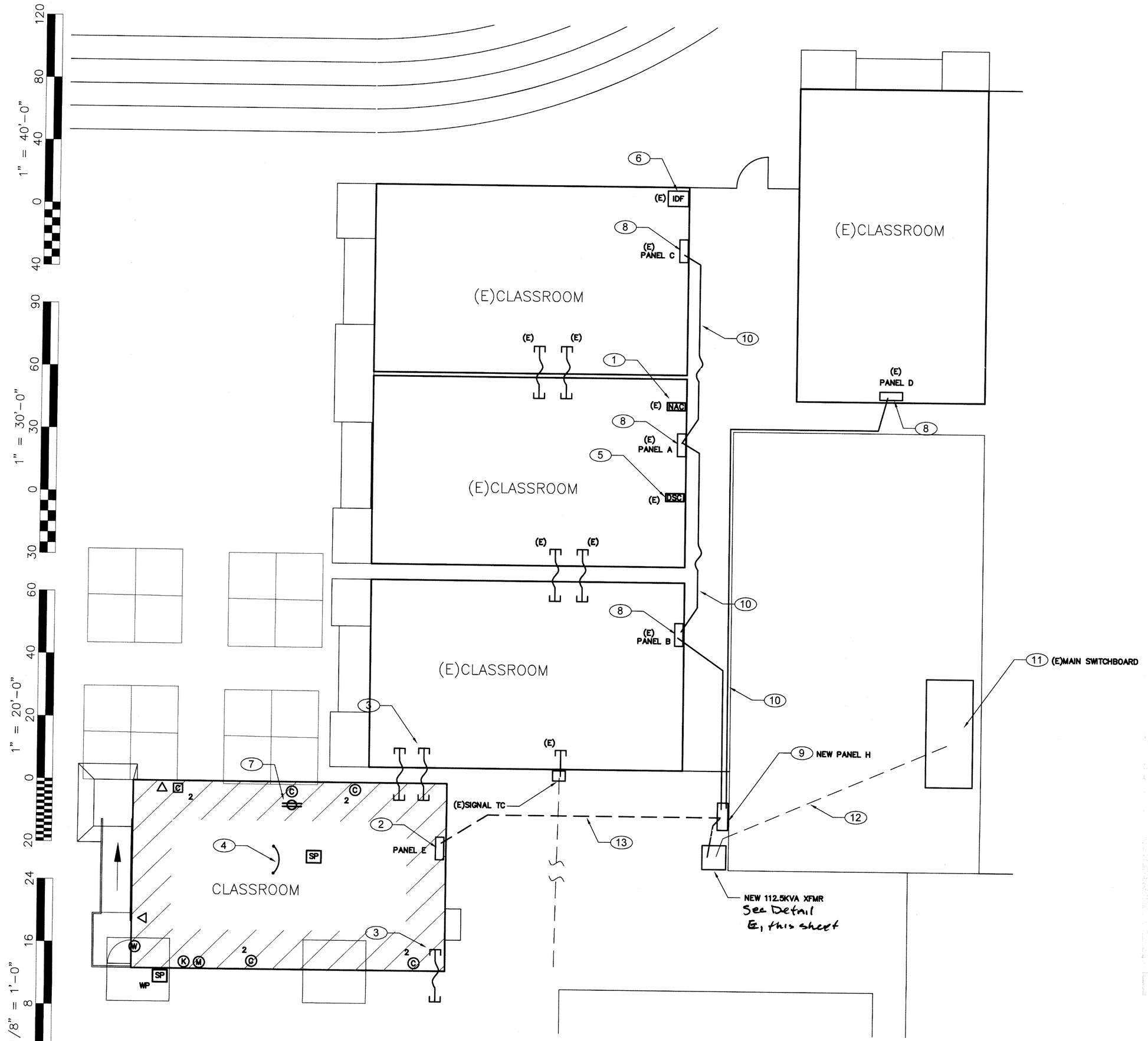


POWER AND SIGNAL PLAN

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

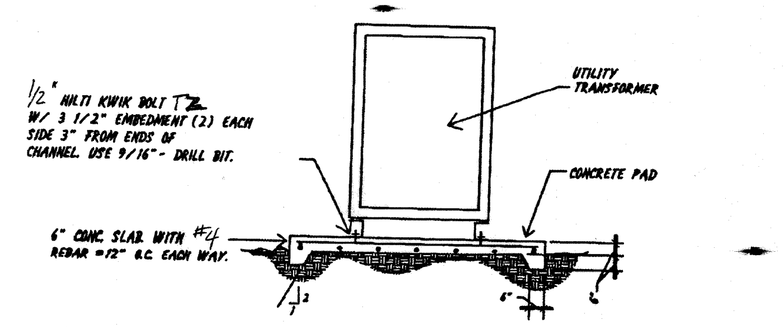
FIRE ALARM SEQUENCE OF OPERATIONS

	ACTIVATE ALARM FACP	ACTIVATE ALARM REMOTE ANNUNCIATOR	ACTIVATE TROUBLE SIGNAL AT FACP	ACTIVATE TROUBLE SIGNAL AT REMOTE ANNUNCIATOR	ACTIVATE SUPERVISORY SIGNAL AT FACP	ACTIVATE SUPERVISORY SIGNAL AT REMOTE ANNUNCIATOR	SEND ALARM SIGNAL OFF-SITE VIA COMMUNICATOR	SEND SUPERVISORY SIGNAL OFF-SITE VIA COMMUNICATOR	SEND SUPERVISORY SIGNAL OFF-SITE VIA COMMUNICATOR	ACTIVATE AUDIBLE/VISIBLE SIGNALS	ACTIVATE WATER FLOW BELL	ACTIVATE BUILDING BELL	SECONDARY FLOOR RECALL	ELEVATOR SHAFT TRIP	SHUTDOWN HVAC UNITS	CLOSE FIRE DOORS	CLOSE FIRE DOORS DAMPERS	RESET 120VAC INITIATING DEVICES	ACTIVATE BATTERY BACK-UP	DEACTIVATE AUDIBLE SIGNALS	ACTIVATE AUDIBLE SIGNALS	RESET 24V 4-WIRE DEVICES	SYSTEM NORMAL
MANUAL PULL STATION	X	X					X		X								X							
SMOKE DETECTORS:																								
ALL (EXCEPT LISTED BELOW)	X	X					X		X								X							
PRIMARY FLOOR LOBBY	X	X					X		X		X						X							
ALL OTHER LOBBIES	X	X					X		X		X						X							
ELEVATOR MACHINE ROOM	X	X					X		X		X						X							
ELEVATOR SHAFT	X						X		X		X						X							
HEAT DETECTORS:																								
ALL (EXCEPT LISTED BELOW)	X	X					X		X								X							
ELEVATOR MACHINE ROOM	X	X					X		X			X					X							
ELEVATOR SHAFT	X	X					X		X			X					X							
DUCT DETECTOR			X	X			X								X	X								
FIRE SPRINKLER WATERFLOW SWITCH	X	X					X		X	X							X							
FIRE SPRINKLER TAMPER SWITCH			X	X			X																	
POST INDICATOR VALVE			X	X			X																	
WIRING CONDITIONS:																								
SIGNALING LINE CIRCUIT (SLC)–																								
WIRE-TO-WIRE SHORT			X	X				X																
SINGLE OPEN			X	X				X																
SINGLE GROUND			X	X				X																
INITIATING DEVICE CIRCUIT (IDC)–																								
WIRE-TO-WIRE SHORT	X	X					X		X								X							
SINGLE OPEN			X	X				X																
SINGLE GROUND			X	X				X																
NOTIFICATION APPLIANCE CIRCUIT (NAC)–																								
WIRE-TO-WIRE SHORT			X	X																				
SINGLE OPEN			X	X																				
SINGLE GROUND			X	X																				
LOSS OF 120VAC POWER			X	X				X											X					
SIGNAL SILENCE																				X	X			
RESET FACP																	X				X	X	X	X

NOTE: SOME SEQUENCE OF OPERATIONS SHOWN MAY NOT APPLY

NOTES:

1. FOR OUTDOOR TRANSFORMER MOUNTING, CONCRETE PAD SHALL BE 6" WIDER THAN TRANSFORMER HOUSING. TOP OF SLABE SHALL BE 2" ABOVE ADJACENT GRADE.



TRANSFORMER ANCHOR DETAIL

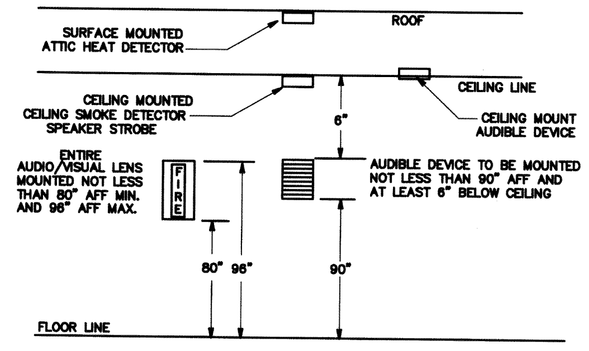
450-01 SCALE: NTS (E)

FOR REFERENCE ONLY. SEE PORTABLE BUILDING ELECTRICAL PLANS FOR MORE INFORMATION.

(E)PANEL A — 120/240V 1Ø 3W — 100 AMP MAIN BREAKER — REAR — 10,000 AIC — FLUSH — NEMA 1

CKT	SERVING	NOTE	GND	AWG	AMP POLE	TOTAL LOAD KVA ØA	TOTAL LOAD KVA ØB	AMP POLE	AWG	GND	NOTE	SERVING	CKT
1	RECEPTACLE		12	12	20/1	0.7	7.1	60/2	8	10		HVAC 3.5 TON	2
3	RECEPTACLE		12	12	20/1		0.7						4
5	SPACE		12	12	20/1			20/1	12	12		SPACE	6
7	SPACE		12	12	20/1			20/1	12	12		SPACE	8
9	INT/EXT LIGHTS		12	12	20/1	0.9		20/1	12	12		SPACE	10
11	INT LIGHTS		12	12	20/1		0.8	20/1	12	12	2	FIRE ALARM NAC PANEL	12
						8.7KVA	8.7KVA						
						72A	72A						

NOTES:
1. PROVIDE CIRCUIT DIRECTORY INSIDE PANEL.
2. PROVIDE NEW MATCHING BREAKER AND MECHANICAL LOCK ON BREAKER PER NFPA 72, 10.6.5.2: DEDICATED CIRCUIT, MECHANICALLY PROTECTED (LOCKOUT), RED MARKING, ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL ID'D AS FIRE ALARM, EMERGENCY COMMUNICATIONS OR FIRE ALARM/ECS. LOCATION OF CIRCUIT DISCONNECT (BREAKER) PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.



1 TYPICAL FIRE ALARM DEVICES MT'D DETAIL

N.T.S.

SHEET NOTES

1. EXISTING FIRE ALARM SIGNAL AND AUDIO BOOSTER PANEL WITH (E) 110V POWER CONNECTION AND DEDICATED CIRCUIT FROM PANEL A-12. SEE DRAWING E-3 FOR MORE INFORMATION.
2. PROVIDE POWER CONNECTION FOR RELOCATABLE BUILDING PRE-WIRED PANEL. SEE SINGLE LINE DIAGRAM ON DRAWING E-4.
3. PROVIDE 2"C EMT BETWEEN BUILDINGS AND STUB INTO BUILDING CEILING CAVITY FOR SIGNAL WIRING RACEWAY. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED. PULL BACK PA/IC/TELE CABLE TO ADMIN OFFICE MASTER EQUIPMENT FOR NEW DEVICES CONNECTION. SEE RISER DIAGRAMS.
4. PROVIDE #6 COPPER GROUNDING CONDUCTOR AND BOND TO EACH SECTION STRUCTURAL STEEL BEAM. FIELD VERIFY EXACT LOCATION WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
5. APPROXIMATE LOCATION FOR EXISTING SECURITY ALARM PANEL AND SYSTEM. PROVIDE CONNECTION FOR NEW SECURITY ALARM DEVICES PER PLANS. SEE RISER DIAGRAM.
6. EXISTING IDF AND CABINET SURFACE MOUNTED BELOW CEILING. PROVIDE CAT. 6 DATA CABLE FOR NEW DATA / IP PHONE OUTLET PER PLANS. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
7. DATA AND POWER OUTLET AT CEILING FOR SMART BOARD. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH OWNER PRIOR TO INSTALLATION. SEE RISER DIAGRAM.
8. RECONNECT EXISTING POWER PANEL TO NEW DISTRIBUTION PANEL H. SEE SINGLE LINE DIAGRAM.
9. NEW PANEL H, PROVIDE NEW CONDUITS AND FEEDERS FOR NEW PRE-WIRED PANEL POWER CONNECTION. SEE SINGLE LINE DIAGRAM.
10. EXISTING CONDUIT AND FEEDER ON EXTERIOR WALL TO REMAIN AND REUSE.
11. EXISTING MAIN SWITCHBOARD. PROVIDE NEW MATCHING BREAKER FOR NEW XFMR AND PANEL H POWER CONNECTION.
12. REPLACE EXISTING FEEDERS WITH NEW CONDUCTORS IN EXISTING UNDERGROUND CONDUIT. SEE SINGLE LINE DIAGRAM.
13. SAW CUT AND PATCH EXISTING FLOOR TO INSTALL NEW ULG CONDUIT AND FEEDER FOR NEW PANEL E POWER CONNECTION. SEE SINGLE LINE DIAGRAM.

SIGNAL AND COMM. LEGEND

SECURITY ALARM SYSTEM

- DSC — DIGITAL SECURITY ALARM CONTROL PANEL. MODEL SCMTROL (64ZONE). INTERFACE WITH EXISTING BUILDING MASTER SECURITY ALARM PANEL AS REQUIRED.
- (K) — LCD KEYPAD – MATCH EXISTING EQUIPMENT AS REQUIRED.
- (M) — DUAL TECHNOLOGY CEILING MOUNT DETECTOR. MATCH EXISTING EQUIPMENT AS REQUIRED.
- (B) — EXTERIOR BELL (SIREN) – DSC#SD15W WITH WEATHERPROOF BACKBOX AND TAMPER SWITCH.
- (W) — DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE.
- —B — INDOOR SECURITY ALARM CABLE. WEST PENN #241
- —B1 — OUTDOOR SECURITY ALARM CABLE. WEST PENN #AOC224

COMMUNICATION (TELEPHONE/INTERCOM) SYSTEM

- ▽ — HANDSET/IP PHONE – FIELD VERIFY MODEL NO. AND MATCH EXISTING MASTER EQUIPMENT AS REQUIRED.
- SP — CEILING SPEAKER – RAULAND #US0221 W/ACC1000 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED
- SP^WP — OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#C884 FOR SURFACE, #P875X FOR RECESS) BACK BOX W/SQLK GRILL
- —T — OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 12 PAIR SHIELDED AND 12 PAIR UNSHIELDED CABLE.
- —T1 — INDOOR TELEPHONE CABLE. CAT.3 22AWG SOILD COPPER 4UTP SHIELDED CABLE.
- —P1 — OUTDOOR PA/IC CABLE – WEST PENN #AOC-389

DATA COMMUNICATION SYSTEM

- C 2 — DATA OUTLET – LEVITON CAT 5E (DUAL RECEPTACLE RED IN COLOR FOR ADMINISTRATIVE)
- C^2 — DATA OUTLET – LEVITON CAT 5E (DUAL RECEPTACLE BLUE IN COLOR FOR INSTRUCTIONAL)
- —FO — FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. SEE RISER DIAGRAM FOR MODEL NO.
- —C1 — (ONE) CAT 5E 22AWG 4UTP. SEE RISER DIAGRAM FOR MODEL NO.
- —C2 — (TWO) CAT 5E 22AWG 4UTP. SEE RISER DIAGRAM FOR MODEL NO.

NOTES:

1. ALL SIGNAL CONDUCTORS CANNOT SPLICE INSIDE PULL BOX. CONDUCTOR MUST BE CONTINUE RUN BETWEEN SIGNAL DEVICES BACK BOX OR ABOVE GROUND TERMINAL CABINET.

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Issue Date:	Designer:	DR:	PIC:
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