

ADDENDUM NO. 1

**TO THE DRAWINGS AND PROJECT MANUAL
FOR
FIRE STATION
RACE TRACK LANE, LAKE CITY, FL
COLUMBIA COUNTY BOARD OF COUNTY COMMISSION**

ARCHITECT'S PROJECT NO. 0715

CRAIG SALLEY & ASSOCIATES, ARCHITECTS, GAINESVILLE, FLORIDA

This Addendum shall be considered part of the Contract Documents for the above mentioned Project as though it has been issued at the same time and incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original Contract Documents, this Addendum shall govern and take precedence. **Bidders are hereby notified that they shall acknowledge receipt of this Addendum on their Bid Proposal Form.**

1. GENERAL:

- A. A Mandatory Pre-Bid Conference was held at the Columbia County Courthouse beginning at 10:00 A.M. on Wednesday, July 23, 2008. Only those General Contractors, or their representatives in attendance, will be allowed to submit a Bid for this project. The following General Contractors were in attendance:

COMPANY	CONTACT	TELEPHONE
Billco	William F. Pagend	386-322-2123
Concept Construction	Jason Parker	386-755-8887
Core Construction	Leslie Lawrence	904-399-1033
Don Reed Construction	Don Reed	386-752-4072
East Coast Construction, LLC	Shawn Snidler Mike Shearer	386-867-0845
Florida Fill & Grading	Clint Boone	386-755-2298
Florida Steel Contracting Corp.	Pat Riley	386-497-1069
GMC Construction	Danette Dorsey	352-380-0318
Gray Construction	Kelly Stone	352-463-3939
Hashman Construction	Mark Hashman	904-739-1122
Inter-Tech Systems	Orlando Cruz	407-876-1658
J. A. Standridge	Tina Rush	352-475-1530
J. K. Lockwood	Matthew Bunce	352-628-2567
J.L. Dupree Construction	Lamar Dupree Curt McDonald	386-754-5678
Joyner Construction	Richard Wagner	352-332-8171

General Contractor's List Continued:

COMPANY	CONTACT	TELEPHONE
Little & Williams	Mark Little	386-755-3139
Mandese White Construction, Inc.	Stephen Bender	352-332-9272
Mil-Con	Matt Haluck	904-317-5601
Music Construction	Allen Music	386-658-1598
Newman Construction	Don Newman	904-783-2260
Nooney Construction	Rick Nooney	904-260-5124
Quality Plus Services	Woody Woodard	386-623-6689
RAM Construction and Development, LLC	Mark Phillips	850-671-7267
ROTCI	Richard O. Tillis	386-496-1360
Simque Construction , LLC	David Simque	386-755-7787
Slack Construction	Ron Webb	352-622-9568
Wade Willis Construction	Wade Willis	386-623-3331
Worth Construction	Jason Worth	386-364-9330

In addition to the General Contractors listed above, interested subcontractors in attendance at the Pre-Bid Conference were present as follows:

COMPANY	CONTACT	TELEPHONE
Associated Construction Services, Inc.	Eric Smith	386-590-0891
Country Comfort Heating & Air	Chris Williams	386-752-5841
Dale's Excavation	Dale Peeler	386-755-1699
Earthworx	Herb Horne	352-339-5844
Florida Rock	Shane Crawford	352-494-1243
Mangrum Plumbing Inc.	Andrew Mangrum	386-623-4237
Metal Erection & Buildings	Randy Sherouse	386-487-0135
Miro Electric	Jim Flanaga	386-792-3888
North Florida Acoustics	Jim Steiner	386-867-0049
PMH Group (Electrical)	Glen Sidwell	863-287-9420
R&E Environmental Services	Thomas Alvarez	866-496-3867
Standard Plumbing & Supplies Co.	Mark Dawson	386-755-1950
Triple "S" Plumbing	David Skinner Tommy Skinner	352-473-0083
Zabatt Inc.	Juan Alfaro	352-484-4151

B. For clarification, the generator, transfer switch and ice machine are Owner furnished and Contractor installed.

2. **ADVERTISEMENT FOR BID:** Delete the reference to Owner Furnished carpet and vinyl base. **All floor finishes and base shall be furnished and installed by the Contractor.**

3. **PROJECT MANUAL, STATEMENT OF CONTRACTOR'S QUALIFICATION FORM:** For clarification: Item 17 can be left blank, since Section 00310 – LIST OF SUBCONTRACTORS OR SUPPLIERS, is sufficient and takes the place of this item. Note that Section 00310 must be completely filled out and turned in with the Proposal Form 00300.
4. **PROJECT MANUAL, SECTION 00100 – INSTRUCTIONS TO BIDDERS:**
 - A. Bidders are not required to submit the SWORN STATEMENT and the DRUG FREE WORKPLACE PROGRAM REQUIREMENTS forms with their bid. These forms shall be submitted by the successful bidder at the time the bonds, builder's risk and insurance policies are submitted.
 - B. Refer to Paragraph 1.16 Building Permit. **The County will waive all permit fees on this project.**
5. **PROJECT MANUAL, SECTION 00900 – DIRECT PURCHASE PROCEDURES:** Delete this section in its entirety. There will be no direct purchase items in this project.
6. **PROJECT MANUAL, SECTION 02750 – CHAIN LINK FENCING AND GATES:** Delete this section in its entirety. There will be no chain link fencing or gates in this project.
7. **PROJECT MANUAL, SECTION 04340 – REINFORCED UNIT MASONRY SYSTEM:**
 - A. Refer to Paragraph 1.04 and delete Paragraph A. SECTION 07165 – DAMPPROOFING. There is no dampproofing required in this project.
 - B. **Delete reference to Textured Coating on exterior unit masonry in Section 09900 – PAINTING.** The split faced CMU shall be water proofed on the exterior per Section 07175 – WATER REPELLENT COATING, which is added as Attachment "A" to this Addendum.
8. **PROJECT MANUAL, SECTION 06416 – PREFABRICATED MILLWORK:** The shelving shown in the Storage Rooms shall be equal to 82/182 wall-mounted shelving system, 16" deep minimum, with heavy-duty, double-track standards and brackets as manufactured by Knappe & Vogt Manufacturing Company, 2700 Oak Industrial Dr N.E., Grand Rapids, MI, 49505, (616)459-3311, www.kv.com
9. **PROJECT MANUAL, SECTION 08300 – SPECIAL DOORS:** Refer to Paragraph 2.02, EXTERIOR ELECTRICALLY OPERATED ROLL-UP DOOR. Add Item 5. **Overhead Door Manufacturer is an approved door manufacturer for this project.**
10. **PROJECT MANUAL, SECTION 09300 – HARD TILE:** For clarification: Unglazed ceramic mosaic floor tile and base shall be DalTile Vitrostone 8" x 8".
11. **PROJECT MANUAL, SECTION 09900 – PAINTING:** **Delete all reference to Textured Coating on exterior unit masonry in this section.** The split faced CMU shall be water proofed on the exterior, per Section 07175 – WATER REPELLENT COATING, which is added as Attachment "A" to this Addendum.

12. **PROJECT MANUAL, SECTION 10350 – FLAGPOLE AND FLAG:** Refer to Paragraph 2.01, Subparagraph A. and add the following manufacturer as approved on this project: PoleTech, Flag Pole Manufacturer, 97 Gnarled Hollow Road, P.O. Box 715, East Setauket, New York, 11733, Toll Free Tel: 800-633-6733; Tel: 631-689-5525; Fax: 631-689-5528; Email: info@poletech.com; Web: www.poletech.com
13. **PROJECT MANUAL, SECTION 13120 – PREFABRICATED METAL BUILDING:**
- A. Add the following Metal Building Manufacturers as approved to bid on this project:
1. Gulf States Manufacturers
 2. Dean Steel Buildings, Inc.
 3. Western Steel Building Systems
 4. Sunward Steel Buildings
 5. Star Building Systems
 6. Liberty Building Systems
- B. For clarification, the metal building siding shall be manufacturer's standard metal siding, not standing seam. The siding shall comply with design wind load requirements specified.
14. **PROJECT MANUAL, SECTION – 15061 - STEEL PIPE AND FITTINGS:** Revise the natural gas piping from yellow polyethylene piping to black steel piping rated for gas service. Prime and paint all gas piping gloss yellow, under Section 09900 – PAINTING, Paragraph 2.03, Subparagraph C. 4.
15. **PROJECT MANUAL, SECTION – 15064 - PLASTIC PIPE AND FITTINGS:** System description: Revise Paragraph A. 2. to be Schedule 40 solid wall PVC piping in lieu of Schedule 80 PVC.
16. **PROJECT MANUAL, SECTION – 15424 – DOMESTIC WATER HEATERS – ELECTRIC:** Change the voltage of the electric water heater WH-1 to 208 volt, 3 phase.
17. **PROJECT MANUAL, SECTION – 15450 – PLUMBING FIXTURES:** Fixture P-1, Standard Toilet, shall be revised to flush valve type, elongated bowl, equal to American Standard “Modera”, Model No. 2234.015. Provide H.C. toilet with ADA compliant trim and flush valves. Flush valves shall be equal to Sloan Royal #111, chrome plated, polished exterior. **Revise water supply lines serving toilets to one inch (1”) in size.**
18. **PROJECT MANUAL, SECTION – 15500 – FIRE PROTECTION:** Refer to PART 3 EXECUTION – INSTALLATION and add Item P. as follows: After the fire sprinkler system has been flushed and sterilized, the system shall be tested and certified by a State Certified Fire Sprinkler Inspector. Provide three copies of the certification as part of the Final Close Out Documents.
19. **PROJECT MANUAL, SECTION 16720 – FIRE DETECTION AND ALARM:** Refer to ACCEPTABLE MANUFACTURERS. Delete all acceptable manufacturers except NOTIFIER, No. 7 on the list. **The Fire Detection and Alarm System shall be as manufactured by Notifier NFS-320.** NO SUBSTITUTIONS will be accepted. Provide all equipment and accessories as outlined in this Section for a complete, Code Compliant System. **The fire alarm system shall be State Certified prior to acceptance of the project.** Provide three copies of the Certification as part of the Final Close Out Documents. Refer to Attachment “B” and replace this section in its entirety.

20. **DRAWINGS, SHEET C-2:** The City of Lake City will extend the gas line to within five feet of the building at the tie-in point of the building gas service line. The City will provide and connect the regulator and meter. The Contractor shall make the connection from the City gas line, regulator and meter to the building gas service line.
21. **DRAWINGS, SHEET SA-1 - ARCHITECTURAL SITE PLAN:** Sodding and Seeding shall be provided at 10'-0" minimum beyond all new construction, including concrete sidewalks and asphalt paving, and at the new retention area.
22. **DRAWINGS, SHEET A-9:** Refer to the LEGEND on this sheet and change all references to 4" thick batt insulation to 6" thick batt insulation. See SECTION 07210 – BUILDING INSULATION, for the specifications for batt insulation.
23. **DRAWINGS, SHEET P-1 – SUPPLY WATER PIPING PLAN:** Revise all references to "C.I." (cast iron) piping to Schedule 40 solid wall PVC. Revise water supply lines serving toilets to one inch (1") in size.
24. **DRAWINGS, SHEET P-4:** Change all automatic trap primers to passive type trap primers equal to J.R. Smith Model 2698, satin chrome cast bronze P-Trap with ground joint outlet. At all A.D.A. Lavatory locations, insulate trap and trap primer assemblies per A.D.A. Regulations.
25. **DRAWINGS, SHEET E-2.2:** Refer to LIGHTING FIXTURES SCHEDULE and add Lithonia as an acceptable manufacturer for fixtures as appropriate for the application. All Lithonia fixtures shall meet or exceed all the requirements of the fixtures specified.
26. **DRAWINGS, SHEET E-3.1 – ELECTRICAL POWER PLAN – APPARATUS BAYS:** The cooling only thermostat shall be equal to a 1E78-140 cooling only non programmable thermostat. Provide with a welded wire locking cover assembly. The control transformer shall be a White Rogers 90-T96F2, 90 va control transformer with a 120/240 volt primary and a 12/24 volt secondary. Provide 12" x 8" x 6" deep hinged over, gasketed control box with an SQ D Model 9999SC8 manual hand off auto switch.

END OF WRITTEN ADDENDUM

ATTACHMENT “A”

SECTION 07175

WATER REPELLENT COATING

PART 1 GENERAL

1.01 WORK INCLUDED: This Section covers the Work necessary to furnish and install, complete, the following:

- A. Water repellent coating for all exterior CMU split faced and smooth faced surfaces.

1.02 RELATED WORK SPECIFIED AND PERFORMED UNDER OTHER SECTIONS

- A. SECTION 04340 - REINFORCED UNIT MASONRY SYSTEM

1.03 QUALITY ASSURANCE

- A. Applicator: Minimum 2 years experience on projects of similar scope.

1.04 SUBMITTALS: Submittals during construction shall be made in accordance with SECTION 01300, SUBMITTALS. In addition, the following specific information shall be provided:

- A. Include details of product description, limitations to coating, cautionary procedures required during application, and chemical properties, including percentage of solids.
- B. Submit manufacturer's printed application instructions.
- C. Applicator's Qualification Affidavit: Submit water repellent coating applicator's affidavit of qualification compliance.

1.05 TRIAL APPLICATION

- A. Apply coating according to manufacturer's directions to approximately 100 square feet of CMU.
- B. Verify that CMU is coated with sufficient material to effectively repel moisture from surface.
- C. Verify that application of coating to CMU will produce no surface stains.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials or equipment under provisions of SECTION 01600, MATERIAL AND EQUIPMENT.
- B. Deliver materials in original sealed containers, clearly marked with manufacturer's name, brand name, and type of material. Store materials in area where temperatures are not less than 50 degrees F or over 85 degrees F, unless otherwise authorized by manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with SECTION 01600, MATERIAL AND EQUIPMENT.
- B. Acceptable Manufacturers:
 - 1. Emusol
 - 2. Hydorzo - Clear 16
 - 3. Chemprobe
 - 4. Prime - A Pell 200
 - 5. Flood - V.I.P. 9100

PART 3 EXECUTION

3.01 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply coating in rainy conditions or within 3 days after surfaces become wet from rainfall or other moisture.
- B. Do not apply coating when low temperature of 40 degrees F or less is predicted within a period of 24 hours after application.

3.02 PROTECTION

- A. Protect plants and vegetation which might be affected by coating fumes.
- B. Protect all adjacent surfaces not to be coated.

3.03 INSPECTION

- A. Examine surfaces to receive coating to assure conditions are satisfactory for application, CMU is clean and ready to receive coating. Do not apply coating to CMU that is stained, needs pointing up or otherwise is not ready to receive coating.
- B. Verify that mortar joints found to be unsound, hollow, or otherwise defective, have been raked out to a depth of 1/2 inch and tuck pointed with mortar.
- C. Verify that cracks which exceed 1/64 inch wide have been filled with pointing mortar.

3.04 SURFACE PREPARATION

- A. Clean CMU surfaces to remove dust, dirt, oil, wax, efflorescence, and other foreign materials, in accordance with coating manufacturer's instructions.
- B. Remove dust and dirt from CMU surfaces by lightly scrubbing with detergent solution and thoroughly rinsing with clean water.
- C. Allow 3 days' drying time following washing down of CMU surfaces.

3.05 APPLICATION

- A. Apply coating in strict accordance with manufacturer's directions with approved low pressure airless spray equipment with a course nozzle, or as directed by manufacturer.
- B. **Apply coating materials in 2-coat application** at rates recommended by the manufacturer. Apply sufficient to obtain a surface run-down of 6 to 12 inches.
- C. Start application at top of wall and work down surface, keeping a wet edge at all times.
- D. Avoid letting coating dry between passes.

3.06 ADJUST AND CLEAN

- A. Clean spillage and overspray from adjacent surfaces as recommended by coating manufacturer.

3.07 FIELD QUALITY CONTROL

- A. After coating has dried, spray coat surfaces with water. Proper coating means water will bead up and not be absorbed by masonry.
- B. Recoat surfaces that show water absorption at no cost to Owner.

END OF SECTION

ATTACHMENT “B”

SECTION 16720

FIRE DETECTION AND ALARM SYSTEMS

GENERAL

WORK INCLUDED

- A. Includes But Not Limited To:
 - 1. Furnish and install alarm and detection system as described in Contract Documents.
 - 2. Furnish and install raceway, cable and conductors, boxes, and miscellaneous items necessary for complete system.
- B. Related Sections:
 - 1. Section 16100 Basic Materials and Methods.

SYSTEM DESCRIPTION

- A. Automatic fire alarm system consisting of control panel, power supplies, alarm initiating devices, notification appliances, and off-site communicating devices. System shall be non-coded, zoned or addressable, and monitored for integrity of conductors.
- B. Class B (Style B) initiating device circuits and Class A (Style Z) notification appliance circuits including end-of-line devices.
- C. Performance Requirements:
 - 1. Operation of manual station or automatic activation of any smoke detector, heat detector, or sprinkler flow device shall:
 - a. Cause system notification appliances to operate. Indicate zone in alarm on control panel.
 - b. Initiate off-site alarm notification system.
 - c. Indicate zone or device in alarm on remote annunciator (future requirement).
 - d. Initiate HVAC shutdown.

2. Alarm may be silenced by switch in control panel.
 - a. When alarms are silenced, zone indicating red LEDs on control panel and remote annunciator shall remain indicated until operated device is returned to normal and control panel is manually reset.
3. Green pilot LED, or other visual annunciation, shall normally be on indicating that system is receiving normal power. In addition, failure of normal power be annunciated.
4. Trouble alarm and annunciation, operating together, shall signal trouble condition.
 - a. Following conditions shall signal trouble condition:
 - (1) Failure of normal power.
 - (2) Opens or short circuits on indicating circuits.
 - (3) Disarrangements in system wiring.
 - (4) Control panel circuit board removal.
 - (5) Ground faults.
5. Trouble silencing switch shall silence trouble alarm, but visual annunciation shall remain on until system is restored to normal. As ring-back feature, trouble alarm shall resound as reminder to return silencing switch to normal position.
6. Supervisory LED, separate from trouble LED, and alarm, operating together, shall signal operation of supervisory device, such as control valve tamper, low air pressure, and low temperature switches. Alarm silence switch shall operate in same manner as trouble alarm.

SUBMITTALS

- A. Shop Drawings:
 - 1, Prepared by authorized factory representative and including:
 - a. Single line diagram of actual system. Typical riser diagrams are not acceptable
 - b. Complete wiring diagrams.
 2. Manufacturer's original catalog data and descriptive information on each piece of equipment to be used.
- B. Quality Assurance / Control: Certificate of completion, from Manufacturer's Representative, in accordance with NFPA 72 requirements.
- C. Closeout:
 1. Operations And Maintenance Manual Data:
 - a. Provide operating and maintenance instructions for each item of equipment submitted under Product Data. Provide instruction manual from Manufacturer that explains what is to be done in event of various indications.
 - b. Include copy of approved shop drawings.

QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. System shall meet approval of authority having jurisdiction (AHJ). NEC and local ordinances and regulations shall govern unless more stringent requirements are specified.
- B. Equipment, devices, and cable shall be UL or Factory Mutual listed for use in fire alarm systems.

OWNER'S INSTRUCTIONS

- A. Instruct Owner's representative in proper operation and maintenance procedures.

PART 2 PRODUCTS

COMPONENTS

- A. Equipment and accessories furnished under this Specification shall be standard products of single manufacturer, or include written statement by Notifier confirming compatibility of components and inclusion of these components under system warranty. Control panel shall be equal to Notifier Model #NFS-320, NO SUBSTITUTIONS.
- B. Control Panel:
 - 1. Listed under UL Standard 864.
 - 2. Solid-state modular design with flush or semi-flush mounting.
 - 3. Control functions shall be behind locked door with annunciating devices visible through door. Single key shall operate all keyed functions in system. Provide three keys.
 - 4. Each zone shall be electrically supervised in accordance with wiring style specified.
 - 5. Provide integral surge protection.
 - 6. Make provisions for connection to off-site alarm notification system. Provide separate dry contacts for alarm and supervisory/trouble alarms.
 - 7. Power Supply:
 - a. Provide indication of normal power supply.
 - b. Loss of normal power shall activate trouble alarm.
 - c. Meet requirements of and size in accordance with UL Standard 1481 and NFPA 72.
 - d. Include standby batteries, charger, and automatic transfer equipment.
 - 8. Visual Annunciation:
 - a. Separate indication on each zone for alarm, trouble, or supervisory conditions.
 - b. Visual indication shall be by LED lights or other easily identifiable method.
 - c. On zoned system, permanently custom label zones by zone name, not number.
 - c. Fault or trouble condition on any zone shall not affect any other zone.

9. Audible Horn Alarm Annunciation:
 - a. Provide separate and distinct alarm signals for alarm and trouble conditions.
 - b. Alarm signal shall also operate strobe lights, if specified.
 - c. Provide alarm silence switches at control panel.
 - d. Trouble alarm shall be horn integral to control panel.
10. Supervisory alarm may be same audible alarm as trouble alarm, but with separate visual annunciation.
11. Off-Site Alarm Notification System
 - a. Provide two telephone lines from telephone terminal board to fire alarm control panel. Owner will arrange for monitoring connection contract.

C. Alarm Initiating Devices:

1. Smoke Detectors (including Duct Smoke Detectors):
 - a. Photoelectric type.
 - b. Listed under UL Standard 268.
 - c. Provide visual indication of alarm on unit when normally pulsed supervisory LED glows continuously.
 - d. Sampling tube for duct detectors shall extend across entire width of duct.
2. Heat Detectors:

Non-settable 200 deg F fixed temperature.
Provide visible indication that device has operated.
Listed under UL Standard 521.
3. Manual Fire Alarm Boxes:
 - a. Non-coded and double-action requiring two actions to initiate alarm. Breakable glass type is not approved.
 - b. Box shall mechanically latch when actuated and require key to reset. Key shall match control panel door lock.

D. Notification Appliances:

1. Combination Horn / Strobe:
 - a. Wall mounted flush or semi-flush.
 - b. Non-coded audible output of 90 dB minimum at 10 feet.
 - c. Integrally mounted flashing light unit with block letters 'FIRE.' Minimum light intensity of 15/75 candela and flash rate between one and three Hertz.
 - d. Listed under UL Standards 464 and 1971.
2. Strobe Only:
 - a. Wall mounted flush or semi-flush.
 - b. Integrally mounted flashing light unit with block letters 'FIRE.' Minimum light intensity of 15/75 candela and flash rate between one and three Hertz.
 - c. Listed under UL Standard 1971.
 - d. Color: White

E. Accessory Devices:

1. Notification Appliance Protective Devices: Provide wire guard covers for appliances installed in Apparatus Bay.
2. HVAC shut-down relays.
3. Remote indicator light for each duct detector.

MANUFACTURER

A. Notifier, NO SUBSTITUTIONS. Model #NFS-320.

B. Contact Information:

Notifier, Northford, CT (800) 454-9779 or (203) 484-7161. www.notifier.com

EXECUTION

INSTALLATION

A. Install fire alarm and detection systems as indicated, in accordance with Equipment Manufacturer's written instructions, and complying with applicable portions of NEC, NFPA, and NECA's 'Standard of Installation.'

B. Mounting Heights:

1. Unless otherwise indicated, mount center of outlets or boxes at following heights above finish floor:
 - a. Fire alarm horns speaker/strobes: 90 inches
 - b. Fire alarm pull stations: 54 inches.
 - c. Remote annunciator panel: 60 inches.
 - d. Remote duct detector indicator light – 48”.
 - e. Locate fire alarm manual stations 24 inches minimum away from any light switch.
2. Identification:
 - a. Label zone indicators on control unit indicating location and type of initiating device, i.e., CORRIDOR SMOKE, VALVE TAMPER, AIR SYSTEM SMOKE, etc. Labels shall be engraved plastic laminate, or other permanent labeling system as supplied by Control Unit Manufacturer.
 - b. Post copy of wire identification list inside fire alarm panel door or other area accessible to fire alarm service personnel.
 - c. Print location of circuit disconnecting means inside panel.

C. Conductors:

1. Install conductors in conduit.
2. Fire alarm system conductors from different zones may be combined in common conduit. Make certain that raceway size and wire quantity, size, and type are suitable for equipment supplied and is within NEC standards. Label pull and junction boxes 'FIRE ALARM.' All fire alarm conduit and junction boxes shall be painted red.
3. Install conductors and make connections to water flow switches, valve tamper switches, low air pressure switches, and duct smoke detectors.
4. Loop wires through each device on zone for proper supervision. Tee-taps not permitted.
5. Minimum conductor size shall be 14 AWG unless otherwise specified.
6. Do not install ceiling mounted detectors within 36 inches of air discharge grilles.
7. Do not install manual fire alarm boxes close to light switches. Coordinate with other trades as required.
8. Mount Duct Smoke detectors in return air ducts of each HVAC unit as shown on the drawings.

FIELD QUALITY CONTROL

A. Manufacturer's Field Service:

1. Provide factory-trained representative to perform complete system testing in presence of Owner's representative and local fire department personnel upon completion of installation.
 - a. Test each initiating and annunciating device for proper operation, except fixed temperature heat detectors.
 - b. Test operation of trouble annunciation on each circuit.
 - c. Perform complete testing of control panel functions.

PROTECTION

1. Provide dust protection for installed smoke detectors until finish work is completed and building is ready for occupancy.
2. Protect conductors from cuts, abrasion and other damage during construction.

END OF SECTION