

TASK ORDER No. 6

**CONTINUING PROFESSIONAL SERVICES
(Civil Engineering – Water)
FOR**

SCADA and Telemetry Master Plan

THIS TASK ORDER FOR CONTINUING PROFESSIONAL SERVICES (“Task Order”) is made on the day of _____, between the **City of Lake Worth Beach**, a Florida municipal corporation (“City”) and **Kimley-Horn and Associates, Inc.**, a North Carolina CORPORATION (“CONSULTANT”).

1.0 Project Description:

The City desires the CONSULTANT to provide those services as identified herein for the Project. The Project is described in the CONSULTANT’s Proposal, dated **February 2, 2024**, and services are generally described as: **Perform an assessment of the Utility Department’s SCADA/telemetry/computer system and prepare the SCADA and Telemetry Master Plan in Technical Memorandum format** (the “Project”).

2.0 Scope

Under this Task Order, the CONSULTANT will provide the City of Lake Worth Beach with civil engineering related to water consulting services for the Project as specified in the CONSULTANT’s **proposal attached hereto and incorporated herein as Exhibit “1”**.

3.0 Schedule

The services to be provided under this Task Order shall be completed within **180-215** calendar days from the City’s approval of this Task Order or the issuance of a Notice to Proceed.

4.0 Compensation

This Task Order is issued for a not to exceed amount of **\$111,850.00**. The attached proposal identifies all costs and expenses included in the not to exceed amount. Invoices will be itemized by the hours per person for the total work completed for each month.

5.0 Project Manager

The Project Manager for the CONSULTANT is **Fannie Howard**, phone: **(561) 840-0246**; email: **fannie.howard@kimley-horn.com**; and, the Project Manager for the City is _____, phone: _____; email: _____.

6.0 Progress Meetings

The CONSULTANT shall schedule periodic progress review meetings with the City Project Manager as necessary but every 30 days as a minimum.

7.0 Authorization

This Task Order is issued pursuant to the Continuing Professional Services Agreement (Civil Engineering – Water) based on RFQ#23-300 between the City of Lake Worth Beach and the CONSULTANT, dated March 21, 2023 (“Agreement” hereafter). If there are any conflicts between the terms and conditions of this Task Order and the Agreement, the terms and conditions of the Agreement shall prevail.

IN WITNESS WHEREOF, the parties hereto have made and executed this Task Order No. 6 as of the day and year set forth above.

CITY OF LAKE WORTH BEACH, FLORIDA

By: _____
Betty Resch, Mayor

ATTEST:

By: _____
Melissa Ann Coyne, City Clerk

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

APPROVED FOR FINANCIAL
SUFFICIENCY

By: _____
Glen J. Torcivia, City Attorney

By: _____
Yannick Ngendahayo, Financial Services Director

CONSULTANT: KIMLEY-HORN AND ASSOCIATES, INC.



By: _____
[Signature]

[Corporate Seal]
STATE OF Florida)
COUNTY OF Palm Beach)

THE FOREGOING instrument was acknowledged before me by means of physical presence or online notarization on this 5th day of February, 2024, by **Kimley-Horn and Associates, Inc.** a North Carolina Corporation, who is personally known to me or who has produced _____ as identification, and who did take an oath that he or she is duly authorized to execute the foregoing instrument and bind the CONSULTANT to the same.

[Signature]

Notary Public Signature

Notary Seal:

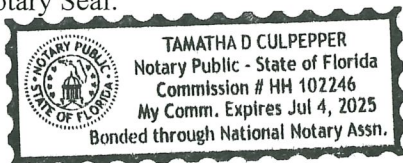


EXHIBIT 1

FOR

SCADA and Telemetry Master Plan Evaluation

1.0 Project Description

It is our understanding that the City of Lake Worth Beach Utilities Department (City) has identified the need to perform a comprehensive SCADA/telemetry/computer system assessment and include the recommendations in a SCADA and Telemetry Master Plan for the City's Water Treatment Plant (WTP) and associated other off-site facilities. It is also our understanding that the City has requested that recommendations be provided regarding the separation of networks between SCADA Operational Technology (OT) and Administration Information Technology (IT) and considerations for Cybersecurity based on EPA requirements. The SCADA/telemetry/computer systems evaluations are critical in the process of developing a plan to address not only the immediate challenges facing the facilities, but to keep pace with industry standards and best practices.

The following is our understanding of the City's existing infrastructure and the project scope of work based on discussions with the City:

It is our understanding that the project will be completed in two phases. Phase 1 will consist of evaluation of existing assets, preparation of a technical memorandum (TM), recommendations, and preparation of estimated opinion of probable construction costs (OPCC). Phase 2 design services would be performed under a separate contract following City approval of the recommendations resulting from the Phase 1 TM. It is anticipated that the Phase 2 work will commence as a separate design package from the remaining tasks associated with this project, but the interrelationships between the Phase 1 recommendations will be defined on sketches/figures to facilitate coordination of the Phase 2 design. Environmental Design Associates (EDA) will be retained to perform the SCADA/telemetry/computer system assessment and prepare the SCADA and Telemetry Master Plan in Technical Memorandum format.

With this understanding, the project team will perform the following scope of services for this project.

2.0 Scope of Services

Task 1

Kimley-Horn will engage EDA to perform the SCADA/telemetry/computer system assessment and prepare the SCADA and Telemetry Master Plan in Technical Memorandum format as described in the attached documents from EDA.

3.0 Schedule (5-6 months)

The following is the estimated schedule to provide the deliverable described in the attached documents from EDA.

Deliverable	Duration (from Task Order Approval)
Task 1 - Draft Findings and Recommendations TM	165 days
Task 1 - Final Findings and Recommendations TM and OPCC	180 days

*This schedule assumes: 1) 15 days for City to provide requested information and 2) 10-day review time by City of all deliverables

4.0 Compensation

Kimley-Horn will perform the Scope of Services for the total lump sum fee below. Fees will be invoiced monthly based on the actual amount of services performed and expenses incurred. Individual task amounts are informational only.

Additional Services which may be identified as needed at a later time will be negotiated at that time.

Task 1 - Preliminary Design Report	\$111,850.00
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5.0 Progress Meetings

The Consultant shall schedule a kickoff meeting, progress meetings, workshops and draft review meetings as described in the attached documents from EDA.

6.0 Additional Services

Consultant is available to provide additional services as requested by the City based on a negotiated fee for each task or utilizing hourly rates established by this contract. All additional work shall be negotiated with and authorized by the City in writing prior to initiation by the Consultant.



Electrical Design Associates

January 30, 2024

Ms. Fannie Howard, P.E.
Kimley-Horn
1920 Wekiva Way, Suite 200
West Palm Beach, Florida 33411

Re: SCADA and Telemetry Systems Master Plan Evaluation – Phase 1
City of Lake Worth Beach, Florida

Dear Ms. Howard:

We are pleased to submit our revised proposal for preliminary SCADA and telemetry systems engineering services for the above project. The following serves to provide an overview of the engineering services Electrical Design Associates, Inc. (EDA) intends to furnish on the above referenced project to Kimley-Horn (KH). Your signature on this agreement will serve as your letter of intent.

INTRODUCTION:

It is our understanding that the CITY of Lake Worth Beach (CITY) has recently observed the need to perform comprehensive SCADA/telemetry/computer system assessments and recommendations be provided as a master plan for the WTP and several other off-site facilities as described below. It is also our understanding that the CITY has requested that recommendations be provided regarding the separation of networks between SCADA Operational Technology (OT) and Administration Information Technology (IT) and considerations for Cybersecurity based on the Environmental Protection Agency (EPA) requirements/guidelines. The SCADA/telemetry/computer systems evaluations are critical in the process of developing a plan to address not only the immediate challenges facing the facilities, but to keep pace with industry standards and best practices.

The following information was provided by the CITY during an initial meeting with KH and EDA on December 1, 2023:

It is our understanding that the project will be completed in two phases. Phase 1 will consist of evaluation of existing assets, preparation of a technical memorandum TM, recommendations, and preparation of estimated opinion of probable construction costs (OPCC). Phase 2 design services would be performed under a separate contract following CITY approval of the recommendations resulting from the Phase 1 TM. It is anticipated that the Phase 2 work will commence as a separate design package from the remaining tasks associated with this project, but the interrelationships between the Phase 1 recommendations will be defined on sketches/figures to facilitate coordination of the Phase 2 design.

Our SCADA/telemetry/computer systems evaluation work scope shall include the following as outlined below:

SCOPE OF SERVICES:

EDA shall review all relevant reference materials and other available supporting documents as well as make independent observations and evaluations of the SCADA/telemetry systems. EDA will make recommendations for modifying existing SCADA, telemetry, and IT networks to mitigate current issues and provide plans for more efficient/effective future operations.

Our work scope shall include the following:

1. Collect and review all available information such as plans, record drawings, and existing standards that may be pertinent to execution of the Project.
2. Perform field visits in order to observe existing conditions.
3. Perform facilities evaluation and condition assessments.
4. Prepare draft and final TM summarizing facility/infrastructure improvements associated with the SCADA, telemetry, computer, and Cybersecurity systems as it relates to rehabilitation, repair, and replacement.
5. Prepare Estimates of OPCC for rehabilitation, repair, and replacement items determined from the facilities evaluation and condition assessments.

TASK 1 – PRELIMINARY DESIGN REPORT (PDR)

1.1 Kick-off Meeting and Initial Operational Workshop:

- Kick-off Meeting: EDA shall attend a Project Kick-off Meeting and site visit with KH and the CITY. The objectives of the kick-off meeting and site visit are to meet with CITY staff and senior management to discuss key project objectives, scope, project team, deliverables, project schedule, project communication protocol, and compile CITY's requirements for the Project.
- Initial Operational Workshop: EDA shall attend an Initial Operational Workshop to work with Operations, Maintenance, SCADA, IT, and Utilities Engineering staff. The objective of the workshop is to discuss current operation of the WTP and off-site facilities, operational issues, recommendations of prior design reports, upcoming projects, data requests and other matters for EDA/KH to gather detailed and current maintenance and operational information.

1.2 Data Collection and Review:

- EDA will review historical plant documentation including costs, record drawings, specifications, and operation and maintenance manuals. CITY shall provide a list of current and future projects to be completed at each facility for overall system integration and construction sequence considerations.

- EDA will review existing record drawings for the PLC systems from the CITY to utilize for development of Figures (PLC system architecture).
- EDA will summarize key data from the facilities, including: SCADA systems, Cybersecurity issues, and any other similar documentation available from the CITY.
- EDA will review pertinent past studies and vendor quotes as it relates to the SCADA, computer, and telemetry systems.
- EDA will review the EPA's Incident Response Guide for Water and Wastewater Sector document titled "WWS-Sector_Incident-Response-Guide.pdf", discuss with the CITY and provide recommendations as needed.

1.3 Field Investigations and Condition Assessment:

- EDA shall perform field investigations of the WTP and off-site facilities listed above and record an assessment of condition for the major SCADA/telemetry equipment and computer equipment (PLC and HMI). The purpose of this task is to determine the status, condition, and functionality of the existing computer/network/telemetry components. Deficiencies will be noted for areas where such deficiencies may adversely impact treatment process performance, facility expansion, and where the remaining useful life of the plant components will likely expire during a 10 year planning horizon. The purpose of the site visits is for visual observations and discussions with Operations staff to provide input on known problem areas at the WTP and off-site facilities. Site visits are not included to "as-built" the current record drawings.
- The condition assessment results will be recorded for every major asset in the inventory that was observed during visual assessment. EDA will not enter confined spaces or open any energized panels. EDA will take photos of all major assets surveyed.
- The condition assessment shall be based on visual inspection only of the telemetry and computer equipment and will not include the use of any testing equipment. No destructive or otherwise invasive testing is proposed at this time. In the event that more detailed inspections or analysis are recommended based on the initial on-site assessments, these can be performed as supplemental service.
- The CITY will need to provide representatives to allow access to facilities and equipment.
- For budget purposes, we are estimating:
 - Four (4) site visits for the WTP and three (3) on-site raw water wells. Site visits to the WTP will include discussions with Plant/IT staff to review details of the existing network.
 - One (1) site visit for the twelve (12) off-site raw water wells.
 - One (1) site visit for the two (2) remote booster pump stations, GST, and master pump station.

- Three (3) site visits for the thirty-three (33) lift stations.
- Total of nine (9) site visits for the initial field investigations; two staff at 8 hours each visit including preparation, discussions with Plant Staff, notes, etc.

1.4 C.C. Control Coordination:

- EDA shall coordinate with the CITY's preferred I&C Integrator to review the existing network infrastructure, computer systems, and any pertinent information related to the SCADA/telemetry/computer systems.
- EDA will make one (1) visit the WTP site with the C.C. Control representative as necessary.

1.5 Draft Findings and Recommendations TM:

1.5.1 SCADA/Telemetry/Computer Systems Recommendations and OPCC:

- EDA will consider pros and cons for SCADA/Telemetry/computer systems replacements as they relate to equipment requirements, design criteria requirements, Cybersecurity, system footprint or layout, safety, personnel requirements, maintenance requirements, redundancy, reliability, operational flexibility, and construction costs. EDA shall include recommendations based on the following criteria:
 - Immediate – System failure imminent.
 - Short Term – Five (5) year upgrade plan.
 - Long Term – Ten (10) year upgrade plan.
- EDA shall make recommendations for improvements for the SCADA/Telemetry/Computer/Cybersecurity systems at the WTP and each off-site facility investigated as part of the scope of work. EDA will evaluate existing SCADA systems based on the conditional assessment and reliability to develop a proposed approach for system upgrades. An initial set of project recommendations will be generated and organized in terms of criticality and timeframe for replacement, taking into account the proposed improvements. Planning level cost estimates will be provided for the recommended projects.
- EDA shall prepare a draft TM to summarize the present state of the SCADA/Telemetry/Cybersecurity and computer systems, identify system goals, and recommended improvements. Major areas to be addressed by the TM will be based on the following:
 - Executive Summary.
 - System background information and system overview.
 - Summary of Recommendations.
 - SCADA/Telemetry/Computer Systems.
 - Design and Reliability Criteria.

- System Evaluation.
 - Illustrative Sketches/Plans. This will include a network diagram of the existing and recommended final configuration.
 - Constructability and Maintenance Operations.
- Cybersecurity Mitigation.
 - Major Computer System Equipment Conditional Assessments.
 - PLC and HMI Recommendations.
 - Planning Level Cost Estimates.
- EDA will prepare a preliminary level cost estimate for the proposed PLC/HMI/Network/Cybersecurity upgrades/improvements. EDA will develop a Class 4 “Budget Level” estimate of the probable cost of construction per *Recommended Practice 18R-97 Cost Estimate Classification System for the Process Industries*, published in 2005 by AACE International.
 - EDA will determine replacement costs for each asset based on previous project experience; EDA’s cost database, vendor proposals (as needed) and industry standard practices. Each replacement cost will represent the total project cost, including direct and indirect cost factors that will likely be incurred in the actual replacement project, in today’s dollars. A multiplier will be applied to account for ancillary support items that are necessary but below the level of detail required for capital projects.
 - Draft TM Review Meeting: EDA shall attend one (1) meeting to review the Draft TM with the CITY and provide a written summary of the items discussed.

1.6 Final Findings and Recommendations TM and OPCC:

- A final TM will be developed based on the comments from the CITY. A review meeting to summarize the results of the final TM will be held at the site. This review meeting will be used to inform stakeholders of the final outcomes of the analysis and provide a final review of the proposed SCADA/Telemetry/PLC upgrades and projects along with proposed sequencing and cost information. The final TM will be used to base the designs associated with the Phase 2 Project and additional scope as noted above will be included under a separate work scope.
- A final OPCC estimate will be prepared based on the final TM recommendations.
- Final TM Review Meeting: EDA shall incorporate all comments received on the Draft TM and finalize the report. EDA shall attend one (1) meeting to review the Final TM with the CITY.

1.7 Project Meetings and Additional Workshops:

- Additional Workshops: EDA shall attend up to three (3) additional four-hour workshops to support the workshop objectives.

- Project Meetings: EDA shall attend two (2) project meetings throughout the assessment to solicit input and comments from staff and inform the CITY staff on the progress, issues, and recommendations of the assessment.

1.8 Project Management:

EDA shall assist KH in managing the project and communicating status and other key issues to KH and the CITY. Project management tasks include the following:

- Project Status Updates: EDA shall assist in preparing a monthly Project Summary Report and monthly invoice. The report will summarize the project progress to date, work performed over the previous month, work anticipated for the upcoming month, outstanding items, and a summary of pertinent decisions, recommendations and scope changes.
- Project Coordination: EDA shall assist KH with project coordination and communication throughout the project.
- Administrative Assistance: EDA shall prepare agendas and meeting minutes for KH's review and submittal to the CITY. The hourly estimate is based on ten (10) meetings: Kick-off, Operational Workshop, C.C. Control Coordination, three (3) Workshops, two (2) Project Status Meetings, Draft TM Review Meeting, and Final TM Review Meeting.

DELIVERABLES:

1. Draft TM: EDA shall submit three (3) hard copies and one (1) PDF copy of the Draft TM to the CITY for review.
2. Final TM: EDA shall submit three (3) hard copies and one (1) PDF copy of the Final TM to the CITY for records retention. The recommendations in the final TM will be utilized as a basis for the modifications to be completed in Phase 2 under a separate contract.

ASSUMPTIONS:

EDA has made the following assumptions in the development of this scope of services:

1. KH/CITY will provide EDA with electronic versions of required documents in PDF and/or AutoCAD/Word files for review.
2. All meetings will be at the WTP site. Travel time is included in the estimated budget.

SCHEDULE OF DELIVERY

Time periods to perform the professional services are estimated as follows:

SCHEDULE FOR PROFESSIONAL SERVICES

Task Name	Duration ⁽¹⁾
Task 1.5 – Draft Findings and Recommendations TM	120 Days
Task 1.6 – Final Findings and Recommendations TM and OPCC	45 Days

Notes: 1) This schedule assumes a 10-day review time by CITY of all deliverables. The schedule will be adjusted/extended as needed should there be a delay in receiving the required information from the CITY.

SUPPLEMENTAL SERVICES - Any work requested by the CITY that is not included in one of the items listed in any other phase will be classified as supplemental services. Services not specifically defined and Electrical, I&C, HVAC, Process, etc. are not included. The attached spreadsheet provides an estimate of our anticipated work effort. Travel to and from the sites and other direct costs are included in the total estimate and will not be billed as a separate line item. Our fee for this work shall be lump sum and shall be billed monthly based on percentage of completion. Our fee shall be payable as follows:

Task 1.1 – Kick-off Meeting and Operational Workshop	\$ 2,216.48
Task 1.2 – Data Collection and Review	\$ 8,608.96
Task 1.3 – Field Investigations and Condition Assessment	\$ 29,938.96
Task 1.4 – C.C. Control Coordination	\$ 3,940.40
Task 1.5.1 – Draft SCADA/Telem/Comp Sys Rec. and OPCC	\$ 22,254.68
Task 1.6 – Final Findings and Recommendations TM and OPCC	\$ 7,662.63
Task 1.7 – Project Meetings and Workshops	\$ 3,632.56
Task 1.8 – Project Management	<u>\$ 14,202.28</u>

Total: \$ 92,456.95

Very truly yours,



Dameion Donaldson, P.E.

ACCEPTED _____ DATE _____

**SCADA and Telemetry Systems Master Plan Evaluation - Phase 1
City of Lake Worth Beach, Florida**

Date: 1/30/2024

Estimate of Work Effort & Fee

	Principal		Senior Electrical Engineer		Engineer		Cadd Technician		Clerical/Admin		Totals	
	Hourly Rate	\$230.88	Hourly Rate	\$200.10	Hourly Rate	\$153.92	Hourly Rate	\$118.40	Hourly Rate	\$86.73		
Task 1 - Preliminary Design Report (PDR)												
Task 1.1 Kick-off Meeting and Initial Operational Workshop	0	\$ -	8	\$ 1,600.80	4	\$ 615.68	0	\$ -	0	\$ -	12	\$ 2,216.48
Task 1.2 Data Collection and Review	4	\$ 923.52	22	\$ 4,402.20	16	\$ 2,462.72	4	\$ 473.60	4	\$ 346.92	50	\$ 8,608.96
Task 1.3 Field Investigations and Condition Assessment	4	\$ 923.52	80	\$ 16,008.00	80	\$ 12,313.60	0	\$ -	8	\$ 693.84	172	\$ 29,938.96
Task 1.4 C.C. Control Coordination	0	\$ -	12	\$ 2,401.20	10	\$ 1,539.20	0	\$ -	0	\$ -	22	\$ 3,940.40
Task 1.5 Draft Findings and Recommendations	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -
Task 1.5.1 Draft SCADA/Telem/Comp Sys Recommendations and OPCC	8	\$ 1,847.04	50	\$ 10,005.00	40	\$ 6,156.80	30	\$ 3,552.00	8	\$ 693.84	136	\$ 22,254.68
Task 1.6 Final Findings and Recommendations TM and OPCC	2	\$ 461.76	18	\$ 3,601.80	14	\$ 2,154.88	10	\$ 1,184.00	3	\$ 260.19	47	\$ 7,662.63
Task 1.7 Project Meetings and Workshops	0	\$ -	12	\$ 2,401.20	8	\$ 1,231.36	0	\$ -	0	\$ -	20	\$ 3,632.56
Task 1.8 Project Management	6	\$ 1,385.28	40	\$ 8,004.00	20	\$ 3,078.40	0	\$ -	20	\$ 1,734.60	86	\$ 14,202.28
Task 1 Subtotal:	24	\$ 5,541.12	242	\$ 48,424.20	192	\$ 29,552.64	44	\$ 5,209.60	43	\$ 3,729.39	545	\$ 92,456.95
Total:	24	\$ 5,541.12	242	\$ 48,424.20	192	\$ 29,552.64	44	\$ 5,209.60	43	\$ 3,729.39	545	\$ 92,456.95

