

<b>F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER
21. TITLE AND LOCATION <i>(City and State)</i>		22. YEAR COMPLETED
Mercedes Dam Restoration Project Jackson, MI		PROFESSIONAL SERVICES 2001 CONSTRUCTION <i>(If applicable)</i> N/A

**23. PROJECT OWNER'S INFORMATION**

a. PROJECT OWNER Mercedes Lake Association	b. POINT OF CONTACT Mr. Jim Schnyder	c. POINT OF CONTACT TELEPHONE NUMBER
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24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size and cost)*

**SCOPE OF WORK**

(A group 2, 3 & 4 Combined Project):

Work included preparing detail construction documents (drawings and specifications) to re-construct an earthen dike for a small private lake. The previous year the dike had failed draining the lake. The Mercedes Lake Association had to have drawings so that they could get the necessary permits from the State of Michigan's Department of Natural Resources (MDNR). The dike had been re-constructed once before, so this was actually the 2nd failure.

Before the new design could be prepared a detailed failure analysis and field investigation of the earthen dike had to be performed. Our investigation and testing showed that the point of failure was directly above the old creek bed that originally had been dammed up to create the lake. To make the lake deeper and to save on the cost of bringing in sound material, the original earthen dike used material dredged directly from the creek bed. The earthen dike for only 6 foot of head was 60' wide at its base and 6 foot wide at the top. But unfortunately the material used was gray clay and peat mixed together without much strength.

A stability analysis was performed and it was decided to reconstruct the dike using engineered strength materials along with placing a line of sheet piling through and across the old creek bed. The dike and spillway were designed to handle a 100 year flood as dictated by the MDNR.

The next problem was getting the material to the site because the only access to the break in the dam was along the dike itself. However, after considerable evaluation it was decided that the dike would not withstand the traffic necessary to bring in the engineered fill required.

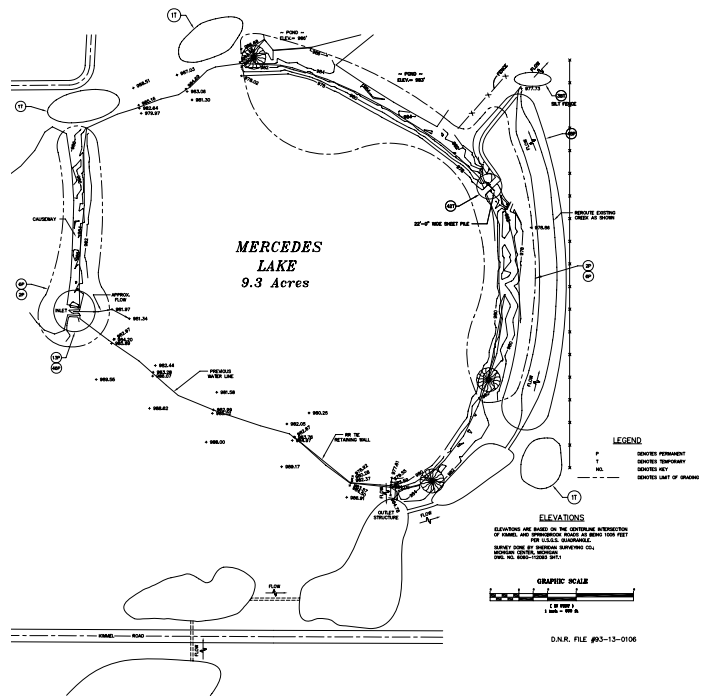
A temporary access road was laid out and designed so that it would come in across a farmers field from the back side of the earthen dam. A temporary culvert was back side of the dam. With this temporary access road installed it was possible to bring in the necessary engineered fill to reconstruct the dike.

Upon completion a full set of design drawings was submitted to the MDNR for their review and approval and issuance of a construction permit. Elite was responsible for assisting the Mercedes Lake Association in obtaining bids and for providing quality control and construction inspection services.

At completion of re-construction as-built drawings were prepared and submitted to MDNR for their review and approval.

**RELEVANCE**

Elite does routine Dam Inspections; but this project provided an opportunity to design a dam re-construction and prepare permit applications.



**EROSION CONTROL PLAN**

P-000007

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

a.	(1) FIRM NAME Elite Engineering Services, Inc.	(2) FIRM LOCATION <i>(City and State)</i> Jackson, Michigan	(3) ROLE Project Engineer
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