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FAYETTEVILLE PUBLIC WORKS COMMISSION
955 OLD WILMINGTON RD
P.O. BOX 1089
FAYETTEVILLE, NORTH CAROLINA 28302-1089
TELEPHONE (910) 483-1401
WWW.FAYPWC.COM

March 8, 2023

TO: All Prospective Bidders
FROM: Tanya Hazlett, Procurement Advisor (774)
SUBJECT: **ADDENDUM NO. 3 – PWC2223039 RFQ/DESIGN/BUILD SERVICES
LINE 54 INCH OUTFALL RESEARCH TO I-95**

The Specifications and Bid Documents are hereby modified or clarified per the attached documents and per the following:

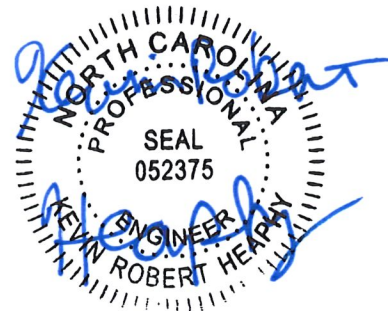
1. The bid opening date has been changed from Tuesday, March 14, 2023, 2:00 PM to Thursday March 16, 2023, 2:00 PM.
2. The foregoing changes or clarifications shall be incorporated in the original Bid Documents and a **signed copy of this Addendum No. 3** shall accompany the bid to acknowledge the bidder's receipt and familiarity with the changes and/or clarifications.

Acknowledgement:

Company _____

By _____

Date _____



Date: March 7th, 2023

**Response to Questions
Request for Statement of Qualifications
Design-Build Services Line 54-Inch Outfall Research Drive to I-95**

1. Questions on the Outfall Manholes

- a. Does the 54-in outfall have manholes or access points at every bend?
- b. Do additional manholes exist in the project section aside from those shown in the RFQ?
- c. Can PWC provide the depths of the existing manholes on the proposed line?

Response: Refer to Attachment A for drawing of the outfall and manhole locations and a table with approximate elevations of manhole rim and inverts. Please note that the information provided is based on PWC's GIS database. PWC makes no guarantees on the accuracy of the data provided.

2. Can we utilize two 11"x17" pages be utilized as two of the 40 pages?

Response: Yes

3. Questions on Contract

- a. Does PWC intend to utilize their standard service agreement for both Phase 1 and Phase 2 of the design build project?
- b. Does PWC have any special terms and conditions that will be enforced during the design activities and or construction phase?
- c. Can you please provide a draft copy of the proposed contract with the terms and conditions?

Response: PWC does not anticipate utilizing its standard Service Agreement for this contract. The Design-Build contract will be based on the Engineers Joint Contract Documents Committee (EJCDC) form modified for a public entity customer. PWC is currently in the process of preparing that contract. It may not be ready for review prior to award. Depending on the final design and other issues discussed with the successful design-build team, PWC may

have specific terms and conditions that will be enforced during the design and construction phases.

4. Outfall Flow Data Questions

- a. Does PWC have flow monitoring data or defined criteria of the peak bypass pumping rate for the 54" line?
- b. Can PWC provide the wet weather flow rate for the outfall in this location?

Response: Refer to Attachment B for the wet weather flow rate graphs of the outfall (Phase 2) attached. It is noted that PWC requires the temporary bypass system to be sized to handle 2.5 times the average daily flow or the specified peak flow – whichever is greater.

5. Condition of Outfall Questions

- a. Would you please forward any photos or video that you have showing the condition of this pipe?
- b. We would like to request a copy of the CCTV inspections.

Response: Refer to Attachment C for the CCTV inspection reports and photos. The videos will be posted when ready..

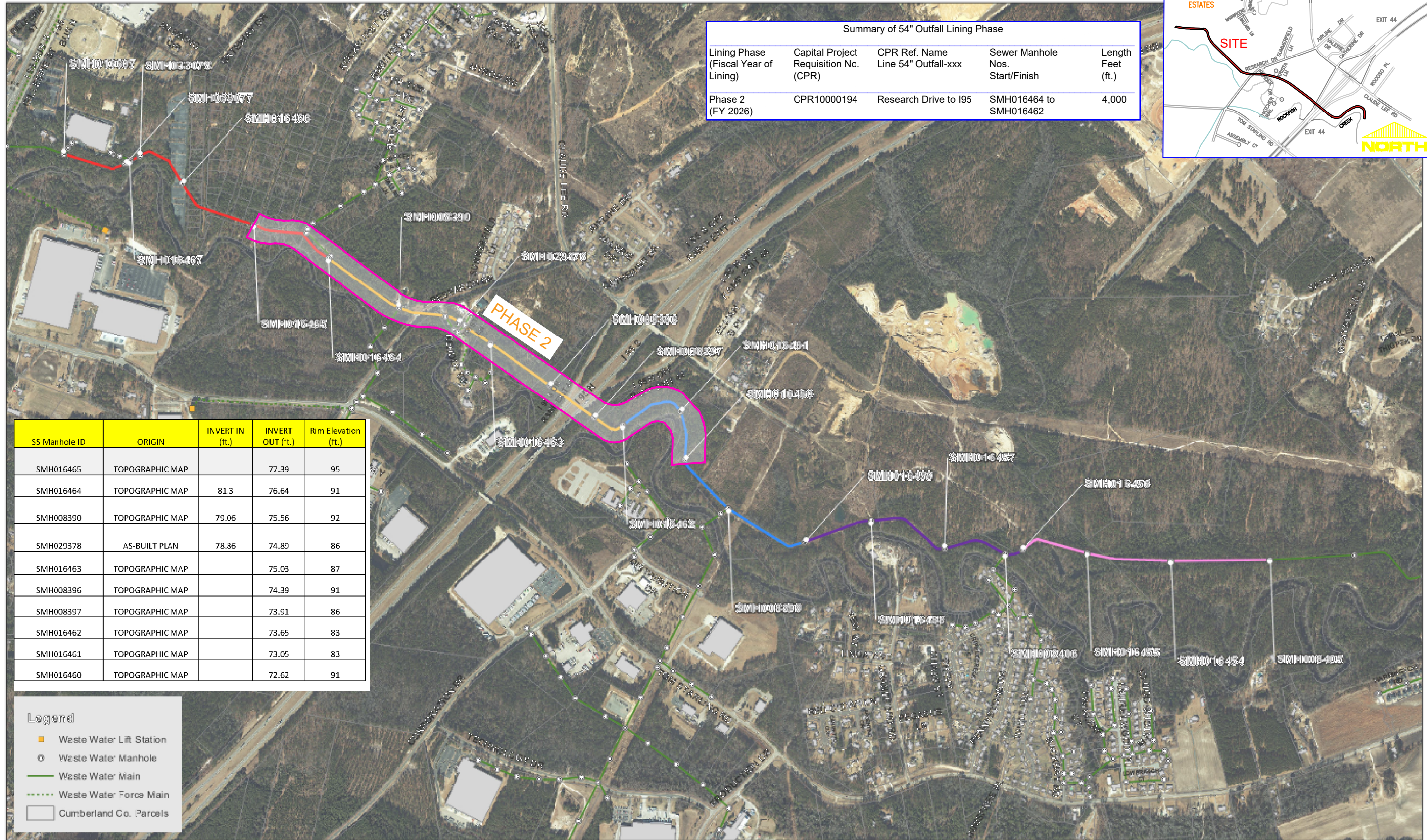
6. I would also like to know if PWC is considering any other technologies for pipe lining other than CIPP?

Response: Yes, PWC will consider other technologies for pipe lining other than CIPP.

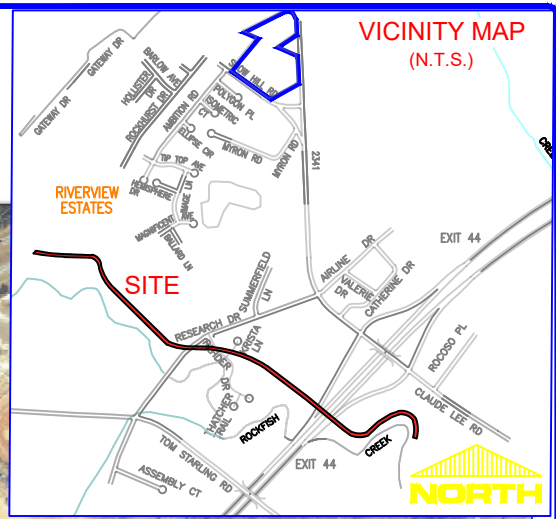
7. We would like to request a copy of the presentation from the pre-submittal meeting on 2/22/23.

Response: Refer to Attachment D for a pdf of the presentation.

ATTACHMENT A



Summary of 54" Outfall Lining Phase				
Lining Phase (Fiscal Year of Lining)	Capital Project Requisition No. (CPR)	CPR Ref. Name Line 54" Outfall-xxx	Sewer Manhole Nos. Start/Finish	Length Feet (ft.)
Phase 2 (FY 2026)	CPR1000194	Research Drive to I95	SMH016464 to SMH016462	4,000



SS Manhole ID	ORIGIN	INVERT IN (ft.)	INVERT OUT (ft.)	Rim Elevation (ft.)
SMH016465	TOPOGRAPHIC MAP		77.39	95
SMH016464	TOPOGRAPHIC MAP	81.3	76.64	91
SMH08390	TOPOGRAPHIC MAP	79.06	75.56	92
SMH029378	AS-BUILT PLAN	78.86	74.89	86
SMH016463	TOPOGRAPHIC MAP		75.03	87
SMH08396	TOPOGRAPHIC MAP		74.39	91
SMH08397	TOPOGRAPHIC MAP		73.91	86
SMH016462	TOPOGRAPHIC MAP		73.65	83
SMH016461	TOPOGRAPHIC MAP		73.05	83
SMH016460	TOPOGRAPHIC MAP		72.62	91

Legend

- Waste Water Lift Station
- Waste Water Manhole
- Waste Water Main
- Waste Water Force Main
- Cumberland Co. Parcels

PROJECT LIMITS

DRAWING FOR REFERENCE
NOT TO SCALE

BY	
REVISIONS	
DATE	

DATE: 3/6/2023
 SURVEY/GPS BY: FAYPING
 DRAWN BY: WDU
 CHECKED BY:
 SCALE: HORIZ: 1"=N/A
 VERT: 1"=N/A

F1

1 OF 2

**54" OUTFALL REHABILITATION
 MANHOLE APPROXIMATE SURVEY DATA**
 FIGURE 1

**FAVETTEVILLE
 PUBLIC WORKS COMMISSION**
WATER RESOURCES ENGINEERING
 P.O. Box 1029 Fayetteville, NC 28402
 855 Old Wilmington Road Fayetteville, NC 28401

Research to 195-54" Sewer Rehabilitation RFQ
Approximate Invert and Rim Elevations of Manholes in Project Area

SS Manhole ID	ORIGIN	INVERT IN (ft.)	INVERT OUT (ft.)	Rim Elevation (ft.)
SMH016465	TOPOGRAPHIC MAP		77.39	95
SMH016464	TOPOGRAPHIC MAP	81.3	76.64	91
SMH008390	TOPOGRAPHIC MAP	79.06	75.56	92
SMH029378	AS-BUILT PLAN	78.86	74.89	86
SMH016463	TOPOGRAPHIC MAP		75.03	87
SMH008396	TOPOGRAPHIC MAP		74.39	91
SMH008397	TOPOGRAPHIC MAP		73.91	86
SMH016462	TOPOGRAPHIC MAP		73.65	83
SMH016461	TOPOGRAPHIC MAP		73.05	83
SMH016460	TOPOGRAPHIC MAP		72.62	91

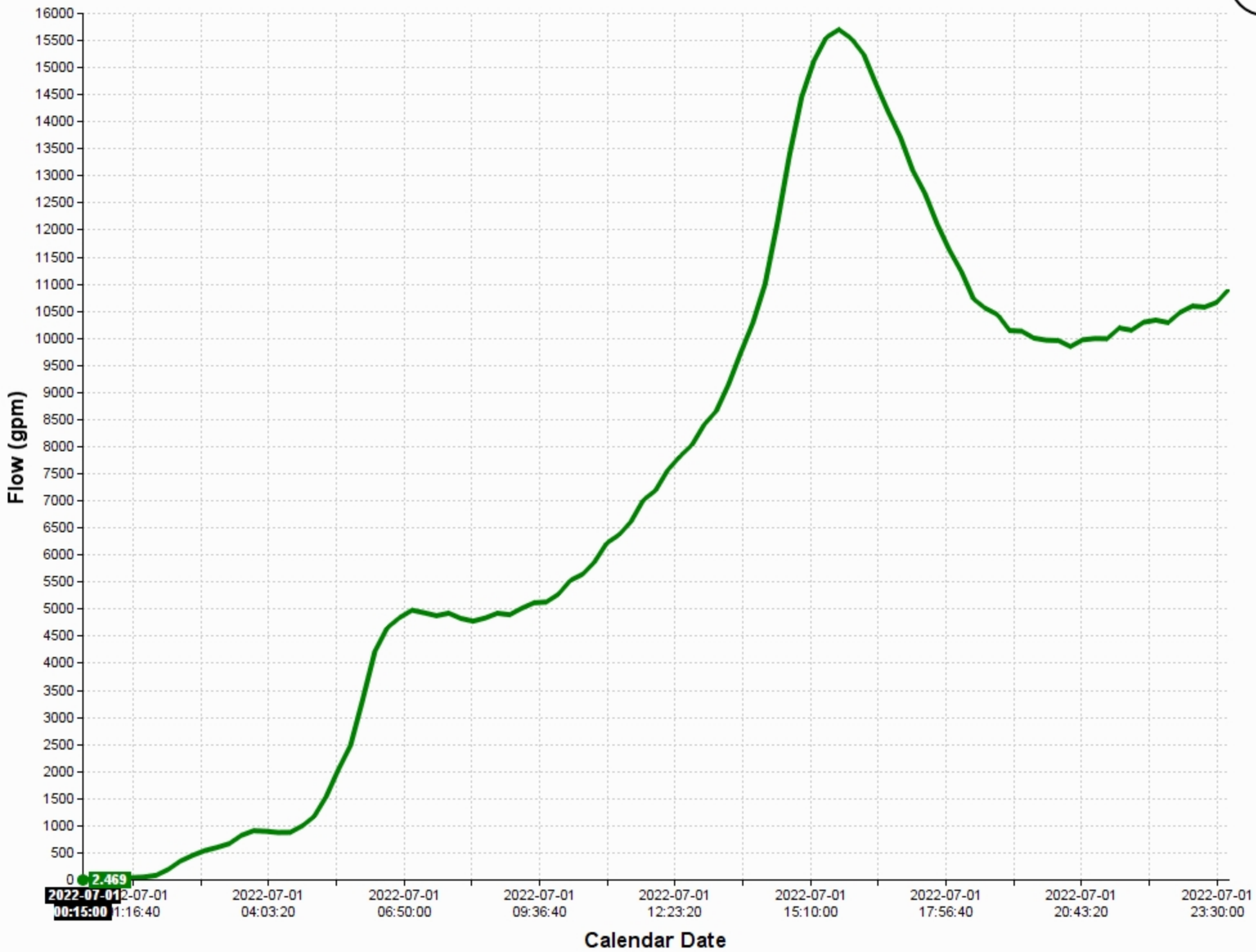
Note

1. Actual Lining is between **SMH016464** and **SMH016462**

ATTACHMENT B

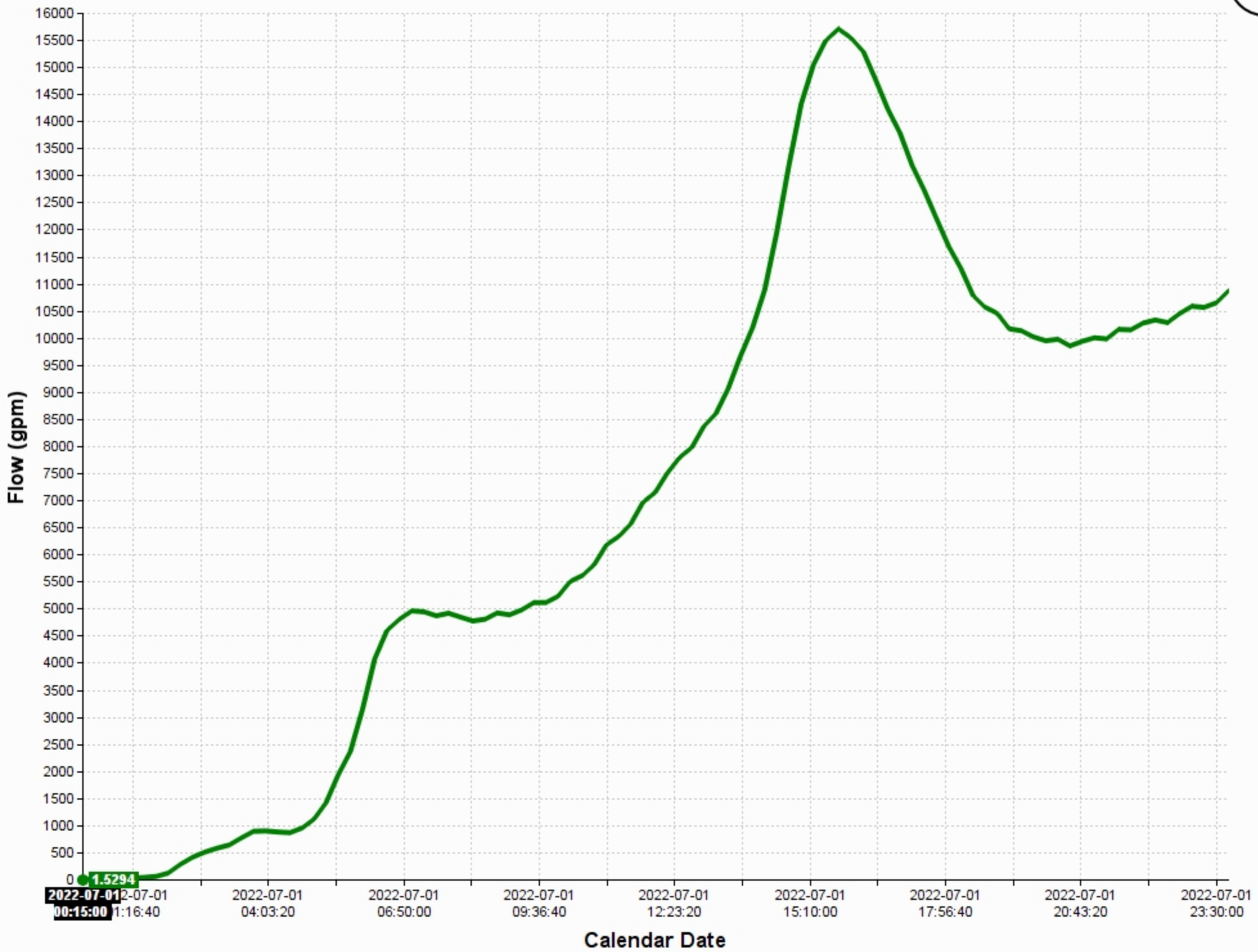
Pipe SGM028716

1%



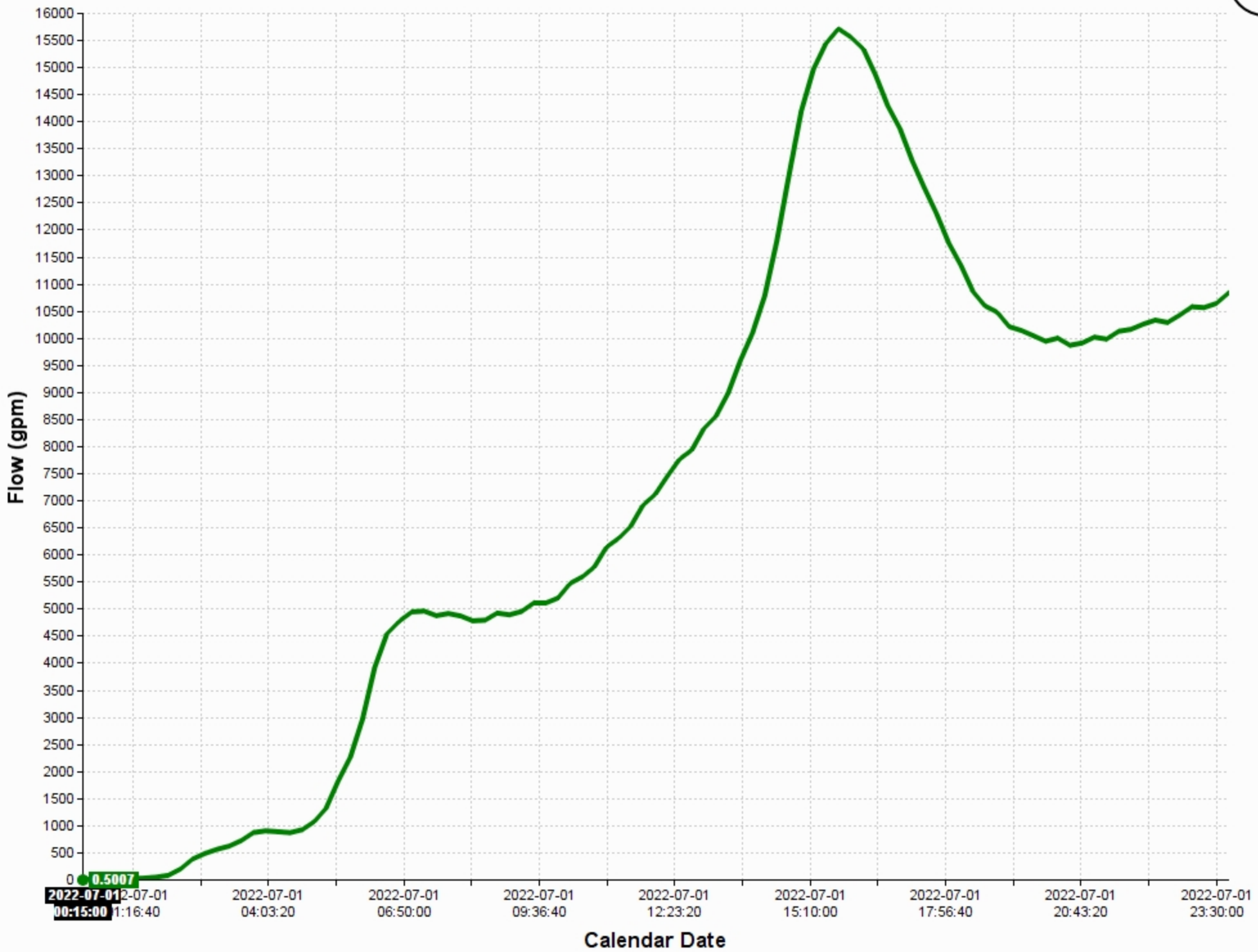
Pipe SGM028717

1%



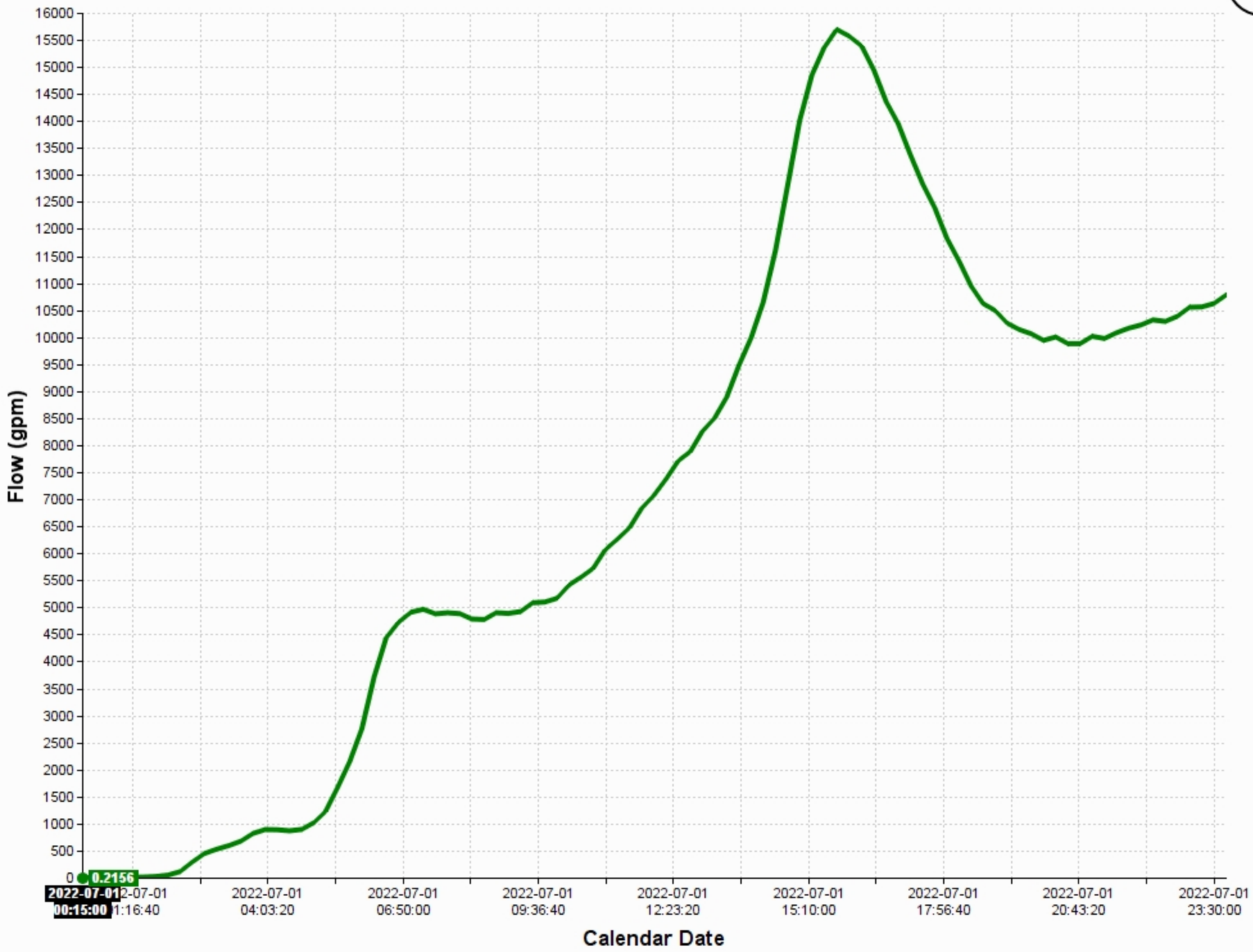
Pipe SGM015085

0%



Pipe SGM007263

0%



ATTACHMENT C

Inspection Report

Date 10/19/2020	P/O. No.	Weather Dry	Surveyor's Name Kyle G	Pipe Segment Reference 17255	Section No. 1
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 123 REHDER ST.	City FAYETTEVILLE	Use of Sewer Sanitary	Upstream MH 016463
Loc. details	Location Code Easement/Right of way	Drainage Area	Dowstream MH 008396
		Flow Control	Dir. of Survey Downstream
		Length surveyed 848.90 ft	Section Length 848.90 ft

Purpose of Survey	Joint Length	
Year Laid	Dia./Height 54 inch	
Year Rehabilitated	Material Reinforced Concrete Pipe	
Tape / Media No.	Lining Method	

Add. Information :

1:1515 Position	Observation	Photo
<p>016463</p> <p>0.00</p> <p>0.00</p> <p>0.00 S1</p>	<p>Manhole</p> <p>Water Level, 30 %of cross sectional area</p> <p>Surface Reinforcement Projecting, from 09 to 03 o'clock, within 8 inches: NO</p>	<p>PWC-2103892-01-AMH '016463'-AMH '008396'-AMH at 0.0 ft.JPG</p> <p>PWC-2103892-01-AMH '016463'-AMH '008396'-MWL at 0.0 ft.JPG</p> <p>016463_D_008396_SRP_0_3_A.jpg, PWC-2103892-01-AMH '016463'-AMH '008396'-SRP at</p>

Inspection Report

Date : 10/19/2020	Job number :	Weather : Dry	Operator : Kyle G	Pipe Segment Reference 17255	Section name : 1
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Inspection Date 10/19/2020	Cleaned : No Pre-Cleaning	Rate :

1:1515	Position	Observation	Photo				
		<p>F1 Surface Reinforcement Projecting, from 09 to 03 o'clock, within 8 inches: NO</p> <p>Manhole</p>	<p>016463_D_008396_SRP_840_4_A.jpg, PWC-2103892-01-AMH '01646 016463_D_008396_AMH_848.9_5_A.jpg, PWC-2103892-01-AMH '01646</p>				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
3a00	0000	504	0	504	3	0	3

Inspection photos

City : FAYETTEVILLE	Street : REHDER ST.	Date : 10/19/2020	Pipe Segment Reference : 17255	Section No : 1
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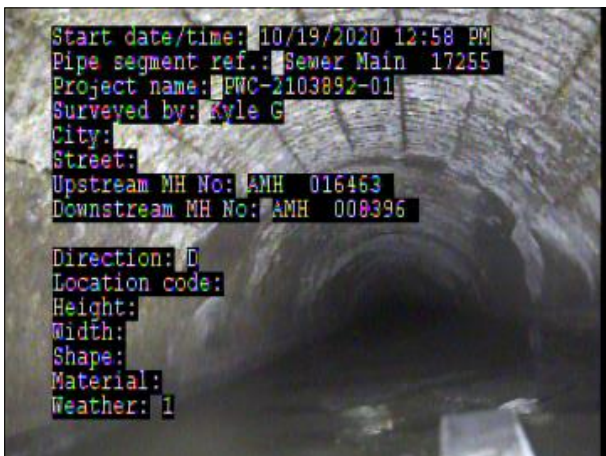


Photo: PWC-2103892-01-AMH '016463'-AMH '008396'-AMH at 0.0 ft.JPG
 OFT, Manhole

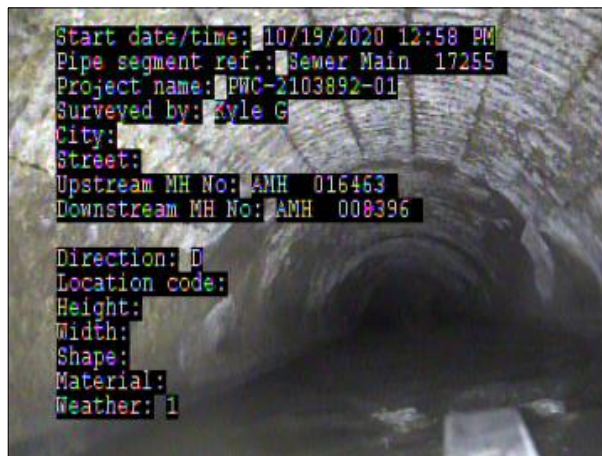


Photo: PWC-2103892-01-AMH '016463'-AMH '008396'-MWL at 0.0 ft.JPG
 OFT, Water Level, 30 %of cross sectional area



Photo: 016463_D_008396_SRP_0_3_A.jpg, 00:00:22
 OFT, Surface Reinforcement Projecting, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016463'-AMH '008396'-SRP at 0.0 ft.JPG, 00:00:22
 OFT, Surface Reinforcement Projecting, from 09 to 03 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : REHDER ST.	Date : 10/19/2020	Pipe Segment Reference : 17255	Section No : 1
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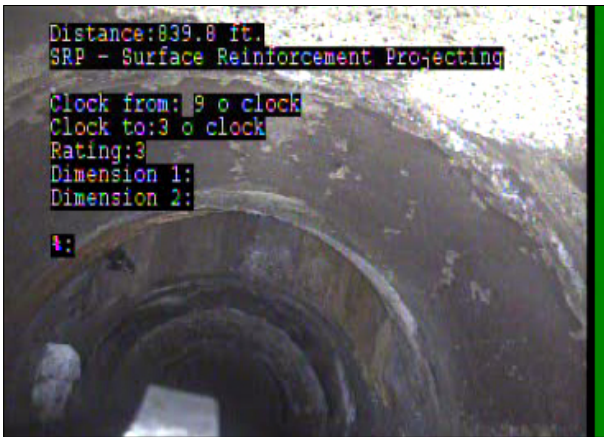


Photo: 016463_D_008396_SRP_840_4_A.jpg, 03:06:49
 840FT, Surface Reinforcement Projecting, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016463'-AMH '008396'-SRP at 840.0 ft.JPG, 03:06:49
 840FT, Surface Reinforcement Projecting, from 09 to 03 o'clock, within 8 inches: NO



Photo: 016463_D_008396_AMH_848.9_5_A.jpg, 03:08:54
 848.9FT, Manhole



Photo: PWC-2103892-01-AMH '016463'-AMH '008396'-AMH at 848.9 ft.JPG, 03:08:54
 848.9FT, Manhole

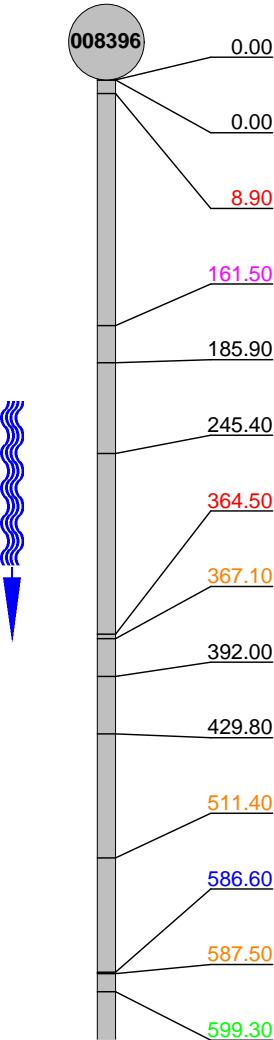
Inspection Report

Date 10/20/2020	P/O. No.	Weather Dry	Surveyor's Name Kyle G	Pipe Segment Reference 8336	Section No. 2
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street123 City Loc. details Location Code	I 95 FAYETTEVILLE Easement/Right of way	Use of Sewer Drainage Area Flow Control Length surveyed	Sanitary 636.70 ft	Upstream MH Dowstream MH Dir. of Survey Section Length	008396 008397 Downstream 654.00 ft
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Purpose of Survey Year Laid Year Rehabilitated Tape / Media No.	Joint Length Dia./Height Material Lining Method	54 inch Reinforced Concrete Pipe
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Add. Information :

1:1515 Position	Observation	Photo
	Manhole	PWC-2103892-01-AMH '008396'-AMH '008397'-AMH at 0.0 ft.JPG
	Water Level, 30 %of cross sectional area	PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
8.90	S1 Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO	008396_D_008397_SRC_8.9_8_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
161.50	Infiltration Runner, from 02 to 03 o'clock, within 8 inches: NO	008396_D_008397_IR_161.5_9_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
185.90	Infiltration Stain, from 03 to 04 o'clock, within 8 inches: NO	008396_D_008397_IS_185.9_10_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
245.40	Infiltration Stain, from 02 to 04 o'clock, within 8 inches: NO	008396_D_008397_IS_245.4_11_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
364.50	F1 Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO	008396_D_008397_SRC_364.5_12_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
367.10	S2 Surface Aggregate Projecting, from 09 to 03 o'clock, within 8 inches: NO	008396_D_008397_SAP_367.1_13_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
392.00	Infiltration Stain, from 01 to 04 o'clock, within 8 inches: NO	008396_D_008397_IS_392_14_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-IS at 392.0 ft.JPG
429.80	Infiltration Stain, at 08 o'clock, within 8 inches: NO	008396_D_008397_IS_429.8_15_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
511.40	F2 Surface Aggregate Projecting, from 09 to 03 o'clock, within 8 inches of joint: NO, Finish	008396_D_008397_SAP_511.4_16_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
586.60	Deposits Attached Encrustation, 5% of cross sectional area, from 08 to 11 o'clock, within 8 inches: NO	008396_D_008397_DAE_586.6_17_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
587.50	Surface Aggregate Visible, from 09 to 03 o'clock, within 8 inches: NO	008396_D_008397_SAV_587.5_18_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
599.30	Surface Roughness Increased, from 09 to 03 o'clock, within 8 inches: NO	008396_D_008397_SRI_599.3_19_A.jpg, PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG

Inspection Report

Date : 10/20/2020	Job number :	Weather : Dry	Operator : Kyle G	Pipe Segment Reference 8336	Section name : 2
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Inspection Date 10/20/2020	Cleaned : No Pre-Cleaning	Rate :

1:1515	Position	Observation	Photo				
	636.70	Manhole	008396_D_008397_AMH_636.7_20_A.jpg, PWC-2103892-01-AMH '00839				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5M3E	4121	446	6	452	4.37	3	4.35

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-AMH at 0.0 ft.JPG
 0FT, Manhole



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-MWL at 0.0 ft.JPG
 0FT, Water Level, 30 %of cross sectional area



Photo: 008396_D_008397_SRC_8.9_8_A.jpg, 00:00:51
 8.9FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-SRC at 8.9 ft.JPG, 00:00:51
 8.9FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: 008396_D_008397_IR_161.5_9_A.jpg, 00:06:41
161.5FT, Infiltration Runner, from 02 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-IR at 161.5 ft.JPG, 00:06:41
161.5FT, Infiltration Runner, from 02 to 03 o'clock, within 8 inches: NO



Photo: 008396_D_008397_IS_185.9_10_A.jpg, 00:08:21
185.9FT, Infiltration Stain, from 03 to 04 o'clock, within 8 inches: NO

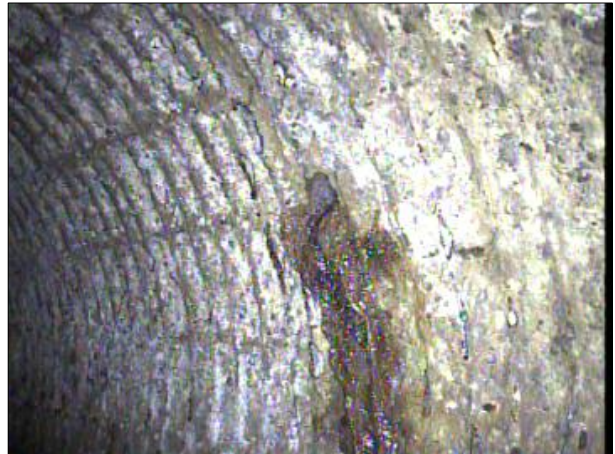


Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-IS at 185.9 ft.JPG, 00:08:21
185.9FT, Infiltration Stain, from 03 to 04 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: 008396_D_008397_IS_245.4_11_A.jpg, 00:10:37
 245.4FT, Infiltration Stain, from 02 to 04 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-IS at 245.4 ft.JPG, 00:10:37
 245.4FT, Infiltration Stain, from 02 to 04 o'clock, within 8 inches: NO



Photo: 008396_D_008397_SRC_364.5_12_A.jpg, 00:17:29
 364.5FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-SRC at 364.5 ft.JPG, 00:17:29
 364.5FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: 008396_D_008397_SAP_367.1_13_A.jpg, 00:18:42
 367.1FT, Surface Aggregate Projecting, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-SAP at 367.1 ft.JPG, 00:18:42
 367.1FT, Surface Aggregate Projecting, from 09 to 03 o'clock, within 8 inches: NO



Photo: 008396_D_008397_IS_392_14_A.jpg, 00:20:09
 392FT, Infiltration Stain, from 01 to 04 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-IS at 392.0 ft.JPG, 00:20:09
 392FT, Infiltration Stain, from 01 to 04 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: 008396_D_008397_IS_429.8_15_A.jpg, 00:22:25
 429.8FT, Infiltration Stain, at 08 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-IS at 429.8 ft.JPG, 00:22:25
 429.8FT, Infiltration Stain, at 08 o'clock, within 8 inches: NO



Photo: 008396_D_008397_SAP_511.4_16_A.jpg, 00:27:08
 511.4FT, Surface Aggregate Projecting, from 09 to 03 o'clock, within 8 inches of joint: NO, Finish



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-SAP at 511.4 ft.JPG, 00:27:08
 511.4FT, Surface Aggregate Projecting, from 09 to 03 o'clock, within 8 inches of joint: NO, Finish

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: 008396_D_008397_DAE_586.6_17_A.jpg, 00:31:58
 586.6FT, Deposits Attached Encrustation, 5% of cross sectional area, from 08 to 11 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-DAE at 586.6 ft.JPG, 00:31:58
 586.6FT, Deposits Attached Encrustation, 5% of cross sectional area, from 08 to 11 o'clock, within 8 inches: NO



Photo: 008396_D_008397_SAV_587.5_18_A.jpg, 00:32:23
 587.5FT, Surface Aggregate Visible, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-SAV at 587.5 ft.JPG, 00:32:23
 587.5FT, Surface Aggregate Visible, from 09 to 03 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 8336	Section No : 2
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Photo: 008396_D_008397_SRI_599.3_19_A.jpg, 00:33:38
599.3FT, Surface Roughness Increased, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-SRI at 599.3 ft.JPG, 00:33:38
599.3FT, Surface Roughness Increased, from 09 to 03 o'clock, within 8 inches: NO



Photo: 008396_D_008397_AMH_636.7_20_A.jpg, 00:35:50
636.7FT, Manhole



Photo: PWC-2103892-01-AMH '008396'-AMH '008397'-AMH at 636.7 ft.JPG, 00:35:50
636.7FT, Manhole

Inspection Report

Date 10/20/2020	P/O. No.	Weather Dry	Surveyor's Name Kyle G	Pipe Segment Reference 17254	Section No. 3
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 195	Use of Sewer Sanitary	Upstream MH 008397
City FAYETTEVILLE	Drainage Area	Dowstream MH 016462
Loc. details	Flow Control	Dir. of Survey Downstream
Location Code Easement/Right of way	Length surveyed 374.30 ft	Section Length 374.30 ft

Purpose of Survey	Joint Length
Year Laid	Dia./Height 54 inch
Year Rehabilitated	Material Reinforced Concrete Pipe
Tape / Media No.	Lining Method

Add. Information :

1:900	Position	Observation	Photo
	0.00	Manhole	PWC-2103892-01-AMH '008397'-AMH '016462'-AMH at 0.0 ft.JPG
	0.00	Water Level, 50% of cross sectional area	PWC-2103892-01-AMH '008397'-AMH '016462'-MWL at 0.0 ft.JPG
	7.00	S1 Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches: NO	008397_D_016462_SAV_7_23_A.jpg, PWC-2103892-01-AMH '008397'-AMH '016462'-SAV at
	93.40	F1 Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches: NO	008397_D_016462_SAV_93.4_24_A.jpg,
	93.50	S2 Surface Reinforcement Corroded, from 08 to 04 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '00839 008397_D_016462_SRC_93.5_25_A.jpg,
	169.80	Alignment Left, 25°	PWC-2103892-01-AMH '00839 008397_D_016462_LL_169.8_26_A.jpg,
	212.10	Alignment Left, 25°	PWC-2103892-01-AMH '00839 008397_D_016462_LL_212.1_27_A.jpg,
	246.70	Alignment Left, 25°	PWC-2103892-01-AMH '00839 008397_D_016462_LL_246.7_28_A.jpg,
	302.10	F2 Surface Reinforcement Corroded, from 08 to 04 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '00839 008397_D_016462_SRC_302.1_29_A.jpg,
	306.60	Surface Reinforcement Corroded, from 01 to 05 o'clock, within 8 inches of joint: YES	PWC-2103892-01-AMH '00839 008397_D_016462_SRC_306.6_160_A.jpg
	374.30	Manhole	008397_D_016462_AMH_374.3_30_A.jpg,
			PWC-2103892-01-AMH '00839

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17254	Section No : 3
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Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-AMH at 0.0 ft.JPG
 OFT, Manhole



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-MWL at 0.0 ft.JPG
 OFT, Water Level, 50% of cross sectional area



Photo: 008397_D_016462_SAV_7_23_A.jpg, 00:00:33
 7FT, Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches: NO

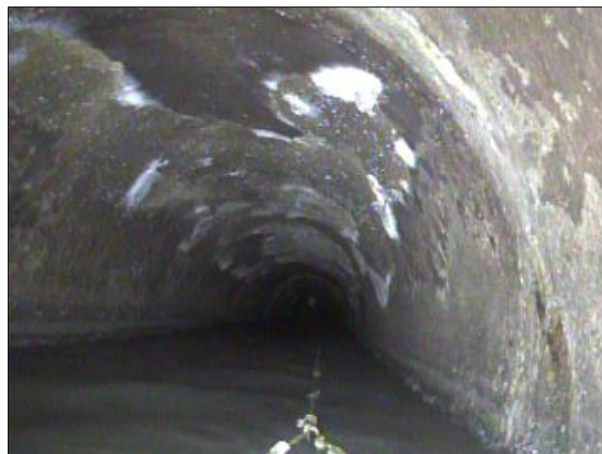


Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-SAV at 7.0 ft.JPG, 00:00:33
 7FT, Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17254	Section No : 3
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Photo: 008397_D_016462_SAV_93.4_24_A.jpg, 00:04:11
 93.4FT, Surface Aggregate Visible, from 08 to 04 o'clock,
 within 8 inches: NO



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-SAV at
 93.4 ft.JPG, 00:04:11
 93.4FT, Surface Aggregate Visible, from 08 to 04 o'clock,
 within 8 inches: NO



Photo: 008397_D_016462_SRC_93.5_25_A.jpg, 00:05:10
 93.5FT, Surface Reinforcement Corroded, from 08 to 04
 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-SRC at
 93.5 ft.JPG, 00:05:10
 93.5FT, Surface Reinforcement Corroded, from 08 to 04
 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17254	Section No : 3
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Photo: 008397_D_016462_LL_169.8_26_A.jpg, 00:10:03
169.8FT, Alignment Left, 25°



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-LL at
169.8 ft.JPG, 00:10:03
169.8FT, Alignment Left, 25°



Photo: 008397_D_016462_LL_212.1_27_A.jpg, 00:12:15
212.1FT, Alignment Left, 25°



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-LL at
212.1 ft.JPG, 00:12:15
212.1FT, Alignment Left, 25°

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17254	Section No : 3
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Photo: 008397_D_016462_LL_246.7_28_A.jpg, 00:15:08
 246.7FT, Alignment Left, 25°



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-LL at
 246.7 ft.JPG, 00:15:08
 246.7FT, Alignment Left, 25°



Photo: 008397_D_016462_SRC_302.1_29_A.jpg, 00:18:46
 302.1FT, Surface Reinforcement Corroded, from 08 to 04
 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-SRC at
 302.1 ft.JPG, 00:18:46
 302.1FT, Surface Reinforcement Corroded, from 08 to 04
 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17254	Section No : 3
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Photo: 008397_D_016462_SRC_306.6_160_A.jpg
306.6FT, Surface Reinforcement Corroded, from 01 to 05 o'clock, within 8 inches of joint: YES



Photo: 008397_D_016462_AMH_374.3_30_A.jpg, 00:23:35
374.3FT, Manhole



Photo: PWC-2103892-01-AMH '008397'-AMH '016462'-AMH at 374.3 ft.JPG, 00:23:35
374.3FT, Manhole

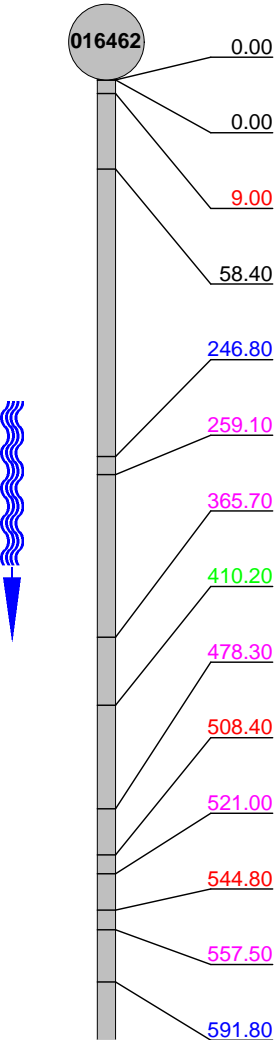
Inspection Report

Date 10/20/2020	P/O. No.	Weather Dry	Surveyor's Name Kyle G	Pipe Segment Reference 17253	Section No. 4
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 195	Use of Sewer Sanitary	Upstream MH 016462
City FAYETTEVILLE	Drainage Area	Dowstream MH 016461
Loc. details	Flow Control	Dir. of Survey Downstream
Location Code Easement/Right of way	Length surveyed 808.90 ft	Section Length 808.90 ft

Purpose of Survey	Joint Length	54 inch Reinforced Concrete Pipe
Year Laid	Dia./Height	
Year Rehabilitated	Material	
Tape / Media No.	Lining Method	

Add. Information :

1:1512 Position	Observation	Photo
	Manhole	PWC-2103892-01-AMH '016462'-AMH '016461'-AMH at 0.0 ft.JPG
	Water Level, 35% of cross sectional area	PWC-2103892-01-AMH '016462'-AMH '016461'-MWL at 0.0 ft.JPG
	Surface Reinforcement Corroded, at 12 o'clock, within 8 inches: NO	016462_D_016461_SRC_9_33_A.jpg, PWC-2103892-01-AMH '016462'-AMH '016461'-SRC at 016462_D_016461_MGP_58.4_34_A.jpg,
	General Photograph	PWC-2103892-01-AMH '016462_D_016461_MGP_58.4_34_A.jpg,
S1	Surface Spalling, from 08 to 04 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_SSS_246.8_35_A.jpg,
	Infiltration Runner, at 09 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_IR_259.1_36_A.jpg,
	Infiltration Runner, at 12 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_IR_365.7_37_A.jpg,
S2	Surface Roughness Increased, from 08 to 04 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_SRI_410.2_38_A.jpg,
	Alignment Right, 25°	PWC-2103892-01-AMH '016462_D_016461_LR_478.3_39_A.jpg,
	Surface Reinforcement Corroded, from 09 to 11 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_SRC_508.4_40_A.jpg,
	Alignment Right, 25°	PWC-2103892-01-AMH '016462_D_016461_LR_521.4_41_A.jpg,
	Surface Reinforcement Corroded, from 08 to 11 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_SRC_544.8_42_A.jpg,
	Infiltration Runner, at 03 o'clock, within 8 inches: NO	PWC-2103892-01-AMH '016462_D_016461_IR_557.5_43_A.jpg,
	Alignment Right, 20°	PWC-2103892-01-AMH '016462_D_016461_LR_591.8_44_A.jpg,
		PWC-2103892-01-AMH '016462'

Inspection Report

Date : 10/20/2020	Job number :	Weather : Dry	Operator : Kyle G	Pipe Segment Reference 17253	Section name : 4
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Inspection Date 10/20/2020	Cleaned : No Pre-Cleaning	Rate :

1:1512	Position	Observation	Photo
	651.50	F2 Surface Roughness Increased, from 08 to 04 o'clock, within 8 inches: NO	016462_D_016461_SRI_651.5_45_A.jpg, PWC-2103892-01-AMH '01646
	690.80	Deposits Attached Encrustation, 5% of cross sectional area, from 03 to 04 o'clock, within 8 inches: NO	016462_D_016461_DAE_690.8_46_A.jpg, PWC-2103892-01-AMH '01646
	690.80	Alignment Right, 25°	016462_D_016461_LR_690.8_47_A.jpg, PWC-2103892-01-AMH '01646
	789.70	F1 Surface Spalling, from 08 to 04 o'clock, within 8 inches: NO	016462_D_016461_SSS_789.7_48_A.jpg, PWC-2103892-01-AMH '01646
	792.20	Manhole	016462_D_016461_AMH_792.2_49_A.jpg, PWC-2103892-01-AMH '01646

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-AMH at 0.0 ft.JPG
OFT, Manhole



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-MWL at 0.0 ft.JPG
OFT, Water Level, 35% of cross sectional area



Photo: 016462_D_016461_SRC_9_33_A.jpg, 00:00:31
9FT, Surface Reinforcement Corroded, at 12 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SRC at 9.0 ft.JPG, 00:00:31
9FT, Surface Reinforcement Corroded, at 12 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_MGP_58.4_34_A.jpg, 00:02:39
58.4FT, General Photograph



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-MGP at
58.4 ft.JPG, 00:02:39
58.4FT, General Photograph



Photo: 016462_D_016461_SSS_246.8_35_A.jpg, 00:10:26
246.8FT, Surface Spalling, from 08 to 04 o'clock, within 8
inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SSS at
246.8 ft.JPG, 00:10:26
246.8FT, Surface Spalling, from 08 to 04 o'clock, within 8
inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_IR_259.1_36_A.jpg, 00:11:50
 259.1FT, Infiltration Runner, at 09 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-IR at 259.1 ft.JPG, 00:11:50
 259.1FT, Infiltration Runner, at 09 o'clock, within 8 inches: NO



Photo: 016462_D_016461_IR_365.7_37_A.jpg, 00:18:26
 365.7FT, Infiltration Runner, at 12 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-IR at 365.7 ft.JPG, 00:18:26
 365.7FT, Infiltration Runner, at 12 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_SRI_410.2_38_A.jpg, 00:20:37
 410.2FT, Surface Roughness Increased, from 08 to 04
 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SRI at
 410.2 ft.JPG, 00:20:37
 410.2FT, Surface Roughness Increased, from 08 to 04
 o'clock, within 8 inches: NO



Photo: 016462_D_016461_LR_478.3_39_A.jpg, 00:24:03
 478.3FT, Alignment Right, 25°



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-LR at
 478.3 ft.JPG, 00:24:03
 478.3FT, Alignment Right, 25°

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_SRC_508.4_40_A.jpg, 00:26:52
508.4FT, Surface Reinforcement Corroded, from 09 to 11 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SRC at 508.4 ft.JPG, 00:26:52
508.4FT, Surface Reinforcement Corroded, from 09 to 11 o'clock, within 8 inches: NO



Photo: 016462_D_016461_LR_521_41_A.jpg, 00:27:37
521FT, Alignment Right, 25°



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-LR at 521.0 ft.JPG, 00:27:37
521FT, Alignment Right, 25°

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_SRC_544.8_42_A.jpg, 00:30:28
 544.8FT, Surface Reinforcement Corroded, from 08 to 11 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SRC at 544.8 ft.JPG, 00:30:28
 544.8FT, Surface Reinforcement Corroded, from 08 to 11 o'clock, within 8 inches: NO



Photo: 016462_D_016461_IR_557.5_43_A.jpg, 00:31:52
 557.5FT, Infiltration Runner, at 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-IR at 557.5 ft.JPG, 00:31:52
 557.5FT, Infiltration Runner, at 03 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_LR_591.8_44_A.jpg, 00:33:50
 591.8FT, Alignment Right, 20°



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-LR at
 591.8 ft.JPG, 00:33:50
 591.8FT, Alignment Right, 20°



Photo: 016462_D_016461_SRI_651.5_45_A.jpg, 00:37:19
 651.5FT, Surface Roughness Increased, from 08 to 04
 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SRI at
 651.5 ft.JPG, 00:37:19
 651.5FT, Surface Roughness Increased, from 08 to 04
 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_DAE_690.8_46_A.jpg, 00:40:07
 690.8FT, Deposits Attached Encrustation, 5% of cross sectional area, from 03 to 04 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-DAE at 690.8 ft.JPG, 00:40:07
 690.8FT, Deposits Attached Encrustation, 5% of cross sectional area, from 03 to 04 o'clock, within 8 inches: NO



Photo: 016462_D_016461_LR_690.8_47_A.jpg, 00:40:26
 690.8FT, Alignment Right, 25°



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-LR at 690.8 ft.JPG, 00:40:26
 690.8FT, Alignment Right, 25°

Inspection photos

City : FAYETTEVILLE	Street : I 95	Date : 10/20/2020	Pipe Segment Reference : 17253	Section No : 4
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Photo: 016462_D_016461_SSS_789.7_48_A.jpg, 00:45:32
789.7FT, Surface Spalling, from 08 to 04 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-SSS at 789.7 ft.JPG, 00:45:32
789.7FT, Surface Spalling, from 08 to 04 o'clock, within 8 inches: NO



Photo: 016462_D_016461_AMH_792.2_49_A.jpg, 00:46:53
792.2FT, Manhole



Photo: PWC-2103892-01-AMH '016462'-AMH '016461'-AMH at 792.2 ft.JPG, 00:46:53
792.2FT, Manhole

Inspection Report

Date 10/21/2020	P/O. No.	Weather Dry	Surveyor's Name Kyle G	Pipe Segment Reference 17252	Section No. 5
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Date Cleaned	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street 123	claude lee rd	Use of Sewer Sanitary	Upstream MH 016461
City FAYETTEVILLE		Drainage Area	Dowstream MH 016460
Loc. details		Flow Control	Dir. of Survey Downstream
Location Code Easement/Right of way		Length surveyed 608.30 ft	Section Length 608.30 ft

Purpose of Survey	Joint Length	
Year Laid	Dia./Height	54 inch
Year Rehabilitated	Material	Reinforced Concrete Pipe
Tape / Media No.	Lining Method	

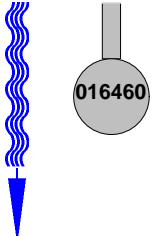
Add. Information :

1:1380 Position	Observation	Photo
	<p>Manhole</p> <p>Water Level, 35% of cross sectional area</p> <p>S1 Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO</p> <p>Alignment Left, 25°</p> <p>Alignment Right, 15°</p> <p>F1 Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO</p> <p>Manhole</p>	<p>PWC-2103892-01-AMH '016461'-AMH '016460'-AMH at 0.0 ft.JPG</p> <p>PWC-2103892-01-AMH '016461'-AMH '016460'-MWL at 0.0 ft.JPG</p> <p>016461_D_016460_SRC_11.2_53_A.jpg,</p> <p>PWC-2103892-01-AMH '016461_D_016460_LL_83_54_A.jpg, PWC-2103892-01-AMH '016461'-AMH '016460'-LL at 83</p> <p>016461_D_016460_LR_183.6_55_A.jpg,</p> <p>PWC-2103892-01-AMH '016461_D_016460_SRC_563.4_56_A.jpg,</p> <p>PWC-2103892-01-AMH '016461_D_016460_AMH_570.4_57_A.jpg,</p> <p>PWC-2103892-01-AMH '016461</p>

Inspection Report

Date : 10/21/2020	Job number :	Weather : Dry	Operator : Kyle G	Pipe Segment Reference 17252	Section name : 5
Certificate No. U-916-07005449	Survey Customer PWC	System Owner PWC	Inspection Date 10/21/2020	Cleaned : No Pre-Cleaning	Rate :

1:1380	Position	Observation	Photo



QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5U00	4121	550	6	556	5	3	4.96

Inspection photos

City : FAYETTEVILLE	Street : claud lee rd	Date : 10/21/2020	Pipe Segment Reference : 17252	Section No : 5
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Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-AMH at 0.0 ft.JPG
 OFT, Manhole



Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-MWL at 0.0 ft.JPG
 OFT, Water Level, 35% of cross sectional area



Photo: 016461_D_016460_SRC_11.2_53_A.jpg, 00:00:45
 11.2FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-SRC at 11.2 ft.JPG, 00:00:45
 11.2FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO

Inspection photos

City : FAYETTEVILLE	Street : claudie lee rd	Date : 10/21/2020	Pipe Segment Reference : 17252	Section No : 5
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Photo: 016461_D_016460_LL_83_54_A.jpg, 00:05:02
83FT, Alignment Left, 25°



Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-LL at
83.0 ft.JPG, 00:05:02
83FT, Alignment Left, 25°



Photo: 016461_D_016460_LR_183.6_55_A.jpg, 00:08:35
183.6FT, Alignment Right, 15°



Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-LR at
183.6 ft.JPG, 00:08:35
183.6FT, Alignment Right, 15°

Inspection photos

City : FAYETTEVILLE	Street : claudie lee rd	Date : 10/21/2020	Pipe Segment Reference : 17252	Section No : 5
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Photo: 016461_D_016460_SRC_563.4_56_A.jpg, 00:27:26
 563.4FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO



Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-SRC at 563.4 ft.JPG, 00:27:26
 563.4FT, Surface Reinforcement Corroded, from 09 to 03 o'clock, within 8 inches: NO



Photo: 016461_D_016460_AMH_570.4_57_A.jpg, 00:30:09
 570.4FT, Manhole



Photo: PWC-2103892-01-AMH '016461'-AMH '016460'-AMH at 570.4 ft.JPG, 00:30:09
 570.4FT, Manhole

Inspection Report

Date 10/28/2020	P/O. No.	Weather Dry	Surveyor's Name Taylor	Pipe Segment Reference 17257	Section No. 38
Certificate No. U-0917-07009190	Survey Customer PWC	System Owner PWC	Inspection Date: 10/28/2020	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street Off Research Dr	Use of Sewer Sanitary	Upstream MH 016464
City FAYETTEVILLE	Drainage Area	Dowstream MH 008390
Loc. details	Flow Control Not Controlled	Dir. of Survey Downstream
Location Code Easement/Right of Way	Length surveyed 990.90 ft	Section Length 990.90 ft

Purpose of Survey Routine Assessment	Joint Length
Year Laid	Dia./Height 54 inch
Year Rehabilitated	Material Reinforced Concrete Pipe
Tape / Media No. 1	Lining Method

Add. Information :

1:1512 Position	Observation	Photo
	<p>0.00 Manhole</p> <p>0.00 Water Level, 45% of cross sectional area</p> <p>0.20 S4 Surface Aggregate Visible, from 07 to 05 o'clock, within 8 inches of joint: YES, Start</p> <p>13.00 Deposits Attached Encrustation, 5 %of cross sectional area, from 07 to 05 o'clock, , within 8 inches of joint: YES</p> <p>13.80 Infiltration Stain, from 08 to 10 o'clock, within 8 inches: YES</p> <p>25.80 Infiltration Dripper, from 09 to 11 o'clock, within 8 inches: YES</p> <p>31.00 S4 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start</p> <p>41.50 Infiltration Stain, from 09 to 11 o'clock, within 8 inches: YES</p> <p>433.30 Infiltration Runner, from 11 to 10 o'clock, within 8 inches: YES</p> <p>592.00 S5 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start</p> <p>621.00 F4 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish</p>	<p>016464_D_008390_AMH_0.jpg</p> <p>016464_D_008390_MWL_0.jpg</p> <p>016464_D_008390_SAV_0.2.jpg</p> <p>016464_D_008390_DAE_13.jpg</p> <p>016464_D_008390_IS_13.8.jpg</p> <p>016464_D_008390_ID_25.8.jpg</p> <p>016464_D_008390_SRV_31.jpg</p> <p>016464_D_008390_IS_41.5.jpg</p> <p>016464_D_008390_IR_433.3.jpg</p> <p>016464_D_008390_SRV_592.jpg</p> <p>016464_D_008390_SRV_621.jpg</p>

Inspection Report

Date 10/28/2020	P/O. No.	Weather Dry	Surveyor's Name Taylor	Pipe Segment Reference 17257	Section No. 38
Certificate No. U-0917-07009190	Survey Customer PWC	System Owner PWC	Inspection Date: 10/28/2020	Cleaned : No Pre-Cleaning	Sewer Category

1:1512	Position	Observation	Photo				
	<u>812.00</u>	F5 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish	016464_D_008390_SRV_812.jpg				
	<u>845.00</u>	Surface Reinforcement Visible, from 11 to 04 o'clock, within 8 inches of joint: YES	016464_D_008390_SRV_845.jpg				
	<u>907.00</u>	Infiltration Stain, from 08 to 04 o'clock, within 8 inches of joint: YES	016464_D_008390_IS_907.jpg				
	<u>908.00</u>	Surface Reinforcement Visible, from 09 to 03 o'clock, within 8 inches of joint: YES	016464_D_008390_SRV_908.jpg				
	<u>912.00</u>	Deposits Attached Encrustation, 5 %of cross sectional area, from 08 to 04 o'clock, , within 8 inches of joint: YES	016464_D_008390_DAE_912.jpg				
	<u>943.00</u>	S7 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: YES, Start	016464_D_008390_SRV_943.jpg				
	<u>943.00</u>	Alignment Left, 20 %	016464_D_008390_LL_943.jpg				
	<u>972.00</u>	Infiltration Stain, from 08 to 04 o'clock, within 8 inches of joint: YES	016464_D_008390_IS_972.jpg				
	<u>981.00</u>	F4 Surface Aggregate Visible, from 07 to 05 o'clock, within 8 inches of joint: YES, Finish	016464_D_008390_SAV_981.jpg				
	<u>982.00</u>	F7 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: YES, Finish	016464_D_008390_SRV_982.jpg				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5a3f	4131	1448	13	1461	3.93	2.6	3.92

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17257	Section No : 38
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Photo: 016464_D_008390_AMH_0.jpg, VCR No.: 1
 0FT, Manhole



Photo: 016464_D_008390_MWL_0.jpg, VCR No.: 1
 0FT, Water Level, 45% of cross sectional area

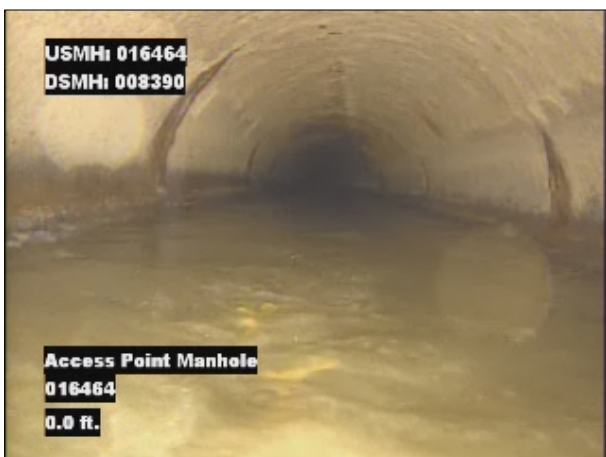


Photo: 016464_D_008390_SAV_0.2.jpg, VCR No.: 1
 0.2FT, Surface Aggregate Visible, from 07 to 05 o'clock,
 within 8 inches of joint: YES, Start



Photo: 016464_D_008390_DAE_13.jpg, VCR No.: 1
 13FT, Deposits Attached Encrustation, 5 %of cross sectional
 area, from 07 to 05 o'clock, , within 8 inches of joint: YES

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17257	Section No : 38
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Photo: 016464_D_008390_IS_13.8.jpg, VCR No.: 1
 13.8FT, Infiltration Stain, from 08 to 10 o'clock, within 8 inches: YES



Photo: 016464_D_008390_ID_25.8.jpg, VCR No.: 1
 25.8FT, Infiltration Dripper, from 09 to 11 o'clock, within 8 inches: YES



Photo: 016464_D_008390_SRV_31.jpg, VCR No.: 1
 31FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start



Photo: 016464_D_008390_IS_41.5.jpg, VCR No.: 1
 41.5FT, Infiltration Stain, from 09 to 11 o'clock, within 8 inches: YES

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17257	Section No : 38
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Photo: 016464_D_008390_IR_433.3.jpg, VCR No.: 1
 433.3FT, Infiltration Runner, from 11 to 10 o'clock, within 8 inches: YES



Photo: 016464_D_008390_SRV_592.jpg, VCR No.: 1
 592FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start



Photo: 016464_D_008390_SRV_621.jpg, VCR No.: 1
 621FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish



Photo: 016464_D_008390_SRV_812.jpg, VCR No.: 1
 812FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17257	Section No : 38
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Photo: 016464_D_008390_SRV_845.jpg, VCR No.: 1
 845FT, Surface Reinforcement Visible, from 11 to 04 o'clock,
 within 8 inches of joint: YES



Photo: 016464_D_008390_IS_907.jpg, VCR No.: 1
 907FT, Infiltration Stain, from 08 to 04 o'clock, within 8 inches
 of joint: YES

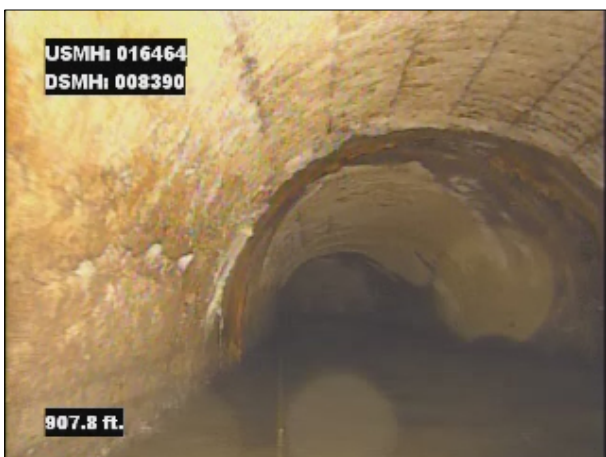


Photo: 016464_D_008390_SRV_908.jpg, VCR No.: 1
 908FT, Surface Reinforcement Visible, from 09 to 03 o'clock,
 within 8 inches of joint: YES



Photo: 016464_D_008390_DAE_912.jpg, VCR No.: 1
 912FT, Deposits Attached Encrustation, 5 %of cross sectional
 area, from 08 to 04 o'clock, , within 8 inches of joint: YES

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17257	Section No : 38
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Photo: 016464_D_008390_SRV_943.jpg, VCR No.: 1
 943FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: YES, Start



Photo: 016464_D_008390_LL_943.jpg, VCR No.: 1
 943FT, Alignment Left, 20 %



Photo: 016464_D_008390_IS_972.jpg, VCR No.: 1
 972FT, Infiltration Stain, from 08 to 04 o'clock, within 8 inches of joint: YES



Photo: 016464_D_008390_SAV_981.jpg, VCR No.: 1
 981FT, Surface Aggregate Visible, from 07 to 05 o'clock, within 8 inches of joint: YES, Finish

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17257	Section No : 38
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Photo: 016464_D_008390_SRV_982.jpg, VCR No.: 1
982FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
within 8 inches of joint: YES, Finish

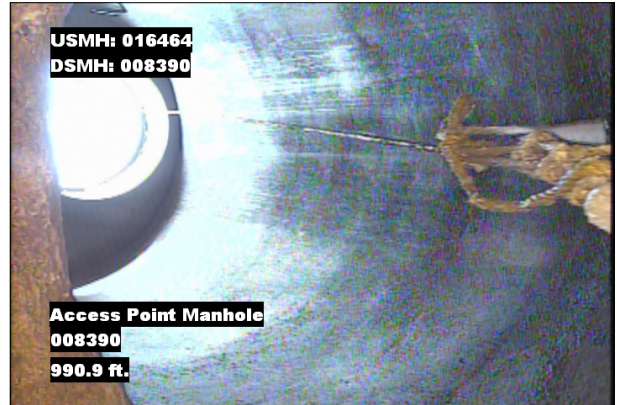


Photo: 016464_D_008390_AMH_990.9.jpg, VCR No.: 1
990.9FT, Manhole

Inspection Report

Date 10/28/2020	P/O. No.	Weather Dry	Surveyor's Name Taylor	Pipe Segment Reference 17256.1	Section No. 39
Certificate No. U-0917-07009190	Survey Customer PWC	System Owner PWC	Inspection Date: 10/28/2020	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street Off Research Dr	City FAYETTEVILLE	Use of Sewer Sanitary	Upstream MH 008390
Loc. details	Location Code Easement/Right of Way	Drainage Area	Dowstream MH 029378
		Flow Control Not Controlled	Dir. of Survey Downstream
		Length surveyed 709.70 ft	Section Length 709.70 ft

Purpose of Survey Routine Assessment	Joint Length
Year Laid	Dia./Height 54 inch
Year Rehabilitated	Material Reinforced Concrete Pipe
Tape / Media No. 1	Lining Method

Add. Information :

1:1512 Position	Observation	Photo
008390	Manhole	008390_D_029378_AMH_0.jpg
0.00	Water Level, 45% of cross sectional area	008390_D_029378_MWL_0.jpg
0.10	S1 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start	008390_D_029378_SRV_0.1.jpg
28.70	F1 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish	008390_D_029378_SRV_28.7.jpg
28.80	S2 Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start	008390_D_029378_SAV_28.8.jpg
47.30	Surface Reinforcement Visible, from 08 to 12 o'clock, within 8 inches of joint: YES	008390_D_029378_SRV_47.3.jpg
72.90	S3 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start	008390_D_029378_SRV_72.9.jpg
109.20	F2 Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish	008390_D_029378_SAV_109.2.jpg
212.00	F3 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish	008390_D_029378_SRV_212.jpg
222.00	S4 Surface Aggregate Visible, from 07 to 05 o'clock, within 8 inches of joint: YES, Start	008390_D_029378_SAV_222.jpg
237.00	S5 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start	008390_D_029378_SRV_237.jpg
325.00	Deposits Attached Ragging, 5 %of cross sectional area, from 03 to 04 o'clock, , within 8 inches of joint: YES	008390_D_029378_DAR_325.jpg
591.00	F5 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish	008390_D_029378_SRV_591.jpg
624.00	Surface Reinforcement Visible, from 01 to 04 o'clock, within 8 inches of joint: NO	008390_D_029378_SRV_624.jpg

Inspection Report

Date 10/28/2020	P/O. No.	Weather Dry	Surveyor's Name Taylor	Pipe Segment Reference 17256.1	Section No. 39
Certificate No. U-0917-07009190	Survey Customer PWC	System Owner PWC	Inspection Date: 10/28/2020	Cleaned : No Pre-Cleaning	Sewer Category

1:1512	Position	Observation	Photo
	675.00	S6 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start	008390_D_029378_SRV_675.jpg
	698.00	F6 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish	008390_D_029378_SRV_698.jpg
	702.50	F4 Surface Aggregate Visible, from 07 to 05 o'clock, within 8 inches of joint: YES, Finish	008390_D_029378_SAV_702.5.jpg

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5U3U	2100	896	2	898	4	2	3.99

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17256.1	Section No : 39
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Photo: 008390_D_029378_AMH_0.jpg, VCR No.: 1
 0FT, Manhole



Photo: 008390_D_029378_MWL_0.jpg, VCR No.: 1
 0FT, Water Level, 45% of cross sectional area



Photo: 008390_D_029378_SRV_0.1.jpg, VCR No.: 1
 0.1FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Start



Photo: 008390_D_029378_SRV_28.7.jpg, VCR No.: 1
 28.7FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Finish

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17256.1	Section No : 39
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Photo: 008390_D_029378_SAV_28.8.jpg, VCR No.: 1
 28.8FT, Surface Aggregate Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Start



Photo: 008390_D_029378_SRV_47.3.jpg, VCR No.: 1
 47.3FT, Surface Reinforcement Visible, from 08 to 12 o'clock,
 within 8 inches of joint: YES



Photo: 008390_D_029378_SRV_72.9.jpg, VCR No.: 1
 72.9FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Start



Photo: 008390_D_029378_SAV_109.2.jpg, VCR No.: 1
 109.2FT, Surface Aggregate Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Finish

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17256.1	Section No : 39
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Photo: 008390_D_029378_SRV_212.jpg, VCR No.: 1
 212FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Finish



Photo: 008390_D_029378_SAV_222.jpg, VCR No.: 1
 222FT, Surface Aggregate Visible, from 07 to 05 o'clock,
 within 8 inches of joint: YES, Start



Photo: 008390_D_029378_SRV_237.jpg, VCR No.: 1
 237FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Start



Photo: 008390_D_029378_DAR_325.jpg, VCR No.: 1
 325FT, Deposits Attached Ragging, 5 %of cross sectional
 area, from 03 to 04 o'clock, , within 8 inches of joint: YES

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17256.1	Section No : 39
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Photo: 008390_D_029378_SRV_591.jpg, VCR No.: 1
 591FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Finish



Photo: 008390_D_029378_SRV_624.jpg, VCR No.: 1
 624FT, Surface Reinforcement Visible, from 01 to 04 o'clock,
 within 8 inches of joint: NO



Photo: 008390_D_029378_SRV_675.jpg, VCR No.: 1
 675FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Start



Photo: 008390_D_029378_SRV_698.jpg, VCR No.: 1
 698FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Finish

Inspection photos

City : FAYETTEVILLE	Street : Off Research Dr	Date : 10/28/2020	Pipe Segment Reference : 17256.1	Section No : 39
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Photo: 008390_D_029378_SAV_702.5.jpg, VCR No.: 1
702.5FT, Surface Aggregate Visible, from 07 to 05 o'clock,
within 8 inches of joint: YES, Finish



Photo: 008390_D_029378_AMH_709.7.jpg, VCR No.: 1
709.7FT, Manhole

Inspection Report

Date 10/29/2020	P/O. No.	Weather Dry	Surveyor's Name Taylor	Pipe Segment Reference 17256.2	Section No. 40
Certificate No. U-0917-07009190	Survey Customer PWC	System Owner PWC	Inspection Date: 10/29/2020	Pre-Cleaning No Pre-Cleaning	Sewer Category

Street Rehder St	Use of Sewer Sanitary	Upstream MH 029378
City FAYETTEVILLE	Drainage Area	Dowstream MH 016463
Loc. details	Flow Control Not Controlled	Dir. of Survey Downstream
Location Code Easement/Right of Way	Length surveyed 435.70 ft	Section Length 435.70 ft

Purpose of Survey Routine Assessment	Joint Length
Year Laid	Dia./Height 54 inch
Year Rehabilitated	Material Reinforced Concrete Pipe
Tape / Media No. 1	Lining Method

Add. Information :

1:1050 Position	Observation	Photo
	<p>0.00 Water Level, 40% of cross sectional area</p> <p>0.00 Manhole</p> <p>1.00 S1 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start</p> <p>45.00 Alignment Right, 25 %</p> <p>61.30 Infiltration Stain, from 08 to 04 o'clock, within 8 inches: NO</p> <p>115.00 F1 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish</p> <p>115.00 S2 Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start</p> <p>165.00 Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO</p> <p>165.60 General Photograph</p> <p>323.00 Surface Reinforcement Visible, from 10 to 01 o'clock, within 8 inches of joint: NO</p> <p>379.00 Surface Reinforcement Visible, from 10 to 02 o'clock, within 8 inches of joint: NO</p> <p>403.00 Surface Reinforcement Visible, from 10 to 02 o'clock, within 8 inches of joint: NO</p> <p>426.00 F2 Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish</p> <p>435.70 Manhole</p>	<p>029378_D_016463_MWL_0.jpg</p> <p>029378_D_016463_AMH_0.jpg</p> <p>029378_D_016463_SRV_1.jpg</p> <p>029378_D_016463_LR_45.jpg</p> <p>029378_D_016463_IS_61.3.jpg</p> <p>029378_D_016463_SRV_115.jpg</p> <p>029378_D_016463_SAV_115.jpg</p> <p>029378_D_016463_SRV_165.jpg</p> <p>029378_D_016463_MGP_165.6.jpg</p> <p>029378_D_016463_SRV_323.jpg</p> <p>029378_D_016463_SRV_379.jpg</p> <p>029378_D_016463_SRV_403.jpg</p> <p>029378_D_016463_SAV_426.jpg</p> <p>029378_D_016463_AMH_435.7.jpg</p>

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5D3K	4100	321	4	325	3.61	4	3.61

Inspection photos

City : FAYETTEVILLE	Street : Rehder St	Date : 10/29/2020	Pipe Segment Reference : 17256.2	Section No : 40
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Photo: 029378_D_016463_MWL_0.jpg, VCR No.: 1
 0FT, Water Level, 40% of cross sectional area



Photo: 029378_D_016463_AMH_0.jpg, VCR No.: 1
 0FT, Manhole



Photo: 029378_D_016463_SRV_1.jpg, VCR No.: 1
 1FT, Surface Reinforcement Visible, from 08 to 04 o'clock,
 within 8 inches of joint: NO, Start



Photo: 029378_D_016463_LR_45.jpg, VCR No.: 1
 45FT, Alignment Right, 25 %

Inspection photos

City : FAYETTEVILLE	Street : Rehder St	Date : 10/29/2020	Pipe Segment Reference : 17256.2	Section No : 40
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Photo: 029378_D_016463_IS_61.3.jpg, VCR No.: 1
 61.3FT, Infiltration Stain, from 08 to 04 o'clock, within 8 inches: NO



Photo: 029378_D_016463_SRV_115.jpg, VCR No.: 1
 115FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Finish



Photo: 029378_D_016463_SAV_115.jpg, VCR No.: 1
 115FT, Surface Aggregate Visible, from 08 to 04 o'clock, within 8 inches of joint: NO, Start



Photo: 029378_D_016463_SRV_165.jpg, VCR No.: 1
 165FT, Surface Reinforcement Visible, from 08 to 04 o'clock, within 8 inches of joint: NO

Inspection photos

City : FAYETTEVILLE	Street : Rehder St	Date : 10/29/2020	Pipe Segment Reference : 17256.2	Section No : 40
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Photo: 029378_D_016463_MGP_165.6.jpg, VCR No.: 1
165.6FT, General Photograph



Photo: 029378_D_016463_SRV_323.jpg, VCR No.: 1
323FT, Surface Reinforcement Visible, from 10 to 01 o'clock,
within 8 inches of joint: NO



Photo: 029378_D_016463_SRV_379.jpg, VCR No.: 1
379FT, Surface Reinforcement Visible, from 10 to 02 o'clock,
within 8 inches of joint: NO

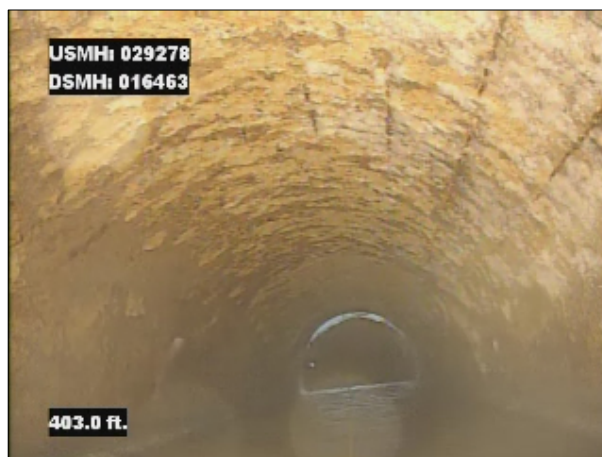


Photo: 029378_D_016463_SRV_403.jpg, VCR No.: 1
403FT, Surface Reinforcement Visible, from 10 to 02 o'clock,
within 8 inches of joint: NO

Inspection photos

City : FAYETTEVILLE	Street : Rehder St	Date : 10/29/2020	Pipe Segment Reference : 17256.2	Section No : 40
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Photo: 029378_D_016463_SAV_426.jpg, VCR No.: 1
426FT, Surface Aggregate Visible, from 08 to 04 o'clock,
within 8 inches of joint: NO, Finish



Photo: 029378_D_016463_AMH_435.7.jpg, VCR No.: 1
435.7FT, Manhole

ATTACHMENT D



REQUEST FOR STATEMENT OF QUALIFICATIONS

DESIGN-BUILD SERVICES LINE 54-INCH OUTFALL
RESEARCH DRIVE TO I-95
PRE-PROPOSAL MEETING, FEBRUARY 22, 2023

PWC2223039

Date of Issue: February 8, 2023
RFQ Deadline: March 14, 2023
2:00 p.m.

▶ AGENDA

- ▶
 1. **Introductions**
 2. **Project Overview**
 3. **Request for Qualifications Overview**
 4. **Schedule and Budget**
 5. **Photos**
 6. **Questions**

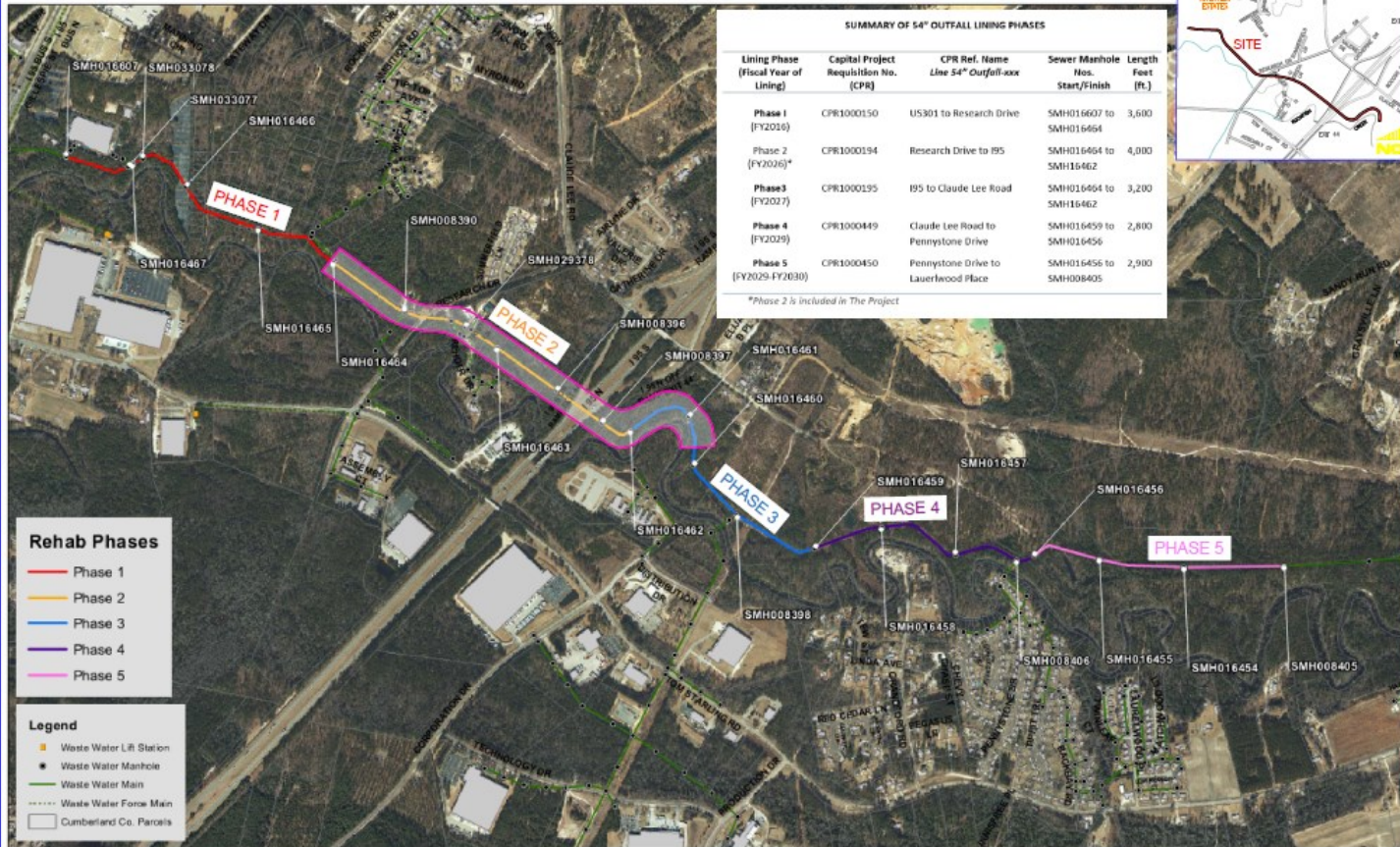
PROJECT OVERVIEW

- PWC owns a 48-year-old, 54-inch RCP gravity sanitary sewer outfall.
- Extends west of US Route 301 to the Rockfish Creek Water Reclamation Facility.
- Outfall located within an existing 50-foot-wide easement.
- CCTV studies indicate significant hydrogen sulfide damage and needs rehabilitation.
- The 1 of 5 sections was lined in 2016 (US Route 301 to West of Research Drive.)

PROJECT OVERVIEW

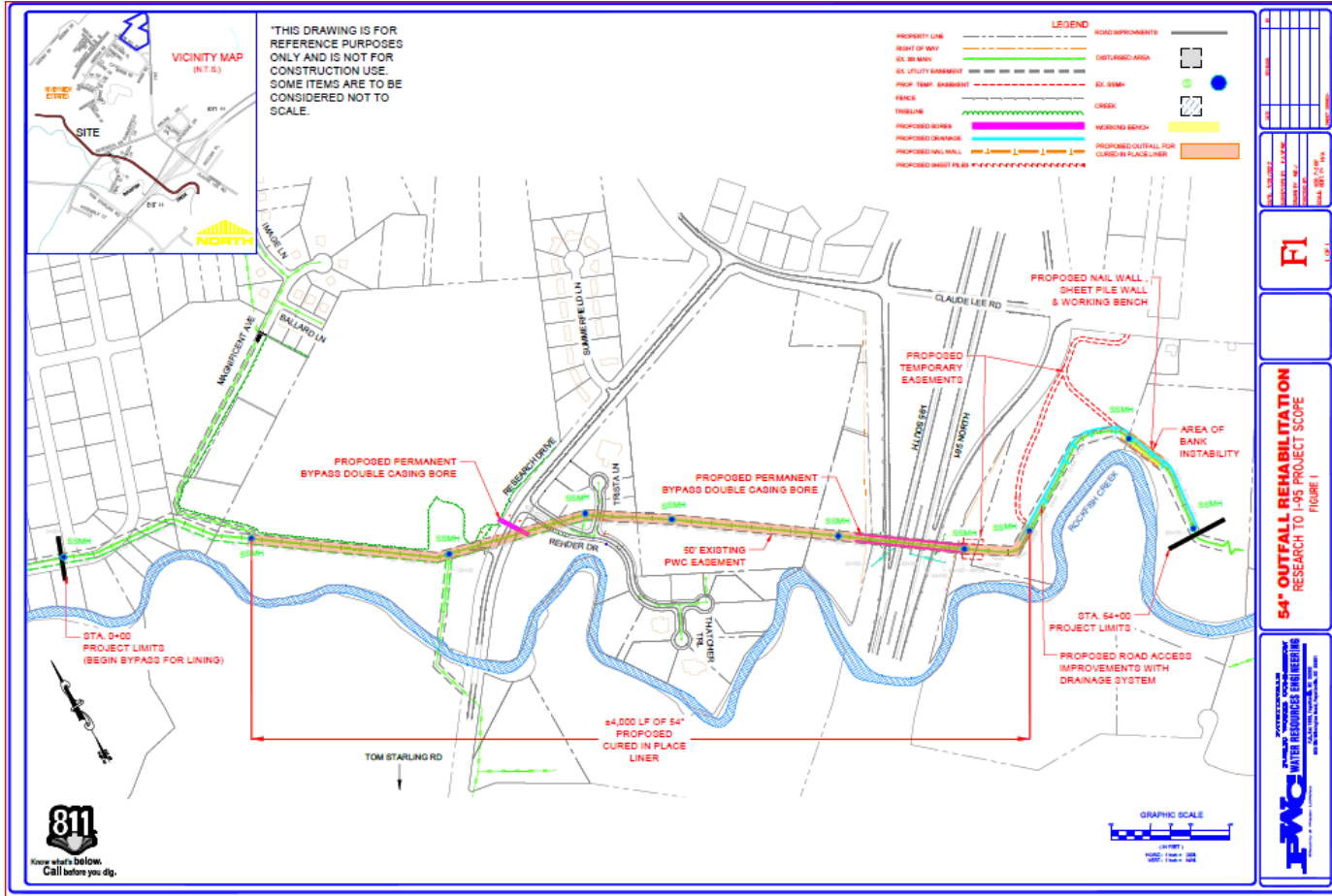
- PWC owns a 48-year-old, 54-inch RCP gravity sanitary sewer outfall.
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SEWER REHABILITATION PHASES



DRAWING FOR REFERENCE
 NOT TO SCALE

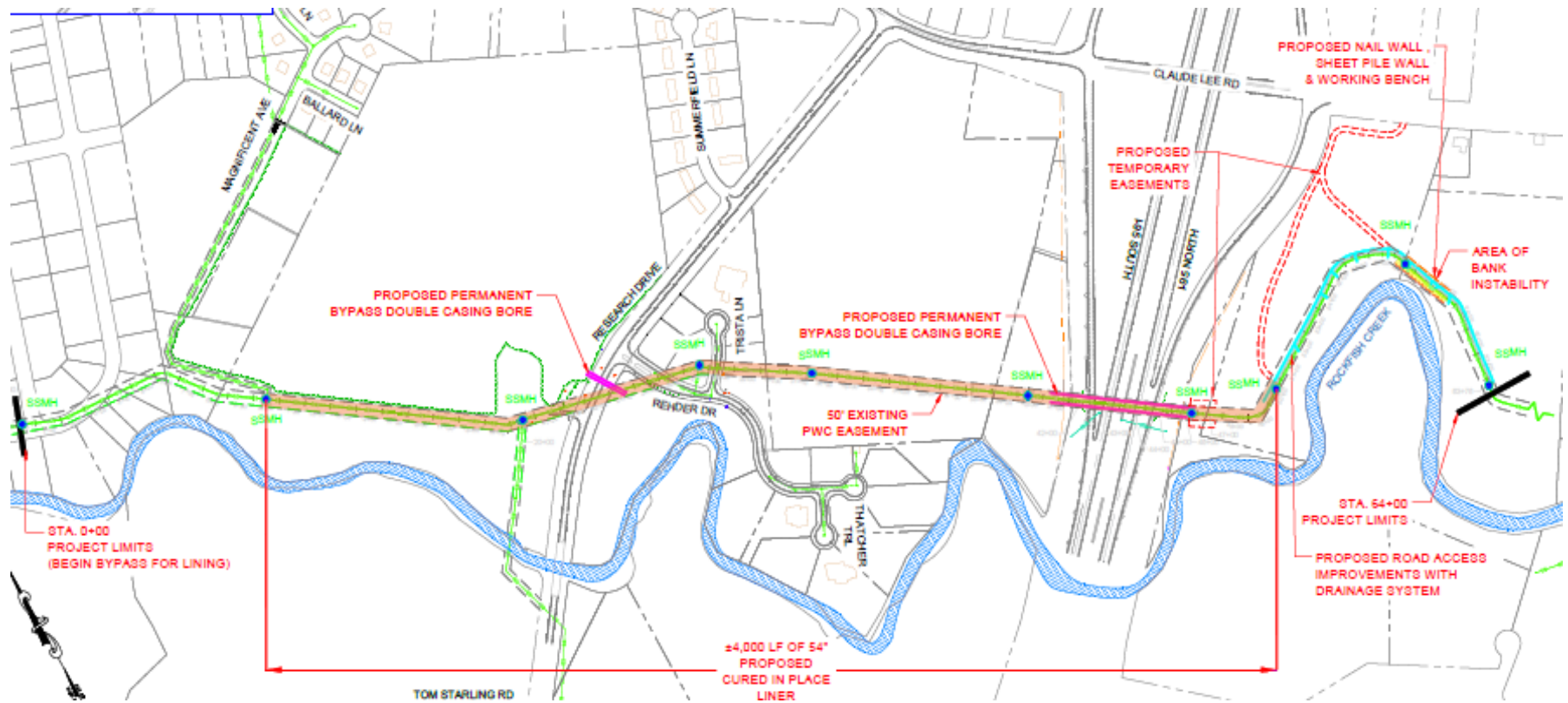
PROJECT OVERVIEW



PROJECT OVERVIEW

- East of I-95, the outfall continues along the north side of Rockfish Creek.
- 800 linear feet (LF) of this maintenance road is not stable enough to support vehicular traffic
- This includes approximately 200 LF of very unstable earth embankment.

PROJECT OVERVIEW



Primary Scope

- Bank Stabilization
- Maintenance Road Improvements (1,500 LF)
From Stat. 49+00 to 64+00.
- Outfall Rehabilitation Lining (4,000 LF)
From West of Research Drive to East of I-95

DESIGN-BUILD SCOPE

Supporting Scope

- Supplemental Geotechnical Investigations
- Surveying
- Support Easement Acquisitions
- Secure Encroachments
- Establish Project Access Roads
- Install By-Pass Pumping Lines Under I-95 and Research Drive for By-Pass

Supporting Scope (Cont.)

- Project Management And Coordination
- Project Planning And Scheduling
- Value Engineering
- Constructability Studies And Reviews
- Construction Observation
- Manage Record Drawings And Documents

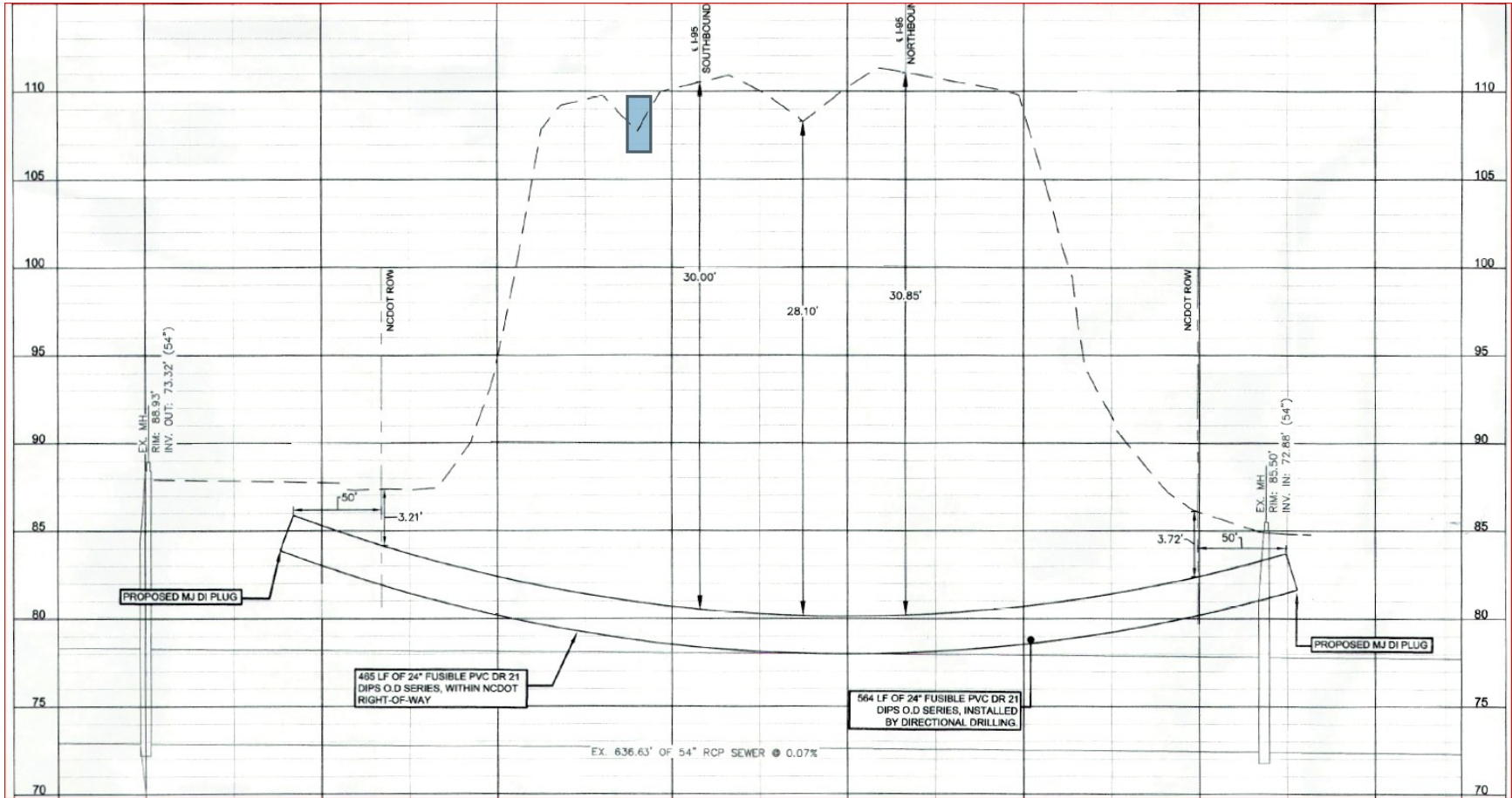
Research Drive Sewer By-Pass Borings

- PWC in process of obtaining permanent and temporary Easement for American Uniform Sales property at the Cumberland County Dump site.
- PWC submitted NCDOT Encroachment (Encr. No. 18827.) We asked DOT for updates in October 2022.

I-95 Sewer By-Pass Borings and Pumping

- PWC submitted to NCDOT (Raleigh) Encroachment for I-95 (19515)
- Permanent and temporary easements will be needed

NCDOT Encroachment I-95 By-Pass Borings



PREVIOUS STUDIES

- **Preliminary Engineering Report for Bank Stabilization and Access Roadway Stabilization at Rockfish Outfall** (Fleming and Associates, October 28, 2021)
 - Fleming and Associates retained Building and Earth to perform a Preliminary Subsurface Investigation and Geotechnical Evaluation.
- **Report of Preliminary Subsurface Exploration and Geotechnical Evaluation Claude Lee Road –** (Building and Earth, April 2021)

PREVIOUS STUDIES

- Bank Instability at sharp bend in creek (200 LF)
- Top of sewer is two to three feet below original grade with less than one foot cover at lowest point
- Sewer is 55 feet to 60 feet from the edge of the creek

PREVIOUS STUDIES

Stratum No.	Typical Thickness	Description	Consistency / Relative Density
1	14 in.	Topsoil	N/A
2	1.0 – 10.0 ft.	Fill – Silty Sand (SM), Poorly Graded Sand with Silt (SP-SM), Clayey Sand (SC)	Very Loose to Medium Dense
3	1.2 – 15.0 ft.	Clayey Sand (SC), Silty Sand (SM), and Poorly Graded Sand with Silt (SP-SM) [Coastal Plain]	Very Loose to Very Dense
4	1.5 – 14.5 ft.	Lean Clay (CL) and Sandy Lean Clay (CL) [Coastal Plain]	Medium Stiff to Hard
5	1.5 – 11.5 ft.	Fat Clay (CH) and Sandy Fat Clay (CH) [Coastal Plain]	Soft to Hard (Typically Very Stiff to Hard)

Table 2: Stratification Summary

- Groundwater at depths at up to 24.5 Feet in 13 borings. Perched in GW bearing strata

BANK STABILIZATION



Figure 1: Vicinity map (Google Earth)

BANK STABILIZATION



BANK STABILIZATION

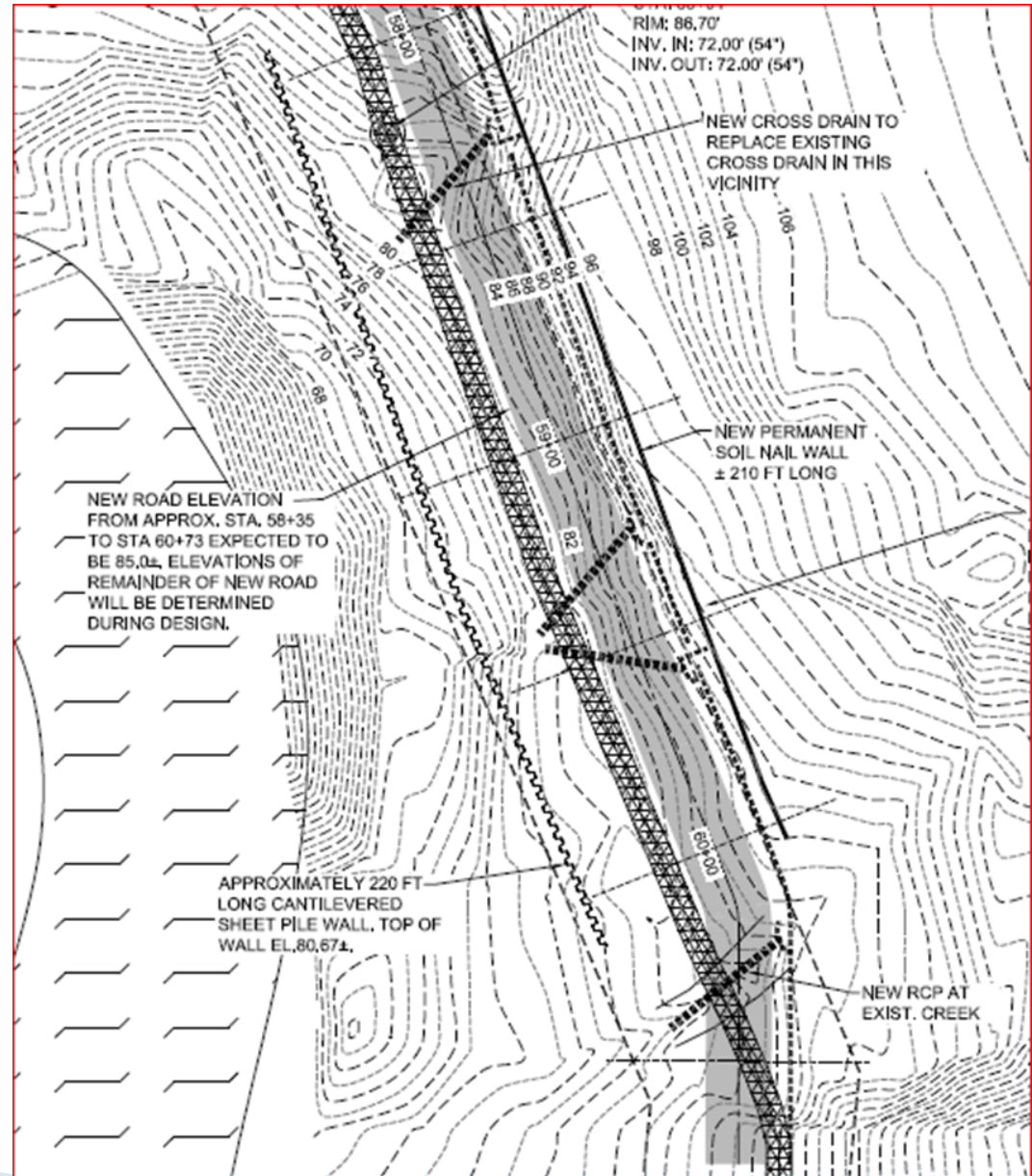


BANK STABILIZATION

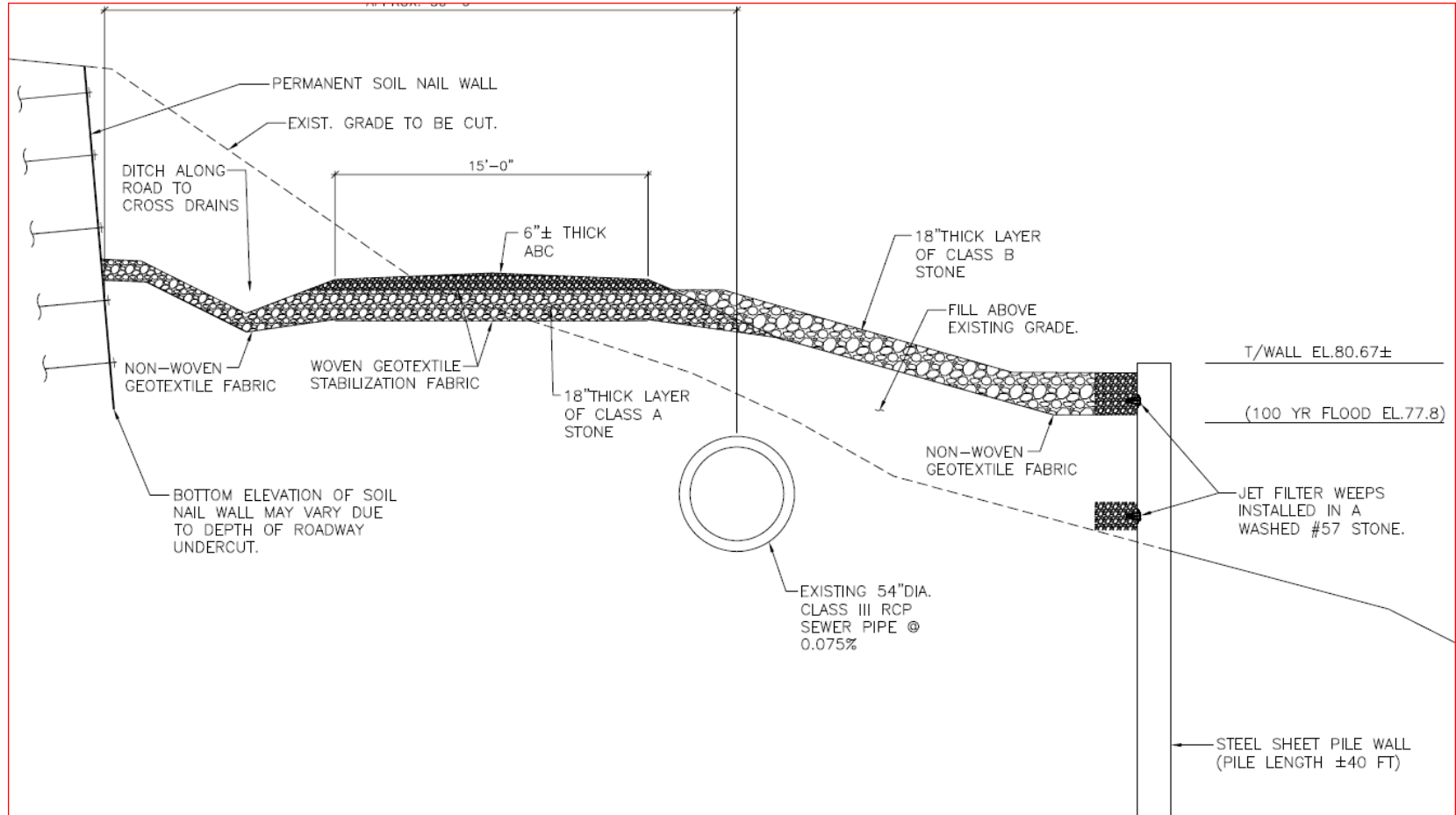
Recommendations

- Cantilevered sheet pile wall-creek side of the sewer pipe. Pre-drilling prior to sheet pile installation is recommended.
- 25 feet wide level bench on the uphill side of the sewer pipe.
- Permanent soil nail wall, to retain the bank above the bench. Additional easements will be needed.

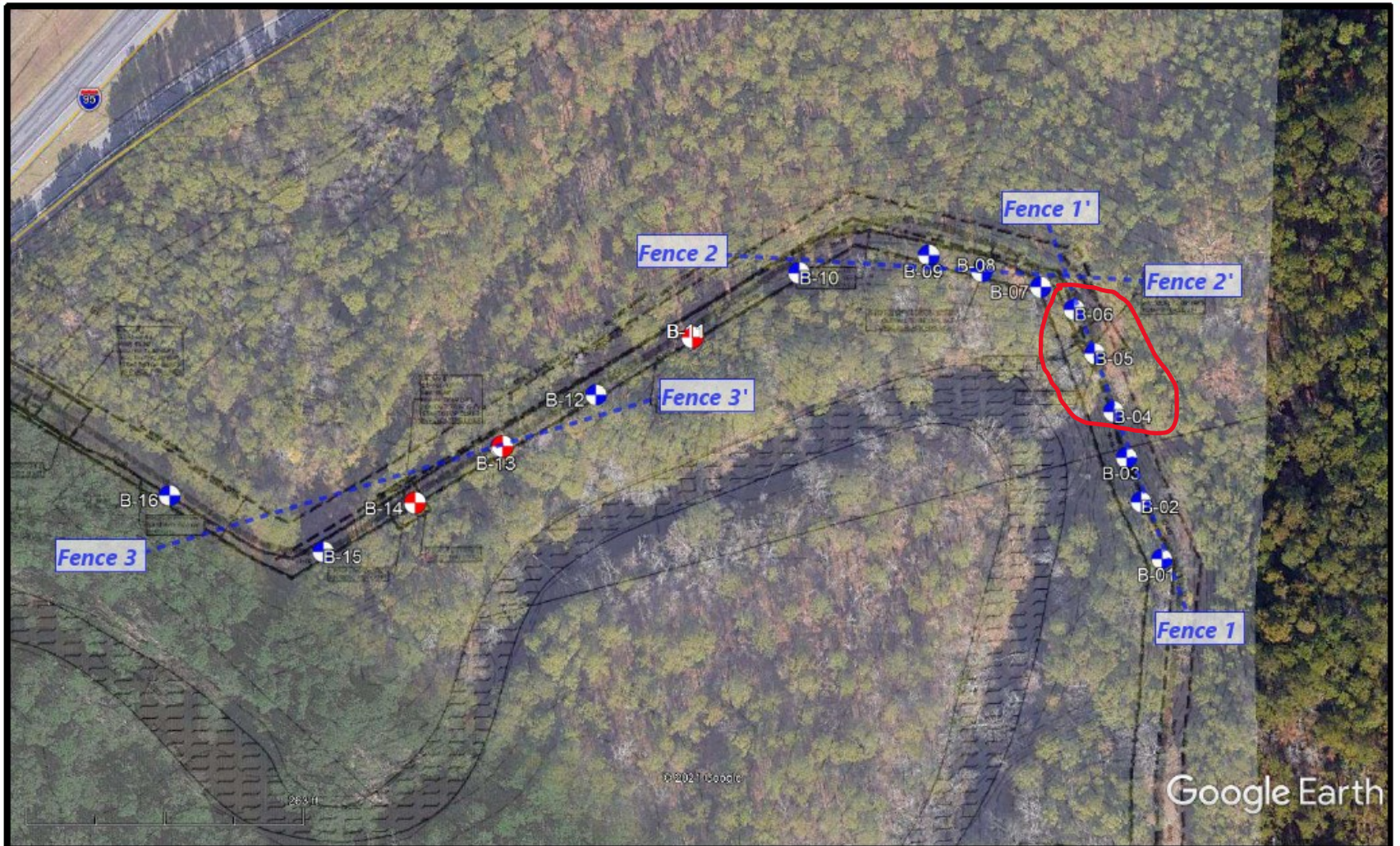
BANK STABILIZATION



BANK STABILIZATION



BANK STABILIZATION

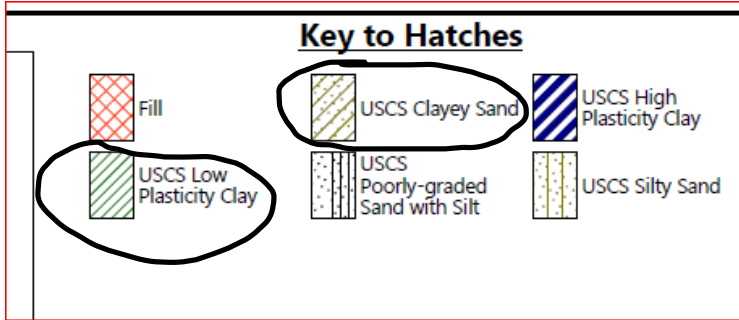


 Boring Location

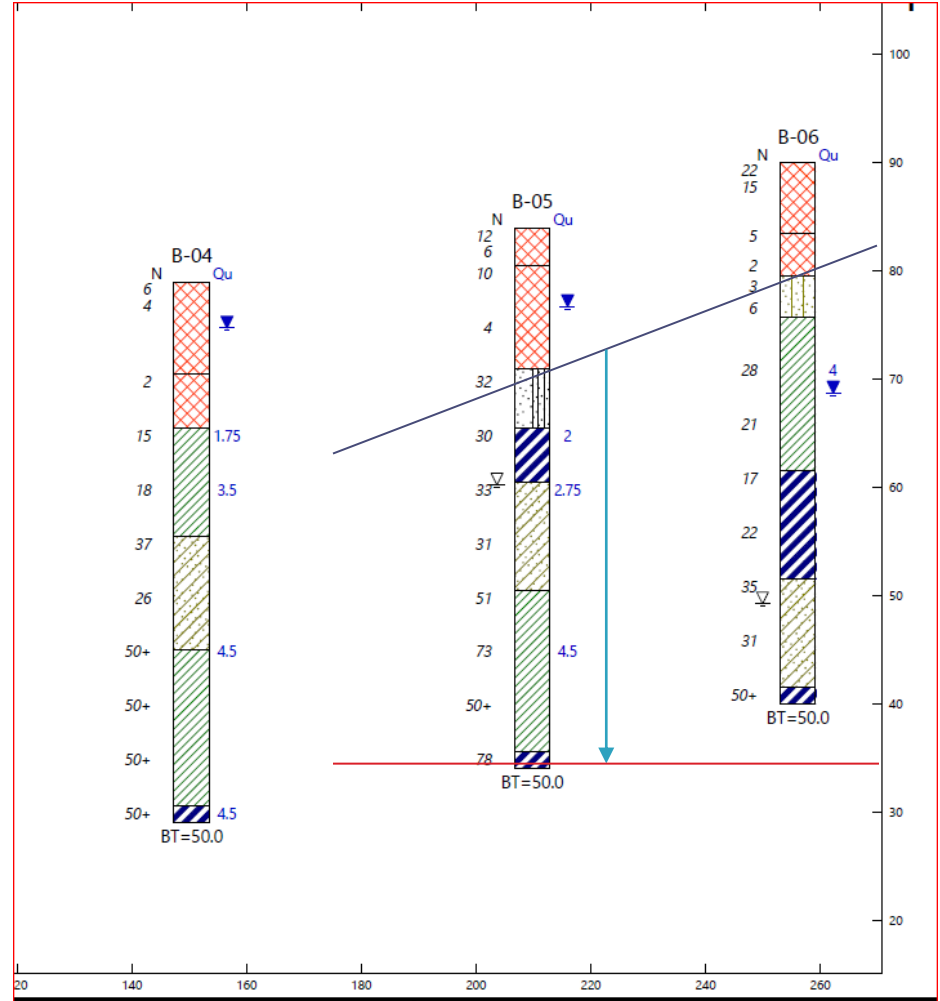
 Kessler DCP Location



BANK STABILIZATION



Cohesive: Fine-Grained		
SPT Penetration (blows/foot)		Consistency
Automatic Hammer*	Manual Hammer	
< 2	< 2	Very Soft
2 - 3	2 - 4	Soft
3 - 6	4 - 8	Medium Stiff
6 - 12	8 - 15	Stiff
12 - 23	15 - 30	Very Stiff
> 23	> 30	Hard



•Stiff layer of clay layer starting at 10 feet to 15 @ proposed sheet pile wall location

BANK STABILIZATION

Additional Recommendations

- Additional subsurface investigation to evaluate long-term slope stability and to identify the effects of instability during the proposed repair effort.
- Temporary bank stability measures may be required until the sheet pile wall is completed.
- Sewer bypass plan to be developed in the event the existing pipe is damaged during construction.

MAINTENANCE ROAD IMPROVEMENTS

Existing Conditions

- The terrain-rolling with a few erosion gullies.
- Several areas of very soft soils & shallow water impoundment on the roadway surface.
 - Fill material to 13 ft. bg: Very loose to medium dense fill soils
 - Below fill material: Very loose to very dense sandy soils
 - Ponding either from perched groundwater or springs emanating from the adjacent hillside

MAINTENANCE ROAD IMPROVEMENTS

Recommendations

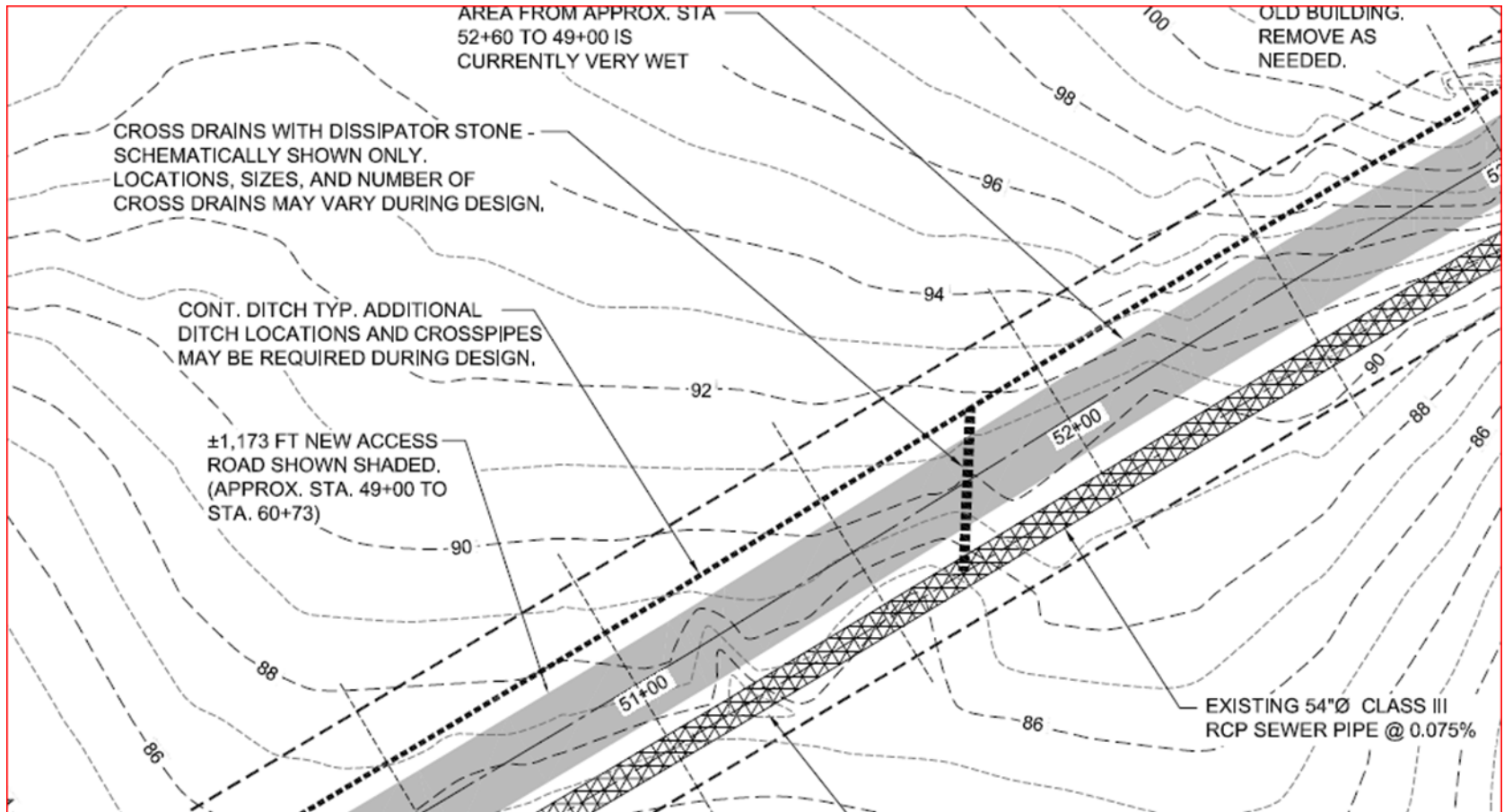
- Ditch roadway to drain water and dry surface to dry as much as possible.
- Remove all vegetation and topsoil for a 15 feet wide roadway plus drainage ditch.
- Continuous drainage ditch along the uphill side of the roadway. Install cross drainpipes below the roadway to direct seepage and runoff water from the continuous ditch.
- Geogrid for soft areas.
- Cut and fill for a smooth roadway.

MAINTENANCE ROAD IMPROVEMENTS

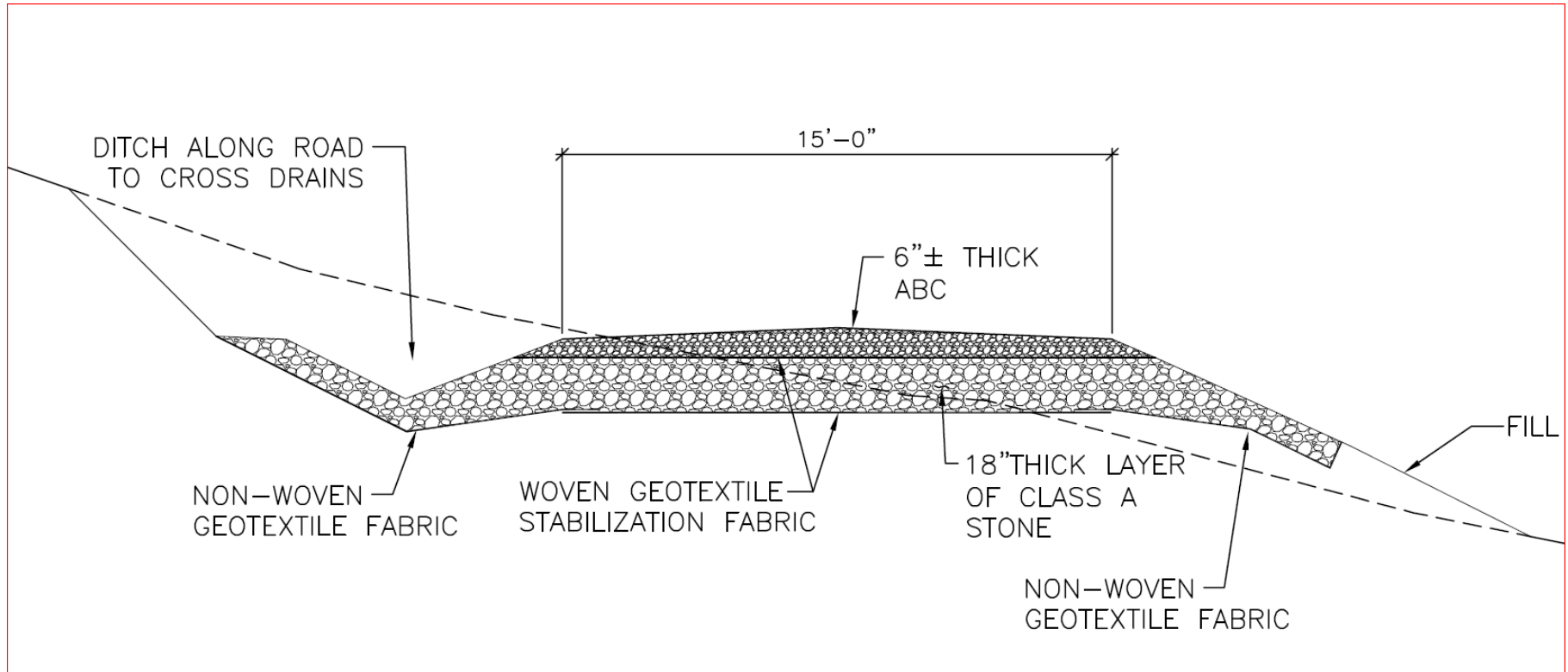
Recommendations (Cont.)

- Remove soft soils in fill areas, place geogrid with engineered fill material to subgrade elevations.
- Place geogrid and 18 inches minimum of Class A stone below the roadway ABC stone.
- Final roadway surface consisting of six to eight inches of ABC stone over a woven geosynthetic fabric.
- Additional easements for drainage ditch and to slope back bank.

MAINTENANCE ROAD IMPROVEMENTS



MAINTENANCE ROAD IMPROVEMENTS



RFQ Contents, Addendums

- PWC shall not be held responsible for any oral instructions.
- RFQ Changes-via written addendum,

Contracts

- ▶ PWC and the DB will negotiate the scope, price, and special conditions utilizing **Pwc's Standard Form Agreement Between Owner And Design Builder.**

DB Team Structure

- One entity identified as the Design-Builder consisting of a general contractor and a professional engineering firm.
- Both firms shall be licensed in the State of North Carolina
- GC shall be a licensed utility contractor with classifications for:
 - Public Utilities – Water and Sewer: Unlimited
 - Unclassified-Unlimited

DB Team Experience Expectations

- Design and Construction of:
 - Structural, bank stabilization including sheet pile walls
 - By-pass borings via directional drilling and jack and bore methods
 - Maintenance road improvements (grading, drainage, retaining walls, stabilization, etc.)
 - Sanitary sewer rehabilitation lining
- Easement acquisitions support (maps legal descriptions, etc.)
- Encroachments
- Surveying
- Value engineering
- Coordination with other agencies and/or contractors

DB Team Additional Responsibilities

- Assumes all design and construction responsibility and risk for:
 - Delivering the Project
 - Construction means and methods.
 - Subconsultants
- Acts as PWC's fiduciary
- Incorporate and Follow PWC's standards and details
- "Open book" job with PWC having access to records/meetings relating to the Project.
- Provide Performance and Payment Bonds under Article 3 of Chapter 44A of the NC General Statutes - 100% of the contract amount.

SOQ REQUIREMENTS (PGS. 6,7)

- **Section 1** – Letter of Transmittal (maximum of two (2) pages)
- **Section 2** – Personnel (20% of score)
- **Section 3** – Contractors/Subcontractors (15% of score)
- **Section 4** – Project and Project Management Experience (25% of score)

SOQ REQUIREMENTS (PGS. 6,7)

- **Section 5** – Project Approach and Understanding (30% of score)
- Ten percent (10%) of the submittal score will come from:
 - The completeness of the submittal,
 - The firms operating history,
 - Insurance and licensing, and
 - Compliance with the RFQ requirements.
- **Page Limit=40** Includes the tabs and/or other dividers. Double-sided pages will be counted as two (2) pages. The front and back cover and copies of Certificates of Insurance do not count against page limit.

AWARDING OF PROJECTS (p. 6)

- PWC to evaluate SOQ as follows:
 - In accordance with N.C.G.S. 143-128 and 143-64.31.
 - Through a committee composed of PWC management and non-management personnel.
 - SOQs to be ranked based on criteria in the RFQ.

AWARDING OF PROJECTS (p. 6)

- PWC reserves the right to select one (1) or more DB to complete the Project and will attempt to negotiate a contract with the highest-ranked DB firm or Design-Build Team.
- If unsuccessful, PWC reserves the right to continue scope and fee negotiations with the other firms, in order of their proposal rankings. PWC reserves the right to reject any or all submittals.

- **Federal E-Verify** - Program operated by the U.S. Department of Homeland Security and other Federal agencies which is used to verify the work authorization of newly hired employees pursuant to Federal law and in accordance with Article 2, Chapter 64 of the North Carolina General Statutes.
- Employers must use E-Verify and after hiring an employee/subconsultant to work in the US, shall verify the work authorization of the employee through E-Verify in accordance with NCGS §64-26(a).
- **IRAN DIVESTMENT ACT** - North Carolina General Statute 147-86.59(a) - Employers shall not utilize any sub-consultant found on the State Treasurer's Final Divestment List.

UTILIZATION OF SMALL BUSINESS CONCERNS

Design-Builders (DB) shall follow good faith efforts to comply with HUB participation requirements (G.S. 143-128.2 and – 128.4) and to recruit and select small business entities for this project.

- ▶ Bidders are encouraged to include utilization of HUB with their design submittals. HUB utilization for design will be considered during the evaluation.
- ▶ **HUB** includes provisions which establish goals and other requirements to participation by certified Minority Business Enterprises (MBE)/Women Business Enterprises, wage rates set forth under the Davis Bacon Act and requirements of the American Steel Act.
- ▶ State of NC MBE/WBE participation goals: **10%**
- ▶ Contractors are required to give DBE Contractors the opportunity to quote the work.

UTILIZATION OF SMALL BUSINESS CONCERNS

- ▶ The Design-Builder to whom the contract is awarded shall comply with the statutory requirements of the **HUB** provisions.
 - All DBE documents/affidavits will be required to be submitted with the **construction bid** and marked as such. Good faith opportunity efforts shall be documented. If the goal is not met, Contractor will be required to show that good faith efforts were made.
 - PWC promotes utilizing local (Cumberland, Hoke, Harnett County) businesses for services and supplies.
- ▶ We strongly encourage when working on your bid please consider - Subcontractors & Suppliers In order to reach the participation goals set forth in the HUB requirements:

UTILIZATION OF SMALL BUSINESS CONCERNS

- ▶ The DOT website has a searchable directory of certified SDBE firms, and that link is also listed on our FAYBIDS page and will be also listed soon on our PWC Purchasing page. If you need assistance to navigate that please reach out, we can assist you.

HUBZone small business database search application Web page at:

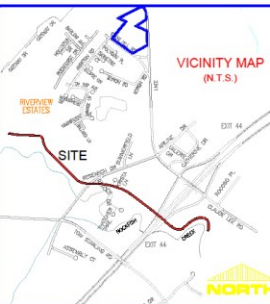
- ▶ http://dsbs.sba.gov/dsbs/search/dsp_searchhubzone.com
- ▶ <http://www.sba.gov/hubzone>

SCHEDULE AND BUDGET

Milestone	Date
Submit Written Questions	Tuesday, 2/28/2023, 5:00 p.m.
PWC to Provide Response to Questions	Tuesday, 3/7/2023, 5:00 p.m.
Submit RFQ	Tuesday, 3/14/2023, 2:00 p.m.
Award Contract	April 2023
Execute Design Build Agreement	May or June 2023
Complete Bank Stabilization and Maintenance Road Improvements	February 2026
Outfall Lining (Research Drive And I-95)	February 2027

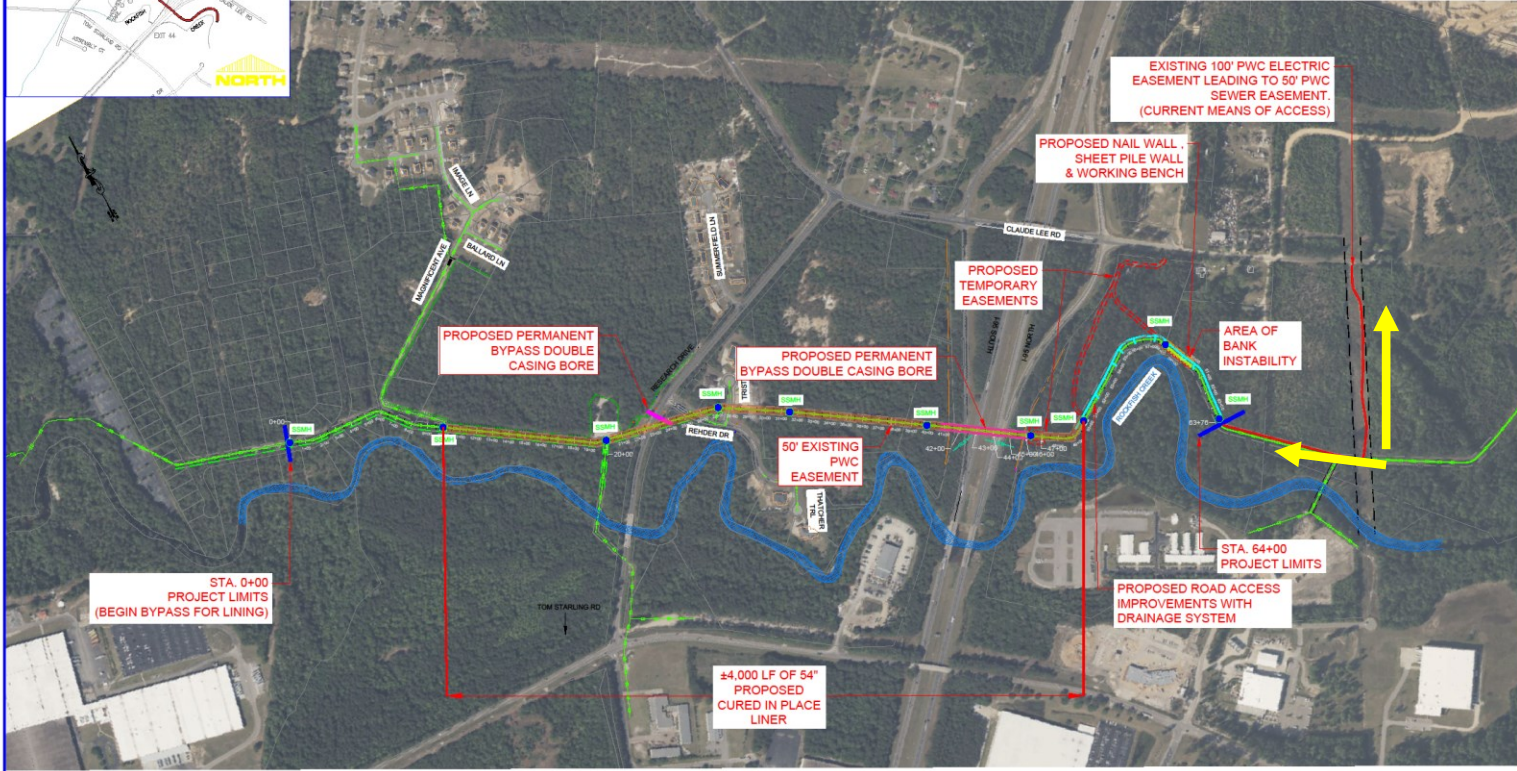
- Estimated budget =\$8,600,000

PHOTOS



*THIS DRAWING IS FOR REFERENCE PURPOSES ONLY AND IS NOT FOR CONSTRUCTION USE. SOME ITEMS ARE TO BE CONSIDERED NOT TO SCALE.

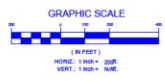
LEGEND	
PROPERTY LINE	---
RIGHT OF WAY	---
EX. 50' MAIN	---
EX. UTILITY EASEMENT	---
PROP. TEMP. EASEMENT	---
FENCE	---
TREELINE	---
PROPOSED BORES	---
PROPOSED DRAINAGE	---
PROPOSED NAIL WALL	---
PROPOSED SHEET PILES	---
ROAD IMPROVEMENTS	---
DISTURBED AREA	---
EX. 55' MH	---
CREEK	---
WORKING BENCH	---
PROPOSED OUTFALL FOR CURED IN PLACE LINER	---



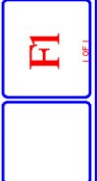
STA. 0+00
PROJECT LIMITS
(BEGIN BYPASS FOR LINING)

±4,000 LF OF 54"
PROPOSED
CURED IN PLACE
LINER

STA. 64+00
PROJECT LIMITS



DATE	2/22/2024
PROJECT NO.	24-001
DRAWN BY	J. JAY
CHECKED BY	J. JAY
SCALE	AS SHOWN



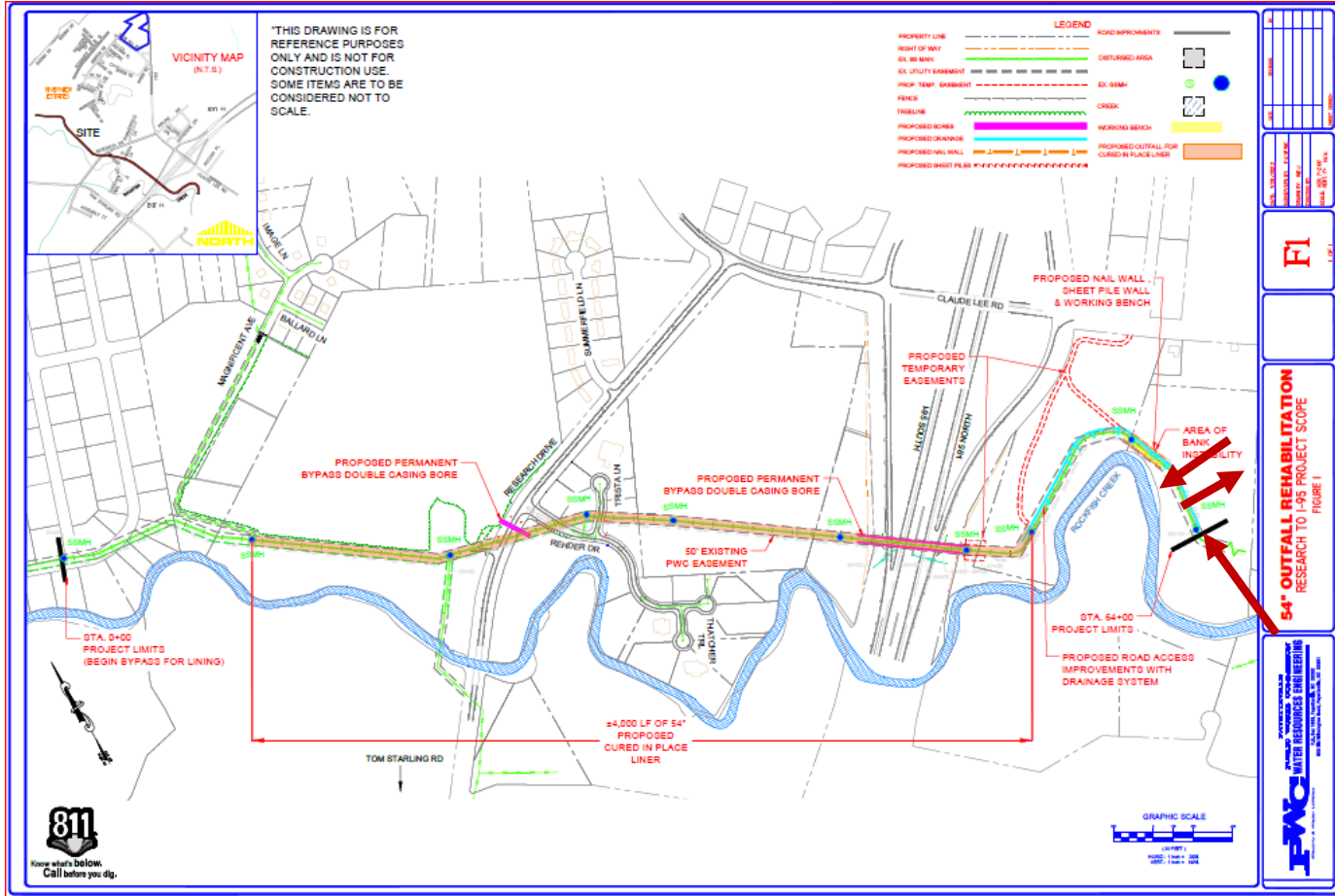
54" OUTFALL REHABILITATION
RESEARCH TO I-95 PROJECT SCOPE
FIGURE 1























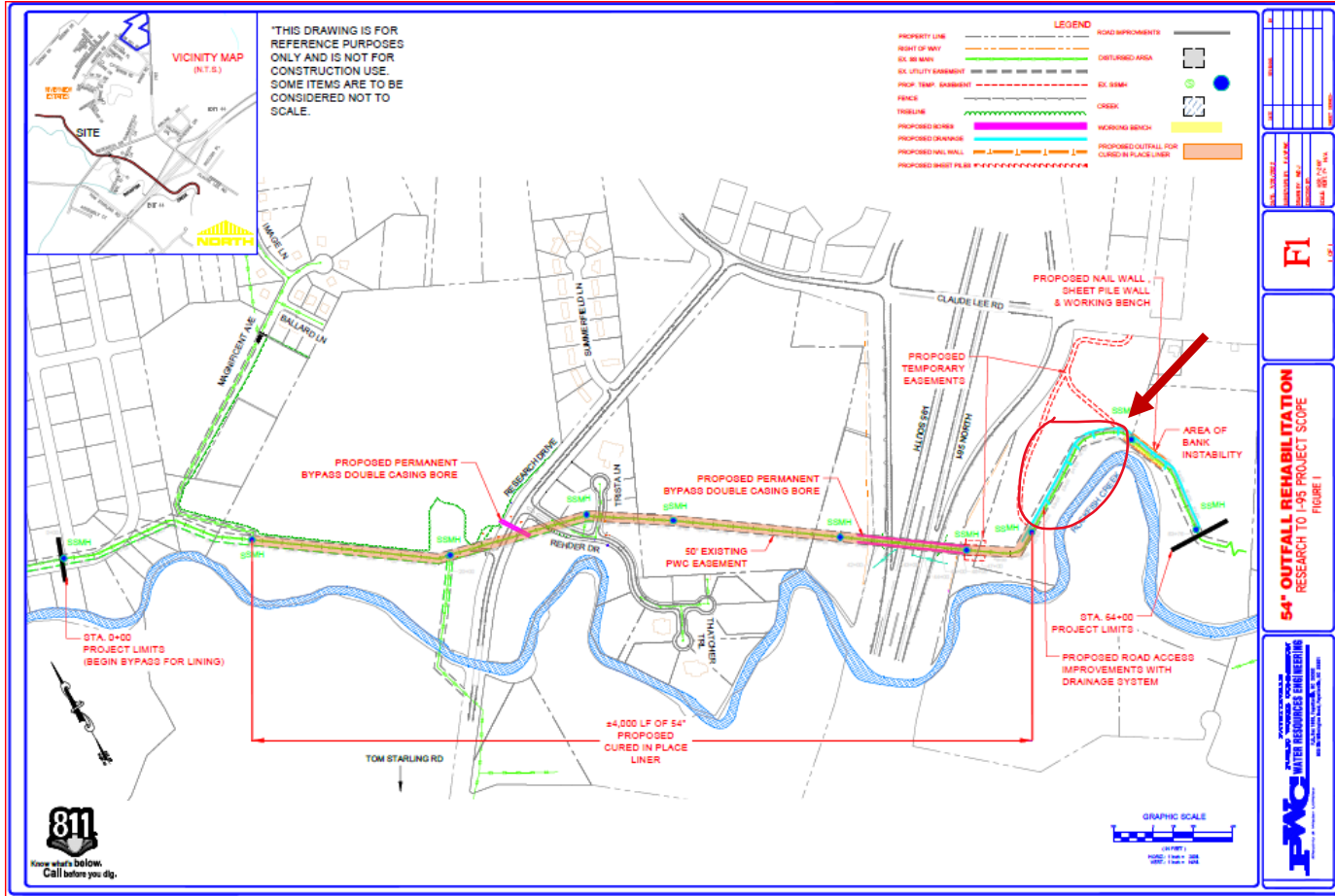














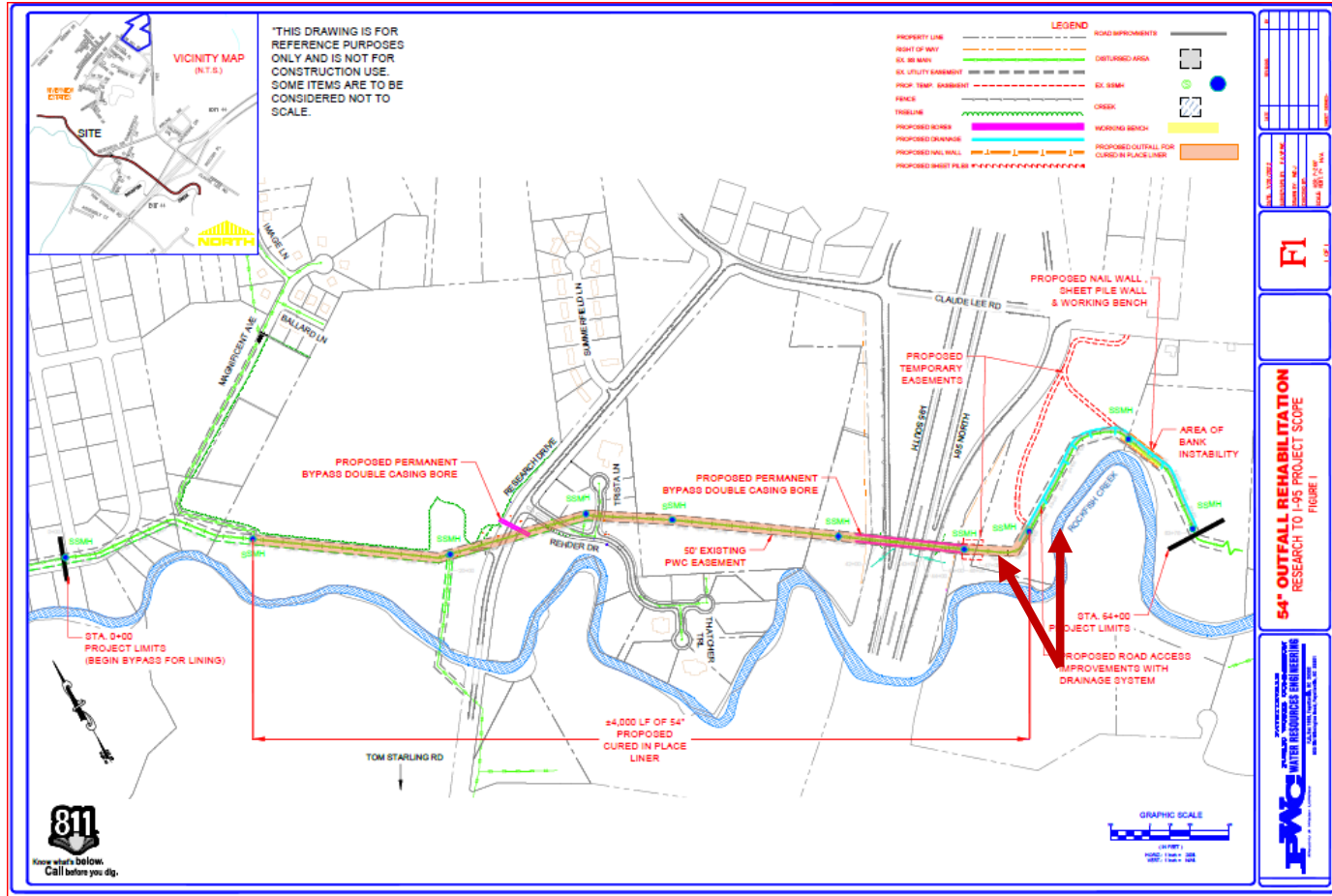






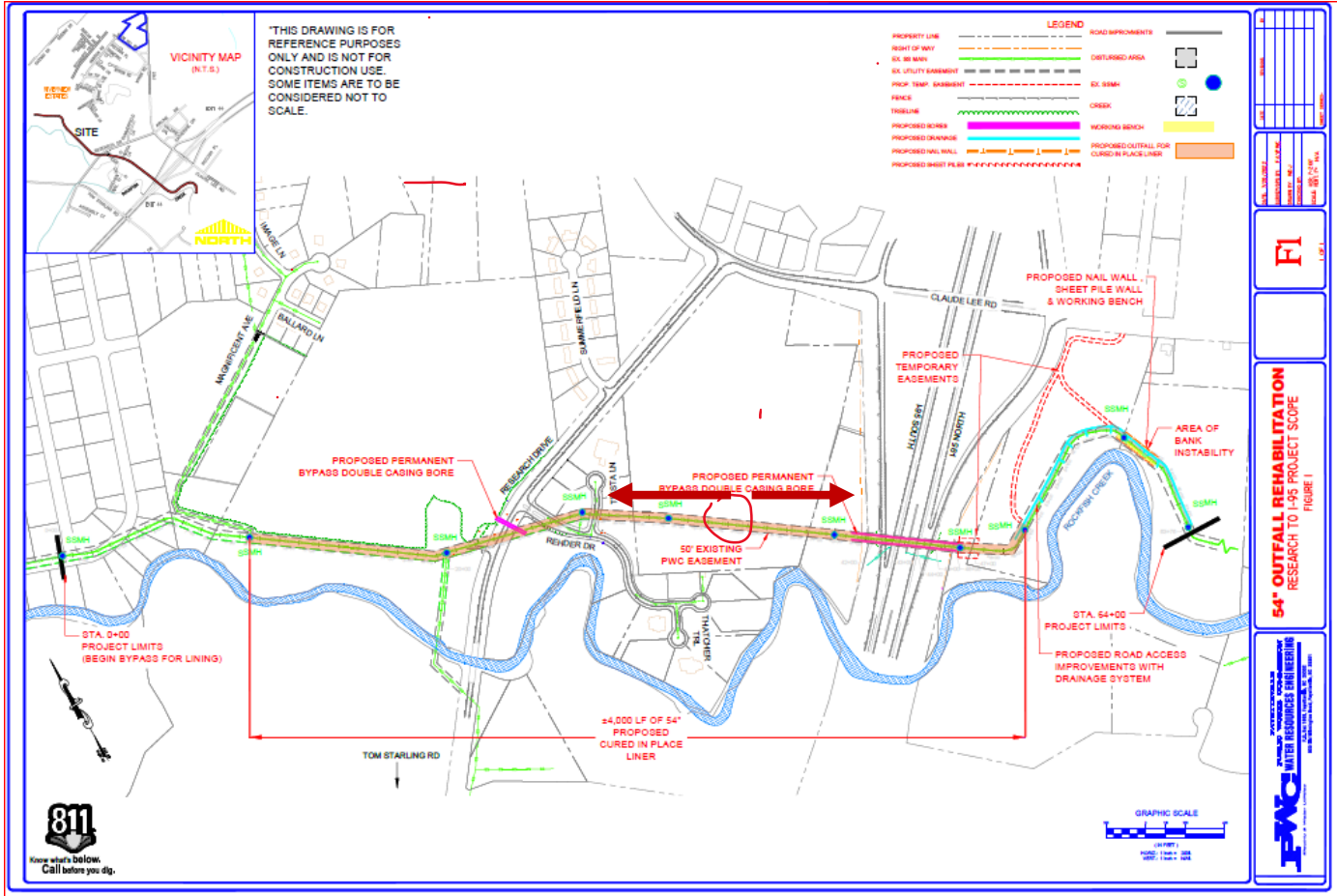










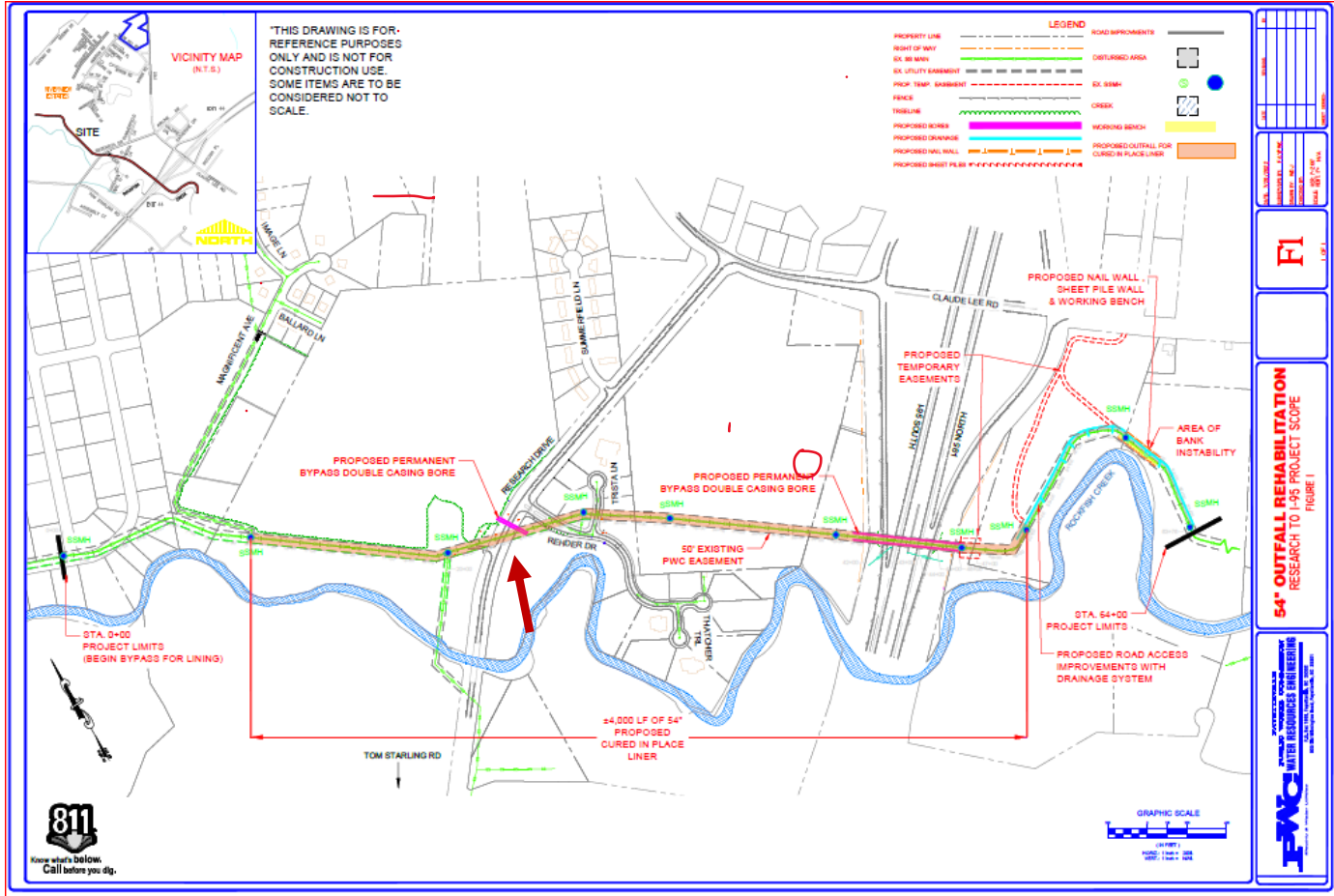






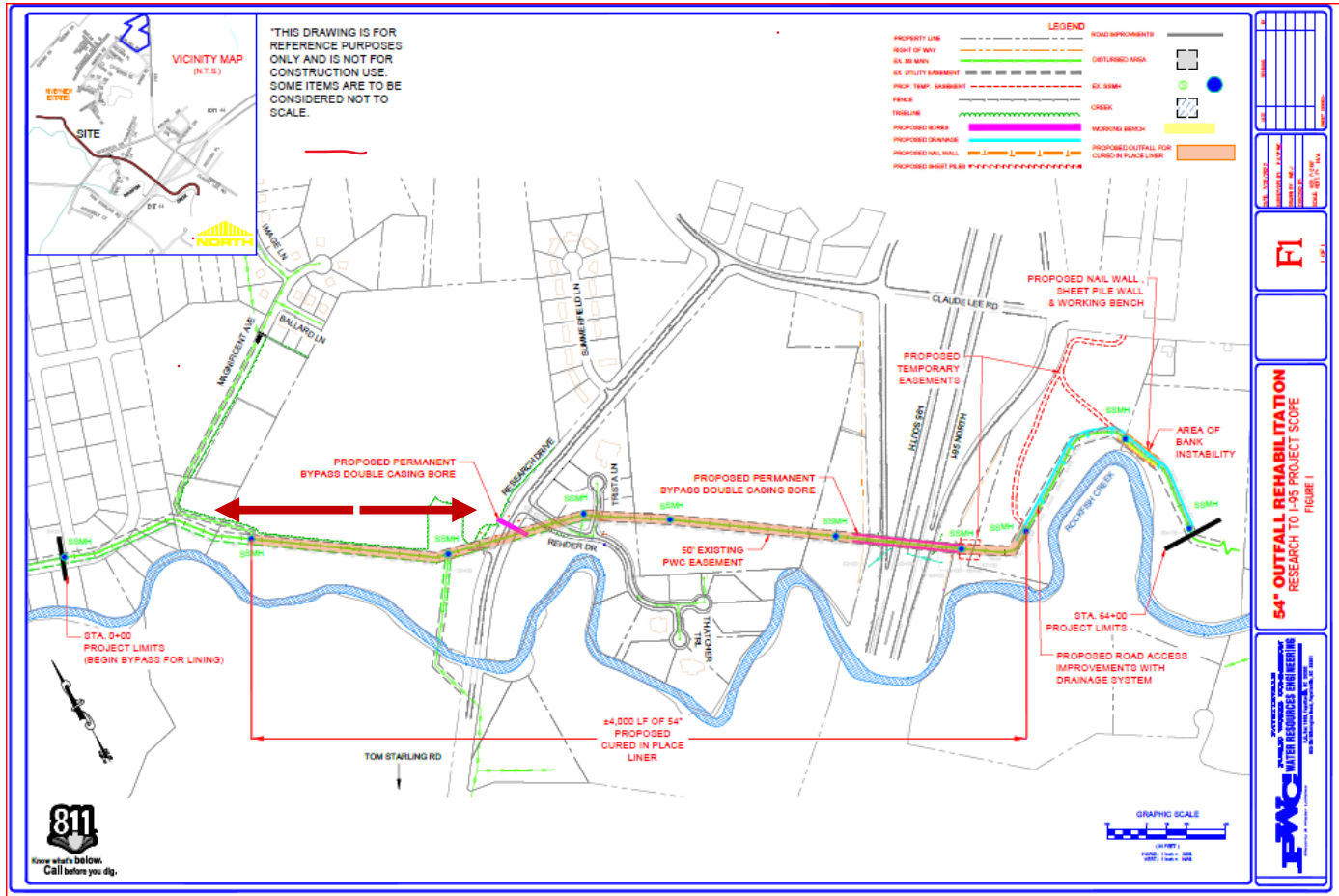


















QUESTIONS