

**Modification #2 to the Professional Services
Agreement #20022 for Lake County**

This second contract modification (“Modification #2”) is between the County of Lake, Illinois, an Illinois body politic and corporate (“County”), and Donohue & Associates, Inc. d/b/a (“Consultant”) and relates to the parties’ *Professional Services Agreement* (“Services”).

RECITALS

Whereas:

- a. On July 14, 2020, the Parties entered into a *Professional Services Agreement* (“PSA”) for Engineering Services for the SCADA Phase III Improvements Project in accordance with the Local Government Professional Services Selection Act, 50 ILCS 510/1 et. Seq., in the amount of \$69,680.
- b. Under the terms of the agreement, Consultant began services on July 14, 2020.
- c. Under its initial terms, see Attachment A to Agreement #20022, the PSA anticipated 3 parts (SCADA Phase III Improvements Project) of the engineering services in connection with the upgrade and rehabilitation of remote site control panels in the southeast and northwestern regions of Lake County, Illinois.
- d. Contract Modification #1, in the amount of \$82,595 approved by the County on October 13, 2020, was a request for Part 2 (SCADA Phase III Improvements Project) of the engineering services in connection with the control panel design drawings and technical specification for bidding the sites in the southeast and northwestern regions of Lake County, Illinois.
 1. Complete design drawings for all remote sites.
 2. Provide technical specification and assist the County in preparing a bid for materials and radio equipment.
 3. Solicit pricing from subcontractors to perform remote site work, field wiring and control panel upgrades.
- a. This second contract modification is required for Part 3 (SCADA Phase III Improvements Project) of the engineering services in revising the bidding approach and design documents to allow for traditional bidding for a general contractor to perform all the work at eight sites in the northwestern region of Lake County, Illinois. The Consultant’s scope of work is described in Attachment A and as detailed below:
 1. Complete traditional bidding documents for eight remote sites.
 2. Provide technical specifications and assist the County in preparing bid documents for all the work at each of the eight sites.
 3. Provide engineering services related to submittal and RFI review to support County staff during construction.

- b. The original intention of the project was for the Consultant to perform the application engineering (programming) of the new control panels and associated equipment to meet County standards and ensure proper project implementation. To achieve this intention under a traditional bidding arrangement, the Consultant will include an allowance in the Bidding Documents that requires use of the Consultant as the Application Engineer and the Consultant will subcontract for that work directly with the selected General Contractor.

In light of the foregoing, the parties now agree as follows:

1. **Incorporation of Recitals; Capitalized Terms.** The recitals above are incorporated into the body of this Contract Modification #2, as if set forth here in their entirety. Capitalized terms used and not otherwise defined herein shall have the meanings given to such terms in the *Professional Services Agreement*.

2. **Counterparts.** The parties may sign this Modification #2 in several counterparts, each of which will be deemed an original but all of which together will constitute one instrument.

3. **Effective Date.** The "Effective Date" of this Contract Modification #2 is the date this document is executed by the County. The date of the County's signature on this document is an acknowledgment of the approval by the County.

4. **Agreement Price.** The County will pay the Consultant an additional fee of \$176,600 for a total amount not to exceed \$328,875 to complete the tasks outlined in Consultant's proposal Attachment A dated June 6, 2022.

Signed:

COUNTY OF LAKE:

CONSULTANT:

Donohue & Associates, Inc.

By: _____
Name: RuthAnne K. Hall
Its: Purchasing Agent

By:  _____
Name: Eric Cockerill
Title: Vice President

Date: _____

Date: 6/7/2022

Attachment A

Contract Modification #2

AGREEMENT 20022 FOR ENGINEERING SERVICES

REMOTE SITE SCADA NETWORK PROJECT

JUNE 6, 2022

PART I

PROJECT DESCRIPTION/SCOPE OF SERVICES/TIMING

A. PROJECT DESCRIPTION

The intent of this project is to assist Lake County Public Works (LCPW) with the Design and Implementation of SCADA network for the Southeast and former Lakes Region Sanitary District remote sites.

Lake County Public Works Department (LCPW) provides wastewater conveyance and treatment services to approximately 40% of the residential, commercial, and industrial customers in Lake County. LCPW owns and operates three treatment facilities and over 345 miles of sewer system. LCPW solicited qualifications from engineering firms to provide detailed planning, design, and systems integration for SCADA telemetry networking to service the Southeast region and former Lakes Region Sanitary District remote sites. Lift stations in the Southeast region are not currently connected to the network. The Lakes Region Sanitary District was recently acquired and serves the areas of Lake Villa, Ingleside, and portions of Round Lake and Volo.

The overall project includes Planning, Design, and Implementation of control system upgrades in the Southeast Region (28 sites) as well as the former Lakes Region (20 sites) and their respective telemetry hubs. In order to effectively evaluate and provide accurate costs for the associated improvements, the overall project will be broken into three phases as shown below.

- Phase 1 – Site Investigation and Planning
- Phase 2 – Control Panel Design
- Phase 3 – Final Design of Bidding Documents and Construction Services

B. SCOPE OF SERVICES

Basic Services to be provided by Donohue (Engineer) for this Project under this Agreement are as follows:

Phase 1 – Site Investigation and Planning (Completed)

To start the project, Donohue will host a virtual kickoff meeting to introduce the staff, review the project plan, and coordinate on site activities.

Task 1 – Inventory of Remote Sites

Donohue will visit and document inventory of each remote site in the Southeast Region and Lakes Region. Inventory will include, but not limited to, existing equipment, physical condition rating, existing communication protocols, panel dimensions, and GPS coordinates.

Task 2 – Cellular Feasibility Study

Donohue and its subconsultant, J&K Communication, will use the GPS coordinates for each of the remote sites and conduct an electronic propagation study to verify cellular communication probability for each of the selected sites. Donohue will consult with Verizon Wireless for the cellular communication.

Task 3 – Standardization and Cost Analysis

Donohue will consolidate the results of the Field Investigation Report to develop a set of Standard Lift Station control panels. It is assumed that many of the 48 remote sites will be categorized or classified into smaller groupings, which will be used to develop an opinion of probable construction costs. Using a standardized approach provides commonality throughout the hardware and maintenance as well as commonality of the control panel designs, which is the most cost-effective means of designing a large quantity of control panels. An example of standardization, which may be expanded or modified during the Project is as follows:

Type 1 – Radio and Antenna Replacement Only

Type 2 – Backpanel Replacement with new control hardware and radio hardware

Type 3 – Complete Control Panel Replacement

Donohue will prepare for and lead a workshop to review the deliverables of the Site Investigation and Planning Phase with the Owner. The workshop will be held at the Owner's facility.

Phase 1 Deliverables

Task 1 – Field Investigation Report

Task 2 – Cellular Feasibility Report

Task 3 – Standardization Memorandum with Cost Opinions

Phase 2 – Control Panel and Site Work Design (Completed and/or Scope Changes to be incorporated in Phase 3)

Upon completion of the Phase 1 Deliverables, Donohue will prepare control panel designs for each of the remote stations and telemetry hubs, as defined in Phase 1. Donohue will begin with a single control panel design for each of the standard "types" identified in Phase 1 (three types have been identified). The control panel designs will be submitted to the Owner for review, comment, and approval prior to completing the remaining control panel designs. Donohue will meet with the Owner to receive comments and resolve open issues. Control panel designs will include

detailed electrical schematics, wire numbering, scaled layout drawings, and bill of materials with manufacturer part numbers.

During field investigations, it was determined that some sites will require new full size electrical enclosure that houses transfer switch, generator plug, meter socket, and a control panel for remote communication and local pump monitoring control. These sites will typically require concrete pads, revised conduit and wire installation, and minor site grading/tree removal. Donohue will visit the site to produce site layouts and typical installation details for the related concrete, electrical, and civil work required at those sites. Nineteen sites are expected to require this level of work. Figure 1 shows a typical site requiring the larger “standard” enclosure design. Figure 2 shows a recently upgraded site with the enclosure, concrete work, etc.



Figure 1- Typical Site Pre-Improvements



Figure 2- Typical Post-Improvement Site - Electrical/Control Enclosure

Several sites are space limited and can only accommodate the smaller exterior control panel. Donohue will provide panel design and typical mounting details for the control panel. It is estimated that approximately five sites can only fit these smaller control panels.

The remaining sites include a building where the control panel can be installed inside and do not require site work.

Donohue will prepare the detailed control panel designs for each site and submit to the Owner for review. Donohue will meet with the Owner to receive comments and resolve open issues.

Phase 2 Deliverables

Standard Control Panel Designs (three types)

Detailed Control Panel Designs (one for each remote site)

Summary of Site Improvements required at each site

Phase 3 is authorized through this Contract Modification #2.

Phase 3 – Final Design, Bidding, and Construction Services

During Phase 2 field investigation and reporting, the overall scope of the project was modified. Five groups of control panel designs were completed including Standard Enclosure Design(2), Pedestal Mount Enclosure Design(8), Indoor Wall Mount Enclosure Design(2), PLC Hardware Upgrade Design(25), and Three Pump Enclosure Design(1). Rather than bidding the construction and installation of these control panel designs, the County has opted to self-perform the upgrades and replacements of all the stations except the following eight sites: Anderson Lift Station, Brooks Farm Lift Station, Forest Avenue Lift Station, Hickory Lift Station, Luther Lift Station, Oak Street Lift Station, Park and Reed Lift Station, and Sunnybrook Lift Station. These included sites are unique and require additional electrical, site, and panel construction that will be designed, bid, and constructed under Phase 3 of this Project. In lieu of bidding the Control Panel equipment separately, with Donohue performing all remaining work at each site (with subcontractors), the work at all eight sites will be bid to a single contractor with traditional bidding documents with Donohue listed as the sole-source Application Engineer responsible for programming the PLC controlling each station. Given Donohue's detailed history and experience with this project, it is prudent to require that Donohue be the sole-source Application Engineer to help ensure proper coordination and implementation of this project. The eight sites and a summary of proposed improvements at each site is provided below.

1. Anderson Lift Station

- a. Locate a new standard enclosure between the station and the channel (Southeast of trees)
- b. Provide new Automatic Transfer Switch inside standard enclosure based on existing nameplate information.
- c. Remove and replace trees as required.
- d. Remove and replace guardrail as required.
- e. The station is in the floodway. Construct platform structure to elevate control panel and minimize impact on floodway. Match height of generator pad.

- f. Install junction box near wetwell to terminate pump and control cables.
- g. Gas line will be in conduit path. Gas line will need to be capped and reinstalled during construction. Donohue will coordinate with gas company during design and require additional coordination by Contractor during construction.
- h. Use existing utility pole for power feed. Provide new power cable from pole to new meter base mounted on side of control panel enclosure.
- i. Confirm location of the public R.O.W. for this site (all 6 sites that are not within a building).
- j. Evaluate paver walkway and remove/replace if necessary to complete the other work at the site.
- k. Restore site, including concrete/asphalt, after other improvements are completed.

2. Brooks Farm Lift Station

- a. Relocate existing automatic transfer switch, lighting panel, corrosion protection, and lighting transformer.
- b. Install new meter enclosure outdoors
- c. Install new service disconnect outdoors
- d. Block in side door
- e. Install new wall-mounted control panel
- f. Install new wall-mounted VFDs w/ Bypass Contactors.
- g. Move meter trim to south side of building (to be closer to transformer and closer to new panels)
- h. Restore site, including concrete/asphalt, after other improvements are completed.

3. Forest Drive Lift Station

- a. Existing control panel will be replaced with a wall-mounted two door enclosure inside the existing building.
- b. Relocate flow meter transmitter as required to accommodate control panel

4. Hickory Lift Station

- a. Pedestal Mount 48x42 SST Enclosure.
- b. Relocate power to rear of pedestal. Provide new meter base, disconnect, and generator socket.
- c. Replace and extend existing retaining wall to the south to allow Pedestal Mounting of 48" control panel.
- d. Provide new concrete pad in front of entire retaining wall including around wetwell.
- e. Bottom of enclosure to be 2' above wet well hatch to de-classify enclosure space
- f. Use existing utility pole for power feed. Provide new power cable from pole to new disconnect on rear of pedestal.
- g. Investigate location of the public R.O.W. for this site and confirm location of the wall.
- h. Evaluate and include bollards as needed.
- i. Restore site, including concrete/asphalt, after other improvements are completed.

5. Luther Lift Station

- a. Remove/Replace section of curb as required for construction

- b. Temporary generator required during construction. County to provide temporary generator.
- c. Remove utility pole adjacent to lift station.
- d. Directional bore new electric feed under the road.
- e. Locate new standard enclosure next to wetwell in location of existing utility pole. Position so that there is at least a 2' walkway in front of cabinet doors to allow for opening.
- f. Restore site, including concrete/asphalt and guardrail, after other improvements are completed.

6. Oak Lift Station

- a. Install new standard control enclosure in ROW east of generator.
- b. Route new conduit north of generator.
- c. Remove utility pole (coordinate with property owner).
- d. Directional bore new electric feed under the road.
- e. Relocate existing comm/tel/cable service to residence.
- f. Reconstruct stairs to accommodate new conduit to new control panel
- g. Restore site, including concrete/asphalt, after other improvements are completed.

7. Park and Reed Lift Station

- a. Locate new standard enclosure next to wetwell in location of existing utility pole.
- b. Temporary generator required during construction. County to provide temporary generator.
- c. Remove utility pole.
- d. Directional bore new electric feed from next pole east of lift station.
- e. Mount enclosure 6" above wet well hatch.
- f. Consider short drive to approach enclosure from ROW or through HOA property.
- g. Evaluate and include bollards as needed.
- h. Restore site, including concrete/asphalt, after other improvements are completed.

8. Sunnybrook Lift Station

- a. Locate new standard control enclosure in location of existing panel.
- b. Enclosure doors to open left and right of sidewalk.
- c. Determine electrical service routing
- d. Replace concrete pad for new enclosure
- e. New vent into wetwell, cut/cap existing vent
- f. Temporary generator required during construction. County to provide temporary generator.
- g. Consider drive for access for vacuum trucks if allowed by easement and/or township permit.
- h. Restore site, including concrete/asphalt, after other improvements are completed.

Donohue's services will include the following:

- A. Provide project management and attend monthly progress meetings with the County. Prepare project meeting agendas and meeting summaries.

- B. Conduct a review workshop with the County after submittal of draft documents to receive, discuss, and resolve County comments.
- C. Coordinate with gas, telecommunication, and power utilities for any anticipated relocation or temporary shutoff of utilities in or around the work sites.
- D. Prepare permit applications and supporting documents for the work. Permits are anticipated to be required from the Lake County Planning and Building Development (Sunnybrook LS, Brooks Farm LS, and Forest Ave LS), Lake County Stormwater Management Commission (Anderson LS), and Grant Township Road District (Anderson LS, Hickory LS, Park and Reed LS, Sunnybrook LS) and Avon Township Road District (Luther LS and Oak LS).
- E. Provide a topographic survey of six of the sites (Brooks Farm and Forest Lift Stations not included). The survey will include title and easement search for the Sunnybrook Lift Station. Survey will locate existing right-of-way. Submit JULIE planning/design stage requests for utility marking prior to survey.
- F. Prepare Final Design Drawings for each of the eight sites to define improvements required at each.
- G. Prepare updated cost estimates for the project based on design submittals.
- H. Prepare a project manual including "front end" (bidding forms and requirements) and technical specifications to allow traditional bidding of the work by the County.
- I. Revise drawings and project manual based on review comments received from the County.
- J. Attend and manage one pre-bid meeting for the project bidding
- K. Respond to questions from bidders during the bidding period.
- L. When required to clarify the Bidding Documents, prepare addenda revising the Bidding Documents for distribution by the County.
- M. Review submittals/shop drawings from the Contractor for compliance with the Contract Documents
- N. Review RFIs and generate change orders as required.
- O. Coordinate with contractors and conduct site visits to observe work completed and assist with resolving questions or conflicts. Four site visits are anticipated for each location for pre-excavation coordination, conduit routing, post installation inspection, and troubleshooting. Provide site visit notes/inspection reports/photos to document conclusions of the visits.
- P. Attend up to six monthly progress meeting and/or the project kickoff meeting during design. It is assumed that attendance will be virtual.
- Q. Attend pre-construction meeting plus six monthly progress meetings during construction. It is anticipated that attendance will be in person.
- R. Assist the County with generation of the Punch List, Substantial Completion Certificate, and Final Completion Certificate.
- S. As contingent services to be completed only at the request of the County, the proposal includes \$1600 for additional title search at the Oak St Lift Station and \$15,000 for an Owner's Directed Allowance for any additional engineering services required during the construction phase.

Donohue will provide PLC and HMI programming for the remote sites, telemetry polling hubs, and associated SCADA application development to incorporate the eight Phase 3 sites into the existing SCADA system as a subcontractor to the selected General Contractor.

Phase 3 Deliverables

Bidding Documents for Improvements at 8 sites - Draft 60% – PDF of documents and five hard copies (11x17 drawings) with updated cost estimate, and estimate of # of working days for contractor to perform the work

Bidding Documents for Improvements at 8 sites - Draft 90% – PDF of documents and five hard copies (11x17 drawings) with updated cost estimate, and estimate of # of working days for contractor to perform the work

Bidding Documents for Improvements at 8 sites – Final, Bid Ready – PDF of documents and ten hard copies (11x17 drawings) with final cost estimate

Permit Applications and Supporting Documents (including Shipping and Printing)

Construction Site Visit Reports and Memorandum

C. PROJECT TIMING

Donohue shall be authorized to commence the Services set forth herein upon execution of this Agreement. Engineering Services to reach Final Bidding Services for Phase 3 to be completed within 185 days after execution of this Agreement. The following target milestone dates are anticipated:

Agreement Execution: July 15, 2022

Draft 60% Bidding Documents: September 5, 2022

Draft 60% Review Workshop: On or Around October 4, 2022

Draft 90% Bidding Documents: November 4, 2022

Draft 90% Review Workshop: On or Around December 2, 2022

Final Bidding Documents: January 13, 2023

PART II

OWNER RESPONSIBILITIES

- A. In addition to other responsibilities of Owner set forth in this Agreement, Owner shall:
 - 1. Identify a person authorized to act as the Owner’s representative to respond to questions and make decisions on behalf of Owner, accept completed documents, approve payments to Donohue, and serve as liaison with Donohue as necessary for Donohue to complete its Services.
 - 2. Furnish to Donohue copies of existing documents and data pertinent to Donohue’s Scope of Services.

PART III

COMPENSATION, BILLING AND PAYMENT

- A. Compensation for the work for Phase 3 as defined in the Scope of Services (Part I) of this Agreement shall be in accordance with Donohue's standard chargeout rates in effect at the time the Services are performed. Routine expenses will be billed at cost. The amended total cost for these Services will not exceed \$176,600, without prior written approval from Owner. Total agreement cost for Phases 1, 2 and 3 is \$328,875.
- B. Donohue will bill Owner monthly, with net payment due in 30 days.
- C. Donohue will notify Owner if Project scope changes require modifications to the above-stated contract value. Services relative to scope changes will not be initiated without authorization from Owner.
- D. Use of the Owner's Directed "Allowance for Unforeseen Services" for any additional engineering services required during the construction phase shall require written confirmation from Lake County Department of Public Works staff.

**Lake County Public Works
Remote Site SCADA Phase 3 Project - Phase 3
Donohue & Associates**

Task Description	Sheet Count	Cockerill	Bell	Bielanski	Erickson	Madrid	Roundy	Lagenour	Rivera	Total Hours	Total Labor	Travel	Other Expenses	Subconsultant	Total Cost	Subtotals
		ENG VIII	ENG VI	ENG VI	ENG IV	ENG III		ENG I	ENG III							
		\$ 240	\$ 200	\$ 200	\$ 170	\$ 150	\$ 120	\$ 120	\$ 150							
1 Project Management																\$ 21,450
1.1 Project Administration/Progress Meetings (6)		36	16							52	\$ 11,840				\$ 11,840	
1.2 Permits (SMC/Township/PB&D)		8				24	32			64	\$ 9,360		\$ 250		\$ 9,610	
										-	\$ -				\$ -	
2 Final Design																\$ 80,600
2.1 Survey and Field Visits		4			4	8				16	\$ 2,840	\$ 100		\$ 9,000	\$ 11,940	
2.2 Final Drawing Preparation										-	\$ -		\$ 300		\$ 300	
Brooks Farm and Forest				40				16		56	\$ 9,920				\$ 9,920	
Structural Design (Anderson)					24					24	\$ 4,080				\$ 4,080	
Site Improvements (All)		16	8	20	8	16	72	32		172	\$ 25,680				\$ 25,680	
2.3 Coordination with Utilities				4		8	12			24	\$ 3,440				\$ 3,440	
2.4 Preparation of Front End Documents and Specifications		8	4	4	4		24	16		60	\$ 9,000		\$ 200		\$ 9,200	
2.5 Review Workshops (2)		8	4	6	6	6	12	4		46	\$ 7,760				\$ 7,760	
2.6 Revise Documents based on County comments		4	2	8	8	4	24	4		54	\$ 8,280				\$ 8,280	
										-	\$ -				\$ -	
3 Bidding Assistance																\$ 5,670
3.1 Manage pre-bid meeting (1)		4								4	\$ 960	\$ 50			\$ 1,010	
3.2 Answer bidder questions		2	2	2	2		4	4		16	\$ 2,580				\$ 2,580	
3.3 Issue addenda as needed		2	2				8	2		14	\$ 2,080				\$ 2,080	
										-	\$ -				\$ -	
4 Construction-Related Services (CRS)																\$ 52,280
4.1 Review shop drawings			8	16	12	4	12	24		76	\$ 11,760				\$ 11,760	
4.2 Generate change orders as needed		2	2	2			8		4	18	\$ 2,840				\$ 2,840	
4.3 Site Visits		8			4		16		128	156	\$ 23,720	\$1,700			\$ 25,420	
4.4 Attend Progress Mtgs. (7)		21								42	\$ 8,190				\$ 8,190	
4.5 Assist with Punch List, Substantial, and Final Completion		4	4				8		8	24	\$ 3,920	\$ 150			\$ 4,070	
										-	\$ -				\$ -	
										-	\$ -				\$ -	
Sub-Total	-	127	52	102	72	70	232	102	161	918	\$148,250	\$2,000	\$ 750	\$ 9,000	\$ 160,000	\$ 160,000
Total Labor Dollars by Staff		\$ 30,480	\$ 10,400	\$ 20,400	\$ 12,240	\$ 10,500	\$ 27,840	\$ 12,240	\$ 24,150							
6 Contingent Services																\$ 16,600
5.1 Title Search/Property Information for Oak St LS Site										-	\$ -			\$ 1,600	\$ 1,600	
5.2 Allowance for Unforeseen Services										-	\$ -		\$ 15,000		\$ 15,000	
Total	-	30,480	10,400	20,400	12,240	10,500	27,840	12,240	24,472		\$148,250	\$2,000	\$ 15,750	\$ 10,600	\$ 176,600	