



Illinois Department of Natural Resources

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<http://dnr.state.il.us>

Pat Quinn, Governor
Marc Miller, Director

March 4, 2011

SUBJECT: Multi-Purpose Dam Project - Phase 3
Pedestrian Bridge Over Canoe and Fish Bypass Channel
Yorkville Dam – Fox River
Yorkville, Illinois, Kendall County
Contract No. FR-430
Item No. 1W, March 11, 2011 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS

Attached is an addendum to the plans and proposal. This addendum involves revised and/or added material.

1. Revised pages 76-77 in the Special Provisions.
2. Added page 77A in the special provisions.
3. Revised sheets 18 and 19 of the plans.

Prime contractors must utilize the enclosed material when preparing their bid.

Sincerely,

Ted M. Montrey, P.E., S.E.
Chief, Design Section

cc: Arlan R. Juhl

TMM:GMS:kmp

attachment

60,000 lbs and be certified to be proof tested to 57,000 pounds working capacity. Manufacturer is responsible for providing testing certificate attesting to load capability of connectors. Each shackle shall be supplied with a stainless steel straight cotter pin to prevent the safety bolt from coming loose. "R" type cotter pins shall not be acceptable.

Item "C". Weldless links shall be 3/4-inch, be hot-dipped galvanized according to ASTM A153 for corrosion resistance and have a WLL (working load limit) of not less than 4-3/4 tons. The WLL rating shall be clearly identified on the body of each shackle. The minimum average tensile breaking strength of each shackle shall be 60,000 lbs and be certified to be proof tested to 57,000 pounds working capacity. The weldless link may be substituted with alternate connectors in order to achieve a wider gap between floatation units. Where any alternate connector is utilized it must exceed the 57,000 pound proof tested working capacity of the weldless link. Use of lower strength connectors in a stacking or doubling configuration shall not be acceptable.

3. Color. The color of the floatation logs shall be brown. The color shall be clearly stated on the purchase requisition.
4. Submerged Debris Screens. Floatation units shall be able to support the weight of submerged debris screens or netting even if structurally damaged or punctured. Debris screens shall be rectangular shaped, fabricated from ASTM A500 structural tubular steel and include an industrial grade rubber face material. All exposed metal surfaces shall be of corrosion resistant construction. Debris screens shall be designed to permit easy attachment to the floatation units and all attachments must be connected to the internal steel channel. Debris screens shall be connected underwater via proof-coil galvanized chain.
5. Deflector Plates. Each Floatation unit shall include profile plates to be attached to one end of each unit for the purpose of restricting the passage of smaller debris between booms. Deflector plates shall include a 3-point method of affixing to each floatation unit and shall be capable of moving independently of the adjoining floatation unit.
6. West Anchor. The anchor at the west end of the debris deflector shall be attached to the south wall of the Denil fishway and shall be in accordance with the details shown in the plans and as directed by the Engineer. The bottom attachment will need to be made underwater.
7. East Anchors. Two anchors will be required at the east end of the debris deflector.
 - A. The east anchorage points are located in or in close proximity to a designated wetland. Extreme care shall be exercised in working at this location to insure minimal disruption to the surrounding area. Equipment that aids in achieving this goal shall be utilized in this area and shall be approved for use by the Engineer. Where excavation and subsequent backfilling is required, the top 8" of soil shall be carefully removed and stockpiled, and replaced at the top of the backfill. All disturbed areas shall be seeded, mulched and fertilized.
 - B. Slight adjustment to the east anchor locations and/or to the location of the east end of the line of floatation logs may be necessary in order to achieve the proposed sag in the line of floatation logs or if there is a conflict/obstruction to anchor placement. The final location shall be approved by the Engineer.
 - C. The east anchors shall consist of Manta Ray earth anchors or an Engineer approved equal. This work shall consist of furnishing, driving, load locking, proof testing and attaching earth

anchors including anchor rods, connecting chains/cables and all required hardware of the models, at the locations and to the finished embedment depths as shown on the plans, as specified herein or as directed by the Engineer.

1. Definitions

- A. Earth Anchors (Manta Ray or approved equal) – Impact or vibration driven tipping plate soil anchors for reaction of tensile loads.
- B. Anchor Rod – Galvanized threaded steel bar used to connect the anchor head to the structure. The rod shall be a fully threaded bar of sufficient strength to be compatible with the strength of the earth anchor head. This will provide an adequate structural safety factor compared to the proof test, lock-off, or working load.

2. Materials

- A. Earth anchors shall be as manufactured by Foresight Products, LLC of Commerce City, CO. or an Engineer approved equivalent. Anchor model, rod size, embedment depth, and proof test requirement may vary with location as detailed on the project drawings.
- B. Anchor rods shall be a minimum of ¾” diameter steel for Manta Ray and shall provide enough length to satisfy the specified minimum finished embedment length as shown on the project drawings.
- C. Attachment Hardware consisting of Eynuts, chains, turnbuckles or shackles shall be compatible with the anchor rods in terms of fit, finish, function and strength.
- D. Earth anchor heads shall be Hot Dip Galvanized Ductile Iron per ASTM A-123.
- E. Anchor rods and attachment hardware shall be Hot Dip Galvanized Steel per ASTM A-153.

3. Installation

- A. Earth anchors must be driven to a depth that allows sufficient pull back allowance to meet the required minimum finished embedment length and depth after proof testing. A good general rule is to allow for 3 feet of pull back. Choice of driving equipment is the responsibility of the contractor, but it is suggested that the contractor contact Foresight Products Engineering Department at 1-800-325-5360 for installation suggestions and required equipment.
- B. Earth anchor must be proof tested to the load specified on the project drawings with the Foresight LL-1, LL-45 or SR-LLK Load Locker or an engineer approved equivalent. After tipping the anchor to its “load locked” position, by one or more cycles of the Load Locker, a proof test must be performed. The anchor must also meet the specified minimum embedment length and depth after the proof test. If the anchor fails this proof test, the engineer must be notified. The Contractor shall keep a record of the proof tests including loads achieved, length of time that each load increment is held, amount of movement during each load increment and final embedment lengths and depths of each anchor, and shall provide this to the Engineer.
- C. The anchor at the extension of the east end of the debris deflector consists of three earth anchors bridled together. After each of these three anchors is installed and successfully proof loaded to the load specified in the plans, the anchors shall be connected to a bridle ring that meets at a minimum the requirements of item “C” weldless links specified above. The connection between the anchors and the bridle ring shall be made using galvanized chain, shackles and if necessary, turnbuckles possessing the same or higher strength as the anchor rods to allow adjustment of each of the anchors so that equal distribution of the load to all three anchors is insured. This anchor system shall then be proof loaded to 22.5 kips in the direction of the anticipate load from the debris deflector. If necessary, adjustments shall be made to insure equal distribution of the load to the three anchors.

- D. Remedies for a failed proof test load must be approved by the engineer, but in general include:
- a) Decreased anchor spacing
 - b) Increased anchor embedment depth
 - c) Slightly different installation angle
 - d) Larger anchor head size
 - e) Addition of grout or other capacity enhancement material
 - f) Re-test after a period of 12 – 24 hours. History has shown an increase in capacity over time in the range of 5 – 10 percent.

Method of Measurement and Basis of Payment. This work will be paid for at the contract lump sum price for DEBRIS DEFLECTOR.