

APPENDIX

Exhibit A

TASK ORDER 9663-01

This Task Order pertains to an Agreement by and between UNION COUNTY, NORTH CAROLINA ("OWNER"), and GAVEL & DORN ENGINEERING, PLLC ("ENGINEER"), dated June 13th, 2025 ("the Agreement"). ENGINEER shall perform services on the project described below as provided herein and in the Agreement. This Task Order shall not be binding until it has been properly signed by both parties. Upon execution, this Task Order shall supplement the Agreement as it pertains to the project described below.

Int

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JD	EDW

TASK ORDER NUMBER: **9663-01** * or "Owner"
**or "G&D"

PROJECT NAME: 12-Mile Site 5 Sub-Metering

PART 1.0 PROJECT DESCRIPTION:

Flow metering was performed in the **12-Mile Creek** drainage basin under the previous contract. The results of that study indicate that “**Site 5**” exhibited significant amounts of rainfall induced inflow and infiltration (RDII). Under this Task Order, the collection system upstream of Site 5 will be sub-metered. G&D will install seventeen (17) meters and two (2) rain gauges within the Site 5 basin. Additionally, two (2) meters and one (1) rain gauge will be installed in the Poplin pumpstation basin, as it pumps flow into the Site 5 basin. The metering equipment will be installed for a period of three (3) months. The collected data will be analyzed for metrics associated with both dry and wet weather flows for comparison. These results will direct further SSES activities (e.g., MH inspections and smoke testing).

PART 2.0 SCOPE OF BASIC SERVICES TO BE PERFORMED BY ENGINEER ON THE PROJECT:

- A. The initial step in the project will include a Project Kick-off Meeting, during which the goals and objectives of the project will be reviewed, data requirements discussed, communication plans developed, and the preliminary work plan reviewed and modified as needed.
- B. The most current versions of the GIS files for the 12 Mile Basin area shall be obtained from the Owner. Based on the mapping and areas provided by the Owner, the ENGINEER will confirm the viability of these locations. Meters will be placed at key locations throughout the system to isolate flow into smaller basins. Locations will be reviewed with and approved by the Owner prior to being deployed.
- C. A total of nineteen (19) temporary flow meter units will be installed in manholes at the approved locations in accordance with manufacturer recommendations. These units will remain in service for 3 months or until sufficient rain events are captured to evaluate the I-I entering the system. Hach FL900 series flow monitors with

submerged level-velocity sensors will be utilized. Level-velocity meters operate using a single sensor that translates pressure into depth of flow and uses Doppler to measure average velocity. The meters will continuously monitor the level and velocity within the pipe and calculate the corresponding rate of flow; a data point for level, flow, and velocity will be stored every five (5) minutes.

Three (3) tipping bucket rain gauges will be deployed within the drainage area. Rainfall data will be collected at the same time interval (5-min) as the flow metering data.

- D. The flow meters will continuously submit real-time data via a wireless cellular modem to a dedicated server where it can be viewed and downloaded through an internet-connected web browser. The data is also stored on the meter and can be manually downloaded during a site visit if the cellular signal is not sufficient to upload data. The system will also include alarms to submit event notifications via SMS texts and emails in the event any problems occur with the meters. ~~Union~~ Owner ~~Water~~ staff will be provided with a username and password to view the data in near real time.
- E. A confined space entry-certified crew will assess the suitability of the proposed meter sites, install the meters, calibrate them to match the existing conditions encountered in the field, perform any necessary site visits for equipment replacement and maintenance, and remove the meters at the end of the monitoring period. Data specialists will daily monitor meter operation and data remotely via the Claros web portal. Any equipment malfunctions, sensor fouling, or other problems will be immediately apparent from the data. Field crews will be dispatched as soon as possible to troubleshoot and resolve the problems.
- F. The flow and rainfall data will be reviewed, processed, reconstructed (as needed), and analyzed. Wet weather flows will be compared to dry weather flows to quantify the amount of extraneous flow entering the system upstream of each meter. This flow will be disaggregated into rainfall induced infiltration and inflow (i.e., RDII) based on the characteristics of the data.
- G. A draft Final Report will be prepared which will summarize findings, estimate RDII per meter basin, rank the meter basins according to RDII severity, and recommend additional field evaluation activities to identify the exact sources of the RDII within the system. Once the Owner has reviewed the draft Final Report and provided comments, a Final Report will be submitted.
- H. A brief weekly progress report will be submitted to the Owner that summarizes the work completed that week and identifies any work that will be occurring in the following week. It will also identify any issues that have occurred during work and request any additional information that might be needed from the Owner. A monthly progress meeting (either in person or via web conference) will be held to discuss the project in detail.

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PART 3.0 ADDITIONAL SERVICES, NOT PART OF BASIC SERVICES:

- A. Study of any sewer basins outside of the gravity sewer area known as 12 Mile Site 5 Basin.
- B. Performance of any field assessment activities beyond those specifically mentioned in this scope of work.
- C. Design of any sewer rehabilitation, repair or replacement work to address deficiencies in the sewer collection system.
- D. Permitting or other regulatory agency compliance activities.

PART 4.0 OWNER'S RESPONSIBILITIES:

- A. Provide ENGINEER with electronic data including GIS files, previous reports or studies, or other relevant data.* *which is in OWNER's possession
- B. Assist ENGINEER with any public issues or concerns.
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- C. ~~Promptly review~~ and advise ENGINEER of any recommended changes to the project or concerns with the scope or schedule of the work and provide review comments for the Draft Flow meter analysis and I/I report. ** Review

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PART 5.0 PERIODS OF SERVICE:

Work on the project will begin within 15 days of receipt of a written Notice to Proceed from OWNER. Fieldwork will be completed within 110 days from the start date (NTP) unless extended by OWNER. The draft I/I report will be submitted to OWNER within 60 days of completion of field assessment activities, and the Final I/I report will be submitted within 15 days of receipt of comments on the draft report from OWNER.

PART 6.0 PAYMENTS TO ENGINEER:

1. Payment for Basic Services:

All work included in the Basic Services Scope of Work will be completed per the following fee schedule:

12-Mile Site 5 Sub-Metering – Fee Table				
Item	Unit	Quantity	Unit Cost	Extended Cost
Flow Meter Installation	EA	19	\$600.00	\$11,400.00
Meter Maintenance	Meter/Month	57	\$1,450.00	\$82,650.00
Rain Gauge	Gauge/Month	9	\$740.00	\$6,660.00
Data Analysis	Meter/Month	57	\$300.00	\$17,100.00
Total:				\$117,810.00

2. Payment for Additional Services:

Payment for Additional Services outside of the Basic Services Scope of Work shall be based upon a mutually agreed upon fee using a firmly defined scope of services. No work outside of the Basic Services will be performed without written amendment to this Task Order.

This Task Order is executed this October 20, 2025.

UNION COUNTY,
NORTH CAROLINA

Signed by:
By: Brian W Matthews
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Name: Brian Matthews

Title: County Manager

Address: 500 N. Main St.
Monroe, NC 28112

GAVEL & DORN ENGINEERING, PLLC

Signed by:
By: Jason Dorn

Name: Jason Dorn

Title: Partner

Address: 6730 Freedom Drive
Charlotte, North Carolina 28214

Approved as to Legal Form: BTI

This instrument has been preaudited in the Manner required by The Local Government Budget and Fiscal Control Act.

Signed by:
Kiara McLendon
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Deputy Finance Officer