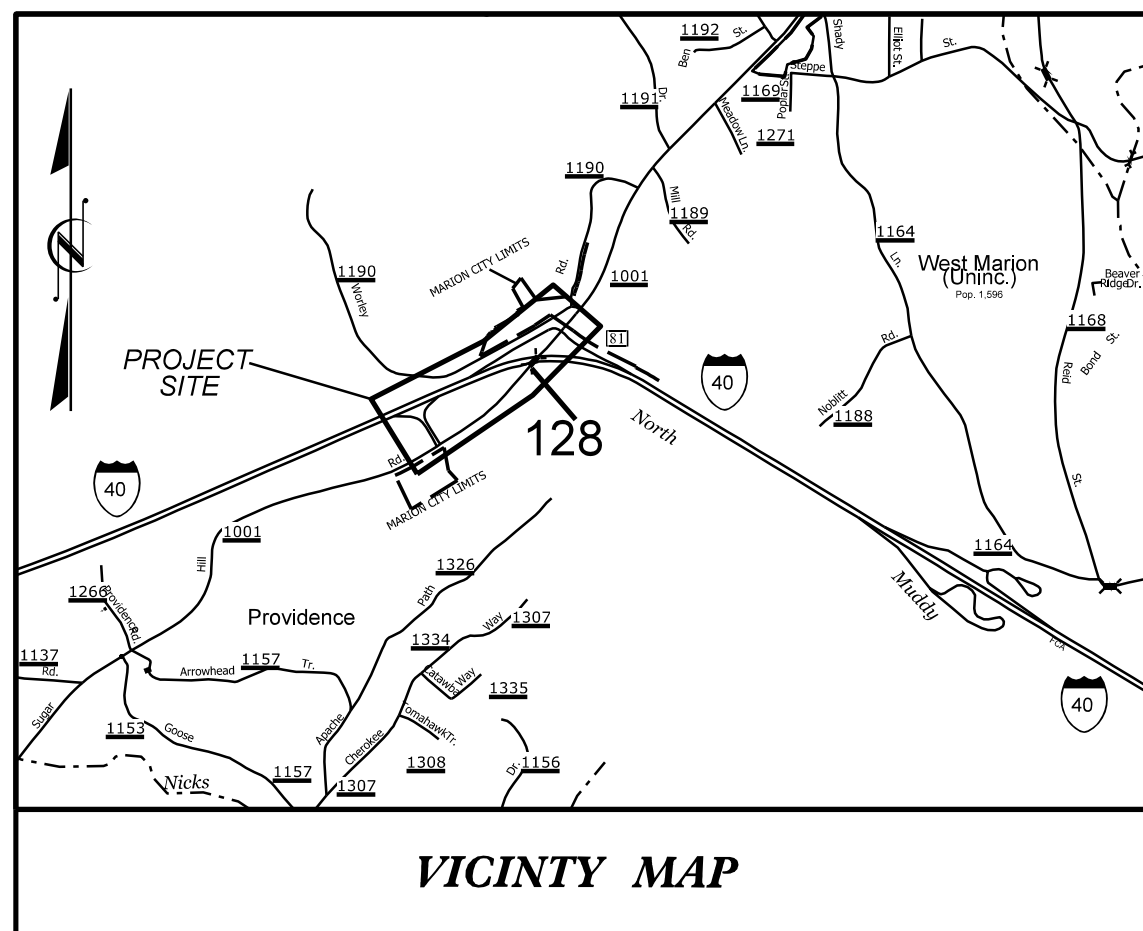


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and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
McDOWELL COUNTY

T.I.P. NO.	SHEET NO.
U-5818	UC-1

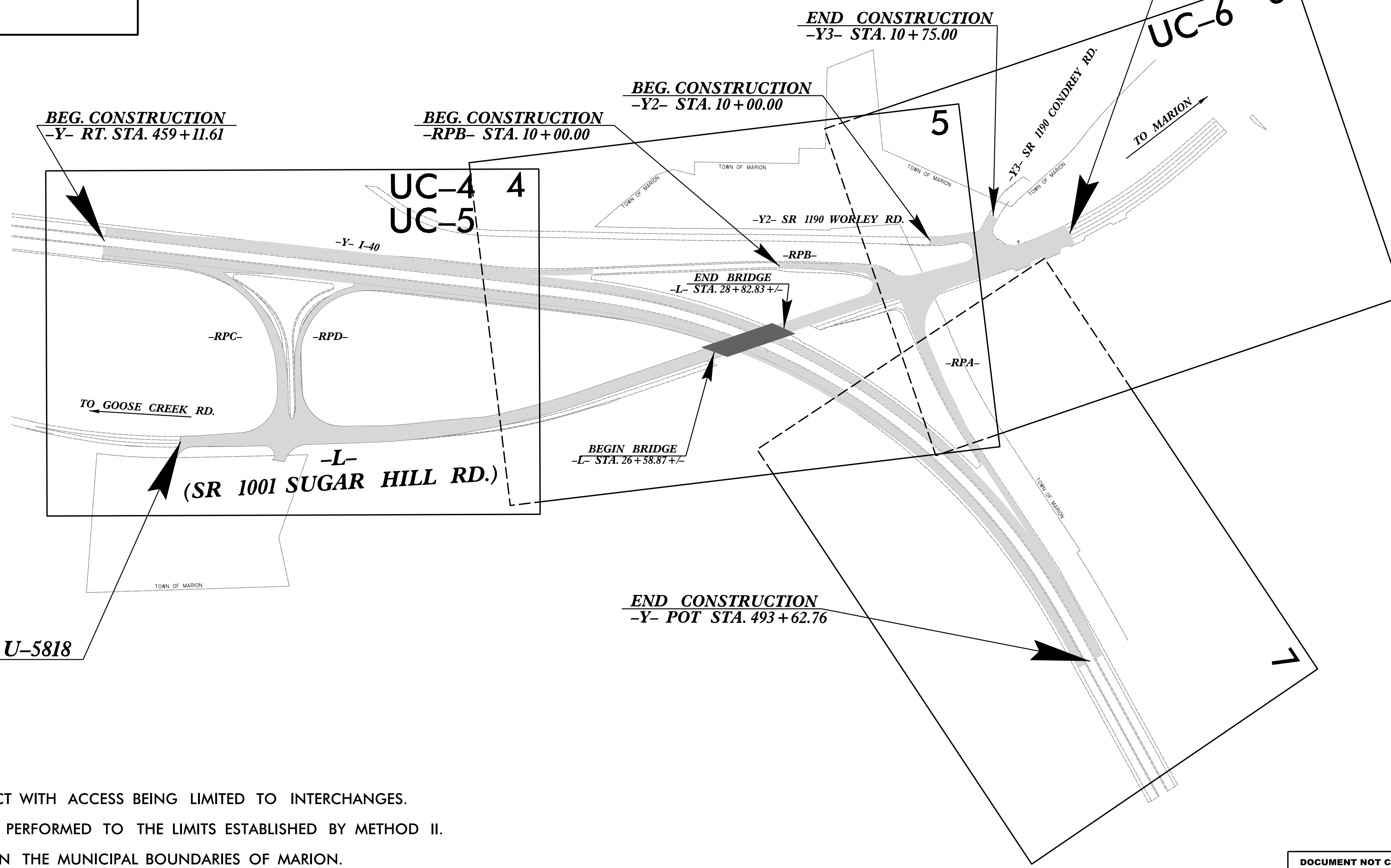
WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

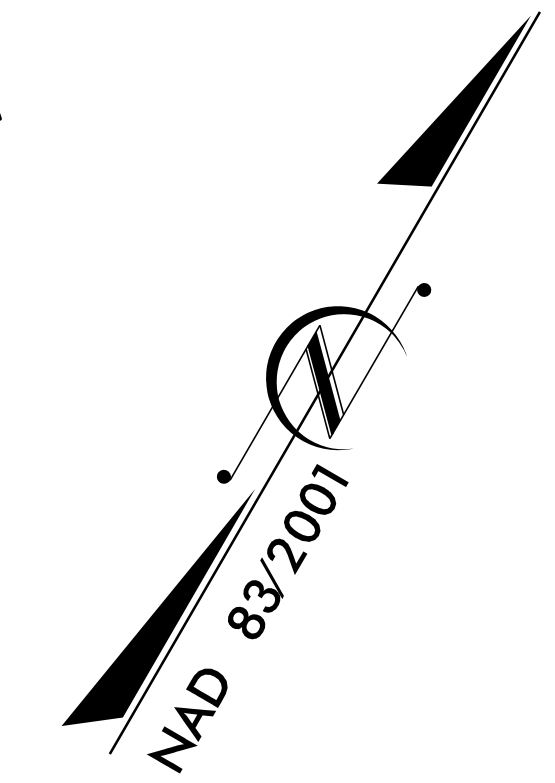
TIP PROJECT: U-5818

LOCATION: SR 1001 (SUGAR HILL RD.) FROM I-40 WB RAMPS TO 0.3MI. WEST OF I-40 EB RAMPS.
TYPE OF WORK: WATER LINE CONSTRUCTION

END TIP PROJECT U-5818
-L- STA. 38+00.00

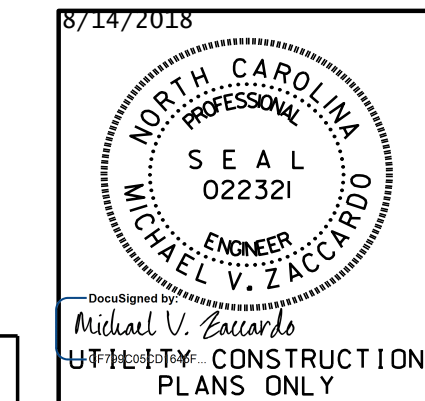


FINAL DESIGN
NOT RELEASED
FOR CONSTRUCTION



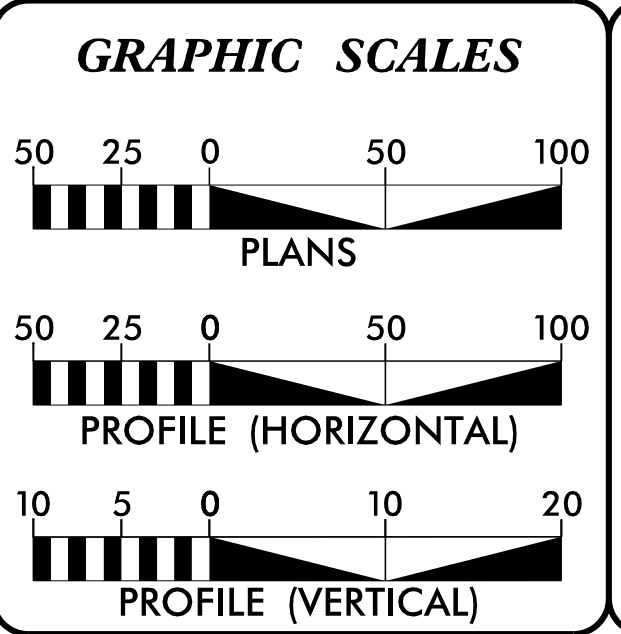
BEGIN TIP PROJECT U-5818
-L- STA. 10+00.00

THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF MARION.



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	SYMBOLGY SHEET
UC-3	GENERAL NOTES SHEET
UC-3A	DETAIL SHEET
UC-4	WATER PLAN & PROFILE SHEET
UC-5	SEWER PLAN & PROFILE SHEET
UC-6	PLAN SHEET

WATER AND SEWER OWNERS ON PROJECT

(1) CITY OF MARION PUBLIC WORKS (WATER & SEWER)

Prepared for: **DIVISION OF HIGHWAYS**
DIVISION THIRTEEN
in the Office of:

WETHERILL ENGINEERING
1223 JONES FRANKLIN ROAD
RALEIGH, N.C. 27606
LICENSE NO. F-0377
BUS: 919 851 8077
FAX: 919 851 8107

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JUNE 15, 2018

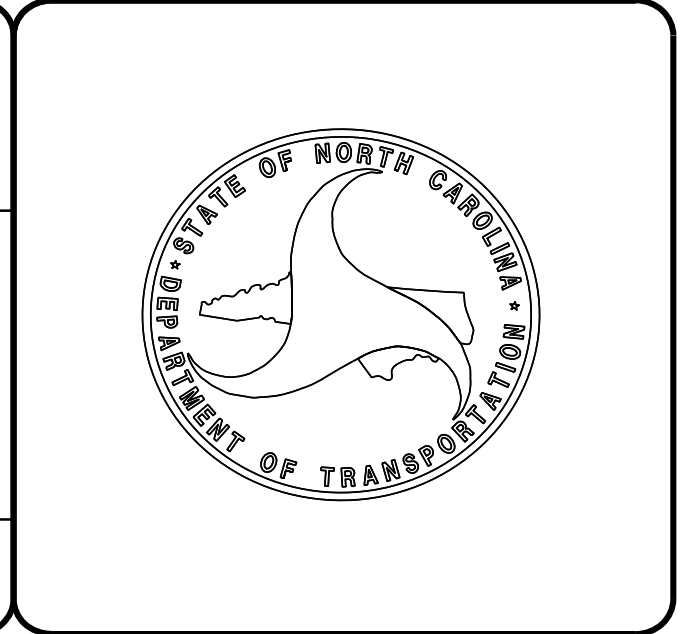
LETTING DATE: JUNE 18, 2019

NCDOT CONTACT: COLE HOOD, PE
DIVISION 13 CONSTRUCTION ENGINEER

GREG PURVIS, PE
PROJECT ENGINEER

ROBERT O'DELL
PROJECT DESIGN ENGINEER

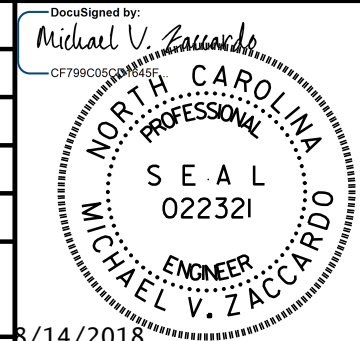

MICHAEL V. ZACCARDO, PE
UTILITY DESIGN ENGINEER



8/14/2018
U:\Projects\U-5818\U-5818_U-1_UC1_Tsh.dgn
USER:SKENNEDY

5/14/19

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	PROJECT REFERENCE NO. U-5818	SHEET NO. UC-3
	DESIGNED BY: SLK	
	DRAWN BY: SLK	
	CHECKED BY: MVZ	
	APPROVED BY: MVZ	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	8/14/2018
	UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
		
	<small>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</small>	

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
2. THE EXISTING UTILITIES BELONG TO CITY OF MARION .
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WQ PERMITTING, PERCS UNIT. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

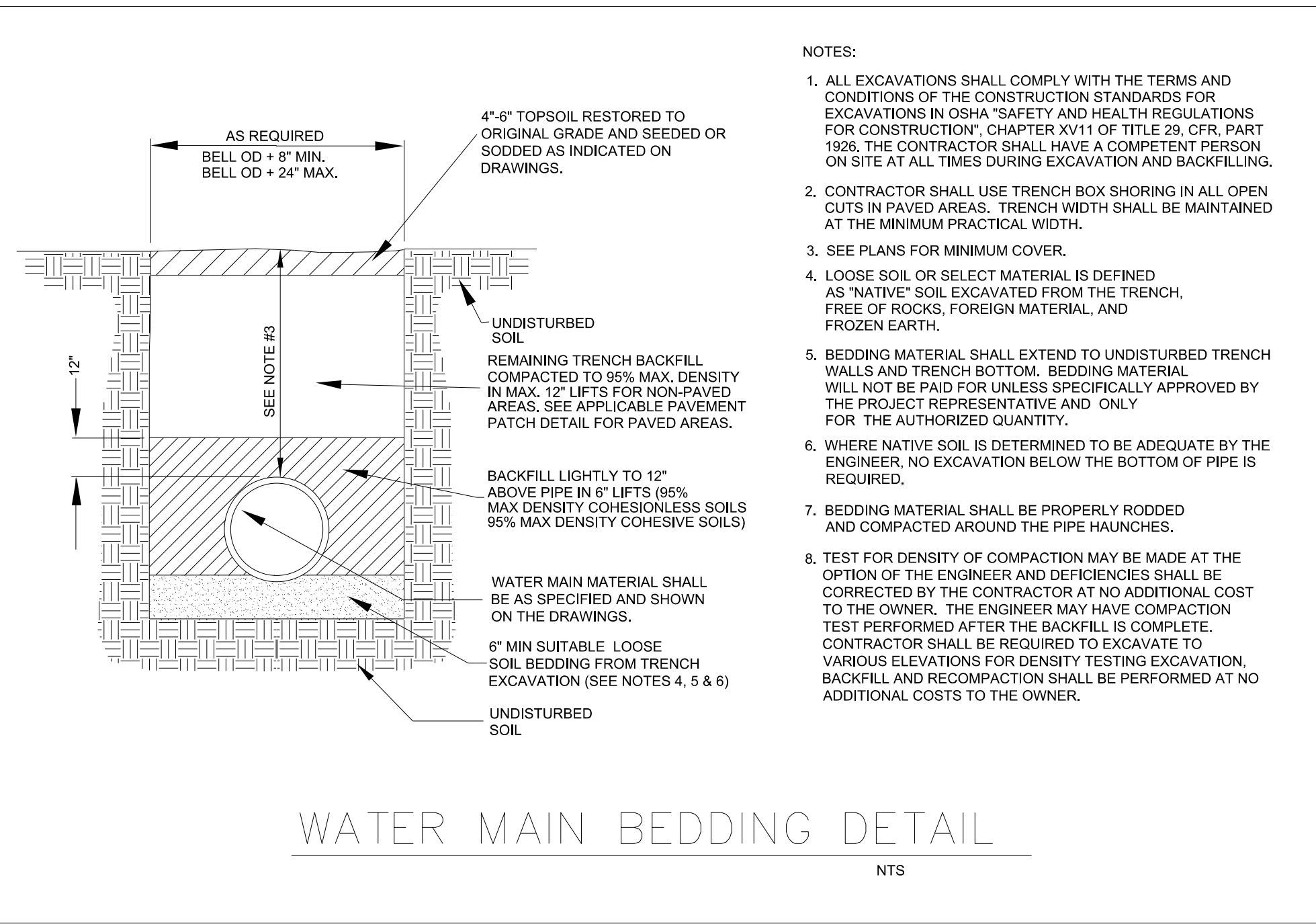
PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE FROM -WL- LINE STATION 11+30 +/- TO 11+53 +/- SHALL BE 12" CL51 R.J. DIP, INSTALLED BY OPEN CUT METHOD, AND FROM -WL- LINE STATION 11+53 +/- TO 13+12 +/- SHALL BE 16" DR9 (DIPS)HDPE, INSTALLED BY DIRECTIONAL DRILL METHOD, AND FROM -WL- LINE STATION 13+12 +/- TO 17+30 +/- SHALL BE 12" CL51 R.J. DIP, INSTALLED BY OPEN CUT METHOD.
2. PROPOSED SEWER LINE FROM -SL- LINE STATION 11+21 +/- TO 11+48 +/- SHALL BE 8" CL51 R.J. DIP, INSTALLED BY OPEN CUT METHOD, AND FROM -SL- LINE STATION 11+48 +/- TO 13+13 +/- SHALL BE 10" DR9 (DIPS)HDPE, INSTALLED BY DIRECTIONAL DRILL METHOD, AND FROM -SL- LINE STATION 13+13 +/- TO 14+17 +/- SHALL BE 8" CL51 R.J. DIP, INSTALLED BY OPEN CUT METHOD.
3. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
4. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL, IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.

UTILITY CONSTRUCTION

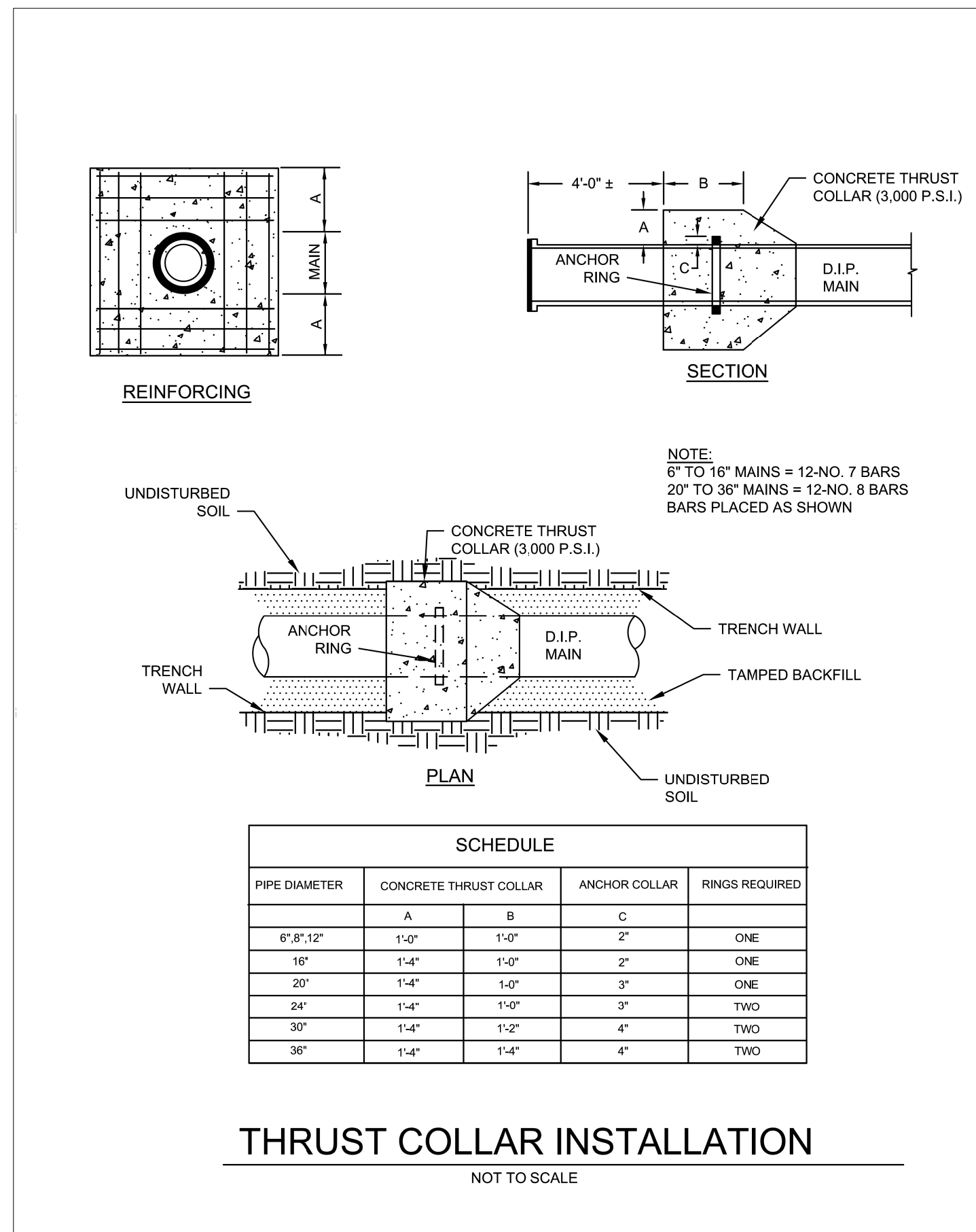
FINAL DESIGN
 NOT RELEASED
 FOR CONSTRUCTION

8/13/2018 8:11:43 AM ut-rdy4_UC3_psh.dgn
 USER: skenneth



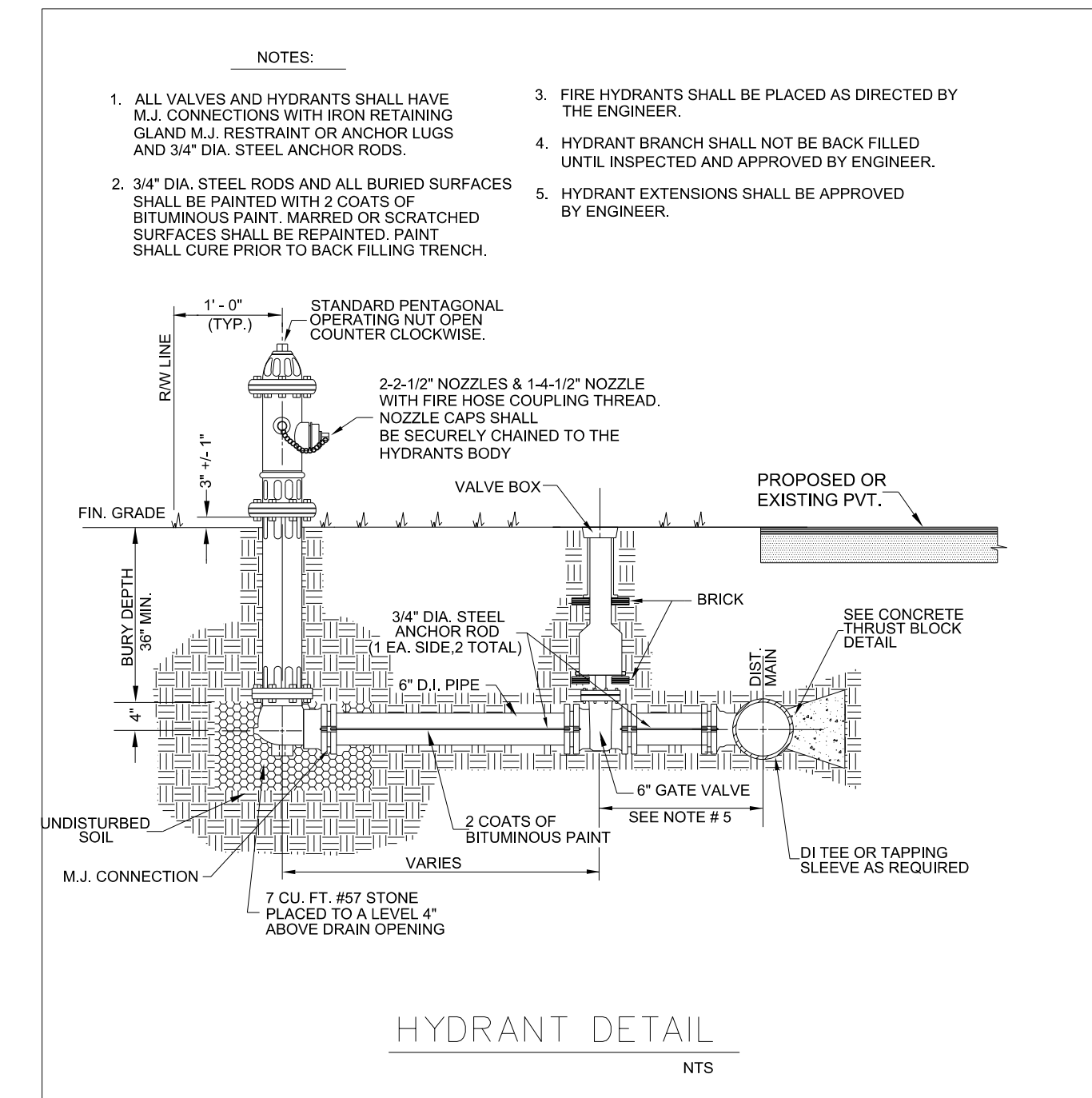
WATER MAIN BEDDING DETAIL

NTS



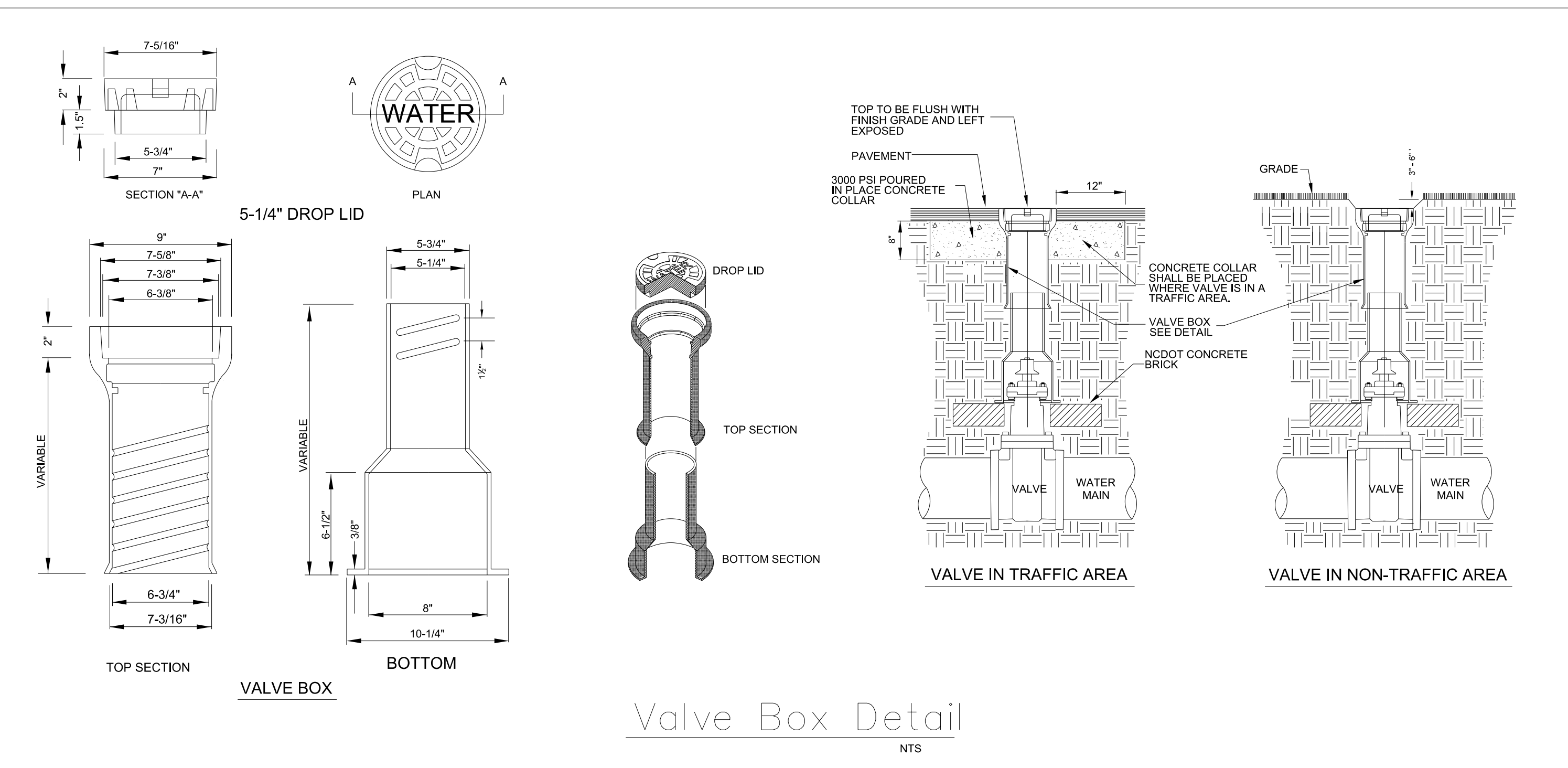
THRUST COLLAR INSTALLATION

NOT TO SCALE



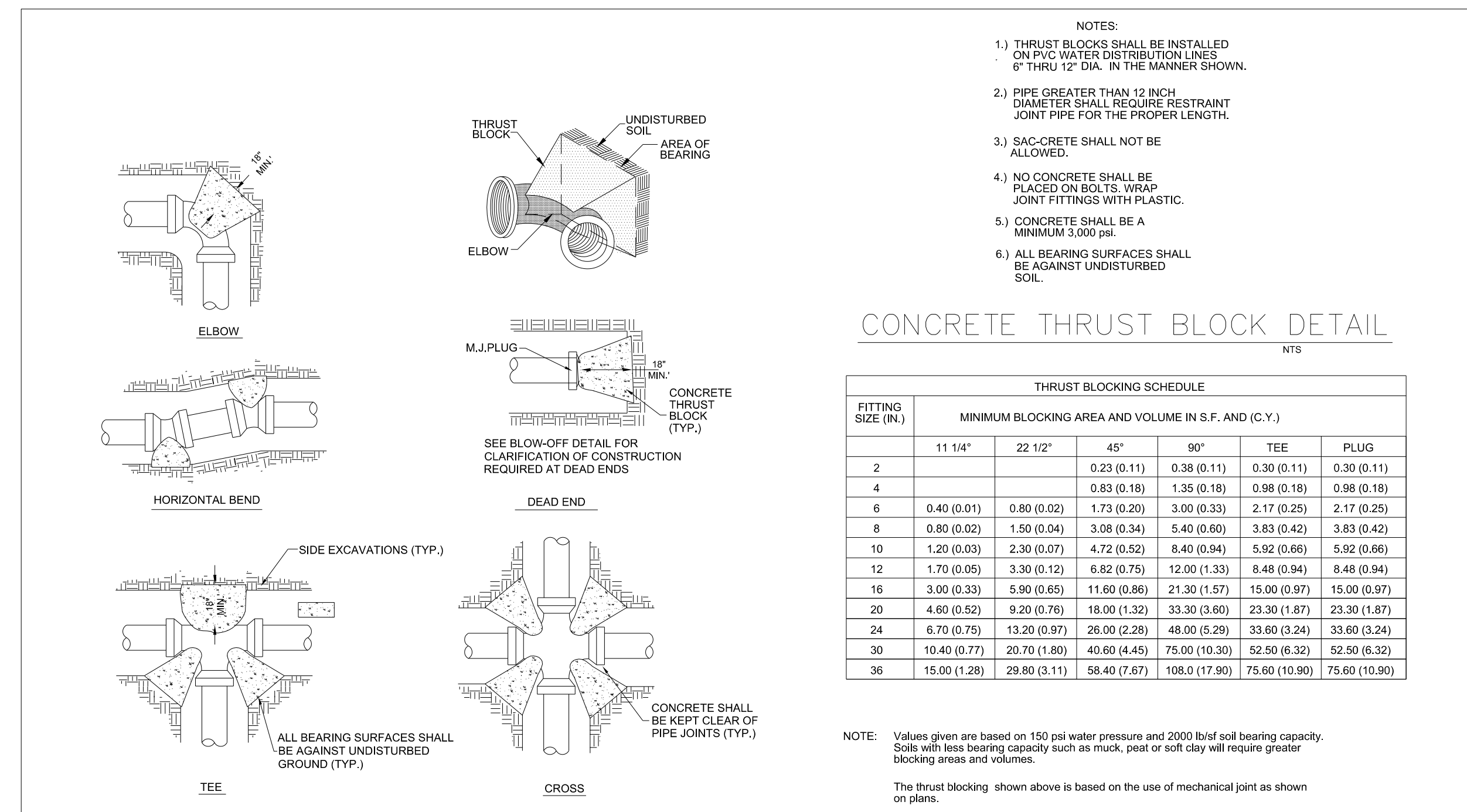
HYDRANT DETAIL

NTS



Valve Box Detail

NTS



CONCRETE THRUST BLOCK DETAIL

NTS

UTILITY CONSTRUCTION PLANS

1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

ETHERILL ENGINEERING

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

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

PROJECT REFERENCE NO. **U-5818**

SHEET NO. **UC-3A**

DESIGNED BY: **SLK**

DRAWN BY: **SLK**

CHECKED BY: **MVZ**

APPROVED BY: **MVZ**

REVISED:



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
 PHONE: (919) 707-6690
 FAX: (919) 250-4151

7/14/2018

SEAL
 022321
 NORTH CAROLINA PROFESSIONAL ENGINEER
 MICHAEL V. ZICCARRO

Approved by: Michael V. Ziccarro
 UTILITIES CONSTRUCTION PLANS ONLY

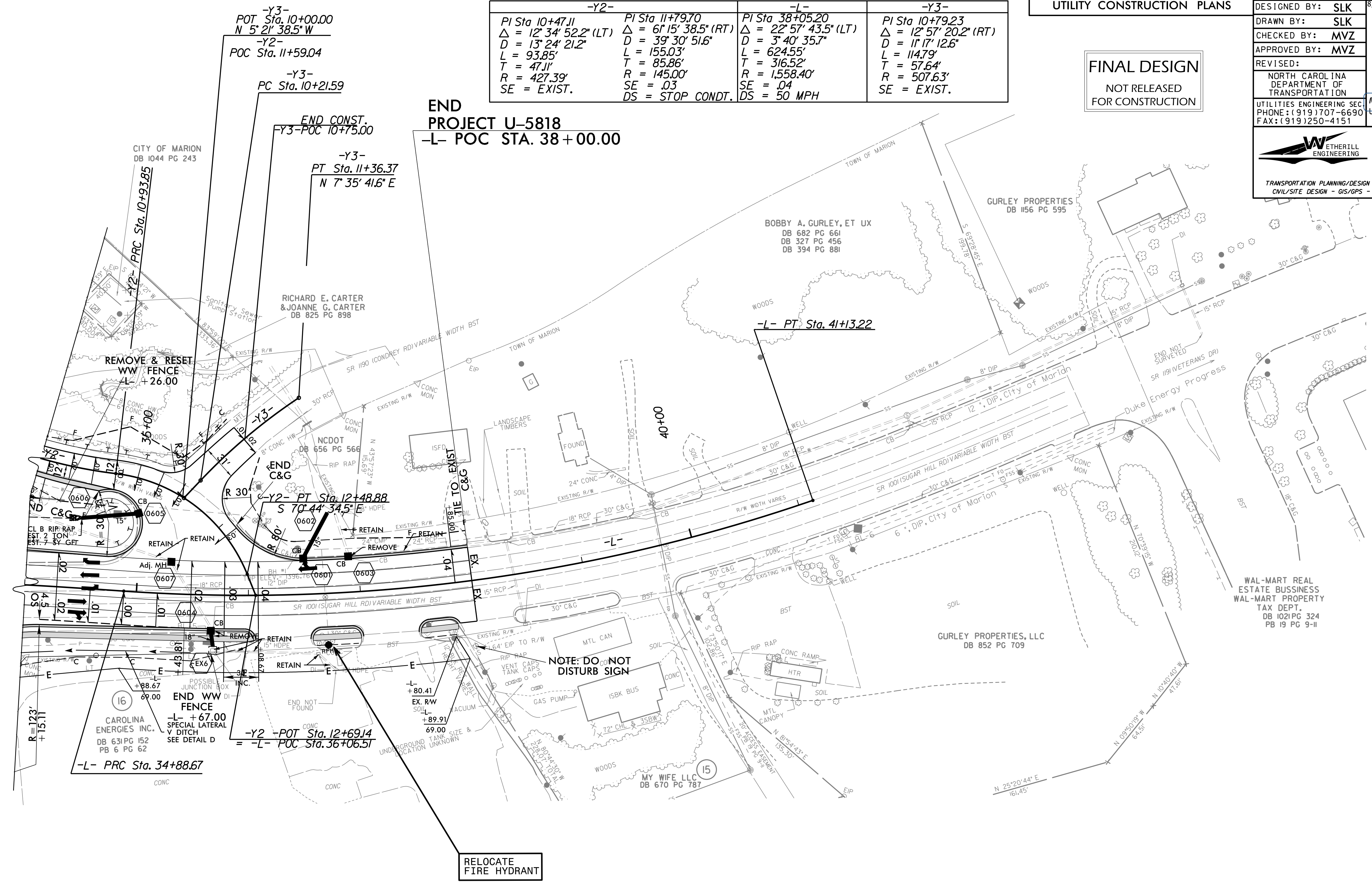
PROJECT REFERENCE NO.		SHEET NO.
U-5818		UC-6
DESIGNED BY:	SLK	8/14/2018
DRAWN BY:	SLK	
CHECKED BY:	MVZ	
APPROVED BY:	MVZ	ENGINEER
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SECTION PHONE: (919) 707-6690 FAX: (919) 250-4151		1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107
		
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION		

UTILITY CONSTRUCTION PLANS

FINAL DESIGN
NOT RELEASED
FOR CONSTRUCTION

-Y2-	-Y2-	-L-	-Y3-
PI Sta 10+47.11	PI Sta 11+79.70	PI Sta 38+05.20	PI Sta 10+79.23
$\Delta = 12^\circ 34' 52.2" (LT)$	$\Delta = 61^\circ 15' 38.5" (RT)$	$\Delta = 22^\circ 57' 43.5" (LT)$	$\Delta = 12^\circ 57' 20.2" (RT)$
D = 13' 24' 21.2"	D = 39' 30' 51.6"	D = 3' 40' 35.7"	D = 11' 17' 12.6"
L = 93.85'	L = 155.03'	L = 624.55'	L = 114.79'
T = 47.11'	T = 85.86'	T = 316.52'	T = 57.64'
R = 427.39'	R = 145.00'	R = 1,558.40'	R = 507.63'
SE = EXIST.	SE = 03	SE = 04	SE = EXIST.
	DS = STOP COND.	DS = 50 MPH	

END PROJECT U-5818
-L- POC STA. 38+00.00



NOTE: DO NOT DISTURB SIGN

RELOCATE FIRE HYDRANT

WAL-MART REAL ESTATE BUSSINESS
WAL-MART PROPERTY TAX DEPT.
DB 1021 PG 324
PB 19 PG 9-II

GURLEY PROPERTIES, LLC
DB 852 PG 709

BOBBY A. GURLEY, ET UX
DB 682 PG 661
DB 327 PG 456
DB 394 PG 881

RICHARD E. CARTER & JOANNE G. CARTER
DB 825 PG 898

CITY OF MARION
DB 1044 PG 243

GURLEY PROPERTIES
DB 1156 PG 595

MY WIFE LLC
DB 670 PG 781

CAROLINA ENERGIES INC.
DB 631 PG 152
PB 6 PG 62