

**VA701-12-R-0157 Amendment A00004 – ATTACHMENT 2:  
BILOXI SOLAR TECHNICAL QUESTIONS AND ANSWERS**

1. The solicitation, appendix A, paragraph 2, Technical Requirements, 5th paragraph notes the carport structures to be either single or double cantilever configuration for 2 row (back to back) and single for single row parking. Is it possible to get a copy of the design calculations for the parking garage from the structural engineer that can validate what additional loads the current parking garage can support, i.e., was the original design based on future expansion so there is sufficient capacity to carry the additional structural loads for the PV system along with the high velocity wind loading for this area. This is a critical design issue and if we could get the manufacturer's design calculations for the existing garage this would be very helpful. In addition, would the VA be will to consider an optional structural support system which is not cantilever and is based on clear span support system which would be based on a hot dipped galvanized structural steel framework which would be designed to focus the PV loading directly to the current column supports.

**ANSWER: It is preferred for the system to be a clear span support system. If the drawings have not been posted to date, they are not expected to be posted in time for the award. The offeror, in this case, should assume that the parking garage columns are sufficient to support the clear span structure. We are working to obtain the calculations.**

2. Please provide MV riser diagram and MV site plan. Are the transformers at Buildings 26 and 28 "loop feed"?

**ANSWER: If the drawings have not been posted to date, they are not expected to be posted in time for the award. The offeror, in this case, should assume that they must set a stainless steel (coastal zone) sectionalizing cabinet adjacent to the existing transformers (which were available for inspection at the site visit) to provide a MV connection point. We are working to obtain the drawings.**

3. There is an equipment yard at 30°24'44.22"N, 88°56'48.41"W, with a cluster of four transformers, some switch enclosures, and a switchgear hut. Presumably this is the POCC for the entire facility, correct? Are the transformers paralleled in a secondary network?

**ANSWER: A web application used to locate 30°24'44.22"N, 88°56'48.41"W seems to indicate the location is a generator/switchgear yard near the center of the campus. No work or connections will be allowed in this area. There is a MV transformer associated with most, if not all, significant buildings. There is no secondary distribution network except to supply outbuildings. Please see answer to #2 for electrical connection requirements.**

4. Sheet SS100 of the warehouse drawings states that the IBC basic design wind speed used in the structural design is 135 mph, No wind exposure category is given. What design wind speed and exposure category should be used in the design of the rooftop mounted PV system (Site 1)?

**ANSWER: 135 MPH / Exposure C**

5. Sheet SS—001 of the parking garage drawings states that the IBC basic wind speed used in the structural design is 140 mph (owner defined), and the exposure category is D (owner defined). What design wind speed and exposure category should be used in the design of the carport PV system (Site 2)?

**ANSWER: 140 MPH / Exposure D**

6. Which version of the IBC/ASCE 7 wind loads should be used for the structural design of the PV system? Should ASCE 7-08 be used, or should ASCE 7-10 be used?

**ANSWER: IBC/ASCE 7-10**

7. Is there a product submittal available that shows the manufacturer and gage of the existing standing seam metal roof deck at Site 1?

**ANSWER: The roof decking is 22 gage and a submittal will be made available after award.**

8. Page 2 of the pre-solicitation notice states that a “minimum 750 kW Solar PV system” is to be installed. Page 8 of the Final Environmental Assessment states that the system size is “1 megawatt (MW) at peak performance.” What is the target system size, and what is the target distribution of this total system size between Sites 1 and 2 (Reference page 7 of the Final Environmental Assessment). How should the system size be determined? DC or AC watts? PV Watts or PV Syst?

**ANSWER: There is no distribution target although we intend to use all available space. The system design should provide the greatest value – defined as system output/cost (See question # (Procurement Question 7) for further detail). Provide AC and DC output, including Watt hours. Both PV Watts and PV Syst are acceptable design tools.**

9. How much of the existing lighting at the Site 2 can be removed? Are there VA specifications for the replacement lighting at the carports?

**ANSWER: All of the lighting standards/fixtures on top of the garage should be removed (assuming a clear span canopy; see answer to #1.)**

10. Plans page SS-140, 5<sup>th</sup> Floor Structural, Will structural engineer allow us to add column to precast light wall grid 2 and 4?

**ANSWER: Adequate structural capacity is required.**

11. Has the utility done and interconnection study?

**ANSWER:** The offeror is required to perform a load flow and relay coordination study to coordinate and otherwise ensure that other on-campus system breakers do not trip as a result of this installation. This is usual & customary design practice when connecting any significant load or source.

12. Are there any specific requirements to connect to the VA National Metering System?

**ANSWER:** The solar PV meter aggregation system must provide system output of all system registers that is compatible with the VA's National Metering (Schneider/Square D ION) system as defined in the RFQ. The system will preferably be connected to the VA's Cat 5e Ethernet switch inside of the facility where the aggregation system resides.

13. Are there any specific requirements for lighting?

**ANSWER:** The roof deck of the parking garage lighting shall be in accordance with VA and IESNA Lighting Handbook (9<sup>th</sup> Edition) requirements for that application.

Currently there is a project under contract to install new energy saving LED lighting and controls. Lighting for 5th deck shall be coordinated and installed to match the following:

- 95w LED Solstice light fixtures.
- Wireless RF Mesh Node Controllers.
- Include necessary graphics and PPCL programming for incorporation into the existing Siemens Energy Management System.

There are no requirements to illuminate the roof-mounted systems on the warehouse and vehicle maintenance facility.

14. Does the VA wish to keep the Parking Lot lights that are to be removed from the garage top deck?

**ANSWER:** No. The selected contractor should dispose and/or recycle properly.

15. Is the parking garage and metal buildings structurally sound for the additional load of the solar arrays?

**ANSWER:** The offeror will provide a structurally sound solution.

16. Are the structural plans and single line diagrams available to review?

**ANSWER:** See answers to #1 and #2.

17. What is the minimum canopy height for the parking garage solar array?

**ANSWER:** The minimum canopy height will be the maximum vehicle height that is allowed into the garage. The parking garage drawings indicate 8'-6" but the engineer/contractor must ensure that this is the maximum height possible. The maximum height possible will constrain

**the canopy height. 8'-6" is an absolute minimum. Additional height for lighting fixtures and signage under canopy will be necessary.**

**18.** How large of any area will be available for staging/laydown? Where is it located at?

**ANSWER: The offeror should prepare to minimize the amount of required laydown area. Adequate space is available onsite for this and most any other imaginable project. The exact location will be determined for each location at the appropriate time.**

**19.** Are there any other construction projects that may interfere with this project? If so what is the timing?

**ANSWER: No.**

**20.** What are the preferred interconnection locations?

**ANSWER: At the nearest medium voltage connection point.**

**21.** Are exterior conduits acceptable on the buildings/parking garage? Are there spare conduits running from the top floor of the parking garage to ground level?

**ANSWER: Interior or screened conduit locations are preferred. No spare conduits are available.**

**22.** On the parking garage solar carport, will a "saw tooth" configuration/design be acceptable for aesthetics or is the VA looking for the solar panels to be laying flat?

**ANSWER: Sawtooth is acceptable.**

**23.** Is there any issue with tree trimming near site 3?

**ANSWER: No tree trimming will be permitted.**

**24.** Appendix A: Statement of Work 1.4.12; Photovoltaic modules are susceptible to degradation from marine environments and the manufacturer warranties address use of their products in these environmental conditions as specific actions which will void the product warranty (not to be confused with the production warranty). Please confirm if offerors are expected to provide special, additional warranty from the manufacturers, or if offerors are required to accept the risk of installing modules in an environment which voids their warranty.

**ANSWER: Offerors should provide products that are suitable for use in the intended environment. Proposed materials that are inappropriate for the intended environment will receive lower scores.**

**25.** Appendix A: Statement of Work 2; For the base bid, can offerors propose to utilize parking spaces under the canopy for installing inverters (this would mean these spaces are no longer available for parking, however, the intent of keeping the inverters out of the sun is met)?

**ANSWER: No. The offeror will provide separate inverter shading structures.**

26. Appendix A: Statement of Work (General); Reference is made in section 2 of the SOW document to corrosion resistance for the parking canopy. However, other sections of the SOW make reference to NEMA 3R enclosures. Given Biloxi's proximity to the Gulf of Mexico, one would assume corrosion resistance requirements. Please confirm the required enclosure rating (NEMA 3R, NEMA 4, NEMA 4X, etc.) for all exterior equipment (inverters, combiner boxes, disconnects, and transformers).

**ANSWER: Offerors providing enhanced corrosion protection will be graded more favorably - as long as this enhanced provision is indicated in their proposal.**

27. Appendix A: Statement of Work (6.11.1.g); this item is effectively a performance guarantee; please provide a definition for "required performance predictions" as well as the variance from this prediction (in %) that will be allowed for weather patterns outside of the norm.

**ANSWER: Performance predictions shall be used in bid evaluation. It is understood that variable weather patterns affect system performance. In the event the actual electrical output is significantly above or below VA expectations, VA will perform an analysis of the system as designed given the actual weather conditions experienced during the time period compared to average weather conditions.**

28. Please clarify that offerors need to make provisions for mitigation of potential for additional snow loads for a project in Biloxi, MS.

**ANSWER: Snow loads are not a large consideration in Biloxi, MS.**

29. In order to assure that there is no warranty impact to any existing warranties held by the VAMC, please provide contact information for the roofer of record and roof warranty information for Building 26 and Building 27.

**ANSWER: This information will be provided by the facility at the time of award. The offeror should indicate any assumptions in their proposal.**

30. Please confirm the maximum number of parking spaces that can be removed from use during construction

**ANSWER: The Biloxi VA is a campus style facility with substantial available laydown area. The number of parking spaces used for laydown area will be kept to an absolute minimum in order to minimize inconvenience to patients and employees.**

31. Can you provide the original design loadings used for the parking garage (alternatively, at least the date of design and governing building codes used by the designer)?

**ANSWER: The parking garage was designed & constructed within the past 5 years using the latest Codes and Standards. The facility is working to obtain drawings, structural calcs, etc.**

32. What was the date of construction of the parking garage? Have any structural repairs been made to the garage since original construction?

**ANSWER: No structural repairs or alterations have been made since construction.**

33. The prints provided labeled "VAMC PARKING STRUCTURE BILOXI, MS" are marked as "30% OVERALL AND 95% FAST TRACK SUBMITTAL DESIGN DEVELOPMENT-NOT FOR CONSTRUCTION". Are these the final prints used for the existing parking garage structure? These prints do not provide the panel schedules needed to determine what is available on site for the PV systems integration into the existing conditions nor do they provided the needed as built conditions.

**ANSWER: Offerors should not use existing electrical service panels except perhaps to serve lighting loads (in which case the removed lighting standards/fixtures should provide adequate or near-adequate spare breaker capacity. In the event spare capacity is unavailable, the offeror will provide a new panel - relatively simple and inexpensive.) The facility is working to obtain as-built drawings, structural calcs, etc. Offerors shall state their assumptions.**

34. Is the parking garage fabricated out of pre-stressed concrete with embedded tension wires? If so will this allow for coring penetrations that may be needed to accommodate power and communications from the proposed top of the structure to the lower level s? Will core drilling be allowed?

**ANSWER: Core drilling may be allowed if the contractor/engineer determines it is appropriate between the tensioning cables/reinforcement in the pre-stressed slabs and other slabs.**

35. On the parking structure print on page ES-200 will the MDP (Main Distribution Panel) have an extra space for the addition of a 175 Amp Breaker? What is the manufacture and AIC rating of the MDP gear for the existing breakers? Does the MDP buss meet the 200% rating needed for the PV system sub panel integration?

**ANSWER: No. N/A. No. The offeror should provide separate power connection.**

36. Near the parking structure you show a pedestal mounted meter near the transformer "XFMRI". Is there a preference to the production meter next to the existing meter or can the production meter be in the electric room with the MDP? Is there a utility requirement for the production meter to be located to next to the transformer?

**ANSWER: Separate MV connections for solar PV systems are preferred. The facility prefers that meters be located inside of electrical rooms although there may be some utility interconnection requirements that we are not currently aware of. All metering must be compatible with (and preferably tie back to) the Schneider/Square D Ion system as indicated in the RFQ.**

37. Do the existing prints for the new warehouse reflect the current conditions of the electrical panels? (I.E. breaker spaces available, as-built conditions)

**ANSWER: The as-built drawings indicate the "as-intended" condition. There have been some modifications that would likely impact available breaker spaces. The price of low voltage panels is relatively small on a project of this type. In order to provide a technically superior solution, offerors should provide dedicated connection points for all but the smallest loads.**

38. Do we know the existing AIC ratings and manufactures of the panels for the alternate locations for the PV system tie-in?

**ANSWER: The price of low voltage panels is relatively small on a project of this type. In order to provide a technically superior solution, offerors should provide dedicated connection points for all but the smallest loads.**

39. We need contact information for the precast contractor who did the original structural design for the parking garage to verify maximum loading that can be placed on the post-tension slabs along with available loading on the support columns. Current concerns from the structural steel designer and fabricator is without a mid column support to the post tensioned slabs the spans in certain areas will reach 100 ft and the cost for this increases is extremely high vs. reducing the span to 50 ft with an intermediate support column.

**ANSWER: This information will be available after award.**

40. We also need the design calculations for the original metal buildings, sites 2 & 3, to verify the current roof design loads along with the allowable roof loading to determine if the installation of the solar panels will require additional reinforcing to support the panel loads.

**ANSWER: See answers to numbers 4, 5, and 6.**

41. In the statement of work, paragraph 1.3, Building Kiosk, 8th line, it notes the system monitoring and public display Kiosk is required to capture the data currently logged by the existing VA hot water solar data acquisition system at the site. We would like to request information on the data collection system being used, it's location on the site, and what specific data fields are being monitored and collected so this can be included in our proposal for the PV site data collection and reporting database & building Kiosk. Also, can the location for the public kiosk be provided?

**ANSWER: The solar hot water data acquisition will be BACnet compatible and include Btu measurement. All system output will be available via BACnet as well as via the existing (non-BACnet) Siemens Apogee BAS in each building. The kiosk will be located in a main patient lobby. The exact location of the kiosk is unavailable at this time. The facility will work with the contractor/engineer to determine the most appropriate location and will provide the use of existing facility power and communication wiring to serve this system throughout the campus, where available.**

42. Can you please provide a contact for Mississippi Power Company?

**ANSWER: Joe Bosco, (228) 861-6747**

43. What are the desired lumens for the lights under the canopy on the parking deck?

**ANSWER: Average footcandles and max/min & avg/min uniformity requirements shall be in accordance with VA / IESNA Lighting Handbook recommendations and requirements for the intended application.**

44. Is local permitting required?

**ANSWER: No - except for MV electrical interconnection.**

45. Can the entire top floor of the parking deck be closed during construction?

**ANSWER: If absolutely necessary, but preferably NO.**

46. Can parking spaces be permanently removed from the top floor of the parking deck to create room for electrical equipment?

**ANSWER: No.**

47. Who is responsible for commissioning?

**ANSWER: The VA is responsible for commissioning. The contractor shall provide access, information, drawings, production data, and other support as necessary to VA commissioning personnel.**

48. Where should the kiosk be located? At the deck or warehouse? Or if not, please specify.

**ANSWER: The kiosk will be located inside of a main patient facility - in a lobby area. The exact location of the kiosk is unavailable at this time. The facility will work with the contractor/engineer to determine the most appropriate location and will provide the use of existing facility power and communication wiring to serve this system throughout the campus, where available. The facility does have an existing campuswide communication system but it is not available at the parking garage or vehicle maintenance facility. (It is available at the warehouse.)**

49. Is wireless communication acceptable for monitoring/metering connectivity?

**ANSWER: Utility-grade wireless communication is acceptable. Wired connections are preferred.**

50. Please provide details of the installer and/or manufacturer's roof warranty for Building 26, if any.

**ANSWER: This information will be available post-award.**

51. What term contract is required for the monitoring service?

**ANSWER: As long as practicable. Lifetime monitoring agreements are preferred.**

52. What are the specifications, demarcation connection points, and other requirements for the electrical metering outputs for both; a) the local metering system and b) the nationwide metering system? Will there need to be underground conduit required across the site for the metering systems cabling; if so, are there favored routes?

**ANSWER: The local and national metering systems are the same - Square D / Schneider ION system. Exact meter models numbers are provided in the RFQ. The Solar PV system has a separate metering requirement and that system is required to be compatible with and interconnect with the existing systems. The facility will work with the contractor/engineer to determine the most appropriate location & favored routes - and will provide the use of existing facility power and communication wiring to serve this system throughout the campus, where available. The facility does have an existing campuswide communication system but it**



**is not available at the parking garage or vehicle maintenance facility. (It is available at the warehouse.)**

- 53.** Is there a preference among VA personnel towards tilting the PV modules for optimal kilowatt-hours output per year? Or, would the VA prefer to fix the criteria that PV module arrays would be mounted in planar fashion that mimics the outline of the structure?

**ANSWER: Since the systems are located on roofs and/or in industrial zones, the Solar PV system should be designed to provide the maximum output.**

- 54.** To assess viability of connecting a PV solar power system to the existing electrical system, please provide the final construction drawings for the Parking Garage, along with the approved submittal cut sheets for the electrical distribution equipment.

**ANSWER: It is not viable to connect to the existing electrical system in the Parking Garage. A separate system should be designed.**

- 55.** Once the above as-built documentation is provided, the existing distribution equipment may prove impracticable for connection of a 750kW photovoltaic system. Direct connection to the medium voltage (MV) loop may prove to be the next most economical option to explore. For this MV option to be vetted we would like to know if the utility company owns the MV loop including MV switches and service transformers. Please provide any utility requirements along with any other associated electrical information and requirements for the medium voltage system.

**ANSWER: The VA owns & operates the campus MV distribution system. The offeror should plan their connections to the VA's MV system (referencing provided drawings) - not at low voltage as spare LV capacity is unavailable.**

- 56.** Please affirm that it would be acceptable to the VA to remove existing parking light poles and provide new lighting below new PV structural members; fixture selections and layout can be modeled after the surface mounted garage parking fixtures used on the lower levels of the parking garage.

**ANSWER: It is acceptable/preferred to remove the existing parking lot light poles and to replace with new LED lighting (to match that currently being installed in the garage) beneath the canopies.**

- 57.** Are there any constraints or VA preferences that would limit the extent of square footage available; e.g. 'to not place PV modules over drive ramps?'

**ANSWER: The minimum canopy height will be the maximum vehicle height that is allowed into the garage. Additional height for lighting fixtures and signage under canopy will be necessary. It is acceptable/preferred to place modules over the drive lanes, if practicable. Please refer to parking garage design drawings.**

58. Will the general contractor for the PV scope be responsible for establishing the means and methods for the roofing system from here forward; as regards approved materials and install protocols affecting warranty, maintenance, and future alterations?

**ANSWER: Yes.**

59. During the Job Walk, it was mentioned that the project is in Miami-Dade's High Velocity Hurricane Zone. What is the Risk Category for these buildings/structures (Cat I, II, III, or IV)?

**ANSWER: The expected potential wind speed for Biloxi, MS is approximately 25 mph less than in Miami-Dade Counties which make this question hard to answer. Healthcare facilities are typically defined as Category III or IV. The facility will work with the contractor/engineer to determine the most appropriate Risk Category. See also the answers to numbers 4, 5, and 6.**

60. Single and double cantilever configurations are outlined in the Statement of Work for this project. Will covered parking with tilt racks be an equivalent solution for the parking garage canopies?

**ANSWER: Clear span structures covering the entire roof deck are preferred. "Covered parking with tilt racks" is undefined making that part of the question impracticable to answer.**

61. Are the post-tension shop drawings available for the parking garage? If so please provide.

**ANSWER: Facility is working to provide and will have available post contract award.**

62. Is drilling through the post-tension slab permitted?

**ANSWER: If the engineer/contractor determines that it is appropriate given the existing design.**

63. Will you be evaluating the relevant experience of "Team" members bound by formal teaming agreements, as allowed under FAR 9.6, along with the prime SDVOSB when evaluating Past Performance of the subject RFP response?

**ANSWER: Teaming arrangements are permitted in accordance with FAR 9.6: Contractor Team Arrangements. Offerors are reminded of the requirements for the Service-Disabled Veteran-Owned Small Business set aside per VAAR 852.219-10 (RFP 4.12). Evaluation of the proposals will be done in accordance with the Evaluation Criteria stated in the solicitation (Appendix F). In addition, ensure that all offers include the required Project Organizational Chart and Narrative per Appendix E: Instructions to Offerors: Section II.I.4.B.**

64. What exactly are the Buy American requirements for the Solar PV on this procurement?

**ANSWER: Proposal's shall conform with Buy American Act requirements that are listed in the clauses and provisions indicated in the RFP. There are no certificates required to be submitted as this is not a purchase of a supply. Further clarification regarding Trade Agreements can be found in FAR 25.2 and VAAR 825.2.**

65. RFP: Instructions to Offerors 4.33- some categories of work performed during the construction of a photovoltaic array should be classified as laborer category; please confirm that tasks which are do not involve making electrical connections (moving equipment or materials; basic assembly of equipment including mounting PV modules; disassembly or modification of raceways) will be classified as labor and not electrical work.

**ANSWER: CONFIRMED**

66. General; Please provide a copy of any feasibility studies that were conducted for this project

**ANSWER: See Attachment 1 of Amendment A00004.**

67. Appendix D, Page 7, Item 3 states "Provide the monthly and annual prices for the option task for operation and maintenance required for the proposed system." Should this pricing be provided for an outsourced maintenance agreement or a reference for "in house" cost? Please clarify.

**ANSWER: Propose based on the requirements in the Request for Proposals and provide a Firm-Fixed Price.**

68. Is there a minimum or maximum capacity in kWh that is expected from the system?

**ANSWER: 52.215-1(f)(1) states The Government intends to award a contract or contracts resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and sub factors in the solicitation. The optimal configuration of priority areas and sizes of PV power (DC rating) shall be proposed by the contractor and shall be based on the system which provides the best economic returns for the VA. The estimates provided in the Feasibility Study are not given as targets which are to be met for each individual site, but rather as order-of magnitude estimates. The offeror is asked to design a technically superior system according to the specifications given in the RFP document, which will be evaluated according to the evaluation criteria listed in the paragraph "Evaluation and Award".**

69. In the SFO documents it references both the standard construction warranty and the provisions for special warranties outlined in FAR 52.246-21 and VAAR 852.246-74. The standard construction warranty is one year and the noted PV panel warranty (performance base 80% of rated output) is noted as 20 yrs in the Appendix A, paragraph 1.4.11. In paragraph 1.4.12, it also notes a five year warranty on the PV systems for both labor and parts. The bonding company is requesting clarification from us on the extent of the warranty and how long the performance bond needs to be in place and the value over time. Our bonding company has expressed concern over the warranty requirements for performance at 20 years and whether or not our subcontracted solar company will still be in business. Would this mean that the VA could call the Performance Bond to force replacement? Please confirm that the responsibility for replacement of modules required under this part, under the manufacturer's warranty, which is required at a time beyond the warranty requested in part 12 of this section, will be provided by the manufacturer.

**ANSWER: The 5-year warranty will be for parts and for labor; the 20-year warranty will be for parts after the 5-year warranty expires. VA will be responsible for labor**

**costs associated with re-installation after five years. Bonding will not be called upon for the warranty requirements.**

**70.** Will other carport structure locations be considered that were reviewed in the Environmental Assessment Report (i.e. the parking lot on the west side of the Parking Garage)?

**ANSWER: Offerors shall only propose on the sites listed in the Statement of Work. No other sites will be considered.**

**71.** In APPENDIX D: Key Personnel, one of the personnel listed is a Design Engineer. Can you define this role? Are you referring to the Designer of Record (DOR)?

**ANSWER: The Design Engineer is the same as the Designer of Record.**

**72.** Appendix A 6.6.2: How will any delays in review of 50% submittals impact project schedule?

**ANSWER: Reference APPENDIX F – D-B PROJECT SCHEDULES**

**73.** Will this project be considered tax exempt?

**ANSWER: Price proposals shall include all taxes (Reference FAR 52.229-3). It is the responsibility of the contractor to determine the applicable taxes and rates to include in their Firm-Fixed Price.**