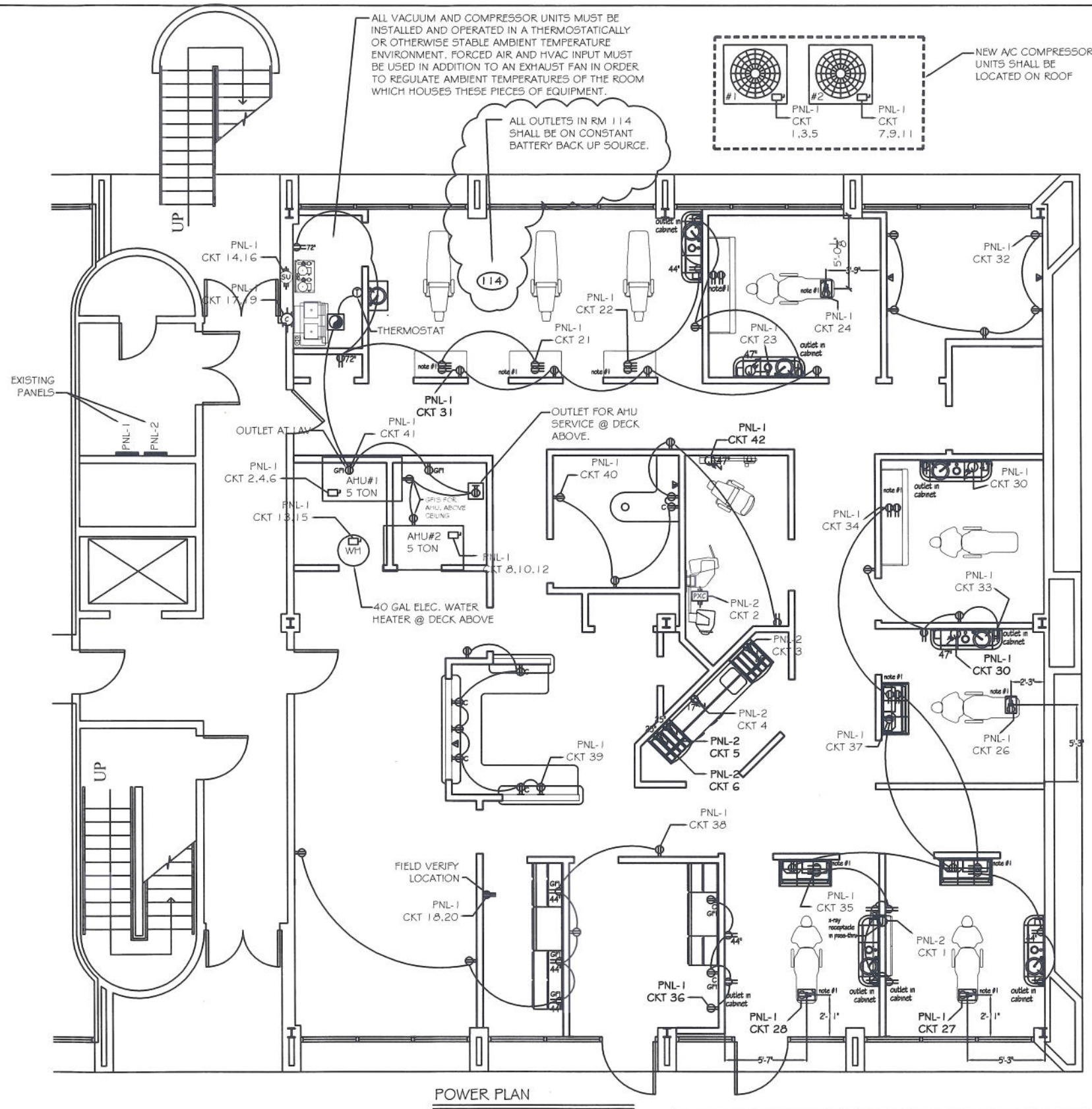

POWER PLAN

SCALE: 1/4"= 1'-0"

NOTE:

SEE EQUIPMENT SUPPLIER PLANS AND DETAILS FOR DENTAL EQUIPMENT ELECTRICAL REQUIREMENTS.

POWER PLAN LEGEND

SYM.	DESCRIPTION	SYM.	DESCRIPTION
	STANDARD 120V DUPLEX RECEPTACLE @ 18" AFF (UNLESS NOTED)		QUAD CAT.5 JACK WITH FACEPLATE NETWORKING CONNECTION
GFI	GFI RECEPTACLE ALL OUTLETS WITHIN 48" OF A WATER SOURCE SHALL BE GFI		POWER DISCONNECT
	RECEPTACLE ABOVE COUNTER HEIGHT	WH	ELECTRIC WATER HEATER SIZE AS NOTED
	STANDARD 220V DUPLEX RECEPTACLE @ 18" AFF (UNLESS NOTED)		AIR CONDITIONING COND. UNIT SEE MECH SHEETS FOR UNIT DETAILS
	STANDARD 120V QUAD RECEPTACLE @ 18" AFF (UNLESS NOTED)		STANDARD 120V DUPLEX RECEPTACLE ABOVE CEILING

PATTERSON DENTAL ELECTRICAL NOTES

SEE PLANS BY PATTERSON DENTAL

ELECTRICAL SPECIFICATIONS

ON THE DAY OF DENTAL EQUIPMENT INSTALLATION, THE ELECTRICIAN MUST BE ON THE JOB TO MAKE FINAL CONNECTIONS WHERE NECESSARY. CIRCUIT BREAKER PANEL FOR THE SUITE TO BE LOCATED IN SUITE AND CONVENIENTLY ACCESSIBLE. ALL ELECTRICAL LINES TO BE CONCEALED. PROVIDE PROPER EMERGENCY LIGHTING AND LIGHTED EXIT SIGNS AS REQUIRED BY LOCAL CODES.
ELECTRICIAN SHALL PROVIDE POWER FOR WATER HEATER. SEE CONTRACTOR FOR LOCATION.
ELECTRICIAN SHALL PROVIDE POWER FOR PHONE BOARD. SEE CONTRACTOR FOR LOCATIONS.
ELECTRICIAN SHALL PROVIDE POWER FOR HVAC SYSTEM. SEE CONTRACTOR FOR LOCATION.
ELECTRICIAN SHALL PULL THE FOLLOWING CABLES WHERE APPLICABLE:
CAMERA SYSTEM (SUPPLIED BY PATTERSON DENTAL CO.)
COMPUTER SYSTEM (SUPPLIED BY DOCTOR) * CPU SYSTEM: TO BE ON SEPARATE CIRCUITS WITH NO MORE THAN FIVE COMPUTERS PER CIRCUIT. *

- DENTAL UNIT - SEPARATE CIRCUIT, 115 VOLTS, 20 AMPS (PER TREATMENT AREA). INSTALL RIGID OR FLEX CONDUIT WITH CONNECTOR TO QUAD OUTLET.
- DEDICATED RECEPTACLE - SEPARATE CIRCUIT 115 VOLT, 20 AMPS.
- AIR COMPRESSOR - SEPARATE CIRCUIT, 230 VOLTS, 20 AMPS, SINGLE PHASE. 3 #10 WIRES. INSTALL 18" ABOVE FLOOR. FINAL CONNECTION BY ELECTRICIANS. SEE MANUFACTURER'S SPECIFICATIONS.
- SU — SUCTION UNIT RECEPTACLE - SEPARATE CIRCUIT, 230 VOLTS, 20 AMPS, SINGLE PHASE, 3#10 WIRES. INSTALL 24" ABOVE FLOOR. SEE MANUFACTURER'S SPECIFICATIONS.
- MOTOR CHAIR RECEPTACLE - 115 VOLTS, 6 AMPS, RECESSED FLOOR TYPE RECEPTACLE, WHERE DESIGNATED.
- 230 VOLT OUTLET - PROVIDE 230 VOLT OUTLET, 20 AMPS HEIGHT AS NOTED.
- DUPLEX WALL RECEPTACLE - INSTALL WITH GROUND PIN. HEIGHT @ 18" UNLESS DESIGNATED OTHERWISE.
- X-RAY RECEPTACLE - SEPARATE CIRCUIT, 115 VOLTS, 20 AMPS. INSTALL SINGLE DEDICATED CIRCUIT. HEIGHT AS SPECIFIED. MUST BE GROUNDED TO PANEL. SEE MANUFACTURER'S SPECIFICATIONS.
- EXHAUST FAN - INSTALL CONCEALED WIRE TO WALL SWITCH. EXHAUST FAN IN DARK ROOM TO BE LIGHT PROOF. SUPPLIED AND INSTALLED BY ELECTRICIAN.
- PXC — PANORAMIC X-RAY CONTROL RECEPTACLE - SEPARATE CIRCUIT, 115 VOLTS, 20 AMPS RECEPTACLE. RECEPTACLE LOCATED 12" ABOVE FLOOR AT LOCATION DESIGNATED.

NOTE #1 - SEE A PATTERSON DENTAL REPRESENTATIVE FOR LIFE-SIZE TEMPLATES OR EXPLANATION AND LOCATION OF DENTAL UNIT REQUIREMENTS.
NOTE #2 - PROVIDE CIRCUIT FOR COMPUTERS WITH NO MORE THAN FIVE COMPUTERS PER CIRCUIT. COMPUTER CIRCUITS TO BE SEPARATE FROM CIRCUITS POWERING TREATMENT CONSOLES, CUSTOM CABINETS, AND ANCILLARY DENTAL EQUIPMENT LOCATED IN CONSOLES OR CUSTOM CABINETS.
NOTE #3 - PROVIDE POWER SHOWN WITH NO OUTLET NECESSARY. EXTEND WIRES IN FLEXIBLE CONDUIT TO BOX PROVIDED WITH CABINET OR WALL MOUNTED LIGHT.

SBD - SUPPLIED BY DOCTOR, HOWEVER, WHERE THESE ITEMS APPEAR, ELECTRICIAN SHALL PROVIDE LABOR AND MATERIAL TO INSURE PROPER INSTALLATION.

ALL ADDITIONAL CONVENIENCE OUTLETS TO BE PLACED BY DOCTOR.

ELECTRICAL NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. THE GOVERNING ELECTRICAL CODE AND ALL OTHER INSPECTION DEPARTMENTS HAVING JURISDICTION. OBTAIN CERTIFICATES OR APPROVAL WHERE REQUIRED.
2. ALL MATERIALS FURNISHED SHALL BE NEW AND SHALL BE U.L. LISTED.
3. THE DRAWINGS INDICATE SIZE AND GENERAL LOCATION OF WORK. SCALE DIMENSIONS SHALL NOT BE USED. THE EXACT LOCATION AND LOCATION OF ALL LIGHTING FIXTURES, RECEPTACLES AND TELEPHONE OUTLETS, ETC. SHALL BE DETERMINED BY ACTUAL CONDITIONS IN THE FIELD.
4. PRIOR TO BIDDING, CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AND WITH OTHER CONTRACTORS WHOSE WORK MAY AFFECT THIS INSTALLATION.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE INCOMING ELECTRICAL SERVICE WITH UTILITY COMPANY AND INCLUDE IN HIS BID ALL CHARGES AND FEES INCURRED IN MODIFICATIONS.
7. WHERE MORE THAN ONE SWITCH OCCURS IN THE SAME LOCATION, THEY SHALL BE INSTALLED IN A GANG TYPE BOX UNDER ONE COVER PLATE.
8. ELECTRICAL CONTRACTOR SHALL COORDINATE THE TELEPHONE INSTALLATION WITH THE TELEPHONE COMPANY AND THE GENERAL CONTRACTOR.
9. ELECTRICAL CONTRACTOR, BEFORE INSTALLING ANY OF THE WORK, SHALL SEE THAT IT DOES NOT INTERFERE WITH CLEARANCES REQUIRED FOR FINISHED COLUMNS, HUNG CEILINGS, PLASTER, PARTITIONS, WALLS, ETC., AS SHOWN IN THE ARCHITECTURAL DRAWINGS AND DETAILS. IF ANY WORK IS INSTALLED AND IT LATER DEVELOPS THAT SUCH DETAILS OR DESIGN CANNOT BE FOLLOWED, THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL MAKE SUCH CHANGES IN THE WORK AS DIRECTED BY THE ARCHITECT, AS WELL AS TO PERMIT THE INSTALLATION OF THE ARCHITECTURAL WORK AS SHOWN ON THE PLANS AND DETAILS.
10. PERFORM TEST REQUIRED BY THE OWNER OR THE ENGINEER IN CONNECTION WITH THE OPERATION OF THE ELECTRICAL SYSTEM IN THE BUILDING.
11. ALL TESTS SHALL BE MADE IN ACCORDANCE WITH THE LATEST STANDARD OF THE IEEE AND THE NATIONAL ELECTRICAL CODE.
12. MINIMUM CONDUCTOR SIZE SHALL BE #12, 600V INSULATION. MINIMUM SIZE CONDUIT SHALL BE 3/4" EMT FOR INTERIOR USE, AND 3/4" RIGID ALUMINUM FOR EXTERIOR USE. USE TYPE NMC CABLE COPPER. FOR LIGHTS AND RECEPTACLE CIRCUITS. EXTERIOR FITTINGS SHALL BE CAST BOXES AND COVERS. INTERIOR FITTINGS SHALL BE CAST WHERE EXPOSED ON WALLS. STAMPED BOXES MAY BE USED ABOVE CEILINGS IN AIR CONDITIONED SPACES. WHERE LAY IN FIXTURES ARE IN USE, USE 14/2 ALLOWED FOR 6' WIDTH.
13. CONTRACTOR SHALL INSTALL WIRING AND OTHER CIRCUIT COMPONENTS TO MATCH EQUIPMENT ACTUALLY INSTALLED.
14. INSTALL GROUND FAULT RECEPTACLES AT RECEPTACLE LOCATIONS WITHIN 5' OF SINKS OR LAVATORIES, AND AT EXTERIOR LOCATIONS. EXTERIOR RECEPTACLES SHALL ALSO BE WATERPROOF.
15. BONDING AND GROUNDING SHALL BE IN ACCORDANCE WITH NFPA 70:230-63, NFPR 250-23, 250-71 & 250-72.
16. GROUND NEUTRAL IN ACCORDANCE WITH NFPA 70:250-23b.
17. FUSES SHALL BE ITT CLASS K5, 250 VOLT, 200,000 AMP INTERRUPTING CAP.
18. PROVIDE SERVICES OF A FIRE/SMOKE DETECTION AND ALARM COMPANY TO DESIGN AND INSTALL ALARM SYSTEM TO MEET REQUIREMENTS OF THE STATE FIRE MARSHALL.
19. EXTERIOR LIGHTING SHALL BE SHADED OR INWARDLY DIRECTED IN SUCH A MANNER SO THAT NO DIRECT LIGHTING OR GLARE IS CAST BEYOND THE PROPERTY LINE. THE INTENSITY OF SUCH LIGHTING SHALL NOT EXCEED ONE FOOT CANDLE AS MEASURED AT THE ABUTTING PROPERTY LINE.
20. ALL ELECTRICAL, MECHANICAL AND PLUMBING PENETRATING FIRE PARTITIONS SHALL BE FIRE CAULKED. (PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED WITH A MATERIAL CAPABLE OF PREVENTING THE PASSAGE OF FLAMES AND HOT GASES WHEN TESTED IN ACCORDANCE WITH ASTM-E814.)

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POWER PLAN

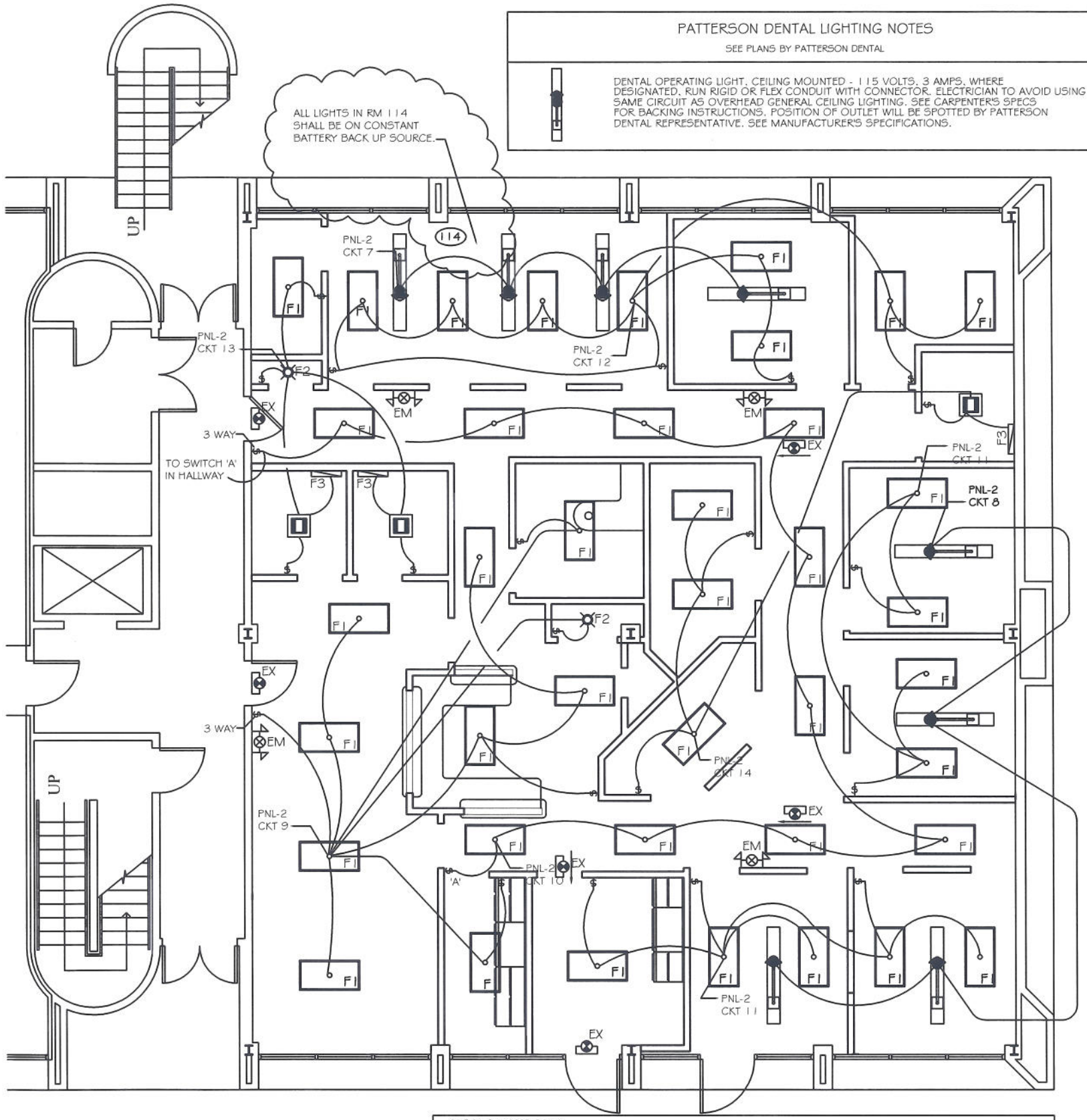
STATE OF LOUISIANA
EMMETT G. DAMMON
License No. 8796
PROFESSIONAL ENGINEER IN ELECTRICAL ENGINEERING

REV:05-01-12
SCALE: AS NOTED
JOB#: 2130
DATE: 02-15-12
SHEET 8
E-1
OF 11

PATTERSON DENTAL LIGHTING NOTES

SEE PLANS BY PATTERSON DENTAL

DENTAL OPERATING LIGHT, CEILING MOUNTED - 115 VOLTS, 3 AMPS, WHERE DESIGNATED. RUN RIGID OR FLEX CONDUIT WITH CONNECTOR. ELECTRICIAN TO AVOID USING SAME CIRCUIT AS OVERHEAD GENERAL CEILING LIGHTING. SEE CARPENTER'S SPECS FOR BACKING INSTRUCTIONS. POSITION OF OUTLET WILL BE SPOTTED BY PATTERSON DENTAL REPRESENTATIVE. SEE MANUFACTURER'S SPECIFICATIONS.

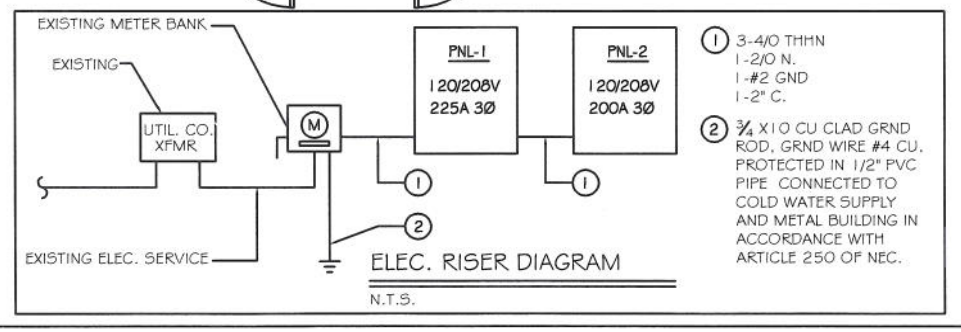


LIGHTING PLAN

SCALE: 1/4" = 1'-0"

NOTE:

SEE EQUIPMENT SUPPLIER PLANS AND DETAILS FOR DENTAL EQUIPMENT ELECTRICAL REQUIREMENTS.



ELEC. RISER DIAGRAM

N.T.S.

(1) 3-4/0 THHN
1-2/0 N.
1-#2 GND
1-2" C.

(2) ¾ X 10 CU CLAD GRND ROD, GRND WIRE #4 CU. PROTECTED IN 1/2" PVC PIPE CONNECTED TO COLD WATER SUPPLY AND METAL BUILDING IN ACCORDANCE WITH ARTICLE 250 OF NEC.

LIGHTING FIXTURE SCHEDULE

LABEL	DESCRIPTION	MANUFACTURER PRODUCT #	LAMPS	QTY
F1	2x4 RECESSED FLOURESCENT 3" PARABOLIC TROFFER	LITHONIA LIGHTING 2PM3N 3 32 MVOLT 1/3 GEB101S	3-T8 32W FLOURESCENT 120V	16
F2	SURFACE MOUNTED FLOURESCENT	LEVITON 9860 LHG	1-13W FLOURESCENT 120V	5
F3	COMMERCIAL WALL BRACKET 24" LONG	LITHONIA LIGHTING WC 2 17 MVOLT GEB101S	2-T8 17W FLOURESCENT 120V	5
EM	EMERGENCY EGRESS LIGHT W/ 90 MIN. BATTERY BACKUP	EELP LIGHTING ELM2	2-5.4W HALOGEN	
EX	WALL MOUNTED LED EXIT SIGN	EELP LIGHTING XE2 R WE EM	LED	
EX1	WALL MOUNTED LED EXIT SIGN W/ REMOTE HEAD	EELP LIGHTING XE2 R WE EM RC RHW WP1 6V 7.2W	LED 7.2W REMOTE HEAD	

NOTES:
1. CONNECT ALL EMERGENCY / EXIT LIGHT FIXTURES TO NEAREST CONSTANT POWER SOURCE.

PANEL: PNL-1
LOCATION: EXISTING ELEC. RM.
FEEDER SOURCE: MDP

VOLTAGE: 208/120V, 225A 3Ø, 4W MLO
ENCLOSURE: SURFACE MOUNTED W/EQUIPMENT GND BAR BOLT-ON BRK 22000 AIC

CKT. NO.	THHN WIRE SIZE	LOAD DESCRIPTION / LOCATION	BREAKER AMP	BREAKER POLE	LOAD (VA)	A/C B/C C/C	LOAD (VA)	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION / LOCATION	THHN WIRE SIZE	CKT. NO.
1	#10	A/C #1 COMPRESSOR UNIT 5 TON	50	3	4800		2430	2	30	DENTAL SUCTION UNIT RECEPTACLE	#10	2
3					4800		2430					4
5					4800		2430					6
7	#10	A/C #2 COMPRESSOR UNIT 5 TON	50	3	4800		2430	2	30	DENTAL SUCTION UNIT RECEPTACLE	#10	8
9					4800		2430					10
11					4800		2430					12
13	#8	ELEC. WATER HEATER 40 GALLON	40	2	3200		1560	2	30	DENTAL SUCTION UNIT RECEPTACLE	#10	14
15					3200		1560					16
17	#10	DENTAL AIR COMPRESSOR	30	2	1560		1560	2	30	220 V OUTLET AT LAB RM.104	#12	18
19					1560		1560					20
21	#12	RECEPTACLES	20	1	1200		1200	1	20	RECEPTACLES	#12	22
23	#12	XRAY RECEPTACLE	20	1	300		1400	1	20	DENTAL CHAIR UNIT OUTLET	#12	24
25	#12	DENTAL CHAIR UNIT OUTLET	20	1	400		1400	1	20	DENTAL CHAIR UNIT OUTLET	#12	26
27	#12	DENTAL CHAIR UNIT OUTLET	20	1	400		1400	1	20	DENTAL CHAIR UNIT OUTLET	#12	28
29	#12	XRAY RECEPTACLE	20	1	300		1200	1	20	XRAY RECEPTACLE	#12	30
31	#12	COMPUTER OUTLETS	20	1	1200		1200	1	20	RECEPTACLES	#12	32
33	#12	RECEPTACLES	20	1	1200		1200	1	20	RECEPTACLES	#12	34
35	#12	RECEPTACLES	20	1	1200		1200	1	20	RECEPTACLES	#12	36
37	#12	COMPUTER OUTLETS	20	1	1200		1200	1	20	RECEPTACLES	#12	38
39	#12	RECEPTACLES	20	1	1200		1200	1	20	RECEPTACLES	#12	40
41	#12	RECEPTACLES AND EQ. RM EXH. FAN	20	1	1300		1300	1	20	XRAY RECEPTACLE	#12	42
		SOLID NEUTRAL NEUTRAL WIRE (N)			TOTAL CONNECTED LOAD (VA)=67200					GROUND BUS GROUND WIRE (G)		
					A/Ø=22400	B/Ø=22400	C/Ø=22400					

PANEL: PNL-2
LOCATION: EXISTING ELEC. RM.
FEEDER SOURCE: MDP

VOLTAGE: 208/120V, 225A 3Ø, 4W MLO
ENCLOSURE: SURFACE MOUNTED W/EQUIPMENT GND BAR BOLT-ON BRK 22000 AIC

CKT. NO.	THHN WIRE SIZE	LOAD DESCRIPTION / LOCATION	BREAKER AMP	BREAKER POLE	LOAD (VA)	A/C B/C C/C	LOAD (VA)	BREAKER POLE	BREAKER AMP	LOAD DESCRIPTION / LOCATION	THHN WIRE SIZE	CKT. NO.
1	#12	XRAY RECEPTACLE	20	1	1300		1600	1	20	PANORAMIC XRAY CONTROL RECEPTACLE	#12	2
3	#12	DEDICATED RECEPTACLE	20	1	1200		1200	1	20	DEDICATED RECEPTACLE	#12	4
5	#12	DEDICATED RECEPTACLE	20	1	1200		1200	1	20	DEDICATED RECEPTACLE	#12	6
7	#12	DENTAL OPERATING LIGHTS	20	1	1380		1380	1	20	DENTAL OPERATING LIGHTS	#12	8
9	#12	GENERAL LIGHTING	20	1	1200		1200	1	20	GENERAL LIGHTING	#12	10
11	#12	GENERAL LIGHTING	20	1	1200		1200	1	20	GENERAL LIGHTING	#12	12
13	#12	TOILET LIGHTS / VENT COMBO	20	1	1200		1200	1	20	GENERAL LIGHTING / TOILET LGT. AND VENT COMBO	#12	14
15	#12	SPARE	20	1	1200		1200	1	20	SPARE	#12	16
17	#12	SPARE	20	1	1200		1200	1	20	SPARE	#12	18
19	#12	SPARE	20	1	1200		1200	1	20	SPARE	#12	20
21	-	BLANK	-	-	-		-	-	-	BLANK	-	22
23	-	BLANK	-	-	-		-	-	-	BLANK	-	24
25	-	BLANK	-	-	-		-	-	-	BLANK	-	26
27	-	BLANK	-	-	-		-	-	-	BLANK	-	28
29	-	BLANK	-	-	-		-	-	-	BLANK	-	30
31	-	BLANK	-	-	-		-	-	-	BLANK	-	32
33	-	BLANK	-	-	-		-	-	-	BLANK	-	34
35	-	BLANK	-	-	-		-	-	-	BLANK	-	36
37	-	BLANK	-	-	-		-	-	-	BLANK	-	38
39	-	BLANK	-	-	-		-	-	-	BLANK	-	40
41	-	BLANK	-	-	-		-	-	-	BLANK	-	42
		SOLID NEUTRAL NEUTRAL WIRE (N)			TOTAL CONNECTED LOAD (VA)=67200					GROUND BUS GROUND WIRE (G)		
					A/Ø=22400	B/Ø=22400	C/Ø=22400					

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LIGHTING PLAN

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REV: 05-01-12

SCALE: AS NOTED

JOB#: 2130

DATE: 02-15-12

SHEET 9

E-2

OF 11