

FIRE ALARM SYMBOL LEGEND

Table with 4 columns: Symbol, Description, Symbol, Description. Includes items like FIRE ALARM CONTROL PANEL, REMOTE LCD ANNUNCIATOR PANEL, FIRE ALARM COMMUNICATOR (DACT), DETECTOR, HEAT, SUB TEXT, DETECTOR, SMOKE, FOR DUCT, MAGNETIC DOOR HOLD OPEN DEVICE, ADDRESSABLE MONITOR MODULE, CONNECTION TO SPRINKLER TAMPER AND/OR LOW AIR SWITCH.

ABBREVIATIONS

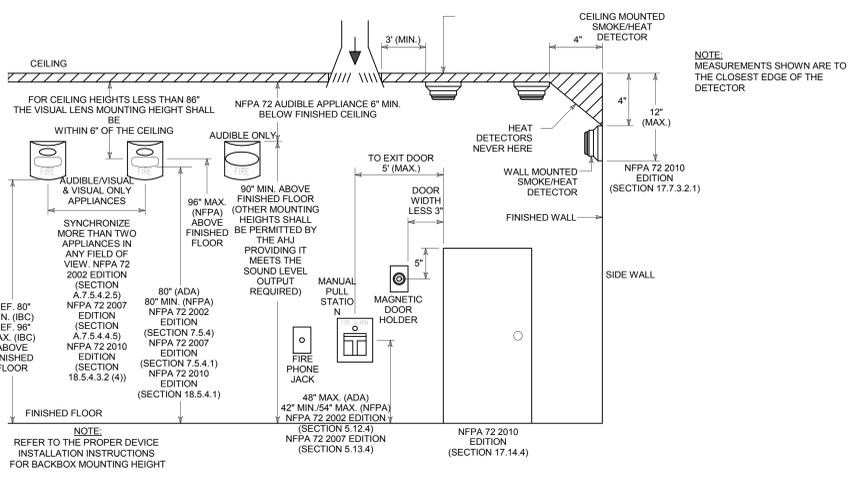
Table with 4 columns: Abbreviation, Full Name, Abbreviation, Full Name. Includes terms like AFF above finished floor, AFG fire alarm, ACC fire alarm annunciator panel, ADJ fire alarm control panel, AL alternating current, ALU aluminum, ANS adjustable, AM American wire gauge, AMP ammeter, AAMP ampere, APPROX approximately, ASY asymmetric, ACR attenuation/crossstalk ratio, ATS automatic transfer switch, BATT battery, BFC below finished ceiling, BLK black, BRKT bracket, BRK breaker, CAB cabinet, CATV cable television, CLG ceiling, CIR/CCTV circuit, CLR clear, CCTV closed circuit television, COL column, COMM communication, CONDUIT conduit, CW cool white, CU copper, CU current limiting fuse, CT current transformer, DB decibel, DED dedicated, DIA diameter, DC direct current, DISC disconnect, DP distribution panel, DPDT double pole double-throw, DNLT downlight, DWG drawing, DE dual element, EA each, EWC electric water cooler, ELEC electrical, EC electrical contractor, EO electrically operated, ELEV elevator, E EMERG emergency, EMBRGM energy saving ballast, EQP equipment, EF exhaust fan, EP explosion proof, EA electronics industry association, FEXT far end crosstalk, FA fire alarm, FAAP fire alarm annunciator panel, FAAD fire alarm control panel, FAGP fire alarm graphic annunciator panel, FXT normally opened, FL floor, FLOUR fluorescent, FT footcandle, FTA full load ampere, FVNR full voltage non-reversing, GC general contractor, GEN generator, GND/G ground, GFI ground fault interrupter, HH hand hole, HVS heating ventilating, HVAC air conditioning, HZ hertz, HD high intensity discharge, HPF high power factor, HV high voltage, HSP horsepower, INCAN incandescent, IG isolated ground, JB junction box, KVAR kilovolt ampere, KVA kilovolt, KW kilowatt, KWH kilowatt hour meter, IPS inverter power supply, LT light, LTD lighting, LA lightning arrester, LV low voltage, LED light emitting diode, MCB main circuit breaker, MDP main distribution panel, MLO main legs only, MHS marhale, MFR manual transfer switch, MATV manufacturer antenna television, MC mechanical contractor, MV medium voltage, MH metal halide, MCC metal clad cable, MISC miscellaneous, MOP motor circuit protector, MCC motor control center, MOD motor operated damper, MTD mounted, MGT HT mounting height, MM millimeter, MV millivolt, NEMA National Electric Manufacturer Association, NEC National Electrical Code, NEXT Near End Crosstalk, NL night light, NO normally opened, N/A Not Available/Not Applicable, NIC not in contract, NTS not to scale, OC on center, OH overhead, OHL overhead heater element, PNL panel, PEW pewter, PLY plywood, P pole, PVC polyvinyl chloride, PT potential transformer, PP power panel, PB pull box, RS rapid start, REC/RECPT reflector, REFL requires, RECD rigid galvanized, RSG steel conduit, RM room, RIO rough in only, SCHEDSCH schedule, SPST single pole double throw, SPDT single pole single throw, SSS solid state ballast, SW switch, SWB switchboard, SWGR switchgear, TELE telephone, XFMR transformer, TT twin tube, TYP typical, TIA telecommunications Industry Association, TSB Technical Service Bulletin, TSP twisted shielded pair, UTP unshielded twisted pair, UL Underwriter's Laboratories, ULF unremittible power supply, UON unless otherwise noted, VV vapor proof, VPI vault, VMT voltmeter, WW warm white, W weatherproof, WF with, WH within, W/O without

GENERAL FIRE ALARM SYSTEM NOTES:

- 1. THE FOLLOWING GENERAL NOTES AS LISTED BELOW SHALL APPLY TO ALL FIRE ALARM SYSTEM SCOPES OF WORK AS INDICATED ON THE EF SERIES DRAWINGS.
2. THE SCOPE OF WORK FOR THIS PROJECT INCLUDES BUT NOT LIMITED TO THE EXTENSION AND MODIFICATION OF THE EXISTING FC-72 FIRE ALARM AND SIGNALING SYSTEM AS MANUFACTURED BY FIRE CONTROL INSTRUMENTS. THE WORK SHALL INCLUDE ALL NECESSARY CONTROL PANEL, MODIFICATIONS AS REQUIRED TO FULLY INTEGRATE ALL INITIATING, NOTIFICATION AND ANCHILARY SYSTEM OPERATIONS IMPACTING THE OPERATION OF THE FIRE ALARM SYSTEM, HVAC AND ELEVATORS AS WELL AS THE OVERALL LIFE SAFETY OF THE OCCUPANTS.
3. THE CONTRACT DOCUMENTS MAY NOT DEAL INDIVIDUALLY WITH EVERY PART, CONTROL, DEVICE, SOFTWARE OR PROGRAMMING, WHICH MAY BE REQUIRED TO PRODUCE THE EQUIPMENT AND/OR SYSTEM PERFORMANCE SPECIFIED OR AS NECESSARY FOR THE INSTALLATION AND/OR INTEGRATION OF ANY SYSTEMS. ALL MODIFICATIONS SHALL BE PROVIDED WIRED, CONNECTED, AND LEFT IN FIRST CLASS OPERATING CONDITION. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY WIRING, CIRCUITS, CONNECTIONS, MODIFICATIONS TO THE EXISTING FIRE ALARM EQUIPMENT, AND DEVICES FOR THE PROPER INTEGRATION OF ALL ELEVATORS IMPACTING THE FIRE FIGHTERS PHASE OPERATION.
5. ALL EQUIPMENT SYMBOLS ARE SHOWN ON DRAWINGS AS CLOSE AS POSSIBLE TO THEIR INTENDED LOCATION. CONTRACTOR SHALL COORDINATE IN THE FIELD THE PROPER INSTALLATION OF ALL EQUIPMENT, DEVICES, CONTROLS AND CABLING. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
6. DRAWINGS FOR THIS WORK ARE DIAGRAMMATIC AND INTENDED TO CONVEY THE EXTENT, GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK, BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS ACCESS PANELS, CONDUITS, CABINET SIZES, PENETRATION OF SLEEVES, PULL BOXES, BACKBOXES AND JUNCTION BOXES MAY NOT BE SHOWN. INCLUDE ALL ITEMS WHERE REQUIRED BY CODE, MANUFACTURER AND RELATED SPECIFICATION SECTIONS FOR THE PROPER INSTALLATION OF ALL WORK.
7. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 780 OF THE 2008 NATIONAL ELECTRICAL CODE. ALL FIRE ALARM CABLING MUST BE INSTALLED IN DEDICATED CONDUITS AND PROVIDED IN ACCORDANCE WITH THE CABLING REQUIREMENTS SPECIFIED BY THE MANUFACTURER AND THE CONTRACT DOCUMENTS.
8. FIRE ALARM DEVICE MOUNTING HEIGHTS SHALL COMPLY WITH ALL ANSI I17, NFPA 72 AND IBC REQUIREMENTS.
9. COORDINATE WITH ALL TRADES ALL CONDITIONS RELATED TO THE INSTALLATION OF ALL DEVICES. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE TRADE ALL INSTALLATION REQUIREMENTS IMPACTING THE PLACEMENT OF ALL SYSTEM COMPONENTS TO THE SATISFACTION OF ALL CONCERNED TRADES.
10. PROVIDE ALL EQUIPMENT CLEARANCES IN ACCORDANCE WITH NFPA TO REQUIREMENTS. ARRANGE EQUIPMENT TO FACILITATE UNRESTRICTED ACCESS FOR MAINTENANCE AND SERVICE AROUND ALL EQUIPMENT, COMPONENTS AND/OR CABLE TERMINATIONS.
11. COORDINATE EXACT LOCATION(S) OF ALL CEILING MOUNTED CABLE, CONDUITS, EQUIPMENT AND/OR DEVICES WITH ALL ARCHITECTURAL PLANS, REFLECTED CEILING PLANS AND AFFECTED TRADES PRIOR TO INSTALLATION.
12. ALL SMOKE AND HEAT DETECTORS SHALL BE MOUNTED TO FINISHED CEILING AND/OR DECKING, UNLESS NOTED OTHERWISE. DETECTORS SHALL NOT BE INSTALLED ON BOTTOM OF OPEN WEB JOISTS OR ON BEAMS EXCEEDING 12 INCHES DEPTH FROM FINISHED CEILING OR DECK. REFER TO NFPA 72 FOR ALL INITIATING DEVICE INSTALLATION REQUIREMENTS. PROVIDE DETECTORS IN SUFFICIENT QUANTITY TO COMPLY WITH ALL NFPA 72 REQUIREMENTS BASED ON CEILING CONDITIONS AND PROTECTED SPACE REQUIREMENTS.
13. PROTECTIVE ANTI-DUST COVERS SHALL BE INSTALLED AND MAINTAINED ON ALL SYSTEM SMOKE DETECTORS UNTIL FINAL ACCEPTANCE BY THE AUTHORITIES HAVING JURISDICTION.
14. SMOKE DETECTORS SHALL NOT BE INSTALLED LESS THAN 3 FEET FROM ANY HVAC SUPPLY OR RETURN AIR REGISTER AND A MINIMUM OF 1 FOOT AWAY FROM ALL LIGHTING FIXTURES.
15. WHERE EQUIPMENT AND/OR JUNCTION BOXES ARE INSTALLED ABOVE FINISHED CEILING, THE CONTRACTOR SHALL PROVIDE ACCESS HATCHES LISTED FOR THE INTENDED APPLICATION. ACCESS HATCHES SHALL BE LOCATED SO THAT SERVICE ACCESS TO THE EQUIPMENT AND/OR JUNCTION BOXES IS UNIMPEDED.
16. THE FIRE ALARM SYSTEM CABLING SHALL BE INSTALLED IN DEDICATED CONDUITS. ALL CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 AND THE CONTRACT DOCUMENTS. ALL CONDUITS SHALL BE SIZED IN ACCORDANCE WITH NFPA 70 AND SHALL BE A MINIMUM OF 3/4" UNLESS OTHERWISE NOTED. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
17. ALL CONDUITS/RACEWAYS SHALL BE INSTALLED IN A MANNER THAT PREVENTS TAMPERING OR REMOVAL WHEN INSTALLED IN AREAS EXPOSED TO THE GENERAL POPULATION. PROVIDE TAMPER-RESISTANT INSTALLATION UTILIZING TORX WITH PEG SECURITY FASTENING DEVICES FOR ALL CONDUITS/RACEWAYS, EQUIPMENT DEVICES AND APPURTENANCES IN ALL AREAS ACCESSIBLE TO THE GENERAL POPULATION AND/OR AREAS SUBJECT TO TAMPERING OR VANDALISM. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
18. PROVIDE APPROVED EARTH GROUND AT FIRE ALARM CONTROL PANEL, CHASSIS A CONDUIT GROUNDING TO BUILDING STEEL SHALL NOT BE CONSIDERED A ACCEPTABLE METHODOLOGY FOR GROUNDING OF FIRE ALARM CONTROL PANEL.
19. ALL SYSTEM WIRING AND EQUIPMENT INSTALLATIONS SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AND BY ALL IEEE, EIA, NEC AND MANUFACTURERS REQUIREMENTS. WIRING SHALL COMPLY WITH ALL STATE AND LOCAL ELECTRICAL CODES. ALL WIRING SHALL TEST FREE FROM ALL GROUNDS, SHORTS AND EMI.
20. NO A.C. CARRYING CONDUCTORS ARE PERMITTED TO SHARE RACEWAYS WITH ANY FIRE ALARM INITIATING AND/OR NOTIFICATION CIRCUITS.
21. ALL ELECTRICAL CIRCUITS FEEDING THE FIRE ALARM CONTROL EQUIPMENT SHALL BE EQUIPPED WITH DECATED CIRCUIT BREAKER LOCKOUT DEVICE IN ACCORDANCE WITH NFPA 72.
22. THE CONTRACTOR SHALL METER ALL WIRES AND CIRCUITS TO ENSURE THEY ARE FREE OF ANY GROUNDS AND SHORTS PRIOR TO COMMISSIONING OF THE SYSTEM.
23. ALL AUXILIARY ALARM RELAYS MUST BE INSTALLED WITHIN 3 FEET OF THE EQUIPMENT TO BE CONTROLLED IN ACCORDANCE WITH ALL NFPA 72 REQUIREMENTS.
24. ALL FIRE ALARM DEVICES AND EQUIPMENT SHALL BE LABELED UNDER IDENTIFICATION NUMBER. ALL NUMBERS SHALL CORRESPOND WITH NUMBERING SEQUENCE AS SUBMITTED ON THE PROJECT SHOP DRAWINGS. LABELS TO BE SIMILAR TO "BROTHER P-TOUCH" BLACK LETTERING ON WHITE BACKGROUND. SELF-ADHESIVE TAPE. ALL DEVICE LABELS SHALL BE INSTALLED PRIOR TO SYSTEM CHECKOUT.
25. ALL PENETRATIONS OF WALLS AND FLOORS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE ASTM AND NFPA. REFER TO RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION. INSTALLATION OF FIRE STOPS SHALL BE PERFORMED BY AN APPLICATION/INSTALLER QUALIFIED AND TRAINED BY THE MANUFACTURER.
26. REFER TO ALL RELATED SPECIFICATION SECTIONS FOR ADDITIONAL INFORMATION.
27. ALL EQUIPMENT ENCLLOSURES LOCATED OUTSIDE OR IN ALL AREAS WITH HIGH MOISTURE OR A RELATIVE HUMIDITY OF 75% OR GREATER SHALL BE NEMA 4X ENCLLOSURES AND RATED FOR THAT APPLICATION.
28. ALL EQUIPMENT EXPOSED TO THE ENVIRONMENT OR INSTALLED IN PROXIMITY TO AREAS WITH HIGH MOISTURE, OR A RELATIVE HUMIDITY OF 75% OR GREATER SHALL BE PROVIDED WITH ENCLLOSURES AND OR BACKBOXES RATED FOR THE ENVIRONMENTAL CONDITIONS.
29. THE STROBE INTENSITY OF ALL VISUAL NOTIFICATION APPLIANCES SHALL BE IN ACCORDANCE WITH NFPA 72 AND ILL. STROBE CANDELA RATINGS SHALL BE PROVIDED IN ACCORDANCE WITH DEVICE LOCATIONS AND SHALL CONFORM TO ALL ICSANS I17 AND NFPA 72 INSTALLATION REQUIREMENTS. CONTRACTOR SHALL PROVIDE THE REQUIRED CANDELA POWER AND LOCATE ALL VISUAL NOTIFICATION APPLIANCES AS REQUIRED TO MEET THE REQUIREMENTS OF ALL REFERENCED CODES AND STANDARDS.

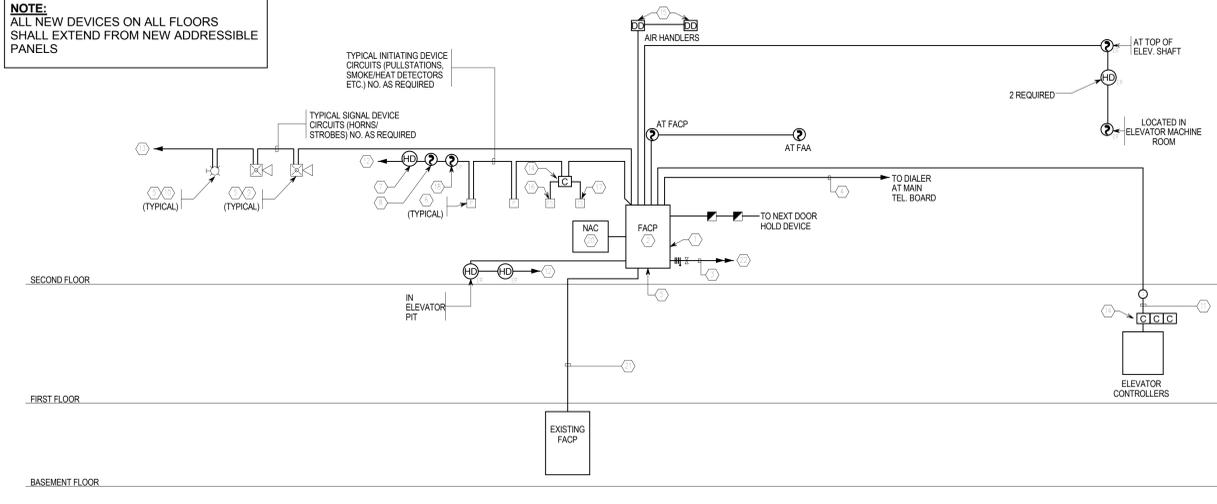
FIRE ALARM NOTES (AUDIBLE/VISIBLE ALARM SYSTEM)

- 1. ADDRESSABLE FIRE ALARM SYSTEM CONTROL PANEL (FACP) WITH BUILT-IN SURGE SUPPRESSOR ON INCOMING POWER CIRCUIT.
2. THE FIRE ALARM SYSTEM MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE A COMPLETE SYSTEM INSTALLATION WIRING DIAGRAM AND BACK-UP BATTERY CALCULATIONS.
3. 3/8" THIN + #10 GROUND - 3/4" CONDUIT, OR FIRE ALARM MC CABLE.
4. EIGHT (8) CONDUCTOR, 24 GAUGE, COPPER TELEPHONE CABLE WITH "TWISTED PAIRS" IN A 3/4" CONDUIT TO TELEPHONE BOARD FOR LEASED LINE TO OWNER'S MONITORING COMPANY. FURNISH AND INSTALL A DIALER AT THE TELEPHONE BOARD LOCATION.
5. ALL FIRE ALARM SIGNAL DEVICES SHALL BE IN COMPLIANCE WITH A.D.A. REQUIREMENTS.
6. TYPICAL PULL STATION - SEE PLANS FOR ALL REQUIRED LOCATIONS.
7. TYPICAL HEAT DETECTOR - SEE PLANS FOR ALL REQUIRED LOCATIONS.
8. TYPICAL SMOKE DETECTOR - SEE PLANS FOR ALL REQUIRED LOCATIONS.
9. TYPICAL COMBINATION HORN/FLASHING LIGHTS - SEE PLANS FOR ALL REQUIRED LOCATIONS.
10. TYPICAL STROBE ONLY (FLASHING LIGHT) - SEE PLANS FOR ALL REQUIRED LOCATIONS.
11. FIRE ALARM SYSTEM SHALL INITIATE RECALL OF ELEVATORS ON THE RECAPTURE SYSTEM.
12. TO NEXT INITIATING DEVICES (PULL STATION, SMOKE DETECTOR, ETC.)
13. TO NEXT ALARM SIGNAL DEVICE (SPEAKER/STROBE, ETC.)
14. TYPICAL INDIVIDUAL ADDRESSABLE MODULE.
15. TYPICAL DUCT DETECTORS AT EACH AIR HANDLER.
16. SPRINKLER WATER FLOW SWITCH - SEE PLANS FOR ALL REQUIRED LOCATIONS.
17. SPRINKLER TAMPER SWITCH - SEE PLANS FOR ALL REQUIRED LOCATIONS.
18. WIRE ON ELEVATOR RECAPTURE SYSTEM CONTROLS.
19. MONITOR MODULES FOR FLOW AND TAMPER SWITCHES.
20. PROVIDE NAC PANEL(S) AS REQUIRED TO SUPPORT SYSTEM LOAD WITH 20% SPARE CAPACITY (MINIMUM).
21. NEW FIRE ALARM SYSTEM SHALL BE TIED INTO EXISTING HARD WIRED SYSTEM. PROVIDE ALL INTERFACE COMPONENTS FOR A FULLY FUNCTIONING SYSTEM.
22. FEED NEW FACP FROM EXISTING NE PANEL ELP-9 QKT #7.



2 FIRE ALARM DEVICE MOUNTING DIAGRAM SCALE = NTS

NOTE: ALL NEW DEVICES ON ALL FLOORS SHALL EXTEND FROM NEW ADDRESSABLE PANELS



1 SCHEMATIC FIRE ALARM RISER DIAGRAM 1/8" = 1'-0"

CONSULTANTS:



ARCHITECTS/ENGINEERS:



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Office of Construction and Facilities Management Department of Veterans Affairs

FULLY SPRINKLERED BID DOCUMENTS