PROFESSIONAL SERVICES CONTRACT
CONTRACT NO. 0418-0680

THE PARTIES TO THIS CONTRACT are the City of Daytona Beach (the "CITY"), and Carollo Engineers, Inc., a foreign profit corporation authorized to do business in the state of Florida ("CONSULTANT").

In consideration of the mutual covenants herein contained, the Parties agree as follows:

Section 1. Scope of Services. CONSULTANT will provide professional Wastewater Master Planning to the CITY as further described in Exhibit A, attached hereto and incorporated herein by reference. Exhibit A includes deadlines for tasks and if applicable, sub-tasks, and lists any deliverables required.

Section 2. *Reserved.*

Section 3. Fees and Other Payments; Limitations.

(a) Unless the Exhibits specifically provides for reimbursement of expenses, the Fee(s) described herein will be CONSULTANT's sole compensation for the services to be provided.

(b) The CITY will pay CONSULTANT a Fixed Fee of $549,590.56. Exhibit B, attached hereto, includes an agreed-upon estimate of the time needed by CONSULTANT to complete the work, including hourly rates. This estimate is provided solely to allow the CITY to determine that the Fixed Fee is reasonable.

In entering into this Contract, the CITY has relied on CONSULTANT's good faith estimate of the time needed to complete the work, included in Exhibit B. CONSULTANT's obligation to complete the work will not be affected merely because CONSULTANT's estimate is in error. The Fixed Fee will not be increased merely because CONSULTANT's estimate is in error.

(c) Payment for expenses such as reimbursables will only be made if expressly provided for in Exhibit B, and will be capped at $7,000.00. In addition:

(1) If Exhibit B specifically provides for reimbursement of travel-related expenses per diem, mileage will be paid in accordance with then-current IRS business related mileage rate and in such cases, only for travel in excess of 50 miles round trip.

(2) If Exhibit B specifically provide for reimbursement of CONSULTANT's cost of using one or more subconsultants, such costs will be paid at the rates set forth in the Exhibits, and CONSULTANT certifies that such rates do not include a mark-up for the benefit of CONSULTANT.

(d) Except for any expenses specifically provided for in Exhibit B, CONSULTANT will be solely responsible for all of costs CONSULTANT incurs in meeting its obligations herein.

Section 4. Billing; Manner of Payment. In addition to requirements for payment established by applicable federal, state, or local law including the City Code, payment terms are as follows:

(a) No payment will be due for services performed until CONSULTANT submits a proper invoice. CONSULTANT may invoice the CITY no more frequently than monthly, and no sooner than 30 days after the date of the purchase order.

(b) As to the Fixed Fee, the CITY will pay based on the percentage of work completed and accepted.

(c) In order to be considered proper, the invoice must include all information and documentation that the CITY may need to verify the accuracy of the invoice and the amount of payment due based on the

specific requirements of this Contract. Where payment is for the cost incurred for certain reimbursables (such as for subconsultants or air travel), the invoice must include proof that CONSULTANT has paid such costs.

(d) The CITY will within 30 days after receipt of an invoice notify the CONSULTANT that the invoice is improper, or pay CONSULTANT the amount due.

Section 5. Standard of Performance. CONSULTANT's services will at a minimum meet the level of care and skill ordinarily used by qualified members of CONSULTANT's profession performing the type of services provided referenced herein within the State of Florida.

Section 6. Relationship between Parties. This Contract does not create an employee-employer relationship between the CITY and CONSULTANT. CONSULTANT is an independent contractor of the CITY and will be in control of the means and the method in which the requested work is performed. As an independent contractor, CONSULTANT will be solely responsible for payment of all federal, state, and local income tax, and self-employment taxes, arising from this Contract; and CONSULTANT agrees to indemnify and hold harmless the CITY from any obligations relating to such taxes. The CITY will not make deductions from payments due, for such taxes, or for social security, unemployment insurance, worker's compensation, or other employment or payroll taxes. CONSULTANT will also be responsible for the performance of CONSULTANT's sub-consultants.

Section 7. Documents.

(a) All reports, estimates, logs, original drawings, and other materials furnished, prepared or executed by CONSULTANT during the term of and in accordance with the provisions of this Contract are the property of the CITY. CONSULTANT will immediately deliver all such materials to the CITY upon demand or upon completion of the particular task for which such materials were prepared, executed, or otherwise required; or, where no demand has been made at the time that this Contract expires or is terminated, upon such expiration or termination.

(b) CONSULTANT understands and agrees that CITY will have the right to reuse any plans and specifications, including construction drawings, that CONSULTANT is required to provide to CITY pursuant to this Contract without having to obtain further approvals from or providing additional compensation to CONSULTANT. CITY understands and agrees that CONSULTANT will not be liable for CITY's use of such plans and specifications other than for the purposes intended by this Contract.

Section 8. Public Records.

(a) To the extent applicable, CONSULTANT will comply with the requirements of Florida Statutes Section 119.0701, which include the following:

(1) Keeping and maintaining public records that the CITY requires for performance of the service provided herein.

(2) Upon the request of the City Clerk of the CITY, (i) providing the City Clerk with a copy of requested public records or (ii) allowing inspection or copying of the records, within a reasonable time after receipt of the City Clerk's request, at a cost that does not exceed the cost provided in Ch. 119, Florida Statutes, or as otherwise provided by law.

(3) Ensuring that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law until completion of this Contract, and following such completion if CONSULTANT fails to transfer such records to the CITY if CONSULTANT does not transfer such records to the CITY.

(4) Upon completion of this Contract, keep and maintain public records required by the CITY to perform the service. CONSULTANT will meet all applicable requirements for retaining public

records. All records stored electronically must be provided to the CITY upon request from the City Clerk, in a format that is compatible with the CITY's information technology systems.

IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONSULTANT MUST CONTACT THE CITY CLERK, WHOSE CONTACT INFORMATION IS AS FOLLOWS:

(Phone)	386 671-8023
(Email)	clerk@codb.us
(Address)	301 S. Ridgewood Avenue Daytona Beach, FL 32114

(b) Nothing herein will be deemed to waive CONSULTANT's obligation to comply with Section 119.0701(3)(a), Florida Statutes, as amended by Chapter 2016-20, Laws of Florida (2016).

Section 9. Effective Date and Term. The Effective Date of this Contract is the last signature date set forth below (the "Effective Date"). This Contract will begin on the Effective Date and end when the work is completed, unless terminated sooner pursuant to the provisions below.

Section 10. Termination of Contract.

(a) The CITY may terminate this Contract, in whole or in part, at any time, for the CITY's convenience or upon CONSULTANT's material breach, by providing written notice as follows:

(1) Before terminating for convenience, the CITY must provide CONSULTANT 30 days' notice. Termination will be automatic upon the expiration of the 30-day period.

(2) Before terminating due to CONSULTANT's material breach of its contractual obligations, CITY must provide CONSULTANT prior written notice, specifying the breach and demanding that CONSULTANT remedy the breach within 10 days of the notice. This Contract will terminate automatically and without need for additional notice if CONSULTANT fails to remedy the material breach within this 10 day period.

In either instance upon termination CONSULTANT will immediately discontinue all services affected, unless the notice directs otherwise, and deliver to the CITY all data, drawings, specifications, reports, estimates, summaries, and any and all such other information and services of whatever type or nature as may have been accumulated by CONSULTANT in performing this Contract, whether completed or in process.

(b) If the termination is for the CITY's convenience, CONSULTANT will be paid compensation for services performed to the date of termination.

(c) If the termination is due to the CONSULTANT's material breach, the CITY reserves all rights and remedies it may have under law due to such breach.

(d) If after notice of termination for the CONSULTANT's material breach it is determined by the CITY or by a court of law that the CONSULTANT had not materially breached this Contract, or that the CITY's notice for termination upon such breach was insufficient, the termination will be conclusively deemed to have been effected for the CITY's convenience. In such event, adjustment in payment to CONSULTANT will be made as provided in Subsection (b) of this Section.

(e) The rights and remedies of CITY provided for in this Section are in addition and supplemental to any and all other rights and remedies provided by law or under this Contract.

Section 11. Suspension of Services. If a notice of material breach issued by the CITY so directs, CONSULTANT will suspend services immediately upon receipt thereof, other than the work required to remedy the material breach.

Section 12. Indemnification. CONSULTANT will indemnify and hold harmless the CITY, including the CITY's officers, employees, and agents, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the CONSULTANT's negligent acts or omissions, or reckless or intentionally wrongful conduct in the performance of this Contract. For purposes of this Section, the term, "CONSULTANT," includes CONSULTANT's officers, employees, and agents, including subconsultants and other persons employed or used by CONSULTANT. This indemnification is in no way limited by any insurance provided by CONSULTANT.

Section 13. Insurance CONSULTANT will provide and maintain at CONSULTANT's own expense, insurance of the kinds of coverage and in the amounts set forth in this Section. All such insurance will be primary and non-contributory with the CITY's own insurance. In the event any request for the performance of services presents exposures to the CITY not covered by the requirements set forth below, the CITY reserves the right to add insurance requirements that will cover such an exposure.

(a) Coverage and Amounts.

(1) Workers Compensation Insurance if required by Florida Statutes, Chapter 440, Workers' Compensation Insurance, for all employees of CONSULTANT, employed at the site of the service or in any way connected with the work, which is the subject of this service. The insurance required by this provision will comply fully with the Florida Workers' Compensation Law and include Employers' Liability Insurance with limits of not less than $500,000 per occurrence. Any associated or subsidiary company involved in the service must be named in the Workers' Compensation coverage. If CONSULTANT wishes to claim an exemption from worker's compensation insurance requirements, CONSULTANT will notify the Risk Manager in writing on CONSULTANT's official letterhead.

(2) Liability Insurance, including **(i) Commercial General Liability coverage** for operations, independent CONSULTANTs, products-completed operations, broad form property damage, and personal injury on an "occurrence" basis insuring CONSULTANT and any other interests, including but not limited to any associated or subsidiary companies involved in the work; and **(ii) Automobile Liability Insurance**, which will insure claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle used by the CONSULTANT in the performance of this Contract.

THE COMMERCIAL GENERAL LIABILITY INSURANCE POLICY WILL NAME THE CITY AS AN ADDITIONAL INSURED. Consultant's Commercial General Liability insurance policy shall provide coverage to Consultant, and City when required to be named as an additional insured either by endorsement or pursuant to a blanket additional insured endorsement, for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01) without the attachment of any endorsements excluding or limiting coverage for Products/Completed Operations, Independent Contractors, Property of City in Consultant's Care, Custody or Control or Property of City on which contracted operations are being performed, Explosion, Collapse or Underground hazards (XCU Coverage, Contractual Liability or Separation of Insureds. When City is added as additional insured by endorsement, ISO Endorsements CG 20 10 and CG 20 37 or their equivalent shall be used to provide such Additional Insured status.

The limit of liability for each policy will be a combined single limit for bodily injury and property damage of no less than $1,000,000 per occurrence. If insurance is provided with a general aggregate, then the aggregate will be in an amount of no less than $2,000,000. The Risk Manager for the CITY may authorize lower liability limits for the automobile policy only, at the Risk Manager's sole discretion.

(3) Professional Liability Insurance, insuring CONSULTANT and other interests, including, but not limited to, any associated or subsidiary companies involved in the work, for errors or omissions in the performance of professional services to be rendered pursuant to this Contract. The limit of liability will be no less than $1,000,000.

Professional Liability coverage will be provided on an Occurrence Form or a Claims Made Form with a retroactive date no later than the Effective Date and with a two year reporting tail beyond the annual expiration date of the policy.

Unless specifically waived hereafter in writing by the Risk Manager, Consultant agrees that the insurer shall waive its rights of subrogation, if any, against the City on each of the foregoing types of required insurance coverage.

(b) Proof of Insurance. CONSULTANT will furnish proof of insurance acceptable to the CITY prior to or at the time of execution of this Contract. CONSULTANT will not commence work until proof of all required insurance has been filed with and approved by the CITY. CONSULTANT will furnish such proof in the form of certificates of insurance which will clearly outline all hazards covered as itemized above, the amounts of insurance applicable to each hazard, and the expiration dates.

If requested by the CITY, CONSULTANT will furnish copies of the insurance contracts to support the certificates of insurance and the copies of said insurance must be acceptable to the CITY.

(c) Cancellation; Replacement Required. CONSULTANT will file replacement certificates 30 days prior to expiration or termination of the required insurance occurring prior to the acceptance of the work by the CITY. If a required policy is canceled without CONSULTANT's prior knowledge CONSULTANT will immediately notify the CITY immediately upon becoming aware that a required insurance coverage has been canceled for any reason, and promptly replace the canceled policy. The CITY expressly reserves the right or replace the canceled policy at CONSULTANT'S expense if CONSULTANT fails to do so.

(d) Termination of Insurance. CONSULTANT may not cancel the insurance required by this Contract until the work is completed, accepted by the CITY and CONSULTANT has received written notification from the Risk Management Division of the CITY that CONSULTANT may cancel the insurance required by this Contract and the date upon which the insurance may be canceled. The Risk Management Division of the CITY will provide such written notification at the request of CONSULTANT if the request is made no earlier than two weeks before the work is to be completed.

(e) Liabilities Unaffected. CONSULTANT's liabilities under this Contract will survive and not be terminated, reduced or otherwise limited by any expiration or termination of insurance coverages. Similarly, CONSULTANT's liabilities under this Contract will not be limited by the existence of any exclusions or limitations in insurance coverages, or by CONSULTANT'S failure to obtain insurance coverage.

CONSULTANT will not be relieved from responsibility to provide required insurance by any failure of the CITY to demand such coverage, or by CITY's approval of a policy submitted by CONSULTANT that does not meet the requirements of this Contract.

Section 14. Notices. Unless otherwise expressly agreed herein, all notices, requests, and demands to or upon the Parties will be delivered by hand, delivered by a courier service, provided to a nationally recognized delivery service for overnight delivery, or by U.S. mail, postage prepaid by registered or certified mail, return receipt requested, to the Parties' addresses. The Parties' contact information is as follows:

If to the CITY
Shannon Ponitz, Interim Utilities Director
The City of Daytona Beach Utilities Dept.
125 Basin St., Suite 204
Daytona Beach, FL 32114
Fax: 386-671-3545

If to the CONSULTANT
Laura Baumberger, Associate Vice President
Carollo Engineers, Inc.
301 N. Cattlemen Road, Suite 302
Sarasota, FL 34232

~~Fax:~~ Email: LBaumberger@carollo.com

Either Party may change the name or address for receipt of that Party's notices, by providing the other Party written notice in the manner described above.

Section 15. Personnel. In order to induce the CITY into entering this Contract, CONSULTANT represents that Laura Baumberger P.E., Project Manager will generally perform or directly supervise the tasks assigned to CONSULTANT herein, and that CONSULTANT will not replace Laura Baumberger P.E., Project Manager without the CITY's prior written approval. CONSULTANT represents that CONSULTANT has or will secure at CONSULTANT's own expense, all personnel required in performing the services under this Contract. Such personnel will not be employees of or have any contractual relationship with the CITY.

All personnel engaged in the work will be fully qualified and will be authorized under state and local law to perform such services.

The CITY will have the right to approve or reject any subconsultants that CONSULTANT proposes to use for work assigned.

Section 16. CITY's Responsibilities. The CITY agrees to make available for review and use by the CONSULTANT, reports, studies, and data relating to the services required. The CITY will establish a project manager to meet periodically with the CONSULTANT to facilitate coordination and ensure expeditious review of work product.

Section 17. Limitation on Waivers. Neither the CITY's review, approval, or acceptance of, or payment for, any of the services provided by CONSULTANT, will be construed to operate as a waiver of the CITY's rights under this Contract. CONSULTANT will be and always remain liable to the CITY in accordance with applicable law for any and all damages to the CITY caused by the CONSULTANT's negligent or wrongful provision of any of the services furnished under this Contract.

Failure of the CITY to exercise any right or option arising out of a breach of this Contract will not be deemed a waiver of any right or option with respect to any subsequent or different breach, or the continuance of any existing breach. Furthermore, the failure of the CITY at any time to insist upon strict performance of any condition, promise, agreement or understanding set forth herein will not be construed as a waiver or relinquishment of the CITY's right to insist upon strict performance of the same condition, promise, agreement or understanding at a future time.

Section 18. Dispute Resolution. If a dispute exists concerning this Contract, the Parties agree to use the following procedure prior to pursuing any judicial remedies.

(a) Negotiations. A Party will request in writing that a meeting be held between representatives of each Party within 14 calendar days of the request or such later date that the Parties may agree to. Each Party will attend and will include, at a minimum, a senior level decision maker (an owner, officer, or employee of each organization) empowered to negotiate on behalf of their organization. The purpose of this meeting is to negotiate in the matters constituting the dispute in good faith. The Parties may mutually agree in writing to waive this step and proceed directly to mediation as described below.

(b) Non-Binding Mediation. Mediation is a forum in which an impartial person, the mediator, facilitates communication between parties to promote reconciliation, settlement, or understanding among them. Within 30 days after the procedure described in Subsection (a) proves unsuccessful or the Parties mutually waive the Subsection (a) procedure, the Parties will submit to a non-binding mediation. The

mediation, at a minimum, will provide for (i) conducting an on-site investigation, if appropriate, by the mediator for fact gathering purposes, (ii) a meeting of all Parties for the exchange of points of view and (iii) separate meetings between the mediator and each Party to the dispute for the formulation of resolution alternatives. The Parties will select a mediator trained in mediation skills and certified to mediate by the Florida Bar, to assist with resolution of the dispute. The Parties will act in good faith in the selection of the mediator and give consideration to qualified individuals nominated to act as mediator. Nothing in this Contract prevents the Parties from relying on the skills of a person who also is trained in the subject matter of the dispute or a contract interpretation expert. Each Party will attend and will include, at a minimum, a senior level decision maker (an owner, officer, or employee of each organization) empowered to negotiate on behalf of their organization.

If the Parties fail to reach a resolution of the dispute through mediation, then the Parties are released to pursue any judicial remedies available to them.

Section 19. General Terms and Conditions.

(a) Amendments. Except as otherwise provided herein, no change or modification of this Contract will be valid unless the same is in writing and signed by both Parties**.**

(b) Assignments and Subcontracting.

No assignment or subcontracting will be permitted without the CITY's written approval.

(c) Compliance with Laws and Regulations. In providing all services pursuant to this Contract, CONSULTANT will abide by all statutes, ordinances, rules, and regulations pertaining to, or regulating the provisions of, such services including those now in effect and hereafter adopted. Any violation of said statutes, ordinances, rules, or regulations will constitute a material breach of this Contract and will entitle the CITY to terminate this Contract immediately upon delivery of written notice of termination to the CONSULTANT.

(d) Truth in Negotiations Certificate. CONSULTANT hereby certifies that the wages and other factual unit costs supporting the compensation herein are accurate, complete, and current at the time of this Contract.

(e) No Third Party Beneficiaries. There are no third party beneficiaries of CONSULTANT'S services under this Contract.

(f) Contingency Fee. CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for CONSULTANT, to solicit or secure this Contract and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for CONSULTANT, any fee, commission, percentage, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.

(g) Nondiscrimination. CONSULTANT will not discriminate against any employee or applicant for employment because of race, color, sex, or national origin. CONSULTANT will take affirmative action to ensure that applicants are employed and the employees are treated during employment without regard to their sex, race, creed, color, or national origin. Further, CONSULTANT agrees to comply with all local, state and federal laws and ordinances regarding discrimination in employment against any individual on the basis of race, color, religion, sex, national origin, physical or mental impairment, or age. In particular, CONSULTANT agrees to comply with the provisions of Title 7 of the Civil Rights Act of 1964, as amended, and applicable executive orders including, but not limited to, Executive Order No. 11246.

(h) Principles in Construing Contract. This Contract will be governed by and construed in accordance with the laws of the State of Florida. Captions and paragraph headings used herein are for convenience only, are not a part of this Contract and will not be deemed to limit or alter any provisions hereof or to be relevant in construing this Contract. The use of any gender herein will be deemed to be or

include the other genders, and the use of the singular herein will be deemed to be or include the plural (and vice versa), wherever appropriate. If any word, phrase, clause, sentence or provision of the Contract, or the application of same to any person or set of circumstances is for any reason held to be unconstitutional, invalid or unenforceable, that finding will only effect such word, phrase, clause, sentence or provision, and such finding will not affect the remaining portions of this Contract; this being the intent of the Parties in entering into the Contract; and all provisions of the Contract are declared to be severable for this purpose.

(i) Venue. The exclusive venue for any litigation arising out of this Contract will be Volusia County, Florida if in state court, or the U.S. District Court, Middle District of Florida if in federal court.

(j) Litigation Costs. Except where specifically provided herein, in case of litigation between the Parties concerning this Contract, each party will bear all of its litigation costs, including attorney's fees.

(k) Force Majeure. A force majeure event is an act of God or of the public enemy, riots, civil commotion, war, acts of government or government immobility (whether federal, state, or local) fire, flood, epidemic, quarantine restriction, strike, freight embargo, or unusually severe weather; provided, however, that no event or occurrence will be deemed to be a force majeure event unless the failure to perform is beyond the control and without any fault or negligence of the Party charged with performing or that Party's officers, employees, or agents. Whenever this Contract imposes a deadline for performing upon a Party, the deadline will be extended by one day for each day that a Force Majeure event prevents the Party from performing; provided, however, that the Party charged with performing and claiming delay due to a Force Majeure event will promptly notify the other Party of the Event and will use its best efforts to minimize any resulting delay.

(l) Jury Trial Waived. THE PARTIES HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS CONTRACT, OR ANY DEALINGS BETWEEN THE PARTIES. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL ENCOMPASSING OF ANY DISPUTES BETWEEN THE PARTIES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER, INCLUDING WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS.

(m) Authority to Bind CONSULTANT. The undersigned representative of CONSULTANT represents and warrants the he or she is fully authorized to bind CONSULTANT to the terms and conditions of this Contract.

(n) Incorporation of RFP and Proposal. The CITY's Request for Proposals 0418-0680, and the CONSULTANT's responsive proposal are incorporated herein by reference as Composite Exhibit C. Composite Exhibit C is not attached but will remain on file with the CITY's Purchasing Agent and will be available upon request made to the City Clerk. In case of conflicts between the RFP and Proposal, the RFP will govern. In case of conflicts between Composite Exhibit C and other provisions of this Contract, including Exhibits A and B, this Contract will govern.

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(o) Integration. This Contract represents the entire agreement of the parties with respect to the subject matter hereof. No representations, warranties, inducements or oral agreements have been made by either Party except as expressly set forth herein, or in other contemporaneous written agreements.

IN WITNESS WHEREOF, the Parties through their undersigned representatives have caused this Contract to be executed in duplicate original.

THE CITY

By: _____
Derrick L. Henry, Mayor

Attest: _____
Letitia LaMagna, City Clerk

Date: _____

Approved as to legal form:

By: _____
Robert Jagger, City Attorney

CAROLLO ENGINEERS, INC.

By: _____
Name Typed: Eric Leveque, P.E.
Title: Client Services Director

Date: 7-16-18

By: _____
Name Typed: Laura Baumberger, P.E.
Title: Associate Vice President

Date: 7/16/18

EXHIBIT A

CITY OF DAYTONA BEACH (CITY)
CITY CONTRACT NO.: 0418-0680

WASTEWATER MASTER PLAN

June 18, 2018

SCOPE OF SERVICES

GENERAL

The City of Daytona Beach (CITY) owns and operates a wastewater collection and treatment system consisting of gravity sewers, pump stations, and force mains, which collect and transfer wastewater flows generated within its service area for treatment at two water reclamation facilities (WRFs): the Bethune Point WRF with a capacity of 13 mgd and the Westside Regional WRF with a capacity of 15 mgd. The collection system consists of approximately 110 miles of force main, 280 miles of sanitary sewer gravity main, 6,100 manholes, and 140 wastewater lift stations. The CITY wastewater system serves approximately 90 square miles with a population of approximately 71,300.

As population growth continues along with increasing rehabilitation needs, the CITY has a need to develop a Wastewater Master Plan, establish a new hydraulic model, perform condition assessments of key infrastructure, update its Capital Improvement Plan (CIP), and provide an overall outlook of the system and plan for the future.

A critical tool in performing the master planning analysis is the development of an accurate hydraulic model that can assess the CITY pump stations and the extensive wastewater collection system. This model will provide a comprehensive approach to address current deficiencies, predict impacts of future growth/flow increases, and assist in the evaluation of various operational scenarios.

The following describes the Scope of Services for the project, which includes data gathering, hydraulic model development and calibration, flow monitoring, and project deliverables including a summary report and model training materials for CITY staff. Facilities data collection and assessment will also occur in order to capture the current condition and treatment capabilities, as well as to address future needs.

The scope of services for Carollo Engineers Inc. (CONSULTANT) will include the following tasks. Certain assumptions have been made in preparing this Scope of Services. To the extent possible, they are stated herein, and are reflected in the attached project budget.

TASK 1: PROJECT AND QUALITY MANAGEMENT

Task 1 includes all aspects of project and quality management to provide effective delivery of the PROJECT. Specific items included in Task 1 are detailed in the subtasks described below.

1.1: Project Management and Communications

Carollo will provide overall project management and communication between its staff, subconsultant, and CITY staff. Carollo will track and manage the budget, project tasks, and schedule.

1.2: Project Management and Work Plan

The CONSULTANT will prepare a Project Management and Work Plan and distribute it to project personnel including CITY staff, the CONSULTANT's staff, and its subconsultant. The Project Management and Work Plan will include the project description and objectives, project personnel contact information, scope of work, detailed project delivery schedule, communication protocol, and quality management plan. The schedule will be created and maintained in MS Project. Each task identified in the scope of work will be included in the project schedule, along with milestone dates. The Project Management and Work Plan will be provided in electronic pdf format for use by CITY and the CONSULTANT'S project personnel.

1.3: Project Kickoff and Progress Meetings

The CONSULTANT will facilitate a project Kickoff Meeting to review the Project Management and Work Plan, including the project tasks, schedule, lines of communication, and quality management procedures. The Kickoff Meeting will be a working meeting to discuss project needs, modeling software capabilities, efficient and effective data collection approaches, and other items necessary to efficiently begin the project.

The CONSULTANT will conduct eight (8) meetings throughout the project to inform CITY staff on the project's progress, issues, findings, and recommendations. The agenda, meeting materials, meeting minutes, and action/decision logs for each meeting will be prepared by the CONSULTANT and distributed to all project stakeholders.

1.4: Monthly Progress Reports

The CONSULTANT will provide monthly progress reports that identify what work has been performed during the month and an itemized listing of work that will be anticipated in the upcoming month. These reports will be delivered as part of the monthly progress payment request.

The project schedule will be updated monthly and delivered as part of the monthly progress reports. The CONSULTANT will maintain a Decision Log and an Action Log that will be updated and delivered as part of each monthly progress report.

1.5: Quality Control and Quality Assurance

The CONSULTANT’S project manager shall coordinate quality control and quality assurance review of the project including a concept check for laying out the data gathering, field testing, model development, and calibration procedures; a peer review and owner review after the model development step to confirm all data entry; calibration review between the QA/QC officer and CITY staff so that all parties understand the accuracy of the model; a final model check after scenario development including both dry and wet weather scenarios; and review of the WRF assessment and recommendations.

TASK 1 DELIVERABLES

- Project Management and Work Plan (electronic pdf)
- Meeting sign-in sheet and agenda (hard copies to be provided at meetings)
- Meeting minutes (electronic pdf)
- Monthly progress reports and Action/Decision Logs (electronic pdf)
- Monthly schedule updates (electronic pdf)

TASK 2: DATA GATHERING AND PLANNING FRAMEWORK

Task 2 involves gathering of data necessary for execution of the project and will result in an overall planning framework for the wastewater system hydraulic model and the Wastewater Master Plan. Specific items included in Task 2 are detailed in the subtasks described below.

2.1: Data Gathering and Review

The CONSULTANT will provide a comprehensive data request list data of information and data to be provided by the CITY. Data sources may include but are not limited to:

- CITY Comprehensive Plan
- Current and near term allocated service commitments and utility service agreements
- WRFs DMRs (starting March 2018)
- GIS data (service area, pipelines, pump stations, manholes, parcels, water meters, etc.)
- Wastewater model (existing model in forcemain software)
- Specific WRF and lift station SCADA data, as available
- Elevation data for manholes, discharge force mains into wetwells, etc., where available
- Pump station data including wetwell dimensions, number of pumps, pump curves
- Pump station operational data including lead/lag elevation setpoints or other control information for master lift stations on VFDs
- Location and use of any control valves in the force main system to transfer flows between WRFs (normal operation or emergency conditions)
- As-built drawings for master lift stations
- As-built drawings for key force main and gravity system pipes, if needed
- Water meter billing data
- Metered wastewater billing data (i.e, South Daytona)
- Planning area and/or traffic analysis zone (TAZ) population estimates
- City level of service standards, design criteria for pipeline, lift stations
- Previous master plans, reports, or studies which may support the master plan development
- Where record drawing information does not exist, the CONSULTANT with work with CITY to agree upon the most reasonable assumptions possible in order to maintain progress on the project. The CONSULTANT will not take field measurements or perform surveying during the project.

The data collection and all hydraulic modeling tasks will include all CITY owned pump stations (approximately 140). Additionally, private pump stations with the highest flow and/or those that are in key locations in the collection system will be included in the model. Flow from the smaller private stations will be accounted for (where data is available) and included in a nearby (upstream or downstream) pump station. This approach will provide a robust hydraulic model of the CITY's lift station network that can be used to make planning decisions, while simplifying and streamlining model development and maintenance.

2.2: Population, Flow, and Diurnal Patterns Analysis

The CONSULTANT will use the gathered information to delineate existing population and flows into each of the WRFs and will use the historical data to calculate the per capita flow for each

facility. Peaking factors (maximum month and maximum day) for each facility will also be developed based on data from the past ten (10) years. A typical diurnal flow curve for the influent of each facility will also be calculated based on available hourly SCADA flow data from the WRFs. Any differences in flow patterns between facilities will be identified and differentiated in the hydraulic model.

2.3: Draft Planning Framework Technical Memorandum

Based upon the review of the available data, the CONSULTANT will provide a technical memorandum (TM) detailing the sufficiency of the data collected. Data gaps will be identified and will include explanations of potential impacts to the work effort including:

- Assumptions to be made to overcome data gaps and the resulting limitations of the reliability of results based on data gaps.
- Labor hours estimate for additional efforts, if desired by CITY (e.g. GIS data gaps and lift stations not included in the hydraulic model).

This Planning Framework TM also will include a summary of the population and flow estimates by WRF, including seasonal and diurnal flow patterns. It also will include the CITY's specific performance criteria (i.e., velocity, pump run time, etc.) to be used to evaluate the collection system. The selected performance criteria will be used in future tasks to analyze system performance.

The Planning Framework TM will present the data gaps, planning, and performance information that will be the foundation of future tasks. The Draft Planning Framework TM will be submitted to the CITY for review. The CONSULTANT will discuss the CITY's comments on the Draft Planning Framework TM at a regularly scheduled progress meeting. Upon receipt of CITY comments and discussion/resolution of all data gaps and planning/performance data and criteria, the CONSULTANT will update the document and incorporate it into a chapter of the Draft Wastewater Master Plan Report.

The CONSULTANT will compile all new data (pump curves, model numbers, etc.) into a table for future use by the CITY.

TASK 2 DELIVERABLES

- Draft Planning Framework TM (electronic pdf)
- Compiled data (electronic Excel or other format as applicable)

TASK 3: COLLECTION SYSTEM DATA AND ANALYSIS

Field data collection is necessary to build and calibrate the hydraulic model Calibration of the hydraulic model provides confidence that the model is operating in close resemblance to reality. In order to calibrate the model, sufficient field measurements are required to develop a model that is operating in the same manner as CITY's collection system.

It is understood that field data may be limited within the SCADA system, and therefore this task includes effort for field investigation and data collection to be utilized in the hydraulic model and master plan. This will include an overall assessment of the existing SCADA system and by temporary measurement devices.

3.1: SCADA System Assessment

The CONSULTANT will work closely with CITY staff to understand and assess the current SCADA system. The focus will be on the system's current and potential capability to automatically collect and store operational data which is beneficial to the hydraulic model and master plan. Additionally, this will help guide decisions in the model related to facility capacities and CIP recommendations. This will include review of existing data monitoring equipment, remote site communications, and historical data logging, as well as review of:

- Existing data systems and data collection system
- Current communication systems
- Remote site monitoring capability/remote notification
- Software platform(s) and connectivity between systems
- Operational automation and data collection

Where SCADA connectivity and data is limited or not available for lift stations, the CONSULTANT will work with the CITY to identify sites for data collection, as further noted below in the field testing section.

3.2: Lift Station Assessment

The CONSULTANT will work closely with CITY to obtain all available data related to the lift stations. As the lift station data will be a primary focus in order to develop an accurate representation of the wastewater collection system, the CONSULTANT will visit and inspect up to twenty (20) key identified lift stations which are critical to the system's operation. This specific sites for this effort are anticipated to be identified during data collection and in close coordinate with the CITY. The assessment effort will include a high level evaluation of the stations including:

- General Assessment – Provide an overall site assessment to collect and confirm station condition and parameters. The focus shall be to establish a general overall site condition, with a focus on confirming and obtaining operation data such as pump size and performance data, wet well dimensions, system arrangement, controls and historical operational information.
- Structural Assessment – Provide an overall assessment of the site structural condition, including visual inspection of structures and coatings. Each site will be scored using a general criteria scale (typically 1-5 scale rating).
- Electrical Investigation - Provide an overall assessment of the site electrical condition, including visual inspection of electrical equipment. Each site will be scored using a general criteria scale (typically 1-5 scale rating).
- Note that the items noted are to be a visual condition assessment only. This does not include in-depth or specific analysis of the stations components, and will not address items such as specific site safety criteria, arc flash, gas detection, thermal imaging, or other specialty investigation of structures or equipment.

The results of this assessment will provide data for use in the hydraulic model and guide decisions related to facility capacities and CIP recommendations. This investigation is limited to include up to twenty (20) pump stations, based on data evaluation and discussion with the CITY.

3.3: Field Test Plan

It is the CONSULTANT's understanding that CITY has limited collection system flow data available in the SCADA historian. The CONSULTANT will work closely with CITY staff to determine what system data is available (Task 3.1 & 3.2). Based on the collected data, the CONSULTANT shall identify key pump stations for field verification of current flows and/or

pressures. CITY staff will accompany the CONSULTANT on two 1-day site visits throughout the collection system to identify locations amenable to flow monitoring. The manholes and/or wetwells selected for flow monitoring must be accessible and have relatively laminar flow.

Based on information gathered during the site visit, the CONSULTANT will develop a Field Test Plan that identifies field-testing locations, timing of field tests, necessary equipment, and CITY support requirements necessary for capturing required field measurements. This is assumed to include flow monitoring in gravity manholes (to be completed by a subconsultant in Task 3B), pressure recorders (to be provided by the CONSULTANT and installed by the CITY), or other data as determined necessary.

Upon receipt of CITY comments and discussion/resolution of all necessary aspects of the Field Test Plan, the CONSULTANT will update the document and submit the Final Field Test Plan.

TASK 3 DELIVERABLES

- Draft Field Test Plan (electronic pdf)
- Final Field Test Plan (electronic pdf and 5 hard copies)

TASK 3B: FIELD TESTING (SUBCONSULTANT)

This task includes field testing and specialized equipment to be installed by a subconsultant. The CONSULTANT will coordinate the location selection in Task 3. The installation effort will be completed by the subconsultant with the assistance of the CITY staff for access. Installation sites will be selected based on data need, but will also be limited to accessibility. Specialty access requirements, such as permitting or MOT are not included in this scope. Field testing equipment will be selected based on the preliminary assessment of the system completed in earlier tasks. The testing may include, but is not limited to flow monitoring, pressure logging, level sensors, or other equipment. The proposed method, quantity and equipment type may be adjusted pending the preliminary data and field investigation.

The subconsultant quote assumes specific methodology for quotation purposes, and is based upon flow monitoring to be conducted at up to fourteen (14) locations within the collection system. Flow monitoring will be conducted at locations identified by the CONSULTANT within the collection system. The flow monitoring should ideally be conducted during the summer months in order to capture wet weather flow conditions. The flow monitoring and field testing duration will be one (1) month. If a substantial rain event is not captured during the selected period, additional flow monitoring can be conducted at an additional cost, if agreed to by CITY.

CITY staff will accompany the CONSULTANT and/or its subconsultant in the field during installation of flow meters. The Field Test Plan will be followed by both the CONSULTANT and CITY in order to collect all necessary data for adequate calibration of the hydraulic model. The CONSULTANT will check data routinely as appropriate and immediately inform CITY of any maintenance requirements (e.g. air release valve on which pressure recorder is installed appears clogged/no pressure recording).

TASK 4: WRF DATA COLLECTION AND ANALYSIS

The CONSULTANT will begin the facilities master planning effort with review of the existing WRFs past studies and reports and on-going projects. This information will be used to identify problems and constraints and possible solutions for each WRF.

Based on the results of this data collection, the CONSULTANT will work closely with the CITY staff to develop a long term outlook for the facilities. The planning horizon for this Master Plan is assumed to be the next twenty years. This task will determine and evaluate the future needs within this planning horizon.

The following subtasks will be performed as part of this task.

4.1: Review of Westside Regional WRF and Bethune Point WRF

Under this task, the CONSULTANT will visit both WRFs; update design criteria, unit sizes, and capacities (for both treatment processes and hydraulics); and prepare updated plant layouts and simplified flow schematics. The CONSULTANT will develop GIS, aerial photos, and base maps of the two WRFs covering the entire plant sites to be adequate for development of the master planning alternatives. The CONSULTANT will make efficient use of already gathered information regarding the facilities based on previous and on-going work being performed by the CONSULTANT for the CITY.

4.2: Develop Master Plan Standby/Reliability Criteria

A key consideration in the design and operation of a major wastewater treatment facility is reliability. Reliability is defined as the ability to provide uninterrupted service while continuing to meet effluent limits as will be assessed through the process simulation/optimization evaluation. The determination of the future facility needs depends upon the criteria established for providing reliability. The CONSULTANT will discuss reliability criteria at a regularly scheduled progress meeting for each WRF to develop this criteria based on staff recommendations. Such criteria is typically based on (a) values based on past designs; (b) staff's experience with routine and unscheduled outages; (c) reliability information from other treatment plants; (d) accepted engineering practice. Reliability criteria may vary between different treatment processes.

Recommendations for improvements at each WRF to improve system reliability will be developed for incorporation into the Wastewater Master Plan recommended projects.

4.3: Historical Wastewater Flows/Characteristics

The CONSULTANT shall update historically recorded influent wastewater flows and loads for each of the WRFs developed for the most recent Capacity Analysis Reports for the purpose of projecting future wastewater flows and loads and treatment capacity needs. The population and flow projections developed as part of Task 2.2, will be used in develop the future flows and loads to each WRF.

The CONSULTANT shall develop the following from this information for each WRF.

- Average and peak flows and diurnal flow profile. If diurnal flow data is not readily available, the CONSULTANT will work with the plant staff to obtain hourly flow readings over a two-week period (to be completed as part of Task 2.2).

- Historical average day annual loadings (ADAL), average day dry weather loads (ADWL), average day maximum month loads (ADMML), and peak wet weather loads (PWWL). Using this information the CONSULTANT will develop peaking factors for the purpose of projecting future loads.

- Utilizing the projected flows and loading, project the potential reuse supply. This data will be utilized relative to future growth to project the potential future need.

4.4: Treatment Facility Performance, Capacity, and Optimization Assessment

The CONSULTANT will review the original design and sizing criteria and historical operating data to evaluate the hydraulic and process loadings and associated performance of each major treatment process at each WRF. The CONSULTANT will take into account changes that are currently being designed to upgrade the treatment processes.

The performance of the existing facility will be evaluated based on historical effluent quality including conventional (BOD, TSS, TN, and TP) and nonconventional pollutants including heavy metals, trace organics, microbiological parameters such as protozoan cysts and other constituents that are typically sampled and reported every quarterly.

The CONSULTANT will determine the peak capacity (all units in service) and firm capacity (standby units out of service) for all major existing and proposed treatment units and hydraulic conveyance components based on the reliability and design criteria developed for each WRF.

The CONSULTANT will review plant operating data, conduct a plant tour, interview operations and maintenance staff, and apply appropriate analyses and modeling to help assess improvements to existing facilities to reduce operation and maintenance costs for each WRF. The analyses shall assess performance under different process loading conditions, with and without standby facilities.

4.5: Existing and Anticipated Regulatory Requirements

The CONSULTANT will review existing applicable regulatory requirements and policies for treated effluent, water reuse, and groundwater impacts potentially affecting the level of treatment required and the master planning facility recommendations. The CONSULTANT will also review any pending and emerging regulatory requirements in order to assess regulatory trends reasonably anticipated over the 20-year planning horizon. Based on the review of the existing and pending regulations and trends, a range of anticipated regulatory scenarios will be identified for the purpose of developing the master planning alternatives. At a minimum, the following documents will be included for review and summary:

- Federal Water Pollution Control Act and Amendments (Clean Water Act)
- State of Florida Rules and Regulations
    - Chapters 62-600 "Domestic Wastewater Facilities",
    - Chapter 62-610 "Reuse of Reclaimed Water and Land Application",
    - Chapter 62-304 "Total Maximum Daily Loads",
    - Chapter 62-650 "Water Quality Based Effluent Limitations"
- Regulations and policies related to 303(D) listed pollutants and micropollutants
- Pending USEPA and state regulatory actions related to personal care products and pharmaceuticals (PCPPs) and endocrine disruptor chemicals (EDCs)
- Local, state, and federal regulations and policies related to biosolids management.

Based on the above information, the CONSULTANT will discuss and develop regulatory scenarios to be used in the development of the master planning alternatives at a regularly scheduled progress meeting.

4.6: Facility Condition Assessment

The CONSULTANT will perform following subtasks as part of this effort.

4.6.1 Data Review and Facility Inspection

The CONSULTANT will begin this task by reviewing facility information including record drawings, O&M Manuals, and historical work order information. Following this, the CONSULTANT will conduct a walk-through facility inspection to visually assess and document the overall condition of the two WRFs. The CONSULTANT will work with the plant staff from each of the two WRFs to gather the required information and data for major components.

The CONSULTANT will also conduct interviews with staff to obtain information on historical maintenance efforts at each facility, criticality of various pieces of equipment, information on the condition of the equipment that may not be visible during the time of inspection, and other institutional knowledge. The plant staff should be available to accompany the CONSULTANT during the site visits.

4.6.2 SCADA System Evaluation

Building upon the SCADA assessment completed for the collection system, the CONSULTANT will work with CITY staff to understand and assess the SCADA system at the WRFs. The focus will be on the system's current and potential capability to automatically collect and store operational data that improves facility operation and performance. While both facilities will be evaluated, the review is anticipated to focus more on the Bethune WRF, as the Westside WRF is anticipated to be under construction. This will include review of existing SCADA platform, equipment, communications, data logging and historian capabilities, and operational automation.

4.6.3 Assessment Summary

Based on the information gathered during the site assessment and discussions with staff, the CONSULTANT will summarize the physical condition of the facilities with major components for each WRF. This will identify key system components or processes with a location, age, and capacity where data is available. For treatment processes, this is anticipated to be a high level assessment, grouping systems and components by process or major components (such as influent pump station, clarifier, etc.).

Recommended improvements will be summarized at a planning level along with a project cost to improve or replace major components. Costs will be planning level based on CONSULTANT's cost database, recent construction costs, and industry standard practices.

4.7: Determine Future Treatment Facility Needs

By comparing projected wastewater flows and loadings with the capacity of the existing and proposed facilities and potential impacts of regulatory requirements, and reliability, the required improvements for each of the WRFs can be defined. With the definition of needs, conceptual alternatives will be developed to provide needed capacity expansion and/or improved water quality. Based on the needs analysis, an evaluation will be made of alternative treatment processes to existing processes for meeting these defined needs for increased capacity,

increased reliability, increased level of treatment, and/or potential repair and replacement of existing treatment processes at each of the WRFs.

The CONSULTANT will summarize the information from Task 4 in a WRF Assessment and Future Treatment Scenarios TM. The Draft WRF Assessment and Future Scenarios TM will be submitted to the CITY for review. The CONSULTANT will review and discuss comments on the document during a regularly scheduled progress meeting. Upon discussion of comments, the CONSULTANT will update the document and will incorporate it as a chapter of the Draft Wastewater Master Plan Report.

TASK 4 DELIVERABLES

1. Draft WRF Assessment and Future Scenarios TM (electronic pdf)

TASK 5: HYDRAULIC MODEL DEVELOPMENT

The CONSULTANT will create a hydraulic model comprised of pump stations, the pressurized force main system, and gravity mains and manholes necessary for connecting pump stations to the major collection system network. However, some portions of the system may not be completely modeled where data is unavailable or private service areas exists. Specific steps included in Task 5 are detailed in the subtasks described below.

5.1: Construct Model Infrastructure Using GIS and Existing Model Data

The CONSULTANT will primarily use the CITY's existing GIS and hydraulic model as the basis for model development. This data will be reviewed for reasonableness in Task 2 and data gaps will be filled as agreed to and documented in the Task 2 deliverables. The GIS database will be used to determine the location, length, and diameter of force mains and gravity connector pipes, supplemented by record drawings as needed. Manholes located along the gravity connector pipes will also be added to the model from the GIS database and/or existing model. This will also be compared to the current hydraulic model for overall completeness. At a minimum, specific properties related to lift stations are anticipated to be extracted from the existing model for input into the newly developed model. It is assumed that the CITY has compiled or will compile manhole invert elevations for use in the hydraulic model. If no elevation data is available, the CONSULTANT will assume reasonable slopes to apply to gravity mains included in the model.

The CONSULTANT will first construct the pipeline network in GIS in order to provide proper pipeline connectivity for modeling purposes. The GIS data will then be converted into model pipelines using the InfoSWMM software. Since InfoSWMM runs within a GIS platform, it is simple and more efficient to work with the data in the GIS database format first, and then convert to model pipes and build the pump station facilities around them.

The model will include all of the CITY owned pump stations (approx. 140 stations) and the major identified private pump stations (less than 20). The private pump stations will be those with the highest flow and/or those that are in key locations in the collection system. Small private stations may be accounted for and included in a nearby (downstream) pump station.

The model will be an extended-period simulation model constructed in Innovyze InfoSWMM software. InfoSWMM is a fully dynamic software that can be used simultaneously for gravity flow and pressured force main networks. Note that the CITY will have to separately purchase the Innovyze InfoSWMM software for internal use of the model. The CONSULTANT will assist in

identifying the proper software options with the CITY and Vendor (Innovyze), but the software purchase is anticipated to be directly by the CITY.

5.2: Populate Model Data

The CONSULTANT will use available pump station and other data to populate the model infrastructure data, including wetwell dimensions, pump configuration and pump curves, and operational controls including on/off control set-points or other set-points as applicable for master lift stations on VFDs. It is assumed that the CITY will provide pump curves and operational controls for each CITY-owned pump station, where available. It is the CONSULTANT's understanding that this information is available from the existing model along with other summary databases. Where data is not available, or outdated, the CITY will conduct draw down tests for critical pump stations. Pump curves or design points for private stations will be obtained, where available, with the assistance of the CITY.

The CONSULTANT will allocate flows to each lift station in the model based on meter billing data and population distribution data sources such as TAZ. Typical representative diurnal flow curves developed in previous tasks will be applied to lift stations within in the model. These will be modified during model calibration where needed.

5.3: Delineate Sewershed Areas

The CONSULTANT will create a GIS layer (or update CITY's existing GIS layer) to reflect the sewersheds for the pump stations to be included in the model (140 stations and up to 20 private stations). Service areas of other private lift stations or other metered customers will be combined with a nearby (upstream or downstream) CITY owned station. The sewershed layer will be used to determine pump station service areas, wet weather runoff coefficients for major lift stations included in the field testing, and to create maps reflecting pump station service area boundaries.

5.4: Develop Model Scenarios

After construction of the base model, the CONSULTANT will discuss the specific model simulations, key assumptions, appropriate level of model validation/calibration, and methodology to accurately represent a peak hour flow event. These discussions will be held in the form of a workshop with City staff to discuss the desired modeling scenarios. This meeting will be coordinated to occur along with a regularly scheduled progress meeting.

From the Base model, the CONSULTANT will construct a number of scenarios in the model to reflect various system operating conditions. These will include calibration scenarios as well as typical operational scenarios for the CITY. This Scope of Services allows for the creation of the following scenarios:

- Base
- Dry Weather Calibration
- Wet Weather Calibration
- 2018 Level of Service Flow Conditions
- 2018 Wet Weather Storm Event
- 2025 Level of Service Flow Conditions
- 2025 Wet Weather Storm Event

- 2030 Level of Service Flow Conditions
- 2030 Wet Weather Storm Event
- 2040 Level of Service Flow Conditions
- 2040 Wet Weather Storm Event

All of the scenarios will be extended period simulation (EPS) scenarios with an operating time step of five minutes or less. The future scenarios will address planned/anticipated growth, primarily in the western portion of the service area. These scenarios will address specific CITY goals related to pump station and force main hydraulics.

5.5: Model Calibration

Using data collected from SCADA and field tests (Task 3), the CONSULTANT will calibrate the model by comparing model results with the field data. The primary objective of the calibration task is to give the CITY confidence that the model is a reasonable representation of the collection system so that capital improvement decisions can be made based on model results. Specific steps included in Task 5.6 are detailed in the subtasks described below.

5.5.1: Dry Weather Calibration

Model calibration will begin with a dry weather calibration to verify that sanitary flows and base infiltration are correctly distributed in the collection system. The model will be calibrated for an EPS period of a minimum of 48 hours using a 2-day period selected from the driest period of the field test. Adjustments to field test data will be made using historical data if a multi-day period without rain does not occur during the field test. The model will be run to confirm it matches dry weather flows.

The CONSULTANT will modify data parameters such as infrastructure parameters, operational controls of pump stations, load allocations, and/or friction factors until there is a reasonable correlation between the model and the field test data. Significant deviation from expected results will be discussed with the CITY to determine appropriate modifications. Industry guidelines for reasonable correlation and significant deviation in model calibration will be documented in the Hydraulic Modeling TM (to be completed as part of Task 6) and will also be discussed with CITY staff at a progress meeting.

In conjunction with a regularly scheduled progress meeting, the CONSULTANT will present the results of the dry weather calibration. The CONSULTANT will present model output compared with field measurements to inform the CITY on the accuracy and reasonableness of the sanitary and base infiltration flows in the model.

5.5.2: Wet Weather Calibration

The CONSULTANT will utilize a second calibration scenario to reflect system operation under a wet weather event. The wet weather calibration will use data from the field test conducted during wet summer months. For wet weather calibration, the CONSULTANT will use the Wastewater Planners Users Group (WaPUG) modeling calibration criteria as the minimum standard for accuracy and precision in judging results. WaPUG criteria sets specific targets for the comparison of measured flows to model calculated flows during simulation of wet weather storm events. The WaPUG criteria will be provided to the CITY and documented in the Hydraulic Modeling TM.

5.6: Model Training and Users Guide

The CONSULTANT will train CITY staff on the use of the hydraulic model. The CONSULTANT will provide two 4-hour training sessions with CITY staff to demonstrate various model functions. The training sessions will focus on information provided in the Wastewater Model Reference Guide and on how to evaluate various aspects of concern for the CITY such as adding a new development to the collection system, changing master lift station operation, and planning for future flow transfers. Training will be presented using the CITY model, and will be an opportunity for CITY staff to observe the execution of typical model functions. The training sessions will focus on aspects specific to CITY's model, rather than on usage of the modeling software itself.

The model will be delivered to the CITY after each major model milestone. Overall, training will be continuous with the involvement of CITY staff, and will provide on-going knowledge transfer to staff on the various aspects of the project, including building the model, calibration, and scenario analyses. However, formal training sessions can be scheduled throughout the project, or at the end of the project, at the preference of the CITY. The capabilities and limitations of the model will be clearly conveyed. This will provide the CITY with a comprehensive understating of the tool to allow the CITY to maximize in-house use of the models.

The CONSULTANT will create a document explaining the various components of the wastewater system model. The Wastewater Model Reference Guide will outline model components, describe uses of the various elements within the model, document standard modeling conventions, and explain the standard operating procedures needed to use the model. Specifically, the Wastewater Model Reference Guide will include information on:

- Scenario management
- Wastewater flow allocation and diurnal patterns
- Calibration and maintenance of calibration records
- Model element naming conventions
- Lift station facility and operational data/set-points
- Model maintenance and database management

The Draft Wastewater Model Reference Guide will be issued to the CITY for review. The Draft deliverable will be submitted electronically to the CITY as a MS Word doc file. Upon receipt of CITY comments on the Draft Wastewater Model Reference Guide, the CONSULTANT will revise the document and issue the Final Wastewater Model Reference Guide.

TASK 5 DELIVERABLES

- Sewershed areas GIS database
- InfoSWMM hydraulic model
- Draft Wastewater Model Reference Guide (electronic MS Word document)
- Final Wastewater Model Reference Guide (electronic MS Word document and pdf)

TASK 6: EXISTING SYSTEM HYDRAULIC ANALYSIS

Once the facilities assessment and model is completed, the CONSULTANT will complete the scenarios outlined in previous tasks and use them to evaluate the CITY's overall system. The

results of the existing system analysis will be used to develop specific recommended projects during Task 7. Specific tasks included in this task are detailed in the subtasks described below.

6.1: Existing Collection System Analyses

The CONSULTANT will evaluate the existing wastewater collection system to identify operational performance under the various modeling scenarios outlined in Task 5.4. The existing system evaluation will include evaluation of each lift station regarding current flows and pumping capacity requirements, force main velocity, and major gravity collectors connecting the force main network. Areas not meeting performance criteria will be identified in a series of maps and will be presented to the CITY during a progress meeting.

6.2: Draft Hydraulic Modeling TM

The final results of the model construction and existing system modeling analyses will be described in a Draft Hydraulic Modeling TM. The Hydraulic Modeling TM will include an overall description of the model and calibration efforts.

Model results will be presented for the scenarios outlined in Task 6.1 including force main velocity, gravity flow depth and/or surcharged or overflow locations, and pump stations that do not meet the selected performance criteria for pump station capacity, number of pump starts per hour, etc.

Upon receipt of CITY comments on the Draft Hydraulic Modeling TM, the CONSULTANT will update the document and incorporate it into a chapter of the Draft Master Plan Report.

TASK 6 DELIVERABLES

- Draft Hydraulic Modeling TM (electronic pdf)

TASK 7: PROJECT ALTERNATIVES/CAPITAL IMPROVEMENT PLAN

Based on the modeling results, facility assessment and other data collected, the CONSULTANT team will develop project alternatives for future Capital Improvement Plan (CIP) projects. This will include both collection system and WRF related components.

7.1: Collection System Future Scenario Analyses and CIP

With the involvement of CITY staff, the CONSULTANT will identify and develop project alternatives to address the findings of the needs analysis for the collection system. Using the hydraulic model scenario results developed, the CONSULTANT will develop a CIP consistent for the 20-year planning period analyzed. The planning intervals will include immediate (near-term) CIP needs, mid-range CIP needs (2025 and 2030) and long-term CIP projects (2040). This task will include collection system components including forcemains, gravity collection system (where included in the model), lift station capacity and performance for all stations, and lift station condition/R&R projects for the 20 lift stations evaluated during the field assessment.

The CONSULTANT will evaluate the existing wastewater system for deficiencies utilizing the assessment and hydraulic model scenarios. This will include alternatives which address:

- Capacity of the system (pipelines, lift stations) to handle present and future anticipated flows.

- Improvements to the twenty (20) key lift stations related to condition and age, structural, electrical, and SCADA systems based on the available data.
- Recommendations for operational changes to improve system performance, hydraulics, efficiency and reliability.

Upon completing the future model scenarios, the CONSULTANT will schedule a workshop with the CITY to review existing system limitations and discuss potential strategies for improvement. A range of collection system improvement options and projects will be identified and discussed with the CITY at the beginning of the alternatives task.

The CONSULTANT will develop planning level cost estimates for the infrastructure recommended in the capital improvements projects. The costs will be based on conceptual level cost estimates. The Consultant will develop a year 2025, 2030, and 2040 CIP based on these costs with a detailed implementation schedule for the first seven (7) years (2019 through 2025).

For pipelines and lift stations (other than the key twenty (20) stations assessed), the Master Plan includes evaluation of infrastructure necessary for future growth and development and does not include analysis or recommendations for replacement due to age or condition.

7.2: WRF Future Scenario Analyses and CIP

With the input of CITY staff, the CONSULTANT team will identify and develop project alternatives to address the finding of the needs analysis for each WRF. Alternatives for the WRF will be based on the facility assessment in Task 4 along with growth driven needs based projected flows and treatment process capacity, as well as future regulatory requirements.

The CONSULTANT will develop recommended alternatives which address:

- Capacity of the WRF unit processes to handle present and future anticipated flows.
- Improvements related to condition and age, structural, electrical, and SCADA systems based on the results of Task 4.6.
- Recommendations for operational changes to improve WF performance, hydraulics, efficiency, and reliability.

The CONSULTANT will develop planning level cost estimates for the infrastructure recommended in the capital improvements projects. The costs will be based on conceptual level cost estimates. The Consultant will develop a year 2025, 2030, and 2040 CIP based on these costs with a detailed implementation schedule for the first seven (7) years (2019 through 2025).

7.3: Alternatives Analyses and Recommended CIP Projects Workshop

Together with the CITY staff, the CONSULTANT will facilitate a workshop with CITY staff to identify and discuss the recommended CIP projects based on the alternatives analysis for both the collection system and the WRFs. This may include a wide range of conceptual technical alternatives for collection system and WRF improvement. Based on CITY feedback, the CONSULTANT will incorporate the agreed upon projects into the CITY's Draft Wastewater Master Plan Report.

TASK 7 DELIVERABLES

- CIP Summary
- Workshop agenda and minutes (electronic pdf)

TASK 8: WASTEWATER MASTER PLAN

Upon completion of the evaluation, modeling and CIP development, the CONSULTANT will prepare a Draft Wastewater Master Plan Report. This will include the assembly of a draft report, review meeting, and final report. Specific tasks included in this task are detailed in the subtasks described below.

8.1: Draft Report

The CONSULTANT will develop a combined report summarizing the results of the project as a comprehensive Wastewater Master Plan. The report is anticipated to include the following sections:

- Executive Summary.
- Introduction including background information, general purpose and scope, and description of factors affecting the CITY's wastewater planning efforts such as permitting regulations and population growth.
- Population projections as provided in the CITY's planning data.
- Wastewater flow projections.
- Summary of existing facilities including treatment plants, force mains and major gravity connectors, infrastructure, lift stations, and master lift stations.
- Model description and documentation including model elements, loading allocations, and calibration efforts.
- Model scenarios including 2018, 2025, 2030, and 2040 (level of service and wet weather EPS).
- Graphics for each model scenario showing proposed developments/service areas being served by which infrastructure (sewer shed for each transmission line and each pump/lift station shown on the map).
- Results of the WRF assessment including capacity evaluation, condition assessment, and regulatory requirements.
- CIP through the 20-year timeframe including cost estimates and timing.

After submittal of the Draft Wastewater Master Plan Report, the CONSULTANT will discuss CITY comments during a regularly scheduled progress meeting. Based on the feedback from the meeting, the CONSULTANT will prepare meeting minutes to summarize comments. Additional comments may be provided by the CITY following the meeting. Upon receipt of CITY comments and discussion/resolution of all necessary aspects for the report, the CONSULTANT will proceed to complete the Final Master Plan Report.

8.2: Final Report

Upon receipt of CITY comments and agreement of meeting summary/minutes on the Draft Master Plan Report, the CONSULTANT will update the document and submit the Final Wastewater Master Plan Report.

TASK 8 DELIVERABLES

- Draft Wastewater Master Plan Report (electronic pdf)
- Final Wastewater Master Plan Report (electronic pdf and eight (8) hard copies)
- Project materials in electronic format (Excel, GIS, InfoSWMM, etc.)

CITY RESPONSIBILITIES

Because of the nature of this project, certain assumptions apply to this Scope of Services. To the extent possible, these assumptions are stated within this document and are reflected in the budget. If the project task requirements are different from the assumptions presented in this Scope of Services, or if the CITY desires additional services, the resultant change in scope will serve as a basis for amending this project assignment or initiating the development of a new project assignment as agreed to by both the CITY and CONSULTANT. The following assumptions and CITY responsibilities apply to this project:

- The CONSULTANT shall be entitled to rely upon the accuracy of the data and information supplied by the Town without independent review or evaluation.
- The CITY shall attend all workshops and review meetings to maintain the progress of the project according to the schedule.
- The CITY will provide the CONSULTANT with access to treatment facility and collection system sites for data gathering and data validation.
- The CITY will assist with field testing as necessary, including accompanying the CONSULTANT on site visits.
- The CITY will provide all required information within the period established in the schedule contained in this Scope of Services. The schedule is based on timely receipt of data from the CITY. The CITY shall review Draft deliverables and provide comments to the CONSULTANT within a two-week period.
- The CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, over the incoming wastewater quality and/or quantity, or over the way the CITY's plant(s) and/or associated processes are operated and/or maintained. Data projections and estimates are based on the CONSULTANT's opinion based on experience and judgment. The CONSULTANT cannot and does not guarantee that actual costs and/or quantities realized will not vary from the data projections and estimates prepared by the CONSULTANT and the CONSULTANT will not be liable to and/or indemnify the CITY and/or any third party related to any inconsistencies between the CONSULTANT's data projections and estimates and actual costs and/or quantities realized by the CITY and/or any third party in the future.
- The services to be performed by the CONSULTANT are intended solely for the benefit of the CITY. No person or entity not a signatory to this Scope of Work shall be entitled to rely on the CONSULTANT's performance of its services hereunder, and no right to assert a claim against the CONSULTANT by assignment of indemnity rights or otherwise shall

accrue to a third party as a result of this Scope of Work or the performance of the CONSULTANT's services hereunder.

SCHEDULE

The services described above are anticipated to be completed in accordance with the following summary. Unless noted otherwise, time durations listed below are weeks measured from the date upon which the CONSULTANT received the notice to proceed for the work.

Task	Weeks After NTP
Task 1: Project Management	52
Task 2: Data Gathering and Framework	8
Task 3: Collection System Data and Analysis	20
Task 4: WRF Data and Analysis	20
Task 5: Hydraulic Model Development	24
Task 6: Hydraulic Analysis	32
Task 7: Project Alternatives/CIP	46
Task 8: Wastewater Master Plan	52

It has been assumed that the CITY will complete all reviews within two weeks of receiving the submittals. It is expected that all services in this scope of services will be completed within 12 months of receiving a notice to proceed.

PROJECT FEE

Compensation for the services described above shall be delivered for the amount of $549,590.56. The basis for this is a combination of lump-sum and cost basis amount is provided in the attached **Exhibit A**.B.

City of Daytona Beach
Wastewater Master Plan
Budget

EXHIBIT B

EXHIBIT A
6/25/2018

Task No.	Task Description / Project Role	Labor Hours and Costs													Other Direct Costs		Task Total	Billing Method
		PIC	Project Manager	Assistant Project Manager	WRF Tech Lead	Model Tech Lead	Discipline Engineer Electrical/I&C	Discipline Engineer Structural	WRF Analysis	Data Collection / Analysis	Hydraulic Modeling	Doc Process	Hours	Cost	Expenses	Subconsultant		
		$252.39	$203.79	$201.93	$199.59	$130.95	$216.33	$209.40	$139.29	$118.98	$101.76	$65.25						
1	**Project and Quality Management**	**46**	**120**	**60**	**32**	**32**	**0**	**0**	**18**	**12**	**92**	**20**	**432**	**$73,359.72**	**$1,500.00**	**$0.00**	**$74,859.72**	**Lump Sum**
	1.1: Project Management and Communications	12	40	24									76	$16,026.60			$16,026.60	
	1.2: Project Management and Work Plan	2	4	4							16	4	30	$4,016.82			$4,016.82	
	1.3: Project Kickoff and Progress Meetings	8	64	32	8	8			18	12	64	8	222	$35,137.38			$35,137.38	
	1.4: Monthly Progress Reports		12								12	8	32	$4,188.60			$4,188.60	
	1.5: Quality Control and Quality Assurance	24			24	24							72	$13,990.32			$13,990.32	
2	**Data Gathering and Planning Framework**	**0**	**16**	**12**	**0**	**0**	**0**	**0**	**16**	**40**	**120**	**16**	**220**	**$25,926.84**	**$1,500.00**	**$0.00**	**$27,426.84**	**Lump Sum**
	2.1: Data Gathering and Review		4	4					12	40	40		100	$12,123.96			$12,123.96	
	2.2: Population, Flow, and Diurnal Patterns Analysis		4	4					4		40		52	$6,250.44			$6,250.44	
	2.3: Draft Planning Framework Technical Memorandum		8	4							40	16	68	$7,552.44			$7,552.44	
3	**Collection System Data and Analysis**	**8**	**10**	**64**	**0**	**0**	**44**	**20**	**0**	**152**	**64**	**16**	**378**	**$56,328.66**	**$1,500.00**	**$0.00**	**$57,828.66**	**Lump Sum**
	3.1: SCADA System Assessment	4		16			24			40			84	$14,191.56			$14,191.56	
	3.2: Lift Station Assessment			32			20	20		48			120	$20,687.40			$20,687.40	
	3.3: Field Test Plan	4	10	16						64	64	16	174	$21,449.70			$21,449.70	
3B	**Field Testing**												**0**	**$0.00**		**$47,349.00**	**$47,349.00**	**Cost Basis**
4	**WRF Data Collection and Analysis**	**12**	**0**	**4**	**44**	**0**	**68**	**32**	**158**	**380**	**0**	**16**	**714**	**$102,293.82**	**$750.00**	**$0.00**	**$103,043.82**	**Lump Sum**
	4.1: Review of Westside Regional & Bethune Point WRF								24	40			64	$8,102.16			$8,102.16	
	4.2: Develop Master Plan Standby/Reliability Criteria	8			12		12		16	40			88	$13,998.00			$13,998.00	
	4.3: Historical Wastewater Flows/Characteristics			4					8	40			52	$6,681.24			$6,681.24	
	4.4: Treatment Facility Performance, Capacity and Optimization Assessment				16				30	60			106	$14,510.94			$14,510.94	
	4.5: Existing and Anticipated Regulatory Requirements	4			8				24	40			76	$10,708.44			$10,708.44	
	4.6: Facility Condition Assessment						40	20	24	80			164	$25,702.56			$25,702.56	
	4.7: Determine Future Treatment Facility Needs				8		16	12	32	80		16	164	$22,590.48			$22,590.48	
5	**Hydraulic Model Development**	**12**	**52**	**40**	**0**	**120**	**0**	**0**	**0**	**40**	**760**	**0**	**1024**	**$119,513.76**	**$750.00**	**$0.00**	**$120,263.76**	**Lump Sum**
	5.1: Construct Model Infrastructure		8			16					100		124	$13,901.52			$13,901.52	
	5.2: Populate Model Data		4			24					160		188	$20,239.56			$20,239.56	
	5.3: Delineate Sewershed Area		4			16					80		100	$11,051.16			$11,051.16	
	5.4: Develop Model Scenarios	4	8	16		40					220		288	$33,495.96			$33,495.96	
	5.5: Model Calibration	8	24	16		24					160		232	$29,565.36			$29,565.36	
	5.6: Model Training and Users Guide		4	8						40	40		92	$11,260.20			$11,260.20	
6	**Existing System Hydraulic Analysis**	**4**	**16**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**120**	**16**	**172**	**$20,756.28**	**$500.00**	**$0.00**	**$21,256.28**	**Lump Sum**
	6.1: Existing Collection System Analyses	4	8	4							40		56	$7,518.00			$7,518.00	
	6.2: Draft Hydraulic Modeling TM		8	12							80	16	116	$13,238.28			$13,238.28	
7	**Project Alternatives/CIP**	**8**	**40**	**36**	**0**	**0**	**16**	**16**	**24**	**96**	**176**	**0**	**412**	**$56,926.68**	**$0.00**	**$0.00**	**$56,926.68**	**Lump Sum**
	7.1: Collection System Future Scenario Analyses and CIP	4	32	24			8	8			160		236	$32,064.60			$32,064.60	
	7.2: WRF Future Scenario Analyses and CIP						8	8	16	80			112	$15,152.88			$15,152.88	
	7.3: CIP Workshop	4	8	12					8	16	16		64	$9,709.20			$9,709.20	
8	**Wastewater Master Plan**	**0**	**24**	**32**	**0**	**0**	**0**	**0**	**20**	**92**	**112**	**56**	**336**	**$40,135.80**	**$500.00**	**$0.00**	**$40,635.80**	**Lump Sum**
	8.1: Draft Report		16	20					16	60	80	32	224	$26,895.48			$26,895.48	
	8.2: Final Report		8	12					4	32	32	24	112	$13,240.32			$13,240.32	
	TOTALS	**90**	**278**	**264**	**76**	**152**	**128**	**68**	**236**	**812**	**1444**	**140**	**3,688**	**$495,241.56**	**$7,000.00**	**$47,349.00**	**$549,590.56**	

Composite Exhibit C is not attached. It will be kept on file with the Purchasing Agent, and will be made available upon request made to the City Clerk.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/12/2018

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(ies) 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).

PRODUCER Risk Strategies Company 2040 Main Street, Suite 450 Irvine, CA 92614 www.risk-strategies.com CA DOI License No. 0F06675	**CONTACT NAME:** Risk Strategies Company **PHONE (A/C, No, Ext):** 949-242-9240 **FAX (A/C, No):** **E-MAIL ADDRESS:** syoung@risk-strategies.com
INSURED Carollo Engineers, Inc. 2700 Ygnacio Valley Road, #300 Walnut Creek CA 94598	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Continental Insurance Company — 35289 **INSURER B :** American Casualty Company of Reading, PA — 20427 **INSURER C :** Valley Forge Insurance Company — 20508 **INSURER D :** Continental Casualty Company — 20443 **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 42475784 **REVISION NUMBER:**

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.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ **COMMERCIAL GENERAL LIABILITY** ☐ ☐ CLAIMS-MADE ☑ OCCUR ✓ Deductible $0 GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☑ PRO-JECT ☐ LOC ☐ OTHER:	✓		6050490317	12/31/2017	12/31/2018	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ $1,000,000 $ $1,000,000 $ $25,000 $ $1,000,000 $ $2,000,000 $ $2,000,000 $
A	**AUTOMOBILE LIABILITY** ✓ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ✓ HIRED AUTOS ONLY ☑ NON-OWNED AUTOS ONLY			6050490267	12/31/2017	12/31/2018	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Ded: Comp/Collision	$ $1,000,000 $ $ $ $ $1,000
	☐ **UMBRELLA LIAB** ☐ OCCUR ☐ **EXCESS LIAB** ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $						EACH OCCURRENCE AGGREGATE $	$ $ $
B C	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		6050490270 6050490298	12/31/2017 12/31/2017	12/31/2018 12/31/2018	✓ PER STATUTE ✓ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	Deductible: $0 $ $1,000,000 $ $1,000,000 $ $1,000,000
D	Professional Liability Unlimited Prior Acts			AEH288354410	7/4/2017	7/4/2018	Each Claim: Aggregate: Deductible:	$1,000,000 $1,000,000 $400,000

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

Projects as on file with the insured including but not limited to: Wastewater Master Plan. Carollo Project #: Not yet assigned.
City of Daytona Beach is included as additional insured with respects to general liability.

CERTIFICATE HOLDER

City of Daytona Beach
Attn: John J. Drago
Utilities Dept.
125 Basin St., Ste. 204
Daytona Beach FL 32114

CANCELLATION

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

Michael Christian

Blanket Additional Insured - Owners, Lessees or Contractors - with Products-Completed Operations Coverage Endorsement

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

It is understood and agreed as follows:

I. The **WHO IS AN INSURED** section is amended to add as an **Insured** any person or organization whom the **Named Insured** is required by **written contract** to add as an additional insured on this **coverage part,** including any such person or organization, if any, specifically set forth on the Schedule attachment to this endorsement. However, such person or organization is an **Insured** only with respect to such person or organization's liability for:

A. unless paragraph **B.** below applies,

1. **bodily injury**, **property damage**, or **personal and advertising injury** caused in whole or in part by the acts or omissions by or on behalf of the **Named Insured** and in the performance of such **Named Insured's** ongoing operations as specified in such **written contract**; or

2. **bodily injury** or **property damage** caused in whole or in part by **your work** and included in the **products-completed operations** hazard, and only if

a. the **written contract** requires the **Named Insured** to provide the additional insured such coverage; and

b. this **coverage part** provides such coverage.

B. **bodily injury, property damage,** or **personal and advertising injury** arising out of **your work** described in such **written contract**, but only if:

1. this **coverage part** provides coverage for **bodily injury** or **property damage** included within the **products completed operations hazard**; and

2. the **written contract** specifically requires the **Named Insured** to provide additional insured coverage under the 11-85 or 10-01 edition of CG2010 or the 10-01 edition of CG2037.

II. Subject always to the terms and conditions of this policy, including the limits of insurance, the Insurer will not provide such additional insured with:

A. coverage broader than required by the **written contract**; or

B. a higher limit of insurance than required by the **written contract**.

III. The insurance granted by this endorsement to the additional insured does not apply to **bodily injury**, **property damage**, or **personal and advertising injury** arising out of:

A. the rendering of, or the failure to render, any professional architectural, engineering, or surveying services, including:

1. the preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and

2. supervisory, inspection, architectural or engineering activities; or

B. any premises or work for which the additional insured is specifically listed as an additional insured on another endorsement attached to this **coverage part**.

IV. Notwithstanding anything to the contrary in the section entitled **COMMERCIAL GENERAL LIABILITY CONDITIONS,** the Condition entitled **Other Insurance**, this insurance is excess of all other insurance available to the additional insured whether on a primary, excess, contingent or any other basis. However, if this insurance

is required by **written contract** to be primary and non-contributory, this insurance will be primary and non-contributory relative solely to insurance on which the additional insured is a named insured.

V. Solely with respect to the insurance granted by this endorsement, the section entitled **COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended as follows:

The Condition entitled **Duties In The Event of Occurrence, Offense, Claim or Suit** is amended with the addition of the following:

Any additional insured pursuant to this endorsement will as soon as practicable:

1. give the Insurer written notice of any **claim**, or any **occurrence** or offense which may result in a **claim**;

2. except as provided in Paragraph IV. of this endorsement, agree to make available any other insurance the additional insured has for any loss covered under this **coverage part**;

3. send the Insurer copies of all legal papers received, and otherwise cooperate with the Insurer in the investigation, defense, or settlement of the **claim**; and

4. tender the defense and indemnity of any **claim** to any other insurer or self insurer whose policy or program applies to a loss that the Insurer covers under this **coverage part**. However, if the **written contract** requires this insurance to be primary and non-contributory, this paragraph **(4)** does not apply to insurance on which the additional insured is a named insured.

The Insurer has no duty to defend or indemnify an additional insured under this endorsement until the Insurer receives written notice of a **claim** from the additional insured.

VI. Solely with respect to the insurance granted by this endorsement, the section entitled **DEFINITIONS** is amended to add the following definition:

Written contract means a written contract or written agreement that requires the **Named Insured** to make a person or organization an additional insured on this **coverage part**, provided the contract or agreement:

A. is currently in effect or becomes effective during the term of this policy; and

B. was executed prior to:

1. the **bodily injury** or **property damage**; or

2. the offense that caused the **personal and advertising injury**

for which the additional insured seeks coverage.

Any coverage granted by this endorsement shall apply solely to the extent permissible by law.

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy, unless another effective date is shown below, and expires concurrently with said Policy.

POLICY NUMBER: 6050490317

COMMERCIAL GENERAL LIABILITY
CG 20 10 04 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
City of Daytona Beach	**As required by a written contract.**
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

INSURED: Carollo Engineers, Inc.
POLICY NUMBER: 6050490317
EFFECTIVE DATE: 12/31/2017

COMMERCIAL GENERAL LIABILITY
CG 20 37 07 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS - COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
WHERE REQUIRED BY WRITTEN CONTRACT City of Daytona Beach	WHERE REQUIRED BY WRITTEN CONTRACT Wastewater Master Plan
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard."

CITY OF DAYTONA BEACH
RISK MANAGEMENT DIVISION
P. O. Box 2451
Daytona Beach, FL 32115
Phone: (386) 671-8222 Fax: (386) 671-3257

Memorandum

To: Letitia LaMagna, City Clerk

From: Bob Flaniken, Sr. Account Clerk *BF*

Date: July 17, 2018

Re: Contract No. 0418 - 0680

Attached is a copy of Contract Number 0418 – 0680 with Carollo Engineers, Inc. (Wastewater master planning). I have reviewed the evidence of insurance submitted with the contract, and I find it to be satisfactory.

Attachments