**Oro Hondo Fan Variable Frequency Drive Replacement Q & A**

1/12/201 Written Questions:

Questions on the purchase order terms and conditions.

1. What is required delivery date? Delivery date is dependent on the manufacturing lead time of the drive. In general, the delivery date should be quoted manufacturing lead time + 2 weeks (realizing lead time differs between suppliers). SDSTA would like the drive as soon as possible but doesn't want to increase manufacturing costs by specifying an unrealistic delivery date.
2. Paragraph II. This RFB info list Ross warehouse as the delivery address. Is this correct or does it go to the site? If it goes to the site, what is the address? Are the roads adequate for this? Delivery location is at the Oro Hondo fan site shown in the figure below. The roads are adequate for heavy equipment access. Bidders are responsible for the VFD/E-house package until the package is sitting on the ground at the fan site. Any equipment costs (crane, forklift, etc.) to unload the drive must be included in the bid.

3. Paragraph V. Exception to this. We will provide approval drawings and supply equipment conforming to those drawings as approved. Witness testing of the VFD or E house is available, but at SDSTA expense. Vendors are responsible for commissioning, which includes inspection and testing of the equipment. **As noted in the RFB, please note all exceptions in your bid response.**
4. Paragraph IX. This is a custom-built piece of equipment. As such any cancellation will carry a 100% cancelation charge. Equipment of this type should come with a payment/cancellation policy dependent on milestones or percentage of build completion. As written, SDSTA will pay incurred cost based on the vendors payment/cancellation policy if SDSTA terminates, UNLESS cancellation is due to vendor's breach. Please note your policy regarding payment/cancellation charges in your response.
5. Paragraph X. Title will pass to SDSTA at delivery to address on purchase order. Please read the response to question #2 above.

Questions on request for bid

1. Page 4, question 3. What are required services that are not included?
   Some replies to budgetary estimates stated we had to furnish 480V and 120V to the E-House, they only provide 2300V for the VFD. Therefore 480 and 120 would be additional services (as an example).
2. Page 7. Figure 3. This shows a 350HP 480V VFD. If the existing building is demolished, where does this go?

   Please see Page 5 Figure 1. The American Davidson 3,000HP VFD is housed in the building labeled (VFD building). The 350HP VFD for the Spendrup fan is not in same building and is not included in the scope. The Spendrup 350HP VFD is housed in the grey building directly behind the item labeled as (Spendrup Vane-Axial Fan).
3. Page 11 4.1. VFD provider to ensure that the motor and VFD are compatible. We can't guarantee an old motor won't fail.
   The VFD must be designed to operate with the existing motor characteristics. The VFD cannot be delivered and installed and then found to be incompatible with the motor.
4. Page 11 4.2. Assuming SDSTA is reusing the transformer and existing equipment that feeds the existing 3000HP VFD to feed the E house with the new VFD and this work not part of E house scope.
   The existing transformer is the 69kV to 2300V located at a nearby substation. The 2300V feed to the fan site will be reused.

5. Page 12 4.2 The E house is to accommodate the existing conduits. Will SDSTA provide.
   Available drawings have been provided. Additional photos and rough measurements may be provided on request. SDSTA will not provide engineering services.
6. Page 12 4.2 E house will require both 2300V and 480V power to be supplied to it.
   State this clearly in your proposal as instructed in RFB.
7. Page 12 4.3 SDSTA to provide short circuit and arc flash calculations.
   SDSTA will not provide these calculations for vendor supplied equipment. Manufacturer needs to determine this information to ensure equipment meets codes.
8. Page 12 4.3 Who provides the new circuit interrupter and lighting and surge protection?
   These should be included with the E-House/VFD package.
9. Page 17An E house takes time to quote and may not be able to put quote together by 1/26/18. Can this date be extended? SDSTA is willing to extend the date if there is consensus among prospective vendors.
10. Does the new VFD need to be installed in a new E-house or can it stand alone in a weather proof enclosure?
    The RFB is for an E-House. You are welcome to provide an alternate solution if you wish.
11. Do you have any specs on the new building design if it must be housed in a new building?
    No, only what is shown for dimensions on drawing and called out in RFB specifications provided.
12. Will this be delivered to the warehouse or to the fan location? If delivered to fan site I will need a crane to offload this equipment and do we need to figure this in the price?
    Please read the response to question #2 above.
13. Does SURF have a preference for the VFD topology, ie LCI versus IGBT?
    No, SURF expects the supplier to provide what they think is the best solution.
14. Will there be a vendor walk thru? No
15. Does the existing LCI slow the fan down (i.e. regenerative braking) during a shutdown or is it acceptable to allow the fan to coast to a stop with the new VFD?
    Coast to stop is OK.
16. Should the new control house match the existing footprint dimensions (existing is approximately 23' xc 15')? Please read paragraph 2 in section **4.2 Control Building/E-House** of the RFB on Page 11.

17. What would be the expected onsite date for equipment and approximate construction schedule? Please read question #1 for the drive delivery date. The construction schedule will shift to match the drive delivery date.
18. Regarding switchgear incomer: Concern is the maintenance and reliability associated with a motorized load break switch (LBS) Would the owners allow:
    a. A fused manual load break switch with lockout provision and downstream vacuum contactor that would be remotely operated.
    b. A vacuum breaker in place of the motorized LBS.

    The switchgear will rarely be operated. SURF will consider other options. Equipment must fit in E-House.