AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES
CITY OF BAY CITY
Bay City, Texas
Project No. 20W09157

CONTRACT AMENDMENT NO. 1

This Contract Amendment No. 1 ("Amendment"), effective on the date last written below, shall amend the original contract between Bay City ("Owner") and Garver, LLC ("Garver"), dated October 27th, 2020 referred to in the following paragraphs as the "Agreement."

This Amendment adds professional services for **Work Order No. 9 – WWTP Construction Management & Inspection.**

The Agreement is hereby modified as follows:

SECTION A – Scope of Services and Payment Schedule

The attached **Appendix A.1** is hereby added to Section A of the Agreement

The parties hereby affirm, no other changes or modification are applicable to the terms of the Agreement, all other provisions are binding and effective as provided for in said Agreement.

This Agreement may be executed in two (2) or more counterparts each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[*Signature Page to Follow*]

IN WITNESS WHEREOF, City of Bay City and Garver have executed this Amendment effective as of the date last written below.

CITY OF BAY CITY	GARVER, LLC
By: _____ *Signature*	By: _____ *Signature*
Name: _____ *Printed Name*	Name: Daniel N. Olson, P.E. *Printed Name*
Title: _____	Title: Vice President
Date: _____	Date: _____
Attest: _____	Attest: _____

APPENDIX A.1 – SCOPE OF SERVICES AND FEE SCHEDULE

1. General

Bay City has requested Garver to prepare cost optimization/value engineering, construction pre-NTP Scope Modifications, Project Funding (WIFIA) Support, and Alternate Design of Project Elements for the Bay City WWTP Improvements project. The following sections provide the detail scope of work.

2. Project Location:

The WWTP Improvements project is located at 4511 Starling, Bay City, Texas 77414.

3. Scope of Work

Refer to Appendix A.2 for scope details.

4. Fee Schedule

An estimated total lump sum fee of $1,388,629.00. Details on the level of efforts for cost on each parcel work are shown below.

Task	Cost
TASK 1 - Construction Administration	$ -
TASK 2 - Resident Project Representative	$ -
TASK 3 - Startup & Commissioning	$ -
TASK 4 - Proposal, Cost Optimization, and Value Engineering Mitigation Support (New Task)	$ 456,314.00
TASK 5 - Construction Pre-NTP Scope Modifications (New Task)	$ 336,094.00
TASK 6 - Project Funding Support (WIFIA Funding) (New Task)	$ 142,274.00
Task 7 - Alternate Design of Project Elements by Priority (New Task)	$ 453,947.00
Total Cost	**$ 1,388,629.00**

5. Project Deliverable:

Refer to Appendix A.2 for scope details.

6. Project Schedule:

Refer to Appendix A.2 for scope details.

APPENDIX A.2 – DETAILED SCOPE

Work Order No. 9

20W09157 – Bay City WWTP CM & I

Amendment 1

General

The project 20W09157 includes the following tasks for the Bay City WWTP Construction Management and Inspection:

1. Task 1 – Construction Administration
2. Task 2 – Resident Project Representative
3. Task 3 – Startup and Commissioning

This Amendment addresses project design revisions and funding support to mitigate the project from bidding more than the original TWDB-authorized funding amount. This includes efforts to enhance the project proposal environment, conduct cost optimizations, develop the plan forward for the project, implement initial change orders necessary to secure construction notice to proceed, assist the city in procurement of additional funding, and development of alternate design of project elements to meet the City's improvement priority preferences.

The following reflects work items necessary to prepare the Bay City WWTP Improvements Project to meet the stated work needs:

1. Tasks 1 through 3: No changes
2. (New Task) Task 4: Proposal, Cost Optimization, and Value Engineering Mitigation Support
3. (New Task) Task 5: Construction Pre-NTP Construction Contract Modifications
4. (New Task) Task 6: Project Funding Support (WIFIA Funding)
5. (New Task) Task 7: Alternate Design of Project Elements by Priority

Task 4: Proposal, Cost Optimization, and Value Engineering Mitigation Support (New Task)

This task will capture effort during the bidding and post-bidding stages to identify potential cost mitigation strategies, incorporate proposal alternates into the bidding documents, support augmented funding efforts, and engage in cost savings and value engineering discussions with the apparent best value contractor. Task 4 includes the following scope items:

1. Proposal Alternates: Develop proposal alternates into the proposal form and Contract Documents for evaluation of nine (9) alternates designed to reduce project costs. Examples included Cottonwood Lift Station Top Slab Replacement and Associated Upgrades, Deletion of the new Administration Building, Alternate to install PVC yard piping in lieu of ductile iron, Alternative to install Centrifugally Cast Fiber Reinforced Polymer Mortar (CCFRPM) piping in lieu of ductile iron, Deletion of Trunk Sewer Repairs, Adjustment for Modified Trunk Sewer Repairs, Alternate Blower/Blower Control System, Clarifier Mechanism Manufacturer, and Alternate Rotary Fan Press manufacturer.
2. Proposal Interviews: Conduct interviews with offerors for evaluation and preliminary identification of cost optimizations.
3. Cost Optimization/Value Engineering Listing and Evaluation: Develop initial listing of cost optimizations. Evaluate full listing of cost optimizations developed by apparent best value contractor, meet, and evaluate merits of optimizations for inclusion into the project.
4. Cost Optimization Coordination: Participate in three (3) formal meetings and up to ten (10) virtual meetings/conference calls with the apparent best-value contractor for purposes of coordination of

5. Path Forward Planning: Develop the project path forward plan to allow for cost optimizations, contractor notice to proceed, and future contract changes for the project.
6. City Council Meeting Participation: Develop agenda items, presentations, discussion points, and participate in up to nine (9) City Council Meetings to provide status of the projects, path forward, and engineering recommendations.

Task 5: Construction Pre-NTP Construction Contract Modifications (New Task)

Effort under this task is intended to incorporate the agreed-upon construction scope items from the above discussions in Task 4 into a Change Order suitable for authorization of the limited-scope construction contract to fit within the TWDB-authorized funding availability.

The following construction scope items are to be included in the initial Authorization:

a. Facility 02 (Cottonwood Lift Station Improvements): Per Original Design, with accepted top slab replacement alternate.
b. Facility 10 (Influent Lift Station): As per original design with minimal modifications
c. Facility 15 (Headworks): Modify approach to keep existing headworks with no changes.
d. Facility 20 (Aeration Basins): Modify approach to keep existing aeration basins with no changes.
e. Facility 25 (Blower Building): Modifications of Original Design, including:
    a. Emergency Blower Provisions, including use of existing blower room with rental (or refurbished or replacement) blower bodies for purposes of plant operation during the initial construction.
    b. The proposed Electrical Room is to remain, with modifications to electrical gear.
    c. Removal of Blower Room and Blower Packages from the project scope (Multi-Stage Centrifugal blowers for Aeration Basins; Positive displacement blowers for ASHT)
f. Facility 27 (Clarifiers): As per original design with modifications to keep the existing RAS/WAS and MLSS Channels, provide replacement grating over channels, and provide temporary scum pumping.
g. Facility 50 (Rectangular Sludge Storage): Modify approach to keep existing rectangular ASHTs rather than repurpose existing ABs into ASHTs. Revisions to keep existing ASHTs:
    a. Electrical controls for existing press feed pumps to feed the new Dewatering Equipment
    b. Isolation of influent sludge and scum piping as necessary per deletion of the circular ASHT.
h. Facility 55 (Sludge Building): As per original designs, with modification to Reduce scope to one (1) 8-channel dewatering press while continuing to use existing dewatering boxes as backup redundancy.
i. Facility 90 (Electrical): Maintained, but with revisions due to modified scope elsewhere.
j. Facility 95 (SCADA): Maintained, but with revisions due to modified scope elsewhere.
k. Site Civil: Adjustments to scope to match modified design areas:

The Task 5 Garver Scope of Services needed to produce updates includes:

1. Engineering Memorandum: Prepare engineering memorandum reflecting the alternate, reduced scope design. Memorandum should demonstrate effectiveness of treatment system and compliance with TCEQ rules.
2. Contract Document/Change Order Preparation: Development of appropriate change order documents to modify the original contracting documents to the revised scope.
3. Specification Modifications: Modify specifications, including removal of not-used scope; and revisions to appropriate Division 00 specifications (modified scope, Addenda reflecting changes, etc.) and Division 01 (work restrictions, temporary facilities, etc.).
4. Drawing Revisions: Conduct design revisions for drawings to indicate the following:
    a. Revised drawing index.
    b. Revised hydraulic profile.

c. Revised process flow diagram.
d. Revised site plan (and associated yard piping, grading, and paving) reflecting initial authorization layout.
e. Revised P&IDs for impacted facilities.
f. Revised process drawings for modified scope facilities. Examples include modified influent lift station header and forcemain, revised blower building/blower electrical room, revised clarifier modifications, and revisions for the dewatering building to reflect installation of only one piece of dewatering equipment.
g. Revised electrical drawings for modified electrical scope of work, including construction phasing drawings.
h. Revised plant SCADA drawings.
i. Removal of drawings for scope removed from project.

5. Preparation of Conformed Drawing Set: Produce the modified Conformed Drawing set to indicate initial authorization construction scope.
6. TWDB Coordination for Modified Scope: Coordinate with the TWDB regarding the project design changes. Provide scope modification request and alternate funding allocation request.
7. Contractor Coordination: Coordinate with the apparent best value contractor via phone (up to five (5) virtual calls), in-person meetings (up to two (2) meetings), and misc. email correspondence. Incorporate construction enhancements as noted by contractor, as viable, to optimize project cost and implementation schedule.

Task 6: Project Funding Support (WIFIA Funding)

This task will provide support for the City to secure additional project funding from the Environmental Protection Agency's (EPA's) Water Infrastructure Finance and Innovation Act (WIFIA) program.

1. WIFIA Letter of Intent (LOI) Preparation: Prepare WIFIA LOI for invitation to apply for WIFIA Funding.
2. WIFIA Application Preparation: Assist City in development of WIFIA Loan application, including application preparation and ongoing coordination and communication to monitor application status.
3. WIFIA Loan Closing Support: Assist City during the loan closing process, including ongoing coordination and document sharing.
4. WIFIA Construction Implementation Support: Assist city during construction process for ongoing construction-related documentation and coordination.

Task 7: Alternate Design of Project Elements by Priority

The following scope items are prioritized for additional design development. These areas may be included into the construction project in part or in whole as change-orders.

1. Aeration Basin Improvements
    a. Scope: prepare evaluation for reuse of existing aeration basins as complete mix reactors. Evaluate use of retractable or fixed grid diffusers, including estimated construction costs, statement of benefits, and operator preferences. Prepare design for selected alternate.
    b. Specification Updates: Prepare specification updates, including revised diffuser specification, revised construction sequencing specifications, and other appurtenant aeration basin related updates (such as valve and gate schedules).
    c. Drawing Updates: Prepare drawings for the selected alternate, including demolition (up to 4 drawings – plan and section for each tank), process drawings (up to 4 drawings – plan and section for each tank), P&IDs (up to 2 drawings – one for each tank), electrical (up to 4 drawings), structural (up to 2 drawings), and civil.

    d. Contract Modification Request (CMR) Preparation: prepare CMR for pricing and incorporation by the contractor along with the Blowers and RAS/WAS Pump Station design alternates as a single, combine change order. Additionally, scope could be incorporated into a comprehensive change order for all remaining priority design items with pending budget.
2. Blower System Alternate Design
    a. Scope: prepare evaluation for the alternate blower system design, including provisions for air supply to the aeration basins, aerated sludge holding tanks, mixed liquor channels, and post-aeration/chlorine contact basins. Evaluate blower capacity, blower type (multi-stage centrifugal vs. positive displacement), and lineup for number of blowers and service locations (it is expected that the aeration basins will be separated from the other air demands). Blowers may be located either within the new blower facility, outside on concrete pads in blower enclosures, or within the existing blower building depending on the blower system and type of blowers selected.
    b. Specification Updates: Prepare specification updates, including revised blower specification, revised blower control system specification, revised construction sequencing specifications, and other appurtenant blower-related updates (such as valve and instrumentation schedules).
    c. Drawing Updates: Prepare drawings for the selected alternate, including demolition (up to 1 drawing – within existing blower building), process drawings (up to 4 drawings – plan and section for each blower system), P&IDs (up to 4 drawings – two for each blower system), electrical (up to 4 drawings), structural (up to 3 drawings), and civil.
    d. Change Order Preparation: prepare CMR for pricing and incorporation by the contractor along with the Aeration Basin and RAS/WAS Pump Station design alternates as a single, combine change order. Additionally, scope could be incorporated into a comprehensive change order for all remaining priority design items with pending budget.
3. RAS/WAS and Scum Pumping Stations
    a. Scope: it is anticipated that RAS/WAS pumps will be moved to an on-grade pump station utilizing self-priming RAS and WAS pumps. Suction is to be taken from individual headers from the existing RAS channel. Clarifier underflow will be controlled using telescoping valves at the location of the existing air-lift pumps. The work will also include construction of new scum wetwells (one per clarifier) and scum pumping stations.
    b. Specification Updates: Prepare specification updates, including self-priming pump specification, scum pumps, revised RAS/WAS and scum control descriptions, revised construction sequencing specifications, temporary bypass pumping and bulkhead considerations, and other appurtenant pump-related updates (such as valve and instrumentation schedules).
    c. Drawing Updates: Prepare drawings, including demolition (up to 2 drawings – within existing RAS channel), process drawings (up to 5 drawings – plan, section, and details for RAS/WAS Pumps; one combined plan/section/detail for each scum system), P&IDs (up to 3 drawings), electrical (up to 3 drawings), structural (up to 3 drawings), and civil.
    d. Change Order Preparation: prepare CMR for pricing and incorporation by the contractor along with the Aeration Basin and Blower design alternates as a single, combine change order. Additionally, scope could be incorporated into a comprehensive change order for all remaining priority design items with pending budget.
4. Disinfection Building and Chlorine Contact Basin
    a. Scope: Return Facility 40 and 43 Improvements from original design.
    b. Specification Updates: Include original design scope.
    c. Drawing Updates: Include original design drawings, pending any updates to site layout or minor modifications to adjacent facilities (scope reductions).

    d. Change Order Preparation: prepare CMR for pricing and incorporation by the contractor. Additionally, scope could be incorporated into a comprehensive change order for all remaining priority design items with pending budget.
5. Headworks Improvements
    a. Scope: Includes installation of a washer-compactor for the existing screen, improved screening discharge piping, new grating, and replacement of butterfly gates with slide gates.
    b. Specification Updates: Prepare specification updates, including washer-compactor, and other appurtenant headworks-related updates (such as gate schedule).
    c. Drawing Updates: Prepare drawings, including demolition (up to 2 drawings – plan and sections), process drawings (up to 2 drawings – plan and section/details), P&IDs (up to 1 drawing), electrical (up to 2 drawings), structural (up to 1 drawing), and civil.
    d. Change Order Preparation: prepare CMR for pricing and incorporation by the contractor. Additionally, scope could be incorporated into a comprehensive change order for all remaining priority design items with pending budget.
6. Off-site Interceptor Repairs – Spot/Reduced Scope
    a. Scope: Return Volume 4 (Trunk Sewer Repairs) into the project as noted in original Base Proposal Component 5.05 TS2: Adjustment for Modified Trunk Sewer Repair Scope. K. This includes repairs to the most critical components of the Trunk Sewer Repairs.
    b. Specification Updates: Include original design scope.
    c. Drawing Updates: Include original design drawings, pending any adjustments for highlighting the modified repair scope only.
    d. Change Order Preparation: prepare CMR for pricing and incorporation by the contractor. Additionally, scope could be incorporated into a comprehensive change order for all remaining priority design items with pending budget.
7. Engineering Memorandum: Prepare engineering memorandum reflecting the incorporated Alternate Designs as selected and implemented. Memorandum should demonstrate effectiveness of treatment system and compliance with TCEQ rules.

Extra Work

The following items are not included under this agreement but will be considered as extra work:

1. Submittals or deliverables in addition to those listed herein.
2. Additional design outside the scope of the project.
3. Preparation of a Storm Water Pollution Prevention Plan (SWPPP). The construction contract documents will require the Contractor to prepare, maintain, and submit an SWPPP to TCEQ.
4. Construction materials testing (to be provided by a materials testing company contracted directly with the City).
5. Warranty Services after the construction period.

Extra Work will be as directed by the Owner in writing for an additional fee as agreed upon by the Owner and Garver.

SCHEDULE

Garver shall begin work under this Agreement within ten (10) days of a Notice to Proceed and shall complete the work in accordance with the Schedule below:

Phase Description	Calendar Days
Task 4: Proposal and Cost Optimization Mitigation Support	Complete within 30 days of Amendment Notice to Proceed
Task 5: Construction Pre-NTP Construction Contract Modifications	Complete within 60 days of Amendment Notice to Proceed
Task 6: Project Funding Support (WIFIA Funding)	Ongoing through the end of the 730-day Contractor's Construction period
Task 7: Alternate Design of Project Elements by Priority	• AB and Blower Evaluation Memo within 70 days of Notice to Proceed • CMR Preparation for All Design Revisions within 120 days of Amendment Notice to Proceed for pricing purposes. • Engineering Memorandum within 45 days of acceptance of intent to include Alternate Design components in writing by Owner.