FIRE ALARM NOTES

1. WALL MOUNTED, AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM ABOVE THE FINISHED FLOOR, AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE. (NFPA 72, SECTION 18.4.8.1). ALL WALL MOUNTED VISUAL APPLIANCES AND COMBINATION AUDIBLE/VISUAL APPLIANCES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM ABOVE FINISHED FLOOR AS MEASURED TO THE LENS. (NFPA 72, SECTION 18.5.5.1)
2. ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
3. ALL FIRE ALARM WIRING SHALL BE FLP (FIRE POWER LIMITED) OR FPLP (FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
4. PER THE CEC, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6' OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC AND SHALL HAVE THEIR COVERS PAINTED RED WHERE APPLICABLE.
5. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM ELECTRICAL ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
6. ALL FAN SHUTDOWN FUNCTIONS, DAMPER CLOSURES AND ASSOCIATED MECHANICAL SYSTEM FIRE ALARM INTERFACE SHALL BE BY MECHANICAL CONTRACTOR, AND SHALL BE COORDINATED WITH FIRE ALARM SYSTEM.
7. ALL DUCT SMOKE DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS EXPOSED TO THE WEATHER SHALL BE C.S.F.M. LISTED FOR OUTDOOR INSTALLATION, AND WEATHER PROTECTED BY THE MECHANICAL CONTRACTOR. ALL AIR VELOCITY TESTING SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.
8. ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES AND ASSOCIATED CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
9. SMOKE DETECTOR TESTING SHALL BE PERFORMED TO ENSURE THAT EACH DETECTOR IS WITHIN ITS LISTED AND MARKED SENSITIVITY RANGE USING THE METHODS RECOMMENDED PER CFC, SECTION 907.8.4 AND NFPA 72, SECTION 14.4.4.3.4.
10. ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
    A. INITIATING DEVICE CIRCUITS (IDC): CLASS B
    B. SIGNALING LINE CIRCUITS (SLC): CLASS B
    C. NOTIFICATION APPLIANCE CIRCUITS (NAC): CLASS B
11. ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.
12. POINT AND COMMON ANNUNCIATION AND T–TAPPING ARE PROHIBITED. (T–TAPPING IS ALLOWABLE ON SLC LOOPS).
13. PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING, WHEN APPLICABLE.
14. CONTRACTOR TO FIELD VERIFY AND PROVIDE DECIBEL METER FOR TESTING OF AMBIENT NOISE LEVELS AUDIBLE DEVICES TO BE AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75 DBA AT 10 FEET OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL BUT NOT MORE THAN 110 DBA AT THE MINIMUM HEARING DISTANCE. SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECONDS. (CFC, SECTION 907.5.2.1.1) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS. PROVIDE UPDATED PLANS AND CALCULATIONS THROUGH THE "CHANGE ORDER" PROCESS WHEN INSTALLING ADDITIONAL DEVICES.
15. VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15–CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
16. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, APPROVED SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON THE DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. ALL CONDUITS SHALL BE 3/4" MINIMUM. CONTRACTOR TO VERIFY CONDUIT FILL PRIOR TO INSTALLATION.
17. ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON–ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL "WFD SERIES" ONLY.
18. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
19. SYSTEM SHALL BE FURNISHED AND INSTALLED BY AN AUTHORIZED DISTRIBUTOR.
20. FIRE ALARM SYSTEM INSTALLATION COMPANY SHALL BE UL LISTED (UUJS).
21. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURER'S SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
22. SMOKE DETECTOR SHALL NOT BE ANY CLOSER THAN 1 FOOT FROM FIRE SPRINKLERS OR 3 FEET FROM ANY SUPPLY DIFFUSER. IN THE AREA OF CONSTRUCTION OR WHERE POSSIBLE DAMAGE/CONTANMINATION COULD OCCUR ON NEWLY INSTALLED FIRE ALARM DEVICES, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER. DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO FINAL CLEAN–UP BY ALL TRADES SHALL BE CLEANED OR REPLACED IN ACCORDANCE WITH CFC, SECTION 907. CLEANING OR REPLACEMENT OF DEVICES THAT WERE MOUNTED AT THE REQUEST OF THE CONTRACTOR WILL NOT BE PERFORMED WITHOUT WRITTEN AUTHORIZATION THAT ASSUMES FINANCIAL RESPONSIBILITY FOR COSTS INCURRED. TESTING OF DETECTORS SHALL BE PERFORMED PER NFPA 72, SECTION 14.4.5.3 AND CFC, SECTION 907.8.4.
23. PER CBC, SECTION 11B–309 ACTIVATION OF INITIATING DEVICE SHALL NOT REQUIRE MORE THAN 5 LBS. (22.2N) OF FORCE OR REQUIRE TIGHT GRASPING PINCHING, OR TWISTING OF WRIST.
24. THE SYSTEM SHALL CONFORM TO CALIFORNIA CODE OF REGULATIONS (CCR) TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
25. THE VOICE/ALARM COMMUNICATION SYSTEM VOICE MESSAGE SHALL COMPLY WITH NFPA 72, SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, MESSAGE PRIORITY, TONES, ETC.
26. A DEDICATED 120V BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT, THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION AND BE LABELED AS FOLLOWS:
    A. "FIRE ALARM" FOR FIRE ALARM SYSTEMS
    B. "EMERGENCY COMMUNICATIONS" FOR EMERGENCY COMMUNICATION SYSTEMS, OR
    C. "FIRE ALARM/ECS" FOR COMBINATION FIRE ALARM AND COMMUNICATIONS SYSTEMS.
27. WHERE A DETECTOR IS INSTALLED ABOVE THE CEILING, THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED. FOR DUCT SMOKE DETECTORS A REMOTE TEST STATION SHALL BE PROVIDED. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING, ETC.
28. THE "END OF LINE RESISTANCE" OF EACH CIRCUIT SHALL BE TESTED IN THE PRESENCE OF THE I.O.R. AND SHALL NOT EXCEED THE LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGE.
29. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE LISTED FOR WET LOCATIONS, IN ACCORDANCE WITH CEC, SECTIONS 110.11, 300.5(B), 300.6, 300.9, 310.10, AND 760.3(D).
30. FIRE ALARM SYSTEM IS A FULLY AUTOMATIC SYSTEM. CONTRACTOR TO UTILIZE AREA COVERAGE SMOKE DETECTORS AND ADDRESSABLE CONTROL RELAYS FOR THE SHUTDOWN AND/OR CLOSURE OF HVAC UNITS AND COMBINATION SMOKE/FIRE DAMPERS. CONTROL RELAYS TO BE LOCATED WITHIN 3FT OF THE CONTROLLED CIRCUIT OR APPLIANCE PER NFPA 72, SECTION 21.2.4.
31. PROVIDE (VIA CHANGE ORDER PROCESS) APPROPRIATE MANUFACTURER PRODUCT DATA SHEETS AND APPLICABLE CSFM LISTINGS FOR ALL SUBSTITUTED MANUFACTURER'S MATERIAL, EQUIPMENT OR APPLIANCES, TO DSA PRIOR TO START OF INSTALLATION.
32. CONTRACTOR SHALL PROVIDE FIRE WATCH FOR ALL OCCUPIED AREAS OF WORK WHERE THE REQUIRED FIRE ALARM SYSTEM IS OUT OF SERVICE FOR THE DURATION OF THE SYSTEM OUTAGE. FIRE WATCH AND SYSTEM/EQUIPMENT SHALL BE PER CFC, SECTION 901.7.
33. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72. THE OPERATION OF ANY AUTOMATIC FIRE DETECTOR, SPRINKLER WATERFLOW DEVICE OR MANUAL FIRE ALARM BOX SHALL AUTOMATICALLY SOUND AN ALERT TONE FOLLOWED BY VOICE INSTRUCTIONS GIVING APPROVED INFORMATION AND DIRECTIONS FOR A GENERAL OR STAGED EVACUATION IN ACCORDANCE WITH THE FIRE SAFETY EVACUATION PLANS REQUIRED BY CFC, SECTION 404 PER CBC/CFC, SECTION 907.5.2.2
34. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL HAVE THE CAPABILITY TO BROADCAST LIVE VOICE MESSAGES BY PAGING ZONES ON A SELECTIVE AND ALL–CALL BASIS PER CBC/CFC, SECTION 907.5.2.2.2.
35. EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS SHALL BE PROVIDED WITH AN APPROVED EMERGENCY POWER SOURCE PER CBC/CFC, SECTION 907.5.2.2.5.
36. UPON DETECTION OF CARBON MONOXIDE THE FIRE ALARM SYSTEM SHALL PRODUCE A FOUR–PULSE TEMPORAL PATTERN SIGNAL WITHIN THE BUILDING AND COMPLY WITH NFPA 720, SECTION 5.8.6.5.
37. ALL MEMBRANE AND THROUGH–PENETRATIONS OF RATED ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED FIRE STOP SYSTEM AS IDENTIFIED IN CBC, CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE FIRE ALARM SECTION OF THE PROJECT SPECIFICATIONS.
38. CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.

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Author

SEQUENCE OF OPERATIONS

ACTION / DEVICE	120 VOLT POWER FAILURE	SYSTEM TROUBLE, WIRING FAULT OR OPEN, GROUND FAULT, SYSTEM LOW BATTERY, CIRCUIT SHORT	MANUAL PULL STATION	AREA SMOKE DETECTOR	AREA or ATTIC HEAT DETECTOR
SOUND CONTROL PANEL TROUBLE BUZZER	YES	YES	NO	NO	NO
SOUND CONTROL PANEL SUPERVISORY BUZZER	NO	NO	NO	NO	NO
SOUND CONTROL PANEL ALARM BUZZER	NO	NO	YES	YES	YES
ACTIVATE RELAY FOR CENTRAL STATION MONITORING	YES	YES	YES	YES	YES
ANNUNCIATE AT FIRE ALARM CONTROL PANEL (ALARM)	NO	NO	YES	YES	YES
ANNUNCIATE AT FIRE ALARM CONTROL PANEL (TROUBLE)	YES	YES	NO	NO	NO
ACTIVATE AUDIBLE NOTIFICATION ALARM SIGNAL THROUGHOUT CAMPUS	NO	NO	YES	YES	YES
ACTIVATE VISUAL NOTIFICATION ALARM SIGNAL THROUGHOUT CAMPUS	NO	NO	YES	YES	YES
ACTIVATE AUDIBLE NOTIFICATION ALARM SIGNAL THROUGHOUT BLDG	NO	NO	YES	YES	YES
ACTIVATE VISUAL NOTIFICATION ALARM SIGNAL THROUGHOUT BLDG	NO	NO	YES	YES	YES
NOTIFY FIRE DEPARTMENT VIA MONITORING STATION –	NO	NO	YES	YES	YES
SOUND AN ALERT TONE FOLLOWED BY VOICE INSTRUCTION	NO	NO	YES	YES	YES

FIRE ALARM SYSTEM TESTING NOTES:

1. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATIONS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
2. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
3. DISTRICT SHALL PROVIDE A CERTIFIED IMPARTIAL FIRE ALARM INSPECTOR. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
4. 100% OF THE SYSTEM IN CONTRACT WILL BE TESTED AND INSPECTED WITH THE CONTRACTOR OR CONTRACTOR'S SUB AND DISTRICT'S ETS STAFF MEMBER PRESENT. INSPECTION WILL INCLUDE, BUT NOT BE LIMITED TO, REMOVING STROBES/HORNS TO CHECK FOR "T–TAPS", REMOVING J–BOX COVERS TO CHECK WIRE GAGE AND SPLICES.
5. FOLLOW ALL REQUIREMENTS AND INSTRUCTIONS PROVIDED BY MANUFACTURER UPON INSTALLATION OF MANUFACTURER'S PRODUCTS AND DEVICES.
6. PRIOR TO REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE FIRE CODE OFFICIAL THAT THE SUBJECT FIRE PROTECTION SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH APPROVED PLANS AND HAS BEEN TESTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE APPROPRIATE INSTALLATION STANDARD. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT. ANY DEVIATIONS FROM THE DESIGN STANDARDS SHALL BE NOTED AND COPIES OF THE APPROVALS FOR SUCH DEVIATIONS SHALL BE ATTACHED TO THE WRITTEN STATEMENT. (CFC, SECTION 901.2.1)
7. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO DSA/I.O.R. CONTRACTOR SHALL SUPPLY NECESSARY TESTING EQUIPMENT, INCLUDING A "SOUND LEVEL METER" TO CHECK ACCEPTABLE NOISE LEVELS OF AUDIBLE DEVICES. PROVIDE TEST RESULTS PER NFPA 72 TO ARCHITECT, D.S.A., I.O.R. AND TO LOCAL FIRE AUTHORITY, PER CFC, SECTION 907.8.2.
8. INSPECTION, TESTING AND MAINTENANCE SHALL BE IN COMPLIANCE WITH NFPA 72, CHAPTER 14, REACCEPTANCE TESTING SHALL BE IN COMPLIANCE WITH NFPA 72, SECTION 14.4.2.
9. LOCAL FIRE AUTHORITY NOTIFICATION TO BE DOCUMENTED AND RECORDED AS "UNAVAILABLE" OR "CONFIRM WHEN PRESENT".
10. PRIOR TO COMPLETION OF FIRE ALARM SYSTEM THE TWO WAY COMMUNICATION SYSTEM SHALL BE TESTED AND CERTIFIED VIA NFPA 72 EMERGENCY COMMUNICATION SYSTEM SUPPLEMENTARY RECORD OF INSPECTION AND TESTING FORM.
11. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED RECORD OF COMPLETION PER NFPA 72, FIGURE 7.8.2(A) THROUGH (I) AS APPLICABLE. A COMPLETE RECORD OF THE TESTS AND OPERATIONS OF EACH SYSTEM SHALL BE KEPT UNTIL THE NEXT TEST AND FOR ONE YEAR AFTER PER NFPA 72, SECTION 7.7.1.
12. FIRE ALARM SYSTEM DOCUMENTS SHALL BE HOUSED IN THE DOCUMENT CABINET. THE DOCUMENT CABINET SHALL BE INSTALLED AT THE SYSTEM CONTROL UNIT OR AT ANOTHER APPROVED LOCATION AT THE PROTECTED PREMISES AS REQUIRED BY NFPA 72, SECTION 7.7.2.
13. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CFC, SECTION 907.6.6. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A FIRE ALARM SYSTEM MONITORING CONTRACT.
14. THE VOICE/ALARM COMMUNICATION SYSTEM VOICE MESSAGE SHALL COMPLY WITH NFPA 72 SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, MESSAGE PRIORITY, TONES, ETC. REFER TO NFPA 72 ANNEX D, D.1 THROUGH D.6 FOR DETERMINING THE FUNDAMENTALS OF TEST PROTOCOL AND METHOD OF MEASURING INTELLIGIBILITY.

SYMBOL	DESCRIPTION	MODEL	MANUFACTURER	BACKBOX	MOUNTING HEIGHT	C.S.F.M. NUMBER
VECP	VOICE EVACUATION CONTROL PANEL	IFP–100ECS	FARENHYT BY SILENT KNIGHT	PROVIDED	5'–6'' A.F.F. TO TOP	7165–0559:0169
AMP	FIRE ALARM DIGITAL AUDIO AMPLIFIER	ECS–50W	FARENHYT BY SILENT KNIGHT	PROVIDED	5'–6'' A.F.F. TO TOP	7300–0559:0173
FATC	FIRE ALARM TERMINAL CABINET	N/A	BY ELECTRICIAN	18"SQ. x 6"D U.N.O. (RED)	VERIFY IN FIELD	N/A
FAAP	REMOTE FIRE ALARM ANNUNCIATOR	RA–1000	FARENHYT BY SILENT KNIGHT	PROVIDED	5'–6'' A.F.F. TO TOP	7165–0559:0135
MS	MANUAL PULL STATION (ADDRESSABLE)	IDP–PULL–DA	FARENHYT BY SILENT KNIGHT	4S DEEP BOX W/ SINGLE GANG RING	48'' A.F.F. TO TOP OF ACTIVATING HANDLE	7150–0559:0140
RM	REMOTE VOICE EVACUATION MICROPHONE	ECS–RPU	FARENHYT BY SILENT KNIGHT	PROVIDED	5'–6'' A.F.F. TO TOP	7300–0559:0175
SD	AREA SMOKE DETECTOR (ADDRESSABLE/PHOTO.)	IDP–PHOTO IDP–6AB (BASE)	FARENHYT BY SILENT KNIGHT	4S DEEP BOX W/ 3–0 RING	CEILING	7272–0559:0149 7300–0559:0159
HD	AREA HEAT DETECTOR (ADDRESS./FIXED 200°F)	IDP–HEAT–HT B210LP (BASE)	FARENHYT BY SILENT KNIGHT	4S DEEP BOX W/ 3–0 RING	ABOVE ACCESSIBLE CEILING, U.O.N.	7270–0559:0147 7300–1653:0109
S WP	FIRE ALARM SPEAKER (WEATHERPROOF/WALL)	SPRK (RED)	SYSTEM SENSOR	WP BACKBOX PROVIDED	90'' A.F.F. TO TOP	7320–1653:0201
SF cd	FIRE ALARM SPEAKER/STROBE (CEILING)	SPSCWL (WHITE)	SYSTEM SENSOR	4S DEEP BOX W/ 4S EXTENSION	CEILING	7320–1653:0505
SYNC	AUDIBLE/VISUAL SYNC MODULE	MDL3	SYSTEM SENSOR	5S DEEP BOX W/ 5S EXTENSION	VERIFY IN FIELD	7300–1653:0202
J	FIRE ALARM JUNCTION BOX	N/A	BY ELECTRICIAN	4S BOX, U.N.O.	VERIFY IN FIELD	N/A

GENERAL FIRE ALARM SYMBOL LIST NOTES:

1. CONFIRM NOTIFICATION DEVICE COLOR (WHITE OR RED) WITH ARCHITECT PRIOR TO ANY ORDER OR INSTALLATION. COLOR TO BE INDICATED IN SHOP DRAWING SUBMITTAL.
2. NOTIFICATION DEVICES SHALL HAVE NO "FIRE" MARKINGS.
3. NUMBER ADJACENT TO VISUAL DEVICES INDICATES MINIMUM CANDELLA RATING OF STROBE DEVICE.

GENERAL FIRE ALARM ABBREVIATIONS:

A.F.F.	ABOVE FINISHED FLOOR	N/A	NOT APPLICABLE
E.O.L.	END OF LINE RESISTOR	U.N.O.	UNLESS NOTED OTHERWISE
(E)	EXISTING DEVICE	VL	VERIFY LOCATION IN FIELD
F.B.O.	FURNISHED BY OTHERS	WP	WEATHERPROOF DEVICE
TSP	TWISTED SHIELDED PAIR	cd	INDICATED CANDELA RATING OF STROBE DEVICE

WIRING LEGEND

WIRE DESIGNATION	WIRE IN CONDUIT	WIRE IN CONDUIT UNDERGROUND/WET LOC.	UNDERGROUND/WET WIRE DESIGNATION
INITIATING CIRCUITS Z	2 CONDUCTOR #18 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	2 CONDUCTOR #18 FPL TWISTED/ UNSHEILDED W/OVERALL JACKET	INITIATING CIRCUITS ZU
POWER CKT. P	2 CONDUCTOR #12 THHN STRANDED	2 CONDUCTOR #12 STRANDED TYPE THWN	POWER CKT. PU
NETWORK CONTROL C	2 CONDUCTOR #12 THHN STRANDED	2 CONDUCTOR #12 STRANDED TYPE THWN	NETWORK CONTROL CU
ANNUNCIATOR D	4 CONDUCTOR #18 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	4 CONDUCTOR #18 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	ANNUNCIATOR DU
AUDIBLE LOOP B	2 CONDUCTOR #18 FPL TWISTED/ SHIELDED W/OVERALL JACKET	2 CONDUCTOR #18 FPL TWISTED/ SHIELDED W/OVERALL JACKET	AUDIBLE LOOP BU
AUDIBLE (SPEAKER) A	2 CONDUCTOR #16 FPL TWISTED/ SHIELDED W/OVERALL JACKET	2 CONDUCTOR #16 FPL TWISTED/ SHIELDED W/OVERALL JACKET	AUDIBLE (SPEAKER) AU
VISUAL (STROBE) V	2 CONDUCTOR #12 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	2 CONDUCTOR #12 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	VISUAL (STROBE) VU
S–BUS S	4 CONDUCTOR #16 FPLR (2 PAIR)	4 CONDUCTOR #16 FPLR (2 PAIR)	S–BUS SU

NOTE:
1. ALL WIRE TO BE CLASS 'B' PATHWAY SURVIVAL LEVEL 1.
2. ALL CABLING TO BE WEST PENN OR APPROVED EQUAL.
3. COLOR CODE ALL FIRE ALARM CONDUCTORS PER DISTRICT STANDARDS. VERIFY COLOR SCHEMES PRIOR TO ORDERING FIRE ALARM CONDUCTORS.

PLAN REVIEW REQUIREMENTS AND APPLICABLE CODES AND STANDARDS

1.0 FIRE ALARM PLAN REVIEW

A. FIRE ALARM PLAN REVIEW

1. AS PART OF THE FIRE ALARM PLAN REVIEW, PLANS AND SPECIFICATIONS FOR THE FIRE ALARM SYSTEM HAVE BEEN INCLUDED FOR REVIEW AND COMMENT BY THE DIVISION OF THE STATE ARCHITECT, FIRE & LIFE SAFETY.
2. THE FLOOR PLANS AND SPECIFICATIONS INCLUDE THE FOLLOWING : LOCATIONS OF ALL ALARM–INITIATING AND SIGNALING DEVICES, CONTROL AND TROUBLE SIGNALING EQUIPMENT (FIRE ALARM CONTROL PANEL, BUILDING ANNUNCIATION (FIRE ALARM ANNUNCIATOR).

B. FIRE ALARM COMPONENTS

1. PROVIDE CALIFORNIA STATE FIRE MARSHAL LISTING SHEETS AND U.L. LISTING NUMBERS FOR EACH COMPONENT.
2. EQUIPMENT POWER CONNECTIONS.
3. RISER DIAGRAM SHOWING EACH COMPONENT.
4. VOLTAGE DROP CALCULATIONS.
5. POWER CONNECTIONS TO APPLICABLE COMPONENTS.
6. WIRE AND/OR CABLING TYPES AND SIZES.
7. PROVIDE CATALOG DATA SHEETS FOR ALL FIRE ALARM SYSTEM COMPONENTS.
8. CONTRACTOR TO FURNISH STATEMENT OF COMPLIANCE BEFORE REQUESTING FINAL APPROVAL OF INSTALLATION IN ACCORDANCE WITH CFC, SECTION 901.2.1.
9. A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE PROJECT INSPECTOR AND, IF APPLICABLE, LOCAL FIRE AUTHORITY.
10. THE INSTALLER SHALL SUPPLY THE OWNER WITH A WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT–TO–POINT AS BUILT DRAWINGS AND EQUIPMENT SPECIFICATIONS. AS BUILT RECORDS SHALL BE MAINTAINED ON PREMISES FOR A MINIMUM OF THREE YEARS PER CFC, SECTION 901.6.3.

C. SCOPE OF WORK

1. INSTALL A FULLY AUTOMATIC, ADDRESSABLE, FIRE ALARM SYSTEM WITH AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM WITHIN ALL BUILDINGS IN SCOPE OF PROJECT AS DEFINED PER CFC, SECTION 907.2.3 AND NFPA 72.
2. FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE U.L. LISTED AS UUFX (CENTRAL STATION) PER CFC, SECTION 907.6.6.3.
3. FIRE SPRINKLER SYSTEM UTILIZED FOR HEAT DETECTION IN ALL ABOVE CEILING, ATTIC SPACES AND CONCEALED COMBUSTIBLE AREAS. PROVIDE HEAT DETECTORS WHERE FIRE SPRINKLERS HAVE BEEN OMITTED PER NFPA 72 AND NFPA 13.

2.0 LIST OF CURRENT CALIFORNIA CODE OF REGULATIONS

APPLICABLE CODES AS OF January 1, 2020

2019 California Administrative Code, Title 24 C.C.R.
2019 California Building Code (CBC), Title 24 C.C.R.
(2018 International Building Code of the International Code Council, with California Amendments.)
2019 California Electrical Code (CEC), Title 24, C.C.R.
(2017 National Electric Code of the National FIre Protection Assoc., NFPA)
2019 California Mechanical Code (CMC), Title 24, C.C.R.
(2018 Uniform Mechanical Code of the International Association of Plumbing and Mechanical Officials, IAPMO.)
2019 California Plumbing Code (CPC), Part 5, Title 24, C.C.R.
(2018 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials, IAPMO.)
2019 California Energy Code (CEC), Title 24, C.C.R.
2019 California Historical Building Code, Title 24, C.C.R.
2019 California Fire Code (CFC), Title 24, C.C.R.
(2018 International Fire Code of the International Code Council)
2019 California Existing Building Code, Title 24, C.C.R.
(2018 International Existing Building Code of the International Code Council, with amendments)
2019 California Green Building Standards Code (CALGreen Code), Title 24, C.C.R.
2019 California Referenced Standards Code, Title 24, C.C.R.

LIST OF FEDERAL CODES AND STANDARDS (if applicable)

Americans with Disabilities Act (ADA), Title II or Title III
For Title II: Uniform Federal Accessibility Standards (UFAS) or ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36.)
For Title III: ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36.)
Americans with Disabilties Act Accessibility Guidelines (ADAAG) (with amendments through September 2002)

PARTIAL LIST OF APPLICABLE NFPA STANDARDS:

NFPA 13–Automatic Sprinkler Systems (CA Amended)	2016 Edition
NFPA 14–Standpipes Systems (CA Amended)	2016 Edition
NFPA 17–Standard for Dry Chemical Extinguishing Systems	2017 Edition
NFPA 17a–Standard for Wet Chemical Systems	2017 Edition
NFPA 20–Installation Stationary Pumps for Fire Protection	2016 Edition
NFPA 22–Water tanks for Private Fire Protection	2013 Edition
NFPA 24–Installation of Private Fire Service Mains (CA Amended)	2016 Edition
NFPA 72–National Fire Alarm and Signaling Code (CA Amended)	2016 Edition
NFPA 80–Fire Door and Other Opening Protectives	2016 Edition
NFPA 92–Standard for Smoke Control Systems	2015 Edition
NFPA 253–Critical Radiant Flux of Floor Covering Systems	2015 Edition
NFPA 720–Carbon Monoxide (CO) Detection and Warning	2015 Edition
NFPA 2001–Clean Agent Fire Extinguishing Systems (CA Amended)	2015 Edition
ICC 300 –ICC Standards on Bleachers, Folding and Telescoping Seating and Grandstands	2017 Edition
UL 38–Manual Operating Signal Boxes (with revisions through February 2, 2005 as amended)	1999 Edition
UL 268–Smoke Detectors for Fire Alarm Systems	2009 Edition
UL 268A–Smoke Detectors Duct Applications (with revisions through October 22, 2003 as amended)	2009 Edition
UL 300–Fire Testing of Fire Extinguishing Systems for Protection Of Restaurant Cooking Areas (with revisions through December 2014 as amended)	2005 Edition
UL 464–Audibile Signal Appliances (with revisions through October 10, 2003 as amended)	2003 Edition
UL 521–Heat Detectors for Fire Protective Signaling Systems (with revisions through July 20, 2005 as amended)	1999 Edition
UL 864–Control Units for Fire Protective Signaling Systems (with revisions through December 2014)	2003 Edition

Reference code section for NFPA Standards–2019 CBC (SFM) Chapter 35
See Chapter 35 for State of California amendments to NFPA Standards.

COMPLETE FIRE ALARM SUBMITTAL
AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-121846 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 11/05/2021

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Wedgeworth ES Portable Relocation
16949 WEDGEWORTH DR.
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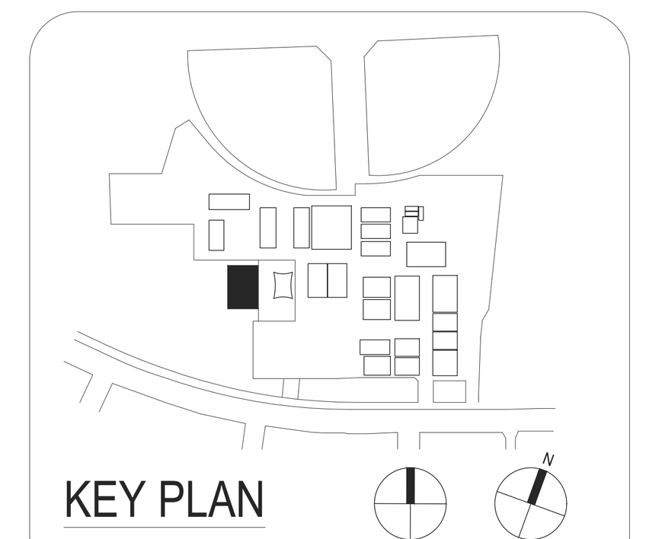
CONSTRUCTION DOCUMENTS
DSA APPL. NO.: 03-121846 DSA FILE NO.: 19-38



ENGINEER
REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWARTZ
No. E15610
ELECTRICAL
STATE OF CALIFORNIA

CLIENT
HACIENDA LA PUENTE USD

DATE	PROJECT NUMBER
10/12/2021	#####

DRAWING HISTORY

No.	Description	Date

CONSTRUCTION DOCUMENTS

FIRE ALARM INFORMATION

EFA0.01