

**Scope of Work**  
**City of Hollywood**  
**Southern Regional Wastewater Treatment Plant Clarifier No. 1 Rehabilitation**  
**July 24, 2024**

## **PROJECT DESCRIPTION**

The existing Secondary Clarifier No. 1, at the City of Hollywood (City) Southern Regional Wastewater Treatment Plant (SRWWTP) is infrastructure critical to the proper functioning of the biological process at the facility. The Secondary Clarifier No. 1 is in need of replacement of the center assembly, drive motor, seals, rake blades, skimmer arms, and scum scrapers along with associated miscellaneous metal repairs and alarm controls. It is the scope of this project to replace the drive mechanisms and seals and to perform other miscellaneous repairs for Secondary Clarifier No. 1. As requested by the City and as part of the “Professional Services Agreement for Continuing Consulting Engineering Services – Water Treatment Plant and Wastewater Treatment Plan Projects” dated October 5, 2023, Carollo Engineers, Inc (Consultant) is pleased to offer design services for the Rehabilitation of the Secondary Clarifier No. 1 at the City’s SRWWTP.

## **SCOPE OF WORK**

### **Task 1: Project Management and Meetings**

The Consultant will provide overall project management and facilitate communication and coordination with the City. Administrative efforts such as project oversight, budget and schedule control, monthly progress reports and invoicing, will all be performed by the project manager under this task. Quality assurance/quality control will be performed by the technical advisor who will be assigned to the project from the beginning through completion. The project manager will organize and facilitate project meetings, including the development of meeting agendas and minutes throughout the course of the project. The following meetings are expected:

- Kickoff Meeting: Conducted with the purpose of introducing project team members and lines of communication, review of project background, scope, and schedule, and address data needs/requests.
- Monthly Progress Review Meetings including schedule updates. Assumed half of the meetings are in person and half are virtual (rotate every month).
- Virtual Project Coordination Meetings as needed between the City and Consultant project managers..*Task 1 Deliverables*
  - Meeting Agendas (PDF).
  - Meeting Minutes (PDF).
  - Monthly Status Reports including schedule updates, delivered with Monthly Invoice (PDF).

## Task 2: Request for Information and Review

The Consultant will collect and review previous documentation pertaining to the Scope of Work for use in design and coordination with upstream and downstream components of the plant. Data collection may include a variety of sources based on the best available information. A Data Request List will be provided upon NTP and will include at a minimum:

- Information (drawings and specifications) from the manufacturer of the clarifier drives and components, WesTech.
- Record drawings of the SRWWTP including existing Secondary Clarifier No. 1 and piping into and out of the clarifier
- Records from prior similar rehabilitations at the SRWWTP
- *Task 200 Deliverables*

No Deliverables

## Task 3: Detailed Design

The Consultant will evaluate the existing Clarifier No. 1 for the purpose of preparing design documents suitable for bidding. Contract Documents (plans and specifications) for bidding/construction of the described work shall be prepared. The detailed design development shall include:

- Field inspection (structural, mechanical, electrical, instrumentation) of existing clarifier No. 1, Consultant will coordinate with the City to allow Consultant full access to all clarifier features. If practical, Consultant will conduct an inspection of the feed and effluent piping to the clarifier, this will be discussed with City operations. Intent is to conduct the field inspection after the Kickoff meeting, however pipe inspection will likely be conducted separately.
- Conduct a meeting with City Operations staff to review the approach and details of the rehabilitation.
- Replacement will include the center assembly, drive motor, torque limiting system, RAS suction valves, center column grating, neoprene seals, rake blades, skimmer arms, and scum scrapers, miscellaneous welding, spray water nozzle replacement, miscellaneous spray piping and valve replacement, interior and exterior painting, replacement of clarifier trough joint material and coating of troughs.
- It is envisioned that equipment will be replaced in-kind.
- The local control panel shall be replaced, and typical clarifier instrumentation shall be connected to the existing SCADA system to meet current standards at the SRWWTP. It is also intended that all wiring will be replaced for power and instrumentation systems.
- The existing walkway, trusses, feed well, feed pipes, center column, rake arms, sludge removal pipes, sludge valves, scum drop box, weirs and baffles shall be reused unless determined during the field inspection these features require replacement.



- To the extent possible, a column inspection hatch similar in size and location to existing will be implemented in the design.
- The pipe that carries influent into Clarifier No. 1 and the clarifier effluent pipe shall be inspected for condition and integrity.
- Development of field inspection report.
- Development of 30% drawings, specifications table of contents, and summary of major equipment.
- Development of 90% drawings and specifications.
- Development of final (bid-ready) drawings and specifications.

#### *Task 3 Deliverables*

- Piping Inspection Report (PDF)
- 30% Review Meeting – Agenda, Meeting Minutes, and Comment Logs
- 30% Drawings and technical specification summary table. (PDF)
- 90% Drawings and Technical Specifications. Specifications will be developed using Carollo Engineer's Master Format 16-Division Standard documents. (PDF)
- 90% Review Meeting – Agenda, Meeting Minutes, and Comment Logs. (PDF)
- Bid-ready documents. (PDF)

#### **Task 4: Option of Probable Cost**

The Consultant shall provide a cost opinion on the project construction budget at the 90% design stage.

#### *Task 4 Deliverables*

- A preliminary Association for the Advancement of Cost Engineering (AACE) International Class 2 Engineer's Opinion of Probable Construction Cost (OPCC)

#### **Task 5: Bid Phase Services**

The Consultant shall assist the City during the bidding phase of the project. Activities to be performed include:

- Attending a pre-bid conference.
- Replying to bidders' questions, via addendum.
- Drafting up to two addenda to the Technical Specifications and Drawings for City distribution.
- Reviewing the Bid Proposal form, preparing a Bid Tabulation, checking contractor references of the lowest responsive bidder, and issuing a recommendation of award.
- Develop conformed documents that incorporate the addendum into the drawings and specifications.


Contract document packages will be produced and sold/advertised by the City.

#### *Task 5 Deliverables*



- Pre-bid meeting minutes (PDF)
- Two addendums (PDF)
- Recommendation of award letter (PDF)
- Conformed documents (drawings and specifications, PDF)

## KEY CONSIDERATIONS

- Information (drawings and specifications) from the manufacturer of the clarifier drives and components, WesTech, will be used for the basis of design. Previous plans and specifications in their present format will be used to the extent possible.
  - Existing underground electrical conduit, electrical feeds, instrumentation conduit are adequate for the envisioned project and will not require expansion or replacement.
  - Surveying services, underground utility locates, and environmental and geotechnical investigations are not included..
  - Pipeline inspection will be performed by RedZone Robotics. The fees for their services are estimated based upon review of Record Drawings. A site visit, after the notice to proceed, will verify the assumptions and confirm the effort.
  - Any features of the existing Secondary Clarifier No. 1 that cannot be inspected by the Consultant, due to operating conditions or inability to isolate for inspection, will be included in the bid documents for the awarded contractor to inspect and rehabilitate under a City owned allowance.
  - The proposed work is considered maintenance and permitting is not envisioned, including with the City of Hollywood Building Department. No permitting, plan submittal or responses to Building Department comments is anticipated or included.
  - No owner-furnished / pre-purchasing of equipment is anticipated.
  - No shop drawing or product submittal after acceptance of final design is included, however this will envision to be included in a subsequent and separate construction phase scope of work.
  - The design approach will address minimal downtime of the existing operating facilities.
  - Value engineering and other outside reviews (other than City staff review) are not anticipated.
  - No local minority business enterprise or local small business enterprise participation is envisioned, however wherever practical this is encouraged by the City.
  - The City will competitively bid the project and enter into an agreement with an outside Contractor to complete the work. No prequalification of Contractors will be performed.
  - The City will provide front end documents applicable to the project, which will be reviewed by the Consultant and comments provided if appropriate.
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- Engineering Services during construction will be included and performed under a separate work order.
- City shall provide comments on all deliverables within two weeks of delivery.

## WORK ASSIGNMENT ASSUMPTIONS

Due to the nature and schedule of this project, certain assumptions apply to this Scope of Services. To the extent possible, these assumptions are stated within this document and are reflected in the budget.

1. If the project task requirements are different from the assumptions presented in this Scope of Services or if the City desires additional services, the resultant changes in scope will serve as a basis for amending this project assignment or initiating the development of a new project assignment as agreed upon by both the City and the Consultant.
  - a. The Consultant shall be entitled to rely upon the accuracy of information supplied by the City without independent review or evaluation.
  - b. The schedule provided is based on the timely receipt of the data from City.
  - c. The City shall pay for all fees associated with permitting.
  - d. The material terms of the "Agreement for General Consulting Services" supersedes and nullifies any and all assumptions outlined below that are contrary and/or conflict with said terms and conditions in said Agreement:
    - i. The Consultant shall perform the services required hereunder in accordance with the prevailing standard of care by exercising the skill and ability ordinarily required of consultants performing the same or similar services, under the same or similar circumstances, in the State of Florida.
    - ii. The Consultant makes no warranty that City's actual project costs, financial aspects, economic feasibility, schedules, and/or quantities or quality realized will not vary from the Consultant's opinions, analyses, projections, or estimates.
    - iii. Documents, including drawings and specifications, prepared by the Consultant pursuant to this Service Authorization are not intended or represented to be suitable for reuse by City or others for this Project or on any other project. Any reuse of completed documents or use of partially completed documents without written verification or concurrence by the Consultant for the specific purpose intended will be at City's sole risk and without liability or legal exposure to the Consultant.
    - iv. The services to be performed by the Consultant are intended solely for the benefit of the City. No person or entity not a signatory to this Service Authorization shall be entitled to rely on the Consultant's performance of its services hereunder, and no right to assert a claim against the Consultant by assignment of indemnity rights or otherwise shall accrue to a third party as a result of this Service Authorization or the performance of Consultant's services hereunder.

## COMPENSATION

We propose to conduct the requested work for a Not-To-Exceed Total of \$467,778. Payment will be billed to the City based on Exhibit A – Rate Schedule of "Professional Services Agreement for Continuing Consulting



Engineering Services – Water Treatment Plant and Wastewater Treatment Plan Projects” dated October 5, 2023, included in Attachment A.

Attachment B provides Time and Materials estimated for each task by Job Category/Description in the Rate Schedule. Services provided by the Consultant and billed to the City shall be limited to those services specifically identified in this work order.

## **SCHEDULE**

Engineering services will be completed within 9 months from receipt of the Notice-to-Proceed with the schedule contingent on the requested information from manufacturers, bidding period, and award to the contractor.

