CONSULTANT WORK ORDER

Date:	06/12/2025

1. PROJECT INFORMATION:

Project Title:	N Beach Stormwater & Tidal Improvements
City Project Number:	24-0037-EN
City Plan Set Number:	2024036
Consultant Project Number:	25-0569.00001

INTRODUCTION:

The growing intensity and frequency of storms and tidal events, combined with urban expansion, have created an increased demand for a more robust stormwater system.

The primary scope for the overall project is to design and permit upgraded stormwater infrastructure facilities for the twelve (12) tidally influenced stormwater conveyance systems with the North Beach Basin. At current, the North Beach community experiences frequent flooding from extreme rainfall events and high sea levels.

City Project Number 24-0012-EN was recently completed and involved the detailed modelling and analysis of six (6) of the tributary basins in North Beach for purposes of developing conceptual designs for pump stations and potential stormwater conveyance system interconnectivity that could be implemented in a short timeframe without affecting the tidal outfalls, thus avoiding a lengthy permitting process. A Technical Memorandum was produced to further the analysis included in the North Beach Master Plan.

One of the two primary purposes for this new Work Order is to advance the recommendations of the Technical Memorandum through 100% design and assist the City with bidding services for procuring a contractor or contractors to construct the proposed stormwater infrastructure improvements. The recommendations include the construction of several new stormwater pump stations and the interconnection of the existing gravity storm systems of the Bruce and Carlouel basins.

The second scope component of this Work Order is to take a broader look at developing engineering alternatives associated with the overall goals of reducing sunny day flooding in North Beach and the development of a grant funding and regulatory agency permitting roadmap based on the City's preferred infrastructure improvement alternatives.

Potential improvement concepts involve the installation of upsized conveyance piping, additional inlets to address areas with insufficient or no existing drainage, backflow prevention devices, additional pump stations, upgrades to existing pump stations, effects on existing utility relocation, grading of existing grassed areas to create drainage swales, localized reconfiguration of the conveyance connectivity to provide redundancy between

sub-basin drainage networks, roadway grade elevation adjustments, and possible seawall improvements.

PROJECT GOALS:

Enhance the stormwater conveyance system's level of service to improve emergency response capabilities and mitigate the impacts of storm and tidal flooding within the area.

The goals for this Work Order are as follows:

- Final design, Permitting, Grant Assistance, and Bidding Services for up to six (6) new pump stations that will provide pumping capacity to the maximum discharge rate available during a 25-year, 1-day storm event to minimize permitting requirements. Pump station components shall be designed with scalable capacity to accommodate future demand increases without requiring significant infrastructure modifications. Prior to the start of design, City to advise what storm event the future pump station structures should be designed to under future conditions.
- Final Design, Permitting, Grant Assistance, and Bidding Services of stormwater conveyance system interconnections. Interconnecting basins will allow for more efficient pump station sizing, will provide system redundancies, and will simplify maintenance efforts. Alternative Services are included for interconnections design, since the final number of interconnections will be determined under this work order scope.
- Final design of a rain monitoring and flood warning system.
- Analyze areas where no inlets exist and locations where inadequate drainage has been identified in the stormwater improvement alternatives.
- Conceptual development of several stormwater improvement alternatives for each of the twelve (12) tributary basins in North Beach, including value engineering analysis, permitting considerations and implementation timeline.
- Conceptual level cost estimates for the preferred alternatives developed.
- Research grant funding opportunities and create an application schedule. The Consultant shall apply for certain grant opportunities available during the term of this contract.

Additional overarching project goals are:

- Reduce sunny day flooding disruption to residents
- Attain quicker recovery of the stormwater conveyance system following a storm and/or a tidal event.
- Refinement of the City's objectives and desired outcomes for the stormwater improvements that will ultimately be implemented in North Beach.
- Minimize needs for additional right-of-way.
- Pursue cost efficiencies in all project components.
- Maximize grant-based funding for the project's construction.

- Create a scope for the following project phases.
- Have the base scope improvements plus any City requested Alternative Service improvements bid and constructed by 2032.

2. SCOPE OF SERVICES:

The Scope of Services of this Work Order are twofold and include two distinct components:

Final design, permitting, grant assistance, and bidding services for up to six (6) new stormwater pump stations and modifications to the Kipling Plaza pump station:

Prepare contract plans and specifications that can be used to construct the Stormwater pump stations in up to three (3) phases/bid document sets and a fourth (4) phase/bid document set for the control panel and generator work proposed at the existing Kipling Plaza pump station, depending on funding. Designs will be based on the recommendations outlined in the Technical Memorandum developed as part of City Project Number 24-0012-EN. The scope of services will include design, plans production, utility coordination, permitting services, and bid assistance.

Each pump station site will include the following components:

- Bypass structure with trash screen/sedimentation trap
- Water Quality Structure
- Cast-in-place wet well structural design (precast structure may be considered as an alternative)
- Elevated electrical/pump control panels including access and platforms
- Elevated generator & electrical/pump control panels to be housed in an infrastructure in plain sight approach. Includes 2 renderings for city selection. City to provide themes (e.g. Life Guard Tower).
- Elevated generator including access and platforms
- Variable frequency drives (VFDs) and soft starters
- Pumps (intent is to design a maximum of 2 different pumping capacities). Pump stations may include 2 full capacity size pumps, and a third smaller pump to handle low flows
- Energy dissipation structure
- Sluice gate/isolation valve
- Check valve
- Backflow prevention systems (with separate vault and isolation valves)
- Manatee screen
- SCADA/remote control & monitoring system
- Upgrades to exposed gravity pipe within pump station site (excluding pipe at sea wall)
- Site grading & drainage
- MOT design

- Rain monitoring and flood warning system (sea level sensors), with cloud-based access and data backup

Within 45 days of notice to proceed the Consultant will research components that are in back-order or will take more than five (5) months to deliver to help the City purchase these components directly before the design is completed.

Certain stormwater pump stations components, including structures and panels, will be sized larger than required for the immediate conditions, in order to accommodate future conditions. As indicated in the project information section, smaller pumps may be selected during this design to meet permitting exemptions, but future pump and equipment sizes will be also identified in this scope of work. Prior to the start of design, City to advise what storm event the future pump station structures should be design to under future conditions.

Consultant will research available grants and assist the City with applications and management of up to two new grants and the reapplication for the existing Resilient Florida Grant, as needed.

This Work Order includes the design of an elevated permanent generator and elevating the existing control panels at the existing pump station at Kipling Plaza. This Work Order also includes Alternative Services for the design, site investigation, and permitting of stormwater conveyance system interconnections. For budgeting purposes, we have assumed not more than 2,300 LF of conveyance piping across all final designs of interconnections.

Future improvement alternatives, Grant and Permitting Roadmap:

The scope of this Work Order is to clearly define the intended outcomes of the planned infrastructure improvements in the North Beach community, develop conceptual engineering alternatives aligned with those outcomes, and establish a funding and permitting roadmap to guide the City and Design Team in making informed decisions for project design and implementation.

I. PROJECT MANAGEMENT:

Task 1.1: Project Management Plan: CMA will manage the project execution (i.e., manage project team activities, implement project plans and track progress, oversee quality control and compliance with standards, etc.). CMA will monitor and control the project (i.e., track project performance; manage changes to the project scope, schedule, and budget, if applicable; address issues and risks as they arise; etc.), and CMA will perform project closeout activities (i.e., confirm all deliverables are completed and accepted, etc.). The fees for this task will be paid on a time and material basis.

Task 1.2: Progress Reports: These reports are anticipated and will be submitted, as needed, with progress invoices. The fees for this task will be paid on a time and material basis.

Task 1.3: Coordination: Time for internal CMA team coordination and updates with City Project Manager for various project components, and as required. This task includes time for CMA's coordination with the various subconsultants included on the design team. The fees for this task will be paid on a time and material basis.

NOTE: All time and material tasks to be coordinated with the City prior to performing any of these scope elements.

Task 1.4: Meetings: Time for preparation, attendance and follow-up for project meetings (i.e., bi-weekly status coordination meetings, etc.). This task assumes up to six (6) in person meetings (these are exclusive of workshops with the City defined in Tasks 4.2 and 6.1) at the City of Clearwater Municipal Services Building and up to twelve (12) virtual meetings, as needed. The fees for this task will be paid on a time and material basis. The number of approved attendees on behalf of the Consultant team is to be confirmed prior to scheduling with the City's Project Manager.

Task 1.5: Kickoff Meeting with City staff to Define Objectives and Desired outcomes: CMA and the City's Project Manager will work together to schedule a kickoff meeting with applicable City officials and design team members aimed at achieving consensus on the objectives and desired outcomes for the immediate pump station and gravity sewer interconnection designs as well as the ultimate stormwater infrastructure improvements that will be constructed in the North Beach Community. These discussions will include determination of the desired level of service and pump configuration for the ultimate stormwater pump infrastructure configurations. The final designs for the structural elements of the pump stations (wet wells, energy dissipation structures, generator pads and control panel infrastructure) will be sized to accommodate larger, ultimate configuration pumps.

Prior to holding the kickoff meeting, CMA will produce a consolidated spreadsheet of the various model results, recommendations, and cost estimates that were produced as part of City Project Number 24-0012-EN.

Recommended City Attendees:

City's Project Manager, Assistant Project Manager, City Engineer, and Public Works Director, and others as deemed appropriate by the City.

Consultant Attendees:

CMA Project Manager, CMA's Lead Stormwater Designer, Brizaga's Grant Strategy Expert, Cummins Cederberg's Local, State, and Federal Permitting Expert, and Applied Sciences' Lead Stormwater Designer.

General Meeting Outline/Goals:

- Define evaluation metrics for assessing potential solutions.

- Establish the desired level of service and performance criteria.
- Define baseline storm events, flood stage limits, and flood duration limits.
- Discuss applicable design standards and improvement considerations.
- Obtain concurrence for initial pump station and gravity sewer interconnect design.
- Determine scope of work to be included in the separate bid packages that will be developed as part of the base scope of work for this Work Order.
- Define improvement alternatives/solution set, ensuring prioritization of cost-effective and nature-based solutions.

Meeting minutes will be developed by CMA and distributed for review and comment within 3 business days following the meeting. The fees for this task will be paid on a time and material basis. The City shall approve workshop attendees in advance of said workshop.

Task 1.6: Direct Purchasing Assistance to the City: CMA will provide the City's Project Manager with technical assistance (i.e., identify size and equipment needs, technical coordination with manufacturers, assist with identifying lead times, identify equipment/material substitutions, etc.) as necessary so that the City may direct purchase some components of the project prior to the construction phase. The fees for this task will be paid on a time and material basis.

II. FINAL DESIGN FOR PUMP STATIONS:

The design considerations and effort level associated with each design will vary, depending on the pump station location. The overall intent for the pump station design is to create a standardized pump station design with scalable components, to the extent possible. Elements such as pump sizing, pump configuration, control systems, water quality systems, and structural layout will be developed for deployment across multiple pump station sites to improve efficiency with design and construction times and reducing future maintenance costs for the City.

This scope of work and schedule includes effort for one (1) update to the stormwater model to re-establish level of service and/or design storm threshold for determination of ultimate sizing for pumps wet well, and other components.

For each site, CMA's team will be responsible for confirming the location and detailing the placement of all key components identified earlier in this section. Site grading needs will vary based on existing conditions and site-specific constraints. These may include adjustments to existing inflow and outfall piping to align with the proposed pump station configuration; limited available space within the public right-of-way (ROW); impacts to existing trees, canopies, and root systems requiring mitigation or restoration; and overall site restoration needs

New pump station sites are planned for the outfalls at Bruce, Laurel, Gardenia, Verbena, and Mango. Design will include the preparation of up to three (3) separate phase/bid document submittals for the proposed pump stations and one

(1) additional phase/bid document submittal for the proposed work at the existing Kipling Plaza pump station.

Pump Station Design

Pump Station shall be designed to the following key components:

- Design capacity: Pumps will be initially sized to provide pumping capacity to the maximum discharge rate available during a 25-year, 1-day storm event to avoid additional permitting requirements of the Southwest Florida Water Management District (SWFWMD) for each watershed area. The pump station wet well, generator pad, internal discharge piping, energy dissipation structure, and electrical panels will be designed such that the pump station site is scalable and can accommodate pumps that can achieve a higher level of service after such time that upgrades are made to the force main outfalls. City to advise during kickoff meeting in Task 1.5 which storm event the future pump station structures should be design to under future conditions.
- Flood Protection: Critical equipment including control panels and generators will be elevated above the FEMA flood elevation to protect against flooding during extreme storm events.
- Control Systems: Pumps are anticipated to use variable frequency drives (VFD) to adjust pump speeds based on real-time stormwater flow, optimizing energy consumption. Soft-starters will minimize the pump start required electrical current. Advanced SCADA (Supervisory Control and Data Acquisition) systems for real-time monitoring and control will be implemented. This includes sensors to measure flow rates, pump performance, and water levels, with the capability to expand monitoring for future needs.
- Power Supply: Install energy-efficient power systems including power generators. Electrical panel to remain above FEMA flood elevations.
- Stormwater Management Features: Site Design of Parcel to include Green Infrastructure with swale or provide additional water quality and storage to offset the additional impervious area of the pump station components to naturally manage stormwater and reduce inflow to the pump station.
- Community Impact: Design will aim to minimize disruption to the surrounding community. Future retrofits will be able to be designed to minimal interference with station operations and local infrastructure.
- Environmental Water Quality: The pump stations will include water quality control systems, such as sedimentation traps and oil-water separators, which can be expanded as part of future retrofits.
- Monitoring and warning system: The design will include rain monitoring and flood warning system. Rain gauges and sea level sensors with wi-fi capabilities shall be installed, with the necessary software for cloud-based access and data backup. Pump stations shall incorporate a wi-fi connection or equivalent alternative.

Task 2.1: 60% Design Submittal: CMA shall prepare the 60% Design Submittal for five (5) proposed stormwater pump stations. The 60% Design Submittal will include up to three (3) phases. CMA will prepare and submit the 60% Design Submittal to the City for review within forty five (45) calendar days.. This duration is dependent on final determination of pump configuration(s) for initial construction and future build-out scenario by the City. Any review comments from the City on the 60% Design Submittal are expected to be provided to CMA within fourteen (14) calendar days of the 60% Design Submittal, in order to maintain the project schedule. The fees for this task will be paid on a lump sum basis. The 60% Design Submittal shall include the following subtasks:

Task 2.1A: 60% Civil Engineering Design: CMA shall be responsible for all civil engineering design services necessary to prepare the 60% Design Submittal which shall include the following design documents:

- *Design Plans:* CMA will prepare 60% design drawings, which will consist of the existing condition plans, demolition plans, stormwater plans (plan view only), pump station design including design of mechanical components, and any relevant detail drawings.
- *Cost Estimate:* CMA will prepare a preliminary cost estimate of the probable construction costs which will reflect the proposed work included within the 60% Design Submittal. The cost estimate will also include elements designed in Tasks 2.1B, 2.1C and 2.1D.

Task 2.1B: 60% Tree Survey and Disposition Plans: CMA shall be responsible arborist services necessary to prepare the 60% Design Submittal which shall include the following design documents:

- *Tree Disposition Plans:* CMA shall be responsible for verification of the surveyed trees anticipated to be impacted by the proposed improvements. The 60% design drawings for each site are anticipated to include tree disposition plans meeting the minimum requirements set forth in the City's landscape code. This includes the tree evaluation criteria for tree disposition and screening requirements for landscape.

Task 2.1C: 60% Electrical Engineering Design: CMA will utilize our electrical engineering subconsultant, Metco Southeast, to begin to prepare designs for the electrical, instrumentation, and control components. Their scope will include:

- New Electrical Supply from the Utility Pole to the Panel at each site.
- New Electrical Panels at elevation consistent with flood control requirements.
- New Pump Control Panels (including VFDs, if applicable).
- New power and control cables between the pumps and the new panels.

- New power and control cables between the future fixed Generator and the ATS/Pump Control Panel.
- SCADA system including a PLC with a protocol capable of communicating for remote monitoring of the Pump Station.
- Metco will initiate communication and coordination with Duke Energy during this phase of design development.
- New rain monitoring and flood warning system components.
- Lighting design
- 60% Electrical Design Drawings will not be included in 60% submittal.

Task 2.1D: 60% Structural Engineering Design: CMA will utilize our structural engineering subconsultant, Structures International, to begin to prepare the structural designs for the base of the control panels and generators for up to five (5) stormwater pump stations. Their scope will include:

- Generator Foundation design, primarily of reinforced concrete construction.
- Foundation design to accommodate space for control panels.
- Design shall include guard rails and stairs.
- Top of slab (for generator and control panel) to be elevated 2 feet above base floor elevation (BFE).
- Pump station pits and energy dissipation structures.
- 60% Structural Design Drawings will not be included in 60% submittal.

Task 2.2: 90% Design Submittal: CMA shall prepare the 90% Design Submittal for five (5) proposed stormwater pump stations. Similar to the 60% Design Submittal, the 90% Design Submittal will include up to three (3) phases. CMA will address all City comments from the 60% Design Submittal and submit the 90% Design Submittal to the City for review within sixty (60) calendar days from receiving 60% design review comments from the City (after the completion of *Task 2.1: 60% Design Submittal*). Any review comments from the City on the 90% Design Submittal are expected to be provided to CMA within fourteen (14) calendar days of the 90% Design Submittal to maintain the project schedule. The fees for this task will be paid on a lump sum basis.

The 90% Design Submittal shall include all subtasks described in detail in *Task 2.1* including the following:

Task 2.2A: 90% Civil Engineering Design: CMA shall be responsible for all civil engineering design services necessary to prepare the 90% Design Submittal which shall include all tasks and documents noted in *Task 2.1A*, in addition to the following design documents:

- *Design Plans:* Stormwater plans (plan and profile views), paving and grading plans and maintenance of traffic plans.
- *Technical Specifications:* CMA will prepare technical specifications for the proposed work included within the 90% Design Submittal.

Task 2.2B: 90% Tree Disposition Plans: CMA shall be responsible for all arborist services necessary to prepare the 90% Design Submittal which shall include all tasks and documents noted in *Task 2.1B*.

Task 2.2C: 90% Electrical Engineering Design: CMA will utilize our electrical engineering subconsultant, Metco Southeast, to prepare the design plans for the electrical, instrumentation, and control components within the 90% Design Submittal. Their scope will include all tasks and documents noted in *Task 2.1C*.

Task 2.2D: 90% Structural Engineering Design: CMA will utilize our structural engineering subconsultant, Structures International, to prepare the structural design plans for the elevated control panels and generators for the 90% Design Submittal. Their scope will include all tasks and documents noted in *Task 2.1D*.

Task 2.3: Final Design Submittal: CMA shall prepare the Final Design Submittal for five (5) proposed stormwater pump stations. Similar to the 60% and 90% Design Submittals, the 100% Design Submittal will include up to three (3) phases. CMA will address all City comments from the 90% Design Submittal and submit the Final Design Submittal to the City within thirty (30) calendar days upon receiving permit approvals from all regulatory agencies *(Task 3.1)*. The fees for this task will be paid on a lump sum basis.

The Final Design Submittal shall include all subtasks described in detail in *Task 2.1* and *Task 2.2* including the following:

Task 2.3A: Final Civil Engineering Design: CMA shall be responsible for all civil engineering design services necessary to prepare the Final Design Submittal which shall include all documents and tasks noted in *Task 2.1A* and *Task 2.2A* in addition to the following design documents.

- *Bid Schedules:* CMA will prepare final bid schedules (separated into as many as four (4) separate bid packages), which will include all line items for the proposed work defined within the Final Design Submittal.

Task 2.3B: Tree Disposition Plans: CMA shall be responsible for all landscape architecture design services necessary to prepare the Final Design Submittal which shall include all documents and tasks noted in *Task 2.1B* and *Task 2.2B*.

Task 2.3C: Final Electrical Engineering Design: CMA will utilize our electrical engineering subconsultant, Metco Southeast, to prepare the Final Design Submittal for the electrical, instrumentation, and control components which shall include all documents and tasks noted in *Task 2.1C* and *Task 2.2C*.

Task 2.3D: Final Structural Engineering Design: CMA will utilize our structural engineering subconsultant, Structures International, to prepare the structural design plans for the elevated control panels and generators for the Final Design Submittal. Their scope will include all tasks and documents noted in *Task 2.1D* and *Task 2.2D*.

Task 2.4: New Elevated Generator and Elevating Existing Control Panels at Kipling Plaza Pump Station: The work shall include raising the electrical panels to meet FEMA base flood elevation, or elevation indicated by the City, rerouting the associated conduit and cable to match, SCADA design, design of a generator system sized to appropriately handle the operating load of the pump station, associated foundation(s) and platform(s), trench and asphalt restoration with regrading isolated around the proposed work, and landscape architecture services, including renderings produced at the 60% design phase, to shield elevated control panels from public view. Full roadway regrading is not included in scope.

The scope of services for this design will include design plans, cost estimate, and technical specifications to be included as part of the base scope of the 60%, 90%, and 100% Design Submittals *(*Tasks 2.1 through 2.3*)*. Design plans will include existing conditions; proposed civil plans; proposed structural plans; proposed electrical, instrumentation, and control components plans; restoration plan; and all associated notes and details. Design alternative scope excludes survey, test holes, and geotechnical services. The fees for this task will be paid on a lump sum basis. This work will be included with the first Bid Package for the proposed pump stations designed as part of Task 2.

Task 2.5: Bidding Services: CMA will assist the City with the preparation of the bid advertisement and bid documents for up to four (4) bid/phases. CMA's scope and fee reflect that all four contract/bid documents will be advertised, bid, and awarded concurrently. CMA will be responsible for preparing the final bid plans, the final bid specifications, and final bid schedule for each phase. The City shall be responsible for the preparation of the standard front-end documents with the bid requirements. CMA will provide the City with any relevant project information for incorporation into the front-end bid documents. CMA will attend the Pre-Bid Meeting and will answer all questions and clarifications from potential bidders that are technical in nature. CMA will respond to all written questions requesting clarification of the technical documents for this project. The City shall be responsible for bid advertisement, distribution of bid documents to interested bidders, processing all bid submittals, and verification that each bid submittal meets all Purchasing related requirements. CMA will review the final bid results and make a recommendation for bid award. CMA shall evaluate the qualifications and prior project performance of the low bidder. CMA shall prepare and submit a bid recommendation letter to the City. CMA shall complete this task according to the schedule defined by the City for the bidding process. The fees for this task will

be paid on a lump sum basis. CMA will invoice the prorated amount per bid (up to 4), and reserve as credit to the contract the prorates for less than 4 bids.

III. PERMITTING, GRANT FUNDING, LANDSCAPE ARCHITECTURE SERVICES:

Task 3.1: Regulatory Permitting: CMA's subconsultant Applied Sciences (AS) will obtain, review, and complete permit applications and will prepare backup documentation required by the regulatory permitting agencies. AS will be responsible for coordination with all regulatory agencies during the permitting process. AS will send the application forms to the City for signature along with dollar amount(s) for all permit and application fees. Fees shall be paid directly to the regulatory agencies by AS through allowance task 8.1. AS shall submit all required permit applications to the relevant regulatory agencies. The regulatory agencies typically complete their initial review within thirty (30) calendar days after the permit submittal. Upon obtaining review comments from the regulatory agencies, AS will revise applications, and CMA will revise plans, and technical specifications as per comments from these regulatory agencies and re-submit to the regulatory agencies for permit approval. AS will submit one (1) permit application package per required permit for the base scope identified in Task 2, that will encompass the entire scope of the project.

CMA and AS expect to need the following permit approvals for this project:

- *Surface Water Permitting:* AS shall obtain the relevant surface water permit required for the proposed stormwater improvements within the project area. AS shall coordinate with SWFWMD and submit for the permit exception with any relevant documents required for the exemption. CMA shall update the design plans based on any review comments received from SWFWMD during the permitting process.
- *Water Use Permitting:* AS shall obtain the relevant water use permit required for the dewatering activities needed during construction within the project area. The associated geotechnical analysis will be covered by the geotechnical services being performed by the City's contractor or via the allowance Task 8.10. CMA shall update the design plans based on any review comments received from SWFWMD during the permitting process.
- *City Building Permitting:* AS shall obtain the relevant roadway permits required for the proposed improvements within the project area. AS shall submit the design plans to the City for a Building Permit through the Accella platform for a "dry run" review of the landscaping, irrigation, and structural components of the proposed improvements as well as the Maintenance of Traffic Plans. AS shall submit one (1) permit application package, per required permit, to the local City agency for approval, as necessary. CMA shall update the plans based on any review comments received during the permitting process.

- *U.S. Army Corps of Engineer (USACE):* AS shall submit an email to USACE with exhibits of our site plans to confirm that these projects are not within their jurisdiction and exempt from any permitting requirements.
- *Pinellas County Coastal Management:* A permit from Pinellas County Coastal Management is not anticipated based on the scope of work of this work order. AS will hold a pre-application meeting with Pinellas County Coastal Management to confirm.

The permit approvals can typically be expected within ninety (90) calendar days of submittal to the regulatory agencies. All required permit approvals must be obtained from the regulatory agencies prior to submitting the Final Design Submittal to the City. The fees for this task will be paid on a time and material basis.

Task 3.2: Grant Support: CMA will utilize our sub, Brizaga, to perform grant support for the City. Brizaga will research available grants and provide support in developing grant applications, as outlined below.

Consultant will develop a funding memorandum that outlines potential grants and other funding opportunities specifically suited for the North Beach pump stations being designed as part of this WO1. This memorandum will identify relevant and most eligible local, state, and federal grant programs, as well as other funding sources that align with the project's goals. For each identified funding opportunity, the consultant will provide a brief analysis of eligibility criteria, application deadlines, funding amounts, and strategic recommendations on the best approach for securing these funds. The memorandum will serve as a strategic guide, equipping project stakeholders with a roadmap for obtaining the necessary financial resources to initiate this phase of the project. This memorandum will also consider the broader project and how these elements fit into an overall Funding Strategy for the North Beach Stormwater and Tidal Improvements Project, discussed in more detail in Task 5.1.

Consultant will assist the City with the reapplication for the 2026-2027 Resilient Florida Grant and develop two (2) additional comprehensive grant applications, which include crafting the overall application strategy, drafting the application text, and completing all necessary forms. Consultant will incorporate all documents into the grant applications to ensure alignment with funding requirements and to support the application's narrative and objectives. The consultant will also ensure that all elements meet submission guidelines and reflect a cohesive and persuasive case for funding. Additional detailed analysis required for the permit application is not included in this task.

Consultant will assist the City in managing grant(s) throughout duration of award to include strategy and completing all necessary forms required for the grant agency. Consultant will assist with grant stacking if required.

These services will be provided on a time and material basis.

Task 3.3: Landscape Architecture Services for Pump Station Sites: CMA shall be responsible for landscape, irrigation, and hardscape screening alternative development for the pump station sites as directed by the City. If included as part of the pump station design, these services are anticipated to be completed in parallel with the pump station(s) final design and include the following milestone submittals.

Task 3.3A: 60% Landscape Architecture Design: CMA shall be responsible for all landscape architecture design services necessary to prepare the 60% Design Submittal which shall include the following design documents:

- *Design Plans:* The 60% design drawings for each site are anticipated to include landscape plans, both meeting the minimum requirements set forth in the City's landscape code. This includes the tree screening requirements for landscape. Due diligence for irrigation points of connection associated with proposed landscape shall be included with the 60% Design Submittal.
- *Renderings:* CMA shall be responsible for photo-documentation of each site and overlay of photo-realistic rendering of proposed design elements for a select view for demonstration of the intended design. Two alternatives of *Before* and *After* images will be provided for each scoped site, (five (5) total included). Renderings will consider perimeter wall and gate screening and/or other screening options as selected by the City.

Task 3.3B: 90% Landscape Architecture Design: CMA shall be responsible for all landscape architecture design services necessary to prepare the 90% Design Submittal which shall include all tasks and documents noted in *Task 3.3A*, excluding renderings, in addition to the following design documents:

- *Design Plans:* Irrigation plans and details suitable for the 90% Design Submittal. All technical specifications for landscape architecture plans will be included within the plan set. Hardscape design plans for selected in-plain sight screening of pump station sites.
- Task 3.3C: Final Landscape Architecture Design: CMA shall be responsible for all landscape architecture design services necessary to prepare the Final Design Submittal which shall include all documents and tasks noted in *Task 3.3A* and *Task 3.3C*, excluding renderings.

These tasks shall be provided on a time and material basis as authorized by the City.

IV. CONCEPTUAL STORMWATER IMPROVEMENTS DEVELOPMENT:

Two of the primary goals of this work order are to lay out a grant funding and permitting strategy and baseline schedule for stormwater infrastructure improvement implementations. Before we can accomplish these however, the

City and CMA need to come to consensus on the types of improvements that we will be targeting for the various tributary basins within the North Beach Area. This portion of the scope of work focuses on developing an assortment of component improvements that could be implemented individually or in some combination with one another and finally achieving consensus with City leadership for which combination of stormwater infrastructure improvements will be carried forward into Preliminary Design (future work order(s)).

Task 4.1: Conceptual Stormwater Improvement Alternatives Development:

Task 4.1A: Conceptual Alternative Development: CMA and its Subconsultant partners will utilize available data and City input to define evaluation metrics for evaluating solutions in each of the twelve (12) tributary basins in North Beach. Constraints, opportunities, and unique characteristics of each basin affecting infrastructure improvement solution feasibility will be identified and documented.

Potential stormwater infrastructure improvement solutions will be evaluated from a conceptual level focused on macro level benefits to the individual basin and greater area.

Improvement options will include, but are not limited to:

- Swales, bioswales
- Additional stormwater pumps
- Upgraded underground conveyance systems
- Basin interconnectivity
- One-way roads to increase green areas
- Stormwater detention in City right of ways and properties
- Roadway grade adjustment recommendations
- Tidal Barrier improvements
- Other innovative approaches
- Phasing

The existing StormWise (ICPRv4) model may be utilized to assess performance of select improvement options during design storm events as appropriate. Model runs to be limited to a total of twenty (20) model alternatives that are compared against the level of service goals established in Task 1.5. Runs are to be presented to City staff prior to execution for City's pre-approval. The intention of this task is to have a high-level expectation for each improvement solution's impact on achieving the desired level of service.

A GIS plan view schematic will be prepared for each of the twelve basins displaying all improvement options modeled. Plan view will be limited to displaying available GIS data such as aerial imagery, parcel lines and City utility data available in GIS to view possible conflicts. One profile schematic will be prepared to display the conveyance system upgrade alternative in the lowest basin.

CMA and its subconsultants will review Shoreline Improvements Alternatives to determine the degree of work needed in or over the water to determine which seawall and nature-based solution is available and recommended.

High-level cost estimates, including contingencies for water quality structures to meet new SWFWMD water quality standards will be developed for each improvement solution provided in the Draft Conceptual Alternatives Matrix.

CMA's subconsultant, Applied Sciences will provide a quality control audit of the alternatives and cost estimates developed.

Task 4.1B: Refinement of Alternatives Matrix & Basin Solutions: CMA and its Subconsultants will meet with City staff to solicit input regarding the Draft Conceptual Alternatives Matrix. As a result of this meeting, the Conceptual stormwater improvement solutions identified for each basin will be narrowed down to a maximum of three (3) preferred solutions based on performance metrics, constructability, and budget constraints. Scope assumes a total of fifteen (15) total solutions will be advanced for further analysis across all basins. CMA and its subconsultants will work through two (2) rounds of written comments with the City's Project Team on the Conceptual Alternatives Matrix.

CMA and its Subconsultants will analyze the water quality requirement for each basin per the requirements of the new statewide stormwater rule and calculate the water quality volume available for each alternative for inclusion in the matrix.

Regular Bi-Weekly coordination meetings, noted in Task 1.4 above, will occur during the overall development of the Conceptual Alternatives and Conceptual Alternatives Matrix.

Task 4.1C: Cost-Benefit Analysis of Preferred Alternatives: CMA and its Subconsultants will refine the recommendations for the refined group of stormwater improvement solutions that was mutually decided upon from Task 4.1B above. It is assumed that the refined group of preferred alternatives would be a maximum of fifteen (15) alternatives that are carried forward from the previous tasks. It is assumed that no new alternatives will be analyzed as part of this Task.

This task will include:

- The existing StormWise model results will be used to conduct a detailed cost-benefit analysis of the refined conceptual alternatives moving forward from Task 4.1B.
- Comparisons of expected performance improvements vs. implementation costs across all basins will be refined.
- Conceptual solutions will be ranked in order of the most cost-effective solutions for implementation.
- Initial grant detail requirements and permitting considerations will be noted for consideration related to final determination of which conceptual

improvement alternatives are chosen to move forward into Preliminary and Final Design.

Task 4.2: City Workshop to Determine Preferred Alternatives: Upon completion of the Conceptual Alternatives Matrix, CMA and the City Project Manager will convene a workshop with City Officials to review the recommendations of the Project Team and begin the discussion regarding strategies for grand funding and permitting timelines for implementation of recommended improvements.

The goal of this meeting is to obtain agreement with City Officials on the overall scope of stormwater infrastructure improvements that will be pursued in the North Beach Community to achieve the desired outcomes and storm mitigation goals discussed as part of Task 1.5. The City shall approve workshop attendees in advance of said workshop.

These tasks shall be provided on a time and material basis as authorized by the City.

V. GRANT FUNDING AND PERMITTING ROADMAP:

Task 5.1: Grant Funding and Permitting Roadmap: CMA will utilize our subconsultants, Brizaga and Cummins Cederberg to identify applicable grant funding opportunities and outline permitting requirements for each proposed infrastructure improvement solutions. These opportunities and requirements will be combined to develop a roadmap for a high-level implementation timeline for proposed infrastructure improvement.

Task 5.1A: Grant Funding Options: Brizaga will develop a funding memorandum that outlines potential grants and other funding opportunities specifically suited for the North Beach Improvements. This memorandum will identify relevant and most eligible local, state, and federal grant programs, as well as other funding sources that align with the project's goals. For each identified funding opportunity, the consultant will provide a brief analysis of eligibility criteria, application deadlines, funding amounts, and strategic recommendations on the best approach for securing these funds. The memorandum will serve as a strategic guide, equipping project stakeholders with a roadmap for obtaining the necessary financial resources to initiate this phase of the project.

Task 5.1B: Permitting Requirements/Restrictions: Cummins Cederberg will develop a permitting memorandum that outlines the local, state, and federal regulatory agency requirements for each of the proposed infrastructure improvement solutions under consideration. Permit requirements, limitations, and approximate permitting timelines will be tabulated for the recommended alternatives. Additional permitting considerations will be highlighted.

Task 5.1C: Grant Funding and Permitting Roadmap: Develop a high-level implementation timeline including:

- Grant applications
- Preliminary design
- Permitting
- Final design
- Construction solicitation

Special consideration will be given to multiple phased implementation schedules as needed based on funding and/or permitting constraints as well as opportunities for grant stacking and fund braiding to maximize grant proceeds compared to initial investment by the City.

Task 5.1D: City coordination: CMA and it's Subconsultants will coordinate with the City and will work through two (2) rounds of written comments with the City's Project Team on the Grant Funding and Permitting Roadmap. Regular Bi-Weekly coordination meetings, noted in Task 1.4 above will occur during the overall development of the Grand Funding and Permitting Roadmap. Elements discussed during these regular check-in calls shall not be considered formal comments.

These tasks shall be provided on a time and material basis as authorized by the City.

VI. FINAL CITY WORKSHOP AND FUTURE WORK ORDER PLANNING:

Task 6.1: Final City Workshop: CMA and its Subconsultants, as appropriate, will attend a workshop with City officials to align the Conceptual Alternatives Matrix and Grant Funding and Permitting Roadmap with one another, re-affirm consensus on preferred stormwater infrastructure improvement alternatives to advance forward and the timeline for implementation. As part of this workshop, the framework for future work orders that will enable this implementation to occur will be outlined. Fees for these services will be paid on a time and material basis. The City shall approve workshop attendees in advance of said workshop.

VII. ALTERNATIVES SERVICES:

The City may decide to implement the following scopes, on top of the base scope presented in Sections I through VII. These alternatives include:

- Conveyance System Redundancy Interconnections
- Pump Station design at the Carlouel Outfall
- Permitting Selected Alternative Services

The fees associated with the Alternative Services presented herein assume that the designs are progressed on the same timeline as the Base Scope of Services elements.

These Alternative Service elements will require topographic survey, geotechnical investigation, and SUE services as part of their final design process. In order to complete these designs on the same timeline as the Base Scope of Services, City

authorization for these Alternative Services, in part or in whole, shall be provided at NTP for the overall Work Order.

Task 7.1: Gravity Sewer Redundant Interconnections: The City may decide to implement the design of additional gravity sewer pipe interconnection between the basins in the North Beach Area in an effort to provide redundancy of the stormwater system or to eliminate the need of a pump station in one or more basins. The interconnect shall follow the shortest route between these two systems, assumed to be pipe(s) between 18- and 24-inches. CMA will design not more than 2,300 linear feet of redundancy piping. Design will include stormwater pipes and inlets and trench restoration with regrading isolation around the proposed inlets. Design will also include check valves (if necessary) to avoid backflow from higher sub-basins. Design will also include percolating inlet when interconnection ends at a lower invert than existing receiving inlet. Full roadway regrading will not be included in scope.

The scope of services for this pipe interconnection design alternative will include design plans, cost estimate, and technical specifications to be included as part of the base scope of the 60%, 90%, and 100% Design Submittals *(*Tasks 2.1 through 2.3*)*. Design plans will include existing conditions, proposed drainage plan view, proposed drainage profiles (90% and 100% Design Submittals), restoration plan, and all associated notes and details. Design alternative scope excludes survey, test holes, and geotechnical services.. The fees for this task will be paid on a lump sum basis.

Task 7.2: Carlouel Pump Station Final Design: The City may decide to install a scalable pump station site at the existing Carlouel gravity sewer outfall location. This work shall include the final design for a pump station at the Carlouel outfall.

The scope of services for this design alternative will include design plans, cost estimate, and technical specifications to be included as part of the base scope of the 60%, 90%, and 100% Design Submittals *(*Tasks 2.1 through 2.3*)*. Design plans will include existing conditions; proposed civil plans; proposed structural plans; proposed electrical, instrumentation, and control components plans; restoration plan; and all associated notes and details. Design alternative scope excludes survey, test holes, and geotechnical services. Design for this pump station assumes use of pump and structural components that are the same size as one of the base scope pump stations. No new pump specifications or structural design is included. It is assumed that this pump station would be designed on the same schedule as the other five (5) pump station sites. The fees for this task will be paid on a lump sum basis. This work, if designed, will be included with one of the Bid Packages for the proposed pump stations designed as part of Task 2.

Task 7.3 Permitting Alternative Services: CMA's subconsultant Applied Sciences (AS) will obtain, review, and complete permit applications and will prepare backup documentation required by the regulatory permitting agencies. AS will be

responsible for coordination with all regulatory agencies during the permitting process. AS will submit one (1) permit application package any selected Alternative Services scope items that the City elects to move forward through final design. AS will send the application forms to the City for signature along with dollar amount(s) for all permit and application fees. Fees shall be paid directly to the regulatory agencies by AS through allowance task 8.1. AS shall submit all required permit applications to the relevant regulatory agencies. The regulatory agencies typically complete their initial review within thirty (30) calendar days after the permit submittal. Upon obtaining review comments from the regulatory agencies, AS will revise applications, and CMA will revise plans, and technical specifications as per comments from these regulatory agencies and re-submit to the regulatory agencies for permit approval.

CMA and AS expect to need the following permit approvals for this project:

- *Surface Water Permitting:* AS shall obtain the relevant surface water permit required for the selected Alternative Services. AS shall coordinate with SWFWMD and submit an ERP (Environmental Resource Permit) individual permit with all relevant documents required. CMA shall update the design plans based on any review comments received from SWFWMD during the permitting process.
- *Water Use Permitting:* AS shall obtain the relevant water use permit required for the dewatering activities needed during construction for the selected Alternative Services. The associated geotechnical analysis will be covered by the geotechnical services being performed by the City's contractor or via the allowance Task 8.10. CMA shall update the design plans based on any review comments received from SWFWMD during the permitting process.
- *City Building Permitting:* AS shall obtain the relevant roadway permits required for the selected Alternative Services. AS shall submit the design plans to the City for a Building Permit through the Accella platform for a "dry run" review of the landscaping, irrigation, and structural components of the proposed improvements as well as the Maintenance of Traffic Plans. AS shall submit one (1) permit application package, per required permit, to the local City agency for approval, as necessary. CMA shall update the plans based on any review comments received during the permitting process.

The permit approvals can typically be expected within ninety (90) calendar days of submittal to the regulatory agencies. The fees for this task will be paid on a time and material basis.

VIII. ALLOWANCES:

All allowances with the exception of Task 8.1 are subconsultant services. Should any of these services be requested by the City, items will be billed as noted with each Task in this section. CMA will include copies of our subconsultant invoices as

part of our monthly invoice(s) associated with this work. CMA's time associated with the administration of this work will be billed on a time and material basis through Task 1.3. Subconsultant proposals for the work associated with these subtasks shall be presented to and approved by the City prior to commencing any of the Allowance services.

Task 8.1: Permit Fees: Per the City's direction, permit fees will be paid for by the Consultant and reimbursed by the City. This task is to cover any anticipated permit fees for the scope of services that may arise during the duration of the project.

Task 8.2: Additional Grant Application Assistance: Per the City's direction, CMA's Subconsultant, Brizaga, will assist the City with the development of up to four (4) additional comprehensive grant applications, which include crafting the overall application strategy, drafting the application text, and completing all necessary forms. Consultant will incorporate all documents into the grant applications to ensure alignment with funding requirements and to support the application's narrative and objectives. The consultant will also ensure that all elements meet submission guidelines and reflect a cohesive and persuasive case for funding.

Consultant will assist the City in managing each grant throughout duration of award to include strategy and completing all necessary forms required for the grant agency. Consultant to assist with grant stacking if required.

This Task is to cover to cover the costs associated with this work. Allowances for grant application assistance will be issued on an individual grant application basis, thus fees allocated to this task will be prorated per grant.

Task 8.3: Scour Analysis: CMA will utilize our coastal and marine engineering subconsultant, Cummins Cederberg, to conduct a scouring analysis for the outfalls. Cummins Cederberg will conduct a scour analysis for up to six (6) outfalls, each evaluated under three (3) varying discharge rates. The analysis will address three different outfall sizes, with pump stations taken into consideration for the design. Cummins Cederberg will utilize the Hydraulic Design of Energy Dissipators for Culverts and Channels as outlined in Highway Engineering Circular No. 14 (HEC 14) as the basis for this analysis. Cummins Cederberg will conduct 45 calculations (based on 6 outfalls with 3 different outfall sizes and 3 iterations per outfall) to assess scour hole geometry, time of scour, and equilibrium scour depth, considering critical factors such as discharge, culvert slope, culvert height above the bed, and tailwater depth. These calculations, designed to represent worst-case scour geometries, will guide the evaluation of local scour conditions at the outfall outlets, providing insights into potential scour risks.

Cummins Cederberg will prepare an engineering report (in PDF format) documenting the results of the scour analysis and recommendations for scour mitigation strategies. Figures illustrating the results will be incorporated within the report, including a plot of the estimated scour conditions. The report will be signed and sealed by a Florida Licensed Professional Engineer.

Task 8.4: Site Survey – Gravity Sewer Interconnections: This Task establishes an allowance for CMA's subconsultant ECHO UES, for survey needs at gravity sewer system interconnections. This task will cover site survey for up to six (6) gravity sewer interconnection sites.

Task 8.5: Site Survey - Allowance: This task establishes an allowance for CMA's subconsultant ECHO UES, for site survey for a new pump station site at the Carlouel outfall, work associated with the Kipling Plaza existing pump station site, or unforeseen additional survey needed for up to six (6) pump stations being designed as part of the base scope for this Work Order.

Task 8.6: Subsurface Utility Engineering – Base Scope Pump Station: This task establishes an allowance for CMA's subconsultant ECHO UES, for performance and documentation associated with subsurface utility engineering (SUE) test holes that are needed to confirm the location of existing buried utilities at the six (6) pump station sites. This task assumes an average of four (4) test holes are needed at each project site for a total of twenty-four (24) SUE test holes. The fee for this task will be paid as a lump sum per test hole performed and documented.

Task 8.7: Subsurface Utility Engineering –Gravity Sewer interconnections: This task establishes an allowance for CMA's subconsultant ECHO UES, for performance and documentation associated with subsurface utility engineering (SUE) test holes that may be needed to confirm the location of existing buried utilities at up to six (6) gravity sewer pipe interconnection sites detailed in Task 7.1. This task assumes an average of four (4) test holes are needed at each project site for a total of twenty four (24) SUE test holes. The fee for this task will be paid as a lump sum per test hole performed and documented.

Task 8.8: Subsurface Utility Engineering – Kipling Plaza Pump Station Improvements: This task establishes an allowance for CMA's subconsultant ECHO UES, for performance and documentation associated with subsurface utility engineering (SUE) test holes that may be needed to confirm the location of existing buried utilities at the existing Kipling Plaza pump station site related to the work outlined in Task 2.4. This task assumes four (4) test holes are needed at the project site. The fee for this task will be paid as a lump sum per test hole performed and documented.

Task 8.9: Subsurface Utility Engineering - Allowance: This task establishes an allowance for CMA's subconsultant ECHO UES, for performance and documentation associated with subsurface utility engineering (SUE) test holes that may be at other locations where infrastructure designs are being completed as part of this Work Order at the City's direction. This task includes an allowance for an additional twenty four (24) SUE test holes. The fee for this task will be paid as a lump sum per test hole performed and documented.

Task 8.10: Geotechnical Investigation – Base Scope Pump Station and Interconnection: This task establishes an allowance for CMA's subconsultant,

Arehna Engineering to obtain up to ten (10) Standard Penetration Test (SPT) borings to a depth of 20-ft each. Borings will be performed at each pump station on gravity sewer pipe interconnection site.

Task 8.11: Geotechnical Investigation – Scour Analysis: This task establishes an allowance for CMA's subconsultant, Arehna Engineering to obtain material samples and perform sieve analysis for grain size distribution at the existing outfall locations. The water depth at each outfall location will need to be collected as part of this investigation as well. This information is needed by CMA's subconsultant Cummins Cederberg for them to be able to perform Task 8.3.

IX. CONTINGENCY:

Task 9.1: 10% Contingency: Per the City's direction, a 10% continency is being added to cover any anticipated additional services requested outside of this scope of services that may arise during the duration of the project. The City must approve in writing the use of any contingency money prior to the work being done by the Consultant. The fees for this task will be paid on a time and material basis.

3. PROJECT DELIVERABLES:

- Up to six (6) pump station sites:
    - Design Plans Submittal (60%, 90%, 100%) to include PDF format, Digital AutoCAD format.
    - Technical Specifications Submittals (90%, 100%) in PDF & MS Word format.
    - Cost Estimate Submittals (60%, 90%, 100%) in PDF & Excel format.
    - Design calculation, complete with pump design curves (100%) in PDF format.
    - Calculation and summary spreadsheets in PDF and Excel format (excel files to include formulas).
    - Hydraulic models: input/output reports in pdf, software files.
    - QA/QC Certification (60%, 90%, 100%)
    - Permit applications, permitting agency comments and CMA's responses.
    - Bidding Award Recommendation Letter in PDF format.
    - 2 renderings of infrastructure in plain sight for pump station elevated equipment.
- Conceptual Stormwater Improvement Alternatives Matrix, separated by tributary basin.
- Conceptual level cost estimates for the conceptual design alternatives represented in the Alternatives Matrix.
- Grant funding alternatives and recommendations.
- Regulatory permitting considerations and conceptual approval timelines.

4. FEES:

Refer to Attachment A

Chen Moore and Associates, Inc. for the completion of these tasks will be compensated in accordance with a combination of Professional Services Method "A" – Time and Materials, Not to Exceed and Professional Services Method "B" – Lump Sum as detailed in Attachment A in the total amount of one million one hundred seventy seven thousand and seven hundred and ninety eight dollars and no cents ($1,177,798.00).

5. SCHEDULE:

The schedule for the scope outlined in this work order anticipated to be phased as follows:

The final design and permitting for the new pump stations and the modifications to the Kipling Plaza pump station are to be completed in accordance with the schedule below following issuance of Notice to Proceed (NTP) from the City. The project deliverables are anticipated to be phased and durations shown are per phased set of deliverables.

Task 1: Project Management / Pre-Design Phase:	**Concurrent with Final Design and Permitting**
Task 2: Final Design for Pump Stations and Basin Interconnect	
2.1 60% Design:	**45* calendar days**
60% Design Review by City	**14 calendar days**
2.2 90% Design:	**60 calendar days**
90% Design Review by City	**14 calendar days**
2.3 Final Design:	**30 calendar days**
2.4 Kipling Plaza PS:	**Concurrent with tasks 2.1-2.3**
2.5 Bidding Services:	**TBD**
Task 3: Regulatory Permitting & Grant Assistance	**Concurrent with Task 2**
Task 4: Conceptual Stormwater Improvements Development	
4.1 Alternatives Development	**100 calendar days**
4.2 Alternatives Workshop	**7 calendar days**
Task 5: Grant Funding and Permitting	**60 calendar days**
Task 6: Final Workshop and Future Planning	**7 calendar days**

Task 7: Alternative Services	**TBD**
Task 8: Allowances	**N/A**
Task 9: Contingency	**N/A**

* Final Design of pump station sites to commence after NTP and the City has provided direction on the pump size(s) and configuration(s) to be installed as well as the pump size(s) and configuration(s) under consideration for sizing of the structural components of the station.

Time is of the essence with respect to SWFWMD permitting for these project improvements. CMA's scope and fee for the final design elements of this project assume that permits from SWFWMD will be received on or before December 31st, 2025, before the grace period exempting applicants from complying with the new stormwater water quality and operation and maintenance requirement rules that went into effect on July 1st, 2024 expires. Additional scope and fee and likely additional infrastructure improvements will be required to comply with these new rules if permitted after December 31st, 2025.

6. STAFF ASSIGNMENT:

City Project Manager – Angel Rivera, PE
City Engineer - Tara Kivett, PE
CMA Principal – Peter Moore, PE
CMA Project Manager – Benjamin Lehr, PE
CMA Principal Engineer – Jennifer Smith, PE
CMA Senior Engineer – Stephanie Long-Marquez, PhD, PE
CMA Senior Engineer – Robert Best, PE
CMA Project Engineer – Charmaine Emanuels, PE
CMA Associate Engineer – Craig Wallander, PE
CMA Subconsultants – Applied Sciences, Arehna Engineering, Brizaga, Cummins Cederburg, ECHO UES, Metco Southeast Consulting Engineers, and Structures International.

7. CORRESPONDENCE/REPORTING PROCEDURES:

Consultant's project correspondence shall be directed to:

Benjamin Lehr, PE

Peter Moore, PE

All City project correspondence shall be directed to:

Angel Rivera, PE

Samantha Reilly, EI

Tara Kivett, PE

8. INVOICING/FUNDING PROCEDURES:

City Invoicing Code: ENST240001 DSGN-PROSVC

For work performed, invoices shall be submitted monthly to:

ATTENTION: JAMIE GAUBATZ, ACCOUNTANT II
CITY OF CLEARWATER, PUBLIC WORKS DEPARTMENT/ENGINEERING
PO BOX 4748
CLEARWATER, FLORIDA 33758-4748

9. INVOICING PROCEDURES:

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

1. Purchase Order, Project and Invoice Numbers and Contract Amount.
2. The time period (begin and end date) covered by the invoice.
3. A summary of activities completed in the time period per sub-task.
4. Contract billing method – Lump Sum or Hourly Rate.
5. If Lump Sum, the percentage completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
6. If Hourly Rate, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, the percent completion, total earned to date for each task and other direct costs (receipts will be required for any single item with a cost of $50 or greater or cumulative monthly expenses greater than $100).
7. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. CONSIDERATIONS:

Consultant acknowledges the following:

1. The Consultant named above is required to comply with Section 119.0701, Florida Statutes, where applicable.
2. All City directives shall be provided by the City Project Manager.
3. “Alternate equals” shall not be approved until City Project Manager agrees.
4. All submittals must be accompanied by evidence that each has been internally checked for QA/QC before providing to City.

5. Consultants/Contractors are not permitted to use City-owned equipment (i.e., sampling equipment, etc.).
6. Documents posted on City website must be ADA accessible.

11. ADDITIONAL CONSIDERATIONS:

All work orders should include considerations for the following:

1. Sea Level Rise and Flood Resilience, as applicable.
2. Submittal of a Critical Path Method (CPM) Schedule(s).
3. Submittal of a Project Catalog with the following items, as appropriate:
    a. Data requests, assumptions, critical correspondence, meeting agenda, sign-in sheets, meeting minutes, document comment-response log(s), technical memorandum/reports, addenda, progress reports, regulatory correspondence, and other project-related documents.
    b. If construction project, also include design plans, conformed plans, change orders, field orders, RFIs, work change directives, addenda, progress reports, shop drawing and progress submittals, as-builts, record drawings, and other project-related documents such as O&M manuals and warranty information.
    c. At the conclusion of the project, ENGINEER will combine this information into a Project Catalog and submit to the City for review and comment.
4. Arc Flash labeling requirements:
    a. All electrical designs and construction shall adhere to NFPA 70 E “Standard for Electrical Safety in the Workplace”.
    b. Updated calculations of Fault and Arc Flash, and provisions for new or updated Arc Flash equipment labeling shall be included in the contract documents.

12. SPECIAL CONSIDERATIONS:

- The work products developed in Tasks 5 and 6 are conceptual in nature and are not intended to be utilized for construction of any of the improvements recommended. Only Final design of the initial five (5) pump stations and one (1) gravity sewer interconnect are to be constructed as part of this work order.
- CMA’s base scope does not include topographic survey or geotechnical investigation and testing services. Allowances are included to provide topographical survey and geotechnical investigation and testing to CMA and its subconsultants if a need arises. Subsurface utility test hole data collection is also not included in CMA’s base scope and allowances are included for the gathering

of subsurface utility test hole data at the relevant pump station and gravity pipe interconnect locations.

- To meet the design and permitting schedule, the City will complete their design reviews within ten (10) working days.
- City to provide the required access to the project sites.
- Public Involvement is not included as part of this scope of services.
- City to provide the required access to the project sites.
- Generators are expected to be of same brand (size may vary).
- This base scope assumes that no direct impacts to protected benthic resources (i.e., seagrass, corals) will occur in association with the proposed project. If it is determined that direct resource impacts will occur, then additional permitting efforts may be required, including the development of a mitigation plan. These additional permitting efforts are not included in this scope but may be provided as additional services to this contract.
- The design of scour protection is not included in this scope.
- A Pinellas County Coastal Management permit is not anticipated and is not included.
- Communication network design, PLC, or any other device programming are not included and will be by others.
- Construction Phase Services are limited and do not include full-time onsite inspection services above and beyond the those services identified in the scope of Task 4.3.
- Scope for Structural Design of generator foundation base is presumed to have soils suitable to support conventional shallow foundation.

13. SIGNATURES:

PREPARED BY:

Peter M. Moore, P.E.
President and CEO
Chen Moore and Associates, Inc.

06/12/2025
Date

APPROVED BY:

Tara Kivett, P.E.
City Engineer
City of Clearwater

Date

CONSULTANT WORK ORDER

PROJECT FEES TABLE

Task	Description	Subconsultant Services	CMA Services	Total
1.0	**Project Management**			
1.1	Project Management Plan		$14,800.00	$14,800.00
1.2	Progress Reports		$6,360.00	$6,360.00
1.3	Coordination		$23,750.00	$23,750.00
1.4	Meetings		$13,920.00	$13,920.00
1.5	Kickoff Workshop with City	$6,000.00	$6,920.00	$12,920.00
1.6	Direct Material Purchase Assist.		$10,220.00	$10,220.00
	Project Management Subtotal (T&M NTE):			**$81,970.00**
2.0	**Final Design of Pump Stations and Kipling Plaza Pump Station Upgrades**			
2.1	60% Design Submittal	$36,500.00	$90,520.00	$127,020.00
2.2	90% Design Submittal	$60,500.00	$59,570.00	$120,070.00
2.3	Final Design Submittal	$24,000.00	$35,920.00	$59,920.00
2.4	Elevated Generator & Control Panel – Kipling Plaza	$22,000.00	$15,410.00	$37,410.00
2.5	Bidding Services	$4,000.00	$13,600.00	$17,600.00
	Final Design of Pump Stations and Kipling Plaza Subtotal (LS):			**$362,020.00**
3.0	**Permitting, Grant Funding, Landscape Architecture Services**			
3.1	Regulatory Permitting	$12,500.00	$3,820.00	$16,320.00
3.2	Grant Support	$29,675.00	$1,760.00	$31,435.00
3.3	Landscape Architecture for Pump Station Sites	$20.000.00	$49,200.00	$69,200.00
	Permitting and Grant Funding Services Subtotal (T&M NTE):			**$116,955.00**
4.0	**Conceptual Stormwater Improvements Development**			
4.1	Conceptual Alternatives Analysis	$35,000.00	$117,290.00	$152,290.00
4.2	Workshop with City	$4,000.00	$4,240.00	$8,240.00
	Conceptual Stormwater Improvements Dev. Subtotal (T&M NTE):			**$160,530.00**
5.0	**Grant Funding and Permitting Roadmap**			
5.1	Funding & Permitting Roadmap	$54,230.00	$2,720.00	$56,950.00
	Grant Funding and Permitting Roadmap Subtotal (T&M NTE):			**$56,950.00**
6.0	**Final Workshop and Future WO Planning**			
6.1	Final City Workshop	$6,000.00	$4,240.00	$10,240.00
	Final Workshop and Future WO Planning Subtotal (T&M NTE):			**$10,240.00**

ATTACHMENT "A"

CONSULTANT WORK ORDER – PROJECT FEES TABLE

N Beach Stormwater & Tidal Improvements

Chen Moore and Associates, Inc. 24-0037-EN City of Clearwater

BASE SUBTOTAL, LABOR & SUB-CONTRACTORS (T&M NTE):				**$426,645.00**
BASE SUBTOTAL, LABOR & SUB-CONTRACTORS (LS):				**$362,020.00**
7.0	**Alternative Services**			
7.1	Gravity Sewer Interconnections		$65,840.00	$65,840.00
7.2	Carlouel Pump Station	$17,000.00	$34,380.00	$51,380.00
7.3	Permitting Additional Services	$20,000.00	$5,350.00	$25,350.00
	Alternative Services Subtotal (T&M NTE):			**$25,350.00**
	Alternative Services Subtotal (LS):			**$117,220.00**
8.0	**Allowances**			
8.1	Permit Fees		$25,000.00	$25,000.00
8.2	Add'l Grant Application Services	$54,600.00		$54,600.00
8.3	Scour Analysis	$25,770.00		$25,770.00
8.4	Survey – Gravity Interconnections	$59,535.00		$59,535.00
8.5	Survey – Allowance	$25,000.00		$25,000.00
8.6	SUE – Base Scope	$9,900.00		$9,900.00
8.7	SUE – Add'l Interconnections	$9,900.00		$9,900.00
8.8	SUE – Kipling Pump Station	$3,440.00		$3,440.00
8.9	SUE – Allowance	$9,900.00		$9,900.00
8.10	Geotech – Base Scope	$13,900.00		$13,900.00
8.11	Geotech – Scour Analysis	$6,000.00		$6,000.00
	Allowances Subtotal (LS):			**$242,945.00**
9.0	**Contingency - Owner's approval required**			
9.1	10% Contingency (T&M NTE)			$45,199.50
9.2	10% Contingency (LS)			$72,218.50
	TOTAL CONTINGENCY:			**$117,418.00**
GRAND TOTAL (BASE, ALT & CONTINGENCY) (T&M NTE):				**$497,194.50**
GRAND TOTAL (BASE, ALTS, ALLOWS, & CONTINGENCY) (LS):				**$794,403.50**
GRANT TOTAL:				**$1,291,598.00**

CONSULTANT WORK ORDER

CITY DELIVERABLES

1. FORMAT:

The design plans shall be compiled utilizing the following methods:

1. City of Clearwater CAD standards.
2. Datum: Horizontal and Vertical datum shall be referenced to North American Vertical Datum of 1988 (vertical) and North American Datum of 1983/90 (horizontal). The unit of measurement shall be the United States Foot. Any deviation from this datum will not be accepted unless reviewed by City of Clearwater Engineering/Geographic Technology Division.

2. DELIVERABLES:

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20' unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format.

CMA shall prepare and provide all necessary calculations required by the EOR for the design and construction of the project. These calculations shall demonstrate that the design meets all applicable codes, standards, and project specifications. Calculations shall cover, but are not limited to, structural integrity, load capacities, grading and drainage requirements, utility sizing, environmental impact as applicable, and any other engineering disciplines pertinent to the project. Calculations shall be clearly presented, fully documented, and organized in a manner that allows for easy review by the City or any authorized third-party reviewers. All assumptions, methodologies, and design criteria shall be explicitly stated and referenced. Calculations shall be provided in both digital and printed formats as specified by the City, and any specific software requirements or formats (e.g., PDF, Excel) shall be met as agreed upon.

NOTE: If approved deviation from Clearwater CAD standards is used, the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk software. All block references and other references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Thomas Mahony, at (727) 562-4762 or email address Thomas.Mahony@myClearwater.com.

All electronic files (including CAD and Specification files) must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.