

CITY OF SANDY
WASTEWATER TREATMENT PLANT IMPROVEMENTS
SCOPE OF WORK

PROJECT DESCRIPTION

The City of Sandy (Owner) has retained Keller Associates, Inc. (Consultant), in partnership with Kennedy/Jenks Consultants, Inc. and the identified subconsultants, to provide professional engineering services for improvements at the Jarl Road Wastewater Treatment Plant (WWTP). The work will advance the recommendations of the City's 2026 Wastewater Facility Plan Amendment and support the City's compliance, capacity, reliability, and long-term wastewater treatment objectives.

The project generally includes conversion of the operating WWTP to a 12.2 million gallon per day (MGD) design capacity membrane bioreactor (MBR) configuration; headworks screening and grit improvements; aeration, anoxic, membrane, pumping, blower, ultraviolet disinfection, solids handling, electrical, instrumentation, and local control improvements; recycled-water pipeline replacement from WWTP to Iseli Nursery storage pond; site and utility improvements; and associated permitting, bidding, construction-phase, startup, and commissioning support. The facilities will be planned and designed to maintain treatment operations and permit compliance during construction. The project will be delivered using the Construction Management/General Contractor (CM/GC) method with up to four bidding packages.

The Consultant's services are limited to those expressly described in this scope of work. If new information or changes to project assumptions, design criteria, regulatory requirements, delivery approach, schedule, or Owner direction materially affect the services, the parties will address the resulting changes through a mutually agreed amendment.

SCOPE OF WORK

TASK 1: PROJECT MANAGEMENT

Consultant Responsibilities

- 1.1. Project Management Plan. Develop a Project Management Plan (PMP) including contacts, vision and critical success factors, scope of work, schedule, financial plan, project team, responsibility matrix, document distribution, quality control plan, change management plan, risk management plan, and communication plan including communication and interaction with the construction manager/general contractor (CM/GC) team.
- 1.2. General Project Management. Manage the project team to track budget, schedule, project upcoming work, scope and schedule changes, risk register, action items, and key decisions. Prepare monthly invoices and progress reports that summarize what was accomplished for the month, anticipated schedule for the next month, critical decisions to be reached, key decisions made and impact to budget and schedule and identify potential issues or scope changes.
- 1.3. Project Team Coordination Meetings. Coordinate bi-weekly coordination meetings between Consultant Project Management Team, City Project Manager, Program Manager, and CM/GC (once CM/GC is under contract) to discuss project management topics. Consultant will develop agenda to review project schedule, scope, budget, general project coordination, deliverable progress, key decisions, and action items.
- 1.4. Kickoff Meeting. Prepare for and attend a project kickoff meeting with the Owner. The purpose of this meeting will be to establish communication channels; review the overall project schedule, including major milestones and meetings; review objectives of the design; and review process for deliverables including process for Owner review and approval.

- 1.5. Request for Information. Prepare initial request for information for data to be used in the pre-design process.

Owner Responsibilities

- Provide meeting space for project meetings.
- Provide requested information in a timely manner.

Assumptions

- Scope of work includes up to two (2) Consultant staff members attending Project Team Coordination Meetings. These meetings are assumed to be virtual.
- Project management budget assumes a design schedule of up to 18 months and 30 months for construction.
- Should Owner request additional meetings or require an extended schedule, project management budget will be increased accordingly.
- Unless otherwise noted, meetings/workshops may be held in person or via on-line meeting tools. This assumption applies to this task as well as subsequent tasks.

Deliverables

- Project Management Plan (draft and final).
- Action Items list and historic register of resolved Action Items.
- Decision Log.
- Risk Register.
- Monthly invoices and progress reports.
- Bi-weekly progress agendas and minutes.
- Kickoff meeting agendas and minutes.
- Request for information.

TASK 2: CM/GC SUPPORT SERVICES

Consultant Responsibilities:

- 2.1. CM/GC Kickoff Meeting. Participate in a kickoff meeting with the selected CM/GC to review project progress, walk site, establish lines of communication, review project schedule, review project budget and review process for CM/GC review of deliverables.
- 2.2. CM/GC Coordination. Coordinate with the CM/GC for general project efforts throughout project duration, including establishing lines of communication.
- 2.3. CM/GC Value Engineering Workshops. Participate in up to three (3) value engineering workshops with the CM/GC and Owner, immediately following 30%, 60% and 90% design deliverables. The purpose of these workshops will be to identify, with the CM/GC, potential cost savings alternatives to each project. Where the Owner or Program Manager elects to include such alternatives, the Consultant will modify the design as appropriate to incorporate these changes.

Owner Responsibilities:

- Provide meeting space for kickoff meeting, coordination meetings and value engineering meetings.

Assumptions:

- Meetings may be attended either virtually or in person.
- Services for CM/GC bidding, interviews, evaluation of bids, and selection of CM/GC are not included in this scope.
- CM/GC Kickoff Meeting is assumed to include up to four staff members and up to four hours in length.
- Consultant has budgeted four (4) hours for each Value Engineering Workshop and assumed up to six (6) staff members will attend.

- Value engineering alternatives identified to be implemented will be captured in the subsequent deliverable (i.e. 60%, 90% or 100%) and not in a separate deliverable.

Deliverables:

- Value Engineering meeting agendas and notes.

TASK 3: BASIS OF DESIGN REPORT (BODR)

Consultant Responsibilities:

- 3.1. Topographic Survey. Provide a topographic survey of approximately 4.0 acres encompassing the WWTP in addition to proposed recycled water pipeline alignment. The survey will document visible structures, marked utilities, and observed surface features, including pavement, landscaping, buildings, concrete structures, and sidewalks. Recycled pipeline survey to include up to six easement boundaries, as identified by Owner. Consultant will use the survey to prepare the project base map. The horizontal datum will be NAD 83, and the vertical datum will be NAVD 88. As applicable, basemap will incorporate available aerial imagery, horizontal survey data, and information provided by utilities (identified with input from Dig-Line). Establish benchmarks for future construction reference.
- 3.2. Geotechnical Review and Investigation. Consultant will review available geotechnical information provided by the City and conduct a geotechnical investigation at the WWTP and along the proposed recycled water effluent pipe alignment. The investigation will include up to eleven borings.
- 3.3. Environmental Study.
- 3.4. Site Visit. Consultant will complete a site tour with Owner's operation staff and Program Manager to assess general conditions, document existing infrastructure, conduct field measurements, and note known and observed needs. Existing conditions and informational gaps will be recorded in the BODR.
- 3.5. Design Criteria. Document design criteria that will serve as basis for design. Consultant will review information provided by the Owner's Representative, field data, and the facility planning study to recommend equipment and process sizing, number of units, and establish design criteria.
- 3.6. Improvement Alternatives. Compare applicable technology and process alternatives using project-specific criteria such as lifecycle cost, performance, footprint, maintainability, energy use, constructability, phasing, operational risk, and schedule. Evaluate up to three alternatives for each of the following: MBR types, basin mixing types, and pump type for mixed liquor, permeate, and waste activated sludge processes; screening configuration (e.g., single- versus two-stage); and reuse of existing infrastructure (e.g., aeration basins, clarifiers).
- 3.7. Workshop Meeting. Virtual meeting with Owner to review concepts and alternatives and select preferred equipment and process alternatives for design.
- 3.8. Opinion of Probable Cost. Provide an AACE Class 5 opinion of probable cost for the recommended improvements.
- 3.9. Draft Basis of Design Report (BODR). Prepare a draft BODR documenting the recommended improvements and basis of design. The BODR will include design flows and loads, anticipated discharge criteria, process modeling, hydraulic profile, design criteria, preliminary equipment list, site layout, preliminary phasing, electrical load strategy, and local SCADA strategy. Submit to Owner for review.
- 3.10. Final BODR. Incorporate Owner input and submit to DEQ for review. Address agency comments in final BODR.

Owner Responsibilities:

- Conduct site tour with Consultant; provide access to facilities and records.
- Provide input on design criteria and preferred alternatives.
- Respond to information requests, if any, in a timely manner.

- Review and comment on the BODR.

Assumptions:

- Site visit will be conducted with up to four members of the Consultant's team.
- Recommended improvements are limited to screening, grit removal, aeration/anoxic and MBR treatment, supplemental carbon addition, UV disinfection, biosolids dewatering via screw press, biosolids storage, existing storage pond upgrades, and associated piping, pumping, electrical service and distribution, standby power, instrumentation and local SCADA control, and ancillary equipment and infrastructure.
- Workshop meeting will include a mix of in person and virtual attendees.
- Documentation of selections of improvement alternatives will be included in the BODR. No additional technical memos will be provided.
- Three phase power is readily available and located adjacent to the site.
- Consultant can rely on the flow and load analysis and future projections provided by the Owner or as documented in the Facility Plan.
- Drawings included in BODR will be limited to no more than ten sheets and may include general sheets and conceptual site layout sheets.

Deliverables:

- Agenda and minutes for virtual online Meeting.
- Draft and Final BODR.

TASK 4: MAJOR EQUIPMENT PROCUREMENT

Consultant Responsibilities:

- 4.1. Procurement Strategy. Develop procurement strategies for the identified major equipment and long-lead items with input from the CM/GC. Incorporate critical procurement dates into the overall project delivery schedule.
- 4.2. Major Equipment Procurement Specifications. Consultant will produce technical specifications for up to five major pieces of equipment on the project including membranes, headworks screens, and screw press.
- 4.3. Bid Support. Consultant will provide support during bidding for major equipment, including responding to questions, preparing addenda, and evaluating bids received.
- 4.4. Major Equipment Submittal Review. Review submittals for major equipment. This task assumes up to one resubmittal for each major equipment.

Owner Responsibilities:

- Provide input on major equipment specifications.

Assumptions:

- Contract documents for equipment procurement will be provided by the CM/GC.
- Procurement specifications will be provided by Program Manager.

Deliverables:

- Major equipment technical specifications.

TASK 5: EARLY WWTP CIVIL PACKAGE

Consultant Responsibilities:

- 5.1. Plan Sheets. Prepare a civil package for critical path civil construction items at the WWTP. The package is to include civil plan sheets associated with new fine screens, MLSS pump station and splitter box, new aeration/MBR basins, and WAS pump building. Coordinate location of new facilities, piping layout, and access with the City. Prepare a 90% review set.

- 5.2. Coordination with Portland Gas and Electric. Consultant will coordinate with the utility company to confirm any necessary new electrical infrastructure required for WWTP upgrades is incorporated into the plan sheets.
- 5.3. Technical Specifications. Prepare technical specifications to detail the materials, processes, and the products that are to be used in the civil package. Prepare complete draft technical specifications for the 90% review set.
- 5.4. Civil Package Workshop Meeting. Submit 90% design review drawings and specifications to the City. Participate in a 90% design review workshop meeting.
- 5.5. Final Design. Upon City review, Consultant will incorporate appropriate revisions into a final set of stamped drawings and specifications that will be used for bidding.
- 5.6. Bid Support. Consultant will provide support during bidding of early works package, including responding to questions and preparing addenda.

City Responsibilities:

- Provide easement and right-of-way information for the project extents.
- Review and provide one set of consolidated written comments on the 90% design deliverables.
- Provide legal and risk reviews of the bid documents.
- Pay for any associated permitting fees not assigned to the Contractor.
- Facilitate coordination as necessary with Pacific Gas & Electric.

Assumptions:

- Surveying to be completed within existing right-of-way and easements; boundary surveying limited to that specifically identified in the scope. Land and easement acquisition, negotiations, and legal descriptions, if required, will be provided as an additional service.
- Agency submittal is not required for this package.
- AutoCAD is to be used to prepare drawings, and AutoCAD Civil 3D or Revit may be used for the site and building design. Spreadsheets will be prepared in Microsoft Excel and text documents in Microsoft Word.
- The Civil Package drawings shall be developed with the intent to progress critical path. Further completion is anticipated as part of the final design package. The package is subject to change based on input from the CM/GC.
- The Owner acknowledges that advancing the Civil Package before completion of final design may require revisions to previously issued design documents or to constructed work as later design information is developed. Consultant will be entitled to additional compensation for redesign caused by changes to previously approved criteria, CM/GC input received after the applicable review milestone, or other changes outside Consultant's control.
- Building dimensions, location, and piping connections have been established.

Deliverables:

- Agendas and minutes for workshop meetings.
- 90% design drawings and specifications, including one electronic PDF submittal prepared at 22 by 34 inches and formatted for review at 11 by 17 inches.
- 100% stamped design package, including one electronic PDF submittal prepared at 22 by 34 inches and formatted for review at 11 by 17 inches.

TASK 6: RECYCLED WATER PIPELINE DESIGN

Consultant Responsibilities

- 6.1. Environmental. Perform environmental and natural resources review to support development of the proposed effluent pipeline alignment. Services will include desktop review and field reconnaissance to identify wetlands, waterways, creek crossings, sensitive habitat, cultural resources, and other potential environmental constraints. Evaluate potential impacts and provide coordination related to avoidance and minimization measures, permitting requirements, and additional environmental studies that may be required as design progresses.
- 6.2. Utility Coordination. Identify known utility crossings and conflicts along the proposed pipeline alignment and coordinate with applicable utility providers, as necessary, to support development of the pipeline design.
- 6.3. 30% Design Plans and Review Workshop. Submit 30 percent design review drawings to the Owner. Participate in a 30 percent design review workshop meeting.
 - a. Develop the preliminary horizontal and vertical alignment of the proposed recycled-water effluent pipeline. Evaluate alignment constraints including existing utilities, roadway improvements, property and right-of-way limits, easements, environmental constraints, constructability, access, and connections to existing facilities.
 - b. Perform hydraulic calculations necessary to confirm pipeline sizing and anticipated operating conditions. Coordinate the pipeline design with the WWTP hydraulic profile and proposed effluent pumping requirements.
- 6.4. 60% Design Plans and Review Workshop. Submit 60 percent design review drawings to the Owner. Participate in a 60 percent design review workshop meeting.
- 6.5. 90% Design Plans and Specifications. Address 30% design review comments. Advance design to 90% and submit design review drawings and specifications to the Owner. Drawings to include general, civil, and detail sheets. Prepare technical specifications. Technical specifications will be prepared to detail the materials, processes, and the products that are to be used in the construction.
- 6.6. 90% Design and Review Workshop Meeting. Submit 90% design review drawings and specifications to the Owner. Participate in a 90% design review workshop meeting with Owner and CM/GC.
- 6.7. Agency Submittal. Submit the 90% plans and specifications to Agency for review. Address comments and resubmit at 100%.
- 6.8. 100% Design Submittal. Address 90% design review comments. Advance design for submission to DEQ. Consultant will incorporate appropriate revisions into a final set of stamped drawings and specifications that can be used for bidding.
- 6.9. Opinion of Probable Cost. Prepare an AACE Class 4 opinion of probable cost at 30%, an AACE Class 3 opinion of probable cost at 60%, an AACE Class 2 opinion of probable cost at 90%, and an AACE Class 2 opinion of probable cost for the project at final design.
- 6.10. Cost Reconciliation. Reconcile each estimate with the prior estimate and the Owner's budget and identify material cost changes.
- 6.11. CM/GC Cost Model Review. Review CM/GC Cost Model Updates and attend review meetings. SOW includes review of up to three (2) Cost Model Updates at 30% and 90% deliverables and attending two (2) review meetings.

Owner Responsibilities:

- Provide comments and input on the 30 and 90% design deliverables.
- Front End documents will be completed and provided by Program Manager.

- Provide legal and risk reviews of the bid documents. Assist in identifying permits and approvals for which Contractor will be responsible.
- Program Manager to provide Front-End Construction Contract Documents
- Pay for any associated permitting fees not assigned to the Contractor.

Assumptions:

- Drafting will be completed on 11"x17" sheets.
- Consultant will be compensated for additional services for Owner-requested out of scope items and for rework triggered by Owner-requested changes to previously agreed upon design criteria and concepts. Additional services will be performed only upon mutual agreement on the associated scope, schedule, and compensation. This provision applies to this task and all other tasks included in this scope of services.
- CM/GC will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), prepare traffic control plans, and secure associated permits.
- Shoring (if required) will be designed by the CM/GC.
- Since Consultant has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, the Consultant does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost prepared by the Consultant.
- AutoCAD is to be used to prepare drawings and AutoCAD Civil 3D or Revit may be used for the site and building design. Spreadsheets will be prepared in Microsoft Excel and text documents in Microsoft Word.
- All deliverables will be submitted in electronic format and reviews will be completed using Bluebeam.
- Land use permitting is not required. Any required permitting services are by Others.

Deliverables:

- Agenda and minutes for Workshop Meetings.
- Environmental documentation summarizing identified wetlands, aquatic and other natural resources, environmental constraints, and anticipated permitting or mitigation requirements.
- 30 percent design drawings and opinion of probable cost, including one electronic submittal (11"x17").
- 90 percent design drawings, technical specifications, and opinion of probable cost including one electronic submittal (drawings prepared in 22"x34" and reviewed in 11"x17").
- 100 percent stamped design package, including one electronic submittal (drawings prepared in 22"x34" reviewed in 11"x17").
- Cost reconciliation summaries.
- Exhibits for permitting for Owner's use.

TASK 7: WWTP DESIGN

Consultant Responsibilities

- 7.1. 30% Design and Review Workshop. Submit 30 percent design review drawings to the Owner. Design drawings to include general, site civil, key mechanical plan sheets, electrical one-lines, and process and instrumentation drawings. Owner to provide comments. Participate in a 30 percent design review workshop meeting following comment receipt.
- 7.2. 60% Design. Consultant will prepare and submit 60 percent design documents to the Owner. The drawings will include general, site civil, structural, architectural, mechanical, HVAC, electrical one-line, and instrumentation and control P&ID sheets. Consultant will also submit a table of contents identifying the technical specifications planned for the 90 percent design package.
- 7.3. 60% Review Workshop Meeting. Participate in a 60 percent design review workshop meeting with Owner and CM/GC.

- 7.4. 90% Design. Address 60 percent design review comments. Advance design to 90 percent and submit design review drawings and specifications to the Owner. Drawings to include general, survey, site civil, structural, architectural, plumbing, HVAC, mechanical, electrical, and instrumentation and control sheets.
- Instrumentation and control plan sheets will generally include a network layout drawing (if applicable), piping and instrumentation diagrams (P&ID), wiring diagrams, input/output schedule, and the instrumentation schedule.
- Prepare technical specifications. Technical specifications will be prepared to detail the materials, processes, and the products that are to be used in the construction.
- 7.5. 90% Review Workshop Meeting. Submit 90 percent design review drawings and specifications to the Owner. Participate in a 90 percent design review workshop meeting with Owner and CM/GC.
- 7.6. Agency Submittal. Submit the 90% plans and specifications to Agency for review.
- 7.7. 100% Design Submittal. Address 90 percent design review comments. Advance design for submission to DEQ. Consultant will incorporate appropriate revisions into a final set of stamped drawings and specifications that can be used for bidding.
- 7.8. Opinion of Probable Cost. Prepare an AACE Class 4 opinion of probable cost at 30%, AACE Class 3 opinion of probable cost at 60%, an AACE Class 2 opinion of probable cost at 90%, and an AACE Class 2 opinion of probable cost for the project at final design.
- 7.9. Cost Reconciliation. Reconcile each estimate with the prior estimate and the Owner's budget and identify material cost changes.
- 7.10. CM/GC Cost Model Review. Review CM/GC Cost Model Updates and attend review meetings. SOW includes review of up to two (2) Cost Model Updates at 30% and 60% deliverables and attending two (2) review meetings.
- 7.11. Construction Schedule. Review CM/GC schedule submission.

Owner Responsibilities:

- Provide one, written consolidated set of comments on the 30, 60 and 90 percent design deliverables.
- Provide legal and risk reviews of the bid documents. Assist in identifying permits and approvals for which Contractor will be responsible.
- Provide written review comments from Owner's SCADA integrator.
- Owner to provide Front-End Construction Contract Documents.
- Pay for any associated permitting fees not assigned to the Contractor.

Assumptions:

- Drafting will be completed on 11"x17" sheets.
- Front End documents will be completed and provided by Program Manager.
- Land use compliance permitting is not included in this scope.
- Project integration and control panel design will be provided by City's Integrator.
- Project landscaping will match existing landscape style at the WWTP. Services of a licensed landscape architect will not be required.
- Extensive architectural features (occupied spaces, restrooms, etc.) are not included. Consultant will develop 3D building models/renderings for new structures.
- CM/GC will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), prepare traffic control plans, and secure associated permits.
- Shoring (if required) will be designed by the CM/GC.
- Building permit and trade permits will be submitted and obtained by Others.

- Since Consultant has no control over the cost of labor, materials, equipment, or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, the Consultant does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost prepared by the Consultant.
- AutoCAD is to be used to prepare drawings and AutoCAD Civil 3D or Revit may be used for the site and building design. Spreadsheets will be prepared in Microsoft Excel and text documents in Microsoft Word.
- All deliverables will be submitted in electronic format and reviews will be completed using Bluebeam.
- Permitting services are limited to drawing and figure preparation for submitting the Land Use Application. All other permitting services, including preparation of the Land Use Application, are by Others.
- Review of Contractor's cost model and schedule is limited to a single review.
- It is assumed only one review and set of comments from DEQ will be provided for Consultant to address.

Deliverables:

- Agenda and minutes for Workshop Meetings.
- 30 percent design drawings and opinion of probable cost, including one electronic submittal (11"x17").
- 60 percent design drawings, technical specifications table of contents, and opinion of probable cost, including one electronic submittal (drawings prepared in 22"x34" and reviewed in 11"x17").
- 90 percent design drawings, technical specifications, and opinion of probable cost including one electronic submittal (drawings prepared in 22"x34" and reviewed in 11"x17").
- 100 percent stamped design package, including one electronic submittal (drawings prepared in 22"x34" reviewed in 11"x17").
- Cost reconciliation summaries.
- Exhibits for permitting for Owner's use.

TASK 8: CONSTRUCTION PHASE SERVICES

Consultant Responsibilities:

This task includes the professional services to support the Owner and Owner's Representative during the construction of the project by one prime Contractor. Consultant's level of effort during construction is often affected by the selected Contractor. The fee estimate, level-of-effort projections, and schedule assumptions represent Consultant's professional judgement. As activities progress, it may become apparent some modifications to this scope are necessary due to changes in the Contractor's schedule and work. Consultant will advise the Owner's Representative of such issues and any fee and/or schedule impact prior to implementing revised activities. This task will include the following:

- 8.1. Contract Documents. Incorporate addenda and prepare construction documents for distribution to Owner and Contractor.
- 8.2. Pre-Construction Meeting. A pre-construction conference will be chaired by the Program Manager and attended by the Owner, Consultant, the CM/GC, major suppliers, and subcontractors. The purpose of this meeting will be to establish lines of communication as well as procedures and timelines for the job. Program Manager will prepare meeting agenda and meeting notes to be distributed to attendees.
- 8.3. Construction Meetings. Attend monthly construction meetings (virtually) as requested by Program Manager.
- 8.4. Submittals. Review Contractor's submittals for general conformance to the specified materials and methods noted in the design plans and specifications. Reviews will not specify Contractor techniques, sequencing, procedures, means or methods of construction or to safety precautions.
- 8.5. Requests for Information (RFIs). Respond to RFIs from CM/GC or Program Manager and provide clarification of Contract Documents.

- 8.6. Change Orders. Review change order and work directive requests.
- 8.7. Site Visits. As requested by Program Manager, Consultant will participate in up to twenty-five (25) site visits during periods of active construction.
- 8.8. Startup Support. Provide startup assistance. Startup is assumed to be ten (10) days of support from the Consultant.
- 8.9. Substantial and Final Completion Inspections. Hold a Substantial Completion inspection with Owner Staff for the purpose of issuing a Notice of Substantial Completion to the Contractor. This Substantial Completion inspection will include the development of a "punch-list" for the Owner to use as the Contractor's final work to be completed. A final walkthrough will be held at the site to check that punch list items have been completed.
- 8.10. O&M Manual. Consultant will receive from the Contractor an operation and maintenance manual (O&M) that includes all major equipment. Consultant to provide brief supplement outlining the purpose, design criteria, operations/controls (including normal operations, theory of operation, equipment isolation), and a summary of recommended preventative maintenance activities. Consultant will submit a draft to the Owner. Upon receiving comments, Consultant will address comments and submit final O&M.
- 8.11. Record Drawings. The Record Drawings will be developed using the Contractor maintained set of "Red-line" drawings and will show locations of installed components of the Project as identified by the Contractor. These Record Drawings will show significant changes made during construction. Contractor drawings will be reviewed, noted and submitted to Owner. Record drawings will be provided to Owner as updated electronic CAD files and a PDF of Construction Drawings.

Owner Responsibilities:

- Review and process Contractor pay requests, change orders and other construction related documents.
- Provide Construction Contract Administration throughout the duration of construction.
- Provide day-to-day construction observation. Seek interpretation of the Contract Documents as required. Alert Consultant of any concerns observed.
- Provide information for O&M manual as requested by Consultant.
- Provide written comments on draft O&M manual provided.
- Provide written comments on red-lined drawings from Contractor.

Assumptions:

- One member of the Consultants team will attend the pre-construction meeting in person. Assumes up to three (3) others virtually.
- Attendance at construction progress meetings will be weekly by up to two team members. Assumes virtual attendance.
- Work will be performed by one General Contractor.
- Review of Contractor pay requests and Contractor schedules are not included in these services. Review and negotiation of change order proposals are not included in Consultant's scope.
- If required, Material testing services such as soil compaction, concrete, asphalt, steel, pipe pressure, and bacteria will be provided by the Owner and reviewed by the Consultant. Owner shall also be responsible for specialty inspection services as outlined in the contract documents. Review of test reports are not included in the Consultant's scope.
- Budget assumes 27 months of active construction.
- Substantive design and other technical services in connection with work change directives, change proposals, and change orders requested by Owner will be completed as an additional service. Similarly, use the of the additional services budget will apply to extended services arising from (a) the presence at the site of any constituent of concern or items of historical or cultural significance, (b) emergencies or acts of God endangering the work, (c) damage to the work by fire or other causes during construction,

(d) a significant amount of defective, neglected, or delayed work, (e) acceleration of the progress schedule involving services beyond normal working hours, or (f) default by Contractor.

- Claims or legal support services, if required, will be provided as an additional service.
- Consultant shall not be responsible for any decision made regarding the Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Consultant.
- Budget also assumes 400 submittals reviews, 200 resubmittal reviews, 100 RFIs, 20 field orders, and 10 change orders. Consultant will notify the Owner that the Consultant is commencing an additional service when any of these levels have been reached.
- The Contractor will prepare operation and maintenance manual information for the equipment and submit it to the Consultant.
- Because Record Drawings are based on unverified information provided by other parties, the Consultant does not warrant their accuracy.

Deliverables:

- One full size (22" x 24") electronic copy in PDF format of the Contract documents and drawings and will be delivered to Owner.
- Submittal and RFI reviews.
- Substantial completion checklists.
- One electronic copy in PDF format of the Operations and Maintenance Manual provided to the Owner.
- One electronic (PDF) copy of construction plans marked "Record Drawings" and electronic CAD files, if requested.
- One-year warranty inspection punch list documenting observed deficiencies and recommended corrective actions.

TASK 9: WARRANTY INSPECTION

Consultant Responsibilities:

- 9.1. One-year Warranty Inspection. Consultant shall participate in a one-year warranty inspection of the completed improvements prior to expiration of the Contractor's warranty period. Services shall include:
- a. Coordinate and attend an on-site inspection with the Owner, CM/GC, and Program Manager.
 - b. Review the completed improvements for observable deficiencies, defects, or outstanding items that may require correction under the Contractor's warranty.
 - c. Document identified warranty items and provide a summary of recommended corrective actions to the Owner.
 - d. Coordinate with the Owner and Contractor regarding resolution of identified warranty items.
 - e. Perform one follow-up review, as needed, to confirm identified corrective work has been completed.

Owner Responsibilities:

- Participate in warranty inspection.
- Provide input on known, observed issues.

Assumptions:

- Consultant's warranty inspection will be limited to observable conditions and is not intended to constitute a comprehensive evaluation of concealed construction or equipment performance.

Deliverables:

- One-year warranty inspection punch list documenting observed deficiencies and recommended corrective actions.

TASK 10: MANAGEMENT RESERVE (ADDITIONAL SERVICES)

From time to time the Owner may have additional tasks related to the project, or additional tasks may be encountered that are not identified in this scope of work or that may be dependent on decisions not yet made ("Additional Services"). Such additional services may include discharge permit support, Energy Trust incentive support, and City Council presentations. This task establishes a management reserve for Additional Services. Consultant shall not perform any Additional Services unless authorized in writing by Owner staff (Owner's Project Manager). Compensation for Additional Services may be based on Consultant's time and material or a lump sum amount as agreed by Owner and Consultant.

ADDITIONAL SERVICES (not included in scope of work)

- Special use permits, public hearings, or public meetings are not included in scope of work.
- Additional professional time required for correspondence, meetings, redesign, or other project support resulting from a City-initiated change to the project design, or otherwise exceeding the services expressly described in this scope, will be treated as an additional service.
- Public outreach or stakeholder outreach support
- Power utility rebate support
- Bond election or judicial confirmation support
- Field investigations to check available record drawings
- Detailed quantity surveys of materials, equipment, and labor
- Construction staking, potholing/profiling

SCHEDULE

Consultant anticipates completing final design approximately 18 months after receipt of a signed agreement and authorization to proceed, subject to the sequencing shown in the following table. The schedule assumes that the Owner will provide requested information and consolidated review comments within the periods identified for each submittal, that DEQ and other third-party review durations are outside Consultant's control, and that CM/GC input will be provided in time to support the listed milestones. Delays or changes affecting the critical path may require an adjustment to the schedule and compensation.

Task	Schedule (calendar months)	Comments
Task 1 – Project Management	18 months	Assumes 18-month project schedule; additional duration may require additional compensation.
Task 2 – CM/GC Support Services	18 months	Assumes 18-month project schedule; additional duration may require additional compensation.
Task 3 – Basis of Design Report	6 months	
Task 4 – Major Equipment Procurement	2 months from CM/GC contact execution	This task will be completed concurrently with Tasks 1, 2, and 5.
Task 5 – Early Civil Package	4 months	This task will be completed after Task 7.1 and concurrently with Task 7.2.
Task 6 – Recycled Water Pipeline Design		
<i>Task 6.3 – 30% Design</i>	3 months from completion of Task 3	
<i>Task 6.4 – 90% Design</i>	4 months from workshop with Owner in Task 6.3	
<i>Task 6.7 – 100% Design</i>	2 months from workshop with Owner in Task 6.4	
Task 7 – WWTP Final Design		
<i>Task 7.1 – 30% Design</i>	3 months from review meeting with Owner in Task 3	
<i>Task 7.2 – 60% Design</i>	3 months from workshop with Owner in Task 7.1	This task will be completed concurrently with Tasks 5.
<i>Task 7.4 – 90% Design</i>	4 months from workshop with Owner in Task 7.2	
<i>Task 7.7 – 100% Design</i>	2 months from workshop with Owner in Task 7.4	
Task 8 – Construction Phase Services	30 months	
Task 9 – Project Closeout	2 months	This task assumes tasks 8 is completed.
Task 10 – Warranty Inspection	2 months	This task commences 12 months after Task 8.
Task 11 – Management Reserve	Ongoing	

COMPENSATION

As compensation for services to be performed by Consultant, the Owner will pay Consultant as described in the following table. The total authorized budget amount shall not be exceeded without written authorization from the Owner. Lump sum amounts shall include all costs for direct labor, indirect labor, overhead, reimbursable expenses, equipment, travel, per diem, and fixed fees.

Task	Type	Amount
Task 1 – Project Management		
Task 2 – CM/GC Support Services		
Task 3 – Basis of Design Report		
Task 4 – Major Equipment Procurement		
Task 5 – Early Civil Package		
Task 6 – Recycled Water Pipeline Design		
Task 6.3 – 30% Design		
Task 6.4 – 90% Design		
Task 6.7 – 100% Design		
<i>Task 7 – WWTP Final Design</i>		
Task 7.1 – 30% Design		
Task 7.2 – 60% Design		
Task 7.4 – 90% Design		
Task 7.7 – 100% Design		
Task 8 – Construction Phase Services		
Task 9 – Project Closeout		
Task 10 – Warranty Inspection		
Task 11 – Management Reserve		
TOTAL COST		

LS = Lump Sum

T&M = Time and Materials