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PROJECT: 50143.1.FDI REFERENCE: W-5522

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5522	1	13

STRUCTURE
SUBSURFACE INVESTIGATION

CONTENTS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3-9	SITE PLAN(S) AND PROFILE(S)
10-12	BORE LOG(S)
13	SOIL TEST RESULTS

COUNTY WAKE

PROJECT DESCRIPTION SR 1656 (TRINITY RD.) AT SR 1658 (YOUTH CENTER DR.) INTERSECTION IN RALEIGH. CONSTRUCT PEDESTRIAN TUNNEL UNDER 1656 (TRINITY RD.)

SITE DESCRIPTION RETAINING WALLS 1-8 ALONG NORTH AND SOUTH RAMPS TO PEDESTRIAN TUNNEL

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1919 TOT-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

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

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

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

PERSONNEL

D.G. PINTER

O.B. OTI

J.R. SWARTLEY

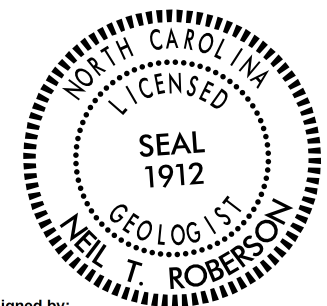
INVESTIGATED BY J.R. SWARTLEY

DRAWN BY J.R. SWARTLEY

CHECKED BY N.T. ROBERSON

SUBMITTED BY N.T. ROBERSON

DATE FEBRUARY 2017



DocuSigned by:
Neil Roberson 4061D9A8C8C649C... 3/3/2017

SIGNATURE DATE

**DOCUMENT NOT CONSIDERED FINAL
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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 (ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

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

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

CONSISTENCY OR DENSENESS

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

TEXTURE OR GRAIN SIZE

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

SOIL MOISTURE - CORRELATION OF TERMS

Table correlating Soil Moisture Scale (Atterberg Limits) with Field Moisture Description (Saturated, Wet, Moist, Dry) and Plasticity Limit (LL, PL, OM, SL).

PLASTICITY

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

COLOR

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

GRADATION

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

ANGULARITY OF GRAINS

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

MINERALOGICAL COMPOSITION

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

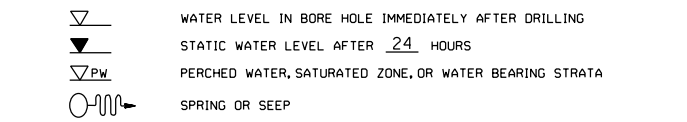
COMPRESSIBILITY

Table showing Compressibility levels (Slightly, Moderately, Highly) and corresponding SPT N values (LL < 31, LL = 31 - 50, LL > 50).

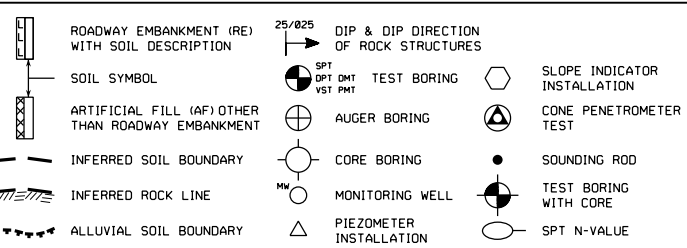
PERCENTAGE OF MATERIAL

Table showing percentages of Organic Material, Granular Soils, Silty-clay Soils, and Other Material.

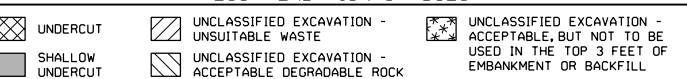
GROUND WATER



MISCELLANEOUS SYMBOLS



RECOMMENDATION SYMBOLS



ABBREVIATIONS

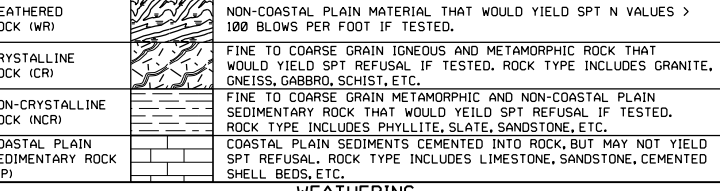
Table of abbreviations for test methods (AR, BT, CL, CPT, CSE, DMT, DPT, e, F, FOSS, FRAC, FRAGS, HI), soil types (MED., MICA, MOD., NP, ORG., PMT, SAP., SD., SL., TCR, w, V), and vane shear test (VST, WEATHERED, UNIT WEIGHT, DRY UNIT WEIGHT).

EQUIPMENT USED ON SUBJECT PROJECT

Form for listing equipment used on the project, including Drill Units (CME-45C, CME-55, CME-550, Vane Shear Test, Portable Hoist), Advancing Tools (Clay Bits, Augers, Inserts, Casings, Tricone bits, Core Bit), and Hammer Type (Automatic, Manual) with Core Size and Hand Tools (Post Hole Digger, 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:



WEATHERING

Table describing weathering conditions: Fresh, Very Slight (IV SLI), Slight (SLI), Moderate (MOD), Moderately Severe (MOD. SEV.), Severe (SEV.), Very Severe (V SEV.), and Complete. Includes descriptions of rock appearance and SPT N-value ranges.

ROCK HARDNESS

Table describing rock hardness levels: Very Hard, Hard, Moderately Hard, Medium Hard, and Soft, with corresponding descriptions of how they are excavated or tested.

FRACTURE SPACING

Table showing Fracture Spacing (Term, Spacing) and Bedding (Term, Thickness) with corresponding descriptions.

INDURATION

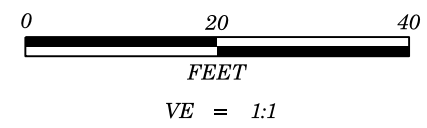
Table describing induration levels: Friable, Moderately Indurated, Indurated, and Extremely Indurated, with descriptions of how they are tested and broken.

TERMS AND DEFINITIONS

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

NOTES

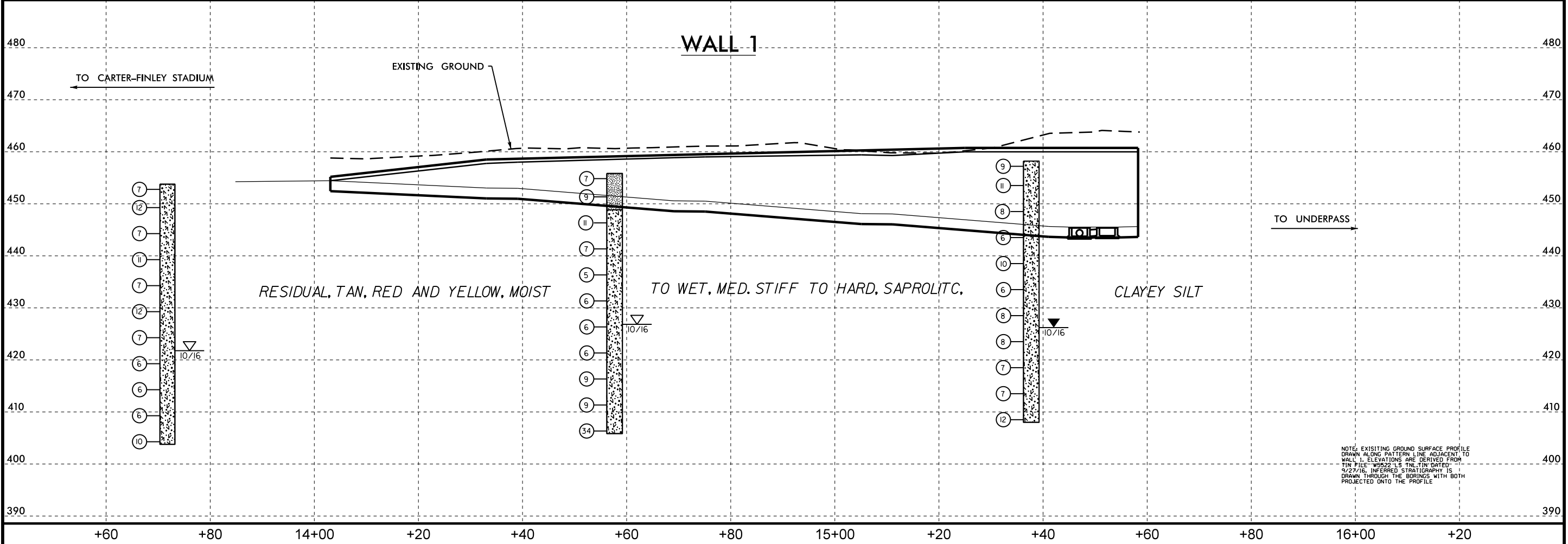
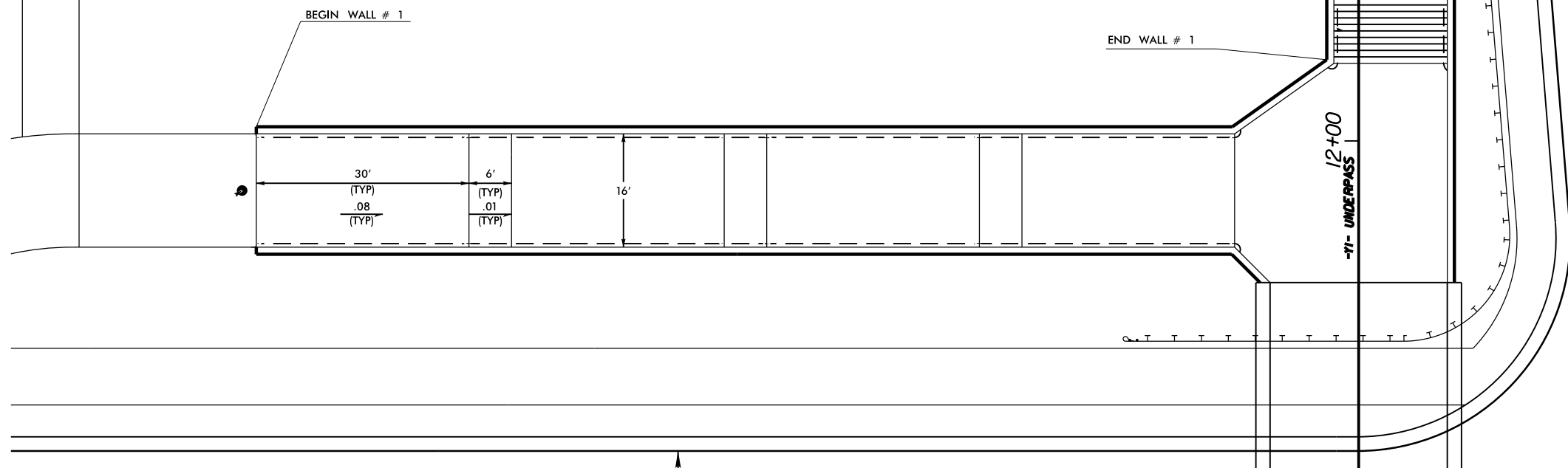
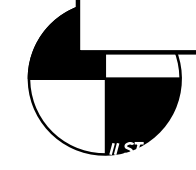
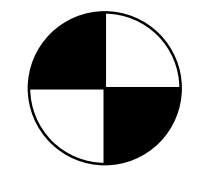
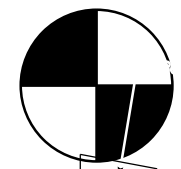
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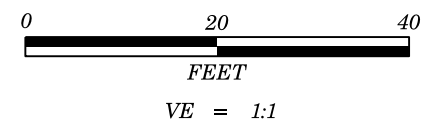
W6

W5

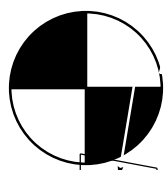
W4



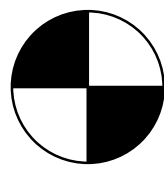
NOTE: EXISTING GROUND SURFACE PROFILE DRAWN ALONG PATTERN LINE ADJACENT TO WALL 1. ELEVATIONS ARE DERIVED FROM THE FILE: W5522-LS-TN-LIN.DWG, DATED 9/27/16. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE.



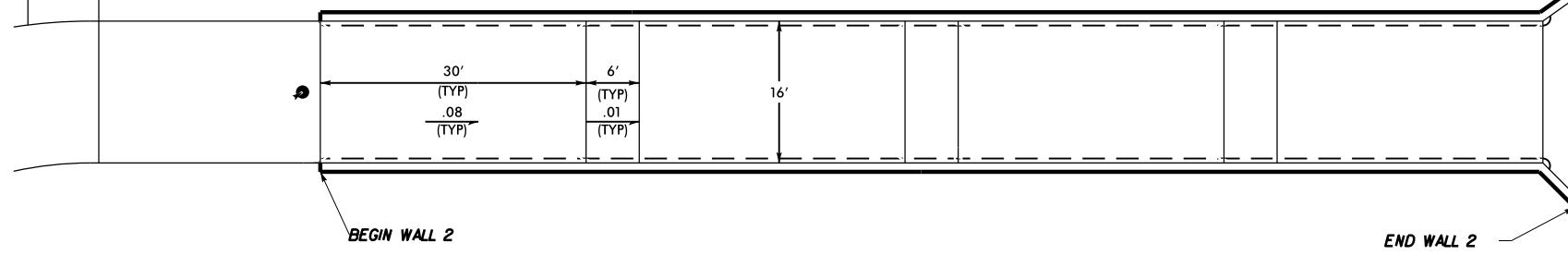
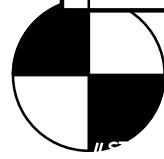
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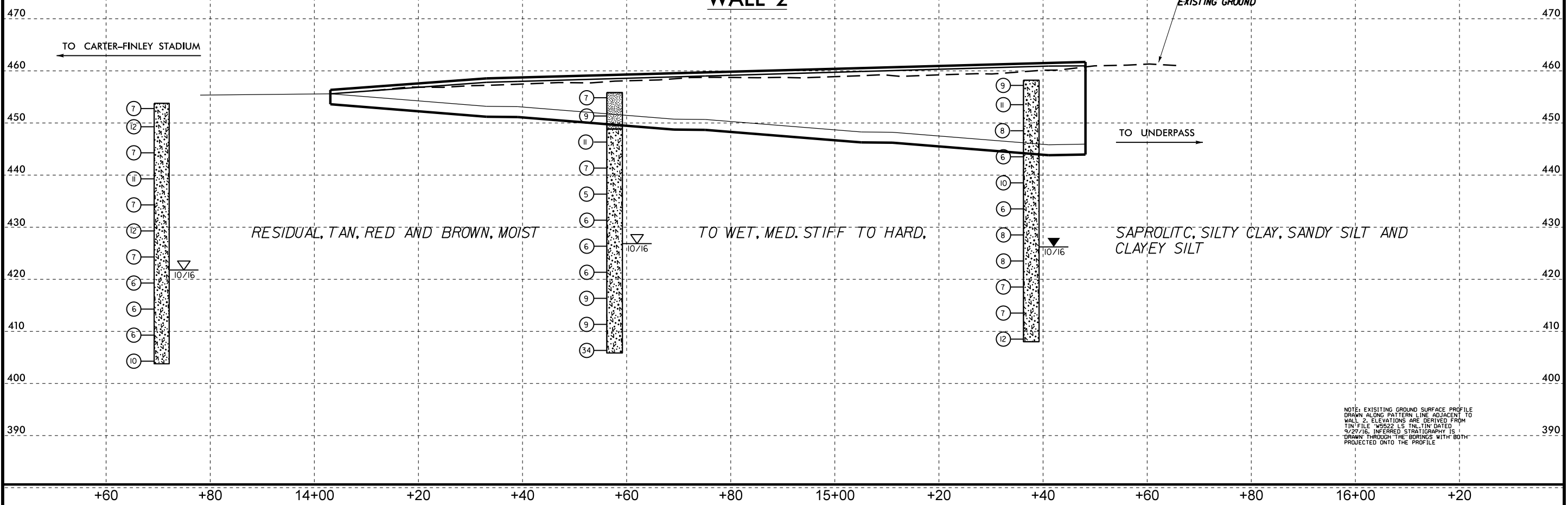
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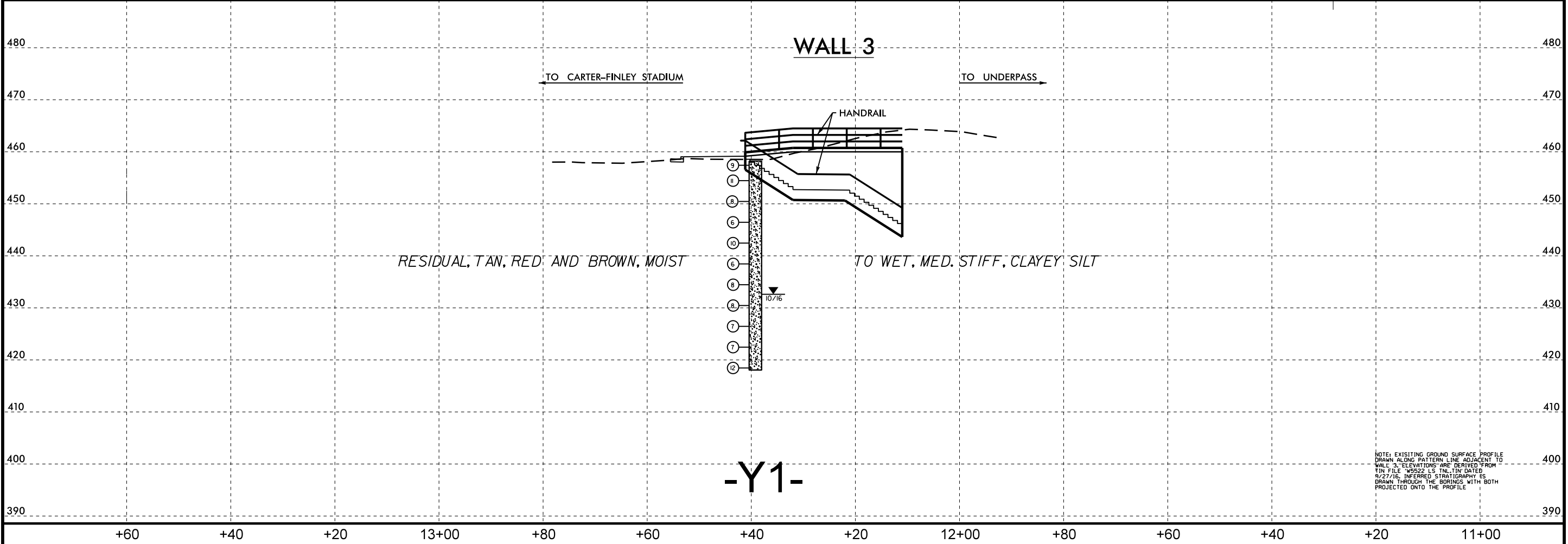
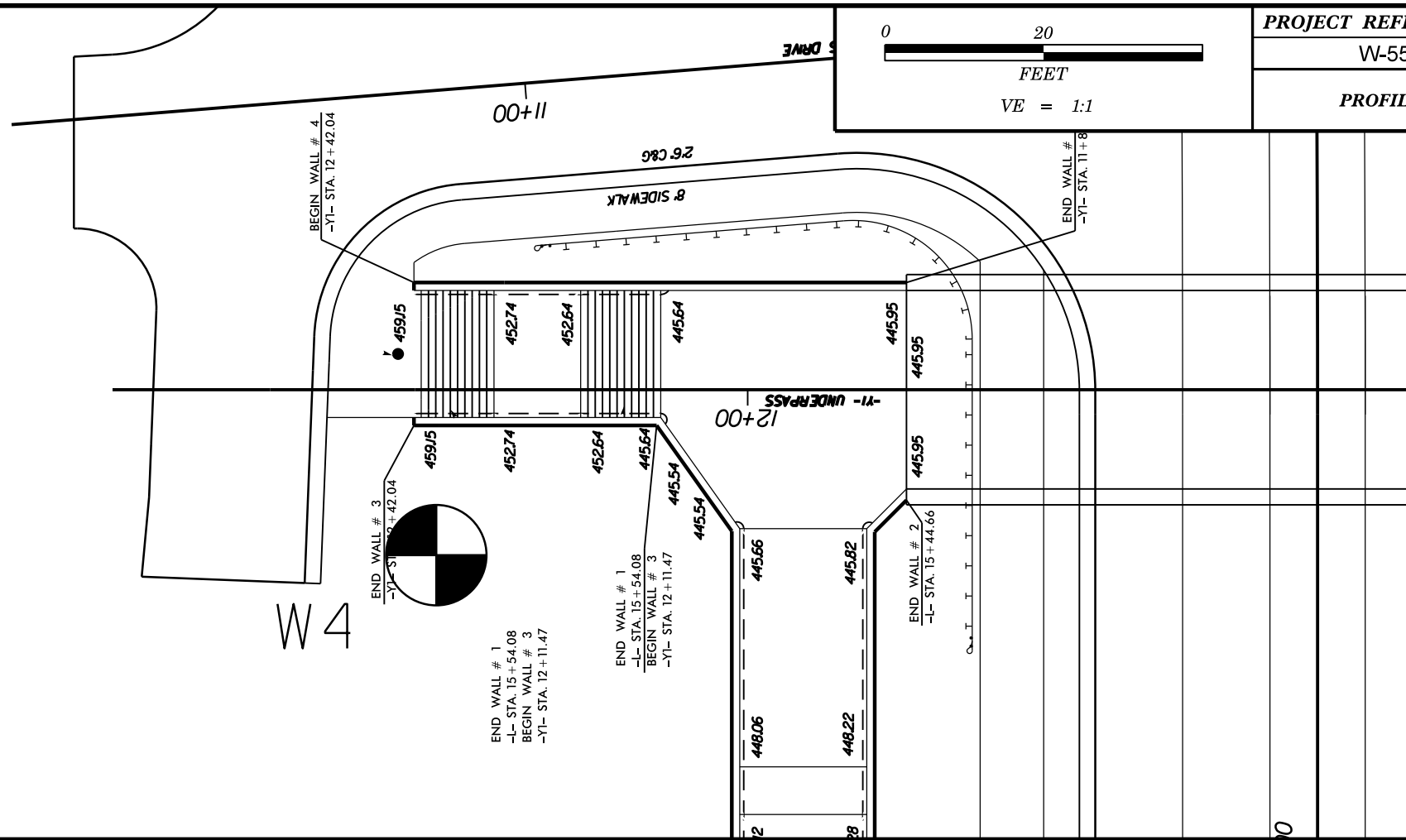
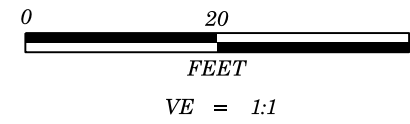


W4

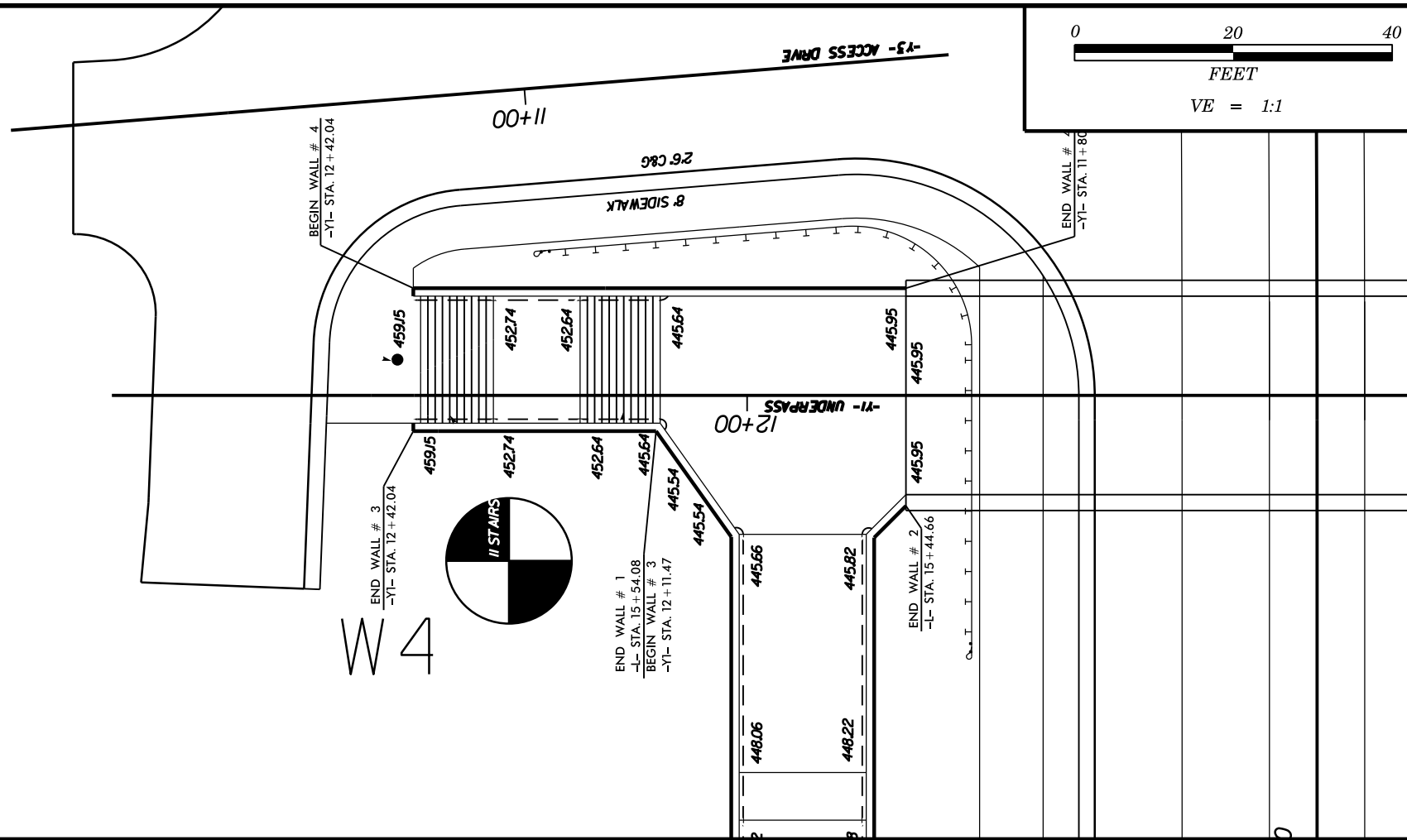
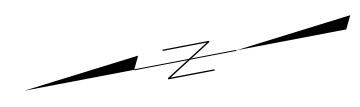
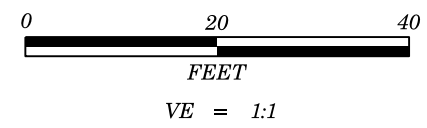


WALL 2

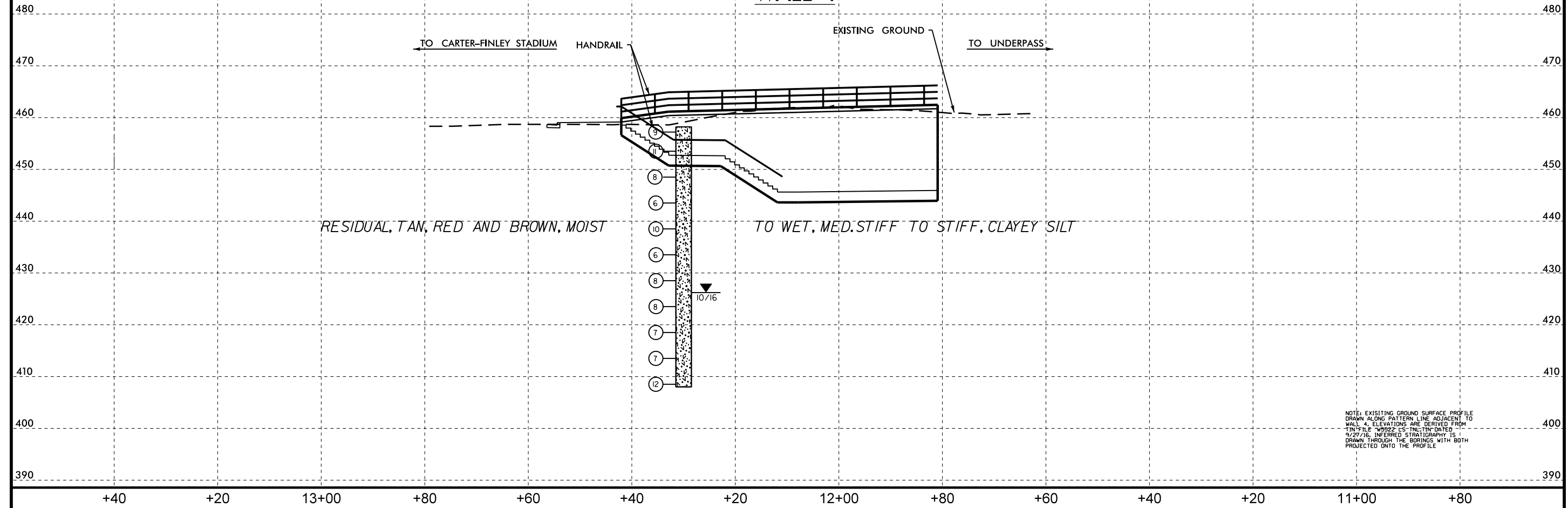




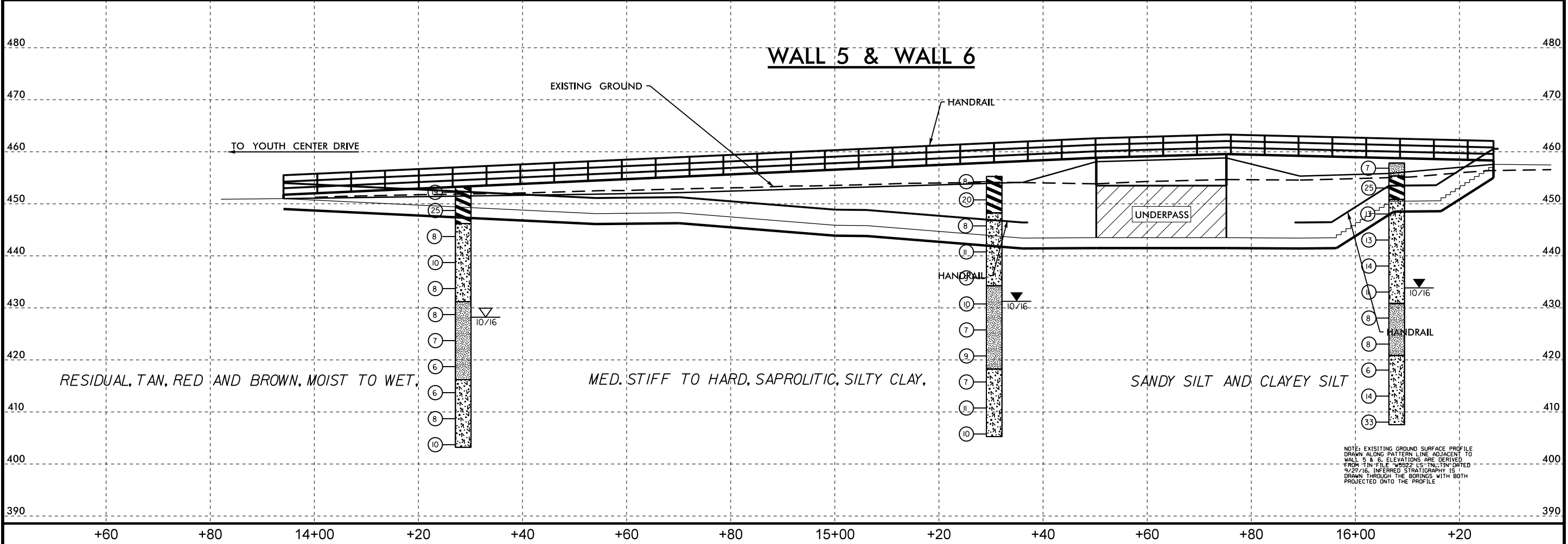
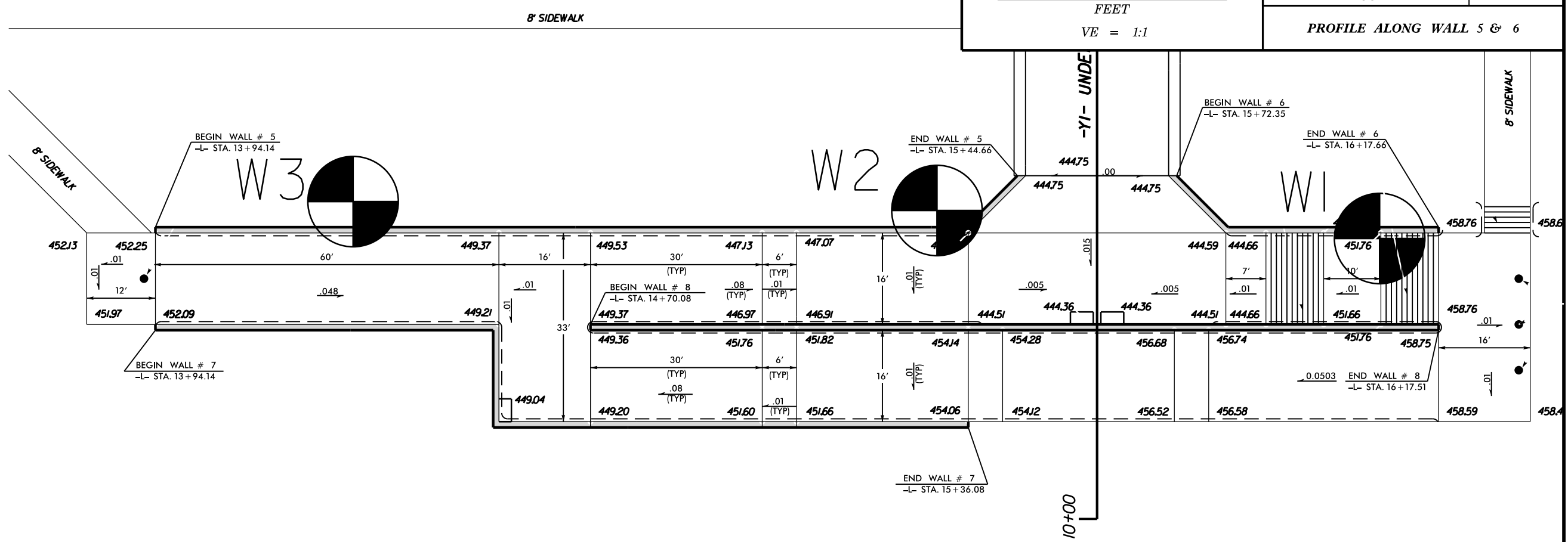
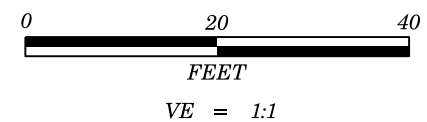
NOTE: EXISTING GROUND SURFACE PROFILE DRAWN ALONG PATTERN LINE ADJACENT TO WALL 3. ELEVATIONS ARE DERIVED FROM TIN FILE "W5522 LS TIN.TIN" DATED 9/27/16. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE.



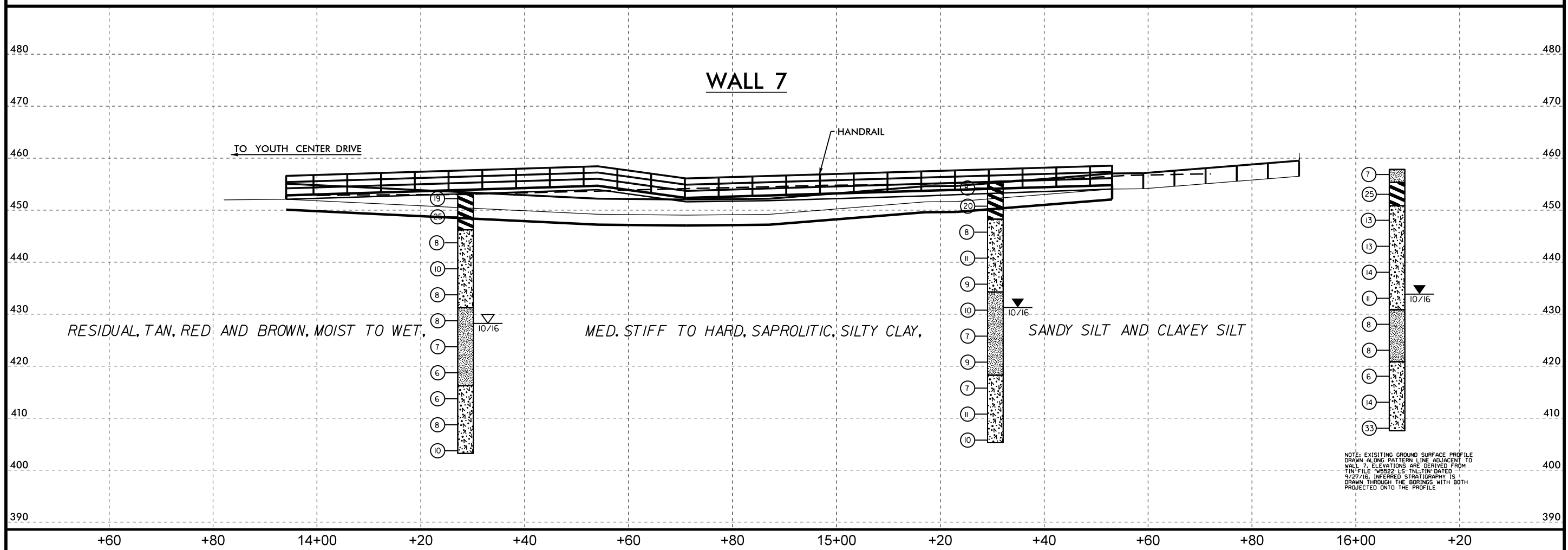
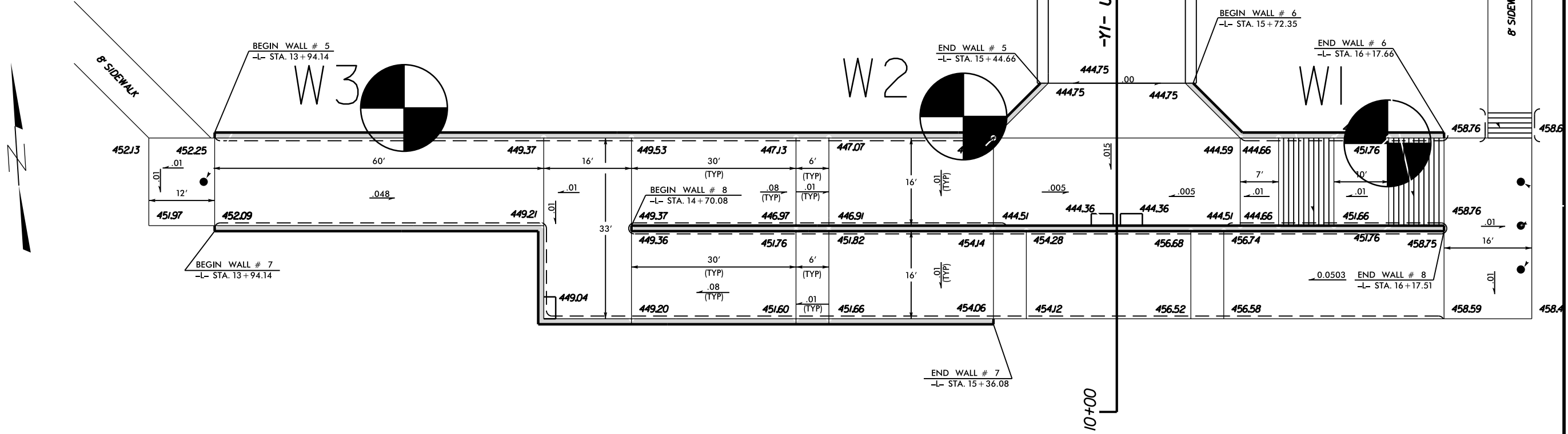
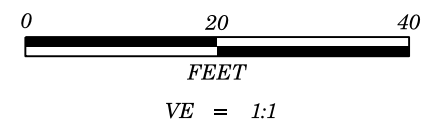
WALL 4

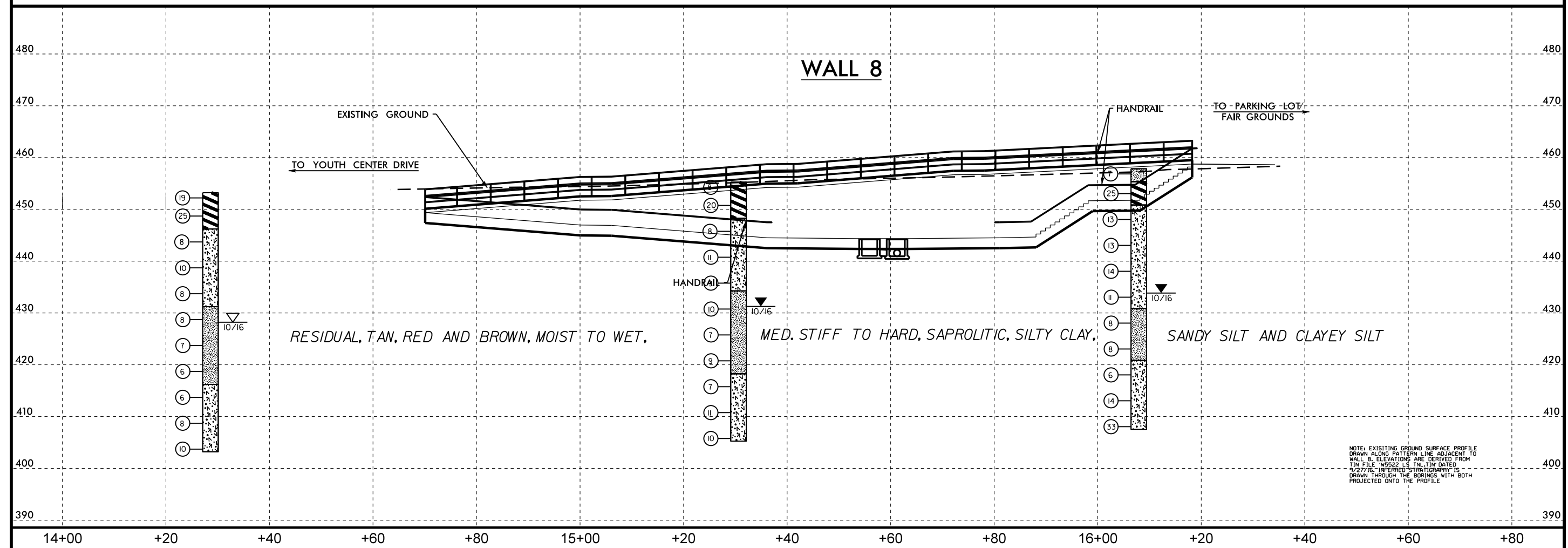
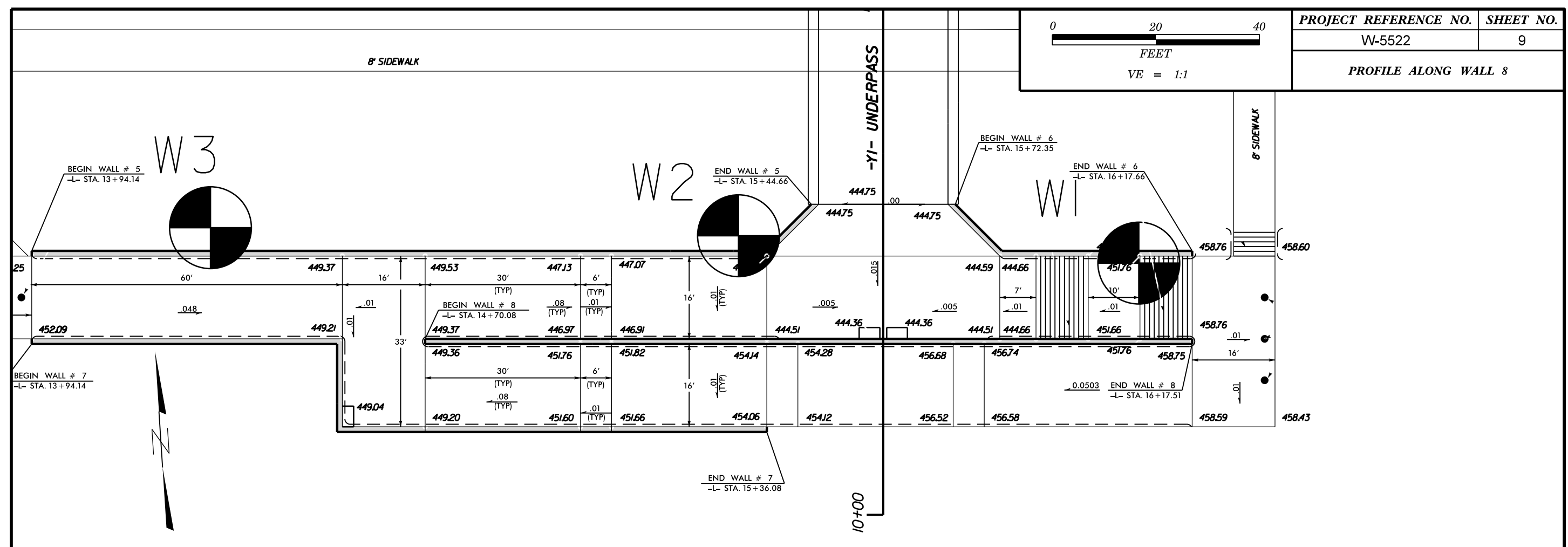
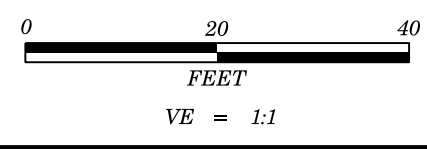


NOTE: EXISTING GROUND SURFACE PROFILE DRAWN ALONG PATTERN LINE ADJACENT TO WALL 4. ELEVATIONS ARE DERIVED FROM TIN FILE W-5522-15, INLET DATED 9/27/16. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE



NOTE: EXISTING GROUND SURFACE PROFILE DRAWN ALONG PATTERN LINE ADJACENT TO WALL 5 & 6. ELEVATIONS ARE DERIVED FROM 1"=16' FILE W-5522 CS-TNLTIN-DATED 9/29/16. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE.





GEOTECHNICAL BORING REPORT

BORE LOG

WBS 50143.1.FD1		TIP W-5522		COUNTY WAKE		GEOLOGIST Oti, O. B.	
SITE DESCRIPTION SR 1656 (Trinity Rd.) at SR 1658 (Youth Center Dr.) Intersection in Raleigh. Construct Ped. Tunnel under Trinity Rd.						GROUND WTR (ft)	
BORING NO. W1		STATION 16+07		OFFSET 79 ft RT		ALIGNMENT -L-	
COLLAR ELEV. 457.8 ft		TOTAL DEPTH 50.3 ft		NORTHING 745,657		EASTING 2,084,288	
DRILL RIG/HAMMER EFF./DATE RFO0067 CME-550X 85% 07/12/2016				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic	
DRILLER Pinter, D. G.		START DATE 10/03/16		COMP. DATE 10/03/16		SURFACE WATER DEPTH N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
460														457.8	GROUND SURFACE	0.0
455	457.8	0.0	5	3	4	7	10	15					M	455.3	RESIDUAL TAN AND BROWN, SANDY SILT RED AND BROWN, HIGHLY PLASTIC, SILTY CLAY	2.5
450	454.0	3.8	7	10	15								M	450.8	TAN, RED AND BROWN, SAPROLITIC, CLAYEY SILT AND SANDY SILT	7.0
445	449.0	8.8	4	6	7								M			
440	444.0	13.8	5	6	7								M			
435	439.0	18.8	4	6	8								M			
430	434.0	23.8	4	4	7								M			
425	429.0	28.8	2	3	5								W			
420	424.0	33.8	1	3	5								W			
415	419.0	38.8	4	3	3								W			
410	414.0	43.8	2	5	9								W			
	409.0	48.8	8	13	20								W			
														407.5	Boring Terminated at Elevation 407.5 ft IN HARD RESIDUAL (CLAYEY SILT)	50.3

WBS 50143.1.FD1		TIP W-5522		COUNTY WAKE		GEOLOGIST Oti, O. B.	
SITE DESCRIPTION SR 1656 (Trinity Rd.) at SR 1658 (Youth Center Dr.) Intersection in Raleigh. Construct Ped. Tunnel under Trinity Rd.						GROUND WTR (ft)	
BORING NO. W2		STATION 15+31		OFFSET 74 ft RT		ALIGNMENT -L-	
COLLAR ELEV. 455.3 ft		TOTAL DEPTH 50.0 ft		NORTHING 745,666		EASTING 2,084,211	
DRILL RIG/HAMMER EFF./DATE RFO0067 CME-550X 85% 07/12/2016				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic	
DRILLER Pinter, D. G.		START DATE 10/03/16		COMP. DATE 10/03/16		SURFACE WATER DEPTH N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
460														455.3	GROUND SURFACE	0.0
455	455.3	0.0	4	3	5	6	8	12					M	448.3	RESIDUAL TAN, RED AND BROWN, SAPROLITIC, CLAYEY SILT AND SANDY SILT	7.0
450	451.8	3.5	6	8	12								M			
445	446.8	8.5	3	4	4								M			
440	441.8	13.5	3	5	6								M			
435	436.8	18.5	3	3	6								M			
430	431.8	23.5	3	4	6								M			
425	426.8	28.5	2	3	4								W			
420	421.8	33.5	1	3	6								W			
415	416.8	38.5	2	3	4								W			
410	411.8	43.5	2	4	7								W			
	406.8	48.5	3	4	6								W			
														405.3	Boring Terminated at Elevation 405.3 ft IN STIFF RESIDUAL (CLAYEY SILT)	50.0

NCDOT BORE DOUBLE W5522_GEO_TUNNEL&RWAL_SPT_BORINGS.GPJ NC_DOT.GDT 2/28/17

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 50143.1.FD1		TIP W-5522		COUNTY WAKE		GEOLOGIST Oti, O. B.								
SITE DESCRIPTION SR 1656 (Trinity Rd.) at SR 1658 (Youth Center Dr.) Intersection in Raleigh. Construct Ped. Tunnel under Trinity Rd.						GROUND WTR (ft)								
BORING NO. W3		STATION 14+28		OFFSET 73 ft RT		ALIGNMENT -L-								
COLLAR ELEV. 453.2 ft		TOTAL DEPTH 50.0 ft		NORTHING 745,673		EASTING 2,084,109								
DRILL RIG/HAMMER EFF./DATE RFO0067 CME-550X 85% 07/12/2016				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic								
DRILLER Pinter, D. G.		START DATE 10/03/16		COMP. DATE 10/03/16		SURFACE WATER DEPTH N/A								
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
455	453.2	0.0	6	7	12							M		0.0
450	449.7	3.5	7	11	14							M		453.2
445	444.7	8.5	3	3	5							M		446.2
440	439.7	13.5	3	4	6							M		431.2
435	434.7	18.5	2	4	4							M		416.2
430	429.7	23.5	2	3	5							W		403.2
425	424.7	28.5	2	3	4							W		
420	419.7	33.5	1	2	4							W		
415	414.7	38.5	WOH	2	4							W		
410	409.7	43.5	2	3	5							W		
405	404.7	48.5	3	4	6							W		

WBS 50143.1.FD1		TIP W-5522		COUNTY WAKE		GEOLOGIST Oti, O. B.								
SITE DESCRIPTION SR 1656 (Trinity Rd.) at SR 1658 (Youth Center Dr.) Intersection in Raleigh. Construct Ped. Tunnel under Trinity Rd.						GROUND WTR (ft)								
BORING NO. W4		STATION 15+38		OFFSET 111 ft LT		ALIGNMENT -L-								
COLLAR ELEV. 458.2 ft		TOTAL DEPTH 50.2 ft		NORTHING 745,851		EASTING 2,084,228								
DRILL RIG/HAMMER EFF./DATE RFO0067 CME-550X 85% 07/12/2016				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic								
DRILLER Pinter, D. G.		START DATE 10/04/16		COMP. DATE 10/04/16		SURFACE WATER DEPTH N/A								
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
460	458.2	0.0	3	3	6							M		0.0
455	454.5	3.7	4	5	6							SS-6		458.2
450	449.5	8.7	2	4	4							M		
445	444.5	13.7	2	3	3							M		
440	439.5	18.7	3	4	6							M		
435	434.5	23.7	1	3	3							SS-7		
430	429.5	28.7	2	3	5							M		
425	424.5	33.7	2	3	5							W		
420	419.5	38.7	2	3	4							W		
415	414.5	43.7	1	2	5							SS-10		
410	409.5	48.7	3	5	7							W		

NCDOT BORE DOUBLE W5522_GEO_TUNNEL&RWAL_SPT_BORINGS.GPJ_NC_DOT.GDT 2/28/17

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 50143.1.FD1		TIP W-5522		COUNTY WAKE		GEOLOGIST Oti, O. B.										
SITE DESCRIPTION SR 1656 (Trinity Rd.) at SR 1658 (Youth Center Dr.) Intersection in Raleigh. Construct Ped. Tunnel under Trinity Rd.						GROUND WTR (ft)										
BORING NO. W5		STATION 14+58		OFFSET 110 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 455.8 ft		TOTAL DEPTH 50.0 ft		NORTHING 745,854		EASTING 2,084,148										
DRILL RIG/HAMMER EFF./DATE RFO0067 CME-550X 85% 07/12/2016				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Pinter, D. G.		START DATE 10/05/16		COMP. DATE 10/05/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
460																
455	455.8	0.0	2	3	4										455.8	GROUND SURFACE
450	452.3	3.5	3	4	5											RESIDUAL TAN, RED AND BROWN, SAPROLITIC, SANDY SILT AND CLAYEY SILT
445	447.3	8.5	3	5	6											
440	442.3	13.5	2	3	4											
435	437.3	18.5	1	2	3											
430	432.3	23.5	2	3	3											
425	427.3	28.5	2	3	3											
420	422.3	33.5	2	3	3											
415	417.3	38.5	3	4	5											
410	412.3	43.5	3	4	5											
	407.3	48.5	7	12	22										405.8	

WBS 50143.1.FD1		TIP W-5522		COUNTY WAKE		GEOLOGIST Oti, O. B.										
SITE DESCRIPTION SR 1656 (Trinity Rd.) at SR 1658 (Youth Center Dr.) Intersection in Raleigh. Construct Ped. Tunnel under Trinity Rd.						GROUND WTR (ft)										
BORING NO. W6		STATION 13+70		OFFSET 104 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 453.8 ft		TOTAL DEPTH 50.0 ft		NORTHING 745,853		EASTING 2,084,061										
DRILL RIG/HAMMER EFF./DATE RFO0067 CME-550X 85% 07/12/2016				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Pinter, D. G.		START DATE 10/05/16		COMP. DATE 10/05/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
455																
	453.8	0.0	2	3	4										453.8	GROUND SURFACE
450	450.3	3.5	3	4	8											RESIDUAL TAN, RED AND BROWN, SAPROLITIC, CLAYEY SILT
445	445.3	8.5	3	3	4											
440	440.3	13.5	3	5	6											
435	435.3	18.5	3	3	4											
430	430.3	23.5	3	4	8											
425	425.3	28.5	1	3	4											
420	420.3	33.5	2	2	4											
415	415.3	38.5	2	2	4											
410	410.3	43.5	1	2	4											
405	405.3	48.5	3	4	6										403.8	

NCDOT BORE DOUBLE W5522_GEO_TUNNEL&RWAL_SPT_BORINGS.GPJ_NC_DOT.GDT 2/28/17

SOIL TEST RESULTS

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-1	79' RT	16+07	3.8-5.3	A-7-5(30)	71	37	9.9	17.5	10.2	62.4	96	91	74	-	-
SS-2	79' RT	16+07	8.8-10.3	A-5(0)	47	NP	13.3	47.1	21.5	18.1	99	91	52	-	-
SS-3	79' RT	16+07	18.8-20.3	A-5(0)	42	NP	15.7	48.5	23.7	12.1	95	86	49	-	-
SS-4	79' RT	16+07	28.8-30.3	A-4(0)	39	NP	13.1	59.8	19.0	8.1	97	90	40	-	-
SS-5	79' RT	16+07	38.8-40.3	A-5(0)	43	NP	17.7	51.2	19.0	12.1	91	80	42	-	-
SS-6	111' LT	15+38	3.7-5.2	A-5(5)	44	7	11.9	33.4	26.5	28.2	100	94	64	-	-
SS-7	111' LT	15+38	23.7-25.2	A-5(0)	49	NP	21.6	37.9	28.5	12.1	95	80	50	-	-
SS-8	110' LT	14+58	8.5-10.0	A-5(3)	42	5	12.5	39.9	29.5	18.1	98	91	58	-	-
SS-9	110' LT	14+58	28.5-30.0	A-5(0)	45	NP	23.2	33.6	29.1	14.1	92	77	50	-	-
SS-10	111' LT	15+38	43.7-45.2	A-5(0)	44	NP	15.5	52.2	18.2	14.1	92	83	42	-	-