PHILIPS

www.healthcare.philips.com

Final Site Preparation Support Document

The equipment components shown in this drawing package are based on the current proposed purchase and are subject to change if modifications are made to the configuration.

*Photo shown is not site specific.

Revision History

Note for Architects and/or Contractors: If revisions are listed, these drawings must be thoroughly reviewed so that all changes can be incorporated into your project

Rev.	Date	Revision Descriptions	By
A	11/9/2020	Updated CAD background per PM request and equipment configuration per order: 6600492935.010000	LG
B	1/4/2020	Added Ambient Experience equipment per order: 6600508588.010000.	LG
C	1/6/2021	Updated CAD background per updated Architect CAD and PM request.	LG
D	1/27/2021	Created final site-preparation support document per orders: 6600492935.010000 and 6600508588.010000.	LG
E	2/18/2021	A1, A2, S1 - S4, E1: Updated CAD background and added RCP from latest Architect CAD per PM request. A2, S2, S3, E1: Relocated ceiling injector, CCT, ambient speakers, and AECM on patient entry side of bore to match Architect CAD locations.	LG

Table of Contents

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

C1

General Specifications

1. **Responsibility**
   The customer shall be solely responsible, at their expense for preparation of site, including any required structural alterations. The site preparation shall be in accordance with plans and specifications provided by Philips. Compliance with all safety, electrical, and building codes relevant to the equipment and its installation is the customer's responsibility. Sufficiency of such plans and specifications, specifically including, but not limited to the accuracy of the dimensions described therein, shall be the sole responsibility of the customer. The customer shall advise Philips of conditions at or near the site which could adversely affect the carrying out of the installation work and shall ensure that such conditions are corrected and that the site is fully prepared and available to Philips before the installation work is due to begin. The customer shall provide all necessary plumbing and/or carpentry work as well as electrical raceways and/or conduit wiring required to attach and install products ready for use.

2. **Permits**
   Customer shall obtain all permits and licenses required by federal, state/provincial or local authorities in connection with the construction, installation and operation of the products and shall bear any expense in obtaining same or in complying with any related rules, regulations, ordinances and statutes.

3. **Radiation Protection**
   The customer or their contractor, at their own expense, shall obtain the service of a licensed radiation physicist to specify radiation protection

4. **Asbestos and Other Toxic Substances**
   Philips assumes no hazardous waste (i.e., pcb's in existing transformers) exists at the site. If any hazardous materials are found, it shall be the sole responsibility of the customer to properly remove and dispose of these materials at their expense. Any delays caused in the project for this special handling shall result in Philips' time period for completion being extended by like period of time. Philips assumes that no asbestos material is involved in this project in any ceilings, walls or floors. If any asbestos material is found anywhere on the site, it shall be the customer's sole responsibility to properly remove and/or make safe this condition, at the customer's sole expense.

5. **Labor**
   In the event local labor conditions make it impossible or undesirable to use Philips' regular employees for such installation and connection, such work shall be performed by laborers supplied by the customer, or by an independent contractor chosen by the customer at the customer's expense, and in such case, Philips agrees to furnish adequate engineering supervision for proper completion of the installation.

6. **Schedule**
   The general contractor should provide Philips with a schedule of work to assist in the coordination of delivery of Philips supplied products and primary equipment, which are to be installed by the contractor.

7. **Extended Installation or Turnkey Work by Philips**
   Any room preparation requirements for Philips equipment indicated on these drawings is the responsibility of the customer. If an extended installation or turnkey contract exists between Philips and the customer for room preparation, then additional work required for the equipment will not be represented on these drawings. Some of the responsibilities of the customer as depicted in these drawings may be assumed by Philips. In the event of a conflict between the work described in the turnkey contract work scope and these drawings, the turnkey contract work scope shall govern.

(14.0)

General Considerations

1. Wheels on control room equipment are provided for service only. Philips equipment located in the control room should not be repositioned post-installation and should be handled with care.
2. Philips CT systems come with a calibration phantom, service tools, and manuals. These should be stored in or near the exam room if possible, for ease of use and access by the Philips service engineer and customer physicist. Consult with Philips service.

(14.0)

Minimum Site Preparation Requirements

A smooth efficient installation is vital to Philips and its customers. Understanding what the minimum site preparation requirements are will help achieve this goal. The following list clearly defines the requirements which must be fulfilled by the customer before the installation can begin.

1. Walls to be painted or covered, baseboards installed, floors to be tiled and/or covered, ceiling shall have grid tiles, architectural features (such as casework or bulkheads) installed and finished, lighting fixtures installed and operational, light levels for servicing of equipment to be a minimum of 500 lux, and the area in and around the CT Suite must be dust free.

2. Doors and windows, especially radiation protection barriers, installed and finished with locksets operational.

3. All electrical convenience outlets, conduit, raceway and junction boxes installed and operational.

4. Incoming mains power (including any power devices purchased through Philips) operational and available at the CT Gantry.

5. 120 V convenience outlets operational.

6. All support structures correctly installed. All channels, pipes, beams and/or other supporting devices should be level, parallel, and free of lateral or longitudinal movements.

7. Door switch (if required) and door light (if required) wires must be pulled and available for connection.

8. All HVAC (heating, ventilating and air conditioning) installed and operational per specifications listed under "HVAC Requirements for General Equipment Locations" on this page.

9. All plumbing installed and operational (if required).

10. All doors and passage sizes are adequate for moving of equipment from exterior to specified room. Required door width is 48" (1220mm) for 96" (2438mm) adjacent corridor and 72" (1830mm) for 72" (1830mm) adjacent corridor. Recommended minimum door heights shall be 80" (2032mm) clear opening.

11. The floor levelness under the CT Gantry and the Patient Table meet Philips' specifications. If the customer cannot meet these specifications, then contact the local Philips Service Representative to discuss possible solutions.

12. The structural floor support of the CT Suite and the delivery path is adequate for the weight of the equipment and has been validated by the customer prior to delivery of the system.

13. Internet access is required to be available in the control area prior to delivery of the system for Web FSE Access.

14. Remote Service Diagnostics - Medical imaging equipment to be installed by Philips is equipped with a service diagnostic feature which allows for remote and on site service diagnostics. To establish this feature, an RJ45 type ethernet 1000 Mbit network connector must be installed as shown on plan. Access to customer's network via their remote access server is needed for Remote Service Network (RSN) connectivity. All costs with this feature are the responsibility of the customer.

Note
Once Philips has moved equipment into the CT Suite and started the installation, contractors shall schedule their work around the Philips installation team on site. It is suggested that a telephone be provided in the suite to receive telephone calls. This will alleviate the need for facility staff to answer calls for Philips personnel.

(14.0)

Electrical Requirements
iCT Configuration

Supply Configuration:	3 phase, 3 wire power, Earth 1 & 2
Nominal Line Voltage:	480/415/400/380 VAC ± 10%, 50/60 Hz, ±3 Hz
Branch Power Requirement:	225kVA nominal - 175kVA maximum momentary power

Refer to sheet ED1 of final drawing package for complete electrical requirements

(14.0)

HVAC Requirement for General Equipment Locations

Operating temperature range within the CT Exam Room is 64° F (18° C) to 75° F (24° C) [ideal stable room temperature setting: 72° F (22° C)] at 35% to 70% relative humidity (non-condensing). Temperature variations within this range (18-24° C; 64-75° F) must not exceed 5° F (3° C) during operations. Temperature gradient must not exceed 5° F (3° C) per hour. Room air-conditioning supply vents should not discharge directly over patient table and treatment area, which may cause discomfort to the patient.

Operating temperature range throughout rest of CT Suite is 59° F (15° C) to 75° F (24° C) [ideal stable room temperature setting: 72° F (22° C)] at 35% to 70% relative humidity (non-condensing). Operating temperature change per hour throughout the CT suite is 5° F (3° C).

The above conditions must be maintained at all times including overnight, weekends and holidays. Heat output in one area of CT suite must not affect temperature and humidity in other areas. It is strongly recommended that any definable areas within the suite, i.e. equipment closets, control areas, etc. (if applicable), be individually environmentally controlled as required to meet the ambient ranges specified.

See Equipment Detail sheets of final drawing package for individual equipment ratings which may or may not operate simultaneously.

(14.0)

Air-Cooling Requirements -- CIRS Recon/COM Cabinet

1. Placement of CRC should accomodate CRC heat levels.
   1.1. 4" required between back of CRC and wall.
   1.2. Avoid running raceway behind back of CRC. If raceway passes behind CRC, 4" required between back of CRC and surface of existing raceway.
2. If CRC cabinet is placed in a corner or under a desk, there must be airflow around the cabinet and a method for the hot exhaust air from the computers (vented in rear) to escape.
   2.1. Provide 5 X 46 cm (2" x 18") or equivalent area opening on counter top near wall .

(18.0)

Vibration Specifications

	Operation Gantry & Couch	Operation Rest of System
Vibration Frequency Range in Hz	1-150	1-150
Vibration/Shock Amplitude in mm (peak to peak)	0.15	0.15
Vibration Acceleration in grams	*	0-2
Shock Acceleration in g	0-2	0-2
Steady State Vibration	*	N/A
Air Pressure in kPa (10mbar)	70-110	70-100
* See chart on MP2 sheet of final drawing package.		

(14.0)

Magnetic Field Limitations

To avoid image quality issues the magnetic field may not exceed 2 gauss (0.2mT) at any point on the Brilliance CT System.

(14.0)

Radiation Considerations

Refer to sheet MP1 of final drawing package for Stray Radiation Dose Map. A licensed radiation physicist needs to determine any shielding requirements for the site. If lead shielding is required, it is the customer's responsibility to ensure that the shielding meets state, local, and site-specific requirements.

(18.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

AN

Equipment Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

	Equipment Designation	Description	Weight (lbs)	Heat Load (BTU/hr)	Detail Sheet
A	WS	iCT Spectral CT Scanner Gantry	5656	31014	AD2
A	WT	Patient Table Extended Version	1005		AD2
A	OC	Operator's Console (dual monitor)	45	1000	AD2
A	COM	IMR Host Computer Cabinet	174	1450	AD2
A	REC	REC Server Recon Cabinet	279	8872	AD3
A	PDU	Power Distribution Unit	1264	8086	AD3
A	AIR	Air Compressor	265	6500	AD3
A	INJ	Bayer Injector (ceiling)	116	-	AD3
A	IC	Injector Control Unit	21.8	-	AD3
A	CCT	Continuous CT - Ceiling Mounted	66	140	AD3
D	STA	200 kVA STACO UPS Electronics Cabinet	2456	11900	AD4
D	BAT	200 kVA STACO UPS Battery Cabinet	3790	0	AD4
D	RMP	200 kVA STACO UPS Remote Monitoring Panel	5	0	AD4
A	DE1	Data Enabler	5.4	68	AD4
A	DE2	Data Enabler	5.4	68	AD4
A	SFF	AE "Small Form Factor" Control Components	77	277	AD4
A	ATS	AE Touch Screen ELO 1517L	10.6	41	AD4
A	ATSW	AE Touch Screen ELO 1517L (Wall mounted)	10.6	41	AD4
A	AVI	AV Input Wall Plate (Extron WPB 108)	-	-	-
A	SPK	Exron SI 26x Ceiling Speakers (Qty. = 2)	2.6	-	-
A	AECM	AE 55" Ceiling Flatscreen Monitor (Qty. = 2)	97	444	-

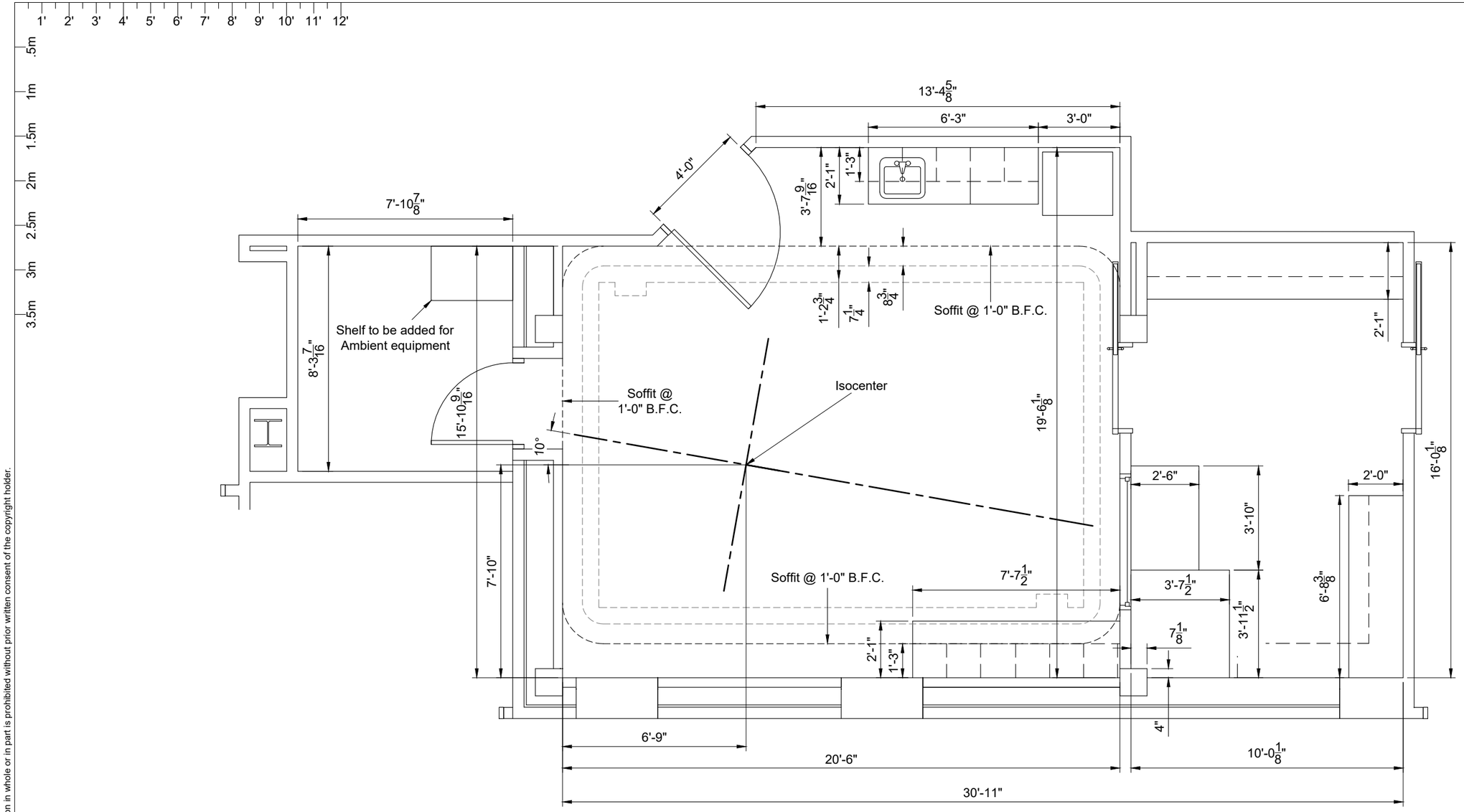
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

AL



Legend

- Walls
- Soffit
- Existing (to be removed)
- Beams or other building construction elements

Site Layout

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

7/15/2020

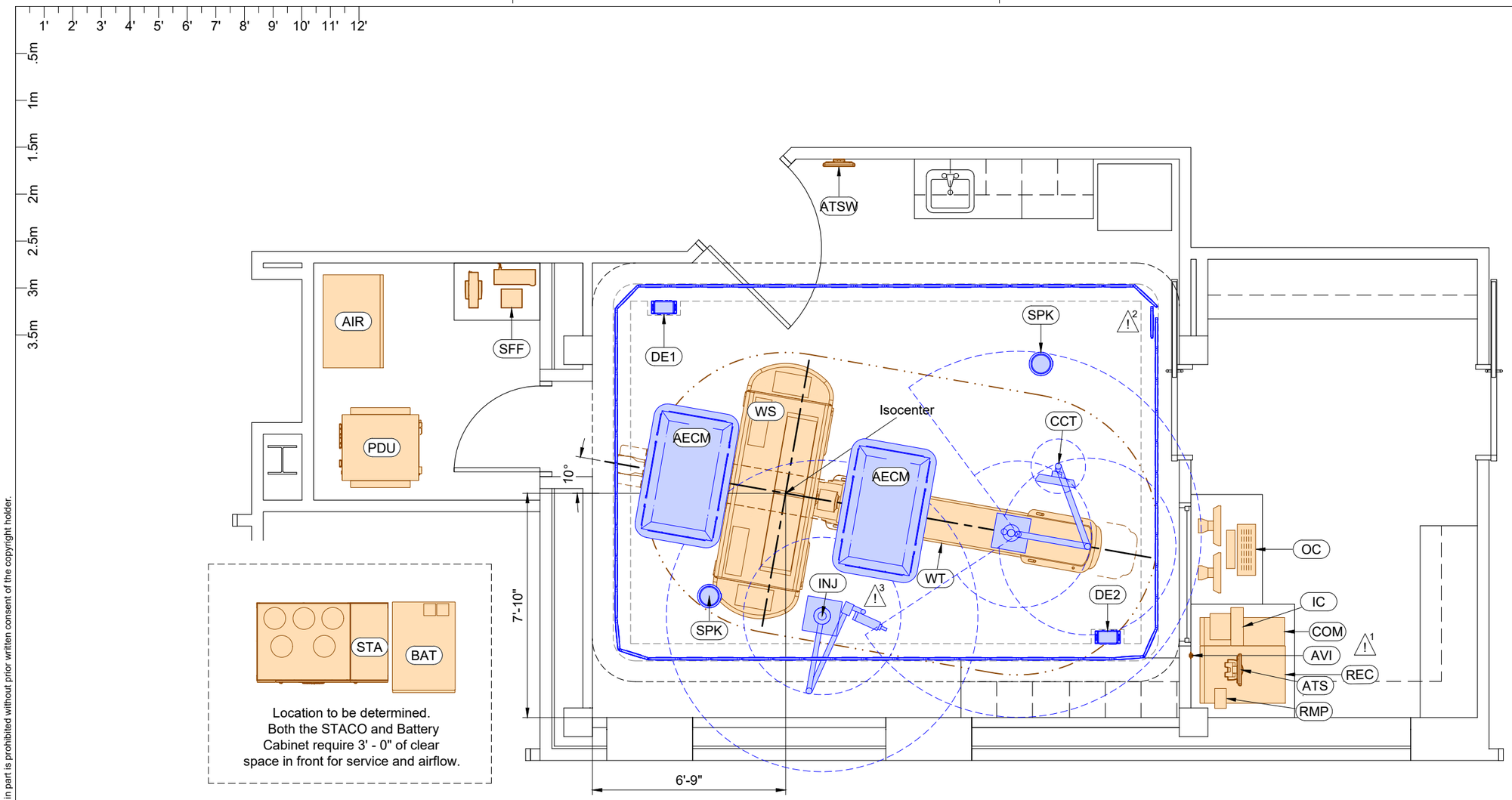
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

A1



Location to be determined.
Both the STACO and Battery
Cabinet require 3' - 0" of clear
space in front for service and airflow.

Due to potential audible/ambient noise produced from the UPS system, it is strongly recommended that these UPS cabinets be located outside the immediate CT imaging suite in a well ventilated and sound insulated area. In the event that louvered or vented closet doors are needed for air circulation, as determined by the customer's HVAC contractor, compromise to sound abatement must be considered.
Please see STACO installation manual and "Installation Considerations for Noise Reduction" document from STACO for more information.

Equipment Layout

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

General Notes

* Any counters, keyboard trays and cabinetry shown to be supplied and installed by contractor.
* Field to verify all existing Philips and/or third party equipment will not affect the functionality of the system and its components.

Site Planning Issues and Considerations

1. Recommended counter height is 32" from floor to under side of counter. Top cover of "COM/REC" is not removable and cannot be modified in any way. Customer to ensure adequate ventilation for heat dissipation around cabinet.
2. Additional Jumper cables may be needed due to gaps between the LEDs in the cove lighting. Part #: 910503703257 for 1' cables, Part #: 910503703258 for 5' cables.
3. Requested location of ceiling injector is in a non-standard location and must be verified by local Philips Service for feasibility and to ensure full functionality of ceiling injector in conjunction with iCT system.

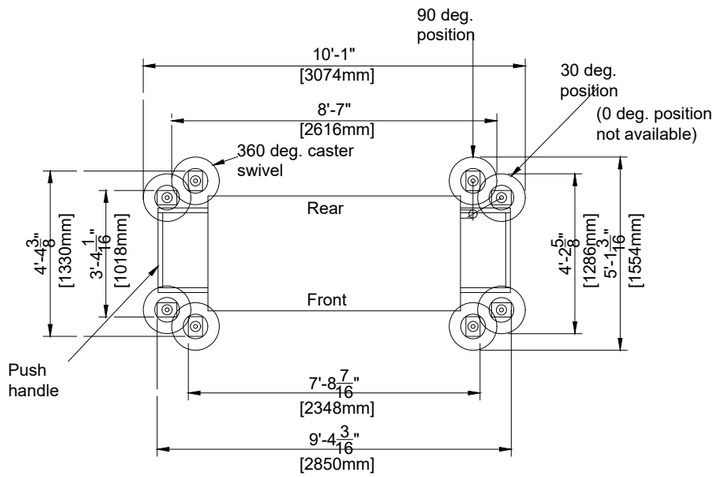
PHILIPS

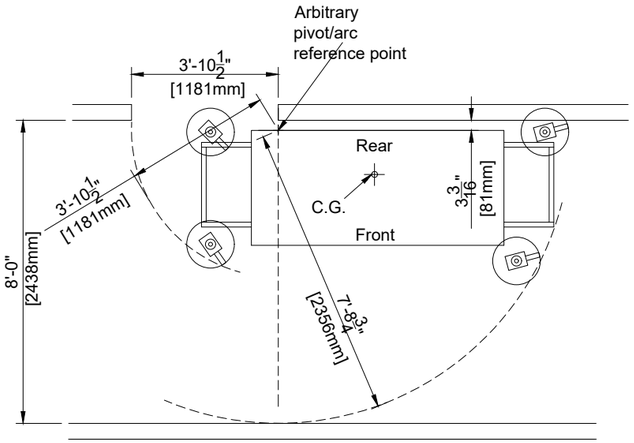
Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

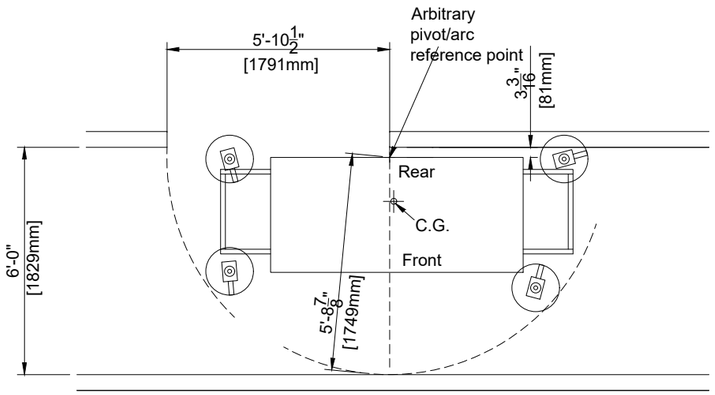
Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

A2







Gantry with top/front/rear covers (no side covers):	5437 lbs. (2466kg)
Shipping tubes (set of two):	476 lbs. (216kg)
Dolly wheels/hinges (set of four):	415 lbs. (188kg)
Push handles (set of two):	53 lbs. (24kg)
Lifting chains and eyelets (estimated):	200 lbs. (91kg)
Gantry Transport Height (with gantry raised 16mm off floor):	78.74" (2000mm)

Standard/Bariatric Patient Table Transport Weight with transport wheels: 930 lbs. (422kg)
Standard/Bariatric Patient Table Transport Dimensions:

108" L x 34.5" W x 21.5" H (height can vary)
(2743mm L x 876mm W x 546mm H)

Extended Patient Table Transport Weight with transport wheels: 1000 lbs. (454kg)
Extended Patient Table Transport Dimensions: 118" L x 34.5" W x 29" H (height can vary)
(2997mm L x 876mm W x 740mm H)

Configuration for ocean or air transport: Gantry, top/front/rear covers, push handles, shipping tubes all within, and including, wooden crate = 7447 lbs. (3378kg)

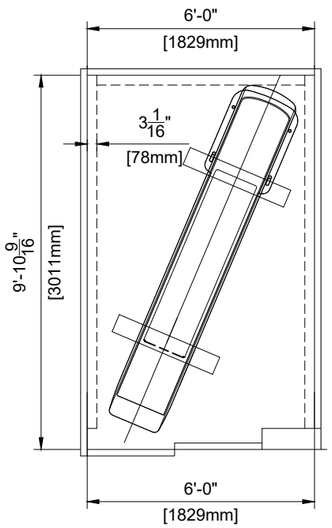
Configuration for lifting off of a delivery truck: Gantry, top/front/rear covers, shipping tubes, dolly wheels, and push handles = 6379 lbs. (2893kg)

Configuration for moving through hospital building: Gantry, top/front/rear covers, dolly wheels/hinges and push handles = 5905 lbs. (2678kg)

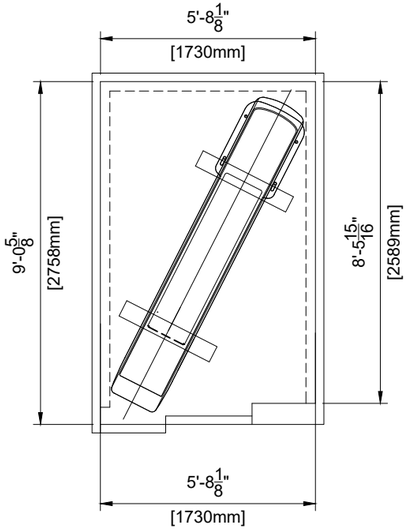
Configuration for lifting through a roof opening: Gantry and top/front/rear covers, lifting chains/eyelets and push handles = 5690 lbs. (2581kg)

Shipping and Delivery Access (14.0)
Not to scale

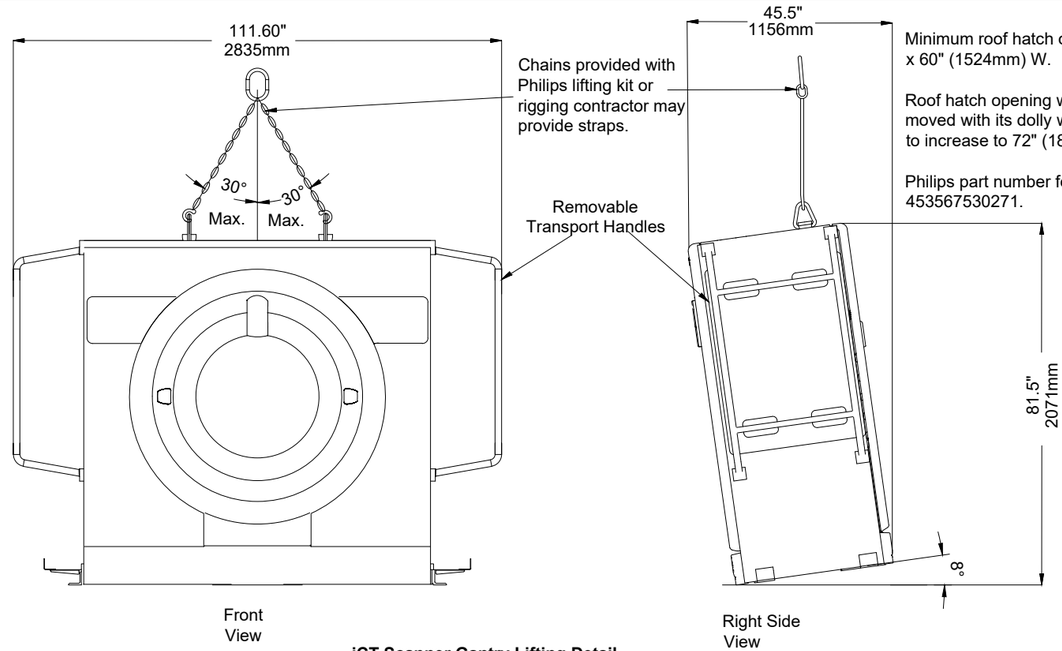
Notes:
1. Door Height Requirements
   -Scanner unit will fit through a 80" (2032mm) door height with dolly assembly provided by Philips.
2. Casters Note
   - The casters have 10" (254mm) diameter hard plastic wheels. Tiled floors should be protected.
   - Always move gantry with dolly wheels in the maximum width position for safety tilt reasons.
3. -The gantry's center of gravity favors the rear. Caution must be taken during moving, pushing or lifting, especially on inclines and grades. This applies to forklift operations and making turns on un-level grades and ramps.
   - Never attempt to move or push the gantry without either the dolly wheels or steel shipping tubes attached.



Extended Couch Elevator Transport Detail
Not to scale



Standard/Bariatric Couch Elevator Transport Detail
Not to scale



iCT Scanner Gantry Lifting Detail (14.0)
Not to Scale

Minimum roof hatch opening: 120" (3048mm) L x 60" (1524mm) W.

Roof hatch opening width when gantry is moved with its dolly wheels attached will need to increase to 72" (1829mm).

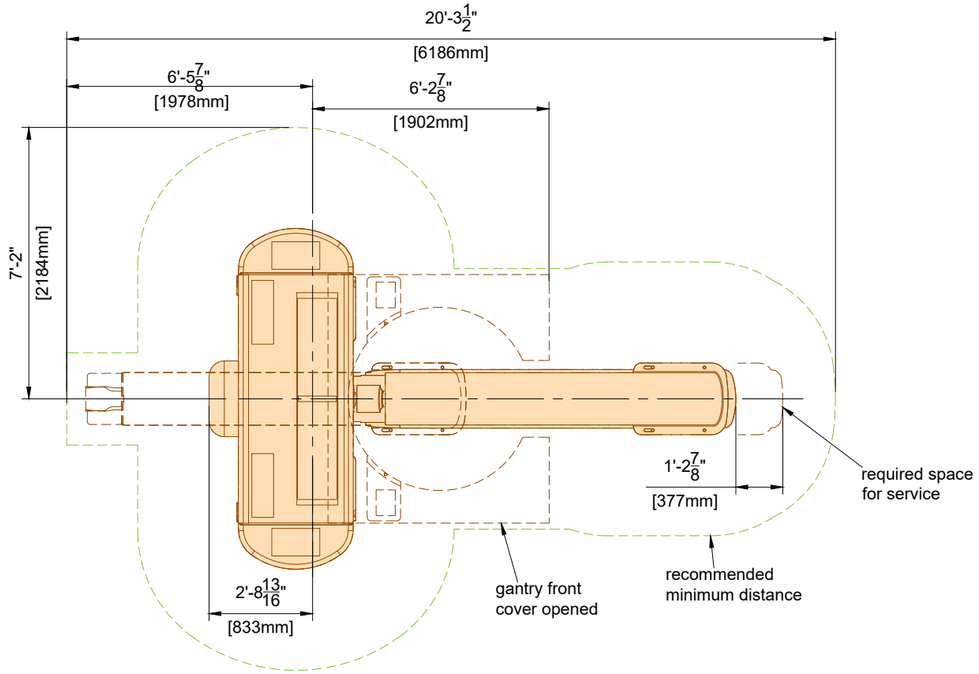
Philips part number for lifting kit is 453567530271.

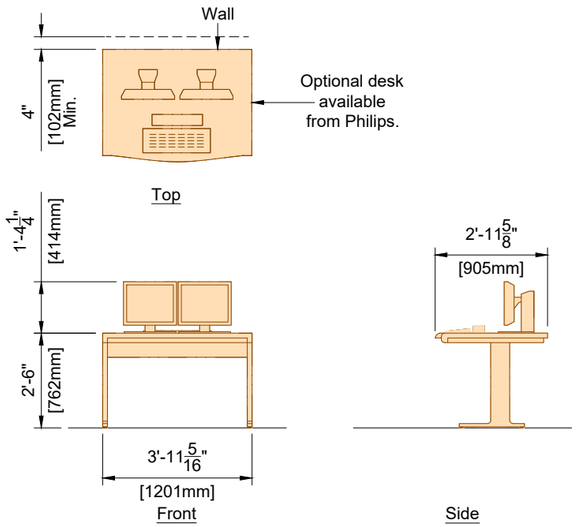
Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerbolth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

AD1

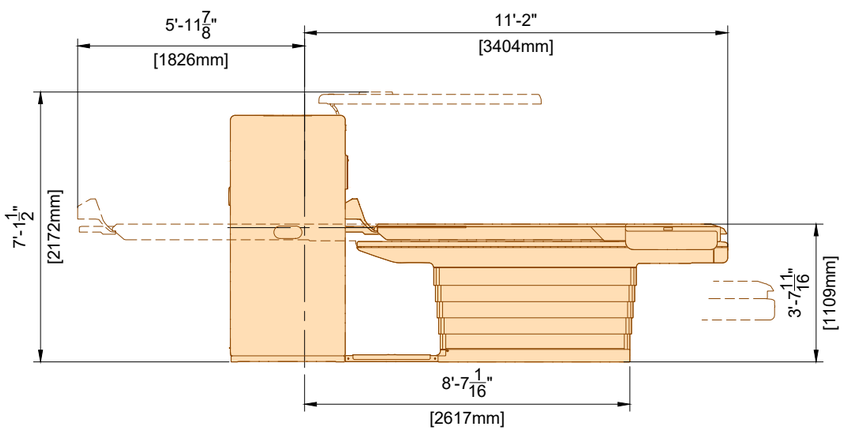


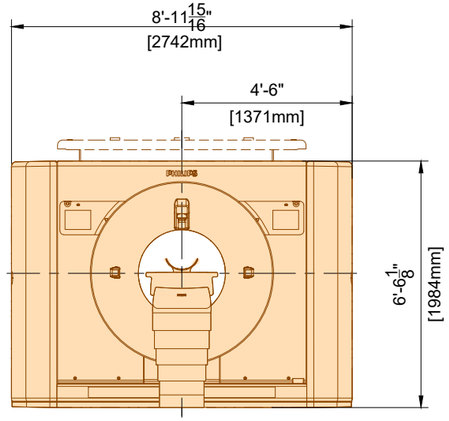


Optional desk weighs 148 lbs. (67 kg)

(14.0)

	Operator's Console	
OC	Weight	Heat Dissipation
	40 lbs	1000





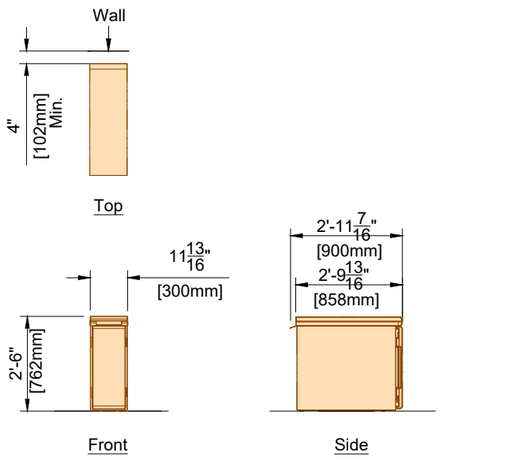
Audible noise: 68 dBA maximum at 1 meter from Isocenter

(14.0)

	iCT Scanner Gantry	
WS	Weight	Heat Dissipation
	5656 lbs	31,014 btu/hr

(14.0)

	Patient Table Extended Version	
WT	Weight	Heat Dissipation
	1005 lbs	Included in gantry heat output



(20.0)

	IMR Host Computer Cabinet	
COM	Weight	Heat Dissipation
	174 lbs	1550 btu/hr

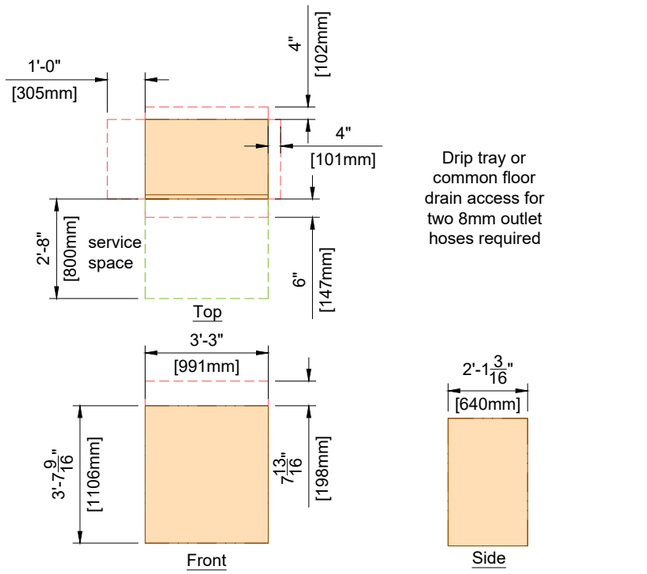
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

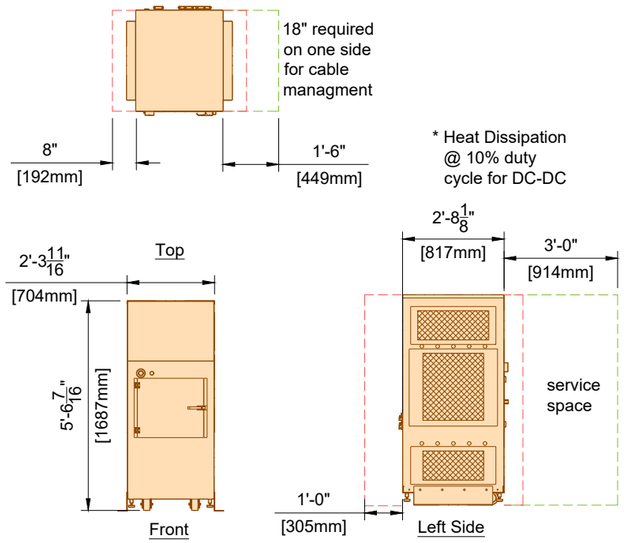
AD2



53 dB @ 1 meter typical

(20.1)

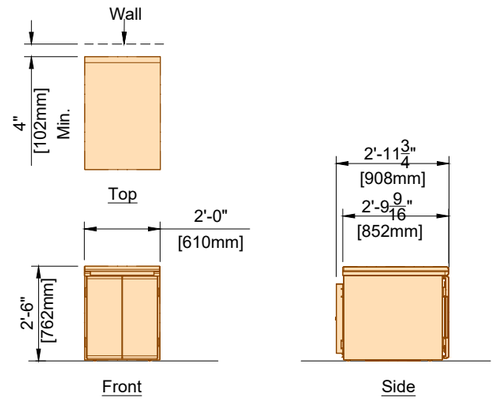
	Air Compressor	
AIR	Weight	Heat Dissipation
	265lbs	6500 btu/hr



27dBA at 1 meter typical

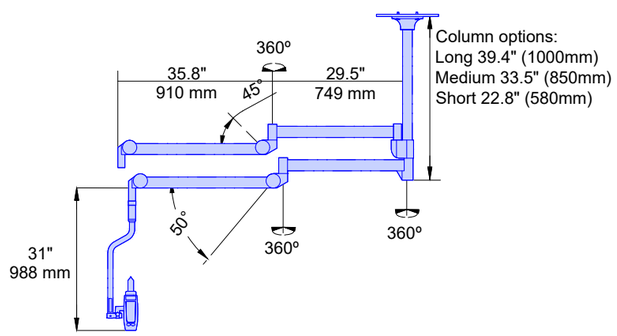
(20.1)

	Power Distribution Unit	
PDU	Weight	Heat Dissipation
	1264 lbs	8086 btu/hr*



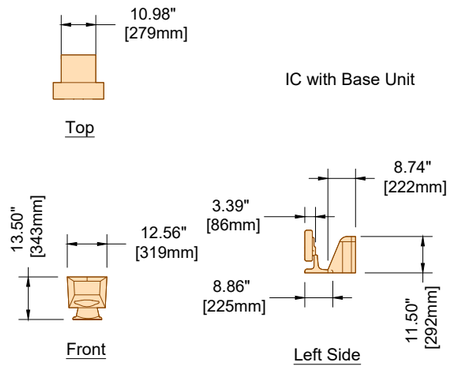
(20.0)

	IMR Server Recon Cabinet	
REC	Weight	Heat Dissipation
	279 lbs	8872 btu/hr



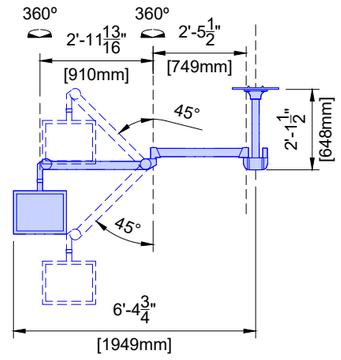
(13.0)

	Bayer Injector (ceiling)	
INJ	Weight	Heat Dissipation
	116 lbs	-- btu/hr



(13.0)

	Injector Control Unit	
IC	Weight	Heat Dissipation
	21.8 lbs	-- btu/hr



(13.0)

	Continuous CT - Ceiling Mounted	
CCT	Weight	Heat Dissipation
	66 lbs	140 btu/hr

PHILIPS

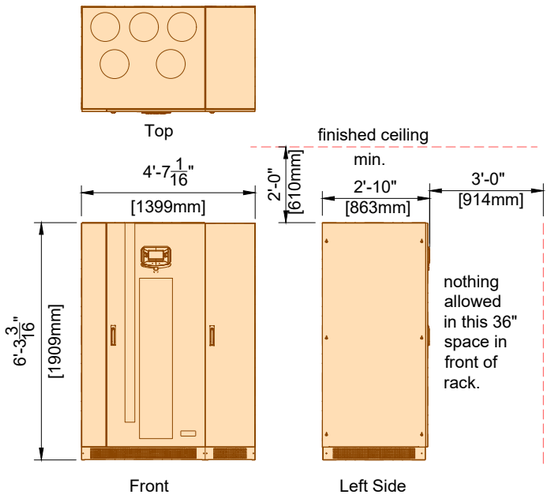
Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

AD3

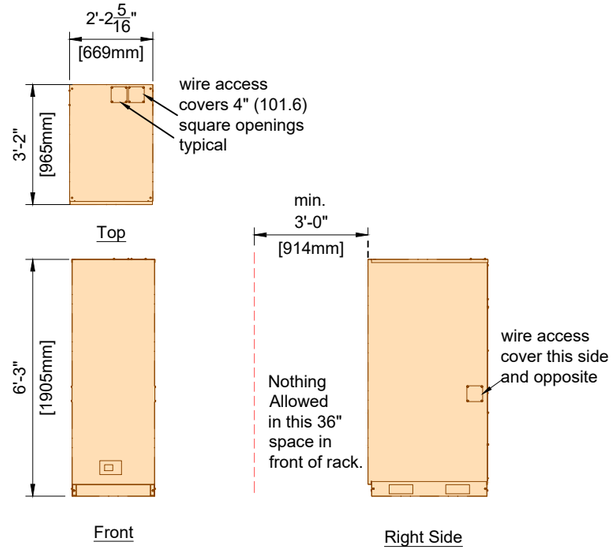
7/15/2020



68dB at 1m typical

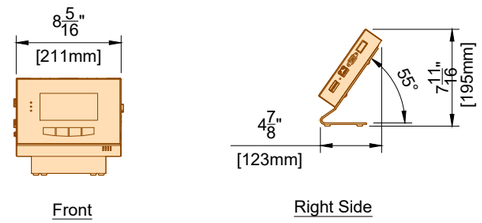
(13.0)

	200 kVA STACO UPS Electronics Cabinet	
STA	Weight	Heat Dissipation
	2456 lbs	11900 btu/hr



(13.0)

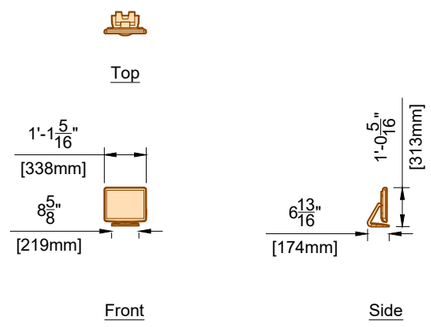
	200 kVA STACO UPS Battery Cabinet	
BAT	Weight	Heat Dissipation
	3790 lbs	-- btu/hr



Not to Scale

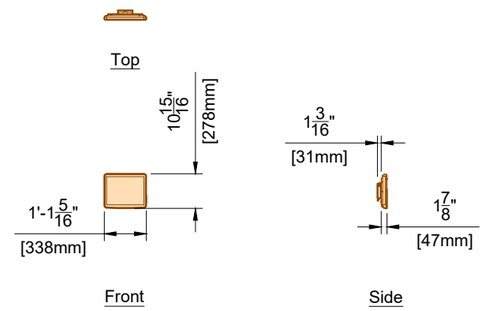
(13.0)

	Remote Monitoring Panel (for STACO UPS)	
RMP	Weight	Heat Dissipation
	5 lbs	-- btu/hr



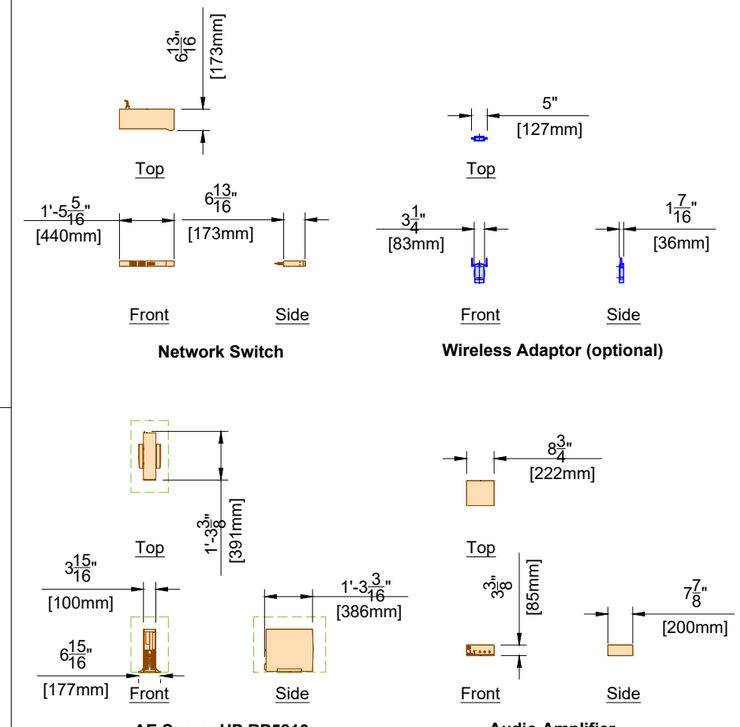
(16.0)

	AE Touch Screen	
ATS	Weight	Heat Dissipation
	10.6 lbs (4.8 kg)	41 Btu/hr (12 W)



(16.0)

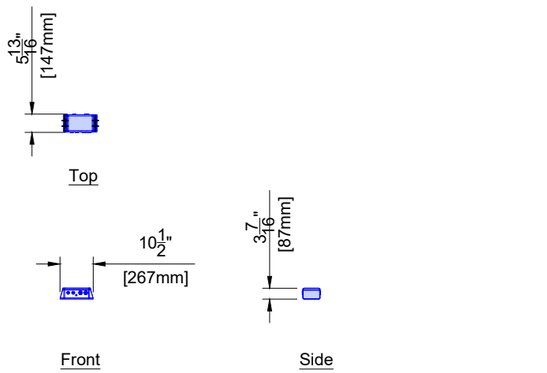
	AE Touch Screen (Wall Mounted)	
ATSW	Weight	Heat Dissipation
	10.6 lbs (4.8 kg)	41 Btu/hr (12 W)



Weight shown is for all components.

(16.0)

	Ambient Experience Small Form Factor	
SFF	Weight	Heat Dissipation
	77 lbs (35 kg)	277 Btu/hr (81 W)



(16.0)

	Data Enabler	
DE1/DE2	Weight	Heat Dissipation
	5.3 lbs (2.4 kg)	68 Btu/hr (20 W)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

AD4

Minimum Site Preparation Requirements

1. **General**
   The customer shall be solely responsible, at its expense, for preparation of the site, including any required structural alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and building codes. The customer shall be solely responsible for obtaining all construction permits from jurisdictional authority.

2. **Equipment Anchorage**
   Philips provides, with this plan and specifications, information relative to equipment size, weight, shape, anchoring hole locations and forces which may be exerted on anchoring fasteners. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of equipment anchoring to floors, wall and/or ceiling of the building. Any anchorage test required by local authority shall be the customer's responsibility. Stud type anchor bolts should not be specified as they hinder equipment removal for service.

3. **Floor Loading and Surface**
   Philips provides, with this plan and specifications, information relative to size, weight and shape of floor mounted equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings confirmation of the structural adequacy of the floor upon which the equipment will be placed. Any load test required by local authority, shall be the customer's responsibility. The floor surface upon which Philips equipment is to be placed/anchored shall be flat and level per specifications on sheet SD2.

4. **Ceiling Support Apparatus**
   Philips provides, with this plan and specifications, information relative to size, weight and shape of ceiling supported equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of structural support apparatus, fasteners and anchorage to which Philips will attach equipment. Any anchorage and/or load test required by local authority shall be the customer's responsibility.

   The structural support apparatus surface to which Philips equipment is to be attached, shall have horizontal equipment attachment surfaces parallel, square and level to within plus or minus 1/16" (2mm).

   Any drilling and/or tapping of holes required to attach Philips equipment to the structural support apparatus shall be the responsibility of the customer.

   Fasteners/anchors (i.e., bolts, spring nuts, lock and flat washers) and strip closures shall be provided by the customer.

5. **Lighting**
   Lighting fixtures shall be placed in such a position that they are not obscured by equipment or its movement, nor shall they interfere with Philips ceiling rails and equipment movement or otherwise adversely affect the equipment. Such lighting fixture locations shall be the sole responsibility of the customer.

6. **Ceiling Obstructions**
   There shall be no obstructions that project below the finished ceiling in the area covered by ceiling suspended equipment travel.

7. **Seismic Anchorage (For Seismic Zones Only)**
   All seismic anchorage hardware, including brackets, backing plates, bolts, etc., shall be supplied and installed by the customer/contractor unless otherwise specified within the support legend on this sheet. Installation of electronic cabinets to meet seismic anchorage requirements must be accomplished using flush mounted expansion type anchor/bolt systems to facilitate the removal of a cabinet for maintenance. Do not use threaded rod/adhesive anchor systems.

(14.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SN

AE Paint Requirements

A Furnished and installed/anchored by Philips (see exceptions - Note 2, below)
B Furnished by customer/contractor and installed/anchored by customer/contractor
C Installed/anchored by customer/contractor
D Furnished by Philips and installed/anchored by contractor
E Existing
F Future
G Optional

	Item Number	Description
B	MF	Main floor space. Forbo Smaradg Classic (Color: 6192 Light Grey).
B	FI	Floor island. Forbo Smaradg Classic (Color: 6175 Middle Blue).
B	FW	Finished walls. Drywall painted white matte: Sherwin Williams SW7005 Pure White. Walls must have a Level 5 finish.
B	S	Skirting. Allstate A02 Rubber Cove. Color to match Sherwin Williams SW 7005 Pure White.
B	ES	All visible exposed surfaces: Recommend Corian Glacier White (A). (not shown)
B	OS	All other surfaces: MDF painted white matte: Sherwin Wiliams SW7005 Pure White. (not shown)
B	CW	Continuous work surface: Recommend Corian Glacier White (A).
B	D	Doors. Painted white matte: Sherwin Williams SW7005 Pure White.
B	RS	Rounded soffit corners Ø18" (Ø460mm).

Ceiling Support Legend

A Furnished and installed/anchored by Philips (see exceptions - Note 2, below)
B Furnished by customer/contractor and installed/anchored by customer/contractor
C Installed/anchored by customer/contractor
D Furnished by Philips and installed/anchored by contractor
E Existing
F Future
G Optional

	Item Number	Description	Detail Sheet
D	INJ	Ceiling Plate for Bayer Injector	SD2
D	CCT	Ceiling Plate for CCT	SD3
A	CL	Cove mounted iColor Cove QLX Powercore - 12" length (58 in Exam Room)	SD4
B	PC	Perimeter Light Cove Construction	SD4
A	SP	Ceiling speakers to be mounted flush with suspended ceiling.	
A	DE	Data Enabler mounted to cove support structure	SD4
B	CMS	Unistrut (P1000 or equal) Support Structure for AE Ceiling Flatscreen. Exact size and location to be determined by local Philips Service.	SD5
B	CMO	55.2" (1402mm) L x 34.5" (876mm) W opening in ceiling centered around the AE Ceiling Monitor with corner curve radii of 4.9" (125mm). Third party exclusion zone above finished ceiling. All third party items are prohibited in this area.	SD5
B	CME	AE Ceiling Monitor Enclosure Drywall Box; optional - per local requirements, Minimum Dimensions: 37" (940mm) W x 57.8" (1468mm) L x 11.8" (300mm) D. Larger Drywall Box is recommended. Customer/contractor to ensure that projector box receives return air for cooling. *Size and location of Drywall Box extends beyond the opening in the ceiling, "CMO".	SD5

All dimensions must be off of the finished wall.

If a wall is furred out to hide electrical duct or boxes, the dimensions included in this plan must come off of the finished furred wall.

Notes:

1. Anchors for items that are installed/anchored by customer/contractor shall be provided by customer/contractor.
2. Anchors for items that are installed/anchored by Philips shall be provided by Philips. If customer's engineering documents specify anchors other than those listed in this document, the anchors shall be provided by customer/contractor and installed by Philips.
3. In all instances, the wall and/or floor support are the sole responsibility of the customer/contractor. The customer's architect/engineer of record shall specify wall and/or floor support sufficient for the bolt forces shown on the details.

Floor & Wall Support Legend

A Furnished and installed/anchored by Philips (see exceptions - Note 2, below)
B Furnished by customer/contractor and installed/anchored by customer/contractor
C Installed/anchored by customer/contractor
D Furnished by Philips and installed/anchored by contractor
E Existing
F Future
G Optional

	Item Number	Description	Detail Sheet
B	F1	Floor anchor location for Gantry	SD1
B	F2	Floor anchor location for Patient Table	SD1
A	ATSW	Anchorage for Touch Sceen Wall Bracket.	SD6

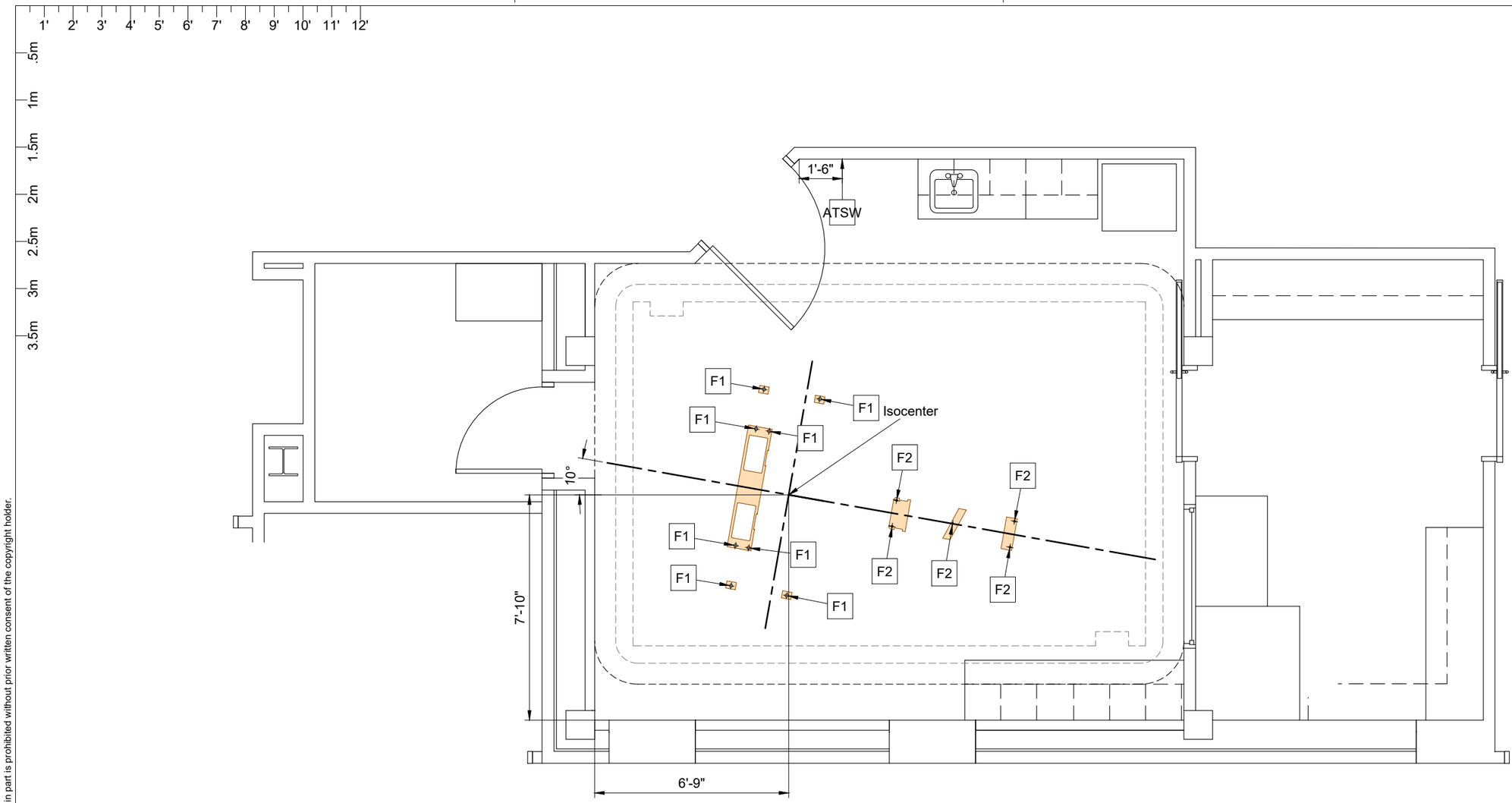
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SL



Floor & Wall Support Layout

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

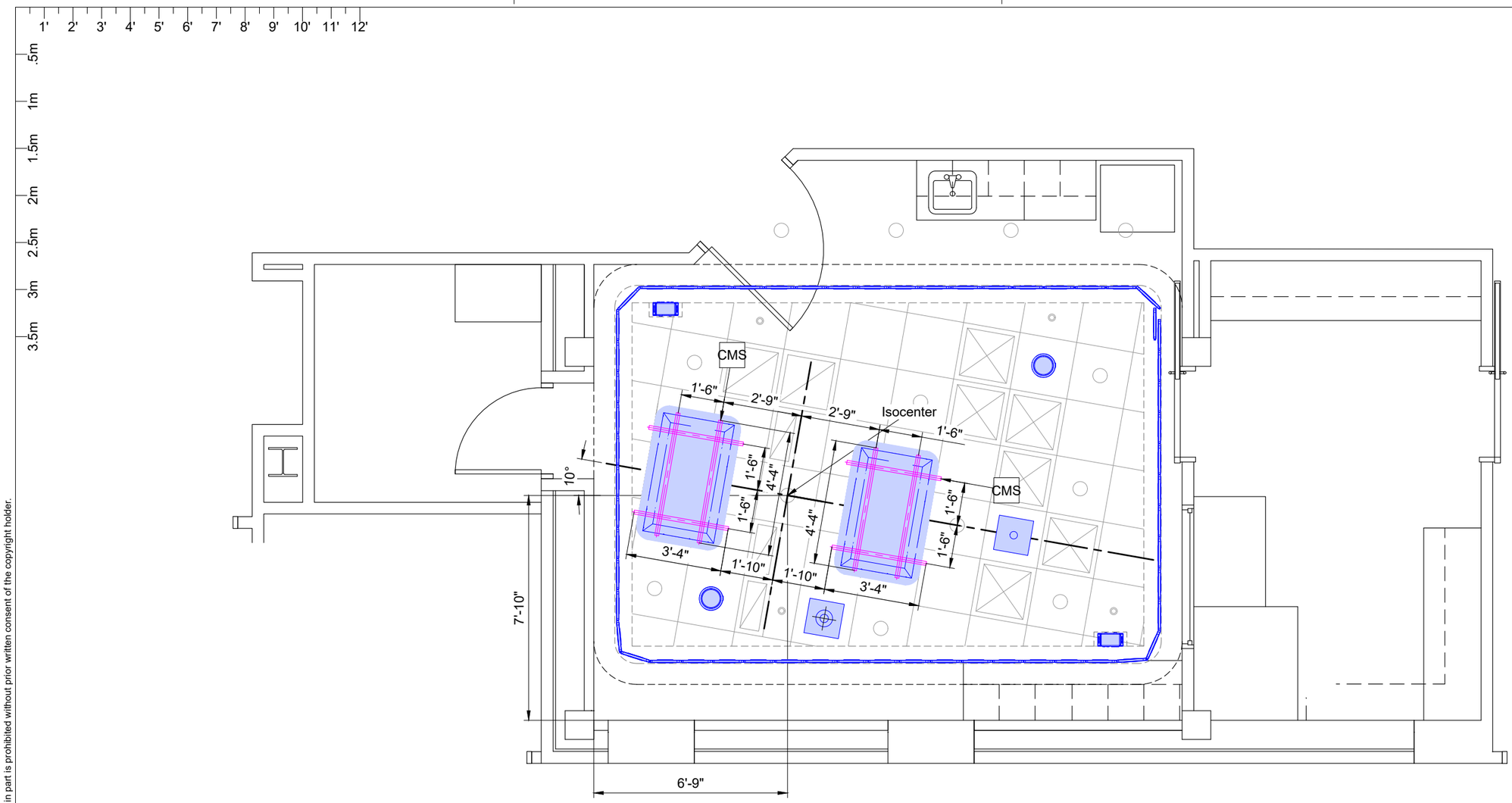
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

S1



Ceiling Support Layout (Unistrut)

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

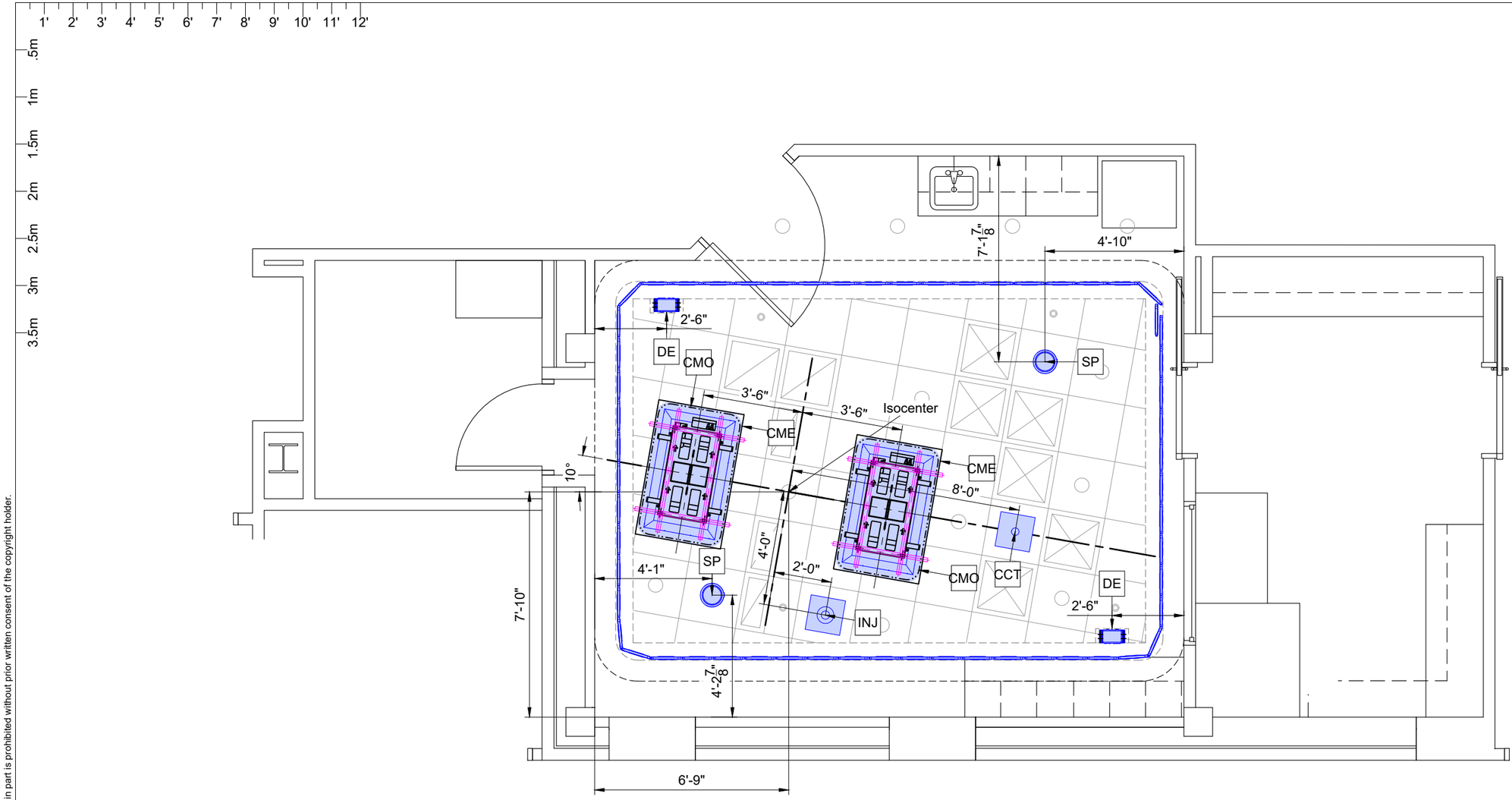
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

S2



Ceiling Support Layout (Equipment)

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

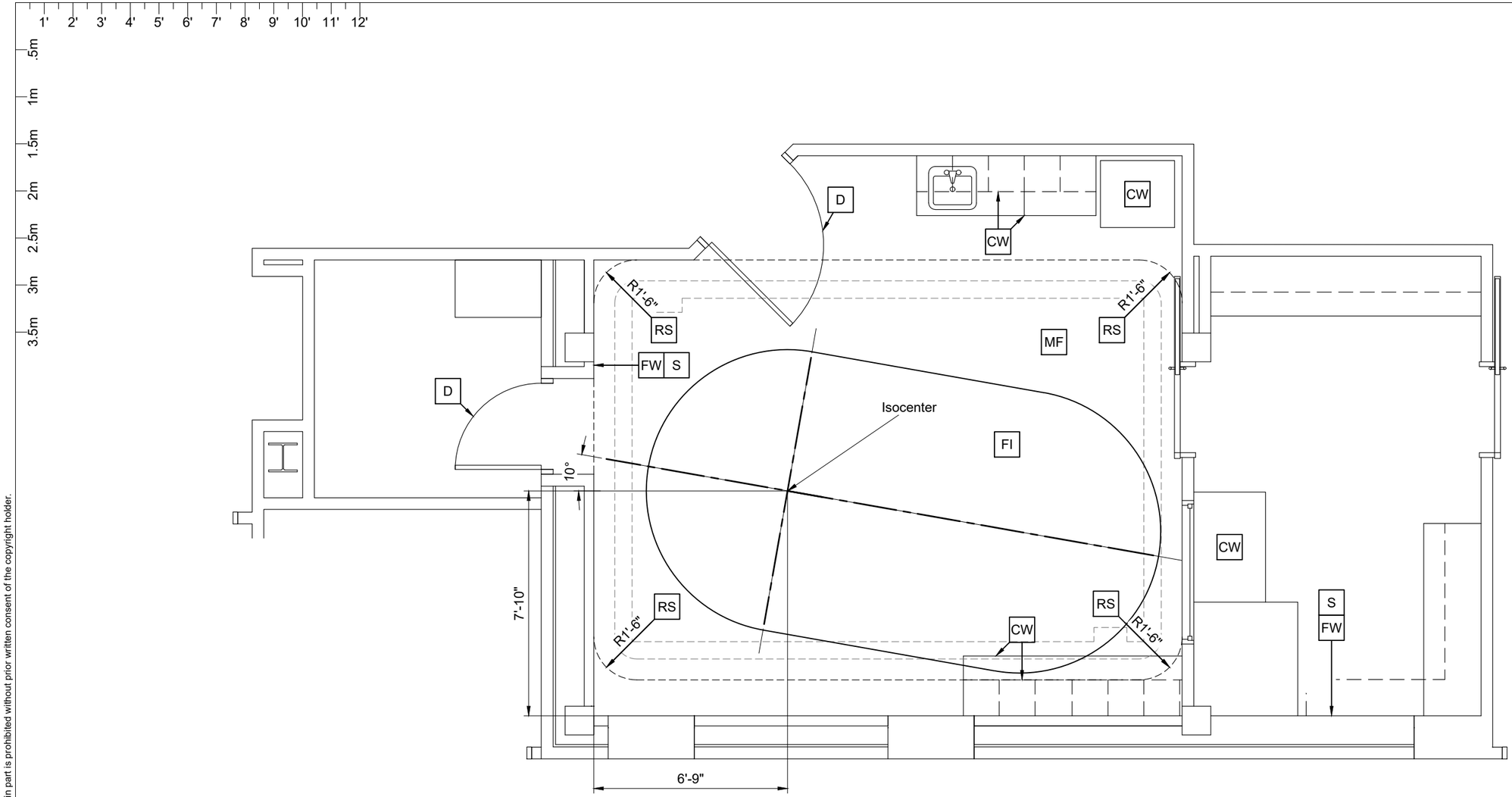
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

S3



AE Paint Requirements

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

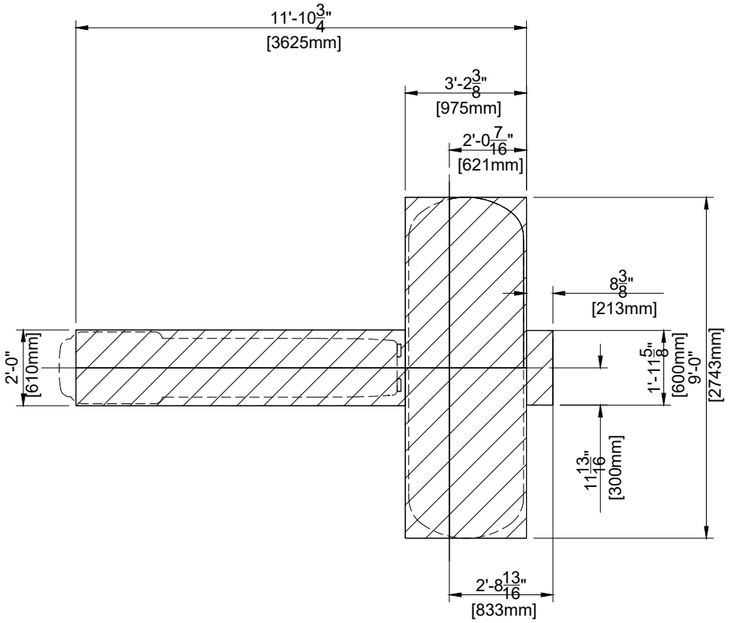
S4

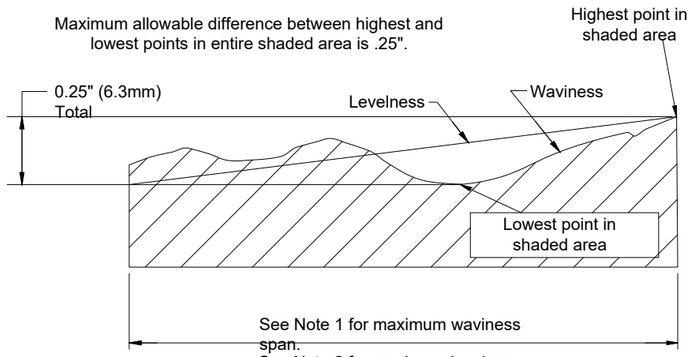
NOTES:

1. Floor waviness of exam room shall not exceed 1/4" (6.3mm) when measured within 12" (300mm) from any point within the shaded area on layout.

2. Floor levelness of exam room shall not exceed 1/4" (6.3mm) when measured between any two boundary points across the shaded area on layout.

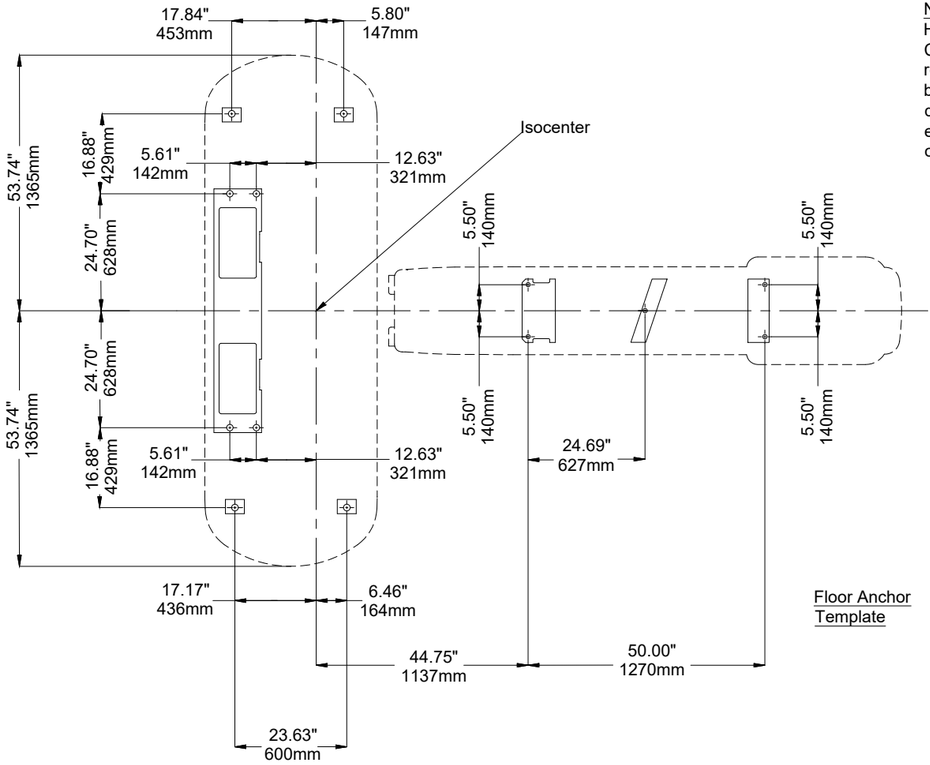
3. If shim stock is applied beyond 1/4" (6.3mm), improper anchor engagement may occur. The local Philips Service Representative shall coordinate on a solution with the customer.



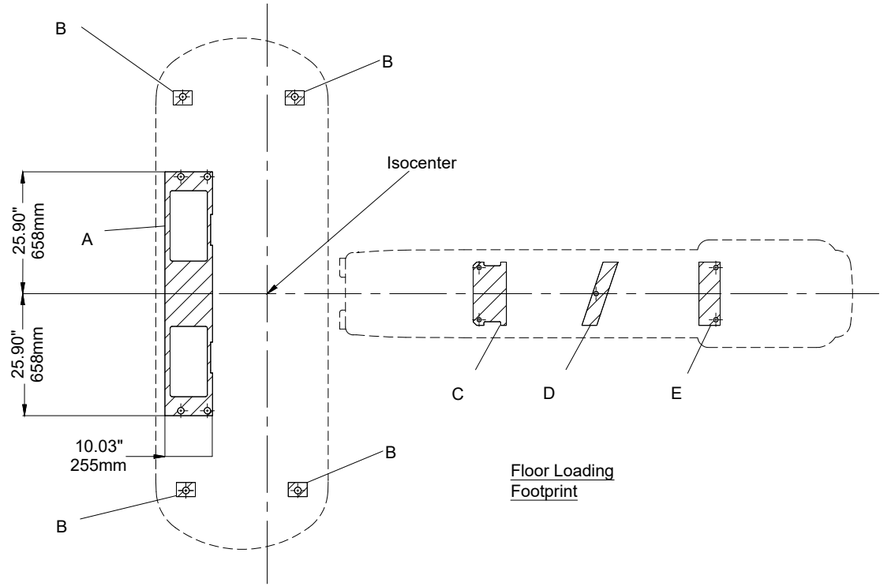


iCT Floor Levelness/Waviness Detail
Not to scale

(08.1)



Floor Anchor Template



Floor Loading Footprint

iCT Scanner Gantry and Patient Table Floor Anchoring/Loading Detail
Not to scale

Note
Holes need to be drilled for fasteners at the locations shown. Contractor to verify if other types of mounting hardware are required depending on site construction conditions and local building code requirements.Anchor hardware supplied by Philips does not apply to seismic zones. Philips equipment forces will not exceed 50% of the Ultimate Anchor Value Ratings under normal operating conditions.

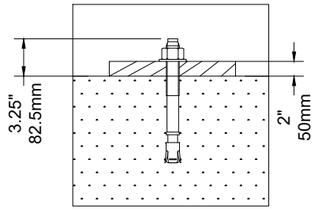
Scanner Gantry:
Weight: 5656 lbs. (2,566 kg) Base Frame (A+B) Structural Area: 2.16 sq.ft. (.201 sq. m) Floor Area Perimeter: 26.84 sq.ft. (2.49 sq.m.)

Gantry Ultimate Anchor Value Ratings:
- Tension = 2730 lbs (12.1 kN) - Shear = 5710 lbs (25.4 kN) - Bolt torque = 80 ft.-lbs. (108 Nm) Philips supplies (8) Hilti Kwik Bolt 3/4" x 5 1/2", KB3 expansion anchors. 3 1/4" embedment.

Patient Table:
Weight: 1005 lbs. (456kg) for Extended Long Table 981 lbs. (445 kg) for Standard/Bariatric Table Base Frame (C+D+E) Structural Area: .96 sq.ft. (0.089 sq. m) Floor Area Perimeter: 5.96 sq.ft. (.554 sq.m)

Patient Table Ultimate Anchor Value Ratings:
- Tension = 1965 lbs (8.7 kN) - Shear = 1460 lbs (6.5 kN) - Bolt torque = 20 ft.-lbs. (27 Nm) *Philips supplies (5) Hilti Kwik Bolt 3/8" x 7", KB3 expansion anchors. 3 3/4" embedment.

Top of table bolts must be 3.25" above floor for adequate anchorage.



Not to Scale

(18.0)

F1 F2

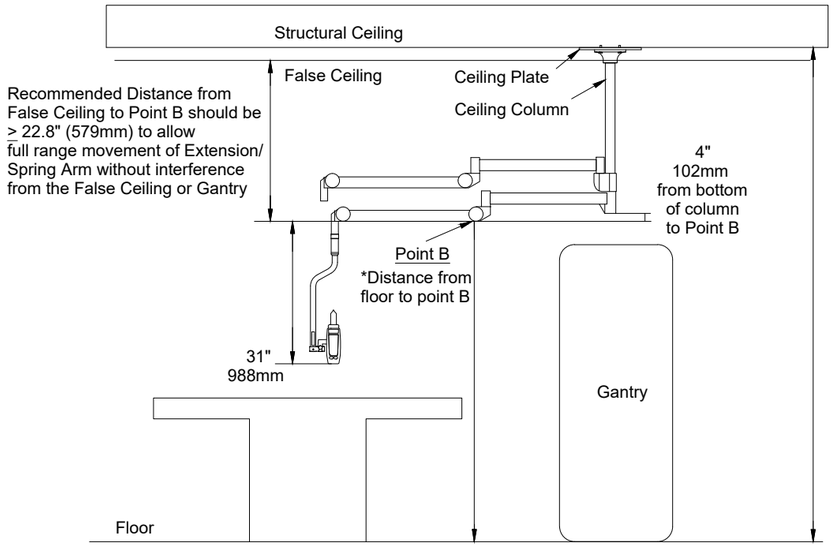
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

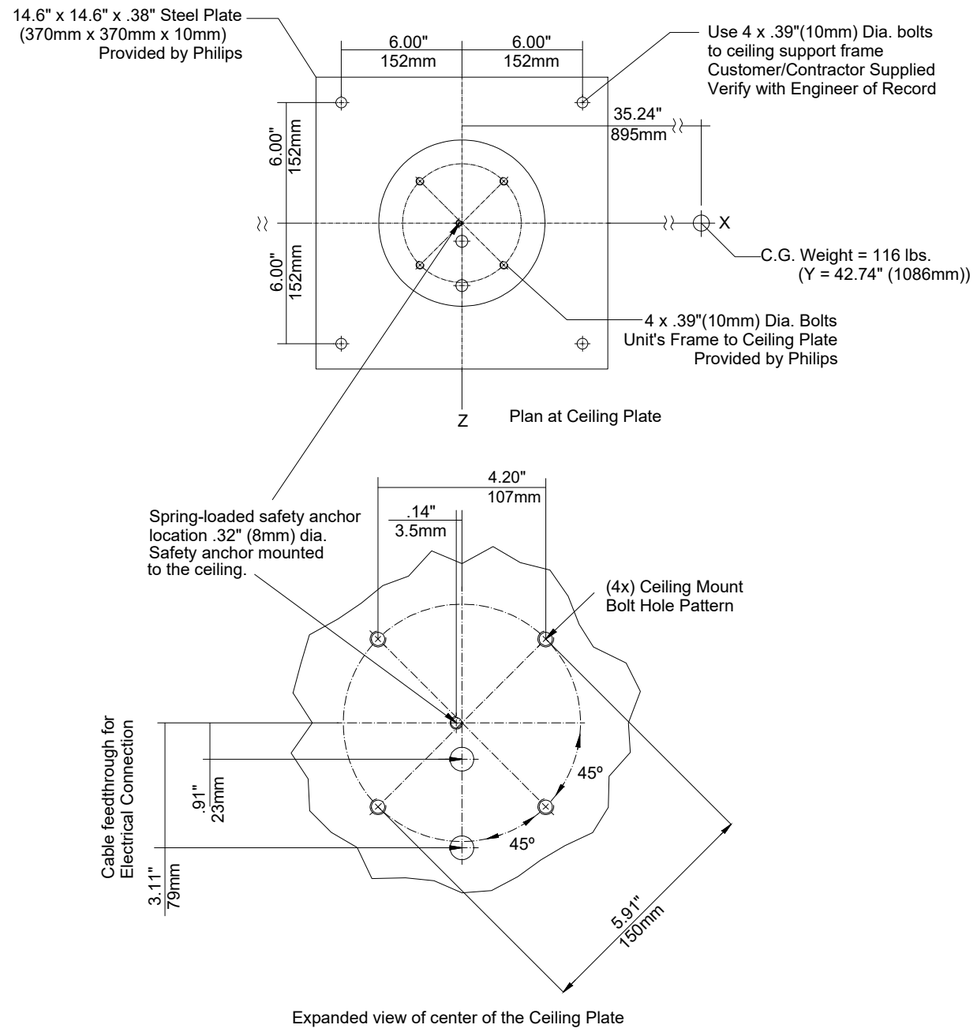
SD1



Distance of Structural Ceiling	Recommended Ceiling Column	*Distance to Point B
108" (2743mm)	Short Arm 22.8" (580mm)	81.2" (2062mm)
114" (2897mm)	Short Arm 22.8" (580mm)	87.2" (2215mm)
120" (3048mm)	Medium Arm 33.5" (850mm)	82.5" (2096mm)
126" (3200mm)	Long Arm 39.4" (1001mm)	82.6" (2098mm)
132" (3353mm)	Long Arm 39.4" (1001mm)	88.6" (2250mm)

Notes:

- All framework and hardware to be supplied and installed by contractor (unless otherwise noted).
- Ceiling mount plate weighs 29.8 lbs



Details of Ceiling Plate for Bayer Injector (20.0) INJ
Not to Scale

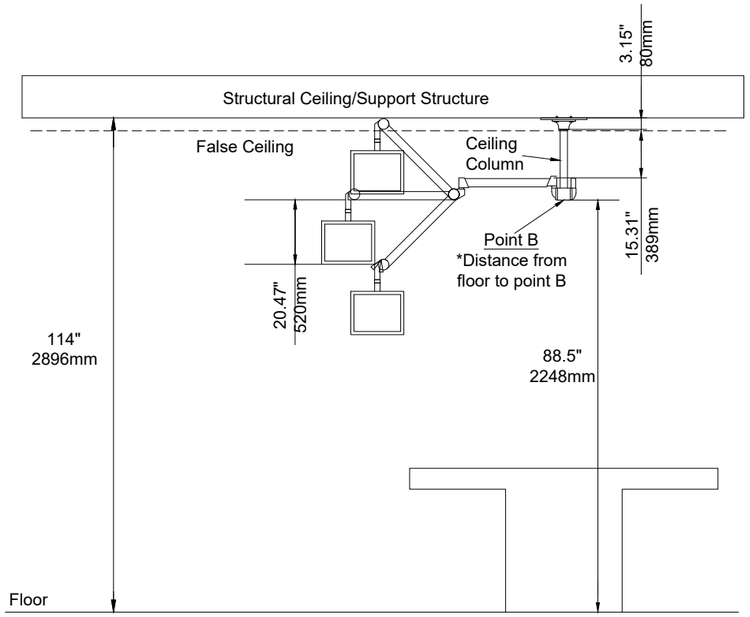
PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SD2



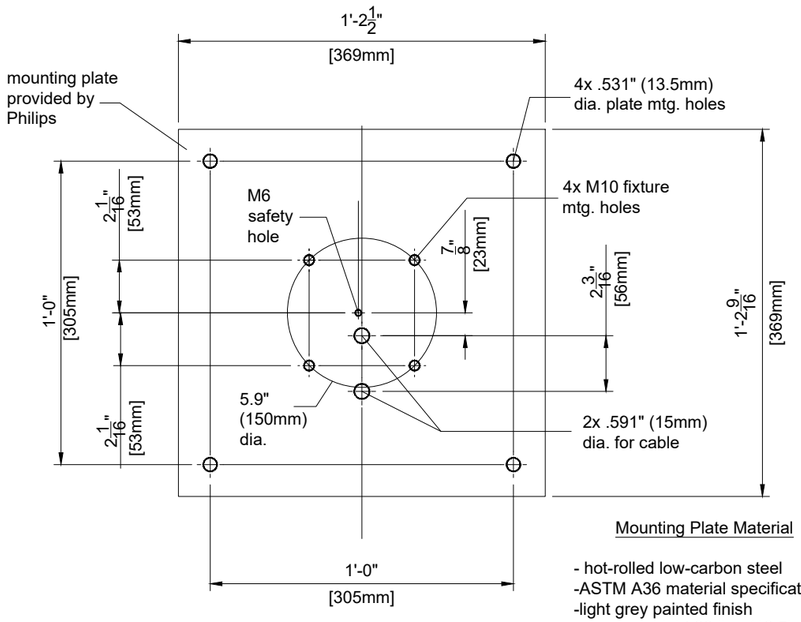
Distance to Structural Ceiling/Support Structure	Standard Ceiling Column	*Distance to Point B
114" (2896mm)	Medium Column 25.5" (648mm)	88.5" (2248mm)

Details of Ceiling Plate for CCT (16.0)
Not to scale

CCT

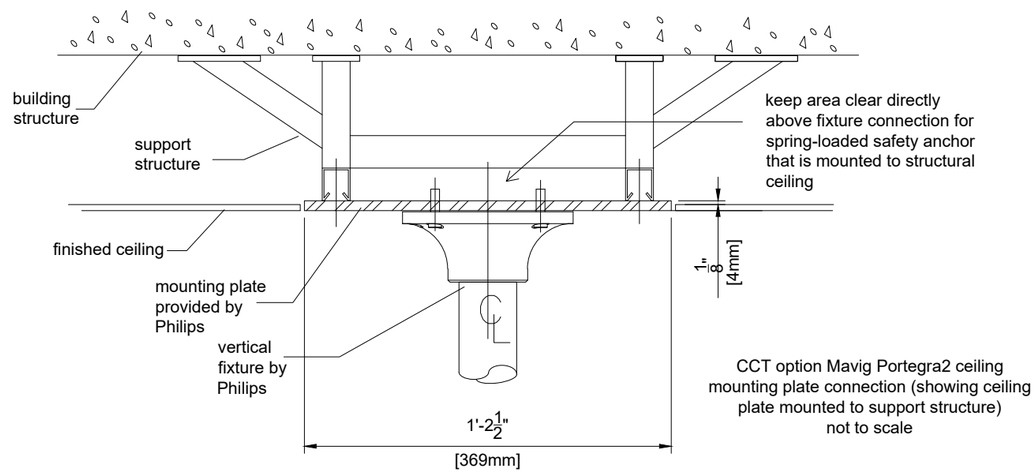
Notes:

- All framework and hardware(including bolts) to be supplied and installed by contractor (unless otherwise noted).



Mounting Plate Material

- hot-rolled low-carbon steel
-ASTM A36 material specification
-light grey painted finish
-approx. weight 28 lbs. (12.5kg).



CCT option Mavig Portegra2 ceiling mounting plate connection (showing ceiling plate mounted to support structure)
not to scale

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

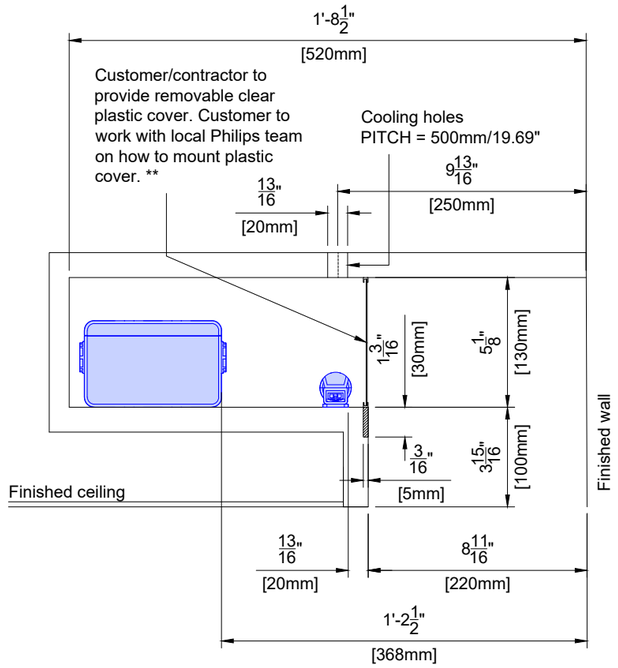
Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SD3

Detail - Data Enabler in Cove

(Not to scale)

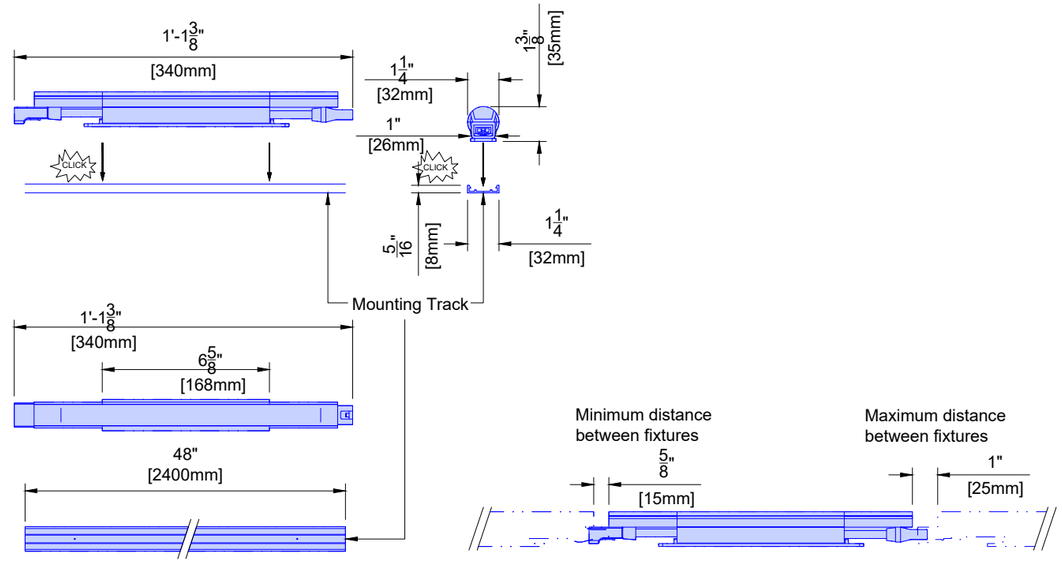


PC | DE

(19.1)

Detail - Data Enabler in Cove Recess

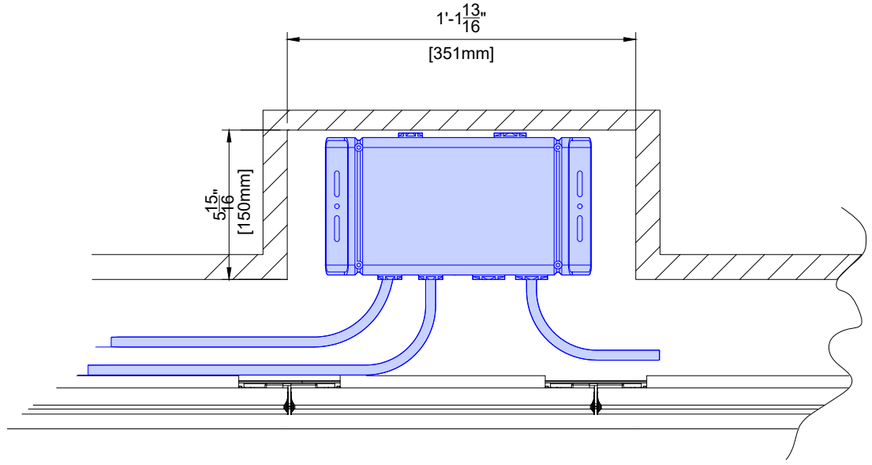
(Not to scale)



**Recommended mounting clear plastic covers on a track for ease of service.
Sufficient ventillation must be provided to closed coves to remove heat given off by LEDs.

Detail - iColor Cove QLX Powercore Cove Light

(Not to scale)



CL | PC | DE

(19.1)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

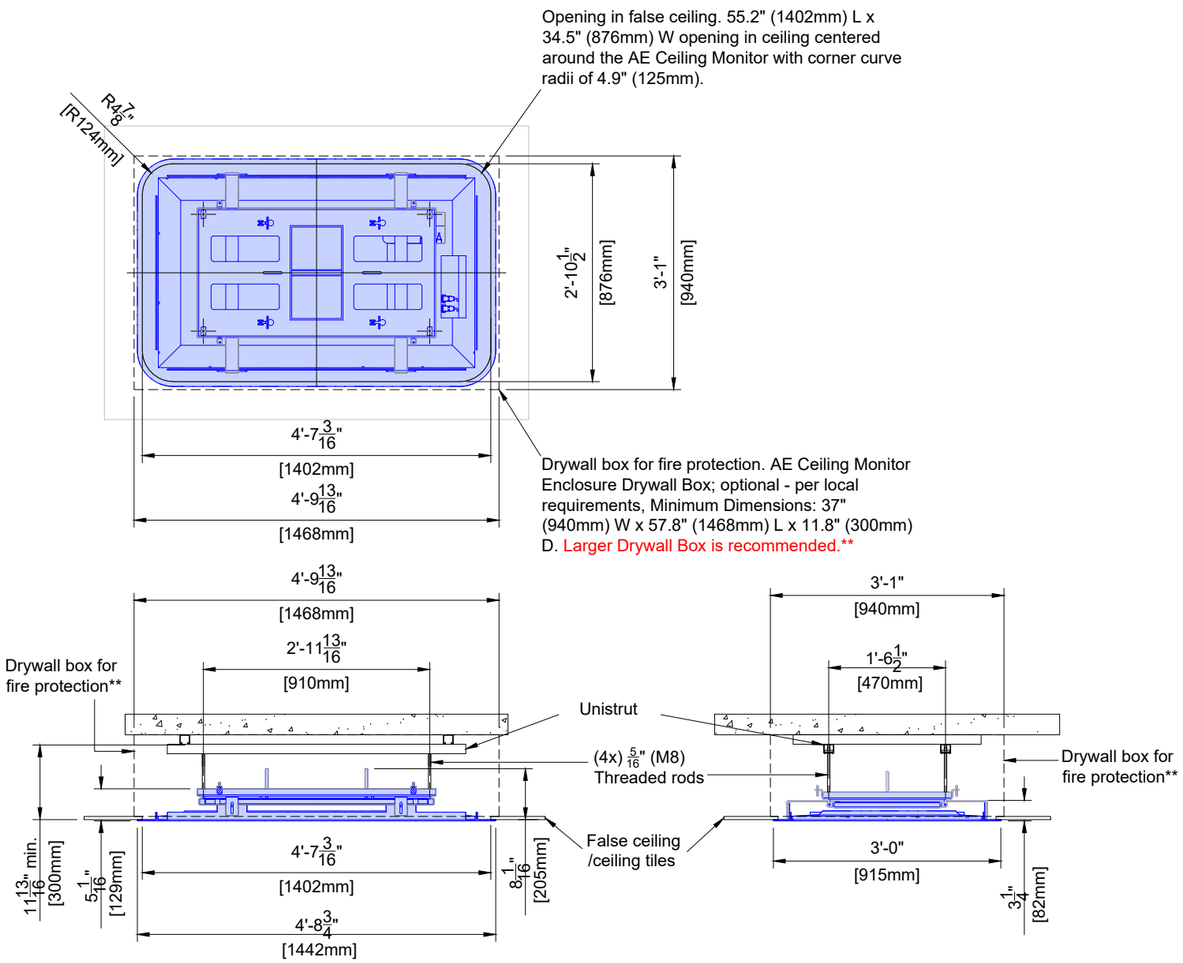
Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SD4

Detail - Ceiling Flatscreen Display (55 inch) Support

(Not to scale)



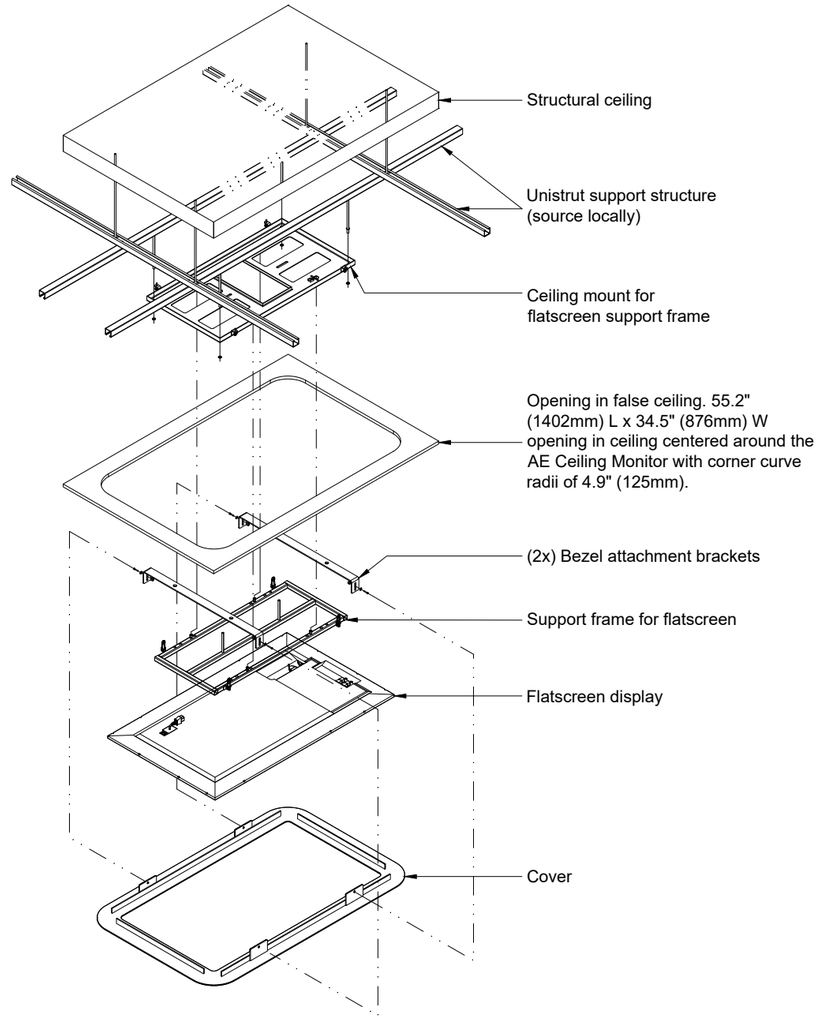
**Note: Sufficient cooling / ventilation must be provided.

CMS CMO CME

(17.0)

Detail - Ceiling Support Frame Assembly

(Not to scale - Not site specific)



CMS CMO

(14.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

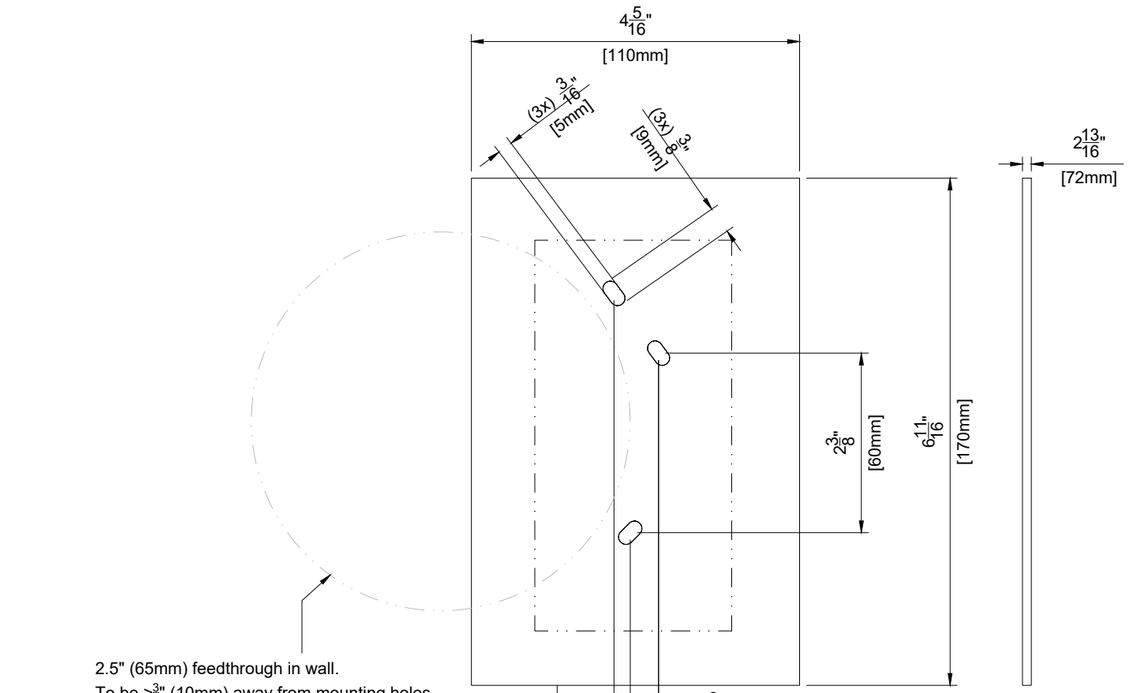
Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SD5

Detail - Wall Mounting Template for Touch Screen Monitor Elo 1517L

(Not to scale)



ATSW

(16.1)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

SD6

General Electrical Information

1. **General**
   The customer shall be solely responsible, at their expense, for preparation of the site, including any required electrical alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and electrical codes, the customer shall be solely responsible for obtaining all electrical permits from jurisdictional authority.

2. **Materials and Labor**
   The customer shall be solely responsible, at its expense, to provide and install all electrical ducts, boxes, conduit, cables, wires, fittings, bushings, etc., as separately specified herein.

3. **Electrical Ducts and Boxes**
   Electrical ducts and boxes shall be accessible and have removable covers. Floor ducts and boxes shall have watertight covers. Ducts shall be divided into as many as three separate channels by metal dividers, separately specified herein, to separate wiring and/or cables into groups as follows: Group a, power wiring and/or cables. Group b: signal and/or data and protective ground wiring and/or cables. Group c: x-ray high voltage cables. The use of 90 deg. ells is not acceptable. On ceiling duct and wall duct use 45 deg. bends at all corners. All intersecting points in duct to have cross over tunnels supplied and installed by contractor to maintain separation of cables.

4. **Conduit**
   Conduits are to be metal. Conduit point-to-point runs shall be as direct as possible. Empty conduit runs used for cables may require pull boxes located along the run. A pull wire or cord shall be installed in each conduit run. All conduits which enter duct prior to their termination point must maintain separation from other cables via use of dividers, cross over tunnels, or flex conduit supplied and installed by contractor from entrance into duct to exit from duct. Maximum conduit lengths shown on these plans are calculated from electrical box entrance to electrical box entrance. Any conduit installed below grade must be water tight.

5. **Conductors**
   All conductors, separately specified, shall be 90° C stranded copper, rung out and marked.

6. **Disconnecting Means**
   A disconnecting means shall be provided as separately specified on sheet ED1.

7. **Warning Lights and Door Switches**
   "X-ray on" warning lights and x-ray termination door switches should be provided at all entrances to x-ray rooms as required by code.

(14.0)

Electrical Notes

1. The contractor will supply & install all breakers and incoming power to the breakers based on local code requirements and Philips cable requirements on sheet ED1. The exact location of the breakers will be determined by the architect or contractor.

2. Philips only supplies the EPO with the STACO UPS package. Otherwise, it is contractor supplied with the Teal. The contractor will install and supply the EPO in control room or based on local code requirements. The exact location of shunt trips will be determined by the architect or contractor.

3. The contractor shall supply & install all pull boxes, raceways, conduit runs, steel covers, etc. Conduit/raceways must be free from burrs and sharp edges over its entire length. Electrical raceway shall be installed with removable covers. The raceway should be accessible for their entire length. In case of non-accessible floors, walls and ceilings, an adequate number of access hatches should be supplied to enable installation of cabling. Approved conduits may be substituted. All raceways will be designed in a manner that will not allow cables to fall out of the raceway when the covers are removed. In most cases, this will require above-ceiling raceway to be installed with the covers removable from the top. Raceway systems as illustrated on this drawing are based upon length of furnished cables. Any changes in routing of raceway system could exceed maximum allowable length of furnished cables. Conduit or raceway above-ceiling must be kept as near to finished ceiling as possible.

4. All pre-terminated, cut-to-length cables, will be supplied and installed by Philips. All wires through the main disconnect and to the gantry will be supplied and installed by the contractor, subject to local arrangements.

5. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with Philips, local or National Electrical Codes, whichever requires the largest diameter.

6. Convenience outlets are not illustrated. Their number and location are to be specified by the customer/architect. Locate at least one duplex outlet within 2'-0" (610mm) of the system rack cabinet (s) and at least three (3) outlets spaced around the control room.

7. All sections of raceway and conduit shall be grounded with an independent #6 a.w.g. green wire that is to be attached using solderless lugs. All ceiling mounted structural support members and ceiling plates shall also be grounded. All grounding connections, terminals, etc. shall be installed in a manner to provide accessibility for inspection, maintenance, repair, etc. (Does not refer to CT system and components, for facility only. Refer to ED1)

8. The contractor is to ensure system cables are not run under the slab in ground floor installations. They need to be run in a trough or a raceway in the floor per NEC section 390 Underfloor Raceway. Conduits may not be allowed in a basement slab. Cables are not certified in a wet environment/area.

9. Applied cable connectors cannot be removed for installation. Site must select a suitable size for cable ducts and wall outlets so connectors and cables can pass through.

(20.0)

Electrical Specifications

The facility transformer supply source shall provide isolation between its input mains and output. The source shall be configured as a Wye. Floating Delta or corner/split leg ground is forbidden. The neutral of the Wye shall be bonded to protective earth. If a Wye supply is not available, then a Philips approved isolation transformer (or equal) shall be provided as a separately derived source with copper windings and a 3.5% regulation rating or better (2% is preferred) compliant to UL1561 and grounded per N.E.C. Article 250-30 Grounding and Bonding, Exhibit 250.13 or 250.14 (see exception note below). When stepping up voltage to meet Philips requirements, reverse orientation and wiring of the supply transformer is forbidden. Philips shall approve the type and use of any power protection and conditioning equipment. Apply a dedicated 225 kVA branch isolation transformer, or purchase a Philips approved power conditioning device, to create a separately derived source whenever:

a. The isolated earth conductors (PE1 and PE2) are not available from the main power supply source at the Neutral / Ground X0 reference point.

b. The run length of feeders exceeds 200' (61m).

c. It is necessary to improve power factors and reduce fault current.

d. It is necessary to adjust voltages to meet CT system input ranges.

e. It is necessary to reduce harmonic currents induced in the supply.

Exception note: Grounding and bonding per N.E.C 250.14 is permitted when the grounding electrode conductor connection is made at the first disconnecting means, then fed directly to the CT room safety disconnect box.

2. The CT system equipment components shall be insulated from building steel, such as; raceways, trough ducts, junction boxes, floor rebar, etc. Apply Philips mylar anchor washers and mylar mat (under gantry and couch). Only isolated ground wires from the facility power source or power conditioner shall provide proper grounding to the CT system, assuring safety and ground quality in compliance with country and local codes. See Protective Earth Ground.

3. Dedicated protective earth conductors shall be supplied by the facility and be the same size as the power feeders. The earth conductors shall have their origin at the facility electric utility power entrance or a separately derived supply source (or Philips approved power conditioner) with an N/G reference point per NEC 250-30, exhibit 250.13 (see supply device above) or NEC 250, exhibit 250.14 (See exception note below). The primary earth (PE1) conductor shall be sized equal to, and routed with, the output power conductors between the supply device and the CT system incoming line connections. The alternate primary earth (PE2) conductor can be the minimum size allowed by local codes, and must be routed in the same conduit as the primary earth (PE1). Resistance between CT system PDU ground and the facility earth ground must not exceed 0.5 Ohm.

4. Locate power conditioners, step-up transformers or isolation transformers close to the CT Suite when possible (200' maximum (61m)). Refer to wire distances given on sheet ED1.

5. All power conditioning and surge suppressor equipment shall be installed according to manufacturer's specifications and installation instructions. Some devices may require additional external fuse protection. All work shall comply with local building codes.

6. **Important Notice:** Power supply for patient automatic power injector system should derive from a ground potential equal to the CT System (if applicable).

(18.0)

Power Quality Guidelines

1. Power supplied to medical imaging equipment must be separate from power feeds to air conditioning, elevators, outdoor lighting, and other frequently switched or motorized loads. Such loads can cause waveform distortion and voltage fluctuations that can hinder high quality imaging.

2. Equipment that utilizes the facility power system to transmit control signals (especially clock systems) may interfere with medical imaging equipment, thus requiring special filtering.

3. The following devices provide a high impedance, nonlinear voltage source, which may affect image quality:
   Static UPS systems, Series filters, Power conditioners, and Voltage regulators. Do not install such devices at the mains supply to medical imaging equipment without consulting Philips installation or service personnel.

4. Line impedance is the combined resistance and inductance of the electrical system and includes the impedance of the power source, the facility distribution system, and all phase conductors between the source and the imaging equipment. Philips publishes recommended conductor sizes based on equipment power requirements, acceptable voltage drops, and assumptions about the facility source impedance (see sheet ED1). The minimum conductor size is based on the total line impedance and N.E.C. requirements. Unless impedance calculations are performed by an electrical engineer, the recommended values must be used.

(14.0)

Electrical Requirement Notes

Electrical power distribution at the facility shall comply with:

1. Phase conductors sized per N.E.C. 517.73 and in accordance with Philips voltage drop requirements. Recommendations are in table 310-16, 90 deg. C copper wires.

2. Room Safety Disconnect sized per N.E.C. 517.72 de-rating, reflecting Philips requirements.

3. Ground conductors to be sized equivalently to phase conductors, unless otherwise noted.

4. Metal conduit shall not be used as the equipment ground conductor.

5. ANSI / NFPA 70 - National Electrical Code
   Article 250 - grounding
   Article 517 - health care facilities

6. ANSI / NFPA 99 - health care facilities

7. NEMA standard XR9 - power supply guideline for x-ray machines

(18.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

EN

Electrical Legend

A Furnished and installed by Philips
B Furnished and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

Item Number | Description | Detail Sheet

Wall

		Description	Detail Sheet
B	WL	Warning light above X-ray room door, if required by code or desired by customer. (Optional - not shown)	ED1 / ED2
B	DS	Door activated switch, if required by code or desired by customer. Switch located on hinge side of door. (Optional - not shown)	ED1 / ED2
B	S1	120 VAC / 15 A, single pole general purpose ON/OFF switch with red cover. Flush mounted 60" (1524mm) above finished floor to centerline of box. Safety switch is required between scanner unit and "WL" for Philips Service, if a warning light is used. Locate next to "A1" if possible or near "PDU". (Optional - not shown)	ED1 / ED2
B	A1	175 A @ 480 VAC, circuit breaker time trip curve/characteristic Class B or 200 A @ 380 VAC, circuit breaker time trip curve/characteristic Class B. Location per local code or owner's requirements. Coordinate with local Philips Service.	ED1
D	A2	Firstline remote EPO switch (provided with STACO UPS). Includes a momentary push-button switch (1) normally open and (1) normally closed set of contacts. Clear polycarbonate lift cover. 3" x 2" x 2-1/2" deep steel switch box with .62" thick spacer for use if user switch box is used that is shorter than 2-1/2". Facility power not required to this device. Surface mounted 60" (1524mm) above finished floor to centerline or per user requirements. (Minimum requirement)	ED1
B	PB	16" (406mm) W x 16" (406mm) L x 6" (152mm) D surface mounted junction box with 5 position terminal blocks (#3/0 max and #6 AWG) and removable cover plate. Bottom of box 72" (1829mm) above finished floor. Locate behind PDU cabinet. Coordinate with local Philips Service.	ED1
B	AIR / PDU	4" (102mm) wide grommeted opening from top to bottom "WR1" cover plate. Preferred locations behind "PDU" and "AIR" cabinets.	ED2
B	COM	8" (203mm) W x 4 3/4" (121mm) L grommeted cable opening at bottom of cover plate on "WR2". Preferred location behind final location of "COM" cabinet.	
B	WR1	18" (457mm) W x 3 1/2" (89mm) D trough surface mounted on wall (Square-D or equal). 8" (203mm) from floor to bottom of raceway. Install barrier strips to form 4 compartments. Provide 4" (102mm) gaps with grommeted edges every 2' (610mm) along each horizontal barrier strip for cable cross-overs.	ED2
B	WR2	4 3/4" (121mm) W x 3 1/2" (89mm) D (or equivalent) surface mounted wall raceway with removable steel cover plate, bottom 3 1/2" (89mm) above finished floor. Install a barrier strip to form 2 compartments.	ED2
B	SFF	12" (305mm) W x 12" (305mm) L x 6" (150mm) D junction box flush mounted in wall. Height of box to be determined by local Philips Service.	
B	ATS	4" (100mm) W x 4" (100mm) L x 4" (100mm) D junction box flush mounted in wall with removable screw-type coverplate, flush mounted 12" A.F.F. to bottom of box. Location shown is recommended and may be changed - verify relocation with local Philips Service.	
B	ATSW	8" (200mm) W x 8" (200mm) L x 4" (100mm) D junction box flush mounted in wall with removable screw-type coverplate, flush mounted 48"(1220mm) A.F.F. with Ø2 1/2" (65mm) grommet opening 1" (25mm) off center for ATSW cable connections. Location shown is recommended and may be changed - verify relocation with local Philips Service.	
B	AVI	1-Gang box for customer's external audio source. Located per customer requirement, suggested placement shown.	

Electrical Legend

A Furnished and installed by Philips
B Furnished and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

Item Number | Description | Detail Sheet

Wall

		Description	Detail Sheet
B	V / V1	18" (457mm) W x 18" (457mm) L x 6" (152mm) D surface mounted junction box shall contain removable cover plate with one flexible conduit connector. Bottom of box 84" (2134mm) above finished floor. To be used for STACO UPS, Philips approved UPS, "STA". Coordinate with local Philips Service.	ED1
B	RMP	4" (102mm) W x 4" (102mm) L x 4" (102mm) D surface mounted wall box. Removable cover plate shall contain a grommeted notch for cable access as required. Exact location to be determined by Philips Service.	
B	OP1	Over current protection from supply soruce to UPS input circuit. Size per codes and UPS input circuitry ratings. (not shown)	
B	OP2	Over current protection from UPS output circuit. Size per codes for branch feeding room safety disconnect. (not shown)	

Floor

		Description	Detail Sheet
B	WS	18" (457mm) W x 18" (457mm) L x 6" (152mm) D junction box, mounted flush in floor. Shall contain a field cut opening with grommet located by Philips Service at time of installation.	ED2

Ceiling

		Description	Detail Sheet
B	INJ	8" (203mm) W x 8" (203mm) L x 4" (102mm) D junction box flush in finished ceiling with removable cover plate. Cover plate shall contain 2" (51mm) x 2" (51mm) grommeted opening.	
B	CCT	8" (203mm) W x 8" (203mm) L x 4" (102mm) D junction box flush in finished ceiling with removable cover plate. Cover plate shall contain 2" (51mm) x 2" (51mm) grommeted opening.	
B	DE1 / DE2	4" (100mm) W x 4" (100mm) L x 4" (100mm) D junction box flush with back of ceiling cove (for Data Enablers). Power Supply Unit connections to be routed via "DE1" box.	
B	SPK	4" (100mm) W x 4" (100mm) L x 4" (100mm) D ceiling junction box. To connect to speakers via 1" diameter, 6' long flex conduits.	
B	CM1 / CM2	4" (100mm) W x 4" (100mm) L x 4" (100mm) D junction box flush mounted (if there is drywall box) in ceiling for ceiling flatscreen display.	

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

EL1

Electrical Legend

A Furnished and installed by Philips
B Furnished and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

Item Number | Detail Sheet | Description

Duplexes

B		120 V / 20 A dedicated duplex outlet.
B	A_T	120 VAC recessed electrical outlet (clock outlet) for ELO Touchscreen, "ATSW", power adapter. Outlet must be located inside "ATSW" junction box. Outlet and junction box will be located behind and covered by ELO Touchscreen, "ATSW". If required by code to separate data and power, a divider must be used.
B	A_D	120 V / 20 A dedicated circuit (switched duplex outlet) for Data Enablers to be located adjacent to "DE". Located in cove or above ceiling, per local code requirements.
B	A_S	120V/20A dedicated duplex outlet for AE Control Unit (SFF) power strip.
B	A_C	120V/20A dedicated duplex outlet for flatscreen displays (CM1 & CM2).

Electrical Legend

A Furnished and installed by Philips
B Furnished and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

Item Number | Detail Sheet | Description

Network Connectors

B	e	RJ45 type Ethernet 100/1000 Mbit network connector with internet access for Philips Field Service Engineer connectivity to on-line system documentation.
B	N1	RJ45 type Ethernet 100/1000 Mbit network connector. Access to customer's network via their remote access server is needed for Remote Service network (RSN) connectivity.
B	N2	RJ45 type Ethernet 100/1000 Mbit connector (1000 Mbit recommended) with access to customer's network. Locate within 10' (3048mm) of network card. Network fiber optic and Ethernet cabling, connectors, wall boxes, patch panels, etc. are the responsibility of the purchaser. Philips assumes no responsibility for procurement, installation, or maintenance of these components.
B	N3	RJ45 type ethernet 100/1000 Mbit network connector with access to customer's network for Syncright injector. Locate within 23' (7010mm) of injector control box. Network fiber optic and ethernet cabling, connectors, wall boxes, patch panels, etc. are the responsibility of the purchaser. Philips assumes no responsibility for procurement, installation, or maintenance of these components. (Optional)
B	N4	RJ45 type Ethernet 100/1000 Mbit connector (1000 Mbit recommended) with access to customer's network. Locate within 10' (3048mm) of network card. Network fiber optic and Ethernet cabling, connectors, wall boxes, patch panels, etc. are the responsibility of the purchaser. Philips assumes no responsibility for procurement, installation, or maintenance of these components. To be used for PRS for remote service access.

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

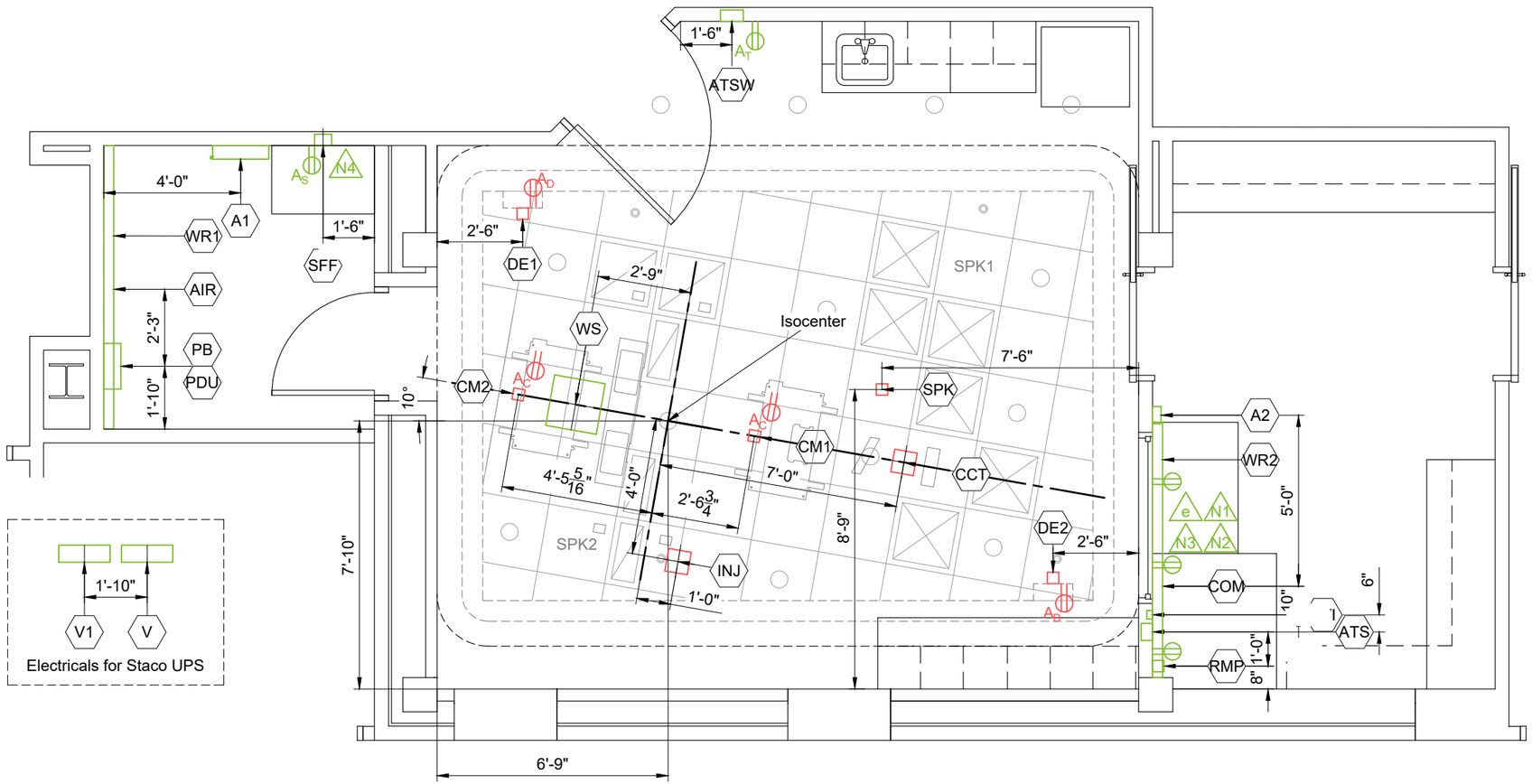
Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

EL2

7/15/2020

Refer to Electrical Legend - Sheet EL
and Electrical Connections - Sheet E2



Electricals for Staco UPS

Electrical Layout

1/4" = 1'-0"

Recommended Ceiling Height: 9' - 0" (2743mm)
Minimum Ceiling Height: 8' - 0" (2438mm)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

E1

Conduit Required

General Notes

1. All conduit runs must take most direct route point to point.
2. All conduit runs must have a pull string.

A Conduit supplied/installed by contractor - Philips cables installed by Philips
B Conduit supplied/installed by contractor - Philips cables installed by contractor
C Conduits and cables supplied and installed by contractor
D Conduit existing - cables supplied and installed by Philips
E Conduit existing - cables supplied by Philips and installed by contractor
F Conduit existing - cables supplied and installed by contractor
G Optional equipment, verify with local Philips Service

* **P** Power (AC)
D Power (DC)
G Ground
S Signal
H High Tension
C Cooling Hose
A Air Supply Hose

	Conduit			Conduit Quantity	Cable Type (*)	Minimum Conduit Size	Maximum Conduit Length	Special Requirements
	Run No.	From	To					
C	1	Hosp. Power	OP1	Per N.E.C.	P	Per N.E.C.	Per N.E.C.	
C	2	Hosp. Power	WL	1	P	Per N.E.C.	Per N.E.C.	
C	3	OP1	V	Per N.E.C.	P	Per N.E.C.	10'	
C	4	V	"STA"	Per N.E.C.	P	Per N.E.C.	5'	Flex Conduit
C	5	"STA"	V1	Per N.E.C.	P	Per N.E.C.	5'	Flex Conduit
C	6	V1	OP2	Per N.E.C.	P	Per N.E.C.	10'	
C	7	OP2	A1	1	P	Per N.E.C.	See Note	Max 200' based on wire sizes on sheet ED1.
C	8	A1	PB	1	P	2 1/2"	25'	
C	9	PB	"PDU"	1	P	2"	5'	Cable supplied by Philips.
C	10	A2	WR1	1	P	3/4"	100'	Connection from "A2" to "PDU". Use non-conductive conduit for connection from "PDU" to raceway.
C	11	A2	V1	1	P	3/4"	100'	
C	12	RMP	V1	1	(S)	1 1/2"	200'	
C	13	"STA"	"BAT"	Per N.E.C.	P	Per N.E.C.	25'	
C	14	S1	WR1	1	P	3/4"	100'	Connection from "S1" to "PDU". Use non-conductive conduit for connection from "PDU" to raceway.
C	15	WL	S1	1	P	3/4"	100'	
C	16	DS	WR1	1	P	3/4"	200'	Connection from "DS" to "PDU". Use non-conductive conduit for connection from "PDU" to raceway.
A	17	WS	WR1	1	(S)	2 1/2"	60'	
A	18	WS	WR1	1	(D/G)	3"	60'	Provide proper interface between 3" conduit connection and edge of 3 1/2" wide raceway surface.
A	19	WS	WR1	1	(P)	2 1/2"	60'	
A	20	WS	WR1	1	(P)	2 1/2"	60'	
A	21	WS	WR1	1	(A)	1 1/2"	60'	
A	22	WS	COM	1	(S)	2 1/2"	60'	
A	23	WS	COM	1	(P)	2 1/2"	60'	
A	24	WR1	COM	1	(P)	2 1/2"	60'	
A	25	WR1	COM	1	(S)	2 1/2"	60'	
B	26	INJ	COM	1	P/S	2 1/2"	See Note	For connection from injector to "IC". Via WR2. Max cable length = 75'
B	27	CCT	COM	1	P/S	2 1/2"	See Note	Via WR2. Max cable length = 75'

Conduit Required

General Notes

1. All conduit runs must take most direct route point to point.
2. All conduit runs must have a pull string.

A Conduit supplied/installed by contractor - Philips cables installed by Philips
B Conduit supplied/installed by contractor - Philips cables installed by contractor
C Conduits and cables supplied and installed by contractor
D Conduit existing - cables supplied and installed by Philips
E Conduit existing - cables supplied by Philips and installed by contractor
F Conduit existing - cables supplied and installed by contractor
G Optional equipment, verify with local Philips Service

* **P** Power (AC)
D Power (DC)
G Ground
S Signal
H High Tension
C Cooling Hose
A Air Supply Hose

	Conduit			Conduit Quantity	Cable Type (*)	Minimum Conduit Size	Maximum Conduit Length	Special Requirements
	Run No.	From	To					
A	28	SFF	AVI	1	S	1"	49'	For external audio cable
A	29	SFF	DE1	1	S	1"	98'	Cat5
A	30	DE1	DE2	1	S	1"	98'	Cat5
A	31	DE1	LED Lights	1	S	1 1/2"	9'	Cable connections from Data Enabler leader cable to first LED of chain
A	32	DE2	LED Lights	1	S	1 1/2"	9'	Cable connections from Data Enabler leader cable to first LED of chain
A	33	SFF	SPK	1	S	1"	65'	Plenum rated speaker wire
A	34	SPK	"SPK1"	1	S	1"	-	Via 1" flex conduit.
A	35	SPK	"SPK2"	1	S	1"	-	Via 1" flex conduit.
A	36	SFF	ATS	1	S	2"	65'	For DVI Connection and USB connection
A	37	SFF	ATSW	1	S	2"	65'	For DVI Connection and USB connection
A	38	SFF	CM1	1	S	2"	65'	For DVI and Network Connection for CM1. For Network Connection for CM2
A	39	CM1	CM2	1	S	2"	16'	For DVI and Network Connection

Refer to Electrical Legend - Sheet EL
and Electrical Connections - Sheet E2

The use of 90° elbows are not acceptable. Use 45° bends at all raceway corners. The use of crossover tunnels at all applicable locations is required.

The minimum bend radius of the fiber optic cables is 2" (51mm).

The minimum bend radius of Air Hose is 3" (76mm).

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

E2

Run Distances and Conductor Sizes (09.0)

All Wires Shown Shall Be Supplied and Installed by the Customer / Contractor.

All Wires Shown Shall Be Supplied and Installed by the Customer / Contractor.

STACO UPS is supplied by Philips. Refer to installation and user manual from manufacturer for detailed wiring specifications and installation requirements before room construction or facility renovations take place.

3 phase main facility supply
-480 VAC
- -40% to +15% for 100% full battery operation
- 60hz (0.8 PF)

Input Current
-235A nominal (480V)
-265A maximum (480V)

Run 'A' - Copper Wire Size [run from Facility Supply or UPS to Room Disconnect (A1) based on 480 VAC load side]: (200 ft [61m] Max. Listed)

4 #00 AWG (67mm^2) Power & Isolated Ground (PE1) 1 #4 AWG(25mm^2) Redundant Isolated Ground (PE2)	0' - 50' (15.2m)
4 #00 AWG (67mm^2) Power & Isolated Ground (PE1) 1 #4 AWG (25mm^2) Redundant Isolated Ground (PE2)	51' - 100' (30.5m)
4 #0000 AWG (107mm^2) Power & Isolated Ground (PE1) 1 #2 AWG (34mm^2) Redundant Isolated Ground (PE2)	101' - 200' (61.0m)

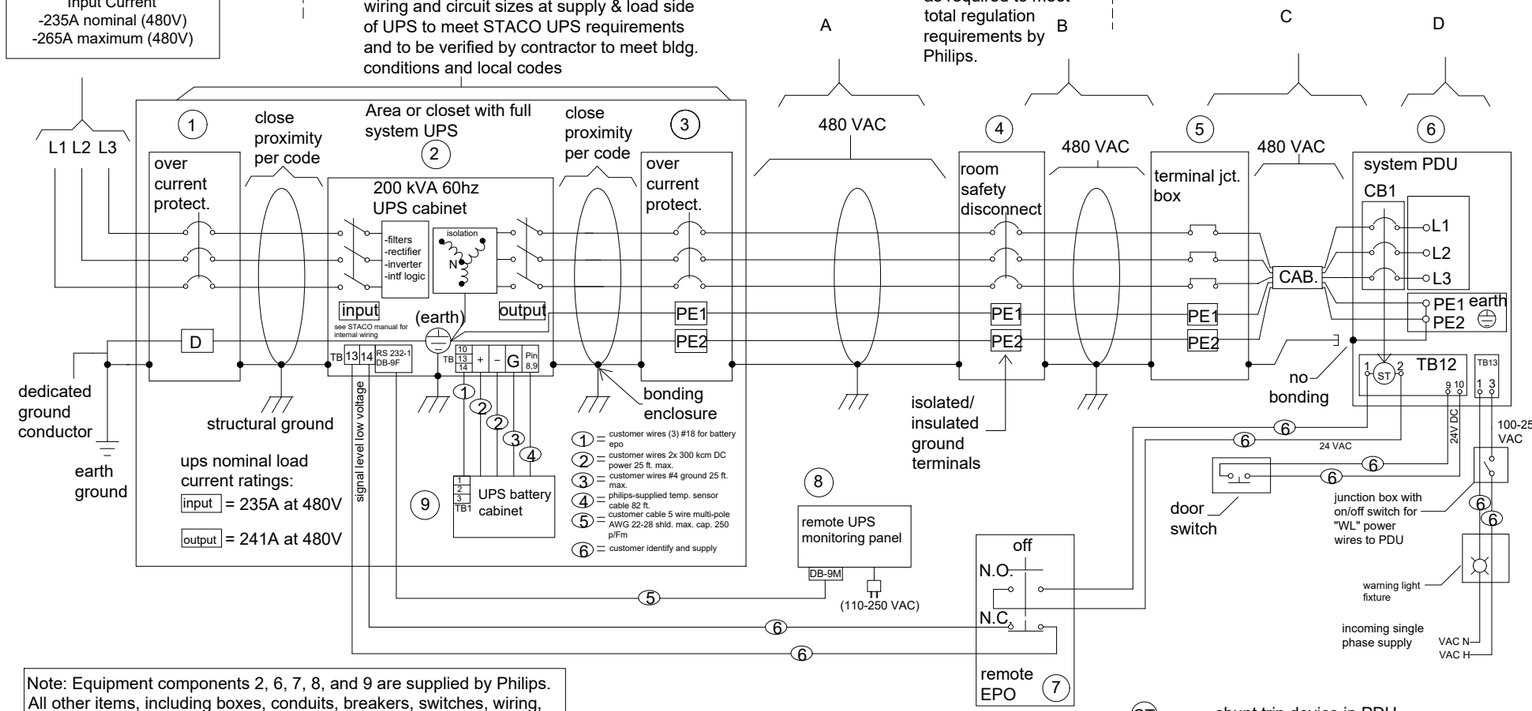
Note: These wire sizes are based on 90 deg. C copper with not more than 2.5% voltage drop within the specified distances. The total voltage loss, including the supply source and these wires, must not exceed 6% combined. Increase wire sizes as required to meet total regulation requirements by Philips.

Run 'B' - Copper Wire Size [run from Room Disconnect (A1) to Terminal Junction Box behind PDU (JB) based on 480 VAC load side]: (25 ft [7.6m] Max. Listed)

4 #00 AWG (67mm^2) Power & Isolated Ground (PE1) 1 #4 AWG(25mm^2) Redundant Isolated Ground (PE2)

Philips Supplied and Customer Installed Power Cables from Terminal Box to PDU Connections (5 ft [1.5m] Max. Length)

wiring and circuit sizes at supply & load side of UPS to meet STACO UPS requirements and to be verified by contractor to meet bldg. conditions and local codes



Note: Equipment components 2, 6, 7, 8, and 9 are supplied by Philips. All other items, including boxes, conduits, breakers, switches, wiring, etc., shall be supplied and installed by the customer

1. Recommended o.c.p. at UPS input circuit 350A/480V or size per local codes
2. STACO Firstline UPS. 200 kVA/60hz 480VAC Philips-approved UPS with full isolation and balanced output
3. Recommended o.c.p. at UPS. De-rated 175 A, 480 V c.b. (Class B) or equal slow-trip fuse for run feeding room safety disconnect. Or size per local codes.
4. Room safety disconnect with over current protection. Recommended de-rated 175 A, 480 V c.b. (Class B) or equal slow-trip fuse for run feeding terminal junction box.
5. Terminal junction box where facility wires connect to Philips cables. Locate above PDU.
6. Philips PDU cabinet. Locate as specified on room layout drawings.
   Power demand at PDU input connections:
   - 240 A @ 480 VAC max. momentary (5 secs.)
   - 30 A @ 480 VAC steady state
7. Remote emergency off (EPO). Locate in Control Room or as Required by Codes.

   Latching type single mushroom push button dry switch:
   - N.O. contacts for PDU shunt trip
   -N.C. contacts for UPS logic disconnect
   Note: Not to be connected to facility power
8. remote UPS mnitoring panel. locate in control room
9. battery cabinet. lcoate within 25 ft. of UPS electronics cabinet

ST	=	shunt trip device in PDU
D	=	dedicated ground same size as feeders
PE1	=	primary earth ground, isolated and same size as feeders
PE2	=	redundant primary isolated earth ground
CAB.	=	Philips-supplied power cables

iCT Incoming Power Schematic (20.0)
(with STACO 200 kVA UPS, 480 VAC 60 Hz)

Mains Supply and Power Quality Requirements (09.0)

iCT Configuration

Mains Supply Configuration:	3 phase Wye, 3 wires and Earth 1 & 2 (L1, L2, L3, PE1, PE2) to system PDU
Mains Supply Voltages:	480, 415, 400, or 380 VAC input to the system PDU
Mains Supply System sub-components:	Ancillary power is fed directly from system PDU output to all CT system sub-components and gantry
Nominal frequency:	50/60Hz
Mains branch power capacity: (separately derived source)	225 kVA nominal size for dedicated isolation transformer
Maximum/ momentary power required:	175 kVA @ 5 sec. maximum 120 kW x-ray exposure
Steady state/long time/processing power required:	25 kVA
Standby/idle power required:	7 kVA
Line voltage variation:	480/415/400/380 VAC +/- 10% total (absolute limits)
Line frequency range:	50/60 +/- 3 Hz
Phase to phase imbalance:	3%
Load Voltage Regulation:	+/- 6%, not to exceed absolute limits
Conductor Impedance:	Ohms/1000 ft. (305mm), .85 PF, copper wires in steel conduit
Power Factor:	0.85 min. PF
Voltage Drop allowed in feeders (copper):	2.5% when supply source and other line impedance contributors do not exceed an additional 3.5%, which equates to 6% total regulation limit.
Mains Resistance:	150 mOhm line to line, max. at 480 VAC 100 mOhm line to line, max. at 380 VAC
Measured current 480 VAC: (standby, steady state, maximum)	Standby 7.5 A, 3 phase average Steady state 30 A Maximum 240 A (120 kW scan @ 480 VAC, 0.85 PF) 5 sec
Voltage Variation:	+/- 10% total (absolute limits)
Voltage Impulse:	+/- 2 kV per IEC 61000-4-4
Voltage Surge:	+/- 2 kV per IEC 61000-4-5
Voltage Sag: limits	-10% of nominal within absolute
Static Frequency Variation:	+/- 3 Hz
Harmonic Voltage Distortion: (single, total)	8% max. THDv

PHILIPS

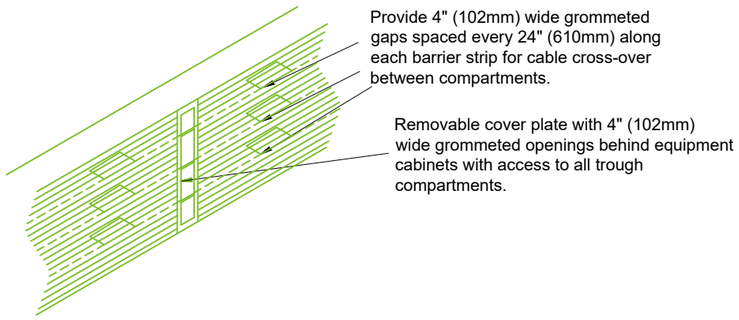
Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerbolth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

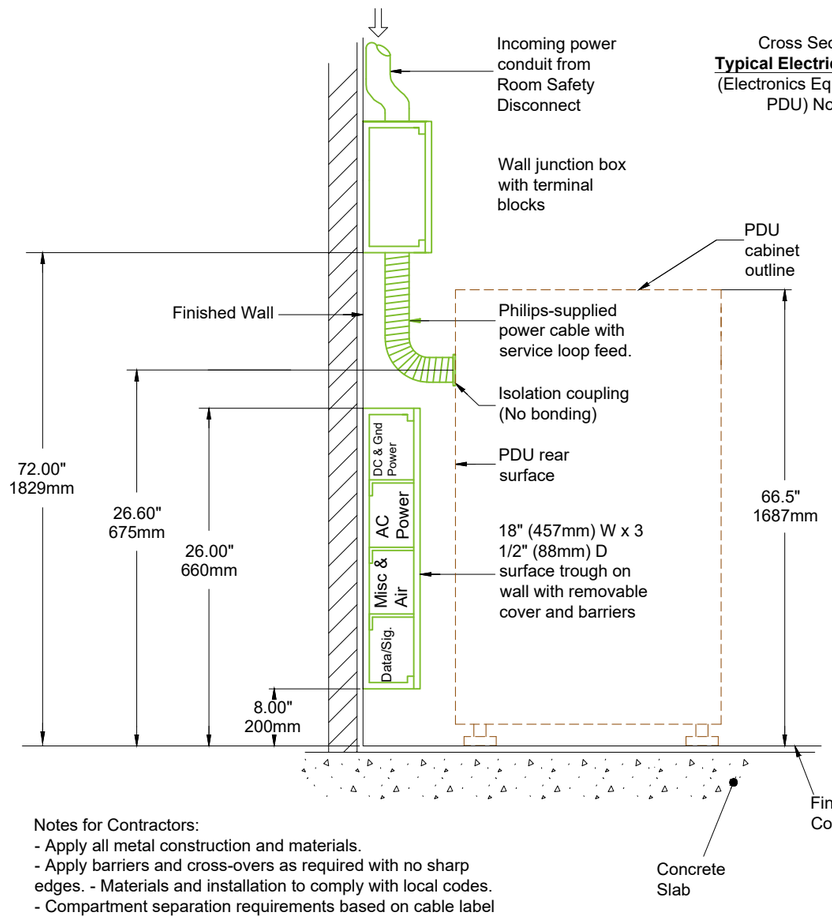
ED1

Equipment Area Wall Raceway Detail (12.0)
Not to scale



AIR PDU (14.0)

Cross Section Detail
Typical Electrical Behind PDU
(Electronics Equipment Area at PDU) Not to scale



Raceway Notes:

All raceway shall be surface mounted on finished surfaces unless otherwise specified, and shall be provided with removable covers, the full length. Covers shall be clear of any obstruction for insertion of pre-plugged cables.

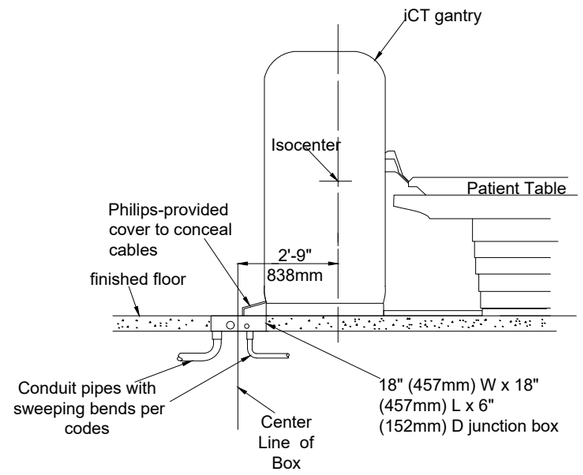
All raceway shall be 4 3/4" (120 mm) x 3 1/2" (88 mm) deep G-6000 "Wiremold" (or equal) or 18" (457mm) x 3 1/2" (88mm) deep Square-D (or equal) for floor, walls, or ceiling.

Removable type barrier strip and crossovers must be provided for separation of A.C. power wires from Philips signal cables. Provide 4" gaps with grommeted edges every 2' along each horizontal barrier strip for cable crossovers.

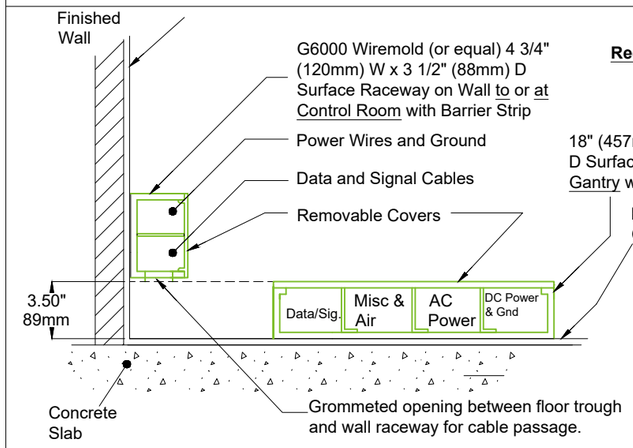
Notes for Contractors:
- Apply all metal construction and materials.
- Apply barriers and cross-overs as required with no sharp edges. - Materials and installation to comply with local codes.
- Compartment separation requirements based on cable label ratings may differ per local codes. Add or modify barriers as required.

WR1 (20.0)

Cross Sectional Detail of Junction Box
(Not to Scale)



WS



Cross Section Detail
Recommended Typical Surface Trough (12.0)
(General)
Not to scale

WR2

Notes for Contractors:
- Provide liquid tight covers.
- Apply all metal construction and materials.
- Apply barriers and cross-overs as required with no sharp edges. - Materials and installation to comply with local codes.
- Compartment separation requirements based on cable label ratings may differ per local codes. Add or modify barriers as required.

(14.0)

PHILIPS

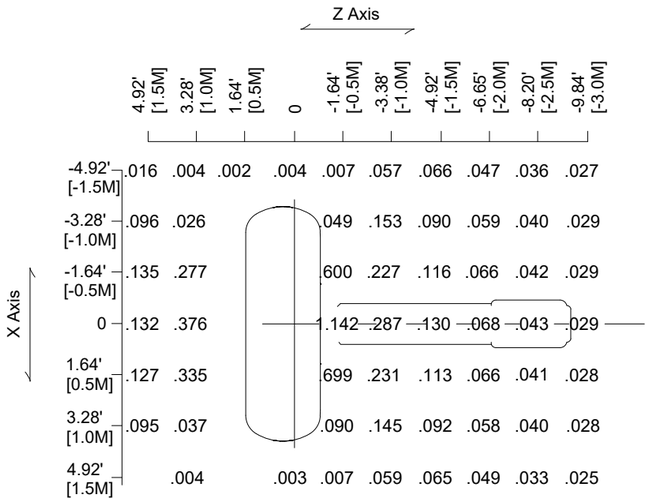
Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com

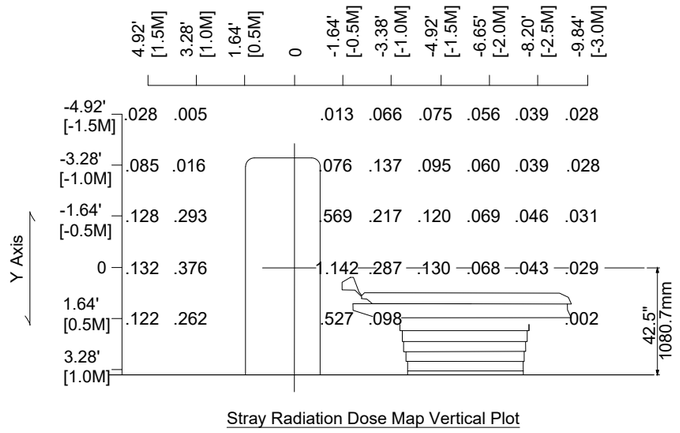
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

ED2



Stray Radiation Dose Map Horizontal Plot



Stray Radiation Dose Map Vertical Plot

Measurements are made with the QA axial body 2D exam card at the maximum collimation of 128 x 0.625 = 80mm and at 140 kVP in the horizontal plane through the system axis and in vertical plane along the system axis. Room dimensions are 5m wide, 5.5m long with a 3m high wall have a ceiling that is 5.5 m above the finished floor.

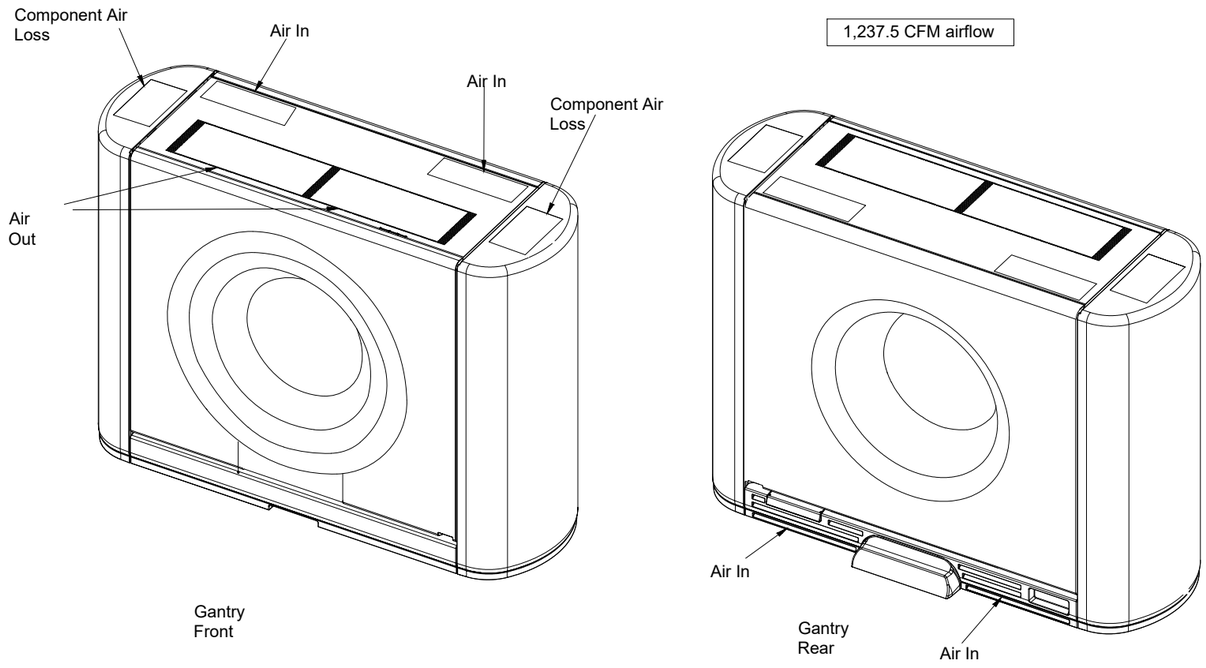
The body CTDI phantom was centrally positioned in the tomographic scan plane and scanned as indicated to produce the near-worst-case scatter map values listed. This PMMA material phantom has a cylindrical shape with a diameter of 32cm and length of 15cm. Any missing values on the charts were not measured because location was not accessible with the measurement probe.

The values shown are in micro Gy/mAs units calculated from the direct measurements.

(16.0)

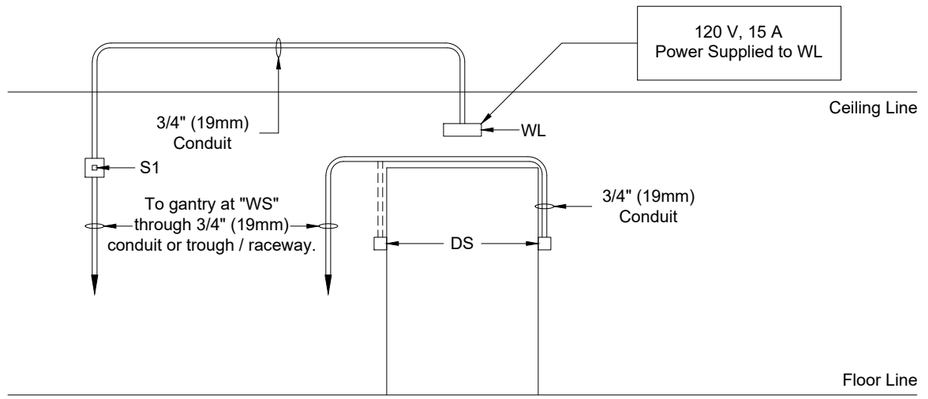
Air Flow Diagram

Not to Scale (14.0)



Door Switch / Warning Light / Switch Detail

(Not to Scale)



Notes:

- Door switch to be located on hinge side of door jamb.
- In case of a double jamb, a door switch should be located on each hinge side.
- Maximum 120V / 25 watt incandescent bulbs recommended for warning light. Due to lag time in activation, fluorescent light not to be used.
- These items are optional. Consult with local Philips Service.

WL DS S1

(14.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

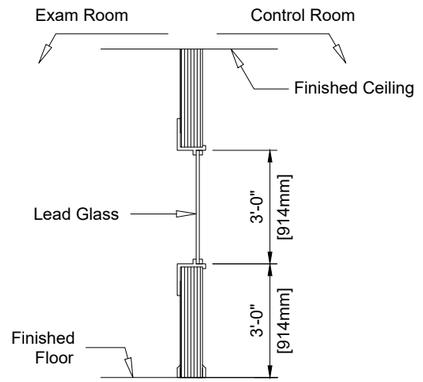
Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

MP1

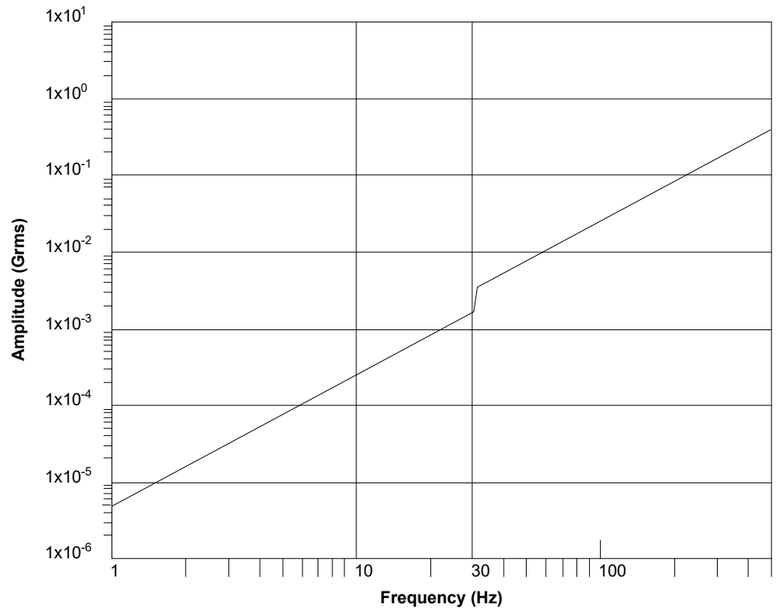
Lead Glass View Window Detail

(Not to Scale)



If applicable, the general contractor shall supply and install lead glass view 3' - 0" (910mm) above finished floor to bottom of glass.

(14.0)



Floor Vibration Amplitude Limits

The measurement should be taken at the site, at the gantry and patient table location, prior to the installation of the system, from 1 to 150 Hz.

The current vibration profile is generated based on image quality simulations and system vibration measurements.

Frequencies from 10 to 30 Hz coming from the floor would have a higher effect on the system related vibrations. Any high amplitude measurements in these frequency ranges could affect image quality and the source should be identified and vibration dampening solutions implemented.

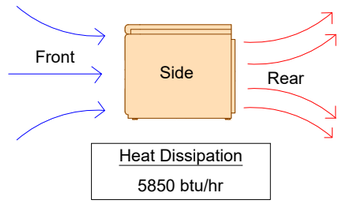
Measurements in the acceptable range should be below the baseline indicated at left.

(14.0)

Air-Flow Diagram -- CIRS Recon/COM Cabinet

(Not to Scale)

1. Placement of CRC should accomodate CRC heat levels.
   - 1.1. 4" required between back of CRC and wall.
   - 1.2. Avoid running raceway behind back of CRC. If raceway passes behind CRC, 4" required between back of CRC and surface of existing raceway.
2. If CRC cabinet is placed in a corner or under a desk, there must be airflow around the cabinet and a method for the hot exhaust air from the computers (vented in rear) to escape.
   - 2.1. Provide 5 X 46 cm (2" x 18") or equivalent area opening on counter top near wall .



(18.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

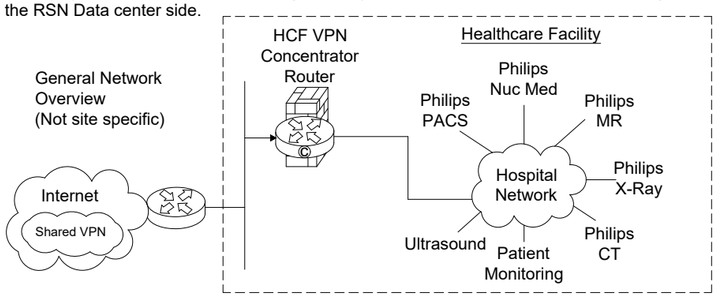
MP2

Philips Healthcare Remote Services Network (RSN)

Secure broadband connection required for Philips remote technical support, diagnostics, and applications assistance

Broadband Site-to-Site Connectivity (Preferred)
This connectivity method is designed for customers who prefer a connection from the RSN Data Center to the Health Care Facility (HCF) utilizing their existing VPN equipment.

Connectivity Details:
- A Site-to-Site connection from the RSN data center's Cisco router will be established to the HCF's VPN concentrator.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE as standard, but alternative standards are also available, such as AES, MD5, SHA, Security Association lifetime and Encryption Mode.
- Every system that we will be servicing remotely will have a static NAT IP that we configure on the RSN Data center side.

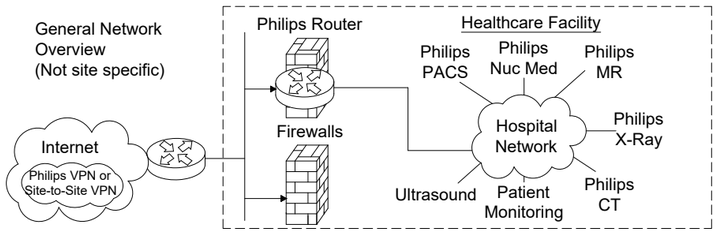


Action Required by Hospital:
- Review and approve connection details.
- Complete appropriate Site Checklist.
- Configure and allow Site-to-Site access prior to setting up connectivity depending on the access criteria that the HCF decides to implement (ex: Source IP filtering, destination IP filtering, NAT assignment, etc.).
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to the designed IP provided by Philips.

Broadband Router Installed at Health Care Facility
This connectivity method is designed for customers who have a dedicated high speed connection for Philips equipment.

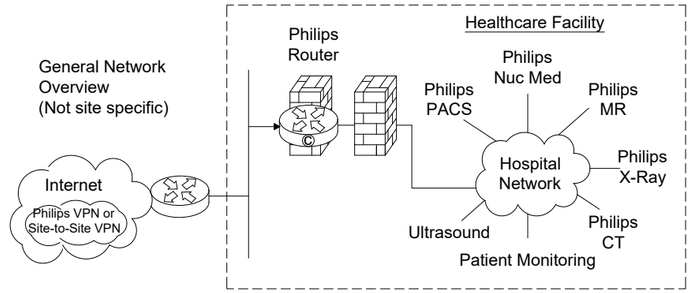
Connectivity Details:
- An RSN Cisco 1711 or 1712 router will be preconfigured and installed at the HCF by Philips in conjunction with the HCF IT representative.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE and will be established from the RSN-DC and terminated at the RSN Router on-site.
- One to One NAT is used to limit access to Philips equipment only.
- Router Config and IP auditing is enabled for Customer IT to view via website 24/7.
- Dedicated DSL connections are also supported.

Option 1: Parallel to HCF Firewall Connectivity Method
This connectivity method is designed for customers who prefer a Philips RSN Router installed on site utilizing all the security features provided and managed by Philips.



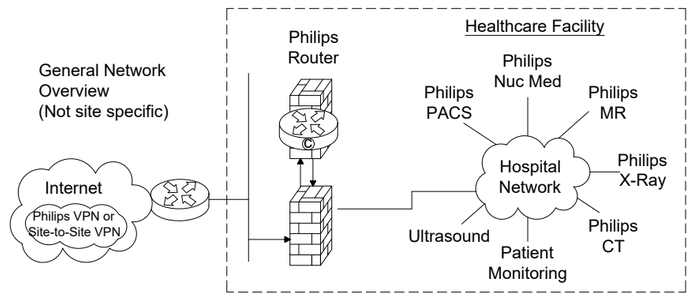
Action Required by Hospital:
- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network.
- Complete appropriate Site Checklist.
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.

Option 2: Back End Connected to the HCF Firewall Connectivity Method
This connectivity method is designed for customers who prefer a Philips RSN Router installed on site by setting up an IP-Based policy allowing access thru existing HCF Firewall to Philips equipment.



Action Required by Hospital:
- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network.
- Complete appropriate Site Checklist.
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
- Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address.

Option 3: Router Installed Inside the HCF's DZM
This connectivity method is designed for customers who prefer the RSN Router installed inside and existing, or new DMZ, allowing access to Philips equipment.



Action Required by Hospital:
- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network.
- Complete appropriate Site Checklist.
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
- Configure and allow on the firewall on the DASHED line interface IPSec protocol communication by opening protocol 500, 50, 51, 47 and port 23 + TACACS. Traffic should be between external IP Address located on the Philips router and the RSN Data center IP address 192.68.48/24 and IP address AOSN TACAS.
- Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address.

(14.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22QH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

N1

7/15/2020

Instructions

This form is to be used by Project Manager, Contractor and Service Engineer.

Information is used to develop and determine site ready date.

Items listed are go/no go items for delivery unless noted as delay only items.

Items identified with *** as delayed items must be completed after hours or on weekend. These items cannot be accomplished while installation is in progress. Also, these items must be completed within two days of installation start or they may stop installation.

Site Readiness Checklist

Modality: _____

Order: _____

Site Name: _____

Location: _____

Contact Name: _____

Contact Phone Number: _____

- ☐ Customer site preparation verified in general against the Philips Site Preparation Support Drawings.
- ☐ Walls finished including painting.
- ☐ Doors installed.
- ☐ Floor leveled according to Philips drawings and specifications.
- ☐ Floors are tiled/covered finished. Flooring is covered with protective covering (scratch protection).
- ☐ Floor leveled according to Philips drawings and specifications.
- ☐ Ceiling lights installed.
- ☐ Cable conduit and ductwork installed and clean. Position checked. Duct covers in place but not finally closed. Cable opening are clear, without sharp edges. Pull strings in conduit. Installation per Philips specifications.
- ☐ HVAC environmental equipment installed and working according to Philips specifications.
- ☐ Ceiling installation completed.
- ☐ Electrical preparation according to Philips specifications.
- ☐ All network cabling, drops installed according to Philips specifications (including hardcopy cameras).
- ☐ All pre-cabling identified on Philips drawings has been installed.
- ☐ Pre-move survey completed - Delivery route identified.
- ☐ Lead glass installed ***.
- ☐ X-ray warning lights installed ***.
- ☐ Cabinets and casework installed ***.
- ☐ Room has been cleaned ***.
- ☐ Philips RSN Champion contacted.
- ☐ RSN Surveys completed and submitted.

Approved for Delivery

_____

Project Manager Date

_____

Service Engineer Date

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-22OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

CHK1

Ambient Checklist

(Tier 3)

Installation Item	Philips Supply	Philips Install	Local Installer Supply	Contractor Supply	Contractor Install	Notes
Basic						
Floor covering				X	X	
Floor island				X	X	
Exam room walls (including projection wall)				X	X	
Rounded corners				X	X	
All conduits/boxes/trays specified for AE cables				X	X	
AE Control Components (SFF Server)						
AE Cabinet (optional - to be ordered)	X	X				
Shelf/location for AE Server				X	X	
Mains power for AE Server power strip				X	X	
Power strip for AE control hardware	X	X				
Junction box for all conduit runs to AE control hardware				X	X	
Audio						
1-gang junction box for external audio face plate				X	X	
Conduit from AE Server to Speakers				X	X	
External audio input plate	X	X				
External audio input cable	X	X				
Power outlet for external audio source				X	X	
AE audio speaker wires	X	X				
AE Speakers	X	X				
Conduit from AE Server to Speakers				X	X	
Location/Holes for AE Speakers		X		X		
ELO Touchscreen						
Touch Screens (wall and desk)	X	X				
Wall box and face plates for Touchscreens				X	X	
Mains power outlet for desk touchscreen				X	X	
Power for wall touchscreen and USB Extender				X	X	Located in ceiling, per local code
Conduits from AE Server to touchscreens				X	X	
Touchscreen power adapter (desk or wall)	X	X				
Touchscreen wall mount	X	X				
Cables for VGA and USB for touchscreen	X	X				

Installation Item	Philips Supply	Philips Install	Local Installer Supply	Contractor Supply	Contractor Install	Notes
Lighting						
Cove Construction for LEDs				X	X	
LED Lighting	X	X				
LED Mounting Strips	X	X				
LED Mounting Strips hardware		X	X			
Data Enabler(s)	X	X				
Data Enabler(s) mounting hardware		X	X			
Mains power for Data Enabler(s) in ceiling				X	X	
Mains power cable for Data Enabler(s)	X	X		X	X	Contractor supplied if hardwired.
Mains power switch for Data Enabler(s)				X	X	
Leader cable for Data Enabler(s) to LEDs	X	X				
Terminator(s) on LED module string	X	X				
Conduit for cable between Data Enabler and AE Server				X	X	
Conduit for cable between Data Enabler(s)				X	X	
Cable between Data Enabler(s)	X	X				
Ceiling Mounted Flatscreen						
Unistrut for Monitor mounting plate				X	X	
Monitor mounting plate	X	X				
Monitor(s)	X	X				
Monitor mounting hardware	X	X				
Opening in ceiling for monitor(s)				X	X	
Bezel for monitor(s)	X	X				
Mains power for monitor(s) above ceiling				X	X	
Conduit from AE Server to monitor Video				X	X	
Conduit from AE Server to monitor network				X	X	
Drywall Box around monitor(s)				X	X	Per local code
Air ventilation to Drywall Box for monitor(s)				X	X	Per local code

(19.0)

PHILIPS

Project
ICT Elite
Good Samaritan Hospital of Suffern
Community Medical Care
Suffern, NY
CT Room

Philips Contacts
Project Manager: Rich Halm
Contact Number: (860) 373-3707
Email: richard.halm@philips.com
Drawn By: Lisa Gerboth

Project Details
Drawing Number: **N-EAS190435 E**
Date Drawn: 2/18/2021
Quote: 1-222OH1W Rev. 7
Order: 6600492935.010000
Quote: 1-2D3440G Rev. 3
Order: 6600508588.010000

CHK2