CITY OF LENOIR

COUNCIL ACTION FORM

I. Agenda Item: Consideration to approve the Service Line Material Field Inspections to Support the Lead and Copper Rule Improvements (LCRI) Service Line Inventory Development Proposal from McKim & Creed

Background Information: The City received 100% principal forgiveness funding in the amount of $1,000,000 through the Division of Water Infrastructure for the LCRI Service Line Inventory project. Staff received formal proposals for Service Line Material Field Inspections to support the LCRI inventory development at 2:00 PM in the Public Utilities Director's office on Thursday, April 9,2026. Proposals were received by three firms and were ranked on the basis of:

Firms	Ranking	Ranking Criteria
KCI Associates of NC, PA	8.75	50%: Price
LJA Environmental Services	9.25	25%: Prior Experience
McKim & Creed	9.50	25%: Project Scheduling

After staff review, and a recommendation letter from Freese and Nichols, McKim and Creed received the highest ranking. Their proposal is within the budget documented in the SK SRF-D-LSL-017 Funding Scope of Work that was submitted to NCDEQ in November of 2025.

II. Staff Recommendation: Staff recommends City Council approve the firm of McKim & Creed to perform the service line material field inspections project, as presented.

III. Reviewed by:

City Attorney: _____

Finance Director: _____

Public Works/Public Utilities Director: Jeff Church

FREESE AND NICHOLS

Innovative approaches
Practical results
Outstanding service

1017 Main Campus Drive, Suite 1200 + Raleigh, North Carolina 27606 + 919-582-5850 + FAX 817-735-7491 www.freese.com

April 20, 2026

Jeff Church
Public Services Public Utilities Director
City of Lenoir

Dear Dr. Jeff Church,

FNI recommends the City of Lenoir contract with McKim & Creed (MKC) to complete the Scope for Service Line Material Field Inspections to Support the Lead and Copper Rule Improvements (LCRI) Service Line Inventory Development. MKC's reference (City of Durham) provided positive feedback on MKC's performance and commitment to quality. MKC's cost proposal is within the budget documented in the SL SRF-D-LSL-017 Funding Scope of Work (submitted to NCDEQ Nov. 2025). FNI looks forward to working with City of Lenoir and MKC on completing field inspections to support LCRI compliance.

Sincerely,

Isabella Stubbs, PE
Project Manager

CC:
Brian White, PE
Koby Boman, PE
Radha Jagwani, EIT



Requests for Proposal for

SERVICE LINE MATERIAL FIELD INSPECTIONS

PRINTED

SUBMITTED TO:

CITY OF LENOIR
510B Greer Circle SW
Lenoir, NC 28645
828.957.2200

APRIL 9, 2026

SUBMITTED BY:

MCKIM & CREED, INC.
Charlotte, NC
704.841.2588 | mckimcreed.com

McKIM&CREED
ENGINEERS SURVEYORS PLANNERS



April 9, 2026

Dr. Jeff Church
Public Utilities Director
City of Lenoir
510B Greer Circle SW
Lenoir, NC 28645

RE: City of Lenoir – SERVICE LINE MATERIAL FIELD INSPECTIONS TO SUPPORT THE LEAD AND COPPER RULE IMPROVEMENTS (LCRI) SERVICE LINE INVENTORY DEVELOPMENT

Dear Dr. Church:

McKim & Creed, Inc. is pleased to present its qualifications for the Service Line Material Field Inspections to Support Lead and Copper Rule Improvements contract for City of Lenoir (the City). Verifying water service line materials is essential for safeguarding public health, ensuring regulatory compliance, and advancing environmental equity throughout the City.

McKim & Creed brings a proven record of delivering Lead Service Line Inventory (LSLI) and field verification projects across North Carolina. With experience on more than 1,000 municipal projects over the past 20 years, the firm understands the operational constraints municipalities face and the critical importance of accurate service line verification. **This capability is demonstrated by the City of Durham project, where McKim & Creed executed 1,500 lines in six months under a strict, penalty-backed deadline while maintaining schedule compliance and minimizing impacts to the public and stakeholders.**

McKim & Creed has helped procure Lead Service Line Replacement (LSLR) funding from the North Carolina Division of Water Infrastructure (NCDWI) for multiple North Carolina municipalities. Our team can mobilize quickly to develop funding applications and is well-versed in the subsequent administrative tasks after notice of intent to fund. Our Lead and Copper Rule technical advisors stay up-to-date on the evolving legislation and can help the City navigate the various compliance requirements and deadlines of the Lead and Copper Rule Improvements (LCRI).

SAFETY FIRST / For this project, McKim & Creed will ensure public safety by using advanced technology such as vacuum excavation for precise, minimally invasive field investigations. This approach minimizes environmental disruption and exposure risks while maintaining strict adherence to regulatory standards.

COMMUNICATION BUILDS TRUST / The team prioritizes effective communication with stakeholders, employing public meetings, informational door hangers, and direct outreach to keep residents informed and engaged throughout the process.

LOCAL KNOWLEDGE BACKED BY LARGE FIRM RESOURCES / With four decades of Subsurface Utility Engineering (SUE) experience in North Carolina, McKim & Creed offers local knowledge backed by large-firm resources. The Charlotte office will support this project. We offer all SUE levels, including Quality Levels A-D. In addition to SUE, McKim & Creed offers data collection, utility inspection, electromagnetic detection, ground-penetrating radar, data processing and map development. Additional resources, whether personnel or equipment, can be deployed quickly from our office in Raleigh. Our team has the necessary qualifications and support personnel to complete the inventory by the City's deadline of November 2026.

We appreciate the opportunity to submit this proposal and look forward to a positive and professional relationship with the City of Lenoir.

Sincerely,

McKim & Creed, Inc.

Kenneth R Williams

Kenneth Williams
Project Manager

Robert English Jr.

Rob English
Principal-in-Charge

CORE VALUES

RESPECT FOR PEOPLE

CONTINUOUS IMPROVEMENT

CLIENT SATISFACTION

SAFETY

OWNERSHIP



POINT-OF-CONTACT
Kenneth Williams Project Manager
P: 919.233.8091
E: KRwilliams@mckimcreed.com

A PRICING

Type	Cost
Meter box inspection (single-side and dual-side)	$30 single-side/$40 dual-side
Hand excavation (single-side and dual-side)	$350 single-side / $400 dual-side
Mechanical excavation (single-side and dual-side)	$490 single-side / $540 dual-side
New sod and soil (single-side and dual-side)	No additional cost for restoration
Pavement cuts and repair (per square foot)	$800 Per square foot

Fee Table | **Water Service Line Field Investigations for City of Lenoir**

McKim & Creed is committed to fair, transparent, and well-defined pricing that aligns directly with the scope of work and the City's objectives. Our pricing is developed from a detailed understanding of project requirements and is structured to ensure clients pay only for the level of effort and resources necessary to deliver high-quality, defensible results.

We emphasize clear cost breakdowns, realistic production assumptions, and efficient use of personnel and technology to control costs without compromising quality or safety. Where appropriate, our approach incorporates phased or overlapping tasks and proven methodologies that reduce rework and avoid unnecessary field effort—resulting in cost-effective delivery over the life of the project.

McKim & Creed's pricing reflects our focus on budget predictability and accountability, with clearly defined scopes and procedures for managing any additional services. This approach provides clients with confidence that project costs are reasonable, justified, and aligned with successful project outcomes.

Completed 1,500 lines for the City of Durham within a six-month window under a non-negotiable, accelerated deadline with financial consequences for delay, while minimizing impacts to the public and stakeholders.



1 LEAD AND COPPER RULE REVISIONS INVENTORY - 2 CONTRACTS

CITY OF DURHAM, NC

The City of Durham Department of Water Management is currently completing water service evaluation as part of its LCRR efforts. As part of this project, the City is receiving requests from property owners that need assistance with determining buried service materials. McKim & Creed is currently serving on two contracts for the City.



LCRR CONTRACT #21868 FOR DISADVANTAGED AREAS IN CITY OF DURHAM

McKim & Creed conducted partial Quality Level A Subsurface Utility Engineering (SUE) services for the City of Durham's LCRR efforts. The firm focused on approximately 1,000 water service line verifications in disadvantaged areas of the City's distribution system.

LCRR CONTRACT #18384 FOR CITY OF DURHAM

McKim & Creed provided professional Subsurface Utility Engineering (SUE) services to assist the City in identifying lead and copper water lines. This project focused on verifying the material types of both public and private water services. Approximately 200 water meters were excavated as part of this initiative. The project is aligned with the North Carolina Department of Environmental Quality's Division of Water Infrastructure (NCDWI) standards, ensuring compliance with state regulations and contributing to the city's efforts to maintain safe and reliable water services.

PROJECT DETAILS

OWNER
City of Durham

PROJECT DATES
07/2025 - Current

PROJECT COSTS
$1 Million (Contract #21868)
$200,000 (Contract #18384)

TEAM MEMBERS INVOLVED

Rob English, Leon Mackey, Lee Cooper

REFERENCE CONTACT

City of Durham
Harmon Henderson
P: 919.560.4881
E: harmon.henderson@durhamnc.gov

2 CAPE FEAR UTILITY WATER LINE SERVICE INVENTORY - CONTRACT B

CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA)

TheEnvironmental Protection Agency (EPA) issued an Initial Lead Service Line Inventory compliance deadline of October 2024 for all public water systems. Many utilities are using McKim & Creed to assist with water service line inventories and in-field material verifications. Compliance requires a complete inventory of all service lines, both system and customer owned sides, and to determine a replacement strategy if lead or galvanized lines requiring replacement are found.



As part of a full-service LCRR compliance service, which also involves our Asset Management team, McKim & Creed's SUE group provided Cape Fear Public Utility Authority with a material assessment and inventory of water service lines throughout the Wilmington and Wrightsville Beach area, including downtown Wilmington. To date, our team has completed more than 5,000 excavations. Lead line service inventory work is important as it protects public health, helps replace lead and copper in lines and is essential for prioritizing lead removal.

KEY HIGHLIGHTS

- Completed over 5,000+ service line excavations for CFPUA

PROJECT DETAILS

OWNER
Cape Fear Public Utility Authority (CFPUA)

PROJECT DATES
August 2023 - May 2025

PROJECT COSTS
$594,675

REFERENCE CONTACT

CFPUA
Steve Mongeau
Program Manager - Asset Management
P: 910.332.6658
E: steve.mongeau@cfpua.org

3 FAYETTEVILLE PWC LEAD AND COPPER RULE REVISION

FAYETTEVILLE PWC

McKim & Creed provided professional Subsurface Utility Engineering (SUE) services as a subconsultant to CDM Smith for the Fayetteville Public Works Commission (PWC) Lead and Copper Rule Service Project in Fayetteville, North Carolina. The team was tasked with verifying water service line materials at 400 meter locations throughout the city, a critical step in supporting PWC's compliance with the EPA's LCRR.



Utilizing non-destructive vacuum excavation methods, McKim & Creed exposed service lines on both the public and private sides of the meter to visually verify and document the pipe material and configuration. Each test hole included photographic documentation, meter number or service address, and the date of investigation. The team coordinated closely with utility records and ensured that all excavations were carefully backfilled with original spoils and compacted using a pneumatic hand tamp to restore the site with minimal disruption.



KEY HIGHLIGHTS

- Completed 400 meter locations
- Utilized non-destructive vacuum excavation
- Provided thorough documentation for each test hole

PROJECT DETAILS

OWNER
Fayetteville Public Works Commission (PWC)

PROJECT DATES
May 2023 - August 2025

PROJECT COSTS
$553,120

REFERENCE CONTACT

CDM Smith
Dave Malinauskas, PE, PMP
P: 919.325.3500
E: malinauskas@cdmsmith.com

4 LCRR WATER SERVICE INVENTORY - PHASE 1

TOWN OF WRIGHTSVILLE BEACH, NC

McKim & Creed has assisted the Town of Wrightsville Beach in completing their service line inventory ahead of initial submission deadline while successfully classifying over 64% of their service lines as Non-Lead through coordinated desktop efforts alone. The team helped compile and organize available data to classify the maximum number of service lines before the Town had to employ the most costly field-based efforts. The project manager, Mr. Marlin, procured a $2 million dollar loan from NCDEQ DWI at 0% to replace the Town's unknown service lines. He also assisted the Town in submitting the initial inventory and issuing the annual customer service line material notifications. He coordinated with DWI to ensure all funding would be maintained as the Town's water system was procured by Cape Fear Public Utility Authority (CFPUA). **Received NTP in February with an accelerated completion required by April to avoid spring break community impacts; completed approximately 3,000 lines within the compressed schedule.**

PROJECT DETAILS

OWNER
City of Wrightsville Beach

PROJECT DATES
January 2024 - July 2024

PROJECT COSTS
$44,969

REFERENCE CONTACT

City of Wrightsville Beach
Bill Fay
P: 910.256.7935
E: bfay@towb.org

5 HARNETT COUNTY LCRR COMPLIANCE PROGRAM ASSISTANCE, PHASE 3

HARNETT COUNTY, NC

Harnett County's LCRR Compliance Project supports Harnett Regional Water in meeting updated EPA requirements for identifying and managing potential lead service lines within its distribution system. McKim & Creed is providing field verification of service line materials through hand-tool excavations, data collection, and inventory updates to ensure accurate classification of each line as lead, galvanized, or non-lead. Findings will guide future replacement and compliance planning to safeguard public health and meet the November 2027 federal deadline. Funded through a $1.12 million capital allocation, the program is anticipated to include approximately 4,300 individual service line verifications across Harnett County's service area, focusing on areas with older infrastructure or limited material records.



PROJECT DETAILS

OWNER
Harnett County, NC

PROJECT DATES
August 2025 - Current

PROJECT COSTS
$959,700

REFERENCE CONTACT

Harnett County
Seann Byrd
P: 910.514.2502
E: sbyrd@harnett.org

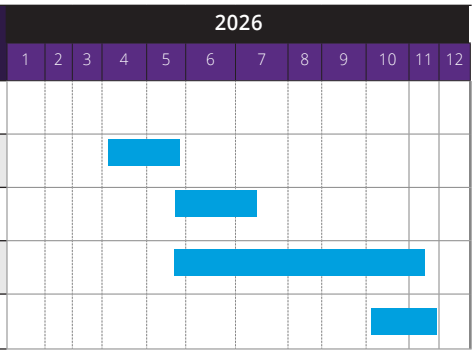
C PROJECT SCHEDULING

McKim & Creed is committed to meeting the project timeline and is fully prepared to complete this contract by the specified deadline. The firm is aware that the federal completion date for this project is November 1, 2027, **and will ensure all work is delivered by the City's requested deadline of November 2026.** McKim & Creed understands the importance of quality work in achieving the City's objectives and approaches each project with tailored planning and field operations based on site-specific requirements. Below is the anticipated project task completion schedule, based on a Spring 2026 Notice to Proceed (NTP) date and the November 1, 2027, federal completion date.

The City of Lenoir is incentivized to minimize the number of unknown service lines by the Nov. 1, 2027 deadline set by the EPA, which reduces the burden of an annual 10% replacement rate moving forward. Based on the initial inventory submission data available from NCDEQ at the time of reporting, ranging from 10/16/24 to 1/7/25 City of Lenoir has a approximately 2300 unknown service lines. The schedule below is based on a Spring 2026 Notice to Proceed (NTP) and conservatively assumes no further reduction in unknowns since the initial report. Note that McKim & Creed can begin mobilization field verification crews within 30 days of NTP if a list of addresses is provided.

» **FIG. 1** | Project Schedule

TASK	START	FINISH	2026
Lead Service Line Inventory: City of Lenoir	04/2026	11/2026	
A. Inventory Assessment	04/2026	05/2026	
B. Inventory Desktop Development	05/2026	06/2026	
C. Field Investigations	05/2026	10/2026	
D. Closeout	10/2026	11/2026	



ADDITIONAL INFORMATION

PROJECT SAFETY

In lead service line field verification projects, safety considerations are paramount to protect both field personnel and the community. McKim & Creed emphasizes the following safety measures:

Advanced Technology and Equipment: The use of advanced technology, such as vacuum trucks, is crucial for precise excavation. This minimizes environmental disruption and reduces the risk of exposure to lead particles, ensuring a safer work environment.

Compliance with Regulations: Adhering to the Underground Utility Safety and Damage Prevention Act and other relevant regulatory standards is essential. This compliance ensures that all safety protocols are followed, reducing the likelihood of accidents and ensuring the protection of both workers and the public.

Comprehensive Training: McKim & Creed provides thorough training for employees on safety procedures and safety-conscious work habits. This training equips team members with the knowledge and skills needed to identify potential hazards and take preventive measures.

Safety Responsibility: Safety is considered every employee's responsibility. Employees are encouraged to point out potential hazards and take all reasonable actions to prevent accidents or injuries.

Community Engagement: Effective communication with the community is vital to ensure cooperation and understanding of the project's safety measures. This includes educating residents about the risks associated with lead and the steps being taken to mitigate these risks.

McKim & Creed has a robust safety program that includes regular equipment inspections, PPE, Smith System Defensive Driver Training, dash cams, and a third-party company who conducts recurring full safety assessments to maintain high standards.

QUALITY ASSURANCE/QUALITY CONTROL

McKim & Creed's approach to quality aligns with the Total Quality Management philosophy and incorporates ISO 9001:2015 and ISO 10007:2017 Standards by providing guidance on every aspect of the project. From initial project proposal, field measurements, processing, deed interpretations, data analysis, computations, data truthing and adjustments to monthly billings, status reports, final CAD drawings, field staking, and digital file structures, the quality checkpoints are maintained, documented and adhered to. We believe that Quality Assurance begins before the first survey stake is driven into the ground, the first paint is sprayed on the ground, or the computer is turned on.

D APPROACH TO THE PROJECT

PROJECT UNDERSTANDING

Our team brings extensive experience developing lead service line inventories throughout North Carolina, supported by active contracts with the Cities of Durham, Raleigh, Fayetteville, and Wilmington that demonstrate our proven ability to deliver consistent, high-quality results. Additionally, we understand the critical importance of effective public communication. Our field teams engage daily with homeowners, residents, and pedestrians, ensuring that all interactions are handled with professionalism, clarity, and respect.

The City is incentivized to minimize the number of unknown service lines in advance of the EPA's November 1, 2027 deadline, while also requiring completion of field inspection activities by November 2026 to support compliance and planning efforts. Meeting this accelerated schedule reduces the burden of an ongoing annual 10% replacement rate. McKim & Creed's depth of field investigation experience and the ability to mobilize multiple crews from our Charlotte and Raleigh offices position us as an effective and efficient partner to deliver the inventory within the City's required timeframe

PROJECT APPROACH

McKim & Creed's project approach for conducting lead service line field verifications for the City is structured to ensure compliance with all contractual and regulatory requirements while maintaining safety and efficiency. By following this structured approach, McKim & Creed aims to deliver high-quality service line verifications that meet the City's expectations and regulatory standards within the specified timeframe.





All proposed field procedures for the City will be conducted in strict compliance with the City's Scope, including Sections 2.0–3.0 and Appendix A (Service Line Inspection SOP) as outlined in the City of Lenoir RFP for Service Line Field Inspections. The approach below explicitly maps City requirements to operational commitments, ensuring that every aspect of the inspection process aligns with the City's standards and expectations. The firm confirms its availability and willingness to attend the field inspection kickoff meeting within two (2) weeks of Project start, as required..

Kenneth Williams, Project Manager (PM) or a qualified designee confirms their commitment to attend and actively participate in bi-weekly progress meetings with the City for the duration of the Project, as required under Section 2.2 – Progress Meetings. These meetings will be used to:

Report on completed field inspections and verified service line materials, including site locations and inspection status

Discuss field procedures and any recommended refinements based on field conditions

Review the remaining inspection schedule and budget status

The PM will attend each meeting and will be prepared with up-to-date inspection metrics derived directly from the City's Field Inspection App. This commitment aligns with the shared City/Vendor responsibility outlined in Section 2.0 – Field Inspection Coordination.

TASK 1: IN-OFFICE RESEARCH

All proposed field procedures for the City of Lenoir's Service Line Material Field Inspections will be conducted in strict compliance with the City's Scope, including Sections 2.0–3.0 and Appendix A (Service Line Inspection SOP) as outlined in the City of Lenoir RFP for Service Line Field Inspections. The approach below explicitly maps City requirements to operational commitments, ensuring that every aspect of the inspection process aligns with the City's standards and expectations.

It's indicated that the City has approximately 2300 unknown service line materials that require field inspections to complete the LCR compliance.

LCRR BY THE NUMBERS

10,000+
SERVICE LINES INVENTORIED

10+
ENTITIES CURRENTLY SERVING FOR LCRR COMPLIANCE

McKim & Creed is well-versed in meeting service line inventories and data sets where they are. Whether in paper format, scanned PDFs, spreadsheets, GIS data, institutional knowledge, or likely some combination, our team of professionals can quickly digest your inventory and mobilize a standardized review and documentation process.

McKim & Creed's team of experienced engineering and SUE professionals will begin by meeting with City staff to gain an understanding of the status of each water system's existing service line inventories and the methods and data sources used for their development to date. Armed with this information, our team will provide recommendations for additional desktop data collection and integration efforts if necessary by using the following data sources:

- County parcel data and address point
- Tap cards and work orders
- Well abandonment records
- Tax listing records
- Deed and plat research
- Billing information
- Institutional knowledge
- Water system record drawings
- Existing water system asset GIS data

Using this enriched dataset, McKim & Creed's GIS analysts will update the initial service line inventory and ensure classification of service lines materials for the following criteria:

AGE OF INITIAL DEVELOPMENT:

Derived from existing GIS data, parcel information, tax records, deed research, and well abandonment data.

SERVICE LINE DIAMETER:

Informed by GIS records and supporting documentation from tap cards and work orders.

INSTITUTIONAL KNOWLEDGE:

Drawn from interviews and meetings with internal City staff.

Effort will be focused on records that provide the most valuable insight and potentially establish patterns that can be used to effectively direct and prioritize field investigations. The goal is to minimize the number of unknowns before proceeding with more costly field investigation efforts. A prioritized field investigation plan will be issued to the City based on the findings from Task 1.



TASK 2: FIELD SURVEY EXCAVATION

Our team will conduct hand or vacuum excavation on the utility-owned and customer-owned portion of the service line, ensuring minimal disruption and accurate documentation of service line materials. Pre-work and post-work photographs will be taken, and all staff will be identifiable by company attire and vehicles. The results of the in-office research task vetting service lines will affect the scope of the associated field investigation requirements. To illustrate this, three simple examples are provided below:

- For example, if all service lines for a system were found to be Non-Lead based on records approved by the EPA in the Lead & Copper Rule Improvements, there is no requirement to validate the classification of these services lines through field investigations. McKim & Creed could still assist in field validation to ensure the City's comfort.
- However, if some service lines were found to be Non-Lead through means other than approved records review or 2-point visual inspection, then those become a validation pool from which a minimum number of randomly selected service lines must be field investigated per EPA requirements. For example, if the City were to classify3,800 service lines ias Non-Lead using Institutional Knowledge, then a minimum of 351 would need to be field validated to confirm the classification accuracy of all 3,800 per EPA validation requirements.
- Statistical methods, approved by NCDEQ on a case-by-case basis, can be used to physically verify a subset of unknowns If no lead or galvanized requiring replacement lines are discovered after exhausting the desktop inventory effort. This can significantly reduce the total number of field investigations required.



Regardless of the results of the in-office research task, McKim & Creed is prepared to assist the City in finding the most efficient and cost-effective approach for the field investigation stage. Field investigations will be batched to simplify public notification coordination, minimize mobilization costs, and lump service lines together that may require special equipment, such as those needing concrete pavement coring and restoration. Results from this stage will be evaluated to assist in prioritizing the long-term replacement of galvanized lines requiring replacement (GRR) and lead lines, if found.

The firm confirms strict adherence to the City's Leak, Damage, and Incident Reporting procedures as outlined in Section 3.2 of the Field Inspection SOP. All field crews will be trained to immediately recognize, stop work, and report issues through the City's established chain of communication:

Existing leaks or damage (pre-existing):
Work will stop immediately.
The Distribution and Collections Superintendent/designee will be notified without delay.
Work will not resume until direction is received from the City.

Vendor-caused leaks or damage:
On the customer side, the firm will complete repairs in compliance with current plumbing codes and within the same shift, while coordinating with the City as required.
On the system side, the firm will immediately notify the City and await further instruction.

Incidents (e.g., hostile residents, accidents, injuries):
Inspections will cease immediately. The Public Utilities Director will be notified in accordance with City protocol.

These procedures are embedded in daily field safety briefings and are reinforced through supervisor oversight to ensure full compliance with City expectations. [City of Le...nspections
The firm will implement the following training and QA measures:

Field Staff Training

All field personnel will be trained on the City's Diamond Maps Field Inspection Application, including required fields, photo documentation, inspection status selections, and action item coding.
Training will explicitly follow the step-by-step procedures in Appendix A, including meter box inspections, excavations,
Crews will be trained to correctly document field issues using only the permitted fields (Inspection Status, Action Item, and Field Visit Notes) when inspections cannot be completed.

Quality Assurance Controls

Supervisors will conduct routine reviews of submitted inspections to confirm that both system-side and customer-side materials are properly documented and field-verified.
Photo documentation will be checked for clarity, completeness, and alignment with SOP examples.
Any identified data inconsistencies will be corrected promptly in coordination with the City, ensuring only "complete" inspections are submitted for invoicing eligibility.

This structured training and QA approach ensures that all field data meets the City's SOP requirements and supports efficient City review and verification.



TASK 3: DATA COLLECTION AND MANAGEMENT

Following the update of the initial inventory, McKim & Creed will deploy GIS-based applications to support data collection, review, and communication. All field efforts will be conducted using the City's Diamond Maps FieldInspection App or ArcGIS Field Maps and Survey123, enabling real-time data collection. This information will be reviewed for accuracy and made visible via office-based applications such as ArcGIS Operations Dashboard and customized web experiences. A report for each batch of field investigations will be provided and reviewed with TriRiver to discuss to reduce remobilization and address specific and unique challenges in a timely and efficient manner.

EXPERIENCE WITH GRANT ADMINISTRATION

Our team is well-versed on the latest funding sources and availability for LCRR compliance programs in North Carolina. Our team can assist the City in evaluating funding opportunities and preparing letters of interest and application packages. Currently, the most likely funding assistance program for the City's LCRR compliance program is the Lead Service Line Replacement (LSLR) Funding program developed by NCDEQ DWI.

DWI developed the LSLR funding program as a result of the $87 million/year that the Bipartisan Infrastructure Law (BIL) allocated to North Carolina for LSLR over five fiscal years (FY22-FY26). NCDEQ DWI is still accepting Project Solicitation Forms for LSLR projects (including inventory projects) on an ongoing basis.

McKim & Creed has supported multiple municipalities, including the Town of Wrightsville Beach, Harnett County, and the City of Eden, in procuring and administering LSLR funding through NCDEQ. Our team maintains regular communication with NCDEQ DWI staff to stay current on all funding requirements.

FAMILIARITY WITH THE LOCALITY

McKim & Creed has experience working on City of Lenoir and Lenoir County projects over the past 25 years. The firm has delivered subsurface utility engineering, surveying, and construction support for the City utilizing advanced geophysical techniques to ensure accurate mapping and minimize utility conflicts. McKim & Creed also maintains a strong working relationship with contractors.

- Yelerton and Eason GTP Boundary Surveys
- Lenoir-23 Replacement
- Lenoir-72 Replacement
- U-4435 US64 at US321
- Lenoir Events-Operations Center HVAC
- U-2928 SUE
- Lenoir State Employees Credit Union Survey
- 15 Lots Lenoir County
- Jones County 911 Facility
- Lenoir County Hazard Mitigation Grant Project





With recent and relevant experience on LCRR contracts, McKim & Creed's team is well-prepared to address common challenges efficiently and effectively.

E TEAM ORGANIZATION AND EXPERIENCE

McKim & Creed's team brings a robust and proven track record of performing lead service line inventories in North Carolina. **The firm has supported numerous municipalities, including the City of Durham, Harnett County, Fayetteville PWC, and others, in meeting regulatory requirements and advancing public health through comprehensive service line inventories, material verifications, and replacement planning.**

Throughout North Carolina, McKim & Creed has been a trusted partner, providing comprehensive engineering, GIS, and field investigation services for water main replacements and upgrades. These projects frequently require detailed Subsurface Utility Engineering (SUE) investigations—including both Quality Level A and B services—to accurately identify, map, and document existing water service line materials. The team's integrated approach leverages advanced engineering technologies such as ground penetrating radar, vacuum excavation, and GIS-based asset management systems, ensuring minimal disruption, precise results, and robust geospatial data for project planning and regulatory reporting.

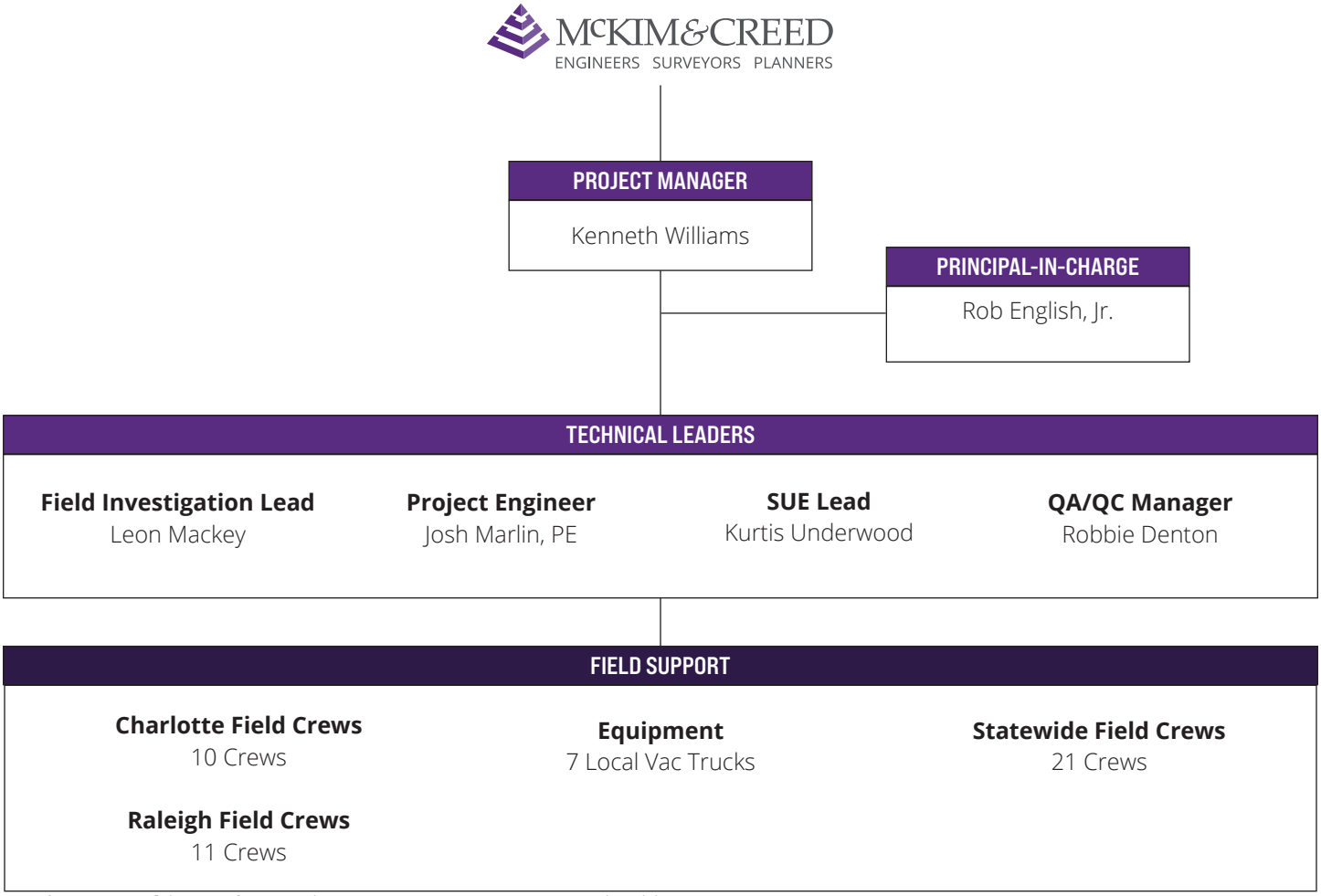
This expertise is further demonstrated in similar work for the City of Durham, where McKim & Creed has performed on-call LCRR water service line material verifications. These services include visual inspections, scratch and magnet tests, GIS data integration, and comprehensive documentation to support regulatory compliance and asset management.

Kenneth Williams, **Project Manager,** has 33 years of Subsurface Utility Engineering (SUE) experience in North Carolina, managing projects for public and private clients such as the City of Durham, City of Raleigh, UNC Chapel Hill, and the North Carolina Department of Transportation. As a Project Manager with McKim & Creed, Inc., he has led multiple Lead and Copper Rule (LCR) compliance projects, including lead service line inventories and replacements. His expertise covers all aspects of SUE and LCR work, ensuring regulatory compliance and effective project delivery.

Project Engineer Josh Marlin, PE, has extensive experience with LCRR contracts, supporting water utilities across North Carolina in achieving compliance. He has served as project manager and technical advisor for multiple LCRR initiatives, including the Harnett County LCRR Compliance Program, the Town of Mooresville Lead & Copper Rule Program Assistance, and the LCRR Water Service Inventory for the Town of Wrightsville Beach.

ORGANIZATIONAL CHART

CITY OF LENOIR
Lead Service Line Inventory



KEY TEAM MEMBERS

Getting the right team on board is the first step in executing a successful project. We have assembled a diverse, local team of engineering, and SUE professionals that are experienced with, and understand the nuances of lead service line inventory for the City.



Rob English, Jr.
PRINCIPAL-IN-CHARGE

Mr. English serves as McKim & Creed's Regional SUE Director – Mid Atlantic, overseeing SUE operations in North and South Carolina. He supports business development and project management and has extensive experience with utilities, municipalities, DOTs, and the U.S. Army Corps of Engineers.

Unique Qualifications

- 23 years of Subsurface Utility Engineering QLA-D experience
- Experience managing multiple service line field investigation contracts in North Carolina



Josh Marlin, PE
PROJECT ENGINEER

Mr. Marlin has assisted North Carolina water utilities with Lead and Copper Rule compliance, including service line inventories, GIS development, NCDEQ LSLR funding, and field investigations. He is highly familiar with the new Lead & Copper Rule Improvements and presented on the legislation at the 2024 NC One Water Conference.

Unique Qualifications

- Water Systems Specialist
- GIS Inventory Management
- Lead and Copper Rule Expert
- LCRR Field Data Collection Management



Kenneth Williams
PROJECT MANAGER

Mr. Mackey has over three decades of experience working for public and private sector clients in the Subsurface Utility Engineering (SUE) industry. He has completed projects for numerous municipalities and government agencies including Town of Cary, City of Raleigh, City of Durham, Town of Holly Springs, Town of Fuquay-Varina, FEMA and USACE.

Unique Qualifications

- 34 years of experience in the Subsurface Utility Engineering industry
- GPR
- Utility & Survey Coordination
- Utility Excavation



Leon Mackey
FIELD INVESTIGATION LEAD

Mr. Mackey has nearly three decades of experience working for public and private sector clients in the Subsurface Utility Engineering (SUE) industry. He has completed projects for numerous municipalities and government agencies including Town of Cary, City of Raleigh, City of Durham, Town of Holly Springs, Town of Fuquay-Varina, FEMA and USACE.

Unique Qualifications

- 28 years of experience in the Subsurface Utility Engineering industry
- 1.5 years of experience working on LCRR projects
- Utility Excavation



Robbie Denton
QA/QC MANAGER

Mr. Denton serves as Director of SUE in McKim & Creed's Charlotte office. He has over two decades of experience in the surveying and SUE field and has been with McKim & Creed for over a decade. In that time, Mr. Denton has worked for a variety of clients including Duke Energy, Piedmont Natural Gas, Charlotte Water, Orange County Water and Sewer Authority, UNC Chapel Hill and NCDOT.

Unique Qualifications

- 22 Years Subsurface Utility Engineering QLA-D experience
- QA/QC Reviewer
- Utility Mapping
- Utility Locating
- Project Management



Kurtis Underwood
SUE LEAD

With over a decade of industry experience, Mr. Underwood specializes in utility mapping and subsurface utility locating, ground-penetrating radar, electromagnetic radar, GPS, GIS, project management, field operations management, and quality/budget control. As a highly skilled SUE Project Manager at McKim & Creed, Mr. Underwood has successfully managed large-scale projects for departments of transportation, energy providers, cable and communications companies, and private industries.

Unique Qualifications

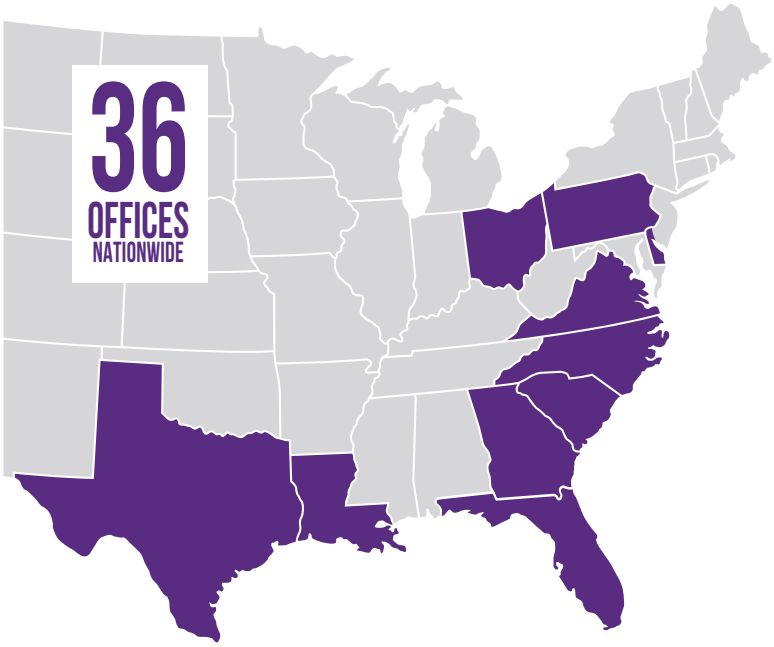
- 11 years of experience in the GIS industry
- Utility Mapping
- Subsurface Utility Locating
- Project Management

FIRM OVERVIEW

McKim & Creed, Inc. is recognized as one of the largest and most comprehensive geomatics firms in the United States. Established in 1978 by Herbert P. McKim, Jr., PE, PLS, and Michael W. Creed, PE, Ph.D., the firm has grown from a two-person structural engineering company to an employee-owned organization with hundreds of professionals and offices across the country.

McKim & Creed's Geomatics and Engineering division delivers a comprehensive range of services, including conventional and hydrographic surveying, airborne and mobile lidar, photogrammetry, unmanned aerial systems, subsurface utility engineering, and advanced GIS solutions. The firm's licensed surveyors, engineers, and GIS professionals operate in more than 20 states, providing topographic, hydrographic, engineering, and mapping services for public and private sector clients nationwide.

OFFICE LOCATIONS



*Charlotte will provide primary support for this contract with support from Raleigh if needed.

FLORIDA
Boca Raton
Clearwater
Daytona Beach
Fort Myers
Jacksonville
Orange City
Orlando
Palm Coast
Pensacola
Sarasota
Tampa

OHIO
Columbus

TEXAS
Austin
Dallas-Fort Worth
Houston
Stafford

VIRGINIA
Norfolk
Charlottesville

DELAWARE
Newark

PENNSYLVANIA
Pittsburgh
Sewickley

N. CAROLINA
Asheville
*Charlotte
Raleigh
Wilmington

S. CAROLINA
Charleston
Greenville

GEORGIA
Atlanta

LOUISIANA
Baton Rouge
Gonzales

With over 1,000 team members across 36 offices, our team of local professionals will provide the same attention to detail to all work assignments, regardless of size.

SIMILAR CONTRACT EXPERIENCE

McKim & Creed brings extensive, directly relevant experience to the City of Lenoir's lead service line inventory contract, having successfully delivered similar projects for municipalities across North Carolina. **The firm has supported clients such as:**

- City of Raleigh
- City of Durham
- Harnett County (Harnett Regional Water)
- Fayetteville Public Works Commission (PWC)
- Cape Fear Public Utility Authority (CFPUA)
- Town of Wrightsville Beach
- Town of Mooresville






McKIM&CREED
ENGINEERS SURVEYORS PLANNERS