

**Date:** March 1, 2018

**Project:** Mertarvik Phase I Power System:  
Power Plant Module

**Solicitation No.:** 18045

**Addendum No. Three**

TO ALL PLANHOLDERS:

The enclosed addendum amends the bid documents for the above referenced Project.

Acknowledgment of this addendum is required on the Proposal Form. Failure to do so may subject the bidder to disqualification.

Sincerely,

Rich Wooten, CDT, CPSM, PMP  
Contracting Officer

<b>ADDENDUM TO CONTRACT DOCUMENTS</b>	<b>Page Number</b> 1	<b>No. of Pages</b> Four Pages (including attachments)
<b>Addendum No.</b> THREE	<b>Date Addendum Issued:</b> March 1, 2018	
<b>Issuing Office</b> Rich Wooten, CDT, CPSM, PMP Alaska Energy Authority 813 W Northern Lights Blvd Anchorage, AK 99503 Phone: (907) 771-3019 Fax: (907) 771-3044	<b>Previous Addenda Issued</b>  Addendum One, February 21, 2018 Addendum Two, February 28, 2018	
<b>Project:</b> Mertarvik Phase I Power System: Power Plant Module <b>Solicitation No.:</b> 18045	<b>Date and Hour Quotes Due:</b> March 8, 2018 at 2:00 p.m., prevailing Anchorage time.	

**NOTICE TO BIDDERS:**

**Bidders must acknowledge receipt of this addendum prior to the hour and date set for the bid due date by one of the following methods:**

- (a) By acknowledging receipt of this addendum on the proposal form submitted.
- (b) By email or telefacsimile which includes a reference to the project and addendum number.

The bid documents require acknowledgment individually of all addenda to the drawings and/or specifications. This is a mandatory requirement and any bid received without acknowledgment of receipt of addenda may be classified as not being a responsive bid. If, by virtue of this addendum it is desired to modify a bid already submitted, such modification may be made by email or telefacsimile provided such an email or telefacsimile makes reference to this addendum and is received prior to the opening hour and date specified above.

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The Bid documents for the above project are amended as follows (All other terms and conditions remain unchanged):

**GENERAL – QUESTIONS & ANSWERS**

- 1) **Q:** Does the spec on the generator conductor cable have a 150°C rating?  
**A:** Yes, the Electrical Conductor Schedule on Sheet E1.1 requires 150°C cable.
  
- 2) **Q:** Can we substitute Burndy copper C's for the exothermic welding on the ground bonding?  
**A:** Sheet E2.2 indicates that the ground grid is not in contract for this project. Exothermic welds are not required.
  
- 3) **Q:** The floor in the generator room: can 4' x 8' sheets of steel, full seam welded, be used or does it need to be 1 continuous sheet of steel?  
**A:** 4' by 8' sheets would be acceptable provided that all joints are (1) Centered on the HSS2x2x1/4 members; (2) Fully seal welded; and (3) Ground flush on top.
  
- 4) **Q:** The floor in the generator room: Does there need to be paint on the connex floor and floor joists before the full sheet of steel is welded in?  
**A:** No, only the finished interior surfaces need to be painted.
  
- 5) **Q:** The floor in the control room: Can stainless angle iron and 1" fasteners be substituted for the 5" fasteners to hold the floor joists down to the connex floor?  
**A:** No, attach 2 x 4 furring as shown in Detail 8 Sheet 3.01. (**Attachment A**)

6) **Q:** What is going to be used to fill the voids between the floor and the outer connex wall corrugations or will these spaces be left open?

**A:** Fill voids between the floor and the outer connex wall corrugations with non-shrink grout see revised sheet S3.01 Detail 3 (**Attachment A**). Provide Five Star High Performance Precision Non-Shrink Grout or approve equal. Also note on revised sheet S3.01, In Details 1, 2, and 3 the length of the 3/8" carriage bolts have been changed from 3.5" to 2.5" to allow the ends of the bolts to stay within the corrugations on the inside of the connex interior walls

7) **Q:** Can the Engine Control J-box be relocated from the strut on the generator enclosure to a full floor to ceiling strut next to the generator enclosure?

**A:** No, a floor to ceiling rack may restrict future service access.

## **BIDDING AND CONTRACT REQUIREMENTS**

### **DIVISION 26 – Electrical**

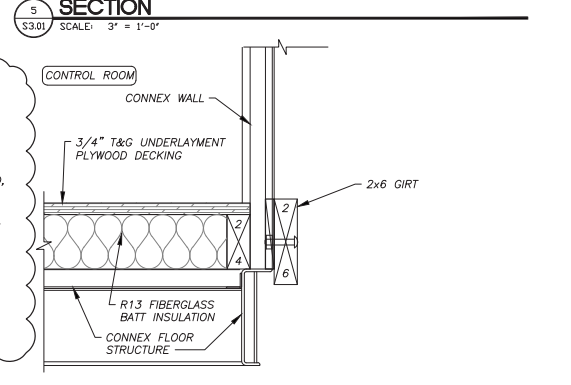
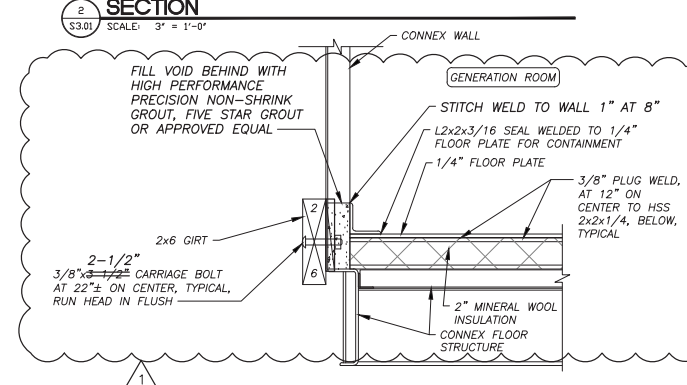
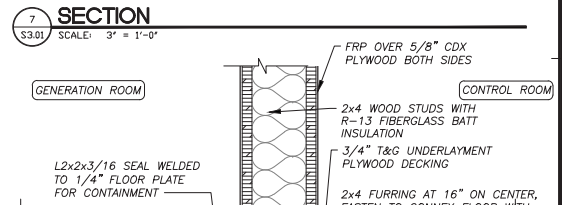
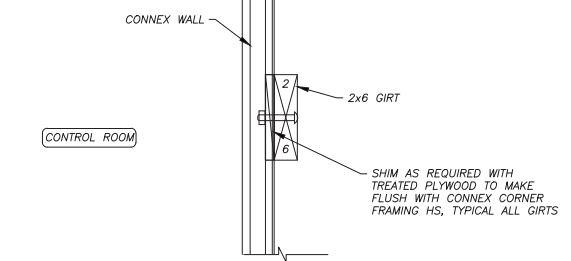
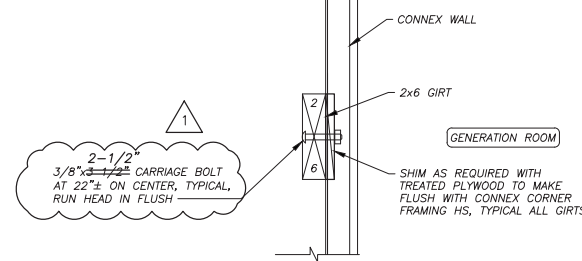
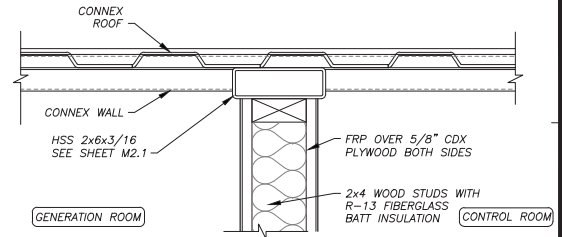
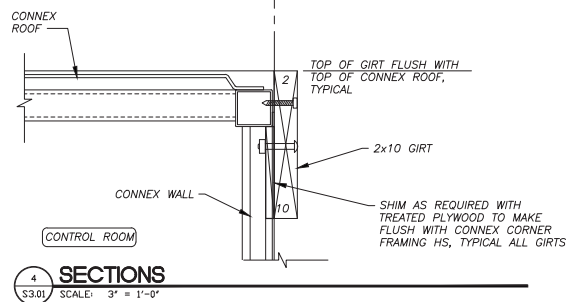
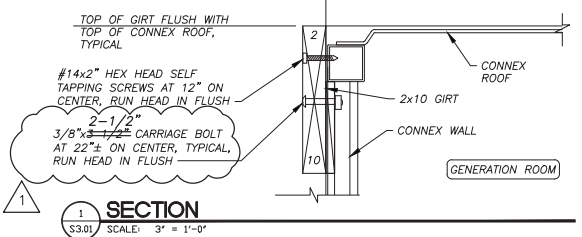
8) Specification Change #1: Specification 26 32 13.10 Paragraphs 2.8 E and 2.8 F are revised to eliminate requirements that are not part of the standard production generators. See attached red-marked page from the specifications (**Attachment B**).

**END OF ADDENDUM**

H:\jobs\16-035 Mertarvik BFU & RPSU Upgrades (AEA term)\CAD\Drawing\Plan B Design\Power Plant Module Construction\16-035\_00\_CONNEX-ARCH-MODULE\_1=1, 02-12-18 at 08:43 by jkk  
 LAYOUT: S3.01  
 XREF: 16035-00\_B03-Bk\_X-ARCH-STAMP-DGT\_X-STAMP-DGT-ARCH

**STRUCTURAL GENERAL NOTES:**

- DO NOT MAKE ANY PENETRATION THROUGH CONNEX ROOF. ALL ATTACHMENTS TO ROOF SHALL BE WELDED. SEE SHEETS M2.1 AND M2.2.



REVISION	DATE	DESCRIPTION



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MERTARVIK PHASE 1 POWER SYSTEM  
 POWER PLANT MODULE  
**ALASKA ENERGY AUTHORITY**  
 MERTARVIK, ALASKA

SHEET TITLE: CONNEX DETAILS  
 SHEET: S3.01  
 DRAWN BY: KJK  
 CHECKED BY: DGT  
 DATE: 02/12/18  
 SCALE: AS SHOWN  
 JOB NUMBER: 16-035

- E. The insulation system of both the rotor and stator shall be of NEMA Class H materials or better and shall be synthetic and non-hygroscopic. The stator winding shall be given multiple dips of resin, plus a final coating of epoxy for extra moisture and abrasion resistance. The rotor shall be layer wound with thermosetting 100% solids epoxy between each layer, plus a final coating of epoxy for moisture and abrasion resistance. ~~The shaft exposed metal surfaces and rectifier assembly shall be coated with an epoxy varnish.~~
- F. The generator shall be equipped with a permanent magnet generator (PMG) excitation system. ~~Both the PMG and the rotating brushless exciter shall be mounted outboard of the bearing.~~ The system shall supply a minimum short circuit support current of 300% of the rating for 10 seconds. The rotating exciter shall use a three-phase full wave rectifier assembly with hermetically sealed silicon diodes protected against abnormal transient conditions by a multi-plate selenium surge protector. The diodes shall be designed for safety factors of 5 times voltage and 3 times current.
- G. Voltage Regulator: The voltage regulator shall be compatible with the PMG excitation and shall control the output of the brushless AC generator by regulating the current into the exciter field. The regulator shall include electromagnetic interference (EMI) filtering, and under frequency roll-off protection. Newage/Stamford MX-341, Caterpillar CDVR, Basler BE2000E, or approved equal.
1. The voltage regulator shall be factory mounted inside of the generator and shall be fully wired.
  2. The voltage regulator shall be furnished complete with a cross current transformer (CT) for paralleling operation.
- H. Nameplate: On the side of the generator housing, provide a nameplate that provides the following information. The nameplate shall be located in a clearly visible location and shall not be obscured by the terminal enclosure or located such that the nameplate is behind any part of the generator or housing.
1. Rated kW as specified.
  2. Full load amps.
  3. Rated voltage, phase, and power factor.
  4. Rated voltage and current of the field exciter.
- I. Each generator shall be provided with a standard sized terminal compartment. The terminal compartment shall be provided with a load connection block to allow easy field termination of the load, neutral, and ground conductors. The generator neutral connection shall not be connected to the mounting skid or the generator frame. The neutral shall be isolated for field grounding at the switchgear or transformer.
- J. The generator shall be self-ventilated with a direct drive one-piece, cast aluminum alloy, unidirectional internal fan for high volume, low noise air delivery. Airflow shall be from opposite drive end through generator to drive end. The exciter shall be in the airflow.