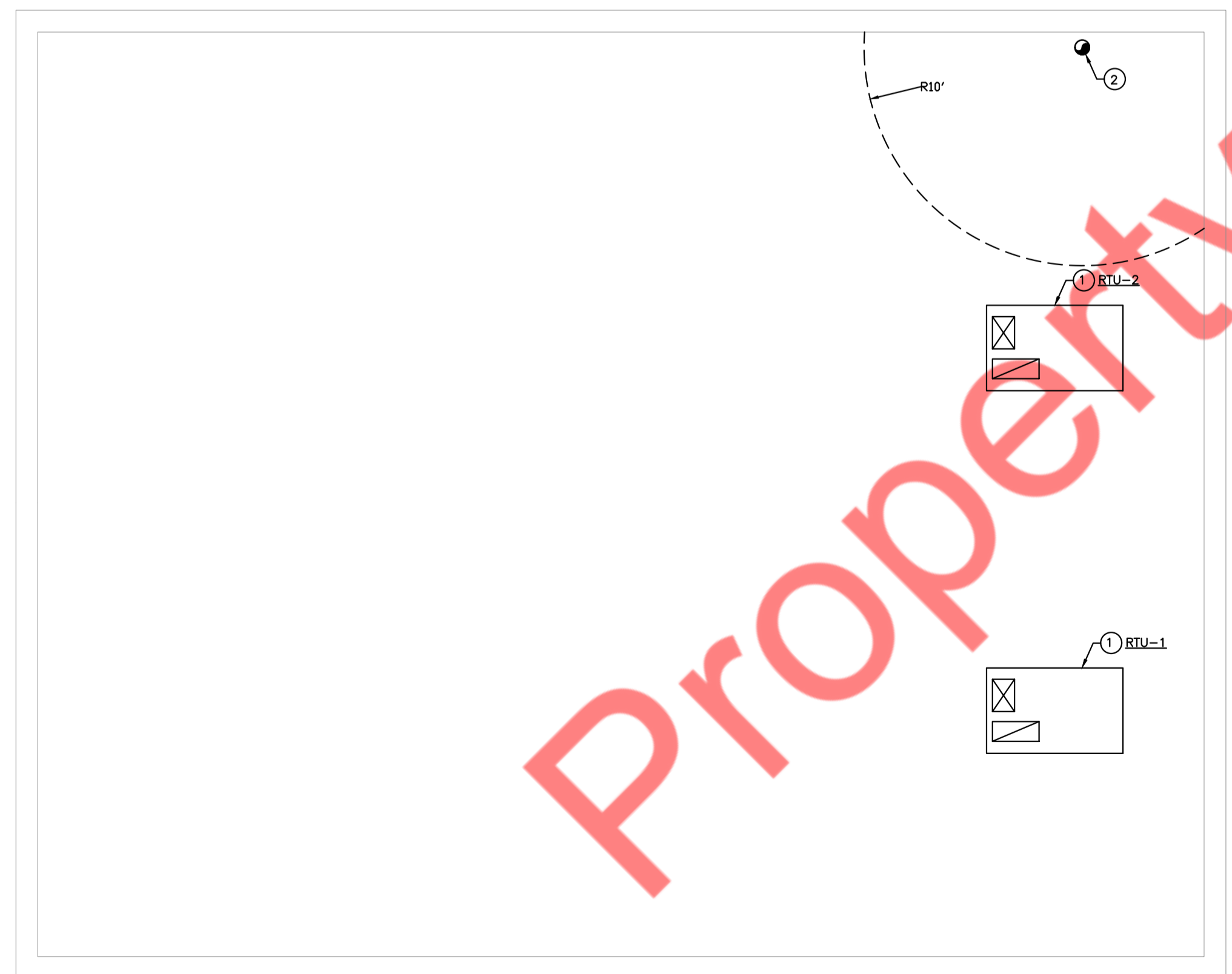


MECHANICAL FLOOR PLAN  
SCALE: 3/16" = 1' 0"



MECHANICAL ROOFTOP PLAN  
SCALE: 3/16" = 1' 0"

**MECHANICAL PLAN NOTES**

- EXTEND FULL SIZE SUPPLY & RETURN DUCTWORK FROM 4 & 6-TON ROOFTOP UNIT TO SPACE. EXTEND AS SHOWN. ACOUSTICALLY LINE THE FIRST 10'-0" OF BOTH SUPPLY AND RETURN MAIN DUCTS.
- INSTALL AND WIRE NEW 7-DAY PROGRAMMABLE THERMOSTAT. COORDINATE EXACT LOCATION WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
- ROUTE 8" EXHAUST DUCT UP THROUGH ROOF WITH TALL CONE FLASHING, WEATHER SKIRT, AND VENT CAP. MAINTAIN A MINIMUM OF 10'-0" FROM ALL OUTSIDE AIR INTAKES AND TERMINATES 36" ABOVE ROOF.
- MECHANICAL CONTRACTOR TO MOUNT SMOKE DETECTOR REMOTE KEY STATUS AND TEST STATIONS (WITH AUDIO AND VISUAL ALARM) NEXT TO UNIT THERMOSTAT. MC. TO INDICATE DETECTOR SERVING AIR CONDITIONING UNIT. COORDINATE EXACT LOCATION WITH FIRE MARSHAL PRIOR TO ROUGH-IN. ALL WIRING SHALL BE BY ELECTRICAL CONTRACTOR IN CONDUIT PER N.E.C. REMOTE STATION SHALL BE A SYSTEM SENSOR MODEL SSK451 OR EQUAL.

CFM	DUCT SIZE
0-100	6"ø
101-250	8"ø
251-400	10"ø
401-650	12"ø

**GAS PIPING NOTES**

- CONTRACTOR TO FIELD VERIFY AND CONNECT EXISTING GAS PIPING TO NEW ROOFTOP UNITS. VERIFY EXACT LOCATION OF BOTH THE RTUS IN FIELD.
- VERIFY EXACT PRESSURE REQUIRED FOR THE NEW RTUS.
- PROVIDE NEW SHUT-OFF VALVE, IF NOT EXISTING/DAMAGED/NOT IN GOOD CONDITION.
- CONTRACTOR TO FIELD VERIFY EXISTING AVAILABLE GAS PRESSURE AND MAKE SURE TO PROVIDE ADEQUATE INLET PRESSURE REQUIRED TO RTU-1 AND RTU-2. PROVIDE GAS BOOSTER PUMP IF INLET PRESSURE IS LESS THAN 7" W.C. BASE BID ACCORDINGLY.

**MECHANICAL LEGEND**

SYMBOL	DESCRIPTION
	TURNING VANE
	AIR EXTRACTOR
	OPPOSED BLADE VOLUME DAMPER
	SUPPLY DUCT
	RETURN DUCT
	EXHAUST DUCT
	FLEXIBLE DUCT CONNECTION
	LINED DUCTWORK
	THERMOSTAT
	SMOKE DETECTOR TEST STATION
	DUCT SMOKE DETECTOR TO SHUT DOWN UNIT UNDER ALARM
	UNDERCUT DOOR (BY G.C.)
	FIRE DAMPER
	BACK DRAFT DAMPER
	FIRE & SMOKE DAMPER

Property of NY Engineers

EXISTING PANELBOARDS:

PANEL: RP-A										MOUNTING:		SURFACE	
208Y/120	VOLTS,	3	PHASE,	4	WIRE								
MAIN CB	225A	BUS	225A	MIN,	INTERRUPTING RATING				22 KAIC				
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	PER PHASE (KVA)			LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
					A	B	C						
1	20	EXISTING LOAD			0					EXISTING LOAD	20	2	
3	20	WORKSTATION RECEPTACLE	R	1.08	2.16		1.08	R		WORKSTATION RECEPTACLE	20	4	
5	20	EXISTING LOAD			0					EXISTING LOAD	20	6	
7	20	EXISTING LOAD			0					EXISTING LOAD	20	8	
9	20	WORKSTATION RECEPTACLE	R	1.08	1.62		0.54	R		TV RECEPTACLES	20	10	
11	20	EXISTING LOAD			0					EXISTING LOAD	20	12	
13	20	EXISTING LOAD			0					EXISTING LOAD	20	14	
15	20	RECEPTACLE	R	1.08	1.98		0.90	R		GFI RECEPTACLES	20*	16	
17	20	EXISTING LOAD			0					EXISTING LOAD	20	18	
19	20	EXISTING LOAD			0					EXISTING LOAD	20	20	
21	20	CORRIDOR RECEPTACLE	R	0.72	1.8		1.08	R		EXAM ROOM RECEPTACLE	20	22	
23	20	EXISTING LOAD			0					EXISTING LOAD	20	24	
25	20	EXISTING LOAD			0					EXISTING LOAD	20	26	
27	20	RECEPTACLE	R	0.72	1.08		0.36	R		EXAM ROOM RECEPTACLE	20	28	
29	20	EXISTING LOAD			0					EXISTING LOAD	20	30	
31	20	EXISTING LOAD			0					EXISTING LOAD	20	32	
33	20*	DRINKING FOUNTAIN	R	1.00	1.72		0.72	R		SHOW WINDOW RECEPTACLE	20	34	
35	20	EXISTING LOAD			0					EXISTING LOAD	20	36	
37	20	EXISTING LOAD			0					EXISTING LOAD	20	38	
39	20	C-ARM MACHINE	E	2.40	2.9		0.50	E		EXTERIOR SIGNAGE	20*	40	
41	20	EXISTING LOAD			0					EXISTING LOAD	20	42	
TOTAL LOAD (KVA)				0	13.26	0							

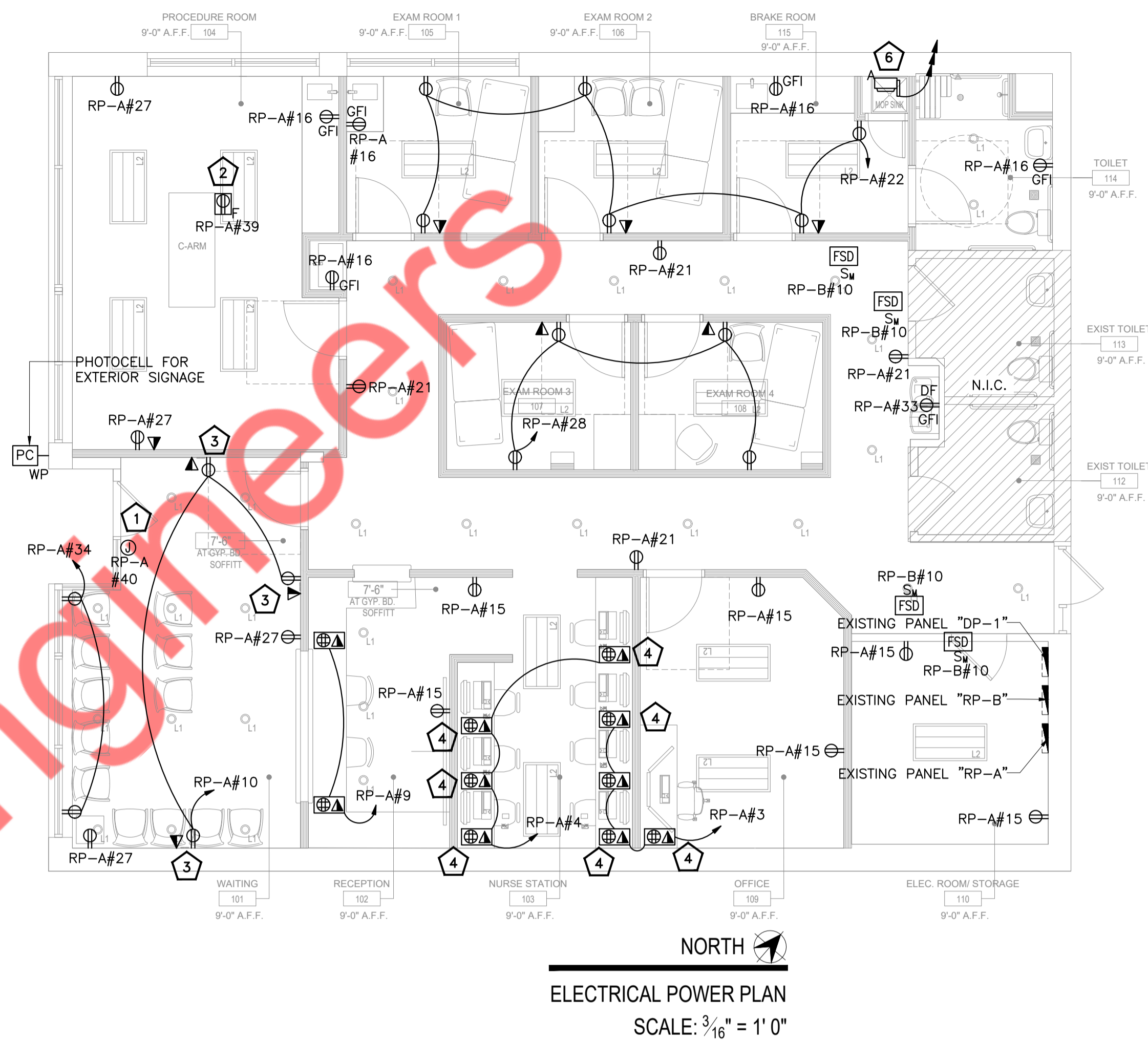
PANEL: RP-B										MOUNTING:		SURFACE	
208Y/120	VOLTS,	3	PHASE,	4	WIRE								
MAIN CB	100A	BUS	100A	MIN,	INTERRUPTING RATING				22 KAIC				
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	PER PHASE (KVA)			LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
					A	B	C						
1	20	EXISTING LOAD			0					EXISTING LOAD	20	2	
3	20	GENERAL LIGHTING	L	0.67	1.39		0.72	L		GENERAL LIGHTING	20	4	
5	20	EXISTING LOAD			0					EXISTING LOAD	20	6	
7	20	EXISTING LOAD			0					EXISTING LOAD	20	8	
9	20	EM LIGHTING	L	0.54	0.54					SPACE	20	10	
11	20	EXISTING LOAD			0					EXISTING LOAD	20	12	
13	20	EXISTING LOAD			0					EXISTING LOAD	20	14	
15	20*	WP RECEPTACLES ROOF	R	0.36	0.36					SPACE	20	16	
17	20	EXISTING LOAD			0					EXISTING LOAD	20	18	
19	20	EXISTING LOAD			0					EXISTING LOAD	20	20	
21	20	SPACE			0					SPACE	20	22	
23	20	EXISTING LOAD			0					EXISTING LOAD	20	24	
25	20	EXISTING LOAD			0					EXISTING LOAD	20	26	
27	20	SPACE			0					SPACE	20	28	
29	20	EXISTING LOAD			0					EXISTING LOAD	20	30	
31	20	EXISTING LOAD			0					EXISTING LOAD	20	32	
33	20	SPACE			0					SPACE	20	34	
35	20	EXISTING LOAD			0					EXISTING LOAD	20	36	
37	20	EXISTING LOAD			0					EXISTING LOAD	20	38	
39	20	SPACE			0					SPACE	20	40	
41	20	EXISTING LOAD			0					EXISTING LOAD	20	42	
TOTAL LOAD (KVA)				0	2.29	0							

**PATIENT CARE AREA WIRING NOTE:**  
 WIRING IN PATIENT CARE AREAS AND EXAM ROOMS SHALL COMPLY WITH NEC ARTICLE 517.13. ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH AN EFFECTIVE GROUND-FAULT CURRENT PATH BY INSTALLATION IN A METAL RACEWAY SYSTEM OR CABLE HAVING A METALLIC ARMOR ASSEMBLY. THE ASSEMBLY OR RACEWAY SHALL ITSELF QUALIFY AS AN EQUIPMENT GROUNDING CONDUCTOR IN ACCORDANCE WITH NEC 250.118. PROVIDE INSULATED COPPER EQUIPMENT GROUNDING CONDUCTOR WITHIN OR PART OF THE ASSEMBLY OR RACEWAY AND BOND RECEPTACLES AND ALL NON-CURRENT CARRYING CONDUCTIVE SURFACES OR FIXED ELECTRICAL EQUIPMENT. SIZE GROUNDING CONDUCTOR IN ACCORDANCE WITH TABLE 250.122.

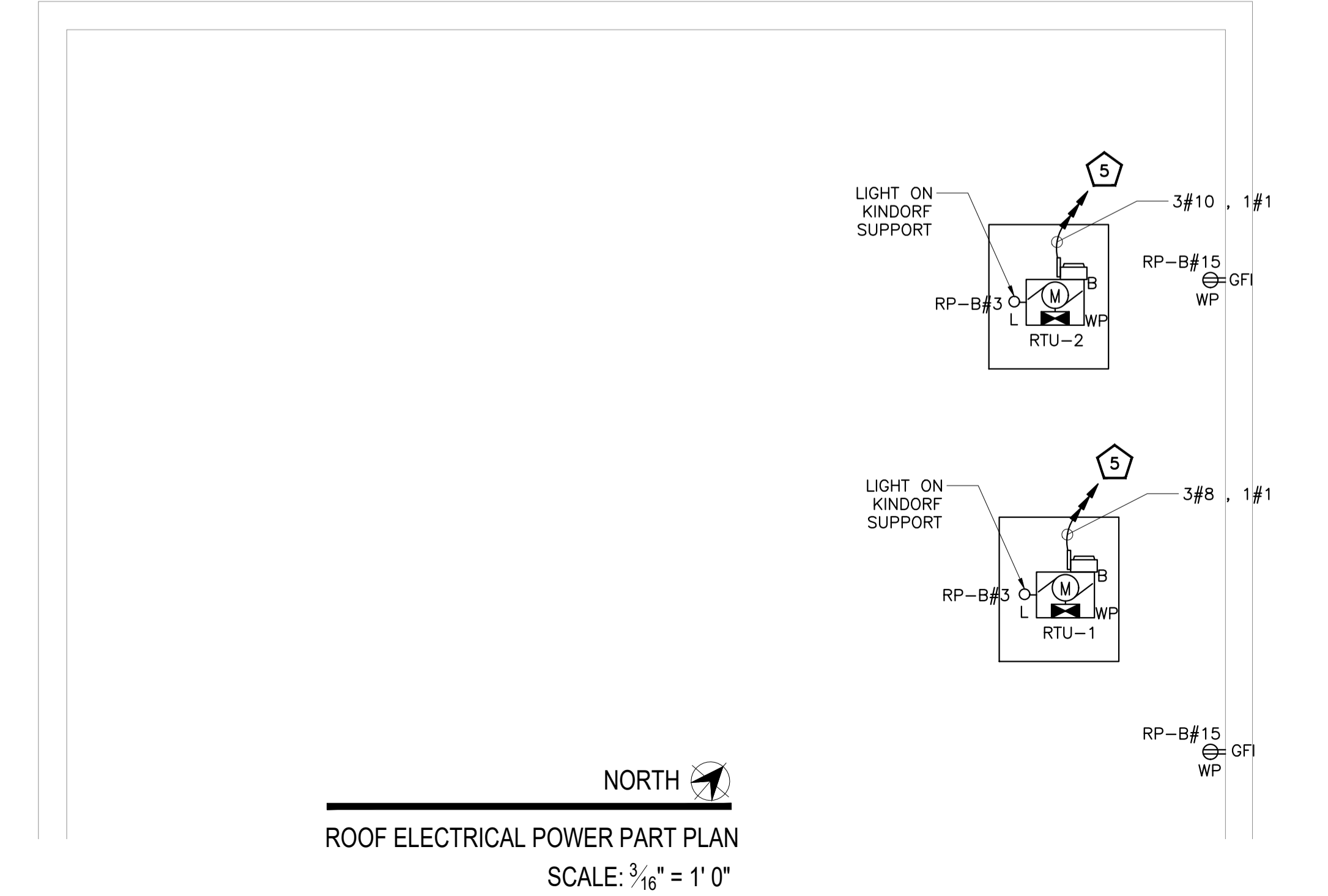
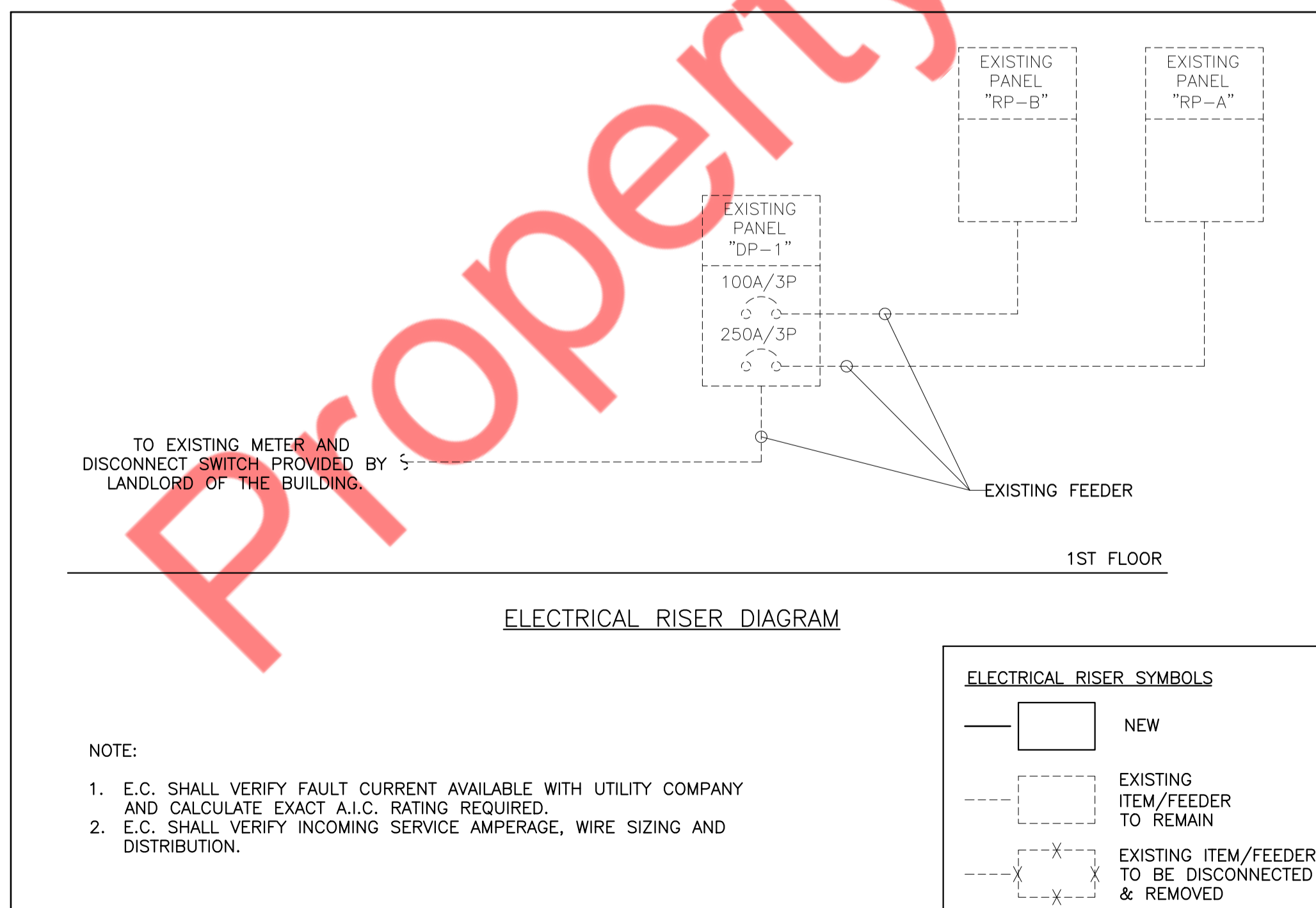
- GENERAL POWER PLAN NOTES:**
- EXACT LOCATION OF MECHANICAL, PLUMBING, KITCHEN, FURNITURE SYSTEMS, OWNER FURNISHED EQUIPMENT ETC. THAT REQUIRE ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL, PLUMBING, AND/OR ARCHITECTURAL DRAWINGS. COORDINATE EXACT LOCATIONS WITH RESPECTIVE CONTRACTORS AND/OR VENDORS PRIOR TO ANY ROUGH-INS.
  - REVIEW AND COORDINATE WITH ALL TRADES CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR EQUIPMENT WITH ELECTRICAL CONNECTIONS. COORDINATE EXACT MOUNTING LOCATIONS WITH THE SPECIFIC TRADE AND ARCHITECT.
  - MINIMUM CONDUCTOR SIZE FOR 120V BRANCH CIRCUITS SHALL BE 12-AWG. FOR 120V BRANCH CIRCUITS WITH HOMERUN OVER 100 LINEAR FEET, A MINIMUM WIRE SIZE OF 10-AWG SHALL BE PROVIDED FROM FIRST JUNCTION/OUTLET BOX TO BRANCH CIRCUIT PANELBOARD. FOR 120V BRANCH CIRCUITS WITH HOMERUN OVER 150 LINEAR FEET, A MINIMUM OF 8-AWG SHALL BE PROVIDED FROM FIRST JUNCTION/OUTLET BOX TO BRANCH CIRCUIT PANELBOARD.
  - ALL WIRINGS SHALL BE IDENTIFIED BY PANELBOARD AND CIRCUIT NUMBERS IN ALL CABINETS, JUNCTION BOXES, WIRING TROUGHS, ENCLOSURES, SPLICE OR TERMINATION POINTS, ETC.
  - A NEW TYPED PANELBOARD DIRECTORY CARD SHALL BE PROVIDED FOR ALL PANELS INSTALLED OR MODIFIED UNDER THIS CONTRACT. NEW DIRECTORY CARDS SHALL BE LOCATED ON THE INSIDE DOOR OF ASSOCIATED PANELS.

**ABBREVIATIONS:**  
 L = LIGHTING , R = RECEPTACLE , H = HVAC , E = EQUI. , M = MISCELLANEOUS  
**NOTE:**  
 - \* INDICATES GFCI CIRCUIT BREAKERS.

**IMPORTANT NOTE:**  
 CIRCUITING FOR THE LIGHTING, RECEPTACLES AND OTHER ELECTRICAL EQUIPMENT IS DONE BY FILLING UP THE SPACES AVAILABLE IN THE EXISTING PANELBOARDS. ELECTRICAL CONTRACTOR TO PROVIDE NEW CIRCUIT BREAKER AS NOTED IN THE PANEL SCHEDULE AND BASE BID ACCORDINGLY.



- ELECTRICAL POWER PLAN KEYED WORK NOTES:**
- PROVIDE JUNCTION BOX FOR EXTERIOR SIGNAGE. MOUNT JUNCTION ABOVE MEDICAL OFFICE WINDOW, WITHIN 18" OF TOP OF THE WINDOW.
  - FLOOR MOUNTED DUPLEX CONVENIENCE RECEPTACLE FOR C-ARM MACHINE. E.C. TO COORDINATE WITH THE MANUFACTURER FOR EXACT POWER REQUIREMENTS.
  - DATA AND POWER FOR WALL MOUNTED T.V. STUB DATA CONDUIT TO 6" ABOVE CEILING WITH PULL STRING. COORDINATE EXACT LOCATION WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
  - FURNITURE MOUNTED DATA AND POWER FOR WORKSTATIONS. COORDINATE EXACT LOCATION WITH THE ARCHITECTURAL PLANS PRIOR TO ROUGH-IN.
  - NEW RTU-1 & RTU-2 (208V, 3-PH, 30 MCA & 208V, 3-PH, 33 MCA): CONNECT TO EXISTING CIRCUIT OF PANEL "DP-1" AS CONNECTED PREVIOUSLY. E.C. TO VERIFY OPERABLE CONDITION OF EXISTING FEEDER OR ELSE PROVIDE NEW OF SIZE AS NOTED IF FOUND NON-OPERABLE. E.C. TO COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATION OF THESE UNITS ON ROOF. PROVIDE NEW 40A CIRCUIT BREAKER FOR RTU-1 & NEW 50A CIRCUIT BREAKER FOR RTU-2 IN PANEL "DP-1". BASE BID ACCORDINGLY.
  - WATER HEATER (208V-1, 4.5KW): PROVIDE 30A 2-POLE HEAVY DUTY DISCONNECT SWITCH AT UNIT. WIRING SHALL BE 2#10, 1#10(G), 3/4"C. E.C. TO VERIFY IF CONSECUTIVE SPACE FOR 2-POLE CIRCUIT IS AVAILABLE IN PANEL "RP-A" OR ELSE SHIFT ANY EXISTING LOAD TO ANY SPACE AVAILABLE IN THE PANEL SO THAT TO GET TWO (2) CONSECUTIVE POLES & PROVIDE 30A CIRCUIT BREAKER TO IT.



**LIGHT FIXTURE SCHEDULE:**

Fixture Type	LAMP	WATTAGE	VOLTAGE	DESCRIPTION	CATALOG NUMBER
L1	LED	7W	120	RECESSED 6-INCH LED DOWNLIGHT	HC620D010REM7 - HM612835 - 61MDC
L2	LED	47W	120	2X4 LIGHT FIXTURE	2AVL4 40LSE MDR EZ1 LP835-E10WLCP
EM	LED	1W	120	LED BASED EMERGENCY LIGHT	CU2 SERIES

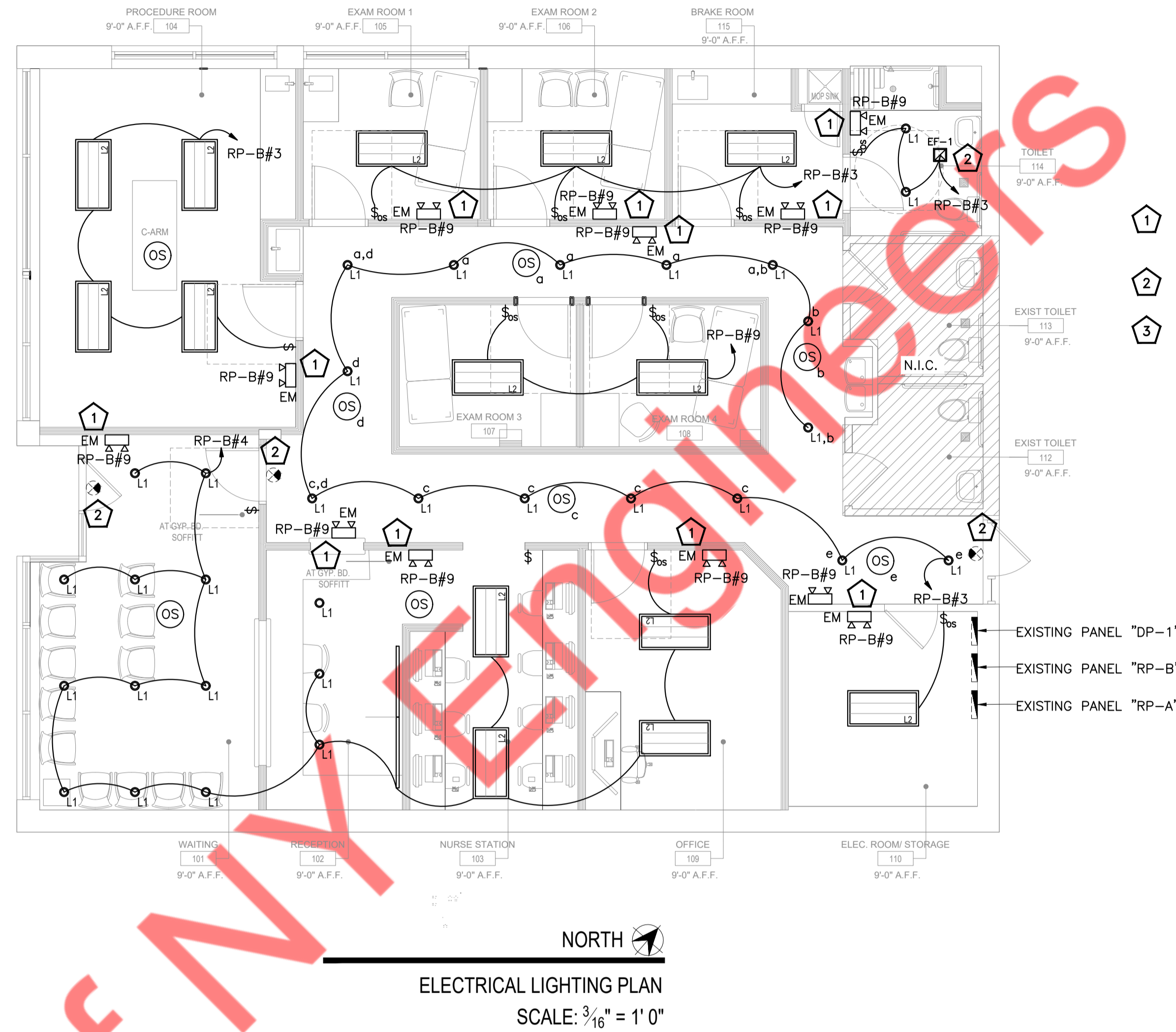
NOTE:  
- ARCHITECT TO SELECT LIGHT FIXTURES AS REQUIRED BY OWNER.

**LUMINAIRE SCHEDULE GENERAL NOTES:**

- VERIFY ALL LUMINAIRE COLORS, TRIMS, LENGTHS, ETC. WITH THE ARCHITECT PRIOR TO PLACING FINAL PURCHASE ORDERS. SUBMISSION OF SHOP DRAWINGS WILL BE INTERPRETED AS HAVING BEEN COORDINATED WITH THE ARCHITECTURAL DRAWINGS.
- PROVIDE ALL LENGTHS, FEEDS, ACCESSORIES, CONNECTORS, WIRING, POWER SUPPLIES, DRIVERS ETC. FOR A COMPLETE INSTALLATION. THE E.C. SHALL VERIFY THE COMPLETE BILL OF MATERIAL WITH MANUFACTURER'S REPRESENTATIVE AND ENSURE ALL EQUIPMENT ARE INCLUDED IN BID PRICE. COORDINATE INSTALLATION WITH ARCHITECTURAL DETAILS.
- VERIFY FINAL LUMINAIRE LOCATIONS WITH OTHER CEILING MOUNTED EQUIPMENTS SUCH AS DIFFUSER WITH ARCHITECTURAL REFLECTED CEILING PLANS.
- VERIFY EXACT MOUNTING HEIGHT AND LOCATIONS OF ALL WALL MOUNTED LUMINAIRE WITH ARCHITECTURAL PLANS AND ELEVATIONS PRIOR TO ROUGH-IN.
- CONNECTIONS TO RECESSED LUMINAIRES SHALL BE MADE WITH MINIMUM 1/2" FLEXIBLE METAL CONDUIT (FMC) FROM LUMINAIRE TO OUTLET BOX. LENGTH OF FMC SHALL NOT EXCEED 6'-0". CONNECTIONS TO RECESSED LUMINAIRES SHALL BE MADE WITH MINIMUM 1/2" FLEXIBLE METAL CONDUIT (FMC) FROM LUMINAIRE TO OUTLET BOX. LENGTH OF FMC SHALL NOT EXCEED 6'-0".
- AT THE CONCLUSION OF WORK, EACH LUMINAIRE SHALL BE CLEANED AND EQUIPPED WITH THE PROPER TYPE, NUMBER OF LAMPS, INCLUDING KELVIN TEMPERATURE AND WATTAGE. AT THE CONCLUSION OF WORK, EACH LUMINAIRE SHALL BE CLEANED AND EQUIPPED WITH THE PROPER TYPE, NUMBER OF LAMPS, INCLUDING KELVIN TEMPERATURE AND WATTAGE, ALL IN GOOD OPERATING CONDITION.
- AUTOMATIC LIGHTING CONTROLS: OCCUPANCY SENSOR SHALL BE CAPABLE OF TURNING OFF THE LIGHTS WITHIN 20 MINUTES OF ALL OCCUPANT LEAVING THE SPACE AND SHALL BE MANUAL ON.

**GENERAL LIGHTING PLAN NOTES:**

- ALL EXIT SIGNS, EMERGENCY LIGHTING BATTERY PACKS, EMERGENCY LUMINAIRES (ON GENERATOR OR EMERGENCY LIGHTING BATTERY PACKS INTEGRAL TO LUMINAIRE), AND NIGHT LIGHTS (DENOTED 'NL') SHALL BE CONNECTED TO THE LOCAL LIGHTING CIRCUIT AHEAD OF ANY CONTROLS SUCH AS: SWITCHES (DEVICE), OCCUPANCY SENSORS AND/OR RELAY CONTROLS.
- EXACT LOCATION OF ALL LUMINAIRES, AND EXACT MOUNTING HEIGHT OF ALL PENDANT MOUNTED LUMINAIRES SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS PRIOR TO ANY ROUGH-INS.
- MINIMUM CONDUCTOR SIZE FOR 120 VOLT BRANCH CIRCUITS SHALL BE 12-AWG. FOR 120 VOLT BRANCH CIRCUITS WITH HOMERUNS OVER 100 LINEAR FEET, A MINIMUM WIRE SIZE OF 10-AWG SHALL BE PROVIDED FROM FIRST JUNCTION/OUTLET BOX TO BRANCH CIRCUIT PANELBOARD. FOR 120 VOLT BRANCH CIRCUITS WITH HOMERUN OVER 150 LINEAR FEET, A MINIMUM WIRE SIZE OF 8-AWG SHALL BE PROVIDED FROM FIRST JUNCTION/OUTLET BOX TO BRANCH CIRCUIT PANELBOARD.
- ALL WIRING SHALL BE IDENTIFIED BY PANELBOARD AND CIRCUIT NUMBER(S) IN ALL CABINETS, JUNCTION BOXES, WIRING TROUGHS, ENCLOSURES, SPLICE OR TERMINATION POINTS, ETC.
- A NEW TYPED PANELBOARD DIRECTORY CARD SHALL BE PROVIDED FOR ALL PANELS INSTALLED OR MODIFIED UNDER THIS CONTRACT. NEW DIRECTORY CARDS SHALL BE LOCATED ON THE INSIDE DOOR OF ASSOCIATED PANELS.



**GENERAL LIGHTING PLAN KEYED WORK NOTES:**

- CONNECT ALL EMERGENCY EGRESS AND NIGHT LIGHTING FIXTURES TO NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS PER STATE AND LOCAL CODES. EXIT SIGNS SHALL NOT EXCEED 5 WATTS PER FACE.
- E.C. TO FIELD VERIFY OPERABLE CONDITION OF THE EXISTING EXIT SIGNS OR ELSE PROVIDE NEW IF FOUND NON-OPERABLE.
- EXHAUST FAN EF-1 TO BE CONTROLLED AND CIRCUITED WITH LIGHT FIXTURES IN THE SAME ROOM.

**OAC AND VAC MANUAL MODE OPERATION:**

- SWITCHES ARE REQUIRED TO TURN LOAD ON.
- LOAD TURNS OFF WHEN SENSOR TIMES OUT OR WITH SWITCH.

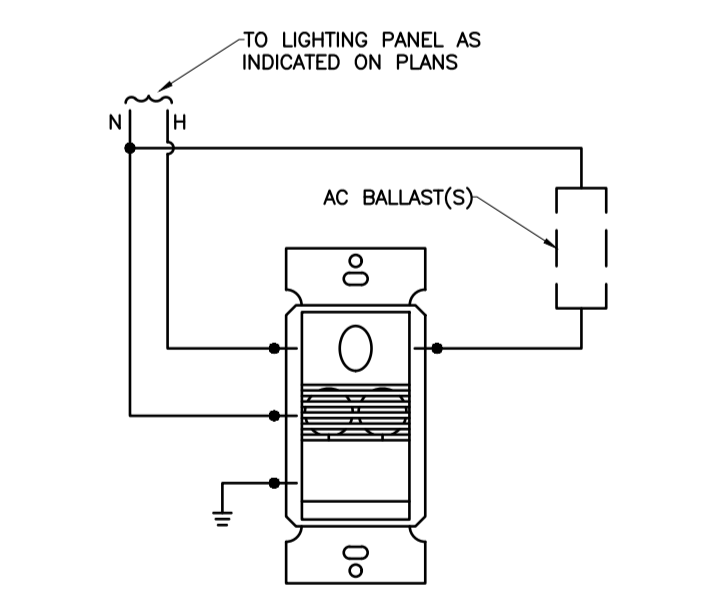
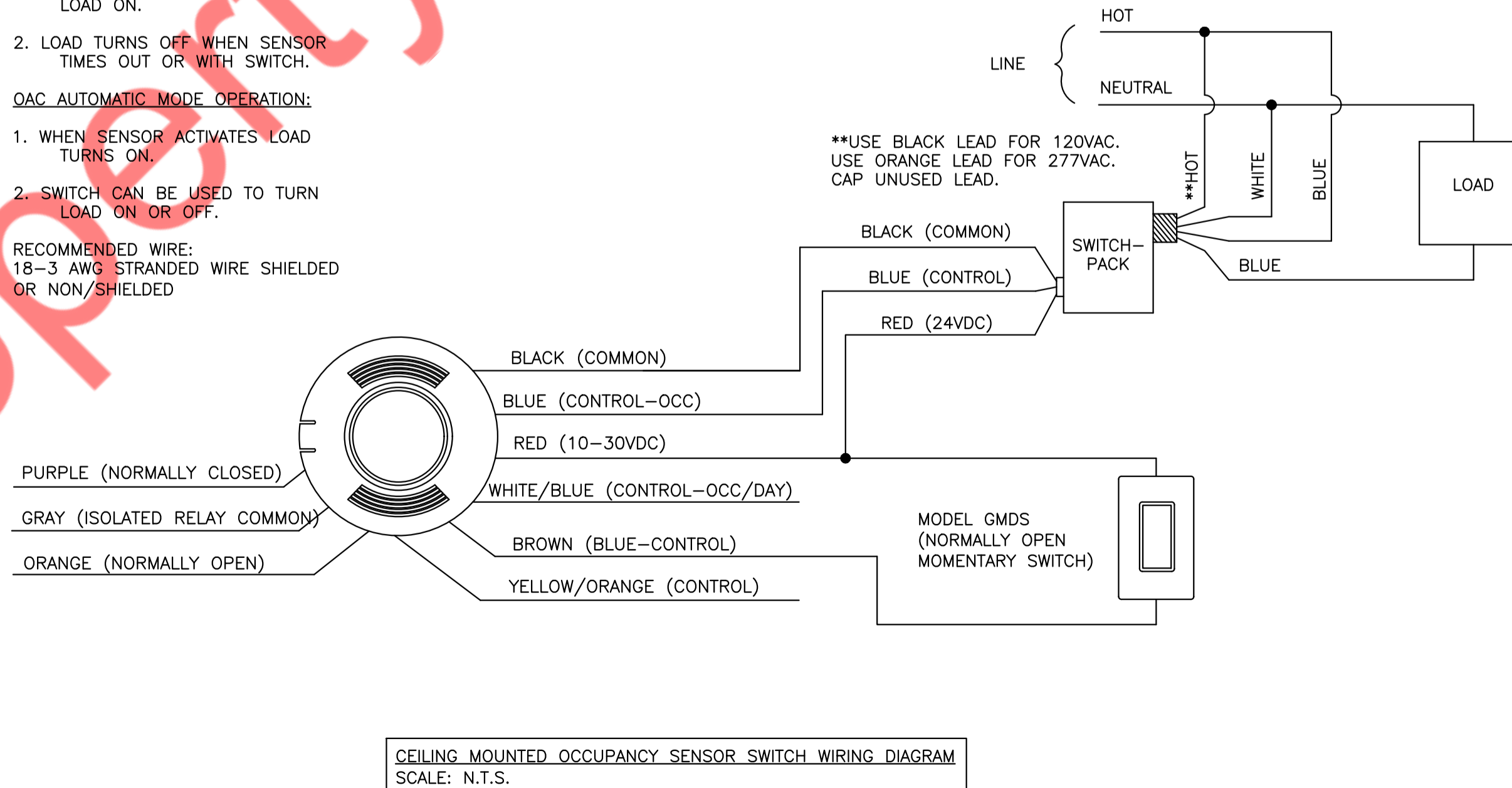
**OAC AUTOMATIC MODE OPERATION:**

- WHEN SENSOR ACTIVATES LOAD TURNS ON.
- SWITCH CAN BE USED TO TURN LOAD ON OR OFF.

RECOMMENDED WIRE:  
18-3 AWG STRANDED WIRE SHIELDED OR NON-SHIELDED

**NOTES**

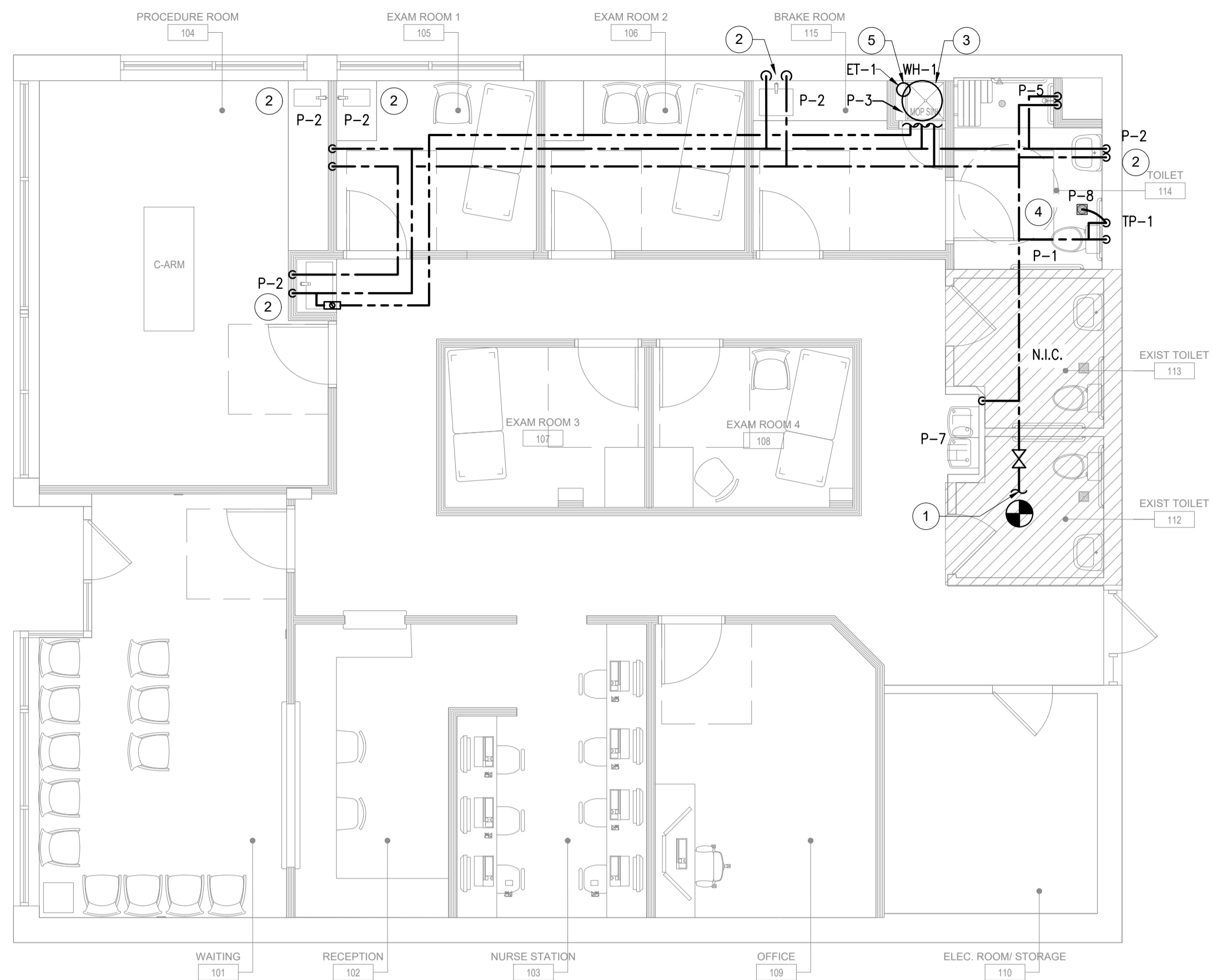
- SP20-RD4 SWITCHPACK SHOWN. 120/277VAC 20AMP RATING.



**OCCUPANCY SENSOR SWITCH WIRING DIAGRAM**

SCALE: N.T.S.

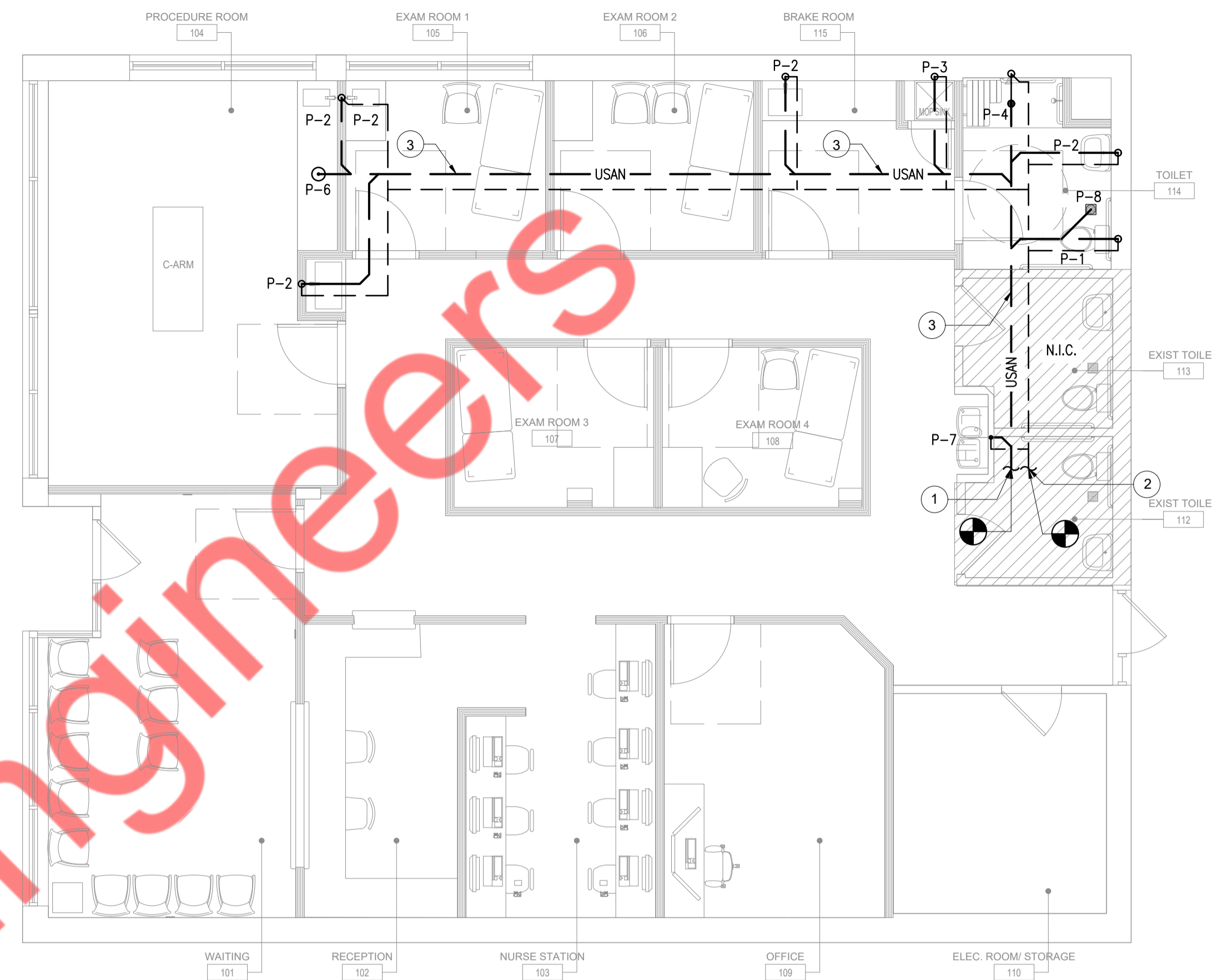
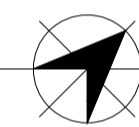
- NOTES:
- ALL LOW VOLTAGE WIRING AND TERMINATIONS TO BE BY ELECTRICAL CONTRACTOR.
  - OCCUPANCY/VACANCY SENSOR SHALL BE "SENSOR SWITCH" WSX-PDT-SA-WH OR APPROVED EQUAL. ALL EXPOSED CONTROL WIRING SHALL BE IN CONDUIT.



**DOMESTIC WATER PIPING PLAN NOTES:**

- ① ROUTE NEW 1" CW PIPING WITH SHUT OFF VALVE AND TIE-INTO THE EXISTING WATER SERVICE. CONTRACTOR TO FIELD VERIFY SIZE, ROUTING AND ANY WATER SUBMETER REQUIREMENTS WITH LANDLORD PRIOR TO BID.
- ② PROVIDE HOT WATER MIXING VALVE (TMV-1). SET MAX. OUTLET TEMP. AT 110°F.
- ③ ROUTE T&P RELIEF TO DRAIN IN MOP SINK.
- ④ TRAP PRIMER (TP-1) EXTEND AND CONNECT 1/2" TRAP PRIMER PIPING TO FLOOR DRAINS WITH TRAP PRIMER CONNECTIONS. COORDINATE ROUTING.
- ⑤ CONTRACTOR TO INSTALL NEW EXPANSION TANK THERM-X-TROL MODEL ST-5, 2 GAL PER LOCAL CODE REQUIREMENTS.

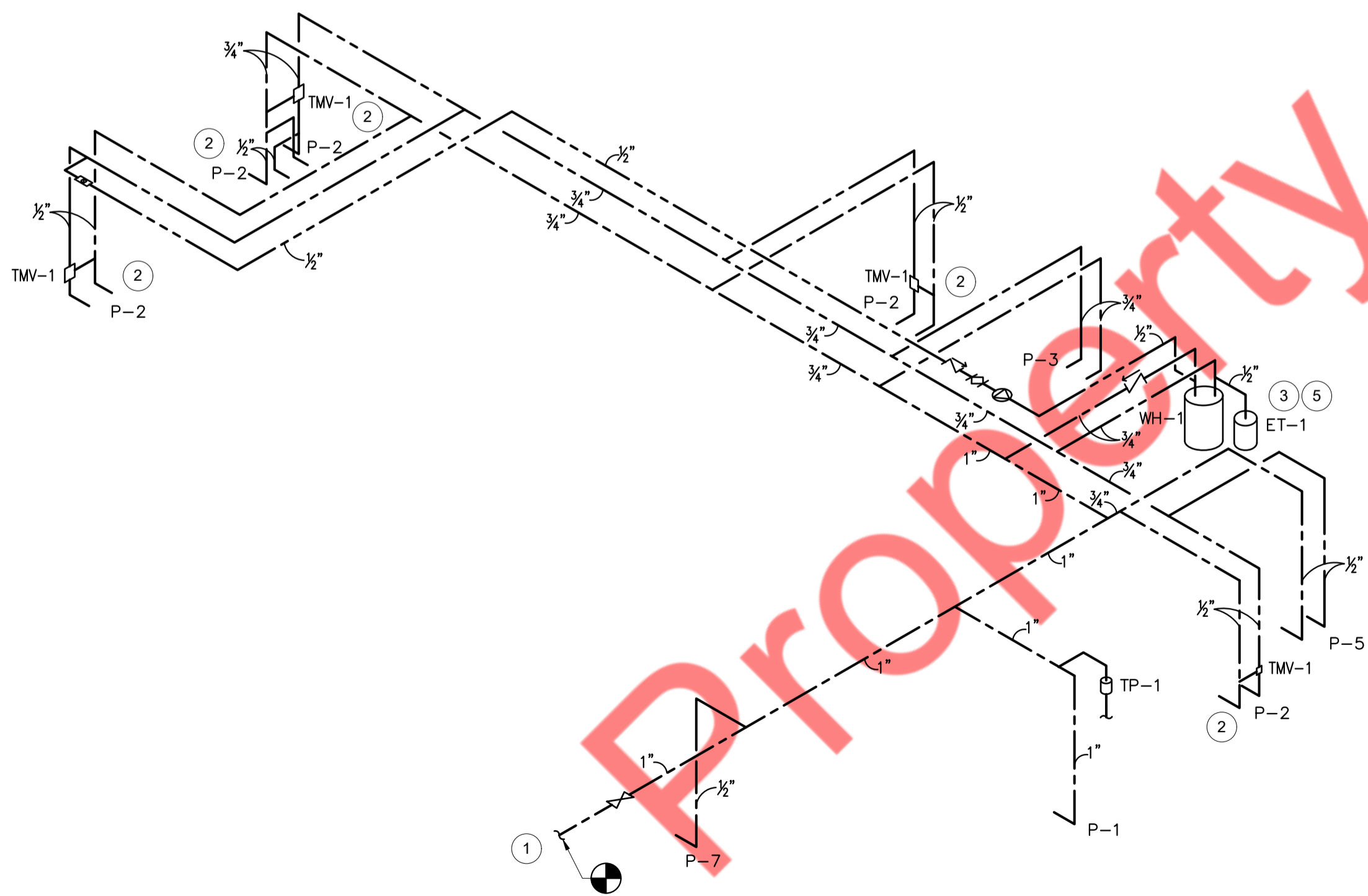
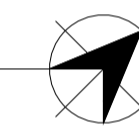
**1 DOMESTIC WATER PIPING PLAN**  
SCALE: 3/16" = 1'-0"



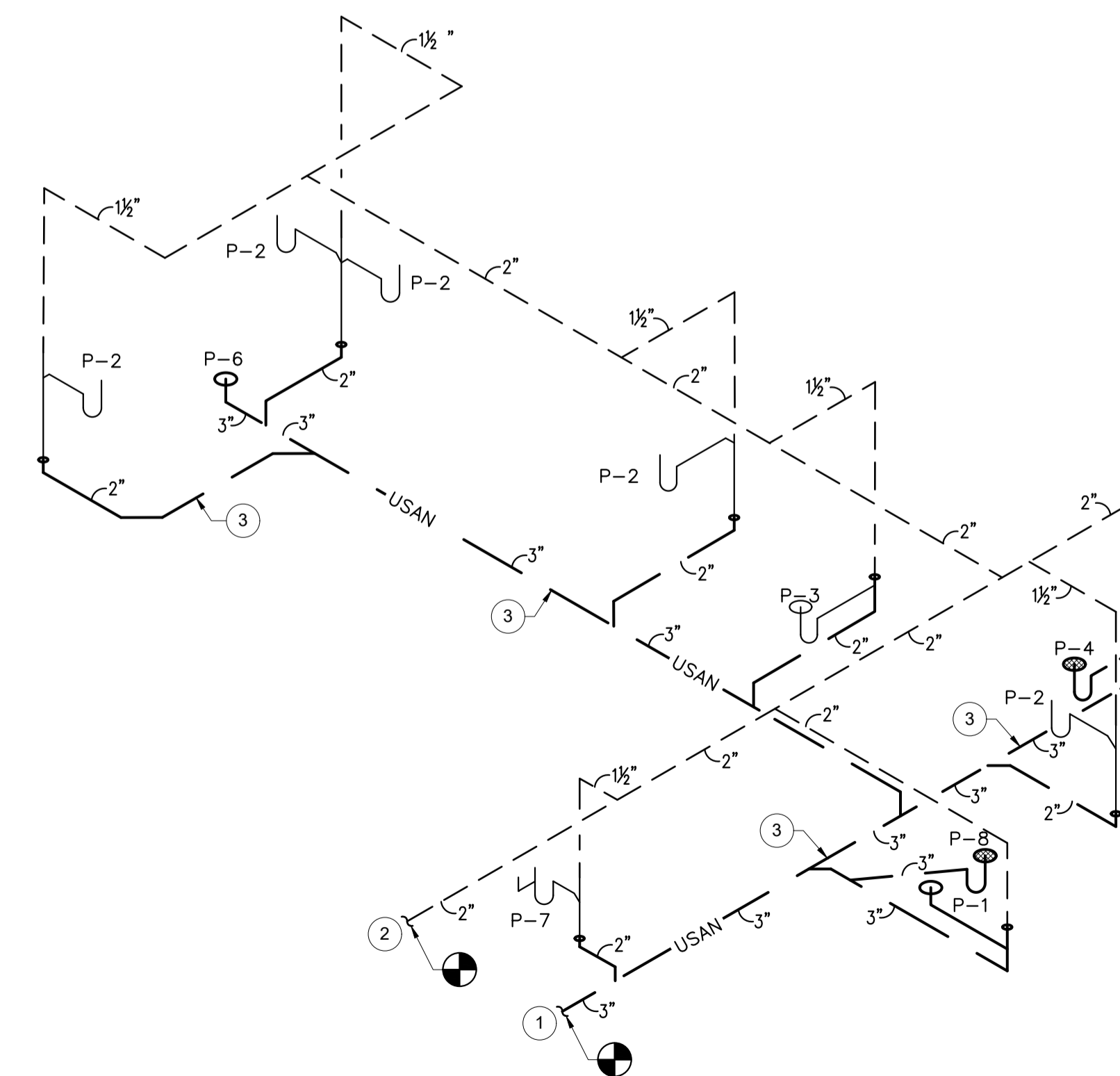
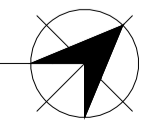
**SANITARY PIPING PLAN NOTES:**

- ① CONNECT NEW 3" SANITARY WASTE PIPING TO EXISTING SANITARY WASTE LINE OF ADEQUATE SIZE. CONTRACTOR TO FIELD VERIFY SIZE, ROUTING AND INVERT ON SITE.
- ② CONTRACTOR TO FIELD VERIFY AND CONNECT NEW 2" VENT TO EXISTING VENT IN EXISTING TOILET AREA.
- ③ SANITARY PIPING RUNNING UNDERGROUND SHOWN FOR REFERENCE. CONTRACTOR TO COORDINATE WITH EXISTING STRUCTURAL AND REROUTE AS REQUIRED TO AVOID ANY CONFLICTS AS PER FILED CONDITIONS.

**2 SANITARY PIPING PLAN**  
SCALE: 3/16" = 1'-0"



**3 DOMESTIC WATER ISOMETRIC RISER**  
SCALE: N.T.S.



**4 SANITARY ISOMETRIC RISER**  
SCALE: N.T.S.

