

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE	PAGE OF PAGES 1   6
2. AMENDMENT/MODIFICATION NO. 0003		3. EFFECTIVE DATE Dec 23, 2009	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)	
6. ISSUED BY		CODE N69450	7. ADMINISTERED BY (If other than Item 6)		CODE
NAVFAC SOUTHEAST, IPT SC, AJAX ST, PO BOX 30, BLD 135, JACKSONVILLE FL 32212-0030 ROBERT.WOOLWINE@NAVY.MIL (904) 542-6325					
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)			(X)	9A. AMENDMENT OF SOLICITATION NO.	
			<input checked="" type="checkbox"/>	SOW#0014 WORKORDER 792150	
				9B. DATED (SEE ITEM 11) Nov 25, 2009	
				10A. MODIFICATION OF CONTRACT/ORDER NO.	
			<input type="checkbox"/>	10B. DATED (SEE ITEM 13)	
CODE		FACILITY CODE			

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:  
 (a) By completing items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION ( Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

P196 VEHICLE MAINTENANCE FACILITY, NWS CHARLESTON, SC. RFP FOR SOW #0014, WORK ORDER #792150, MACC N69450-08-D-1779/1780/1781/1782 & 09-D-1760.

continued on page 2.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR		16B. UNITED STATES OF AMERICA	
15C. DATE SIGNED		16C. DATE SIGNED	
(Signature of person authorized to sign)		(Signature of Contracting Officer)	

## SUMMARY OF CHANGES

**Government Responses to Requests for Information / changes to the RFP are posted below:**

Q22. Because of the majority of the bid preparation time occurs over the holidays, it will be extremely difficult to obtain bids from subcontractors and vendors. Will the government consider a 10 day extension to the due date?

**A22. Proposal due date is hereby changed to 18 January 2010, 2:00 pm (ET).**

Q31. In Section 01 45 00.05 20, DESIGN AND CONSTRUCTION QUALITY CONTROL, Paragraph 1.2: Design Quality Control Plan is a required submittal. This is not a difficult plan to prepare (we have prepared and submitted several); however, there is some language in this same section of the SOW that appear to be contrary to the Standard Operating Procedure for our QCP. In Paragraph 1.4.2 it is noted that one of the responsibilities of the Commissioning Authority is to "lead the design quality control actions and to be responsible for the design integrity, professional design standards, and all design services required." We typically use an in - house quality control manager (with QC experience) to fulfill this role. The QC manager is not ordinarily certified by a "recognized Building Commissioning Organization" as required in Paragraph 1.4.2b (LEED requirements for the Commissioning Authority). It also would not make sense for somebody not employed by the design firm or the construction manager (see PROJECT PROGRAM, Part 3, Paragraph 2.3.3) to be responsible for all design services.

**A31. CHANGE TO:**

**PART 2/SECTION 01 45 00.05 20**

**Replace section 01 45 00.05 20 in the RFP with new section 01 45 00.05 20 attached.**

Q43. In the PROJECT PROGRAM, Part 3, Chapter 6, Paragraph B2010 it is stated that "a pre - cast concrete water table shall be provided to match existing adjacent to Reserve Center structure". What is a precast water table? Can we get some dimensions desired, and a basis of design?

**A43. CHANGE TO:**

**PART 3/CHAPTER 6/PAGE 35**

**B20 EXTERIOR CLOSURES**

**B2010 EXTERIOR WALLS**

**A pre-cast concrete coping shall be provided to match existing adjacent Reserve Center structure.**

Q49. In the PROJECT PROGRAM, Room Information Sheets, some rooms call for "solid steel doors and frames" can this be clarified? This seems excessive.

A49. CHANGE TO:

**PART 3/CHAPTER 5/ROOM REQUIREMENTS**

Uniformat Level 4#	Uniformat Title	Description	Quantity	Size	Remarks
<b>Vehicle Maintenance Bays</b>					
B2030	Exterior Doors	Personnel Doors	2	3' - 0" x 7' - 0"	Provide insulated hollow metal door and frame. Finish hardware to include heavy duty mortise lockset.
<b>Tools and Publications Room</b>					
C1020	Interior Doors	Passage Doors		3.5' - 0" x 7' - 0"	Provide insulated hollow metal door and frame. Finish hardware to include heavy duty mortise lockset. Passage door width must meet or exceed 42" to accommodate the common #1 toolkit.
<b>Parts Room</b>					
C1020	Interior Doors	Passage Doors		3' - 0" x 7' - 0"	Provide hollow metal door and frame. Finish hardware to include heavy duty mortise lockset. Undercut door.
<b>Janitor's Closet</b>					
C1020	Interior Doors	Passage Doors		3' - 0" x 7' - 0"	Provide hollow metal door and frame. Finish hardware. Undercut door.
<b>Motor Transportation Office</b>					
B2030	Exterior	Passage		3' -	Provide insulated

	<b>Doors</b>	<b>Doors and Glazed Openings</b>		0" x7' - 0"	hollow metal doors and frames. Finish hardware to include heavy duty mortise lockset. Glazed openings frame to match door. All glazing shall be clear fixed wire glass.
<b>C1020</b>	<b>Interior Doors</b>	<b>Passage Doors</b>		3' - 0" x7' - 0"	Provide insulated hollow metal door and frame. Finish hardware to include heavy duty mortise lockset.
<b>Offices</b>					
<b>C1020</b>	<b>Interior Doors</b>	<b>Passage Doors</b>		3' - 0" x7' - 0"	Provide hollow metal door and frame. Finish hardware to include heavy duty mortise lockset. Undercut door.
<b>Air Compressor Room</b>					
<b>B2030</b>	<b>Exterior Doors</b>	<b>Passage Doors</b>		3' - 0" x7' - 0"	Provide insulated hollow metal door and frame. Finish hardware to include heavy duty mortise lockset.
<b>Storage Room</b>					
<b>C1020</b>	<b>Interior Doors</b>	<b>Passage Doors</b>		3' - 0" x7' - 0"	Provide hollow metal door and frame. Finish hardware to include heavy duty mortise lockset. Undercut door.
<b>Mechanical/Telecomm/Electrical</b>					
<b>B2030</b>	<b>Exterior Doors</b>	<b>Passage Doors</b>		3' - 0" x7' - 0"	Provide insulated hollow metal door and frame. Finish hardware to include heavy duty mortise lockset.

<b>Men' s Head</b>					
<b>C1020</b>	<b>Interior Doors</b>	<b>Passage Doors</b>		<b>3' - 0" x 7' - 0"</b>	<b>Provide hollow metal door and frame. Finish hardware. Undercut door.</b>
<b>Women' s Head</b>					
<b>C1020</b>	<b>Interior Doors</b>	<b>Passage Doors</b>		<b>3' - 0" x 7' - 0"</b>	<b>Provide hollow metal door and frame. Finish hardware. Undercut door.</b>

Q51. The room data sheet for the Motor Transportation Office calls for a 4'x14' high window, which is also shown as such on the exterior elevations. However, the Room data sheet also indicates that an acoustical ceiling tile ceiling shall be installed at 9'-0" a.f.f. in the Motor transportation office. Therefore the top 5' of the window system will be above the finishes ceiling height in the office area - is the intention to have the top few panes be spandrel glass, or is it acceptable to lower the 4'x14' high window, to 4'x9' to meet the scheduled ceiling height?

A51. CHANGE TO:

**PART 3/CHAPTER 5/ROOM REQUIREMENTS**

<b>Uniformat Level 4#</b>	<b>Uniformat Title</b>	<b>Description</b>	<b>Quantity</b>	<b>Size</b>	<b>Remarks</b>
<b>Motor Transportation Office</b>					
<b>B2020</b>	<b>Exterior Windows</b>	<b>Glazed Openings</b>		<b>4' - 0" x 7' - 4" Overall</b>	<b>Provide day lighting and views to front of building.</b>

Q53. In the Project Program Part 3 Chapter 3 Page 14, section 3.2.8 Physical Security, the rfp calls for passive vehicle barriers 25 meters from the VMF at the main driveway and at 9th Street. In Part 3 Chapter 6/ESP Page 63, Section G204004 Security Structures the RFP call for an Active Barrier System. Which system is desired?

If the Active Barrier System is desired, it will be necessary for the "dilemma zone", and warning signs be on 10th Street. Will work outside the project limits on 10th Street be allowed?

For either system, will measures to prevent vehicles from circumventing the barriers be necessary? (i.e. trenches or berms around the perimeter).

*A53. CHANGE TO:*

**Delete the requirement for the active barrier system and use the passive system as stated in Section 3.2.8.**

**Therefore, delete the first two paragraphs of the requirements for an active barrier system in Part 3 Chapter 6\ESP Page 63, Section G204004 Security Structures. Replace with the following:**

**"Provide a passive barrier system including bollards, posts, guardrails, ditches, and cable reinforced fence.**

**Each bollard shall withstand a 10,000 pound (4536 kg), vehicle at impact speed of 40 mph (65 kph), with a maximum bollard deflection or vehicle penetration of 20 feet (6 m). The cable reinforced fence shall be designed for a 4000 lb (1814 kg) vehicle traveling at 40 mph (64 kph) with a maximum penetration of 40 feet (12.2 meters)."**

All other terms and conditions of the solicitation remain unchanged.

ACKNOWLEDGEMENT OF THIS AMENDMENT IS REQUIRED WITH YOUR PROPOSAL.

(End of Summary of Changes)

SECTION 01 45 00.05 20

DESIGN AND CONSTRUCTION QUALITY CONTROL  
11/07

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E 329 (2008) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2008) Safety -- Safety and Health Requirements

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED-NC (2002; R 2005) Leadership in Energy and Environmental Design™ Green Building Rating System for New Construction (LEED-NC)

1.2 SUBMITTALS

The use of a "G" following a submittal indicates that a Government approval action is required. Submit the following in accordance with Section 01 33 10.05 20 DESIGN SUBMITTAL PROCEDURES and Section 01 33 00.05 20 CONSTRUCTION SUBMITTAL PROCEDURES.

SD-01 Preconstruction Submittals

Design Quality Control (DQC) Plan; G

Submit a DQC Plan prior to the Post Award Kickoff Meeting.

Construction Quality Control (CQC) Plan; G

Submit a Construction QC Plan prior to start of construction.

Commissioning Plan; G

Submit a Commissioning Plan within 60 days of approval of CxAuthority.

SD-07 Certificates

Preliminary Inspections and Final Acceptance Testing; G

Final Life Safety/Fire Protection Certification; G

IBC Special Inspections Certification; G

SD-11 Closeout Submittals

Summary Commissioning Report; G

Training Course Outline; G

### 1.3 QC PROGRAM REQUIREMENTS

Establish and maintain a QC program that is administered by a Design and Construction Quality Control organization, using Quality Control (Design and Construction) Plans, Commissioning Plans and Reports, meetings, a Coordination and Mutual Understanding Meeting, three phases of control, submittal review and approval, testing, completion inspections, and QC certifications and documentation necessary to provide design, materials, equipment, workmanship, fabrication, construction and operations which comply with the requirements of this Contract. The QC program shall cover on-site and off-site work. No construction work or testing may be performed unless the QC Manager is on the work site.

#### 1.3.1 Mutual Understanding Meeting

The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration, requirements & procedures, coordination of activities to be performed, and the coordination of the contractor's management, production and QC personnel. At the meeting, the contractor will explain in detail how the three phases of quality control will be implemented for each DFOW.

#### 1.3.2 Design and Construction Quality Control Plans

The Contractor shall provide a project specific Design Quality Control (DQC) Plan and Construction Quality Control (CQC) Plan, for review and approval by the Government. The Contractor shall perform no design until the DQC Plan is approved and no construction until the CQC Plan is approved. The Contractor's plan shall include the following:

- a. The QC organization for this contract, including member resumes.
- b. A letter from an officer of the company designating the QC Manager, Alternate QC Manager, DQC Manager, Commissioning Authority, and their authority.
- c. QC Manager qualifications.
- d. DQC Manager qualifications.
- e. List of Definable Features of Work (DFOW) including list of design submittal packaging. DFOW is a task that is separate and distinct from other tasks and has control requirements and work crews unique to the task.
- f. For the CQC Plan, a plan to implement the "Three Phases of Control" for each DFOW.
- g. For the CQC Plan, a testing Plan, log and list of personnel and accredited laboratories that will perform tests. Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of the Certificate of Accreditation and Scope of Accreditation with the testing plan. Coordinate this testing Plan with the

Commissioning Plan verification testing requirements to avoid duplication of effort.

- h. Submittal Log including design submittals, listing personnel who will review submittals and noting submittals for Government review.
- i. Procedures for submitting and reviewing variations prior to submission to the Government.
- j. As a part of the Contractor's CQC plan, a statement of Special Inspections shall be prepared by the Designer of Record (DOR) describing a complete list of materials and work requiring special inspections, the inspections to be performed and any applicable quality assurance plans and structural observations. The Contractor's plan shall implement the applicable requirements of the International Building Code (IBC), Chapter 17 "Structural Tests and Special Inspections." The plan shall include a listing of the individuals, approved agencies or firms that will be retained for conducting the required special inspections accompanied by a description of individual inspector's experience and a copy of all required certifications. Structural tests and special inspections, as outlined in Chapter 17 of the IBC, shall be conducted by individuals and agents that are under the direct supervision of a Registered Design Professional (RDP) and meet the requirements of ASTM E 329.
- k. A plan for assuring the proper design, construction, installation of all life safety and fire protection features across all disciplines and trades. Examples of life safety and fire protection features include, but are not limited to, water distribution systems including fire pumps and fire hydrants, fire resistive assemblies such as fire rated walls/partitions and spray-applied fire proofing of structural components, fire alarm and detection systems, fire suppression and standpipe systems, means of egress components, emergency and exit lighting fixtures. As a part of the plan, a statement of Special Inspections shall be prepared by the Fire Protection Engineer Designer of Record (DOR) describing a complete list of materials and work requiring special inspections, the inspections to be performed and any applicable quality assurance plans and fire protection observations. The plan will include a listing of the individuals, approved agencies or firms that will be retained for conducting the required special inspections accompanied by a description of individual inspector's experience and a copy of all required certifications.
- l. For the DQC plan, submit a formal Communication Plan that indicates the frequency of design meetings and what information is covered in those meetings, key design decision points tied to the Network Analysis Schedule and how the DOR plans to include the Government in those decisions, peer review procedures, interdisciplinary coordination, design review procedures, comment resolution, etc.

The Communication Plan will emphasize key decisions and possible problems the Contractor and Government may encounter during the design phase of the project. Provide a plan to discuss design alternatives and design coordination with the stakeholders at the key decision points as they arise on the project. Identify individual stakeholders and suggested communication methods that will be employed to expedite and facilitate each anticipated critical decision. Communication methods may include: Concept Design Workshop, over-the-shoulder review meetings, presentation at client's office, lifecycle cost analysis presentation,

technical phone conversation, and formal review meeting. The design portion of the Communication Plan must be written by the DQC Manager and confirmed during the Post Award Kick off Partnering. Update the Communication Plan at every Partnering meeting.

- m. For the DQC Plan, procedures for insuring the design documents are submitted in accordance with UFC 1-300-09N, *Design Procedures* and other procedures to ensure disciplines have been properly coordinated to eliminate conflicts.
- n. For the DQC Plan, a list of design subcontractors and the scope of the work which each firm will accomplish.

### 1.3.3 Commissioning Plan

The Contractor shall provide a project specific Commissioning Plan for review and acceptance by the Government. Develop and submit the Commissioning Plan to define the on-site activities and roles and responsibilities for commissioning all building systems required by the Project Program paragraph entitled, Building Commissioning. The Commissioning Plan shall be updated as information changes during the project. The Plan shall include all items required by the LEED-NC version 2.2 and shall include the following:

- a. Commissioning Authority qualifications and experience.
- b. A description of the Commissioning Team's roles and responsibilities as well as organizational relationships with the Contractor's QC Manager, DQC Manager, and verification and testing personnel.
- c. A listing of all systems required to be commissioned.
- d. A description of all commissioning process activities. Include the sequence and schedule for starting and balancing air distribution systems to ensure construction materials, such as architectural finishes, are installed under the appropriate environmental conditions. Also address the procedure that will be used to "dry out" the structure.
- e. A procedures and schedule for functional performance tests of all systems to be commissioned. The Commissioning Authority shall be present for all functional performance tests. Coordinate this schedule with the QC Plan testing requirements to avoid duplication of effort.
- f. A procedure and schedule detailing training sessions for Government personnel. Training sessions are to address maintenance and operation of systems required to be commissioned.

### 1.3.4 Summary Commissioning Report

The Commissioning Authority shall provide a Summary Commissioning Report upon completion of the performance verification items. The Summary Commissioning Report shall include all items required by LEED-NC version 2.2 and shall include the following:

- a. Executive Summary of the commissioning process including results and observations of the commissioning program.

- b. A history of deficiencies identified and their resolution. Indicate outstanding issues to be resolved.
- c. Commissioned systems performance test results and evaluations.

#### 1.4 QC ORGANIZATION

The QC Manager shall manage the QC organization and shall report to an officer of the firm and shall not be subordinate to the Project Superintendent or the Project Manager.

##### 1.4.1 QC and Alternative QC Manager

QC and Alternative QC Manager qualifications:

- a. Complete the course entitled "Construction Quality Management (CQM) for Contractors." and shall maintain a current certificate.
- b. Ten years of combined experience as a Superintendent, QC Manager, Project Manager, or Project Engineer on similar size and type construction contracts, and at least two years experience as a QC Manager.
- c. Familiar with requirements of USACE EM 385-1-1, and experience in the areas of hazard identification and safety compliance.

QC and Alternative QC Manager responsibilities:

- a. Participate in the Post Award Kick-off, Partnering, Preconstruction, Design Development, and Coordination and Mutual Understanding Meetings.
- b. Implement the "Three Phase of Control" plan for each DFOW and notify the Contracting Officer at least 3 business days in advance of each Preparatory and Initial Phase meeting. Submit respective checklists to the Contracting Officer the next business day.
- c. Ensure that no construction begins before the DOR has finalized the design for that segment of work, and construction submittals are approved as required.
- d. Inspect all work and rework, using International Conference of Building Officials certified QC specialists as applicable, to ensure its compliance with contract requirements. Maintain a rework log.
- e. Immediately stop any segment of work, which does not comply with the contract and plans and specifications, and direct the removal and replacement of any defective work.
- f. Remove any individual from the site who fails to perform their work in a skillful, safe and workmanlike manner or whose work does not comply with the contract plans and specifications.
- g. Prepare daily QC Reports.
- h. Ensure that Contractor Production Reports are prepared daily.

- i. Hold weekly QC meetings with the DQC Manager, Commissioning Authority, DOR (or representative), Superintendent and the Contracting Officer; participation shall be suitable for the phase of work. Distribute minutes of these meetings.
- j. Ensure that design and construction submittals are reviewed and approved, as required by the contract, prior to allowing material on site and work to proceed with these items. Maintain a submittal log.
- k. Update As-built drawings daily, maintaining up-to-date set on site.
- l. Maintain a testing plan and log. Ensure that all testing is performed in accordance with the contract. Review all test reports and notify the Contracting Officer of all deficiencies, along with a proposal for corrective action.
- m. Maintain rework log on site, noting dates deficiency identified, and date corrected.
- n. Certify and sign statement on each invoice that all work to be paid under the invoice has been completed in accordance with contract requirements.
- o. Perform Punch-out and participate in Pre-final and Final acceptance Inspections. Submit list of deficiencies to the Contracting Officer for each inspection. Correct all deficiencies prior to the Final inspection. Notify Contracting Officer prior to final inspection to establish a schedule date acceptable by the Contracting Officer.
- p. Ensure that all required keys, operation and maintenance manuals, warranty certificates, and the As-built drawings are correct and complete, in accordance with the contract, and submitted to the Contracting Officer.
- q. Assure that all applicable tests, special inspections, and observations required by the contract are performed.
- r. Coordinate all factory and on-site testing, Testing Laboratory personnel, QC Specialists, and any other inspection and testing personnel required by this Contract.
- s. Notify the Contracting Officer of any proposed changes to the QC plan.
- t. Retain a copy of approved submittals at project site, including Contractor's copy of approved samples.
- u. Update the Performance Assessment Plan as described in the UFGS section 01 31 19.05 20, Post Award Meetings and discuss monthly at a QC meeting.

#### 1.4.2 DQC Manager

The DQC Manager shall be a member of the QC organization, shall coordinate actions with the QC Manager, and shall not be subordinate to the Project Superintendent or the Project Manager. DQC Manager qualifications:

- a. A minimum of 5 years experience as a design Architect or Engineer

on similar size and type designs /or design-build contracts. Provide education, experience, and management capabilities on similar size and type contracts.

b. Be a registered professional engineer or architect with an active registration. Provide proof of registration as part of the resume submittal package.

DQC Manager responsibilities:

a. Be responsible for the design integrity, professional design standards, and all design services required.

b. Be a member of the Designer of Record's (DOR) firm.

c. Be responsible for development of the design portion of the QC Plan, incorporation and maintenance of the approved Design Schedule, and the preparation of DQC Reports and minutes of all design meetings.

d. Participate in the Post Award Kick-Off, all design planning meetings, design presentations, partnering, and QC meetings.

e. Implement the DQC plan and shall remain on staff involved with the project until completion of the project.

f. Be cognizant of and assure that all design documents on the project have been developed in accordance with the Contract, and have been properly coordinated.

g. Develop the submittal register. Coordinate with each DOR to determine what items need to be submitted, and who needs to approve.

h. Provide QC certification for design compliance.

i. Certify and sign statement on each invoice that all work to be paid to the DOR under the invoice has been completed in accordance with the contract requirements.

j. Prepare weekly DQC Reports that documents the work the design team accomplished that week.

#### 1.4.3 Commissioning Authority

Commissioning Authority qualifications:

The Commissioning Authority shall be a member of the QC organization, shall coordinate actions with the QC Manager, shall not be subordinate to the Project Superintendent or the Project Manager, and shall report findings directly to the Government. The Commissioning Authority may also act as the DQC Manager if all DQC Manager qualifications are met. The Commissioning Authority selected shall meet the requirements of LEED-NC with the following additional qualifications:

- a. Be certified by a recognized Building Commissioning Organization. Acceptable minimum certifications are "Certified Cx Agent" from the Associated Air Balance Council (AABC); "Certified Building Cx Professional" from the Association of Energy Engineers (AEE);

"Certified Cx Professional (CxP)" from the Building Commissioning Association (BCA); or "Commissioning Process Authority Professional" or "Commissioning Process Manager" from the University of Wisconsin College of Engineering.

- b. Have documented Commissioning Authority experience in at least two building projects. Provide proof of commissioning experience as part of the Commissioning Plan.

Commissioning Authority responsibilities:

- a. Be responsible for development of the Commissioning Plan, the Summary Commissioning Report, and minutes of all commissioning meetings.
- b. Participate in the Post Award Kick-Off, all design planning meetings, design presentations, partnering, and QC meetings.
- c. Review the Request for Proposal (RFP) for energy and sustainability goals, system expectations, O&M requirements, training expectations, and construction quality expectations.
- d. Review the Basis of Design and ensure the RFP requirements are met.
- e. Ensure commissioning requirements are incorporated into the construction documents.
- f. Be responsible for implementation and updating of the Commissioning Plan.
- g. Be responsible for development of systems functional testing procedures.
- h. Ensure pre-functional installation inspections are performed on all systems indicated to be commissioned in accordance with the Commissioning Plan and Contract documents.
- i. Verify systems performance of all systems indicated to be commissioned in accordance with the Commissioning Plan and Contract documents.
- j. Report any deficiencies in installation or performance of all systems indicated to be commissioned.
- k. Coordinate all training issues and validate that the testing and training requirements of this contract are accomplished.

#### 1.4.4 QC Specialists

QC Specialists shall assist and report to the QC Manager and may perform production related duties but must be allowed sufficient time to perform their assigned quality control duties. QC Specialists are required to attend the Coordination and Mutual Understanding Meeting, QC meetings and be physically present at the construction site to perform the three phases of control and prepare documentation for each definable feature of work in their area of responsibility at the frequency specified below.

##### 1.4.4.1 Fire Protection QC Specialist

The Fire Protection QC Specialist shall be a U.S. Registered Fire Protection Engineer (FPE) and shall be an integral part of the Prime Contractor's Quality Control Organization. This FPE shall have no business relationships (owner, partner, operating officer, distributor, salesman, or technical representative) with any fire protection equipment device manufacturers, suppliers or installers for any such equipment provided as part of this project. The Fire Protection Designer of Record may serve as the lead Fire Protection QC Specialist, provided the following qualifications are met.

- a. **Qualifications/Experience:** The FPE shall have obtained their professional registration by successfully completing the Fire Protection Engineering discipline examination. This FPE shall have a minimum of 5 years full time and exclusive experience in every aspect of facility design and construction as it relates to fire protection, which includes, but is not limited to, building code analysis, life safety code analysis, design of automatic detection and suppression systems, passive fire protection design, water supply analysis, and a multi-discipline coordination reviews, and construction surveillance.
- b. **Area of Responsibility:** The FPE is responsible for assuring the proper construction and installation of life safety and fire protection features across all disciplines and trades. The FPE shall be responsible for assuring that life safety and fire protection features are provided in accordance with the design documents, approved construction submittals, and manufacturer's requirements. Examples include, but are not limited to, water distribution systems including fire pumps and fire hydrants, fire resistive assemblies such as spray-applied fire proofing of structural components and fire rated walls/partitions, fire alarm and detection systems, fire suppression and standpipe systems, emergency and exit lighting fixtures, etc.
- c. **Construction Surveillance:** The FPE shall visit the construction site as necessary to ensure life safety and fire protection systems are being constructed, applied, and installed in accordance with the approved design documents, approved construction submittals, and manufacturer's requirements. Frequency and duration of the field visits are dependent upon particular system components, system complexity, and phase of construction. At a minimum, field visits shall occur just prior to installation of suspended ceiling systems to inspect the integrity of passive fire protection features and fire suppression system piping, and required performance verification testing of all life safety and fire protection systems identified below and in Part 4.
  - (1) **Preliminary Inspections and Final Acceptance Testing:** FPE shall personally witness all preliminary inspections of fire alarm/detection and suppression systems. Once preliminary inspections have been successfully completed, the FPE shall submit a signed certificate to the QC Manager that systems are ready for final inspection and testing. The Naval Facilities Engineering Command Fire Protection Engineer will witness formal tests and approve all systems before they are accepted. The QC Manager shall submit the request for formal inspection at least 30 days prior to the date the inspection is to take place. The QC manager shall provide 10 days advance notice to the Contracting Officer and the activity Fire Inspection Office of scheduled final inspections.
  - (2) **Final Life Safety/Fire Protection Certification**

Documentation: The FPE shall provide certification that all life safety and fire protection systems have been inspected and, in the FPE's professional judgment, have been installed in accordance with the contract documents, approved submittals, and manufacturer's requirements. This certification shall summarize all life safety and fire protection features, and shall bear the professional seal of the fire protection engineer.

### 1.5 THREE PHASES OF CONTROL

The Three Phases of Control shall adequately cover both on-site and off-site work and shall include the following for each DFOW.

#### 1.5.1 Preparatory Phase

Notify the Contracting Officer at least two work days in advance of each preparatory phase meeting. The meeting shall be conducted by the QC Manager and attended by the Project Superintendent, QC Specialists, and the foreman responsible for the DFOW. The DQC Manager shall also attend if required by structural tests and special inspections, as outlined in Chapter 17 of the IBC and the DQC Plan. When the DFOW will be accomplished by a subcontractor, that subcontractor's foreman shall attend the preparatory phase meeting. Document the results of the preparatory phase actions in the Preparatory Phase Checklist. Perform the following prior to beginning work on each DFOW:

- a. Review each paragraph of the applicable specification sections;
- b. Review the Contract drawings;
- c. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required;
- d. Review the testing plan and ensure that provisions have been made to provide the required QC testing;
- e. Examine the work area to ensure that the required preliminary work has been completed;
- f. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data;
- g. Discuss the specific controls used in construction methods, construction tolerances, workmanship standards, and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each DFOW; and
- h. Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted.

#### 1.5.2 Initial Phase

Notify the Contracting Officer at least two work days in advance of each initial phase. When construction crews are ready to start work on a DFOW, conduct the initial phase with the Project Superintendent, QC Specialists, and the foreman responsible for that DFOW. The DQC Manager shall also attend if required by structural tests and special inspections, as outlined

in Chapter 17 of the IBC and the DQC Plan. Observe the initial segment of the DFOW to ensure that the work complies with Contract requirements. Document the results of the initial phase in the daily CQC Report and in Initial Phase Checklist. Repeat the initial phase for each new crew to work on-site, or when acceptable levels of specified quality are not being met. Perform the following for each DFOW:

- a. Establish the quality of workmanship required;
- b. Resolve conflicts;
- c. Ensure that testing is performed by the approved laboratory, and
- d. Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.
- e. Ensure manufacturer's representative has performed necessary inspections, if required.

#### 1.5.3 Follow-Up Phase

Perform the following for on-going work daily, or more frequently as necessary, until the completion of each DFOW and document in the daily CQC Report:

- a. Ensure the work is in compliance with Contract requirements;
- b. Maintain the quality of workmanship required;
- c. Ensure that testing is performed by the approved laboratory; and
- d. Ensure that rework items are being corrected.

#### 1.5.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW is resumed after substantial period of inactivity, or if other problems develop.

#### 1.5.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least two weeks prior to the start of the preparatory and initial phases.

#### 1.6 COMPLETION INSPECTIONS

The Contractor shall perform the necessary prefinal inspections, compile punchlists, and correct deficiencies. Notify the Contracting Officer 5 calendar days prior to the date a prefinal inspection can be held. Notify the Contracting Officer at least 14 calendar days prior to the date a final acceptance inspection can be held. The Government will perform final inspection to verify that the facility is complete and ready to be occupied. All items previously identified on the prefinal punchlist will have been corrected and acceptable.

### 1.7 TRAINING

The Commissioning Authority shall provide a comprehensive project-specific Government personnel training program for the systems of the facility specified in the technical specifications of this Contract. The core of this training will be based on manufacturer's recommendations and the operation and maintenance support information (OMSI) provided as a part of this Contract. Training shall include classroom discussion as well as hands on maintenance, replacement of typical components and repair type maintenance training for parts typically replaced or repaired in the field, such as:

1. Domestic water pressure boosting system
2. Plumbing systems, including temperature actuated thermostatic water mixing valve
3. HVAC Systems, including chillers, boilers, heat pumps, air handling equipment, exhaust fans, fan coil units, hot and chilled water pumping system
4. Direct Digital Controls/Space Temperature Controls
5. Electrical systems, including transformers, diesel-electric generator sets, automatic transfer switches, primary switchgear, secondary switchgear, high-voltage switchgear, variable frequency drives, and frequency converters
6. Fire protection systems, including fire alarm systems and detection systems
7. Site mechanical utilities, including cathodic protection
8. Site electrical utilities, including substations, transformers, and pad mounted switchgear

Provide each trainee in the course a written training course outline. Submit outline for approval at least 90 calendar days prior to training session. Provide to the Contracting Officer two copies of the training video recording in VHS or DVD format. Confirm media format required with the using activity. The recording shall capture, in video and audio, all instructors training presentations including question and answer periods with the trainees.

### 1.8 DOCUMENTATION

Maintain current and complete records of on-site and off-site QC program operations and activities.

### PART 2 PRODUCTS

Not used.

### PART 3 EXECUTION

Not used.

-- End of Section --