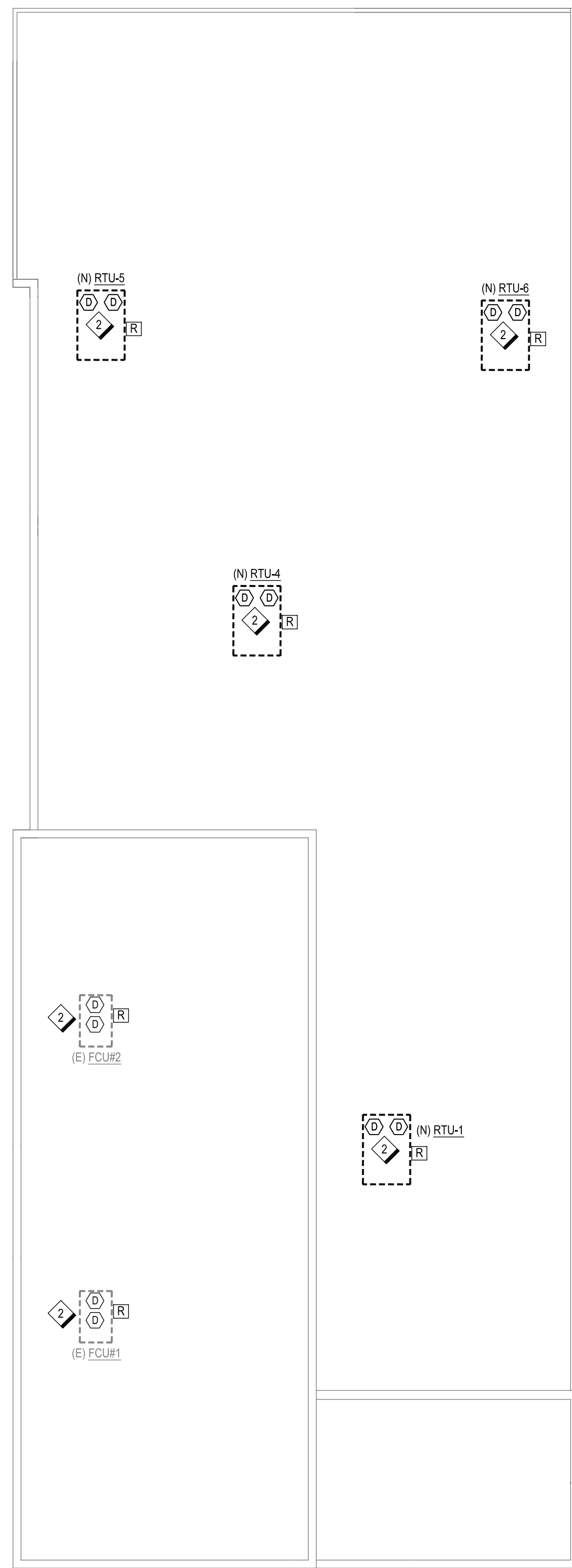


1 FIRE ALARM FLOOR PLAN - NEW
Scale: 1/8" = 1'-0"

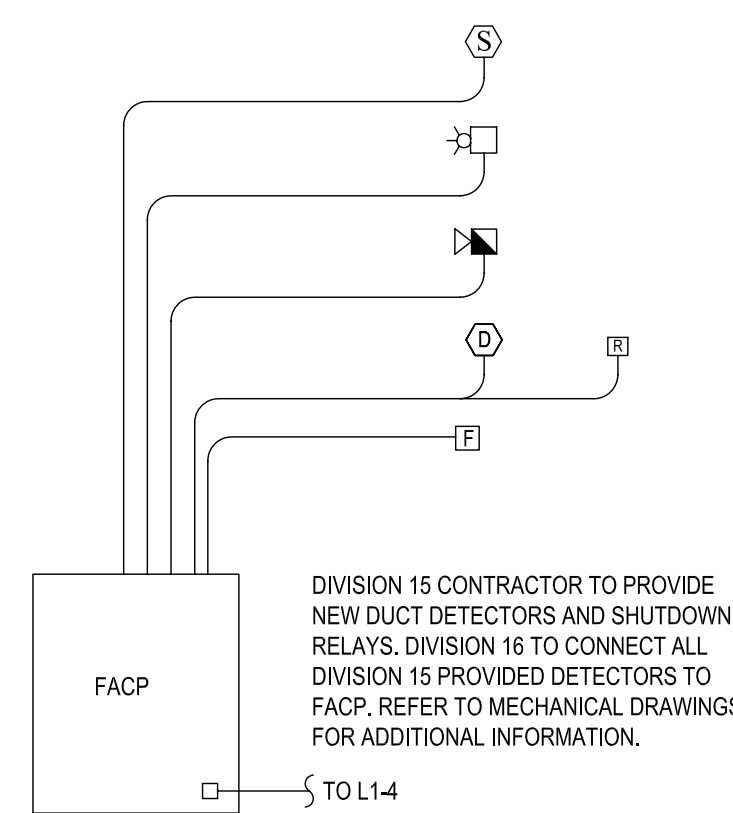


2 FIRE ALARM ROOF PLAN - NEW
Scale: 1/8" = 1'-0"

FIRE ALARM KEYED NOTES

- 1 EXPOSED STRUCTURE. SURFACE MOUNT DETECTORS TO 16'-0" OPEN CEILING. ALL WIRING IN CONDUIT.
- 2 DUCT MOUNTED SMOKE DETECTORS LOCATED IN SUPPLY AND RETURN, TYP. PROVIDE AIR HANDLER SHUT DOWN RELAY MODULE AS REQUIRED.

3 FIRE ALARM RISER
Scale: NONE



DIVISION 15 CONTRACTOR TO PROVIDE NEW DUCT DETECTORS AND SHUTDOWN RELAYS. DIVISION 16 TO CONNECT ALL DIVISION 15 PROVIDED DETECTORS TO FACP. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

REQUIREMENTS:

ALARMS

AUDIBLE ALARMS.

IF PROVIDED, AUDIBLE EMERGENCY ALARMS SHALL PRODUCE A SOUND THAT EXCEEDS THE PREVAILING EQUIVALENT SOUND LEVEL IN THE ROOM OR SPACE BY AT LEAST 15 dBA OR EXCEEDS ANY MAXIMUM SOUND LEVEL WITH A DURATION OF 60 SECONDS BY 5 dBA, WHICHEVER IS LOUDER. SOUND LEVELS FOR ALARM SIGNALS SHALL NOT EXCEED 120 dBA.

VISUAL ALARMS.

VISUAL ALARM SIGNALS SHALL HAVE THE FOLLOWING MINIMUM PHOTOMETRIC AND LOCATION FEATURES:

- (1) THE LAMP SHALL BE A XENON STROBE TYPE OR EQUIVALENT.
- (2) THE COLOR SHALL BE CLEAR OR NOMINAL WHITE (I.E., UNFILTERED OR CLEAR FILTERED WHITE LIGHT).
- (3) THE MAXIMUM PULSE DURATION SHALL BE TWO-TENTHS OF ONE-SECOND (0.2 SEC) WITH A MAXIMUM DUTY CYCLE OF 40 PERCENT. THE PULSE DURATION IS DEFINED AS THE TIME INTERVAL BETWEEN INITIAL AND FINAL POINTS OF 10 PERCENT OF MAXIMUM SIGNAL.
- (4) THE INTENSITY SHALL BE A MINIMUM OF 30 CANDELA.
- (5) THE FLASH RATE SHALL BE A MINIMUM OF 1 HZ AND A MAXIMUM OF 3HZ.

A. GENERAL:

01. ALL FIRE ALARM CIRCUITS SHALL BE ELECTRICALLY SUPERVISED.
02. AUTOMATIC RESPONSE FUNCTIONS SHALL BE ACCOMPLISHED BY THE FIRST DEVICE INITIATED. ALARM FUNCTIONS RESULTING FROM INITIATION BY THE FIRST DEVICE SHALL NOT BE ALTERED BY SUBSEQUENT ALARMS. AN ALARM SIGNAL SHALL BE THE HIGHEST PRIORITY. A PRE-ALARM SIGNAL SHALL HAVE SECOND PRIORITY AND SUPERVISORY OR TROUBLE SIGNALS SHALL HAVE THIRD AND FOURTH LEVEL PRIORITY. SIGNALS OF A HIGHER LEVEL PRIORITY SHALL TAKE PRECEDENCE OVER SIGNALS OF LOWER PRIORITY EVEN THOUGH THE LOWER PRIORITY CONDITION OCCURRED FIRST.

B. FIRE ALARM OPERATING SEQUENCES SHALL BE AS FOLLOWS:

01. ACTIVATION OF ANY AUTOMATIC DETECTOR, MANUAL STATION, OR SPRINKLER FLOW SWITCH SHALL CAUSE THE LOCATION OF ALARM TO BE IDENTIFIED IN AN AUDIBLE AND VISUAL MANNER AT THE BUILDING FIRE ALARM CONTROL PANEL (FACP), AND SHALL INITIATE THE FOLLOWING EVENTS:
 01. THE SYSTEM COMMON ALARM LED ON THE CPU MODULE SHALL FLASH. THE INTERNAL AUDIBLE TROUBLE DEVICE SHALL SOUND. ACKNOWLEDGING THE ALARM CONDITION SHALL SILENCE THE AUDIBLE TROUBLE DEVICE AND REVERT THE FLASHING COMMON ALARM LED TO A STEADY STATE.
 02. THE 80 CHARACTER DISPLAY SHALL INDICATE ALL APPLICABLE INFORMATION ASSOCIATED WITH THE ALARM CONDITION INCLUDING: ZONE, DEVICE TYPE, DEVICE LOCATION, AND TIME OF ALARM. LOCATION AND ZONING MESSAGES SHALL BE CUSTOM FIELD PROGRAMMED TO RESPECTIVE PREMISES.
 03. ANY REMOTE OR LOCAL ANNUNCIATOR LED'S ASSOCIATED WITH THE ALARM POINT SHALL BE ILLUMINATED AS HEREIN SPECIFIED.
 04. THE REMOTE SIGNALING CONNECTION SHALL BE ACTIVATED RELAYING THE ALARM SIGNAL TO AN APPROVED CENTRAL STATION (CENTRAL STATION CONNECTION AND SERVICE PROVIDED BY OWNER).
 05. ALL AUTOMATIC EVENTS PROGRAMMED TO THE ALARM POINT SHALL BE EXECUTED AND THE ASSOCIATED INDICATING DEVICES AND/OR OUTPUTS ACTIVATED.

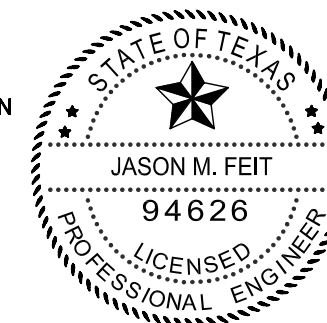
07. ACTIVATE ALL AUDIBLE/VISUAL ALARM DEVICES.
08. DE-ACTIVATE ALL HVAC SYSTEMS.
09. CLOSE ALL RELATED SMOKE DAMPERS.
10. CLOSE ALL RELATED SMOKE/FIRE DAMPERS.
11. SIGNAL THE BUILDING AUTOMATION SYSTEM AND SECURITY SYSTEM.
12. THE AUDIBLE ALARMS SHALL BE INHIBITED FROM BEING SILENCED FOR A PERIOD OF 3 MINUTES AFTER COMMENCING OPERATION UNLESS ALARM IS ACKNOWLEDGED AND APPROPRIATE ACTION HAS BEEN TAKEN.
13. RECORD ALL EVENTS ON THE SYSTEM MEMORY.
14. RECORD ALL EVENTS ON THE SYSTEM MEMORY.
15. ACTIVATION OF DUCT MOUNTED SMOKE DETECTOR ON THE HVAC EQUIPMENT, OR A SMOKE DETECTOR MOUNTED IN THE RETURN AIR/SUPPLY AIR STEAM OF ANY FAN SHALL SHUT DOWN THE UNIT AS REQUIRED BY NFPA. THE ACTIVATION OF ONE OF THESE DETECTORS SHALL ALSO INITIATE THE EVENTS LISTED UNDER ARTICLE 3.04.

16. ANY SUBSEQUENT FIRE ALARM SHALL REACTIVATE THE ALARM INDICATING APPLIANCES AND ACTIVATE THE RESPECTIVE CONTROL SEQUENCES DESCRIBED ABOVE.
17. UPON RESET OF THE FIRE ALARM CONTROL PANEL, HVAC UNITS SHALL BE CAPABLE OF BEING STARTED, AND RESUME NORMAL OPERATION.

4 FIRE ALARM SEQUENCE OF OPERATION
Scale: NONE

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RICE & GARDNER CONSULTANTS INC.
TX PE FIRM F-9057



GENERAL NOTES

1. FIRE ALARM SYSTEM SHALL MEET ALL ADA REQUIREMENTS AND SHALL BE INSTALLED BY A LICENSED FIRE ALARM CONTRACTOR.
2. VERIFY ALL CEILING TYPES WITH ARCHITECTURAL DRAWINGS. FINAL LOCATION OF ALL SURFACE MOUNTED DEVICES ARE TO BE VERIFIED WITH ARCHITECTURAL DRAWINGS AND / OR ARCHITECT PRIOR TO INSTALLATION.
3. COORDINATE FIRE ALARM INSTALLATION WITH MECHANICAL, ELECTRICAL, AND PLUMBING DISCIPLINES PRIOR TO CONSTRUCTION. SMOKE DETECTORS SHALL BE LOCATED A MINIMUM OF 1 FOOT FROM LIGHTING FIXTURES AND A MINIMUM OF 3 FEET FROM HVAC SUPPLY/RETURN GRILLS.
4. FURNISH AND INSTALL COMPLETE FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA CHAPTER 72 AND AUTHORITY HAVING JURISDICTION, PROVIDE BATTERY BACK-UP POWER SUPPLY. DESIGN SHALL BE SIGNED AND SEALED BY A FIRE ALARM DESIGN PROFESSIONAL. PROVIDE AUXILIARY POWER SUPPLIES AS REQUIRED AND COORDINATE LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. FIRE ALARM CONTRACTOR SHALL PROVIDE COMPLETE FIRE ALARM SYSTEM SHOP DRAWINGS TO LOCAL FIRE MARSHAL INCLUDING COMPLETE BATTERY CALCULATIONS FOR REVIEW PRIOR TO INSTALLATION.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED ELECTRICAL BOXES, CONDUIT RACEWAYS AND CONDUIT STUBS PER FIRE ALARM MANUFACTURER'S RECOMMENDATIONS. ALL CONDUIT STUBS SHALL BE PROVIDED WITH INSULATED THROAT CONNECTORS TO PROTECT FIRE ALARM CABLING. REFERENCE SUBMITTED EQUIPMENT SPECIFICATIONS SHEETS FOR ACTUAL JUNCTION BOX SIZES AND DETAILS. ALL FIRE ALARM CABLING SHALL BE ROUTED IN 3/4" CONDUIT IN OPEN CEILING AREAS UNLESS OTHERWISE NOTED.
6. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL CONDUIT, FITTINGS, ALL STANDARD ELECTRICAL BOXES, PENETRATIONS, FIREPROOFING, MOUNTING OF BACK-BOXES, AND CONDUIT FOR FIRE ALARM POWER SUPPLIES, AND CONNECTION TO ALL NON-LOW VOLTAGE DEVICES. FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL OTHER DEVICES, CABLING AND CONNECTIONS UNLESS NOTED OTHERWISE.
7. ONLY POWER-LIMITED FIRE ALARM CABLES SHALL BE ALLOWED IN RACEWAYS DESIGNATED FOR FIRE ALARM SYSTEM.
8. ELECTRICAL SHALL PROVIDE A DOUBLE GANG BOX NEXT TO EACH AHU STARTER FOR CONNECTION TO FAN SHUT DOWN RELAY. ELECTRICAL CONTRACTOR SHALL ROUTE LOW VOLTAGE AHU CONTROL CONDUCTORS FROM THE DUCT HOUSING IN SEPARATE CONDUIT AND THROUGH THE RELAY NORMALLY CLOSED CONTACTS FOR FAN SHUTDOWN. COORDINATE CONNECTIONS AND LOCATION WITH FIRE ALARM AND HVAC CONTRACTOR.
9. COORDINATE WITH ALARM COMPANY TO PROVIDE AN ALARM SIGNAL FROM FIRE ALARM PANEL TO SECURITY PANEL.

REVISIONS
NOVEMBER 18, 2009



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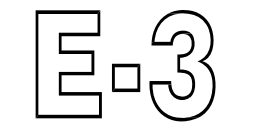
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PROJECT ISSUED FOR PERMIT
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TITLE
FIRE ALARM PLANS

SHEET



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