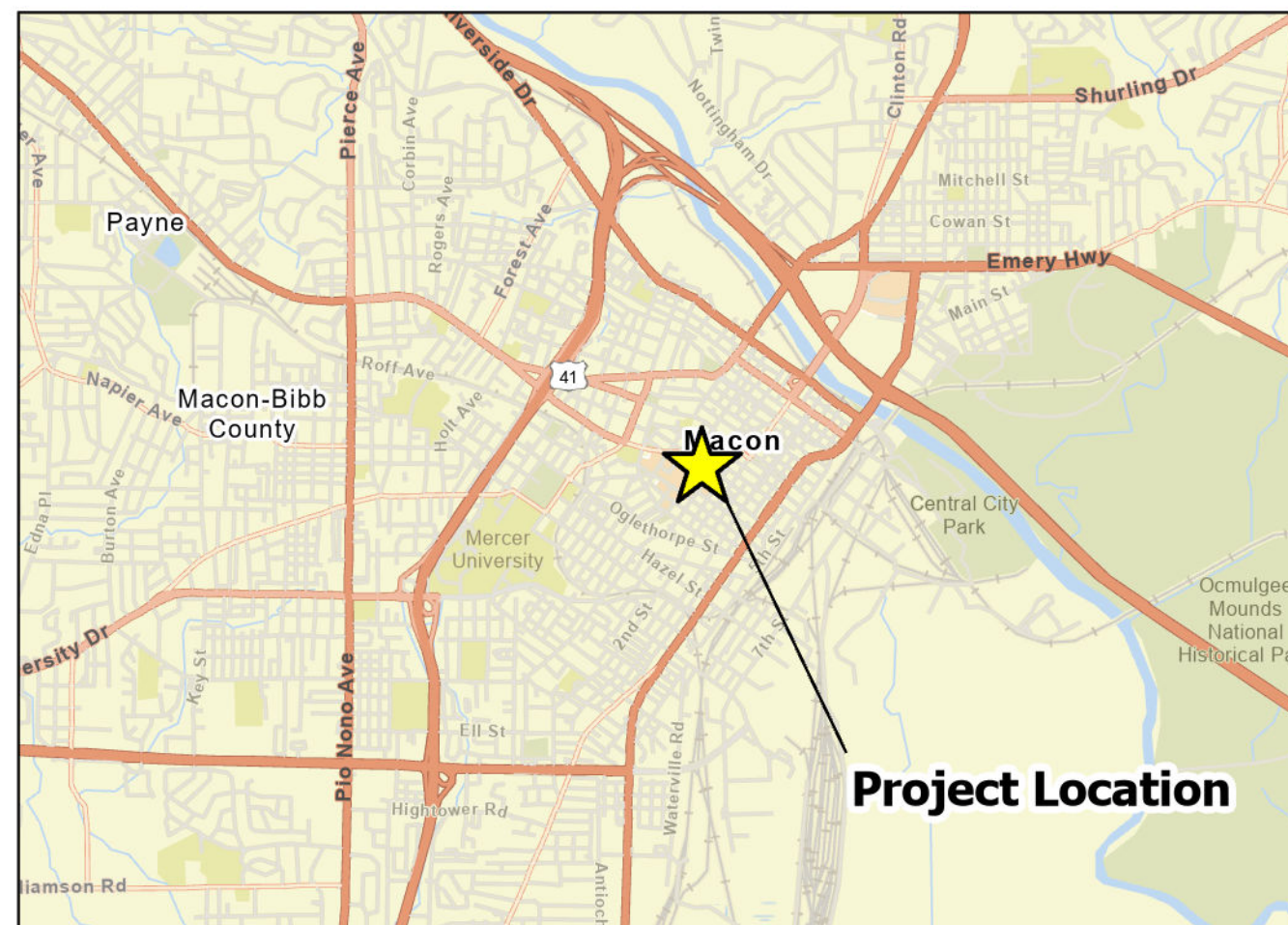


# MACON WATER AUTHORITY

## PLUM STREET LANE STORMWATER PIPE REHABILITATION

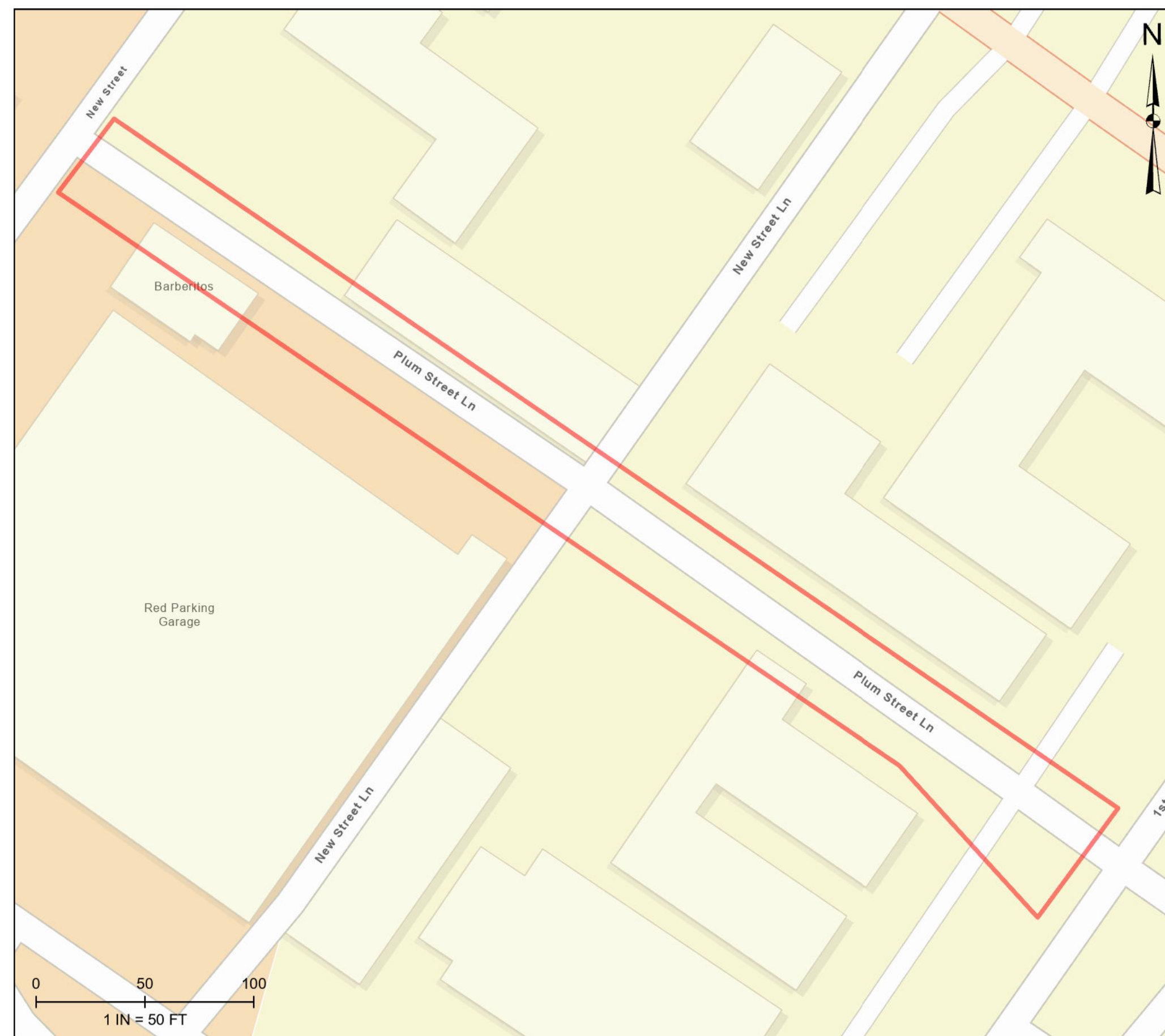


PROJECT VICINITY MAP



NOT TO SCALE

PROJECT AREA MAP



### PROJECT SUMMARY

**EXISTING SITE CONDITIONS:**

THE EXISTING WORK AREA IS A PAVED STREET IN THE CENTRAL BUSINESS DISTRICT ZONED CBD-1.

**COORDINATE ALL TRAFFIC MANAGEMENT PLANS WITH MACON-BIBB ENGINEERING DEPARTMENT.  
(478) 621-6660**

**SCOPE:**

REHABILITATE EXISTING STORMWATER PIPING USING CURE IN PLACE PIPE LINING.

**PROPOSED CONDITIONS:**

FOLLOWING CONSTRUCTION THE SURFACE CONDITIONS WILL BE UNCHANGED. THE STORMWATER PIPE WILL BE RELINED.

### SHEET INDEX

COVER SHEET	G-00
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PIPE INDEX AND KEY MAP	C-00
EXISTING CONDITIONS AND PIPE REHABILITATION PLAN - NEW STREET TO PLUM STREET LANE	C-01
EXISTING CONDITIONS AND PIPE REHABILITATION PLAN - PLUM STREET LANE	C-02
EXISTING CONDITIONS AND PIPE REHABILITATION PLAN - PLUM STREET LANE TO FIRST STREET	C-03

### OWNER

MACON WATER AUTHORITY  
537 HEMLOCK DRIVE  
MACON, GA 31201  
CONTACT: HEATHER VEAL  
PHONE: (478) 464-5642  
EMAIL: HVEAL@MACONWATER.ORG

### ENGINEER

R2T, INC.  
580 W. CROSSVILLE RD, STE 101  
ROSWELL, GA 30075  
CONTACT: ALTARRAL HAGEN, PROJECT MANAGER  
PHONE: (470) 563-7192  
EMAIL: ALTARRAL.HAGEN@R2TINC.COM

# TRAFFIC CONTROL PLAN

Notes for Figure 6P-10—Typical Application 10  
Lane Closure on a Two-Lane Road Using Flaggers

- Option:
- Positive protection devices may be used per Section 6M.02.
  - For low-volume situations with short TTC zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6D).
  - The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short-duration operations.
  - Flashing warning lights and/or flags may be used to call attention to the advance warning signs. A BE PREPARED TO STOP sign may be added to the sign series.
  - Automated Flagger Assistance Devices (see Section 6L.02) may be used in situations where there is only one lane of approaching traffic in the direction to be controlled.
- Guidance:
- The buffer space should be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.
- Standard:
- At night, flagger stations shall be illuminated, except in emergencies.
- Guidance:
- When used, the BE PREPARED TO STOP sign should be located between the Flagger sign and the ONE LANE ROAD sign.
  - When a grade crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the grade crossing, the TTC zone should be extended so that the transition area precedes the grade crossing.
  - When a grade crossing equipped with active warning devices exists within the activity area, provisions should be made for keeping flaggers informed as to the activation status of these warning devices.
  - When a grade crossing exists within the activity area, drivers operating on the left-hand side of the normal center line should be provided with comparable warning devices as for drivers operating on the right-hand side of the normal center line.
  - Early coordination with the railroad company or transit agency should occur before work starts.
- Option:
- A flagger or a uniformed law enforcement officer may be used at the grade crossing to minimize the probability that vehicles are stopped within 15 feet of the grade crossing, measured from both sides of the outside rails.

Notes for Figure 6P-11—Typical Application 11  
Lane Closure on a Two-Lane Road with Low Traffic Volumes

- Option:
- Positive protection devices may be used per Section 6M.02.
  - This TTC zone application may be used as an alternate to the TTC application shown in Figure 6P-10 (using flaggers) when the following conditions exist:
    - Vehicular traffic volume is such that sufficient gaps exist for vehicular traffic that must yield.
    - Road users from both directions are able to see approaching vehicular traffic through and beyond the worksite and have sufficient visibility of approaching vehicles.
  - The Type B flashing warning lights may be placed on the ROAD WORK AHEAD and the ONE LANE ROAD AHEAD signs whenever a night lane closure is necessary.

# GENERAL TRAFFIC CONTROL NOTES

- ALL TRAFFIC CONTROL DEVICES AND METHODS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND MACON-BIBB COUNTY REQUIREMENTS AND STANDARDS.
- WORK INVOLVING LANE CLOSURES MAY BE CONDUCTED AS FOLLOWS:
  - LANE CLOSURES SHALL ONLY BE CONDUCTED BETWEEN THE HOURS OF 9 AM AND 4 PM, MONDAY THROUGH FRIDAY.
  - NO LANE CLOSURES SHALL BE ALLOWED ON HOLIDAYS.
  - ADDITIONAL RESTRICTIONS MAY BE IMPOSED BY THE MACON-BIBB COUNTY PUBLIC WORKS DEPARTMENT BASED ON TRAFFIC CONDITIONS DURING CONSTRUCTION.
- TRAFFIC CONTROL PLANS:
  - TRAFFIC CONTROL PLANS ARE INCLUDED IN THE CONSTRUCTION PLANS FOR THIS PROJECT. HOWEVER, FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THE TRAFFIC CONTROL MEASURES SHOWN.
  - THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL BY THE MACON-BIBB COUNTY ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO COMMENCING WORK AND THE CONTRACTOR SHALL NOT DISRUPT TRAFFIC PATTERNS UNTIL THE OWNER AND MACON-BIBB COUNTY PUBLIC WORKS DEPARTMENT HAVE APPROVED THE CONTRACTOR'S TRAFFIC CONTROL PLAN SUBMITTAL.
  - THE CONTRACTOR'S REVISED TRAFFIC CONTROL PLANS SHALL INCLUDE SITE SPECIFIC TRAFFIC CONTROL DETAILS AND SHALL IDENTIFY THE SEQUENCE OF CONSTRUCTION.
  - THE OWNER AND ENGINEER RESERVE THE RIGHT TO MODIFY THE TRAFFIC CONTROL PLANS AS NECESSARY IN THE INTEREST OF PUBLIC SAFETY OR TRAFFIC EFFICIENCY.
  - PRIOR TO BEGINNING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL TRAFFIC CONTROL DEVICES AND MEASURES COMPLY WITH THE APPROVED TRAFFIC CONTROL PLANS.
- THE CONTRACTOR SHALL CHECK ALL TRAFFIC CONTROL DEVICES AND WORK ZONES BEFORE, DURING, AND AFTER EACH WORK DAY TO ENSURE PROPER OPERATION. ON WEEKENDS, HOLIDAYS, OR ANY NON-WORKING DAYS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE TRAFFIC MAINTENANCE AND CONTROL DEVICES DAILY FOR PROPER OPERATION.
- TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY DEKALB COUNTY DOT. RESIDENT, MAIL AND PARCEL DELIVERY SERVICE, TRASH PICKUP, AND EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES REGARDLESS OF THE LANE AND/OR STREET CLOSURES IN EFFECT.
- ALL LANE CLOSURES SHALL BE REOPENED TO TRAFFIC AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES EACH DAY, UNLESS 24-HOUR CLOSURES HAVE BEEN OTHERWISE APPROVED BY MACON-BIBB COUNTY DOT.
- DURING NON-WORKING HOURS OR DAYS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED OR SECURED AND PROTECTED USING APPROVED SAFETY DEVICES AND MATERIALS.
- WHEN THE USE OF TYPE III BARRICADES IS REQUIRED (DAY OR NIGHT), ALL BARRICADES SHALL BE EQUIPPED WITH TYPE B HIGH INTENSITY FLASHING WARNING LIGHTS.
- ALL CONTRACTOR EMPLOYEES EXPOSED TO VEHICULAR TRAFFIC SHALL BE PROVIDED WITH AND REQUIRED TO WEAR WARNING VESTS MARKED WITH OR MADE OF REFLECTORIZED OR HIGH VISIBILITY MATERIALS.
- FOR CONSTRUCTION OPERATIONS LASTING LONGER THAN 14 CALENDAR DAYS, THE CONTRACTOR SHALL INSTALL "ROAD WORK AHEAD" SIGNS (W21-4, 48" X 48") AND "END ROAD WORK" (G20-2A, 48" X 24") WARNING SIGNS ON 6"x6" WOODEN GROUND MOUNTED POSTS. THESE SIGNS MUST BE INSTALLED PRIOR TO BEGINNING WORK AND SHALL BE REMOVED AFTER COMPLETION OF ALL CONSTRUCTION AND RESTORATION ACTIVITIES.
- FOR ALL APPROVED CONSTRUCTION/TRUCK ENTRANCES, THE CONTRACTOR SHALL INSTALL "TRUCKS ENTERING HIGHWAY" (48" X 48" ORANGE AND BLACK) WARNING SIGNS ON 6"x6" WOODEN GROUND MOUNTED POSTS. THESE SIGNS SHALL BE INSTALLED ± 500 FEET IN ADVANCE OF ALL APPROVED CONSTRUCTION ACCESS/ENTRANCE POINTS.
- ANY TRAFFIC CONTROL DEVICES INCLUDING BUT NOT LIMITED TO PAVEMENT MARKINGS, SIGNS, AND TRAFFIC CONTROL SIGNAL EQUIPMENT AND LOOPS THAT IS DAMAGED OR DESTROYED BY THE CONTRACTOR MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE UNLESS THEIR REMOVAL OR DESTRUCTION IS CALLED FOR BY THE CONTRACT DOCUMENTS.
- DISTURBED STRIPING SHALL BE REPLACED IN LIKE & KIND WITH NEW MATERIALS CONFORMING TO MACON-BIBB COUNTY STANDARDS.
- WHERE EXISTING PAVEMENT MARKINGS AND LINES ARE IN CONFLICT WITH THE TRAFFIC PATTERN BEING USED ON CONSTRUCTION, THE CONTRACTOR SHALL REMOVE OR OVERLAY LINES TO THE SATISFACTION OF THE ENGINEER SUCH THAT THE LINES DO NOT CONFUSE THE TRAVELING PUBLIC. ALL REMAINING LINES OR MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", OR AS DIRECTED BY THE ENGINEER. TRAFFIC SHALL NOT BE ALLOWED ON ANY PAVEMENT NOT PROPERLY STRIPED. ALL TEMPORARY SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION AND/OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DETOUR SIGNAGE MAY BE REQUIRED IN ORDER TO CONFORM TO THE MUTCD.
- PEDESTRIAN AND LOCAL VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SAFETY DEVICES AND FLAG-MEN SHALL BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE. WRITTEN PERMISSION TO CLOSE THE CONSTRUCTION AREA TO TRAFFIC MUST BE OBTAINED FROM MACON-BIBB COUNTY DOT PRIOR TO THE CLOSING. ALL LOCAL EMERGENCY SERVICES SHALL BE NOTIFIED IN WRITING A MINIMUM OF 72 HOURS PRIOR TO ROAD CLOSINGS.
- DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY TRAFFIC CONTROL MEASURES TO ENSURE SAFETY AT ALL TIMES FOR EMPLOYEES, RESIDENTS, AND MOTORISTS, IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", ANSI D6.1, LATEST REVISION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL MACON-BIBB COUNTY DOT REQUIREMENTS.
- FOR ANY FURTHER INFORMATION REGARDING TRAFFIC MAINTENANCE AND CONTROL REQUIREMENTS, CONTACT MACON-BIBB COUNTY DOT AT 478-621-6660.
- CONTRACTOR SHALL ADHERE TO THE FEDERAL, STATE, COUNTY, AND LOCAL LAWS, ORDINANCES, AND REGULATIONS THAT IN ANY MANNER AFFECT THE CONDUCT OF WORK, INCLUDING, BUT NOT LIMITED TO, INITIATING, MAINTAINING, AND SUPERVISING THE SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

0 0.5 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

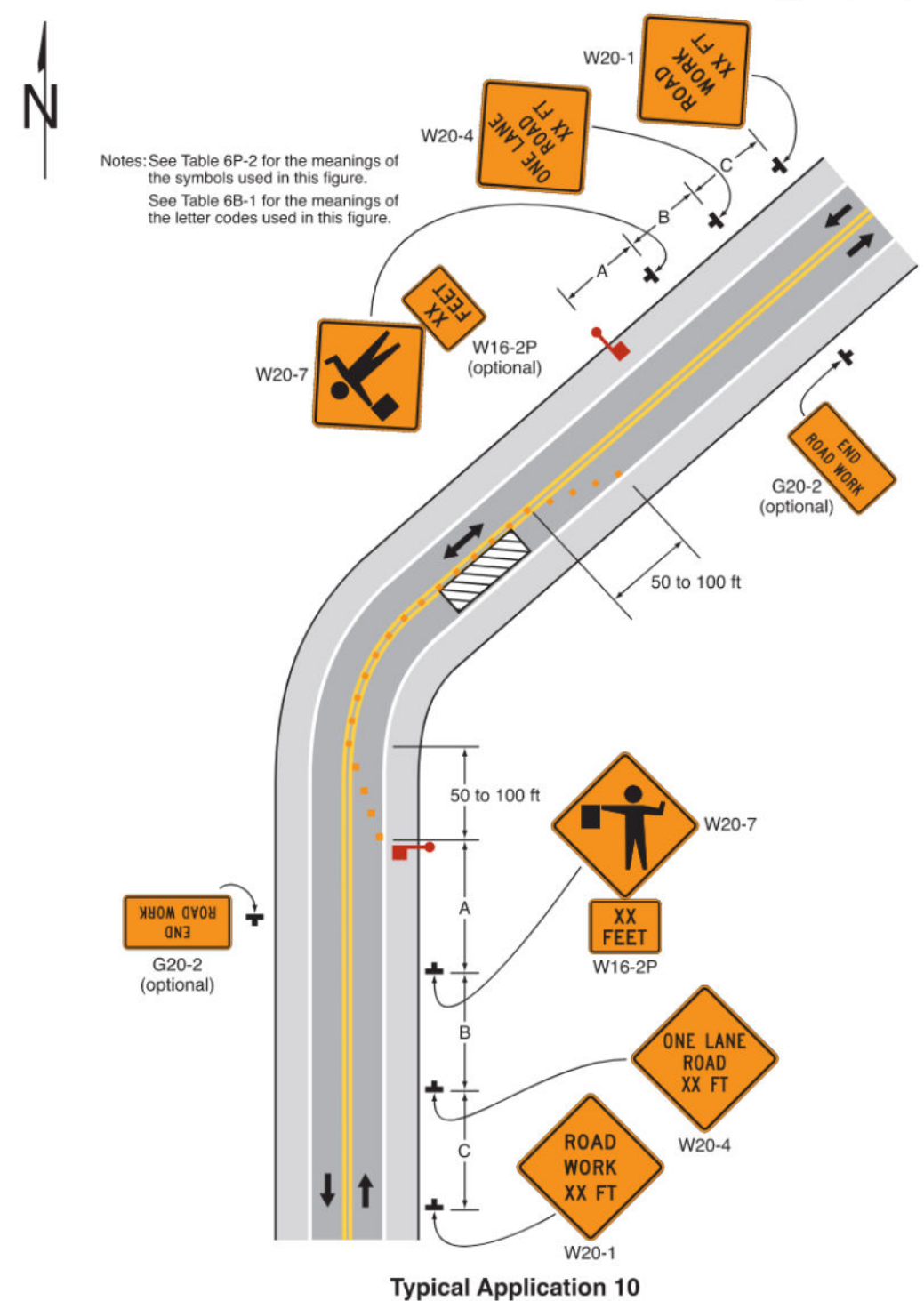


GEORGIA COA

FIRM: R2T  
LICENSE NO.: PEF004653  
EXPIRATION DATE: 6/30/2025

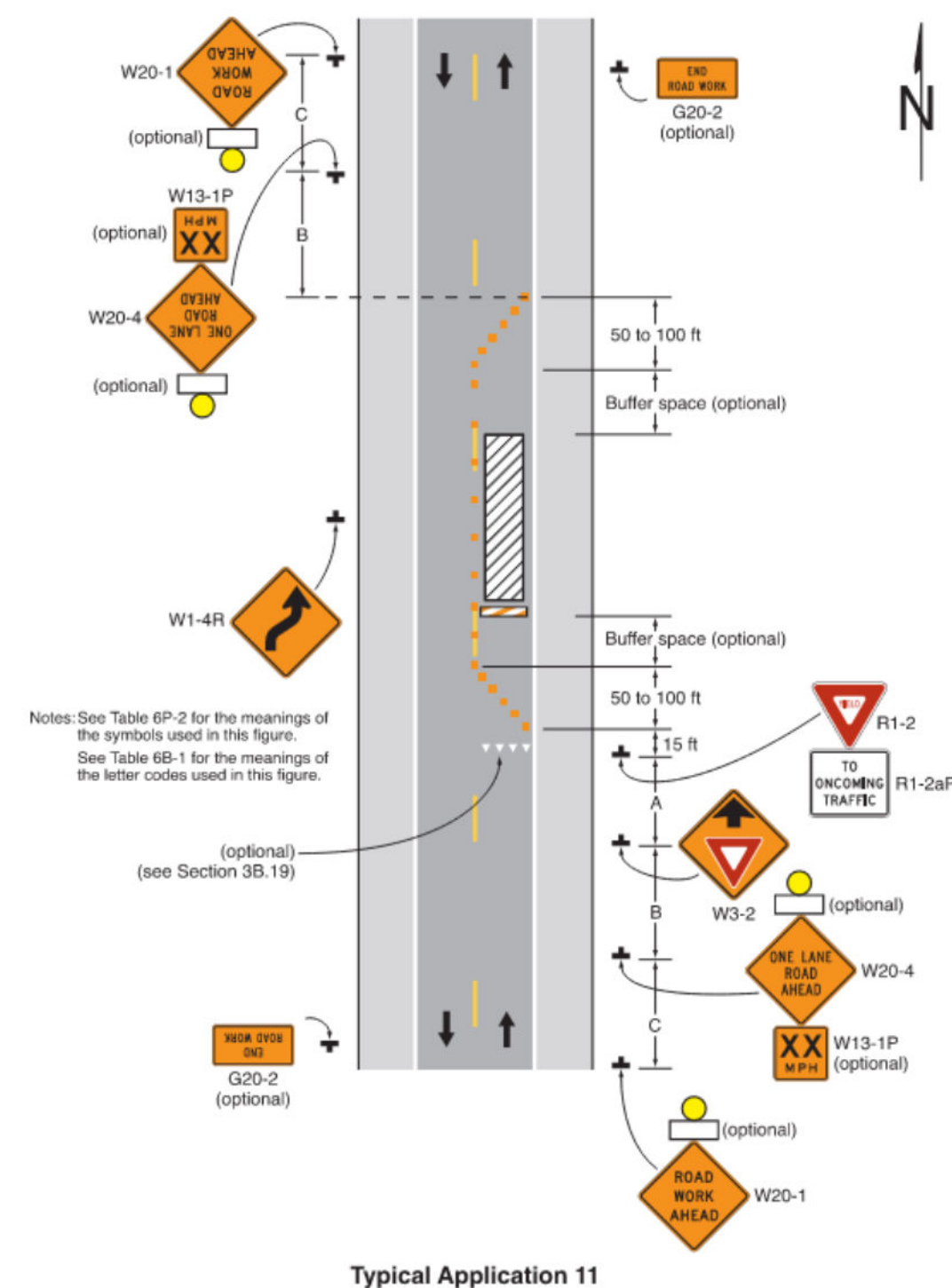
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Figure 6P-10. Lane Closure on a Two-Lane Road Using Flaggers (TA-10)



Typical Application 10

Figure 6P-11. Lane Closure on a Two-Lane Road with Low Traffic Volumes (TA-11)



Typical Application 11

ISSUED FOR CONSTRUCTION	REVISIONS AND RECORD OF USE				
	NO.	DATE	BY	DESCRIPTION	DATE
01/23/25					

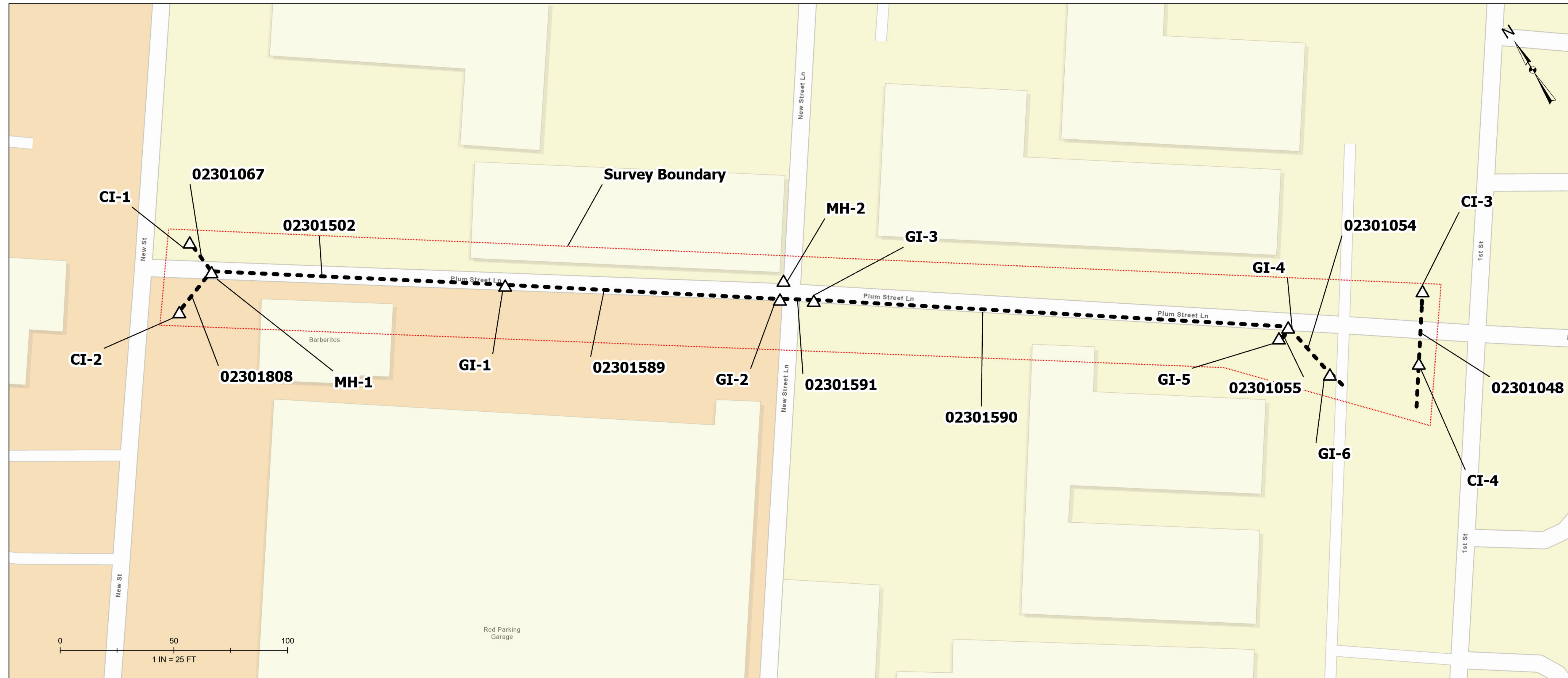
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CHECKED: SS  
APPROVED: AH  
DATE: 01/23/2025

TRAFFIC CONTROL PLANS  
REHABILITATION PLAN  
PLUM STREET LANE

**G-01**  
SHEET  
1 OF 5

# EXISTING DRAINAGE INFRASTRUCTURE CONDITIONS PLAN PLUM STREET LANE

PIPE SURVEY KEY MAP



SUMMARY TABLE OF PIPE TO BE RELINED

Pipe ID	Size (Inches)	Length (Feet)	Material	Upstream Structure	Downstream Structure	Number of Defects	Rehabilitation Recommendation
2301808	15	22	RCP	Curb Inlet 2	Manhole 1	3	Lining Via CIPP
2301502	15	16	RCP	Curb Inlet 1	Manhole 1	2	Lining Via CIPP
2301067	18	125	RCP	Manhole 1	Grate Inlet 1	7	Lining Via CIPP
2301589	18	120	RCP	Grate Inlet 1	Grate Inlet 2	6	Lining Via CIPP
2301591	18	15	RCP	Grate Inlet 2	Grate Inlet 3	1	Lining Via CIPP
2301590	18	215	RCP	Grate Inlet 3	Grate Inlet 4	12	Lining Via CIPP
2301055	18	6	RCP	Grate Inlet 4	Grate Inlet 5	N/A	Lining Via CIPP
2301054	18	28	RCP	Grate Inlet 4	Grate Inlet 6	1	Lining Via CIPP
2301048	12	30	RCP	Curb Inlet 4	Curb Inlet 3	2	Lining Via CIPP

RELEVANT NASSCO PIPELINE ASSESSMENT  
CERTIFICATION PROGRAM (PACP) CODING

Code	Description
CL	Crack Longitudinal
CM	Crack Multiple
B	Broken
TSB	Tap Saddle Abandoned
TSI	Tap Saddle Intruding
RPP	Point Repair Patch
SRC	Surface Damage Reinforcement Corroded

0 0.5 1

IF THIS BAR DOES NOT  
MEASURE 1" THEN DRAWING  
IS NOT TO FULL SCALE



GEORGIA COA

FIRM: R2T  
LICENSE NO.: PEF004653  
EXPIRATION DATE: 6/30/2025

STAMP

ISSUED FOR CONSTRUCTION

REVISIONS AND RECORD OF USE

DATE

DESIGNED: TH  
CHECKED: SS  
APPROVED: AH  
DATE: 01/23/2025

EXISTING DRAINAGE  
INFRASTRUCTURE CONDITIONS  
AND PROPOSED  
REHABILITATION PLAN  
PLUM STREET LANE

**C-00**

SHEET  
2 OF 5



X Point Defects  
 OOOO Pipe to be Relined  
 XXXXX Line Defects  
 Sewer Gravity Main  
 Structures  
 Water Main  
 0 30  
 1 Inch = 7.5 feet

0 0.5 1  
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



GEORGIA COA  
 FIRM: R2T  
 LICENSE NO.: PEF004653  
 EXPIRATION DATE: 6/30/2025

STAMP

ISSUED FOR CONSTRUCTION	REVISIONS AND RECORD OF USE			
	NO.	DATE	DESCRIPTION	BY
01/23/25				

DESIGNED: TH  
 CHECKED: SS  
 APPROVED: AH  
 DATE: 01/23/2025

EXISTING DRAINAGE INFRASTRUCTURE CONDITIONS AND PROPOSED REHABILITATION PLAN PLUM STREET LANE

**C-01**  
 SHEET  
 3 OF 5



**PIPE ID: 02301502**  
**15" RCP**  
**CIPP REHAB**  
**RELIN 16 LF**  
**CURB INLET 1**  
**MANHOLE 1**  
 CODE: CL  
 NOTES: Crack Longitudinal at 12 from 0' to 5'  
 CODE: CL  
 NOTES: Crack Longitudinal at 3 at 25'

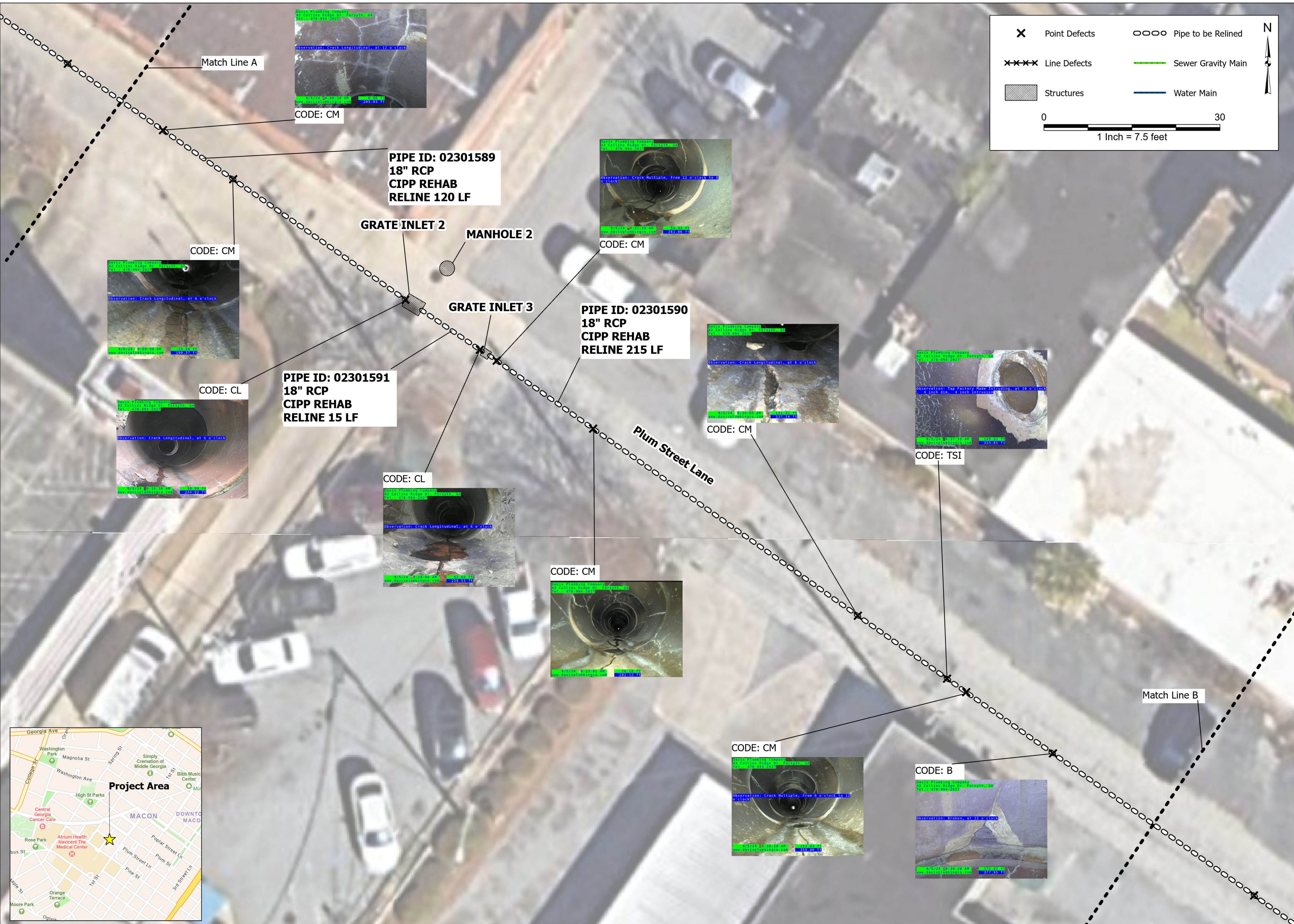
**PIPE ID: 02301808**  
**15" RCP**  
**CIPP REHAB**  
**RELIN 22 LF**  
**CURB INLET 2**  
 CODE: CL  
 NOTES: Multiple CL at 0', 1.4', 4'  
 CODE: TSB  
 NOTES: Tee at 35' that doesn't appear on as-builts  
 CODE: CL  
 NOTES: 45' to 58'

CODE: CL  
 NOTES: Crack Longitudinal at 9 at Joint at 20'  
**PIPE ID: 02301067**  
**18" RCP**  
**CIPP REHAB**  
**RELIN 125 LF**  
 CODE: SRC

CODE: SRC  
 CODE: CM  
 CODE: CM

**PIPE ID: 02301589**  
**18" RCP**  
**CIPP REHAB**  
**RELIN 120 LF**  
**GRATE INLET 1**  
 CODE: TSI  
 NOTES: Concrete Pipe 15" Intrusion

Match Line A



X Point Defects      ○○○○ Pipe to be Relined  
 ×××× Line Defects      — Sewer Gravity Main  
 Structures      — Water Main  
 0 30  
 1 Inch = 7.5 feet

0 0.5 1  
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



GEORGIA COA  
 FIRM: R2T  
 LICENSE NO.: PEF004653  
 EXPIRATION DATE: 6/30/2025

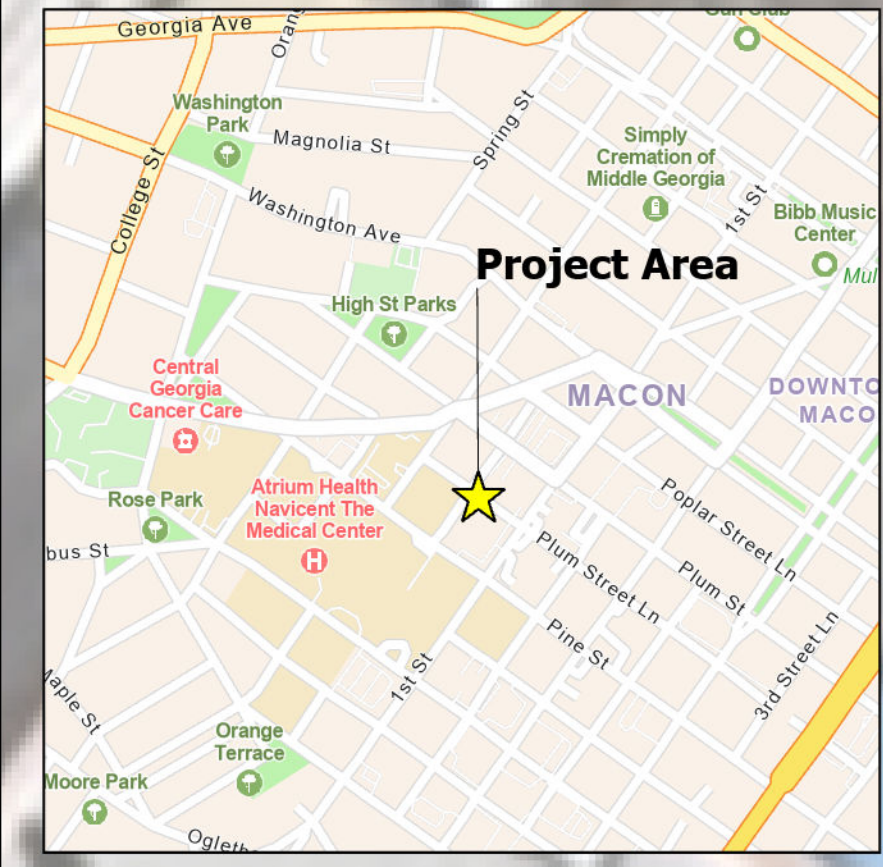
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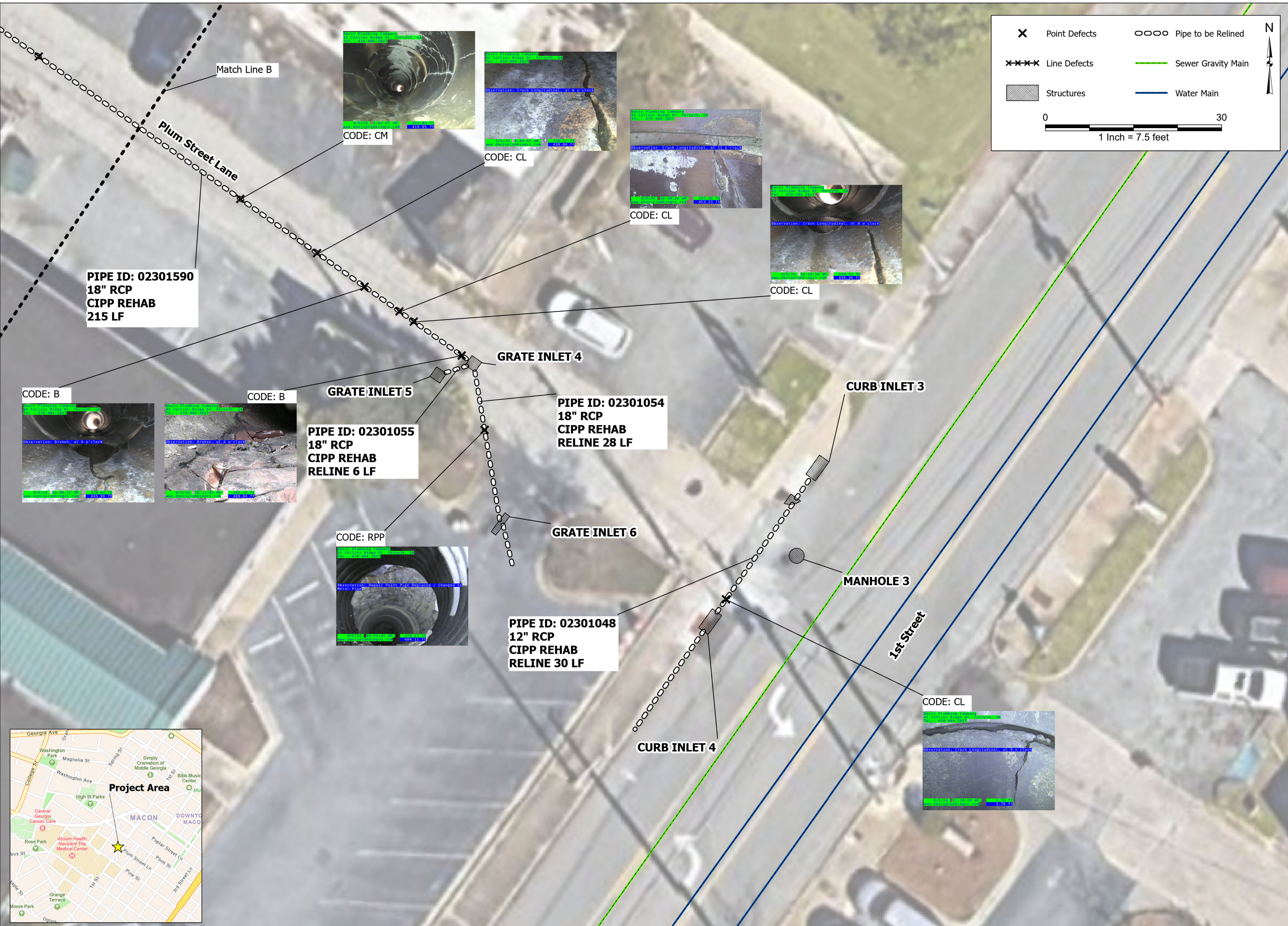
ISSUED FOR CONSTRUCTION	REVISIONS AND RECORD OF USE	DATE
01/23/25		

DESIGNED: TH  
 CHECKED: SS  
 APPROVED: AH  
 DATE: 01/23/2025

EXISTING DRAINAGE  
 INFRASTRUCTURE CONDITIONS  
 AND PROPOSED  
 REHABILITATION PLAN  
 PLUM STREET LANE

**C-02**  
 SHEET  
 4 OF 5





X Point Defects      OOOO Pipe to be Relined  
 XXXX Line Defects      Sewer Gravity Main  
 Structures      Water Main  
 0 30  
 1 Inch = 7.5 feet

0 0.5 1  
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



GEORGIA COA  
 FIRM: R2T  
 LICENSE NO.: PEF004653  
 EXPIRATION DATE: 6/30/2025

STAMP

ISSUED FOR CONSTRUCTION	REVISIONS AND RECORD OF USE	DATE
01/23/25		

DESIGNED: TH  
 CHECKED: SS  
 APPROVED: AH  
 DATE: 01/23/2025

EXISTING DRAINAGE  
 INFRASTRUCTURE CONDITIONS  
 AND PROPOSED  
 REHABILITATION PLAN  
 PLUM STREET LANE

