







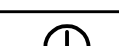

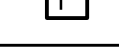






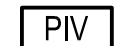





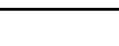
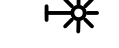
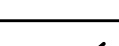







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FIRE ALARM S SYSTEM LEGEND	
SYMBOL	DESCRIPTION
	FIRE ALARM SYSTEM CONTROL PANEL
	FIRE ALARM SYSTEM POWER SUPPLY FOR NOTIFICATION DEVICES
	FIRE ALARM SYSTEM REMOTE ANNUNCIATOR PANEL
	AES WIRELESS TRANSCEIVER
	BATTERY CABINET
	GRAPHIC MAP
	SMOKE DETECTOR (CEILING MOUNTED)
	SMOKE/CARBON MONOXIDE DETECTOR (CEILING MOUNTED)
	HEAT DETECTOR (CEILING MOUNTED)
	MANUAL PULL STATION - WALL MOUNT OPERABLE PART BETWEEN 42" AND 48" ABOVE FINISH FLOOR
	DUCT SMOKE DETECTOR
	REMOTE TEST STATION / REMOTE INDICATOR
	SPRINKLER SYSTEM FLOW SWITCH
	SPRINKLER SYSTEM PRESSURE SWITCH
	SPRINKLER SYSTEM TAMPER SWITCH
	SPRINKLER SYSTEM HIGH / LOW PRESSURE SWITCH
	SPRINKLER SYSTEM POST INDICATOR VALVE
	SPRINKLER SYSTEM BACKFLOW PREVENTER
	FIRE ALARM SYSTEM MONITOR MODULE
	FIRE ALARM SYSTEM RELAY MODULE
	FIRE ALARM HORN W/CLEAR (WHITE) STROBE - WALL MOUNTED W/ THE ENTIRE STROBE LENS NOT LESS THAN 80" OR MORE THAN 96" ABOVE THE FINISHED FLOOR OR NOT MORE THAN 6" BELOW THE CEILING, WHICHEVER IS LOWER
	FIRE ALARM CLEAR (WHITE) STROBE ONLY - WALL MOUNTED WITH THE ENTIRE STROBE LENS NOT LESS THAN 80" OR MORE THAN 96" ABOVE THE FINISHED FLOOR OR NOT MORE THAN 6" BELOW THE CEILING, WHICHEVER IS LOWER
	COMBINATION FIRE ALARM HORN AND SINGLE CLEAR (WHITE) STROBE APPLIANCE - CEILING MOUNTED
	FIRE ALARM STROBE ONLY - CEILING MOUNTED
	SPRINKLER SYSTEM ALARM BELL (24 VOLTS D.C.)
	DOOR HOLDER
	FIRE / SMOKE DAMPER
	TRANSMITTER ANTENNA

MISCELLANEOUS	
SYMBOL	DESCRIPTION
	MECHANICAL EQUIPMENT CONNECTION
	RISER CONSTRUCTION NOTES
	JUNCTION BOX
F	F INDICATES FIXED TEMPERATURE TYPE
FA	FA INDICATES FIRE ALARM
LF,SB	LF INDICATES LOW FREQUENCY, SB INDICATED SOUNDER BASE
MSTA	MULTIPLE STATION ALARM
RD	RD INDICATES RETURN DUCT
S	S INDICATES SURFACE MOUNT BACK BOX
W	W INDICATES WEATHERPROOF DEVICE

FIRE ALARM SYSTEM AUDIBILITY REQUIREMENTS

1. THE FIRE ALARM SYSTEM CONTRACTOR SHALL PERFORM AUDIBILITY TESTING IN EACH SPACE OF THE BUILDING PRIOR TO ACCEPTANCE TESTING. DOCUMENTATION OF DECIBEL (dB) VALUES RECORDED IN ALL SPACES SHALL BE PROVIDED TO THE ARCHITECT / ENGINEER PRIOR TO ACCEPTANCE TESTING.
- A.

DECIBEL READINGS SHALL BE TAKEN AT A POINT 10'-0" FROM THE APPLIANCE AT AN ELEVATION OF 5'-0" ABOVE FINISHED FLOOR.
- B.

THE SOUND LEVEL SHALL BE A MINIMUM OF 15 DECIBELS (dBs) ABOVE THE AVERAGE AMBIENT SOUND LEVEL.
- C.

THE SOUND LEVEL SHALL BE A MAXIMUM OF 30 DECIBELS (dBs) ABOVE THE AVERAGE AMBIENT SOUND LEVEL.
- D.

THE SOUND LEVEL SHALL BE A MINIMUM OF 5 DECIBELS (dBs) ABOVE THE MAXIMUM SOUND LEVEL HAVING A MINIMUM DURATION OF 60 SECONDS.
- E.

IN SPACES THAT DO NOT MEET THE MINIMUM AUDIBLE (dB) VALUES, THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE ADDITIONAL AUDIBLE NOTIFICATION APPLIANCES UNTIL THE MINIMUM DECIBEL (dB) VALUES ARE OBTAINED.

FIRE ALARM SYSTEM FLOOR PLAN GENERAL NOTES

1. THESE FIRE ALARM SYSTEM CONTRACT DRAWINGS ARE NOT A COMPLETE DESIGN AND ARE SIMPLY CONCEPTUAL. THESE DOCUMENTS ARE PROVIDED TO AID THE NICET DESIGNER IN CREATING SHOP DRAWINGS IN ACCORDANCE WITH NFPA 72, STATE & LOCAL REQUIREMENTS, AND **CONTRACT DOCUMENTS: BCE FIRE ALARM SITE ASSESSMENT, BCE FIRE ALARM CODE ANALYSIS, AND SPECIFICATION**. THE CONTRACTORS AND THE FIRE ALARM SYSTEM DESIGNER SHALL COORDINATE THE EXACT QUANTITIES AND LOCATIONS OF ALL SYSTEM COMPONENTS BETWEEN TRADES AND/OR EXISTING CONDITIONS.
2. PROVIDE ALL MATERIALS, EQUIPMENT, LABOR, DESIGN AND PROGRAMMING FOR THE **COMPLETE REPLACEMENT OF AN EXISTING SILENT KNIGHT BRAND 5820XL WITH A COMPLETE, ADDRESSABLE LOW VOLTAGE 24 VOLT D.C., FULLY OPERATIONAL SILENT KNIGHT BRAND 6820 SERIES FIRE ALARM SYSTEM**. ALL EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE NEW, CURRENTLY MANUFACTURED, AND SHALL BE DELIVERED TO THE PROJECT SITE WITH THE ORIGINAL FACTORY SEAL INTACT. MATERIALS AND WORKMANSHIP SHALL FULLY COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (N.F.P.A. #70), NATIONAL FIRE ALARM AND SIGNALING CODE (N.F.P.A. #72), THE LAWS AND REGULATIONS OF WASHINGTON STATE, AND THE CITY OF BURIEN MUNICIPAL CODE. .
- 2.1. THE NICET DESIGNER SHALL BE RESPONSIBLE FOR DESIGN, LAYOUT, AND COORDINATION OF SMOKE DETECTION COVERAGE IN ALL CONCEALED SPACES PER NFPA #72
- 2.2. REMOVE, RELOCATE, ADD, OR REPLACE AS NECESSARY TO ACCOMMODATE THE CHANGES FROM THE TENANT IMPROVEMENT WITHIN THE AREA OF WORK ONLY.
- 2.3. SHOP DRAWINGS
- 2.3.1. PREPARE DETAILED WORKING DRAWINGS FOR THE SYSTEM LAYOUT IN ACCORDANCE WITH N.F.P.A. #72 AND THE FOLLOWING:
- 2.3.2. SHOP DRAWING REQUIREMENTS: THE INSTALLING VENDOR'S/CONTRACTOR'S COMPLETE AND FULL-SIZE SET OF SHOP DRAWINGS SHALL BE ISSUED IN THE FOLLOWING FORMAT:
- a. THEY SHALL BE CLEAR AND LEGIBLE.
- b. THE SAME SHEET SIZE AS THE CONTRACT DRAWINGS (I.E. 30" X 42").
- c. A MINIMUM OF 1/8" TEXT HEIGHT SHALL BE USED FOR ALL TEXT, SYMBOL TEXT, AND SUBSCRIPT TEXT.
- d. SCALE OF DRAWINGS
- i. ANY SITE PLAN DRAWINGS SHALL BE THE SAME SCALE AS ISSUED IN THE CONTRACT DOCUMENTS.
- ii. FLOOR PLAN DRAWINGS SHALL BE 1/8"=1'-0", UNLESS DIRECTED TO DO OTHERWISE.
- e. THE ELECTRICAL LEGEND, WIRE LEGEND, LOAD AND BATTERY CALCULATIONS, RISER DIAGRAM, SEQUENCE OF OPERATION INFO, WIRING DETAILS, AND MOUNTING DETAILS SHALL PRECEDE THE SITE PLANS AND FLOOR PLANS.
- f. ALL SHEETS, INCLUDING THE COVER, SHALL INCLUDE A TITLE BLOCK ALONG THE EDGE OF EACH OF THE DRAWINGS THAT, WHEN THE DRAWINGS ARE ROLLED UP, THE FOLLOWING INFORMATION SHALL BE VISIBLE:
- g. THE SYSTEM-SPECIFIC SHEET NUMBER
- h. PROJECT NAME, SPECIFICATION SECTION NUMBER AND SECTION TITLE NAME
- i. FLOOR NAME, AREA, AND/OR SECTION OF THE BUILDING (USE THE NAME OF THE AREA AND/OR FLOOR DESCRIPTION THAT IS ON THE CONTRACT DRAWINGS.)
- j. ARCHITECTURAL INFORMATION ON THE CONTRACT DRAWINGS SHALL BE INCLUDED ON THE INSTALLING VENDOR'S/CONTRACTOR'S SHOP DRAWINGS, INCLUDING, BUT NOT LIMITED TO: MATCH LINES, GRID LINES, GRID BUBBLES, KEY PLAN, AND ENLARGED FLOOR PLANS.
3. WHEN PENETRATING FIRE RATED WALLS, FLOORS, OR CEILINGS, THE CONTRACTOR SHALL UTILIZE APPROVED FIRE RATED PENETRATION METHODS. THE FIRE RATING OF THE WALLS, FLOORS, OR CEILINGS SHALL BE MAINTAINED AFTER THE CONDUIT HAS BEEN INSTALLED.
4. THE GENERAL CONTRACTOR AND FIRE ALARM SYSTEM CONTRACTOR SHALL COORDINATE ALL CUTTING, PATCHING AND FINISH WORK.
5. ALL MANUAL PULL STATIONS SHALL BE DUAL ACTION, KEY OPERABLE. THE USE OF BREAK GLASS FRONT STATIONS ARE NOT ALLOWED.
6. WATER FLOW SWITCH, PRESSURE SWITCH, OR TAMPER SWITCH SHALL HAVE A SEPARATE AND UNIQUE ADDRESS.
7. ALL ADDRESSABLE DEVICES AND DETECTOR BASES SHALL BE PERMANENTLY AND CLEARLY LABELED WITH THE DEVICE ADDRESS IN A READILY VISIBLE LOCATION DIRECTLY ON THE DEVICE.
8. CORE DRILLED HOLES SHALL NOT PENETRATE THROUGH ANY STRUCTURAL BEAMS, REBAR CONCRETE SLABS, AND/OR WALLS THAT MAY COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING.
9. CONTRACTOR TO VERIFY EXISTING CONDITIONS. NOTIFY OWNER OF ANY CONDITIONS INCONSISTENT WITH THE INTENT OF THE DRAWINGS PRIOR TO STARTING OR CONTINUING WITH THE WORK.
10. THE CONTRACTOR WILL SUSPEND WORK IMMEDIATELY AND NOTIFY OWNER IF MATERIALS SUSPECTED OF BEING HAZARDOUS, AND NOT PREVIOUSLY IDENTIFIED, ARE ENCOUNTERED IN THE COURSE OF THE CONTRACTORS WORK.
11. COORDINATE ALL OPERATIONS WITH OWNER, SUCH AS AREAS USED FOR MATERIAL STORAGE, ACCESS TO AND FROM THE SITE, TIMING OF WORK, CUTTING, PATCHING, FINISH WORK, AND REQUIREMENTS OF NOISE ORDINANCE. INSTALL DUST AND NOISE BARRIERS AS REQUIRED TO PROTECT EXISTING ADJACENT AREAS AND OCCUPANTS AND TO MAINTAIN AN ENVIRONMENT SUITABLE TO PERMIT CONTINUED OCCUPANCY.
12. NEW SYSTEM INSTALLATIONS OR REPLACEMENT OF EXISTING SYSTEMS SHALL UTILIZE SILENT KNIGHT BRAND CONTROL PANELS AND EQUIPMENT AVAILABLE FROM MULTIPLE INSTALLERS IN THE LOCAL SERVICE AREA.

FIRE ALARM SYSTEM CABLING AND CONDUIT REQUIREMENTS

1. ALL INITIATING AND NOTIFICATION CIRCUITS SHALL BE "CLASS B" WIRING.
2. ALL "CLASS B" WIRING CIRCUITS SHALL BE PROVIDED WITH AN "END-OF-LINE" RESISTOR INSTALLED AT THE END OF EACH CIRCUIT.
3. THE USE OF T-TAPPING WILL BE ALLOWED ON S.L.C. (SIGNALING LINE CIRCUIT) CIRCUITS ONLY. T-TAPPING IS NOT ALLOWED ON ANY CIRCUIT REQUIRING AN END OF LINE RESISTOR.
4. ALL WIRE TERMINATIONS SHALL BE BY USE OF WIRE NUTS OR SCREW TYPE TERMINATION BLOCKS.
5. THE USE OF CRIMPED CONNECTORS, TWISTING OF WIRES, ETC. SHALL NOT BE ALLOWED IN J-BOXES, TERMINAL CABINETS, OR ENCLOSURES.
6. ALL WIRES OUTSIDE OF J-BOXES, TERMINAL CABINETS, OR ENCLOSURES SHALL BE FREE OF SPLICES.
7. CONDUITS SHALL BE CONCEALED IN CEILING SPACES, WALLS, AND OTHER AREAS WHEREVER POSSIBLE.
8. ALL CONDUIT SHALL BE INSTALLED IN A PARALLEL OR PERPENDICULAR FASHION THAT IS TIGHT TO STRUCTURE. THE CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH OTHER TRADES.
9. FIRE ALARM CABLING INSTALLED ABOVE ACCESSIBLE CEILINGS SHALL BE ALLOWED TO BE INSTALLED AS OPEN CABLING. PROVIDE "D" RING HANGER FOR ALL OPEN CABLING AT A MAXIMUM SPACING OF 5'-0" ON CENTER.
10. CABLING THAT IS INSTALLED IN WALLS, CABLING THAT IS INSTALLED BELOW 8'-0" IN ELEVATION THAT IS SUBJECT TO DAMAGE, AND CABLING THAT IS INSTALLED ABOVE INACCESSIBLE CEILINGS SHALL BE INSTALLED IN CONDUIT.
11. CONDUITS PASSING THROUGH BUILDING EXPANSION JOINTS OR BUILDING SEISMIC JOINTS SHALL HAVE JUNCTION BOXES AT EACH SIDE OF THE EXPANSION / SEISMIC JOINT. PROVIDE SECTION OF FLEXIBLE CONDUIT BETWEEN JUNCTION BOXES AND GROUNDING BUSHINGS WITH #12 GROUNDING CABLE TO MAINTAIN CONTINUITY BETWEEN ALL (2) JUNCTION BOXES. PROVIDE FLEX CONDUIT AND GROUNDING CABLE OF SUFFICIENT LENGTH TO ACCOMMODATE THE CALCULATED BUILDING MOVEMENT PLUS 6" OF ADDITIONAL MOVEMENT. PROVIDE QUANTITIES AS REQUIRED.
12. ALL EXPOSED SURFACE MOUNTED RACEWAYS IN FINISHED SPACES BELOW 8'-0" IN ELEVATION SHALL BE A MINIMUM OF SERIES 700 METAL WIREMOLD OR EQUAL. THE INSTALLATION OF EXPOSED ELECTRICAL METALLIC TUBING (EMT) IN FINISHED SPACES BELOW 8'-0" IN ELEVATION WILL NOT BE ALLOWED.
13. WHERE NEW FIRE ALARM SYSTEM DEVICES ARE INSTALLED ON EXISTING WALLS, PROVIDE WIREMOLD 700 OR 2400 SERIES RACEWAY, SIZED AS REQUIRED, ROUTED TO NEAREST ACCESSIBLE CEILING SPACE. ***RUN SURFACE RACEWAY AS INCONSPICUOUSLY AS POSSIBLE***. FOLLOW WALL AND CEILING JOINTS TO MAINTAIN A CLEAN VISUAL APPEARANCE.
14. CONDUITS SHALL NOT EXCEED FILL RATING OF 40% AS DEFINED BY THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (N.F.P.A. #70). PROVIDE SIZES AND QUANTITIES AS REQUIRED.
15. WHERE EXPOSED TO VIEW IN FINISHED SPACES, PAINT ALL NEW CONDUITS, MOUNTING HARDWARE, AND RACEWAYS TO MATCH THE ADJACENT SURFACES.
16. ALL NEW FIRE ALARM SYSTEM JUNCTION BOXES SHALL BE PAINTED RED AND ANNOTATED "FIRE ALARM POWER LIMITED" ON THE COVER IN BLACK BOLD PRINT HAVING MINIMUM CHARACTER FONT SIZE 1/4" TALL X 1/4" WIDE.

FIRE ALARM SYSTEM EQUIPMENT REQUIREMENTS

1. THE FIRE ALARM SYSTEM SHALL BE FULLY FUNCTIONAL WITHOUT THE USE OF PRIMARY POWER. THE FIRE ALARM SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF 24 HOURS OF STANDBY OPERATION FOLLOWED BY AN ADDITIONAL 5 MINUTES OF ALARM OPERATION.
2. ALL BATTERIES SHALL PROVIDE AT LEAST 25% SPARE CAPACITY.
3. PROVIDE 25% SPARE CAPACITY FOR NOTIFICATION POWER SUPPLIES.
4. THE FIRE ALARM SYSTEM CONTROL PANEL (FACP) SHALL BE A **SILENT KNIGHT 6820** AND MAY INCLUDE INTERNAL POWER SUPPLIES. PROVIDE ADDITIONAL QUANTITIES OF POWER SUPPLIES AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. THE FIRE ALARM SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ELECTRICAL CONTRACTOR FOR ALL POWER CONNECTIONS THE FIRE ALARM SYSTEM CONTRACTOR SHALL BE RESPONSIBLE FOR THE ELECTRICAL COSTS ASSOCIATED WITH ALL NON-COORDINATED POWER CONNECTIONS
5. PROVIDE MULTIPLE INITIATING DEVICE CIRCUITS AND SIGNALING LINE CIRCUITS (SLC) SO THAT FAILURE OF ONE CIRCUIT DOES NOT CAUSE THE FACILITY TO LOSE OVER 50% OF ITS DETECTION CAPABILITY PER FLOOR.
6. DWELLING UNIT NOTIFICATION SHALL BE ACCOMPLISHED BY LOW FREQUENCY SOUNDER BASES AND VISUAL DEVICES. THERE SHALL BE NO MORE THAN 4 DWELLING UNITS BEING SERVED FROM ONE SOUNDER BASE NOTIFICATION APPLIANCE CIRCUIT. THIS ALLOWS FOR THE VISUAL COVERAGE WITHIN THESE 4 UNITS AS THIS IS A 65+ "SENIOR BUILDING" MANY OF THE TENANTS WILL BE A **"MODERATELY SEVERE TO PROFOUND HEARING LOSS"** TENANTS.
7. DWELLING UNIT NOTIFICATION CIRCUIT END OF LINE RESISTORS SHALL BE LOCATED IN THE LIVING ROOM OF THE DWELLING UNIT.
8. PROVIDE ISOLATION MODULES PER CIRCUIT OR SEPARATE SLC CIRCUITS SUCH THAT EACH CIRCUIT SHALL HAVE A MAXIMUM OF 20 DEVICES PER ISOLATION MODULE.
9. PROVIDE BATTERY CALCULATIONS FOR ALL FIRE ALARM SYSTEMS.

FIRE ALARM SYSTEM SCOPE OF WORK NARRATIVE

THE SCOPE OF THIS PROJECT INCLUDES THE FOLLOWING:

1. REPLACE THE EXISTING FIRE ALARM SYSTEM IN ITS ENTIRETY. ALL PANELS, DEVICES, AND WIRE SHALL BE COMPLETELY DEMOLISHED AND REPLACED.
2. THE EXISTING SYSTEM IS TO REMAIN OPERATIONAL AT ALL TIMES UNTIL THE NEW SYSTEM IS INSTALLED, TESTED, AND APPROVED BY THE AUTHORITY HAVING JURISDICTION. ONCE THE NEW SYSTEM IS APPROVED, THE EXISTING SYSTEM SHALL BE DEMOLISHED. AT NO TIME SHALL ANY EXISTING WIRES BE CONNECTED TO THE NEW FIRE ALARM CONTROL PANEL.
3. READ THE ACCOMPANYING DOCUMENTS WHICH INCLUDE THE BURIEN PARK APARTMENTS FIRE ALARM CODE ANALYSIS AND THE BURIEN PARK APARTMENTS SITE ASSESSMENT REPORT.
4. PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, DESIGN, AND SERVICES NECESSARY TO PERFORM THE INSTALLATION OF A COMPLETE, FULLY OPERATIONAL, INTELLIGENT (ANALOG) AND ADDRESSABLE (DIGITAL), LOW VOLTAGE 24 VOLTS D.C., POINT IDENTIFICATION, MICROPROCESSOR-BASED FIRE ALARM SYSTEM
5. THE CONTRACTOR SHALL OBTAIN A PERMIT AND FINAL APPROVAL FROM (CITY OF BURIEN) FOR THE FIRE ALARM SYSTEM. ALL PERMITS, FEES FOR PLAN REVIEW, INSPECTIONS, TESTING, ETC. SHALL BE INCLUDED IN THE BID PROPOSAL.

IN THE EVENT OF A CONFLICT BETWEEN THIS STATEMENT OF WORK AND THE DRAWINGS OR SPECIFICATIONS, THE STATEMENT OF WORK SHALL GOVERN OVER SPECIFICATIONS AND DRAWINGS, AND THE SPECIFICATIONS SHALL GOVERN OVER THE DRAWINGS.

SYSTEM CODE REQUIREMENTS

THE FIRE ALARM SYSTEM AS RECOMMENDED BY BCE, ENGINEERS, INC. (SEE ATTACHED FIRE ALARM SYSTEM CODE ANALYSIS FOR A DEEPER UNDERSTANDING OF THE ITEMS BELOW):

- AUTOMATIC SMOKE DETECTORS REQUIRED IN ALL PUBLIC EGRESS PATHWAYS, ELECTRICAL ROOMS, ELEVATOR MACHINE ROOM, AND ELEVATOR LOBBY.

• AUTOMATIC SMOKE DETECTORS WITH LOW FREQUENCY SOUNDER BASES PROGRAMMED TO FUNCTION LIKE SINGLE MULTIPLE STATION ALARMS IN ALL DWELLING UNIT SLEEPING AREAS (BEDROOM & LIVING ROOM)

• MONITORING OF THE EXISTING FULL SPRINKLER SYSTEM.

• MANUAL PULL STATIONS ARE NOT REQUIRED PER SECTION 907.2.9.1 EXCEPTION 2 OF THE INTERNATIONAL BUILDING CODE (IBC)

• GRAPHIC MAPS (QTY. 2) ARE REQUIRED FOR THIS PROJECT AND SHALL BE POSTED AT THE FIRE ALARM CONTROL PANEL AND ALL REMOTE ANNUNCIATOR PANEL LOCATIONS.

• REMOTE ANNUNCIATORS (QTY. 2) SHALL BE INSTALLED, ONE AT THE FRONT ENTRANCE AND THE OTHER IN THE SPRINKLER RISER ROOM ON THE FIRST FLOOR LEVEL.

•• QUANTITY AND LOCATION OF REMOTE ANNUNCIATORS ARE SUBJECT TO LOCATION AND ACCESSIBILITY OF MAIN FIRE ALARM PANEL. COORDINATE WITH THE LOCAL AHJ TO DETERMINE ANY FURTHER REQUIREMENTS.

• AUDIBLE/VISUAL NOTIFICATION SHALL BE INSTALLED THROUGHOUT THE ENTIRE BUILDING IN ACCORDANCE WITH SECTIONS 907.5.2.1 AND 907.5.2.3 OF THE INTERNATIONAL BUILDING CODE (IBC) AND SECTION 18.4 AND 18.5 OF NFPA 72.

• AUDIBLE/VISUAL COVERAGE IN BUILDING COMMON AREAS (DINING AREAS, COMMUNITY ROOMS, LAUNDRY ROOMS, RESTROOMS, LIBRARY, COMMUNITY OUTDOOR DECKS, AND INTERIOR CORRIDORS).

• ALL SLEEPING AREAS WILL BE EQUIPPED WITH LOW FREQUENCY SOUNDER BASES ACTIVATED BY BUILDING ALARM.

• VISUAL NOTIFICATION SHALL BE INSTALLED IN THE LIVING ROOM, BEDROOM, AND BATHROOM OF ALL DWELLING UNITS.

• THE FIRE ALARM SYSTEM SHALL ALSO INTERFACE WITH OTHER SYSTEMS SUCH AS SMOKE AND FIRE/SMOKE DAMPERS, DUCT SMOKE DETECTORS, H.V.A.C. SYSTEMS, MAGNETIC DOOR HOLDERS, MAGNETIC DOOR RELEASES, COOKING HOOD FIRE SUPPRESSION SYSTEMS, FIRE PROTECTION SPRINKLER SYSTEMS, AND ELEVATORS.

UPGRADED SYSTEM OPERATION

THE ACTIVATION OF ANY COMMON AREA SMOKE DETECTOR, MANUAL PULL STATION, OR WATERFLOW DEVICE SHALL ACTIVATE ALL NOTIFICATION IN THE BUILDING. COMMON AREA AUDIBLE/VISUAL COVERAGE AND TENANT LOW FREQUENCY SOUNDER BASES AND STROBES IF INSTALLED.

PHASE I & II ELEVATOR RECALL - THE ACTIVATION OF THE 1ST FLOOR ELEVATOR LOBBY SMOKE DETECTOR SHALL RECALL THE ELEVATOR TO THE 2ND FLOOR. THE ACTIVATION OF THE 2ND, 3RD, OR 4TH FLOOR ELEVATOR LOBBY SMOKE DETECTOR SHALL RECALL THE ELEVATOR TO THE 1ST FLOOR. THE ACTIVATION OF THE ELEVATOR MACHINE ROOM SMOKE DETECTOR SHALL RECALL THE ELEVATOR TO THE 2ND FLOOR AND ACTIVATE THE HAT LIGHT FUNCTION WITHIN THE ELEVATOR.

THE ACTIVATION OF ANY TENANT SMOKE DETECTOR SHALL ACTIVATE THE LOW FREQUENCY SOUNDER BASES OF ALL SMOKE DETECTORS AND STROBES (IF INSTALLED) WITHIN THAT TENANT UNIT ONLY.

THE SYSTEM SMOKE DETECTORS SHALL BE PROGRAMMED TO ACT LIKE SINGLE- AND MULTIPLE-STATION ALARMS. WHEN THE DETECTOR IS ACTIVATED, THE SOUNDER BASE IS ACTIVATED; WHEN THE DETECTOR IS CLEARED, THE SOUNDER BASE IS DEACTIVATED. THIS WILL NEED TO SHOW A SUPERVISORY INDICATION AT THE MAIN FIRE ALARM PANEL AND IT NEEDS TO NOTIFY THE OFF-SITE MONITORING COMPANY OF THE CONDITION. NO ACTION NEEDS TO TAKE PLACE, JUST AUTOMATIC RECORDING.

THE SYSTEM SMOKE DETECTORS WITHIN A DWELLING UNIT SHALL ACTIVATE THE VISUAL DEVICES UPON ACTIVATION OF THE DWELLING UNIT SMOKE DETECTOR. IF THE DETECTOR IS CLEARED, THE STROBES DEACTIVATE.

ACTIVATION OF TWO SEPARATE SMOKE DETECTORS IN TWO SEPARATE ADJACENT APARTMENTS SHALL BE REQUIRED TO ACTIVATE A BUILDING ALARM CONDITION.

KCHA


BURIEN PARK APARTMENTS

500 SW 148TH ST,
BURIEN, WA 98166

PROJECT #

07.15.2022

KHCA PROJECT MANAGER:
PM PHONE:
PM EMAIL:

 SUBMITTAL / REVISION DATE
PRELIMINARY BID SET 2022-07-15

JURISDICTIONAL APPROVAL STAMP

SHEET TITLE

FIRE ALARM SYSTEM LEGEND
AND NOTES

SHEET NUMBER

FA0.01

FIRE ALARM SYSTEM RISER DIAGRAM CONSTRUCTION NOTES

- 1

THE RISER DIAGRAM IS DIAGRAMMATIC IN NATURE. IT DOES NOT SHOW ALL DEVICES AND DOES NOT REPRESENT ACTUAL CONDUIT OR CABLE ROUTING.
- 2

THE FIRE ALARM SYSTEM SHALL BE FULLY FUNCTIONAL WITHOUT THE USE OF PRIMARY POWER. THE FIRE ALARM SYSTEM SHALL BE PROVIDED WITH A MINIMUM OF 24 HOURS OF STANDBY OPERATION FOLLOWED BY AN ADDITIONAL 5 MINUTES OF ALARM OPERATION. ALL BATTERIES SHALL BE SIZED TO PROVIDE AT LEAST 25% ADDITIONAL SPARE CAPACITY. SEE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 3

PROVIDE SYSTEM POWER SUPPLIES WHERE REQUIRED. COORDINATE ADDITIONAL POWER CONNECTIONS THAT ARE NOT SHOWN ON ELECTRICAL DRAWINGS WITH ELECTRICAL CONTRACTOR AS REQUIRED. COST FOR ADDITIONAL CONNECTIONS SHALL BE INCLUDED.
- 4

PROVIDE ALL NECESSARY EQUIPMENT, INTERFACES, OTHER APPURTENANCES, AND PROGRAMMING AS REQUIRED FOR COMMUNICATION TO THE CENTRAL STATION MONITORING COMPANY OR MONITORING STATION. SEE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING MONITORING AGREEMENT.
- 5

FIRE ALARM CONTRACTOR SHALL MEASURE AES SIGNAL STRENGTH. SIGNAL STRENGTH SHALL BE A NETCON 5 OR BETTER. IF AN OUTDOOR ANTENNA IS REQUIRED, MOUNT ANTENNA SO IT REACHES ABOVE THE ROOF LINE OF THE BUILDING
- 6

FIRE ALARM SYSTEM REMOTE ANNUNCIATOR PANEL INSTALLED WHERE REQUIRED BY AHJ - FRONT ENTRY.
- 7

PROVIDE SURGE PROTECTION ON ALL INCOMING PRIMARY POWER SUPPLIES SERVING FIRE ALARM SYSTEM PANELS.
- 8

PROVIDE SYSTEM CABLES FOR A FULLY FUNCTIONAL SYSTEM AS REQUIRED.
- 9

ALL WIRE RUN UNDERGROUND SHALL BE SUITABLE FOR "WET" INSTALLATIONS.
- 10

FIRE ALARM SYSTEM CABLING THAT PENETRATES EXISTING OR NEW WALLS SHALL BE PROVIDED WITH AN APPROVED PENETRATION METHOD AS OUTLINED IN THE PROJECT SPECIFICATIONS.
- 11

FIRE SPRINKLER SYSTEM SWITCHES ARE ALL EXISTING. THE SWITCHES SHALL BE WIRED AND CONNECTED TO THE NEW FIRE ALARM SYSTEM BY THE FIRE ALARM CONTRACTOR. EXACT QUANTITIES AND LOCATIONS OF ALL FIRE SPRINKLER SWITCHES, WHICH SHALL BE MONITORED BY THE FIRE ALARM SYSTEM ARE SHOWN WITHIN THE FIRE ALARM SITE ASSESSMENT.
- 12

THE 24 VOLTS D.C. SPRINKLER SYSTEM ALARM BELL/STROBE SHALL BE PROVIDED BY THE FIRE ALARM SYSTEM CONTRACTOR. THE FIRE ALARM CONTRACTOR SHALL WIRE AND CONNECT THE ALARM BELL TO THE FIRE ALARM SYSTEM CONTROL PANEL (FACP) AND PROGRAM THE ALARM BELL TO ACTIVATE UPON THE FLOW OF WATER.
- 13

PROVIDE A SMOKE DETECTOR IN THE ELEVATOR LOBBY FOR ELEVATOR RECALL ON ALL LEVELS.
- 14

PROVIDE SMOKE DETECTOR IN ELEVATOR MACHINE ROOM FOR ELEVATOR RECALL AND, A 135°F FIXED TEMPERATURE HEAT DETECTOR FOR ACTUATION OF THE SHUNT TRIP BREAKER FEATURE.
- 15

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE A 135°F HEAT DETECTOR AT THE BOTTOM OF THE ELEVATOR HOISTWAY WITHIN 24" OF THE SPRINKLER HEAD FOR ACTUATION OF THE ELEVATOR RECALL FEATURE.
- 16

FIRE ALARM SYSTEM SHALL MONITOR THE STATUS OF THE ELEVATOR SHUNT TRIP POSITION AND CONTROL ELEVATOR POWER AS REQUIRED BY ASME A17.1.
- 17

WITHIN ANY ONE DWELLING UNIT, SYSTEM SMOKE DETECTORS SHALL BE PROGRAMMED TO ACT LIKE SINGLE- AND MULTIPLE-STATION ALARMS. WHEN THE DETECTOR IS ACTIVATED, THE SOUNDER BASE IS ACTIVATED; WHEN THE DETECTOR IS CLEARED, THE SOUNDER BASE IS DEACTIVATED. THE FIRE ALARM CONTRACTOR SHALL PROGRAM THESE DETECTORS TO ACTIVATE A SUPERVISORY INDICATION AT THE MAIN FIRE ALARM PANEL AND NOTIFY THE OFF-SITE MONITORING COMPANY OF THE CONDITION. THE MONITORING COMPANY SHALL BE DIRECTED TO TAKE NO ACTION OTHER THAN AUTOMATIC LOGGING AND EMAIL THE EVENT TO PROPERTY MANAGER.
- 18

THE ACTIVATION OF ANY ONE DWELLING UNIT SMOKE DETECTOR SHALL ACTIVATE THE LOW FREQUENCY SOUNDER BASES OF ALL DWELLING UNIT SMOKE DETECTORS AND STROBES WITHIN THAT DWELLING UNIT ONLY.
- 19

THE ACTIVATION OF SMOKE DETECTORS WITHIN TWO SEPARATE ADJACENT DWELLING UNITS SHALL ACTIVATE THE BUILDING FIRE ALARM SYSTEM.
- 20

ACTIVATION OF ANY COMMON AREA SMOKE DETECTOR, HEAT DETECTOR, MANUAL PULL STATION, OR SPRINKLER FLOW SHALL ACTIVATE THE BUILDING FIRE ALARM SYSTEM.
- 21

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE VISUAL COVERAGE FOR ALL DWELLING UNITS. IF VISUAL COVERAGE IS PROVIDED ON WALLS, GREATER THAN 24" DOWN FROM CEILING, STROBE INTENSITY SHALL BE 110CD. IF VISUAL COVERAGE IS PROVIDED ON THE CEILING OR THE WALL LESS THAN 24" DOWN FROM THE CEILING, STROBE INTENSITY SHALL BE 177CD. VISUAL DEVICES SHALL BE PROVIDED IN EACH BEDROOM, LIVINGROOM, AND BATHROOM.
- 22

DWELLING UNIT NOTIFICATION SHALL BE ACCOMPLISHED BY LOW FREQUENCY SOUNDER BASES AND VISUAL DEVICES. THERE SHALL BE NO MORE THAN 4 DWELLING UNITS BEING SERVED FROM ONE SOUNDER BASE NOTIFICATION APPLIANCE CIRCUIT. THIS ALLOWS FOR THE VISUAL COVERAGE WITHIN THESE 4 UNITS AS THIS IS A 65+ "SENIOR BUILDING" MANY OF THE TENANTS WILL BE A "MODERATELY SEVERE TO PROFOUND HEARING LOSS" TENANTS. DWELLING UNIT NOTIFICATION CIRCUIT END OF LINE RESISTORS SHALL BE LOCATED IN THE LIVING ROOM OF THE DWELLING UNIT.
- 23

ALL DWELLING UNITS SHALL BE CONSIDERED TO BE OCCUPIED BY A "MODERATELY SEVERE TO PROFOUND HEARING LOSS" TENANT AND SHALL BE PROVIDED WITH VISUAL COVERAGE AS DESCRIBED ABOVE IN NOTE 21
- 24

COMMON AREA NOTIFICATION POWER SUPPLY CIRCUITS SHALL BE KEPT SEPARATE FROM DWELLING UNIT NOTIFICATION POWER SUPPLY CIRCUITS. COMMON AREA NOTIFICATION CIRCUIT END OF LINE RESISTORS SHALL BE LOCATED WITHIN AN ACCESSIBLE COMMON SPACE.
- 25

POST INDICATING VALVE (PIV) AND BACKFLOW PREVENTER (BFP) TAMPER SWITCH MONITORING IS REQUIRED. SEE FIRE ALARM SITE ASSESSMENT FOR LOCATION. ADDRESSABLE MONITOR MODULES MUST REMAIN IN A CONDITIONED SPACE AND WET RATED CABLE INSTALLED FROM THE ADDRESSABLE MODULE TO THE OUTSIDE TAMPER SWITCHES VIA EXISTING CONDUIT.
- 26

IF CONDUIT IS NOT PROVIDED, THE FIRE ALARM SYSTEM CONTRACTOR SHALL INSTALL 1" PVC FROM THE BUILDING TO THE OUTSIDE PIV. THEN 1" RAIN-TIGHT FLEXIBLE METAL CONDUIT FROM TERMINATION OF 1" PVC CONDUIT UP TO THE POST INDICATING VALVE TAMPER SWITCH. FLEXIBLE METAL CONDUIT SHALL BE SECURED TO THE POST INDICATING VALVE HOUSING WITH (3) STAINLESS STEEL HOSE CLAMPS.
- 27

DUCT SMOKE DETECTORS SHALL BE PROVIDED, INSTALLED, AND WIRED BY THE FIRE ALARM SYSTEM CONTRACTOR. INSTALL DUCT SMOKE DETECTORS FOR AIR HANDLING UNITS GREATER THAN 2,000 C.F.M. CAPACITY ON THE RETURN SIDE OF H.V.A.C. UNIT PER INTERNATIONAL MECHANICAL CODE SECTION 606.2. (CONTRACTOR TO VERIFY IF EXISTING) (SEE MAP PROVIDED WITH BURIEN PARK FIRE ALARM SITE REPORT).
- 28

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE A RELAY MODULE TO SHUT DOWN THE H.V.A.C. UNIT UPON ACTIVATION OF H.V.A.C. UNIT DUCT SMOKE DETECTOR IN ADDITION TO TRANSMITTING A SUPERVISORY SIGNAL AT THE FIRE ALARM CONTROL PANEL. (WHERE EXISTING) (CONTRACTOR TO VERIFY IF EXISTING).
- 29

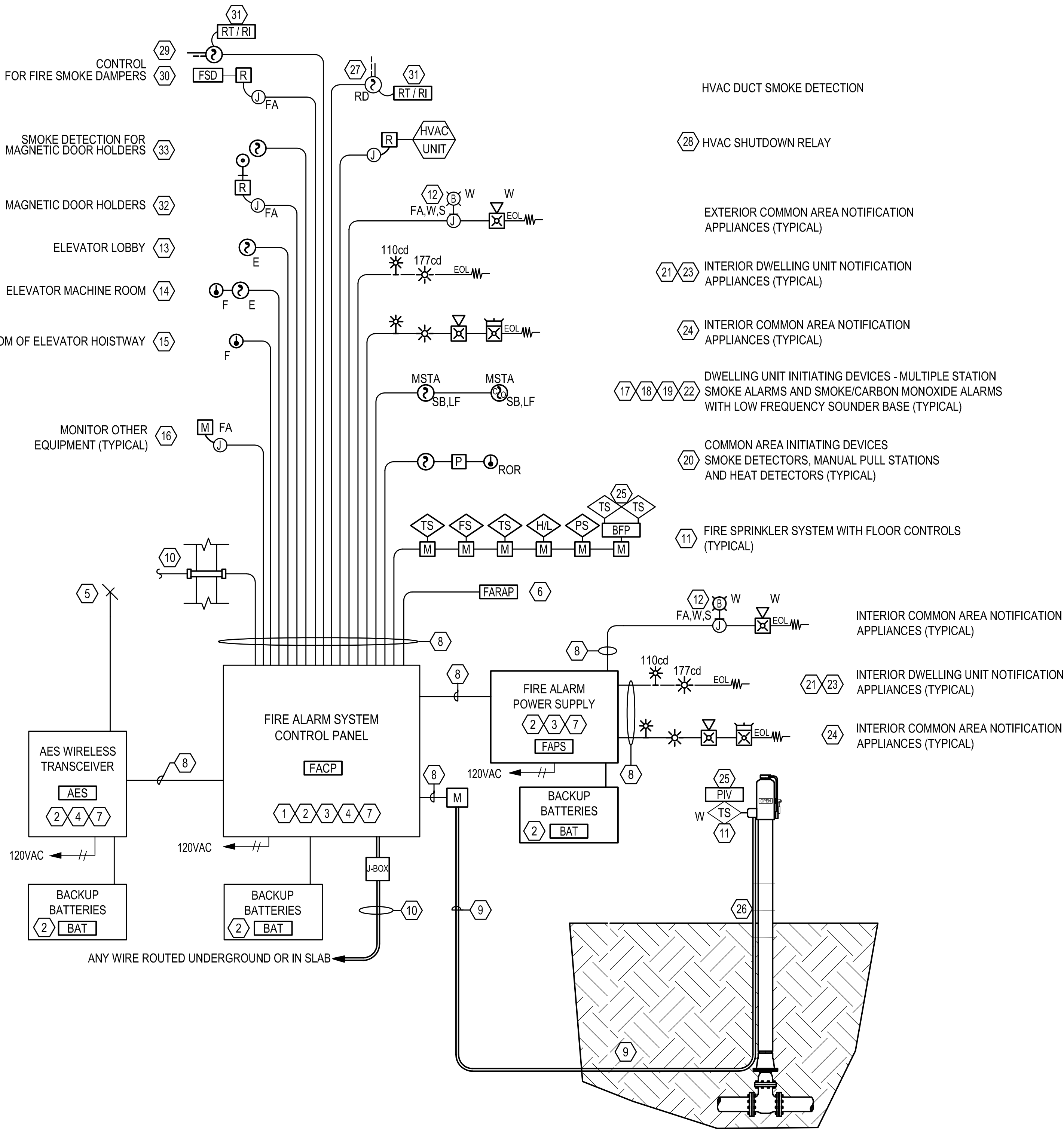
A DUCT SMOKE DETECTOR SHALL BE INSTALLED ON THE SUPPLY SIDE WITHIN 5FT OF FIRE SMOKE DAMPER. DUCT DETECTOR SHALL BE PROVIDED BY FIRE ALARM / EMERGENCY COMMUNICATION CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR WITH CABLING AND TERMINATION PROVIDED BY THE ELECTRICAL CONTRACTOR. FIRE SMOKE DAMPER SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. (WHERE EXISTING) (CONTRACTOR TO VERIFY IF EXISTING).
- 30

THE FIRE ALARM CONTRACTOR SHALL PROVIDE A RELAY MODULE TO CLOSE FIRE SMOKE DAMPER UPON ACTIVATION OF DUCT SMOKE DETECTOR IN ADDITION TO TRANSMITTING A SUPERVISORY SIGNAL AT THE FIRE ALARM CONTROL PANEL. (WHERE EXISTING) (CONTRACTOR TO VERIFY IF EXISTING).
- 31

PROVIDE REMOTE ALARM INDICATOR FOR EACH INITIATING DEVICE NOT VISIBLE FROM THE FLOOR (WHERE APPLICABLE). REMOTE ALARM INDICATORS INSTALLED IN ACOUSTICAL CEILING TILES SHALL BE CENTERED ON THE CEILING TILES (12" FROM AN ACOUSTICAL TILE RUNNER) OR ON THE WALL OF EXPOSED STRUCTURE SPACES.
- 32

THE FIRE ALARM SYSTEM CONTRACTOR SHALL PROVIDE A RELAY MODULE FOR CONNECTION TO THE MAGNETIC DOOR HOLDERS. THE MAGNETIC DOOR HOLDER SHALL RELEASE UPON ACTIVATION OF THE SMOKE DETECTOR SERVING THE DOOR HOLDERS OR UPON RECEIVING AN ALARM SIGNAL FROM THE FIRE ALARM SYSTEM CONTROL PANEL. (WHERE APPLICABLE) PROVIDE NEW IF NECESSARY.
- 33

SMOKE DETECTOR FOR MAGNETIC DOOR HOLDER RELEASE SHALL BE LOCATED WITHIN 5'-0" OF THE DOOR IT IS SERVING AND INSTALLED ALONG THE CENTERLINE OF THE DOOR OPENING UNLESS SMOKE DETECTION AS PART OF AN OPEN AREA PROTECTION SYSTEM COVERING THE ROOM, CORRIDOR, OR ENCLOSED SPACE ON EACH SIDE OF THE SMOKE DOOR AND THAT ARE LOCATED AND SPACED AS REQUIRED BY NFPA #72 SECTION 17.7.3 SHALL BE PERMITTED TO ACCOMPLISH SMOKE DOOR RELEASE SERVICE. (WHERE APPLICABLE).
- THE FOLLOWING ITEMS ARE NOT CONFIRMED TO BE EXISTING. THE FIRE ALARM SYSTEM CONTRACTOR SHALL VERIFY AND PROVIDE IF NECESSARY:



1 FIRE ALARM SYSTEM RISER DIAGRAM
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