

**The Miami Conservancy District
Request for Qualifications
Engineering Services for Levee Analysis
Statements of Qualifications (SOQ)
May 2021**

Request for Qualifications

The Miami Conservancy District (MCD) is requesting Statements of Qualifications (SOQ) from civil engineering consulting firms for professional engineering services related to levee analysis at MCD levee systems in Montgomery County, Ohio.

About MCD

MCD protects communities in southwest Ohio from flooding, preserves the quality and quantity of water, and promotes the enjoyment of our waterways.

MCD is a regional agency chartered under Section 6101 of the Ohio Revised Code that provides a high degree of flood protection to 11 municipalities in the Great Miami River Watershed. The design flood is known as the Official Plan Flood (OPF). This level of flood protection is accomplished by the actions of five dry dams, storage areas known as retarding basins, channel improvements, and over 55 miles of levees.

The integrated system of dams and levees was built and is maintained with local funding. The dams are all non-federal structures and the levees and channels are almost all non-federal structures.

The dams and levees are regulated by the Ohio Department of Natural Resources (ODNR) under Section 1521 of the Ohio Revised Code and Section 1501 of the Ohio Administrative Code.

Additional information about MCD may be found at www.mcdwater.org.

Purpose

MCD maintains the dams and levees to ensure they provide the high level of flood protection for which they were designed. On-going evaluation, analysis, and design are required for rehabilitation of deteriorated structures, improving the safety and integrity of the structures, and for certification of the levees as providing protection to the Base Flood for accreditation by FEMA. MCD has professional engineers, scientists, and technicians on staff to manage projects and perform parts of the required evaluation, analysis, and design. However, the assistance of consulting engineers is needed for specific elements of this project.

Services

The following are types of consulting services that may be required:

- Site visit(s) with MCD to observe and evaluate the project area(s).
- Review available engineering data and condition assessment of the levees that may include:
 - Record drawings and engineering plans
 - MCD reports
 - Geologic and foundation data
 - Inspection reports
 - Engineering plans of previous repairs
 - Field measurements of the levee, if available
 - Historical loading records
 - Original construction photographs
- Evaluate each levee system for the possibility of dividing the levee into separate sections for performing the analysis.
- Perform geotechnical borings, field tests, laboratory testing, and propose the number of levee sections to be analyzed.
- Levee analysis may consist of the following:
 1. Embankment Protection – the determination that the surface of the levee is sufficient to protect the embankment for the anticipated range of channel velocities.
 2. Embankment Stability – analysis of embankment stability and factor of safety for the specified conditions:
 - a. Static
 - b. Sudden drawdown
 - c. Critical (Base) Flood stage
 - d. Steady seepage at Base Flood stage
 - e. Earthquake (Case I)
 - f. Embankment seepage – time series during Base Flood hydrograph
 - g. Foundation seepage analysis
 - h. Uplift analysis at the landside toe
 - i. Seepage exit gradients
 - j. Determination of the duration of Base Flood hydrograph
 3. Floodwall stability – analysis of concrete floodwalls and factors of safety for overturning, foundation bearing, sliding, and other requirements.
 4. Settlement – determination of potential settlement due to foundation consolidation and embankment compression.
 5. Determination of rate of seepage and total seepage through the levee system during the Base Flood as a component of the interior drainage analysis.
 6. Other analyses to meet FEMA levee accreditation.
- Prepare the levee accreditation submittal (or selected sections) including full engineering support information, report, and other relevant required information.
- The submittal shall be sealed by a professional engineer registered in the State of Ohio.

MCD will select engineering consultants for defined services based on qualifications as outlined Ohio's Qualifications Based Selection Law, ORC 153.65–153.73. MCD may schedule and interview with one or more consulting firms as part of the selection process. MCD intends to enter into negotiations with the preferred firm(s) regarding the scope of work and fees. Each

service agreement will include a Scope of Services defining the deliverable products, project schedule, and meeting requirements. If an agreement on scope and fees cannot be reached, MCD will initiate negotiations with the next preferred firm(s).

General Qualifications

All firms submitting their qualifications must provide the information below:

1. Firm name, mailing address, telephone number, web address (if applicable), name, title, and email address of contact person.
2. A brief statement of interest and qualifications that your firm is qualified to provide.
3. Discussion of firm's specific abilities and expertise to provide the required professional services.
4. Discussion of firm's qualifications related to project management skills and methodology to monitor project budgets.
5. Discussion of firm's capacity and personnel resources to perform the types of services described in a timely manner.
6. A list of key personnel anticipated to be project team members, including detailed resumes and experience on similar projects.
7. Examples of recent related projects completed by the firm including discussion of unique knowledge, expertise, or experience offered by the firm for those projects.
8. At least (5) references from other agencies or corporations, (3) of which should be local, regional, or state government agencies, for which the firm has established a contract for a similar type of project. Reference information must include:
 - a. Project name
 - b. Name of owner
 - c. Name and contact information of owner contact person
 - d. Description of the firm's involvement and services provided
 - e. Firm's key personnel assigned to the referenced project
9. A brief description of the proposed methods and procedures to complete a similar type of work and an estimate of time to complete.

Additional Considerations

The firm is encouraged to provide additional information that could assist MCD in determining which firm is best qualified for a specific service. This additional information would include but not be limited to:

- Discussion of the firm's familiarity with provisions of the Ohio Revised Code and Ohio Administrative Code as they apply to dam and levee permitting and inspection requirements, including successful past experience working with the Dam Safety office of the Ohio Department of Natural Resources, Division of Water.
- Discussion of the firm's experience with meeting FEMA's levee accreditation requirements, procedures, and submittals.
- Discussion of the firm's familiarity with USACE documents and engineering manuals pertinent to this subject, including, but not limited to:
 - EM 1110-2-1913, *Engineering and Design-Design and Construction of Levees*
 - EM 1110-1-1904, *Engineering and Design-Settlement Analysis*
 - EM 1110-2-301, *Engineering and Design-Laboratory Soils Testing*.
 - Public Law 84-99 *Levee Owner's Manual for Non-Federal Flood Control Works*
- Discussion of the firm's successful past experience working with FEMA Region V.

Limitations

Firms that have a potential conflict of interest due to other contractual obligations may be precluded from performing work in the same area.

Schedule

Work is scheduled to begin in August of 2021.

Submittals

The Statement of Qualifications (SOQ) including all attachments and appendices should not exceed 20 pages. An electronic copy of the SOQ is due to The Miami Conservancy District, Chief of Technical and Engineering Services at the contact information below **no later than 4:30 p.m., Eastern Standard Time, June 18, 2021**. Acknowledgment of receipt will be provided and no late SOQs will be accepted.

Questions regarding this RFQ should be made by email to Barry Puskas.

(Note: Please use "SOQ for Levee Analysis" in the email subject.)

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