

PCWRP Expansion to 26 MGD Evaluation file 7574-027

Project Scoring		Freese and Nichols, Inc.	Kimley-Horn and Associates, In	Garver	CP&Y, Inc.	Hazen and Sawyer
Key personnel and project team	30	26.00	28.00	26.40	26.60	26.40
Adequacy and availability of resources	30	26.00	28.00	26.80	26.20	25.60
Experience of the Firm	20	17.60	18.20	17.20	17.20	17.80
Past Performance	20	16.40	18.60	17.20	17.20	16.00
Total		86.00	92.80	87.60	87.20	85.80

## ATTACHMENT "A"

Scope for Engineering Design Related Services for:

### **PECAN CREEK WATER RECLAMATION PLANT EXPANSION TO 26 MGD INCLUDING SOLIDS HANDLING AND DISINFECTION SYSTEM IMPROVEMENTS**

The ENGINEER will perform its services pursuant to the requirements delineated below. Services under this attachment include engineering services for the design and bidding for the PECAN CREEK WATER RECLAMATION PLANT EXPANSION TO 26 MGD INCLUDING SOLIDS HANDLING AND DISINFECTION SYSTEM IMPROVEMENTS project.

#### **Project Understanding**

The CITY needs to expand the existing Pecan Creek Water Reclamation Plant (PCWRP) to 26 MGD. Currently, PCWRP is designed and permitted to discharge 21 MGD. An updated discharge permit submitted to the Texas Commission on Environmental Quality (TCEQ) includes two additional phases of 26 MGD and 30 MGD, respectfully. The CITY anticipates receiving an approved TCEQ discharge permit in early 2023.

The expansion of PCWRP will include a new 5 MGD treatment train that will utilize membrane bioreactor (MBR) technology, new 26 MGD solids handling facilities and ultraviolet disinfection (UV) facilities.

The project will include the necessary piping and electrical/SCADA improvements to have the new facilities work with the existing facilities to treat 26 MGD.

ENGINEER will provide professional services for the following tasks:

- Task 1 – Design Management
- Task 2 – Preliminary Design
- Task 3 – Geotechnical Services
- Task 4 – Final Design
- Task 5 – Construction Contract Documents
- Task 6 – Bidding Phase Services
- Task 7 – Construction Phase Services

## **Task 1 – DESIGN MANAGEMENT**

### **A. Project Management**

1. Develop project communication plan.
  - a. Develop project contact list.
  - b. Prepare and e-mail progress reports to the project team once a month to be included with invoices. 24 months are assumed.
  - c. Prepare project schedule and provide schedule updates if the schedule changes.
2. Meetings
  - a. Prepare for and attend one (1) project kickoff meeting.
  - b. Prepare for and attend up to twenty-four (24) project status meetings with the CITY.
  - c. Prepare meeting notes and distribute to the CITY.
3. Sub-consultant Agreement Preparation
  - a. Prepare and execute up to five (5) subconsultant agreements.

## **Task 2 – PRELIMINARY DESIGN**

### **A. Equipment Selection Process**

The ENGINEER will prepare for and conduct the pre-design equipment selection process. This process includes the following items:

1. Prepare the equipment selection criteria based on CITY input for the following items:
  - a. Membrane Bioreactor (MBR) Equipment
  - b. Peak Wet Weather Treatment Equipment
  - c. Aeration Equipment
  - d. UV Disinfection Equipment
  - e. Solids Thickening Equipment
  - f. Solids Dewatering Equipment
2. Prepare for and conduct up to ten (10) equipment provider interviews with CITY. The ENGINEER will schedule the in-person interviews in coordination with the CITY on time and location. Each interview will be at least one hour in length.
3. Prepare for and arrange up to five (5) site visits to existing water reclamation plant with CITY to observe similar processes and equipment that may be considered for installation on this project. The ENGINEER anticipates each site visit being one day in length.
  - a. Expenses for travel will include travel expense for up to four (4) CITY staff
4. Participate on equipment selection committee with CITY
5. Document the equipment selection process and prepare a technical memorandum summarizing the selected and equipment.

6. Once the equipment above has been selected and approved by the CITY, preliminary technical specifications will be prepared for all the equipment that will be used on this project and preliminary design will be based around specific equipment selections.

**Meetings:**

- a. Prepare for and conduct equipment provider interviews
- b. Facilitate and attend site visits to existing water reclamation plant

**Deliverables:**

- a. Two (2) copies of Equipment Selection Technical Memorandum and .pdf electronic copy
- b. Two (2) copies of the preliminary technical specifications and .pdf electronic copy

**Services/Deliverables provided by the CITY:**

- a. Participate in pre-design equipment selection process
- b. Attend water reclamation plant site visits

**B. Prepare Preliminary Engineering Report (PER) for Expansion to 26 MGD**

The ENGINEER shall prepare a Preliminary Engineering Report. The ENGINEER shall perform the following tasks:

1. Design and size each treatment unit. Calculations, analyses, graphs, formulas, constants, and technical assumptions will be provided to support the design and sizing of each unit.
2. Develop a process flow diagram for the treatment facility.
3. Develop hydraulic model to determine the elevations of the treatment units and determine the sizing of interconnected piping.
4. Prepare the Preliminary Engineering Report Document including:
  - a. Types of units proposed and their capacities
  - b. Detention times, surface loadings and weir loadings for each unit
  - c. Plot of the hydraulic gradient at peak flow conditions
  - d. The recommended operation mode
  - e. Organic and volumetric loadings pertinent to each treatment unit
  - f. Preliminary site plan
  - g. Site access and security
  - h. Flood protection
  - i. Emergency power

**Meetings:**

- a. Prepare for and conduct one (1) Preliminary Engineering Report review meeting

**Deliverables:**

- a. Five (5) copies of the Draft and Final Engineering Report and .pdf electronic copy of each

**Services/Deliverables provided by the CITY:**

- a. Participate in the Preliminary Engineering Report review meeting
- b. Review and provide comments on the Final Engineering Report

**C. Preliminary Design**

1. Prepare engineering plan sheets and technical specifications in accordance with the preliminary engineering report.
2. The 30 % plans will include:
  - a. Civil sheets:
    - i. General notes
    - ii. Overall site plan
    - iii. Yard piping plan
    - iv. Paving plan
  - b. Mechanical sheets:
    - i. General notes
    - ii. MBR treatment equipment layouts
    - iii. Peak wet weather treatment equipment layouts
    - iv. Aeration equipment layouts
    - v. Permeate pumping equipment layouts
    - vi. UV Disinfection equipment layouts
    - vii. Solids Thickening equipment layouts
    - viii. Solids Stabilization equipment layout
    - ix. Solids Dewatering equipment layout
  - c. Structural sheets:
    - i. General notes
    - ii. Site plans
    - iii. Foundation plans

- d. Electrical sheets:
  - i. Site plan
  - ii. Electrical plan
  - iii. Grounding plan
  - iv. One-line diagrams
  - v. Conduit and wiring plan
  - vi. Lighting plan
  - vii. SCADA/instrumentation layout
- 3. Prepare 30% quantity take-off for proposed improvements and engineer's opinion of probable construction cost (OPCC).
- 4. Prepare a cost-benefit analysis for further processing solids with drying technologies.

**Meetings:**

- a. Prepare for and conduct one (1) Preliminary Design review meeting

**Deliverables:**

- a. Five (5) copies of 30% 11"x17" plans and .pdf electronic copy
- b. Five (5) copies of 30% OPCC and .pdf electronic copy

**Services/Deliverables provided by the CITY:**

- a. Review and comment on the 30% plans, preliminary specifications and OPCC
- b. Participate in 30% design review meeting

## **Task 3 –GEOTECHNICAL SERVICES**

### **A. Geotechnical Engineering**

- 1. Perform a geotechnical analysis of the site utilizing a qualified geotechnical laboratory to determine subsurface conditions and make recommendations regarding design parameters. The analysis shall include the following:
  - a. Subsurface exploration including up to ten (10) sample bore drilled to between 35 and 40 feet depending upon depth to un-weathered shale or limestone.
  - b. Laboratory tests for classification purposes and strength characteristics.
  - c. Engineering services that address the following:
    - i. Soil and groundwater conditions
    - ii. Comments on general excavatability of soils and shale encountered
    - iii. Recommendations for foundations, transformer and generator pads, and vault foundation types, depth, allowable loading and backfill requirements

- iv. Foundation construction requirements
  - v. Recommended lateral pressures for the design of below grade walls
  - vi. Evaluation of the subgrade soils
  - vii. Recommendations for yard piping installation, including bedding and backfill
  - viii. Recommendations for earthwork.
2. A geotechnical report will be furnished by the geotechnical engineer to present the results of the field and laboratory data as well as analyses and recommendations. The data contained in the geotechnical report will be made available to contractors during the bidding process for informational purposes.

**Meetings:**

- a. N/A

**Deliverables:**

- a. Two (2) copies of geotechnical report

**Services/Deliverables provided by the CITY:**

- a. Site access

## **Task 4 –FINAL DESIGN**

### **A. 60% Design**

1. Prepare 60% engineering plan sheets and specifications in accordance with the preliminary engineering report.
2. The plans will include:
  - a. Civil sheets:
    - i. General notes
    - ii. Overall site plan
    - iii. Yard piping plan and profiles
    - iv. Paving plan and profile
    - v. Grading plan
    - vi. Details
  - b. Mechanical sheets:
    - i. General notes
    - ii. Membrane treatment equipment layouts and sections
    - iii. Peak wet weather treatment equipment layouts and sections
    - iv. Aeration equipment layouts and sections

- v. Permeate pumping equipment layouts and sections
- vi. Disinfection equipment layouts and sections
- vii. Solids Thickening equipment layouts and sections
- viii. Solids Stabilization equipment layouts and sections
- ix. Solids Dewatering equipment layouts and sections
- c. Structural sheets:
  - i. General notes
  - ii. Site plans
  - iii. Foundation plans
  - iv. Excavation plan
  - v. Sections
- d. Electrical sheets:
  - i. Site plan
  - ii. Electrical plan
  - iii. Grounding plan
  - iv. One-line diagrams
  - v. Conduit and wiring plan
  - vi. Lighting plan
  - vii. SCADA/instrumentation layout
- 3. Specifications shall include CITY Standard and non-standard technical specifications for materials and installation of the proposed facilities.

**Meetings:**

- a. Prepare for and conduct a 60% design review workshop

**Deliverables:**

- a. Five (5) copies of 60% 11"x17" plans, specification, and construction documents and .pdf electronic copy
- b. Five (5) copies of 60% OPCC and electronic copy

**Services/Deliverables provided by the CITY:**

- a. Review and comment on the 60% plans, specifications, and OPCC
- b. Participate in the 60% design review workshop

**B. 90% Design**

- 1. Prepare 90% engineering plan sheets and specifications in accordance with the preliminary engineering report.

2. The plans will include:
  - a. Civil sheets:
    - i. General notes
    - ii. Overall site plan
    - iii. Yard piping plan and profiles
    - iv. Paving plan and profile
    - v. Grading plan
    - vi. Details
  - b. Mechanical sheets:
    - i. General notes
    - ii. Membrane treatment equipment layouts, sections, and details
    - iii. Peak wet weather treatment equipment layouts, sections and details
    - iv. Aeration equipment layouts, sections, and details
    - v. Permeate pumping equipment layouts, sections, and details
    - vi. Disinfection equipment layouts, sections, and details
    - vii. Solids Thickening equipment layouts, sections, and details
    - viii. Solids Stabilization equipment layout, sections, and details
    - ix. Solids Dewatering equipment layout, sections, and details
  - c. Structural sheets:
    - i. General notes
    - ii. Site plans
    - iii. Foundation plans
    - iv. Excavation plan
    - v. Sections
    - vi. Details
  - d. Electrical sheets:
    - i. Site plan
    - ii. Electrical plans
    - iii. Grounding plans
    - iv. One-line diagrams
    - v. Conduit and wiring plans
    - vi. Lighting plans and details
    - vii. SCADA/instrumentation layout
    - viii. Details

3. Specifications shall include CITY Standard and non-standard technical specifications for materials and installation of the proposed facilities.

**Meetings:**

- a. Prepare for and conduct a 90% design review workshop

**Deliverables:**

- a. Five (5) copies of 90% 11"x17" plans, specification, and construction documents and .pdf electronic copy
- b. Five (5) copies of 90% OPCC and electronic copy

**Services/Deliverables provided by the CITY:**

- a. Review and comment on the 90% plans, specifications, and OPCC
- b. Participate in the 90% design review workshop

**C. Final Engineering Report and Summary Transmittal Letter**

The ENGINEER shall prepare a Final Engineering Report based on the comments received on the Preliminary Engineering Report and design changes determined during Final Design. The ENGINEER will prepare and submit a Summary Transmittal Letter to the TCEQ. The Final Engineering Report will include:

- a. Types of units proposed and their capacities
- b. Detention times, surface loadings and weir loadings for each unit
- c. Plot of the hydraulic gradient at peak flow conditions
- d. The recommended operation mode
- e. Organic and volumetric loadings pertinent to each treatment unit
- f. Final site plan
- g. Site access and security
- h. Flood protection
- i. Emergency power
- j. Variance requests (if any)

**Meetings:**

- a. N/A

**Deliverables:**

- a. Submit five (5) copies and one electronic .pdf copy of the Final Engineering Report

**Services/Deliverables provided by the CITY:**

- a. Review and approve the report for submittal to TCEQ

**Task 5 – CONSTRUCTION CONTRACT DOCUMENTS**

**A. Bidding Construction Contract Documents**

- 1. Incorporate CITY comments from final design submittal and prepare construction contract documents, bid plans, and opinion of probable construction cost.
- 2. Construction contract documents will consist of the final plans and project manual, both signed and sealed by a licensed professional engineer in the State of Texas and in accordance with comments provided by the CITY during final design.

**Meetings:**

- a. Prepare for and conduct a construction contract document review workshop

**Deliverables:**

- a. Construction Contract Documents Submittal
- b. Submit two (2) copies and electronic (.pdf) documents to the CITY for bidding.
- c. Submittal shall include the following:
  - a. Bid drawings
  - b. Bid project manual
  - c. Opinion of probable construction cost

**Services/Deliverables provided by the CITY:**

- a. Review and approve the construction contract documents for bidding.

**Task 6 – BID PHASE SERVICES**

**A. Bid Phase Services**

- 1. Provide electronic bid documents to the CITY purchasing department for bidding.
- 2. Provide the Notice to Bidders to the CITY for publication. The CITY will be responsible for publication of the notice. The CITY will be responsible for distribution of the bidding documents to prospective contractors, suppliers, and plan rooms.
- 3. The following assistance will be provided to the CITY during the bidding phase:

- a. Preparation of addenda and delivery to CITY for distribution to plans holders.
  - b. Responses to questions submitted by plans holders.
  - c. Attend bid opening facilitated by CITY.
  - d. Preparation of bid tabulation.
  - e. Preparation of recommendation of award letter.
4. Conformance plans and specifications
- a. Based on potential questions and addenda from the bidding phase, prepare conformance set of plans and specifications to be used during construction.
    - i. Provide up to four (4) sets to CITY for execution.

## **Task 7 – CONSTRUCTION PHASE SERVICES**

### **A. Construction Phase Services**

1. Prepare for and conduct one (1) public meeting with CITY staff and Contractor.
2. Pre-Construction Conference
  - a. Prepare for and attend a pre-construction conference prior to commencement of Work at the Site
3. Site Visits
  - a. Prepare for and conduct up to twenty-four (24) monthly construction progress meetings with the CITY and contractor on site. Meetings will also be considered site visits.
  - b. Site Visits are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress. Observations are to be limited to spot checking, selective measurement, and similar methods of general observation of the Work based on ENGINEER's exercise of professional judgement.
  - c. Based on information obtained during site visits, ENGINEER will determine if Contractor's work is generally proceeding in accordance with the Contract Documents, and ENGINEER will keep CITY informed of the general progress of the work.
4. Resident Project Representative. ENGINEER'S role as Resident Project Representative will include furnishing a Resident Project Representative ("RPR") to assist ENGINEER in observing progress and quality of the work.
  - a. The duties and responsibilities of the RPR are limited to those of ENGINEER in the Agreement with the CITY and in the Contract Documents, and are further limited and described as follows:
    - i. General
      - a) RPR is the ENGINEER'S agent at the Site, will act as directed by and under the supervision of the ENGINEER, and will confer with the ENGINEER regarding RPR's actions

- b) RPR's dealings in matters pertaining to a Contractor's work in progress shall in general be with the ENGINEER and Contractor, keeping CITY advised as necessary
  - c) RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of Contractor
  - d) RPR shall generally communicate with CITY with the knowledge of and under the direction of the ENGINEER
- ii. Schedules
- a) Review the progress schedule, schedule of Shop Drawing and submittals, and any other schedules prepared by Contractor and consult with ENGINEER concerning acceptability
- iii. Conferences and Meetings
- a) Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof
- iv. Liaison
- a) Serve as ENGINEER's liaison with Contractor, working principally through Contractor's superintendent, and assist in providing information regarding the intent of the Contract Documents
  - b) Assist ENGINEER in serving as CITY's liaison with Contractor when Contractor's operations affect CITY's on-site operations
  - c) Assist in obtaining from CITY additional details or information, when required for proper execution of the Work
- v. Interpretation of Contract Documents
- a) Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by ENGINEER
- vi. Shop Drawings and Submittals
- a) Maintain Shop Drawing and Submittal Record log
  - b) Advise ENGINEER and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or submittal for which RPR believes that the submittal has not been approved by ENGINEER

- vii. Modifications.
  - a) Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to ENGINEER. Transmit to Contractor in writing decisions as issued by ENGINEER
- viii. Review of Work and Rejection of Defective Work
  - a) Conduct on-Site observations of Contractor's work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents
  - b) Report to ENGINEER whenever RPR believes that any part of Contractor's work in progress will not produce a completed project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Specific Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval
- ix. Inspections, Tests, and System Start-ups
  - a) Consult with ENGINEER in advance of scheduled major inspections, tests, and systems start-ups of important phases of the Work
  - b) Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate CITY 's personnel, and that Contractor maintains adequate records thereof
  - c) Observe, record, and report to ENGINEER appropriate details relative to the test procedures and systems start-ups
  - d) Accompany visiting inspectors representing public or other agencies having jurisdiction over a Specific Project, record the results of these inspections, and report to ENGINEER
- x. Records
  - a) Maintain at the Site orderly files for correspondence, reports of job conferences, reproductions of original Contract Documents including all Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing

and submittals received from and delivered to Contractor, and other Specific Project-related documents

- b) Prepare a daily report or keep a diary or logbook, recording Contractor's hours on the Site, weather conditions, data relative to questions of Change Orders, Field Orders, or changed conditions, Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER
- c) Record names, addresses, fax numbers, e-mail addresses, web site locations and telephone numbers of all Contractors, subcontractors, and major suppliers of materials and equipment
- d) Maintain records for use in preparing project documentation
- e) Upon completion of the Work, furnish original set of all RPR Specific Project documentation to ENGINEER

xi. Reports

- a) Furnish to ENGINEER periodic reports, as required, of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and submittals
- b) Draft and recommend to ENGINEER proposed Change Orders and Field Orders. Obtain backup material from Contractor
- c) Furnish to ENGINEER and CITY copies of all inspection, test, and system startup reports
- d) Immediately notify ENGINEER of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Constituent of Concern

xii. Payment Request

- a) Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the Work completed, and materials delivered at the Site but not incorporated in the Work
- b) Certificates, Operation and Maintenance Manuals
- c) During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable

to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to ENGINEER for review and forwarding to CITY prior to payment for that part of the Work

xiii. Completion

- a) Participate in a final inspection in the company of ENGINEER, CITY, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied
- b) Observe whether all items on the final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance and issuance of the Notice of Acceptability of the Work

xiv. Resident Project Representative shall not:

- a) Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items)
- b) Exceed limitations of ENGINEER's authority as set forth in the Agreement or the Contract Documents
- c) Undertake any of the responsibilities of a Contractor, subcontractors, suppliers, or a Contractor's superintendent
- d) Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of the Contractor's work unless such advice or directions are specifically required by the Contract Documents
- e) Advise on, issue directions regarding, or assume control over safety practices, precautions and programs in connection with the activities or operations of CITY or Contractor
- f) Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by ENGINEER
- g) Accept Shop Drawings or submittals from anyone other than Contractor
- h) Authorize CITY to occupy a Specific Project in whole or in part
- i) Through such observations of Contractor's work in progress and field checks of materials and equipment by the RPR, ENGINEER shall endeavor to provide CITY a greater degree of confidence that the completed Work will conform in general to the Contract Documents. However, ENGINEER shall not, during such visits or as a result of such observations of Contractor's work in

progress, supervise, direct, or have control over Contractor's work, nor shall ENGINEER have authority over or responsibility for the means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's work, nor for any failure of Contractor to comply with laws and regulations applicable to Contractor's furnishing and performing the Work. Accordingly, ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform its work in accordance with the Contract Documents.

5. Recommendations with Respect to Defective Work

- a. Provide recommendations to CITY that Contractor's work be disapproved and rejected while it is in progress if, on the basis of site visit evaluations, ENGINEER believes such work will not produce a completed Project that conforms generally to Contract Documents or that it will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Notwithstanding the foregoing, the CITY reserves the right to disapprove or reject Contractor's work without a recommendation from the ENGINEER.

6. Clarifications and Interpretations

- a. Issue necessary clarifications and interpretations of the Contract Documents to CITY as appropriate to the orderly completion of Contractor's work. Such clarifications and interpretations will be consistent with the intent of the Contract Documents. Field orders authorizing variations from the requirements of the Contract Documents will be made by CITY.

7. Change Orders

- a. Recommend change orders to CITY, as appropriate.
- b. Review and make recommendations related to Change Orders submitted or proposed by the Contractor.

8. Shop Drawings and Samples

- a. Review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs. Assumes up to thirty (30) shop drawings.

9. Substitutes and “or-equal”

- a. Evaluate and determine the acceptability of substitute or “or-equal” materials and equipment proposed by Contractor in accordance with the Contract Documents, but subject to the provisions of applicable standards of state or local government entities.
- b. Provide recommendations to CITY

10. Inspections and Tests

- a. Review certificates of inspections and tests within ENGINEER’s area of responsibility for the purpose of determining that the results certified indicate compliance with the Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Contract Documents. ENGINEER will be entitled to rely on the results of such tests and facts being certified. The scope of services assumes the pumps and motors will go through a non-witnessed factory test. Attending testing will be considered additional services.

11. Disagreements between CITY and Contractor

- a. As necessary, ENGINEER will, with reasonable promptness, render initial written decision on all claims of CITY and Contractor relating to the acceptability of Contractor’s work or the interpretation of the requirements of the Contract Documents pertaining to the progress of the Contractor’s work. In rendering such decisions, ENGINEER will be fair and not show partiality to CITY or Contractor and will not be liable in connection with any decision rendered in good faith in such capacity. The initial decision of the ENGINEER shall be required as a condition precedent to mediation or litigation of any claim arising prior to the date final payment is due to the Contractor, unless thirty (30) days have passed after a claim has been referred to the ENGINEER with no decision having been rendered.

12. Final Walkthrough and Punchlist Preparation

- a. Attend final walkthrough with Contractor and CITY to determine if the completed work of Contractor is generally in accordance with the Contract Documents.
  - i. Limitation of Responsibilities: The ENGINEER will not be responsible for the acts or omissions of any Contractor, or of any of their subcontractors, suppliers, or of any other individual entity performing or furnishing the work. ENGINEER will not have the authority or responsibility to stop the work of any Contractor.
- b. Compile punch list from information gathered during final walkthrough with CITY and Contractor.

13. Start-up Assistance: The ENGINEER will attend manufacturer’s start-up and training for major equipment components and will assist the CITY with questions during an initial six-week start-up of the facility. The ENGINEER will be available for an additional eight weeks beyond the initial start-up completion to

conduct site visits and answer additional questions with regards to making adjustments to operating protocols or process control changes.

## **Task 8 – RECORD DRAWINGS**

### **A. Record Drawings**

1. Obtain and review comments and field changes on the construction plans from CITY and Contractor.
2. Prepare record drawings based on comments and field changes. The ENGINEER will not be providing resident engineering services and will not be observing on a full-time basis and will therefore not seal the record drawings. The record drawings will be provided in the following format:
  - a. PDF electronic copy

---

## ADDITIONAL SERVICES NOT INCLUDED IN THE EXISTING SCOPE OF SERVICES

CITY and ENGINEER agree that the following services are beyond the Scope of Services described in the tasks above. However, ENGINEER can provide these services, if needed, upon the CITY's written request. Any additional amounts paid to ENGINEER as a result of any material change to the Scope of the Project shall be agreed upon in writing by both parties before the services are performed. These additional services include, but are not limited to the following:

- Design of solids drying or composting facilities
- Evaluation and design of improvements to existing North and South treatment trains
- Redesign to reflect project scope changes requested by the CITY, required to address changed conditions, or change in direction previously approved by the CITY, mandated by changing governmental laws, or necessitated by the CITY's acceptance of substitutions proposed by the contractor.
- Design or Survey of any offsite collection system improvements beyond the improvements identified in the scope
- Preparation for and attendance at public meetings beyond those identified in the scope
- Furnish additional copies of review documents and/or bid documents in excess of the number of the same identified above.
- Services related to disputes over bid protests, bid rejection, and re-bidding of the contract for construction.
- Appearing before regulatory agencies or courts as an expert witness in any litigation with third parties or condemnation proceedings arising from the development or construction of the Project, including the preparation of engineering data and reports for assistance to the CITY.
- Accompanying the CITY when meeting with the TCEQ, U.S. Environmental Protection Agency, or other regulatory agencies during the course of the Project, beyond those meetings identified above. The ENGINEER will assist the CITY on an as-needed basis in preparing compliance schedules, progress reports, and providing general technical support for the CITY's compliance efforts.
- Assisting CITY or Contractor in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this Agreement. Such services, if any, will be furnished by ENGINEER on a fee basis negotiated by the respective parties outside of and in addition to this Agreement.
- Providing professional services associated with the discovery of any hazardous waste or materials in the project site.
- Performance of materials or specialty testing services.
- Services necessary due to default of the Contractor.
- Services related to damages caused by fire, flood, earthquake, or other acts of God.
- Services related to warranty claims, enforcement, and inspection after final completion.
- Services related to Survey Construction Staking.
- Services to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CITY.
- Performance of miscellaneous and supplemental services related to the project as requested by the CITY.
- "Value engineering" after bidding
- Additional bid packages beyond the scope identified above
- SWPPP inspections / coordination
- Any services not listed in the Scope of Services

## ATTACHMENT "B"

Compensation for Engineering Design Related Services for:

### PECAN CREEK WATER RECLAMATION PLANT EXPANSION TO 26 MGD INCLUDING SOLIDS HANDLING AND DISINFECTION SYSTEM IMPROVEMENTS

Total compensation for the ENGINEER contemplated under the terms of this agreement **shall be a total not-to-exceed \$14,952,000** for all services including reimbursable expenses. The CITY shall compensate the ENGINEER as follows:

For Tasks 1-8 the total compensation shall be on a lump sum basis and not to exceed **\$14,952,000**.

Progress payments for shall be paid monthly based on the actual work satisfactorily completed per month in each phase, with the following amounts of the total compensation for each phase of the Project:

• Task 1 – Project Management	\$ 189,000
• Task 2 – Preliminary Design	\$3,684,000
• Task 3 – Geotechnical Services	\$ 80,000
• Task 4 – Final Design	\$6,898,000
• Task 5 – Construction Contract Documents	\$ 235,000
• Task 6 – Bid Phase Services	\$ 35,000
• Task 7 – Construction Phase Services	
○ CCA	\$2,906,000
○ RPR	\$ 860,000
• Task 8 – Record Drawings	\$ 65,000

**Grand Total           \$ 14,952,000**

ENGINEER will not exceed the total maximum fee shown without authorization from the CITY. Individual task amounts are provided for budgeting purposes only. ENGINEER reserves the right to reallocate amounts among tasks as necessary.

All permitting, application, and similar project fees will be paid directly by the CITY.

**Non-Labor Expenses:** Non-labor expenses for reimbursable tasks shall be reimbursed as Direct Expenses at invoice or internal office cost. 4.6% will be added to each invoice to cover certain other internal office cost expenses as to these tasks, such as in-house duplicating, local mileage, telephone calls, facsimiles, postage, and word processing.

**Direct Expenses** (non-labor) for reimbursable tasks include, but are not limited to, mileage, travel and lodging expenses, mail, supplies, printing and reproduction services, other direct expenses associated with delivery of the work; plus applicable sales, use, value added, business transfer, gross receipts, or other similar taxes. Direct reimbursable expenses such as express delivery services, fees, travel, and other direct expenses will be billed at 1.10 times the cost.

Payment will be due within 25 days of your receipt of the invoice and should include the invoice number and Kimley-Horn project number.