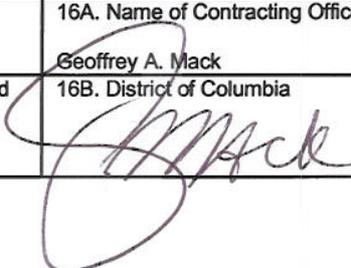


AMENDMENT OF SOLICITATION			1. Contract Number		Page of Pages		
					1	1	
2. Amendment/Modification Number M0001		3. Effective Date 05/25/07		4. Requisition/Purchase Request No.		5. Solicitation Caption Renovation & Modification of Engine Company No. 10	
6. Issued by: Construction, Design and Building Renovation Office of Contracting and Procurement 441 4 <sup>th</sup> Street, N.W., Suite 700S Washington, D.C. 20001				7. Administered By: (If other than line 6) Construction, Design and Building Renovation Office of Contracting and Procurement 441 4 <sup>th</sup> Street, N.W., Suite 700S Washington, D.C. 20001			
8. Name and Address of Contractor (No. street, city, county, state and zip code)				9A. Amendment of Solicitation No. DCFB-2007-B-0046			
				9B. Dated (See Item 11) May 25, 2007			
				10A. Modification of Contract/Order No.			
				10B. Dated (See Item 13)			
Code		TIN					
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input checked="" type="checkbox"/> is not extended. Offerors 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) completing Items 8 and 15, and returning <u>2</u> copies of the amendment; (b) acknowledging receipt of this amendment on each copy of the offer submitted; or (c) separate letter or fax which includes a reference to the solicitation and amendment number. 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 you desire to change an offer already submitted, such change may be made by letter, telegram or fax, provided each letter or telegram 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 APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
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.							
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 27 DCMR, Chapter 36, Section 3601.2.							
C. This supplemental agreement is entered into pursuant to authority of: 27 DCMR, § 1517							
D. Other (Specify type of modification and authority)							
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is required <input type="checkbox"/> is not required to sign this document and return <u>2</u> copies to the issuing office.							
14. Description of Amendment/Modification (Organized by UCF Section headings, including solicitation/contract subject matter where feasible.)							
<b>Specifications for the Renovation &amp; Modernization of Engine Company No. 10 are hereby amended as follows:</b>							
1. The attached section <u>16511</u> , <b>Interior Lighting</b> is hereby incorporated into the specifications of solicitation number DCFB-200-B-0046.							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A remain unchanged and in full force and effect.							
15A. Name and Title of Signer (Type or print)				16A. Name of Contracting Officer			
				Geoffrey A. Mack			
15B. Name of Contractor		15C. Date Signed		16B. District of Columbia		16C. Date Signed	
(Signature of person authorized to sign)						5/25/07	
				(Signature of Contracting Officer)			

**INTERIOR LIGHTING**  
**SECTION 16511**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes the following:
1. Interior lighting fixtures with lamps and ballasts.
  2. Lighting fixtures mounted on exterior building surfaces.
  3. Emergency lighting units.
  4. Exit signs.
  5. Accessories, including florescent fixture dimmers.
- B. Related Sections include the following:
1. Division 16 Section "Wiring Devices" for manual wall-box dimmers for incandescent lamps.
  2. Division 16 Section "Lighting Control Devices" for automatic control of lighting, including time switches, photoelectric relays, occupancy sensors and multi-pole lighting, relays and contactors.
  3. Division 16 Section "Dimming Controls" for architectural dimming systems.

**1.3 DEFINITIONS**

- A. BF: Ballast factor. Ratio of light output of a given lamp(s) operated by the subject ballast to the light output of the same lamp(s) when operated on an ANSI reference circuit.
- B. CRI: Color rendering index.
- C. CU: Coefficient of utilization.

- D. LER: Luminaire efficiency rating, which is calculated according to NEMA LE 5. This value can be estimated from photometric data using the following formula:
  - 1. LER is equal to the product of total rated lamp lumens times BF times luminaire efficiency, divided by input watts.
- E. RCR: Room cavity ratio.

#### 1.4 SUBMITTALS

- A. Product Data: For each type of lighting fixture scheduled, arranged in order of fixture designation. Include data on features, accessories, finishes and the following:
  - 1. Physical description of fixture, including dimensions and verification of indicated parameters.
  - 2. Emergency lighting unit battery and charger.
  - 3. Fluorescent and high-intensity-discharge ballasts.
  - 4. Air and Thermal Performance Data: For air-handling fixtures. Furnish data required in "Submittals" Article in Division 15 Section "Diffusers, Registers and Grilles."
  - 5. Sound Performance Data: For air-handling fixtures. Indicate sound power level and sound transmission class in test reports certified according to standards specified in Division 15 Section "Diffusers, Registers and Grilles."
  - 6. Lamps.
- B. Shop Drawings: Show details of non-standard or custom fixtures. Indicate dimensions, weights, methods of field assembly, components, features and accessories.
- C. Wiring Diagrams: Power, signal and control wiring.
- D. Coordination Drawings: Reflected ceiling plan(s) and other details, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:
  - 1. Suspended ceiling components.
  - 2. Structural members to which lighting-fixture suspension systems will be attached.
  - 3. Other items in finished ceiling, including the following:
    - a. Air outlets and inlets.

- b. Speakers.
  - c. Sprinklers.
  - d. Access panels.
4. Perimeter moldings:
- E. Samples for Verification: For interior lighting fixtures designated for sample submission in the Interior Lighting Fixture Schedule.
- 1. Lamps: Specified units installed.
  - 2. Ballast: 120-V models of specified ballast types.
  - 3. Accessories: Cords and plugs.
- F. Product Certificates: For each type of ballast for dimmer-controlled fixtures, signed by product manufacturer.
- G. Source quality-control test reports.
- H. Field quality-control test reports.
- I. Operation and Maintenance Data: For lighting equipment and fixtures to include in emergency, operation and maintenance manuals. In addition to items specified in Division 1 Section "Operation and Maintenance Data," including the following:
- a. Catalog data for each fixture. Include the diffuser, ballast and lamps installed in that fixture.
- J. Warranties: Special warranties specified in this Section.

## **1.5 QUALITY ASSURANCE**

- A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7.
- 1. Interior lighting fixtures with lamps and ballasts.
- B. Electrical Components, Devices and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction and marked for intended use.
- C. Comply with NFPA 70.

- D. NFPA 101 Compliance: Comply with visibility and luminance requirements for exit signs.
- E. Mockups: Provide lighting fixtures for room or module mockups. Install fixtures for mockups with power and control connections.
  - 1. Obtain Architect's approval of fixtures for mockups before starting installations.
  - 2. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - 3. Approved fixtures in mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## **1.6 COORDINATION**

- A. Coordinate layout and installation of lighting fixtures and suspension system with other construction that penetrates ceilings or is supported by them, including HVAC equipment, fire-suppression system, and partition assemblies.

## **1.7 WARRANTY**

- A. Special Warranty for Emergency Lighting Unit Batteries: Manufacturer's standard form in which manufacturer of battery-powered emergency lighting unit agrees to repair or replace components of rechargeable batteries that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: 10 years from date of Substantial Completion: Full warranty shall apply for first year, and prorated warranty for the remaining nine years.
- B. Special Warranty for Fluorescent Ballasts: Manufacturer's standard form in which ballast manufacturer agrees to repair or replace ballasts that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period for Electronic Ballasts: Five years from date of Substantial Completion.
- C. Manufacturer's Special Warranty for T8 Fluorescent Lamps: Manufacturer's standard form, made out to Owner and signed by lamp manufacturer agreeing to replace lamps that fail in materials or workmanship, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
  - 1. Warranty Period: One year from date of Substantial Completion.

## **1.8 EXTRA MATERIALS**

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Lamps: 10 for every 100 of each type and rating installed. Furnish at least one of each type.
  - 2. Plastic Diffusers and Lenses: 1 for every 100 of each type and rating installed. Furnish at least one of each type.
  - 3. Battery and Charger Data: One for each emergency lighting unit.
  - 4. Ballasts: 1 for every 100 of each type and rating installed. Furnish at least one of each type.
  - 5. Globes and Guards: 1 for every 20 of each type and rating installed. Furnish at least one of each type.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

### **2.2 FIXTURES AND COMPONENTS, GENERAL**

- A. The specified fixtures shall be used as the basis of design.

### **2.3 HIGH-INTENSITY-DISCHARGE LAMPS**

- A. Low-Pressure-Sodium Lamps: NEMA C78.41.
- B. Metal-Halide Lamps: ANSI C78.1372, wattage and burning position as scheduled, CRI 65 (minimum), and color temperature 4000.

## **2.4 FIXTURE SUPPORT COMPONENTS**

- A. Comply with Division 16 Section "Basic Electrical Materials and Methods" for channel- and angle-iron supports and nonmetallic channel and angle supports.
- B. Single-Stem Hangers: 1/2-inch (13-mm) steel tubing with swivel ball fittings and ceiling canopy. Finish same as fixture.
- C. Twin-Stem Hangers: Two, 1/2-inch (13-mm) steel tubes with single canopy designed to mount a single fixture. Finish same as fixture.
- D. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated, 12 gauge (2.68 mm).
- E. Wires For Humid Spaces: ASTM A 580/A 580M, Composition 302 or 304, annealed stainless steel, 12 gauge (2.68 mm).
- F. Rod Hangers: 3/16-inch- (5-mm-) minimum diameter, cadmium-plated, threaded steel rod.
- G. Hook Hangers: Integrated assembly matched to fixture and line voltage and equipped with threaded attachment, cord, and locking-type plug.
- H. Aircraft Cable Support: Use cable, anchorages, and intermediate supports recommended by fixture manufacturer.

## **2.5 FINISHES**

- A. Fixtures: Manufacturers' standard, unless otherwise indicated.
  - 1. Paint Finish: Applied over corrosion-resistant treatment or primer, free of defects.
  - 2. Metallic Finish: Corrosion resistant.

## **2.6 LIGHTING CONTROL DEVICES**

- A. Dimming Ballast Controls: Sliding-handle type with on/off control; compatible with ballast and having light output and energy input over the full dimming range.

## **2.7 SOURCE QUALITY CONTROL**

- A. Provide services of a qualified, independent testing and inspecting agency to factory test fixtures with ballasts and lamps; certify results for electrical ratings and photometric data.

- B. Factory test fixtures with ballasts and lamps; certify results for electrical ratings and photometric data.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Fixtures: Set level, plumb, and square with ceilings and walls. Install lamps in each fixture.
- B. Suspended Fixture Support: As follows:
  - 1. Pendants and Rods: Where longer than 48 inches (1200 mm), brace to limit swinging.
  - 2. Stem-Mounted, Single-Unit Fixtures: Suspend with twin-stem hangers.
  - 3. Continuous Rows: Use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of fixture chassis, including one at each end.
  - 4. Continuous Rows: Suspend from cable.
- C. Adjust aimable fixtures to provide required light intensities.

### **3.2 CONNECTIONS**

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

### **3.3 FIELD QUALITY CONTROL**

- A. Inspect each installed fixture for damage. Replace damaged fixtures and components.
- B. Verify normal operation of each fixture after installation.
- C. Test for Emergency Lighting: Interrupt power supply to demonstrate proper operation. Verify normal transfer to battery power source and retransfer to normal.
- D. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

- E. Corroded Fixtures: During warranty period, replace fixtures that show any signs of corrosion.

**END OF SECTION**