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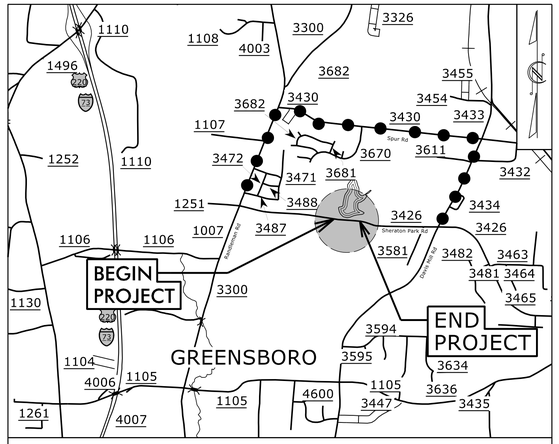
09/08/99

WBS PROJECT: 17BP.7.C.11

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Standard Symbology Sheet



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

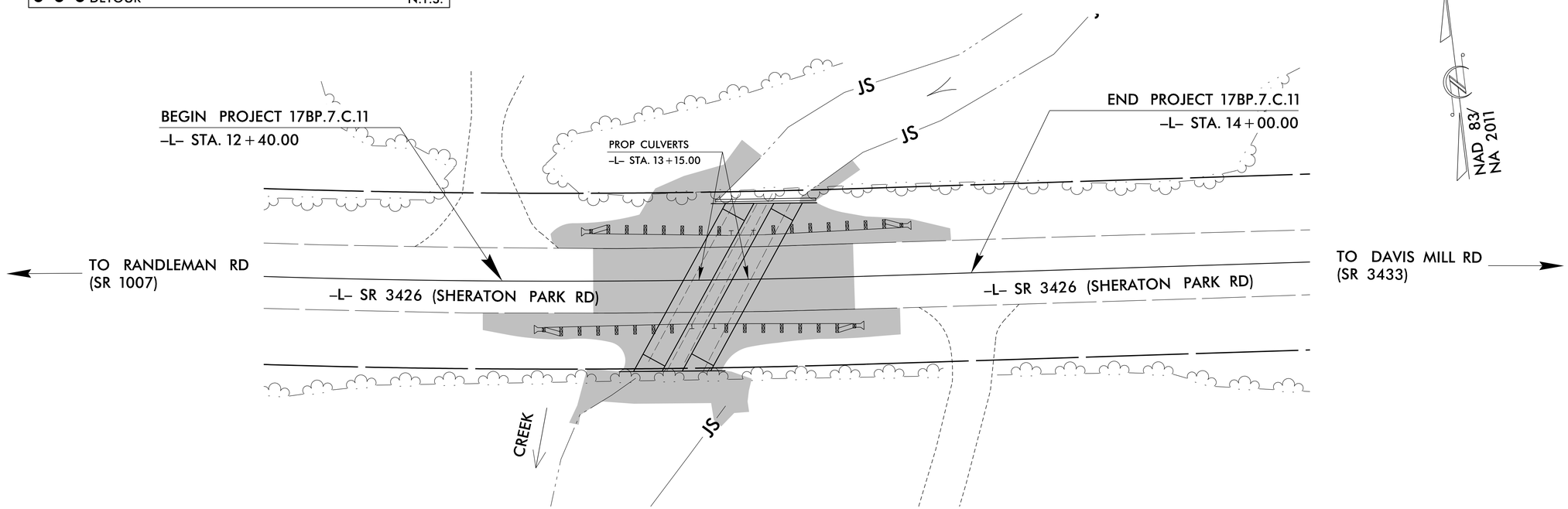
GUILFORD COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.7.C.11	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

LOCATION: REPLACE PIPE #40 2221 ON SR 3426 (SHERATON PARK RD) – 0.6 MI. E. JCT. SR 1007 (RANDLEMAN RD)

TYPE OF WORK: GRADING, PAVING, SHOULDER CONSTRUCTION, GUARDRAIL, & CULVERT



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

DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, HORIZONTAL & VERTICAL ALIGNMENT, VERTICAL STOPPING SIGHT DISTANCE, & SUPERELEVATION .

GRAPHIC SCALES

20 10 0 20 40
PLANS

20 10 0 20 40
PROFILE (HORIZONTAL)

4 2 0 4 8
PROFILE (VERTICAL)

DESIGN DATA

ADT 2016 = 1700

V = 45 MPH

FUNC CLASS = MAJOR COLLECTOR

PROJECT LENGTH

TOTAL LENGTH WBS PROJECT 17BP.7.C.11 = 0.030 MI

Prepared in the Office of:

USI INFRASTRUCTURE OF CAROLINA, INC.

9140 ARROWPOINT BLVD, SUITE 200
CHARLOTTE, NORTH CAROLINA 28273
N.C. LICENSE # C-1950

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

SANDRA P. HAYES, PE
PROJECT ENGINEER

KEITH A. SCHELL, EI
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIL

W. Galen Cail 10/5/2018 *P.E.*
SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 32110 ENGINEER SANDRA P. HAYES

Sandra P. Hayes 10/8/2018 *P.E.*
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

$$$$SYSTIME$$$$
$$$$USERNAME$$$$DGN$$$$

8/17/99

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2A	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND IMPROVEMENT DETAILS
3	SUMMARY OF EARTHWORK, GUARDRAIL SUMMARY, RIGHT OF WAY AREA DATA, AND QUANTITIES
4	PLAN SHEET AND PROFILE SHEET
TMP-1 THRU TMP-4	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
UO-1 THRU UO-2	UTILITES BY OTHERS PLANS
X-1 THRU X-5	CROSS-SECTIONS

STANDARD DRAWINGS

EFF. 01-16-2018
2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method for Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 5 - SUBGRADE, BASES, AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method 1
DIVISION 8 - INCIDENTALS	
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
DIVISION 12 - PAVEMENT MARKINGS, MARKERS, AND DELINEATION	
1205.01	Pavement Markings - Line Types and Offsets
1261.01	Guardrail and Barrier Delineations - Installation Spacing
1261.02	Guardrail and Barrier Delineations - Types and Mounting
1262.01	Guardrail End Delineation

GENERAL NOTES

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

SUPEREVELATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY (POWER), AT&T DISTRIBUTION (TELEPHONE), AND TWC/CHARTER/SPECTRUM (CATV).

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

USI INFRASTRUCTURE OF CAROLINA, INC.
9140 ARROWPOINT BLVD, SUITE 200
CHARLOTTE, NORTH CAROLINA 28273
N.C. LICENSE # C-1950

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	1-A

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 32110 ENGINEER SANDRA P. HAYES
SIGNATURE:
DATE: 10/8/2018

$$$$SYSTIME$$$$
$$$$JOB$$$$
$$$$USERNAME$$$$

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E*) — W
- U/G Water Line LOS C (S.U.E*) — W
- U/G Water Line LOS D (S.U.E*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

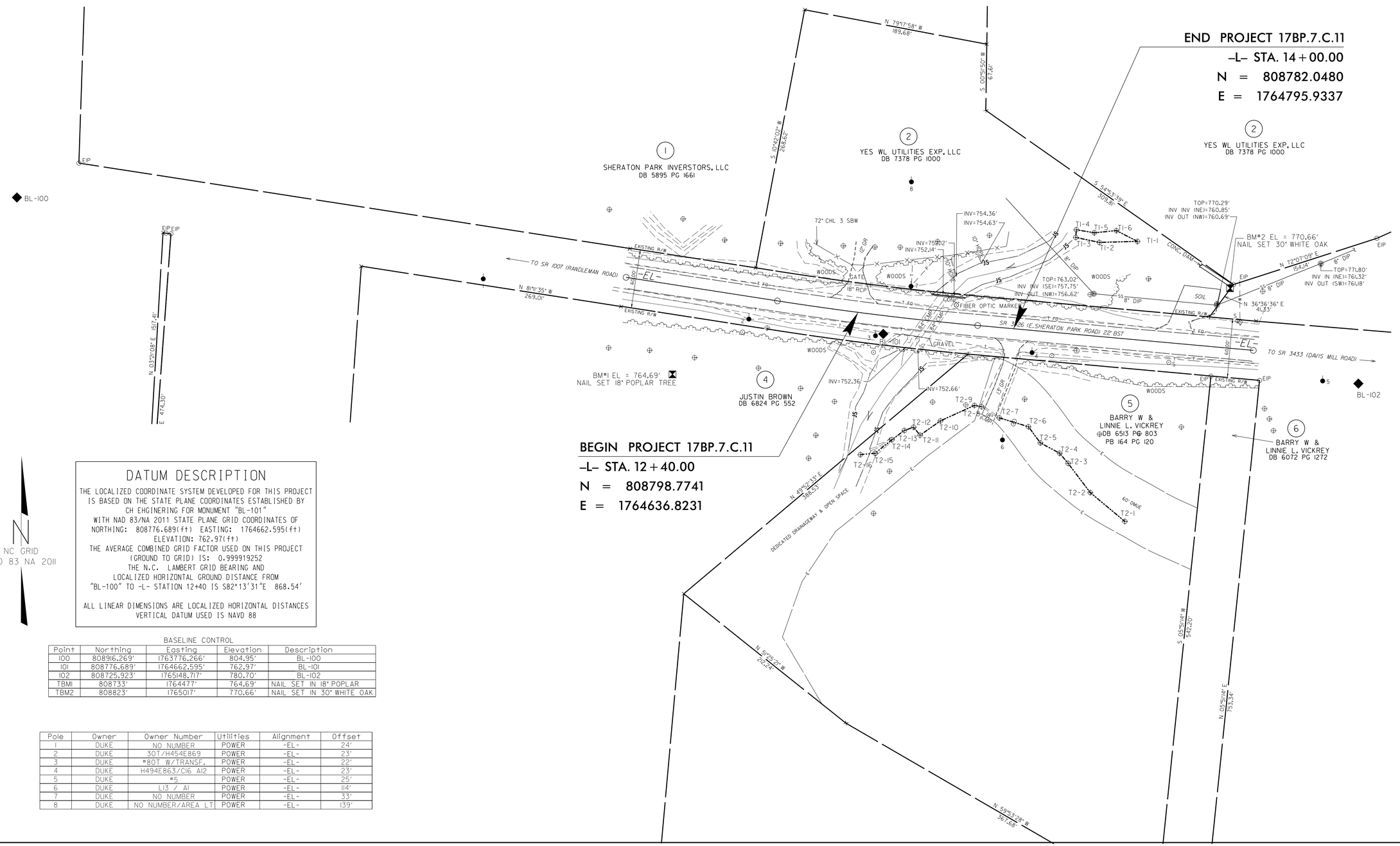
- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole LOS A (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	1-C
R/W SHEET NO.	____

17BP.7.C.11 SURVEY CONTROL SHEET

◆ *INDICATES CONTROL REBAR WITH CAP USED OR SET FOR HORIZONTAL PROJECT BY CH ENGINEERING.*

DRAWING NOT TO SCALE



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY CH EHGINERING FOR MONUMENT "BL-101"
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF
NORTHING: 808776.689(ft) EASTING: 1764662.595(ft)
ELEVATION: 762.97(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999919252
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-100" TO -L- STATION 12+40 IS S82°13'31"E 868.54'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

BASELINE CONTROL

Point	Northing	Easting	Elevation	Description
100	808916.269'	1763776.266'	804.95'	BL-100
101	808776.689'	1764662.595'	762.97'	BL-101
102	808725.923'	1765148.717'	780.70'	BL-102
TBM1	808733'	1764477'	764.69'	NAIL SET IN 18" POPLAR
TBM2	808823'	1765017'	770.66'	NAIL SET IN 30" WHITE OAK

Pole	Owner	Owner Number	Utilities	Alignment	Offset
1	DUKE	NO NUMBER	POWER	-EL-	24'
2	DUKE	30T/H454E869	POWER	-EL-	23'
3	DUKE	#30T W/TRANSF.	POWER	-EL-	22'
4	DUKE	H494E863/C16 A12	POWER	-EL-	23'
5	DUKE	#6	POWER	-EL-	25'
6	DUKE	L13 / A1	POWER	-EL-	114'
7	DUKE	NO NUMBER	POWER	-EL-	33'
8	DUKE	NO NUMBER/AREA LT	POWER	-EL-	139'

REVISIONS

8/17/99

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

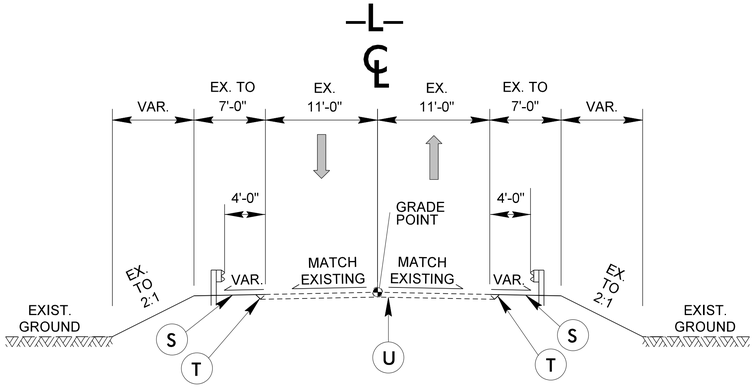
PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	2A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 32110 ENGINEER SANDRA P. WATKINS

SIGNATURE:

DATE: 10/8/2018



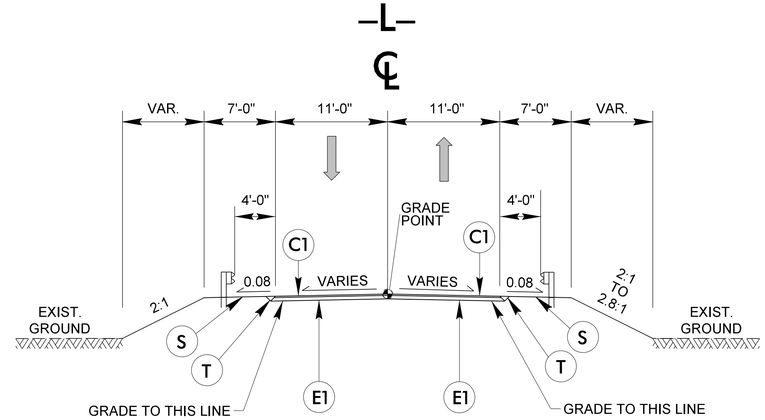
TYPICAL SECTION NO. 1

-L- STA. 12+40.00 TO 12+71.00

-L- STA. 13+60.00 TO 14+00.00

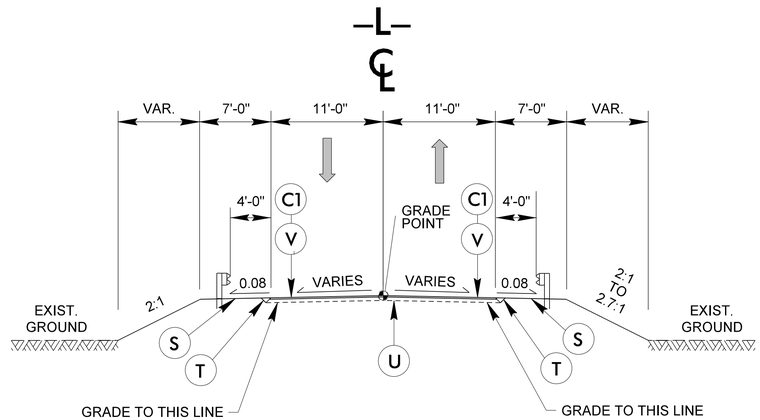
GUARDRAIL FROM STA. 12+67.00 TO 13+79.50 LT

GUARDRAIL FROM STA. 12+50.00 TO 13+62.50 RT



TYPICAL SECTION NO. 3

-L- STA. 12+83.00 TO 13+48.00



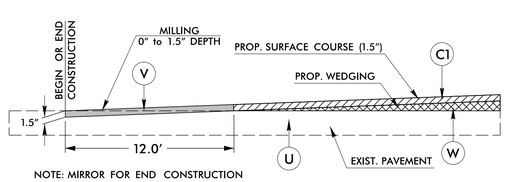
TYPICAL SECTION NO. 2

-L- STA. 12+71.00 TO 12+83.00

-L- STA. 13+48.00 TO 13+60.00

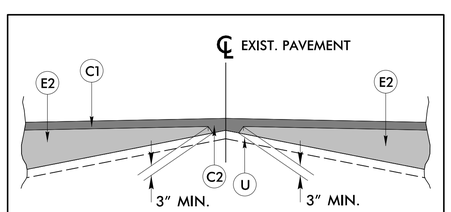
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 11" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD IN EACH OF TWO LAYERS.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
S	SHOULDER RECONSTRUCTION
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING BITUMINOUS PAVEMENT 0" TO 1.5" DEPTH
W	PAVEMENT WEDGING (SEE WEDGING DETAIL)

NOTES:
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. EXISTING DITCHES NOT TO BE DISTURBED UNLESS OTHERWISE NOTED.



MILLING DETAIL

LINE	FROM	TO
-L-	12+71	12+83
-L-	13+48	13+60



WEDGING DETAIL

REVISIONS

8/17/99

$$SYSTIME$$
$$DGN$$
$$USERNAME$$

USI INFRASTRUCTURE OF CAROLINA, INC.
9140 ARROWPOINT BLVD, SUITE 200
CHARLOTTE, NORTH CAROLINA 28273
N.C. LICENSE # C-1950

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	3

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 32110 ENGINEER
SIGNATURE: 10/8/2018
DATE:

SUMMARY OF QUANTITIES

SURVEY LINE	LENGTH (MI)	WIDTH (FT)	EARTHWORK: UNDERCUT EXCAVATION (CY)	EARTHWORK: UNCLASSIFIED EXCAVATION (CY)	EARTHWORK: BORROW (CY)	ASPHALT: REMOVAL OF EX. ASPHALT PAVEMENT (SY)	ASPHALT: INCIDENTAL STONE BASE (TONS)	ASPHALT: 0" - 1.5" MILLING (SY)	ASPHALT: BASE COURSE, B25.0B (TONS)	ASPHALT: SURFACE COURSE, S9.5B (TONS)	ASPHALT: ASPHALT PLANT MIX PG 64-22 (TONS)	GUARDRAIL: STRAIGHT (LF)	GUARDRAIL: GREU TYPE TL-2 (EA)	GUARDRAIL: GREU TYPE TL-3 (EA)	THERMOPLASTIC PAVEMENT MARKINGS: 4" X 90 M WHITE THERMO (LF)	THERMOPLASTIC PAVEMENT MARKINGS: 4" X 90 M YELLOW THERMO (LF)	TRAFFIC CONTROL: WORK ZONE SIGNS - STATIONARY (SF)	TRAFFIC CONTROL: WORK ZONE SIGNS - BARRICADE MOUNTED (SF)	TRAFFIC CONTROL: BARRICADES - TYPE III (LF)			
-L-	0.03	22	-	180	190	-	50	118	200	40	12	25	-	4	180	180	460	94	80			

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

SURVEY LINE	DRAINAGE & EROSION CONTROL: 102" CORRUGATED ALUMINUMIZED ALLOY PIPE (LF)	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES (TON)	FOUNDATION CONDITIONING GEOTEXTILE (SY)	GEOTEXTILE FOR DRAINAGE (SY)	RIP RAP, CLASS I (TONS)	RIP RAP, CLASS II (TONS)	RIP RAP, CLASS A (TONS)	RIP RAP, CLASS B (TONS)	EROSION CONTROL STONE, CLASS A (TONS)	EROSION CONTROL STONE, CLASS B (TONS)	SEDIMENT CONTROL STONE (TON)	SAFETY FENCE (LF)		TEMP. SILT FENCE (LF)	1/4" HARDWARE CLOTH (LF)	SPECIAL STILLING BASINS (EA)	IMPERVIOUS DIKE (LF)	COIR FIBER WATTLE BARRIER (LF)	MATTING FOR EROSION CONTROL (SY)	PERMANENT SOIL REINFORCE-MENT MAT (SY)	SEED & MULCHING (AC)	RESPONSE FOR EROSION CONTROL (EA)
-L-	130	90	760	375	-	115	-	-	55	90	160	200		1225	130	2	70	-	1200	-	3	3

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT +%	BORROW	WASTE
-L- STA. 12+40.00 TO 14+00.00	180	0	180	180	0
SUBTOTAL	180	0	180	180	0
WASTE IN LIEU OF BORROW					
SUBTOTAL	180	0		180	0
5% TO REPLACE BORROW		0		9	0
PROJECT TOTAL	180	0		189	0
SAY	180	0		190	0

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

RIGHT OF WAY AREA DATA

PARCEL NO.	PROPERTY OWNER NAMES	TOTAL ACREAGE	TEMP. CONST. EASE.	TEMP. DRAINAGE EASE.	TEMP. UTILITY EASE.	PERM. DRAIN. EASE.	PERM. DRAIN. & UTILITY EASE.	PERM. UTILITY EASE.	AERIAL UTILITY EASE.
2	YES WL UTILITIES EXP, LLC						4398 SF		
4	JUSTIN BROWN						4964 SF		

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH: STRAIGHT	LENGTH: SHOP CURVED	LENGTH: DOUBLE FACED	WARRANT POINT: APPROACH END	WARRANT POINT: TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH: APPROACH END	FLARE LENGTH: TRAILING END	W: APPROACH END	W: TRAILING END	ANCHORS: GREU TL-3	ANCHORS: CAT-1	ANCHORS: TYPE B-77	IMPACT ATTENUATOR TYPE 350: G	IMPACT ATTENUATOR TYPE 350: NG	SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	12+67.00	13+79.50	LT	112.5'			12+67.00	13+79.50	4'-0"	7'-0"	50'-0"	50'-0"	1'-0"	1'-0"	2								
-L-	12+50.00	13+62.50	RT	112.5'			12+50.00	13+62.50	4'-0"	7'-0"	50'-0"	50'-0"	1'-0"	1'-0"	2								
PROJECT SUBTOTAL				225.0'											4								
LESS ANCHOR REDUCTIONS				200.0'											200.0'	TOTAL DEDUCTIONS:							GREU TL-3 4 @ 50' EACH
PROJECT TOTAL				25.0'																			

8/17/99
$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$DRAWN$$$$

DocuSign Envelope ID: E36AD103-93C0-43CE-BFB5-B82A5F2B6C0E

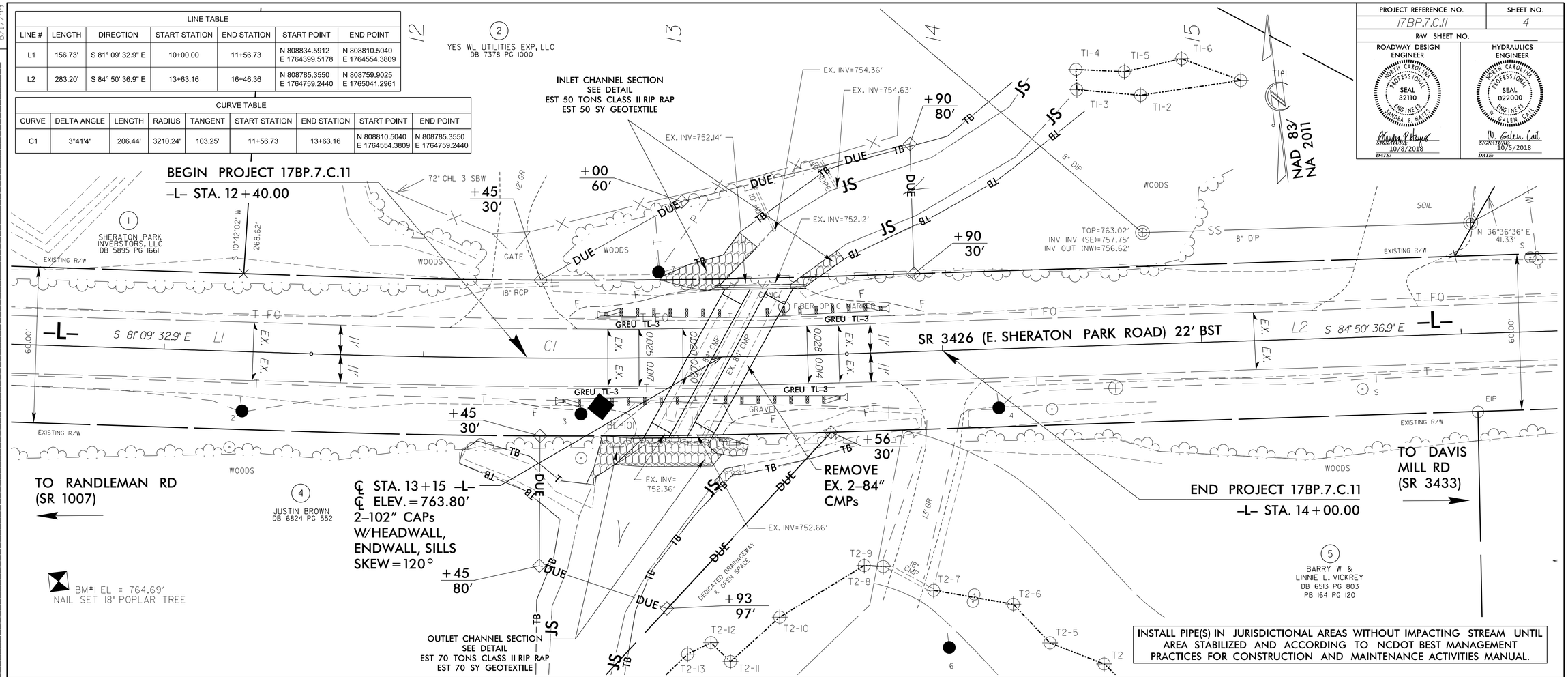
LINE TABLE						
LINE #	LENGTH	DIRECTION	START STATION	END STATION	START POINT	END POINT
L1	156.73'	S 81° 09' 32.9" E	10+00.00	11+56.73	N 808834.5912 E 1764399.5178	N 808810.5040 E 1764554.3809
L2	283.20'	S 84° 50' 36.9" E	13+63.16	16+46.36	N 808785.3550 E 1764759.2440	N 808759.9025 E 1765041.2961

CURVE TABLE								
CURVE	DELTA ANGLE	LENGTH	RADIUS	TANGENT	START STATION	END STATION	START POINT	END POINT
C1	3°41'14"	206.44'	3210.24'	103.25'	11+56.73	13+63.16	N 808810.5040 E 1764554.3809	N 808785.3550 E 1764759.2440

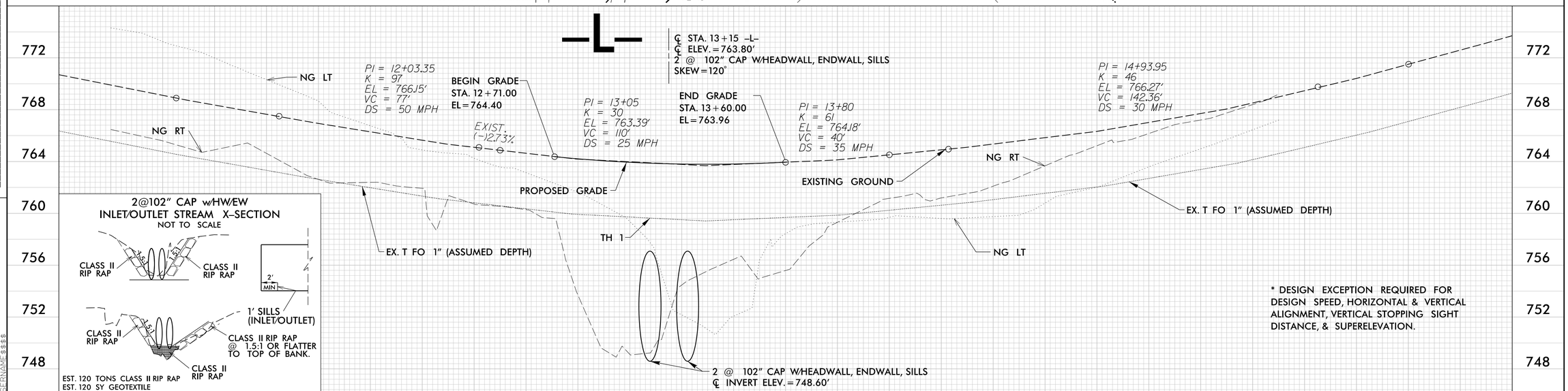
PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 32110 ENGINEER SANDRA P. HAYES
SIGNATURE: Sandra P. Hayes
DATE: 10/8/2018

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 022000 ENGINEER W. GALEN CAIL
SIGNATURE: W. Galen Cail
DATE: 10/5/2018



INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED, HORIZONTAL & VERTICAL ALIGNMENT, VERTICAL STOPPING SIGHT DISTANCE, & SUPERELEVATION.

REVISIONS

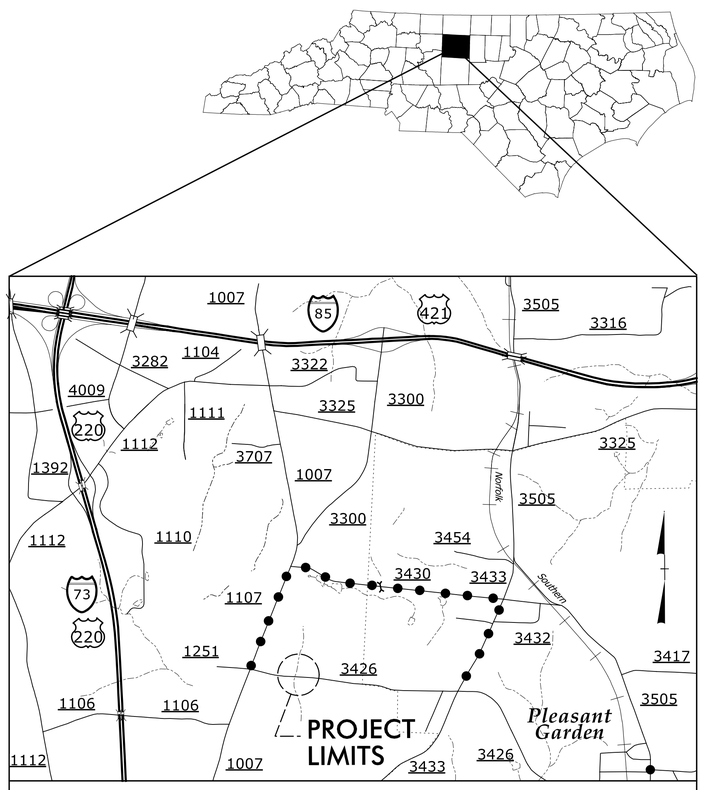
8/17/99

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$CELLNAME$$$$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

GUILFORD COUNTY



VICINITY MAP

DETOUR ROUTE

LOCATION: SR 2426 (SHERATON PARK RD) – 0.6 MILES EAST OF SR 1007 (RANDLEMAN RD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, INDEX OF SHEETS, AND LEGEND
TMP-2	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION OPERATIONS PLAN: MANAGEMENT STRATEGY GENERAL NOTES AND PHASING
TMP-3	DETOUR PLAN SHERATON PARK ROAD (SR 3426) CLOSURE
TMP-4	ROAD CLOSURE SIGN, DETOUR SIGNS AND SIGN DESIGN

LEGEND

GENERAL

NORTH ARROW

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

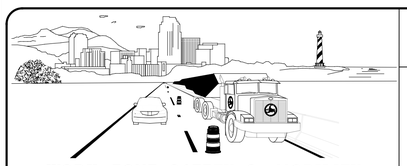
TEMPORARY SIGNING

STATIONARY SIGN

SHEET NO.
TMP-1

17BP.7.C.11

WBS PROJECT:



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PREPARED FOR N.C.D.O.T.– DIVISION 7 BY: HDR | ICA

M. T. RZEPKA, P.E. — TRAFFIC CONTROL PROJECT ENGINEER
M. ULA, P.E. — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
Y. MARIOTTE — TRAFFIC CONTROL DESIGN ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR | ICA
ICA Engineering, Inc.
5121 Kingdom Way,
Suite 100
Raleigh, NC 27607
NC License No: F-0258

APPROVED: DocuSigned by: Michael T. Rzepka 018C3480C26049D...

DATE: 8/25/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

8/25/2017
P:\LIBRprojects\Div07\div07_culverts_with_us1\Group2\17BP.7.C.11\6.0_CAD_BIM\6.2_Work_In_Progress\Traffic Control\17BP.7.C.11_tmp_title.dgn
ICA Engineering

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

MISCELLANEOUS

E) MAINTAIN ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES DURING CONSTRUCTION.

MANAGEMENT STRATEGY

THIS PROJECT CONSISTS OF REPLACING A CULVERT UNDER SR 3426 (SHERATON PARK RD). DURING CONSTRUCITON, SR 3426 (SHERATON PARK RD) WILL BE CLOSED AT THE CONSTRUCTION LIMITS AND TRAFFIC WILL BE PLACED ON AN OFF-SITE DETOUR ALONG SR 3433 (DAVIS MILL RD), SR 3430 (SPUR RD) AND SR 1007 (RANDLEMAN RD).

SR 3426 (E. SHERATON PARK RD) WILL BE REOPENED TO 2-LANE/2-WAY TRAFFIC UPON COMPLETION OF CONSTRUCTION.

PHASING

STEP 1

USING ROADWAY STANDARD DRAWING 1101.03 (SHEET 1 OF 9), INSTALL ROAD CLOSURE AND DETOUR SIGNS. CLOSE SR 3426 (SHERATON PARK RD) AND DETOUR TRAFFIC (SEE TMP-3).

STEP 2

AWAY FROM TRAFFIC, REMOVE EXISTING CULVERT.

STEP 3

AWAY FROM TRAFFIC, CONSTRUCT PROPOSED CULVERT AND ROADWAY.

STEP 4

AWAY FROM TRAFFIC, PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON SR 3426 (SHERATON PARK RD) AND OPEN ROAD TO TRAFFIC.

STEP 5

REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

APPROVED: DocuSigned by: Michael T. Rzepka 01BC3480C26049D...

DATE: 8/25/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

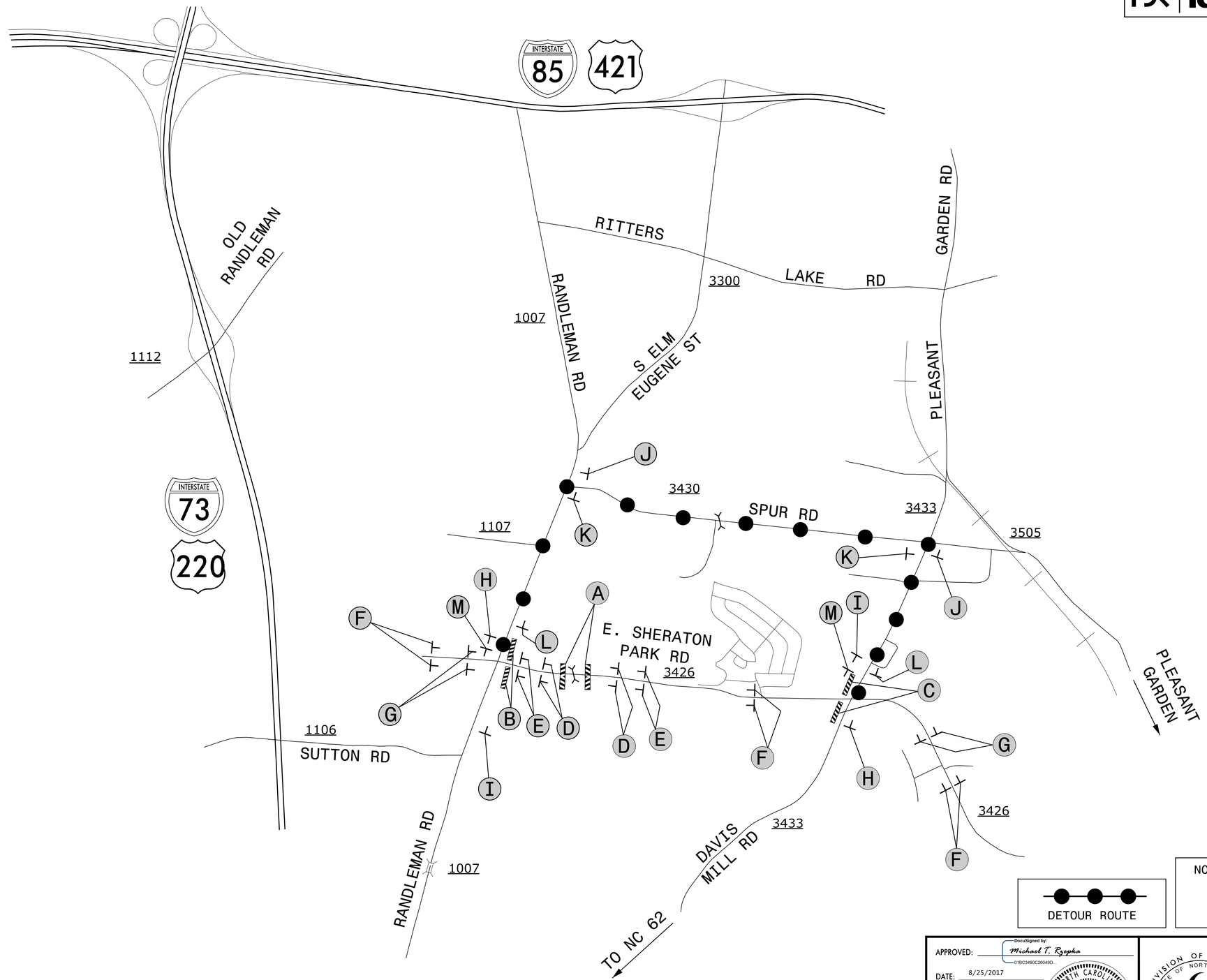
DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & TRANSPORTATION OPERATIONS PLAN

8/25/2017
P:\LBRprojects\Div07\div07_culverts_with_usi\Group2\17BP.7.C.11\6.0_CAD_BIM\6.2_Work_In_Progress\Traffic Control\17BP.7.C.11_tmp_title_2.dgn
ICA Engineering

PROJ. REFERENCE NO.	SHEET NO.
17BP.7.C.10	TMP-3

ICA Engineering, Inc.
5121 Kingdom Way,
Suite 100
Raleigh, NC 27607
NC License No: F-0258



DETOUR ROUTE

NOTES: SEE SHEET TMP-4 FOR ROAD CLOSURE SIGNS AND DETOUR SIGNS

REFER TO RSD 1101.03, (SHEET 1 OF 9) FOR APPLICABLE NOTES

APPROVED: DocuSigned by: Michael T. Rzepka 01BC3480C26049D...

DATE: 8/25/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

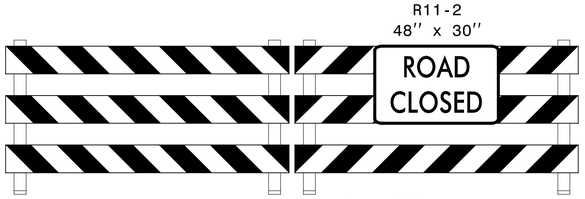
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

DETOUR PLAN
SHERATON PARK RD
(SR 3426)
ROAD CLOSURE

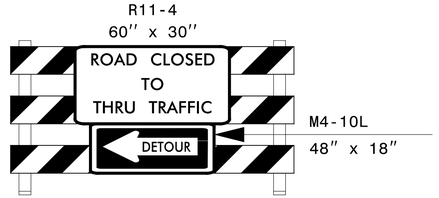
8/25/2017
P:\LBRprojects\Div07\div07_culverts_with_us1\Group2\17BP.7.C.II\6.0_CAD_BIM\6.2_Work_in_Progress\Traffic Control\17BP.7.C.II_tmp_detour_3.dgn
ICA Engineering

HDR | ICA	ICA Engineering, Inc. 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
		17BP.7.C.10	TMP-4



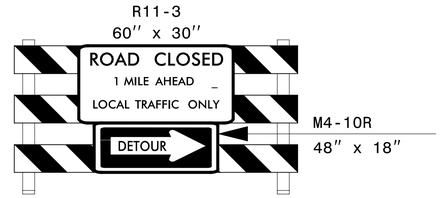
TYPE III BARRICADE(S)

A



TYPE III BARRICADE

B



TYPE III BARRICADE

C

W20-3
48" X 48"

D

W20-3
48" X 48"

E

W20-3
48" X 48"

F

W20-2
48" X 48"

G

W20-3
48" X 48"

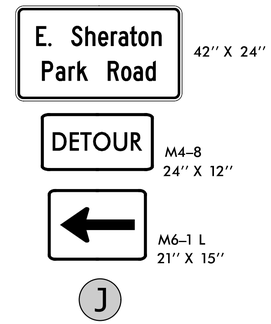
NEXT LEFT SP-4L 42" X 12"

H

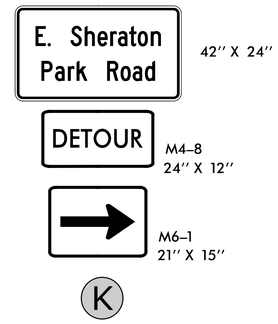
W20-3
48" X 48"

NEXT RIGHT SP-4R 42" X 12"

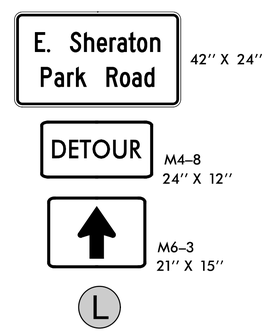
I



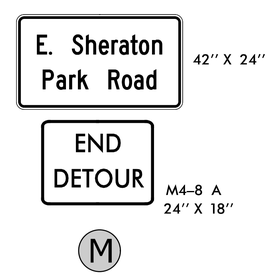
J



K



L



M

SIGN NUMBER: E. Sheraton Pk
TYPE: STATIONARY
QUANTITY: SEE PLANS

BACKG COLOR: Fluorescent Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 3'-6"
HEIGHT: 2'-0"
TOTAL AREA: 7.0 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.47"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

MAT'L: 0.080" (2.0 mm) ALUMINUM

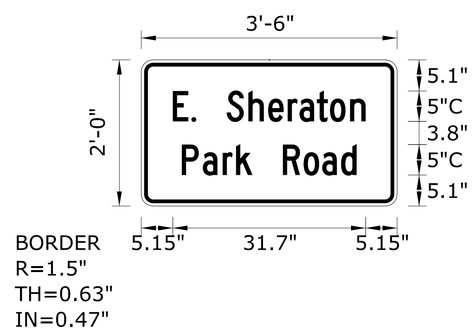
USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluoresent orange retroreflective sheeting.

DESIGN BY: ICA
PROJECT ID: 17BP.7.C.10

CHECKED BY:
DIV: 7

DATE: Apr 05, 2017



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																												Series/Size Text Length
		E	.		S	h	e	r	a	t	o	n																C 2000
	5.2	3	0.8	5	3.5	3.3	3.2	2	2.8	2.1	3.3	2.6	5.2															31.7
		P	a	r	k		R	o	a	d																		C 2000
	6.7	3.5	3.3	2.2	2.7	5	3.4	3	3.1	2.6	6.6																	28.7

FILENAME: C11_tmp_detour_4

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: DocuSigned by: Michael T. Rzepka 01BC3480C260490...

DATE: 8/25/2017

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROAD CLOSURE SIGNS
DETOUR SIGNS AND
SIGN DESIGN

8/25/2017
P:\LIBRprojects\Div07\div07_culverts_with_usl\Group2\17BP.7.C.11\6.0_CAD_BIM\6.2_Work_In_Progress\Traffic Control\17BP.7.C.11_tmp_detour_4.dgn
ICA Engineering

WBS: 17BP.7.C.11

CONTRACT:

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	PMP-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 32110 ENGINEER SANDRA P. HAYES

SIGNATURE: Sandra P. Hayes

DATE: 10/8/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
GUILFORD COUNTY

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS

PAVEMENT MARKING SCHEDULE

PAY ITEM	TOTAL QUANTITY		SYMBOL	DESCRIPTION	QUANTITY BREAKDOWN	
PAVEMENT MARKING LINES THERMOPLASTIC (4", 90 MILS)						
	360	LF	TA	WHITE	180	LF
			TB	YELLOW	180	LF

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	THERMOPLASTIC	PERMANENT RAISED

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

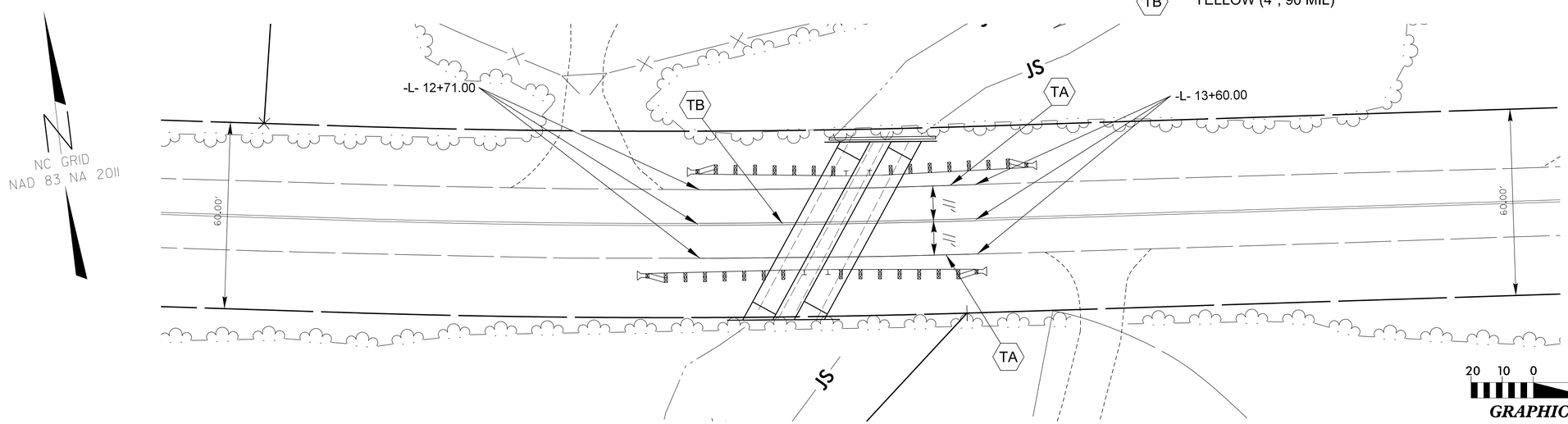
D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

I) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

SYMBOL AND PAVEMENT MARKING LEGEND

TA — WHITE (4", 90 MIL)

TB — YELLOW (4", 90 MIL)



PLAN PREPARED BY: US Infrastructure of Carolina, INC.

Sandra P. Hayes, PE — Project Engineer

Keith A. Schell, EI — Project Design Engineer

USI INFRASTRUCTURE OF CAROLINA, INC.
9140 ARROWPOINT BLVD, SUITE 200
CHARLOTTE, NORTH CAROLINA 28273
N.C. LICENSE # C-1950

$$$$$$SYSTIME$$$$$
$$$$$$USERNAME$$$$$$DGN$$$$$$$$$$$$$$$$$$$$

WBS PROJECT: 17BP.7.C.11

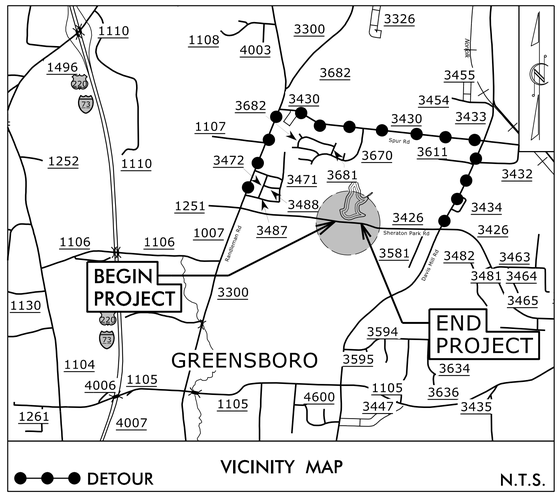
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.7.C.11	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

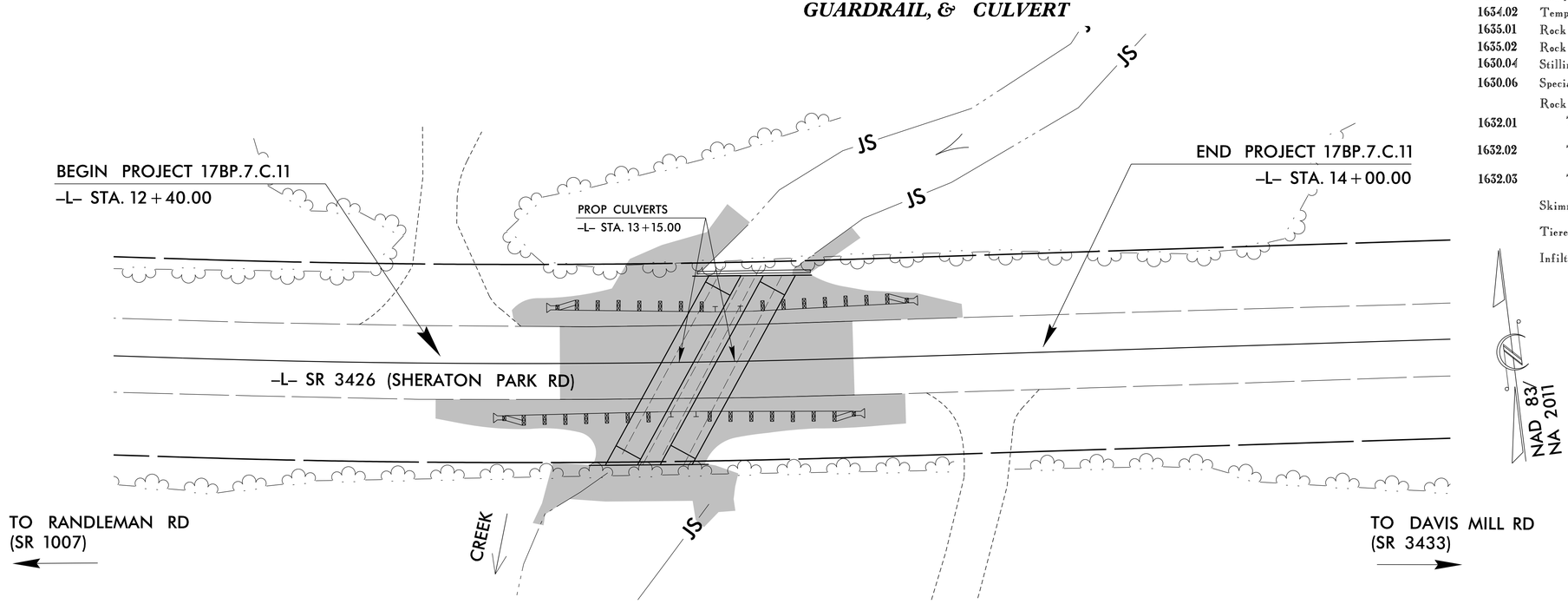
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

GUILFORD COUNTY



LOCATION: REPLACE PIPE #40 2221 ON SR 3426 (SHERATON PARK RD) – 0.6 MI. E. JCT. SR 1007 (RANDLEMAN RD)

TYPE OF WORK: GRADING, PAVING, SHOULDER CONSTRUCTION, GUARDRAIL, & CULVERT



THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	EW CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

GRAPHIC SCALE

10 0 20 PLANS

10 0 20 PROFILE (HORIZONTAL)

2 0 4 PROFILE (VERTICAL)

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:

USI INFRASTRUCTURE OF CAROLINA, INC.

9140 ARROWPOINT BLVD, SUITE 200
CHARLOTTE, NORTH CAROLINA 28273
N.C. LICENSE # C-1950

Designed by:

SANDRA P. HAYES, PE — ***3280***

NAME — *LEVEL III CERTIFICATION NO.*

Reviewed in the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

AARON HARPER

2018 STANDARD DRAWINGS
Roadway Standard Drawings

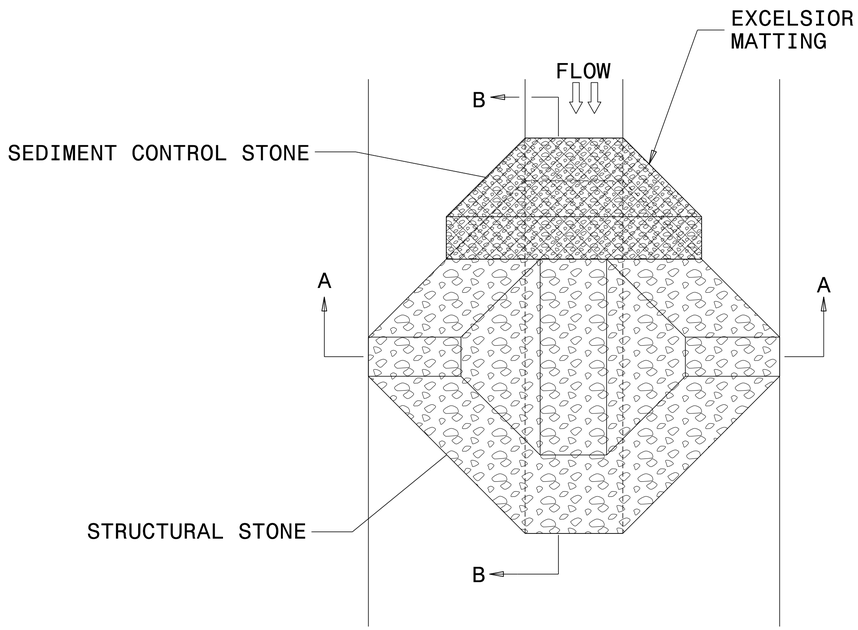
The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

SYSTIME#### SYNERGI#### SCALE#### PLOTDATE#### PLOTTIME#### USER#### DGN#### ####

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	EC-2
R/W SHEET NO.	___

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN

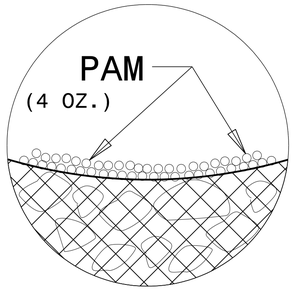
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

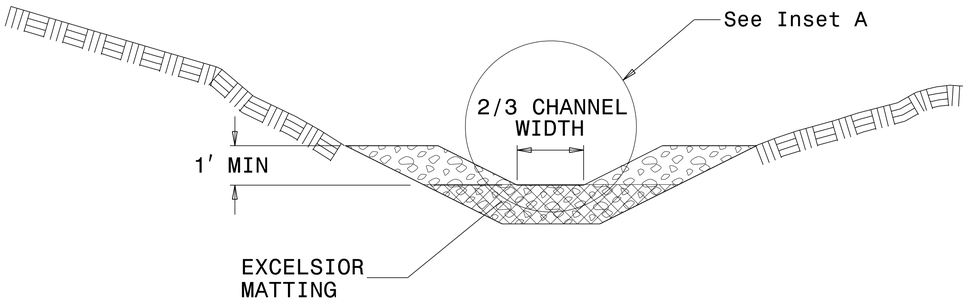
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

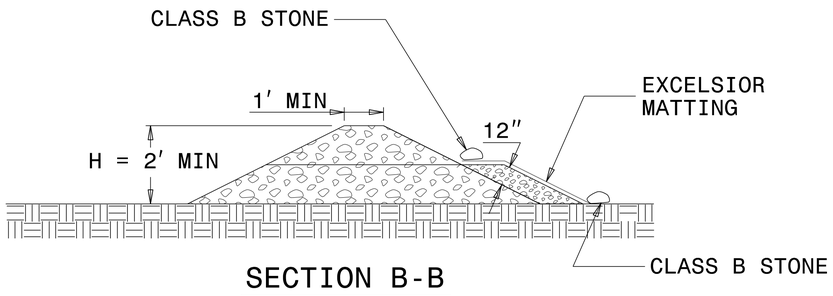
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	EC-3
	___

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

SOIL STABILIZATION SUMMARY SHEET

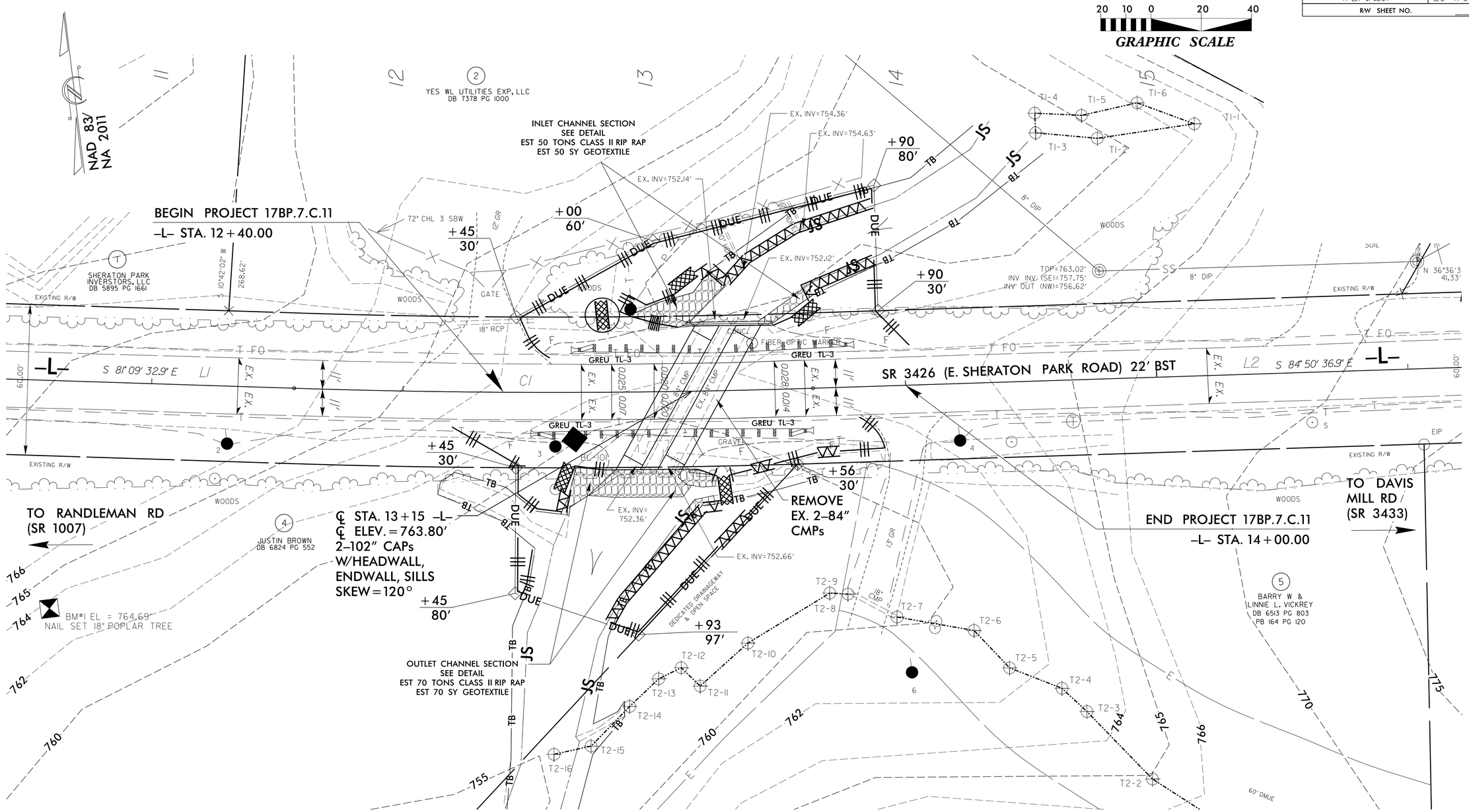
MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	12+40	14+00	LT	600
4	-L-	12+40	14+00	RT	600
				SUBTOTAL	1200
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					0
				TOTAL	1200
				SAY	1200

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
				SUBTOTAL	
		ADDITIONAL PSRM TO BE INSTALLED			
				TOTAL	
				SAY	

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	EC-4/CONST.4
R/W SHEET NO.	



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING R/W OR EASEMENT.

Temporary Rock Silt Check Type A 2.0 ft. weir height

DISTURBED AREA 17,140 SF

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

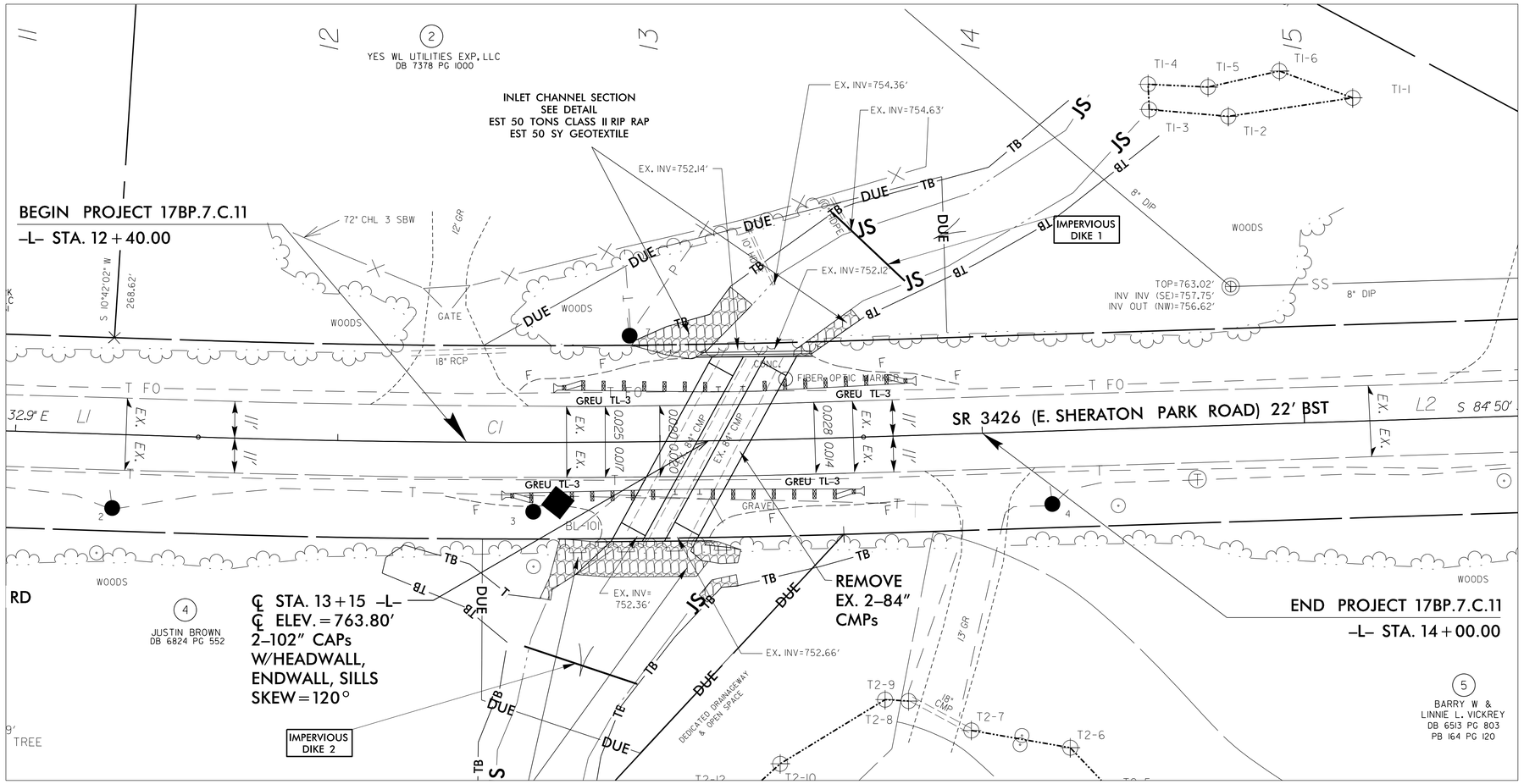
REVISIONS

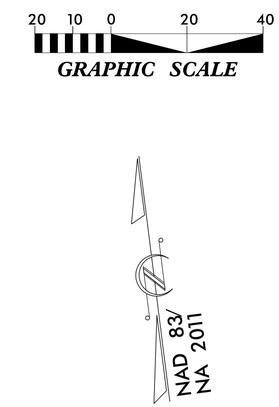
8/17/99

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	EC-4A/CONST.4
R/W SHEET NO.	

CONSTRUCTION SEQUENCE





1. INSTALL TEMPORARY SEDIMENT CONTROL DEVICES: PERIMETER EROSION CONTROL, SAFETY FENCING, AND JURISDICTIONAL FLAGGING.
2. INSTALL SPECIAL STILLING BASIN (DE-WATERING BAG) AND TEMPORARY STABILIZED OUTLET(S) AT THE DOWNSTREAM END OF THE WORKING AREA. REFER TO STD. DRAWING 1630.06.
3. INSTALL CLEAN WATER PUMP-AROUND PUMP(S) AND TEMPORARY FLEXIBLE HOSE(S).
4. INSTALL UPSTREAM IMPERVIOUS DIKE(S) AND BEGIN PUMPING (CLEAN WATER EFFLUENT) DOWNSTREAM TO TEMPORARY STABILIZED OUTLET.
5. INSTALL DOWNSTREAM IMPERVIOUS DIKE(S), DE-WATERING PUMP(S), AND TEMPORARY FLEXIBLE HOSE(S).
6. DE-WATER THE WORKING AREA, AS NEEDED FOR CONSTRUCTION, INTO THE SPECIAL STILLING BASIN AND TEMPORARY STABILIZED OUTLET.
7. PERFORM REQUIRED EXCAVATION FOR PROPOSED CULVERT(S) INCLUDING REMOVAL OF EXISTING CULVERT(S).
8. CONSTRUCT PROPOSED CULVERT(S), HEADWALL & ENDWALL (AS REQUIRED BY PLANS), BACKFILL, CHANNEL IMPROVEMENTS, AND PROPOSED ROADWAY PER PLANS.
9. UPON COMPLETION OF WORK, REMOVE ANY SEDIMENT ACCUMULATION BEHIND IMPERVIOUS DIKES.
10. REMOVE DOWNSTREAM, THEN UPSTREAM DIKE(S), ALL PUMPS, HOSES, AND STABILIZED OUTLETS. ALLOW FLOW THROUGH NEWLY CONSTRUCTED CULVERT(S).
11. PREPARE AND STABILIZE SLOPES AND ALL OTHER DISTURBED AREAS. AREAS WITHIN JURISDICTIONAL WATERS SHALL BE RESTORED TO THE PRE-PROJECT CONDITIONS.
12 UPON STABILIZATION OF ALL DISTURBED AREAS, REMOVE ALL TEMPORARY SEDIMENT CONTROL DEVICES.

NOTES:

1. ALL CULVERT AND CHANNEL WORK INVOLVING EXCAVATION SHALL BE PERFORMED IN DRY CONDITIONS OR IN CHANNEL SECTIONS ISOLATED BY IMPERVIOUS DIKES AND KEPT DE-WATERED.
2. IMPERVIOUS DIKES SHALL BE CONSTRUCTED TO ISOLATE THE IN-STREAM WORKING AREA AND SHALL NOT PERMIT SEEPAGE OF WATER INTO THE CONSTRUCTION SITE OR CONTRIBUTE TO SILTATION OF THE STREAM. IMPERVIOUS DIKES SHALL BE CONSTRUCTED OF AN ACCEPTABLE MATERIAL, IN LOCATIONS NOTED ON THE PLANS OR AS DIRECTED, AND IN SUCH A MANNER APPROVED BY THE RESIDENT ENGINEER.

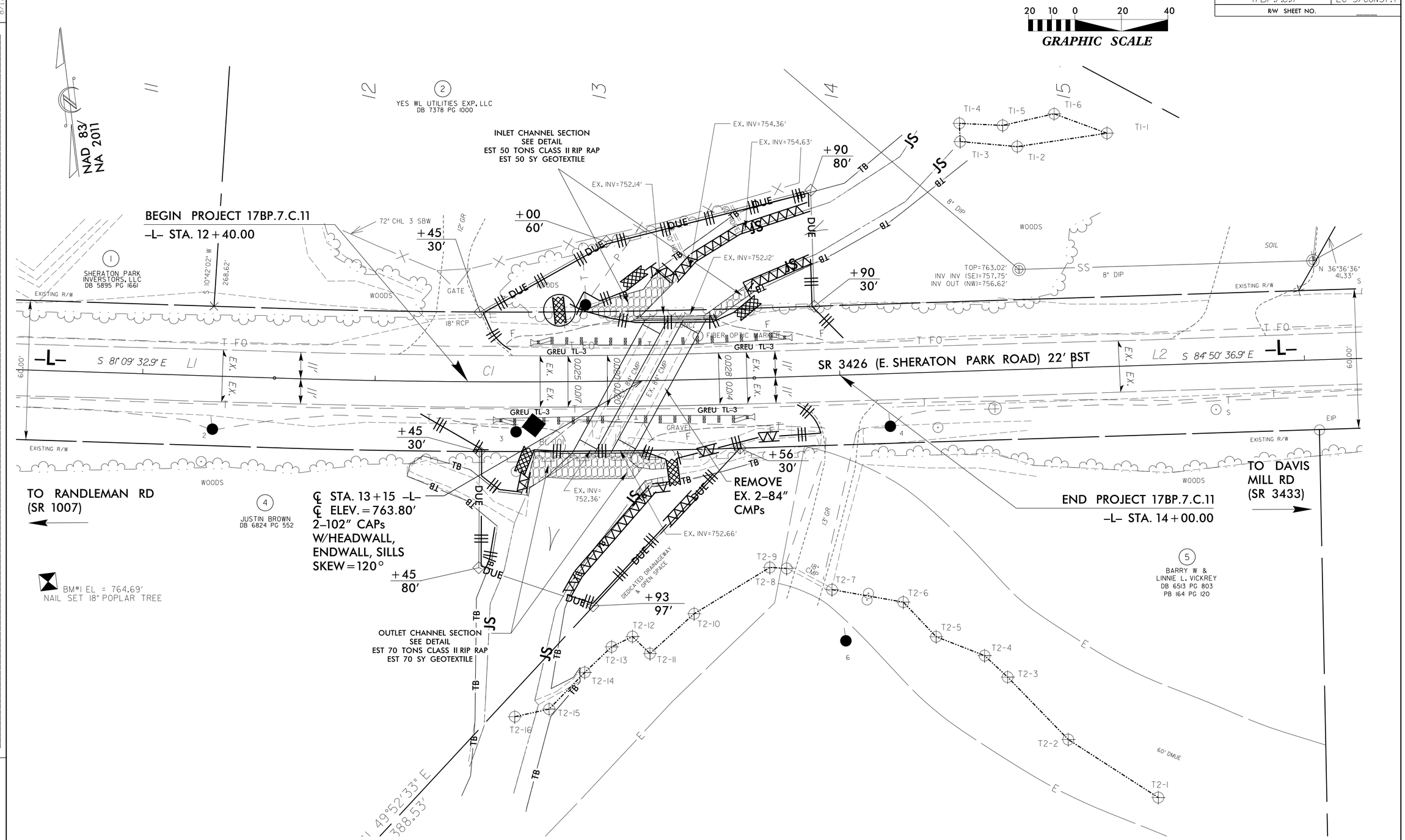
NOTE:
ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING R/W OR EASEMENT.

REVISIONS

8/17/99

$$$$SYSTIME$$$$
$$$$DGNFILE$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	EC-5/CONST.4
R/W SHEET NO.	____



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE: ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN EXISTING R/W OR EASEMENT.

Place Matting for Erosion Control on Slope as Work Allows. Sta. 12+40 to Sta. 14+00

FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4

REVISIONS

8/17/99

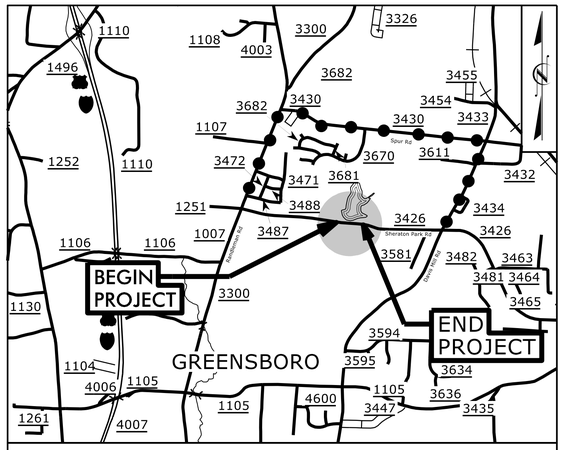
$$$$$$$$USERNAME$$$$ $$$$$$$$SYSTIME$$$$ $$$$$$$$LOGIN$$$$

09/08/99

TIP PROJECT: 17BP.7.C.11

T.I.P. NO.	SHEET NO.
17BP.7.C.11	UO–1

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET IS DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



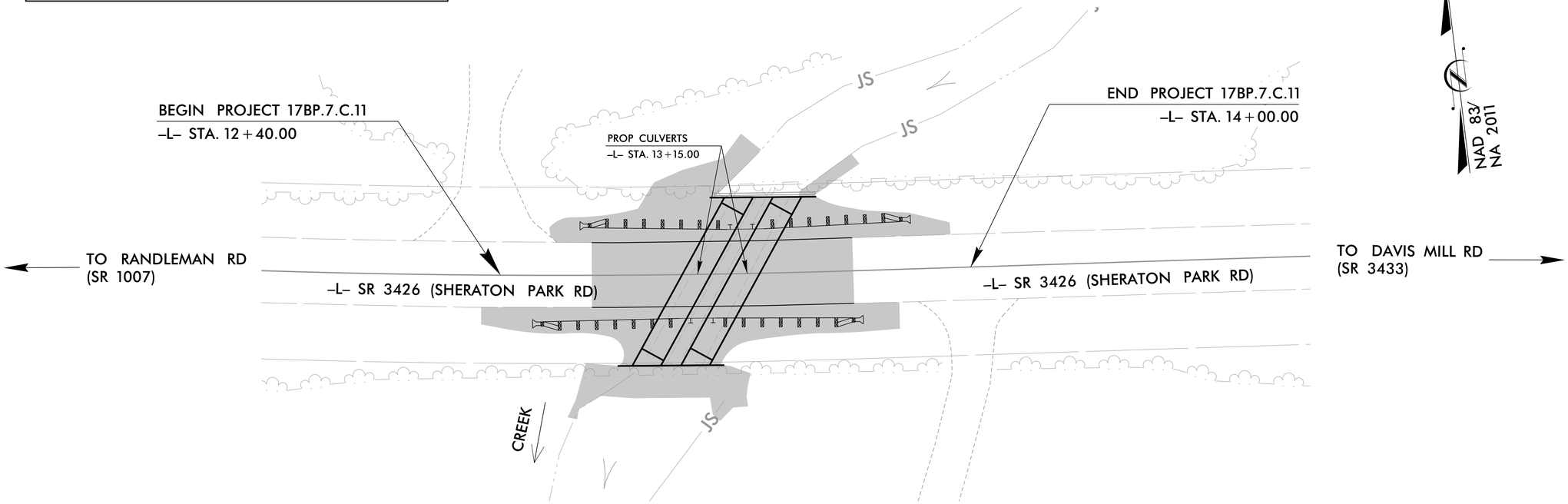
VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS
GUILFORD COUNTY

LOCATION: REPLACE PIPE #40 2221 ON SR 3426 (SHERATON PARK RD) – 0.6 MI. E. JCT. SR 1007 (RANDLEMAN RD)

TYPE OF WORK: TELEPHONE RELOCATION



GRAPHIC SCALES

20 10 0 20 40
PLANS

20 10 0 20 40
PROFILE (HORIZONTAL)

4 2 0 4 8
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO–1	TITLE SHEET
UO–2	UBO PLAN SHEET

UTILITY OWNERS ON PROJECT

(A) POWER – DUKE ENERGY CAROLINAS
(B) TELEPHONE – AT&T (DISTRIBUTION)
(C) CATV – CHARTER/SPECTRUM

PREPARED IN THE OFFICE OF:
CH ENGINEERING
3220 GLEN ROYAL RD. RALEIGH, NC 27617
TELE 919.788.0224 FAX 919.788.0232
NC LICENSE #P-0189

UTILITIES PROJECT ENGINEER
Mary Jo Lee, P.E.

DIVISION OF HIGHWAYS
DIVISION 7
PO BOX 14996
1584 YANCEYVILLE STREET
GREESBORO, 27415–4996

TIM POWERS, PE	DIVISION CONTACT #1
XXXX	DIVISION CONTACT #2
XXXX	DIVISION CONTACT #3
XXXX	DIVISION CONTACT #4

8/21/2018
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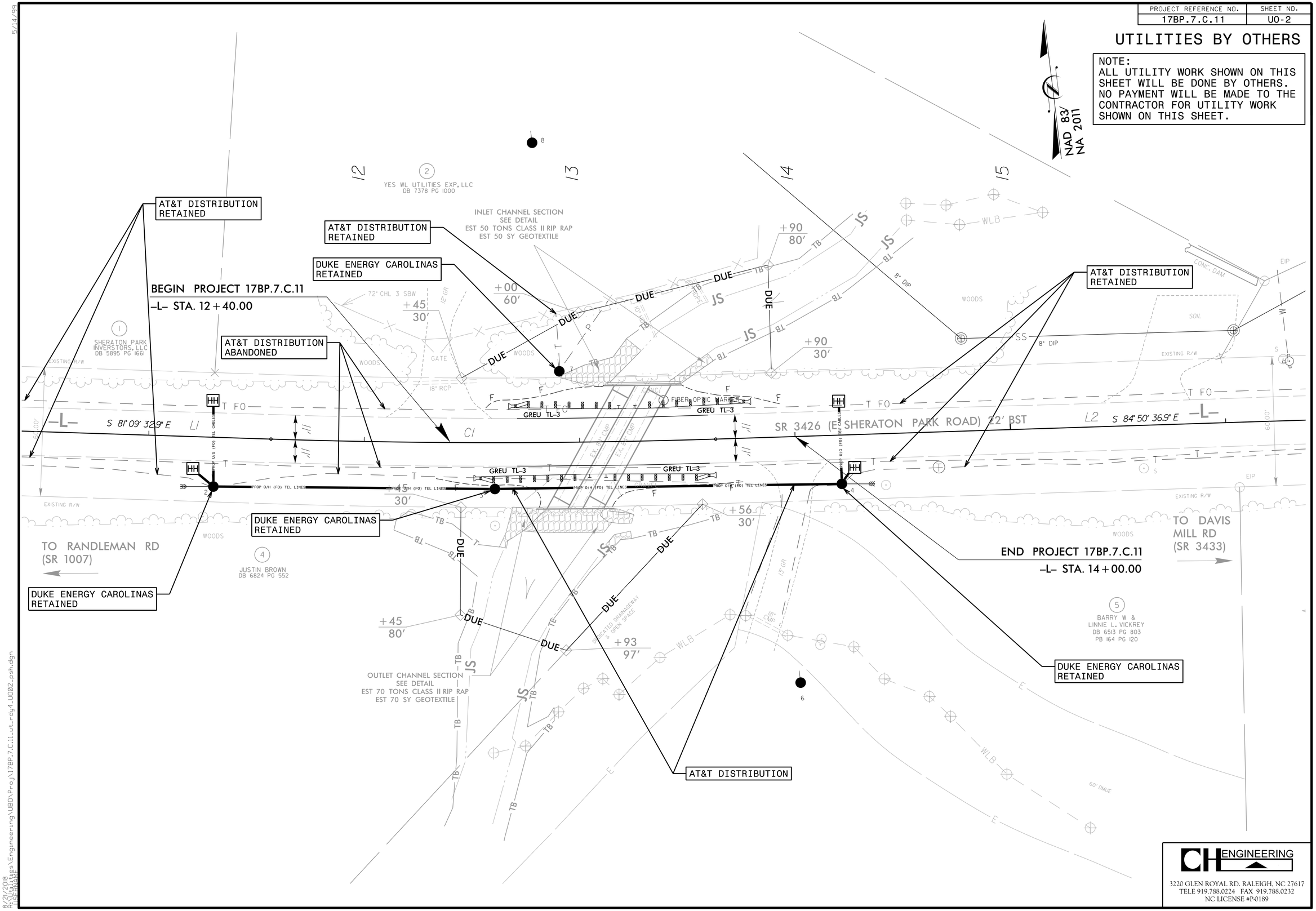
USERNAME

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.C.11	U0-2

UTILITIES BY OTHERS

NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



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5/14/99
8/21/2018
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