

# GRP PROGRAM CONSTRUCTION PROGRESS



**GRP Review  
Committee  
Meeting  
August 25, 2014**



**SJRA Board  
of Directors  
Meeting  
August 28, 2014**

# SURFACE WATER FACILITY CONSTRUCTION ADMINISTRATION

## Project Data Thru 7/31/2014

Contracted Amount:	\$190,704,740.00
Change Orders:	\$ 0.00
Estimate to Complete:	\$190,704,740.00
Amount Invoiced:	\$132,709,131.00
Percent Complete:	70%
Completion Date:	June 2015



# SURFACE WATER FACILITY CONSTRUCTION ADMINISTRATION

## Project Data Thru 7/31/2014

- Over 150,000 LF or 28.4 miles of medium voltage cable installed
- 3.8 Acres of roofing installed



**Raw Water Intake  
and Pump Station**





Raw Water Intake & Pump Station – Pump assembly and slide gate installation



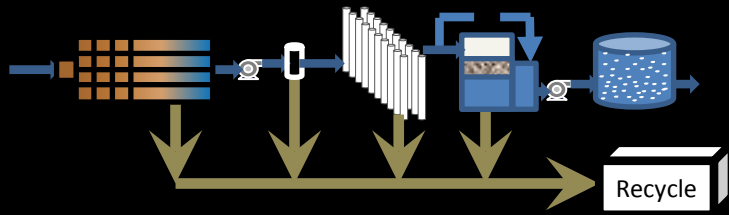
**GAC  
Contactors**

**Membrane  
Building**

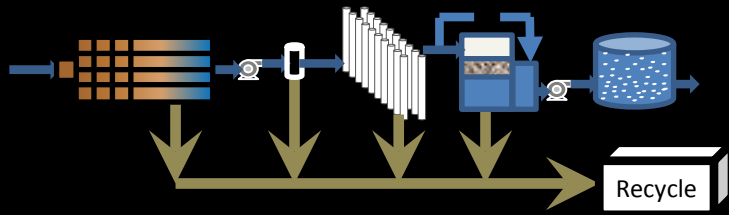
**Pretreatment  
Facilities**

**Chemical  
Facilities**

**Water Treatment Process Structures**

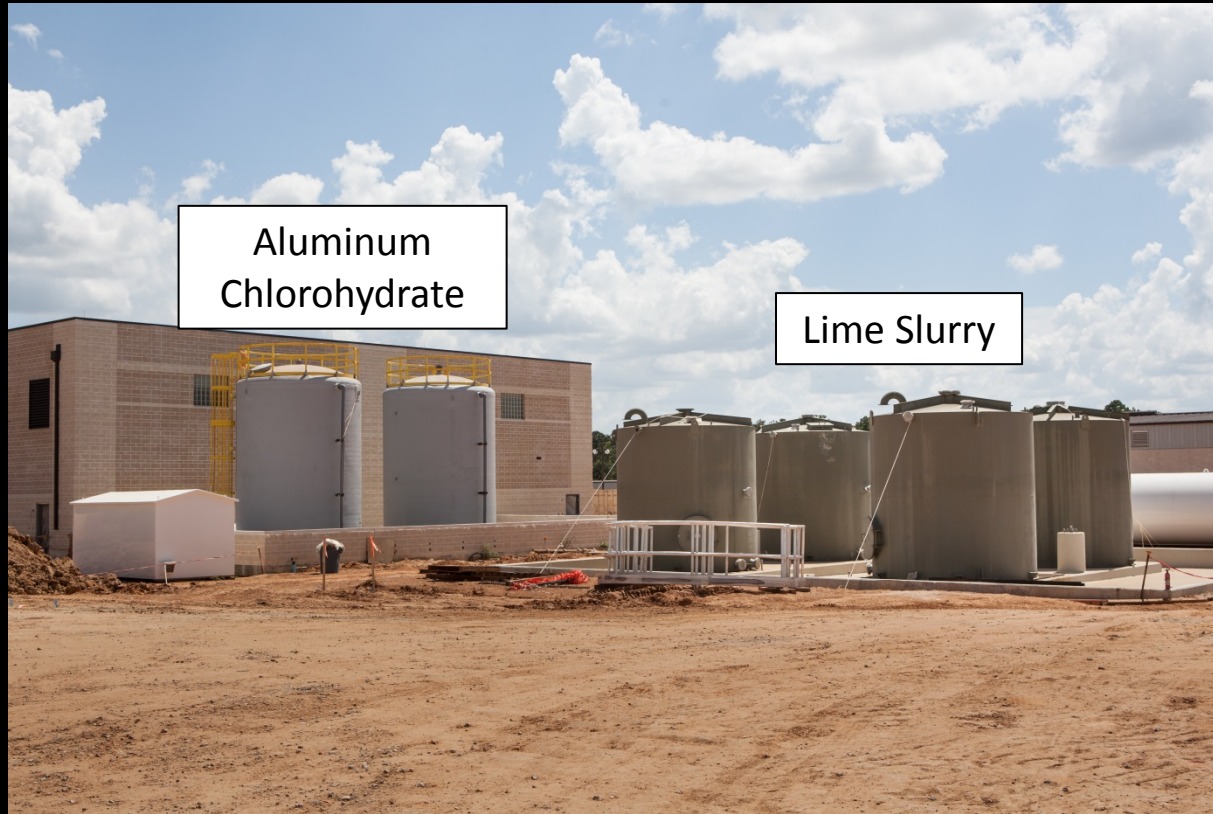
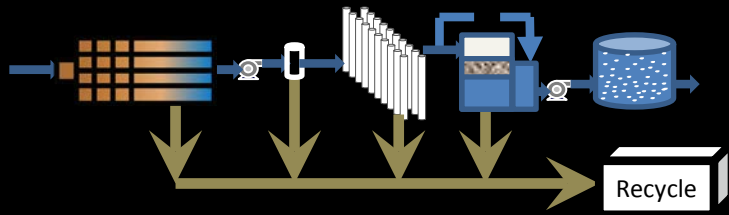


Membrane Building – Feed pump and piping installation



Granulated Activated Carbon – Carbon contactor process piping installation



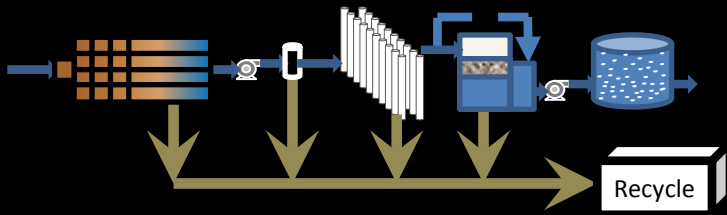


Chemical Building – Storage tank installation



**High Service Pump Station,  
GST's, and Blower Building**

**Finished Water Process Structures**



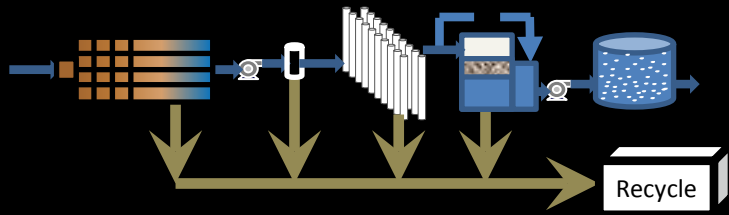
High Service Pump Station – Transformer installation (12470V:4160V)



**Solids-Waste Process Structures**

**Backwash  
Equalization Basin**

**Process Residual Treatment and Disposal Structures**



Dewatering Building – Pedestal for belt filter press

**Electrical  
Facilities**

**Operations  
Building**

**Operational Structures**



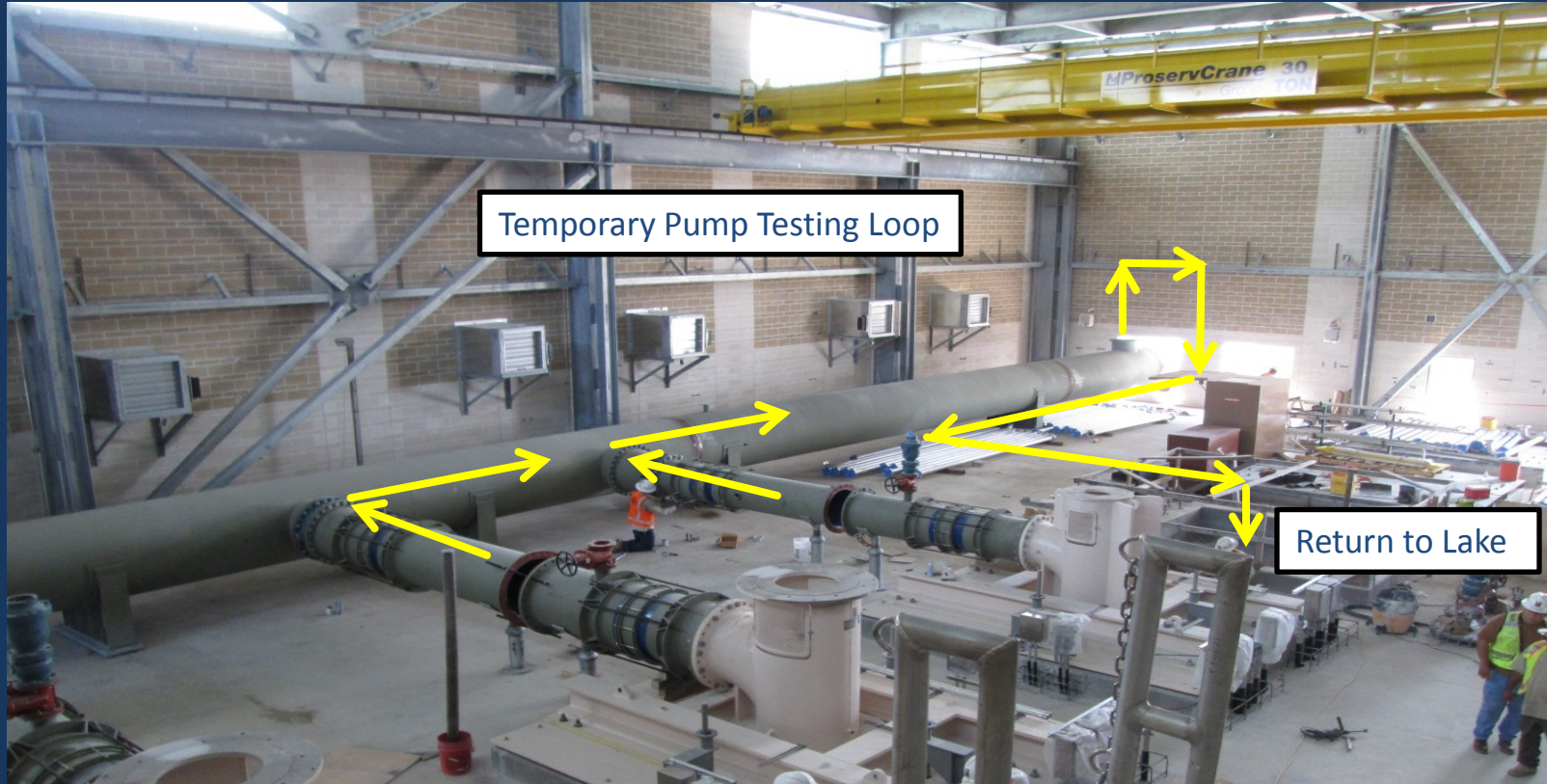
Operations Building – Drywall installation and finishing

# STRUCTURAL LEAK TESTING PLAN





# RAW WATER PUMP TESTING PLAN



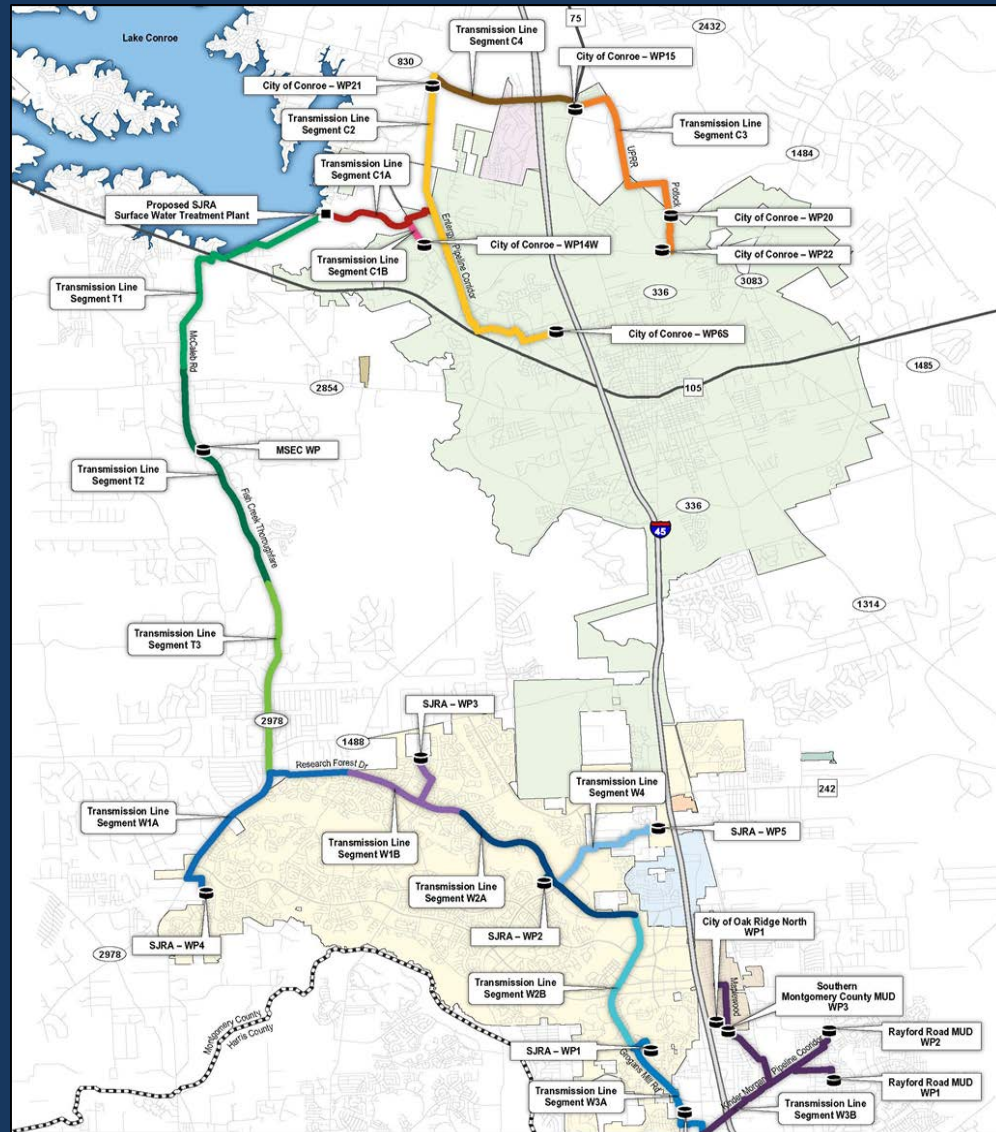
Beginning September 2014

# SURFACE WATER FACILITY CONSTRUCTION PROGRESS

## Questions?



# SURFACE WATER TRANSMISSION SYSTEM CONSTRUCTION PROGRESS



# TRANSMISSION LINE SYSTEM CONSTRUCTION ADMINISTRATION

## Project Data Thru 7/31/2014

Original Contract Amount: \$ 146,610,000.60

Change Orders: \$ 2,391,349.69

Total Contract Amount: \$ 149,001,350.29

Amount Invoiced: \$105,535,314.02

Percent Complete: 71%

Estimated Completion Date: May 2015



# TRANSMISSION LINE SYSTEM CONSTRUCTION ADMINISTRATION

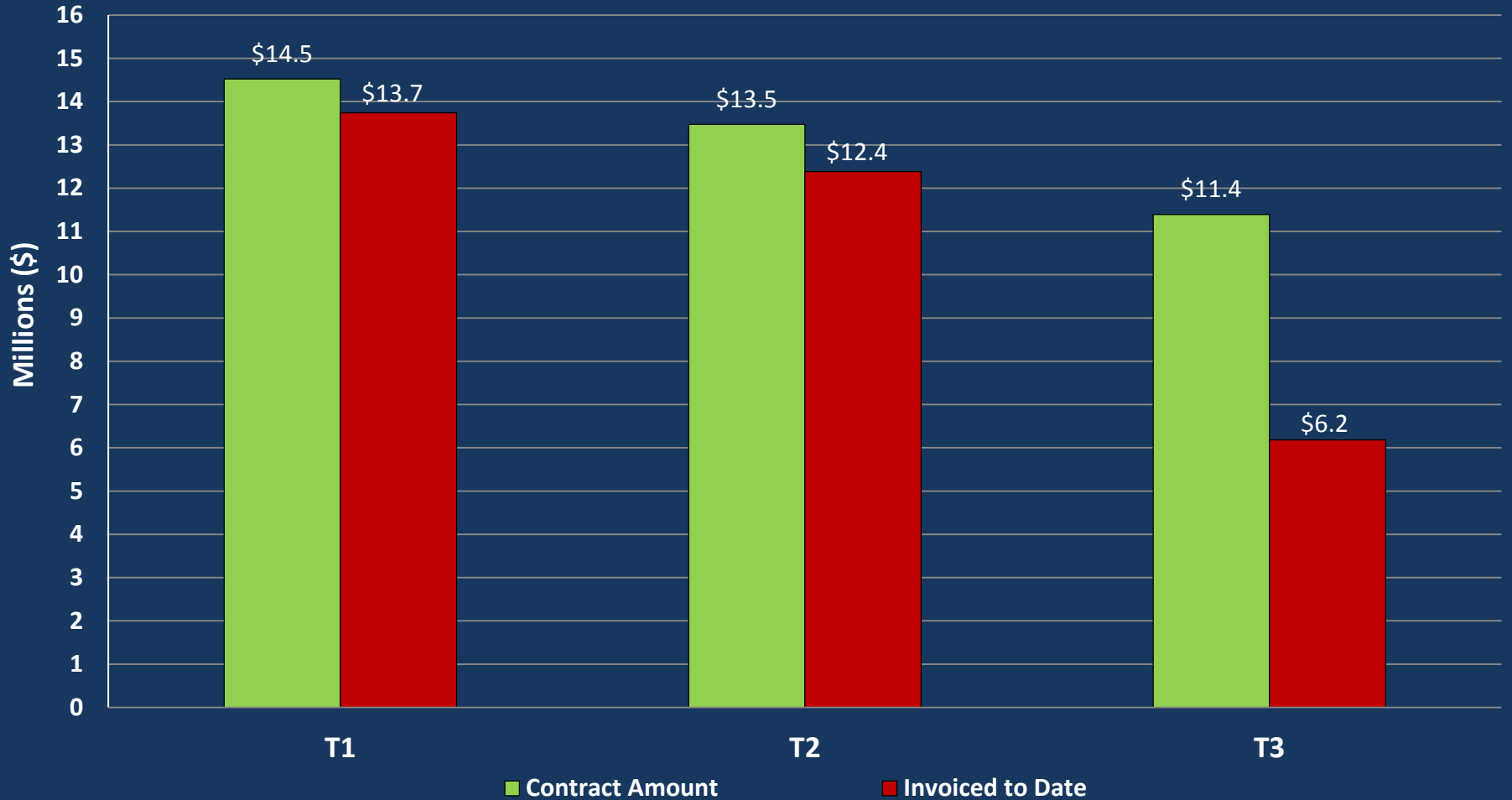
## Project Data Thru 7/31/2014

Average Daily workforce:	296 workers
Piping installed to date:	38.0 miles
Average cost per day:	\$271,517
Percentage of pipe installed:	74%



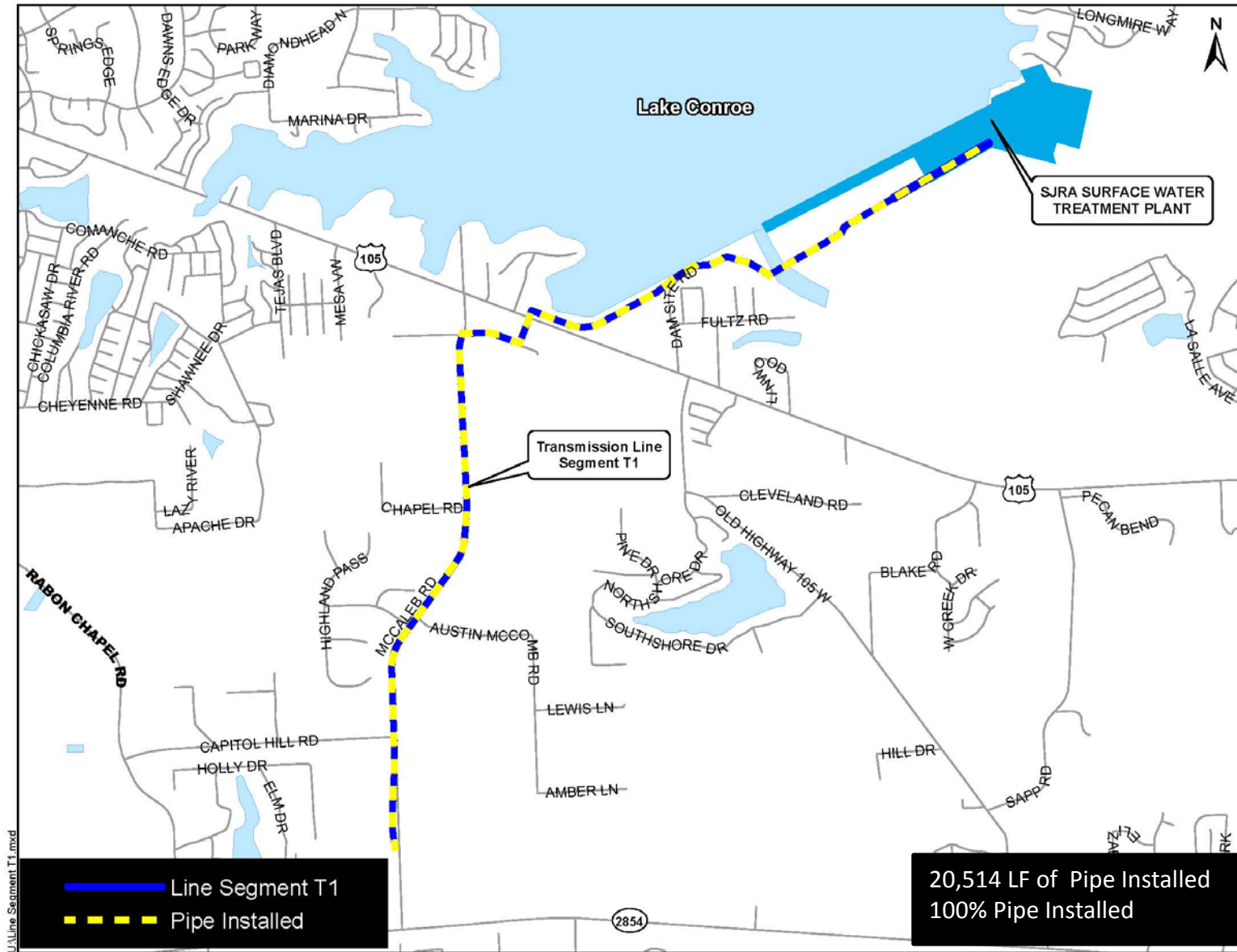
# SURFACE WATER TRANSMISSION SYSTEM "T" ROUTES

## – FINANCIAL DATA



# SURFACE WATER TRANSMISSION SYSTEM "T" ROUTES - PROJECT STATUS

Line	Overall % Complete	Testing % Complete	Substantial Completion	Final Completion
T1	95%	25%		
T2	92%			
T3	54%			



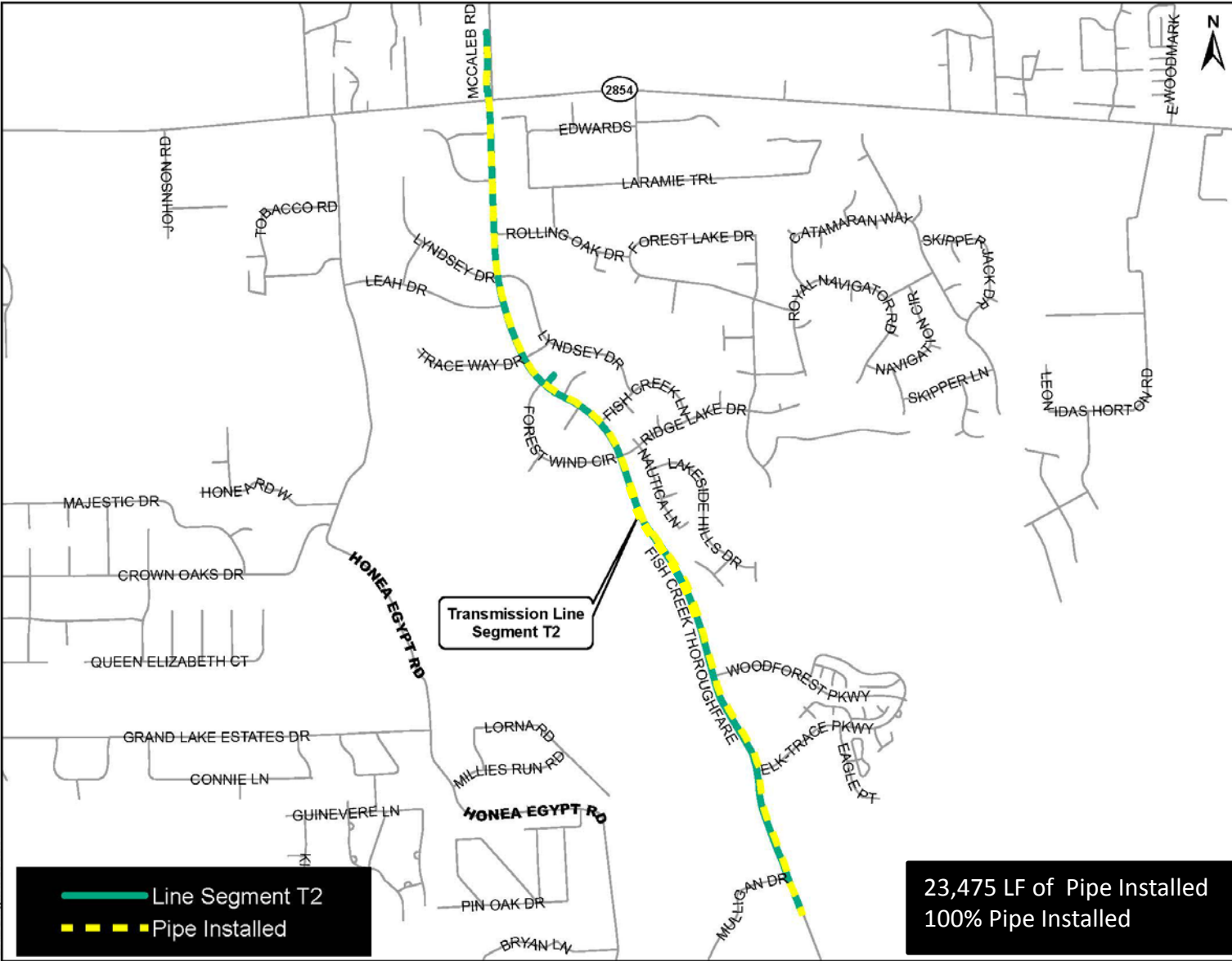
SJRA SURFACE WATER TREATMENT PLANT

Transmission Line Segment T1

- Line Segment T1
- Pipe Installed

20,514 LF of Pipe Installed  
100% Pipe Installed





Transmission Line Segment T2

- Line Segment T2
- Pipe Installed

23,475 LF of Pipe Installed  
100% Pipe Installed

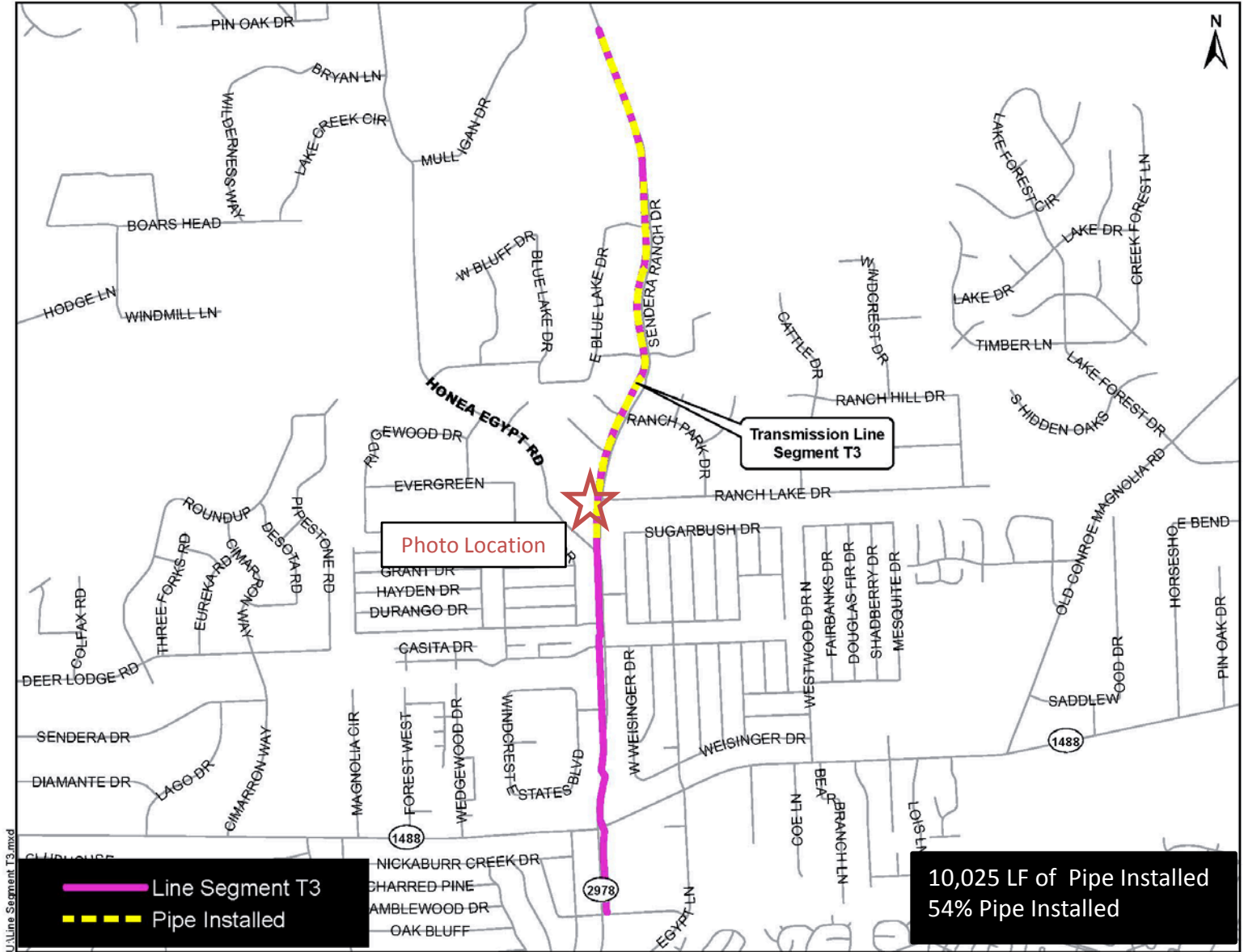


Photo Location

Transmission Line Segment T3

— Line Segment T3  
- - - Pipe Installed

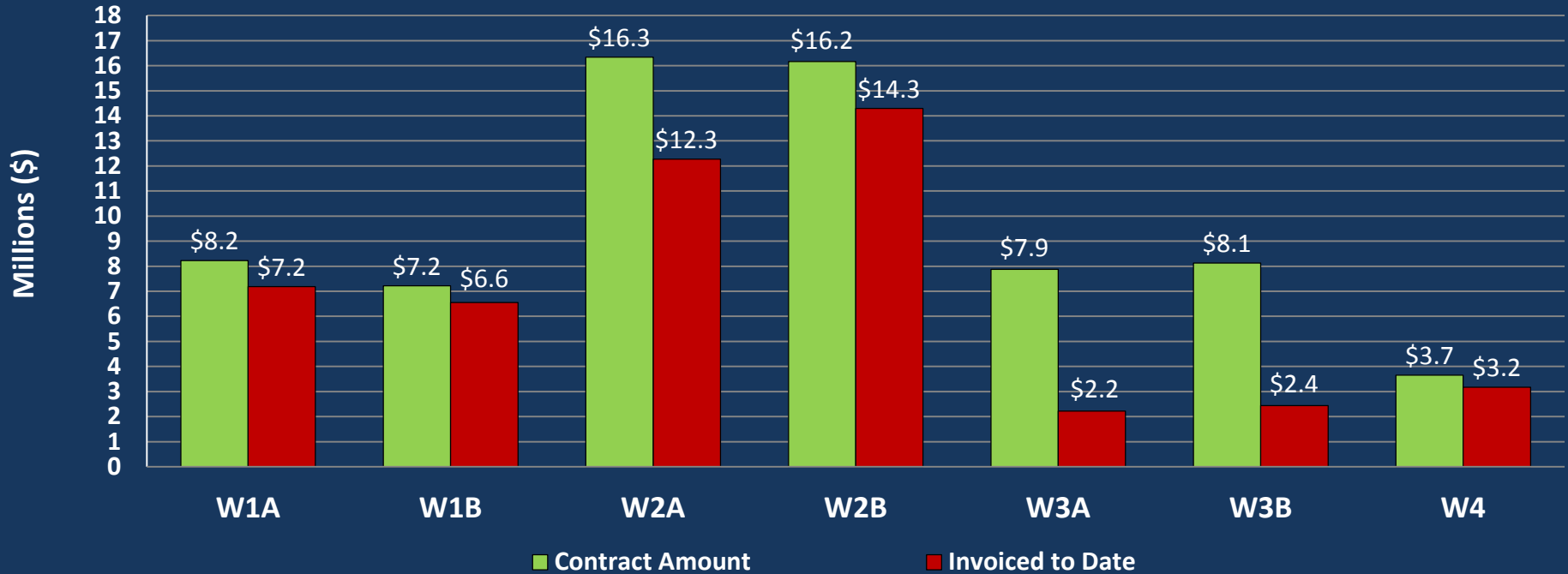
10,025 LF of Pipe Installed  
54% Pipe Installed

U:\Line Segment T3.mxd



54-inch pipe installation along Sendera Ranch Road

# SURFACE WATER TRANSMISSION SYSTEM "W" ROUTES – FINANCIAL DATA



# SURFACE WATER TRANSMISSION SYSTEM "W" ROUTES - PROJECT STATUS

Line	Overall % Complete	Testing % Complete	Substantial Completion	Final Completion
W1A	87%			
W1B	91%	76%		
W2A	75%			
W2B	88%			
W3A	24%			
W3B	24%			
W4	87%			

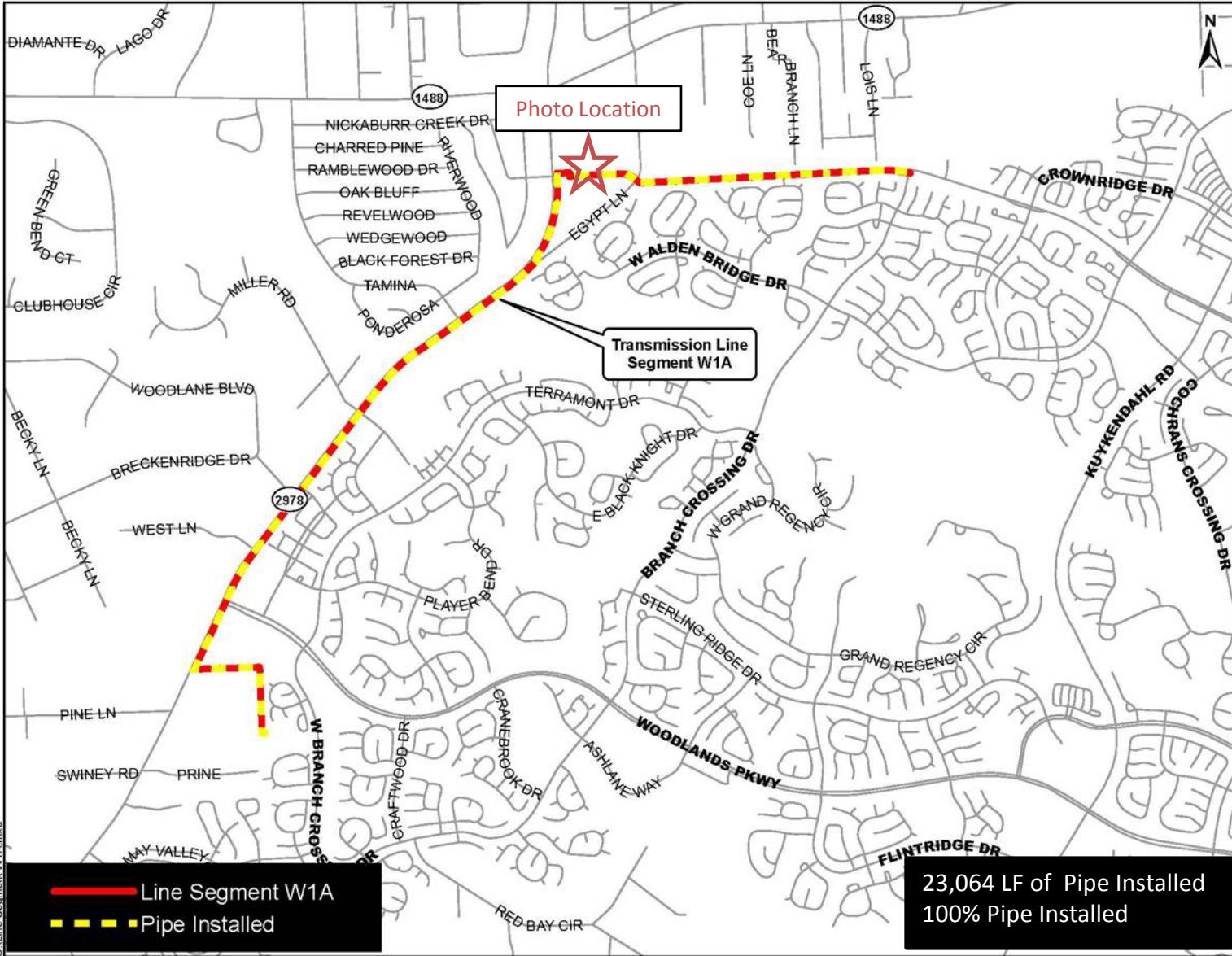


Photo Location

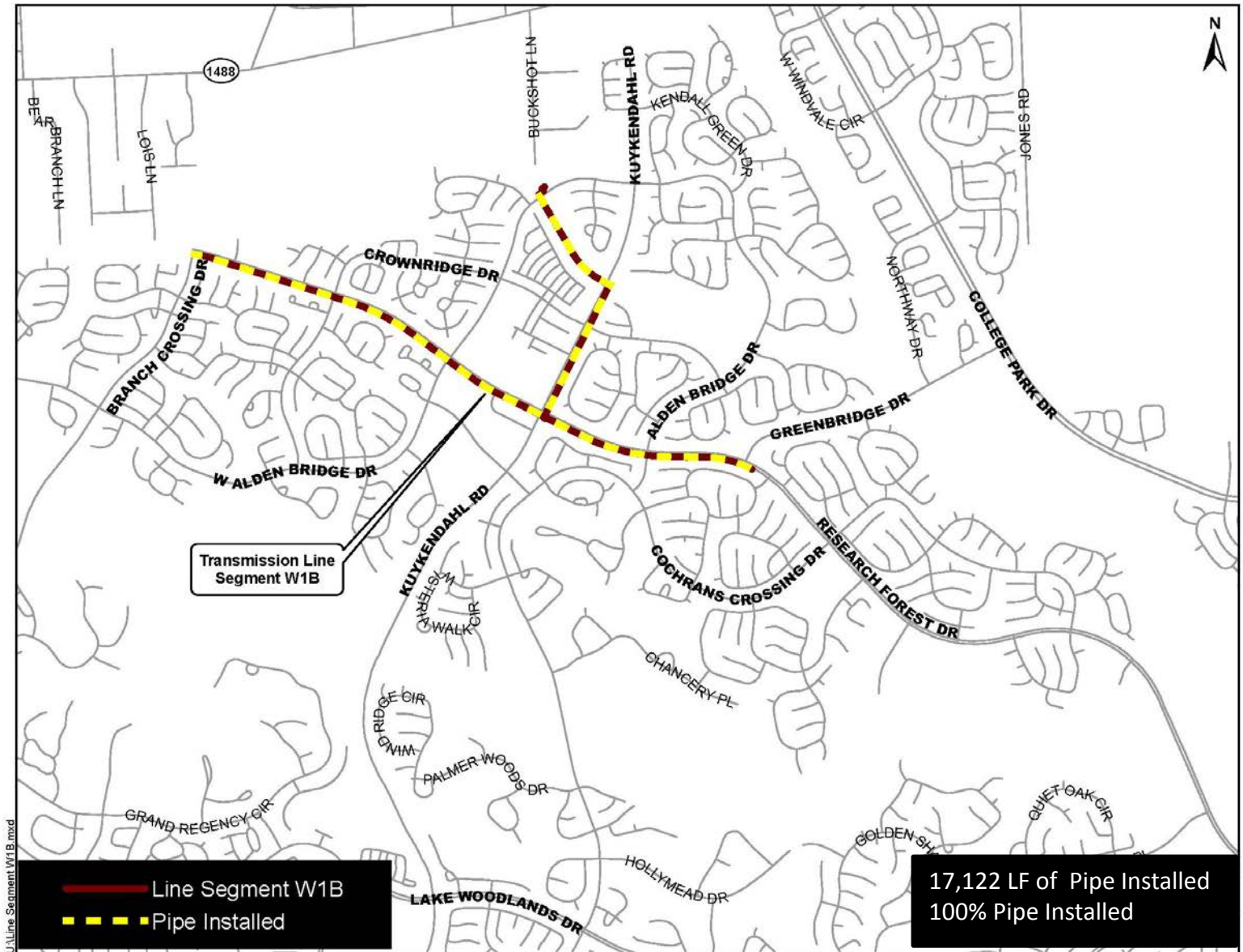
Transmission Line Segment W1A

— Line Segment W1A  
- - - Pipe Installed

23,064 LF of Pipe Installed  
 100% Pipe Installed



Traffic restoration along Research Forest Drive at FM 2978



Transmission Line Segment W1B

- Line Segment W1B
- Pipe Installed

17,122 LF of Pipe Installed  
100% Pipe Installed

U:\Line Segment W1B.mxd



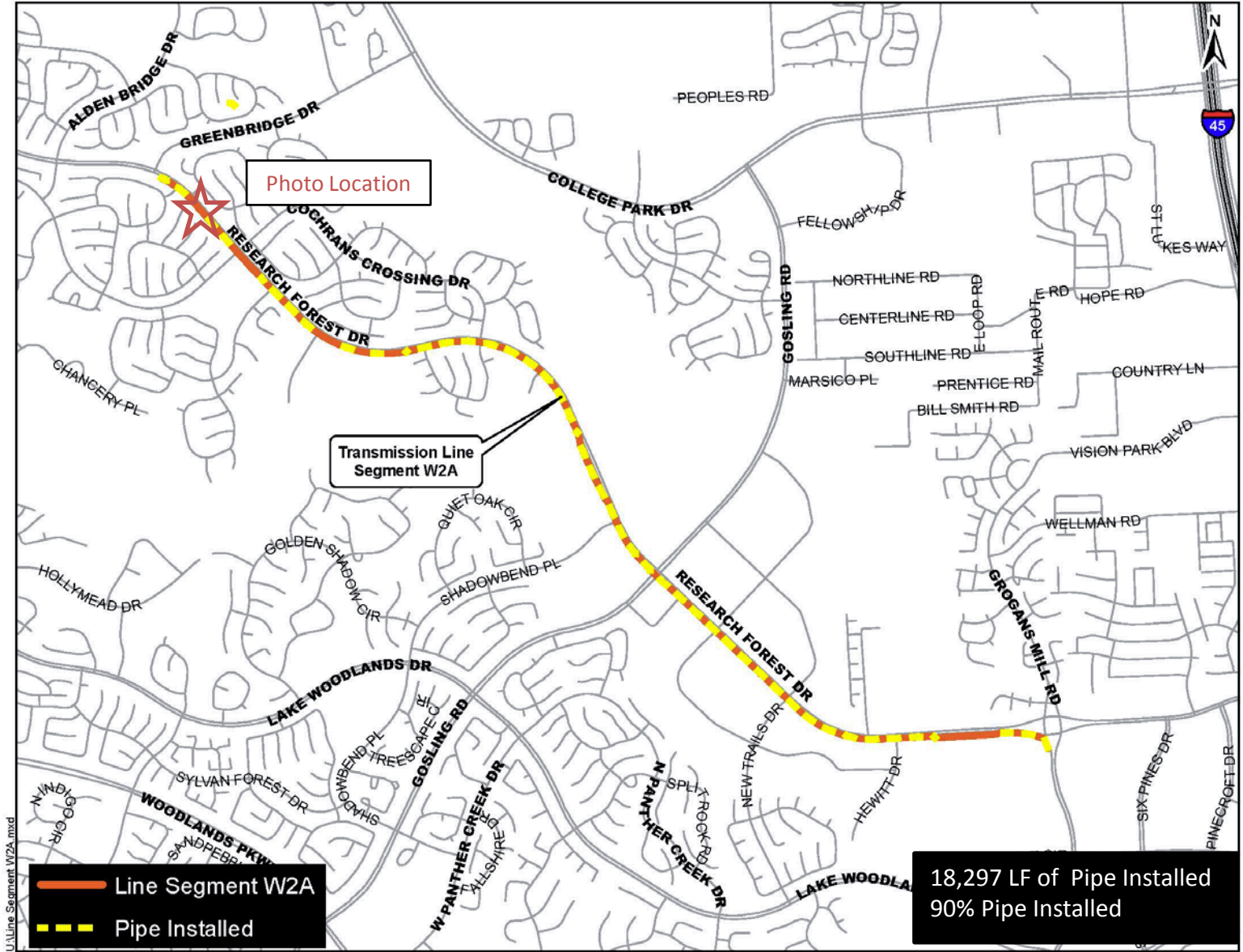


Photo Location

Transmission Line Segment W2A

U:\Line Segment W2A.mxd

- Line Segment W2A
- Pipe Installed

18,297 LF of Pipe Installed  
90% Pipe Installed



Expansion joint installation at Big Barn fault crossing

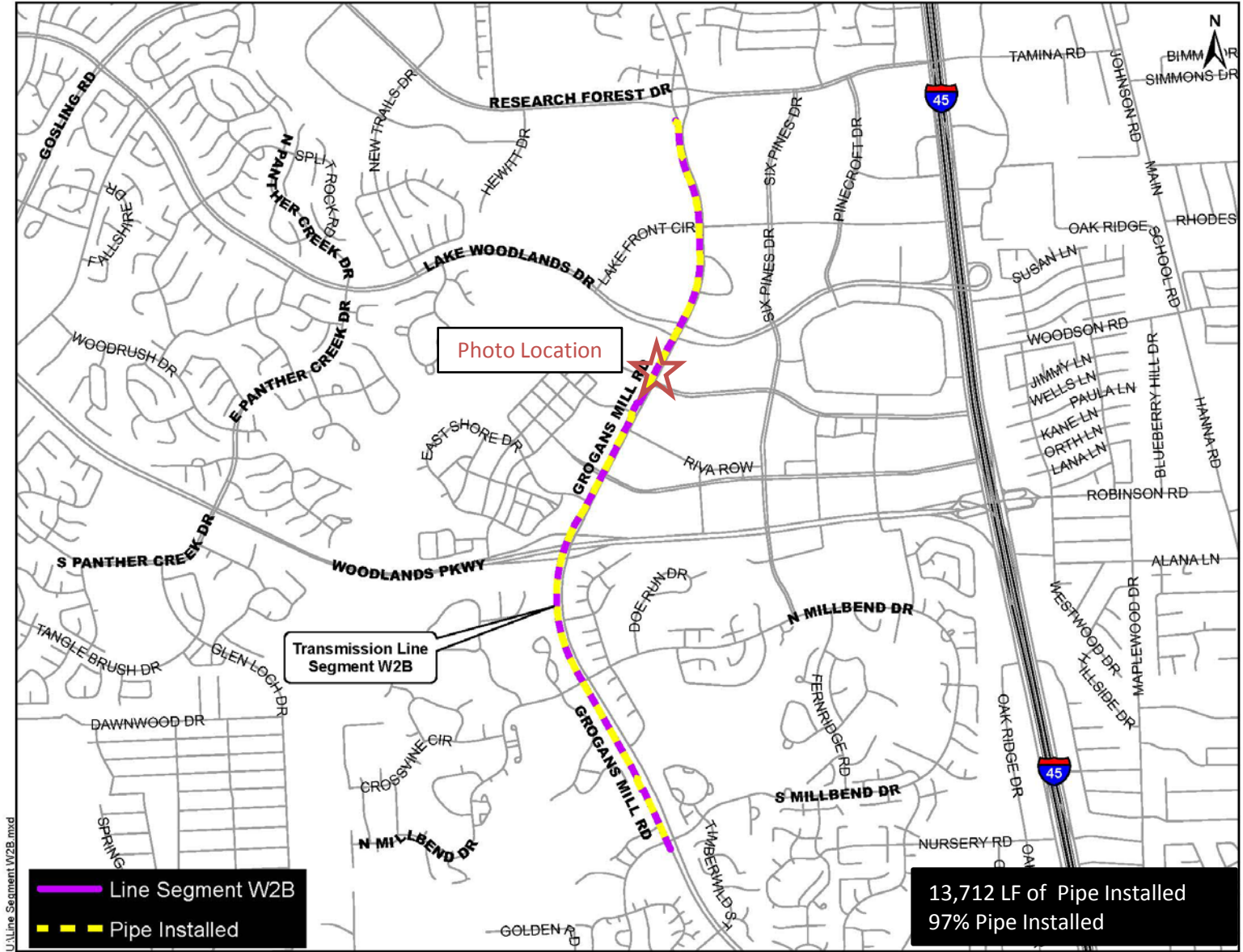


Photo Location

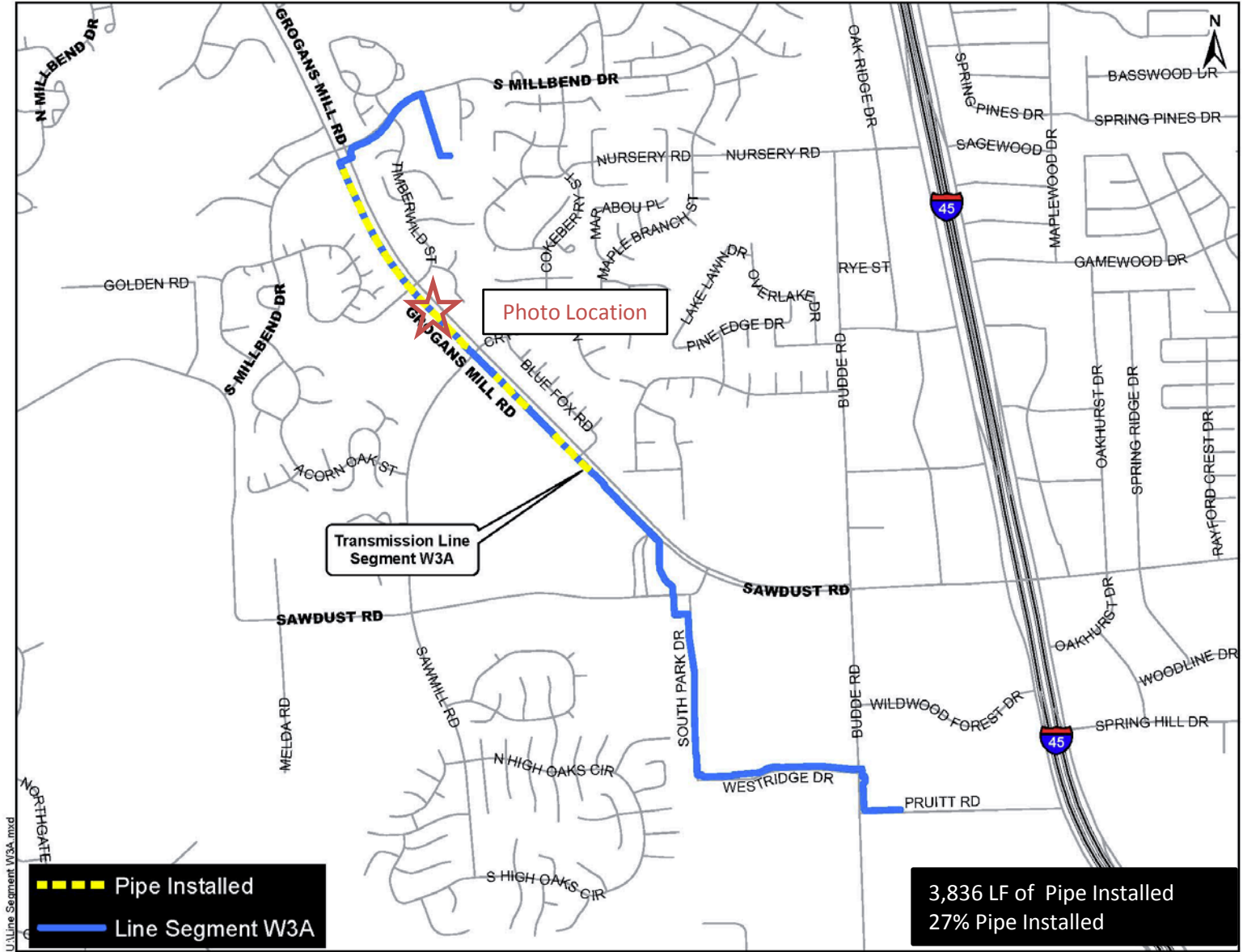
Transmission Line Segment W2B

- Line Segment W2B
- Pipe Installed

13,712 LF of Pipe Installed  
97% Pipe Installed



Bore Pit and Tunneling Bore Machine installation for Woodlands Waterway crossing



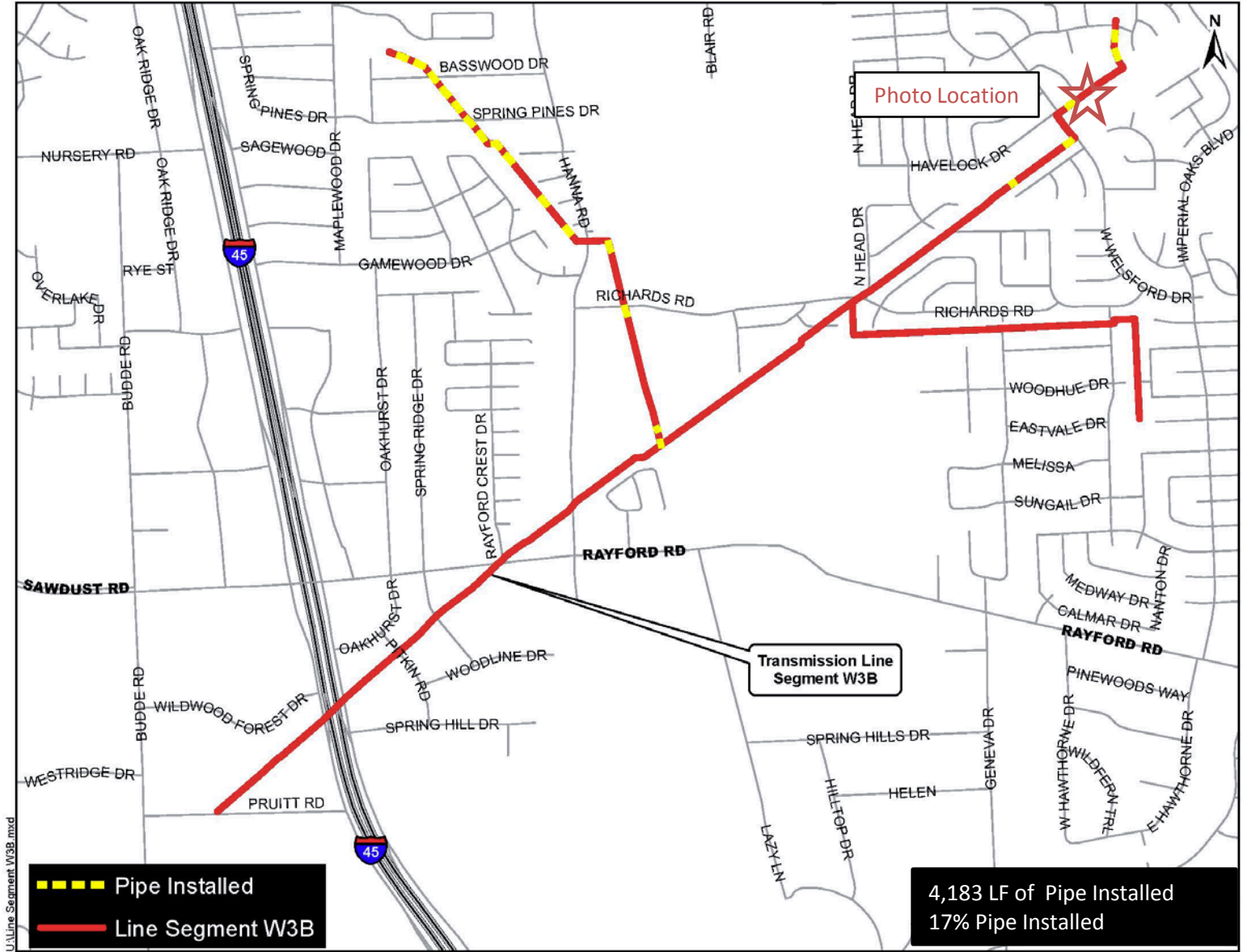
U:\Line Segment W3A.mxd

- Pipe Installed
- Line Segment W3A

3,836 LF of Pipe Installed  
27% Pipe Installed



20-inch pipe installation along Grogans Mill Road



U:\Line Segment W3B.mxd

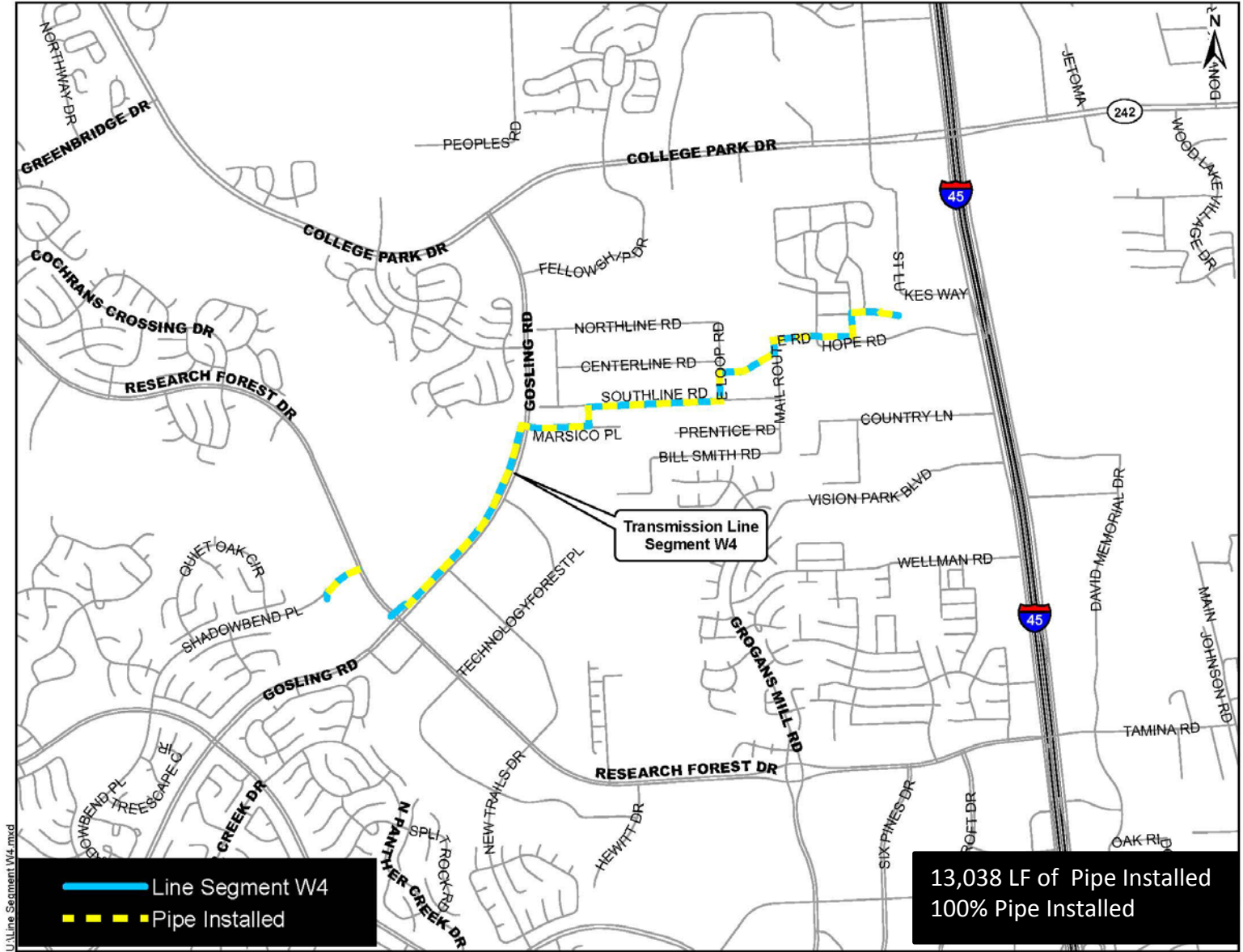
- - - Pipe Installed  
— Line Segment W3B

4,183 LF of Pipe Installed  
 17% Pipe Installed



12-inch waterline installation along Montgomery County Drainage District No. 6





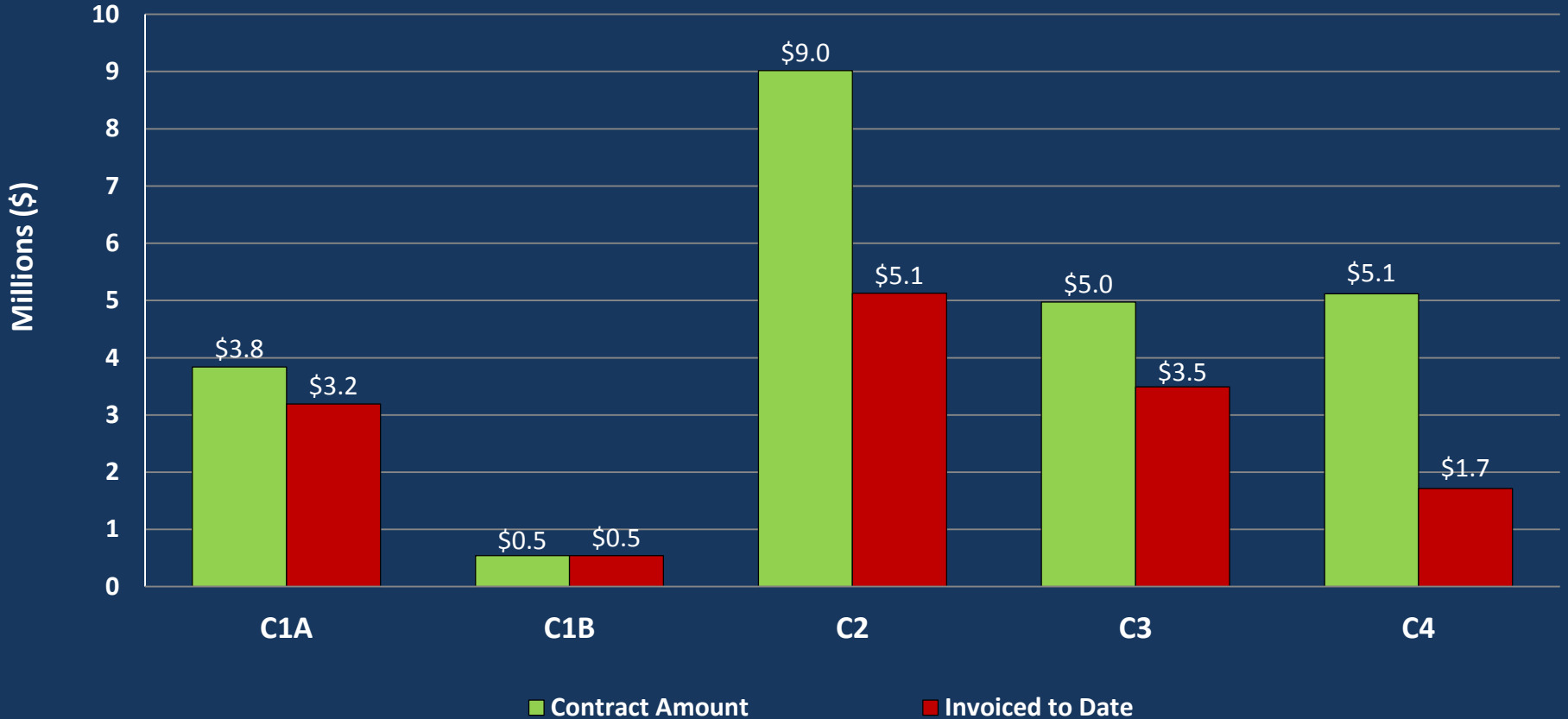
U:\Line Segment W4.mxd

— Line Segment W4  
- - - Pipe Installed

Transmission Line Segment W4

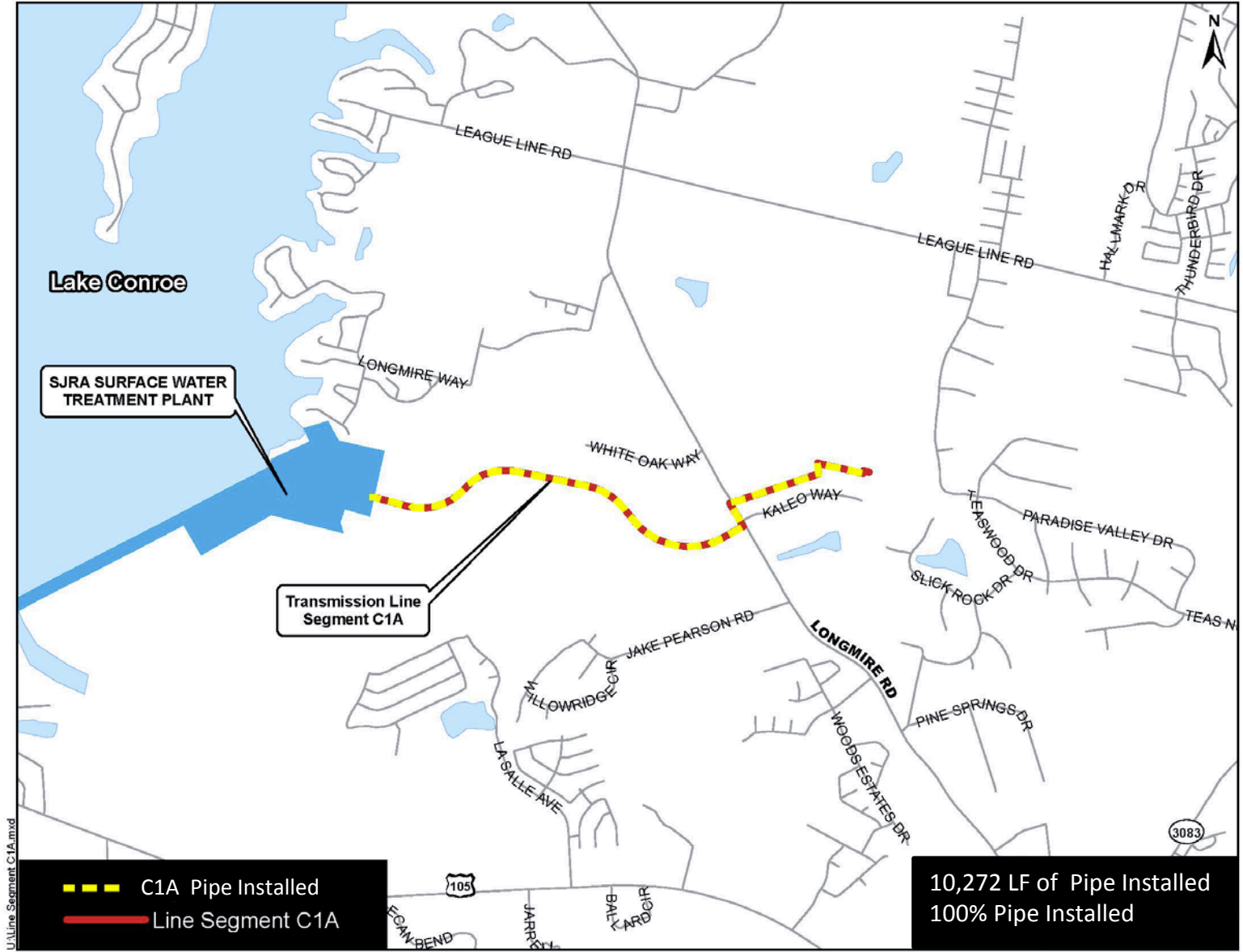
13,038 LF of Pipe Installed  
 100% Pipe Installed

# SURFACE WATER TRANSMISSION SYSTEM "C" ROUTES – FINANCIAL DATA



# SURFACE WATER TRANSMISSION SYSTEM "C" ROUTES - PROJECT STATUS

Line	Overall % Complete	Testing % Complete	Substantial Completion	Final Completion
C1A	83%			
C1B	100%	100%	✓	✓
C2	57%			
C3	70%			
C4	34%			



**SJRA SURFACE WATER TREATMENT PLANT**

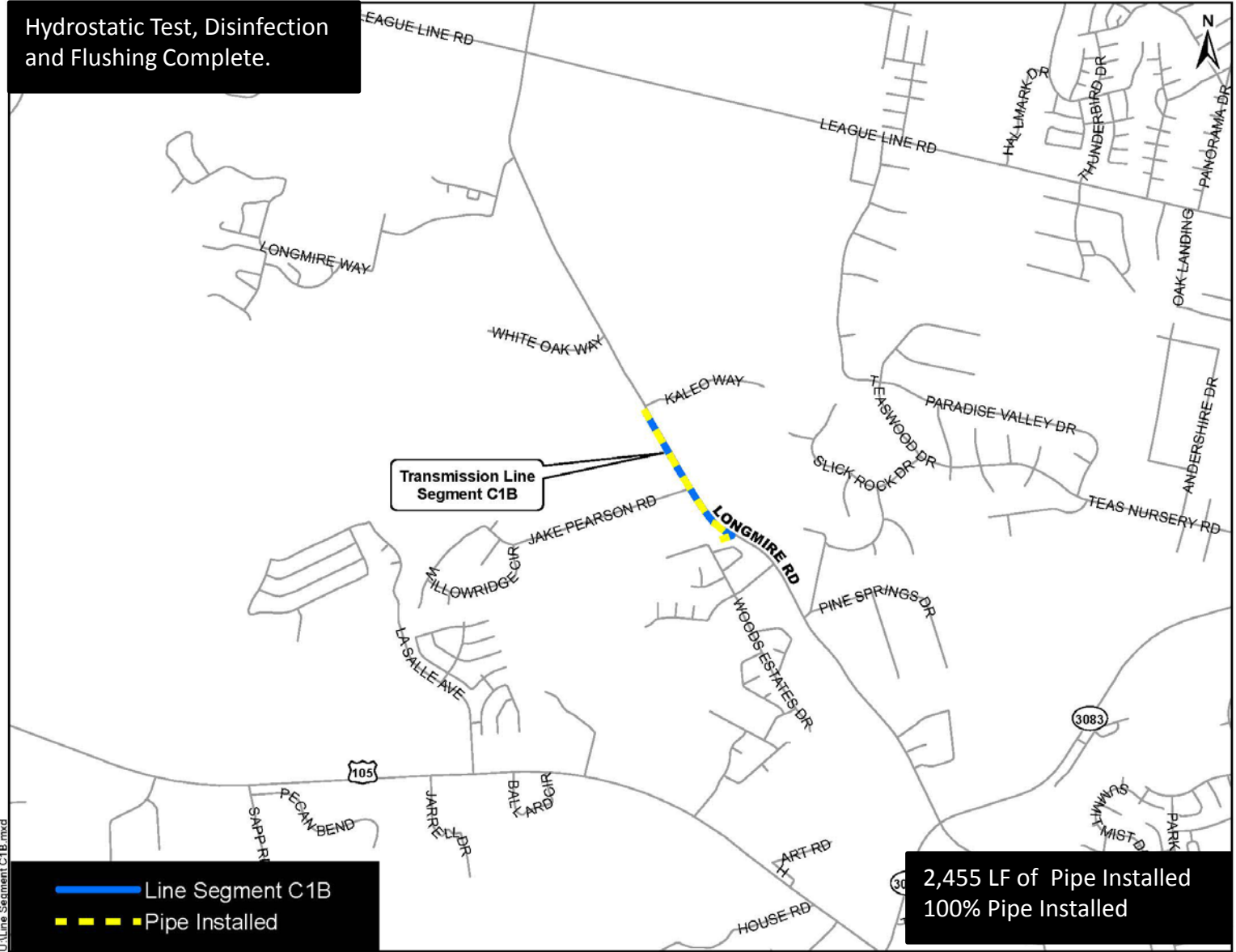
**Transmission Line Segment C1A**

- - - C1A Pipe Installed
- - - Line Segment C1A

**10,272 LF of Pipe Installed  
100% Pipe Installed**

L:\Line Segment C1A.mxd

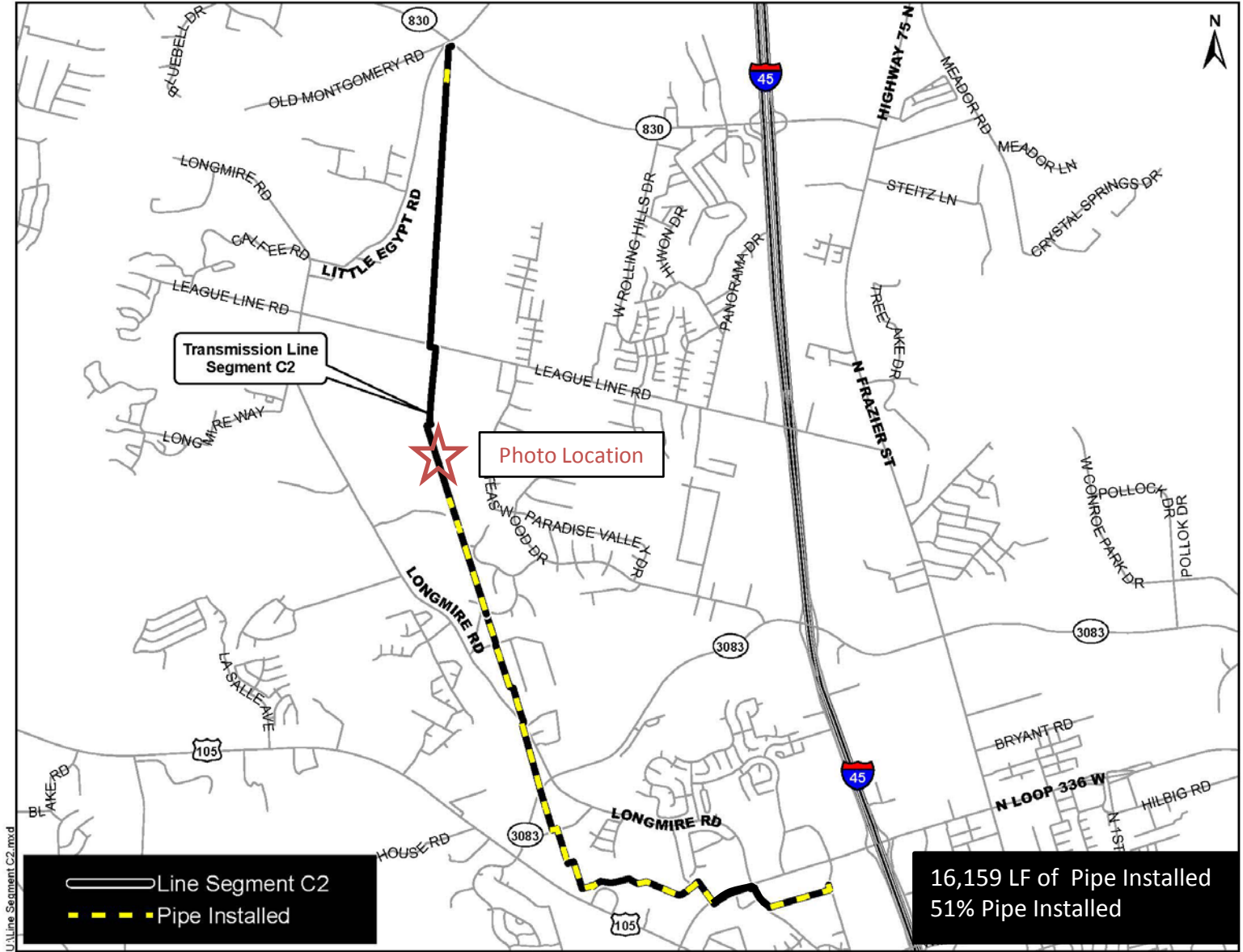
Hydrostatic Test, Disinfection and Flushing Complete.



Transmission Line Segment C1B

— Line Segment C1B  
- - - Pipe Installed

2,455 LF of Pipe Installed  
100% Pipe Installed



Transmission Line Segment C2

Photo Location

— Line Segment C2  
- - - Pipe Installed

16,159 LF of Pipe Installed  
51% Pipe Installed

U:\Line Segment C2.mxd



Tunnel bore pit installation along Entergy corridor

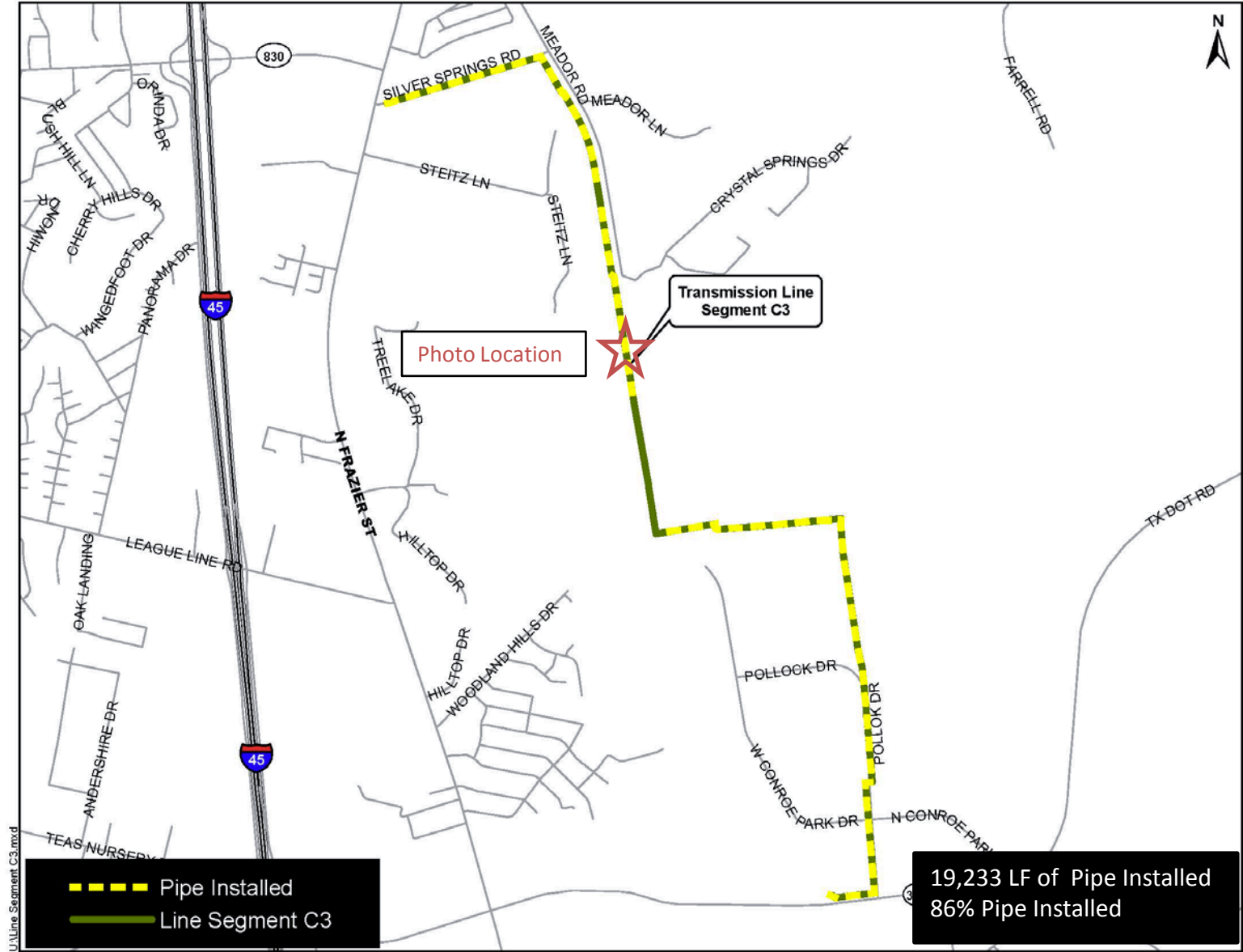


Photo Location

Transmission Line Segment C3

--- Pipe Installed  
— Line Segment C3

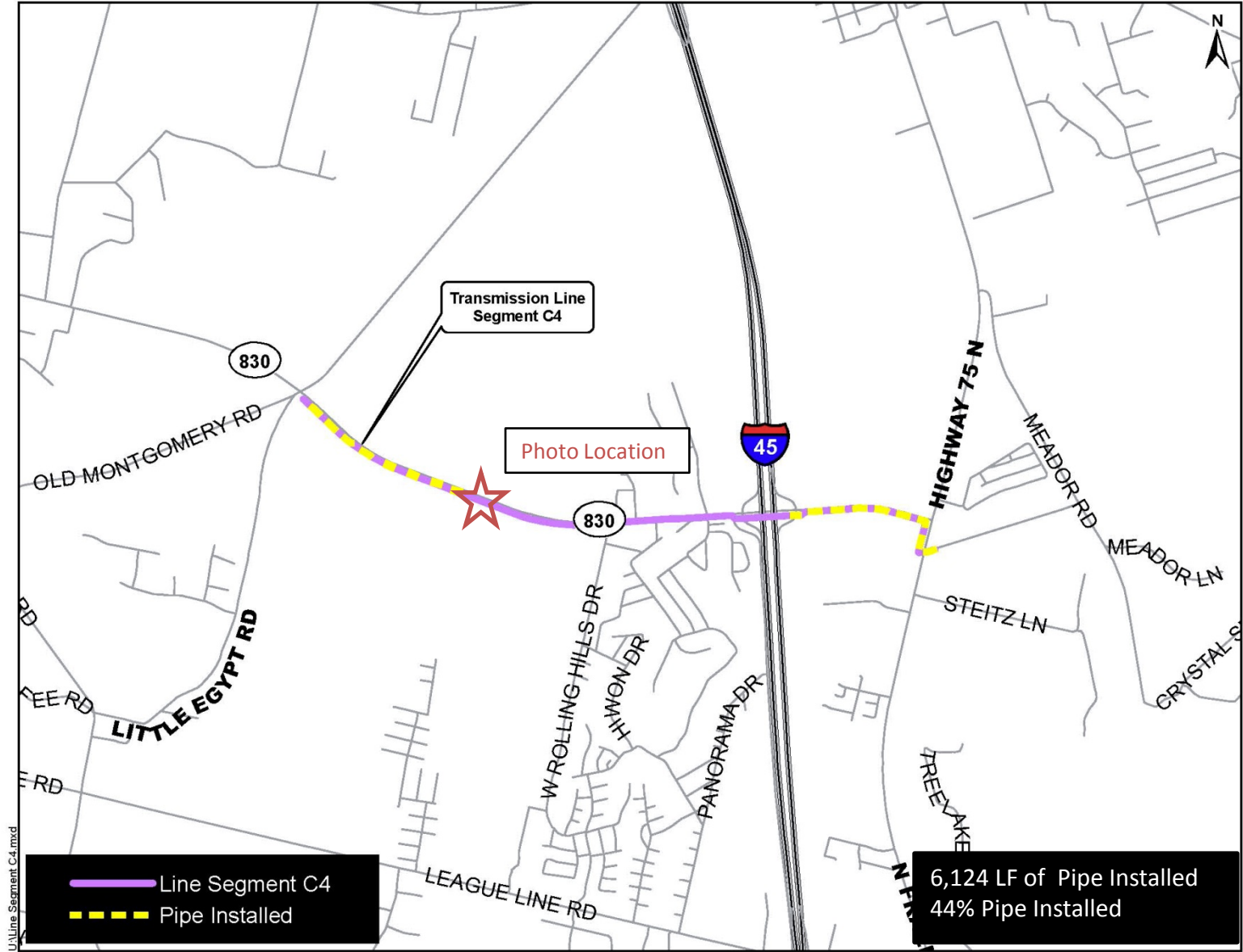
19,233 LF of Pipe Installed  
86% Pipe Installed

U:\Line Segment C3.mxd





Manhole installation preparation along Silver Springs Road



Transmission Line Segment C4

Photo Location

— Line Segment C4  
- - - Pipe Installed

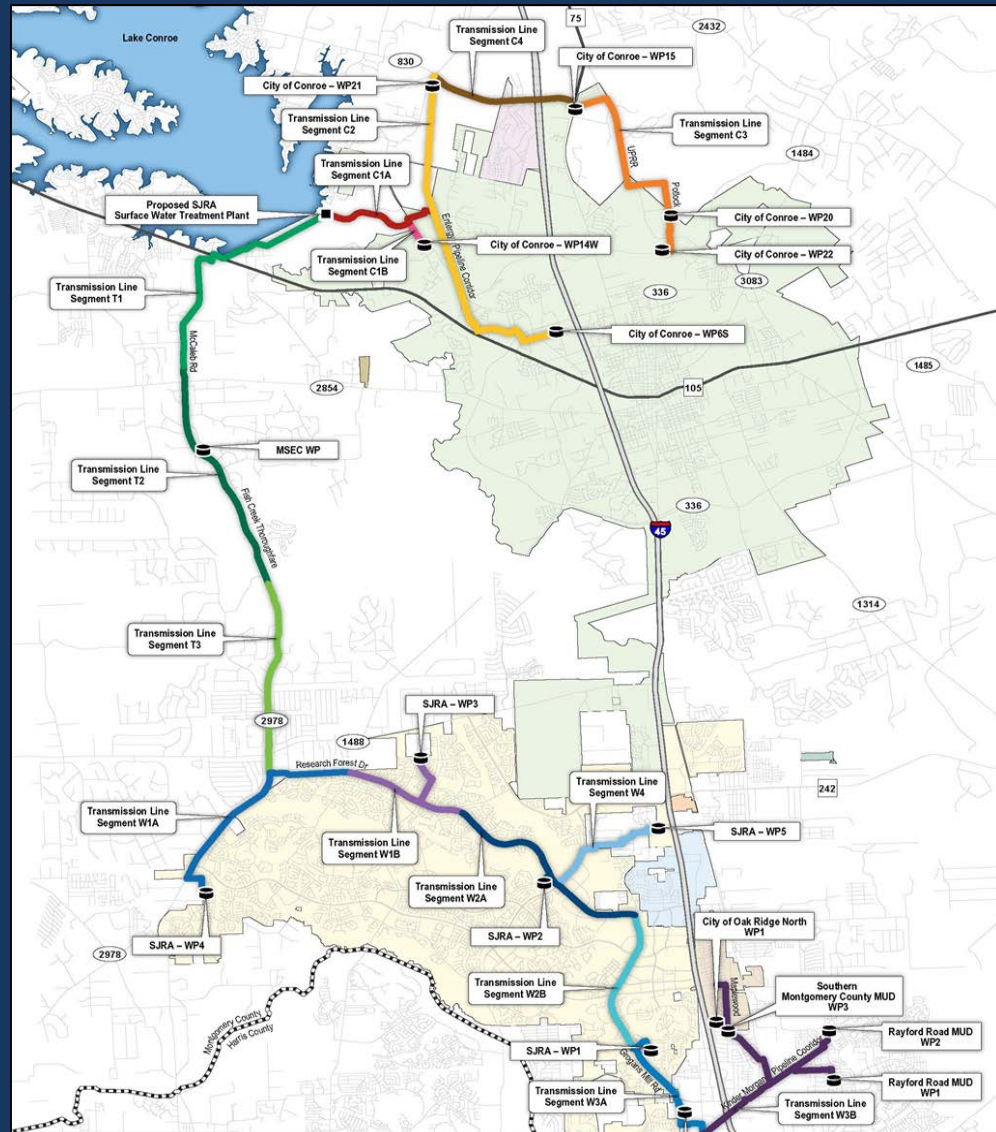
6,124 LF of Pipe Installed  
44% Pipe Installed

U:\Line Segment C4.mxd

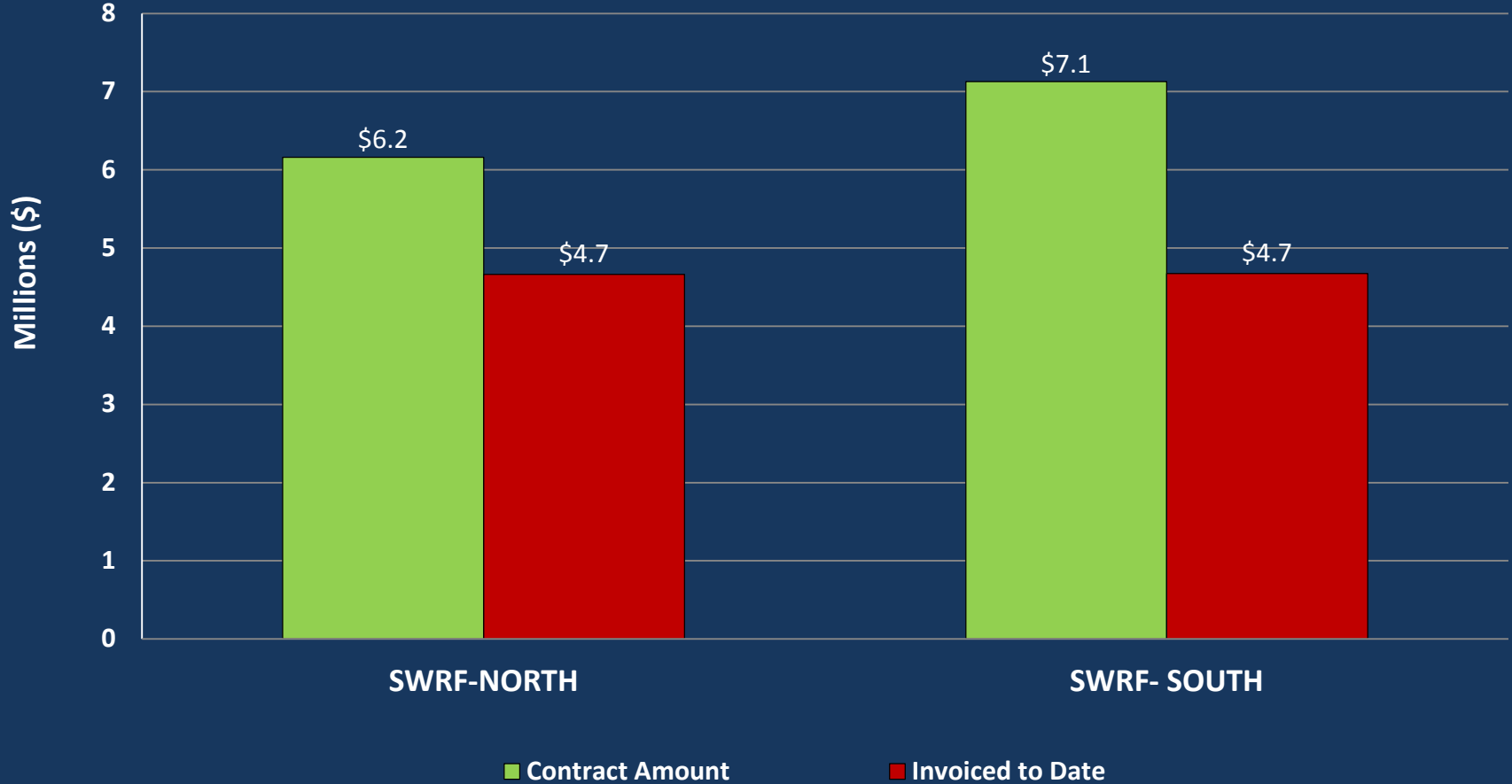


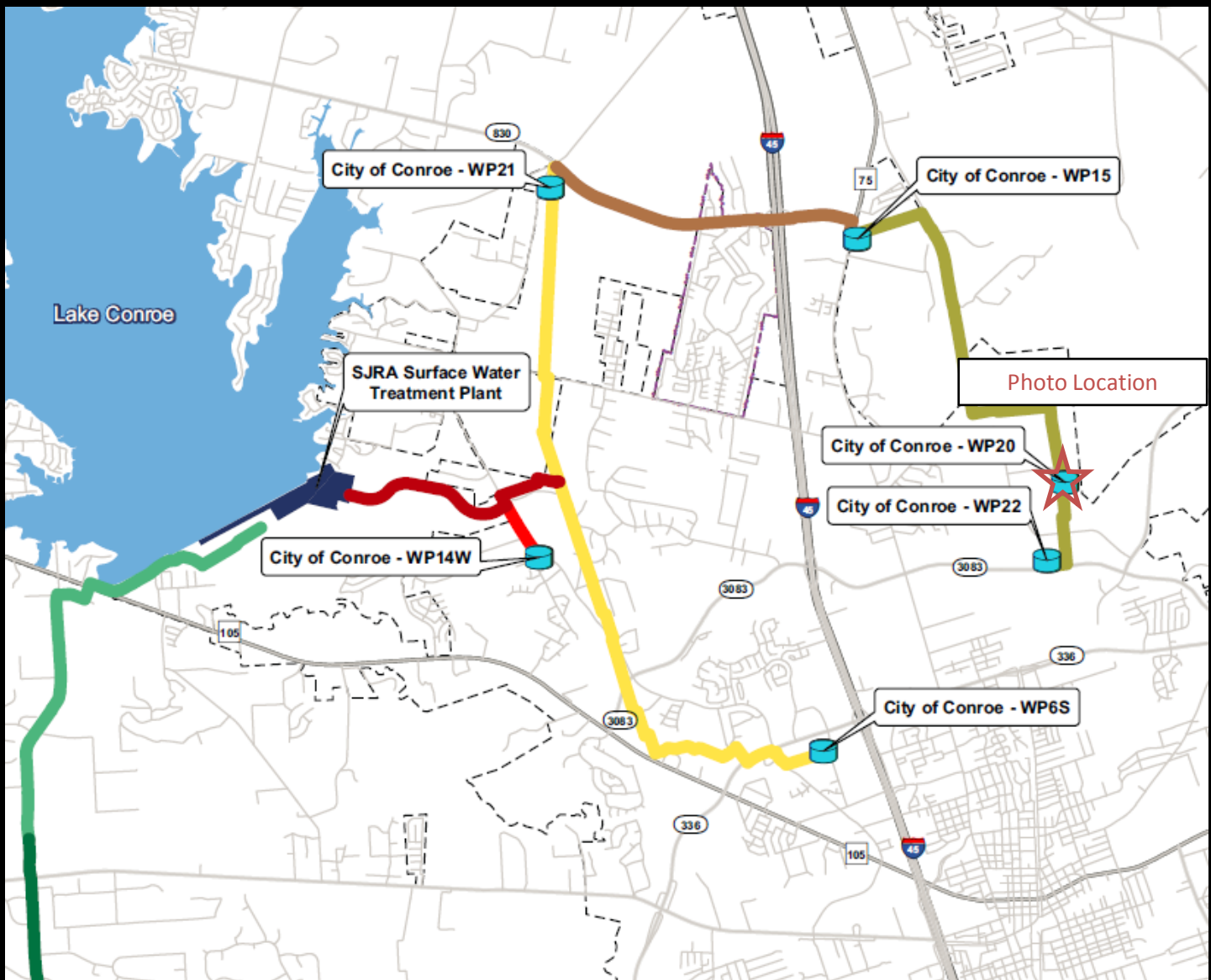
20-inch waterline installation along FM 830

# SURFACE WATER RECEIVING FACILITIES CONSTRUCTION PROGRESS



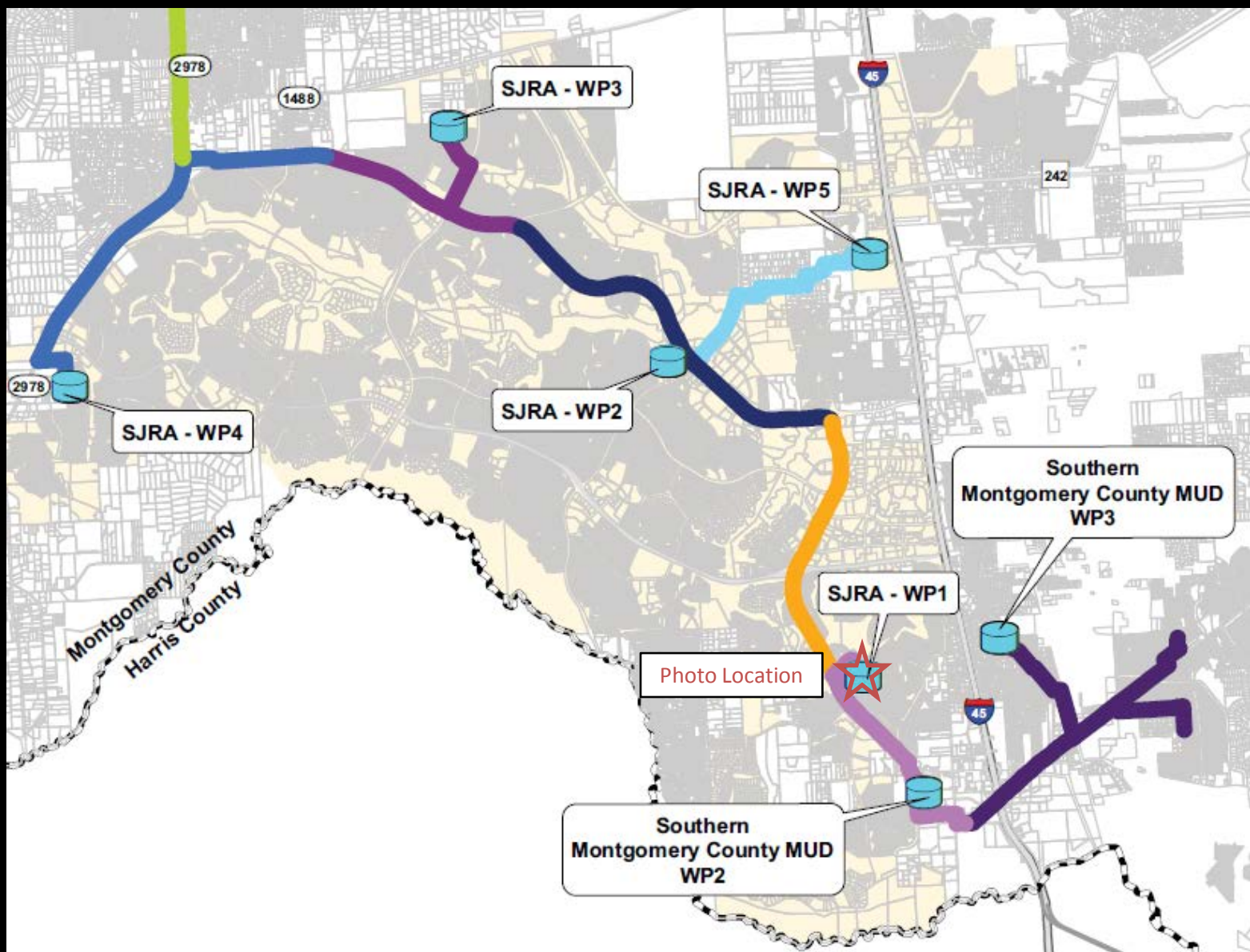
# SURFACE WATER TRANSMISSION SYSTEM RECEIVING FACILITIES – FINANCIAL DATA







Flow Control Pressure Station assembly at Conroe Water Plant No. 20

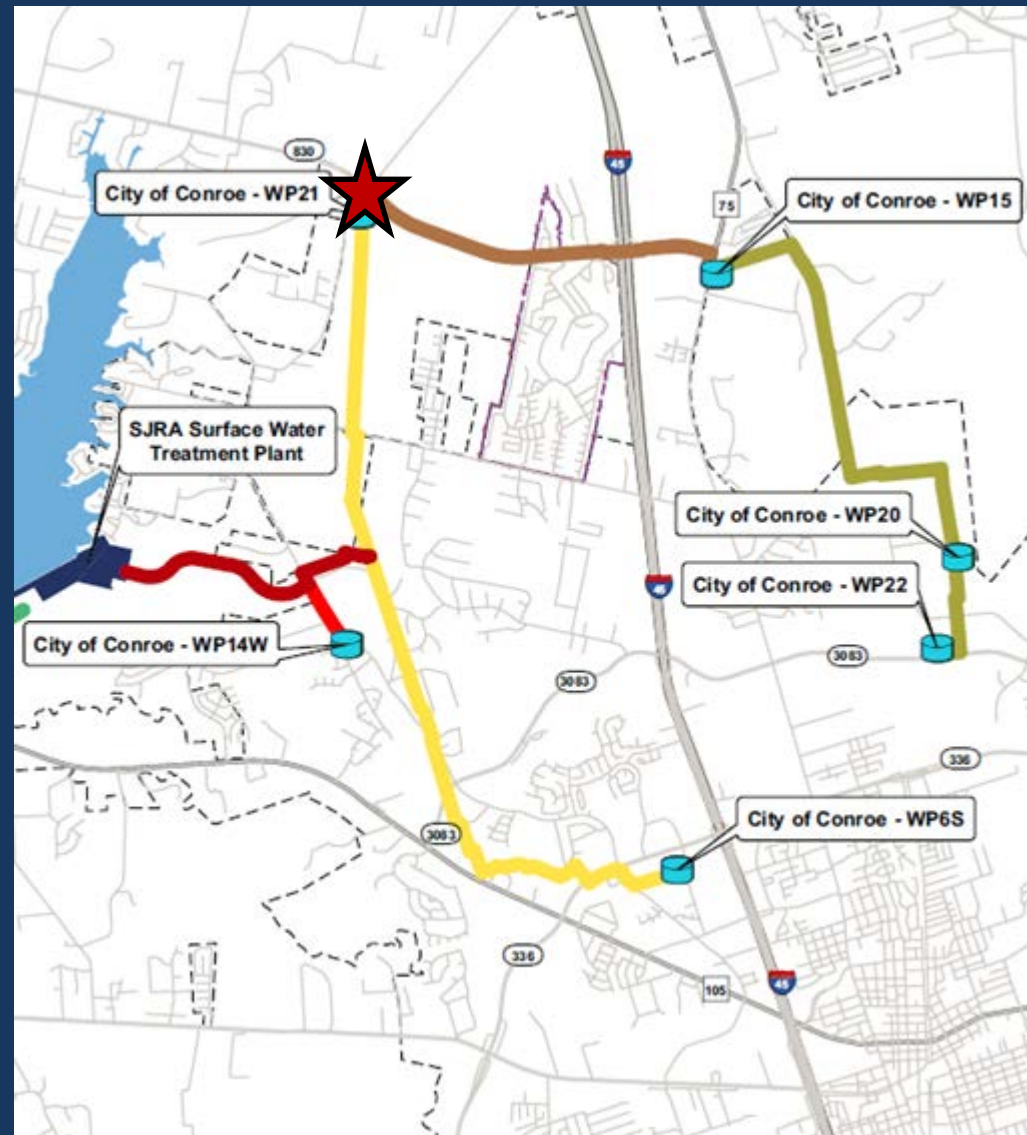




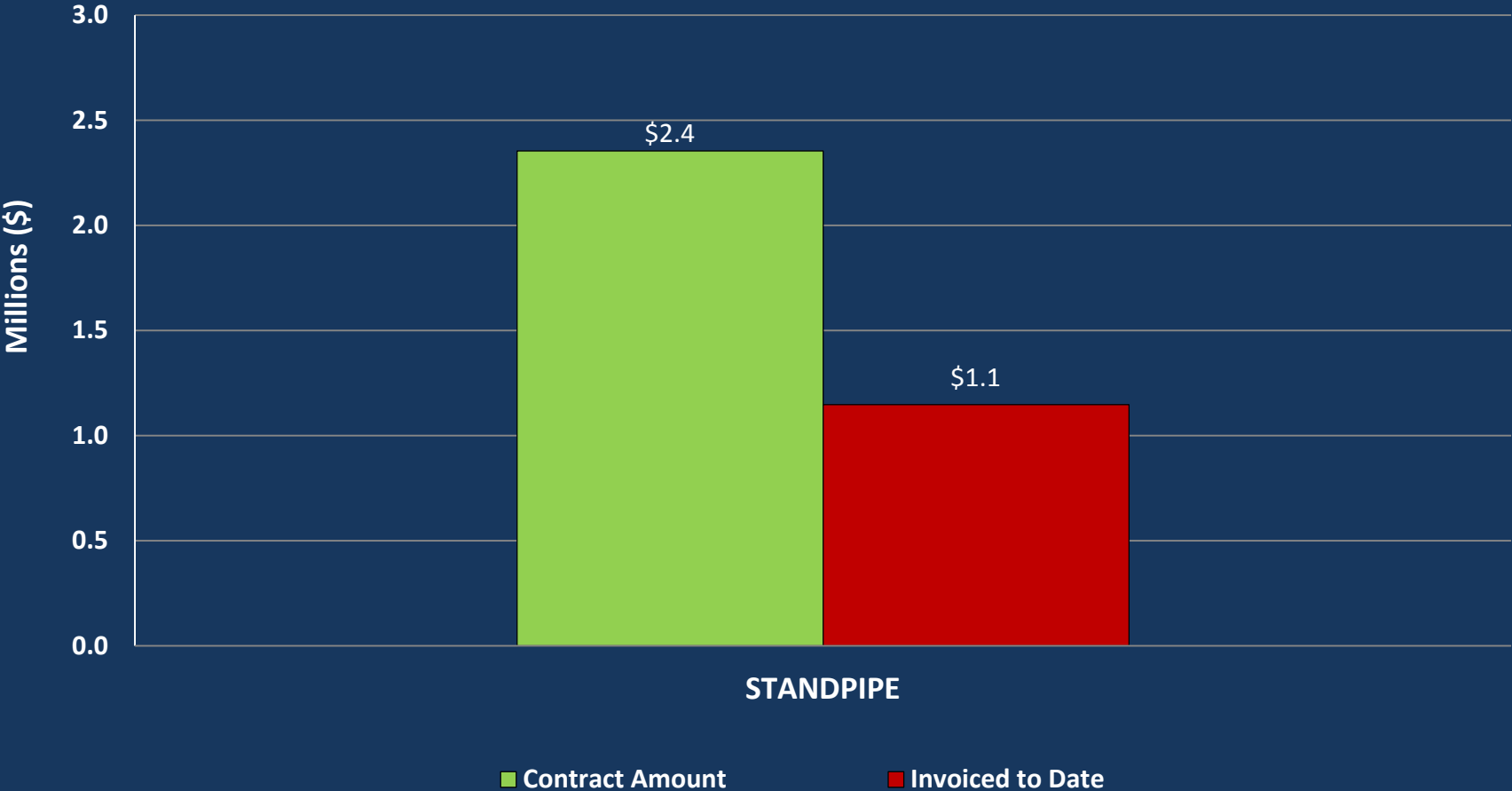


Riser pipe installation at Woodlands Water Plant No. 1

# SURFACE WATER STANDPIPE CONSTRUCTION PROGRESS



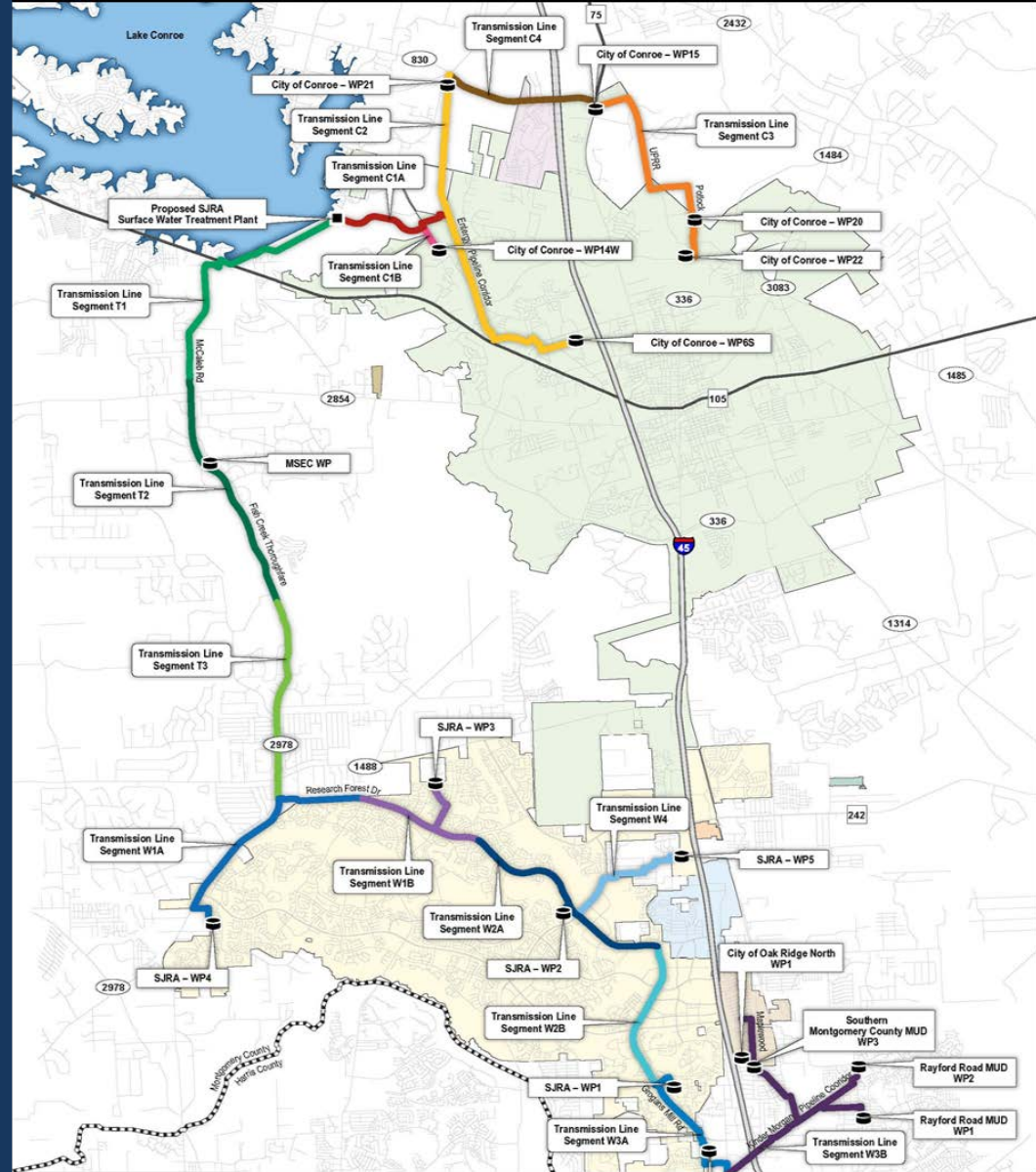
# SURFACE WATER TRANSMISSION SYSTEM STANDPIPE – FINANCIAL DATA



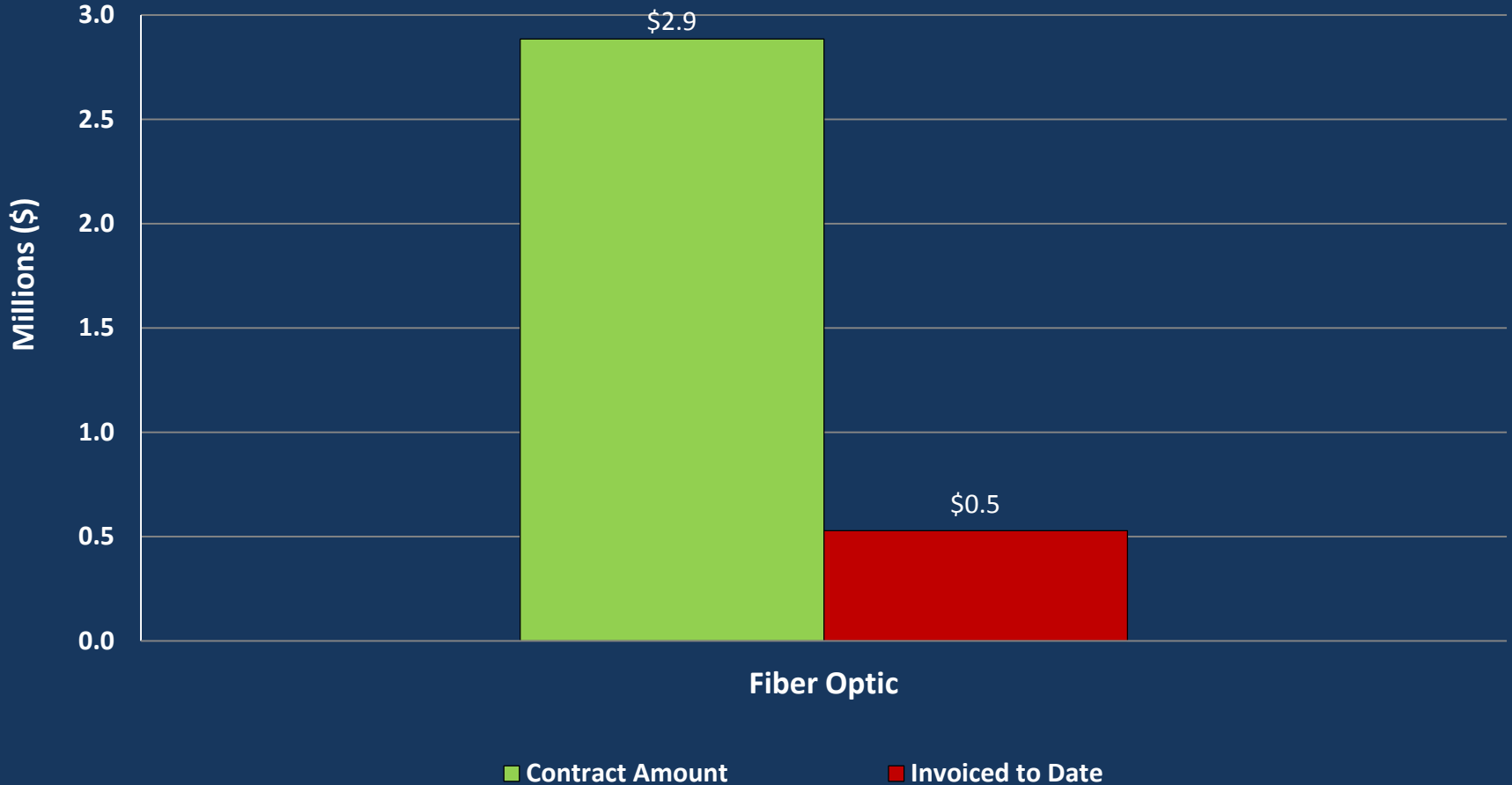


Standpipe tank panel installation

# FIBER OPTIC COMMUNICATION CONSTRUCTION ADMINISTRATION



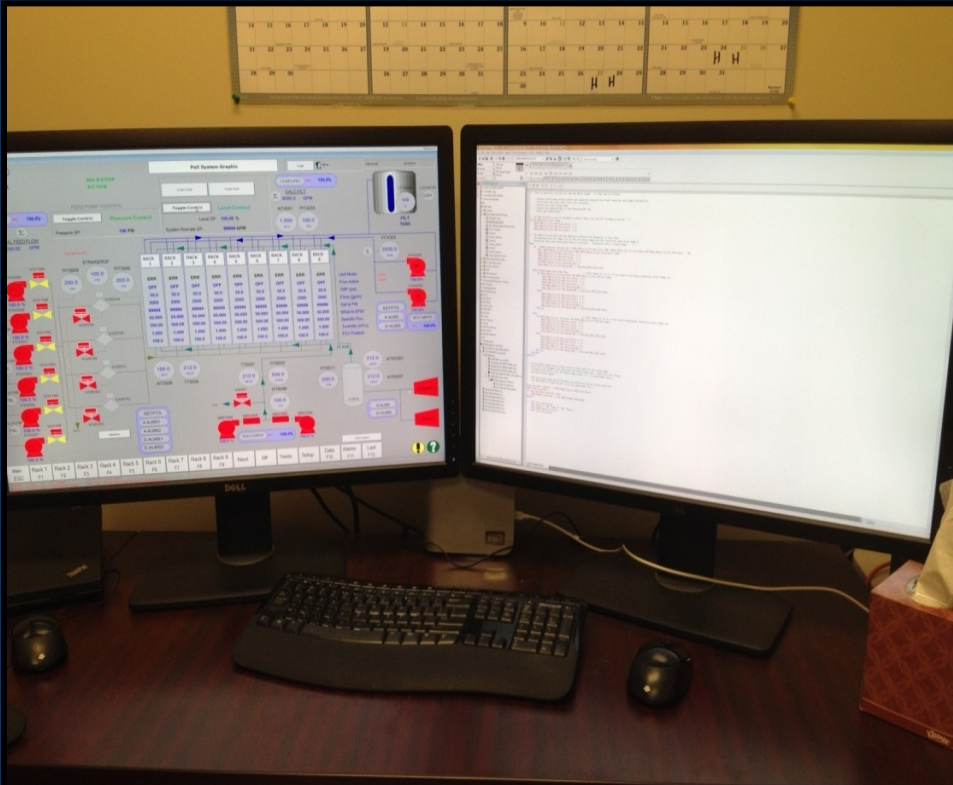
# SURFACE WATER TRANSMISSION SYSTEM FIBER OPTIC— FINANCIAL DATA





Fiber Optic cable stored materials

# SCADA SYSTEM PROGRAMMING AND CONFIGURATION PROGRESS





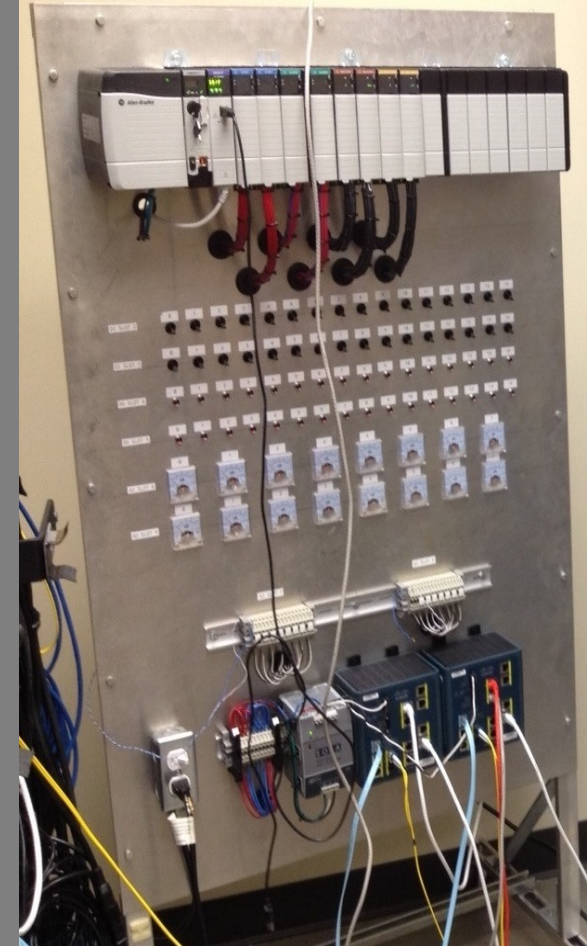
# SCADA SYSTEM PROGRAMMING AND CONFIGURATION PROGRESS

## PLC Programming

- Control Strategies (90%)
- “Soft” I/O Configuration (67%)

## Human-Machine Interface (HMI)

- Templates (100%)
- Graphic Screens (90%)
- I/O Database (90%)
- Alarm Database (90%)
- History Database (90%)
- Reporting (5%)



# Production Servers, PLCs, and Network Set Up Testing (10%)



# SURFACE WATER TRANSMISSION SYSTEM CONSTRUCTION PROGRESS

## QUESTIONS?

