

NORTH CAROLINA
BRUNSWICK COUNTY

**PROFESSIONAL SERVICES AGREEMENT
FOR ENGINEERING SERVICES
(Mini-Brooks Act/Qualification Based Selection)**

THIS PROFESSIONAL SERVICES AGREEMENT (hereinafter referred to as the “Agreement”) is made and entered into by and between Brunswick County, a body politic and corporate of the State of North Carolina, (hereinafter referred to as “County” or “Owner”), party of the first part and CDM Smith Inc., (hereinafter referred to as “Provider” or “Engineer”), party of the second part.

WITNESSETH:

1. SERVICES; FEES

Provider agrees to perform the services (hereinafter referred to as the “Services”) in connection with the project (hereinafter referred to as the “Project”), as more fully set forth in the Request for Qualifications entitled: “Comprehensive Water Treatment & Distribution System Master Plan” published by Brunswick County on February 16, 2021, and any addenda thereto, and on Exhibit “A” and Exhibit “B” attached hereto.

Any exhibits or attachments referenced herein are hereby incorporated by reference and made a part of this Agreement. Any conflict between the language in an exhibit or attachment and the main body of this Agreement shall be resolved in favor of the main body of this Agreement.

2. TERM OF AGREEMENT; TIME OF COMPLETION

The term of this Agreement begins one (1) business day after approval by the Brunswick County Board of Commissioners (the “Effective Date”) and continues in effect until 12/19/2022, unless extended or sooner terminated as provided for herein or in the General Conditions of the Contract. Notwithstanding the foregoing, Provider shall complete the Services in accordance with the schedule set forth on Exhibit “A” (the “Time of Completion”), unless extended as provided for in the General Conditions of the Contract.

3. TERMINATION

The County may terminate this Agreement at any time without cause by giving written notice to Provider. The County may set the effective date of termination at a time up to thirty (30) days following notice to Provider to allow Provider ample time to complete tasks for which value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks and/or to assemble Project materials in orderly files. As soon as practicable after receipt of a written notice of termination without cause, Provider shall submit a statement to County showing in detail the work performed under this Agreement through the effective date of termination. County may terminate this Agreement for cause by giving written notice of a breach of the Agreement. Provider shall have fifteen (15) days to cure the breach following receipt of the notification. Failure to cure the breach within the fifteen (15) days shall result in the immediate

termination of the Agreement. Notwithstanding the foregoing, County may terminate this Agreement immediately and without notice to Provider if Provider becomes insolvent, makes or has made an assignment for the benefit of creditors, is the subject of proceedings in voluntary or involuntary bankruptcy instituted on behalf of or against Provider, or has a receiver or trustee appointed for substantially all of its property, or if Provider allows any final judgment to stand against it unsatisfied for a period of forty-eight (48) hours.

4. BRUNSWICK COUNTY GENERAL CONDITIONS OF THE CONTRACT

This Agreement, in addition to any construction documents prepared hereunder, shall be subject to the Brunswick County, North Carolina General Conditions of the Contract (for construction contracts), unless the County directs otherwise. In the event of a conflict between the General Conditions of the Contract and this Agreement, this Agreement shall prevail.

5. NONAPPROPRIATION

If the Board of County Commissioners does not appropriate the funding needed by the County to make payments under this Agreement for a given fiscal year, the County will not be obligated to pay amounts due beyond the end of the last fiscal year for which funds were appropriated. In such event, the County will promptly notify the Provider of the non-appropriation and this Agreement will be terminated at the end of the last fiscal year for which funds were appropriated. No act or omission by the County which is attributable to non-appropriation of funds shall constitute a breach of or default under this Agreement.

6. COMPENSATION

The County agrees to pay Provider as specified in the Exhibits attached hereto or as set out above for the Services satisfactorily performed in accordance with this Agreement. Unless otherwise specified, Provider shall submit monthly invoices to County and include detail of all Services delivered or performed under the terms of this Agreement. County shall pay all undisputed and properly completed invoices within forty-five (45) days of receipt. Notwithstanding the foregoing, County will not pay late fees on any charges under this Agreement. If County disputes any portion of the charges on any invoice received from Provider, the County shall inform Provider in writing of the disputed charges. Once the dispute has been resolved, Provider shall re-invoice County for the previously disputed charges, and, per any resolution between County and Provider, the County shall pay those charges in full at that time. No advance payment shall be made for the Services to be performed by Provider under this Agreement.

7. INDEPENDENT CONTRACTOR

Both County and Provider agree that Provider shall act as an independent contractor and shall not represent itself as an agent or employee of the County for any purpose in the performance of its duties under this Agreement. Provider represents that it has or will secure, at its own expense, all personnel required in performing the Services under this Agreement. Accordingly, Provider shall be responsible for payment of all federal, state and local taxes arising out of its activities in accordance with this Agreement, including, without limitation, federal and state income tax, social security

tax, unemployment insurance taxes and any other taxes or business license fees as required. Provider shall not be entitled to participate in any plans, arrangements or distributions by the County pertaining to or in connection with any pension, stock, bonus, profit sharing or other benefit extended to County employees.

In the event the Internal Revenue Service should determine that Provider is, according to Internal Revenue Service guidelines, an employee subject to withholding and social security contributions, then Provider hereby acknowledges that all payments hereunder are gross payments, and the Provider is responsible for all income taxes and social security payments thereon.

8. OPINIONS OF COST

If applicable, Provider shall provide opinions of probable construction costs, including but not limited to, designer fees, costs of construction, costs of equipment, furnishings, signage, permit fees and appropriate contingencies, at Project intervals determined by County. Such opinions of costs shall be representative of Provider's best judgment as an experienced and qualified professional generally familiar with the construction industry. The parties acknowledge that actual bids, proposals and costs may vary from Provider's opinions of costs based on the cost of labor, materials, equipment or services furnished by others, differing methods for determining prices, competitive bidding or other market conditions. When requested by County, Provider shall participate in rebidding, renegotiation and design adjustments to the extent such are necessary to reduce Project costs. Such services shall be performed by Provider without additional compensation.

9. ACCOUNTING RECORDS

Provider shall maintain accounting records in accordance with generally accepted accounting practices and shall make such records available for inspection by County upon reasonable request and during normal business hours for a period of three (3) years following completion of the Services.

10. PERMITS AND APPROVALS

Provider shall provide County with a schedule of all required approvals and the dates by which application for such approvals must be made in order to avoid any risk of delay to the Project. Provider shall prepare the necessary application forms, present documents requiring approval by County and submit documents with County approval to appropriate federal, state and local government or other agencies in a timely manner.

11. ENVIRONMENTAL CONDITIONS

County shall disclose to Provider the existence of all known and suspected hazardous substances, including, without limitation: asbestos; polychlorinated biphenyls (PCBs); petroleum; hazardous waste; or radioactive material located at or near the site where the Services are to be performed. If Provider discovers any undisclosed hazardous substances, or if investigative or remedial action or other professional services are necessary, Provider may, at its option and

without liability for damages, suspend performance of the Services hereunder until County: (1) retains an appropriate specialist consultant or contractor to identify and, as appropriate, abate, remediate or remove the hazardous substances; and (2) warrants that the site where the Services are to be performed are in full compliance with applicable laws and regulations. Notwithstanding the foregoing, if the presence of any hazardous materials adversely affects the performance of Provider's duties under this Agreement, then Provider shall have the option of: (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause upon thirty (30) days' written notice to County.

12. PROVIDER REPRESENTATIONS

- a. Provider is a duly organized entity or corporation qualified to do business and in good standing under the laws of the State of North Carolina;
- b. Provider has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement;
- c. No approval, authorization or consent of any governmental or regulatory authority is required to be obtained or made by it in order for Provider to enter into and perform its obligations under this Agreement;
- d. In connection with Provider's obligations under this Agreement, it shall comply with all applicable federal, state and local laws and regulations and shall obtain all applicable permits and licenses;
- e. Provider shall not violate any agreement with any third party by entering into or performing the Services under this Agreement;
- f. Provider has not engaged in corrupt, fraudulent or coercive practices in competing for or executing this Agreement;
- g. Provider will perform all Services in conformity with the specifications and requirements of this Agreement;
- h. The Services provided by Provider under this Agreement will not violate, infringe or misappropriate any patent, copyright, trademark or trade secret rights of any third party, or any other third-party rights (including, without limitation, non-compete agreements);
- i. Provider shall exercise reasonable care and diligence when performing the Services hereunder and will ensure that it adheres to the highest generally accepted standards in the industry when performing said Services;
- j. Provider shall be responsible for all errors, omissions or deficiencies in technical accuracy in any drawings, specifications or other documents prepared or services rendered by Provider, its subcontractors or consultants and shall correct, at no

additional cost to County, any and all errors, omissions, discrepancies, ambiguities, mistakes, deficiencies or conflicts;

- k. Provider acknowledges that if any specific licenses, certifications or related credentials are required in its performance of the Services, it will ensure that such credentials remain current and active and not in a state of suspension or revocation; and
- l. Provider shall ensure that whenever its employees or agents are on County property, they will strictly abide by all instructions and directions issued by the County with respect to rules, regulations, policies and security procedures applicable to work on the County's premises. Such rules, regulations, policies and security procedures shall include, but not be limited to: (i) not possessing any controlled substances; (ii) smoking only in designated smoking areas, if any; and (iii) not possessing weapons, except for weapons possessed by law enforcement officials.

13. DAMAGE TO EQUIPMENT, FACILITIES, PROPERTY OR DATA

Provider shall be solely responsible for any damage to or loss of the County's equipment, facilities, property and/or data arising out of the negligent or willful act or omission of Provider or its subcontractors or consultants. In the event that Provider causes damage to the County's equipment or facilities, Provider shall, at its own expense, promptly repair or replace such damaged items to restore them to the same level of functionality that they possessed prior to such damage.

14. NON-ENDORSEMENT AND PUBLICITY

County is not endorsing Provider or its Services, and Provider is not permitted to reference this Agreement or County in any manner without the prior written consent of County. Notwithstanding the foregoing, the parties agree that Provider may list the County as a reference in response to requests for proposals and may identify County as a customer in presentations to potential customers.

15. NON-EXCLUSIVITY

Provider acknowledges that County is not obligated to contract solely with Provider for the Services covered under this Agreement.

16. DIVESTMENT FROM COMPANIES THAT BOYCOTT ISRAEL

Provider hereby certifies that it has not been designated by the North Carolina State Treasurer as a company engaged in the boycott of Israel pursuant to N.C.G.S. § 147-86.81.

17. DEBARMENT

Provider hereby certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this

Agreement by any governmental department or agency. Provider must notify County within thirty (30) days if debarred by any governmental entity during this Agreement.

18. INDEMNIFICATION

Provider shall indemnify and hold harmless County, its officers, officials, agents and employees from and against all actions, liability, claims, suits, damages, costs or expenses of any kind (collectively, "Claims") which may be brought or made against County or which County must pay and incur arising out of this Agreement should fault or negligence on the part of the Provider or its subcontractors or consultants be the proximate cause of such Claims. Provider shall be fully responsible to County for the acts and omissions of its subcontractors or consultants and of persons either directly or indirectly employed by it. This Section shall survive any expiration or termination of this Agreement.

19. INSURANCE

Provider shall procure and maintain in full force and effect at all times and at its sole cost and expense, and shall ensure that any of its consultants maintains in full force and effect at all times and at its sole cost and expense, Commercial General Liability, Commercial Automobile Liability, Professional Liability and Workers' Compensation insurance, if applicable, and any additional insurance as may be required by County with limits acceptable to County. All insurance policies (with the exception of Workers' Compensation, if applicable, and Professional Liability) shall be endorsed, specifically or generally, to include County as an additional insured and as a certificate holder. Provider shall furnish a Certificate of Insurance from a licensed insurance agent in North Carolina with a rating of A-VII or better by A.M. Best verifying the existence of any insurance coverage required by County. The Certificate will provide for thirty (30) days' advance notice in the event of termination or cancellation of coverage. Provider shall have no right of recovery or subrogation against County (including its officers, agents and employees), it being the intention of the parties that the insurance policies so affected shall protect both parties and be primary coverage for any and all losses covered by the aforementioned insurance.

20. WORKERS' COMPENSATION

To the extent required by law, Provider shall comply with the North Carolina Workers' Compensation Act and shall provide for the payment of workers' compensation to its employees in the manner and to the extent required by such Act. In the event Provider is excluded from the requirements of such Act and does not voluntarily carry workers' compensation coverage, Provider shall carry or cause its employees to carry adequate medical/accident insurance to cover any injuries sustained by its employees or agents while fulfilling Provider's obligations under this Agreement.

Provider agrees to furnish County proof of compliance with said Act or adequate medical/accident insurance coverage upon request.

21. REMEDIES

- a. **RIGHT TO COVER.** If Provider fails to meet any completion date or resolution time set forth, due to no fault of County, the County may take any of the following actions with or without terminating this Agreement, and in addition to, and without limiting, any other remedies it may have:
 - i. Employ such means as it may deem advisable and appropriate to perform itself or obtain the Services from a third party until the matter is resolved and Provider is again able to resume performance under this Agreement; and
 - ii. Deduct any and all expenses incurred by County in obtaining or performing the Services from any money then due or to become due Provider and, should the County's cost of obtaining or performing the Services exceed the amount due Provider, collect the amount due from Provider.
- b. **RIGHT TO WITHHOLD PAYMENT.** County reserves the right to withhold any portion, or all, of a scheduled payment if Provider fails to perform under this Agreement until such breach has been fully cured.
- c. **SETOFF.** Each party shall be entitled to set off and deduct from any amounts owed to the other party pursuant to this Agreement all damages and expenses incurred or reasonably anticipated as a result of the other party's breach of this Agreement.
- d. **OTHER REMEDIES.** Upon breach of this Agreement, each party may seek all legal and equitable remedies to which it is entitled. The remedies set forth herein shall be deemed cumulative and not exclusive and may be exercised successively or concurrently in addition to any other available remedy.
- e. **NO SUSPENSION.** In the event that County disputes in good faith an allegation of breach by Provider, notwithstanding anything to the contrary in this Agreement, Provider agrees that it will not terminate this Agreement or suspend or limit any Services or warranties, unless: (i) the parties agree in writing; or (ii) an order of a court of competent jurisdiction determines otherwise; provided, however, this dispute period shall be limited to ninety (90) days.

22. TAXES

Provider shall be responsible for paying all taxes, fees, assessments and premiums of any kind payable on its employees and operations. Provider shall substantiate, on demand by the County, that all taxes and other charges are being properly paid.

23. HEALTH AND SAFETY

Provider shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with performing the Services. Provider shall take all

necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees in connection with performing the Services and other persons who may be affected thereby.

24. NON-DISCRIMINATION IN EMPLOYMENT

Provider shall not discriminate against any employee or applicant for employment because of race, ethnicity, gender, gender identity, sexual orientation, age, religion, national origin, disability, color, ancestry, citizenship, genetic information, political affiliation or military/veteran status, or any other status protected by federal, state or local law or other unlawful form of discrimination. Provider shall take affirmative action to ensure that applicants are employed and that employees are treated fairly during employment. In the event Provider is determined by the final order of an appropriate agency or court of competent jurisdiction to be in violation of any non-discrimination provision of federal, state or local law or this provision, this Agreement may be cancelled, terminated or suspended in whole or in part by County, and Provider may be declared ineligible for further County agreements.

25. COMPLIANCE WITH E-VERIFY PROGRAM

Pursuant to N.C.G.S. § 143-133.3, Provider understands that it is a requirement of this Agreement that Provider and its subcontractors or consultants must comply with the provisions of Article 2 of Chapter 64 of the North Carolina General Statutes. In doing so, Provider agrees that, unless it is exempt by law, it shall verify the work authorization of its employees utilizing the federal E-Verify program and standards as promulgated and operated by the United States Department of Homeland Security, and Provider shall require its subcontractors and consultants to do the same. Upon request, Provider agrees to provide County with an affidavit of compliance or exemption.

26. CONFIDENTIAL INFORMATION

For purposes of this Agreement, the party disclosing Confidential Information is the “Discloser,” and the party receiving Confidential Information is the “Recipient.” “Confidential Information” shall mean any nonpublic information concerning the parties’ respective businesses including, but not limited to, all tangible, intangible, visual, electronic, present or future information such as: (a) trade secrets; (b) financial information, including pricing; (c) technical information, including research, development, procedures, algorithms, data, designs and know-how; (d) business information, including operations, planning, marketing interests and products; and (e) the terms of any agreement between the parties and the discussions, negotiations and proposals related thereto. Confidential Information disclosed to the other party must be clearly identified. Written Confidential Information must be clearly marked in a conspicuous place with an appropriate legend identifying the information as “Confidential.” Confidential Information that is not written must be identified as confidential at the time of disclosure and confirmed in writing delivered to Recipient within fifteen (15) days of disclosure.

The restrictions regarding the use and disclosure of Confidential Information do not apply to information that is:

- a. in the public domain through no fault of the Recipient;
- b. within the legitimate possession of the Recipient, with no confidentiality obligations to a third party;
- c. lawfully received from a third party having rights in the information without restriction, and without notice of any restriction against its further disclosure;
- d. independently developed by the Recipient without breaching this Agreement or by parties who have not had, either directly or indirectly, access to or knowledge of the Confidential Information;
- e. disclosed with the prior written consent of the Discloser; or
- f. required to be disclosed by law, regulation or court or governmental order, specifically including requests pursuant to the Public Records Laws of North Carolina contained in Chapter 132 of the North Carolina General Statutes. In the event Recipient receives such a request, it shall notify Discloser and Discloser shall have the opportunity to defend against production of such records at Discloser's sole expense.

27. OWNERSHIP OF WORK PRODUCT

- a. All work product created by Provider pursuant to this Agreement, including, without limitation, design drawings, construction documents, photographs and models and any derivative works and compilations, and whether or not such work product is considered a "work made for hire" or an employment to invent (hereinafter referred to collectively as "Work Product") shall be the exclusive property of County. County and Provider agree that such original works of authorship are "works made for hire" of which County is the author within the meaning of the United States Copyright Act. To the extent that County is not the owner of the intellectual property rights in and to such Work Product, Provider hereby irrevocably assigns to County any and all of its rights, title and interest in and to all original Work Product created pursuant to this Agreement, whether arising from copyright, patent, trademark, trade secret or any other state or federal intellectual property law or doctrine. Upon County's request, Provider shall execute such further documents and instruments or obtain such documents from third parties, including consultants and subcontractors, if applicable, necessary to fully vest such rights in County. Provider forever waives any and all rights relating to original Work Product created pursuant to this Agreement, including without limitation, any and all rights arising under 17 U.S.C. § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.
- b. In the event the use of any of Provider's intellectual property, including any derivative work created with the use of third-party intellectual property, is necessary for the use of any Work Product, Provider hereby grants to County an irrevocable, non-exclusive, non-transferable, perpetual, royalty-free license to use the intellectual property for the purposes set forth in this Agreement and will ensure that any third-party grants the same.

- c. County may use Work Product for any other purpose and on any other project without additional compensation to Provider. Notwithstanding the foregoing, the use of Work Product by County for any purpose other than as set forth in this Agreement shall be at County's risk.

28. NO ASSIGNMENT WITHOUT CONSENT

Neither party shall assign this Agreement (or assign any right or delegate any obligation contained herein whether such assignment is of service, of payment or otherwise) without the prior written consent of the other party hereto. Any such assignment without the prior written consent of the other party hereto shall be void. An assignee shall acquire no rights, and County shall not recognize any assignment in violation of this provision.

29. GOVERNING LAW AND VENUE

This Agreement shall be governed by applicable federal law and by the laws of the State of North Carolina without regard for its choice of law provisions. All actions relating in any way to this Agreement shall be brought in the General Court of Justice of the State of North Carolina in Brunswick County or in the Federal District Court for the Eastern District of North Carolina, Wilmington division.

30. DISPUTE RESOLUTION

Should a dispute arise as to the terms of this Agreement, both parties agree that neither may initiate binding arbitration. The parties may agree to non-binding mediation of any dispute prior to the bringing of any suit or action.

31. GOVERNMENTAL IMMUNITY

County, to the extent applicable, does not waive its governmental immunity by entering into this Agreement and fully retains all immunities and defenses provided by law with regard to any action based on this Agreement.

32. NON-WAIVER

Failure by County at any time to require the performance by Provider of any of the provisions of this Agreement shall in no way affect County's right hereunder to enforce the same, nor shall any waiver by County of any breach be held to be a waiver of any succeeding breach or a waiver of this Section.

33. ENTIRE AGREEMENT

This Agreement constitutes the entire agreement between the parties with respect to the subject matter herein. There are no other representations, understandings or agreements between the parties with respect to such subject matter. This Agreement supersedes all prior agreements, negotiations, representations and proposals, written or oral. Notwithstanding the foregoing, all documents included in the Request for Qualifications and the qualifications statement submitted

by Provider, if applicable, including, but not necessarily limited to: General Conditions; Supplementary General Conditions; Scope of Work; Specifications; Addenda; Accepted Proposal; Notice to Proceed; Performance Bond; Payment Bond; MBE forms; Power of Attorney; Insurance Certificates; Approval by County Commissioners; Tax Statement and Certification; Notice of Substantial Completion; Notice of Final Completion and Acceptance; and Drawings are incorporated herein by reference and made an integral part of this Agreement. To the extent the terms of such documents conflict with the terms of this Agreement, the terms of this Agreement shall prevail.

34. HEADINGS

The headings in this Agreement are for convenience of reference only and shall not define or limit any of the terms or provisions hereof.

35. SEVERABILITY

The invalidity of one or more of the phrases, sentences, clauses or sections contained in this Agreement shall not affect the validity of the remaining portion of the Agreement so long as the material purposes of this Agreement can be determined and effectuated. If a provision of this Agreement is held to be unenforceable, then both parties shall be relieved of all obligations arising under such provision, but only to the extent that such provision is unenforceable, and this Agreement shall be deemed amended by modifying such provision to the extent necessary to make it enforceable while preserving its intent.

36. AMENDMENTS

No amendments or changes to this Agreement, or additional Proposals or Statements of Work, shall be valid unless in writing and signed by authorized agents of both Provider and County.

37. NOTICES

- a. **DELIVERY OF NOTICES.** Any notice, consent or other communication required or contemplated by this Agreement shall be in writing, and shall be delivered in person, by U.S. mail, by overnight courier, by electronic mail or by facsimile to the intended recipient at the address set forth below.
- b. **EFFECTIVE DATE OF NOTICES.** Any notice shall be effective upon the date of receipt by the intended recipient; provided that any notice which is sent by facsimile or electronic mail shall also be simultaneously sent by mail deposited with the U.S. Postal Service or by overnight courier.

- c. **NOTICE ADDRESS.** Communications that relate to any breach, default, termination, delay in performance, prevention of performance, modification, extension, amendment or waiver of any provision of this Agreement shall be sent to:

- i. For the County: Brunswick County Manager
P.O. Box 249
Bolivia, NC 28422
Fax: 910-253-2022

- ii. For the Provider: CDM Smith Inc.
5400 Glenwood Avenue, Suite 400
Raleigh, NC 27612

[SIGNATURES APPEAR ON FOLLOWING PAGE]

38. SIGNATURES

This Agreement, together with any amendments or modifications, may be executed in one or more counterparts, each of which shall be deemed an original and all of which shall be considered one and the same agreement. This Agreement may also be executed electronically. By signing electronically, the parties indicate their intent to comply with the Electronic Commerce in Government Act (N.C.G.S. § 66-358.1 et seq.) and the Uniform Electronic Transactions Act (N.C.G.S. § 66-311 et seq.). Delivery of an executed counterpart of this Agreement by either electronic means or by facsimile shall be as effective as a manually executed counterpart.

ATTEST:

BRUNSWICK COUNTY

 Clerk to the Board /
 Deputy Clerk to the Board

By: _____
 Chairman, Board of Commissioners

[SEAL]

CDM SMITH INC.

By: Reed M. Barton

Printed Name: Reed M. Barton

Title: Client Service Leader

Date: 4/29/2021

“This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.”

Julie A. Miller
 Julie A. Miller, Director of Fiscal Operations
 Brunswick County, North Carolina

APPROVED AS TO FORM

Robert V. Shaver, Jr.
 Robert V. Shaver, Jr., County Attorney /
 Bryan W. Batton, Assistant County Attorney

This is **EXHIBIT A**, consisting of 9 pages, referred to in and part of the **Professional Services Agreement** between Owner and Engineer to which it is attached.

Engineer's Services

The Professional Services Agreement is supplemented to include the following agreement of the parties.

Engineer shall provide Services in accordance with the Request for Qualifications, as applicable, and in accordance with the Basic and Additional Services as set forth below.

PART 1 – BASIC SERVICES

Brunswick County Utilities (County) provides water service to 45,940 retail customers and nine (9) wholesale customers from two water treatment plants. The County is anticipating significant growth over the next twenty (20) years and is seeking to develop a Master Plan to evaluate water supply, treatment, transmission, and distribution needs to support existing customers and future growth and a Capital Improvement Plan to guide the planning of water system projects.

This Scope of Services includes development of a comprehensive Water Treatment and Distribution System Master Plan including water demand projections, hydraulic model development and evaluation, water supply and treatment evaluation, and phased recommendations for future water infrastructure needs. This Scope of Services consists of the following major tasks:

Task 1 – Kickoff & Data Review

Task 2 – Hydraulic Model Updates & Calibration

Task 3 – Water Demand Projections

Task 4 – Hydraulic Evaluation & Identify Alternatives

Task 5 – Water Supply & Treatment Evaluation

Task 6 – Alternatives Analysis, Phasing & Capital Improvement Plan

Task 7 – Master Plan & Presentation

Task 8 – Project & Quality Management

A1.01 Task 1 – Kickoff and Data Review

1.01.1 Data Collection and Review

Engineer will obtain and review information from the County pertaining to existing water supply and demands, metered water usage, growth projections, existing water distribution system hydraulic model, GIS and other data needed to develop and update the hydraulic model of the water distribution system,

and previous studies applicable to this master plan. A preliminary data request list will be provided to the County to identify data needed to complete the master plan.

1.01.2 Kickoff Meeting

Engineer will conduct a virtual kickoff meeting with County staff to define the goals, objectives and priorities to help focus the work effort to be accomplished. Data collection will also be discussed as well as schedule, communications, and risk management. Engineer will develop meeting minutes and distribute to all meeting attendees.

Task 1 Deliverables:

- Data Request List
- Kickoff Meeting Minutes
- List of project milestones with dates

A1.02 Task 2 – Hydraulic Model Updates and Calibration

1.02.1 Hydraulic Model Updates

The County has an existing water distribution system model developed in WaterGEMS software. Engineer will evaluate the status of the existing model versus the County's GIS. Engineer will update the model to include any water system facilities constructed since the previous model update and work with the County to obtain as-built drawings to address inconsistencies between the existing model and GIS.

Modeled tanks, pumps and valves will be reviewed and updated based on manufacturer's curves, pump performance data, or as-built data provided by the County.

Engineer will meet with operators to discuss typical system operations and obtain information to set up the model to simulate the system operations for extended period simulation (EPS) model runs. One virtual meeting with operations staff to discuss these items is assumed.

1.02.2 Existing Demand Allocation

Engineer will allocate existing demands into the hydraulic model based on meter/billing records. Annual average demand for each customer (from meter/ billing data) will be geocoded by address or point and allocated to the nearest pipe in the hydraulic model. Based on review of historical data, peaking factors will be developed to simulate maximum and average demand days. Estimates of non-revenue water will also be included in system-wide demands. Estimates of water supplied from the County's system to outside municipalities or other wholesale users will be determined from meter data and input as demand nodes in the model.

After review of monthly meter/billing data, Engineer will request hourly data from the County's advanced metering infrastructure (AMI) system. Engineer will analyze the AMI data to determine diurnal demand patterns for key customers or customer types. If hourly data is not able to be provided by the County, Engineer will apply typical diurnal demand patterns based on Engineer's experience with water systems of similar size/customer base.

1.02.3 Model Calibration

Engineer will calibrate the model for both hydraulics and extended period simulations using field and operational data. Activities include:

- Develop a plan for collecting field data and other data requirements for model calibration. Engineer will incorporate County's feedback on the proposed plan.
- Identify up to 15 proposed locations for collecting hydrant flow test data. It is assumed that County staff will conduct the hydrant flow tests and provide data to the Engineer. Engineer will provide one person for up to 1 day to assist with starting field data collection and witnessing hydrant flow test procedures.
- Review available system pressure logging data and identify proposed locations for collecting additional pressure data from temporary pressure loggers, if necessary, to verify modeled pressures. It is assumed County will provide the equipment and labor to collect pressure data and provide data to the Engineer.
- Run simulations to compare model results to field measured values. Model calibration will be accomplished using an iterative process where simulation results are compared to field measured values. Where there is disagreement, the model parameters will be adjusted and the model will be rerun and the results rechecked. This process continues until model results agree reasonably with field observations. Potential calibration issues will be summarized for discussion with County staff. Additional field investigation by County staff may be required, depending on the calibration results.
- Calibrate the model for extended period simulations by comparing pressures, flows and tank levels at known locations over a 24-hour period.

Engineer will conduct a virtual meeting with County staff to review the findings and results of the model updates and calibration. This meeting is assumed to also discuss the Task 3 water demand projections.

Task 2 Deliverables:

- Model calibration plan
- A copy of the final calibrated WaterGEMS hydraulic model will be provided at the completion of the project
- A copy of the model data exported to GIS format will be provided at the completion of the project
- Meeting minutes for model updates, calibration, and demand projections meeting

A1.03 Task 3 – Water Demand Projections

Engineer will develop future water demand projections for three planning periods: near-term (approximately 5 years), mid-term (approximately 10 years), and long-term (approximately 20 years). Engineer will review and utilize population growth projections, developed by the County's wastewater master planning consultant, as a basis for the projections. This task relies upon growth projections developed for the wastewater master plan and does not include additional development of growth

projections. One coordination meeting with the County's wastewater master planning consultant is included in this task. Water demands will be estimated by applying unit demand factors estimated from historical water billing data to the growth and population projections.

Engineer will consult with County staff to determine the timing and quantity of proposed water supply to wholesale water purchasers or other major users.

Seasonal peaking factors will be determined from historical data and applied to account for high-season and off-season population.

Engineer will conduct a virtual meeting with County staff to review and approve the draft water demand projections. This meeting is assumed to also discuss the Task 2 model updates and calibration.

Task 3 Deliverables:

- Summary tables and figures of the draft water demand projections for the County's review

A1.04 Task 4 – Hydraulic Evaluation and Identify Alternatives

1.04.1 Establish Criteria and Existing System Evaluation

In collaboration with the County, Engineer will establish criteria for system assessment and modeling including allowable pressure ranges, maximum velocities, allowable headloss, water age, fire flow requirements, resiliency, and other factors. The evaluation criteria will include the requirements of applicable state regulations.

Engineer will use the calibrated hydraulic model developed under Task 2 to perform extended period simulations to confirm that tanks can be refilled on maximum day demand scenarios, that minimum pressures are met under maximum day demands (which includes peak hour) and steady-state runs to check fire-flow availability throughout the existing system.

Engineer will review existing system operation and demands to determine if established hydraulic criteria are being met and to identify immediate action requirements.

1.04.2 Evaluate Future System Improvements

Engineer will use the calibrated hydraulic model developed under Task 2 to perform a hydraulic evaluation and determine system improvements required to meet projected water demands at the defined planning periods. Activities include:

- Prior to complete calibration of the system, engineer will provide preliminary pipe sizing overview.
- Assign future demand projections to junctions in the model. Where necessary, proposed transmission mains will be extended to currently un-served areas to account for future development. Sizing of the new transmission mains will be evaluated. New transmission mains will be routed along roadways.

- Review near-term, mid-term, and long-term system operation and demand scenarios in a similar fashion to the existing system analyses. System deficiencies with respect to the established criteria will be identified for each planning period.
- Evaluate system-wide storage needs through the planning horizon, considering diurnal demand fluctuation needs and fire-flow requirements.
- Identify improvements to address near-term through long-term system deficiencies. This activity will consider the potential sources of future water supply identified under Task 5. Infrastructure improvements may consist of new water mains, new pumps at existing pump stations, new booster pump stations, and new storage tanks. Potential changes to system operations will also be evaluated to address deficiencies.

1.04.3 INTENTIONALLY OMITTED

1.04.4 Identify Alternatives

Based on results of the hydraulic model evaluation (Task 4) and water supply evaluation (Task 5), Engineer will develop system-wide alternatives to address deficiencies and meet future demands from both the water supply and water distribution perspectives. Up to 5 alternatives will be developed. Engineer will identify potential implementation problems or other non-cost related factors for improvement alternatives, such as water quality impacts, permitting, constructability, expandability, environmental impacts, redundancy, and operational flexibility.

Conceptual cost estimates and phasing for the infrastructure improvement alternatives identified in Task 4 will be developed under Task 6.

Engineer will conduct an in-person workshop with County staff to review the hydraulic evaluation and alternatives. This workshop is assumed to also discuss the Task 5 water supply and treatment evaluation.

Task 4 Deliverables:

- Brief memorandum summarizing the initial evaluation and conclusions for the fast-track projects
- Conceptual map of possible future projects to serve future areas. Meeting minutes for hydraulic evaluation & alternatives and water supply & treatment evaluation workshop

A1.05 Task 5 – Water Supply and Treatment Evaluation

1.05.1 Water Supply Capacity Evaluation

The County's existing water treatment facilities include the Northwest Water Treatment Plant (NWTP) with water supply from the Cape Fear River and the 211 WTP with groundwater supply. Engineer will perform a gap analysis that compares the existing and future build-out capacity of the existing water supply sources and WTPs with the future water demand projections. Engineer will identify options for meeting the future water demands and will provide a conceptual evaluation to compare the identified alternatives with respect to the following:

- Quantity of supply
- Water quality
- Treatability and cost of treatment
- Permitting requirements
- Sustainability
- Geographic location in relation to demands and demand growth
- Reliability and redundancy
- Transmission improvements needed to convey water

The evaluation of water supplies will be based on desktop information including existing reports and data about candidate supplies, experiences of other water systems which use those supplies, Engineer's experience with treatment technologies, discussions with regulatory agencies, and other pertinent information. This scope does not include any field testing. Recommendations will be provided for further testing as part of subsequent studies/design to confirm viability of source water supplies and treatment.

1.05.2 Water Treatment Improvements

Engineer will identify and evaluate capital projects needed to maintain, improve, and optimize the County's existing WTPs. These may include:

- Raw-water storage expansion, NWTP (potential future impoundment)
- Replacement of RO Membranes, NWTP
- Additional RO Membrane capacity, NWTP
- High-service pump replacements, both WTPs
- Aging facilities (e.g., chemicals, etc.), both WTPs
- Residuals handling improvements, both WTPs
- Wellfield maintenance, 211 WTP
- Addition of groundwater wells, NWTP

Engineer will provide conceptual evaluation of alternatives for the above improvements, including lifecycle costs where appropriate to compare alternatives (e.g. constructing new residuals dewatering vs. contract operations). Engineer will develop capital costs and phasing of the improvements to be included in the Capital Improvement Plan under Task 6.

Engineer will conduct an in-person workshop with County staff to review the water supply and treatment. This meeting is assumed to also discuss the Task 4 hydraulic evaluation and alternatives.

A1.06 Task 6 – Alternatives Analysis, Phasing, and Capital Improvement Plan

Engineer will review the alternatives for future water supply, treatment, and distribution developed under Tasks 4 and 5. Conceptual level capital cost estimates will be prepared for each alternative for comparison. Engineer will work with the County to identify the appropriate evaluation factors and rank the alternatives accordingly, and to recommend a preferred alternative to meet the overall planning objectives.

Engineer will develop a phased plan for implementation of the recommended improvements, including conceptual level cost estimates, to support a Capital Improvement Plan (CIP) for the County's water system. The CIP will include a list of prioritized projects with timing of implementation and cost. Engineer will develop project sheets for each project that include a map showing the project location, project assumptions, size, cost, and projected year of implementation.

Engineer will conduct a virtual meeting with County staff to review the draft CIP and will incorporate the County's comments into a final CIP.

Task 6 Deliverables:

- Draft and Final CIP including list of projects and cost estimates
- Meeting minutes for draft CIP meeting

A1.07 Task 7 – Master Plan and Presentation

1.07.1 Develop Master Plan Report

Engineer will develop a Water Treatment and Distribution System Master Plan report that summarizes the methodologies, results, and conclusions of the tasks included in this Scope of Services. The report will include the recommended CIP and an Executive Summary.

The Master Plan report will include detailed descriptions of each recommended improvement along with the key criteria driving the need for that improvement. This will allow the County flexibility to adjust improvements should changes be experienced in future growth or other conditions.

Engineer will provide a draft report to the County for review. One virtual meeting is included in this task to discuss the draft report. After the meeting, Engineer will address comments and prepare a final report for the County.

1.07.2 Presentation to Board of Commissioners

Engineer will develop presentation materials and present the findings of the project at a meeting of the County Board of Commissioners.

Task 7 Deliverables:

- One electronic copy and two (2) hard copies of the Draft Master Plan report
- One electronic copy and seven (7) hard copies of the Final Master Plan report
- Presentation for the Board of Commissioners meeting

A1.08 Task 8 – Project and Quality Management

Engineer will perform activities involved with the planning and subsequent monitoring and control of the project throughout the duration of the project. Engineer will conduct regular communications with the County's project manager, prepare materials and facilitate meetings as listed in Tasks 1 through 7, and provide written progress reports to be submitted with monthly invoices. Engineer will undertake quality control activities in accordance with the Engineer's Quality management System that include monthly project status reporting, communication plans, and independent specialist reviews.

Task 8 Deliverables:

- Monthly progress reports and invoices

ASSUMPTIONS AND EXCLUSIONS

The following list of exclusions is provided to clarify the assumptions used to create this Scope of Services. The following items are excluded:

- Any work not explicitly stated herein
- Providing equipment or labor for field testing for model calibration, beyond providing one person for up to 1 day to witness hydrant flow test procedures
- Development of population growth projections. These are assumed to be provided by the County's wastewater master plan consultant
- Field investigations for alternative water supply options (groundwater surveys, well installation and yield tests, etc.)
- Geotechnical, land survey, and subsurface utility exploration surveys
- Purchase of hydraulic modeling software
- Water rate studies

SCHEDULE

It is anticipated that this Project will take approximately fourteen (14) months to complete after receipt of the initial data request in accordance with the schedule included below. This schedule assumes the following:

- County will provide necessary data in a timely manner and will provide review comments on draft deliverables within two weeks.
- Population growth projection information is obtained from the wastewater master planning project within two (2) months of Notice to Proceed (NTP).
- Field testing data for model calibration will be provided by the County within three (3) months of NTP.

	Months from Receipt of Initial Data													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Task 1 – Kickoff & Data Review														
Task 2 – Hydraulic Model Updates & Calibration														
Task 3 – Water Demand Projections														
Task 4 – Hydraulic Evaluation & Identify Alternatives														
Task 4.2 – Preliminary Sizing Evaluation														
Task 5 – Water Supply & Treatment Evaluation														
Task 6 – Alternatives Analysis, Phasing & Capital Improvement Plan														
Task 7 – Master Plan & Presentation														
Task 8 – Project & Quality Management														

This is **EXHIBIT B**, consisting of 2 pages, referred to in and part of the **Professional Services Agreement** between Owner and Engineer to which it is attached.

Payments to Engineer for Services
Basic Services - Lump Sum

The Professional Services Agreement is supplemented to include the following agreement of the parties.

Compensation for Basic Services - Method of Payment

A. Owner shall pay Engineer for Basic Services as follows:

1. A Lump Sum amount based on the following estimated distribution of compensation:

	<u>Amount</u>	<u>Duration</u>
a. Study and Report Phase		See schedule in Exhibit A
1) Task 1 – Kickoff & Data Review	\$ <u>11,800</u>	
2) Task 2 – Existing System Model Updates & Calibration	\$ <u>41,600</u>	
3) Task 3 - Water Demand Projections	\$ <u>11,200</u>	
4) Task 4 - Hydraulic Evaluation & Identify Alternatives	\$ <u>51,700</u>	
5) Task 5 - Water Supply & Treatment Evaluation	\$ <u>29,300</u>	
6) Task 6 - Alternatives Analysis, Phasing & Capital Improvement Plan	\$ <u>31,800</u>	
7) Task 7 - Master Plan_& Presentation	\$ <u>41,400</u>	
8) Task 8 - Project & Quality Management	\$ <u>25,100</u>	
Basic Services Total	\$ <u>243,900</u>	

2. Engineer may alter the distribution of compensation between individual phases noted herein to be consistent with Services actually rendered, but shall not exceed the total Lump Sum amount unless approved in writing by the Owner.
3. The Lump Sum includes compensation for Engineer's services and services of Engineer's Consultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor, overhead, profit, and Reimbursable Expenses.
4. The portion of the Lump Sum amount billed for Engineer's services will be based upon Engineer's estimate of the percentage of the total services actually completed during the billing period.
5. The date for project completion shall be determined by adding the above noted Total Duration, as set forth in Exhibit A, also known as the "Time of Completion," to the date of the Notice to Proceed issued by Brunswick County.