

PINELLAS COUNTY GOVERNMENT IS COMMITTED TO PROGRESSIVE PUBLIC POLICY, SUPERIOR PUBLIC SERVICE, COURTEOUS PUBLIC CONTACT, JUDICIOUS EXERCISE OF AUTHORITY AND SOUND MANAGEMENT OF PUBLIC RESOURCES, TO MEET THE NEEDS AND CONCERNS OF OUR CITIZENS TODAY AND TOMORROW.



NON-CONTINUING PROFESSIONAL SERVICES AGREEMENT

RFP TITLE: Klosterman Bayou Watershed Management Plan – Professional Engineering Services

RFP CONTRACT NO. 190-0353-NC (SS)

COUNTY PID NO.004375A

NON-CONTINUING FIRM: Applied Sciences Consulting Inc.

**PROFESSIONAL ENGINEERING SERVICES NON-CONTINUING SERVICES SAMPLE
AGREEMENT**

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**SECTION 1
INTENT OF AGREEMENT**

**AGREEMENT FOR PROFESSIONAL ENGINEERING SERVICES FOR
Klosterman Bayou Watershed Management Plan – Professional Engineering Services**

THIS AGREEMENT, entered into on the 10 day of August, 2021, between PINELLAS COUNTY, a political subdivision of the State of Florida, hereinafter referred to as the COUNTY, represented by its Board of County Commissioners, and, Applied Sciences Consulting Inc., with offices in Tampa, Florida hereinafter referred to as the CONSULTANT.

WITNESSETH, That:

WHEREAS, Pinellas County, herein referred to as the COUNTY, requires **PROFESSIONAL ENGINEERING SERVICES** associated with support to develop a Watershed Management Plan (WMP) and perform all other professional services as may be required for the Klosterman Bayou watershed, which is located in the northwest region of the County. The WMP shall be done in accordance with the County, the Southwest Florida Water Management District (SWFWMD) and Federal Emergency Management Agency (FEMA) requirements.

Once developed by the Consultant, this WMP will be used as a tool in the planning, regulation, and management of watersheds for future development and for determining and prioritizing capital improvement projects. The WMP must identify and address localized flooding situations, erosion, sedimentation and sea level rise (SLR) and future rainfall patterns. The WMP must also include the evaluation of existing 2.33-year, 5-year, 10-year, 25-year, 50-year and 100-year flood elevations, and the development of an appropriate hydraulic and hydrologic model that can be approved by the National Flood Insurance Program, the County and SWFWMD. Level of Service evaluation and any other requirements established in SWFWMD guideline and Specifications are to be included. The County's preference is to model the watershed using the ICPR4 software package. Modeling efforts must include future scenarios considering SLR as well as changes in rainfall patterns.

WHEREAS, the COUNTY desires the CONSULTANT provide PROFESSIONAL ENGINEERING SERVICES requisite to the development of the PROJECT; and

WHEREAS, the CONSULTANT has expressed the willingness and ability to provide the aforementioned Services; and

NOW THEREFORE, the COUNTY and the CONSULTANT, in consideration of the mutual covenants hereinafter set forth, agree as follows:

SECTION 2 SCOPE OF PROJECT

2.1 PROJECT DESCRIPTION AND PROFESSIONAL REQUIREMENTS

For the purposes of this Agreement the term PROJECT shall include all areas of proposed improvements, all areas that may reasonably be judged to have an impact on the PROJECT, and all PROJECT development phases and the services and activities attendant thereto. It is not the intent of this Agreement to identify the exact limits or details involved in providing satisfactorily completed PROJECT construction documents. The CONSULTANT shall provide the following professional services to prepare construction plans, specifications, and complete applications for and receive all federal, state, and local permits required for construction of the PROJECT. The PROJECT design shall be based on the following data:

The PROJECT will be used as a tool in the planning, regulation, and management of the watershed for future development and as a basis for determining and prioritizing capital improvements. These objectives will be met, in part, by conducting an analysis of the watershed in order to characterize the existing watershed conditions and recommend improvements for flood protection, natural systems, habitat, water quality, erosion control, public awareness and involvement, regulatory control, and capital improvements.

a) Required Deliverables

- All deliverables listed in the Tasks in the Scope of Services in Exhibit A
- A complete watershed management plan including model input and output data and associated geodatabases.

2.2 PROJECT PHASES

All project phases shall be completed on or before the milestone dates provided in the COUNTY approved PROJECT design schedule referenced in Exhibit A.

2.3 CONSULTING RESPONSIBILITIES

- A. It is the intention of the COUNTY that the CONSULTANT is held accountable for its work, including checking and review of plans, and that submittals are complete.
- B. The CONSULTANT shall be responsible for the accuracy of the work and shall promptly correct its errors and omissions without additional compensation. Acceptance of the work by the COUNTY will not relieve the CONSULTANT of the responsibility for subsequent correction of any errors and the clarification of any ambiguities.
- C. The CONSULTANT represents that it has secured or will secure, at its own expense, all personnel necessary to complete this Agreement; none of whom shall be employees of or have any contractual relationship with the COUNTY. Primary liaison with the COUNTY will be through the CONSULTANT'S Project Manager. All of the services required hereunder will be performed by the CONSULTANT or under the CONSULTANT'S supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under law to perform such services.
- D. The CONSULTANT shall endorse all reports, calculations, contract plans, and survey data. Services shall be prepared under the direction of a professional engineer registered in the State of Florida and qualified in the required discipline. Products or services performed or checked shall be signed and sealed by the CONSULTANT'S Florida registered professional engineer.

- E. The CONSULTANT shall be responsible for the preparation of a PROJECT design schedule, prepared in Microsoft Project 2013 or later, which shows a breakdown of all tasks to be performed, and their relationship in achieving the completion of each phase of work. A bar chart schedule showing overall PROJECT time frames should also be prepared. These schedules must be submitted for COUNTY approval within ten (10) days of the initial PROJECT Notice to Proceed. These schedules will be used to verify CONSULTANT performance in relationship to Fees claimed and to allow the COUNTY'S Project Manager to monitor the CONSULTANT'S efforts. The CONSULTANT shall be responsible for any updates to these schedules and for documenting in writing to the COUNTY any major deviations in the actual versus estimated PROJECT time frames.
- F. The CONSULTANT shall respond, in writing, to all review comments made by the COUNTY, and shall incorporate appropriate design adjustments into the PROJECT, in a timely manner, resulting from the review exchange.

2.4 GENERAL DESIGN CONDITIONS

2.4.1 The CONSULTANT shall coordinate and solicit appropriate input, with the knowledge of the COUNTY.

2.4.2 All deliverables, including reports and documents, shall be delivered electronically or on an external hard drive as well as providing reproducible hard copies of the reports.

2.4.3 The CONSULTANT shall develop acceptable alternates to any and all design recommendations that may be declared unacceptable.

2.5 GOVERNING SPECIFICATIONS REGULATIONS AND PERTINENT DOCUMENTS

2.5.1 The PROJECT shall be developed and delivered by the CONSULTANT in accordance with applicable industry standards. The CONSULTANT shall be responsible for utilizing and maintaining current knowledge of any laws, ordinances, codes, rules, regulations, standards, guidelines, special conditions, specifications, or other mandates relevant to the PROJECT or the services to be performed, such as the following:

- Flood Hazard Mapping Partners (available at <https://www.fema.gov/guidelines-and-standards-flood-risk-analysis-and-mapping>),
- Handbook for Developing watershed plans to Restore and Protect Our Waters listed on United States Environmental Protection Agency website (https://www.epa.gov/sites/production/files/2015-11/documents/2008_04_18_nps_watershed_handbook_ch12.pdf)
- Recommended Projection of Sea Level Rise in the Tampa Bay Region http://www.tbrpc.org/wp-content/uploads/2019/07/CSAP_SLR_Recommendation_2019_Final.pdf
- Sea Level Rise reference documentation https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf
- SWFWMD Guidelines and Specifications ftp://ftp.swfwmd.state.fl.us/pub/GWIS/WMP_Guidance_Documents/Final_WMP_Guidelines_and_Specs_20180608.pdf
(Copy and paste link into web browser)
 - Username: Anonymous
 - Password: (your email address)
- Pinellas County Standards (http://www.pinellascounty.org/plan/stormwater_manual.htm) as applicable.

- 2.5.2 The Contractor and Subcontractor must register with and use the E-verify system in accordance with Florida Statute 448.095. The County will verify the work authorization of the Contractor and Subcontractor. A Contractor and Subcontractor may not enter into a contract with the County unless each party registers with and uses the E-verify system.

If a Contractor enters a contract with a Subcontractor, the Subcontractor must provide the Contractor with an affidavit stating that the Subcontractor does not employ, contract with, or subcontract with unauthorized aliens. The Contractor must maintain a copy of the affidavit for the duration of the contract.

If the County, Contractor, or Subcontractor has a good faith belief that a person or entity with which it is contracting has knowingly violated Florida Statute 448.09(1) shall immediately terminate the contract with the person or entity.

If the County has a good faith belief that a Subcontractor knowingly violated this provision, but the Contractor otherwise complied with this provision, the County will notify the Contractor and order that the Contractor immediately terminate the contract with the Subcontractor.

A contract terminated under the provisions of this section is not a breach of contract and may not be considered such. Any contract termination under the provisions of this section may be challenged to Section 448.095(2)(d), Florida Statute. Contractor acknowledges upon termination of this agreement by the County for violation of this section by Contractor, Contractor may not be awarded a public contract for at least one (1) year. Contractor acknowledges that Contractor is liable for any additional costs incurred by the County as a result of termination of any contract for a violation of this section.

Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in this section, requiring the subcontracts to include these clauses in any lower tier subcontracts. Contractor shall be responsible for compliance by any Subcontractor or Lower Tier Subcontractor with the clause set for in this section.

- 2.5.3 Supplier acknowledges and warrants that all digital content and services provided under this contract conforms and shall continue to conform during the Term of this Agreement to the W3C Web Content Accessibility Guidelines, version 2.0 ("WCAG 2.0") at conformance Level A and AA. If all digital content and services does not fully conform to WCAG 2.0 A and AA, Supplier shall advise Pinellas County in writing of the nonconformance prior to execution of this Agreement and shall provide Pinellas County a plan to achieve conformance to WCAG 2.0 A and AA, including but not limited to, an intended timeline for conformance. Failure to achieve conformance, as determined in Pinellas County's sole discretion, on its intended timeline shall be considered a material breach of this Agreement and grounds for termination by Pinellas County.

If during the Term of this Agreement, Supplier fails to maintain compliance with WCAG 2.0 A and AA or Pinellas County otherwise identifies an issue related to accessibility of the product (the "Accessibility Issue") that renders the product inaccessible, then Pinellas County shall notify Supplier of non-compliance. Within 30 days of Supplier's receipt of a non-compliance notice ("Notice"), Supplier and Pinellas County shall meet and mutually agree upon an appropriate timeline for resolution of the Accessibility Issue(s) ("Initial Meeting").

Should Supplier:

- i. fail to acknowledge receipt of the notice within 30 days of receipt of the Notice;
- ii. unreasonably and solely withhold agreement regarding a timeline for resolution for more than 30 days following the Initial Meeting; or
- iii. fail to materially resolve the Accessibility Issue(s) within the agreed-upon timeline,

Failure to comply with the requirements of this section shall constitute a material breach of this Agreement and shall be grounds for termination of this Agreement by Pinellas County and subject Supplier to section 15 of this Agreement, "Indemnification."

**SECTION 3
SERVICES TO BE FURNISHED BY THE CONSULTANT**

3.1 SEE EXHIBIT A – SCOPE OF SERVICES.

3.2 BIDDING PHASE - Not Applicable

3.3 CONSTRUCTION PHASE- Not Applicable

3.4 PROVISIONS RELATED TO ALL PHASES

3.4.1 The CONSULTANT will investigate and confirm in writing to the COUNTY, to the best of the CONSULTANT'S knowledge, conformance with all applicable local public and utility regulations.

3.4.2 The CONSULTANT will coordinate work designed by various disciplines.

3.4.3 The CONSULTANT shall make such reviews, visits, attend such meetings and conferences and make such contacts as are necessary for the proper preparation of the watershed management plan for the PROJECT.

3.4.4 The COUNTY in no way obligates itself to check the CONSULTANT'S work and further is not responsible for maintaining project schedules.

3.4.5 The CONSULTANT must be familiar with the intent, thoroughness, safety factors and design assumptions of all structural calculations.

3.4.6 All work prepared and/or submitted shall be reviewed and checked by a CONSULTANT (Engineer) registered in Florida. All plans shall be signed and sealed by the Professional CONSULTANT in responsible charge.

3.5 PERMIT APPLICATIONS AND APPROVALS- Not applicable

3.6 COORDINATION WITH UTILITY SERVICES AND AFFECTED PUBLIC AGENCIES

3.6.1 Drainage investigations and drainage design shall be coordinated with any city or drainage district that may be affected by or have an effect on the PROJECT.

**SECTION 4
SERVICES TO BE FURNISHED BY THE COUNTY**

4.1 The COUNTY shall provide the following for the CONSULTANT'S use and guidance:

A. Copies of existing maps, existing aerial photographs, as-built construction plans and data pertinent to the PROJECT design, which the COUNTY may have in its possession.

SECTION 5 PRESENTATIONS, PUBLIC MEETINGS AND TECHNICAL LIAISON

The following services shall be provided at no additional cost to the COUNTY:

5.1 Prior to the commencement of design activities, the COUNTY will conduct with the CONSULTANT a pre-design conference for the purpose of discussing issues relative to the PROJECT, plans preparation and submittal procedures and to convey to the CONSULTANT such items provided for under Section 4 as may be required and available at that time.

5.2 The CONSULTANT shall make presentations to the COUNTY'S Director of Public Works or designee as often as reasonably requested and at any point in the PROJECT development should issues arise which make additional presentations other than those listed elsewhere in this Agreement, in the COUNTY'S best interest.

5.3 The CONSULTANT shall participate in monthly PROJECT Conferences with COUNTY staff personnel. The meetings will be scheduled by the COUNTY at a location provided by the COUNTY.

5.4 The CONSULTANT shall attend, as technical advisor to the COUNTY all meetings or hearings conducted by permitting agencies or public bodies in connection with any permit required for the construction of the PROJECT, and shall prepare all presentation aids, documents and data required in connection with such meetings or hearings, and at the discretion of the COUNTY, shall either plead the COUNTY'S case or provide engineering and technical assistance to the COUNTY in its pleading of the case.

5.5 The CONSULTANT shall keep accurate minutes of all meetings and distribute copies to all attending. These meetings shall be set up through the COUNTY and appropriate COUNTY staff shall attend.

SECTION 6 PAYMENT GUIDELINES AND CATEGORY OF SERVICES

6.1 BASIC SERVICES

The services described and provided for under Sections 2, 3 and Exhibit A shall constitute the Basic Services to be performed by the CONSULTANT under this Agreement.

6.2 OPTIONAL SERVICES

Services noted in Exhibit A of this Agreement as "Optional" shall constitute the Optional Services to be performed by the CONSULTANT under this Agreement. Optional Services shall be rendered by the CONSULTANT only upon written authorization by the COUNTY'S Director of Public Works, or designee.

6.3 CONTINGENCY SERVICES

When authorized in writing by the COUNTY'S Director of Public Works or designee, the CONSULTANT shall furnish services resulting from unforeseen circumstances not anticipated under Basic Services due to minor changes in the PROJECT scope.

Compensation for any Contingency Services assignments shall be negotiated between the COUNTY and the CONSULTANT at the time the need for services becomes known.

6.4 ADDITIONAL SERVICES

When executed by the County Administrator or Board of County Commissioners as an amendment to this Agreement, the CONSULTANT shall provide such additional services as may become necessary because of changes in the Scope of PROJECT. Additional Services shall be classified as any change beyond the Contingency Services upset limit for compensation.

6.5 INVOICING

The CONSULTANT may submit invoices for fees earned upon completion, and acceptance by the County, of individual tasks. Such invoicing shall be supported by a Progress Report showing the actual tasks performed and their relationship to the fee claimed for each phase. The COUNTY shall make payments to the CONSULTANT for work performed in accordance with the Local Government Prompt Payment Act, Section 218.70 *et. seq.*

The following services shall be considered reimbursable services and may be filled in full upon their completion and acceptance. The CONSULTANT shall provide copies of supporting receipts/invoices/billing documentation. Self-performed reimbursable work shall be reimbursed at the firm's standard hourly rates for all related services. A breakdown of man hours and billing rates shall be provided with each invoice. An hourly rate sheet is attached (Exhibit B).

- A. Soil Analysis/Geotechnical Investigations.
- B. Contamination Assessments/Hazardous Material Analysis (if required).
- C. Aerial Photography (if required).
- D. Payment of Permit Fees (if required).
- E. Payment of the Public Information Meeting Advertisements, if required.
- F. Payment of the Court Reporter for public meetings, if required.
- G. Printing and Binding Services.

Should an invoiced amount for fees earned appear to exceed the work effort believed to be completed, the COUNTY may, prior to processing of the invoice for payment, require the CONSULTANT to submit satisfactory evidence to support the invoice.

All progress reports shall be mailed to the attention of the designated Project Manager,

Nabil Bawany, P.E.
Public Works Department, Bldg 1
22211 US Highway 19 North
Clearwater, FL 33765

SUPPLIER shall submit invoices for payment due as provided herein with such documentation as required by Pinellas County and all payments shall be made in accordance with the requirements of Section 218.70 *et. seq.*, Florida Statutes, "The Local Government Prompt Payment Act." Invoices shall be submitted to the address below unless instructed otherwise on the purchase order, or if no purchase order, by the ordering department:

Finance Division Accounts Payable
Pinellas County Board of County Commissioners
P. O. Box 2438
Clearwater, FL 33757

Each invoice shall include, at a minimum, the Supplier's name, contact information and the standard purchase order number. The County may dispute any payments invoiced by SUPPLIER in accordance with the County's Dispute Resolution Process for Invoiced Payments, established in accordance with Section 218.76, Florida Statutes, and any such disputes shall be resolved in accordance with the County's Dispute Resolution Process.

Fees for contingent or additional services authorized shall be invoiced separately, and shall be due and payable in full upon the presentation of satisfactory evidence that the corresponding services have been performed.

SECTION 7 COMPENSATION TO THE CONSULTANT

7.1 For the BASIC SERVICES provided for in this Agreement, as defined in Section 3.1, the COUNTY agrees to pay the CONSULTANT as follows:

A Lump Sum Fee of: Eleven Thousand Two Hundred and 00/100 Dollars (\$11,200.00) for the Task 1 – Project Development. Phase of the PROJECT

A Lump Sum Fee of: One Hundred Twenty-Four Thousand Six Hundred Seventy-Two and 00/100 Dollars (\$124,672.00) for the Task 2.0 Watershed Evaluation Phase of the PROJECT.

A Lump Sum Fee of: One Hundred Three Thousand Four Hundred Forty-Six and 00/100 Dollars (\$103,446.00) for the Task 3.0 Floodplain Analysis Phase of the PROJECT.

A Lump Sum Fee of: Sixty Thousand Six Hundred Twenty-Eight and 00/100 Dollars (\$60,628.00) for the Task 4.0 for FPLOS Determination, SWRA, Drainage Improvement Alternatives Analysis and Recommendations Phase of the PROJECT.

The above fees shall constitute the total not to exceed amount of Two Hundred Ninety-Nine Thousand Nine Hundred Forty-Six and 00/100 Dollars (**\$299,946.00**) to the CONSULTANT for the performance of Basic Services. All man hours are billed per the established and agreed hourly rates. The hourly rates are fully loaded and include all labor, overhead, expenses and profit of any nature including travel within the Tampa Bay Metropolitan Statistical area. Travel outside of the Tampa Bay Metropolitan Statistical Area will be reimbursed in accordance with Section 112.061 F.S. and/or the County Travel Policy, as approved by the County.

7.2 For any CONTINGENCY SERVICES performed, the COUNTY agrees to pay the CONSULTANT, a negotiated fee based on the assignment, up to a maximum amount not to exceed Fifty Thousand, and 00/100 dollars (**\$50,000.00**) for all assignments performed.

7.3 Total agreement not-to-exceed amount Three Hundred Forty-Nine Thousand Nine Hundred Forty-Six and 00/100 Dollars (**\$349,946.00**).

7.4 For any ADDITIONAL SERVICES, the COUNTY agrees to pay the CONSULTANT a negotiated total fee based on the work to be performed as detailed by a written amendment to this Agreement.

7.5 In the event that this Agreement is terminated under the provisions of this contract the total and complete compensation due the CONSULTANT shall be as established by the COUNTY based on the COUNTY'S determination of the percentage of work effort completed to date of termination.

SECTION 8 PERFORMANCE SCHEDULE

Time is of the essence in this Agreement. The CONSULTANT shall plan and execute the performance of all services provided for in this Agreement in such manner as to ensure their proper and timely completion in accordance with the following schedule:

8.1 The services to be rendered by the CONSULTANT shall be commenced upon receipt from the COUNTY of written "NOTICE TO PROCEED."

8.2 All project phases shall be completed on or before the milestone dates provided in the COUNTY approved PROJECT design schedule referenced in 2.3 E.

8.3 The CONSULTANT shall not be held responsible for delays in the completion of the PROJECT design when the COUNTY causes such delays. The COUNTY reviews related to the above submittals shall not exceed twenty-one (21) days.

**SECTION 9
AUTHORIZATION FOR CONTINGENT OR ADDITIONAL SERVICES**

9.1 The CONTINGENCY services provided for under this Agreement shall be performed only upon prior written authorization from the Director of Public Works or designee.

9.2 The ADDITIONAL services provided for under this Agreement shall be performed only upon approval of the County Administrator or Board of County Commissioners.

9.3 The CONSULTANT shall perform no services contemplated to merit compensation beyond that provided for in this Agreement unless such services, and compensation therefore, shall be provided for by appropriate written authorization or amendment(s) to this Agreement.

**SECTION 10
FIRMS AND INDIVIDUALS PROVIDING SUBCONSULTING SERVICES**

The COUNTY reserves the right to review the qualifications of any and all subconsultants, and to reject any subconsultant in a proper and timely manner, deemed not qualified to perform the services for which it shall have been engaged. Any subconsultant not listed as part of the prime consultant's team at time of award must be approved by the Director of Purchasing prior to performing any service.

**SECTION 11
SATISFACTORY PERFORMANCE**

All services to be provided by the CONSULTANT under the provisions of this Agreement, including services to be provided by subconsultants, shall be performed to the reasonable satisfaction of the COUNTY'S Director of Public Works or designee.

**SECTION 12
RESOLUTION OF DISAGREEMENTS**

12.1 The COUNTY shall reasonably decide all questions and disputes, of any nature whatsoever, that may arise in the execution and fulfillment of the services provided for under this Agreement.

12.2 The decision of the COUNTY upon all claims, questions, disputes and conflicts shall be final and conclusive, and shall be binding upon all parties to this Agreement, subject to judicial review.

**SECTION 13
CONSULTANT'S ACCOUNTING RECORDS**

13.1 Records of expenses pertaining to all services performed shall be kept in accordance with generally accepted accounting principles and procedures.

13.2 The CONSULTANT'S records shall be open to inspection and subject to examination, audit, and/or reproduction during normal working hours by the COUNTY'S agent or authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the CONSULTANT or any of his payees pursuant to the execution of the Agreement. These records shall include, but not be limited to, accounting records, written policies and procedures, subconsultant files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this Agreement. They shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Agreement. The COUNTY shall not audit payroll and expense records on task assignments paid by lump sum fee.

13.3 For the purpose of such audits, inspections, examinations and evaluations, the COUNTY'S agent or authorized representative shall have access to said records from the effective date of the Agreement, for the duration of work, and until five (5) years after the date of final payment by the COUNTY to the CONSULTANT pursuant to this Agreement.

13.4 The COUNTY'S agent or authorized representative shall have access to the CONSULTANT'S facilities and all necessary records in order to conduct audits in compliance with this Section. The COUNTY'S agent or authorized representative shall give the CONSULTANT reasonable advance notice of intended inspections, examinations, and/or audits.

SECTION 14 OWNERSHIP OF PROJECT DOCUMENTS

Upon completion or termination of this Agreement, all records, documents, tracings, plans, specifications, maps, evaluations, reports and other technical data, other than working papers, prepared or developed by the CONSULTANT under this Agreement shall be delivered to and become the property of the COUNTY. The CONSULTANT, at its own expense, may retain copies for its files and internal use. The COUNTY shall not reuse any design plans or specifications to construct another project at the same or a different location without the CONSULTANT'S specific written verification, adaptation or approval.

SECTION 15 INSURANCE COVERAGE AND INDEMNIFICATION

15.1 The Consultant must maintain insurance in at least the amounts required in the Request for Proposal throughout the term of this contract. The contractor must provide a Certificate of Insurance in accordance with Insurance Requirements of the Request for Proposal, evidencing such coverage prior to issuance of a purchase order or commencement of any work under this Contract. See Section C Insurance Requirements – Attached

15.2 If the CONSULTANT is an individual or entity licensed by the state of Florida who holds a current certificate of registration under Chapter 481, Florida Statutes, to practice architecture or landscape architecture, under Chapter 472, Florida Statutes, to practice land surveying and mapping, or under Chapter 471, Florida Statutes, to practice engineering, and who enters into a written agreement with the COUNTY relating to the planning, design, construction, administration, study, evaluation, consulting, or other professional and technical support services furnished in connection with any actual or proposed construction, improvement, alteration, repair, maintenance, operation, management, relocation, demolition, excavation, or other facility, land, air, water, or utility development or improvement, the CONSULTANT will indemnify and hold harmless the COUNTY, and 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 the CONSULTANT and other persons employed or utilized by the CONSULTANT in the performance of the Agreement.

SECTION 16 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE FOR CONTRACTS NOT SUBJECT TO EXECUTIVE ORDER 11246

In carrying out the contract, the CONSULTANT shall not discriminate against employee or applicant for employment because of race, color, religion, sex or national origin.

SECTION 17 INDEPENDENT CONTRACTOR STATUS AND COMPLIANCE WITH THE IMMIGRATION REFORM AND CONTROL ACT OF 1986

CONSULTANT acknowledges that it is functioning as an independent Consultant in performing under the terms of this Agreement, and it is not acting as an employee of COUNTY. CONSULTANT acknowledges that it is responsible for complying with the provisions of the Immigration Reform and Control Act of 1986, located at 8 U.S.C. Section 1324, et seq., and regulations relating thereto. Failure to comply with the above provisions of this contract shall be considered a material breach and shall be grounds for immediate termination of the contract.

**SECTION 18
PROHIBITION AGAINST CONTINGENT FEE**

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

**SECTION 19
TRUTH IN NEGOTIATIONS**

By execution of this Agreement, the CONSULTANT certifies to truth-in-negotiations and that wage rates and other factual unit costs supporting the compensation are accurate, complete and current at the time of contracting. Further, the original contract amount and any additions thereto shall be adjusted to exclude any significant sums where the COUNTY determines the contract price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. Such adjustments must be made within one (1) year following the end of the contract.

**SECTION 20
SUCCESSORS AND ASSIGNS**

The CONSULTANT shall not assign, sublet, or transfer his interest in this Agreement without the written consent of the COUNTY.

**SECTION 21
INTEREST ON JUDGMENTS**

In the event of any disputes between the parties to this Agreement, including without limitation thereto, their assignees and/or assigns, arising out of or relating in any way to this Agreement, which results in litigation and a subsequent judgment, award or decree against either party, it is agreed that any entitlement to post judgment interest, to either party and/or their attorneys, shall be fixed by the proper court at the rate of five percent (5%), per annum, simple interest. Under no circumstances shall either party be entitled to pre-judgment interest. The parties expressly acknowledge and, to the extent allowed by law, hereby opt out of any provision of federal or state statute not in agreement with this paragraph.

**SECTION 22
TERMINATION OF AGREEMENT**

22.1 The COUNTY reserves the right to cancel this Agreement, without cause, by giving thirty (30) days prior written notice to the CONSULTANT of the intention to cancel. Failure of the CONSULTANT to fulfill or abide by any of the terms or conditions specified shall be considered a material breach of contract and shall be cause for immediate termination of the contract at the discretion of COUNTY. Alternatively, at the COUNTY'S discretion, the COUNTY may provide to CONSULTANT thirty (30) days to cure the breach. Where notice of breach and opportunity to cure is given, and CONSULTANT fails to cure the breach within the time provided for cure, COUNTY reserves the right to treat the notice of breach as notice of intent to cancel the Agreement for convenience.

22.2 If COUNTY terminates the Agreement for convenience, other than where the CONSULTANT breaches the Agreement, the CONSULTANT'S recovery against the COUNTY shall be limited to that portion of the CONSULTANT'S compensation earned through date of termination, together with any costs reasonably incurred by the CONSULTANT that are directly attributable to the termination. The CONSULTANT shall not be entitled to any further recovery against the COUNTY, including but not limited to anticipated fees or profit on work not required to be performed.

22.3 Upon termination, the CONSULTANT shall deliver to the COUNTY all original papers, records, documents, drawings, models, and other material set forth and described in this Agreement.

22.4 In the event that conditions arise, such as lack of available funds, which in the COUNTY'S opinion make it advisable and in the public interest to terminate this Agreement, it may do so upon written notice.

**SECTION 23
AGREEMENT TERM**

This Agreement will become effective on the date of execution first written above and shall remain in effect for thirty-six (36) consecutive calendar months from the commencement date on the Notice to Proceed unless terminated at an earlier date under other provisions of this Agreement, or unless extended for a longer term by amendment.

**SECTION 24
CONFLICT OF INTEREST**

24.1 By accepting award of this Contract, the CONSULTANT, which shall include its directors, officers and employees, represents that it presently has no interest in and shall acquire no interest in any business or activity which would conflict in any manner with the performance of services required hereunder, including as described in the CONSULTANT'S own professional ethical requirements. An interest in a business or activity which shall be deemed a conflict includes but is not limited to direct financial interest in any of the material and equipment manufacturers suppliers, distributors, or contractors who will be eligible to supply material and equipment for the PROJECT for which the CONSULTANT is furnishing its services required hereunder.

24.2 If, in the sole discretion of the County Administrator or designee, a conflict of interest is deemed to exist or arise during the term of the contract, the County Administrator or designee may cancel this contract, effective upon the date so stated in the Written Notice of Cancellation, without penalty to the COUNTY.

**SECTION 25
ENTIRE AGREEMENT**

This Agreement represents, together with all Exhibits and Appendices, the entire written Agreement between the COUNTY and the CONSULTANT and may be amended only by written instrument signed by both the COUNTY and the CONSULTANT.

**SECTION 26
PUBLIC ENTITY CRIMES**

CONSULTANT is directed to the Florida Public Entity Crime Act, Fla. Stat. 287.133, and Fla. Stat. 287.135 regarding Scrutinized Companies, and CONSULTANT agrees that its bid and, if awarded, its performance of the agreement will comply with all applicable laws including those referenced herein. CONSULTANT represents and certifies that CONSULTANT is and will at all times remain eligible to bid for and perform the services subject to the requirements of these, and other applicable, laws. CONSULTANT agrees that any contract awarded to CONSULTANT will be subject to termination by the County if CONSULTANT fails to comply or to maintain such compliance.

**SECTION 27
PUBLIC RECORDS**

Consultant acknowledges that information and data it manages as part of the services may be public records in accordance with Chapter 119, Florida Statutes and Pinellas County public records policies. Contractor agrees that prior to providing services it will implement policies and procedures to maintain, produce, secure, and retain public records in accordance with applicable laws, regulations, and County policies, including but not limited to the Section 119.0701, Florida Statutes. Notwithstanding any other provision of this Agreement relating to compensation, the Consultant agrees to charge the County, and/or any third parties requesting public records only such fees allowed by Section 119.07, Florida Statutes, and County policy for locating and producing public records during the term of this Agreement.

CONTRACTOR'S DUTY

If the contractor has questions regarding the application of Chapter 119, Florida Statutes, to the Contractor's duty to provide public records relating to this contract, contact the Pinellas County Board of County Commissioners, Purchasing Department, Operations Manager custodian of public records at 727-464-3311, purchase@pinellascounty.org, Pinellas County Government, Purchasing Department, Operations Manager, 400 S. Ft. Harrison Ave, 6th Floor, Clearwater, FL 33756.

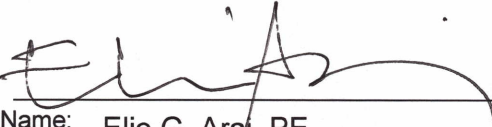
**SECTION 28
GOVERNING LAW AND AGREEMENT EXECUTION**

This Agreement shall be governed by the laws of the State of Florida.

IN WITNESS WHEREOF, the parties herein have executed this Agreement as of the day and year first written above.

Firm Name: **Applied Sciences Consulting Inc.**


PINELLAS COUNTY, by and through its Board of County Commissioners

By: 
Print Name: Elie G. Araj, PE
Title: Owner/President Date: July 13, 2021

By:  Date: 8/10/2021
Name
Chairman



ATTEST:
Ken Burke, Clerk of the Circuit Court

By:  Date: 8/10/2021
Deputy Clerk

APPROVED AS TO FORM
By: Amanda S. Coffey
Office of the County Attorney

Exhibit A
SCOPE OF SERVICES

ENGINEERING CONSULTING SERVICES

RFP NO.: 190-0353-NC (SS)

PROJECT NO.: 004375A

KLOSTERMAN BAYOU WATERSHED
MANAGEMENT PLAN

Prepared for:



Pinellas County
Public Works Department
22211 US Hwy 19 N Bldg. 1
Clearwater, FL 33765

Prepared by:



1000 N Ashley Drive, Suite 500, Tampa, Florida 33602
9500 Koger Boulevard North, Suite 100, St. Petersburg, Florida 33702
Phone: 813.228.0900 | Fax: 813.434.2454 | info@appliedfl.com | www.appliedfl.com

PROJECT TITLE

Klosterman Bayou Watershed Management Plan (Project # 004375A)

Note: All deliverables are required to meet the general requirements of the Southwest Florida Water Management District (DISTRICT), Pinellas County (COUNTY), and the Federal Emergency Management Agency (FEMA) as noted in the scope of work presented below.

OBJECTIVE

On behalf of the Pinellas County Board of County Commissioners, the Public Works Department has sought the services of Applied Sciences Consulting, Inc. to develop a Watershed Management Plan (WMP) for the Klosterman Bayou watershed in accordance with County, Southwest Florida Water Management District (SWFWMD or DISTRICT) and Federal Emergency Management Agency (FEMA) requirements.

BACKGROUND

This request involves the development of a comprehensive WMP for the Klosterman Bayou watershed. The study will primarily be focused towards water quality, flood control and natural systems improvement projects. The WMP shall also consider future scenarios by incorporating sea level rise (SLR) and climate change as it relates to rainfall patterns (changes in depth, duration, intensity) as part of the County's resiliency planning efforts. This WMP will be used as a tool in the planning, regulation, and management of watersheds for future development and for determining and prioritizing capital improvement projects.

The Klosterman Bayou watershed is generally located in the in the northwest region of Pinellas County with an area of approximately 3.2 square miles. Roughly 11 percent of that area is under the jurisdiction of City of Tarpon Springs, the remainder of the watershed is unincorporated County. Klosterman Bayou abuts 6 other watersheds. Lake Tarpon to the east, Sutherland Bayou and Smith Bayou towards the south, Anclote River and St. Joseph Sound to the north and Clearwater Harbor to the west. All boundary conditions from the abutting watersheds must be considered during the development of the WMP.

There has been no formal WMP completed for the Klosterman Bayou watershed, thus this will be the first full effort to model and analyze the watershed. There are 2 major tributaries in the watershed - Channel A and Channel B. Channel A is the main tributary draining Innisbrook Golf Course, which occupies a substantial amount of the watershed.

PROJECT DESCRIPTION

The PROJECT involves development of a comprehensive WMP for the watershed that results in recommendations for water quality, flood control, and natural system improvement projects.

SCOPE OF WORK

The general scope of this project is to update and complete the WMP for the Klosterman Bayou Watershed in accordance with the Guidelines and Specifications for:

- Flood Hazard Mapping Partners
(<https://www.fema.gov/flood-maps/guidance-partners/guidelines-standards>)
- The nine elements listed in United States Environmental Protection Agency (USEPA) 319(h) Guidance Manual
(<http://water.epa.gov/polwaste/nps/cwact.cfm>)
- Recommended Projection of Sea Level Rise in the Tampa Bay Region (2019)
(http://www.tbrpc.org/wp-content/uploads/2019/07/CSAP_SLR_Recommendation_2019_Final.pdf)
- SWFWMD Watershed Management Program Guidelines and Specifications published in 2017 (rev 2020)
(ftp://ftp.swfwmd.state.fl.us/pub/GWIS/WMP_Guidance_Documents/)
Username: Anonymous Password: (your email address)
- Pinellas County Comprehensive Plan, as applicable.
(http://www.pinellascounty.org/plan/comprehensive_plan.htm)

2.0 GENERAL SCOPE OF WORK

The general scope of work includes:

- A. Project Development - Includes initial data collection and the development of a Project Management Plan (PMP) that lists deliverables, schedules, a quality assurance/quality control (QA/QC) plan, communication plan, and a breakdown of resource allocations.
- B. Digital Topographic Information - Includes development of a digital terrain model (DTM) based on the best available LiDAR for Pinellas County. This effort is typically included in the Watershed Evaluation phase of the project. It will include suitable modifications to the DTM to account for any topo voids or other necessary adjustments.
- C. Watershed Evaluation - This effort will develop an existing conditions watershed evaluation including data collection efforts and field evaluations and inspections. Such information includes data regarding soil hydraulics, terrain information (LiDAR), watershed boundary limits, receiving water body characteristics (groundwater, rivers, etc.), catchment characterization, hydraulic element inventory, depression storage, land use, etc. Routines in ArcMap along with custom programs will be used to acquire and analyze the watershed data in GWIS compliant format. The ultimate goal is to incorporate the processed information as data input into computer simulation models for floodplain development, and water quality load assessments. ICPR4 1D will be used for floodplain analysis. Developing an updated

Exhibit A
Klosterman Bayou Watershed Management Plan

land use map will also be of the evaluation for use in other tasks. A report detailing issues, data gaps, and a finalized watershed approach along with Generic hydraulic and hydrologic geodatabase are to be delivered and Peer reviewed for approval before moving forward.

- D. Floodplain Analysis - Includes the processing of the information acquired under the Watershed Evaluation plus any additional data regarding pertinent terrain voids, missing hydraulic element data, and geotechnical information to develop a debugged and stable computer simulation model of the watershed. In addition to the Generic geodatabase, a Model geodatabase will be developed containing items specifically required for input into ICPR4. The Green-Ampt method of computing excess runoff will be used. The result is an existing conditions water quantity model which will serve as the basis for other tasks including floodplain delineation/analyses consistent with SWFWMD and FEMA guidelines for rainfall volumes, floodplain delineation, and flood zone definition.
- E. The Flood Protection Level of Service analysis - Includes determination of Level of Service (LOS) for the watershed based on model results and floodplain mapping. This effort, in conjunction with the SWRA and Water Quality analyses, will identify problem areas and guide development of Best Management Practices (BMPs) for flood reduction and/or water quality improvements. This effort will also consider evaluate and address future conditions by incorporating SLR.
- F. The Surface Water Resource Assessment - Includes the development of a surface water resource assessment (SWRA) that is specific to the watershed. This effort also assists in the development of BMPs for improving water quality and natural systems. It will be performed in concert with the LOS determination and water quantity analyses mentioned above.
- G. The Best Management Practice (BMP) analysis - includes the development of conceptual structural and/or non-structural BMPs that address water quality problems and/or flooding within the watershed. Deliverables for this task include a BMP analysis report identifying the BMP projects, ICPR and water quality models in support of the final BMPs and a geodatabase of the components of the conceptual design.

Notes:

- Unless specified, all deliverables will be digital files. No hardcopies will be provided.
- Peer review will be conducted at strategic points during the project by an independent 3rd party reviewer. At each peer review point, the CONSULTANT's efforts will include preparation of responses to peer reviews of the project geodatabase and all developed models.

A detailed scope of work is defined below:

2.1 PROJECT DEVELOPMENT

2.1.1 Data Collection and Initial Evaluation

This task includes coordination and research that CONSULTANT conducted to become familiar with the watershed under study, project goals, background, data available, scope of work, and the COUNTY/DISTRICT study process and Guidance documents. The COUNTY/DISTRICT will provide or direct the CONSULTANT to obtain the following relevant information:

- Topographic Information
- Historical Water Levels
- FEMA Flood Insurance Rate Map (FIRM) feature data sets
- FEMA Flood Insurance Studies (FIS)
- Water quality sampling information
- USGS Gage Locations
- NOAA Tidal Gage Locations
- DISTRICT/COUNTY Data Collection Site Locations
- Stormwater Inventory
- Site-Specific Information, including known flooding problem areas (photos, videos, notes, etc.)
- Water Quality Data
- Existing Studies and Models
- Adjacent Watershed Studies
- Data collection "Date certain"

The CONSULTANT will set up a GIS base map using relevant information from the above list. It is assumed that the COUNTY and/or the DISTRICT will provide this information with limited exceptions.

2.1.2 Draft Project Plan

The CONSULTANT shall document the approach to execute tasks and identify outstanding project related issues; establish a communication protocol with members of the project team, the COUNTY, the DISTRICT, and other project stakeholders; and establish a project specific Quality Assurance / Quality Control (QA/QC) plan. This is the initial effort; however, this document shall be revisited periodically to assess the actual progress, evaluate staff allocations, include deficiencies and the recovery actions completed and planned, if any.

The Project Plan shall include the following contents:

Exhibit A
Klosterman Bayou Watershed Management Plan

- Introduction
- Goals and Objectives
- Project Approach for the approved Scope of Work
- Staff Allocation
- Quality Assurance Plan
- Communication Plan
- Assumptions and Issues Management
- Attachments/Appendices
- Project Schedule
- Project Cost

2.1.3 Kick-off Meeting

Upon the COUNTY's acceptance of the draft Project Plan, the kick-off meeting will be conducted to discuss the draft Project Plan accomplished in Task 2.1.2. Details may be added for anticipated work effort and issues of importance.

2.1.4 Final Project Plan

Within fifteen (15) days of the kick-off meeting, the CONSULTANT shall finalize the Project Plan developed in Task 2.1.2 to include additional information from Task 2.1.3 and submit to the COUNTY for approval.

Deliverables

- A. Kickoff Meeting Minutes*
- B. Draft Project Plan*
- C. Final Project Plan*

2.2 WATERSHED EVALUATION

2.2.1 Assembly and Evaluation of Watershed Data

2.2.1.1 Drainage Pattern and Watershed Boundary

The CONSULTANT shall examine drainage patterns and define the preliminary watershed boundary based on information previously identified in 2.1.1.

- The DISTRICT Planning Units
- Topographic Information
- USGS National Hydrography Dataset (NHD)
- Aerial Imagery
- Stormwater Inventory
- ERPs and Roadway Plans
- Existing Studies and Models, if any
- Modeling of Klosterman Bayou
- Adjacent Watershed Studies

2.2.1.2 Areas of Development

The CONSULTANT shall identify ERPs and roadway plans to be incorporated into the watershed model based on, but not limited to, the following:

- Data Collection Cut-off Date (Date Certain)
- Aerial Imagery
- Topographic Information
- The DISTRICT Guidance Documents
- Public Interest

ERPs that have been constructed or are under construction as of the "date certain" and are considered to have substantial impact to the watershed will be incorporated within the watershed model. ERPs that started construction after the "date certain" shall be documented for potential future model update.

A summary table shall be provided indicating which ERPs/as- built will or will not be incorporated in the watershed model or are reserved for future model update.

The CONSULTANT will review the ERP list with the scanned files available from the DISTRICT. The CONSULTANT will notify the COUNTY of data collection efforts needed where ERP data are not available, or the scanned files are not legible.

The CONSULTANT shall review ERPs and roadway plans to determine whether any data gaps exist or if there are areas where additional information is needed. ERP data for areas within and near the watershed was provided by the DISTRICT in August 2020. The CONSULTANT will search the DISTRICT'S website for additional ERP information, if needed, and request roadway or other plans from the COUNTY or FDOT to fill data gaps. A "Data Gaps" polygon feature class will be developed to delineate significant data gaps not addressed by aforementioned searches.

The plan sheet that shows the drainage network for the development or roadway will be georeferenced, if available. It is anticipated that up to two (2) plan sheets will be georeferenced for each development or roadway. The georeferenced sheets will be used for catchment development, topographic refinement, and Hydronetwork refinement.

2.2.1.3 Initial GIS Processing

The CONSULTANT shall perform initial GIS processing to develop the Catchments and Surface Connectivity.

The CONSULTANT will place junctions appropriately to determine the effects of storage routing on hydrologically determined flow rates. As a goal, the CONSULTANT will place junctions in stormwater management and storage areas, ponds or lakes, natural lakes,

Exhibit A
Klosterman Bayou Watershed Management Plan

wetlands and depressions for catchment delineation in accordance with DISTRICT G&S. It is anticipated that the preliminary schematic will be a raw schematic (Arc Hydro generated catchments and Hydronetwork features), mostly generated from automated processes within GIS. A refined network ready for model incorporation will be developed later in the scope of work.

The Klosterman Bayou Watershed can, for the most part, be considered a developed area, therefore, the CONSULTANT will generally adhere to the level of detail specified in the DISTRICT G&S.

It is anticipated a meeting, if appropriate, will be conducted between the COUNTY and the CONSULTANT, to discuss preliminary results, alternative threshold criteria, potential to expand the task scope and budget, and other issues.

2.2.1.4 Topographic Voids Replacement Methodology

The CONSULTANT shall identify and document the topographic voids based on, but not limited to, the following:

- Data Collection Cut-off Date
- Aerial Imagery
- ERPs and Roadway Plans
- Site-Specific Information, if any
- Existing Studies and Models, if any

The CONSULTANT shall propose the methodology to eliminate topographic voids, such as: refinement of topographic information based on ERPs or roadway plans, site physical surveys to establish pertinent elevations or bias in the LiDAR, or no action needs may be taken based on the significance of the void area to overall floodplain delineation and other tasks. The proposed methodology shall be included in Task 2.2.1.10.

2.2.1.5 DEM and LiDAR Suitability Review

The CONSULTANT will review the best available DEM, breaklines, and accuracy report. The DEM will be reviewed to identify possible problems with the LiDAR based DEM such as floating breaklines and insufficient post spacing, and voids. The CONSULTANT will perform a desktop review of the best available DEM for suitability. It is anticipated that the DEM provided by the County will be suitable for watershed modeling. If necessary, comments and concerns will be relayed to the COUNTY and DISTRICT.

The CONSULTANT will review metadata accompanying the LiDAR data and incorporate subsequent changes and updates to the DEM during task 2.2.2.3 Topographic Information Refinement. It is understood that the DEM is a dynamic dataset, and a final DEM will be delivered at the end of the Watershed Evaluation phase of the study.

2.2.1.6 Hydrologic Characteristics and Percolation

Exhibit A
Klosterman Bayou Watershed Management Plan

The CONSULTANT shall examine hydrologic characteristics of the watershed. When applicable, the CONSULTANT shall identify locations where percolation simulation is desired based on, but not limited to, the following:

- Soil Map
- Potentiometric Surface Map
- ERP and Roadway Plans
- Site-Specific Information if any
- Topographic information

It is anticipated that percolation data will be available from ERP files or site-specific investigation. The CONSULTANT shall review existing percolation data and develop a watershed-specific approach to conduct an additional geotechnical investigation if any. No site geotechnical testing is proposed for the study.

2.2.1.7 Historical Water Levels

The CONSULTANT shall assemble information on historic water levels, surveys, photos or videos of flooding, and any other available information including, but not limited to, the following:

- Seasonal High-Water Level (SHWL)
- Potentiometric Surface Maps
- Lake levels
- Stream or River Profiles
- High water levels
- Flood photos
- Flooding complaints
- Stream Gauges

The CONSULTANT shall identify locations where additional historic water levels information is desired but unavailable based on the data listed above.

2.2.1.8 Data Acquisition Plan

Upon evaluation of available watershed data and initial GIS processing, the CONSULTANT shall develop an approach to data acquisition. This watershed specific approach shall identify locations where hydraulic feature data collection will occur and what the method of collection will be. Hydraulic feature data will be collected beginning from the depression areas progressing upstream until the local system is considered insignificant. All regional and intermediate systems will be inventoried for hydraulic characteristics. More detail concerning the proposed approach shall be included in Task 2.2.1.10.

2.2.1.9 Pre-field Reconnaissance Plan

HydroJunctions shall be placed where fieldwork is required to parameterize a hydraulic feature and will be developed per guidance in the WMPG (Guidance Document 1a) for use

Exhibit A
Klosterman Bayou Watershed Management Plan

in the field data acquisition, and the GWIS Database Design Document Version 1.6 (Guidance Document 2a) and for eventual documentation of the acquisition process. A preliminary HydroNetwork with HydroJunction and HydroEdge feature classes will be further developed upon completion of field data acquisition.

The CONSULTANT shall also document the level of accuracy for the acquisition of additional spatial information in accordance with the “Acquisition of Geospatial Information to Complete the Generic Watershed Parameters” (Guidance Document 2b). It is anticipated that vertical referencing to LiDAR-derived data points on hard surfaces will be acceptable (Level 2 specification of accuracy in Guidance Document 2b). Field survey may later be performed for hydraulic structures, cross-sections, and other topographic information. Field survey may be accomplished with a combination of GPS and traditional survey techniques when sufficient information is not attainable from existing data sources (i.e. LiDAR, As-Built drawings, etc.). GPS surveying may involve Real-Time Kinematic (RTK) units or Differential GPS (DGPS) depending on the circumstances. The appropriate level of accuracy for the information to be gathered will be determined by the CONSULTANT in close consultation with the COUNTY and must be approved by the COUNTY prior to field data acquisition.

2.2.1.10 Task Memorandum

The CONSULTANT shall document the efforts involved in Tasks 2.2.1.1 through 2.2.1.9. The document shall include, but not limited to, the following:

- Watershed Boundary and Surroundings
- Major Conveyance Systems and Drainage Pattern
- List of ERP & Roadway Plans to Incorporate
- Initial GIS Processing
- Topographic Voids Locations
- Methodology to Eliminate Topographic Voids
- Land use Distribution by Cut-off Date
- Hydrologic Soil Group Distribution
- Percolation Locations
- Historical Water Levels
- Potential Data Issues, if any
- Data Acquisition Plan
- Field Data Acquisition Accuracy Approach

2.2.1.11 Pre-Submittal Meeting (See Task 2.2.6.3)

2.2.1.12 Quality Assurance and Quality Control (See Task 2.2.6.4)

Deliverables

Exhibit A
Klosterman Bayou Watershed Management Plan

- A. *Digital Elevation Model (DEM)*
- B. *GWIS geodatabase containing the following feature classes:*
 - *Topographic information (e.g., contours, breaklines)*
 - *Preliminary watershed boundary*
 - *Areas of development*
 - *ERPs to be incorporated into the watershed model*
 - *Initial GIS catchments*
 - *Preliminary Hydro-, Model-, and HEP Networks*
 - *Historical water levels*
 - *Land use map*
 - *Soil map*
 - *Data acquisition locations*
 - *Identify data type and acquisition methodology*
 - *Other feature classes and tables, if applicable*
- C. *Task memorandum (Task 2.2.1.10)*
- D. *Project-specific QA/QC document*
- E. *Responses to comments geodatabase*

2.2.2 Hydrologic and Hydraulic Feature Database

2.2.2.1 Acquisition of Data

The CONSULTANT shall perform data acquisition based on the approach developed in Task 2.2.1.8 for the following:

- Desktop Acquisition from ERP & Roadway Plans
- Drainage Feature
- Topographic Information
- Construction Plans Prior to ERP regulation
- Field Reconnaissance and Survey
- Drainage Feature
- Topographic Information

Desktop reconnaissance will consist of using all previously obtained data and mapping programs such as Google Earth street view and Bing birds-eye view to determine watershed conditions and hydraulic features. Field reconnaissance and survey will be required to fill any outstanding data gaps following the desktop research effort.

Field reconnaissance will involve the locating and field verifying hydraulic features as anticipated from the data acquisition plan. Photos should be taken with a device with Global Positioning System (GPS) capabilities so that images can be georeferenced within GIS. The digital photos shall be hyperlinked to GIS data. Field sketches and notes will be provided for each location visited.

Exhibit A
Klosterman Bayou Watershed Management Plan

An access letter will be obtained from the COUNTY. Google Street View will be used to identify any gated communities. In the case of gated communities, homeowners associations will be contacted to obtain gate codes. A list of large private (or public) land owners from which access is needed will be provided to and discussed with the COUNTY to identify any known contacts and/or access concerns. Access to large private (or public) properties will be coordinated with the property owners or their representatives. The COUNTY's PM will be copied on any and all correspondence.

The CONSULTANT will conduct up to two (2) days of field reconnaissance for two people to verify structure locations and hydraulic conductivity. Additional field reconnaissance can be provided for an additional fee with written authorization from the COUNTY.

The number and location of surveys needed for the project will be estimated during the Data Acquisition Plan task. A professional survey budget allowance of \$15,000 is included in the current fee estimate. Additional survey can be provided for an additional fee with written authorization from the COUNTY.

The CONSULTANT shall also document any immediate maintenance needs and notify the COUNTY.

2.2.2.2 HydroNetwork Development

The HydroNetwork is used to establish connectivity between features to identify which direction water flows. The HydroNetwork is comprised of HydroEdge and HydroJunction feature classes, which are limited to modeled bridges, channel conveyances, and pipe and control structure conveyances. The CONSULTANT shall develop the Hydronetwork including:

- HydroJunctions and HydroEdges
- Hydraulic Element Points (HEPs)

The HydroJunction and HydroEdge features will contain spatial data of the stormwater infrastructure with hyperlinks to supporting data.

The sources of the Hydronetwork are anticipated to include:

- Hydraulic Data from ERPs received from the DISTRICT
- Roadway Plans from FDOT, COUNTY, or other municipalities
- Existing GIS stormwater infrastructure databases from COUNTY or other Municipalities
- Aerial Imagery
- Bing birds-eye view
- Google street view
- Field Reconnaissance
- Survey

Exhibit A
Klosterman Bayou Watershed Management Plan

The drainage infrastructure digitized to HydroneNetwork is anticipated to only include drainage structures anticipated to be included in the model network.

The CONSULTANT, with input from the COUNTY and DISTRICT, shall establish a consistent procedure and conversion factor(s) to be used to convert data in NGVD29 (or other datums, if any) to NAVD88 datum.

The datum used will be noted for data sources reviewed for their potential incorporation to the watershed model. The DISTRICT G&S will be used to determine datums when not specified.

The HEP Network is used to define subelements (culverts, weirs, etc.) from the Hydro Network, and to store specific structure data. The HEP Network is comprised of Hydraulic_Element_Point and HEP_Line feature classes, which are limited to modeled bridges, pipes, and control structure conveyances. The CONSULTANT will create HEP features in a manner consistent with DISTRICT G&S.

The system level shall also be assigned to the HydroNetwork in accordance with the DISTRICT G&S.

2.2.2.3 Topographic Information Refinement

When identified in the methodology of elimination of topographic voids in Task 2.2.1.4, the CONSULTANT shall refine the topographic information with ERP and roadway plans (e.g., computer-aided drafting files) or field data acquisition (e.g., site-specific survey). Any changes shall be annotated in the accompanying metadata.

2.2.2.4 Hydrologic Feature Database

The CONSULTANT shall review and update, if necessary, the latest land use map based on, but not limited to, the following:

- Data Collection Cut-off Date
- Impervious area provided with the LiDAR
- Aerial Imagery
- ERPs and Roadway plans
- Site-Specific Information, if any
- The CONSULTANT shall develop a generic lookup table for the watershed to include land use parameters.
- The CONSULTANT shall review and update, if necessary, the soil map based on, but not limited to, the following:
 - Soil Survey
 - Site-Specific Information, if any

When applicable, the CONSULTANT shall develop a generic lookup table for the watershed to include soil parameters. Green-Ampt will be used to simulate the hydrologic portion of the watershed. The Green Ampt methodology for determining rainfall excess is most

appropriate for the predominantly deep sandy soil conditions and other conditions as exhibited in this watershed.

Pre-Submittal Meeting (See Task 2.2.6.3)

Quality Assurance and Quality Control (See Task 2.2.6.4)

Deliverables

- A. *Refined topographic information*
- B. *GWIS geodatabase containing feature classes from previous tasks and the following feature classes and tables:*
 - *HydroNetwork*
 - *HydroJunctions and HydroEdges*
 - *HEPs*
 - *Updated land use map & lookup table*
 - *Updated soil map & lookup table*
 - *Other feature classes and tables, if applicable*
- C. *TSDN*
- D. *Project-specific QA/QC document*
- E. *Responses to comments geodatabase*

2.2.3 Preliminary Model Features

2.2.3.1 Additional GIS Processing

When deemed necessary, the CONSULTANT shall perform additional GIS processing to update the following:

- Catchment
- Surface Connectivity
- Preferential Flow Path
- Percent Impervious
- DCIA and non-DCIA

2.2.3.2 Preliminary Model Schematic

The CONSULTANT shall refine the GIS processed catchments and connectivity in conjunction with ERP and roadway plans and HydroNetwork developed in Task 2.2.2.2. This task should follow SWFWMD G&S to develop preliminary model features. The CONSULTANT shall identify the data source of each hydraulic feature to be included in the watershed model.

The CONSULTANT shall also coordinate with adjacent watershed(s) when necessary.

2.2.3.3 Model Parameterization Approach

Exhibit A
Klosterman Bayou Watershed Management Plan

The CONSULTANT shall develop and document the approach to parameterize model features developed in Task 2.2.3.2. The model parameters shall include, but not limited to, the following:

- Design, Calibration, and Verification Storm Events
- Rainfall Excess and Unit Hydrographs
- Time of Concentration
- Initial Stages and Baseflow
- Stage-Storage Relationships
- Boundary Conditions
- DCIA vs UCIA
- Percolation Criteria
- Hydraulic Links (Pipes, Channels, Weirs, etc.)

The proposed approach shall be included in Task 2.2.3.4.

2.2.3.4 Watershed Evaluation Report

The CONSULTANT shall document the efforts involved in Watershed Evaluation. This report can be an expansion of the memorandum developed in Task 2.2.1.10 with documentation of its subsequent tasks up to this point.

2.2.3.5 Pre-Submittal Meeting (See Task 2.2.6.3)

2.2.3.6 Quality Assurance and Quality Control (See Task 2.2.6.4)

Deliverables

- A. Refined topographic information*
- B. GWIS geodatabase containing feature classes from previous tasks and the following feature classes and tables:*
- C. Preliminary model features*
- D. Other feature classes and tables, if applicable*
- E. Watershed evaluation report*
- F. TSDN*
- G. Project-specific QA/QC document*
- H. Pre-submittal meeting*

2.2.4 Peer Review of Watershed Evaluation

2.2.4.1 Peer Review Kick-off Meeting and Presentation

The CONSULTANT will prepare and submit a draft PowerPoint presentation to the COUNTY and the DISTRICT for review and approval. The presentation will summarize the work accomplished in the Watershed Evaluation with emphasis on approach, effort, and end products. This subtask includes a web-based meeting to discuss the presentation and the COUNTY and DISTRICT comments.

The CONSULTANT will address and incorporate the COUNTY and DISTRICT comments into the final PowerPoint presentation. The CONSULTANT will then deliver the presentation in a web-based meeting format to the peer review consultant, the COUNTY, the DISTRICT, and other interested parties. The complete deliverable set shall be transmitted to the peer review consultant prior to this meeting.

2.2.4.2 Meeting to Present Peer Review Comments

Within thirty (30) days of the peer review kick-off meeting and presentation (Task 2.2.4.1), a meeting will be held for the peer review consultant to present draft review comments to the CONSULTANT, the DISTRICT, and the Cooperator if needed. The meeting will be in a remote format unless otherwise specified. Peer review deliverables shall be transmitted to the CONSULTANT prior to this meeting.

During the peer review process, the peer review consultant may seek clarification and request additional information from the CONSULTANT. Additional information requested from the CONSULTANT, if any, shall be transmitted to the peer review consultant in a timely manner.

2.2.4.3 Meeting to Discuss Approach of Responding to Peer Review Comments

Within twenty (20) days of the meeting to present peer review comments (Task 2.2.4.2), a meeting will be held for the CONSULTANT to present the approach to responding to peer review comments. The meeting will be in a remote format unless otherwise specified.

The CONSULTANT may seek clarification from the peer review consultant prior to the meeting. Clarification requested from the peer review consultant, if any, shall be provided to the CONSULTANT in a timely manner.

2.2.5 Final Approved Watershed Evaluation Deliverables

2.2.5.1 Revised Deliverables

Within sixty (60) days of receiving COUNTY/DISTRICT/PEER review comments, the CONSULTANT shall address and resubmit watershed evaluation deliverables to the COUNTY.

2.2.5.2 Pre-Submittal Meeting (See Task 2.2.6.3)

2.2.5.3 Quality Assurance and Quality Control (See Task 2.2.6.4)

Deliverables

- A. Attend peer review kick-off meeting*
- B. Revised Watershed Evaluation deliverables*
- C. Responses to comments geodatabase*
- D. Project-specific QA/QC document*

2.2.6 Project Management

2.2.6.1 Progress Meetings

A remote meeting, unless otherwise specified, will be conducted on a monthly basis between the COUNTY, the CONSULTANT, and other Cooperators, if needed. During each meeting the CONSULTANT Project Manager shall report the work completed, staff utilization, actual progress as compared to the performance schedule, work planned for the next month, coming milestone, project issues, any deficiencies and the recovery actions completed and planned.

2.2.6.2 Progress Reports with Invoicing

All scheduled invoices shall include progress report with the CONSULTANT Project Manager's assessment of the project's actual progress as compared to the performance schedule. Details must include any deficiencies and the recovery actions completed and planned.

2.2.6.3 Pre-Submittal Meetings

Within five (5) business days of each anticipated submittal, the CONSULTANT shall conduct a pre-submittal meeting with the COUNTY prior to transmitting full deliverables. The CONSULTANT will present to the COUNTY how the deliverables would satisfy the scope of work as well as follow the data delivery structure and include all applicable contents to date. The meeting will be in a remote format unless otherwise specified. This task also includes packaging up and transmitting the deliverables.

2.2.6.4 Quality Assurance and Quality Control (QA/QC)

The CONSULTANT shall follow the Quality Assurance Plan submitted in the Project Development task. A project-specific QA/QC document shall be submitted with each scheduled submittal. The QA/QC manager shall certify that QA/QC has been performed on all deliverables and that any outstanding issues have been communicated with the COUNTY. The COUNTY reserves the right to request QA/QC documents from the CONSULTANT.

2.3 WATERSHED MANAGEMENT PLAN - FLOODPLAIN ANALYSIS

2.3.1 Watershed Model Parameterization

2.3.1.1 Acquisition of Additional Model Parameters

Additional information needed to fill the watershed parameter gaps, if any, shall be acquired. These parameter gaps may include, but not limited to, the following:

- Drainage Feature
- Topographic Information
- Groundwater

It is assumed that additional surveying and/or revisions to the terrain data will not be required as part of this task.

When percolation information is desired but missing from existing data, the COUNTY shall conduct further geotechnical investigation and provide the information to the CONSULTANT.

2.3.1.2 Development of Model Specific Geodatabase

The CONSULTANT shall develop watershed model parameters per the approach defined in Task 2.2.3.3 of Watershed Evaluation. When deemed necessary, the CONSULTANT may use a revised approach for certain parameters. The revised approach shall be documented in Tasks 2.3.1.4. The CONSULTANT shall store the parameterization information within a GWIS geodatabase in a format that can be imported into the model framework.

2.3.1.3 Model Setup, Debug, and Stabilization

The CONSULTANT shall transfer model parameters from GWIS geodatabase into the model framework, set up, and debug the model. The following preliminary simulations shall be performed:

- 100-year/1-day Storm
- No Rainfall

The CONSULTANT shall also develop the level pool plots for the following:

- Initial Conditions
- 100-year/1-day Floodplain

The CONSULTANT shall identify and address the following potential issues based on the preliminary simulations and plots:

- Continuity Error (preferably less than 2%)
- Inadequate Simulation Time
- Flow Reversals or Sudden Change
- Instability
- Significant Initial Flows
- Missing Interconnections (glass walls)

2.3.1.4 Model Parameterization Approach Update

If applicable, the CONSULTANT shall update the Watershed Evaluation report with revised model parameterization approach.

2.3.1.5 Pre-Submittal Meeting (see Task 2.3.8.3)

2.3.1.6 Quality Assurance/Control (See Task 2.3.8.4)

Deliverables

- A. GWIS geodatabase containing all applicable feature classes and tables*

- B. *Model input/output files for:*
 - *100-year/1-day Storm*
 - *No Rainfall*
- C. *Geodatabase containing level pool plots for:*
 - *Initial Conditions*
 - *100-year/1-day Floodplain*
- D. *Updated watershed evaluation report with revised model parameterization approach, if applicable*
- E. *TSDN*
- F. *Project-specific QA/QC document*
- G. *Pre-submittal meeting*

2.3.2 Final Approved Watershed Model Parameterization Deliverables

2.3.2.1 Revised Deliverables

Within sixty (60) days of the COUNTY/DISTRICT review comments, the CONSULTANT shall address comments and re-submit watershed model parameterization deliverables to the COUNTY/DISTRICT.

2.3.2.2 Pre-Submittal Meeting (see Task 2.3.8.3)

2.3.2.3 Quality Assurance/Control (See Task 2.3.8.4)

Deliverables

- A. *Revised Task 2.3.1 deliverables*
- B. *Responses to comments geodatabase*
- C. *Project-specific QA/QC document*
- D. *Updated Project Plan*
- E. *Pre-submittal meeting*

2.3.3 Watershed Model Development and Floodplain Delineation

2.3.3.1 Model Calibration and Verification

The CONSULTANT will calibrate the ICPR model to one (1) of the rainfall events developed in Task 2.2.3.4. The CONSULTANT shall simulate a monitored event by adjusting appropriate model parameters within an acceptable range and using the measured rainfall depth and distribution, and then compare simulated surface water stages, flows, volumes, and time of occurrence to the measured data collected at gaging stations. The model is considered well calibrated when the simulated surface water stages, flows, volumes, and time of occurrence are in reasonable range, which shall be discussed with the COUNTY, with the measured data. The antecedent moisture content (AMC) condition and site-specific condition shall also be considered.

The CONSULTANT shall simulate one or more other recent storm events independent of the event used for calibration. The model is considered well verified when the simulated

surface water stages, flows, volumes, and time of occurrence are in reasonable range, which shall be discussed with the COUNTY, with the measured data. The AMC condition and site-specific condition shall also be considered.

Model calibration and verification shall consider rainfall spatial distribution. Calibration and verification rainfall will be based on the DISTRICT's Doppler Radar-derived rainfall data at a 2- kilometer grid size.

2.3.3.2 Model Validation

The model simulation results will be assessed for accuracy and reasonableness with historic water levels, if any, corresponding to one of the existing, suitable simulations. The existing, suitable simulations include the calibration event, verification event, or design storm event with similar depth and duration.

2.3.3.3 Design Storm Simulations

Unless otherwise specified, the CONSULTANT shall simulate the following nine (9) design storms:

- 2.33-year, 5-year, 10-year, 25-year, 50-year, 100-year, and 500-year, 1-day events using the Florida Modified Type II 24-hour distribution as specified in 40D-4.
- 10-year, 50-year, and 100-year, 5-day events using the DISTRICT's 120-hour distribution.

The results should show simulated stages increasing the severity of the event unless it can be well explained.

2.3.3.4 Multi-Day Event Simulations and Rainfall Justification to Project Floodplain

Unless otherwise specified, the CONSULTANT shall simulate the following additional multi-day events:

- 100-year/3-day, 100-year/7-day, and 100-year/10-day events using FDOT rainfall distribution (Guidance Document 4c). The recent updated NOAA document (2014) will be used if adopted by FDOT.

To project 100-year floodplain, a rainfall event of duration longer than 1-day may be used if compelling evidence presents, such as historic water levels developed in Task 2.2.1.7 of Watershed Evaluation and existing studies.

The CONSULTANT shall also coordinate with adjacent watershed(s) when necessary.

2.3.3.5 Floodplain Delineation

The CONSULTANT shall delineate the floodplain based on digital topographic information and model predicted peak stages of the 100-year storm event(s). The final product of this task shall be floodplain mapping that meets FEMA standards for updating the existing

DFIRMs. The approach of mapping transition zones shall be documented in Task 2.3.3.6 – Floodplain Justification Report.

The floodplain area will be compared for accuracy with the model stage versus area relationships. A 10% error is considered the maximum acceptable deviation for each subbasin. Volumetric comparisons will be made for the FEMA floodplain event between model storage at significant storage nodes to the volume provided by the terrain DEM.

The CONSULTANT shall also generate flood depth grids associated with the delineated floodplain.

The CONSULTANT shall also coordinate with adjacent watershed(s) when necessary.

The CONSULTANT shall compare the preliminary floodplain with effective FEMA flood hazard zone and document the comparison and explanation in Task 2.3.3.6 – Floodplain Justification Report.

2.3.3.6 Floodplain Justification Report

The CONSULTANT shall document the efforts involved in Tasks 2.3.3.1 through 2.3.3.5 and also merge with Watershed Evaluation report to develop this Floodplain Justification Report.

2.3.3.7 Sea-Level Rise (SLR) Analyses

CONSULTANT shall model three scenarios for SLR and evaluate the 100-year and 25-year 24-hour rainfall in each scenario. The three scenarios will be the projections identified in the Pinellas County Restore Act Vulnerability Assessment and published in "Global and Regional Sea Level Rise Scenarios for the United States" (NOAA, 2017). The three projections are:

- Intermediate-Low Scenario (1.9 ft. of SLR from 2000 - 2100)
- Intermediate Scenario (3.9 ft. of SLR from 2000 - 2100)
- High Scenario (8.5 ft. of SLR from 2000 - 2100)

Associated draft, level-pool floodplains will be developed. SLR scenarios will be evaluated using the existing conditions model (developed in Task 2.3.1.3) with updated boundary conditions and rainfall depths. It is anticipated that rainfall depths for the future conditions 100-year and 25-year 24-hour storm events will be provided by the COUNTY or will be available from reference data.

2.3.3.8 Pre-Submittal Meeting (see Task 2.3.8.3)

2.3.3.9 Quality Assurance/Control (see Task 2.3.8.4)

Deliverables

- A. *GWIS geodatabase containing:*
- *Updated features classes and tables*

Exhibit A
Klosterman Bayou Watershed Management Plan

- *100-year floodplain*
- B. *Model input/output files for:*
 - *Calibration and verification storms*
 - *Design storms*
 - *Multi-day events*
- C. *100-year flood depth grids*
- D. *Floodplain justification report*
- E. *TSDN*
- F. *Project-specific QA/QC document*
- G. *Pre-submittal meeting*

2.3.4 Peer Review of Watershed Model Development and Floodplain Delineation

Within fifteen (15) days after the watershed model development and floodplain delineation deliverables are transmitted to the COUNTY, the peer review process shall resume.

2.3.4.1 Peer Review Meeting and Presentation

A remote meeting, unless otherwise specified, will be conducted for the CONSULTANT to conduct a PowerPoint presentation to the peer review consultant, the COUNTY, the Cooperator, and other interested parties, by summarizing the work accomplished in Watershed Model Development and Floodplain Delineation with emphasis on approach, effort, and product. The full deliverables shall be transmitted to the peer review consultant prior to this meeting.

2.3.4.2 Meeting to Present Peer Review Comments

Within thirty (30) days of the peer review meeting and presentation (Task 2.3.4.1), a meeting will be held for the peer review consultant to present draft review comments to the CONSULTANT, the COUNTY, and the Cooperator if needed. The meeting will be in a remote format unless otherwise specified. Peer review deliverables shall be transmitted to the CONSULTANT prior to this meeting.

During the peer review process, the peer review consultant may seek clarification and request additional information from the CONSULTANT. Additional information requested from the CONSULTANT, if any, shall be transmitted to the peer review consultant in a timely manner.

2.3.4.3 Meeting to Discuss Approach to Responding to Peer Review Comments

Within twenty (20) days of the meeting to present peer review comments (Task 2.3.4.2), a meeting will be held for the CONSULTANT to present the approach to responding to peer review comments. The meeting will be in a remote format unless otherwise specified.

The CONSULTANT may seek clarification from the peer review consultant prior to the meeting. Clarification requested from the peer review consultant, if any, shall be provided to the CONSULTANT in a timely manner.

2.3.5 Approved Floodplain Analysis Deliverables for Preliminary Floodplain Open House

2.3.5.1 Revised Deliverables

Within sixty (60) days of the meeting to present peer review comments (Task 2.3.4.2), the CONSULTANT shall address peer review comments, as well as any COUNTY review comments, and resubmit watershed model development and floodplain delineation deliverables to the COUNTY.

2.3.5.2 Pre-Submittal Meeting (see Task 2.3.8.3)

2.3.5.3 Quality Assurance/Control (see Task 2.3.8.4)

Deliverables

- A. Revised Task 2.3.4 deliverables*
- B. Responses to comments geodatabase*
- C. Project-specific QA/QC document*
- D. Pre-submittal meeting*

2.3.6 Preliminary Floodplain Open House and Response to Public Comments

2.3.6.1 Preliminary Floodplain Open House and Public Relations

The CONSULTANT will assist the COUNTY/DISTRICT with conducting the preliminary floodplain open house. Assistance consists of providing adequate professionals as needed, based on the number of impacted parcels and anticipated attendance of the public meeting. The CONSULTANT will assist citizens by responding to questions at the meeting; operate laptop computers that can display recent aerials, existing flood hazard zones, base map information, parcels, and the preliminary floodplains. The CONSULTANT will also assist the COUNTY with development of a map that the COUNTY will post to its website for residents to see how their property is impacted by new floodplains. The CONSULTANT will also look into hosting on their own website and provide the COUNTY the link. The CONSULTANT will assist the COUNTY with developing a mailer list of impacted parcels.

2.3.6.2 Response to Public Comments

Public comment period closes forty-five (45) days after the open house unless otherwise specified. Within fifteen (15) days of the public comment period closure, the COUNTY will provide public comments collected by the CONSULTANT. The public comments will be included in a comments geodatabase. The CONSULTANT shall review and respond to public comments and update Task 2.3.6 deliverables as necessary.

2.3.7 Final Approved Floodplain Analysis Deliverables

2.3.7.1 Revised Deliverables

Within thirty (30) days after the public comments are transmitted to the CONSULTANT, the CONSULTANT shall respond to public comments and re-submit the full floodplain analysis deliverables to the COUNTY/DISTRICT, including floodplain transition zones.

2.3.7.2 Pre-Submittal Meeting (see Task 2.3.8.3)

2.3.7.3 Quality Assurance/Control (see Task 2.3.8.4)

Deliverables

- A. Attend public meeting*
- B. Revised Task 2.3.6 deliverables by responding to public comments geodatabase*
- C. The complete PowerPoint presentation for peer review*
- D. Signed and sealed Floodplain Justification Report*
- E. Project-specific QA/QC document*
- F. Updated Project Plan*
- G. Pre-submittal meeting*

2.3.8 Project Management

2.3.8.1 Progress Meetings

A remote meeting, unless otherwise specified, will be conducted on a monthly basis between the COUNTY, the CONSULTANT, and Cooperators, if needed. During each meeting the CONSULTANT Project Manager shall report the work completed, staff utilization, actual progress as compared to the performance schedule, work planned for the next month, coming milestone, project issues, any deficiencies and the recovery actions completed and planned.

2.3.8.2 Progress Reports with Invoicing

All scheduled invoices shall include progress report with the CONSULTANT Project Manager's assessment of the project's actual progress as compared to the performance schedule. Details must include any deficiencies and the recovery actions completed and planned.

2.3.8.3 Pre-Submittal Meetings

Within five (5) business days of each anticipated submittal, the CONSULTANT shall conduct a pre-submittal meeting with the COUNTY prior to transmitting full deliverables. The CONSULTANT will present to the COUNTY how the deliverables would satisfy the scope of work as well as follow the data delivery structure and include all applicable contents to date. The meeting will be in a remote format unless otherwise specified. Upon written approval by the COUNTY, the CONSULTANT shall submit the deliverables to the COUNTY for review. If during the meeting, the COUNTY determines there are deficiencies in the anticipated deliverables, the CONSULTANT shall address deficiencies and re-schedule the pre-submittal meeting until written approval by the COUNTY is received.

2.3.8.4 Quality Assurance and Quality Control (QA/QC)

The CONSULTANT shall follow the Quality Assurance Plan submitted in the Project Development task. A project-specific QA/QC document shall be submitted with each scheduled submittal. The QA/QC manager shall certify that QA/QC has been performed on all deliverables and that any outstanding issues have been communicated with the COUNTY. The COUNTY reserves the right to request QA/QC documents from the CONSULTANT.

2.4 FLOOD PROTECTION LEVEL OF SERVICE (FPLOS) DETERMINATION, DRAINAGE IMPROVEMENT ANALYSIS AND RECOMMENDATIONS

2.4.1 FPLOS Determination and Flood Damage Estimation

2.4.1.1 FPLOS Methodology Meeting

A meeting will be conducted between the COUNTY, the CONSULTANT, and the DISTRICT if needed, to discuss the FPLOS methodology and criteria to be used for this project. It is anticipated that the level-of-service criteria in the COUNTY's Comp Plan will be the basis for the FPLOS determination.

2.4.1.2 FPLOS Determination

Floodplains for the 2.33-year, 5-year, 10-year, 25-year, and 50- year events will be delineated. The 100-year and 500-year floodplains were delineated previously during Task 2.3.3.5.

The CONSULTANT shall establish landmark elevations for structures and/or roadways at each subbasin in the watershed. Road feature class with classification will be provided by the COUNTY. A feature class showing approximate structure footprints will be provided by the COUNTY. Structure classifications will be based on the Florida Department of Revenue (FOOR) classifications. The landmark elevations established for FPLOS analysis are the critical or lowest landmark elevations and are reflective of the worst-case flooding that could occur in a subbasin. These elevations will be determined from survey or estimated from topographic information and stored in geodatabase feature classes. It is assumed that for structures, the landmark elevation will be the finished floor elevation (FFE), either surveyed or estimated from LiDAR topography. Also, it is assumed that the roadway landmark elevation will be the edge of pavement.

The CONSULTANT will determine the flood protection level-of- service (FPLOS) throughout the watershed. FPLOS determinations will be based on the methodology and criterion agreed to during Task 2.4.1.1 using inundation polygons and flood depth grids as well as comparing landmark elevations with model results.

A FPLOS shall be assigned to each structure and roadway segment under analysis for each subbasin. An overall subbasin FPLOS shall be determined by the lowest FPLOS assigned within that subbasin. A table shall be provided in the FPLOS Analysis Report (2.4.1.4), which categorizes each subbasin with the roadway FPLOS, structure FPLOS, and overall FPLOS.

2.4.1.3 Flood Damage Estimate

The CONSULTANT shall determine the flood damage estimate based on the methodology defined in Task 2.4.1.1. The general methodology below is assumed.

Damage for structure and roadway flooding shall be analyzed independently due to different factors to be considered. Structure damage (including structure, content, and displacement) will heavily depend on the depth-damage function, which has been developed by federal agencies such as FEMA and US Army Corps of Engineers (USACE). Roadway damage may consider both traffic delay and roadway repair cost which rely considerably on local practice. The approach for flood damage estimates shall be discussed with the COUNTY and DISTRICT.

Flood damage for each structure and roadway segment under analysis will be performed for each design storm considered. The expected annual damage can then be estimated using the trapezoidal rule in tabular format.

2.4.1.4 FPLOS Analysis Report

The CONSULTANT shall document the efforts involved in Tasks 2.4.1.1 through 2.4.1.3.

The report shall include a table with all subbasins showing their respective FPLOS classification and expected annual flood damage. Also, the roadway flooding, structure flooding, and subbasins with the highest annual costs will be summarized and ranked. The rankings will assist the COUNTY and DISTRICT in prioritizing BMP Alternatives Analysis.

2.4.1.5 Project Management and Quality Assurance/Control

The CONSULTANT will attend a meeting to discuss the findings of the FPLOS Analysis and select locations to examine during the best management practices task. The CONSULTANT will conduct quality assurance and quality control. Quality control reviews will be documented in the comments geodatabase and in the QA/QC document, as appropriate.

Deliverables

- A. Model input/output files for design storms required by FPLOS determination methodology*
- B. Geodatabase containing:*
 - *Model simulation results*
 - *Inundation polygons*
 - *Feature classes with landmark elevations*
- C. FPLOS designation for each subbasin*
- D. Flood depth grids for design storms*
- E. FPLOS analysis report*
- F. Project specific QA/QC document*
- G. Responses to comments geodatabase*

2.5 SURFACE WATER RESOURCE ASSESSMENT (SWRA)

2.5.1 SWRA Approach

A meeting will be conducted between the CONSULTANT, the COUNTY project manager to discuss water quality data available, known issues, and the approach of SWRA that is specific to the watershed. The methodology of pollutant loading analysis, shall also be determined.

Pollutants to be assessed are the following:

- Total Nitrogen (TN)
- Total Phosphorus (TP)

The CONSULTANT will identify and review any existing documents dealing with either the impairment assessment or TMDL development and recommend appropriate actions regarding either the impairment assessment or TMDL. The information compiled will be examined in order to develop recommendations to reduce pollutant loadings (if appropriate) to address relevant impairments and to aid in the implementation of any draft or final TMDLs. These recommendations will be the basis for the development of water quality BMPs to be included in the BMPs Alternatives Analysis.

The COUNTY/DISTRICT shall establish the goals of the SWRA and which pollutants, if any, are of additional concern using but not limited to the sources below:

- FDEP classification and designation of waterbodies within the watershed
- FDEP waterbody identification (WBID) basins within the watershed
- Total Maximum Daily Loads (TMDLs), Basin Management Action Plans (BMAPs), or Reasonable Assurance Plans that may affect the watershed
- FDEP Impaired Waters Rule (IWR) Database
- SWFWMD Water Management Information System (WMIS)
- USGS National Water Information Service (NWIS)
- FDEP Wastewater Facility Regulation (WAFR)
- Florida Department of Health (FDOH) septic tank feature class for parcels and/or permits
- Florida Water Management Inventory (FLWMI)
- Sanitary Sewer coverage (from the COUNTY)
- US Environmental Protection Agency (EPA) Storage and Retrieval (STORET) Database
- Existing studies, historical records, and data not uploaded to online databases (Water Atlas, STORET, and IWR)
- FDEP Florida STORET Database
- The Florida Water Resource Monitoring Catalog (Water-CAT)
- The Watershed Information Network (WIN)
- Locally collected data

2.5.2 Water Quality Assessment

The CONSULTANT shall compile available historical and existing water quality data that may be pertinent to the watershed. Possible trends in water quality data that has been regularly collected shall be noted. In general, water quality data shall be collected and analyzed for, but not limited to, the following:

- Streams
- Lakes
- Groundwater

Data sets examined will include the IWR data set used by FDEP, as well as additional data sets, as available, from the COUNTY and/or other publicly available water quality monitoring efforts. The Klosterman Bayou watershed characteristics will also be assessed relative to any known anthropogenic or environmental factors, and physical features within the watershed which may be impacting water quality conditions or sampling results, particularly for the impairment parameters such as land use types, point- and non-point discharges, extent of existing stormwater runoff treatment, and base flow. The assessment will include a comparison against criteria, as well as a discussion of the appropriateness of the criteria. The assessment will be used along with the Pollutant Loading Model to guide in the development of water quality BMPs.

2.5.3 Existing Conditions Pollutant Loading Analysis

The CONSULTANT will develop average annual pollutant loading estimates for total nitrogen (TN), total phosphorous (TP), biological oxygen demand (BOD), and total suspended solids (TSS) using a spreadsheet, GIS, or similar model. The pollutant loading model shall use land use-based event mean concentrations to calculate pollutant loads. Pollutant loading will consider the presence and efficiency of BMPs in the watershed. Gross and net pollutant loads will be reported and mapped by subbasin. Point sources such as septic tanks and wastewater treatment facilities shall be considered as part of the pollutant loading analysis. The Pollutant Loading Model will be used along with the Water Quality Assessment to guide in the development of water quality BMPs.

2.5.4 SWRA Report

The CONSULTANT shall document the efforts involved in Tasks 2.5.1 through 2.5.3 in a SWRA of Water Quality report.

The report shall include the following:

- A table of all subbasins and the expected pollutant load generated for each constituent analyzed.
- Summary of land use types
- Presence of existing BMPs
- Locations where pollutants are discharged to major surface waterbodies
- Significant discharges of pollutants to groundwater

The findings in the report will help the COUNTY and DISTRICT prioritize the BMP Alternatives Analysis.

2.5.5 Pre-Submittal Meeting

Within five (5) business days of each anticipated submittal, the CONSULTANT shall conduct a pre-submittal meeting with the COUNTY and DISTRICT prior to transmitting full deliverables. The CONSULTANT will present how the deliverables will satisfy the scope of work as well as follow the data delivery structure and include all applicable contents to date. The meeting will be in remote format, unless otherwise specified. This task includes one (1) pre-submittal meeting. The pre-submittal meeting will involve a web-based walk-through of key elements of the deliverables typically through a PowerPoint presentation format. A brief transmittal memorandum will be prepared summarizing the deliverables being submitted. Both of these efforts are intended to facilitate the review by the COUNTY and the DISTRICT. This task also includes packaging up and transmitting the deliverables.

2.5.6 Project Management and Quality Assurance/Control

The CONSULTANT will attend a meeting to discuss the findings of the SWRA task and potential projects to evaluate during the BMP analysis. The CONSULTANT will conduct quality assurance and quality control. Quality control reviews will be documented in the comment's geodatabase and in the QA/QC document, as appropriate.

Deliverables

- A. *Meeting minutes*
- B. *SWRA Report*
- C. *Geodatabase/Water Quality Assessment Data*
- D. *Pollutant Loading Model/GIS files*
- E. *Project Specific QA/QC Document*
- F. *Responses to comments geodatabase*

2.6 BEST MANAGEMENT PRACTICES (BMP) ALTERNATIVES ANALYSIS

2.6.1 BMP Site Selection

A BMP site selection meeting will be held between the CONSULTANT and the COUNTY / DISTRICT. Prior to the meeting the CONSULTANT will identify locations that have been characterized with flooding and/or water quality concerns within the FPLOS and SWRA deliverables. 7 to 10 sites will be identified for BMP alternatives analysis. These sites may be a combination of structural and non-structural BMP alternatives.

The COUNTY / DISTRICT and CONSULTANT will set the FPLOS and/or Water Quality target for each selected site (e.g. 25-year event).

2.6.2 BMP Alternatives Analysis, Recommendation and Rankings

The CONSULTANT will conduct a BMP alternatives analysis for the BMPS selected in 2.6.1 in the watershed. Each BMP shall include the following:

Exhibit A
Klosterman Bayou Watershed Management Plan

- Measurable benefit (e.g., acres treated)
- Resource benefit (e.g., providing flood protection during 25- year, 24-hour storm, lbs/year of target contaminant removed)
- Existing/proposed conditions models (ICPR, pollutant loading model)
- Planning level cost estimate
- Benefit/cost analysis (For flood reduction BMPs benefit/cost is reduction in flood damages versus cost of project over the life of the project, for water quality BMPs benefit/cost is cost per pound or cost per acre of pollutant removed. O&M costs will be shown separately.)
- Preliminary design (GIS features showing proposed grading contours, proposed subbasin delineations, contributing area of BMP, drainage structures to be removed, proposed drainage structures, roadway reconstruction, etc.)
- BMP permitting analysis

The CONSULTANT will model the selected Flood Protection BMPs using ICPR. Water Quality BMPs will also be modeled using ICPR, if necessary, to ensure there will be no adverse impacts as a result of the BMP. ICPR models using the mean annual, 5-year, 10-year, 25-year, 50-year, and 100-year storms will be used to evaluate the effect on flooding. Proposed conditions inundation polygons will be included to show flood protection benefit.

The mass pollutant removal and the drainage area treated for each constituent analyzed in the SWRA task shall be determined for each water quality BMP. Reduction in pollutant loading shall be assessed using the same methods as those used in evaluating BMPs within the SWRA task.

The CONSULTANT shall rank the alternatives using the COUNTY's ranking tool:

- Flood Control Benefit (e.g, FPLOS Improvement)
- Permitability
- Implementability
- Water Quality and Environmental Benefit
- Natural Systems Improvement
- Construction Cost
- Operation and Maintenance Cost
- Cost Benefit Analysis
- Public Acceptance
- Availability

Ranking tables will be included in the BMP Alternatives Analysis Report (2.6.3).

The ranking may also include an analysis of the proposed project for one of the SLR/Rainfall Depth scenarios in Task 2.3.3.7.

The CONSULTANT will not provide construction plans or apply for conceptual ERP permits for the proposed BMPs.

2.6.3 BMP Alternatives Analysis Report

An alternative BMP Analysis report will be developed. A draft alternative analysis and recommendations report will be prepared to summarize the findings of the BMP Analysis. Upon review and comment by the COUNTY, a final report will be issued.

2.6.4 Project Management and Quality Assurance/Control

The CONSULTANT will attend a meeting to discuss the findings of the BMP analysis. The CONSULTANT will conduct quality assurance and quality control. Quality control reviews will be documented in the comments geodatabase and in the QA/QC document, as appropriate.

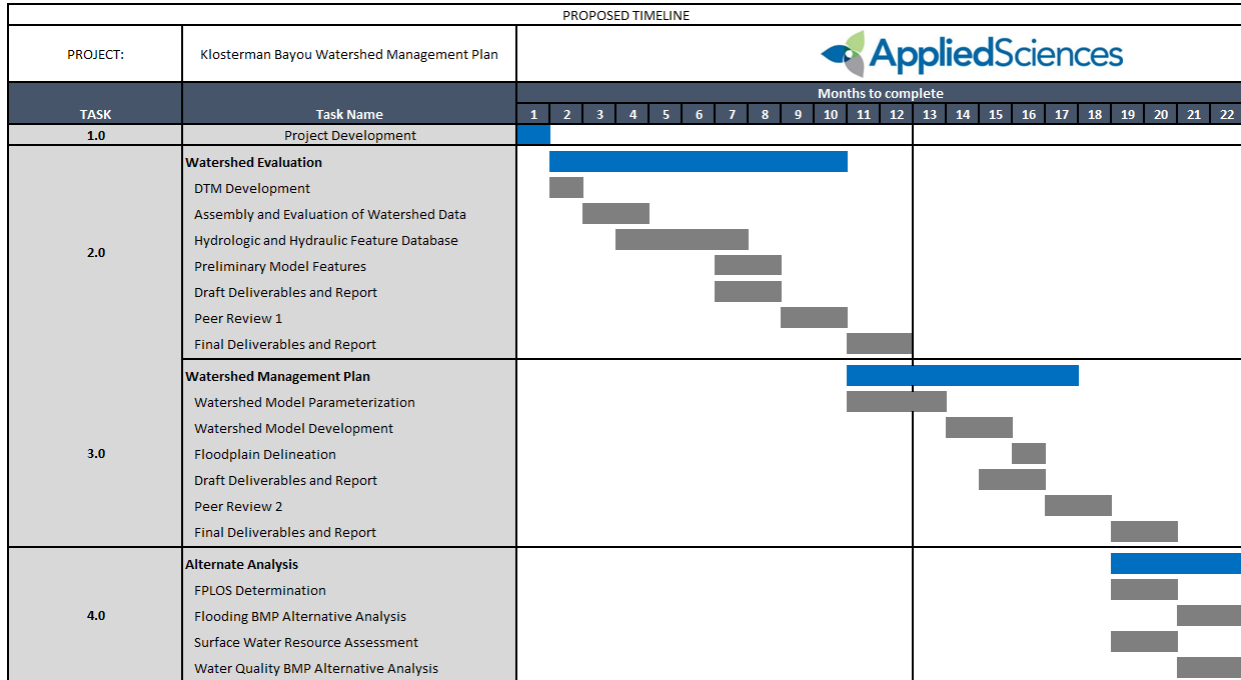
Deliverables

- A. Alternatives analysis and recommendations report*
- B. Model input/output files for proposed conditions*
- C. Pollutant load model GIS files*
- D. Geodatabase containing:*
 - *Site locations*
 - *Locations of final recommended projects*
 - *Model simulation results for proposed conditions*
 - *Inundation polygons for proposed conditions*
- E. Project specific QA/QC document*
- F. Responses to comments geodatabase*

PERFORMANCE SCHEDULE

The following tasks are to be completed within the number of months indicated below, counted forward from the date the COUNTY issues Notice to Proceed to the CONSULTANT. The COUNTY has up to six (6) months to issue Notice to Proceed to the CONSULTANT. The project agreement is for project completion in thirty-six (36) calendar months from the notice to proceed. Based on the schedule below, project completion is anticipated to take twenty-two (22) consecutive calendar months from the notice to proceed.

Exhibit A Klosterman Bayou Watershed Management Plan



PROJECT BUDGET BY:
 PROJECT NAME:
 AGREEMENT NUMBER:
 TASK WORK ASSIGNMENT:
 PROJECT METRIC (SQ MI):

Applied Sciences Consulting, Inc.
 Klosterman Bayou WMP

3.4 (Pumped + Marine + Freshwater)

Title/Job Description	Sr Principal	Super- visory Engineer	Sr. Prof. Engineer	Prof. Engineer	Engineer III	Sr. Design Engineer	Environ. Scientist I	Admin	Prof. Engineer III	Prof. Engineer II	Prof. Engineer I	Engineer Intern / Scientist III	Engineer Intern / Scientist I	Survey Sub- Consultant	Line Item Costs	Line Item Hours	Element Costs Running Total	Total Project Costs Running Total
Firm Name	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	SAI	SAI	SAI	SAI	SAI					
Personnel Hourly Rate	\$213.00	\$185.00	\$163.00	\$142.00	\$130.00	\$129.00	\$79.00	\$59.00	\$181.00	\$162.00	\$152.00	\$131.00	\$110.00					
ELEMENT & TASK DESCRIPTIONS																		
2.1 Project Development																		
2.1.1 Data Collection and Initial Evaluation																		
	0.0	0.0	0.0	20.0	0.0	32.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$7,284.00	56.0	\$8,284.00	\$8,284.00
2.1.2 Draft Project Plan	0.0	0.0	0.0	4.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,832.00	20.0	\$10,116.00	\$10,116.00
2.1.3 Kickoff Meeting	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	\$0	\$1,000.00	6.0	\$1,000.00	\$1,000.00
2.1.4 Final Project Plan	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$10,684.00	\$10,684.00
2.1.5 Project Management and Quality Assurance/Quality Control	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$516.00	4.0	\$11,200.00	\$11,200.00
Element 2.1 Hours	0.0	2.0	2.0	28.0	0.0	36.0	20.0	0.0	0.0	0.0	2.0	0.0	0.0				\$11,200.00	
Element 2.1 Days (8 Hour/Day)	0.0	0.3	0.3	3.5	0.0	4.5	2.5	0.0	0.0	0.0	0.3	0.0	0.0					
Element 2.1 Costs	\$0	\$370	\$326	\$3,976	\$0	\$4,644	\$1,580	\$0	\$0	\$0	\$304	\$0	\$0	\$0				
2.2 Watershed Evaluation																		
2.2.1 Assembly and Evaluation of Watershed Data																		
2.2.1.1 Drainage Pattern and Watershed Boundary																		
	0.0	0.0	0.0	2.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,116.00	10.0	\$1,116.00	\$12,316.00
2.2.1.2 Areas of Development	0.0	0.0	0.0	0.0	0.0	72.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$9,604.00	76.0	\$10,720.00	\$21,920.00
2.2.1.3 Initial GIS Processing	0.0	0.0	0.0	2.0	0.0	8.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,632.00	14.0	\$12,352.00	\$23,552.00
2.2.1.4 Topographic Voids Replacement Methodology	0.0	0.0	2.0	4.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$4,764.00	36.0	\$17,116.00	\$28,316.00
2.2.1.5 DEM and LiDAR Suitability Review	0.0	0.0	2.0	4.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,966.00	22.0	\$20,082.00	\$31,282.00
2.2.1.6 Hydrologic Characteristics and Percolation	0.0	0.0	10.0	0.0	6.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,726.00	20.0	\$22,808.00	\$34,008.00
2.2.1.7 Historical Water Levels	0.0	0.0	2.0	2.0	2.0	2.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,602.00	14.0	\$24,410.00	\$35,610.00
2.2.1.8 Data Acquisition Plan	0.0	0.0	0.0	4.0	4.0	2.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,978.00	18.0	\$26,388.00	\$37,588.00
2.2.1.9 Pre-field Reconnaissance Plan	0.0	0.0	4.0	8.0	10.0	24.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$8,080.00	70.0	\$34,468.00	\$45,668.00
2.2.1.10 Task Memorandum	0.0	0.0	2.0	4.0	6.0	4.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$4,086.00	40.0	\$38,554.00	\$49,754.00
2.2.1.11 Pre-Submittal Meeting	0.0	0.0	2.0	2.0	2.0	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,134.00	22.0	\$40,688.00	\$51,888.00
2.2.1.12 Quality Assurance and Quality Control	0.0	0.0	2.0	2.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,430.00	18.0	\$43,118.00	\$54,318.00
2.2.2 Hydrologic and Hydraulic Feature Database																		
2.2.2.1 Acquisition of Data																		
	0.0	0.0	4.0	28.0	56.0	48.0	36.0	0.0	0.0	0.0	0.0	0.0	0.0	\$15,000.00	\$35,944.00	172.0	\$79,062.00	\$90,262.00
2.2.2.2 HydroNetwork Development	0.0	0.0	0.0	4.0	0.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,242.00	10.0	\$80,304.00	\$91,504.00
2.2.2.3 Topographic Information Refinement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$0.00	0.0	\$80,304.00	\$91,504.00
2.2.2.4 Hydrologic Feature Database	0.0	0.0	0.0	2.0	0.0	12.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,990.00	16.0	\$82,294.00	\$93,494.00
2.2.2.5 Pre-Submittal Meeting	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$82,862.00	\$94,062.00
2.2.2.6 Quality Assurance and Quality Control	0.0	0.0	2.0	2.0	2.0	0.0	8.0	0.0	4.0	4.0	2.0	0.0	0.0	\$0	\$3,178.00	24.0	\$86,040.00	\$97,240.00
2.2.3 Preliminary Model Features																		
2.2.3.1 Additional GIS Processing																		
	0.0	0.0	0.0	2.0	0.0	8.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,790.00	16.0	\$87,830.00	\$99,030.00
2.2.3.2 Preliminary Model Schematic	0.0	0.0	18.0	38.0	4.0	12.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$10,714.00	76.0	\$98,544.00	\$109,744.00
2.2.3.3 Model Parameterization Approach	0.0	0.0	4.0	4.0	4.0	4.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$3,204.00	28.0	\$101,748.00	\$112,948.00
2.2.3.4 Watershed Evaluation Report	0.0	0.0	2.0	2.0	2.0	4.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,808.00	28.0	\$104,556.00	\$115,756.00
2.2.3.5 Pre-Submittal Meeting	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$652.00	4.0	\$105,208.00	\$116,408.00

PROJECT BUDGET BY:
 PROJECT NAME:
 AGREEMENT NUMBER:
 TASK WORK ASSIGNMENT:
 PROJECT METRIC (SQ MI):

Applied Sciences Consulting, Inc.
 Klosterman Bayou WMP

3.4 (Pumped + Marine + Freshwater)

Title/Job Description	Sr Principal	Super- visory Engineer	Sr. Prof. Engineer	Prof. Engineer	Engineer III	Sr. Design Engineer	Environ. Scientist I	Admin	Prof. Engineer III	Prof. Engineer II	Prof. Engineer I	Engineer Intern / Scientist III	Engineer Intern / Scientist I	Survey Sub- Consultant	Line Item Costs	Line Item Hours	Element Costs Running Total	Total Project Costs Running Total
Firm Name	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	SAI	SAI	SAI	SAI	SAI					
Personnel Hourly Rate	\$213.00	\$185.00	\$163.00	\$142.00	\$130.00	\$129.00	\$79.00	\$59.00	\$181.00	\$162.00	\$152.00	\$131.00	\$110.00					
2.2.3.6 Quality Assurance and Quality Control	0.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,028.00	8.0	\$106,236.00	\$117,436.00
2.2.4 Peer Review of Watershed Evaluation																		
2.2.4.1 Peer Review Kick-off Meeting and Presentation	0.0	0.0	2.0	4.0	0.0	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,468.00	12.0	\$107,704.00	\$118,904.00
2.2.4.2 Meeting to Present Peer Review Comments	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$442.00	4.0	\$108,146.00	\$119,346.00
2.2.4.3 Meeting to Discuss Approach of Responding to Peer Review	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$109,366.00	\$120,566.00
2.2.5 Final Approved Watershed Evaluation Deliverables																		
2.2.5.1 Revised Deliverables	0.0	0.0	4.0	10.0	4.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$10,912.00	98.0	\$120,278.00	\$131,478.00
2.2.5.2 Pre-Submittal Meeting	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$120,846.00	\$132,046.00
2.2.5.3 Quality Assurance and Quality Control	0.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$902.00	8.0	\$121,748.00	\$132,948.00
2.2.6 Project Management																		
2.2.6.1 Progress Meetings	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$122,316.00	\$133,516.00
2.2.6.2 Progress Reports with Invoicing	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$122,884.00	\$134,084.00
2.2.6.3 Pre-Submittal Meetings	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$123,452.00	\$134,652.00
2.2.6.4 Quality Assurance and Quality Control (QA/QC)	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$124,672.00	\$135,872.00
Element 2.2 Hours	0.0	0.0	78.0	162.0	128.0	288.0	234.0	0.0	4.0	4.0	2.0	0.0	0.0				\$124,672.00	
Element 2.2 Days (8 Hour/Day)	0.0	0.0	9.8	20.3	16.0	36.0	29.3	0.0	0.5	0.5	0.3	0.0	0.0					
Element 2.2 Costs	\$0	\$0	\$12,714	\$23,004	\$16,640	\$37,152	\$18,486	\$0	\$724	\$648	\$304	\$0	\$0	\$15,000				
2.3 Watershed Management Plan - Floodplain Analysis																		
2.3.1 Watershed Model Parameterization																		
2.3.1.1 Acquisition of Additional Model Parameters	0.0	0.0	0.0	2.0	0.0	6.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,374.00	12.0	\$1,374.00	\$137,246.00
2.3.1.2 Development of Model Specific Geodatabase	0.0	0.0	12.0	40.0	32.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$20,116.00	164.0	\$21,490.00	\$157,362.00
2.3.1.3 Model Setup, Debug, and Stabilization	0.0	0.0	12.0	6.0	12.0	12.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$6,864.00	54.0	\$28,354.00	\$164,226.00
2.3.1.4 Model Parameterization Approach Update	0.0	0.0	2.0	2.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,442.00	12.0	\$29,796.00	\$165,668.00
2.3.1.5 Pre-Submittal Meeting	0.0	0.0	2.0	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,130.00	8.0	\$30,926.00	\$166,798.00
2.3.1.6 Quality Assurance and Quality Control	0.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$902.00	8.0	\$31,828.00	\$167,700.00
2.3.2 Final Approved Watershed Model Parameterization Deliverables																		
2.3.2.1 Revised Deliverables	0.0	0.0	4.0	4.0	8.0	16.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$6,220.00	56.0	\$38,048.00	\$173,920.00
2.3.2.2 Pre-Submittal Meeting	0.0	0.0	2.0	2.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,084.00	10.0	\$39,132.00	\$175,004.00
2.3.2.3 Quality Assurance/Control	0.0	0.0	2.0	0.0	2.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,102.00	8.0	\$40,234.00	\$176,106.00
2.3.3 Watershed Model Development and Floodplain Delin.																		
2.3.3.1 Model Calibration and Verification	0.0	0.0	18.0	2.0	14.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$5,554.00	38.0	\$45,788.00	\$181,660.00
2.3.3.2 Model Validation	0.0	0.0	2.0	2.0	4.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,794.00	24.0	\$48,582.00	\$184,454.00
2.3.3.3 Design Storm Simulations	0.0	0.0	0.0	4.0	8.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$2,240.00	20.0	\$50,822.00	\$186,694.00
2.3.3.4 Multi-Day Event Sims. and Rainfall Justification to Project Flood.	0.0	0.0	0.0	4.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,404.00	12.0	\$52,226.00	\$188,098.00
2.3.3.5 Floodplain Delineation	0.0	0.0	0.0	4.0	0.0	8.0	24.0	0.0	0.0	0.0	20.0	0.0	16.0	\$0	\$8,296.00	72.0	\$60,522.00	\$196,394.00
2.3.3.6 Floodplain Justification Report	0.0	0.0	4.0	8.0	4.0	16.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$6,268.00	56.0	\$66,790.00	\$202,662.00
2.3.3.7 Sea-level Rise (SLR) Analyses	0.0	0.0	12.0	0.0	2.0	24.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$6,576.00	54.0	\$73,366.00	\$209,238.00

PROJECT BUDGET BY:
 PROJECT NAME:
 AGREEMENT NUMBER:
 TASK WORK ASSIGNMENT:
 PROJECT METRIC (SQ MI):

Applied Sciences Consulting, Inc.
 Klosterman Bayou WMP

3.4 (Pumped + Marine + Freshwater)

Title/Job Description	Sr Principal	Super-visory Engineer	Sr. Prof. Engineer	Prof. Engineer	Engineer III	Sr. Design Engineer	Environ. Scientist I	Admin	Prof. Engineer III	Prof. Engineer II	Prof. Engineer I	Engineer Intern / Scientist III	Engineer Intern / Scientist I	Survey Sub-Consultant	Line Item Costs	Line Item Hours	Element Costs Running Total	Total Project Costs Running Total
Firm Name	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	SAI	SAI	SAI	SAI	SAI					
Personnel Hourly Rate	\$213.00	\$185.00	\$163.00	\$142.00	\$130.00	\$129.00	\$79.00	\$59.00	\$181.00	\$162.00	\$152.00	\$131.00	\$110.00					
2.3.3.8 Pre-Submittal Meeting	0.0	0.0	2.0	2.0	2.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,344.00	12.0	\$74,710.00	\$210,582.00
2.3.3.9 Quality Assurance/Control	0.0	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,172.00	8.0	\$75,882.00	\$211,754.00
2.3.4 Peer Review of Watershed Model Development and Floodplain																		
2.3.4.1 Peer Review Meeting and Presentation	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$610.00	4.0	\$76,492.00	\$212,364.00
2.3.4.2 Meeting to Present Peer Review Comments	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$610.00	4.0	\$77,102.00	\$212,974.00
2.3.4.3 Meeting - Discuss Approach to Resp. to Review Cmets	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$78,322.00	\$214,194.00
2.3.5 Approved Floodplain Analysis Deliverables for Preliminary																		
2.3.5.1 Revised Deliverables	0.0	0.0	2.0	16.0	24.0	28.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$9,330.00	70.0	\$87,652.00	\$223,524.00
2.3.5.2 Pre-Submittal Meeting	0.0	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,088.00	8.0	\$88,740.00	\$224,612.00
2.3.5.3 Quality Assurance/Control	0.0	0.0	4.0	4.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,852.00	16.0	\$90,592.00	\$226,464.00
2.3.6 Preliminary Floodplain Open House and Response to Public																		
2.3.6.1 Preliminary Floodplain Open House and Public Relations	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$91,812.00	\$227,684.00
2.3.6.2 Response to Public Comments	0.0	0.0	0.0	4.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,600.00	12.0	\$93,412.00	\$229,284.00
2.3.6.3 Meeting - Discuss Approach and Responding to Public Cmets	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$284.00	2.0	\$93,696.00	\$229,568.00
2.3.7 Final Approved Floodplain Analysis Deliverables																		
2.3.7.1 Revised Deliverables	0.0	0.0	2.0	4.0	16.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$5,038.00	38.0	\$98,734.00	\$234,606.00
2.3.7.2 Pre-Submittal Meeting	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$99,302.00	\$235,174.00
2.3.7.3 Quality Assurance/Control	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$100,522.00	\$236,394.00
2.3.8 Project Management																		
2.3.8.1 Progress Meetings	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$101,090.00	\$236,962.00
2.3.8.2 Progress Reports with Invoicing	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$101,658.00	\$237,530.00
2.3.8.3 Pre-Submittal Meetings	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$102,226.00	\$238,098.00
2.3.8.4 Quality Assurance and Quality Control (QA/QC)	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$103,446.00	\$239,318.00
Element 2.3 Hours	0.0	0.0	108.0	154.0	146.0	194.0	192.0	0.0	0.0	0.0	20.0	0.0	16.0				\$103,446.00	
Element 2.3 Days (8 Hour/Day)	0.0	0.0	13.5	19.3	18.3	24.3	24.0	0.0	0.0	0.0	2.5	0.0	2.0					
Element 2.3 Costs	\$0	\$0	\$17,604	\$21,868	\$18,980	\$25,026	\$15,168	\$0	\$0	\$0	\$3,040	\$0	\$1,760	\$0				
2.4 FPLOS Determination, Alternatives Analysis and Recommendations																		
2.4.1 FPLOS Determination and Flood Damage Estimation																		
2.4.1.1 FPLOS Methodology Meeting	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	\$0	\$958.00	6.0	\$958.00	\$240,276.00
2.4.1.2 FPLOS Determination	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	20.0	\$0	\$8,934.00	64.0	\$9,892.00	\$249,210.00
2.4.1.3 Flood Damage Estimate	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	12.0	4.0	2.0	\$0	\$3,112.00	22.0	\$13,004.00	\$252,322.00
2.4.1.4 FPLOS Analysis Report	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,304.00	8.0	\$14,308.00	\$253,626.00
2.4.1.5 Project Management and Quality Assurance/Control	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$568.00	4.0	\$14,876.00	\$254,194.00
2.5 Surface Water Resource Assessment (SWRA)																		
2.5.1 SWRA Approach	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	8.0	0.0	8.0	\$0	\$3,794.00	26.0	\$3,794.00	\$257,988.00
2.5.2 Water Quality Assessment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	0.0	56.0	\$0	\$7,984.00	68.0	\$11,778.00	\$265,972.00
2.5.3 Existing Conditions Pollutant Loading Analysis	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	32.0	0.0	0.0	\$0	\$6,122.00	40.0	\$17,900.00	\$272,094.00

PROJECT BUDGET BY:
 PROJECT NAME:
 AGREEMENT NUMBER:
 TASK WORK ASSIGNMENT:
 PROJECT METRIC (SQ MI):

Applied Sciences Consulting, Inc.
 Klosterman Bayou WMP

3.4 (Pumped + Marine + Freshwater)

Title/Job Description	Sr Principal	Super- visory Engineer	Sr. Prof. Engineer	Prof. Engineer	Engineer III	Sr. Design Engineer	Environ. Scientist I	Admin	Prof. Engineer III	Prof. Engineer II	Prof. Engineer I	Engineer Intern / Scientist III	Engineer Intern / Scientist I	Survey Sub- Consultant	Line Item Costs	Line Item Hours	Element Costs Running Total	Total Project Costs Running Total
Firm Name	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	ASCI	SAI	SAI	SAI	SAI	SAI					
Personnel Hourly Rate	\$213.00	\$185.00	\$163.00	\$142.00	\$130.00	\$129.00	\$79.00	\$59.00	\$181.00	\$162.00	\$152.00	\$131.00	\$110.00					
2.5.4 SWRA Report	0.0	0.0	2.0	0.0	4.0	0.0	0.0	0.0	0.0	4.0	12.0	0.0	12.0	\$0	\$4,638.00	34.0	\$22,538.00	\$276,732.00
2.5.5 Pre-Submittal Meeting	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	\$0	\$546.00	4.0	\$23,084.00	\$277,278.00
2.5.6 Project Management and Quality Assurance/Control	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	0.0	8.0	\$0	\$2,420.00	18.0	\$25,504.00	\$279,698.00
2.6 Best Management Practices (BMP) Alternatives Analysis																		
2.6.1 BMP Site Selection	0.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$1,220.00	8.0	\$1,220.00	\$280,918.00
2.6.2 BMP Alternatives Analysis, Recommendation and Rankings	0.0	0.0	16.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	32.0	8.0	\$0	\$12,992.00	92.0	\$14,212.00	\$293,910.00
2.6.3 BMP Alternatives Analysis Report	0.0	0.0	0.0	8.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	\$0	\$3,208.00	24.0	\$17,420.00	\$297,118.00
2.6.4 Project Management and Quality Assurance/Control	0.0	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	4.0	\$0	\$2,828.00	20.0	\$20,248.00	\$299,946.00
Element 2.4 Hours	0.0	4.0	40.0	42.0	18.0	8.0	0.0	0.0	4.0	16.0	150.0	36.0	120.0				\$60,628.00	
Element 2.4 Days (8 Hour/Day)	0.0	0.5	5.0	5.3	2.3	1.0	0.0	0.0	0.5	2.0	18.8	4.5	15.0					
Element 2.4 Costs	\$0	\$740	\$6,520	\$5,964	\$2,340	\$1,032	\$0	\$0	\$724	\$2,592	\$22,800	\$4,716	\$13,200	\$0				
Total Hours	0.0	6.0	228.0	386.0	292.0	526.0	446.0	0.0	8.0	20.0	174.0	36.0	136.0				\$299,946.00	
Total Days (8 Hour/Day)	0.0	0.8	28.5	48.3	36.5	65.8	55.8	0.0	1.0	2.5	21.8	4.5	17.0					
Basic Services Total Costs	\$0	\$1,110	\$37,164	\$54,812	\$37,960	\$67,854	\$35,234	\$0	\$1,448	\$3,240	\$26,448	\$4,716	\$14,960	\$15,000				
Contingency Services																		\$0.00
Project Total Cost																		\$299,946.00

COOPERATIVE FUNDING AGREEMENT (TYPE 3)
BETWEEN THE
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
AND
PINELLAS COUNTY
FOR
KLOSTERMAN BAYOU WATERSHED MANAGEMENT PLAN (Q083)

THIS COOPERATIVE FUNDING AGREEMENT (Agreement) is made and entered into by and between the SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, a public corporation of the State of Florida, whose address is 2379 Broad Street, Brooksville, Florida 34604-6899, hereinafter referred to as the "DISTRICT," and PINELLAS COUNTY, a political subdivision of the State of Florida, whose address is 315 Court Street, Clearwater, Florida 33756, hereinafter referred to as the "COOPERATOR."

WITNESSETH:

WHEREAS, the COOPERATOR proposed a project to the DISTRICT for funding consideration under the DISTRICT'S cooperative funding program; and

WHEREAS, the project consists of the completion of a Watershed Management Plan (WMP) for the Klosterman Bayou watershed in Pinellas County, through and including Watershed Evaluation, Floodplain Analysis, Level of Service (LOS) Determination, Surface Water Resource Assessment (SWRA), and Best Management Practice (BMP) Alternative Analysis, hereinafter referred to as the "PROJECT"; and

WHEREAS, the DISTRICT considers the resource benefits to be achieved by the PROJECT worthwhile and desires to assist the COOPERATOR in funding the PROJECT.

NOW THEREFORE, the DISTRICT and the COOPERATOR, in consideration of the mutual terms, covenants and conditions set forth herein, agree as follows:

1. PROJECT CONTACTS AND NOTICES.

Each party hereby designates the individual set forth below as its prime contact for matters relating to this Agreement. Notices shall be sent to the attention of each party's prime contact as set forth herein by U.S. mail, postage paid, by nationally recognized overnight courier, or personally to the parties' addresses as set forth below. Notice is effective upon receipt.

Contract Manager for the DISTRICT:
Robert McDonald
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34604

Project Manager for the COOPERATOR:
Paul Miselis
Pinellas County
14 S. Fort Harrison Ave, 3rd Floor
Clearwater, Florida 33756

Any changes to the above contact information must be provided to the other party in writing.

Unless otherwise indicated in this Agreement, reports required under this Agreement may be provided to the DISTRICT'S Contract Manager via email.

- 1.1 The DISTRICT'S Contract Manager is authorized to approve requests to extend a PROJECT task deadline set forth in the Project Plan. Such approval must be in writing, explain the reason for the extension and be signed by the DISTRICT'S Contract Manager and his or her Bureau Chief, or Director if the Bureau Chief is the DISTRICT'S Contract Manager, unless the DISTRICT'S Signature Authority provides otherwise. The DISTRICT'S Signature Authority supersedes the approval requirements provided in this Subparagraph. The DISTRICT'S Contract Manager is not authorized to approve any time extension which will result in an increased cost to the DISTRICT or which will exceed the expiration date set forth in this Agreement.
- 1.2 The DISTRICT'S Contract Manager is authorized to adjust a line item amount of the Project Budget set forth in the Project Plan, or, if applicable, the refined budget as set forth in Subparagraph 4 of the Funding Paragraph. The authorization must be in writing, explain the reason for the adjustment, and be signed by all appropriate DISTRICT staff in accordance with the DISTRICT'S Signature Authority. The DISTRICT'S Contract Manager is not authorized to make changes to the Scope of Work and is not authorized to approve any increase in the amounts set forth in the Funding Paragraph of this Agreement.

2. SCOPE OF WORK.

Upon receipt of written notice to proceed from the DISTRICT, the COOPERATOR shall perform the services necessary to complete the PROJECT in accordance with the Project Plan. Any changes to this Agreement, except as provided herein, must be mutually agreed to in a formal written amendment approved by the DISTRICT and the COOPERATOR prior to being performed by the COOPERATOR. The COOPERATOR shall be solely responsible for managing and controlling the PROJECT, including the hiring and supervising of any consultants or contractors it engages.

The parties agree that time is of the essence in the performance of each obligation under this Agreement.

3. FUNDING.

The parties anticipate that the total cost of the PROJECT will be Three Hundred Thousand Dollars (\$300,000). The DISTRICT agrees to fund PROJECT costs as appropriated by

the DISTRICT in accordance with Subparagraph 1 of this Funding Paragraph and anticipates funding PROJECT costs up to One Hundred Fifty Thousand Dollars (\$150,000), and shall have no obligation to pay any costs beyond this anticipated maximum amount. The COOPERATOR agrees to provide all remaining funds necessary for the satisfactory completion of the PROJECT.

- 3.1 The DISTRICT'S performance and payment pursuant to this Agreement are contingent upon the DISTRICT'S Governing Board appropriating funds in its approved budget for the PROJECT in each fiscal year of this Agreement. The COOPERATOR recognizes that the DISTRICT has approved \$100,000 for the PROJECT through Fiscal Year 2020. The COOPERATOR'S payment of any financial obligation under this Agreement is subject to appropriation by the COOPERATOR'S Board of legally available funds.
- 3.2 The COOPERATOR shall pay PROJECT costs prior to requesting reimbursement from the DISTRICT. The DISTRICT shall reimburse the COOPERATOR for the DISTRICT'S share of allowable PROJECT costs in accordance with the Project Budget set forth in the Project Plan. Reimbursement for expenditures of contingency funds is contingent upon approval by the DISTRICT. If a reimbursement request includes expenditures of contingency funds, the COOPERATOR shall provide sufficient documentation to the DISTRICT to explain the basis of the expenditures. The DISTRICT shall not reimburse the COOPERATOR for any expenditures of contingency funds that the DISTRICT determines, in its sole discretion, to be in excess of what was reasonably necessary to complete the PROJECT. The DISTRICT shall reimburse the COOPERATOR for fifty percent (50%) of all allowable costs in each DISTRICT approved invoice received from the COOPERATOR, but at no point in time will the DISTRICT'S expenditure amounts under this Agreement exceed expenditures made by the COOPERATOR. The parties acknowledge that the DISTRICT'S reimbursement percentage stated above is subject to change if the percentage of the DISTRICT'S anticipated funding amount is changed due to subsequent Governing Board approvals, but amounts approved by the DISTRICT in its annual budget shall not be reduced after the COOPERATOR has paid PROJECT costs of incurred obligations approved by the DISTRICT pursuant to Subparagraph 4 of this Funding Paragraph and are otherwise reimbursable by the DISTRICT under this Agreement.
- 3.3 Unless otherwise provided in the Project Plan, any federal, state, local or grant monies received by the COOPERATOR for the PROJECT shall be applied to equally reduce each party's share of PROJECT costs. The COOPERATOR shall provide the DISTRICT with written documentation detailing its allocation of any such funds appropriated for the PROJECT. This Subparagraph shall survive the expiration or termination of this Agreement.
- 3.4 The COOPERATOR may contract with consultant(s), contractor(s) or both to accomplish the PROJECT. Prior to posting solicitations, the COOPERATOR must obtain the DISTRICT'S written input regarding whether costs to be paid are allowable under this Agreement. The COOPERATOR must also obtain the DISTRICT'S written approval prior to entering into agreements for PROJECT work

to ensure that costs to be reimbursed by the DISTRICT are reasonable. The DISTRICT shall provide a written response to the COOPERATOR within twenty-one (21) days of receipt of the solicitation or agreement. Upon written DISTRICT approval, the budget amounts for the work set forth in such agreement(s) shall refine the amounts set forth in the Project Budget and be incorporated herein by reference. The DISTRICT shall not reimburse the COOPERATOR for costs incurred under consultant and contractor agreements until the DISTRICT approvals required under this Subparagraph have been obtained.

- 3.5 Payment shall be made to the COOPERATOR within forty-five (45) days of receipt of an invoice with adequate supporting documentation to satisfy auditing purposes. Invoices shall be submitted to the DISTRICT every two (2) months electronically at invoices@WaterMatters.org, or at the following address:

Accounts Payable Section
Southwest Florida Water Management District
Post Office Box 15436
Brooksville, Florida 34604-5436

The above-referenced payment due date shall not apply to that portion of an invoice that includes expenditures of contingency funds. The DISTRICT agrees to reimburse the COOPERATOR for expenditures of contingency funds within a reasonable time to accommodate the process provided for in Subparagraph 2 of this Funding Paragraph.

In addition to sending an original invoice to the DISTRICT'S Accounts Payable Section as required above, copies of invoices may also be submitted to the DISTRICT'S Contract Manager in order to expedite the review process. Failure of the COOPERATOR to submit invoices to the DISTRICT in the manner provided herein shall relieve the DISTRICT of its obligation to pay within the aforementioned timeframe.

The DISTRICT makes payments electronically through the Automated Clearing House (ACH) process. The COOPERATOR agrees to complete the DISTRICT'S *Vendor Registration Form* and *Vendor Electronic Payment Authorization Form* to enable payments to be sent to the COOPERATOR electronically. The forms may be downloaded from the DISTRICT'S website at www.watermatters.org under Business & Finance – Contracts and Procurement. Any questions regarding electronic payments may be directed to the DISTRICT'S Accounts Payable Lead at 352-796-7211, extension 4108.

- 3.6 The parties acknowledge that the PROJECT was approved for funding by the DISTRICT based upon the resource benefits expected to be achieved by the PROJECT (the "Measurable Benefit"). The parties also acknowledge that the COOPERATOR is solely responsible for implementing the PROJECT in such a manner that the expected resource benefits are achieved. If at any point during the progression of the PROJECT, the DISTRICT determines that it is likely that the Measurable Benefit as set forth in the Project Plan will not be achieved, the DISTRICT shall provide the COOPERATOR with fifteen (15) days advance written

notice that the DISTRICT shall withhold payments to the COOPERATOR until such time as the COOPERATOR demonstrates that the PROJECT shall achieve the required resource benefits, to provide the COOPERATOR with an opportunity to cure the deficiencies.

- 3.7 Any travel expenses which may be authorized under this Agreement shall be paid in accordance with Section 112.061, Florida Statutes (F.S.), as may be amended from time to time. The DISTRICT shall not reimburse the COOPERATOR for any purpose not specifically identified in the Scope of Work Paragraph. Surcharges added to third party invoices are not considered an allowable cost under this Agreement. Costs associated with in-kind services provided by the COOPERATOR are not reimbursable by the DISTRICT and may not be included in the COOPERATOR'S share of funding contributions under this Agreement.
- 3.8 Each COOPERATOR invoice must include the following certification, and the COOPERATOR hereby delegates authority by virtue of this Agreement to its Project Manager to affirm said certification:

"I hereby certify that the costs requested for reimbursement and the COOPERATOR'S matching funds, as represented in this invoice, are directly related to the performance under the Klosterman Bayou Watershed Management Plan (Q083) agreement between the Southwest Florida Water Management District and Pinellas County (Agreement No. 20CF0002707), are allowable, allocable, properly documented, and are in accordance with the approved Project Budget. This invoice includes \$_____ of contingency funds expenditures. The COOPERATOR has been allocated a total of \$_____ in federal, state, local or grant monies for the PROJECT (not including DISTRICT funds) and \$_____ has been allocated to this invoice, reducing the DISTRICT'S and COOPERATOR'S share to \$_____ / \$_____ respectively."

- 3.9 In the event any dispute or disagreement arises during the course of the PROJECT, including whether expenses are reimbursable under this Agreement, the COOPERATOR will continue to perform the PROJECT work in accordance with the Project Plan. The COOPERATOR is under a duty to seek clarification and resolution of any issue, discrepancy, or dispute by providing the details and basis of the dispute to the DISTRICT'S Contract Manager no later than ten (10) days after the precipitating event. If not resolved by the DISTRICT'S Contract Manager, in consultation with his or her Bureau Chief, within ten (10) days of receipt of notice, the dispute will be forwarded to the DISTRICT'S Assistant Executive Director. The DISTRICT'S Assistant Executive Director in consultation with the DISTRICT'S Office of General Counsel will issue the DISTRICT'S final determination. The COOPERATOR'S continuation of the PROJECT work as required under this Subparagraph shall not constitute a waiver of any legal remedy available to the COOPERATOR concerning the dispute.

4. COMPLETION DATES.

The COOPERATOR shall commence and complete the PROJECT and meet the task deadlines in accordance with the Project Schedule set forth in the Project Plan, including

any extensions of time provided by the DISTRICT in accordance with Subparagraph 1 of the Project Contacts and Notices Paragraph. In the event of hurricanes, tornados, floods, acts of God, acts of war, or other such catastrophes, or other man-made emergencies such as labor strikes or riots, which are beyond the control of the COOPERATOR, the COOPERATOR'S obligations to meet the time frames provided in this Agreement shall be suspended for the period of time the condition continues to exist. During such suspension, this Agreement shall remain in effect. When the COOPERATOR is able to resume performance of its obligations under this Agreement, in whole or in part, it shall immediately give the DISTRICT written notice to that effect and shall resume performance no later than two (2) working days after the notice is delivered. The suspension of the COOPERATOR'S obligations provided for in this Paragraph shall be the COOPERATOR'S sole remedy for the delays set forth herein.

5. REPAYMENT.

- 5.1 The COOPERATOR shall repay the DISTRICT all funds the DISTRICT paid to the COOPERATOR under this Agreement, if: a) the COOPERATOR fails to complete the PROJECT in accordance with the terms and conditions of this Agreement, including failing to achieve the Measurable Benefit; b) the DISTRICT determines, in its sole discretion and judgment, that the COOPERATOR has failed to maintain scheduled progress of the PROJECT thereby endangering the timely performance of this Agreement; c) the COOPERATOR fails to appropriate sufficient funds to meet the task deadlines, unless extended in accordance with Subparagraph 1 of the Project Contacts and Notices Paragraph; or d) a Paragraph or Paragraphs of this Agreement setting forth the requirements or expectations of a Measurable Benefit resulting from the PROJECT is held to be invalid, illegal or unenforceable during the term of this Agreement. Should any of the above conditions exist that require the COOPERATOR to repay the DISTRICT, this Agreement shall terminate in accordance with the procedure set forth in the Default Paragraph.
- 5.2 Notwithstanding the above, the parties acknowledge that if the PROJECT fails to achieve the Measurable Benefit set forth in the Project Plan, the COOPERATOR may request the DISTRICT Governing Board to waive the repayment obligation, in whole or in part.
- 5.3 In the event the COOPERATOR is obligated to repay the DISTRICT under any Paragraph of this Agreement, the COOPERATOR shall repay the DISTRICT within a reasonable time, as determined by the DISTRICT in its sole discretion.
- 5.4 The COOPERATOR shall pay attorneys' fees and costs incurred by the DISTRICT, including appeals, as a result of the COOPERATOR'S failure to repay the DISTRICT as required by this Agreement.
- 5.5 This Repayment Paragraph, including all subparagraphs, shall survive the expiration or termination of this Agreement.

6. CONTRACT PERIOD.

This Agreement shall be effective October 1, 2019 and shall remain in effect through September 30, 2023, or upon satisfactory completion of the PROJECT and subsequent reimbursement to the COOPERATOR, whichever occurs first, unless amended in writing by the parties. The COOPERATOR shall not be eligible for reimbursement for any work that is commenced, or costs that are incurred, prior to the effective date of this Agreement.

7. PROJECT RECORDS AND DOCUMENTS.

Upon request by the DISTRICT, the COOPERATOR shall permit the DISTRICT to examine or audit all PROJECT related records and documents during or following completion of the PROJECT at no cost to the DISTRICT. Payments made to the COOPERATOR under this Agreement shall be reduced for amounts found to be not allowable under this Agreement by an audit. If an audit is undertaken by either party, all required records shall be maintained until the audit has been completed and all questions arising from it are resolved. Each party shall maintain all such records and documents for at least three (3) years following completion of the PROJECT. Each party shall comply with Chapter 119, F.S., the Public Records Act, including allowing public access to PROJECT documents and materials made or received by either party. Should either party assert any exemption to the requirements of Chapter 119, F.S., the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon the asserting party. This Paragraph shall survive the expiration or termination of this Agreement.

8. OWNERSHIP OF DOCUMENTS AND OTHER MATERIALS.

All documents, including reports, drawings, estimates, programs, manuals, specifications, and all goods or products, including intellectual property and rights thereto, purchased under this Agreement with DISTRICT funds or developed in connection with this Agreement shall be and shall remain the property of the DISTRICT and the COOPERATOR, jointly. Notwithstanding the above, all infrastructure shall be and shall remain the sole property of the COOPERATOR. This Paragraph shall survive the expiration or termination of this Agreement.

9. REPORTS.

9.1 The COOPERATOR shall provide the DISTRICT with a quarterly report describing the progress of the PROJECT tasks, adherence to the Project Schedule and any developments affecting the PROJECT. The COOPERATOR shall promptly advise the DISTRICT of issues that arise that may impact the successful and timely completion of the PROJECT. Quarterly reports shall be submitted to the DISTRICT'S Contract Manager no later than forty-five (45) days following the completion of the quarterly reporting period. It is hereby understood and agreed by the parties that the term "quarterly" shall reflect the calendar quarters ending March 31, June 30, September 30 and December 31.

9.2 Upon request by the DISTRICT, the COOPERATOR shall provide the DISTRICT with copies of all data, reports, models, studies, maps or other documents resulting

from the PROJECT. Additionally, one (1) set, electronic and hardcopy, of any final reports must be submitted to the DISTRICT as Record and Library copies. This Subparagraph shall survive the expiration or termination of this Agreement.

- 9.3 The COOPERATOR shall provide the DISTRICT with each deliverable set forth in the Project Plan for review by the DISTRICT, including any supporting documentation. The DISTRICT shall provide a written response to the COOPERATOR and the COOPERATOR shall respond to the DISTRICT'S questions and concerns within the timeframes set forth in the Project Plan.
- 9.4 The COOPERATOR shall provide the data, reports and documents referenced in this Paragraph at no cost to the DISTRICT.

10. RISK, LIABILITY, AND INDEMNITY.

- 10.1 To the extent permitted by Florida law, the COOPERATOR assumes all risks relating to the PROJECT and agrees to be solely liable for, and to indemnify and hold the DISTRICT harmless from all claims, loss, damage and other expenses, including attorneys' fees and costs and attorneys' fees and costs on appeal, arising from the design, construction, operation, maintenance or implementation of the PROJECT; provided, however, that the COOPERATOR shall not indemnify for that portion of any loss or damages proximately caused by the negligent act or omission of the DISTRICT'S officers, employees, contractors and agents. The acceptance of the DISTRICT'S funding by the COOPERATOR does not in any way constitute an agency relationship between the DISTRICT and the COOPERATOR.
- 10.2 The COOPERATOR agrees to indemnify and hold the DISTRICT harmless, to the extent allowed under Section 768.28, F.S., from all claims, loss, damage and other expenses, including attorneys' fees and costs and attorneys' fees and costs on appeal, arising from the negligent acts or omissions of the COOPERATOR'S officers, employees, contractors and agents related to its performance under this Agreement.
- 10.3 This Risk, Liability, and Indemnity Paragraph, including all subparagraphs, shall not be construed as a waiver of the COOPERATOR'S sovereign immunity or an extension of the COOPERATOR'S liability beyond the limits established in Section 768.28, F.S. Additionally, this Risk, Liability, and Indemnity Paragraph, including all subparagraphs, will not be construed to impose contractual liability on the COOPERATOR for underlying tort claims as described above beyond the limits specified in Section 768.28, F.S., nor be construed as consent by the COOPERATOR to be sued by third parties in any manner arising out of this Agreement.
- 10.4 Nothing in this Agreement shall be interpreted as a waiver of the DISTRICT'S sovereign immunity or an extension of its liability beyond the limits established in Section 768.28, F.S., nor be construed as consent by the DISTRICT to be sued by third parties in any manner arising out of this Agreement.

10.5 This Risk, Liability, and Indemnity Paragraph, including all subparagraphs, shall survive the expiration or termination of this Agreement.

11. DEFAULT.

Either party may terminate this Agreement upon the other party's failure to comply with any term or condition of this Agreement, including the failure to meet task deadlines established in this Agreement, as long as the terminating party is not in default of any term or condition of this Agreement at the time of termination. To effect termination, the terminating party shall provide the defaulting party with a written "Notice of Termination" stating its intent to terminate and describing all terms and conditions with which the defaulting party has failed to comply. If the defaulting party has not remedied its default within thirty (30) days after receiving the Notice of Termination, this Agreement shall automatically terminate. If a default cannot reasonably be cured in thirty (30) days, then the thirty (30) days may be extended at the non-defaulting party's discretion, if the defaulting party is pursuing a cure of the default with reasonable diligence. The rights and remedies in this Paragraph are in addition to any other rights and remedies provided by law or this Agreement.

12. RELEASE OF INFORMATION.

The parties agree not to initiate any oral or written media interviews or issue press releases on or about the PROJECT without providing notices or copies to the other party no later than three (3) business days prior to the interview or press release. This Paragraph shall not be construed as preventing the parties from complying with the public records disclosure laws set forth in Chapter 119, F.S.

13. DISTRICT RECOGNITION.

The COOPERATOR shall recognize DISTRICT funding in any reports, models, studies, maps or other documents resulting from this Agreement, and the form of said recognition shall be subject to the DISTRICT'S approval. If construction is involved, the COOPERATOR shall provide signage at the PROJECT site that recognizes the DISTRICT'S funding for the PROJECT. All signage must receive the DISTRICT'S written approval as to form, content and location, and must be in accordance with local sign ordinances.

14. PERMITS AND REAL PROPERTY RIGHTS.

The COOPERATOR shall obtain all permits, local government approvals and all real property rights necessary to complete the PROJECT prior to commencing any construction involved in the PROJECT. The DISTRICT shall have no obligation to reimburse the COOPERATOR for any costs under this Agreement until the COOPERATOR has obtained all permits, approvals, and property rights necessary to accomplish the objectives of the PROJECT. In the event a permit, approval or property right is obtained but is subsequently subject to a legal challenge that results in an unreasonable delay or cancellation of the PROJECT as determined by the DISTRICT in its sole discretion, the COOPERATOR shall repay the DISTRICT all monies contributed

to the PROJECT. This Paragraph shall survive the expiration or termination of this Agreement.

15. LAW COMPLIANCE.

The COOPERATOR shall comply with all applicable federal, state and local laws, rules, regulations and guidelines, including those of the DISTRICT, related to performance under this Agreement.

16. DIVERSITY IN CONTRACTING AND SUBCONTRACTING.

The DISTRICT is committed to supplier diversity in the performance of all contracts associated with DISTRICT cooperative funding projects. The DISTRICT requires the COOPERATOR to make good faith efforts to encourage the participation of minority owned and woman owned and small business enterprises, both as prime contractors and subcontractors, in the performance of this Agreement, in accordance with applicable laws.

16.1 If requested, the DISTRICT shall assist the COOPERATOR by sharing information to help the COOPERATOR in ensuring that minority owned and woman owned and small businesses are afforded an opportunity to participate in the performance of this Agreement.

16.2 The COOPERATOR agrees to provide the DISTRICT with a report indicating all contractors and subcontractors who performed work in association with the PROJECT, the amount spent with each contractor or subcontractor, and to the extent such information is known, whether each contractor or subcontractor was a minority owned or woman owned or small business enterprise. If no minority owned or woman owned or small business enterprises were used in the performance of this Agreement, then the report shall so indicate. The Minority/Women Owned and Small Business Utilization Report form is attached as an exhibit. The report is required upon final completion of the PROJECT prior to final payment, or within thirty (30) days of the execution of any amendment that increases PROJECT funding, for information up to the date of the amendment and prior to the disbursement of any additional funds by the DISTRICT.

17. ASSIGNMENT.

Except as otherwise provided in this Agreement, no party may assign any of its rights or delegate any of its obligations under this Agreement, including any operation or maintenance duties related to the PROJECT, without the prior written consent of the other party. Any attempted assignment in violation of this Paragraph is void. This Paragraph shall survive the expiration or termination of this Agreement.

18. CONTRACTORS.

Nothing in this Agreement shall be construed to create, or be implied to create, any relationship between the DISTRICT and any consultant or contractor of the COOPERATOR.

19. THIRD PARTY BENEFICIARIES.

Nothing in this Agreement shall be construed to benefit any person or entity not a party to this Agreement.

20. LOBBYING PROHIBITION.

Pursuant to Section 216.347, F.S., the COOPERATOR is prohibited from using funds provided by this Agreement for the purpose of lobbying the Legislature, the judicial branch or a state agency.

21. PUBLIC ENTITY CRIMES.

Pursuant to Subsections 287.133(2) and (3), F.S., a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, F.S., for Category Two, for a period of 36 months following the date of being placed on the convicted vendor list. The COOPERATOR agrees to include this Paragraph in all contracts issued as a result of this Agreement.

22. SCRUTINIZED COMPANIES.

Pursuant to Section 287.135, F.S., a company that, at the time of submitting a bid or proposal for a new contract or renewal of an existing contract, is on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, is ineligible to, and may not bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services in any amount. If the goods or services are in the amount of \$1 million dollars or more, the company must also not be on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or be engaged in business operations in Cuba or Syria. By signing this Agreement, the COOPERATOR certifies that it is not on any of the lists or engaged in any of the prohibited activities identified above, as applicable based upon the amount of this Agreement. The COOPERATOR agrees to notify the DISTRICT if it is placed on any of the applicable lists or engages in any of the prohibited activities during the term of this Agreement. The DISTRICT may immediately terminate this Agreement at its option if the COOPERATOR is found to have submitted a false certification, is placed on any of the applicable lists or engages in any prohibited activities.

23. GOVERNING LAW.

This Agreement is governed by Florida law and venue for resolving disputes under this Agreement shall be exclusively in Hillsborough County, Florida. This Paragraph shall survive the expiration or termination of this Agreement.

24. SEVERABILITY.

If any Paragraph or Paragraphs of this Agreement shall be held to be invalid, illegal, or unenforceable, the validity, legality and enforceability of the remaining Paragraphs shall not in any way be affected or impaired thereby. Notwithstanding the above, if a Paragraph or Paragraphs of this Agreement setting forth the requirements or expectations of a Measurable Benefit resulting from the PROJECT is held to be invalid, illegal or unenforceable during the term of this Agreement, this Agreement shall terminate in accordance with Subparagraph 1 of the Repayment Paragraph. This Paragraph shall survive the expiration or termination of this Agreement.

25. COUNTERPARTS.

The parties may execute this Agreement, and any amendments related to this Agreement, each of which constitutes an original, and all of which, collectively, constitute only one agreement. The signatures of all of the parties need not appear on the same counterpart.

26. ENTIRE AGREEMENT.

This Agreement and the attached exhibit(s) listed below constitute the entire agreement between the parties and, unless otherwise provided herein, may be amended only in writing, signed by all parties to this Agreement.

27. DOCUMENTS.


The following document(s) is/are attached and made a part of this Agreement. In the event of a conflict of contract terminology, priority shall first be given to the language in the body of this Agreement, then to Exhibit "A", then to Exhibit "B".

Exhibit "A" Project Plan
Exhibit "B" Minority/Women Owned and Small Business Utilization Report Form


The remainder of this page intentionally left blank.

IN WITNESS WHEREOF, the parties hereto, or their lawful representatives, have executed this Agreement on the day and year set forth next to their signatures below.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

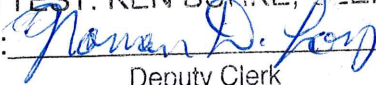
By:  1/21/2020
Amanda Rice, P.E. Date
Assistant Executive Director

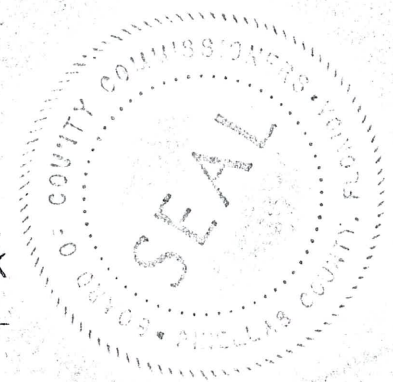
PINELLAS COUNTY

By:  1-14-20
Date

Name: Pat Gerard

Title: Chair, Board of County Commissioners
Authorized Signatory

ATTEST: KEN BURKE, CLERK
By: 
Deputy Clerk



APPROVED AS TO FORM
NOT AS TO CONTENT
OFFICE OF COUNTY ATTORNEY

By: 
ATTORNEY

COOPERATIVE FUNDING AGREEMENT (TYPE 3)
BETWEEN THE
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
AND
PINELLAS COUNTY
FOR
KLOSTERMAN BAYOU WATERSHED MANAGEMENT PLAN (Q083)

EXHIBIT "A"
PROJECT PLAN

PROJECT DESCRIPTION

This is a multi-year funded project to develop a Watershed Management Plan (WMP) for the Klosterman Bayou Watershed. The watershed covers a total area of approximately 3.2 square miles located within Pinellas County, and discharges to Saint Joseph Sound. The following elements of the DISTRICT'S Watershed Management Program are to be performed: Project Development, Watershed Evaluation, Floodplain Analysis, Level of Service Determination, Surface Water Resource Assessment, and Best Management Practice Alternatives Analysis. These elements are defined as Project Tasks listed below. Project Tasks are to be accomplished according to the Project Schedule and Project Budget table listed below.

The WMP will analyze flooding problems that exist in the watershed. Currently, flood analysis models are not available or are over 10 years old, and the watershed includes regional or intermediate stormwater systems.

MEASURABLE BENEFIT

The completion of a WMP that identifies floodplains, establishes LOS, and evaluates BMPs to address flooding concerns in the Klosterman Bayou watershed in accordance with the requirements of this Agreement.

PROJECT TASKS

The COOPERATOR shall:

Perform the work in accordance with the DISTRICT Scope of Work Task Descriptions in the "Watershed Management Program Guidance Documents", effective as of the date of the COOPERATOR'S issuance of a work order to its consultant. These guidance documents can be found at: ftp://ftp.swfwmd.state.fl.us/pub/GWIS/WMP_Guidance_Documents.

- 1.1 PROCUREMENT
 - 1.1.1 Consultant Contract Development
 - 1.1.2 District Consultant Contract Review and Approval
- 2.1 PROJECT DEVELOPMENT
 - 2.1.1 Data Collection and Initial Evaluation
 - 2.1.2 Draft Project Plan
 - 2.1.3 Kick-off Meeting
 - 2.1.4 Final Project Plan
- 2.2 WATERSHED EVALUATION
 - 2.2.1 Assembly and Evaluation of Watershed Data
 - 2.2.2 Hydrologic and Hydraulic Feature Database
 - 2.2.3 Preliminary Model Features
 - 2.2.4 Peer Review of Watershed Evaluation
 - 2.2.5 Final Approved Watershed Evaluation Deliverables
- 2.3 FLOODPLAIN ANALYSIS
 - 2.3.1 Watershed Model Parameterization
 - 2.3.2 Peer Review of Watershed Model Parameterization

- 2.3.3 Final Approved Watershed Model Parameterization Deliverables
- 2.3.4 Watershed Model Development and Floodplain Delineation
- 2.3.5 Peer Review of Watershed Model Development and Floodplain Delineation
- 2.3.6 Approved Floodplain Analysis Deliverables for Preliminary Floodplain Open House
- 2.3.7 Preliminary Floodplain Open House and Response to Public Comments
- 2.3.8 Final Approved Floodplain Analysis Deliverables
- 2.4 Alternatives Analysis – FPLOS, Drainage Improvement Alternatives Analysis and Recommendations
 - 2.4.1 FPLOS Determination
 - 2.4.2 Drainage Improvement Alternatives Analysis and Recommendations
- 2.5 Alternatives Analysis – SWRA and BMPs of Water Quality
 - 2.5.1 SWRA of Water Quality
 - 2.5.2 Water Quality BMPs

DELIVERABLES

The following deliverables are related to the specific Project Tasks from above:

- Quarterly Reports

Procurement

- Executed Consultant Agreement

Project Development

- Final Project Plan

Watershed Evaluation

Assembly and Evaluation of Watershed Data

- Task Memorandum
- Project Specific QA/QC Document
- Responses to Comments Geodatabase
- Digital Elevation Model (DEM)
- Updated Project Plan
- GWIS Geodatabase

Hydrologic and Hydraulic Feature Database

- Response to Comments Geodatabase
- Refined Topographic Information
- Updated GWIS Geodatabase
- Supporting Data
- Project Specific QA/QC Document

Preliminary Model Features

- Watershed Evaluation Report
- Supporting Data
- Project Specific QA/QC Document
- Refined Topographic Information
- GWIS Geodatabase

Final Approved Watershed Evaluation Deliverables

- Response to Comment Geodatabase
- Update Project Plan
- Revised Watershed Evaluation Deliverables
- Project Specific QA/QC Document

Floodplain Analysis

Watershed Model Parameterization

- Updated Watershed Evaluation Report
- Model Input/Output Files
- Project Specific QA/QC Document
- GWIS Geodatabase
- Supporting Data

Final Approved Watershed Model Parameterization Deliverables

- Revised Watershed Model Parameterization Deliverables
- Response to Comment Geodatabase
- Updated Project Plan
- Project Specific QA/QC Document

Watershed Model Development and Floodplain Delineation

- Floodplain Justification Report
- 100-Year Flood Depth Grids
- 100-Year Floodplains with Climate Change and Sea Level Rise Considerations
- Model Input/Output Files
- Project Specific QA/QC Document
- Updated GWIS Geodatabase
- Supporting Data

Approved Floodplain Analysis Deliverables for Preliminary Floodplain Open House

- Responses to Comments Geodatabase
- Revised Floodplain Analysis Deliverables
- Project Specific QA/QC Document

Final Approved Floodplain Analysis Deliverables

- Attendance at Preliminary Floodplain Open House
- Response to Public Comments
- Signed & Sealed Floodplain Justification Report
- PowerPoint Presentation
- Updated Project Plan
- Revised Floodplain Analysis Deliverables
- Project Specific QA/QC Document

Alternatives Analysis – FPLOS, Drainage Improvement Alternatives Analysis and Recommendations

Watershed Model Development and Floodplain Delineation

- FPLOS Analysis Report

- Flood Depth Grids for FPLOS Design Storms
- Model Input/Output Files for FPLOS Design Storms
- Geodatabase
- Responses to Comment Geodatabase
- Project Specific QA/QC Document

Drainage Improvement Alternatives Analysis and Recommendations

- Alternative Analysis and Recommendation Report
- Flood Depth Grids for Proposed Conditions
- Ranking of BMP Recommendations
- Updated Project Plan
- Model Input/Output Files for Proposed Conditions
- Geodatabase
- Responses to Comments Geodatabase
- Project Specific QA/QC Document

Alternatives Analysis – SWRA and BMPs of Water Quality

SWRA of Water Quality

- Surface Water Resource Assessment (SWRA) Report
- Geodatabase
- Existing Conditions Pollutant Loading Model
- Responses to Comments Geodatabase
- Project Specific QA/QC Document

Water Quality BMPs

- Water Quality BMPs Report
- Ranking of BMP Recommendations
- Proposed Conditions Pollutant Loading Model
- Geodatabase
- Response to Comments Geodatabase
- Project Specific QA/QC Document

DELIVERABLE REVIEW TIMES

The DISTRICT shall provide a written response to the COOPERATOR within twenty (20) business days of receipt of each deliverable specified below including supporting documentation. The COOPERATOR shall respond to the DISTRICT'S questions and concerns with twenty (20) business days of receipt by the COOPERATOR.

- All deliverables related to the following Project Tasks:
 - Watershed Evaluation
 - Floodplain Analysis
 - Alternatives Analysis – FPLOS, Drainage Improvement Alternatives Analysis and Recommendations
 - Alternatives Analysis – SWRA and BMPs of Water Quality

PROJECT SCHEDULE

DESCRIPTION	COMMENCE	COMPLETE
1.1 Procurement	10/01/2019	01/31/2020
2.1 Project Development	02/01/2020	03/31/2020
2.2 Watershed Evaluation	04/01/2020	03/31/2021
2.3 Floodplain Analysis	04/01/2021	01/31/2022
2.4 Alternatives Analysis – FPLOS BMP Alternatives Analysis	02/01/2022	03/31/2023
2.5 Alternatives Analysis – SWRA & BMPs of Water Quality	02/01/2022	03/31/2023

- Additional task deadlines contained in the performance schedules of any consultant and contractor contracts will be incorporated herein by reference.

PROJECT BUDGET

DESCRIPTION	DISTRICT	COOPERATOR	TOTAL
2.1 Project Development	\$2,500	\$2,500	\$5,000
2.2 Watershed Evaluation	\$57,500	\$57,500	\$115,000
2.3 Floodplain Analysis	\$50,000	\$50,000	\$100,000
2.4 Alternatives Analysis – FPLOS BMP Alternatives Analysis	\$20,000	\$20,000	\$40,000
2.5 Alternatives Analysis – SWRA & BMPs of Water Quality	\$20,000	\$20,000	\$40,000
TOTAL	\$150,000	\$150,000	\$300,000

- Budget amounts for tasks can be adjusted by the Contract Manager in accordance with Subparagraph 1.2.
- Reimbursement for expenditures of contingency funds is contingent upon DISTRICT approval in accordance with the Funding Paragraph in the Agreement. The COOPERATOR must provide justification for the expenditure that will require documentation including, but not limited to, the purpose and necessity of the expenditure, the reason the expenditure was not included in the consultant agreement with the COOPERATOR, expenditure cost comparisons and justification of the cost.

The remainder of this page intentionally left blank.

EXHIBIT "B"
MINORITY/WOMEN OWNED AND SMALL BUSINESS UTILIZATION REPORT

Projects receiving \$100,000 or more in cooperative funding from the Southwest Florida Water Management District require the submission of the following information within 30 days of any amendment increasing project funding and with the final invoice. Questions regarding use of this form should be directed to Contracts Administration, Phone (352) 796-7211 ext. 4132.

INDICATE THE ONE CATEGORY THAT BEST DESCRIBES EACH ORGANIZATION LISTED*		NON-CERTIFIED MBE					CERTIFIED MBE					BUSINESS CLASSIFICATION	
		AFRICAN AMERICAN	HISPANIC AMERICAN	ASIAN/HAWAIIAN AMERICAN	NATIVE AMERICAN	AMERICAN WOMAN	AFRICAN AMERICAN	HISPANIC AMERICAN	ASIAN/HAWAIIAN AMERICAN	NATIVE AMERICAN	AMERICAN WOMAN		
COOPERATOR: _____												SMALL BUSINESS Section 288.703(1) F.S.	
AGREEMENT NO.: _____												NON-MINORITY	
PROJECT NAME: _____													
TOTAL PROJECT COST: _____													
NAMES OF CONTRACTORS AND SUBCONTRACTORS UTILIZED	TOTAL AMOUNT PAID												

* Our organization does not collect minority status data.

Signature _____ Date _____ Print Name and Title _____

SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

1. INSURANCE:

- a) If Consultant does not currently meet insurance requirements, Consultant shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place within 10 days after award recommendation.
- b) No work shall commence at any project site unless and until the required Certificate(s) of Insurance are received and approved by the County. Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the RFP and/or contract period.
- c) All policies providing liability coverage(s), other than professional liability and workers compensation policies, obtained by the Consultant and any subcontractors to meet the requirements of the Agreement shall be endorsed to include **Pinellas County a Political subdivision of the State of Florida** as an Additional Insured.
- d) If any insurance provided pursuant to the Agreement expires, or cancels prior to the completion of the work you will be notified by CTrax, the authorized vendor of Pinellas County. Upon notification, renewal certificate(s) of Insurance and endorsement(s) should be furnished to Pinellas County Risk Management at InsuranceCerts@pinellascounty.org and to CTrax c/o JDi Data at PinellasSupport@jdidata.com by the Consultant or their agent prior to the expiration date
 - (1) Consultant shall also notify County within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Consultant from its insurer. Notice shall be given by email to Pinellas County Risk Management at InsuranceCerts@pinellascounty.org Nothing contained herein shall absolve Consultant of this requirement to provide notice.
 - (2) Should the Consultant, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement, or at its sole discretion may purchase such coverages necessary for the protection of the County and charge the Consultant for such purchase or offset the cost against amounts due to Consultant for services completed. The County shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the County to purchase such insurance shall in no way be construed to be a waiver of any of its rights under the Agreement.
- e) The County reserves the right, but not the duty, to review and request a copy of the Contractor's most recent annual report or audited financial statement when a self-insured retention (SIR) or deductible exceeds \$50,000.
- f) If subcontracting is allowed under this RFP, the Prime Consultant shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; *but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.*

SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

- (1) All subcontracts between Consultant and its subcontractors shall be in writing and may be subject to the County's prior written approval. Further, all subcontracts shall (1) require each subcontractor to be bound to Consultant to the same extent Consultant is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the subcontractor; (2) provide for the assignment of the subcontracts from Consultant to the County at the election of Owner upon termination of the Contract; (3) provide that County will be an additional indemnified party of the subcontract; (4) provide that the County will be an additional insured on all insurance policies required to be provided by the subcontractor except workers compensation and professional liability; (5) provide waiver of subrogation in favor of the County and other insurance terms and/or conditions as outlined below; (6) assign all warranties directly to the County; and (7) identify the County as an intended third-party beneficiary of the subcontract. Consultant shall make available to each proposed subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the subcontractor will be bound by this Section C and identify to the subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- g) Each insurance policy and/or certificate shall include the following terms and/or conditions:
- (1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County. If Consultant is a Joint Venture per Section A. titled Joint Venture of this RFP, Certificate of Insurance and Named Insured must show Joint Venture Legal Entity name and the Joint Venture must comply with the requirements of Section C with regard to limits, terms and conditions, including completed operations coverage.
 - (2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Contractor.
 - (3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
 - (4) The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by County or any such future coverage, or to County's Self-Insured Retentions of whatever nature.
 - (5) All policies shall be written on a primary, non-contributory basis.
 - (6) Any Certificate(s) of Insurance evidencing coverage provided by a leasing company for either workers compensation or commercial general liability shall have a list of covered employees certified by the leasing company attached to the Certificate(s) of Insurance. The County shall have the right, but not the obligation to determine that the Consultant is only using employees named on such list to perform work for the County. Should employees not named be utilized by Consultant, the County, at its option may stop work without penalty to the County until proof of coverage or removal of the employee by the contractor occurs, or alternatively find the Consultant to be in default and take such other protective measures as necessary.
 - (7) Insurance policies, other than Professional Liability, shall include waivers of subrogation in favor of Pinellas County from both the Consultant and subcontractor(s).

SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

- h) The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

(1) Workers' Compensation Insurance

Limit	Florida Statutory
Employers' Liability Limits	
Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

- (2) Commercial General Liability Insurance including, but not limited to, Independent Contractor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury.

Limits

Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

- (3) Professional Liability (Errors and Omissions) Insurance with at least minimum limits as follows. If "claims made" coverage is provided, "tail coverage" extending three (3) years beyond completion and acceptance of the project with proof of "tail coverage" to be submitted with the invoice for final payment. In lieu of "tail coverage", Consultant may submit annually to the County, for a three (3) year period, a current certificate of insurance providing "claims made" insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

Limits

Each Occurrence or Claim	\$ 1,000,000
General Aggregate	\$ 1,000,000

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

- (4) Property Insurance Consultant will be responsible for all damage to its own property, equipment and/or materials.