City of New London

Department of Finance-Purchasing Agent
13 Masonic Street • New London, CT 06320 • Phone (860) 447-5215 • Fax (860) 447-5297

Invitation for Bids

ADDENDUM

Bid No.: **2019-03**

Addendum No.: 6 **Date Issued: 8/31/2018**

Bogue Brook Reservoir Dam Rehabilitation

Opening Date and Time: September 5, 2018 @ 2:00 P.M.

Bidders Notes: This Addendum is issued to provide all bidders with notice of a bidders request for the Dive Survey referenced in Division 2, page 02458-2, section 1.04 Subsurface and Underwater Data.

The Dive Survey is attached.

PLEASE NOTE THAT ONLY CONTRACTORS THAT ATTENDED THE MANDATORY SITE VISIT ON AUGUST 6, 2018 ARE ELIGIBLE TO BID ON THIS PROJECT.

All other terms and conditions remain the same.

This Addendum cover page must be signed and returned with your bid.

_____ _____

Authorized Signature of Bidder Company Name

Return Bid To:

Dedra Aker, Purchasing Agent
City of New London
13 Masonic Street
New London, CT 06320

Bids cannot be accepted after the Bid Opening Date and Time indicated above.

BOGUE BROOK DAM

INSPECTION REPORT

PREPARED FOR:

GZA GeoEnvironmental, Inc.
249 Vanderbilt Avenue
Norwood, MA 01719

INSPECTION CONDUCTED JULY 18, 2016

PREPARED BY:

DIVING SERVICES INCORPORATED
12 SPUR RD.
FOSTER, RI. 02825
866-901-3483

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Introduction

Diving Services Incorporated (DSI) was engaged by the GZA to conduct a condition inspection of the underwater portions of Bogue Brook Dam's upstream face. The Dam is located in Montville, CT.

On July 18th, 2016 a DSI crew with a hard hat P.E. Diver conducted an underwater inspection of the gatehouse structures exterior. An engineering representative from GZA was on site during all phases of the inspection.

Objectives

DSI was directed to inspect, assess and document the structures existing condition to identify any obvious defect or deformity.

Methods

For the underwater component DSI utilized an ADCI / OSHA compliant 4 person surface supplied air dive team with a Professional Engineer Diver wearing a Superlite hard hat diving helmet equipped with real time video and voice communications to conduct the inspection. All diving operations were conducted in compliance with OSHA, USCG and ADCI standards.

Crew

DSI crew on site:

Dive Supervisor & Life Support Technician - L. Baxter

Diver – T.J. Baxter, P.E.

Stand by Diver / Tender – M. Carr

Stand by Diver / Tender – M. Boschi

Inspection

The Dam is constructed of concrete with spillway on the center right side of the crest. Actuators for 2 low level outlet valves are contained on the crest.

Upstream water depths on the date of inspection ranged from less than 2' on the left and right thirds and approximately 12' in the center where the toe meets the reservoir bottom. Shallow water depths limited underwater inspection ability on the majority of the upstream slope.

Two spall areas were identified one each on the left and right. Both are contained on a control joint and show signs of a prior patch attempt. The spall on the right measured 3" wide by 2" deep running horizontal 3' below the water surface for a distance of 10'. The left spall measured 5" wide by 5" high and 3" deep. It is located approximately 25' from shore. Reinforcing steel was not visible on either.

The reservoir bottom is comprised of a thick organic mat averaging 3' to hard refusal in most areas. The diver searched for remanence of steel sheet pile between the dam's toe to approximately 25' upstream and discovered none. Two cables for recently installed piezometers were found approximately 15' upstream of the toe.

In the center of the dam a rectangular box structure 15' wide by 4' high extends upstream 6'. 42" below the top of the box is the crown of a 16" ID iron pipe. The pipe ends with a bell section 9' upstream from the face of the concrete box. When probed there was 3' of sediment over consistent hard refusal thought to be a localized concrete slab.

Immediately inside the end of the 16" pipe 5 small pipes surround a slightly larger pipe in the center. This group of pipes extend slightly past the end of the 16" pipe. The purpose of these pipes is unknown.

Although there is an actuator for a second low level outlet on the dam's crest the inlet was not located during the course of this inspection.

Following the conclusion of the inspection DSI mounted client supplied conduit on the face of the dam to encase the two piezometer cables previously mentioned.

Conclusion

Although there is no significant defect or deformity noted that does not endorse the structural integrity or stability of the dam. This report should be only one part of a thorough assessment that includes topside and geotechnical investigations.

Recommendations

1) Repair compromised spall areas. Utilizing an approved underwater applied mortar product. Application should be done by a qualified and experienced contractor proficient in this type of work.
2) Conduct routine inspections to identify potential problems and ensure dam safety.

GZA Bogue Brook Pictures

6 smaller diameter pipes inside 16" LLO pipe

Side view of pipes within the LLO pipe

Pipes within LLO

View of slightly larger diameter pipe in center

Measurement of LLO pipe

Rectangular box at toe of dam where LLO pipe extends

Spall at control joint approximately 3' below water surface

Spalling at prior patch