KALARE

DRAWING CONTENTS

TOSHIBA
Leading Innovation »»

REV	DATE	REVISED SHEET(S)	INT
1	07-18-13	COMPLETED ORIGINAL FINAL DRAWING.	J.A.D.
2	08-28-13	A1, S1, E1, E2	J.A.D.

TRISTAN RADIOLOGY
HERSHEY PA

(R/F ROOM – KALARE)

2015 TECHNOLOGY PKWY
MECHANICSBURG, PA 17050

DATE: 08-28-13

SCALE: NOT TO SCALE

PLANNER: J.A.D.

S.I.D.: 30006080

PROJECT NO.
130013743XRF1

C1

FOR REFERENCE ONLY. NOT TO BE USED FOR CONSTRUCTION PURPOSES.

MINIMUM SITE REQUIREMENTS CHECKLIST

PROJECT:		SITE INSPECTION DATE:
EQUIPMENT DELIVERY DATE:		INSPECTED BY:
IN ORDER TO ENSURE A TIMELY AND SUCCESSFUL INSTALLATION, IT IS NECESSARY TO COMPLETE THIS FORM PRIOR TO INSTALLATION. PLEASE ASSIST US BY HAVING THE CONTRACTOR OR YOUR REPRESENTATIVE COMPLETE THE FOLLOWING:		
	1.	ALL WALLS, FLOORS, AND CEILINGS FINISHED. WALLS PAINTED, FLOORS TILED, AND CEILING GRID WORK AND FIXTURES INSTALLED.
	2.	MONOLITHIC OR LAY–IN CEILING? PLEASE CIRCLE ONE. ALL MATERIALS IN SCAN ROOM MUST BE NON–FERROUS.
	3.	DOORS AND WINDOWS (INCLUDING ALL LEADED DOORS AND GLASS) INSTALLED AND LOCKABLE. DOORS TO BE REMOVED PRIOR TO DELIVERY BY CUSTOMER OR CONTRACTOR AND REINSTALLED AFTER EQUIPMENT MOVE–IN. RESERVE SECURE ROOM FOR STORAGE DURING INSTALLATION.
	4.	AREA SET ASIDE FOR EQUIPMENT RIGGING AND MOVE–IN. ENVIRONMENTAL ISSUES ADDRESSED AND RESOLVED PRIOR TO EQUIPMENT DELIVERY (I.E. SURGICAL SUITE).
	5.	ALL CONDUIT, TROUGHING (WITH COVERS), AND BOXES INSTALLED (CLEAN AND DUST FREE). GROMMETED OPENINGS, CHASE NIPPLES, RACEWAY DIVIDERS, ETC. COMPLETE.
	6.	CIRCUIT BREAKER INSTALLED AND INCOMING POWER (PER POWER QUALITY REQUIREMENTS) OPERATIONAL AND CONNECTED TO ROOM BREAKER(S).
	7.	LOCATION OF ALL ELECTRICAL BREAKERS IN POWER CHAIN NOTED.
	8.	ALL CONTRACTOR–INSTALLED STRUCTURAL SUPPORT DEVICES INSTALLED AND LEVELED ACCORDING TO TAMS SPECIFICATIONS ON SITE PLANS.
	9.	ROOM LIGHTING INSTALLED AND OPERATIONAL.
	10.	LIGHTING/SPRINKLER HEADS PRESENT NO CONFLICT WITH UNITS TO BE MOUNTED ON THE CEILING.
	11.	110V ROOM OUTLETS OPERATIONAL.
	12.	ALL CONTRACTOR–SUPPLIED CABLES PULLED AND TERMINATED, INCLUDING GROUND WIRE IN TROUGHING AS SPECIFIED IN THE TOSHIBA SITE PLANS.
	13.	INTERFACE FOR DIMMING OF ROOM LIGHTS IF APPLICABLE. WARNING LIGHTS AND DOOR SWITCHES INSTALLED AND INTERFACE AVAILABLE AND CONNECTED (RELAYS ETC.).
	14.	DUST–FREE ENVIRONMENT IN ALL RELATED ROOMS.
	15.	HEATING AND AIR–CONDITIONING INSTALLED, OPERATIONAL AND STABILIZED PER TOSHIBA SITE PLANS. FILTERS TO BE CHANGED 24 HOURS BEFORE DELIVERY.
	16.	ALL MILLWORK COMPLETE AND INSTALLED.
	17.	PLUMBING COMPLETED (INCLUDING GASES, IF APPLICABLE) ACCORDING TO TAMS SPECIFICATIONS ON SITE PLANS.
	18.	OPTIONAL COMPUTER FLOORING INSTALLED (IF APPLICABLE).
	19.	THIRD PARTY VENDED ITEMS SUCH AS PROCESSORS, INJECTORS, GAS PEDESTALS, PHYSIOLOGICAL MONITORING EQUIPMENT, ETC., INSTALLED AND OPERATIONAL.
	20.	TELEPHONE LINES (VOICE AND OPTIONAL MODEM) INSTALLED AND OPERATIONAL. A DEDICATED PHONE LINE IS REQUIRED FOR SITES THAT ARE RECEIVING INNERVISION.
	21.	ALL UNFINISHED AREAS ARE SEALED OFF TO PREVENT DUST CONTAMINATION.
	22.	RECEPTACLE FOR TRASH AVAILABLE (LARGE ENOUGH FOR SHIPPING CRATES IF REQUIRED).
	23.	SUB BASE PLATE(S) INSTALLED (IF REQUIRED).
	24.	"PDU" INSTALLED AND CONNECTED TO "CB".
	25.	EPOXY LEVELING PAD INSTALLED BY (TOSHIBA OR CONTRACTOR)? PLEASE CIRCLE ONE. IF BY CONTRACTOR, TOSHIBA REPRESENTATIVE MUST INSPECT PAD.
	26.	SEISMIC REQUIREMENTS, AND REQUIRED SEISMIC ANCHORING DEVICES INSTALLED (IF APPLICABLE).
	27.	NETWORK CONNECTIONS INSTALLED AND OPERATIONAL.
	28.	ALL APPLICABLE PERMITS OBTAINED.
	29.	

NOTICE:
CUSTOMER MUST COMPLETE ALL ITEMS ON THIS CHECKLIST BEFORE SCHEDULED DELIVERY DATE FOR THE EQUIPMENT. IF CUSTOMER FAILS TO DO SO, DELIVERY MAY BE DELAYED. FURTHERMORE, THE EQUIPMENT WARRANTY MAY BE VOIDED.

COMMENTS:	
SIGNED TOSHIBA:	
CONTRACTOR:	
CUSTOMER:	

10–07–11

CEILING HEIGHT

RECOMMENDED CEILING HEIGHT: 9'–2" (SEE DETAIL 1 ON SHEET A3)
EXISTING CEILING HEIGHT: 9'–6"

NOTE:
OVERHEAD X–RAY TUBE SUPPORT RAILS MUST NOT BE DIRECTLY OVER KALARE TABLE. IF OVERHEAD X–RAY TUBE SUPPORT RAILS ARE DIRECTLY ABOVE KALARE TABLE, THE CEILING HEIGHTS SHOWN MUST BE INCREASED BY THE DEPTH OF THE RAIL (APPROXIMATELY 4").

10–07–11

GENERAL NOTES

CUSTOMER/CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING UNLESS OTHERWISE NOTED.

GENERAL

A. TOSHIBA RESERVES THE RIGHT TO CHANGE THESE DESIGNS AND SPECIFICATIONS WITHOUT NOTICE.

B. CUSTOMER/CONTRACTOR SHALL SUPPLY AND INSTALL MATERIALS AND OTHER FEATURES SPECIFIED IN THE TOSHIBA SITE PLANS. CUSTOMER/CONTRACTOR SHALL SUPPLY AND INSTALL ALL COUNTERTOPS, SINKS, CASE WORK AND CABINETS SPECIFIED IN THE TOSHIBA SITE PLANS.

C. ANY CABINETRY THAT MAY BE REQUIRED TO HOUSE VIDEO RECORDERS, MONITORS KEYBOARDS, OR OTHER ANCILLARY EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.

D. THE CUSTOMER/CONTRACTOR SHALL PROVIDE ADEQUATE VENTILATION WITHIN CABINETRY AND INSTALL AXIAL FANS ON THE TOP, SIDE, OR BACK OF CABINETS, IF REQUIRED.

E. THESE TOSHIBA SITE PLANS DO NOT INDICATE EQUIPMENT REQUIREMENTS FOR ITEMS NOT SOLD BY TOSHIBA SUCH AS, PHYSIOLOGICAL MONITORS, LASER CAMERAS, INJECTORS, ETC. SPECIFICATIONS FOR THOSE ITEMS MUST BE OBTAINED FROM THE VENDOR AND INCLUDED IN THE DESIGN TOTALS.

F. IF REQUIRED, THE CUSTOMER/CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN INTERCOM SPEAKER SYSTEM BETWEEN THE EQUIPMENT ROOM, CONTROL ROOM, AND PROCEDURE ROOM.

G. THE CUSTOMER/CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL COSTS REQUIRED FOR THE ENGINEERING AND/OR REMOVAL OF ANY HAZARDOUS MATERIALS SUCH AS ASBESTOS.

H. CUSTOMER/CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN OPERATING PHONE IN THE CONTROL ROOM AT THE TIME TOSHIBA EQUIPMENT INSTALLATION BEGINS.

I. CUSTOMER/CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE LIGHTING FOR SERVICING OF EQUIPMENT IN ALL AREAS OF THE INSTALLATION.

J. PRIOR TO EQUIPMENT DELIVERY AND INSTALLATION, THE SITE MUST BE 100% COMPLETE, CLEAN AND FREE OF DUST. CUSTOMER/CONTRACTOR AND TOSHIBA INSTALLATION PROJECT MANAGER MUST COMPLETE A SITE WALK THROUGH 1 WEEK PRIOR TO DELIVERY AND DETERMINE ACCEPTABILITY FOR DELIVERY.

K. CUSTOMER/CONTRACTOR/ARCHITECT SHALL BE RESPONSIBLE FOR PROVIDING THE ENTIRE NETWORKING AND COMMUNICATION SYSTEMS.

L. CUSTOMER/CONTRACTOR SHALL DESIGN, FABRICATE, AND INSTALL MEDICAL GAS PEDESTAL, IF REQUIRED. CONSULT WITH TOSHIBA INSTALLATION MANAGER FOR SUITABLE LOCATIONS.

CODES AND PERMITS

M. THE CUSTOMER/CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES AND ORDINANCES ARE COMPLIED WITH.

SITE CONDITIONS

N. DIMENSIONS TO WALLS AND OR OTHER ROOM FEATURES, EXCEPT FOR NOTED COLUMN AND BEAM CENTER LINES SHALL BE FROM FINISHED SURFACES.

O. IT IS RECOMMENDED THAT XR EQUIPMENT REMAIN OUTSIDE 1 GAUSS FIELD OF MR EQUIPMENT.

PLUMBING

P. PLUMBING IS REQUIRED FOR CERTAIN COMPONENTS OF TOSHIBA EQUIPMENT.

Q. IT IS RECOMMENDED THAT A SINK BE PROVIDED FOR USE BY PERSONNEL.

TRANSPORT REQUIREMENTS

R. EQUIPMENT INGRESS ROUTE MUST BE CHECKED PRIOR TO EQUIPMENT DELIVERY TO ENSURE THE LARGEST AND HEAVIEST ITEMS OF EQUIPMENT CAN BE ACCOMMODATED, DIMENSIONS OF DOORWAYS SHOULD BE NO LESS THAN 4'–0" IN WIDTH.

S. CONTACT THE TOSHIBA INSTALLATION PROJECT MANAGER FOR DETAILS OF THE LARGEST AND HEAVIEST ITEMS OF EQUIPMENT FOR THIS INSTALLATION.

10–07–11

HVAC REQUIREMENTS

CUSTOMER TO PROVIDE THE NECESSARY HVAC REQUIREMENTS FOR THE TOSHIBA EQUIPMENT TO OPERATE PROPERLY.

AMBIENT TEMPERATURE SHOULD BE IN ACCORDANCE WITH THE FOLLOWING FOR CORRECT EQUIPMENT OPERATION AND PATIENT/OPERATOR COMFORT.

A. AIR–CONDITIONING FACILITIES MUST BE PROVIDED TO ENSURE THAT THE AMBIENT TEMPERATURE AND RELATIVE HUMIDITY ARE MAINTAINED WITHIN THE OPERATING ENVIRONMENTAL CONDITIONS.

B. AIR SUPPLY DUCTS SHOULD NOT BE PLACED DIRECTLY OVER EXAMINATION TABLES FOR PATIENT COMFORT.

C. EQUIPMENT IN ENCLOSED SPACES SUCH AS EQUIPMENT ROOMS, TRANSFORMER CLOSETS, AND COMPUTER ROOMS MUST BE PROVIDED WITH ADEQUATE VENTILATION. THE AIR FLOW THROUGH TOSHIBA EQUIPMENT CABINETS IS FROM BOTTOM TO TOP. WHERE POSSIBLE, A/C SUPPLY OUTLETS SHOULD BE LOCATED AT FLOOR LEVEL WITH RETURN GRILLES IN THE CEILING. A/C SUPPLY OUTLET TO BE PROVIDED BY CUSTOMER FLOOR LEVEL AT CONTROL ROOM DESK.

D. TO MAINTAIN THE ENVIRONMENTAL CONDITIONS SPECIFIED BELOW, INSTALL AN AIR–CONDITIONER, DEHUMIDIFIER, ETC. WITH APPROPRIATE PERFORMANCE RATINGS FOR THE EXAMINATION ROOM SIZE.

AMBIENT TEMPERATURE	10°C TO 35°C
RELATIVE HUMIDITY	30% TO 85% (NO CONDENSATION
ATMOSPHERIC PRESSURE	700 hPa TO 1,060 hPa
ILLUMINANCE	1000 LX OR LESS
ATMOSPHERE	DO NOT INSTALL THE SYSTEM IN A LOCATION WHERE THE OPERATING ENVIRONMENTAL CONDITIONS SPECIFIED ABOVE ARE NOT SATISFIED. ALSO, DO NOT INSTALL THE SYSTEM IN A LOCATION WHERE IT MAY BE EXPOSED TO THE FOLLOWING: FLAMMABLE GASES, CORROSIVE GASES, STEAM, DRIPPING WATER, EXCESSIVE DUST, SALTY AIR, DIRECT SUNLIGHT, EXCESSIVE SHOCK OR VIBRATION, EXCESSIVE LINE VOLTAGE FLUCTUATION

SYSTEM NAME	HEAT GENERATION (BTU/HR)	POWER CONSUMPTION (kW)
DUA–450F	1,239.00	0.027 (DURING STANDBY)
KXO–80XD	7,678.00	
	4,164.00 (FOR CONTINUOUS FLUOROSCOPY ONLY)	
	2,731.00 APPROX. (DURING STANDBY)	

10–07–11

STRUCTURAL NOTES

CUSTOMER/CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING UNLESS OTHERWISE NOTED.

A. THESE SITE PLANS ARE INTENDED TO DEPICT ONLY A CONCEPT OF THE STRUCTURE REQUIRED FOR THE TOSHIBA EQUIPMENT. THE DESIGN OF ALL STRUCTURAL ELEMENTS MUST BE SPECIFIED BY A LICENSED STRUCTURAL ENGINEER IN ACCORDANCE WITH TOSHIBA SPECIFICATIONS AND ALL APPLICABLE CODES.

B. THE CUSTOMER/CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING CONSTRUCTION.

C. THE TOSHIBA INSTALLATION PROJECT MANAGER SHALL BE NOTIFIED IN WRITING OF ANY FIELD CONDITIONS ENCOUNTERED THAT ARE CONTRADICTORY TO THOSE SHOWN IN THE TOSHIBA SITE PLANS.

D. THE DEMOLITION, FABRICATION AND ERECTION OF SUPPORT STRUCTURES FOR TOSHIBA EQUIPMENT SHALL BE PERFORMED BY THE CUSTOMER/CONTRACTOR IN ACCORDANCE WITH THE DESIGN AND SPECIFICATIONS SET FORTH BY THE STRUCTURAL ENGINEER OF RECORD.

E. DUE TO THE DYNAMIC NATURE OF THE LOAD, BOTH HORIZONTAL AND VERTICAL ACCELERATIONS SHOULD BE INCLUDED IN THE DESIGN CALCULATIONS FOR THE SUPPORT STRUCTURE AS WELL AS ANCHORING AND THRU–BOLTING FOR THE TOSHIBA EQUIPMENT (FOR EXAMPLE, CEILING INJECTORS OR MONITORS).

F. IN THE INTEREST OF SAFETY, TOSHIBA RESERVES THE RIGHT TO DELAY INSTALLATION COMMENCEMENT UNTIL RECEIPT OF STRUCTURAL DESIGN DRAWINGS STAMPED BY THE STRUCTURAL ENGINEER OF RECORD.

FLOOR MOUNTING NOTES

G. UNDER NO CIRCUMSTANCE SHOULD THE TOSHIBA EQUIPMENT BE INSTALLED ON A WOOD FLOOR.

H. THE FLOOR MUST USE CONCRETE WITH A LOAD STRENGTH OF AT LEAST 2,560 PSI (1,760 M/cm²) OVER THE ENTIRE FLOOR SURFACE.

I. THE DEPTH OF CONCRETE MUST BE AT LEAST 5 1/8" (130 mm).

J. THE LEVELNESS SLOPE IN THE LONGITUDINAL DIRECTION SHOULD BE LESS THAN 1/16" OVER 5'–9" RUN (1 mm OVER 1,100 mm).

K. THE LEVELNESS SLOPE IN THE LATERAL DIRECTION SHOULD BE LESS THAN 1/16" OVER 3'–9" RUN (1 mm OVER 713 mm).

L. EVENNESS OF FLOOR UNDER BASE SHOULD BE LESS THAN 1/32" (1 mm).

CEILING STRUCTURAL SYSTEM

M. CEILING UNISTRUT SUPPORT STRUCTURES TO BE DESIGNED BY OTHERS BASED ON SPECIFICATIONS SHOWN ON TOSHIBA SITE PLANS.

N. UNISTRUT OR EQUIVALENT CHANNEL SUPPORT SYSTEM TO BE SUPPLIED AND INSTALLED BY CUSTOMER/CONTRACTOR.

O. IN ORDER TO AVOID COLLISION WITH MOVEABLE TOSHIBA CEILING MOUNTED EQUIPMENT, ALL CEILING FIXTURES SUCH AS LAMPS, SMOKE DETECTORS, SPRINKLERS, ETC. MUST BE FLUSH MOUNTED.

P. CONTRACTOR TO SUPPLY M10 UNISTRUT NUTS.

ACCESS NOTES

Q. CUSTOMER/CONTRACTOR TO PROVIDE TWO 18" X 18" CEILING ACCESS PANELS FOR SERVICING OF CEILING MOUNTED EQUIPMENT WHEN INSTALLED ON HARD FINISHED CEILINGS. A MINIMUM CLEARANCE OF 12" ABOVE FINISHED CEILING IS REQUIRED IN THE AREA OF THE ACCESS PANELS.

UNISTRUT NOTE

R. UNISTRUT ARE TO BE P1001 OR EQUIVALENT, MOUNTED FLUSH WITH FINISHED CEILING. ALL UNISTRUT ARE TO BE MOUNTED PARALLEL AND LEVEL WITH A MAXIMUM DEVIATION OF 1/16". UNISTRUT IS TO BE CAPABLE OF SUPPORTING LOAD REQUIREMENTS OF TOSHIBA EQUIPMENT. UNISTRUT LOAD REQUIREMENTS AND DESIGN ARE THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD.

10–07–11

ELECTRICAL REQUIREMENTS FOR KALARE SYSTEM WITH PDU

SUPPLY CONFIGURATION: 3 PHASE DELTA CONNECTED, 86 kVA SERVICE

SUPPLY VOLTAGE: 480V – 80 AMP

10–07–11

ELECTRICAL NOTES

CUSTOMER/CONTRACTOR IS RESPONSIBLE FOR THE FOLLOWING UNLESS OTHERWISE NOTED.

A. THESE SITE PLANS ARE INTENDED TO DEPICT ONLY A CONCEPT OF THE ELECTRICAL REQUIREMENTS FOR THE TOSHIBA EQUIPMENT. THE DESIGN OF ALL ELECTRICAL ELEMENTS MUST BE SPECIFIED BY A LICENSED ELECTRICAL ENGINEER IN ACCORDANCE WITH TOSHIBA SPECIFICATION AND ALL APPLICABLE CODES.

B. IN ACCORDANCE WITH NEC ARTICLE 517–72(B), THE EQUIPMENT CIRCUIT BREAKER(S) MUST BE LOCATED SO THAT THEY SHALL BE OPERABLE FROM A LOCATION READILY ACCESSIBLE FROM THE CONTROL AREA. IF THIS IS IMPOSSIBLE OR IMPRACTICAL, THE USE OF A SHUNT TRIP TYPE BREAKER WILL BE NECESSARY TO SATISFY THIS REQUIREMENT. THE EMERGENCY OFF BUTTON FOR THE SHUNT TRIP SHOULD BE LOCATED IN THE CONTROL AREA.

C. THE CUSTOMER/CONTRACTOR SHALL SUPPLY AND INSTALL ALL CIRCUIT BREAKERS, CONDUITS, JUNCTION BOXES, DUCTS, A/C POWER RECEPTACLES, THERMOSTATS, EMERGENCY OFF BUTTONS, AND 12 VOLT POWER, ETC. SPECIFIED HEREIN.

D. THE TOSHIBA SITE PLANS DO NOT SPECIFY ELECTRICAL REQUIREMENTS FOR EQUIPMENT NOT SOLD BY TOSHIBA. THESE REQUIREMENTS MUST BE OBTAINED BY THE VENDOR.

E. TOSHIBA WILL SUPPLY INTERCONNECTING CABLES FOR THE TOSHIBA EQUIPMENT. TOSHIBA WILL INSTALL IF LOCAL TRADE LABOR PERMITS.

F. EXCEPT FOR THEIR USE IN POWER LINE CONNECTIONS TO EQUIPMENT CABINETS, FLEXIBLE CONDUIT SHALL NOT BE USED IN THIS INSTALLATION. ONLY FACTORY CONDUIT ELBOWS SHALL BE USED.

G. DUCT WORK SHALL BE PROVIDED WITH SWEEP ELBOWS.

H. ALL JUNCTION BOXES AND DUCTS THAT PENETRATE THE FLOOR SHALL BE WATERPROOF TYPE AND PROVIDED WITH GASKETED WATERPROOF COVERS. ALL FLOOR JUNCTION BOXES AND DUCT COVERS SHALL BE CAPABLE OF SUPPORTING A 200 LB. CONCENTRATED LOAD.

I. ALL ACCESS HOLES ARE TO BE MADE IN THE DUCT WORK PER TOSHIBA SITE PLANS. ACCESS HOLES MUST BE GROMMETED WITH NON–CHAFING MATERIAL SUCH AS RUBBER/PLASTIC OR SLEEVED WITH A SHORT NIPPLE WITH NON–ABRASIVE BUSHINGS.

J. ALL CHASE OPENINGS SHALL HAVE PLASTIC/NYLON BUSHINGS.

K. ALL WALL DUCT WORK SHALL HAVE A MINIMUM OF THREE COMPARTMENTS. TRANSITIONS SUCH AS HORIZONTAL TO VERTICAL WALL DUCT OR JUNCTION BOXES MUST BE REVIEWED ON AN INDIVIDUAL BASIS WITH THE INSTALLATION PROJECT MANAGER. LOCAL CODES. MAY REQUIRE THE USE OF CROSS–OVER TUNNELS OR OTHER SUCH DEVICES TO MAINTAIN CABLE SEPARATION.

L. ALL DUCT WORK MAKING A 90 DEGREE ANGLE MUST BE CHAMFERED FOR CABLE ACCESS.

M. ALL DUCT AND CONDUITS SHALL BE ELECTRICALLY BONDED AS A GROUNDING PATH IN ACCORDANCE WITH NEC ARTICLE 517–13(B).

N. CUSTOMER/CONTRACTOR SHALL SUPPLY AND INSTALL GREENLEE NYLON MEASURING PULL STRING OR EQUIVALENT IN ALL CONDUITS AND CLOSED DUCT WORK.

O. ALL CONDUIT RUNS MUST TAKE THE SHORTEST MOST DIRECT ROUTE POSSIBLE.

P. CONDUIT RUNS MAY HAVE A MAXIMUM OF (3) 90° BENDS.

Q. 110VAC GROUNDED OUTLETS SHALL BE PROVIDED ON WALLS NEAR THE TOSHIBA EQUIPMENT FOR USE DURING EQUIPMENT SERVICE.

R. CUSTOMER/CONTRACTOR MUST SUPPLY AND INSTALL ALL INCOMING POWER CABLES FROM CIRCUIT BREAKER(S) TO TOSHIBA EQUIPMENT CONNECTION POINT. CABLE TYPE MUST BE MTW. MULTI–STRAND COPPER – NO ALUMINUM IS PERMITTED. CABLE SIZE MUST BE IN ACCORDANCE WITH TOSHIBA POWER QUALITY REQUIREMENTS.

S. CUSTOMER/CONTRACTOR IS TO SUPPLY AND INSTALL ALL NECESSARY HARDWARE TO ENCLOSE INCOMING POWER CABLES IN FLEXIBLE WATER TIGHT CONDUIT FROM CIRCUIT BREAKER(S) TO TOSHIBA EQUIPMENT CABINET(S).

T. ANY CHANGES IN THE LOCATION OR TYPE OF CONDUIT, DUCT WORK, JUNCTION BOXES, ETC. MUST BE SUBMITTED IN WRITING TO THE TOSHIBA INSTALLATION PROJECT MANAGER FOR APPROVAL.

U. A SEPARATE CIRCUIT, FED FROM THE FACILITY RADIOLOGY PANEL OR A MAIN SERVICE PANEL IS REQUIRED. USE OF A SUB PANEL WITH LOADS SUCH AS ELEVATORS, HVAC, MOTORS, ETC. IS NOT PERMITTED.

06–01–12

SPECIAL NOTES

SPECIAL SEISMIC CERTIFICATION

A. THE FOLLOWING COMPONENTS HAVE SPECIAL SEISMIC CERTIFICATION:
A.A. OSP–0133–10
TABLE CONTROL UNIT
PULSED FLUOROSCOPY UNIT
DTS 100S OTC OVERHEAD TUBE CRANE
GENERATOR CONTROL PANEL
WALL STAND POWER SUPPLY
TW–420–T BUCKY STAND (AS APPLICABLE)
TW–420 BUCKY STAND (AS APPLICABLE)
GENERATOR CABINET
IDI 1000F–1 SINGLE SUSPENSION
KALARE X–RAY DIAGNOSTIC TABLE
MONITOR
KEYBOARD
MOUSE.
A.B. OSP–0281–10
SYSTEM CABINET
MAIN PROCESSING UNIT
TW–420–T–D TILTING BUCKY STAND (AS APPLICABLE)
TW–420–D NON–TILTING BUCKY STAND (AS APPLICABLE)
A.C. OSP–0133–10
POWER DISTRIBUTION UNIT (AS APPLICABLE)

08–01–12

TOSHIBA
Leading Innovation »»

REV	DATE	DESCRIPTION	INT
1	07–18–13	COMPLETED ORIGINAL FINAL DRAWING.	J.A.D.
2	08–28–13	NO CHANGES MADE TO THIS SHEET.	J.A.D.

TRISTAN RADIOLOGY
HERSHEY PA
(R/F ROOM – KALARE)
2015 TECHNOLOGY PKWY
MECHANICSBURG, PA 17050

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DATE: 08–28–13
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PLANNER: J.A.D.
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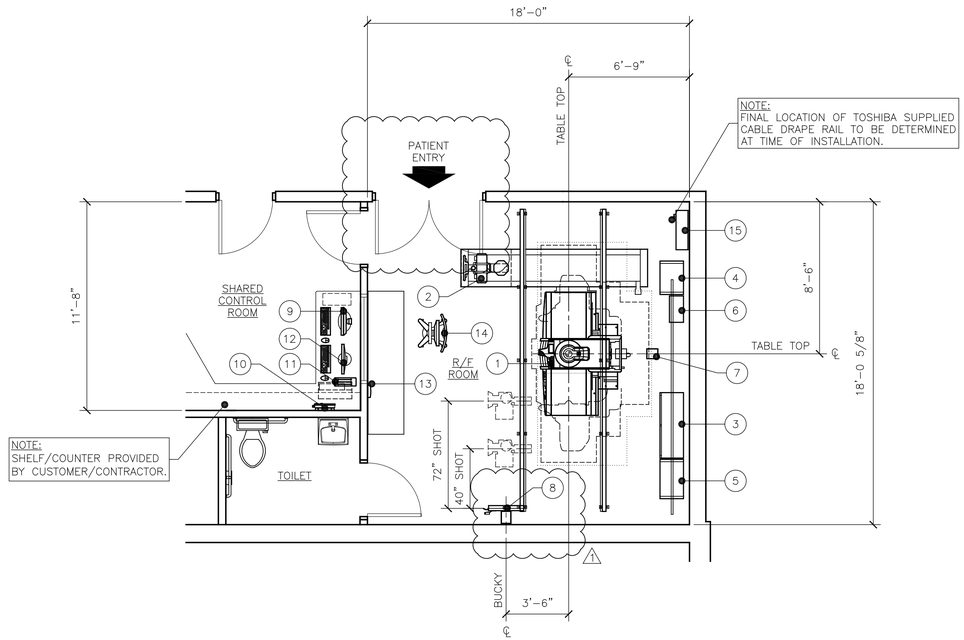

EQUIPMENT LAYOUT

0 1' 2' 4' 8' 16'

EQUIPMENT LEGEND

ITEM	ELEC. SYM.	ITEM DESCRIPTION SUPPLIED AND INSTALLED BY TOSHIBA	BTU/HR	WEIGHT	REF.
1	TBL	DUA-450F X-RAY DIAGNOSTIC TABLE	1,239	4,300	1/A2
2	OTC	DST-100S CEILING SUSPENDED TUBE SUPPORT W/DSR/242B RAILS AND CARRIAGE	–	909	2/A2
3	XRC	KXO-80XD GENERATOR CONTROL CABINET	2,116	893	3/A2
4	SYS	SYSTEM CABINET ("RCU" WITHIN "SYS" CABINET)	–	485	4/A2
5	GCU	XKGC-80XM FLUORO CONTROL CABINET	–	574	5/A2
6	TCU	TABLE CONTROL UNIT	–	133	6/A2
7	TCS	TABLE CABLE STAND	–	–	1/A2
8	VBS	TW-420-R VERTICAL BUCKY STAND (RIGHT LOAD)	–	225	8/A2
9	MPU	MAIN PROCESSING UNIT (MONITOR, PC, & KEYBOARD)	–	66	3/A3
10	GCP	KXO-80XD GENERATOR CONTROL PANEL (WALL MOUNTED)	–	22	7/A2
ITEM	ELEC. SYM.	OPTIONAL ITEM DESCRIPTION SUPPLIED AND INSTALLED BY TOSHIBA	BTU/HR	WEIGHT	REF.
11	PBC	DRX WIRELESS PANEL BATTERY CHARGER	–	5	4/A3
12	DRX	DRX WORKSTATION (WITH MONITOR, KEYBOARD, MOUSE)	–	90	5/A3
13	WAP	DIGITAL PANEL WIRELESS ACCESS POINT	–	4	–/–
14	CART	XAMC-100L MONITOR CART (SINGLE MONITOR)	–	109	–/–
ITEM	ELEC. SYM.	ITEM DESCRIPTION – SUPPLIED BY TOSHIBA & INSTALLED BY CUSTOMER / CONTRACTOR	BTU/HR	WEIGHT	REF.
15	PDU	POWER DISTRIBUTION UNIT	193	203	2/A3

SITE PLAN APPROVAL

IN ORDER TO USE THIS SET OF FINAL SITE PLANS, A CUSTOMER SIGNATURE IS REQUIRED BELOW. THE CUSTOMER'S SIGNATURE DEMONSTRATES ACCEPTANCE OF THE LAYOUT SHOWN AND ALL STATED SPECIFICATIONS.

CUSTOMER:	DATE:
SALES:	DATE:
I.P.M.:	DATE:

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1	07-18-13	COMPLETED ORIGINAL FINAL DRAWING.	J.A.D.
2	08-28-13	PATIENT ENTRY ENLARGED AND BUCKY MOVED.	J.A.D.

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DATE: 08-28-13

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

PLANNER: J.A.D.

S.I.D.: 30006080

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A1

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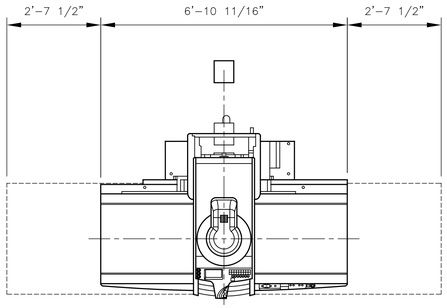
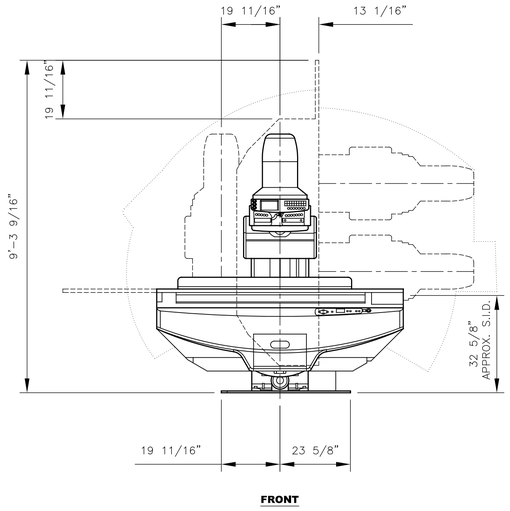
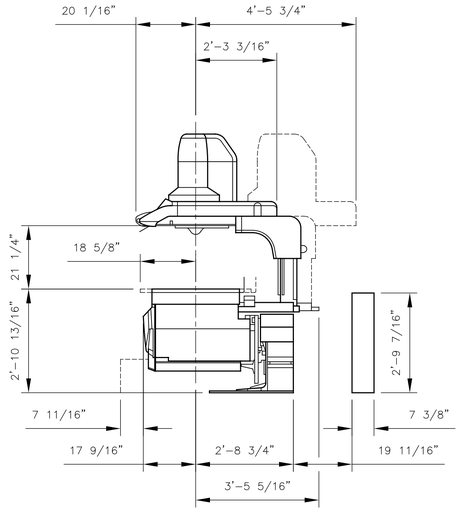
TBL
HEAT OUTPUT (BTU'S)
1,239
WEIGHT (LBS)
4,300



PLAN



FRONT

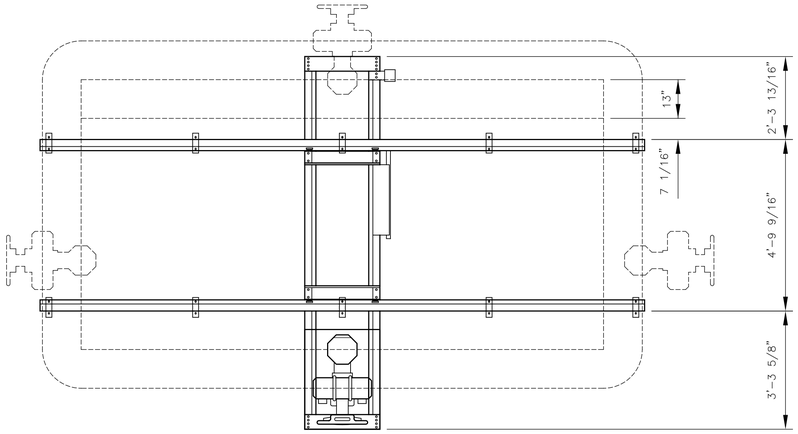


SIDE

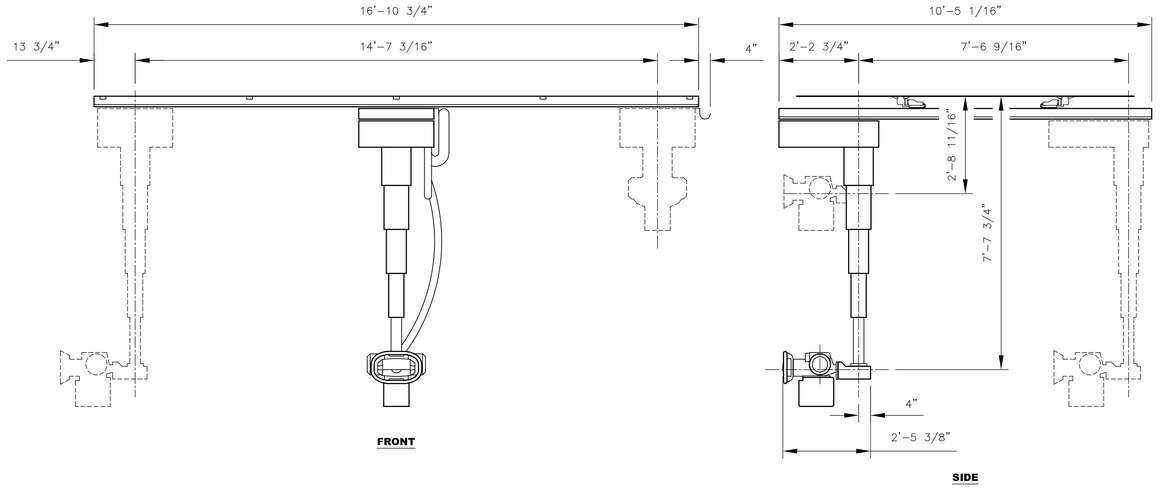
1 KALAKE DUA-450F X-RAY DIAGNOSTIC TABLE

SCALE: 1/2" = 1'-0" 03-11-13

OTC
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
909



PLAN

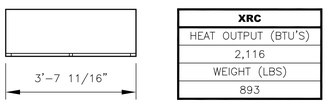


FRONT SIDE

2 CEILING SUSPENDED X-RAY TUBE SUPPORT DST-100S WITH DSR-242B LONGITUDINAL RAILS

SCALE: 1/2" = 1'-0" 03-11-13

XRC
HEAT OUTPUT (BTU'S)
2,116
WEIGHT (LBS)
893



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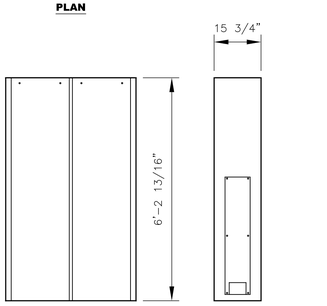
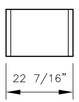


FRONT SIDE

3 KXO-80XD GENERATOR CABINET

SCALE: 1/2" = 1'-0" 03-11-13

SYS
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
485



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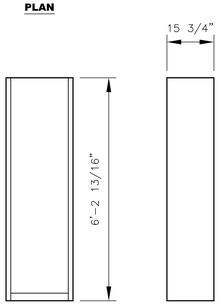
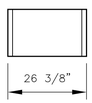


FRONT SIDE

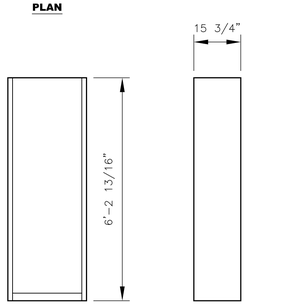
4 KXO-80XD SYSTEM CABINET

SCALE: 1/2" = 1'-0" 03-11-13

GCU
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
574



PLAN

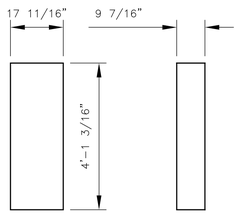


FRONT SIDE

5 XKGC-80XM FLUORO CONTROL

SCALE: 1/2" = 1'-0" 03-11-13

TCU
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
133

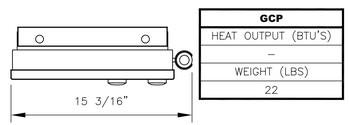


FRONT SIDE

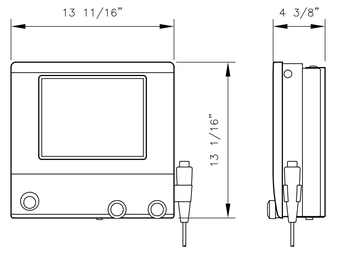
6 TABLE CONTROL UNIT

SCALE: 1/2" = 1'-0" 03-11-13

GCP
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
22



PLAN

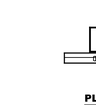


FRONT SIDE

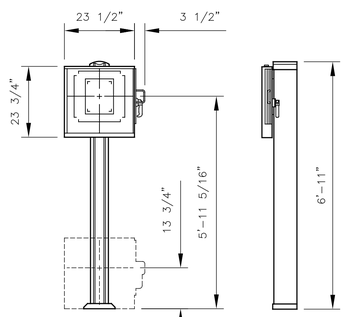
7 KXO-80XD CONTROL PANEL

SCALE: 2" = 1'-0" 03-11-13

VBS
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
225



PLAN



FRONT SIDE

8 VERTICAL BUCKY STAND

SCALE: 1/2" = 1'-0" 03-11-13

TOSHIBA
Leading Innovation

REV	DATE	DESCRIPTION	INT
1	07-18-13	COMPLETED ORIGINAL FINAL DRAWING.	J.A.D.
2	08-28-13	NO CHANGES MADE TO THIS SHEET.	J.A.D.

TRISTAN RADIOLOGY
HERSHEY PA

(R/F ROOM – KALARE)

2015 TECHNOLOGY PKWY
MECHANICSBURG, PA 17050

THESE TOSHIBA PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT BE USED FOR ANY PURPOSE OTHER THAN THAT AGREED UPON BETWEEN TOSHIBA AND THE CUSTOMER. THESE SITE PLANS ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.

DATE: 08-28-13

SCALE: AS NOTED

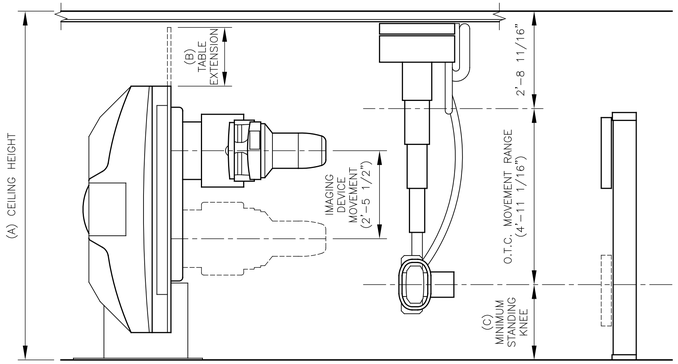
PLANNER: J.A.D.

S.I.D.: 30006080

PROJECT NO.
130013743XRF1

A2

FOR REFERENCE ONLY. NOT TO BE USED FOR CONSTRUCTION PURPOSES.



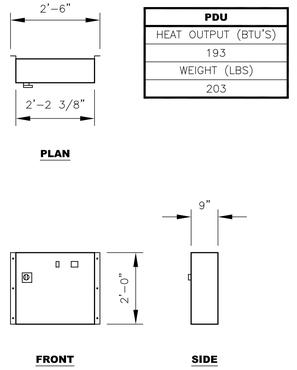
NOTE:
ALL MEASUREMENTS SHOWN REQUIRE THE KALARE TABLE TO BE CENTERED WITHIN LONGITUDINAL RAILS. IF THE TABLE IS UNDERNEATH A RAIL, THEN THE DEPTH OF THE RAIL (3 9/16") MUST BE SUBTRACTED FROM THE CEILING HEIGHT.

NOTE:
WHEN TABLE EXTENSION IS LIMITED DUE TO LESS THAN RECOMMENDED CEILING HEIGHTS, COVERAGE OF IMAGING DEVICE ON TABLE IS REDUCED BY THE SAME AMOUNT. STANDARD COVERAGE IS 2'-5 1/2" (750 mm RANGE OF IMAGING DEVICE) + 1'-7 11/16" (500 mm HEAD END TABLE EXTENSION) = 4'-1 3/16".

NOTE:
IF CEILING HEIGHT IS LESS THAN RECOMMENDED, TABLE MOVEMENT LIMITATIONS MAY BE NECESSARY.

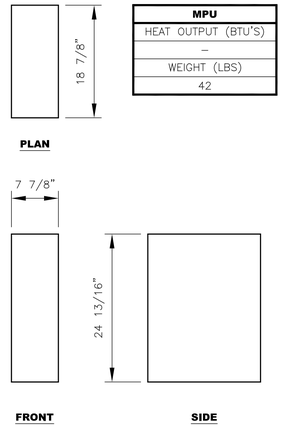
CEILING KIT	(A) CEILING HEIGHT		TABLE TOP S.I.D. MAXIMUM AT 0 DEGREES	(B) TABLE EXTENSION AT 90 DEGREES	(C) STANDING KNEE MINIMUM	NOTES
	ABOVE	AT OR BELOW				
XGST-105A	9'-7 1/2"	10'-0"	48" (40 1/8" W/KIT)	19 11/16"	23 3/4" (15 7/8" W/KIT)	
NONE	9'-5 3/8"	9'-7 1/2"	45 7/8" (38" W/KIT)	19 11/16"	21 5/8" (13 3/4" W/KIT)	40" S.I.D. TO TABLE TOP IS NOT ATTAINABLE WITH HIGH CEILING KIT.
NONE	9'-2"	9'-5 3/8"	42 1/2"	15 3/4"	18 1/4"	
NONE	9'-1 7/16"	9'-2"	41 15/16"	15 3/4"	17 11/16"	9'-2" IS RECOMMENDED CEILING HEIGHT.
XGST-104A	8'-9 1/2"	9'-1 7/16"	38" (42 15/16" W/KIT)	11 13/16"	13 3/4" (18 11/16" W/KIT)	40" S.I.D. TO TABLE TOP IS NOT ATTAINABLE WITHOUT LOW CEILING KIT.
XGST-104A	8'-7 9/16"	8'-9 1/2"	36" (40 15/16" W/KIT)	9 13/16"	11 13/16" (16 3/4" W/KIT)	40" S.I.D. TO TABLE TOP IS NOT ATTAINABLE WITHOUT LOW CEILING KIT. COLLIMATOR CAN COLLIDE WITH THE FLOOR.

1 CEILING HEIGHT AND SYSTEM LIMITATIONS
SCALE: 1/2" = 1'-0" 10-07-11



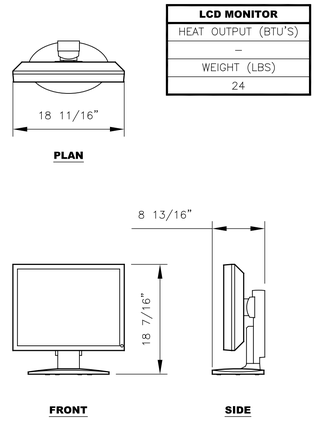
PDU
HEAT OUTPUT (BTU'S)
193
WEIGHT (LBS)
203

2 POWER DISTRIBUTION UNIT
SCALE: 1/2" = 1'-0" 03-11-13

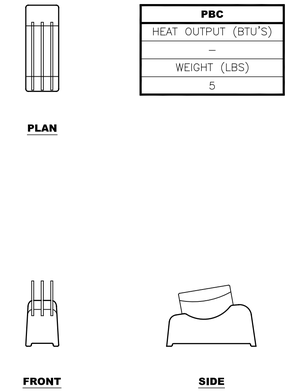


MPU
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
42

3 MAIN PROCESSING UNIT
SCALE: 1" = 1'-0" 03-11-13



LCD MONITOR
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
24

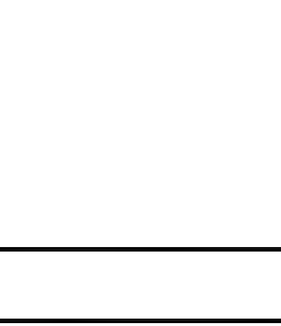


PBC
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
5

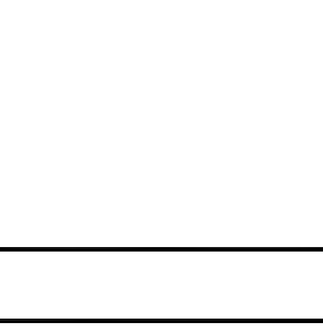
4 DRX BATTERY CHARGER
SCALE: 1" = 1'-0" 03-11-13

DRX
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
90

5 DRX WORKSTATION AND MONITOR
SCALE: 1" = 1'-0" 03-11-13



LCD MONITOR
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
–



CART
HEAT OUTPUT (BTU'S)
–
WEIGHT (LBS)
109

6 XAMC-100L SINGLE MONITOR CART
SCALE: 1/2" = 1'-0" 03-11-13

TOSHIBA
Leading Innovation

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2	08-28-13	NO CHANGES MADE TO THIS SHEET.	J.A.D.

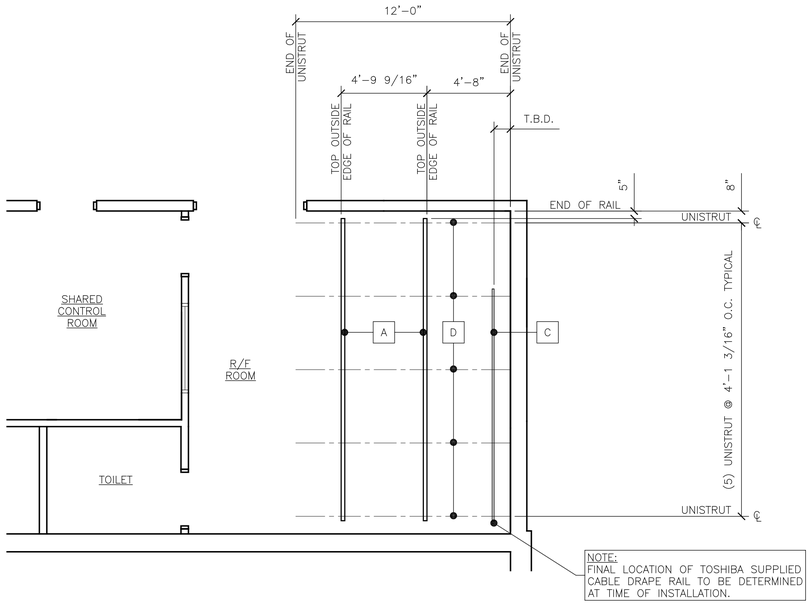
TRISTAN RADIOLOGY
HERSHEY PA
(R/F ROOM - KALARE)
2015 TECHNOLOGY PKWY
MECHANICSBURG, PA 17050

DATE: 08-28-13
SCALE: AS NOTED
PLANNER: J.A.D.
S.I.D.: 30006080
PROJECT NO.
130013743XRF1

A3

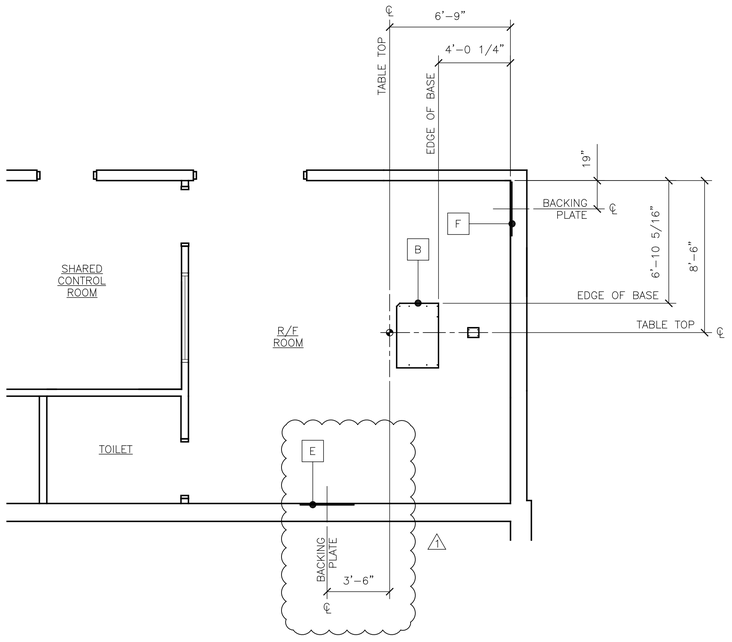
STRUCTURAL LEGEND

ITEM	ITEM DESCRIPTION SUPPLIED AND INSTALLED BY TOSHIBA	REF.
A	DSR–242B CEILING RAILS	3/S2
B	BASE LAYOUT FOR DUA–450F TABLE	1/S2
C	CABLE DRAPE RAIL	3/S2
ITEM	**ITEM DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER / CONTRACTOR**	**REF.**
D	P1001 UNISTRUT	3/S2
E	BACKING PLATE FOR TW–420 VERTICAL BUCKY STAND	4/S2
F	BACKING PLATE FOR POWER DISTRIBUTION UNIT (36" W X 30" H, 31" A.F.F.)	2/S2



CEILING SUPPORT LAYOUT

0 1' 2' 4' 8' 16'



FLOOR SUPPORT LAYOUT

0 1' 2' 4' 8' 16'

TOSHIBA
Leading Innovation

REV	DATE	DESCRIPTION	INT
0	07–18–13	COMPLETED ORIGINAL FINAL DRAWING.	J.A.D.
1	08–28–13	BACKING PLATE MOVED PER NEW BUCKY LOCATION.	J.A.D.

TRISTAN RADIOLOGY
HERSHEY PA

(R/F ROOM – KALARE)

2015 TECHNOLOGY PKWY
MECHANICSBURG, PA 17050

DATE: 08–28–13

SCALE: 1/4" = 1'–0"

PLANNER: J.A.D.

S.I.D.: 30006080

PROJECT NO.
130013743XRF1

S1

FOR REFERENCE ONLY. NOT TO BE USED FOR CONSTRUCTION PURPOSES.

KALARE FLOOR MOUNTING NOTES:

A. THE TABLE MUST NOT BE INSTALLED ON A WOODEN FLOOR.

B. THE FLOOR MUST USE CONCRETE WITH A LOAD STRENGTH OF AT LEAST 2,560 PSI (1,760 N/cm²) OVER THE ENTIRE FLOOR SURFACE.

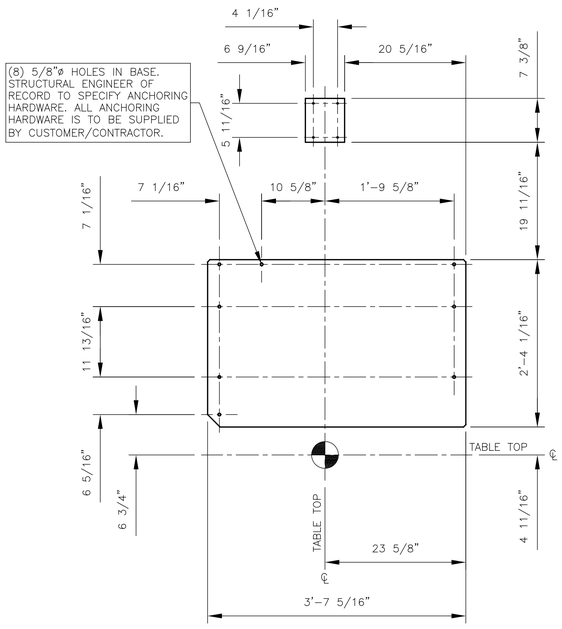
C. THE DEPTH OF CONCRETE MUST BE AT LEAST 5 1/8" (130 mm).

D. THE LEVELNESS SLOPE IN THE LONGITUDINAL DIRECTION SHOULD BE LESS THAN 1/16" OVER 3'-9" RUN (1 mm OVER 1,100 mm).

E. THE LEVELNESS SLOPE IN THE LATERAL DIRECTION SHOULD BE LESS THAN 1/16" OVER 3'-9" RUN (1 mm OVER 713 mm).

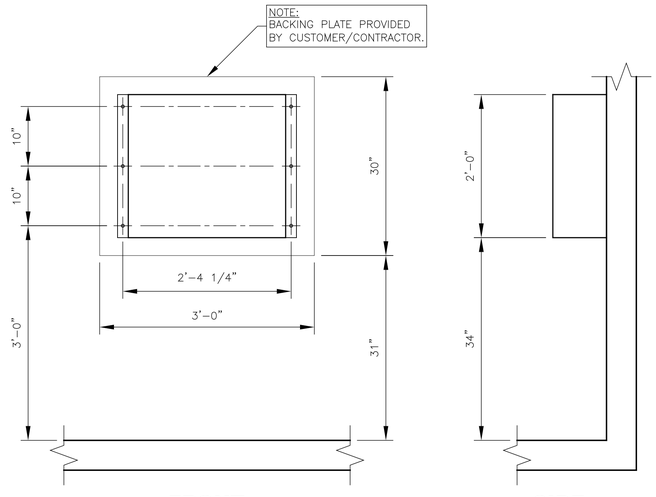
F. EVENNESS OF FLOOR UNDER BASE SHOULD BE LESS THAN THAN 1/32" (1 mm).

G. REMOVAL FORCE OF THE ANCHOR BOLTS SHOULD BE AT LEAST 12kN.



1 DUA-450 TABLE BASE

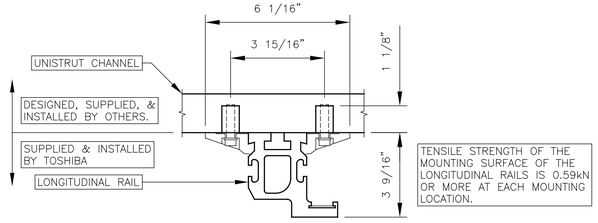
SCALE: 1" = 1'-0" 10-07-11



FRONT **SIDE**

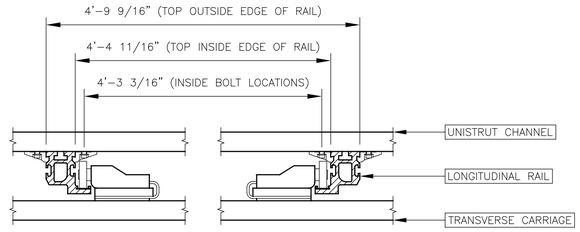
2 "PDU" BACKING PLATE

SCALE: 1" = 1'-0" 10-07-11



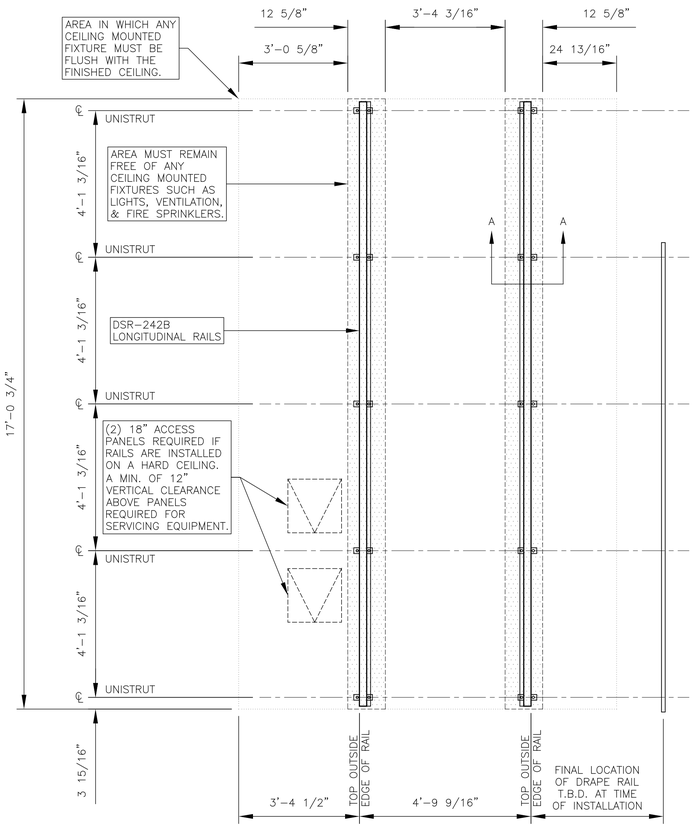
TYPICAL SECTION A-A

SCALE: 4" = 1'-0"



RAIL / TRANSVERSE CARRIAGE PROFILE

SCALE: NOT TO SCALE

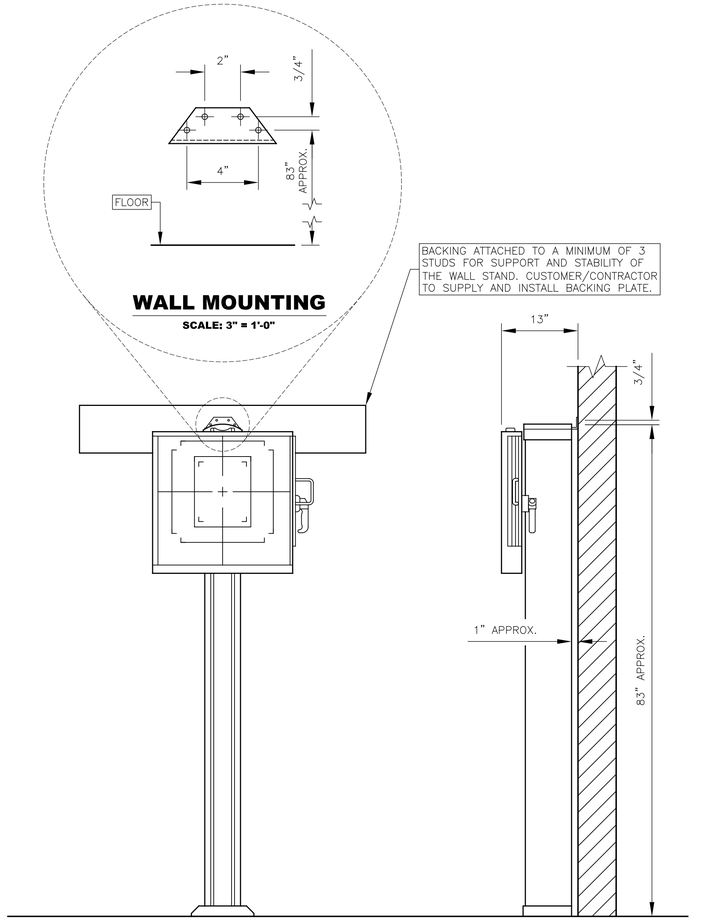


PLAN VIEW OF DST-100S AND DSR-242B RAIL SYSTEM

SCALE: 1/2" = 1'-0"

3 DSR-242B RAIL SYSTEM

SCALE: AS NOTED 10-07-11

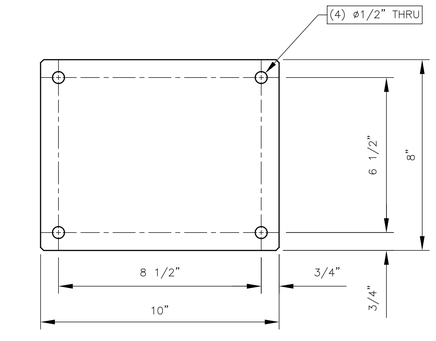


WALL MOUNTING

SCALE: 3" = 1'-0"

MOUNTING ELEVATION

SCALE: 1" = 1'-0"



FLOOR MOUNTING DETAIL

SCALE: 4" = 1'-0"

4 TW-420 VERTICAL BUCKY STAND

SCALE: AS NOTED 10-07-11

TOSHIBA
Leading Innovation

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2	07-18-13	COMPLETED ORIGINAL FINAL DRAWING.	J.A.D.
1	08-28-13	NO CHANGES MADE TO THIS SHEET.	J.A.D.

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HERSHEY PA
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MECHANICSBURG, PA 17050

DATE: 08-28-13
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PLANNER: J.A.D.
S.I.D.: 30006080
PROJECT NO.
130013743XRF1

S2

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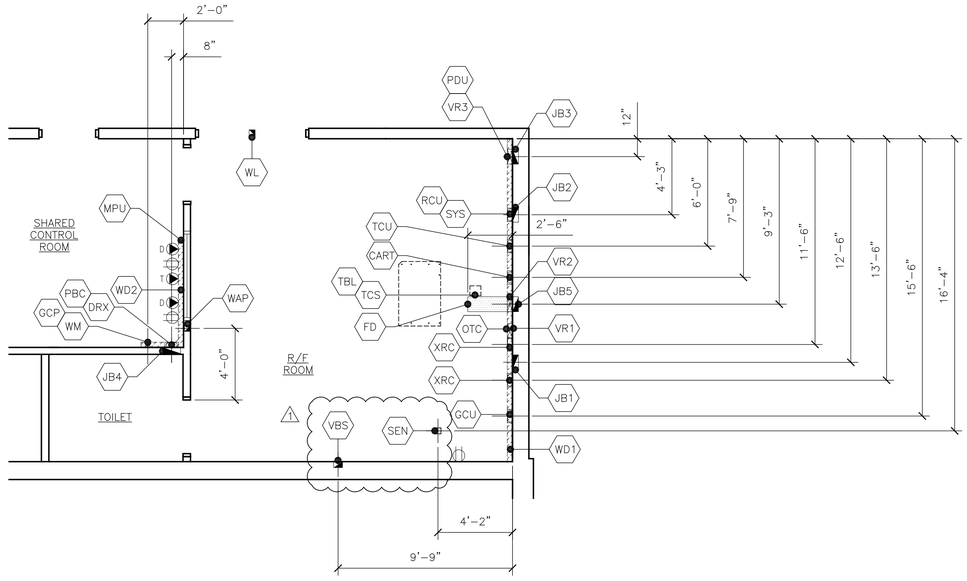

ELECTRICAL LAYOUT

0 1' 2' 4' 8' 16'

NOTE:
TO BE LOCATED BY CUSTOMER / CONTRACTOR.

ADDITIONAL "EPO" SWITCHES TO BE LOCATED IN ADJACENT ROOMS WITH TOSHIBA EQUIPMENT IF MAIN "EPO" IS NOT ACCESSIBLE (VERIFY WITH LOCAL CODE). ALL "EPO" SWITCHES TO BE PROVIDED BY CUSTOMER / CONTRACTOR.

NOTE:
J-BOX SIZES MAY BE INCREASED AS NEEDED.

NOTE:
GROMMETED OPENINGS ARE SHOWN FOR REFERENCE ONLY. VERIFY SIZE AND LOCATION WITH TOSHIBA REPRESENTATIVE.

NOTE:
CUSTOMER HAS THE OPTION TO FURR OUT WALL TO ACCOMMODATE FLUSH MOUNTED WALL DUCT IF DESIRED.

ELECTRICAL LEGEND

ITEM	ITEM DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER / CONTRACTOR	REF.
MAIN	MAIN SERVICE ENTRANCE PANEL.	1 E3
CB	THREE PHASE CIRCUIT BREAKER PER TOSHIBA POWER QUALITY REQUIREMENTS. CIRCUIT BREAKER LOCATION PER CODE REQUIREMENTS BY ELECTRICAL CONTRACTOR. PREFERRED LOCATION IN CONTROL ROOM.	1 E3
PDU	GROMMETED OPENING AT END OF "VR3", 34" A.F.F.	3 E3
EPO	4" STD. J-BOX FOR REMOTE OFF SWITCH. LOCATED BY CUSTOMER/CONTRACTOR. DPDT, NORMALLY OPEN MUSHROOM HEAD PUSH BUTTON.	1 E3
BS	BUILDING STEEL.	1 E3
WL	4" STD. BOX J-BOX FOR "X-RAY ON" OR WARNING LIGHT MOUNTED ABOVE PATIENT ENTRY DOOR.	2 E3
TBL	CONNECTED TO TABLE CABLE STAND, "TCS".	
TCS	4 W X 4" L, GROMMETED OPENING IN FLOOR DUCT "FD".	3 E3
OTC	8" W X 3" H, GROMMETED OPENINGS IN "VR1", 14" BELOW FINISHED CEILING.	3 E3
SEN	4" W X 4" L X 4" H, J-BOX FLUSH MOUNTED IN FINISHED CEILING.	
CART	8" W X 3" H, GROMMETED OPENING IN "WD1".	3 E3
XRC	(2) 8" W X 3" H, GROMMETED OPENINGS IN "WD1".	3 E3
SYS	8" W X 3" H, GROMMETED OPENING IN "WD1".	3 E3
RCU	8" W X 3" H, GROMMETED OPENING IN "WD1".	3 E3
GCU	8" W X 3" H, GROMMETED OPENING IN "WD1".	3 E3
TCU	8" W X 3" H, GROMMETED OPENING IN "WD1".	3 E3
VBS	6" W X 6" L X 4" H, J-BOX FLUSH MOUNTED IN WALL, 42" A.F.F. TO BOTTOM OF BOX.	
MPU	8" W X 3" H, GROMMETED OPENING IN END OF "WD2".	3 E3
GCP	GROMMETED OPENING IN END OF "WM".	3 E3
DRX	8" W X 3" H, GROMMETED OPENING IN "WD2". (D)	3 E3
WAP	4" W X 4" L X 4" H, J-BOX FLUSH MOUNTED IN FINISHED WALL, 7'-0" A.F.F. OR MORE.	
PBC	DRX WIRELESS PANEL BATTERY CHARGER.	
JB1	10" W X 10" H X 4" D, J-BOX FLUSH W/FINISHED WALL, MOUNTED 12" A.F.F. TO BOTTOM OF BOX. OPEN TO "WD1".	3 E3
JB2	10" W X 10" H X 4" D, J-BOX FLUSH W/FINISHED WALL, MOUNTED 12" A.F.F. TO BOTTOM OF BOX. OPEN TO "WD1".	3 E3
JB3	10" W X 10" H X 4" D, J-BOX FLUSH W/FINISHED WALL, MOUNTED 12" A.F.F. TO BOTTOM OF BOX. OPEN TO "WD1".	3 E3
JB4	12" W X 12" H X 4" D, J-BOX FLUSH W/FINISHED WALL, MOUNTED 11" A.F.F. TO BOTTOM OF BOX. OPEN TO "WD2".	3 E3
JB5	10" W X 10" H X 4" D, J-BOX FLUSH W/FINISHED WALL, MOUNTED 2" A.F.F. TO BOTTOM OF BOX. OPEN TO "VR2".	3 E3
	110V ELECTRICAL OUTLETS FOR SYSTEM EQUIPMENT AND/OR SERVICE EQUIPMENT. OUTLETS TO BE LOCATED IN EACH ROOM WHERE SYSTEM EQUIPMENT IS LOCATED.	
D	RJ45 CONNECTOR, CAT5 CABLE TO BE USED FOR DATA CONNECTION FOR NETWORKING.	
T	DEDICATED PHONE LINE SUPPLIED/INSTALLED BY CUSTOMER/CONTRACTOR.	

ELECTRICAL DUCT LEGEND

ITEM	ITEM DESCRIPTION SUPPLIED AND INSTALLED BY CUSTOMER / CONTRACTOR	REF.
WD1	EXISTING SURFACE MOUNTED WALL DUCT.	– E3
WD2	EXISTING SURFACE MOUNTED WALL DUCT.	3 E3
VR1	EXISTING SURFACE MOUNTED RISER DUCT. FROM "WD1" TO ABOVE FINISHED CEILING.	3 E3
VR2	10" W X 3 1/2" D, FLUSH/SURFACE MOUNTED RISER DUCT W/(3) EQUALLY PARTITIONED COMPARTMENTS THROUGHOUT & REMOVABLE ACCESS COVERS. FROM "WD1" TO "FD".	3 E3
VR3	10" W X 3 1/2" D, FLUSH/SURFACE MOUNTED RISER DUCT W/(3) EQUALLY PARTITIONED COMPARTMENTS THROUGHOUT & REMOVABLE ACCESS COVERS. FROM "WD1" TO "PDU".	3 E3
FD	10" W X 3 1/2" D, SURFACE MOUNTED METAL FLOOR DUCT W/(3) EQUAL PARTITIONED COMPARTMENTS THROUGHOUT & REMOVABLE ACCESS COVERS. (COVERS SHOULD BE ABLE TO SUPPORT MIN. OF 200 LBS.)	3 E3
WM	G-3000 (2 3/4" X 1 17/32") WIREMOLD, SURFACE MOUNTED ON WALL CONNECTING WALL DUCT "WD2" TO "GCP".	

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HERSHEY PA
(R/F ROOM – KALARE)
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S.I.D.: 30006080
PROJECT NO.
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E1

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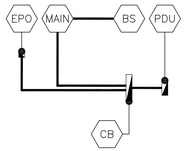
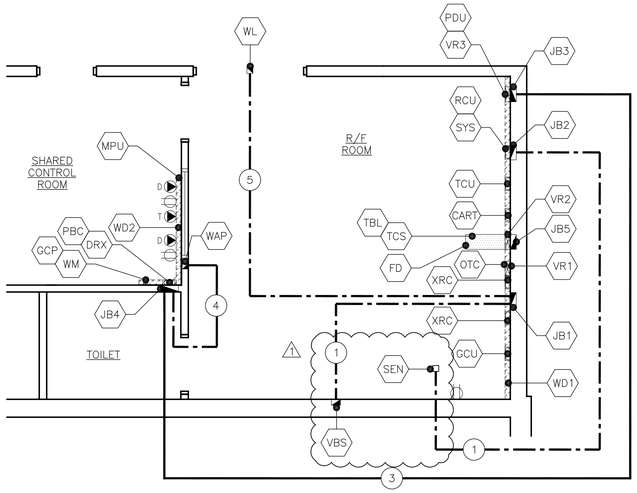


NOTES:
FOR ABOVE CONNECTIONS, SEE DETAIL 1, SHEET E3.

ADDITIONAL "EPO" SWITCHES TO BE LOCATED IN ADJACENT ROOMS WITH TOSHIBA EQUIPMENT IF MAIN "EPO" IS NOT ACCESSIBLE (VERIFY WITH LOCAL CODE). ALL "EPO" SWITCHES TO BE PROVIDED BY CUSTOMER/CONTRACTOR.

ALL CABLES AND CONDUITS REQUIRED ARE TO BE PROVIDED BY CUSTOMER/CONTRACTOR.



CABLE KEY	
——·——·——	IN/UNDER FLOOR
——·—·—·——	OVER CEILING
————	CONTRACTOR DETERMINED

CEILING ELECTRICAL SCHEMATIC

(PROVIDED FOR REFERENCE PURPOSES ONLY)

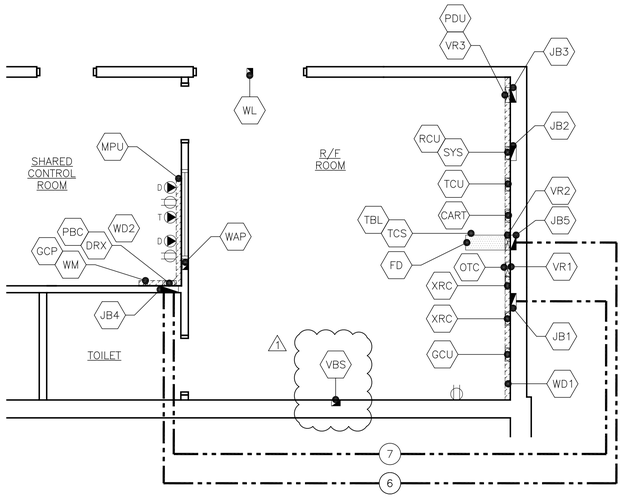
0 1' 2' 4' 8' 16'

CEILING CONDUIT SCHEDULE

CONTRACTOR CONDUIT REFERENCE						TOSHIBA CABLE REFERENCE			
RUN NO.	CONDUIT (POINT TO POINT)		CONDUIT (ROUTING)	CONDUIT (DIAMETER)	CONDUIT (MAX. LENGTH)	CABLE (POINT TO POINT)		CABLE LENGTH (USABLE)	CABLES (SUPPLIED BY)
1	JB1	VBS	OVER CEILING	2"	36'-0"	XRC	VBS	SEE RUN "V" DETAIL (1/E4)	TOSHIBA
2	SEN	JB2	OVER CEILING	1"	60'-0"	SEN	SYS	SEE RUN "Y" DETAIL (1/E4)	TOSHIBA
3	JB4	JB3	CONTRACTOR DETERMINED	PER CODE	PER CODE	DRX	PDU	PER CODE	CONTRACTOR
4	JB4	WAP	OVER CEILING	3/4"	40'-0"	DRX	WAP	50'-0"	TOSHIBA
5	JB1	WL	OVER CEILING	1/2"	PER CODE	XRC	WL	PER CODE	CONTRACTOR

NOTE:
A. CONDUITS SUPPLIED/INSTALLED BY CUSTOMER/CONTRACTOR.
B. ALL CONDUIT RUNS MUST TAKE THE SHORTEST MOST DIRECT ROUTE POSSIBLE.
C. CONDUITS MAY HAVE A MAXIMUM OF (3) 90° BENDS.
D. CONDUIT IS NOT TO BE RUN IN SUCH A MANNER THAT WILL ALLOW CABLE POINT TO POINT LENGTHS TO BE EXCEEDED AS SHOWN IN CONDUIT LEGEND.

*** FINAL LENGTH OF CONDUIT TO BE DETERMINED IN FIELD BY I.P.M.**



CABLE KEY	
——·——·——	IN/UNDER FLOOR
——·—·—·——	OVER CEILING
————	CONTRACTOR DETERMINED

FLOOR ELECTRICAL SCHEMATIC

(PROVIDED FOR REFERENCE PURPOSES ONLY)

0 1' 2' 4' 8' 16'

FLOOR CONDUIT SCHEDULE

CONTRACTOR CONDUIT REFERENCE						TOSHIBA CABLE REFERENCE			
RUN NO.	CONDUIT (POINT TO POINT)		CONDUIT (ROUTING)	CONDUIT (DIAMETER)	CONDUIT (MAX. LENGTH)	CABLE (POINT TO POINT)		CABLE LENGTH (USABLE)	CABLES (SUPPLIED BY)
6	JB4	JB5	UNDER FLOOR	2 1/2"	28'-0"	GCP	TCU	SEE RUN "I" DETAIL (1/E4)	TOSHIBA
						MPU	RCU	SEE RUN "O" DETAIL (1/E4)	TOSHIBA
						MPU	TBL	SEE RUN "R" DETAIL (1/E4)	TOSHIBA
7	JB4	JB1	UNDER FLOOR	2 1/2"	45'-0"	GCP	XRC	SEE RUN "M" DETAIL (1/E4)	TOSHIBA
						MPU	XRC	SEE RUN "U" DETAIL (1/E4)	TOSHIBA
						DRX	XRC	75'-0"	TOSHIBA

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S.I.D.: 30006080
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E2

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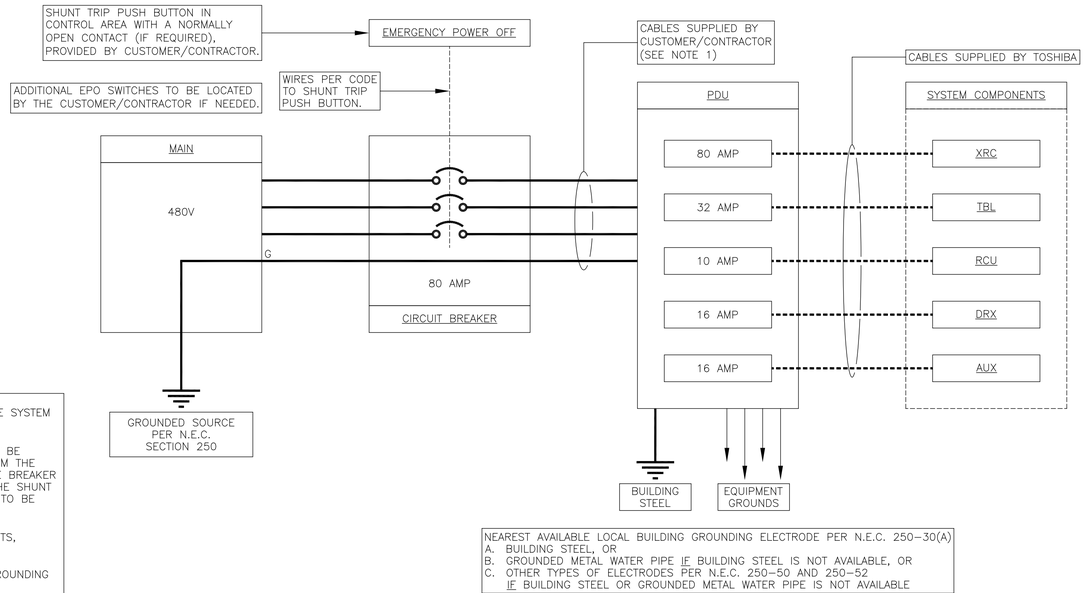


NOTE:
1. REFER TO WIRE CHART FOR ELECTRICAL REQUIREMENTS AND PROPER WIRE SIZES FOR THE SYSTEM (SEE DETAIL X, SHEET E3).
2. IN ACCORDANCE WITH N.E.C. ARTICLE 517–72(B), THE EQUIPMENT CIRCUIT BREAKER MUST BE LOCATED SO THAT THEY SHALL BE OPERABLE FROM A LOCATION READILY ACCESSIBLE FROM THE CONTROL AREA. IF THIS IS IMPOSSIBLE OR IMPRACTICAL, THE USE OF A SHUNT TRIP TYPE BREAKER WILL BE NECESSARY TO SATISFY THE REQUIREMENT. THE EMERGENCY OFF BUTTON FOR THE SHUNT TRIP SHOULD BE LOCATED IN THE CONTROL AREA. ADDITIONAL EMERGENCY OFF BUTTONS TO BE LOCATED BY CUSTOMER/CONTRACTOR IF NEEDED. WIRES TO SHUNT TRIP PER CODE.
3. THE CUSTOMER/CONTRACTOR SHALL SUPPLY AND INSTALL ALL CIRCUIT BREAKERS, CONDUITS, JUNCTION BOXES, DUCT, ETC. PER CODE.
4. GROUND ELECTRODE PER N.E.C. ARTICLE 250–26(C) BUILDING STEEL, WATER PIPE, OR GROUNDING ELECTRODE.
5. GROUNDING MUST BE PROVIDED IN ACCORDANCE WITH ALL APPLICABLE LEGAL REQUIREMENT FOR MEDICALLY USED ELECTRICAL EQUIPMENT.

NEAREST AVAILABLE LOCAL BUILDING GROUNDING ELECTRODE PER N.E.C. 250–30(A)
A. BUILDING STEEL, OR
B. GROUNDED METAL WATER PIPE IF BUILDING STEEL IS NOT AVAILABLE, OR
C. OTHER TYPES OF ELECTRODES PER N.E.C. 250–50 AND 250–52
IF BUILDING STEEL OR GROUNDED METAL WATER PIPE IS NOT AVAILABLE

1 CIRCUIT BREAKER WITH "PDU" WIRING DIAGRAM

SCALE: NOT TO SCALE 10–07–11

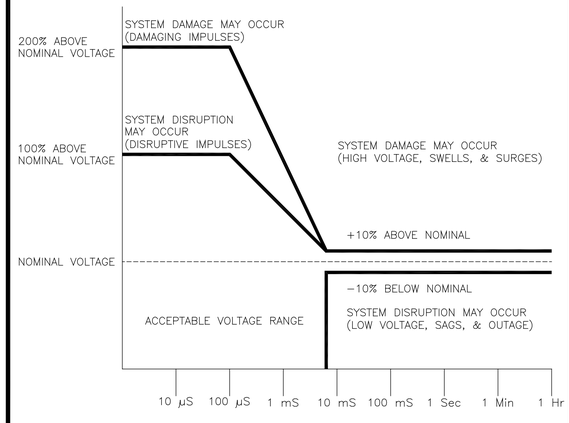
POWER QUALITY REQUIREMENTS KALARE WITH PDU

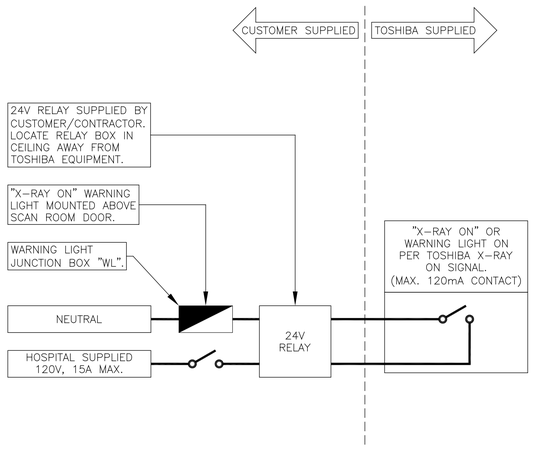
SUPPLY CONFIGURATION:	3 PHASE DELTA CONNECTION (3 WIRE POWER AND GROUND)
KVA RATING:	86.00
VOLTAGE (SEE NOTE B):	480V, 60Hz
CALCULATED CURRENT (AMP):	103.44
CIRCUIT BREAKER (AMP) (SEE NOTE F):	80
% IMPEDANCE:	5.00
LINE RESIST. SPEC.:	0.000
MAXIMUM CURRENT (AMPS):	103.44
VOLTAGE DROP (VOLTS):	24.00
LINE RESIST. (OHMS):	0.232
LINE DROP (PERCENT):	1.50
LINE DROP (VOLTS):	7.20
CONDUCTOR (OHMS):	0.070
TEMPERATURE:	68°F (20°C)

CONDUCTOR SIZES (SEE NOTE E)	OHMS PER 1000 FT.	TEMP DERATED	NEC 75 °C	LENGTH (FT.)
4 AWG	0.3210	0.2640	85	132
3 AWG	0.2540	0.2089	100	167
2 AWG	0.2010	0.1653	115	211
1 AWG	0.1600	0.1316	130	265
1/0 AWG	0.1270	0.1044	150	333
2/0 AWG	0.1010	0.0831	175	419
PDU MAX INPUT WIRE SIZE IS 2/0				

STANDARD POWER QUALITY NOTES

A. A GROUNDED NEUTRAL POWER SOURCE IS REQUIRED TO ASSURE RELIABLE EQUIPMENT OPERATION. THE NEUTRAL CONDUCTOR MAY NOT BE USED FOR A PARTICULAR SYSTEM.
B. IN CASES WHERE MULTIPLE VOLTAGES ARE PERMITTED, THE PREFERRED SYSTEM VOLTAGE IS SPECIFIED.
C. DUE TO THE HIGH INSTANTANEOUS POWER OF MEDICAL IMAGING SYSTEMS, USE THE HIGHEST AVAILABLE VOLTAGE SOURCE. ENSURE THAT LOWER VOLTAGE SOURCES ARE DERIVED DIRECTLY FROM THE SERVICE ENTRANCE OF THE FACILITY.
D. GROUND CONDUCTORS ARE REQUIRED TO BE THE SAME SIZE AS THE PHASE CONDUCTORS UNLESS A LARGER SIZE IS REQUIRED BY CODE.
E. ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS MUST BE COPPER – ALUMINUM IS NOT PERMITTED.
F. IF THE EQUIPMENT CIRCUIT BREAKER IS NOT LOCATED IN THE CONTROL AREA, A SHUNT TRIP BREAKER MUST BE USED IN ORDER TO COMPLY WITH N.E.C. 517–72(B). A PUSH–BUTTON TO OPERATE THE SHUNT TRIP MUST BE LOCATED IN THE CONTROL AREA.
G. A SEPARATE CIRCUIT, FED FROM THE FACILITY RADIOLOGY PANEL OR A MAIN SERVICE PANEL IS REQUIRED. USE OF A SUB PANEL WITH LOADS SUCH AS ELEVATORS, HVAC, MOTORS, ETC., IS NOT PERMITTED.
H. DEVICES SUCH AS UNINTERRUPTIBLE POWER SUPPLIES, POWER CONDITIONERS, VOLTAGE REGULATORS, AND FILTERS MAY BE INCOMPATIBLE WITH THIS IMAGING EQUIPMENT. CONSULT YOUR TOSHIBA SERVICE REPRESENTATIVE PRIOR TO PURCHASING OR INSTALLING THESE DEVICES.
I. GROUND CONDUCTORS SHOULD BE RUN SEPARATE FROM PHASE CONDUCTORS.

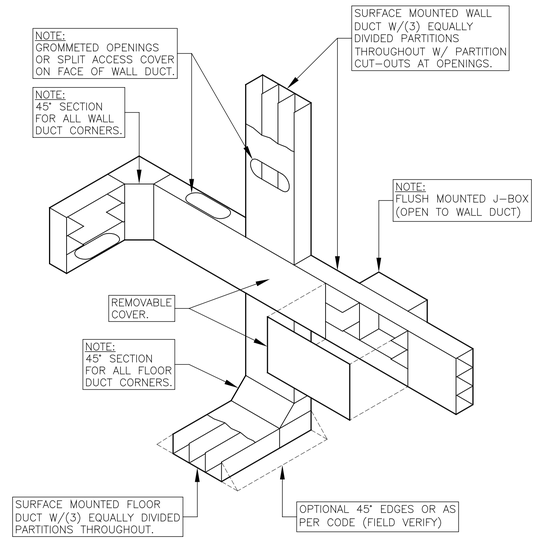




NOTE:
1. "X–RAY ON" OR WARNING LIGHT TO BE PROVIDED BY CUSTOMER/CONTRACTOR.
2. USE INCANDESCENT FIXTURES ONLY.

2 WARNING LIGHT DETAIL

SCALE: NOT TO SCALE 06–01–12



NOTE:
CUSTOMER'S CONTRACTOR TO VERIFY LOCATION OF J–BOX(ES) FOR CABLE PULL TO WALL DUCT. CUSTOMER'S CONTRACTOR TO VERIFY LOCATION OF GROMMETED OPENINGS IN WALL DUCT WITH TOSHIBA REP.

3 TYPICAL WALL DUCT DETAIL WITH FLOOR DUCT / J–BOX / VERTICAL RISER

SCALE: NOT TO SCALE 10–07–11

4 KALARE W/ PDU POWER REQUIREMENTS

SCALE: NOT TO SCALE 10–07–11

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PLANNER: J.A.D.
S.I.D.: 30006080
PROJECT NO. **130013743XRF1**

E3

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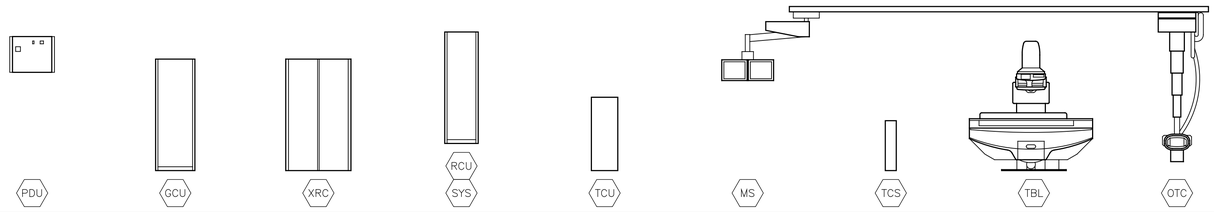

NOTE:
A. THE FOLLOWING CABLE DIAGRAM IS FOR REFERENCE ONLY AND MAY NOT CONTAIN THE EXACT EQUIPMENT SHOWN IN THE ATTACHED DRAWING PACKAGE.

B. I.P.M. IS RESPONSIBLE FOR ENSURING THAT CABLE LENGTHS MEET THE SITE CONDITIONS. THE I.P.M. IS RESPONSIBLE FOR ORDERING THE REQUIRED CABLES TO MEET EXISTING/PROPOSED SITE CONDITIONS.

C. THIRD PARTY ITEM CONNECTIONS TO BE VERIFIED WITH INSTALLATION PROJECT MANAGER.

D. POWER AND SIGNAL CABLES MUST BE RUN IN SEPARATE CONDUIT. REFER TO SHEET E2.

A "PDU" TO "XRC" (31'–2") – (POWER)
B "PDU" TO "SYS" (49'–2") – (POWER)
C "PDU" TO "RCU" (47'–2") – (POWER)
D "SYS" TO "TCU" (36'–1") – (POWER)
E "RCU" TO "TCU" (36'–1") – (SIGNAL)
F "SYS" TO "MS" (45'–11") – (POWER)
G "XRC" TO "SYS" (9'–10") – (POWER)
H "XRC" TO "RCU" (36'–1") – (SIGNAL)
I "TCU" TO "GCP" (61'–4") – (SIGNAL)
J "TCU" TO "TBL" (13'–1") – (SIGNAL)
K "TCU" TO "TCS" (13'–1") – (SIGNAL)
L "XRC" TO "TCU" (41'–0") – (SIGNAL & POWER)
M "XRC" TO "GCP" (58'–4") – (SIGNAL & POWER)
N "XRC" TO "TBL" (29'–6") – (SIGNAL)
O "GCU" TO "TBL" (29'–6") – (SIGNAL)
P "GCU" TO "XRC" (5'–3") – (HIGH VOLTAGE, SIGNAL, & GROUND)
Q "RCU" TO "MPU" (55'–9") – (SIGNAL)
R "TBL" TO "MPU" (42'–7") – (SIGNAL)
S "RCU" TO "TBL" (52'–5") – (SIGNAL)
T "MS" TO "MPU" (59'–0") – (SIGNAL)
U "XRC" TO "MPU" (59'–0") – (SIGNAL)
V "XRC" TO "VBS" (39'–4") – (SIGNAL)
W "XRC" TO "OTC" (65'–7") – (HIGH VOLTAGE, LOW VOLTAGE)
X "SYS" TO "OTC" (57'–5") – (SIGNAL & GROUND)
Y "SYS" TO "SEN" (65'–7") – (SIGNAL)

RUN LTR.	CONNECTION (POINT TO POINT)		REMARKS
A	PDU	XRC	**CX12-43501-3 (47'-6")**
B	PDU	SYS	EXTENDED CABLES ARE NOT AVAILABLE
C	PDU	RCU	EXTENDED CABLES ARE NOT AVAILABLE
D	SYS	TCU	EXTENDED CABLES ARE NOT AVAILABLE
E	RCU	TCU	**CX91-05900-2 (68'-10") CX91-06063-3 (72'-2") CX91-06796-2 (72'-2")**
F	SYS	MS	EXTENDED CABLES ARE NOT AVAILABLE
G	XRC	SYS	CX91–00932–3 (59'–0")
H	XRC	RCU	**CX91-05791-2 (68'-10") CX91-05792-2 (72'-2") CX91-05793-2 (68'-10")**
I	TCU	GCP	EXTENDED CABLES ARE NOT AVAILABLE
J	TCU	TBL	EXTENDED CABLES ARE NOT AVAILABLE
K	TCU	TCS	EXTENDED CABLES ARE NOT AVAILABLE
L	XRC	TCU	**CX91-06773-2 (90'-2") CX91-06797-2 (90'-2")**
M	XRC	GCP	EXTENDED CABLES ARE NOT AVAILABLE
N	XRC	TBL	**45'-11"**
O	GCU	TBL	EXTENDED CABLES ARE NOT AVAILABLE
P	GCU	XRC	EXTENDED CABLES ARE NOT AVAILABLE
Q	RCU	MPU	EXTENDED CABLES ARE NOT AVAILABLE
R	TBL	MPU	EXTENDED CABLES ARE NOT AVAILABLE
S	RCU	TBL	EXTENDED CABLES ARE NOT AVAILABLE
T	MS	MPU	EXTENDED CABLES ARE NOT AVAILABLE
U	XRC	MPU	**BSX17-0698-03 (124'-8")**
V	XRC	VBS	EXTENDED CABLES ARE NOT AVAILABLE
W	XRC	OTC	98'–5"
X	SYS	OTC	EXTENDED CABLES ARE NOT AVAILABLE
Y	SYS	SEN	EXTENDED CABLES ARE NOT AVAILABLE

1 CABLE LENGTH DIAGRAM (FOR INTERNAL USE ONLY)
SCALE: NOT TO SCALE

05–25–12

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