



SOUTH FLORIDA WATER MANAGEMENT DISTRICT SOLICITATION ADDENDUM

South Florida Water Management District
Attn: Procurement Bureau
B-1 Building, 2nd Floor West
3301 Gun Club Road
West Palm Beach, FL 33406

REQUEST FOR BID (RFB) NUMBER: 6000000860

ADDENDUM NUMBER: 5

DATE: NOVEMBER 16, 2017

PROJECT TITLE: CALOOSA HATCHEE RIVER (C-43) WEST BASIN STORAGE RESERVOIR PUMP STATION, HENDRY COUNTY, FL

This **ADDENDUM NO. 5** is issued for the purpose of providing the information below.

1. **DEADLINE FOR BID SUBMISSION:** REMAINS WEDNESDAY, NOVEMBER 29, 2017 @ 2:30 P.M.

2. **TECHNICAL SPECIFICATIONS:** **DELETE** "Section 01 22 02 Measurement and Payment" and **REPLACE** with revised "Section 01 22 02 Measurement and Payment" hereto attached and made a part of Addendum 5.

DELETE "Section 2.3.1.1 Travel Limit Switches" last sentence that reads "Bridge-travel limit-switches are optional" and **REPLACE** with revised sentence to read as follows: "Bride-travel limit-switches shall be provided".

DELETE "Section Motor Control System, Paragraph 2.4.5.2" from specifications.

DELETE "Section Motorized Pendant Trolley Paragraph 2.4.6.5" all requirements for a motorized trolley to carry the pendant from specifications.

DELETE "Section Rail Clamps Paragraph 2.4.8.2" from specifications.

DELETE "Section Receptacles on Walkway, Paragraph 2.4.11.4" from specifications.

DELETE "Section 46 21 91, Page 13, Paragraph C., Acceptable Manufacturer: Item 1" and **REPLACE** with revised specification to read as follows: "Duperon Corporation, D&J Machinery, Inc or approved equivalent."

3. **CONSTRUCTION BID FORM:** **DELETE** "Construction Bid Forms, 00320-1 – 00320-5" and **REPLACE** with revised "Construction Forms, 00320-1 – 00320-5" hereto attached and made a part of Addendum 5.

4. **REFERENCE MATERIALS:** The following materials are included as part of this solicitation. These materials are for reference only, are provided as-is, are not contractual documents, and do not replace the CONTRACTOR's due diligence in bid preparation.

- a. **ADD:** "Canal Sediment Sampling and Analysis Report, Townsend Canal – C-43 Reservoir Project State Road 80" hereto attached and made a part of Addendum 5.

5. **DRAWINGS:** **DELETE** Sheet 34 of 296, “Site Plan & Horizontal Control Plan” Drawing No. C1112; and **REPLACE** with revised Sheet 34 of 296, “Site Plan & Horizontal Control Plan” Drawing No. C112, hereto attached and made part of Addendum 5.

DELETE Sheet 35 of 296, “Horizontal Control Plan” Drawing No. C1113; and **REPLACE** with revised Sheet 35 of 296, “Horizontal Control Plan” Drawing No. C1113, hereto attached and made part of Addendum 5.

DELETE Sheet 37 of 296, “Grading & Drainage Plan” Drawing No. C1115; and **REPLACE** with revised Sheet 37 of 296, “Grading & Drainage Plan” Drawing No. C1115, hereto attached and made part of Addendum 5.

DELETE Sheet 38 of 296, “Grading & Drainage Plan” Drawing No. C1116; and **REPLACE** with revised Sheet 38 of 296, “Grading & Drainage Plan” Drawing No. C1116, hereto attached and made part of Addendum 5.

DELETE Sheet 244 of 296, “Control Schematics (Sheet 1 of 3)” Drawing No. E1621; and **REPLACE** with revised Sheet 244 of 296, “Control Schematics (Sheet 1 of 3)” Drawing No. E1621, hereto attached and made part of Addendum 5.

DELETE Sheet 248 of 296, “Panelboard Schedules” Drawing No. E1731; and **REPLACE** with revised Sheet 248 of 296, “Panelboard Schedule” Drawing No. E1731, hereto attached and made part of Addendum 5.

DELETE Sheet 251 of 296, “Circuit & Conduit Schedule (Sheet 3 of 3)” Drawing No. E1734; and **REPLACE** with revised Sheet 251 of 296, “Circuit & Conduit Schedule (Sheet 3 of 3)”, Drawing No. E1734, hereto attached and made part of Addendum 5.

DELETE Sheet 254 of 296, “Plan View of Shelter Bldg. + Generator Room Equip. Layout” Drawing No. E6101; and **REPLACE** with revised Sheet 254 of 296 “Plan View of Shelter Bldg. + Generator Room Equip. Layout” Drawing No. E6101, hereto attached and made part of Addendum 5.

DELETE Sheet 255 of 296, “Shelter Build. Keyed Notes” Drawing No. E6102; and **REPLACE** with revised Sheet 255 of 296, “Fresh Water Pumps Structural” Drawing No. E6102, hereto attached and made part of Addendum 5.

DELETE Sheet 269 of 296, “375 Circuit Schematic & Circuit Schedule” Drawing No. E6601; and **REPLACE** with revised Sheet 269 of 296, “Circuit Schematic & Circuit Schedule” Drawing No. E6601, hereto attached and made part of Addendum 5.

6. **QUESTIONS AND RESPONSES:** Attachment 1 to this Addendum No. 5, contains the list of Questions and Responses.

Please direct any questions to the Procurement Representative specified below at (561) 682-2519 or pwilson@sfwmd.gov.

Pierre Wilson
Senior Contract Specialist
Procurement Bureau

ATTACHMENT 1
RFB 6000000860 – ADDENDUM NUMBER: 5
QUESTIONS AND RESPONSES

1. **Question:** Drawing Number S6401 of project S-470 Pump Station references specification 13_42_25 for detailed information on the Precast Microwave Equipment Shelter. Division 13 for Special Construction does not appear in the table of contents or specifications given for the project.

Response: Refer to Drawing S6401, note 11: Delete the sentence and replace with the words "Not Used."

2. **Questions:** Please see the following questions concerning the overhead cranes from a manufacturer.

Footwalk & access gates: The Project specs do not direct the crane to include a full length walkway and facility side access to it. This would be a common requirement on cranes that are 60 feet in the air. Additionally, walkways have typically been required by the district on similar cranes we've built for them (S370 & 372). The owner may wish to include a ladder or stairs up to the crane as well. Please confirm none are required?

Response: Owner will use personnel lift to access bridge. Bridge shall be supplied as indicated on the contract documents. Note that bridge is only about 27 feet above the working floor on the contract documents.

Paint system: Div 41 spec, para 3.2.5 states the crane shall be painted in accordance with manufacturer's standard practice. – This implies the crane will come with a relatively poor corrosion protection system as opposed to the S1 (SP-6 blast & 2 coat epoxy) required for other structural steel in the facility. Some of the previous cranes we've built for the district required the hi-performance prep & paint systems. Please confirm paint system?

Response: This equipment shall be coated as specified in System S-7 in 09_06_90.

Runway rail & fastener Prep & Paint: Please clarify if the runway rails & fasteners are to be cleaned & painted per Div 9 or? Note that rails are commonly left un-painted throughout most industries. They are made of higher carbon & manganese steel that is rust resistant.

Response: In 41 22 13.13 paragraph 3.2.5 it states that surfaces in contact with the wheels are not to be coated.

CAB Operated Crane? Para 1.3.2.3 implies the crane is to be cab operated while other portions of the spec imply pendant operated (2.4.6). There are no spec sections that state that an operators cab is to be provided, nor are there specifics on how such a cab is to be constructed. We assume this is NOT a cab operated crane. Note that we do encourage the owner to require radio control. It's an economical adder in today's world. It also enhances safety as well as user control of the load. Lastly, it should be noted that cabs are commonly used in steel mills, hazardous environments and outdoors when extended use is required. This is not the case here. Please confirm?

Response: There is no cab for this project.

Hydraulic bumpers: Para 2.2.7 requires hydraulic bumpers for the bridge & trolley motions. We believe this is an unnecessary and expensive requirement that yields little to no benefit on this slow speed & occasional service application. Additionally, there are travel limit switches in place that slow then stop the bridge & trolley motions prior to impacting the end stops. Lastly, the exposed shaft of the hydraulic bumper will rust badly in a short time, and if the bumper ever gets used, it will likely fail in some fashion. Rubber bumpers are commonly used in this application and are designed & rated for proper deceleration of the crane & trolley. Please confirm if Hydraulic bumpers can be eliminated?

Response: Provide bumpers as specified.

Travel limit switches: Para 2.3.1.1 & .2 state that the horizontal motion limit switches are "optional". I believe they should be required for this application. They are an economical and important safety device that should not be overlooked on a crane of this capacity. Please advise?

Response: Replace the last sentence in para. 2.3.1.1 that reads, "Bridge-travel limit-switches are

optional.” with the following sentence, “Bridge-travel limit-switches shall be provided.”

Micro-drives: Para 2.3.1.3 requires micro-drives for the trolley, hoist and auxiliary hoist. Micro-drive’s are an obsolete technology that has been replaced by the precision positioning control available thru VFD motor controllers. The spec already requires VFD motor control; this will provide the user with precision movements of the load. Moreover, micro-drives can be unreliable due to the numerous added components need to achieve the positioning ability. Lastly, they are expensive both at initial purchase and the number of spare parts that need to be purchased and managed during the life of the crane. Suggest this requirement be deleted.

Response: Variable frequency drives (VFDs) are considered acceptable as an alternate to the specified micro-drive.

Cab Operated Hydraulic Brakes: Para 2.4.4.1 indicates a hydraulic brake system associated with cab operated cranes... Which I do not believe is the intent of the spec. Conversely, Para 2.3.3 directs use of shoe or disc brakes (which is common in the crane & hoist industry) – Suggest this para be deleted?

Response: There is no cab specified for this crane.

Motor Control System: Contradiction in Specs: Para 2.4.1.2 specifies VFD motor controls. Conversely, Para 2.4.5.2 specifies across the line starting with reversing contactors. Across the line starting is NOT a good selection for loads of this nature. Suggest deleting 2.4.5.2?

Response: Delete paragraph. 2.4.5.2.

Motorized Pendant Trolley(?): Para 2.4.6.5 requires a switch to operate a motorized trolley to carry the pendant. There is no spec section that directs provision of a motorized pendant trolley. Note that provision of this feature is not only extraordinarily uncommon, but is also not necessary. The pendant will easily slide in a festoon system that runs the length of the bridge. Or, better yet, go with the radio control system. Can this be deleted?

Response: Delete all requirements for a motorized trolley to carry the pendant.

Transfer of control stations(?): Para 2.4.6.5 discusses a light & key switch associated with transfer of control stations. However, there is no requirement defined in the spec to provide multiple control stations along with the myriad of specifics that would need to be considered if this were required. Again, radio controls would give operator unlimited operational location. Suggest deleting this paragraph?

Response: There is no cab specified for this crane, so transfer of control from a cab is not required.

Rail Clamps(?): Para 2.4.8.2 discusses a limit switch restricting operation when rail clamps are set. However, there is no requirement defined in the spec to provide rail clamp. Rail clamps are typically needed only with outdoor cranes where wind may cause the crane to run-away. Suggest deleting this paragraph?

Response: Delete Paragraph 2.4.8.2.

Receptacles on Walkways(?): Para 2.4.11.3 requires a 120v receptacle on the crane walkway, but; no walkway is required in the spec. Please advise?

Response: Response: Delete paragraph 2.4.11.4.

Shielded Cables Para 2.5.2 requires Shielded cables be used for pendant & festoon. This does not make sense. Shielded cables are typically used only in low voltage & signal cables. We use shielding on encoder cables due to the sensitivity of the signal, but no other cables on the crane need to be shielded for a crane to function properly. Suggest adding “when” shielded cables are used?

Response: Electromagnetic compatibility or system security is not required for this project.

EMI / RFI Shielding - Para 2.5.2 The spec seems to imply shielding is required IF the crane needs it to operate properly... Which a crane typically does not. I occasionally see a requirement for this if a crane works in the vicinity of a military grade electronics such as missiles & space flight vehicles. In this case, the user was concerned that the cranes EMI & emissions might influence the electronics on their ultra-sensitive types of equipment. Crane motor control systems inherently have fairly low EMI to begin with... but this does leave me wondering if the entire S-470 facility has EMI shielding or perhaps this is a stray requirement that did not belong

in the spec. Note this can become a costly requirement. Please confirm if required?

Response: Electromagnetic compatibility or system security is not required for this project.

3. **Question:** Pump Specification Section 35 45 01 paragraph 2.10 requires that the Mixed Flow Pump “be assembled in the United States, at Manufacturer’s plant.” Should this requirement also be applied to the Pump Drivers (2500 HP Vertical Motors)? Note that this project/contract has incorporated FAR clauses which includes the Buy American Act, however, without this requirement in the equipment section of the specifications, these large motors can be assembled and tested at a third world country (under FAR regulations) 24 hours flying time from the USA, making it unlikely for District inspection or witnessing of testing. We suggest adding this same verbiage to Section 26 29 01.00 10, requiring assembly and testing of the Vertical Induction Motors in the United States, and the manufacturer’s plant.

Response: Provide motor as specified.

4. **Question:** The Instructions to Bidders, Article 10, Paragraph B.1 requires the bidder to provide prior project experience on at least Two Pump Station projects. The criteria set forth requires unique Pump Station project examples to have cofferdam/dewatering work and have been a minimum of 1,000 CFS. It is unlikely that many bidders can demonstrate projects that meet both criteria inclusive to pump station projects. Please consider revising the project experience requirements as follows:
- a. To be deemed Responsible, the bidder must submit at least Two (2) projects that achieved Final Completion within the last Ten (10) years from the date bid is submitted which the bidder completed as Prime Contractor, as evidence of its experience and ability to complete this project. If one project does not contain all the elements described below then additional projects can be submitted to demonstrate the experience. Each project submitted as reference must:
 - i. Have contained cofferdam and dewatering work for a Pump Station or Heavy Civil project in the amount of \$20,000,000 or greater located within the continental United States.
 - ii. Have been a Pump Station project approaching 500 CFS in the amount of \$20,000,000 or greater located within the continental United States.
 - iii. Be verified by the District.

Response: See Addendum No. 3

5. **Question:** On Drawing M1011 375 CFS Reservoir Pump Hydraulic Profile, notes two different Bid Packages. After reviewing the Documents, it is apparent that the 84” discharge Pipe & Saxophone type discharge are not part of this bid package as shown on M1011. Please confirm

Response: The items noted on this drawing as "Bid Package 4 (Future) are not included in this project. The limits of the discharge piping are shown on Drawing M1103.

6. **Question:** Detail 16 on Sheet 178 of the drawings provides a detail for a removable submersible sump pump. Please provide the specification for this sump pump and please confirm the quantity of sump pumps the Contractor is to provide.

Response: No sump pump is shown in the detail. Contractor may use any sump pump during construction that meets the dimensional requirements of the sump and does not over load the nearby receptacle. This sump is provided to facilitate future maintenance activities with temporary removable sump pumps used by the District.

7. **Question:** Specification Section 40 05 06.01; Paragraph 2.2 details a 14” Propeller Type Flow Element. Please indicate where this is shown on the drawings.

Response: Refer to Section 40 05 06.01, page 1 and deleted Paragraph 2.2. Refer to Section 40 05 06.01, page 4 and delete Paragraph 2.2 in its entirety.

8. **Question:** Sheet Pile wall outflow pipe with Jet Filter is indicated on S1516. Please provide spacing required for outflow and filter.

Response: Delete the text for Note 5 on Drawing S1516 and replace with the note as follows:

"5. JET FILTERS SHALL BE SPACED AT ONE PER PIECE OF SHEET MATERIAL."

9. **Questions:** Concerning the relocation of the existing Agriculture Pump Station shown on drawing sheet 61, please address the following items:

Please provide the appropriate as-built drawings or additional information detailing the pump station foundations and retaining structures that are to be removed.

Response: As-builts are not available.

Please provide the location where the pump station motor and pump system are to be relocated.

Response: For bidding purposes, the relocation of the pump and pump motor is estimated to be within a 5-mile radius of the existing pump station site.

Please confirm if a new, operational pump station is to be installed utilizing the existing pump station pumps.

Response: No, a new operational pump station is NOT to be installed.

Note 5-d on Sheet 61 states that "construction of the features shown on this dwg shall be performed in the dry as much as practicable", but this drawing only shows demolition and no new construction. Please clarify.

Response: See note 4 for the requirement of a new intake pipe installation

Note 5-k on Sheet 61 states to provide all local permits necessary for construction. Which permits is the Contractor required to pay for?

Response: All necessary permits related to the demolition and removal noted on the drawing and for the installation of the new intake pipe.

10. **Question:** Will there be any need for bypass pumping during the project? I've reviewed the project specifications and could not find any reference to it. I want to make sure I'm not missing something.

Response: Temporary pumping operation will be performed through reverse flow as described in Paragraph 2.4.2. of Section 35 45 01.

11. **Question:** Specification Section 41 22 13.13 paragraph 1.3.2.3 indicates speed requirements for a Cab Operated Crane. The bridge crane at S-470 is not to be cab operated.

The three (3) speeds indicated for the hoist are not recommended for a Class C crane. SFWMD typically uses a two (2) speed configuration for the hoist (high/low). As an alternative, VFD controls are available for infinitely variable hoist speeds, however, at much greater cost. Please confirm a two (2) speed hoist is acceptable as typically utilized at SFWMD installations.

Response: Three rated speeds are specified in Paragraph 1.3.2.3 of Section 41 22 13.13.

The three (3) speeds indicated in this paragraph are in conflict with the requirements of paragraph 2.4.1.2 which requires two step infinitely variable speed control as would be typical at other SFWMD installations. Please clarify requirements.

Response: Provide three rated speeds as specified in Paragraph 1.3.2.3 of Section 41 22 13.13.

12. **Question:** Specification Section 41 22 13 13 paragraph 2.4.6.5 indicates speed requirements for a Cab Operated Crane. The bridge crane at S-470 is no the cab operated. Please confirm that the bridge crane at S-470 will not be required to incorporate control transfer accordingly. Operation would will be by the pendant only, typical of other SFWMD installations.

Response: There is no cab specified for this crane, so transfer of control from a cab is not required.

13. **Question:** Specification Section 41 22 13.13 paragraph 2.4.11.3 requires receptacles located along the bridge walkway. There is no requirement for a bridge walkway. Please confirm no receptacles will be required accordingly.

Response: Please refer to previous comment above addressing the question.

14. **Question:** Specification Section 41 22 13.13 paragraph 2.4.6.2 indicates requirements for operating pushbuttons. These requirements do not appear to be coordinated with the Specified bridge crane as they include gantry up/down and do not include bridge travel functions. Please revise or clarify.

Response: Replace the words "Gantry-up" and "Gantry-down" in Paragraph 2.4.6.2. of Section 41 22 13.13 with the words "Hoist-up" and "Hoist-down". Insert the new entries to Paragraph 2.4.6.2 of Section 41 22 13.13 as follows: "Trolley-forward" and "Trolley-reverse."

15. **Question:** Specification Section 41 22 13.13 paragraph 2.4.6.4 indicates a requirement for a pendant drive control. This is typically only provided on high speed, high production type cranes. There are no other requirements in this Specification for motorized pendant drives, and this paragraph appears to conflict with the requirements of paragraphs 1.3.2.2. and 2.3.2.1. Please confirm this will not be required.

Response: Please refer to previous comment above addressing the question.

16. **Question:** Specification Section 41 22 13.13 paragraph 2.4.7.5 includes overload requirements for DC static controlled cranes. The Specified crane is not DC static controlled. Please confirm Manufacturer's standard thermal overloads will be acceptable for this application.

Response: Manufacturer's standard thermal overloads will be acceptable.

17. **Question:** Specified Section 41 22.13.13 paragraph 3.3.5 overload tests indicates to test all crane functions at 125% rated load. ASME Specifications do not recommend over capacity load testing. OSHA and ASME recommend a test between 100% & 125%. Typically, the hoist is factory load tested at 125% and then the electro-mechanical overload is set at 110% of rated load. If a load test is performed in the field above 110%, the overload limits must be bypassed, which is not recommended by hoist Manufacturers. Please confirm the field overload testing will not be required accordingly.

Response: Perform crane test as specified.

18. **Question:** Specification Section 41 22 13.13 paragraph 2.5.3 drum grounding is typically only required for cranes that utilized drum control. Drum control are becoming obsolete and are not typical of other SFWMD installations. There is no requirement for drum controls on the hoist for the S-470 bridge crane, and drum grounding would not apply for this application accordingly. Please confirm this will not be required.

Response: Drum grounding does not apply.

19. **Question:** Specification Section 41 22 13.13 paragraph 2.4.7.2 indicated for insulation transformers in DC controlled cranes. This paragraph does not appear to be coordinated with the Specified control in other paragraphs. Please clarify or confirm this will not be required.

Response: The project crane is not DC controlled.

20. **Question:** Specifications Section 41 22 13.13 paragraph 2.4.12 requires the load limit system to include a load cell attached to the upper sheave pin. The configuration is obsolete and may not be available. Please confirm that a Manufacturer's standard electronic overload device utilizing a strain gauge and corresponding red warning light will be acceptable.

Response: Manufacturer's standard electric overload device will be acceptable provided it meets all specified requirements.

21. **Question:** Specification Section 41 22 13.13 paragraph 2.4.3.1 indicates motor heaters are required for the crane. This crane control power to remain "on", which could allow lighting or voltage spikes/fluctuations to damage

motors or controls when the crane is not in use. This feature is not typical of the other recent SFWMD installation. Please confirm if this is to be required.

Response: Refer to paragraph 2.4.3.1.b. and change the number "20" to "50" in the second sentence.

22. **Question:** Specification Section 26 36 14 paragraph 1.1.1 indicates that Propane Fueled Generator Manufacturer is to be Cummins/Onan, Kohler, or District approved equal. SFWMD Specifications on other recent projects have listed Taylor Power Systems as an acceptable Manufacturer. Please confirm that Taylor Power System will be acceptable as the Propane Fueled Generator Manufacturer for the S-470 Pump Station and adjacent Microwave Equipment Shelter.

Response: Provide propane fueled generator as specified.

23. **Question:** Specification Section 26 36 14 paragraph 1.1.1 indicates that Propane Fueled Generator Manufacturer is to be Cummins/Onan, Kohler, or District approved equal for both the Pump Station and Microwave Shelter Generators. Drawing E6102 Key Note 8 indicates that the Microwave Shelter Generator is to be Onan Type C40N6. Please clarify if a Generator other than that listed is Key Note 8 may be utilized.

Response: Drawing E6102 with the attached drawing marked Addendum No. 5.

24. **Question:** The wing wall drain detail on Drawing S1516 shows the bottom of the 57 stone to be 6" above design low water elevation (EI 1.0 as show on drawing M1301) with the tie rods passing through the 57 stone. This is not consistent with Section A on Drawing S1110 which shows the tie rods at EI-5.0 and would pass under the wing wall drain. Please Clarify.

Response: Install tie rods per the elevations shown on Drawing S1110. The tie rod depicted in the Typical Sheet Pile Section of Drawing S1516 is diagrammatic and does not prescribe a specific rod elevation.

25. **Question:** There are 2 places along the Townsend canal Sta 513 +00 and Sta 520+00 where the placement of fill is required so as to maintain the grades show on Drawings C4108 and C4109. Please provide a specification for placing embankment fill in a wet condition.

Response: Fill placed below the canal water surface may be placed in the wet, without the need for lifts and/or compaction. Such fills are expected to be relatively minor in horizontal and vertical limits

26. **Question:** Drawing S1109 ramp retaining wall plan shows concrete pavement running the length of the wall, however Drawing C1113 shows asphalt alongside the wall. Please clarify.

Response: The pavement along the retaining wall shall be concrete as shown on Drawing S1109, and detailed on Drawings S1305 & S1311. Replace Drawings C1112, C1113, C1115, and C1116 with attached drawing marked Addendum No. 5.

27. **Question:** Section 35 41 20 Sand Relief Column 3.2.2 Excavation states "Contractor shall probe bottom each excavation at four equally spaced locations around the perimeter of casing and once in the center to verify that the design tip elevation has been reached would a tape measure with a weight attached be acceptable in lieu of a probe?"

Response: Probe should consist of a 1-inch diameter PVC pipe, with sufficient wall thickness and stiffness to accomplish the work, and should be equipped with a bottom end cap. Lower reaches of the pipe should be perforated to allow water to enter and discharge from the pipe as it is lowered and raised for probing. The pipe should be graduated in one-foot increments for measuring depths.

28. **Question:** Section 35 41 20 Sand Relief Column 3.2.3 Backfill states "At 10-foot vertical intervals during backfilling, the active backfill surface shall be sounded to verify that the materials are reaching the base of the excavation" Please describe the method of sounding the sand slurry fill in a 40-foot-deep caisson.

Response: Soundings may be accomplished using a 1-inch diameter PVC pipe, with sufficient wall thickness and stiffness to accomplish the work, and equipped with a bottom end cap. Lower reaches of the pipe should be perforated to allow water to enter and discharge from the pipe as it is lowered and raised during soundings. The pipe should be graduated in one-foot increments for measuring depths.

29. **Question:** Are the Townsend Canal access roads permanent?

Response: Yes, the access roads along the Top of Bank of the Townsend Canal are permanent.

30. **Questions:** Will a Joint Venture team be allowed to bid this solicitation if one of the team members did not attend the prebid meeting?

Response: Yes, this is permissible as long it's a legitimate "Joint Venture" and not a subcontractor.

31. **Question:** Do you have information regarding any kind of contamination onsite?

Response: Please see reference document titled "Canal Sediment Sampling and Analysis" prepared by Terracon Consultants, Inc., October 4, 2017, hereto attached a made a part of Addendum 5.