

COUNTY OF NEWBERRY

INVITATION FOR BIDS

Purchasing Department, Post Office Box 156, Newberry, SC 29108
Ph: (803) 321-2100 / Fax: (803) 321-2102

BID NUMBER: 2021-08 (re-id)

DATE: July 14, 2021


OPENING DATE AND TIME: August 10, 2021 @ 3:00 p.m.

SUBMITTAL ADDRESS: Newberry County Courthouse Annex, 1309 College Street,
Newberry (Hand Delivered)
Post Office Box 156, Newberry SC 29108
(US Postal Service Delivered)

PROCUREMENT FOR: Newberry County Detention Center Fire Alarm Replacement

Subject to the conditions, provisions and the enclosed specifications, sealed bids will be received at this office until the stated date and time and then publicly opened. Any bid received after the scheduled deadline, will be immediately disqualified. The County assumes no responsibility for the delivery of bids which are mailed. BID NUMBER MUST BE SHOWN ON THE OUTSIDE OF ENVELOPE.

DIRECT ALL INQUIRIES TO:



Crystal Waldrop, CPPB
Purchasing Director
Post Office Box 156
Newberry SC 29108

NOTICE TO BIDDERS: Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending the execution of the work under the conditions of this bid. The failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to this bid. All amendments to and interpretations of this solicitation shall be in writing and issued by the Purchasing Director of the County. Newberry County shall not be legally bound by an amendment or interpretation that is not in writing.

COUNTY OF NEWBERRY
Purchasing Office, 1309 College Street, Post Office Box 156, Newberry S.C. 29108
Ph: (803) 321-2100 / Fax: (803) 321-2102

BIDDERS SCHEDULE

BID NUMBER: 2021-08 (re-bid)

DATE: July 14, 2021

OPENING DATE AND TIME: August 10, 2021 @ 3:00 p.m.

OPENING LOCATION: Newberry County Courthouse Annex, Conference Room
1309 College Street
Newberry, SC 29108

PROCUREMENT: Newberry County Detention Center Fire Alarm Replacement

Base Bid: \$ _____

Acknowledgement of Addenda (if necessary):

***Bids shall be good for forty-five (45) days from the date of submittal.**

VENDOR: _____ **SIGNATURE:** _____

Name of Authorized Contact: _____

Email Address: _____

Address: _____

Phone Number: _____

Contractor's License #: _____

There will not be a site visit but one may be scheduled, if requested.

INSTRUCTIONS TO BIDDERS

1. Only one copy of bid is required unless otherwise specified.
2. Bids, amendments thereto or withdrawal request must be received by the time advertised for bid openings to be timely filed. It is the vendor's sole responsibility to ensure these documents are received by the purchasing office at the time indicated in the bid document.

PLEASE NOTE THE VENDOR IS ULTIMATELY RESPONSIBLE FOR VERIFYING THEY HAVE RECEIVED ANY/ALL ADDENDA PRIOR TO THE BID OPENING.

3. When specifications or descriptive papers are submitted with the bid, enter bidder's name thereon.
4. Submit your signed bid on the bidder's schedule provided. Show bid number on envelope as instructed and the bid name or description. Newberry County accepts no responsibility for unmarked or improperly marked envelopes.
5. Bidders must clearly mark as "Confidential" each part of their bid which they consider to be proprietary information that could be exempt from disclosure under Section 30-4-40 Code of Laws of South Carolina, 1976, as amended, (also known as the Freedom of Information Act). The County reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the County or its agents for its determination in this regard.
6. By submission of a bid, you are guaranteeing that all goods and services meet the requirements of the solicitation during the contract period.
7. Tie bids will be resolved in accordance with the provisions of the Newberry County Purchasing Ordinance.
8. A copy of the bidder's W-9 shall be included in the submission.

GENERAL PROVISIONS

1. The County of Newberry reserves the right to reject any and all bids, to cancel a solicitation, and to waive any technicality if deemed to be in the best interest of the County.
2. Unit prices will govern over extended prices unless otherwise stated in this bid invitation.
3. **PROHIBITION OF GRATUITIES:** South Carolina law and the Newberry County Purchasing Ordinance prohibit the giving of anything of value in return for favors or other preferential treatment in the purchasing process. Bidders should govern themselves accordingly.

4. **BIDDERS QUALIFICATION:**Bidders must, upon request of the county, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. The County reserves the right to make the final determination as to the bidder's ability to provide the products or services requested herein. Bidder determined to be irresponsible bidders are not allowed to bid to provide the County goods or services.
5. **BIDDERS RESPONSIBILITY:**Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending the execution of the work under the conditions of this bid. It is expected that this will sometimes require on-site observation. The failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to this bid or to the contract.
6. **AWARD CRITERIA:**The contract shall be awarded to the lowest responsible and responsive bidder(s) whose bid meets the requirements and criteria set forth in the Invitation for Bid. Award may be made to one or a multiple of bidders, whichever deems to be in the best interest of the County, or unless otherwise stated on the bidder's schedule.
7. **WAIVER:**The County reserves the right to waive any Instruction to Bidders, General or Special Provisions, General or Special Conditions, or specifications deviation if deemed to be in the best interest of the county.
8. **COMPETITION:**This solicitation is intended to promote competition. If any language, specifications, terms and conditions, or any combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the interested vendor to notify the Purchasing Director on in writing within five (5) days prior to the opening date. The solicitation may or may not be changed but a review of such notification will be made prior to the award.
9. **REJECTION:**Ambiguous bids which are uncertain as to terms, delivery, quantity, or compliance with specifications may be rejected or otherwise disregarded if such action is in the best interest of the County.
10. **RIGHT TO PROTEST:** Any prospective bidder, offeror, or contractor, who is aggrieved in connection with the solicitation of a contract shall protest in writing to the Purchasing Director within ten (10) calendar days of the date of issuance of the Invitation to Bid or other solicitation documents, whichever is applicable, or any amendment thereto, if the amendment is at issue. Any actual bidder, offeror, or contractor, who is aggrieved in connection with the intended award or award of a contract, shall protest in writing to the purchasing director within ten (10) calendar days of the notification of intent to award or statement of award.
11. **PROTEST PROCEDURE:** A protest shall be in writing, submitted to the purchasing director, and shall set forth the specific grounds of the protest with enough particularity to give notice to the issues to be decided.

GENERAL CONDITIONS

1. **DEFAULT:** In case of default by the contractor, the County reserves the right to purchase any or all items in default in the open market, charging the contractor with any excessive costs. Should such charge be assessed, no subsequent bids of the defaulting contractor will be considered until the assessed charge has been satisfied.
2. **NON-APPROPRIATION:** Any contract entered into by the County resulting from this bid invitation shall be subject to cancellation without damages or further obligation when funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period or appropriated year.
3. **HOLD HARMLESS AND INSURANCE:** The successful bidder shall indemnify and hold harmless the County of Newberry and all County officers, agents and employees against all suits or claims for personal injury or property damage resulting from, or arising from, the successful bidder's performance of the contract, as well as against any suits or claims of any character brought against the County or its agents or employees by reason of any claim of infringement of any patent, trade mark, trade dress, or copyright, including reimbursement to the County for all attorney's fees and court costs incurred by the County in defending itself or its agents or employees against any such claim or suit. **In addition, the successful bidder will maintain a public liability policy with minimum limits of \$500,000 per occurrence, or \$1,000,000 single limit, for damages arising from acts which occur during the contract period, with the County of Newberry named as an additional insured on the policy; the successful bidder shall also maintain workers compensation and vehicle liability insurance in the amounts required by statutory law.** Proof of such coverage will be provided upon demand or as otherwise provided in the bid specifications.
4. **CONTRACT ADMINISTRATION:** Questions or problems arising after award of this contract shall be directed to the Purchasing Director, P.O. Box 156, Newberry, SC 29108, or by calling 803-321-2100.
5. **FORCE MAJEURE:** The Contractor shall not be liable for any excess costs if the failure to perform the contract arises out of causes beyond the control and without fault or negligence of the contractor. Such causes may include, but are not restricted to acts of God or of a public enemy, acts of Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the contractor. If the failure to perform is caused by default of a subcontractor, and if such default arises out of causes beyond the control of both the contractor and subcontractor and without excess costs for failure to perform, unless the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the contractor to meet the required delivery schedule.

6. **PUBLIC RELEASE:** Contractor agrees not to refer to award of this contract in commercial advertising in such a manner as to state or imply that the products or services provided are endorsed or preferred by the User.
7. **QUALITY OF PRODUCT:** Unless otherwise indicated in this bid it is understood and agreed that any items offered or shipped on this bid shall be new, in first class condition, and without defect that all containers shall be new and suitable for storage or shipment, and that prices include standard commercial packaging and shipping to the specified destination in Newberry County. No demonstration models shall be sold as new, without prior written permission of the County.
8. **S.C. LAW CLAUSE:** Upon award of a contract under this bid, the person, partnership, association or corporation to whom the award is made must comply with the laws of South Carolina which require such person or entity to be authorized and/or licensed to do business with this State. Notwithstanding the fact that applicable statutes may exempt or exclude the successful bidder from requirements that it be authorized and/or licensed to do business in this State, by submission of this signed bid, the bidder agrees to subject himself to the jurisdiction and process of the courts of the State of South Carolina as to all matters and disputes arising or to arise under the contract and the performance thereof, including any questions as to the liability for taxes, licenses, or fees levied by the State.
9. **ASSIGNMENT:** No contract or its Provisions may be assigned, sublet, or transferred without the written consent of the Purchasing Director.
10. **AFFIRMATIVE ACTION:** The successful bidder will take affirmative action in complying with all Federal and State requirements concerning fair employment of the handicapped, and concerning the treatment of all employees, without regard or discrimination by reason of race, color, religion, sex, national origin or physical handicap.
11. **DELIVERIES:** All deliveries shall be FOB Destination. It is agreed by the parties hereto that delivery by the contractor to the common carrier does not constitute delivery to the County. Any claim for loss or damage shall be between the contractor and the carrier.
12. **APPROPRIATE S.C. SALES TAXES, FEES AND PERMITS** shall be included in the Vendor's base bid.
13. **PAYMENT TERMS:** Payment will be made monthly when proper invoicing has been presented to the County.

14. **BID BOND:** For each bid in excess of \$25,000.00 each bidder will submit with their bid a bond in the amount of 5% of the total price of the bid submitted. The bid bonds will be returned to the unsuccessful bidders once the county accepts the lowest most responsive bid. If the most responsive bidder fails to perform the responsibility of the bid within 10 days of the award, then the bid bond will be forfeited to the county as liquidated damages and the next lowest bidder will be awarded the bid. Bid bonds may be in the form of a surety, a cashier's check or an unconditional letter of credit in favor of Newberry County issued by a commercial bank in South Carolina.

15. **PERFORMANCE AND PAYMENT BONDS:** The chosen vendor will be required to submit to the County both a performance bond and payment bond in the amount of 100% of the contract price before commencing with the work. **Both bonds will be issued from a surety company with an "A" minimum rating of performance as stated in the most current publication of Best Key Rating Guide, Property Liability.**

16. **Compliance with The South Carolina Illegal Immigration Act:** By submitting an offer, Bidder certifies that it will comply with the applicable requirements of Title 8, Chapter 14 of the South Carolina code of Laws (originally enacted as Section 3 of The South Carolina Illegal Immigration act, 2008 S.C. Act No. 280) and agrees to provide upon request any documentation required to establish either: (a) the applicability of Title 8, Chapter 14 to Bidder and any subcontractor or sub-subcontractors; or (b) the compliance with Title 8, Chapter 14 by Bidder and any subcontractors or sub-subcontractors. Pursuant to Section 8-14-60, "A person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony and, upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both". Bidder agrees to include in any contracts with its sub-contractor's language requiring the subcontractors to (a) comply with the applicable requirements of Title 8, Chapter 14, and (b) include in any contracts with the sub-sub-contractor's language requiring the sub-subcontract to comply with the applicable requirements of Title 8, Chapter 14.

Scope of Work:

The Scope of work is detailed in the attached drawings and documents provided by Pond Engineering, attached, and incorporated into this solicitation.

This is a re-bid; therefore, the Addendum originally issued has been incorporated into this solicitation with the following information:

- The Detention Center is in the City of Newberry. Permits and business licenses must be obtained from their offices, at the bidder's expense.
- Work will be coordinated with the City Fire Marshal, State Fire Marshal and the Department of Corrections.
- Two complete tests of the system are required: The first will be after the project is completed and the second to be done one year later, prior to warranty expiration. Firmware is for two years.
- Question:
How are they to deal with new conduit and used existing conduit being painted red? ANSW: It is suggested that the Contractor can just mark, tape or spray paint to identify security conduits, not required. This is a benefit to the end user.

Site Visit (from original bid)

- A- **NOTE: Per CPT. Floyd an existing fire watch exists in this manned 24/7 facility. Therefore, in theory the entire existing system can be removed and the new system put in place using all existing conduits and boxes if that adequate fire watch stays in place.**
- B- Page FA001 under Fire Alarm notes #16 references the addition of new conduits will be ¾". Note that where existing conduits are abandoned, they will be used before installation of new ¾" conduits. This is the same for back boxes are to be re-used before abandoning in place.
- C- All doors in the secure area are manually opened in case of fire by the 24/7 watch.

SITE VISIT (continued)

Started in Mechanical Room and Sprinkler Room

- Open free runs are acceptable.

Training Room

- Second annunciator panel location
- Use exiting conduits, no new conduits.
- Q to DOC – Can this panel be temporarily taken down and if so how long and under what stipulations?
- Room is presently out of use due to water supply issues.

Booking Room

- Ceiling conduit above tile ceiling status.
- Existing equipment room is not a conditioned space
- Where to put fire alarm control panel? Keep it in Central Control Room
 - o If Contractor wants to locate it in Sergeants Room first door on left between sally port and Booking Room. This will require a new detail by Contractor with detail of plan.

Control Foyer

- Showed mechanical hall chase and ladder access into Booking Room Ceiling.

Control Room

Public Work Room

- Pointed out upper floor chase to common wall over Control Room.

Back to Sally Port

- Inspection of Mech. Closet and Electrical Room

Kitchen

- Hood
- Exposed conduit

Main Jail Block from Kitchen

- Showed AC Condenser leaks
- Showed typical space above ceiling tiles
- Any unused conduit can be abandoned in place to reduce costs

Minimum Security Block

- 1/2" conduits are too small can it be 3/4". See note B under Site Visit
 - o Problem occurs all new 3/4" conduit must be drilled and routed.
 - o Can 3/4" conduit be installed only where needed to meet code?
 - Abandoned old conduit in place and use EMT.

Maximum Security Area

- First room on right entered and examined for existing conditions.
- Smoke detectors in main hallway only not each room.

Laundry Room

- Pointed out gas used on dryers

Female Dorm

- Entered and examined for existing conditions.

Main Public Entrance Area

Courtroom

- Anything added here? Speaker strobe.

Back to Main Access Control Panel

- How is each access door handled if power is lost? Manually controlled in secure areas by guards. See CPT. Floyd for non-secured areas.
 - o Does every door have an individual door control panel and if so, mark it on drawings is requested? Are they in the ceiling? ANS: Not an issue in non-secured areas and will not be marked on plans.

SECTION 284621.11 - ADDRESSABLE FIRE-ALARM SYSTEMS

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 1. Addressable fire-alarm system.
 2. Fire-alarm control unit (FACU).
 3. Manual fire-alarm boxes.
 4. System smoke detectors.
 5. Duct smoke detectors.
 6. Fire-alarm notification appliances.
 7. Fire-alarm remote annunciators.
 8. Fire-alarm addressable interface devices.
 9. Digital alarm communicator transmitters (DACTs).

1.3 DEFINITIONS

- A. DACT: Digital alarm communicator transmitter.
- B. EMT: Electrical metallic tubing.
- C. FACU: Fire-alarm control unit.
- D. NICET: National Institute for Certification in Engineering Technologies.
- E. Voltage Class: For specified circuits and equipment, voltage classes are defined as follows:
 1. Control Voltage: Listed and labeled for use in remote-control, signaling, and power-limited circuits supplied by a Class 2 or Class 3 power supply having rated output not greater than 150 V and 5 A, allowing use of alternate wiring methods complying with NFPA 70, Article 725.
 2. Low Voltage: Listed and labeled for use in circuits supplied by a Class 1 or other power supply having rated output not greater than 1000 V, requiring use of wiring methods complying with NFPA 70, Article 300, Part I.

1.4 SEQUENCING AND SCHEDULING

- A. Existing Fire-Alarm Equipment: Maintain existing equipment fully operational until new equipment has been tested and accepted to the greatest extent possible. When new equipment is installed, label it "NOT IN SERVICE" until it is accepted. Remove labels from new equipment

when put into service, and label existing fire-alarm equipment "NOT IN SERVICE" until removed from building.

- B. Equipment Removal: After acceptance of new fire-alarm system, remove remainder of the existing disconnected fire-alarm equipment and wiring.

1.5 ACTION SUBMITTALS

- A. Approved Permit Submittal: Submittals must be approved by authorities having jurisdiction prior to submitting them to Engineer for Review. Submittals shall be prepared and stamped by a NICET Level III in Fire Alarm Design.
- B. Product Data: For each type of product, including furnished options and accessories.
 - 1. Include construction details, material descriptions, dimensions, profiles, and finishes.
 - 2. Include rated capacities, operating characteristics, and electrical characteristics.
- C. Shop Drawings: For fire-alarm system.
 - 1. Comply with recommendations and requirements in "Documentation" section of "Fundamentals" chapter in NFPA 72.
 - 2. Include plans, elevations, sections, and details, including details of attachments to other Work.
 - 3. Include details of equipment assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and locations. Indicate conductor sizes, indicate termination locations and requirements, and distinguish between factory and field wiring.
 - 4. Annunciator panel details as required by authorities having jurisdiction.
 - 5. Detail assembly and support requirements.
 - 6. Include voltage drop calculations for notification-appliance circuits.
 - 7. Include battery-size calculations.
 - 8. Include input/output matrix.
 - 9. Include performance parameters and installation details for each detector.
 - 10. Verify that each duct detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.
 - 11. Provide control wiring diagrams for fire-alarm interface to HVAC; coordinate location of duct smoke detectors and access to them.
 - a. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators.
 - b. Show field wiring and equipment required for HVAC unit shutdown.
 - c. Locate detectors in accordance with manufacturer's written instructions.
 - 12. Include voice/alarm signaling-service equipment rack or console layout, grounding schematic, amplifier power calculation, and single-line connection diagram.
 - 13. Include floor plans to indicate final outlet locations showing address of each addressable device. Show size and route of cable and conduits and point-to-point wiring diagrams.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For fire-alarm systems and components to include in emergency, operation, and maintenance manuals.

1. In addition, include the following:

- a. Comply with "Records" section of "Inspection, Testing and Maintenance" chapter in NFPA 72.
- b. Provide "Fire-Alarm and Emergency Communications System Record of Completion Documents" in accordance with "Completion Documents" Article in "Documentation" section of "Fundamentals" chapter in NFPA 72.
- c. Complete wiring diagrams showing connections between devices and equipment. Each conductor must be numbered at every junction point with indication of origination and termination points.
- d. Riser diagram.
- e. Device addresses.
- f. Record copy of site-specific software.
- g. Provide "Inspection and Testing Form" in accordance with "Inspection, Testing and Maintenance" chapter in NFPA 72, and include the following:
 - 1) Equipment tested.
 - 2) Frequency of testing of installed components.
 - 3) Frequency of inspection of installed components.
 - 4) Requirements and recommendations related to results of maintenance.
 - 5) Manufacturer's user training manuals.
- h. Manufacturer's required maintenance related to system warranty requirements.
- i. Abbreviated operating instructions for mounting at FACU and each annunciator unit.

B. Software and Firmware Operational Documentation:

1. Software operating and upgrade manuals.
2. Program Software Backup: On USB media
3. Device address list.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Extra Stock Material: Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Lamps for Remote Indicating Lamp Units: Quantity equal to 10 percent of amount installed, but no fewer than one unit.
2. Lamps for Strobe Units: Quantity equal to 10 percent of amount installed, but no fewer than one unit.
3. Smoke Detectors: Quantity equal to 10 percent of amount of each type installed, but no fewer than one unit of each type.
4. Detector Bases: Quantity equal to two percent of amount of each type installed, but no fewer than one unit of each type.

5. Keys and Tools: One extra set for access to locked or tamper-proofed components.
6. Audible and Visual Notification Appliances: One of each type installed. Including guards.
7. Fuses: Two of each type installed in system. Provide in box or cabinet with compartments marked with fuse types and sizes.

1.8 QUALITY ASSURANCE

A. Installer Qualifications:

1. Personnel must be trained and certified by manufacturer for installation of units required for this Project.
2. Installation must be by personnel certified by NICET as fire-alarm Level II technician.
3. Fire Alarm Submittals must be prepared by personnel certified by NICET as fire-alarm Level III technician.
4. Obtain certification by NRTL in accordance with NFPA 72.
5. Licensed or certified by authorities having jurisdiction.

1.9 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace fire-alarm system equipment and components that fail because of defects in materials or workmanship within specified warranty period.

1. Warranty Period: One year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ADDRESSABLE FIRE-ALARM SYSTEM

A. Description:

1. Noncoded, UL-certified, FM Global-placarded addressable system, with multiplexed signal transmission and voice-and-strobe notification for evacuation.

B. Performance Criteria:

1. Regulatory Requirements:

- a. Fire-Alarm Components, Devices, and Accessories: Listed, and labeled by a NRTL in accordance with NFPA 70 for use with selected fire-alarm system and marked for intended location and application.

2. General Characteristics:

- a. Fire-alarm signal initiation must be by one or more of the following devices:
 - 1) Manual stations.
 - 2) Smoke detectors.

NEWBERRY COUNTY DETENTION CENTER
FIRE ALARM REPLACEMENT

03/23/2021

- 3) Automatic sprinkler system water flow.
 - 4) Dry system pressure flow switch.
- b. Fire-alarm signal must initiate the following actions:
- 1) Continuously operate alarm notification appliances.
 - 2) Identify alarm and specific initiating device at FACU and remote annunciators.
 - 3) Transmit alarm signal to remote alarm receiving station.
 - 4) Record events in system memory.
- c. Supervisory signal initiation must be by one or more of the following devices and actions:
- 1) Valve supervisory switch.
 - 2) Duct smoke detectors.
 - 3) Low-air-pressure switch of dry-pipe sprinkler system.
 - 4) Zones or individual devices have been disabled.
 - 5) FACU has lost communication with network.
- d. System trouble signal initiation must be by one or more of the following devices and actions:
- 1) Open circuits, shorts, and grounds in designated circuits.
 - 2) Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
 - 3) Loss of communication with addressable sensor, input module, relay, control module, or remote annunciator.
 - 4) Loss of primary power at FACU.
 - 5) Ground or single break in internal circuits of FACU.
 - 6) Abnormal ac voltage at FACU.
 - 7) Break in standby battery circuitry.
 - 8) Failure of battery charging.
 - 9) Abnormal position of switch at FACU or annunciator.
 - 10) Voice signal amplifier failure.
- e. System Supervisory Signal Actions:
- 1) Identify specific device initiating event at FACU and remote annunciators.
 - 2) Record event in system memory.
 - 3) After time delay of 200 seconds transmit trouble or supervisory signal to remote alarm receiving station.
- f. Network Communications:
- 1) Provide network communications for fire-alarm system in accordance with fire-alarm manufacturer's written instructions.
 - 2) Provide network communications pathway per manufacturer's written instructions and requirements in NFPA 72 and NFPA 70.
- g. Device Guards:

NEWBERRY COUNTY DETENTION CENTER
FIRE ALARM REPLACEMENT

03/23/2021

- 1) Description: Welded wire mesh or plastic covering, of size and shape for, smoke detector, gong, or other device requiring protection.
 - a) Factory fabricated and furnished by device manufacturer.
 - b) Finish: Clear for plastic, or painted of color to match protected device.

h. Document Storage Box:

- 1) Description: Enclosure to accommodate standard 8-1/2-by-11 inch manuals and loose document records. Legend sheet will be permanently attached to door for system required documentation, key contacts, and system information. Provide two key ring holders with location to mount standard business cards for key contact personnel.
- 2) Material and Finish: 18-gauge cold-rolled steel; four mounting holes.
- 3) Color: Red powder-coat epoxy finish.
- 4) Labeling: Permanently screened with 1 inch high lettering "SYSTEM RECORD DOCUMENTS" with white indelible ink.
- 5) Security: Locked with 3/4 inch barrel lock. Provide solid 12 inch stainless steel piano hinge.

2.2 FIRE-ALARM CONTROL UNIT (FACU)

A. Description: Field-programmable, microprocessor-based, modular, power-limited design with electronic modules.

B. Performance Criteria:

1. Regulatory Requirements: Comply with NFPA 72 and UL 864.
2. General Characteristics:
 - a. System software and programs must be held in nonvolatile flash, electrically erasable, programmable, read-only memory, retaining information through failure of primary and secondary power supplies.
 - b. Include real-time clock for time annotation of events on event recorder and printer.
 - c. Provide communication between FACU and remote circuit interface panels, annunciators, and displays.
 - d. FACU must be listed for connection to central station signaling system service.
 - e. Provide nonvolatile memory for system database, logic, and operating system and event history. System must require no manual input to initialize in the event of complete power down condition. FACU must provide minimum 500-event history log.
 - f. Addressable Initiation Device Circuits: FACU must indicate which communication zones have been silenced and must provide selective silencing of alarm notification appliance by building communication zone.
 - 1) Addressable Control Circuits for Operation of Notification Appliances and Mechanical Equipment: FACU must be listed for releasing service.

- g. Fire-Alarm Annunciator: Arranged for interface between human operator at FACU and addressable system components including annunciation and supervision. Display alarm, supervisory, and component status messages and programming and control menu.
 - 1) Annunciator and Display: LCD, 80 characters, minimum.
 - 2) Keypad: Arranged to permit entry and execution of programming, display, and control commands.

- h. Alphanumeric Display and System Controls: Arranged for interface between human operator at FACU and addressable system components including annunciation and supervision. Display alarm, supervisory, and component status messages and programming and control menu.
 - 1) Annunciator and Display: LCD, two line(s) of 40 characters, minimum.
 - 2) Keypad: Arranged to permit entry and execution of programming, display, and control commands.

- i. Initiating-Device, Notification-Appliance, and Signaling-Line Circuits:
 - 1) Pathway Class Designations: NFPA 72, Class B.
 - 2) Pathway Survivability: Level 0.
 - 3) Install no more than 100 addressable devices on each signaling-line circuit.
 - 4) Install fault circuit isolators to comply with circuit performance requirements of NFPA 72 or with manufacturer's written instructions, whichever is more conservative.

- j. Smoke-Alarm Verification:
 - 1) Initiate audible and visible indication of "alarm-verification" signal at FACU.
 - 2) Activate approved "alarm-verification" sequence at FACU and detector.
 - 3) Record events by system printer.
 - 4) Sound general alarm if alarm is verified.
 - 5) Cancel FACU indication and system reset if alarm is not verified.

- k. Notification-Appliance Circuit:
 - 1) Audible appliances must sound in three-pulse temporal pattern, as defined in NFPA 72.
 - 2) Where notification appliances provide signals to sleeping areas, alarm signal must be 520 Hz square wave with intensity 15 dB above average ambient sound level or 5 dB above maximum sound level, or at least 75 dB(A-weighted), whichever is greater, measured at pillow.
 - 3) Visual alarm appliances must flash in synchronization where multiple appliances are in same field of view, as defined in NFPA 72.

- l. Remote Smoke-Detector Sensitivity Adjustment: Controls must select specific addressable smoke detectors for adjustment, display their current status and sensitivity settings, and change those settings. Allow controls to be used to program repetitive, time-scheduled, and automated changes in sensitivity of

specific detector groups. Record sensitivity adjustments and sensitivity-adjustment schedule changes in system memory

- m. Transmission to Remote Alarm Receiving Station: Automatically transmit alarm, supervisory, and trouble signals to remote alarm station.
- n. Primary Power: 24 V(dc) obtained from 120 V(ac) service and power-supply module. Initiating devices, notification appliances, signaling lines, trouble signals, supervisory and DACT must be powered by 24 V(dc) source.
- o. Alarm current draw of entire fire-alarm system must not exceed 80 percent of power-supply module rating.
- p. Secondary Power: 24 V(dc) supply system with batteries, automatic battery charger, and automatic transfer switch.
- q. Batteries: Sealed lead calcium

C. Accessories:

- 1. Instructions: Computer printout or typewritten instruction card mounted behind plastic or glass cover in stainless steel or aluminum frame. Include interpretation and describe appropriate response for displays and signals. Briefly describe functional operation of system under normal, alarm, and trouble conditions.

2.3 MANUAL FIRE-ALARM BOXES

- A. General Requirements for Manual Fire-Alarm Boxes: Comply with UL 38. Boxes must be finished in red with molded, raised-letter operating instructions in contrasting color; must show visible indication of operation; and must be mounted on recessed outlet box where wall are furred out. If indicated as surface mounted, provide manufacturer's surface back box.
 - 1. Double-action mechanism requiring two actions to initiate alarm, plastic-rod pull-lever type; with integral addressable module arranged to communicate manual-station status (normal, alarm, or trouble) to FACU.
 - 2. Station Reset: Key- or wrench-operated switch.

2.4 SYSTEM SMOKE DETECTORS

- A. Photoelectric Smoke Detectors:
 - 1. Performance Criteria:
 - a. Regulatory Requirements:
 - 1) NFPA 72.
 - b. General Characteristics:
 - 1) Detectors must be two or four-wire type.
 - 2) Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FACU.
 - 3) Base Mounting: Detector and associated electronic components must be mounted in twist-lock module that connects to fixed base. Provide terminals in fixed base for connection to building wiring.

NEWBERRY COUNTY DETENTION CENTER
FIRE ALARM REPLACEMENT

03/23/2021

- 4) Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
- 5) Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.
- 6) Detector address must be accessible from FACU and must be able to identify detector's location within system and its sensitivity setting.
- 7) Operator at FACU, having designated access level, must be able to manually access the following for each detector:
 - a) Primary status.
 - b) Device type.
 - c) Present average value.
 - d) Present sensitivity selected.
- 8) Detector must have functional humidity range within 10 to 90 percent relative humidity.
- 9) Color: White.

2.5 DUCT SMOKE DETECTORS

A. Description: Photoelectric-type, duct-mounted smoke detector.

B. Performance Criteria:

1. Regulatory Requirements:

- a. NFPA 72.
- b. UL 268A.

2. General Characteristics:

- a. Detectors must be four-wire type.
- b. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FACU.
- c. Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
- d. Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.
- e. Detector address must be accessible from FACU and must be able to identify detector's location within system and its sensitivity setting.
- f. Operator at FACU, having designated access level, must be able to manually access the following for each detector:
 - 1) Primary status.
 - 2) Device type.
 - 3) Present average value.
 - 4) Present sensitivity selected.
- g. Each sensor must have multiple levels of detection sensitivity.

- h. Sampling Tubes: Design and dimensions as recommended by manufacturer for specific duct size, air velocity, and installation conditions where applied.
- i. Relay Fan Shutdown: Fully programmable relay rated to interrupt fan motor-control circuit.

2.6 FIRE-ALARM NOTIFICATION APPLIANCES

A. Fire-Alarm Audible Notification Appliances:

- 1. Description: Horns, bells, or other notification devices that cannot output voice messages, including electric alarm bells.
- 2. Performance Criteria:
 - a. Regulatory Requirements:
 - 1) NFPA 72.
 - b. General Characteristics:
 - 1) Individually addressed, connected to signaling-line circuit, equipped for mounting as indicated, and with screw terminals for system connections.
 - 2) Chimes, Low-Level Output: Vibrating type, 75 dBa minimum rated output.
 - 3) Chimes, High-Level Output: Vibrating type, 81 dBa minimum rated output.
 - 4) Sounders, High Volume 24 V(dc): Less than 6 mA of alarm current.
 - 5) Sounders, Low Volume 24 V(dc): Less than 4 mA of alarm current.
 - 6) Audible notification appliances must have functional humidity range of 10 to 95 percent relative humidity.
 - 7) ISO Temporal 3 Evacuation Tone: 90 plus or minus 4 dBa at 24 V.

B. Fire-Alarm Voice Notification Appliances:

- 1. Description: Notification appliances capable of outputting voice evacuation messages.
- 2. Performance Criteria:
 - a. Regulatory Requirements:
 - 1) NFPA 72.
 - 2) UL 1480.
 - b. General Characteristics:
 - 1) Speakers for Voice Notification: Locate speakers for voice notification to provide intelligibility requirements of "Notification Appliances" and "Emergency Communications Systems" chapters in NFPA 72.
 - 2) High-Range Units: Rated 2 to 15 W.
 - 3) Low-Range Units: Rated 1 to 2 W.
 - 4) Mounting: semi-recessed for furred walls or surface mounted and bidirectional for block walls.
 - 5) Matching Transformers: Tap range matched to acoustical environment of speaker location.

- 6) Combination Devices: Factory-integrated audible and visible devices in single-mounting assembly, equipped for mounting as indicated, and with screw terminals for system connections.

C. Fire-Alarm Visible Notification Appliances:

1. Performance Criteria:

a. Regulatory Requirements:

- 1) NFPA 72.
- 2) UL 1971.

b. General Characteristics:

- 1) Rated Light Output:
 - a) 15/30/75/110/177 cd, selectable in field.
- 2) Clear or nominal white polycarbonate lens mounted on aluminum faceplate.
- 3) Mounting: semi-recessed for furred walls or surface mounted for block walls.
- 4) For units with guards to prevent physical damage, light output ratings must be determined with guards in place.
- 5) Flashing must be in temporal pattern, synchronized with other units.
- 6) Strobe Leads: Factory connected to screw terminals.
- 7) Mounting Faceplate: Factory finished, red or white.

2.7 FIRE-ALARM REMOTE ANNUNCIATORS

A. Performance Criteria:

1. Regulatory Requirements:

- a. NFPA 72.

2. General Characteristics:

- a. Annunciator functions must match those of FACU for alarm, supervisory, and trouble indications. Manual switching functions must match those of FACU, including acknowledging, silencing, resetting, and testing.

- 1) Mounting: Flush cabinet, NEMA 250, Type 1.

- b. Display Type and Functional Performance: Alphanumeric display and LED indicating lights must match those of FACU. Provide controls to acknowledge, silence, reset, and test functions for alarm, supervisory, and trouble signals.

2.8 FIRE-ALARM ADDRESSABLE INTERFACE DEVICES

A. Performance Criteria:

1. Regulatory Requirements:
 - a. NFPA 72.
 2. General Characteristics:
 - a. Include address-setting means on module.
 - b. Store internal identifying code for control panel use to identify module type.
 - c. Listed for controlling HVAC fan motor controllers.
 - d. Monitor Module: Microelectronic module providing system address for alarm-initiating devices for wired applications with normally open contacts.
 - 1) Allow control panel to switch relay contacts on command.
 - 2) Have minimum of two normally open and two normally closed contacts available for field wiring.
 - e. Control Module:
 - 1) Operate water flow notification devices.
- 2.9 DIGITAL ALARM COMMUNICATOR TRANSMITTERS (DACTs)

A. Performance Criteria:

1. Regulatory Requirements:
 - a. NFPA 72.
2. General Characteristics:
 - a. DACT must be acceptable to remote central station and must be listed for fire-alarm use.
 - b. Functional Performance: Unit must receive alarm, supervisory, or trouble signal from FACU and automatically capture two telephone line(s) and dial preset number for remote central station. When contact is made with central station(s), signals must be transmitted. If service on either line is interrupted for longer than 45 seconds, transmitter must initiate local trouble signal and transmit signal indicating loss of telephone line to remote alarm receiving station over remaining line. Transmitter must automatically report telephone service restoration to central station. If service is lost on both telephone lines, transmitter must initiate local trouble signal.
 - c. Local functions and display at DACT must include the following:
 - 1) Verification that both telephone lines are available.
 - 2) Programming device.
 - 3) LED display.
 - 4) Manual test report function and manual transmission clear indication.
 - 5) Communications failure with central station or FACU.
 - d. Digital data transmission must include the following:

- 1) Address of alarm-initiating device.
 - 2) Address of supervisory signal.
 - 3) Address of trouble-initiating device.
 - 4) Loss of ac supply.
 - 5) Loss of power.
 - 6) Low battery.
 - 7) Abnormal test signal.
- e. Secondary Power: Integral rechargeable battery and automatic charger.
- f. Self-Test: Conducted automatically every 24 hours with report transmitted to central station.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions for compliance with requirements for ventilation, temperature, humidity, and other conditions affecting performance of the Work.
1. Verify that manufacturer's written instructions for environmental conditions have been permanently established in spaces where equipment and wiring are installed, before installation begins.
- B. Examine roughing-in for electrical connections to verify actual locations of connections before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Preinstallation Testing: Perform verification of functionality of installed components of existing system prior to starting work. Document equipment or components not functioning as designed.
- B. Interruption of Existing Fire-Alarm Service: Do not interrupt fire-alarm service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary guard service in accordance with requirements indicated:
1. Notify Owner no fewer than seven days in advance of proposed interruption of fire-alarm service.
 2. Do not proceed with interruption of fire-alarm service without Owner's written permission.
- C. Protection of In-Place Conditions: Protect devices during construction unless devices are placed in service to protect facility during construction.

3.3 INSTALLATION OF EQUIPMENT

- A. Comply with NECA 305, NFPA 72, NFPA 101, and requirements of authorities having jurisdiction for installation and testing of fire-alarm equipment. Install electrical wiring to comply with requirements in NFPA 70 including, but not limited to, Article 760, "Fire Alarm Systems."
 - 1. Devices installed, but not yet placed, in service must be protected from construction dust, debris, dirt, moisture, and damage in accordance with manufacturer's written storage instructions.
- B. Connecting to Existing Reporting Equipment: Verify that new fire-alarm system is operational before making connection.
 - 1. Connect new equipment to existing monitoring equipment at supervising station. Coordinate transmission equipment with Tyco Security.
- C. Manual Fire-Alarm Boxes:
 - 1. Install manual fire-alarm box in normal path of egress within 60 inches of exit doorway.
 - 2. Mount manual fire-alarm box on background of contrasting color.
 - 3. Operable part of manual fire-alarm box must be between 42 and 48 inches above floor level. Devices must be mounted at same height unless otherwise indicated.
- D. Smoke- Detector Spacing:
 - 1. Comply with "Smoke-Sensing Fire Detectors" section in "Initiating Devices" chapter in NFPA 72, for smoke-detector spacing.
 - 2. Smooth ceiling spacing must not exceed 30 ft.
 - 3. Spacing of detectors for irregular areas, for irregular ceiling construction, and for high ceiling areas must be determined in accordance with Annex A in NFPA 72.
 - 4. HVAC: Locate detectors not closer than 36 inch from air-supply diffuser or return-air opening.
 - 5. Lighting Fixtures: Locate detectors not closer than 12 inches from lighting fixture and not directly above pendant mounted or indirect lighting.
- E. Install cover on each smoke detector that is not placed in service during construction. Cover must remain in place except during system testing. Remove cover prior to system turnover.
- F. Duct Smoke Detectors: Comply with NFPA 72 and SC Mechanical Code. Install sampling tubes so they extend full width of duct. Tubes more than 36 inch long must be supported at both ends.
 - 1. Do not install smoke detector in duct smoke-detector housing during construction. Install detector only during system testing and prior to system turnover.
- G. Remote Status and Alarm Indicators: Install in visible location near each smoke detector, sprinkler water-flow switch, and valve-tamper switch that is not readily visible from normal viewing position.
- H. Audible Alarm-Indicating Devices: Install not less than 6 inches below ceiling. Install bells on surface-mounted back boxes with device-operating mechanism concealed behind grille. Install devices at same height unless otherwise indicated.

- I. Visible Alarm-Indicating Devices: If not a combination device, install adjacent to each alarm speaker and at least 6 inches below ceiling. Install devices at same height unless otherwise indicated.

3.4 ELECTRICAL CONNECTIONS

- A. Install electrical devices furnished by manufacturer, but not factory mounted, in accordance with NFPA 70 and NECA 1.

3.5 CONTROL CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.
- B. Install nameplate for each control connection, indicating field control panel designation and I/O control designation feeding connection.

3.6 PATHWAYS

- A. Pathways above recessed ceilings and in inaccessible locations may be routed exposed.
 - 1. Exposed pathways located less than 96 inches above floor must be installed in EMT.
- B. Exposed EMT must be painted red enamel.

3.7 CONNECTIONS

- A. Make addressable connections with supervised interface device to the following devices and systems. Install interface device less than 36 inches from device controlled. Make addressable confirmation connection when such feedback is available at device or system being controlled.
 - 1. Supervisory connections at valve supervisory switches.
 - 2. Supervisory connections at low-air-pressure switch of each dry-pipe sprinkler system.

3.8 IDENTIFICATION

- A. Identify system components, wiring, cabling, and terminals in accordance with NFPA 72.
- B. Install framed instructions in location visible from FACU.

3.9 GROUNDING

- A. Ground FACU and associated circuits in accordance with NFPA 72 and NFPA 70.
- B. Ground shielded cables at control panel location only. Insulate shield at device location.

3.10 FIELD QUALITY CONTROL

- A. Field tests must be witnessed by Authorities Having Jurisdiction and Owner.
- B. Administrant for Tests and Inspections:
 - 1. Engage qualified testing agency to administer and perform tests and inspections.
 - 2. Engage factory-authorized service representative to administer and perform tests and inspections on components, assemblies, and equipment installations, including connections.
 - 3. Administer and perform tests and inspections with assistance of factory-authorized service representative.
- C. Tests and Inspections:
 - 1. Visual Inspection: Conduct visual inspection prior to testing.
 - a. Inspection must be based on completed record Drawings and system documentation that is required by "Completion Documents, Preparation" table in "Documentation" section of "Fundamentals" chapter in NFPA 72.
 - b. Comply with "Visual Inspection Frequencies" table in "Inspection" section of "Inspection, Testing and Maintenance" chapter in NFPA 72; retain "Initial/Reacceptance" column and list only installed components.
 - 2. System Testing: Comply with "Test Methods" table in "Testing" section of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 - 3. Factory-authorized service representative must prepare "Fire Alarm System Record of Completion" in "Documentation" section of "Fundamentals" chapter in NFPA 72 and "Inspection and Testing Form" in "Records" section of "Inspection, Testing and Maintenance" chapter in NFPA 72.
- D. Reacceptance Testing: Perform reacceptance testing to verify proper operation of added or replaced devices and appliances.
- E. Fire-alarm system will be considered defective if it does not pass tests and inspections.
- F. Prepare test and inspection reports.
- G. Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.
- H. Annual Test and Inspection: One year after date of Substantial Completion, test fire-alarm system complying with visual and testing inspection requirements in NFPA 72. Use forms developed for initial tests and inspections.

3.11 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain fire-alarm system.

3.12 MAINTENANCE

- A. Maintenance Service: Beginning at Substantial Completion, maintenance service must include 12 months' full maintenance by skilled employees of manufacturer's designated service organization. Include preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper operation. Parts and supplies must be manufacturer's authorized replacement parts and supplies.
 - 1. Include visual inspections in accordance with "Visual Inspection Frequencies" table in "Testing" paragraph of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 - 2. Perform tests in "Test Methods" table in "Testing" paragraph of "Inspection, Testing and Maintenance" chapter in NFPA 72.
 - 3. Perform tests per "Testing Frequencies" table in "Testing" paragraph of "Inspection, Testing and Maintenance" chapter in NFPA 72.

3.13 SOFTWARE SERVICE AGREEMENT

- A. Comply with UL 864.
- B. Technical Support: Beginning at Substantial Completion, service agreement must include software support for one year.
- C. Upgrade Service: At Substantial Completion, update software to latest version. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software must include operating system and new or revised licenses for using software.
 - 1. Upgrade Notice: At least 30 days to allow Owner to schedule access to system and to upgrade computer equipment if necessary.

END OF SECTION 284621.11

FIRE ALARM LEGEND

Table with 2 columns: Symbol and Description. Includes items like FACU, ANN, DACT, NAC, DOC, FIRE ALARM CLEAR VISUAL STROBE AND SPEAKER, FIRE ALARM DUCT MOUNTED SMOKE DETECTOR, HEAT DETECTOR, VALVE SUPERVISORY SWITCH, WATER FLOW DETECTOR, PRESSURE SWITCH, MONITOR MODULE, CONTROL MODULE, ALARM INDICATING AND REMOTE TEST SWITCH, CARBON MONOXIDE DETECTOR.

GENERAL NOTES

- 1. DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 70, "NATIONAL ELECTRICAL CODE" 2020 EDITION; NFPA 72, "NATIONAL FIRE ALARM AND SIGNALING CODE" 2020 EDITION; NFPA 101, "LIFE SAFETY CODE" 2018 EDITION; NFPA 241, "SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS" 2019 EDITION; SOUTH CAROLINA FIRE CODE (SCFC), 2018 EDITION; SOUTH CAROLINA MECHANICAL CODE (SCMC), 2018 EDITION; SOUTH CAROLINA BUILDING CODE (SCBC), 2018 EDITION.
2. CONTRACTOR SHALL VISIT JOB SITE PRIOR TO BID WITH THE PROJECT DOCUMENTS AND SPECIFICATIONS TO BECOME FAMILIAR WITH THE SITE AND SCOPE OF WORK. NOTIFY CONTRACTING OFFICER'S REPRESENTATIVE WITH ANY DISCREPANCIES OUTSIDE THIS DESIGN INTENT. ANY CHANGE ORDER REQUEST AS A RESULT OF COORDINATION BETWEEN TRADES SHALL BE DENIED.
3. ADHERE TO AND OBTAIN ALL PERMITS, LICENSES, FOR BOTH LOCAL AND STATE GOVERNMENT REQUIREMENTS.
4. DO NOT SCALE PLANS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS. FIELD DIMENSIONS GOVERN.
5. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE PARTITIONS. FIRE STOPPING SHALL BE OF UL LISTED ASSEMBLY.
6. IF ASBESTOS OR LEAD BASED PAINT IS FOUND, SUB-CONTRACTOR SHALL IMMEDIATELY STOP WORK AND NOTIFY OWNER. OWNER IS RESPONSIBLE FOR ABATEMENT OF LEAD BASED PAINT AND ASBESTOS.

SCOPE OF WORK

- 1. PROJECT SCOPE INCLUDES THE FOLLOWING: FULL REPLACEMENT OF THE EXISTING FIRE ALARM SYSTEM IN A DETENTION CENTER, GROUP I-3 OCCUPANCY, CONDITIONS 3 & 4. DETECTION DEVICES, WIRING, NOTIFICATION APPLIANCES, ANNUNCIATORS, FIRE ALARM PANEL, POWER SUPPLY, AREA SMOKE DETECTORS, DUCT DETECTORS, HEAT DETECTORS, ETC. THE FIRE ALARM SYSTEM WILL BE REPLACED IN ITS ENTIRETY. FIRE ALARM DEVICES NOT REQUIRED BY CURRENT CODE WILL BE DEMOLISHED WITHOUT REPLACEMENT. THE PROJECT WILL BE PHASED TO ACCOMMODATE THE ACTIVE FACILITY AND TO MINIMIZE SYSTEM DOWNTIME. PHASING SHALL BE DEVELOPED BY CONTRACTOR AND COORDINATED WITH OWNER. THE NEW FIRE ALARM SYSTEM COMPONENTS WILL BE INSTALLED AND BROUGHT ONLINE PRIOR TO THE REMOVAL OF THE EXISTING COMPONENTS.
2. ALL PHASING SHALL BE DETERMINED BY THE CONTRACTOR WITH GUIDANCE FROM THE CONTRACTING OFFICER'S REPRESENTATIVE/USER.
3. THE NEW SYSTEM COMPONENTS WILL BE INSTALLED TO MEET THE CURRENT EDITION OF NFPA 72 & NFPA 101.
4. DEMOLITION: THE EXISTING FIRE ALARM EQUIPMENT WILL BE REMOVED IN ITS ENTIRETY. CEILINGS, WALLS, AND FLOORS THAT CONDUIT IS CURRENTLY PASSING THROUGH AND WALLS AND CEILING THAT DEVICES AND APPLIANCES ARE CURRENTLY ATTACHED TO, WILL BE IMPACTED DURING DEMOLITION AND WILL REQUIRE FILLING AND PATCHING ON A CASE BY CASE BASIS. WALLS, CEILING, AND FLOORS WILL BE REPAIRED TO MATCH THE EXISTING CONSTRUCTION AND/OR FIRE/SMOKE RATINGS AS APPLICABLE.
5. AREAS WHERE SMOKE DETECTION IS CURRENTLY INSTALLED AND NO LONGER REQUIRED PER CURRENT REQUIREMENTS WILL BE REMOVED AND WILL NOT BE REINSTALLED.
6. NEW NOTIFICATION APPLIANCES SHALL BE ADDED TO PROVIDE COMPLETE AND CODE COMPLIANT OCCUPANT NOTIFICATION OF THE FACILITY.
7. ELECTRICAL POWER FEEDS THAT CURRENTLY SUPPLY THE FIRE ALARM SYSTEMS WILL BE RE-USED FOR NEW FIRE ALARM PANEL.
8. FIRE ALARM CONTROL PANEL SHALL BE REPLACED WITH A NEW ADDRESSABLE FIRE ALARM CONTROL PANEL THAT IS COMPATIBLE WITH EXISTING FIRE ALARM RECEIVING EQUIPMENT.
9. CONTRACTOR SHALL CONNECT EXISTING RELAYS, HVAC SHUTDOWN, AND SPRINKLER MONITORING DEVICES, INCLUDING BUT NOT LIMITED TO FLOW SWITCHES AND VALVE TAMPER SWITCHES, TO NEW FIRE ALARM SYSTEM.
10. ALL AREAS OF THE DETENTION CENTER SHALL BE CONSIDERED CONDITION 3 IN ACCORDANCE WITH THE SCBC, UNLESS OTHERWISE NOTED.

FIRE ALARM NOTES

- 1. UNLESS OTHERWISE NOTED, DEMOLISH EXISTING FIRE DETECTION, FIRE ALARM, AND OCCUPANT NOTIFICATION SYSTEM IN ITS ENTIRETY INSIDE THE INDICATED PROJECT SCOPE AREA. CONTRACTOR SHALL REPAIR IN KIND ANY DAMAGES THE BUILDING SUSTAINS DURING DEMOLITION.
2. CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED COMPONENTS AND MATERIALS IN ACCORDANCE WITH ALL LOCAL AND STATE REGULATIONS.
3. EXISTING OWNER FACILITATED FIRE WATCH SHALL BE MAINTAINED DURING CONSTRUCTION FOR SYSTEM IMPAIRMENTS.
4. AS NEW EQUIPMENT IS INSTALLED, LABEL IT "NOT IN SERVICE" UNTIL THE NEW EQUIPMENT IS ACCEPTED. ONCE THE NEW SYSTEM IS COMPLETED, TESTED, AND ACCEPTED BY THE AHJ, IT SHALL BE PLACED IN SERVICE AND CONNECTED TO THE STATION FIRE ALARM SYSTEM. REMOVE TAGS FROM NEW EQUIPMENT AND TAG THE EXISTING EQUIPMENT "NOT IN SERVICE" UNTIL REMOVED FROM THE BUILDING.
5. REFER TO PLAN DRAWINGS AND PROJECT DOCUMENTS FOR APPROXIMATE FIRE ALARM SYSTEM QUANTITIES AND LOCATIONS. NOT ALL SITE CONDITIONS ARE SHOWN. FIRE ALARM CONTRACTOR SHALL VISIT JOB SITE WITH ALL PROJECT DOCUMENTS PRIOR TO BID TO BECOME FAMILIAR WITH PROJECT DESIGN, INSTALLATION, TESTING AND COMMISSIONING REQUIREMENTS. SITE CONDITIONS FOR NEW SYSTEM INSTALLATION, IN ORDER TO PROVIDE A COMPREHENSIVE AND COMPLETE BID, CODE COMPLIANT SYSTEM DESIGN, INSTALLATION, TESTING, COMMISSIONING AND APPROVAL.
6. CONTRACTOR SHALL SUBMIT COMPLETE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, MATERIAL DATA SHEETS, AND SHOP DRAWINGS TO OWNER'S TECHNICAL REPRESENTATIVE FOR REVIEW PRIOR TO COMMENCING FABRICATION AND INSTALLATION. FAILURE TO COMPLY IS AT THE RISK OF THE CONTRACTOR.
7. FIRE ALARM FLOOR PLANS AND RISER DIAGRAM ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW EACH AND EVERY COMPONENT, DEVICE, APPLIANCE, ETC. CONDUIT PATHWAYS AND INTERCONNECTIONS SHALL BE DETERMINED BY THE BUILDING FEATURES, NFPA 70, NFPA 72, SYSTEM MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS.
8. FIRE ALARM SIGNALS AND EMERGENCY COMMUNICATIONS SHALL TAKE PRECEDENCE OVER ALL OTHER SIGNALS, SUCH AS BUT NOT LIMITED TO PUBLIC ADDRESS SYSTEMS.
9. CONTRACTOR SHALL PROVIDE ALL NECESSARY AND REQUIRED SYSTEM PROGRAMMING TO MEET THE DESIGN INTENT AND CODE COMPLIANCE.
10. FIRE ALARM NOTIFICATION APPLIANCES SHALL BE 15 CANDELA UNLESS OTHERWISE NOTED.
11. ALL NOTIFICATION APPLIANCE CIRCUITS (NAC) SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
12. ALL SIGNALING LINE CIRCUITS (SLC) SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
13. ALL INDICATING DEVICE CIRCUITS SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
14. THE INSTALLATION OF WIRING BETWEEN THE FACP AND RELAY MODULES OR APPLIANCES SHALL PERFORM TO CLASS "B" AS DEFINED BY NFPA 70 AND NFPA 72.
15. FIRE ALARM MANUAL PULL STATIONS AT DOOR OPENINGS SHALL BE WITHIN 5' - 0" HORIZONTALLY OF THE DOOR OPENING.
16. ALL CONDUCTORS FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN CONDUIT AND IN ACCORDANCE WITH NFPA 70. THE CONDUCTORS SHALL NOT BE INSTALLED WITH CONDUCTORS OF LIGHTING OR POWER SYSTEMS. THE SUM OF THE CROSS-AREA OF INDIVIDUAL CONDUCTORS SHALL NOT EXCEED 40% OF THE INTERIOR CROSS SECTION OF THE CONDUIT. ALL FIRE ALARM SYSTEM CONDUIT SHALL NOT BE LESS THAN 3/4".
17. WALL MOUNTED FIRE ALARM DEVICES IN UNFINISHED AREAS AND IN FINISHED AREAS WITH BLOCK WALLS MAY BE SURFACED MOUNTED. THE CONDUIT MAY BE INSTALLED EXPOSED ON WALLS AND ON CEILINGS.
18. IN FINISHED AREAS AND AREAS WITH FURRED OUT WALLS, WALL MOUNTED DEVICES SHALL BE FLUSH MOUNTED. THE CONDUIT SHALL BE INSTALLED CONCEALED IN THE WALLS AND CEILINGS UNLESS REFERENCED AS CEILING MOUNTED.
19. ELECTRICAL AND FIRE ALARM CONTRACTORS SHALL COORDINATE WITH FIRE ALARM VENDOR FOR SYSTEM OPERATING INSTRUCTIONS AND WIRING DIAGRAMS.
20. CONTRACTOR SHALL PROVIDE PATHWAY SURVIVABILITY OF LEVEL 0.
21. FIRE ALARM CONTRACTOR SHALL PROVIDE POWER PANEL INFORMATION, BREAKER LOCKING AND IDENTIFICATION REQUIREMENTS IN ACCORDANCE WITH NFPA 70 AND 72 REQUIREMENTS.
22. THE FIRE ALARM SYSTEM SHALL NOT BE COMBINED WITH ANY OTHER BUILDING SYSTEM, SUCH AS BUT NOT LIMITED TO, AUTOMATION, ENERGY, SECURITY, ETC.
23. REFER TO FIRE ALARM RELATED SPECIFICATION SECTIONS: 28.46.21.11 FOR ADDITIONAL REQUIREMENTS AND INFORMATION.
24. COORDINATE LOCATION OF ALL NEW FIRE ALARM APPLIANCES WITH EXISTING BUILDING CONDITIONS.
25. NEW DUCT SMOKE DETECTORS SHALL BE PROVIDED IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000-CFM. ACCESS TO DETECTORS SHALL BE PROVIDED FOR INSPECTION AND MAINTENANCE PURPOSES. ACTIVATION OF THE DUCT DETECTOR SYSTEM SHALL SHUT DOWN ALL OPERATIONAL CAPABILITIES OF THE AFFECTED UNIT. COORDINATE LOCATION OF ALL NEW REPLACED DUCT DETECTORS WITH EXISTING DETECTOR LOCATIONS. DUCT SMOKE SENSORS SHALL BE IN ACCORDANCE WITH NFPA 72, AND INTERNATIONAL MECHANICAL CODE.
26. ALL DUCT DETECTORS SHALL BE PROVIDED WITH REMOTE STATUS INDICATION. PROVIDE INDICATING LAMP FOR ALL CONCEALED DETECTORS.
27. INSTALL SMOKE DETECTORS NO CLOSER THAN 3'-0" TO HVAC AIR SUPPLY DIFFUSERS.



3500 Parkway Lane, Suite 500
Peachtree Corners, GA 30092
Phone (678) 336-7740

Copyright © 2021 by Pond & Company. All rights reserved. No copying or duplication of these documents is allowed without the expressed written agreement of Pond & Company.

CLIENT INFORMATION



PROJECT NAME
NEWBERRY COUNTY
DETENTION CENTER
FIRE ALARM
REPLACEMENT

3239 LOUIS RICH ROAD
NEWBERRY, SC 29108

KEY PLAN

CORPORATE SEAL



EO/AOR SEAL



DRAWING ISSUE

Table with 3 columns: MARK, DESCRIPTION, DATE. Contains drawing revision history.

DESIGNED BY: DBB
DRAWN BY: JKC
CHECKED BY: BTH
SUBMITTED BY: TW
DATE: 03/23/2021
POND PROJECT #: 1210063

SHEET TITLE
FIRE PROTECTION
GENERAL NOTES &
LEGEND

SHEET NUMBER
FA001

ORIGINAL SHEET SIZE: 30" X 42"

BID SET

