

V A SALT LAKE CITY

500 Foothill Dr
Salt Lake City, UT 84148

SYMBIA T16

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Project Contacts:

Siemens
Project Manager
David Lyman
Phone: (801) 602-8711

david.lyman@siemens.com

Planner
Joan Paolucci

Project #: 1403947

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SIEMENS MEDICAL SOLUTIONS

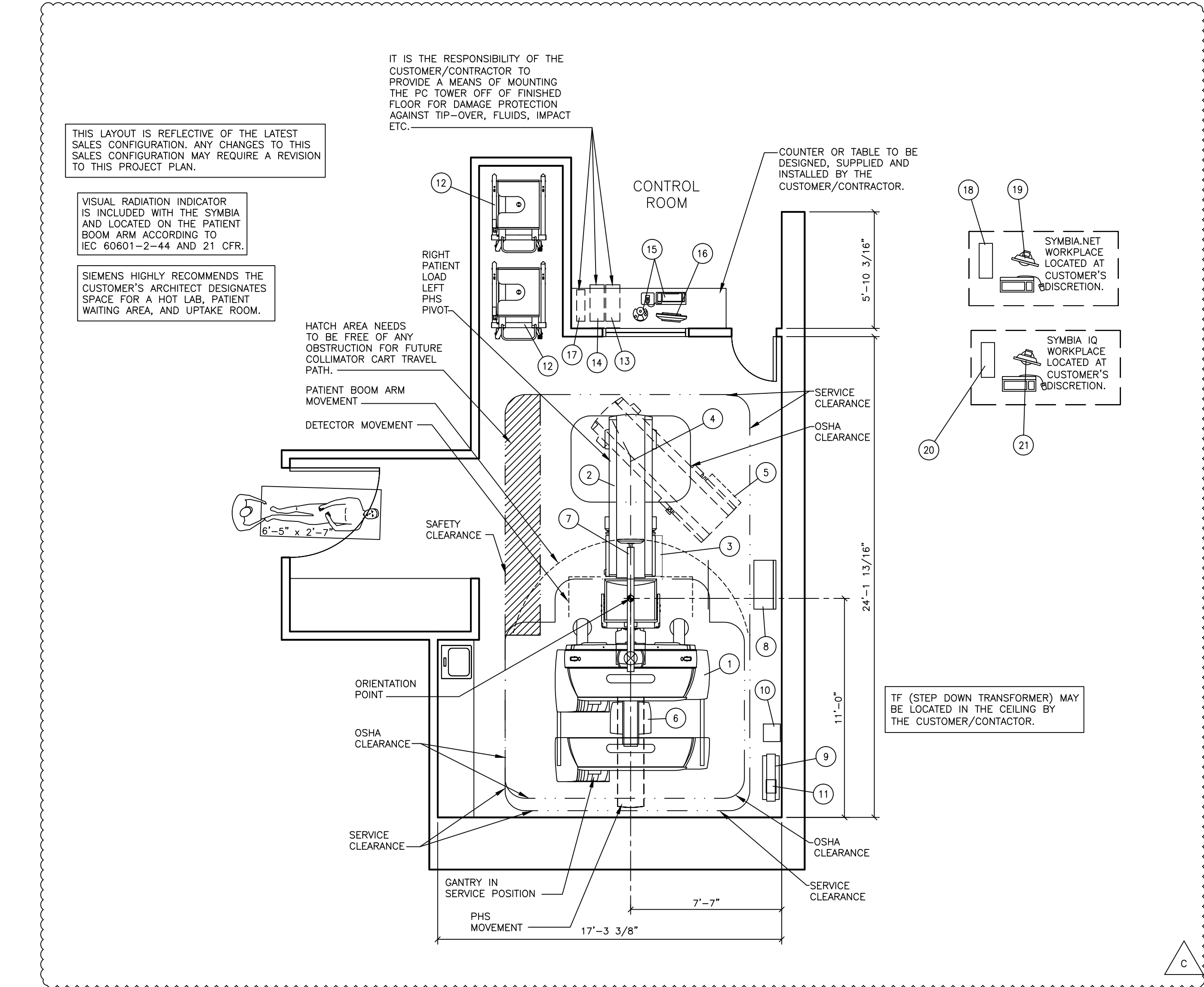
51 Valley Stream Parkway
Malvern, PA 19355
www.usa.siemens.com/medical

V A SALT LAKE CITY

SYMBIA T16
ROOM # 1E09

Issue #: C
Date: 01/16/15

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ARCHITECTURAL EQUIPMENT PLAN

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

ROOM MEASUREMENTS

ALL ROOM MEASUREMENTS AND ROOM DETAIL SPECIFICATIONS MUST BE VERIFIED ON SITE PRIOR TO BEGINNING ANY CONSTRUCTION WORK.

NOISE LEVEL

SYSTEM COMPONENT	DECIBEL LEVEL (AT 3'-3" DISTANCE)
SYMBIA T, T2, T6 AND T16 GANTRY	68
FRONT PHS (PATIENT TABLE)	60
UPS FOR IMS	<45
1) NOISE DEPENDS ON THE ROOM TEMPERATURE AND THE PROCESSOR LOAD.	

SITE READINESS GUIDELINES

THE FOLLOWING GENERAL CONDITIONS ARE NECESSARY TO HAVE THE STATUS OF "READY SITE":

- 1) PROPER POWER AVAILABLE AT SIEMENS EQUIPMENT POWER CABINET LOCATION.
- 2) AIR CONDITIONING/HUMIDIFICATION SYSTEMS COMPLETE, TESTED, AND FUNCTIONING PROPERLY ACCORDING TO SIEMENS SPECIFICATIONS.
- 3) PROPER LIGHTING INSTALLED AND FUNCTIONING.
- 4) PLUMBING COMPLETE EXCEPT FOR ANY FINAL CONNECTIONS TO SIEMENS EQUIPMENT. LINES MUST BE FLUSHED AND LEAKED TESTED.
- 5) ALL CABLE TRAYS/DUCTS/CONDUITS CORRECTLY SIZED AND INSTALLED IN THE CORRECT LOCATIONS ACCORDING TO THE SIEMENS DRAWINGS.
- 6) ALL REINFORCEMENT PLATES INSTALLED AS REQUIRED.
- 7) ROOM FOR EQUIPMENT INSTALLATION AND IMMEDIATE VICINITY IS DUST-FREE AND IS TO REMAIN SO FOR THE DURATION OF THE INSTALLATION.
- 8) A SECURE AREA, APPROXIMATELY 10'x10', IS AVAILABLE AT EQUIPMENT DELIVERY FOR PARTS AND INSTALLATION TOOLS.
- 9) CUSTOMER SUPPLIED CAMERAS AND PROCESSORS INSTALLED.
- 10) MODEM OUTLET OR ROUTER, VOICE AND DATA TELEPHONE LINES INSTALLED.
- 11) WALLS TO BE PRIMED AND PAINTED, FLOORS TO BE TILED CEILINGS TO BE INSTALLED.

IF THESE CONDITIONS ARE NOT MET, THE SIEMENS PROJECT MANAGER AND THE DESIGNATED SIEMENS INSTALLATION SUPERVISOR SHALL RESCHEDULE THE INSTALLATION START DATE. NOTE: ADDITIONAL COST MAY BE INCURRED BY THE CUSTOMER/CONTRACTOR WHEN THE SIEMENS SITE READINESS GUIDELINES ARE NOT MET, AND DELIVERY DATES NEED TO BE RESCHEDULED.

CASEWORK & ACCESSORY NOTES

- 1) ALL CASEWORK IS EITHER EXISTING OR IS TO BE DESIGNED, DETAILED, FURNISHED AND INSTALLED BY THE CUSTOMER AND/OR CONTRACTOR. FOLLOW DESIGN RECOMMENDATIONS INCLUDED HEREWITH, AS THEY ARE ESSENTIAL FOR THE SUCCESSFUL INSTALLATION & OPERATION OF THE SIEMENS EQUIPMENT.
- 2) ALL FURNITURE (CHAIRS, ETC.) FOR THE CONTROL ROOM ARE TO BE PROVIDED BY THE CUSTOMER.

FINISHED ROOM HEIGHT

SYMBIA T, T2, T6 OR T16	MINIMUM 8'-0"
SYMBIA T, T2, T6 OR T16 WITH CEILING MOUNTED COMPONENT OTHER THAN RADIATION ON LAMP	MINIMUM 8'-0" MAXIMUM 12'-0"

CONSIDER THE WARNING LIGHT WILL BE PLACED ON TOP OF THE PATIENT BOOM. ANY OTHER CEILING MOUNTED COMPONENT MUST BE PLACED AS TO NOT COLLIDE WITH WARNING LIGHT.

EQUIPMENT LEGEND

NO	DESCRIPTION	SMS SYM	WEIGHT (LBS)	BTU/HR TO AIR	DIMENSIONS (INCHES)			REMARKS
					W	D	H	
1	SYMBIA T16 GANTRY W/COLLIMATORS	ⓑ	7,413	24,574	93	84 1/2	90 1/2	6,826 BTU ON STANDBY. WORST CASE WEIGHT 7,963 LBS. WITH (2) HIGH ENERGY COLLIMATORS AT 275 LBS. EACH
2	FRONT PHS	ⓐ	2,512	-	31 1/8	97 1/2	23 3/16	MAXIMUM HEIGHT 41"
3	AUTOMATIC COLLIMATOR CHANGER-ACC WITH AQC - PRODUCTIVITY PACKAGE	ⓐ	684	-	31 1/8	97 1/2	23 3/16	WEIGHT CALCULATED WITH 1 SET LOW AND MEDIUM ENERGY COLLIMATORS.
4	UNDER THE FLOOR PHS CABLE	ⓐ	-	-	-	-	-	UNDER FLOOR
5	PHS EXTENDED PIVOT	ⓐ	-	-	-	-	-	EXTENDED PIVOT - 45 DEGREES
6	REAR PHS WITH SNAC	ⓐ	415.3	-	-	-	-	ON FLOOR
7	PATIENT BOOM SWING ARM	ⓐ	-	-	-	-	-	-
8	LINE CONNECTION BOX	ⓐ	227	1,365	29 1/2	11 3/4	32	ON FLOOR
9	UPS FOR SPECT	ⓐ	120	1,024	10	28 3/8	17 7/8	ON FLOOR
10	TRANSFORMER REQUIRED WITH UPS FOR SPECT (SPS)	ⓐ	-	-	-	-	-	CUSTOMER SUPPLIED PRIOR TO INSTALLATION. SEE POWER SCHEDULE.
11	TVSS SURGE PROTECTION UPS FOR SPECT	ⓐ	11	-	8	6	10	ON TOP OF UPS FOR SPECT
12	COLLIMATOR CART (EMPTY) (2)	ⓐ	400	-	47 3/8	32 5/8	47 1/2	WORST CASE 1,330 LBS. WITH 1 SET HE AND 1 SET ME
13	IMAGE CONSTRUCTION SYSTEM FOR SYNGO MI (ACQUISITION) WORKPLACE	ⓐ	66	2,398	8 1/2	22	18	OFF FLOOR.
14	IMAGE RECONSTRUCTION SYSTEM FOR SYNGO MI (ACQUISITION) WORKPLACE	ⓐ	66	*	8 1/2	22	18	OFF FLOOR. *BTU'S INCL. WITH ICS
15	CONTROL AND KEYBOARD	ⓐ	-	-	-	-	-	ON CUSTOMER'S COUNTER
16	18" MONITOR	ⓐ	31	-	18 3/8	2 5/8	14 13/16	ON CUSTOMER'S COUNTER
17	SYNGO MI (ACQUISITION) WORKPLACE UPS FOR IMS STANDARD COMPONENT	ⓐ	70	-	5	19	17 1/4	OFF FLOOR.
18	SYMBIA.NET WORKPLACE CPU	ⓐ	51	1,400	8	21	17 1/2	OFF FLOOR
19	SYMBIA.NET WORKPLACE KEYBOARD AND MONITOR	ⓐ	31	*	17 5/8	18 5/16	17	ON CUSTOMER'S COUNTER. *BTU'S INCL. WITH SNW CPU
20	IQ-SPECT WITH WORKPLACE CPU	ⓐ	51	1,400	8	21	17 1/2	OFF FLOOR
21	IQ-SPECT WITH WORKPLACE MONITOR AND KEYBOARD	ⓐ	-	*	-	-	-	*BTU'S INCL. WITH IQ CPU

ARCHITECTURAL NOTES

- 1) ALL PRELIMINARY EQUIPMENT LAYOUTS SUBMITTED BY SIEMENS MEDICAL SOLUTIONS, INC. (SMS HEREAFTER) ARE BASED ON THE RECOMMENDED SPACE NECESSARY FOR THE OPERATION AND SERVICEABILITY OF THE EQUIPMENT BEING PROPOSED. SMS WILL NOT SUBMIT AN EQUIPMENT LAYOUT THAT IS NOT IN THE BEST INTEREST OF BOTH THE CUSTOMER AND SMS. ALL EQUIPMENT LAYOUTS ARE BASED EITHER ON AN ACTUAL SITE LOCATION SURVEY OR ARCHITECTURAL DRAWINGS SUPPLIED TO SMS. SMS WILL NOT BE RESPONSIBLE FOR ANY ALTERATIONS THAT ENCROACH WITHIN DESIGNATED SAFETY AND SERVICE CLEARANCE ZONES AS INDICATED ON DRAWINGS (IE. PIPE CHASES, VENTILATION DUCTS, CASEWORK, AND SOFFITS, ETC.) MADE BY THE CUSTOMER OR REQUIRED BY A CUSTOMER'S ARCHITECTURAL FIRM ONCE PRELIMINARY DRAWINGS HAVE BEEN SUBMITTED AND APPROVED. DO NOT ALTER ANY SPECIFICATIONS AND/OR DIMENSIONS WITHOUT CONTACTING AND RECEIVING WRITTEN CONFIRMATION FROM SMS PROJECT MANAGER.
- 2) SMS IS NOT AN ARCHITECTURAL OR ENGINEERING FIRM. DRAWINGS SUPPLIED BY SMS ARE NOT CONSTRUCTION DRAWINGS. THEREFORE, THESE DRAWINGS ARE TO BE USED ONLY FOR INFORMATION TO COMPLEMENT ACTUAL CONSTRUCTION DRAWINGS AVAILABLE FROM A CUSTOMER APPOINTED ARCHITECTURAL REPRESENTATIVE OR A CUSTOMER'S ENGINEERING DESIGN GROUP. THE CUSTOMER'S ARCHITECT AND GENERAL CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CODES AND PROFESSIONAL DESIGN REQUIREMENTS.
- 3) THE CUSTOMER IS RESPONSIBLE FOR ALL ROOM AND AREA PREPARATION COSTS, PROFESSIONAL FEES, PERMITS, REPORTS, AND INSPECTION FEES.
- 4) EQUIPMENT WARRANTIES, EXPRESSED OR IMPLIED ON THE PART OF SMS SHALL BE CONTINGENT UPON STRICT COMPLIANCE WITH THE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL AND RECOMMENDATIONS AND REQUIREMENTS CONTAINED IN THESE DRAWINGS, UNLESS SPECIFIED OTHERWISE.
- 5) ALL DIMENSIONS SHOWN ARE TAKEN FROM FINISHED SURFACES UNLESS SPECIFIED OTHERWISE.
- 6) THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST. ACTUAL PROTECTION REQUIREMENTS SHALL BE SPECIFIED BY A REGISTERED RADIATION PHYSICIST AT CUSTOMER'S ENGAGEMENT AND EXPENSE. RESPONSIBILITY FOR ALL INFORMATION AS TO THE ROOM LOCATION, USE, AND NUMBER OF ANTICIPATED EXAMINATIONS TO BE PERFORMED PER TIME PERIOD SHALL BE PROVIDED TO THE PHYSICIST BY THE CUSTOMER. THE CUSTOMER SHALL FURTHER TAKE ALL RESPONSIBILITY IN THE COMMUNICATION AND COORDINATION OF ACTIVITIES OF THE RADIATION PHYSICIST AND THE ARCHITECTURAL REPRESENTATIVE.
- 7) SMS SHALL BE RESPONSIBLE FOR SMS EQUIPMENT INSTALLATION AND CALIBRATION, CONNECTION AND INSTALLATION OF SMS PROVIDED CABLES, AND CONNECTION OF CONTRACTOR PROVIDED WIRES TO SMS EQUIPMENT. IN THE EVENT THAT SPECIFIC TRADE RULES OR LICENSE REQUIREMENTS PROHIBIT THIS, THE CUSTOMER SHALL INITIATE THE SERVICES OF APPROVED OTHER CONTRACTORS AND PAY FOR SELECTED, APPROVED PARTIES TO PERFORM THIS WORK WITH JOB SUPERVISION TO BE PROVIDED BY SMS. CALIBRATION WHEN ACCOMPLISHED OUTSIDE OF NORMAL INSTALLATION SEQUENCES DUE TO CONTRACTOR OR TRADE RULE ACTIONS OR REQUIREMENTS SHALL BE SUPPORTED BY, CHARGED TO, AND ACCEPTED BY THE CUSTOMER AS AN ADDITIONAL INSTALLATION EXPENSE.
- 8) THE CUSTOMER SHALL VERIFY WITH SMS PROJECT MANAGER FINAL INSTALLATION DRAWINGS THE LOCATIONS AND TRAVEL OF ALL ANCILLARY EQUIPMENT TO BE CEILING OR WALL MOUNTED (IE: O.R. LIGHTS, MEDICAL GAS COLUMNS, PHYSIOLOGICAL MONITORING INJECTORS, CRT PLATFORMS, SPRINKLER HEADS, SMOKE DETECTORS, ELECTRICAL OUTLETS, HVAC GRILLES, SPEAKERS, AND GENERAL ROOM LIGHTING, ETC.).
- 9) THE GENERAL CONTRACTOR/CUSTOMER SHALL BE RESPONSIBLE FOR ALL FINAL PAINT, TOUCH-UP AND ANY COSMETIC OR TRIM WORK WHICH NEEDS TO BE OR IS REQUIRED TO BE COMPLETED AFTER THE INSTALLATION OF THE SMS EQUIPMENT AND ANY ASSOCIATED SUPPORT APPARATUS.

ENVIRONMENTAL/POWER AUDIT

AS AN INDICATION OF OUR COMMITMENT TO QUALITY, SIEMENS MAY, AT NO COST TO YOUR FACILITY, CHECK THE OPERATING ENVIRONMENT AFTER SYSTEM TURNOVER TO DETERMINE IF THE REQUIREMENTS FOR TEMPERATURE, HUMIDITY, POWER, AND GROUNDING ARE MET AS PER SIEMENS' PUBLISHED SPECIFICATIONS. SIEMENS WILL GENERATE A WRITTEN REPORT DETAILING THE ENVIRONMENTAL AND ELECTRICAL CONDITION OF THE SITE AFTER TURNOVER AND WILL SHARE THE REPORT WITH YOU. IN THE EVENT WE IDENTIFY ANY ENVIRONMENTAL/POWER DEFICIENCIES AT THE SITE, YOUR FACILITY WILL BE REQUESTED TO CORRECT DEFICIENCIES WITHIN THIRTY (30) DAYS. SHOULD ANY CORRECTIVE ACTIONS BE NECESSARY, AND UPON REQUEST, SIEMENS WILL PROVIDE GUIDANCE IN AN EFFORT TO FACILITATE RESOLUTION. PLEASE BE ADVISED THAT AFTER 30 DAYS NOTICE ANY REPAIR OR MAINTENANCE SERVICES NECESSITATED BY DEFICIENCIES WILL FALL OUTSIDE YOUR WARRANTY COVERAGE.

LIGHTING GUIDELINES

ROOM LIGHTING IS THE RESPONSIBILITY OF THE CUSTOMER. HOWEVER, SIEMENS OFFERS THE FOLLOWING RECOMMENDATIONS, AS A GENERAL GUIDE ONLY, WHEN PLANNING FOR LIGHTING.

- 1) OVERALL GENERAL ILLUMINATION IS NECESSARY FOR CLEAN UP AND MAINTENANCE OF EQUIPMENT.
- 2) THE LIGHTING IN ROOMS IN WHICH DIAGNOSES ARE MADE ON VIDEO DISPLAY UNITS (MONITORS) MUST MEET THE FOLLOWING REQUIREMENTS:
 - ADJUSTABLE, GLARE-FREE AND REPRODUCIBLE SETTING OF LIGHTING (I.E. DIMMER WITH SCALE)
 - NO REFLECTIONS FROM WINDOWS, LAMPS AND VIEWING BOXES WHEN THE MONITORS ARE IN THEIR STANDARD OPERATING POSITION.

CUSTOMER SUPPLIED

DOOR (SAFETY) SWITCH REQUIRED ON ALL DOORS ACCESSING THE EXAMINATION ROOM IN ACCORDANCE WITH LOCAL CODES.

RADIATION WARNING LIGHTS REQUIRED ON ALL DOORS ACCESSING THE EXAMINATION ROOM IN ACCORDANCE WITH FDA CODES.

EMERGENCY POWER OFF BUTTON SHOULD BE INSTALLED IN BOTH THE SCANNER AND CONTROL ROOM.

PRELIMINARY

NOT FOR CONSTRUCTION

THIS DRAWING DOES NOT REPRESENT A COMPLETE SET OF DETAILS REQUIRED FOR CONSTRUCTION, INSTALLATION, OR PRICING. PLEASE CONTACT SIEMENS SITE PLANNING FOR FURTHER INFORMATION.

RESOURCE LIST (SMS USE ONLY)

DESIGNATION	PG NUMBER	DATE
SYMBIA T, T2, T6 AND T16	NM02-001.891.02.11.02	08/13

SYMBIA T, T2, T6, T16
REV 3

PROJECT MANAGER: DAVID LYMAN
TEL: (801) 602-8711 EXT:
FAX:
EMAIL: david.lyman@siemens.com

V A SALT LAKE CITY
500 FOOTHILL DR., SALT LAKE CITY, UT 84148
ROOM # 1E09 - SYMBIA T16

THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS AUTHORIZATION WILL RESULT IN PROSECUTION UNDER FULL EXTENT OF THE LAW.

PROJECT #:
1403947

SHEET:
R-101

SHEET 1 OF 2
DRAWN BY: J.PAOLUCCI

SCALE: AS NOTED
REF. #: 30175186

DATE: 11/11/14

ATTENTION:

-THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.
-THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

-IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION DOCUMENTS FOR REFERENCE.

-ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.
-THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

-ISSUE BLOCK-

TRANSPORT AND DELIVERY NOTES

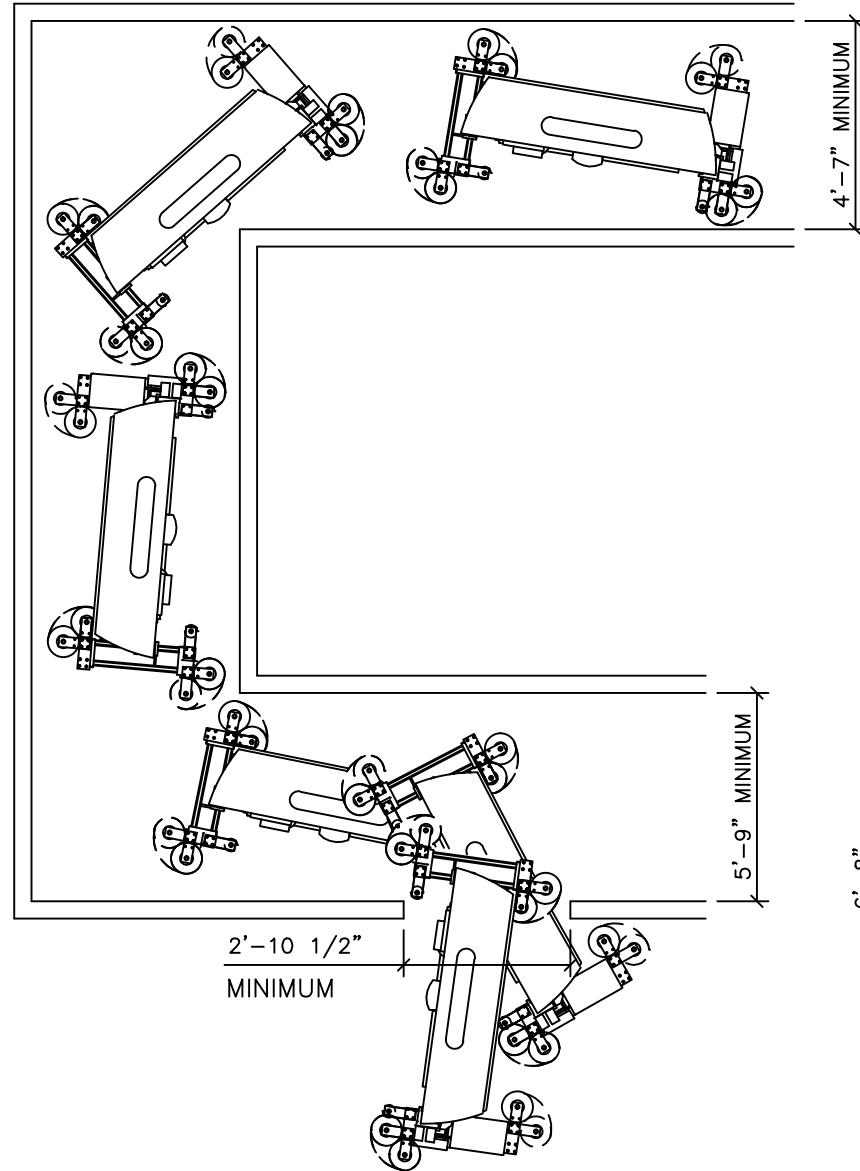
NM SUB-SYSTEM ON SKID	4,118 LBS.
NM GANTRY WITH TRANSPORT AND BOOM	3,886 LBS.
CT SUB-SYSTEM	2,480 LBS.
FRONT PHS	2,745 LBS.
REAR PHS	506 LBS.

NORMAL TRANSPORT REQUIREMENTS:
DURING THE MOVEMENT OF THE GANTRY THROUGH CORRIDORS
THE TRANSPORT CASTERS ARE SWIVELED OUT FOR STABILITY.

FRONT PHS REQUIRES THE SAME HALLWAY TRANSPORT ROUTE
AS THE GANTRY AS SHOWN BELOW.

PLEASE CONSULT PLANNING GUIDE FOR ELEVATOR CLEARANCES
FOR GANTRY AND FRONT PHS.

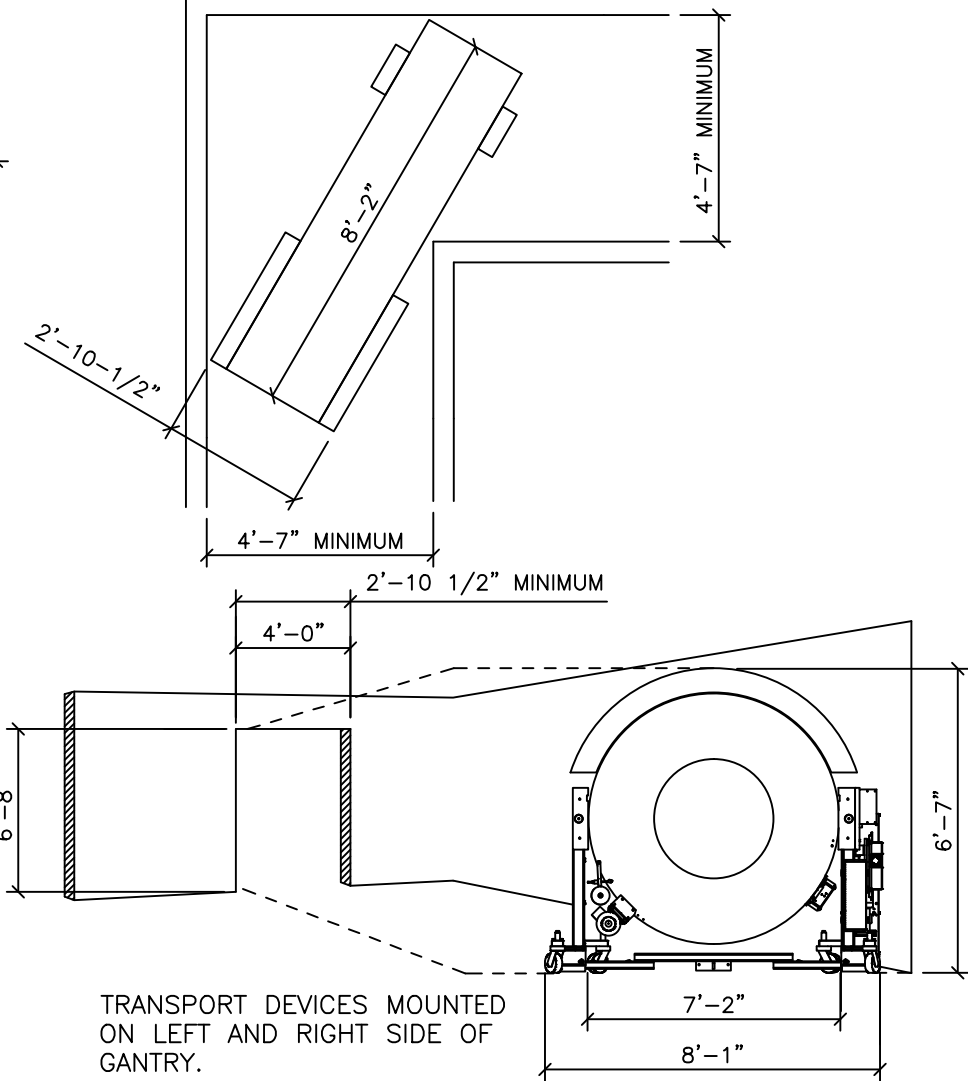
HALLWAY TRANSPORT FOR GANTRY:



HALLWAY TO DOOR TRANSPORT:
ACCESS FLOORS MUST BE LAID OUT TO SUPPORT A LOAD
MINIMUM 1296 LBS. DURING TRANSPORT OF THE GANTRY,
ONCE SYSTEM HAS PASSED THROUGH NARROW AREA, THE
TRANSPORT ROLLERS MUST BE SWIVELED OUT AGAIN FOR
STABILITY.

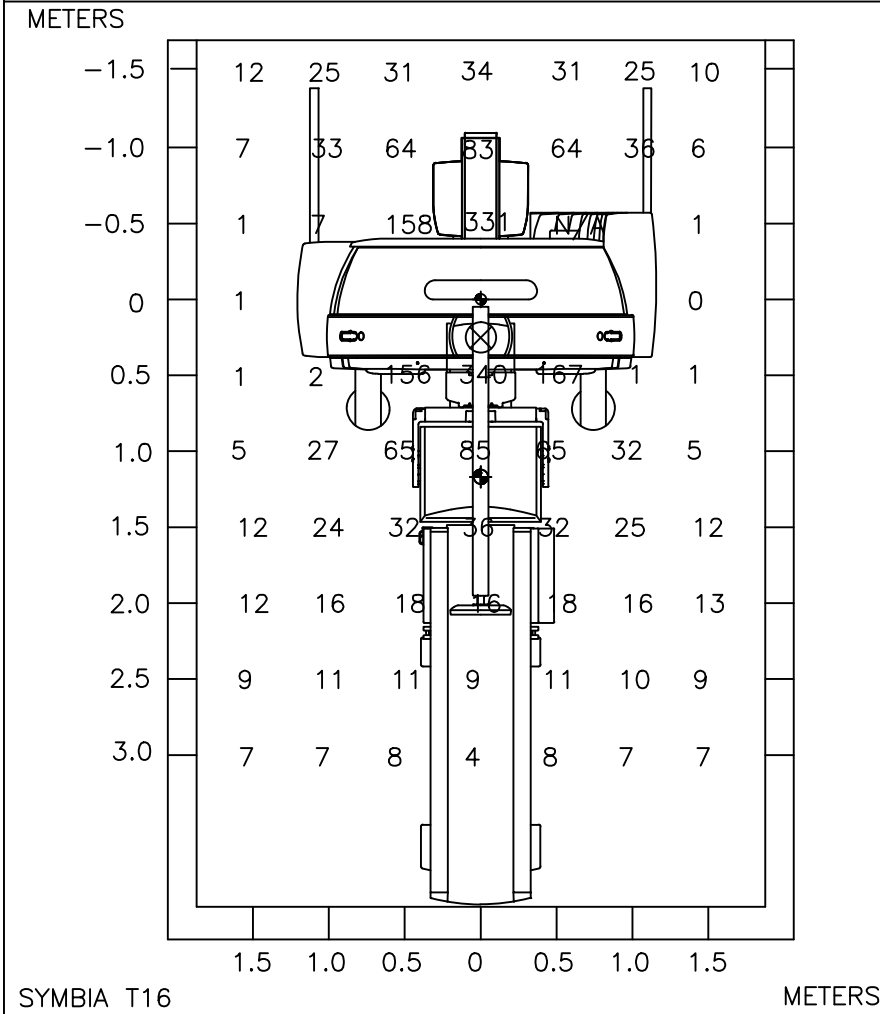
TRANSPORTING GANTRY FLOOR LOAD:
ACCESS FLOORS MUST BE LAID OUT TO SUPPORT A LOAD
MINIMUM 1296 LBS. DURING TRANSPORT OF THE GANTRY,
ONCE SYSTEM HAS PASSED THROUGH NARROW AREA, THE
TRANSPORT ROLLERS MUST BE SWIVELED OUT AGAIN FOR
STABILITY.

HALLWAY TRANSPORT FOR FRONT PHS:



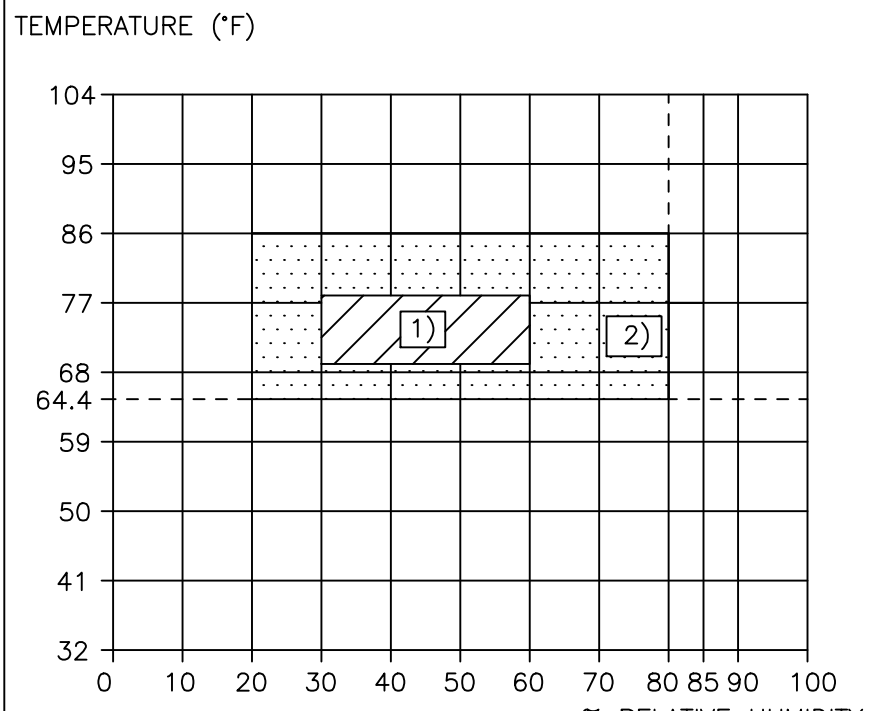
TRANSPORT DEVICES MOUNTED
ON LEFT AND RIGHT SIDE OF
GANTRY.

RADIATION SCATTER



SYMBIA T16
MEASUREMENT IN $\mu\text{Gy/As}$ SCAN SCALE: 1/4"=1'-0"
THE MEASUREMENT WAS TAKEN AT THE MAXIMUM SLICE
THICKNESS OF 16 x 1.2 mm AT 130 kV AND 300 mAs/scan
IN THE HORIZONTAL PLANE THROUGH THE SYSTEM AXIS WITH
THE SPECT DETECTORS AT 180° POSITION. THE PHANTOM USED
WAS A CYLINDRICAL PMMA PHANTOM WITH A DIAMETER OF 32
CM AND A LENGTH OF 16 CM. THE PHANTOM WAS CENTERED
IN THE TOMOGRAPHIC PLANE.
♦ INDICATES CT ORIENTATION POINT
♦ INDICATES SPECT ORIENTATION POINT

ENVIRONMENTAL REQUIREMENTS



- 1) RECOMMENDED OPERATING CONDITIONS.
- 2) REQUIRED OPERATING CONDITIONS.

TEMPERATURE, HUMIDITY, DUST, AIR CONTAMINATION:
REFER TO THE CLIMATOGRAM ABOVE FOR THE PERMITTED
CLIMATE RANGE.

THE MAXIMUM TEMPERATURE GRADIENT IS 8°F PER HOUR.

THE OPTIMAL ENVIRONMENT FOR THE SCANNER ROOM AND THE
SYSTEM IS 65°F-86°F (± 8°F/HR.) WITH A RELATIVE HUMIDITY
OF 20-80% NON-CONDENSING. THE OPTIMAL ENVIRONMENT FOR
THE CONTROL ROOM 75°F (± 8°F/HR.) WITH A RELATIVE
HUMIDITY OF 20-80% NON-CONDENSING. TEMPERATURE
RANGES FOR THE SCANNER ROOM AND CONTROL CANNOT BE
GUARANTEED IN ALL SEASONS OF THE YEAR, AN APPROPRIATE
AIR-CONDITIONING SYSTEM MUST BE INSTALLED ON-SITE BY
THE CUSTOMER/CONTRACTOR.

FOR EXTERNAL AIR SUPPLY (FRESH AIR) IT IS RECOMMEND
THAT COARSE FILTERS OF THE CLASS EU3 TO EU4 BE USED
ON-SITE TO FILTER OUT DUST PARTICLES >10µm.

THE VENTILATION SHOULD ENSURE THAT AGGRESSIVE
POLLUTANTS ARE PREVENTED FROM ENTERING THE ROOM. THE
ROOM AIR SHOULD BE PROTECTED AGAINST CONTAMINATION BY
HYDROGEN SULFIDE, EVEN IN SMALL AMOUNTS. THE MOST WELL
KNOWN SOURCES OF HYDROGEN SULFIDE INCLUDE: EXHAUST
FUMES AND WASTE WATER FROM DEVELOPERS, EXPOSED SEWER
DRAINS, EXHAUST FUMES FROM DIESEL POWER UNITS. IF A
DANGER OF SUCH CONTAMINATION EXISTS, CORRECTIVE ACTIONS
HAVE TO BE TAKEN E.G.: EXTRACTOR FANS, SIPHON, AND
MODIFICATION OF VENTILATION INTAKE.

FLOOR REQUIREMENTS

- 1) THE MINIMUM ALLOWABLE CONCRETE THICKNESS FOR
NONSEISMIC REGIONS OF THE SCANNER ROOM FLOOR IS 4".
- 2) CONDITIONS OF FLOORING:

VIBRATION FREE LOCATION AS FOUND IN A TYPICAL CLINICAL
ENVIRONMENT.

INSTALLATION OF THE GANTRY AND PATIENT TABLE ON:

CONCRETE FLOORING CLASS C20/25 TO C50/60.
COMPOSITE FLOORING OR ACCESS FLOOR WITH SUITABLE
ON SITE.
MOUNTING FRAME, SUB CONSTRUCTION,
OR EQUIVALENT STRUCTURE.

- 3) WEIGHT CAPACITY OF FLOORING SHOULD BE TESTED BY A
STRUCTURAL ENGINEER.
- 4) ANY FLOORING OTHER THAN LISTED ABOVE REQUIRES AN ON
SITE FRICTION FREE SUB CONSTRUCTION MADE FROM STEEL IN
THE AREAS OF SUPPORT. PLEASE CONSULT STRUCTURAL
ENGINEER.
- 5) THE MINIMUM EXTRACTION FORCE FOR THE POINTS WHERE
THE PATIENT TABLE IS ATTACHED IS 610 LBF. PER ANCHOR.

INSTALLATION ON A FLOATING FLOOR WITHOUT
SUB-CONSTRUCTION IS PROHIBITED.

- 6) THE BASE FRAME FOOT PADS ARE MOUNTED TO THE FLOOR
USING (4) 5/8" X 3 1/2" ANCHORS.
- 7) FLOOR LEVELNESS REFER TO FLOOR LEVELING AND
FLATTENING DETAIL LOCATED ON THIS SHEET.
- 8) THE MINIMUM REQUIREMENTS FOR COMPRESSIVE STRENGTH
FOR THE FLOOR COVERING BASED ON SYMBIA COLLIMATOR CART
SHALL BE 375 PSI. THIS IS BASE ON WORSE CASE LOADING
WITH 2-HIGH ENERGY AND 2-MEDIUM ENERGY COLLIMATORS
PLACED ON THE COLLIMATOR CART.

POWER REQUIREMENTS

SYSTEM	LINE VOLTAGE (VOLTS)	POWER CONSUMPTION (kVA) SEE NOTE BELOW	AUTOMATIC CIRCUIT BREAKER (AMPS)	INCOMING LINE IMPEDANCE (mΩ)	HZ
SYMBIA T6/T16	3ø 480±10%	74.8 kVA SCAN	100	320	60

POWER CONSUMPTION:
SYMBIA T6/T16 - LESS THAN OR EQUAL TO 70 kVA MAXIMUM
POWER CONSUMPTION, LESS THAN OR EQUAL TO 3 kVA STANDBY

SPECT GANTRY, PHS, UPS, & SNAC - 4.8 kVA MAXIMUM POWER
CONSUMPTION, LESS THAN OR EQUAL TO 1.5 STANDBY

TOTAL CONSUMPTION = 74.8 TOTAL STANDBY = 4.5 kVA

NOTE: THE SPECT UNITS NEED TO BE WIRED SINGLE PHASE TO
NEUTRAL WITH APPROPRIATE BREAKER AND WIRE SIZE.

DO NOT CONNECT ANY EXTERNAL USERS TO THE SPECT/CT
POWER LINE. FOR SYMBIA T6/T16, THE IMAGING SYSTEM IMS
(ICS, IRS, AND MONITOR) MUST BE CONNECTED VIA THE UPS TO
THE LCB. THE FUSE IS ALREADY INTEGRATED IN THE LCB.

AN ON/OFF SWITCH IN ACCORDANCE WITH UL 2601/CSA114
INCLUDING A SWITCH POSITION INDICATOR IS INTEGRATED IN THE
LCB. A SEPARATE ON/OFF SWITCH MAY BE REQUIRED PER LOCAL
CODE.

THE SCANNER AND CONTROL ROOM SHOULD BE EQUIPPED WITH
AT LEAST ONE EACH EMERGENCY POWER OFF BUTTON.

RADIOACTIVE SOURCES

THE FOLLOWING RADIOACTIVE SOURCES ARE REQUIRED FOR THE
SYMBIA T AT THE TIME OF INSTALLATION FOR CALIBRATION:

- 1) 10-20 mCi Co57 (COBALT 57) OR LIQUID FILLED Tc99
(TECHNETIUM 99) SHEET SOURCE (FOR EXTRINSIC FLOOD).
- 2) POINT SOURCE 30-35 uCi Tc99 (FOR INTRINSIC FLOODS,
TUNING AND PEAKING).
- 3) QUANTITY OF 5 - 1 mCi Tc99 POINT SOURCES (FOR
MHR CALIBRATION).
- 4) QUANTITY OF 10 Tc99 POINT SOURCES WITH COMBINED
ACTIVITY OF ALL SOURCES 5 mCi TO 20 mCi (FOR NM/CT FOV).

IT IS CUSTOMER'S RESPONSIBILITY TO OBTAIN THESE SOURCES
PRIOR TO INSTALLATION. CO-57 RECTANGULAR FLOOD SHEET
SOURCE MAY BE ORDERED FROM SIEMENS (ASK SIEMENS SALES
ASSOCIATE). Tc99 MUST OBTAINED THROUGH CUSTOMER'S LOCAL
RADIOACTIVE SOURCE PROVIDER.

THESE RADIOACTIVE SOURCES AREA NEEDED TO COMPLETE
CALIBRATION OF EQUIPMENT. PLEASE NOTE SOURCE PROVIDERS
WILL NOT SHIP SOURCES TO SITE WITHOUT A VALID RAM LICENSE.

RAM LICENSE

RAM LICENSE NEEDS TO BE APPLIED FOR THROUGH
GOVERNMENT AGENCY AS EARLY AS POSSIBLE. PLEASE ADDRESS
WITH YOUR RSO (RADIATION SAFETY OFFICER).

RAM LICENSE MUST BE OBTAINED NO LATER THAN 4 WEEKS
AHEAD OF SCHEDULED DELIVERY. DELAY OF INSTALLATION MAY
OCCUR IF SITE HAS NOT OBTAINED RAM LICENSE AT THIS TIME.
RADIOACTIVE SOURCES NEEDED TO COMPLETE CALIBRATION OF
EQUIPMENT WILL NOT BE SHIPPED TO SITE WITHOUT VALID RAM
LICENSE.

RADIATION SAFETY

LEAD OR EQUIVALENT SHIELDING MAY BE REQUIRED IN THE
WALLS OF THE SCANNER ROOM, HOTLAB AND/OR PATIENT
PREPARATION AREAS. IT IS THE RESPONSIBILITY OF THE
CUSTOMER TO VERIFY WITH THE SITE'S RADIATION SAFETY
OFFICER THAT RADIATION DOSE RATES FROM THE SPECT PATIENT
AND/OR ISOTOPE WILL NOT EXCEED LOCAL RADIATION SAFETY
GUIDELINES IN THE ROOM ADJACENT TO SCANNER, HOTLAB,
AND/OR PATIENT PREPARATION AREAS.

IMPROPER SHIELDING MAY AFFECT CAMERA'S PERFORMANCE.

UPS FOR SPECT
PREINSTALL REQUIREMENTS

THE CUSTOMER HAS PURCHASED THE UPS FOR SPECT OPTION
FOR THE SPECT PORTION OF THE SYMBIA T'S SYSTEMS. THE
UPS FOR SPECT REQUIRES 208/220/240 VAC AND NEEDS A
CUSTOMER/CONTRACTOR SUPPLIED STEP DOWN TRANSFORMER
(277 VOLTS PRIMARY 5 KVA STEP DOWN TRANSFORMER TO
208/220/240 VAC). IT IS THE CUSTOMER/CONTRACTOR
RESPONSIBILITY TO PROVIDE POWER TO AND CONNECT THE
STEP DOWN TRANSFORMER PRIOR TO EQUIPMENT DELIVERY
AND INSTALLATION.

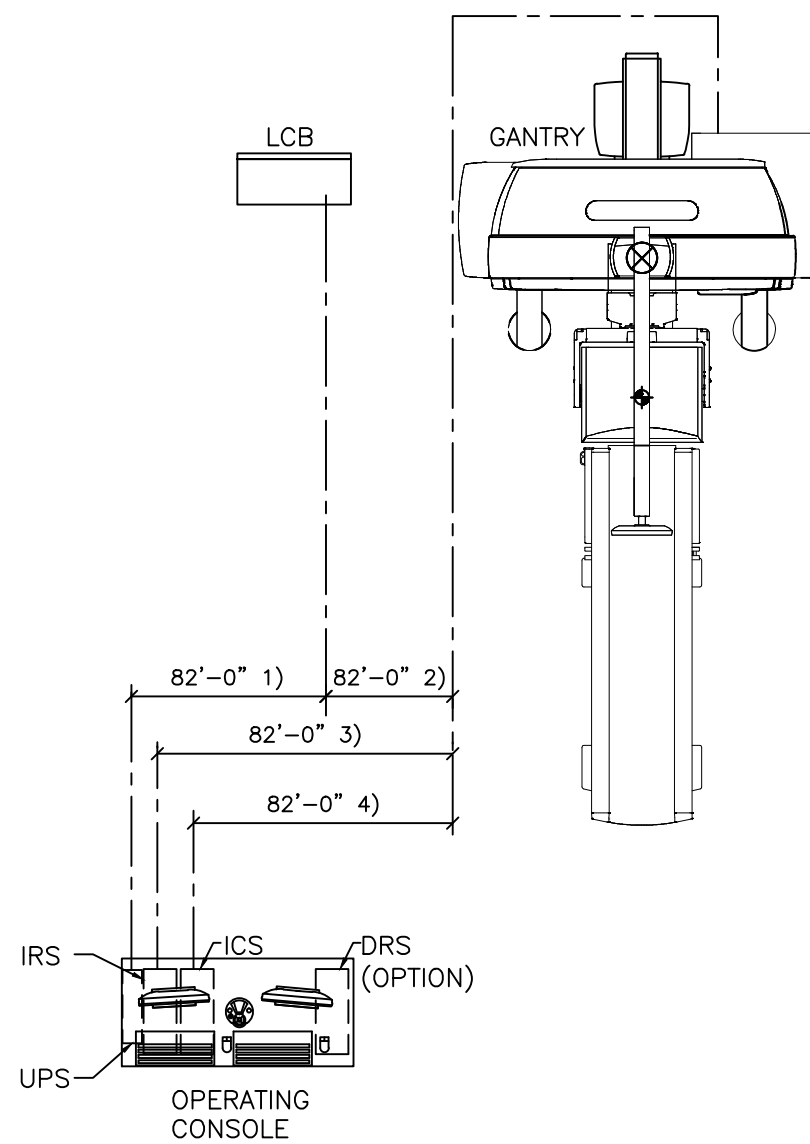
POWER QUALITY

POOR POWER WILL ALTER EQUIPMENT PERFORMANCE

IT IS IN THE CUSTOMER'S INTEREST THAT THE ELECTRICAL
CONTRACTOR BE RESPONSIBLE FOR TESTING AND VERIFYING THAT
THE EQUIPMENT POWER SUPPLY COMPLIES WITH THE SIEMENS
SPECIFICATIONS.

MAXIMUM DISTANCES

THE MAXIMUM DISTANCE BETWEEN COMPONENTS IS CALCULATED
AS THE DISTANCE FROM CABLE OUTLET TO CABLE OUTLET.
VARIOUS ARRANGEMENTS OF COMPONENTS ARE POSSIBLE AS
LONG AS THE DISTANCES SHOWN BELOW ARE NOT EXCEEDED.



- 1) LCB TO UPS THE OVERALL LENGTH OF CABLE IS 82'-0".
- 2) LCB TO THE SYMBIA T GANTRY THE OVERALL LENGTH OF
CABLE IS 82'-0".
- 3) IRS TO THE SYMBIA T GANTRY THE OVERALL LENGTH OF
CABLES IS 82'-0".
- 4) ICS TO THE SYMBIA T GANTRY THE OVERALL LENGTH OF
CABLE IS 82'-0".

MAGNETIC FIELD PRECAUTIONS

THE PRESENCE OF MAGNETIC FIELDS IN THE VICINITY OF
EQUIPMENT MAY HAVE AN ADVERSE EFFECT. IT IS THE
CUSTOMER'S RESPONSIBILITY TO VERIFY THAT THE FOLLOWING
VALUES ARE NOT EXCEEDED.

MAXIMUM ALLOWABLE MAGNETIC FIELD	DEVICES
1.0mT (10 GAUSS)	COMPUTERS, MAGNETIC DISK DRIVES
0.2mT (2 GAUSS)	SIEMENS CT PORTION OF SYMBIA SIEMENS CT SCANNERS
0.15mT (1.5 GAUSS)	COLOR MONITOR (FOR LIQUID CRYSTAL DISPLAYS ONLY)
0.1mT (1.0 GAUSS AC OR DC)	SIEMENS HAS ESTABLISHED THE UPPER LIMITS OF MAGNETIC FIELD EXPOSURE FOR THE SYMBIA DETECTORS

MAGNETIC FIELDS SHOULD BE MEASURED PRIOR TO DELIVERY.

REMOTE SYSTEM DIAGNOSTICS

SIEMENS REMOTE SERVICES (SRS) REQUIRES A CONNECTION BETWEEN
THE SRS REMOTE SERVER AND SIEMENS SYSTEMS VIA REMOTE LOCAL
AREA NETWORK ACCESS, TO ENSURE THE UPTIME OF YOUR SYSTEM.

THIS SERVICE REQUIRES ONE OF THE FOLLOWING CONNECTION METHODS:
1. (PREFERRED) VPN - WHERE THE CUSTOMER HAS AVAILABLE A VPN
CAPABLE FIREWALL OR OTHER VPN APPLIANCE.
2. (OPTIONAL) *SRS ROUTER* - CONNECTED TO ANALOG PHONE LINE
VIA *ANALOG MODEM*, ETHERNET CONNECTION TO CUSTOMER'S LAN, AND
A POWER OUTLET. NOTE: = *SUPPLIED BY SIEMENS*

SYMBIA T, T2, T6, T16
REV 3

ATTENTION:

-THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED
AT THE TIME OF THEIR PREPARATION. SINCE BOTH THESE FACTORS ARE SUBJECT TO DESIGN
MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES.
-THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED.

-IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION
DOCUMENTS FOR REFERENCE.

-ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES.
-THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED
EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION
PHYSICIST TO SPECIFY RADIATION PROTECTION.

PROJECT MANAGER: DAVID LYMAN TEL: (801) 602-8711 EXT: FAX: EMAIL: david.lyman@siemens.com		
SIEMENS		
V A SALT LAKE CITY		
500 FOOTHILL DR., SALT LAKE CITY, UT 84148 ROOM # 1E09 - SYMBIA T16		
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PROJECT #: 1403947		
SHEET 2 OF 2		
DRAWN BY: J.PAOLUCCI		
SHEET: R-501		
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SCALE: AS NOTED	REF. #: 30175186	DATE: 11/11/14