UTAH VALLEY UNIVERSITY
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES

CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
OREM, UT 84058

STATE OF UTAH
DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT
4110 State Office Building / SLC, Utah 84114 / (801) 538-3018

DFCM PROJECT NO. 12142790

PROTECTION CONSULTANTS, INC.
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DRAWING SCHEDULE

SHEET	DRAWING TITLE	SHT #
FA-0.0	FIRE ALARM SYSTEM COVER SHEET NOTES AND SCHEDULES	01
FA-1.0	FIRE ALARM SYSTEM NETWORK SCHEMATIC	02
FA-2.0	FIRE ALARM SYSTEM LIBRARY LEVEL 1	03
FA-2.1	FIRE ALARM SYSTEM LIBRARY LEVEL 2	04
FA-2.2	FIRE ALARM SYSTEM LIBRARY LEVEL 3	05
FA-2.3	FIRE ALARM SYSTEM LIBRARY LEVEL 4	06
FA-2.4	FIRE ALARM SYSTEM LIBRARY LEVEL 5	07
FA-3.0	FIRE ALARM SYSTEM LIBERAL ARTS LEVEL 0	08
FA-3.1	FIRE ALARM SYSTEM LIBERAL ARTS LEVEL 1	09
FA-3.2	FIRE ALARM SYSTEM LIBERAL ARTS LEVEL 2	10
FA-3.3	FIRE ALARM SYSTEM LIBERAL ARTS MECHANICAL PENTHOUSE	11
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FA-4.1	FIRE ALARM SYSTEM PHYSICAL EDUCATION LEVEL 1 SOUTH	13
FA-4.2	FIRE ALARM SYSTEM PHYSICAL EDUCATION MECHANICAL PLATFORMS	14
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FA-8.0	FIRE ALARM SYSTEM ENVIRONMENT TECH & HALL OF FLAGS LEVEL 1	29
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SCHEDULE OF DEFERRED SUBMITTALS

SUB #	DESCRIPTION
1	FIRE ALARM SYSTEM SHOP DRAWINGS
2	FIRE ALARM SYSTEM EQUIPMENT CUT SHEETS
3	FIRE ALARM SYSTEM BATTERY/VOLTAGE DROP CALCULATIONS

SCHEDULE OF REQUIRED TESTS/INSPECTIONS

NUMBER	DESCRIPTION
1	CONDUIT/WIRING/ELECTRICAL – DFCM
2	FIRE ALARM BATTERY TESTS – USFM/DFCM
3	FIRE ALARM FUNCTIONAL TEST – USFM/DFCM
4	FIRE ALARM CIRCUIT INTEGRITY TESTS – USFM/DFCM
5	FIRE ALARM NETWORK OPERABILITY TESTS – USFM/DFCM

FIRE ALARM SYSTEM GENERAL NOTES

1. SCOPE OF WORK: WORK SHALL INCLUDE UPGRADING ALL EXISTING FIRE ALARM SYSTEMS IN CENTRAL CAMPUS (CONTROL EQUIPMENT AND INITIATING DEVICES) TO BE ADDRESSABLE FIRE ALARM SYSTEMS FROM A SINGLE MANUFACTURER WITH EMERGENCY VOICE ALARM CAPABILITY. EXISTING FIRE ALARM NOTIFICATION APPLIANCES SHALL BE REPLACED WITH NEW SPEAKER/STROBES AND SPACING OF NOTIFICATION APPLIANCES SHALL BE UPGRADED WHERE REQUIRED TO COMPLY WITH CURRENT IBC, NFPA 72 AD ADA REQUIREMENTS. EXISTING CONDUIT, J-BOXES AND WIRING MAY BE RECONFIGURED AND REUSED WHERE COMPATIBLE WITH NEW EQUIPMENT/CIRCUITS. INSTALL NEW CIRCUITS WHERE REQUIRED TO PROVIDE COMPLETE AND FUNCTIONAL FIRE ALARM/EMERGENCY VOICE ALARM SYSTEMS. A NEW CAMPUS FIRE ALARM NETWORK SHALL BE INSTALLED TO LINK ALL CONTROL PANELS ON CAMPUS TOGETHER AND TO A NEW NETWORK CONTROLLER/ANNUNCIATOR IN POLICE DISPATCH (GUNTHER TECHNOLOGY). FIRE ALARM SYSTEMS SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE IBC, IFC NFPA 72, UTAH STATE FIRE MARSHAL'S OFFICE, EQUIPMENT MANUFACTURER, THESE DRAWINGS AND THE PROJECT SPECIFICATIONS.

2. APPLICABLE CODES/STANDARDS:
INTERNATIONAL BUILDING CODE - 2009 EDITION
INTERNATIONAL FIRE CODE - 2009 EDITION
UTAH STATE FIRE MARSHAL RULE R710-4
NFPA 70 - 2011 EDITION
NFPA 72 - 2010 EDITION
UTAH STATE DFCM STANDARDS

3. QUALITY ASSURANCE: ALL EQUIPMENT, MATERIAL AND DEVICES USED FOR THE FIRE/EMERGENCY VOICE ALARM SYSTEMS INSTALLATION SHALL BE UL LISTED AND/OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. ALL INITIATING DEVICES SHALL BE LISTED COMPATIBLE WITH THE FIRE ALARM CONTROL EQUIPMENT USED. MAJOR SYSTEM COMPONENTS (CONTROL PANELS, INITIATING DEVICES, ADDRESSABLE MODULES AND RELAYS, ETC.) SHALL BE FROM A SINGLE MANUFACTURER.

4. SUBMITTALS: FIRE ALARM SYSTEM CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS TO UTAH STATE FIRE MARSHAL'S OFFICE, OWNER AND ENGINEER FOR REVIEW/APPROVAL PRIOR TO ORDERING OR INSTALLING ANY EQUIPMENT. SUBMITTALS SHALL CONFORM TO THE CONSTRUCTION DOCUMENTS REQUIREMENTS OF IFC 907.1.1. SHOP DRAWINGS SHALL BE BASED ON THESE (ENGINEER'S) DRAWINGS. EACH DEFERRED SUBMITTAL IS REQUIRED TO HAVE THE PROJECT NAME, DFCM NUMBER, PROJECT ADDRESS, CONFORMANCE LETTER OR STAMP FROM THE DESIGNER AND A 3"x3" SPACE FOR THE APPROVAL STAMP ON THE FRONT PAGE. EACH DEFERRED SUBMITTAL SHALL BE ENTERED INTO THE EDMS SYSTEM.

5. DEMOLITION: IT IS THE INSTALLER'S RESPONSIBILITY FOR THE DEMOLITION OR PARTIAL DEMOLITION OF EACH EXISTING FIRE ALARM SYSTEM. EXISTING DEVICES AND CONDUIT NOT BEING REPLACED AND REUSED THAT ARE VISIBLE, SUCH AS CABINETS NOTIFICATION APPLIANCES OR SMOKE DETECTORS SHALL BE REMOVED AND REMAINING WALL OR CEILING SURFACE REPAIRED OR REPLACED TO MATCH SURROUNDING AREAS (U.N.O.). REMOVE ALL UNUSED WIRE IN ALL REMAINING J-BOXES AND/OR CONDUITS. ANY CEILING TILE DAMAGED BY THE INSTALLER MUST BE REPLACED WITH THE SAME OR EQUIVALENT TILE.

6. WIRING/CONDUIT: EXISTING WIRING MAY BE REUSED WHERE FREE OF SHORTS OR GROUNDS AND COMPATIBLE WITH NEW CONTROL EQUIPMENT. NEW WIRING, WHERE REQUIRED, SHALL BE SHALL BE FREE OF OPENS, SHORTS AND GROUNDS. ALL NEW WIRING SHALL BE INSTALLED IN METAL CLAD (WHEN RUN CONCEALED), RIGID CONDUIT OR EMT. FLEXIBLE CONDUIT MAY BE USED FOR DROPS TO SINGLE DEVICES (MAXIMUM 6'). MINIMUM CONDUIT SIZE SHALL BE 3/4". CONDUIT MAY BE RUN EXPOSED IN UNFINISHED AREAS, BUT SHALL BE INSTALLED CONCEALED ABOVE CEILINGS OR INSIDE WALLS IN FINISHED AREAS. EXPOSED CONDUIT SHALL BE PAINTED RED. WIRE MOLD MAY BE INSTALLED EXPOSED IN FINISHED AREAS BUT SHALL BE PAINTED TO MATCH WALL/CEILING SURFACE. ALL PENETRATIONS THROUGH RATED PARTITIONS SHALL BE FIRE STOPPED WITH A SUITABLE CAULKING COMPOUND. ALL WIRING USED IN THE FIRE ALARM SYSTEM SHALL BE FPL (FIRE, POWER LIMITED) WITH MINIMUM 300V INSULATION OR EQUIVALENT AS PER NFPA 70 ARTICLE 760.

7. CIRCUIT CLASSIFICATION (PER NFPA 72): INITIATING DEVICE, NOTIFICATION APPLIANCE AND DATA/NETWORK CIRCUITS SHALL MEET THE REQUIREMENTS FOR CLASS A CIRCUITS. OUTGOING AND RETURN CONDUCTORS TO A SINGLE DEVICE SHALL BE RUN IN SEPARATE RACEWAY WHERE COMMON PATH EXCEEDS A DISTANCE OF 10'.

8. POWER: EXISTING 120VAC POWER CIRCUITS TO FIRE ALARM CONTROL EQUIPMENT MAY BE REUSED TO POWER NEW EQUIPMENT WHERE PRESENT. WHERE EXISTING 120VAC POWER CIRCUITS ARE NOT PRESENT INSTALL NEW CIRCUITS PER NFPA 70 FROM NEARBY POWER DISTRIBUTION PANELS. FURNISH A BATTERY BACKUP TO PROVIDE SECONDARY POWER SUPPLY TO EACH FIRE ALARM CONTROL PANEL AND POWER SUPPLY. BATTERY BACKUP SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE 24 HOURS OF STANDBY POWER WITH AN ADDITIONAL RESERVE TO OPERATE THE SYSTEM FOR 15 MINUTES IN FULL ALARM.

9. INITIATING DEVICES:

   SMOKE DETECTORS: INSTALL SMOKE DETECTORS ON CEILING/DECK OF ALL CORRIDORS, LOBBIES, CONCOURSES AND ALL AREAS OPEN TO CORRIDORS/LOBBIES/CONCOURSES. INSTALL ADDITIONAL DETECTORS ABOVE ALL FIRE ALARM SYSTEM CONTROL EQUIPMENT. DETECTORS SHALL BE LOCATED IN CONFORMANCE WITH NFPA 72 WITH A MAXIMUM SPACING OF 30' BETWEEN DETECTORS (OR ALL PORTIONS OF PROTECTED AREA WITHIN 21' OF A DETECTOR).

   HEAT DETECTORS: INSTALL HEAT DETECTORS ON CEILING/DECK OF ELEVATOR EQUIPMENT AREAS, ELEVATOR SHAFTS AND OTHER AREAS AS INDICATED ON PLANS. HEAT DETECTORS SHALL BE FIXED TEMPERATURE TYPE (135 DEG-F). DETECTORS SHALL BE LOCATED IN CONFORMANCE WITH NFPA 72 WITH A MAXIMUM SPACING OF 50' BETWEEN DETECTORS.

   DUCT SMOKE DETECTORS: INSTALL DUCT SMOKE DETECTORS WHERE INDICATED ON PLANS AND IN RETURN DUCTS OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. REQUIRED NUMBER AND LOCATION OF DUCT SMOKE DETECTORS SHALL CONFORM TO IMC (2009) AND MANUFACTURER'S REQUIREMENTS. DUCT SMOKE DETECTORS ARE NOT REQUIRED WHERE ENTIRE AREA SERVED BY AIR MOVEMENT SYSTEM IS PROTECTED BY AREA SMOKE DETECTION SYSTEMS.

   PROJECTED BEAM SMOKE DETECTORS: INSTALL PROJECTED BEAM TYPE SMOKE DETECTORS WHERE INDICATED ON PLANS. INSTALL IN ACCORDANCE WITH NFPA 72 AND MANUFACTURER'S REQUIREMENTS. DETECTORS SHALL BE SINGLE ENDED TYPE WITH ALL POWER/CONTROLS CONTAINED AT ONE END WITH A REFLECTOR UNIT ONLY ON THE OPPOSITE END. BEAM DETECTORS SHALL INCLUDE AN INTEGRATED TESTING SYSTEM UTILIZING OPAQUE SCREENS/FILTERS. TEST/RESET SWITCHES SHALL BE PROVIDED FOR EACH DETECTOR AND SHALL BE KEY OPERATED OR LOCATED WITHIN A SECURE ROOM.

   MONITOR MODULES: INSTALL MONITOR MODULES TO FACILITATE CONNECTION OF EXISTING CONVENTIONAL INITIATING DEVICES (WATER FLOW, VALVE SUPERVISORY, FIRE SUPPRESSION SYSTEMS, ETC.) THAT REMAIN TO NEW FIRE ALARM SYSTEM. PROVIDE A SEPARATE MONITOR MODULE FOR EACH WATER FLOW SWITCH. A SINGLE MONITOR MODULE MAY BE USED FOR MULTIPLE VALVE SUPERVISORY SWITCHES WHERE EACH OF THE VALVES CONNECTED TOT HE MODULE SERVES THE SAME PURPOSE/ZONE.

10. NOTIFICATION APPLIANCES: PROVIDE AUDIBLE (VOICE) AND VISUAL NOTIFICATION APPLIANCES THROUGHOUT EACH BUILDING WHERE INDICATED ON PLANS. NOTIFICATION APPLIANCES SHALL BE SPEAKER/STROBE TYPE DEVICES WITH ADJUSTABLE LIGHT INTENSITY (15cd-110cd) AND VOLUME SETTINGS (1/4W - 2W). VOLUME OF SPEAKERS SHALL BE SUFFICIENT TO PROVIDE A SOUND LEVEL (ALERT TONE) OF 15 Db ABOVE AMBIENT AND SUFFICIENT TO PRODUCE VOICE INTELLIGIBILITY (AVERAGE STI OF 0.50) IN ALL OCCUPIED AREAS. VOICE INTELLIGIBILITY IS NOT REQUIRED IN MECHANICAL SPACES, LARGE VOLUME SPACES (GYMS, ARENAS, ATRIUMS, ETC.) OR PRIVATE OFFICES. VISIBLE ALARMS SHALL BE PROVIDED THROUGHOUT ALL PUBLIC AND COMMON AREAS OF EACH BUILDING INCLUDING AREAS WITH POSSIBLE OCCUPANCY BY HEARING IMPAIRED PERSONS. STROBES SHALL FLASH IN SYNCHRONIZATION. NOTIFICATION APPLIANCES MAY BE WALL OR CEILING MOUNT. LOCATE WALL MOUNT DEVICES BETWEEN 80" AND 96" ABOVE FLOOR (ADJUST HEIGHT OF EXISTING J-BOXES AS REQUIRED). LOCATE NEW CEILING MOUNT DEVICES ON EXISTING CEILINGS OR SUSPENDED BELOW MECHANICAL/UTILITY EQUIPMENT IN AREAS WITHOUT CEILINGS (I.E. CONCOURSE AREAS).

11. NOTIFICATION APPLIANCE ZONING: PROVIDE A SEPARATE ZONE OF NOTIFICATION APPLIANCES FOR EACH FLOOR LEVEL OF EACH BUILDING. CONFIGURE VOICE ALARM CONTROL EQUIPMENT TO ALLOW MANUAL PAGING TO EACH FLOOR LEVEL OF EACH BUILDING SEPARATELY AS WELL AS TO THE ENTIRE BUILDING. AUTOMATIC VOICE ALARM MESSAGES SHALL BE TRANSMITTED THROUGHOUT THE ENTIRE BUILDING WHERE FIRE ALARM INITIATING DEVICES HAVE ACTIVATED.

12. PROTECTED PREMISE FIRE SAFETY FUNCTIONS: INSTALL PROGRAMMABLE OUTPUT MODULES WITH RELAY CONTACTS TO INITIATE REQUIRED FIRE SAFETY FUNCTIONS (FAN SHUTDOWN, FIRE DOOR RELEASE, ELEVATOR RECALL, SMOKE CONTROL SYSTEM ACTIVATION, ETC.). OUTPUT MODULES SHALL BE INSTALLED WITHIN 36" OF DEVICE OR CIRCUIT CONTROLLED. ALL EXISTING PROTECTED PREMISE FIRE SAFETY FUNCTIONS CONTROLLED BY EXISTING FIRE ALARM SYSTEMS SHALL BE MIGRATED TO NEW SYSTEMS AND TESTED TO VERIFY PROPER FUNCTION.

13. PHASING: PLAN SEQUENCE OF WORK TO MINIMIZE DOWN TIME OF EXISTING FIRE ALARM SYSTEMS AND FIRE ALARM REPORTING SYSTEM (DACR IN POLICE DISPATCH). IT IS THE INSTALLER'S RESPONSIBILITY TO NOTIFY PROPER AUTHORITIES AND PROVIDE A FIRE WATCH DURING INTERRUPTIONS OF FIRE DETECTION AND ALARM SERVICE IN ANY BUILDING. WORK IN ONLY ONE BUILDING AT A TIME. COMPLETE ALL FIRE ALARM SYSTEM WORK IN ONE BUILDING BEFORE BEGINNING WORK IN THE NEXT BUILDING.

14. TESTING: SCHEDULE AND PERFORM ALL ACCEPTANCE TESTS REQUIRED BY NFPA 72. TESTING SHALL BE WITNESSED BY STATE FIRE MARSHAL'S OFFICE, PROJECT ENGINEER, DFCM AND BUILDING MAINTENANCE PERSONNEL. SUBMIT A WRITTEN TESTING PLAN DETAILING EACH TEST TO BE PERFORMED TO EACH AGENCY AT LEAST TWO DAYS PRIOR TO SCHEDULED TEST. ALL INSPECTIONS AND TESTS MUST BE COMPLETED AND WRITTEN APPROVAL PROVIDED BY CODE INSPECTOR AND FIRE MARSHAL INSPECTOR PRIOR TO FINAL ACCEPTANCE.

15. PROVIDE A NEW FIRE ALARM NETWORK TO CONNECT EACH IN-BUILDING FIRE ALARM/EMERGENCY VOICE CONTROL PANEL ON THE CENTRAL CAMPUS OF UTAH VALLY UNIVERSITY TO THE NEW EMERGENCY COMMAND CENTER/NETWORK ANNUNCIATOR TO BE INSTALLED IN THE POLICE STATION IN THE GUNTHER TECHNOLOGY BUILDING. THE NETWORK ARCHITECTURE SHALL BE BASED ON A LOCAL AREA NETWORK WITH PEER-TO-PEER CONNECTIONS. NETWORK MEDIA MAY BE COPPER OR FIBER OPTIC CABLE. FIRE ALARM NETWORK SHALL BE AS SHOWN ON SHEET FA-01.

16. MAJOR SYSTEM COMPONENTS (CONTROL EQUIPMENT, POWER SUPPLIES, AMPLIFIERS, NETWORK MODULES, NETWORK CONTROLLERS/ANNUNCIATORS, ETC.) FOR THE FIRE ALARM/EMERGENCY VOICE ALARM SYSTEMS SHALL BE FROM A SINGLE MANUFACTURER TO ENSURE NETWORK INOPERABILITY. ALL PRODUCTS SHALL BE FURNISHED, INSTALLED, PROGRAMMED AND TESTED BY A FACTORY AUTHORIZED/TRAINED REPRESENTATIVE OF THE EQUIPMENT MANUFACTUER. FIRE ALARM EQUIPMENT INSTALLER SHALL HAVE A LOCAL OFFICE LOCATED WITHIN 75 MILES OF THE PROJECT LOCATION AND SHALL BE CAPABLE OF PROVIDING EMERGENCY SERVICE (INCLUDING PARTS/REPAIRS) WITHIN 24 HOURS OF NOTIFICATION BY CUSTOMER.

17. UNIT PRICES: TO ASSIST IN MANAGEMENT OF PROJECT SCOPE CHANGES, CONTRACTOR SHALL PROVIDE UNIT PRICES FOR THE ADDITION (OR DELETION) OF THE FOLLOWING SYSTEM COMPONENTS COMMON TO EACH SYSTEM. UNIT PRICES SHALL INCLUDE ALL MATERIAL AND LABOR COSTS. INCLUDE A SEPARATE LINE ITEM FOR EACH COMPONENT ON BID FORM:
   FIRE ALARM POWER SUPPLY
   EMERGENCY VOICE ALARM AMPLIFIER (50W)
   LOCAL OPERATING CONSOLE/ANNUNCIATOR
   SMOKE DETECTORS (SPOT, DUCT AND PROJECTED BEAM)
   HEAT DETECTORS
   MANUAL PULL STATIONS
   MONITOR MODULES
   CONTROL RELAYS
   NOTIFICATION APPLIANCES

18. IT IS THE INTENT OF THE DESIGN CONTAINED WITHIN THESE DOCUMENTS TO COMPLY WITH ALL REQUIREMENTS OF ALL STATE OF UTAH DFCM STANDARDS.

LICENSED PROFESSIONAL ENGINEER
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GREGORY T. JONES
STATE OF UTAH

03/04/13
ENGINEER'S STAMP

DFCM REVIEW STAMP

USFM REVIEW STAMP

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REVISIONS:

DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

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FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM COVER SHEET AND SCHEDULES
FA-1.0

1 FIRE ALARM NETWORK SCHEMATIC
SCALE APPROX 1" = 100'

100 0 100 500

FIRE ALARM NETWORK ROUTING

LEG #	FROM	TO	MEDIA TYPE	FUNRISHED BY
1	LI FACP	LI 323B	FIBER OR COPPER	CONTRACTOR
2	LI 323B	CS 608	FIBER	UVU
3	CS 608	CS FACP	FIBER OR COPPER	CONTRACTOR
4	CS FACP	CS 521A	FIBER OR COPPER	CONTRACTOR
5	CS 521A	LC 307B	FIBER	UVU
6	LC 307B	LC FACP	FIBER OR COPPER	CONTRACTOR
7	LC FACP	LC 307B	FIBER OR COPPER	CONTRACTOR
8	LC 307B	WB 104	FIBER	UVU
9	WB 104	WB FACP	FIBER OR COPPER	CONTRACTOR
10	WB FACP	WB 104	FIBER OR COPPER	CONTRACTOR
11	WB 104	GT 343	FIBER	UVU
12	GT 343	GT FACP	FIBER OR COPPER	CONTRACTOR
13	GT FACP	GT ECC	FIBER OR COPPER	CONTRACTOR
14	GT ECC	SA FACP	FIBER OR COPPER	CONTRACTOR
15	SA FACP	GT 343	FIBER OR COPPER	CONTRACTOR
16	GT 343	CS 608	FIBER	UVU
17	CS 608	WB 104	FIBER	UVU
18	WB 104	BA 010	FIBER	UVU
19	BA 010	BA FACP	FIBER OR COPPER	CONTRACTOR
20	BA FACP	BA 010	FIBER OR COPPER	CONTRACTOR
21	BA 010	PS 101A	FIBER	UVU
22	PS 101A	PS FACP	FIBER OR COPPER	CONTRACTOR
23	PS FACP	SC FACP	FIBER OR COPPER	CONTRACTOR
24	SC FACP	ET FACP	FIBER OR COPPER	CONTRACTOR
25	ET FACP	ET 111	FIBER OR COPPER	CONTRACTOR
26	ET 111	SB 067	FIBER	UVU
27	SB 067	SB FACP	FIBER OR COPPER	CONTRACTOR
28	SB FACP	SB 067	FIBER OR COPPER	CONTRACTOR
29	SB 067	PS 101A	FIBER	UVU
30	PS 101A	LA 011E	FIBER	UVU
31	LA 011E	LA FACP	FIBER OR COPPER	CONTRACTOR
32	LA FACP	LA 011E	FIBER OR COPPER	CONTRACTOR
33	LA 011E	EC 002C	FIBER	UVU
34	EC 002C	EC FACP	FIBER OR COPPER	CONTRACTOR
35	EC FACP	EC 002C	FIBER OR COPPER	CONTRACTOR
36	EC 002C	PE 133	FIBER	UVU
37	PE 133	PE FACP	FIBER OR COPPER	CONTRACTOR
38	PE FACP	PE 133	FIBER OR COPPER	CONTRACTOR
39	PE 133	LA 011E	FIBER	UVU
40	LA 011C	LI 323B	FIBER	UVU
41	LI 323B	LI FACP	FIBER OR COPPER	CONTRACTOR

NOTES:
FACP = FIRE ALARM CONTROL PANEL
ECC = EMERGENCY COMMAND CENTER/NETWORK ANNUNCIATOR
LOCATION OF EXISTING UVU FIBER ROUTES IS SCHEMATIC AND NOT SHOWN IN ACTUAL LOCATION. UVU FIBER IS GANERALLY RUN ON CABLE TRAYS INSTALLED IN CONNECTING CORRIDORS.
LOCATION OF CONTRACTOR RUN SEGMENTS IS SCHEMATIC. CONTRACTOR TO DETERMINE EXACT ROUTE.

FIRE ALARM NETWORK GENERAL NOTES

1. PROVIDE A NEW FIRE ALARM NETWORK TO CONNECT EACH IN–BUILDING FIRE ALARM/EMERGENCY VOICE CONTROL PANEL ON THE CENTRAL CAMPUS OF UTAH VALLY UNIVERSITY TO THE NEW EMERGENCY COMMAND CENTER/NETWORK ANNUNCIATOR TO BE INSTALLED IN THE POLICE STATION IN THE GUNTHER TRADES BUILDING. THE NETWORK ARCHITECTURE SHALL BE BASED ON A LOCAL AREA NETWORK WITH PEER–TO–PEER CONNECTIONS. ROUTING OF FIRE ALARM NETWORK MEDIA SHALL BE AS SHOWN ON THIS DRAWING AND INDICATED IN THE TABLE ABOVE.

2. FIRE ALARM NETWORK WILL BE CONSTRUCTED USING A COMBINATION OF NEW (SUPPLIED BY CONTRACTOR) AND EXISTING (SUPPLIED BY UVU) NETWORK MEDIA AS INDICATED IN TABLE ABOVE. COORDINATE WITH UVU INFRASTRUCTURE SERVICES FOR USE OF EXISTING FIBER OPTIC CABLE. FOR EACH UVU SUPPLIED LEG INDICATED IN TABLE ABOVE, UVU WILL SUPPLY ONE PAIR (TWO STRANDS) OF SINGLE MODE FIBER OPTIC CABLE. CONTRACTOR SHALL BE RESPONSIBLE TO SPLICE NEW FIBER TO EXISTING FIBER, PROVIDE PATCH CORDS AND/OR PROVIDE FIBER TO COPPER INTERFACE BOARDS AS REQUIRED TO PROVIDE CONTINUOUS CIRCUITS FROM ONE FACP TO THE NEXT FACP.

3. NEW NETWORK MEDIA FURNISHED AND INSTALLED BY THE CONTRACTOR MAY BE COPPER OR FIBER OPTIC CABLE THAT MEETS THE REQUIREMENTS OF THE EQUIPMENT MANUFACTURER. FIBER SHALL BE SINGLE MODE, LOW LOSS, 9/125 UM, MAXIMUM TOTAL ATTENUATION OF 15 DB WITH A MINIMUM OF 5 FIBERS PER CABLE.

4. EXCEPT AS NOTED BELOW, ALL NETWORK CABLE SHALL BE INSTALLED IN CONDUIT (RIGID OR EMT). CONDUIT IS NOT REQUIRED WHERE NETWORK CIRCUITS CAN BE INSTALLED ON AND SECURED TO EXISTING CABLE TRAYS IN CONNECTING CORRIDORS. COORDINATE WITH UVU INFRASTRUCTURE SERVICES PRIOR TO INSTALLING ANY NEW CABLE ON EXISTING CABLE TRAYS.

5. SEQUENCE INSTALLATION OF NEW CABLE AND CONNECTION OF EACH FACP TO THE NETWORK TO MINIMIZE THE DOWN TIME OF EACH FIRE ALARM SYSTEM. NOTIFY CAMPUS PERSONELL WHEN THE COMMUNICATION LINK BETWEEN ANY FIRE ALARM PANEL AND THE EXISTING RADIONIC DIGITIAL RECEIVER IN POLICE DISPATCH WILL BE INTERRUPTED. EXISTING FIRE ALARM PANELS MAY ONLY BE DISCONNECTED FROM LINK TOPOLICE DISPATCH WHILE THE CONTRACTOR IS ON CAMPUS WORKING ON FIRE ALARM NETWORK.

6. CONDUIT CONTAINING FIRE ALARM NETWORK CIRCUITS SHALL BE PERMANTENLY MARKED TO IDENTIFY CIRCUITS AS FIRE ALARM CIRCUITS. MARKING SHALL CONSIST OF RED PAINTED J–BOXES AND RED BANDING (PAINT OR TAPE) OF CONDUIT EVERY 20'. WHERE CIRCUIT IS INSTALLED EXPOSED ON CABLE TRAY (NO CONDUIT REQUIRED), CABLE SHALL HAVE A RED SHEATH OR SHALL BE MARKED (PAINT OR TAPE) RED EVERY 10'.

7. CONTRACTOR SHALL TEST EACH FIBER OPTIC CABLE INSTALLED UNDER THIS CONTRACT FOR CONTINUITY AND INTEGRITY. DOCUMENT EACH TEST AND SUBMIT TEST DOCUMENTS TO PROJECT ENGINEER FOR APPROVAL. EACH CABLE SHALL CONSIST OF A MINIMUM OF 5 SEPARATE FIBERS, 3 OF WHICH, SHALL BE VERIFIED BY TESTING TO BE CONTINUOUS AND COMPLETELY FUNCTIONAL FOR CURRENT OR FUTURE FIRE ALARM NETWORK SYSTEM USE.

8. ALL NEW FIRE ALARM NETWORK CIRCUITS INSTALLED BY CONTRACTOR TO CREATE THE FIRE ALARM SYSTEM NETWORK SHALL MEET THE REQUIREMENTS FOR CLASS A CIRCUITS AS DEFINED BY NFPA 72. OUTGOING AND RETRUN CONDUCTORS SHALL BE INSTALLED IN SEPARATE CONDUIT OR RACEWAY. FOR A DISTANCE NOT EXCEED 10' WHERE THE CONDUCTORS ENTER OR EXIT A CONTROL PANEL ENCLOSURE, A SIGNLE CONDUIT/RACEWAY MAY BE USED. WHERE CIRCUITS ARE CONSTRCUTED USING EXISING MEDIA SUPPLIED BY UVU, CLASS A REQUIREMENTS WILL NOT APPLY.
9. CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL FIBER OPTIC CABLE CONNECTORS, PATCH CABLES AND/OR TERMINATIONS REQUIRED TO CONNECT TO EXISTING FIBER OPTIC CABLES PROVIDED BY UVU.

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH
03/04/13
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JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
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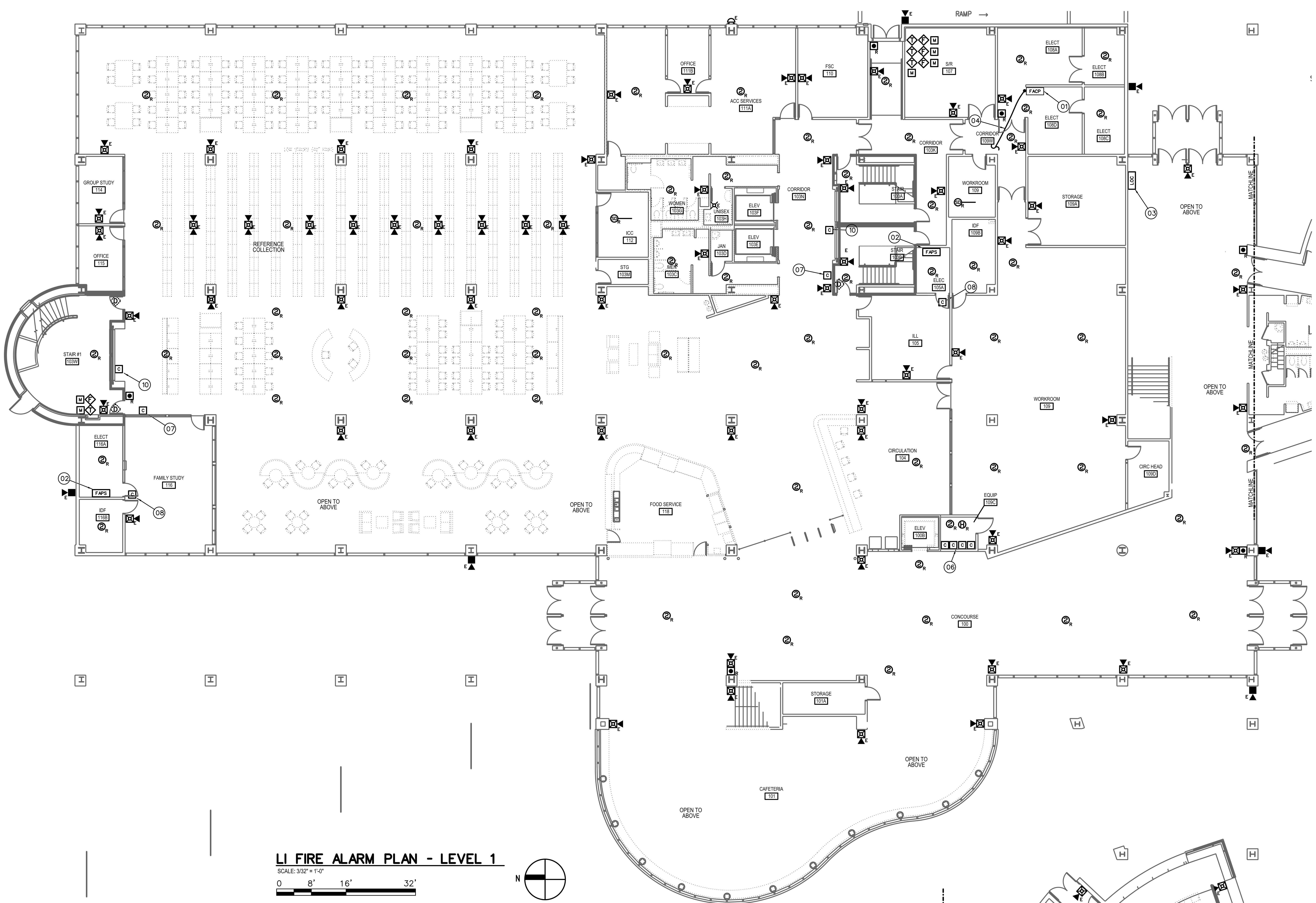
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM NETWORK SCHEMATIC

FA-01

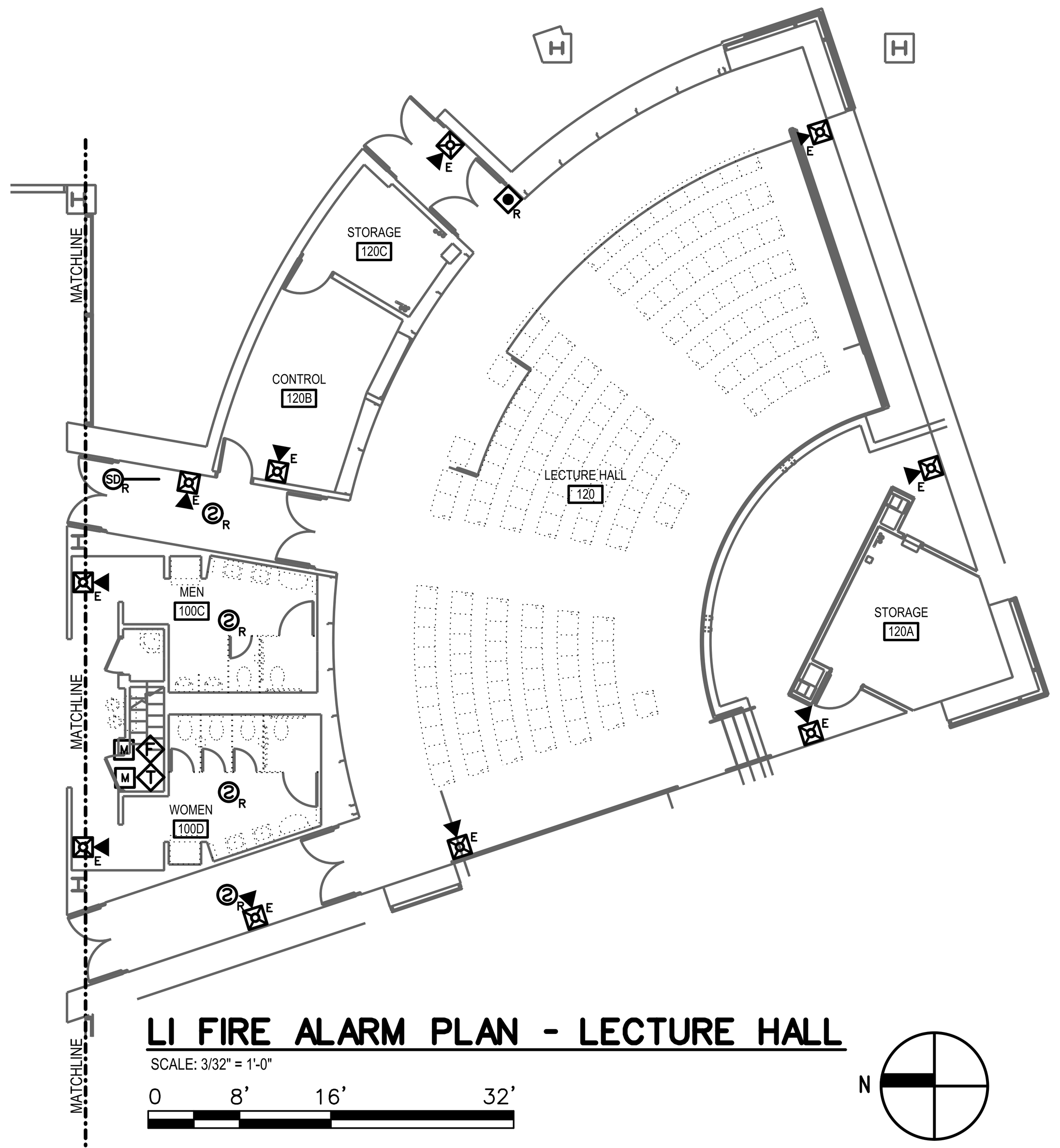


LI FIRE ALARM PLAN - LEVEL 1

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N



LI FIRE ALARM PLAN - LECTURE HALL

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LI – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (EST E3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. EXISTING POWER SUPPLIES (WHERE PRESENT) MAY BE RE-USED WHERE FULLY COMPATIBLE WITH NEW CONTROL EQUIPMENT. PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. EXISTING ANNUNCIATOR/OPERATING CONSOLE (WHERE PRESENT) MAY BE REUSED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN L1 323B (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(06) INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(07) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(08) INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS IN BUILDING. CONNECT RELAYS TO EXISTING DAMPER CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(09) EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP. EXISTING MONITOR MODULES FOR FIRE SUPPRESSION SYSTEM MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(10) EXISTING ROLL DOWN FIRE SHUTTER TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE SHUTTER UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE SHUTTER RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(11) SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

(12) INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. INSTALL A SEPARATE RELAY FOR EACH FAN COIL UNIT. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE OR ANY OTHER FIRE ALARM INITIATING DEVICE IN BUILDING.

LI – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	1
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	378
R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	9
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	26
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	19
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	19
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	45
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	9
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	8
E	WALL MOUNT STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	5
E	WALL MOUNT HORN/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	80
E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	216
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	0
E	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	67
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	1
E	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
E	EXTERIOR WATER FLOW BELL. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	23

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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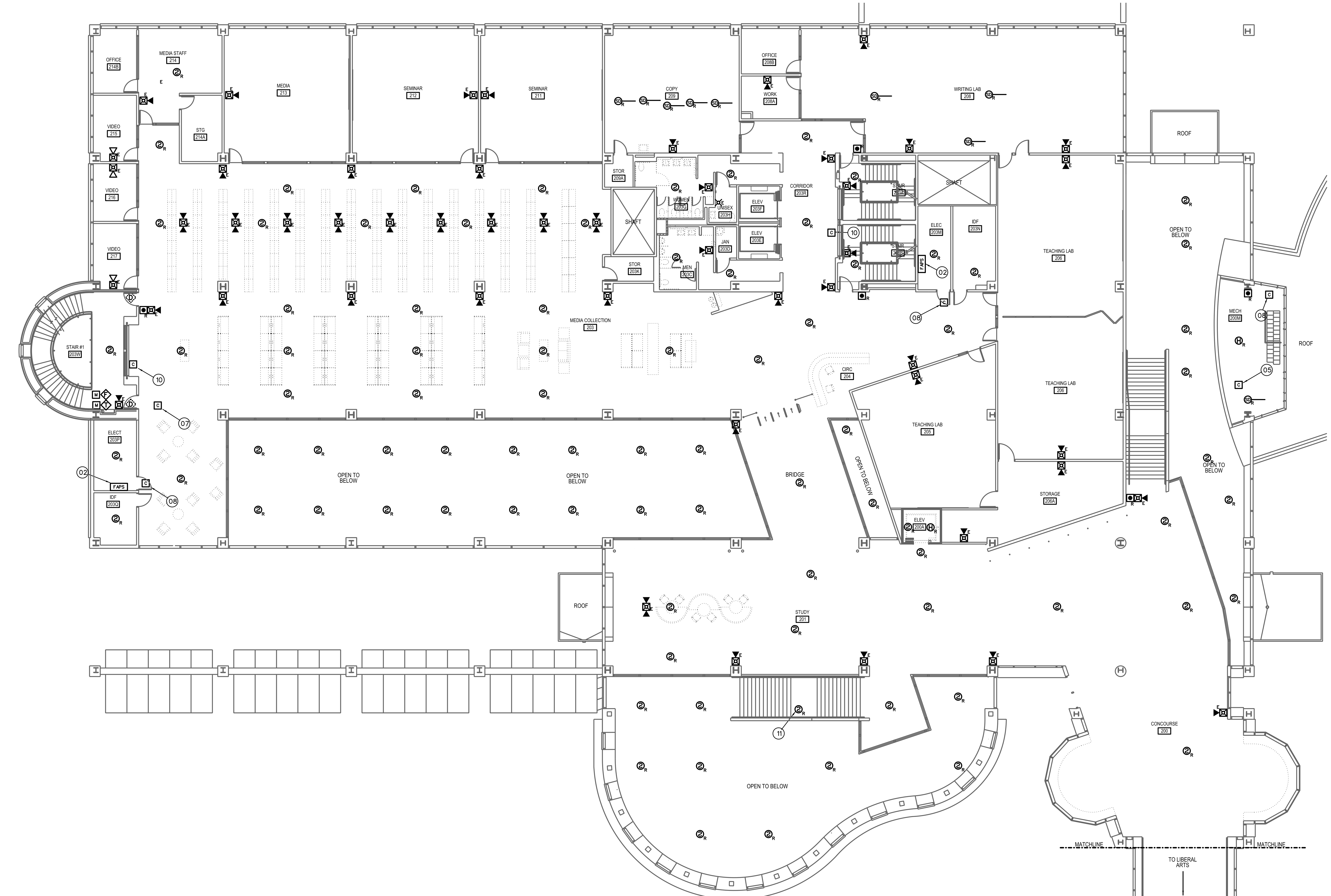
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBRARY
LEVEL 1

FA-2.0

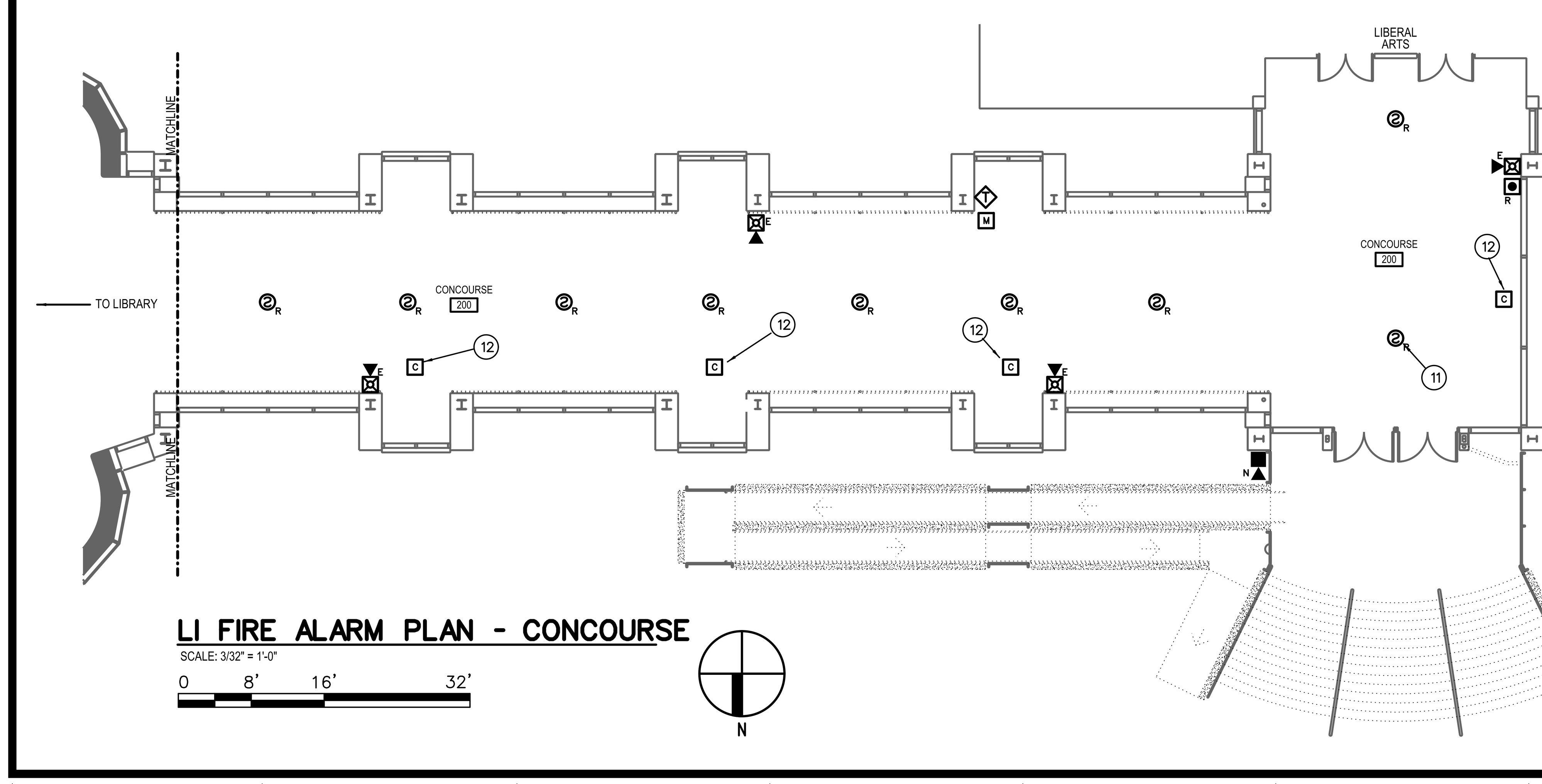


LI FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N



LI FIRE ALARM PLAN - CONCOURSE

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LI – FIRE ALARM SYSTEM KEY NOTES

01. REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (EST E3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02. FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. EXISTING POWER SUPPLIES (WHERE PRESENT) MAY BE RE-USED WHERE FULLY COMPATIBLE WITH NEW CONTROL EQUIPMENT. PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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07. EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

08. INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS IN BUILDING. CONNECT RELAYS TO EXISTING DAMPER CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

09. EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP. EXISTING MONITOR MODULES FOR FIRE SUPPRESSION SYSTEM MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

10. EXISTING ROLL DOWN FIRE SHUTTER TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE SHUTTER UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE SHUTTER RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

11. SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

12. INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. INSTALL A SEPARATE RELAY FOR EACH FAN COIL UNIT. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE OR ANY OTHER FIRE ALARM INITIATING DEVICE IN BUILDING.

LI – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
[symbol] N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	1
[symbol] R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	378
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	9
[symbol] R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	26
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	19
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	19
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	45
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	9
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	8
[symbol] E	WALL MOUNT STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	5
[symbol] E	WALL MOUNT HORN/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	80
[symbol] E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	216
[symbol] N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	0
[symbol] E	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	67
[symbol] N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	1
[symbol] E	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
[symbol] E	EXTERIOR WATER FLOW BELL. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	23

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

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FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBRARY
LEVEL 2

FA-2.1

LI FIRE ALARM PLAN - LEVEL 3

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

LI – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (EST E3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. EXISTING POWER SUPPLIES (WHERE PRESENT) MAY BE RE-USED WHERE FULLY COMPATIBLE WITH NEW CONTROL EQUIPMENT. PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. EXISTING ANNUNCIATOR/OPERATING CONSOLE (WHERE PRESENT) MAY BE REUSED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN L1 323B (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(06) INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(07) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(08) INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS IN BUILDING. CONNECT RELAYS TO EXISTING DAMPER CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(09) EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP. EXISTING MONITOR MODULES FOR FIRE SUPPRESSION SYSTEM MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(10) EXISTING ROLL DOWN FIRE SHUTTER TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE SHUTTER UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE SHUTTER RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(11) SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

(12) INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. INSTALL A SEPARATE RELAY FOR EACH FAN COIL UNIT. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE OR ANY OTHER FIRE ALARM INITIATING DEVICE IN BUILDING.

LI – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	1
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	378
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	9
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	26
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	19
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	19
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	45
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	9
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	8
E	WALL MOUNT STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	5
E	WALL MOUNT HORN/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	80
E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	216
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	0
E	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	67
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	1
E	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
E	EXTERIOR WATER FLOW BELL. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	23

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13
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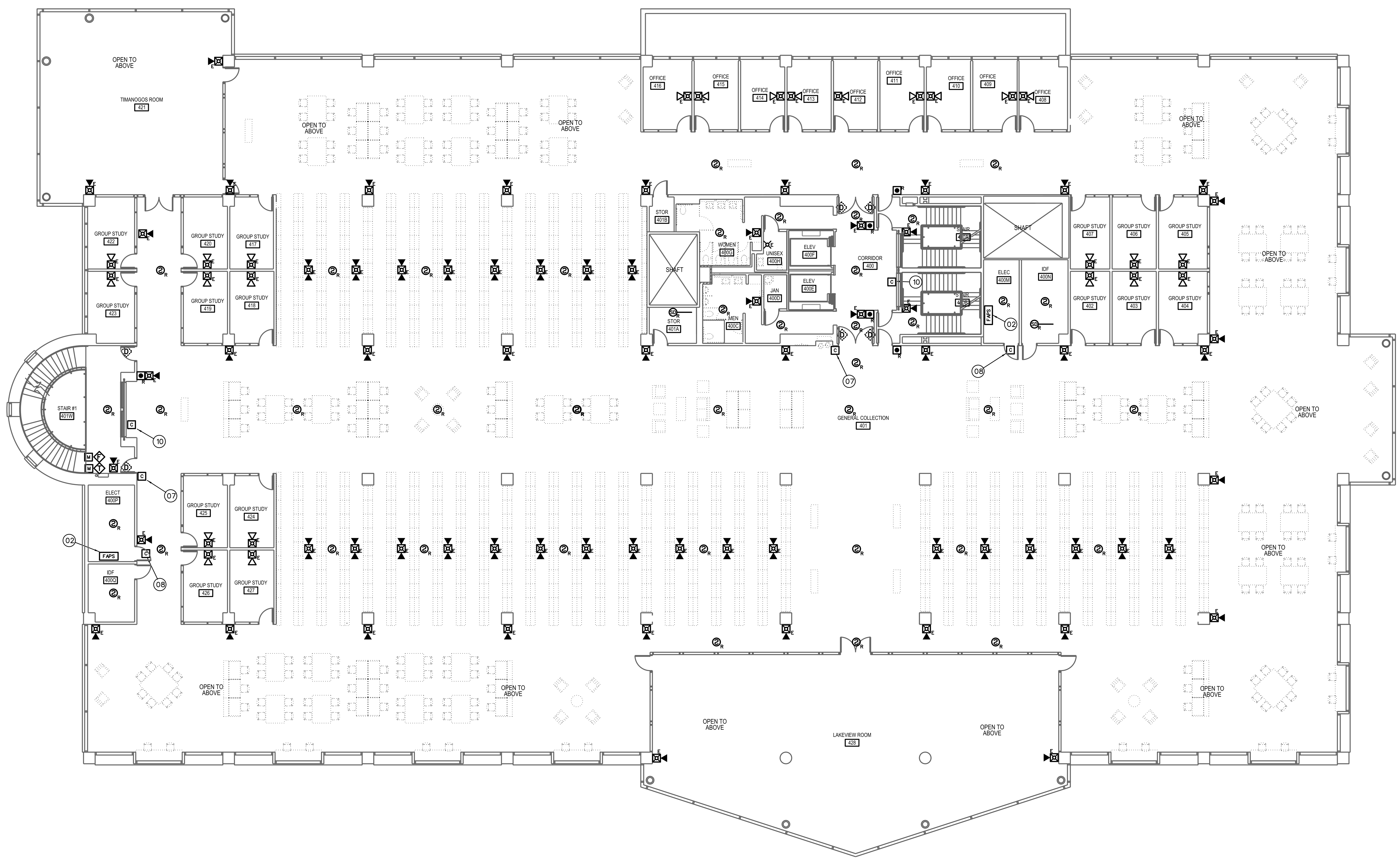
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBRARY
LEVEL 3

FA-2.2



LI FIRE ALARM PLAN - LEVEL 4

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	378
R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	9
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	26
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	19
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	19
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	45
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	9
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	8
E	WALL MOUNT STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	5
E	WALL MOUNT HORN/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	80
E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	216
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	0
E	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	67
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	1
E	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
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GREGORY T. JONES
STATE OF UTAH

03/04/13

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CHECKED BY:	GTJ

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OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES

DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBRARY
LEVEL 4

FA-2.3

LI FIRE ALARM PLAN - LEVEL 5

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

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(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. EXISTING ANNUNCIATOR/OPERATING CONSOLE (WHERE PRESENT) MAY BE REUSED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN L1 323B (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(06) INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(07) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(08) INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS IN BUILDING. CONNECT RELAYS TO EXISTING DAMPER CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(09) EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP. EXISTING MONITOR MODULES FOR FIRE SUPPRESSION SYSTEM MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(10) EXISTING ROLL DOWN FIRE SHUTTER TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE SHUTTER UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE SHUTTER RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(11) SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

(12) INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. INSTALL A SEPARATE RELAY FOR EACH FAN COIL UNIT. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE OR ANY OTHER FIRE ALARM INITIATING DEVICE IN BUILDING.

LI – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	1
	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	378
	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	9
	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	26
SD	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	19
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	19
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	45
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	9
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	8
	WALL MOUNT STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	5
	WALL MOUNT HORN/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	80
	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	216
	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	0
	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	67
	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	1
	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
	EXTERIOR WATER FLOW BELL. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	23

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
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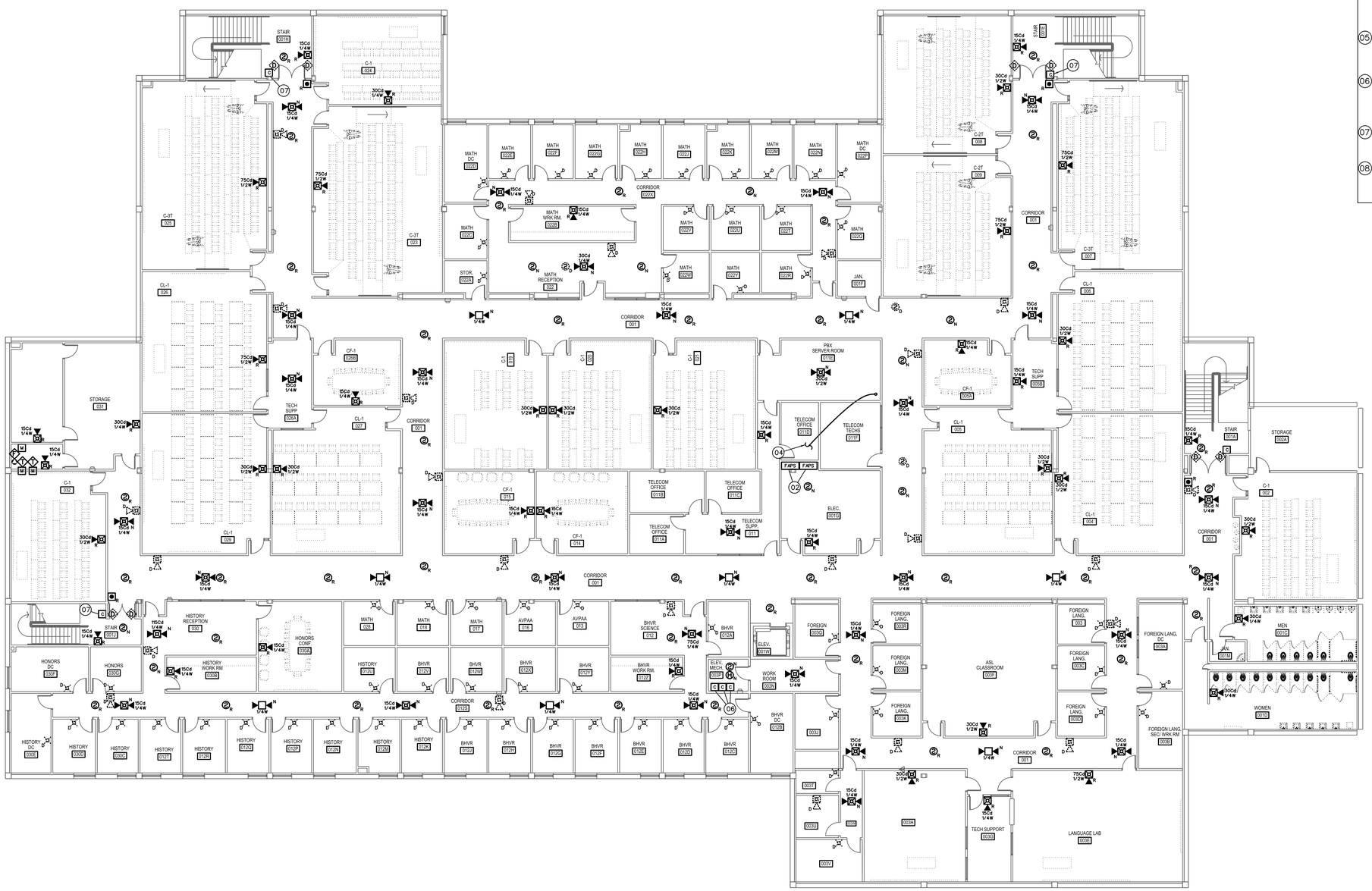
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBRARY
LEVEL 5

FA-2.4



LA FIRE ALARM PLAN - LEVEL 0

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

LA – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST EN-4) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02 FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN LA 011E (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

06 REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07 EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR FAN-COIL UNITS IN CONCOURSE WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE.

LA – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	19
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	119
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	6
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J–BOX.	1
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	8
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	0
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	1
P R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	12
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	0
DS	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	0
DS R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	6
DS D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J–BOX.	0
B R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	4
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	17
R	TEST/RESET SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	0
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	91
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	84
D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	190
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	103
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET VOLUME AS INDICATED.	24
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
N	MAGNETIC DOOR HOLD–OPEN DEVICE. INSTALL NEW DEVICE ON NEW J–BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	0
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	24

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

ENGINEER'S STAMP

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USFM REVIEW STAMP

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JOB NUMBER:	104806
DWG ISSUE:	REVIEW
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UTAH VALLEY UNIVERSITY
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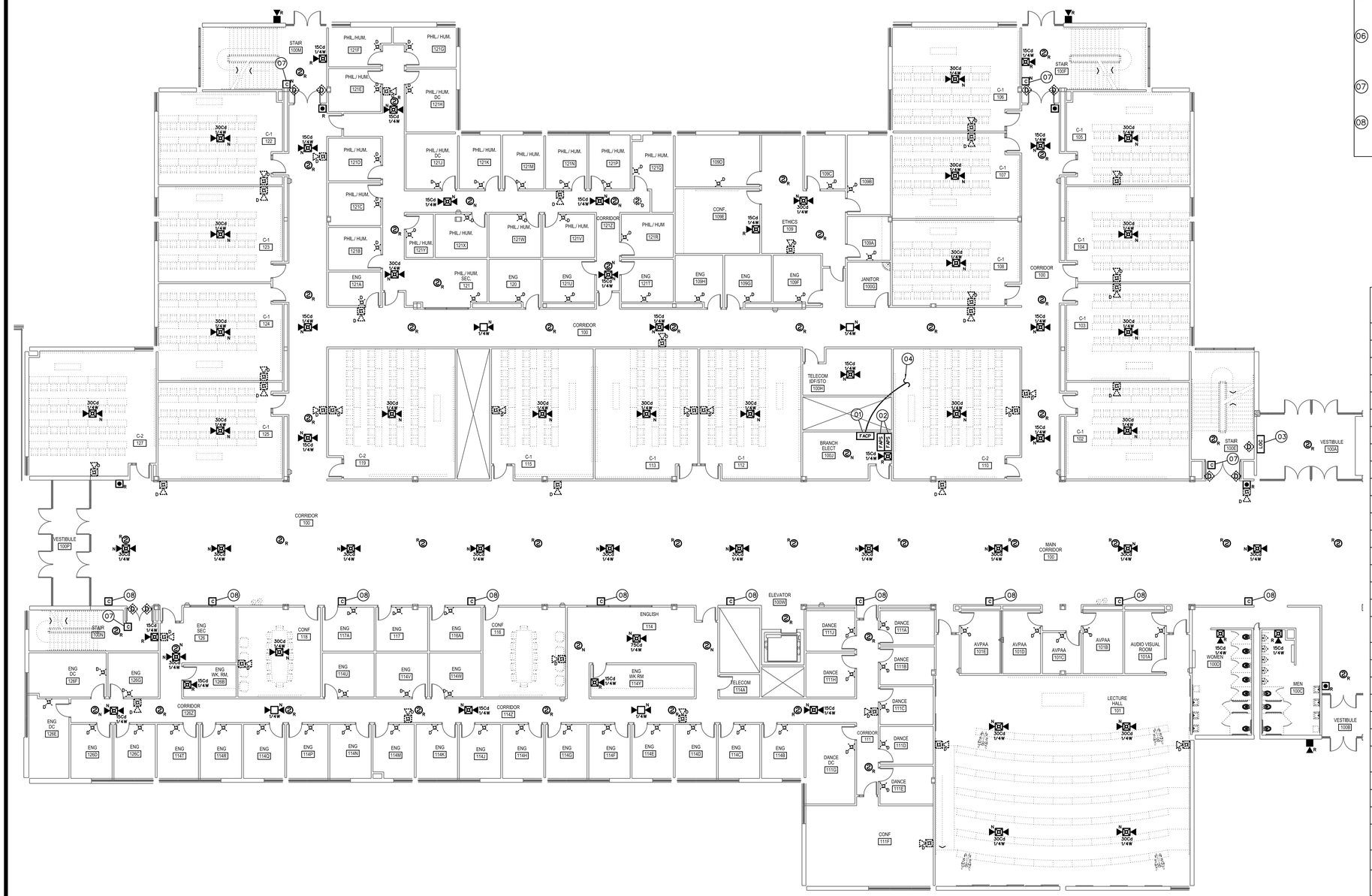
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBERAL ARTS
LEVEL 0

FA-3.0

SHEET 08 OF 55



LA FIRE ALARM PLAN - LEVEL 1

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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06 REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07 EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR FAN-COIL UNITS IN CONCOURSE WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE.

LA – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	19
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	6
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	1
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	8
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	1
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	12
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	0
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	6
D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
P	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	0
P R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	4
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	17
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	0
V	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	91
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	84
D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	190
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	103
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	24
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
N	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	0
R	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	24

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
ENGINEER'S STAMP

DFCM REVIEW STAMP

USFM REVIEW STAMP

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REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
CENTRAL CAMPUS BUILDINGS
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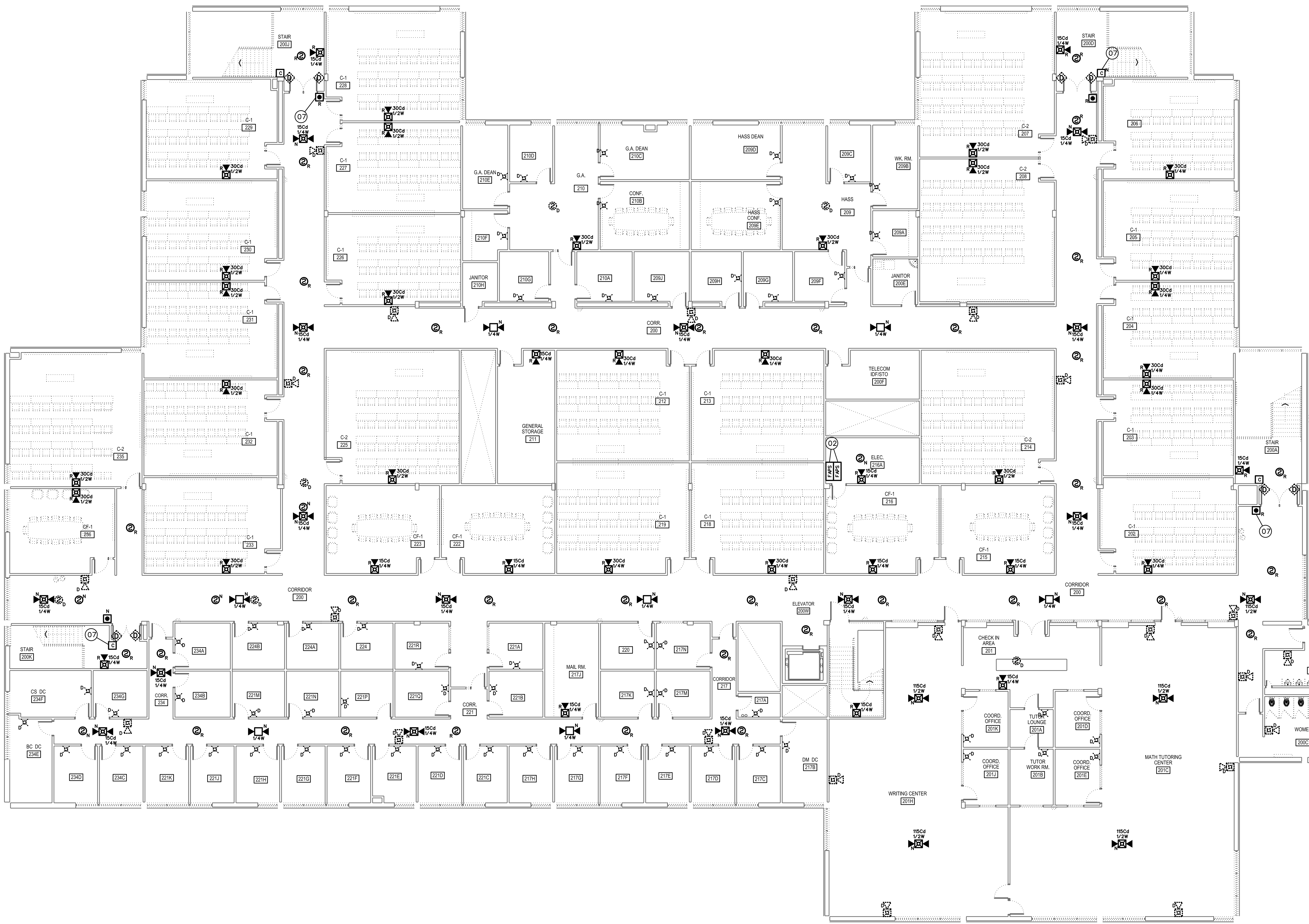
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBERAL ARTS
LEVEL 1

FA-3.1

SHEET 09 OF 55



LA FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LA – FIRE ALARM SYSTEM KEY NOTES

01. REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST EN-4) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02. FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03. FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04. INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN LA 011E (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05. INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

06. REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07. EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08. INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR FAN-COIL UNITS IN CONCOURSE WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE.

LA – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	19
	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	6
	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	1
	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	8
	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
	PULL STATION. NEW DEVICE ON NEW J-BOX.	1
	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	12
	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
SD	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	0
SD	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	6
SD	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	0
B	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	4
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	17
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	0
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	91
	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	84
	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	190
	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	103
	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	24
	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	0
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	24

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
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USFM REVIEW STAMP

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-Since 1983-

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DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
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UTAH VALLEY UNIVERSITY
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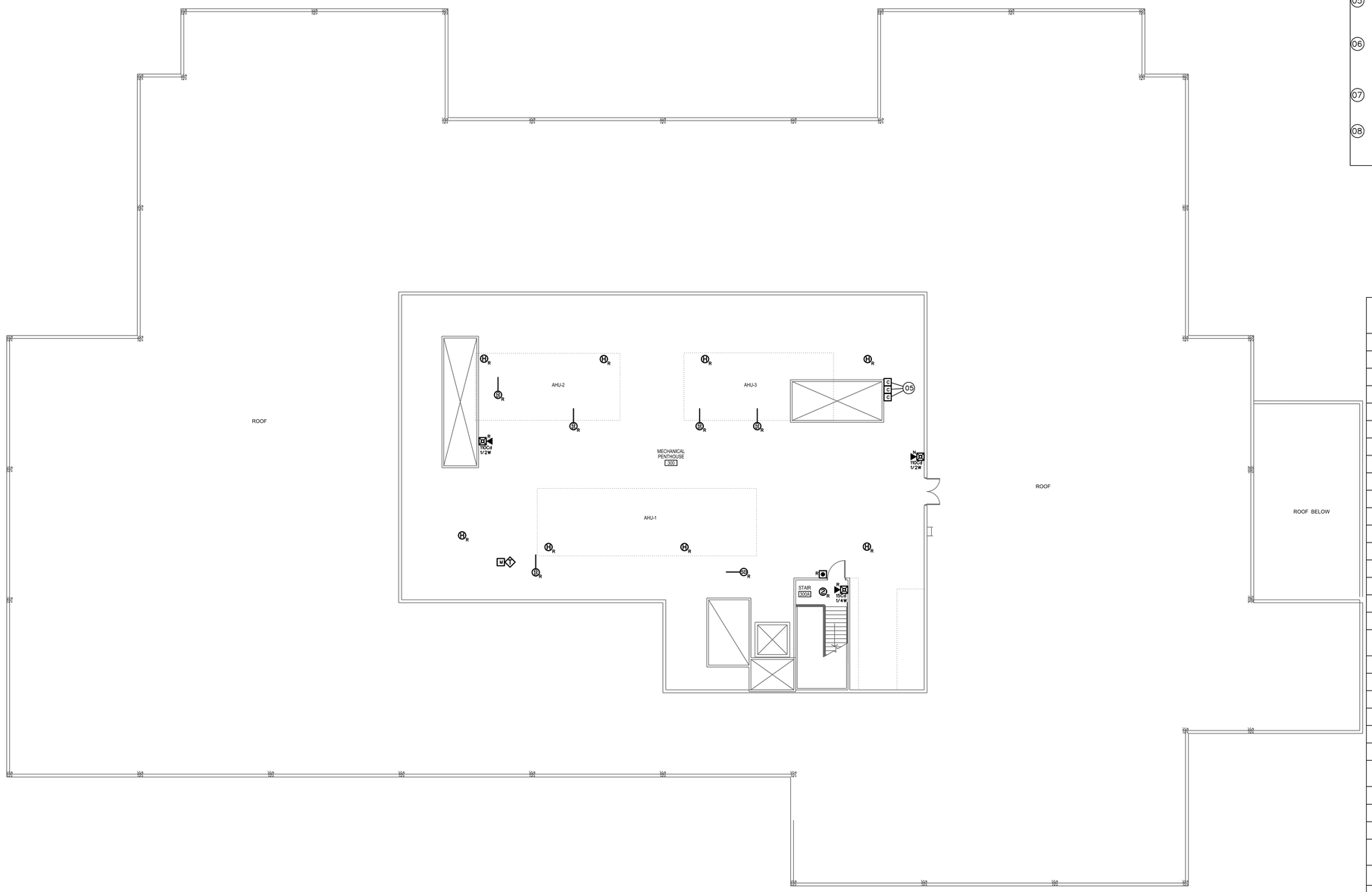
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBERAL ARTS
LEVEL 2

FA-3.2



LA FIRE ALARM PLAN - MECH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LA – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST EN-4) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

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LA – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	19
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	6
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	1
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	8
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
P N	PULL STATION. NEW DEVICE ON NEW J-BOX.	1
P R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	12
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
S N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	0
S R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	6
S D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	0
B R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	4
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	17
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	0
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
S N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
S R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	91
S D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	84
S D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	190
S N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	103
S R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
S N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	24
S N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
S R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D N	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	0
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	24

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
ENGINEER'S STAMP

DFCM REVIEW STAMP

USFM REVIEW STAMP

PROTECTION CONSULTANTS, INC
Fire Protection Engineers
<Since 1985>
Suite #101
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Phone: 801-677-0000
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REVISIONS:

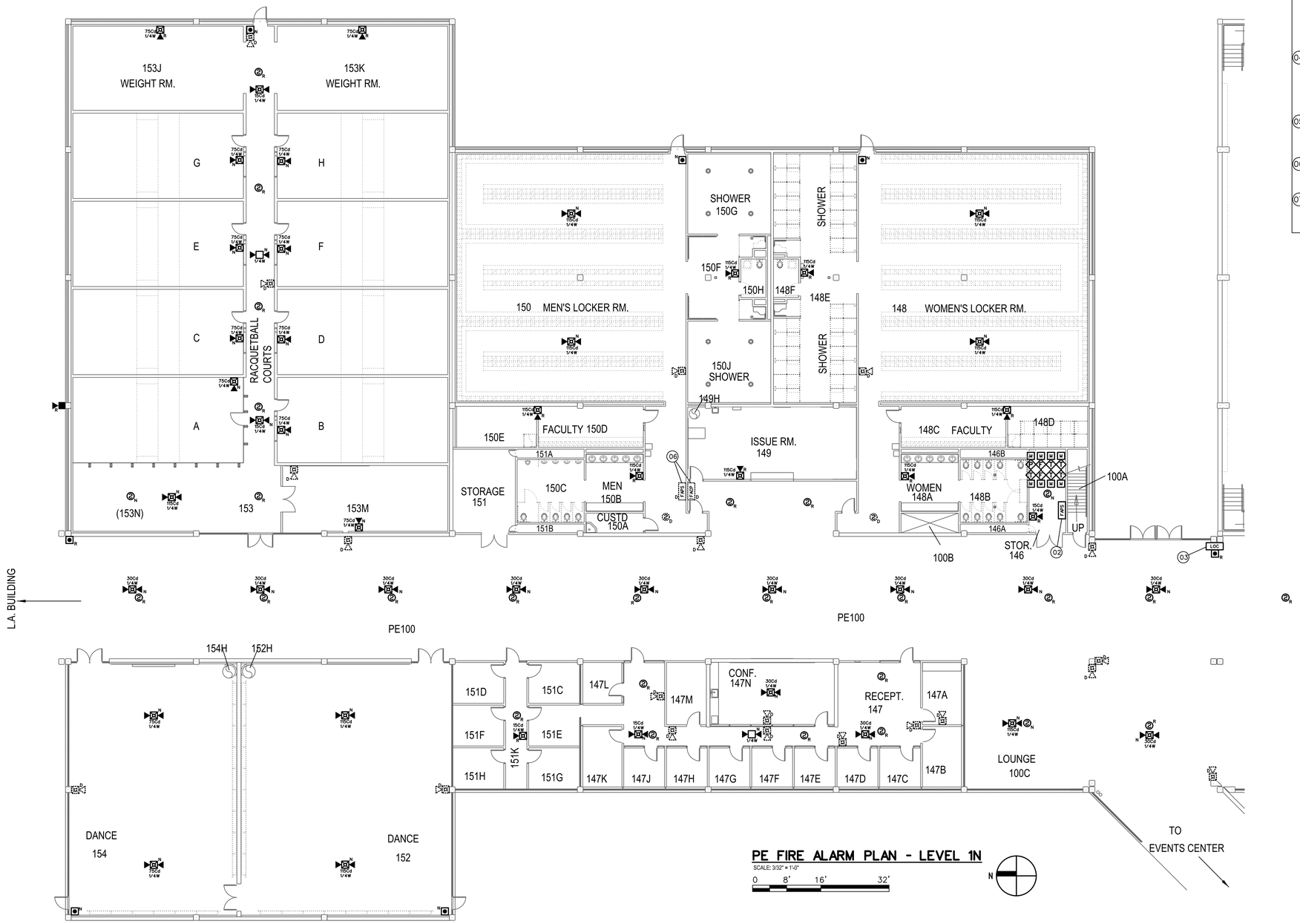
DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LIBERAL ARTS
MECHANICAL PENTHOUSE

FA-3.3



PE FIRE ALARM PLAN - LEVEL 1N

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

PE – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL (FCIFLEX SERIES) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

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PE – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
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N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	11
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	42
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	9
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	9
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. REUSE EXISTING PROTECTIVE ENCLOSURES WHERE PRESENT.	7
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	10
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	11
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	10
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	15
V	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	6
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	3
P	FIRE SPRINKLER PRESSURE SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	37
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	15
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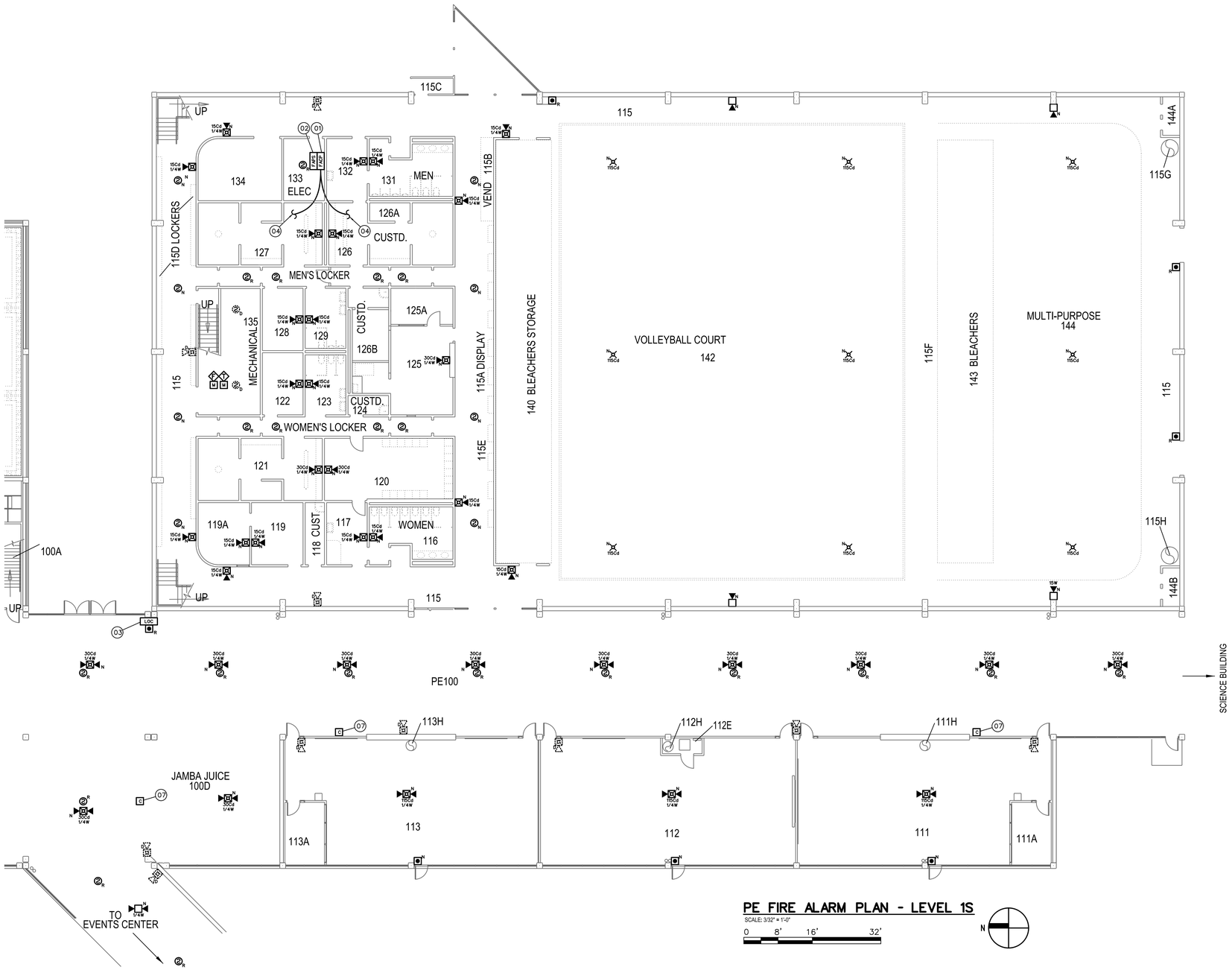
FIRE ALARM SYSTEM
PHYSICAL EDUCATION
LEVEL 1 NORTH

FA-4.0



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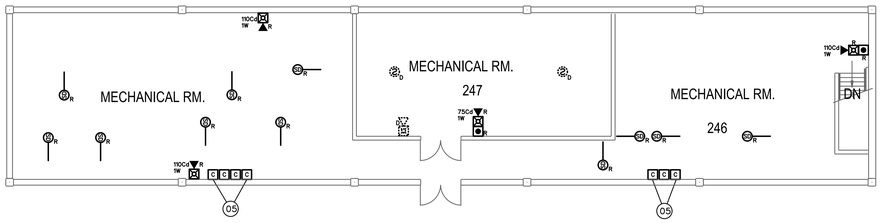
PHYSICAL EDUCATION
LEVEL 1 SOUTH

FA-4.1



PE FIRE ALARM PLAN - NORTH MECH

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0 8' 16' 32'

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T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	6
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	3
P	FIRE SPRINKLER PRESSURE SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	37
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	15
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	31
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	40
N	CEILING MOUNT SPEAKER. INSTALL NEW DEVICE ON NEW J-BOX. SET VOLUME AS INDICATED.	3
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AS INDICATED.	9
N	WALL MOUNT LOUDSPEAKER. NEW DEVICE ON NEW J-BOX. SET VOLUME AS INDICATED.	4

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
ENGINEER'S STAMP

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DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
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800 WEST UNIVERSITY PARKWAY
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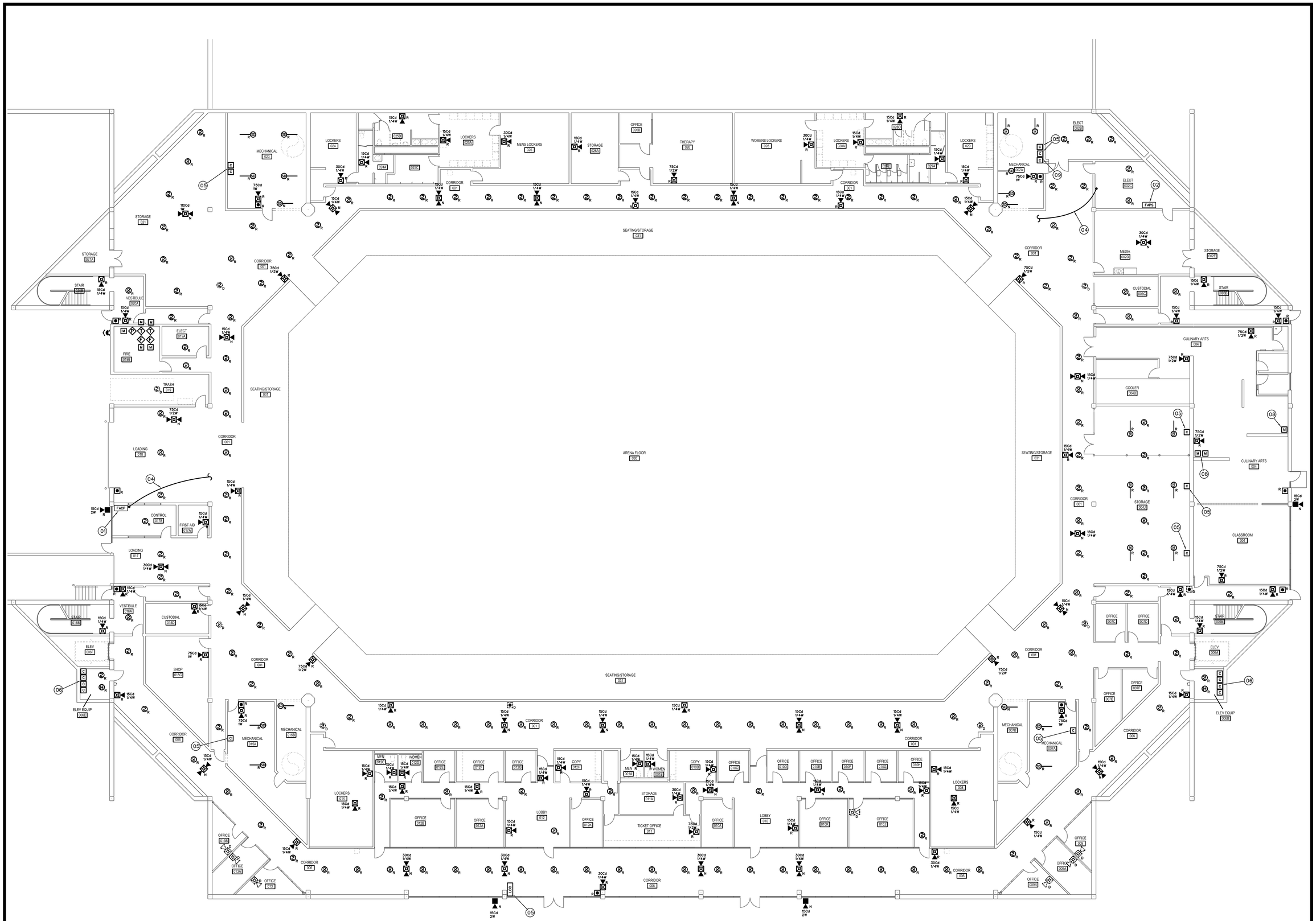
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
PHYSICAL EDUCATION
MECHANICAL PLATFORMS

FA-4.2



EC FIRE ALARM PLAN - LEVEL 0

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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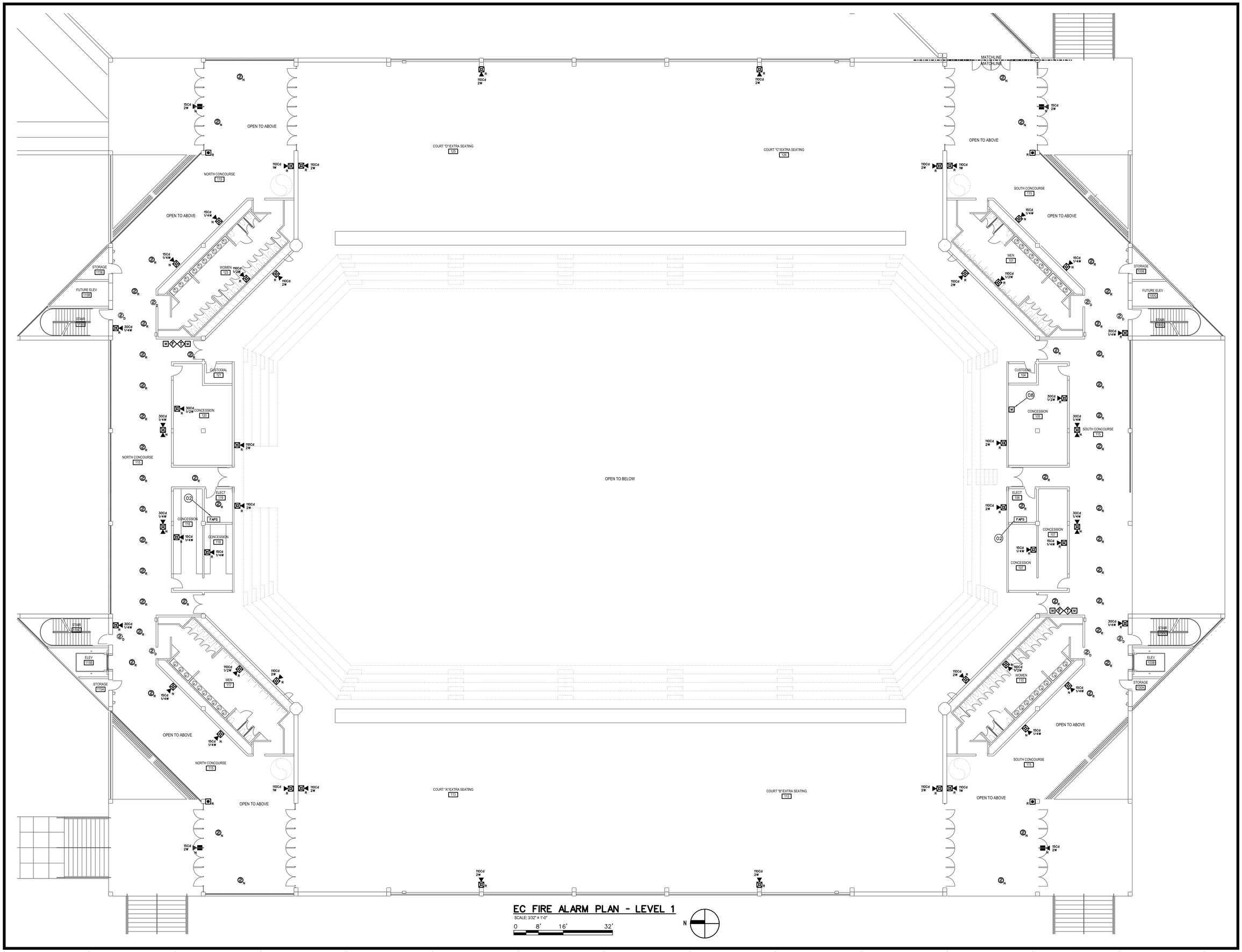
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES

DFCM PROJECT #12142790

FIRE ALARM SYSTEM
EVENTS CENTER
LEVEL 0

FA-5.0



EC FIRE ALARM PLAN - LEVEL 1

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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No. 191330
GREGORY T. JONES
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ENGINEER'S STAMP

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DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

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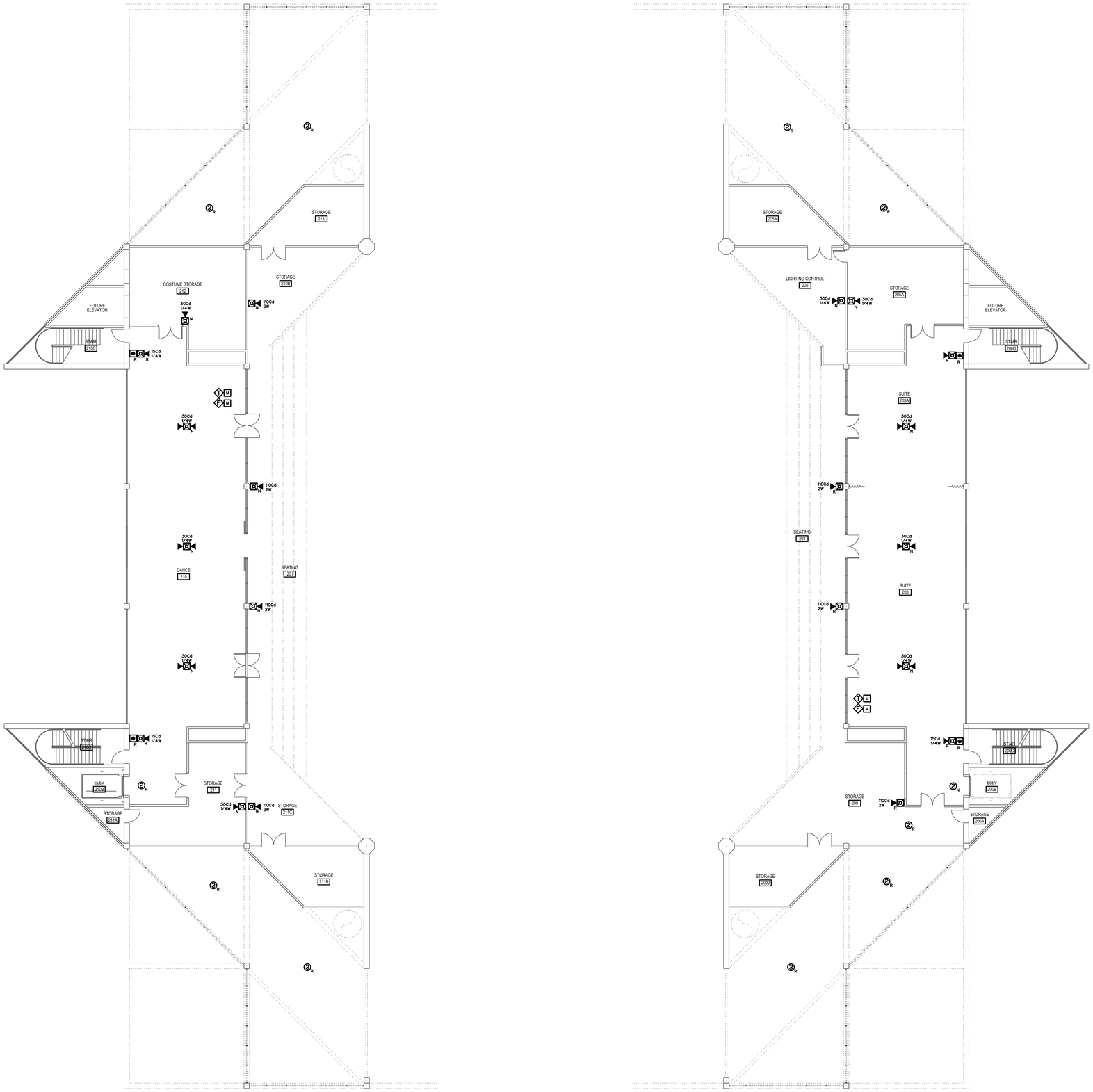
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE
ALARM SYSTEM UPGRADES
DFCM PROJECT #1242790

FIRE ALARM SYSTEM
EVENTS CENTER
LEVEL 1

FA-5.1



NORTH

SOUTH

EC FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

EC – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (FCI 7200) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN EC 002C (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

06 INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

07 INSTALL ADDRESSABLE RELAY TO ACTUATE SMOKE EVACUATION SYSTEM FOR BUILDING. LOCATE RELAY ADJACENT TO SMOKE EVACUATION SYSTEM CONTROLS (LOCATION TO BE DETERMINED BY CONTRACTOR). EXISTING CONTROL CIRCUIT MAY BE RE-USED IF FUNCTIONAL. PROGRAM SMOKE EVACUATION SYSTEM TO ACTIVATE UPON OPERATION OF ANY 2 SMOKE DETECTORS INSTALLED IN THE AREA SERVED BY THE SMOK EVACUATION SYSTEM. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

08 EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULE AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP.

09 INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS IN BUILDING. CONNECT RELAYS TO EXISTING DAMPER CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

10 INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

11 INSTALL ADDRESSABLE RELAYS TO ACTUATE ELEVATOR SHAFT EXHAUST FAN. CONNECT RELAYS TO EXISTING FAN CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). EXISTING CONTROL RELAYS FOR EXHAUST FAN ACTUATION MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

EC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	11
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	225
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	15
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	4
N	PULL STATION. NEW DEVICE ON NEW J–BOX.	1
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	20
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	4
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	4
R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	18
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	26
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	7
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE–USED.	7
P	FIRE SPRINKLER WATER FLOW SWITCH (PRESSURE TYPE). EXISTING TO BE RE–USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	116
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	116
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	7
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	38
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
	EXISTING EXTERIOR WATER MOTOR ALARM TO REMAIN	1

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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CENTRAL CAMPUS BUILDINGS
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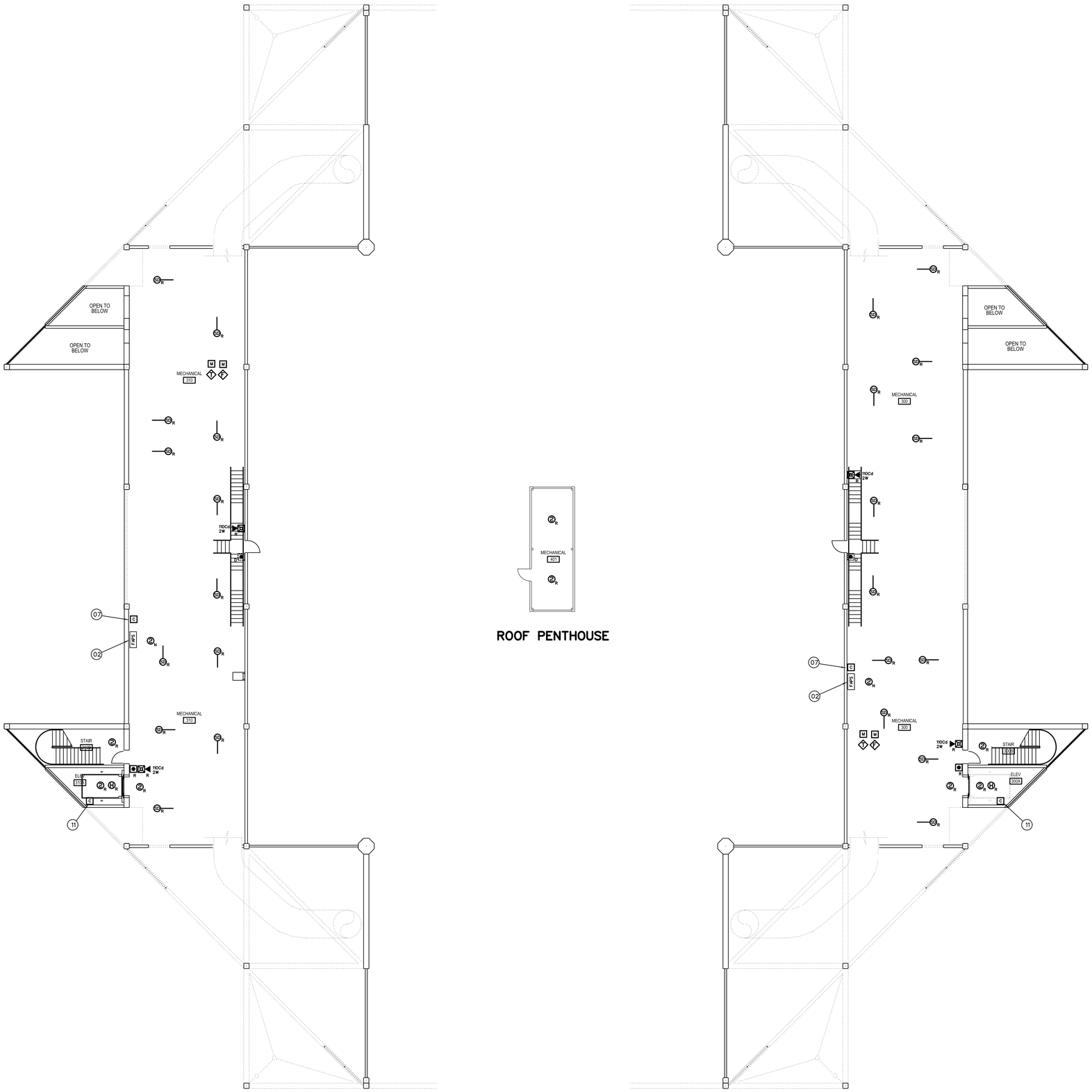
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
EVENTS CENTER
LEVEL 2

FA-5.2



EC FIRE ALARM PLAN - LEVEL 3

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

EC – FIRE ALARM SYSTEM KEY NOTES

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EC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	11
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	225
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	15
R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	4
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	1
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	20
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	4
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	4
R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	18
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	26
V	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	7
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE-USED.	7
P	FIRE SPRINKLER WATER FLOW SWITCH (PRESSURE TYPE). EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	116
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	116
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	7
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	38
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
	EXISTING EXTERIOR WATER MOTOR ALARM TO REMAIN	1

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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DFCM REVIEW STAMP

USFM REVIEW STAMP

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JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
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UTAH VALLEY UNIVERSITY
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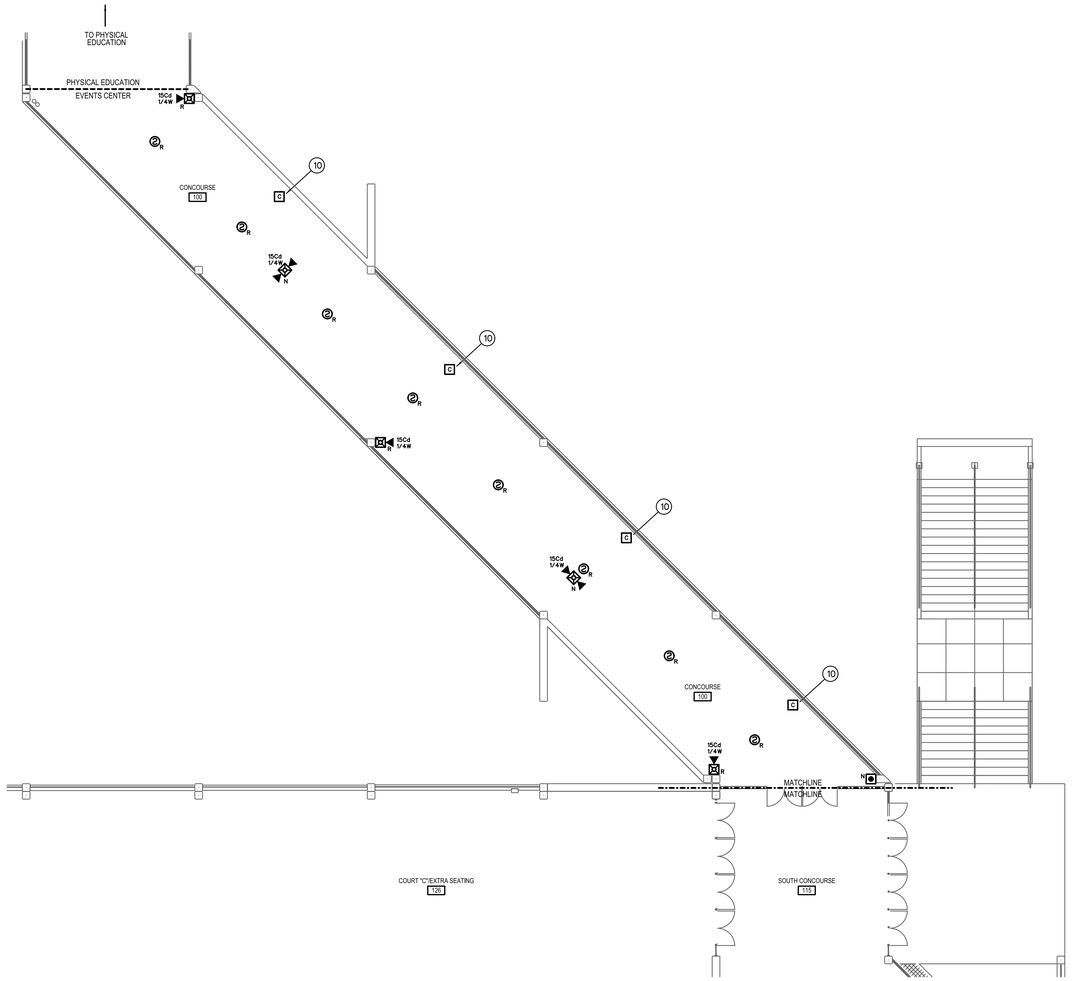
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
EVENTS CENTER
LEVEL 3

FA-5.3



EC FIRE ALARM PLAN - CONCOURSE

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

EC – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (FCI7200) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN EC 002C (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

06 INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

07 INSTALL ADDRESSABLE RELAY TO ACTUATE SMOKE EVACUATION SYSTEM FOR BUILDING. LOCATE RELAY ADJACENT TO SMOKE EVACUATION SYSTEM CONTROLS (LOCATION TO BE DETERMINED BY CONTRACTOR). EXISTING CONTROL CIRCUIT MAY BE RE-USED IF FUNCTIONAL. PROGRAM SMOKE EVACUATION SYSTEM TO ACTIVATE UPON OPERATION OF ANY 2 SMOKE DETECTORS INSTALLED IN THE AREA SERVED BY THE SMOK EVACUATION SYSTEM. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

08 EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULE AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP.

09 INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS IN BUILDING. CONNECT RELAYS TO EXISTING DAMPER CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS FOR FIRE/SMOKE DAMPER CONTROL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

10 INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

11 INSTALL ADDRESSABLE RELAYS TO ACTUATE ELEVATOR SHAFT EXHAUST FAN. CONNECT RELAYS TO EXISTING FAN CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). EXISTING CONTROL RELAYS FOR EXHAUST FAN ACTUATION MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

EC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	11
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	225
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	15
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	4
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	1
P R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	20
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	4
DS N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	4
DS R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	18
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	26
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	7
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE–USED.	7
P	FIRE SPRINKLER WATER FLOW SWITCH (PRESSURE TYPE). EXISTING TO BE RE–USED.	1
S N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	116
S R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	116
S D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	7
S N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	38
S N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
S R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
R	EXISTING EXTERIOR WATER MOTOR ALARM TO REMAIN	1

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

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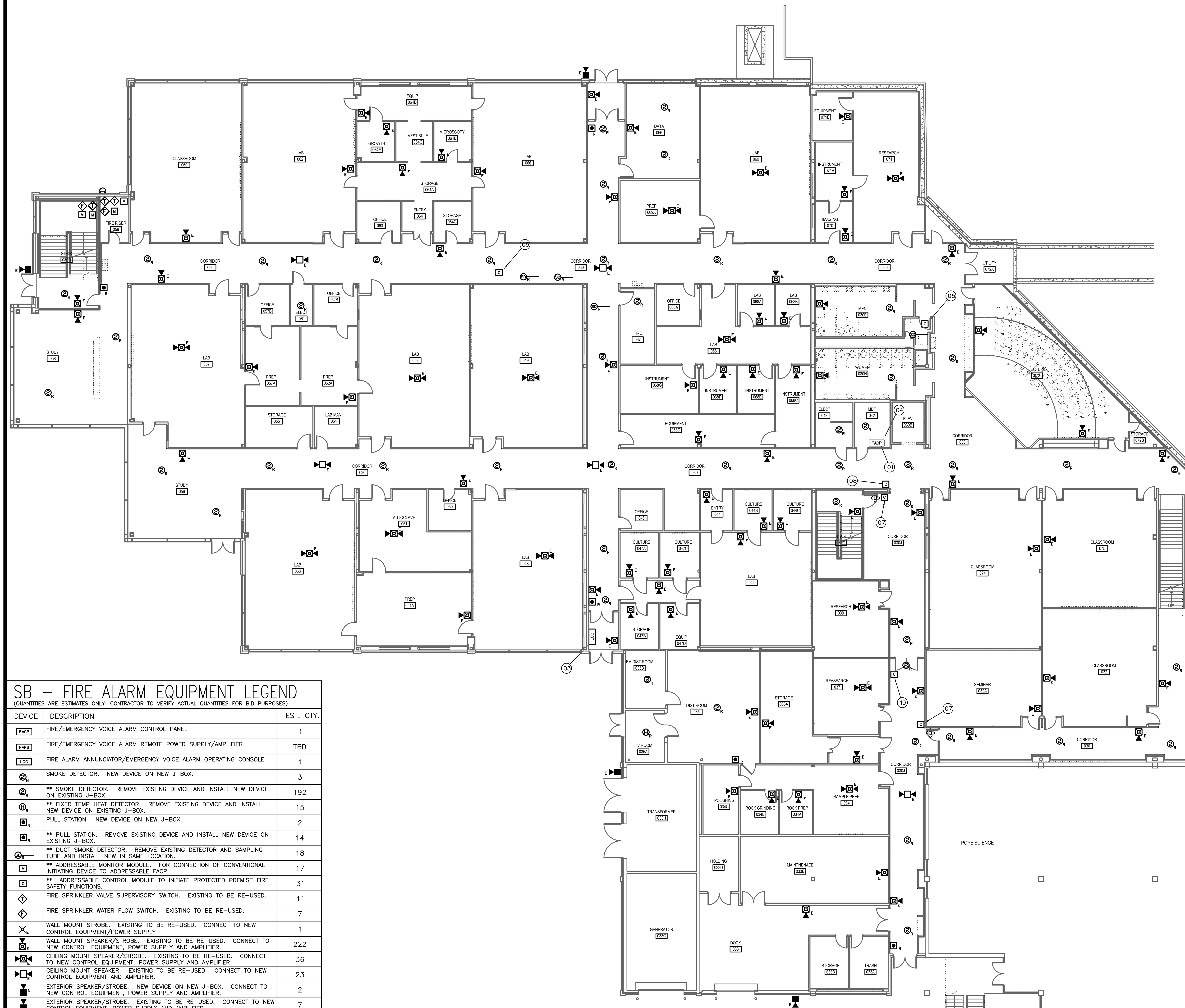
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
EVENTS CENTER
CONCOURSE

FA-5.4



SB FIRE ALARM PLAN - LEVEL 0

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

SB – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (FCI E3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

(02) FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. EXISTING ANNUNCIATOR/OPERATING CONSOLE (WHERE PRESENT) MAY BE REUSED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN SB067 (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(06) INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(07) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(08) EXISTING ROLLING FIRE DOOR TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(09) INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS OR OPERATION OF OTHER SMOKE CONTROL DEVICES IN BUILDING. CONNECT RELAYS TO EXISTING CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS, SMOKE CONTROL SYSTEM INTERFACES AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(10) EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

(11) SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

SB – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
(smoke detector, N)	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	3
(smoke detector, R)	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	192
(H, R)	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	15
(pull station, N)	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
(pull station, R)	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	14
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	17
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	31
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	11
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	7
(strobe, E)	WALL MOUNT STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
(speaker/strobe, E)	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	222
(ceiling speaker/strobe, E)	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	36
(ceiling speaker, E)	CEILING MOUNT SPEAKER. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT AND AMPLIFIER.	23
(exterior speaker/strobe, N)	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	2
(exterior speaker/strobe, E)	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	7
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	14
(bell)	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13
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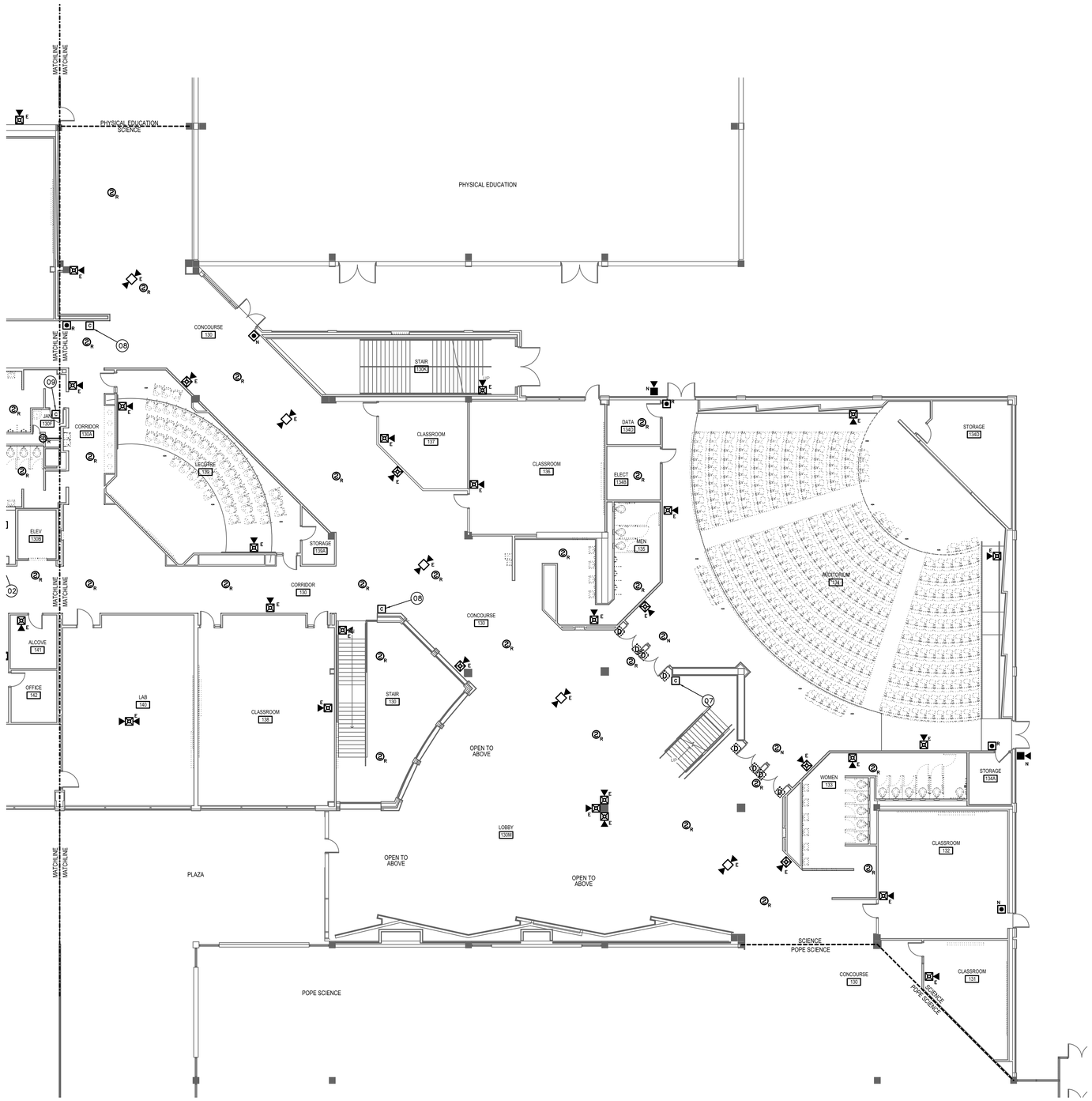
800 WEST UNIVERSITY PARKWAY
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SCIENCE BUILDING
LEVEL 0

FA-6.0



SB FIRE ALARM PLAN - LEVEL 1 (EAST)

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

SB – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (FCIE3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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07 EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

08 EXISTING ROLLING FIRE DOOR TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

09 INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS OR OPERATION OF OTHER SMOKE CONTROL DEVICES IN BUILDING. CONNECT RELAYS TO EXISTING CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS, SMOKE CONTROL SYSTEM INTERFACES AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

10 EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

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SB – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	3
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	192
R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	15
N	PULL STATION. NEW DEVICE ON NEW J–BOX.	2
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	14
R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	17
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	31
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	11
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	7
E	WALL MOUNT STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	222
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LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SCIENCE BUILDING
LEVEL 1 - EAST

FA-6.1

SB FIRE ALARM PLAN - LEVEL 1 (WEST)

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

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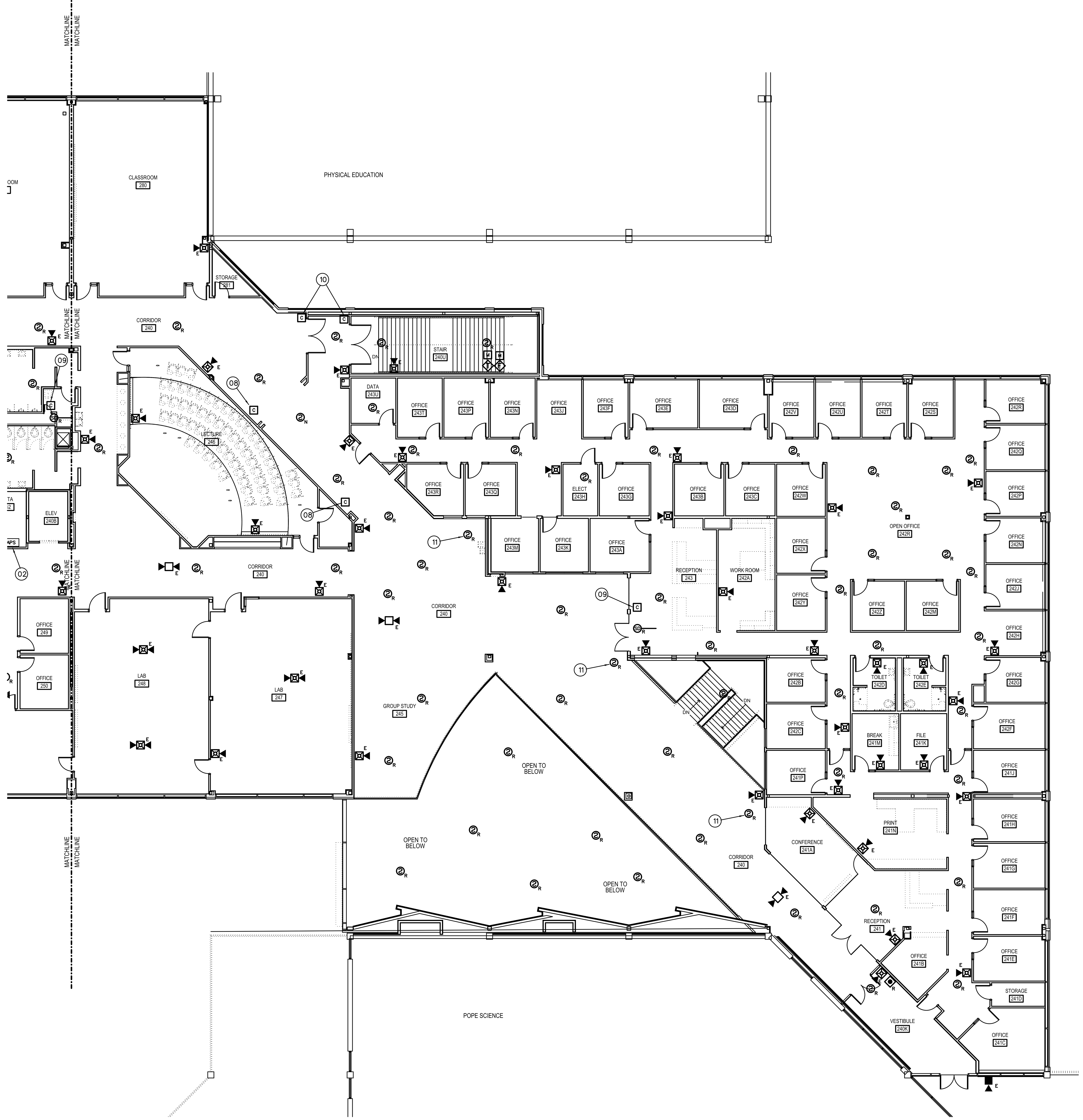
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #1242790

FIRE ALARM SYSTEM
SCIENCE BUILDING
LEVEL 1 - WEST

FA-6.2



SB FIRE ALARM PLAN - LEVEL 2 (EAST)

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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(09) INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS OR OPERATION OF OTHER SMOKE CONTROL DEVICES IN BUILDING. CONNECT RELAYS TO EXISTING CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS, SMOKE CONTROL SYSTEM INTERFACES AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(10) EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

(11) SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

SB - FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	3
	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	192
	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	15
	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	14
	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	17
	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	31
	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	11
	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	7
	WALL MOUNT STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	222
	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	36
	CEILING MOUNT SPEAKER. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT AND AMPLIFIER.	23
	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	2
	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	7
	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	14
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

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Fire Protection Engineers
-Since 1983-

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DWG ISSUE:	REVIEW
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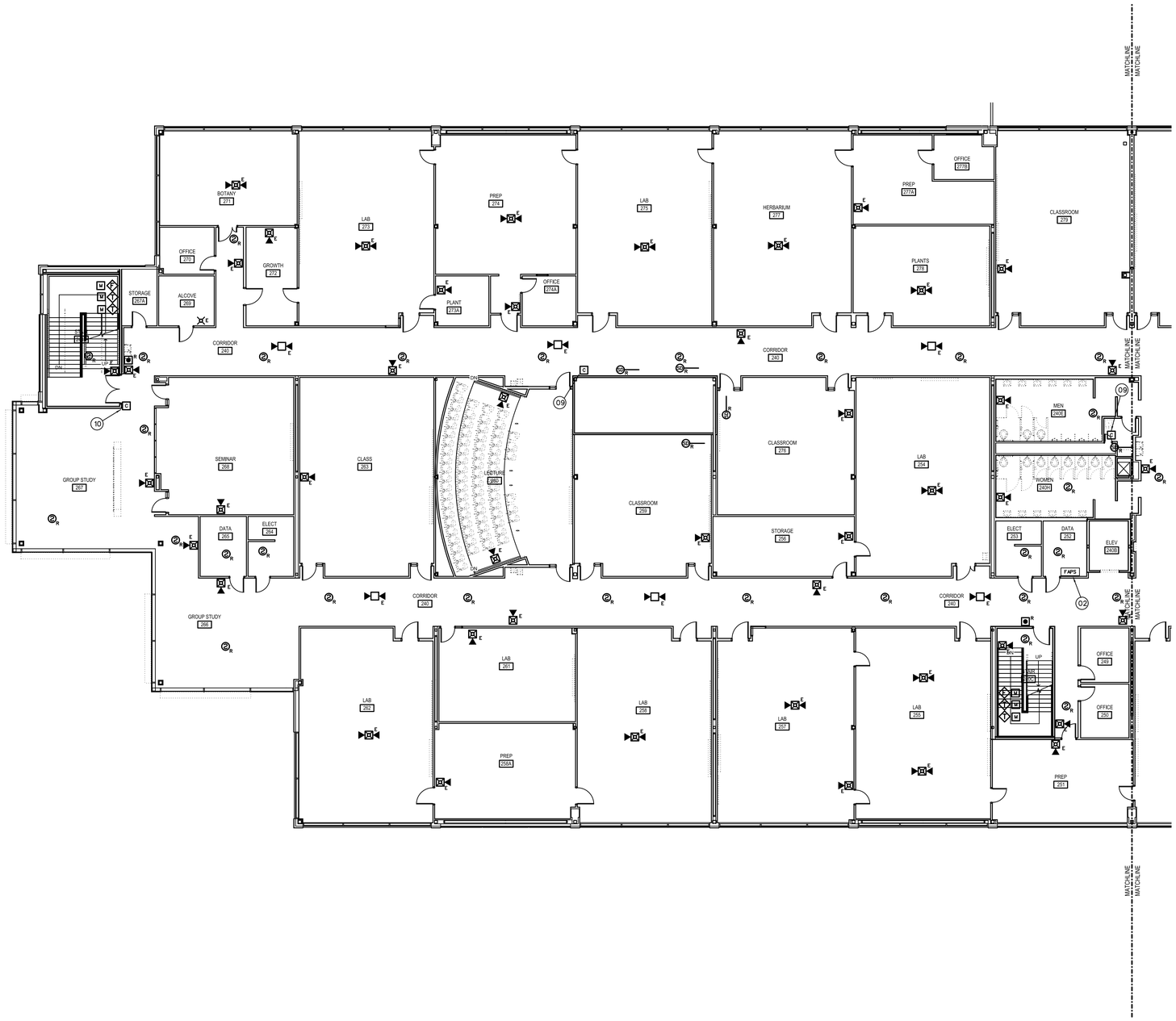
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SCIENCE BUILDING
LEVEL 2 - EAST

FA-6.3



SB FIRE ALARM PLAN - LEVEL 2 (WEST)

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

SB – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (FCIE3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN SB067 (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

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07 EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

08 EXISTING ROLLING FIRE DOOR TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

09 INSTALL ADDRESSABLE RELAYS TO INITIATE CLOSURE OF EXISTING FIRE/SMOKE DAMPERS OR OPERATION OF OTHER SMOKE CONTROL DEVICES IN BUILDING. CONNECT RELAYS TO EXISTING CONTROL CIRCUITS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL). CONTRACTOR TO FIELD VERIFY NUMBER AND LOCATION OF FIRE/SMOKE DAMPERS, SMOKE CONTROL SYSTEM INTERFACES AND CONTROL CIRCUITS REQUIRED. EXISTING CONTROL RELAYS MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

10 EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

11 SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

SB – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	3
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	192
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	15
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	2
P R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	14
S E	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	18
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	17
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	31
V	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	11
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	7
S E	WALL MOUNT STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1
S E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	222
S E	CEILING MOUNT SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	36
S E	CEILING MOUNT SPEAKER. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT AND AMPLIFIER.	23
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S E	EXTERIOR SPEAKER/STROBE. EXISTING TO BE RE–USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	7
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	14
B	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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DWG ISSUE:	REVIEW
DRAWN BY:	BBH
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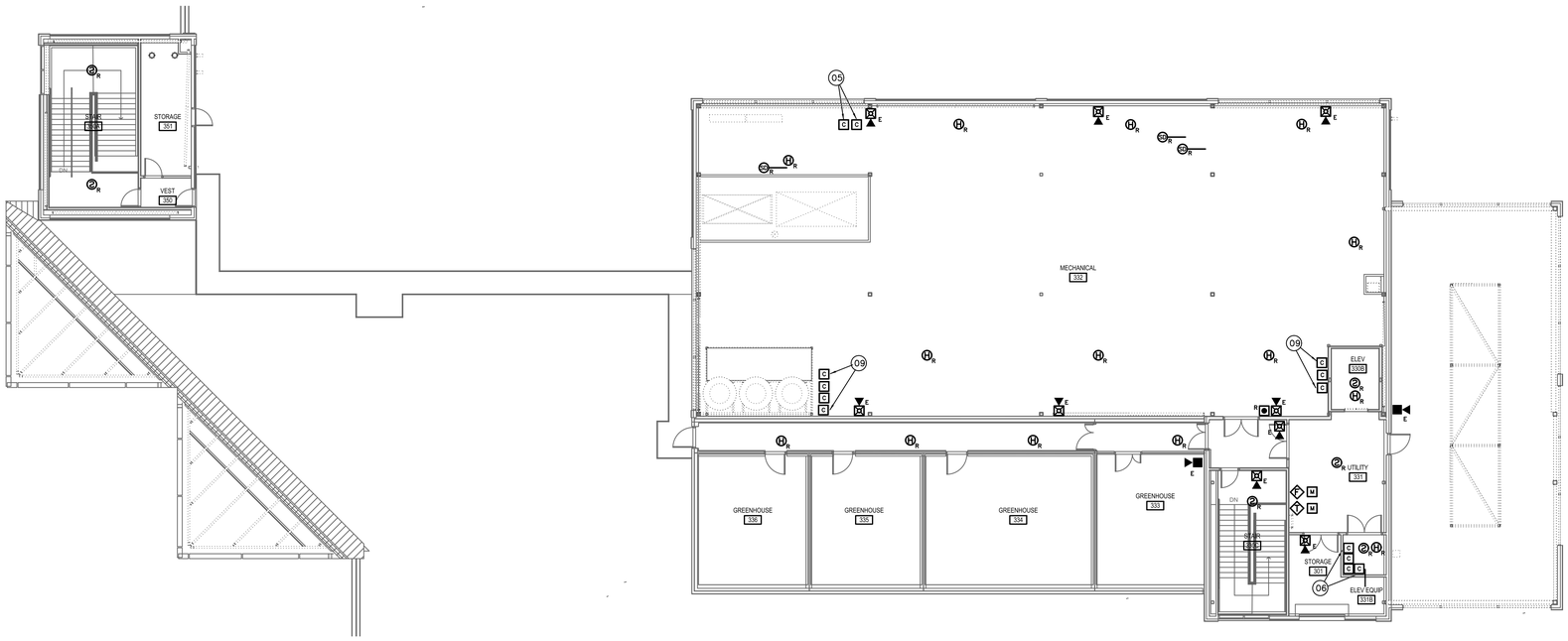
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SCIENCE BUILDING
LEVEL 2 - WEST

FA-6.4



SB FIRE ALARM PLAN - LEVEL 3

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
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S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	192
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	15
P N	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
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** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

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GREGORY T. JONES
STATE OF UTAH

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CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SCIENCE BUILDING
LEVEL 3

FA-6.5

PS FIRE ALARM PLAN - LEVEL 0

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

PS – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL (SIMPLEX CONVENTIONAL) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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08 EXISTING ROLL DOWN FIRE SHUTTER AND RELEASING HADWARE TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE SHUTTER UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE SHUTTER RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

09 INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. INSTALL A SEPARATE RELAY FOR EACH FAN COIL UNIT. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE OR ANY OTHER FIRE ALARM INITIATING DEVICE IN BUILDING.

PS – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	7
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	57
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	5
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J–BOX.	2
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	2
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	6
P R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	13
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	3
S E	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	6
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	8
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	13
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	5
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	17
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	14
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	81
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	4
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	6

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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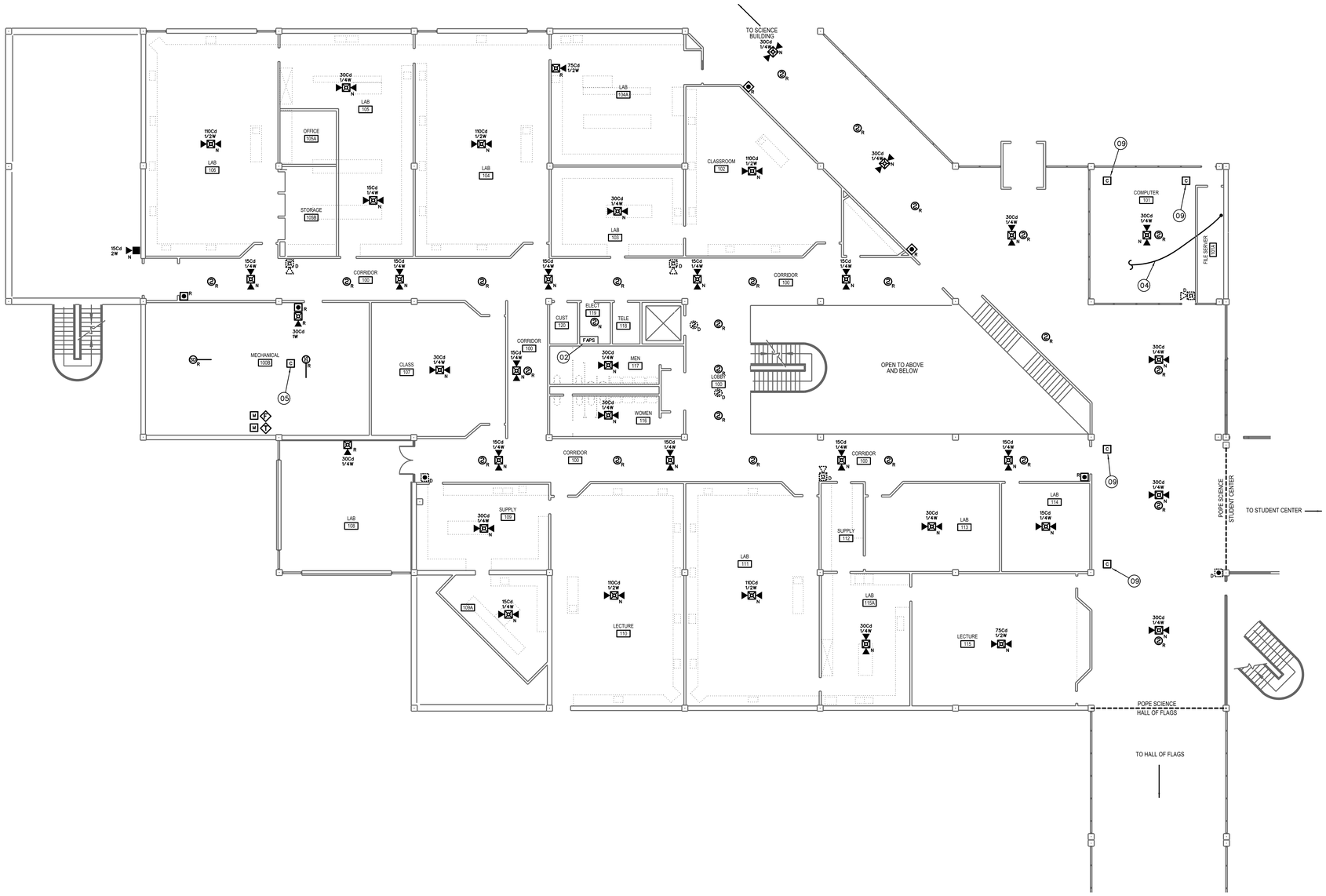
FIRE ALARM SYSTEM
POPE SCIENCE
LEVEL 0

FA-7.0



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FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
POPE SCIENCE
LEVEL 1

FA-7.1

PS FIRE ALARM PLAN - LEVEL 2

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F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	17
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	14
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	81
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	4
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	6

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
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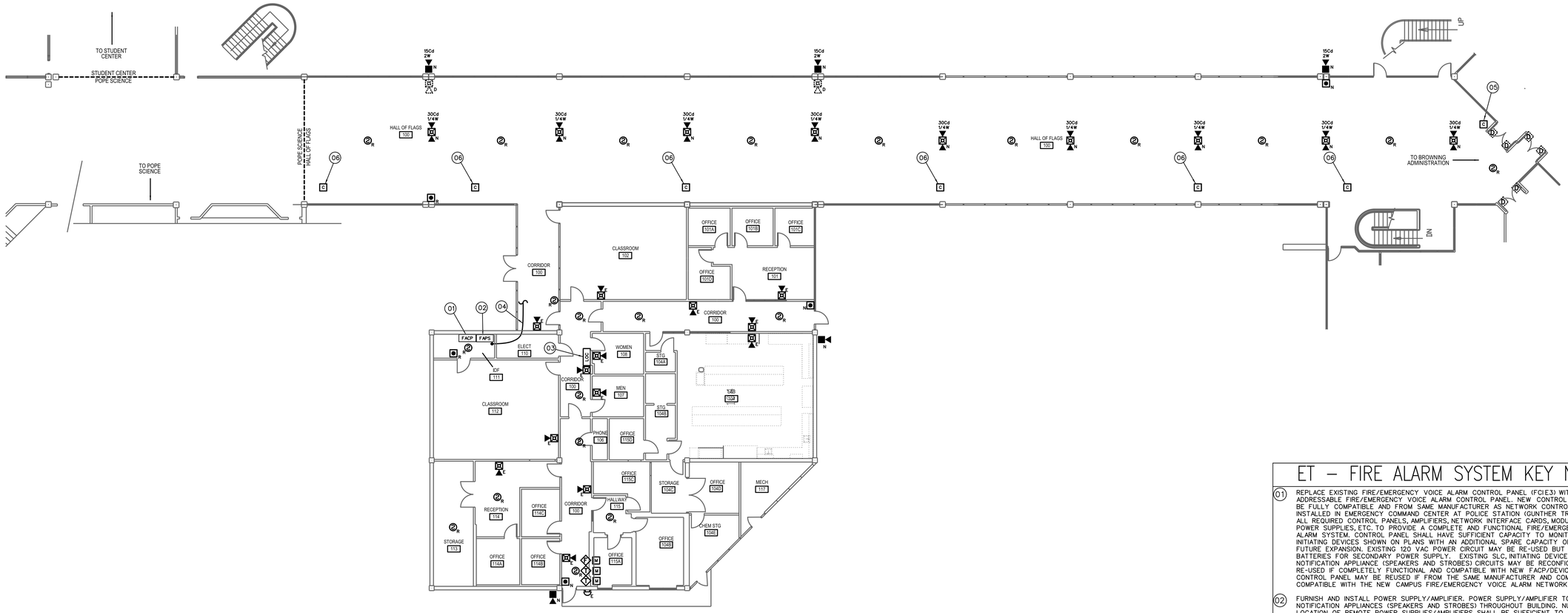
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
POPE SCIENCE
LEVEL 2

FA-7.2



ET & HALL OF FLAGS FIRE ALARM PLAN

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

ET – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (FCIE3) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE (SPEAKERS AND STROBES) CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

(02) FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOM. EXISTING POWER SUPPLIES (WHERE PRESENT) MAY BE RE-USED WHERE FULLY COMPATIBLE WITH NEW CONTROL EQUIPMENT. PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. EXISTING ANNUNCIATOR/OPERATING CONSOLE (WHERE PRESENT) MAY BE REUSED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING FACP IN STUDENT CENTER (RETURN) AND UVU FIBER NETWORK (OUTGOING) IN ET 111 (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY. EXISTING CONTROL RELAYS FOR DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(06) INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. INSTALL A SEPARATE RELAY FOR EACH FAN COIL UNIT EXCEPT A SINGLE RELAY MAY BE USED TO SHUT DOWN UNIT IMMEDIATELY NEXT TO EACH OTHER. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

ET – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	21
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	3
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	2
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	3
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	1
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	6
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	2
E	WALL MOUNT SPEAKER/STROBE. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	13
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
N	CEILING MOUNT SPEAKER. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	4
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. CONNECT TO NEW CONTROL EQUIPMENT, POWER SUPPLY AND AMPLIFIER.	6
E	EXTERIOR WATER FLOW BELL. EXISTING TO BE RE-USED. CONNECT TO NEW CONTROL EQUIPMENT/POWER SUPPLY	1

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

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FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
ENVIRONMENTAL TECH
& HALL OF FLAGS
LEVEL 1

FA-8.0

BA FIRE ALARM PLAN - LEVEL 0

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

BA - FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST QUICK START) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN BA 010 (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

(06) EXISTING ELEVATOR CONTROLLER IS NOT COMPATIBLE WITH EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR SHAFT AND EQUIPMENT ROOM TO FACILITATE FUTURE ACTIVATION OF EMERGENCY FUNCTIONS IF PROVIDE IN FUTURE. INSTALL 4 CONTROL RELAYS INSIDE ELEVATOR EQUIPMENT ROOM FOR FUTURE USE. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP). CONNECTION OF RELAYS TO ELEVATOR EQUIPMENT TO BE UNDER FUTURE CONTRACT.

(07) EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

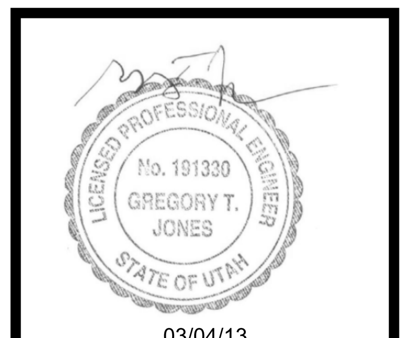
(08) EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

(09) EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP.

BA - FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	2
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	20
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	75
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	49
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	2
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	0
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	12
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	2
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	1
SD R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	9
SD D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	8
B R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	6
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	20
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	4
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	1
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	95
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	17
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	29
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	10
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D N	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	3
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	6



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-Since 1983-

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CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
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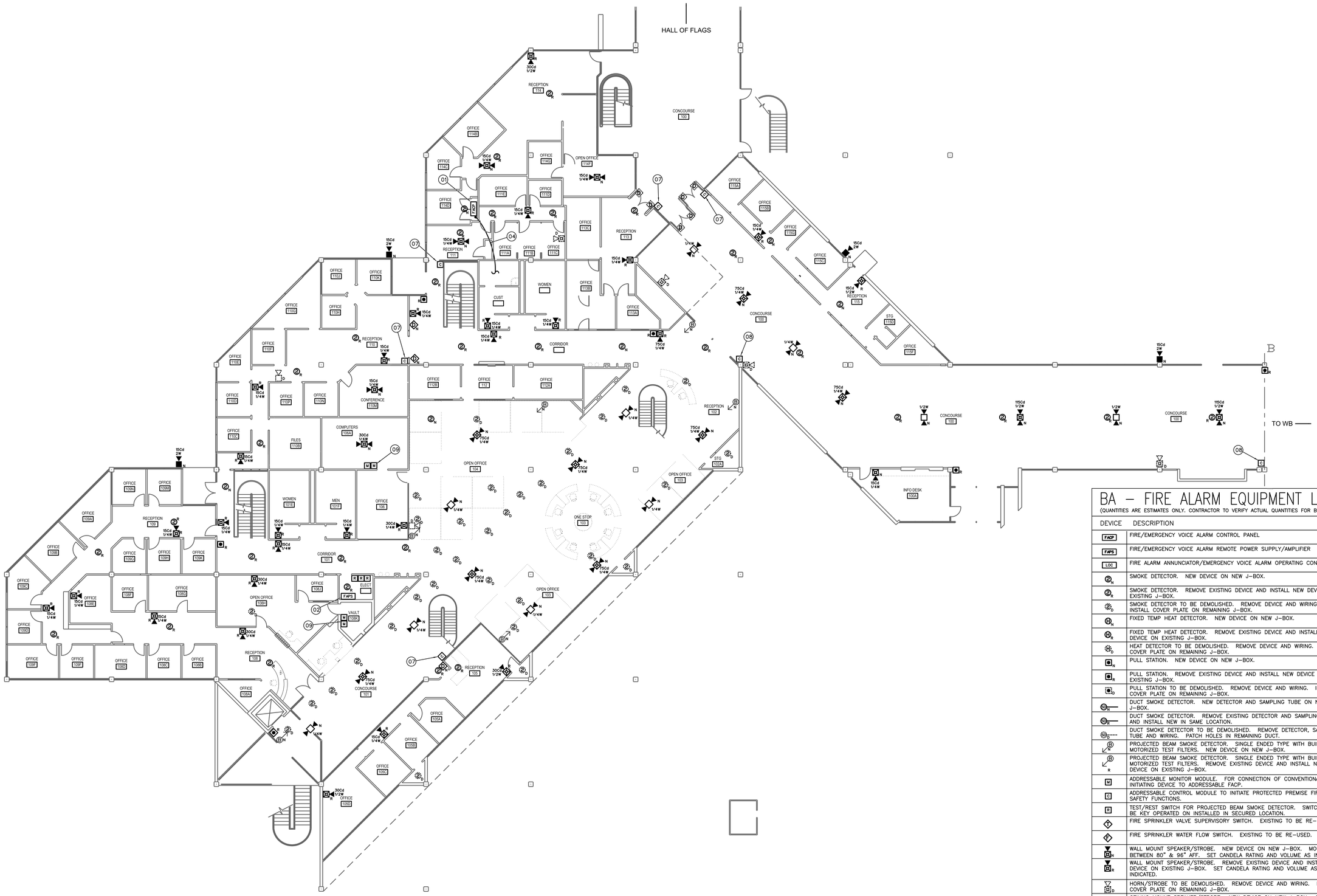
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
BROWNING ADMINISTRATION
LEVEL 0

FA-9.0



BA FIRE ALARM PLAN - LEVEL 1

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

BA – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	2
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	20
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	75
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	49
N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J–BOX.	2
R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	0
D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	0
N	PULL STATION. NEW DEVICE ON NEW J–BOX.	0
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	12
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	2
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	1
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	9
D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J–BOX.	8
R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	6
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	20
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	4
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	1
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	95
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	17
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	29
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET VOLUME AS INDICATED.	10
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
N	MAGNETIC DOOR HOLD–OPEN DEVICE. INSTALL NEW DEVICE ON NEW J–BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	3
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	6

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
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DWG ISSUE:	REVIEW
DRAWN BY:	BBH
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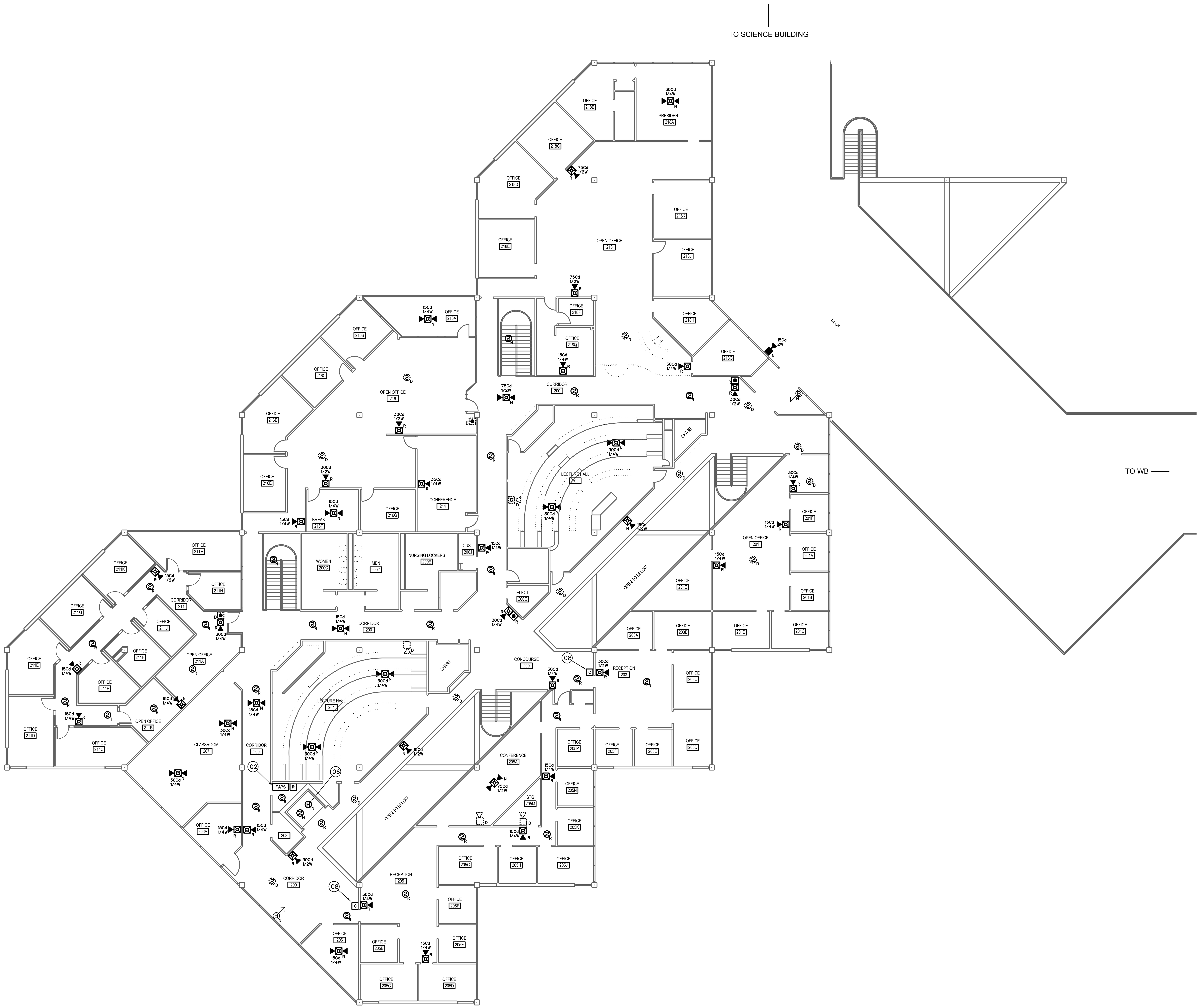
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
BROWNING ADMINISTRATION
LEVEL 1

FA-9.1



BA FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

BA - FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST QUICK START) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN BA 010 (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

(06) EXISTING ELEVATOR CONTROLLER IS NOT COMPATIBLE WITH EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR SHAFT AND EQUIPMENT ROOM TO FACILITATE FUTURE ACTIVATION OF EMERGENCY FUNCTIONS IF PROVIDE IN FUTURE. INSTALL 4 CONTROL RELAYS INSIDE ELEVATOR EQUIPMENT ROOM FOR FUTURE USE. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP). CONNECTION OF RELAYS TO ELEVATOR EQUIPMENT TO BE UNDER FUTURE CONTRACT.

(07) EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

(08) EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

(09) EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM, SUPERVISORY AND TROUBLE SIGNALS TO BUILDING FACP.

BA - FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	2
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	20
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	75
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	49
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	2
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	0
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	12
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	2
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	1
SD R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	9
SD D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	8
B R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	6
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	20
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	4
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	1
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	95
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	17
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	29
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	10
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D N	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	3
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	6

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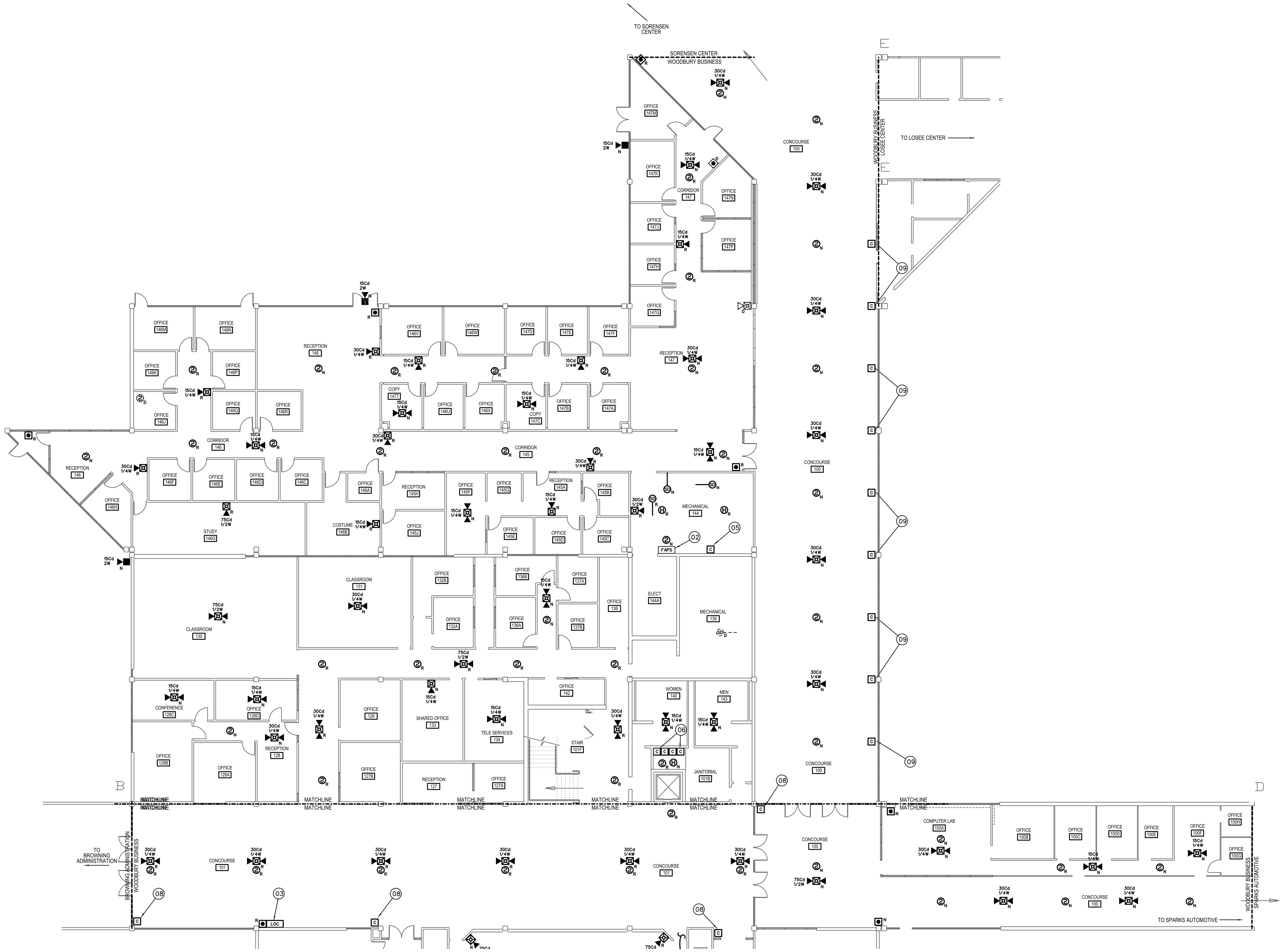
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
BROWNING ADMINISTRATION
LEVEL 2

FA-9.2



WB FIRE ALARM PLAN - LEVEL 1 NORTH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

WB – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (SIMPLEX 4100U) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

(02) FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN WB 104 (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(06) INSTALL ADDRESSABLE RELAYS TO PROVIDE ELEVATOR RECALL FUNCTIONS. CONNECT RELAYS TO EXISTING ELEVATOR CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO PERFORM SAME FUNCTIONS AS RELAYS REPLACED. EXISTING CONTROL RELAYS FOR ELEVATOR RECALL MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(07) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

(08) EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

(09) INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

WB – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	47
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	48
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	6
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	1
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	2
N	PULL STATION. NEW DEVICE ON NEW J–BOX.	3
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	10
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	1
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	3
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	2
SD D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE, SAMPLING TUBE AND WIRING. PATCH HOLE IN DUCT.	1
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	2
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	24
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	1
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE–USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	26
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	6
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	12
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	73
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	5
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	9

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

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PCi Fire Protection Engineers
-Since 1983-

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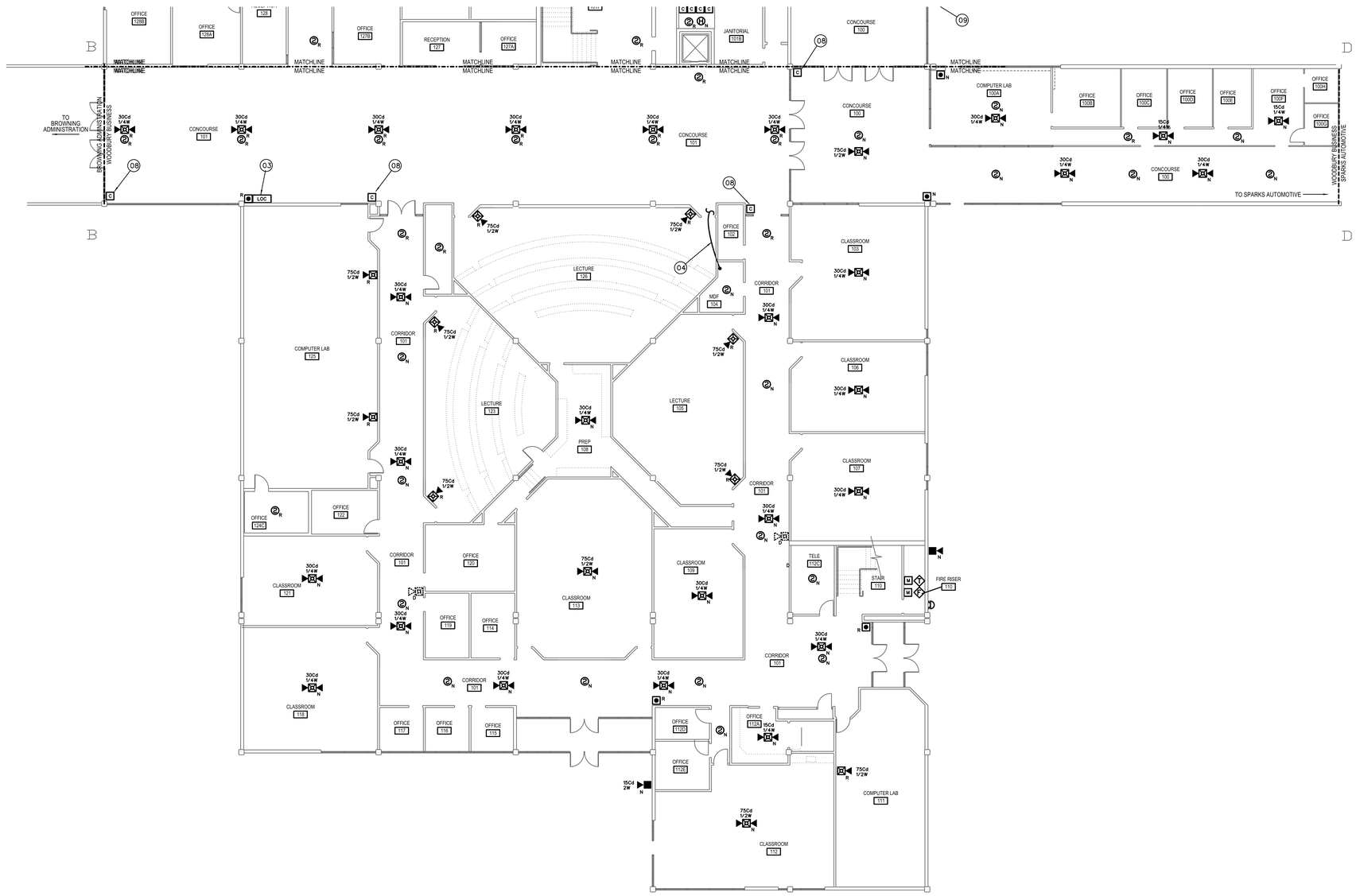
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES

DFCM PROJECT #12142790

FIRE ALARM SYSTEM
WODDBURY BUSINESS
LEVEL 1 - NORTH

FA-10.0



WB FIRE ALARM PLAN - LEVEL 1 SOUTH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

WB – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (SIMPLEX 4100U) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

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07 EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 EXISTING FIRE DOOR WITH AUTOMATIC CLOSURE WITH BUILT-IN HOLD-OPEN DEVICE. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT RELAY OUTPUT TO RELEASING CONTACTS OF EXISTING DOOR CLOSURE.

09 INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

WB – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	47
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	48
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	6
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	1
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	2
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	3
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	10
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	1
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	3
R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	2
D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE, SAMPLING TUBE AND WIRING. PATCH HOLE IN DUCT.	1
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	2
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	24
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	1
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	26
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	6
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	12
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	73
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	5
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	9

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LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
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REVISION DATE:	XX/XX/XX
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DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

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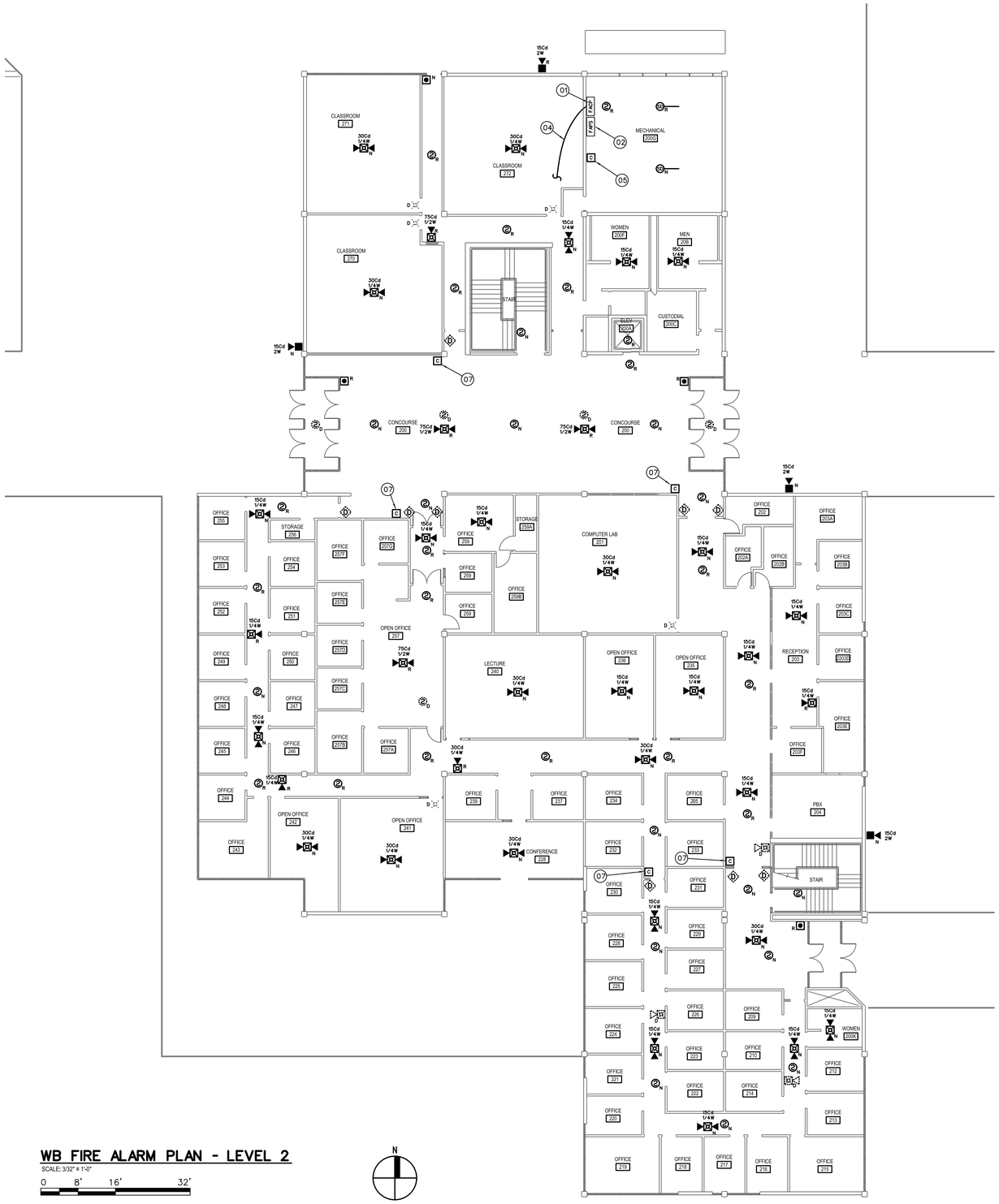
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #1242790

FIRE ALARM SYSTEM
WODDBURY BUSINESS
LEVEL 1 - SOUTH

FA-10.1



WB FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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WB – FIRE ALARM EQUIPMENT LEGEND

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S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	47
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	48
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	6
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	1
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	2
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	3
P R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	10
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	1
D N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	3
D R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	2
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M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	2
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	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	1
	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE–USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	26
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	6
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	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
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LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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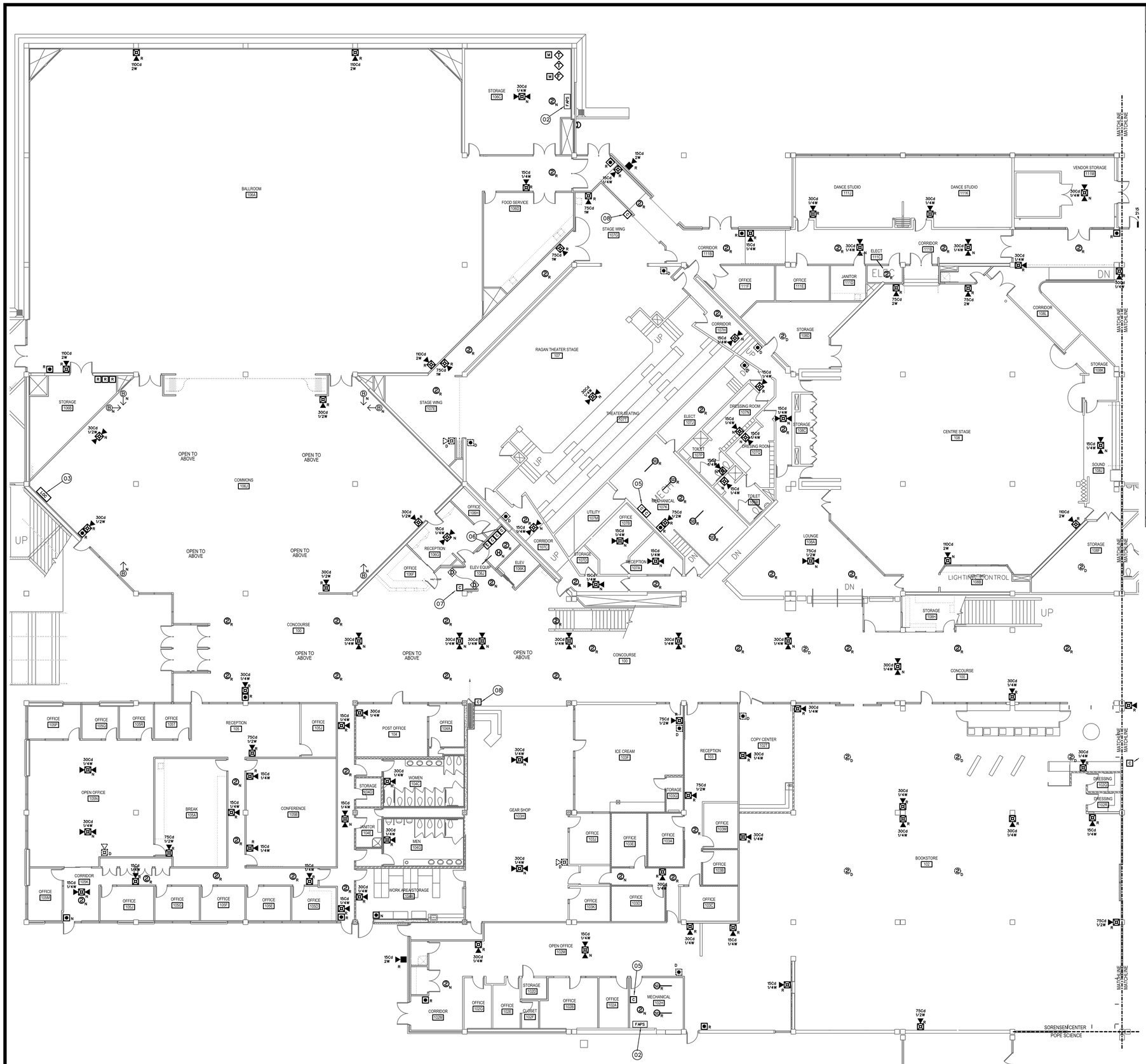
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
WODDBURY BUSINESS
LEVEL 2

FA-10.2



SC FIRE ALARM PLAN - LEVEL 1 NORTH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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06 EXISTING ELEVATOR CONTROLLER IS NOT COMPATIBLE WITH EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR SHAFT AND EQUIPMENT ROOM TO FACILITATE FUTURE ACTIVATION OF EMERGENCY FUNCTIONS IF PROVIDE IN FUTURE. INSTALL 4 CONTROL RELAYS INSIDE ELEVATOR EQUIPMENT ROOM FOR FUTURE USE. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP). CONNECTION OF RELAYS TO ELEVATOR EQUIPMENT TO BE UNDER FUTURE CONTRACT.

07 EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 EXISTING ROLLING FIRE DOOR TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOORR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

09 INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

10 EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM SIGNAL TO BUILDING FACP.

11 SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

SC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	36
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	117
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	8
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	6
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	1
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	5
P R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	30
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	12
DS N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	4
DS R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	31
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J–BOX.	10
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	5
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	7
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	32
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE–USED.	1
SP N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
SP R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	134
SP D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	5
SP N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	74
SP N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
SP R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	4
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	5

** EXISTING INITIATING DEVICES MAY BE RE–USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191339 GREGORY T. JONES STATE OF UTAH

03/04/13

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DFCM REVIEW STAMP

USFM REVIEW STAMP

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DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
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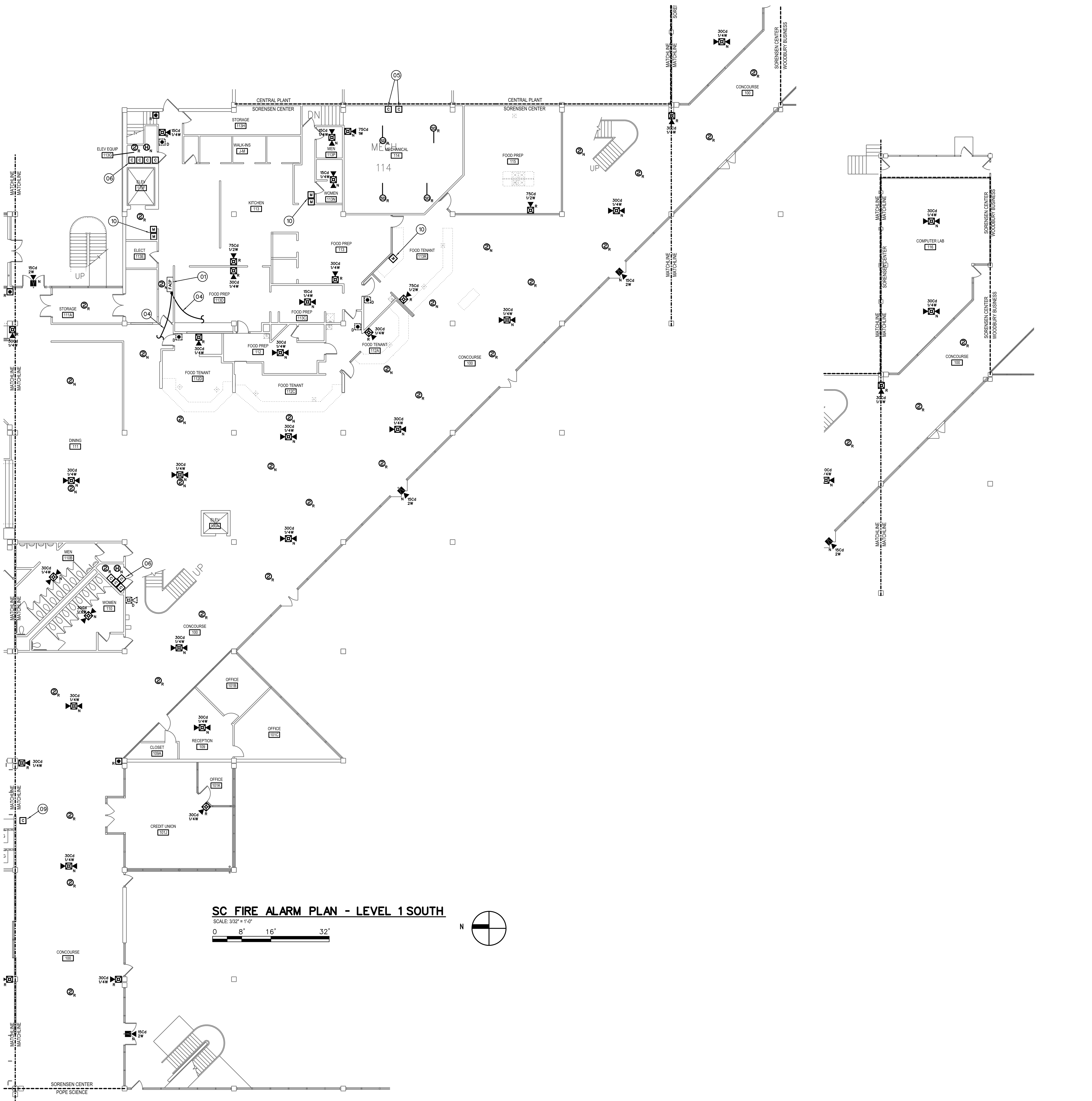
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SORENSEN CENTER
LEVEL 1 - NORTH

FA-11.0

SHEET 36 OF 55



SC FIRE ALARM PLAN - LEVEL 1 SOUTH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

SC – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (SIMPLEX 4100) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

(02) FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH FACP FOR POPE SCIENCE AND ENVIRONMENTAL TECH BUILDINGS (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

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(07) EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

(08) EXISTING ROLLING FIRE DOOR TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOORR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

(09) INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

(10) EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM SIGNAL TO BUILDING FACP.

(11) SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

SC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	36
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	117
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	8
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	6
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	1
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	5
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	30
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	12
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	4
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	31
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	10
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	5
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	7
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	32
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	134
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	5
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	74
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	4
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	5

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13
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USFM REVIEW STAMP

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Fire Protection Engineers
-Since 1983-

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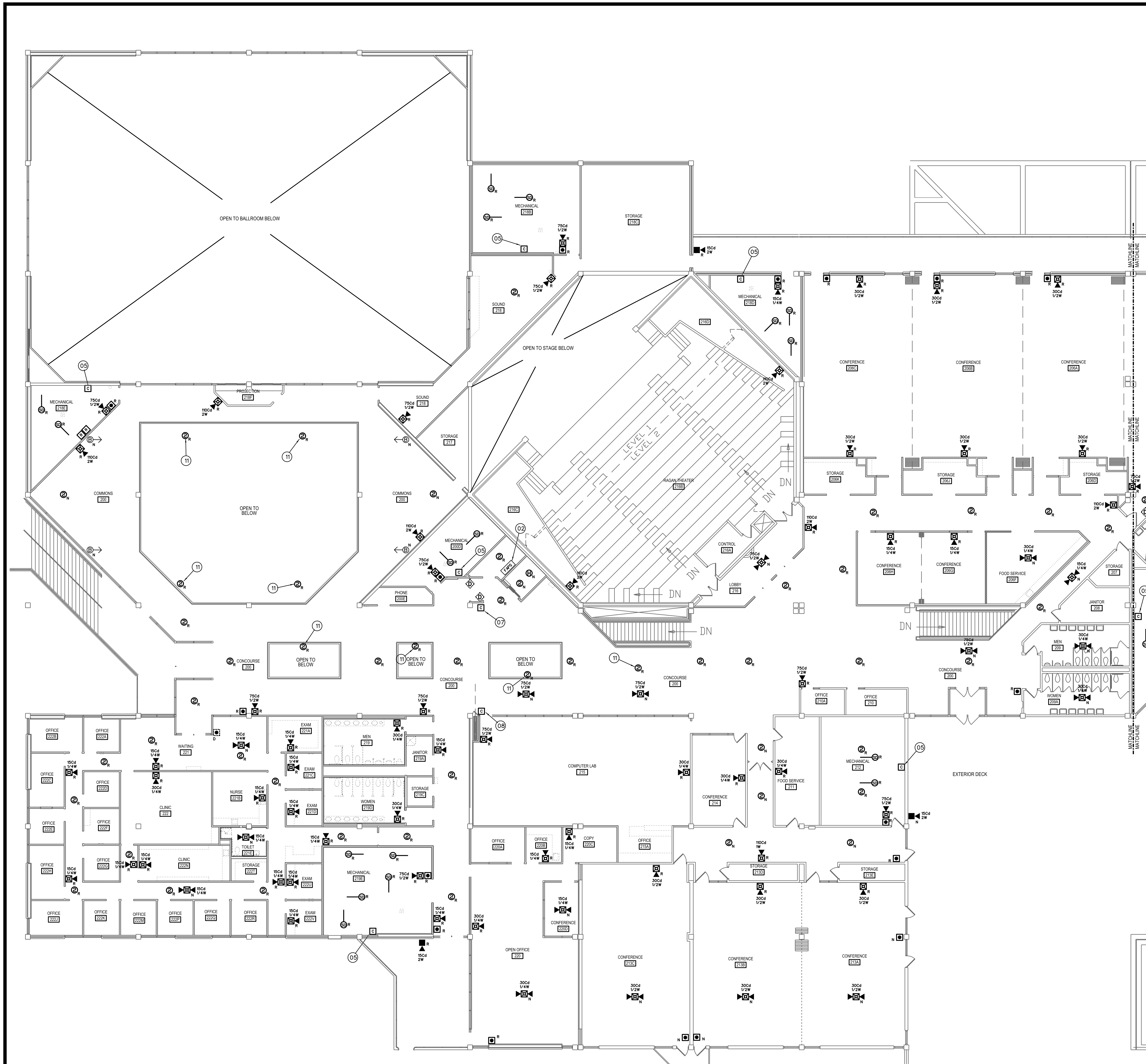
FIRE ALARM/EMERGENCY VOICE
ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SORENSEN CENTER
LEVEL 1 - SOUTH

FA-11.1



SC FIRE ALARM PLAN - LEVEL 2 NORTH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

SC - FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (SIMPLEX 4100) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

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LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	36
R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	117
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	8
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	6
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	1
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	5
R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	30
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	12
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	4
SD R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	31
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	10
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	5
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	7
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	32
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	134
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	5
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	74
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	4
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	5

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

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REVISION DATE: XX/XX/XX
JOB NUMBER: 104806
DWG ISSUE: REVIEW
DRAWN BY: BBH
CHECKED BY: GTJ

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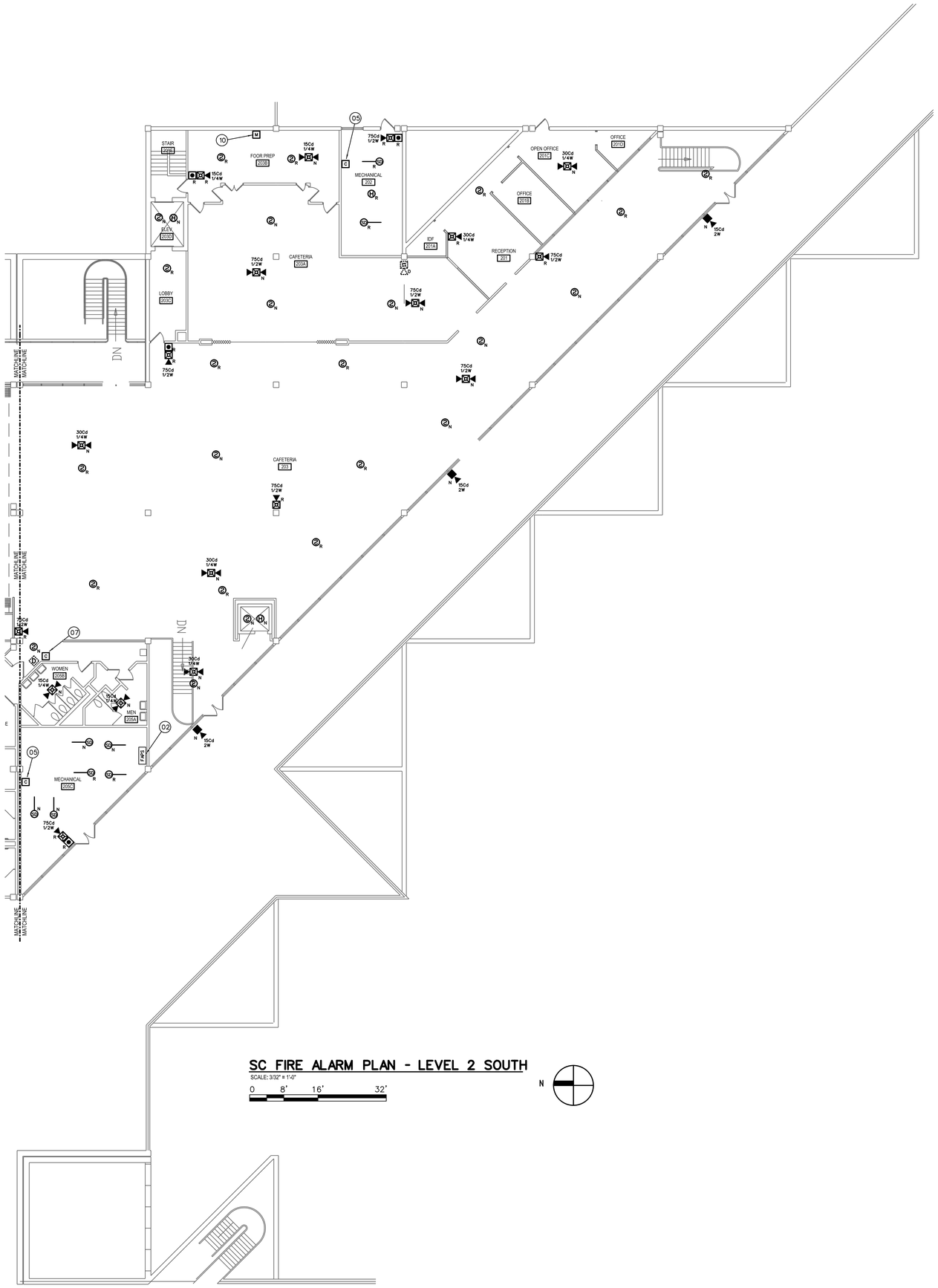
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SORENSEN CENTER
LEVEL 2 - NORTH

FA-11.2



SC FIRE ALARM PLAN - LEVEL 2 SOUTH

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

SC – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE/EMERGENCY VOICE ALARM CONTROL PANEL (SIMPLEX 4100) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, AMPLIFIERS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. EXISTING SLC, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES. EXISTING CONTROL PANEL MAY BE REUSED IF FROM THE SAME MANUFACTURER AND COMPLETELY COMPATIBLE WITH THE NEW CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK.

02 FURNISH AND INSTALL POWER SUPPLY/AMPLIFIER. REMOTE POWER SUPPLY/AMPLIFIER TO PROVIDE POWER TO NOTIFICATION APPLIANCES (SPEAKERS AND STROBES) THROUGHOUT BUILDING. NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FOR EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED WHERE PRESENT BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH FACP FOR POPE SCIENCE AND ENVIRONMENTAL TECH BUILDINGS (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE. EXISTING CONTROL RELAYS FOR FAN SHUTDOWN MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

06 EXISTING ELEVATOR CONTROLLER IS NOT COMPATIBLE WITH EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR SHAFT AND EQUIPMENT ROOM TO FACILITATE FUTURE ACTIVATION OF EMERGENCY FUNCTIONS IF PROVIDE IN FUTURE. INSTALL 4 CONTROL RELAYS INSIDE ELEVATOR EQUIPMENT ROOM FOR FUTURE USE. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP). CONNECTION OF RELAYS TO ELEVATOR EQUIPMENT TO BE UNDER FUTURE CONTRACT.

07 EXISTING FIRE DOOR WITH EXISTING MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 EXISTING ROLLING FIRE DOOR TO REMAIN. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOORR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. EXISTING CONTROL RELAYS FOR FIRE DOOR RELEASE MAY BE RE-USED IF FULLY COMPATIBLE WITH FIRE/EMERGENCY VOICE ALARM CONTROL EQUIPMENT USED.

09 INSTALL ADDRESSABLE RELAY TO PROVIDE SHUTDOWN OF EXISTING FAN COILS UNITS IN CONCOURSE AREA. A SINGLE RELAY MAY BE USED TO PROVIDE SHUTDOWN OF ADJACENT UNITS. CONNECT RELAY TO EXISTING FAN COIL UNIT CONTROLS AND PROGRAM RELAY TO SHUT DOWN UNIT UPON ACTIVATION OF ANY SPOT TYPE SMOKE DETECTOR IN CONCOURSE.

10 EXISTING FIRE SUPPRESSION SYSTEM TO REMAIN. INSTALL ADDRESSABLE MONITOR MODULES AT FIRE SUPPRESSION SYSTEM CONTROLS TO RELAY FIRE SUPPRESSION SYSTEM ALARM SIGNAL TO BUILDING FACP.

11 SMOKE DETECTOR IS INSTALLED INSIDE SKYLIGHT.

SC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	36
S R	** SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	117
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	8
H N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	6
H R	** FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	1
P N	PULL STATION. NEW DEVICE ON NEW J-BOX.	5
P R	** PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	30
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	12
S N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	4
S R	** DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	31
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	10
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	5
M	** ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	7
C	** ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	32
V	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH (VANE TYPE). EXISTING TO BE RE-USED.	1
S N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
S R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	134
S D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	5
S N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	74
S N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	8
S R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	4
	EXISTING EXTERIOR FIRE SPKR WATER FLOW BELL TO REMAIN. CONNECT TO NEW FIRE ALARM SYSTEM FOR POWER/CONTROL.	1
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	5

** EXISTING INITIATING DEVICES MAY BE RE-USED IF COMPATIBLE WITH CONTROL EQUIPMENT USED.

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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JOB NUMBER:	104806
DWG ISSUE:	REVIEW
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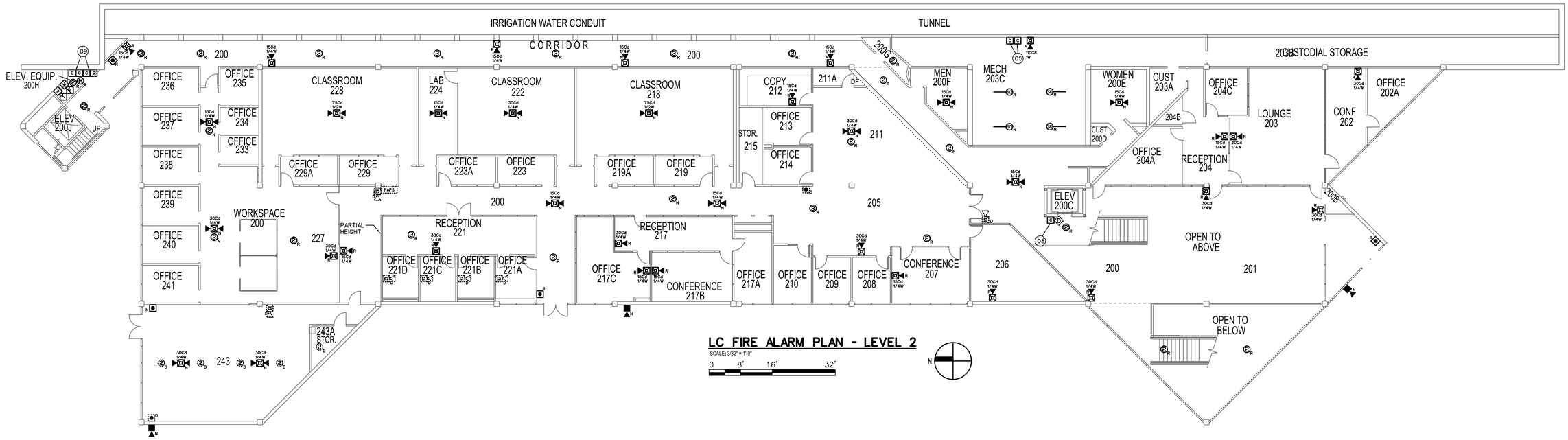
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SORENSEN CENTER
LEVEL 2- SOUTH

FA-11.3



LC FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	X
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	24
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	70
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	10
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	1
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	2
P R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	7
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	3
DT N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	9
DT R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
DT D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	1
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J–BOX JUST BELOW WOOD CEILING PANELS.	3
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	6
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	25
R	TEST/RESET SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	1
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	3
SP N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	9
SP R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	78
SP D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	7
SP N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	34
SP N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	6
D	MAGNETIC DOOR HOLD–OPEN, FIRE SHUTTER OR ROLL–DOWN DOOR. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	15

LC – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST EN-4) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02 FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN LC 307B (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

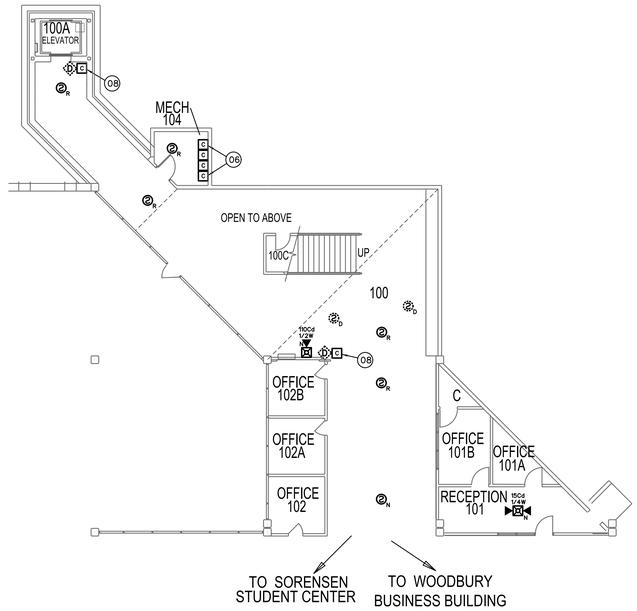
05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

06 REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07 EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 EXISTING ROLL-DOWN FIRE DOOR OR SHUTTER. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO DOOR CONTROLLER THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

09 EXISTING ELEVATOR CONTROLLER IS NOT COMPATIBLE WITH EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND POWER SHUNT/TRIP). INSTALL 4 CONTROL RELAYS INSIDE ELEVATOR EQUIPMENT ROOM FOR FUTURE USE. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP). CONNECTION OF RELAYS TO ELEVATOR EQUIPMENT TO BE UNDER FUTURE CONTRACT.



LC FIRE ALARM PLAN - LEVEL 1

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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Fire Protection Engineers
-Since 1985-

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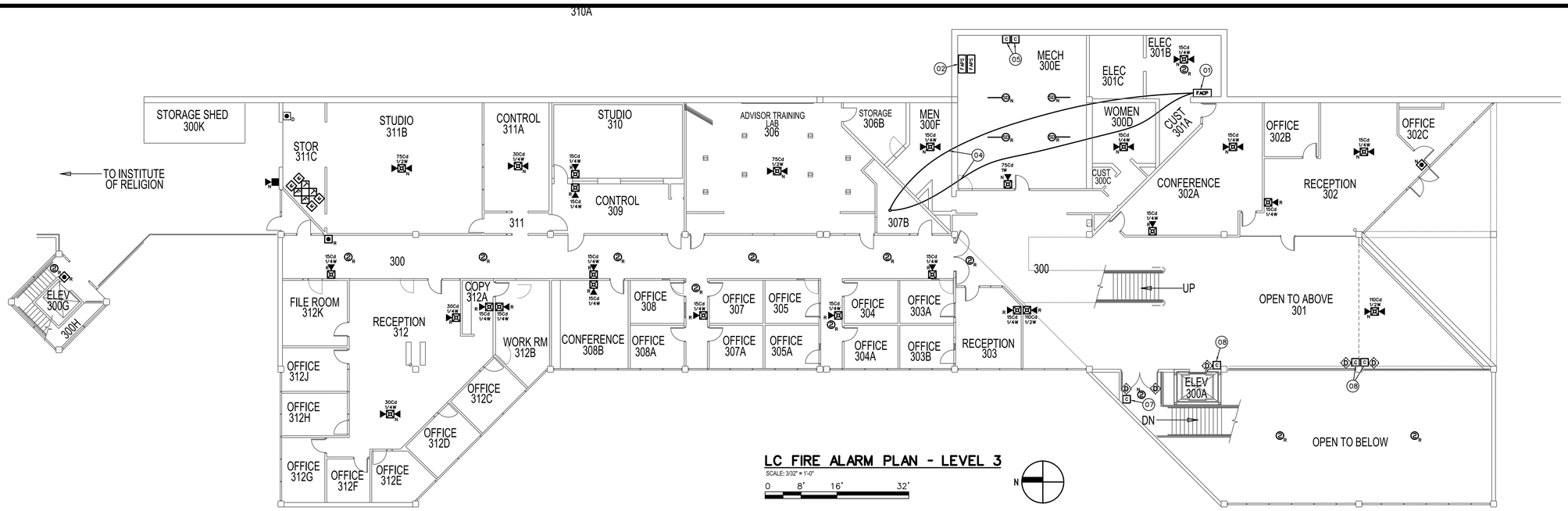
800 WEST UNIVERSITY PARKWAY
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
LOSEE CENTER
LEVEL 1 & 2

FA-12.0



LC FIRE ALARM PLAN - LEVEL 3

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

LC – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	X
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	24
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	70
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	10
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	1
P N	PULL STATION. NEW DEVICE ON NEW J–BOX.	2
P R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	7
P D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	3
S N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	9
S R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
S D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	1
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT–IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J–BOX JUST BELOW WOOD CEILING PANELS.	3
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	6
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	25
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	1
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	9
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	78
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	7
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	34
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. DEVICE AND J–BOX SHALL BE WEATHER–PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	6
D	MAGNETIC DOOR HOLD–OPEN, FIRE SHUTTER OR ROLL–DOWN DOOR. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	15

LC – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL (EST EN-4) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02 FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN LC 307B (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

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06 REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07 EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 EXISTING ROLL-DOWN FIRE DOOR OR SHUTTER. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OF ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO DOOR CONTROLLER THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

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STATE OF UTAH
03/04/13
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DWG ISSUE:	REVIEW
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FIRE ALARM SYSTEM
LOSEE CENTER
LEVEL 3

FA-12.1

LC FIRE ALARM PLAN - LEVEL 4

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

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LC – FIRE ALARM EQUIPMENT LEGEND

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N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	24
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	70
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	10
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	1
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	7
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	3
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	9
SD R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
SD D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	1
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C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	25
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	1
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	3
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	9
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	78
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	7
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	34
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-Since 1983-

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FIRE ALARM SYSTEM
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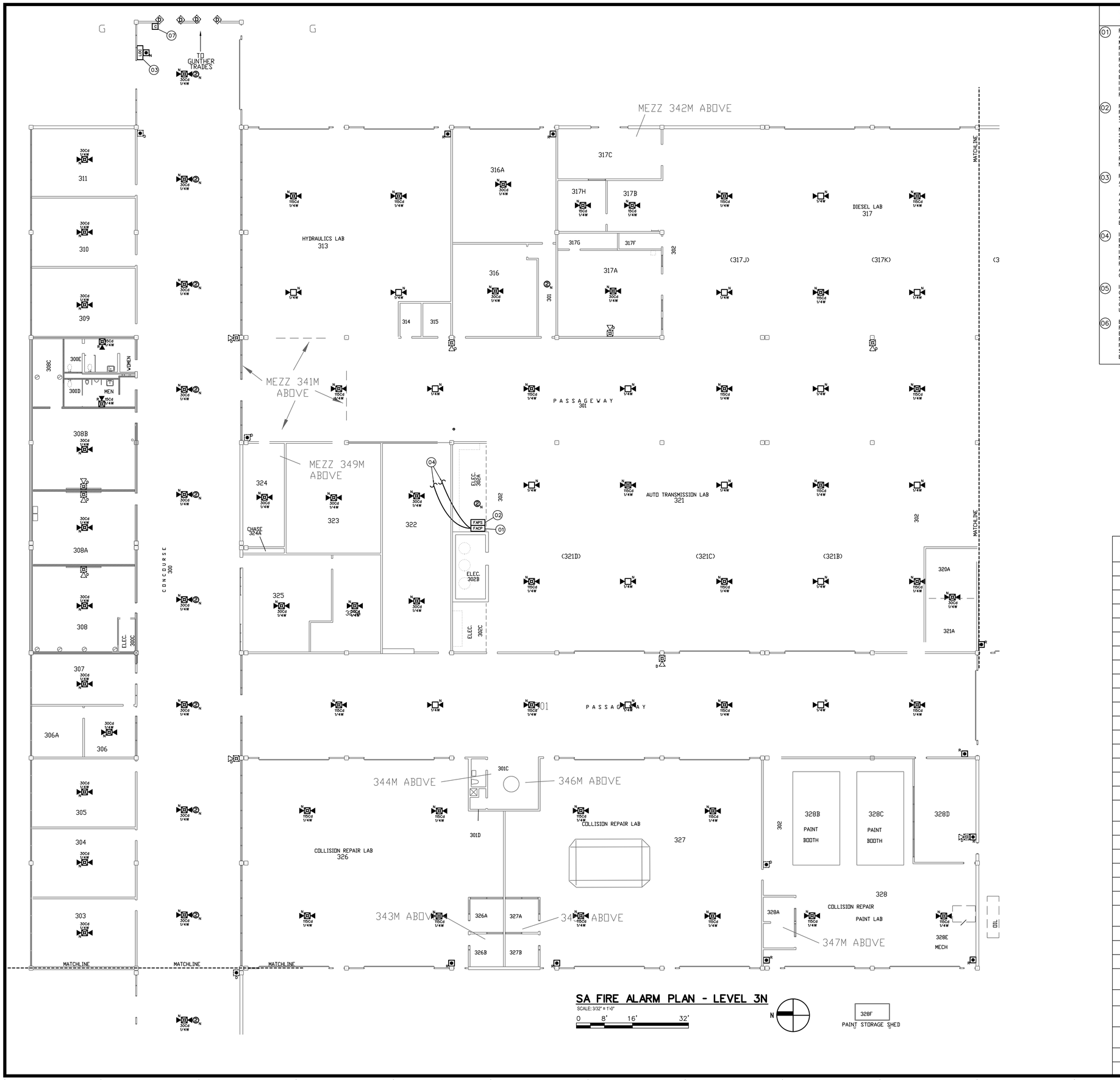
LEVEL 4

FA-12.2



SA FIRE ALARM PLAN - LEVEL 3N

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LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	2
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	17
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	1
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	1
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	1
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	16
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	3
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	2
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	2
D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	0
R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	4
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	7
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	0
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	12
D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	79
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	26
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	0
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	4

LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

ENGINEER'S STAMP

DFCM REVIEW STAMP

USFM REVIEW STAMP

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REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
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UTAH VALLEY UNIVERSITY
CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
OREM, UT 84058

FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

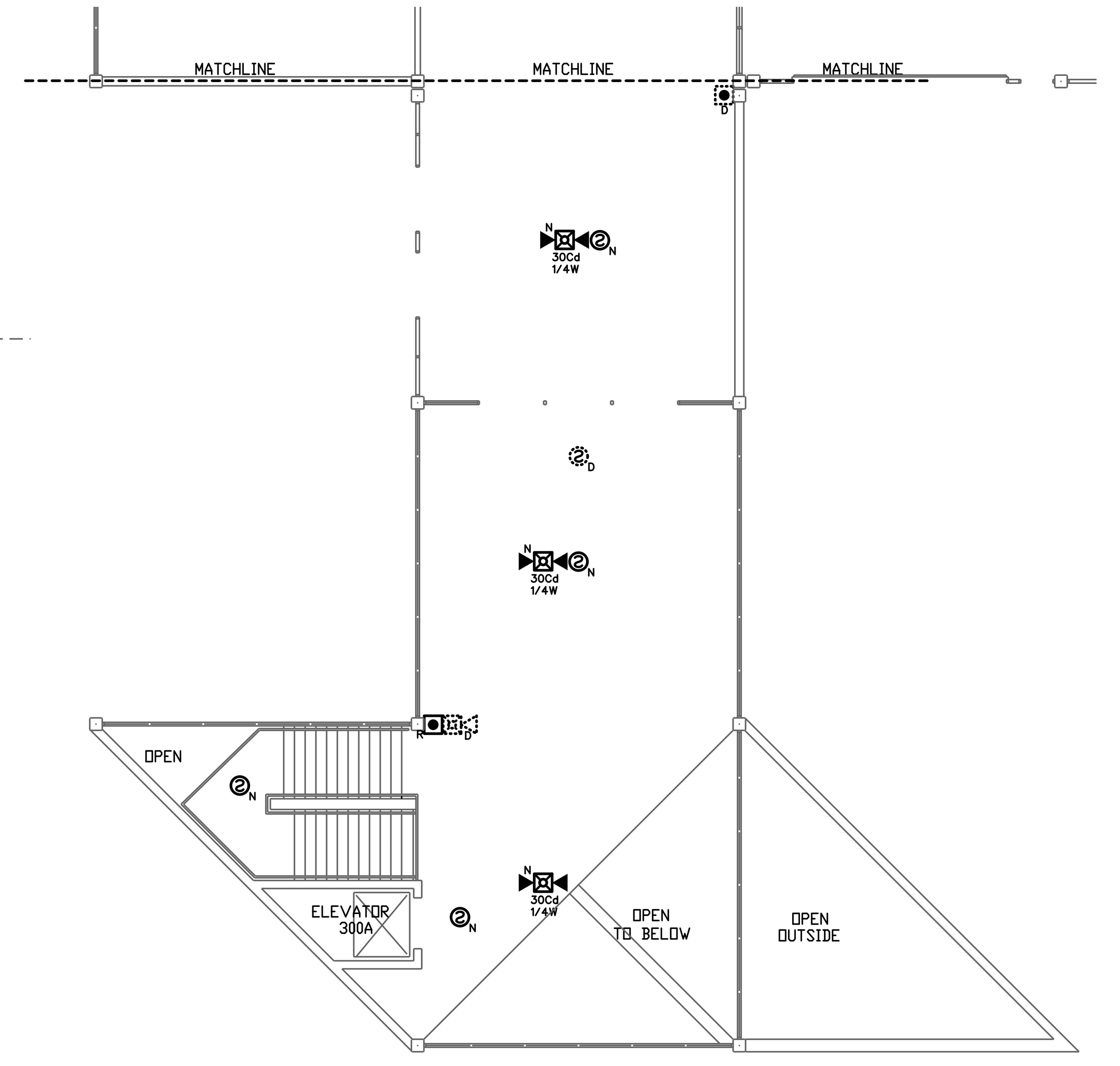
FIRE ALARM SYSTEM
SPARKS AUTOMOTIVE
LEVEL 3 NORTH

FA-13.0

SA FIRE ALARM PLAN - LEVEL 3S

SCALE: 3/32" = 1'-0"

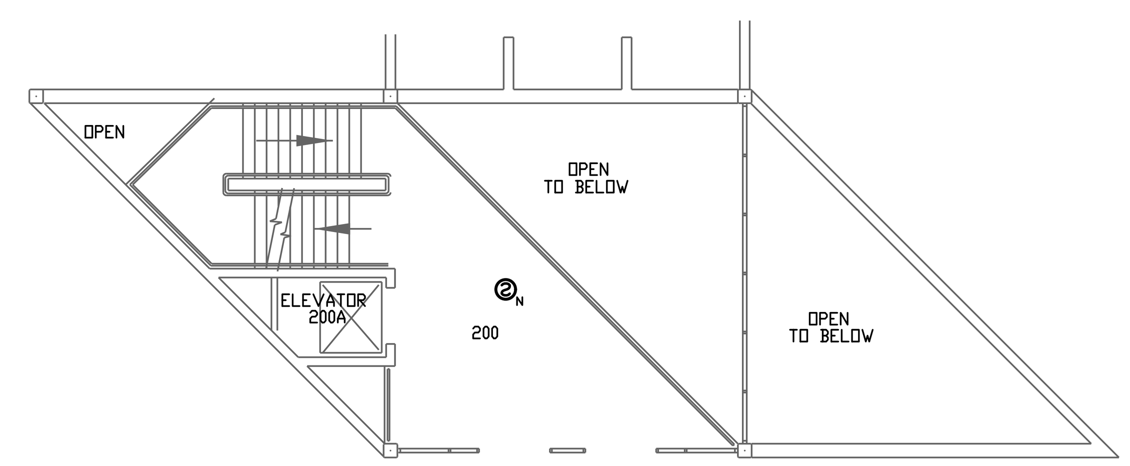
0 8' 16' 32'



SA FIRE ALARM PLAN - COUNCOURSE LEVEL 3

SCALE: 3/32" = 1'-0"

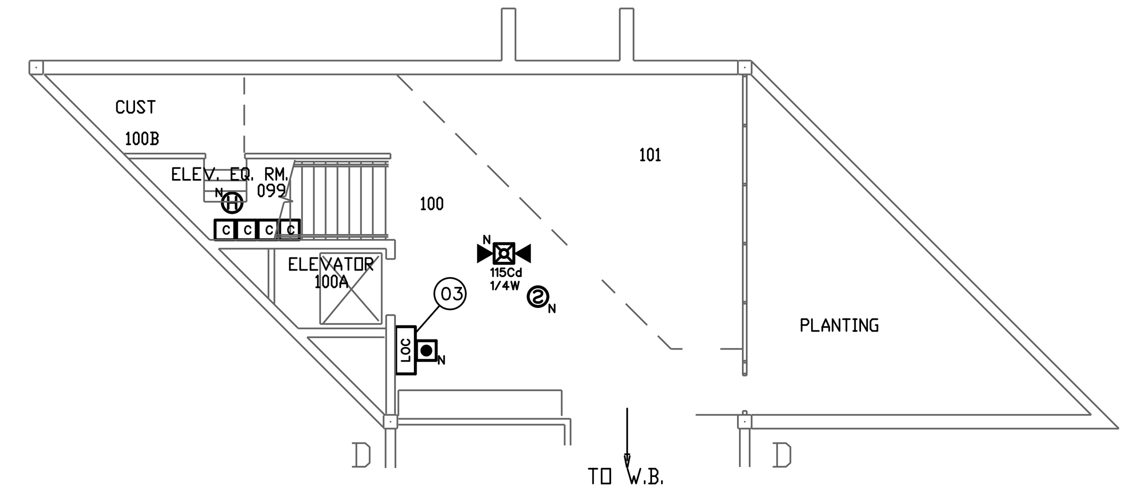
0 8' 16' 32'



SA FIRE ALARM PLAN - LEVEL 2

SCALE: 3/32" = 1'-0"

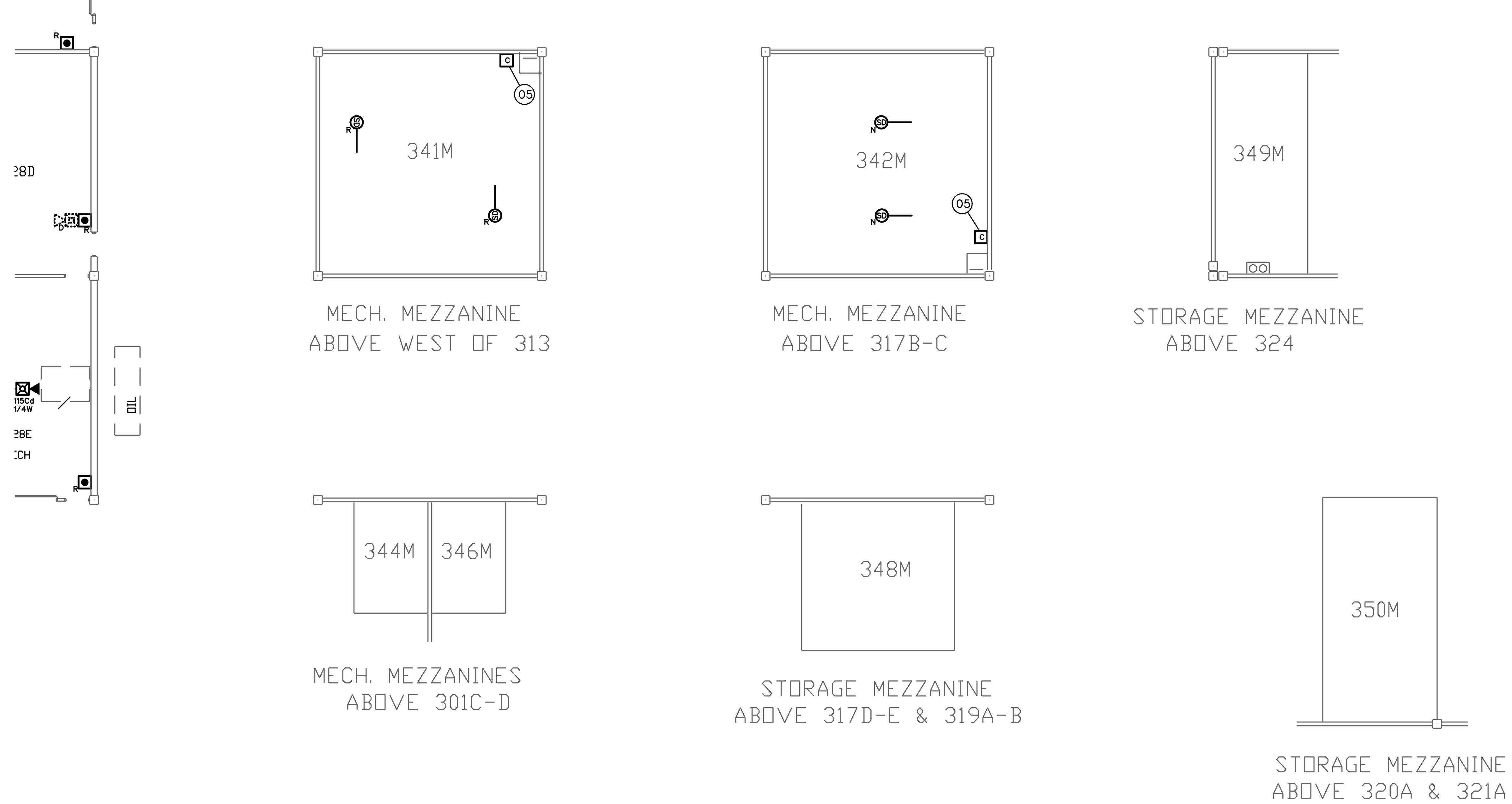
0 8' 16' 32'



SA FIRE ALARM PLAN - LEVEL 1

SCALE: 3/32" = 1'-0"

0 8' 16' 32'



SA – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE ALARM CONTROL PANEL WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN GT 343 AND GT ECC (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

(06) EXISTING ELEVATOR CONTROLLER IS NOT COMPATIBLE WITH EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR SHAFT AND EQUIPMENT ROOM TO FACILITATE FUTURE ACTIVATION OF EMERGENCY FUNCTIONS IF PROVIDE IN FUTURE. INSTALL 4 CONTROL RELAYS INSIDE ELEVATOR EQUIPMENT ROOM FOR FUTURE USE. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP). CONNECTION OF RELAYS TO ELEVATOR EQUIPMENT TO BE UNDER FUTURE CONTRACT.

SA – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	2
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	17
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	1
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	1
H R	FIXED TEMP HEAT DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
H D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	1
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	16
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	3
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	2
SD R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	2
SD D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	0
B N	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. NEW DEVICE ON NEW J-BOX.	0
B R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	0
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	4
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	7
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	0
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	2
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	1
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	12
D	STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	0
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	79
R	CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	0
N	CEILING MOUNT SPEAKER. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	26
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	0
D N	MAGNETIC DOOR HOLD-OPEN DEVICE. INSTALL NEW DEVICE ON NEW J-BOX. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY	0
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	4

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
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USFM REVIEW STAMP

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-Since 1983-

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DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
CENTRAL CAMPUS BUILDINGS
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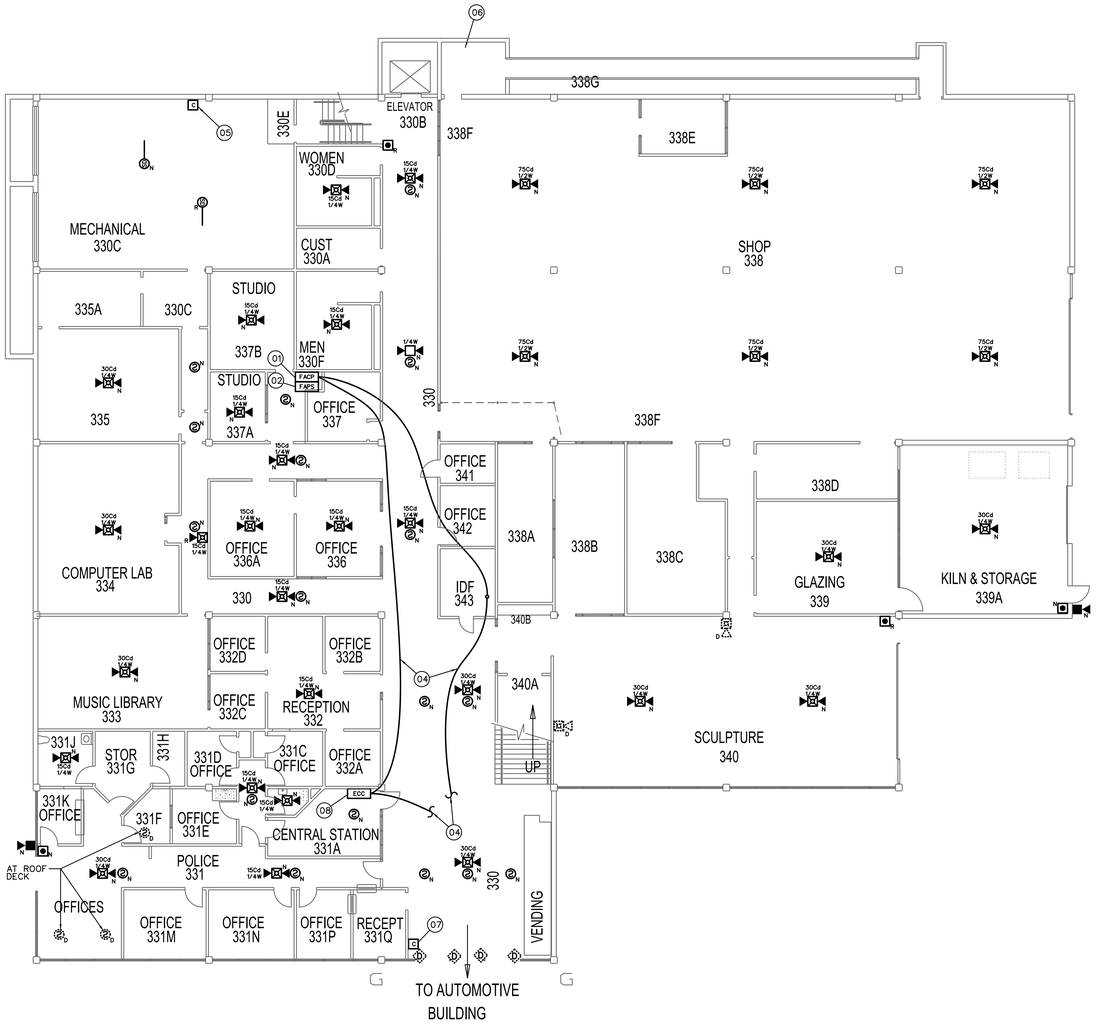
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
SPARKS AUTOMOTIVE
LEVEL 1, 2 & 3 SOUTH & MEZZANINES

FA-13.1



GT FIRE ALARM PLAN - LEVEL 3

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

GT – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02 FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL OR NETWORK ANNUNCIATOR TO GT343, GT FACP, GT ECC OR SA FACP (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

06 REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07 EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER FOR EMERGENCY VOICE/ALARM SYSTEM. EMERGENCY COMMAND CENTER SHALL INCLUDE ALL NECESSARY HARDWARE AND SOFTWARE (INCLUDING SOFTWARE LICENSES) TO DISPLAY COMPLETE STATUS OF ALL NETWORKED FIRE ALARM SYSTEMS ON CAMPUS. FIRE ALARM SYSTEM STATUS SHALL BE DISPLAYED ON A COLOR LCD MONITOR WITH A MINIMUM DIAGONAL DIMENSION OF 17". LCD MONITOR SHALL DISPLAY BUILDING MAP FOR EACH BUILDING AS WELL AS EACH INDIVIDUAL FIRE ALARM INITIATING DEVICE IN EACH BUILDING. EMERGENCY COMMAND CENTER SHALL INCLUDE CONTROLS FOR ALL NETWORKED EMERGENCY VOICE ALARM SYSTEMS ON CAMPUS THAT WILL ENABLE INITIATION OF PRE-RECORDED OR MANUAL AUDIO MESSAGES IN EACH INDIVIDUAL BUILDING OR TO ALL CAMPUS BUILDINGS SIMULTANEOUSLY. EMERGENCY COMMAND CENTER SHALL BE LOCATED IN POLICE DISPATCH. COORDINATE LOCATION AND SPACE REQUIRED WITH UVU FIRE MARSHAL. DEMOLISH EXISTING FIRE ALARM RECEIVER ONCE NEW FIRE ALARM NETWORK CONTROL/ANNUNCIATOR IS FUNCTIONAL.

09 PROVIDE SPEAKER/STROBE WITH AMBER LENS IN PHOTOGRAPHY DEVELOPMENT AREAS NOTED ON PLANS.

GT – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
ECC	FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	70
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	50
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	10
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	2
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	7
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	16
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	8
S N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	17
S R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	8
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	16
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	5
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	95
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	33
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	127
N	CEILING MOUNT SPEAKER. INSTALL NEW DEVICE ON NEW J-BOX. SET VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER. INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	1
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	14

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
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DRAWN BY:	BBH
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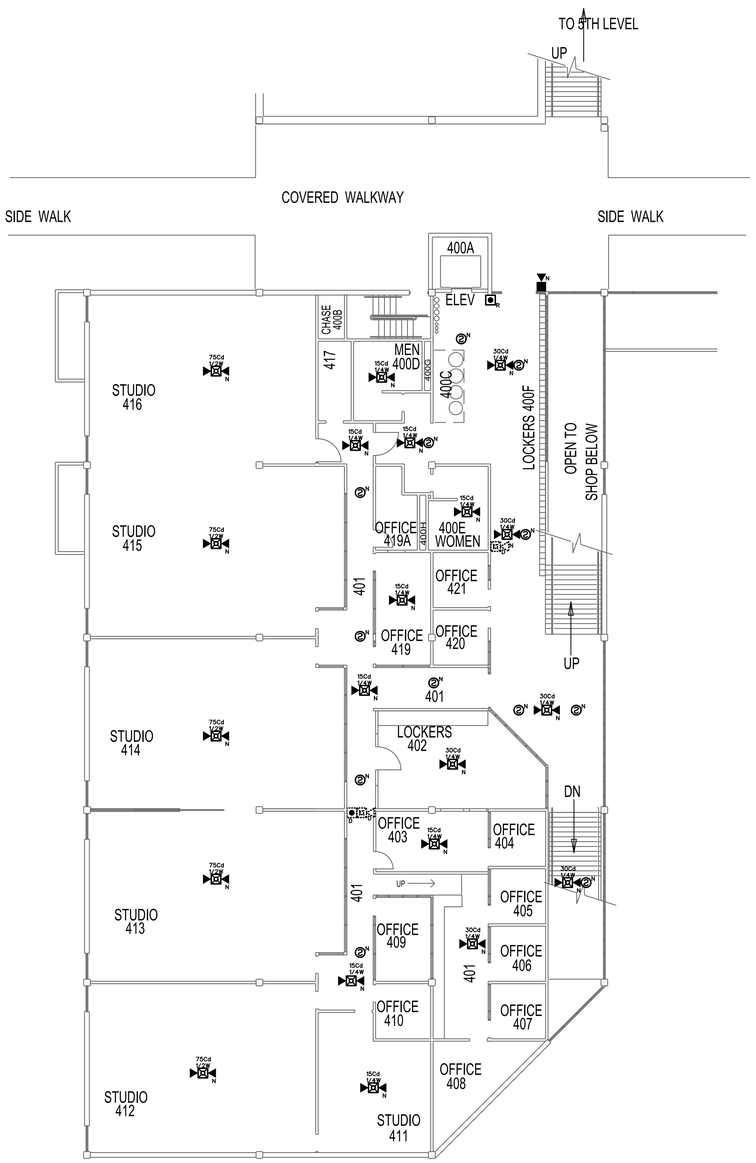
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
GUNTHER TECHNOLOGY
LEVEL 3

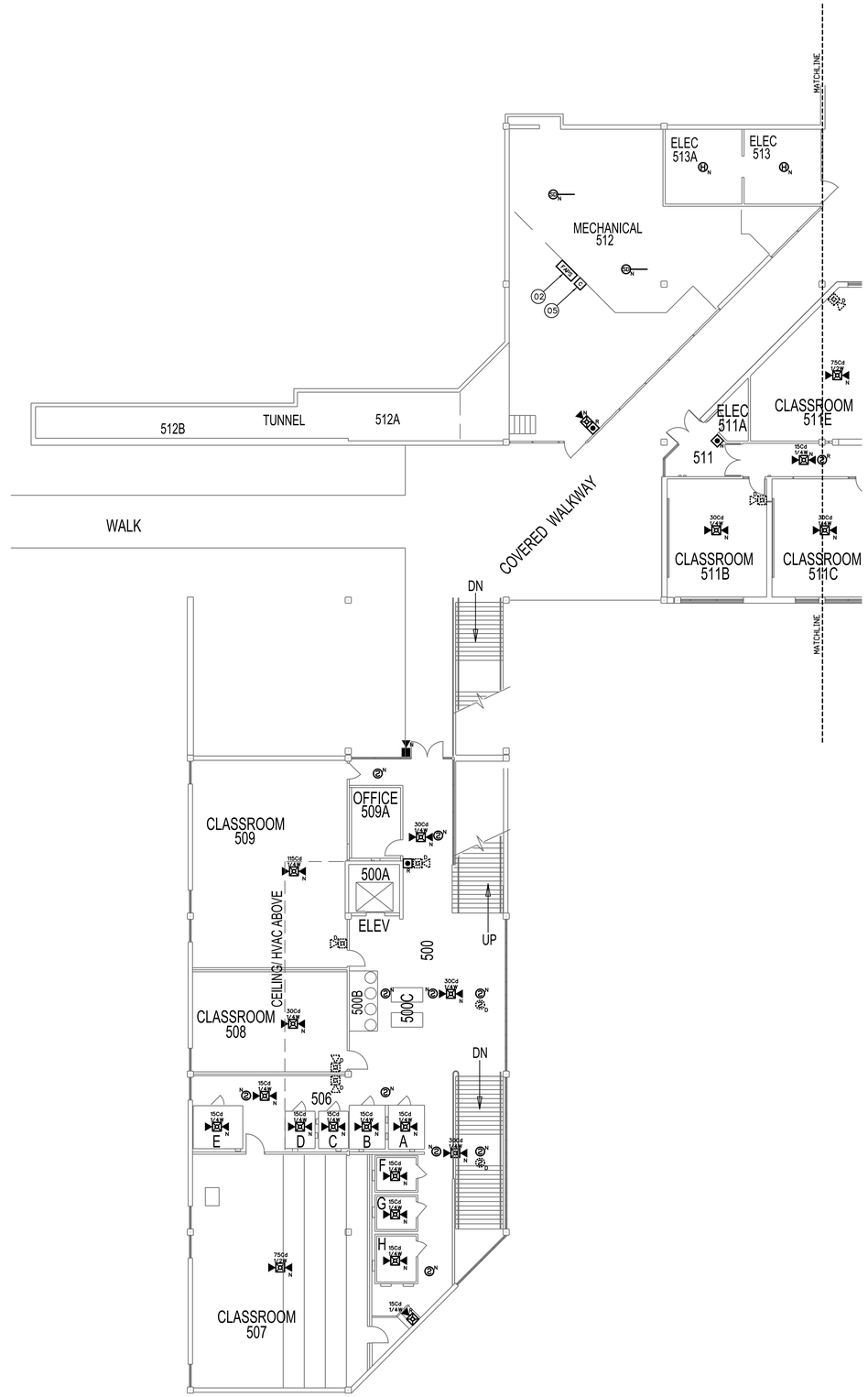
FA-14.0



GT FIRE ALARM PLAN - LEVEL 4

SCALE: 3/32" = 1'-0"

0 8' 16' 32'



GT FIRE ALARM PLAN - LEVEL 5N

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

GT – FIRE ALARM SYSTEM KEY NOTES

01 REPLACE EXISTING FIRE ALARM CONTROL PANEL WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

02 FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03 FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04 INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL OR NETWORK ANNUNCIATOR TO GT343, GT FACP, GT ECC OR SA FACP (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05 INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

06 REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07 EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08 FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER FOR EMERGENCY VOICE/ALARM SYSTEM. EMERGENCY COMMAND CENTER SHALL INCLUDE ALL NECESSARY HARDWARE AND SOFTWARE (INCLUDING SOFTWARE LICENSES) TO DISPLAY COMPLETE STATUS OF ALL NETWORKED FIRE ALARM SYSTEMS ON CAMPUS. FIRE ALARM SYSTEM STATUS SHALL BE DISPLAYED ON A COLOR LCD MONITOR WITH A MINIMUM DIAGONAL DIMENSION OF 17". LCD MONITOR SHALL DISPLAY BUILDING MAP FOR EACH BUILDING AS WELL AS EACH INDIVIDUAL FIRE ALARM INITIATING DEVICE IN EACH BUILDING. EMERGENCY COMMAND CENTER SHALL INCLUDE CONTROLS FOR ALL NETWORKED EMERGENCY VOICE ALARM SYSTEMS ON CAMPUS THAT WILL ENABLE INITIATION OF PRE-RECORDED OR MANUAL AUDIO MESSAGES IN EACH INDIVIDUAL BUILDING OR TO ALL CAMPUS BUILDINGS SIMULTANEOUSLY. EMERGENCY COMMAND CENTER SHALL BE LOCATED IN POLICE DISPATCH. COORDINATE LOCATION AND SPACE REQUIRED WITH UVU FIRE MARSHAL. DEMOLISH EXISTING FIRE ALARM RECEIVER ONCE NEW FIRE ALARM NETWORK CONTROL/ANNUNCIATOR IS FUNCTIONAL.

09 PROVIDE SPEAKER/STROBE WITH AMBER LENS IN PHOTOGRAPHY DEVELOPMENT AREAS NOTED ON PLANS.

GT – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
ECC	FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER	1
S N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	70
S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	50
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	10
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J–BOX.	2
N	PULL STATION. NEW DEVICE ON NEW J–BOX.	7
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	16
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	8
N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	17
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	8
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	16
V	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	5
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	95
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	33
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	127
N	CEILING MOUNT SPEAKER. INSTALL NEW DEVICE ON NEW J–BOX. SET VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER. INSTALL NEW DEVICE ON EXISTING J–BOX. SET VOLUME AS INDICATED.	1
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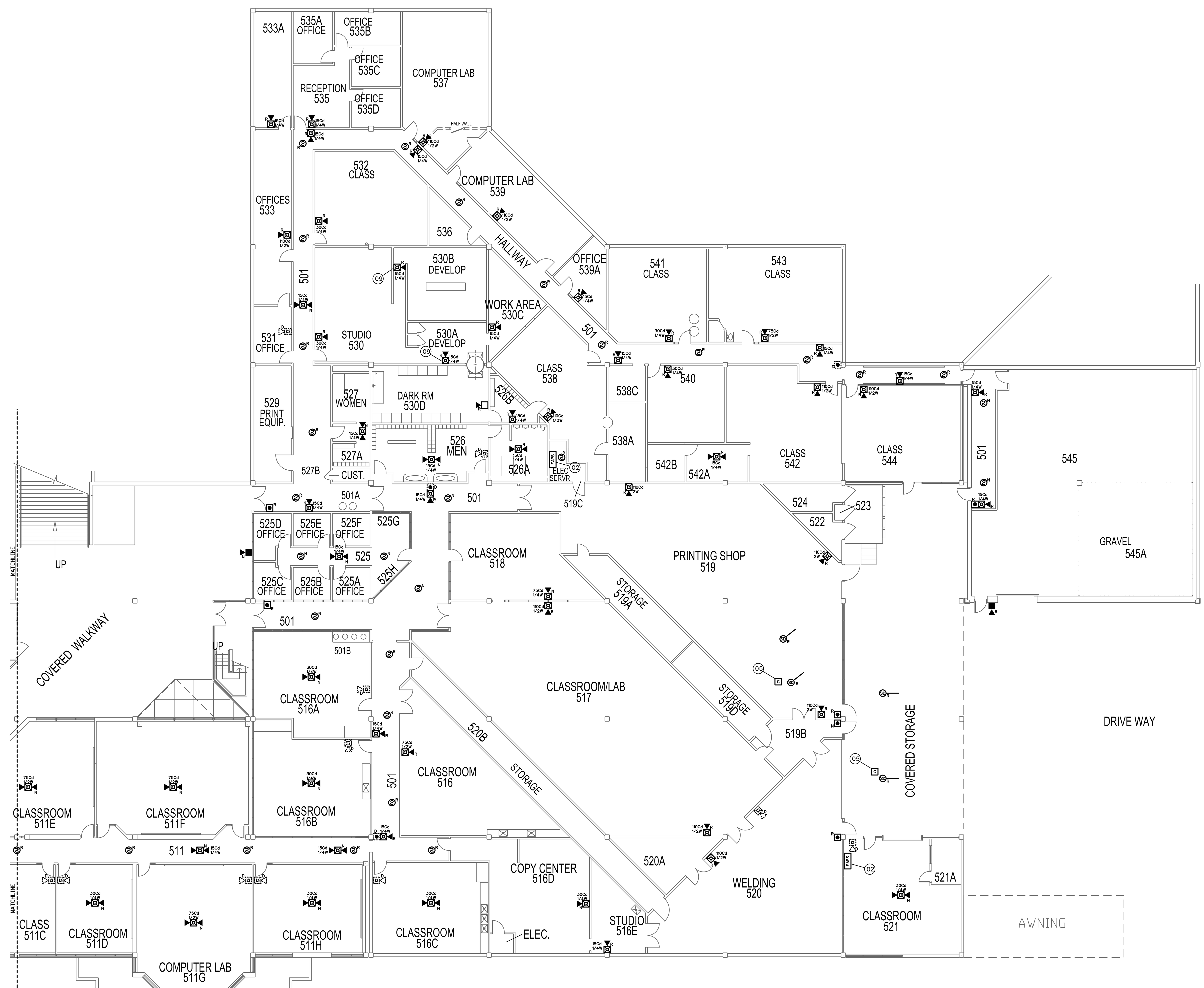
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
GUNTHER TECHNOLOGY
LEVEL 4 & 5 NORTH

FA-14.1



GT FIRE ALARM PLAN - LEVEL 5S

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

GT – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE ALARM CONTROL PANEL WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

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(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL OR NETWORK ANNUNCIATOR TO GT343, GT FACP, GT ECC OR SA FACP (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

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(07) EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

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(09) PROVIDE SPEAKER/STROBE WITH AMBER LENS IN PHOTOGRAPHY DEVELOPMENT AREAS NOTED ON PLANS.

GT – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
ECC	FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	70
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	50
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	10
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	2
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	7
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	16
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SD R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
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C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	16
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	5
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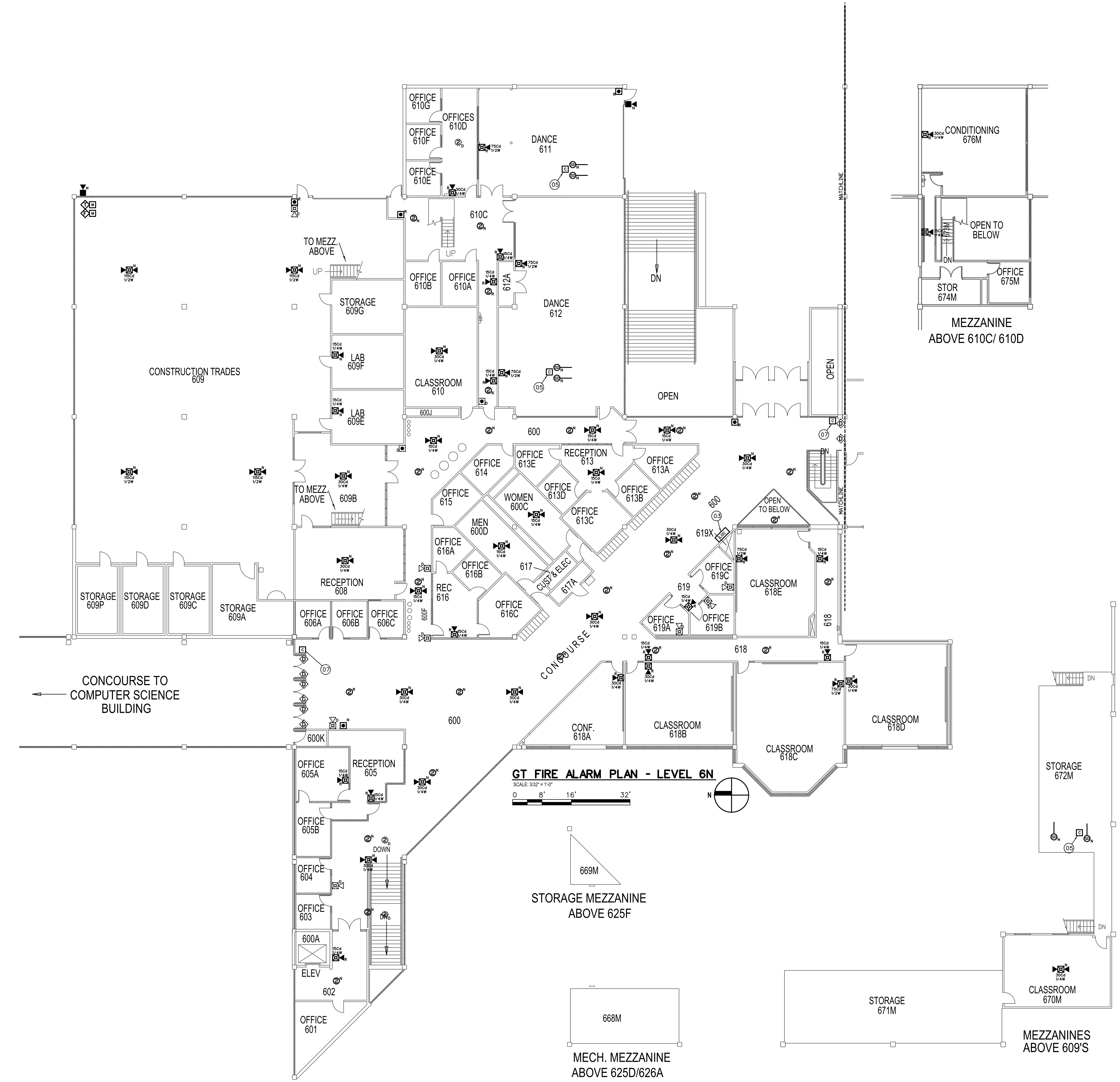
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
GUNTHER TECHNOLOGY
LEVEL 5 SOUTH

FA-14.2



GT FIRE ALARM PLAN - LEVEL 6N

GT – FIRE ALARM SYSTEM KEY NOTES

(01) REPLACE EXISTING FIRE ALARM CONTROL PANEL WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

(02) FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

(03) FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

(04) INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL OR NETWORK ANNUNCIATOR TO GT343, GT FACP, GT ECC OR SA FACP (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

(05) INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

(06) REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

(07) EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

(08) FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER FOR EMERGENCY VOICE/ALARM SYSTEM. EMERGENCY COMMAND CENTER SHALL INCLUDE ALL NECESSARY HARDWARE AND SOFTWARE (INCLUDING SOFTWARE LICENSES) TO DISPLAY COMPLETE STATUS OF ALL NETWORKED FIRE ALARM SYSTEMS ON CAMPUS. FIRE ALARM SYSTEM STATUS SHALL BE DISPLAYED ON A COLOR LCD MONITOR WITH A MINIMUM DIAGONAL DIMENSION OF 17". LCD MONITOR SHALL DISPLAY BUILDING MAP FOR EACH BUILDING AS WELL AS EACH INDIVIDUAL FIRE ALARM INITIATING DEVICE IN EACH BUILDING. EMERGENCY COMMAND CENTER SHALL INCLUDE CONTROLS FOR ALL NETWORKED EMERGENCY VOICE ALARM SYSTEMS ON CAMPUS THAT WILL ENABLE INITIATION OF PRE-RECORDED OR MANUAL AUDIO MESSAGES IN EACH INDIVIDUAL BUILDING OR TO ALL CAMPUS BUILDINGS SIMULTANEOUSLY. EMERGENCY COMMAND CENTER SHALL BE LOCATED IN POLICE DISPATCH. COORDINATE LOCATION AND SPACE REQUIRED WITH UVU FIRE MARSHAL. DEMOLISH EXISTING FIRE ALARM RECEIVER ONCE NEW FIRE ALARM NETWORK CONTROL/ANNUNCIATOR IS FUNCTIONAL.

(09) PROVIDE SPEAKER/STROBE WITH AMBER LENS IN PHOTOGRAPHY DEVELOPMENT AREAS NOTED ON PLANS.

GT – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	1
ECC	FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER	1
	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	70
	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	50
	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	10
	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J-BOX.	2
	PULL STATION. NEW DEVICE ON NEW J-BOX.	7
	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	16
	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	8
SD	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J-BOX.	17
SD	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	8
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	16
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	5
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	3
	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	95
	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	33
	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	127
	CEILING MOUNT SPEAKER. INSTALL NEW DEVICE ON NEW J-BOX. SET VOLUME AS INDICATED.	1
	WALL MOUNT SPEAKER. INSTALL NEW DEVICE ON EXISTING J-BOX. SET VOLUME AS INDICATED.	1
	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	2
D	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	14

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
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DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

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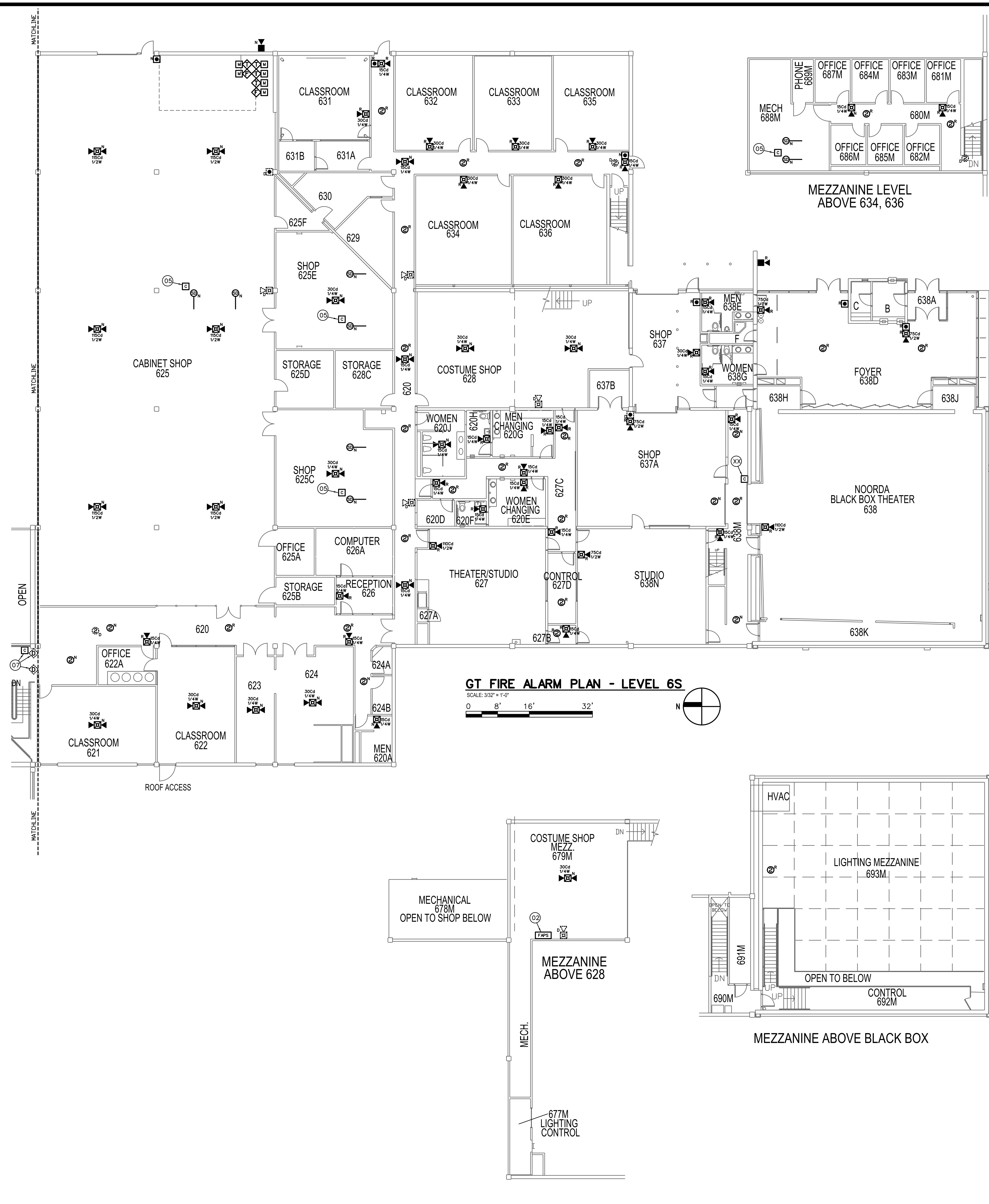
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
GUNTHER TECHNOLOGY
LEVEL 6 NORTH

FA-14.3



GT FIRE ALARM PLAN - LEVEL 6S

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GT – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
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ECC	FIRE ALARM NETWORK CONTROL PANEL/EMERGENCY COMMAND CENTER	1
N	SMOKE DETECTOR. NEW DEVICE ON NEW J–BOX.	70
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	50
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	10
H N	FIXED TEMP HEAT DETECTOR. NEW DEVICE ON NEW J–BOX.	2
N	PULL STATION. NEW DEVICE ON NEW J–BOX.	7
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J–BOX.	16
D	PULL STATION TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J–BOX.	8
SD N	DUCT SMOKE DETECTOR. NEW DETECTOR AND SAMPLING TUBE ON NEW J–BOX.	17
SD R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	5
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	8
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	16
T	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE–USED.	5
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE–USED.	3
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	5
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N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J–BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	127
N	CEILING MOUNT SPEAKER. INSTALL NEW DEVICE ON NEW J–BOX. SET VOLUME AS INDICATED.	1
R	WALL MOUNT SPEAKER. INSTALL NEW DEVICE ON EXISTING J–BOX. SET VOLUME AS INDICATED.	1
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D	MAGNETIC DOOR HOLD–OPEN DEVICE. EXISTING TO BE RE–USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	14

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GREGORY T. JONES
STATE OF UTAH

03/04/13
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REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

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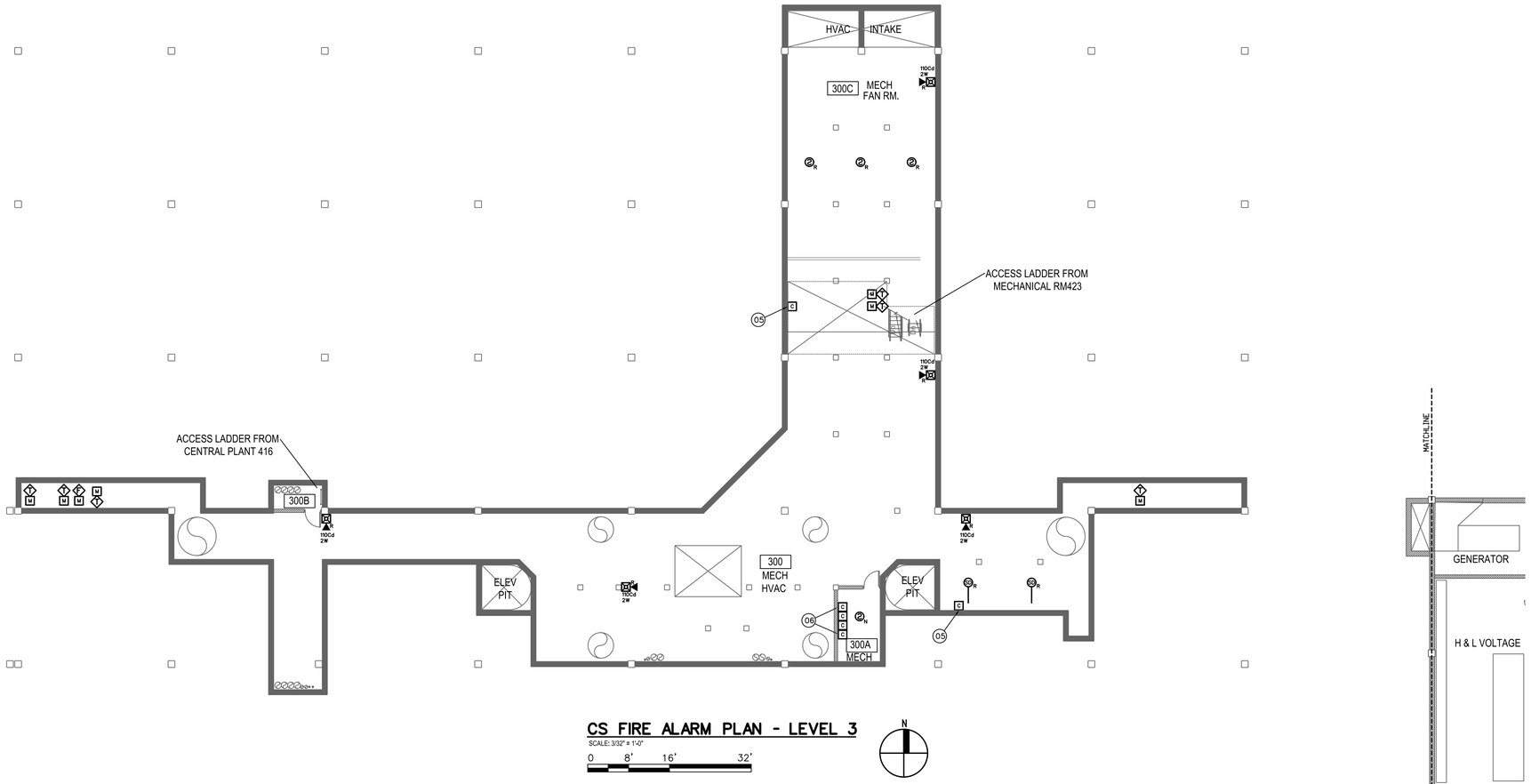
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
GUNTHER TECHNOLOGY
LEVEL 6 SOUTH

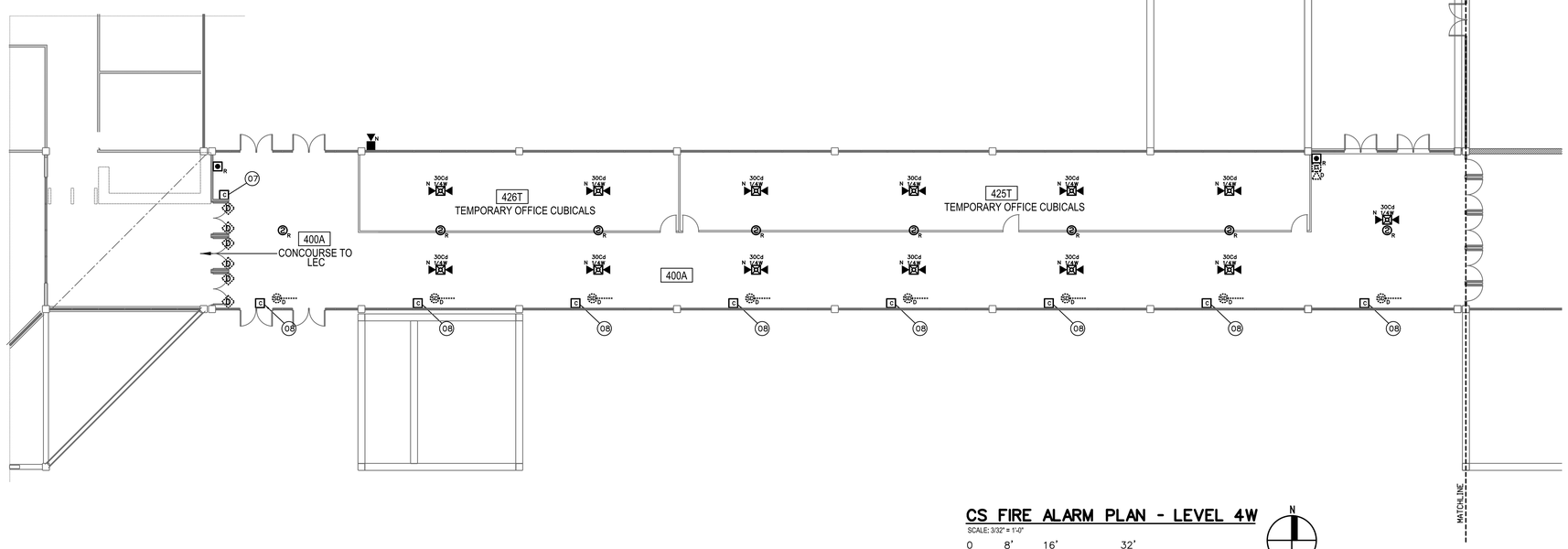
FA-14.4



CS FIRE ALARM PLAN - LEVEL 3

SCALE: 3/32" = 1'-0"

0 8' 16' 32'



CS FIRE ALARM PLAN - LEVEL 4W

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

CS – FIRE ALARM SYSTEM KEY NOTES

01. REPLACE EXISTING FIRE ALARM CONTROL PANEL (SIMPLEX 4100) WITH NEW, ADDRESSABLE FIRE/EMERGENCY VOICE ALARM CONTROL PANEL. NEW CONTROL PANEL SHALL BE FULLY COMPATIBLE AND FROM SAME MANUFACTURER AS NETWORK CONTROL PANEL INSTALLED IN EMERGENCY COMMAND CENTER AT POLICE STATION (GUNTHER TRADES). PROVIDE ALL REQUIRED CONTROL PANELS, NETWORK INTERFACE CARDS, MODULES, CABINETS, POWER SUPPLIES, ETC. TO PROVIDE A COMPLETE AND FUNCTIONAL FIRE/EMERGENCY VOICE ALARM SYSTEM. CONTROL PANEL SHALL HAVE SUFFICIENT CAPACITY TO MONITOR ALL INITIATING DEVICES SHOWN ON PLANS WITH AN ADDITIONAL SPARE CAPACITY OF 20% FOR FUTURE EXPANSION. EXISTING 120 VAC POWER CIRCUIT MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. PROVIDE NEW SIGNALING LINE, INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS FROM FACP TO NEW AND EXISTING INITIATING DEVICES AND NOTIFICATION APPLIANCES. EXISTING CIRCUITS MAY BE RECONFIGURED AND RE-USED IF COMPLETELY FUNCTIONAL AND COMPATIBLE WITH NEW FACP/DEVICES.

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04. INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN CS608 & CS521A (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

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06. REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

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CS – FIRE ALARM EQUIPMENT LEGEND

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DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	4
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	10
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	7
D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	3
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	26
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	15
D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	13
R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	2
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	14
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	55
R	TEST/RESET SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	1
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	10
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	4
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	10
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	122
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	53
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	84
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
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	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	56

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No. 191330
GREGORY T. JONES
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CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
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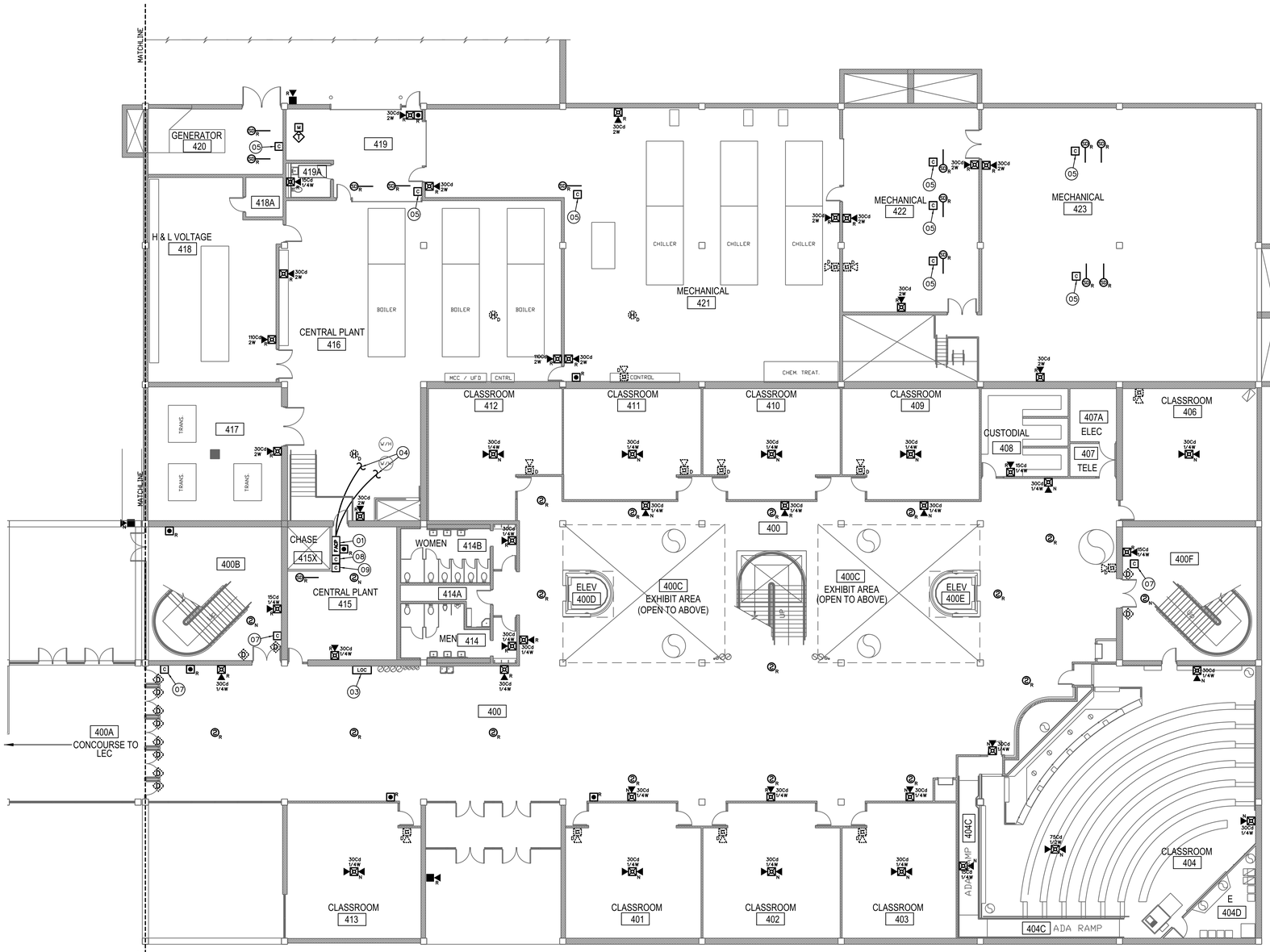
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
COMPUTER SCIENCE
LEVEL 3 & 4 WEST

FA-15.0



CS FIRE ALARM PLAN - LEVEL 4E

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

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S R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
S D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	7
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LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

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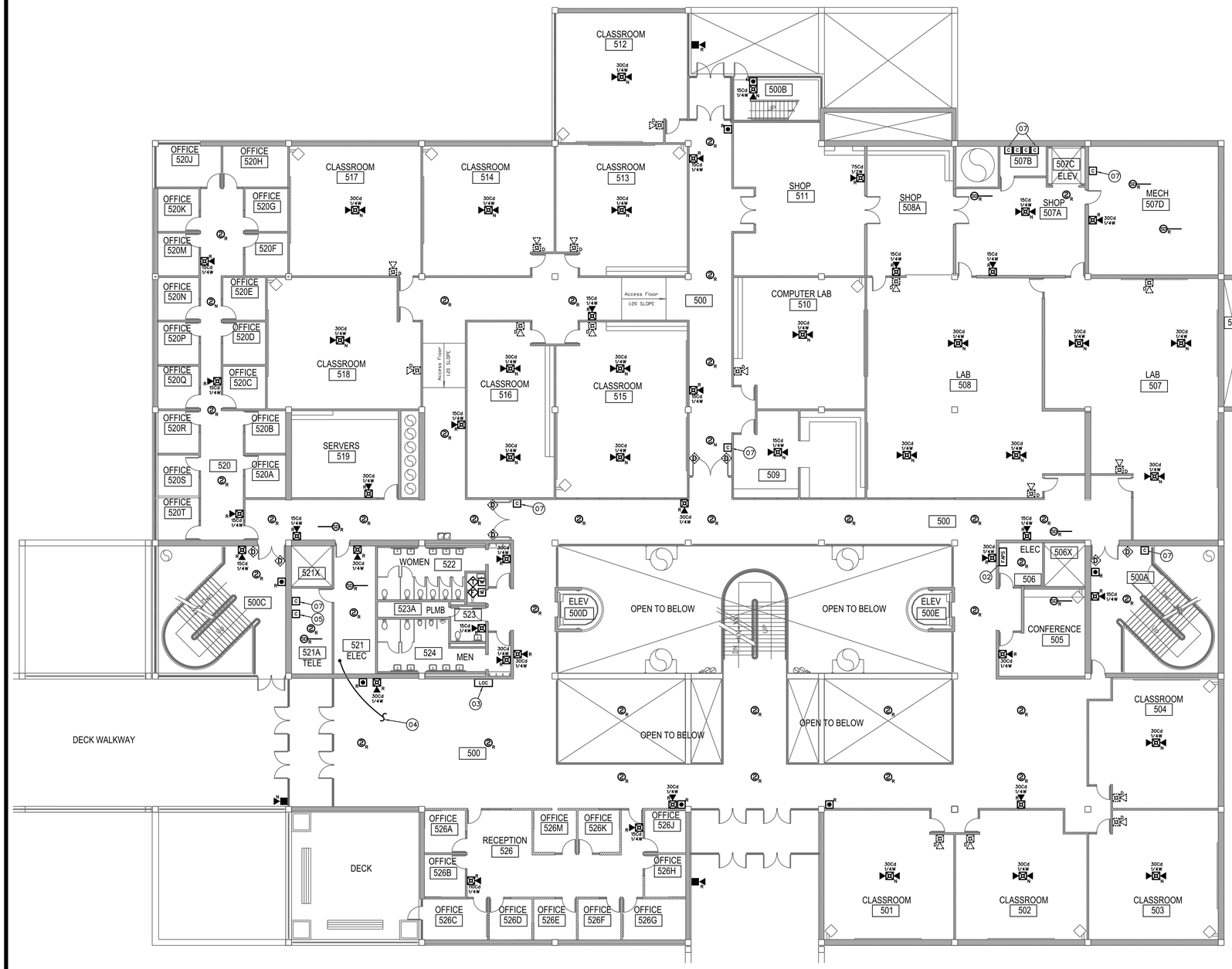
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
COMPUTER SCIENCE
LEVEL 4 EAST

FA-15.1



CS FIRE ALARM PLAN - LEVEL 5

SCALE: 3/32" = 1'-0"

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N

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LICENSED PROFESSIONAL ENGINEER No. 191330 GREGORY T. JONES STATE OF UTAH

03/04/13

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USFM REVIEW STAMP

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Fire Protection Engineers
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UTAH VALLEY UNIVERSITY
CENTRAL CAMPUS BUILDINGS
800 WEST UNIVERSITY PARKWAY
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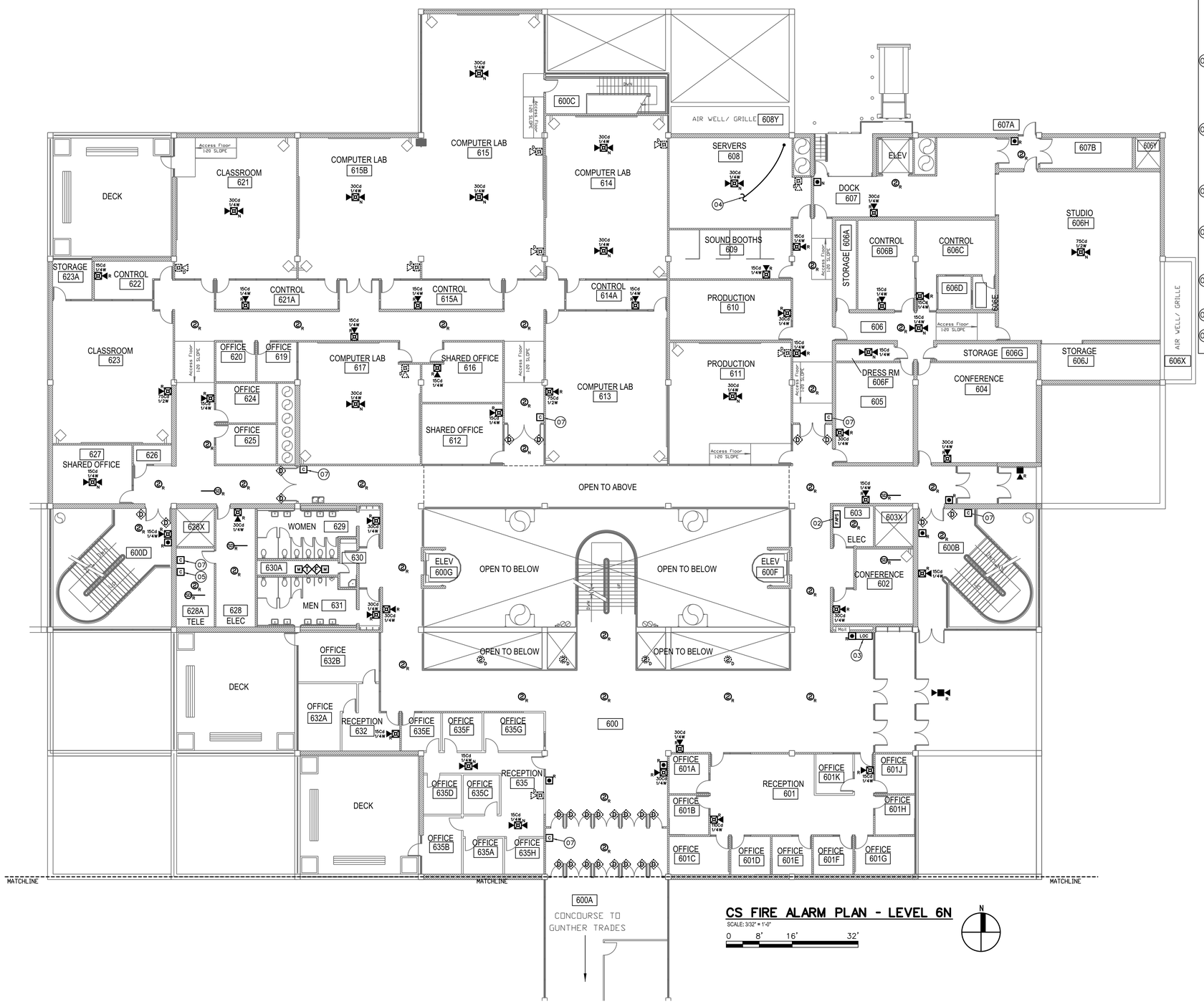
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
COMPUTER SCIENCE
LEVEL 5

FA-15.2



CS FIRE ALARM PLAN - LEVEL 6N

SCALE: 3/32" = 1'-0"

0 8' 16' 32'

N

CS – FIRE ALARM SYSTEM KEY NOTES

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CS – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	4
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	10
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	7
D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	3
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	26
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	15
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M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	14
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	55
T	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	1
F	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	10
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	4
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	10
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	122
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	53
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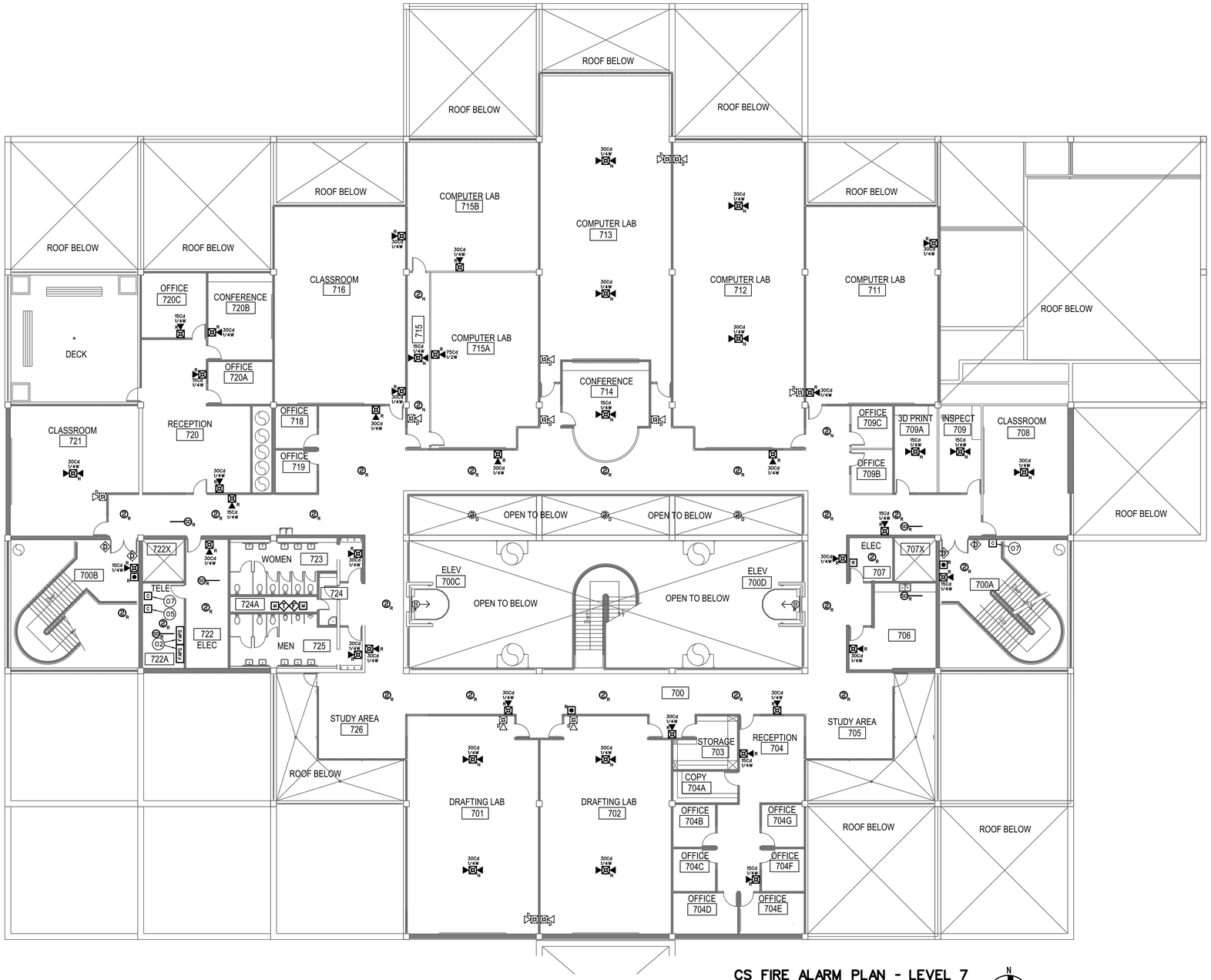
FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
COMPUTER SCIENCE
LEVEL 6 NORTH

FA-15.3



CS FIRE ALARM PLAN - LEVEL 7

SCALE: 3/32" = 1'-0"

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N

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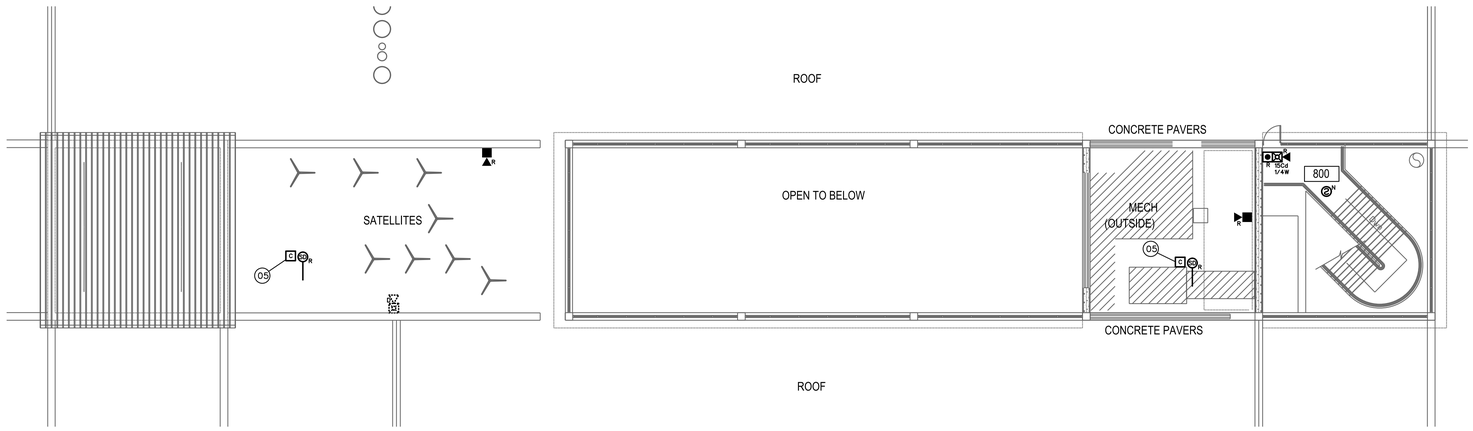
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
COMPUTER SCIENCE
LEVEL 7

FA-15.4



CS FIRE ALARM PLAN - LEVEL 8

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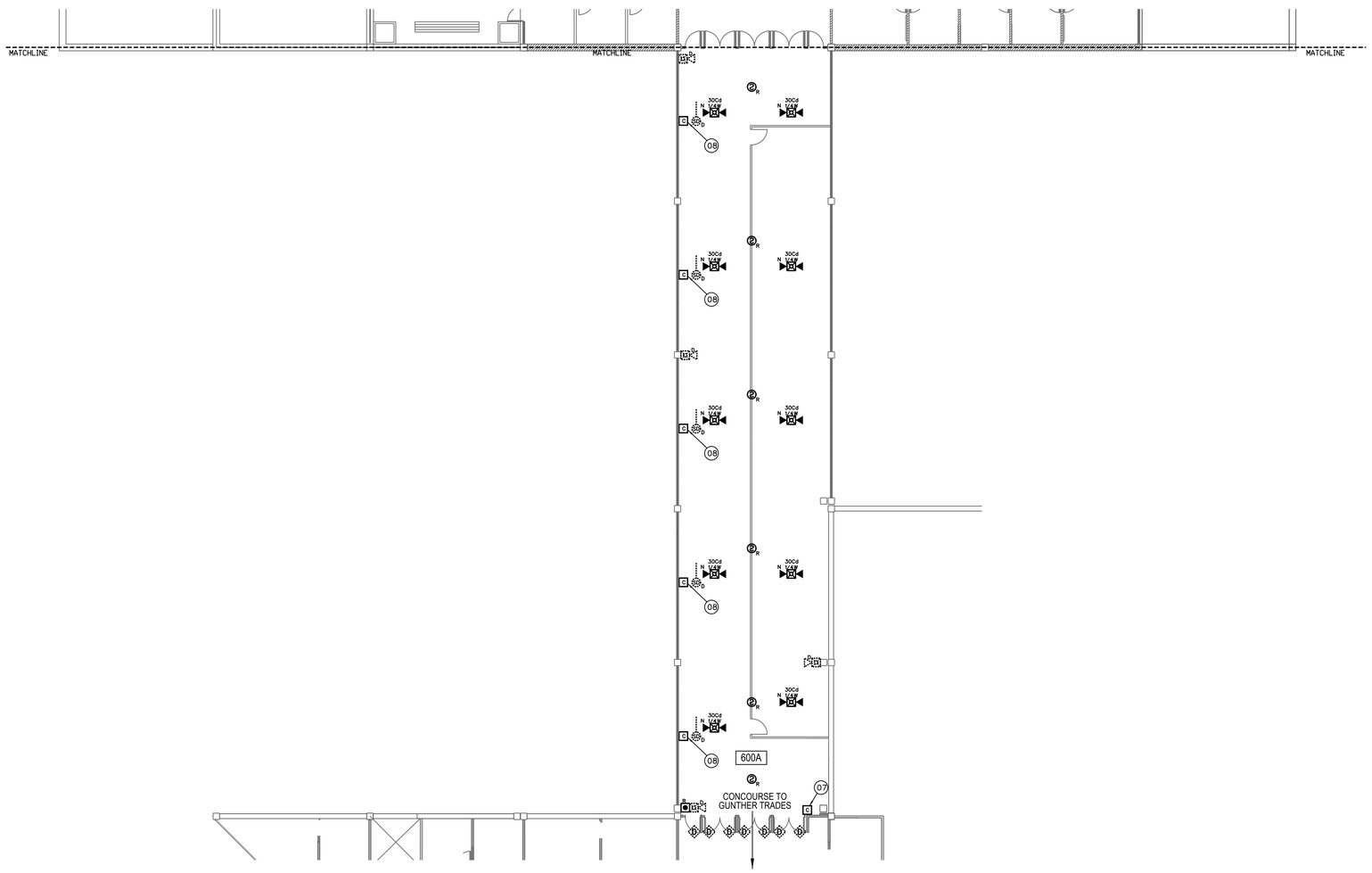

CS FIRE ALARM PLAN - LEVEL 6S

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02. FURNISH AND INSTALL POWER SUPPLY TO PROVIDE 24 VDC POWER TO NOTIFICATION APPLIANCES. REMOTE POWER SUPPLY/AMPLIFIER TO POWER NOTIFICATION APPLIANCES (SPEAKERS AND STROBES). NUMBER AND LOCATION OF REMOTE POWER SUPPLIES/AMPLIFIERS SHALL BE SUFFICIENT TO PROVIDE A SEPARATE NOTIFICATION ZONE FORE EACH FLOOR LEVEL OF BUILDING. REQUIRED NUMBER AND LOCATION OF POWER SUPPLIES/AMPLIFIERS TO BE DETERMINED BY CONTRACTOR. SURFACE MOUNT ON WALLS OF ELECTRICAL ROOMS. DEMOLISH EXISTING POWER SUPPLIES (WHERE PRESENT). PROVIDE ADDRESSABLE MODULES TO SUPERVISE TROUBLE OUTPUTS OF POWER SUPPLIES AND ADDRESSABLE CONTROL RELAYS FOR NOTIFICATION APPLIANCE ACTIVATION. EXISTING 120 VAC POWER CIRCUITS MAY BE RE-USED BUT PROVIDE NEW BATTERIES FOR SECONDARY POWER SUPPLY. POWER SUPPLIES SHALL SYNCHRONIZE ALL AUDIBLE AND VISUAL SIGNALS OF NOTIFICATION APPLIANCES.

03. FIRE ALARM ANNUNCIATOR PANEL AND EMERGENCY VOICE ALARM OPERATING CONSOLE. FIRE ALARM ANNUNCIATOR SHALL BE LCD TYPE TO DISPLAY STATUS OF FIRE ALARM SYSTEM WITH BUTTONS TO ALLOW FULL SYSTEM CONTROL (ACKNOWLEDGE, SILENCE, RESET, ETC.). EMERGENCY VOICE ALARM OPERATING CONSOLE SHALL HAVE BUTTONS FOR ACTIVATION OF PRERECORDED MESSAGES AND A BUILT-IN MICROPHONE FOR MANUAL MESSAGES. CONFIGURE OPERATING CONSOLE TO ALLOW VOICE MESSAGES TO BE BROADCAST TO INDIVIDUAL BUILDING ZONES OR TO ENTIRE BUILDING. DEMOLISH EXISTING FIRE ALARM ANNUNCIATOR PANEL (WHERE PRESENT) AND INSTALL NEW ANNUNCIATOR/OPERATING CONSOLE IN SAME LOCATION. PANELS MAY BE SURFACE MOUNTED ON EXISTING WALLS.

04. INSTALL FIBER OPTIC OR COPPER CABLES (CONTRACTOR'S OPTION) TO FACILITATE CONNECTION OF BUILDING CONTROL PANEL TO CAMPUS FIRE/EMERGENCY VOICE ALARM NETWORK. INSTALL NETWORK CIRCUITS (OUTGOING AND RETURN) FROM NETWORK MODULE IN CONTROL PANEL TO INTERFACE WITH EXISTING UVU FIBER NETWORK IN CS608 & CS521A (SEE SHEET FA-02 FOR NETWORK SCHEMATIC). PROVIDE ALL REQUIRED NETWORK INTERFACE MODULES, REPEATERS OR FIBER TO COPPER CONVERTERS. NETWORK CIRCUITS SHALL BE INSTALLED IN CONDUIT. OUTGOING AND RETURN CIRCUITS SHALL BE PHYSICALLY SEPARATED AND INSTALLED IN SEPARATED CONDUIT/RACEWAY.

05. INSTALL ADDRESSABLE RELAYS TO PROVIDE SHUTDOWN OF ALL AIR MOVEMENT SYSTEMS WITH A CAPACITY IN EXCESS OF 2,000 CFM. INSTALL A SEPARATE RELAY FOR EACH AIR MOVEMENT SYSTEM. CONNECT RELAYS TO EXISTING AIR MOVEMENT SYSTEM CONTROLS (EXISTING CONTROL CIRCUITS MAY BE RE-USED IF FUNCTIONAL) AND PROGRAM RELAY TO SHUT DOWN AIR HANDLER UPON ACTIVATION OF ANY DUCT SMOKE DETECTOR OR FIRE ALARM INITIATING DEVICE.

06. REPLACE EXISTING CONTROL RELAYS FOR ELEVATOR CONTROLLER WITH NEW CONTROL RELAYS COMPATIBLE WITH NEW FACP. CONNECT NEW RELAYS TO EXISTING ELEVATOR CONTROL EQUIPMENT TO PROVIDE EXISTING EMERGENCY FUNCTIONS (RECALL, FIRE FIGHTER CONTROL AND/OR POWER SHUNT/TRIP). INSTALL SMOKE AND HEAT DETECTORS IN ELEVATOR EQUIPMENT ROOM. LABEL RELAY TO INDICATE PROGRAMMED FUNCTION (PRIMARY RECALL, SECONDARY RECALL, CAB LIGHT FLASH, POWER SHUNT/TRIP).

07. EXISTING FIRE DOOR WITH NEW OR EXISTING (SEE LEGEND) MAGNETIC DOOR HOLD-OPEN DEVICES. INSTALL ADDRESSABLE RELAY TO RELEASE FIRE DOOR UPON ACTIVATION OR ANY FIRE ALARM INITIATING DEVICE IN BUILDING. CONNECT POWER SUPPLY TO MAGNETIC HOLD-OPEN DEVICES THROUGH NORMALLY CLOSED CONTACTS OF CONTROL RELAY.

08. INSTALL ADDRESSABLE RELAYS TO ACTIVATE THE CLOSURE OF PNEUMATIC FIRE/SMOKE DAMPERS. CONNECT RELAY TO EXISTING PNEUMATIC SYSTEM.

09. INSTALL ADDRESSABLE RELAY TO ACTIVATE THE SMOKE EVACUATION SYSTEM. CONNECT NEW RELAY TO EXISTING SMOKE EVACUATION SYSTEM AND PROGRAM TO OPERATE UPON ACTIVATION OF SMOKE DETECTORS IN ATRIUM.

CS – FIRE ALARM EQUIPMENT LEGEND

(QUANTITIES ARE ESTIMATES ONLY. CONTRACTOR TO VERIFY ACTUAL QUANTITIES FOR BID PURPOSES)

DEVICE	DESCRIPTION	EST. QTY.
FACP	FIRE/EMERGENCY VOICE ALARM CONTROL PANEL	1
FAPS	FIRE/EMERGENCY VOICE ALARM REMOTE POWER SUPPLY/AMPLIFIER	TBD
LOC	FIRE ALARM ANNUNCIATOR/EMERGENCY VOICE ALARM OPERATING CONSOLE	4
N	SMOKE DETECTOR. NEW DEVICE ON NEW J-BOX.	10
R	SMOKE DETECTOR. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	119
D	SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	7
D	HEAT DETECTOR TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	3
N	PULL STATION. NEW DEVICE ON NEW J-BOX.	2
R	PULL STATION. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	26
R	DUCT SMOKE DETECTOR. REMOVE EXISTING DETECTOR AND SAMPLING TUBE AND INSTALL NEW IN SAME LOCATION.	15
D	DUCT SMOKE DETECTOR TO BE DEMOLISHED. REMOVE DETECTOR, SAMPLING TUBE AND WIRING. PATCH HOLES IN REMAINING DUCT.	13
R	PROJECTED BEAM SMOKE DETECTOR. SINGLE ENDED TYPE WITH BUILT-IN, MOTORIZED TEST FILTERS. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX.	2
M	ADDRESSABLE MONITOR MODULE. FOR CONNECTION OF CONVENTIONAL INITIATING DEVICE TO ADDRESSABLE FACP.	14
C	ADDRESSABLE CONTROL MODULE TO INITIATE PROTECTED PREMISE FIRE SAFETY FUNCTIONS.	55
R	TEST/REST SWITCH FOR PROJECTED BEAM SMOKE DETECTOR. SWITCH SHALL BE KEY OPERATED ON INSTALLED IN SECURED LOCATION.	1
	FIRE SPRINKLER VALVE SUPERVISORY SWITCH. EXISTING TO BE RE-USED.	10
F	FIRE SPRINKLER WATER FLOW SWITCH. EXISTING TO BE RE-USED.	4
N	WALL MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. MOUNT BETWEEN 80" & 96" AFF. SET CANDELA RATING AND VOLUME AS INDICATED.	10
R	WALL MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	122
D	HORN/STROBE TO BE DEMOLISHED. REMOVE DEVICE AND WIRING. INSTALL COVER PLATE ON REMAINING J-BOX.	53
N	CEILING MOUNT SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. SET CANDELA RATING AND VOLUME AS INDICATED.	84
N	EXTERIOR SPEAKER/STROBE. NEW DEVICE ON NEW J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
R	EXTERIOR SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	7
R	EXTERIOR CEILING MOUNT SPEAKER/STROBE. REMOVE EXISTING DEVICE AND INSTALL NEW DEVICE ON EXISTING J-BOX. DEVICE AND J-BOX SHALL BE WEATHER-PROOF. SET CANDELA RATING AND VOLUME AS INDICATED.	1
	MAGNETIC DOOR HOLD-OPEN DEVICE. EXISTING TO BE RE-USED. POWER TO BE PROVIDED FROM FACP OR REMOTE POWER SUPPLY.	56

LICENSED PROFESSIONAL ENGINEER
No. 191330
GREGORY T. JONES
STATE OF UTAH

03/04/13
ENGINEER'S STAMP

DFCM REVIEW STAMP

USFM REVIEW STAMP

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DRAWING DATE:	03/04/13
REVISION DATE:	XX/XX/XX
JOB NUMBER:	104806
DWG ISSUE:	REVIEW
DRAWN BY:	BBH
CHECKED BY:	GTJ

UTAH VALLEY UNIVERSITY
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FIRE ALARM/EMERGENCY VOICE ALARM SYSTEM UPGRADES
DFCM PROJECT #12142790

FIRE ALARM SYSTEM
COMPUTER SCIENCE
LEVEL 6 SOUTH & 8

FA-15.5