

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

ADDENDUM NO. 3

Army Aviation Support Facility (AASF) Improvements, Kalaeloa,
State of Hawaii, Department of Defense, Hawaii Army National Guard,
Job No. CA-1825-C

The items listed hereinafter are hereby made a part of the contract for the above mentioned project and shall govern the work taking precedence over previously issued contract documents governing the items mentioned. Receipt of this addendum is to be acknowledged on page OF-8 of the proposer's packet.

Clarification

1. Contractor shall coordinate with HIARNG to develop a plan to prevent Foreign Object Debris (FOD) from entering airfield. See Attachment 11 Drawing C001 Drawing Index and Construction Notes.
2. The correct/complete project name is Army Aviation Support Facility (AASF) Improvements, Kalaeloa, State of Hawaii, Department of Defense, Hawaii Army National Guard, Job No. CA-1825-C

The following are answers to questions submitted prior to the due date of May 14, 2020.

1. What is type "3E" duct?
 - a. *3" electrical ductline.*
2. Are light poles in solar canopy area going to be removed and if so how many/which ones?
 - a. *No, light poles in solar canopy are not to be removed.*
3. Can we mount PV electrical panel, inverters, DC disconnect/combiners on carport columns?
 - a. *Yes, that is the intention.*
4. Is PV monitoring to be included (none shown on drawings)?
 - a. *PV monitoring would be limited to the built-in software in the inverters.*

5. Is 125A PV breaker already installed in MSB2?
 - a. *No. New breaker needs to be provided.*
6. Is 100A breaker for Panel 4A already installed in MSB2?
 - a. *No. New breaker needs to be provided.*
7. Are all three trench conduits (solar, washroom power, existing airfield lighting) going into new JB on exterior of office building? We assume the existing airfield lighting currently terminates in LH1?
 - a. *Yes, they can share the same JB.*
8. Are the 4 each new P1 lights (see E301) tying into the new lighting contactor inside the main building?
 - a. *There are 4 P1 lights and 4 P2 lights on twin head poles that all tie into the lighting contactor in the main building.*
9. How many airfield lights are being demolished? Where do the existing airfield lights terminate? LH1?
 - a. *There are 5 light poles. 'X' through the object denotes demolition. The existing lights are fed from panel "LH1" via RC-2.*
10. Are the 2 handhole boxes depicted along the airfield lighting trench existing or do they need to be added?
 - a. *Yes, the handholes are new and will need to be added. They are referenced as NEW SYMBOL on the symbol list – refer to Bid Set Drawing E001 Symbol List, General Notes.*
11. Are the new GFI plugs for the helicopter wash rack being mounted on the new P1 light poles?
 - a. *Receptacles are mounted to the backside of the concrete vehicle barrier. See structural drawings for elevations.*
12. Is the wash rack equipment supplier running their own electrical? Or are we running it to and terminating it at their specified location, (e.g., disconnects, junction boxes). Who is responsible for supplying disconnects and control panels? Are we responsible for only running power to the equipment with all equipment being provided by wash rack supplier?
 - a. *The wash rack is being provided as part of this contract. Coordination of the scope between subcontractors will need to be discussed and coordinated with the general contractor. The intent was for the wash rack system to be a*

package system with a single point of connection for the electrical contractor but it will be dependent on the manufacturer of the system being provided.

13. Who is responsible for alarm control panel? Wash rack supplier?
 - a. *See response to item #12.*
14. What brand time clock for wash rack building?
 - a. *Provide in accordance with the specifications.*
15. On lighting plan, which fixtures are to be equipped with emergency backup battery?
 - a. *Per UFC 3-530-01 and the NFPA 101 this area is considered a normally unoccupied space and does not need EM lighting. Occupancy of the building is going to be occupancy U so EM lighting does not apply.*
16. Please provide as builts for project area. Looking for the site utilities as builts of this facility.
 - a. *See Attachment #2, as-built sheets CS-101, CS-102, CS-103, and CS-104.*
17. What is the project schedule duration?
 - a. *Project schedule duration is 365 calendar days.*
18. Has a DPP building permit been processed for this project? If yes, who pays for the permit fees?
 - a. *Building Permit is currently being processed. Contractor to pay for permit fee.*
19. Is the bid opening still required to be in person with the COVID-19 restrictions?
 - a. *See Addendum 2.*
20. NEM was eliminated in 2015. Please confirm you mean to get utility approval based on available programs by utility.
 - a. *See Attachment #6, Section 13650. Interconnection must comply with HECO "Standard Interconnection Agreement" (SIA) standards. The contractor shall complete the HECO SIA and provide all required submittals to HIARNG. HIARNG will for submit to NAVFAC. NAVFAC will submit the SIA to HECO for processing and approval.*

21. Please provide installation requirements for bedding material for Oily Water Separator. If any deadman concrete anchors are required? No details shown in mechanical or civil drawings.

a. For the bottom of the tank, you may use a 6-inch granular leveling course, such as imported select borrow, compacted to 95% of the ASTM D1557 maximum dry density. The remainder of the backfill should follow the backfill and compaction requirements in the geotechnical report. Alternatively, CLSM may be used. The geotechnical report also has recommendations in the event unsuitable materials and/or soft/pumping subgrades are encountered. Deadman concrete anchors not required.

22. Please provide existing switch board as built shop drawings for the purposes of sizing and selecting breakers for existing switchboard.

a. Switchgear is Siemens Vacu-break type. Per General Note #1 on Sheet E001, Contractor should field verify the exact breaker requirements prior to ordering.

23. Dwg C-005 indicates battery storage system for Alternate 1 -4 bid items. Dwg E601 does not show any battery storage system on one line diagram. Where would the battery storage be place onsite? Is the one line diagrams suppose to show the battery electrical information for Alternate 1 – 4?

a. Remove references to battery storage throughout Bid Documents.

24. Civil drawings states to see Mechanical drawings for diverter valve in precast box. Please provide mechanical detail for the motorized valve installation in precast box. How do we seal the pipe penetrations in the precast boxes?

a. Diverter valve is a motorized plug valve to be installed in-line with the 6-inch sewer piping and is shown on Drawing M201. Provide clearances and supports per manufacturer's recommendations. Please refer to the referenced drawing in the Bid Set Drawings.

b. For sealing pipe penetrations in the Precast Boxes, follow Standard Detail S-48 Section Thru Manhole Wall, Attachment #8.

25. Is oil to transfer from trench drain box to infiltration chambers? If 6" sewer line to diverter valve is lower than infiltration chamber inlet wouldn't the oil flow into the infiltration chambers first before it goes into the oil water separator? Is the 6" sewer line at the correct elevation?

a. Diverter valve automatically opens when any wash rack equipment turns on to divert wash water to the oil water separator (OWS-1) and automatically closes once all the wash rack equipment is shut down. When wash rack is not in use (i.e. during rain events), rainwater will rise in the diverter box due to the closed diverter valve and discharge out to the infiltration chambers.

- b. *The 6-Inch sewer is at the correct elevation. Pipe is sized to handle wash rack design flow without backing up in structure.*
26. SHTC006, Please provide the thickness of the "Gravel Topping" shown on sheet C006 along with the anticipated subgrade material (if any).
- a. *Demolition of existing gravel topping based on required excavation for improvements, existing depth is unknown.*
27. C100, Please provide a structural detail for the "6" Curb" shown on sheet C100
- a. *Please see revised detail 1/S500, Attachment #3, for curb within concrete wash rack slab. See Attachment #7, Standard Detail R-1 Pre-Cast Concrete Curb for curb within A.C. Pavement.*
28. SHT C006/C100, The AC demo extents shown on sheet C006 do not match the "New A.C. Pavement" shown on sheet C100 (area East and West of the helicopter wash pad, South of the curb). The note in the bottom left corner of sheet C100 states "Extent of new A.C. Pavement", however, the hatching shown in the legend does not match the same extents. Please confirm the new A.C. paving boundaries.
- a. *C006 limits are correct.*
29. SHT C300, Please provide a profile view for the 2" waterline shown on sheet C300.
- a. *Profiles not provided for waterlines less than 4" diameter. Maintain minimum cover as shown in detail 2/C402. Please refer to the referenced detail in the Bid Set Drawings.*
30. SHT C300/S500, Sheet S300 states that the 11" slab-on-grade is to be placed on 6" of base course. However, sheet S500 detail(s) 1/S500 and 2/S500 state that the subgrade material is to be select borrow. Please clarify the material to be used as subgrade for slab(s)-on grade.
- a. *Callouts should all be base course. Base course shall meet Section 703.06 of HDOT Standard Specifications for Roads and Bridges.*
31. SCR 3200/3300, Per part 2.1 of SCR Sect. 3200, Reinforcing Steel, all reinforcing bars, welded wire fabric and dowel bars are to be epoxy coated. Per part 2.2 of SCR Sect. 3300, Cast-In-Place Concrete, there is no mention of epoxy coating. Please clarify if epoxy coating is required for reinforcing steel on this project.
- a. *Epoxy coating not required.*

32. SCR3300/SHTS404, Per part 2.11 of SCR Sect. 3300, slabs-on-grade are to be constructed with 4000psi concrete. Detail 2/C405 references "650 psi Flexural Strength" PCC. Please confirm that 4000psi concrete is required for all new slabs-on-grade.

a. New slab-on-grade shall be 4000 psi.

33. Bid Items - Alternative #7 Deductive. Per Sheet C005, Alternative #7 deductive shows the deletion of AC paving scope above the Absorption bed location. Please confirm that: a) The absorption bed scope is to remain in the base-bid
b) The finished surface above the absorption bed will follow sheet C100-site plan regardless of Alt. #7 deductive.

a. Confirmed to remain

b. Match existing grade. Finish shall be gravel topping to match existing.

34. SHT C300, Sheet C300 calls out a "37'x75' Absorption Bed". Please confirm that this area represents the chambers only, exclusive of the manifold piping and bed drain box.

a. Clarifying the absorption bed chamber area is 37'x71', not 37'x75'. This area is exclusive of the manifold piping and the Absorption Bed Drain Box.

35. SHT S300, Please clarify that the intent of the jointing plan shown on sheet S300 is that the slab-on-grade sections on either side of the trench drain(s) are to be placed in one, continuous pour. If not, please provide an expansion joint detail and/or construction joint detail.

a. Trench drain will be separate pour. Line work was missing on S300 showing construction joints. Please refer to the referenced detail in the Bid Set Drawings.

36. Misc. Please provide a plan view layout of the absorption bed showing cell layout, count and manifold orientation.

a. See Attachment #1 Absorption Bed Plan Detail.

37. Misc. Please provide bedding/backfill material requirements for the Oil/Water Separator Tank

a. For the bottom of the tank, you may use a 6-inch granular leveling course, such as imported select borrow, compacted to 95% of the ASTM D1557 maximum dry density. The remainder of the backfill should follow the backfill and compaction requirements in the geotechnical report. Alternatively, CLSM may be used. The geotechnical report also has recommendations in the event unsuitable materials and/or soft/pumping subgrades are encountered.

38. Misc. Please provide detail for equipment room footings at sewer and waterline penetrations if necessary.

a. *Please see new detail 10/S501. Attachment 4.*

39. Misc. Will there be a construction water source available onsite?

a. *Contractor to provide own water. If contractor to use water at facility, contractor to inform HIARNG PM, contractor to provide and install water meter at water point connection to capture and record water usage. Contractor to reimburse HIARNG for water usage.*

40. Misc. What is the purpose of the battery storage? For example, maximizing self supply, grid backup of certain critical loads, demand shaving, other?

a. *See answer to Question 23.*

41. Misc. What is the battery storage capacity required and is it the same for each bid additive? Meaning, is bid additive #1 for rough in work only or does it include rough in for the battery also, and what battery. Then, for each additional array added, what is the corresponding storage amount.

a. *See answer to Question 23.*

42. Misc. Where is the battery storage system to be located on site and are there any requirements for the battery cabinet or inverter enclosure?

a. *See answer to Question 23.*

43. Section 13650 - PHOTOVOLTAIC SYSTEMS or drawings does not provide any information on the battery system required as per OF-1 Additive Bid Item #1~4. Please confirm that battery is not required for this project.

a. *See answer to Question 23.*

44. Section 13650 - PHOTOVOLTAIC SYSTEMS 2.01 B 8 shows Canadian Solar, Grape Solar, Hyundai Heavy Industries Co. or approved equal. However, Drawing E601 shows LG Neon Series LG365N2W-B3.

a. *Added LG Electronics to the list of approved companies, see Attachment #6, Section 13650, Part 2.01, B.*

45. Offer Form OF-3 requires "This project falls under the requirement of the "Buy American Act".". However, most of the solar modules specified in specifications and drawings are not Buy America compliant.

a. *Buy American Act is not required. Replace OF-2 and OF-3 with OF-2R and OF-3R.*

46. Drawing E601 – There is no PV AC Disconnect Switch shown as required by Utility.

a. The contractor shall provide the PV disconnect. The disconnect should be located next to the NEMA 4X 316 SS junction box mounted on the west wall of Building 30. See Attachment 10 for the location.

47. Section 13650 - PHOTOVOLTAIC SYSTEMS 2.01 C requires photovoltaic mounting racks to be anodized aluminum material. However, Drawing S600 Detail 1 shows that solar modules are attached directly to steel purlins and this is the most effective mounting system for canopy-based PV arrays. Therefore, please delete specification requiring Aluminum racking.

a. Aluminum rails would be attached to the purlins. Detail 1/S600 Photovoltaic Frame Structure Section revised to show aluminum support frame for PV Panels – see included Attachment 12.

48. Section 13650 - PHOTOVOLTAIC SYSTEMS 2.01 D 14 requires inverters to be Solaredge, SMA or approved equal. Drawing E601 shows 3 Inverters @ 24 kW each. Please note that Solar Edge and SMA does not provide 24 kW inverter for 277/480V grids currently. Solar Edge provides 20kW, 30kW, 33.3kW, 66.6kW and 100kW for 277/480V grids while SMA provides 33.3kW, 50kW, 62.5kW for 277/480V grids. Moreover, the drawing E601 does not show optimizers for each solar module as required in the case of Solar Edge Inverters.

*a. See Attachment #6, Section 13650. SMA makes a 24kW inverter for 480Y/277V which has been installed at various DOE schools. While SolarEdge does not, a de-rated 30kW inverter can be used in lieu of the 24kW since the PV optimizers will regulate the voltage. One-line will be updated to show PV optimizers.
For an SMA designed system the PV optimizers are listed as a “Rapid Shutdown Module.” The same configuration can be used for a SolarEdge designed system and the PV Optimizers would replace the Rapid Shutdown Modules.*

49. Section 13650 - PHOTOVOLTAIC SYSTEMS 2.01 D 2 requires 98% minimum CEC efficiency rating. The specified SMA inverters have a CEC rating of 97.5%

a. SMA inverters 24kW and above have a CEC efficiency of 98% according to the most recent cutsheet.

50. The Electrical Drawings do not show location for Inverters and Panel PV. Section 13650 - PHOTOVOLTAIC SYSTEMS 3.02 5 refers to a concrete pad for inverters. The ideal place to hang the inverters and Panel PV are the carport canopy columns.

a. Yes, the intention was to mount the inverters and PV panel to the canopy columns.

51. Section 13650 - PHOTOVOLTAIC SYSTEMS 3.01 E – Please change HECO NEM Interconnection to HECO SIA Interconnection as NEM Interconnection is not available anymore.

a. See Attachment #6, Section 13650. Changed from NEM to HECO SIA. Added a note that contractor shall submit to HIARNG and they will forward to NAVFAC for HECO processing and approval.

52. Rapid Shut Down system not included as required under NEC 2017. The local AHJ might consider PV Canopy as a Building.

a. See Attachment #6, Section 13650. Added requirement for Rapid Shutdown Device.

53. Drawing S600 Detail 1 - Are the above grade concrete column 3' surrounds at the solar structure required as the columns are not placed in the parking stall area and there are wheel stops to prevent any collision?

a. Concrete above grade to be provided for added protection as indicated on the detail, referenced in the Bid Set Drawings.

54. Drawing S600 Detail 1,2 - Can alternate foundation design, provided by a licensed PE replace the indicated design due to cost effectiveness?

a. An alternate design may be accepted if provided by a Hawaii licensed PE and if all current requirements are met

55. Is hot dip galvanized finish acceptable for the structural steel required for the carport canopy structure as permitted in Section 05120 – Structural Steel 2.9?

a. Hot-dip galvanized finish is acceptable.

56. The carport canopy purlins design does not appear to meet local code requirements, is it acceptable to substitute heavier members approved by our licensed PE?

a. Heavier members are acceptable. Purlin sizing and spacing to be coordinated to meet photovoltaic manufacturer's recommendations.

57. No Specification was noted for the carport canopy light gauge purlins' finish, please confirm G90 electroplate galvanized finish is acceptable.

a. G90 is acceptable

58. Please confirm that no finish paint is required on steel for the carport canopy as it is already Galvanized.

a. Canopy to be painted and color to be coordinated with HIARNG to match existing canopy.

59. Substitution Request: In accordance with the requirements of the Special Provisions, we hereby submit three (3) sets of technical specifications, brochures, variances, and other information so as to compare quality and suitability of the following alternative equipment:

SP SECT/SHEET: 15400-2.20-A
ITEM: OWS-1
SPECIFIED ALTERNATE: HIGHLAND PS INT'L
VARIANCE: NONE

I further certify that this request for substitution has no other variant features.

a. Oil water separator shall be UL 2215 listed (reference SECTION 15400, paragraph 2.20.A). Proposed product is not UL 2215 listed and therefore is not an acceptable substitution.

60. In accordance with the requirements of the Special Provisions and as stated on the Specifications, we hereby submit for substitution 3 sets of technical brochures and statement of variances for your review and approval for the item(s) shown below:

ITEM: Fixed Louvers
SPECIFIED BRAND: Architectural Louvers, Co.
Ruskin
The Airlite Company, LLC
SUBSTITUTE BRAND: Reliable Architectural Products
MODIFICATION VARIANT FEATURES: None

I further certify that my request for substitution of the above item(s) has no other variant features.

a. No exceptions taken to proposed substitution, provided proper finish is provided per specifications. Subject to further review and comments during the formal submittal process.

61. We are general contractors: L/C No: BC. Do I need all these licenses C-43, C-57A, C-61, or Do we have to have Sub Contractor with this license?

a. The license classification list in the Notice to Bidders and Bid Documents is a list of the minimum license requirements. All work requiring licenses must be provided by contractors holding those specific licenses. If the General contractor does not hold a specialty license that is required for the project, he must have a sub-contractor that holds that specialty license. Please refer to the Notice to Bidders and bid documents for more information and requirements.

Replacements

1. Replace OF-2 and OF-3 with OF-2R and OF-3R.
2. Replace in Specifications Division 13 Special Construction, Section 13650 Photovoltaic Systems with Attachment 6 Specifications Division 13 Special Construction, Section 13650 Photovoltaic Systems.

Attachments

1. Absorption Bed Plan Detail (Pre-Bid Question 36)
2. As-Built Drawings CS101, CS102, CS103, and CS104 (Pre-Bid Question 16)
3. Detail 1/S500 Wash Rack Slab (Pre-Bid Question 27)
4. Detail 10/S501 Typical Pipe at Footing Detail (Pre-Bid Question 38)
5. Drawing E601 One-Line Diagram (Pre-Bid Questions 41 and 52)
6. Specification Section 13650 – Photovoltaic Systems (Pre-Bid Questions 20, 44, 48, 51, and 52)
7. Standard Detail R-1 Pre-Cast Concrete Curb (Pre-Bid Question 27)
8. Standard Detail S-48 Section Thru Manhole Wall (Pre-Bid Question 24)
9. Drawing M402 Equipment Room Piping Diagram (provided for bidding purposes showing addition of one (1) Double Check Backflow Preventer, Watts LF007 or approved equal and one (1) Reduced Pressure Backflow Preventer, Watts LF009 or approved equal with Air Gap Fitting)
10. Drawing E201 Electrical Site Plan 1 PV Disconnect Sketch (Pre-Bid Question 46)
11. Drawing C001 Drawing Index and Construction Notes (Clarification Item 1)
12. Detail 1/S600 Photovoltaic Frame Structure Section (Pre-Bid Question 47)

Stephen F. Logan
Colonel
Acting Adjutant General

Posted: May 29, 2020