CITY OF FAIR OAKS RANCH
WASTEWATER TREATMENT PLANT – PHASE 1 EXPANSION (FINAL DESIGN PHASE)
SCOPE OF SERVICES

Project Understanding

Kimley-Horn and Associates, Inc. (the Professional or Consultant) understands that the City of Fair Oaks Ranch (the City) wishes to construct multiple improvements to the Wastewater Treatment Plant (the Project). The Wastewater Treatment Plant (WWTP) is an activated sludge plant that is permitted for an average daily flow of 0.5 million gallons per day (MGD). This project will include design of the following improvements:

- Effluent pump station capacity upgrades
    - Installation of three (3) new 30 HP VFD Flygt submersible pumps with a duty point of 608 gpm @ 101 feet of head and their respective valves and appurtenances.
    - Modifications to the pump vault including coring of vault wall to accommodate for new discharge piping.
    - Modifications to the wet well including coring of structure wall to accommodate for new discharge piping. Removal and replacement of wet well structure concrete top to accommodate for a larger access hatch.
    - Replacement existing canopy cover.
    - Replacement of existing pump control panel to include VFDs, controls and air conditioning.
    - Installation of an additional panel with communication and SCADA equipment.
    - Replacement above ground and below ground conduit.
    - Replacement of MCC feeder breaker and cable.
    - Install new electric service drop, electric distribution, control panel and radio communication for remote operated valves.
- Offsite effluent water main upsizing to storage ponds
    - Installation of approximately 10,400 LF of 12-inch PVC pipe parallel to the existing alignment and abandon in place existing 6-inch and 8-inch pipe to Blackjack 1 pond.
- Influent lift station capacity and condition upgrades
    - Installation of two (2) new 15 HP VFD Flygt solids-handling pumps with a duty point of 509 gpm @ 709 feet of head and their respective valves and appurtenances.
    - Relining of existing wet well.
    - Replacement of existing canopy cover.
    - Installation of new pump control panel with VFDs, controls and air conditioning.
    - Replacement above ground and below ground conduit.
    - Replacement of MCC feeder breaker and cable.
- Odor control system at the headworks
    - Installation of vapor-phase treatment and carbon adsorption system at the headworks.
    - Replacement of grating sections at the headworks with aluminum or fiberglass

- Rehabilitation of structural channel concrete surface and replacement of corroded bolts and nuts with stainless steel.

The Consultant had previously prepared a 30% Preliminary Engineering Report for these improvements as part of the Wastewater Treatment Plant – Phase 1 Expansion (30% Phase) project. This proposal encompasses the final design, bidding, and construction phase services related to these improvements as recommended in the 30% Preliminary Engineering Report.

Scope of Services

The Consultant will in accordance with the terms and conditions of the Contract provide project management and preliminary design services for the project.

Task 1 – Project Management

1.1 – Project Schedule

Consultant will prepare and submit project schedule in Microsoft Project, for review and approval by City. The schedule will reflect the agreements made during the scoping meeting and subsequent negotiations. An updated project schedule will be maintained and submitted with each invoice to reflect City approved changes/delays in the project. Project schedule will be updated and resubmitted at each design phase of the project.

Deliverable – Baseline Microsoft Project Schedule in PDF. Updated schedule at 75% deliverable. Updated schedule at 100% deliverable.

1.2 – Sub-Consultant Management

Consultant will manage, coordinate, and be responsible for its sub-consultants participating in the project. This includes, but is not limited to, distribution and coordination of work among the sub-consultants, review and payment of monthly progress and billing, quality assurance and control of the work and submittals by the sub-consultants.

1.3 – Quality Assurance and Control Reviews

Consultant will manage and be responsible for the quality of its deliverables, which includes following an established QA/QC program. The program will include reviews at each milestone along with discipline coordination, constructability reviews, and interim reviews by project staff.

Deliverable – QA/QC Certificate Form, Copy of QA/QC internal redlines and responses at 75% and 100% deliverables

1.4 – Project Meetings

Consultant will conduct four (4) monthly virtual coordination calls with City staff. Consultant will prepare agendas and necessary documents and exhibits to present project status and discuss design details. Meeting notes will be prepared and sent out to all attendees for review and approval. Minutes and meeting notes will confirm discussions and decisions made at each meeting.

Deliverable – Meeting Agenda and Meeting notes in PDF.

Task 2 – 75% Design Phase

City will provide the Consultant with written Notice to Proceed (NTP) at which time the work for the 75% Design Phase shall be initiated.

The Consultant will perform the following professional services for this project phase:

2.1 – 75% Project Kick-Off Meeting

Consultant will conduct a project kick-off meeting with City Staff to discuss field work, WWTP pump station civil/mechanical design considerations, and electrical design considerations.

2.2 – Survey – Boundary, Improvements, Topographic and Tree Survey

Kimley-Horn will prepare a boundary, improvements, topographic and tree survey for the treated effluent main route as well as for the proposed improvements at the WWTP. The survey will be used for site planning and civil engineering design purposes. The treated effluent main route is expected to cross approximately 30 existing parcels. The survey will consist of:

- Locating existing monumentation, deed lines, platted lot lines, street rights-of-way, easements, and any encroachments or protrusions of visible improvements. Only record property lines, lot lines and easements shown on the recorded subdivision plats and in the property deeds or provided by the Client will be shown. Title research on the individual properties is not part of this proposal.
- All existing substantial features and improvements will be located. This includes buildings, parking areas, streets, sidewalks, fences, top of curb and gutter, light poles, and other structures.
- Observed locations of existing utility appurtenances, including electric and communications lines, water, wastewater, valves, top of nut elevations, manholes, drainage structures, storm pipes, gas valves, as well as inverts, flow lines, and pipe sizes where accessible. Texas 811 markings of subsurface utilities that are in place at the time our field work will also be located. This part of the proposal does not include subsurface utility engineering (SUE) such as designation by electronic means, potholing or excavating.

- Topographic information at an even grid will be provided with details of features and contour lines representing the surface of the existing ground at one-foot intervals. Primary control and benchmarks will be set on site and tied to the North American Vertical Datum of 1988 based on GNSS post processing methods.
- A tree survey, in accordance with City of Fair Oaks ordinance (Article III, Section 6) will be performed. The tree species shown on the survey will reflect field identifications made by survey crew personnel. This fee does not reflect effort by an arborist or other expert consultant should make the final determination of tree types and conditions.
- Data collection methods will be according to standard professional land surveying techniques and methods per the following where conditions warrant: GPS/GNSS Static RTK, total station, robotic scanning, and drone UAV. The base field data will be collected by Open Range Field Services field crews and processed by Kimley-Horn.

TBPLS Firm Number: San Antonio: 10193973

INFORMATION PROVIDED BY the client

Consultant shall be entitled to rely on the completeness and accuracy of all information provided by the Client or the Client's consultants or representatives. The Client shall provide all information requested by Kimley-Horn during the project, including but not limited to the following:

- CAD files, record construction drawings and asbuilt drawings showing the location of existing buried utilities, property lines, and easement boundaries, if available.
- Copies of title reports, if available.
- Right of Entry and Access to all Properties.

2.3 – Civil/Mechanical Design Services

Consultant will perform civil and mechanical engineering services for the proposed WWTP Improvements. The civil/mechanical design will include the following:

- Effluent Pump Station Improvements, including:
  - Installation of 3 new submersible pumps
  - Modifications to the pump vault to accommodate for new discharge piping
  - Modifications to the wet well to accommodate for new discharge piping
  - Replacement of existing canopy cover
- Offsite Effluent Water Mains
  - Installation of approximately 10,400 LF of 12-inch PVC pipe parallel to the existing alignment and abandon in place existing 6-inch and 8-inch pipe to Blackjack 1 pond.
- Influent Lift Station Improvements, including
  - Installation of 2 new submersible solids handling pumps
  - Relining of the existing wet well

- Replacement of the existing canopy cover
- Headworks Odor Control Improvements, including:
  - Installation of vapor-phase treatment and carbon adsorption system at the headworks.
  - Replacement of grating sections at the headworks with aluminum or fiberglass.
  - Rehabilitation of structural channel concrete surface and replacement of corroded bolts and nuts with stainless steel.
- Minor provisions for future expansion of the influent and effluent pump stations, including consideration and spacing for future pumps and piping should the effluent system be upgraded in the future.

2.4 – Electrical Engineering Services

Consultant will perform electrical engineering services for the proposed improvements. The electrical design will include the following:

- Effluent Pump Station Improvements, including:
  - Replacement of the existing pump control panel to include VFDs, controls and air conditioning.
  - All above ground and possibly below ground conduit (as needed) will be replaced
  - The MCC feeder breaker and cable will be replaced
  - Connect the station to the existing SCADA system for control using pond level or another method. Panel with communication and SCADA equipment will be provided.
- Remote Actuated Valve (located near Effluent Pump Station)
  - Design power feed from the main MCC.
  - Connect the station to the existing SCADA system. Panel with communication and SCADA equipment will be provided or combined with the Effluent Pump Station Panel.
  - Provide P&ID
- Influent Lift Station Improvements, including:
  - Installation of a new pump control panel with VFDs, controls and air conditioning.
  - Replacement of above ground and below ground conduit.
  - Replacement of MCC feeder breaker and cable.
  - Connect to existing SCADA system or relocate equipment to proposed panel.
- Electrical Improvements related to the odor control system to be installed at the Headworks.
  - Design power feed from the main MCC
  - Connect the station to the existing SCADA system. Panel with communication and SCADA equipment will be provided.
  - Provide P&ID.
- Electrical Service Review
  - The CPS Energy service transformers, cable, demand load, etc. will need to be reviewed.

1. The design of upgrades to the electrical service will be coordinated with CPS Energy.
2. Design is limited to transformer, meter and main OCPD replacement as needed.
3. The replacement of the existing motor control center and other equipment located at the service entrance is not included.

2.5 - 75% Construction Drawings

Consultant will prepare engineering plans in half-size (11" x 17") format. The Consultant will provide the following information on the 75% plan sheets:

1) Information Sheets
   - Cover
   - Sheet Index
   - General Notes
   - Project Control Plans

2) Civil Sheets (Influent Lift Station, Effluent Pump Station, and Effluent Water Mains)
   - Site Plan
   - Project Layout (Effluent Waterline Only)
   - Plan Sheets for approximately 9,600 LF of Effluent Water Line (24 Sheets)
   - Plan & Profile Sheets for approximately 800 LF of Effluent Water Line at roadway crossings (2 Sheets)
   - Pond Discharge Details for the Effluent Waterline (1 sheet)
   - Effluent Pump Station Details
     - Section view
     - Plan view
     - Remote-actuated valve detail
     - Pump vault details
     - Wet well details
     - Canopy replacement details
     - Other misc. pump station details
   - Effluent Waterline Details
   - Influent Lift Station Details
     - Section view
     - Plan view
     - Remove-actuated valve detail
     - Pump vault details
     - Wet well details
     - Canopy replacement details
     - Other misc. lift station details
   - Erosion Control Plans and Details
   - Tree Preservation Plans
   - Traffic Control Plans

3) Odor Control Sheets
    - Odor control system arrangement plan and section drawings
    - Odor Control P&ID drawings
    - Headworks improvement details
    - Structural channel details
    - Other misc. odor control details

4) Electrical Sheets (Influent Lift Station, Effluent Pump Station, and Effluent Water Mains)
    - Site plan
    - Electrical one line
    - Miscellaneous controls
    - SCADA sheets
    - Instrumentation
    - Security
    - Details
    - Grounding
    - Cable and conduit schedule
    - Lighting
    - Legend
    - Panel layouts and schedule

Deliverable – One (1) electronic copy in PDF.

2.6 - 75 % Specifications

Consultant will include technical specifications for materials and installation of all proposed facilities. No Front End Contract Documents will be provided at the 75% stage.

Deliverable –One (1) electronic copy in PDF.

2.7 – 75% Opinion of Probable Construction Cost

Consultant will prepare and submit an Engineer's Opinion of Probable Construction Cost (OPCC) with the 75% design plans and specifications. 75% OPCC shall be a Class 2 Estimate as described in AACE Recommended Practice No. 18R-97 and 56R-08 or the latest editions. OPCC will include quantities and unit prices for construction materials included in the design.

Deliverable – One (1) electronic copy in PDF.

2.8 – 75% Design Workshop

Consultant will conduct a 75% Design review workshop for the City staff following the completion of the City's review of the 75% design submittal. This workshop will be tailored to review, discuss, and finalize specific aspects of the design criteria and concepts and to discuss City's review comments prior to initiating 100% Design.

Consultant will prepare written response to City's comments on the 75% Design and submit to City in electronic format. Comments will be incorporated into the 100% Design Documents.

Deliverable – Meeting Agenda, Sign-in Sheet, Meeting Notes and Comment Responses in PDF.

2.9 – 75% Utility & Stakeholder Coordination Meetings

Consultant will prepare for and conduct coordination meetings upon completion of the 75% Design Workshop. These coordination meetings will include all applicable utility companies and other affected agencies, such as

a. Franchise utilities (gas, phone, electric)
b. Private Property Owners

In addition, to the formal in-person coordination meeting listed above, this scope item will include informal coordination and meetings required to keep open lines of communication with stakeholders/agencies listed above.

Deliverable – Utility Log, Communication Log, Meeting Agenda, Sign-in Sheet, Meeting notes in PDF, and Up to two (2) Misc. Exhibit (11"x17")

TASK 2 – Services/Deliverables provided by City:

- Review and comment on the 75% submittal.
- Attend the 75% design review workshop.
- Review and comment on 75% design review workshop meeting minutes.

Task 3 - 100% Design Phase

The Consultant will perform the following professional services for this project phase, once 75% Design Phase has been approved by City:

3.1 - 100% Construction Drawings, Specifications, and OPCC

Consultant will prepare engineering plans in half-size (11" x 17") format. Consultant will include technical specifications for materials and installation of proposed facilities as well as front end documents according to Engineers Joint Contract Documents Committee (EJCDC) guidelines. The City will provide input on the EJCDC front end documents, including the use of Supplementary Conditions or any other requested

modifications. The City may elect to select a contractor based on "lowest responsible bidder" or "best value bid", and the front end documents prepared by the Consultant will reflect the preferred approach. Consultant will prepare and submit an Engineer's Opinion of Probable Construction Cost (OPCC) with the 100% design plans and specifications. 100% OPCC shall be a Class 1 Estimate as described in AACE Recommended Practice No. 18R-97 and 56R-08 or the latest editions. OPCC will include quantities and unit prices for construction materials included in the design.

Deliverable

- *One (1) electronic copy of 100% Construction Drawings in PDF*
- *One (1) electronic copy of 100% Specifications in PDF.*
- *One (1) electronic copy of 100% OPCC in PDF.*

3.2 – Permitting

Consultant will prepare and submit the following permits:

- City of Fair Oaks Ranch Floodplain Development Permit.
  - Consultant to prepare application form and related documents for the City of Fair Oaks Ranch Floodplain Development Permit. Permitting fee to be paid for by the City.
  - Consultant will respond to one (1) round of technical comments
- City of Fair Oaks Ranch Tree Preservation/Mitigation Plan for City review.
  - Consultant to prepare tree preservation/mitigation plan for City review. Permitting/review fee to be paid for by the City.
  - Consultant will respond to one (1) round of technical comments
- Compliance with the TCEQ Texas Pollutant Discharge Elimination System and Construction General Permit
  - A TCEQ Construction General Permit will be required for construction work related to this project. Consultant will provide erosion control sheets as part of the construction drawings that include Best Management Practices (BMPs), erosion control narrative, vegetation restoration notes, and erosion control notes
  - Preparation of a Storm Water Pollution Prevention Plan (SWP3) and acquisition of a TCEQ Construction General Permit to be performed by the selected contractor.

TASK 3 – Services/Deliverables provided by City:

- Provide input on the EJCDC front end documents.

Task 4 – Bid Phase

The Consultant will perform the following professional services for this project phase:

4.1 - Bid Ready Documents

Upon written notification from City, Consultant will proceed with providing Contract Documents (bid sets) for bidding. The Contract documents will be submitted electronically to the City.

Consultant will provide one (1) copy of plans, specifications and Contract Documents in Adobe Acrobat PDF format for project advertisement.

4.2 – Pre-bid conference and Site Visit

Consultant will attend the Pre-bid Conference to present the project to prospective bidders and respond to questions. Consultant will submit a draft agenda for City's review at least one (1) working day prior to conference and distribute the approved agenda and a sign-in sheet at the conference. Consultant will prepare meeting minutes within three (3) working day following the conference and provide a draft to the City PM for review. After incorporating all of City's comments, Consultant will submit the final minutes electronically.

Consultant will attend a pre-bid site visit for prospective bidders.

4.3 – Responses to Questions

Consultant will provide written interpretation of the intent of plans and specification (Contract Documents) to City for distribution to potential bidders. Consultant will prepare a log of all bidders' questions and provide response. Any changed to the contract documents resulting from bidders' questions will be addressed formally through an addendum.

4.4 – Prepare Addenda

Consultant will prepare addenda required to clarify, correct or change the bid documents. Consultant will also revise the OPCC, if necessary. Addenda will be provided in Adobe.pdf format and sealed by responsible engineer(s). Addenda will be issued to bidder through the City.

4.5 – Evaluation of Bids

City will provide consultant with the bid tabulation and the bid packets. Consultant will review the bid packet(s), verify the accuracy of the bid tabulation, determine if the apparent low bidder is the lowest responsible bidder, and prepare a letter of recommendation of award. At a minimum, the bid packet review will examine previous project history (contact client references), proposed superintendents' work history, financial viability (financial strength, payment performance, credit worthiness, etc.), and OSHA safety records. Consultant will also assess the bid for balance. Consultant will consult with City as to the acceptability of major subcontractors, suppliers, and other entities included in the bid packet.

4.6 – Conformed Documents

Per the addenda issued, Consultant will update the Contract. Consultant will provide three (3) hard copy sets of half-size (11”x17”) plans and three (3) hard copy sets of specifications. One (1) CD containing the plans and specifications for the project in PDF format. Conformed sets will be sealed and signed by a professional engineer in the state of Texas.

Bid Phase Deliverables

In summary, Consultant will provide the following deliverables to City as part of the bid phase services:

- Contract documents (bid sets) and final OPCC
- Pre-bid meeting agenda and meeting minutes
- Addenda
- Written response to question from bidders
- Letter of recommendation of award
- Conformed drawings and specifications (hard copies and one PDF)

Task 5 – Construction Phase Services

For the purposes of this Agreement it is anticipated that the construction period will be twelve (12) months. The Consultant will perform the following professional services for this project phase:

5.1 – Pre-Construction Conference

Consultant will attend a Pre-Construction Conference prior to commencement of construction activity.

5.2 – Visit to Site and Observation of Construction

Consultant will make up to twenty-four (24) site visits to observe the progress of the work, twice per month for the expected construction duration of 12 months. Such observations will not be exhaustive or extend to every aspect of Contractor's work. Observations will to be limited to spot checking, selective measurement, and similar methods of general observation. Based on information obtained during site visits, Consultant will evaluate whether Contractor's work is generally proceeding in accordance with the Contract Documents, and Consultant will keep Client informed of the general progress of the work.

Consultant will not supervise, direct, or have control over Contractor's work, nor shall Consultant have authority to stop the Work or have responsibility for the means, methods, techniques, equipment choice and usage, schedules, or procedures of construction selected by Contractor, for safety programs incident to Contractor's work, or for any failure of Contractor to comply with any laws. Consultant does not guarantee the performance of any Contractor and has no responsibility for Contractor's failure to perform its work in accordance with the Contract Documents.

5.3 – Construction Progress Meetings

Consultant shall attend twenty-four (24) twice-monthly construction progress meetings. Consultant will prepare agenda and meeting minutes.

5.4 – Pay Estimate Reviews

Based on its observations and on review of applications for payment and supporting documentation, Consultant will determine amounts that Consultant recommends Contractor be paid. Such recommendations will be based on Consultant's knowledge, information and belief, and will state whether in Consultant's opinion Contractor's work has progressed to the point indicated, subject to any qualifications stated in the recommendation. For unit price work, Consultant's recommendations of payment will include determinations of quantities and classifications of Contractor's work, based on observations and measurements of quantities provided with pay requests. Consultant's recommendations will not be a representation that its observations to check Contractor's work have been exhaustive, extended to every aspect of Contractor's work, or involved detailed inspections.

5.5 – Shop Drawings/Submittal Review

Consultant will 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. Such review and approvals or other action will not extend to means, methods, techniques, equipment choice and usage, schedules, or procedures of construction or to related safety programs.

Substitutes and "or-equal." Consultant will evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor in accordance with the Contract Documents. Consultant will develop special condition in the bid documents for contractor to submit "or equal" substitutions with bid.

5.6 – Requests for Information (RFI)

Consultant (or the appropriate sub-consultant) will respond to all questions and concerns that may arise during construction. Clarifications and interpretations of the Contract Documents will be consistent with the intent of the Contract Documents. Responses will be provided in writing, using City's standard format, if applicable.

5.7 – Requests for Proposals (RFPs) and Change Orders (COs)

Consultant may recommend Change Orders to the Client, and will review and make recommendations related to Change Orders submitted or proposed by the Contractor.

5.8 – Substantial and Final Completion Walk-through

Substantial Completion. Consultant will, after notice from Contractor that it considers the Work ready for its intended use, in company with Client and Contractor, conduct a site visit to determine if the Work is substantially complete. Work will be considered substantially complete following satisfactory completion of all items with the exception of those identified on a final punch list.

Consultant will attend a one-day site visit for odor control system review for startup and commissioning.

Final Notice of Acceptability of the Work. Consultant will conduct a final site visit to determine if the completed Work of Contractor is generally in accordance with the Contract Documents and the final punch list so that Consultant may recommend final payment to Contractor. Accompanying the recommendation for final payment, Consultant shall also provide a notice that the Work is generally in accordance with the Contract Documents to the best of Consultant's knowledge, information, and belief based on the extent of its services and based upon information provided to Consultant.

Task 6 – Record Drawings

6.1 – Record Drawings

Consultant will prepare Contract Record Drawings for the project, based on as-built redlines provided by the contractor.

Deliverable

Digital Delivery of the following.

- *Record Drawings in PDF*
- *AutoCAD Project files (2024)*
- *GIS shapefiles of installed pipelines*

Task 7 – Supplemental Services

Supplemental Services shall only be performed by Consultant upon written authorization from City, which may require an amended professional services agreement for approval. Subject to the City's approval, all unused supplemental services funds can be reallocated to other tasks depending on actual project needs.

7.1– General Engineering

This scope is intended to encompass the design associated with items that were not clearly understood or otherwise clearly defined at the time of scoping and fee development. Items in this task may include, but are not limited to, evaluation of additional WWTP components, site work, and other items that may be preferred for the operations and improvement/expansion of the WWTP.

7.2– Easement Acquisition Support

In addition to easement services discussed in the 75% Design Phase, Kimley-Horn will provide engineering support for easement acquisition during the 100% Design Phase by researching and responding to landowner and other stakeholder inquiries, meeting with landowner and other stakeholders during the acquisition process and creating RPLS signed and sealed easement exhibits and documents associated with engineering support of City's acquisition efforts. As part of this effort the Consultant will attend up to three (3) meetings. This effort does not include attendance and testimony at condemnation hearings.

Metes and bounds exhibit cost:

- $2,100 per permanent easement (maximum of 10)
- $1,300 per temporary easement (maximum of 10)
- $1,000 for title research per tract each easement is being requested for (maximum of 10)

Deliverables: RPLS signed and sealed easement exhibits and documents

7.3 – Subsurface Utility Exploration (SUE)

Consultant will provide Quality Service Level A subsurface utility exploration (SUE) services to identify the location and depth of existing utilities.

- Maximum of ten (10) locations are included in this scope at an average depth of 0-10 feet.

Consultant shall provide City with a SUE pothole plan for review, approval, and coordination by City prior to actual SUE work. The plan is to show approximate location of existing utilities and proposed locations of potholes for utility identification. Changes to the plan shall be documented and re-submitted to City for approval and record purposes. This service does not include City Police Officer or expedited permitting fees.

Deliverables: Summary sheet of all test hole coordinate data and depth information, 8.5"x11" test hole data forms for all test hole locations completed signed and sealed by a Professional Engineer in PDF format, utility report containing metadata

7.4 – City Council Briefings

The Consultant will prepare briefing materials for City Staff review and participate in City Council briefings. The consultant will prepare discussion topics for City Council focused upon areas of diverse opinion from the workshops in a manner that allows City Council to discuss issues and provide policy direction for City Staff and the Consultant.

The following meetings are included in this Scope of Services:

- 75% Design Phase
    - One (1) briefing to discuss progress on the design of the WWTP improvements, including a presentation prepared by the Consultant.
- Bid Phase
    - One (1) briefing in a support role to City Staff to discuss bid results and construction contract award/approval.

Deliverable

- *Microsoft PowerPoint presentation for each briefing*

7.5 – TLAP Major Permit Amendment

The Consultant will prepare, submit and process a major permit amendment to the City's existing Texas Land Application Permit (TLAP). The City's current permit is overseen by the Texas Commission on Environmental Quality. The following documents are required to be completed in order to amend the existing permit:

- TCEQ 10053 Form (Domestic Wastewater Permit Application Administrative Report)
- TCEQ 10054 Form (Domestic Wastewater Permit Application Technical Report)
- TCEQ 10056 Form (Sewage Sludge Technical Report)
- TCEQ 10400 Form (Core Data Form)

Consultant will complete forms outlined above based on existing and available knowledge of the City's existing TLAP, including required exhibits, calculations, and attachments. Consultant will not perform sample collection or analysis.

City to provide baseline information about the existing TLAP permit including permitted flows and capacities. City to perform any required pollutant, BOD, effluent monitoring data, and other sample collection and analysis of existing treatment facilities as required by the TCEQ forms outlined above. The amendment fee will be paid by the City.

Consultant to respond to comments from TCEQ to assist in a TCEQ determination that the application is administratively complete. Consultant to respond to technical questions raised by TCEQ in review of the Permit Application. For the purposes of this scope, it is assumed that there will be no more than two (2) rounds of technical comments from the TCEQ.

Deliverable

- *Completed TCEQ Forms 10053, 10054, 10056, and 10400, compiled TLAP amendment deliverable to TCEQ*

Additional Services

Services requested by the City outside of the Basic Services scope will be authorized based on negotiated contract amendments. Additional Services shall require independent and specific not-to-exceed authorizations. Additional Services may include:

A. Obtaining rights-of-entry for any required field work.
B. Accompanying City when meeting with the U.S. Environmental Protection Agency, or other regulatory agencies during the course of the Project, beyond those meetings identified above. The Consultant will assist City on an as-needed basis in preparing compliance schedules, progress reports, and providing general technical support for City's compliance efforts.
C. Sampling, testing, or analyses beyond that specifically included in the Scope of Services referenced herein above.
D. Preparing applications and supporting documents for government grants, loans, or planning advances, and providing data for detailed applications.
E. 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 City.
F. Additional meetings beyond those identified in the Scope of Services.
G. Any services not listed in the Scope of Services.

FEE AND EXPENSES

Basic Services

Kimley-Horn will perform the services in Tasks 1 - 6 for the total lump sum fee below. Individual task amounts are informational only. All permitting, application, and similar project fees will be paid directly by the Client.

Task 1 Project Management	$ 27,850.00
Task 2 75% Design	$ 228,371.00
Task 3 100% Design	$ 86,075.00
Task 4 Bid Phase	$ 24,190.00
Task 5 Construction Phase Services	$ 122,575.00
Task 6 Record Drawings	$ 9,440.00
Total Lump Sum Fee	**$ 498,501.00**

Supplemental Services

Kimley-Horn will perform the Supplemental Services in the tasks below on a time and materials basis per task. Supplemental Services shall only be performed by Consultant upon written authorization from City, which may require an amended professional services agreement for approval.

Task 7.1 General Engineering Design	$ 20,200.00
Task 7.2 Easement Acquisition Support	$ 51,550.00
Task 7.3 Subsurface Utility Exploration	$ 23,795.00
Task 7.4 City Council Meetings	$ 8,120.00
Task 7.5 TLAP Major Permit Amendment	$ 31,060.00

City of Fair Oaks Ranch
Wastewater Treatment Plant - Phase 1 Expansion (Final Design PHASE)
11/15/2024
Detailed Cost Breakdown

	$ 498,501
	$ 134,725
	$ 633,226

Phase	Task	Project Role	QA/QC Engineer (Senior Professional I)	Senior Project Manager (Senior Professional I)	Surveyor (RPLS) (Professional II)	Senior Engineer (Professional II)	Engineer (PE) (Professional I)	Analyst II (EIT)	Analyst I (EIT)	Senior CAD Tech I (Senior Tech Support I)	Accountant (Support Staff II)	Administrative (Support Staff I)	Total Hours	Total Labor Effort	Total Expense Effort	Grubb	Open Range	The Rios Group	V&A	Total Effort
		Hourly Bill Rate	$260.00	$260.00	$230.00	$230.00	$200.00	$175.00	$160.00	$155.00	$115.00	$85.00								
Basic Services																				
1		**Project Management**											121							**$ 27,850**
	1.1	Project Schedule					1	2					3	$ 550						$ 550
		Updates					1	4					5	$ 900						$ 900
	1.2	Sub-consultant Management												$ -						$ -
		Project Coordination (Grubb)		1			12	12					25	$ 4,760						$ 4,760
		Project Coordination (V&A)		1			8	8					17	$ 3,260						$ 3,260
		Project Coordination (Open Range)		1			8	8					17	$ 3,260						$ 3,260
	1.3	Quality Assurance and Control Reviews												$ -						$ -
		QC Review at 75%	8										8	$ 2,080						$ 2,080
		QC Review at 100%	8										8	$ 2,080						$ 2,080
														$ -						$ -
	1.4	Project Meetings (4 meetings, including agenda and notes prep)		2			6	8					16	$ 3,120					$ 4,440	$ 7,560
														$ -						$ -
	1.5	Project Administration (invoicing, etc.)					6	6			10		22	$ 3,400						$ 3,400
2		**75% Design**											752							**$ 228,371**
														$ -						$ -
	2.1	75% Kickoff Meeting		1			1	1	2				5	$ 955						$ 955
														$ -						$ -
	2.2	Survey												$ -						$ -
		Locating existing property lines			10			16		24			50	$ 8,820						$ 8,820
		Locating substantial features			10			18		22			50	$ 8,860						$ 8,860
		Locating existing utilities			10			18		22			50	$ 8,860						$ 8,860
		Generating Topographic Information			8			20		16			44	$ 7,820						$ 7,820
		Tree Survey			8			20		16			44	$ 7,820						$ 7,820
		Collection of base field data												$ -			$ 49,000			$ 49,000
														$ -						$ -
	2.5	Construction Drawings												$ -						$ -
														$ -						$ -
		Information Sheets																		
		Cover					1		1				2	$ 360						$ 360
		Sheet Index					1		1				2	$ 360						$ 360
		General Notes					1		2				3	$ 520						$ 520
		Project Control Plans					1		2				3	$ 520						$ 520
		Civil Sheets																		
		Site Plan		1			4	6		10			21	$ 3,660						$ 3,660
		Waterline Layout		1			2	4					7	$ 1,360						$ 1,360
		Offsite Effluent Water Mains												$ -						$ -
		Plan View Sheets for 9,600 LF of Waterline (12 Sheets)		2			10	32	64				108	$ 18,360						$ 18,360
		Plan & Profile Sheets for 10,400 LF of Waterline (2 Sheets)		1			2	6	8				17	$ 2,990						$ 2,990
		Pond discharge details for the effluent waterline (1 sheet)					1		1				2	$ 360						$ 360
		Water Main Details (2 sheets)		1			1		2				4	$ 780						$ 780
		Effluent Pump Station												$ -						$ -
		Section View		1			4	6		10			21	$ 3,660						$ 3,660
		Plan View		1			4	6		10			21	$ 3,660						$ 3,660
		Remote-actuated valve detail					1	2					3	$ 550						$ 550
		Pump Vault Details		1			1	2					4	$ 810						$ 810
		Canopy Replacement Details					1	2					3	$ 550						$ 550
		Miscellaneous Details					1	2					3	$ 550						$ 550
														$ -						$ -
		Influent Lift Station												$ -						$ -
		Section View		1			4		6	10			21	$ 3,570						$ 3,570
		Plan View		1			4		6	10			21	$ 3,570						$ 3,570
		Remote-actuated valve detail					1		2				3	$ 520						$ 520
		Pump Vault Details					1		4	4			9	$ 1,460						$ 1,460
		Wet Well Details		1			1		4	4			10	$ 1,720						$ 1,720
		Canopy Replacement Details					1		4	4			9	$ 1,460						$ 1,460
		Miscellaneous Details					1		2	2			5	$ 830						$ 830
														$ -						$ -
		Erosion Control (3 Sheets)					2	4					6	$ 1,100						$ 1,100
		Tree Sheets					1	2					3	$ 550						$ 550
														$ -						$ -
		Traffic Control												$ -						$ -
		Internal Traffic Control Kick-Off Meeting				1	1						2	$ 430						$ 430
		TCP Exhibit/Narrative				2	8						10	$ 2,060						$ 2,060
		Detour Plan (1Phase)				2	8						10	$ 2,060						$ 2,060
		Details/Standards					2						2	$ 400						$ 400
		Traffic Control QAQC		1		1							2	$ 490						$ 490
														$ -						$ -
		Odor Control Sheets												$ -						$ -

City of Fair Oaks Ranch
Wastewater Treatment Plant - Phase 1 Expansion (Final Design PHASE)
11/15/2024
Detailed Cost Breakdown

	$ 498,501
	$ 134,725
	$ 633,226

Phase	Task	Project Role	QA/QC Engineer (Senior Professional I)	Senior Project Manager (Senior Professional I)	Surveyor (RPLS) (Professional II)	Senior Engineer (Professional II)	Engineer (PE) (Professional I)	Analyst II (EIT)	Analyst I (EIT)	Senior CAD Tech I (Senior Tech Support I)	Accountant (Support Staff II)	Administrative (Support Staff I)	Total Hours	Total Labor Effort	Total Expense Effort	Grubb	Open Range	The Rios Group	V&A	Total Effort
		Hourly Bill Rate	$260.00	$260.00	$230.00	$230.00	$200.00	$175.00	$160.00	$155.00	$115.00	$85.00								
		V&A 75% Effort												$ -					$ 15,335	$ 15,335
		Odor Control Site Plan					1	2	4	6			13	$ 2,120						$ 2,120
		Headworks improvement details					1	2	4	6			13	$ 2,120						$ 2,120
		Structural channel details					2	4	4	6			16	$ 2,670						$ 2,670
														$ -						$ -
		75% Site Visit					4	4	4				12	$ 2,140	$ 200					$ 2,340
		Vendor Coordination					8	8	8				24	$ 4,280						$ 4,280
														$ -						$ -
		Electrical Engineering Services												$ -		$ 30,530				$ 30,530
														$ -						$ -
	2.6	75% Specifications		1			10	16					27	$ 5,060						$ 5,060
														$ -						$ -
	2.7	75% OPCC		1			6	8	8				23	$ 4,140						$ 4,140
														$ -						$ -
	2.8	75% Design Workshop		3			3	6	6				18	$ 3,390	$ 200					$ 3,590
		Respond to 75% Comments		1			2	2	2				7	$ 1,330	$ 201					$ 1,531
														$ -						$ -
	2.9	75% Utility and Stakeholder Meetings												$ -						$ -
		Private Property Owners					1	2	3				6	$ 1,030						$ 1,030
		Franchise Utilities					1	2	3				6	$ 1,030						$ 1,030
		Utility Log and Communication Log					1	2	4				7	$ 1,190						$ 1,190
3		**100% Design**											375							**$ 86,075**
														$ -						$ -
	3.1	100% Construction Drawings												$ -						$ -
														$ -						$ -
		Information Sheets												$ -						$ -
		Cover					1		2				3	$ 520						$ 520
		Sheet Index					1		2				3	$ 520						$ 520
		General Notes					1		2				3	$ 520						$ 520
		Project Control Plans					1		2				3	$ 520						$ 520
		Civil Sheets																		
		Site Plan		1			2	2		10			15	$ 2,560						$ 2,560
		Waterline Layout		1			1	2					4	$ 810						$ 810
		Offsite Effluent Water Mains												$ -						$ -
		Plan View Sheets for 9,600 LF of Waterline (12 Sheets)		2			12	30	50				94	$ 16,170						$ 16,170
		Plan & Profile Sheets for 10,400 LF of Waterline (2 Sheets)		1			2	6	8				17	$ 2,990						$ 2,990
		Pond discharge details for the effluent waterline (1 sheet)		1			1		2	2			6	$ 1,090						$ 1,090
		Water Main Details (2 sheets)					1		2				3	$ 520						$ 520
														$ -						$ -
		Effluent Pump Station												$ -						$ -
		Section View		1			3	4		8			16	$ 2,800						$ 2,800
		Plan View		1			3	4		8			16	$ 2,800						$ 2,800
		Remote-actuated valve detail						1					1	$ 175						$ 175
		Pump Vault Details		1			1	2					4	$ 810						$ 810
		Canopy Replacement Details					1	1					2	$ 375						$ 375
		Miscellaneous Details					1	1					2	$ 375						$ 375
														$ -						$ -
		Influent Lift Station												$ -						$ -
		Section View		1			2		8	8			19	$ 3,180						$ 3,180
		Plan View		1			2		8	8			19	$ 3,180						$ 3,180
		Remote-actuated valve detail							1				1	$ 160						$ 160
		Pump Vault Details		1			1		3				5	$ 940						$ 940
		Wet Well Details		1			1		3				5	$ 940						$ 940
		Canopy Replacement Details					1		2				3	$ 520						$ 520
		Miscellaneous Details					1		2				3	$ 520						$ 520
														$ -						$ -
		Erosion Control (3 Sheets)					1		2				3	$ 520						$ 520
		Tree Sheets					1		4	8			13	$ 2,080						$ 2,080
														$ -						$ -
		Traffic Control												$ -						$ -
		Address Comments				1		2					3	$ 580						$ 580
		Update Plans						4					4	$ 700						$ 700
		Traffic Control QAQC		1		1							2	$ 490						$ 490
														$ -						$ -
		Odor Control Sheets												$ -						$ -
		V&A 100% Effort												$ -					$ 7,870	$ 7,870
		Odor Control Site Plan					1		2	2			5	$ 830						$ 830
		Headworks improvement details					1		2	2			5	$ 830						$ 830
		Structural channel details					1		2	2			5	$ 830						$ 830
														$ -						$ -

City of Fair Oaks Ranch
Wastewater Treatment Plant - Phase 1 Expansion (Final Design PHASE)
11/15/2024
Detailed Cost Breakdown

	$ 498,501
	$ 134,725
	$ 633,226

Phase	Task	Project Role	QA/QC Engineer (Senior Professional I)	Senior Project Manager (Senior Professional I)	Surveyor (RPLS) (Professional II)	Senior Engineer (Professional II)	Engineer (PE) (Professional I)	Analyst II (EIT)	Analyst I (EIT)	Senior CAD Tech I (Senior Tech Support I)	Accountant (Support Staff II)	Administrative (Support Staff I)	Total Hours	Total Labor Effort	Total Expense Effort	Grubb	Open Range	The Rios Group	V&A	Total Effort
		Hourly Bill Rate	$260.00	$260.00	$230.00	$230.00	$200.00	$175.00	$160.00	$155.00	$115.00	$85.00								
		100% Electrical Plans and Specifcations												$ -		$ 11,750				$ 11,750
														$ -						$ -
		100% Site Visit					4	4	4				12	$ 2,140	$ 200					$ 2,340
		Vendor Coordination					4	6	6				16	$ 2,810						$ 2,810
														$ -						$ -
		100% Specifcations and OPCC		2			16	16					34	$ 6,520						$ 6,520
														$ -						$ -
	3.2	Permitting												$ -						$ -
		Floodplain Development Permit Submittal		1			2	8					11	$ 2,060						$ 2,060
		Tree Preservation/Mitigation Plan Submittal		1			2	8					11	$ 2,060						$ 2,060
		TCEQ TPDES Coordination		1			1	2					4	$ 810						$ 810
4		**Bid Phase**											87							**$ 24,190**
														$ -						$ -
	4.1	Bid Ready Documents												$ -		$ 810			$ 4,115	$ 4,925
		Construction Drawings		1			2	4	4				11	$ 2,000						$ 2,000
		Project Manual		1			2	4					7	$ 1,360						$ 1,360
														$ -						$ -
	4.2	Prebid Conference and Site Visit		1			3	4					8	$ 1,560	$ 100	$ 920				$ 2,580
														$ -						$ -
	4.3	Responses to Questions		1			4	8	8				21	$ 3,740		$ 1,250				$ 4,990
														$ -						$ -
	4.4	Prepare Addenda		1			4	4	4				13	$ 2,400						$ 2,400
														$ -						$ -
	4.5	Evaluation of Bids		1			2	4					7	$ 1,360						$ 1,360
														$ -						$ -
	4.6	Conformed Docs		1			2	3	6			8	20	$ 2,825		$ 1,750				$ 4,575
														$ -						$ -
5		**Construction Phase**											436							**$ 122,575**
														$ -						$ -
	5.1	Pre-Construction Conference		4			4	4					12	$ 2,540	$ 100				$ 10,714.70	$ 13,355
														$ -						$ -
	5.2	Visit to Site and Observation of Construction												$ -		$ 2,420				$ 2,420
		Construction Site Visits (24)		12			48	24					84	$ 16,920	$ 1,000					$ 17,920
		Prepare Observation Reports (24)		3			6	24					33	$ 6,180						$ 6,180
														$ -						$ -
	5.3	Construction Progress Meetings (24)		12			24	48					84	$ 16,320		$ 3,980				$ 20,300
														$ -						$ -
	5.4	Pay Estimate Reviews (12)		4			6	12					22	$ 4,340						$ 4,340
														$ -						$ -
	5.5	Shop Drawing/Submittal Review (45 submittals)		15			30	60					105	$ 20,400		$ 12,440				$ 32,840
														$ -						$ -
	5.6	Requests for Information (RFI) (Max 15)		8			20	20					48	$ 9,580		$ 1,500				$ 11,080
														$ -						$ -
	5.7	Requests for Proposals (RFPs) and Change Orders (COs) (Max 5)		2			10	10					22	$ 4,270		$ 1,250				$ 5,520
														$ -						$ -
	5.8	Substantial/Final Completion Walkthrough		4			4	6					14	$ 2,890	$ 200	$ 3,160				$ 6,250
		Issues Log		2			4	6					12	$ 2,370						$ 2,370
														$ -						$ -
6		**Record Drawings**											44							**$ 9,440**
														$ -						$ -
	6.1	Record Drawings		1			2	8	25		8		44	$ 6,980		$ 2,460				$ 9,440
														$ -						$ -
		Total Basic Services Hours	**16**	**118**	**46**	**8**	**405**	**629**	**327**	**240**	**18**	**8**	**1815**	**$ 330,605**	**$ 2,201**	**$ 74,220**	**$ 49,000**	**$ -**	**$ 42,475**	**$ 498,501**
		Total Basic Services Labor Effort	**$ 4,160**	**$ 30,680**	**$ 10,580**	**$ 1,840**	**$ 81,000**	**$ 110,075**	**$ 52,320**	**$ 37,200**	**$ 2,070**	**$ 680**								

Supplemental Services

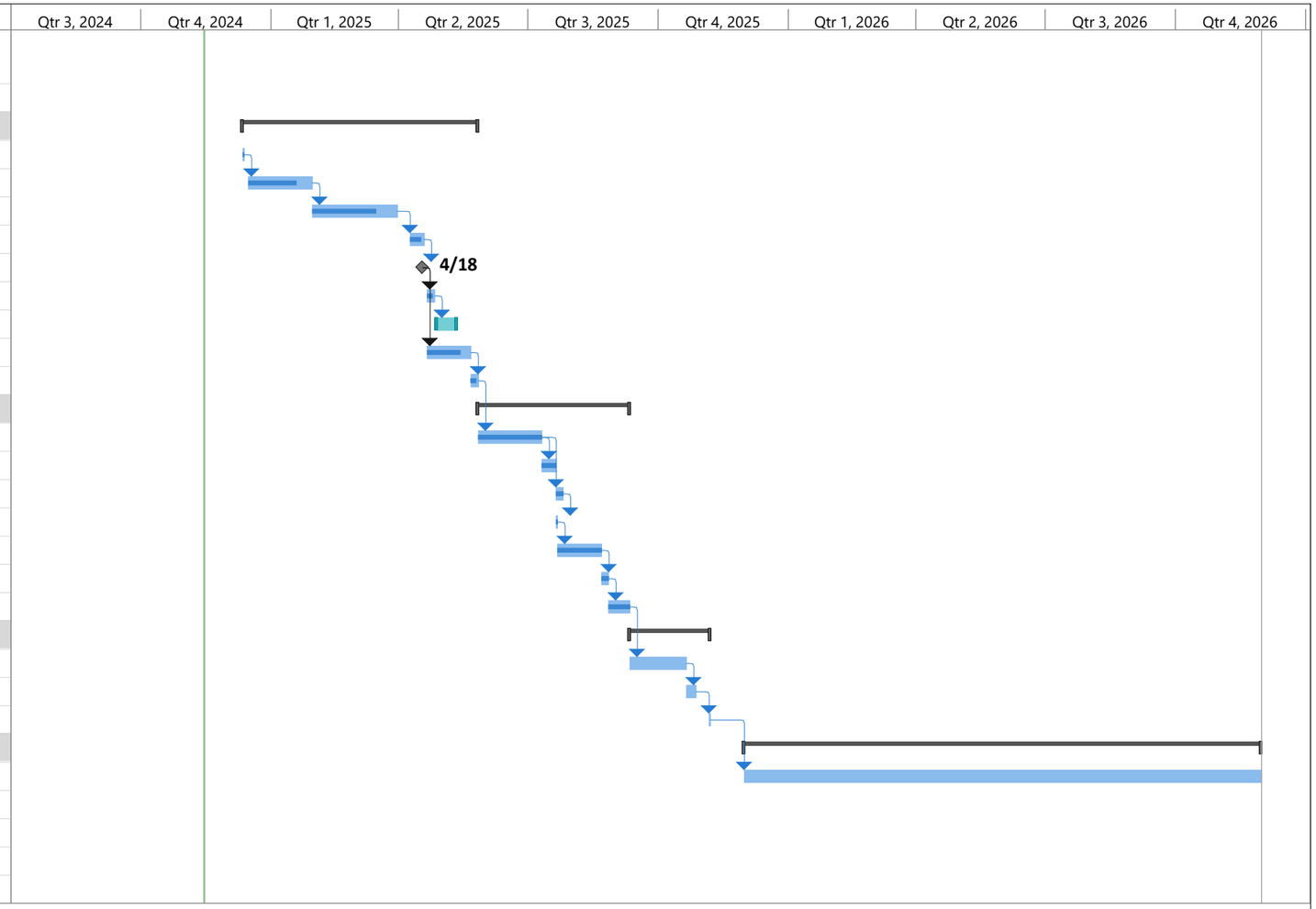
Phase	Task	Project Role	QA/QC Engineer (Senior Professional I)	Senior Project Manager (Senior Professional I)	Surveyor (RPLS) (Professional II)	Senior Engineer (Professional II)	Engineer (PE) (Professional I)	Analyst II (EIT)	Analyst I (EIT)	Senior CAD Tech I (Senior Tech Support I)	Accountant (Support Staff II)	Administrative (Support Staff I)	Total Hours	Total Labor Effort	Total Expense Effort	Grubb	Open Range	The Rios Group	V&A	Total Effort
		Hourly Bill Rate	$260.00	$260.00	$230.00	$230.00	$200.00	$175.00	$160.00	$155.00	$115.00	$85.00								
	7.1	General Engineering Design		20			40	40					100	$ 20,200						**$ 20,200**
	7.2	Easement Acquisiton Support												$ -						**$ 51,550**
		10 Temporary Construction Easements												$ -	$ 21,000					$ 21,000
		10 Permanent Easements												$ -	$ 13,000					$ 13,000
		Title research per tract, (max 10)												$ -	$ 10,000					$ 10,000
		Landowner Coordination		4			8	8					20	$ 4,040						$ 4,040
		Exhibit Generation		1				4	8				13	$ 2,240						$ 2,240
		Meeting with Stakeholders		2			2	2					6	$ 1,270						$ 1,270
	7.3	Subsurface Utility Exploration		1			2	3	3				9	$ 1,665					$ 22,130	**$ 23,795**

City of Fair Oaks Ranch	
Wastewater Treatment Plant - Phase 1 Expansion (Final Design PHASE)	$ 498,501
11/15/2024	$ 134,725
Detailed Cost Breakdown	$ 633,226

Phase	Task	Project Role	QA/QC Engineer (Senior Professional I)	Senior Project Manager (Senior Professional I)	Surveyor (RPLS) (Professional II)	Senior Engineer (Professional II)	Engineer (PE) (Professional I)	Analyst II (EIT)	Analyst I (EIT)	Senior CAD Tech I (Senior Tech Support I)	Accountant (Support Staff II)	Administrative (Support Staff I)	Total Hours	Total Labor Effort	Total Expense Effort	Grubb	Open Range	The Rios Group	V&A	Total Effort
		Hourly Bill Rate	$260.00	$260.00	$230.00	$230.00	$200.00	$175.00	$160.00	$155.00	$115.00	$85.00								
	7.4	City Council Meetings												$ -						**$ 8,120**
		75% City Council Meeting		4			5		12				21	$ 3,960	$ 100					$ 4,060
		Bid Phase Council Meeting		4			5		12				21	$ 3,960	$ 100					$ 4,060
	7.5	TLAP Major Permit Amendment												$ -						**$ 31,060**
		TCEQ 10053 Form		3			6	10	10					$ 5,330						$ 5,330
		TCEQ 10054 Form		6			10	12	12					$ 7,580						$ 7,580
		TCEQ 10056 Form		2			6	10	10					$ 5,070						$ 5,070
		TCEQ 10400 Form		1			4	6	8					$ 3,390						$ 3,390
		Coordination with TCEQ Staff		2			2	4	4					$ 2,260						$ 2,260
		Coordination with City Staff		2			4	4	4					$ 2,660						$ 2,660
		Revising TCEQ Comments		6			6	6	6					$ 4,770						$ 4,770
														$ -						$ -
		Total Supplemental Services Hours		**58**			**100**	**109**	**89**				**190**	**$ 68,395**	**$ 44,200**	**$ -**	**$ -**	**$ 22,130**	**$ -**	**$ 134,725**
		Total Supplemental Services Labor Effort	**$ -**	**$ 15,080**	**$ -**	**$ -**	**$ 20,000**	**$ 19,075**	**$ 14,240**	**$ -**	**$ -**	**$ -**								

EXHIBIT A

ID	Task Name	Duration	Start	Finish
1	**Fair Oaks Ranch WWTP Ph. 1 Improvements (Final Design)**			
2				
3	**75% Design**	**166 days**	**Thu 12/12/24**	**Mon 5/26/25**
4	Kickoff Meeting	1 day	Thu 12/12/24	Thu 12/12/24
5	Perform Survey	45 days	Mon 12/16/24	Wed 1/29/25
6	75% Construction Documents	60 days	Thu 1/30/25	Sun 3/30/25
7	75% Internal QA/QC, Address Comments	10 days	Wed 4/9/25	Fri 4/18/25
8	Submit 75% Plan Set for Review	0 days	Fri 4/18/25	Fri 4/18/25
9	Prepare for and Conduct 75% Workshop	5 days	Mon 4/21/25	Sat 4/26/25
10	75% Utility Coordination Meeting	14 days	Mon 4/28/25	Sun 5/11/25
11	City Review	31 days	Mon 4/21/25	Wed 5/21/25
12	Address City Comments	5 days	Thu 5/22/25	Mon 5/26/25
13	**100% Design**	**107 days**	**Tue 5/27/25**	**Wed 9/10/25**
14	100% Construction Documents	45 days	Tue 5/27/25	Thu 7/10/25
15	100% Internal QA/QC, Address Comments	10 days	Fri 7/11/25	Sun 7/20/25
16	Prepare and Submit Permits	5 days	Mon 7/21/25	Fri 7/25/25
17	Submit 100% Documents for Review	1 day	Mon 7/21/25	Mon 7/21/25
18	City Review	31 days	Tue 7/22/25	Thu 8/21/25
19	Address City Comments	5 days	Fri 8/22/25	Tue 8/26/25
20	Prepare Signed/Sealed Bid Documents	15 days	Wed 8/27/25	Wed 9/10/25
21	**Advertise for Construction**	**57 days**	**Thu 9/11/25**	**Thu 11/6/25**
22	Bidding Period	40 days	Thu 9/11/25	Mon 10/20/25
23	Respondent Review and Recommendation	7 days	Tue 10/21/25	Mon 10/27/25
24	City Council Meeting (Approval)	1 day	Thu 11/6/25	Thu 11/6/25
25	**Construction Phase Services**	**365 days**	**Mon 12/1/25**	**Mon 11/30/26**
26	Construction Phase	365 days	Mon 12/1/25	Mon 11/30/26
27				
28				
29				
30				



Project: WWTP Imps, Ph. 1 (30%)
Date: Fri 11/15/24

Task	Project Summary	Manual Task	Start-only	Deadline	
Split	Inactive Task	Duration-only	Finish-only	Progress	
Milestone	Inactive Milestone	Manual Summary Rollup	External Tasks	Manual Progress	
Summary	Inactive Summary	Manual Summary	External Milestone		

GRUBB ENGINEERING, INC.
ELECTRICAL POWER SYSTEMS
DESIGN AND TESTING

TBPE F 3904

August 8, 2024

Trevor Stokes, P.E
Kimley-Horn
10101 Reunion Place, Suite 400
San Antonio, TX 78216

Re: City of Fair Oaks Ranch: Wastewater Treatment Plant – Phase 1 Expansion (Design, Bid and Construction Services)
Scope and Fee Proposal: Rev2

Dear Mr. Stokes:

Grubb Engineering, Inc. ("Grubb Engineering") is pleased to submit this Proposal to Kimley-Horn ("Client") for providing Electrical Engineering Services associated with City of Fair Oaks Ranch: Wastewater Treatment Plant – Phase 1 Expansion (Design, Bid and Construction Services) ("Project").

Project Understanding

Project Overview:
This project includes the design of upgrades at the existing WWTP as recommended in the Technical Memorandum issued in January 2024. Site areas and the design work to be completed are listed below:

1. **Effluent Pump Station:**
    a. The existing control panel will be replaced with a new panel designed for the proposed three 30hp pumps utilizing VFDs
    b. All above ground and possibly below ground conduit (as needed) will be replaced.
    c. The MCC feeder breaker and cable will be replaced.
    d. Connect the station to the existing SCADA system for control using pond level or another method. Panel with communication and SCADA equipment will be provided.
    e. Provide P&ID

2. **Remote Actuated Valve (located near Effluent Pump Station):**
    a. Design power feed from the main MCC.

2727 N. St. Mary's St. * San Antonio, Texas 78212 * Phone: (210) 658-7250 * Fax (210) 658-9805

b. Connect the station to the existing SCADA system. Panel with communication and SCADA equipment will be provided or combined with the Effluent Pump Station Panel.
c. Provide P&ID

3. **Influent (Bottom of the Hill) Lift Station:**
    a. Install a new pump control panel to include the VFDs, controls and air conditioning.
    b. All above ground and possibly below ground conduit (as needed) will be replaced.
    c. Replace feeder breaker and cable from MCC.
    d. Connect to existing SCADA system or relocate equipment to proposed panel.

4. **Headworks Odor Control:**
    a. Design power feed from the main MCC.
    b. Connect the station to the existing SCADA system. Panel with communication and SCADA equipment will be provided.
    c. Provide P&ID

5. **Electrical Service Review:**
    a. The CPS Energy service transformers, cable, demand load, etc. will need to be reviewed.
        i. The design of upgrades to the electric service will be coordinated with CPS Energy.
        ii. Design is limited to transformer, meter and main OCPD replacement as needed.
        iii. The replacement of the existing motor control center and other equipment located at the service entrance is not included.

Scope of Services

75% DESIGN PHASE:

- Prepare 75% Plans and Specifications.
- Provide Cost Estimate (OPCC) based on 75% design.
- Attend Kickoff Meeting
    - One (1) virtual meeting
- Attend Bi-Weekly Design Meetings.
    - Four (4) virtual meetings
- Attend 75% Design Review Workshop.
    - One (1) virtual meeting
- Provide response to 75% design comments.

Re: City of Fair Oaks Ranch: Wastewater Treatment Plant – Phase 1 Expansion (Design, Bid and Construction Services)
Scope and Fee Proposal: Rev2

100% DESIGN PHASE:

- Provide 100% (Draft) Plans and Specifications
- Provide 100% (Final) Plans and Specifications
- Provide Final Cost Estimate (OPCC) based on 100% design.
- Attend Bi-Weekly Design Meetings. (virtual)

BID PHASE:

- Attend Pre-Bid Meeting (in-person, site visit included)
- Respond to Contractor questions and provide addenda as necessary
- Provide Bid Phase Cost Estimate (OPCC) based on Bid Set Plans.

CONSTRUCTION PHASE SERVICES:

- Provide Conformed Documents.
- Attend up to two (2) Site Visits during construction.
- Review Submittals and O&M Manuals.
- Review RFIs and provide responses.
- Assist with miscellaneous field/change orders.
- Attend Substantial and Final Completion Walkthroughs and generate punch list.
- Attend three (3) SCADA Coordination Meetings (virtual)
- Attend Functional Demonstration Test (2 days total) (in-person)
- Provide Record Drawings.
    - Provide Record Drawings based on Contractor's marked-up drawings. Record Drawing information will be based solely on the marked-up drawings and field documentation.
    - Provide draft Record Drawings in PDF format.
    - Provide final Record Drawings in PDF and CAD file format.

Exclusions

The following services are excluded from the above scope:

1. Design of light pole support bases, concrete slabs, antenna mast foundations, electrical rack foundations or other structural items
2. Design of building fire alarm or other life safety equipment.
3. Field tracing of electric circuits
4. HVAC design
5. Cathodic Protection System design
6. Additional meetings and inspections beyond the total mentioned in this document
7. Submittals of paper copies of reports, drawings and specifications
8. Radio Path Studies
9. Design of a Radio Repeater Station
10. Design at other facilities
11. Electrical Startup and Acceptance Testing

Re: City of Fair Oaks Ranch: Wastewater Treatment Plant – Phase 1 Expansion (Design, Bid and Construction Services)
Scope and Fee Proposal: Rev2

12. Power System Studies
13. SCADA System Testing
14. SCADA System Programming
15. Antenna mast design
16. Antenna mast foundation design
17. Design of new service entrance Motor Control Center and other related equipment.
18. Design or review of standby generator system.

An attached spreadsheet is provided to help you in your review of our price.

Grubb Engineering will provide the services as stated for a lump sum price of **$74,220.00.** Invoicing will be based on percentage of completion.

Sincerely,

Steven Mouser, P.E.
Senior Project Manager

Accepted by:
Signature:_____

Date:_____

EXHIBIT A

City of Fair Oaks Ranch WWTP Improvements (Design, Bid & Construction Services)							
Fee Schedule: Rev2							
Grubb Engineering, Inc.							
Personnel:	**SR PE**	**GE**	**SR DSG**	**CAD**			
Rate:	**$230**	**$145**	**$185**	**$105**	**Total Task Hours**	**Total Task Cost**	
TASK							
Task 1: 75% Design							
1.1 75% Plans and Specifications	21	59	31	39	150	$23,215.00	
1.2 75% OPCC	3	18			21	$3,300.00	
1.3 Kickoff Meeting	2	2			4	$750.00	
1.4 Bi-Weekly Design Meetings	4	2	2		8	$1,580.00	
1.5 75% Design Review Workshop	2	2			4	$750.00	
1.6 Response to Comments	2	2	1		5	$935.00	
						Subtotal:	**$30,530.00**
Task 2: 100% Design							
2.1 100% Plans and Specifications (Draft Bid)	5	15	8	7	35	$5,540.00	
2.2 100% Plans and Specifications (Final Bid)	5	8	5	4	22	$3,655.00	
2.3 100% OPCC	2	8			10	$1,620.00	
2.4 Bi-Weekly Design Meetings	2	2	1		5	$935.00	
							$11,750.00
Task 3: Bid Phase							
3.1 Bid OPCC	1	4			5	$810.00	
3.2 Pre-Bid Meeting	4				4	$920.00	
3.3 Contractor Questions / Addenda	2	4		2	8	$1,250.00	
						Subtotal:	**$2,980.00**
Task 4: Construction Phase Services							
4.1 Conformed Documents	2	6		4	12	$1,750.00	
4.2 Site Visits	8	4			12	$2,420.00	
4.3 Submittal Review	16	40	16		72	$12,440.00	
4.4 RFIs	4	4			8	$1,500.00	
4.5 Change Orders	2	4		2	8	$1,250.00	
4.6 SCADA Coordination Meetings	3	2			5	$980.00	
4.7 Functional Demonstation Tests	8	8			16	$3,000.00	
4.8 Substantial Completion Walkthrough	4		4		8	$1,660.00	
4.9 Final Completion Walkthrough	4	4			8	$1,500.00	
4.10 Record Drawings	2	8		8	18	$2,460.00	
						Subtotal:	**$28,960.00**
Total Hours:	**108**	**206**	**68**	**66**	**448**		
						Total Fees:	**$74,220.00**
Personnel Legend:							
SR PE = Senior Project Engineer, PE							
GE = Graduate Engineer							
SR DSG = Senior Engineering Designer							
CAD = CADD Level 2							

EXHIBIT A

Open Range Field Services, LLC
P. O. Box 2372, Pampa, TX 79066-2372
39350 IH-10 West, Ste. 1, Boerne, TX 78006

September 19, 2024 (Revision 1)

Client: Kimley-Horn
10101 Reunion Place, Ste 400
San Antonio, TX 78216
Attn: Greg Mosier/Trevor Stokes

Open Range Field Services, LLC (ORFS) is pleased to submit this proposal for professional land surveying services requested for the following parcel:

RE: City of Fair Oaks Ranch - WWTP Phase 1 Improvements Final Design

Scope of Services and Basis of Estimate

- Locate approximately 150 property corners and adjoining property corners to establish our property lines, PROVIDE A "**NF**" (NOT FOUND) if no corner is located;
- Fee includes up to 2 return trips for additional boundary, SUE, topo densification.
- Improvements Survey: including curbs, driveways, walls, visible utilities, fences; Limits of survey will be a corridor approximately 50' wide, however the area at Battle Intense Crossing will be 100' wide;
- **UTILITY NOTES**: Transformer and AC pads must have 3 shots; Power poles must be centered or in-line;
- **Power Poles with Cross Arms** – the extent of the cross arm must be located;
- Coordinate with 811 to place a ticket request and locate designation marks made by utility companies;
- Note any evidence of signs of recent construction or earth moving;
- Locate all signage including traffic signs: **note sign type**;
- Sketches & Photos;
- Light poles and cross arms on sketch, plus base dimensions, and material;
- Monument, Pylon or Billboard Signs: include diameter of pole and shots of pedestal, and sketch;
- Show buried site utilities including Top of Nut Elevations on Valves, measure downs, flow lines, pipe sizes (locate the nearest fire hydrants and sewer manhole with inverts - including clean outs; Photos Inside Manholes);
- For culverts locate flow lines, culvert dimensions and material;
- Fee provides for up to 12 accessible manholes, including pipe invert elevations, diameter, material, direction, and photos;
- Fee provides for up to 50 QL-A and QL-B designation marks made by others. Markings to be clear and field notes/sketches to be provided by SUE firm;
- Topographic survey for design (50' wide corridor except Battle Intense Crossing will be 100' wide);
- As-built of above ground facilities at WWTP site and tank site (SEE EXHIBIT "B")
- Report the Geoid Model used for NAVD'88;
- Provide deliverables in scaled state plane coordinates, using a Bexar County Adjustment Factor of 1.00017 with a scale origin of x=0, y=0;
- Set minimum of 2 Primary Control Points (PCP's) at beginning and end of project, and 4 Secondary Control Points (SCP's) at evenly spaced intervals along the route. Coordinates for PCP's shall be established by OPUS or Trimble RTX post-processing methods. Horizontal Coordinates for SCP's will be established by redundant RTK measurements. A level run will be performed from the first PCP to the second PCP, establishing differentially leveled elevations on the SCP's between. PCP's will be 2 base stable benchmarks, preferably in concrete and outside of potential construction area STAMP SHINER WITH POINT NUMBER. Provide closure notes written in field book for level loop.
- Per the City of Fair Oaks. TC=28" (9" DBH) or larger – see 2024 ordinance pgs. 160-161 and App. B for approved trees (https://www.fairoaksranchtx.org/DocumentCenter/View/5203/2024-Statutory-UDC-Clean?bidId=)

Boundary Fee	**=**	**$9,000.00**
Topo Fee	**=**	**$29,000.00**
Tree Survey Fee	**=**	**$11,000.00**

OVERALL LUMP SUM FEE: $49,000.00

continued next page

EXHIBIT A

Open Range Field Services, LLC
P. O. Box 2372, Pampa, TX 79066-2372
39350 IH-10 West, Ste. 1, Boerne, TX 78006

Pricing includes both field and office work necessary to complete the scope of work. If the scope outlined above changes, the price will be reassessed and discussed with the client before performing the additional work. Project will be billed on a monthly basis at the appropriate percentage complete. As of the date of this proposal, work can begin within approximately 15 business days of receiving authorized notice to proceed. Deliverables will be submitted within approximately 30 business days of authorized notice to proceed.

Work Order Authorization
Project will be scheduled after receiving a signed copy of this proposal or IPO which includes the scope of work stated in this agreement. Please call should you have any questions and thank you for considering Open Range Field Services for this project.

Open Range Field Services, LLC

Signature: _____

W. Andrew McLaughlin, RPLS

Date: _____

Authorized Client Signature

Signature:_____

Date:_____

continued next page

EXHIBIT A

Open Range Field Services, LLC
P. O. Box 2372, Pampa, TX 79066-2372
39350 IH-10 West, Ste. 1, Boerne, TX 78006

EXHIBIT "A"
OVERALL ROUTE
29.74003°,-98.64263°

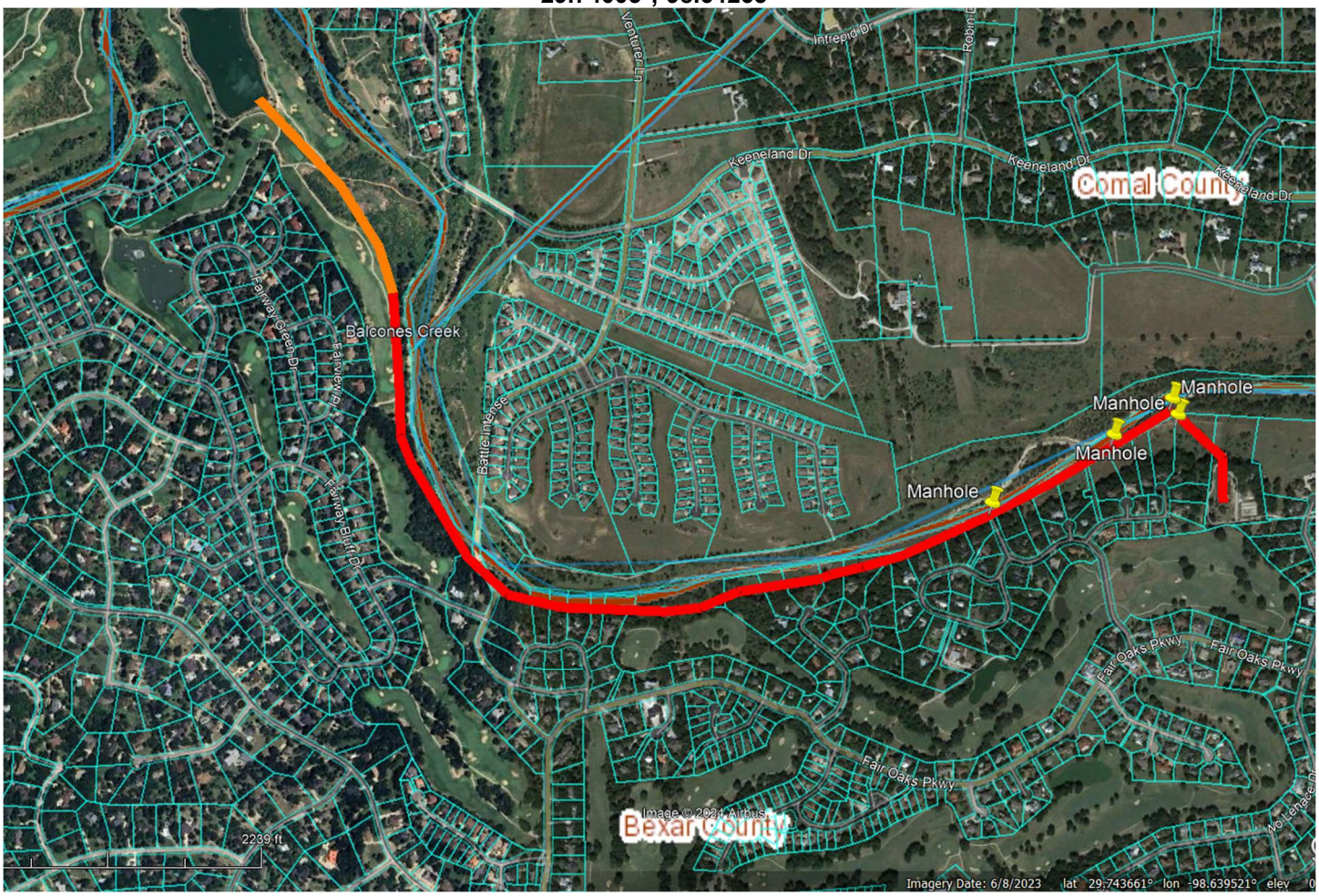
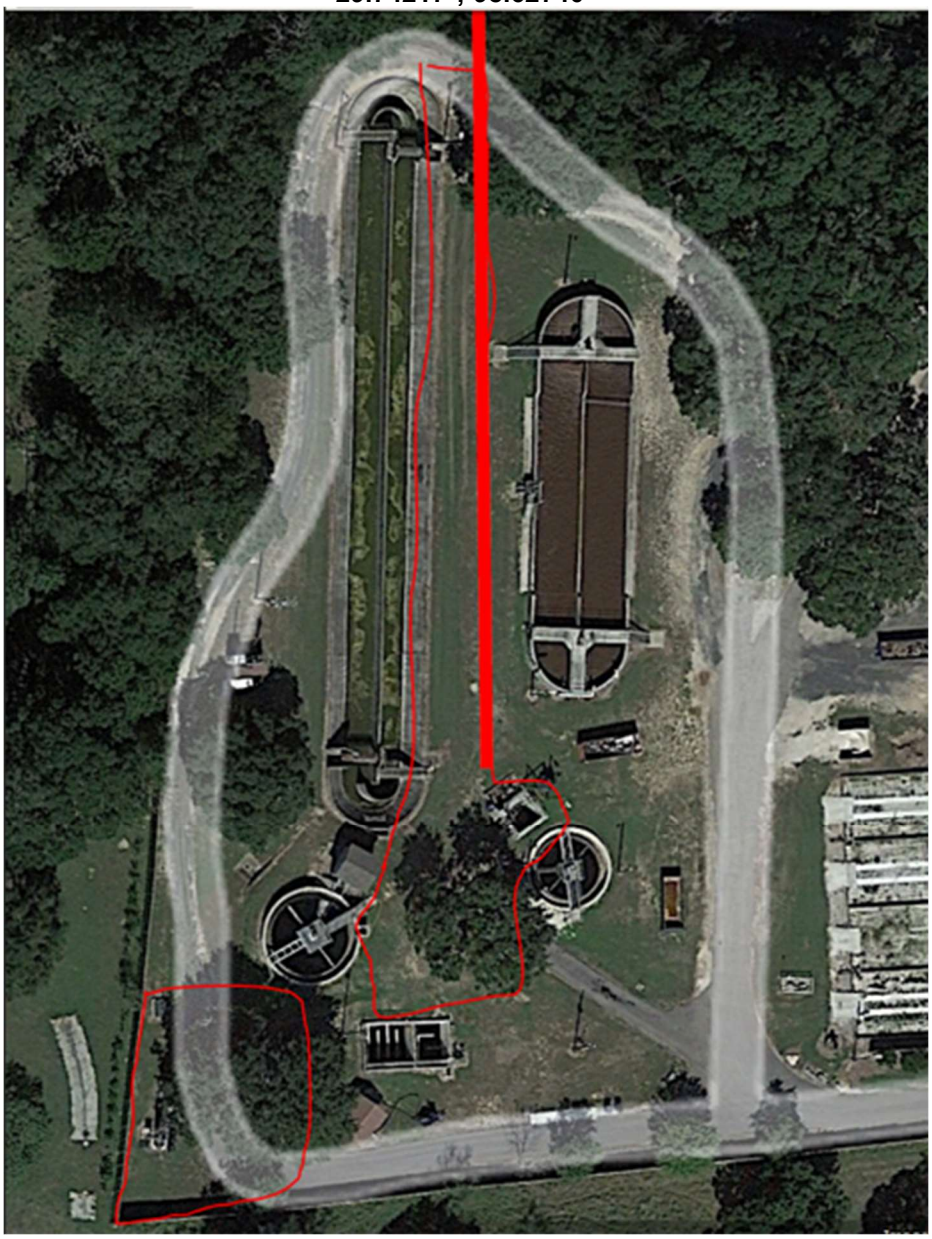


EXHIBIT A

Open Range Field Services, LLC
P. O. Box 2372, Pampa, TX 79066-2372
39350 IH-10 West, Ste. 1, Boerne, TX 78006

continued next page

EXHIBIT "B"
WWTP SITE AND TAND SITE
29.74217°,-98.62740°



15720 Park Row
Suite 500
Houston, TX 77084

713.568.9067
vaengineering.com

V&A Project No. 24-0238

September 16, 2024

Trevor Stokes, P.E.
Kimley-Horn
10101 Reunion Place, Suite 400
San Antonio, TX 78216
Email: Trevor.Stokes@kimley-horn.com

Subject: Fair Oaks Ranch Wastewater Treatment Plant
Proposal for Odor Control Design Services

Dear Mr. Stokes:

Thank you for requesting a proposal for odor control design services at the City of Fair Oaks Ranch (City) Wastewater Treatment Plant (WWTP). V&A Consulting Engineers (V&A) performed a field investigation of odor issues at the WWTP in December 2023 and made recommendations for headworks odor control in early 2024. The City has requested that Kimley-Horn (KH) proceed with the final design, including the odor control recommendations. V&A is prepared to provide design services for Carbon Adsorption Odor Control Equipment for the facility. It is anticipated that this work will occur in 2024.

Per your request, the following is our proposal and detailed scope of work for the subject services:

Scope of Work

Task | Description

1. **Project Management:** The objective of this task is to track and execute the project in accordance with the schedule, budget, and quality expectations that are established. This task includes the following project management work activities:
    a. Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion; manage activities within total project budget.
    b. Monitor project activities for potential changes and anticipate changes whenever possible; with approval, modify project tasks, task budgets, and approach to keep the overall project within budget and on schedule.
    c. Manage the quality of all work activities and project deliverables.
    d. Attend project coordination meetings up to 5 hours. Time spent over 5 hours will be invoiced on a time and materials basis at the rates shown on the attached Resource Allocation Estimate.
2. **75% Design.** V&A will develop 75% design documents for the odor control system. This task includes the following activities by V&A:
    a. Virtually attend a project kick-off meeting to discuss the project work plan including scope, schedule, coordination, and QA-QC-related issues.
    b. Drawings:
        i. Provide general arrangement plan and section drawings for the odor control system.
        ii. Provide P&IDs for the odor control system.

iii. Provide recommended duct size connection locations on the headworks covers.

iv. Review and provide input on site layout and duct system drawings as prepared by KH.

c. Specifications:

i. Provide specifications for the odor control system.

ii. Review and provide input on specifications for odor control duct and appurtenances as prepared by KH.

d. Provide an Opinion of Probable Construction Cost (OPCC) for the odor control system.

e. Coordinate with KH on design elements provided by other disciplines such as civil, structural, electrical, instrumentation and controls, HVAC, and others.

f. Internal Technical Review – Perform internal quality review on Task 2 Deliverables

g. Address 75% Design Comments - Receive, review, and address up to one round of comments on the 75% design submittal.

3. **100% and Final Design.** V&A will develop final design documents for the odor control system. This task includes the following activities by V&A:

a. Drawings:

i. Provide general arrangement plan and section drawings for the odor control system.

ii. Provide P&IDs for the odor control system.

iii. Review and provide input on site layout and duct system drawings as prepared by KH.

b. Specifications:

i. Provide specifications for the odor control system.

ii. Review and provide input on specifications for odor control duct and appurtenances as prepared by KH.

c. Provide an Opinion of Probable Construction Cost (OPCC) for the odor control system.

d. Coordinate with KH on design elements provided by other disciplines such as civil, structural, electrical, instrumentation and controls, HVAC, and others.

e. Internal Technical Review – Perform internal quality review on Task 3 Deliverables

f. Address 100% Design Comments - Receive, review, and address up to one round of comments on the 100% design submittal

4. **Bid Phase Services.** V&A will provide bid assistance for KH and the City. The bid phase services under this task are based on advertising, bidding, and awarding one single construction contract. This task will consist of the following activities by V&A:

a. Prepare for and virtually attend a pre-bid conference.

b. Prepare up to two addenda and respond with technical clarification on up to two bidders' questions.

c. Review and provide relevant comments on the bid tabulation.

5. **Construction Phase Services.** V&A will provide construction assistance for KH and the City. The construction phase services under this task will consist of the following activities by V&A:

a. Review and respond to up to four Contractor Requests for Information (RFI) relevant to the odor control system.

b. Review and provide relevant comments on odor control system submittals.

c. Attend a one-day site visit for odor control system inspection and commissioning.

d. Provide as-built record drawings of the odor control system.

Any changes to the following assumptions, prevailing wage assumption, exclusions and limitations, or proposed schedule may necessitate an adjustment to the proposed fee.

Assumptions

The following is a list of additional assumptions used to develop V&A's scope of work.

- V&A will submit monthly invoices in electronic format via email. Time spent submitting the invoice via a different method may incur additional charges.
- The odor control system design will be based on the system recommended in the Odor Control Analysis and Recommendations Technical Memorandum dated March 20, 2024 (V&A Project No. 23-0377).

Exclusions and Limitations

The following items, unless otherwise indicated, are not included in the scope of work:

- Project Specific Health and Safety Plan
- Permitting
- Bonds
- Vendor Portal Registration
- Payment Portal Invoice Submission

Fee Proposal

V&A proposes to complete this work on a lump sum basis at a total cost not to exceed **$42,474.70** with terms of Net 15 days (Pay When Paid payment terms dependent on timely processing of V&A's submitted invoice). This fee is valid for 90 days from the date of this proposal (after which the total cost may be adjusted to reflect annual updates our Fee Schedule). The scope of work was developed as a result of our discussions and represents our mutual understanding.

If unforeseen circumstances should arise which indicate that more work is required, V&A will provide a written estimate of additional required work and cost. The fees in the Resource Allocation Estimate (subject to annual adjustments) will serve as the basis for developing future cost estimates. V&A will not proceed with work beyond the not-to-exceed figure without written authorization from your office.

We are prepared to begin work on your project upon receiving written approval, a notice to proceed (NTP), or a purchase order from your office.

EXHIBIT A

On behalf of our staff and myself, I would like to thank you for the opportunity to be of service to you, Kimley Horn, and the City of Fair Oaks Ranch. We look forward to working with you.

Sincerely,
V&A Consulting Engineers, Inc.

Vaughan Harshman, P.E. (TX, FL)
Odor Control Practice Lead
Texas Registered Engineering Firm F-9154

Accepted: _____ Date: _____
Kimley Horn

EXHIBIT A

Resource Allocation Estimate

JOB NO: 24-0238 9/16/2024

CLIENT: Kimley Horn

PROJECT NAME: Headworks Odor Control Design

Task	Description	Sr. Professional II	Sr. Professional I	Professional II	Analyst II	Analyst I	Sr. Technical Support II	Support Staff II	Total Labor Hours	Total Labor Cost and ODC by Task
1	Project Management		2	15				7	24	$ 4,440.00
2	75% Design	2	18	14	10	20	16	1	81	$ 15,335.00
3	100% Design	3	8	8	6	6	8	1	40	$ 7,870.00
4	Bid Phase Services	2	5	7		6			20	$ 4,115.00
5	Construction Phase Services		6	16	8	20	8		58	$ 10,714.70
	Subtotal Direct Labor Hours	7	39	60	24	52	32	9	223	
	Hourly	$ 285.00	$ 240.00	$ 215.00	$ 165.00	$ 140.00	$ 180.00	$ 105.00		
	Subtotal Direct Labor Cost	$ 1,995.00	$ 9,360.00	$ 12,900.00	$ 3,960.00	$ 7,280.00	$ 5,760.00	$ 945.00	$ 42,200.00	
Other Direct Costs		**Unit Cost**	**Units**	**No. of Units**					**ODC Subtotal**	
	Mileage	$ 0.67	per mile	410					$ 274.70	
	Subtotal Other Direct Costs								$ 274.70	
GRAND TOTAL ESTIMATED COST										**$ 42,474.70**

EXHIBIT A

THE RIOS GROUP

June 28, 2024

Trevor Stokes, P.E.
Kimley-Horn
10101 Reunion Place, Suite 400
San Antonio, Texas 78216
Trevor.Stokes@kimley-horn.com
210.660.2922 office

RE: Subsurface Utility Engineering
Fair Oaks Ranch WWTP Phase 1 Improvements
Fair Oaks Ranch, Texas

Dear Trevor:

The Rios Group, Inc. (TRG) is pleased to submit a cost proposal for Subsurface Utility Engineering (SUE) for the above-referenced project. This proposal is based on information provided via email on June 26, 2024

Introduction

TRG will perform SUE services for this project in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities". SUE Quality Level definitions and data limitations are included in Exhibit C, attached to this proposal.

Scope of Work

Based on information provided by Kimley-Horn (Client), TRG has developed a proposed scope for SUE services on this project. This scope may be modified, with Client and TRG concurrence, during the performance of work if warranted by changing or unexpected field conditions.

This proposal includes up to **ten (10) QLA SUE** test holes within the limits of the Fair Oaks Ranch WWTP Phase 1 Improvements project in Fair Oaks Ranch, Texas. The locations of the test holes are assumed to fall within the proposed effluent water main shown in red on Exhibit B, attached to this proposal. The proposed test holes will be provided to The Rios Group prior to our mobilization. To lay out the test holes, TRG will attempt to designate the target utility 10-feet on either side of the proposed test holes. No other utility investigation or designation work is included in this scope of work. TRG has made the following assumptions related to test hole excavations on this project:

- Any necessary Right-Of-Entry (ROE) permits and access to the site will be provided by the Client prior to the start of field work.

- Test holes will be excavated using vacuum excavation equipment.
- All test holes will be accessible to truck/trailer-mounted vacuum excavation equipment. Any improvements required to access test hole locations (clearing, grading, mat installation, etc.) will be provided by others at no cost to TRG.
- Right-Of-Way (ROW) permits from the City of Fair Oaks Ranch will be required. TRG will obtain all required City permits and ensure that coordination and compliance with the City is provided.
- Designed traffic control plans **will not** be required
- Traffic control measures **will not** be required
- Pavement coring/repair **will not** be required.
- The following items are specifically excluded from this scope of work: flowable fill for backfill of test holes, full-section pavement repair (including sidewalks)
- Due to the risk of damage, TRG will not attempt to probe or excavate test holes on AC water lines unless approval is obtained from the owner in advance.
- Excavation in rock, or to a depth greater than 18 feet, is considered beyond the scope of this proposal.

The survey of SUE field markings and test hole locations is also included in this scope of work. Client will provide the necessary survey control information in close proximity to the work area.

Deliverables

TRG will provide the following as a final deliverable to the Client:

- A utility file in CAD format depicting all SUE data documented on the project. The Client will provide TRG with any necessary background files for use in completing the final deliverables.
- A summary sheet of all test hole coordinate data and depth information.
- 8.5” x 11” Test Hole Data Forms for all test hole locations completed. These forms will be signed and sealed by a Professional Engineer and delivered to the Client in electronic PDF form.
- A Utility Report containing metadata (e.g. scope of work, work limits, dates of performance, survey control, etc.), information about the Utility Investigation not otherwise conveyed in other project deliverables, and recommendations to address data deficiencies.

Schedule

TRG can mobilize within three (3) weeks of receiving Notice-To-Proceed (NTP). TRG estimates that the QLA SUE work can be completed in thirty-one (31) working days following approval of the City ROW permit, broken down as follows:

- Layout test holes – 1 day
- QLA field work – 6 days
- QLA survey and preparation of data – 10 days
- QLA deliverable preparation – 12 days

Estimated Fee

The total estimated cost to complete the work described herein is **Twenty-Two Thousand One Hundred Thirty Dollars and NO/100 ($ 22,130.00)**. An itemized breakdown of cost is provided in Exhibit A. Please note that these pricings are based on estimated quantities, and that only actual quantities will be invoiced – up to the total Contract amount.

We look forward to working with you on this project. If there are any questions, please do not hesitate to call at 210.981.3050.

Respectfully,

The Rios Group, Inc.

Thomas W. Franke III

Branch Manager

THE RIOS GROUP

Estimate for Subsurface Utility Engineering

WWTP Phase 1 Improvements

Fair Oaks Ranch, Texas

EXHIBIT A

Direct Expenses		*Rate*	*Assumed Quantity*	*Unit of Measure*		*Sub-Total*
Survey (RPLS)	$	2,600.00	1	DAY	$	2,600.00
Sub-Total					**$**	**2,600.00**
Hourly Office Labor		*Rate*	*Assumed Quantity*	*Unit of Measure*		*Sub-Total*
Senior Project Manager	$	190.00	1	HR	$	190.00
Senior Professional Engineer	$	175.00	2	HR	$	350.00
Project Manager	$	150.00	4	HR	$	600.00
Assistant Project Manager	$	95.00	6	HR	$	570.00
SUE Field Manager	$	105.00	8	HR	$	840.00
CADD Tech I	$	90.00	6	HR	$	540.00
Project Coordinator	$	80.00	4	HR	$	320.00
Sub-Total					**$**	**3,410.00**
QL"B" SUE Designating		*Rate*	*Assumed Quantity*	*Unit of Measure*		*Sub-Total*
1-Man Des. Crew & TH Setup	$	132.00	10	HR	$	1,320.00
Sub-Total					**$**	**1,320.00**
QL"A" SUE Test Holes						
Unit Rate - Depth		*Rate*	*Assumed Quantity*	*Unit of Measure*		*Sub-Total*
0 - 6 feet	$	1,300.00	6	EA	$	7,800.00
6.01 - 10 feet	$	1,750.00	4	EA	$	7,000.00
10+ feet	$	2,800.00		EA	$	-
Every 1' deeper than 20'	$	300.00		EA	$	-
Pavement Coring	$	350.00		EA	$	-
Test Hole Total			10			
Sub-Total					**$**	**14,800.00**
Total Estimated Cost					**$**	**22,130.00**

1740 Universal City Boulevard, Suite 200 | Universal City, Texas 78148 | Phone: 210.981.3050

Subsurface Utility Engineering | Utility Coordination

EXHIBIT A

EXHIBIT B

Cliff Dr
Venturer Ln
Intrepid Dr
Robin Dale Dr
Keeneland Dr
Keeneland Dr
Valley Pt
Valley Crest
Ivy Run
Saratoga Ln
Fairway Green Dr
Balcones Creek
Fairview Pl
Cibolo View
Battle Intense
Cibolo Trace
Cibolo Run
Cibolo Run
Fairway Bluff Dr
SUE LIMITS
Fair Oaks Pkwy
Google Earth
Image © 2024 Airbus
N
1000 ft

THE RIOS GROUP

EXHIBIT C
DEFINITIONS & DATA LIMITATIONS

Subsurface Utility Engineering (SUE) Quality Level Definitions

The Rios Group (TRG) performs SUE services in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities". The core aspect of this standard is affixing a professionally judged value (a Utility Quality Level) to buried and hidden Utility Segments and Utility Features that identify the reliability and nonquantifiable locational uncertainty of documented Utility infrastructure data. The four quality levels, as defined in the standard, are:

- **Utility Quality Level D (QLD)** – A value assigned to a Utility Segment or Utility Feature not visible at the ground surface whose estimated position is judged through Utility records, information from others, or from visual clues such as pavement cuts, obvious trenches, or existence of service.

  A QLD data attribute is assigned to a Utility Segment or Utility Feature after review and compilation of existing records, oral recollections, One-Call or "private-locate" markings, managed data repositories, context with other achieved Utility Quality Levels, and/or other evidence of existence. QLD data is more uncertain than QLC, QLB, and QLA. QLD data is less uncertain than utilities documented without any Utility Quality Level barring a Professional's statement of fact to the contrary.

- **Utility Quality Level C (QLC)** – A value assigned to a Utility Segment not visible at the ground surface whose estimated position is judged through correlating Utility records or similar evidence to Utility Features, visible aboveground and/or underground. The Utility Anchor Point on the Utility Features shall be tied to the Project Survey Datum with an accuracy of 0.2 ft (60 mm) horizontal.

  A QLC value judgement is assigned to a Utility Segment by using visible Utility Features to approximate the position of a Utility Segment between or in proximity to the visible Utility Features and in context with other achieved Utility Quality Levels. QLC only pertains to the underground Utility Segment(s), not the Utility Feature(s). QLC data is more certain than QLD and is more uncertain than QLB and QLA

- **Utility Quality Level B (QLB)** – A value assigned to a Utility Segment or Subsurface Utility Feature whose existence and horizontal position is based on Geophysical Methods combined with professional judgement and whose location is tied to the Project Survey Datum.

A QLB value is assigned to a Utility Segment when the following conditions are met: (1) the Utility Segment was detected through the application of appropriate Geophysical Methods; (2) the geophysical signal was judged to be reliable. (3) the interpreted position was judged based on knowledge and use of geophysical science, Utility design and installation practices, available records, visual features, and influence of site conditions; and (4) the source Designation has been tied to the Project Survey Datum with an accuracy of 0.2 ft (60mm) horizontally. QLB is more uncertain than QLA and more certain than QLC or QLD.

- **Utility Quality Level A (QLA)** – A value assigned to that portion (x-, y-, and z-geometry) of a Utility Segment or subsurface Utility Feature that is directly exposed and measured and whose location and dimensions are tied to the Project Survey Datum. The Utility Segment or subsurface Utility Feature shall be tied to Project Survey Datum with an accuracy of 0.1 ft (30 mm) vertical and to 0.2 ft (60 mm) horizontal for measurements of the outside limits of the Utility Feature or Utility Segment that is exposed.

  Other measurable, observable, and judged Utility Attributes are also recorded. If obtained by means of a Test Hole observation, a verification effort is made, and professional judgement is used to assert that the exposed infrastructure is indeed the sought target. The assignment of QLA conveys the lowest level of relative (nonquantifiable) uncertainty of measurable and judged Attributes and locations. QLA is more certain than QLB, QLC, or QLD.

Acronyms and Special Definitions

3D three-dimensional
CAD Computer-Aided Design
EOI End of Information
GIS geographic information system
GPR ground penetrating radar
ROE Right of Entry
ROW Right of Way
SAF Surface Adjustment Factor

Anchor Point: A defined point on a Utility Feature or a Utility Segment. (ASCE 38-22)

Attribute: A defined characteristic of a Utility Feature, Utility Segment, or of a singular point on a Utility Feature or Utility Segment. (ASCE 38-22)

Deliverable: The sealed results from a Subsurface Utility Engineering investigation that typically includes a Utility Report, Utility Drawings, and other relevant Utility data for inclusion in digital or paper formats, and/or within databases and/or three-dimensional models. (ASCE 38-22)

Designating: The application and interpretation of shallow earth Geophysical Methods to infer (with or without surface markings) the existence and the approximate horizontal position and,

when possible and part of the Scope of Work, Depth of a subsurface Utility Segment and/or Utility Feature. (ASCE 38-22)

Electronic Depth (ED): Depth obtained by electromagnetic receiver that has a varying level of accuracy based on many factors including soil conditions, connection type, overhead interference, etc. ED reports to the center of the induced magnetic field.

Encasement: A structure that encloses and protects utility facilities and surrounding infrastructure, environment, and the public. E.G. Concrete cap, casing pipe, tile, ducts, tunnel.

Geophysical Method: Application of an established shallow-earth Geophysical Method (such as seismic, acoustic, gravitational, magnetic, electrical, and electromagnetic) to observe the physical response of the subsurface Utility infrastructure and cultural features, as well as anomalies within those responses. (ASCE 38-22)

Locating: The process of exposing and verifying a Utility for purposes of determining its function, type, position, outside dimensions, and other observable Attributes at its exposed points. (ASCE 38-22)

Low Wire Sag: Lowest elevation on the lowest wire at a crossing overhead utility.

Overhead attachment point: Elevation where overhead line is attached to above ground structure such as a pole.

Subsurface Utility Engineering (SUE): The specialty practice of civil engineering's Utility Engineering branch that includes the investigation, analysis, judgment, and documentation of existing Utility networks. (ASCE 38-22)

Test Hole: A small, limited excavation, made to determine, measure, and record data about a buried Utility Segment or Utility Feature. (ASCE 38-22)

Utility: A privately, publicly, or cooperatively owned pipeline, cable(s), and/or conduits, facility, or system for producing, transmitting, or distributing communications, traffic control cables and structures, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, stormwater, or any other similar commodity, including any fire or police signal system or street lighting system. The term Utility shall also mean the Utility owner/operator inclusive of any wholly owned or controlled subsidiary. (ASCE 38-22)

Utility Feature: A physical component of a Utility. Examples include valves, hydrants, reducers, switches, thrust blocks, vaults, and transformers. (ASCE 38-22)

Utility Investigation: Any or all of a variety of office and field activities undertaken to understand and document the existence of, location, and Attributes of existing Utility facilities within the project limits. (ASCE 38-22)

Utility Quality Level: The value, assigned by the Professional, of a Utility Segment or subsurface Utility Feature that identifies the relative (nonquantifiable) uncertainty of a Utility Segment's or subsurface Utility Feature's existence and actual location to that of its documented location. (ASCE 38-22)

Utility Report: A report or sufficient notes contained within a Utility Drawing, sealed by a Professional, that (1) contains information about the Utility Investigation that might otherwise not be conveyed, (2) assists the end user in understanding the subsurface Utility landscape and risks, (3) provides recommendations to address data deficiencies, and (4) complements the Utility Drawing Deliverables. (ASCE 38-22)

Utility Segment: A continuous portion of a Utility for which the Utility Quality Level is constant, and the Attributes, other than Depth, are substantially identical. (ASCE 38-22)

Vault: A concrete box underground that is used for utility purpose.

General Data Limitations

SUE services are performed in accordance with ASCE/UESI/CI 38-22 guideline, generally accepted engineering principles and practices at the time of service. However, a possibility exists that abandoned, forgotten, non-detectable, undocumented, or newly installed utilities may not get mapped using standard records research and surface geophysical survey procedures. While the ASCE 38-22 standard guidelines mitigate these issues, utilities possessing characteristics mentioned below can be missed while following standard Utility Designating and Locating procedures:

1. Utilities lacking apparent available records and without apparent surface features.
2. Utilities with record information which is illegible, misleading, or incomplete.
3. Utilities which are inaccurately reported or inaccurately represented by the utility owner as being a significant distance from the true position.
4. Abandoned utilities without apparent surface features.
5. Utilities buried excessively deep, beyond detection limits of standard utility designating equipment.
6. Non-conductive utilities buried in clay soil without apparent surface features.
7. Non-conductive lines buried away from the tracer wire (e.g., HDPE Gas)
8. Facilities installed after the SUE effort has been completed.

A common problem occurs when the project involves facility owners and operators with insufficient records and non-conductive buried facilities (a situation often encountered with public works installations), infrastructure for oil and natural gas wells installed prior to 1960, and irrigation systems that utilize non-conductive water mains. Facilities mapped under these circumstances are often depicted as QLD during the utility designating field effort to keep operations and budgets at a practical level. As the design project progresses, some depicted facilities may have to be upgraded to a higher quality level through more advanced geophysical prospecting and utility locating methods to properly identify and assess utility conflicts for design and construction.

Designers, utility coordinators, and contractors must realize the CI/ASCE 38-22 utility mapping effort is an iterative acquisition and interpretation process. Unless subsequent endeavors are made to upgrade designated quality levels, facilities depicted at lower quality levels, such as QLD, may be completely in error. In addition, depicted facilities and corresponding data are pertinent at the time in which field investigation operations are completed and are subject to change.

Final utility plans and data are for design purposes only and reflect utility conditions at the time surveyed. The SUE consultant cannot be held responsible for utility scenario changing after completion of field operations.

Users of this data set must understand and adhere to the limitations associated with the designated quality levels assigned to the depicted facilities. QLC and QLD depictions are based on interpolations, extrapolations, and available record data; this data can be erroneous and should not be used alone for design development and bidding purposes. Additional utility designating and locating field efforts to upgrade data to QLB and QLA are strongly recommended for areas where accurate final design and construction planning and bidding is required.

It is strongly recommended that users of this data, especially project engineers-of-record, become familiar with the ASCE 38-22 standard guidelines and the corresponding data limitations inferred by the designated quality levels prior to employing the data set for design purposes. In addition, a utility report should always accompany the existing utility CADD file to ensure proper interpretation and usage of the data set. Any questions regarding the SUE data or utility report should be directed to the SUE professional engineer-of-record.