This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document –

The documents contained herein were originally issued and sealed by the individuals whose names and license numbers appear on each page, on the dates appearing with their signature on that page.
This file or an individual page shall not be considered a certified document.

REFERENCE: R-5749

PROJECT: 53086

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5749	1	146

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

ROADWAY SUBSURFACE INVESTIGATION

COUNTY *COLUMBUS*

PROJECT DESCRIPTION *US 74-76 AT SR 1001 (HALLSBORO ROAD), CONVERT AT GRADE INTERSECTION TO INTERCHANGE*

INVENTORY

CONTENTS

CROSS SECTIONS

APPENDICES

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

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

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

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

PERSONNEL

T. WELLS

B. JOHNSON

D. KUBINSKI

G. EISTER

G. BRIDGER

M. RADFORD

INVESTIGATED BY *B. JOHNSON*

DRAWN BY *B. JOHNSON*

CHECKED BY *X. BARRETT*

SUBMITTED BY *KLEINFELDER, INC.*

DATE *NOVEMBER 2016*

NC REGISTERED FIRM LICENSE NO. F-1132

NORTH CAROLINA PROFESSIONAL SEAL 015741 ENGINEER XAVIER C. BARRETT

DocuSigned by: Xavier C. Barrett 11/28/2016

2D00374FA68B407 SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
R-5749	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 UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

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
MATERIAL PASSING #40 LL PI	— 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 SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

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

CONSISTENCY OR DENSENESS

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

TEXTURE OR GRAIN SIZE

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

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

GRAIN SIZE	MM	305	75	2.0	0.25	0.05	0.005
	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 SL — SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	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.
UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

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

MINERALOGICAL COMPOSITION

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

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

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
- SPT, DPT, DMT, VST, PMT — TEST BORING
- AUGER BORING
- CORE BORING
- MW — MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING WITH CORE
- SPT N-VALUE

RECOMMENDATION SYMBOLS

- UNDERCUT
- SHALLOW UNDERCUT
- UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
- UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK
- UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

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

SAMPLE ABBREVIATIONS

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

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [X] CME-45C
- [ ] CME-55
- [ ] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [ ] _____
- [ ] _____

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

HAMMER TYPE:
- [X] AUTOMATIC [ ] MANUAL

CORE SIZE:
- [ ] -B _____ [ ] -H _____
- [ ] -N _____

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

ROCK DESCRIPTION

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

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD 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, WOULD YIELD SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD 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 FOOT
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 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, SUCH 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: N/A

ELEVATION: N/A FEET

NOTES:

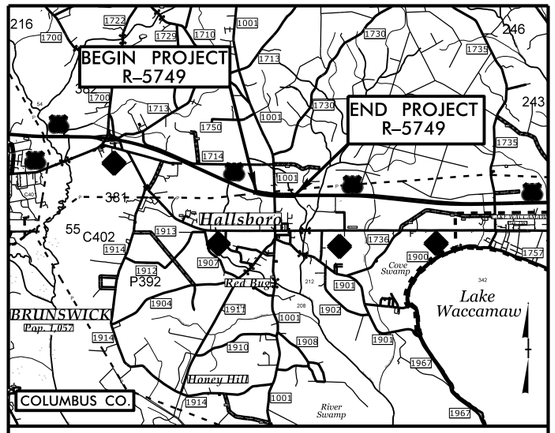
TOP OF BORING ELEVATIONS OBTAINED FROM PROJECT TIN FILE (R5749_LS_TIN.TIN, DATED MAY 12, 2016)
FIAD - FILLED IMMEDIATELY AFTER DRILLING
UCP - UNDIVIDED COASTAL PLAIN

DATE: 8-15-14

TIP PROJECT: R-5749

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5749	3	146

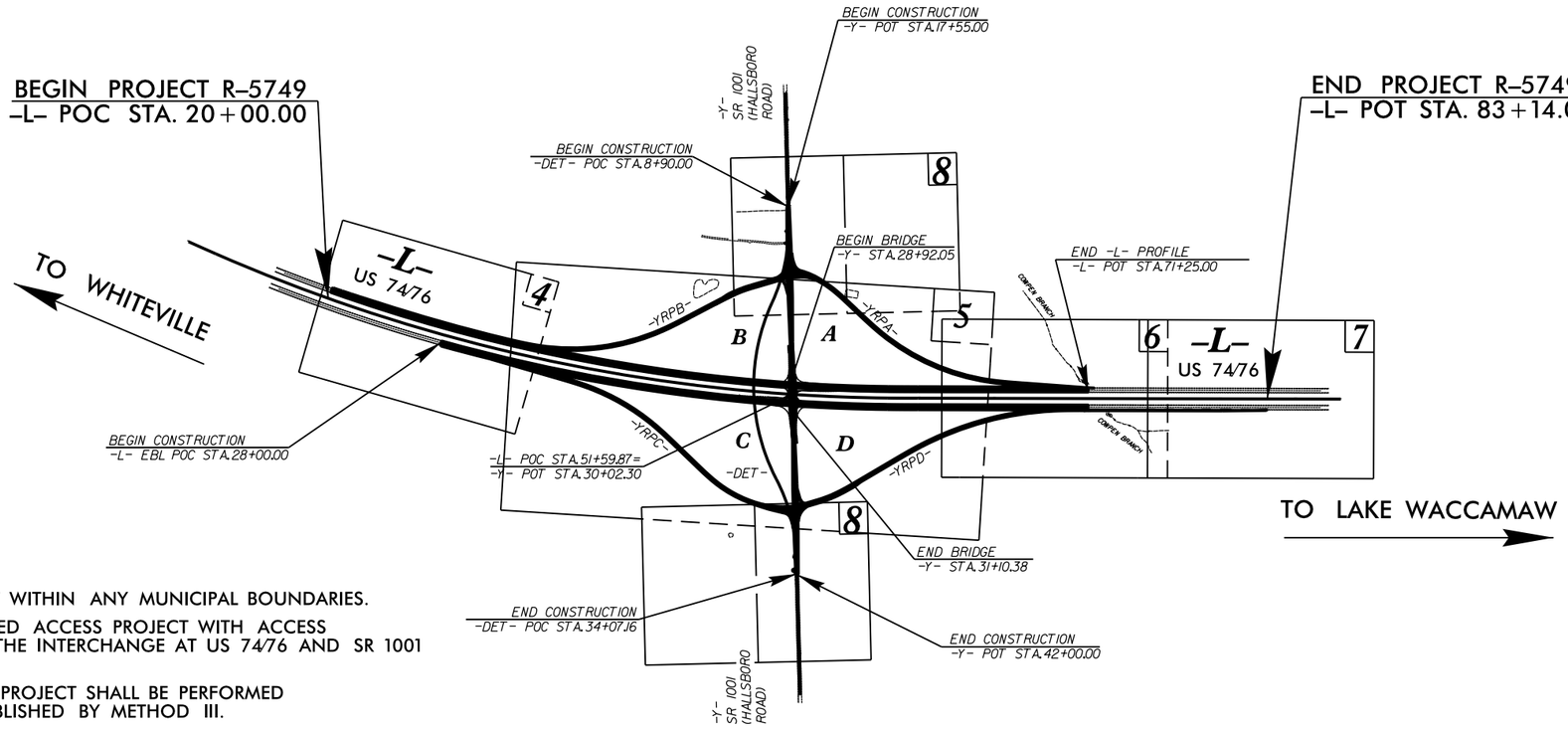
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
53086.1.FD1	HSIP-0074 (169)	P.E.
53086.2.1	HSIP-0074 (169)	R/W / UTIL
53086.3.1	HSIP-0074 (169)	CONST.

LOCATION: US 74/76 AT SR 1001 (HALLSBORO ROAD)
CONVERT AT GRADE INTERSECTION TO INTERCHANGE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE, AND SIGNING

25% PRELIMINARY PLANS

NAD 83/
NSRS 2007



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO THE INTERCHANGE AT US 74/76 AND SR 1001 (HALLSBORO ROAD).

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 10 5 0 10 20

DESIGN DATA

ADT 2018 = 12,900
ADT 2038 = 18,700
DHV = 55 %
D = 8 %
T = 16 % *
V = 75 MPH
* TTST = 3 DUAL = 13
FUNC CLASS = INTERSTATE
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5749	=	*1.212*	*MILES*
LENGTH STRUCTURE TIP PROJECT R-5749	=	*0.000*	*MILES*
TOTAL LENGTH TIP PROJECT R-5749	=	*1.212*	*MILES*

Prepared In the Office of:
CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-0412
FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 2017

LETTING DATE:
FEBRUARY 2018

DAVID J. CLODGO, P.E.
PROJECT ENGINEER

CURTIS J. TILLMAN, P.E.
PROJECT DESIGN ENGINEER

SEAN MATUSZEWSKI
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

November 4, 2016
File No. 20151548.025A

STATE PROJECT: 53086.1.FD1 (R-5749)
FEDERAL PROJECT: HSIP-0074(169)
COUNTY: Columbus
DESCRIPTION: US 74/76 at SR 1001 (Hallsboro Road), Convert at Grade Intersection to Interchange

SUBJECT: GEOTECHNICAL REPORT - INVENTORY

PROJECT DESCRIPTION

This project consists of the reconstruction of the interchange of US 74/76 (-L-) and Hallsboro Road (-Y-). Also proposed is the construction of at grade ramps (-YRPA-, -YRPB-, -YRPC-, and -YRPD-) and a temporary detour of Hallsboro Road (-DET-). Embankments up to 27 feet are expected.

The geotechnical investigation was conducted between June and October of 2016. Standard Penetration Test borings were advanced with a CME 45 with automatic hammer. Hand auger borings were also completed. Representative soil samples were collected for visual classification in the field and selected samples were submitted for laboratory analysis by Kleinfelder Southeast, Inc.

The following alignments, totaling 3.72 miles, were investigated. Subsurface profiles and cross sections of these alignments are included in this report.

LINE	STATIONS
-L-	20+00 to 83+14
-YRPA-	5+00 to 25+62
-YRPB-	5+00 to 24+48
-YRPC-	5+00 to 27+12
-YRPD-	5+00 to 25+36
-Y-	17+55 to 42+00
-DET-	8+90 to 34+07

AREAS OF SPECIAL GEOTECHNICAL INTEREST

1) Moderately to Highly Plastic Clays: Moderate to Highly plastic clays (PI > 15) were encountered on the project at the following locations:

LINE	STATIONS	OFFSETS
-L-	20+00 to 83+00	LT to RT
-YRPA-	11+00 to 25+00	LT to RT
-YRPB-	11+00 to 25+00	LT to RT
-YRPC-	11+00 to 25+00	LT to RT
-YRPD-	11+00 to 25+00	LT to RT
-Y-	17+55 to 42+00	LT to RT
-DET-	14+00 to 30+00	LT to RT

A discussion of these moderate to highly plastic clay soils is located below in the section titled “Soil Properties”.

2) Groundwater: The following areas exhibit a high water table, seasonal high groundwater or the potential for groundwater related construction problems:

LINE	STATIONS
-L-	20+00 to 83+14
-YRPA-	5+00 to 25+62
-YRPB-	5+00 to 24+48
-YRPC-	5+00 to 27+12
-YRPD-	5+00 to 25+36
-Y-	17+55 to 42+00
-DET-	8+90 to 34+07

PHYSIOGRAPHY AND GEOLOGY

The project is located in the Coastal Plain Physiographic Province. The project corridor is comprised primarily of residential and undeveloped properties. The general topography along the project is generally flat to gently sloping.

Geologically, the soils in the project area generally consist of undivided coastal plain soils underlain by the Waccamaw and Peedee Formations.

SOIL PROPERTIES

Soils encountered during this investigation are separated into four categories based on origin. They consist of roadway embankment, undivided coastal plain, and coastal plain soils belonging to the Waccamaw and Peedee Formations.

Roadway Embankment soils are present along the existing roadways on the project. These soils consist of moist to wet, loose to dense, non-plastic to slightly plastic, fine sands, silty, fine to coarse sands (A-3, A-2-4) and moist to wet, soft to stiff, slightly to highly plastic, clays, silty clays, fine sandy, silty clays, and silty, fine sandy clays (A-6, A-7-5, A-7-6).

Soils identified as undivided coastal plain consist of moist to wet, soft to very stiff, slightly plastic to highly plastic clays, silty clays, fine sandy, silty clays, and silty, fine sandy clays, fine sandy silts (A-6, A-7-5, A-7-6, A-4), moist to wet, loose to very dense, clayey, fine to coarse sands, silty, fine to coarse sands, fine sands (A-3, A-2-4, A-2-6), and limestone.

Soils identified as Coastal Plain - Waccamaw Formation consist of moist, soft, highly plastic clays, and silty clays, (A-7-5).

Soils identified as Coastal Plain - Peedee Formation consist of moist to wet, soft to very stiff, slightly to moderately plastic, fine sandy clays (A-6), non-plastic, loose to very dense, dark gray, clayey, fine to coarse sand (A-2-6).

GROUNDWATER

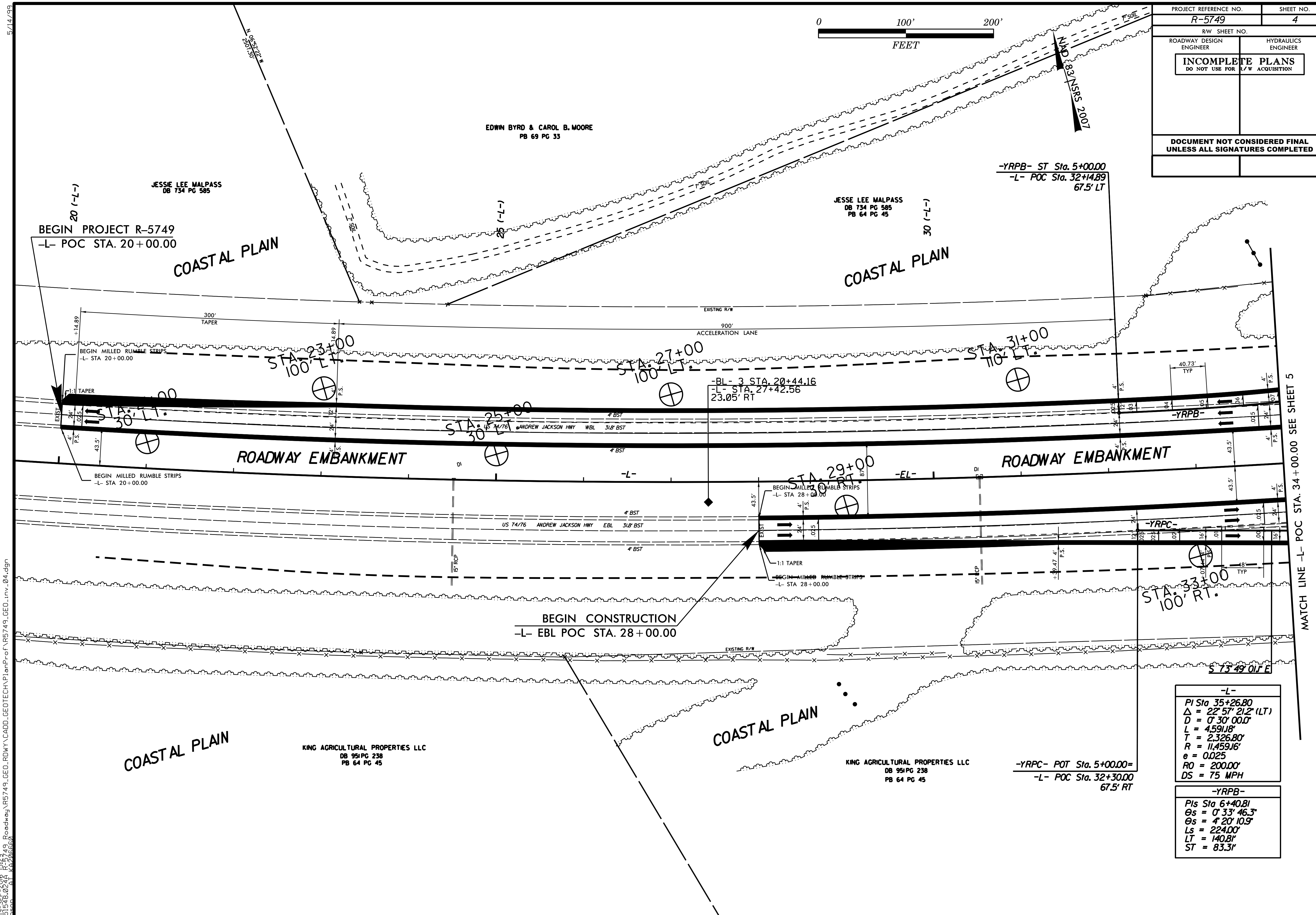
Groundwater was encountered at elevations ranging from 47.8 to 64.5 feet MSL along the proposed roadways of the project.

Prepared by,

Thomas R. Wells, PE
Senior Professional

Xavier C. Barrett, PE
Principal Professional

TRW/XCB:cas



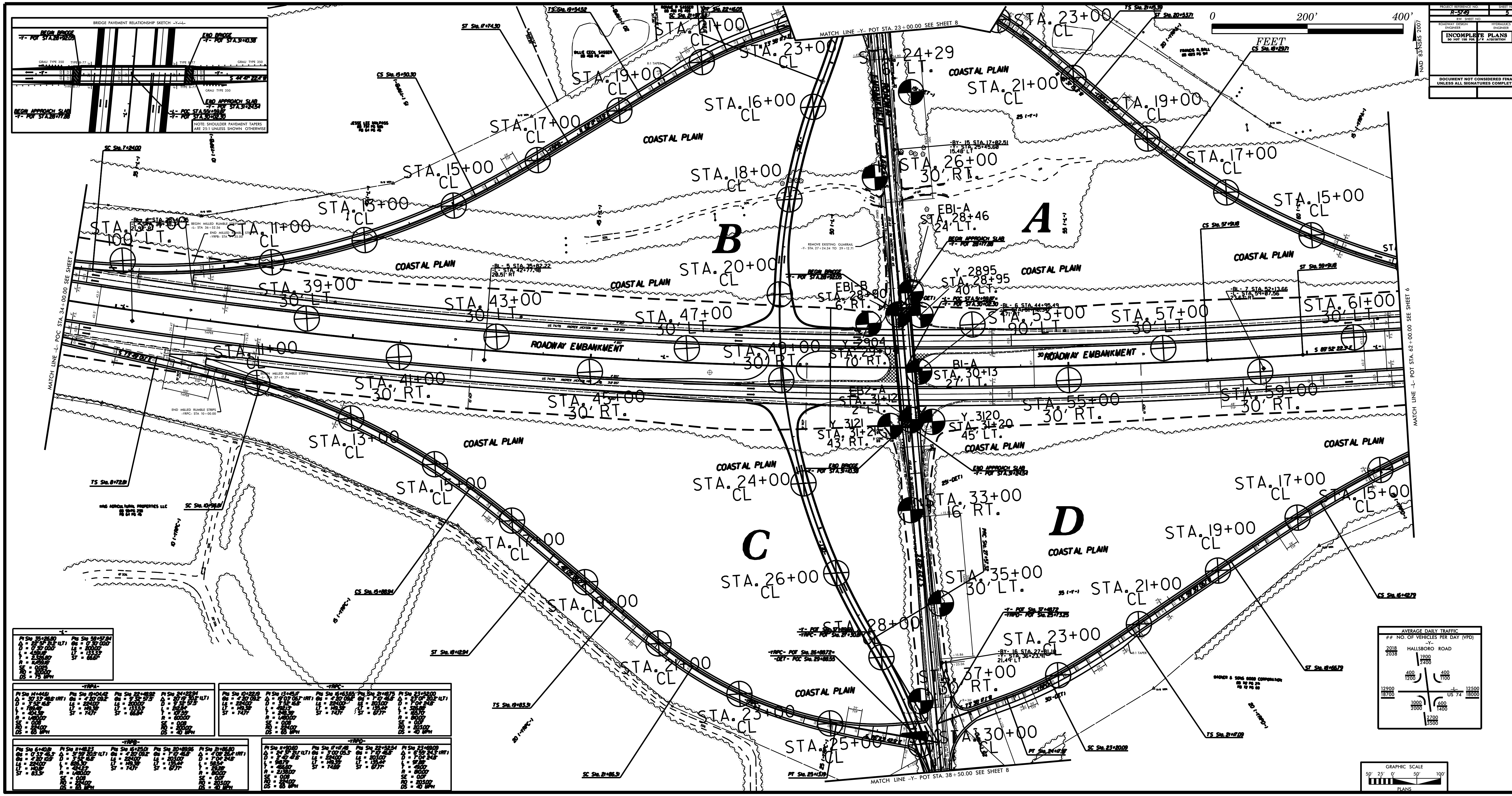
PROJECT REFERENCE NO. R-5749
SHEET NO. 4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
0 100' 200'
FEET
NAD 83/NSRS 2007
EDWIN BYRD & CAROL B. MOORE
PB 69 PG 33
JESSIE LEE MALPASS
DB 734 PG 585
JESSIE LEE MALPASS
DB 734 PG 585
PB 64 PG 45
BEGIN PROJECT R-5749
-L- POC STA. 20+00.00
COASTAL PLAIN
COASTAL PLAIN
COASTAL PLAIN
COASTAL PLAIN
-YRPB- ST Sta. 5+00.00
-L- POC Sta. 32+14.89
67.5' LT
EXISTING R/W
300' TAPER
900' ACCELERATION LANE
BEGIN MILLED RUMBLE STRIPS -L- STA 20+00.00
STA. 23+00 100' LT.
STA. 27+00 100' LT.
STA. 31+00 110' LT.
-BL- 3 STA. 20+44.16
-L- STA. 27+42.56
23.05' RT
STA. 21+00 30' LT.
STA. 25+00 30' LT.
US 74/76 ANDREW JACKSON HWY WBL 31.8' BST
4' BST
-YRPB-
ROADWAY EMBANKMENT
ROADWAY EMBANKMENT
-L-
-EL-
BEGIN MILLED RUMBLE STRIPS -L- STA 20+00.00
STA. 29+00 30' RT.
BEGIN MILLED RUMBLE STRIPS -L- STA 28+00.00
US 74/76 ANDREW JACKSON HWY EBL 31.8' BST
-YRPC-
1:1 TAPER
15" RCP
STA. 33+00 100' RT.
BEGIN CONSTRUCTION
-L- EBL POC STA. 28+00.00
MATCH LINE -L- POC STA. 34+00.00 SEE SHEET 5
S 73°49' 01.1" E
KING AGRICULTURAL PROPERTIES LLC
DB 951 PG 238
PB 64 PG 45
KING AGRICULTURAL PROPERTIES LLC
DB 951 PG 238
PB 64 PG 45
-YRPC- POT Sta. 5+00.00=
-L- POC Sta. 32+30.00
67.5' RT

-L-
PI Sta 35+26.80
Δ = 22° 57' 21.2" (LT)
D = 0° 30' 00.0"
L = 4,591.18'
T = 2,326.80'
R = 11,459.16'
e = 0.025
RO = 200.00'
DS = 75 MPH

-YRPB-
PIs Sta 6+40.81
θs = 0° 33' 46.3"
θs = 4° 20' 10.9"
Ls = 224.00'
LT = 140.81'
ST = 83.31'

5/14/99

19-SEP-2016 15:29
R5749_GEO_RDWY\CADD_GEOTECH\PlanProf\R5749_GEO_inv_04.dgn


BRIDGE PAVEMENT RELATIONSHIP SKETCH -Y--L-
NOTE: SHOULDER PAVEMENT TAPERS ARE 25:1 UNLESS SHOWN OTHERWISE
MATCH LINE -Y- POT STA. 23+00.00 SEE SHEET 8
MATCH LINE -Y- POT STA. 38+50.00 SEE SHEET 8
MATCH LINE -L- POC STA. 34+00.00 SEE SHEET 4
MATCH LINE -L- POT STA. 62+00.00 SEE SHEET 6
0
200'
400'
FEET
NAD 83/NSRS 2007
INCOMPLETE PLANS
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
A
B
C
D
COASTAL PLAIN
ROADWAY EMBANKMENT
EBI-A STA. 28+46 24' LT.
EBI-B STA. 28+90 6' RT.
EB2-A STA. 31+12 2' LT.
BI-A STA. 30+13 27' LT.
Y 2895 STA. 28+95 40' LT.
Y 2904 STA. 29+04 70' RT.
Y 3120 STA. 31+20 45' LT.
Y 3121 STA. 31+21 43' RT.
STA. 24+29 61' LT.
STA. 26+00 30' RT.
STA. 33+00 16' RT.
STA. 35+00 30' LT.
STA. 37+00 30' RT.
STA. 39+00 30' LT.
STA. 41+00 30' RT.
STA. 43+00 30' LT.
STA. 45+00 30' RT.
STA. 47+00 30' LT.
STA. 49+00 30' RT.
STA. 53+00 90' LT.
STA. 55+00 30' RT.
STA. 57+00 30' LT.
STA. 59+00 30' RT.
STA. 61+00 30' LT.
STA. 9+00 100' LT.
AVERAGE DAILY TRAFFIC
NO. OF VEHICLES PER DAY (VPD)
HALLSBORO ROAD
US 74
GRAPHIC SCALE
PLANS

DATE: 9-15-14

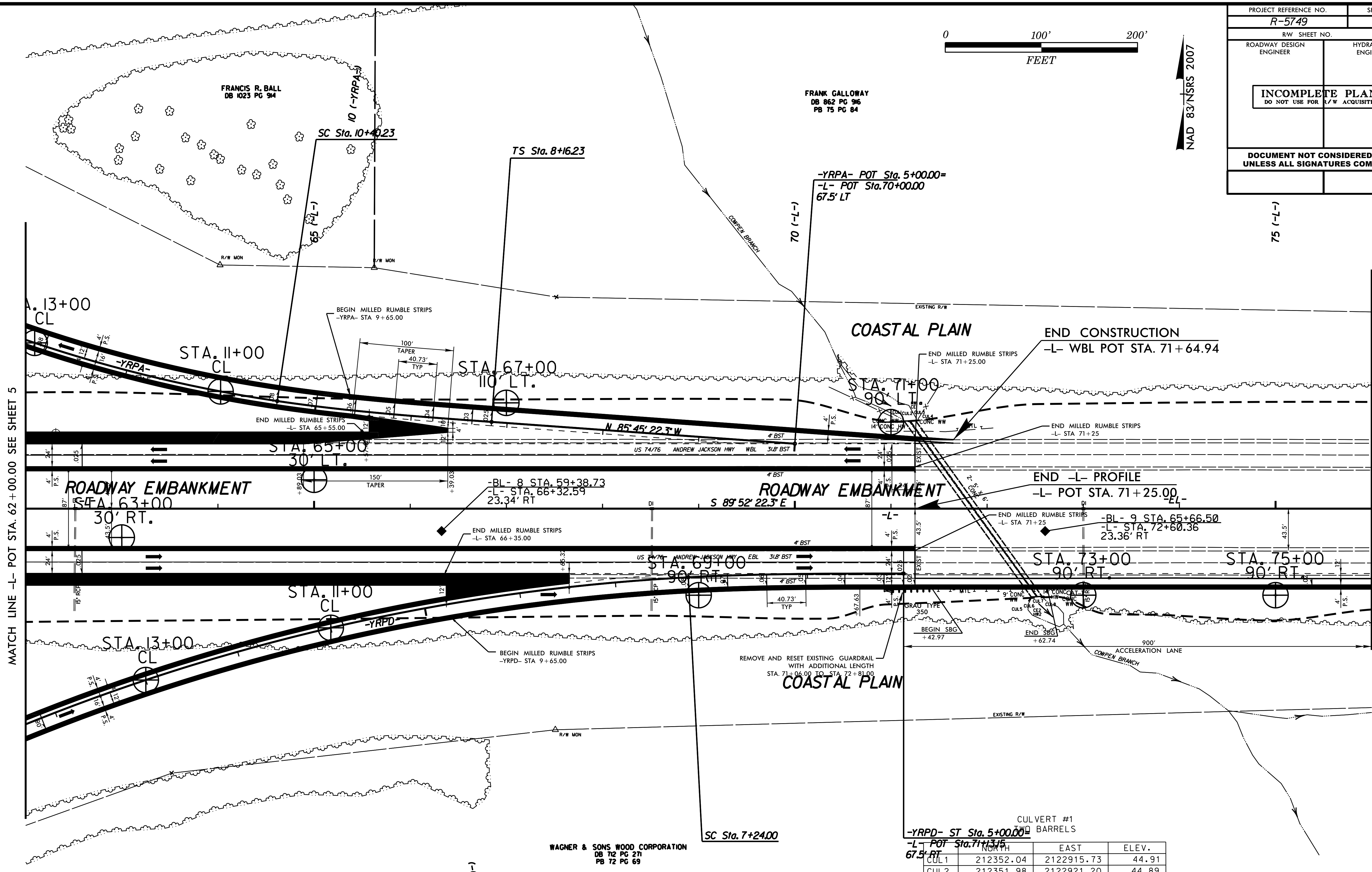
PROJECT REFERENCE NO.	SHEET NO.
R-5749	6

R/W SHEET NO.

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



0 100' 200'
FEET
NAD 83/NSRS 2007
FRANCIS R. BALL
DB 1023 PG 914
FRANK GALLOWAY
DB 862 PG 916
PB 75 PG 84
SC Sta. 10+40.23
TS Sta. 8+16.23
-YRPA- POT Sta. 5+00.00=
-L- POT Sta.70+00.00
67.5' LT
65 (-L-)
70 (-L-)
75 (-L-)
10 (-YRPA-)
COMPEN BRANCH
R/W MON
EXISTING R/W
COASTAL PLAIN
END CONSTRUCTION
-L- WBL POT STA. 71+64.94
BEGIN MILLED RUMBLE STRIPS
-YRPA- STA 9+65.00
END MILLED RUMBLE STRIPS
-L- STA 65+55.00
END MILLED RUMBLE STRIPS
-L- STA 71+25.00
END MILLED RUMBLE STRIPS
-L- STA 71+25
STA. 11+00
CL
STA. 67+00
110' LT.
STA. 71+00
90' LT.
STA. 65+00
30' LT.
100' TAPER
40.73' TYP
150' TAPER
N 85°45' 22.3" W
US 74/76 ANDREW JACKSON HWY WBL 31.8' BST
ROADWAY EMBANKMENT
STA. 63+00
30' RT.
-BL- 8 STA. 59+38.73
-L- STA. 66+32.59
23.34' RT
END -L- PROFILE
-L- POT STA. 71+25.00
S 89°52' 22.3" E
-BL- 9 STA. 65+66.50
-L- STA. 72+60.36
23.36' RT
END MILLED RUMBLE STRIPS
-L- STA 66+35.00
US 74/76 ANDREW JACKSON HWY EBL 31.8' BST
STA. 69+00
90' RT.
STA. 73+00
90' RT.
STA. 75+00
90' RT.
STA. 11+00
CL
-YRPD-
STA. 13+00
CL
BEGIN MILLED RUMBLE STRIPS
-YRPD- STA 9+65.00
REMOVE AND RESET EXISTING GUARDRAIL
WITH ADDITIONAL LENGTH
STA. 71+06.00 TO STA. 72+81.00
BEGIN SBG
+42.97
END SBG
+62.74
900'
ACCELERATION LANE
MATCH LINE -L- POT STA. 62+00.00 SEE SHEET 5
MATCH LINE -L- POT STA. 76+00.00 SEE SHEET 7
WAGNER & SONS WOOD CORPORATION
DB 712 PG 271
PB 72 PG 69
SC Sta. 7+24.00
-YRPD- ST Sta. 5+00.00=
-L- POT Sta.71+13.15
67.5' RT
10 (-YRPD-)

-YRPA-	
PIs Sta 9+65.61	PI Sta 14+44.61
θs = 4° 20' 09.2"	Δ = 30° 33' 48.6" (RT)
Ls = 224.00'	D = 3° 52' 16.8"
LT = 149.38'	L = 789.48'
ST = 74.71'	T = 404.38'
	R = 1,480.00'
	SE = 0.08
	RO = 224.00'
	DS = 65 MPH

-YRPD-	
PIs Sta 6+49.35	PI Sta 11+90.60
θs = 3° 00' 05.3"	Δ = 24° 37' 21.1" (LT)
Ls = 224.00'	D = 2° 40' 47.6"
LT = 149.35'	L = 918.79'
ST = 74.69'	T = 466.60'
	R = 2,138.00'
	SE = 0.08
	RO = 224.00'
	DS = 65 MPH

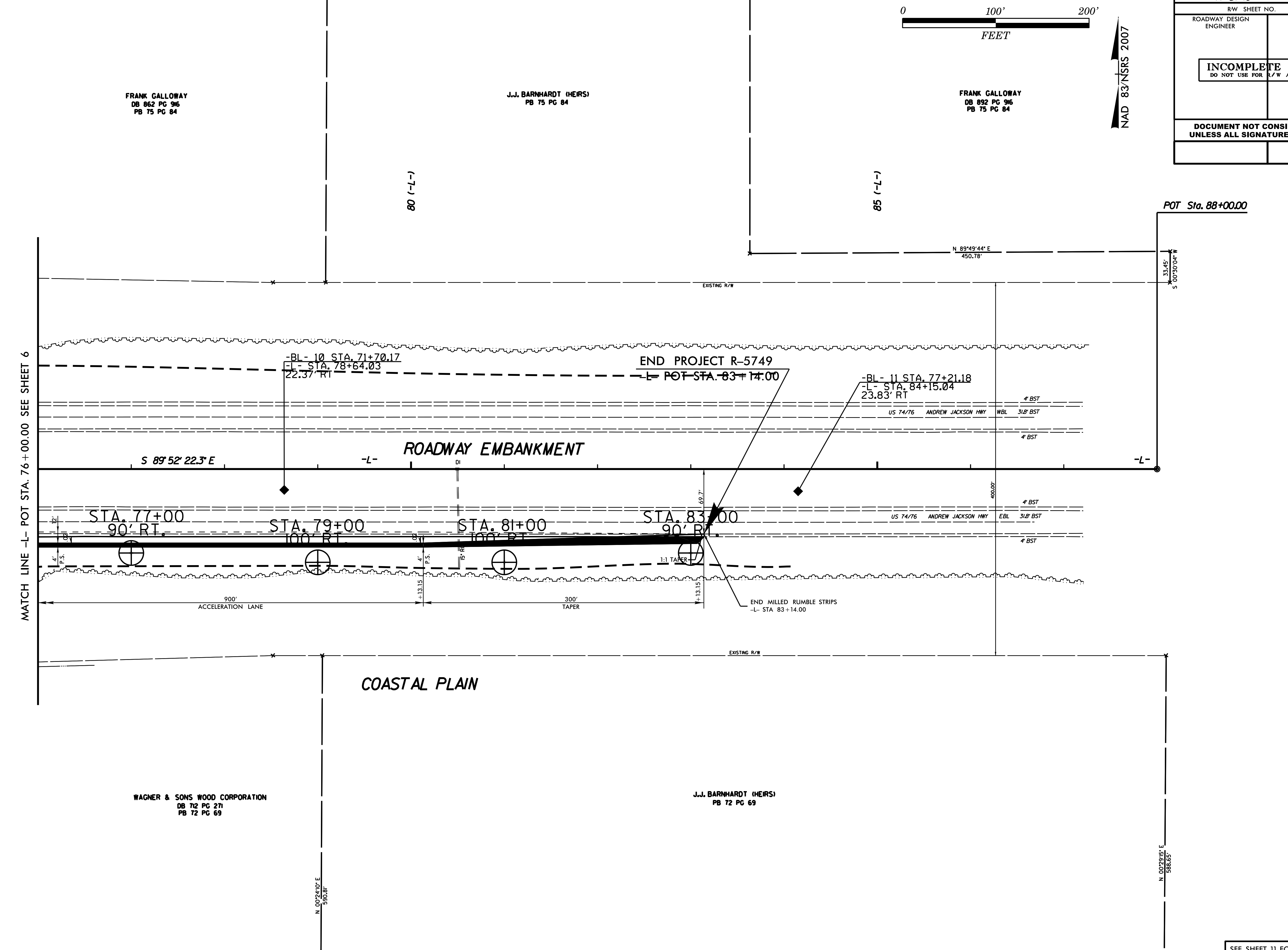
CULVERT #1
TWO BARRELS

	NORTH	EAST	ELEV.
CUL1	212352.04	2122915.73	44.91
CUL2	212351.98	2122921.20	44.89
CUL3	212352.00	2122922.09	44.85
CUL4	212351.80	2122928.11	44.90
CE1	212351.72	2122915.77	49.91
HW1	212351.03	2122928.77	51.44
CUL5	212167.30	2123048.58	44.68
CUL6	212167.41	2123054.49	44.72
CUL7	212167.41	2123054.49	44.72
CUL8	212167.07	2123060.34	44.66
CE2	212167.77	2123048.54	49.70
HW2	212168.97	2123061.31	51.33

PROJECT REFERENCE NO.	SHEET NO.
R-5749	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

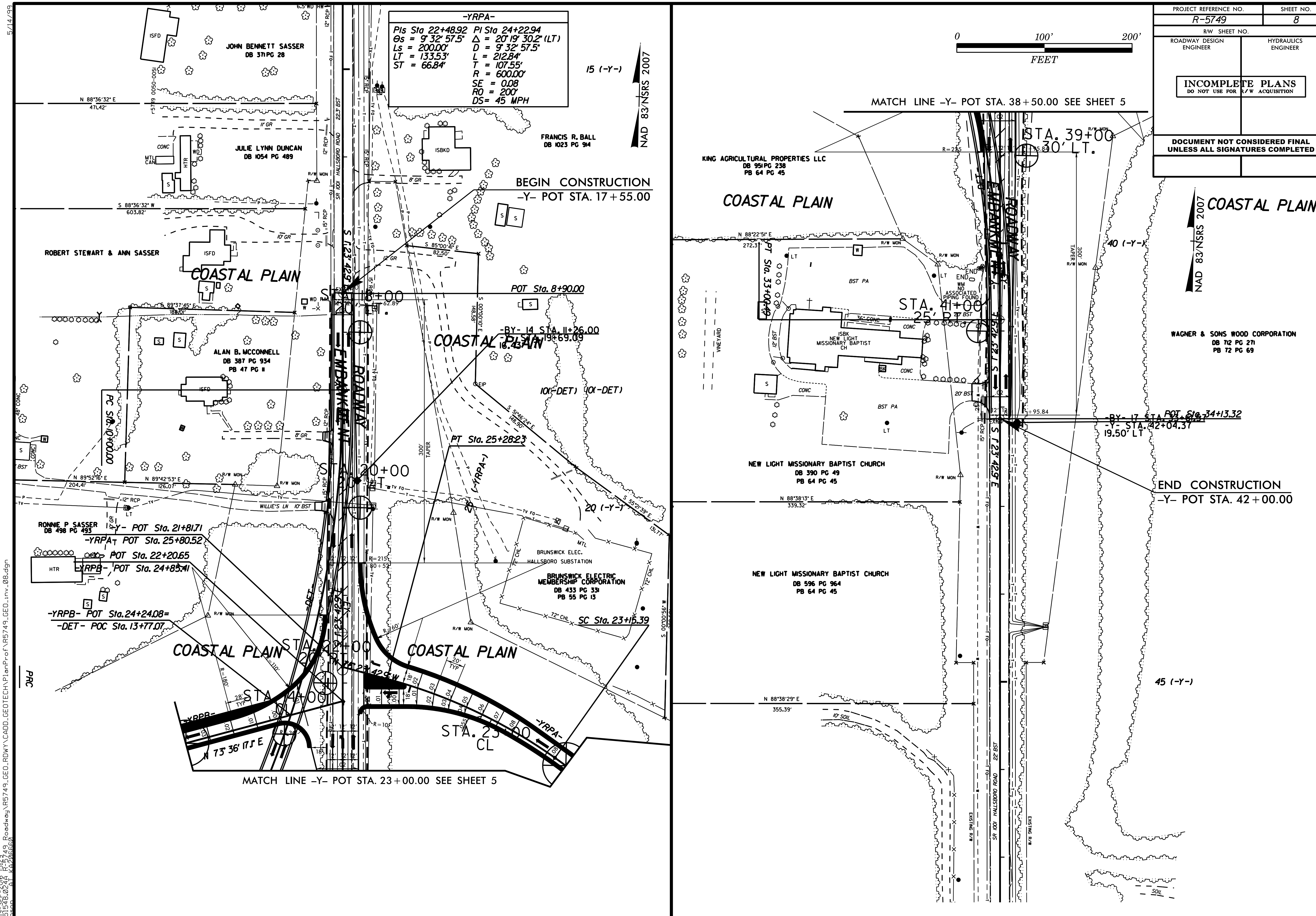
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SEE SHEET 11 FOR -L- PROFILE

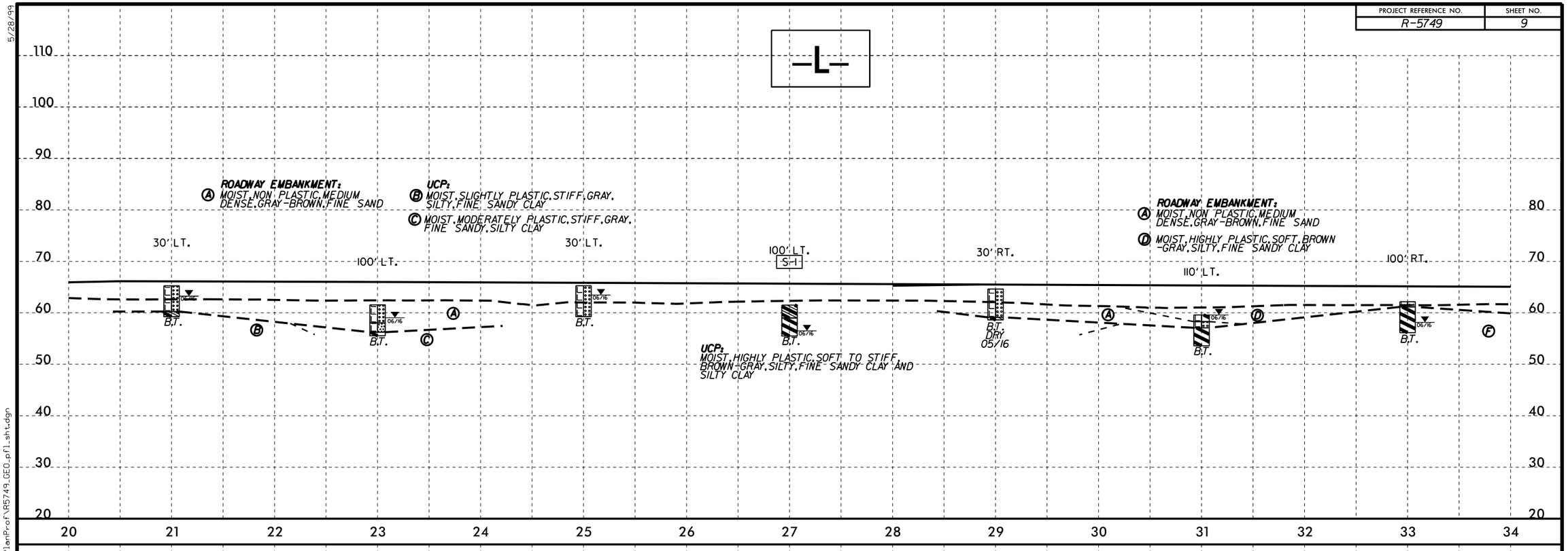
5/14/99

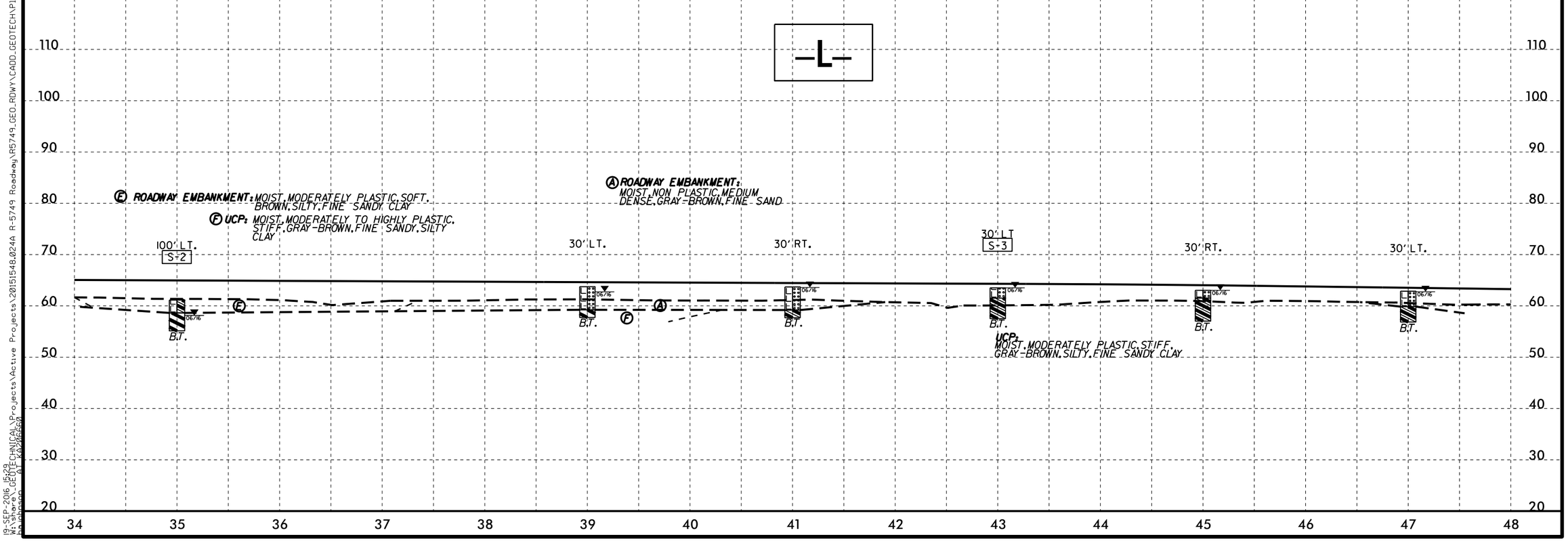
19-SEP-2016 15:29
R:\2015\548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\PlanProf\R5749_GEO_inv_07.dgn



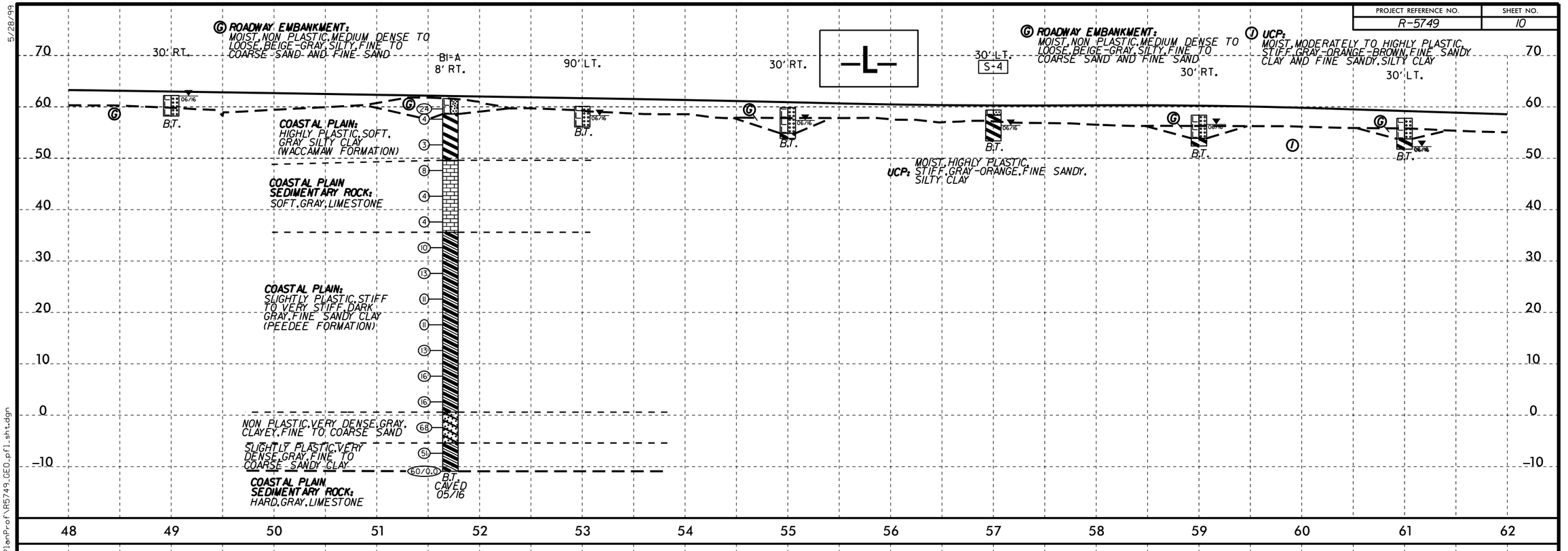
PROJECT REFERENCE NO.
SHEET NO.
R-5749
8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
0
100'
200'
FEET
-YRPA-
PIs Sta 22+48.92
PI Sta 24+22.94
Θs = 9° 32' 57.5"
Δ = 20° 19' 30.2" (LT)
Ls = 200.00'
D = 9° 32' 57.5"
LT = 133.53'
L = 212.84'
ST = 66.84'
T = 107.55'
R = 600.00'
SE = 0.08
RO = 200'
DS= 45 MPH
NAD 83/NSRS 2007
BEGIN CONSTRUCTION
-Y- POT STA. 17+55.00
END CONSTRUCTION
-Y- POT STA. 42+00.00
MATCH LINE -Y- POT STA. 23+00.00 SEE SHEET 5
MATCH LINE -Y- POT STA. 38+50.00 SEE SHEET 5
COASTAL PLAIN
JOHN BENNETT SASSER
DB 371 PG 28
JULIE LYNN DUNCAN
DB 1054 PG 489
ROBERT STEWART & ANN SASSER
ALAN B. MCCONNELL
DB 387 PG 934
PB 47 PG 11
RONNIE P SASSER
DB 498 PG 493
FRANCIS R. BALL
DB 1023 PG 914
BRUNSWICK ELEC. HALLSBORO SUBSTATION
BRUNSWICK ELECTRIC MEMBERSHIP CORPORATION
DB 433 PG 331
PB 55 PG 13
KING AGRICULTURAL PROPERTIES LLC
DB 951 PG 238
PB 64 PG 45
NEW LIGHT MISSIONARY BAPTIST CHURCH
DB 390 PG 49
PB 64 PG 45
NEW LIGHT MISSIONARY BAPTIST CHURCH
DB 596 PG 964
PB 64 PG 45
WAGNER & SONS WOOD CORPORATION
DB 712 PG 271
PB 72 PG 69
POT Sta. 8+90.00
-BY- 14 STA. 11+26.00
PT Sta. 25+28.23
-Y- POT Sta. 21+81.71
-YRPA- POT Sta. 25+80.52
POT Sta. 22+20.65
-YRPB- POT Sta. 24+85.41
-YRPB- POT Sta. 24+24.08=
-DET- POC Sta. 13+77.07
SC Sta. 23+15.39
PC Sta. 10+00.00
STA. 18+00
STA. 20+00
STA. 22+00
STA. 24+00
STA. 23+00
STA. 39+00
STA. 41+00
N 73° 36' 17.5" E
POT Sta. 34+13.32
-Y- STA. 42+04.37
19.50' LT
SR 1001 HALLSBORO ROAD
15 (-Y-)
20 (-Y-)
40 (-Y-)
45 (-Y-)
5/14/99
19-SEP-2016 15:29

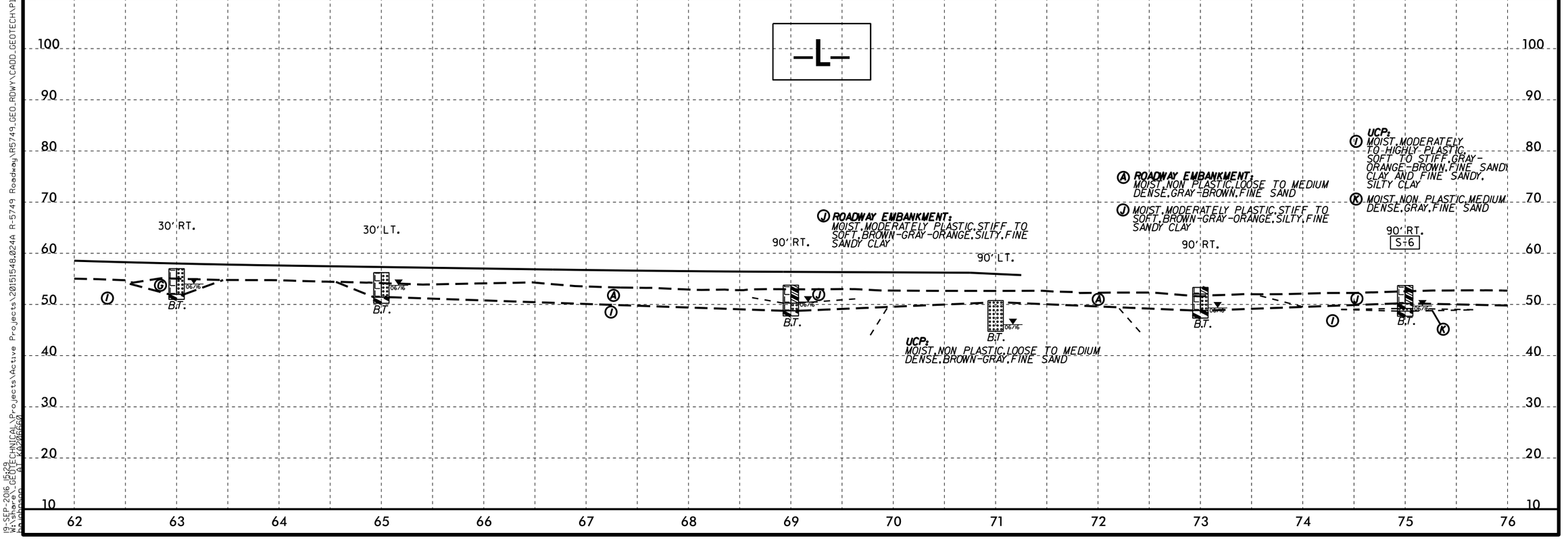
PROJECT REFERENCE NO.	SHEET NO.
R-5749	9





PROJECT REFERENCE NO.	SHEET NO.
R-5749	10





PROJECT REFERENCE NO.	SHEET NO.
R-5749	11

-L-

ROADWAY EMBANKMENT:
(1) MOIST, MODERATELY PLASTIC, STIFF TO SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

UCP:
(1) MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-ORANGE-BROWN, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY AND SILTY CLAY

90' RT. 100' RT. 100' RT. 90' RT.

B.T. 06/16 B.T. 06/16 B.T. 06/16 B.T. 06/16

100 90 80 70 60 50 40 30 20 10

76 77 78 79 80 81 82 83 84 85 86 87

THIS SPACE INTENTIONALLY BLANK

PROJECT REFERENCE NO.	SHEET NO.
R-5749	12

-YRPA-

21' RT.

S-5

S-7

S-8

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

B.T. 06/16

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, CLAY AND SILTY, FINE SANDY CLAY

B.T. 06/16

B.T. 06/16

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

B.T. 06/16

B.T. 06/16

100 90 80 70 60 50 40 30 20 10

5 6 7 8 9 10 11 12 13 14 15 16 17 18

-YRPA-

S-9

S-10

UCP: MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

B.T. 06/16

B.T. 06/16

UCP: MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

B.T. 06/16

100 90 80 70 60 50 40 30 20 10

18 19 20 21 22 23 24 25

PROJECT REFERENCE NO.	SHEET NO.
R-5749	13

-YRPB-

23' LT.

S-2

S-11

S-12

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

UCP: MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

B.T.

06/16

UCP: MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY CLAY, TRACE LIMESTONE

UCP: MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY CLAY

-YRPB-

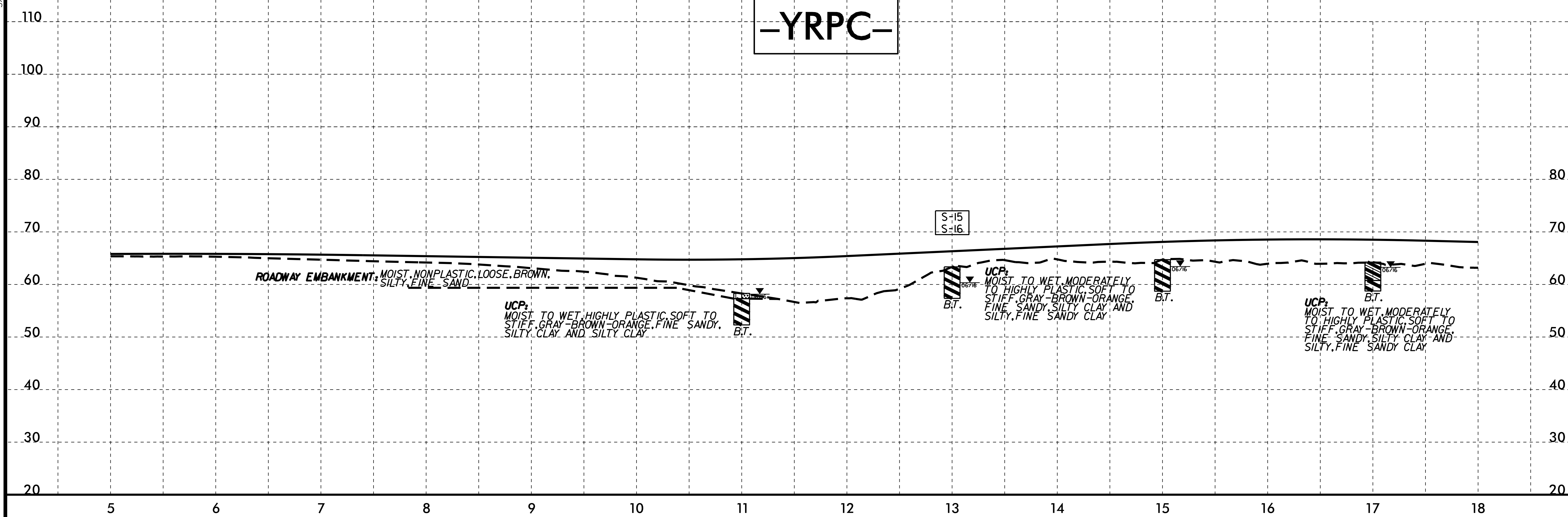
S-13

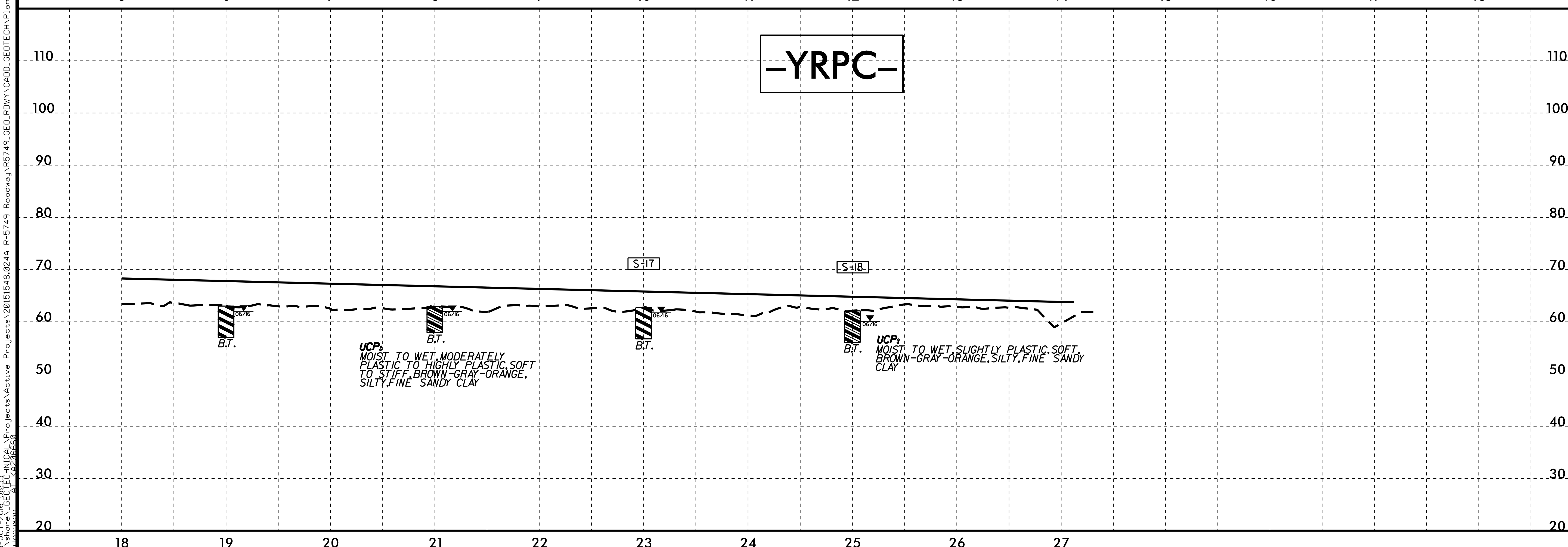
S-14

UCP: MOIST TO WET, MODERATELY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY FIAD CLAY

UCP: MOIST TO WET, MODERATELY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

PROJECT REFERENCE NO.	SHEET NO.
R-5749	14





PROJECT REFERENCE NO.	SHEET NO.
R-5749	15

-YRPD-

Ⓐ **ROADWAY EMBANKMENT**
MOIST, MODERATELY PLASTIC, STIFF TO SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, GRAY-BROWN, FINE SAND

19' LT.

S-19

S-20

Ⓒ UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

Ⓓ UCP: MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY SILT

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

06/16

B.T.

-YRPD-

S-21

S-22

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY, FINE SANDY CLAY

B.T.

FIAD

PROJECT REFERENCE NO.	SHEET NO.
R-5749	16

-Y-

Ⓐ ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

Ⓑ MOIST, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

Ⓒ UCP: SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY SILT

20' LT. S-23

20' LT.

20' RT. S-24

B.T. 06/16

B.T. 06/16

B.T. 06/16

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

UCP: HIGHLY PLASTIC, STIFF, GRAY-ORANGE-RED, FINE SANDY CLAY

UCP: SLIGHTLY TO HIGHLY PLASTIC, STIFF, GRAY-ORANGE-RED, FINE SANDY CLAY

Ⓓ ROADWAY EMABNKMENT: MOIST, NON PLASTIC, LOOSE TO DENSE, GRAY-BEIGE, SILTY, FINE TO COARSE SAND

PAVEMENT

EBI-B 6' RT.

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

COASTAL PLAIN: SLIGHTLY TO MODERATELY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY (PEEDEE FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: HARD, GRAY, LIMESTONE

B.T.

Ⓔ ROADWAY EMBANKMENT: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY

BI-A 27' LT.

Ⓕ COASTAL PLAIN: NON PLASTIC, VERY DENSE, GRAY, CEMENTED SAND

EB2-A 2' LT. PAVEMENT

Ⓖ UCP: MOIST, SLIGHTLY PLASTIC, SOFT, BROWN-RED-GRAY, SILTY, FINE SANDY CLAY

16' RT.

30' LT.

Ⓗ UCP: MOIST, MODERATELY PLASTIC, SOFT TO MEDIUM STIFF, BROWN-ORANGE-RED, SILTY, FINE SANDY CLAY

30' RT.

Ⓓ ROADWAY EMABNKMENT: MOIST, NON PLASTIC, LOOSE TO DENSE, GRAY-BEIGE, SILTY, FINE TO COARSE SAND

30' LT. S-25

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

COASTAL PLAIN: NON PLASTIC, LOOSE TO VERY DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND (PEEDEE FORMATION)

B.T. FIAD

B.T. FIAD

B.T. FIAD

B.T. CAVED

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

COASTAL PLAIN: WET, HIGHLY PLASTIC, VERY STIFF, DARK GRAY, FINE SANDY, SILTY CLAY (WACCAMAW FORMATION)

UCP: WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO VERY STIFF, GRAY-ORANGE-BROWN, FINE SANDY, SILTY CLAY

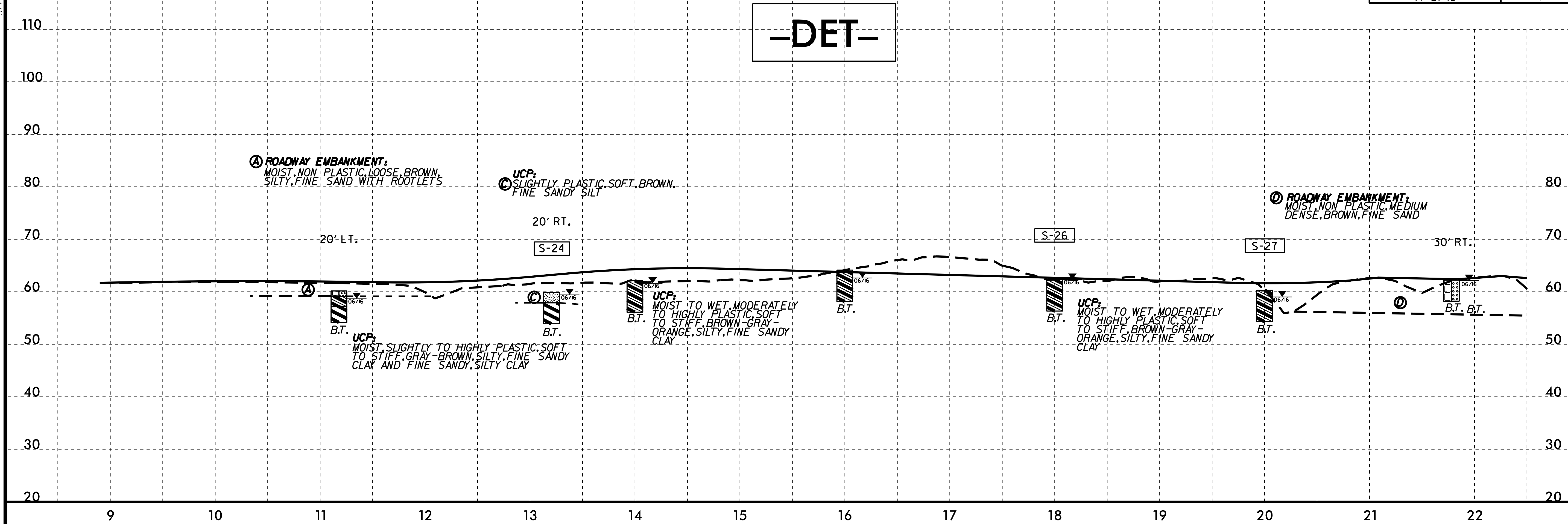
COASTAL PLAIN: SLIGHTLY TO MODERATELY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY (PEEDEE FORMATION)

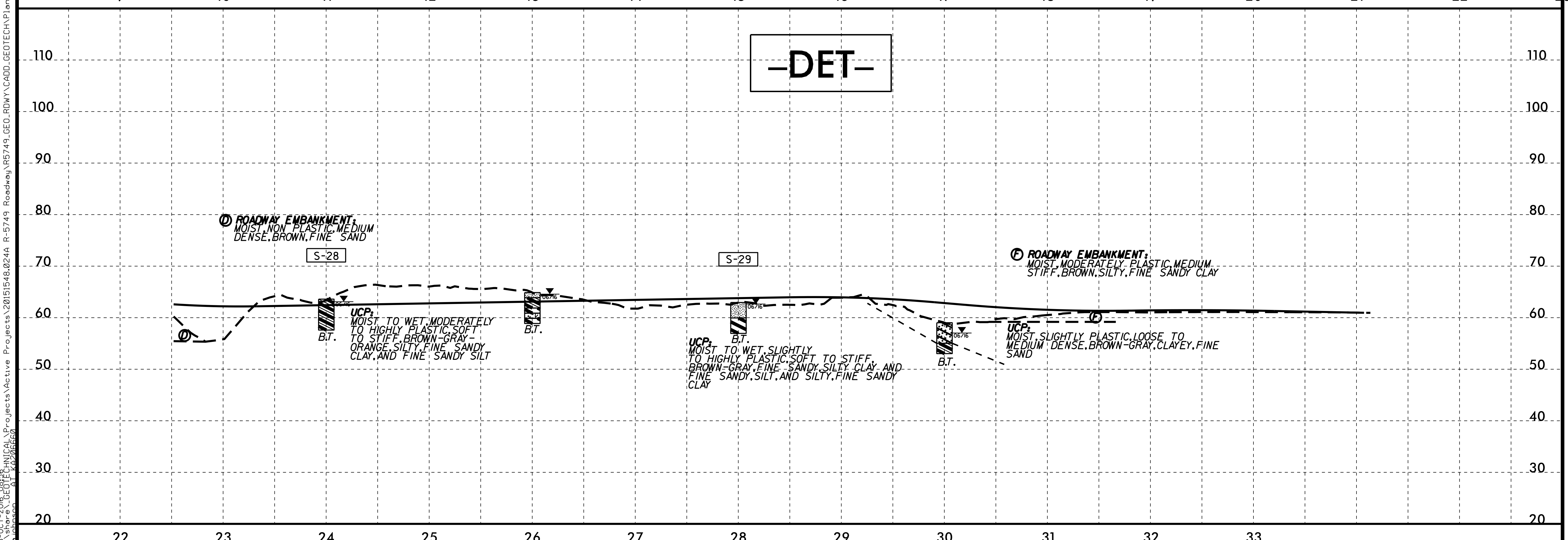
NON PLASTIC, VERY DENSE TO DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND (PEEDEE FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: HARD, GRAY, LIMESTONE

B.T.

PROJECT REFERENCE NO.	SHEET NO.
R-5749	17





5/28/99
28-OCT-2016 08:56

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	18

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

70
60
50

21+50.00

5:1 0.025 8:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST, SLIGHTLY PLASTIC, GRAY, SILTY, FINE SANDY CLAY

21+00.00

5:1 0.025 7.99:1

06/16

B.T.

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST, SLIGHTLY PLASTIC, GRAY, SILTY, FINE SANDY CLAY

20+50.00

5:1 0.025 7.99:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST, SLIGHTLY PLASTIC, GRAY, SILTY, FINE SANDY CLAY

40
70
60
50
40

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

-L-

8/23/99

19-SEP-2016 15:30
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn
bajohnson AT KAZOO60

W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	19

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

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

0.025 8.002:1 6:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, SILTY FINE SAND

UCP: MOIST, MODERATELY PLASTIC, GRAY, FINE SANDY, SILTY CLAY

23+50.00

0.025 8.001:1 6:1

06/16

B.T.

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, SILTY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, GRAY, FINE SANDY, SILTY CLAY

23+00.00

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

0.025 7.999:1 5:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, SILTY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, GRAY, FINE SANDY CLAY

22+50.00

-L-

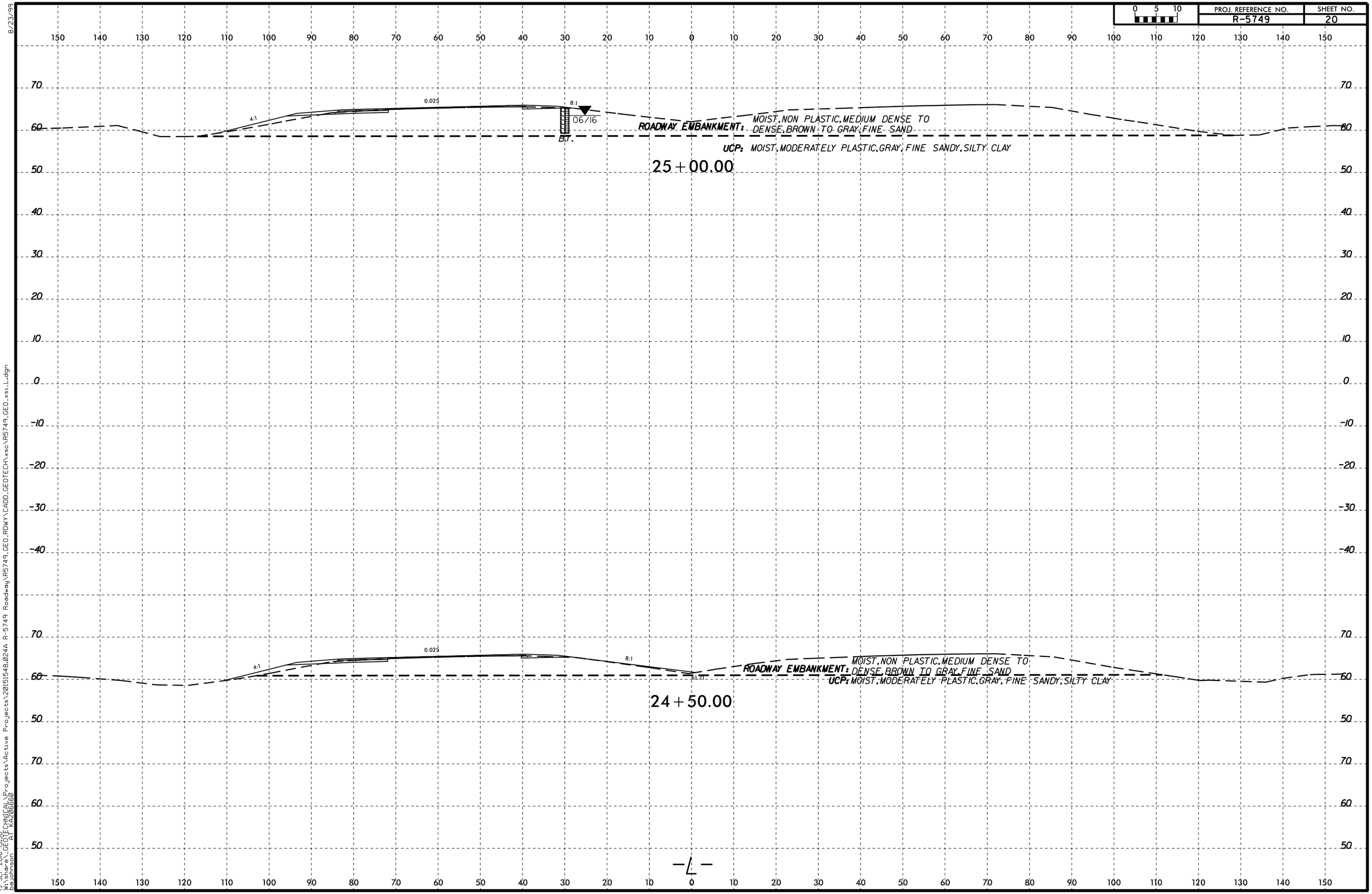
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

8/23/99

19-SEP-2016 15:30
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xs1_L.dgn
bajohnson AT KA206660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_L.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	20



8/23/99

19-SEP-2016 15:30
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn
bjohnson AT KAZOO60

W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	21

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

70
60
50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, HIGHLY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

0.025 4:1 7.999:1 Ⓐ

UCP: MOIST, HIGHLY PLASTIC, STIFF, BROWN-GRAY, SILTY CLAY

26+50.00

70
60
50

0.025 4:1 8.005:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, MEDIUM DENSE TO DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, GRAY, FINE SANDY, SILTY CLAY

25+50.00

-L-

70
60
50

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

8/23/99

19-SEP-2016 15:30
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD.GEOTECH\xsc\R5749_GEO_xsLL.dgn
bajohnson AT KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	22

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

70 60 50 70 60 80

0.025 8.001:1 4:1

ROADWAY EMBANKMENT: MOIST, HIGHLY PLASTIC, SOFT, BROWN-GRAY, SILTY FINE SANDY CLAY

UCP: MOIST, HIGHLY PLASTIC, STIFF, BROWN-GRAY, SILTY CLAY

27 + 50.00

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

Ⓐ **ROADWAY EMBANKMENT:** MOIST, HIGHLY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

S-1

0.025 7.998:1 4:1

Ⓐ

UCP: MOIST, HIGHLY PLASTIC, STIFF, BROWN-GRAY, SILTY CLAY

B.T. 06/16

27 + 00.00

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

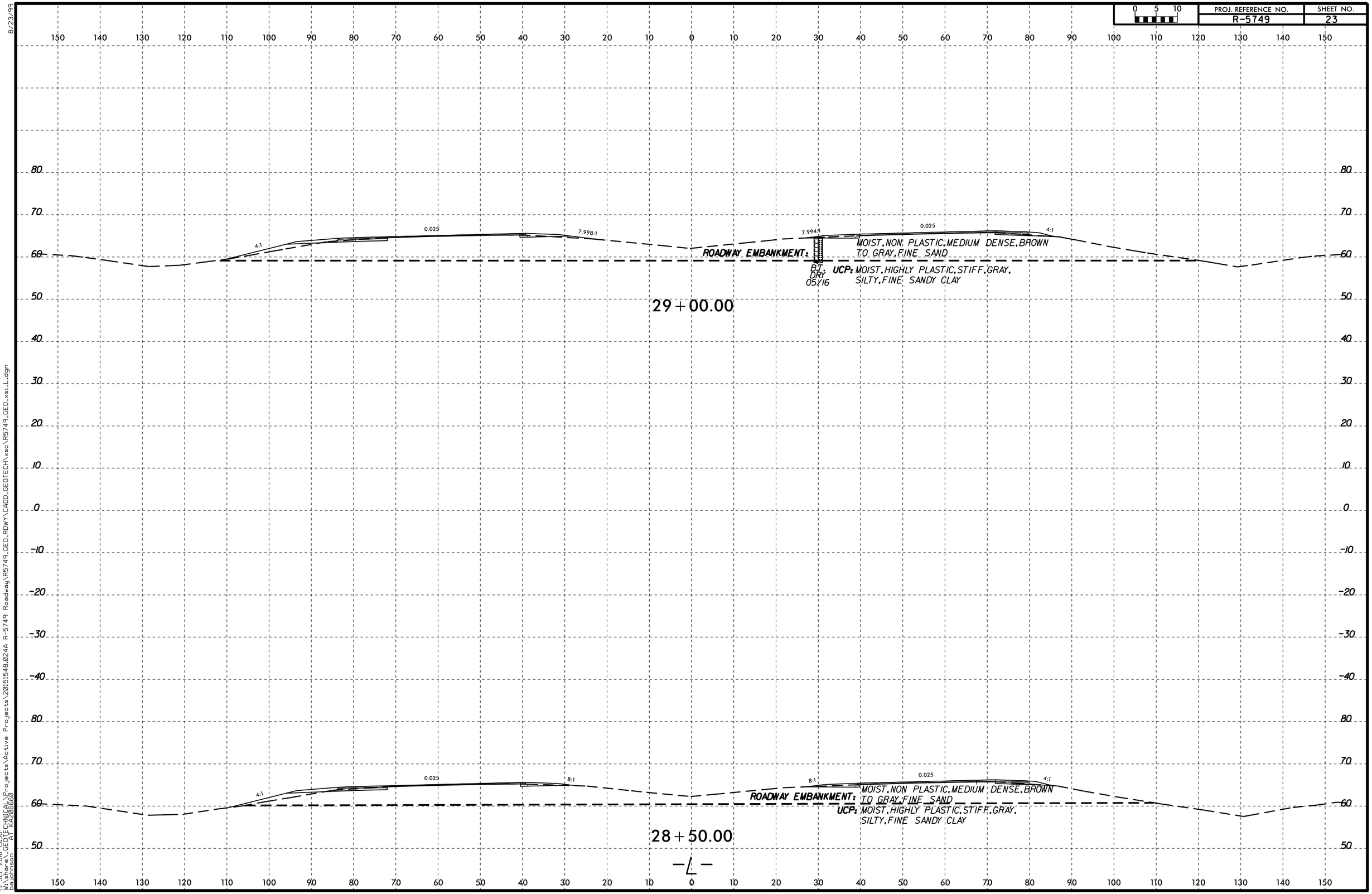
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

—L—

8/23/99

19-SEP-2016 15:30
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL.dgn
bajohnson
AT KH206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	23



8/23/99

19-SEP-2016 15:30
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsLL.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	24

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

80 70 60 50

0.025 8:1 6:1

ROADWAY EMBANKMENT: MOIST, HIGHLY PLASTIC, SOFT, BROWN TO GRAY FINE SANDY CLAY

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY, CLAY

30+50.00

8.001:1 0.025 6:1

0.025 7.996:1 6:1

7.998:1 0.025 4:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY, SILTY, FINE SANDY CLAY

29+50.00

-L-

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

8/23/99

19-SEP-2016 15:30
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_L.dgn
bajohnson AT KAZOO660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_L.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	25

Ⓐ **ROADWAY EMBANKMENT:** MOIST, HIGHLY PLASTIC, SOFT, BROWN-GRAY, FINE SANDY, CLAY

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY, CLAY

31+50.00

Ⓐ MOIST, NON PLASTIC, LOOSE, GRAY, FINE SAND

ROADWAY EMBANKMENT: MOIST, HIGHLY PLASTIC, SOFT, BROWN-GRAY, FINE SANDY, CLAY

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY, CLAY

06/16

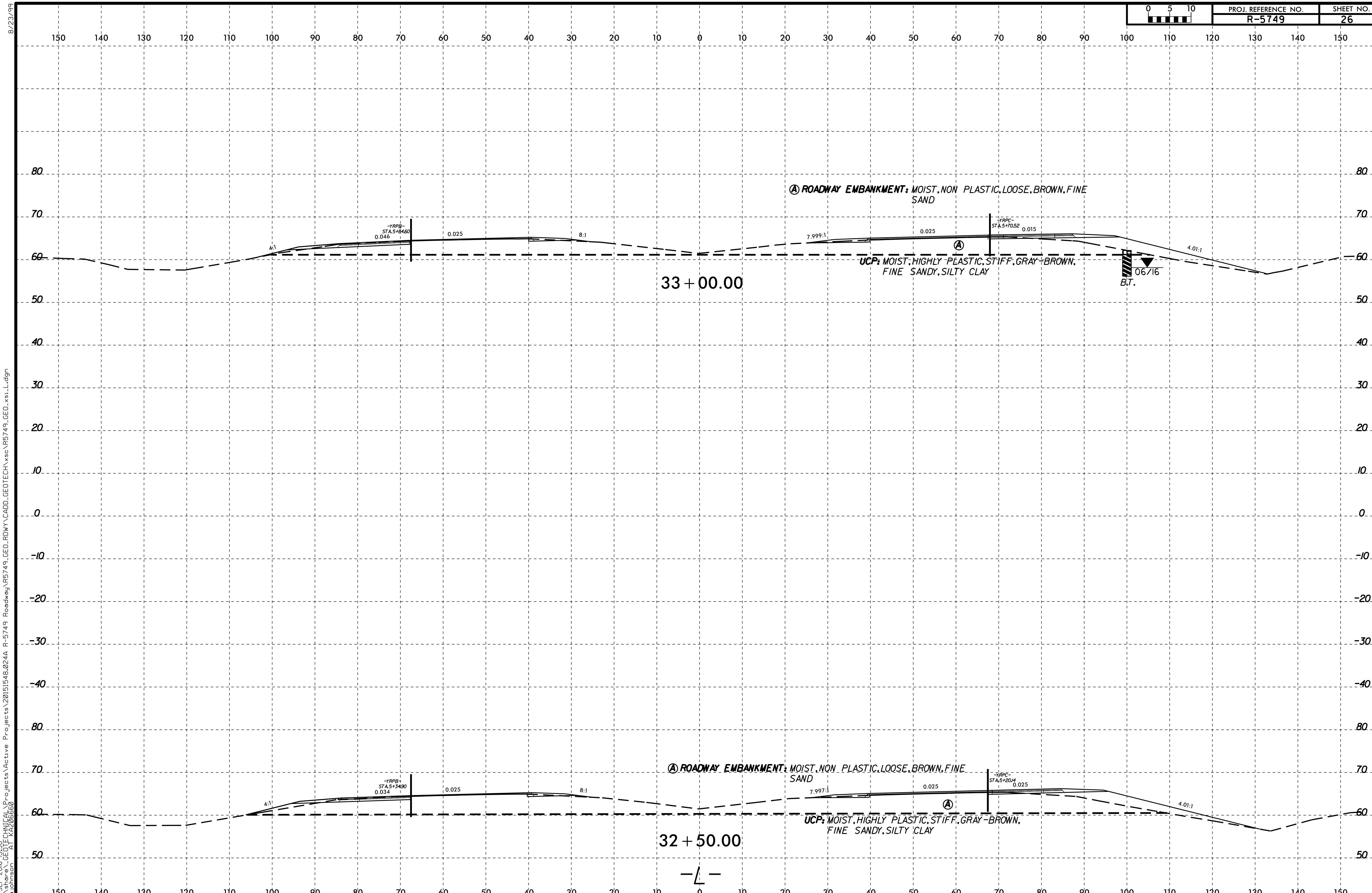
B.T.

31+00.00

8/23/99

19-SEP-2016 15:30
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_L.dgn
bajohnson AT KHA06660

PROJ. REFERENCE NO.	SHEET NO.
R-5749	26



8/23/99

19-SEP-2016 15:30
W:\share\GEOTECHNICAL\Projects\Active Projects\2015I548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_L.dgn
ba.johnson AT KA206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	27

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

80 70 60 50

Ⓐ ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

-YRPB- STA 7+33.81

4:1 0.080 0.025 8.002:1 Ⓐ 8.003:1 0.025 -YRPC- STA 7+21.78 0.017 4.01:1

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY TO BROWN, FINE SANDY, SILTY CLAY

34+50.00

Ⓐ ROADWAY EMBANKMENT: MOIST, NON-PLASTIC, LOOSE, BROWN, FINE SAND

-YRPB- STA 6+34.31

4:1 0.058 0.025 8.001:1 7.993:1 0.025 -YRPC- STA 6+20.91 0.005 4.01:1 Ⓐ

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

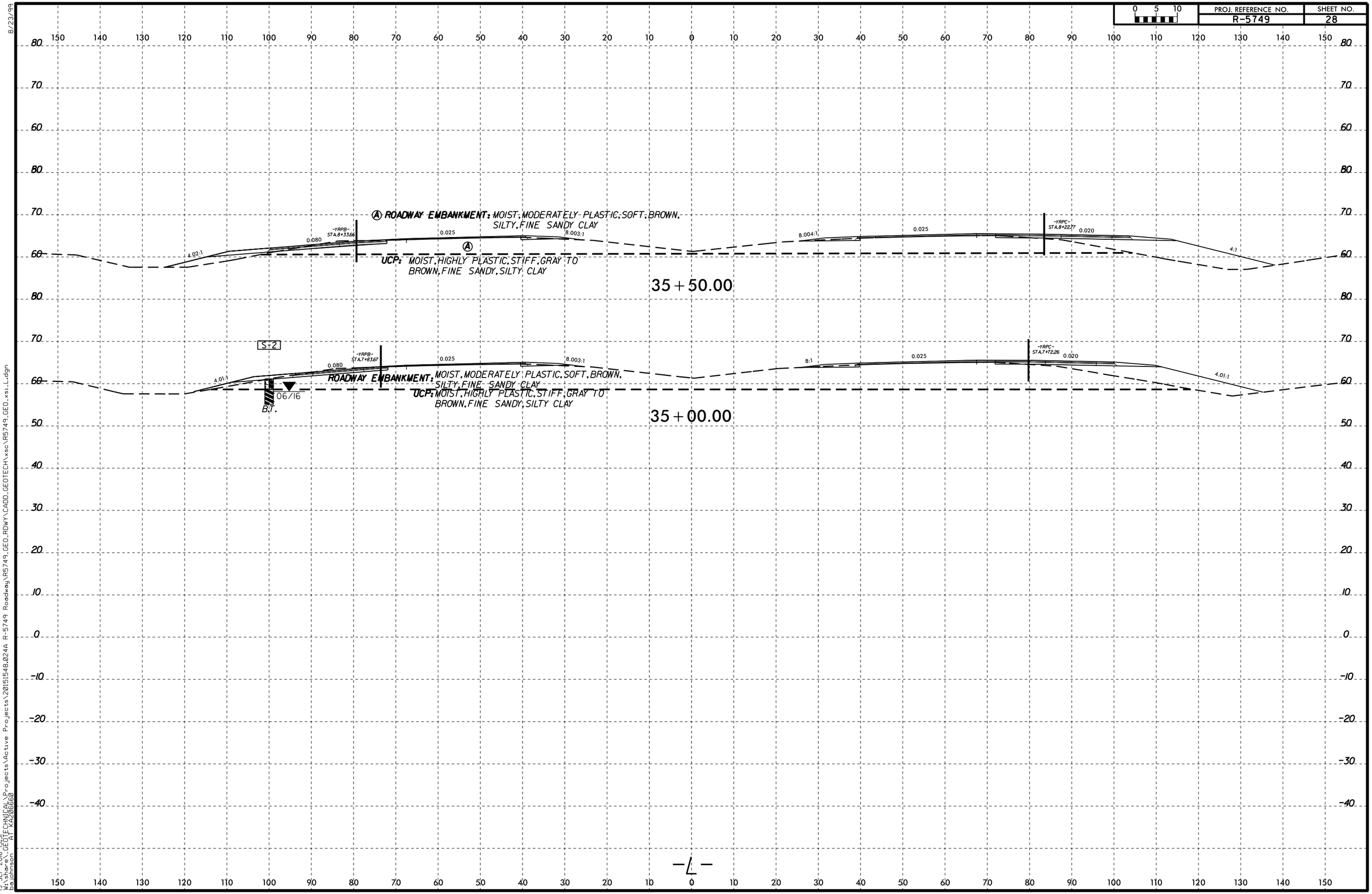
33+50.00

-L-

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

19-SEP-2016 15:30
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_L.dgn
bjohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	28



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	29

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

80 70 60 50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON-PLASTIC, MEDIUM DENSE, GRAY, FINE SAND

4.848:1 | 0.025 | 7.999:1 | 7.999:1 | 0.025 | 5.732:1 | SHEAR TO -YRPC- STA.10+26.36

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY TO BROWN, FINE SANDY, SILTY CLAY

37 + 50.00

80 70 60 50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON-PLASTIC, MEDIUM DENSE, GRAY, FINE SAND

6:1 | 0.025 | 8:1 | 8:1 | 0.025 | 7.53:1 | SHEAR TO -YRPC- STA.10+25.36

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY TO BROWN, FINE SANDY, SILTY CLAY

37 + 00.00

80 70 60 50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

8:1 | 0.025 | 7.999:1 | 7.994:1 | 0.025 | -YRPC- STA.9+74.56 | 0.048 | 4:1

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY TO BROWN, FINE SANDY, SILTY CLAY

36 + 50.00

80 70 60 50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

4.03:1 | -YRPC- STA.8+63.81 | 0.080 | 0.025 | 8.002:1 | 8.004:1 | 0.025 | -YRPC- STA.8+73.32 | 0.020 | 4:1

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY TO BROWN, FINE SANDY, SILTY CLAY

36 + 00.00

−L−

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

19-SEP-2016 15:33
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn
bajohnson AT KAZOO660

W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	30

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

70 60 80 70 60 80 70 50 40 30 80 70 50 40

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, MEDIUM DENSE, GRAY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

4:1 0.025 8:1 8:1 0.025 4:1

39 + 50.00

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, MEDIUM DENSE, GRAY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

4:1 0.025 7.999:1 7.999:1 0.025 4:1

06/16 B.T.

39 + 00.00

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, MEDIUM DENSE, GRAY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

4:1 0.025 8.004:1 8.001:1 0.025 4.627:1

38 + 50.00

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

8/23/99

19-SEP-2016 15:31
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_L.dgn
bajohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	31

41+50.00

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, MEDIUM DENSE, DARK BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY

41+00.00

06/16

B.T.

ROADWAY EMBANKMENT: DENSE, DARK BROWN, FINE SAND

MOIST, NON PLASTIC, MEDIUM

UCP: MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY

40+50.00

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, MEDIUM DENSE, DARK BROWN, FINE SAND

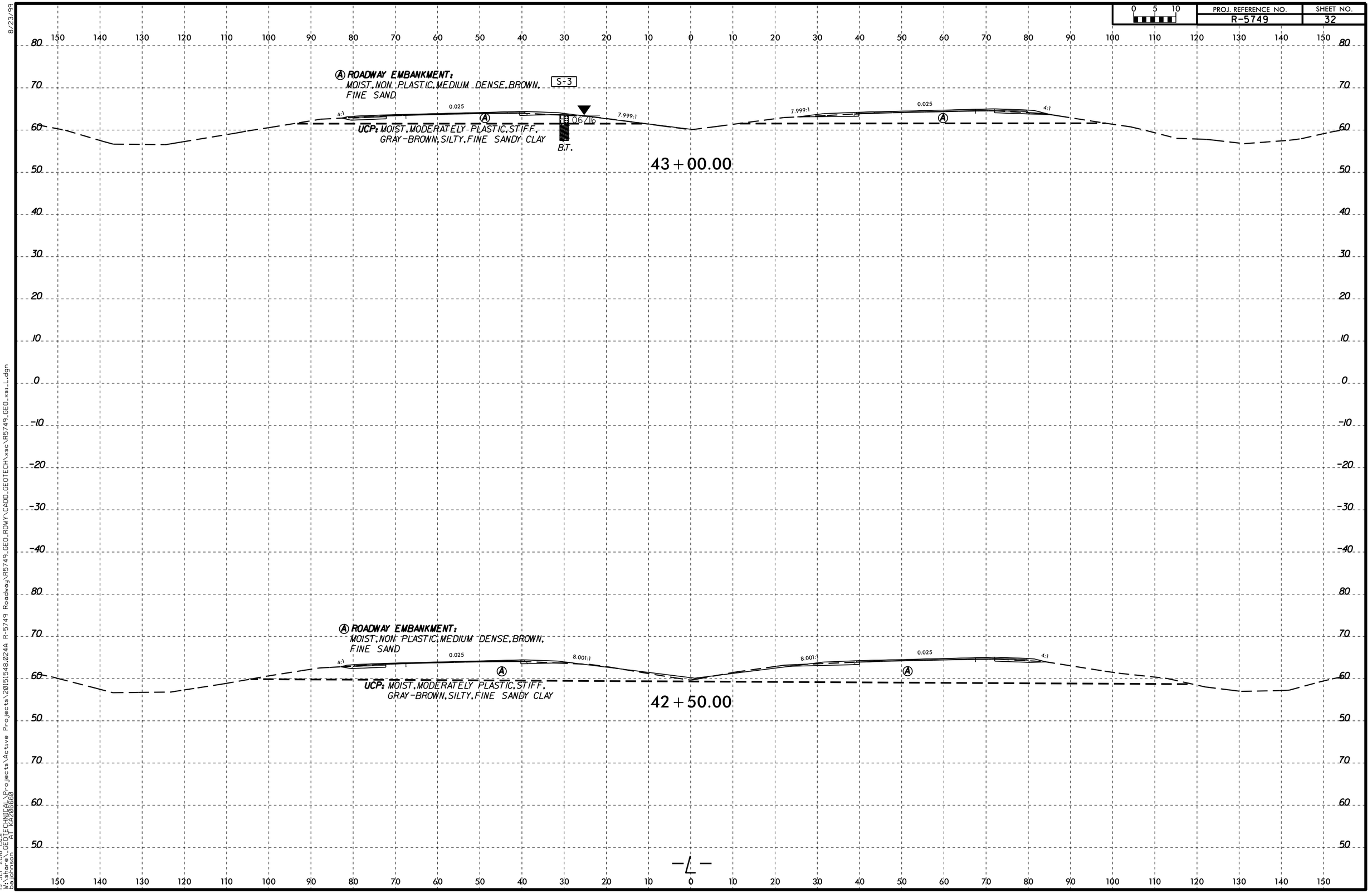
UCP: MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY

-L-

8/23/99

19-SEP-2016 15:31
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_L.dgn
bjohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	32

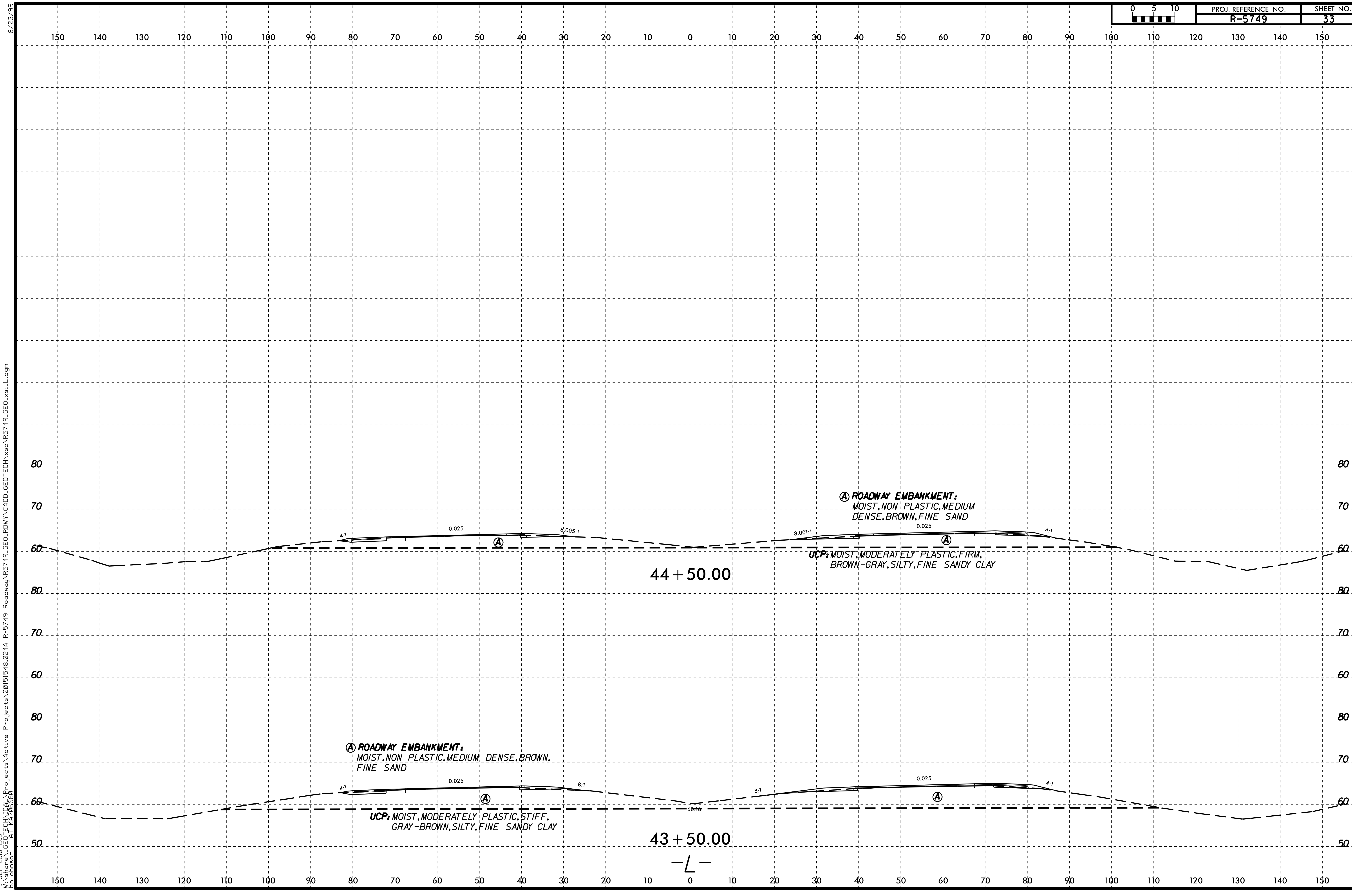


8/23/99

19-SEP-2016 15:31
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn
bajohnson AT KHA20660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL.dgn

PROJ. REFERENCE NO.	SHEET NO.
R-5749	33



8/23/99

19-SEP-2016 15:31
W:\share_GEOTECHNICAL\Projects\Active Projects\2015\1548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_L.dgn
bajohnson AT KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	34

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, MEDIUM DENSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, FIRM, BROWN-GRAY, SILTY, FINE SANDY CLAY

45+50.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, MEDIUM DENSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY

06/16

B.T.

45+00.00

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	35

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

90 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 90 80 70 60 50

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND
Ⓑ **UCP:**
MOIST, MODERATELY PLASTIC, FIRM, GRAY-BROWN, SILTY, FINE SANDY CLAY

4:1 0.025 7.998:1 06/16 B.T. 7.997:1 0.025 4:1

Ⓐ
Ⓑ

47 + 00.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND
Ⓑ **UCP:**
MOIST, MODERATELY PLASTIC, FIRM, GRAY-BROWN, SILTY, FINE SANDY CLAY

4:1 0.025 7.998:1 7.997:1 0.025 4:1

Ⓐ
Ⓑ

46 + 50.00

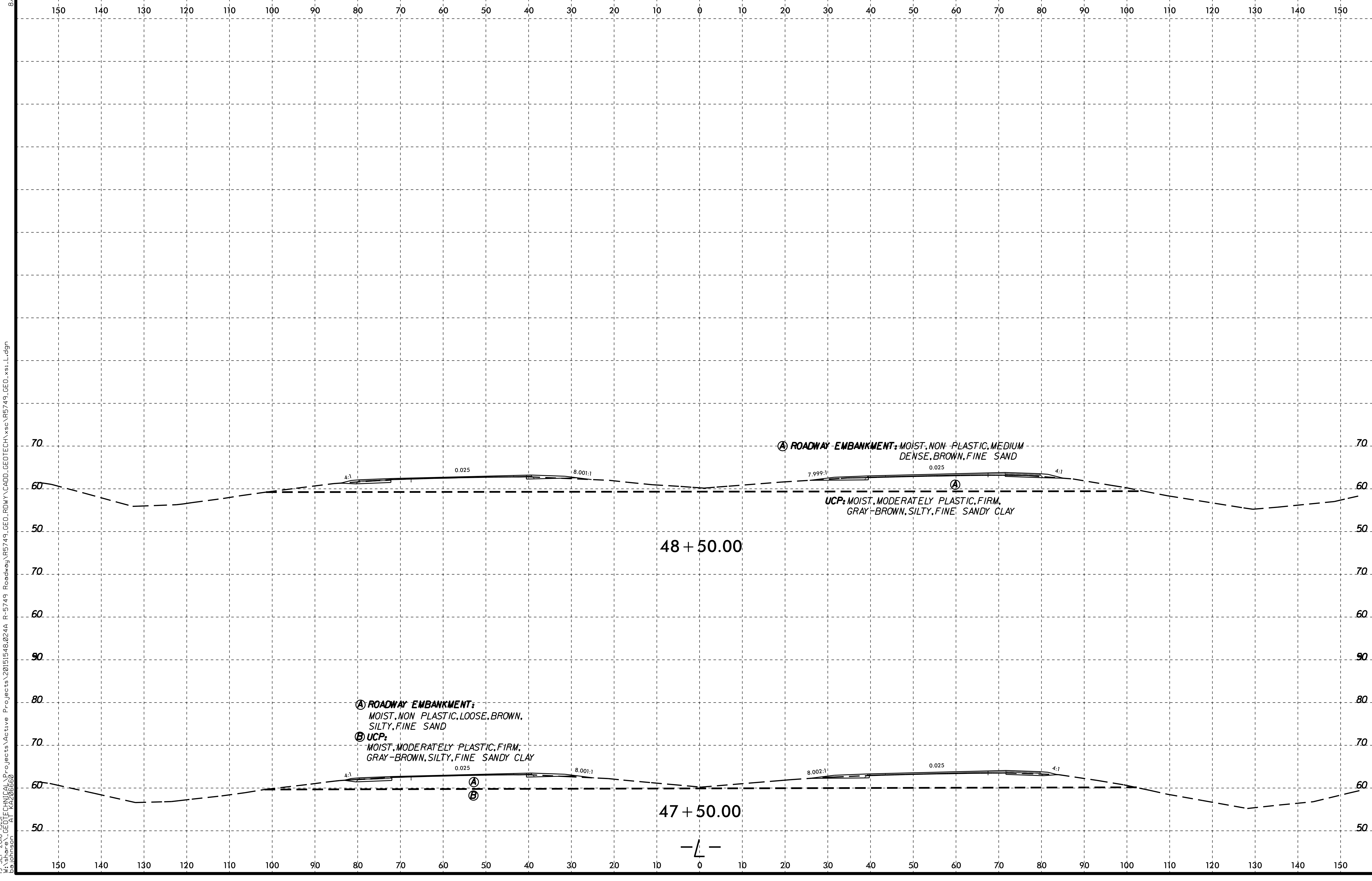
-L-

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

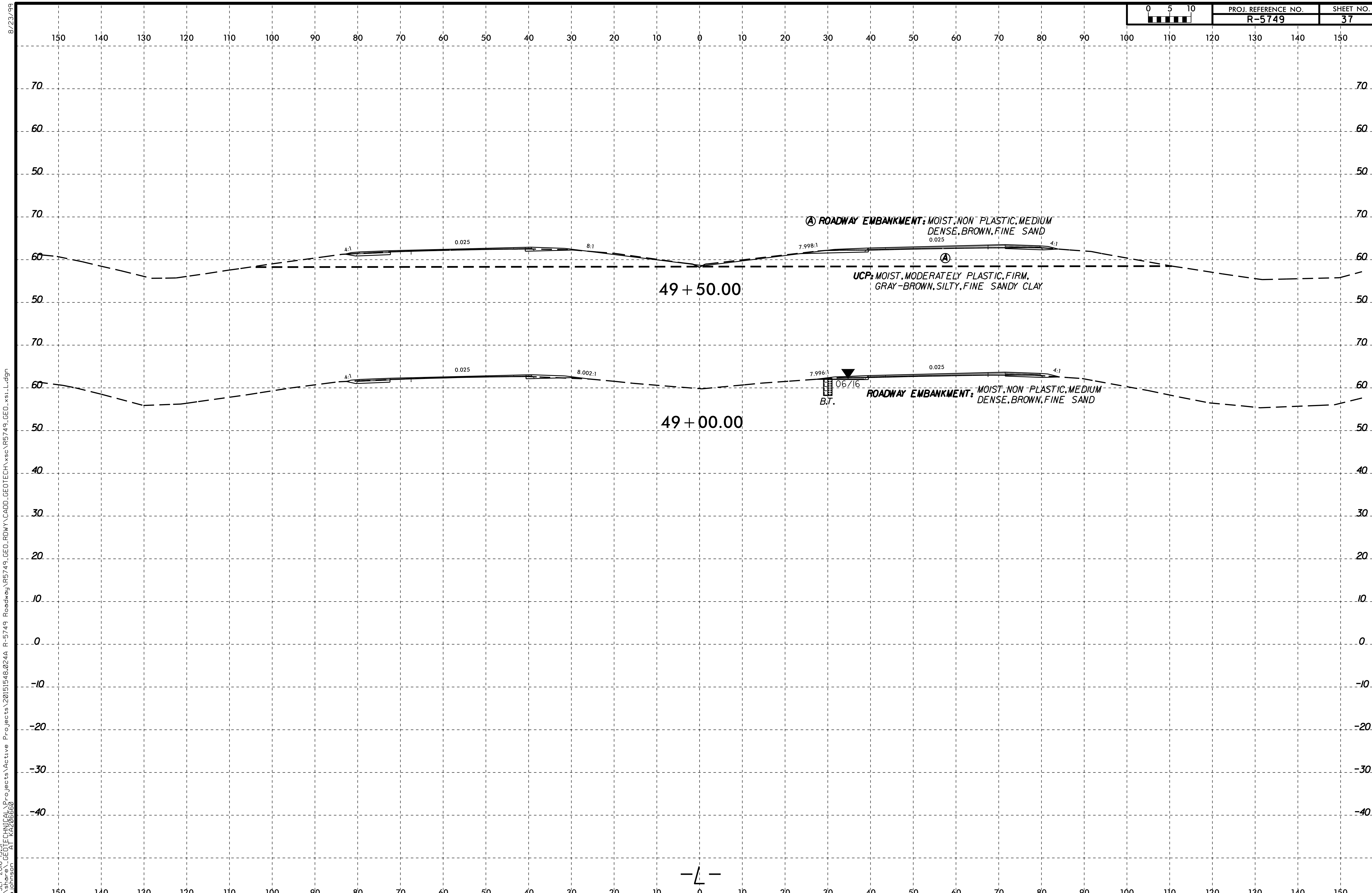
8/23/99

19-SEP-2016 15:31
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_L.dgn
bajohnson AT KA206660

PROJ. REFERENCE NO.	SHEET NO.
R-5749	36



PROJ. REFERENCE NO.	SHEET NO.
R-5749	37



8/23/99

19-SEP-2016 15:31
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_L.dgn
ba.johnson AT KA206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	38

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

90 80 70 60 50 40 30 20 10 0 -10 70 60 50

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND

0.025 7.995:1 7.985:1 0.025 4:1

4% 6% 58.16

COASTAL PLAIN: *HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *SOFT, GRAY, LIMESTONE*

51+00.00

-L-

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

90 80 70 60 50 40 30 20 10 0 -10 70 60 50

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

90 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

Ⓐ **ROADWAY EMBANKMENT:** *MOIST, NON PLASTIC, MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND AND FINE SAND*

Ⓑ *NON PLASTIC, VERY DENSE TO DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND (PEEDEE FORMATION)*

Ⓒ **COASTAL PLAIN:** *NON PLASTIC, VERY DENSE, GRAY, CEMENTED SAND*

Ⓓ **ROADWAY EMBANKMENT:** *PAVEMENT*

STA. 51+44
111' LT.

STA. 51+72
109' RT.

0.025 8.0 4:1 8.0 3.7:1 0.025 4:1

36 11 3 7 5 3 9 10 13 12 12 12 60/0.1 B.T.

05/16 58.00

40 13 4 4 4 86 9 8 12 10 10 25 82 38 60/0.1 60/0.0 B.T. FIAD

COASTAL PLAIN: *HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *SOFT, GRAY, LIMESTONE*

COASTAL PLAIN: *SLIGHTLY PLASTIC, STIFF, DARK GRAY, FINE SANDY CLAY (PEEDEE FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *HARD, GRAY, LIMESTONE*

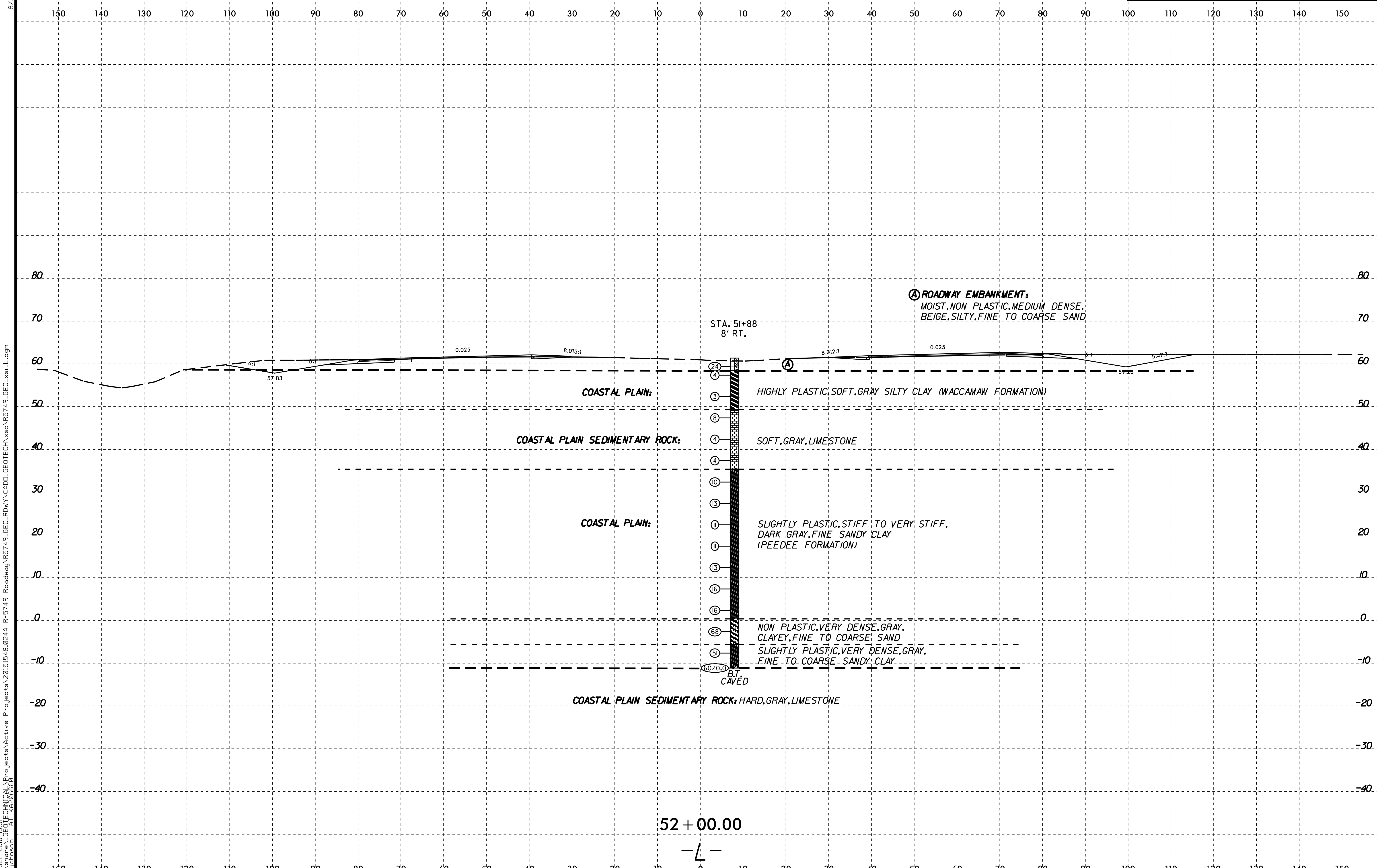
51+50.00

—L—

8/23/99

02-NOV-2016 13:22
W:\share_GEOTECH\GAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL.dgn
bajohnson AT KA2066E0

PROJ. REFERENCE NO.	SHEET NO.
R-5749	40



52 + 00.00

-L-

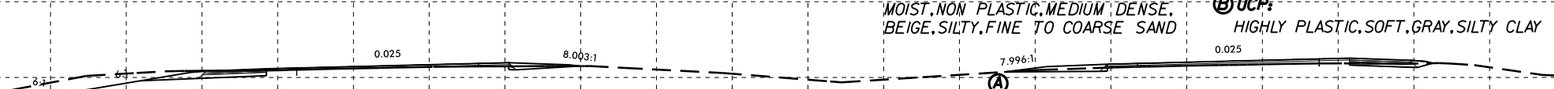
19-SEP-2016 15:31
W:\shared\GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL_L.dgn
bajohnson AT KA2066600
8/23/99

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

80 70 60 50 40 30 20 10 0 -10 -20

Ⓐ **ROADWAY EMBANKMENT:** *MOIST, NON PLASTIC, MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND*

Ⓑ **UCP:** *HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY*



COASTAL PLAIN: *HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *SOFT, GRAY, LIMESTONE*

52 + 50.00

-L-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	42

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

70 60 50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, TAN-BROWN, FINE SAND

4:1 0.025 7.998:1 8:1 0.025 4:1

Ⓐ

UCP: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY

53+50.00

6:1 57.50 06/16 B.T.

0.025 8.012:1 8.001:1 0.025 4:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, TAN-BROWN, FINE SAND

53+00.00

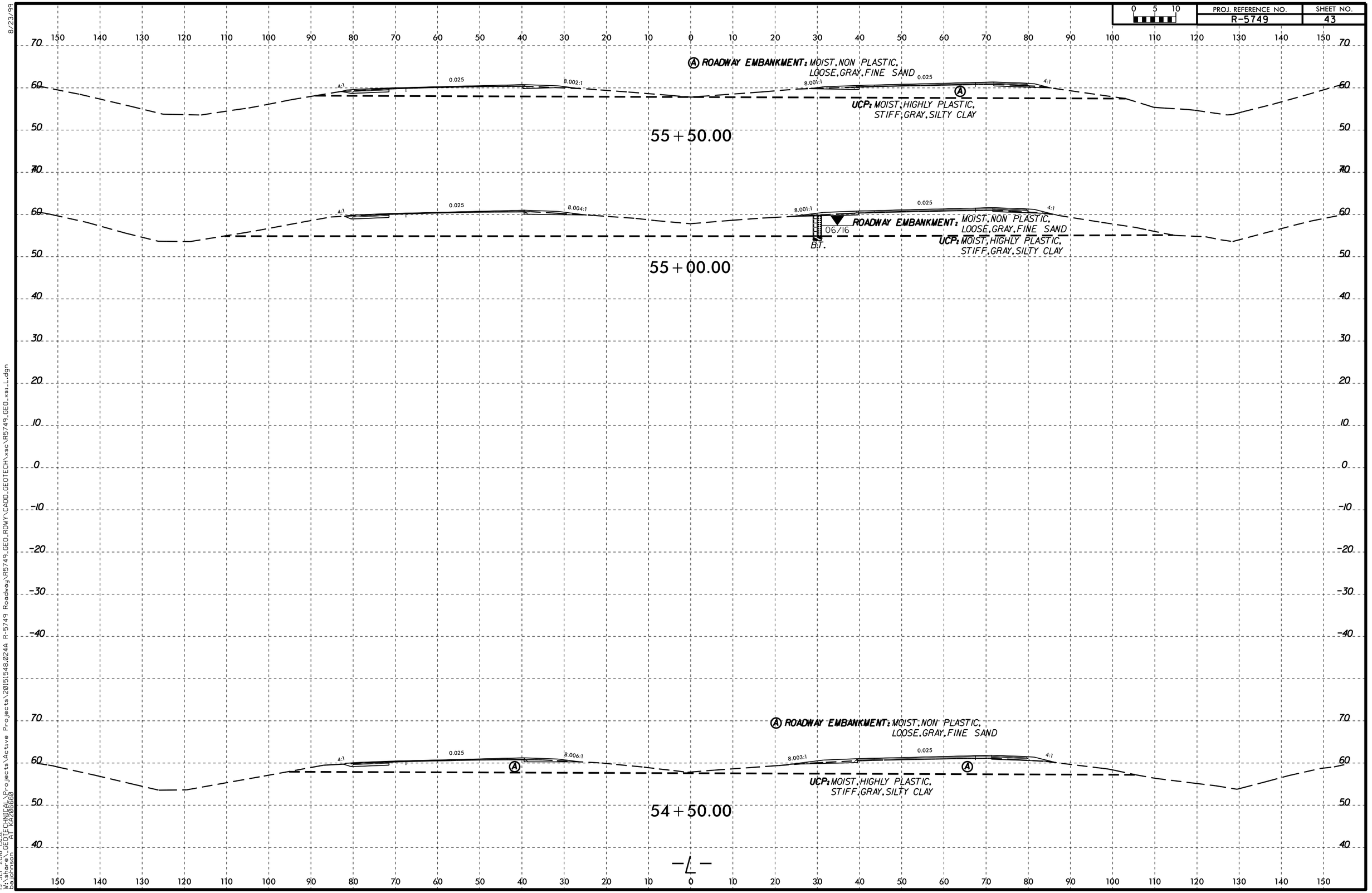
40 30 20 10 0 -10 -20 -30 -40

—℄—

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

19-SEP-2016 15:31
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_L.dgn
bajohnson AI KA206660

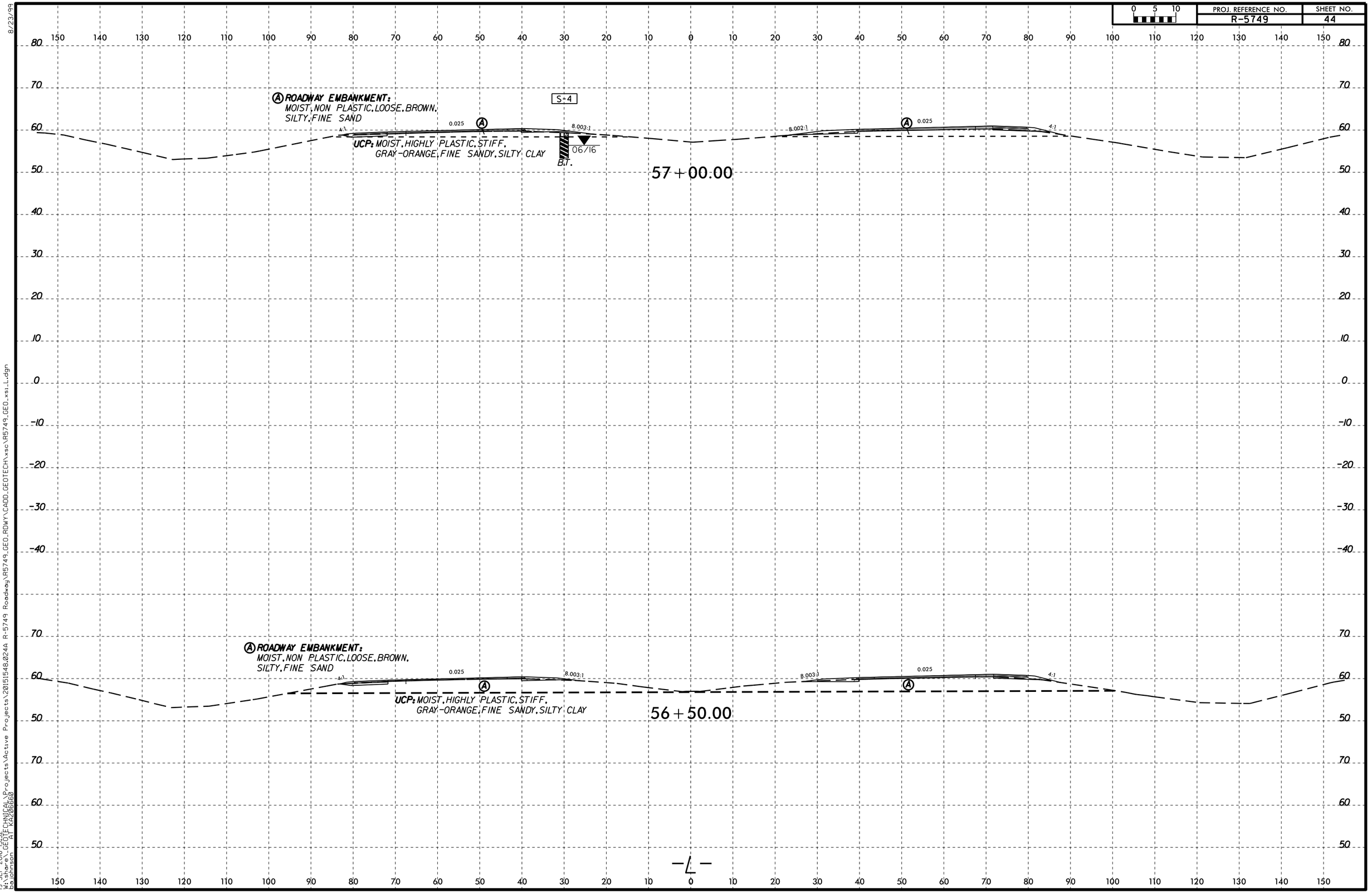
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	43



8/23/99

19-SEP-2016 15:32
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_L.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	44



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	45

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

70
60
50
40
30

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

4:1 0.025 8:1 8:1 0.013 4:1

Ⓐ

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY-ORANGE-BROWN, FINE SANDY CLAY

58 + 50.00

70
60
50
40
30

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND

4:1 0.025 8:1 7.999:1 0.025 4:1

Ⓐ

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

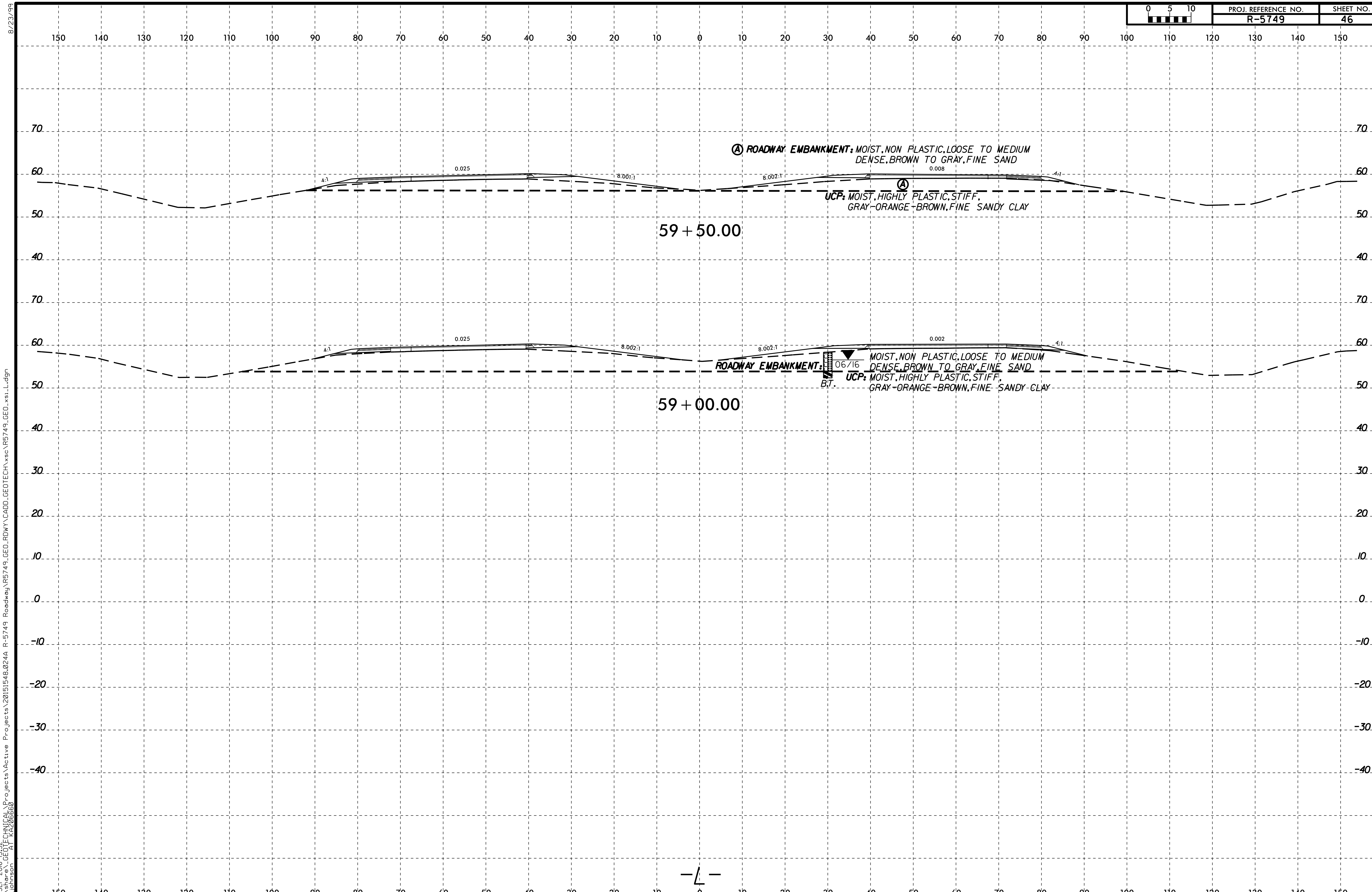
57 + 50.00

-L-

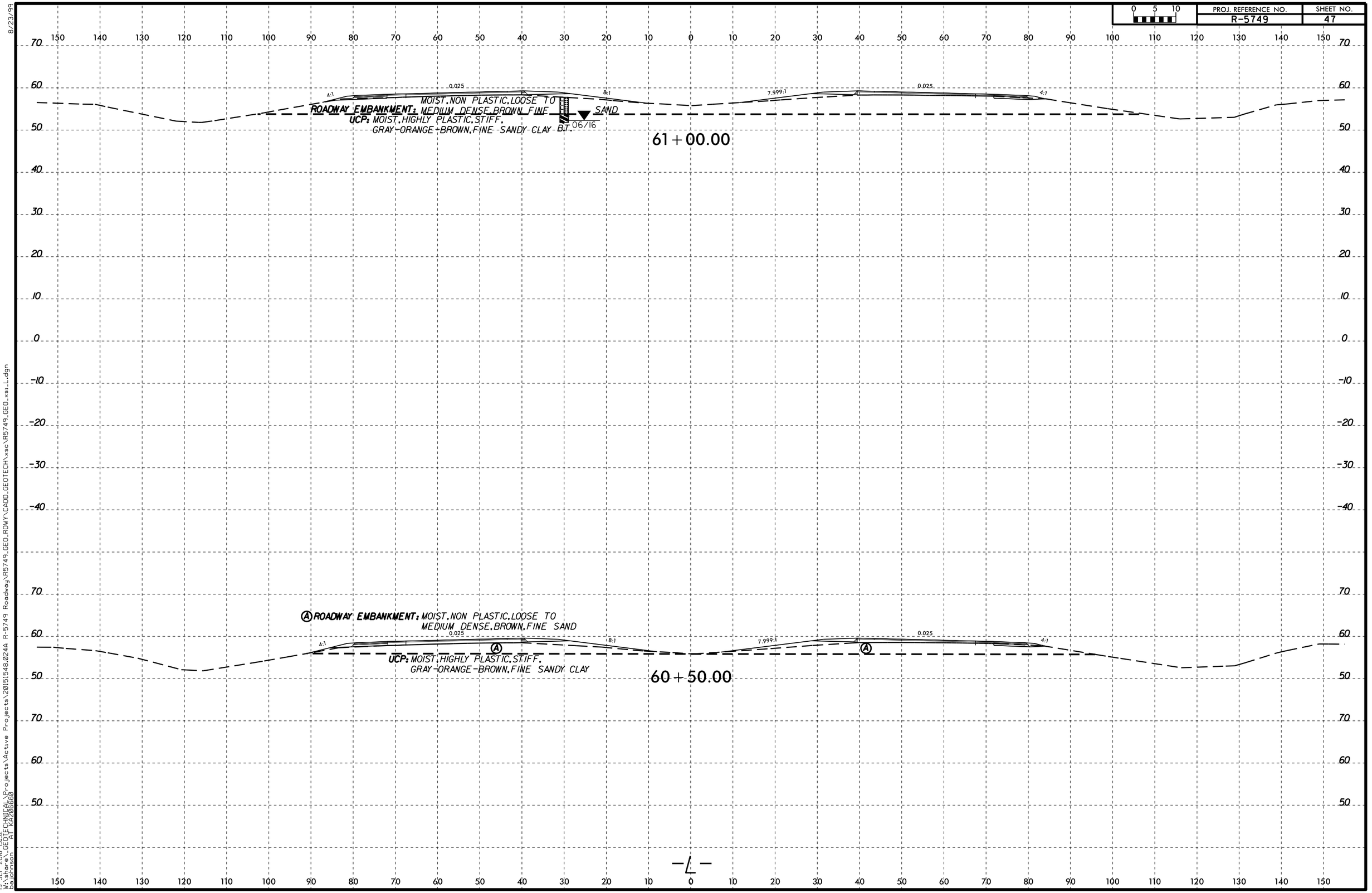
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

19-SEP-2016 15:32
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn
bajohnson AT KH206660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	47



8/23/99

19-SEP-2016 15:32
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsL.dgn
bajohnson AI KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	48

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

70
60
50
40
70
60
50
70
60
50

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

4:1 0.025 8:1 8.002:1 0.025 4:1

Ⓐ

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

62 + 50.00

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN, FINE SAND

4:1 0.025 8:1 7.999:1 0.025 3.99:1

Ⓐ

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY-ORANGE-BROWN, FINE SANDY CLAY

61 + 50.00

-L-

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

8/23/99

19-SEP-2016 15:32
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_L.dgn
bajohnson AI KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	49

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

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

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

4:1 0.025 7.998:1 8:1 0.025 4:1

Ⓐ

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

63 + 50.00

4:1 0.025 7.997:1 8:1 0.025 4:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE BROWN TO GRAY, FINE SAND

06/16 B.F.

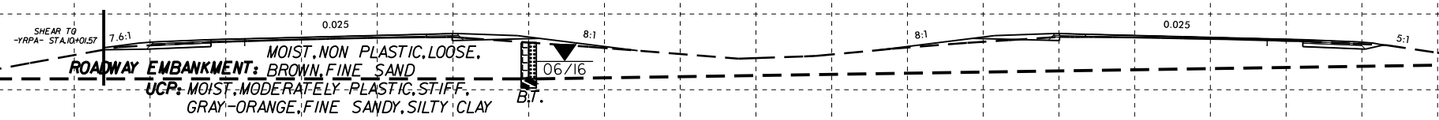
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

63 + 00.00

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	50

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

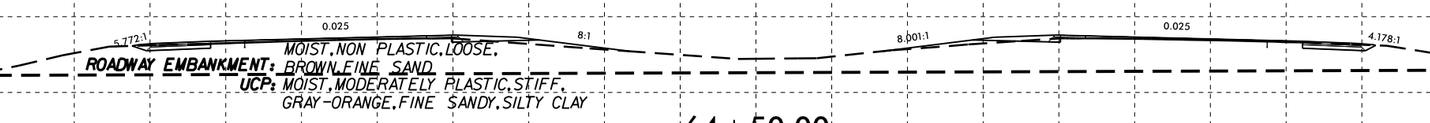
70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50 70 60 50 40



ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

65+00.00



ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

64+50.00

-L-

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

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	51

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

70
60
50
40

-YRPA-
STA.8+50.91

0.033 0.025 8:1 8.002:1 0.025 -YRPD- STA.9+64.25 0.079 4.06:1 3.04:1

4.01:1

50.83

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY, FINE SANDY, SILTY CLAY

66+50.00

70
60
50
40

SHEAR TO -YRPA- STA.9+51.26

10.8:1 0.025 7.999:1 8.002:1 0.025 6.4:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-ORANGE, FINE SANDY, SILTY CLAY

65+50.00

-L-

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

19-SEP-2016 15:32
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsLL.dgn
bjohnson AT KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	52

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

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

-YRPA-
STA.7+50.65

0.025 0.025 8.002:1 4.01:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY, FINE SANDY, SILTY CLAY

8.004:1 0.025 -YRPD-
STA.8+63.74 0.080 4:1

67 + 50.00

S-5

-YRPA-
STA.8+00.78

0.025 0.025 8:1 4.01:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY

UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

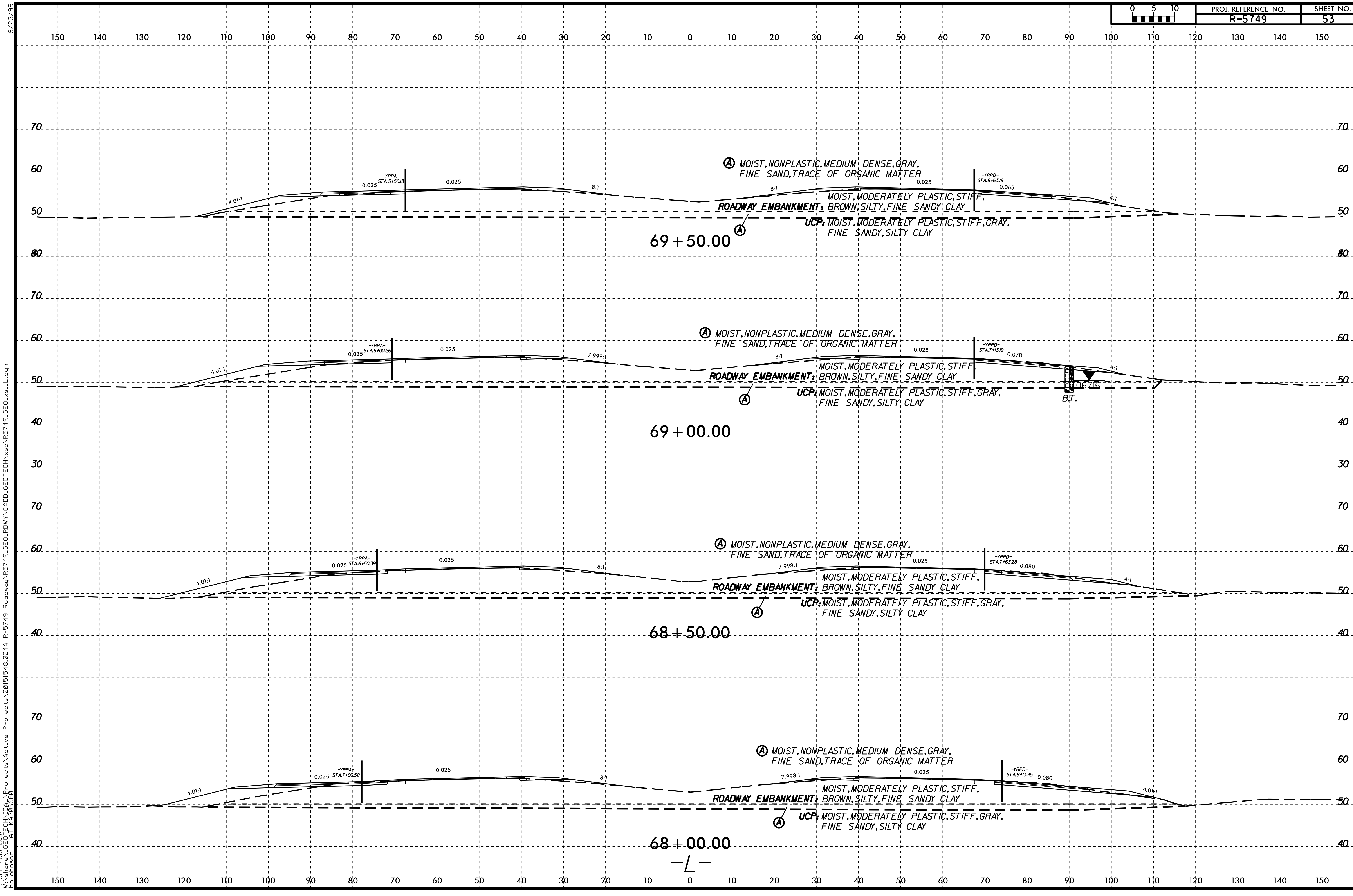
B.F. 06/16

8.001:1 0.025 -YRPD-
STA.9+14.16 0.079 4.04:1 3.03:1

50.84

67 + 00.00

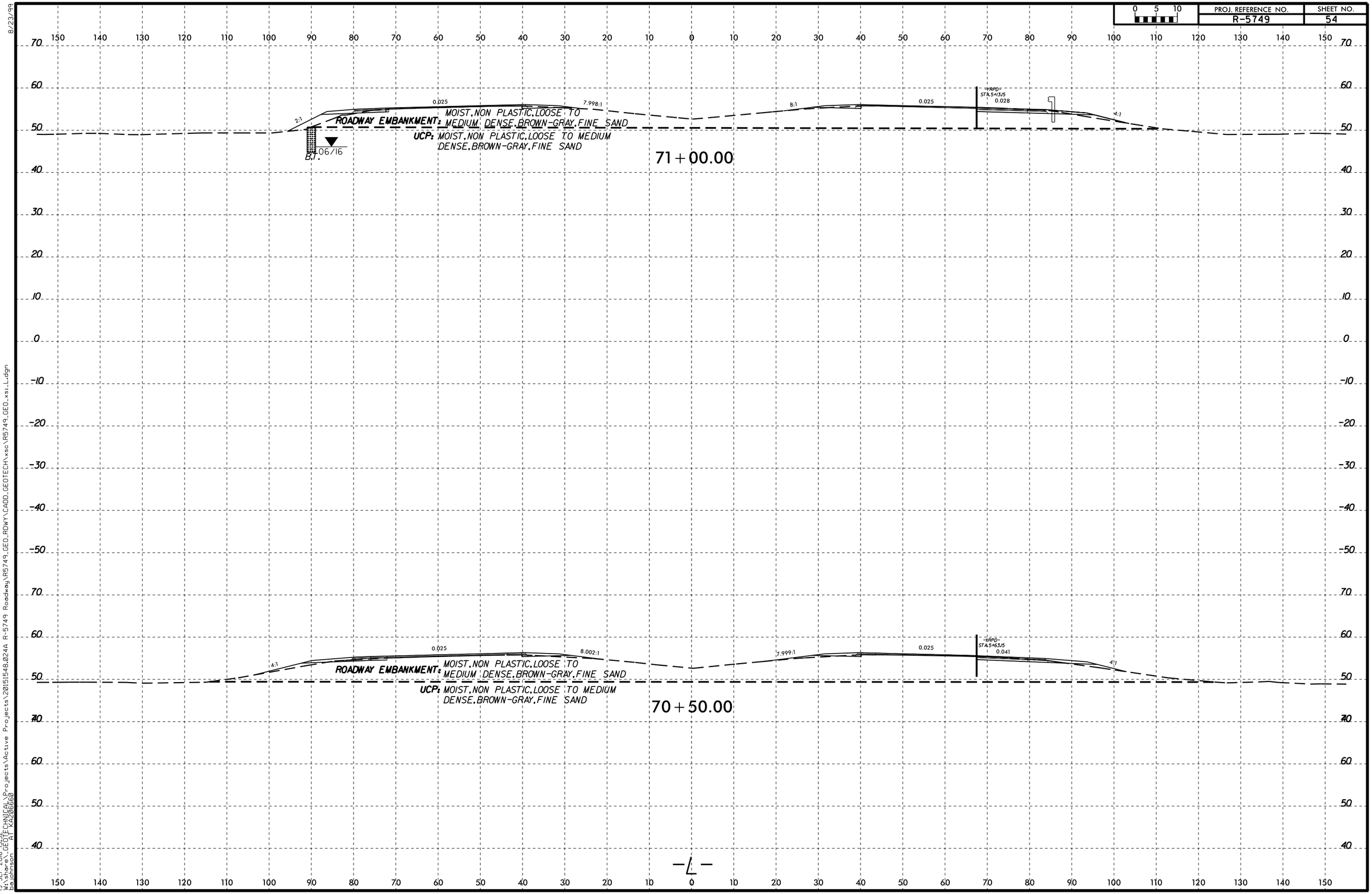
8/23/99



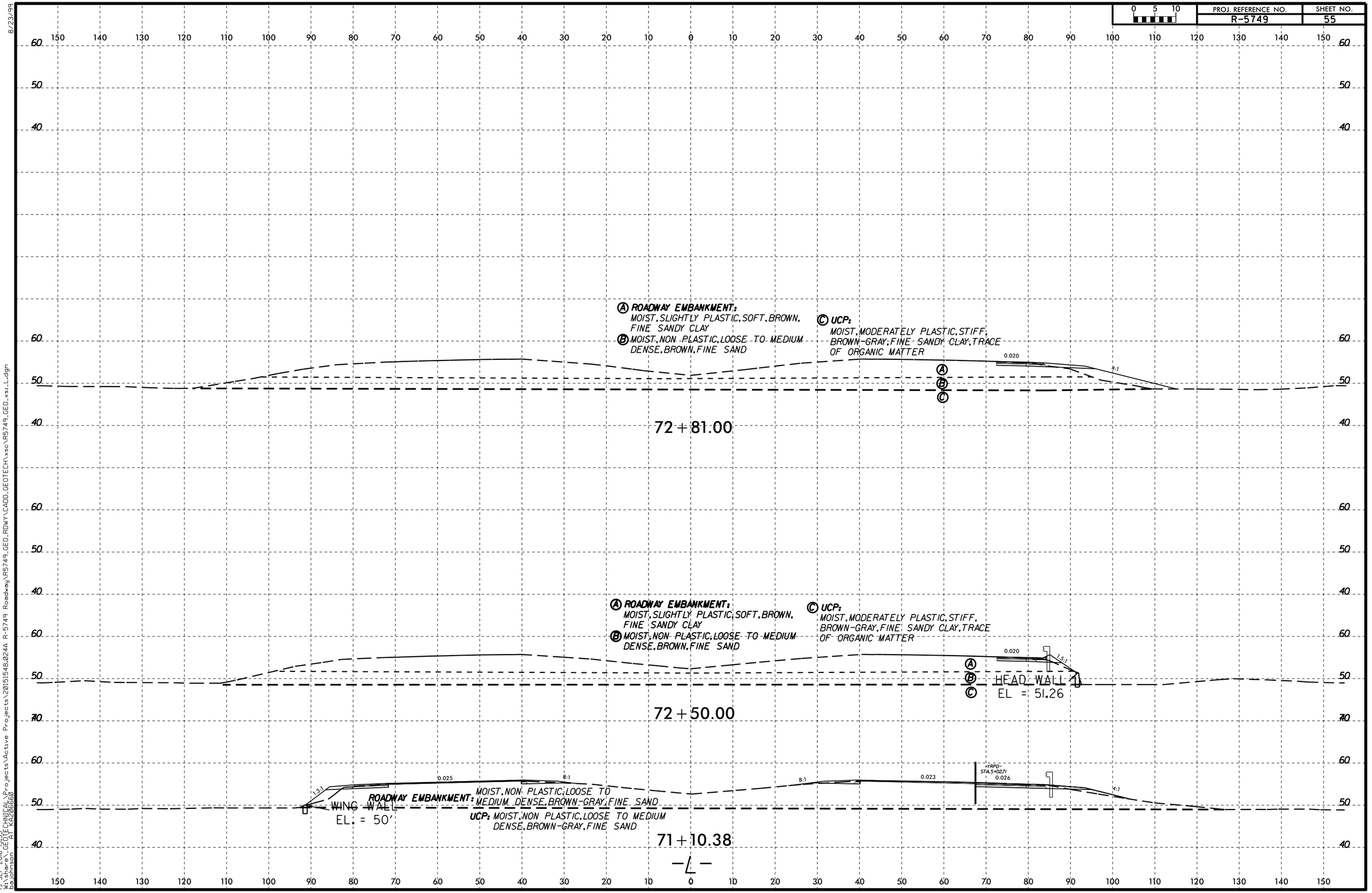
0 5 10
PROJ. REFERENCE NO.
R-5749
SHEET NO.
53
Ⓐ MOIST, NONPLASTIC, MEDIUM DENSE, GRAY, FINE SAND, TRACE OF ORGANIC MATTER
ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY, FINE SANDY, SILTY CLAY
69+50.00
Ⓐ MOIST, NONPLASTIC, MEDIUM DENSE, GRAY, FINE SAND, TRACE OF ORGANIC MATTER
ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY, FINE SANDY, SILTY CLAY
B.T.
69+00.00
Ⓐ MOIST, NONPLASTIC, MEDIUM DENSE, GRAY, FINE SAND, TRACE OF ORGANIC MATTER
ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY, FINE SANDY, SILTY CLAY
68+50.00
Ⓐ MOIST, NONPLASTIC, MEDIUM DENSE, GRAY, FINE SAND, TRACE OF ORGANIC MATTER
ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY, FINE SANDY, SILTY CLAY
68+00.00
-L-

19-SEP-2016 15:32
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_L.dgn
bajohnson AT KA206560

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	54



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	55



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	56

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY CLAY
Ⓑ MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN, FINE SAND

Ⓒ **UCP:**
MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY CLAY, TRACE OF ORGANIC MATTER

0.020

4:1

Ⓐ
Ⓑ
Ⓒ

73 + 50.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY CLAY
Ⓑ MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN, FINE SAND

Ⓒ **UCP:**
MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY CLAY, TRACE OF ORGANIC MATTER

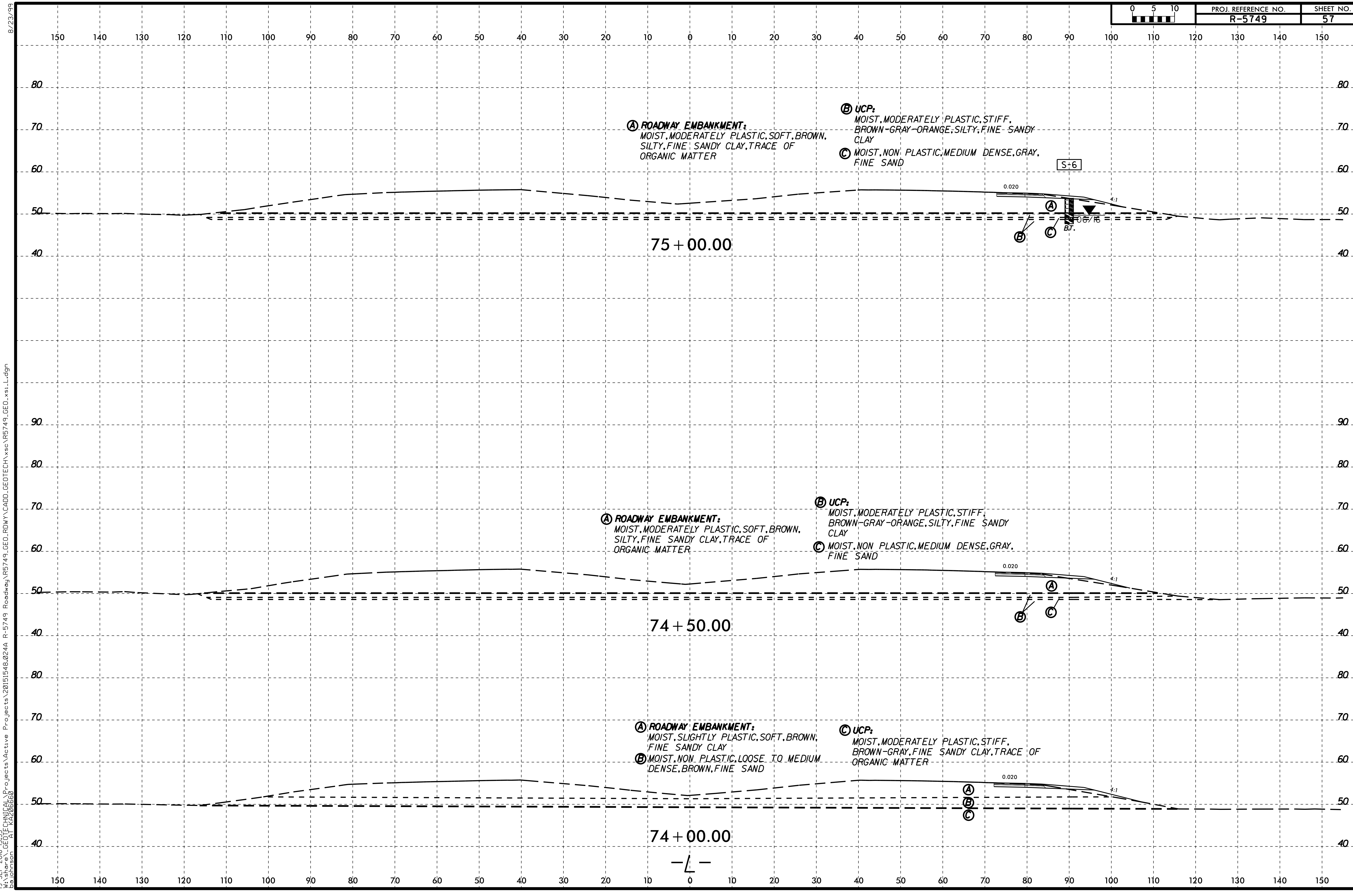
0.020

4:1

Ⓐ
Ⓑ
Ⓒ

U6716
BT.

73 + 00.00



8/23/99

W:\share\GEOTECHNICAL\Projects\Active Projects\2015154B.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsL_L.dgn

19-SEP-2016 15:33
bajohnson AT KA206660

PROJ. REFERENCE NO.	SHEET NO.
R-5749	58

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

70
60
50
40

0.020
4:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN-ORANGE, FINE SANDY, SILTY CLAY

76 + 50.00

70
60
50
40

0.020
4:1

ROADWAY EMBANKMENT:
MOIST, MODERATELY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN-ORANGE, FINE SANDY, SILTY CLAY

76 + 00.00

90
80
70
60
50
40

0.020
4:1

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY, TRACE OF ORGANIC MATTER

Ⓑ **UCP:**
MOIST, MODERATELY PLASTIC, STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

Ⓒ MOIST, NON PLASTIC, MEDIUM DENSE, GRAY, FINE SAND

75 + 50.00

-L-

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

8/23/99

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsLL.dgn
bajohnson AIT KH206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	59

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

70
60
50
40
30
20

0.020

4:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN-GRAY SILTY FINE SANDY CLAY

UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN-ORANGE, FINE SANDY, SILTY CLAY

77 + 50.00

0.020

4:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN-GRAY SILTY FINE SANDY CLAY

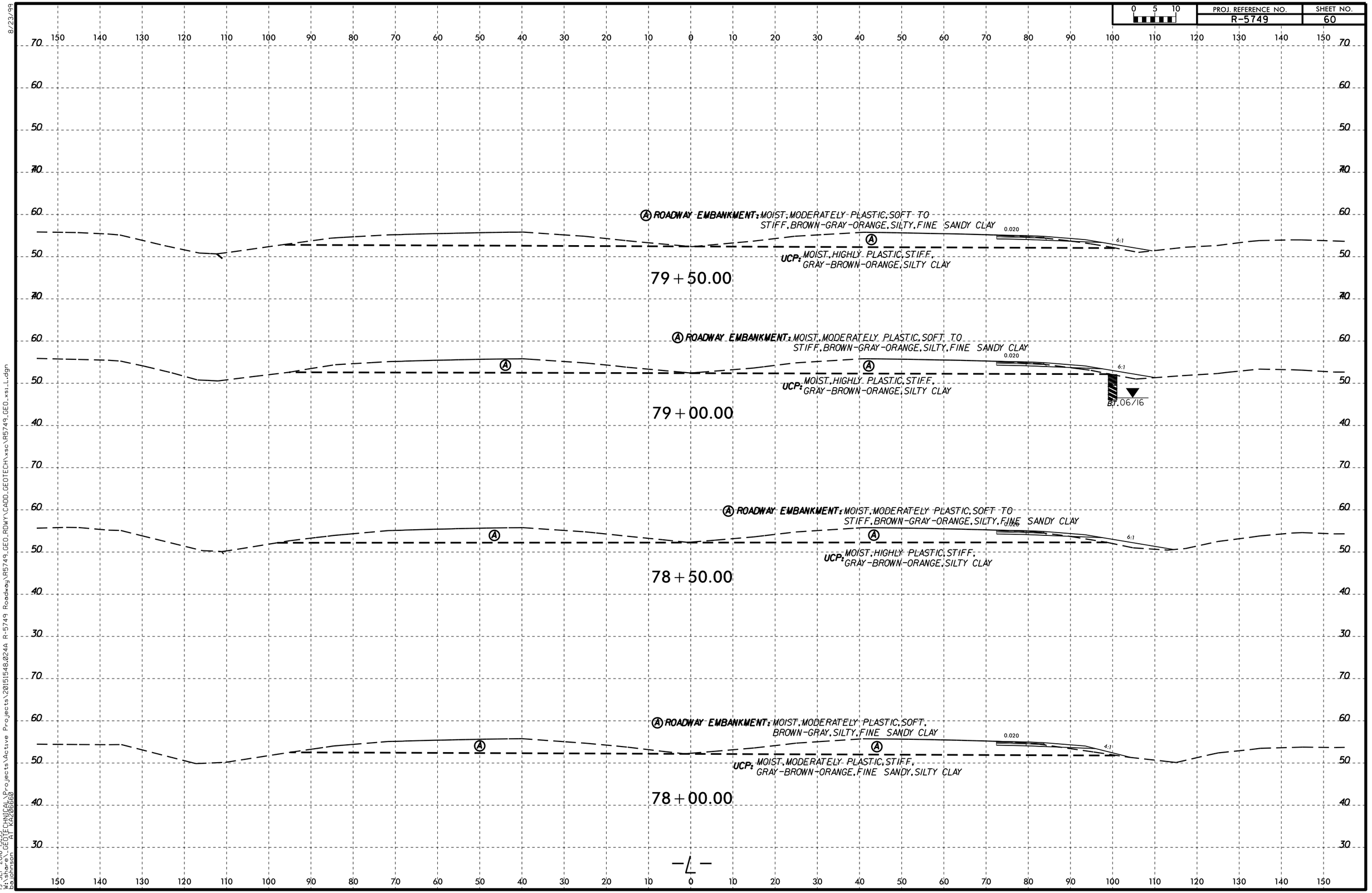
UCP: MOIST, MODERATELY PLASTIC, STIFF, GRAY-BROWN-ORANGE, FINE SANDY, SILTY CLAY

BT. 06/16

77 + 00.00

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

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	60



8/23/99

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsLL.dgn
bajohnson AT KHA206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	61

Ⓐ ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN-ORANGE, SILTY, FINE SANDY CLAY AND SILTY CLAY

0.020

6:1

81 + 50.00

Ⓐ ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN-ORANGE, SILTY, FINE SANDY CLAY AND SILTY CLAY

0.020

6:1

06/16

BT.

81 + 00.00

Ⓐ ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

0.020

6:1

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN-ORANGE, SILTY, FINE SANDY CLAY AND SILTY CLAY

80 + 50.00

Ⓐ ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

0.020

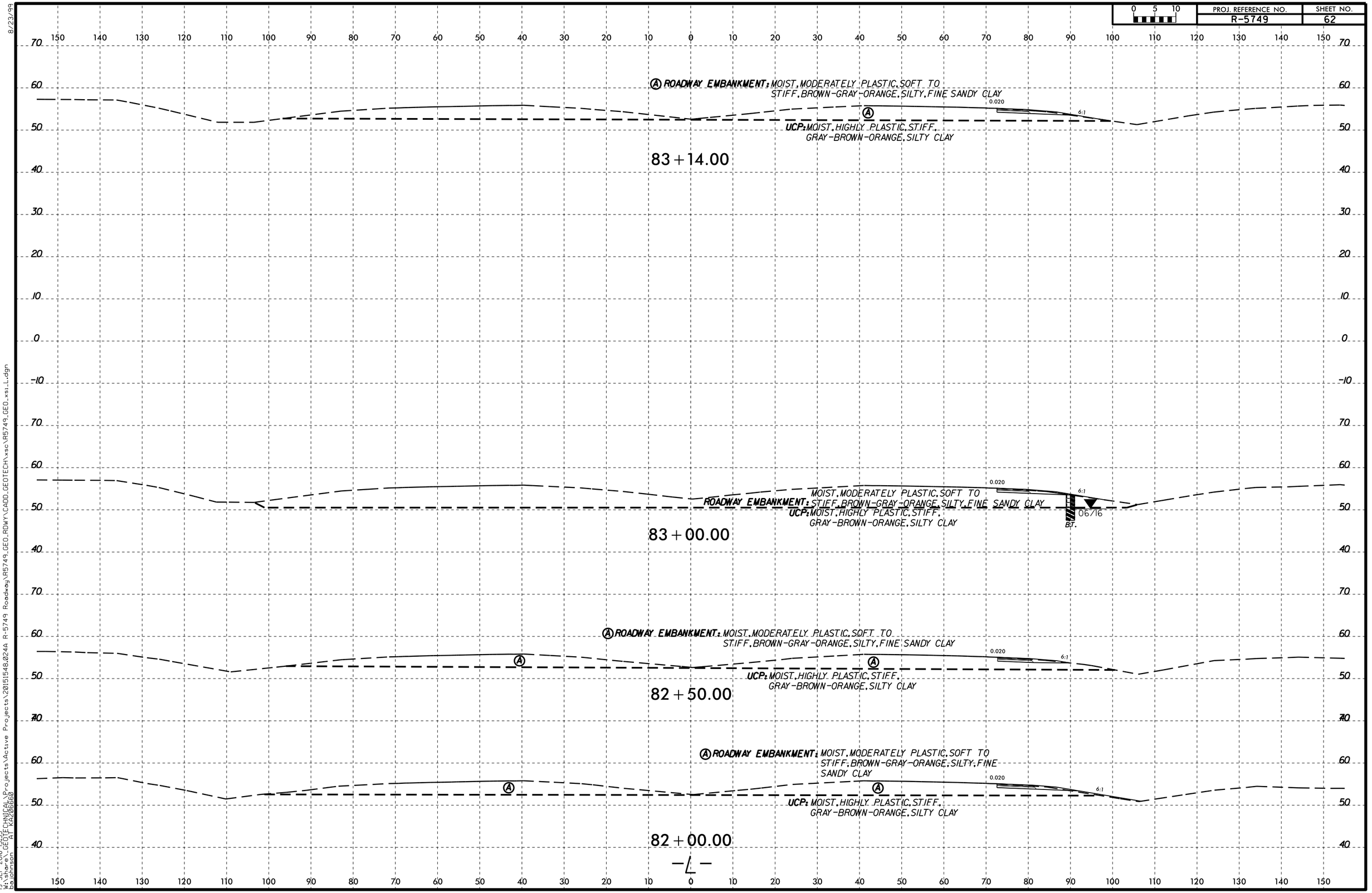
6:1

UCP: MOIST, HIGHLY PLASTIC, STIFF, GRAY-BROWN-ORANGE, SILTY CLAY

80 + 00.00

-L-

19-SEP-2016 15:33
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsLL.dgn
bajohnson AT KA206660



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	63

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

70 60 50 40 30

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

5.85:1 4:1

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND CLAY

10 + 50.00

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

SHEAR TO
℄ STA 64+88.42

1.69:1 6.20:1 4:1

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND CLAY

10 + 00.00

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

SHEAR TO
℄ STA 65+41.24

4:1

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND CLAY

9 + 50.00

ROADWAY EMBANKMENT:
MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

9 + 00.00

-YRPA-

8/23/99

19-SEP-2016 15:33
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPA.dgn
bjohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	64

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

60 50 40 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40 -50

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

4:1 4:1 3:1

53.10

MOIST, MODERATELY TO HIGHLY PLASTIC,
UCP: SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND CLAY

11+50.00

S-7

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

4.72:1 4:1

06/16
BIT.

MOIST, MODERATELY TO HIGHLY PLASTIC,
UCP: SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND CLAY

11+00.00

-YRPA-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	65

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

80
70
60
50
40

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

4:1 4:1 3:1 53.72

UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY, FINE SANDY CLAY

12+50.00

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, FINE SAND

4:1 4:1 3:1 53.41

UCP: MOIST, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND CLAY

12+00.00

-YRPA-

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

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPA.dgn
bajohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	66

ROADWAY EMBANKMENT
MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN FINE SAND

UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY, FINE SANDY CLAY

54.35

13 + 50.00

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN FINE SAND

06/16

B.T.

UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY, FINE SANDY CLAY

54.04

13 + 00.00

-YRPA-

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

70 60 50 40

3:1 4:1 58.08 55.92

UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY, CLAY

16 + 00.00

3:1 4:1 57.77 55.61

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

15 + 50.00

S-8

4:1 3:1 06/16 55.29

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

B.T.

15 + 00.00

4:1 3:1 54.98

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

14 + 50.00

4:1 3:1 54.66

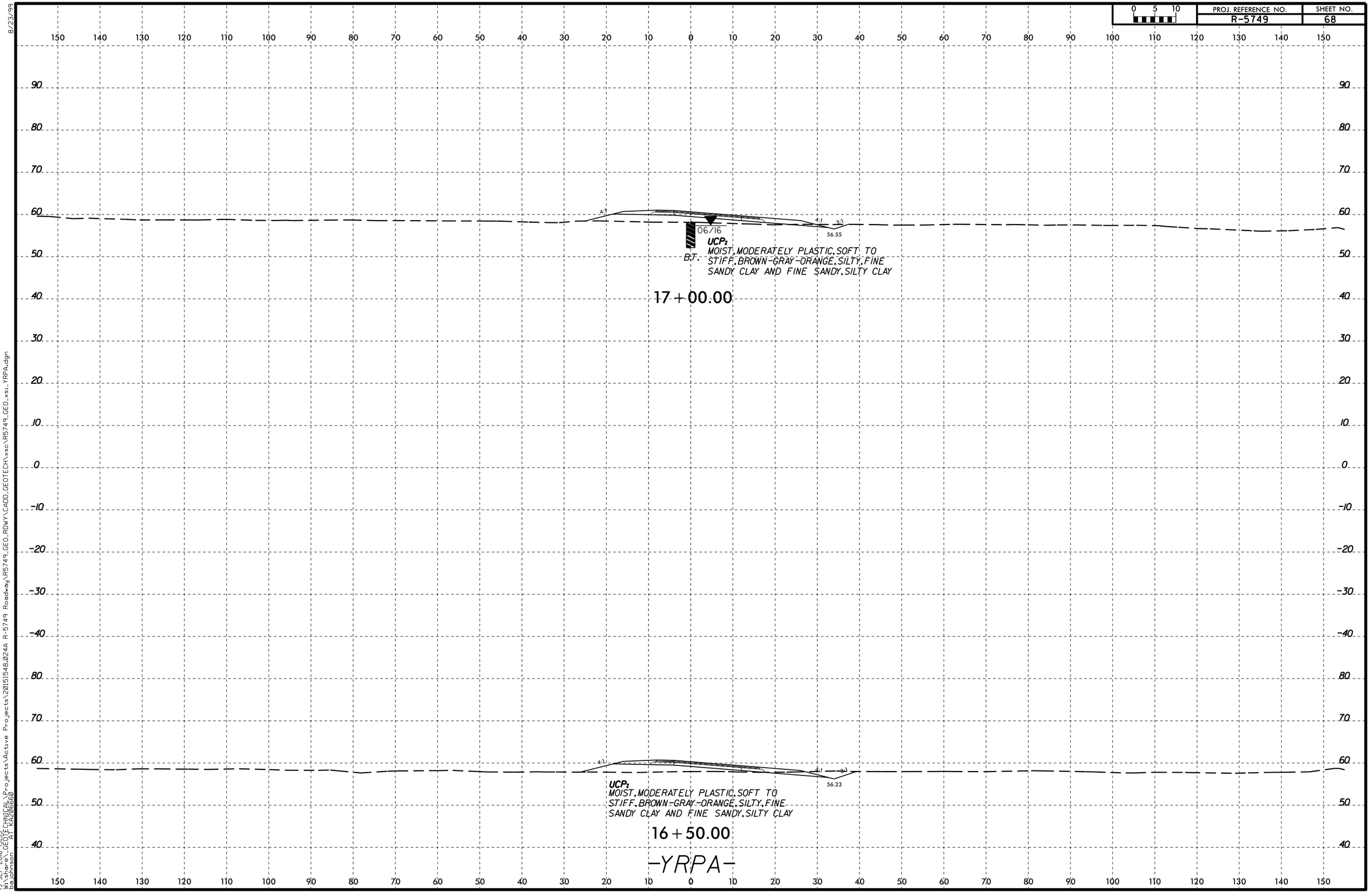
UCP: MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY AND SILTY, FINE SANDY CLAY

14 + 00.00

-YRPA-

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

8/23/99
19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_YRPA.dgn
bajohnson
AT KH206660
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_YRPA.dgn



8/23/99

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xs1_YRPA.dgn
bajohnson AT KAZOO60

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPA.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	69

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

70 60 50 40 70 60 50 40

4:1 4:1 3:1 57.61

UCP:
MOIST, MODERATELY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

18 + 50.00

4:1 4:1 3:1 57.18

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

18 + 00.00

4:1 4:1 3:1 56.86

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

17 + 50.00

-YRPA-

70 60 50 40 70 60 50 40

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

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_YRPA.dgn
bejohnson AT KH206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	70

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

80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

3:1 4:1 59.63

UCP:
MOIST, MODERATELY PLASTIC, SOFT,
BROWN-GRAY, SILTY, FINE SANDY CLAY

4:1 3:1 58.80

19 + 50.00

S-9

3:1 4:1 59.56

UCP:
MOIST, MODERATELY PLASTIC, SOFT,
BROWN-GRAY, SILTY, FINE SANDY CLAY

BT 06/16

4:1 3:1 58.20

19 + 00.00

-YRPA-

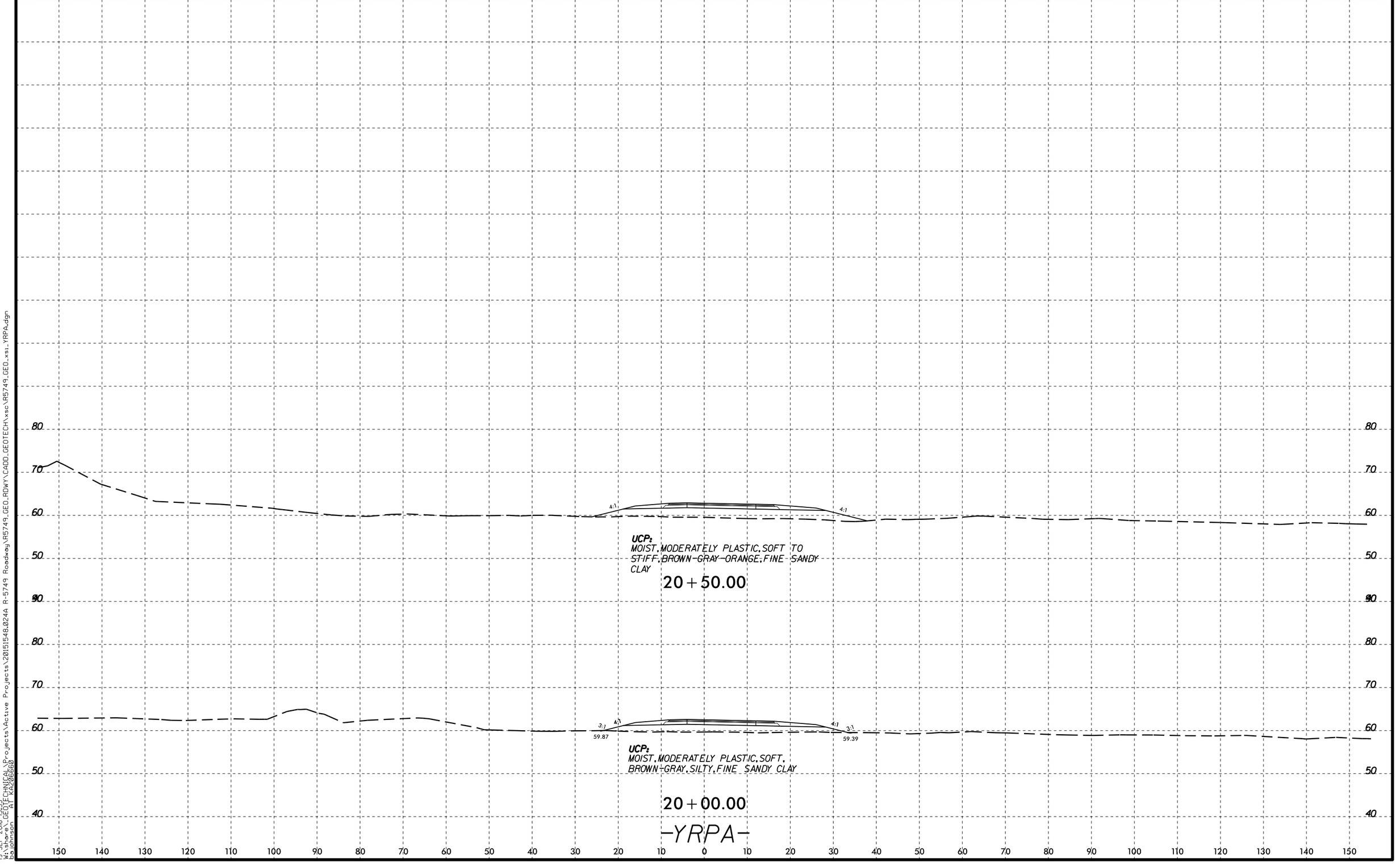
19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_YRPA.dgn
bajohnson AT KH206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	71

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

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

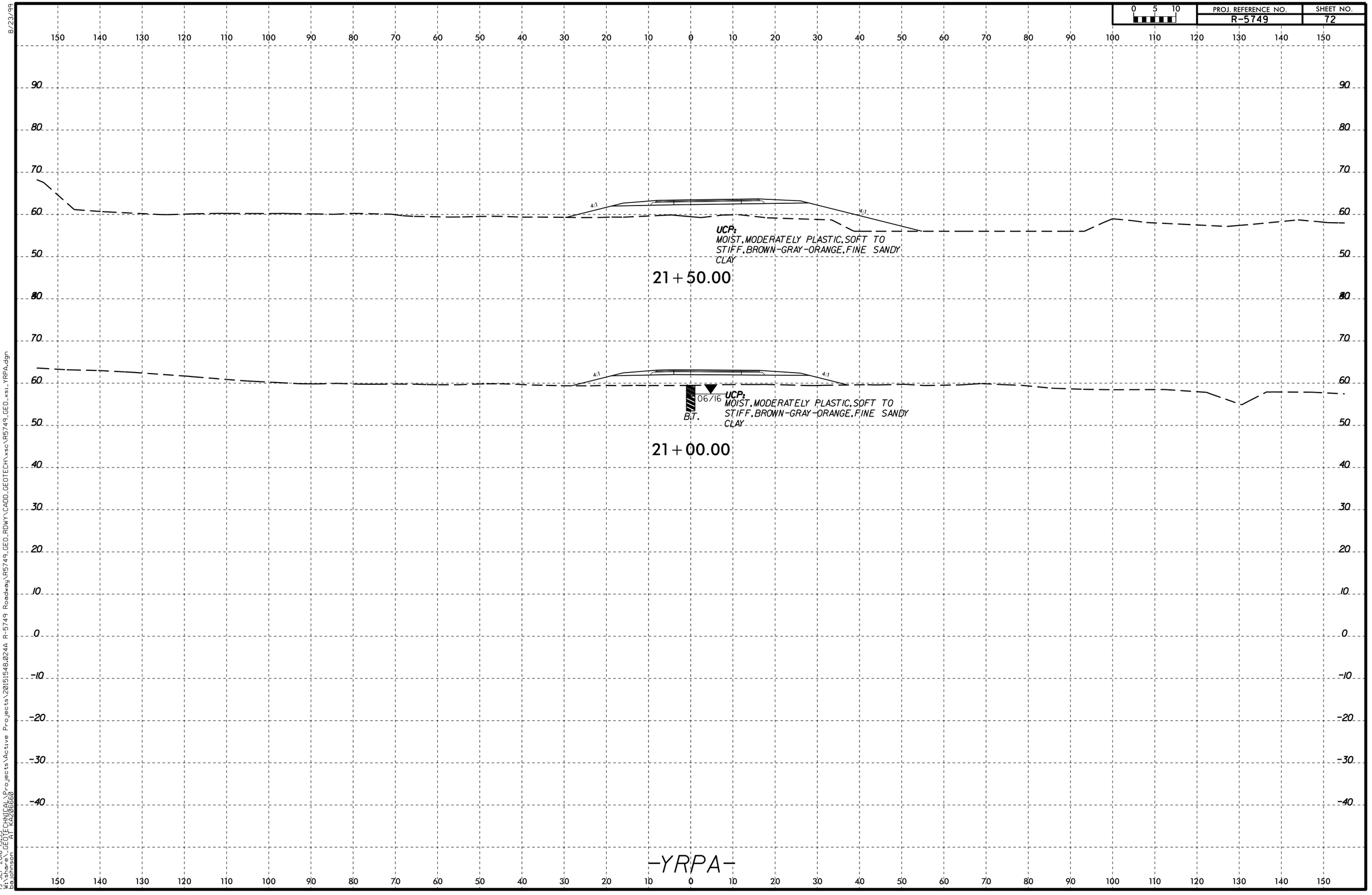


80 70 60 50 40

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

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_YRPA.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	72



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	73

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

80
70
60
50
40

4:1 4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

22+50.00

4:1 4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

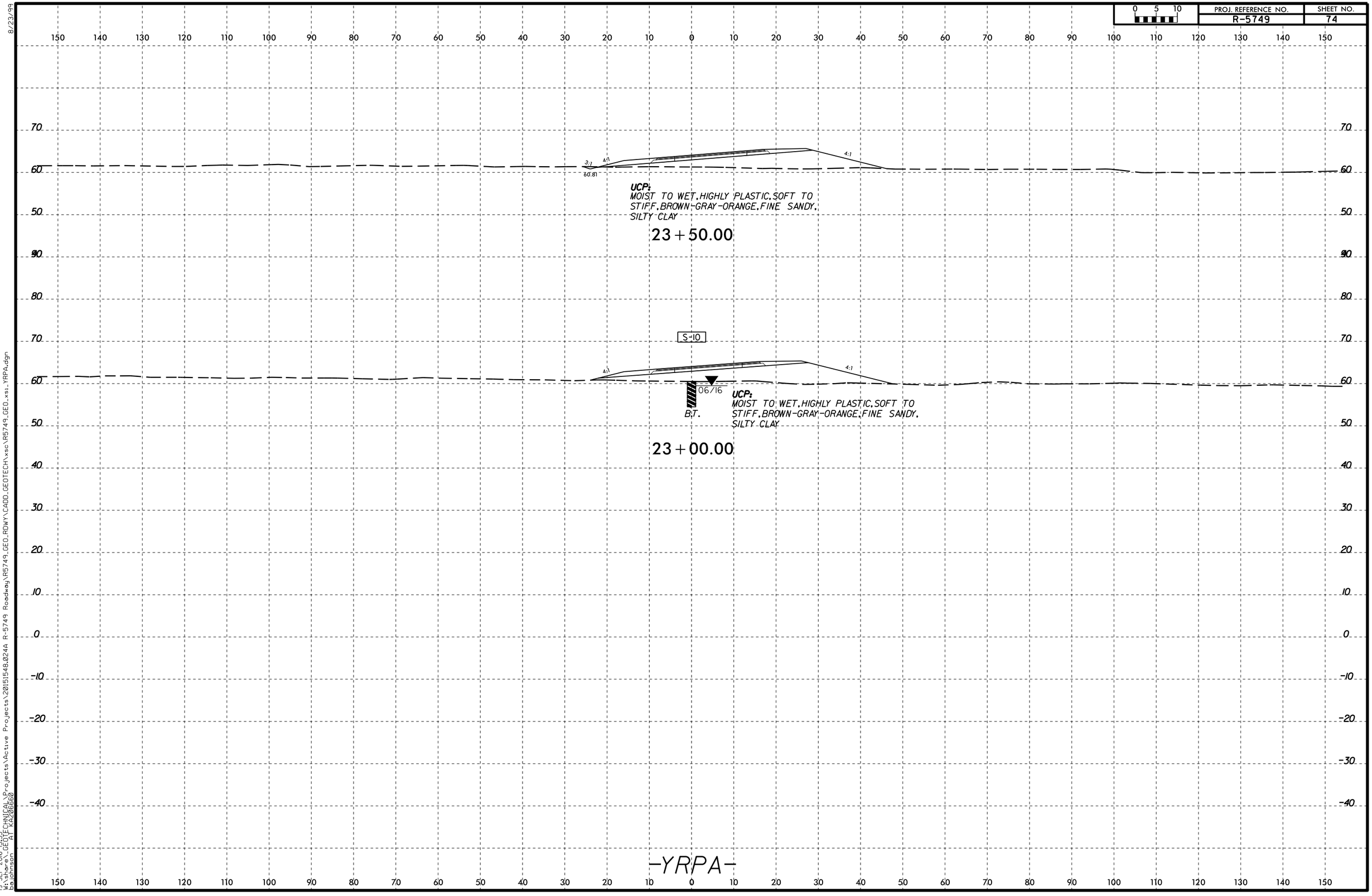
22+00.00

-YRPA-

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

8/23/99

19-SEP-2016 15:33
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPA.dgn
bajohnson AT KHA206660



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	75

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

80 70 60 50 40

SHEAR TO

4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

25 + 50.00

3.13:1 4.23:1

60.74

4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

25 + 00.00

3.09:1 4.10:1

60.71

4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

24 + 50.00

3.01:1 4.01:1

60.85

4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

24 + 00.00

-YRPA-

19-SEP-2016 15:33
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPA.dgn
bajohnson AT KAZOO660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	76

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

70 60 50 40

3:1 4:1 58.90 5.67:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY FINE SANDY CLAY

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

10+50.00

70 60 50 40

3:1 4:1 58.76 7.37:1

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY FINE SANDY CLAY

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

10+00.00

80 70 60 50 40

5.80:1 4:1 58.78

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY FINE SANDY CLAY

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

9+50.00

80 70 60 50 40

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY FINE SANDY CLAY

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

9+00.00

-YRPB-

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

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPB.dgn
bajohnson AT KAZOO60

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	77

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

70 60 50 40

3:1 4:1 60.44

UCP:
MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY TO SILTY CLAY

12 + 50.00

70 60 50 40

3:1 4:1 60.02

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

12 + 00.00

70 60 50 40 80

3:1 4:1 59.59

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

11 + 50.00

S-II

70 60 50 40

3:1 4:1 4.62:1 59.18

06/16

B.T.

UCP:
WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

ROADWAY EMBANKMENT: MOIST, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

11 + 00.00

-YRPB-

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

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_YRPB.dgn
bjohnson AT KAZOO660

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

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

3:1 4:1 4:1 61.30

UCP:
MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY TO SILTY CLAY

13 + 50.00

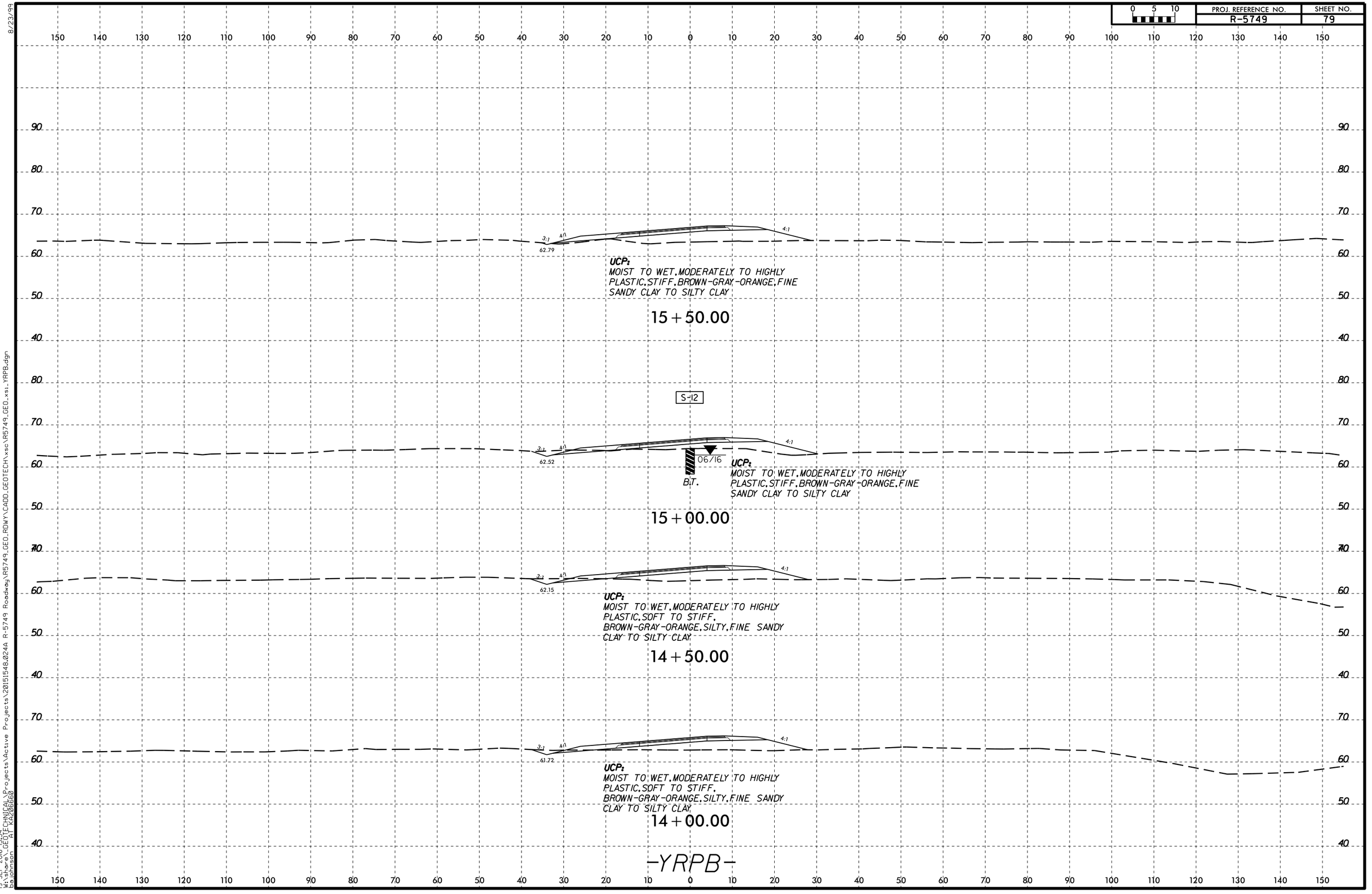
3:1 4:1 4:1 60.87

06/16
B.T.

UCP:
MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY TO SILTY CLAY

13 + 00.00

-YRPB-



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	80

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

80
70
60
50
70
60
50
40

4:1 4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, SILTY CLAY

16+50.00

3:1 4:1 4:1

63.23

UCP:
MOIST TO WET, MODERATELY TO HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, FINE SANDY CLAY TO SILTY CLAY

16+00.00

-YRPB-

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

8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPB.dgn
bajohnson AT KHA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	81

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

80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

4:1 4:1

UCP₄
MOIST TO WET, HIGHLY PLASTIC, STIFF,
BROWN-GRAY-ORANGE, SILTY CLAY

17+50.00

4:1 4:1

06/16
B.T.

UCP₃
MOIST TO WET, HIGHLY PLASTIC, STIFF,
BROWN-GRAY-ORANGE, SILTY CLAY

17+00.00

-YRPB-

8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xs1_YRPB.dgn
bajohnson AT KHA06660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPB.dgn

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	82

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

70
60
50
90
80
70
60
50

3:1
4:1
63.37
4:1

UCP:
MOIST TO WET, MODERATELY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

18+50.00

4:1
4:1

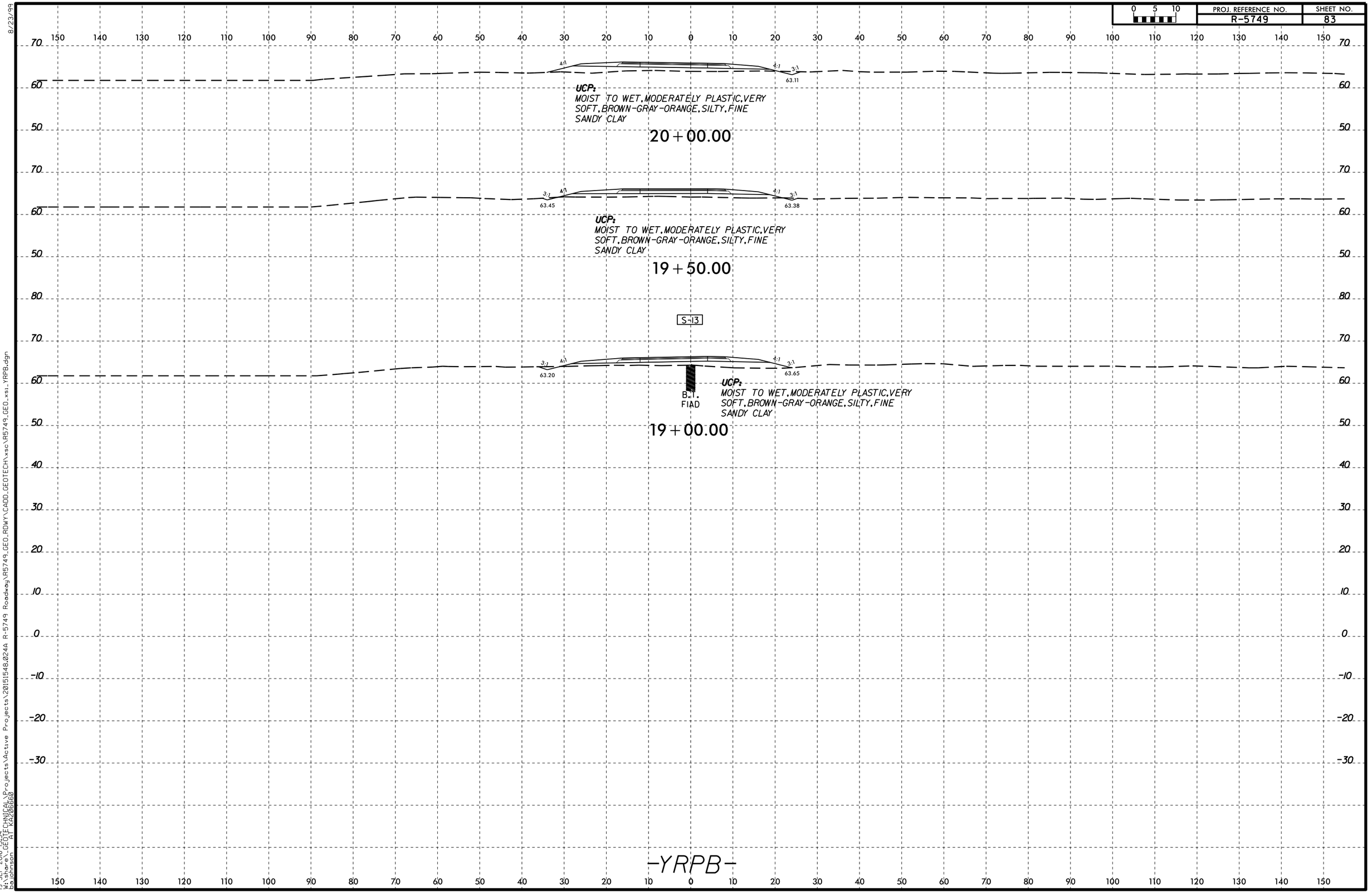
UCP:
MOIST TO WET, HIGHLY PLASTIC, STIFF, BROWN-GRAY-ORANGE, SILTY CLAY

18+00.00

-YRPB-

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

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPB.dgn
bajohnson AT KAZOO60

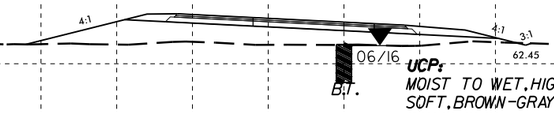


8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	84

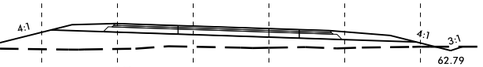
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

100 90 80 70 60 50 40 30 20 10 0 -10 -20 -30



UCP:
MOIST TO WET, HIGHLY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

21+00.00



UCP:
MOIST TO WET, MODERATELY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

20+50.00

70 60 50

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

-YRPB-

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsl_YRPB.dgn
bajohnson AT KAZOO600

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	85

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

70
60
50

4:1 4:1 3:1 61.72 61.78

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

22 + 50.00

4:1 4:1 3:1 61.89

UCP:
MOIST TO WET, HIGHLY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

22 + 00.00

4:1 4:1 3:1 62.11

UCP:
MOIST TO WET, HIGHLY PLASTIC, VERY SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

21 + 50.00

-YRPB-

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_YRPB.dgn
bajohnson AT KHA206660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsc\R5749_GEO_xsi_YRPB.dgn
bajohnson AT KHA206660

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

70 60 50 80 70 60 50 40 30 20 10 0 -10 -20 -30

4:1 4:1 3:1 61.62

UCP: 61.72
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

23+50.00

S-14

4:1 4:1 3:1 61.72

06/16

B.T.

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

23+00.00

-YRPB-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	87

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

70
60
50

UCP: 61.72
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

24+50.00

4.02:1 4:1 3:1 61.50

UCP: 61.72
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

24+00.00

-YRPB-

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

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPB.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	88

ROADWAY EMBANKMENT: MOIST, NONPLASTIC, LOOSE TO MEDIUM DENSE, BROWN, SILTY, FINE SAND, AND FINE SAND

UCP: MOIST, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

4:1 4:1 3:1 61.78

12+50.00

ROADWAY EMBANKMENT: MOIST, NONPLASTIC, LOOSE TO MEDIUM DENSE, BROWN, SILTY, FINE SAND, AND FINE SAND

UCP: MOIST TO WET, HIGHLY PLASTIC, STIFF, GRAY-ORANGE, SILTY CLAY

4:1 4:1 3:1 61.32

12+00.00

ROADWAY EMBANKMENT: MOIST, NONPLASTIC, LOOSE TO MEDIUM DENSE, BROWN, SILTY, FINE SAND, AND FINE SAND

UCP: MOIST TO WET, HIGHLY PLASTIC, STIFF, GRAY-ORANGE, SILTY CLAY

4:1 4:1 3:1 60.94

11+50.00

SHEAR TO -L- STA. 38+44.19

ROADWAY EMBANKMENT: MOIST, NONPLASTIC, LOOSE TO MEDIUM DENSE, BROWN, SILTY, FINE SAND, AND FINE SAND

UCP: MOIST TO WET, HIGHLY PLASTIC, STIFF, GRAY-ORANGE, SILTY CLAY

5.429:1 4:1 56.76 B.T.

11+00.00

SHEAR TO -L- STA. 37+89.97

ROADWAY EMBANKMENT: MOIST, NONPLASTIC, LOOSE TO MEDIUM DENSE, BROWN, SILTY, FINE SAND, AND FINE SAND

UCP: MOIST TO WET, HIGHLY PLASTIC, STIFF, GRAY-ORANGE, SILTY CLAY

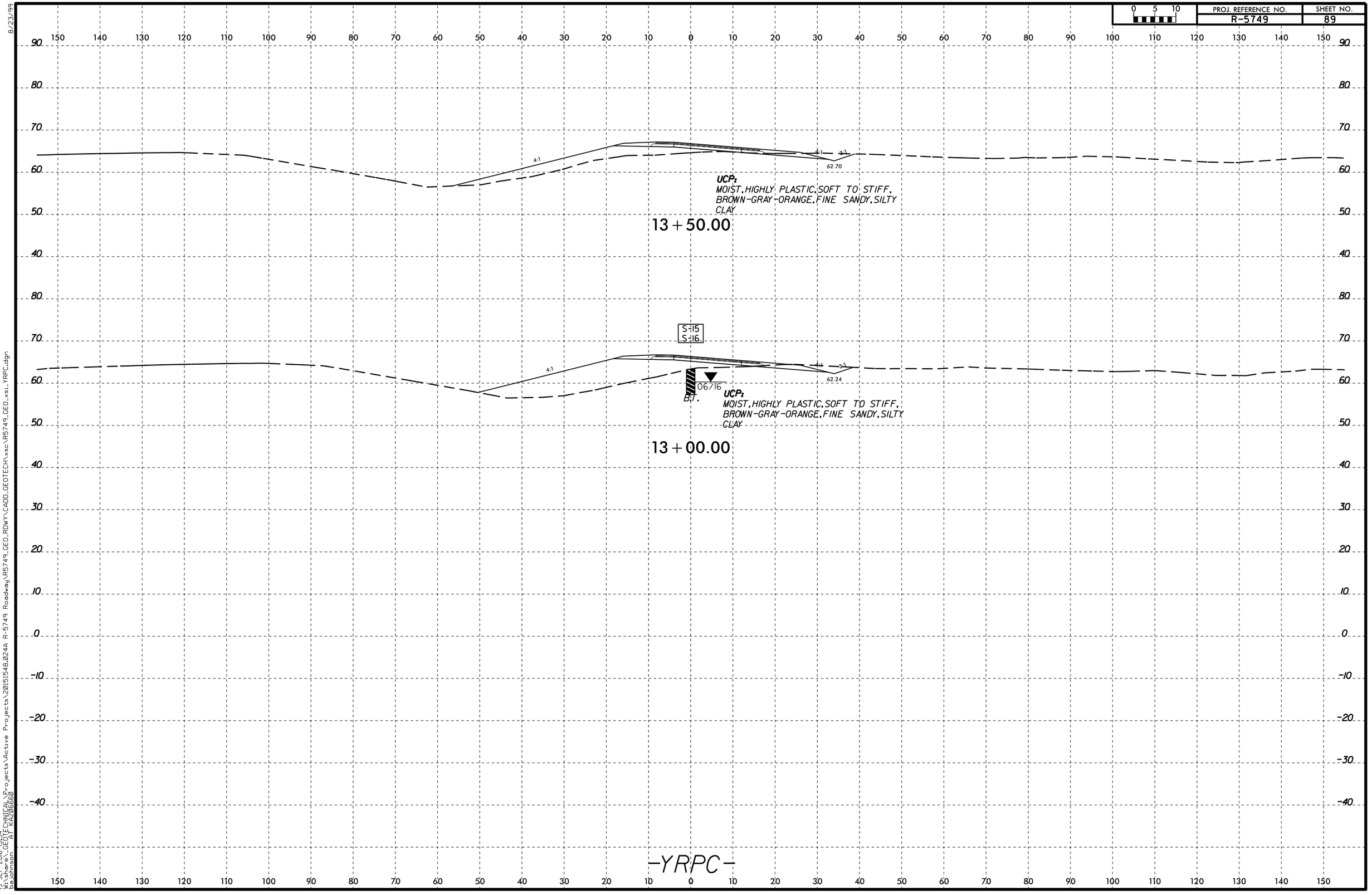
6.96:1 4:1

10+50.00

-YRPC-

02-NOV-2016 13:23
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPC.dgn
bjohnson
AT KH20660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	89



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	90

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

80 70 60 50

4:1 4:1 3:1 64.30

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

15+50.00

80 70 60 50

4:1 4:1 3:1 64.02

06/16 B.T.

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

15+00.00

90 80 70 60 50

4:1 4:1 3:1 63.62

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

14+50.00

80 70 60 50

4:1 4:1 3:1 63.16

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

14+00.00

-YRPC-

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

19-SEP-2016 15:34
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_YRPC.dgn
bjohnson AI KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	91

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

80 70 60 50

4:1 4:1

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY TO FINE SANDY, SILTY CLAY

16+50.00

80 70 60 50

4:1 4:1

UCP:
MOIST, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

16+00.00

-YRPC-

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

8/23/99

W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_YRPC.dgn
19-SEP-2016 15:34
bajohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	92

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

80 70 60 50 40 30 20 10 0 -10 -20 -30

4:1 4:1

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY TO FINE SANDY, SILTY CLAY

17+50.00

4:1 4:1

06/16

B.T.

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY CLAY AND FINE SANDY, SILTY CLAY

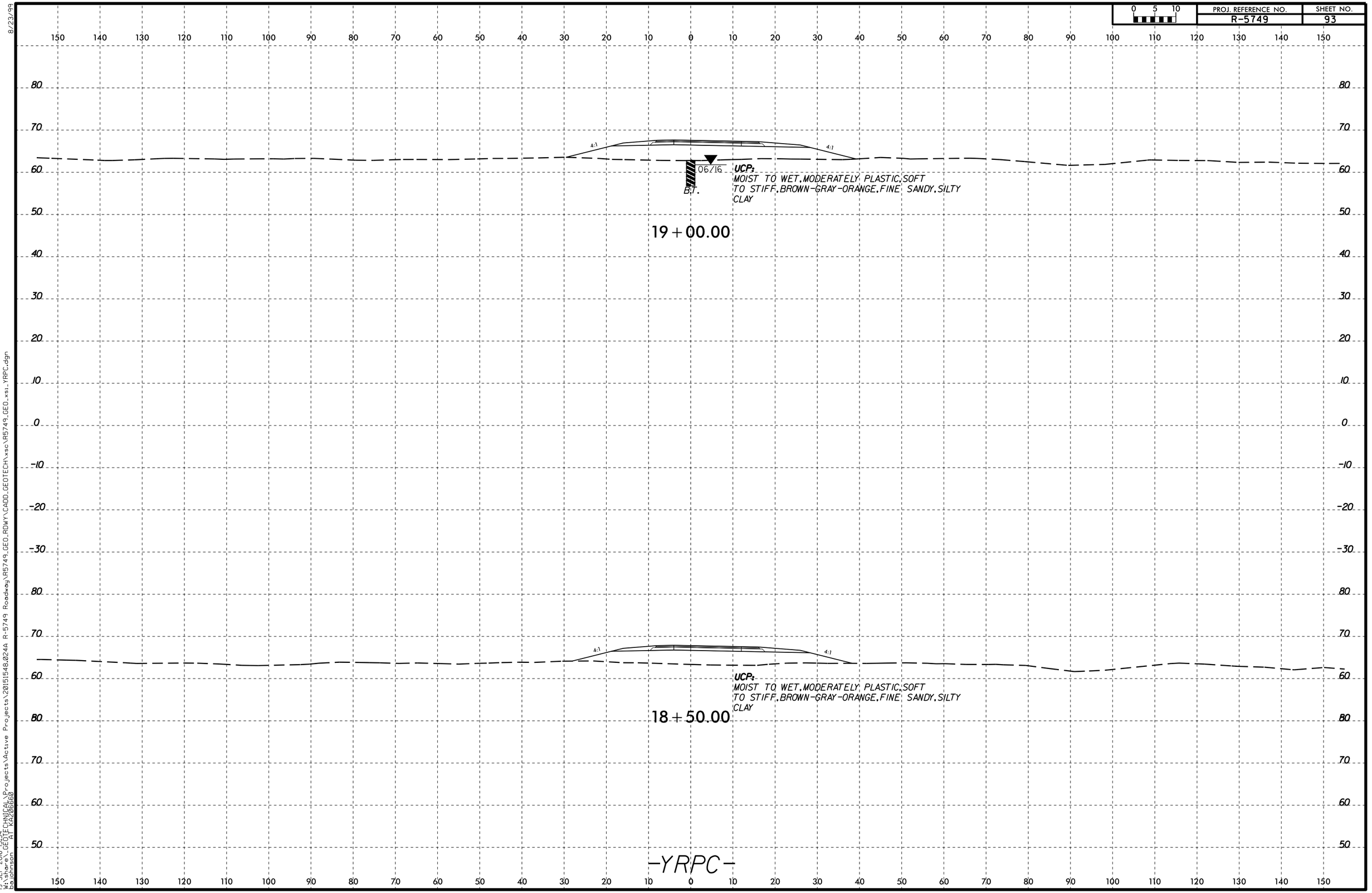
17+00.00

–YRPC–

8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPC.dgn
bajohnson AT KH206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	93



8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPC.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	94

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

70
60
50
70
60
50
70
60
50

4:1 4:1

UCP1:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

20+50.00

4:1 4:1

UCP2:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

19+50.00

-YRPC-

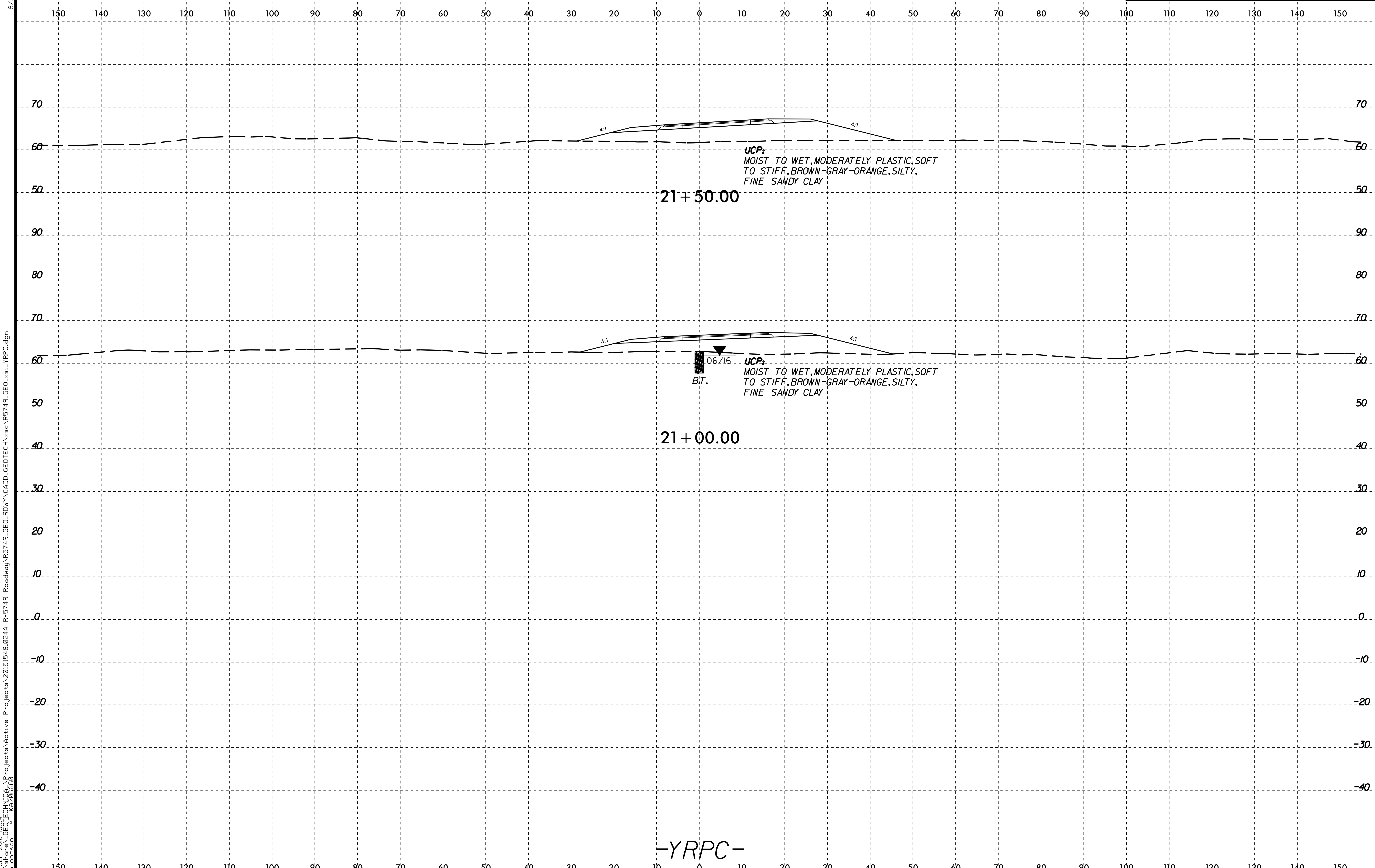
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_YRPC.dgn
bajohnson AI KA206660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_YRPC.dgn

PROJ. REFERENCE NO.	SHEET NO.
R-5749	95



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

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

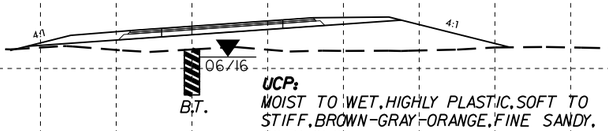
UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

24+00.00

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

23+50.00

S-17



UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

23+00.00

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY

22+50.00

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

22+00.00

40 40

-YRPC-

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

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	97

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

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

3.02:1 4.02:1 4:1 3:1

61.35 62.71

UCP:
MOIST TO WET, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

25+50.00

S-18

3:1 4:1 4:1

61.52

06/16

B.T.

UCP:
MOIST TO WET, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

25+00.00

3:1 4:1 4:1

61.64

UCP:
MOIST TO WET, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

24+50.00

-YRPC-

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

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_YRPC.dgn
bajohnson AT KAZOO660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_YRPC.dgn

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	98

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

80 70 60 50 40

3.00:1 4.00:1 4:1 3:1

61.14 61.21

UCP:
MOIST TO WET, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

26+50.00

3.00:1 10:1 4:1 3:1

61.15 61.96

UCP:
MOIST TO WET, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

26+00.00

-YRPC-

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

8/23/99
19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xsi_YRPC.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	99

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

80
70
60
50
40

4:1 4:1

UCP:
MOIST TO WET, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

27+00.00

–YRPC–

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

80
70
60
50
40

8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xsi_YRPC.dgn
bajohnson AT KAZOO660

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

60 50 40 30

11+50.00

3:1 4:1 52.04 4.47:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY, AND FINE SANDY, SILTY CLAY

S-19

11+00.00

3:1 4:1 51.54 5.45:1 06/16 B.T.

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY, AND FINE SANDY, SILTY CLAY

10+50.00

3:1 4:1 51.14 6.99:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY, AND FINE SANDY, SILTY CLAY

10+00.00

3:1 4:1 50.89 9.74:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, LOOSE TO MEDIUM DENSE, BROWN TO GRAY, FINE SAND

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY, AND FINE SANDY, SILTY CLAY

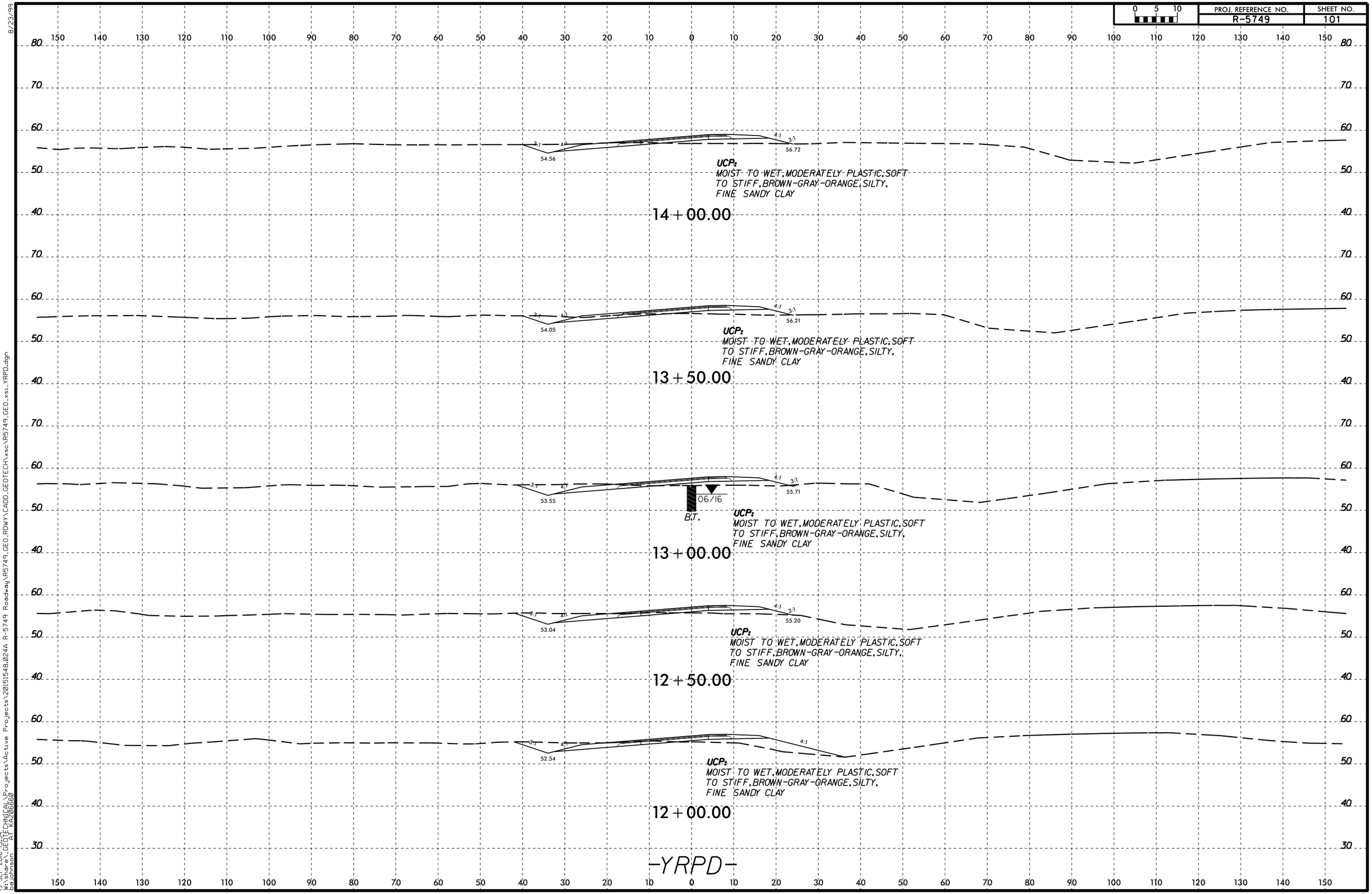
9+50.00

-YRPD-

60 50 40 30 20

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

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	101



8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xsi_YRPD.dgn
bajohnson AI KA206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	102

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

70 60 50 40

3:1 4:1 57.07

UCP: MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

16+50.00

3:1 4:1 56.97

UCP: MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY SILT
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

15+50.00

S-20

3:1 4:1 65.66

UCP: 06/16 B.T.

MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY SILT
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

15+00.00

3:1 4:1 55.06

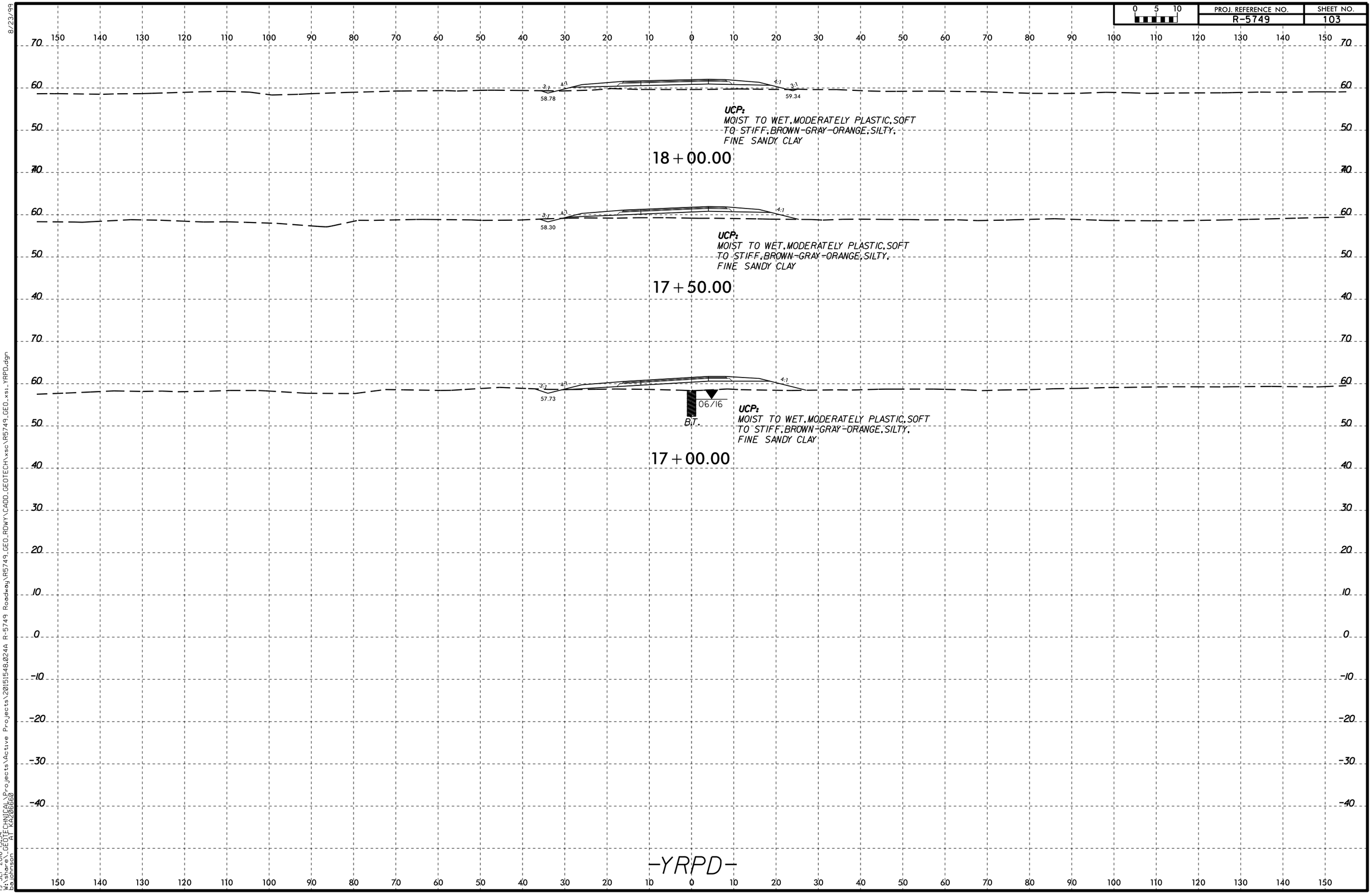
UCP: MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY SILT
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

14+50.00

-YRPD-

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPD.dgn
bajohnson AT KAZOO660

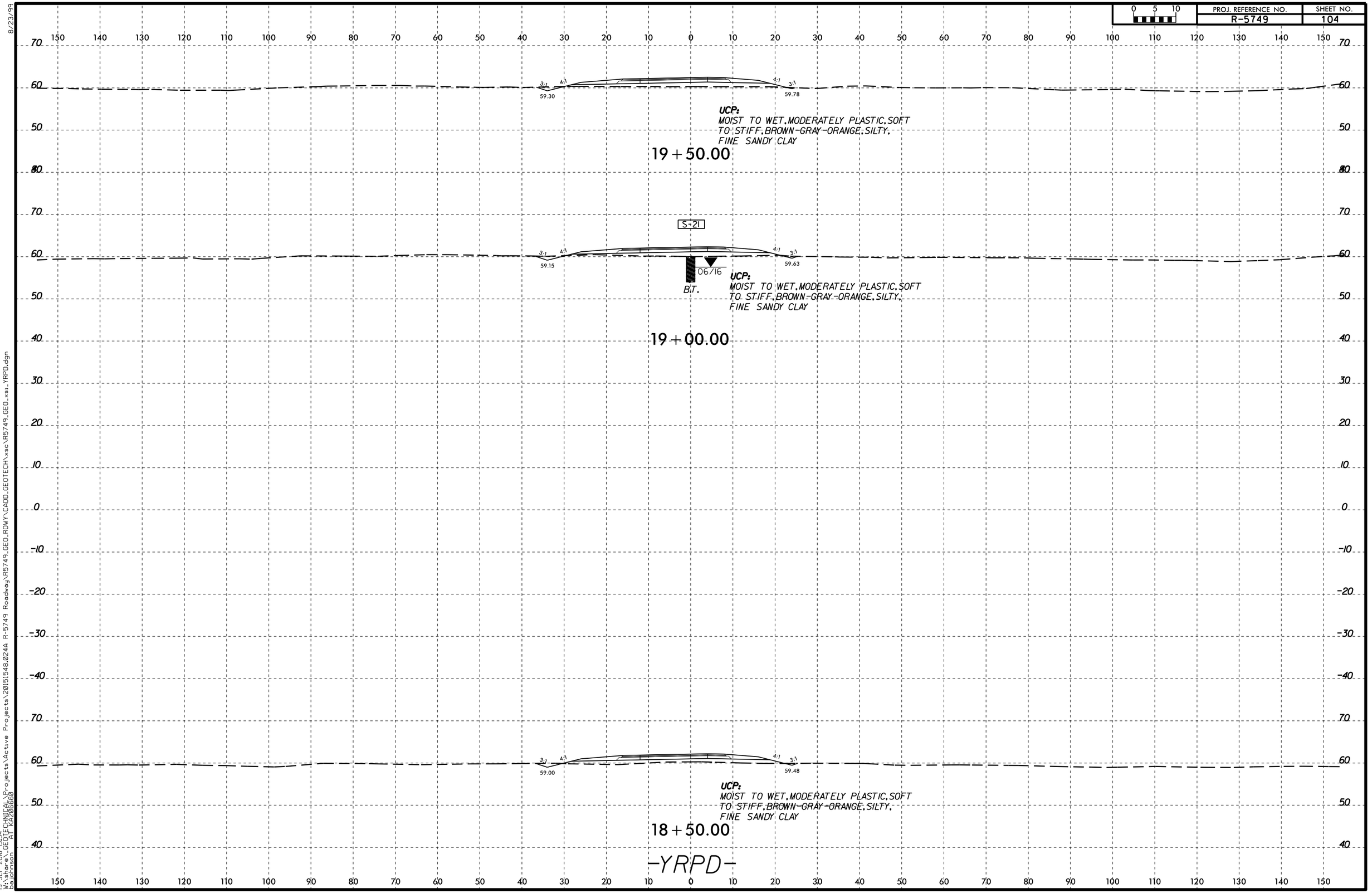
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	103



8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xsi_YRPD.dgn
bajohnson AT KHA06660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	104

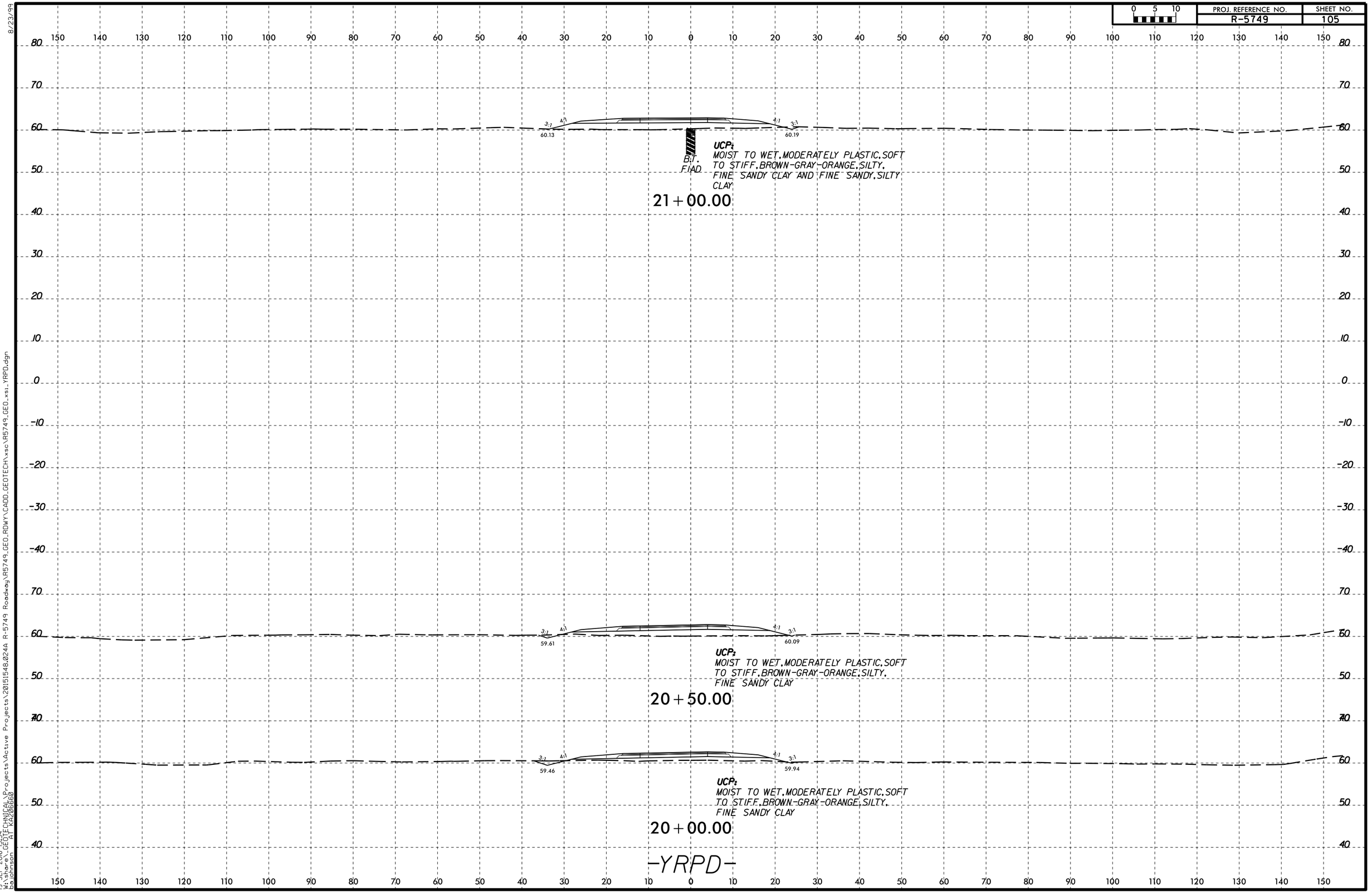


8/23/99

19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xs1_YRPD.dgn
bajohnson AT KAZOO660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	105



19-SEP-2016 15:34
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xsi_YRPD.dgn
bajohnson AT KAZOO660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	106

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

80 70 60 50 40 30 60 50 70 60 50 40

4:1 4:1 3:1 60.34

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY TO CLAY

22 + 50.00

4:1 4:1

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

22 + 00.00

4:1 4:1

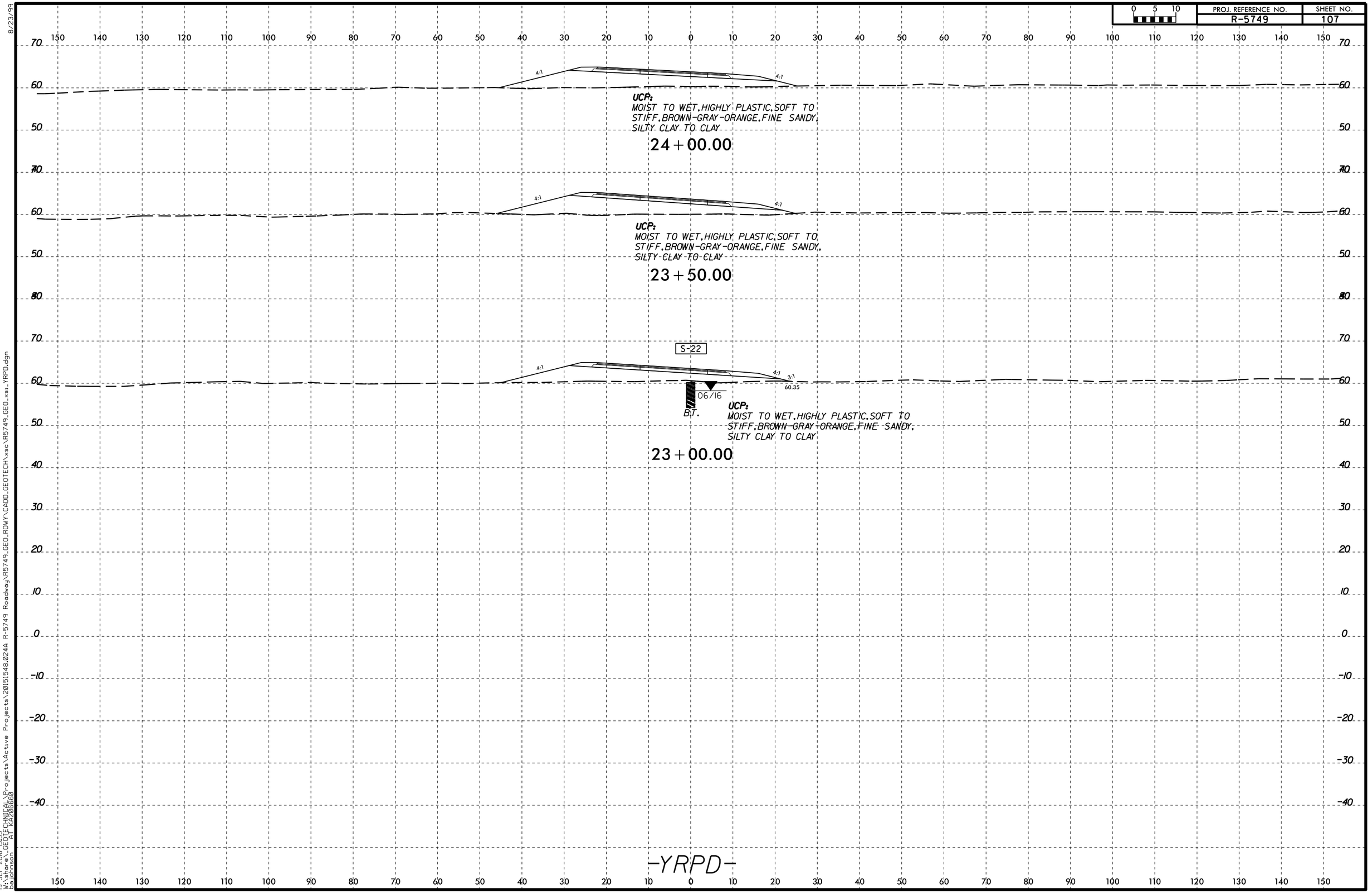
UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

21 + 50.00

-YRPD-

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

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsl_YRPD.dgn
bajohnson AIT KA206660



8/23/99

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xsl_YRPD.dgn
bajohnson AT KAZOO660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	108

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

70 60 50 40

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY TO CLAY

25 + 50.00

4.20:1 4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY TO CLAY

25 + 00.00

4:1 4:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY-ORANGE, FINE SANDY, SILTY CLAY TO CLAY

24 + 50.00

-YRPD-

8/23/99

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_ROWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_YRPD.dgn
bjohnson AT KA206660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	109

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

Ⓑ MOIST, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

UCP:
MOIST, HIGHLY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

3:1

18+50.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

S-23

Ⓑ MOIST, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

3:1

06/16

UCP:
MOIST, HIGHLY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY B.T.

18+00.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

Ⓑ MOIST, SLIGHTLY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

UCP:
MOIST, HIGHLY PLASTIC, STIFF, GRAY-BROWN, FINE SANDY, SILTY CLAY

17+55.00

-Y-

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

80 70 60 50 40 30 80 70 60 50

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

UCP:
WET, SLIGHTLY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN, SILTY, FINE SANDY CLAY AND SILTY CLAY

3:1 3:1 Ⓐ

20+50.00

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

UCP:
WET, SLIGHTLY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN, SILTY, FINE SANDY CLAY AND SILTY CLAY

3:1 Ⓐ 06/16 B.T. TIE TO EXIST. DRIVEWAY

20+00.00

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

UCP:
MOIST TO WET, SLIGHTLY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN, SILTY CLAY AND SILTY, FINE SANDY CLAY

3:1 3:1 Ⓐ

19+50.00

80 70 60 50 40 30 80 70 60 50

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

-Y-

8/23/99

19-SEP-2016 15:35
W:\share\GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_Y.dgn
bjohnson AIT KA206660

8/23/99

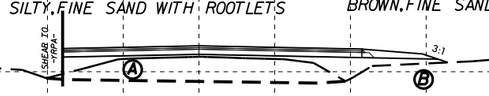
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	111

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

80 70 60 50

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

Ⓑ UCP:
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, FINE SANDY SILT



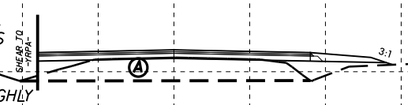
MOIST, HIGHLY PLASTIC, STIFF, GRAY-ORANGE-RED, FINE SANDY CLAY

21+50.00

80 70 60 50

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

UCP:
MOIST TO WET, SLIGHTLY TO HIGHLY PLASTIC, SOFT TO STIFF, GRAY-BROWN, SILTY CLAY AND SILTY, FINE SANDY CLAY



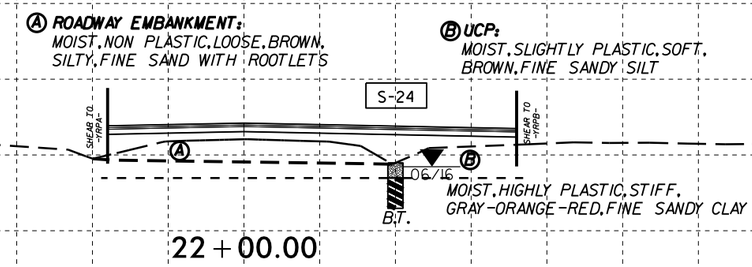
21+00.00

-Y-

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

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xs1_Y.dgn
bajohnson AT KHA06660

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	112



22 + 00.00

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

80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

—Y—

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

70 60 50 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

4:1 4:1

Ⓐ

UCP:
MOIST, HIGHLY PLASTIC, SOFT TO STIFF, GRAY-ORANGE-RED, SILTY, FINE SANDY CLAY

23+00.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

4:1 4:1

Ⓐ

UCP:
MOIST, HIGHLY PLASTIC, SOFT TO STIFF, GRAY-ORANGE-RED, SILTY, FINE SANDY CLAY

-DET-
STA 14+00
67' RT.
05/16
B.T.

22+50.00

−Y−

8/23/99

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_Y.dgn
bajohnson AT KH206660

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_Y.dgn

25+00.00

Ⓐ **UCP:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE TO COARSE SAND

Ⓑ SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

Ⓒ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

24+50.00

STA. 24+29
61' LT.

(7) (4) Ⓐ Ⓑ (4) (10) B.T. FIAD

Ⓐ **UCP:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE TO COARSE SAND

Ⓑ SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

Ⓒ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

24+00.00

Ⓐ **UCP:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE TO COARSE SAND

Ⓑ SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY

Ⓒ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

-Y-

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	115

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

Ⓑ **UCP:** MOIST, NON PLASTIC, LOOSE, BROWN, CLAYEY, FINE SAND

Ⓒ SLIGHTLY PLASTIC, MEDIUM STIFF, BROWN-RED, SILTY, FINE SANDY CLAY

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

B.T. FIAD

26+00.00

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

Ⓑ **UCP:** MOIST, NON PLASTIC, LOOSE, BROWN, CLAYEY, FINE SAND

Ⓒ SLIGHTLY PLASTIC, MEDIUM STIFF, BROWN-RED, SILTY, FINE SANDY CLAY

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

25+50.00

-Y-

8/23/99

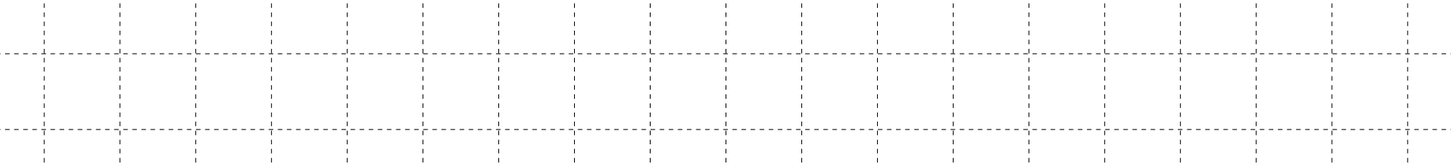
19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_Y.dgn
bjohnson AT KHA206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	116

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

90 80 70 60 90 80 70 60 50 40

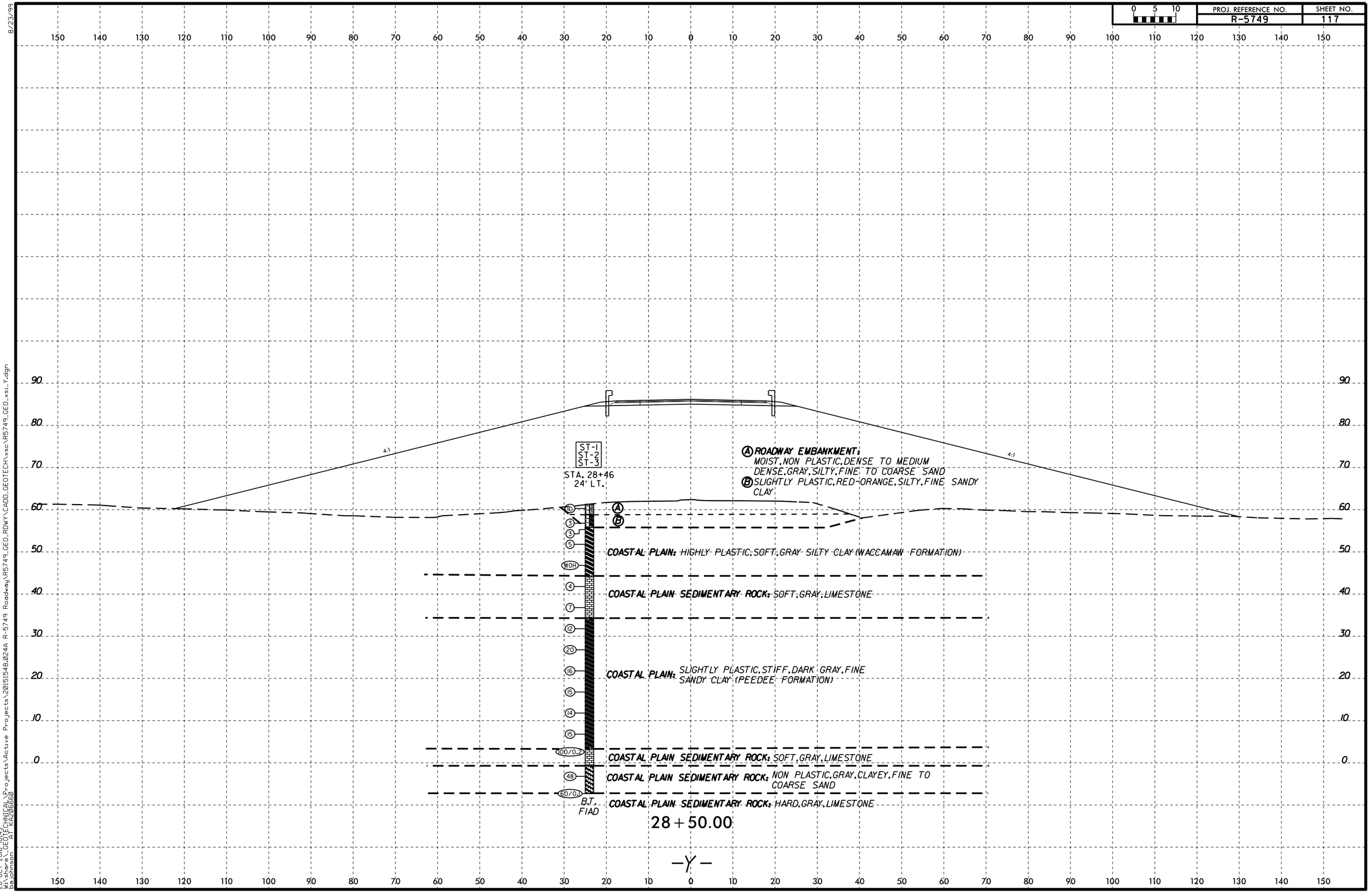


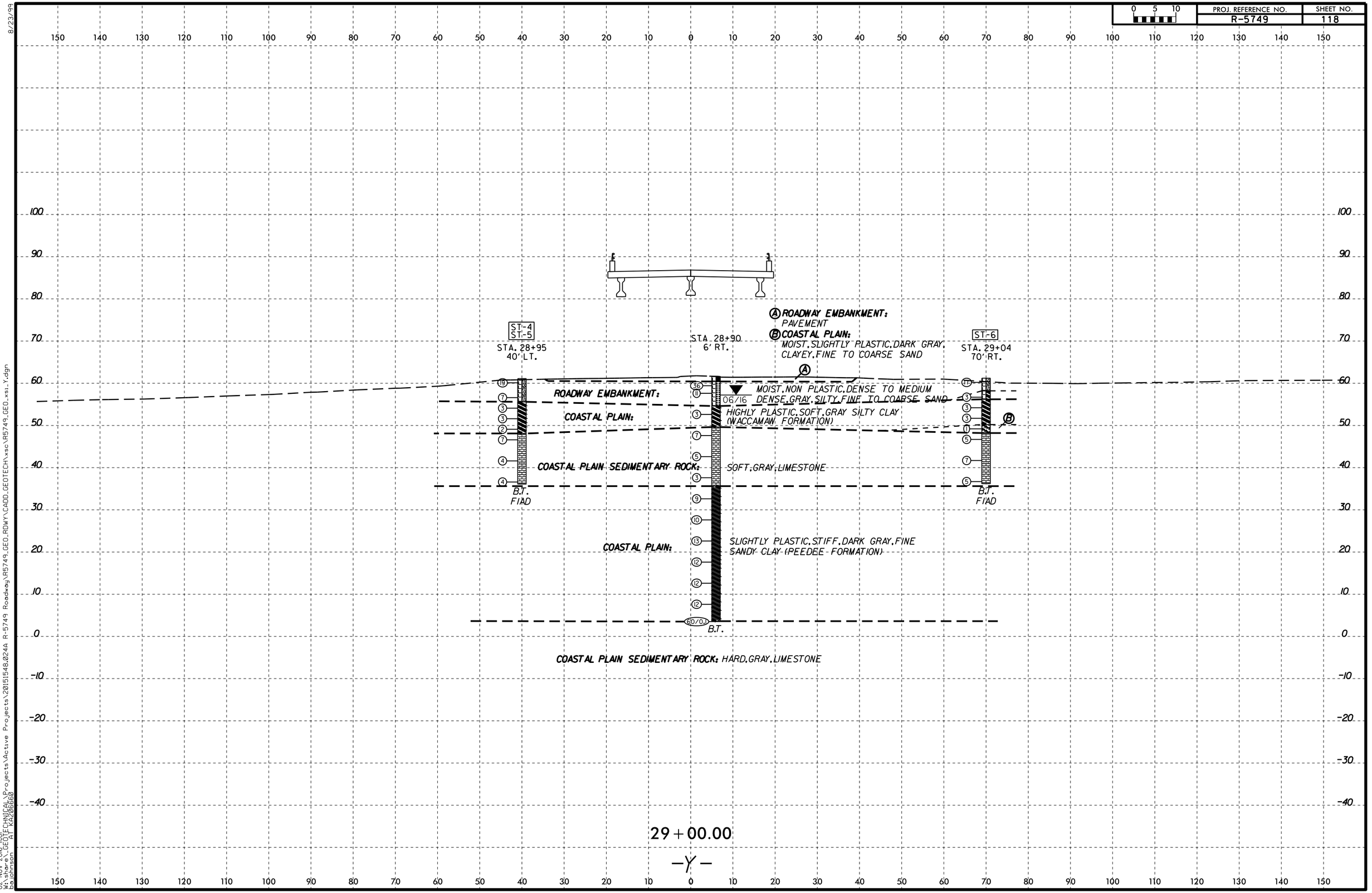
26+50.00

-Y-

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

90 80 70 60 90 80 70 60 50 40

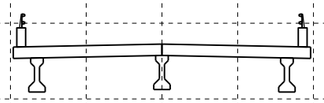




8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	119

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



Ⓐ ROADWAY EMBANKMENT: *MOIST, NON PLASTIC, MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND*

Ⓑ *HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY*

Ⓐ

Ⓑ

COASTAL PLAIN: *HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *SOFT, GRAY, LIMESTONE*

COASTAL PLAIN: *SLIGHTLY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY (PEEDEE FORMATION)*

NON PLASTIC, VERY DENSE, GRAY, CLAYEY, FINE TO COARSE SAND

SLIGHTLY PLASTIC, VERY DENSE, GRAY, FINE TO COARSE SANDY CLAY

COASTAL PLAIN SEDIMENTARY ROCK: *HARD, GRAY, LIMESTONE*

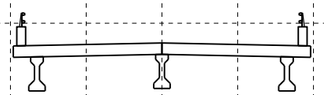
100 90 80 70 60 50 40 30 20 10 0 -10 -20

29 + 50.00

-Y-

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

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_Y.dgn
bajohnson AT KAZOO60



Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND

Ⓑ HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY

STA 30+13
27' LT.

	(24)	Ⓐ
	(4)	Ⓑ
COASTAL PLAIN:	(3)	HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)
	(8)	
COASTAL PLAIN SEDIMENTARY ROCK:	(4)	SOFT, GRAY, LIMESTONE
	(4)	
	(10)	
	(13)	
COASTAL PLAIN:	(11)	SLIGHTLY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY (PEEDEE FORMATION)
	(11)	
	(13)	
	(16)	
	(16)	
	(68)	NON PLASTIC, VERY DENSE, GRAY, CLAYEY, FINE TO COARSE SAND
	(51)	SLIGHTLY PLASTIC, VERY DENSE, GRAY, FINE TO COARSE SANDY CLAY
	(60/0.0)	B.T. CAVED

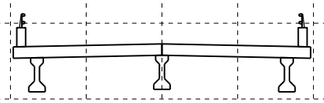
COASTAL PLAIN SEDIMENTARY ROCK: HARD, GRAY, LIMESTONE

30+00.00

-Y-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	121



Ⓐ ROADWAY EMBANKMENT: *MOIST, NON PLASTIC, MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND*

Ⓑ *HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY*

COASTAL PLAIN: *HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *SOFT, GRAY, LIMESTONE*

COASTAL PLAIN: *SLIGHTLY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY (PEEDEE FORMATION)*

NON PLASTIC, VERY DENSE, GRAY, CLAYEY, FINE TO COARSE SAND

SLIGHTLY PLASTIC, VERY DENSE, GRAY, FINE TO COARSE SANDY CLAY

COASTAL PLAIN SEDIMENTARY ROCK: *HARD, GRAY, LIMESTONE*

30 + 50.00

–Y–

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_Y.dgn
bajohnson AT KAZOO660
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_Y.dgn

PROJ. REFERENCE NO.	SHEET NO.
R-5749	122

0 5 10

(A) **ROADWAY EMBANKMENT:** *PAVEMENT*

(B) *MOIST, NON PLASTIC, DENSE TO MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND*

(C) *MOIST, SLIGHTLY PLASTIC, SOFT, DARK BROWN, FINE SANDY CLAY*

(D) **COASTAL PLAIN:** *MOIST, SLIGHTLY PLASTIC, DARK GRAY, CLAYEY, FINE TO COARSE SAND*

(E) **COASTAL PLAIN:** *NON PLASTIC, VERY DENSE, GRAY, CEMENTED SAND*

ST-8
ST-9
STA. 31+20
45' LT.

STA 31+12
2' LT.

ST-7
STA. 31+21
43' RT.

COASTAL PLAIN: *HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)*

COASTAL PLAIN SEDIMENTARY ROCK: *SOFT, GRAY, LIMESTONE*

B.T.
FIAD

COASTAL PLAIN: *NON PLASTIC, VERY DENSE, DARK GRAY, B.T. CLAYEY, FINE TO COARSE SAND*

FIAD *(PEEDEE FORMATION)*

MODERATELY TO SLIGHTLY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY

NON PLASTIC, VERY DENSE TO DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND

B.T.
FIAD

COASTAL PLAIN SEDIMENTARY ROCK: *HARD, GRAY, LIMESTONE*

31+00.00

-Y-

8/23/99

02-NOV-2016 11:01
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD.GEOTECH\xsc\R5749_GEO_xs1_Y.dgn
bjohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	123

4:1

4:1

ROADWAY EMBANKMENT: MOIST, NON PLASTIC, DENSE TO MEDIUM DENSE, BEIGE, SILTY, FINE TO COARSE SAND

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

COASTAL PLAIN: NON PLASTIC, VERY DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND (PEEDEE FORMATION)

MODERATELY TO SLIGHTLY PLASTIC, STIFF TO VERY STIFF, DARK GRAY, FINE SANDY CLAY

NON PLASTIC, VERY DENSE TO DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND

COASTAL PLAIN SEDIMENTARY ROCK: HARD, GRAY, LIMESTONE

31 + 50.00

-Y-

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	124

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

90 80 70 60 50 40 30

4:1 4:1

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, LOOSE, DARK GRAY-BEIGE, SILTY, FINE TO COARSE SAND

Ⓐ **UCP:** SLIGHTLY PLASTIC, SOFT, BROWN-RED, SILTY, FINE SANDY CLAY

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

COASTAL PLAIN: NON PLASTIC, LOOSE TO DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND (PEEDEE FORMATION)

32 + 50.00

-Y-

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

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO_xs1_Y.dgn
bajohnson AT KAZOO60

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	125

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

90 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

4:1 4:1

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, DARK GRAY-BEIGE, SILTY, FINE TO COARSE SAND

Ⓐ

UCP: SLIGHTLY PLASTIC, SOFT, BROWN-RED, SILTY, FINE, SANDY CLAY

9
4 06/16

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

4

COASTAL PLAIN SEDIMENTARY ROCK: SOFT, GRAY, LIMESTONE

4
2

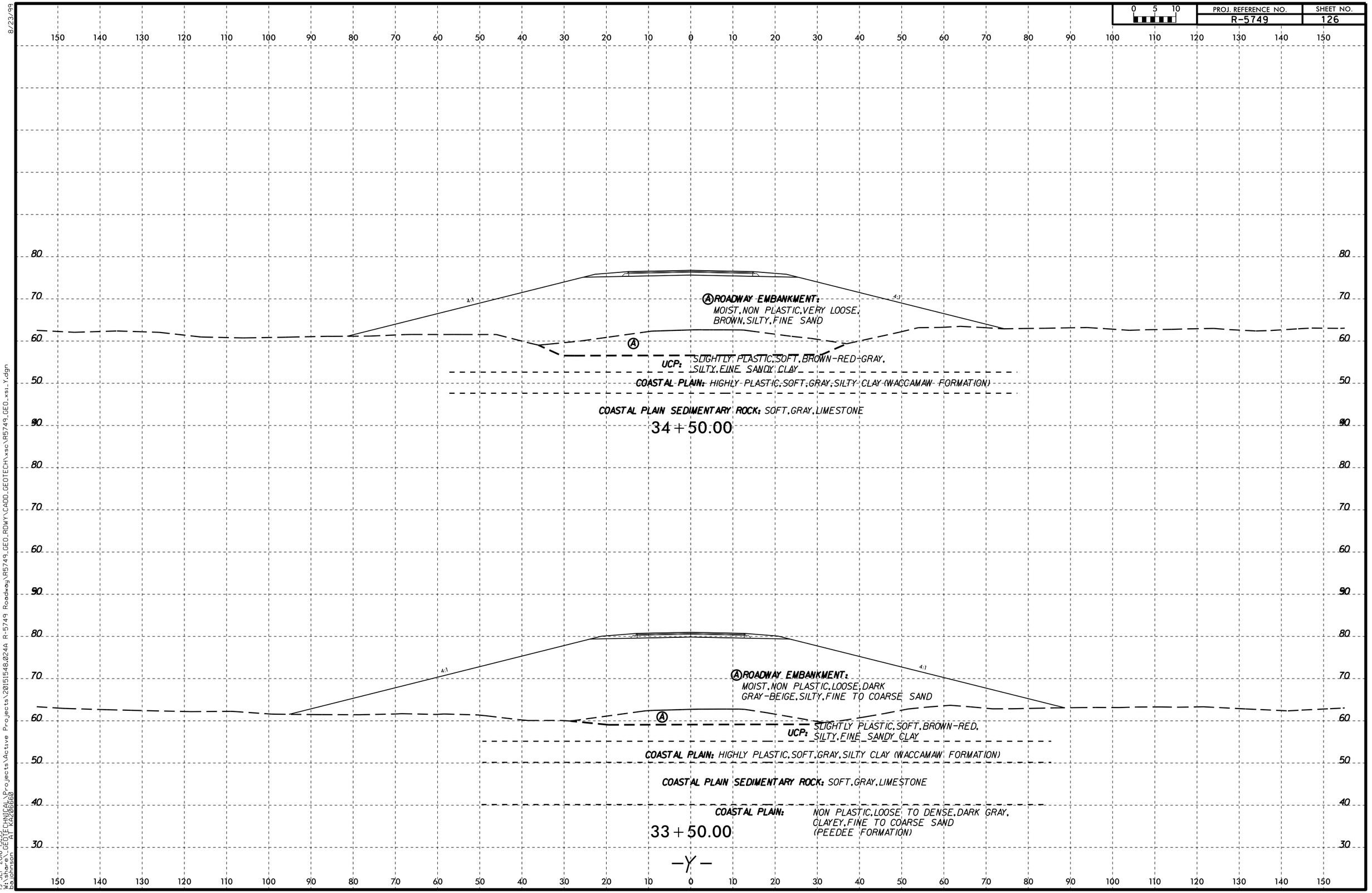
COASTAL PLAIN: NON PLASTIC, LOOSE TO DENSE, DARK GRAY, CLAYEY, FINE TO COARSE SAND (PEEDEE FORMATION)

5
40 B.T.

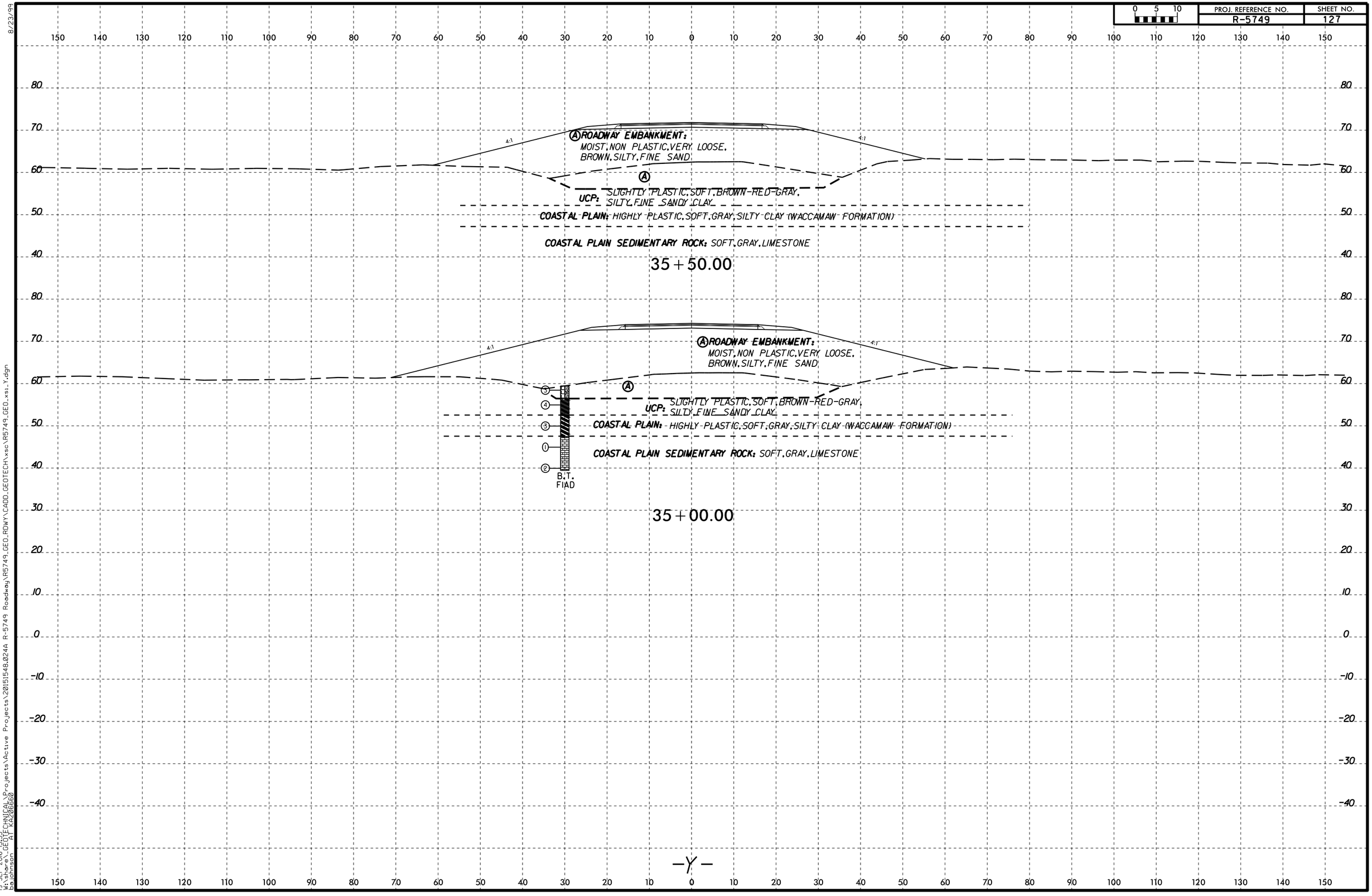
33+00.00

-Y-

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_Y.dgn
bajohnson AT KA206660



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	127



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	128

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

80 70 60 50 40

SHEAR TO "FIRM"

SHEAR TO "FIRM"

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

UCP: MOIST, MODERATELY PLASTIC, MEDIUM STIFF, BROWN, SILTY, FINE SANDY CLAY

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

37 + 50.00

80 70 60 50 40

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

4:1 4:1

UCP: MOIST, MODERATELY PLASTIC, MEDIUM STIFF, BROWN, SILTY, FINE SANDY CLAY

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

5 3 3

B.T. FIAD

37 + 00.00

80 90 80 70 60 50 40

Ⓐ **ROADWAY EMBANKMENT:** MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

4:1 4:1

UCP: MOIST, MODERATELY PLASTIC, MEDIUM STIFF, BROWN, SILTY, FINE SANDY CLAY

COASTAL PLAIN: HIGHLY PLASTIC, SOFT, GRAY, SILTY CLAY (WACCAMAW FORMATION)

36 + 50.00

80 70 60 50 40

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

—Y—

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_Y.dgn
bajohnson AT KAZOO660
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_Y.dgn

70 150 140 130 120 110 100 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 70

60 60

80 80

70 70

60 60

50 50

80 80

Ⓐ UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-RED-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

3:1 3:1

Ⓑ

Ⓐ

WET, HIGHLY PLASTIC, VERY STIFF,
COASTAL PLAIN: DARK GRAY, FINE SANDY, SILTY CLAY
(WACCAMAW FORMATION)

39 + 50.00

70 70

Ⓐ UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-RED-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

S-25

60 60

3:1 3:1

Ⓑ

06/16 Ⓐ

B.T.

WET, HIGHLY PLASTIC, VERY STIFF,
COASTAL PLAIN: DARK GRAY, FINE SANDY, SILTY CLAY
(WACCAMAW FORMATION)

50 50

39 + 00.00

40 40

30 30

80 80

Ⓐ UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-RED-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

70 70

60 60

3:1

SHEAR TO TARC

Ⓑ

Ⓐ

WET, HIGHLY PLASTIC, VERY STIFF,
COASTAL PLAIN: DARK GRAY, FINE SANDY, SILTY CLAY
(WACCAMAW FORMATION)

50 50

38 + 50.00

40 40

–Y–

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

8/23/99

W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_Y.dgn
19-SEP-2016 15:35
bajohnson AT KAZOO60

Ⓐ **UCP:**
MOIST, NON PLASTIC, LOOSE, DARK BROWN, CLAYEY FINE SAND, TRACE OF ORGANIC MATTER

Ⓑ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

3:1 3:1

UCP: WET, MODERATELY PLASTIC, SOFT, GRAY-ORANGE-BROWN, FINE SANDY, SILTY CLAY

41 + 50.00

Ⓐ **UCP:**
MOIST, NON PLASTIC, LOOSE, DARK BROWN, CLAYEY FINE SAND

Ⓑ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

3:1 3:1 06/16

B.T.

UCP: WET, MODERATELY PLASTIC, SOFT, GRAY-ORANGE-BROWN, FINE SANDY, SILTY CLAY

41 + 00.00

Ⓐ **UCP:**
MOIST, NON PLASTIC, LOOSE, DARK BROWN, CLAYEY FINE SAND

Ⓑ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

3:1 3:1

UCP: WET, MODERATELY PLASTIC, SOFT, GRAY-ORANGE-BROWN, FINE SANDY, SILTY CLAY AND SILTY, FINE SANDY CLAY

40 + 50.00

Ⓐ **UCP:**
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-RED-ORANGE, SILTY, FINE SANDY CLAY

Ⓑ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

3:1 3:1

Ⓐ WET, HIGHLY PLASTIC, VERY STIFF, DARK GRAY, FINE SANDY, SILTY CLAY

40 + 00.00

–Y–

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	131

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

90 80 70 60 50 40 30

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

2:1 2:1 Ⓐ

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE, SANDY CLAY

12 + 50.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

2:1 2:1 Ⓐ

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE, SANDY CLAY

12 + 00.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

2:1 2:1 Ⓐ

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE, SANDY CLAY

11 + 50.00

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

2:1 2:1 Ⓐ

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE, SANDY CLAY

11 + 00.00

-DET-

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

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	132

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

70
60
50
40

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

2:1 2:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY

13 + 50.00

Ⓐ ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, LOOSE, BROWN, SILTY, FINE SAND WITH ROOTLETS

2:1 2:1

UCP:
MOIST TO WET, HIGHLY PLASTIC, SOFT TO STIFF, BROWN-GRAY, SILTY, FINE SANDY CLAY

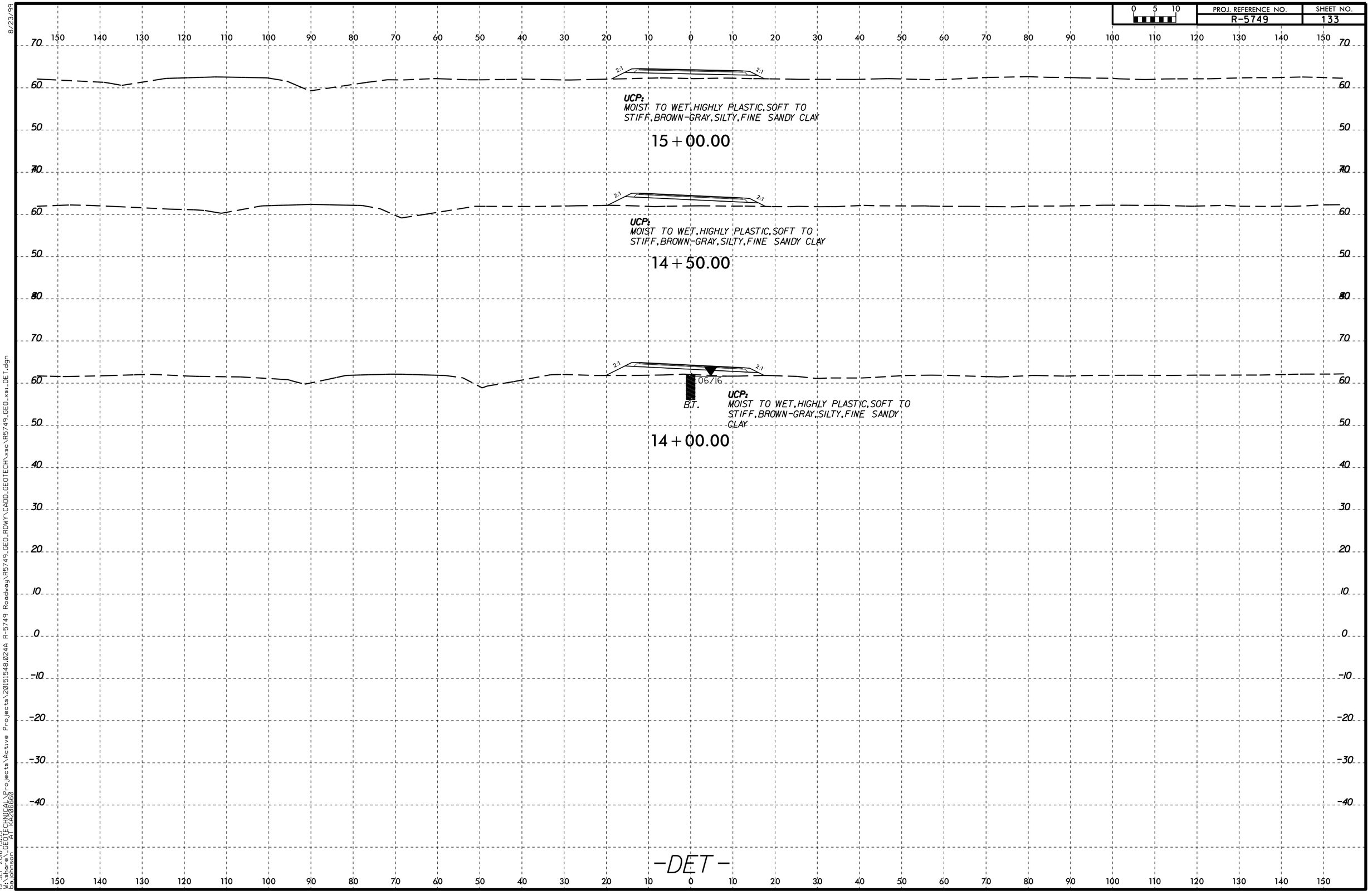
13 + 00.00

-DET-

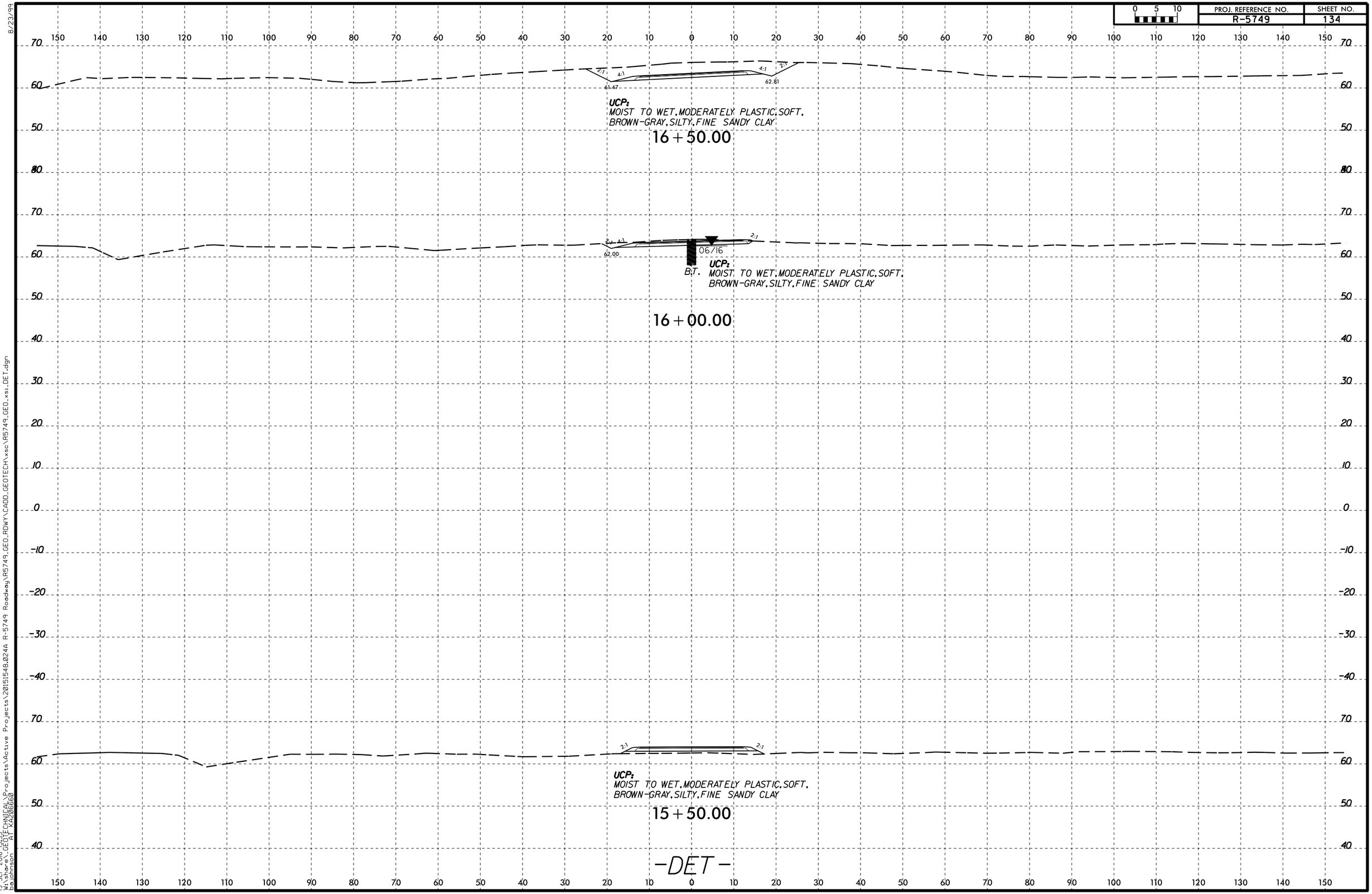
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

8/23/99

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_DET.dgn
bajohnson AT KAZOO60



0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	134



8/23/99

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_xsi_DET.dgn
bjohnson AT KAZOO60

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	135

S-26

2:1 4:1 2:1
60.65
06/16
B.T.

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

18+00.00

2:1 4:1 4:1 2:1
60.92 62.26

UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-GRAY-ORANGE, SILTY, FINE SANDY CLAY

17+50.00

2:1 4:1 4:1 2:1
61.20 62.54

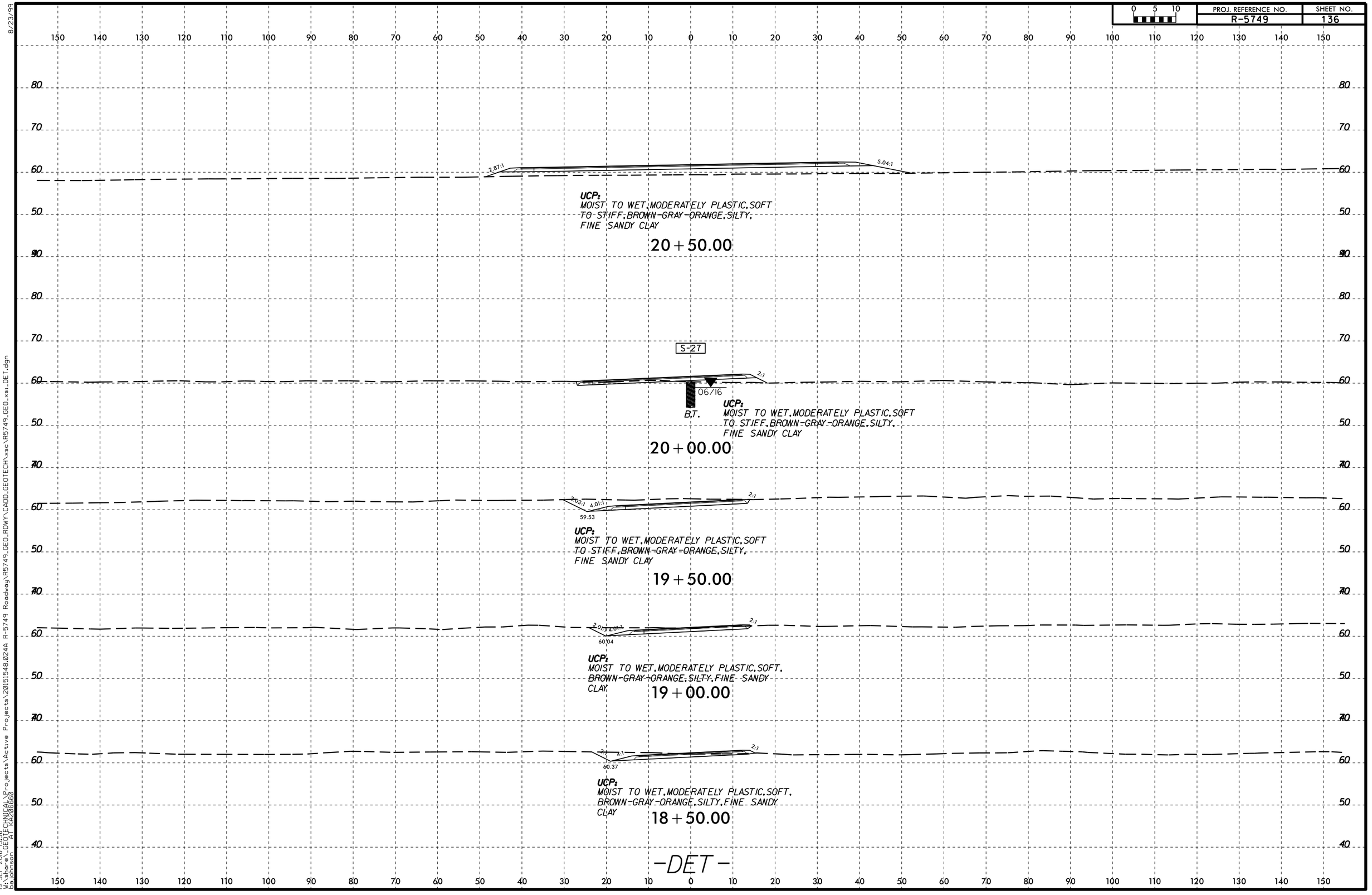
UCP:
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN-GRAY, SILTY, FINE SANDY CLAY

17+00.00

-DET-

8/23/99

19-SEP-2016 15:35
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0244 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_DET.dgn
bajohnson AT KAZOO60



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

70 60 50 40 30 20 10 0

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, MEDIUM DENSE, BROWN, FINE SAND

22+00.00

06/16
B.T.

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, MEDIUM DENSE, BROWN, FINE SAND

21+85.49

12.6:1

0.5:1

ROADWAY EMBANKMENT:
MOIST, NON PLASTIC, MEDIUM DENSE, BROWN, FINE SAND

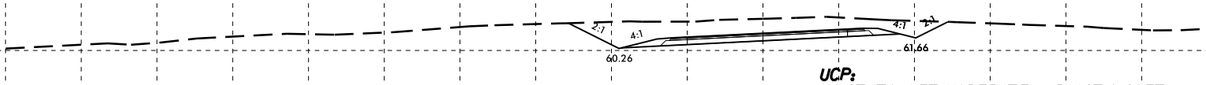
21+50.00

-DET-

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	138

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

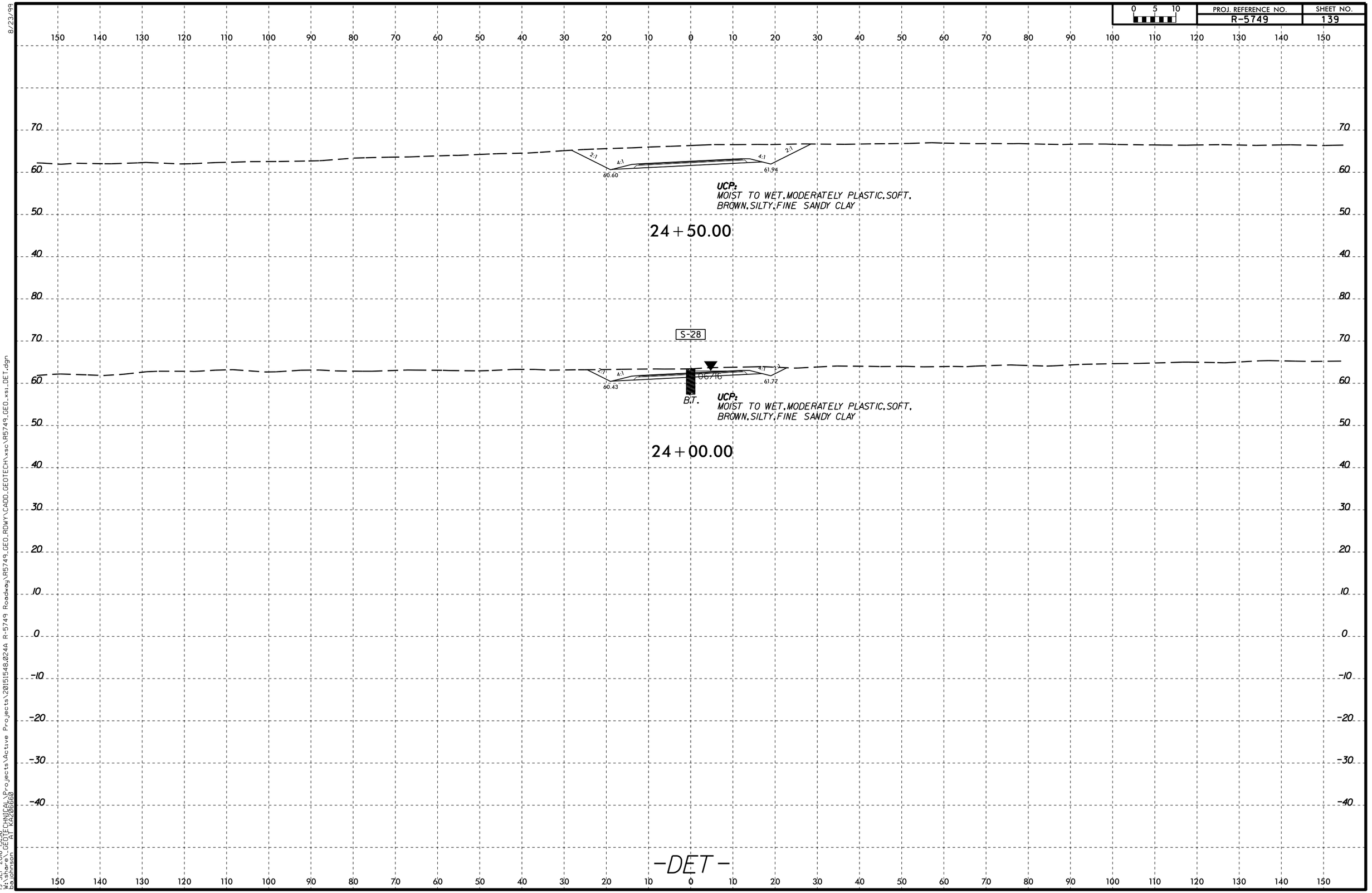
70 60 50 40 30 70 60 50 70 60 50



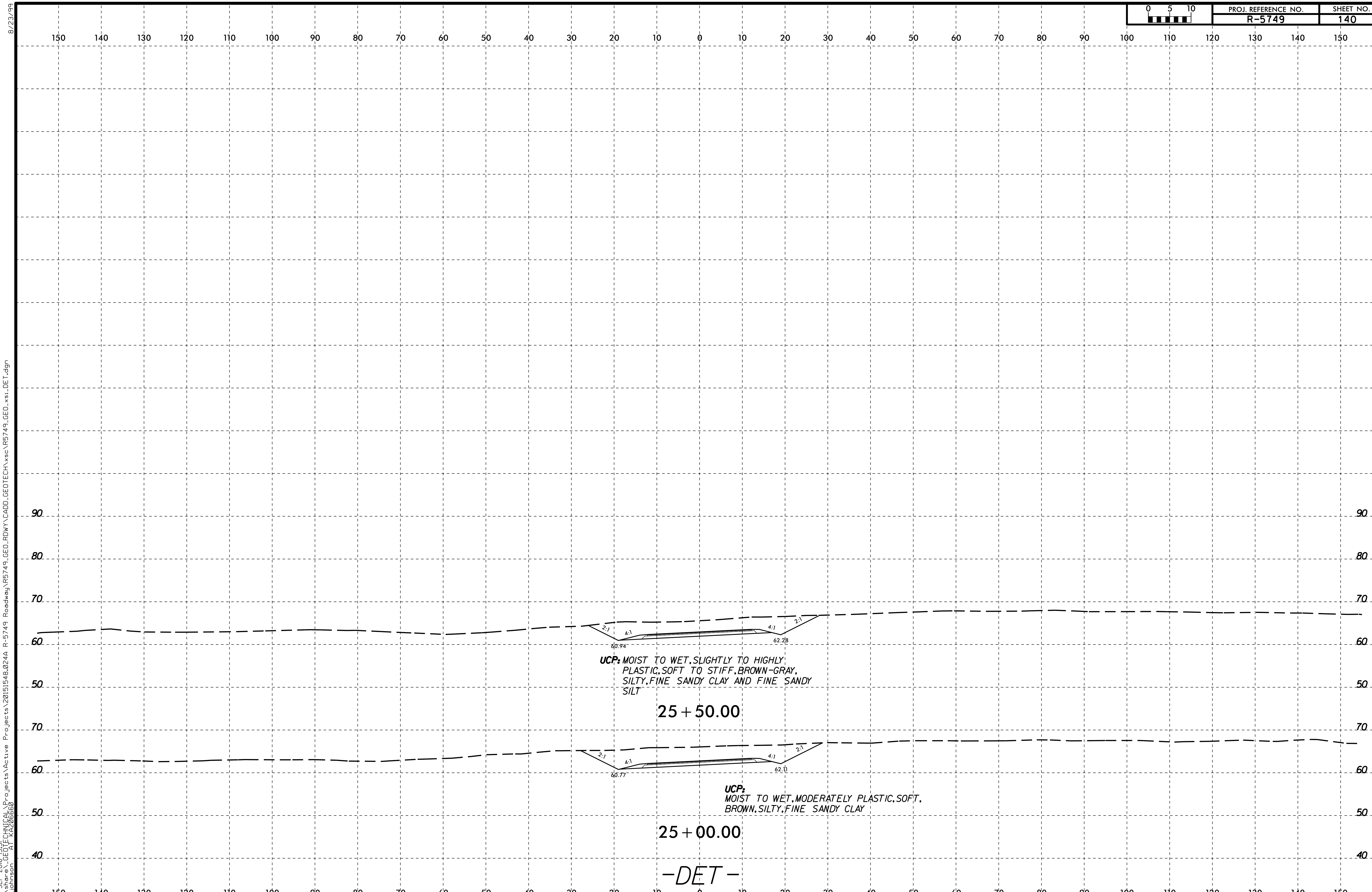
UCP₂
MOIST TO WET, MODERATELY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY CLAY.

23+50.00

-DET-

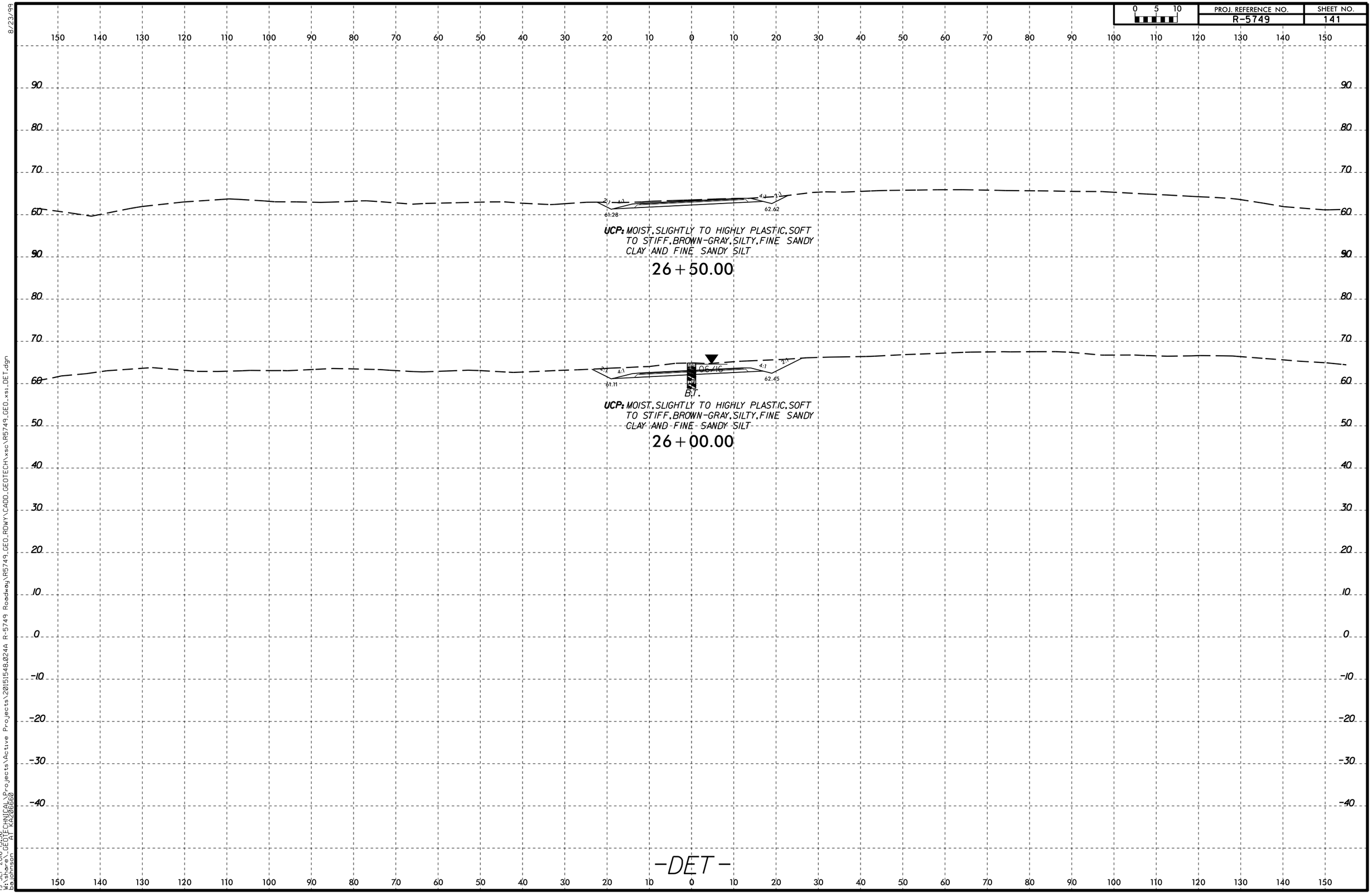


PROJ. REFERENCE NO.	SHEET NO.
R-5749	140



8/23/99

20-SEP-2016 15:51
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xsi_DET.dgn
bajohnson AT KA206660



8/23/99

19-SEP-2016 15:36
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_DET.dgn
bajohnson AT KH206660

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-5749	142

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

80
70
60
50

Ⓐ **UCP:**
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY SILT

2:1 2:1 Ⓐ

MOIST TO WET, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY, SILTY CLAY

27+50.00

Ⓐ **UCP:**
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY SILT

2:1 2:1 Ⓐ

MOIST TO WET, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY, SILTY CLAY

27+00.00

-DET-

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

19-SEP-2016 15:36
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.0241 R-5749 Roadway\R5749_GEO.RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_DET.dgn
bajohnson AT KAZOO60

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

80 70 60 50 90 80 70 60 50 40 30 20 10 0 -10 -20 -30 -40

Ⓐ UCP:
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY SILT

2:1 2:1 Ⓐ

MOIST TO WET, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY, SILTY CLAY

28+50.00

S-29

Ⓐ UCP:
MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY SILT

2:1 2:1 Ⓐ

06/16

B.T.

MOIST TO WET, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY, SILTY CLAY

28+00.00

-DET-

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

70 60 50

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

2:1 2:1

Ⓐ

MOIST, SLIGHTLY PLASTIC, LOOSE TO
UCP: *MEDIUM DENSE, BROWN-GRAY, CLAYEY, FINE SAND*

COASTAL PLAIN:
MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY (WACCAMAW FORMATION)

30 + 50.00

70 60 50

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

2:1 2:1

Ⓐ

06/16
B.T.

MOIST, SLIGHTLY PLASTIC, LOOSE TO
UCP: *MEDIUM DENSE, BROWN-GRAY, CLAYEY, FINE SAND*

COASTAL PLAIN:
MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY (WACCAMAW FORMATION)

30 + 00.00

70 60 50

Ⓐ **ROADWAY EMBANKMENT:**
MOIST, NON PLASTIC, VERY LOOSE, BROWN, SILTY, FINE SAND

2:1

Ⓐ

MOIST, SLIGHTLY PLASTIC, LOOSE TO
UCP: *MEDIUM DENSE, BROWN-GRAY, CLAYEY, FINE SAND*

COASTAL PLAIN:
MOIST, MODERATELY PLASTIC, STIFF, BROWN, SILTY, FINE SANDY CLAY (WACCAMAW FORMATION)

29 + 50.00

90 80 70 60 50 40

Ⓐ **UCP:** *MOIST, SLIGHTLY PLASTIC, SOFT, BROWN, SILTY, FINE SANDY SILT*

2:1 2:1

Ⓐ

MOIST TO WET, MODERATELY PLASTIC, STIFF, BROWN-GRAY, FINE SANDY, SILTY CLAY

29 + 00.00

-DET-

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

8/23/99

19-SEP-2016 15:36
W:\share_GEOTECHNICAL\Projects\Active Projects\20151548.024A R-5749 Roadway\R5749_GEO_RDWY\CADD_GEOTECH\xsc\R5749_GEO_xs1_DET.dgn
bajohnson
AT KH206660

PROJECT REFERENCE NO.	SHEET NO.
R–5749	145

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

APPENDIX A
LABORATORY RESULTS

REFERENCE: R–5749

PROJECT: 53086

XCB 7/8/16
INITIALS DATE

SUMMARY OF LABORATORY TEST DATA

PROJECT NO. 53086.1.FD1 (R-5749)
COUNTY: COLUMBUS
US 74/76 AT SR 1001 (HALLSBORO ROAD CONVERT AT GRADE INTERSECTION TO INTERCHANGE)

									Atterberg Limits			Gradation Results							
Sample No.	Boring Number	Station	Offset	Alignment	Sample Depth (ft.)	Natural Moisture Content (%)	AASHTO Class (Group Index)	N-Value (blows/ ft.)	L.L.	P.L.	P.I.	Pass #10 Sieve	Pass #40 Sieve	Pass #200 Sieve	Retained #270 Sieve	Coarse Sand (%)	Fine Sand (%)	Silt (%)	Clay (%)
S-1	L_2700	27+00	100' LT	-L-	2.0-2.5	17.6	A-6(14)	-	39	10	29	100	92	61	45	13.4	31.6	20.6	34.4
S-2	L_3500	35+00	100' LT	-L-	1.0-1.5	15.8	A-6(13)	-	36	12	24	100	95	65	41	10.9	29.6	25.3	34.2
S-3	L_4300	43+00	30' LT	-L-	3.0-3.5	16.7	A-6(10)	-	32	12	20	100	99	65	43	4.2	38.8	23.3	33.7
S-4	L_5700	57+00	CL	-L-	3.5-4.0	25.8	A-7-6(24)	-	49	15	34	100	98	74	34	5	28.6	24.0	42.4
S-5	L_6700	67+00	110' LT	-L-	1.5-2.0	17.1	A-6(6)	-	26	11	15	100	94	60	46	11.2	34.9	26.7	27.2
S-6	L_7500	75+00	90' RT	-L-	1.0-1.5	15.2	A-6(7)	-	27	12	15	100	96	68	40	8.7	31.5	29.6	30.2
S-7	YRPA_1100	11+00	CL	-YRPA-	3.5-4.0	18.0	A-6(6)	-	28	10	18	100	93	57	50	12.5	37	21	29.5
S-8	YRPA_1500	15+00	CL	-YRPA-	4.0-4.5	26.0	A-6(12)	-	37	13	24	100	97	64	45	5.9	38.7	26.1	29.3
S-9	YRPA_1900	19+00	CL	-YRPA-	1.5-2.0	18.5	A-6(11)	-	32	13	19	100	98	73	37	4.1	32.5	34.3	29.1
S-10	YRPA_2300	23+00	CL	-YRPA-	4.0-4.5	29.0	A-7-6(24)	-	49	14	35	100	99	74	37	3.5	33.6	21.7	41.2
S-11	YRPB_1100	11+00	CL	-YRPB-	1.0-1.5	25.1	A-7-6(22)	-	46	12	34	100	99	73	36	4.1	31.5	20.4	44.0
S-12	YRPB_1500	15+00	CL	-YRPB-	3.0-3.5	20.6	A-6(7)	-	30	12	18	100	98	60	49	5.4	43.6	22.8	28.2
S-13	YRPB_1900	19+00	CL	-YRPB-	3.5-4.0	26.4	A-6(9)	-	32	13	19	100	98	63	48	5.4	42.1	19.5	33.0
S-14	YRPB_2300	23+00	CL	-YRPB-	5.0-5.5	21.0	A-6(16)	-	40	11	29	100	99	67	42	4.6	37.1	19.7	38.6
S-15	YRPC_1300	13+00	CL	-YRPC-	3.0-3.5	20.2	A-7-6(15)	-	42	14	28	100	98	65	44	5.0	38.6	17.6	38.8
S-16	YRPC_1300	13+00	CL	-YRPC-	5.0-5.5	27.8	A-7-6(46)	-	68	10	58	100	98	79	27	3.2	23.8	22.2	50.8
S-17	YRPC_2300	23+00	CL	-YRPC-	4.0-4.5	29.5	A-7-6(13)	-	42	17	25	100	97	62	45	6.7	37.8	17.4	38.1
S-18	YRPC_2500	25+00	CL	-YRPC-	4.0-4.5	23.9	A-6(5)	-	26	13	13	100	98	61	48	5.1	43.0	24.9	27.0
S-19	YRPD_1100	11+00	CL	-YRPD-	1.0-1.5	17.4	A-6(5)	-	27	12	15	100	93	55	51	12.0	39.0	21.7	27.3
S-20	YRPD_1500	15+00	CL	-YRPD-	1.5-2.0	17.7	A-4(0)	-	15	NP	NP	100	95	48	60	9.1	51.0	26.3	13.6
S-21	YRPD_1900	19+00	CL	-YRPD-	3.5-4.0	22.8	A-6(11)	-	39	14	25	100	96	58	49	6.7	42.6	17.9	32.8
S-22	YRPD_2300	23+00	CL	-YRPD-	1.5-2.0	23.8	A-7-6(21)	-	45	14	31	100	97	73	34	4.7	29.7	27.7	37.9
S-23	Y_1800	18+00	20' LT	-Y-	1.0-1.5	20.7	A-6(12)	-	34	13	21	100	99	71	40	3.4	36.3	29.1	31.2
S-24	Y_2200	22+00	20' RT	-Y-	0.5-1.0	17.0	A-6(3)	-	23	13	10	100	98	65	46	4.4	41.7	32.2	21.7
S-25	Y_3900	39+00	30' LT	-Y-	0.5-1.0	24.0	A-6(12)	-	36	13	23	100	97	67	41	5.7	35.4	26.0	32.9
S-26	DET_1800	18+00	CL	-DET-	4.0-4.5	18.3	A-6(9)	-	29	12	17	100	99	72	36	4.2	32.0	29.1	34.7
S-27	DET_2000	20+00	CL	-DET-	3.0-3.5	19.2	A-6(14)	-	34	12	22	100	98	75	32	3.6	28.8	29.3	38.3
S-28	DET_2400	24+00	CL	-DET-	0.5-1.0	23.6	A-6(9)	-	32	13	19	100	99	64	45	3.7	41.2	23.5	31.6
S-29	DET_2800	28+00	CL	-DET-	0.5-1.0	22.3	A-4(1)	-	21	14	7	100	96	56	54	6.8	46.8	27.9	18.5
ST-1	EB1-A	28+46	24' LT	-Y-	5.0-7.0	-	A-7-6 (45)	-	64	13	51	98	98	85	32	0.6	31.5	33.4	34.5
ST-2	EB1-A	28+46	24' LT	-Y-	30.0-32.0	-	A-6 (3)	-	33	12	21	97	93	39	38	19.9	41.5	16.5	22.2
ST-3	EB1-A	28+46	24' LT	-Y-	45.0-47.0	-	A-6 (4)	-	35	16	19	100	97	43	34	17.7	48.1	14.0	20.2
ST-4	Y_2892	28+92	38' LT	-Y-	8.0-10.0	-	A-7-6 (15)	3	47	19	28	100	98	63	45	5.0	40.0	19.9	35.1
ST-5	Y_2892	28+92	38' LT	-Y-	10.0-12.0	-	A-7-6 (28)	2	59	16	43	100	98	69	40	5.1	35.0	36.8	23.7
ST-6	Y_2904	29+04	73' RT	-Y-	10.0-12.0	-	A-2-6 (0)	1	32	20	12	98	77	27	73	38.4	34.9	4.6	22.0
ST-7	Y_3117	31+17	44' RT	-Y-	10.0-12.0	-	A-7-6 (58)	3	74	18	56	100	100	94	20	0.2	19.4	27.5	53.0
ST-8	Y_3117	31+17	46' LT	-Y-	9.0-11.0	-	A-7-6 (28)	3	50	18	32	100	99	86	35	0.9	33.7	28.8	36.6
ST-9	Y_3117	31+17	46' LT	-Y-	11.0-13.0	-	A-2-6 (0)	1	29	17	12	97	75	30	71	34.8	35.7	9.6	20.0

SS = Split-Barrel Sample (ASTM-D-1586) ST = Shelby Tube (Undisturbed) Sample S = Grab Sample NP -- Non Plastic NA-- Non Applicable

Lab Technician: NCDOT Certification No.: 111-06-1203 Jonathan Creech