

#### **BLACK & VEATCH INTERNATIONAL COMPANY**

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June 28, 2018

City of Greensboro 2602 S. Elm-Eugene Street Greensboro, NC 27406

Attention:

Ms. Jana Stewart, PE

**Engineering Supervisor** 

Subject:

Water Resources Capacity Development Study

**Professional Services Contract** 

Dear Ms. Stewart:

We are pleased to present the attached Professional Services Contract for the Water Resources Capacity Development Study for approval by City Council. Also provided is Attachment A which describes the Scope of Services, Compensation, and Schedule for the project, as well as Insurance Certificates.

Our proposed budget for the project is \$969, 176.00. Included in the budget, the estimated M/WBE participation is \$116,301.00 or 12% of the contract value. Please let me know if you have any questions or need additional information. We are excited to work with you and the City on this important project!

Very truly yours,

**BLACK & VEATCH INTERNATIONAL COMPANY** 

Mike Osborne, PE

**Project Manager** 

#### CITY OF GREENSBORO

#### PROFESSIONAL SERVICES CONTRACT

This contract made and entered into this the _	day of	, 2018, by and between the
City of Greensboro, a municipal corporation of	of the State of North	Carolina (hereafter referred to
as the City) and Black & Veatch International	Company (hereafte	er referred to as the Consultant).

#### WITNESSETH:

#### **Professional Services Rendered**

In consideration of the monetary payment hereinafter described in Attachment A, attached hereto and made a part hereof, the Consultant will provide services to the City of Greensboro.

# Relationship

The Parties in this contract agree that the relationship created by this contract is that of employer and independent contractor. The Consultant is not an employee of the City of Greensboro, and is not entitled to the benefits provided by employer to its employees, including, but not limited to, group insurance and pension plan. The Consultant may practice his profession for others during those periods when the Consultant is not performing work under this contract for the City.

# **Supervision and Inspection**

In the performance of the work contemplated in this agreement, the Consultant is an independent contractor with the authority to control and direct the performance of the details of the services that are the subject of this contract. However, the work contemplated in this agreement must meet the approval of the City and shall be subject to City's general rights of inspection and supervision to secure the satisfactory completion thereof.

# **Specific Duties & Responsibilities**

The specific duties and responsibilities of the Consultant shall be as described in the Scope of Services for the Water Resources Capacity Development Study, included in Attachment A.

# Compensation

The City agrees to pay the Consultant an amount not to exceed \$ 969,176.00. The Consultant will be paid as detailed in Attachment A, attached hereto and made a part hereof. Bills for fees or other compensation for Services or expenses shall be submitted to the City in detail sufficient for a proper preaudit and postaudit thereof. Consultant will complete project work within 15 months.

# **Non-Appropriation Clause**

The automatic renewal clause shall not apply to this contract should the Greensboro City Council fail to appropriate funds for the additional term of the contract for the ensuing fiscal year. If this non appropriation occurs the contract shall become void.

#### Invoices

#### 1. Submittal

Invoices to the City for compensation shall be submitted not more often than monthly. Invoices will be based on 100% of the work completed during the preceding month.

# 2. Receipts Required

Where invoices are based in part on reimbursable expenses, the Consultant shall collect and maintain receipts for said expenses and shall make the receipts available to the City, if requested. The requirement to retain receipts shall generally follow the established rules of the Federal Internal Revenue Service regarding what type of expenditure must be supported by receipts for income tax purposes.

# 3. Disputed Items

If any items in any invoices submitted by the Consultant are disputed by City for any reason, including the lack of supporting documentation, City shall temporarily delete the item(s) and shall promptly notify the Consultant of dispute and request clarification and/or remedial action. After the dispute has been settled, the Consultant shall include the disputed item on a subsequent regularly scheduled invoice or on a special invoice for the disputed item only. The undisputed portion of the invoices shall, however, be paid within the normal 30-day period.

### **Payment of Taxes and Insurance**

The Consultant assumes full responsibility for the payment of all assessments, payroll taxes, or contributions, whether State or Federal, as to all employees engaged in the performance of work under this contract. In addition, the Consultant agrees to pay any and all gross receipts, compensation, transaction, sales, use, or other taxes and assessments of whatever nature and kind levied or assessed as a consequence of the work performed or on the compensation paid under this contract.

#### Insurance

During the performance of the services under this Agreement, the Consultant shall maintain the following insurance:

1. General Liability Insurance, including but not limited to coverage for all premises and non-premises operations, independent contractors, broad form property

damage coverage, including explosion, collapse and underground property damage hazards, personal injury liability protection including coverage relating to employment of persons, contractual liability protection, and products and completed operations coverage. This insurance shall provide bodily injury limits of not less than \$1,000,000 for each occurrence and not less than \$2,000,000 in the aggregate, and with property damage limits of not less than \$500,000 for each occurrence and not less than \$500,000 in the aggregate. The General Liability Insurance shall name the City of Greensboro as an additional insured, and the insurance shall be primary and non-contributory to any other insurance that may be available to the City.

- 2. Professional Liability Insurance with limits of not less than \$1,000.000 for each occurrence and not less than \$2,000,000 in the aggregate. This Professional Liability Insurance shall provide coverage for the claims concerning the Contractor's errors and omissions for the scope of services provided to the City under this Agreement, including but not limited to, claims concerning the preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications, and claims relating to supervisory, inspection, architectural or engineering activities.
- 3. Automobile Liability Insurance, covering owned, non-owned, hired vehicles and trailers using in connection with this project. This insurance shall provide bodily injury and property damages limits of not less than \$1,000,000 combined single limit/aggregate.
- 4. Worker's Compensation Insurance in accordance with statutory requirements and Employer's Liability Insurance with limits of not less than \$100,000 for each occurrence. In case any work is sublet under this Agreement, the Consultant shall require the subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the subcontractor's employees to be engaged in such work. This Agreement shall be void and of no effect unless the Consultant shall secure and keep in effect during the term of this Agreement the Consultant's compliance with the provisions of the Worker's Compensation laws of the State of North Carolina.

Consultant shall furnish certificates of insurance for all of the insurance coverages described herein within ten (10) days after this Agreement is ratified and certified copies of any amendments and/or renewals to the policies which occur thereafter. At least thirty (30) days written notice shall be given to the City prior to any cancellation, modification or non-renewal of any insurance required under this Agreement. The City reserves the right to examine the insurance policies required by this Agreement at Consultant's headquarters during normal business hours upon prior written request.

### **Amendments**

Alterations, deletions, and/or additions to the terms and conditions of this contract may only be made by the mutual written consent of the parties.

#### **Conflict of Interest**

No officer, employee or agent of the City, and no sub-grantee or sub-recipient of any federal or state funds from the City shall participate in the selection or in the award or administration of a contract supported by federal, state, or City funds if a conflict of interest, real or apparent, would be involved. Such a conflict of interest would arise when any of the following persons or entities has a financial or other interest in the firm selected for the award:

- (i) The employee, officer, agent;
- (ii) Any member of his immediate family;
- (iii) His or her partner; or
- (iv) An organization which employs, or is about to employ, anyone listed in (i) through (iii) above.

The grantee's or sub-grantee's officers, employees or agents will not solicit or accept gratuities, favors or anything of monetary value from contractors, potential contractors, or parties to sub-agreements except as may be allowed in the City's Gift Policy, B-20.

The Definitions for the terms Officer, Employee and Agent as used in this Section are as follows:

- a. **Officer** An individual who is elected to or appointed to serve or represent the City of Greensboro, other than an employee or independent contractor of the City.
- b. **Employee** Those individuals who are employed at will by the City of Greensboro for remuneration, whether full time or part time, benefited or non-benefited, and are charged with implementing City policies and City Council goals and objectives.
- c. **Agent** Those individuals or companies who are authorized to act on behalf of the City and who provide services or products, whether contractual or not.

# **Termination for Convenience**

The City, in its sole discretion, may terminate this Agreement in whole or in part whenever the City determines that said termination is in its best interest. Any such termination shall be effected by the delivery to the Consultant of a written notice of termination thirty (30) days before the effective date of the termination

# **Failure to Comply With Terms of Contract**

Should the Consultant fail to comply with the terms of this contract, the Consultant, upon actual or constructive notice of the default shall have thirty (30) days to remedy the default. Should the Consultant fail to remedy the default, the contract is terminated immediately upon the expiration of the thirty (30) days.

# **Rights**

City retains the exclusive rights to cancel, stop or re-schedule any or all services associated with the Contract.

# **Non-Discrimination Requirements**

As a condition of entering into this agreement, the Contractor represents and warrants that it will comply with the City's Commercial Nondiscrimination Policy, as described under Section V. A. 1 of the M/WBE Program Plan. As part of such compliance, the Contractor shall not discriminate on the basis of sex, race, gender, color, ethnicity, national origin, age, familial status, marital status, military status, political affiliation, religion, physical or mental disability, genetic information, sexual orientation, gender expression, or gender identity, nor shall the Contractor retaliate against any person for reporting instances of such discrimination. The Contractor shall provide equal opportunity for Subcontractors, vendors, and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the City's Relevant Marketplace. The Contractor understands and agrees that a material violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of the Contractor from participating in City contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party.

# **Compliance With Applicable Law**

Any term or condition of the Contract which by operation or existence is in conflict with applicable Local, State, or Federal Law shall be rendered void and inoperative. City and the Consultant agree to accept the remaining terms and conditions.

#### Indemnification

The Consultant does hereby agree to indemnify and save harmless the City of Greensboro, its officers, agents and employees, against all claims, actions, lawsuits and demands, including reasonable attorney fees, made by anyone for any damages, losses or injuries of any kind, including environmental, which may arise from the sole negligence of Consultant, its agents or employees, or as a result of work performed pursuant to this Contract.

#### Severance

Should any part of this contract be declared unenforceable, all remaining sections remain in force.

# **Non-Assignment**

The Consultant without the written approval of the City shall not assign this contract.

# **Governing Law**

This Agreement is made under, and in all respects shall be interpreted, construed, and governed by and in accordance with, the laws of the State of North Carolina. Venue for any legal action resulting from this Agreement shall lie in Guilford County.

# **Scope of Agreement**

This Agreement is intended by the parties hereto to be the final expression of their Agreement, and it constitutes the full and entire understanding between the parties with respect to the subject hereof, notwithstanding any representations, statements, or agreements to the contrary heretofore made.

# **Confidentiality**

The Recipient will not disclose to any third party, or make any use of the Discloser's Confidential Information except as required by the North Carolina Public Records Act. The Recipient will use at least the same standard of care to maintain the confidentiality of the Discloser's Confidential Information that it uses to maintain the confidentiality of its own Confidential Information, but in no event less than reasonable care. The obligations hereunder will remain in full force with respect to each item of Confidential Information for a period of ten (10) years after Recipient's receipt of that item. However, The City's obligations to maintain software as confidential will survive in perpetuity. "Discloser" means the party providing Confidential Information to the Recipient. "Recipient" means the party receiving Confidential Information from the Discloser. "Confidential Information" means non-public information of a party to this Agreement that is identified as or would be reasonably understood to be confidential and/or proprietary and is marked "confidential" and meets the requirements of North Carolina General Statutes 132-1.2. Confidential Information does not include information that: (i) is or becomes known to the public without fault or breach of the Recipient; (ii) the Discloser regularly discloses to third parties without restriction on disclosure; (iii) the Recipient obtains from a third party without restriction on disclosure and without breach of a non-disclosure obligation; or (iv) is independently developed by the Recipient without access to Confidential Information

Pursuant to the North Carolina Public Records Act, trade secrets or confidential information as defined by the North Carolina Public Records Act that are identified as such prior to disclosure to the Recipient is not public information and will not be released to the public by the Recipient except as set out below. Recipient will notify Discloser of any public records request, and if Discloser objects to Recipient disclosing any of the records responsive to the request, Discloser will notify the Recipient in writing within forty-eight (48) hours. If so notified, Recipient will not disclose the records until ordered to do so by a court of competent jurisdiction, and Discloser will enter an appearance as a party in-interest and defend Recipient in any claim, suit, mediation, litigation, or arbitration proceeding concerning the release of the records to which Discloser objected. Discloser will indemnify, save harmless, and pay any and all attorney's fees incurred by Recipient, and any attorney's fees Recipient is ordered to pay to any person(s) or organization(s) as a result of Discloser's objection to the release of the public records. Discloser will also indemnify, save harmless, and pay any and all claims for damages, court costs, or other

fees Recipient incurs as a result of Discloser's objection to the release of the records requested pursuant to the North Carolina Public Records Act.

# **E-Verify**

The Consultant certifies that it currently complies with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes, and that at all times during the term of this Contract, it will continue to comply with these requirements. Consultant also certifies that it will require that all of its subcontractors that perform any work pursuant to this Contract to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes. Violation of this section shall be deemed a material breach of this Contract.

#### **Iran Divestment Certification**

As of the date of this Contract/Agreement, the Contractor/Vendor/Consultant/Company certifies that it is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 147-86.58 and that the Contractor/Vendor/Consultant/Company will not utilize any subcontractor found on the State Treasurer's Final Divestment List. All individuals signing this Contract/Agreement on behalf of the Contractor/Vendor/Consultant/Company certify that they are authorized by the Contractor/Vendor/Consultant/Company to make this certification.

# ATTACHMENT A SCOPE OF SERVICES

Owner: City of Greensboro, North Carolina (City) Engineer: Black & Veatch International Company Project: Water Resources Capacity Development Study

# PROJECT DESCRIPTION

The purpose of the Water Resources Capacity Development Study (Study) is to identify and develop additional water supply and wastewater capacity to serve the growing Greensboro/Guilford County community. The City's goals for the Study include:

- 1. A plan for water and sewer services that supports the City's economic and population growth, and incorporates the City's Water/Sewer Extension Policy.
- 2. A water supply plan that integrates wastewater treatment and disposal. The City recently decommissioned North Buffalo Creek WWTP and its TZ Osborne WWTP is the only remaining plant discharging to a low flow stream South Buffalo Creek. Additional discharge capacity may be difficult to permit due to South Buffaloes' limited assimilative capacity.
- 3. An evaluation of realistic alternatives for long-term reliability including regional solutions with area utilities; e.g., satellite treatment located in growth corridors where concentrations of users are located such as the I-85 and I-40 corridors, the Piedmont Triad International Airport (PTIA), and the Mega Site.
- 4. A plan with options and tools to promote flexibility, reliability, and resilience in the City's water resources portfolio.
- 5. Thoughtful, community-focused solutions supported by Triple Bottom Line analysis.
- 6. A collaborative approach with a high level of City staff involvement.
- 7. Consideration of funding opportunities including Public Private Partnerships and alternative solutions.
- 8. A flexible long-term plan with the ability to adapt to future changes.

The Study is a critical first step for the City to understand the options that will provide adequate water supply and wastewater capacity for the growing community.





#### **SCOPE OF SERVICES**

#### **Task 1: General Project Administration**

- 1. Provide project management and administration for a 12-month project period to:
  - a. Correspond and consult with City and Stakeholders,
  - b. Coordinate activities of the project team,
  - c. Develop and implement specific work plans, schedule, procedures and a quality control plan, and
  - d. Provide overall project direction to meet City's objectives.
  - e. Maintain a project filing system to document and retain project records.
  - f. Prepare monthly invoices and status reports to document project progress.
- 2. Arrange for and participate in 12 monthly project status conference calls with City to review progress, upcoming activities, budget, schedule and deviations from this scope of services and exchange ideas and information.
  - a. Prepare and distribute the minutes for project meetings. Minutes for the project meetings will include a record of decisions made and actions assigned.
- 3. Provide administration and coordination of sub-consultants.

# Task 2: Project Initiation & Data Gathering

The City of Greensboro has a wealth of data and studies pertaining to their raw water, water treatment and distribution, and wastewater collection and treatment systems. The engineer will jump start the project by gathering and garnering an understanding of the current status of these data and studies, in an effort to avoid duplicating work completed or starting from scratch. Tasks include:

- 1. Engineer will initiate the project by preparing for and conducting a kick-off meeting with key City staff. A summary will be prepared and distributed to City. The meeting will include the following:
  - a. Project team introductions
  - b. Communication points of contact
  - c. Finalization of project plan and schedule
  - d. Transfer of technical information regarding the state of the current program, challenges, previous evaluations, and performance factors
- 2. Engineer will review the data, model, and reports initially provided by the City. Engineer will then prepare and issue a data request for any additional data/information that may be necessary to complete the Study prior to the workshop. The list will be organized by project task and prioritized to help the City focus on gathering the most important items first.

Deliverables: Data Request and Project Kick-Off Meeting Summary





# Task 3: Gap Analysis

Engineer will review data and conduct a gap analysis to understand the current level of system capacity versus the desired level of capacity. This will be accomplished by evaluating and analyzing the following:

- 1. Water Supply Evaluation. Engineer will review the recently completed water supply evaluation (through Year 2050), including safe yield analysis and recent bathymetric survey data. As necessary, engineer will perform an updated water supply evaluation using existing data provided by City. This may include a cursory evaluation of system yield for Greensboro's reservoirs to provide the understanding of the supply reliability and water quality of the City's current water resources. This evaluation will consider a high-level look at the hydrology, existing infrastructure, water rights, and existing operational schemes. The evaluation will estimate expected future supplies from the existing reservoirs, considering factors such as sedimentation, water quality/environmental concerns, and/or area development. This analysis will set a baseline of existing supplies and will inform how additional supplies may be integrated.
- 2. <u>Facilities Assessments</u>. Engineer will conduct plant assessments with representatives of City's Operations staff to evaluate the capability of the above ground facilities including existing water treatment plants, wastewater treatment plant, storage tanks, and pump stations with respect to both current and future demands. The following tasks will be completed:
  - a. Review influent flow and load data and raw water quality characteristics
  - b. Review current operational data
  - c. Evaluate through plant and final product performance utilizing calibrated process models or calculations to evaluate plant performance with respect to current and future demands
  - d. Evaluate current treatment costs to establish an O&M cost baseline
  - e. Evaluate the permit for the TZ Osborne facility and engage regulators to determine the potential for advanced treatment options to increase the permitted flow.

This task assumes on-site tours and meetings to evaluate and understand existing facilities on operations.

- 3. **Existing Demands, Flows, & Projections.** Since the City has recently completed master plans which include water demand and wastewater flow projections, Engineer will review these plans to understand the basis of the projections and leverage that information for this study.
  - a. Engineer will review the existing Water Supply Plan, Water Master Plan, and Wastewater Master Plan in order to understand the various existing demands and/or flows projected in each. This data will be utilized as the basis for the 10-year and 20-year planning horizons. Additionally, the projections developed in the Water Master Plan will be extrapolated to 2070 to provide a 50-year horizon outlook. The 50-year outlook will be used to provide additional in-sights into long term water resource needs.





- b. Engineer will review the City's Drought Management Plan to determine the effects a drought may have on the City's demands.
- 4. <u>Regulatory Review.</u> Identify existing regulations that establish permit limits and identify potential future regulations that could affect future permits. This task includes initial coordination meetings with regulators (Assume 4) and City's staff (Assume 4) to initiate collaboration and obtain input into the project.
- 5. **Gap Analysis.** Engineer will conduct a gap analysis to determine where potential gaps may be within the system. This analysis will look at gaps from raw water supply, water treatment and distribution capacity, collection and wastewater treatment capacity, and assimilated capacity for discharges standpoint.
- 6. **Technical Memorandum & Workshop.** Engineer will present findings in a Workshop to share findings with City and confirm understanding. A Technical Memorandum (TM) will be prepared to document understanding of current conditions, describe future conditions, and document the gap between the two. This TM will serve as the framework from which water resource opportunities and evaluations are developed and future tasks are conducted to close the gap.

Deliverables: Workshop Summary and TM

# **Task 4: Water Resources Opportunities**

Engineer will coordinate with City to identify and evaluate opportunities to close the water resource gaps identified in Task 3. The following activities will be performed:

- 1. <u>Alternative Water Resources Opportunities.</u> Investigate and perform screening-level evaluations of alternative water strategies for expanding water supply, including new sources (freshwater sources, storm water capture/rainwater harvesting, etc.); new infrastructure; water policy (including demand management); and alternative operational schemes. During this evaluation:
  - a. Existing interconnections with regional partners (Winston-Salem, High Point, Burlington, Reidsville, etc.) will be analyzed. In addition, additional potential interconnects with regional partners will be investigated to determine the viability of such a partnership.
  - b. Surface water sources from nearby lakes and rivers will be considered as potential additional sources of supply, at both their current capacity and increased capacities.
  - c. Alternative water storage will be investigated and considered as a way to conjunctively use freshwater supplies to increase yield. The City has some existing information about potential reservoir sites in the area, and this will serve as a starting point for this evaluation.
  - d. Stormwater capture will be assessed including regional facilities and sitespecific rainwater harvesting systems that can offset the need for potable water for industrial and/or irrigation demands. Analysis of existing





- industrial and irrigation demands in the Greensboro services area, as well as economic development corridors, will be evaluated to identify if stormwater capture projects may be best situated to meet needs.
- e. The City's existing water distribution system model will be reviewed and utilized to determine pumping and transmission conveyance infrastructure that would be needed for alternative water strategies. A maximum of 2 alternatives will be evaluated and compared. It is assumed that the model is up-to-date and calibrated to the degree necessary to perform these "high-level" distribution system conveyance evaluations. The hydraulic evaluations will primarily use the existing 2040 maximum day and peak hour steady state model scenarios (contained in the 2017 Greensboro Innovyze InfoWater hydraulic model) as well as 2030 and 2020 steady state scenarios to confirm conveyance infrastructure phasing. The evaluations will focus on major transmission system and pumping infrastructure and not detailed system operations using extended period simulations.
- f. The initial list of water resources options will be screened from a hydrologic stand-point only. After the initial screening process, up to 8 water resource opportunities will be selected for detailed evaluation, including a more detailed hydrologic/hydraulic evaluation, regulatory/permitting assessment, and planning-level cost estimate.
- 2. Reuse. Evaluate reuse (recycled water) opportunities to determine how best to integrate it into City's supply portfolio. Direct non-potable and indirect potable reuse will be considered through existing and satellite treatment facilities, which discharge into existing water supply reservoirs. Direct non-potable reuse will be evaluated to offset potable demands of large industrial customers, thereby reserving the water from the existing water treatment plants for potable needs. Indirect potable reuse will be evaluated as a way to augment the City's existing raw water supplies, thus increasing the safe yield from City-owned/controlled sources. Reuse, as a supply, will be evaluated including feasibility, costs, potential customers, etc. and compared to the other water supply alternatives.
- 3. <u>Alternative Treatment and Discharge Opportunities</u>. Engineer will evaluate alternative treatment and discharge opportunities:
  - a. Reuse. As wastewater effluent will be evaluated as various supply options (as indicated above), the use of the reuse will also be evaluated as a way to reduce the loading of nutrients, BOD and metals to receiving streams. Additionally, as part of this task, there will be coordination with City for a list of large water users, as well as developers, to identify reuse opportunities for both existing and planned infrastructure needs. Where reuse opportunities are identified, they will be further developed in the next two tasks as part of the alternatives for evaluation. Water quality requirements for reuse vary significantly depending on the application. A survey of these large water users will be conducted to identify water quality requirements of potential end users, which will be taken into account in the technology screening evaluation.





- b. Collection System Modeling. The City's existing wastewater collection system model will be reviewed and utilized to determine pumping and gravity/force main conveyance infrastructure that would be needed for alternative strategies. A maximum of 2 alternatives will be evaluated and compared. It is assumed that the model is up-to-date and calibrated to the degree necessary to perform these "high-level" collection system conveyance evaluations. The alternatives analysis will focus on trunk sewers (15-inch and larger) and large pumping stations (firm capacity greater than 1 MGD). The model node dry-weather flows for existing and 2050 future year scenario will be scaled as needed to create a new 2040 flow scenario for each alternative. Wet Weather flows for the new 2040 scenario will be assumed to increase linearly with the increase in population. Wet weather infiltration can be assumed constant in areas of redevelopment (vertical growth).
- c. <u>Alternative Treatment Locations.</u> City growth corridors will be assessed to determine potential areas for new wastewater treatment plants or satellite facilities. Evaluate up to 4 alternative WWTP sites and discharge locations, and determine likely permit limits for proposed plant at each site, accounting for population centers and growth corridors. These WWTP strategies will be evaluated including a high level order of magnitude cost and feasibility to determine the viability versus alternative strategies.
- 4. **Regulatory & Legislative Outreach.** Engineer will work proactively with NCDEQ and the NCEMC throughout the process to ensure recommended alternatives can be permitted effectively. It is assumed up to 6 in-person meetings will be conducted with NCDEQ, NCDWR, and legislative contacts as needed.
- 5. Water Resources Opportunities Technical Memorandum & Workshop. Engineer will present findings in a one-half day Water Resources Opportunities Workshop to share findings with City. A Water Resources Opportunities Technical Memorandum (TM) will be prepared to document Task findings.

Deliverables: Water Resources Opportunities Workshop Summary and TM

# Task 5: Technology Identification and Screening

Various Water Supply, Water Treatment, and Wastewater treatment technologies exist to support the City's project goals. The intent of this task is to summarize those technologies and provide the City guidance on technologies that appear best suited to meet the City's needs. Engineer will conduct the following activities:

1. <u>Technologies.</u> Conduct technology screening exercise to develop alternatives for final evaluation. Each alternative will consist of a portfolio of water, wastewater and integrated/non-traditional solutions. In the event that more than one technology is suitable for a given application, a single technology will be used as a placeholder to allow for evaluation of the portfolio solution, with a view to evaluating technology options in more detail should that portfolio be selected.





2. <u>Technology Screening Technical Memorandum.</u> A Technology Screening Technical Memorandum (TM) will be prepared to document Task findings.

Deliverables: Technology Screening TM

# **Task 6: Alternatives Analysis**

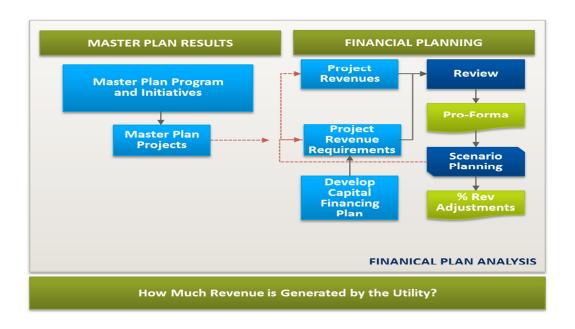
Engineer will evaluate the City's existing and potential alternative supplies and discharge opportunities against current and projected water demands and treatment needs to develop two (2) water supply portfolios of recommended improvements. Each portfolio will consider costs, water quality risks/challenges, impacts to the operation of the existing supply system, regulations/permitting requirements and public acceptance. Thereafter, the Engineer will evaluate the impact of implementing each of the portfolios of projects as determined in Task 5.

- 1. <u>iCIP Tool.</u> Develop an interactive CIP (iCIP) for use in screening alternatives. The iCIP tool includes interactive and customizable GIS-based cost-estimating tools and a present-worth analysis component to determine life-cycle costs for comparing alternative long-term system solutions and is then leveraged to develop the final CIP for the selected alternative. The tool also provides anticipated construction schedules that can be used to determine when a project should start and the duration of the construction. Opinions of probable construction cost will be Class 4 per the American Association of Cost Engineers (AACE). A Level 4 cost estimate is commensurate with a 1-10% level design concept and has an expected accuracy of 15 to -30% on the low end and +20 to +50% on the high end. As a part of the analysis detailed herein, the Engineer will prepare the initial outline of the portfolios of recommended improvements as a part of the list of CIP projects.
- 2. Scenario Evaluations. Refine the "best-fit" scenarios and conduct detailed evaluations using economic and qualitative criteria. Engineer's approach will incorporate salient issues related to Water Resources Capacity public perception, operations, technology, regulations, environmental impacts, risk, vulnerability, associated probabilities of failure, and sustainability. Engineer will leverage a triple bottom line (TBL) analysis with paired comparison using non-cost criteria paired with weighting factors. The engineer may employ Envision, Criterium DecisionPlus, or an alternative customized evaluation tool. The non-cost criteria will be established during the screening workshop and could include such issues as ease of implementation, revenue potential, regulatory risk, flexibility and adaptability, and ease of operation. The paired comparison approach establishes weighting values for each criterion applied to develop a comparative non-economic score. The analysis will be performed using input from City staff to develop the weighting values and allows the City to easily compare how important a specific criterion is to other criteria.
- 3. **Financial Plan.** Develop a multi-year financial plan to illustrate the ability of existing utility system revenues to meet revenue requirements. Upon consulting and





confirming with City staff, the Engineer will work to understand the existing revenue potential and cost requirements, appropriately incorporate and assess the portfolios of utility system projects, and incorporate the necessary financial metrics to determine the financial impact of implementing the portfolios of utility system projects. **Figure 1** provides an illustration of the approach to be utilized in completing the Financial Plan Analysis detailed herein.



Provided below is the scope of work associated with completing the Financial Plan:

- a. **Task Kick-Off and Data Collection** the Engineer will schedule a task kick-off meeting with City to define and align the task goals and objectives. Prior to the meeting, the Engineer will provide an initial data request which includes historical and current financial information, operating and capital budgets, and other applicable reports to be reviewed prior to the meeting. All information transferred to Engineer is preferred in an electronic form, where available.
- b. **Forecast of Existing and Projected Revenues** this task includes a detailed historical analysis of water volumes and customers in order to develop a 10-year forecast of water and wastewater volumes and customers. The results of the 10-year forecast of billing determinants will establish the basis to assess revenues under existing rates and forecast revenues over the 10-year forecast period. Activities associated with this task include:
  - Historical customer and volume analysis;
  - Customer account and volume projections;
  - Projection of revenues under existing rates; and
  - Projection of other revenues sources.
- c. **Forecast of Revenue Requirement Obligations** the Engineer will complete an examination of the historical financial reports, the operating and





capital budgets, and other applicable financial information in order develop a 10-year forecast of revenue requirements based on known future obligations and established escalatory factors for inflation, insurance, power, etc. Specific activities associated with this task includes:

- Project operation and maintenance expenses;
- Incorporate existing and project debt service;
- Review and include current reserves, capital outlay funding, and other requirements;
- Review and include annual capital expenditures; and
- Include the portfolios of utility system projects as a part of the City's annual capital requirements over the 10-year forecast period.
- d. **Determine the Adequacy of Water and Wastewater Rates** Upon the completion of the forecast of revenue requirements, the Engineer will combine the forecast of revenues and revenue requirements to develop a 10-year Financial Plan. The Financial Plan will provide an indication of the magnitude of the overall annual rate increases required to support existing utility system obligations and the requirements of the portfolios of utility system projects. In addition, the Engineer will complete a capital financing analysis to determine the appropriate level of debt, cash, and other funding necessary to fund capital and operating obligations and meet established financial metrics. The Engineer will complete and finalize one Financial Plan per portfolio of projects based on the goals and objectives established at the beginning of the project.

As part of this task, the Engineer will complete a neighboring utilities water and wastewater rate comparison to demonstrate the competitiveness of the existing water and wastewater rates. The Engineer will utilize a sample of 8 neighboring utilities as determined by the City.

- e. **Financial Plan Results Meeting** the Engineer will facilitate a meeting with the City to present and discuss the Financial Plan results and provide an outline of the financial impact associated with implementing the portfolios of utility system projects.
- f. **Task Report** the Engineer will complete a Task Report that documents the assumptions, analysis, and findings associated with the Financial Plan analysis detailed herein.
- 4. **Funding.** Work collaboratively with the City and the applicable funding agencies to maximize alternate funding resources. Engineer will evaluate State and Federal funding programs to identify potential agency metrics that coincide with the City's goals. A summary of viable funding programs, including Public-Private Partnerships, will be ranked for their potential grant and loan elements and expected terms. Engineer and the City will review this list of potential agencies to develop a funding strategy.





5. <u>Alternatives Analysis Technical Memorandum & Meeting.</u> Present findings and implementation strategies in a one-day Alternatives Analysis Workshop to share findings with City. An Alternatives Analysis Technical Memorandum (TM) will be prepared to document Task findings.

Deliverables: Alternatives Analysis Workshop Summary and TM

# Task 7: Recommendations & Final Deliverables

- 1. <u>CIP.</u> Provide the City with a detailed Capital Improvement Plan (CIP) with recommended improvement projects with detailed project descriptions provided for each project included in the Capital Improvement Plan, including the following information: project description, project driver, project objective and benefit, project triggers, project duration, and project cost (planning, engineering, land, and construction).
- **2.** Water Resources Capacity Development Study. Develop a comprehensive Water Resources Capacity Development Study Report summarizing the project findings, recommendations and implementation strategies, supported by the technical memorandums developed during the project. The Report will also include the detailed CIP.
- **3. Update GIS.** Engineer will work with City to incorporate the findings of this study into the City's GIS databases. In some case, this means the engineer will provide new and/or updated shapefiles/data. In others, the engineer will convey necessary updates to existing shapefiles/data.
- **4.** <u>Presentations.</u> Conduct presentation detailing the final Study report. One (1) presentation is assumed.

Deliverables: Water Resources Capacity Development Study Report

# **Unspecified Additional Services**

Unspecified Additional Services may be provided upon authorization by City. Any work requested by the City that is not included in the Scope of Services as described herein will be considered an Additional Service and may be added to the Scope upon mutual agreement.

In addition to those items mentioned specifically in the Scope of Services, Additional Services may also include, but are not limited to:

# A. General

- 1. Security Assessments
- 2. Special consultants or independent professional associates requested or authorized by City





- 3. Additions to an engineering report or other document to update or revise original recommendations
- B. Additional Study Work that May Be Necessary
  - 1. Additional modeling or calibration
  - 2. Development of permit requirements or preparation of permits
  - 3. Addressing water rights issues, beyond planning level information that may be in this Scope of Services.
  - 4. Request to the Army Corps of Engineers for a Jurisdictional Determination, if needed, for water supply alternatives.
- C. Preliminary and Final Design Services
- D. Bidding Assistance
- E. Constructional Phase Services, including Resident Inspection
- F. Operational Phase Services, including Preparation of O&M Manuals
- G. Environmental Assessments:
  - 1. Environmental assessment reports and/or environmental impact statements.
  - 2. Cultural resources and/or archaeological study and reports.
- H. Conducting Pilot Plant Studies and Tests.
- I. Conducting additional Field Work or Investigations
- J. Support services for additional work in connection with public information, communication, or outreach activity.

# City's Responsibilities

The City will furnish, as required by the work and not at the expense of the Engineer, the following items:

- A. All maps, drawings, reports, records, audits, annual reports, and other data that are available in the files of the City and which may be useful in the work involved under this Project
- B. All GIS data files, including aerials, topography, streets, streams and waterways, water lines, sewer lines, and other data that are available in the files of the City and which may be useful in the work involved under this project
- C. Access to public and private property when required of the Engineer's services
- D. Manage the performance of other consultants under direct contract to City necessary for the Project.





#### **ATTACHMENT A**

#### **COMPENSATION**

Owner: City of Greensboro, North Carolina (City) Engineer: Black & Veatch International Company Project: Water Resources Capacity Development Study

Fees for the Scope of Services described herein are estimated to be \$969,176.00 and will be invoiced on a billing rate basis at the rates provided below. The estimated MWBE participation is estimated to be \$116,301.00 or 12% of the contract value. The total amount of billings will not exceed \$969,176.00 unless authorized by the City in writing.

HOURLY RATE SCHEDULE	
Effective through December 31	, 2018
Project Director	\$250
Project Manager	\$225
Planning Manager	\$200
Engineering Manager	\$200
Technical Specialist	\$200
QA/QC Engineer	\$230
Project Engineer	\$185
Engineer 5	\$170
Engineer 4	\$160
Engineer 3	\$140
Engineer 2	\$130
Engineer 1	\$125
Engineering Technician	\$145
Drafter	\$125
Financial Analyst	\$170
Financial Consultant	\$230
Sr. Financial Consultant	\$270
Finance/Controls	\$160
Project Administrator	\$84

All rates shall be subject to annual adjustment with Owner approval on January 1 of each year.





# **ATTACHMENT A**

# **SCHEDULE**

Owner: City of Greensboro, North Carolina (City) Engineer: Black & Veatch International Company Project: Water Resource Capacity Development Study

•	Task 1: General Project Administration	(12 Months)
•	Task 2: Project Initiation & Data Gathering	(0.5 Months)
•	Task 3: Gap Analysis	(2.5 Months)
•	Task 4: Water Resource Opportunities	(2.5 Months)
•	Task 5: Technology Identification & Screening	(2.5 Months)
•	Task 6: Alternatives Analysis	(2 Months)
•	Task 7: Recommendations	(2 Months)





# **CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY) 6/28/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(les) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

this certificate does not comer rights to the certificate holder in fied of	such endorsement(s).	
PRODUCER	CONTACT Max Faerber	
Lockton Companies	PHONE (A/C, No, Ext); (816) 960-9718 FAX (A/C, No):	
444 W. 47th Street, Suite 900	E-MAIL ADDRESS:	
Kansas City MO 64112-1906	INSURER(S) AFFORDING COVERAGE	AIC#
	INSURER A: Zurich American Insurance Company	5535
INSURED	INSURER B: American Zurich Insurance Company 40	142
Black & Veatch International Company 11401 Lamar Ave.	INSURER C: Lexington Insurance Company	9437
Overland Park, KS 66211	INSURER D:	
United States	INSURER E :	
	INSURER F:	
COVERAGES CERTIFICATE NUMBER: 354328	REVISION NUMBER:	
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW H		ERIOD

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

	ACEOSIONS AND CONDITIONS OF SOCIE	ADDL SUBR		POLICY EFF	POLICY EXP	
INSR LTR	TYPE OF INSURANCE	INSD WVD	POLICY NUMBER	(MM/DD/YYYY)	(MM/DD/YYYY)	LIMITS
A	X COMMERCIAL GENERAL LIABILITY		GLO 0139245 - Large	11/1/2017	11/1/2018	EACH OCCURRENCE \$ \$1,000,000
A	CLAIMS-MADE X OCCUR		Works/Small Works GLO 4641367 – Divisional	11/1/2017	11/1/2018	DAMAGE TO RENTED PREMISES (Ea occurrence) \$ \$300,000
'`	Contractual		Works	11/1/2017	11/1/2018	MED EXP (Any one person) \$ \$10,000
	X PD & C/O & XCU	X	GLO 4641358 - Corporate			PERSONAL & ADV INJURY \$ \$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:					GENERAL AGGREGATE \$ \$2,000,000
	X POLICY PRO- JECT LOC					PRODUCTS - COMP/OP AGG \$ \$2,000,000
	OTHER:					\$
Α	AUTOMOBILE LIABILITY		BAP 4641355	11/1/2017	11/1/2018	COMBINED SINGLE LIMIT \$ \$1,000,000
	X ANY AUTO					BODILY INJURY (Per person) \$
	X OWNED SCHEDULED AUTOS					BODILY INJURY (Per accident) \$
	X HIRED X NON-OWNED AUTOS ONLY					PROPERTY DAMAGE (Per accident) \$
						\$
	UMBRELLA LIAB OCCUR					EACH OCCURRENCE \$
	EXCESS LIAB CLAIMS-MADE					AGGREGATE \$
	DED RETENTION\$					\$
Α	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		WC 0139244	11/1/2017	11/1/2018	X PER OTH- STATUTE ER
B	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A	WC 4641354 (ID, MA, WI)	11/1/2017	11/1/2018	E.L. EACH ACCIDENT \$ \$1,000,000
	(Mandatory in NH)		WC 4641353 (AOS)	11/1/2017	11/1/2018	E.L. DISEASE - EA EMPLOYEE \$ \$1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - POLICY LIMIT \$ \$1,000,000
C	Professional Liability		026030198	11/1/2017	11/1/2018	Professional Limit Each Claim and Annual Aggregate Limit: \$2,000,000
	*				•	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Project #: 199465; Project Name: Water Resources Capacity Development Study; Project Manager/Contact: Osborne, James

Please see page 2 for additional information

CERTIFICATE HOLDER	CANCELLATION
City of Greensboro 2602 South Elm-Eugene Street Greensboro, NC 27406 United States	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  Josh M Amelle



# **ADDITIONAL REMARKS SCHEDULE**

**AGENCY** 

Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 NAMED INSURED
Black & Veatch International Company
11401 Lamar Ave.
Overland Park, KS 66211
United States

EFFECTIVE DATE: 11/1/2017

ADDITIONAL REI	MARKS								
THIS ADDITIONAL									
FORM NUMBER:			Certificate of Liab						
The General Liabilit	ty Policy pro	vides primary and	d non-contributory	coverage.					
City of Greensboro General Liability	is included a	as an Additional I	nsured as applicat	ole and required	by executed, w	ritten contract o	n the following po	licies:	
8									
1									



# Notification to Others of Cancellation, Nonrenewal or Reduction of Insurance

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
GLO4641358	11-1-17	11-1-18	11-1-17	37385000	N/A	N/A

#### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the: Commercial General Liability Coverage Part Liquor Liability Coverage Part Products/Completed Operations Liability Coverage Part

- A. If we cancel or non-renew this Coverage Part(s) by written notice to the first Named Insured for any reason other than nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation or non-renewal:
  - 1. To the name and address corresponding to each person or organization shown in the Schedule below; and
  - 2. At least 10 days prior to the effective date of the cancellation or non-renewal, as advised in our notice to the first Named Insured, or the longer number of days notice if indicated in the Schedule below.
- **B.** If we cancel this Coverage Part(s) by written notice to the first Named Insured for nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation to the name and address corresponding to each person or organization shown in the Schedule below at least 10 days prior to the effective date of such cancellation.
- C. If coverage afforded by this Coverage Part(s) is reduced or restricted, except for any reduction of Limits of Insurance due to payment of claims, we will mail or deliver notice of such reduction or restriction:
  - 1. To the name and address corresponding to each person or organization shown in the Schedule below; and
  - 2. At least 10 days prior to the effective date of the reduction or restriction, or the longer number of days notice if indicated in the Schedule below.
- D. If notice as described in Paragraphs A., B. or C. of this endorsement is mailed, proof of mailing will be sufficient proof of such notice.

#### **SCHEDULE**

Name and Address of Other Person(s) / Organization(s):				
	Number of Days Notice:			
Per Attached Certificate	30 Days			

All other terms and conditions of this policy remain unchanged.



# Notification to Others of Cancellation, Nonrenewal or Reduction of Insurance

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP4641355	11-1-17	11-1-18	11-1-17	37385000	N/A	N/A

#### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the: Commercial Automobile Coverage Part

- A. If we cancel or non-renew this Coverage Part by written notice to the first Named Insured for any reason other than nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation or non-renewal:
  - 1. To the name and address corresponding to each person or organization shown in the Schedule below; and
  - 2. At least 10 days prior to the effective date of the cancellation or non-renewal, as advised in our notice to the first Named Insured, or the longer number of days notice if indicated in the Schedule below.
- **B.** If we cancel this Coverage Part by written notice to the first Named Insured for nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation to the name and address corresponding to each person or organization shown in the Schedule below at least 10 days prior to the effective date of such cancellation.
- **C.** If coverage afforded by this Coverage Part is reduced or restricted, except for any reduction of Limits of Insurance due to payment of claims, we will mail or deliver notice of such reduction or restriction:
  - 1. To the name and address corresponding to each person or organization shown in the Schedule below; and
  - 2. At least 10 days prior to the effective date of the reduction or restriction, or the longer number of days notice if indicated in the Schedule below.
- D. If notice as described in Paragraphs A., B. or C. of this endorsement is mailed, proof of mailing will be sufficient proof of such notice.

#### **SCHEDULE**

	Number of Days Notice:
Per attached certificate	30 Days

All other terms and conditions of this policy remain unchanged.

#### NOTIFICATION TO OTHERS OF CANCELLATION, NONRENEWAL OR REDUCTION OF INSURANCE ENDORSEMENT

This endorsement is used to add the following to Part Six of the policy.

### **PART SIX** CONDITIONS

- A. If we cancel or non-renew this policy by written notice to you for any reason other than nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation or non-renewal to the name and address corresponding to each person or organization shown in the Schedule below. Notification to such person or organization will be provided at least 10 days prior to the effective date of the cancellation or nonrenewal, as advised in our notice to you, or the longer number of days notice if indicated in the Schedule below.
- B. If we cancel this policy by written notice to you for nonpayment of premium, we will mail or deliver a copy of such written notice of cancellation to the name and address corresponding to each person or organization shown in the Schedule below at least 10 days prior to the effective date of such cancellation.
- C. If coverage afforded by this policy is reduced or restricted, except for any reduction of Limits of Liability due to payment of claims, we will mail or deliver notice of such reduction or restriction to the name and address corresponding to each person or organization shown in the Schedule below. Notification to such person or organization will be provided at least 10 days prior to the effective date of the reduction or restriction, or the longer number of days notice if indicated in the Schedule below.
- D. If notice as described in Paragraphs A., B. or C. of this endorsement is mailed, proof of mailing will be sufficient proof of such notice.

SCHEDULE				
Name and Address of Other Person(s) / Organization(s):	Number of Days Notice:			
Per Attached Certificate	30 Days			

All other terms and conditions of this policy remain unchanged.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated. (The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 11-1-17 Insured

Policy No. WC 4641353

Endorsement No. N/A Premium \$ N/A

Insurance Company Zurich American Ins. Co.

WC 99 06 34

#### **ENDORSEMENT # 033**

This endorsement, effective 12:01 AM 11/01/2017

Forms a part of policy no.: 026030198

Issued to: BVH, INC

By: LEXINGTON INSURANCE COMPANY

#### NOTICE OF CANCELLATION TO CERTIFICATE HOLDERS ENDORSEMENT

Except with respect to cancellation for non-payment of premium (10 day notice of cancellation), the Insurer shall give 30day notice of cancellation to the Certificate Holder(s) set forth herein, provided that:

- 1. The First Named Insured is required by contract to give notice of cancellation to the Certificate Holder, and
- 2. Prior to the Insurer sending its notice of cancellation to the First Named Insured, the First Named Insured shall provide the Insurer, in writing, either directly or through the First Named Insured broker of record, the name of each person or organization requiring notice of cancellation and the corresponding address for such person or for the employee responsible for receipt of notice of cancellation on behalf of such organization.

Notice of cancellation will be sent in accordance with the terms and conditions of the policy, except that the Insurer may provide written notice individually or collectively to the Certificate Holders by email at the current email address given by the First Named Insured. Proof of sending of the notice of cancellation by email shall be sufficient proof of notice.

Any failure to provide notice of cancellation to the Certificate Holder due to inaccurate or incomplete information provided by the First Named Insured shall remain the sole responsibility of the First Named Insured.

The following definitions apply to this endorsement:

- 1. First Named Insured means the Named Insured shown in Item 1. of Declarations.
- 2. Insurer means the insurance company shown in the header on the Declarations.

All other terms and conditions of the policy remain the same.

LEXD00021 L X0404

Authorized Representative OR Countersignature (In states where applicable)

Name of Prime Contractor: Black & Veatch International Company Project Name: Water Resources Capacity

Development Study

The undersigned intends to perform work in connection with the above project as:

X	Minority Business Enterprise	Women Business Enterprise
=	Individual	A Corporation
	A Partnership	A Joint Venture

The undersigned is certified by the North Carolina Department of Administration or the North Carolina Department of Transportation and have a significant business presence within the Greensboro MSA (Guilford, Randolph, Rockingham, Forsyth, Stokes, Davie, Yadkin, Davidson, Alamance and Surry Counties).

The undersigned is prepared to provide the work (described below) in connection with the above project at the following price: \$ 58,150

You have projected the following commencement date for such work, and the undersigned is projecting completion of such work as follows:

Description of the Work	<b>Projected Commencement Date</b>	<b>Projected Completion Date</b>
Demands and Flows	October 2018	January 2019
Alternative Supply	February 2019	May 2019
Scenario Evaluation	May 2019	July 2019

Pursuant to "Special Instructions to Bidders Regarding Compliance with the City of Greensboro Minority and Women Business Enterprise (MWBE) Program Policies", the Bidder certifies that the above Minority/Women-owned Business Enterprise(s) was (were) contacted in good faith.

The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith.

SEAL

Company Name: JOHN DANSNOOT BUTING DICK Name of Authorized Officer: John M. Davenport Tr

Title: President

County of Torsytt

ly commission expires: Palemi

NATHANIEL BASKETT JR.
Notary Public, North Carolina
Forsyth County
My Commission Expires
November 23, 2019

Name of Prime Contractor: Black & Veatch International Company Project Name: Water Resources Capacity

Development Study

The undersigned intends to perform work in connection with the above project as:

X	Minority Business Enterprise		Women Business Enterprise
	Individual	X	A Corporation
	A Partnership		A Joint Venture

The undersigned is certified by the North Carolina Department of Administration or the North Carolina Department of Transportation and have a significant business presence within the Greensboro MSA (Guilford, Randolph, Rockingham, Forsyth, Stokes, Davie, Yadkin, Davidson, Alamance and Surry Counties).

The undersigned is prepared to provide the work (described below) in connection with the above project at the following price: \$ 58,150

You have projected the following commencement date for such work, and the undersigned is projecting completion of such work as follows:

Description of the Work	<b>Projected Commencement Date</b>	Projected Completion Date	
Facilities Assessment	October 2018	January 2019	
Alt. Discharge Options	February 2019	May 2019	
Scenario Evaluation	May 2019	July 2019	

\_\_\_\_\_\_ % of the dollar value of the subcontract will be sub-let to non-minority/women contractors. The undersigned will enter into a formal agreement for the above work with you conditioned upon your execution of a contract with the City of Greensboro.

Pursuant to "Special Instructions to Bidders Regarding Compliance with the City of Greensboro Minority and Women Business Enterprise (MWBE) Program Policies", the Bidder certifies that the above Minority/Women-owned Business Enterprise(s) was (were) contacted in good faith.
The undersigned hereby certifies that he or she has read the terms of this certification and is authorized to bind the Bidder in accordance herewith.    Company Name:   CRITEK ENGINEERING GROUP, P.C.     Name of Authorized Officer:   J. DAWAYNE CRITE
Date   Name of Authorized Officer: J. DAWAYNE CRITE  Title: PRESIDENT  State of Vorth Carolina County of Durham  Notary Public Mann Royun My commission expires: 12 07 2022
THE OR OF THE PROPERTY OF THE