



Memorandum

To: Honorable Mayor and Members of the City Council
CC: Members of Administration and Public Works Committee
From: Paul Moyano, Senior Project Manager
CC: Edgar Cano, Public Works Agency Director; Lara Biggs, Capital Planning & Engineering Bureau Chief / City Engineer
Subject: Approval of a Sole-Source Contract Award with Greeley and Hansen LLC for Water Plant 4160 V Electrical System Reliability Project (RFP 22-30) Retaining Wall Structural Design
Date: April 24, 2023

Recommended Action:

Staff recommends the City Council authorize the City Manager to execute a sole-source agreement with Greeley and Hansen LLC (100 South Wacker Drive, Suite 1400, Chicago, IL 60606) for Retaining Wall Structural Design related to the Water Plant 4160V Electrical System Reliability Project (RFP 22-30) in the amount of \$39,893.00. *A sole-source purchase requires a 2/3 vote of the Councilmembers.*

Funding Source:

Funding for this project is from the Water Fund (Account No. 513.71.7330.62145 – 722002). Budget is available from anticipated savings of other projects, namely the Lead Paint Removal and Repainting Plan.

City staff intends to pursue a low-interest loan from the Illinois Environmental Protection Agency (IEPA) State Revolving Fund (SRF). The loan is only issued after the design is complete and a contractor has been selected. If the City is successful in obtaining the loan, eligible engineering and construction costs will be funded by the loan.

CARP:

Municipal Operations, Renewable Energy, Emergency Preparedness & Management

Council Action:

For Action

Summary:

On September 12, 2022, the City Council approved a contract for consulting services for the Water Plant 4160V Electrical System Reliability Project (RFP 22-30) with Greeley and Hansen LLC (100 South Wacker Drive, Suite 1400, Chicago, IL 60606). The scope of work includes the design of replacement generators and medium voltage (4160V) switchgear, development of rooms for the new equipment, electrical distribution improvements, SCADA integration, and arc flash update.

Design is proceeding. Through a series of workshops with City Staff, site inspections, and analysis, Greeley and Hansen completed the Preliminary Design, defining the requirements for the installation of two new 4160V generators, replacement of existing 4160V switchgear, development of new space for the new systems, general improvements to the electrical distribution system, and integration of the new systems into SCADA.

Analysis:

The extent of the work being completed under the Electrical System Reliability requires that additional space be built at the water plant to accommodate new equipment meeting current safety and operation standards. Greeley and Hansen are recommending that the additional space can be accommodated within an existing garage space that is adjacent to the existing equipment that is being replaced, utilizing the first floor and building a second floor within the garage to claim 'air space' that was previously unused.

To make up for the loss of garage space, the garage could be extended east, as shown in Figure 1. Upon a more detailed assessment of the site, it was discovered that the retaining wall adjacent to the north side of the garage expansion (also shown in Figure 1) was unsound. Furthermore, after years of in-house maintenance and repairs, there were no engineering drawings or records documenting the design or capacity of the structure. Building a new structure adjacent to this existing retaining wall presented an unacceptable risk, and Greeley and Hansen recommended that the wall be properly engineered and replaced. In addition to properly designing the retaining wall to confidently provide decades of future service, the redesign at this time allows a unique opportunity to more efficiently design the retaining wall more with the proposed building wall. This will allow the building expansion to be better incorporated into the old building structurally and architecturally and provide additional space for the new design.

City Council is separately considering Change Order No. 1 to the Water Plant 4160V Electrical System Reliability Project (RFP 22-30), which represents critical additional work that is needed to improve the reliability of the electrical system at the water plant. The scope of those additions is significant and amounts to almost 50% of the existing contract amount, nearly reaching the limit of change orders to a single contract per the City's purchasing guidelines. This does not allow for the engineering design of the retaining wall replacement to be included in Change Order No. 1. However, it is important to maintain continuity in the design of this retaining wall with the rest of the improvements under design.

Staff recommends that the design of the retaining wall replacement be awarded under a sole-source contract to Greeley and Hansen. The full scope of work and cost breakdown is provided in the attached letter from Greeley and Hansen dated April 12, 2023. Awarding this contract to Greeley and Hansen will allow them to perform the design more efficiently than a new engineer could because of their deep understanding of the structural issues gained from the

current structural design work that they are doing related to the building expansion for the electrical project. They will also be able to consider the retaining wall and building expansion as a single design, providing a more structurally efficient approach and better accommodating the needs of the electrical project. Continuing work with a single engineer on this project will also avoid delays to the design schedule and reduce the burden on staff to develop, issue, and evaluate a separate RFP.

Legislative History:

On September 12, 2022, the City Council approved a contract for the Water Plant 4160V Electrical System Reliability Project (RFP 22-30) with Greeley and Hansen LLC.

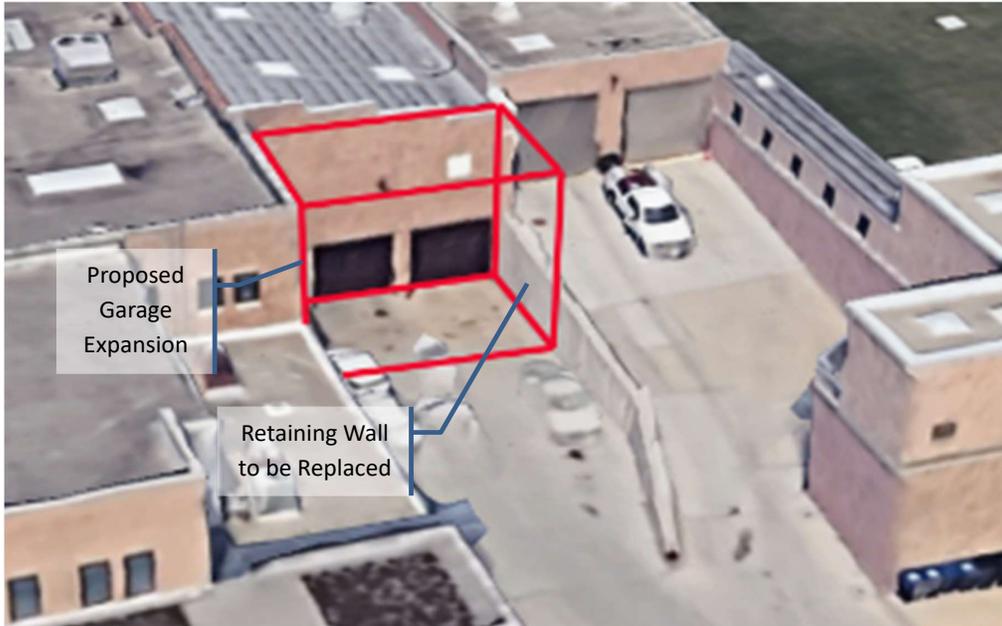
Attachments:

[Figure](#)

[Consultant Cost Proposal](#)

FIGURE

Figure 1 – Location of Garage Expansion for Electrical Project and Retaining Wall





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Chicago, Illinois 60606
p 312 558 9000
f 312 558 1986
www.greeley-hansen.com

April 12, 2023

Mr. Paul Moyano, P.E.
Senior Project Manager - Water and Sewer
Public Works Agency | Capital Planning & Engineering Bureau
City of Evanston
2100 Ridge Avenue
Evanston, IL 60201

Subject: Sole Source Contract for the Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement to support Contract 22-30: Water Plant 4160V Electrical System Reliability Project

Mr. Moyano,

Thank you for the opportunity to submit our proposal for the Sole Source Contract for the Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement to support Contract 22-30: Water Plant 4160V Electrical System Reliability Project. This Sole Source Contract is for additional engineering services to provide civil and structural improvements related to the Garages 5 and 6 Vehicle Ramp and Retaining Wall, which is located adjacent to the new Garage 4 building expansion as part of the Electrical Reliability Project. The additional engineering services fee required to accommodate this additional project scope is \$39,893, as detailed in Attachment A – Sole Source Contract Level of Effort and Fee Table.

Amendment No. 1 Scope of Services:

- 1) Proposed Scope Addition: Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement

Scope: Replacement of the Garage 5 and 6 Vehicle Ramp and Retaining Wall that are located adjacent to the new Garage 4 Building Expansion.

Justification: During the Preliminary Design services, Greeley and Hansen recommended that the Garages 5 and 6 Vehicle Ramp and Retaining Wall be replaced to avoid risk of failure during the construction of the Garage 4 building expansion, and mitigate long-term risk of failure impacting the Garage 4 building expansion foundations and first floor structural walls. Per Evanston Water Plant Staff, the retaining wall was repaired by internal Maintenance Staff years ago due to visible cracking and deterioration, and no record drawings or documentation were available supporting the repairs, existing conditions, or long-term reliable use of the vehicle ramp and retaining wall. The current Electrical Reliability Project scope does not include the Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement, as this is a field condition identified during the Preliminary Design services. It is recommended that the Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement be included in the project scope based on the following reasons:

- A. The Evanston Water Department Staff and Greeley and Hansen agree that the existing Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement are an unknown existing field condition that must be addressed in conjunction with the Electrical Reliability Project to not impact the Garage 4 building expansion and mitigate long-term risk due to failure.
- B. It was determined that in conjunction with the Electrical Reliability Project is the most effective time to replace the vehicle ramp and retaining wall. The retaining wall can be most efficiently designed as an integrated component of the new structural design of the Garage 4 building

expansion. Due to the close proximity, the new Garage 4 building expansion north wall must be located immediately along the existing retaining wall, which requires the Garage 5 and 6 Vehicle Ramp and Retaining Wall to be structurally sound as the new building foundations and first floor structure walls are designed and constructed. The replacement of the Garage 5 and 6 Vehicle Ramp and Retaining Wall Replacement during the design of the Garage 4 building expansion also provide opportunity for the integration of the foundations and new walls to maximize design strength, constructability, and construction sequencing to minimize impacts to useable workspace in this limited work area.

- C. The addition of the Garages 5 and 6 Vehicle Ramp and Retaining Wall Replacement Water Plant cost efficiencies in these improvements through design and construction as it is directly related to the Garage 4 building expansion and can be integrated into the foundation and wall design. Additionally, the Contractor will already be mobilized for the electrical and facility improvements in this project area and will have more flexibility organizing and sequencing their work.
- D. The replacement of the Garages 5 and 6 Vehicle Ramp and Retaining Wall will improve building strength and workspace layout, and to mitigate risk of future costly failure of the vehicle ramp and retaining wall due to unknown and undocumented conditions.
- E. No impact to overall project schedule is anticipated due to this additional scope.

Amendment No. 1 Scope of Services:

The current Scope of Services for Contract 22-30: Water Plant 4160V Electrical System Reliability Project is detailed in the attached Contract 22-30 Scope of Services. The Scope of Services is structured in five (5) project tasks as follows:

- Task 1 Preliminary Design
- Task 2 Detailed Design
- Task 3 IEPA SRF Loan Support
- Task 4 Bidding
- Task 5 Project Management

This Sole Source Contract includes the new levels of efforts for Task 2 Detailed Design for the additional engineering services required. These additional levels of efforts are following the tasks outlined in Attachment B - Contract 22-30 Scope of Services with no task or sub-task additions or subtractions. See breakdown of the task level of effort in Attachment A – Sole Source Contract Level of Effort and Fee Table.

Assumptions:

- Sole Source Contract Scope of Work project tasks and sub-tasks will be performed in a similar propositional manner for professional services with each new scope item as compared to the existing project scope items within the Scope of Services.
- The additional professional services corresponding disciplines, staff, and level of effort are detailed Attachment A – Sole Source Contract Level of Effort and Fee Table
- Sole Source Contract Scope of Work will have no new deliverables.
- Sole Source Contract Scope of Work will amend the existing Scope of Work deliverables to accommodate these additional scope items.
- Amended deliverables include:
 - Preliminary Design Report
 - Preliminary Design Opinion of Probable Construction Cost
 - 60% Design Contract Documents
 - 90% Design Contract Documents

- 100% Design Contract Documents
- Bid Set Contract Documents
- Opinion of Probable Construction Cost (OPCC)
- Sole Source Contract is estimated to require six (6) new drawings and four (4) new specification sections.
- The Garage 5 and 6 Vehicle Ramp and Retaining Wall Replacement design will be limited to the extents the Garage 5 and 6 entrances to the west, the Filter Building masonry wall to the north, the termination of the vehicle ramp and retaining wall to the east, and within 5 feet of the retaining wall to the south.
- The Garage 5 and 6 Vehicle Ramp and Retaining Wall Replacement will provide the design for a new retaining wall that is either stand-alone or integrated into the Garage 4 first floor building expansion foundations and walls, and the replacement of the vehicle ramp base materials and finished paved surface. The design will maintain or improve large vehicle access to the Garage 5 and 6 vehicle ramp and entrances. See Attachment C – Proposed Layout of Garage 4 Building Expansion Impact from Garage 5 and 6 Vehicle Ramp and Retaining Wall.

Amendment No. 1 Attachments:

- 1) Attachment A – Sole Source Contract Level of Effort and Fee Table
- 2) Attachment B – Contract 22-30 Scope of Services
- 3) Attachment C – Proposed Layout of Garage 4 Building Expansion Impact from Garage 5 and 6 Vehicle Ramp and Retaining Wall

Thank you for the opportunity to submit our proposal for Sole Source Contract to support Contract 22-30: Water Plant 4160V Electrical System Reliability Project. The Greeley and Hansen Team is ready to execute these additional engineering services in conjunction with our ongoing professional services to deliver the Electrical Reliability Project successfully and to your expectations. Should you have any questions regarding this proposal, please contact me at (312) 507-9647 or bgoldman@greeley-hansen.com.

Yours very truly,

Greeley and Hansen LLC



Brian R. Goldman, P.E., BCEE, ENV SP
Vice President

Cc: Michael Monte, Project Manager

**Attachment A - Sole Source Contract Level of Effort and Fee Table
(Page 2 of 2)**

Greeley and Hansen - Date: April 12, 2023

Sole Source Contract Level of Effort and Fee Table - Garages 5 and 6 Vehicle Ram

Item Description	Structural Engineer: Eduardo DeSantiago	Structural Designer: Billy Papadopoulos	Civil Engineer: Ted Bluver	CAD Designer: Rob Mason	Admin: Rochel Reid	Total Labor Hours					
	2023	2023	2023	2023	2023		Total Labor Cost	GH Labor	CCJM Labor	Primera Labor	Total
Direct Labor Rate	\$87.50	\$46.64	\$59.74	\$61.54	\$44.05						
Salary Cost Multiplier	2.6	2.6	3.15	3.15	3.15						
Billing Rate	\$227.50	\$121.26	\$188.17	\$193.85	\$138.77						
Tasks											
Task 2 - Detailed Design (4/2022 - 6/2023)	20	68	94	32	0	226	\$ 39,893	\$ 27,097	\$ -	\$ 12,796	\$ 39,893
Garages 5 and 6 Vehicle Ramp and Retaing Wall Replacement	20	68	94	32	0		\$ 39,893	\$ 27,097	\$ -	\$ 12,796	
Total Labor	20	68	94	32	0	226	\$ 39,893	\$ 27,097	\$ -	\$ 12,796	\$ 39,893

Other Costs	
Direct Reimbursible Expenses	\$ -
Subcontractor 1 - Geotech and Boring	\$ -
Subcontractor 2 - Survey	\$ -
Subcontractor 2 - Environmental	\$ -
Fees and Overhead Costs	\$ 39,893
TOTAL NOT-TO-EXCEED COST	\$ 39,893

\$ 27,097	= GH	68%
\$ -	= CCJM	0%
\$ 12,796	= Primera	32%
\$ 39,893	Total	100%

Attachment B - Contract 22-30 Scope of Services

2.0 SCOPE OF SERVICES

The Consultant shall perform the following tasks as a baseline scope of work to address the items presented in Section 1. The Consultant may propose alternate or additional tasks that are considered necessary for the successful completion of the work, which must include an estimated impact to the cost of the baseline scope of work.

Task 1 Preliminary Design

The Consultant will prepare the Preliminary Design based on available record drawings, reports and field investigations as needed.

- 1.1 Lead a project kickoff meeting with City staff at the Evanston Water Plant to understand the desired functionality of the design and review project contacts, scope of work, schedule, and available data.
- 1.2 Lead additional workshops as needed to further define new system requirements and levels of redundancy desired by City staff, considering all of the plant power systems.
- 1.3 Review available diagrams, reports, drawings, and specifications to gather information on the facilities to be designed and evaluated.
- 1.4 Develop a preliminary schedule of the project through commissioning, including procurement and timing for field investigations and shutdowns of major water plant components.
- 1.5 Identify relevant Envision best practices to incorporate into the planning, design, and construction.
- 1.6 Perform any survey, structural evaluation, geotechnical investigation, and other studies of the water plant as needed to support design of new electrical space, electrical modifications, and associated elements.
- 1.7 Provide a draft Preliminary Design Report to the City for review that addresses, at a minimum, each of the Key Issues listed in Section 1.3 and includes 30% design drawings. Submit the draft report electronically in Adobe Portable Document Format (PDF) and two hard copies.

- 1.8 Attend one meeting at the Evanston Water Plant to present findings, discuss and confirm decision points, and review the City's comments on the draft report.
- 1.9 Complete the Preliminary Design Report and submit three hard copies and one electronic copy in Adobe Portable Document Format (PDF) to the City.
- 1.10 Develop AACE Class 4 OPCC based on the preliminary design.

Task 2 Detailed Design

The Consultant will develop a detailed design based on the approved Preliminary Design Report that addresses, at a minimum, each of the Project Objectives listed in Section 1.2.

- 2.1 Coordinate with Evanston staff to finalize selection of equipment manufacturers and materials.
- 2.2 Communicate project scheduling and constructability issues to the City as they are discovered throughout the detailed design process.
- 2.3 Develop 60% design drawings and contract specifications.
- 2.4 Include provisions in the contract documents for maintenance of existing switchgear at the Water Plant SSP and NSP. Maintenance services will be provided during construction.
- 2.5 Submit three hard-copy sets of 60% drawings and specifications, with and a complete electronic set in Adobe PDF format for review by the City.
- 2.6 Meet with City Staff at the Evanston Water Plant to review comments on the 60% drawings and specifications.
- 2.7 Revise plans and contract documents as necessary to incorporate comments from the City.
- 2.8 Develop 90% design drawings and contract documents. The contract documents shall incorporate the City's bidding documents, IEPA SRF Loan requirements, general conditions, supplemental conditions, specifications, and appropriate appendices. Prepare contract documents in Microsoft Word format.
- 2.9 Submit three hard-copy sets of 90% drawings and contract documents, and a complete electronic set in Adobe PDF format for review by the City.
- 2.10 Prepare an AACE Class 2 Opinion of Probable Cost based on the 90% design drawings and contract documents.
- 2.11 Meet with City Staff at the Evanston Water Plant to review comments on the 90% drawings, specifications, and OPCC.
- 2.12 Revise drawings and contract documents as necessary to incorporate comments from the City.
- 2.13 Prepare 100% design drawings and contract documents.
- 2.14 Submit three hard-copy sets of 100% drawings and contract documents, and a complete electronic set in Adobe PDF format for review by the City.
- 2.15 Meet with City Staff at the Evanston Water Plant to review comments on the 100% drawings and specifications.
- 2.16 Prepare final Bid Set of drawings and contract documents incorporating the City's comments.
- 2.17 For bidding, provide 2 sets of contract documents and one electronic version in Adobe PDF format.

- 2.18 For the City's use, provide copies of contract drawings in AutoCAD format and contract specifications in Microsoft Word format.
- 2.19 Prepare and obtain all applicable permits, including IEPA, City Building, and City Electrical.

Task 3 IEPA SRF Loan Support

The City will manage the IEPA SRF Loan Application process, and submit all materials. The Consultant will support the loan application effort as described below:

- 3.1 Develop the Project Plan.
 - 3.1.1 Submit a draft of the Project Plan to the City for review.
 - 3.1.2 Revise the Project Plan to incorporate comments from the City. The City will provide financial information needed to complete the Plan.
 - 3.1.3 Submit four hard-copies of the project plan to the City, and a complete electronic set in both Adobe PDF format Microsoft Word. The City will submit the Project Plan to the IEPA.
- 3.2 Provide information as needed for the City to prepare and submit the following items:
 - 3.2.1 Environmental Checklist,
 - 3.2.2 IDNR and IHPA sign-offs
 - 3.2.3 Public notice for Categorical Exclusion and public hearing if required
 - 3.2.4 Loan Application Form
 - 3.2.5 Design Submittal
 - 3.2.6 Engineering Checklist
 - 3.2.7 Bid Package Submittal
 - 3.2.8 Supplemental forms required for the IEPA SRF Loan Application.
- 3.3 Work with the City and IEPA Project Manager to ensure all contract documents are in accordance with IEPA requirements.
- 3.4 Provide a construction cost estimate to the City in IEPA's required format.
- 3.5 During construction, assist in preparation of submittals to IEPA, including change orders and disbursement requests.
- 3.6 Following construction, work with the City to provide necessary documentation to close out the project with the IEPA.

Task 4 Bidding

The City will manage the bidding process, advertise and distribute the Bid Set drawings and contract documents, and distribute needed addenda. The Consultant will support the bidding process as described below:

- 4.1 Submit a list of contractors (and contact information) that the Consultant considers to be qualified for the type of work to be bid. These contractors will not be prequalified, though they will be informed of the project via a direct email at the time of bid advertisement.
- 4.2 Attend a pre-bid meeting hosted at the Evanston Water Plant. Explain the project scope to bidders and answer technical questions.
- 4.3 Review questions from bidders and prepare addenda that may be necessary to clarify the contract documents or drawings.

- 4.4 Review bids and prepare Recommendation to Award to the lowest responsive and responsible bidder.
- 4.5 Assist the City in preparing construction contracts.

Task 5 Project Management

- 5.1 Manage scope, schedule, and budget of the work associated with Tasks 1 through 4, and perform administrative tasks needed for the successful completion of this work.
- 5.2 Prepare and submit monthly invoices with brief progress report/cover letter.
- 5.3 Provide quality assurance and quality control of the work produced by all staff and subcontractors.
- 5.4 Maintain regular communication with City staff, including weekly telephone/virtual progress updates. Meetings for review of significant deliverables or milestones should be in person. Prepare agenda and minutes for all meetings.

Attachment C - Proposed Layout of Garage 4
 Building Expansion Impact from Garage 5 and 6
 Vehicle Ramp and Retaining Wall

