

**ADDENDUM NO. 2**

**PROJECT NAME: BELFAST & JANDA SUSAN AREA DRAINAGE**

**DATE: 4/21/2015**

**ADDENDUM NO.2**

This addendum should be included in and be considered part of the plans and specifications for the name of the project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their bid.

**CIMS PROJECT NO.: 40-00324**

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**Formal Invitation for Bid and Contract:**

- Utilize the “Special Provision to SAWS Item 864 Bypass Plumbing” attached.

**SPECIAL PROVISION TO SAWS ITEM 864  
BYPASS PUMPING**

The following information is supplemental to SAWS ITEM NO. 864.

**864.1 DESCRIPTION:** The work covered in this item is for the use of inflatable and mechanical pipe plugs. The use of inflatable / mechanical plugs in the water and sewer industry is the standard method to temporarily plug a pipe where permanent flow control devices are not available or are not operating as designed.

An inherent danger exists with all inflatable products. If any conditions with this equipment exist that may jeopardize the safety of workers or others, do not use it.

**864.2 SUBMITTALS**

For all projects requiring the use of pipe plugs on pipes the Contractor shall furnish a submittal containing manufacturer's product data, instructions, recommendations and a project Plug Use Plan (PUP). The PUP shall be submitted a minimum of two weeks prior to commencing any portion of the proposed scope of work.

The following shall be submitted with the PUP:

1. A cover letter containing the following information;
  - a. The project name and job number;
  - b. The name and address of the Contractor
  - c. Contact information of the Contractor's project manager, superintendent, foreman/supervisor, safety professional, etc.
  - d. Emergency (24/7) contact information for the staff responsible for operating and maintaining the plug. Include the name, phone number, email address and the person(s) onsite who is responsible for the project.
  - e. The name and contact information for the PUP preparer.
  
2. A Plug Plan
  - a. The plan shall show where on the project site the contractor intends to use pipe plugs, including:
  - b. manhole numbers;
  - c. the upstream and downstream pipe diameters and pipe materials;
  - d. pipe slopes;
  - e. pipe depth;
  - f. pipe flow direction;
  - g. known peak or surcharge flow data;
  - h. types of plugs to be used;
  - i. types of restraint used;
  - j. type of radio transmitting device.

3. Calculations
  - a. Provide calculations of the maximum anticipated head pressure on the plug and the resultant tensile force required to restrain the plug prior to plug inflation and during plug removal.
  - b. Provide calculations of the required inflation pressure of the plug.
  - c. Calculations shall be sealed and signed by a professional engineer licensed in the state of Texas in civil or mechanical engineering.
4. Plug selection
  - a. Detail the plug selection for each installation including given conditions, pipe size and anticipated pressure requirements. Include in this plan whether sleeves will be used.
5. Plug inspection:
  - a. Provide an inspection form detailing manufacturer's recommendations for plug inspection of plug condition before and after use; form to be signed by contractor staff responsible for plug installation prior to and after plug installation.
6. Monitoring plan
  - a. Provide a monitoring plan for observing the plug inflation pressure gauge and hoses. Monitoring shall be for 24-hours per day during the plug use duration.
  - b. Provide a written response plan for when the plug loses pressure.
  - c. Provide a plug retrieval plan.
7. Plug restraint details
  - a. Provide means and methods for anchoring, support and bracing appropriate for anticipated operating pressure conditions
  - b. Size restraint (cable or chain) based on calculated loads using a safety factor of 4.
  - c. Provide multiple tie-off locations for chain or wire cable restraint.
  - d. Rope of any kind is not an acceptable material for plug restraint.
8. Manufacturer's Literature
  - a. Provide manufacturer's literature on proper plug use and safety precautions, including available on-line training.

### **864.3 MATERIALS**

1. Plugs
  - a. The Contractor shall provide all necessary equipment, plugs, hoses, gauges and necessary appurtenances to install the plug, maintain the plug during use and remove the plug at completion.

- b. All plugs must be in good condition, and shall not have visible damage such as cracks, holes, tears, cuts, punctures, abrasions, loose or damaged fittings, cracks in castings and excessive wear.
- c. All plugs 15-inches and larger shall have an air release valve for rupture protection.
- d. All plugs 24-inches in diameter and larger shall be equipped with a radio transmitter locating device that is activated by the plug losing air pressure. The locating transmitter device shall be effective to a depth of 65 feet, and have a battery life of 1,000 hours when operated in pulse mode after activation.
- e. All plugs 24-inches in diameter and larger shall have a protective sleeve.
- f. If the plug is damaged, do not use the plug and remove it from the job site.
- g. Contractor must be aware of the limitations associated with plugs.

#### **864.4           INSTALLATION**

##### **1. Safety**

- a. The Contractor shall be solely responsible for the safe and effective use of plugs, including the proper combination of inflatable/mechanical plugs to block the sewer flow at both the upstream and downstream ends of a sewer bypass.
- b. Inflatable plugs should be used only after receiving training as recommended by the manufacturer.
- c. An inherent danger exists with all inflatable products. If any conditions with this equipment exist that may jeopardize the safety of workers or others corrective actions should be taken prior to the equipment use.

##### **2. Plugs**

- a. Plugs must be selected and installed in accordance with the manufacturers recommendations.
- b. Plugs must also be selected and installed according to the size of the line to be plugged.
- c. Spare plugs – Provide spare plugs on-site ready to be installed in the event a plug fails or becomes dislodged.
- d. Plugs will be in good condition and reviewed by the Contractor for defects that might lead to failure prior to being installed. The Contractor shall sign the Plug Inspection form.
- e. Plugs must be removed from the system upon completion of the work.
- f. Testing – plugs shall be tested prior to use. The inflatable plug shall be placed inside of a structurally sound pipe or conduit and inflated to its operating pressure and monitored for 24 hours to observe it holds the required pressure. This testing shall be performed in accordance with the manufacturer’s recommendations. Inflating a plug when it is not constrained or overinflating the plug creates a risk of being injured by pieces of the plug exploding if it fails.
- g. Damages – The Contractor will be responsible for damages due to plugs being left in place or dislodged, including but not limited to:

- i. Damages to SAWS infrastructure or private property.
- ii. Costs associated with sanitary sewer overflows including: regulatory fines; sewage and debris cleanup; debris disposal at an appropriate landfill; disinfection of all surfaces which have come in contact with the sewage.
- iii. Costs associated with locating and retrieving lost or dislodged plugs.

**864.5 MEASUREMENT AND PAYMENT:** Measurement of the work for pipe plugs shall be incidental to the work and will not have a separate pay item.

End of Special Provision



**Note: Addenda Acknowledgement Form for Addendum 2 is attached herein. This form must be signed and submitted with the bid package.**

RECEIPT OF ADDENDUM NUMBER(S) 2 IS HEREBY ACKNOWLEDGED FOR PLANS AND

SPECIFICATIONS FOR CONSTRUCTION OF BELFAST & JANDA SUSAN AREA DRAINAGE – 40-00324

FOR WHICH BIDS WILL BE OPENED ON TUESDAY, APRIL 28, 2015 AT 2:00 P.M.

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name/Title