

## AGENDA REPORT

TO: Mayor Pat Humphrey & the Clare City Commission  
FROM: Jeremy Howard, City Manager  
DATE: September 12, 2024  
RE: Shamrock Lake Dam Replacement Project Change Order – GEI Consultants

For the Agenda of September 16, 2024.

---

**Background.** As we continue to move through the project of designing and replacing the dam at Lake Shamrock, we have continuously sought additional grant funds for the project. We received a supplemental \$600,000 grant from EGLE and the DRRGP which was approved in the previous agenda item. Now that the grant agreement has been approved, the City needs to enter into a change order agreement (*att'd*) with GEI Consultants, who are the engineers for the project. This change order will be tied to the original contract with GEI for the work they have already completed on the dam replacement project (*see AR and resolution from 7/17/23*). This new \$670,000 change order is the next phase in the design and work on the dam. The City Commission is asked to formally approve the Change Order.

**Issues & Questions Specified.** Should the City Commission approve the Change Order?

**Alternatives.**

1. Approve the Change Order.
2. Do not approve the Change Order.
3. Set aside a decision regarding this matter at a later date.

**Financial Impact.** Approval of the change order in the amount of \$670,000 will be funded by the grant dollars that the city was awarded for this project from EGLE (\$600,000) and the matching funds (\$70,000) will come from the other state grant/allocation for the overall lake dredging/dam project.

**Recommendation.** I recommend that the City Commission approve the Change Order with GEI Consultants by adoption of Resolution 2024-072 (*copy att'd*).

**Attachments.**

1. Change Order Memo and Agreement.
2. Excerpt from 7/17/23 CC Meeting.
3. Resolution 2024-072.

July 2, 2024



Mr. Jeremy Howard, City Manager  
City of Clare  
202 West Fifth Street  
Clare, Michigan 48617

Consulting  
Engineers and  
Scientists

**RE: Lake Shamrock Dam Rehabilitation Project  
Change Order #2 – Design and Permitting**

Dear Mr. Howard:

GEI Consultants of Michigan, P.C. (GEI) appreciates the continued opportunity to be of service and to provide you with a change order for our technical engineering services for the design of the Lake Shamrock Dam Rehabilitation. The following proposal provides our proposed scope of services, anticipated schedule, and our fees to complete the work. This change order scope will be completed under our existing agreement signed July 26, 2023. Fees are based on the attached 2024 fee schedule.

**Background**

The current configuration of Lake Shamrock Dam, owned by the City of Clare (City), consists of an earth embankment with a 90-foot-wide concrete spillway. The dam is roughly 20 feet tall and creates an impoundment of approximately 120 acres. The spillway includes three 5-foot-long gated bays at the center, with two 17.25-foot-long fixed crest weirs on either side.

The Lake Shamrock Dam is currently characterized as a high hazard dam as determined by EGLE Dam Safety. As such, the dam is currently required to safely pass the 200-year flood, or the flood of record, whichever is greater. According to the latest inspection report, the spillway lacks adequate hydraulic capacity to safely pass the 200-year design flood. Furthermore, the State of Michigan is proposing regulatory changes that would increase this minimum design flood requirement.

GEI has previously been retained by the City to perform field investigations and to develop conceptual design alternatives for rehabilitation of the dam. The findings of these investigations and conceptual designs were presented to the City on November 28, 2024. This proposal is presented with the understanding that the City has selected Alternative 4, with the potential to scale the design back to Alternative 2. The chosen alternative will include the construction of a new concrete spillway on the left embankment that can pass the design flood and the existing structure will be abandoned in place. In the location of the abandoned existing structure, an auxiliary spillway will be constructed to pass a larger flood that would meet the proposed regulatory changes. This alternative also includes the installation of a granular reverse filter blanket, toe drain, and seepage monitoring weir on the right embankment.

**Purpose**

The primary goal of the Lake Shamrock Dam rehabilitation is to construct dam modifications to safely pass the Inflow Design Flood (IDF), which is equivalent to the

200-year design flood, in accordance with the EGLE requirements and to maintain the legal lake level. This proposal effort described herein includes engineering and design services through 100% design. Bidding and construction support services are not included in this proposal and will be provided in a separate proposal toward the end of final design.

GEI's proposed scope of services to complete final design is provided in response to the City's request and is based on our familiarity with the dam and proposed conceptual design. Based on the City's selection of Alternative 4, GEI will proceed with development of the final design plans, specifications, and basis of design report. GEI will also assist the City with submittal of the EGLE Joint Permit Application.

### **Scope of Services**

GEI proposes to team with Spicer Group, Inc. (SGI) in order to complete the scope of services. The following tasks will be performed by the project team to progress the design to 100 percent design documents:

- Task 1 – Field Investigations
  - Storm Sewer Investigation
  - Wetland Delineation and Protected Species Review
  - Freshwater Mussel Survey
- Task 2 – Design Analyses
  - Task 2.1 Hydraulic Analyses
  - Task 2.2 Geotechnical Analyses
  - Task 2.3 Structural Analyses
- Task 3 – Permitting
- Task 4 – Prepare Plans and Technical Specifications
- Task 5 – Project Management and Meetings
- Task 6 – Project Contingency

### **TASK 1 – FIELD INVESTIGATIONS**

#### **Task 1.1 – Storm Sewer Investigation**

The GEI team will coordinate the locating, cleaning, and video inspection for approximately 300 lineal feet of existing 18-inch diameter storm sewer on the downstream side of the dam. Upon completion of the inspection, we will review the video log and prepare a report summarizing the findings and condition ratings of the existing storm sewer. This scope of work assumes the City of Clare will perform the storm sewer cleaning.

#### **Task 1.2 – Wetland Delineation & Protected Species Review**

GEI will perform an on-site evaluation to delineate wetlands according to criteria defined by the U.S. Army Corps of Engineers (USACE), which includes evaluation of soils, vegetation, and hydrology. This wetland delineation protocol is the accepted method by the Michigan Department of Environment, Great Lakes, and Energy (EGLE). GEI will flag wetland boundaries with high visibility flagging tape and/or wire flags. Wetland boundaries will be mapped in the field concurrently with delineation services using Global Positioning System (GPS) technology with equipment capable of providing sub-meter accuracy. GEI will complete USACE Wetland Data Forms and analyze and compile data in report format to accompany a GIS/CAD generated map. Please note that

EGLE requires that wetland delineation reports with completed USACE Wetland Data Forms be submitted as part of the permit application package for any projects with proposed wetland impact activities. GEI will submit a copy of the final report, map, and data forms to the client.

Prior to visiting the site, GEI will access desktop resources/databases of protected species, including, but not limited to, the Michigan Mussel Mapper, U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website, and Michigan Natural Features Inventory (MNFI) database to obtain information on any protected species which may inhabit the area. This scope of work does not include a mussel survey or mussel relocation, which may be requested by EGLE or DNR during the permitting process.

### **Task 1.3 – Freshwater Mussel Survey**

GEI expects that the Michigan DNR will require a mussel survey as part of the permitting process and in advance of impacts to the water course, therefore GEI has included a mussel survey in the scope of work. The mussel survey includes a written plan to MDNR for review and approval, securing permits necessary to conduct the survey, semi-quantitative mussel survey following the State’s standard protocol, and summarizing findings in the basis of design report.

Based on conceptual design drawings, GEI has estimated that the total area below the ordinary high-water mark that may be impacted (entire mussel footprint) to be 2,300 square meters. The scope and budget is based on this survey area and may need to be adjusted if the MDNR requires a larger survey area. Transplant area evaluation efforts are included in the scope of this survey to identify a suitable transplant area downstream of the mussel survey area, should future mussel relocation efforts be required by MDNR. GEI will communicate with the City and MDNR to determine a path forward if suitable transplant areas are not found downstream of the project site on South Branch Tobacco River.

The mussel survey would provide site-specific mussel abundance and diversity data. If a diverse mussel community and/or threatened and endangered species are found during the survey, a follow-up mussel relocation effort will likely be required prior to the start of construction. This scope does not include mussel relocation or post-relocation monitoring.

**Task 1 Deliverables:** Televising results and PACP ratings from the storm sewer investigation will be provided to the City. The results of the mapping will be presented on figures within the Basis of Design Report. A Wetland Delineation Report will be provided and will include a map of the wetlands onsite and completed USACE data forms. The results of the protected species review and the mussel survey will be included in the Basis of Design Report.

### **TASK 2 – DESIGN ANALYSES**

As the design progresses from preliminary to final plans, further geotechnical, structural, and hydraulic analyses will be performed to refine the design and evaluate for consistency with industry standards of practice. The design analyses will be documented in the Basis of Design Report.

### **Task 2.1 - Hydraulic Analyses**

As refinements are made to the design of the spillway, the hydraulic model will be updated utilizing the USACE Hydrologic Engineering Center – River Analysis System (HEC-RAS), version 6.5 computer model. The spillway model will build upon the previously developed 1-D model from the conceptual design phase. Initially, this 1-D hydraulic model was utilized to simulate the flows through proposed spillway configuration and the downstream channel and refine the spillway geometry.

A 2-D hydraulic model will then be developed for use in downstream floodplain inundation mapping. The inundation mapping will be used to determine the downstream consequences and incremental impacts between the non-failure flood and the dam failure flood. Incremental flow rates up to the approximated PMF will be routed through the HEC-RAS model to develop the Inflow Design Flood (IDF) and determine the required spillway configuration. The IDF value will be determined when there are minimal incremental impacts between the failure and non-failure floods. Based on review of the downstream reach and potential impacts, it is anticipated that the model will terminate about 20 river miles downstream at Ross Lake. Once the IDF is determined, the 2-D hydraulic model will be used to evaluate two model sensitivity analyses at two different flow rates to confirm the selected IDF value is reasonable.

Once the IDF and spillway geometries have been optimized using the 1-D and 2-D models, we will confirm the spillway performance using the FLOW-3D HYDRO computer program, which is a computational fluid dynamics (CFD) software package. Given the design includes the development of a proposed concrete spillway structure in a new location, CFD is recommended to confirm the 2D modeling results and better evaluate the proposed spillway hydraulics and provide a comprehensive understanding of the spillway performance and conditions immediately downstream. A benefit of using CFD for the new spillway is the ability to identify localized pressures, concentrated velocities or other adverse hydraulic conditions including cross waves and cavitation.

GEI will create a three-dimensional CAD model of the proposed spillway and import to the CFD model. A computational mesh will be developed to capture the relevant geometric features of new structure and downstream channel. If adverse conditions are identified in the CFD model, the City will be notified that modifications will be required to achieve the design criteria hydraulic performance.

The CFD model will simulate up to four (4) design flows (100-year, 200-year, IDF, and zero-freeboard) to evaluate the spillway hydraulic performance. The scope of work includes four Flow-3D simulations and documentation. If additional runs are required, they will be an additional \$8,000 per simulation. The CFD modeling effort will assist in optimizing the spillway crest, chute configuration, USBR stilling basin, and provide the geometry and loadings needed for finalizing the geotechnical and structural components.

### **Task 2.2 - Geotechnical Analysis and Design**

The geotechnical evaluation will consider both temporary construction and permanent loading conditions. During construction, cofferdam performance, geometry, slope stability, and groundwater management will be analyzed. For the permanent condition, the analysis will consider slope stability and control of seepage. Anticipated analyses include the following:

#### *Geotechnical Exploration*

[www.geiconsultants.com](http://www.geiconsultants.com)

The proposed geotechnical exploration includes the advancement of eight (8) soil borings. This scope of work assumes four borings on each embankment, two borings at the crest, and two borings at the toe. GEI assumes the boring depth at the crest will be about 40 feet and at the toe about 30 feet. The scope also includes installing four wells, conducting falling head tests in each well, and estimating hydraulic conductivity. Split spoon samples will be collected in accordance with ASTM D1586 and if needed, undisturbed samples will be collected per ASTM D1587.

Upon completion of the soil borings, the soil samples will be transported to a material testing laboratory. A Geotechnical Engineer or Geologist will perform visual engineering classifications on the recovered soil samples. The samples will be described in general accordance with ASTM D 2488 “Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)” and visually classified in general accordance with the USCS Classification System. In addition, select samples will be tested for sieve analysis (with hydrometer as needed) (ASTM D6913/D7928) and unit weight (ASTM D7263). Select cohesive samples will be tested for moisture content (ASTM 2216) and Atterberg limits (ASTM D4318).

Results of the geotechnical exploration and engineering analyses will be summarized in a Geotechnical Data Report that will be included as part of the Basis of Design Report.

#### *Seepage and Stability Modeling*

GEI proposes to develop embankment slope stability models for critical cross sections of the embankments. The geometry will be based on the survey data obtained during the Feasibility Study. Stability analyses will be performed in accordance with the USACE Engineering Manuals EM1110-2-1901, EM1110-2-1902, and EM1110-2-2300, and EGLE Part 315 Dam Safety to meet requisite factors of safety against sliding instability using the Slope/W module of the GeoStudio software package (GEOSLOPE International Ltd.). The embankment seepage conditions will be evaluated using SEEP/W (also part of GeoStudio Suite) calibrated using the groundwater elevation data that will be collected. Slope/W runs will be completed for existing and proposed conditions and under normal pool and design flood scenarios. Phreatic levels and in-situ and laboratory testing results will be used to develop seepage and slope stability analyses for the design.

#### *Filter Design*

As presented in the Feasibility Study Report, GEI recommends the installation of a granular reverse filter blanket, toe drain, and weir on the right embankment and potentially constructed beneath future spillways. GEI will utilize the design guidance from USACE and USBR to complete the filter design, including embankment, filter sand, and filter stone. The design will include extent of filter and filter details, including geometry/layout and spillway underdrains. The design will look at compatibility of the filter sand, filter stone, and drainpipe to maximize stability and performance of the filter design.

#### *Spillway Stability (primary and auxiliary)*

GEI stability analyses will be based on USACE Engineering Manual EM-1110-2-2502 – Retaining Walls and Flood Walls, and USACE Engineering Manual EM-1110-2-2100 – Stability Analysis of Concrete Structures. A subgrade reaction modulus and bearing capacity for the site will be estimated as part of the geotechnical explorations and lab testing. Differential settlement and distortion will be checked to make sure they are between 1/500 to 1/1000. In addition to the bearing capacity and settlement discussed above, we will analyze the structures for stability against sliding and overturning, as well as flotation. All stability checks will be completed using 2D analysis methods.

#### *Dam Safety*

GEI will work with the City to develop an abbreviated Potential Failure Modes Analysis (PFMA). Temporary and permanent failure modes will be identified, and the GEI team will suggest proposed risk reduction measures to mitigate or monitor for these potential failure modes. GEI will also develop a temporary construction safety monitoring plan (TCSMP), as required by EGLE. This will include monitoring of the structure, cofferdam, and groundwater conditions. It is assumed that the wells from the geotechnical exploration can be used for monitoring during construction.

### **Task 2.3 - Structural Analysis and Design**

The proposed new structures on the site consist of a new concrete spillway with a pedestrian bridge on the left embankment and an auxiliary spillway structure replacing the current existing structure. The new spillway will be approximately 95-foot wide at the weir and incorporate six equal sized 14-foot wide bays regulated by gates and/or stoplogs. A concrete spillway slab, USBR stilling basin and training walls convey the water downstream. The training walls and center pier for the bays will support the six-foot wide pedestrian bridge. The final geometry of the spillway slab and training walls will be determined based on the hydraulic needs and any net uplift conditions. The new weir and spillway structure will be analyzed for global stability and sized/reinforced to meet the load demands from the system and the reactions from bridge supports. It is anticipated that the training wall and pier foundation will be enlarged to support the bridge loads. The auxiliary spillway structure is anticipated to consist of an earth embankment with a steel sheet pile and concrete cap beam cut off wall. The cutoff wall will be designed to account for differential backfill pressures and the concrete cap beam will be designed to encapsulate the top of the sheets and resist temperature and shrinkage stresses.

The overall analysis and design of the new structures will comply with appropriate USACE, ACI, AISC and State guidelines. Specifically, the concrete analysis for the walls, slabs and beams will comply with USACE EM 1110-2-2104 Strength Design of Concrete Hydraulic Structures and appropriate ACI documents. The design of the stoplogs or gates will comply with EM 1110-2-2107 Design of Hydraulic Steel Structures and current AISC steel construction manual. The pedestrian bridge will be sized and designed for 90 psf uniform load and small maintenance vehicles (UTV or Golf Cart). Bridge will be designed per AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges.

#### **Task 2 Deliverables:**

The Basis of Design Report will summarize the hydraulic, geotechnical, and structural analyses and computations, project purpose and need, narrative summary of the proposed

design, methodology, and construction considerations. Relevant analysis will be appended to the report, including the Geotechnical Data Report and PFMA Report.

### **TASK 3 – PERMITTING**

After completion of the 50% Design Documents we will develop an EGLE Joint Permit Application for the project and submit the application and fee via the MiEnviro Portal. It is anticipated that the application will include Parts 301 – Inland Lakes and Streams, Part 303 – Wetlands, Part 31 – Floodplains, and Part 315 – Dam Safety. Prior to submission of the permit application, we will request a pre-application meeting with regulatory and resource staff to review the general approach of the project and discuss project specific permitting requirements. It is anticipated that permitting sketches will be developed for the application. We will coordinate with EGLE permit review staff throughout the process.

#### **Task 3 Deliverables:**

- Pre-application meeting minutes
- Joint Permit Application

### **TASK 4 – PREPARE PLANS AND TECHNICAL SPECIFICATIONS**

The concept drawings will be updated into full construction documents. The plans and specifications will be progressed from conceptual design to preliminary design to final design. This effort may be initiated concurrently with the Task 1 activities. The design drawings and technical specifications will be prepared in Construction Specifications Institute (CSI) format. The specifications will be submitted for review by the City at the 50% and 90% milestone. The 50% specifications will be an outline only. The 50% and 90% design review comments will be incorporated into 100% Final documents. The 100% final drawings and specifications will be signed, stamped and submitted to the City and EGLE for approval prior to construction of the project.

#### **Task 4 Deliverables:**

- Plans
- Specifications

### **TASK 5 – PROJECT MANAGEMENT AND MEETINGS**

#### **Task 5.1 - Kickoff Meeting**

GEI staff will participate in a project kickoff meeting with the City and SGI. The goals of the kickoff meeting are as follows:

- Introduce key project personnel and identify roles and responsibilities.
- Review and confirm the overall schedule.
- Discuss next steps and confirm path forward.

GEI will coordinate with the City and SGI to schedule the project Kick-off Meeting. GEI will organize and set the agenda and distribute meeting notes following the meeting.

#### **Task 5.2 - Monthly Progress Meetings**

GEI will prepare for and attend monthly progress meetings with the City for the duration of the project.

**Task 5.3 - Design Submission Review Meetings**

GEI will coordinate and attend a design review meeting with the City and other pertinent stakeholders after the 50% and 90% submittals. During this meeting, GEI will solicit feedback on the design. At a minimum, GEI will have one person attend in-person with the rest of the design team attending virtually.

**Task 5.4 - Project Management and QA/QC**

GEI will submit monthly invoices and progress reports tracking the project budget and task percentage complete. Schedule updates will be provided as necessary. Throughout the design progress GEI will perform quality reviews on all work products in accordance with GEI’s quality assurance and quality control policies.

**TASK 6 – PROJECT CONTINGENCY**

This task includes contingency funds for unanticipated work items that may become necessary during this project. The contingency funds will only be utilized after receiving written authorization from the City.

**Schedule**

GEI understands that time is of the essence, and we have the ability, staff, and resources required to complete the work outlined in the scope of services. Our proposed milestones and key deliverables are shown in the following table.

	Weeks after Notice to Proceed																																																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50									
Project Kickoff Meeting	█	█																																																									
Field Investigations																																																											
Design Analyses																																																											
50% Design Submittal																																																											
Design Review Meeting #1																																																											
Sumit Permit Application																																																											
90% Design Submittal																																																											
Design Review Meeting #2																																																											
100% Design Complete																																																											

**Project Fees**

GEI shall perform the tasks described above on a time and materials basis for an estimated fee of:

Task 1 – Field Investigations	\$32,000
Task 2 - Design Analyses	\$218,000
Task 3 - Permitting	\$42,000
Task 4 - Plans and Specifications	\$282,000
Task 5 - Project Management and Meetings	\$58,000
Task 6 - Project Contingency	\$38,000
<b>Total:</b>	<b>\$670,000</b>

**Terms and Conditions**

GEI will complete the proposed scope of work on a time and materials basis according to the Standard Professional Services Agreement executed on July 26, 2023. Please sign

[www.geiconsultants.com](http://www.geiconsultants.com)

and return one copy of this change order, which will serve as notice to proceed. GEI will proceed with the work after the DRRGP grant agreement is executed.

We look forward to providing professional services to you on this project. Please feel free to contact your project manager, Dan DeVaun, at (616) 915-7013 or [ddevaun@geiconsultants.com](mailto:ddevaun@geiconsultants.com) should you need any additional information or have questions regarding our proposal.

Sincerely,

GEI CONSULTANTS OF MICHIGAN, P.C.



Dan DeVaun, P.E.  
Project Manager



Michael Carpenter, P.E.  
Vice President/In-House Consultant

Attachment(s): 2024 Fee Schedule

Authorized by:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date



**FEE SCHEDULE**

<u>Personnel Category</u>	<u>Hourly Billing Rate \$ per hour</u>
Staff Professional – Grade 1	\$ 103
Staff Professional – Grade 2	\$ 112
Project Professional – Grade 3	\$ 121
Project Professional – Grade 4	\$ 131
Senior Professional – Grade 5	\$ 148
Senior Professional – Grade 6	\$ 191
Senior Professional – Grade 7	\$ 206
Senior Consultant – Grade 8	\$ 283
Senior Consultant – Grade 9	\$ 317
Senior Principal – Grade 10	\$ 317
-----	
Senior Drafter and Designer / GIS	\$ 119
Drafter and Designer / GIS	\$ 96
*Senior Field Professional	\$ 121
*Field Professional	\$ 107
*Senior Technician	\$ 92
*Technician II	\$ 87
*Technician I	\$ 77
Word Processor, Administrative Staff	\$ 80
<u>Office Aide</u>	<u>\$ 80</u>

Rates will increase up to 5% annually, at GEI’s option, for all contracts that extend beyond twelve (12) months after the date of the contract. Rates for Deposition and Testimony are increased 1.5 times.

- \*The scope of work is based on a normal work week, Monday through Friday, eight (8) hours per day. Overtime will be charged at 1.3 times the specified rate; Sunday and holiday hours will be charged at two times the specified rate, with a minimum charge of eight (8) hours.

**OTHER PROJECT COSTS**

**Subconsultants, Subcontractors and Other Project Expenses** - All costs for subconsultants, subcontractors and other project expenses will be billed at cost plus a 15% service charge. Examples of such expenses ordinarily charged to projects are subcontractors; subconsultants: chemical laboratory charges; rented or leased field and laboratory equipment; outside printing and reproduction; communications and mailing charges; reproduction expenses; shipping costs for samples and equipment; disposal of samples; rental vehicles; fares for travel on public carriers; special fees for insurance certificates, permits, licenses, etc.; fees for restoration of paving or land due to field exploration, etc.; state sales and use taxes and state taxes on GEI fees. The 15% service charge will not apply to GEI-owned equipment and vehicles or in-house reproduction expenses.

**Field and Laboratory Equipment Billing Rates** – GEI-owned field and laboratory equipment such as pumps, sampling equipment, monitoring instrumentation, field density equipment, portable gas chromatographs, etc. will be billed at a daily, weekly, or monthly rate, as needed for the project. Expendable supplies are billed at a unit rate.

**Transportation and Subsistence** - Automobile expenses for GEI or employee owned cars will be charged at the rate per mile set by the Internal Revenue Service for tax purposes plus tolls and parking charges, or at a day rate negotiated for each project. When required for a project, four-wheel drive vehicles owned by GEI or the employees will be billed at a daily rate appropriate for those vehicles. Per diem living costs for personnel on assignment away from their home office will be negotiated for each project.

**PAYMENT TERMS**

Invoices will be submitted monthly or upon completion of a specified scope of service, as described in the accompanying contract (proposal, project, or agreement document that is signed and dated by GEI and CLIENT).

Payment is due upon receipt of the invoice. Interest will accrue at the rate of 1% of the invoice amount per month, for amounts that remain unpaid more than 30 days after the invoice date. All payments will be made by either check or electronic transfer to the address specified by GEI and will include reference to GEI’s invoice number.

## AGENDA REPORT

TO: Mayor Pat Humphrey & the Clare City Commission  
FROM: Jeremy Howard, City Manager  
DATE: July 13, 2023  
RE: Lake Shamrock Dam/Emergency Spillway/Walkway Project Feasibility and Design Bids

For the Agenda of July 17, 2023

---

Background. The City recently solicited bids for the Lake Shamrock Dam/Emergency Spillway/Walkway Project. The proposals include Feasibility and Design for the three components and once this first phase of the project is complete the project and costs will be able to be finalized for Final Design, Construction Bidding, Construction Oversight and ultimately construction of the structures.

Two bids were received at the bid opening for this first phase (*see copy of att'd Bid Memo and Bid Tabs*). The low bid was submitted by GEI Consultants of Michigan in partnership with Spicer Engineering for an amount of \$108,300.

The City Commission is asked to approve the low bid amount of \$108,300 and award the work to GEI Consultants of Michigan.

Issues & Questions Specified. Should the City Commission approve the bid and award the Lake Shamrock Dam/Emergency Spillway/Walkway Project work to the low bidder?

Alternatives.

1. Approve the bid and award the Lake Shamrock Dam/Emergency Spillway/Walkway Project work to GEI Consultants of Michigan, the low bidder.
2. Approve the bids and award the Lake Shamrock Dam/Emergency Spillway/Walkway Project work to the other bidder.
3. Direct the solicitation of new bids.
4. Direct that no Lake Shamrock Dam/Emergency Spillway/Walkway Project work be completed.
5. Set aside a decision regarding this matter to a later date.

Financial Impact. The City Commission approved a 1.3-million-dollar bond with the cost of the special assessment being split 50/50 between lakefront property owners and the City at large in 2020. The following year, the city was awarded 6.8 million (20% City match required) to complete the Lake Shamrock Dredging, spillway, and dam replacement project. These two funding sources will be used to cover the costs of the work being done.

Recommendation. I recommend that the City Commission approve the bids for the City's Lake Shamrock Dam/Emergency Spillway/Walkway Project and award the work for the project to GEI Consultants of Michigan by adoption of Resolution 2023-052 (*copy att'd*).

Attachments.

1. Bid Memo.
2. Bid Tabs.
3. Resolution 2023-052.

**RESOLUTION 2023-052**

**A RESOLUTION OF THE CLARE CITY COMMISSION APPROVING BIDS AND AWARDING THE CONTRACT FOR THE CITY'S LAKE SHAMROCK DAM, EMERGENCY SPILLWAY, AND WALKWAY PROJECT.**

**WHEREAS**, the City plans to replace/rehabilitate the existing Dam, Emergency Spillway, and Walkway in Lake Shamrock; and

**WHEREAS**, the City solicited bids for said project; and

**WHEREAS**, two bids were received; and

**WHEREAS**, the City Staff has reviewed said bids and determined that all bids met the requested specifications and requirements and all are thus considered qualified bids; and

**WHEREAS**, the City Staff has recommended that the bids be approved and the work associated with the Lake Shamrock Dam/Emergency Spillway/Walkway Project be awarded to GEI Consultants of Michigan, the low bidder; and

**WHEREAS**, the Clare City Commission has reviewed and considered the recommendations of its staff and deemed the same to be reasonable and prudent.

**NOW THEREFORE BE IT RESOLVED THAT** the Mayor and City Commission of the City of Clare, hereby approves the Lake Shamrock Dam/Emergency Spillway/Walkway Project bids and awards the work outlined in the bid specifications to GEI Consultants of Michigan for a cost not to exceed \$108,300.

**ALL RESOLUTIONS AND PARTS OF RESOLUTIONS INsofar AS THEY CONFLICT WITH THE PROVISIONS OF THIS RESOLUTION BE AND THE SAME ARE HEREBY RESCINDED.**

**The Resolution was introduced by Commissioner Bonham and supported by Commissioner Murphy. The Resolution declared adopted by the following roll call vote:**

**YEAS: Bob Bonham, Kim Bussell, Pat Humphrey, Maegan Jenkins, and Carolyn (Gus) Murphy.**

**NAYS: None.**

**ABSENT: None.**

Resolution approved for adoption on this 17<sup>th</sup> day of July 2023.

---

Diane Lyon, City Clerk

**RESOLUTION 2024-072**

**A RESOLUTION OF THE CLARE CITY COMMISSION APPROVING GEI CONSULTANTS CHANGE ORDER FOR THE CITY’S LAKE SHAMROCK DAM REPLACEMENT PROJECT.**

**WHEREAS**, the City of Clare is in the process of completing a critically needed dam replacement project on Lake Shamrock; and

**WHEREAS**, GEI Consultants is the selected engineers for said project; and

**WHEREAS**, said contractor has submitted a Change Order stipulating expenditures for the next phase of the project; and

**WHEREAS**, the estimated cost of said next phase of the project is \$670,000; and

**WHEREAS**, the City applied for and received a grant from EGLE for a Dam Risk Reduction Grant Program (DRRGP) grant; and

**WHEREAS**, said grant will cover \$600,000 with \$70,000 being covered by the city as matching funds for the grant; and

**WHEREAS**, City Staff has reviewed and concurs with said change order; and

**WHEREAS**, the City Commission has reviewed and considered said change order and has determined it to be sound, prudent, and in the best interests of the City.

**NOW THEREFORE BE IT RESOLVED THAT** the Clare City Commission hereby approves the GEI Consultants Change Order in the amount of \$670,000 for the Lake Shamrock dam replacement project.

**ALL RESOLUTIONS AND PARTS OF RESOLUTIONS INSOFAR AS THEY CONFLICT WITH THE PROVISIONS OF THIS RESOLUTION BE AND THE SAME ARE HEREBY RESCINDED.**

**The Resolution was introduced by Commissioner \_\_\_\_\_ and supported by Commissioner \_\_\_\_\_. The Resolution declared adopted by the following roll call vote:**

**YEAS:**

**NAYS:**

**ABSENT:**

Resolution approved for adoption on this 16<sup>th</sup> day of September 2024.

---

Diane M. Lyon, City Clerk