

**NORTH** FLOOR PLAN - POWER



NEC 517.13 (A) All branch circuits serving patient care areas shall be provided with an effective ground-fault current path by installation in a metal raceway system, or a cable having a metallic armor or sheath assembly. The metal raceway system, or metallic cable armor, or sheath assembly shall itself qualify as an equipment grounding conductor in accordance with 250.118.

517.13 (B) Insulated Equipment Grounding Conductor.

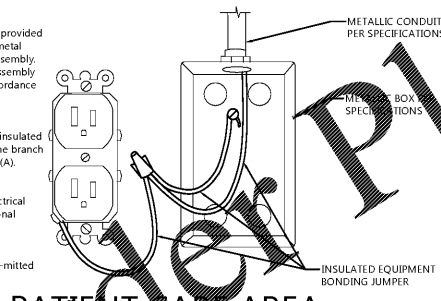
(1) General. The following shall be directly connected to an insulated copper equipment grounding conductor that is installed with the branch circuit conductors in the wiring methods as provided in 517.13(A).

(1) The grounding terminals of all receptacles.

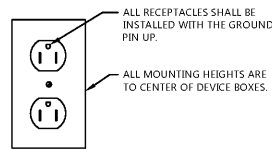
(2) Metal boxes and enclosures containing receptacles.

(3) All non-current-carrying conductive surfaces of fixed electrical equipment likely to become energized that are subject to personal contact, operating at over 100 volts.

Exception: An insulated equipment bonding jumper that directly connects to the equipment grounding conductor is permitted to connect the box and receptacle(s) to the equipment grounding conductor.



**PATIENT CARE AREA RECEPTACLE GROUNDING**



**TYPICAL RECEPTACLE INSTALLATION DETAIL**

**POWER GENERAL NOTES:**

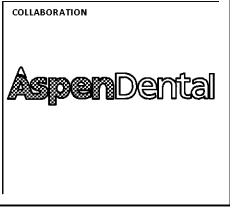
- 1. ALL CONDUITS STUBBED OUT OF BUILDING SHALL BE PER CONDUIT PENETRATION DETAIL/SHEET E3.0.
- 2. VERIFY ALL EXPOSED CONDUIT ROUTING WITH ARCHITECT/ENGINEER WHERE CONDUIT IS EXPOSED IN FINISHED ROOMS.
- 3. ALL RECEPTACLES LOCATED IN TOILET ROOMS, WITHIN 6'-0" OF SINKS OR SERVING COUNTERTOPS SHALL BE GFCI TYPE.
- 4. COORDINATE ALL RECEPTACLE, DATA AND TELEPHONE PORT LOCATIONS WITH FURNITURE LAYOUT AND OWNER'S FURNITURE SUPPLIER PRIOR TO ROUGH-IN.
- 5. COORDINATE THE VOLTAGE, AMPERAGE, PHASE, CONNECTION TYPE, ROUGH-IN LOCATION, ETC. OF ALL EQUIPMENT WITH THE CONTRACTOR INSTALLING THE EQUIPMENT.
- 6. FIRE ALARM SYSTEM INSTALLATION AND WIRING SHALL BE PER NFPA REGULATIONS AND LOCAL FIRE DISTRICT REQUIREMENTS.
- 7. REFER TO ASPEN DENTAL MANAGEMENT, INC. UNDERGROUND LAYOUT DRAWING FOR EXACT LOCATION(S) OF ALL UNDERGROUND UTILITIES.
- 8. ALL ITEMS OR DEVICES SHOWN "DARKER" ARE NEW LOW VOLTAGE DEVICES. ALL ITEMS OR DEVICES SHOWN "LIGHTER" ARE POWER DEVICES. POWER DEVICES ARE SHOWN FOR REFERENCE ONLY. REFER TO POWER SHEETS FOR MORE INFORMATION.

ALL WIRING IN PATIENT CARE SPACES SHALL MEET ALL THE REQUIREMENTS OF ARTICLE 517. ALL TREATMENTS ROOMS SHALL BE CONSIDERED PATIENT CARE SPACES.

**POWER PLAN KEYED NOTES:**

- 1. REVERSE ACTING THERMOSTAT (HONEYWELL T651A) TURN ON FAN AND CLOSE MECHANICAL ROOM MOTOR OPERATED DAMPER ON A RISE IN SPACE TEMPERATURE ABOVE SET POINT. THERMOSTAT FURNISHED BY HEATING CONTRACTOR REFER TO SHEET H1.1. CONDUIT AND WIRING PROVIDED BY E.C.
- 2. PROVIDE TWO (2) 120V, 14, 20 AMP DOUBLE DUPLEX RECEPTACLES FOR EQUIPMENT IN TELEPHONE CABINET. LOCATE RECEPTACLES AS CLOSE TOGETHER AS POSSIBLE.
- 3. NEW ELECTRICAL SERVICE PER ON-LINE DIAGRAM. PROVIDE NEW CIRCUIT BREAKERS AS SHOWN IN PANEL SCHEDULES AND PER SPECIFICATIONS.
- 4. PROVIDE DISCONNECT IN MECH. ROOM ADJACENT TO PUMP FOR SERVICE. PROVIDE POWER FROM SWITCHING RELAY TO TIMESWITCH TO PUMP PER DETAIL. L.V. WIRING PROVIDED BY P.C. SEE WATER HEATER DETAIL ON P3.0. FOR MORE INFORMATION.
- 5. FURNISH AND INSTALL 208V, 2-POLE, NEMA 1 FUSED DISCONNECT FOR VACUUM SYSTEM. PROVIDE WITH FRN8 FUSES. SEE DETAIL #6/SHEET E2.0.
- 6. PROVIDE 2'-0" x 4'-0" x 3/4" "AB" GRADE PLYWOOD TELEPHONE BOARD FOR TELEPHONE EQUIPMENT. SEE TELECOM GROUNDING DETAIL FOR MORE INFORMATION.
- 7. FURNISH AND INSTALL JUNCTION BOXES FOR PASS THROUGH WIRING. SEE DETAIL #7/SHEET E2.0.
- 8. FURNISH AND INSTALL AND MAKE FINAL CONNECTIONS OWNER SIGNAGE. PROVIDE 120V, 14, 20 AMP CIRCUIT FOR SIGNAGE. FIELD VERIFY EXACT ROUGH-IN LOCATION. PROVIDE PHOTOCELL FOR CONTROL. EXTENDER LIGHTING CONTROL DETAIL SHEET E1.1L. COORDINATE WITH OWNER / LANDSCAPE DETAIL #9/E2.0 FOR SIGN J-BOX/ROOF PENETRATION DETAIL.
- 9. PROVIDE 120V, 14, 20 AMP RECEPTACLE FOR X-RAY COMPUTER AND CONTROLS. SEE DETAIL #1/SHEET A5.0.
- 10. BOILER FILLING STATION. SEE DETAIL #1/SHEET E3.0 FOR MORE INFORMATION. PROVIDE GFI PROTECTION USING GFI PROTECTED BREAKER AS NOTED IN PANEL SCHEDULE.
- 11. SEE DETAIL #7/MD FOR ROUGH-IN REQUIREMENTS.
- 12. NOT USED.
- 13. RECEPTACLES AND J-BOXES TO BE NO LESS THAN 4" AND NO MORE THAN 18" OFF CORNER.
- 14. ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRIC HAND DRYER JUNCTION BOX AND ASSOCIATED 120V, 14, 20 AMP CIRCUIT. TOP OF CONTROLS AND AIR DISCHARGE TO BE A MAXIMUM OF 48" A.F.F. DRYER SHALL BE EQUIVALENT TO SURFACE MOUNTED HAND DRYER EXCEL DRYER, INC. XLERATOR MODEL #XL-BW SUPPLIED AND INSTALLED BY G.C.
- 15. FURNISH AND INSTALL DUPLEX RECEPTACLE AND PLASTER RING WITH PULL STRING TO ABOVE CEILING AT HEIGHT SHOWN ON PLANS FOR PLASMA TV.
- 16. PROVIDE 208V, 2-POLE, 20 AMP CIRCUIT AND RECEPTACLE TO SERVE STERILIZER (NEMA 6-20P).
- 17. 2" PVC CONDUIT BELOW FINISHED GRADE. USE UNDERGROUND LAYOUT DRAWING SHEET U1.1 FOR EXACT CONDUIT LOCATION.
- 18. INSTALL JUNCTION BOX OR PLASTER RING WITH 2" CONDUIT RUN TO ABOVE CEILING. REFER TO DETAIL #1/SHEET E2.0.
- 19. PROVIDE 220V, 20 AMP RECEPTACLE TO SERVE X-RAY EQUIPMENT. ELECTRICAL CONTRACTOR TO SUPPLY MALE END. COORDINATE RECEPTACLE AND CONNECTION REQUIREMENTS WITH EQUIPMENT PROVIDER (NEMA 6-20R). LEAVE MALE END TAPED TO OUTLET. REFER TO DETAIL #1/SHEET E2.0.
- 20. LOCATE RECEPTACLE AND DATA OUTLET WITHIN DIMENSIONS SHOWN.
- 21. FURNISH AND INSTALL 208V, 14, 20 AMP, NEMA 1 DISCONNECT FOR WATER HEATER ABOVE CEILING. PROVIDE ELECTRICAL CONNECTIONS TO WATER HEATER INCLUDING THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE MOUNTING LOCATION WITH EQUIPMENT IN ROOM.
- 22. ELECTRICAL CONTRACTOR SHALL FLUSH MOUNT NON-METALLIC LOW VOLTAGE RING. ROUTE CAT 6 WIRE FROM LOW VOLTAGE RING LOCATION TO MECHANICAL ROOM AND COIL 24" ON EACH END WITH MALE CONNECTOR BOTH ENDS (TYP.). SEE DETAIL #8/MD. CONTROL PANEL PROVIDED BY EQUIPMENT SUPPLIER.
- 23. FURNISH AND INSTALL CIRCUIT AND CONTROL WIRING. SEE DETAIL #2/SHEET E2.0.
- 24. PROVIDE JUNCTION BOX AND CONTROL WIRES. SEE DETAIL #4/MD.
- 25. PROVIDE JUNCTION BOX FOR X-RAY CONTROL BOX ASSEMBLY. SEE DETAIL #3/MD.
- 26. PROVIDE 1.5 KVA 208V//120/240V BUCK BOOST TRANSFORMER (SQUARE D 1.5546F OR EQUIVALENT) FOR AIR COMPRESSOR. LOCATE NEAR PANELS. PROVIDE 208V, 2-POLE, 30A, FUSED DISCONNECT TO SERVE AIR COMPRESSOR. SEE DETAIL #6/SHEET E2.0.
- 27. FANS ARE TO BE FURNISHED AND INSTALLED BY THE HEATING CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. SEE FAN SCHEDULE FOR ADDITIONAL INFORMATION.
- 28. ROUTE CIRCUIT THROUGH CONTACTOR. SEE DETAIL ON E1.1L.
- 29. MOTOR OPERATED DAMPER WITH 120V, 2 POSITION, SPRING RETURN, NORMALLY OPEN DAMPER PROVIDED BY H.C.E.C. SHALL PROVIDE WALL SWITCH AND WIRE FROM SWITCH TO ACTUATOR TO CLOSE DAMPER WHEN SWITCH IS "ON".
- 30. RECEPTACLES AND J-BOXES SHALL BE NO LESS THAN 4" AND NO MORE THAN 10" OFF CORNER.
- 31. PROVIDE DATA OUTLET 10" BELOW CEILING FOR WIFI. VERIFY EXACT LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
- 32. INSTALL JUNCTION BOX OR PLASTER RING WITH 2" CONDUIT TO ABOVE CEILING. REFER TO DETAIL #2/SHEET E2.0.
- 33. INTEGRAL DISCONNECT PROVIDED WITH RTAC.

COORDINATE LOCATION OF ALL EXPOSED CONDUIT WITH OWNER PRIOR TO INSTALLATION.



**PROJECT INFORMATION**

TENANT BUILD-OUT FOR:  
**ASPEN DENTAL**  
~12150 FRONTAGE ROAD • MURRELLS INLET, SC 29576

**PROFESSIONAL SEAL**

Blank area for professional seal.

**SHEET DATES**

ISSUE DATE	MAR. 16, 2020
REVISIONS	

**JOB NUMBER**

1860160

**SHEET NUMBER**

**E1.1P**