MEMORANDUM

TO: Carl E. Geffken, City Administrator

CC: Jeff Dingman, Deputy City Administrator

FROM: Lance A. McAvoy, Director of Water Utilities

DATE: May 3, 2023

SUBJECT: 2015 Sanitary Sewer Assessment Remedial Measures, Upsizing 6 Inch Sewer Main Project Number 19-26-C1

SUMMARY

On December 02, 2021, the Board of Directors approved the bid of Goodwin & Goodwin, Inc., in the amount of $882,103.00, for the replacement of 6-inch sanitary sewer mains with 8-inch mains (R-197-21). A project summary sheet and presentation are attached for your review.

Work on this project has been completed. The Notice To Proceed was issued on February 22, 2022. The actual project final completion date was April 13, 2023.

A Resolution accepting the project as complete and authorizing final payment to Goodwin & Goodwin, Inc., for $82,696.35, is attached. The funding for this project is through the 2018 Revenue Bonds.

Please contact me should you or members of the Board have any questions or desire additional information.

ATTACHMENTS

1. 19-26-C1_Resolution (1).pdf
2. 19-26-C1 2023.05.16 Presentation.pdf
3. 19-26-C1 2023.05.16 Project Summary.pdf

FISCAL IMPACT: *$82,696.35*
BUDGET INFORMATION: *Budgeted / Water Utilities - 2018 Revenue Bonds*

RESOLUTION NO._____

RESOLUTION ACCEPTING THE PROJECT AS COMPLETE AND AUTHORIZING FINAL PAYMENT TO GOODWIN & GOODWIN, INC., FOR THE 2015 SSA REMEDIAL MEASURES, UPSIZING 6 INCH SEWER MAINS

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE CITY OF FORT SMITH, ARKANSAS, that:

SECTION 1: The construction of 2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains, Project Number 19-26-Construction (C1), is hereby accepted as complete.

SECTION 2: Final payment to Goodwin & Goodwin, Inc., in the amount of $82,696.35, for Project Number 19-26-Construction (C1) is hereby authorized.

This Resolution adopted this _____day of May 2023.

APPROVED:

_____

Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____npr

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1

- Project Cost & Schedule:
  - Construction Contract Amount: $882,103.00
  - Actual Construction Spend: $871,526.00
    - Completed 1.2% Under Original Construction Contract Amount
  - Notice To Proceed: February 22, 2022
  - Contract Time: 270 Days
  - Final Completion Date Allowed By Contract: November 18, 2022
  - Adjusted Final Completion Date Due To Allowed Delays: June 29, 2023
  - Actual Final Completion Date: April 13, 2023
    - Completed 77 Days Less Than Allowed

- Scope of Work:
  - Remediation of approximately 2,450 linear feet of 6-inch sanitary sewer mains with 8-inch mains by conventional open cut and pipe burst methods. The sanitary sewer mains included in this project are located in Sub-Basins P007, S004, and S008.

- Project Information:
  - Design Engineer – Hawkins-Weir Engineers, Inc. ($54,066.51)
  - Construction Contractor – Goodwin & Goodwin, Inc.
  - Inspection Services – In-House, Assisted by Hawkins-Weir Engineers, Inc. ($38,696.99)

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1

- Project Details:
  - The sanitary sewer mains in this project were originally planned to be lined with a Cured In Place Pipe liner and were included in project 20-07 - 2015 SSA Remedial Measures – CIPP. However, it was determined that if a liner were to be installed in a 6-inch pipe that it would be difficult maintain the pipe in the future. Therefore, it was decided to create a new project to remediate the 6-inch sanitary sewer mains by replacing them with 8-inch pipe.

  - Pipe Replaced: 2,469 LF
    - Ductile Iron: 178 LF
    - PVC: 671 LF
    - Pipe Burst (HDPE): 1,620 LF

  - Clean Outs Installed: 33 EA

  - Lateral Service Lines Installed: 173 LF

  - Abandon Manholes: 4 EA

  - Manholes Installed/Replaced: 13 EA

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1

- Justified Delays: 224 Days
    - Weather Related Delays: 71 Days
    - Line 8 (In Front Of Office Depot): 145 Days
        - Rock Excavation Not Shown On Plans: 73 Days
            - Design Called For 50 CY Of Rock Excavation. Actual Amount Was 351 CY.
        - Design For Change In Profile To Limit Rock Excavation: 16 Days
        - Box Culvert Was Found To Be Twice The Width Shown On The Plans. Bored Under It Instead Of Removing And Replacing It: 21 Days
        - Waiting On Street Department To Repair Storm Culvert To Complete Manhole At South S Street And Rogers: 35 Days
    - Scheduling Final Walk-Through: 8 Days

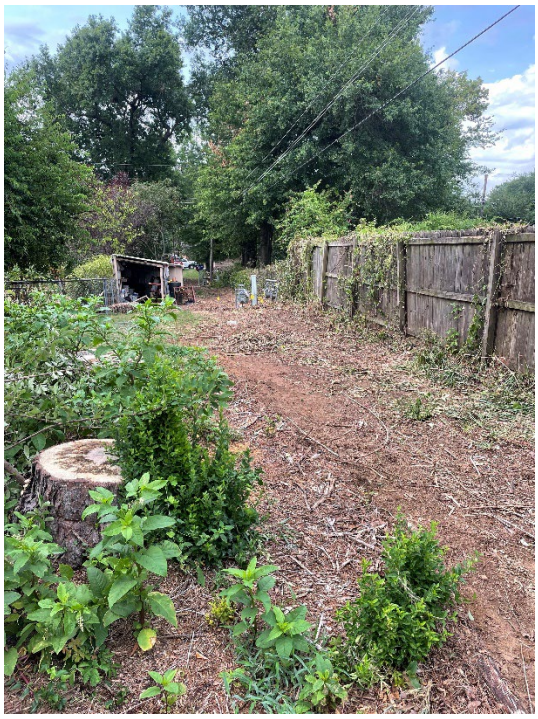
2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1

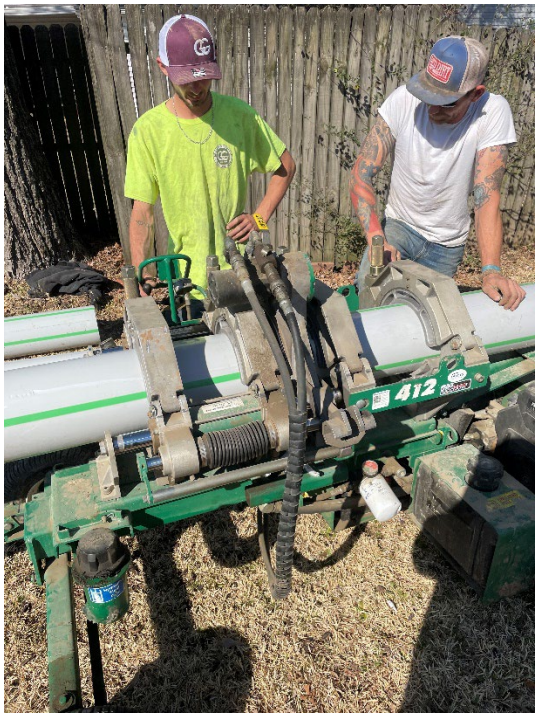
- Challenges:
    - Line 4 – Pipe burst 216 LF of pipe that passed under a concrete lined storm drainage ditch. The existing pipe under the ditch couldn't be burst. Concrete ditch liner had to be removed and replaced. Farther downstream, the new HDPE pipe separated at a weld joint. (Expect that this was due to stress on the joint from trying to pipe burst the pipe under the concrete ditch.) Completed the line segment with a PVC pipe by open cut.
    - Line 5 – Pipe burst two sections of pipe totaling 518 LF. The upstream section of pipe was close to the surface and the pipe bursting operation caused the surface of the ground to heave. This required restoration of the lawn areas and replacement of sections of concrete at three driveways.
    - Line 7 – Pipe burst 211 LF of pipe. A sanitary sewer main was found to connect to the pipe being burst with a Tee connection. This required replacement and realignment of the connecting sewer main to connect at a manhole. This additional work required the removal of four large pine trees.
    - Line 8 – Realignment by open cut 528 LF of three sections of pipe. More rock was found than indicated on the plans. Redesigned the line segment to raise the pipe thereby reducing the amount of rock needing to be removed for the pipe installation. Also, found that the storm water box culvert was wider than shown on the plans. This required the pipe to be bored under the culvert instead of the culvert being removed and replaced. And, when replacing a manhole, found a deteriorated storm water culvert directly adjacent to the manhole. Coordinated with the Street Department to replace the culvert to allow construction of the manhole to be completed.

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1



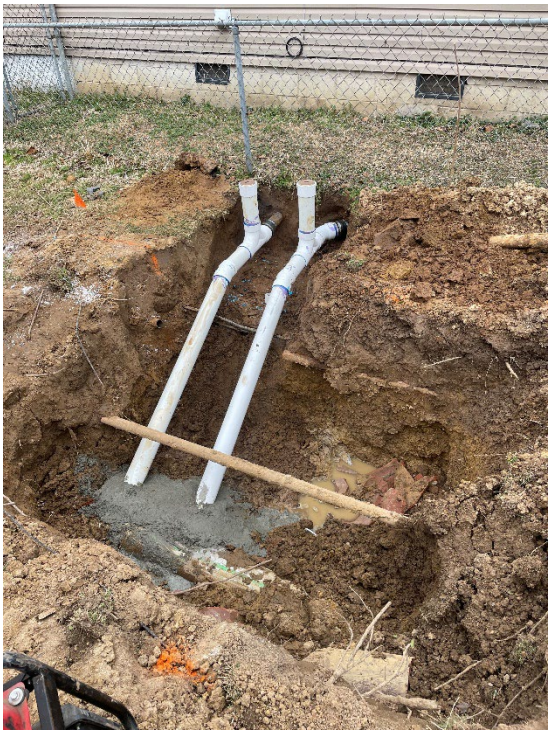
Clearing and Grubbing



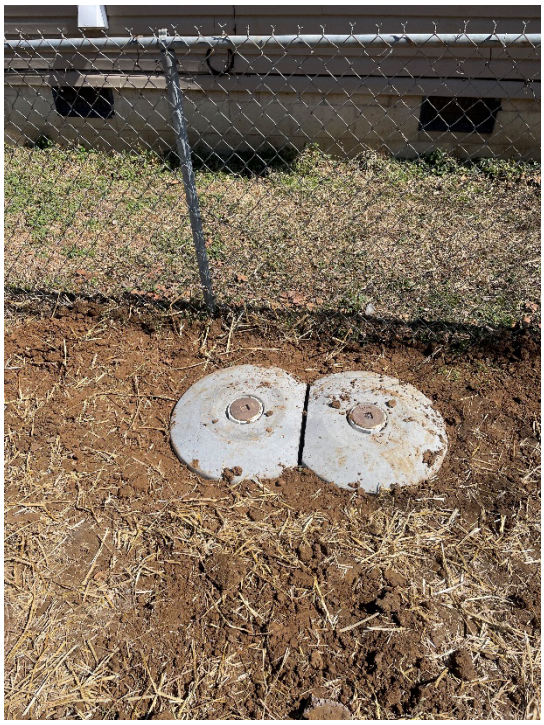
Fusing HDPE Pipe

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1



Lateral Service Lines and Clean Outs

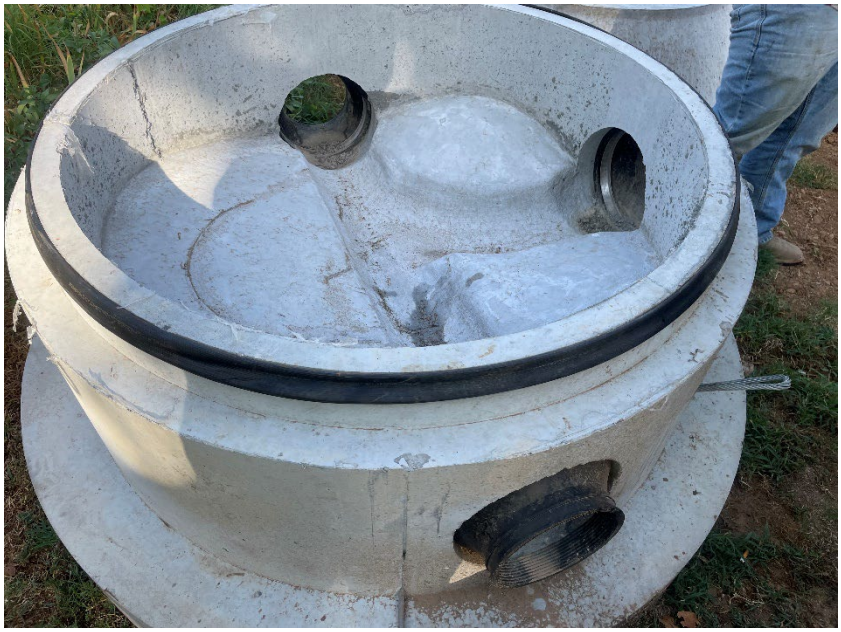


Finished Clean Outs

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1

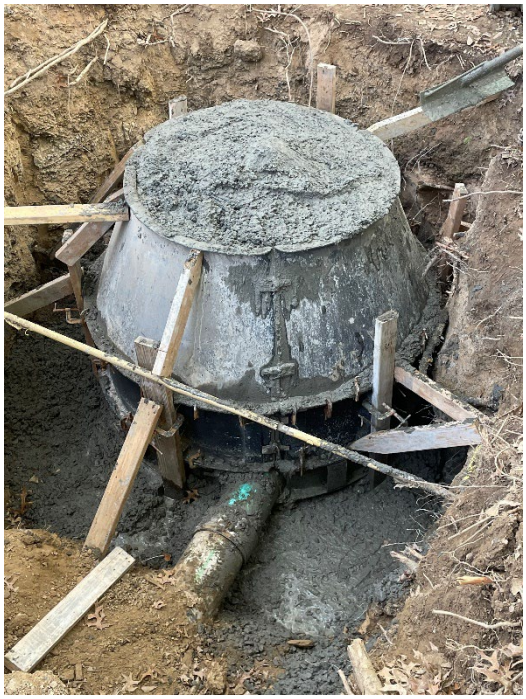
Pipe Coupling



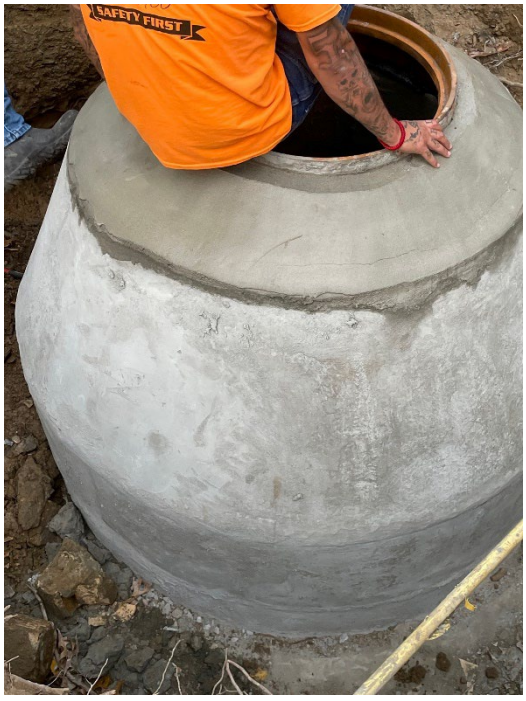
Manhole Base

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1



Formed In Place Manhole



Finishing Formed In Place Manhole

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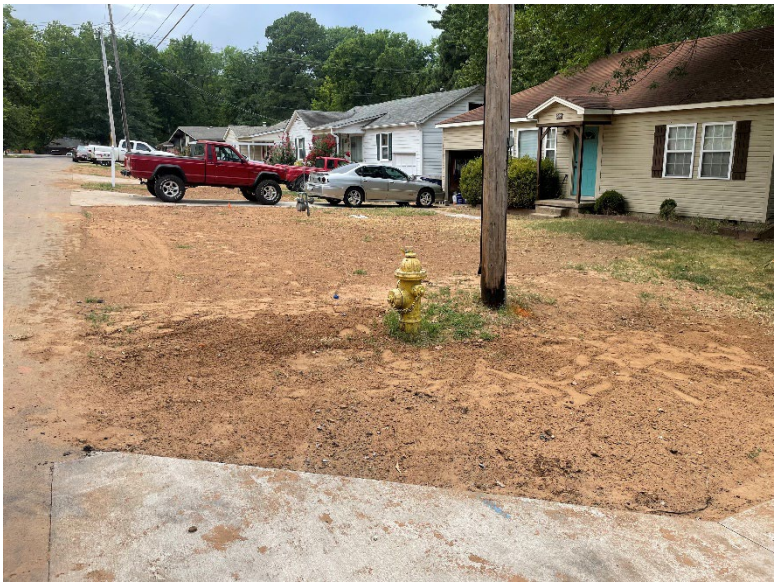
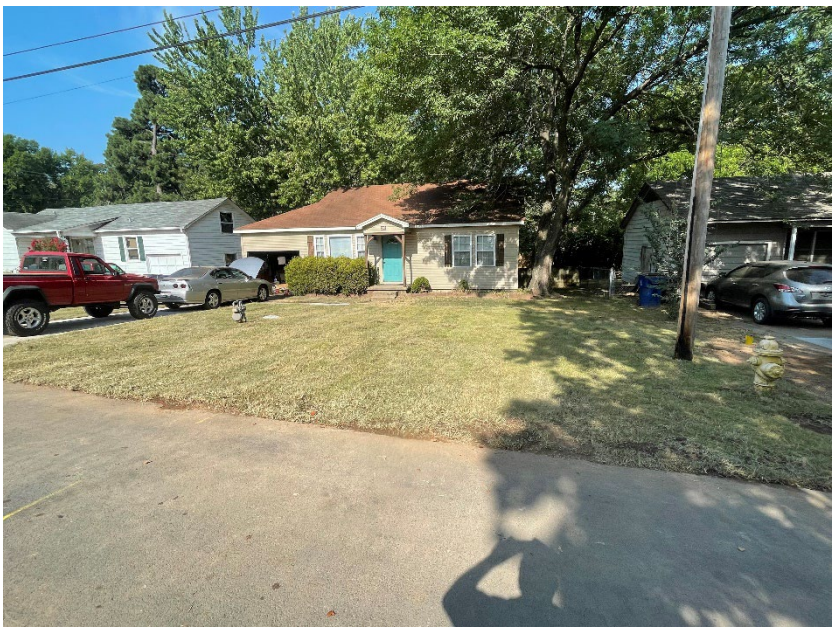
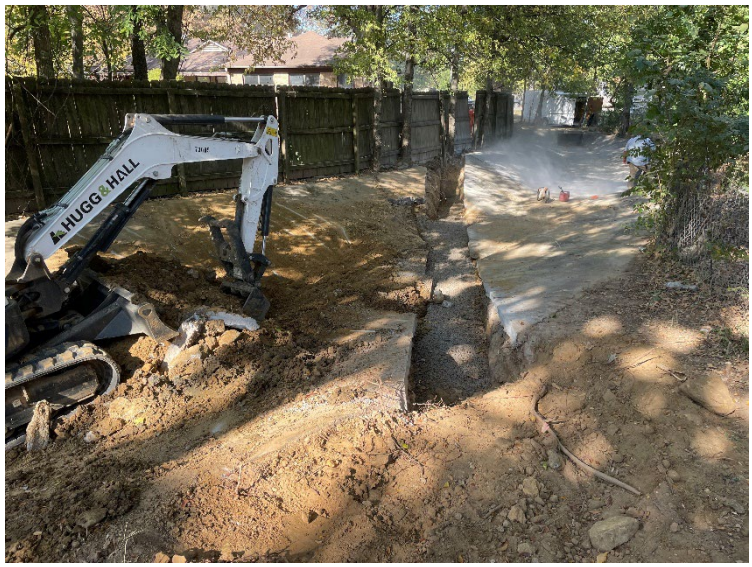


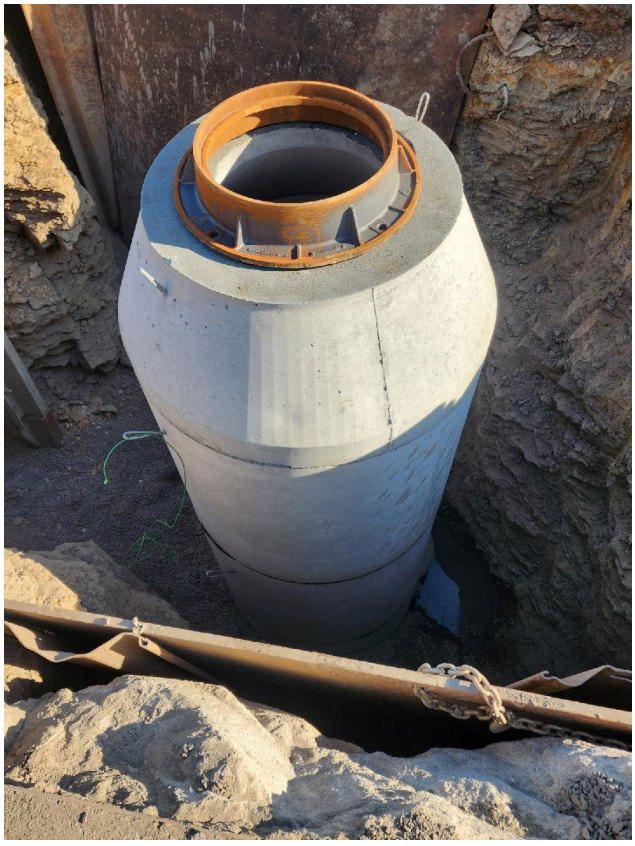
Preparing Surface Restoration



Sod Placed On Surface Restoration



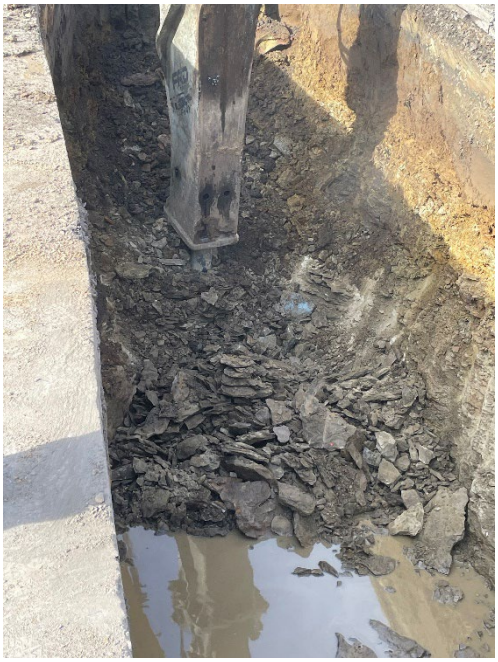
Line 4 – Concrete Lined Storm Drain Cut For Pipe Installation



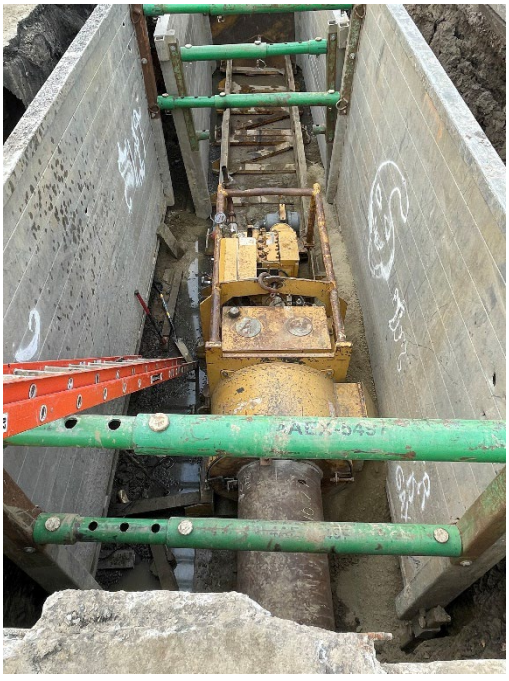
Line 8 – Manhole Installation In Rock

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project No. 19-26-C1



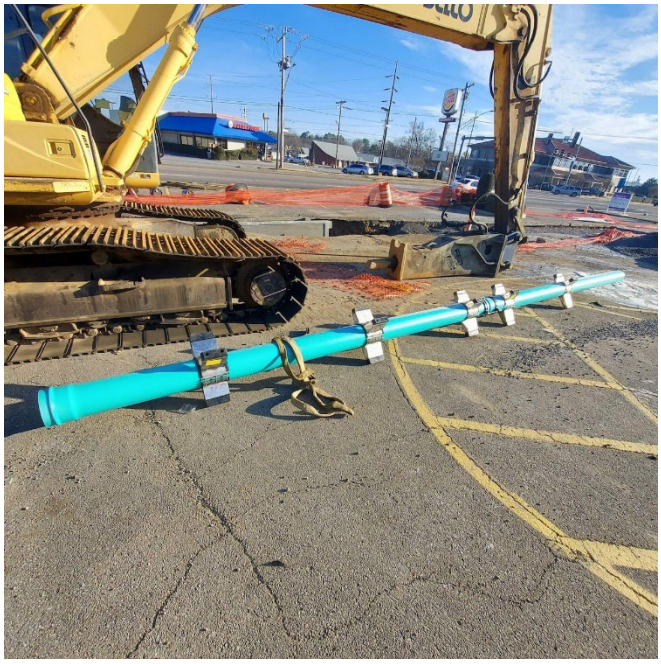
Line 8 – Rock Excavation



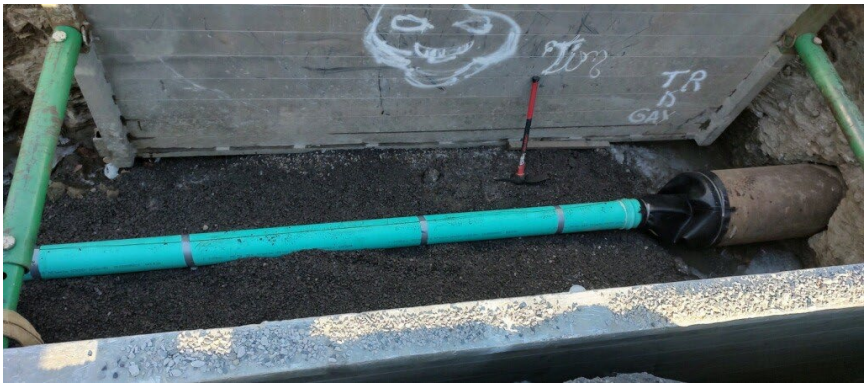
Line 8 – Bore Under Box Culvert

2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

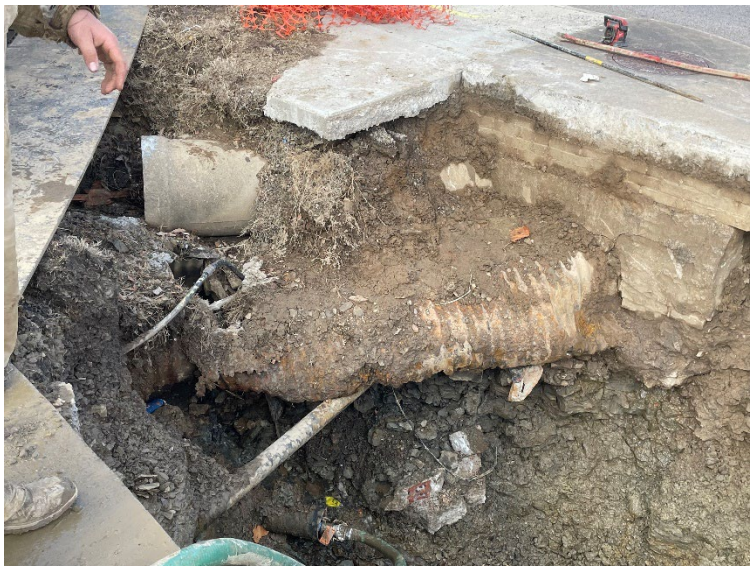
Project No. 19-26-C1



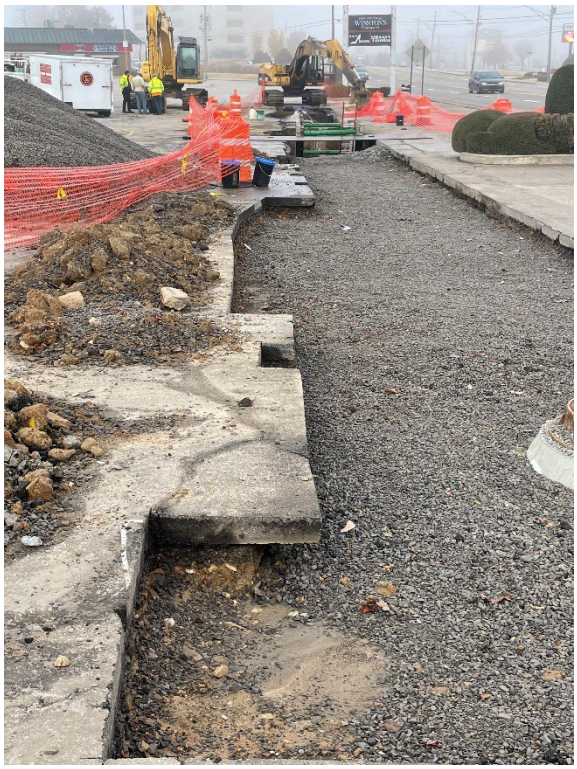
Line 8 – Pipe With Spacers For
Insertion Into Casing Under Box Culvert



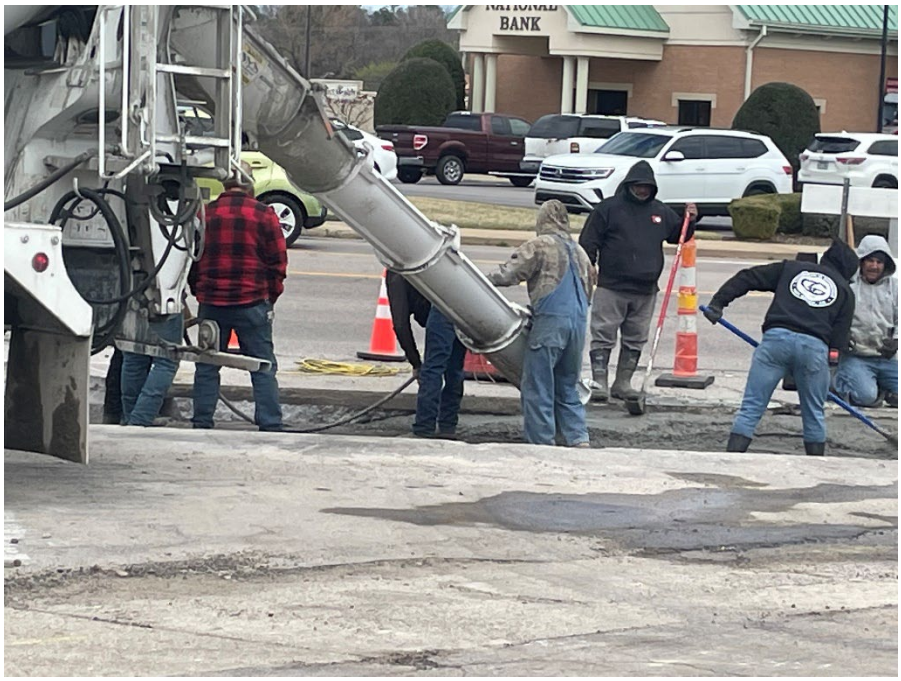
Pipe Under Box Culvert Casing End Seal



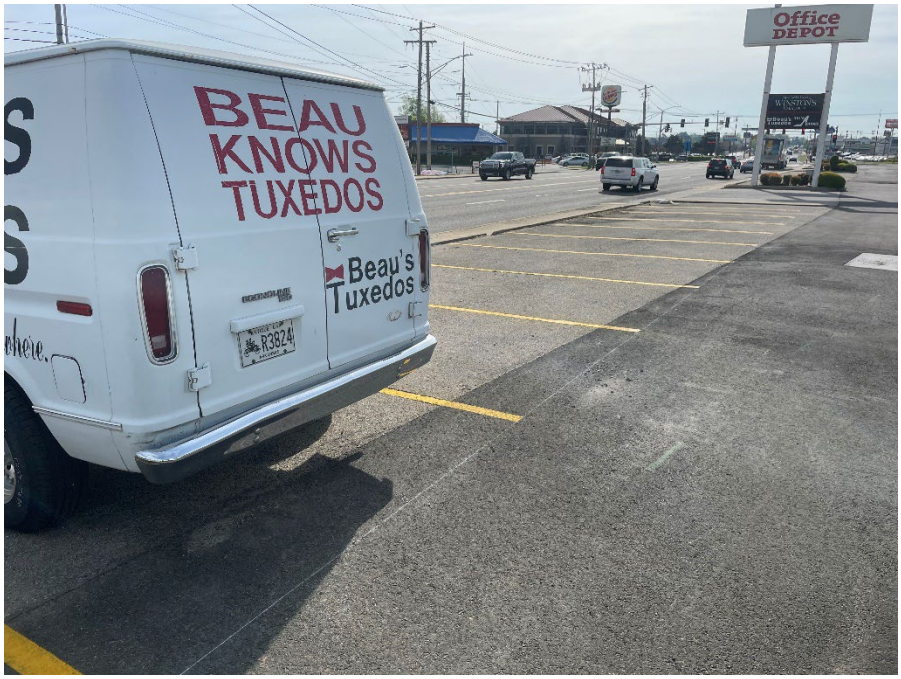
Line 8 – Deteriorated Storm Water Culvert Next To Manhole



Line 8 - Prepping Sub-Base For Asphalt Patch



Line 8 – Placing Base For Asphalt Patch



Line 8 – Asphalt Patch

Project Summary

Project Name:
2015 SSA Remedial Measures, Upsizing 6 Inch Sewer Mains

Project Status:
Complete

Project Number:
19-26-C1

Today's Date:
May 16, 2023

Project Engineer:
Richard Hamrick

Staff Contact Name:
Lance McAvoy

Project Contractor:
Goodwin & Goodwin, Inc.

Staff Contact Phone:
(479) 494-3908

Notice to Proceed Issued:
02/22/2022

Contact Breakdown		
	Dollar Amount	Contract Time (Days)
Original Contract Amount:	$882,103.00	270
Change Order(#1):	-$10,577.00	146
Change Order(#2):		
Total Change Orders:	-$10,577.00	146
Adjusted Contract:	**$871,526.00**	**416**

Contract Payment Breakdown		
	Dollar Amount	
Adujusted Contract Amount	$871,526.00	
Previous Payments	$788,829.65	
Final Payment Amount:	$82,696.35	
Contract Balance Remaining	**$0.00**	

Final Payment Breakdown	
Total Work Installed This Payment	$41,179.00
Retainage Release	$41,517.35
Liquidated Damages	$0.00
Final Payment Amount	**$82,696.35**

Final Comments:
Contract completed 1.2% below original contract amount. Weather related delays and justified construction delays add 224 days to the contract time, allowing 494 days for final completion. However, only 146 days were needed to acheave final completion, for a total contract time of 416 days. The work was completed 77 days less than allowed for final completion.