

AGREEMENT

Between

BROWARD COUNTY

and

HAZEN AND SAWYER, P.C.

for

**CONSULTANT SERVICES FOR
NORTH REGIONAL WASTEWATER TREATMENT PLANT – FACILITY
IMPROVEMENTS
IN BROWARD COUNTY, FLORIDA**

RLI # R1007402R1

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A G R E E M E N T

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This is an Agreement between: BROWARD COUNTY, a political subdivision of the State of Florida, its successors and assigns, hereinafter referred to as "COUNTY," through its Board of County Commissioners,

AND

HAZEN AND SAWYER, P.C., a foreign profit corporation, authorized to conduct business in the State of Florida, hereinafter referred to as "CONSULTANT."

W I T N E S S E T H

WHEREAS, COUNTY issued RLI No. R1007402R1 for professional engineering services for North Regional Wastewater Treatment Plant ("NRWWTP") – Facility Improvements; and

WHEREAS, CONSULTANT represents that it is experienced in providing a full range of engineering services, for all engineering disciplines, to design, prepare security and risk assessment, procure permits, negotiate and provide support related to environmental regulations, prepare construction contract documents, and provide engineering services during construction, related to wastewater treatment plants and its facility improvements; and

WHEREAS, COUNTY wishes to engage CONSULTANT to provide professional engineering services for the NRWWTP Facility Improvements Project; and

WHEREAS, negotiations pertaining to this Project were undertaken between COUNTY and CONSULTANT, and this Agreement incorporates the results of such negotiations; NOW THEREFORE,

In consideration of the mutual terms and conditions, promises, covenants and payments hereinafter set forth, COUNTY and CONSULTANT agree as follows:

ARTICLE 1
DEFINITIONS AND IDENTIFICATIONS

For purposes of this Agreement, reference to one gender shall include the other, use of the plural shall include the singular, and use of the singular shall include the plural. The following definitions and identifications set forth below apply unless the context in which the word or phrase is used requires a different definition:

- 1.1 **Agreement**: means this document, Articles 1 through 10, inclusive. Other terms and conditions are included in the exhibits and documents that are expressly incorporated by reference.
- 1.2 **Board**: The Board of County Commissioners of Broward County, Florida, which is the governing body of the Broward County government created by the Broward County Charter.
- 1.3 **CONSULTANT**: The architect or engineer selected to perform the services pursuant to this Agreement.
- 1.4 **Contract Administrator**: The Director of Broward County Water and Wastewater Engineering Division, or designee. In the administration of this Agreement, as contrasted with matters of policy, all parties may rely upon instructions or determinations made by the Contract Administrator; provided, however, that such instructions and determinations do not change the Scope of Services.
- 1.5 **Contractor**: The person, firm, corporation or other entity who enters into an agreement with COUNTY to perform the construction work for the Project.
- 1.6 **County Administrator**: The administrative head of COUNTY pursuant to Sections 3.02 and 3.03 of the Broward County Charter.
- 1.7 **County Attorney**: The chief legal counsel for COUNTY who directs and supervises the Office of the County Attorney pursuant to Section 2.10 of the Broward County Charter.
- 1.8 **County Business Enterprise or "CBE"**: A small business located in Broward County, Florida, which meets the criteria and eligibility requirements of Broward

County's CBE Program and must be certified by Broward County's Office of Economic and Small Business Development.

- 1.9 **Notice To Proceed**: A written notice to proceed with the Project issued by the Contract Administrator.
- 1.10 **Project**: The project is located at the North Regional Wastewater Treatment Plant (NRWWTP) and consists of modifications, improvements, and upgrades to existing treatment processes, plant facility structures, and electrical and control systems to improve and increase treatment and disposal capacity, and includes security and risk assessment for all facilities and infrastructure supporting the North Regional Wastewater Treatment System, which is comprised of the NRWWTP, 15 master pump stations, ocean outfall, injection wells, and related force mains and infrastructure.
- 1.11 **Subconsultant**: A firm, partnership, corporation or combination thereof having a direct contract with a Consultant for all or any portion of the advertised work or who furnishes skills or materials worked into a special design according to the plans and specifications for such work, but not those who merely furnish equipment or materials required by the plans and specifications.

ARTICLE 2 PREAMBLE

In order to establish the background, context, and frame of reference for this Agreement and to generally express the objectives and intentions of the respective parties hereto, the following statements, representations, and explanations shall be accepted as predicates for the undertakings and commitments included within the provisions which follow and may be relied upon by the parties as essential elements of the mutual considerations upon which this Agreement is based.

- 2.1 COUNTY has budgeted funds for the Project. This Project is funded with County funds.
- 2.2 The Board has met the requirements of Section 287.055, Florida Statutes, the Consultants' Competitive Negotiation Act, and has selected CONSULTANT to perform the services hereunder.
- 2.3 Negotiations pertaining to the services to be performed by CONSULTANT were undertaken between CONSULTANT and a committee established by the Board, and this Agreement incorporates the results of such negotiations.

ARTICLE 3
SCOPE OF SERVICES

- 3.1 CONSULTANT's services shall consist of the phases set forth in Exhibit "A," attached hereto and made a part hereof, and shall include providing a full range of engineering services, for all engineering disciplines, to design (including related engineering reports), security and risk assessment report, procure permits, negotiate and provide support to COUNTY related to environmental regulations, prepare construction contract documents, provide engineering services during construction, and other professional design services, as applicable for the Project. CONSULTANT shall provide all services as set forth in Exhibit "A" including all necessary, incidental, and related activities and services required by the Scope of Services and contemplated in CONSULTANT's level of effort.
- 3.2 CONSULTANT and COUNTY acknowledge that the Scope of Services does not delineate every detail and minor work task required to be performed by CONSULTANT to complete the Project. If, during the course of the performance of the services included in this Agreement, CONSULTANT determines that work should be performed to complete the Project which is in CONSULTANT's opinion outside the level of effort originally anticipated, whether or not the Scope of Services identifies the work items, CONSULTANT shall notify Contract Administrator in writing in a timely manner before proceeding with the work. If CONSULTANT proceeds with said work without notifying the Contract Administrator, said work shall be deemed to be within the original level of effort, whether or not specifically addressed in the Scope of Services. Notice to Contract Administrator does not constitute authorization or approval by COUNTY to CONSULTANT to perform the work. Performance of work by CONSULTANT outside the originally anticipated level of effort without prior written COUNTY approval is at CONSULTANT's sole risk.
- 3.3 COUNTY and CONSULTANT acknowledge that Exhibit "A" is for the first portion of services related to the Project and that additional negotiations will be required for subsequent phases or for additional services except as otherwise provided herein. COUNTY and CONSULTANT may negotiate additional scopes of services, compensation, time of performance, and other related matters for future phases of Project. If COUNTY and CONSULTANT cannot contractually agree, COUNTY shall have the right to immediately terminate negotiations at no cost to COUNTY and procure services for future Project phases from another source.
- 3.4 CONSULTANT shall pay its CBE subconsultants, subcontractors, and suppliers, within fifteen (15) days following receipt of payment from COUNTY for such subcontracted work and pay all other subconsultants, subcontractors, and suppliers, within thirty (30) days following receipt of payment from the COUNTY for such subcontracted work or supplies. CONSULTANT agrees that if it withholds an amount as retainage from CBE subconsultants, subcontractors, or

suppliers that it will release such retainage and pay same within fifteen (15) days following receipt of payment of retained amounts from COUNTY. For all other subconsultants, subcontractors, or suppliers, CONSULTANT agrees that if it withholds an amount as retainage from such subconsultants, subcontractors, or suppliers, that it will release such retainage and pay same within thirty (30) days following receipt of payment of retained amounts from COUNTY.

ARTICLE 4
TIME FOR PERFORMANCE; CONTRACTOR DAMAGES;
LIQUIDATED DAMAGES

- 4.1 CONSULTANT shall perform the services described in Exhibit "A" within the time periods specified in the Project Schedule included in Exhibit "A"; said time periods shall commence from the date of the Notice to Proceed for such services.
- 4.2 Prior to beginning the performance of any services under this Agreement, CONSULTANT must receive a Notice to Proceed. CONSULTANT must receive written approval from the Contract Administrator prior to beginning the performance of services in any subsequent phases of this Agreement. Prior to granting approval for CONSULTANT to proceed to a subsequent phase, the Contract Administrator may, at his or her sole option, require CONSULTANT to submit the itemized deliverables/documents identified in Exhibit "A" for the Contract Administrator's review.
- 4.3 In the event CONSULTANT is unable to complete the above services because of delays resulting from untimely review by COUNTY or other governmental authorities having jurisdiction over the Project, and such delays are not the fault of CONSULTANT, or because of delays which were caused by factors outside the control of CONSULTANT, COUNTY shall grant a reasonable extension of time for completion of the services and shall provide reasonable compensation, if appropriate. It shall be the responsibility of CONSULTANT to notify COUNTY promptly in writing whenever a delay in approval by a governmental agency is anticipated or experienced, and to inform COUNTY of all facts and details related to the delay.
- 4.4 In the event Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with COUNTY or if Contractor is granted an extension of time beyond said substantial completion date, and CONSULTANT's services are extended beyond the substantial completion date, through no fault of CONSULTANT, CONSULTANT shall be compensated in accordance with Article 5 for all services rendered by CONSULTANT beyond the substantial completion date.
- 4.5 In the event Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with COUNTY, and the

failure to substantially complete is caused in whole or in part by a negligent act, error or omission of CONSULTANT, then CONSULTANT shall pay to COUNTY its proportional share of any claim or damages to Contractor arising out of the delay. By reference hereto, the provisions for the computation of delay costs/damages and any amounts included therein, whether direct or indirect, in the agreement between the Contractor and COUNTY are incorporated herein. This provision shall not affect the rights and obligations of either party as set forth in Section 10.7, INDEMNIFICATION OF COUNTY.

- 4.6 In the event CONSULTANT fails to complete the phases of services identified in Exhibit "A" on or before the applicable Time for Performance, CONSULTANT shall pay to COUNTY the sum of dollars identified below for each calendar day after the applicable Time for Performance, plus approved time extensions thereof, until completion of the phase:

NONE

These amounts are not penalties but are liquidated damages to COUNTY for CONSULTANT's inability to proceed with, and complete, the Project in a timely manner pursuant to the agreed upon Project Schedule. Liquidated damages are hereby fixed and agreed upon by the parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by COUNTY as a consequence of such delay, and both parties desiring to obviate any question or dispute concerning the amount of said damages and the cost and effect of the failure of CONSULTANT to complete the respective phases within the applicable Time for Performance. This provision shall not affect the rights and obligations of either party as set forth in Section 10.7, INDEMNIFICATION OF COUNTY.

ARTICLE 5 COMPENSATION AND METHOD OF PAYMENT

5.1 AMOUNT AND METHOD OF COMPENSATION

5.1.1 Maximum Amount Not-To-Exceed Compensation

COUNTY agrees to pay CONSULTANT, as compensation for performance of all services as related to Exhibit "A," required under the terms of this Agreement, the Salary Costs as described in Section 5.2 up to a maximum amount not-to-exceed of \$10,662,083.00 for Basic Services, up to \$50,000.00 for optional additional services, and to reimburse CONSULTANT for Reimbursables as described in Section 5.3, up to a maximum amount not-to-exceed of \$190,078.00, for a total maximum amount not-to-exceed \$10,902,161.00. The method of compensation shall be that of "maximum amount not-to-exceed," which

means CONSULTANT shall perform all services set forth herein for total compensation in the amount of or less than that stated above.

The maximum amount not-to-exceed compensation of \$10,662,083 for Basic Services shall be paid out as follows:

<u>Phase</u>	<u>Amount</u>
Phase I – Security/Risk Assessment	\$309,419
Phase II – Facilities Plan	\$2,243,808
Phase III – Design	\$3,409,793
Phase IV – Engineering Services During Construction	\$4,655,101
Phase V – Regulatory Support	\$43,962

5.1.2 Lump Sum Compensation

[Intentionally Left Blank.]

5.1.3 If the method of compensation between COUNTY and CONSULTANT is a maximum amount not-to-exceed and CONSULTANT has "lump sum" agreements with any Subconsultant(s), then CONSULTANT shall bill all "lump sum" Subconsultant fees as Salary Costs with no "markup." CONSULTANT shall bill all other Subconsultant fees using the employee categories for Salary Costs on **Exhibit "B"** as defined in Section 5.2 and Reimbursables defined in Section 5.3. All Subconsultant Reimbursables shall be billed in the actual amount paid by CONSULTANT. Subconsultant Salary Costs shall be billed to COUNTY in the actual amount paid by CONSULTANT.

5.1.4 CONSULTANT acknowledges and agrees that the retainage amount set forth in Section 5.5 shall be applied to the amount for each phase stated herein.

5.2 SALARY COSTS

The term Salary Costs as used herein shall mean the hourly rate actually paid to all personnel engaged directly on the Project, as adjusted by an overall factor of 3.07, which consists of the following: 1) a fringe benefits factor of 51.8%; 2) an overhead factor of 128.8%; and 3) an operating profit margin of 9.5%. Said Salary Costs are to be used only for time directly attributable to the Project. The fringe benefit and overhead factors shall be certified by an independent Certified Public Accountant in accordance with the Federal Acquisition Regulation ("FAR") guidelines. Said certification shall be dated within ninety (90) days after CONSULTANT's just completed fiscal year. The CONSULTANT certifies that the rates and factors set forth herein are accurate, complete, and consistent with the FAR guidelines at the time of contracting.

- 5.2.1 CONSULTANT shall require all of its subconsultants to comply with the requirements of Section 5.2. Subconsultants may be exempted from the FAR audit requirements of Section 5.2 upon application to, and written approval by, the County Auditor.
- 5.2.2 Salary Costs for CONSULTANT and subconsultants as shown in Exhibit "B" are the Maximum Billing Rates which are provisional, subject to audit of actual costs, and if the audit discloses that the actual costs are less than the costs set forth on Exhibit "B" for the CONSULTANT or any subconsultant, the CONSULTANT shall reimburse the COUNTY based upon the actual costs determined by the audit.
- 5.2.3 Notwithstanding the Salary Costs (formula and requirements) set forth in Section 5.2 above, hourly rates have been negotiated with CONSULTANT utilizing a method and factors agreed to by CONSULTANT and the Contract Administrator which do not comply with Section 5.2. The method and factors utilized to determine the hourly rates are set forth on Exhibit "B," attached hereto.
- 5.2.4 The maximum hourly rates shown on Exhibit "B" are subject to change annually beginning on the first anniversary of the contract execution date and on each contract year thereafter upon written request by CONSULTANT and approval by the Contract Administrator. Any increase in these rates shall be limited to the lesser of the change in cost of living or three percent (3%). The increase or decrease in CPI shall be calculated as follows: the difference of CPI current period less CPI previous period, divided by CPI previous period, times 100. The CPI current period shall mean the most recent published monthly index prior to contract anniversary. The CPI previous period shall mean for the same month of the prior year. All CPI indices shall be obtained from the U.S. Department of Labor table for Consumer Price Index - All Urban Consumers (Series ID CUURA320SA0) for the area of Miami-Fort Lauderdale, FL (All Items), with a base period of 1982-84 = 100. Any changes to the hourly rates shall be set forth on an amended Exhibit "B" executed by the Contract Administrator and the CONSULTANT.

5.3 REIMBURSABLES

- 5.3.1 In accordance with and pursuant to the Broward County Procurement Code, direct nonsalary expenses, entitled Reimbursables, directly attributable to the Project will be charged at actual cost, and shall be limited to the following:
- a) Identifiable transportation expenses in connection with the Project, subject to the limitations of Section 112.061, Florida Statutes.

Transportation expenses to locations outside the Miami-Dade/Broward/Palm Beach County area or from locations outside the Miami-Dade/Broward/Palm Beach County area will not be reimbursed unless specifically pre-authorized in writing by the Contract Administrator.

- b) Identifiable per diem, meals and lodgings, taxi fares and miscellaneous travel-connected expenses for CONSULTANT's personnel subject to the limitations of Section 112.061 Florida Statutes. Meals for class C travel inside Broward County will not be reimbursed. Meals and lodging expenses will not be reimbursed for temporarily relocating CONSULTANT's employees from one of CONSULTANT's offices to another office if the employee is relocated for more than ten (10) consecutive working days. Lodging will be reimbursed only for room rates equivalent to Holiday Inn, Howard Johnson, or Ramada Inn.
- c) Identifiable communication expenses approved by Contract Administrator, long distance telephone, courier and express mail between CONSULTANT's various permanent offices. CONSULTANT's field office at the Project site is not considered a permanent office.
- d) Cost of printing, reproduction or photography which is required by or of CONSULTANT to deliver services set forth in this Agreement.
- e) Identifiable testing costs approved by Contract Administrator.
- f) All permit fees paid to regulatory agencies for approvals directly attributable to the Project. These permit fees do not include those permits required for the construction contractor.

Reimbursable subconsultant expenses are limited to the items described above when the subconsultant agreement provides for reimbursable expenses.

- 5.3.2 It is acknowledged and agreed to by CONSULTANT that the dollar limitation set forth in Section 5.1 is a limitation upon, and describes the maximum extent of, COUNTY's obligation to reimburse CONSULTANT for direct, nonsalary expenses, but does not constitute a limitation, of any sort, upon CONSULTANT's obligation to incur such expenses in the performance of services hereunder. If COUNTY or Contract Administrator requests CONSULTANT to incur expenses not contemplated in the amount for Reimbursables, CONSULTANT shall notify Contract Administrator in writing before incurring such expenses. Any such

expenses shall be reviewed and approved by COUNTY prior to incurring such expenses.

5.4 METHOD OF BILLING

5.4.1 For Maximum Amount Not-To-Exceed Compensation under Section 5.1.1

CONSULTANT shall submit billings which are identified by the specific project number on a monthly basis in a timely manner for all Salary Costs and Reimbursables attributable to the Project. These billings shall identify the nature of the work performed, the total hours of work performed and the employee category of the individuals performing same. Billings shall itemize and summarize Reimbursables by category and identify same as to the personnel incurring the expense and the nature of the work with which such expense was associated. Where prior written approval by Contract Administrator is required for Reimbursables, a copy of said approval shall accompany the billing for such reimbursable. Billings shall also indicate the cumulative amount of CBE participation to date. The statement shall show a summary of Salary Costs and Reimbursables with accrual of the total and credits for portions paid previously. External Reimbursables and subconsultant fees must be documented by copies of invoices or receipts which describe the nature of the expenses and contain a project number or other identifier which clearly indicates the expense is identifiable to the Project. Subsequent addition of the identifier to the invoice or receipt by CONSULTANT is not acceptable except for meals and travel expenses. Internal expenses must be documented by appropriate CONSULTANT's cost accounting forms with a summary of charges by category. When requested, CONSULTANT shall provide backup for past and current invoices that records hours and Salary Costs by employee category, Reimbursables by category, and subcontractor fees on a task basis, so that total hours and costs by task may be determined.

5.4.2 For Lump Sum Compensation under Section 5.1.2

CONSULTANT shall submit billings which are identified by the specific project number on a monthly basis in a timely manner. These billings shall identify the nature of the work performed, the phase of work, and the estimated percent of work accomplished. Billings for each phase shall not exceed the amounts allocated to said phase. Billings shall also indicate the cumulative amount of CBE participation to date. The statement shall show a summary of fees with accrual of the total and credits for portions paid previously. When requested, CONSULTANT shall provide backup for past and current invoices that record hours, salary costs, and expense costs on a task basis, so that total hours and costs by task may be determined.

5.5 METHOD OF PAYMENT

- 5.5.1 COUNTY shall pay CONSULTANT within thirty (30) calendar days from receipt of CONSULTANT's proper statement, as defined by COUNTY's Prompt Payment Ordinance, ninety percent (90%) of the total shown to be due on such statement. When the services to be performed on each phase of the Project are fifty percent (50%) complete and upon written request by CONSULTANT and written approval by the Contract Administrator that the Project is progressing in a satisfactory manner, the Contract Administrator, in his or her sole discretion, may authorize that subsequent payments for each phase may be increased to ninety-five percent (95%) of the total shown to be due on subsequent statements. No amount shall be withheld from payments for reimbursables or for services performed during the construction phase.
- 5.5.2 Upon CONSULTANT's satisfactory completion of each phase and after the Contract Administrator's review and approval, COUNTY shall remit to CONSULTANT that ten percent (10%) or five percent (5%) portion of the amounts previously withheld. Final payment for the Project must be approved by the Director of the Broward County Purchasing Division.
- 5.5.3 Payment will be made to CONSULTANT at:

Hazen and Sawyer, P.C.
4000 Hollywood Blvd., Suite 750N
Hollywood, FL 33021

ARTICLE 6 ADDITIONAL SERVICES; CHANGES IN SCOPE OF SERVICES

- 6.1 COUNTY or CONSULTANT may request changes that would increase, decrease, or otherwise modify the Scope of Services to be provided under this Agreement. Such changes must be made in accordance with the provisions of the Broward County Procurement Code and must be contained in a written amendment, executed by the parties hereto, with the same formality and of equal dignity herewith, prior to any deviation from the terms of this Agreement including the initiation of any Additional Services.
- 6.2 Costs of Additional Services identified by the Contract Administrator during the life of this agreement and as contained in a written amendment will be compensated on an hourly basis, or an agreed upon lump sum, or as a reimbursable as provided in Article 5. Additional Services authorized by the Contract Administrator shall include a required completion for CONSULTANT's performance of those additional services.

- 6.3 In the event a dispute between the Contract Administrator and CONSULTANT arise over whether requested services constitute additional services and such dispute cannot be resolved by the Contract Administrator and CONSULTANT, such dispute shall be promptly presented to COUNTY's Director of Purchasing for resolution. The Director's decision shall be final and binding on the parties. The resolution shall be set forth in a written document in accordance with Section 6.1 above. During the pendency of any dispute, CONSULTANT shall promptly perform the disputed services.
- 6.4 As provided in Section 9.2, each proposed contract modification request that, by itself or aggregated with previous modification requests, increases the contract value by ten percent (10%) or more of the initial contract value, shall be reviewed by COUNTY for opportunities to include or increase CBE participation. CONSULTANT shall demonstrate good faith efforts to include CBE participation in change order work and shall report such efforts to the Office of Economic and Small Business Development.

ARTICLE 7 COUNTY'S RESPONSIBILITIES

- 7.1 COUNTY shall assist CONSULTANT by placing at CONSULTANT's disposal all information COUNTY has available pertinent to the Project including previous reports and any other data relative to design or construction of the Project.
- 7.2 COUNTY shall arrange for access to, and make all provisions for, CONSULTANT to enter upon public and private property as required for CONSULTANT to perform its services.
- 7.3 COUNTY shall review the itemized deliverables/documents identified in Exhibit "A" of CONSULTANT and respond in writing with any comment within the time set forth on the approved Project Schedule.
- 7.4 COUNTY shall give prompt written notice to CONSULTANT whenever COUNTY observes or otherwise becomes aware of any development that affects the scope or timing of CONSULTANT's services or any defect in the work of the Contractor.

ARTICLE 8 INSURANCE

- 8.1 CONSULTANT shall, at a minimum, provide, pay for, and maintain in force at all times during the term of this Agreement the insurance coverage set forth in this Article, in accordance with the terms and conditions required by this Article.
- 8.2 Such policy shall be issued by companies authorized to do business in the State of Florida with an AM Best financial rating of A- or better. Coverage shall be afforded on a form no more restrictive than the latest edition of the respective

Insurance Services Office policy. CONSULTANT shall be responsible for any policy deductibles. CONSULTANT shall specifically protect COUNTY and the Broward County Board of County Commissioners by naming Broward County as an additional insured under the Commercial General Liability Policy as well as on any Excess Liability Policy. The official title of the certificate holder is Broward County. This official title shall be used in all insurance documentation.

8.2.1 Professional Liability Insurance with minimum limits of Two Million Dollars (\$2,000,000) each claim and Two Million Dollars (\$2,000,000) per aggregate. Any deductible amount shall not exceed One Hundred Thousand Dollars (\$100,000) for each claim. The Certificate of insurance shall indicate the policy deductible.

8.2.2 Workers' Compensation Insurance to apply for all employees in compliance with Chapter 440, Florida Statutes, the Workers' Compensation Law, of the State of Florida and all applicable federal laws. Policy shall include Employer's Liability with minimum limits of Five Hundred Thousand Dollars (\$500,000) per accident.

8.2.3 Commercial General Liability Insurance with minimum limits of One Million Dollars (\$1,000,000) per occurrence combined single limit for bodily injury and property damage and Two Million Dollars (\$2,000,000) per aggregate without restrictive endorsements, limiting or excluding coverage for:

- Premises and/or Operations
- Products/Completed Operations
- Independent Contractors
- Broad Form Property Damage
- Broad Form Contractual Coverage applicable to this specific Agreement
- Personal Injury Coverage with Employee and Contractual Exclusions removed with minimum limits of coverage equal to those required for personal injury

8.2.4 Business Automobile Liability Insurance only if a business auto is used in performance of services, with minimum limits of One Million Dollars (\$1,000,000) per occurrence combined single limit for bodily injury and property damage without restrictive endorsements limiting or excluding coverage for:

- Owned vehicles
- Hired and non-owned vehicles
- Employers' non-ownership
- Scheduled vehicles (must be listed on the Certificate of Insurance)

8.3 CONSULTANT shall provide to COUNTY proof of insurance in form of Certificates of Insurance and endorsements, Declarations pages, or policies

evidencing all insurance policies required by this Article, including any subsection thereunder within fifteen (15) days of notification of award of the contract. COUNTY reserves the right to require a certified copy of such policies upon request. Coverage is not to cease and is to remain in force until all performance required of CONSULTANT is completed. All policies shall be endorsed to provide COUNTY notice of expiration, cancellation, and/or restriction of the policy. If any of the insurance coverage will expire prior to the completion of the work, proof of insurance renewal shall be provided to COUNTY upon expiration.

- 8.4 COUNTY reserves the right to review and revise any insurance requirements at the time of renewal or amendment of this Agreement, including, but not limited to, deductibles, limits, coverage, and endorsements.
- 8.5 If CONSULTANT uses a subcontractor, CONSULTANT shall ensure that subcontractor names "Broward County" as an additional insured on the Commercial General Liability policy.

ARTICLE 9 EEO AND CBE COMPLIANCE

- 9.1 No party to this Agreement may discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this contract. CONSULTANT shall comply with all applicable requirements of the Broward County Business Enterprise ("CBE") Program in the award and administration of this Agreement. Failure by CONSULTANT to carry out any of these requirements shall constitute a material breach of this Agreement, which shall permit COUNTY, to terminate this Agreement or to exercise any other remedy provided under this Agreement, under the Broward County Code of Ordinances, or Administrative Code, or under applicable law, with all of such remedies being cumulative.

CONSULTANT shall include the foregoing or similar language in its contracts with any subconsultants, subcontractors or suppliers, except that any project assisted by the U.S. Department of Transportation funds shall comply with the non-discrimination requirements in 49 C.F.R. Parts 23 and 26, as amended. Failure to comply with the foregoing requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as COUNTY deems appropriate.

CONSULTANT shall not unlawfully discriminate against any person in its operations and activities or in its use or expenditure of funds in fulfilling its obligations under this Agreement and shall not otherwise unlawfully discriminate in violation of the Broward County Code, Chapter 16½, as may be amended from time to time. CONSULTANT shall affirmatively comply with all applicable provisions of the Americans with Disabilities Act (ADA) in the course of providing

any services funded by COUNTY, including Titles I and II of the ADA (regarding nondiscrimination on the basis of disability), and all applicable regulations, guidelines, and standards. In addition, CONSULTANT shall take affirmative steps to ensure nondiscrimination in employment against disabled persons.

By execution of this Agreement, CONSULTANT represents that it has not been placed on the discriminatory vendor list (as provided in Section 287.134, Florida Statutes, as may be amended from time to time). COUNTY hereby materially relies on such representation in entering into this Agreement. An untrue representation of the foregoing shall entitle COUNTY to terminate this Agreement and recover from CONSULTANT all monies paid by COUNTY pursuant to this Agreement, and may result in debarment from COUNTY's competitive procurement activities.

- 9.2 The CBE Program, which is implemented under the Broward County Business Opportunity Act of 2012 (Broward County Ordinance No. 2012-33 as may be amended from time to time), referred to as the "Act," provides for the establishment and implementation of CBE participation goals, initiatives, and other opportunities for COUNTY contracts. In completing this Project, CONSULTANT agrees to and shall comply with all applicable requirements of the CBE Program in the award and administration of the Agreement. CONSULTANT acknowledges that the Broward County Board of County Commissioners, acting by and through the Director of the Broward County Office of Equal Opportunity, may make minor administrative modifications to the CBE Program which shall become applicable to this Agreement if the administrative modifications are not unreasonable. Written notice of any such modification shall be provided to CONSULTANT and shall include a deadline for CONSULTANT to notify COUNTY if CONSULTANT concludes that the modification exceeds the authority of this section of this Agreement. Failure of CONSULTANT to timely notify COUNTY of its conclusion that the modification exceeds such authority shall be deemed acceptance of the modification by CONSULTANT.

The COUNTY shall have the right to review each proposed amendment, extension, modification, or change order to this Agreement that, by itself or aggregated with previous amendments, extensions, modifications, or change orders increases the initial Agreement price by ten percent (10%), for opportunities to include or increase the participation of CBE firms already involved in this Agreement. CONSULTANT shall make a good faith effort to include CBE firms in work resulting from any such amendment, extension, modification, or change order and shall report such efforts, along with evidence thereof, to the Office of Economic and Small Business Development.

- 9.3 The Parties acknowledge that subcontract awards to CBE firms are crucial to the achievement of the Project's CBE participation goal. CONSULTANT understands that each CBE firm utilized on the Project to meet the participation goal must be certified by the Broward County Office of Economic and Small

Business Development. In an effort to assist COUNTY in achieving its established goal for this Project, CONSULTANT agrees to meet the following CBE participation goal by utilizing the CBE firms for the work and the percentage of work amounts described in Section 9.4:

Total CBE Goal	30%
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CONSULTANT may not terminate for convenience a CBE firm listed as a subcontractor in the CONSULTANT's bid or offer without the County's prior written consent, which consent shall not be unreasonably withheld. CONSULTANT shall inform COUNTY immediately when a CBE firm is not able to perform or if CONSULTANT believes the CBE firm should be replaced for any other reason, so that the Office of Economic and Small Business Development may review and verify the good faith efforts of CONSULTANT to substitute the CBE firm with another CBE firm. Whenever a CBE firm is terminated for any reason, including for cause, CONSULTANT shall with notice to and concurrence of the Broward County Office of Economic and Small Business Development Division, substitute another CBE firm in order to meet the level of CBE participation provided herein. Such substitution shall not be required in the event the termination results from COUNTY changing the Scope of Work hereunder and there is no available CBE to perform the new Scope of Work.

- 9.4 In performing services for this Project, the Parties hereby incorporate CONSULTANT's participating CBE firms, addresses, scope of work, and the percentage of work amounts identified on each Letter of Intent into this Agreement (Exhibit "C"). Upon execution of this Agreement by COUNTY, CONSULTANT shall enter into a formal contract with the CBE firms CONSULTANT selected to fulfill the CBE participation goal for this Agreement and agrees to provide copies of its contracts with such firms to the Contract Administrator and the Broward County Office of Economic and Small Business Development.
- 9.5 CONSULTANT shall allow COUNTY to engage in on-site reviews to monitor CONSULTANT's progress in achieving and maintaining its contractual and CBE Program obligations. Such review and monitoring shall be by the Contract Administrator in conjunction with the Office of Economic and Small Business Development. COUNTY shall have access, without limitation, to CONSULTANT's books and records, including payroll records, tax returns and records, and books of account, on five (5) business days' notice, to allow COUNTY to determine CONSULTANT's compliance with its commitment to the CBE participation goal and the status of any CBE firm performing any portion of this Agreement.
- 9.6 CONSULTANT understands that it is the responsibility of the Contract Administrator and the Broward County Office of Economic and Small Business Development to monitor compliance with the CBE requirements. In that regard,

CONSULTANT shall report monthly regarding compliance with its CBE obligations in accordance with Section 5.4 of this Agreement.

9.7 In the event of CONSULTANT's noncompliance with its participation commitment to a CBE firm (including without limitation the unexcused reduction of the CBE firm's participation), the affected CBE firm shall have the right to the following remedies if the noncompliance is or was alleged to be due to no fault of the CBE firm, and alleged to be due to the willful action or omission of CONSULTANT:

9.7.1 The affected CBE firm shall be entitled to damages pursuant to its agreement with CONSULTANT.

9.7.2 If the CBE firm has the right to arbitrate and institutes arbitration proceedings claiming non-compliance with the Act by CONSULTANT, then in such event the CBE firm may submit the dispute to arbitration. However, arbitration shall not be available as to any dispute between CONSULTANT and COUNTY; nor shall COUNTY incur any cost, fee, or liability relative to any arbitration proceeding.

9.7.3 Nothing under this Section 9.7 shall be construed to limit the rights of and remedies available to COUNTY, including the right to seek its own damages pursuant to this Agreement.

9.8 Nonpayment of a CBE subconsultant, subcontractor or supplier as required by Section 3.4 of this Agreement shall be a material breach of this Agreement and that COUNTY's Contract Administrator may, at its option, increase allowable retainage or withhold progress payments unless and until CONSULTANT demonstrates timely payments of sums due to such subconsultant, subcontractor or supplier. CONSULTANT agrees that the presence of a "pay when paid" provision in its contract with a CBE firm shall not preclude COUNTY or its representatives from inquiring into allegations of nonpayment. The foregoing remedies under this Section 9.8 shall not be employed when CONSULTANT demonstrates that failure to pay results from a bona fide dispute with its CBE subconsultant, subcontractor or supplier.

9.9 If CONSULTANT fails to comply with the requirements of this Agreement, or the requirements of the Broward County Business Opportunity Act of 2012, COUNTY shall have the right to exercise any administrative remedies provided by the Broward County Business Opportunity Act of 2012, or any other right or remedy provided in the Administrative Procedures of the Office of Economic and Small Business Development, this Agreement, or under applicable law, with all such rights and remedies being cumulative.

ARTICLE 10
MISCELLANEOUS

10.1 OWNERSHIP OF DOCUMENTS

All finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, specifications and reports prepared or provided by CONSULTANT in connection with this Agreement shall become the property of COUNTY, whether the Project for which they are made is completed or not, and shall be delivered by CONSULTANT to Contract Administrator within fifteen (15) days of the receipt of the written notice of termination. If applicable, COUNTY may withhold any payments then due to CONSULTANT until CONSULTANT complies with the provisions of this section.

10.2 TERMINATION

10.2.1 This Agreement or any Work Authorization issued under this Agreement may be terminated for cause by the aggrieved party if the party in breach has not corrected the breach within ten (10) days after written notice from the aggrieved party identifying the breach. This Agreement may also be terminated for convenience by the Board. Termination for convenience by the Board shall be effective on the termination date stated in written notice provided by the COUNTY, which termination date shall be not less than thirty (30) days after the date of such written notice. If this Agreement or Work Authorization was entered into on behalf of COUNTY by someone other than the Board, termination by COUNTY may be by action of the County Administrator or the COUNTY representative (including his or her successor) who entered in this Agreement on behalf of COUNTY. This Agreement may also be terminated by the County Administrator upon such notice as the County Administrator deems appropriate under the circumstances in the event the County Administrator determines that termination is necessary to protect the public health or safety. The parties agree that if the COUNTY erroneously, improperly or unjustifiably terminates for cause, such termination shall be deemed a termination for convenience, which shall be effective thirty (30) days after such notice of termination for cause is provided.

10.2.2 This Agreement may be terminated for cause for reasons including, but not limited to, CONSULTANT's repeated (whether negligent or intentional) submission for payment of false or incorrect bills or invoices, failure to suitably perform the work; or failure to continuously perform the work in a manner calculated to meet or accomplish the objectives as set forth in this Agreement or Work Authorization. The Agreement may also be terminated for cause if the CONSULTANT is placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List created pursuant to

Section 215.473, Florida Statutes, as amended or if the CONSULTANT provides a false certification submitted pursuant to Section 287.135, Florida Statutes, as amended. This Agreement or a Work Authorization may also be terminated by the Board:

- 10.2.2.1 Upon the disqualification of CONSULTANT as a CBE by COUNTY's Director of the Office of Economic and Small Business Development if CONSULTANT's status as a CBE was a factor in the award of this Agreement or the Work Authorization, and such status was misrepresented by CONSULTANT;
 - 10.2.2.2 Upon the disqualification of CONSULTANT by COUNTY's Director of the Office of Economic and Small Business Development due to fraud, misrepresentation, or material misstatement by CONSULTANT in the course of obtaining this Agreement or the Work Authorization, or attempting to meet the CBE contractual obligations;
 - 10.2.2.3 Upon the disqualification of one or more of CONSULTANT's CBE participants by COUNTY's Director of the Office of Economic and Small Business Development if any such participant's status as a CBE firm was a factor in the award of this Agreement or the Work Authorization, and such status was misrepresented by CONSULTANT or such participant;
 - 10.2.2.4 Upon the disqualification of one or more of CONSULTANT's CBE participants by COUNTY's Director of the Office of Economic and Small Business Development if such CBE participant attempted to meet its CBE contractual obligations through fraud, misrepresentation, or material misstatement; or
 - 10.2.2.5 If CONSULTANT is determined by COUNTY's Director of the Office of Economic and Small Business Development to have been knowingly involved in any fraud, misrepresentation, or material misstatement concerning the CBE status of its disqualified CBE participant.
- 10.2.3 Notice of termination shall be provided in accordance with the "NOTICES" section of this Agreement except that notice of termination by the County Administrator which the County Administrator deems necessary to protect the public health or safety may be verbal notice that shall be promptly confirmed in writing in accordance with the "NOTICES" section of this Agreement.

10.2.4 In the event this Agreement or a Work Authorization issued under this Agreement is terminated for convenience, CONSULTANT shall be paid for any services properly performed under the Agreement or Work Authorization through the termination date specified in the written notice of termination. CONSULTANT acknowledges and agrees that it has received good, valuable and sufficient consideration from COUNTY, the receipt and adequacy of which are hereby acknowledged by CONSULTANT, for COUNTY's right to terminate this Agreement for convenience.

10.2.5 In the event this Agreement or a Work Authorization is terminated, for any reason, any amounts due CONSULTANT shall be withheld by COUNTY until all documents are provided to COUNTY pursuant to Section 10.1 of Article 10.

10.3 PUBLIC RECORDS, AUDIT RIGHTS, AND RETENTION OF RECORDS

10.3.1 COUNTY is a public agency subject to Chapter 119, Florida Statutes. To the extent CONSULTANT is a contractor acting on behalf of the COUNTY pursuant to Section 119.0701, Florida Statutes, CONSULTANT shall:

10.3.1.1 Keep and maintain public records that ordinarily and necessarily would be required to be kept and maintained by COUNTY were COUNTY performing the services under this Agreement;

10.3.1.2 Provide the public with access to such public records on the same terms and conditions that COUNTY would provide the records and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by law;

10.3.1.3 Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law; and

10.3.1.4 Meet all requirements for retaining public records and transfer to COUNTY, at no cost, all public records in possession of CONSULTANT upon termination of this Agreement and destroy any duplicate public records that are exempt or confidential and exempt. All records stored electronically must be provided to COUNTY in a format that is compatible with the information technology systems of COUNTY.

The failure of CONSULTANT to comply with the provisions set forth in this Section shall constitute a default and breach of this Agreement and COUNTY shall enforce the default in accordance with the provisions set forth in Section 10.2

10.3.2 CONSULTANT shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to the Project, including, without limitation, complete and correct records of payments to each of its subconsultants and subcontractors. For each subconsultant and subcontractor, the books, records, and accounts shall reflect each payment to the subconsultant or subcontractor and the cumulative total of the payments made to the subconsultant or subcontractor. COUNTY shall have the right to audit the books, records, and accounts of CONSULTANT and its subconsultants and subcontractors that are related to this Project. All books, records, and accounts of CONSULTANT and its subconsultants and subcontractors shall be kept in written form, or in a form capable of conversion into written form within a reasonable time, and upon request to do so, CONSULTANT or its subconsultants and subcontractors, as applicable, shall make same available at no cost to COUNTY in written form.

10.3.3 CONSULTANT and its subconsultants and subcontractors shall preserve and make available, at reasonable times for examination and audit by COUNTY, all financial records, supporting documents, statistical records, and any other documents pertinent to this Agreement for the required retention period of the Florida Public Records Act, Chapter 119, Florida Statutes, if applicable, or, if the Florida Public Records Act is not applicable, for a minimum period of three (3) years after termination of this Agreement. If any audit has been initiated and audit findings have not been resolved at the end of the retention period or three (3) years, whichever is longer, the books, records, and accounts shall be retained until resolution of the audit findings. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for COUNTY's disallowance and recovery of any payment upon such entry.

10.3.4 CONSULTANT shall, by written contract, require its subconsultants and subcontractors to agree to the requirements and obligations of this Section 10.3.

10.4 PUBLIC ENTITY CRIME ACT

CONSULTANT represents that the execution of this Agreement will not violate Section 287.133, Florida Statutes, the Public Entity Crimes Act, which essentially provides that a person or affiliate who is a contractor, consultant or other provider and who has been placed on the convicted vendor list following a conviction for a Public Entity Crime may not submit a bid on a contract to provide any goods or services to COUNTY, may not submit a bid on a contract with COUNTY for the construction or repair of a public building or public work, may not submit bids on leases of real property to COUNTY, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with COUNTY,

and may not transact any business with COUNTY in excess of the threshold amount provided in Section 287.017, Florida Statutes, for category two purchases for a period of 36 months from the date of being placed on the convicted vendor list. Violation of this section shall result in termination of this Agreement and recovery of all monies paid hereto, and may result in debarment from COUNTY's competitive procurement activities.

In addition to the foregoing, CONSULTANT further represents that there has been no determination, based on an audit, that it committed an act defined by Section 287.133, Florida Statutes, as a "public entity crime" and that it has not been formally charged with committing an act defined as a "public entity crime" regardless of the amount of money involved or whether CONSULTANT has been placed on the convicted vendor list.

10.5 SUBCONSULTANTS

10.5.1 CONSULTANT shall utilize the subconsultants identified in the proposal that were a material part of the selection of CONSULTANT to provide the services for this Project. CONSULTANT shall obtain written approval of Contract Administrator prior to changing or modifying the list of subconsultants submitted by CONSULTANT. Where CONSULTANT's failure to use subconsultant results in CONSULTANT's noncompliance with CBE participation goals, such failure shall entitle the affected CBE firm to damages available under this Agreement and under local and state law. The list of subconsultants is provided on Exhibit C-1, Schedule of Subconsultants as attached hereto and made a part hereof.

10.5.2 CONSULTANT shall bind in writing each and every approved subconsultant to the terms stated in this Agreement, provided that this provision shall not, in and of itself, impose the insurance requirements set forth in Article 8 on CONSULTANT's subconsultants. CONSULTANT shall be responsible for recommending to the Broward County Risk Management Division the insurance coverages it will require of each of its subconsultants, after taking into consideration the services to be provided by each of its subconsultants. The Broward County Risk Management Division may either (i) accept the recommendation(s) of the CONSULTANT or (ii) require any coverages that the Risk Management Division determines are necessary to protect the COUNTY's interests. CONSULTANT shall require the proper licensing of each of its subconsultants and shall provide the insurance coverage's as finally determined in the sole discretion of the Risk Management Division.

10.6 ASSIGNMENT AND PERFORMANCE

Neither this Agreement nor any interest herein shall be assigned, transferred, or encumbered without the written consent of the other party and CONSULTANT

shall not subcontract any portion of the work required by this Agreement except as authorized pursuant to Section 10.5. COUNTY shall have the right to terminate this Agreement, effective immediately, if there is an assignment, or attempted assignment, transfer, or encumbrance, of this Agreement or any right or interest herein by CONSULTANT without COUNTY's written consent.

CONSULTANT represents that all persons delivering the services required by this Agreement have the knowledge and skills, either by training, experience, education, or a combination thereof, to adequately and competently perform the duties, obligations, and services set forth in the Scope of Services and to provide and perform such services to COUNTY's satisfaction for the agreed compensation.

CONSULTANT shall perform its duties, obligations, and services under this Agreement in a skillful and respectable manner. The quality of CONSULTANT's performance and all interim and final product(s) provided to or on behalf of COUNTY shall be comparable to the best local and national standards.

10.7 INDEMNIFICATION OF COUNTY

CONSULTANT shall indemnify and hold harmless COUNTY, its officers and employees from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness or intentionally wrongful conduct of CONSULTANT, and other persons employed or utilized by CONSULTANT in the performance of this Agreement. The provisions of this section shall survive the expiration or earlier termination of this Agreement. To the extent considered necessary by Contract Administrator and County Attorney, any sums due CONSULTANT under this Agreement may be retained by COUNTY until all of COUNTY's claims for indemnification pursuant to this Agreement have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by COUNTY.

PURSUANT TO SECTION 558.0035, FLORIDA STATUTES, A DESIGN PROFESSIONAL WHO IS AN INDIVIDUAL EMPLOYEE OR AGENT OF CONSULTANT MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE OCCURRING WITHIN THE COURSE AND SCOPE OF THIS PROFESSIONAL SERVICES AGREEMENT.

10.8 REPRESENTATIVE OF COUNTY AND CONSULTANT

10.8.1 The parties recognize that questions in the day-to-day conduct of the Project will arise. The Contract Administrator, upon CONSULTANT's request, shall advise CONSULTANT in writing of one (1) or more COUNTY employees to whom all communications pertaining to the day-to-day conduct of the Project shall be addressed.

10.8.2 CONSULTANT shall inform the Contract Administrator in writing of CONSULTANT's representative to whom matters involving the conduct of the Project shall be addressed.

10.9 ALL PRIOR AGREEMENTS SUPERSEDED

This document incorporates and includes all prior negotiations, correspondence, conversations, agreements or understandings applicable to the matters contained herein; and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement that are not contained in this document. Accordingly, the parties agree that no deviation from the terms hereof shall be predicated upon any prior representations or agreements whether oral or written.

10.10 AMENDMENTS

No modification, amendment or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

10.11 NOTICES

Whenever either party desires to give notice to the other, such notice must be in writing, sent by certified United States Mail, postage prepaid, return receipt requested, or sent by commercial express carrier with acknowledgement of delivery, or by hand delivery with a request for a written receipt of acknowledgment of delivery, addressed to the party for whom it is intended at the place last specified. The place for giving notice shall remain the same as set forth herein until changed in writing in the manner provided in this section. For the present, the parties designate the following as the respective places for giving of notice:

FOR COUNTY:

Director, Broward County Water and Wastewater Engineering Division
2555 West Copans Road
Pompano Beach, FL 33069

FOR CONSULTANT:

Patrick A. Davis, P.E.
Hazen and Sawyer, P.C.
4000 Hollywood Blvd., Suite 750N
Hollywood, FL 33021

10.12 TRUTH-IN-NEGOTIATION CERTIFICATE

Signature of this Agreement by CONSULTANT shall act as the execution of a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation of this Agreement are accurate, complete, and current at the time of contracting. The original contract price and any additions thereto shall be adjusted to exclude any significant sums by which COUNTY determines the contract price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract adjustments shall be made within one (1) year following the end of this Agreement.

10.13 INTERPRETATION

The language of this Agreement has been agreed to by both parties to express their mutual intent and no rule of strict construction shall be applied against either party hereto. The headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. All personal pronouns used in this Agreement shall include the other gender, and the singular shall include the plural, and vice versa, unless the context otherwise requires. Terms such as "herein," "hereof," "hereunder," and "hereinafter" refer to this Agreement as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a Section or Article of this Agreement, such reference is to the Section or Article as a whole, including all of the subsections of such Section, unless the reference is made to a particular subsection or subparagraph of such Section or Article.

10.14 CONSULTANT'S STAFF

CONSULTANT will provide the key staff identified in their proposal for Project as long as said key staff are in CONSULTANT's employment.

CONSULTANT will obtain prior written approval of Contract Administrator to change key staff. CONSULTANT shall provide Contract Administrator with such information as necessary to determine the suitability of proposed new key staff. Contract Administrator will be reasonable in evaluating key staff qualifications.

If Contract Administrator desires to request removal of any of CONSULTANT's staff, Contract Administrator shall first meet with CONSULTANT and provide reasonable justification for said removal.

10.15 DRUG-FREE WORKPLACE

It is a requirement of COUNTY that it enter into contracts only with firms that certify the establishment of a drug-free work place in accordance with Chapter 21.31(a) of the Broward County Procurement Code. Execution of this Agreement by CONSULTANT shall also serve as CONSULTANT's required certification that it either has or that it will establish a drug-free work place in accordance with Chapter 21.31(a) of the Broward County Procurement Code.

10.16 [Intentionally Left Blank.]

10.17 INDEPENDENT CONTRACTOR

CONSULTANT is an independent contractor under this Agreement. Services provided by CONSULTANT shall be subject to the supervision of COUNTY. In providing the services, CONSULTANT or its agents shall not be acting and shall not be deemed as acting as officers, employees, or agents of COUNTY.

10.18 THIRD PARTY BENEFICIARIES

Except as provided under Section 9.7, neither CONSULTANT nor COUNTY intend to directly or substantially benefit a third party by this Agreement. The parties expressly acknowledge that it is not their intent to create any rights or obligations in any third person or entity under this Agreement. Therefore, the parties agree that there are no third party beneficiaries to this Agreement and that no third party shall be entitled to assert a claim against either of them based upon this Agreement.

10.19 CONFLICTS

Neither CONSULTANT nor its employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with CONSULTANT's loyal and conscientious exercise of judgment related to its performance under this Agreement.

CONSULTANT agrees that none of its officers or employees shall, during the term of this Agreement, serve as an expert witness against COUNTY in any legal or administrative proceeding in which he or she is not a party, unless compelled by court process, nor shall such persons give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of COUNTY or in connection with any such pending or threatened legal or administrative proceeding. The limitations of this section

shall not preclude such persons from representing themselves in any action or in any administrative or legal proceeding.

In the event CONSULTANT is permitted to utilize subcontractors to perform any services required by this Agreement, CONSULTANT agrees to prohibit such subcontractors, by written contract, from having any conflicts as within the meaning of this section.

10.20 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 Agreement 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 other consideration contingent upon or resulting from the award or making of this Agreement. For a breach or violation of this provision, Board shall have the right to terminate this Agreement without liability at its discretion, or to deduct from the Agreement price or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.

10.21 MATERIALITY AND WAIVER OF BREACH

COUNTY and CONSULTANT agree that each requirement, duty, and obligation set forth herein was bargained for at arms-length and is agreed to by the parties in exchange for quid pro quo, that each is substantial and important to the formation of this Agreement and that each is, therefore, a material term hereof.

COUNTY's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement.

10.22 COMPLIANCE WITH LAWS

CONSULTANT shall comply with all federal, state, and local laws, codes, ordinances, rules, and regulations in performing its duties, responsibilities, and obligations related to this Agreement.

10.23 SEVERANCE

In the event this Agreement or a portion of this Agreement is found by a court of competent jurisdiction to be invalid, the remaining provisions shall continue to be effective unless COUNTY or CONSULTANT elects to terminate this Agreement.

The election to terminate this Agreement based upon this provision shall be made within seven (7) days after the finding by the court becomes final.

10.24 JOINT PREPARATION

Preparation of this Agreement has been a joint effort of COUNTY and CONSULTANT and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the parties than any other.

10.25 PRIORITY OF PROVISIONS

If there is a conflict or inconsistency between any term, statement, requirement, or provision of any exhibit attached hereto, any document or events referred to herein, or any document incorporated into this Agreement by reference and a term, statement, requirement, or provision of this Agreement, the term, statement, requirement, or provision contained in Articles 1 through 10 of this Agreement shall prevail and be given effect.

10.26 LAW, JURISDICTION, VENUE, WAIVER OF JURY TRIAL

This Agreement shall be interpreted and construed in accordance with and governed by the laws of the state of Florida. All parties agree and accept that jurisdiction of any controversies or legal problems arising out of this Agreement, and any action involving the enforcement or interpretation of any rights hereunder, shall be exclusively in the state courts of the Seventeenth Judicial Circuit in Broward County, Florida, and venue for litigation arising out of this Agreement shall be exclusively in such state courts, forsaking any other jurisdiction which either party may claim by virtue of its residency or other jurisdictional device. **BY ENTERING INTO THIS AGREEMENT, CONSULTANT AND COUNTY HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.**

10.27 INCORPORATION BY REFERENCE

The attached Exhibits A, B, C, and C-1 are incorporated into and made a part of this Agreement.

10.28 RE-USE OF PROJECT

COUNTY may, at its option, re-use (in whole or in part) the resulting end-product or deliverables resulting from CONSULTANT's professional services (including, but not limited to, drawings, specifications, other documents, and services as described herein and in Exhibit A, Scope of Services); and CONSULTANT agrees to such re-use in accordance with this provision.

If the Contract Administrator elects to re-use the services, drawings, specifications, and other documents, in whole or in part, prepared for this Project for other projects on other sites, CONSULTANT will be paid a re-use fee to be negotiated between CONSULTANT and COUNTY's Purchasing Negotiator, subject to approval by the proper awarding authority.

Each re-use shall include all Basic Services and modifications to the drawings, specifications, and other documents normally required to adapt the design documents to a new site. This re-use may include preparation of reverse plans, changes to the program, provision for exceptional site conditions, preparation of documents for off-site improvements, provisions for revised solar orientation, provisions for revised vehicular and pedestrian access, and modifications to building elevations, ornament, or other aesthetic features. In all re-use assignments, the design documents shall be revised to comply with building codes and other jurisdictional requirements current at the time of re-use for the new site location.

The terms and conditions of this Agreement shall remain in force for each re-use project, unless otherwise agreed by the parties in writing.

10.29 PAYABLE INTEREST

10.29.1 **Payment of Interest.** Except as required by the Broward County Prompt Payment Ordinance, COUNTY shall not be liable for interest for any reason, whether as prejudgment interest or for any other purpose, and in furtherance thereof CONSULTANT waives, rejects, disclaims and surrenders any and all entitlement it has or may have to receive interest in connection with a dispute or claim based on or related to this Agreement.

10.29.2 **Rate of Interest.** In any instance where the prohibition or limitations of Section 10.29.1 are determined to be invalid or unenforceable, the annual rate of interest payable by COUNTY under this Agreement, whether as prejudgment interest or for any other purpose, shall be .025 percent simple interest (uncompounded).

10.30 REPRESENTATION OF AUTHORITY

Each individual executing this Agreement on behalf of a party hereto hereby represents and warrants that he or she is, on the date he or she signs this Agreement, duly authorized by all necessary and appropriate action to execute this Agreement on behalf of such party and does so with full and legal authority.

10.31 MULTIPLE ORIGINALS

Multiple copies of this Agreement may be executed by all parties, each of which, bearing original signatures, shall have the force and effect of an original document.

10.32 DOMESTIC PARTNERSHIP REQUIREMENT

CONSULTANT certifies and represents that it will comply with COUNTY's Domestic Partnership Act (Section 16½-157 of the Broward County Code of Ordinances, as amended) during the entire term of the Agreement. The failure of CONSULTANT to comply shall be a material breach of the Agreement, entitling COUNTY to pursue any and all remedies provided under applicable law including, but not limited to (1) retaining all monies due or to become due CONSULTANT until CONSULTANT complies; (2) termination of the Agreement; and (3) suspension or debarment of CONSULTANT from doing business with COUNTY.

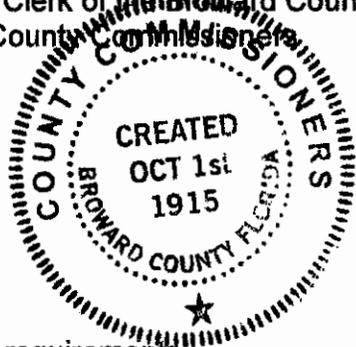
(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement: BROWARD COUNTY, through its BOARD OF COUNTY COMMISSIONERS, signing by and through its Mayor or Vice-Mayor, authorized to execute same by Board action on the 11th day of February, 2014, and HAZEN AND SAWYER, P.C., signing by and through its Vice President, duly authorized to execute same.

COUNTY

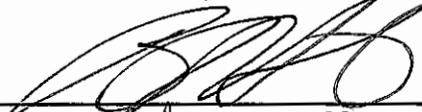
ATTEST:


Broward County Administrator, as
Ex-Officio Clerk of the Broward County
Board of County Commissioners



Insurance requirements
approved by Broward County
Risk Management Division

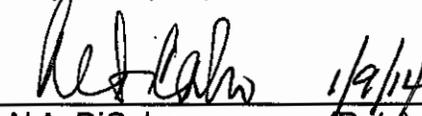
BROWARD COUNTY, by and through
its Board of County Commissioners

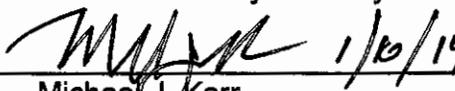
By 
Mayor
11th day of February, 2014

Approved as to form by
Joni Armstrong Coffey
Broward County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-7641

By  1/7/14
Signature (Date)
Risk Management Division

Jacqueline A. Burns
Print Name and Title above
Risk Insurance and
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By  1/9/14
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 1/10/14
Michael J. Kerr
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AAD
3/20/13; 4/23/13; 12/13/13; 12/23/13
Hazen&Sawyer-NRWWTPFacilityImprov(RLI-R1007402R1)_v4Final-122313.a01
File#12-077.05

AGREEMENT BETWEEN BROWARD COUNTY AND HAZEN AND SAWYER, P.C.
FOR CONSULTANT SERVICES FOR NORTH REGIONAL WASTEWATER
TREATMENT PLANT - FACILITY IMPROVEMENTS IN BROWARD COUNTY,
FLORIDA, RLI # R1007402R1

1

CONSULTANT

ATTEST:

HAZEN AND SAWYER, P.C.

Patrick A. Davis
Secretary

By James T. Cowgill
President/Vice President
James T. Cowgill

Patrick A. Davis

James T. Cowgill

(Please Type Name of Secretary)

(Please Type Name of ~~President~~ Vice
President

3rd day of January, 20 14.

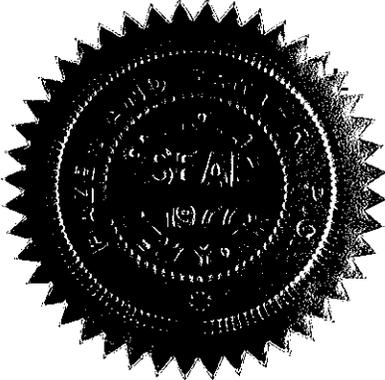


EXHIBIT "A"
SCOPE OF SERVICES
RLI R1007402R1
Engineering Services for Facilities Improvements

December 30, 2013

PREAMBLE

Broward County (COUNTY) has operated the North Regional Wastewater Treatment Plant (NRWWTP) since the 1970s. Presently, modifications, improvements and upgrades to the existing treatment processes, plant facility structures, electrical and control systems are necessary to improve treatment at NRWWTP. The COUNTY desires to initiate these improvements to the NRWWTP by simultaneously preparing a Security/Risk Assessment, a Facilities Plan, and commencing design projects for critical infrastructure improvements.

The Security/Risk Assessment phase applies to the facilities and infrastructure supporting the North Regional Wastewater Treatment System (NRWWTS), including NRWWTP, the master pump stations, ocean outfall, deep injection wells (DIWs) and related force mains and infrastructure. CONSULTANT shall prepare the assessment using the process known as *Risk and Resilience Management of Water and Wastewater Systems (RAMCAP)* as defined under the J100 standard by the American Water Works Association (AWWA).

Under the Facilities Plan phase, COUNTY requests that CONSULTANT prepare a project ranking methodology, referred to as the condition assessment (CA) under which COUNTY will be able to prioritize and optimize infrastructure improvements for future renewal and replacement (R/R) of NRWWTP. CONSULTANT shall utilize the results of the condition assessment in conjunction with long term process improvements and disposal considerations to formulate a Facilities Plan for the NRWWTP. The Facilities Plan shall include a schedule and conceptual costs for the COUNTY to use in their long term Capital Improvements Program (CIP) planning.

Furthermore, COUNTY has designated the design of several improvements as high priority projects to be completed simultaneously with the development of the Security/Risk Assessment and Facilities Plan. The following projects are to be designed under this agreement:

- Grit removal facilities (also includes aeration basin influent piping, fuel tank, screens for headworks, and boilers)
- Clarifier mechanism replacements (also includes Module D weir)
- Biological improvements (also includes clarifier drain valve replacements; return activated sludge, waste activated sludge, and scum pump replacements at all modules; and ventilation improvements and rehabilitation of Secondary Treatment Observation Building (STOB))
- Solids Improvements including: digester complex –pump replacements, digester cover replacements, thickeners upgrades, and belt filter presses

- Effluent disposal improvements including: injection well pump station – replace injection well pumps/motors/variable frequency drives and outfall pump station improvements
- Ancillary infrastructure systems improvements including electrical and fuel storage

The following approach is proposed for implementing these improvements:

- Phase I Security/Risk Assessment
- Phase II Facilities Plan
 - Condition Assessment
 - Long Term Process Strategies Analysis
 - Facilities Capital Improvement Plan
- Phase III Design
 - Phase III (1) Grit Removal/Aeration Basin Influent Pipes
 - Phase III (2) Clarifier Mechanisms
 - Phase III (3) Solids
 - Phase III (4) Ancillary Infrastructure
 - Phase III (5) Biological
 - Phase III (6) Effluent
- Phase IV - Engineering Services During Construction
 - Phase IV (1) Grit Removal/Aeration Basin Influent Pipes
 - Phase IV (2) Clarifier Mechanisms
 - Phase IV (3) Solids
 - Phase IV (4) Ancillary Infrastructure
 - Phase IV (5) Biological
 - Phase IV (6) Effluent
- Phase V Regulatory Support
- Phase VI Optional Additional Services

This initial Scope addresses completion of all Tasks for Phases I, II, III (1) and III (2), IV (1) and IV (2), and V; with partial completion of Tasks for Phases III (3) – III (6). The remaining Tasks for Phases III (3) – III (6) and all Tasks for Phases IV (3) – IV (6) will be provided under subsequent amendment(s) to the Scope.

SCOPE OF WORK

PHASE I – SECURITY/RISK ASSESSMENT

CONSULTANT shall engage COUNTY project team in a series of workshops to complete the Security/Risk Assessment. CONSULTANT shall utilize the industry ANSI standard, also approved by the American Waterworks Association and ASME-ITI, and awarded SAFETY Act designation by the U.S. Department of Homeland Security. (This standard is known as J100 or RAMCAP: Risk and Resilience Management of Water and Wastewater Systems. It provides for a comprehensive review of the wastewater utility with regard to both man-made and natural hazards).

The seven-step process outlined in the J100 standard provided the framework for the project approach. The steps are the following:

1. Asset characterization
2. Threat characterization
3. Consequence analysis
4. Vulnerability analysis
5. Threat analysis
6. Risk/resilience analysis
7. Risk/resilience management

The information collected throughout Task 1 shall be used in the central equation of the J100 standard as follows:

$$R = C \times V \times T$$

where

R = Risk

C = Consequence (the worst reasonable consequence value of losing the asset's functionality)

V = Vulnerability (the likelihood that, given the threat occurs, the consequence also occurs)

T = Threat Likelihood [likelihood of occurrence of a malevolent event, dependency hazard (such as a power outage), or natural hazard]

TASK 1 – PROJECT CHARTERING

Subtask 1.1 - Review of Existing Information

CONSULTANT shall prepare for and participate in a kickoff meeting with COUNTY to detail the project schedule, identify COUNTY staff to participate in the project, and identify existing information to be reviewed by CONSULTANT. Documents to review may include existing security plans and procedures, risk and security assessments, emergency response plans, business continuity plans (Continuity of Operations Plans), SCADA system information, human

resources policies, door lock/key policies, security camera use and policies, local natural hazard mitigation plan(s), and any other documents that may be related to the vulnerability and resiliency of the NRWTS. It is assumed that COUNTY will provide the aforementioned documents to CONSULTANT in either paper or electronic copy. It is also assumed that COUNTY will provide CONSULTANT with a draft list of potentially critical assets. [By the J100 Standard definition, an asset is an item of value to the utility that, if incapacitated, could result in significant damage to the utility or community. Assets include physical elements, cyber elements, and human elements (critical knowledge or functions of people).]

It is assumed that COUNTY will provide a list of COUNTY staff (name, role, phone, email) to participate in the project. Participants in the risk assessment should include, but are not limited to, senior staff from the WWS Director's office, Operations Division, Engineering Division, Fiscal Operations Division, Information and Instrument Technology Division (IITD), and Human Resources officers. Additional participants may include representatives from local law enforcement, hazardous materials team, Department of Homeland Security, and the FBI.

CONSULTANT shall organize an initial kickoff meeting with the COUNTY to discuss the utility background/history related to vulnerability and resiliency. CONSULTANT shall prepare meeting minutes and transmit to COUNTY electronically.

Subtask 1.2 - Project Chartering Workshop

CONSULTANT shall conduct a project chartering session (Workshop #1) with COUNTY. Preparation shall include a pre-workshop meeting between CONSULTANT and COUNTY project manager. CONSULTANT shall prepare an agenda to include project purpose and goals, J100 standard process, COUNTY expectations and metrics for a successful project, project logistics, information confidentiality, document review process, roles of project participants, identification of potentially critical assets (refine the list), next steps and project schedule.

Subtask 1.3 - Data Collection

CONSULTANT shall meet with staff during two workshops to characterize assets to determine general consequences of loss, so that a shorter list of critical assets can be determined from the potentially critical assets. Preparation shall include a pre-workshop meeting between CONSULTANT and COUNTY project manager. CONSULTANT shall review assets and develop a preliminary list of their criticality with COUNTY in Workshop #2. Assets to be considered include the wastewater treatment plant, master pump stations, and other assets within the NRWTS that are chosen by the COUNTY as potentially critical. Optimum coverage requires a limit of 15 assets per meeting.

After the COUNTY determines which assets are critical during the workshop, CONSULTANT shall visit them to estimate potential vulnerabilities and take photos for the Security/Risk Assessment report. It is assumed that a maximum of 40 assets shall be chosen by the COUNTY as critical and can be visited in up to 8 days of site visits.

CONSULTANT shall also identify current man-made or natural hazards that could impact the security and day-to-day operations of the NRWTS. CONSULTANT shall begin the list of potential threats with the variety of natural and man-made hazards addressed in the J100 standard. CONSULTANT shall review the County's hazard mitigation plan for information on hazards. Workshop #3 shall be held for the COUNTY to reach a consensus on the threats that

will be addressed in the vulnerability assessment. Each threat shall be paired with each critical asset (maximum of 40 assets and 11 threats as identified in the J100 standard yields up to 440 threat-asset pairs) in an electronic table (e.g. Excel spreadsheet). Optimum coverage requires a limit of 15 assets per meeting.

Subtask 1.4 - Risk Assessment

CONSULTANT shall calculate the risk for each threat-asset pair. The calculation of risk is a function of threat likelihood, vulnerability, and consequence. For each threat, a likelihood shall be determined based on research of likelihood from the hazard mitigation plan, from knowledge of COUNTY, and from information provided in the J100 standard. The vulnerability for each asset shall be determined, along with a detailed consequence value.

CONSULTANT shall develop these values with the COUNTY during a series of up to four meetings. The resulting risk information will help focus mitigation strategies on critical assets with the highest risk. CONSULTANT shall assist COUNTY to review and finalize risk results during Workshop #4. Optimum coverage requires a limit of 15 assets per meeting. CONSULTANT shall prepare meeting minutes and transmit to COUNTY electronically.

Subtask 1.5 - Risk and Resilience Analysis

Subtask 1.5.1 - SCADA Risk Assessment

CONSULTANT shall review the NRWTP SCADA Upgrades project (bid set) for conformance with SCADA security guidelines. CONSULTANT shall provide a summary of recommendations, if any, for improvements.

CONSULTANT shall include the list in the Security/Risk Assessment report.

Subtask 1.5.2 - Assessment of the Existing Emergency Response Plan and Business Continuity Plan

A key mitigation strategy to lower risk and increase resiliency is a solid emergency preparedness program, including an emergency response plan and business continuity plan. A review of both the existing emergency response plan and business continuity plan will enable CONSULTANT to provide COUNTY with a gap analysis between existing documents and a robust program to increase resiliency. For example, the business continuity plan should contain information on critical functions and critical staff to maintain the functionality of the utility. This information is part of the background information used in determining critical assets in previous tasks.

CONSULTANT shall hold a kickoff meeting for this task with COUNTY. CONSULTANT shall collect the existing documents/preparedness program from the COUNTY at this meeting and compare the documents to the wastewater industry standards.

CONSULTANT shall prepare a technical memorandum (TM) documenting the gap analysis. CONSULTANT shall submit memo electronically. CONSULTANT shall meet with the COUNTY to discuss the findings.

CONSULTANT shall revise memo based on meeting results. CONSULTANT shall submit final memo electronically.

Subtask 1.5.3 - Developing Mitigation Measures for Critical Assets and the NRWTS System as a Whole

With the understanding of which threat-asset pairs have the greatest risk (from Task 1.3), CONSULTANT shall develop mitigation measures for those critical assets, as well as strategies that provide more resilience to the wastewater system as a whole. CONSULTANT shall identify and present existing and potential mitigation strategies in Workshop #6. CONSULTANT shall conduct up to 8 days of site visits to visualize the mitigation measures for up to 40 of the critical assets.

After potential mitigation strategies are identified, CONSULTANT shall roughly categorize costs to implement or improve the mitigation measures. CONSULTANT shall then describe the benefit of each mitigation measure in terms of risk reduction. The final output to be included in the report in Task 1.6 shall provide a simple cost-benefit analysis for each of the mitigation strategies based on the J100 Standard. The cost-benefit information can be used as a communication tool with decision makers.

CONSULTANT shall also develop a Utility Resilience Index (URI) from J100 Standard Appendix H for Broward County's NRWTP System through research and phone discussions with COUNTY. CONSULTANT shall include the URI results in the report in Task 1.6.

Subtask 1.6 - Reporting

CONSULTANT shall prepare the risk assessment report to identify the RAMCAP process used, and provide the data and results of the assessment. CONSULTANT shall include short (typically one page) summaries for each critical asset in the report.

CONSULTANT shall provide the draft report for COUNTY staff on the project team to review four weeks before Workshop #7. It is assumed that COUNTY comments will be received three weeks after receipt of the draft.

CONSULTANT shall review the draft report with COUNTY staff during Workshop #7, and revise the report based on attendees' feedback.

CONSULTANT shall provide a final draft report electronically to the COUNTY.

Subtask 1.7 – Additional Meetings

CONSULTANT shall attend meetings with COUNTY personnel, in addition to those specifically referenced in Subtasks 1.1 through 1.6, on an as-requested basis for up to eight additional meetings.

PHASE I – DELIVERABLES

- Assessment of Emergency Response Planning Gap Analysis Memo
- Risk Assessment Report

PHASE II – FACILITIES PLAN

PHASE II A – CONDITION ASSESSMENT

TASK 1 – PROJECT PRIORITIZATION

Subtask 1.1 – Create Asset Registry

CONSULTANT shall collect data from the COUNTY's Maximo system for the NRWWTP to serve as the basis for creating a comprehensive asset registry. CONSULTANT shall import the existing Maximo data into a working database to analyze the data and complete the database to match current conditions. The existing information to be collected includes:

- Existing database of major equipment, structures and buildings.
- Previous reports covering asset assessments, Facility Master Plans, operations and maintenance (O&M) reports and Plant Annual reports.
- As-built drawings, O&M manuals, historical financial data (asset procurement dates and cost) and miscellaneous O&M and technical data.

CONSULTANT shall compile the asset registry with additional classifications including but not limited to Building, Process, Discipline, and Equipment Type. Asset identification and hierarchies shall also be defined to enable appropriate rollups of data.

CONSULTANT shall provide a draft compilation of assets with relevant classifications. CONSULTANT shall incorporate comments from the COUNTY and prepare a finalized list of NRWWTP Assets.

Subtask 1.2 – Conduct Staff Interviews/Meetings

CONSULTANT shall interview operations, maintenance and technical staff at the NRWWTP who have working knowledge of the plant, specifically in the areas of asset maintenance, repair and replacement and operations, to receive any updated asset reliability, operability, and maintainability issues. CONSULTANT shall utilize this information to prioritize condition assessment of assets which may be near failure and prioritize them for repair and replacement (R/R). The information gathered during these interviews will also be used to define criticality variables/measures to consider during the consequence of failure (CoF) analysis of the assets.

Subtask 1.3 – Define Criteria for Evaluation

CONSULTANT shall preliminarily select criteria for probability of failure and consequence of failure. CONSULTANT shall establish a scoring and weighting matrix for the evaluation of these probabilities. CONSULTANT shall summarize these preliminary criteria, weights, and scores in a TM for COUNTY review.

CONSULTANT shall meet with COUNTY to review this TM and revise preliminary criteria, weights, and scores in a workshop. CONSULTANT shall reissue the TM following the meeting, incorporating COUNTY comments into the final version.

Subtask 1.4 – Asset Condition Assessment and Criticality Ratings

CONSULTANT shall perform condition and criticality assessment on the predetermined list of assets at the NRWWT, not to exceed 1,200 assets. CONSULTANT shall develop a condition and criticality assessment plan for the NRWWT. The plan shall include a timeline for various buildings/processes/assets, assigned CONSULTANT staff for discipline review, and the proposed data collection templates.

CONSULTANT shall record data on appropriate discipline specific forms and enter into the AMDS database on a daily basis. CONSULTANT shall compile digital photographs and related documents as available (specification, drawing) for each asset into the database.

Determination of condition and criticality ratings will be based solely on a combination of visual inspection, information gathered from staff interviews and CONSULTANT's engineering experience and judgment with respect to the evaluation criteria defined in Task 1.3.

CONSULTANT shall summarize datasets of completed inspections and assessments for COUNTY review.

Subtask 1.5 – Perform Probability/Consequence of Failure Analysis

CONSULTANT shall utilize the probability of failure and consequence of failure scores from condition assessment to determine an overall risk (to continued optimal performance) posed by an asset. CONSULTANT shall classify assets in a matrix to determine assets with the highest probability and consequence of failure, which will indicate assets requiring immediate attention.

CONSULTANT shall compile the risk analysis results in a TM and present it to the COUNTY for review.

CONSULTANT shall meet with COUNTY to review this TM and revise preliminary criteria, weights, and scores in a workshop. CONSULTANT shall reissue the TM following the meeting, incorporating COUNTY comments into the final version.

Subtask 1.6 - Customization of the AMDS tool for NRWWT

CONSULTANT shall customize the Asset Management and Decision Support tool (AMDS) for risk management and prioritization of NRWWT assets for R/R. This database-driven application shall run on any Windows 7 Desktop and higher operating systems and can be deployed throughout the COUNTY on as many computers as required without any licensing restrictions.

CONSULTANT shall perform the following in this task:

- Define buildings and structures at the NRWWT and through the MPSs
- Define Treatment Processes (e.g. influent pumping, aeration, etc.) at NRWWT
- Define Disciplines (e.g. structural, mechanical, electrical, I & C, etc.)
- Define Asset types in each discipline (e.g. VFD, Generator, etc.).
- Define a unique identification system (UID) for assets based on a combination of location, building/structure, discipline, asset type, and Maximo tag number
- Add assets to the AMDS database
- Manage photos, videos and documents at the asset level.

- Define static and condition assessment attributes for discipline / asset type combination.
- Input criteria, weights and scores for consequence of failure (CoF) for asset types.
- Input criteria, weights and scores for probability of failure (PoF) for asset types
- Define equipment redundancy.
- Customize data entry operations for the subject experts
- Perform automated / semi-automated QA/QC on data for completeness and accuracy
- Perform customized and ad-hoc queries based on asset attributes and risk analysis to develop prioritized lists of assets for renewal / replacement and O/M scheduling
- Generate pre-formatted reports of high-priority assets for R/R.

CONSULTANT shall provide copy of the AMDS database (SQLServer 2008) and a Windows version of the AMDS application to the COUNTY. The SQL Server format of the AMDS database shall be compatible with the COUNTY's existing Maximo system. The AMDS program may be used by the COUNTY without licensing restrictions. CONSULTANT shall prepare a TM to document the installation and instructions for the AMDS usage.

Subtask 1.7 - Workshop

CONSULTANT shall present the AMDS tool to the COUNTY in a workshop. CONSULTANT shall perform up to three ranking scenarios with the COUNTY and present output based on those ranking scenarios. CONSULTANT shall update weights, scores, and/or criteria with COUNTY if needed during the workshop. CONSULTANT shall provide meeting minutes following the workshop to summarize revisions.

Subtask 1.8 – Document Process Diagrams

CONSULTANT shall prepare process equipment diagrams for the facility to summarize the locations of major process equipment and supporting electrical and instrumentation equipment. CONSULTANT shall utilize the screen shots from the SCADA Upgrades project along with available existing P&IDs from previous projects to prepare the process diagrams. CONSULTANT shall utilize existing tag numbers to label each piece of equipment. CONSULTANT shall locate the equipment in Maximo and provide the Maximo asset identification number for the equipment adjacent to the tag number for future clarification.

CONSULTANT shall submit draft diagrams electronically to the COUNTY for review. CONSULTANT shall attend one meeting to review the draft with the COUNTY. CONSULTANT shall update diagrams accordingly and submit one final electronic copy of the diagrams to the COUNTY.

Subtask 1.9 - Summary Report

Following the workshop, CONSULTANT shall prepare a summary report of activities performed in Task 1. CONSULTANT shall include the following in the report:

- Hierarchies adopted for NRWTP and lift station assets
- Global listings of locations, buildings, disciplines and equipment type definitions
- Asset type summaries at each location
- Risk analysis matrices defined for each asset type
- Summary of risk analysis for each asset type

- Prioritization of assets for R/R and O/M
- Costs for R/R of prioritized assets
- Schedule for R/R of prioritized assets

CONSULTANT shall prepare the draft Condition Assessment Report to the COUNTY for review. COUNTY shall provide comments on the draft report within 30 days. CONSULTANT shall incorporate comments and deliver a final report for electronically to COUNTY.

PHASE IIA – DELIVERABLES

- Asset list
- Inspection Data Sheets per Asset
- Design Criteria TM
- Probability/Consequence of Failure TM
- AMDS Usage TM
- AMDS Database
- Process Diagrams
- Condition Assessment Report

PHASE IIB - LONG TERM PROCESS STRATEGIES ANALYSIS

TASK 1 – BIOLOGICAL PROCESS ANALYSIS

The purpose of this task is to evaluate compliance strategies for potential long term regulatory and growth impacts on the NRWTP liquid treatment process. Alternatives to be considered include:

- Impacts regarding emerging contaminant regulations
- Segregation of higher TDS influent flows due to reuse quality concerns
- Process impacts resulting from future regulatory revisions

Subtask 1.1 - Emerging Contaminants

Emerging contaminants are chemicals in the raw wastewater influent stream that utilities are actively researching for their potential risk to human health and the environment. Chemicals such as pharmaceuticals, personal care products, endocrine disrupting compounds, per-fluorinated compounds and flame retardants are all considered emerging contaminants. Although emerging contaminants are currently not regulated in Florida, new regulations have emerged throughout the country, specifically in California, and may be introduced to Florida in the near future.

CONSULTANT shall perform a desktop evaluation of up to four technologies for emerging contaminant oxidation/removal including:

- Reverse osmosis (RO) membranes
- Biologically activated carbon (BAC)
- UV disinfection with hydrogen peroxide (H₂O₂) addition
- Ozone and/or ozone with H₂O₂

CONSULTANT shall consider these technologies for their performance in oxidizing/removing a list of emerging contaminants based on California's Title 22 Groundwater Replenishment Reuse Draft Regulation (2011 and updated March 28, 2013) which focuses on indicator compounds from nine functional groups. The concept of using functional groups is two-fold:

- Targeting specific functional groups and their associated chemistries allows assessment of the efficacy of a given treatment process or removal mechanism on that specific group.
- Sorting emerging contaminants in accordance to functional group chemistry, allows selection of a single compound, or a limited number of compounds, to act as "surrogates" for other compounds in the same group or chemical class. In this manner, it is easier to relate the observed removal for each surrogate/chemical group to contaminants that are either not monitored or not yet discovered.

Similar approaches have been used in recent pilot studies and evaluations throughout the COUNTY. CONSULTANT shall develop a TM to summarize the previous evaluations of these processes, including percent removal, construction cost, and footprint requirements. CONSULTANT shall deliver the TM to COUNTY electronically for review. Pilot testing and table top evaluations are not included in this analysis.

Subtask 1.2 – NRWTP Process Upgrades for Future Regulatory Compliance

The utility regulatory environment is likely subject to future revisions, as emerging technologies and contaminants will maintain the industry in flux. To this end, CONSULTANT shall evaluate the NRWTP liquid treatment process from an adaptability perspective, assuming that future regulations may require implementation of partial and/or full nutrient removal, or more stringent secondary effluent standards.

Subtask 1.2.1 - Wastewater Characterization

CONSULTANT shall review existing plant data, development of a sampling plan to gather additional data for the development and recalibration of BioWin process models for Modules A, B, C, D and E and a CFD clarifier model for the secondary clarifiers. Specific activities for this task include:

- Obtain 36 to 48 months of electronic plant data from the NRWTP and conduct statistical analyses to evaluate the data. Determine if data values are reasonable based on flows, yields, and mass balances. Identify data needs for the special sampling event for additional wastewater characterization.
- Develop and coordinate a one-week special sampling plan to provide a detailed wastewater characterization. This shall include COD, nutrient and dissolved oxygen profiles across the existing aeration basins, the clarifiers and the recycle streams. The data collected during the sampling event will be used to understand wastewater fractionation and the performance of the biological system and to gather data for the recalibration and validation of the process model.

CONSULTANT shall analyze historic data and the data collected during the special sampling event.

Subtask 1.2.2 - BioWin Model Development and Re-Calibration

CONSULTANT shall upgrade and recalibrate the existing BioWin model previously developed for Module C to include the other modules. CONSULTANT shall use the BioWin model to evaluate variations in performance and estimate process optimization concepts.

Subtask 1.2.3 - Clarifier Field Sampling, Stress Testing and CFD Model Development

CONSULTANT shall develop and coordinate a site specific sampling plan for the evaluation of secondary clarifiers within a specific module (A through D) plus secondary clarifiers at Module E as agreed with the COUNTY. The goal of this sampling effort shall be to gather data for the setup, calibration and validation of the CFD clarifier models. CONSULTANT shall develop a sampling plan that shall include stress testing of the secondary clarifiers.

Subtask 1.2.4 - Plant Evaluation and Recommendations

CONSULTANT shall utilize the CFD model in conjunction with the BioWin model to evaluate plant performance, potential modifications for optimizing operations and enhancing clarifier performance. In particular, the calibrated BioWin model shall be used to evaluate physical and/or operational modifications to maximize performance and capacity. CONSULTANT shall utilize the calibrated BioWin process model to evaluate and optimize the operating criteria [number of basins, solids loading rate (SLR), mixed liquor suspended solids (MLSS), return activated sludge (RAS) flow, dissolved oxygen (DO)] to meet effluent permit limits while minimizing aeration requirements. CONSULTANT shall perform BioWin model evaluations for up to three process alternatives.

Subtask 1.3 - NRWTP Influent Segregation

CONSULTANT shall perform a review of NRWTP influent flow, qualitative data and force mains to develop a segregation strategy for eastern system flows, which are generally responsible for elevated chlorides and total dissolved solids (TDS), to a single (dedicated) treatment module. This effort shall include consideration of two options including:

- The installation of a headworks bypass
- A new headworks structure for receipt of segregated eastern system flows

CONSULTANT shall prepare a conceptual layout and conceptual cost estimate for the two options, including the rerouting of plant recycles and their effect on the historic hydraulic data and loadings.

Subtask 1.4 - Long Term Biological Treatment Process Upgrade TM

CONSULTANT shall develop, review, evaluate and prepare a long term NRWTP Influent and Biological Treatment Process Upgrade TM based on the results of the analyses performed in the above subtasks. The TM shall include conceptual layouts and cost estimates for alternative facilities. CONSULTANT shall summarize and deliver TM to the COUNTY electronically.

TASK 2 – SOLIDS STRATEGY ANALYSIS

Subtask 2.1 – Evaluation of Sludge Thickening Options

CONSULTANT shall conceptually evaluate three thickening technologies for future consideration: gravity belt thickeners, centrifuges, and gravity drum thickeners. CONSULTANT shall review the last 24 months of thickener operating data and prepare an analyses of the three technologies based on the previous 24 months of data. CONSULTANT shall conceptually size and prepare a conceptual cost estimate for up to three options. CONSULTANT shall prepare a process flow diagram, conceptual site layout for up to three options. CONSULTANT shall document analysis in a TM and deliver to COUNTY electronically.

Subtask 2.2 – Evaluation of Current and Projected Digestion Performance

CONSULTANT shall evaluate current digestion performance and projected digestion performance based on co-digestion of thickened waste activated sludge and FOG to establish a baseline of digestion performance from which to evaluate potential long-term digestion improvements.

CONSULTANT shall review the last 24 months of digestion operating data, including hydraulic and volatile solids loading rates, hydraulic residence times, operating temperatures, percent total and volatile solids, operating protocols, volatile solids reduction, digester gas production and other pertinent parameters related to past digestion performance.

CONSULTANT shall review and confirm projected design criteria developed under the EESCO cogeneration project, including hydraulic and solids loading rates, hydraulic residence times, operating protocols, volatile solids reduction, digester gas production and other pertinent parameters related to past digestion performance.

CONSULTANT shall present a summary of projected digestion loadings and performance criteria for the next 20 years and an assessment of the future capacity of the existing digestion facilities based on current infrastructure and cogeneration upgrades. CONSULTANT shall summarize this data in a TM and deliver to the COUNTY electronically.

Subtask 2.3 - Evaluation of Technologies to Increase Volatile Solids Reduction and Digester Gas Production

CONSULTANT shall evaluate the following options for improving volatile solids reduction and increasing digester gas production:

- Conversion from mesophilic anaerobic digestion to temperature-phased anaerobic digestion (TPAD)
- WAS pretreatment using cell lysis technologies (e.g. thermal, mechanical, electrical pulse and chemical)
- Addition of high strength wastes from external sources (if spare digestion capacity is projected to be available based on previous analysis)

CONSULTANT shall develop design criteria, sizing of facilities; conceptual layouts of facilities; improvements in digestion performance; projected improvements in downstream dewatering performance (if applicable); projected reductions in post-digestion and post-dewatering solids production; and projected increases in digester gas production for up to three configurations.

CONSULTANT shall prepare life cycle cost analyses (LCCA) to identify capital, annual O&M cost savings and project payback periods for proposed improvements for each technology. CONSULTANT shall summarize this data in a TM and deliver to the COUNTY electronically.

Subtask 2.4 - Evaluation Long-Term Biosolids Disposal

Growing concern in South Florida regarding the continued long-term viability of land application has caused several municipalities to conduct long-term planning of alternate disposal options, including a transition to Class A biosolids.

CONSULTANT shall conduct an assessment of the long-term viability of land application, including projected availability of sites; locations of site and estimated hauling costs; projected tipping fees based on FDEP land application regulations. CONSULTANT shall evaluate options listed below for Class A biosolids:

- Temperature-phased anaerobic digestion with batched storage
- Thermal drying
- Thermal hydrolysis plus anaerobic digestion
- Contracts with third party vendors operating Class A biosolids processing facilities

CONSULTANT shall prepare LCCA of current disposal practices and each of the Class A options listed above and provide recommendations for long-term disposal practices. CONSULTANT shall summarize this data in a TM and deliver to the COUNTY electronically.

Additionally, CONSULTANT shall propose design criteria and considerations for emerging technologies, including hydrothermal carbonization, gasification (in public-private partnerships). However, the economic analysis of these partnerships is excluded from this scope of work.

CONSULTANT shall summarize this data in a TM and deliver to the COUNTY electronically.

TASK 3 – EFFLUENT DISPOSAL ANALYSIS

The NRWTP utilizes an ocean outfall for disposal of a portion of its effluent. Regulatory requirements for disposal of treated effluent from the NRWTP changed due to the actions of the Florida Legislature, referred to herein as the "Outfall Rule". As originally promulgated on July 1, 2008, the Outfall Rule limited and ultimately eliminated ocean outfall disposal of secondary treated effluent by December 31, 2025. Subsequently, an amendment to the Outfall Rule, with an effective date of July 1, 2013, allows peak flow effluent discharges that do not cumulatively exceed 5.0% of facility baseline flow, measured as a 5-year rolling average. A corresponding analysis of NRWTP hourly effluent flow data indicated that peak outfall discharge in excess of injection well system capacity were estimated to total no more than 4.1% of the NRWTP baseline flow.

Therefore, the COUNTY prepared and submitted the *Outfall Rule Detailed Plan, June 2013* to the FDEP where the following effluent disposal capacity improvements will meet Long Term disposal capacity needs post-2025 outfall closure, based on the amended statute.

- Installation of two additional injection wells (IW-7 and IW-8) to augment the disposal capacity of the six existing injection wells
- Installation of booster pump stations at eight injection wells

The implementation of these improvements is currently ongoing and scheduled for completion by Year 2016. Currently, High Level Disinfection (HLD) is not required for the six existing or two new Class I injection wells.

Subtask 3.1 – Long Term Disposal Plan - Migration or Regulatory Change Scenario

This task is intended to address NRWTP Long Term Effluent Disposal requirements if:

- Monitoring cannot provide reasonable assurance that injectate is suitably contained
- Regulations change to further restrict use of outfalls for peak discharge shaving

- Regulations change with regard to HLD application of injection well effluent

Should any of these conditions arise, new HLD facilities would be required at the NRWWT. The capacity of the new facilities would vary based on the actual conditions that trigger the change and may include:

- In cases where injectate containment is breached, or HLD application to all injected effluent is made mandatory, then 190 mgd peak capacity HLD facilities would be required
- In cases where outfall peak shaving is further restricted or disallowed, then HLD Facilities for new seven new injection wells, as required to offset the disposal capacity of the outfall, would be necessary

It is assumed that required HLD Facilities would include conventional deep bed filters, chlorine contact tanks, wash water storage tanks, backwash storage/recovery tanks, pumping systems, reclaimed water pumps, chemical storage and feed systems, a new injection well pump station, electrical, controls and ancillary systems, as noted in the *Effluent Disposal and Reclaimed Water Conceptual Master Plan, November 2010*.

CONSULTANT shall prepare a summary TM to document the required facilities and estimated costs.

Subtask 3.2 – Long Term Effluent Disinfection Planning

COUNTY desires to eliminate gaseous chlorine in favor of liquid sodium hypochlorite systems to reduce risk and address heightened security concerns. CONSULTANT shall evaluate three configurations of disinfectant: an on-site sodium hypochlorite generation system (OSHG), a commercial bulk sodium hypochlorite storage facility, and a commercial bulk sodium hypochlorite storage facility with provisions for the future addition of an OSHG system.

CONSULTANT shall first define the sizing criteria for each configuration of disinfectant (bulk hypochlorite vs. OSHG vs. bulk hypochlorite with provisions for future OSHG) under each scenario (no regulatory changes to current discharge practices vs future HLD is enforced). CONSULTANT shall evaluate equipment requirements, electrical requirements, site requirements, and calculate a construction cost for each configuration under both scenarios. CONSULTANT shall perform a life cycle cost analysis for each configuration under both scenarios based on a 20 year life, 5% interest rate, and chemical costs at time of analysis.

CONSULTANT shall summarize the long term disinfection strategies accordingly based on NRWWT current and future reuse and effluent disposal disinfection requirements. It is assumed that the recommended disinfectant configuration to meet current regulatory requirements will be configured to be expandable for future requirements should the regulations be revised.

CONSULTANT shall prepare a TM summarizing the effluent disinfection planning considerations. CONSULTANT shall deliver TM to the COUNTY electronically.

TASK 4 - ANCILLARY INFRASTRUCTURE ANALYSIS

Subtask 4.1 – Electrical Capacity

CONSULTANT shall update the electrical master plan to include revisions to the electrical facilities as needed to incorporate additional loads per this Phase IIB analysis. CONSULTANT

shall incorporate long term planning considerations for biological processes, solids processes, effluent disposal processes to update the electrical site configuration. CONSULTANT shall prepare updated one line diagrams and conceptual electrical building layout for the proposed facilities. CONSULTANT shall prepare a TM to document the electrical requirements. CONSULTANT shall deliver TM to the COUNTY electronically.

Subtask 4.2 – Generators – Long Term Compliance

CONSULTANT shall summarize outstanding compliance issues with EPA's Tier 4 generator requirements. CONSULTANT shall prepare a summary TM to present the remaining issues, including potential upcoming air quality regulations identified by Environmental Protection Agency (EPA) and recommendations for future compliance. The TM shall include an economic review of the natural gas/diesel engine generators vs the diesel generators. CONSULTANT shall deliver TM to the COUNTY electronically.

CONSULTANT shall prepare a second TM to document the capital costs and operating cost differences between slow speed (900 rpm) and high speed (1800 rpm) diesel engine generators for long term operation. CONSULTANT shall identify potential training requirements and operational concerns related to the slower speed diesel engine generators in a summary TM. CONSULTANT shall deliver TM to the COUNTY electronically.

Subtask 4.3 – Above Ground Fuel Storage

CONSULTANT shall review existing fuel storage in consideration of Task 4.3 and determine the total required volume of diesel gas storage required onsite. CONSULTANT shall stage diesel storage, as required to meet requirements of additional site facilities, including reclaimed water facilities expansion. CONSULTANT shall prepare a summary TM documenting the diesel storage facilities. CONSULTANT shall deliver TM to the COUNTY electronically.

Subtask 4.4 – Facilities Replacement Schedule

CONSULTANT shall review the general overall condition of the existing facilities, including existing office buildings, maintenance buildings, and storage facilities on the NRWTP site to determine the expected remaining life for the building. CONSULTANT shall review existing heating and ventilation equipment (HVAC), hurricane hardening status, and flood potential for each structure. CONSULTANT shall meet with COUNTY to determine long term needs for each site facility and potential consolidation of facilities. CONSULTANT shall document locations, sizes, equipment manufacturers based on existing data for each building provided by COUNTY. CONSULTANT shall also include a land use summary, specifically to include existing total pervious area to comply with stormwater requirements.

CONSULTANT shall prepare a summary TM documenting the overall land use, existing facilities, expected life of facilities, and replacement costs for each building. CONSULTANT shall deliver TM to the COUNTY electronically.

TASK 5 - MEETINGS

CONSULTANT shall attend and document kickoff meetings and TM review meetings with COUNTY for Tasks 1 through 4 of Phase IIB. CONSULTANT shall distribute meeting minutes electronically within two weeks of each meeting. If necessary, CONSULTANT shall incorporate

revisions to TMs and/or meeting minutes based on COUNTY comments. CONSULTANT shall finalize and distribute final copies of each TM electronically as completed.

PHASE IIB – DELIVERABLES

- Emerging Contaminants TM
- Long Term Biological Treatment Process Upgrade TM
- Sludge Thickening TM
- Digestion Performance TM
- Volatile Solids Reduction Technologies Evaluation TM
- Long Term Biosolids Disposal TM
- Effluent Disposal Analysis TM
- Effluent Disinfection Planning TM
- Updated Electrical Master Plan TM
- Generators TM
- Fuel Storage TM
- Facilities TM

PHASE II C – FACILITIES CAPITAL IMPROVEMENT PLAN

Task 1 – Develop Facilities Plan

CONSULTANT shall prepare a Facilities Capital Improvement Plan based on the results of the technical evaluations performed in Phase IIB as well as the results of the condition assessment performed under Phase IIA. The Facilities Capital Improvement Plan shall include the following elements:

- Cost estimates for recommendations from Phases IIA and IIB
- Sequencing of improvements/interim requirements from Phases IIA and IIB
- Development of bid packages
- Project data sheets for the capital improvement bid packages

CONSULTANT shall prepare the draft Facilities Capital Improvement Plan to the COUNTY for review. COUNTY shall provide comments on the draft report within 30 days. CONSULTANT shall incorporate comments and submit a final report for electronically to COUNTY.

PHASE IIC – DELIVERABLES

- Project Data Sheets
- Facilities Capital Improvement Plan

PHASE III – DESIGN

PHASE III(1) –GRIT REMOVAL AND AERATION BASIN INFLUENT PIPES

TASK 1 – SURVEY (Northeast, Northwest, and Southeast Areas)

CONSULTANT shall prepare the boundary and topographic survey update for the remaining northeast, northwest and southeast portions of the NRWWTP, including survey of points for conversion from National Geodetic Vertical Datum of 1929 (NGVD) to National American Vertical Datum of 1988 (NAVD). This survey shall meet the current minimum technical standards for surveying in Florida, as defined in Chapter 5J-17.050–0.52 of the Florida Administrative Code, and be prepared in AutoCAD Civil 3D 2012. The survey shall also include the following scope:

- a) **Boundary & Topographic Survey:** CONSULTANT shall prepare the boundary survey based on the finding, re-establishing, and/or setting of monuments for the perimeter of the property, based on the legal description provided by the County. The survey shall include finding existing survey control around and within the project limits, tied into State Plane Coordinates, Florida East Zone, NAD 83/90 Datum in U.S. survey feet units. The CONSULTANT shall run a benchmark level loop between two existing National Geodetic Survey Benchmarks, and establish elevations based on North American Vertical Datum of 1988 (NAVD88), and bring that datum up to the site. CONSULTANT shall locate sufficient boundary control along the existing rights-of-way of the surrounding public roads for the purpose of establishing the boundary of the property, based on the legal description provided. The survey shall include the review of all recorded plats and right-of-way maps surrounding the property. Topographic elevations shall be obtained within the survey boundary, and shall include elevations of the site, and surrounding roads, as necessary for engineering design. Elevations shall include finish floors of all buildings, slabs, parking areas, and drainage structures (rim, invert and pipe sizes), and retention areas within the property, and along the adjacent roads.
- b) **Above ground structures:** CONSULTANT shall locate all above-ground visible features within the boundary of the property, and the half right-of-way of the surrounding roads. This shall include pipes, valve boxes, water / electrical meter boxes, electrical pull boxes, telephone / cable risers, fences, hydrants, above-ground utilities, above-ground structures, wood / concrete utility poles, guy wires, overhead electrical lines, culverts, guardrails, pavement limits, headwalls, endwalls, manholes, rim and invert elevations, pipe sized for any sanitary or storm sewer structures, vaults, driveways, side streets, pavement limits, traffic signage, rocked or paved roadways, other signage, and trees greater than four inches in diameter (four feet above ground). CONSULTANT shall determine elevations on the low wire of intersecting power lines.
- c) **Existing Easements:** CONSULTANT shall review recorded plats and show on the survey all utility, drainage and electric power easements,

along with rights-of-way and ownership of record, based on the property appraiser's office data, from their website at www.bcpa.net.

- e) **Control Monument Benchmarks:** CONSULTANT shall set a minimum of two semi-permanent horizontal and vertical control monument benchmarks on the North Regional Wastewater Treatment Plant site, at locations approved by COUNTY. The monuments will be set in concrete with a brass disc on top. Each monument will be established with State Plane Coordinates for the horizontal position and elevations based on NAVD 88 Datum.
- f) **Software:** The survey shall also include the preparation of the survey in AutoCAD 3D 2012, drawing file format (.dwg).
- g) **Flood certificates:** CONSULTANT shall prepare flood certificates for the following buildings:
 - Proposed electrical buildings 1 – 4
 - Existing main electrical building
 - Injection well pump station

TASK 2 – YARD PIPING BASE DRAWING UPDATE SERVICES

CONSULTANT shall update the existing yard piping atlas drawings to reflect the revised survey of the NRWTP. CONSULTANT shall provide revisions in electronic format such that the revised piping and survey base drawing may be incorporated into the COUNTY's ongoing GIS database effort.

TASK 3 – PREPARE TECHNICAL MEMORANDA

Subtask 3.1 – Prepare Grit Technical Memorandum

CONSULTANT shall attend a project kick-off meeting within two weeks after receiving the Notice to Proceed. The purpose of this task is to identify project protocols, establish coordination between CONSULTANT and COUNTY staff, and collect available documents from COUNTY on the existing facilities and the functional requirements for the proposed facilities. CONSULTANT shall prepare and electronically distribute meeting minutes.

CONSULTANT shall lead one workshop with COUNTY to determine COUNTY preferences for grit removal and for operational sequencing during construction of the grit bypasses, grit chambers, and aeration basin influent pipes. CONSULTANT shall present two forms of grit removal as well as discuss the impacts of continued operation without grit removal. CONSULTANT shall prepare summary minutes of the workshop to document COUNTY preferences.

CONSULTANT shall prepare a summary technical memorandum (TM) to present the benefits/disadvantages as well as conceptual costs of the proposed grit removal strategy. CONSULTANT shall include a conceptual design layout for the technology recommended in the TM.

CONSULTANT shall participate in a TM Review Meeting to determine COUNTY's grit removal. CONSULTANT shall prepare meeting minutes to document the COUNTY's grit removal decision.

Subtask 3.2 – Prepare Hydraulics/Screen Selection Technical Memorandum

CONSULTANT shall update hydraulic calculations for the existing preliminary treatment process to consider the addition of higher removal rate screens to the existing headworks. CONSULTANT shall include the hydraulics associated with the grit removal system as selected in Subtask 3.1 by the COUNTY. CONSULTANT shall summarize the resulting hydraulic profile as calculated for the selected screening and grit removal equipment.

CONSULTANT shall prepare a summary technical memorandum (TM) to present the hydraulics calculation summary. CONSULTANT shall include a conceptual design layout for the screens in the TM. CONSULTANT shall submit the TM electronically.

CONSULTANT shall participate in a TM Review Meeting. CONSULTANT shall prepare meeting minutes to document the COUNTY's screening design decisions.

Subtask 3.3 – Prepare Boilers and Fuel Storage Technical Memorandum

CONSULTANT shall review up to three manufacturers' equipment layout for the boilers at the digester complex. CONSULTANT shall present one conceptual layout based on one manufacturer.

CONSULTANT shall prepare a conceptual layout for a 10,000 gallon double walled steel above ground fuel storage tank. It is assumed that this fuel tank will be located adjacent to the existing tank farm.

CONSULTANT shall prepare a summary technical memorandum (TM) to present the conceptual design information and costs for the boilers and fuel storage. CONSULTANT shall include a conceptual design layout for the boilers and the fuel storage in the TM.

CONSULTANT shall participate in a TM Review Meeting. CONSULTANT shall prepare meeting minutes to document the COUNTY's screening design decisions

TASK 4 – DETAILED DESIGN GRIT REMOVAL/AERATION BASIN INFLUENT PIPES

Based on the results of the TM Review Meeting, CONSULTANT shall initiate the detailed design phase. CONSULTANT shall attend one site visit and hold a concurrent kickoff meeting with the project team to meet with COUNTY staff and introduce key staff. CONSULTANT shall prepare meeting minutes for the design kickoff meeting.

At each design milestone, CONSULTANT shall provide COUNTY with one unbound copy and one electronic copy (PDF format) of construction contract documents for that milestone. CONSULTANT shall meet with COUNTY to receive and discuss COUNTY's review comments. CONSULTANT shall incorporate into the construction contract documents the review comments of COUNTY as required. Meeting notes shall be prepared by CONSULTANT and distributed electronically to attendees.

The 50% design milestone submittal shall consist of preliminary drawings (11-inch by 17-inch) for general, civil, mechanical, structural, architectural, instrumentation, and electrical disciplines. Draft technical specifications (Divisions 2 – 17) shall also be included in the submittal. Twenty calendar days of review time for COUNTY have been provided for in CONSULTANT's time of performance.

The 90% design milestone submittal shall consist of the entire contract document set including COUNTY front end documents, technical specifications and construction drawings (11-inch by 17-inch) for all work proposed. Twenty calendar days of review time for the COUNTY have been provided for in CONSULTANT's time of performance.

TASK 5 – PROBABLE CONSTRUCTION COST ESTIMATE

CONSULTANT shall develop an opinion of probable cost of construction based on the 50% and 90% design milestone stages of the project.

At the 50% design milestone, CONSULTANT shall provide a budget level opinion of probable construction cost as defined by the Association for Advancement of Cost Engineering International (AACE International). An estimate of this type is normally expected to be accurate within +30% and -15%.

At the 90% design milestone, CONSULTANT shall update the 50% opinion of probable construction cost.

TASK 6 – FINAL CHECK DOCUMENTS (Pre-Purchasing and Purchasing Review Submittals)

CONSULTANT shall provide COUNTY with construction contract documents that incorporate final comments received from COUNTY during the 90% design review meeting and information required from the COUNTY to finalize the front end documents. CONSULTANT shall submit specifications and drawings (as .pdfs) electronically for COUNTY final check review.

Following receipt of comments from COUNTY, CONSULTANT shall revise documents and resubmit to COUNTY electronically for purchasing review.

CONSULTANT shall revise documents per purchasing review comments and submit revise specifications and drawings for bidding.

TASK 7 – PREBID PERMITTING

At the 90% stage of design, CONSULTANT shall submit the 90% design documents to the permitting agencies listed below for review or permit issuance as noted.

State of Florida Department of Environmental Protection Department (FDEP) – Notification/Application for Constructing a Domestic Wastewater Collection / Transmission System

CONSULTANT shall prepare and submit FDEP form 62-604.300(8)(a) and the required supporting documentation.

Broward County Environmental Protection and Growth Management Division (BC EPGMD) - Application to Construct a Wastewater Collection/Transmission System

CONSULTANT shall prepare and submit form 212-0004 and the required supporting documentation.

City of Pompano Beach Building Department

CONSULTANT shall submit the contract documents for a preliminary review to the City of Pompano Beach Building Department if allowed by the Building Department. All technical comments received in a timely manner will be addressed by inclusion into the Bid Documents or by inclusion through an addendum to the Bid Documents. CONSULTANT shall participate in one meeting with the Building Department to resolve outstanding issues.

Failure to identify governmental authorities that have jurisdiction over project at the time of permitting scope preparation does not relieve CONSULTANT from responsibility to pursue the permit as described above. However, an equitable adjustment to the CONSULTANT's compensation may be negotiated if deemed appropriate.

TASK 8 – SOLE SOURCE ASSISTANCE

CONSULTANT shall provide technical assistance to COUNTY for sole source approval requirements. CONSULTANT shall provide technical performance data for equipment to be specified. CONSULTANT shall contact manufacturer to obtain similar pricing documentation from municipalities who purchased equipment in the previous five years (approximately). CONSULTANT shall attend up to six meetings related to sole source approval.

TASK 9 – BIDDING AND AWARD SERVICES

Subtask 9.1 – Preparation of Final Bid Documents – BCWWS Review Set

CONSULTANT shall make final revisions to the documents based on review comments received by permitting agencies and the COUNTY. CONSULTANT shall assist COUNTY in preparation of the front end documents, including summarizing the scope of work, preparation of cost summary, review of special requirements. CONSULTANT shall provide an electronic copy of the completed technical documents to the COUNTY.

Subtask 9.2 – Preparation of Final Bid Documents – Purchasing Review Set

CONSULTANT shall make final revisions to the documents based on review comments received by permitting agencies and the COUNTY Purchasing Department. CONSULTANT shall provide an electronic copy of the bid documents to the COUNTY.

Subtask 9.3-- Prebid Conference and Job Walk Through

CONSULTANT shall attend one pre-bid conference and job walk through prior to the advertised bid date.

Subtask 9.4 – Issue Bid Documents and Addenda

CONSULTANT shall distribute bid documents by compact disk as requested by construction contractors. CONSULTANT will maintain a list of plan holders. CONSULTANT shall provide timely responses to the inquiries of potential bidders through written addenda or responses to Commonly Asked Questions. These queries shall be transmitted electronically to the COUNTY by CONSULTANT. CONSULTANT shall provide information electronically to COUNTY for incorporation into addenda by COUNTY. CONSULTANT's compensation has been based on addressing comments and questions for two addenda and updating Commonly Asked Questions as required.

Subtask 9.5 – Bid Evaluation

COUNTY shall forward the lowest responsive bid to CONSULTANT. CONSULTANT shall evaluate bids for technical compliance and shall make a recommendation to the COUNTY in regard to the award of the contract. Non-technical bid requirements shall be evaluated by COUNTY. This Scope of Services does not include time for CONSULTANT to assist COUNTY in the event of a bid protest.

Subtask 9.6 – Preparation of Contract Documents for Execution

CONSULTANT shall conform contract documents to incorporate addenda and provide eight sets of conformed documents for execution by COUNTY and Construction Contractor within seven calendar days of request by COUNTY.

Subtask 9.7 – Assistance to Contractor for Procuring Agency Permit and Approval

Building Department: CONSULTANT shall provide assistance to the Contractor for procuring the Building Department permit from the City of Pompano Beach. CONSULTANT shall participate in up to two meetings with the Building Department to resolve outstanding issues. CONSULTANT shall address up to two sets of comments from the Building Department and prepare drawing modifications in response to these comments as required.

Florida Power and Light: CONSULTANT shall provide assistance for coordinating the activities of Florida Power and Light required to arrange for power supply for bypass pumping to be supplied by the contractor. Services shall be limited to providing required electrical design drawings for FPL and attending one meeting on site to meet with COUNTY, FPL and other parties involved in the construction.

PHASE III (2) – CLARIFIER MECHANISMS

TASK 1 – PREPARE TECHNICAL MEMORANDUM – CLARIFIERS

CONSULTANT shall attend a project kick-off meeting within two weeks after receiving the Notice to Proceed. The purpose of this task is to identify project protocols, establish

coordination between CONSULTANT and COUNTY staff, review project scope, and collect available documents from COUNTY on the existing facilities and the functional requirements for the proposed facilities. CONSULTANT shall prepare and electronically distribute meeting minutes. CONSULTANT shall prepare summary minutes of the workshop to document COUNTY preferences.

CONSULTANT shall prepare a summary TM documenting the clarifier mechanism replacements including material type and cost. CONSULTANT shall include a brief summary of the requirements for the Module D aeration basin effluent weir replacement. CONSULTANT shall distribute TM electronically for COUNTY review. CONSULTANT shall attend one TM review meeting and update TM accordingly.

TASK 2 – DETAILED DESIGN CLARIFIERS

Based on the results of the TM Review Meeting, CONSULTANT shall initiate the detailed design phase. CONSULTANT shall attend one site visit and hold a concurrent kickoff meeting with the project team to meet with COUNTY staff and introduce key staff. CONSULTANT shall prepare meeting minutes for the design kickoff meeting.

At each design milestone, CONSULTANT shall provide COUNTY with one unbound copy and one electronic copy (PDF format) of construction contract documents for that milestone. CONSULTANT shall meet with COUNTY to receive and discuss COUNTY's review comments. CONSULTANT shall incorporate into the construction contract documents the review comments of COUNTY as required. Meeting notes shall be prepared by CONSULTANT and distributed electronically to attendees.

The 50% design milestone submittal shall consist of preliminary drawings (11-inch by 17-inch) for general, civil, mechanical, structural, architectural, instrumentation, and electrical disciplines. Draft technical specifications (Divisions 2 – 17) shall also be included in the submittal. Twenty calendar days of review time for COUNTY have been provided for in CONSULTANT's time of performance.

The 90% design milestone submittal shall consist of the entire contract document set including COUNTY front end documents, technical specifications and construction drawings (11-inch by 17-inch) for all work proposed. Twenty calendar days of review time for the COUNTY have been provided for in CONSULTANT's time of performance.

TASK 3 – PROBABLE CONSTRUCTION COST ESTIMATE

CONSULTANT shall develop an opinion of probable cost of construction based on the 50% and 90% design milestone stages of the project.

At the 50% design milestone, CONSULTANT shall provide a budget level opinion of probable construction cost as defined by the Association for Advancement of Cost Engineering International (AACE International). An estimate of this type is normally expected to be accurate within +30% and -15%.

At the 90% design milestone, CONSULTANT shall update the 50% opinion of probable construction cost.

TASK 4 – FINAL CHECK DOCUMENTS (Pre-Purchasing and Purchasing Review Submittals)

CONSULTANT shall provide COUNTY with construction contract documents that incorporate final comments received from COUNTY during the 90% design review meeting and information required from the COUNTY to finalize the front end documents. CONSULTANT shall submit specifications and drawings (as .pdfs) electronically for COUNTY final check review.

Following receipt of comments from COUNTY, CONSULTANT shall revise documents and resubmit to COUNTY electronically for purchasing review.

CONSULTANT shall revise documents per purchasing review comments and submit revise specifications and drawings for bidding.

TASK 5 – PREBID PERMITTING

At the 90% stage of design, CONSULTANT shall submit the 90% design documents to the permitting agencies listed below for review or permit issuance as noted.

State of Florida Department of Environmental Protection Department (FDEP) – Notification/Application for Constructing a Domestic Wastewater Collection / Transmission System

CONSULTANT shall prepare and submit FDEP form 62-604.300(8)(a) and the required supporting documentation.

Broward County Environmental Protection and Growth Management Division (BC EPGMD) - Application to Construct a Wastewater Collection/Transmission System

CONSULTANT shall prepare and submit form 212-0004 and the required supporting documentation.

City of Pompano Beach Building Department

CONSULTANT shall submit the contract documents for a preliminary review to the City of Pompano Beach Building Department if allowed by the Building Department. All technical comments received in a timely manner will be addressed by inclusion into the Bid Documents or by inclusion through an addendum to the Bid Documents. CONSULTANT shall participate in one meeting with the Building Department to resolve outstanding issues.

Failure to identify governmental authorities that have jurisdiction over project at the time of permitting scope preparation does not relieve CONSULTANT from responsibility to pursue the permit as described above. However, an equitable adjustment to the CONSULTANT'S compensation may be negotiated if deemed appropriate.

TASK 6 – BIDDING AND AWARD SERVICES

Subtask 6.1 – Preparation of Final Bid Documents

CONSULTANT shall make final revisions to the documents based on review comments received by permitting agencies and the COUNTY Purchasing Department. CONSULTANT shall provide an electronic copy of the bid documents to the COUNTY.

Subtask 6.2– Prebid Conference and Job Walk Through

CONSULTANT shall attend one pre-bid conference and job walk through prior to the advertised bid date.

Subtask 6.3 – Issue Bid Documents and Addenda

CONSULTANT shall distribute bid documents by compact disk as requested by construction contractors. CONSULTANT will maintain a list of plan holders. CONSULTANT shall provide timely responses to the inquiries of potential bidders through written addenda or responses to Commonly Asked Questions. These queries shall be transmitted electronically to the COUNTY by CONSULTANT. CONSULTANT shall provide information electronically to COUNTY for incorporation into addenda by COUNTY. CONSULTANT's compensation has been based on addressing comments and questions for two addenda and updating Commonly Asked Questions as required.

Subtask 6.4 – Bid Evaluation

COUNTY shall forward the lowest responsive bid to CONSULTANT. CONSULTANT shall evaluate bids for technical compliance and shall make a recommendation to the COUNTY in regard to the award of the contract. Non-technical bid requirements shall be evaluated by COUNTY. This Scope of Services does not include time for CONSULTANT to assist COUNTY in the event of a bid protest.

Subtask 6.5 – Preparation of Contract Documents for Execution

CONSULTANT shall conform contract documents to incorporate addenda and provide eight sets of conformed documents for execution by COUNTY and Construction Contractor within seven calendar days of request by COUNTY.

Subtask 6.6 – Assistance to Contractor for Procuring Agency Permit and Approval

Building Department: CONSULTANT shall provide assistance to the Contractor for procuring the Building Department permit from the City of Pompano Beach. CONSULTANT shall participate in up to two meetings with the Building Department to resolve outstanding issues. CONSULTANT shall address up to two sets of comments from the Building Department and prepare drawing modifications in response to these comments as required.

Florida Power and Light: CONSULTANT shall provide assistance for coordinating the activities of Florida Power and Light required to arrange for power supply for bypass pumping to be supplied by the contractor. Services shall be limited to providing required electrical design drawings for FPL and attending one meeting on site to meet with COUNTY, FPL and other parties involved in the construction.

PHASE III (3) – SOLIDS

TASK 1 – PREPARE TECHNICAL MEMORANDUM

CONSULTANT shall attend a project kick-off meeting within two weeks after receiving the Notice to Proceed. The purpose of this task is to identify project protocols, establish coordination between CONSULTANT and COUNTY staff, review project scope, and collect available documents from COUNTY on the existing facilities and the functional requirements for the proposed facilities.

CONSULTANT shall prepare a summary TM documenting the solids system replacements including thickener upgrades, belt filter press replacements and additions, digester complex improvements including digester cover, pumps, boilers, and gas piping replacements, CONSULTANT shall prepare a drawing list, a conceptual site plan locating the improvements, and a conceptual cost for the proposed improvements.

CONSULTANT shall distribute TM electronically for COUNTY review. CONSULTANT shall attend one TM review meeting and update TM accordingly.

TASKS 2-7 TO BE DEVELOPED AND ADDED TO THIS SCOPE BY WAY OF AN AMENDMENT TO THIS AGREEMENT

PHASE III (4) – ANCILLARY INFRASTRUCTURE

TASK 1 – PREPARE TECHNICAL MEMORANDUM

CONSULTANT shall attend a project kick-off meeting within two weeks after receiving the Notice to Proceed. The purpose of this task is to identify project protocols, establish coordination between CONSULTANT and COUNTY staff, review project scope, and collect available documents from COUNTY on the existing facilities and the functional requirements for the proposed facilities.

CONSULTANT shall prepare a summary TM documenting the electrical system improvements (outdoor bus duct, ductbank replacements, ring bus main replacements, motor control center replacements, site lighting and pager system replacements), fuel storage additions, heating and ventilation system replacements, chemical system replacements, and other ancillary infrastructure as identified. CONSULTANT shall prepare a drawing list, a conceptual site plan locating the improvements, and a conceptual cost for the proposed improvements.

CONSULTANT shall distribute TM electronically for COUNTY review. CONSULTANT shall attend one TM review meeting and update TM accordingly.

TASKS 2-7 TO BE DEVELOPED AND ADDED TO THIS SCOPE BY WAY TO AN AMENDMENT TO THIS AGREEMENT

PHASE III (5) – BIOLOGICAL

TASK 1 – PREPARE TECHNICAL MEMORANDUM

CONSULTANT shall attend a project kick-off meeting within two weeks after receiving the Notice to Proceed. The purpose of this task is to identify project protocols, establish coordination between CONSULTANT and COUNTY staff, review project scope, and collect available documents from COUNTY on the existing facilities and the functional requirements for the proposed facilities.

CONSULTANT shall prepare a summary TM documenting the headworks improvements, return activated sludge improvements, waste activated sludge improvements, scum pumps improvements, Secondary Treatment and Observation Building (STOB) improvements, clarifier drain valve replacements, Module E blower replacements and structure addition, and other specific improvements to the biological systems at each of the five treatment modules. CONSULTANT shall prepare a drawing list, a conceptual site plan locating the improvements, and a conceptual cost for the proposed improvements.

CONSULTANT shall distribute TM electronically for COUNTY review. CONSULTANT shall attend one TM review meeting and update TM accordingly.

TASKS 2-7 TO BE DEVELOPED AND ADDED TO THIS SCOPE BY WAY TO AN AMENDMENT TO THIS AGREEMENT

PHASE III (6) – EFFLUENT

TASK 1 – PREPARE TECHNICAL MEMORANDUM

CONSULTANT shall attend a project kick-off meeting within two weeks after receiving the Notice to Proceed. The purpose of this task is to identify project protocols, establish coordination between CONSULTANT and COUNTY staff, review project scope, and collect available documents from COUNTY on the existing facilities and the functional requirements for the proposed facilities.

CONSULTANT shall prepare a summary TM documenting the pump, motor, liquid rheostats, and/or variable frequency drive (VFD) and controls replacements required at the effluent pump stations (deep injection well and ocean outfall). Supporting structural, HVAC, mechanical, and/or plumbing improvements may also be included, as necessary to support the replacements, including, the construction of an electrical building near the ocean outfall pump station to house VFDs, switchgear, and instrumentation improvements. CONSULTANT shall prepare a drawing list, a conceptual site plan locating the improvements, and a conceptual cost for the proposed improvements. CONSULTANT shall also include a generalized sequence of construction to outline the continuous operation of disposal facilities during construction.

CONSULTANT shall distribute TM electronically for COUNTY review. CONSULTANT shall attend one TM review meeting and update TM accordingly.

TASKS 2-7 TO BE DEVELOPED AND ADDED TO THIS SCOPE BY WAY TO AN AMENDMENT TO THIS AGREEMENT

PHASE IV – ENGINEERING SERVICES DURING CONSTRUCTION

PHASES IV (1) and IV (2) – GRIT REMOVAL/AERATION BASIN INFLUENT PIPES and CLARIFIER MECHANISMS

TASK 1 – CONSTRUCTION OVERSIGHT SERVICES

Subtask 1.1 – General Construction Oversight

Construction Administration - CONSULTANT shall provide construction administration services during the construction phase, including:

General Management – CONSULTANT shall provide necessary services for the management of the project during the construction phase. Such management activities shall include coordination and general correspondence with the COUNTY, Construction Contractor and subcontractors as well as handling and processing of submittals. This task also includes requests for contract interpretations and clarifications required by the Contractor which do not result in the submittal of formal Requests for Information.

Contract Interpretations and Clarifications – CONSULTANT shall log requests for information and issue necessary technical interpretations and clarifications of the Construction Contract Documents in a timely manner.

Change Orders - CONSULTANT shall provide technical input for requests for routine project cost and/or schedule changes from the Contractor. Changes may be the result of unforeseen conditions or interferences arising during routine progress of work or additional improvements requested by COUNTY after the project bid date. CONSULTANT shall evaluate the impact of the change request in terms of project cost and schedule. CONSULTANT shall prepare a recommendation of the change order request and if accepted, a statement noting that the requested cost / schedule impacts are fair and reasonable. CONSULTANT'S analysis of the change request shall be forwarded to COUNTY for processing.

Subtask 1.2 – Submittal Review

CONSULTANT shall perform the submittal review tasks detailed below.

Pay Requests – The CONSULTANT shall review applications for payment and accompanying data, determine the amounts owed, and recommend approval of payments due the Contractor. It is understood that the CONSULTANT's recommendation of any payment requested in an application for payment constitutes a representation by the CONSULTANT to the COUNTY, based on CONSULTANT's on-site observations of construction in progress as an experienced and qualified professional and on the CONSULTANT's review of the application for payment and the accompanying data and schedules, that construction has progressed to the point indicated. In addition, it is understood that to the best of the CONSULTANT's knowledge, information and belief, the quality of construction is in substantial

accordance with the Contract Documents; subject to an evaluation of construction upon substantial completion, to the results of any subsequent tests called for in the Contract Documents, and any qualifications stated in the recommendation; and that the Contractor is due the amount recommended.

Shop Drawings – CONSULTANT shall log, track, review and process shop drawings and any other submittals which the Construction Contractor is required to submit within 21 working days of receipt of the submittal except for special items requiring longer review time if so noted in the Construction Contract Documents. The review shall be for conformance with the design intent and compliance with the information presented in the Construction Contract Documents. CONSULTANT shall determine the acceptability of materials and equipment proposed by the Construction Contractor.

Subtask 1.3 – Construction Meetings

CONSULTANT shall attend meetings as follows:

Preconstruction Conference – CONSULTANT's RPR shall conduct a preconstruction conference attended by representatives of COUNTY and by the construction contractor. CONSULTANT shall provide the attendees with a written summary of the meeting which will be distributed electronically.

Construction Progress Meetings – Twice per month, CONSULTANT's RPR shall conduct a progress meeting with the Construction Contractor and the COUNTY to review project status and identify issues that may affect the project schedule. CONSULTANT shall provide COUNTY with a written summary of each progress meeting which will be distributed electronically to the attendees, including updated versions of submittal and RFI logs.

Pre-Pour Concrete Conferences – CONSULTANT's RPR shall conduct pre-pour concrete conferences attended by the construction contractor and representatives of COUNTY. CONSULTANT shall provide the attendees with a written summary of the meetings which will be distributed electronically.

Subtask 1.4 – Field Observation Services

CONSULTANT shall provide a Resident Project Representative (RPR) to provide field observation services of the proposed Work. The RPR will perform the following duties and responsibilities:

- Attend pre-construction conference, progress meetings and other job conferences.
- Serve as the construction liaison, working primarily with the Contractor(s) superintendent(s) and plant staff.
- Assist in obtaining additional details or information when required at the job site.
- Conduct on-site observations of construction in progress (including specialized field tests) to assist in determining if construction is proceeding in substantial accordance with the Contract Documents.
- Inform the Contractor whenever the RPR believes that construction is unsatisfactory, faulty or defective, does not conform to the Contract Documents,

- does not meet the requirements of any inspections, tests or approval required to be made, or has been damaged before final payment.
- Immediately inform the Contractor upon the commencement of any construction requiring a submittal, if the submittal has not been accepted.
 - Visually review suitability and method of storage of materials, equipment and supplies delivered to the construction site.
 - Verify that operating and maintenance procedures are available to the COUNTY before equipment start-up and operator training is conducted by the Contractor.
 - Observe, record, and report appropriate details relative to testing and start-up procedures.
 - Prepare daily reports and maintain a daily diary or log book, recording hours on the job site, weather conditions, data pertaining to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as in observing test procedures. Record names, addresses and telephone numbers of Contractor, subcontractor and major supplier personnel.
 - Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project(s), and record the outcome of these inspections in the daily report.
 - Review applications for payment with the Contractor for accuracy, back-up detail and completeness.
 - During the course of construction, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by the Contractor are applicable to the items actually installed.
 - Before issuance of a determination of substantial completion, prepare a list of items requiring completion or correction, in concert with the COUNTY. Participate in the final inspection.
 - Coordinate with the COUNTY and Contractor for necessary shutdowns and interruptions of COUNTY facilities.

It is important to note that in performance of the duties noted herein, the RPR shall not:

- Undertake any of the responsibilities of Contractor or its subcontractors, nor direct any of their work.
- Advise on or issue directions pertaining to any aspect of the means, method, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
- Advise on, or issue directions about, safety precautions and programs related to the Contractor's Work.
- Approve any interruptions or modification of COUNTY's facilities without the approval of COUNTY.

Subtask 1.5 – On-Site Startup Services

CONSULTANT shall monitor startup activities and shall participate during the station startup phase of the project. Participation shall include but not be limited to: signal loop testing including electrical and instrumentation terminations; review of as-built documentation prior to startup; instrument calibrations; coordination of new signals with existing SCADA system; and process tuning during startup.

Subtask 1.6 - Specialty Discipline Site Reviews

CONSULTANT shall undertake periodic site reviews sufficient for all Engineers of Record to certify completion of the project for each discipline.

Subtask 1.7 – Project Closeout

Upon receiving notice from the Contractor that the project is substantially complete, CONSULTANT, in conjunction with appropriate COUNTY staff, shall develop a "punch list" of the project. The "punch list" shall include items needing completion or correction prior to consideration of final acceptance. CONSULTANT shall develop the list with assistance from COUNTY. The list shall be forwarded to the Contractor by the COUNTY. Upon notification from the Contractor that all remaining "punch list" items have been resolved, CONSULTANT, in conjunction with appropriate COUNTY staff, shall perform a final review of the finished project. Based on successful completion of all outstanding work items by the Contractor, CONSULTANT shall assist in closing out the construction contract by certifying final construction to jurisdictional agencies. Final certifications include the following:

- DEP Form 62-620.910(12), Notification of Completion of Construction for Wastewater Facilities or Activities.

Subtask 1.8 – Record Drawings

CONSULTANT shall prepare and distribute to the COUNTY within thirty days of the date of receipt of marked-up, red-lined field drawings from the Construction Contractor and COUNTY, two sets of 22" x 34" signed and sealed prints. CONSULTANT shall also deliver the AutoCAD electronic version of the record drawings on compact disk. The record drawings shall incorporate those changes made during the construction process, based on the marked-up prints, drawings and other data furnished by the Construction Contractor and COUNTY to CONSULTANT.

Subtask 1.9 – O&M Manual Updates

CONSULTANT shall update the COUNTY's existing Operation and Maintenance (O&M) Manual. CONSULTANT shall update the O&M for information the grit removal facilities. CONSULTANT shall incorporate manufacturer's information into the existing plant operation manual.

PHASES IV (3) THROUGH IV (6) – TO BE DEVELOPED AND ADDED TO THIS SCOPE BY WAY OF AN AMENDMENT TO THIS AGREEMENT

PHASE V - REGULATORY SUPPORT

TASK 1 – REGULATORY ASSISTANCE

CONSULTANT shall prepare a summary of the regulatory deadlines for the NRWTP. CONSULTANT shall also summarize upcoming regulations and the assumed impact of those regulations. CONSULTANT shall prepare interim milestones for compliance with the deadlines. CONSULTANT shall deliver the summary to the COUNTY in Microsoft Excel format, such that the COUNTY can utilize the database to record compliance dates and track upcoming deadlines.

CONSULTANT shall prepare documentation as-needed for permitting correspondence including but not limited to rerating of NRWTP. Such documentation may include calculations and summary memoranda.

CONSULTANT shall participate in meetings with regulatory personnel on an as-requested basis. CONSULTANT shall assist COUNTY in preparing data and responses to regulatory inquiries.

PHASE VI – OPTIONAL ADDITIONAL SERVICES

CONSULTANT shall provide additional services, as identified by the Contract Administrator, which are related to but beyond the level of effort of the scope of work outlined above. Services provided under this Phase shall be billed on an hourly basis up to the specified amount as authorized by the Contract Administrator, subject to the limits set in the Agreement. Services performed under this Phase must be initiated by a separate written Notice to Proceed issued by the Contract Administrator.

Time of Performance

The estimated schedule of CONSULTANT activities are as follows.

Phase	Task	Estimated Duration (days from NTP)
I	Security/Risk Assessment	550
IIA	Condition Assessment	365
IIB	Long Term Process Strategies Analysis	365
IIC	Facilities Capital Improvement Plan	550
III (1)	Grit Removal/Aeration Basin Influent Pipes	545
III (2)	Clarifier Mechanisms	480
III (3)	Solids – Task 1	90
III (4)	Ancillary Infrastructure – Task 1	90
III (5)	Biological – Task 1	90
III (6)	Effluent – Task 1	90
IV (1)	Grit Removal/Aeration Basin Influent Pipes	1545
IV (2)	Clarifier Mechanisms	1300
V	Regulatory Support	1825

VI	Optional Additional Services	1825
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Key Assumptions

- The security/risk assessment does not include Countywide Information Technology vulnerabilities. The security/risk assessment covers only assets of the North Regional Wastewater Treatment System which are limited to: for the facilities and infrastructure supporting the NRWWTS, including NRWWTP, master pump stations, ocean outfall, deep injection wells (DIWs) and related force mains and infrastructure on-site.
- The security/risk assessment report identifies vulnerabilities in the system that can be compromised by human threats, and is therefore considered a "For Official Use Only" document and will be labeled as such. Prudent security measures will be taken by CONSULTANT and COUNTY to prevent the general public and staff not involved in the project from accessing the document.
- All decisions in the security/risk assessment (including those regarding the vulnerability and risk of assets and the probability of occurrence of human or man-made disasters) are those of COUNTY and not of the CONSULTANT. CONSULTANT facilitates the project and writes the report to document decisions made by COUNTY staff throughout the project.
- The condition assessment does not include testing services. Nondestructive, destructive, laboratory analyses, etc of assets is not included within this scope. The condition assessment is intended to be an engineer's opinion of the current status of an asset and the life of that asset as based on typical equipment life and the engineer's opinion of the existing condition of that particular asset.
- COUNTY will provide up to four years of influent, treatment process, and effluent data
- Additional data, including laboratory analyses, will be included in the reimbursable expenditures for this project.
- Public relations with neighborhood residents, businesses and homeowner's associations are not included.
- The removal of underground diesel storage tanks and the potential associated environmental remediation associated with such removal is not included in this scope of work.
- A single construction bid package for each project shall be prepared with no owner furnished equipment for each design package.
- There is no existing soil contamination in the area to be impacted by construction.
- COUNTY will provide a single version of their Front End documentation that can be modified electronically. Any changes to the standard language or format of the Front End required prior to Bid will be completed by COUNTY.
- The Construction Period for Phase IV (1) is anticipated to last approximately 30 months from the Contractor's construction Notice-to-Proceed to Substantial Completion.
- The Construction Period for Phase IV (2) is anticipated to last approximately 24 months from the Contractor's construction Notice-to-Proceed to Substantial Completion.
- CONSULTANT shall not be responsible for the acts or omissions of any Construction Contractor, any construction subcontractor or any other person (except CONSULTANT's own employees, subconsultants or other agents) at the project site.
- CONSULTANT shall not be responsible for Construction Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto. CONSULTANT shall issue all technical instructions to the

Construction Contractor and shall interpret all technical requirements of the Construction Contract documents.

- The schedule assumes that the bidding/award process will require approximately six months and that the contractor will require three months between notice to proceed 1 and 2 issuance. Any potential variations to schedule assumptions will be rectified during amendments to this agreement.
- The design through engineering services during construction for the solids, ancillary infrastructure, biological, and effluent disposal packages is intended to be negotiated and added to this agreement in future amendment phases. Only the initial technical memoranda are provided in this original agreement to establish the future level of effort required.
- The schedule for each project assumes the COUNTY will complete the review of each design submission within thirty days.

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Hazen and Sawyer, PC

Project No: RLI #R1007402R1
Project Title: NRWTP Facilities Improvements
Facility Name: NRWTP

TITLE	MAXIMUM HOURLY RATE (\$/HR)	+	OVER-HEAD AT 128.8% (\$/HR)	+	FRINGE AT 51.8% (\$/HR)	+	PROFIT AT 9.5% (\$/HR)	=	MAXIMUM BILLING RATE (\$/HR)
Vice President	\$79.40		\$102.27		\$41.13		\$21.17		\$243.97
Senior Associate	\$78.36		\$100.93		\$40.59		\$20.89		\$240.77
Associate	\$64.79		\$81.01		\$33.56		\$17.04		\$196.40
Senior Principal Engineer	\$56.95		\$73.35		\$29.50		\$15.18		\$174.98
Principal Engineer	\$50.16		\$62.72		\$25.98		\$13.19		\$152.06
Assistant Engineer	\$54.63		\$70.36		\$28.30		\$14.56		\$167.86
Senior Principal Scientist	\$42.89		\$55.24		\$22.22		\$11.43		\$131.78
Principal Scientist	\$42.73		\$55.04		\$22.14		\$11.39		\$131.31
Scientist	\$23.38		\$30.11		\$12.11		\$6.23		\$71.84
Senior Principal Designer	\$55.94		\$72.05		\$28.98		\$14.91		\$171.88
Principal Designer	\$42.19		\$54.34		\$21.85		\$11.25		\$125.86
Senior Designer	\$32.53		\$41.90		\$16.85		\$8.67		\$97.04
Principal Graphic Designer	\$35.82		\$46.14		\$18.56		\$9.55		\$106.87
Technical Typist	\$26.28		\$33.84		\$13.61		\$7.00		\$80.73
Technician	\$35.59		\$45.84		\$18.43		\$9.49		\$109.34

OVERHEAD (\$/HR) = HOURLY RATE X OVERHEAD%

FRINGE (\$/HR) = HOURLY RATE X FRINGE%

PROFIT (\$/HR) = (HOURLY RATE+ OVERHEAD+ FRINGE) X PROFIT%

THE MULTIPLIER (Hazen and Sawyer) is 3.07

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Hillers Electrical Engineering

Project No: RLI #R1007402R1
 Project Title: NRWTP Facilities Improvements
 Facility Name: NRWTP

TITLE	MAXIMUM HOURLY RATE (\$/HR)	+	OVER-HEAD AT 124% (\$/HR)	+	FRINGE AT 38% (\$/HR)	+	PROFIT AT 10% (\$/HR)	=	MAXIMUM BILLING RATE (\$/HR)
President	\$78.00		\$96.72		\$29.64		\$20.44		\$224.80
Chief Engineer	\$58.24		\$72.22		\$22.13		\$15.26		\$167.85
Project Manager	\$47.84		\$59.32		\$18.18		\$12.53		\$137.87
Professional Engineer	\$39.52		\$49.00		\$15.02		\$10.35		\$113.90
Project Engineer	\$31.20		\$38.69		\$11.86		\$8.17		\$89.92
CADD/Technician	\$27.04		\$33.53		\$10.28		\$7.08		\$77.93
Field Inspector	\$40.56		\$50.29		\$15.41		\$10.63		\$116.89
Clerical	\$23.92		\$29.66		\$9.09		\$6.27		\$68.94

OVERHEAD (\$/HR) = HOURLY RATE X OVERHEAD%

FRINGE (\$/HR) = HOURLY RATE X FRINGE%

PROFIT (\$/HR) = (HOURLY RATE+ OVERHEAD+ FRINGE) X PROFIT%

THE MULTIPLIER (Hillers Electrical Engineering) is 2.88

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Craven Thompson & Associates, Inc.

Project No: RLI #R1007402R1
 Project Title: NRWTP Facilities Improvements
 Facility Name: NRWTP

TITLE	MAXIMUM HOURLY RATE (\$/HR)	+	OVER-HEAD AT 79.86% (\$/HR)	+	FRINGE AT 51.10% (\$/HR)	+	PROFIT AT 15.00% (\$/HR)	=	MAXIMUM BILLING RATE (\$/HR)
PRINCIPAL	\$88.23		\$70.46		\$45.09		\$30.57		\$234.35
VICE PRESIDENT	\$65.00		\$51.91		\$33.22		\$22.52		\$172.64
PROJECT MANAGER	\$60.00		\$47.92		\$30.66		\$20.79		\$159.36
QUALITY ASSURANCE PERSON	\$60.00		\$47.92		\$30.66		\$20.79		\$159.36
SENIOR ENGINEER	\$51.00		\$40.73		\$26.06		\$17.67		\$135.46
PROJECT ENGINEER	\$40.00		\$31.94		\$20.44		\$13.86		\$106.24
SENIOR DESIGNER/TECH	\$32.00		\$25.56		\$16.35		\$11.09		\$84.99
SENIOR DRAFTER	\$30.00		\$23.96		\$15.33		\$10.39		\$79.68
ADMINISTRATIVE ASSISTANT	\$26.00		\$20.76		\$13.29		\$9.01		\$69.06
PROFESSIONAL SURVEYOR/GIS	\$50.00		\$39.93		\$25.55		\$17.32		\$132.80
3-PERSON SURVEY CREW	\$58.00		\$46.32		\$29.64		\$20.09		\$154.05
2-PERSON SURVEY CREW	\$42.00		\$33.54		\$21.46		\$14.55		\$111.55
SENIOR RESIDENT REP	\$40.00		\$31.94		\$20.44		\$13.86		\$106.24
RESIDENT RERESENTATIVE	\$30.00		\$23.96		\$15.33		\$10.39		\$79.68

OVERHEAD (\$/HR) = HOURLY RATE X OVERHEAD%
 FRINGE (\$/HR) = HOURLY RATE X FRINGE%
 PROFIT (\$/HR) = (HOURLY RATE+ OVERHEAD+ FRINGE) X PROFIT%

THE MULTIPLIER (Craven Thompson & Associates) is 2.656

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Chen Moore & Associates

Project No: RLI #R1007402R1
 Project Title: NRWWTW Facilities Improvements
 Facility Name: NRWWTW

TITLE	MAXIMUM HOURLY RATE (\$/HR)	+	OVER-HEAD AT 152.02% (\$/HR)	+	FRINGE AT 33.38% (\$/HR)	+	PROFIT AT 5.00% (\$/HR)	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$68.86		\$104.68		\$22.99		\$9.83		\$206.35
Project Manager	\$48.23		\$73.32		\$16.10		\$6.88		\$144.53
Senior Engineer	\$40.86		\$62.12		\$13.64		\$5.83		\$122.45
Project Engineer	\$40.94		\$62.24		\$13.67		\$5.84		\$122.68
Engineer	\$25.00		\$38.01		\$8.35		\$3.57		\$74.92
Designer	\$24.03		\$36.53		\$8.02		\$3.43		\$72.01
Senior Technician / CADD	\$23.00		\$34.96		\$7.68		\$3.28		\$68.92
Senior Landscape Architect	\$44.23		\$67.24		\$14.76		\$6.31		\$132.54
CEI Senior Inspector	\$45.12		\$68.59		\$15.06		\$6.44		\$135.21
CEI Inspector	\$24.86		\$37.79		\$8.30		\$3.55		\$74.50
Administrative Assistant	\$26.25		\$39.91		\$8.76		\$3.75		\$78.66

OVERHEAD (\$/HR) = HOURLY RATE X OVERHEAD%
 FRINGE (\$/HR) = HOURLY RATE X FRINGE%
 PROFIT (\$/HR) = (HOURLY RATE+ OVERHEAD+ FRINGE) X PROFIT%

THE MULTIPLIER (Chen Moore & Associates) is 2.9967

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Launch! Consulting LLC

Project No: RLI #R1007402R1
Project Title: NRWTP Facilities Improvements
Facility Name: NRWTP

TITLE	FIXED HOURLY RATE (\$/HR)
Subject Matter Expert	\$173.09
Administrative Assistant	\$51.52

Note: These rates were established in accordance with Section 5.2.3 of the Agreement, utilizing previously established rates with other municipal clients for similar engineering services.

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Tierra South Florida, Inc.

Project No: RLI #R1007402R1
 Project Title: NRWWTW Facilities Improvements
 Facility Name: NRWWTW

TITLE	MAXIMUM HOURLY RATE (\$/HR)	+	OVER-HEAD AT 83.13% (\$/HR)	+	FRINGE AT 39.79% (\$/HR)	+	PROFIT AT 10% (\$/HR)	=	MAXIMUM BILLING RATE (\$/HR)
Principal	\$75.96		\$63.15		\$30.22		\$16.09		\$185.42
Project manager	\$53.85		\$44.77		\$21.43		\$11.40		\$131.45
Senior Engineer	\$51.68		\$42.96		\$20.56		\$10.94		\$126.15
Project engineer	\$45.67		\$37.97		\$18.17		\$9.67		\$111.48
CAD Operator	\$33.65		\$27.97		\$13.39		\$7.13		\$82.14
Senior Technician 1	\$33.65		\$27.97		\$13.39		\$7.13		\$82.14
Secretary	\$22.12		\$18.39		\$8.80		\$4.68		\$53.99
Technician	\$25.00		\$20.78		\$9.95		\$5.29		\$61.02

OVERHEAD (\$/HR) = HOURLY RATE X OVERHEAD%
 FRINGE (\$/HR) = HOURLY RATE X FRINGE%
 PROFIT (\$/HR) = (HOURLY RATE+ OVERHEAD+ FRINGE) X PROFIT%

THE MULTIPLIER (Tierra South Florida) is 2.44

Professional Services Agreement

EXHIBIT B

SALARY COSTS

Florida Engineering & Testing, Inc

Project No: RLI #R1007402R1
 Project Title: NRWWT Facilities Improvements
 Facility Name: NRWWT

TITLE	MAXIMUM HOURLY RATE (\$/HR)	+	OVER-HEAD AT 67.5% (\$/HR)	+	FRINGE AT 8.0% (\$/HR)	+	PROFIT AT 10.0% (\$/HR)	=	MAXIMUM BILLING RATE (\$/HR)
ENGINEER	\$36.25		\$24.47		\$2.90		\$6.36		\$69.98
FIELD SUPERVISOR	\$21.25		\$14.34		\$1.70		\$3.73		\$41.02
BUILDING INSPECTOR	\$19.00		\$12.83		\$1.52		\$3.33		\$36.68
ENGINEERING TECHNICIAN	\$16.00		\$10.80		\$1.28		\$2.81		\$30.89
DRILLING SUPERVISOR	\$21.50		\$14.51		\$1.72		\$3.77		\$41.51
ADMINISTRATIVE ASSISTANT	\$17.50		\$11.81		\$1.40		\$3.07		\$33.78
PRINCIPAL	\$37.50		\$25.31		\$3.00		\$6.58		\$72.39

OVERHEAD (\$/HR) = HOURLY RATE X OVERHEAD%
 FRINGE (\$/HR) = HOURLY RATE X FRINGE%
 PROFIT (\$/HR) = (HOURLY RATE+ OVERHEAD+ FRINGE) X PROFIT%

THE MULTIPLIER (Florida Engineering & Testing) is 1.942

Exhibit C - Letter of Intent CBE



(RESPONSIVE CRITERIA FORM) To Utilize a County Business Enterprise (CBE) Subcontractor/Subconsultant

From (Name of Proposer/Bidder): Hazen and Sawyer, P.C.

Firm Address: 4000 Hollywood Boulevard, 750 N, Hollywood, Florida 33021

Project Description: NRWWTP Facility Improvements - Engineering Services

In response to Broward County's RLI/Bid No. R1007402R1, the undersigned hereby agree to utilize the CBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with Broward County.

Name of CBE Firm: Chen and Associates Consulting Engineers, Inc.

Address of CBE Firm: 500 West Cypress Creek Road, #630, Fort Lauderdale, Florida 33309

Expiration of CBE Certification: 08/18/2013 Projected CBE Work Assignment (description of work assignment): Civil Engineering

Projected Percentage of Prime's Contract Fees to be Awarded to CBE: 13%
(Dollar Amt or Percentage %)

Patrick A. Davis
(Signature of Owner or Authorized Rep. Prime) July 30, 2012
(Date)

Print Name (owner or authorized Rep. Prime): Patrick A. Davis, P.E.

Subscribed and sworn to before me this 30th day of July 20 12

Notary's Signature Annie A. Brown Notary Seal:

(Acknowledgement by the Proposed CBE Firm)

The undersigned intends to perform work in connection with the above Contract as (check one) an individual a partnership x a corporation ___ a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

Peter Moore
(Signature of Owner or Authorized Rep. CBE) July 31, 2012
(Date)

Print Name (owner or authorized Rep. CBE): Peter Moore, P.E., LEED AP, President

Subscribed and sworn to before me this 31 day of July 2012

Notary's Signature Leigh Barron Notary Seal:

Exhibit C - Letter of Intent CBE



(RESPONSIVE CRITERIA FORM) To Utilize a County Business Enterprise (CBE) Subcontractor/Subconsultant

From (Name of Proposer/Bidder): Hazen and Sawyer, P.C.

Firm Address: 4000 Hollywood Boulevard, 750 N, Hollywood, Florida 33021

Project Description: NRWWTP Facility Improvements - Engineering Services

In response to Broward County's RLI/Bid No. R1007402R1, the undersigned hereby agree to utilize the CBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with Broward County.

Name of CBE Firm: Hillers Electrical Engineering, Inc.

Address of CBE Firm: 3440 Hollywood Boulevard, Suite 415, Hollywood, Florida 33021

Expiration of CBE Certification: 03/25/2014 Projected CBE Work Assignment (description of work assignment): Electrical Engineering Design and Construction Management Services

Projected Percentage of Prime's Contract Fees to be Awarded to CBE: 14%
(Dollar Amt or Percentage %)

Patrick A. Davis July 30, 2012
(Signature of Owner or Authorized Rep. Prime) (Date)

Print Name (owner or authorized Rep. Prime): Patrick A. Davis, P.E.

Subscribed and sworn to before me this 30th day of July 20 12

Notary's Signature Annie A. Brown Notary Seal:

(Acknowledgement by the Proposed CBE Firm)

The undersigned intends to perform work in connection with the above Contract as (check one) an individual a partnership a corporation a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

P. Hillers 8/2/12
(Signature of Owner or Authorized Rep. CBE) (Date)

Print Name (owner or authorized Rep. CBE): Paul Hillers

Subscribed and sworn to before me this 2nd day of August 2012

Notary's Signature Jacki Usher-Yasin Notary Seal:



(RESPONSIVE CRITERIA FORM)

To Utilize a County Business Enterprise (CBE) Subcontractor/Subconsultant

From (Name of Proposer/Bidder): Hazen and Sawyer, P.C.

Firm Address: 4000 Hollywood Boulevard, 750 N, Hollywood, Florida 33021

Project Description: NRWWTP Facility Improvements - Engineering Services

In response to Broward County's RLI/Bid No. R1007402R1, the undersigned hereby agree to utilize the CBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with Broward County.

Name of CBE Firm: Tierra South Florida, Inc.

Address of CBE Firm: 2209B NE 54th Street, Fort Lauderdale, Florida 33308

Expiration of CBE Certification: 04/19/2014 Projected CBE Work Assignment (description of work assignment): Soil Borings, Testing Services

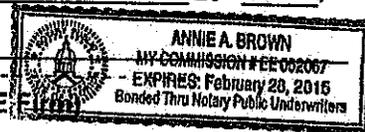
Projected Percentage of Prime's Contract Fees to be Awarded to CBE: 1%
(Dollar Amt or Percentage %)

Patrick A. Davis
(Signature of Owner or Authorized Rep. Prime) July 30, 2012
(Date)

Print Name (owner or authorized Rep. Prime): Patrick A. Davis, P.E.

Subscribed and sworn to before me this 30th day of July 20 12

Notary's Signature Annie A. Brown Notary Seal:



(Acknowledgement by the Proposed CBE Firm)

The undersigned intends to perform work in connection with the above Contract as (check one) an individual a partnership a corporation a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

[Signature]
(Signature of Owner or Authorized Rep. CBE) 7/31/12
(Date)

Print Name (owner or authorized Rep. CBE): RAJ KRISHNASAMY, P.E.

Subscribed and sworn to before me this 31st day of JULY 2012

Notary's Signature [Signature] Notary Seal:

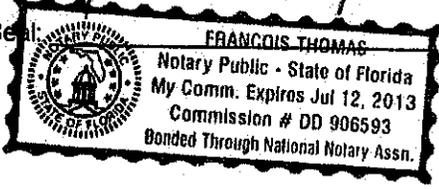


Exhibit 2
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Exhibit C - Letter of Intent CBE



(RESPONSIVE CRITERIA FORM)
To Utilize a County Business Enterprise (CBE) Subcontractor/Subconsultant

From (Name of Proposer/Bidder): Hazen and Sawyer, P.C.

Firm Address: 4000 Hollywood Boulevard, 750 N, Hollywood, Florida 33021

Project Description: NRWWTP Facility Improvements - Engineering Services

In response to Broward County's RLI/Bid No. R1007402R1, the undersigned hereby agree to utilize the CBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with Broward County.

Name of CBE Firm: Florida Engineering and Testing, Inc.

Address of CBE Firm: 250 SW 13th Avenue, Pompano Beach, Florida 33069

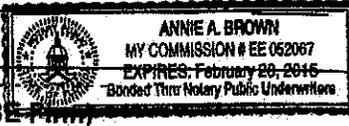
Expiration of CBE Certification: 10/02/2013 Projected CBE Work Assignment (description of work assignment): Construction Materials Testing

Projected Percentage of Prime's Contract Fees to be Awarded to CBE: 1%
(Dollar Amt or Percentage %)

Patrick A. Davis
(Signature of Owner or Authorized Rep. **Prime**) July 30, 2012
(Date)

Print Name (owner or authorized Rep. **Prime**): Patrick A. Davis, P.E.

Subscribed and sworn to before me this 30th day of July, 2012

Notary's Signature Annie A. Brown Notary Seal: 

(Acknowledgement by the Proposed CBE Firm)

The undersigned intends to perform work in connection with the above Contract as (check one) an individual a partnership a corporation a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

a
(Signature of Owner or Authorized Rep. **CBE**) 7/31/12
(Date)

Print Name (owner or authorized Rep. **CBE**): Christine Chang

Subscribed and sworn to before me this 31st day of July, 2012

Notary's Signature Vivienne Cutter Notary Seal: 

Exhibit C - Letter of Intent CBE



(RESPONSIVE CRITERIA FORM)

To Utilize a County Business Enterprise (CBE) Subcontractor/Subconsultant

From (Name of Proposer/Bidder): Hazen and Sawyer, P.C.

Firm Address: 4000 Hollywood Boulevard, 750 N. Hollywood, Florida 33021

Project Description: NRWWTP Facility Improvements - Engineering Services

In response to Broward County's RL/Bid No. R1007402R1, the undersigned hereby agree to utilize the CBE firm listed below, if awarded the contract. The undersigned further certify that the firm has been contacted and properly apprised of the projected work assignment(s) upon execution of the contract with Broward County.

Name of CBE Firm: Ace Blueprinting, Inc.

Address of CBE Firm: 5144 NW 12th Avenue, Fort Lauderdale, Florida 33309

Expiration of CBE Certification: 12/29/2013 Projected CBE Work Assignment (description of work assignment): Reprographics

Projected Percentage of Prime's Contract Fees to be Awarded to CBE: 1%
(Dollar Amt or Percentage %)

Patrick A. Davis July 30, 2012
(Signature of Owner or Authorized Rep. Prime) (Date)

Print Name (owner or authorized Rep. Prime): Patrick A. Davis, P.E.

Subscribed and sworn to before me this 30th day of July 20 12

Notary's Signature Annie A. Brown Notary Seal:

(Acknowledgement by the Proposed CBE)

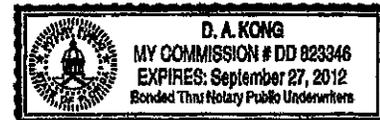
The undersigned intends to perform work in connection with the above Contract as (check one) an individual a partnership a corporation a joint venture. The undersigned agrees with the prime contractor's/consultant's proposal and further certifies that all information provided herein is true and correct.

Ronald G. Chinn 7.31.12
(Signature of Owner or Authorized Rep. CBE) (Date)

Print Name (owner or authorized Rep. CBE): RONALD G. CHINN.

Subscribed and sworn to before me this 31ST day of JULY 200 12.

Notary's Signature D. A. KONG Notary Seal:



Professional Services Agreement

EXHIBIT C-1

SCHEDULE OF SUBCONSULTANTS

Project No.: RLI R1007402R1
Project Title: NRWTP Facilities Improvement Engineering Services
Facility Name: NRWTP

<u>No.</u>	<u>Firm Name</u>	<u>Discipline</u>
1.	Craven Thompson & Associates, Inc.	Civil Engineering, Surveying
2.	Hillers Electrical Engineering, Inc.	Electrical Engineering
3.	Florida Engineering & Testing, Inc.	Testing Services
4.	ACE Blueprinting, Inc.	Reproduction
5.	Chen Moore & Associates	Civil Engineering
6.	Launch! Consulting LLC	Risk Assessment
7.	Tierra South Florida, Inc.	Testing Services