Addendum #5

Directorate of Facilities Engineering 7 February 2022

This Addendum modifies, amends, and supplements designated parts of the Contract Documents, Specifications and Drawings for:

Bog Brook Kitchen Renovation, Gilead, Maine, Project Number 23TR19-603-D, BGS Project Number 3195, Bid Number 22-017.

It shall be the responsibility of the Contractor to notify all Subcontractors and Suppliers for various portions of the work of any changes or modifications contained in this Addendum.

Clarification Items:

1. None.

Specification Items:

1. Remove Section 00 41 13 Contractor Bid Form, pages 1 through 4. Replace with enclosed revised Section 00 41 13 Contractor Bid Form, pages 1 through 4. Addendum #5 is noted on page 3 of 4.

2. Remove Section 00 52 13 Construction Contract, page 3 of 4. Replace with enclosed revised Section 00 52 13 Construction Contract page 3 of 4. Addendum #5 is noted on page 3 of 4.

3. Remove Section 283111 – Digital, Addressable Fire-Alarm & Mass Notification System. Replace with enclosed revised Section 283111 – Digital, Addressable Fire-Alarm & Mass Notification System.

Drawing Items:

1. Remove Drawing Sheet G-101 Code Information 1and replace with revised Drawings Sheet G-101 Code Information 1.

2. Remove Drawing Sheet FA001 Fire Alarm and Mass Notification, Abbreviations, Legend, and Riser and replace with revised Drawings Sheet FA001 Fire Alarm and Mass Notification, Abbreviations, Legend, and Riser.

3. Remove Drawing Sheet FA101 Fire Alarm and Mass Notification Plan and replace with revised Drawings Sheet FA101 Fire Alarm and Mass Notification Plan.

00 41 13
Contractor Bid Form

Bog Brook Kitchen Renovation
PROJECT #23TR19-603-D,
BGS Project Number 3195, Bid Number 22-017

Bid Form submitted by: *paper documents only to address below*

Bid Administrator:
DEPARTMENT OF DEFENSE VETERANS AND EMERGENCY MANAGEMENT
MILITARY BUREAU
Directorate of Facilities Engineering
194 Winthrop Street, Building #7, Camp Keyes
Augusta, Maine 04333-0032

Bidder:

Signature: _____

Printed name and title: _____

Company name: _____

Mailing address: _____

City, state, zip code: _____

Phone number: _____

Email address: _____

State of incorporation, if a corporation: _____

List of all partners, if a partnership: _____

The Bidder agrees, if the Owner offers to award the contract, to provide any and all bonds and certificates of insurance, as well as Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers if required by the Owner, and to sign the designated Construction Contract within twelve calendar days after the date of notification of such acceptance, except if the twelfth day falls on a State of Maine government holiday or other closure day, or a Saturday, or a Sunday, in which case the

aforementioned documents must be received before 12:00 noon on the first available business day following the holiday, other closure day, Saturday, or Sunday.

As a guarantee thereof, the Bidder submits, together with this bid, a bid bond or other acceptable instrument as and if required by the Bid Documents.

00 41 13
Contractor Bid Form

1. The Bidder, having carefully examined the form of contract, general conditions, specifications and drawings dated *15 November 2021*, prepared by *Oak Point Associates* for *Bog Brook Kitchen Renovation, Bog Brook Training Site*, as well as the premises and conditions relating to the work, proposes to furnish all labor, equipment and materials necessary for and reasonably incidental to the construction and completion of this project for the **Base Bid** amount of:

$ _____ .00

2. Allowances *are included* on this project.
<Bid Administrator to select...>

Allowance #1 - CMP: See Administrative Provisions 01 00 00 Schedule of Allowances, Paragraph 1.01 Contract Requirements, G. 1. $ *10,000*.00

3. Alternate Bids *are not included* on this project.
No Alternate Bids
Any dollar amount line below that is left blank by the Bidder shall be read as a bid of **$0.00**.

1 None $ _____ .00

2 None $ _____ .00

3 None $ _____ .00

4 None $ _____ .00

4. The Bidder acknowledges receipt of the following addenda to the specifications and drawings:

Addendum No.	**1**	Dated: **6 December 2021**	Addendum No.	____	Dated: _____
Addendum No.	**2**	Dated: **4 January 2022**	Addendum No.	____	Dated: _____
Addendum No.	**3**	Dated: **21 January 2022**	Addendum No.	____	Dated: _____
Addendum No.	**4**	Dated: **28 January 2022**	Addendum No.	____	Dated: _____
Addendum No.	**5**	Dated: **7 Febraury 2022**	Addendum No.	____	Dated: _____

5. Bid security *is required* on this project.

If noted above as required, the Bidder shall include with this bid form a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with this completed bid form submitted to the Owner.

6. Filed Sub-bids *are not required* on this project.
   If noted above as required, the Bidder shall include with this bid form a list of each Filed Sub-bidder selected by the Bidder on the form provided (section 00 41 13F).

ARTICLE 5 OWNER'S RESPONSIBILITIES

5.1 The Owner shall provide full information about the objectives, schedule, constraints and existing conditions of the project. The Owner has established a budget with reasonable contingencies that meets the project requirements.

5.2 By signing this contract, the Owner attests that all State of Maine procurement requirements for this contract have been met, including the solicitation of competitive bids.

ARTICLE 6 INSTRUMENTS OF SERVICE

6.1 The Contractor's use of the drawings, specifications and other documents known as the Consultant's Instruments of Service is limited to the execution of the Contractor's scope of work of this project unless the Contractor receives the written consent of the Owner and Consultant for use elsewhere.

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 This Contract shall be governed by the laws of the State of Maine.

7.2 The Owner and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to this Contract. Neither party to this Contract shall assign the Contract as a whole without written consent of the other party, which consent the Owner may withhold without cause.

7.3 Notwithstanding any other provision of this Agreement, if the Owner does not receive sufficient funds to fund this Agreement or funds are de-appropriated, or if the Owner does not receive legal authority from the Maine State Legislature or Maine Courts to expend funds intended for this Agreement, then the Owner is not obligated to make payment under this Agreement; provided, however, the Owner shall be obligated to pay for services satisfactorily performed prior to any such non-appropriation in accordance with the termination provisions of this Agreement. The Owner shall timely notify the Contractor of any non-appropriation and the effective date of the non-appropriation.

ARTICLE 8 CONTRACT DOCUMENTS

8.1 The General Conditions of the contract, instructions to bidders, bid form, Special Provisions, the written specifications and the drawings, and any Addenda, together with this agreement, form the contract. Each element is as fully a part of the Contract as if hereto attached or herein repeated.

8.2 Specifications: ***15 November 2021***

8.3 Drawings: ***15 November 2021***

8.4 Addenda: ***Addendum #1 - 6 December 2021***
Addendum #2 - 4 January 2022
Addendum #3 - 21 January 2022
Addendum #4 - 28 January 2022
Addendum #5 - 7 February 2022

SECTION 283111 - DIGITAL, ADDRESSABLE FIRE-ALARM & MASS NOTIFICATION SYSTEM

PART 1 - GENERAL

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. Fire-alarm and mass notification control unit.
2. Local Operating Console.
3. Manual fire-alarm boxes.
4. System smoke detectors.
5. System heat detectors.
6. Carbon monoxide detectors.
7. Combustible gas detectors.
8. Notification appliances.
9. Surge protective devices.
10. Addressable interface device.
11. Wiring and conduit.
12. Digital alarm communicator transmitter.
13. Cellular communicator transmitter.
14. Document Storage Cabinet

B. Related Requirements:

1. Section 260519 “Low-Voltage Electrical Power Conductors and Cables" for cables and conductors for fire-alarm systems.
2. Section 262416 “Panelboards.”
3. Section 262816 “Enclosed Switches and Circuit Breakers.”

1.3 DEFINITIONS

A. EMT: Electrical Metallic Tubing.

B. FMCU: Fire Alarm and Mass Notification Control Unit.

C. Local Operating Console (LOC): A unit designed to allow emergency responders and/or building occupants to operate the MNS including delivery of recorded messages and/or live voice announcements, initiate visual, textual visual, and audible appliance operation and other relayed functions.

D. NICET: National Institute for Certification in Engineering Technologies.

E. Non Proprietary: Equipment and software that may be purchased, programed, serviced etc., by any qualified party and that does not require any formal relationship with the equipment manufacturer, distributor, dealer, etc.

F. MNS: Mass Notification System

G. PC: Personal computer.

H. QFPE: Contractor's Qualified Fire Protection Engineer

1.4 ACTION SUBMITTALS

A. Submittals must comply with the requirements of the Construction Contract Clauses, Section 007213 "General Conditions" and the individual sections specifying the work.

B. Product Data: For each type of product, including furnished options and accessories.

1. Annotated catalog data, showing manufacturer's name, model, voltage, and catalog numbers for equipment and components.
2. Include construction details, material descriptions, dimensions, profiles, and finishes.
3. Include rated capacities, operating characteristics, and electrical characteristics.

C. Shop Drawings: For fire-alarm and mass notification system.

1. Comply with recommendations and requirements in the "Documentation" chapter of NFPA 72.
2. Include plans, elevations, sections, details, and 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. Detail assembly and support requirements.
5. Include voltage drop calculations indicating 25 percent spare capacity for each circuit.
6. Include power calculations for speaker circuits indicating 50 percent spare capacity.
7. Include battery-size calculations indicating 25 percent spare capacity.
8. Include input/output matrix.
9. Include statement from manufacturer that equipment and components have been tested as a system and meet requirements in this Specification and in NFPA 72.
10. Include performance parameters and installation details for each detector.
11. Include candela ratings for strobes and speaker tap settings for speakers.
12. Verify that each duct detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.
13. Include plans, sections, and elevations of heating, ventilating, and air-conditioning ducts, drawn to scale; 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 required for HVAC unit shutdown on duct smoke detector activation.
    c. Locate detectors according to manufacturer's written recommendations.

14. Include voice/alarm signaling-service equipment rack or console layout, grounding schematic, amplifier power calculation, and single-line connection diagram.
15. 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.
16. Include written script for pre-recorded messages.

D. General Submittal Requirements:

1. Shop Drawings must be prepared by persons with the following qualifications:

    a. Trained in fire-alarm and intelligible emergency communication system design.
    b. NICET-certified, fire-alarm technician; Level III minimum.
    c. Licensed or certified by authorities having jurisdiction.

2. Shop drawings and calculations must be stamped by the Contractor's qualified fire protection engineer (QFPE).

E. Delegated-Design Submittal: Indicate compliance with performance requirements and design criteria, including analysis data signed and sealed by the QFPE responsible for their preparation.

1. Drawings showing the location of each initiating device and each notification appliance, ratings of each, and installation details as needed to comply with the requirements of NFPA 72 and of the listing conditions of the devices.
2. Design Calculations:

    a. Calculate primary and secondary power requirements for control equipment.
    b. Calculate requirements for selecting the spacing of detectors, complying with NFPA 72.
    c. Take into consideration expected ambient noise levels.
    d. Calculate sound-pressure levels and intelligibility metrics for audible appliances.
    e. Calculate spacing and intensities for strobe signals.
    f. Calculate power requirements for speaker circuits to demonstrate that proposed control equipment (and supplemental amplifiers) have sufficient capacity, including spare capacity.

F. Provide equipment, circuit and appliance and device layouts, including sizes and working clearances, to General Contractor for inclusion in project coordination drawings.

1.5 INFORMATIONAL SUBMITTALS

A. Submittals must comply with the requirements of the Construction Contract Clauses, Section 007213 "General Conditions" and the individual sections specifying the work.

B. Qualification Data: For Installer and Designers.

1. NICET-certified, fire-alarm technician. Level II minimum for Installer.
2. NICET-certified, fire-alarm technician. Level III minimum for Designer.
3. Qualifications of Qualified Fire Protection Engineer.
4. Documentation from control equipment manufacturer that the technician in responsible charge of the work has attended training specific to the equipment being installed.

C. Field quality-control reports.

D. Sample Warranty: For special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Submittals must comply with the requirements of the Construction Contract Clauses, Section 007213 "General Conditions" and the individual sections specifying the work.

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

1. In addition to items specified in Section 010000 "Administrative Provisions," include the following:

a. Comply with the requirements for records in the Documentation chapter and the Inspection, Testing & Maintenance chapter of NFPA 72.
b. Manuals must be in three-ring binders with full size sheets folded into holding pockets. Manuals must include a full table of contents and tabbed indexing.
c. Provide “Fire Alarm System Record of Completion” and "Emergency Communication Systems Supplemental Record of Completion” documents in accordance with the Documentation chapter of NFPA 72
d. 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.
e. Riser diagram.
f. Device addresses.
g. Record copy of site-specific software.
h. Provide "Inspection and Testing Form" according to the "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.

i. Manufacturer's required maintenance related to system warranty requirements.
j. Abbreviated operating instructions for mounting at FMCU.
k. Owner's manuals for each item of equipment, including installation, service, and training manuals.
l. Approved shop drawings.
m. As-built drawings must be added after preliminary testing is complete.

C. Software and Firmware Operational Documentation:

1. Software operating and upgrade manuals.
2. Program Software Backup: On compact disc, provided in a hanging folder attached to the inside of the panel cabinet door.
3. System passwords (limited warranty release available upon request).

4. Device address list.
5. Printout of software application and graphic screens.

1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Submittals must comply with the requirements of the Construction Contract Clauses, Section 007213 "General Conditions" and the individual sections specifying the work.

B. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Detectors: Quantity equal to 10 percent of amount of each type installed, but no fewer than one unit of each type.
2. Detector Bases: Quantity equal to two percent of amount of each type installed, but no fewer than one unit of each type.
3. Keys and Tools: One extra set for access to locked or tamper proofed components.
4. Audible and Visual Notification Appliances: One of each type installed.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: Personnel must be trained by manufacturer for installation of specific equipment required for this Project. Certificate of attendance for technician in responsible charge of the work must be provided prior to commencement of work.

B. Installer Qualifications: Installation must be by personnel certified by NICET as fire-alarm Level II technician and trained and certified by the manufacturer for installation of units required for this project. The system installer must be regularly engaged in installation of the type and complexity of system specified in the Contract Documents, and must have serviced in a similar capacity for at least two systems that have performed in the manner intended for a period of not less than 18 months.

C. NFPA Certification: Obtain certification according to NFPA 72 by an NRTL (nationally recognized testing laboratory) alarm company.

D. Installation drawings, shop drawings, calculations, and as-built drawings must be prepared by a system technician who is experienced with the types of work specified herein, and is currently certified by the National Institute for Certification in Engineering Technologies (NICET) as an engineering technician with minimum Level III certification in fire alarm systems, and approved by the QFPE.

E. Professional Engineer Qualifications: The QFPE must be a Fire Protection Engineer who is a registered professional engineer (P.E.) who has passed the fire protection engineering written examination administered by the National Council of Examiners for Engineering and Surveys (NCEES).

1.9 PROJECT CONDITIONS

A. 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 24/7 fire watch service according to requirements indicated:

1. Notify Owner no fewer than 14 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.
3. Comply with responding fire department impairment procedures and UFC 3-601-02, EM 385-1-1, and NFPA 241, most recent editions.

B. Use of Devices during Construction: Protect devices during construction unless devices are placed in service to protect the facility during construction.

C. Fire Protection during construction must follow EM 395-1-1, NFPA 241, and the responding fire department regulations.

1.10 SEQUENCING AND SCHEDULING

A. Existing Fire-Alarm Equipment: Maintain existing equipment fully operational until new equipment has been tested and accepted. As 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 the building.

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

1.11 WARRANTY

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

1. A sticker with the start and end dates of the warranty period must be affixed to the inside of the panel cabinet door.
2. Warranty Extent: Equipment and components not covered in the Maintenance Service Agreement.
3. Warranty Period: Five years from date of Substantial Completion.
4. Warranty Response – installer must agree to respond to the site within one business day of receiving a request for service from the owner during the warranty period.
5. Warranty Release – installer may request a limited warranty release upon providing system passwords to the Owner.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. A non-proprietary, combined, addressable, Fire Alarm and Mass Notification System must be provided. For the purposes of this specification "non-proprietary" is defined as "equipment and

software that may be purchased, programmed, serviced etc., by any qualified party and that does not require any formal relationship with the equipment manufacturer, distributor, dealer, etc."

B. This work includes replacing the existing fire alarm system, completion of design, layout, and providing new, complete fire alarm and mass notification coverage as described herein and on the contract drawings. Include in the system wiring, raceways, pull boxes, terminal cabinets, outlet and mounting boxes, control equipment, alarm initiating devices, alarm notification appliances and other accessories and miscellaneous items required for a complete operating system even though each item is not specifically mentioned or described. Provide system complete and ready for operation.

Provide equipment, materials, installation, workmanship, inspection, and testing in strict accordance with the required and advisory provisions of UFC 3-600-01, UFC 4-021-01, NFPA 70, NFPA 72, NFPA 90A, NFPA 101, and the Maine Fuel Gas Law, adopted editions at the time of design, except as modified herein. Any discrepancy between these specifications and any regulations must be brought to the attention of the Consultant immediately. The system layouts on the drawings show the intent of coverage and are shown in suggested locations. Drawings must comply with the requirements of NFPA 170. Final quantity, system layout, and coordination are the responsibility of the Contractor. Additional devices must be provided, if necessary, to meet applicable code requirements at no extra expense to the Owner.

C. The Fire Alarm and Mass Notification System must be combined & installed in a single cabinet enclosure. A separate ECS/MNS cabinet will not be permitted.

D. Source Limitations for Fire Alarm and Mass Notification System and Components: Provide system manufacturer's certification that components provided have been tested as, and will operate as, a system.

E. Noncoded, UL-certified addressable system, with multiplexed signal transmission and voice/strobe evacuation.

F. Automatic sensitivity monitoring of smoke detectors.

G. Components provided must be listed for use with the selected system.

H. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 SYSTEMS OPERATIONAL DESCRIPTION

A. Fire-alarm signal initiation must be by one or more of the following devices:

1. Manual stations.
2. Smoke detectors.
3. Duct smoke detectors.
4. Heat detectors.
5. Carbon monoxide detectors.
6. Combustible gas detectors.
7. Kitchen hood suppression system activation.

B. Fire-alarm signal must initiate the following actions:

1. Continuously operate alarm notification appliances, including voice evacuation notices (activate clear strobes and evacuate textual message for fire alarm).
2. Identify alarm and specific initiating device at FMCU.
3. Transmit an alarm signal to an approved supervising station.
4. Turn on means of egress lighting which is normally controlled by occupancy sensors.
5. Shutdown gas supply.
6. Record events in the system memory.

C. Supervisory signal initiation must be by one or more of the following devices and actions:

1. User disabling of zones or individual devices.
2. Loss of communication with any panel on the network.
3. Manual activation of mass notification evacuate or announcement message.
4. Live message at FMCU.
5. Kitchen low temperature.

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 any addressable sensor, input module, relay, or control module.
4. Loss of primary power at FMCU.
5. Ground or a single break in internal circuits of FMCU.
6. Abnormal ac voltage at FMCU.
7. Break in standby battery circuitry.
8. Failure of battery charging.
9. Abnormal position of any switch at FMCU.
10. Voice signal amplifier failure.
11. Kitchen hood suppression system trouble.
12. Loss or trouble with phone lines or cellular communicator.

E. System Supervisory/Trouble Signal Actions:

1. Activation of the mass notification evacuate or announcement message, or a live message at the FMCU must result in continuous operation of alarm notification appliances, including amber strobes and textual notices (activate evacuate textual message for evacuate and announcement textual message for remainder).
2. Identify specific device initiating the event at FMCU.
3. Transmit system status to building management system.
4. Initiate visual and audible indicator at the FMCU.
5. Record the event in the system memory.
6. After a time-delay of 200 seconds, transmit a trouble or supervisory signal to the remote alarm receiving station.

2.3 PERFORMANCE REQUIREMENTS

A. Intelligibility – Emergency Communication System messages must be intelligible. See the Notification Appliances chapter of NFPA 72 and the requirements of UFC 04-021-01.

2.4 FIRE-ALARM AND MASS NOTIFICATION CONTROL UNIT

A. Control unit must be non-proprietary and must be greater than or equal to a Silent Knight IntelliKnight Model 6820-EVS.

B. General Requirements for Fire-Alarm and Mass Notification Control Unit:

1. Non-proprietary.
2. Integral emergency communication system for mass notification (i.e., single cabinet)
3. Field-programmable, microprocessor-based, modular, power-limited design with electronic modules, complying with UL 864.

    a. System software and programs must be held in nonvolatile flash, electrically erasable, programmable, read-only memory, retaining the information through failure of primary and secondary power supplies.
    b. Include a real-time clock for time annotation of events on the event recorder and printer.
    c. The FMCU must be listed for connection to an approved supervising-station.
    d. Provide nonvolatile memory for system database, logic, and operating system and event history. The system must require no manual input to initialize in the event of a complete power down condition. The FMCU must provide a minimum 1000-event history log.

4. Addressable Initiation Device Circuits: The FMCU must indicate which communication zones have been silenced and must provide selective silencing of alarm notification appliance by building communication zone.
5. Addressable Control Circuits for Operation of Notification Appliances and Mechanical Equipment.
6. Cabinet and associated equipment must be flush mounted and coordinated with wall depth.

C. Alphanumeric Display and System Controls: Arranged for interface between human operator at FMCU and addressable system components including annunciation and supervision. Display alarm, supervisory, and component status messages and the programming and control menu.

1. Annunciator and Display: Liquid-crystal type, two line(s) of 40 characters, minimum.
2. Keypad: Arranged to permit entry and execution of programming, display, and control commands and to indicate control commands to be entered into the system for control of smoke-detector sensitivity and other parameters.

D. Initiating-Device, Notification-Appliance, and Signaling-Line Circuits:

1. Pathway Class Designations: NFPA 72, Class A.
2. Pathway Survivability: Level 0.
3. Install no more than 99 addressable devices on each signaling-line circuit.
4. Serial Interfaces:

    a. One dedicated RS 485 port for supervising station operation using point ID DACT.
    b. One RS 485 port for remote annunciators, Ethernet module, or multi-interface module (printer port).
    c. One USB port for PC configuration.

E. Smoke-Alarm Verification:

1. Initiate audible and visible indication of an "alarm-verification" signal at FMCU.
2. Activate an approved "alarm-verification" sequence at FMCU and detector.
3. Record events by the system memory.
4. Sound general alarm if the alarm is verified.
5. Cancel FMCU system reset if the alarm is not verified.

F. Notification-Appliance Circuit:

1. Speakers and strobes within a given notification area must be synchronized throughout.

G. Transmission to Remote Alarm Receiving Station: Automatically transmit alarm, supervisory, and trouble signals to a remote alarm station.

H. Voice/Alarm Signaling Service: Integrated emergency communication system with redundant microphones, amplifiers, and tone generators provided.

1. The messages must utilize a female voice and be similar to the following with two sets of 1000 Hz tones (1 sec on, 1/2 second off, 1 second on, 1/2 second off, 1 second on, 6 tones total) followed by the following prerecorded messages:

   a. Fire Emergency: “May I have your attention please. May I have your attention please. A fire emergency has been reported. Please leave the building using the nearest exit." Provide 2-second pause, then repeat.
   b. Bomb Threat: “May I have your attention please. May I have your attention please. A Bomb Threat has been reported. Please leave the building using the nearest exit and move away from the building. Further instructions will be issued outside of the building.” (2-second pause and repeat)
   c. Hostile Person: “May I have your attention please. May I have your attention please. An intruder has been reported within or around the building. Please remain calm and stay in your current location. Stand by for further instruction.” (2-second pause and repeat).
   d. Shelter in Place: “May I have your attention please. May I have your attention please. An emergency has been reported outside of the building. All personnel stay in your current location. Do not leave the building. Stand by for further instructions." (2-second pause and repeat)
   e. Severe Weather: “May I have your attention please. May I have your attention please. A weather emergency has been reported. Please tune in to local media for further information for latest updates and stand by for further instructions." (2-second pause and repeat)
   f. All Clear: "May I have your attention please. The emergency has ended. Please resume normal operations. Thank you for your cooperation." (2-second pause and repeat)
   g. System Test: "May I have your attention please. This is a test of the Fire Alarm and Mass Notification System. I repeat, this is only a test." (2 second pause and repeat)

2. Status Annunciator: Indicate the status of various voice/alarm speaker zones

3. Amplifiers and tone generators must automatically transfer to backup units, on primary equipment failure. Amplifiers and tone generators must be housed in the FMCU. Submit amplifier data to indicate that the amplifiers have sufficient capacity to simultaneously drive notification speakers at the maximum rating plus 50 percent spare capacity.
4. A handheld microphone must be provided. The microphone must not be capable of being locked from use.

I. Primary Power: 24-V dc obtained from 120-V ac service and a power-supply module. Initiating devices, notification appliances, signaling lines, trouble signals, supervisory signals, and digital alarm communicator transmitters must be powered by 24-V dc source.

1. Alarm current draw of entire fire-alarm system must not exceed 80 percent of the power-supply module rating.

J. Secondary Power: 24-V dc supply system with batteries, automatic battery charger, and automatic transfer switch.

1. Batteries: Sealed lead acid-type.
2. Battery size must be sufficient capacity to operate the fire alarm and mass notification system under supervisory and trouble conditions, including audible trouble signal devices for 48 house and audible and visual signal devices under alarm conditions for an additional 60 minutes.

K. Instructions: Computer printout or typewritten instruction card mounted behind a plastic or glass cover in a stainless-steel or aluminum frame. Include interpretation and describe appropriate response for displays and signals. Briefly describe the functional operation of the system under normal, alarm, and trouble conditions. Provide clear direction of how to silence audible signals.

2.5 LOCAL OPERATING CONSOLE (LOC)

A. The LOC must consist of a remote microphone station incorporating a push-to-talk (PTT) hand-held microphone and system status indicators. The microphone must not be capable of being locked from use. The LOC must have the capability of being utilized to activate prerecorded messages. The unit must incorporate microphone override of any tone generation or recorded messages. The unit integral with and be fully supervised from the FMCU. The housing for the LOC must not be lockable.

2.6 MANUAL FIRE-ALARM BOXES

A. Greater than or equal to Silent Knight Model SK-PULL-DA

B. 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. If indicated as surface mounted, provide manufacturer's surface back box. Stations that require the replacement of portions of the device after activation are not permitted.

1. Dual-action mechanism requiring two actions to initiate an alarm, pull-lever type; with integral addressable module arranged to communicate manual-station status (normal, alarm, or trouble) to FMCU.
2. Station Reset: Key- or wrench-operated switch.

2.7 SYSTEM SMOKE DETECTORS

A. General Requirements for System Smoke Detectors:

1. Comply with UL 268; operating at 24-V dc, nominal.
2. Addressable detectors must be two wire-type.
3. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FMCU.
4. Base Mounting: Detector and associated electronic components must be mounted in a twist-lock module that connects to a fixed base. Provide terminals in the fixed base for connection to building wiring.
5. Self-Restoring: Detectors do not require resetting or readjustment after actuation to restore them to normal operation.
6. Integral Visual-Indicating Light: LED type, indicating detector has operated and power-on status.
7. Remote Control: Unless otherwise indicated, detectors must be digital-addressable type, individually monitored at FMCU for sensitivity, and alarm condition

B. Photoelectric Smoke Detectors:

1. Greater than or equal to Silent Knight Model SK-PHOTO.
2. Detector address must be accessible from FMCU and must be able to identify the detector's location within the system.
3. An operator at FMCU, having the designated access level, must be able to manually access the following for each detector:

    a. Primary status.
    b. Device type.
    c. Present average level
    d. Present sensitivity selected.
    e. Sensor range (normal, dirty, etc.).

C. Duct Smoke Detectors: Photoelectric type complying with UL 268A.

1. Greater than or equal to Silent Knight Model SK-DUCT.
2. Detector address must be accessible from fire-alarm control unit and must be able to identify the detector's location within the system.
3. An operator at fire-alarm control unit, having the 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.
    e. Sensor range (normal, dirty, etc.).

4. Weatherproof Duct Housing Enclosure: NEMA 250, Type 4X; NRTL listed for use with the supplied detector for smoke detection in HVAC system ducts.
5. Sampling Tubes: Design and dimensions as recommended by manufacturer for specific duct size, air velocity, and installation conditions where applied.
6. Relay Fan Shutdown: Fully programmable relay rated to interrupt fan motor-control circuit.
7. Every duct smoke detector must have its own Remote Status and Alarm Indicator and test switch.

2.8 SYSTEM HEAT DETECTORS

A. Greater than or equal to Silent Knight Model SK-HEAT-HT

B. General: fully addressable heat detector listed for connection to fire-alarm and mass notification system.

1. Comply with UL 521; operating at 24-V dc, nominal.
2. Temperature sensors must test for and communicate sensitivity range of device.
3. Actuated by fixed temperature of 190 deg F.
4. Mounting: Detector and associated electronic components must be mounted in a twist-lock module that connects to a fixed base. Provide terminals in the fixed base for connection to building wiring.
5. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to FMCU.
6. Detector must have functional humidity range of 10 to 90 percent relative humidity.
7. Provide conventional heat detectors as indicated with associated addressable interface module.

2.9 CARBON MONOXIDE DETECTORS

A. Greater than or equal to Silent Knight Model SK-FIRE-CO

B. General: fully addressable carbon monoxide detector listed for connection to fire-alarm and mass notification system.

1. Mounting: Adapter plate for outlet box mounting.
2. Testable by introducing test carbon monoxide into the sensing cell.
3. Detector must send trouble alarm when nearing end-of-life, power supply problems, or internal faults.
4. Comply with UL 2075.
5. Locate, mount, and wire according to manufacturer's written instructions.
6. Activation must cause the control panel to produce a unique, temporal code 4 signal in accordance with NFPA 72.

2.10 COMBUSTIBLE GAS DETECTORS

A. General: fully addressable gas detector listed for sensing of propane and for connection to fire-alarm and mass notification system.

1. Mounting: Adapter plate for outlet box mounting.
2. Testable as required by NFPA 72 and the manufacturer.
3. Detector must send trouble alarm when nearing end-of-life, power supply problems, or internal faults.
4. Comply with UL 2075.
5. Locate, mount, and wire according to manufacturer's written instructions.

2.11 NOTIFICATION APPLIANCES

A. Greater than or equal to System Sensor Spectra Alert Advance Models.

B. General Requirements for Notification Appliances: Connected to notification-appliance signal circuits, zoned as indicated, equipped for mounting as indicated, and with screw terminals for system connections.

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

C. Visible Notification Appliances: Xenon strobe lights complying with UL 1971. Two fixtures at each location. Energize one or the other as appropriate for the emergency:

1. Visual notification appliances must conform to the applicable requirements of UL 1971 and conform to the Americans with Disabilities Act (ADA) for colored lenses such as amber, the notifications appliances must comply with UL 1638. The manufacturer must have the color lenses tested to the full UL 1971 polar plotting criteria, voltage drop, and temperature rise as stated in 1971. Visual notification appliance spacing must be derated per manufacturer recommendations for colored lenses. Fire Alarm Notification Appliances must be red, have clear high intensity optic lens, xenon flash tubes, and output white light and be marked "ALERT" in white letters. Mass Notification Appliances must be white, have amber high intensity optic lens, xenon flash tubes, and output white light and be marked "ALERT" in red letters. The light pattern must be disbursed so that it is visible above and below the strobe and from a 90 degree angle on both sides of the strobe. Strobe flash rate must be 1 flash per second and a minimum of 15 candela (actual output after derating for tinted lens) based on the UL 1971 test. Strobe must be semiflush mounted. Where more than two appliances are located in the same room or corridor, provide synchronized operation.

2. Rated Light Output:

   a. 15/30/75/110 cd, selectable in the field.

3. Mounting: Wall mounted unless otherwise indicated.
4. For units with guards to prevent physical damage, light output ratings must be determined with guards in place.
5. Flashing must be in a temporal pattern, synchronized with other units.
6. Strobe Leads: Factory connected to screw terminals.
7. Mounting Faceplate: Factory finished, color to match above.

D. Voice/Tone Notification Appliances:

1. Comply with UL 1480.
2. Speakers for Voice Notification: Locate speakers for voice notification to meet the intelligibility requirements of the "Notification Appliances" and "Emergency Communications Systems" chapters in NFPA 72 and the C.I.S. score required by UFC 4-021-01.
3. High-Range Units: Rated 2 to 15 W.
4. Low-Range Units: Rated 1/4 to 2 W. Where required for improved sound quality and intelligibility, speakers must have a higher wattage rating.
5. Mounting: Semi-recessed.
6. Matching Transformers: Tap range matched to acoustical environment of speaker location.
7. Speaker installation that emits an audible hum while idle is not acceptable.

E. Remote LED Text Display

1. An LED text display, in compliance with UL Standard 48.
2. The display must be at locations indicated.
3. The LED text display must spell out the words "EVACUATE" and "ANNOUNCEMENT" in minimum two-inch high letters. The design of the text display must be such that the text remains illuminated for 10 seconds after the end of the announcement and so it cannot be read when not illuminated.

2.12 ADDRESSABLE INTERFACE DEVICE

A. Greater than or equal to Silent Knight Model SK-Monitor.

B. General:

1. Include address-setting means on the module.
2. Store an internal identifying code for control panel use to identify the module type.
3. Listed for controlling HVAC fan motor controllers.

C. Monitor Module: Microelectronic module providing a system address for alarm-initiating devices for wired applications with normally open contacts.

D. Relay Module: Capable of initiating circuit-breaker shunt trip for power shutdown.

1. Greater than or equal to Silent Knight Model SK-RELAY.
2. Allow the control panel to switch the relay contacts on command.
3. Have a minimum of two normally open and two normally closed contacts available for field wiring.

E. Control Module:

1. Greater than or equal to Silent Knight Model SK-CONTROL.
2. Allow the control panel to switch the relay contacts on command.
3. Have a minimum of two normally open and two normally closed contacts available for field wiring.

2.13 DIGITAL ALARM COMMUNICATOR TRANSMITTER

A. Digital alarm communicator transmitter must be acceptable to the listed supervising station and must comply with UL 632.

B. Functional Performance: Unit must receive an alarm, supervisory, or trouble signal from fire-alarm control unit and automatically capture two telephone lines and dial a preset number for a listed supervising station. When contact is made with supervising station(s), signals must be transmitted. If service on either line is interrupted for longer than 45 seconds, transmitter must initiate a local trouble signal and transmit the signal indicating loss of telephone line to the supervising station over the remaining line. Transmitter must automatically report telephone service restoration to the supervising station. If service is lost on both telephone lines, transmitter must initiate the local trouble signal.

C. Local functions and display at the digital alarm communicator transmitter must include the following:

1. Verification that both communication paths are available.
2. Programming device.
3. LED display.
4. Manual test report function and manual transmission clear indication.
5. Communications failure with the listed supervising station or fire-alarm control unit.

D. Digital data transmission must include the following:

1. Address of the alarm-initiating device.
2. Address of the supervisory signal.
3. Address of the trouble-initiating device.
4. Loss of ac supply.
5. Loss of power.
6. Low battery.
7. Abnormal test signal.
8. Communication bus failure.

E. Secondary Power: Integral rechargeable battery and automatic charger for associated equipment including but not limited to cable modems and routers.

F. Self-Test: Conducted automatically every 24 hours with report transmitted to approved supervising station.

2.14 CELLULAR COMMUNICATOR TRANSMITTER

A. Provide cellular communicator that is UL 864 compliant and is compatible with the existing supervising station fire alarm system.

B. Functional Performance: Communicator must have a means to transmit alarm, supervisory, and trouble conditions via a single connection to the DACT. Communicator must have a primary and secondary source of power for operation that conforms to NFPA 72 and manufacturer requirements. Communicator must have an integral LED signal that indicates signal strength and status. The enclosure must be identified by an engraved phenolic resin nameplate. Lettering

on the nameplate must say "Fire Alarm Cellular Communicator" and must not be less than 1-inch high.

C. Digital data transmission must include the following:

1. Address of the alarm-initiating device.
2. Address of the supervisory signal.
3. Address of the trouble-initiating device.
4. Loss of ac supply.
5. Loss of power.
6. Low battery.
7. Abnormal test signal.
8. Communication bus failure.

D. Secondary Power: Integral rechargeable battery and automatic charger for associated equipment.

E. Self-Test: Conducted automatically every 24 hours with report transmitted to approved supervising station. Communicator must be capable of initiating a test signal daily at any selected time.

2.15 SURGE PROTECTIVE DEVICES

A. Surge protective devices must be provided to suppress voltage transients which might damage fire alarm control unit components. Where fire alarm circuits enter or exit buildings, including telephone lines for signal transmission, the circuits and equipment must be installed in accordance with the requirements of Article 760 of NFPA 70, National Electrical Code. Cables and conductors, that serve as communications links, must have surge protection circuits installed at each end.

B. The 120 volt, primary power surge protective device must wire in series to the power supply of the protected equipment with screw terminations. Line voltage surge arrestor must be installed directly adjacent to the power panel where the FACU breaker is located.

C. Surge protective devices must be grounded per NFPA 70 and manufacturer requirements.

D. Surge protective devices must feature an audible alarm that alerts building management when the unit stops functioning.

E. The protector must be located as close as possible to where the circuit enters/leaves the building.

2.16 WIRING

A. Provide wiring in minimum 3/4-inch EMT or rigid steel conduit. Wiring must be in accordance with manufacturer's recommendations. Shielding must be omitted where recommended by manufacturer. The signaling line circuits wiring must be solid copper cable in accordance with the manufacturer's requirements. Copper signaling line circuits and initiating device circuit field wiring must be No. 14 AWG size twisted and shielded solid conductors at a minimum. Visual notification appliance circuit conductors, that contain audible alarm appliances, must be solid

copper No. 14 AWG size conductors at a minimum. Speaker circuits must be copper No. 16 AWG size twisted and shielded conductors at a minimum. Wire size must be sufficient to prevent voltage drop problems and allow for 25 percent spare capacity. Circuits operating at 24 VDC must not operate at less than the UL listed voltages for the sensors and/or appliances. Power wiring, operating at 120 VAC minimum, must be a minimum No. 12 AWG solid copper having similar insulation. Acceptable power-limited cables are FPL, FPLR or FPLP as appropriate with red colored covering. Nonpower-limited cables must comply with NFPA 70.

2.17 DOCUMENT STORAGE CABINET

A. Provide a flush-mounted Document Cabinet adjacent to FMCU. Cabinet must be steel, locking, with a hinge-mounted door, keyed the same as the FMCU. Prominently label the exterior of the cabinet "SYSTEM RECORD DOCUMENTS". Cabinet must include paper copies and a CD of Fire Alarm/Mass Notification As-Built drawings, List of Contact ID descriptions for the fire alarm addressable devices, and NFPA 72 Records of Completion. CD must also include site-specific software and O&M manuals stored in a CD jewel case.

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 EQUIPMENT INSTALLATION

A. Comply with applicable codes and standards including but not limited to NFPA 72, the International Building Code, Unified Facilities Criteria, Maine Army National Guard Design Guidelines and the requirements of the authorities having jurisdiction for installation and testing of fire-alarm and mass notification equipment. Install electrical wiring to comply with requirements in NFPA 70 including, but not limited to, Article 760, "Fire Alarm Systems."

1. Devices placed in service before other trades have completed cleanup must be replaced.
2. Devices installed but not yet placed in service must be protected from construction dust, debris, dirt, moisture, and damage according to manufacturer's written instructions.

B. Addressable devices and modules must be installed in areas that are in accordance with their environmental listing criteria. If equipment is required to be installed outside of this range, conventional devices must be installed and addressable monitor modules must be installed in a nearby conditioned area for connection to the FMCU.

C. Install wall-mounted equipment, with tops of cabinets not more than 78 inches above the finished floor.

D. Manual Fire-Alarm Boxes:

1. Install manual fire-alarm box in the normal path of egress within 60 inches of the exit doorway.
2. Mount manual fire-alarm box on a background of a contrasting color.
3. The operable part of manual fire-alarm box must be between 42 inches and 48 inches above floor level. Devices must be mounted at the same height unless otherwise indicated.

E. Smoke Detector Spacing:

1. Comply with the "Smoke-Sensing Fire Detectors" section in the "Initiating Devices" chapter in NFPA 72, for smoke-detector spacing.
2. Smooth ceiling spacing must not exceed 30 feet.
3. Spacing of detectors for irregular areas, for irregular ceiling construction, and for high ceiling areas must be determined according to Annex B of NFPA 72.
4. HVAC: Locate detectors not closer than 36 inches from air-supply diffuser or return-air opening.
5. Lighting Fixtures: Locate detectors not closer than 12 inches from any part of a lighting fixture and not directly above pendant mounted or indirect lighting.

F. Heat Detector Spacing:

1. Comply with the "Initiating Devices" chapter in NFPA 72, for heat-detector spacing.
2. Lighting Fixtures: Locate detectors not closer than 12 inches from any part of a lighting fixture and not directly above pendant mounted or indirect lighting.

G. Install manufacturer approved protection 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.

H. Duct Smoke Detectors: Comply with NFPA 72 and NFPA 90A. Install sampling tubes so they extend the full width of duct. Tubes more than 36 inches 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.

I. Wall-mounted Audible Alarm-Indicating Devices: Install not less than 6 inches below the ceiling unless ceiling mounted. Install speakers on flush-mounted back boxes with the device-operating mechanism concealed behind a grille. Install devices at the same height unless otherwise indicated.

J. Visible Alarm-Indicating Devices: Install adjacent to each audible alarm-indicating device and at least 6 inches below the ceiling unless ceiling mounted. Install devices at the same height unless otherwise indicated.

3.3 PATHWAYS

A. Pathways must be installed in EMT except rigid conduit must be used where physical damage is a possibility.

B. Conduit and equipment must be marked in accordance with NFPA 70, UFC 3-600-01, and MEARNG conduit color coding requirements. In concealed or unfinished areas, factory paint electrical conduit (serving fire alarm equipment), fire alarm conduit, junction boxes, back boxes, covers, couplings, and clips red. In finished areas, paint electrical conduit (serving fire alarm equipment), fire alarm conduit, junction boxes, back boxes, covers, couplings, and clips to match the room finish. Provide 2-inch wide red bands, that completely encircle the conduit, at 20 feet intervals, and on both sides of floor, wall, and ceiling penetrations. Remove labels and manufacturers' markings from exposed conduits. In both types of locations label the inside cover of the junction boxes "FIRE ALARM". Coordinate with Section 099123 “Interior Painting.”

C. Tubing and conduit must be run concealed unless noted otherwise.

3.4 CONNECTIONS

A. Make addressable connections with a supervised interface device to the following devices and systems. Install the interface device less than 36 inches from the device controlled (Exception – where greater than 36” is required due to the monitored equipment being installed in an unconditioned space). Make a separate addressable confirmation connection when such feedback is available at the device or system being controlled.

1. Alarm-initiating connection to activate emergency lighting control.
2. Range hood fire suppression system.
3. Gas shut-off valve.

3.5 IDENTIFICATION

A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

B. Install framed instructions in a location visible from FMCU.

C. Addressable devices must be labeled with permanent labels indicating the device's digital address. Labels must have a font size of 22 point letters (Brother Size 4) with the following color scheme: red devices must have red letters on a white background; devices of other colors must have black letters on a white or clear background providing adequate contrast so as to be read easily. Ceiling mounted devices must be labeled on two sides of the base. Labels must be in accordance with the following requirements:

1. Manual pull stations must have a 12 mm (1/2 inch) label stating the digital address of the device. Mount label at top of pull station.
2. Detector bases must be labeled on two sides with 12 mm (1/2 inch) labels so persons traversing corridors or spaces searching for the device can see labels. Label must have digital address on it.
3. Addressable Interface Devices must be labeled with 12 mm (1/2 inch) labels with each device's digital address and function.

3.6 GROUNDING

A. Ground FMCU and associated circuits; comply with IEEE 1100. Install an insulated ground wire from electrical panel ground to fire-alarm control unit.

B. Ground shielded cables at the control panel location only. Insulate shield at device location.

3.7 FIELD QUALITY CONTROL

A. The QFPD must perform in-progress construction surveillance.

B. Field tests must be witnessed by the QFPE, the Consultant, and authorities having jurisdiction.

C. Perform tests and inspections.

1. The following items are required at testing:

    a. A copy of the specifications.
    b. Operation and Maintenance (O&M) Manuals.
    c. Up-to-date redlined drawings. These drawings must be undamaged sets of prints of the shop drawings, with changes from the original drawings marked in red.

D. The Contractor must provide personnel, equipment, tools, gauges, meters, ladders and communication devices necessary for the performance of tests. This includes a sound level meter conforming to ANSI S1.4a Specifications for Sound Level Meters, Type 2 requirements, and an intelligibility meter as specified by IEC 60849 and IEC 60268-16.

E. Perform the following tests and inspections prior to testing with the authorities having jurisdiction:

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 the "Completion Documentation" section in the "Documentation" chapter of NFPA 72.
    b. Comply with the "Visual Inspection Frequencies" table in the "Inspection" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72; retain the "Initial/Reacceptance" column and list only the installed components.

2. System Testing: Comply with the "Test Methods" table in the "Testing" section of the "Inspection, Testing and Maintenance" chapter in NFPA 72.

3. Test audible appliances for the public operating mode according to manufacturer's written instructions. Perform the test using a portable sound-level meter complying with Type 2 requirements in ANSI S1.4 and with an intelligibility meter.
4. Test visible appliances for the public operating mode according to manufacturer's written instructions.
5. Factory-authorized service representative must prepare the “Fire Alarm System Record of Completion” and the "Emergency Communication Systems Supplemental Record of Completion” in the "Documentation" chapter of NFPA 72 and the "Inspection and Testing Form" in the "Inspection, Testing and Maintenance" chapter in NFPA 72.

F. Reacceptance Testing: Perform reacceptance testing to verify the proper operation of added or replaced devices and appliances.

G. System will be considered defective if it does not pass tests and inspections.

H. Perform final testing with the authorities having jurisdiction. Tests and inspections must be performed at their discretion.

I. Prepare test and inspection reports. Include a marked-up test floor plan with audibility and intelligibility results indicated.

J. Maintenance Test and Inspection: Perform tests and inspections listed for weekly, monthly, quarterly, and semiannual periods. Use forms developed for initial tests and inspections.

K. 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.

3.8 MAINTENANCE SERVICE

A. Initial Maintenance Service: Beginning at Substantial Completion, maintenance service must include 12 months' full maintenance by minimum NICET Level II technicians who have received training specific to the installed equipment. 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 according to the "Visual Inspection Frequencies" table in the "Testing" paragraph of the "Inspection, Testing and Maintenance" chapter in NFPA 72.
2. Perform tests in the "Test Methods" table in the "Testing" paragraph of the "Inspection, Testing and Maintenance" chapter in NFPA 72.
3. Perform tests per the "Testing Frequencies" table in the "Testing" paragraph of the "Inspection, Testing and Maintenance" chapter in NFPA 72.

3.9 SOFTWARE SERVICE AGREEMENT

A. Comply with UL 864.

B. Change factory default passwords.

C. Technical Support: Beginning at Substantial Completion, service agreement must include software support for two years.

D. 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.

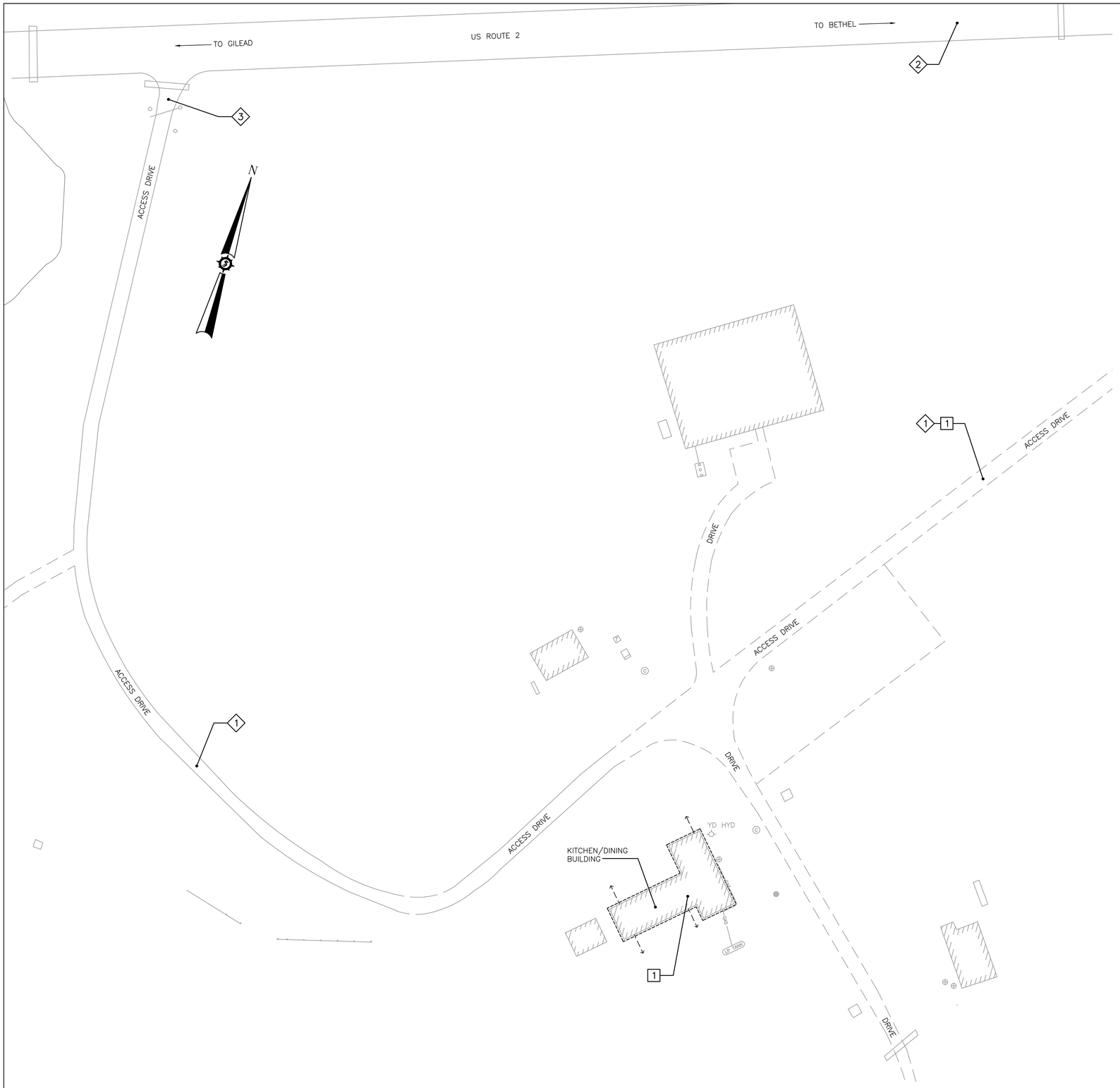
1. Upgrade Notice: At least 30 days to allow Owner to schedule access to system and to upgrade computer equipment if necessary.

E. Whenever a software change is made, a compact disc with a copy of the latest revision must be placed in a hanging folder attached to the inside of the panel cabinet door prior to the technician leaving the site for the day. Any and all passwords necessary for future software modification or any other purpose must be left with the Owner at this time as well.

3.10 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire-alarm system.

END OF SECTION



1 / G-101 EXISTING CONDITIONS SITE PLAN
SCALE: 1"=30'

04 Feb, 2022 - 1:50pm
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GENERAL FIRE PROTECTION CODE INFORMATION

APPLICABLE LIFE SAFETY/BUILDING CODES:

1. ARMY NATIONAL GUARD DG 415-5, GENERAL FACILITIES INFORMATION DESIGN GUIDE, 01 JUNE 2011
2. UNIFIED FACILITIES CRITERIA (UFC) 1-200-01, WITH CHANGE 1, DOD BUILDING CODE, 1 OCTOBER 2020
3. UFC 3-600-01, WITH CHANGE 5, FIRE PROTECTION ENGINEERING FOR FACILITIES, 24 SEPTEMBER 2020
4. UFC 4-021-01, DESIGN AND O&M: MASS NOTIFICATION SYSTEMS, 1 JANUARY 2010
5. INTERNATIONAL BUILDING CODE (IBC), 2018
6. INTERNATIONAL EXISTING BUILDING CODE (IEBC), 2018
7. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 1, FIRE CODE, 2018
8. NFPA 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2018
9. NFPA 17A, STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS, 2017
10. NFPA 70, NATIONAL ELECTRICAL CODE, 2020
11. NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE, 2019
12. NFPA 90A STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS, 2018
13. NFPA 96, STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS, 2017
14. NFPA 101, LIFE SAFETY CODE, 2018
15. NFPA 220, STANDARD ON TYPES OF BUILDING CONSTRUCTION, 2018
16. NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS, 2019
17. ~~NFPA 720, STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE (CO) DETECTION AND WARNING EQUIPMENT~~
18. NFPA 1141, STANDARD FOR FIRE PROTECTION INFRASTRUCTURE FOR LAND DEVELOPMENT IN WILDLAND, RURAL, AND SUBURBAN AREAS, 2017
19. NFPA 1142 STANDARD ON WATER SUPPLIES FOR SUBURBAN AND RURAL FIRE FIGHTING, 2017
20. MAINE UNIFORM BUILDING AND ENERGY CODE (MUBEC), WHICH INCLUDES THE 2015 INTERNATIONAL BUILDING CODE.

1 ADDENDUM NO.5

AUTOMATIC FIRE SUPPRESSION SYSTEM: NONE

FIRE DETECTION/ALARM SYSTEM: COMBINATION FIRE ALARM AND MASS NOTIFICATION SYSTEM WITH SPEAKER/STROBE VOICE NOTIFICATION. FIRE ALARM NOTIFICATION MUST HAVE CLEAR STROBES. MASS NOTIFICATION MUST HAVE AMBER STROBES. FIRE ALARM ACTIVATION BY MANUAL PULL STATIONS, SPOT AND DUCT SMOKE DETECTION, SPOT HEAT DETECTION, AND CARBON MONOXIDE DETECTION. TRANSMISSION TO SUPERVISORY STATION MUST BE BY CELLULAR COMMUNICATOR WITH A DEDICATED PHONE LINE AS BACKUP.

GENERAL NOTE

1. FIRE PROTECTION FEATURES OF THE BUILDING ARE SHOWN FOR GENERAL INFORMATION ONLY. REFER TO APPLICABLE CIVIL AND FIRE ALARM AND MASS NOTIFICATION SHEETS FOR DESIGN INFORMATION.

EXISTING KEYNOTES (THIS SHEET ONLY)

1. EXISTING FIRE DEPARTMENT ACCESS
2. EXISTING WATER FOR FIRE FLOW FROM BOG BROOK AT US ROUTE 2 CROSSING
3. EXISTING GATE

KEYNOTE (THIS SHEET ONLY)

1. FIRE ALARM AND MASS NOTIFICATION CONTROL UNIT (APPROXIMATE LOCATION)

LEGEND (THIS SHEET ONLY)

- EXISTING EXIT DISCHARGE PATH
- PAVED ROAD
- GRAVEL/DIRT ROAD

GRAPHIC SCALE

30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

DIRECTORATE FACILITIES ENGINEERING DFE CAMP KEYES

PLAN REVISIONS

Rev#	Description	Date	Appr.
1	ADDENDUM NO.5	02/07/22	LEC

DESIGNED BY: LEC
DRAWN BY: SAS
CHECKED BY: PNM
DATE: 11/15/2021
SCALE: AS NOTED
DFE PROJECT NO: 23TR19-603D

STATE OF MAINE
DEPARTMENT OF DEFENSE, VETERANS AND EMERGENCY MANAGEMENT

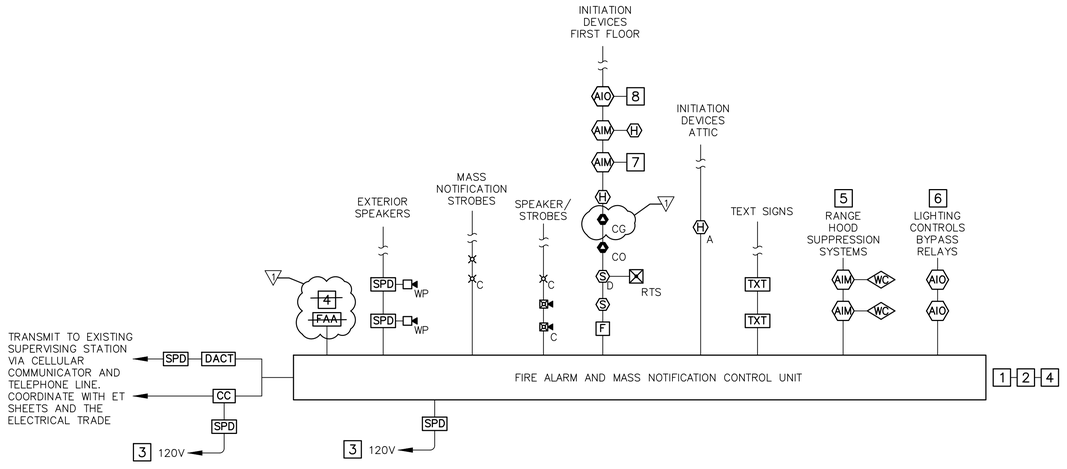
OAK POINT ASSOCIATES
ARCHITECTURE, ENGINEERING, & PLANNING
231 MAIN STREET
BUCKSPORT, MAINE
207-283-0193

BOG BROOK KITCHEN RENOVATION
GILEAD, MAINE

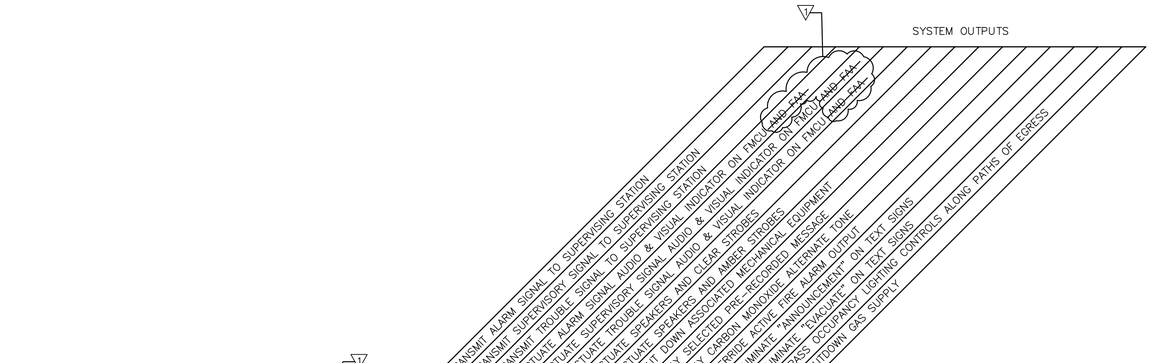
CODE INFORMATION 1

PLAN PROGRESS
- ☐ DRAFT
- ☐ 35% REVIEW
- ☐ 65% REVIEW
- ☐ 95% REVIEW
- ☐ FINAL REVIEW
- ☒ FOR BIDDING
- ☐ ISSUED FOR CONSTRUCTION
- ☐ RECORD DRAWINGS

SHEET ID: G-101
SHEET: 3 OF 74



1 FA001 CONSOLIDATED FIRE ALARM AND MASS NOTIFICATION RISER DIAGRAM
NOT TO SCALE



		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
1	MANUAL PULL STATIONS	●			●			●			●				●	●	●	1
2	AREA SMOKE AND HEAT DETECTORS	●			●			●			●				●	●	●	2
3	DUCT SMOKE DETECTORS		●			●				●								3
4	CARBON MONOXIDE AND COMBUSTIBLE GAS DETECTORS	●			●			●			●	●			●	●		4
5	AMPLIFIER TROUBLE			●			●											5
6	MANUAL ACTIVATION OF MNS ANNOUNCEMENT MESSAGE		●			●			●		●		●	●				6
7	MANUAL ACTIVATION OF MNS EVACUATE MESSAGE		●			●			●		●		●		●			7
8	LIVE MESSAGE AT FMCU OR FAA PANEL		●			●			●				●	●				8
9	FMCU, FAA, AND/OR CELLULAR COMMUNICATOR AC POWER FAILURE			●			●											9
10	FMCU, FAA, AND/OR CELLULAR COMMUNICATOR SYSTEM LOW BATTERY			●			●											10
11	FA/MN OPEN CIRCUIT			●			●											11
12	FA/MN GROUND FAULT			●			●											12
13	NOTIFICATION APPLIANCE CIRCUIT SHORT			●			●											13
14	AIM – RANGE HOOD FIRE SUPPRESSION SYSTEM ACTIVATION	●			●			●			●				●	●	●	14
15	AIM – RANGE HOOD FIRE SUPPRESSION SYSTEM TROUBLE			●			●											15
16	DACT PHONE LINE AND/OR CELLULAR COMMUNICATOR TROUBLE			●			●											16
17	KITCHEN LOW TEMPERATURE		●			●												16
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	

2 FA001 INPUT/OUTPUT MATRIX
NOT TO SCALE

KEYNOTES (THIS DRAWING ONLY)

1. PROVIDE NUMBER OF CIRCUITS REQUIRED FOR THE LOAD. PROVIDE SEPARATE CIRCUIT EACH FOR CLEAR STROBES, AMBER STROBES, AND SPEAKERS. PROVIDE A MINIMUM OF TWO SIGNALING LINE AND NOTIFICATION CIRCUITS. SIGNALING LINE AND NOTIFICATION APPLIANCE CIRCUITS MUST NOT BE LOADED MORE THAN 75% OF THEIR RATED CAPACITY. THE FIRE ALARM SYSTEM INSTALLING CONTRACTOR MUST VERIFY COMPLIANCE WITH THIS REQUIREMENT.
2. PROVIDE QUANTITY OF DEVICES, APPLIANCES, AND CIRCUITS SHOWN ON SHOP DRAWINGS. RETURN CIRCUITS BACK TO THE FMCU THROUGH A SEPARATE CONDUIT RUN. RETURN OF CIRCUITS TO FMCU IS NOT SHOWN.
3. THE BREAKER(S) SERVING THE FIRE ALARM CONTROL UNIT AND CELLULAR COMMUNICATOR MUST BE RED. PROVIDE BREAKER WITH LISTED BREAKER HANDLE CLAMP. MARK BREAKER "FIRE ALARM DISCONNECT". INDICATE LOCATION OF SOURCE PANELBOARD AND THE CIRCUIT BREAKER AT THE CONTROL UNIT. COORDINATE WITH ELECTRICAL TRADE.
4. LOC MUST BE INTEGRAL WITH THE FMCU ~~AND FAA~~. ▽1
5. PROVIDE PROGRAMMING AND SEPARATE ADDRESSABLE INTERFACE DEVICES FOR MONITORING OF THE TWO KITCHEN RANGE HOOD SUPPRESSION SYSTEMS.
6. PROVIDE ADDRESSABLE INPUT/OUTPUT MODULES AND PROGRAMMING FOR BYPASSING OF OCCUPANCY SENSOR CONTROLLED LIGHTING UPON FMCU ALARM ACTIVATION. COORDINATE FINAL NUMBER AND LOCATION WITH THE ELECTRICAL TRADE.
7. MECHANICAL THERMOSTAT
8. GAS APPLIANCE SOLENOID

LEGEND

- FMCU — FIRE ALARM AND MASS NOTIFICATION CONTROL UNIT
- DACT — DIGITAL ALARM COMMUNICATOR TRANSMITTER
- CC — CELLULAR COMMUNICATOR
- ~~FAA~~ — ~~FIRE ALARM ANNUNCIATOR~~ ▽1
- F — MANUAL PULL STATION
- H — HEAT DETECTOR; A = ATTIC
- S — SMOKE DETECTOR; D = DUCT DETECTOR WITH INTEGRAL RELAY
- RTS — REMOTE INDICATOR AND TEST SWITCH
- CG — COMBUSTIBLE GAS DETECTOR ▽1
- CO — CARBON MONOXIDE DETECTOR
- AIM — ADDRESSABLE INPUT MODULE
- AIO — ADDRESSABLE INPUT/OUTPUT MODULE
- SPEAKER WITH CLEAR STROBE; # = CANDELA RATING; C = CEILING MOUNTED
- SPEAKER; C = CEILING MOUNTED; WP = WEATHERPROOF
- AMBER STROBE (UNLESS NOTED OTHERWISE); # = CANDELA RATING; C = CEILING MOUNTED
- TXT — MASS NOTIFICATION TEXT SIGN
- SPD — SURGE PROTECTIVE DEVICE
- WC — WET CHEMICAL HOOD SYSTEM
- K — KNOX BOX
- SOLENOID VALVE

ABBREVIATIONS

AC	ALTERNATING CURRENT
AIC	AMPERE INTERRUPTING CAPACITY
AIM	ADDRESSABLE INPUT MODULE
AIO	ADDRESSABLE INPUT/OUTPUT MODULE
CIS	COMMON INTELLIGIBILITY SCORE
CO	CARBON MONOXIDE
dBA	A-WEIGHTED DECIBEL
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
EMT	ELECTRICAL METALLIC TUBING
~~FAA~~	~~FIRE ALARM ANNUNCIATOR~~ ▽1
FA/MN	FIRE ALARM AND MASS NOTIFICATION SYSTEM
FMCU	FIRE ALARM AND MASS NOTIFICATION CONTROL UNIT
HVAC	HEATING, VENTILATION, AND AIR-CONDITIONING
LOC	LOCAL OPERATING CONSOLE
MNS	MASS NOTIFICATION SYSTEM
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
RMC	RIGID METALLIC CONDUIT
RTU	ROOF TOP UNIT
SPD	SURGE PROTECTIVE DEVICE
UFC	UNIFIED FACILITIES CRITERIA
UL	UNDERWRITERS LABORATORIES
WP	WEATHERPROOF

GENERAL FIRE ALARM AND MASS NOTIFICATION NOTES

1. PROVIDE THE BUILDING WITH A FIRE ALARM AND MASS NOTIFICATION SYSTEM IN ACCORDANCE WITH THE PRESCRIPTIVE REQUIREMENTS OF THE CURRENTLY ADOPTED EDITIONS OF THE UNIFIED FACILITIES CRITERIA (UFC), INCLUDING UFC 3-600-01, UFC 4-021-01, AND THE NFPA, INCLUDING 70, 72, 90A, AND 101 ~~AND 720~~. ▽1
2. THE SYSTEM MUST HAVE AUDIBILITY LEVELS IN ACCORDANCE WITH NFPA 72; NOT TO EXCEED 110 DBA AND INTELLIGIBILITY IN ACCORDANCE WITH UFC 4-021-01. THESE VALUES MUST BE MET WITH DOORS IN THE CLOSED POSITION.
3. SEE "ED" DRAWINGS FOR EXISTING FIRE ALARM REMOVALS.
4. COORDINATE WORK WITH THE ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL TRADES.
5. EQUIPMENT AND WIRING MUST BE NEW AND UL LISTED. RE-USE OF EXISTING CONDUIT IS NOT PERMITTED.
6. FIRE ALARM AND MASS NOTIFICATION SIGNALS MUST BE TRANSMITTED TO THE APPROPRIATE DISPATCH. COORDINATE SIGNAL CODES AND FORMATTING THROUGH THE OWNER.
7. VERIFY EXISTING CONDITIONS AND DIMENSIONS AND REPORT DISCREPANCIES TO THE CONSULTANT. PROCEED WITH THE WORK ONLY AFTER THE DISCREPANCIES HAVE BEEN RESOLVED BY THE CONSULTANT.
8. PROVIDE WIRING AND CONDUIT INTERCONNECTING DEVICES AND APPLIANCES TO THE FMCU. WIRING MUST BE IN ACCORDANCE WITH APPLICABLE CODES AND UFC'S AND AS RECOMMENDED BY EQUIPMENT MANUFACTURERS. RUN WIRING IN METAL CONDUIT (EMT MINIMUM, NOT FLEXIBLE, SIZED PER NFPA 70, 3/4" MINIMUM). INSTALL CONDUIT PARALLEL TO BUILDING LINES. CONDUIT MUST BE INSTALLED ABOVE CEILINGS WHERE DROP CEILINGS ARE PRESENT OR TO BE PROVIDED UNLESS NOTED OTHERWISE. EXPOSED FLEXIBLE METAL CONDUIT WHIPS ARE NOT PERMITTED. DEVICES, APPLIANCES, AND EQUIPMENT ARE TO BE RECESSED MOUNTED IN NEW CONSTRUCTION.
9. CONDUIT AND EQUIPMENT MUST BE MARKED IN ACCORDANCE WITH NFPA 70, UFC 3-600-01, AND MEARNG CONDUIT COLOR CODING REQUIREMENTS. IN CONCEALED OR UNFINISHED AREAS, FACTORY PAINT ELECTRICAL CONDUIT (SERVING FIRE ALARM EQUIPMENT), FIRE ALARM CONDUIT, JUNCTION BOXES, BACK BOXES, COVERS, COUPLINGS, AND CLIPS RED. IN FINISHED AREAS, PAINT ELECTRICAL CONDUIT (SERVING FIRE ALARM EQUIPMENT), FIRE ALARM CONDUIT, JUNCTION BOXES, BACK BOXES, COVERS, COUPLINGS, AND CLIPS TO MATCH THE ROOM FINISH. PROVIDE 2-INCH WIDE RED BANDS, THAT COMPLETELY ENCIRCLE THE CONDUIT, AT 20 FEET INTERVALS, AND ON BOTH SIDES OF WALL AND CEILING PENETRATIONS. REMOVE LABELS AND MANUFACTURERS' MARKINGS FROM EXPOSED CONDUITS. IN BOTH TYPES OF LOCATIONS LABEL THE INSIDE COVER OF THE JUNCTION BOXES "FIRE ALARM".
10. SYNCHRONIZE VISUAL NOTIFICATION APPLIANCES THAT ARE LOCATED IN THE SAME FIELD OF VISION.
11. PROVIDE MODULES, BATTERIES, AND ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM.
12. SEE ARCHITECTURAL FLOOR PLANS AND WALL TYPES, ARCHITECTURAL REFLECTED CEILING PLANS, ELECTRICAL POWER AND LIGHTING PLANS, AND MECHANICAL DUCTWORK AND PIPING PLANS FOR WALLS, CEILING FEATURES, SOFFIT LOCATIONS, AND UTILITIES. COORDINATE WORK TO PREVENT INTERFERENCES AND MAINTAIN COMPLIANT COVERAGE. LOCATE CEILING APPLIANCES AND DEVICES IN A CONSISTENT PATTERN. PIPING MUST NOT BE ROUTED ABOVE THE DEDICATED WORKING CLEARANCES OF THE FMCU.
13. COORDINATE WITH MECHANICAL DRAWINGS, SPECIFICATIONS, AND SUBCONTRACTOR FOR HVAC AND RANGE HOOD CONTROLS AND INTERFACE.
14. DO NOT DRILL OR CUT STRUCTURAL MEMBERS FOR THE INSTALLATION OF EQUIPMENT, DEVICES, APPLIANCES, CONDUIT, OR WIRE. STRUCTURAL MEMBERS WITH UNAPPROVED HOLES OR MODIFICATIONS MUST BE REPLACED AT NO COST TO THE OWNER.
15. DEVICE AND APPLIANCE LOCATIONS AND QUANTITIES ARE SHOWN FOR REFERENCE ONLY. DEVICES AND APPLIANCES IN ADDITION TO THOSE SHOWN MUST BE PROVIDED AT NO ADDITIONAL COST TO THE GOVERNMENT TO MEET REQUIREMENTS OF THE UFC'S AND NFPA CODES.
16. LOCATIONS OF ADDRESSABLE INPUT/OUTPUT MODULES FOR LIGHTING CONTROLS RELAYS ARE NOT INDICATED. REFER TO ELECTRICAL LIGHTING DRAWINGS FOR QUANTITIES AND LOCATIONS OF LIGHTING CONTROLS. PROVIDE ADDRESSABLE INPUT/OUT MODULES AND PROGRAMMING FOR PROVIDING FIRE ALARM SYSTEM CONTROL.
17. DRILL THROUGH EXTERIOR WALLS AT EXTERIOR APPLIANCES. PROVIDE CONDUIT AT BACK OF APPLIANCE BACK BOX. PROVIDE SURFACE MOUNTED EXTERIOR APPLIANCES WITH NO EXPOSED CONDUIT ON BUILDING EXTERIOR. MAKE OPENING WEATHER TIGHT. SEAL CONDUIT INTERIOR TO PREVENT PASSAGE OF MOISTURE.
18. COORDINATE LOCATION OF MASS NOTIFICATION TEXT INDICATORS WITH EXIT SIGNS. EXIT SIGNS MUST NOT OBSTRUCT TEXT INDICATORS AND TEXT INDICATORS MUST NOT OBSTRUCT EXIT SIGNS. REFER TO "EL" SHEETS FOR EXIT SIGNS.
19. CARBON MONOXIDE DETECTORS MUST BE CEILING MOUNTED UNLESS NOTED OTHERWISE OR REQUIRED BY THEIR LISTING OR MANUFACTURER REQUIREMENTS.
20. SURGE PROTECTION MUST BE PROVIDED FOR EXTERIOR APPLIANCES AND DEVICES INCLUDING THE PHONE LINES SERVING THE FMCU.
21. EAGLE SECURITY MUST BE HIRED FOR FMCU ADDRESS PROGRAMMING ON SITE AND CONNECTION OF THE FMCU TO THE OWNER'S CURRENT MONITORING COMPANY. EAGLE SECURITY IS LOCATED AT 735 MAIN ROAD NORTH, HAMPDEN, MAINE 04401, TELEPHONE: 207-907-4890. COORDINATE WITH OWNER.
22. PROVIDE 120 VOLT EQUIPMENT WITH MINIMUM 10,000 AIC RATING.
23. SEAL CONDUIT INTERIOR AT PENTRATIONS THROUGH BUILDING ENVELOPE TO PREVENT PASSAGE OF AIR AND MOISTURE. PROVIDE SEALANT PRODUCT INTENDED FOR SUCH USE. PROVIDE AT CONDUITS PENETRATING EXTERIOR WALLS. BASIS OF DESIGN: AMERICAN POLYWATER FST.

DIRECTORATE OF FACILITIES ENGINEERING — DFE — CAMP KEYES

PLAN REVISIONS

Rev	Description	Date	Appr.
▽1	ADDENDUM NO.5	02/07/22	LEC

DESIGNED BY: LEC
DRAWN BY: SAS
CHECKED BY: WRW
DATE: 11/15/2021
SCALE: AS NOTED
DFE PROJECT NO: 23TR19-603D

STATE OF MAINE
DEPARTMENT OF DEFENSE, VETERANS AND EMERGENCY MANAGEMENT

OAK POINT ASSOCIATES
ARCHITECTURE, ENGINEERING, & PLANNING
330 MAIN STREET
BUCKSPORT, MAINE
207-283-0193

BOG BROOK KITCHEN RENOVATION
GILEAD, MAINE

FIRE ALARM AND MASS NOTIFICATION, ABBREVIATIONS, LEGEND, AND RISER

PLAN PROGRESS
- ☐ DRAFT
- ☐ 35% REVIEW
- ☐ 65% REVIEW
- ☐ 95% REVIEW
- ☐ FINAL REVIEW
- ☒ FOR BIDDING
- ☐ ISSUED FOR CONSTRUCTION
- ☐ RECORD DRAWINGS

SHEET ID: FA001
SHEET: 49 OF 74

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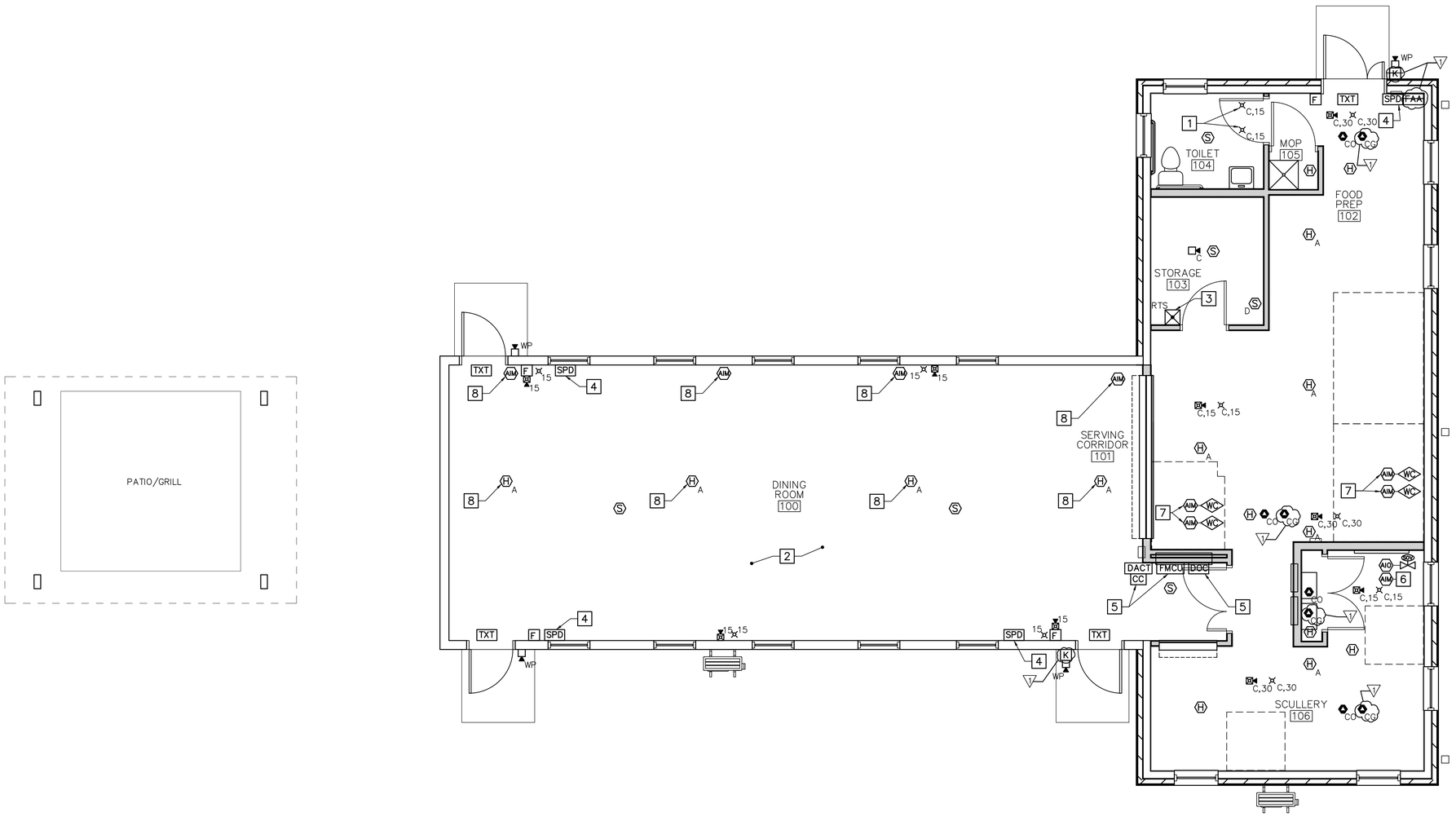

1 FA101 FIRST FLOOR FIRE ALARM AND MASS NOTIFICATION PLAN
SCALE: 1/4"=1'-0"

GENERAL NOTES

1. SEE DRAWING FA001 FOR GENERAL FIRE ALARM AND MASS NOTIFICATION NOTES, ABBREVIATIONS, SYMBOLS, RISER, AND MATRIX.
2. MAINTAIN ACCESSIBILITY CLEARANCES. THIS INCLUDES AT THE PULL AND PUSH SIDES OF DOORS.
3. PATCH SURFACES TO MATCH ADJACENT CONDITIONS.

KEYNOTES (THIS DRAWING ONLY)

1. ONE STROBE MUST BE CLEAR AND ONE STROBE MUST BE AMBER.
2. DEVICES AND APPLIANCES, AND CONDUIT SERVING THESE, MUST BE SURFACE MOUNTED. FOR DEVICES AND APPLIANCES LOCATED AT EXTERIOR WALLS, ROUTE CONDUIT AT EXTERIOR WALL, JUST BELOW THE CEILING.
3. PROVIDE PERMANENTLY ATTACHED PLACARD INDICATING THE FUNCTION AND LOCATION OF THE ASSOCIATED DUCT SMOKE DETECTOR AT THE REMOTE INDICATOR AND TEST SWITCH.
4. PROVIDE SURGE PROTECTIVE DEVICES FOR CIRCUITS EXITING BUILDING EXTERIOR. PROVIDE DEVICE IN A JUNCTION BOX. PROVIDE LABEL ON JUNCTION BOX COVER, "FIRE ALARM SPD".
5. FMCU AND ASSOCIATED EQUIPMENT MUST BE FLUSH MOUNTED OR SEMI-FLUSH MOUNTED. COORDINATE WITH ARCHITECTURAL TRADE FOR DEPTH OF WALL CAVITY REQUIRED. PROVIDE DOORSTOP TO PREVENT DOORS FROM DAMAGING EQUIPMENT.
6. PROVIDE MONITORING OF MECHANICAL THERMOSTAT FOR LOW TEMPERATURE CONDITION. COORDINATE WITH MECHANICAL TRADE.
7. HOOD SUPPRESSION SYSTEM MUST BE MONITORED FOR ALARM AND TROUBLE CONDITIONS.
8. HEAT DETECTORS IN ATTIC WILL BE EXPOSED TO FREEZING TEMPERATURES. PROVIDE CONVENTIONAL DEVICES IN THE ATTIC WITH ADDRESSABLE INPUT MODULES BELOW CEILING AT EXTERIOR WALL.

GRAPHIC SCALE
1/4"=1'-0"
4' 0 4' 8' 16'
CHECK GRAPHIC SCALE BEFORE USING

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DIRECTORATE OF FACILITIES ENGINEERING
DFE CAMP KEYES

PLAN REVISIONS

Rev#	Description	Date	Appr.
7	ADDENDUM NO.5	02/07/22	LEC

DESIGNED BY: LEC
DRAWN BY: SAS
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DEPARTMENT OF DEFENSE, VETERANS AND EMERGENCY MANAGEMENT

OAK POINT ASSOCIATES
ARCHITECTURE, ENGINEERING, & PLANNING
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BIDDEFORD, MAINE
207-283-0193

BOG BROOK KITCHEN RENOVATION
GILEAD, MAINE

FIRE ALARM AND MASS NOTIFICATION PLAN

PLAN PROGRESS
- ☐ DRAFT
- ☐ 35% REVIEW
- ☐ 65% REVIEW
- ☐ 95% REVIEW
- ☐ FINAL REVIEW
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SHEET ID:
FA101
SHEET:50 OF 74