

three inches = one foot
one and one half inch = one foot
one inch = one foot
one quarter inch = one foot
one half inch = one foot
three-quarters inch = one foot
one-eighth inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot

SCOPE OF WORK:

THE SCOPE OF WORK INCLUDES INSTALLING A NEW FIRE ALARM SYSTEM THROUGHOUT BUILDING 22H. THE NEW SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE CODES AS LISTED BELOW. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IF A CONFLICT OCCURS, THE MOST STRINGENT REQUIREMENT SHALL APPLY.

APPLICABLE CODES:

- VA FIRE PROTECTION DESIGN MANUAL, FIFTH EDITION
NFPA 101, LIFE SAFETY CODE (LSC), 2009 EDITION
NFPA 72, NATIONAL FIRE ALARM CODE, 2010 EDITION
NFPA 70, NATIONAL ELECTRIC CODE, 2011 EDITION

FIRE ALARM GENERAL NOTES:

GENERAL REQUIREMENTS

- ALL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO BE USED FOR EXACT MEASURE OR FABRICATION. CONTRACTOR SHALL INSTALL ALL FIRE ALARM COMPONENTS IN ACCORDANCE WITH ALL APPLICABLE CODES. CONTRACTOR SHALL COORDINATE INSTALLATION OF SYSTEM CONDUIT AND OTHER COMPONENTS WITH ALL OTHER TRADES.
- ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND OTHER OWNER REQUIREMENTS.
- IN CASE OF DISPUTE AS TO INTENT OF DRAWING OR SPECIFICATIONS, OBTAIN ARCHITECT'S/ENGINEER'S WRITTEN APPROVAL BEFORE PROCEEDING WITH BID.
- DESIGN AND INSTALL THE FIRE ALARM SYSTEM TO MEET THE REQUIREMENTS OF ALL CODES AND STANDARDS LISTED ON THIS SHEET.
- THE CONTRACTOR SHALL PROVIDE A FIELD PROJECT MANAGER THROUGHOUT THE PROJECT WITH A MINIMUM OF NICET LEVEL III CERTIFICATION IN FIRE ALARM SYSTEM TECHNOLOGY.
- THE CONTRACTOR SHALL HAVE A DESIGNER WITH A MINIMUM NICET LEVEL IV CERTIFICATION IN FIRE ALARM SYSTEM TECHNOLOGY OR A LICENSED PROFESSIONAL FIRE PROTECTION ENGINEER IN RESPONSIBLE CHARGE OF THE FIRE ALARM SYSTEM DESIGN.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS FOR THE FIRE ALARM SYSTEM INCLUDING A RISER (WITH A SEQUENCE OF OPERATION), POWER CONNECTION DETAILS, FLOOR PLANS SHOWING ALL DEVICE ADDRESSES, POWER SUPPLIES, CIRCUITRY AND ZONING PROPOSED FOR THE PROJECT/SYSTEM IN SUFFICIENT DETAIL TO CLEARLY REVIEW AND BUILD THE SYSTEM. PROVIDE INTERIOR PANEL WIRING AND DEVICE POINT-TO-POINT CONNECTION DETAIL DRAWINGS FOR ALL EQUIPMENT.
- IN ADDITION TO SHOP DRAWINGS, CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS, ADDRESSABLE CIRCUIT LOADING, NOTIFICATION APPLIANCE CIRCUIT LOADING, BATTERY CALCULATIONS, CURRENT DRAW AND VOLTAGE DROP CALCULATIONS AND SAMPLES AS REQUIRED BY NFPA 72, OWNER, AND ARCHITECT REQUIREMENTS.
- CHANGES IN THE LOCATIONS OF EQUIPMENT FROM THOSE SHOWN ON APPROVED SHOP DRAWINGS SHALL BE IDENTIFIED AND APPROVED IN WRITING PRIOR TO INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECTIFYING UNAUTHORIZED NONCOMPLIANT CHANGES AT NO ADDITIONAL CHARGE TO THE OWNER.
- THE CONTRACTOR SHALL PREPARE "AS-BUILT" DRAWINGS IN ELECTRONIC FORMAT, REFLECTING ACCURATE FIELD CONDITIONS.
- THE CONTRACTOR IS SPECIFICALLY RESPONSIBLE FOR ALL MEANS AND METHODS OF JOB SAFETY. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
- IF THE CONTRACTOR OPTS TO INSTALL EQUIPMENT OTHER THAN THAT SPECIFIED, HE/SHE SHALL BE RESPONSIBLE FOR PERFORMING THE NECESSARY DESIGN SERVICES TO ACCOMMODATE THE EQUIPMENT. ANY SUCH CHANGES SHALL BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER.
- ALL EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED.
- PROVIDE TRANSIENT SURGE SUPPRESSION FOR THE FIRE ALARM SYSTEM POWER SUPPLY AND FOR ALL CIRCUITS LEAVING THE BUILDING.
- ALL DEVICES NEEDED FOR A COMPLETE AND WORKING FIRE ALARM SYSTEM ARE NOT SHOWN ON THESE CONCEPT DRAWINGS. PROVIDE EQUIPMENT AS NECESSARY FOR A FULLY OPERATIONAL SYSTEM.

INSTALLATION REQUIREMENTS

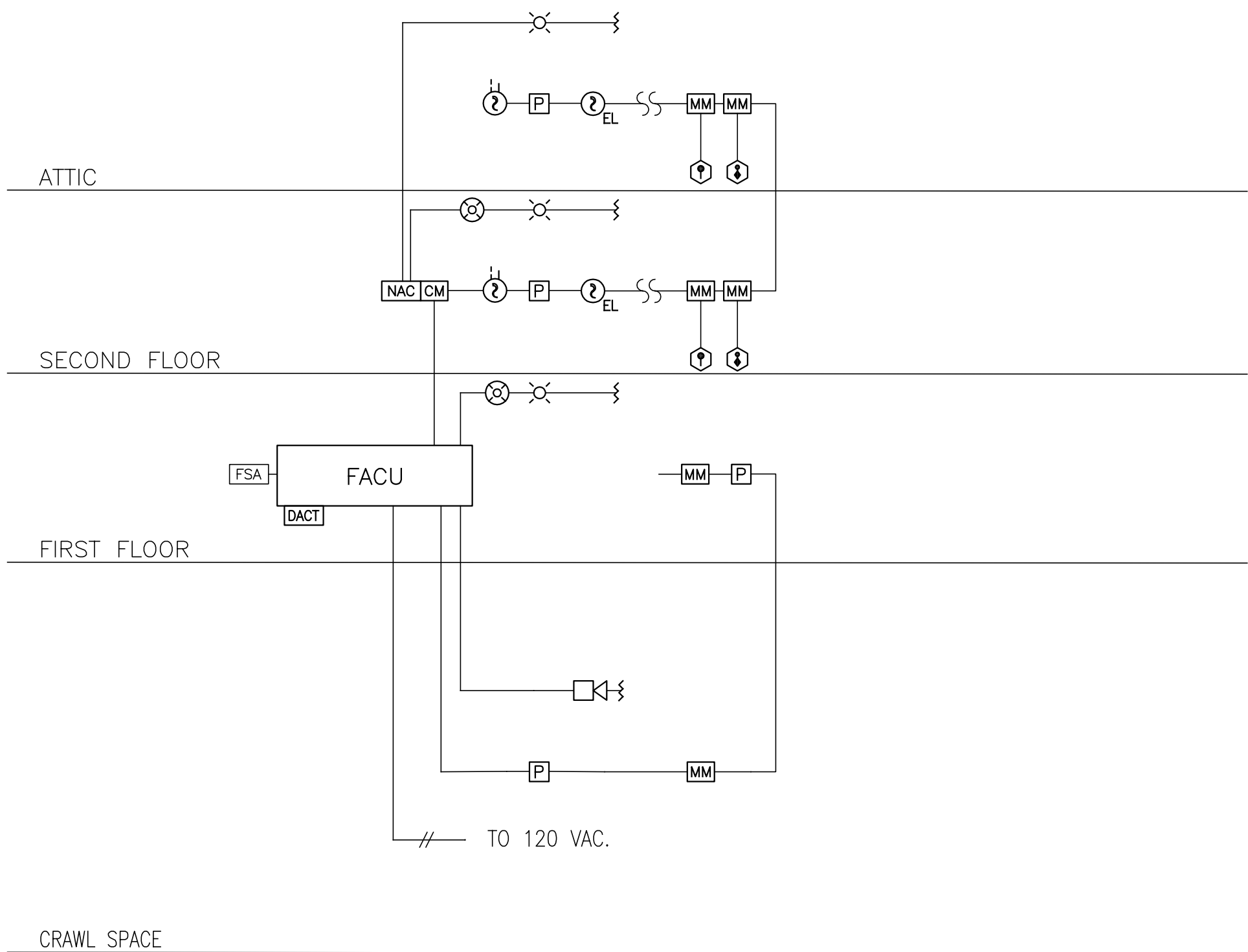
- THE INSTALLING CONTRACTOR SHALL CONTRACT WITH A SINGLE SOURCE FOR SUPPLYING JOB MATERIALS, SERVICES, AND PROGRAMMING, INCLUDING FINAL INSPECTION/TEST SERVICES FOR THE COMPLETED FIRE ALARM SYSTEM.
- EACH COMPONENT OF THE FIRE ALARM SYSTEM SHALL BE LISTED FOR THE INTENDED USE BY UNDERWRITERS LABORATORIES, INC. (UL) AND SHALL BEAR THE "UL" LABEL.
- ALL WIRING, RACEWAYS, CONDUITS AND BOXES FOR NEW AND RELOCATED DEVICES SHALL BE NEW. PROVIDE A PERMANENT LABEL FOR EACH WIRE/CIRCUIT (WITHIN ALL PANELS, CABINETS AND JUNCTION BOXES) INDICATING IT'S APPLICATION/USE/SERVICE.
- WIRING SHALL BE INSTALLED ABOVE CEILINGS AND WITHIN BUILDING CONSTRUCTION WHEREVER POSSIBLE. WIRING SHALL BE INSTALLED WITHIN EMT TYPE CONDUIT. NO EXPOSED WIRING WILL BE PERMITTED IN ANY PORTION OF THE BUILDING.

FIRE ALARM GENERAL NOTES:

- ALL WIRING, CABLES, BOXES, TROUGHS AND OTHER RELATED EQUIPMENT SHALL BE INSTALLED IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).
- FIELD PAINT JUNCTION BOXES, TERMINAL CABINETS, BACK BOXES AND COVERS WITH RED PAINT ON ALL SURFACES. ALL TERMINAL CABINETS AND JUNCTION BOXES SHALL BE LABELED WITH WHITE LETTERS INDICATING "FIRE ALARM" AS REQUIRED BY CODE.
- ALL SYSTEM POWER AND GROUND CIRCUITS SHALL BE TYPE "THHN" SOLID COPPER SIZED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, APPLICABLE CODES, AND IN EMT TYPE CONDUIT.
- IN ALL AREAS WITH DROP CEILINGS, CEILING-MOUNT FIRE ALARM DEVICES SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE.
- ALL EQUIPMENT SHALL BE RECESS MOUNTED WHERE POSSIBLE.
- ALL PENETRATIONS OF FIRE RESISTANCE RATED BARRIERS, WALLS, AND, SHAFT/ASSEMBLIES SHALL BE DRILLED AND SEALED WITH AN APPROVED UL FIRE-RATED THROUGH-PENETRATION ASSEMBLY.
- UL CLASSIFICATIONS AND MATERIAL PRODUCT DATA SHEETS FOR ALL FIRE STOPPING SYSTEMS SHALL BE SUBMITTED AND APPROVED BEFORE ANY FIRE STOPPING IS INSTALLED.
- VISIBLE AND COMBINATION AUDIBLE/VISIBLE ALARM NOTIFICATION APPLIANCES SHALL BE MOUNTED AT A MINIMUM OF 80-INCHES AND MAXIMUM OF 96-INCHES ABOVE THE FINISHED FLOOR MEASURED TO THE BOTTOM OF THE LENS, OR 6-INCHES BELOW THE CEILING MEASURED TO THE TOP OF THE LENS (WHICH EVER IS LOWER).
- ADDRESSABLE CONTROL/RELAY MODULES UTILIZED FOR ANY SHUTDOWN OR ACTIVATION FUNCTIONS SHALL BE MOUNTED WITHIN THREE (3) FEET OF THE CONTROLLED CIRCUIT OR DEVICE.
- UL CLASSIFICATIONS AND MATERIAL PRODUCT DATA SHEETS FOR ALL FIRE STOPPING SYSTEMS SHALL BE SUBMITTED AND APPROVED BEFORE ANY FIRE STOPPING IS INSTALLED.
- SMOKE DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER THE CONSTRUCTION CLEAN-UP IS COMPLETE AND FINAL.
- INSTALLATION AND TERMINATIONS OF ALL WIRE SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS.
- SIGNALING LINE CIRCUITS SHALL BE CLASS B.
- NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS B.
- INITIATING DEVICE CIRCUITS SHALL BE CLASS B.
- PRIOR TO ANY CONCRETE PENETRATIONS, THE CONTRACTOR SHALL X-RAY PROPOSED LOCATIONS FOR OWNER/OWNER'S REPRESENTATIVES APPROVAL.

FIRE ALARM DEMOLITION NOTES:

- DEMOLITION DRAWINGS WERE CREATED FROM FIELD SURVEYS AND MAY NOT SHOW ALL EXISTING DEVICES. WHERE DEVICES ARE LOCATED IN THE FIELD WHICH ARE NOT INDICATED ON THE DEMOLITION DRAWINGS, THE DEVICES AND ASSOCIATED WIRING AND CONDUIT SHALL BE DEMOLISHED.
- ALL EXISTING SYSTEMS AND EQUIPMENT BEING REPLACED OR THEIR OPERATION ABANDONED SHALL BE REMOVED IMMEDIATELY AFTER THE NEW FIRE ALARM SYSTEM IS ACCEPTED BY THE OWNER.
- EXISTING FIRE PROTECTION SYSTEMS SHALL NOT BE TAKEN OUT OF SERVICE WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER UNLESS OTHERWISE NOTED. IF SUCH SYSTEMS ARE TAKEN OUT OF SERVICE, THE CONTRACTOR SHALL PROVIDE ALTERNATIVE PROTECTION ACCEPTABLE TO THE OWNER. UNTIL THOSE SYSTEMS ARE REPLACED OR RESTORED TO SERVICE. THE CONTRACTOR SHALL ASSURE THAT THE SYSTEM IS OPERATIONAL AT THE END OF EACH WORK DAY.
- WHEN FIRE DETECTION AND ALARM SYSTEM DEVICES ARE OUT OF SERVICE, THEY SHALL BE CLEARLY TAGGED "OUT OF SERVICE."
- EXISTING CONCEALED CONDUITS, JUNCTION AND BACK BOXES SHALL HAVE ALL CONDUCTORS REMOVED AND BE ABANDONED IN PLACE.
- EXISTING DEVICE BACK BOXES INSTALLED RECESSED IN MASONRY WALLS SHALL BE ABANDONED IN PLACE AND PROVIDED WITH STAINLESS STEEL BLANK COVER PLATES. AS AN ALTERNATE METHOD AND AT THE OWNER'S DISCRETION, THE CONTRACTOR MAY REUSE EXISTING BACK BOXES AT THESE LOCATIONS. PRIOR WRITTEN APPROVAL MUST BE GRANTED BY THE OWNER.
- EXISTING DEVICE BACK BOXES INSTALLED (RECESSED OR SURFACE) ON GWB OR PLASTER COVERED WALLS SHALL BE REMOVED. PATCH AND FINISH HOLE TO MATCH SURROUNDING SURFACES. EXISTING DEVICE BACK BOXES INSTALLED RECESSED IN WALLS WITH DECORATIVE WALL COVERINGS SHALL BE ABANDONED IN PLACE AND PROVIDED WITH A STAINLESS STEEL BLANK COVER PLATE. AS AN ALTERNATE METHOD AND AT THE OWNER'S DISCRETION, THE CONTRACTOR MAY REUSE EXISTING BACK BOXES AT THESE LOCATIONS. PRIOR WRITTEN APPROVAL MUST BE GRANTED BY THE OWNER.
- WHERE EXISTING EQUIPMENT CABINETS ARE REMOVED, THE WALL SURFACE SHALL BE PATCHED AND FINISHED TO MATCH SURROUNDING SURFACES.
- WHERE EXISTING DUCT SMOKE DETECTORS ARE REMOVED, PATCH AND RE-INSULATE DUCTWORK TO MATCH EXISTING. COORDINATE THE REMOVAL OF ALL DUCT SMOKE DETECTORS WITH BUILDING AUTOMATION SYSTEMS CONTRACTOR.



A
FA-001
CONCEPTUAL RISER DIAGRAM

System Inputs	Annunciation			Notification			Controls						
	Indicate Alarm State at FACU	Indicate Trouble State at FACU	Indicate Supervisory State at FACU	Activate Horn/Strobe Appliances Throughout Building	Display Event or Annunciations	Transmit Signal to Central Station	Activate Smoke Detector Sounder Base(s)*	Release Magnetic Door Hold-Opens on Floor of Alarm	Recall Elevator to First Floor	Recall Elevator to Second Floor	Activate In-car "Fire Hat" Flash Warning	Disconnect Elevator Power (After Time-Delay)	Shutdown Associated HVAC Equipment
Manual Pull Station	1	X		X	X	X	X	X					
Smoke Detector (Corridor / General Area)	2	X		X	X	X	X	X					
Smoke Detector (Sleeping Room)	3		X		X	X	X						
Smoke Detector (Second Floor Elevator Lobby and Elevator Machine Room)	4	X		X	X	X	X		X				
Smoke Detector (First Floor Elevator Lobby)	5	X		X	X	X	X			X			
Heat Detector (Elevator Machine Room)	6	X		X	X	X	X				X	X	
Sprinkler Water Flow Switch	7	X		X	X	X	X	X					
Sprinkler Tamper Switch	8		X		X	X							
Sprinkler Dry Pipe High/Low Air Pressure	9		X		X	X							
Duct Smoke Detector	10		X		X	X							X
Device, Equipment or Circuit Fault	11		X		X	X							
FACP Primary Power Loss	12		X		X	X							
Earth Ground	13		X		X	X							

* - Activate associated sounder base on local smoke detector alarm.; activate all sounder bases on building general alarm

B
FA-001
FIRE ALARM SEQUENCE OF OPERATIONS

FIRE ALARM SYMBOL LEGEND:

- WALL MOUNTED HORN
- WALL MOUNTED STROBE (CANDELA RATING AS INDICATED)
- WALL MOUNTED HORN-STROBE (CANDELA RATING AS INDICATED)
- CEILING MOUNTED HORN
- CEILING MOUNTED STROBE (CANDELA RATING AS INDICATED)
- CEILING MOUNTED HORN-STROBE (CANDELA RATING AS INDICATED)
- MANUAL FIRE ALARM PULL STATION
- FIRE ALARM CONTROL UNIT W/ DACT
- ADDRESSABLE MONITOR MODULE
- ADDRESSABLE CONTROL RELAY MODULE
- REMOTE LCD ANNUNCIATOR PANEL
- HEAT DETECTOR
- SMOKE DETECTOR
- DUCT SMOKE DETECTOR
xx-x = ASSOCIATED HVAC UNIT
- FLOW SWITCH
(PROVIDED BY SPRINKLER CONTRACTOR UNLESS OTHERWISE NOTED)
- TAMPER SWITCH
- MAGNETIC DOOR HOLDER
- WEATHERPROOF DEVICE
- SLEEPING ROOM SUPERVISORY PHOTOELECTRIC SYSTEM SMOKE DETECTOR WITH SOUNDER BASE
- ELEVATOR RECALL SMOKE DETECTOR
- FIRE SMOKE DAMPER
- END OF LINE RESISTOR
- SLASH INDICATES TO BE DEMOLISHED DEVICE
- DARK LINEWEIGHT INDICATES NEW DEVICE
- DASHED LINEWEIGHT INDICATES EXISTING TO REMAIN DEVICE

FULLY SPRINKLERED

Additions:	Date:
Revisions:	
Addendum 1	09/07/12

ARCHITECT/ENGINEERS:

A JOINT VENTURE

TNF **PENZA + BAILEY**

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SEAL

PROFESSIONAL ENGINEER
STATE OF MARYLAND
No. 17608
9/9/12

Approved:

Approved: Chief, Facilities and Engineering:
Approved: Associate Chief for Maintenance And Operations, Perry Point:
Approved: Engineering Projects Supervisor
Approved: Infection Control Officer

Drawing Title:
FIRE ALARM GENERAL NOTES AND LEGEND
Approved: Associate Director for Operations:
Approved: Director, Medical Center:

Project Title:
RENOVATE BUILDING 22H FOR SARRTP
Scale:
AS NOTED
Building No:
22H
Checked:
Drawn:
Location:
VAMHCS PERRY POINT, MD 21902

Date:
OCTOBER 14, 2011
Project No:
512-523
DRAWING NO:
FA0.01
SHT. 162 of 173

