**APPENDIX**

**EXHIBIT A**

This Task Order pertains to an Agreement by and between Union County (OWNER) and CDM Smith Inc. (ENGINEER), dated January 1, 2024 ("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.

**TASK ORDER NUMBER:** **8686-05**

**PROJECT NAME:** **Forest Park Pump Station Expansion – Force Main And Pump Station Evaluation**

## PART 1.0 PROJECT DESCRIPTION

The April 2025 Forest Park Pump Station Flow Modeling and Capacity Analysis Study (Study) prepared by ENGINEER confirmed a 2040 capacity need for the Forest Park Pump Station of 2.4 million gallons per day (mgd). This capacity need aligned with the OWNER'S Wastewater Collection System Master Plan (Brown and Caldwell).

The Study identified the need to conduct a Pump Station and Force Main sizing alternatives analysis to confirm sizing requirements for new pumps, sizing requirements for an upsized force main, and other potential ancillary upgrade needs including the variable frequency drives (VFDs), standby generator, and incoming power.

The Study also identified the need to upgrade the 8-inch southern gravity sewer from 8-inch to a combination of 10-inch and 12-inch sizes for approximately 2,069 feet from Manhole 561 to Manhole 4280. A review of buildout assumptions to confirm pipe size selection will be reviewed with the OWNER during basis of design development (future task).

OWNER is therefore requesting ENGINEER prepare a Pump Station and Force Main Alternatives Evaluation to address the needs and establish design criteria to advance into preliminary/final design.

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

Basic Services to be provided by the ENGINEER under this Agreement include the following:

- Task 100 – Project Management and Initiation
- Task 200 – Pump Station and Force Main Alternatives Evaluation

The detailed scope of services for the basic services included under this Agreement (Tasks 100 and 200) follows.

### TASK 100 PROJECT MANAGEMEN AND INITIATON

The Project Management task includes those activities involved with the detailed planning and subsequent monitoring and control of the Project. In addition to the ENGINEER's

normal in-house staff management and job tracking procedures, the following subtasks will be considered Project Management services:

101 Develop Detailed Project Schedule

ENGINEER will develop a schedule for engineering activities based on the tasks outlined in this Scope of Services. The schedule will be reviewed with the OWNER and finalized, with copies sent to the OWNER. The schedule will be developed using Microsoft Project software, which will also be used during the duration of the Project.

The schedule will incorporate interim deliverables and review periods for the following:

- Pump Station and Force Main Alternatives Technical Memorandum.

102 Project Initiation

A virtual Project kickoff meeting will be held with the OWNER to discuss Project schedule, administrative procedures, respective responsibilities, communications, OWNER contacts, OWNER expectations, progress reporting, data collection, and other Project matters as appropriate. Key stakeholders of the OWNER and ENGINEER's team are expected to attend.

103 Project Meetings

The ENGINEER has assumed the following meetings:

- Virtual Kickoff Meeting.
- Virtual Pump Station and Force Main Alternatives Evaluation Review Virtual Meeting.

**TASK 200 PUMP STATION AND FORCE MAIN ALTERNATIVES EVALUATION**

Related subtasks are described below.

201 Data Collection, Review, and Coordination

Collect and review available data on the existing infrastructure at the Project site. Data on the existing facilities including record drawings, operation and maintenance manuals, permit and subsurface conditions (as is available) shall also be provided by the OWNER. A field walkthrough of the existing gravity sanitary sewer and existing force main will also be conducted to determine necessary easement requirements for the proposed improvements.

202 Pump Station and Force Main Evaluation

The ENGINEER shall prepare a Technical Memorandum for the Project including the following:

- Alternatives analysis to confirm sizing requirements for new pumps, sizing requirements for an upsized force main, and other potential ancillary upgrades needs including VFDs, standby generator, and incoming power. This will also

include an identification of capital and operating expenses (electrical pumping cost) for a maximum of two combinations of force main/pump station alternatives.

- Design criteria for selected alternative including preliminary pump hydraulic calculations, proposed phasing plan for upsizing of the force main system and pump improvements to achieve a future flow of 2.4 MGD, wet well sizing and cycle time calculations, equipment sizing and selection, and site layout and maintenance of flow requirements.

- Verification of gravity sewer size and alignment, crossing requirements, and easement needs. This will be conducted via desktop analysis using aerial mapping and Record Drawings provided by OWNER. The general alignment of the existing sewer and proposed improvements, as well as the existing force main alignment is shown in **Figure 1**.* * which is attached and incorporated herein by reference Int _____

- Verification of force main size and alignment, crossing requirements, and easement needs. This will be conducted via desktop analysis using aerial mapping and Record Drawings provided by OWNER.

- Recommended construction schedule

- Opinion of Probable Construction Cost (OPCC) consistent with an American Association of Cost Engineering's (ACEE) Class 4 estimate with an expected accuracy range on the low end of -10% to -30% and on the high end of +20% to +50%.

- Local, State, and Federal Project permitting requirements including desktop analysis of wetlands impacts. Wetlands flagging, survey, and preliminary jurisdictional determination is not included. Site visit for USACE or DEQ to verify delineation is also not included.

203 Presentation of Results

A draft Technical Memorandum (PDF format) and PowerPoint (PDF format) will be submitted to the OWNER to document the analysis and agreed upon recommendations. OWNER review time will be 2 weeks. After OWNER reviews the PowerPoint, OWNER and ENGINEER shall meet to make final decisions on the recommendations. Final Technical Memorandum will be submitted to the OWNER.

## PART 3.0 ADDITIONAL SERVICES (NOT BUDGETED):

ENGINEER agrees to perform out-of-scope services as requested by OWNER and as may be determined throughout the life of this Project. If the need for such services is identified, ENGINEER will prepare an amendment to this Task Order or a new Task Order that will include a scope, fee, and schedule and will submit to the OWNER for approval. If approved, the Additional Services will be performed upon execution of a Task Order Amendment or new Task Order.

## PART 4.0 OWNER'S RESPONSIBILITIES:

The responsibilities of OWNER as described in this Task Order 8686-05 are as follows:

- Provide the ENGINEER with existing pump station operation data, records, record drawings, operations manuals, etc. *
- Arrange for ** access to sites as necessary
- Timely review and input of deliverables

* which is available and in OWNER's possession

** reasonable

Int _____

Int _____

- ~~OWNER shall be responsible for, and ENGINEER may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by OWNER to ENGINEER pursuant to this Agreement. ENGINEER may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement. Aside from field checking above grade visible features of the pump station, sewer manholes and force main air release vaults against Record Drawings, ENGINEER's scope of work does not include verifying OWNER Provided Information for accuracy or completeness. OWNER may request an independent review of OWNER Provided Information by ENGINEER pursuant to a mutually agreed amendment to this Agreement. ENGINEER shall be entitled to an adjustment in price and schedule to the extent that any corrective action in ENGINEER's Services arises out of inaccurate OWNER Provided Information.~~

Int _____

**PART 5.0 PERIODS OF SERVICE:**

The ENGINEER shall submit a draft Pump Station and Force Main Alternatives Technical Memorandum within 90 days from Notice to Proceed. Final Pump Station and Force Main Alternatives Technical Memorandum will be submitted within 15 days of receipt of OWNER comments.

**PART 6.0 PAYMENTS TO THE ENGINEER:**

As complete compensation for the engineering services described in the Agreement and Task Order 8686-05, the ENGINEER will be paid on a per diem (hourly note to exceed (HNTE)) basis for the services listed herein. The HNTE fee for this scope of services is $99,995 as complete compensation for the services described in Task 100 and 200.

All hourly fee work will be charged monthly based upon the personnel classifications performing the work and corresponding hourly rate set forth in the attached estimated hourly fee breakdown incorporated herein by reference as Attachment A. ~~Labor and expenses on this task will be invoiced according to ENGINEER's then-current Schedule of Rates. A copy of the current Schedule of Rates is attached (Attachment B) and incorporated herein by reference~~. Subconsultant services will be invoiced at direct cost plus 10-percent markup.

Int _____

| UC Water | | |
|---|---|---|
| **Forest Park Pump Station Expansion – Force Main and Pump Station Evaluation** | | |
| **Task Number** | **Task Name** | **Estimated Task Amount** |
| | | |
| **100** | **Project Management and Quality Control** | **$14,130** |
| **200** | **Pump Station and Force Main Evaluation** | **$85,865** |
| | **Total** | **$99,995** |

**PART 7.0 OTHER:**

None

This Task Order is executed this _____.

UNION COUNTY,
NORTH CAROLINA

| | |
|---|---|
| By: _____ | By: _____ |
| Name: _____ | Name: Glendon J. Fetterolf, P.E. |
| Title: _____ | Title: Associate |
| Address: 500 N. Main Street | Address: 4600 Park Road, Ste. 240 |
| Monroe, NC 28112 | Charlotte, NC 28209 |



Figure 1: General Gravity Sewer and Force Main Alignment

# Attachment A

Int _____

**Union County Water**

**Forest Park Pump Station Expansion - Force Main and Pump Station Evaluation**

| | | Subject Matter Expert | Officer/Senior Technical Specialist | Principal/Associate/Technical Specialist | Senior Project Manager/ Senior Professional | Professional III/Project Manager II | Project Manager I | Professional II/Financial Accounting | Professional I | Senior Designer | Designer Drafter | Senior Project Administration | Project Administration | Total Hours | Total Labor Dollars | Other Direct Costs/Expenses | Subconsultant Services (with 10% Markup) | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Task Number** | **Task Name** | | | | | | | | | | | | | | | | | |
| | **2025 Billing Rates** | $325 | $305 | $265 | $230 | $200 | $180 | $165 | $135 | $150 | $125 | $140 | $110 | | | | | |
| **Task 100** | **Project Management and Quality Control** | | 2 | 22 | 0 | 13 | 0 | 10 | 10 | 0 | 0 | 0 | 19 | 76 | $14,130 | $0 | $0 | $14,130 |
| **Task 200** | **Force Main and PS Evaluation** | | 30 | 38 | 0 | 132 | 0 | 54 | 195 | 18 | 0 | 0 | 21 | 488 | $85,865 | $0 | $0 | $85,865 |
| **Total** | | **0** | **32** | **60** | **0** | **145** | **0** | **64** | **205** | **18** | **0** | **0** | **40** | **564** | **$99,995** | **$0** | **$0** | **$99,995** |