

GCCC Photovoltaic Project BID '14/22/B

December 17, 2013

Addendum No. 3 – Answers to questions received by December 13, 2013 deadline

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This addendum is to address the questions received by the December 13, 2013 deadline.

1. Section 1.1.3 The Work on page 56 indicates that the design is included in the contractor's work. Our understanding is that the design is provided in the specifications and design work is not included in the contractor's work.

The contractor is not responsible for design work.

2. How are the racking and solar to be included in the bid sheet? Should the racking be included in the structural and PV in electrical?

The price for racking and PV should be under bid items #10 and #50 respectively.

3. The replacement of the main electrical services at the facility requires power to be interrupted to the facility twice for 4-12 hours each time. Are there any requirements for timing of this shutdown? Performance of this activity outside of normal working hours will increase the cost. Also, are there special startup procedures that should be considered when power is reconnected? If so, please provide them.

Specification section 01001, paragraph 1.3 is modified to read:

CONTRACTOR USE OF PREMISES: For purposes of this paragraph, normal working hours shall be defined as 6:00 A.M. through 10:00 P.M., Seven Days per week.

Work that requires Disruption of power at the entire facility must be performed outside of normal working hours. Length of power disruption shall be limited to 4 hours at a time. Contractor shall schedule all outages with owner 14 days in advance.

For power outages longer than 4 hours, contractor shall provide a portable generator with sufficient capacity to operate a 150 ton Ice Rink chiller. For bidding use, 400KW site rated generator operating at 277/480 Volts. Include portables cables, connection to chiller control panel, and re-termination to main

switchboard after outage is complete. Location of chiller is within 50 feet of main switchboard shown on sheet EB-4.

Proper shutdown and startup procedures of facility plant equipment will be the responsibility of the owner and engineer. These procedures will be performed prior to releasing the contractor to shutdown power. Startup will occur after the contractor has restored power and utility power is deemed stable.

4. Drawing E-4 shows Unistrut welded to the carport column assembly. Would tek screws be an acceptable alternate?

The use of tek screws for attachment of a Unistrut is permissible.

5. The drawings indicate an expected AC voltage drop of 1.36% - 1.85% between the inverters and main electrical service. Can this be verified by the engineer?

The voltage drop from the furthest inverter to the main service (through the combining panel) is expected not to exceed 3 percent worst case based on distances and wire sizes indicated on the drawings.

6. Two different specifications in Section 16123 for PV Wire, (2.2) XLPE and (3.3) USE-2. Are both types approved?

USE PV Cable as manufactured by Southwire, 90 Deg C XLP or XLPE insulated intended for Solar Applications and rated USE-2 when direct buried.

7. Clarify that all panels are 480/277 VAC, Panel MDP Drawing EA-3 has 120/208 VAC in table.

The schedule on page EA-3 is incorrect. Panel MDP shall be rated 277/480 Volts, 3 Phase, 4 wire as indicated on the one-line diagram.

8. Clarify "Install rod and buried electrodes on locations indicated." There is no indication of where on the plans. Will one ufer and two ground rods per carport structure be sufficient? There are four carports. Will the inverters be allowed to be connected to the purlins for ground, or do the inverters each need to have two ground rods and a cadweld ufer connection?

Provide grounding and bonding at equipment shown on one line diagrams and three line diagrams. Steel rebar in the foundation may be used as the sole grounding electrode if it meets the requirements of NEC 250, otherwise the foundation steel will have to be supplemented with a NMEC modified ground ring consisting of 20 Feet of bare #2 cu. with a ground rod at each end.

The steel structure is also required to be bonded to the grounding electrode PeNEC 250.

A single grounding electrode system can be shared between modules and inverters provided the inverter is within 50 feet of the grounding electrode connection.

9. 3.2 Installation (p152) - point C2 - Can you please clarify what you mean by "Secure panel racks to building structure and metal decking." By "building structure" do you mean the canopy? I do not think there is any metal decking requested on canopy.

Secure all PV panels to the mounting rails on the parking structure canopy. Specification Section 16625 Photovoltaic Systems, 3.2 Installation, Paragraph C.2.: Delete reference to metal decking.

10. Canopy design & PV panel - Is it acceptable to submit a structure covering the two head-to-head parking rows and the internal drive aisle? By covering this extra space in between the rows of parking, we would be able to propose an alternative to the SunPower panel and still meet system size and panel warranty.

No, as the PV system design has already been approved by Public Service Company of NM.

2.02 GENERAL STRUCTURE DESIGN AND COMPONENT DETAILS

11. 2.02 GENERAL STRUCTURE DESIGN AND COMPONENT DETAILS Section A - Please confirm we can add the words "or equivalent beams" after the word trusses used in both sentences

Yes, the City will allow equivalent structural beams in lieu of trusses.

12. 2.02 GENERAL STRUCTURE DESIGN AND COMPONENT DETAILS Section F Columns - we would like to propose an equivalent alternative to RFP call for "HSS column sections" that "shall be ASTM A500 Grade B steel tubing with a minimum yield stress of 46ksi"
- a. With your consent we will propose I-beam columns (A-992 Grade 50 --- 50 ksi)

The proposed equivalent alternative is acceptable.

13. 2.02 GENERAL STRUCTURE DESIGN AND COMPONENT DETAILS Section G
“Truss chords and web struts” - we would like to propose an equivalent alternative to the “truss style” crossbeam

- a. With your consent we will propose I-beam crossbeams (A-992 Grade 50 --
- 50 ksi)

The proposed equivalent alternative is acceptable.

14. 2.02 GENERAL STRUCTURE DESIGN AND COMPONENT DETAILS Section H
Purlins - we would like to propose two equivalent alternatives to RFP call for
“ASTM A500 steel tubing”:

Why are C purlins not permitted? We understand they are not used in ProTek’s design, however C and Z purlins are a long-established structural members for solar parking canopies, in use in canopies across the country, including areas with significant snow loads.

- a. We would recommend as an alternative roll-formed light gauge C purlins, most likely 12 gauge Grade 55 steel, with a G90 hot dip galvanized finish.
- b. If C purlins are not an option, please confirm we can propose I-beams (A-992 Grade 50 --- 50 ksi)

Either of the proposed alternatives is acceptable. However, the proposed finishing method is unacceptable.

15. 2.03 DESIGN PERFORMANCE COATING: Does the canopy have to be powder coated? Please confirm we can propose an alternative, as follows:

columns and crossbeams will be painted using a 3 coat, exterior marine grade finish. The system we are proposing is typically used for bridges, tankers and other steel exposed in corrosive environments. The method we use has been approved by the Northeast Protective Coating Committee (NEPCOAT), an affiliation of northeast states (CT, MA, ME, NH, NJ, NY, PA, RI, and VT) for the purpose of developing acceptance/testing criteria of protective coating for use on highway bridge steel.

- a. one advantage over powder coating is that field touch-ups are much easier and look better when done over paint as opposed to powder coating.

purlins - we recommend purlins are either painted or hot-dip galvanized, a very durable, corrosion-resistant solution that requires virtually no maintenance or touch-up.

Proposed 3 coat paint system (optional):

- b. a. Metal Preparation Process - All structural components; columns, base plates, crossbeams and purlins shall be abrasively cleaned after fabrication using a method that meets SSPC- SP6 Commercial Blast Cleaning.
- c. b. Three-coat System
 - i. Primer – zinc rich primer – Sherwin Williams Zinc Clad 200 or equivalent
 - ii. Intermediate Coat – epoxy – Sherwin Williams Macropoxy 646 Fast Cure Epoxy or equivalent
 - iii. Exterior Coat – marine grade polyurethane – Sherwin Williams Acrolon 218 or equivalent

Proposed Hot dip galvanization for Structural Steel (optional) – per ASTM 123 (steel beams) and ASTM 153 (bolts)

Yes, the canopy must be powder coated. No alternatives will be accepted.

16. Light Fixtures - Is there a specific light fixture you would like used under the parking canopies? Are you open to alternative LED fixtures? Do you have photometric requirements that need to be met?

The specifications for the lighting fixtures are located on pages 158 – 163. Alternative fixtures will not be considered. The photometric design will be met with the designed layout and fixtures.

17. Please clarify in an addendum the fact that this is a construction contract and that there is no design obligation whatsoever, notwithstanding any language to the contrary.

The contractor is not responsible for design work.

18. Please consider carefully the overall warranty provisions that last beyond one year (not referring to specific materials or equipment warranties) which tend to complicate the surety underwriting process - because they are a departure from the standard - and issue an addendum if you agree.

The City has considered all warranty requirements and has decided not to modify the requirements within the RFB.