



Typical

REV	DATE	MODIFICATIONS
01 - C1 - Cover Sheet		16 - E2 - Electrical Layout
02 - C2 - Disclaimer - Site Readiness Checklist		17 - E3 - Electrical Elevations
03 - A1 - General Notes		18 - E4 - Power Requirements
04 - A2 - Equipment Layout		19 - E5 - Electrical Details - Interconnect
05 - A3 - Radiation Protection		
06 - A4 - Radiation Protection Details		
07 - A5 - Equipment Dimensions (1)		
08 - A6 - Equipment Dimensions (2)		
09 - A7 - Delivery		
10 - S1 - Structural Notes		
11 - S2 - Structural Layout		
12 - S3 - Structural Details (1)		
13 - S4 - Structural Details (2)		
14 - M1 - HVAC		
15 - E1 - Electrical Notes		



REVOLUTION FRONTIER FINAL STUDY

A mandatory component of this drawing set is the GE HealthCare Pre Installation manual. Failure to reference the Pre Installation manual will result in incomplete documentation required for site design and preparation.
Pre Installation documents for GE HealthCare products can be accessed on the web at: <https://www.gehealthcare.com/support/manuals>

Drawn by	Verified by	Concession	GON/Quote	PIM Manual	Rev
PMM	APP	-	-	5786386-1EN	8
Format	Scale	File Name		Date	Sheet
A3	1/4"=1'-0"	EN-CT-TYP-REVOLUTION-FRONTIER-NF.DWG		10/Oct/2024	01/19

GE HealthCare does not take responsibility for any damages resulting from changes on drawings made by others. Errors may occur by not referring to the complete set of final issue drawings. GE HealthCare cannot accept responsibility for any damage due to the partial use of GE HealthCare final issue drawings, however caused. All dimensions are in millimeters unless otherwise specified. Do not scale from printed pdf files. GE HealthCare accepts no responsibility or liability for defective work due to scaling from these drawings.

DISCLAIMER

GENERAL SPECIFICATIONS

- GE is not responsible for the installation of developers and associated equipment, lighting, cassette trays and protective screens or derivatives not mentioned in the order.
- The final study contains recommendations for the location of GE equipment and associated devices, electrical wiring and room arrangements. When preparing the study, every effort has been made to consider every aspect of the actual equipment expected to be installed.
- The layout of the equipment offered by GE, the dimensions given for the premises, the details provided for the pre-installation work and electrical power supply are given according to the information noted during on-site study and the wishes expressed by the customer.
- The room dimensions used to create the equipment layout may originate from a previous layout and may not be accurate as they may not have been verified on site. GE cannot take any responsibility for errors due to lack of information.
- Dimensions apply to finished surfaces of the room.
- Actual configuration may differ from options presented in some typical views or tables.
- If this set of final drawings has been approved by the customer, any subsequent modification of the site must be subject to further investigation by GE about the feasibility of installing the equipment. Any reservations must be noted.
- The equipment layout indicates the placement and interconnection of the indicated equipment components. There may be local requirements that could impact the placement of these components. It remains the customer's responsibility to ensure that the site and final equipment placement complies with all applicable local requirements.
- All work required to install GE equipment must be carried out in compliance with the building regulations and the safety standards of legal force in the country concerned.
- These drawings are not to be used for actual construction purposes. The company cannot take responsibility for any damage resulting therefrom.

CUSTOMER RESPONSIBILITIES

- It is the responsibility of the customer to prepare the site in accordance with the specifications stated in the final study. A detailed site readiness checklist is provided by GE. It is the responsibility of the customer to ensure all requirements are fulfilled and that the site conforms to all specifications defined in the checklist and final study. The GE Project Manager of Installation (PMI) will work in cooperation with the customer to follow up and ensure that actions in the checklist are complete, and if necessary, will aid in the rescheduling of the delivery and installation date.
- Prior to installation, a structural engineer of record must ensure that the floor and ceiling is designed in such a way that the loads of the installed system can be securely borne and transferred. The layout of additional structural elements, dimensioning and the selection of appropriate installation methods are the sole responsibility of the structural engineer. Execution of load bearing structures supporting equipment on the ceiling, floor or walls are the customer's responsibility.

RADIO-PROTECTION

- Suitable radiological protection must be determined by a qualified radiological physicist in conformation with local regulations. GE does not take responsibility for the specification or provision of radio-protection.

THE UNDERSIGNED, HEREBY CERTIFIES THAT I HAVE READ AND APPROVED THE PLANS IN THIS DOCUMENT.		
DATE	NAME	SIGNATURE

CUSTOMER SITE READINESS REQUIREMENTS

REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION

Description	Document Number*
Product specific Pre-installation Manual	Refer to cover page
<small>*documents can be accessed in multiple languages at https://www.gehealthcare.com/support/manuals</small>	

- A mandatory component of this drawing set is the GE HealthCare Pre-installation manual. Failure to reference the Pre-installation manual will result in incomplete documentation required for site design and preparation.
- The items on the GE HealthCare Site Readiness Checklists listed below are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.

REQUIRED SITE-READINESS CHECKLISTS FOR SYSTEM PRE-INSTALLATION

Modality	Document Number*
Computerized Tomography	DOC2949059
Radiology, Radiology and Fluoroscopy, Mammography, Bone Mass Densitometry	DOC2949063
All modality Customer/Contractor Worksheet	DOC2949068
<small>*documents can be accessed in multiple languages at https://www.gehealthcare.com/support/manuals</small>	

- Any deviation from these drawings must be communicated in writing to and reviewed by your local GE HealthCare installation project manager prior to making changes.
- Make arrangements for any rigging, special handling, or facility modifications that must be made to deliver the equipment to the installation site. If desired, your local GE HealthCare installation project manager can supply a reference list of rigging contractors.
- New construction requires the following;
 1. Secure area for equipment,
 2. Power for drills and other test equipment,
 3. Restrooms.
- Provide for refuse removal and disposal (e.g. crates, cartons, packing)
- For CT systems it is required to minimize vibrations within the scan room. It is the customer's responsibility to contract a vibration consultant/engineer to implement site design modifications to meet the GE vibration specification. Refer to the system Pre-installation manual for vibration specifications.

ENVIRONMENT

ALTITUDE

- The system shall meet all functional and performance specifications when placed in a room that is at an elevation of -150 m to 3000 m [-492 ft to 9842.5 ft] above sea level.

MAGNETIC FIELD SPECIFICATIONS

- Limit the magnetic interference to guarantee specified imaging performance.

GANTRY:

- Ambient static magnetic fields less than 1 Gauss.
- Ambient AC magnetic fields less than 0.01 Gauss peak.

OPERATOR CONSOLE:

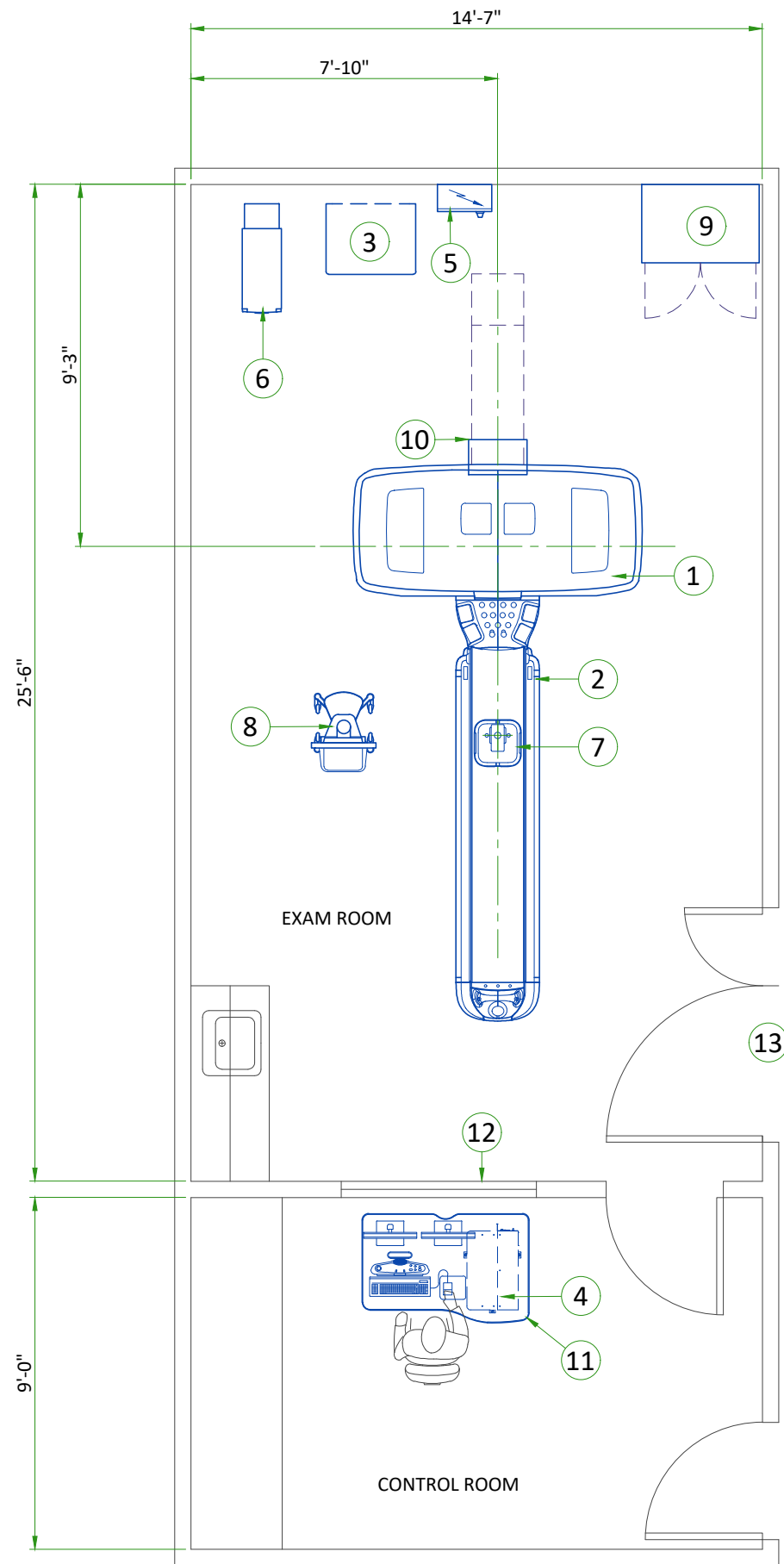
- Ambient static magnetic fields less than 10 Gauss.
- Use static dissipative vinyl.

MAXIMUM GANTRY AUDIBLE NOISE LEVEL

- The maximum ambient noise level is produced by the gantry during a CT scan acquisition.
- It is less than 70 dBA when measured at a distance of one meter from the nearest gantry surface, in any direction.

MAXIMUM CONSOLE AUDIBLE NOISE LEVEL

- The maximum ambient noise level is less than or equal to 56 dBA when measured 1m [3.3 ft] up and 1m [3.3 ft] away from the console at an ambient temperature of 26 °C [47 °F].



LEGEND

A	GE SUPPLIED	D	AVAILABLE FROM GE
B	GE SUPPLIED/CONTRACTOR INSTALLED	E	EQUIPMENT EXISTING IN ROOM
C	CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED	*	ITEM TO BE REINSTALLED FROM ANOTHER SITE

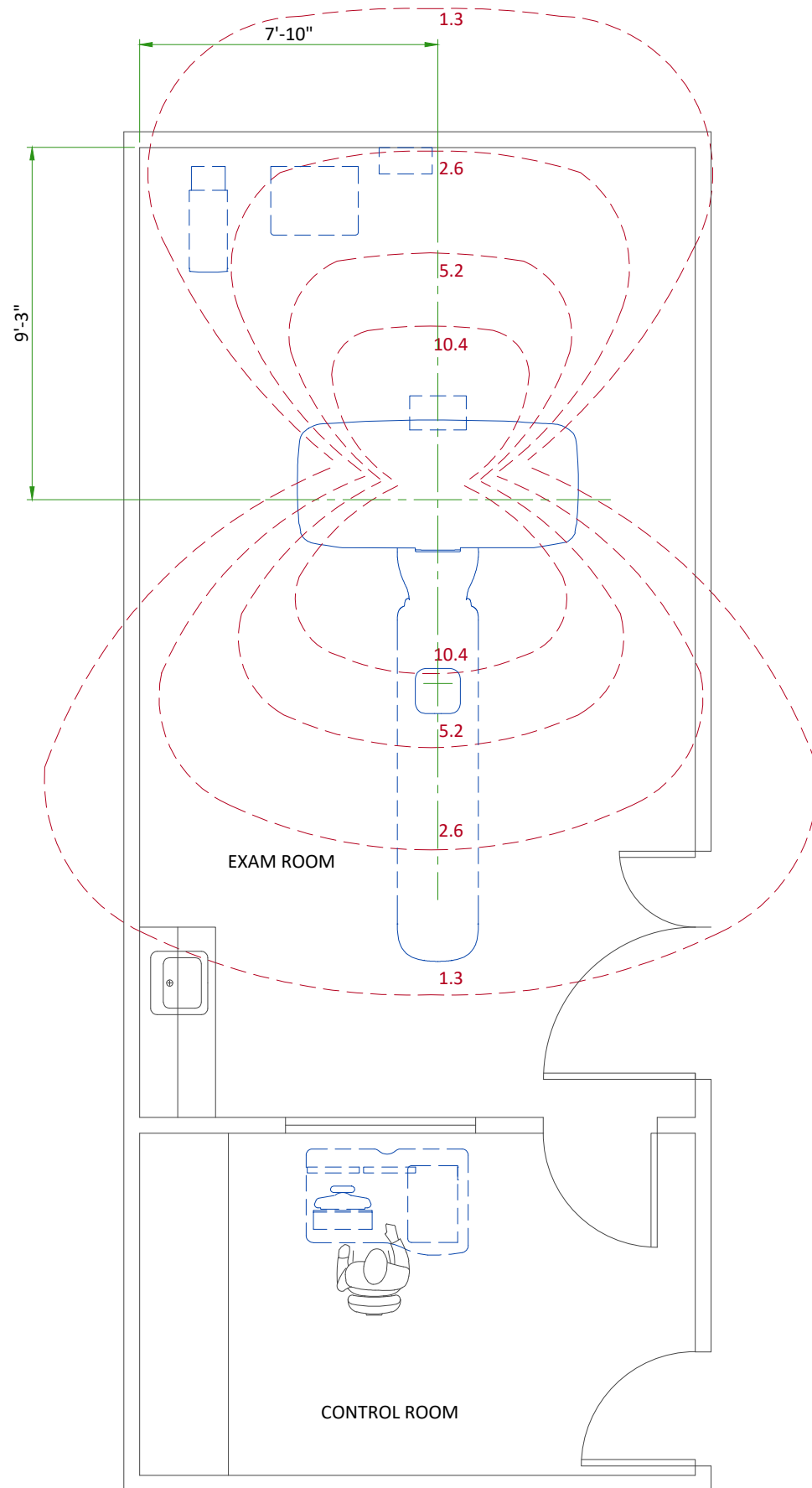
BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
A	1	GANTRY	33315	4062	9764	1842
A	2	GT2000 TABLE	-	1114	-	505
A	3	POWER DISTRIBUTION UNIT (PDU)	1706	805	500	365
A	4	OPEN CONSOLE	3207	142	940	64.5
B	5	MAIN DISCONNECT PANEL (MDP)	-	63	-	28.6
A	6	PARTIAL UPS 14.4 KVA	5122	609	1501.1	276
A	7	AUTO PATIENT POSITIONING DEPTH CAMERA	-	7	-	3.2
A	8	TROLLY CART MONITOR	426	-	125	-
A	9	STORAGE CABINET	-	90	-	41
A	10	REAR CABLE COVER	-	-	-	-
A	11	SMART WORKSPACE DESK	-	88	-	40
C	12	LEAD GLASS WINDOW				
C	13	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1118 mm x 2108 mm [44 in x 83 in], CONTINGENT ON A 2438 mm [96 in] CORRIDOR WIDTH				

EXAM ROOM HEIGHT

FINISHED FLOOR TO SLAB HEIGHT	TBD
FALSE CEILING HEIGHT	8'-9"

For Accessory Sales: (866) 281-7545 Options 1, 2, 1, 2 or mail to: gehaccessoriesales@ge.com

RADIATION PROTECTION LAYOUT



SHIELDING REQUIREMENTS SCALING

CHANGED PARAMETER (mAs)	MULTIPLICATION FACTOR (new mAs/100)
80 kV	0.24
100 kV	0.45
120 kV	0.71
140 kV	1.00
1 mm aperture	0.20
3 mm aperture	0.22
5 mm aperture	0.27
10 mm aperture	0.38
15 mm aperture	0.48
20 mm aperture	0.59
30 mm aperture	0.79
40 mm aperture	1.00

SHIELDING REQUIREMENTS:

Engage a qualified radiological health physicist to review your scan room shielding requirements, taking into consideration:

- Scatter radiation levels within the scanning room
- Equipment placement.
- Weekly projected work-loads (number of patients/day technique (kvp*ma))
- Materials used for construction of walls, floors, ceiling, doors, and windows.
- Activities in surrounding scan room areas.
- Equipment in surrounding scan room areas (e.g., film developer, film storage)
- Room size and equipment placement within the room relative to room size.

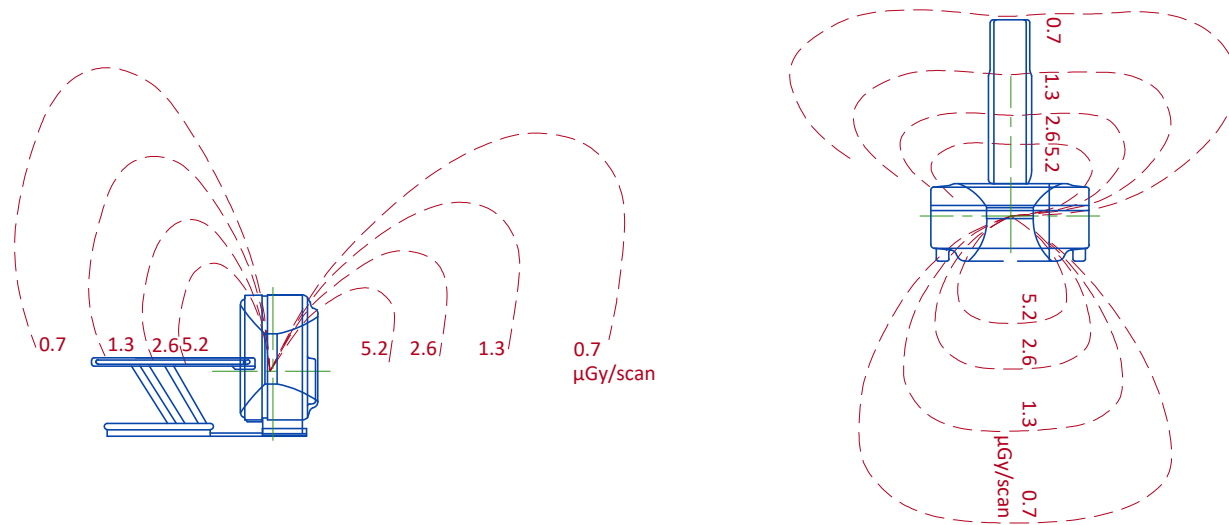
The illustrations on this page depict measured radiation levels within the scanning room, while scanning a 32 cm CTDI phantom placed on the patient table and using a large filter, with the technique shown. Use the mAs, kV and aperture scaling factors in the table shown here to adjust exposure levels to the scan technique used at the site.

Example: (using the illustration) The exposure level for a 120 kV, 800mA, 1 sec. scan at 1270 mm (50 in) away from the scan place is $10.4 \mu\text{Gy} \times 0.71 \times 800/100 = 59.2 \mu\text{Gy}$.

NOTE: Actual measurements can vary. Expected deviations equals $\pm 15\%$, except for the 5 mA and 1mm techniques, where variations may be greater (up to a factor of 2), due to the inherent deviation in small values. The maximum deviation anticipated for tube output equals $\pm 40\%$.

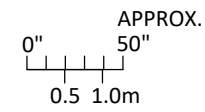
RADIATION SCATTER - HEAD PHANTOM

NOTE: 140 kV
100 mAs/scan
1 sec
40mm aperture



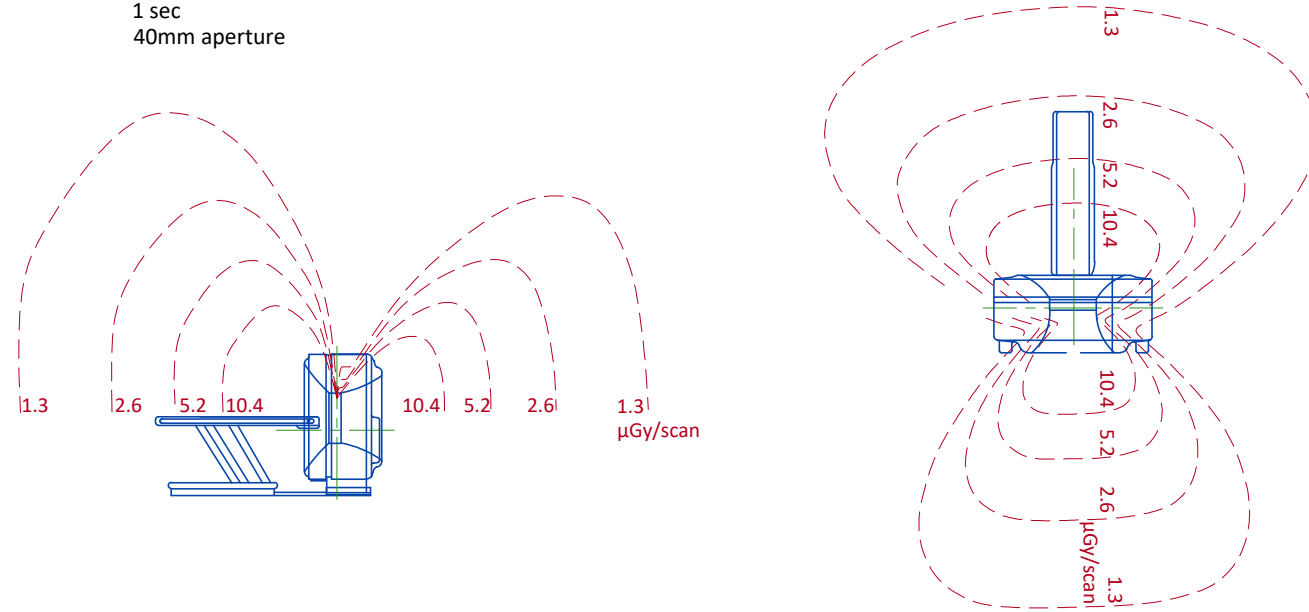
Elevation

Plan View



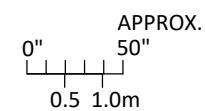
RADIATION SCATTER - BODY PHANTOM

NOTE: 140 kV
100 mAs/scan
1 sec
40mm aperture

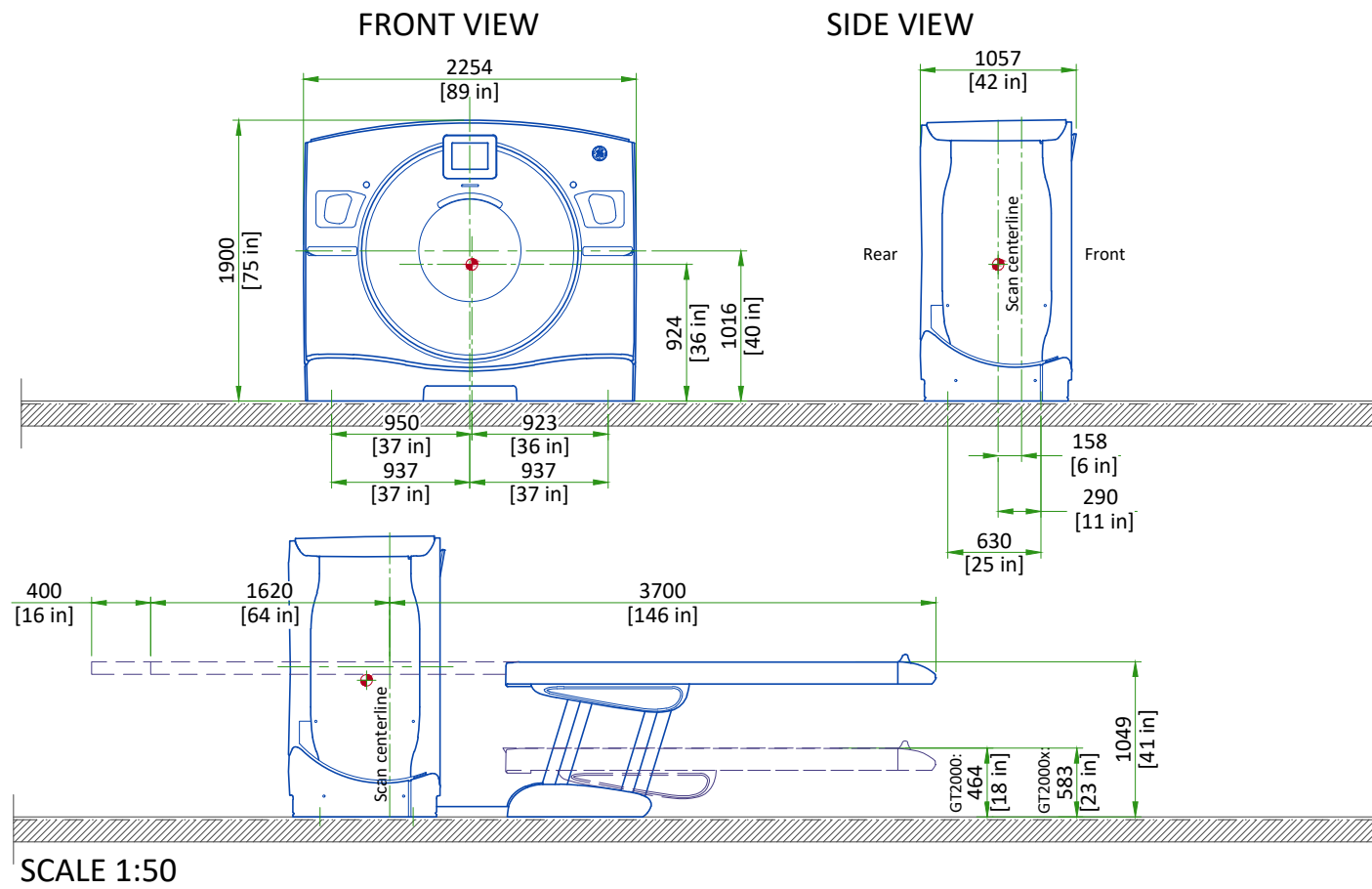


Elevation

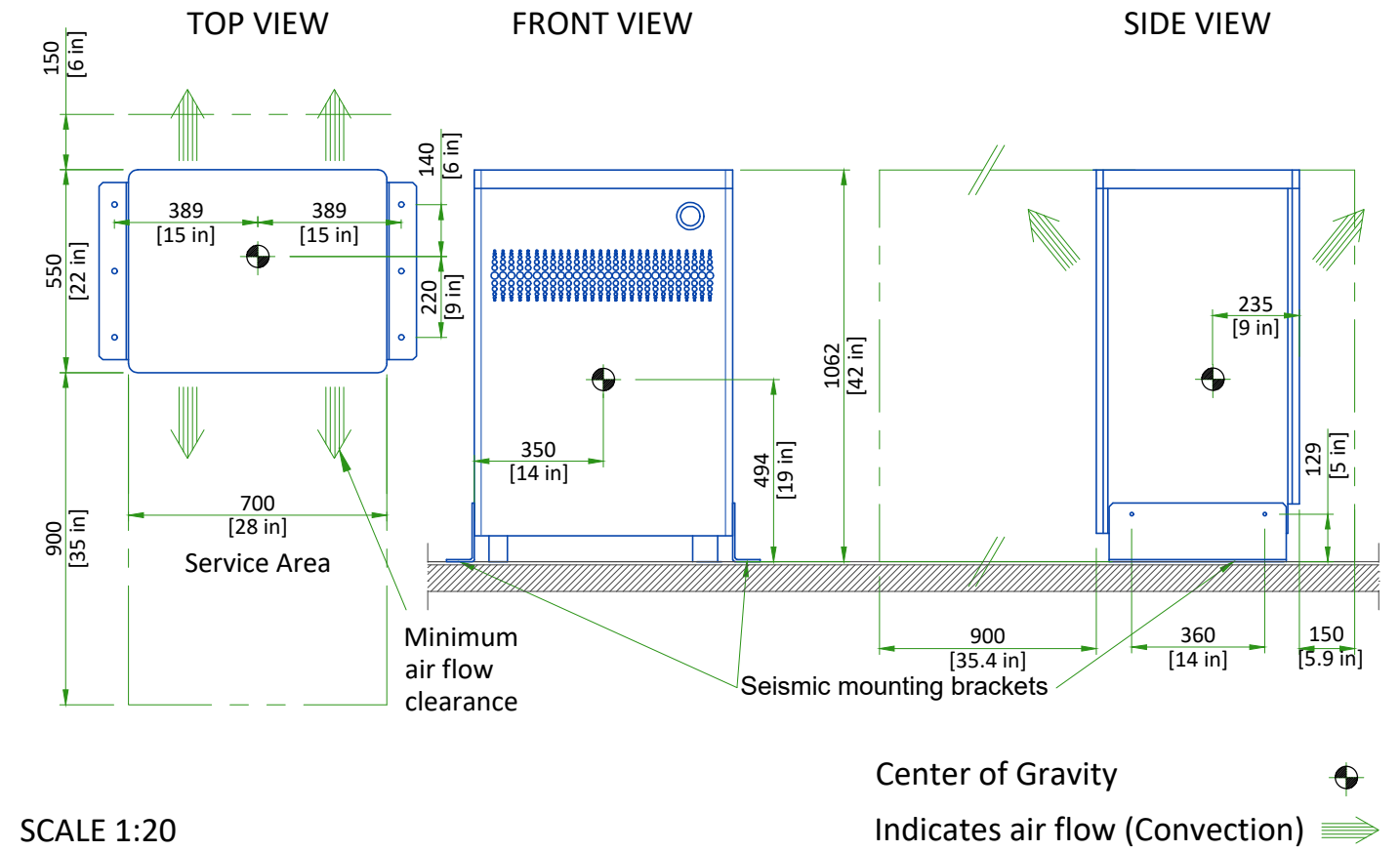
Plan View



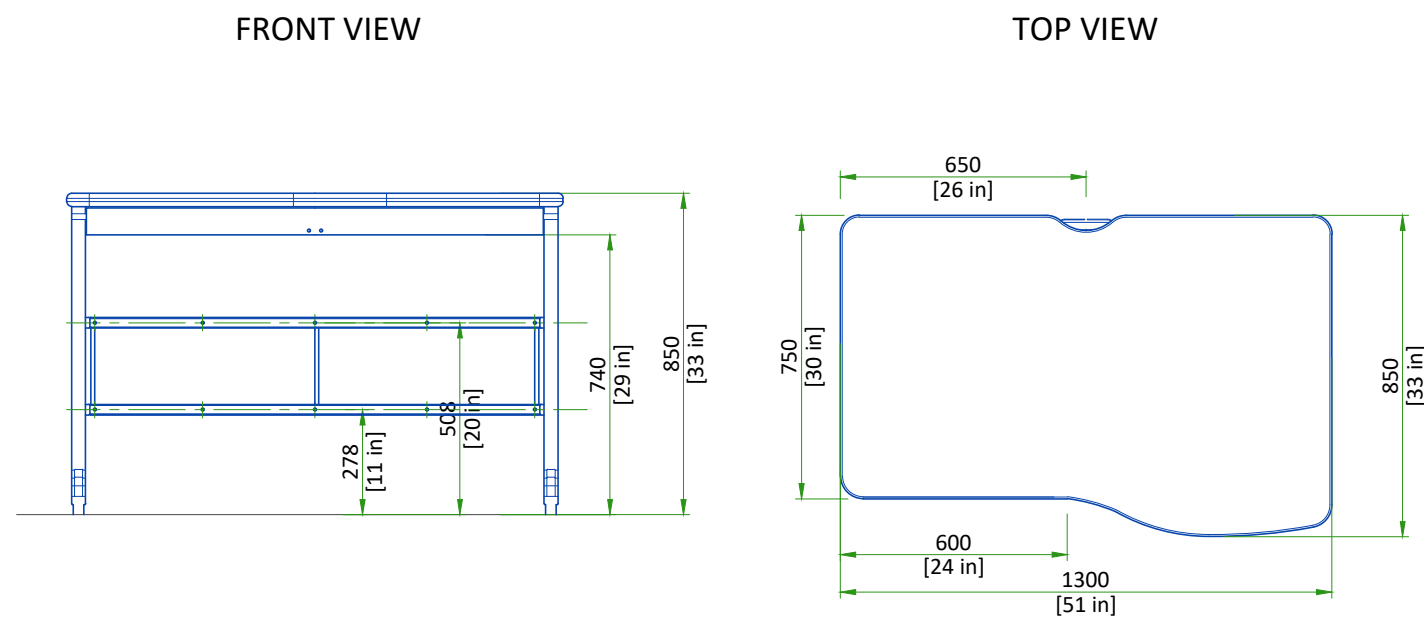
GANTRY WITH GT2000/GT2000X TABLE



POWER DISTRIBUTION UNIT (PDU)

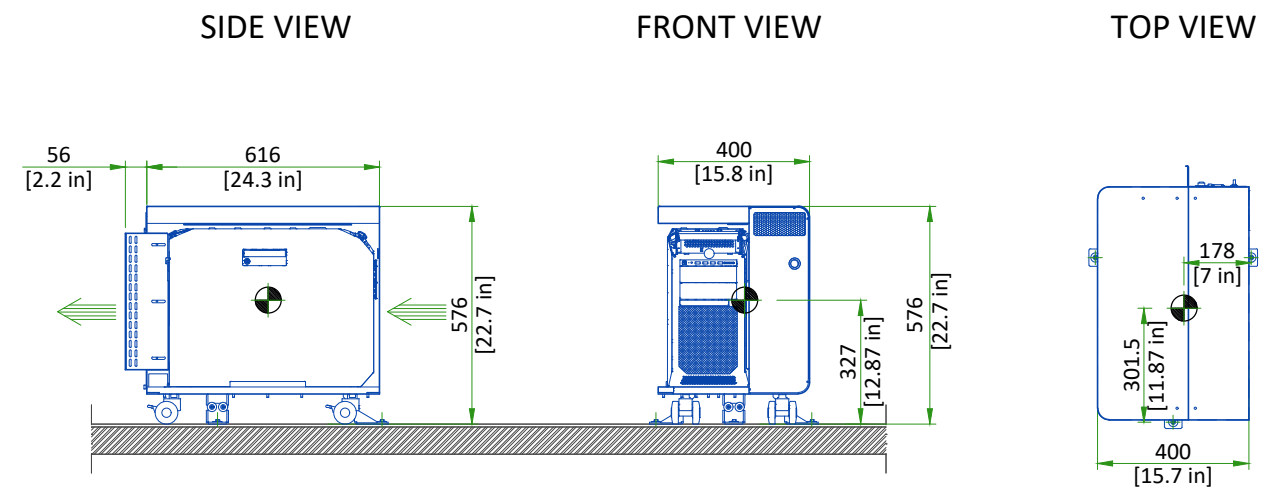


AURORA SWS TABLE



(Table weight: 40 kg)

OPEN CONSOLE WITH Z8G4 HOST PC

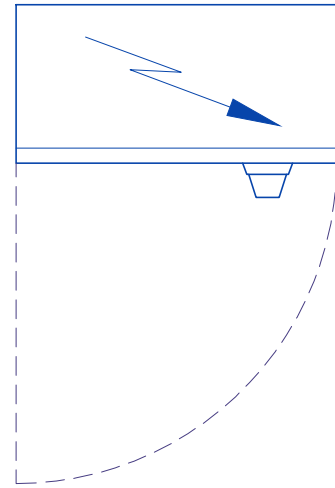


Weight: 64.5 kg [142.2 lbs]
 SCALE 1:20

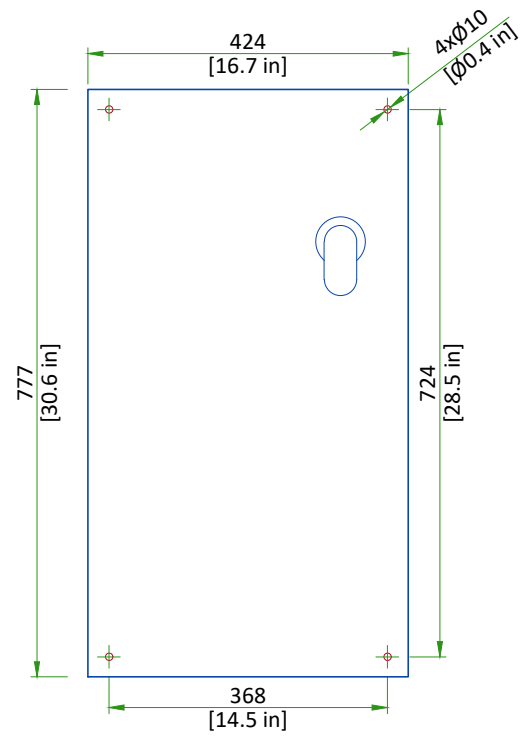
Center of Gravity
 Indicates air flow (Convection)

MAIN DISCONNECT PANEL

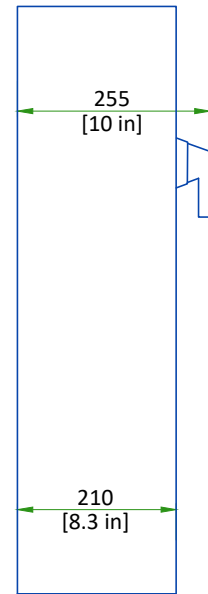
TOP VIEW



FRONT VIEW



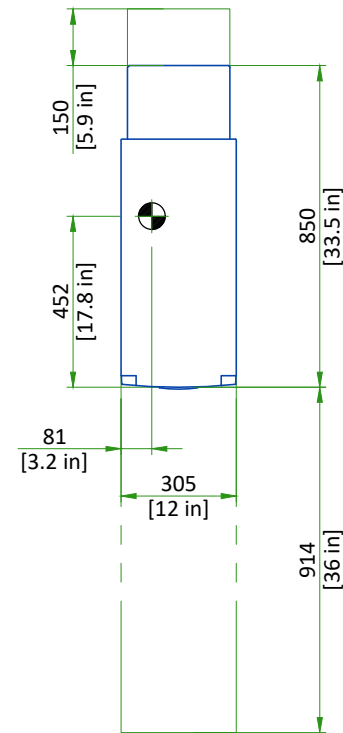
SIDE VIEW



SCALE 1:10

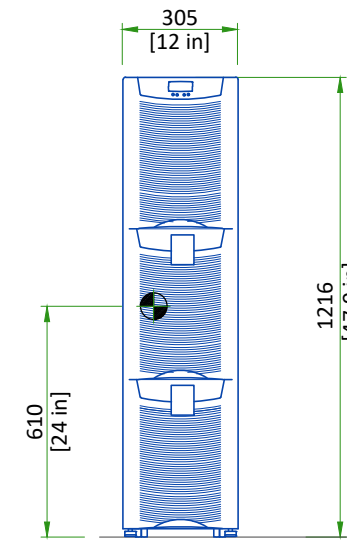
UNINTERRUPTIBLE POWER SUPPLY

TOP VIEW

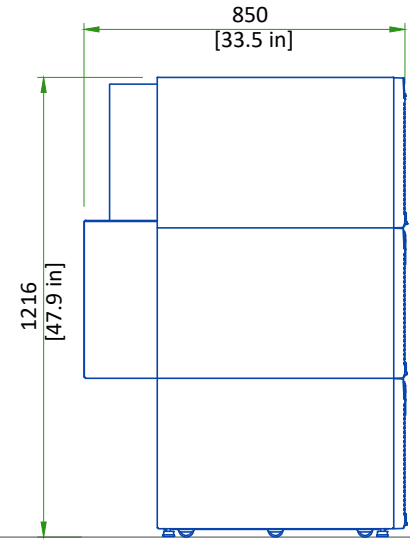


SCALE 1:20

FRONT VIEW



SIDE VIEW



Center of Gravity

DELIVERY

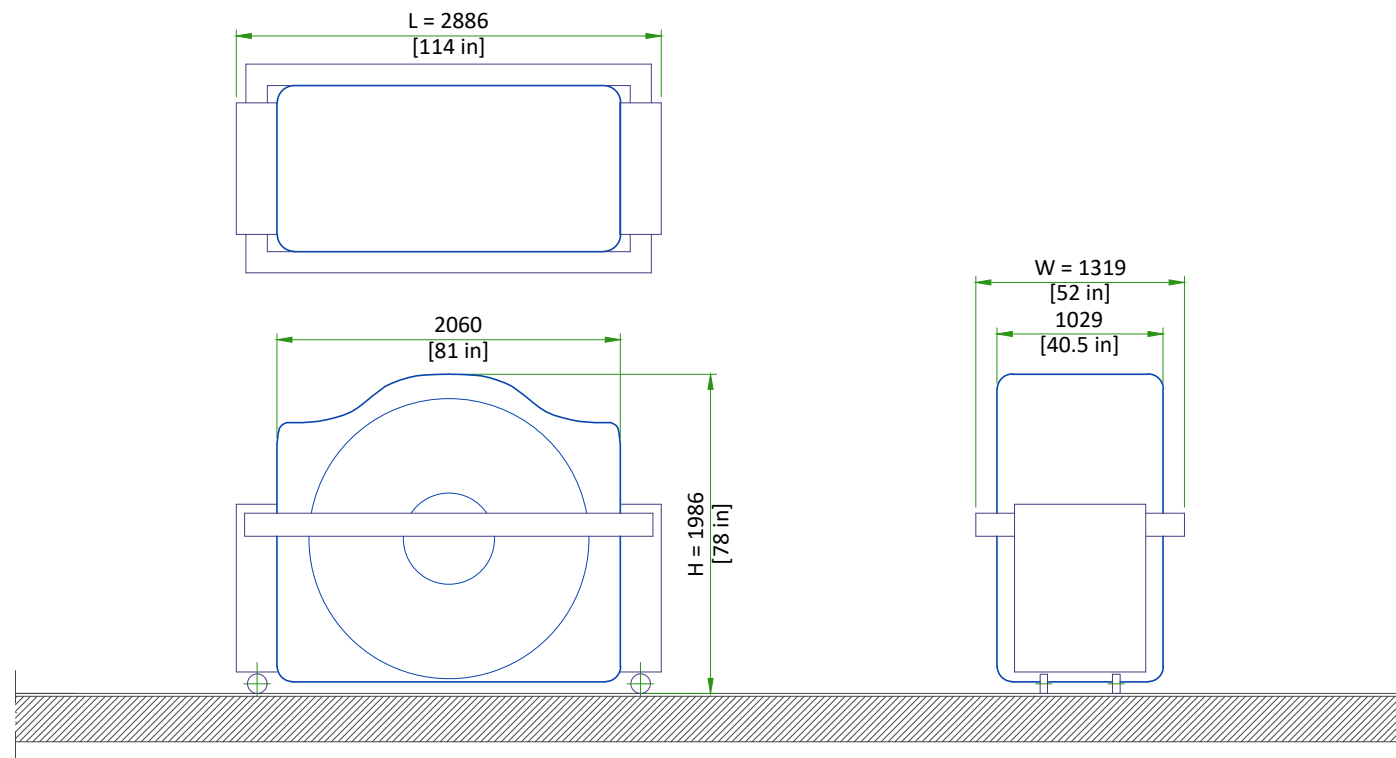
THE CUSTOMER/CONTRACTOR SHOULD:

- Provide an area adjacent to the installation site for delivery and unloading of the GE equipment.
- Ensure that the dimensions of all doors, corridors, ceiling heights are sufficient to accommodate the movement of GE equipment from the delivery area into the definitive installation room.
- Ensure that access routes for equipment will accommodate the weights of the equipment and any transportation, lifting and rigging equipment.
- Ensure that all necessary arrangements for stopping and unloading on public or private property not belonging to the customer have been made.

DIMENSIONS OF DELIVERY WITH DOLLY TRANSPORT EQUIPMENT

EQUIPMENT	DIMENSIONS			WEIGHT	
GANTRY	LENGTH	2886 mm	114 in	1982 kg	4370 lbs
	WIDTH	1319 mm	52 in		
	HEIGHT	1986 mm	78 in		
GT2000/GT2000X TABLE	LENGTH	2997 mm	118 in	632 kg	1392 lbs
	WIDTH	762 mm	30 in		
	HEIGHT	1143 mm	45 in		

GANTRY DELIVERY

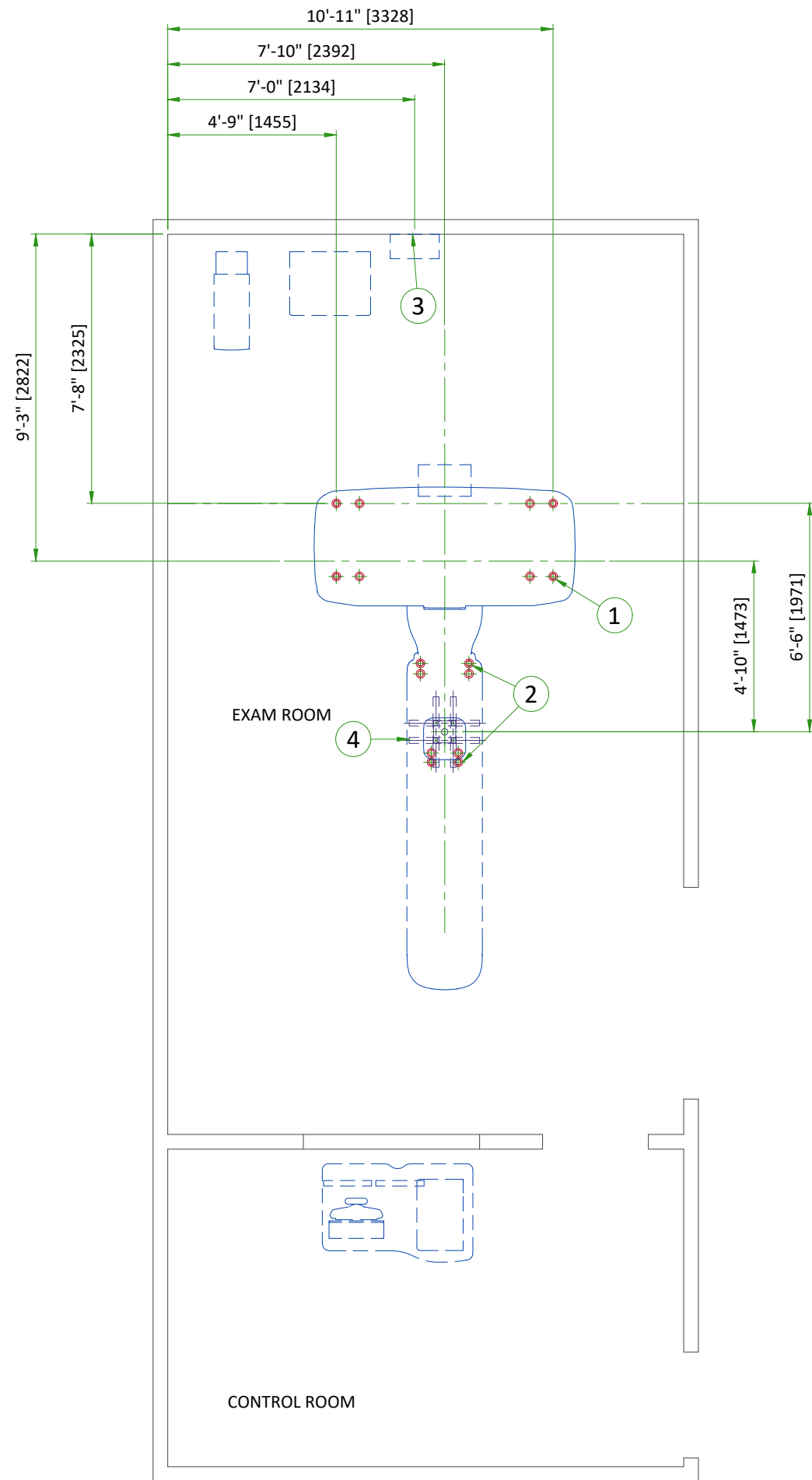


- The gantry is shipped on a dolly equipped with elevating casters (normal shipping configuration).

NOT TO SCALE

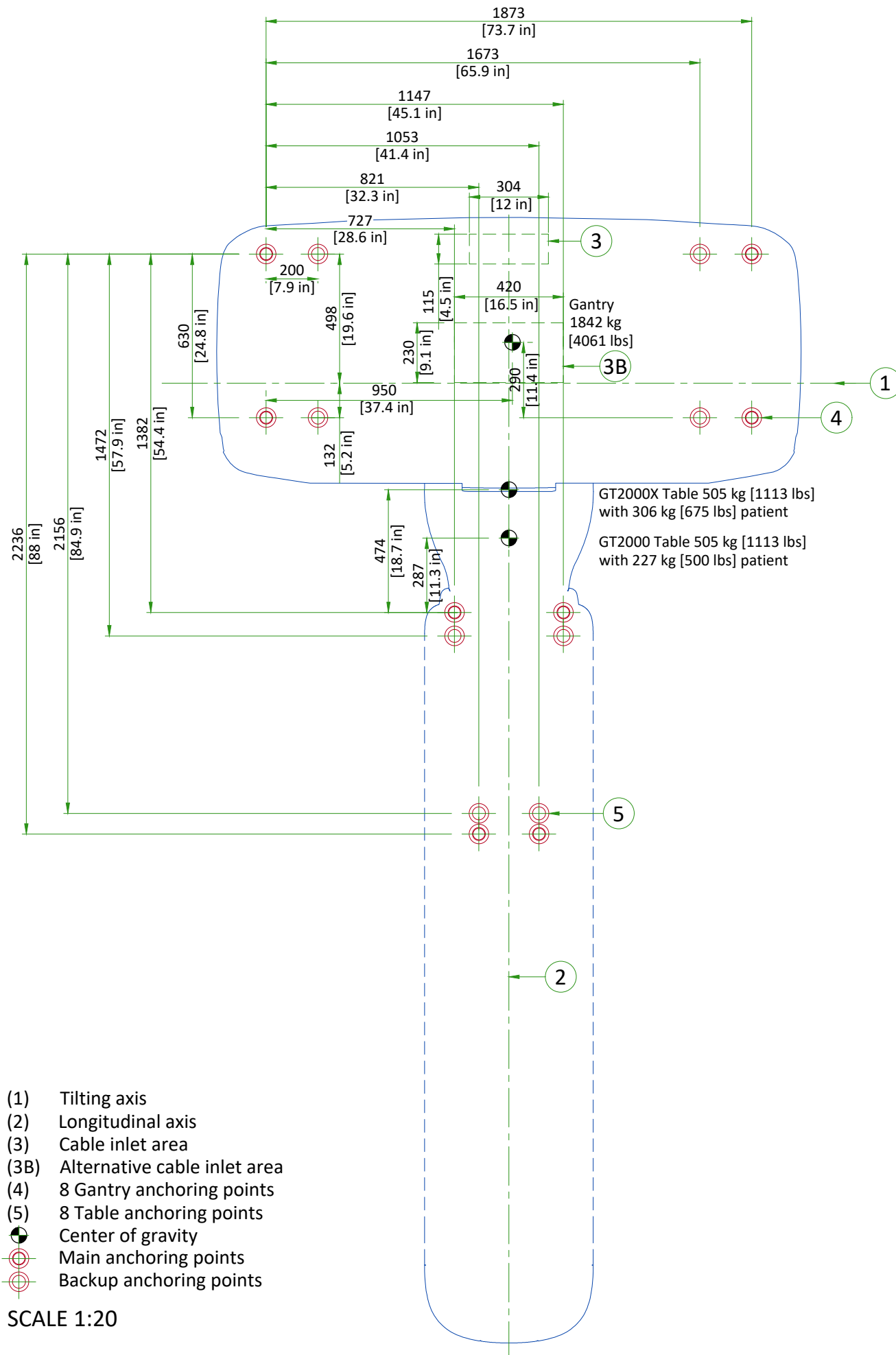
STRUCTURAL NOTES

- all steel work and parts necessary to support ceiling mounted equipment is to be supplied by the customer or his contractors.
- methods of support for the steelwork that will permit attachment to structural steel or through bolts in concrete construction should be favored. Do not use concrete or masonry anchors in direct tension.
- all units that are wall mounted or wall supported are to be provided with supports where necessary. Wall supports are to be supplied and installed by the customer or his contractors. See plan and detail sheets for suggested locations and mounting hole locations.
- all ceiling mounted fixtures, air vents, sprinklers, etc. To be flush mounted, or shall not extend more than 1/4" below the finished ceiling.
- floor slabs on which equipment is to be installed must be level to 1/4" in 10'-0"
- dimensions are to finished surfaces of room.
- customers contractor must provide all penetrations in post tension floors.
- customers contractor must provide and install any non-standard anchoring. Documents for standard anchoring methods are included with GE equipment drawings for geographic areas that require such documentation.
- customers contractor must provide and install hardware for "through the floor" anchoring and/or any bracing under access floors. This contractor must also provide floor drilling that cannot be completed because of an obstruction encountered while drilling by the GE installer such as rebar etc.
- it is the customer's responsibility to perform any floor or wall penetrations that may be required. The customer is also responsible for ensuring that no subsurface utilities (e.g., electrical or any other form of wiring, conduits, piping, duct work or structural supports (i.e. post tension cables or rebar)) will interfere or come in contact with subsurface penetration operations (e.g. drilling and installation of anchors/screws) performed during the installation process. To ensure worker safety, GE installers will perform surface penetration operations only after the customer's validation and completion of the "GE surface penetration permit"



ITEM	DESCRIPTION
(CONTRACTOR SUPPLIED & INSTALLED)	
1	Gantry leveling pads. See Structural Detail
2	Table leveling pads. See Structural Detail
3	Support Backing, locate as shown
4	Unistrut or equivalent for mounting patient positioning camera mounting plate on ceiling. Support designed and supplied by customer. Supports to be at least 2' [610mm] in length and located per dimensions on Positioning Camera Mounting Plate structural detail.
Dimension Precision Note: Metric dimensions should be referenced when positioning the CT gantry alignment tool.	
Camera Position Note: Position of camera(s) must be calculated and verified by GEHC PMI or Field Engineer for final location accuracy.	

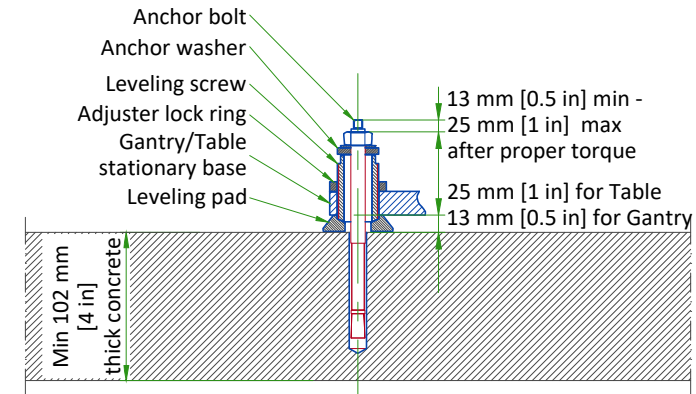
ANCHORING/LOADING DISTRIBUTION TO THE FLOOR



SCALE 1:20

FLOOR REQUIREMENTS

GE SUPPLIED TABLE/GANTRY ANCHORS



NOTES:

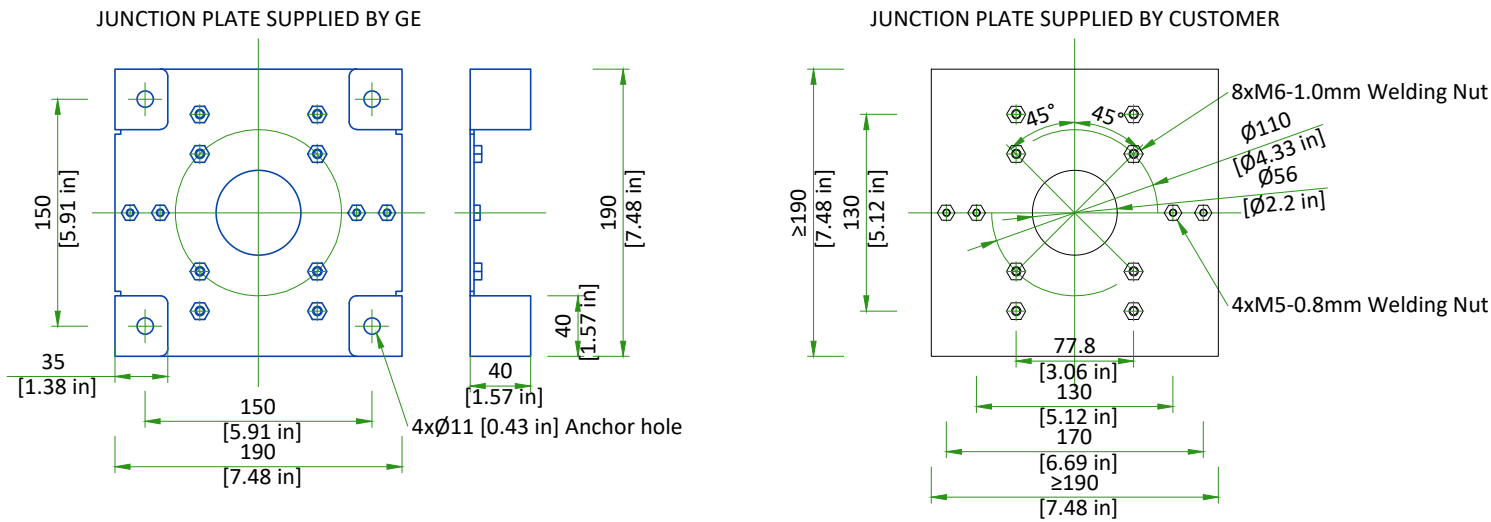
- The distance from central line of anchor to the edge of concrete basement of Gantry/Table should not be less than 178 mm [7 in].
- Torque anchor to 54 Nm (40 ft-lb)

FINISHED FLOOR REQUIREMENTS

- Installation requires a finish floor in the scan and control rooms
- The floor surface in the scan room directly under the gantry and table must be level.
- The floor levelness tolerance of the floor surface that the gantry and table will rest on is 6 mm [1/4 in] over a 3048 mm [10 ft] distance.
- Shims should not be used to compensate for a floor that does not meet this requirement.
- Eight or more floor covering openings that are 102 mm [4 in] in diameter are made to ensure the table and gantry rest on a solid surface. These floor penetrations can be sealed if required.
- These requirements apply to all installation types.

NOT TO SCALE

POSITIONING CAMERA MOUNTING PLATE



GE will provide a Junction Plate, shipped with the system. If the Junction Plate supplied by GE can not meet the requests of the customer or the building structure, the customer's architect can design and install the Junction Plate (refer to the right side of the detail) with sufficient strength to hold the camera assembly.

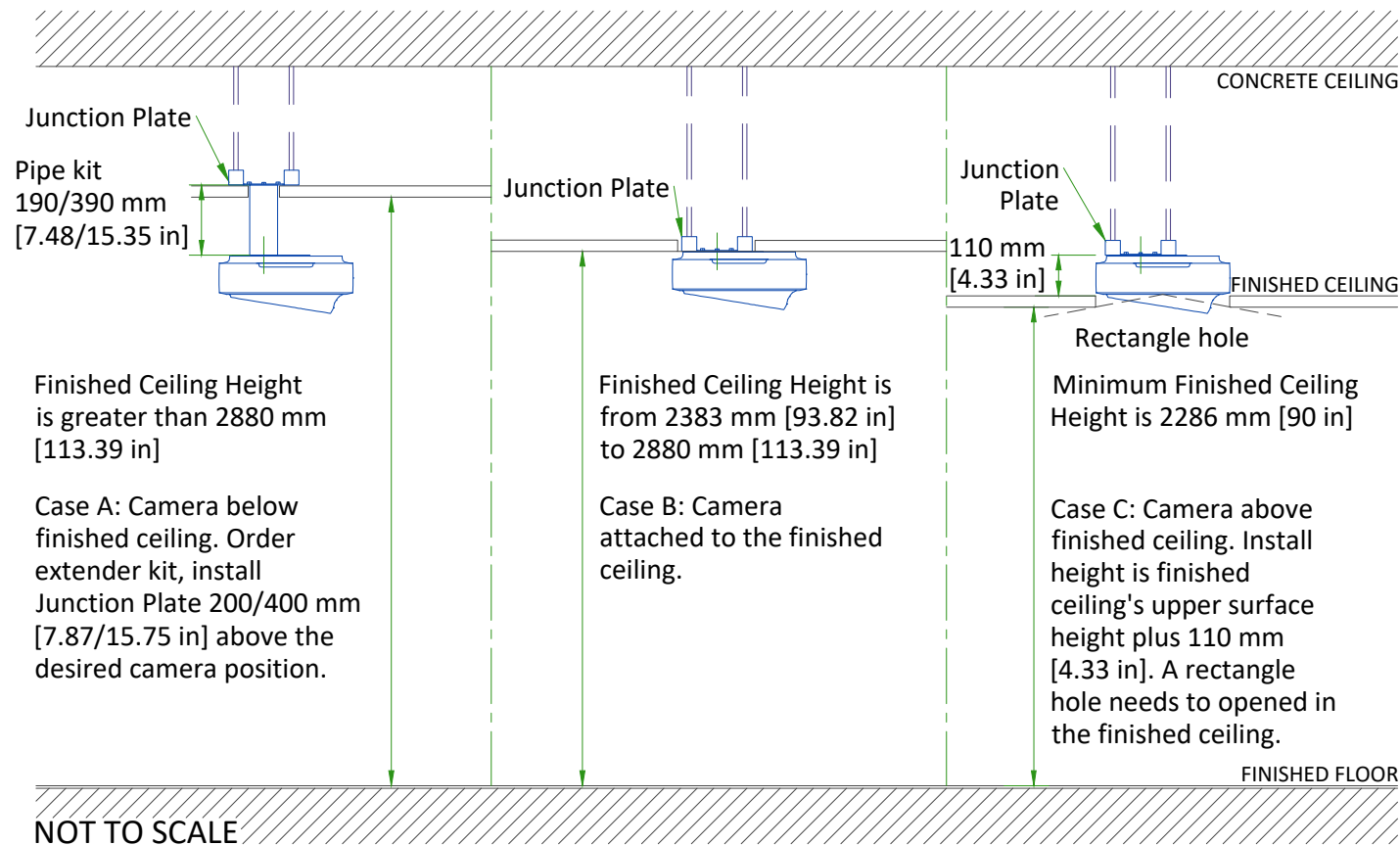
Material: Steel material with a min. tensile strength of 375 MPa
Plate thickness: 2.5 mm [0.10 in]

Welding Nut: Meet GB-T 13681-1992 requirement or equivalent		
	M5-0.8 mm	M6-1.0 mm
Thickness (mm [in])	3.7-4 [0.15-0.16]	4.7-5 [0.19-0.20]
Pledge load (N)	11000	15500

NOTE: The system manufacturer will NOT inspect and test that the fixing methods between the Junction Plate and the building structure meet the loading capacity specified (recommend a 6x safety factor), which is the customer's responsibility. The weight of the camera assembly is approximately 3.2 kg [7.05 lbs], suggest the safety load on the Junction Plate is no less than 20 kg [44.09 lbs]. If the Anchor Bolt is not applicable for site requirement, the customer's architect can consider other methods (such as welding...) to fix the Junction Plate. Presetting for site preparation of the Camera installation, customer had better install the Junction Plate in advance before the system installation.

NOT TO SCALE

POSITIONING CAMERA INSTALLATION POSITION



NOT TO SCALE

TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

	EXAM ROOM			CONTROL ROOM		
	Min	Recommended	Max	Min	Recommended	Max
Temperature	18°C	22°C	26°C	18°C	22°C	26°C
	64°F	72°F	79°F	64°F	72°F	79°F
Temperature gradient	≤ 3°C/h			≤ 3°C/h		
	≤ 5°F/h			≤ 5°F/h		
Relative humidity (1)	30% to 60%			30% to 60%		
Humidity gradient	≤ 5%/h			≤ 5%/h		

STORAGE CONDITIONS

Temperature	0°C to +30°C
	+32°F to +86°F
Temperature gradient	≤ 3°C/h
	≤ 5°F/h
Relative humidity (1)	≤ 70%
Humidity gradient	≤ 5%/h

Storage longer than 6 months is not recommended.

(1) Non-condensing

AIR RENEWAL

According to local standards.

NOTE

In case of using air conditioning systems that have a risk of water leakage it is recommended not to install it above electric equipment or to take measures to protect the equipment from dropping water.

HEAT DISSIPATION

ROOM	DESCRIPTION	HEAT DISSIPATION (kW)	HEAT DISSIPATION (BTU/hr)
		MAX	MAX
Exam Room	Gantry and Table (Without patient)	9.76	33292
	TOTAL	0'-10"	33292
Exam/Technical Room*	Power Distribution Unit (PDU)	0.50	1708
	Partial UPS	1.50	5122
	TOTAL	0'-2"	6830
Control Room	Console with 2 LCD monitors	0.94	3200
	TOTAL	0'-1"	3200

* Technical Room is not mandatory, the placements of these elements are recommended in the Exam Room.

ELECTRICAL NOTES

1. All wires specified shall be copper stranded, flexible, thermo-plastic, color coded, cut 10 foot long at outlet boxes, duct termination points or stubbed conduit ends. All conductors, power, signal and ground, must be run in a conduit or duct system. Electrical contractor shall ring out and tag all wires at both ends. Wire runs must be continuous copper stranded and free from splices.
 - 1.1. Aluminum or solid wires are not allowed.
2. Wire sizes given are for use of equipment. Larger sizes may be required by local codes.
3. It is recommended that all wires be color coded, as required in accordance with national and local electrical codes.
4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.
5. Convenience outlets are not illustrated. Their number and location are to be specified by others. Locate at least one convenience outlet close to the system control, the power distribution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.
6. General room illumination is not illustrated. Caution should be taken to avoid excessive heat from overhead spotlights. Damage can occur to ceiling mounting components and wiring if high wattage bulbs are used. Recommend low wattage bulbs no higher than 75 watts and use dimmer controls (except MR). Do not mount lights directly above areas where ceiling mounted accessories will be parked.
7. Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need for greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths point to point).
8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local electrical codes.
9. A special grounding system is required in all procedure rooms by some national and local codes. It is recommended in areas where patients might be examined or treated under present, future, or emergency conditions. Consult the governing electrical code and confer with appropriate customer administrative personnel to determine the areas requiring this type of grounding system.
10. The maximum point to point distances illustrated on this drawing must not be exceeded.
11. Physical connection of primary power to GE equipment is to be made by customers electrical contractor with the supervision of a GE representative. The GE representative would be required to identify the physical connection location, and insure proper handling of GE equipment.
12. GEHC conducts power audits to verify quality of power being delivered to the system. The customer's electrical contractor is required to be available to support this activity.

- All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied and installed by customers electrical contractor.
- Conduit and duct runs shall have sweep radius bends
- Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible to reduce run length.
- Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.
- All ductwork must meet the following requirements:
 1. Ductwork shall be metal with dividers and have removable, accessible covers.
 2. Ductwork shall be certified/rated for electrical power purposes.
 3. Ductwork shall be electrically and mechanically bonded together in an approved manner.
 4. PVC as a substitute must be used in accordance with all local and national codes.
- All openings in raceway and access flooring are to be cut out and finished off with grommet material by the customers contractor.
- General contractor to insert pull cords for all cable run conduits between the equipment room and the operators control room.
- 10 foot pigtails at all junction points.
- Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.

CONNECTIVITY REQUIREMENTS

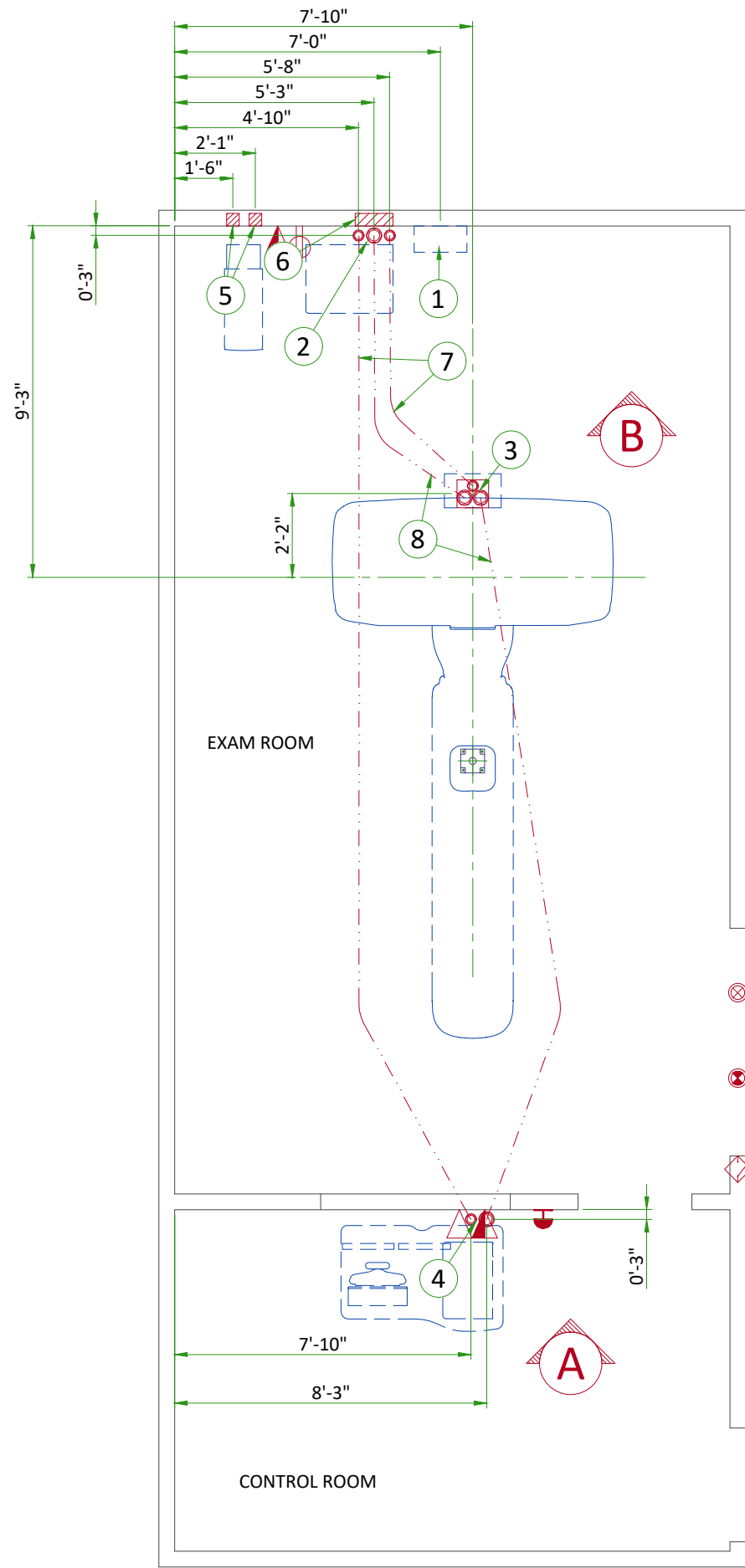
Your new GE Healthcare imaging modality will require local and remote connectivity to enable our full range of digital support:

- Local connectivity - This allows your system to connect to local devices such as PACS and modality worklist. We will require network information to configure the system(s), and a live ethernet port(s) prior to the delivery of the system(s).
- Remote connectivity - Your GE Healthcare service warranty includes InSite™ (applicable to InSite capable products), a powerful broadband-based service which enables digital tools that can help guard your hospital against equipment downtime and revenue loss by quickly connecting you to a GE Healthcare expert.

Depending on product family and software version, imaging systems can be connected in one of the following methods:

1. TLS over TCP Port 443 (Preferred method for new products) via:
 - a. DNS resolution
 - b. Customer-provided Proxy or
 - c. GE Proxy (Available in some regions)
2. Site-to-Site IPsec VPN tunnel

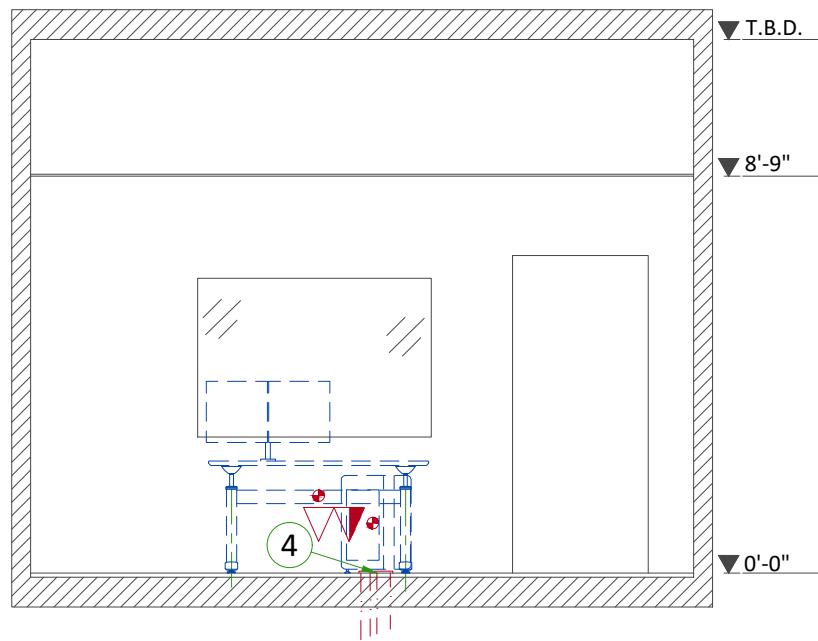
Please provide the GE project manager with the contact information for the resource that can provide information required to set up these connections. GEHC will send out communication to these contacts, which will include the project's Connectivity requirements, and a Connectivity form. This form will need to be completed and returned to GEHC prior to delivery of the system to ensure the system is tested and connectivity is enabled prior to the completion of the installation.



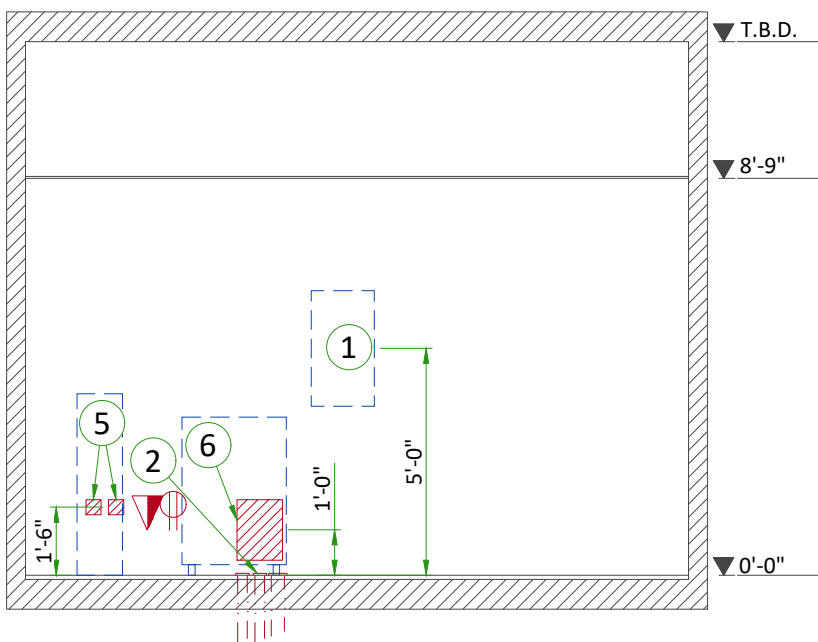
Item	Electrical Layout Item List
1	Main disconnect panel (MDP)
2	Suitable bushings & lock nuts (Power Distribution Unit)
3	Suitable bushings & lock nuts (Gantry)
4	Suitable bushings & lock nuts (Operator's Console)
5	4" x 4" x 4" [100 x 100 x 100] box (Partial UPS)
6	12" x 16" x 4" [150 x 150 x 100] box (Power Distribution Unit)
7	2 1/2" [63] conduit below floor
8	3 1/2" [90] conduit below floor
9	Cable inlet above ceiling (Express Camera)

ITEM	QTY	Electrical Outlet Legend
Customer/contractor supplied and installed items unless otherwise specified. Height above floor determined by local codes unless otherwise specified.		
⊕		Duplex hospital grade, dedicated wall outlet 120-v, single phase power
△		Dedicated telephone line(s)
▲		Network outlet
⊕		System emergency off (SEO), (recommended height 1.2m [48"] above floor)
⊗		X-Ray room warning light control panel
⊙		X-Ray ON lamp (L1) - 24V
◇		Door interlock switch (needed only if required by state/local codes)

Additional Conduit Runs (Contractor Supplied and Installed)					
From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size		
			In.	mm	
3 Phase Power	1 Main Disconnect Panel	1	As req'd	As req'd	
	Emergency Off	1	1/2	13	
1 Main Disconnect Panel	6 Power Distribution Unit	1	As req'd	As req'd	
	Door Switch	1	1/2	13	
6 Power Distribution Unit	Warning Light Control	1	1/2	13	
		1	1/2	13	
Warning Light	4 Partial UPS	1	1 1/4	30	
1 Phase Power		1	2	50	



A



B

POWER REQUIREMENTS

POWER SUPPLY	3 PHASES+G 380/400/420/440/460/480 V ± 10%
FREQUENCIES	50/60 Hz ± 3 Hz
MAXIMUM POWER DEMAND	150 kVA
AVERAGE (CONTINUOUS) POWER DEMAND	11 kVA
POWER FACTOR	0.85

- Power supply should come into a Main Distribution Panel (MDP) containing the protective units and controls.
- The section of the supply cable should be calculated in accordance with its length and the maximum permissible voltage drops.
- There must be discrimination between supply cable protective device at the beginning of the installation (main low-voltage transformer side) and the protective devices in the MDP.

SUPPLY CHARACTERISTICS

- Power input must be separate from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...).
- All equipment (lighting, power outlets, etc...) installed with GE system components must be powered separately.
- The minimum recommended transformer size for a dedicated distribution transformer provided for the scanner is 225 kVA, rated 2.4% regulation at unity power factor.
- Phase imbalance 2% maximum.
- Transients must be less than 1500V peak. (on a 400V line)

GROUND SYSTEM

- System of equipotential grounding.
- Equipotential: The equipotential link will be by means of an equipotential bar. This equipotential bar should be connected to the protective earth conductors in the ducts of the non GE cableways and to additional equipotential connections linking up all the conducting units in the rooms where GE system units are located.

CABLES

- Power and cable installation must comply with the distribution diagram.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- The cables from signaling and remote control (Y, SEO, L...) will go to MDP with a pigtail length of 1.5m, and will be connected during installation. Each conductor will be identified and isolated (screw connector).

CABLEWAYS

The general rules for laying cableways should meet the conditions laid down in current standards and regulations, with regard to:

- Protecting cables against water (cableways should be waterproof).
- Protecting cables against abnormal temperatures (proximity to heating pipes or ducts).
- Protecting cables against temperature shocks.
- Replacing cables (cableways should be large enough for cables to be replaced).
- Metal cableways should be grounded.

POWER DISTRIBUTION

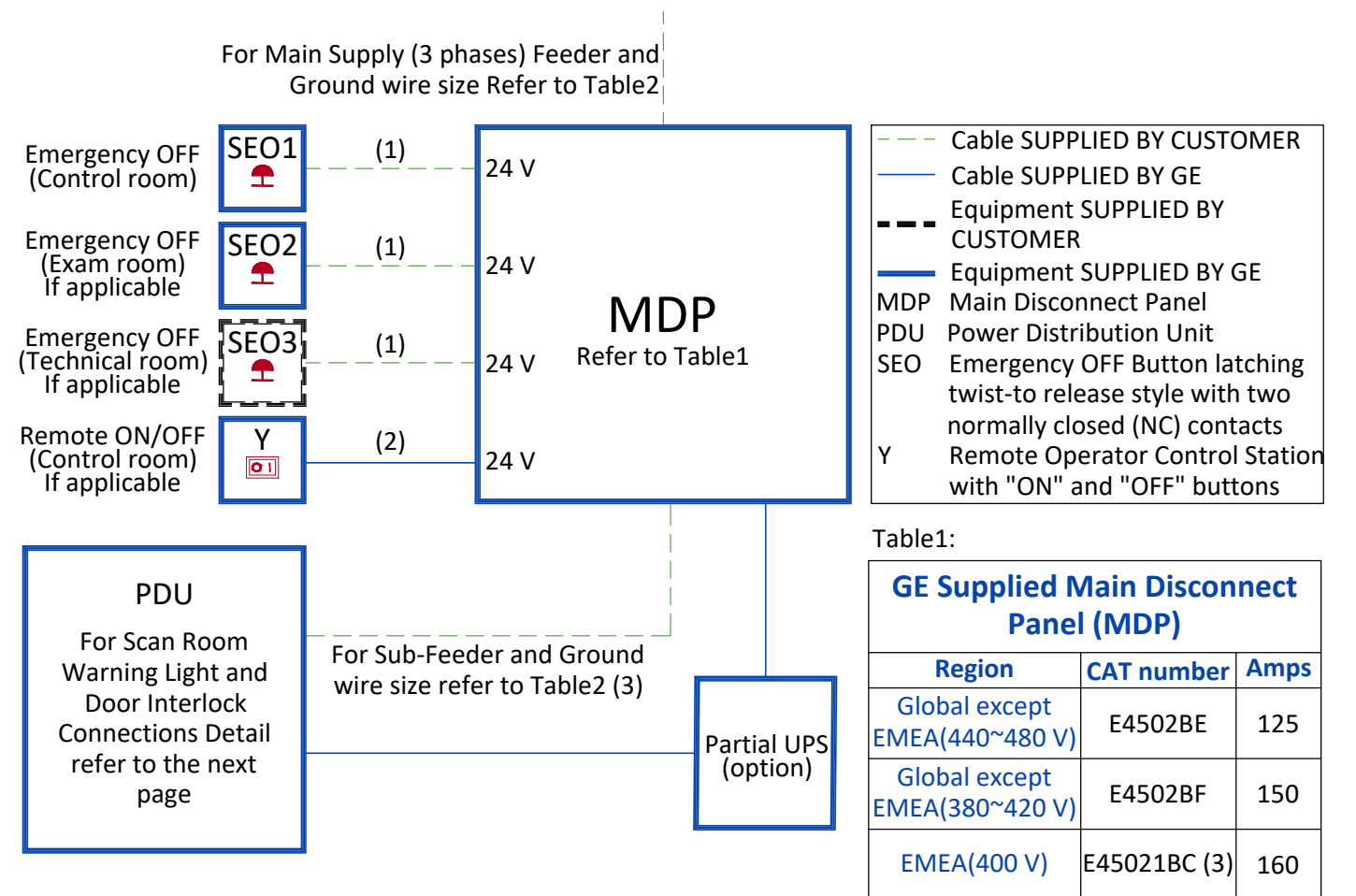


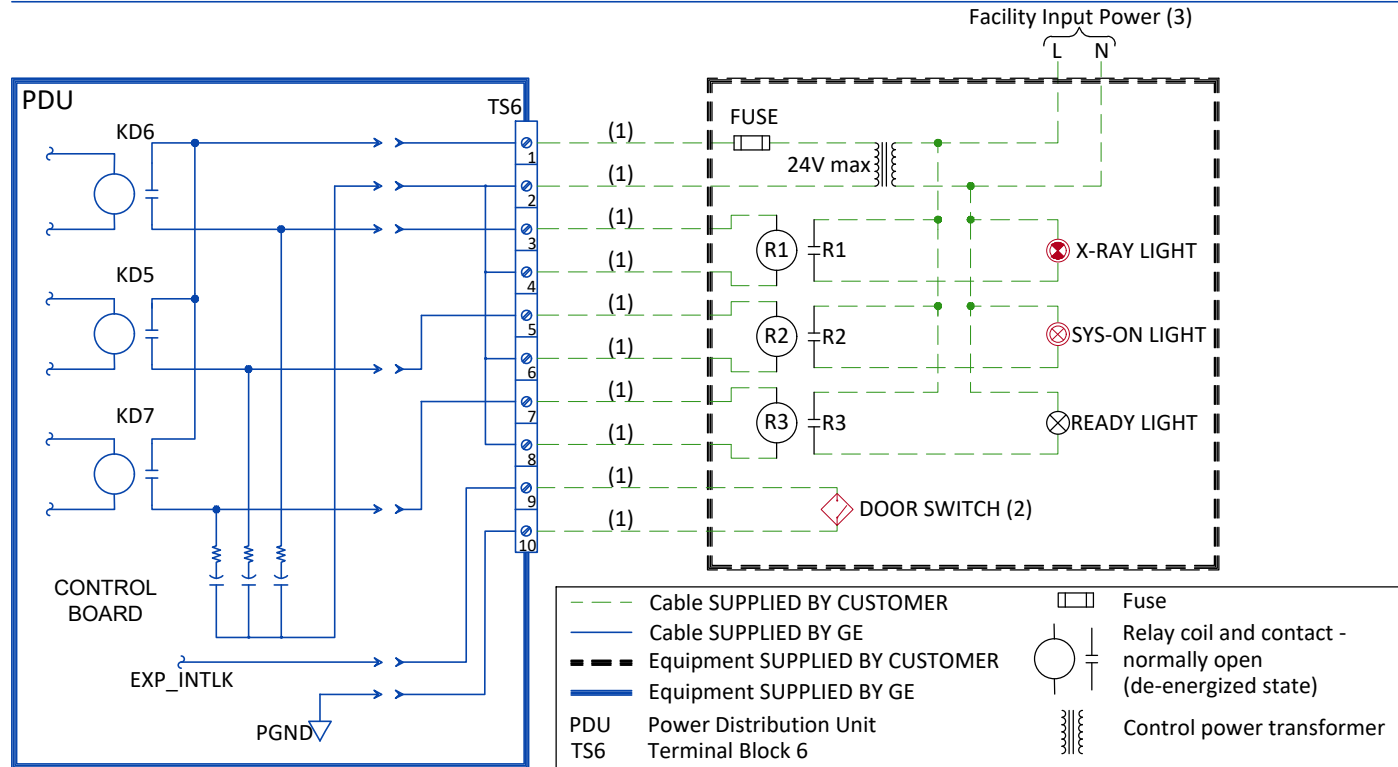
Table2:

Feeder Table						
The information below assumes the use of copper wire, rated 75 C and run in steel conduit. All ampacity is determined in accordance with the National Electrical Code (NFPA 70), Table 310-16 (2002). The ampacity of the circuit protection device listed above determines the minimum feeder size, except where total source regulation limits require a larger size. If the wire size does not match the lists below, please select the nearest wire size as per to local standards.						
Feeder length from Power Substation to MDP - ft (m)	Minimum Wire Size, AWG or MCM (mm ²)/VAC					
	380 VAC	400 VAC	420 VAC	440 VAC	460 VAC	480 VAC
50 (15)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)	1 (45)	1 (45)
100 (30)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)	1 (45)	1 (45)
150 (46)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)	1 (45)	1 (45)
200 (61)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)	1 (45)	1 (45)
250 (76)	2/0 (70)	2/0 (70)	1/0 (50)	1/0 (50)	1 (45)	1 (45)
300 (91)	3/0 (85)	3/0 (85)	2/0 (70)	2/0 (70)	1/0 (50)	1/0 (50)
350 (107)	4/0 (100)	3/0 (85)	3/0 (85)	2/0 (70)	2/0 (70)	1/0 (50)
400 (122)	250 (125)	4/0 (100)	3/0 (85)	3/0 (85)	3/0 (85)	2/0 (70)
Sub-Feeder length from MDP to PDU - ft (m)						
32 (9.7536)	1/0 (50)	1/0 (50)	1/0 (50)	1 (45)	1 (45)	1 (45)
Grounding						
Run a dedicated 1/0 [50 mm ²] or larger insulated copper ground wire from the power source to the MDP and from MDP to the PDU. Run the ground wire in the same raceway with the three-phase wires.						

Notes :

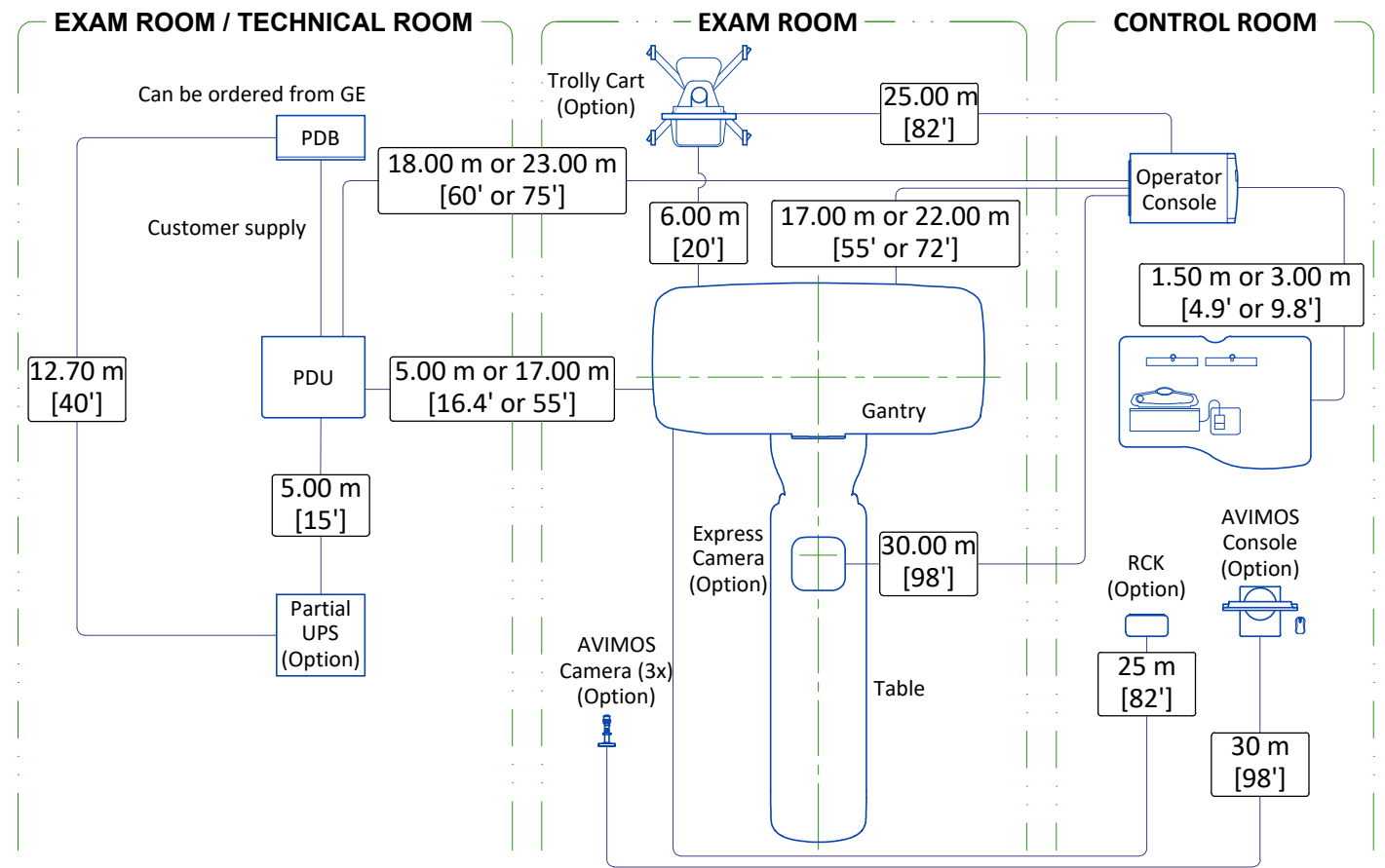
- Wire size: 4x2mm² [14AWG] and 1x2mm² [14AWG] GND
- Power control cable: 3 Meter [10 ft], multi-conductor, 24V DC
- GE supplied MDP option E45021BC includes a 10 meter long power cable (H07RN-F) with wire size 4x50mm² and a 50 meter long control cable with wire size 2x1.5mm²

SCAN ROOM WARNING LIGHT AND DOOR INTERLOCK



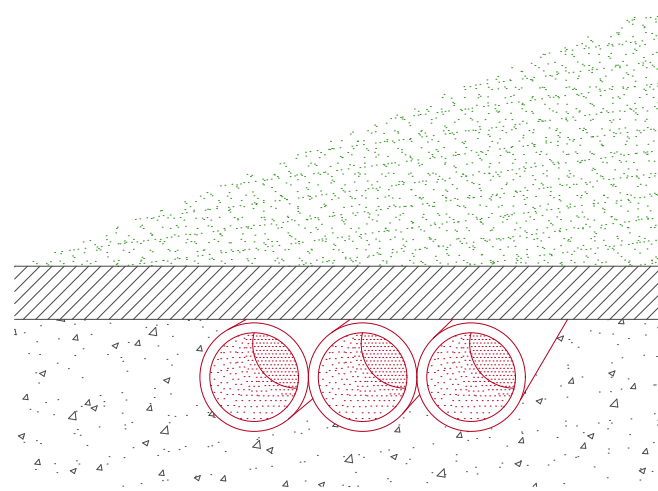
- Notes :**
- (1) Wire size: 2mm² [14 AWG] at 24V
 - (2) Door Interlock circuit is jumpered out if a door switch is not provided.
 - (3) Grounding not shown on the detail, but must comply with local codes.

INTERCONNECTIONS



TYPICAL CABLE MANAGEMENT

CONDUIT IN THE FLOOR



NOT TO SCALE