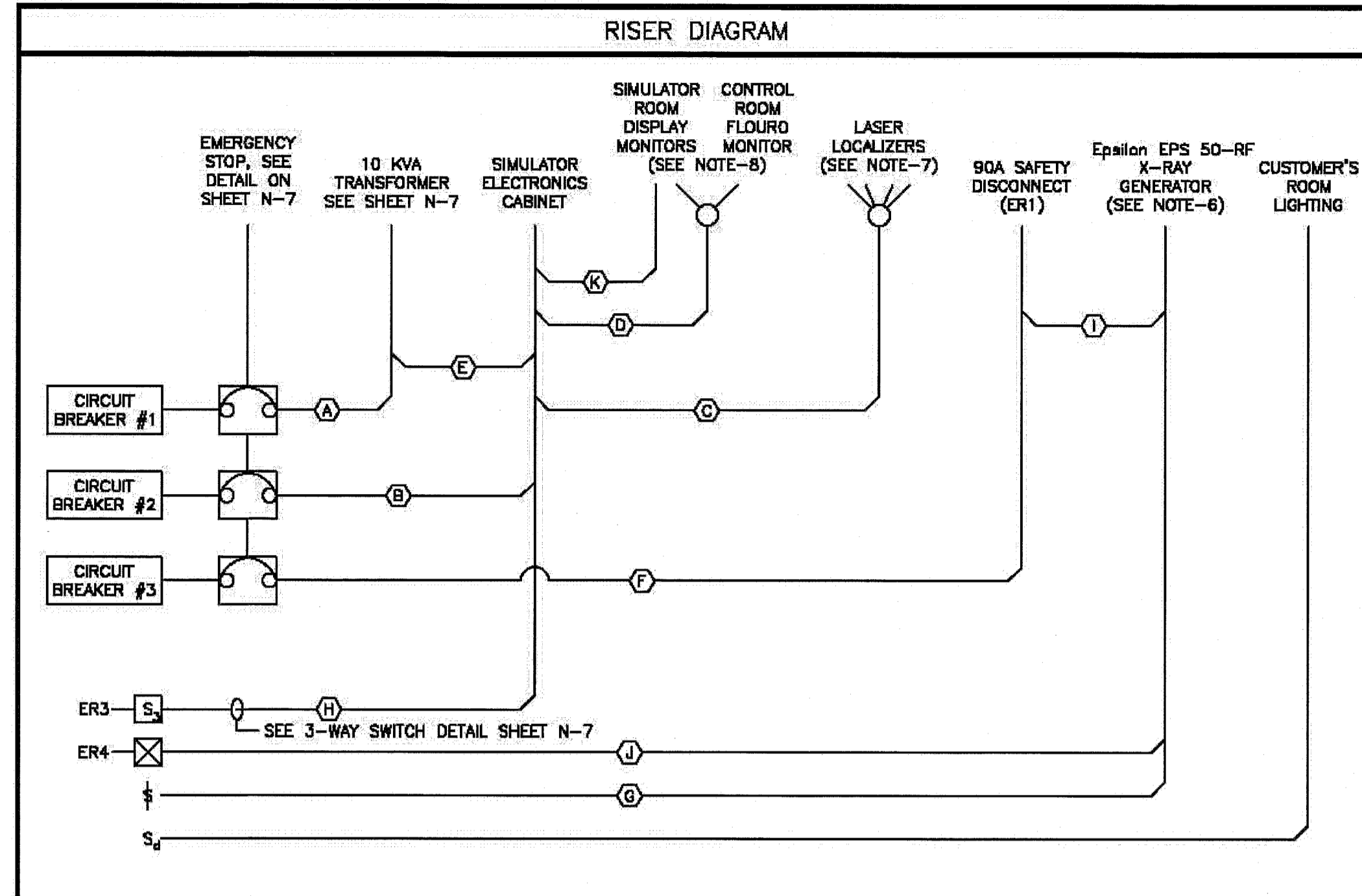


WIRE SIZES	
(A)	5 CONDUCTORS (3 PHASES, GROUND AND NEUTRAL) FEED FOR 10 KVA TRANSFORMER. SEE TABLE A
(B)	3 #12 110 VAC
(C)	3 #12 LASERS (ALL)
(D)	3 #12 MONITORS (ALL)
(E)	5 #12 (3 PHASES, GROUND AND NEUTRAL) 400V, 3Ø FEED FROM 10 KVA TRANS. TO SIM. ELEC. CABINET SEE ER9
(F)	5 CONDUCTORS (3 PHASES, #6 GROUND AND NEUTRAL) FOR 3Ø POWER.
(G)	2 #14 FOR DOOR SWITCH (SWITCH OPEN WHEN DOOR OPEN)
(H)	3 #12 ROOM LIGHTS 3-WAY
(I)	3 PHASES, GROUND, AND NEUTRAL—PHASES MUST BE 50 CABLE/EQUIVALENT, SIZED FOR 90A LOAD
(J)	3 #14 WARNING LIGHT
(K)	CUSTOMER TO SUPPLY 3/4" CONDUIT WITH PULL STRINGS FOR MONITOR CABLES—(CABLES SUPPLIED BY NUCLETRON)
(L)	3 #12 (1 Phase, Ground and Neutral)

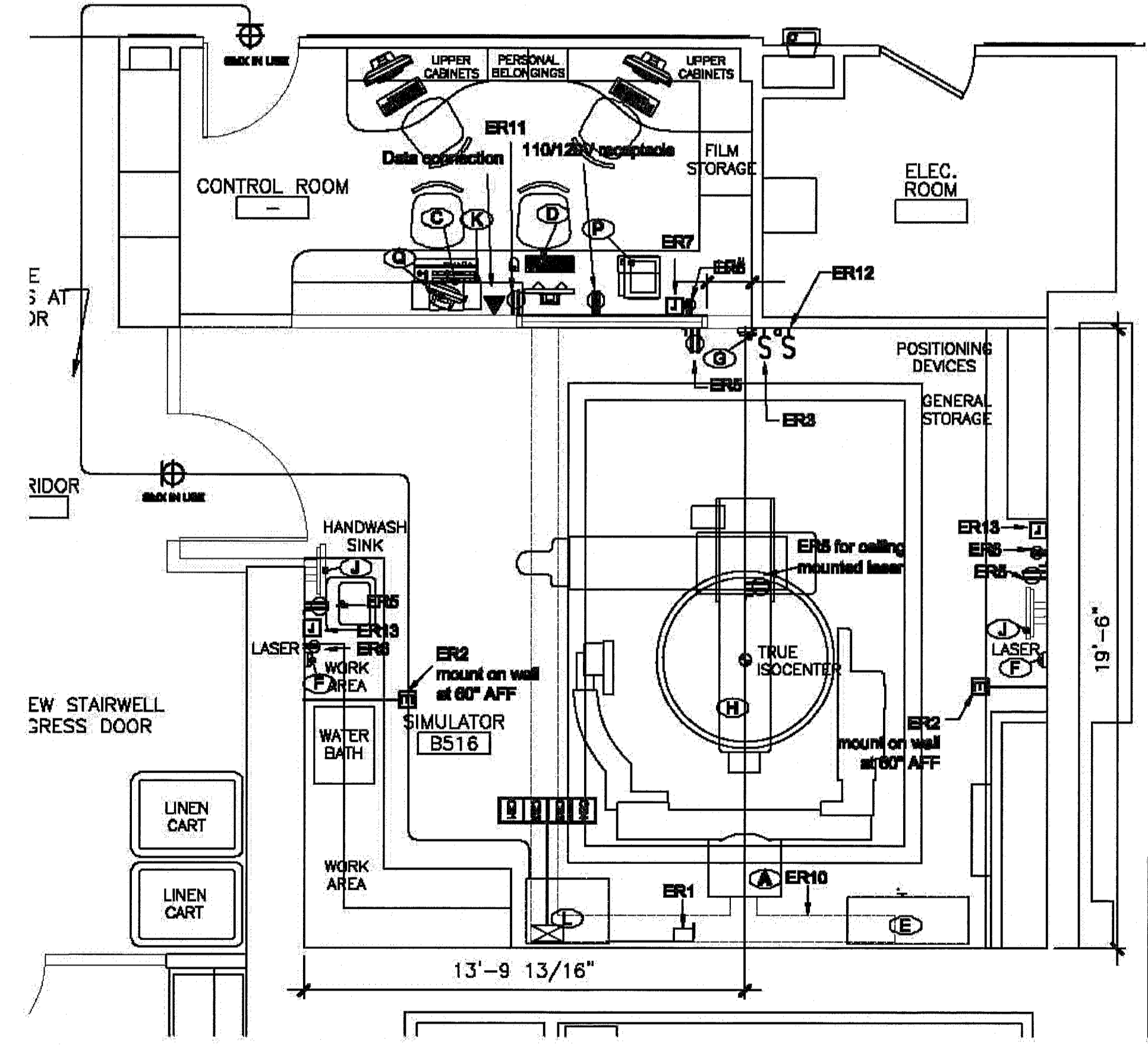
SEE NOTES 1 & 2

TABLE A			
POWER FROM CIRCUIT BREAKER #1 TO 10 KVA TRANS.			
SUPPLY VOLTAGE	BREAKER SIZE	WIRE SIZE	MAX RUN
480 VAC	15A	#12, #14	243'
208 VAC	35A	#6, #8, #10	181'



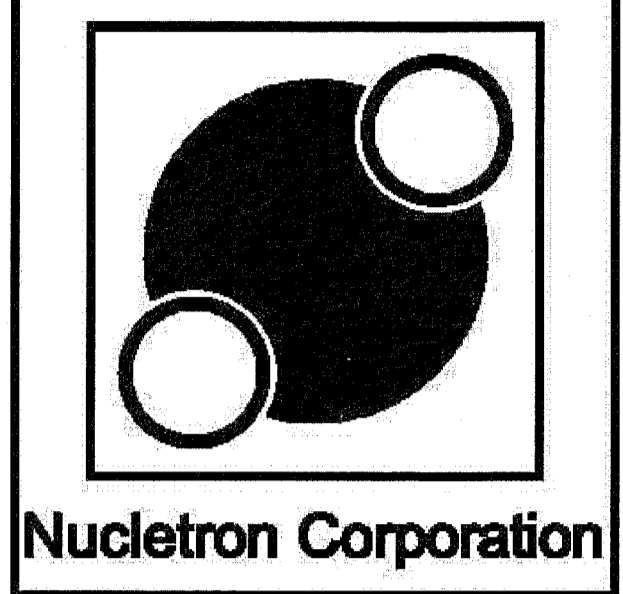
ELECTRICAL REQUIREMENTS		
SYMBOL	ITEM	DESCRIPTION
CB1	CIRCUIT BREAKER #1	SHUNT TRIP—208 OR 480 VOLTS, 3Ø, 10 KVA LOAD (DEDICATED CIRCUIT) SEE TABLE A FOR BREAKER SIZING
CB2	CIRCUIT BREAKER #2	SHUNT TRIP—120 VOLTS, 1Ø, 20A TO SIMULATOR ELECTRONICS CABINET (DEDICATED CIRCUIT)
CB3	CIRCUIT BREAKER #3	SHUNT TRIP—480 VOLTS, 3Ø, 110 KVA MAXIMUM MOMENTARY INPUT POWER DEMAND AT FULL OUTPUT—TO 90A SAFETY DISCONNECT WITH TIME DELAY FUSES—(DEDICATED CIRCUIT)
ER1		SAFETY DISCONNECT WITH TIME DELAY FUSES—90A, TO BE WITHIN 15'-0" OF Epsilon EPS 50-RF X-RAY GENERATOR—CIRCUIT SIZED BY CUSTOMER ACCORDING TO LINE VOLTAGE UP TO DISCONNECT 90A BEYOND—NUCLETRON RECOMMENDS USING CUTLER-HAMMER MODEL 3838XK OR EQUIVALENT
E	ER2	LIGHTED EMERGENCY STOP BUTTONS FOR SHUNT TRIP CIRCUIT BREAKERS 1, 2, & 3—SEE DETAIL ON SHEET N-8, NUCLETRON RECOMMENDS USING MOMENTARY TYPE
ER3		LINKS OF 3-WAY SWITCH, FLUORESCENT OR INCANDESCENT LIGHTS, SEE 3-WAY SWITCH DETAIL SHEET N-8
ER4		WARNING LIGHT (INCANDESCENT ONLY)—POWER FROM Epsilon EPS 50-RF X-RAY GENERATOR
ER5		SINGLE RECEPTACLES—NEMA 5-20R, FOR LASER LIGHTS, MOUNT WITHIN 12" OF LASER—NOT TO INTERFERE WITH LASER LOCATION—FOR SUGGESTED MOUNTING SEE SHEET N-5
ER6		DUPLEX RECEPTACLES—115/120 VOLT OUTLET, CONDUIT FROM TRENCH/WALL DUCT TO ROOM DISPLAY MONITORS AND TO FLUORO MONITOR—SEE NOTES 9 & 10
ER7		JUNCTION BOX WITH 3/4" CONDUIT FROM TRENCH DUCT, LOCATE NEXT TO FLUORO MONITOR RECEPTACLE
ER8		10 KVA TRANSFORMER—SUPPLIED BY NUCLETRON—CUSTOMER TO INSTALL—LOCATION SHOWN ON DRAWING IS A RECOMMENDATION ONLY (12 1/2" H x 17" W x 11 1/2" D) weight approximately 100 lbs.
ER9		CONDUIT FROM 10 KVA TRANSFORMER TO TRENCH/WALL DUCT FOR SIMULATOR MAIN POWER
ER10		TRENCH/WALL DUCT—3 1/2" DEEP x 12" WIDE AT COVER WITH REMOVABLE COVERS—NUCLETRON RECOMMENDS USING WALKER VA TRENCH DUCT OR EQUIVALENT
ER11		DUPLEX RECEPTACLE—115/120 VOLT, 1Ø, 20A CONVENIENCE OUTLET—FOR LASER PRINTER—SEE NOTE 12
ER12		DIMMER SWITCH FOR INCANDESCENT LIGHTING—RECOMMENDATION ONLY
ER13		JUNCTION BOX WITH 3/4" CONDUIT FROM TRENCH DUCT, LOCATE NEXT TO ROOM DISPLAY MONITOR RECEPTACLES
ER14		DOOR SWITCH—PROVIDED BY CUSTOMER—RATED AT 24 VOLTS
ER15		WALL / CEILING DUCT—3 1/2" DEEP x 8" WIDE AT COVER WITH REMOVABLE COVERS—NUCLETRON RECOMMENDS USING WALKER VA TRENCH DUCT OR EQUIVALENT

EQUIPMENT SCHEDULE	
(A) SIMULATOR GANTRY	(J) ROOM MONITORS
(B) SIMULATOR TABLE	(K) Epsilon EPS 50-RF OPERATOR'S CONSOLE
(C) SIMULATOR CONTROL CONSOLE	(L) Epsilon EPS 50-RFX-RAY GENERATOR
(D) Simplicity Workstation	(M) RCC JUNCTION BOX
(E) SIMULATOR ELECTRONICS CABINET	(N) SIMULATOR KEYBOARD
(F) LATERAL LASER LOCALIZERS	(P) PRINTER
(G) SAGITAL LASER LOCALIZER	(Q) SIMULATOR READOUT MONITOR
(H) OVERHEAD LASER LOCALIZER	



1 ROOM LAYOUT W/ EQUIPMENT LOCATION  
A-1

- NOTES:
- 1—ALL WIRES TO BE STRANDED COPPER UNLESS OTHERWISE SPECIFIED.
  - 2—LABEL BOTH ENDS OF ALL WIRES APPROPRIATELY.
  - 3—ALL EQUIPMENT MUST BE GROUNDED, SEE RISER DIAGRAM.
  - 4—ALL TERMINATIONS TO HAVE 6"-0" TAILS UNLESS OTHERWISE SPECIFIED.
  - 5—WIRES SIZED FOR 3% MAXIMUM VOLTAGE DROP.
  - 6—TERMINATIONS TO Epsilon EPS 50-RF X-RAY GENERATOR TO HAVE 8"-0" TAILS.
  - 7—LASER OUTLETS TO BE TIED TOGETHER WITH ONE SET OF WIRES RUNNING TO THE SIMULATOR ELECTRONICS CABINET.
  - 8—DISPLAY MONITORS AND FLUORO MONITOR OUTLETS TO BE TIED TOGETHER WITH ONE SET OF WIRES RUNNING TO THE SIMULATOR ELECTRONICS CABINET.
  - 9—MOUNT FLUORO MONITOR RECEPTACLE AT 72" ABOVE FINISHED FLOOR
  - 10—MOUNT ROOM DISPLAY MONITOR RECEPTACLES WITHIN 12" OF MONITOR
  - 11—CIRCUIT BREAKER LOCATION IS RECOMMENDED ONLY.
  - 12—NUCLETRON RECOMMENDS MULTIPLE DUPLEX CONVENIENCE OUTLETS IN SIMULATOR AND CONTROL ROOMS. LOCATION AND QUANTITY TO BE DETERMINED BY CUSTOMER.
  - 13—Location shown for reference only; Nucletron recommends mounting 10KVA transformer above ceiling in either the treatment or control room; final location to be determined by Customer



Nucletron Corporation

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Project Name and Location  
**Maine Medical Center**  
Portland, ME

NO.	REVISION/ISSUE	DATE
03	HDR out of Sim. room	2/11/10
02	Isocenter revision	2/14/09
01	Control room changes	2/2/09

Drawn By: **Pedraza**  
Checked By:  
Date: **10/28/08**

PROJECT NUMBER: **NUC2008-CP06**  
QUOTATION NUMBER: **A08030401R**  
QUOTATION DATE: **10/22/08**

CUSTOMER APPROVAL:  
NUCLETRON APPROVAL:  
DATE:

Project: **MCC** Sheet: **N-6**  
Date: **10/28/08** Electrical note  
Scale: **1/8"=1'-0"** 8 of 8

PROJECT: NUC2008-CP06

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ARCHITECTURE  
ENGINEERING  
PLANNING  
INTERIOR DESIGN  
COMMISSIONING

**SMART**

PROJECT NORTH

CT SIMULATOR REPLACEMENT  
RE-ISSUED FOR CONSTRUCTION  
02.09.10

PROJECT: NUC2008-CP06  
PORTLAND, ME  
CURRENT ISSUE STATUS:

NO.	REVISION/ISSUE	DATE
1	RE-ISSUED FOR CONSTRUCTION	02.09.10
2	REV	
3	REV	
4	REV	
5	REV	
6	REV	
7	REV	
8	REV	
9	REV	
10	REV	

GRAPHIC SCALE:  
0" 1"  
SCALE:  
PROJECT MANAGER: DM  
IC/DRAWN BY:  
A/E OF RECORD: DM  
PROJECT NO.: 09122  
DATE: 02.09.10

SHEET TITLE:  
**ELECTRICAL REQUIREMENTS**

SHEET NO.: **Q-008**