PROP CONC SIDEWALK

FOR -L- PROFILE, SEE SHEET NO. 30
FOR -Y8- PROFILE, SEE SHEET NO. 39
FOR -Y9- PROFILE, SEE SHEET NO. 40
FOR INT. DETAILS, SEE SHEET NO. 2-N
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

MATCH TO SHEET 11
-L- STA. 108+00

MATCH TO SHEET 13
-L- STA. 118+00

GARY C CARTER & WF ANN S CARTER
DB 05189 PG 273

MATILDA O MULLIS (BY ENTIRETY)
DB 04921 PG 020

MATILDA O MULLIS (BY ENTIRETY)
DB 01634 PG 227

KIMBERLY B WALL (BY WILL)
DB 06321 PG 551

ROBBIE PASOUR BISHOP
DB 06321 PG 551

ROBBIE PASOUR BISHOP & WILLIAM C BISHOP JR
DB 08448 PG 121
MB 967 PG 381

SOTIRIOS TSILIMOS
DB 08495 PG 491

DEREK W DANIELS & WF MICHELE M DANIELS
DB 08436 PG 1017
MB 884 PG 526

ROBERT GEORGE HOPKINS, JR & WF SUSAN F HOPKINS
DB 06665 PG 736

BETTY C PENNINGER (BY ENTIRETY)
DB 01634 PG 435

MABEL PENNINGER (BY ENTIRETY)
DB 01052 PG 205
MB 1045 PG 589

JERRY THOMAS CASKEY (BY WILL)
DB 01184 PG 082

JAMES W PENNINGER & WF VIRGINIA S PENNINGER
DB 02988 PG 555

SR 2850 PENNINGER CIR

SR 2467 BALLARD CREEK RD

RESIDUAL

-L- POT Sta. 114+40.00
-Y10- POT Sta. 10+00.00

-Y10- PC Sta. 10+57.22
-Y10- PT Sta. 11+61.45

END CONSTRUCTION
-Y10- Sta. 12+00.00
-Y10- POT Sta. 12+00.20

BL-40
-BL- PINC 102+87.55 =
-BY10- POT 5+00.00

BY10-65
-BY10- POT 7+88.48

-Y10- CURVE DATA
PI Sta 11+11.54
Δ = 39° 48' 52.8" (LT)
D = 38° 11' 49.9"
L = 104.23'
T = 54.32'
R = 150.00'
SE = SEE PLANS
RO = SEE PLANS

PROP CONC SIDEWALK
FOR -L- PROFILE, SEE SHEET NO. 30
FOR -Y10- PROFILE, SEE SHEET NO. 40
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

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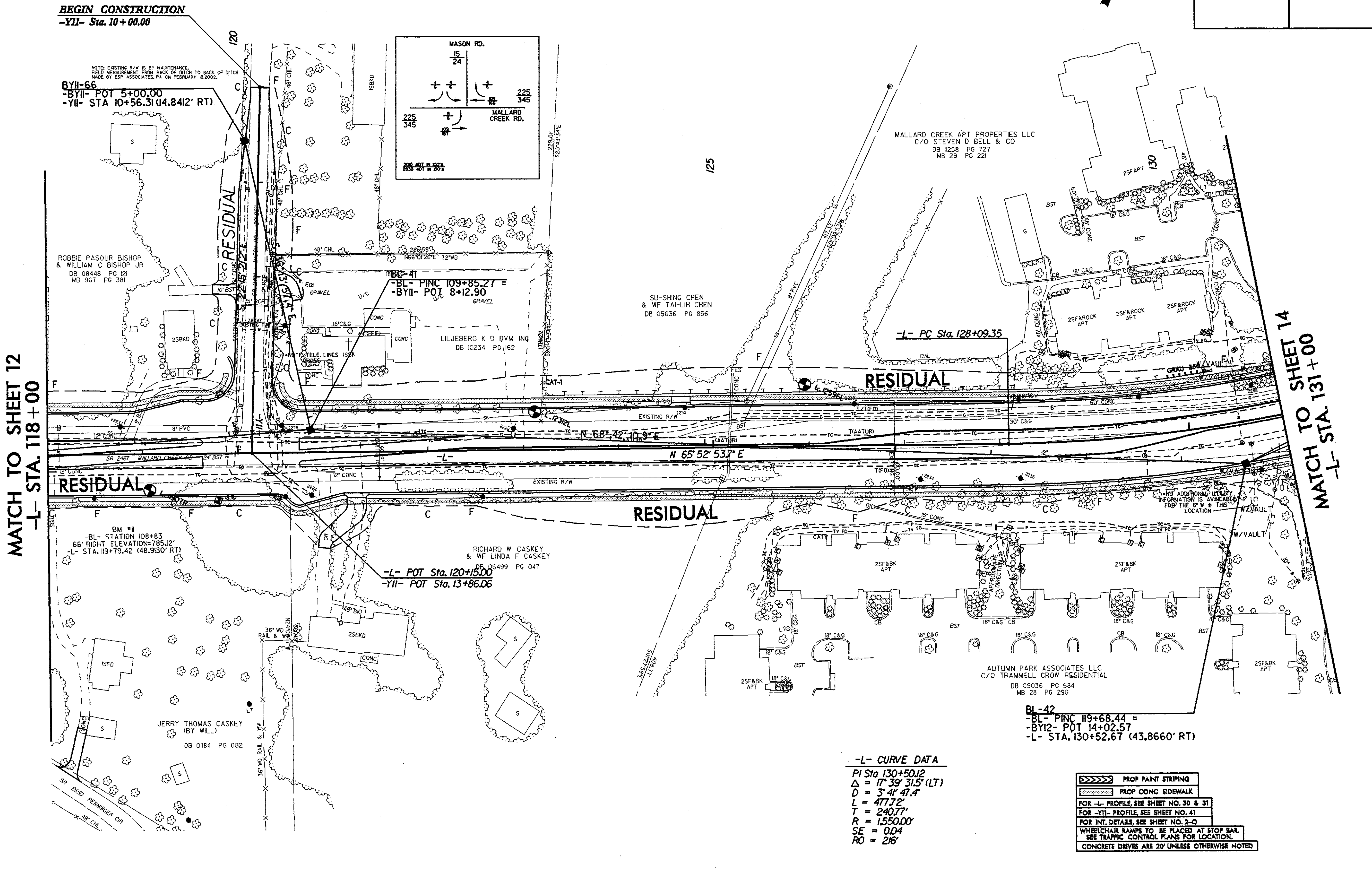
dhewett

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



BEGIN CONSTRUCTION
-Y11- Sta. 10+00.00
NOTE: EXISTING R/W IS BY MAINTENANCE. FIELD MEASUREMENT FROM BACK OF DITCH TO BACK OF DITCH MADE BY ESP ASSOCIATES, PA ON FEBRUARY 18,2002.
BY11-66
-BY11- POT 5+00.00
-Y11- STA 10+56.31 (14.8412' RT)
MASON RD.
MALLARD CREEK RD.
2010 ADT IN 100's
2030 ADT IN 100's
MALLARD CREEK APT PROPERTIES LLC
C/O STEVEN D BELL & CO
DB 11258 PG 727
MB 29 PG 221
ROBBIE PASOUR BISHOP
& WILLIAM C BISHOP JR
DB 08448 PG 121
MB 967 PG 381
BL-41
-BL- PINC 109+85.27 =
-BY11- POT 8+12.90
SU-SHING CHEN
& WF TAI-LIH CHEN
DB 05636 PG 856
LILJEBERG K D DVM INC
DB 10234 PG 162
-L- PC Sta. 128+09.35
RESIDUAL
MATCH TO SHEET 12
-L- STA. 118+00
MATCH TO SHEET 14
-L- STA. 131+00
N 68° 42' 10.9" E
N 65° 52' 53.7" E
SR 2467 MALLARD CREEK RD
EXISTING R/W
BM #11
-BL- STATION 108+83
66' RIGHT ELEVATION=785.12'
-L- STA. 119+79.42 (48.9130' RT)
RICHARD W CASKEY
& WF LINDA F CASKEY
DB 06499 PG 047
-L- POT Sta. 120+15.00
-Y11- POT Sta. 13+86.06
*NO ADDITIONAL UTILITY INFORMATION IS AVAILABLE FOR THE 6" W @ THIS LOCATION
AUTUMN PARK ASSOCIATES LLC
C/O TRAMMELL CROW RESIDENTIAL
DB 09036 PG 584
MB 28 PG 290
JERRY THOMAS CASKEY
(BY WILL)
DB 01184 PG 082
SR 2650 PENNINGER CIR
BL-42
-BL- PINC 119+68.44 =
-BY12- POT 14+02.57
-L- STA. 130+52.67 (43.8660' RT)
-L- CURVE DATA
PI Sta 130+50.12
Δ = 17° 39' 31.5" (LT)
D = 3° 41' 47.4"
L = 477.72'
T = 240.77'
R = 1,550.00'
SE = 0.04
RO = 216'
PROP PAINT STRIPING
PROP CONC SIDEWALK
FOR -L- PROFILE, SEE SHEET NO. 30 & 31
FOR -Y11- PROFILE, SEE SHEET NO. 41
FOR INT. DETAILS, SEE SHEET NO. 2-O
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

REVISIONS

8/17/99

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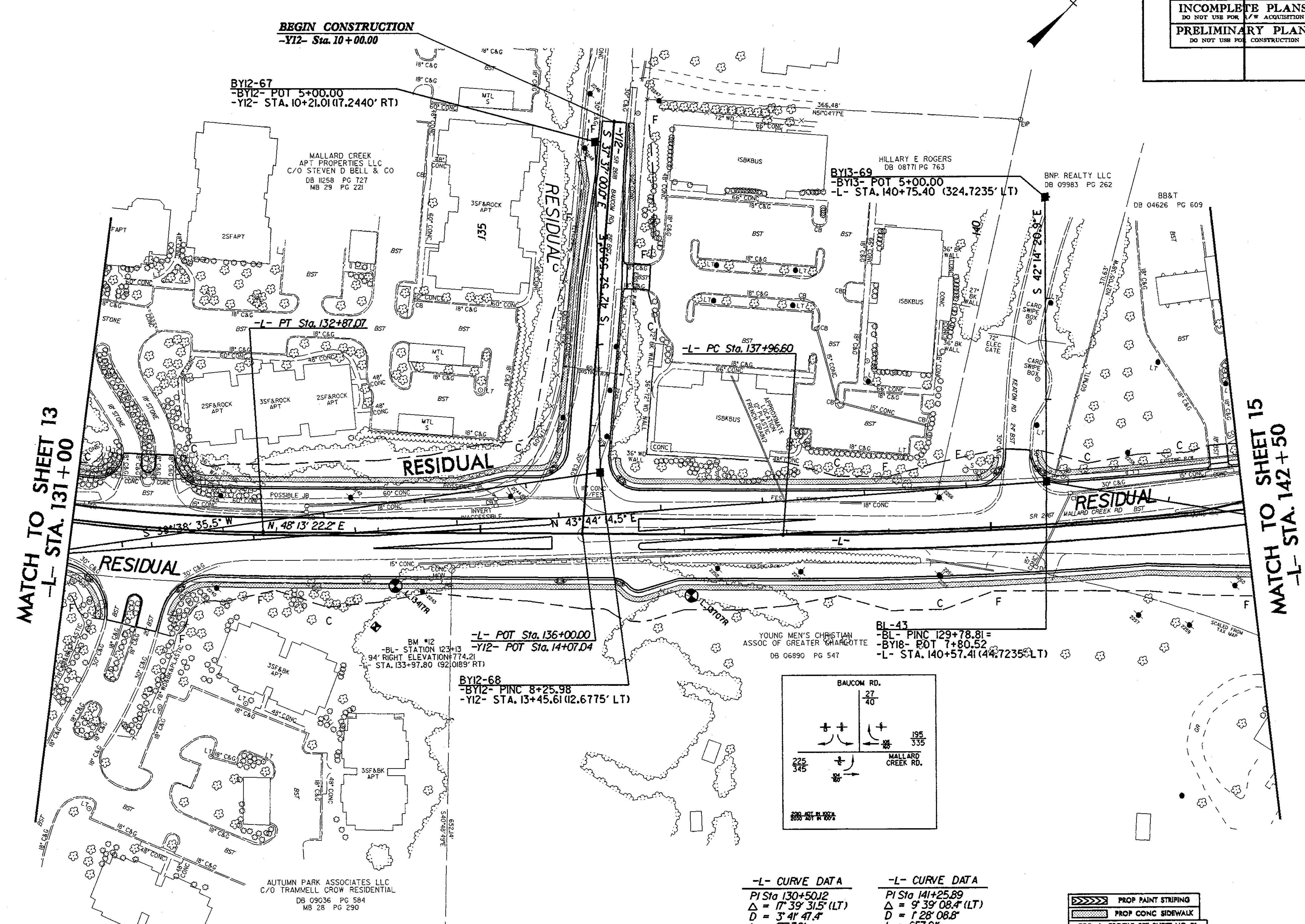
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

REVISIONS



BEGIN CONSTRUCTION
-Y12- Sta. 10+00.00
BY12-67
-BY12- POT 5+00.00
-Y12- STA. 10+21.01 (17.2440' RT)
MALLARD CREEK APT PROPERTIES LLC
C/O STEVEN D BELL & CO
DB 11258 PG 727
MB 29 PG 221
HILLARY E ROGERS
DB 08771 PG 763
BY13-69
-BY13- POT 5+00.00
-L- STA. 140+75.40 (324.7235' LT)
BNP REALTY LLC
DB 09983 PG 262
BB&T
DB 04626 PG 609
RESIDUAL
-L- PT Sta. 132+87.07
-L- PC Sta. 137+96.60
MATCH TO SHEET 13
-L- STA. 131+00
MATCH TO SHEET 15
-L- STA. 142+50
S 38°38' 35.5" W
N 48°13' 22.2" E
N 43°44' 4.5" E
-L-
S 42°14' 29.9" E
-L- POT Sta. 136+00.00
-Y12- POT Sta. 14+07.04
BY12-68
-BY12- PINC 8+25.98
-Y12- STA. 13+45.61 (12.6775' LT)
BM #12
-BL- STATION 123+13
94' RIGHT ELEVATION=774.21
STA. 133+97.80 (92.0189' RT)
YOUNG MEN'S CHRISTIAN ASSOC OF GREATER CHARLOTTE
DB 06890 PG 547
BL-43
-BL- PINC 129+78.81=
-BY18- POT 7+80.52
-L- STA. 140+57.41 (44.7235' LT)
AUTUMN PARK ASSOCIATES LLC
C/O TRAMMELL CROW RESIDENTIAL
DB 09036 PG 584
MB 28 PG 290
BAUCOM RD.
MALLARD CREEK RD.

-L- CURVE DATA

PI Sta 130+50.12
Δ = 17° 39' 31.5" (LT)
D = 3° 41' 47.4"
L = 477.12'
T = 240.77'
R = 1,550.00'
SE = 0.04
RO = 216'

-L- CURVE DATA

PI Sta 141+25.89
Δ = 9° 39' 08.4" (LT)
D = 1° 28' 08.8"
L = 657.01'
T = 329.29'
R = 3,900.00'
SE = 0.03
RO = 162'

PROP PAINT STRIPING

PROP CONC SIDEWALK

FOR -L- PROFILE, SEE SHEET NO. 31

FOR -Y12- PROFILE, SEE SHEET NO. 41

FOR INT. DETAILS, SEE SHEET NO. 2-F

WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

BL-45
-BL- PINC 138+61.46 =
-BY15- PINC 13+07.57
-L- STA. 148+96.12 (95.8842' LT)

MATCH TO SHEET 25
-Y13- STA. 19+00

MATCH TO SHEET 14
-L- STA. 142+50

MATCH TO SHEET 16
-L- STA. 155+50

MATCH TO SHEET 26
-Y13- STA. 25+00

HARRIS TEETER PROPERTIES LLC
DB 10123 PG 861
PB 26 PG 791
PB 25 PG 667

FIRST CITIZENS BANK & TRUST COMPANY
ISMBUS
DB 07581 PG 056
PB 25 PG 667

HARRIS TEETER PROPERTIES LLC
DB 10123 PG 861
PB 26 PG 791
PB 25 PG 667

HIGHWOODS REALTY LP
DB 11423 PG 362
PB 27 PG 245

SOUTHSTAR HOLDINGS-NORTH CHARLOTTE LLC
DB 10881 PG 533
PB 32 PG 174

NOVANT HEALTH INC
DB 07971 PG 858

BM #13
-BL- STATION 137+75
5' LEFT ELEVATION=744.07'
-L- STA 148+13.50 (56.6057' LT)

-L- POT Sta. 150+01.53
-Y13PGL- POC Sta. 23+14.19

-L- POT Sta. 150+31.64
-Y13- POC Sta. 23+05.31

-L- PT Sta. 144+53.62

-L- PC Sta. 153+52.97

U2507A-7
-BY15- PINC 16+18.12

RESIDUAL

RESIDUAL SR 2457 WALLARD CREEK RD

N 19° 02' 56.8" E

N 38° 34' 13.8" E

N 57° 24' 08.7" E

S 18° 08' 15.4" E

NO ASSOCIATED CABLES FOUND FOR ELECTRIC HAND-HOLES.

NO ADDITIONAL UTILITY INFORMATION IS AVAILABLE FOR THE 6" W & THIS LOCATION

BL-44
-BL- PINC 133+80.16 =
-BY14- POT 5+00.00
-L- STA. 144+42.67 (64.9621' RT)

-L- CURVE DATA

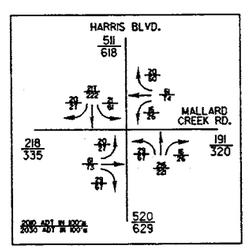
PI Sta 141+25.89	PI Sta 156+10.21
Δ = 9° 39' 08.4" (LT)	Δ = 17° 06' 36.6" (RT)
D = 1° 28' 08.8"	D = 3° 21' 02.3"
L = 657.01'	L = 510.65'
T = 329.29'	T = 257.24'
R = 3,900.00'	R = 1,710.00'
SE = 0.03	SE = 0.04
RO = 162'	RO = 216'

-Y13- CURVE DATA

PI Sta 20+67.04
Δ = 36° 20' 31.6" (LT)
D = 2° 00' 27.3"
L = 1,810.24'
T = 936.74'
R = 2,853.97'
SE = 0.03
RO = 108'

-Y13PGL- CURVE DATA

PI Sta 23+17.97
Δ = 25° 54' 31.7" (LT)
D = 1° 59' 12.5"
L = 1,304.11'
T = 663.40'
R = 2,883.97'



★ PROPOSED SIGNAL

PROP CONC SIDEWALK

FOR -L- PROFILE, SEE SHEET NO. 31, 32

FOR -Y13- PROFILE, SEE SHEET NO. 42

FOR INT. DETAILS, SEE SHEET NO. 2-G

WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.

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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

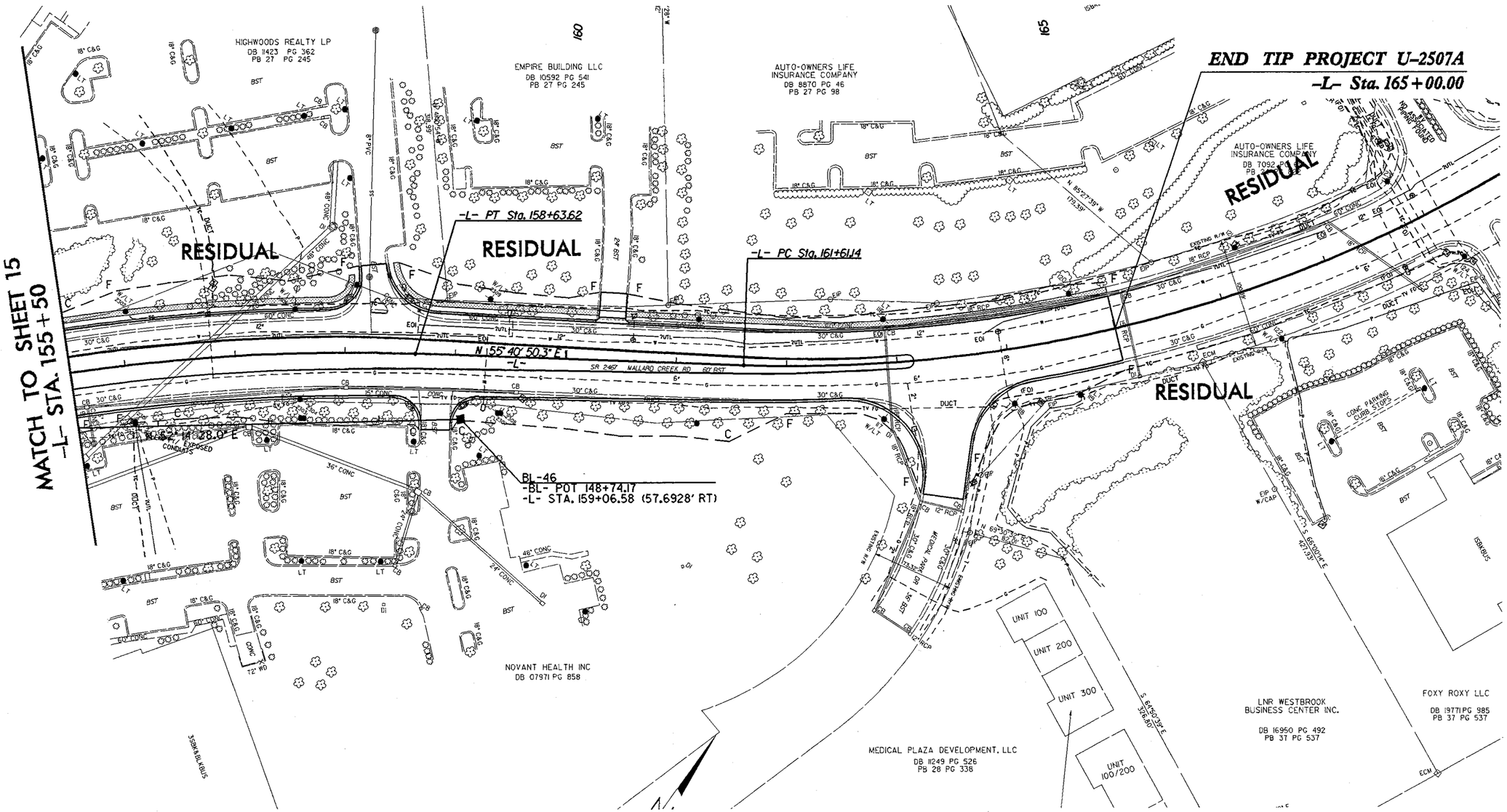
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

-L- CURVE DATA

PI Sta 156+10.21	PI Sta 166+05.31
Δ = 17° 06' 36.6" (RT)	Δ = 38° 33' 14.3" (LT)
D = 3° 21' 02.3"	D = 4° 30' 41.3"
L = 510.65'	L = 854.57'
T = 257.24'	T = 444.17'
R = 1,710.00'	R = 1,270.00'
SE = 0.04	SE = 0.04
RO = 216'	RO = 216'



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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

-Y1- CURVE DATA
PI Sta 14+46.13
Δ = 11° 28' 50.4" (RT)
D = 2° 17' 30.6"
L = 500.94'
T = 251.31'
R = 2,500.00'
SE = 0.03
RO = 93'

UCSGS DERITA2
-BY-REV PINC 10+19.12 =
-BY2-REV POT 5+00.00

BEGIN CONSTRUCTION
-Y1- Sta. 15+00.00

-Y1- POT Sta. 10+00.00

BY2-86
-BY2-REV PINC 8+02.80
-Y1- STA. 15+74.89 (363.699' LT)

BY-51
-BY-REV PINC 12+78.40
-Y1- STA. 17+32.10 (83.4430' LT)

BM #16
-BY-REV STATION 11+73
21' LEFT ELEVATION=814.17'
-Y1- STA. 16+30.76 (82.0944' LT)

BY-81
-BY-REV POT 5+00.00
-Y1- STA. 10+00.00 (18.290' RT)

-Y1- PC Sta. 11+94.82

-Y1- PT Sta. 16+95.76

N 89° 08' 01.3" E

S 73° 26' 26.5" E

S 7° 34' 50.5" E

S 16° 58' 52.2" E

S 31° 23' 42.4" E

S 28° 27' 42.6" E

RESIDUAL

MATCH TO SHEET 5
-Y1- STA. 22+50

CHARLOTTE MECKLENBURG BOARD OF EDUCATION
NO DEED FOUND

VIKING PROPERTIES
DB 5127 PG 454

UPI OF CHARLOTTE, LLC
DB 18377 PG 027

VINOD PATEL and NUTAN PATEL
DB 18342 PG 237

MACK EARL ERWIN and APRIL D. ERWIN
DB 4846 PG 937

SOTIRIOS TSILIMOS
DB 6139 PG 321

PLAYERS SPORTING GOODS, INC.
DB 5194 PG 436

DOROTHY ROBINSON
DB 1667 PG 408
DB 31 PG 571

STEPEHN H. YANG AND CHAO L. YANG
DB 18692 PG 084

FAIRSTONE HOMETOWNERS ASSOCIATION% PRISM REAL ESTATE SERVICES, INC
DB 12654 PG 185

TRIVEN PROPERTIES, LLC.
DB 10646 PG 342

WADE P. BEAM & WF HELEN S BEAM
DB 06192 PG 494

WADE P. BEAM & WE HELEN S BEAM
DB 04614 PG 0697

MARY S. BUTTS (AT ENTIRETY)
DB 01863 PG 428

DONALD L. OEHLER (R/T)
DB 07879 PG 099

DERITA PRESBYTERIAN CHURCH
DB 3064 PG 183

SR 2480 W SUGAR CREEK RD BST

FAIRSTONE AVE 20' BST

SOUTHERN RR

PROP PAINT STRIPING
PROP CONC SIDEWALK
FOR -Y1- PROFILE, SEE SHEET NO. 33
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

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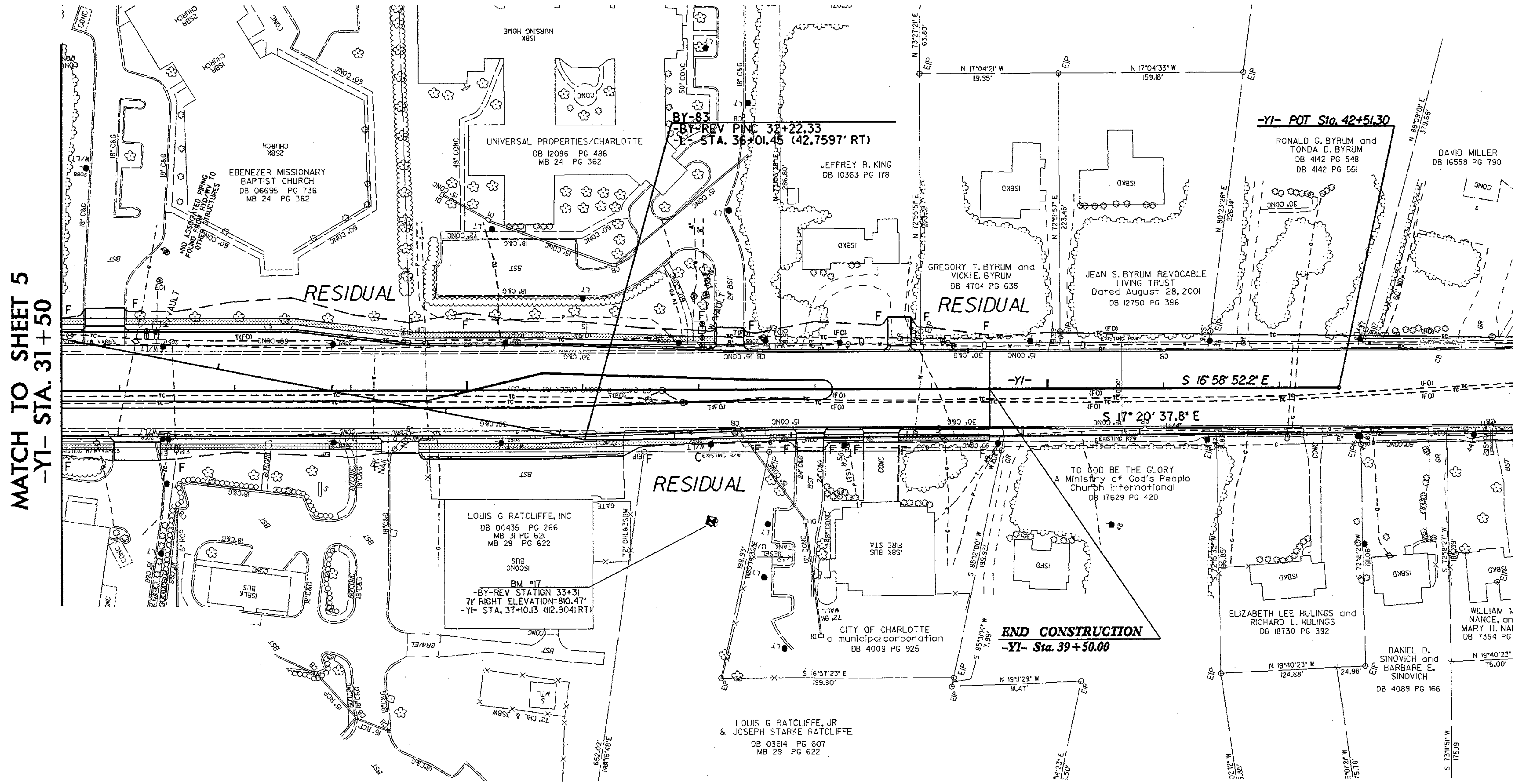
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH TO SHEET 5
-Y1- STA. 31+50
EBENEZER MISSIONARY BAPTIST CHURCH
DB 06695 PG 736
MB 24 PG 362
UNIVERSAL PROPERTIES/CHARLOTTE
DB 12096 PG 488
MB 24 PG 362
BY-83
-BY-REV PINC 32+22.33
-L- STA. 36+01.45 (42.7597' RT)
JEFFREY R. KING
DB 10363 PG 178
GREGORY T. BYRUM and VICKIE BYRUM
DB 4704 PG 638
JEAN S. BYRUM REVOCABLE LIVING TRUST
Dated August 28, 2001
DB 12750 PG 396
-Y1- POT Sta. 42+51.30
RONALD G. BYRUM and TONDA D. BYRUM
DB 4142 PG 548
DB 4142 PG 551
DAVID MILLER
DB 16558 PG 790
RESIDUAL
RESIDUAL
RESIDUAL
-Y1-
S 16° 58' 52.2" E
S 17° 20' 37.8" E
LOUIS G RATCLIFFE, INC
DB 00435 PG 266
MB 31 PG 621
MB 29 PG 622
BM #17
-BY-REV STATION 33+31
71' RIGHT ELEVATION=810.47'
-Y1- STA. 37+10.13 (112.9041'RT)
TO GOD BE THE GLORY
A Ministry of God's People
Church International
DB 17629 PG 420
CITY OF CHARLOTTE
a municipal corporation
DB 4009 PG 925
END CONSTRUCTION
-Y1- Sta. 39+50.00
LOUIS G RATCLIFFE, JR
& JOSEPH STARKE RATCLIFFE
DB 03614 PG 607
MB 29 PG 622
ELIZABETH LEE HULINGS and RICHARD L. HULINGS
DB 18730 PG 392
DANIEL D. SINOVICH and BARBARE E. SINOVICH
DB 4089 PG 166
WILLIAM M. NANCE, and MARY H. NANCE
DB 7354 PG 112

PROP CONC SIDEWALK

FOR -Y1- PROFILE, SEE SHEET NO. 33, 34

WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.

CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

REVISIONS

8/17/99

10-JUN-2008 14:35
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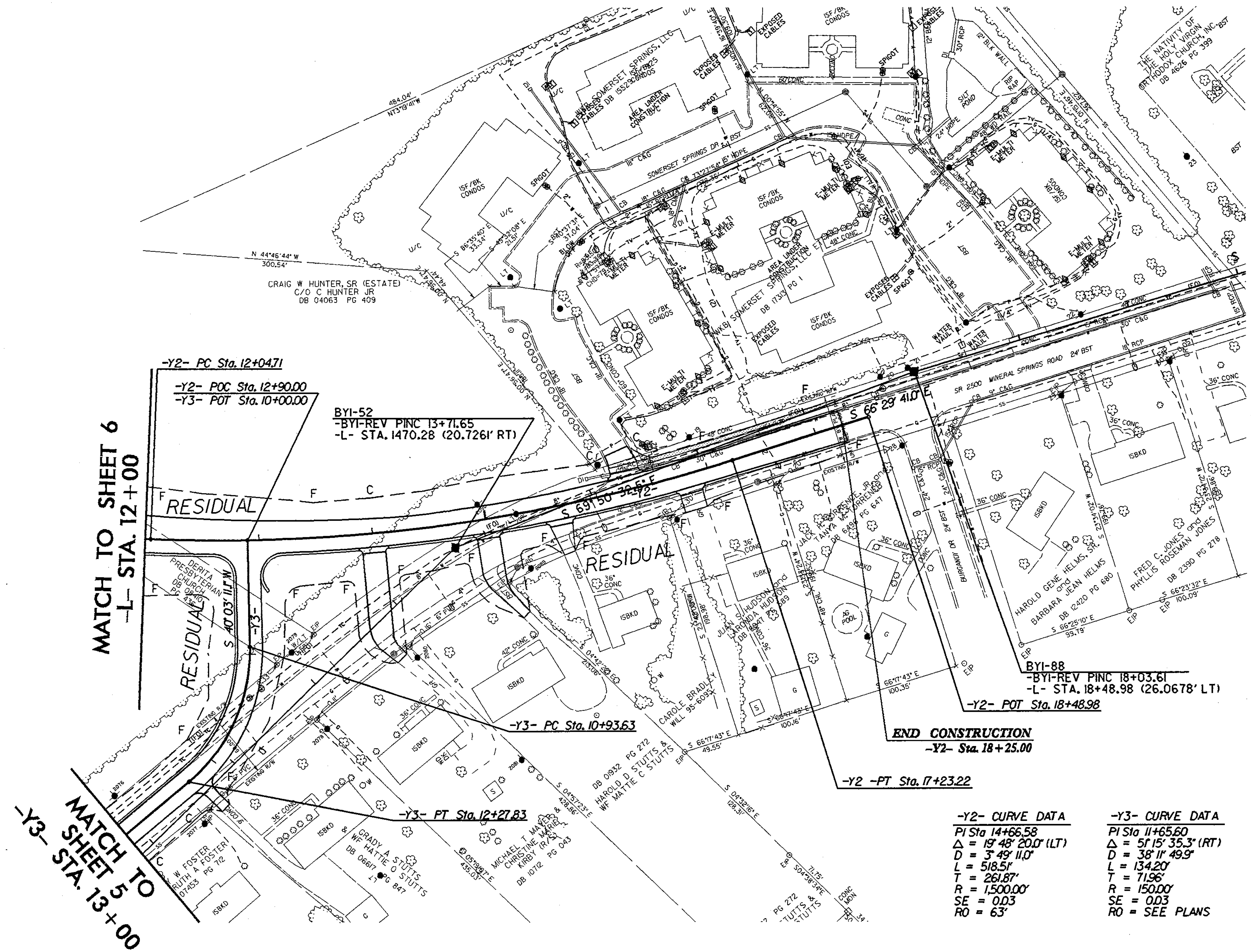
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	19
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99



-Y2- CURVE DATA
PI Sta 14+66.58
Δ = 19° 48' 20.0" (LT)
D = 3° 49' 11.0"
L = 518.51'
T = 261.87'
R = 1,500.00'
SE = 0.03
RO = 63'

-Y3- CURVE DATA
PI Sta 11+65.60
Δ = 51° 15' 35.3" (RT)
D = 38° 11' 49.9"
L = 134.20'
T = 71.96'
R = 150.00'
SE = 0.03
RO = SEE PLANS

PROP PAINT STRIPING
PROP CONC SIDEWALK
PROP PVMT REMOVAL
FOR -Y2- PROFILE, SEE SHEET NO. 34
FOR -Y3- PROFILE, SEE SHEET NO. 35
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

10-JUN-2008 14:36
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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

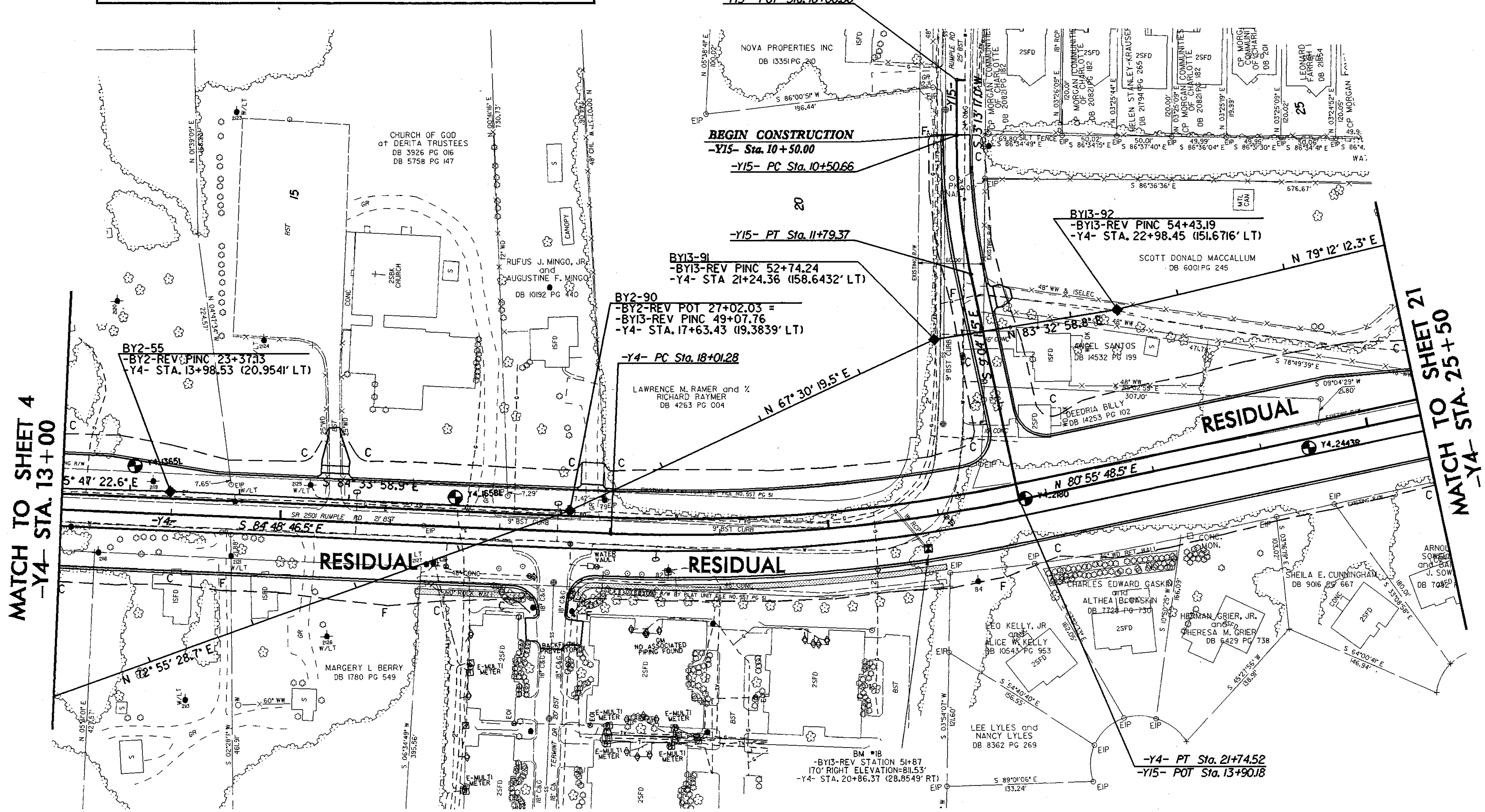
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

NOTE: -Y4- (CITY BLVD.) TO BE REDESIGNED BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE

-Y4- CURVE DATA	-Y15- CURVE DATA
PI Sta 19+88.87	PI Sta 11+15.27
Δ = 14° 15' 25.0" (LT)	Δ = 12° 17' 28.5" (LT)
D = 3° 49' 11.0"	D = 9° 32' 57.5"
L = 373.25'	L = 128.71'
T = 187.59'	T = 64.60'
R = 1,500.00'	R = 600.00'
SE = 0.04	SE = 0.04
RO = 192'	RO = 84'



-Y15- POT Sta. 10+00.00
BEGIN CONSTRUCTION
-Y15- Sta. 10+50.00
-Y15- PC Sta. 10+50.66
-Y15- PT Sta. 11+79.37
NOVA PROPERTIES INC
DB 13351 PG 210
CHURCH OF GOD at DERITA TRUSTEES
DB 3926 PG 016
DB 5758 PG 147
RUFUS J. MINGO, JR. and AUGUSTINE F. MINGO
DB 10192 PG 440
LAWRENCE M. RAMER and ½ RICHARD RAYMER
DB 4263 PG 004
SCOTT DONALD MACCALLUM
DB 6001 PG 245
BY13-92
-BY13-REV PINC 54+43.19
-Y4- STA. 22+98.45 (151.6716' LT)
BY13-91
-BY13-REV PINC 52+74.24
-Y4- STA 21+24.36 (158.6432' LT)
BY2-90
-BY2-REV POT 27+02.03 =
-BY13-REV PINC 49+07.76
-Y4- STA. 17+63.43 (19.3839' LT)
-Y4- PC Sta. 18+01.28
BY2-55
-BY2-REV PINC 23+37.13
-Y4- STA. 13+98.53 (20.9541' LT)
MATCH TO SHEET 4
-Y4- STA. 13+00
MATCH TO SHEET 21
-Y4- STA. 25+50
N 67° 30' 19.5" E
N 83° 32' 58.8" E
N 79° 12' 12.3" E
N 80° 55' 48.5" E
S 84° 33' 58.9" E
S 84° 48' 46.5" E
N 72° 55' 28.7" E
RESIDUAL
RESIDUAL
RESIDUAL
SR 2501 RUMPLE RD
MARGERY L BERRY
DB 1780 PG 549
CHARLES EDWARD GASKIN and ALTHEA B. GASKIN
DB 7728 PG 730
LEO KELLY, JR and ALICE W. KELLY
DB 10543 PG 953
HERMAN GRIER, JR. and THERESA M. GRIER
DB 6429 PG 738
SHEILA E. CUNNINGHAM
DB 9016 PG 667
LEE LYLES and NANCY LYLES
DB 8362 PG 269
BM #18
-BY13-REV STATION 51+87
170' RIGHT ELEVATION=811.53'
-Y4- STA. 20+86.37 (28.8549' RT)
-Y4- PT Sta. 21+74.52
-Y15- POT Sta. 13+90.18
NO ASSOCIATED PIPING FOUND

PROP PVMT REMOVAL	
FOR -Y4- PROFILE, SEE SHEET NO. 35 & 36	
FOR -Y15- PROFILE, SEE SHEET NO. 44	
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED	

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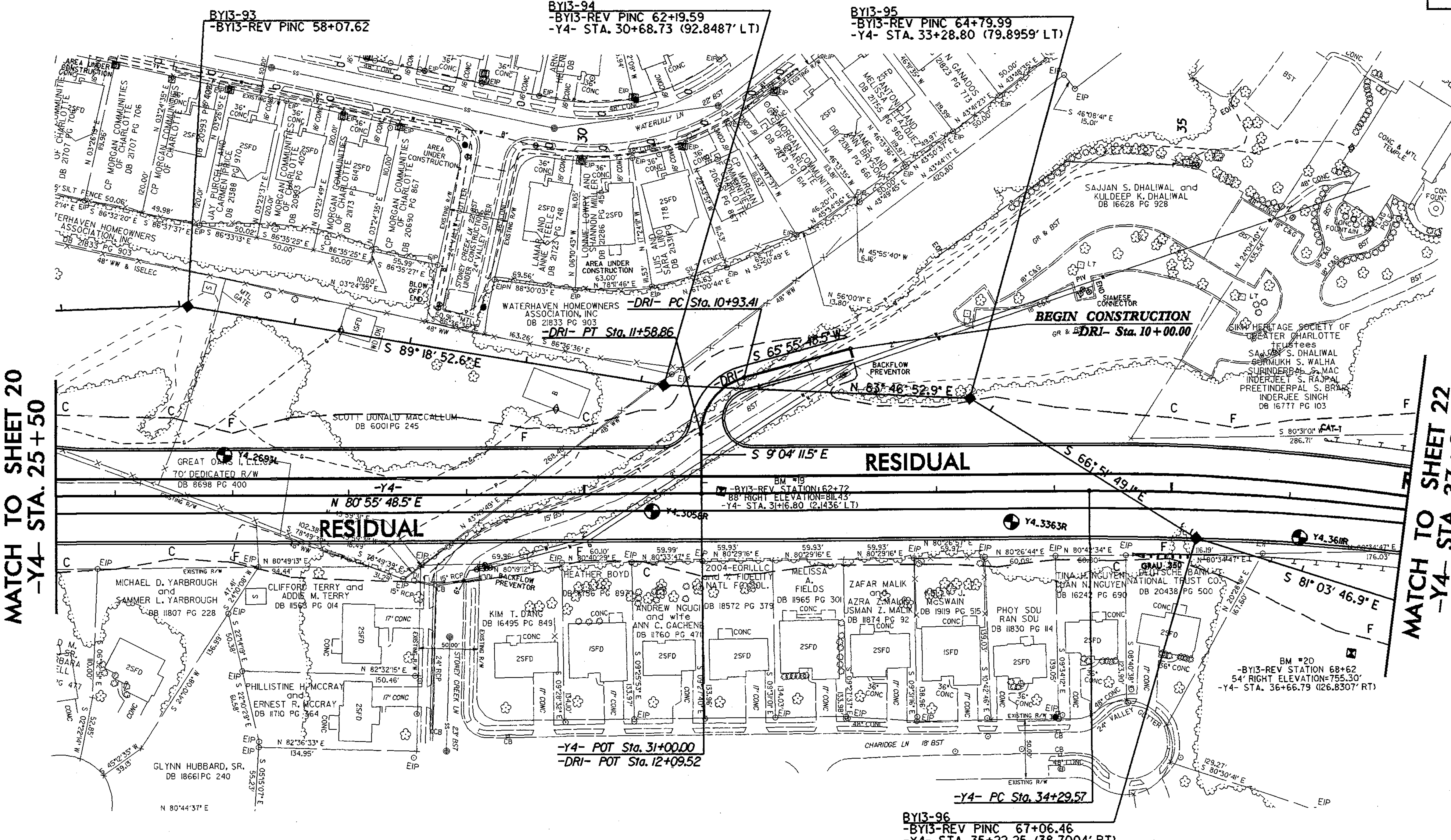
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



BY13-93
-BY13-REV PINC 58+07.62
BY13-94
-BY13-REV PINC 62+19.59
-Y4- STA. 30+68.73 (92.8487' LT)
BY13-95
-BY13-REV PINC 64+79.99
-Y4- STA. 33+28.80 (79.8959' LT)
MATCH TO SHEET 20
-Y4- STA. 25+50
MATCH TO SHEET 22
-Y4- STA. 37+00
RESIDUAL
RESIDUAL
BEGIN CONSTRUCTION
-DRI- Sta. 10+00.00
-DRI- PC Sta. 10+93.41
-DRI- PT Sta. 11+58.86
S 89° 18' 52.6" E
S 65° 55' 48.5" W
N 83° 46' 52.9" E
S 9° 04' 11.5" E
S 66° 51' 49.1" E
N 80° 55' 48.5" E
S 81° 03' 46.9" E
-Y4-
SCOTT DONALD MACCALLUM
DB 6001 PG 245
WATERHAVEN HOMEOWNERS ASSOCIATION, INC
DB 21833 PG 903
SAJJAN S. DHALIWAL and KULDEEP K. DHALIWAL
DB 16628 PG 928
BM #19
-BY13-REV STATION 62+72
88' RIGHT ELEVATION=811.43'
-Y4- STA. 31+16.80 (2.1436' LT)
BM #20
-BY13-REV STATION 68+62
54' RIGHT ELEVATION=755.30'
-Y4- STA. 36+66.79 (126.8307' RT)
-Y4- POT Sta. 31+00.00
-DRI- POT Sta. 12+09.52
-Y4- PC Sta. 34+29.57
BY13-96
-BY13-REV PINC 67+06.46
-Y4- STA. 35+22.25 (38.7004' RT)
MICHAEL D. YARBROUGH and SAMMER L. YARBROUGH
DB 11807 PG 228
CLIFFORD TERRY and ADDIE M. TERRY
PHILLISTINE H. MCCRAY and ERNEST R. MCCRAY
DB 11710 PG 364
GLYNN HUBBARD, SR.
DB 18661 PG 240
KIM T. DANG
DB 16495 PG 849
HEATHER BOYD
ANDREW NGUGI and wife ANN C. GACHENE
DB 11760 PG 471
MELISSA A. FIELDS
DB 11965 PG 301
ZAFAR MALIK and AZRA Z. MALIK
USMAN Z. MALIK
DB 11874 PG 92
PHOY SOU
RAN SOU
DB 11830 PG 114
TINA H. NGUYEN
DB 16242 PG 690
DB 20438 PG 500
GREAT OAKS
70' DEDICATED R/W
DB 8698 PG 400
STONEY CREEK LN
CHARIDGE LN
WATERFULLY LN

NOTE: -Y4- (CITY BLVD.) TO BE REDESIGNED BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE

-DRI- CURVE DATA

PI Sta 11+31.78
Δ = 75° 00' 00.0" (LT)
D = 114° 35' 29.6"
L = 65.45'
T = 38.37'
R = 50.00'
SE = SEE PLANS
RO = SEE PLANS

-Y4- CURVE DATA

PI Sta 42+46.90
Δ = 44° 27' 21.4" (RT)
D = 2° 51' 53.2"
L = 1,551.81'
T = 817.32'
R = 2,000.00'
SE = 0.04
RO = 192'

FOR -Y4- PROFILE, SEE SHEET NO. 36
FOR -DRI- PROFILE, SEE SHEET NO. 45

REVISIONS

8/17/99

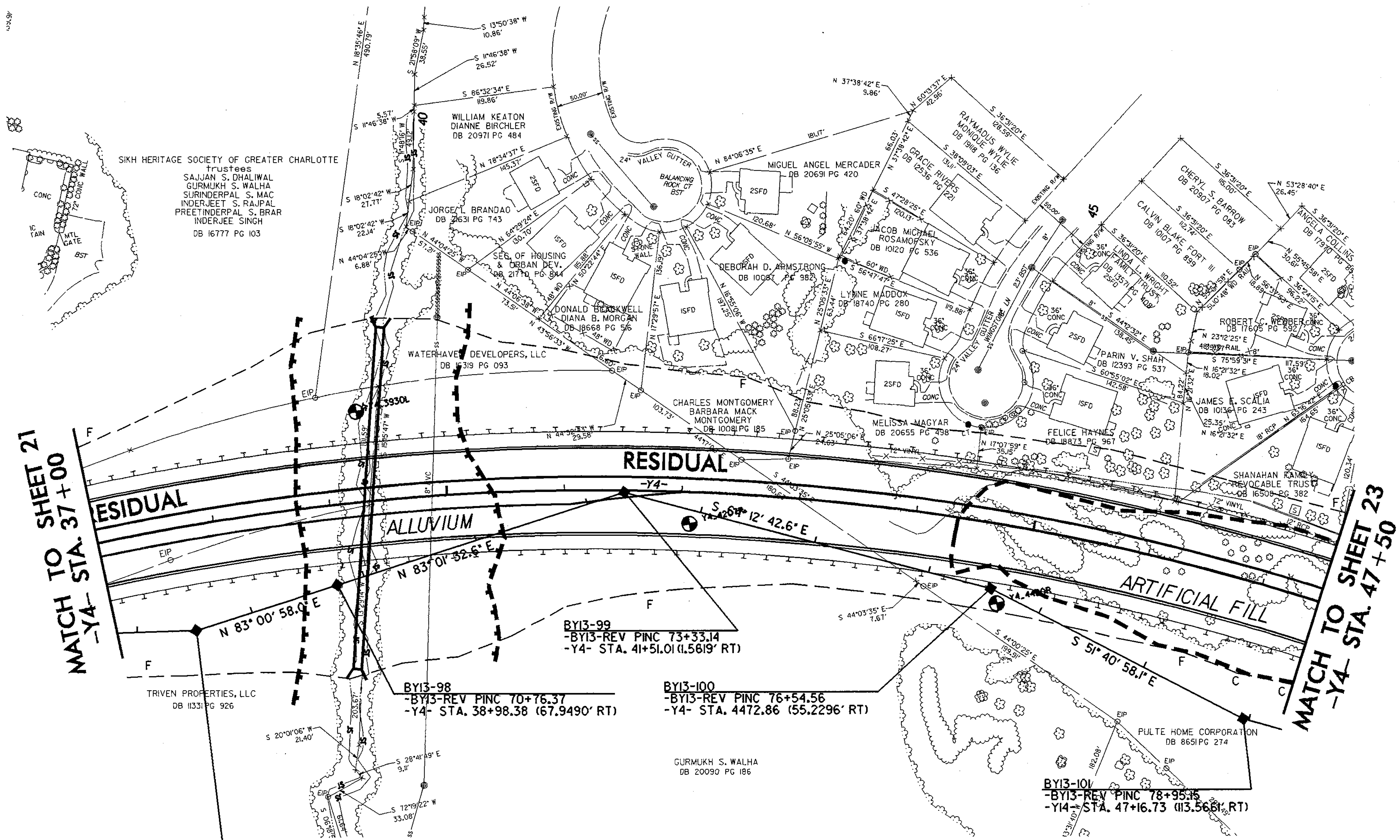
27-AUG-2008 10:29

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NOTE: -Y4- (CITY BLVD.) TO BE REDESIGNED BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE



MATCH TO SHEET 21
-Y4- STA. 37+00
MATCH TO SHEET 23
-Y4- STA. 47+50
RESIDUAL
ALLUVIUM
ARTIFICIAL FILL
SIKH HERITAGE SOCIETY OF GREATER CHARLOTTE
trustees
SAJJAN S. DHALIWAL
GURMUKH S. WALHA
SURINDERPAL S. MAC
INDERJEET S. RAJPAL
PREETINDERPAL S. BRAR
INDERJEE SINGH
DB 16777 PG 103
WILLIAM KEATON
DIANNE BIRCHLER
DB 20971 PG 484
MIGUEL ANGEL MERCADER
DB 20691 PG 420
WATERHAVEN DEVELOPERS, LLC
DB 15319 PG 093
CHARLES MONTGOMERY
BARBARA MACK
MONTGOMERY
DB 10081 PG 185
MELISSA MAGYAR
DB 20655 PG 498
FELICE HAYNES
DB 18873 PG 967
SHANAHAN RANDY
REVOCABLE TRUST
DB 16508 PG 382
TRIVEN PROPERTIES, LLC
DB 11331 PG 926
GURMUKH S. WALHA
DB 20090 PG 186
PULTE HOME CORPORATION
DB 8651 PG 274
N 83° 00' 58.0" E
N 83° 01' 32.5" E
S 51° 40' 58.1" E
BY13-97
-BY13-REV PINC 69+50.34
-Y4- STA. 37+68.97 (88.7419' RT)
BY13-98
-BY13-REV PINC 70+76.37
-Y4- STA. 38+98.38 (67.9490' RT)
BY13-99
-BY13-REV PINC 73+33.14
-Y4- STA. 41+51.01 (1.5619' RT)
BY13-100
-BY13-REV PINC 76+54.56
-Y4- STA. 4472.86 (55.2296' RT)
BY13-101
-BY13-REV PINC 78+95.15
-Y14- STA. 47+16.73 (113.5661' RT)

-Y4- CURVE DATA

PI Sta 42+46.90
Δ = 44° 27' 21.4" (RT)
D = 2° 51' 53.2"
L = 1,551.81'
T = 817.32'
R = 2,000.00'
SE = 0.04
RO = 192'

FOR -Y4- PROFILE, SEE SHEET NO. 36

REVISIONS

8/17/99

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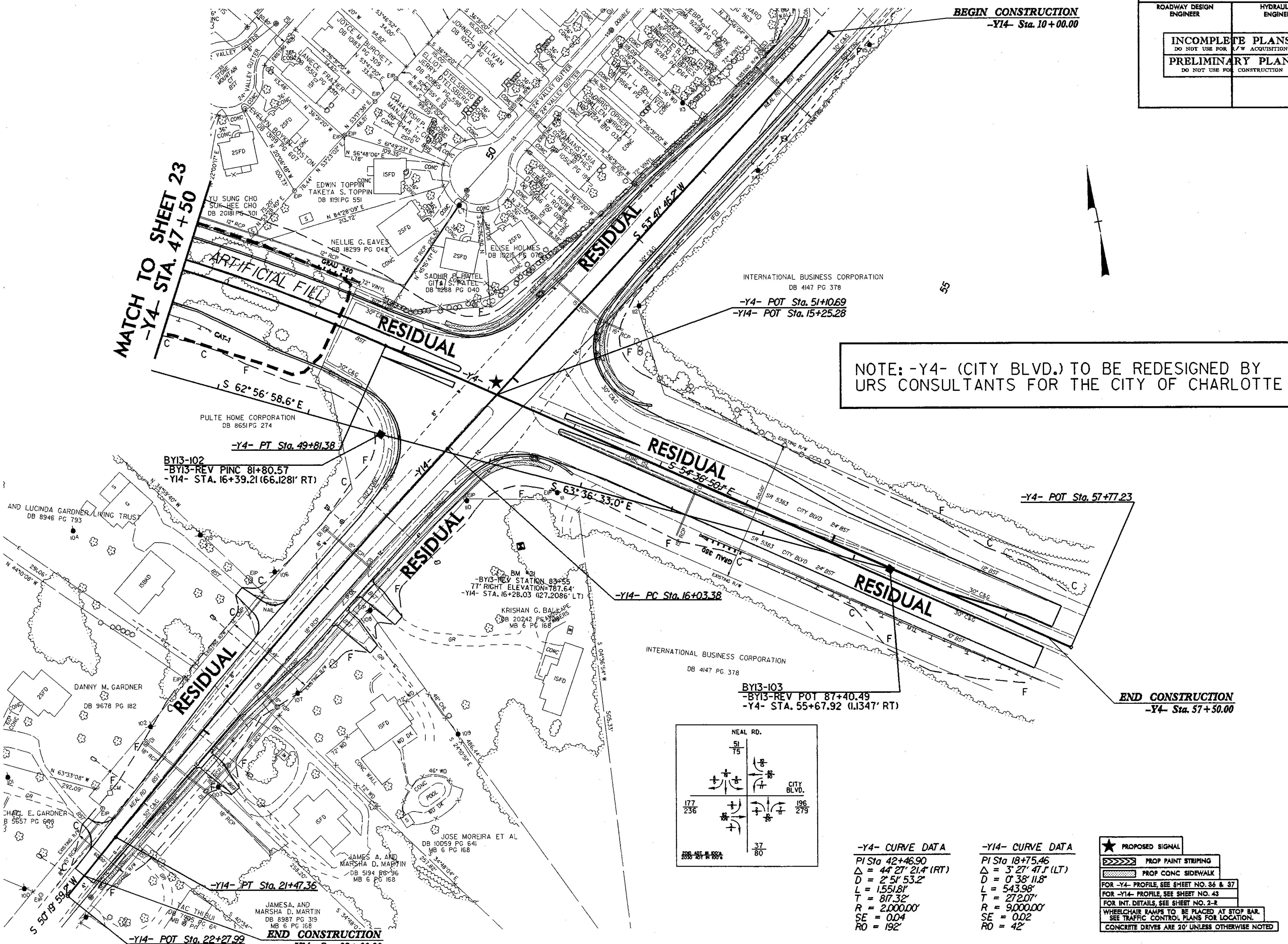
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



MATCH TO SHEET 23
-Y4- STA. 47+50
BEGIN CONSTRUCTION
-Y14- Sta. 10+00.00
END CONSTRUCTION
-Y4- Sta. 57+50.00
END CONSTRUCTION
-Y14- Sta. 22+00.00
RESIDUAL
ARTIFICIAL FILL
S 53° 47' 46.2" W
S 62° 56' 58.6" E
S 63° 36' 33.0" E
S 54° 36' 58.1" E
S 50° 19' 59.7" W
INTERNATIONAL BUSINESS CORPORATION
DB 4147 PG 378
PULTE HOME CORPORATION
DB 8651 PG 274
-Y4- POT Sta. 51+10.69
-Y14- POT Sta. 15+25.28
-Y4- PT Sta. 49+81.38
BY13-102
-BY13-REV PINC 81+80.57
-Y14- STA. 16+39.21 (66.1281' RT)
-Y4- POT Sta. 57+77.23
-Y14- PC Sta. 16+03.38
BY13-103
-BY13-REV POT 87+40.49
-Y4- STA. 55+67.92 (1.1347' RT)
BM #31
-BY13-REV STATION 83+55
77' RIGHT ELEVATION=787.64'
-Y14- STA. 16+28.03 (127.2086' LT)
-Y14- PT Sta. 21+47.36
-Y14- POT Sta. 22+27.99
EDWIN TOPPIN
TAKEYA S. TOPPIN
DB 1191 PG 551
YU SUNG CHO
SUK-HEE CHO
DB 20181 PG 301
NELLIE G. EAVES
DB 18299 PG 043
SADHIR P. PATEL
GITA S. PATEL
DB 11288 PG 040
ELISE HOLMES
DB 10215 PG 079
DANNY M. GARDNER
DB 9678 PG 182
KRISHAN G. BALKAPE
DB 20242 PG
MB 6 PG 168
JOSE MOREIRA ET AL
DB 10059 PG 641
MB 6 PG 168
JAMES A. AND
MARSHA D. MARTIN
DB 5194 PG 96
MB 6 PG 168
JAMESA. AND
MARSHA D. MARTIN
DB 8987 PG 319
MB 6 PG 168
NEAL RD.
CITY BLVD.

NOTE: -Y4- (CITY BLVD.) TO BE REDESIGNED BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE

-Y4- CURVE DATA

PI Sta 42+46.90
Δ = 44° 27' 21.4" (RT)
D = 2° 51' 53.2"
L = 1,551.81'
T = 817.32'
R = 2,000.00'
SE = 0.04
RO = 192'

-Y14- CURVE DATA

PI Sta 18+75.46
Δ = 3° 27' 47.5" (LT)
D = 0° 38' 11.8"
L = 543.98'
T = 272.07'
R = 9,000.00'
SE = 0.02
RO = 42'

★ PROPOSED SIGNAL
PROP PAINT STRIPING
PROP CONC SIDEWALK

FOR -Y4- PROFILE, SEE SHEET NO. 36 & 37
FOR -Y14- PROFILE, SEE SHEET NO. 43
FOR INT. DETAILS, SEE SHEET NO. 2-R
WHEELCHAIR RAMPS TO BE PLACED AT STOP BAR. SEE TRAFFIC CONTROL PLANS FOR LOCATION.
CONCRETE DRIVES ARE 20' UNLESS OTHERWISE NOTED

REVISIONS

8/17/99

27-AUG-2008 10:32

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

BEGIN CONSTRUCTION
-Y6- Sta. 10+00.00

RESIDUAL

U2507A-3
-BY4-REV PINC 19+21.13 =
-BY5A- POT 8+31.98

BY5-59
-BY5A- POT 5+00.00
-Y6- STA. 13+39.48 (305.921l' LT)

BY6-6l
-BY4-REV POT 22+35.47 =
-BY5B- POT 7+54.89
-Y6- STA. 17+05.16 (31.5860' LT)

BY6-60
-BY5B- POT 5+00.00
-Y6- STA. 17+62.98 (276.1899' LT)

-Y6- CURVE DATA
PI Sta 24+93.96
Δ = 107° 34' 47.0" (RT)
D = 9° 32' 57.5"
L = 1126.57'
T = 819.49'
R = 600.00'
SE = 0.04
RO = 84'

-Y6- PC Sta. 16+74.47

MATCH TO SHEET 10
-Y6- STA 19+00

PROP PAINT STRIPING
PROP CONC SIDEWALK
FOR -Y6- PROFILE, SEE SHEET NO. 38

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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

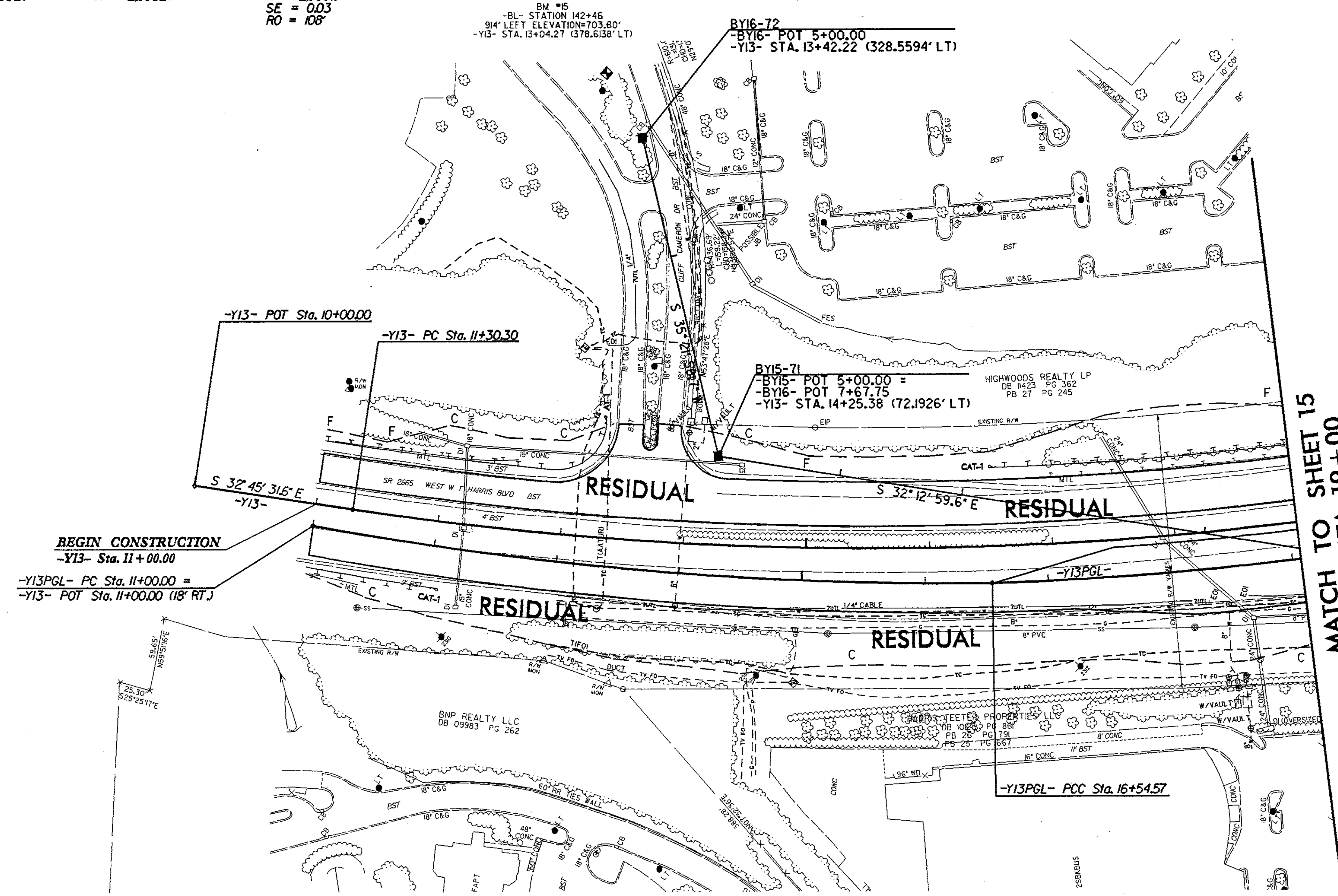
REVISIONS

-Y13PGL- CURVE DATA

PI Sta 13+78.14	PI Sta 23+17.97
Δ = 11° 01' 03.5" (LT)	Δ = 25° 54' 31.7" (LT)
D = 1° 59' 12.1"	D = 1° 59' 12.1"
L = 554.57'	L = 1,304.11'
T = 278.14'	T = 663.40'
R = 2,883.97'	R = 2,883.97'

-Y13- CURVE DATA

PI Sta 20+67.04
Δ = 36° 20' 31.6" (LT)
D = 2° 00' 27.3"
L = 1,810.24'
T = 936.74'
R = 2,853.97'
SE = 0.03
RO = 108'



FOR -Y13- PROFILE, SEE SHEET NO. 42

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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

8/17/99

MATCH TO SHEET 15
-Y13- STA. 25+00

-Y13- POT Sta. 31+62.54

-Y13- PT Sta. 29+40.55

RESIDUAL

WACHOVIA BANK OF NORTH CAROLINA, NA
DB 08391 PG 072
MB 27 PG 094

SR 2665 W T HARRIS BLVD WBL BST

SR 2665 W T HARRIS BLVD EBL BST

END CONSTRUCTION
-Y13- Sta. 30+95.00

S 69° 06' 03.2" E

S 66° 36' 35.8" E

U2507A-8
-BY15- POT 24+29.45 =
-BY17- PINC 9+00.63

-Y13PGL- CURVE DATA
PI Sta 23+17.97
Δ = 25° 54' 31.7" (LT)
D = 1° 59' 12.1"
L = 1,304.11'
T = 663.40'
R = 2,883.97'

IBM COASTAL EMPLOYEES FEDERAL CREDIT UNION
DB 0745 PG 192
PB 25 PG 081

UNIVERSITY RESTAURANT LLC
DB 11219 PG 878
PB 32 PG 174

BM #14
-BY15- STATION 22+22
79' RIGHT ELEVATION=739.52'
-Y13- STA 30+88.16 (156.136' RT)

FIRST UNION NATIONAL BANK
NORTH CAROLINA
DB 07822 PG 0939

-Y13PGL- PT Sta. 29+58.68

-Y13PGL- POT Sta. 31+13.14 =
-Y13- POT Sta. 30+95.00 (30' RT)

-Y13- CURVE DATA
PI Sta 20+67.04
Δ = 36° 20' 31.8" (LT)
D = 2° 00' 27.3"
L = 1,810.24'
T = 936.74'
R = 2,853.97'
SE = 0.03
RO = 108'

FOR -Y13- PROFILE, SEE SHEET NO. 42

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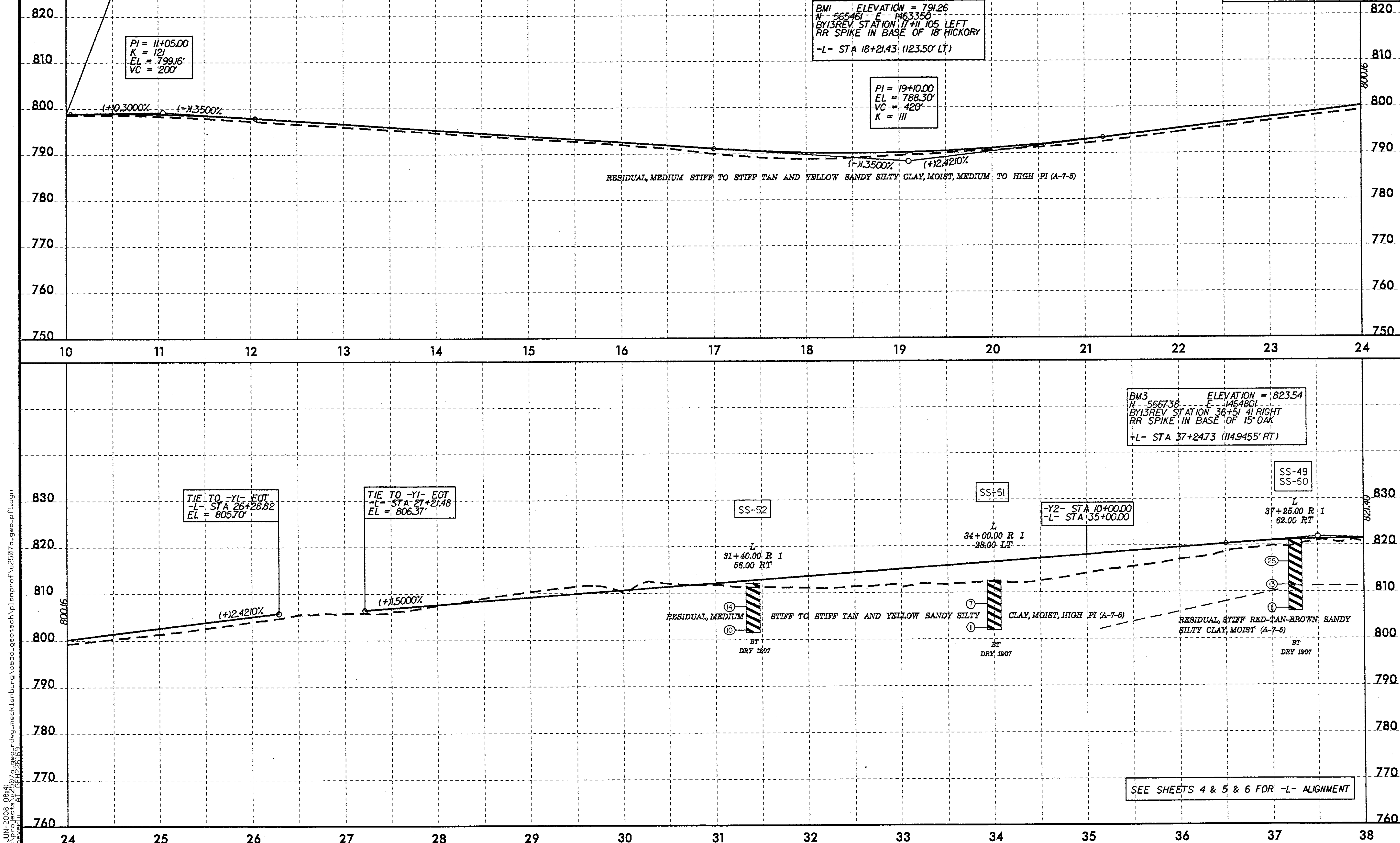
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	27
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

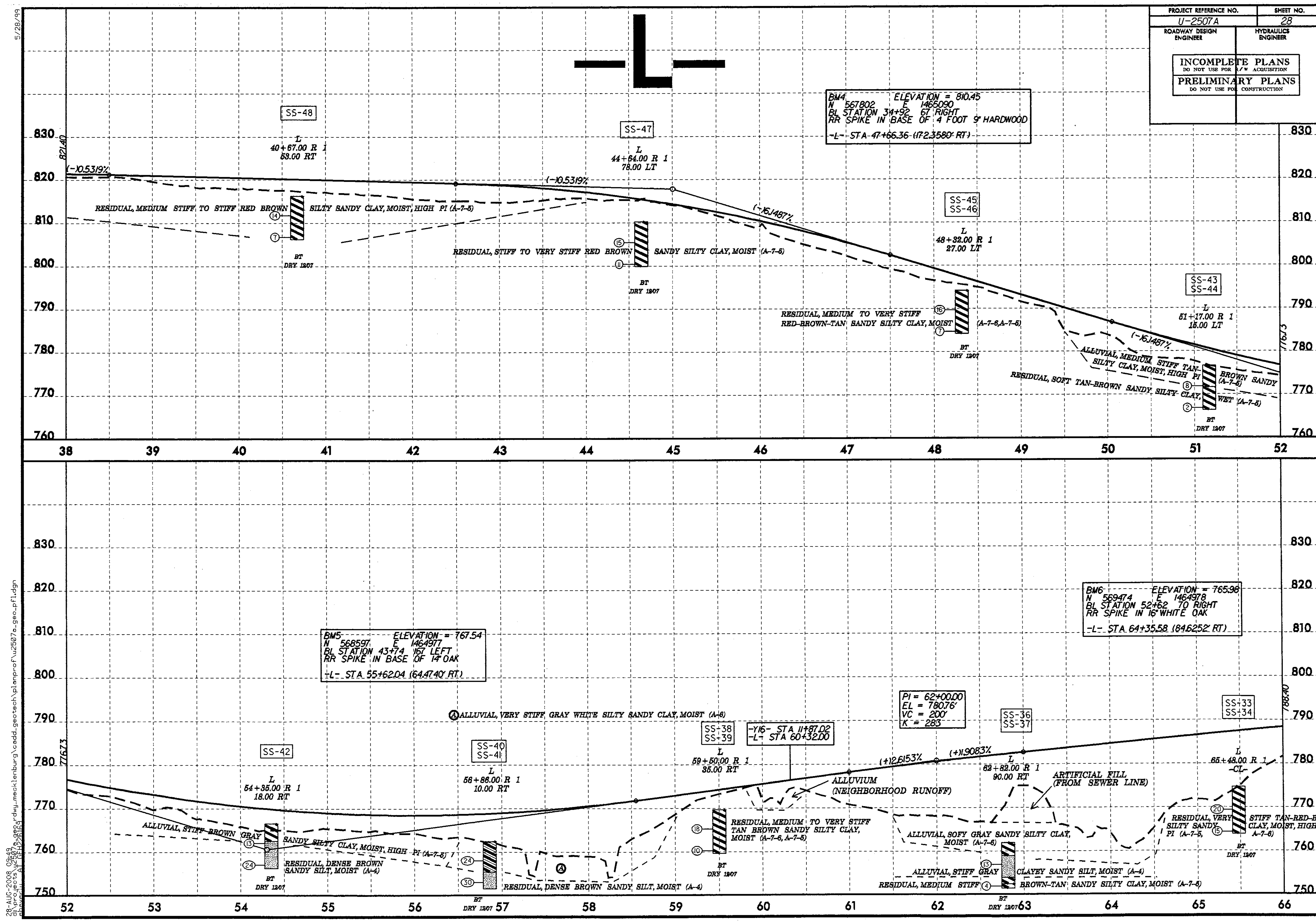
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L-



BEGIN GRADE
-L- STA 10+00.00
ELEV.=798.85
PI = 11+05.00
K = 121
EL = 799.16'
VC = 200'
(+)0.3000%
(-)1.3500%
BM1 ELEVATION = 791.26
N 565461 E 1463350
BY13REV STATION 17+11 105 LEFT
RR SPIKE IN BASE OF 18" HICKORY
-L- STA 18+21.43 (123.50' LT)
PI = 19+10.00
EL = 788.30'
VC = 420'
K = 111
(-)1.3500%
(+)2.4210%
RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, MEDIUM TO HIGH PI (A-7-5)
800.16
TIE TO -Y1- EOT
-L- STA 26+28.82
EL = 805.70'
TIE TO -Y1- EOT
-L- STA 27+21.48
EL = 806.37'
(+)2.4210%
(+)1.5000%
SS-52
L
31+40.00 R 1
56.00 RT
SS-51
L
34+00.00 R 1
28.00 LT
-Y2- STA 10+00.00
-L- STA 35+00.00
SS-49
SS-50
L
37+25.00 R 1
62.00 RT
821.40
BM3 ELEVATION = 823.54
N 566738 E 1464801
BY13REV STATION 36+51 41 RIGHT
RR SPIKE IN BASE OF 15" OAK
-L- STA 37+24.73 (114.9455' RT)
RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF RED-TAN-BROWN SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 12/07
SEE SHEETS 4 & 5 & 6 FOR -L- ALIGNMENT



PROJECT REFERENCE NO.
U-2507A
SHEET NO.
28
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-L-
5/28/99
BM4 ELEVATION = 810.45
N 567802 E 1465090
BL STATION 34+92 67' RIGHT
RR SPIKE IN BASE OF 4 FOOT 9" HARDWOOD
-L- STA 47+66.36 (172.3580' RT)
SS-48
L
40+67.00 R 1
53.00 RT
SS-47
L
44+64.00 R 1
78.00 LT
SS-45
SS-46
L
48+32.00 R 1
27.00 LT
SS-43
SS-44
L
51+17.00 R 1
15.00 LT
821.40
(-)0.5319%
(-)6.1487%
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF TO VERY STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, MEDIUM TO VERY STIFF RED-BROWN-TAN SANDY SILTY CLAY, MOIST (A-7-6,A-7-5)
ALLUVIAL, MEDIUM STIFF TAN-BROWN SANDY SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, SOFT TAN-BROWN SANDY SILTY CLAY, WET (A-7-5)
BT
DRY 12/07
776.73
830
820
810
800
790
780
770
760
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
BM5 ELEVATION = 767.54
N 568597 E 1464977
BL STATION 43+74 167' LEFT
RR SPIKE IN BASE OF 14" OAK
-L- STA 55+62.04 (64.4740' RT)
BM6 ELEVATION = 765.98
N 569474 E 1464978
BL STATION 52+62 70' RIGHT
RR SPIKE IN 16" WHITE OAK
-L- STA 64+35.58 (84.6252' RT)
PI = 62+00.00
EL = 780.76'
VC = 200'
K = 283
-Y16- STA 11+87.02
-L- STA 60+32.00
SS-42
L
54+35.00 R 1
18.00 RT
SS-40
SS-41
L
56+86.00 R 1
10.00 RT
SS-38
SS-39
L
59+50.00 R 1
35.00 RT
SS-36
SS-37
L
62+82.00 R 1
90.00 RT
SS-33
SS-34
L
65+48.00 R 1
-CL-
(+)2.6153%
(+)1.9083%
788.40
A ALLUVIAL, VERY STIFF GRAY WHITE SILTY SANDY CLAY, MOIST (A-6)
ALLUVIAL, STIFF BROWN GRAY SANDY SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, DENSE BROWN SANDY SILT, MOIST (A-4)
RESIDUAL, DENSE BROWN SANDY SILT, MOIST (A-4)
ALLUVIUM (NEIGHBORHOOD RUNOFF)
RESIDUAL, MEDIUM TO VERY STIFF TAN BROWN SANDY SILTY CLAY, MOIST (A-7-6, A-7-5)
ARTIFICIAL FILL (FROM SEWER LINE)
ALLUVIAL, SOFT GRAY SANDY SILTY CLAY, MOIST (A-7-6)
ALLUVIAL, STIFF GRAY CLAYEY SANDY SILT, MOIST (A-4)
RESIDUAL, MEDIUM STIFF BROWN-TAN SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, VERY STIFF TAN-RED-BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5, A-7-6)
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
750
28-AUG-2008 09:49
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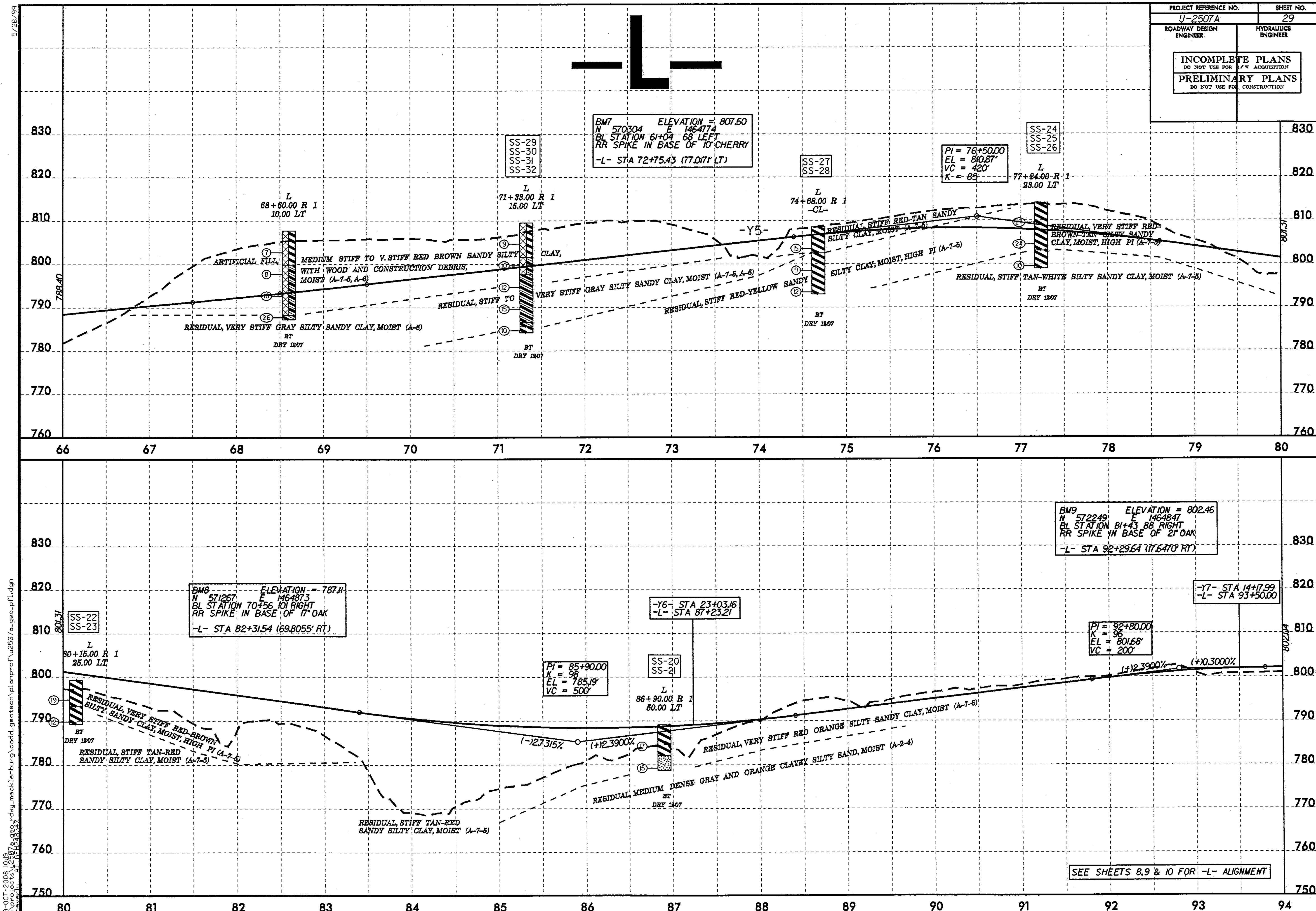
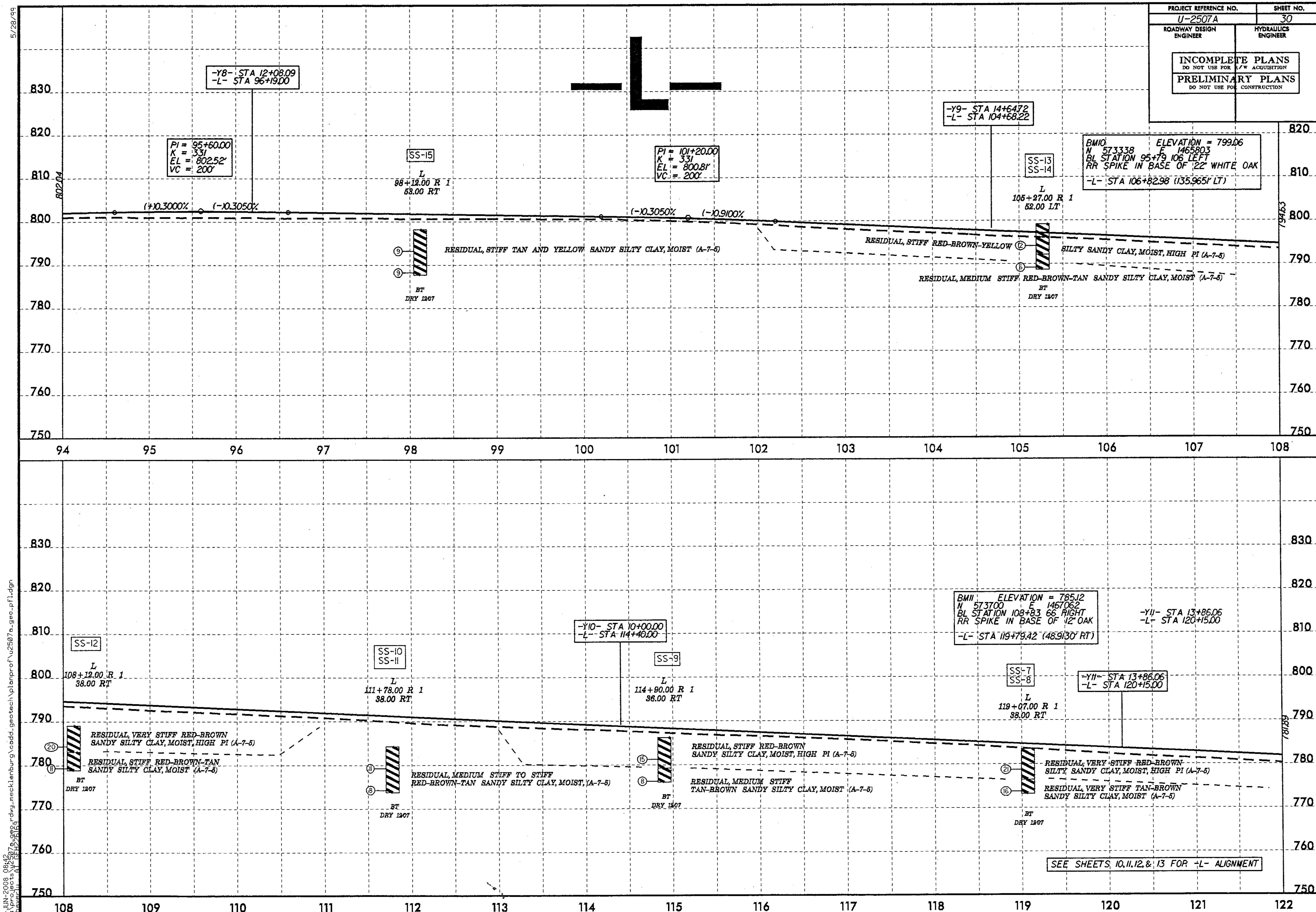


PROJECT REFERENCE NO.
SHEET NO.
U-2507A
29
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-L-
BM7 ELEVATION = 807.60
N 570304 E 1464774
BL STATION 61+04 68 LEFT
RR SPIKE IN BASE OF 10' CHERRY
-L- STA 72+75.43 (77.0171' LT)
SS-29
SS-30
SS-31
SS-32
SS-27
SS-28
SS-24
SS-25
SS-26
PI = 76+50.00
EL = 810.87'
VC = 420'
K = 85
L
68+60.00 R 1
10.00 LT
L
71+33.00 R 1
15.00 LT
L
74+68.00 R 1
-CL-
L
77+24.00 R 1
23.00 LT
-Y5-
ARTIFICIAL FILL, MEDIUM STIFF TO V. STIFF RED BROWN SANDY SILTY CLAY,
WITH WOOD AND CONSTRUCTION DEBRIS,
MOIST (A-7-5, A-6)
RESIDUAL, VERY STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)
RESIDUAL, STIFF TO VERY STIFF GRAY SILTY SANDY CLAY, MOIST (A-7-5, A-6)
RESIDUAL, STIFF RED-YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF RED-TAN SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, VERY STIFF RED-BROWN-TAN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF TAN-WHITE SILTY SANDY CLAY, MOIST (A-7-5)
BT
DRY 12/07
788.40
801.31
830
820
810
800
790
780
770
760
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
BM9 ELEVATION = 802.46
N 572249 E 1464847
BL STATION 81+43 88 RIGHT
RR SPIKE IN BASE OF 21' OAK
-L- STA 92+29.64 (17.6470' RT)
BM8 ELEVATION = 787.11
N 571267 E 1464873
BL STATION 70+56 101 RIGHT
RR SPIKE IN BASE OF 17' OAK
-L- STA 82+31.54 (69.8055' RT)
-Y6- STA 23+03.16
-L- STA 87+23.21
-Y7- STA 14+17.99
-L- STA 93+50.00
SS-22
SS-23
SS-20
SS-21
L
80+15.00 R 1
25.00 LT
L
86+90.00 R 1
50.00 LT
PI = 85+90.00
K = 98
EL = 785.19'
VC = 500'
PI = 92+80.00
K = 96
EL = 801.68'
VC = 200'
(-)2.7315%
(+)2.3900%
(+)0.3000%
RESIDUAL, VERY STIFF RED-BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF TAN-RED SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, STIFF TAN-RED SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, VERY STIFF RED ORANGE SILTY SANDY CLAY, MOIST (A-7-5)
RESIDUAL, MEDIUM DENSE GRAY AND ORANGE CLAYEY SILTY SAND, MOIST (A-2-4)
801.31
802.04
750
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
SEE SHEETS 8,9 & 10 FOR -L- ALIGNMENT
5/28/99
29-OCT-2008 10:19


PROJECT REFERENCE NO.
SHEET NO.
U-2507A
30
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-L-
5/28/99
-Y8- STA 12+08.09
-L- STA 96+19.00
PI = 95+60.00
K = 331
EL = 802.52'
VC = 200'
(+)0.3000%
(-)0.3050%
802.04
SS-15
L
98+12.00 R 1
53.00 RT
RESIDUAL, STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 1207
PI = 101+20.00
K = 331
EL = 800.81'
VC = 200'
(-)0.3050%
(-)0.9100%
-Y9- STA 14+64.72
-L- STA 104+68.22
BM10 ELEVATION = 799.06
N 573338 E 1465803
BL STATION 95+79 106 LEFT
RR SPIKE IN BASE OF 22" WHITE OAK
-L- STA 106+82.98 (135.965' LT)
SS-13
SS-14
L
105+27.00 R 1
52.00 LT
RESIDUAL, STIFF RED-BROWN-YELLOW
SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, MEDIUM STIFF RED-BROWN-TAN SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 1207
794.63
830
820
810
800
790
780
770
760
750
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
SS-12
L
108+12.00 R 1
38.00 RT
RESIDUAL, VERY STIFF RED-BROWN
SANDY SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF RED-BROWN-TAN
SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 1207
SS-10
SS-11
L
111+78.00 R 1
38.00 RT
RESIDUAL, MEDIUM STIFF TO STIFF
RED-BROWN-TAN SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 1207
-Y10- STA 10+00.00
-L- STA 114+40.00
SS-9
L
114+90.00 R 1
36.00 RT
RESIDUAL, STIFF RED-BROWN
SANDY SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, MEDIUM STIFF
TAN-BROWN SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 1207
BM11 ELEVATION = 785.12
N 573700 E 1467062
BL STATION 108+83 66 RIGHT
RR SPIKE IN BASE OF 12" OAK
-L- STA 119+79.42 (48.9130' RT)
-Y11- STA 13+86.06
-L- STA 120+15.00
SS-7
SS-8
L
119+07.00 R 1
38.00 RT
RESIDUAL, VERY STIFF RED-BROWN
SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, VERY STIFF TAN-BROWN
SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 1207
781.89
SEE SHEETS 10, 11, 12, & 13 FOR -L- ALIGNMENT
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

BM12 ELEVATION = 774.21
N 574347 E 1468343
BL STATION 123+13 94 RIGHT
RR SPIKE IN BASE OF 17 PIN OAK
-L- STA 133+97.80 (92.0189' RT)

-Y12- STA 14+07.04
-L- STA 136+00.00

SS-5
SS-6
L
123+12.00 R 1
40.00 LT

PI = 125+00.00
K = 1524
EL = 779.16'
VC = 200'

SS-4
L
125+96.00 R 1
65.00 LT

SS-3
L
134+17.00 R 1
52.00 RT

781.89

770.59

(-)0.9100%

(-)0.7787%

RESIDUAL, STIFF TO VERY STIFF RED-BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)

(17) (8) RESIDUAL, MEDIUM STIFF RED-TAN SILTY SANDY CLAY, MOIST (A-7-5)

BT
DRY 1207

(28) (16) RESIDUAL, STIFF TO VERY STIFF RED-BROWN SILTY SANDY CLAY, DRY, HIGH PI (A-7-5)

RESIDUAL, MEDIUM STIFF RED-TAN SILTY SANDY CLAY (A-7-5)

BT
DRY 1207

RESIDUAL, STIFF TO VERY STIFF RED-BROWN SILTY SANDY CLAY, DRY (A-7-5)

(13) (14) (15)

BT
DRY 1207

SS-1
SS-2
L
137+07.00 R 1
60.00 RT

770.59

RESIDUAL, STIFF RED-BROWN SANDY SILTY CLAY, DRY (A-7-5)

RESIDUAL, MEDIUM DENSE RED-BROWN-TAN CLAYEY SILTY SAND, DRY (A-2-5)

(12) (11) (10) (9)

BT
DRY 1207

PI = 144+00.00
K = 183
EL = 764.36'
VC = 750'

(-)0.7787%

(-)1.4785%

(-)1.4785%

BM13 ELEVATION = 744.07
N 575484 E 1469198
BL STATION 137+75 5 RIGHT
EXISTING RR SPIKE IN POWER POLE
-L- STA 148+13.50 (71.6057' LT)

TIE TO -Y13- EOT
-L- STA 149+77.44
EL = 736.19'

SEE SHEETS 13,14 & 15 FOR -L- ALIGNMENT

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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

TIE TO -Y13- EOT
-L- STA 150+73.79
EL = 733.42'

PI = 152+00.00
K = 149
EL = 730.12'
VC = 200'

PI = 157+10.00
K = 103
EL = 709.91'
VC = 330'

PI = 163+80.00
K = 161
EL = 704.81'
VC = 200'

(-)12.6176%

(-)13.9622%

(+)13.9622%

(-)10.7611%

(-)10.7611%

(-)12.0000%

735.54

704.21

RESIDUAL, STIFF RED-BROWN SANDY SILTY CLAY, DRY (A-7-5)

RESIDUAL, STIFF RED-BROWN SANDY SILTY CLAY, DRY (A-7-5)

END GRADE
-L- STA 165+00.00
ELEV.=702.41

PI = 163+80.00
K = 161
EL = 704.81'
VC = 200'

704.21

RESIDUAL, STIFF RED-BROWN SANDY SILTY CLAY, DRY (A-7-5)

SEE SHEETS 15 & 16 FOR -L- ALIGNMENT

780 770 760 750 740 730 720 710 700 690

150 151 152 153 154 155 156 157 158 159 160 161 162 163 164

760 750 740 730 720 710 700 690 680 670

164 165 166 167 168 169 170 171

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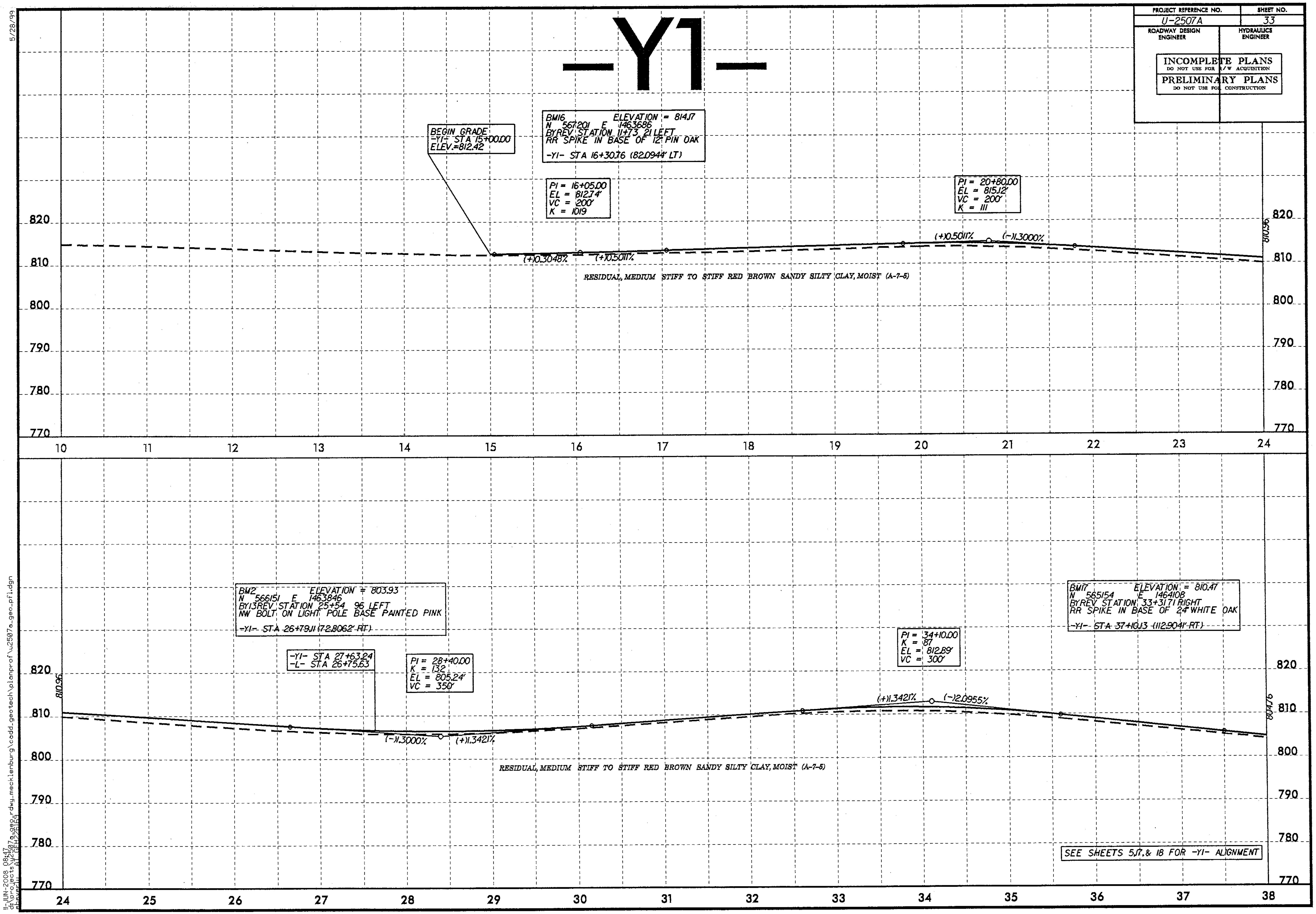

PROJECT REFERENCE NO.
U-2507A
SHEET NO.
33
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-Y1-
BEGIN GRADE
-Y1- STA 15+00.00
ELEV.=812.42
BM16 ELEVATION = 814.17
N 567201 E 1463686
BYREV STATION 11+73 21 LEFT
RR SPIKE IN BASE OF 12" PIN OAK
-Y1- STA 16+30.76 (82.0944' LT)
PI = 16+05.00
EL = 812.74'
VC = 200'
K = 1019
PI = 20+80.00
EL = 815.12'
VC = 200'
K = 111
(+)0.3048%
(+)0.5011%
(+)0.5011%
(-)1.3000%
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)
810.96
820
810
800
790
780
770
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
BM2 ELEVATION = 803.93
N 566151 E 1463846
BY13REV STATION 25+54 96 LEFT
NW BOLT ON LIGHT POLE BASE PAINTED PINK
-Y1- STA 26+79.11 (72.8062' RT)
-Y1- STA 27+63.24
-L- STA 26+75.63
PI = 28+40.00
K = 132
EL = 805.24'
VC = 350'
PI = 34+10.00
K = 87
EL = 812.89'
VC = 300'
BM17 ELEVATION = 810.47
N 565154 E 1464108
BYREV STATION 33+31 71 RIGHT
RR SPIKE IN BASE OF 24" WHITE OAK
-Y1- STA 37+10.13 (112.9041' RT)
(-)1.3000%
(+)1.3421%
(+)1.3421%
(-)2.0955%
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)
810.96
804.76
SEE SHEETS 5,17, & 18 FOR -Y1- ALIGNMENT
24
25
26
27
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29
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31
32
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36
37
38

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	34

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y1-

END GRADE
-Y1- STA 39+50.00
ELEV.=802.32

PI = 38+50.00
K = 288
EL = 803.67'
VC = 200'

80476

(-)2.0955%

(-)1.3500%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)

820
810
800
790
780
770

38 39 40 41 42

-Y2-

BEGIN GRADE
-Y2- STA 10+55.00
ELEV.=820.25'

-Y2- STA 12+90.00
-Y3- STA 10+00.00

PI = 11+50.00
EL = 821.20'
VC = 180'
K = 106

PI = 15+20.00
EL = 818.61'
VC = 180'
K = 79

END GRADE
-Y2- STA 18+25.00
ELEV.=809.55'

(+)1.0000%

(-)0.7000%

(-)0.7000%

(-)2.9705%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)

820
810
800
790
780
770
760

10 11 12 13 14 15 16 17 18

SEE SHEETS 6 & 19 FOR -Y2- ALIGNMENT
SEE SHEET 18 FOR -Y1- ALIGNMENT

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	35

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y3-

BEGIN GRADE
-Y3- STA 10+12.00
ELEV.=819.86

PI = 10+75.00
EL = 819.03'
VC = 100'
K = 41

PI = 11+90.00
EL = 814.73'
VC = 130'
K = 38

PI = 14+70.00
K = 22
EL = 813.89'
VC = 100'

PI = 15+80.00
K = 31
EL = 808.53'
VC = 120'

END GRADE
-Y3- STA 16+55.00
ELEV.=807.78

(-)1.3175%
(-)3.7391%
(-)0.3000%
(-)0.3000%
(-)4.8727%
(-)1.0000%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)

820 810 800 790 780 770 760

10 11 12 13 14 15 16

-Y4-

BEGIN GRADE
-Y4- STA 10+43.18
ELEV.=816.99

PI = 12+15.00
EL = 821.90'
VC = 260'
K = 45

SS-53
SS-54
Y4
13+65.00 R 1
43.00 LT

PI = 15+00.00
EL = 813.50'
VC = 200'
K = 103

SS-55
Y4
16+58.00 R 1
27.00 LT

PI = 17+25.00
EL = 811.25'
VC = 200'
K = 154

SS-65
SS-57
Y4
21+80.00 R 1
-CL-

BM18 ELEVATION = 841.53
N 567419 E 1466005
BY13REV STATION 51+82.170 RIGHT
RR SPIKE IN BASE OF 10" SWEETGUM
-Y4- STA 20+86.37 (28.8549' RT)

(+)2.8600%
(-)2.9488%
(-)2.9488%
(-)1.0000%
(-)1.0000%
(+)0.3022%

RESIDUAL, STIFF TO VERY STIFF RED BROWN YELLOW SANDY SILTY CLAY, MOIST (A-7-6, A-7-5)

BT
DRY 12:07

RESIDUAL, STIFF RED TAN AND YELLOW SILTY SANDY CLAY, MOIST (A-7-6)

BT
DRY 12:07

RESIDUAL, VERY STIFF RED AND ORANGE SILTY SANDY CLAY, MOIST (A-7-5)

RESIDUAL, STIFF TAN AND YELLOW CLAYEY SANDY SILT, MOIST (A-5)

BT
DRY 12:07

811.95

830 820 810 800 790 780 770 760

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

NOTE: -Y4- (CITY BLVD.) BEING REDESIGNED BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE

SEE SHEETS 5 & 19 FOR -Y3- ALIGNMENT
SEE SHEETS 6 & 20 FOR -Y4- ALIGNMENT

29-SEP-2008 13:50
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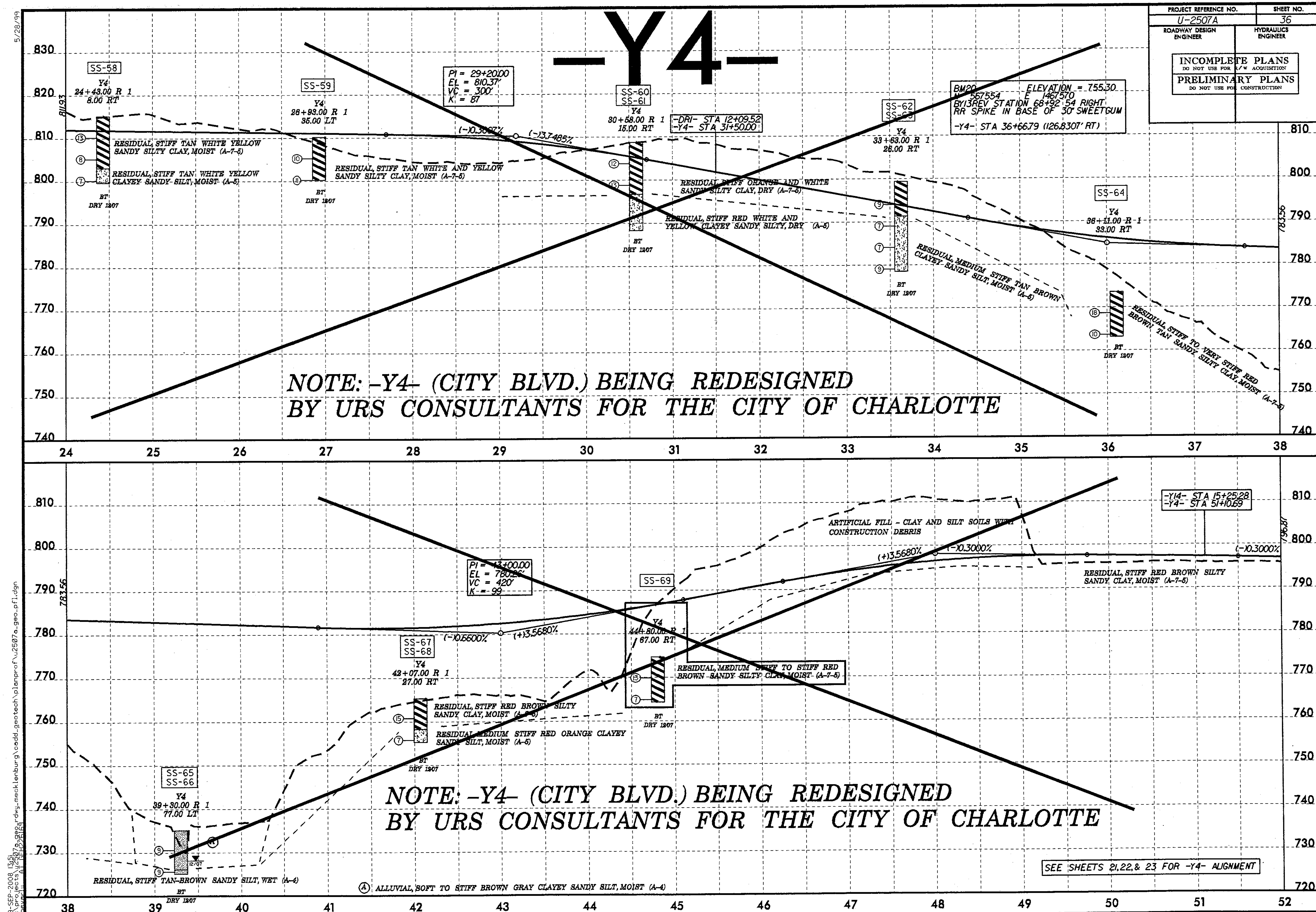


PROJECT REFERENCE NO.
SHEET NO.
U-2507A
36
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-Y4-
5/28/99
SS-58
Y4
24+43.00 R 1
8.00 RT
SS-59
Y4
26+93.00 R 1
35.00 LT
PI = 29+20.00
EL = 810.37'
VC = 300'
K = 87
SS-60
SS-61
Y4
30+58.00 R 1
15.00 RT
-DRI- STA 12+09.52
-Y4- STA 31+50.00
SS-62
SS-63
Y4
33+63.00 R 1
26.00 RT
BM20 ELEVATION = 755.30
N 567554 E 1467570
BY13REV STATION 68+92.54 RIGHT
RR SPIKE IN BASE OF 30" SWEETGUM
-Y4- STA 36+66.79 (126.8307' RT)
SS-64
Y4
36+11.00 R 1
33.00 RT
(-)0.3000%
(-)3.7485%
RESIDUAL, STIFF TAN WHITE YELLOW SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, STIFF TAN WHITE YELLOW CLAYEY SANDY SILT, MOIST (A-5)
RESIDUAL, STIFF TAN WHITE AND YELLOW SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, STIFF ORANGE AND WHITE SANDY SILTY CLAY, DRY (A-7-5)
RESIDUAL, STIFF RED WHITE AND YELLOW CLAYEY SANDY SILTY, DRY (A-5)
RESIDUAL, MEDIUM STIFF TAN BROWN CLAYEY SANDY SILT, MOIST (A-5)
RESIDUAL, STIFF TO VERY STIFF RED BROWN TAN SANDY SILTY CLAY, MOIST (A-7-5)
BT
DRY 12/07
811.93
783.56
NOTE: -Y4- (CITY BLVD.) BEING REDESIGNED
BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE
PI = 43+00.00
EL = 780.26'
VC = 420'
K = 99
(-)0.5600%
(+)3.5680%
SS-65
SS-66
Y4
39+30.00 R 1
77.00 LT
SS-67
SS-68
Y4
42+07.00 R 1
27.00 RT
SS-69
Y4
44+80.00 R 1
67.00 RT
-Y14- STA 15+25.28
-Y4- STA 51+10.69
(-)0.3000%
796.81
ARTIFICIAL FILL - CLAY AND SILT SOILS WITH CONSTRUCTION DEBRIS
RESIDUAL, STIFF RED BROWN SILTY SANDY CLAY, MOIST (A-7-5)
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)
RESIDUAL, STIFF RED BROWN SILTY SANDY CLAY, MOIST (A-7-5)
RESIDUAL, MEDIUM STIFF RED ORANGE CLAYEY SANDY SILT, MOIST (A-5)
RESIDUAL, STIFF TAN-BROWN SANDY SILT, WET (A-4)
(A) ALLUVIAL, SOFT TO STIFF BROWN GRAY CLAYEY SANDY SILT, MOIST (A-4)
NOTE: -Y4- (CITY BLVD.) BEING REDESIGNED
BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE
SEE SHEETS 21, 22, & 23 FOR -Y4- ALIGNMENT
29-SEP-2008 13:51

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y4-

END GRADE
-Y4- STA 57+50.00
ELEV.=789.62

PI = 52+50.00
EL = 796.75'
VC = 200'
K = 359

PI = 56+00.00
EL = 793.75'
VC = 200'
K = 105

796.87

(-)0.3000%

(-)0.8571%

(-)0.8571%

(-)2.7533%

789.62

RESIDUAL, STIFF RED BROWN SILTY SANDY CLAY, MOIST (A-7-6)

NOTE: -Y4- (CITY BLVD.) BEING REDESIGNED BY URS CONSULTANTS FOR THE CITY OF CHARLOTTE

830 820 810 800 790 780 770 760 750

52 53 54 55 56 57

-Y5-

BEGIN GRADE
-Y5- STA 12+50.00
ELEV.=805.61

TIE TO -L- EOT
-Y5- STA 15+44.93
EL = 804.33'

TIE TO -L- EOT
-Y5- STA 16+30.93
EL = 804.33'

END GRADE
-Y5- STA 19+00.00
ELEV.=804.52

PI = 14+00.00
EL = 803.82'
VC = 200'
K = 129

PI = 17+30.00
EL = 802.58'
VC = 160'
K = 55

(-)1.1933%

(+)0.3519%

(-)4.7684%

(+)1.1412%

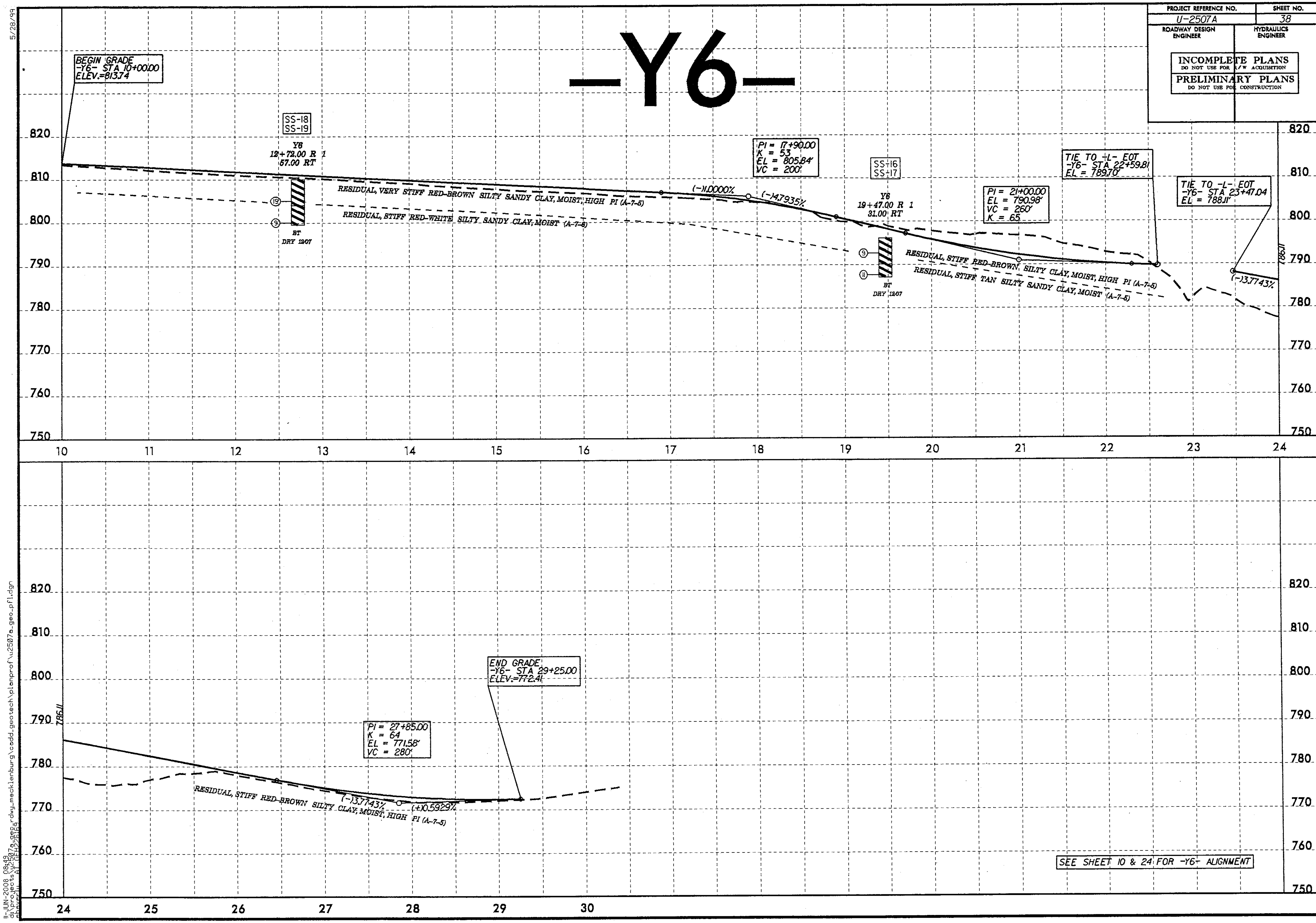
RESIDUAL, STIFF RED BROWN SILTY SANDY CLAY, MOIST (A-7-6)

SEE SHEET 23 FOR -Y4- ALIGNMENT
SEE SHEET 9 FOR -Y5- ALIGNMENT

810 800 790 780 770 760 750

10 11 12 13 14 15 16 17 18 19 20 21

5/28/99



PROJECT REFERENCE NO.
U-2507A
SHEET NO.
38
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-Y6-
BEGIN GRADE
-Y6- STA 10+00.00
ELEV.=813.74
SS-18
SS-19
Y6
12+72.00 R 1
57.00 RT
BT
DRY 12/07
RESIDUAL, VERY STIFF RED-BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF RED-WHITE SILTY SANDY CLAY, MOIST (A-7-6)
PI = 17+90.00
K = 53
EL = 805.84'
VC = 200'
(-)1.0000%
(-)4.7935%
SS-16
SS-17
Y6
19+47.00 R 1
31.00 RT
BT
DRY 12/07
PI = 21+00.00
EL = 790.98'
VC = 260'
K = 65
RESIDUAL, STIFF RED-BROWN SILTY CLAY, MOIST, HIGH PI (A-7-5)
RESIDUAL, STIFF TAN SILTY SANDY CLAY, MOIST (A-7-5)
TIE TO -L- EOT
-Y6- STA 22+59.81
EL = 789.70'
TIE TO -L- EOT
-Y6- STA 23+47.04
EL = 788.11'
(-)3.7743%
786.11
820
810
800
790
780
770
760
750
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
END GRADE
-Y6- STA 29+25.00
ELEV.=772.41
PI = 27+85.00
K = 64
EL = 771.58'
VC = 280'
(-)3.7743%
(+)0.5929%
RESIDUAL, STIFF RED-BROWN SILTY CLAY, MOIST, HIGH PI (A-7-5)
786.11
SEE SHEET 10 & 24 FOR -Y6- ALIGNMENT
25
26
27
28
29
30

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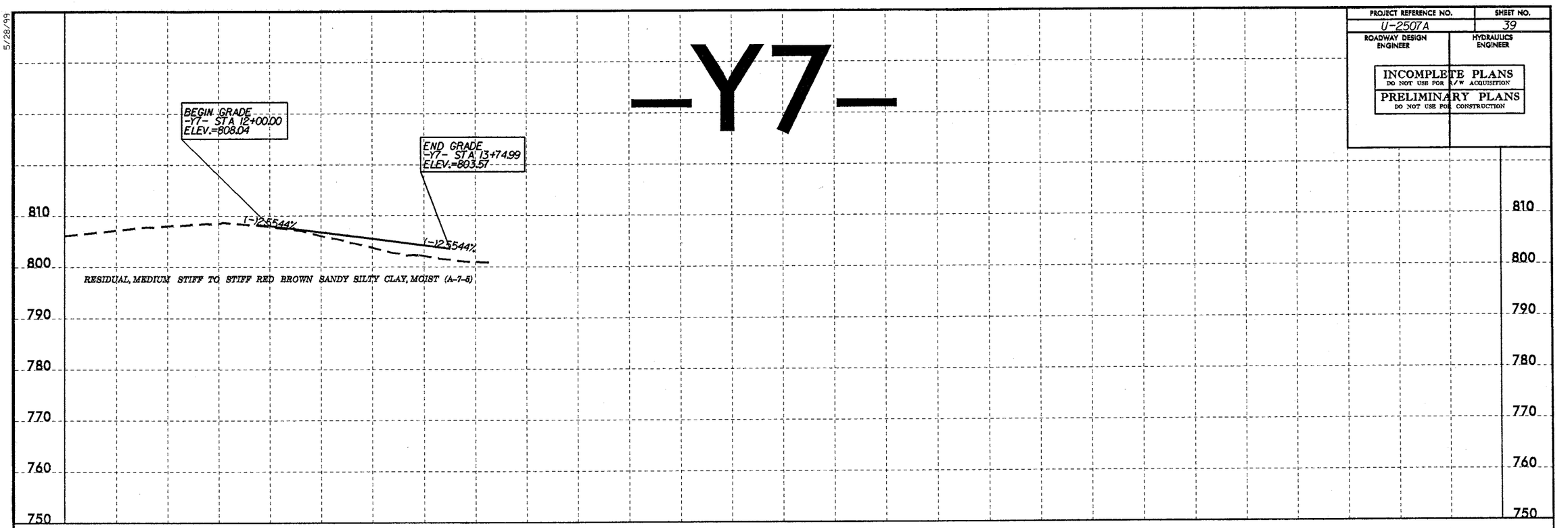
ebeverly AT GFH22616

5/28/99

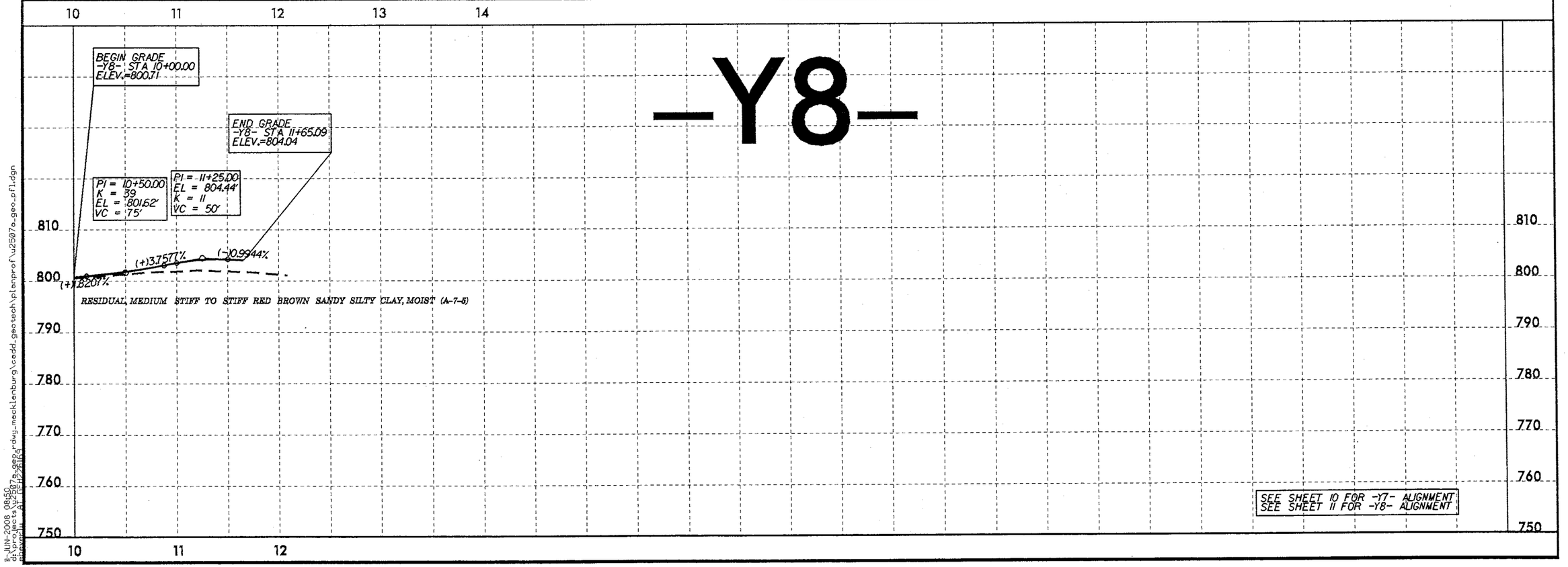
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	39
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y7-



-Y8-



SEE SHEET 10 FOR -Y7- ALIGNMENT
SEE SHEET 11 FOR -Y8- ALIGNMENT

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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y9-

BEGIN GRADE
-Y9- STA 10+00.00
ELEV.=797.32

END GRADE
-Y9- STA 14+21.41
ELEV.=798.72

PI = 11+40.00
K = 47
EL = 801.62'
VC = 130'

PI = 13+65.00
K = 15
EL = 802.30'
VC = 100'

(+)3.0714%
(+)0.3022%
(+)0.3022%
(-)5.3464%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-6)

-Y10-

BEGIN GRADE
-Y10- STA 10+44.30
ELEV.=787.85

PI = 11+25.00
K = 40
EL = 785.92'
VC = 150'

END GRADE
-Y10- STA 12+00.00
ELEV.=786.94

(-)2.3869%
(+)1.3615%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-6)

SEE SHEET 11 FOR -Y9- ALIGNMENT
SEE SHEET 12 FOR -Y10- ALIGNMENT

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PROJECT REFERENCE NO.	SHEET NO.
U-2507A	41

ROADWAY DESIGN ENGINEER

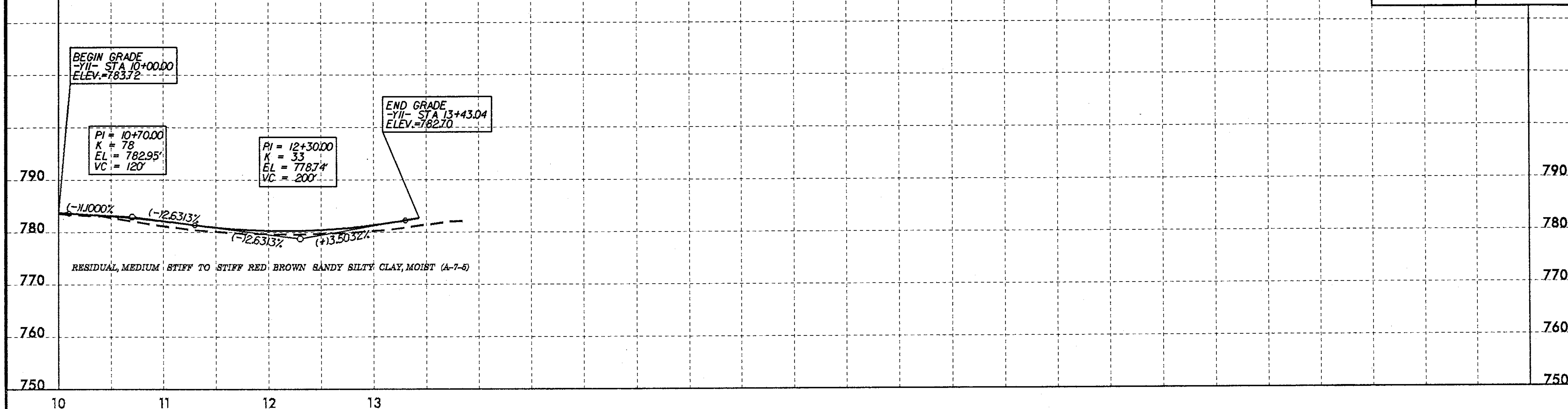
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

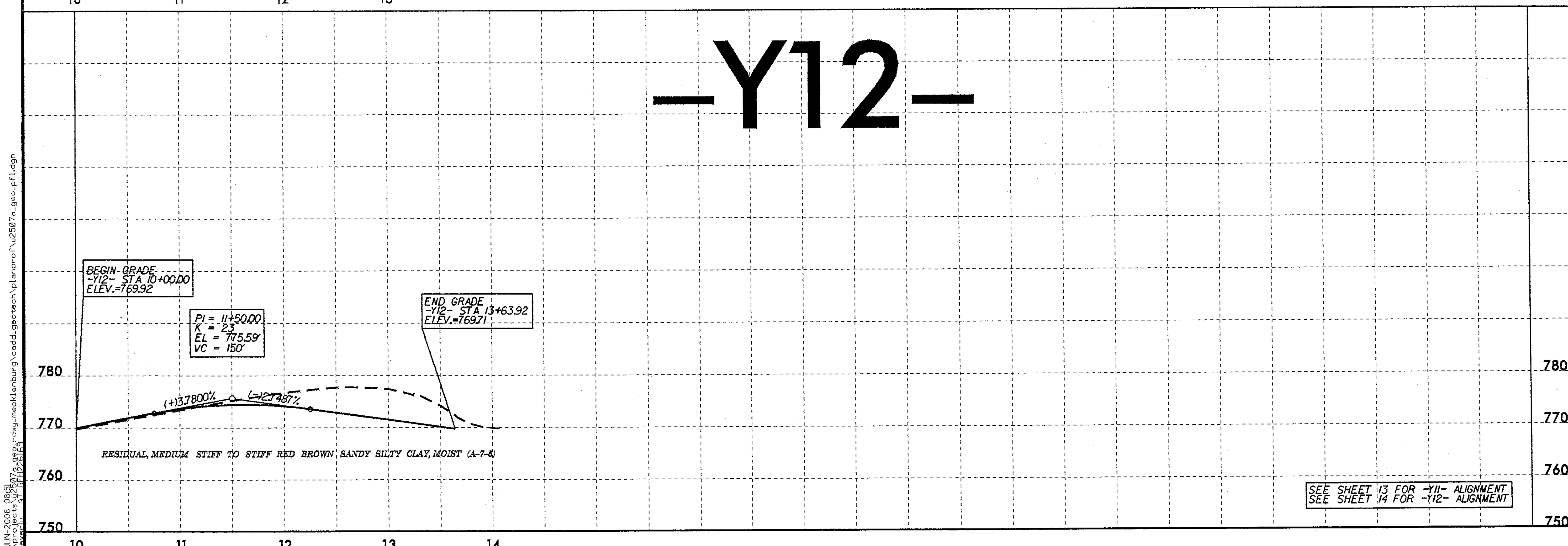
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

5/28/99

-Y11-



-Y12-



SEE SHEET 13 FOR -Y11- ALIGNMENT
SEE SHEET 14 FOR -Y12- ALIGNMENT

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ebeverlu AT GFH226169

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	42

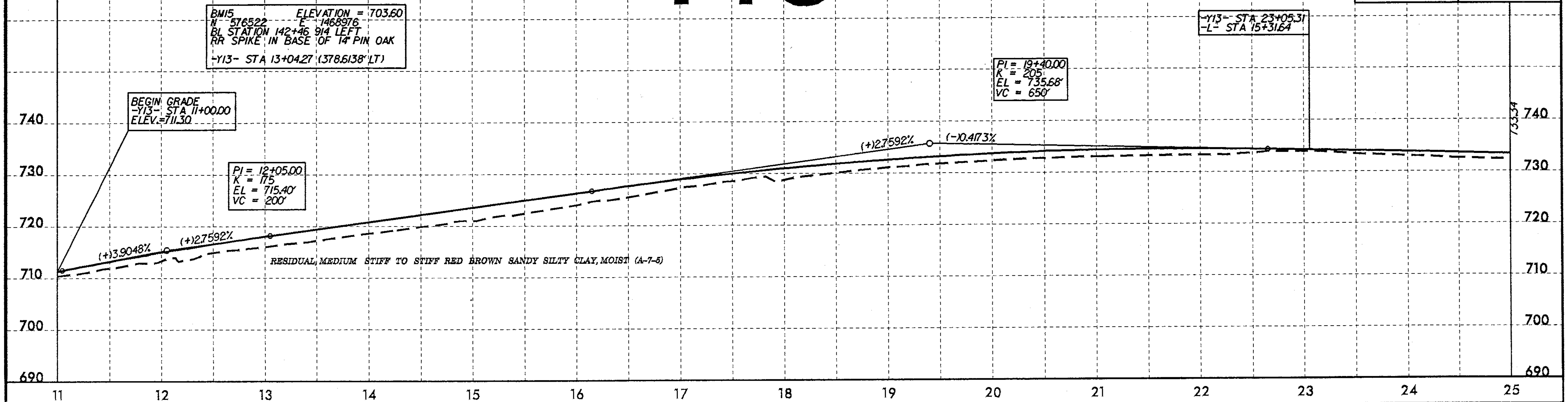
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

5/28/99

-Y13-



BM15 ELEVATION = 703.60
N 576522 E 1468976
BL STATION 142+46 914 LEFT
RR SPIKE IN BASE OF 14" PIN OAK
-Y13- STA 13+04.27 (378.6138' LT)
BEGIN GRADE
-Y13- STA 11+00.00
ELEV.=711.30
PI = 12+05.00
K = 175
EL = 715.40'
VC = 200'
(+)3.9048%
(+)2.7592%
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)
PI = 19+40.00
K = 205
EL = 735.68'
VC = 650'
(+)2.7592%
(-)0.4173%
-Y13- STA 23+05.31
-L- STA 15+31.64
733.34
740
730
720
710
700
690
11
12
13
14
15
16
17
18
19
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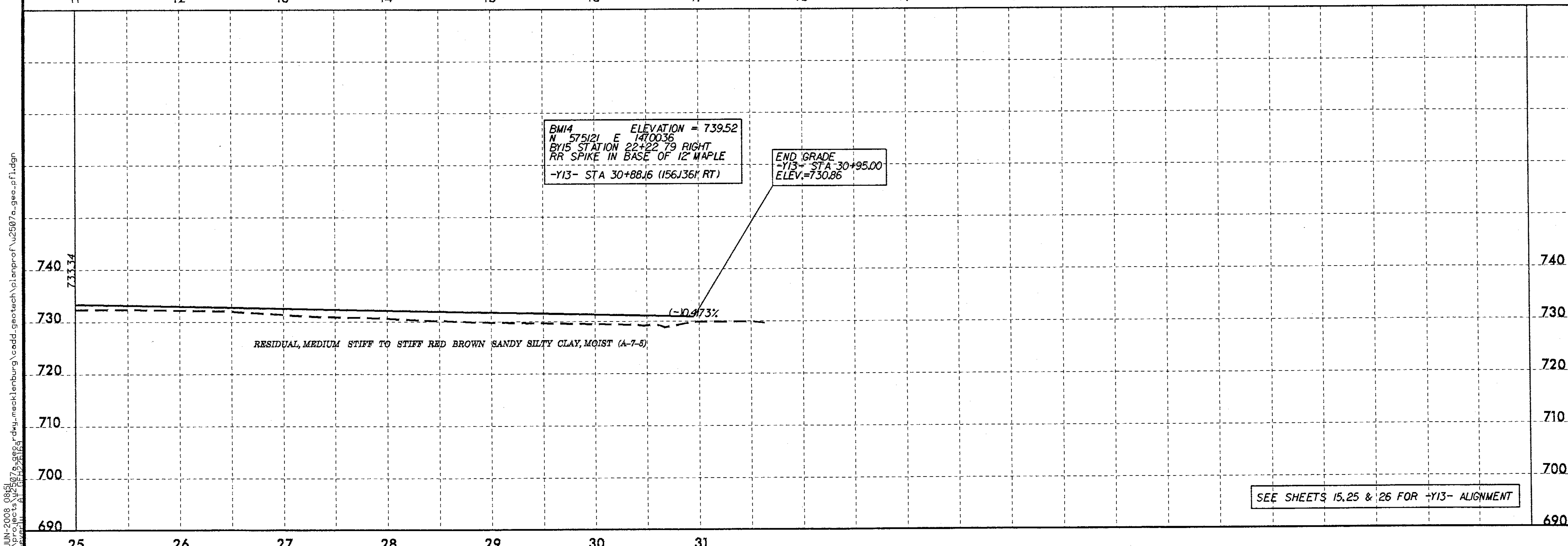
21
22
23
24
25



BM14 ELEVATION = 739.52
N 575121 E 1470036
BY15 STATION 22+22 79 RIGHT
RR SPIKE IN BASE OF 12" MAPLE
-Y13- STA 30+88.16 (156.1361' RT)
END GRADE
-Y13- STA 30+95.00
ELEV.=730.86
(-)0.4173%
733.34
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)
740
730
720
710
700
690
25
26
27
28
29
30
31

SEE SHEETS 15, 25 & 26 FOR -Y13- ALIGNMENT

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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	43
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y13PGL-

BEGIN GRADE
-Y13PGL- STA 11+00.00
ELEV.=712.04

PI = 12+05.00
K = 152
EL = 716.29'
VC = 200'

PI = 19+80.00
K = 195
EL = 737.48'
VC = 650'

(+)4.0476%
(+)2.7342%
(+)2.7342%
(-)0.6054%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)

734.33

END GRADE
-Y13PGL- STA 31+13.33
ELEV.=730.62

(-)0.8054%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-5)

SEE SHEETS 15, 25 & 26 FOR -Y13- ALIGNMENT

740
730
720
710
700
690

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
U-2507A	44
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y14-

BEGIN GRADE
-Y14- STA 10+00.00
ELEV.=795.79

PI = 11+10.00
EL = 797.50'
VC = 200'
K = 85

PI = 13+50.00
EL = 795.58'
VC = 200'
K = 82

TIE TO -Y4- EOT
-Y14- STA 14+87.34
EL = 797.85'

TIE TO -Y4- EOT
-Y14- STA 15+63.22
EL = 796.58'

PI = 18+40.00
EL = 788.35'
VC = 300'
K = 81

END GRADE
-Y14- STA 22+00.00
ELEV.=791.01

(+)11.5545%
(-)10.8000%
(-)10.8000%
(+)11.6528%
(-)12.9735%
(+)10.7389%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-6)

BM21 ELEVATION = 787.64
N 567075 E 1468901
BY13REV STATION 83+55.77 RIGHT
RR SPIKE IN BASE OF 8" OAK

-Y14- STA 16+28.03 (127.2068' LT)

800 790 780 770 760 750

10 11 12 13 14 15 16 17 18 19 20 21 22

-Y15-

BEGIN GRADE
-Y15- STA 10+50.00
ELEV.=809.28

PI = 11+95.00
K = 23
EL = 813.63'
VC = 100'

END GRADE
-Y15- STA 13+61.18
ELEV.=811.42

(+)3.0000%
(-)11.4150%

RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SANDY SILTY CLAY, MOIST (A-7-6)

820 810 800 790 780 770 760 750

10 11 12 13

SEE SHEET 23 FOR -Y14- ALIGNMENT
SEE SHEET 20 FOR -Y15- ALIGNMENT

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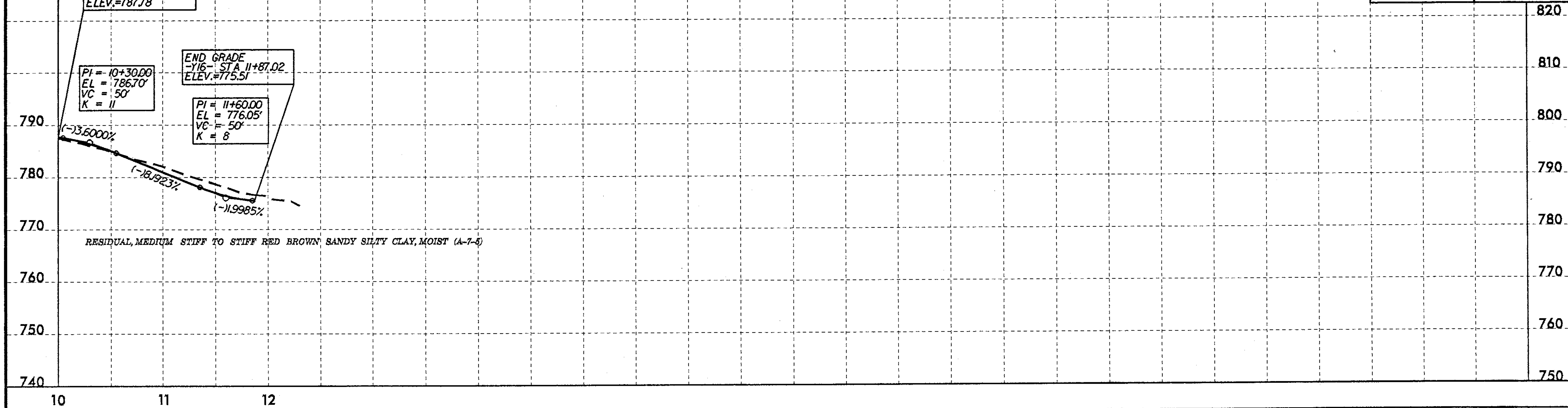
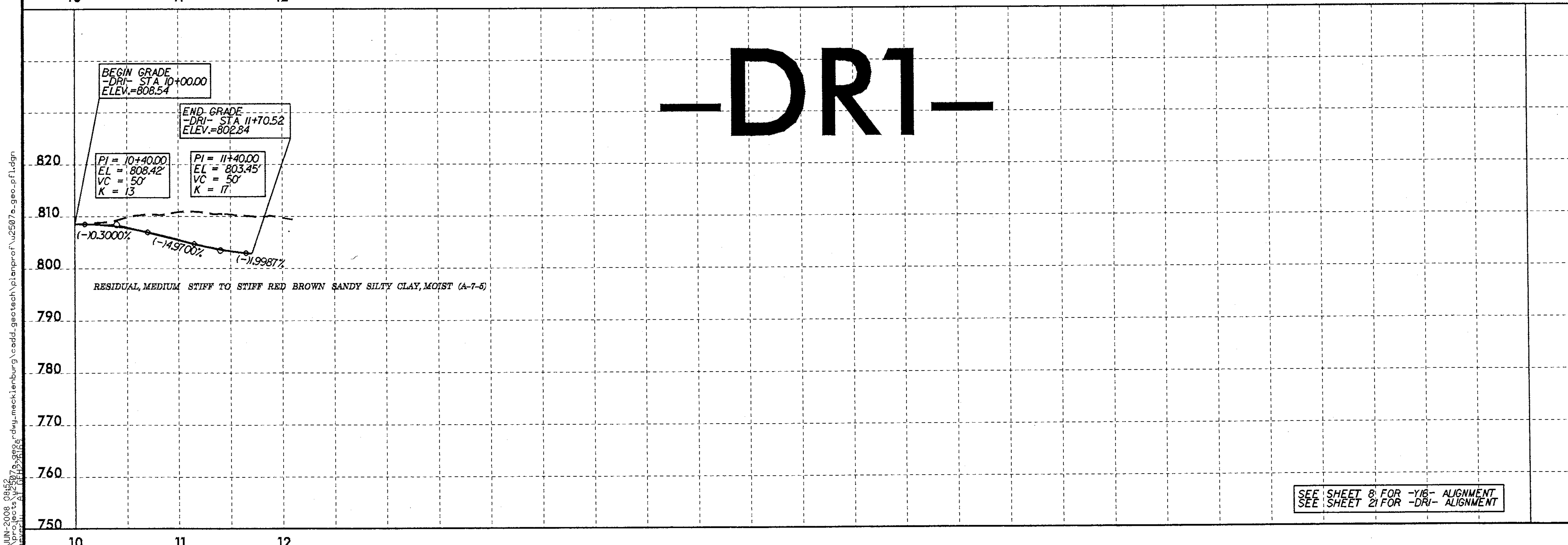
PROJECT REFERENCE NO.	SHEET NO.
U-2507A	45
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION





SEE SHEET 8 FOR -Y16- ALIGNMENT
SEE SHEET 21 FOR -DR1- ALIGNMENT

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chaverlu AT GFH32616

9/23/99

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	~~X-T~~ 46

0 5 10

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

820 810 800

30+50.00

S.S. 810.831 — 4:1 — 812.2 — 0.016 — 0.016 — 0.016 — 810.30 — TIE TO -Y3- BERM

RESIDUAL - STIFF TAN YELLOW SANDY SITLY CLAY, MOIST, HIGH PI (A-7-6) 811.92

30+00.00

S.S. 811.252 — 4:1 — 812.22 — 0.025 — 0.025 — 0.025 — 809.02 — TIE TO -Y3- BERM

809.97 RESIDUAL - STIFF TAN YELLOW SANDY SITLY CLAY, MOIST, HIGH PI (A-7-6)

29+50.00

S.S. 812.277 — 4:1 — 811.71 — 0.030 — 0.030 — 0.030 — 808.01 — S.S. 810.063 — 4:1

811.43 RESIDUAL - STIFF TAN YELLOW SANDY SITLY CLAY, MOIST, HIGH PI (A-7-6)

29+00.00

S.S. 813.207 — 4.008:1 — 811.08 — 0.030 — 0.030 — 0.030 — 807.26 — S.S. 810.656 — 4:1

RESIDUAL - STIFF TAN YELLOW SANDY SITLY CLAY, MOIST, HIGH PI (A-7-6)

28+50.00

S.S. 811.098 — 4.375:1 — 810.42 — 0.029 — 0.029 — 0.029 — 806.59 — S.S. 810.390 — 4:1

RESIDUAL - STIFF TAN YELLOW SANDY SITLY CLAY, MOIST HIGH PI (A-7-6) 808.95

28+00.00

S.S. 808.776 — 4:1 — 808.33 — 0.019 — 0.019 — 0.019 — 806.37 — S.S. 809.951 — 4:1

RESIDUAL - STIFF TAN YELLOW SANDY SITLY CLAY, MOIST, HIGH PI (A-7-6) 807.30

8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	X-647

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

830 820 810 800

4:1 813.94 0.039 815.31 815.5 0.039 0.039 811 3:1

S.S. 812.302

811.16 RESIDUAL - STIFF TAN YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

33+50.00

S.S. 812.175

4:1 813.67 0.030 815.10 815.4 0.030 0.030 817 3.027:1

S.S. 811.512

811.27 RESIDUAL - STIFF TAN YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

33+00.00

S.S. 811.878

4:1 813.2 0.021 0.021 0.021 815 4:1

S.S. 811.402

811.27 RESIDUAL - STIFF TAN YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

32+50.00

S.S. 811.967

4:1 4:1 812.7 0.012 0.012 0.012 814 4:1

S.S. 811.273

810.96 RESIDUAL - STIFF TAN YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

32+00.00

S.S. 811.501

TIE TO -Y3- BERM

SS-69 31+40.00 R 1 58.00 RT

4:1 812.55 0.002 0.002 0.002

S.S. 810.938

811.20 RESIDUAL - STIFF TAN YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

31+50.00

14 10

4:1 812.4 0.007 0.007 0.007 811.58

S.S. 811.022

811.73 RESIDUAL - STIFF TAN YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

31+00.00

TIE TO -Y3- BERM

-4-

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ebeverly AT GEN226169

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	U-2507A	X-348

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

830 820 810

4:1 816.45 0.040 820 820 0.040 8 4:1

S.S. 818.877 S.S. 818.245

RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

36+50.00

4:1 817.67 0.040 0.040 8 3:1

S.S. 817.122 S.S. 816.957

RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

36+00.00

4:1 816.92 0.040 0.040 8 3:1

S.S. 816.201 S.S. 815.413

RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

35+50.00

INTERSECTION WITH -Y2-

4:1 816.17 0.040 0.040

S.S. 814.566

RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

35+00.00

4:1 815.42 0.040 816.65 817.5 0.040 0.040 3:1

S.S. 813.791 S.S. 813.424

RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

34+50.00

4:1 814.67 SS-31 84+00.00 R 1 28.00 RT 815.94 817.0 0.040 0.040 3:1

S.S. 813.007 S.S. 812.436

RESIDUAL, MEDIUM STIFF TO STIFF TAN AND YELLOW SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

34+00.00

⑦ ⑪ BT DRY 11-07

800

23-SEP-2008 08:40
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eleverly AT GEN226169

8/23/99

0 5 10

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	~~1049~~

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

830 820 810

4:1 818.85 0.040 822.1 0.040 3:1

S.S. 816.982

818.20 RESIDUAL, VERY STIFF TAN ORANGE SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

39+50.00

S.S. 817.972

4:1 819.12 0.040 823 0.040 4:1

S.S. 818.248

819.57 RESIDUAL, VERY STIFF TAN ORANGE SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

39+00.00

S.S. 820.367

4:1 819.39 0.040 82 0.040 4.028:1

S.S. 819.893

820.59 RESIDUAL, VERY STIFF TAN ORANGE SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

38+50.00

S.S. 822.001

4:1 819.52 0.040 821.2 821.8 0.040 82: 4:1

S.S. 819.677

820.66 RESIDUAL, VERY STIFF TAN ORANGE SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

38+00.00

S.S. 822.548

4:1 819.41 0.040 821.1 821. 0.040 82 4:1

S.S. 819.343

820.89 RESIDUAL, VERY STIFF TAN ORANGE SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

820.80

37+50.00

S.S. 821.718

4:1 819.0 0.040 820 821 0.040 4:1

S.S. 818.843

RESIDUAL, VERY STIFF TAN ORANGE SANDY SILTY CLAY, MOIST, HIGH PI (A-7-6)

RESIDUAL, STIFF RED-TAN-BROWN SANDY SILTY CLAY, MOIST (A-7-6)

37+00.00

S.S. 820.451

55-49
53-50

37+25.00 R 1
52.00 R1

25
13
11

830 820 810

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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beverly
AT 0EH226164

8/23/99

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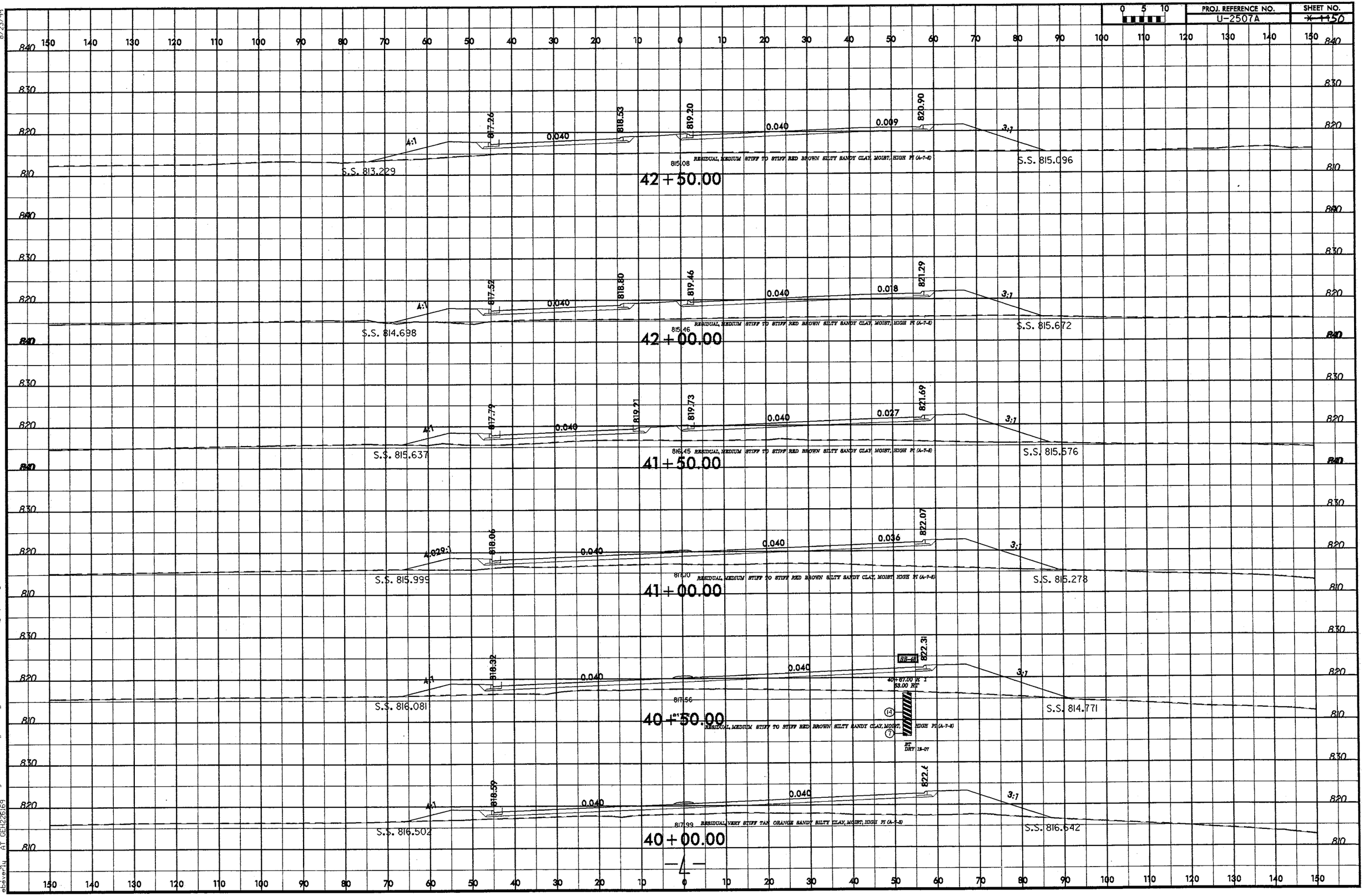
	U-2507A	~~X-1150~~



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8/23/99

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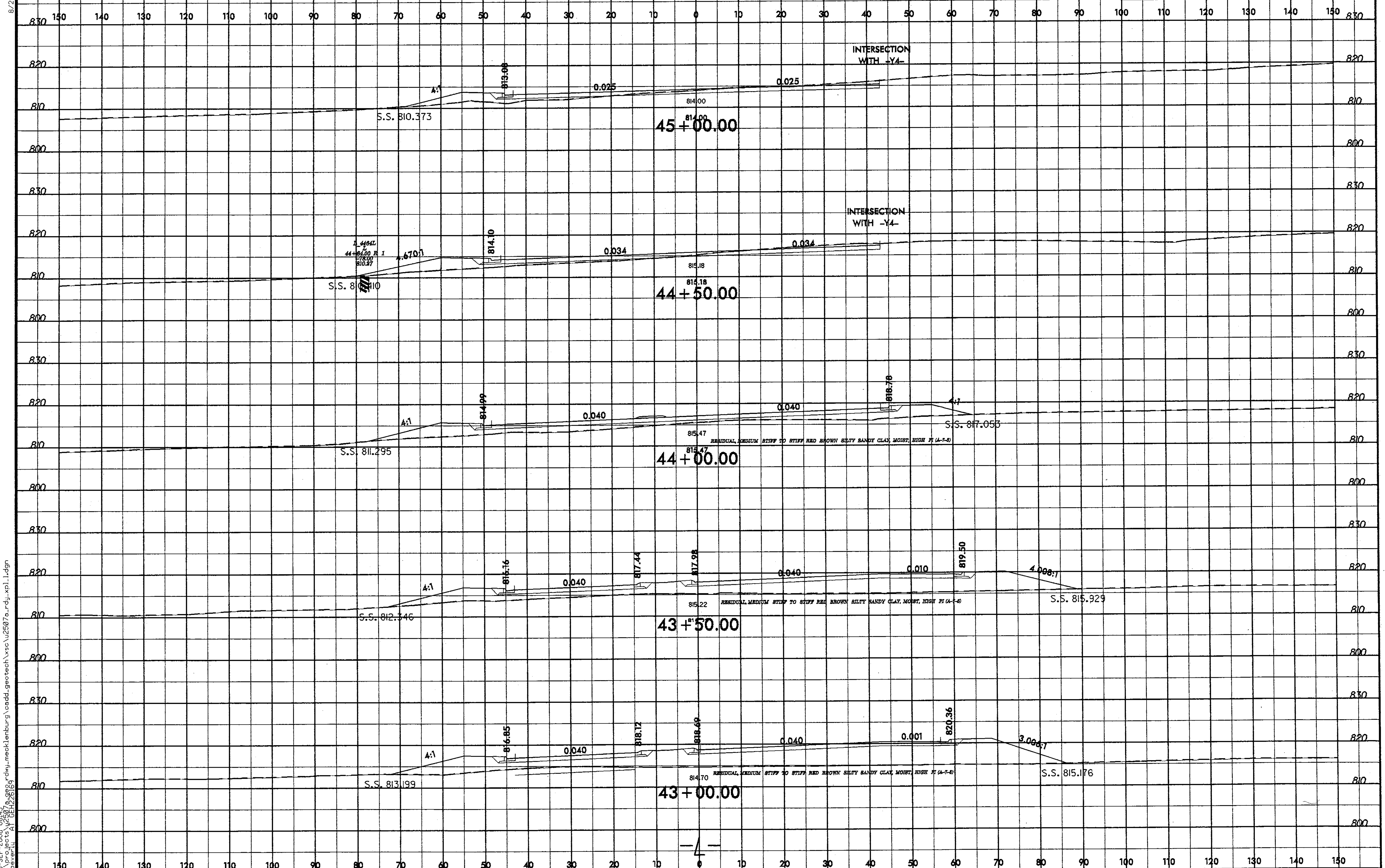
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INTERSECTION WITH -Y4-
0.025
813.08
4:1
814.00
S.S. 810.373
45+00.00
INTERSECTION WITH -Y4-
0.034
814.10
4.670:1
815.18
S.S. 810.110
44+50.00
0.040
814.99
818.78
4:1
815.47
RESIDUAL, MEDIUM STIFF TO STIFF RED BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-6)
S.S. 811.295
S.S. 817.053
44+00.00
0.040
0.010
815.16
817.44
817.98
819.50
4.008:1
815.22
S.S. 812.346
S.S. 815.929
43+50.00
0.040
0.001
816.85
818.12
818.69
820.36
3.096:1
814.70
S.S. 813.199
S.S. 815.176
43+00.00
830
820
810
800
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

23-SEP-2008 08:43
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ebeverly AT GEH226169

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	~~X~~ 21.52

0 5 10

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

800 790 780 770 760

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST, (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)

789.32 | 0.020 | 790.01 | 0.020 | 789.32

3:1 S.S. 786.634

4:1 S.S. 788.654

792.69

67+00.00

788.37 | 0.020 | 789.04 | 0.020 | 789.04 | 0.020 | 788.37

3:1 S.S. 781.762

4:1 S.S. 786.358

786.31

66+50.00

787.42 | 0.020 | 788.08 | 0.020 | 788.08 | 0.020 | 787.42

2:1 S.S. 776.589

4:1 S.S. 784.039

781.66

66+00.00

786.46 | 0.020 | 787.13 | 0.020 | 787.13 | 0.020 | 786.46

2:1 S.S. 770.585

3:1 S.S. 778.800

774.90

65+50.00

785.51 | 0.020 | 786.17 | 0.020 | 786.17 | 0.020 | 785.51

2:1 S.S. 767.976

2:1 S.S. 772.349

771.86

65+00.00

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	~~* 2253~~

0 5 10

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

810 800 790 780

70+00.00

806.18 | 795.51 | 795.51 | 4:1 | 4:1 | 0.020 | 0.020

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-5, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST

S.S. 794.257 | S.S. 794.622

69+50.00

806.09 | 794.40 | 794.40 | 4:1 | 4:1 | 0.020 | 0.020

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-5, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)

S.S. 793.412 | S.S. 793.253

69+00.00

805.93 | 805.72 | 794.22 | 793.31 | 793.31 | 4:1 | 4:1 | 0.020 | 0.020

ARTIFICIAL FILL - STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - VERY STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)

S.S. 794.155 | S.S. 792.455

68+60.00 -R- 1
10.00 LT

68+50.00

805.51 | 805.51 | 793.17 | 792.26 | 4:1 | 4:1 | 0.020 | 0.020

ARTIFICIAL FILL - MEDIUM STIFF TO VERY STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-5, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - MEDIUM STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)

BRIDGE NO. 12 DRY 12/07

S.S. 793.182 | S.S. 791.916

68+00.00

803.81 | 803.81 | 792.16 | 791.25 | 791.25 | 4:1 | 4:1 | 0.020 | 0.020

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - VERY STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)

S.S. 792.659 | S.S. 791.089

67+50.00

799.74 | 791.09 | 790.28 | 790.28 | 4:1 | 4:1 | 0.020 | 0.020

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-5, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

RESIDUAL - VERY STIFF GRAY SILTY SANDY CLAY, MOIST (A-6)

S.S. 791.270 | S.S. 790.235

-4-

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ebeverlin

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	~~X-2354~~

0 5 10

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820 810 800 790

S.S. 807.307

4:1

801.97

ARTIFICIAL FILL - STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

0.020 0.020

805.29

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST (A-6)

0.020 0.020

801.90

4:1

S.S. 802.507

73+00.00

S.S. 805.580

4:1

801.04

8102

ARTIFICIAL FILL - STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

0.020

0.020 0.020

800.80

4:1

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST (A-6)

S.S. 800.148

72+50.00

S.S. 802.744

4:1

799.93

809.69

ARTIFICIAL FILL - STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

0.020

0.020 0.020

799.80

4:1

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST (A-6)

S.S. 798.969

72+00.00

SS-29
SS-30
SS-31
SS-32

71+38.00 -R- 1
15.00 LT

798.82

808.32

ARTIFICIAL FILL - STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

0.020

0.020 0.020

798.81

4:1

S.S. 799.028

S.S. 797.422

71+50.00

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST (A-6)

RESIDUAL - RED AND YELLOW STIFF SANDY SILTY CLAY, MOIST, HIGH PLASTIC (A-7-6) (PI=37)

797.72

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

0.020

806.47

0.020 0.020

797.72

4:1

S.S. 797.521

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST

S.S. 796.351

71+00.00

796.61

805.97

ARTIFICIAL FILL - MEDIUM STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-6, A-6) WITH WOOD AND CONSTRUCTION DEBRIS

0.020

0.020 0.020

796.61

4:1

S.S. 795.376

RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST

S.S. 795.118

70+50.00

-L-

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abeverly
AT GEH226169

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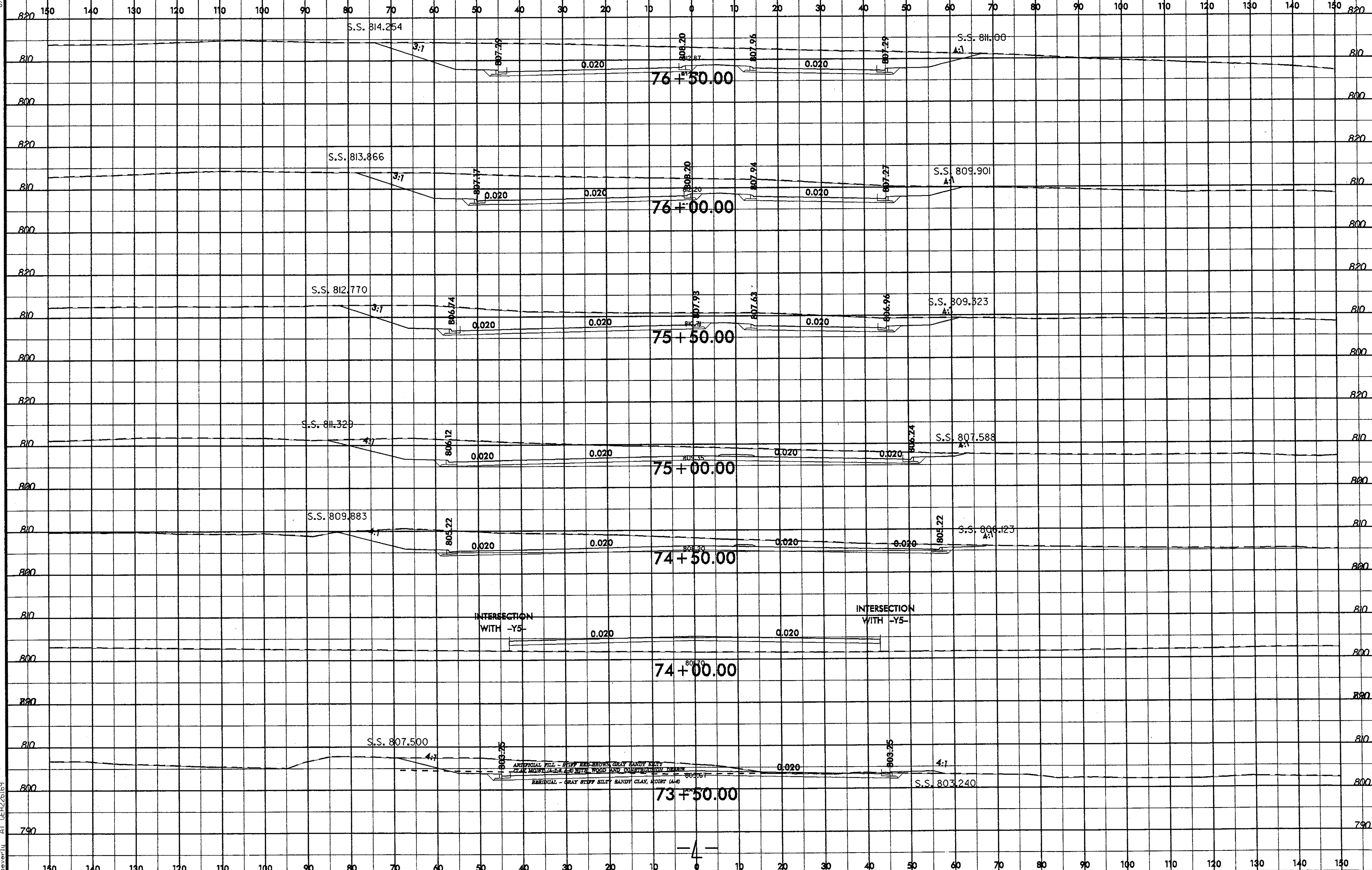

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807.96
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807.29
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4:1
76+50.00
S.S. 813.866
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807.17
0.020
0.020
808.20
812.20
807.94
0.020
807.27
S.S. 809.901
4:1
76+00.00
S.S. 812.770
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0.020
807.93
811.71
807.63
0.020
806.96
S.S. 809.323
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75+50.00
S.S. 811.329
4:1
806.12
0.020
0.020
809.35
0.020
0.020
806.24
S.S. 807.588
4:1
75+00.00
S.S. 809.883
4:1
805.22
0.020
0.020
808.20
0.020
0.020
805.22
S.S. 806.123
4:1
74+50.00
INTERSECTION WITH -Y5-
0.020
0.020
INTERSECTION WITH -Y5-
801.70
74+00.00
S.S. 807.500
4:1
803.25
ARTIFICIAL FILL - STIFF RED-BROWN, GRAY SANDY SILTY CLAY, MOIST (A-7-5, A-6) WITH WOOD AND CONSTRUCTION DEBRIS
RESIDUAL - GRAY STIFF SILTY SANDY CLAY, MOIST (A-6)
805.67
0.020
803.25
4:1
S.S. 803.240
73+50.00

8/23/99

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ebeverly AT GEH226169

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
U-2507A	X-4856

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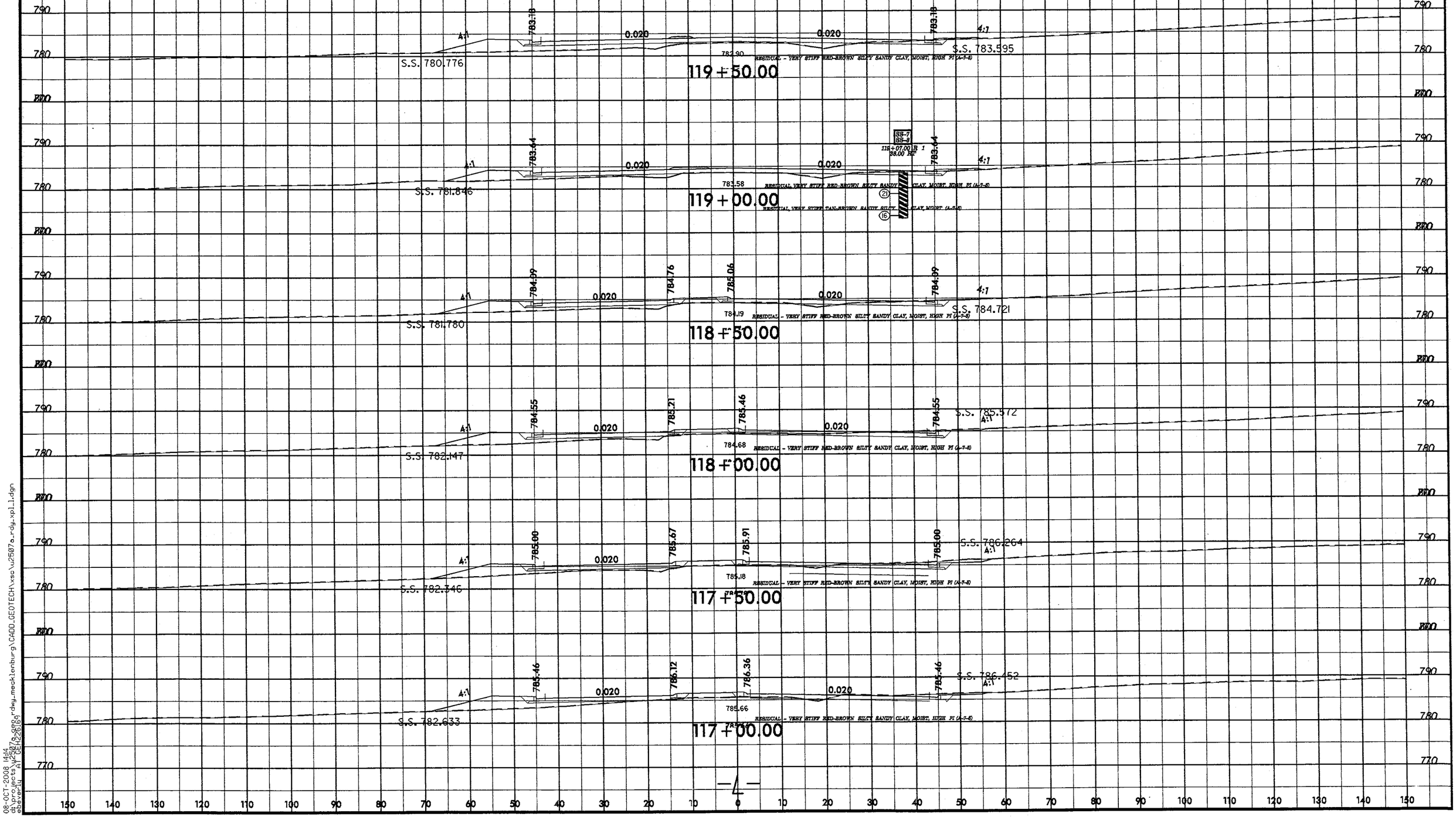
800 790 780 770



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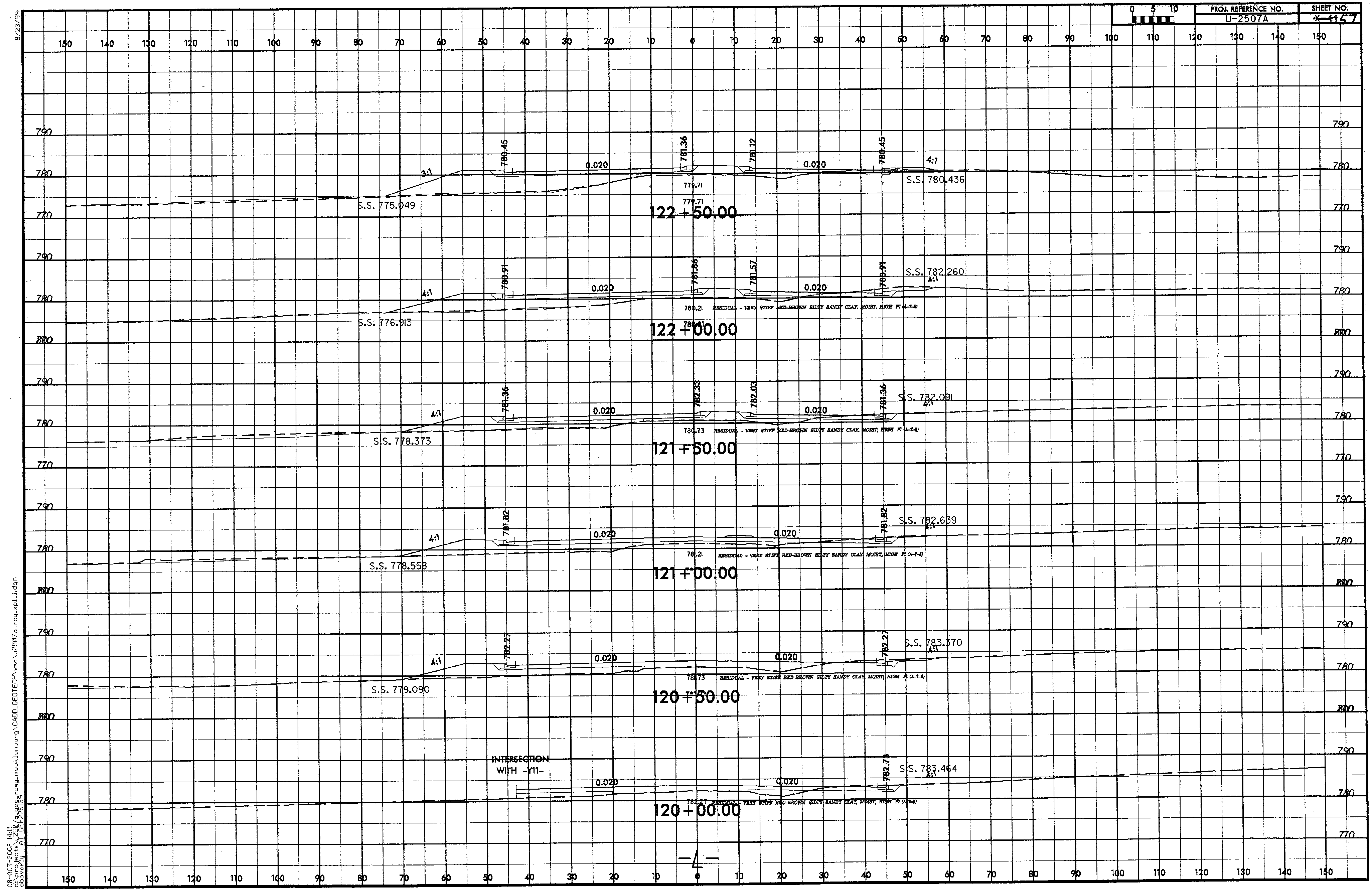
AT GEH226169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S.S. 780.436
122+50.00
0.020
3:1
4:1
780.45
781.36
781.12
779.71
S.S. 776.913
S.S. 782.260
122+00.00
780.91
781.86
781.57
780.21
RESIDUAL - VERY STIFF RED-BROWN SILTY SANDY CLAY, MOIST, HIGH PI (A-7-5)
S.S. 778.373
S.S. 782.091
121+50.00
781.36
782.33
782.03
780.73
S.S. 778.558
S.S. 782.639
121+00.00
781.82
S.S. 779.090
S.S. 783.370
120+50.00
782.27
781.73
INTERSECTION WITH -Y11-
S.S. 783.464
120+00.00
782.73
790
780
770
-4-
08-OCT-2008 14:13
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY			**By**	J E BEVERLY
Submitted by	N WAINAINA				1995 **Standard Specifications**

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-1	SS-2	SS-3	SS-4	SS-5	SS-6
Lab. Sample No.		742857	742858	742859	742860	742861	742862
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	97	97	100	100	100
Passing #40 Sieve	%	99	56	69	83	87	80
Passing #200 Sieve	%	94	29	55	61	72	55

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	1.6	55.4	36.1	26.2	17.7	27.8
Fine Sand Ret - #270	%	7.0	17.5	8.7	14.5	11.9	22.6
Silt 0.05 - 0.005 mm	%	45.0	17.0	27.1	11.0	22.1	29.5
Clay < 0.005 mm	%	46.3	10.1	28.2	48.3	48.3	20.1
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	55	41	57	60	71	51
P. I.	18	6	21	27	34	14
AASHTO Classification	A-7-5(23)	A-2-5(0)	A-7-5(10)	A-7-5(16)	A-7-5(27)	A-7-5(7)
Station	137+07	137+07	134+17	125+96	123+12	123+12
OFFSET	60 RT	60 RT	52 RT	65 LT	40 LT	40 LT
ALIGNMENT	L	L	L	L	L	L
Depth (Ft)	3.30	8.30	4.00	3.90	4.30	9.30
to	4.30	9.30	5.00	4.90	5.30	10.30

cc: J E BEVERLY
Soils File

Soils Engineer

Sheet 58

M & T Form 503

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

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Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY			**By**	J E BEVERLY
Submitted by	N WAINAINA				1995 **Standard Specifications**

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-7	SS-8	SS-9	SS-10	SS-11	SS-12
Lab. Sample No.		742863	742864	742865	742866	742867	742868
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	100	100	100	100	100
Passing #40 Sieve	%	96	94	99	100	100	98
Passing #200 Sieve	%	82	75	86	88	81	85

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	8.7	12.1	2.0	2.4	4.4	5.6
Fine Sand Ret - #270	%	11.1	16.9	14.3	13.5	21.3	10.9
Silt 0.05 - 0.005 mm	%	11.8	32.7	29.3	35.8	44.0	23.1
Clay < 0.005 mm	%	68.5	38.3	54.4	48.3	30.2	60.4
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	83	53	66	63	58	69
P. I.	49	15	26	24	15	30
AASHTO Classification	A-7-5(46)	A-7-5(14)	A-7-5(28)	A-7-5(27)	A-7-5(17)	A-7-5(31)
Station	119+07	119+07	114+90	111+78	111+78	108+12
OFFSET	38 RT	38 RT	36 RT	64 RT	64 RT	38 RT
ALIGNMENT	L	L	L	L	L	L
Depth (Ft)	4.20	9.20	4.50	4.50	9.50	4.20
to	5.20	10.20	5.50	5.50	10.50	5.20

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY		**By**	J E BEVERLY	
Submitted by	N WAINAINA			1995 **Standard Specifications**	

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-13	SS-14	SS-15	SS-16	SS-17	SS-18
Lab. Sample No.		742869	742870	742871	742872	742873	742874
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	100	100	100	100	100
Passing #40 Sieve	%	83	89	94	97	93	86
Passing #200 Sieve	%	59	64	74	90	55	64

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	24.8	20.9	13.3	4.8	13.9	25.2
Fine Sand Ret - #270	%	17.7	19.7	17.5	7.3	34.8	11.9
Silt 0.05 - 0.005 mm	%	17.2	35.1	30.9	25.5	23.1	16.6
Clay < 0.005 mm	%	40.3	24.2	38.3	62.4	28.2	46.3
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	62	55	55	63	43	61
P. I.	30	15	16	29	12	30
AASHTO Classification	A-7-5(16)	A-7-5(10)	A-7-5(14)	A-7-5(32)	A-7-5(5)	A-7-5(19)
Station	105+27	105+27	98+12	19+47	19+47	12+72
OFFSET	52 LT	52 LT	53 RT	31 RT	31 RT	57 RT
ALIGNMENT	L	L	L	Y5	Y6	Y6
Depth (Ft)	4.50	9.50	4.50	3.00	8.00	4.50
to	5.50	10.50	5.50	4.00	9.00	5.50

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY		**By**	J E BEVERLY	
Submitted by	N WAINAINA			1995 **Standard Specifications**	

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-19	SS-20	SS-21	SS-22	SS-23	SS-24
Lab. Sample No.		742875	742876	742877	742878	742879	742880
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	100	100	100	100	100
Passing #40 Sieve	%	75	88	71	96	96	97
Passing #200 Sieve	%	53	57	35	79	71	89

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	38.5	26.2	44.9	9.5	12.5	4.6
Fine Sand Ret - #270	%	9.5	19.5	26.2	13.9	20.3	7.9
Silt 0.05 - 0.005 mm	%	23.9	14.0	20.8	22.3	32.9	13.0
Clay < 0.005 mm	%	28.2	40.3	8.1	54.4	34.2	74.5
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	46	54	31	67	50	70
P. I.	17	25	3	33	11	31
AASHTO Classification	A-7-6(7)	A-7-6(12)	A-2-4(0)	A-7-5(29)	A-7-5(10)	A-7-5(34)
Station	12+72	86+90	86+90	80+15	80+15	77+24
OFFSET	57 RT	50 LT	50 LT	25 LT	25 LT	23 LT
ALIGNMENT	Y6	Y	L	L	L	L
Depth (Ft)	9.50	4.40	9.40	4.00	9.00	4.10
to	10.50	5.40	10.40	5.00	10.00	5.10

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY		**By**	J E BEVERLY	
Submitted by	N WAINAINA			1995 **Standard Specifications**	

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-25	SS-26	SS-27	SS-28	SS-29	SS-30
Lab. Sample No.		742881	742882	742883	742884	742885	742886
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	100	100	100	100	98
Passing #40 Sieve	%	83	83	99	98	93	88
Passing #200 Sieve	%	72	64	80	84	76	60

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	23.2	25.8	5.4	3.4	13.9	21.1
Fine Sand Ret - #270	%	6.8	14.1	20.3	14.3	11.7	19.5
Silt 0.05 - 0.005 mm	%	21.7	29.9	33.9	23.9	18.0	19.0
Clay < 0.005 mm	%	48.3	30.2	40.3	58.4	56.4	40.3
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	62	54	61	64	55	39
P. I.	29	24	19	27	24	16
AASHTO Classification	A-7-5(22)	A-7-5(15)	A-7-5(20)	A-7-5(27)	A-7-5(20)	A-6(8)
Station	77+24	77+24	74+68	74+68	71+33	71+33
OFFSET	23 LT	23 LT	C/L	C/L	15 LT	15 LT
ALIGNMENT	L	L	L	L	L	L
Depth (Ft)	9.10	14.10	4.50	9.50	4.40	9.40
to	10.10	15.10	5.50	10.50	5.40	10.40

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project 34811.1 County MECKLENBURG Owner
Date: Sampled 12/11/07 Received 12/28/07 Reported 1/7/08
Sampled from RDWY By J E BEVERLY
Submitted by N WAINAINA 1995 Standard Specifications

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-31	SS-32	SS-33	SS-34	S-35	SS-36
Lab. Sample No.		742887	742888	742889	742890	742891	742892
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	99	99	100	100	100	98
Passing #40 Sieve	%	86	89	93	94	93	78
Passing #200 Sieve	%	56	63	74	70	68	37

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	28.0	16.3	14.5	12.9	16.3	26.6
Fine Sand Ret - #270	%	17.7	21.8	14.1	21.1	17.7	38.9
Silt 0.05 - 0.005 mm	%	18.0	21.7	19.0	19.6	19.6	16.4
Clay < 0.005 mm	%	36.3	40.3	52.4	46.3	46.3	18.1
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	39	37	65	51	45	29
P. I.	17	16	33	35	21	10
AASHTO Classification	A-6(7)	A-6(8)	A-7-5(26)	A-7-6(23)	A-7-6(13)	A-4(0)
Station	71+33	71+33	65+48	65+48	62+82	62+82
OFFSET	15 LT	15 LT	C/L	C/L	90 RT	90 RT
ALIGNMENT	L	L	L	L	L	L
Depth (Ft)	14.40	19.40	4.80	9.80	0.00	4.50
to	15.40	20.40	5.80	10.80	3.00	5.50

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY			**By**	J E BEVERLY
Submitted by	N WAINAINA				1995 **Standard Specifications**

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-37	SS-38	SS-39	SS-40	SS-41	SS-42
Lab. Sample No.		742893	742894	742895	742896	742897	742898
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	97	100	100	100	100	100
Passing #40 Sieve	%	93	93	95	93	86	97
Passing #200 Sieve	%	79	66	70	60	39	91

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	5.8	13.9	8.3	17.9	29.6	3.8
Fine Sand Ret - #270	%	18.9	28.6	29.4	25.2	39.1	10.3
Silt 0.05 - 0.005 mm	%	49.0	27.3	44.2	24.7	27.3	45.6
Clay < 0.005 mm	%	26.2	30.2	18.1	32.2	4.0	40.3
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	53	50	42	33	29	68
P. I.	23	22	11	16	5	36
AASHTO Classification	A-7-5(20)	A-7-6(14)	A-7-5(8)	A-6(7)	A-4(0)	A-7-5(39)
Station	62+82	59+50	59+50	56+86	56+86	54+35
OFFSET	90 RT	35 RT	35 RT	10 RT	10 RT	18 RT
ALIGNMENT	L	L	L	L	L	L
Depth (Ft)	9.50	3.90	8.90	3.90	8.90	4.10
to	10.50	4.90	9.90	4.90	9.90	5.10

Soils Engineer

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

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Project	34811.1	**County**	MECKLENBURG	**Owner**	
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742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-43	SS-44	SS-45	SS-46	SS-47	SS-48
Lab. Sample No.		742899	742900	742901	742902	742903	742904
Retained #4 Sieve	%	-	-	-	-	-	3
Passing #10 Sieve	%	100	100	98	100	100	93
Passing #40 Sieve	%	98	94	71	98	71	91
Passing #200 Sieve	%	80	71	44	84	55	85

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	6.2	13.5	41.3	4.2	32.0	4.0
Fine Sand Ret - #270	%	16.3	20.5	16.1	18.7	16.5	5.6
Silt 0.05 - 0.005 mm	%	27.1	37.8	14.4	46.8	23.3	19.8
Clay < 0.005 mm	%	50.4	28.2	28.2	30.2	28.2	70.5
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	58	56	50	61	56	89
P. I.	26	22	21	16	20	48
AASHTO Classification	A-7-5(23)	A-7-5(17)	A-7-6(5)	A-7-5(19)	A-7-5(10)	A-7-5(49)
Station	51+17	51+17	48+32	48+32	44+64	40+67
OFFSET	15 LT	15 LT	27 LT	27 LT	78 LT	53 RT
ALIGNMENT	L	L	L	L	L	L
Depth (Ft)	4.30	9.30	4.00	9.00	4.30	4.00
to	5.30	10.30	5.00	10.00	5.30	5.00

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/11/07	**Received**	12/28/07	**Reported**	1/7/08
Sampled from	RDWY			**By**	J E BEVERLY
Submitted by	N WAINAINA				1995 **Standard Specifications**

742857 TO 742909
10/29/08

TEST RESULTS

Proj. Sample No.		SS-49	SS-50	SS-51	SS-52	SS-53	
Lab. Sample No.		742905	742906	742907	742908	742909	
Retained #4 Sieve	%	-	-	-	-	-	
Passing #10 Sieve	%	100	100	100	100	100	
Passing #40 Sieve	%	98	99	94	86	95	
Passing #200 Sieve	%	87	87	83	73	79	

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	4.2	2.4	7.5	20.7	10.7	
Fine Sand Ret - #270	%	11.1	17.1	10.9	8.1	11.9	
Silt 0.05 - 0.005 mm	%	22.3	46.2	15.2	20.8	25.1	
Clay < 0.005 mm	%	62.4	34.2	66.5	50.4	52.4	
Passing #40 Sieve	%	-	-	-	-	-	
Passing #200 Sieve	%	-	-	-	-	-	

L. L.		73	64	98	77	61	
P. I.		33	16	52	36	26	
AASHTO Classification		A-7-5(36)	A-7-5(21)	A-7-5(52)	A-7-5(30)	A-7-5(24)	
Station		37+25	37+25	34+00	31+40	13+65	
OFFSET		62 RT	62 RT	28 LT	56 RT	43 LT	
ALIGNMENT		L	L	L	L	Y-4	
Depth (Ft)		4.30	14.30	4.60	4.50	4.20	
	to	5.30	15.30	5.60	5.50	5.20	

Soils Engineer

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

REPORT ON SAMPLES OF SOILS FOR QUALITY

Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/17/07	**Received**	1/4/08	**Reported**	1/9/08
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Submitted by	N WAINAINA				1995 **Standard Specifications**

742910 TO 742925
10/29/08

TEST RESULTS

Proj. Sample No.		SS-54	SS-55	SS-56	SS-57	SS-58	SS-59
Lab. Sample No.		742910	742911	742912	742913	742914	742915
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	100	100	100	100	100
Passing #40 Sieve	%	96	96	79	81	100	95
Passing #200 Sieve	%	78	67	65	48	88	70

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	10.9	8.3	23.7	34.4	2.8	14.6
Fine Sand Ret - #270	%	15.8	33.0	13.8	21.1	11.9	18.8
Silt 0.05 - 0.005 mm	%	44.9	26.3	30.2	26.3	36.6	28.1
Clay < 0.005 mm	%	28.3	32.4	32.4	18.2	48.6	38.5
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.		53	41	55	41	61	52
P. I.		16	14	21	10	25	20
AASHTO Classification		A-7-5(15)	A-7-6(9)	A-7-5(14)	A-5(3)	A-7-5(27)	A-7-5(15)
Station		13+65	16+58	21+80	21+80	24+43	26+93
OFFSET		43 LT	27 LT	C/L	C/L	8 RT	35 LT
ALIGNMENT		Y4	Y4	Y4	Y4	Y4	Y4
Depth (Ft)		9.20	4.30	3.80	8.80	4.40	4.40
	to	10.20	5.30	4.80	9.80	5.40	5.40

cc: J E BEVERLY
Soils File

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAY
MATERIALS & TESTS UNIT
SOILS LABORATORY

T. I. P. No. U-2507A

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Project	34811.1	**County**	MECKLENBURG	**Owner**	
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Submitted by	N WAINAINA			1995 **Standard Specifications**	

742910 TO 742925
10/29/08

TEST RESULTS

Proj. Sample No.		SS-60	SS-61	SS-62	SS-63	SS-64	SS-65
Lab. Sample No.		742916	742917	742918	742919	742920	742921
Retained #4 Sieve	%	-	-	-	-	-	-
Passing #10 Sieve	%	100	100	100	100	100	97
Passing #40 Sieve	%	85	79	97	96	93	78
Passing #200 Sieve	%	66	49	79	64	67	41

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	16.2	28.7	8.9	12.1	8.7	32.2
Fine Sand Ret - #270	%	22.3	29.4	16.2	30.2	28.7	30.0
Silt 0.05 - 0.005 mm	%	29.1	31.8	38.5	39.5	34.2	19.6
Clay < 0.005 mm	%	32.4	10.1	36.4	18.2	28.3	18.2
Passing #40 Sieve	%	-	-	-	-	-	-
Passing #200 Sieve	%	-	-	-	-	-	-

L. L.	55	44	51	49	52	24
P. I.	18	7	14	6	20	8
AASHTO Classification	A-7-5(13)	A-5(2)	A-7-5(14)	A-5(5)	A-7-5(14)	A-4(0)
Station	30+58	30+58	33+63	33+63	36+11	39+30
OFFSET	15 RT	15 RT	26 RT	26 RT	33 RT	77 LT
ALIGNMENT	Y4	Y4	Y4	Y4	Y4	Y4
Depth (Ft)	4.40	14.40	4.80	9.80	4.40	4.00
to	5.40	15.40	5.80	10.80	5.40	5.00

Soils Engineer

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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SOILS LABORATORY

T. I. P. No. U-2507A

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Project	34811.1	**County**	MECKLENBURG	**Owner**	
Date: Sampled	12/17/07	**Received**	1/4/08	**Reported**	1/9/08
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Submitted by	N WAINAINA			1995 **Standard Specifications**	

742910 TO 742925
10/29/08

TEST RESULTS

Proj. Sample No.		SS-66	SS-67	SS-68	SS-69		
Lab. Sample No.		742922	742923	742924	742925		
Retained #4 Sieve	%	-	-	-	-		
Passing #10 Sieve	%	100	100	100	100		
Passing #40 Sieve	%	99	85	93	100		
Passing #200 Sieve	%	65	69	67	94		

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - #60	%	7.7	23.1	9.9	0.8		
Fine Sand Ret - #270	%	30.8	9.5	27.5	9.3		
Silt 0.05 - 0.005 mm	%	53.4	18.8	40.3	47.4		
Clay < 0.005 mm	%	8.1	48.6	22.3	42.5		
Passing #40 Sieve	%	-	-	-	-		
Passing #200 Sieve	%	-	-	-	-		

L. L.	34	51	46	63		
P. I.	5	17	4	17		
AASHTO Classification	A-4(3)	A-7-5(12)	A-5(4)	A-7-5(24)		
Station	39+30	42+07	42+07	44+80		
OFFSET	77 LT	27 RT	27 RT	67 RT		
ALIGNMENT	Y4	Y4	Y4	Y4		
Depth (Ft)	9.00	4.00	9.00	4.30		
to	10.00	5.00	10.00	5.30		

Soils Engineer