LEON COUNTY COURTHOUSE NEW FIRE ALARM SYSTEM

100% CONSTRUCTION DOCUMENTS

for

LEON COUNTY
TALLAHASSEE, FLORIDA

March 13, 2013



PEG #212-116

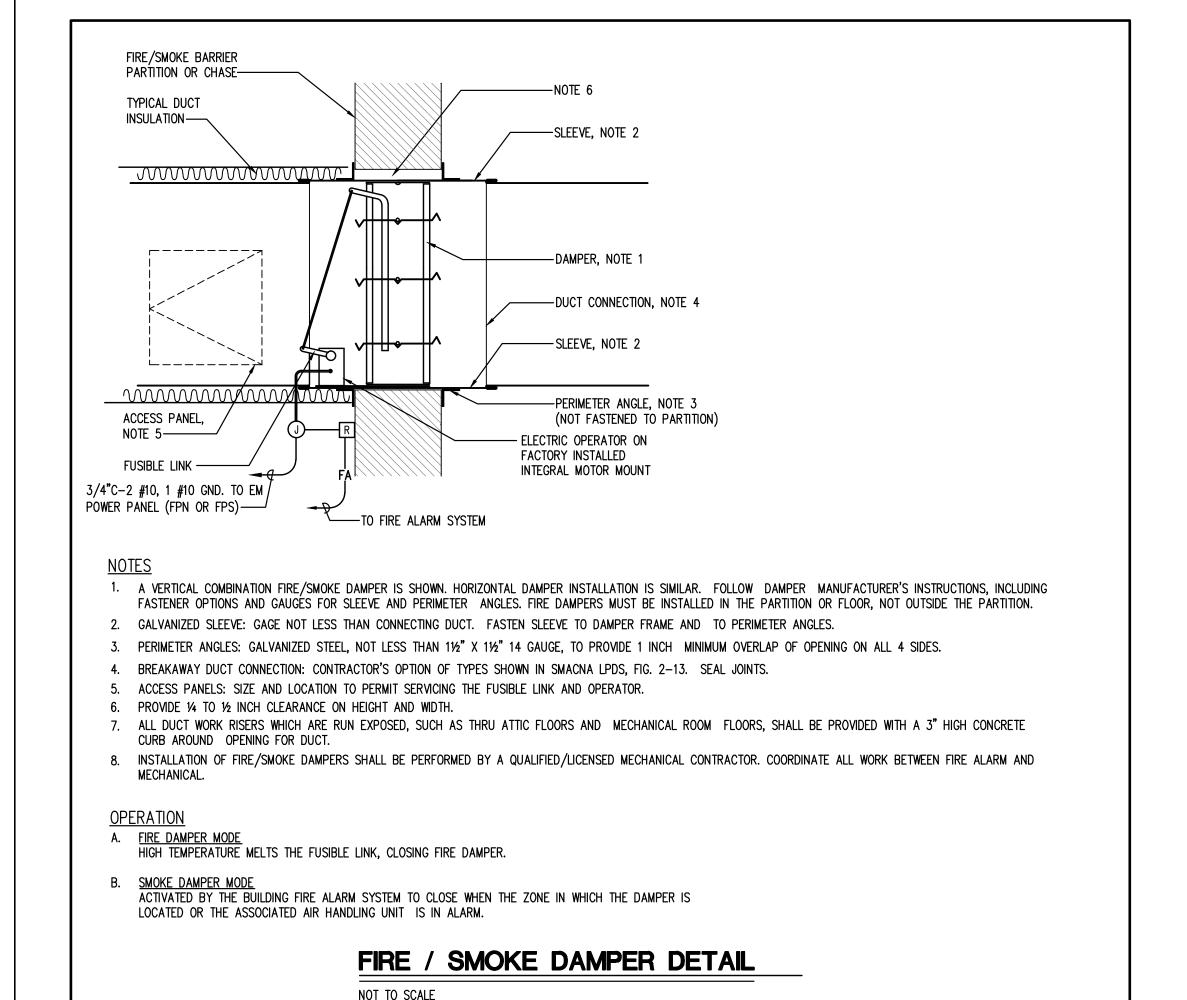
DRAWING LIST

E1.P2 E1.P3S E1.P3N E1.P4S E1.P4N E1.1S	ABBREVIATIONS, LEGEND, AND GENERAL NOTES SPECIFICATIONS PARKING LEVEL 0 - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PARKING LEVEL 1 - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PARKING LEVEL 2 - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PARKING LEVEL 3 SOUTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PARKING LEVEL 3 NORTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PARKING LEVEL 4 SOUTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PARKING LEVEL 4 NORTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PLAZA LEVEL SOUTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN PLAZA LEVEL NORTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN	E1.2N E1.3S E1.3N E1.4S E1.4N E1.5S	THIRD FLOOR SOUTH — EXISTING CONDITIONS/NEW WORK — FLOOR PLAN THIRD FLOOR NORTH — EXISTING CONDITIONS/NEW WORK — FLOOR PLAN FOURTH FLOOR SOUTH — EXISTING CONDITIONS/NEW WORK — FLOOR PLAN FOURTH FLOOR NORTH — EXISTING CONDITIONS/NEW WORK — FLOOR PLAN
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EXISTING FAN SCHEDULE

NIT NO.	LOCATION	AREA SERVED	CFM	MOTOR HP	FIRE ALARM DEVICES
F-2	P1	PARKING LEVEL 1	7200	3/4	N
F-4	P1	PARKING LEVEL 1	7200	3/4	N
F-6	P1	PARKING LEVEL 1	7200	3/4	N
EF-7	P2	CHILLER ROOM 1 VENTILATION	15,000	2	R
EF-9	P2	PARKING LEVEL 2	7200	3/4	N
EF-11	P2	PARKING LEVEL 2	7200	3/4	N N
EF-12	P2	PARKING LEVEL 2	7200	3/4	
EF-13	P2	PARKING LEVEL 2	7200	·	N
				3/4	N
EF-14	P3S	PRISON HOLD TOILET	90	50 WATTS	R
EF-16	P3S	PARKING LEVEL 3	7200	3/4	N
F-19	P3S	PARKING LEVEL 3	7200	3/4	N
EF-21	P4S	PARKING LEVEL 4	20200	3	N
F-22	P4S	PARKING LEVEL 4	20200	3	N
F-23	P4S	PARKING LEVEL 4	20200	3	N
F-24	P4S	PARKING LEVEL 4	20200	3	N -
F-25	ROOF	TOILET EXHAUST	725	1/16	R
F-26	ROOF	TOILET EXHAUST	7195	1.5	R
F-27	RPPF	SOUTH ATRIUM SMOKE EXHAUST	40000	10	*A INTERLOCK TO START UPON F.A. ACTIVATION
F-28	P2	TRANSFORMER ROOM VENTILATION	15000	2	R
F-30	PO PO	PARKING LEVEL O	7200	3/4	N
F-32	P0	PARKING LEVEL O	7200	3/4	N
F-34	P0	PARKING LEVEL O	7200	3/4	N
F-36	P0	PARKING LEVEL O	14400	3	N
F-39	P1	PARKING LEVEL 1	14400	3	N
F-42	P2	PARKING LEVEL 2	14400	3	N
F-45	P3S	PARKING LEVEL 3	14400	3	N
EF-47	P4S	ELEVATOR #4 MACH. RM VENTILATION	5000	1/4	R
F-48	R00F	ELEVATORS #1 & #2 MACH. RM VENTILATION	15000	2	R
EF-49	R00F	ELEVATORS #3 & #5 MACH. RM VENTILATION	15,00	2	R
EF-51	P4N	PARKING LEVEL 4	18,115	3	N
F-52	P4N	PARKING LEVEL 4	18,115	3	N
F-53	P4N	PARKING LEVEL 4	18,115	3	N
F-54	P4N	PARKING LEVEL 4	18,115	3	N N
F-55 F-56	P4N P4N	PARKING LEVEL 4 PARKING LEVEL 4	18,115	3	N N
F-57	P4N P4N	PARKING LEVEL 4 PARKING LEVEL 4	18,115 18,115	3	N N
EF-58	P4N P4N	PARKING LEVEL 4 PARKING LEVEL 4	18,115	3	N N
F-59	P4N P4N	PARKING LEVEL 4 PARKING LEVEL 4	18,115	3	N N
F-61	P4N	PARKING LEVEL 4	18,115	3	N N
F-62	P4N	PARKING LEVEL 4	18,115	3	N N
F-63	P4N	PARKING LEVEL 4	18,115	3	N N
F-64	P4N	PARKING LEVEL 4	18,115	3	N
F-65	ROOF	SMOKE EXHAUST	56,000	15	*∆ INTERLOCK TO START UPON F.A. ACTIVATION
F-66	ROOF	SMOKE EXHAUST	56,000	15	*A INTERLOCK TO START UPON F.A. ACTIVATION
F-67	ROOF	NORTH ATRIUM SMOKE EXHAUST	40,000	10	*∆ INTERLOCK TO START UPON F.A. ACTIVATION
F-68	ROOF	TOILET EXHAUST	4,315	3/4	R
F-69	ROOF	TOILET EXHAUST	260	130 WATTS	R
F-70	ROOF	TOILET EXHAUST	500	1/6	R
F-71	ROOF	LOCKER EXHAUST	2100	1/4	
F-72	ROOF	ELEV. #6 & #7 MACH RM. VENTILATION	15,000	2	R
F-73	P4N	PARKING LEVEL 4 ELECT. RM VENTILATION	2000		R
1 - ۱۵	P4N P2	PARKING LEVEL 4 ELECT. RM VENTILATION PARKING LEVEL 2	1800	1/4	R
F-74		MARKING LEVEL Z	ı IDUU	1/4	N

- R=PROVIDE F.A. SHUTDOWN RELAY AND INTERCONNECTION TO F.A. SYSTEM.
- N=NO F.A. RELAY. Δ =THIS IS THE PRESENT JOHNSON CONTROLS CONFIGURATION.
- *=PROVIDE MANUAL/AUTO CONTROL SWITCH IN BAILIFF'S MONITORING ROOM. PROVIDE
- INTERCONNECTION CONDUITS/CONDUCTORS, (\rightarrow" C-2 #10, 1 #10 GND. EA. SWITCH). EXISTING AUTOMATIC FAN OPERATION SHALL NOT BE CIRCUMVENTED.



GENERAL NOTES

- 1. THE SCOPE OF THIS PROJECT IS TO:
- A. REPLACE EXISTING HORN/STROBES WITH NEW VOICE EVACUATION TYPE SPEAKER/STROBES (AS APPLICABLE).
- B. PROVIDE ADDITIONAL VOICE EVACUATION TYPE SPEAKER/STROBES.
- C. UPGRADE THE SYSTEM ALARM TO PRE-RECORDED VOICE EVACUATION TYPE D. PROVIDE ADDITIONAL DEVICES INCLUDING DOOR-HOLDERS, SMOKE AND HEAT
- DETECTORS, AND PULL STATIONS AS INDICATED.
- E. REPLACE THE FIRE ALARM PANELS. F. REPLACE OTHER PANELS ANNUNCIATORS
- G. PROVIDE INTERFACE BETWEEN FACP AND LOCAL AREA NETWORK, TELEPHONE SYSTEM, DOOR ACCESS CONTROL SYSTEM AND ENERGY MANAGEMENT CONTROL
- H. PROVIDE LOCAL RESTRICTED EMERGENCY USE HANDSET FOR LIVE EMERGENCY VOICE BROADCAST OVER THE SYSTEM SPEAKERS FROM MAIN RECEPTION DESK
- I. REPLACE ALL NON-ADDRESSABLE DEVICES WITH ADDRESSABLE DEVICES (AS APPLICABLE).
- 2. THE NEW SYSTEM SHALL BE A MICRO-PROCESSOR BASED, MULTI-PLEX, ADDRESSABLE FIRE ALARM CONTROL PANEL WITH ADDRESSABLE INITIATING
- DEVICES AND VOICE-EVACUATION ALARM FEATURE. 3. REFER TO PLANS FOR LOCATION AND QUANTITY OF DEVICES.

(B-1) AND CONTROL ROOM (CENTRAL UTILITY PLANT).

- 4. CONTRACTOR SHALL PROVIDE ALL TESTING AND REPORTS REQUIRED TO RE-CERTIFY THE SYSTEM.
- CONTRACTOR SHALL INSPECT AND REPLACE DEFECTIVE CONDUIT, WIRING, AND DEVICES TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM IN COMPLIANCE WITH CURRENT NFPA CODE REQUIREMENTS.
- 6. ALL WIRING SHALL BE INSTALLED IN CONDUIT $\binom{3}{4}$ MINIMUM).
- 7. DUCT SMOKE DETECTORS SHALL BE LOCATED NEAR AHU'S AND SHALL BE FULLY ACCESSIBLE. PROVIDE A REMOTE INDICATOR FOR EACH DUCT SMOKE DETECTOR.
- 8. OUTDOOR MOUNTED DUCT SMOKE DETECTORS SHALL BE INSTALLED IN WEATHERPROOF ENCLOSURES.
- 9. CONTRACTOR SHALL FIRE-CAULK AND SEAL ALL CONDUIT PENETRATIONS OF WALLS, FLOORS, AND CEILINGS TO MAINTAIN CURRENT FIRE/SMOKE RATINGS.
- 10. THIS FACILITY IS FULLY SPRINKLERED. THIS FIRE ALARM DESIGN TAKES ADVANTAGE OF ACCEPTABLE CODE PROVISIONS.
- 11. FOR EACH ELEVATOR LOBBY, PIT, SHAFT, AND EQUIPMENT ROOM SMOKE AND HEAT DETECTORS SHALL BE INTERCONNECTED TO COMPLY WITH ALL APPLICABLE ELEVATOR CODE AND NFPA REQUIREMENTS IN ADDITION TO THE FOLLOWING:
- A. ELEVATOR LOBBY SMOKE DETECTORS SHALL ACTIVATE ELEVATOR RECALL TO DESIGNATED LEVEL OR ALTERNATE LEVEL.
- B. ELEVATOR EQUIPMENT ROOM AND SHAFT SMOKE DETECTORS SHALL ACTIVATE PH.1 ELEVATOR RECALL AND FLASH "DO NOT USE ELEVATOR" WARNING LIGHT.
- C. THE PROSPECTIVE BIDDER IS REQUIRED TO FIELD VERIFY THAT ELEVATOR SHAFTS, PITS AND MACHINE ROOMS ARE NOT SPRINKLERED. IF ANY ARE SPRINKLERED, THEN PROVIDE HEAT DETECTORS, SHUNT TTRIP FEEDER CIRCUIT BREAKERS, (OUTSIDE AREAO, ANSD SHUNT TRIP POWER WITH ALL REQUIRED INTERCONNECTION CONDUITS/CONDUCTORS FOR A COMPLETE AND OPERATIONAL SYSTEM PER FBS, NFPA AND LOCAL AUTHORITY HAVING JURISDICTION
- 12. ACTIVATION OF ANY MANUAL OR AUTOMATIC FIRE ALARM INITIATION DEVICE SHALL INITIATE A GENERAL ALARM (PRE-RECORDED VOICE-EVACUATION AND STROBE LIGHTS) THROUGHOUT THE FACILITY. UPON A GENERAL ALARM, THE FIRE ALARM SYSTEM SHALL CLOSE FIRE/SMOKE DOORS AND SHUT DOWN HVAC EQUIPMENT IN AFFECTED SMOKE COMPARTMENT ON SAME FLOOR AND SMOKE COMPARTMENTS ABOVE AND BELOW.
- 13. GENERAL NOTES APPLY TO ALL ELECTRICAL DRAWINGS. SHEET NOTES APPLY ONLY ON THE DRAWING ON WHICH THEY APPEAR. FLAG NOTES REFER TO LIKE NUMBERED ITEMS ON THE SHEET WHICH THEY APPEAR.
- 14. ALL EQUIPMENT SHALL BE UL LABELED AND LISTED.
- 15. PROJECT PHASING SHALL BE COORDINATED WITH OWNER AND ENGINEER.
- 16. LEGEND NOTES APPLY TO ALL SHEETS.
- 17. THE PROSPECTIVE BIDDER IS REQUIRED TO VISIT THE SITE TO REVIEW ALL EXISTING CONDITIONS TO VERIFY ALL EQUIPMENT, DEVICE LOCATIONS, AND WIRING PRIOR TO
- 18. ALL PLANS DEPICT THE EXISTING SYSTEM AND REPLACEMENT REQUIRED TO A NEW PRE-RECORDED, VOICE-EVACUATION SYSTEM. HOWEVER, ALL PROPOSALS MUST BE BASED UPON REPLACEMENT OF ALL EXISTING SIMPLEX EQUIPMENT WITH AN EQUIVALENT TO SIMPLEX 4100 ES SYSTEM.
- 19. CONNECTION TO AND INTERFACE WITH ACCESS CONTROL SYSTEM AND JOHNSON CONTROLS, (BAS) SYSTEMS IS REQUIRED. PROSPECTIVE BIDDERS SHALL INVESTIGATE AND INCLUDE ALL WORK COMPONENTS AND PROGRAMMING NECESSARY. INCLUDE ALL
- 20. THIS CONTRACTOR SHALL PROVIDE (10) NEW FIRE/SMOKE DAMPERS, PER FIRE/SMOKE DAMPER DETAIL AND 100' OF FIRE ALARM CABLE/CONDUIT PER UNIT, LABOR, MATERIAL, OVERHEAD, AND PROFIT SHALL BE INCLUDED. PROVIDE INTERCONNECTIONS (INTERFACE RELAY) TO NEW FIRE ALARM SYSTEM, POWER CONSISTING OF ₹"C-2 #10, #10 GND. TO NEAREST EM PANEL "FPN" OR "FPS". EXACT LOCATIONS OF THESE DEVICES TO BE DETERMINED BY ENGINEER. IF THESE DEVICES ARE NOT USED, THEN A CREDIT WILL BE ISSUED BACK TO OWNER AT PROJECT SUBSTANTIAL COMPLETION.
- 21. THIS CONTRACTOR SHALL DISPOSE OF ALL REMOVED/SURPLUS MATERIAL IN A LEGAL MANNER. THE OWNER MAY TAKE POSSESSION OF ANY REMOVED/SURPLUS MATERIAL AT THEIR DISCRETION UPON NOTIFICATION OF THE CONTRACTOR.
- 22. THIS CONTRACTOR SHALL REPAIR ALL WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RELOCATION OF EXISTING DEVICES OR PANELS. BLANK PLATES MAY BE USED OVER EXISTING WALL OR CEILING BOXES.

ABBREVIATIONS, LEGENDS AND GENERAL NOTES

ABBREVIATIONS

AIR CONDITIONING OR ALTERNATING CURRENT ACCESS AMPERE FRAME ABOVE FINISHED FLOOR ABOVE GRADE AIR HANDLING UNIT ALUMINUM AMMETER ARCHITECT AMPERE TRIP AUTOMATIC TEMPERATURE CONTROL AUTOMATIC TRANSFER SWITCH AMERICAN WIRE GAUGE BELOW GRADE CONDUIT CATEGORY CIRCUIT BREAKER CHILLER CIRCUIT CENTER LINE CURRENT-LIMITING FUSE CEILING MOUNTED

CONTROL COPPER DRAWING ELECTRICAL CONTRACTOR EXHAUST FAN EMERGENCY ELECTRICAL METALLIC TUBING

ELECTRICAL METALLIC TUBING EMERGENCY POWER OFF ENCLOSURE EWH ELECTRIC WATER HEATER EXIST EXISTING FIRE ALARM FCP FIRE ALARM CONTROL PANEL

> FATC FIRE ALARM TERMINAL CABINET FI OOR FURISHED BY MECHANICAL CONTRACTOR FIBER OPTIC TERMINAL CABINET

FIRE ALARM COMMAND CENTER

FURNISHED WITH EQUIPMENT GROUND FAULT INTERRUPTER GROUND HOA HAND-OFF-AUTO HEATING/AIR CONDITIONING-RATED HIGH INTENSITY DISCHARGE HIGH POWER FACTOR HIGH PRESSURE SODIUM

HERTZ HORSEPOWER ISOLATED GROUND INTERMEDIATE METALLIC CONDUIT JUNCTION BOX

THOUSAND CIRCULAR MILS KILOVOLT AMPERE KILOWATT MECHANICAL CONTRACTOR MOTOR CONTROL CENTER MOTOR GENERATOR MAIN DISTRIBUTION PANEL

METAL HALIDE MOTOR OPERATED DAMPER OR DOOR NORMALLY CLOSED

NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MANUFACTURERS ASSOC. NON-FUSED NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT

NORMALLY OPEN PANEL PHASE OWNER FURNISHED CONTRACTOR INSTALLED PUSHBUTTON

PHOTOELECTRIC PATCH PANEL POLYVINYL CHLORIDE CONDUIT RELOCATED

RIGID STEEL CONDUIT SCHEDULE SECURITY

SWITCHGEAR TELEPHONE TELEPHONE BACKBOARD TRANSIENT VOLTAGE SURGE SUPPRESSOR

TIME SWITCH TRANSFORMER TRANSFER TYPICAL

UNDERGROUND UNIT HEATER UNINTERRUPTIBLE POWER SUPPLY UNLESS OTHERWISE NOTED

VARIABLE AIR VOLUME VARIABLE FREQUENCY DRIVE VOLT

VOLTMETER WATT WATTHOUR METER WATTMETER WEATHER PROOF

DESCRIPTION

(ALL ITEMS PER SPEC'S)

FIRE ALARM PULL STATION W/OUTLET BOX, STI

ENCLOSURE, 50' OF FIRE ALARM CABLE & CONDUIT

CEILING MOUNTED SMOKE DETECTOR W/OUTLET BOX, 50'

OF FIRE ALARM CABLE & CONDUIT

DUCT TYPE SMOKE DETECTOR WITH REMOTE INDICATOR AND SHUTDOWN RELAY W/50' OF FIRE ALARM CABLE &

CEILING MOUNTED RECESSED SPEAKER/STROBE, N/HOUSING BOX, 50' OF FIRE ALARM CABLE & CONDUIT WALL MOUNTED SPEAKER/STROBE W/OUTLET BOX, 50' OF

FIRE ALARM CABLE & CONDUIT

CEILING MOUNTED HEAT DETECTOR E/OUTLET BOX, 50' OF

FIRE ALARM CABLE & CONDUIT

FIRE ALARM SHUT DOWN RELAY, BOX. 50' OF FIRE ALARM

SPRINKLER FLOW SWITCH, 50' OF FIRE ALARM CABLE &

SPRINKLER TAMPER SWITCH, 50' OF FIRE ALARM CABLE &

DOOR HOLD OPEN DEVICE, OUTLET BOX, RELAY, 50' OF FIRE ALARM CABLE & CONDUIT 24"x36" FIRE/SMOKE DAMPER WITH FIRE ALARM CONNECTIONS 50' OF FIRE ALARM CABLE AND CONDUIT.

HOUR FIRE RATED HINGED DOOR ACCESS HATCH WITH

LOCKING PROVISIONS 36"x36"

UNIT PRICING LIST

EACH BIDDER SHALL PROVIDE THE FOLLOWING UNIT PRICING INFORMATION

ITEM NO.

UNIT PRICE TO

INCLUDE L, M, O & F

LEGEND NOTES

- 1. THE LEGEND INDICATES STANDARD SYMBOLS AND ALL SYMBOLS MAY NOT BE USED ON THESE PLANS. HOWEVER, WHERE THE SYMBOL APPEARS ON THE PLANS IT SHALL BE PROVIDED AND INSTALLED ACCORDING TO PLANS AND SPECIFICATIONS.
- 2. THE LETTER 'WP' ADJACENT TO RECEPTACLE INDICATES A WEATHERPROOF COVER IS REQUIRED.
- 3. THE LETER 'GFI' ADJACENT TO RECEPTACLE INDICATES A GROUND FAULT INTERRUPTING RECEPTACLE. FEED THROUGH CONFIGURATION IS NOT PERMITTED.

LINE TYPE LEGEND

---- EXISTING TO BE REMOVED ----- EXISTING TO REMAIN ----- NEW TO BE PROVIDED

DRAWING SYMBOLS

2 - \ DETAIL NUMBER — DRAWING NUMBER WHERE DRAWN A SECTION LETTER — DRAWING NUMBER WHERE DRAWN

> POINT OF INTERFACE BETWEEN NEW & EXISTING POINT OF DEMOLITION → POINT OF INTERFACE BETWEEN CONTRACTORS

WALL RATING LEGEND 1 HOUR FIRE RATED PARTITION ---- 1 HOUR RATED FIRE/SMOKE PARTITION 2 HOUR FIRE RATED PARTITION SMOKE TIGHT CONSTRUCTION

NOTE TO REVIEWING AUTHORITY: THIS FACILITY IS FULLY SPRINKLERED

EXISTING FIRE ALARM POINTS LIST

DUCT SMOKE DETECTOR - 21 ALARM | PRESSURE SWITCH - 7 INITIATING√ PHOTO SMOKE DETECTOR - 58 DEVICES | PULL STATION—SINGLE ACTION — 56

WATER FLOW DETECTOR - 12

ALARM ANNUNCIATOR - 1 INITIATING√ SPEAKER/VISUAL - 169 DEVICES UISUAL ONLY - 11

AND SHUT-DOWN RELAYS.

SUPERVISORY | FIRE PUMP - 1 DEVICES SPRINKLER TAMPER SWITCH - 21 *=DOES NOT INCLUDE PANELS, NACS,

FIRE ALARM LEGEND

- PULL STATION UON CENTERLINE MOUNTED 48" AFF WHERE EXISTING PULL STATIONS ARE TO BE REPLACED IN THE SAME LOCATION, THIS CONTRACTOR SHALL ADJUAT THE HEIGHT TO 48" AFF AT CENTERLINE. PROVIDE ALL PULL STATIONS WITH STI ENCLOSURE
- BOTTOM OF DEVICE SHALL BE MOUNTED 80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER
- ☐ HORN/STROBE

SPEAKER/STROBE WITH MULTI-WATTAGE, MULTI-TAP VOICE TRANSFORMER. BOTTOM OF DEVICE SHALL BE MOUNTED 80" AFF OR 6" BELOW CEILING WHICHEVER IS

LOWER (WHEN WALL MOUNTED).. HEAT DETECTOR CEILING MOUNTED

DUCT SMOKE DETECTOR DUCT MOUNTED

SMOKE DETECTOR CEILING MOUNTED

FIRE ALARM CONTROL PANEL-UON MOUNT TOP OF ENCLOSURE

FIRE ALARM ANNUNCIATOR PANEL-UON MOUNT TOP OF ENCLOSURE

FIRE ALARM TERMINAL CABINET-UON, MOUNT TOP OF ENCLOSURE 66" AFF. FLOW SWITCH

TAMPER SWITCH PRESSURE SWITCH

SHUT-DOWN RELAY

MAGNETIC DOOR HOLDER REMOTE ALARM INDICATOR WITH TEST SWITCH. FLUSH CEILING MOUNTED. (WALL MOUNTED, CENTER LINE 48" AFF IN MECHANICAL ROOMS).

EF- EXHAUST FAN

SEF- SMOKE EVACUATION FAN ASF- AIR SUPPLY FAN

PUSH-BUTTON PRE-ACTIONI SYSTEM ABORT INDICATES AREA WITH LAY-IN GRID CEILING CONSIDERED

ACCESSIBLE. AREA SHOWN IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY. INDICATES AREA WITH HARD (GYPSUM BOARD TYPE)

CEILING CONSIDERED ACCESSIBLE. AREA SHOWN IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY.

INDICATES CEILING IN THIS AREA IS EXPOSED. CONSIDERED INACCESSIBLE. AREA SHOWN IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY.

VOICE/DATA OUTLET HALON CONTROL PANEL

NOTIFICATION APPLIANCE CABINET 277/480V PANELBOARD.

SAFETY SWITCH

DRY TYPE TRANSFORMER DUPLEX RECEPTACLE. 20A, 125A

HOMERUN CONDUIT AND CONDUCTORS TO DESIGNATED PANEL

EXISTING AIR HANDLING UNIT SCHEDULE

UNIT NO.	AREA SERVED	CFM	MOTOR HP	FIRE ALARM DEVICES
AHU-1	FIRST FLOOR SOUTH (PLAZA)	23,100	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-2	SECOND FLOOR SOUTH	25,200	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-3	THIRD FLOOR SOUTH	23,970	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-4	FOURTH FLOOR SOUTH	23,660	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-5	P3 (PRISON HOLD AREA)	2,110	2	(1) SUPPLY DUCT SMOKE DETECTOR AND SHUTDOWN RELAY
AHU-6	FIRST FLOOR NORTH	23,990	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-7	SECOND FLOOR NORTH	17,740	15	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-8	THIRD FLOOR NORTH	17,520	15	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-9	FOURTH FLOOR NORTH	18,900	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-10	FIFTH FLOOR NORTH	18,840	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-11	P3 NORTH DATA PROCESSING SOUTH HALF	7,500	10	(2) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-12	P3 NORTH DATA PROCESSING NORTH HALF	7,900	10	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-13	FOURTH FLOOR NORTH	10,440	7.5	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
RTU-1	FIFTH FL NORTH (AHU-10)		20	(1) SUPPLY DUCT SMOKE DETECTOR AND SHUTDOWN RELAY
RTU-2	FOURTH FL SOUTH (AHU-4)		25	(1) SUPPLY DUCT SMOKE DETECTOR AND SHUTDOWN RELAY

PROVIDE ARC FLASH LABELING ON ALL NEW PANELS. SPECIFICS FOR ARC FLASH LABELS SHALL BE PROVIDED BY ENGINEER AFTER SHOP DRAWINGS/SUBMITTALS ARE APPROVED.

UNIT NO.	AREA SERVED	CFM	MOTOR HP	FIRE ALARM DEVICES
AHU-1	FIRST FLOOR SOUTH (PLAZA)	23,100	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-2	SECOND FLOOR SOUTH	25,200	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
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AHU-4	FOURTH FLOOR SOUTH	23,660	20	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
AHU-5	P3 (PRISON HOLD AREA)	2,110	2	(1) SUPPLY DUCT SMOKE DETECTOR AND SHUTDOWN RELAY
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AHU-13	FOURTH FLOOR NORTH	10,440	7.5	(1) SUPPLY/(1) RETURN DUCT SMOKE DETECTORS AND SHUTDOWN RELAYS
RTU-1	FIFTH FL NORTH (AHU-10)		20	(1) SUPPLY DUCT SMOKE DETECTOR AND SHUTDOWN RELAY
RTU-2	FOURTH FL SOUTH (AHU-4)		25	(1) SUPPLY DUCT SMOKE DETECTOR AND SHUTDOWN RELAY

URTHO

3/13/2013 DRAWN BY: CHECKED BY:

E0.01

PARTIAL SPECIFICATIONS

SECTION 16000 PART 1 - GENERAL

1.1 SUMMARY

A. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO COMPLETE THE CONSTRUCTION OF THE ELECTRICAL SYSTEM.

1.2 WORK INCLUDED

A. THE WORK REQUIRED UNDER THIS DIVISION SHALL INCLUDE ALL MATERIALS, LABOR AND AUXILIARIES REQUIRED TO INSTALL A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM. THE ELECTRICAL SYSTEM WORK REQUIRED UNDER THIS DIVISION SHALL BE AS SPECIFIED HEREIN AND AS SHOWN

B. DRAWINGS FOR THE WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY THE EXTENT, GENERAL ARRANGEMENT, AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS CONDUIT FITTINGS, ACCESS PANELS, SLEEVES, PULL AND JUNCTION BOXES MAY NOT BE SHOWN. INCLUDE SUCH ITEMS WHERE REQUIRED BY CODE, OTHER SECTIONS, OR FOR PROPER INSTALLATION OF THE WORK.

C. EQUIPMENT SPECIFICATIONS MAY NOT DEAL INDIVIDUALLY WITH EVERY PART, CONTROL, OR DEVICE, WHICH MAY BE REQUIRED TO PRODUCE THE EQUIPMENT PERFORMANCE SPECIFIED OR AS REQUIRED TO MEET THE EQUIPMENT WARRANTIES. INCLUDE SUCH ITEMS AS REQUIRED, WHETHER OR NOT SPECIFICALLY

D. COORDINATE WITH ALL TRADES IN SUBMITTAL OF SHOP DRAWINGS. SHOP DRAWINGS SHALL DETAIL SPACE CONDITIONS TO THE SATISFACTION OF ALL CONCERNED TRADES, SUBJECT TO FINAL REVIEW OF THE ENGINEER. IF ELECTRICAL WORK IS INSTALLED, BEFORE COORDINATING WITH OTHER TRADES, WHICH INTERFERES WITH WORK OF OTHER TRADES, MAKE ALL NECESSARY CHANGES TO CORRECT THE CONDITION AT NO ADDITIONAL COST TO THE OWNER.

1.3 CODES AND STANDARDS

a. INSTALL ALL WORK IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE FOLLOWING:

b. (SBC) FAC 9B-3.047 STATE BUILDING CODE ADOPTED c. (NFPA) NFPA 72, 2007 NATIONAL FIRE ALARM CODE

d. (NEC) NFPA 70, 2008 NATIONAL ELECTRICAL CODE

e. (NFPA) NFPA 101, 2009 LIFE SAFETY CODE f. FAC 4A-3.012 STANDARD OF THE NATIONAL FIRE PROTECTION ASSOCIATION ADOPTED. g. (FBC) FLORIDA BUILDING CODE, 2010

B. STANDARDS OF THE FOLLOWING ASSOCIATIONS OR ORGANIZATIONS SHALL BE FOLLOWED AND APPLIED

WHERE APPLICABLE. a. (UL) UNDERWRITERS LABORATORIES

b. (IEEE) INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS

c. (NEMA) NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION d. (FM) FACTORY MUTUAL

C. IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO COMPLY WITH THE APPLICABLE CODES, ORDINANCES, REGULATIONS, AND STANDARDS. WHERE DISCREPANCIES OCCUR, NOTIFY THE ENGINEER, IN WRITING, AND ASK FOR INTERPRETATION. CORRECT ANY INSTALLATION THAT FAILS TO COMPLY WITH THE APPLICABLE CODES AND STANDARDS AT NO ADDITIONAL COST TO THE OWNER.

1.4 PERMITS AND INSPECTIONS

A. OBTAIN AND MAKE ALL PAYMENT FOR PERMITS AND INSPECTIONS REQUIRED. AT THE COMPLETION OF THE PROJECT AND BEFORE FINAL ACCEPTANCE OF THE ELECTRICAL WORK, PROVIDE EVIDENCE OF FINAL INSPECTION AND APPROVAL BY THE AUTHORITIES HAVING JURISDICTION.

1.5 ACTIVE SERVICES

A. PROTECT EXISTING ACTIVE SERVICES, WATER, GAS, SEWER, ELECTRIC, WHEN ENCOUNTERED, AGAINST DAMAGE. DO NOT PREVENT OR DISTURB OPERATION OF ACTIVE SERVICES WHICH ARE TO REMAIN. IF ACTIVE SERVICES ARE ENCOUNTERED WHICH REQUIRE RELOCATION, MAKE REQUEST TO AUTHORITIES WITH JURISDICTION FOR DETERMINATION OF PROCEDURES. WHERE EXISTING SERVICES ARE TO BE ABANDONED, TERMINATE THEM IN CONFORMANCE WITH REQUIREMENTS OF THE UTILITY OF MUNICIPALITY HAVING JURISDICTION.

1.6 TESTS AND DEMONSTRATIONS

A. TEST ALL SYSTEMS AND PLACE IN PROPER WORKING ORDER PRIOR TO DEMONSTRATING SYSTEMS TO

B. PERFORM SUCH TESTS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER THE SITE.

C. PRIOR TO ACCEPTANCE OF THE WORK, DEMONSTRATE TO THE OWNER ALL FEATURES AND FUNCTIONS OF ALL SYSTEMS, AND INSTRUCT THE OWNER IN THE PROPER OPERATION, CARE AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT.

D. ARRANGE WITH THE OWNER THE DATES AND TIMES FOR EACH DEMONSTRATION.

1.7 IDENTIFICATION

A. PROVIDE ENGRAVED LAMINATED NAMEPLATES ON THE FOLLOWING, LISTING THE DESIGNATED

1. SAFTEY SWITCHES, MOTOR STARTERS, VARIABLE FREQUENCY DRIVES, PANELS AND

PANELBOARDS (WITH EQUIPMENT SERVED IDENTIFIED).

2. NAMEPLATES SHALL BE WHITE LETTERS ON BLACK BACKGROUND FOR NORMAL SYSTEM

B. POWER WIRING SHALL HAVE CONDUCTORS COLOR BANDED IN EACH JUNCTION AND PULL BOX. C. CONTROL CIRCUIT WRING SHALL BE IDENTIFIED WITH WIRE NUMBERS AT EACH TERMINATION.

1.8 DELIVERY AND STORAGE

A. HANDLE, STORE AND PROTECT EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND WITH THE REQUIREMENTS OF NFPA B, APPENDIX I, TITLED "EQUIPMENT STORAGE AND MAINTENANCE DURING CONSTRUCTION". REPLACE DAMAGED OR DEFECTIVE ITEMS WITH NEW ITEMS.

1.9 ELECTRICAL CONNECTIONS TO EQUIPMENT

A. PROVIDE POWER CIRCUIT AND CONTROL WIRING FOR ALL ELECTRICAL EQUIPMENT AND CONNECT COMPLETE UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS.

B. ALL CONNECTION SHALL BE TIGHTENED TO THE TORQUE VALUES RECOMMENDED BY THAT DEVICE MANUFACTURERS INSTRUCTIONS. IF THESE VALUES ARE NOT LISTED, TIGHTEN TO POUND-INCH OR POUND-FOOT VALUES RECOMMENDED BY UL STANDARD 486B, A SUMMARY OF WHICH MAY BE FOUND IN SECTION 110-14 OF THE NATIONAL ELECTRIC CODE HANDBOOK.

1.10 SUBMITTALS

A. SUBMIT DATA CONSISTING OF SHOP DRAWINGS AND/OR CATALOGUE CUTS COMPLETE WITH TECHNICAL DATA NECESSARY TO EVALUATE THE MATERIAL OR EQUIPMENT. INCLUDE DIMENSIONS, WIRING DIAGRAMS, PERFORMANCE CURVES, RATINGS, CONTROL SEQUENCE, AND OTHER DESCRIPTIVE DATA NECESSARY TO DESCRIBE FULLY THE ITEM PROPOSED AND ITS OPERATING CHARACTERISTICS.

B. DO NOT PURCHASE OR INSTALL EQUIPMENT REQUIRING SUBMITTAL UNTIL THE REVIEW PROCESS IS

1.11 ACCEPTABLE PRODUCTS

A. USE ONLY NEW PRODUCTS MADE BY COMPANIES REGULARLY ENGAGED IN THE MANUFACTURE OF THE TYPE EQUIPMENT SPECIFIED. USE THE PRODUCTS OF A SINGLE MANUFACTURER FOR SIMILAR TYPE EQUIPMENT, I.E. SAFETY SWITCHES, PANELBOARDS, CONDUIT, CONDUCTORS AND CIRCUIT BREAKERS.

1.12 RECORD DRAWINGS

A. AT THE JOB SITE, MAINTAIN A SET OF PRINTS ON WHICH ARE RECORDED ALL FORMAL FIELD CHANGES AND OTHER PORTIONS OF THE WORK THAT VARY SIGNIFICANTLY FROM THE CONTRACT DOCUMENTS. INDICATE ACTUAL ROUTING OF ELECTRICAL FEEDERS.

B. DELIVER RECORD DRAWINGS TO THE OWNER IN THE QUANTITY AND MANNER REQUESTED.

C. FINAL ACCEPTANCE AND PAYMENT FOR THE PROJECT WILL NOT BE GIVEN UNTIL THESE DRAWINGS HAVE

A. ALL MATERIALS AND LABOR SHALL BE UNCONDITIONALLY WARRANTED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION. SPECIFIC MANUFACTURER'S EQUIPMENT WARRANTIES IN EXCESS OF ONE (1) YEAR SHALL TAKE PRECEDENCE. MANUFACTURER'S WARRANTIES SHALL BE PROVIDED WHENEVER AVAILABLE AND POSSIBLE. ALL EQUIPMENT SHALL BE NEW AND UNUSED FROM THE FACTORY AND SHALL NOT BE MODIFIED OR REBUILT.

PART 2 - PRODUCTS

2.1 - OUTLET BOXES:

GENERAL USE BOXES: GALVANIZED, PRESSED STEEL UNITS OF PROPER DEPTH AND GAUGE REQUIRED BY THE OUTLET LOCATION. EQUIP WITH PLASTER RING OR COVER AS NECESSARY.

ACCEPTABLE MANUFACTURERS: RACO OR STEEL CITY.

SPECIAL BOXES: GALVANIZED SHEET METAL OR CAST CONSTRUCTION AND SIZED IN ACCORDANCE WITH THE NEC BASED ON THE NUMBER OF CONDUCTORS AND SPLICES TO BE HOUSED. FOR SPECIAL SYSTEMS, USE BOXES AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

2.2 CONDUIT

RIGID METALLIC CONDUIT (RMC): HOT DIPPED GALVANIZED STEEL CONFORMING TO FS WW-C581E AND ELECTRICAL METALLIC TUBING (EMT/THINWALL): GALVANIZED STEEL CONFORMING TO ASA C80.3, FS WW-C563 AND UL 797. INTERMEDIATE METAL CONDUIT (IMC): HOT DIPPED GALVANIZED STEEL CONFORMING TO FS WW-C581E

FLEXIBLE METAL CONDUIT: SPIRAL WOUND, SQUARE- LOCKED, HOT-DIPPED GALVANIZED STEEL CONFORMING TO UL 1.

2.3 CONDUIT FITTINGS

RMC: THREADED, MALLEABLE IRON, HOT-DIPPED GALVANIZED OR CADMIUM PLATED. FITTINGS USED WITH COATED RMC SHALL HAVE A SIMILAR COATING. EMT: COMPRESSION TYPE, MADE OF CADMIUM PLATED STEEL OR HOT-DIPPED

FLEXIBLE METAL: TWO SCREW, DOUBLE CLAMP MALLEABLE IRON, HOT- DIPPED GALVANIZED OR CADMIUM

2.4 WIRE AND CABLE - 600 VOLT

GALVANIZED MALLEABLE IRON.

ALL CONDUCTORS SHALL BE COPPER.

INSULATION: HEAT AND MOISTURE RESISTANT WITH A TEMPERATURE RATING OF AT LEAST 75 DEGREES (THHN, THWN) AND A 600 VOLT RATING UNLESS OTHERWISE INDICATED.

USE STRANDED CONDUCTOR ON ALL WIRING #10 AWG AND LARGER. ALL OTHER WIRING MAY BE SOLID.

277/480 VOLT, 3 PHASE, 4 WIRE

COLOR CODE WIRING AS FOLLOWS:

120/208 VOLT, 3 PHASE, 4 WIRE

NEUTRAL - WHITE NEUTRAL - NATURAL GRAY PHASE A - BLACK PHASE A - BROWN PHASE B - RED PHASE B - ORANGE PHASE C - BLUE PHASE C - YELLOW GROUND --- GREEN GROUND --- GREEN

ALL OTHER COLORS SHALL BE RESERVED FOR AND ONLY USED FOR SWITCH LEGS, CONTROL CIRCUITS, COMMUNICATIONS WIRING, FIRE ALARM, ETC. USE DIFFERENT COLOR FOR DIFFERENT CIRCUIT TYPES.

2.5 GROUNDING

A. PROVIDE AN EQUIPMENT CONDUCTOR IN ALL RACEWAYS SIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC).

B. BOND ALL BRANCH CIRCUIT DEVICES TO THE BUILDING GROUND SYSTEM BY MEANS OF THE GROUNDING

CONDUCTOR INSTALLED IN EACH RACEWAY. 2.6 ANCHORS AND FASTENERS

A. USE ANCHORS AND FASTENERS OF A TYPE DESIGNED AND INTENDED FOR USE IN THE BASE MATERIAL TO WHICH THE MATERIAL OR SUPPORT IS TO BE ATTACHED, AND CAPABLE OF SUPPORTING THE INTENDED LOAD AND WITHSTANDING ANY ASSOCIATED STRESSES AND VIBRATIONS. DO NOT USE WOODEN PLUGS FOR FASTENING.

2.7 PANELBOARDS

A. ALL PANELBOARDS SHALL BE DEADFRONT CONSTRUCTION WITH COPPER BUSS BRACED FOR A MINIMUM 22,000 A.I.C. RATING, (UNLESS NOTED OTHERWISE), ENCLOSURES SHALL BE NEMA 1 LOCKABLE UNLESS OTHERWISE NOTED. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC BOLT-ON TYPE. ACCEPTABLE MANUFACTURERS ARE:

SQ. D SIEMENS

2.8 DRY TYPE TRANSFORMERS:

TRANSFORMERS SHALL BE ENCLOSED, VENTED DRY QUIET TYPE, NON-LINEAR LOAD RATED. (K-13). IMPEDANCE OF 3.13%, 480V, DELTA, 3ø, PRIMARY TO 120/208V, 3ø, 4W. SECONDARY. TRANSFORMER INSULATION CLASS TO BE 220°C, TEMPERATURE RISE 115°C ABOVE AMBIENT. TRANSFORMER SHALL HAVE ALUMINUM WINDINGS. TRANSFORMER SHALL BE U.L. LISTED. EFFICIENCIES SHALL BE; 1/4 LOAD = 96.38%, 1/2 LOAD = 97.6%, 3/4 LOAD = 97.77%, FULL LOAD = 97.67%. ACCEPTABLE MANUFACTURERS ARE; SQUARE D

SIEMENS CUTLER-HAMMER B. THIS CONTRACTOR SHALL PROVIDE A PERMANENT NAMEPLATE ON EACH PANEL TOUCHED OR AFFECTED BY THIS PROJECT SCOPE. THIS IDENTIFICATION NAMEPLATE SHALL IDENTIFY THE FEEDER AND BRANCH CIRCUIT COLOR CODES USED IN THE PANEL. PROVIDE COLOR CODING FOR ALL FEEDERS AND BRANCH CIRCUITS ALSO, AS FOLLOWS:

PHASE	120/208V	277/480V
Α	BLACK	YELLOW
В	RED	BROWN
С	BLUE	ORANGE
NEUTRAL	WHITE	NATURAL GRAY
GROUND	GREEN	GREEN

2.9 RECEPTACLES, SWITCHES & PLATES:

RECEPTACLES, SWITCHES AND COVER PLATES SHALL BE VOLTAGE & AMPACITY APPLICABLE TO LOAD AND CIRCUIT. PROVIDE BRUSHED STAINLESS STEEL COVER PLATE AND IVORY DEVICES, (UNLESS NOTED OTHERWISE). ACCEPTABLE MANUFACTURERS ARE: LEVITON HUBBELL

PASS-SEYMORE

2.91 SAFETY SWITCHES:

ALL SAFETY SWITCHES SHALL BE THE HEAVY DUTY TYPE. FUSED OR NON-FUSED AS INDICATED ON PLANS. ENCLOSURE TYPE, (NEMA 1 OR NEMA 3R DEPENDING ON LOCATION) AS INDICATED ON PLANS. ACCEPTABLE MANUFACTURERS ARE;

2.92 COMBINATION MAGNETIC MOTOR STARTERS

PROVIDE FVNR, 3P MAGNETIC MOTOR STARTERS AS INDICATED ON PLANS. STARTERS SHALL HAVE H.O.A. START/STOP PUSH BUTTONS, RED/GREEN PILOT LIGHTS, DISCONNECT AND CONTROL TRANSFORMER. ENCLOSURE TYPE (NEMA 1 OR NEMA 3R DEPENDING ON LOCATION) ACCEPTABLE MANUFACTURERS ARE: SQUARE D, G.E., SIEMENS.

PROVIDE CIRCUIT BREAKERS IN AMPACITY, POLES, AND A.I.C. RATINGS TO MATCH PANEL & CIRCUIT.

2.93 CIRCUIT BREAKERS

CIRCUIT BREAKERS THAT ARE LARGER THAN 90 AMPS SHALL BE ADJUSTABLE ELECTRONIC TYPE WITH LSIG SETTING.

2.94 FIRE ALARM SYSTEM: SEE BOUND FIRE ALARM SYSTEM SPECIFICATIONS. 3.1 MINIMUM SIZES

A. CONDUIT: 3/4" FOR ALL INSTALLATIONS, UNLESS OTHERWISE NOTED.

B. WIRE: #12 AWG FOR ALL POWER AND LIGHTING CIRCUITS. SIGNAL AND CONTROL WIRING MAY BE SMALLER, AS INDICATED.

3.2 LOCATIONS AND DIMENSIONS

A. LOCATE ALL DEVICES AND EQUIPMENT WHERE SHOWN ON THE DRAWINGS. ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE FROM FINISHED FLOOR TO THE CENTER OF THE DEVICE UNLESS OTHERWISE INDICATED.

3.3 WIRING METHODS

A. INSTALL ALL WIRING IN CONDUIT OR APPROVED RACEWAYS. PROVIDE NYLON PULL CORD IN EMPTY

B. SET OUTLET BOXES SQUARE, LEVEL, AND FLUSH WITH FINISHED SURFACES. SECURE AND BRACE WORK IN SUCH A MANNER AS TO INSURE THAT OUTLET BOXES AND CONDUIT DO NOT BECOME DISLOCATED DURING THE CONCRETE PLACING OPERATIONS OR WHILE OTHER CONSTRUCTION WORK IS BEING DONE.

C. UNLESS OTHERWISE INDICATED, PROVIDE CONDUIT IN ACCORDANCE WITH THE FOLLOWING:

1. RIGID METAL CONDUIT (RMC): USE ANYWHERE. FOR SERVICE ENTRANCE OR WHERE RUN EXPOSED. PVC: USE WHERE SHOWN ON THE DRAWINGS OR BELOW GRADE. WHERE CONDUITS EMERGE FROM SLAB, 2. TRANSITION TO METALLIC RACEWAY BELOW SLAB.

3. THIN WALL METAL (EMT): USE ANYWHERE EXCEPT: 1. UNDERGROUND

BUNDLES WHEN THERE ARE MANY CONDUCTORS.

2. IN SLABS ON GROUND

D. USE FLEXIBLE STEEL CONDUIT WITH GROUND WIRE FOR FINAL 24" OF CONNECTION TO MOTORS OR EQUIPMENT SUBJECT TO VIBRATION. PROVIDE IN LIQUID-TITE FLEXIBLE CONDUIT IN OUTDOOR APPLICATIONS.

E. FIRMLY AND SECURELY FASTEN CONDUITS TO OR SUPPORT FROM THE BUILDING OR STRUCTURAL MEMBER OR EMBEDDED IN CONCRETE OR MASONRY. USE HANGERS AND SUPPORTS THAT ARE STANDARD CATALOG ITEMS OF A TYPE COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. TWISTED WIRE HANGERS AND SUPPORTS ARE NOT ACCEPTABLE.

F. DO NOT PULL CONDUCTORS INTO CONDUITS UNTIL ALL WORK WHICH MAY CAUSE DAMAGE TO THE WIRES IS COMPLETED. INSTALL WIRE AND CABLES SO AS NOT TO DAMAGE THE INSULATION OR CABLE SHEATH. PULL ALL CONDUCTORS TO BE INSTALLED IN A RACEWAY TOGETHER.

G. KEEP CONDUCTOR SPLICES TO A MINIMUM. PROVIDE SPLICES AND TAPS WITH AT LEAST THE EQUIVALENT MECHANICAL STRENGTH AND INSULATION AS THE CONDUCTORS. PROVIDE SPLICE AND TAP

DEVICE OF THE PROPER SIZE AND TYPE FOR THE USE AND COMPATIBLE WITH THE CONDUCTOR MATERIAL. H. PROVIDE SUFFICIENT LENGTH OF CONDUCTORS WITHIN CABINETS AND CUTOUT BOXES TO NEATLY TRAIN THE CONDUCTOR TO THE TERMINAL POINT WITH NO EXCESS. FASTEN THE CABLES TOGETHER IN NEAT

I. PROVIDE FIRE RESISTANT COMPOUND TO RESTORE FIRE AND SMOKE RATING WHEN PENETRATING A RATED WALL OR CEILING

3.4 EQUIPMENT MOUNTING

A. INSTALL EQUIPMENT AS INDICATED OR AS APPROPRIATE. PROVIDE FASTENERS OR SUPPORTS SUFFICIENT IN SIZE AND QUANTITY TO SUBSTANTIALLY SECURE THE EQUIPMENT IN PLACE TO THE BUILDING STRUCTURE OR STRUCTURAL ELEMENT.

B INSTALL THE EQUIPMENT PLUMB AND TRUE AS INTENDED AND SECURE. WHEN SEVERAL ITEMS OF EQUIPMENT ARE WALL OR RACK MOUNTED IN THE SAME AREA, LINE THEM UP VERTICALLY AND HORIZONTALLY ALONG WITH ANY ASSOCIATED RACEWAYS.

3.5 SLEEVES

A. WHERE ELECTRICAL CONDUITS PASS THROUGH WALLS, ROOFS, CEILING, OR FLOORS, SET SLEEVES FOR THEM WHEN THE FLOORS, WALLS, CEILING OR ROOFS ARE CONSTRUCTED. IF ANY HOLES ARE CUT IN FINISHED WORK WHERE SLEEVES HAVE BEEN OMITTED, USE A CONCRETE CORING MACHINE OR OTHER APPROVED METHOD AND ONLY WITH WRITTEN CONSENT OF THE ARCHITECT. CUT ALL SUCH HOLES CAREFULLY, NO LARGER THAN NECESSARY. COVER THESE HOLES ENTIRELY BY ESCUTCHEON PLATES WHEN WORK IS COMPLETED. PROVIDE SLEEVES MADE OF STEEL NO LIGHTER THAN 18 GAUGE.

B. WHERE CONDUITS PASS THROUGH SLEEVES IN EXTERIOR WALLS. CAULK THE ANNULAR SPACE WITH OAKUM AND FILL INSIDE AND OUT WITH A NON- HARDENING, WATERPROOF SEALANT FINISHED OFF FLUSH WITH BOTH FACES OF THE WALL.

C. PRIOR TO ANY WORK ON ROOF, VERIFY EXTENT OF ROOFING WARRANTIES WITH OWNER AND ARCHITECT. OBTAIN OWNER'S WRITTEN APPROVAL OF ROOFING WORK. WHERE CONDUITS PASS THROUGH SLEEVES IN THE ROOF, FLASH THE PENETRATION IN ACCORDANCE WITH PLATE 59, FIGURE C OF THE "ARCHITECTURAL SHEET METAL MANUAL" OF THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC., AND THE ROOFING MANUFACTURER'S RECOMMENDED PROCEDURES AND MATERIALS.

3.6 CUTTING AND PATCHING

A. CUT WALLS, FLOORS, PAVEMENT, ETC., AS REQUIRED FOR THE ELECTRICAL INSTALLATIONS. UNLESS OTHERWISE INDICATED, PATCH AND REFINISH TO MATCH ADJACENT SURFACES AND IN ACCORDANCE WITH THE OTHER DIVISIONS OF THESE SPECIFICATIONS.

3.7 PROTECTION OF EQUIPMENT

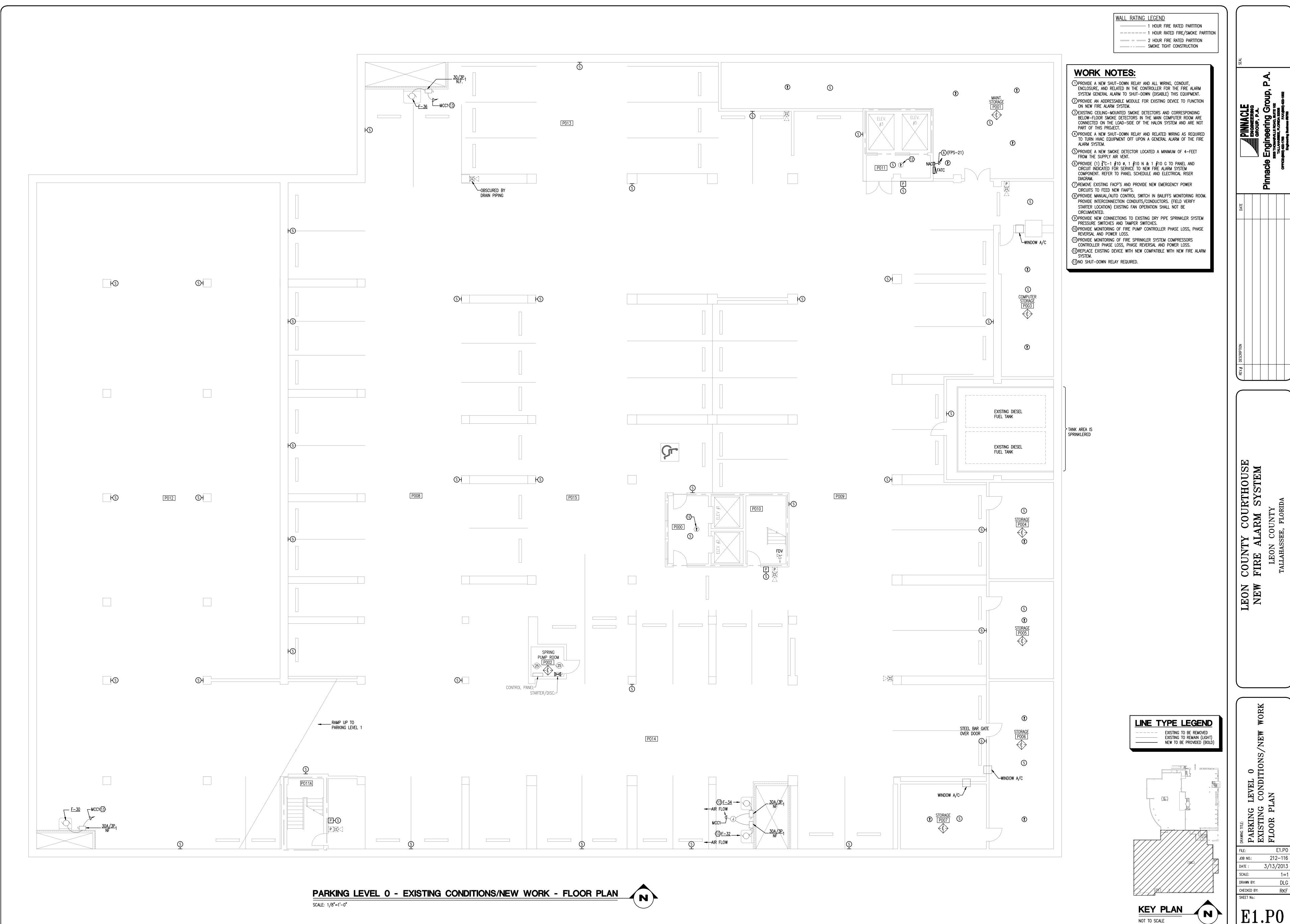
A. DURING CONSTRUCTION, PROTECT ALL EQUIPMENT FROM INSULATION MOISTURE ABSORPTION AND METALLIC COMPONENT CORROSION BY APPROPRIATE USE OF STRIP HEATERS, LAMPS, COVERINGS, OR OTHER SUITABLE MEANS. APPLY PROTECTION IMMEDIATELY UPON RECEIVING THE PRODUCTS AND MAINTAIN CONTINUALLY.

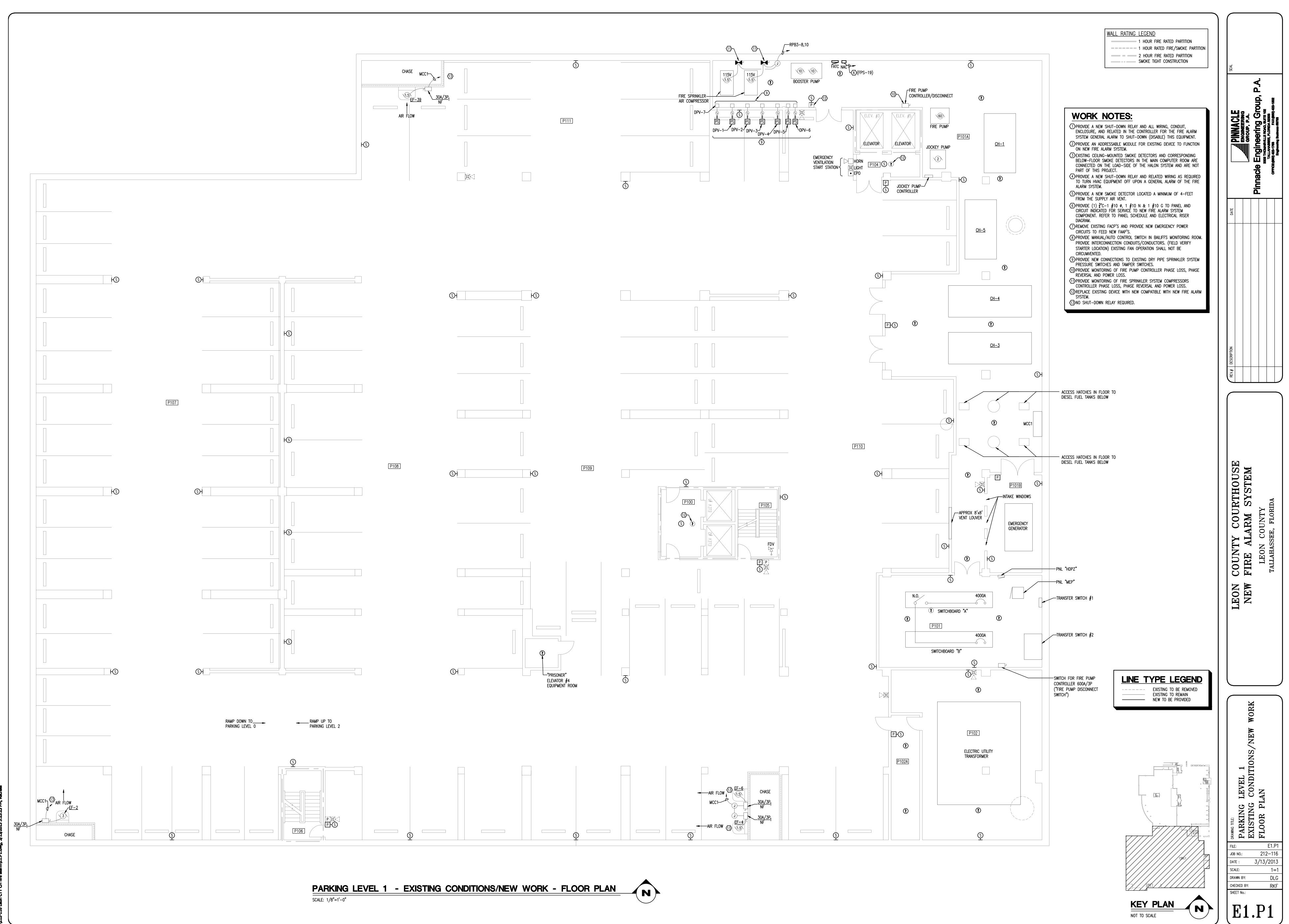
C. KEEP PRODUCTS CLEAN BY ELEVATING ABOVE GROUND OR FLOOR AND BY USING SUITABLE COVERINGS. TAKE SUCH PRECAUTIONS AS ARE NECESSARY TO PROTECT APPARATUS AND MATERIALS FROM DAMAGE. FAILURE TO PROTECT MATERIALS IS SUFFICIENT CAUSE FOR REJECTION OF THE APPARATUS OR MATERIAL IN QUESTION.

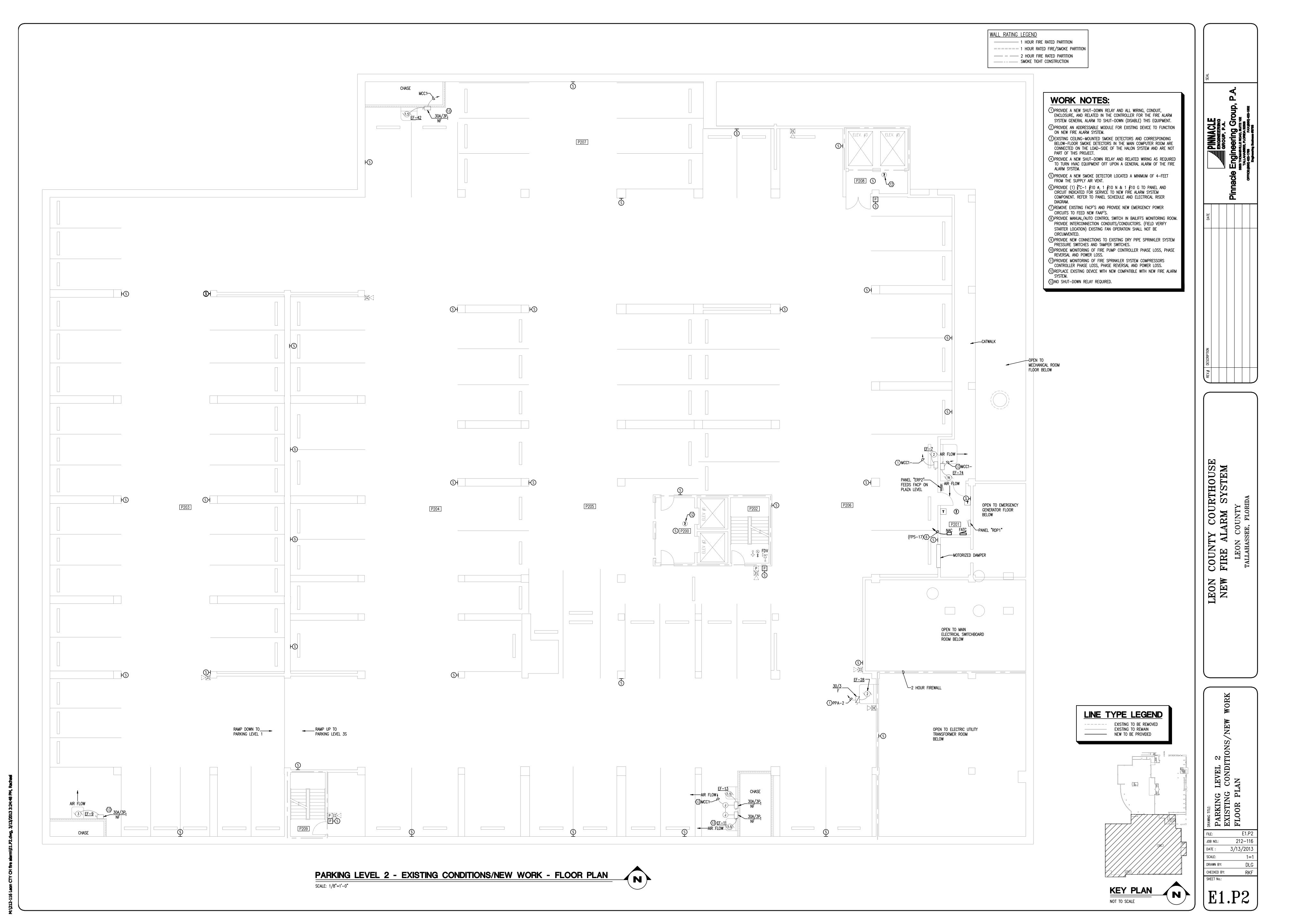
D. PROTECT FACTORY FINISH FROM DAMAGE DURING CONSTRUCTION OPERATIONS AND UNTIL ACCEPTANCE

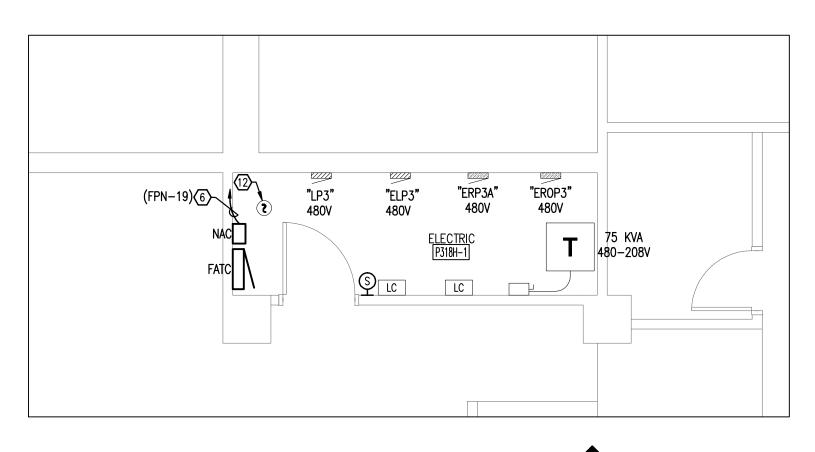
OF THE PROJECT. SATISFACTORILY RESTORE ANY FINISHES THAT BECOME STAINED OR DAMAGED.

COUNTY COURTHOU FIRE ALARM SYSTE

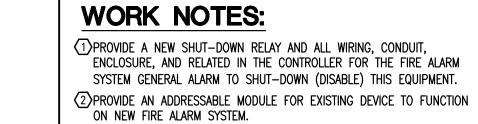












(3) EXISTING CEILING-MOUNTED SMOKE DETECTORS AND CORRESPONDING BELOW-FLOOR SMOKE DETECTORS IN THE MAIN COMPUTER ROOM ARE CONNECTED ON THE LOAD-SIDE OF THE HALON SYSTEM AND ARE NOT PART OF THIS PROJECT.

4 PROVIDE A NEW SHUT-DOWN RELAY AND RELATED WIRING AS REQUIRED TO TURN HVAC EQUIPMENT OFF UPON A GENERAL ALARM OF THE FIRE ALARM SYSTEM.

5) PROVIDE A NEW SMOKE DETECTOR LOCATED A MINIMUM OF 4-FEET FROM THE SUPPLY AIR VENT.

6 PROVIDE (1) ¾"C-1 #10 ø, 1 #10 N & 1 #10 G TO PANEL AND CIRCUIT INDICATED FOR SERVICE TO NEW FIRE ALARM SYSTEM COMPONENT. REFER TO PANEL SCHEDULE AND ELECTRICAL RISER

7) REMOVE EXISTING FACP'S AND PROVIDE NEW EMERGENCY POWER CIRCUITS TO FEED NEW FAAP'S.

(8) PROVIDE MANUAL/AUTO CONTROL SWITCH IN BAILIFFS MONITORING ROOM. PROVIDE INTERCONNECTION CONDUITS/CONDUCTORS. (FIELD VERIFY STARTER LOCATION) EXISTING FAN OPERATION SHALL NOT BE CIRCUMVENTED.

(9) PROVIDE NEW CONNECTIONS TO EXISTING DRY PIPE SPRINKLER SYSTEM PRESSURE SWITCHES AND TAMPER SWITCHES. ①PROVIDE MONITORING OF FIRE PUMP CONTROLLER PHASE LOSS, PHASE REVERSAL AND POWER LOSS.

PROVIDE MONITORING OF FIRE SPRINKLER SYSTEM COMPRESSORS CONTROLLER PHASE LOSS, PHASE REVERSAL AND POWER LOSS. 12) REPLACE EXISTING DEVICE WITH NEW COMPATIBLE WITH NEW FIRE ALARM

(13)NO SHUT-DOWN RELAY REQUIRED.

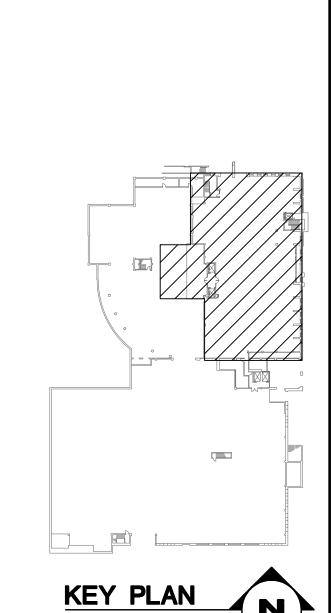
WALL RATING LEGEND 1 HOUR FIRE RATED PARTITION 1 HOUR RATED FIRE/SMOKE PARTITION

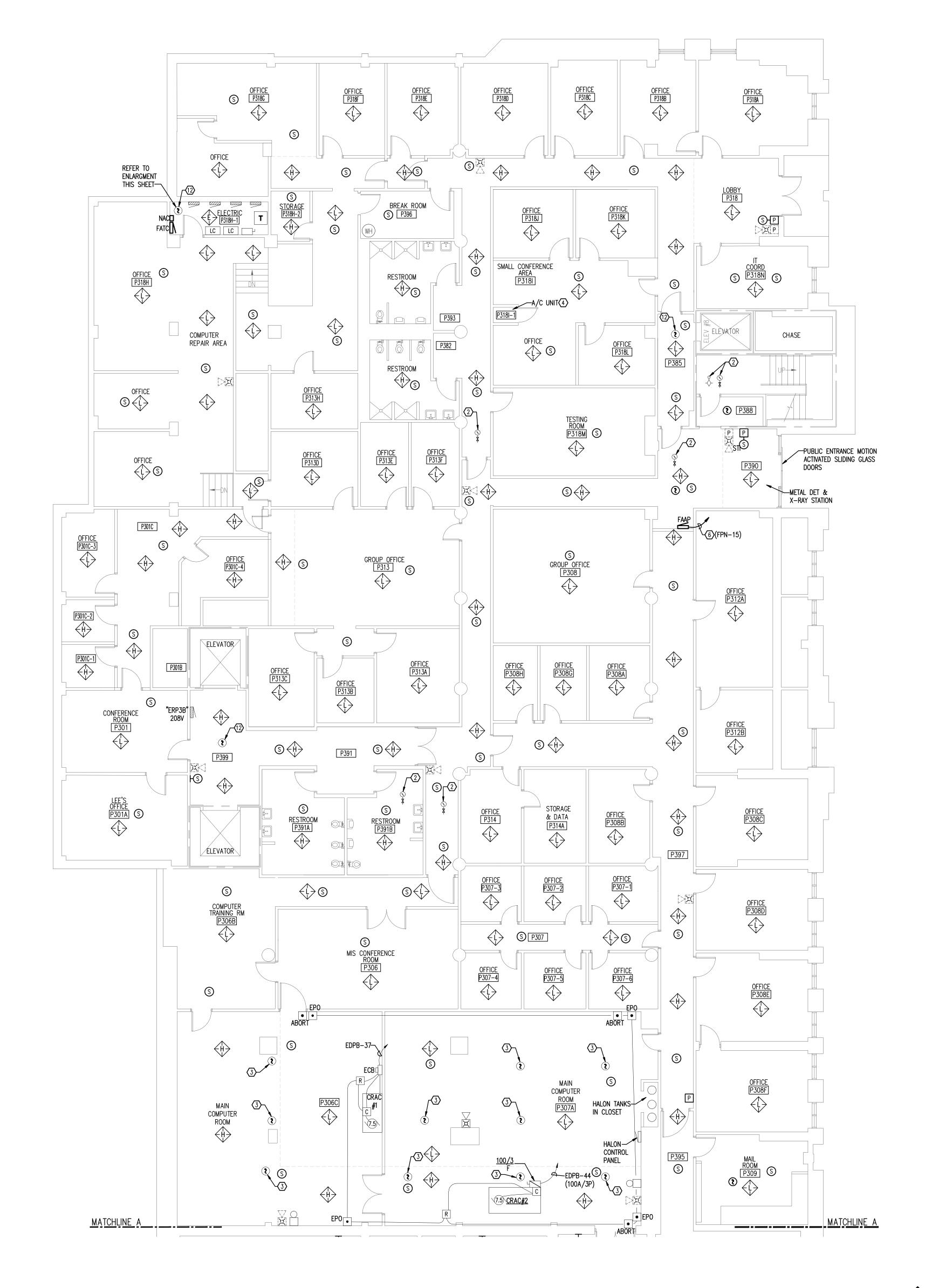
- 2 HOUR FIRE RATED PARTITION SMOKE TIGHT CONSTRUCTION

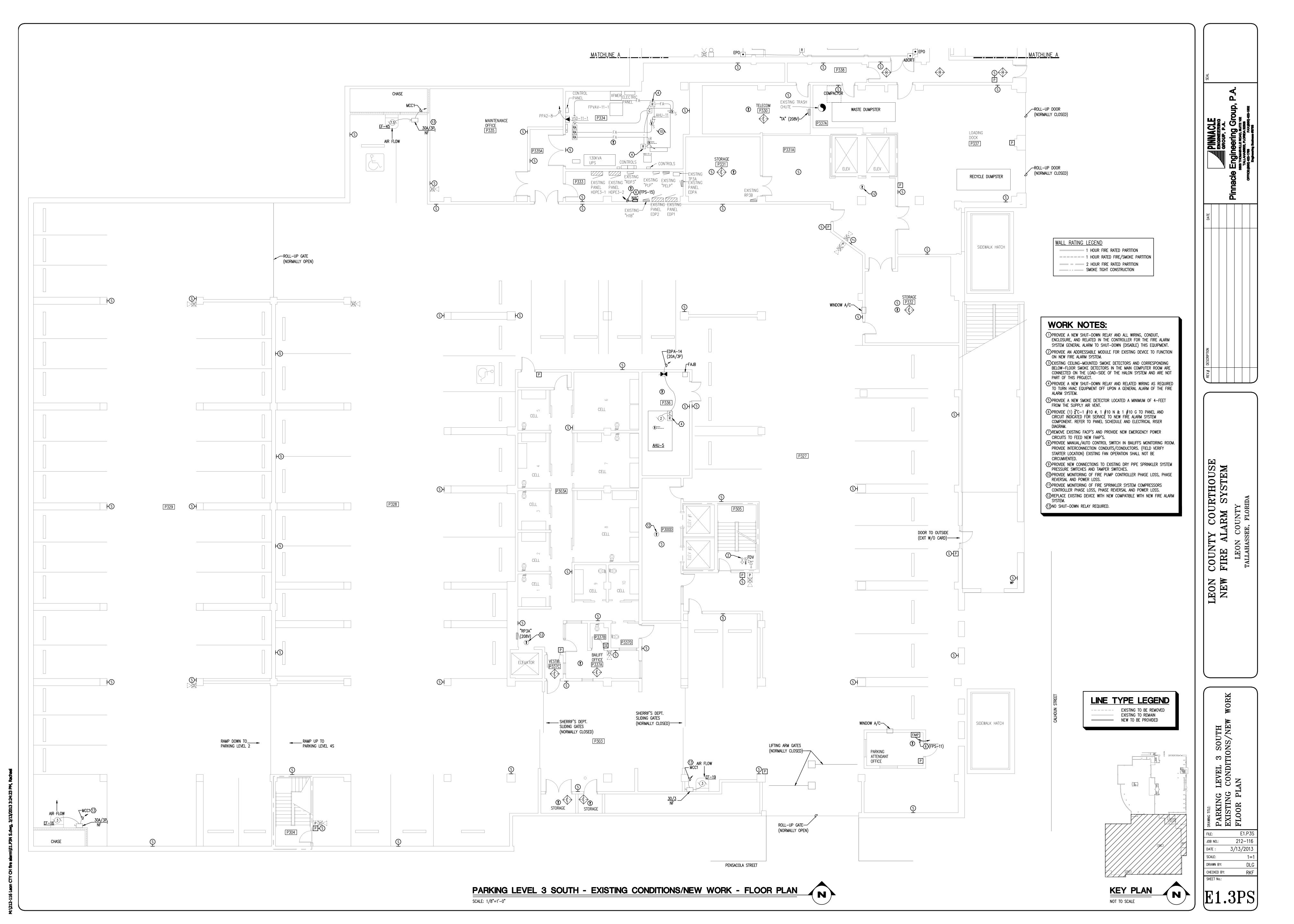
COUNTY COURTHOUSE FIRE ALARM SYSTEM

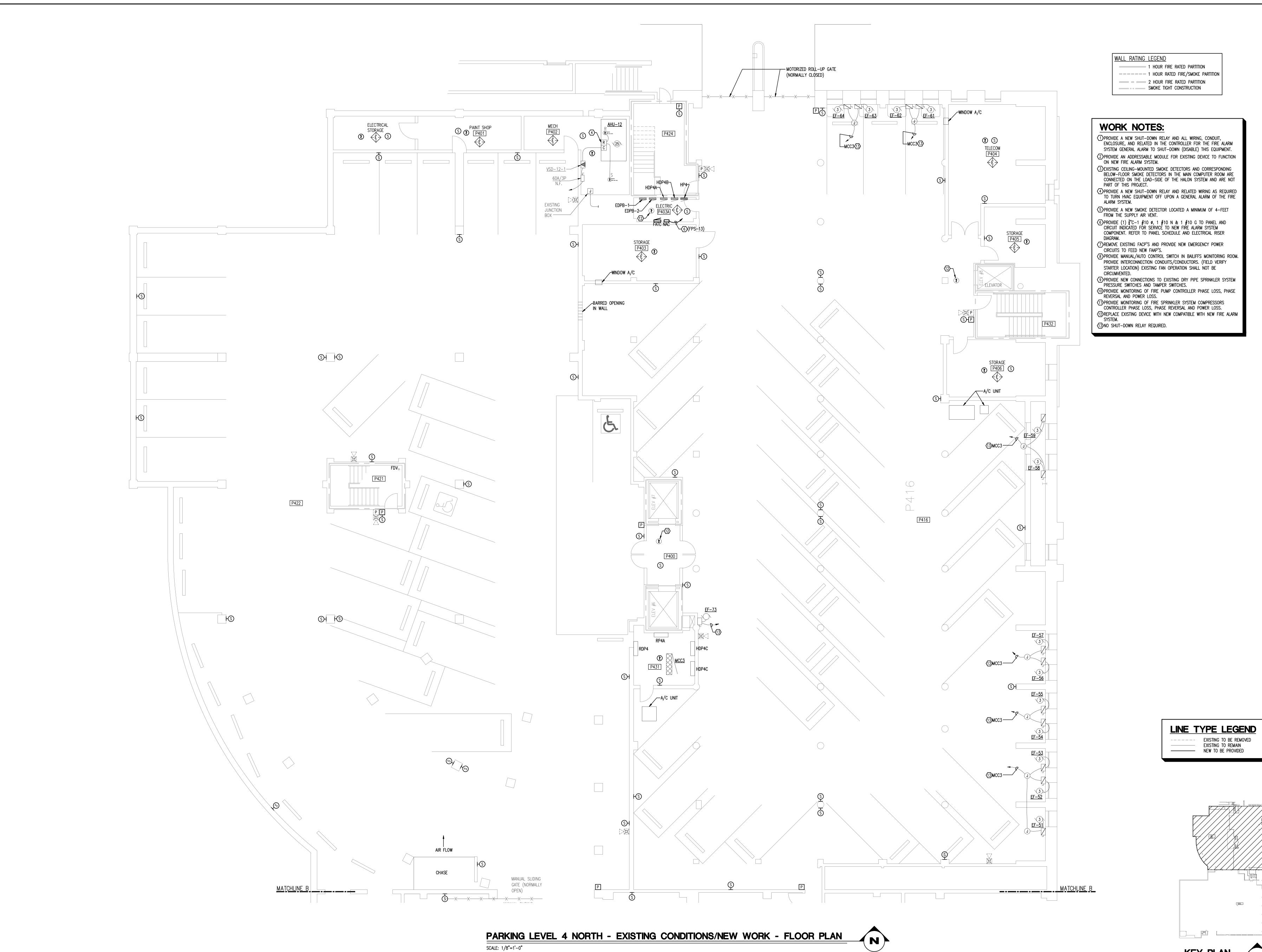
LINE TYPE LEGEND EXISTING TO BE REMOVED
EXISTING TO REMAIN
NEW TO BE PROVIDED

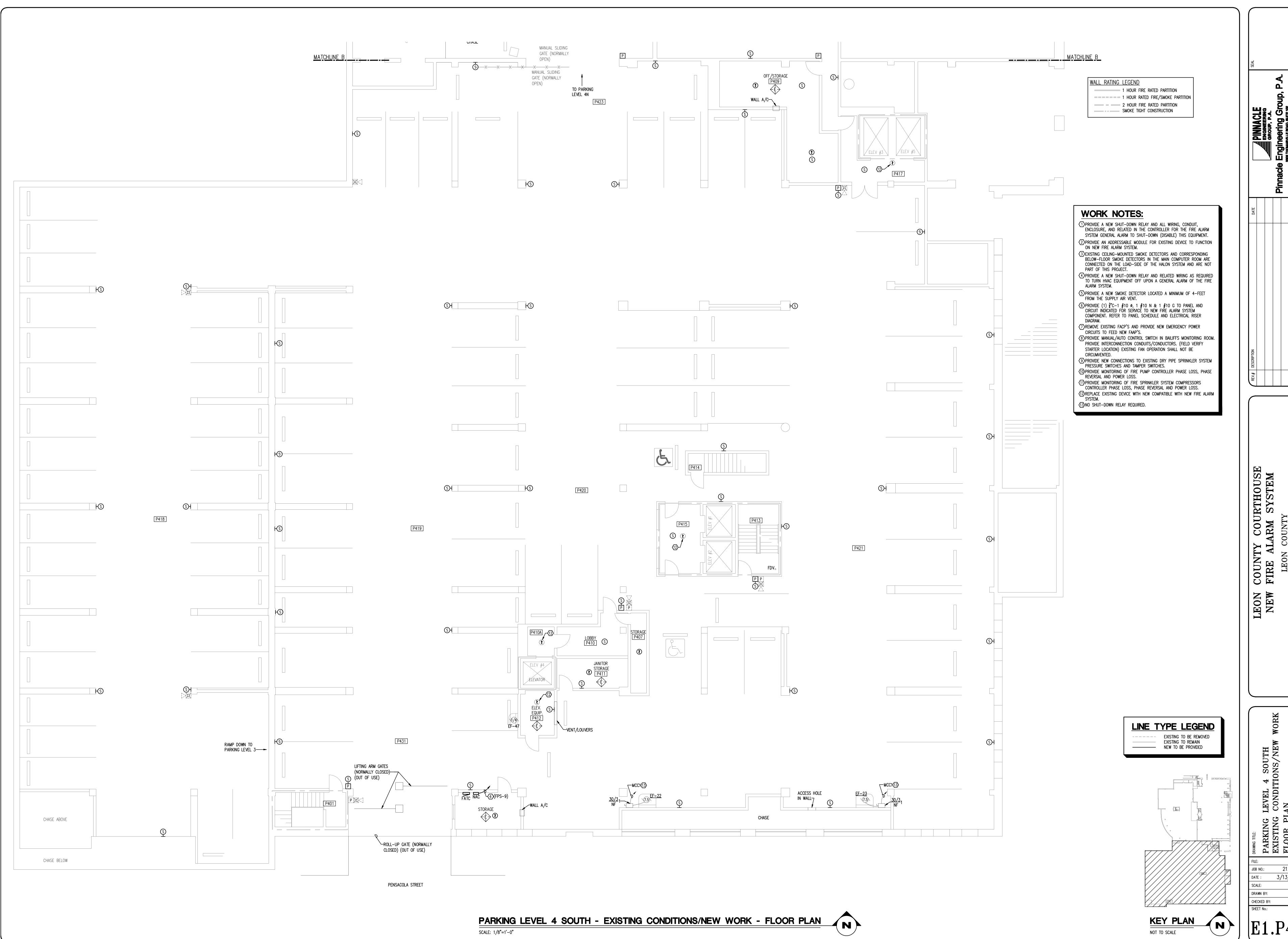
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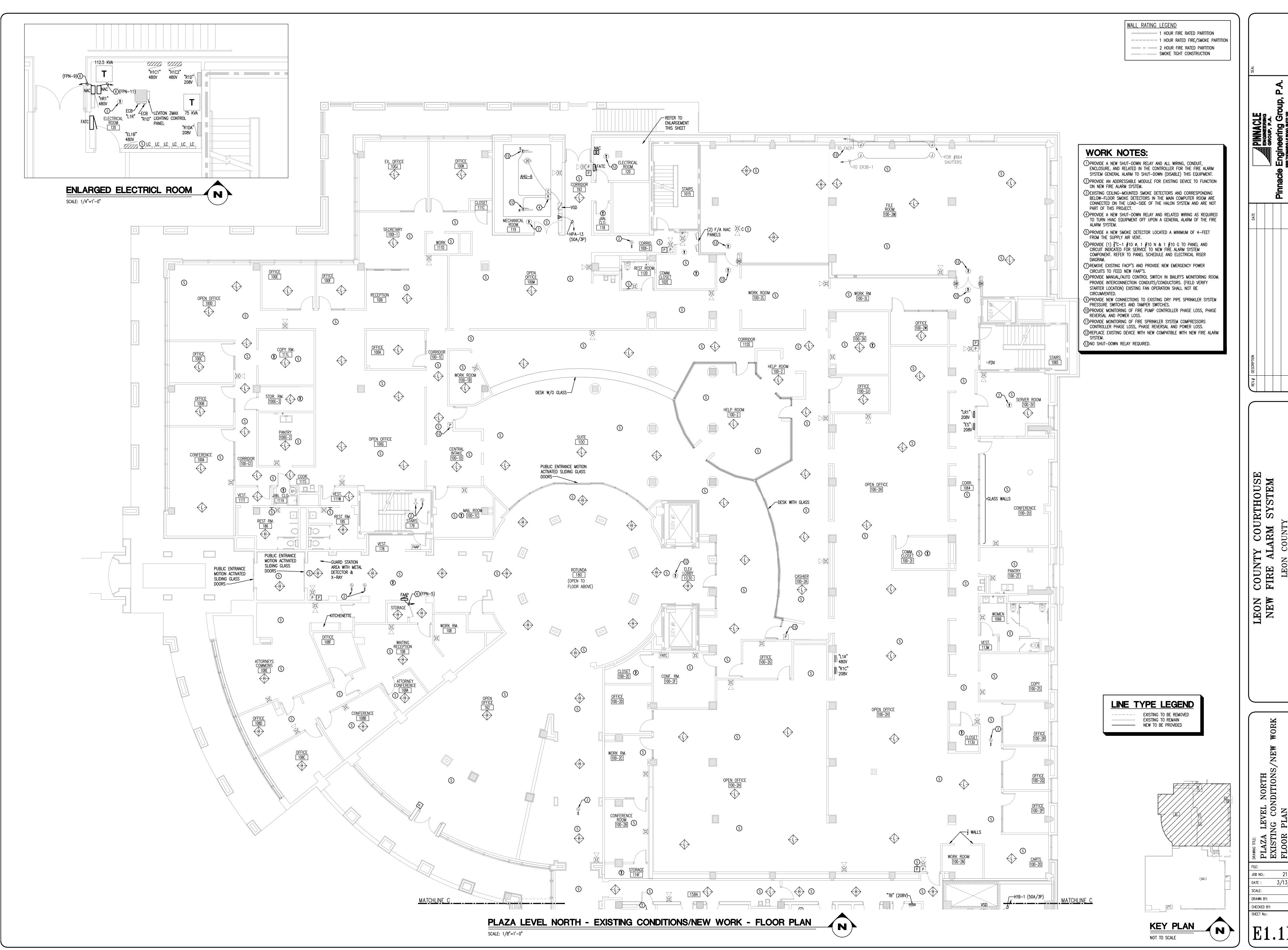


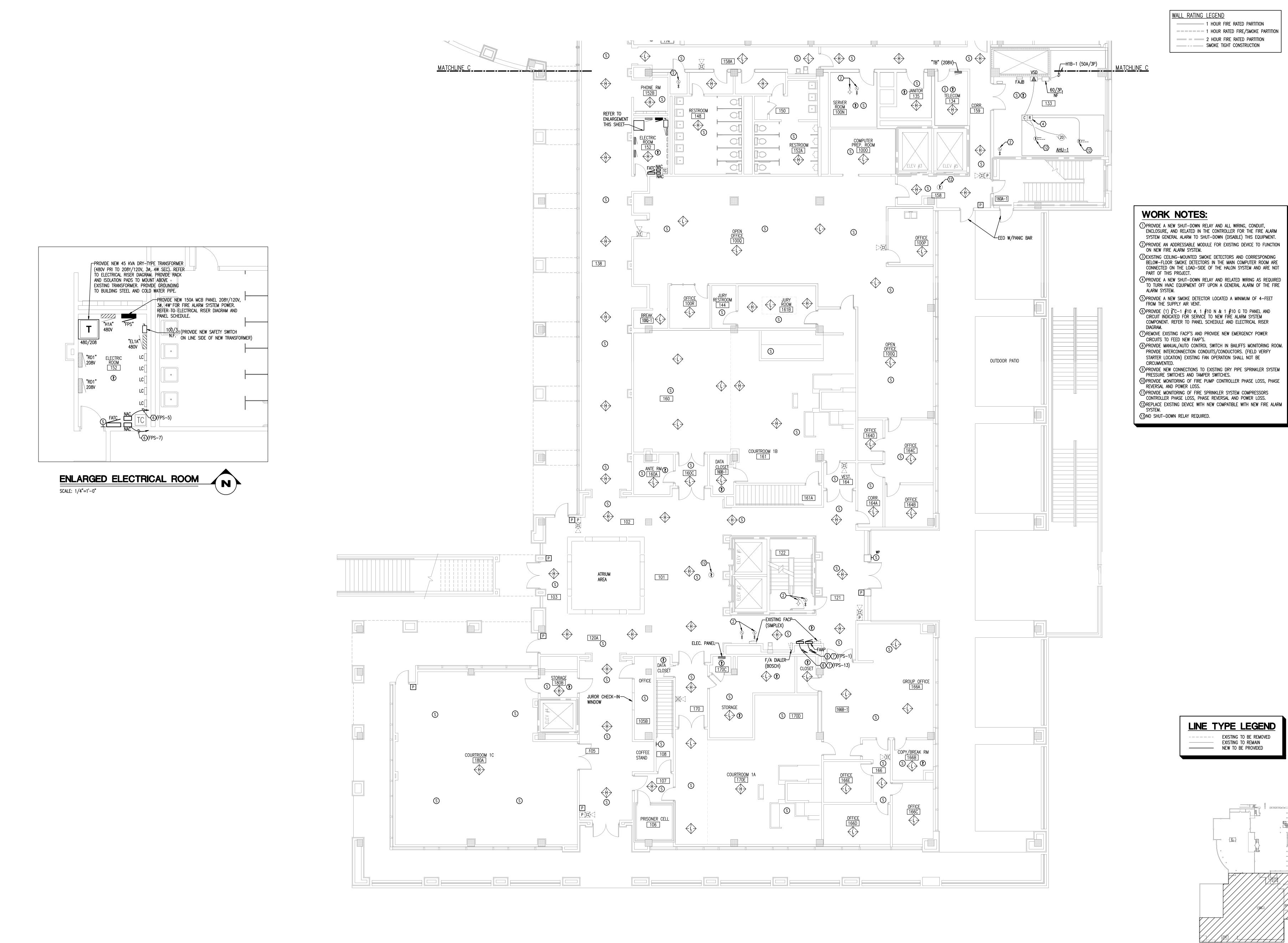












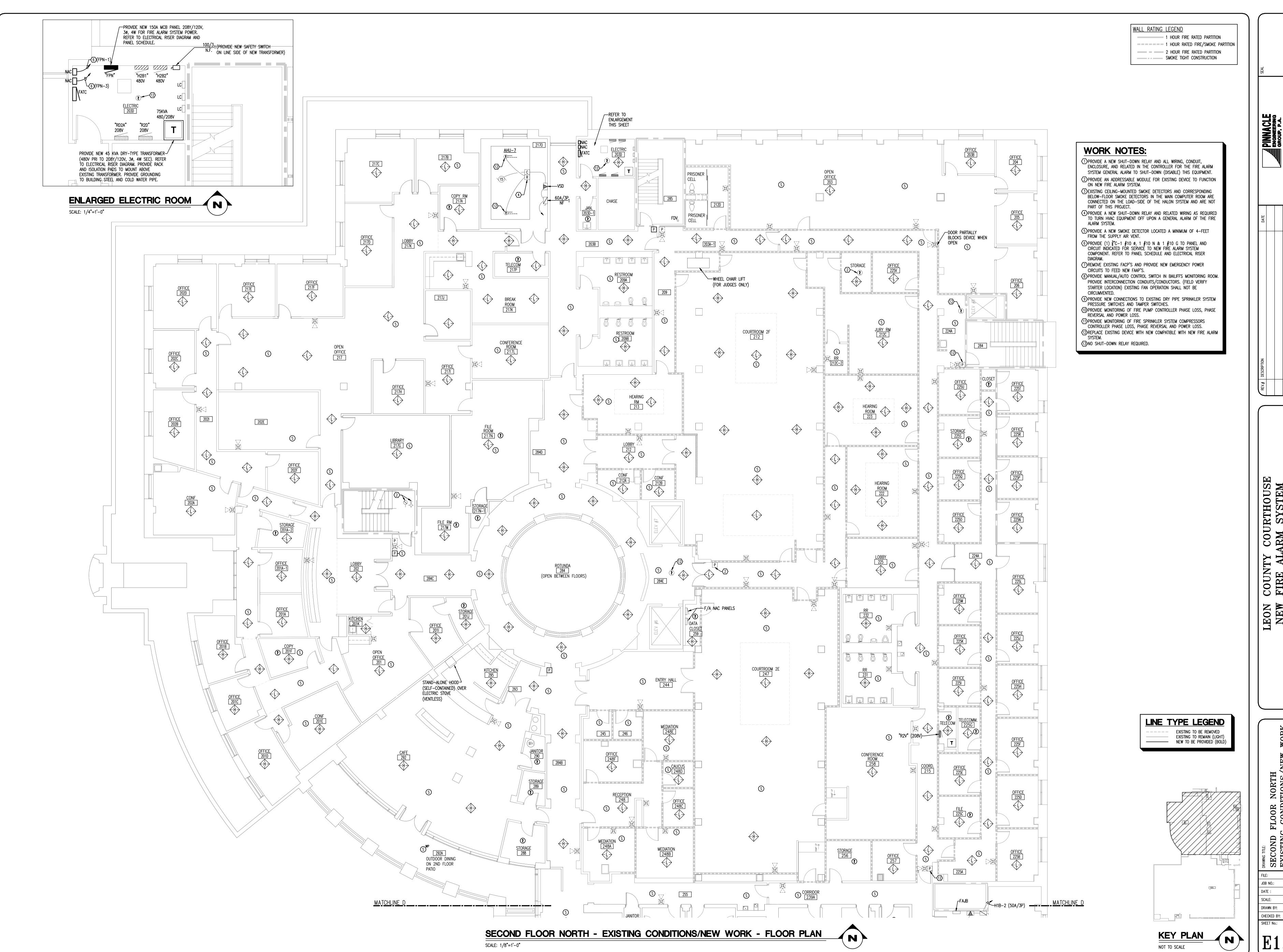
SOUTH IDITIONS/NEW

3/13/2013 CHECKED BY:

KEY PLAN NOT TO SCALE

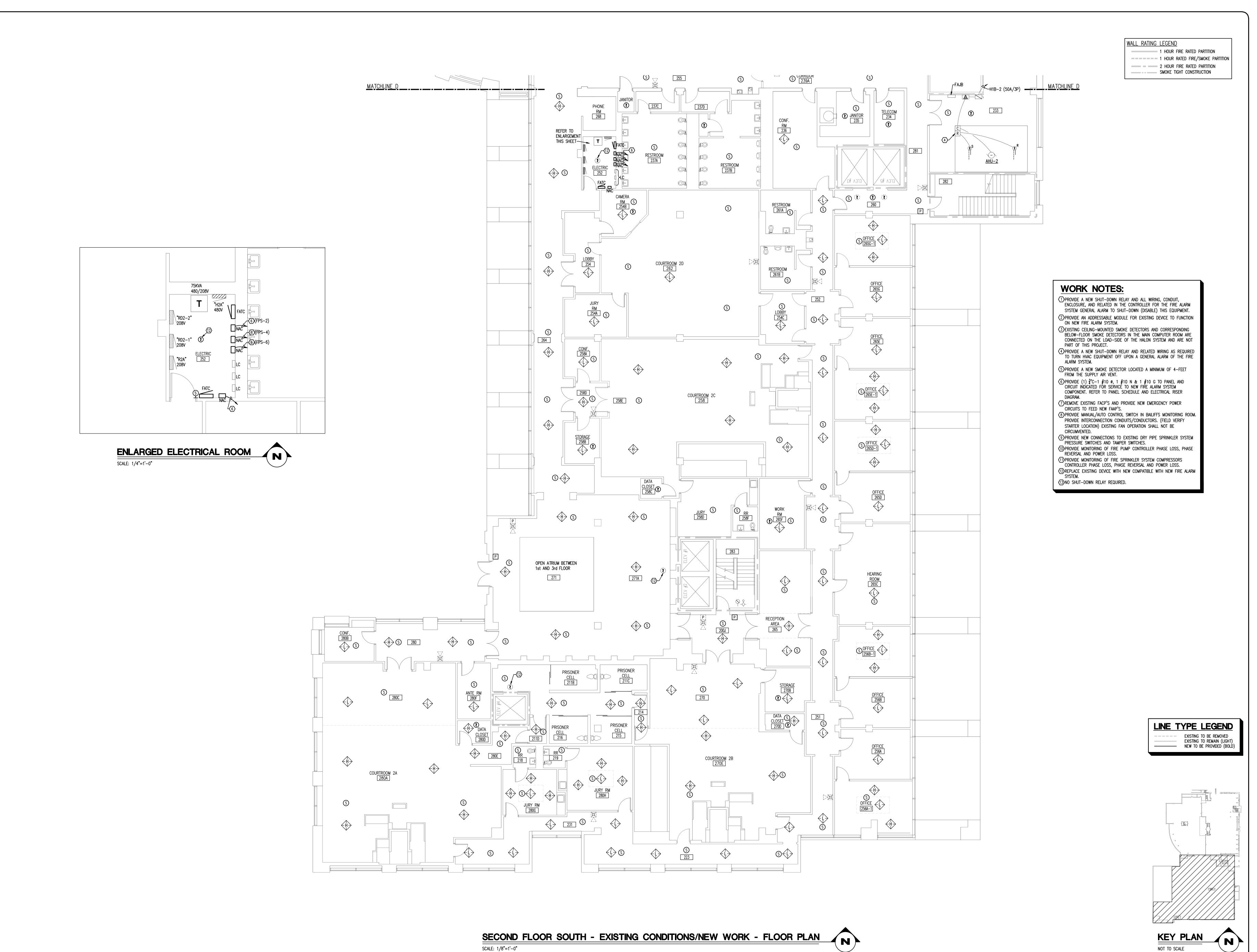
PLAZA LEVEL SOUTH - EXISTING CONDITIONS/NEW WORK - FLOOR PLAN SCALE: 1/8"=1'-0"

E1.1S



FLOOR NORTH G CONDITIONS/NEW

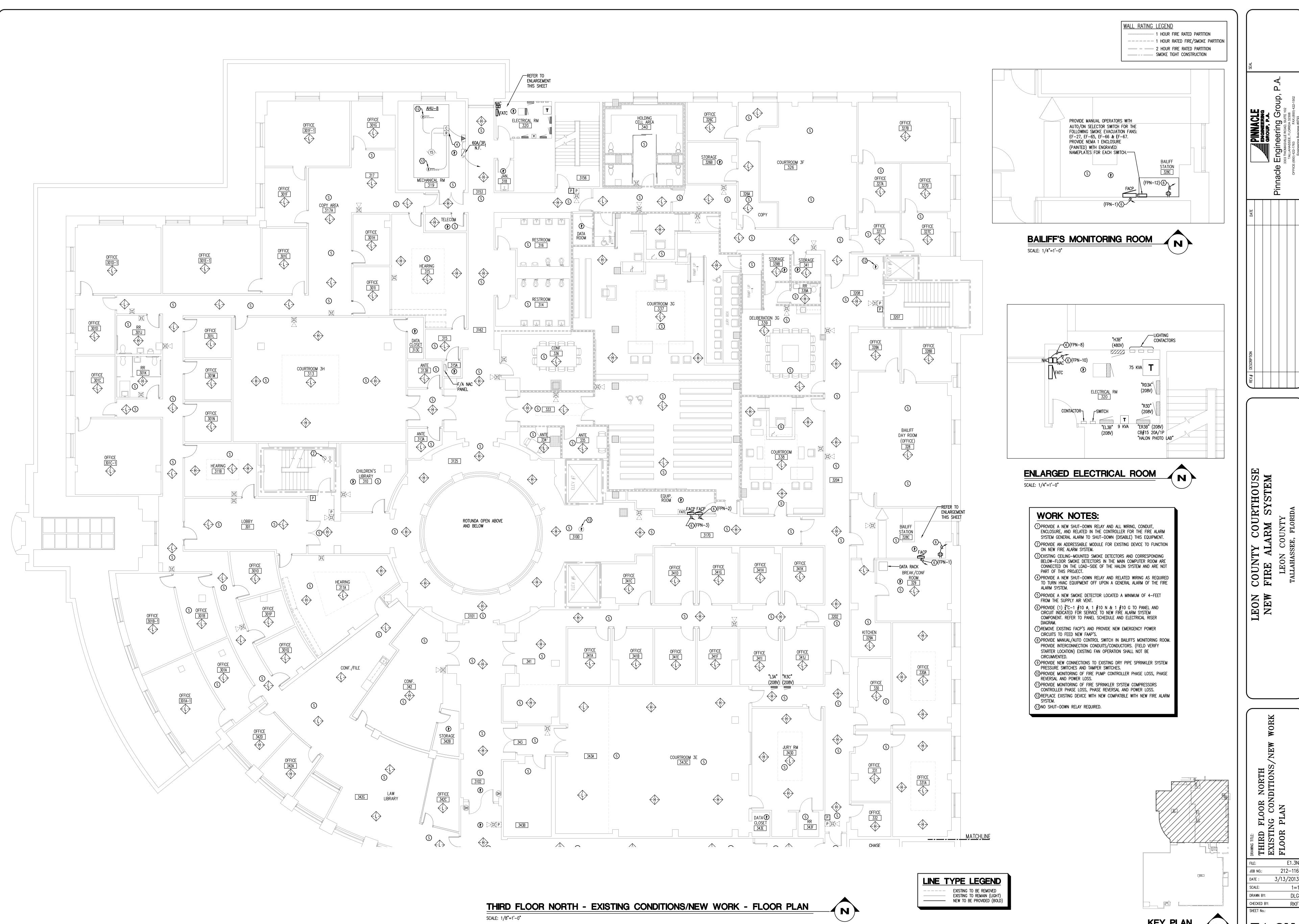
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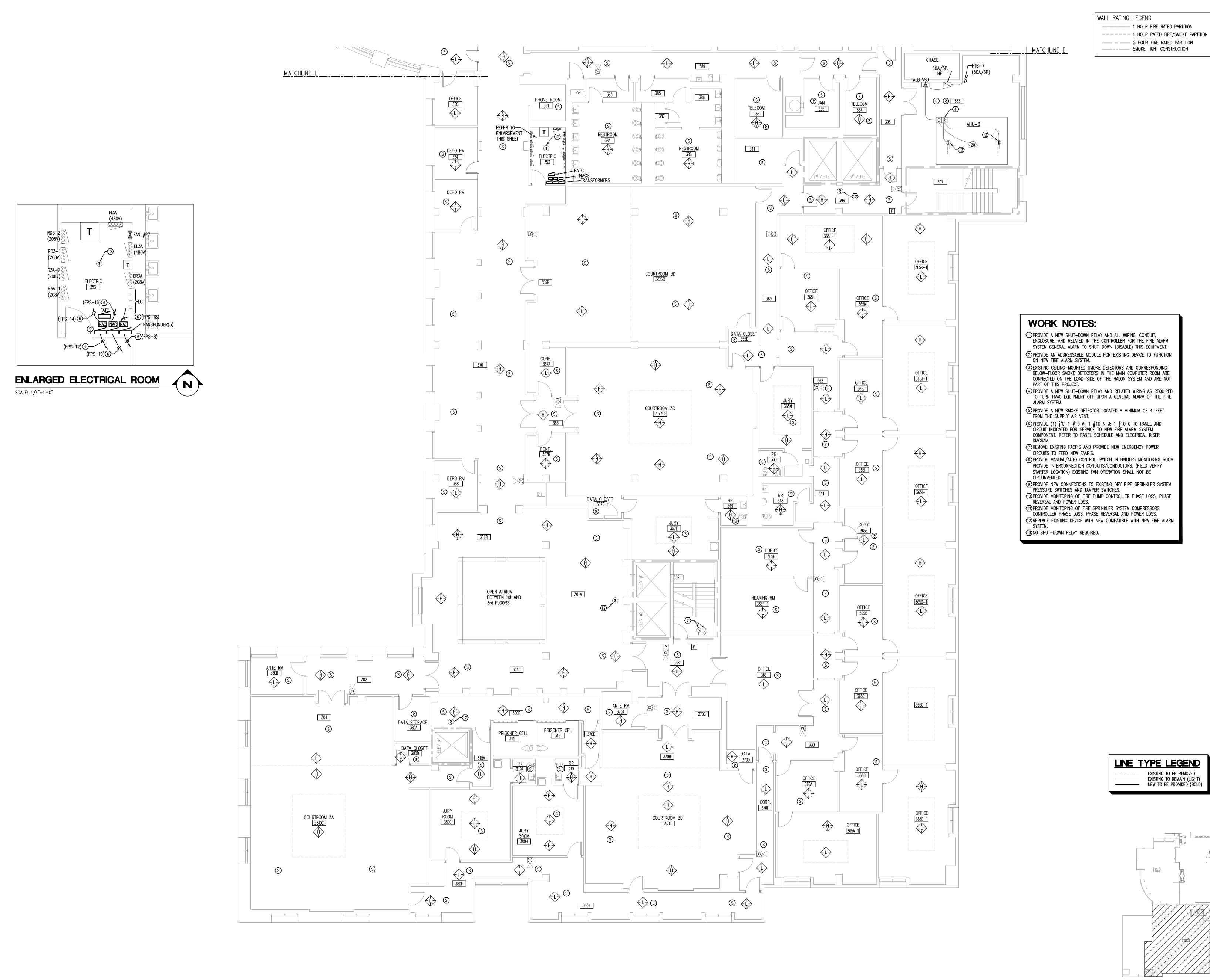


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SECOND FLOOR SOUTH
EXISTING CONDITIONS/NE





THIRD FLOOR SOUTH - EXISTING CONDTIONS/NEW WORK - FLOOR PLAN

SCALE: 1/8"=1'-0"

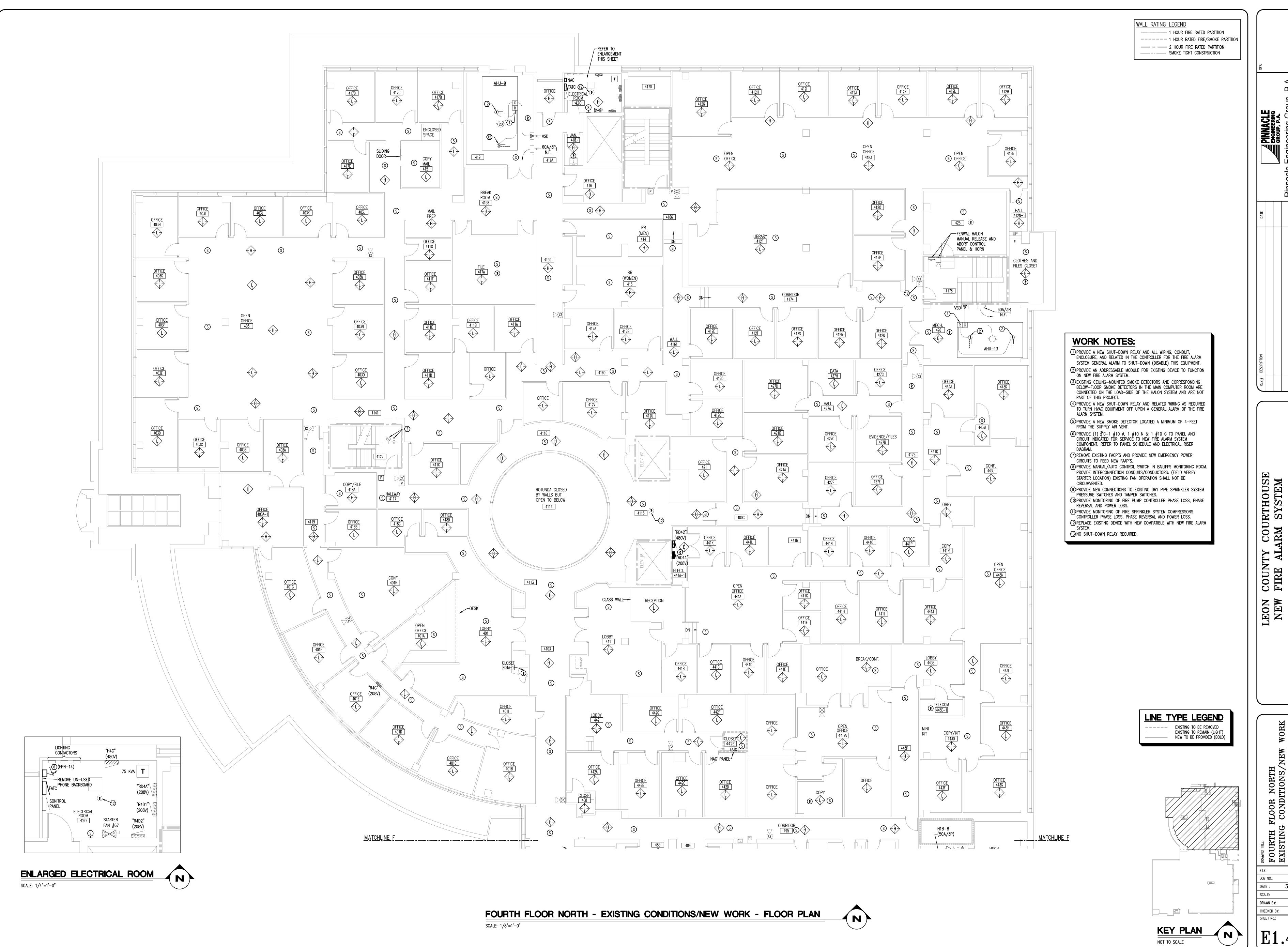
KEY PLAN

NOT TO SCALE

E1.38

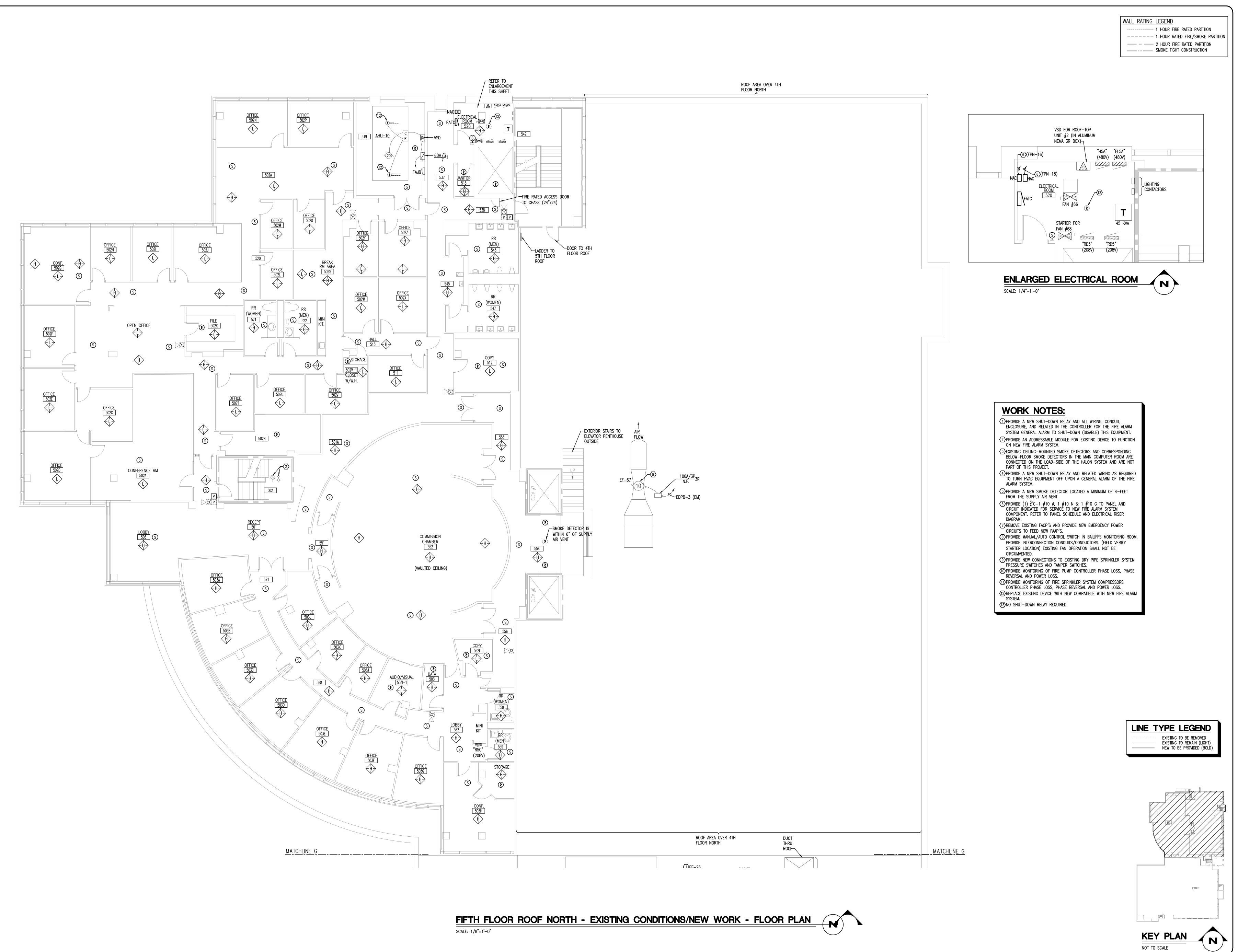
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Y COURTHOUSE LARM SYSTEM



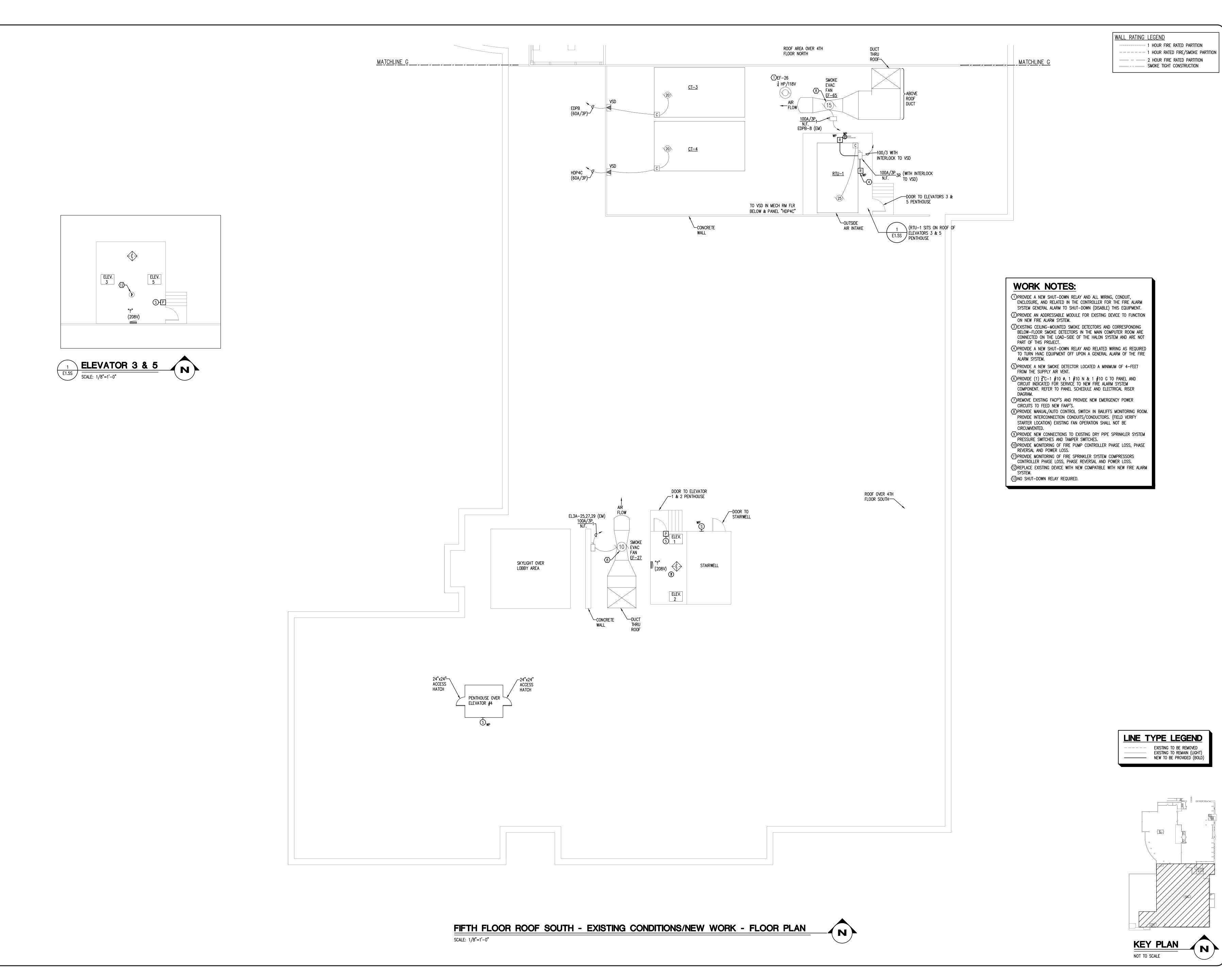


COUNTY COURTHOUSE FIRE ALARM SYSTEM

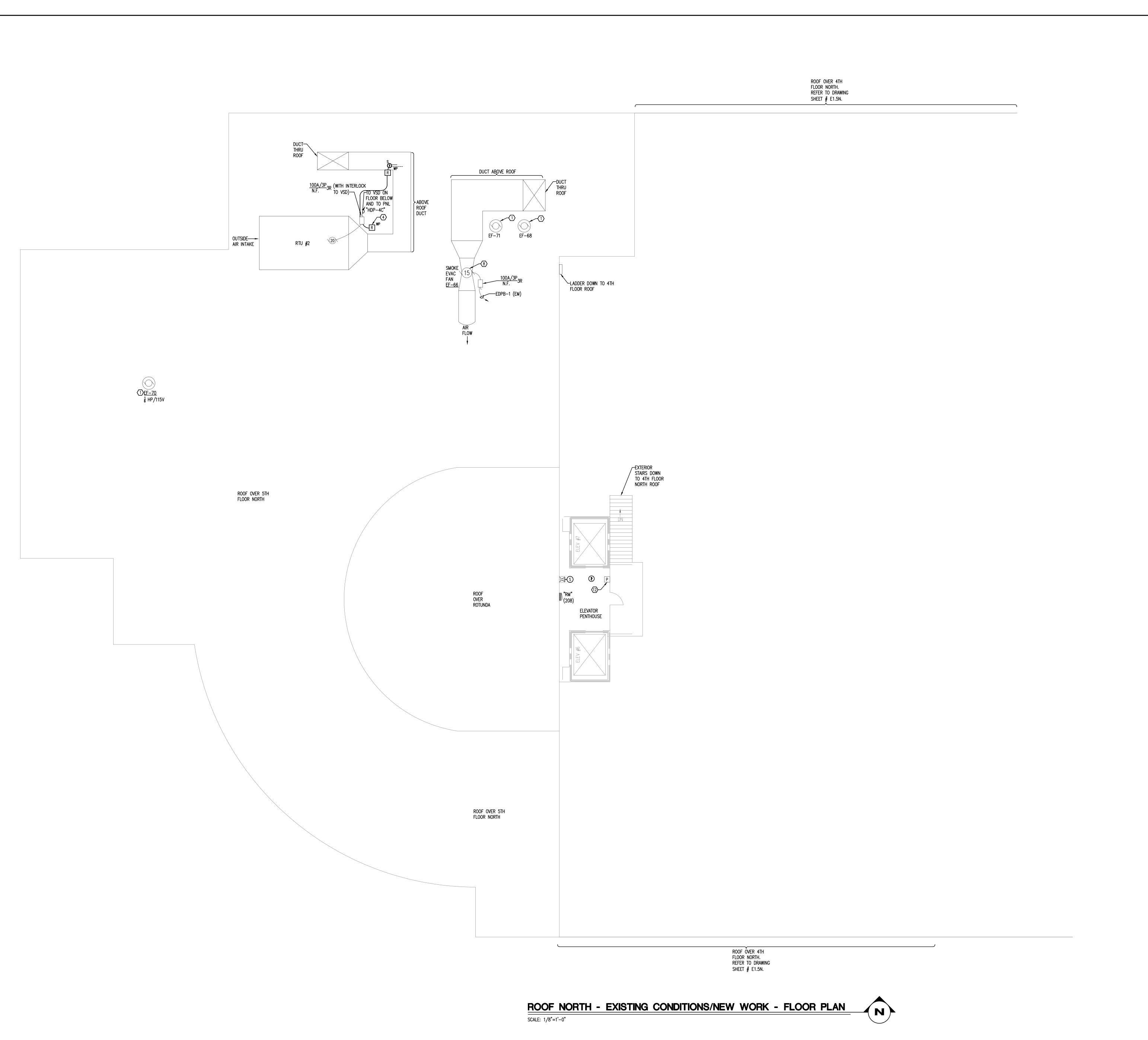


| E1.5N

COUNTY COURTHOUSE FIRE ALARM SYSTEM



COUNTY COURTHOUSE FIRE ALARM SYSTEM



WALL RATING LEGEND 1 HOUR FIRE RATED PARTITION ----- 1 HOUR RATED FIRE/SMOKE PARTITION ---- 2 HOUR FIRE RATED PARTITION SMOKE TIGHT CONSTRUCTION

WORK NOTES:

1) PROVIDE A NEW SHUT-DOWN RELAY AND ALL WIRING, CONDUIT, ENCLOSURE, AND RELATED IN THE CONTROLLER FOR THE FIRE ALARM SYSTEM GENERAL ALARM TO SHUT-DOWN (DISABLE) THIS EQUIPMENT. 2 PROVIDE AN ADDRESSABLE MODULE FOR EXISTING DEVICE TO FUNCTION ON NEW FIRE ALARM SYSTEM.

3 EXISTING CEILING-MOUNTED SMOKE DETECTORS AND CORRESPONDING BELOW-FLOOR SMOKE DETECTORS IN THE MAIN COMPUTER ROOM ARE CONNECTED ON THE LOAD-SIDE OF THE HALON SYSTEM AND ARE NOT PART OF THIS PROJECT.

4) PROVIDE A NEW SHUT-DOWN RELAY AND RELATED WIRING AS REQUIRED TO TURN HVAC EQUIPMENT OFF UPON A GENERAL ALARM OF THE FIRE ALARM SYSTEM.

5) PROVIDE A NEW SMOKE DETECTOR LOCATED A MINIMUM OF 4-FEET FROM THE SUPPLY AIR VENT.

6 PROVIDE (1) ₹"C-1 #10 Ø, 1 #10 N & 1 #10 G TO PANEL AND CIRCUIT INDICATED FOR SERVICE TO NEW FIRE ALARM SYSTEM COMPONENT. REFER TO PANEL SCHEDULE AND ELECTRICAL RISER

7 REMOVE EXISTING FACP'S AND PROVIDE NEW EMERGENCY POWER CIRCUITS TO FEED NEW FAAP'S. (8) PROVIDE MANUAL/AUTO CONTROL SWITCH IN BAILIFFS MONITORING ROOM. PROVIDE INTERCONNECTION CONDUITS/CONDUCTORS. (FIELD VERIFY

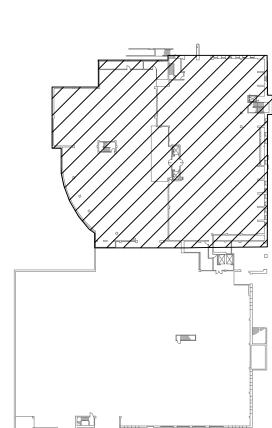
STARTER LOCATION) EXISTING FAN OPERATION SHALL NOT BE

9) PROVIDE NEW CONNECTIONS TO EXISTING DRY PIPE SPRINKLER SYSTEM PRESSURE SWITCHES AND TAMPER SWITCHES. PROVIDE MONITORING OF FIRE PUMP CONTROLLER PHASE LOSS, PHASE REVERSAL AND POWER LOSS.

(11) PROVIDE MONITORING OF FIRE SPRINKLER SYSTEM COMPRESSORS CONTROLLER PHASE LOSS, PHASE REVERSAL AND POWER LOSS. (12) REPLACE EXISTING DEVICE WITH NEW COMPATIBLE WITH NEW FIRE ALARM SYSTEM.

(13)NO SHUT-DOWN RELAY REQUIRED.

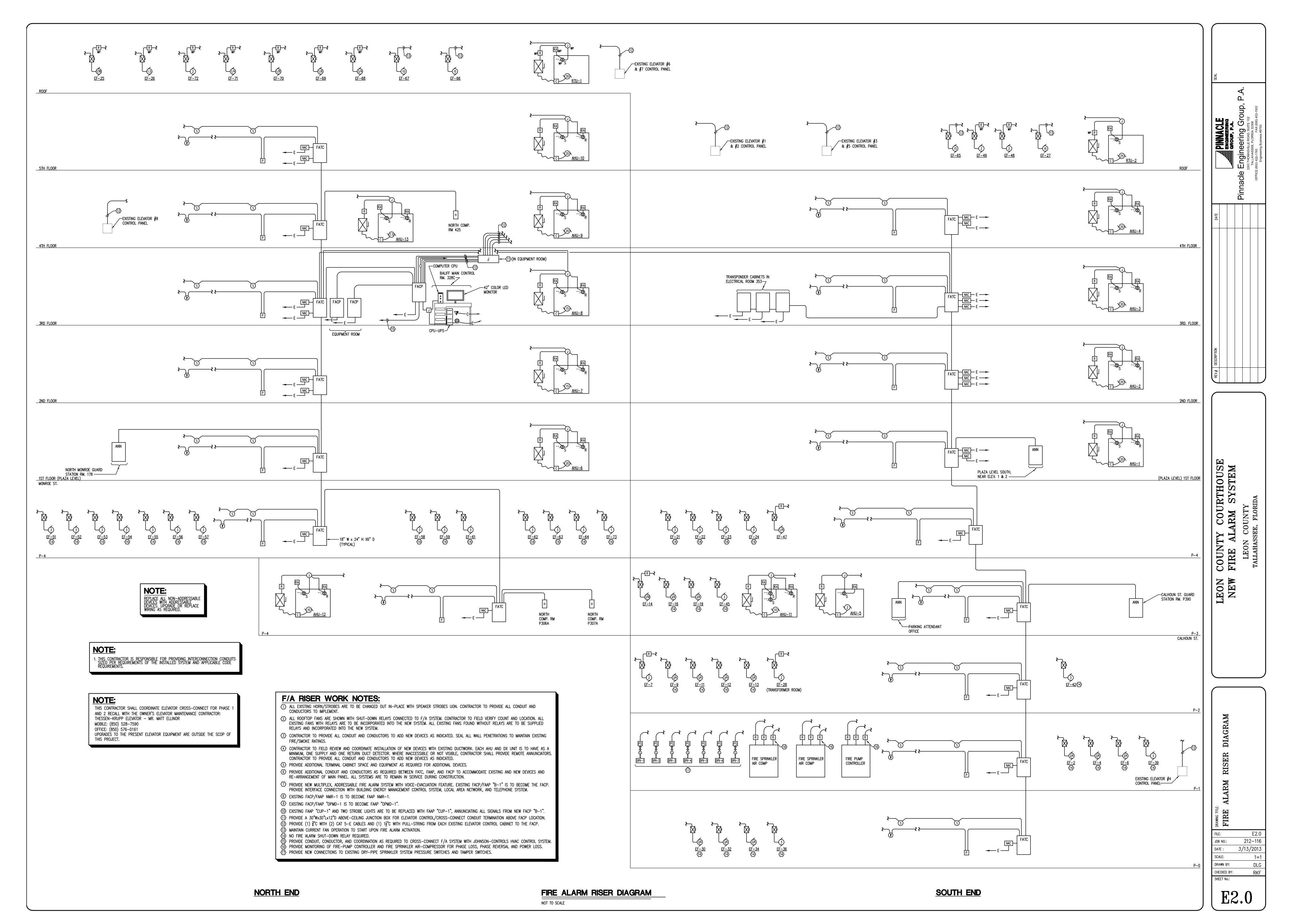
LINE TYPE LEGEND EXISTING TO BE REMOVED
EXISTING TO REMAIN (LIGHT)
NEW TO BE PROVIDED (BOLD)

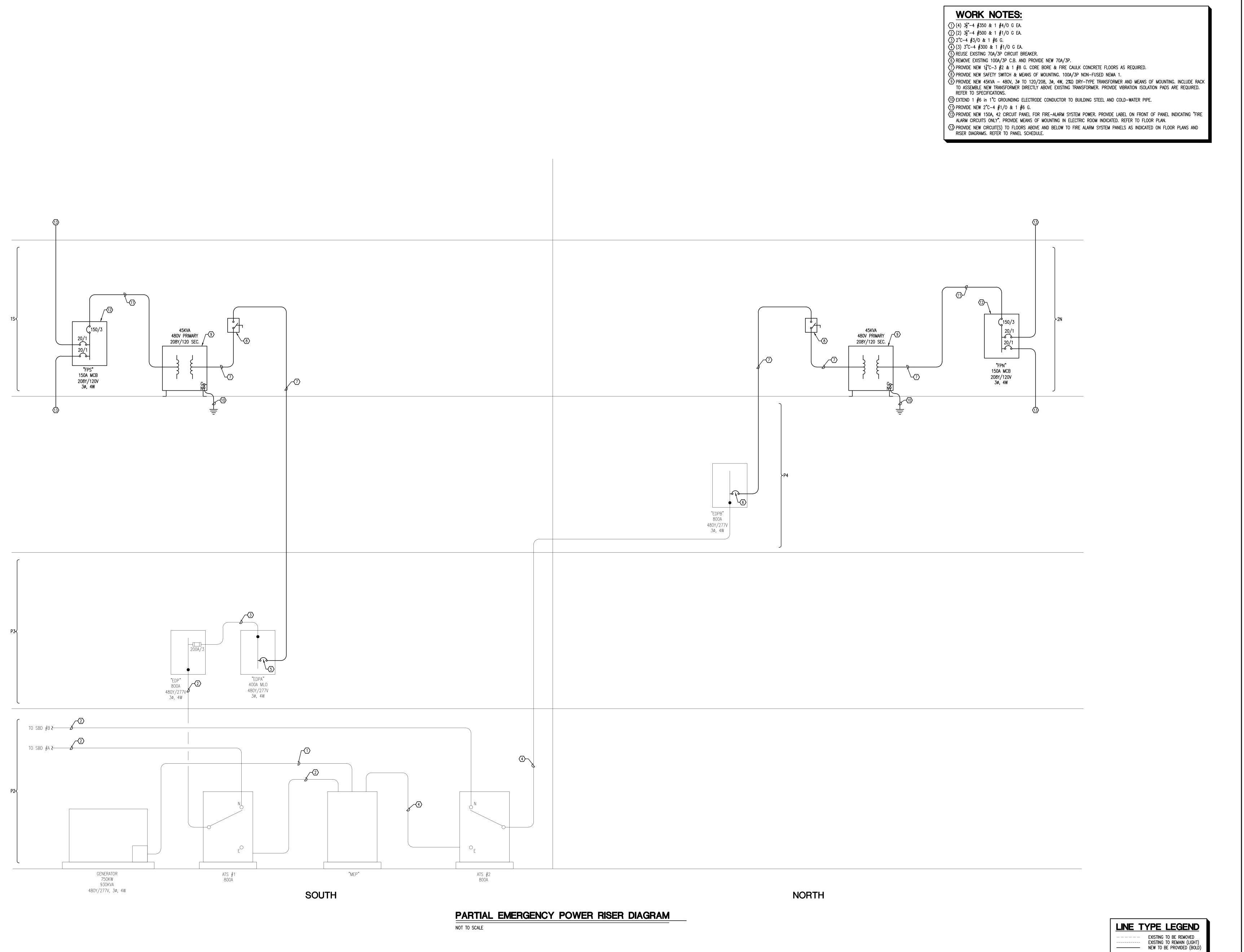


KEY PLAN

NOT TO SCALE

CHECKED BY:





PINNACLE Engineering Group, P.A.

Pinnacle Engineering Group, P.A.

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LEON COUNTY COURTHOUSE
NEW FIRE ALARM SYSTEM
LEON COUNTY

PARTIAL EMERGENCY POWER RISER DIAGRAM

E: E3.0

DB NO.: 212-116

ATE: 3/13/2013

CALE: 1=

DRAWN BY: DLG
CHECKED BY: RKF
SHEET No.:

E3.0

NEW

ERVIC	E: 208Y/120V, 3ø, 4W I				M	IAIN:	150/	MCB		K	ATING:	22,000 A.I.C	
KT	DESCRIPTION	C. BKR.			LOAD KVA./ø						. BKR.	DESCRIPTION	СК
۱0.		A	Р	A	В	С	A	В	С	Α	Р	DESCRIPTION	NO.
1	NAC-2N-1	20	1	1.44			1.68			20	1	FAAP-P3N-1	
3	NAC-2N-2				1.44			1.68				FAAP-P3N-2	
5	FAAP-1N-1		П			1.68			1.68			FAAP-P3N-3	
7	SPARE		П	-			1.44					NAC-3N-1	
9	NAC-1N-1				1.44			1.44				NAC-3N-2	
11	NAC-1N-2					1.44			.70			RECEPT-3N	
13	NAC-P4N			1.44			1.44					NAC-4N	
15	FAAP-P3N-1				1.68			1.44				NAC-5N-1	
17	SPARE					-			1.44			NAC-5N-2	
19	NAC-P3N			1.44			-					SPARE	
21	SPARE				-			-					
23			П			-			-				
25			П	-			-						
27					-			-					
29						-			-				
31				-			-						,
33					-			-					,
35						-			-				
37				_			_						
39					-			-					
41	1		\prod			-			-	,	П		
		•	-	4.32	4.56	3.12	4.56	4.56	3.82	•			

NFW

SERVIC	NEL SCHEDULE: E: 208Y/120V, 3ø, 4W			3			IOUNTING: IAIN:	SURF 150	FACE MCB			OCATION ATING:	: ELECTRIC ROOM 1S 22,000 A.I.C	
CKT	DECORPORTION	(C. BKR			LOAD KVA./ø					С	. BKR.	DECODINE	СК
NO.	DESCRIPTION		Α	Р	А	В	С	A	В	С	Α	Р	DESCRIPTION	NO.
1	FAAP-1S-1		20	1	1.68			1.44			20	1	NAC-2S-1	2
3	FAAP-1S-2					1.68			1.44				NAC-2S-2	4
5	NAC-1S-1						1.44			1.44			NAC-2S-3	6
7	NAC-1S-2				1.44			1.68					TRANSPOND-3S-1	8
9	NAS-P4S					1.44			1.68				TRANSPOND-3S-2	10
11	FAAP-P3S-1						1.68			1.68			TRANSPOND-3S-3	1:
13	SPARE				T -			1.44					NAC-3S-1	14
15	NAC-P3S					1.44			1.44				NAC-3S-2	1
17	NAC-P2S						1.44			1.44			NAC-3S-3	1
19	NAC-P1S				1.44			1.44					NAC-4S-1	2
21	NAC-POS					1.44			1.44				NAC-4S-2	2.
23	SPARE						-			-			SPARE	2
25					T -			-						2
27						-			-					2
29							-			-				3
31					-			-						3
33						-			-					3
35							-			-				3
37					_			-						3
39						-			-					4
41							_			-				4
TOTA TOTA	L CONNECTED LOAD: 31.68 KVA L DEMAND LOAD: 31.68 KVA		07 AN	MPS MPS	4.56	6.00	4.56	6.00	6.00	4.56				

COUNTY COURTHOUSE
FIRE ALARM SYSTEM
LEON COUNTY
TALLAHASSEE, FLORIDA

E3.1 212-116 3/13/2013 1=1 DLG RKF