

VCBO® ADDENDUM 001

project	Intermountain Healthcare PKH CT Remodel	project no	22545
date	2024-01-11	no. pages	
owner	Intermountain Healthcare		
contractor			
bid date	2024-01-19	bid time	4:00 pm

This Addendum shall be considered part of the Contract Documents and Project Manual for the above mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original Contract Documents and Project Manual, the Addendum shall govern and take precedence.

general

- 1.1 See included GE Drawings for reference.
- 1.2 See included Radiation Shielding Reports.

drawings

item	sheet#	description
1.1	AD110	FIRST FLOOR - DEMOLITION PLAN & DEMOLITION RCP <ol style="list-style-type: none">1. ADD TEXT NOTES EXISTING FLOORING AND BASE TO BE REMOVED FOR PATCHING AT NEW WALLS AS CLOUDED.2. ADD TEXT NOTE TO REMOVE FLOORING AND BASE IN TECH WORK AREA.3. ADD NOTES AND SHOW RELOCATION OF EXISTING MILLWORK IN TECH WORK AREA.4. ADD UPPER CABINETS IN FUTURE CT PROCEDURE 1386 TO BE REMOVED.5. ADD NOTES FOR GYP. BOARD DEMO CLARIFICATION IN FUTURE CT PROCEDURE 1386.6. ADD NOTE FOR EXISTING BUMPER RAILS AND HANDRAILS IN THE ENTRY CORRIDOR TO THE EXISTING FLUOROSCOPY ROOM.
1.2	AS101	OVERALL SITE PLAN <ol style="list-style-type: none">1. REVISED LOCATION OF PROJECT WITHIN THE EXISTING BUILDING AS CLOUDED.
1.3	A110	FIRST FLOOR - SLAB PLAN, ANNOTATED & DIMENSION PLAN <ol style="list-style-type: none">1. ADD NOTES FOR SLAB CUTTING AS CLOUDED.2. REVISED WALL TYPES AS CLOUDED.3. ADD EXISTING COUNTERTOP AND MILLWORK TO BE RELOCATED IN TECH

WORK AREA 1366. THIS MILLWORK IS EXISTING IN THIS ROOM AND IS TO RELOCATED TO THE LOCATION SHOWN ON THIS DRAWING.

- 1.4 A111 FIRST FLOOR - REFLECTED CEILING PLAN & EQUIPMENT PLAN
1. ADD TEXT NOTE INDICATING THE LOCATION OF LEAD SHIELDING ON THE UNDERSIDE OF THE FLOOR DECK ABOVE IN CT PROCEDURE 1386 AS CLOUDED.
- 1.5 A112 FIRST FLOOR - FINISH PLAN
1. ADD TEXT NOTES SHOWING LOCATIONS TO PATCH IN FLOORING AT NEW WALLS AS CLOUDED.
 2. SHOW LOCATION OR RELOCATED EXISTING MILLWORK IN TECH WORK AREA 1366 AS CLOUDED.
- 1.6 A401 INTERIOR ELEVATIONS
1. SHOW LOCATION OF EXISTING MILLWORK IN TECH CORE IN THE RELOCATED LOCATION.
 2. ADD KEYED NOTES AS CLOUDED.
- 1.7 A402 INTERIOR ELEVATIONS
1. DETAIL A4 - ADD KEYED NOTE FOR WALL MOUNTED FOLD DOWN BENCH.
 2. ADD KEYED NOTES AS CLOUDED.
- 1.8 A520 TYPICAL INTERIOR FRAMING DETAIL & WALL TYPES.
1. REVISE WALL TYPES AS CLOUDED.

End of Addendum 001



REV	DATE	DESCRIPTION
1	01/09/2024	ADD 001

KEYED NOTES

- 2-608.1 EXISTING CABINET, REMOVE & DISPOSE IN ITS ENTIRETY
- 2-608.3 EXISTING CABINET, REMOVE & SALVAGE FOR REUSE AS SHOWN
- 2-609.3 EXISTING COUNTERTOP, REMOVE & SALVAGE FOR REUSE AS SHOWN
- 2-801.2 EXISTING DOOR AND FRAME, REMOVE DOOR ONLY & DISPOSE AS SHOWN
- 2-802.1 EXISTING HOLLOW METAL FRAME, REMOVE & DISPOSE IN ITS ENTIRETY
- 2-901.2 EXISTING NON-STRUCTURAL METAL FRAMED WALL ASSEMBLY, REMOVE & DISPOSE AS SHOWN
- 2-912 EXISTING CEILING SYSTEM, PROTECT AS NECESSARY, REPAIR AS REQUIRED
- 2-912.1 EXISTING CEILING SYSTEM, REMOVE & DISPOSE IN ITS ENTIRETY
- 2-912.3 EXISTING GYPSUM CEILING BOARD SYSTEM, PROTECT AS NECESSARY, REPAIR AS REQUIRED
- 2-912.4 EXISTING GYPSUM CEILING BOARD SYSTEM, REMOVE & DISPOSE IN ITS ENTIRETY
- 2-1008.1 EXISTING GRAB BAR, REMOVE & DISPOSE IN ITS ENTIRETY
- 2-2001.1 EXISTING SINK - FAUCET, REMOVE & DISPOSE IN ITS ENTIRETY
- 2-2002.1 EXISTING WATER CLOSET, REMOVE & DISPOSE IN ITS ENTIRETY

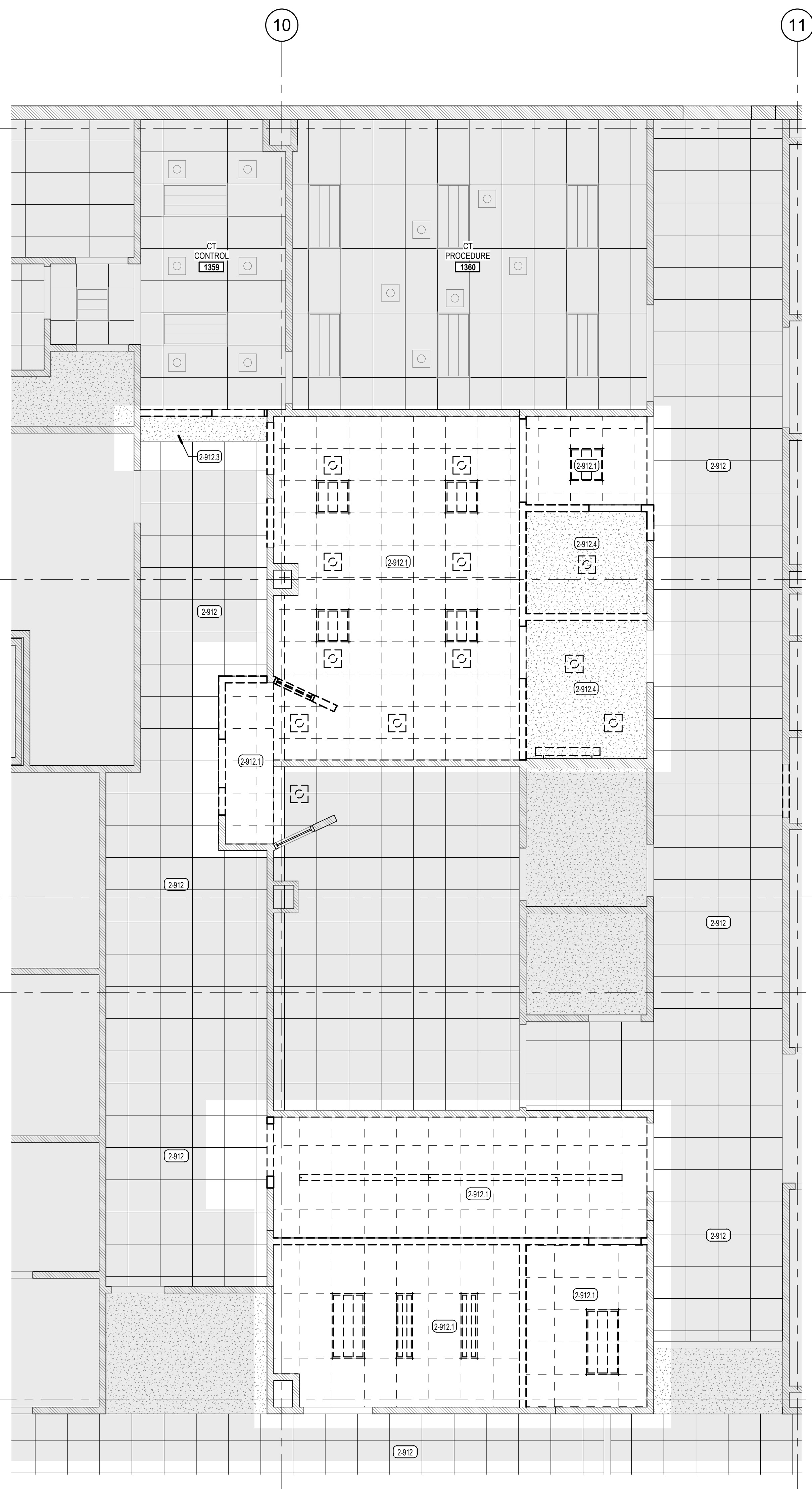
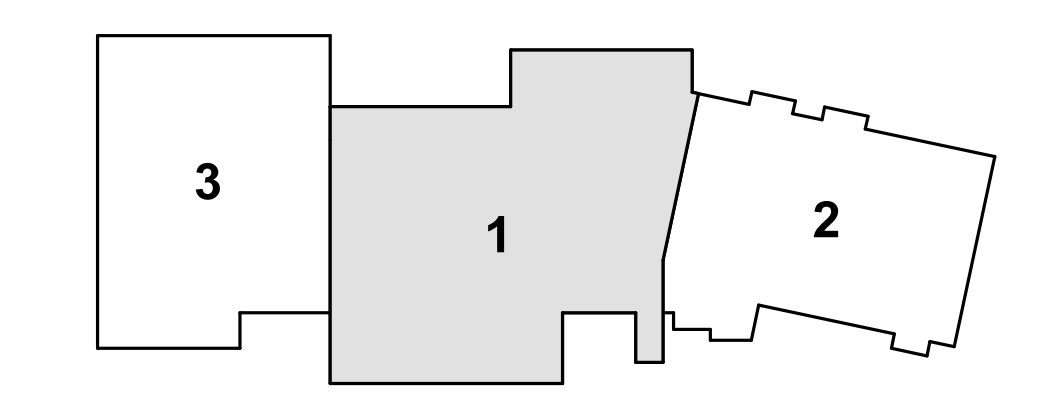
DEMOLITION LEGEND

- REMOVE & DISPOSE ELEMENT
- REMOVE & DISPOSE FLOORING AND CEILING IN THIS AREA (SEE DEMO PLANS)
- REMOVE & DISPOSE FLOORING (ONLY) IN THIS AREA (SEE DEMO PLANS)
- AREA NOT IN CONTRACT

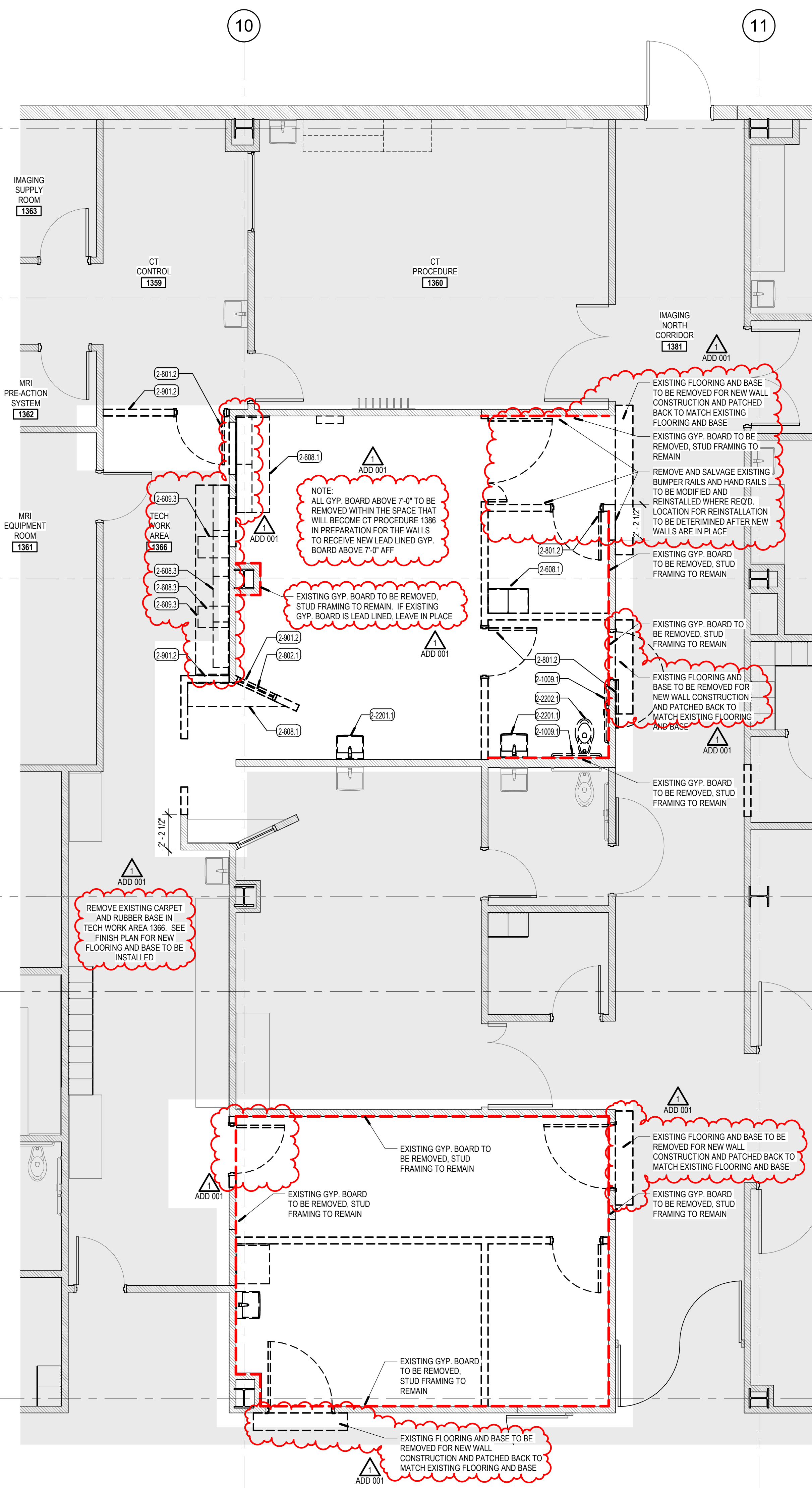
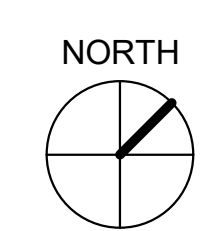
GENERAL DEMOLITION NOTES

1. FIELD VERIFY CONDITIONS PRIOR TO BIDDING. BRING DIFFERING DIMENSIONS AND CONDITIONS TO ARCHITECT'S ATTENTION PRIOR TO BIDDING.
2. A HAZARDOUS MATERIAL SURVEY IS AVAILABLE FROM THE OWNER. ABATEMENT MUST BE COMPLETED PRIOR TO DEMOLITION OF BUILDINGS OR BUILDING ELEMENTS.
3. COORDINATION WITH OWNER'S INFECTION CONTROL SPECIALIST AND AN APPROVED ICRA MANAGEMENT PLAN IS REQUIRED PRIOR TO START OF ANY DEMOLITION WORK.
4. PROVIDE DUSTPROOF ENCLOSURES AT PERIMETER OF CONSTRUCTION & DEMOLITION FOR PROTECTION OF ADJACENT SPACES AS PER ICRA PLAN.
5. COORDINATE MAINTENANCE OF FIRE EGRESS FOR OCCUPANTS IN EXISTING BUILDING WITH THE OWNER AND FIRE MARSHAL. PROVIDE NECESSARY TEMPORARY WALLS OR ENCLOSURES, EMERGENCY LIGHTS, ETC., FOR THE DURATION OF CONSTRUCTION.
6. BRING TO ARCHITECT'S ATTENTION EXISTING CONDITIONS THAT PRESENT ANY CODE VIOLATIONS, INCORRECT CONSTRUCTION OR SAFETY PROBLEMS.
7. MAINTAIN EXISTING FIRE RATINGS, ABOVE CEILING MARKING REQUIREMENTS AND ASSOCIATED FIRE PROTECTION SYSTEMS (I.E. FIRE SPRINKLERS AND FIRE ALARM SYSTEMS) THROUGHOUT CONSTRUCTION. COORDINATE ANY INTERRUPTION TO THESE SYSTEMS WITH THE OWNER AND FIRE MARSHAL. PROVIDE FIRE WATCH REQUIREMENTS ASSOCIATED WITH INTERRUPTIONS TO THESE SYSTEMS.
8. DO NOT DISTURB EXISTING FIRE RATED ELEMENTS INCLUDING FIREPROOFING ON BUILDING STRUCTURE. PATCH/REPAIR DAMAGED OR DISTURBED ITEMS.
9. PROTECT EXISTING STRUCTURE, FINISHES, AND SITE ELEMENTS NOT SCHEDULED FOR DEMOLITION. RESTORE DAMAGED ITEMS TO THEIR ORIGINAL CONDITION OR REPLACE AT CONTRACTOR'S EXPENSE.
10. REMOVE AND DISPOSE SELECTIVE DEMOLITION MATERIAL PER LOCAL REQUIREMENTS.
11. SALVAGE MATERIAL WHERE INDICATED. REMOVE ITEMS FROM CURRENT LOCATIONS & PREPARE FOR STORAGE BY THE OWNER.
12. REFER TO ELECTRICAL AND MECHANICAL PLANS FOR REQUIRED ADDITIONAL DEMOLITION.
13. AFTER DEMOLITION, PRIOR TO FINISH, PATCH AND REPAIR EXISTING WALLS TO PROVIDE SURFACE SUITABLE FOR PAINTING OR WALL COVERING.
14. PATCH & LEVEL EXISTING CONCRETE SLABS FOR NEW FINISHES WITH FLOOR LEVELING COMPOUND.
15. FIELD VERIFY AND COORDINATE SAW CUTTING OF THE CONCRETE FLOOR SLAB WITH PLUMBING AND ELECTRICAL.
16. REPLACE SLAB AND TRENCH BY COMPACTING CLEAN GRAVEL IN 8 INCH LIFTS. DRILL #4 EPOXY-COATED REBAR INTO EXISTING SLAB @ 12 INCHES OC. POUR SLAB TO PROVIDE A SMOOTH EVEN FLOOR.
17. WHERE ELECTRICAL CIRCUIT CONTINUITY IS INTERRUPTED, BUT MUST BE MAINTAINED, MAKE NECESSARY MODIFICATIONS TO MAINTAIN CIRCUIT INTEGRITY.
18. REMOVE ELECTRICAL BOXES BEHIND RELOCATED MILLWORK AND CAP AS REQUIRED.
19. CAP EXISTING DUCT WORK FOR DUST CONTROL.
20. CONTRACTOR IS TO COORDINATE ALL DEMOLITION AND CONSTRUCTION ACTIVITIES WITH THE ONGOING OPERATIONS OF AN ACTIVE AND ONGOING CLINIC. AFTER HOURS OR WEEKEND WORK SHALL BE EMPLOYED TO AVOID ADVERSE IMPACTS TO TENANT EMPLOYEES. CONTRACTOR TO SCHEDULE WORK AND COORDINATE ANY UTILITY SHUT OFFS OR INTERRUPTIONS WITH BUILDING OWNER 2 WEEKS PRIOR TO OCCURRENCE.
21. SAWCUT EXISTING SLAB AS REQUIRED FOR NEW PLUMBING AND ELECTRICAL. COORDINATE WITH PLUMBING AND ELECTRICAL DRAWINGS FOR EXACT LOCATION.

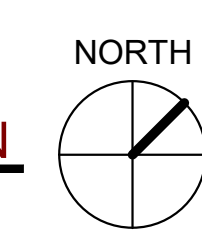
KEY PLAN

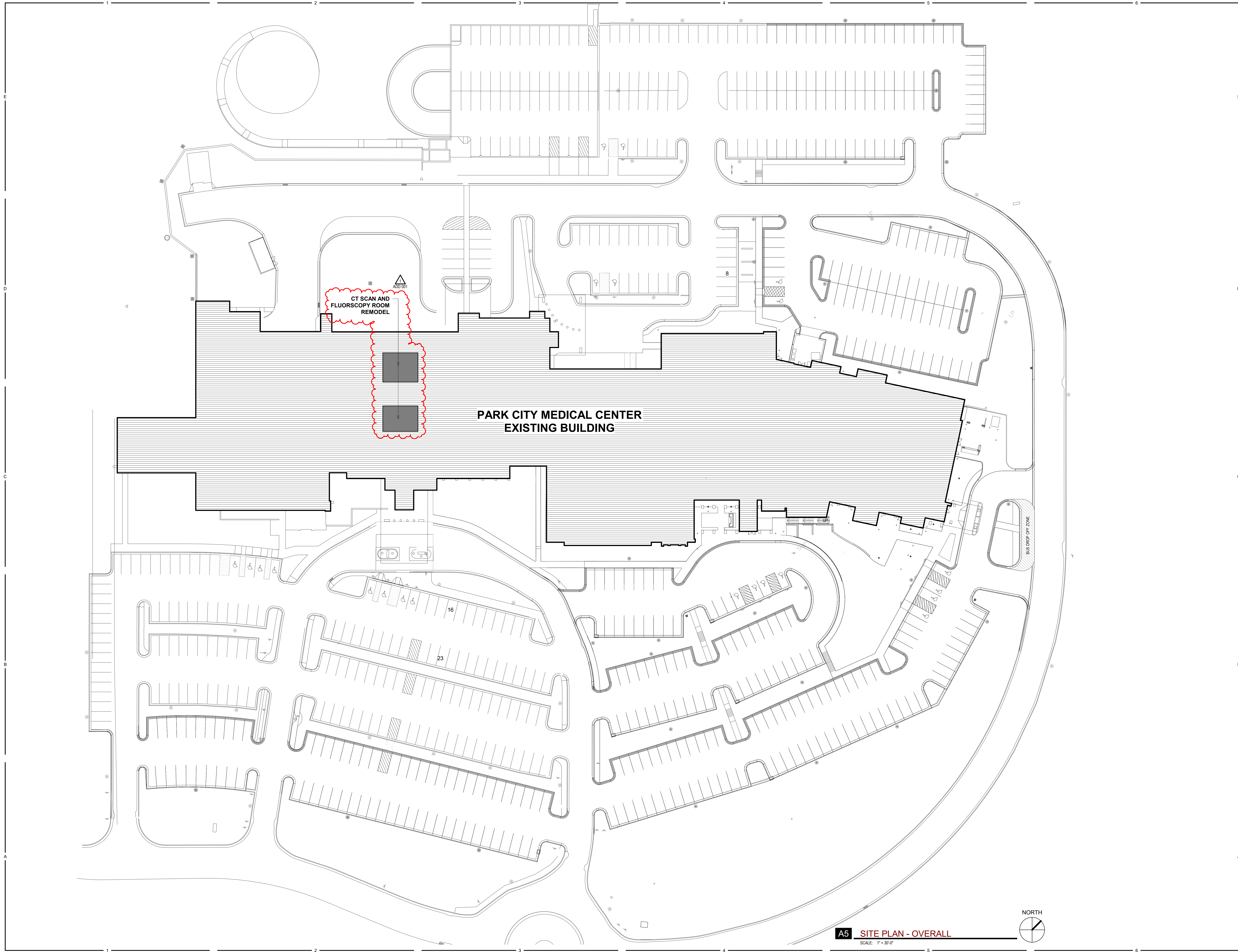


A3 CT PROCEDURE - DEMOLITION REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



C3 CT PROCEDURE - DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

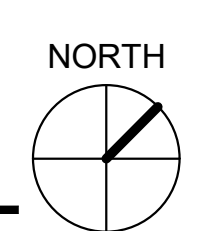




CT SCAN AND
FLUOROSCOPY ROOM
REMODEL

PARK CITY MEDICAL CENTER
EXISTING BUILDING

A5 SITE PLAN - OVERALL
SCALE: 1" = 30'-0"

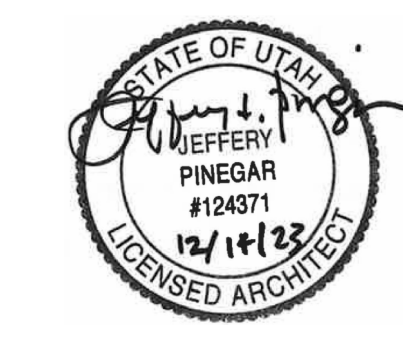


VCBO

SALT LAKE CITY - HQ
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800

ST. GEORGE
20 N. MAIN ST., #103
ST. GEORGE, UT 84770
435.522.7070

VCBO.COM
VCBO NUMBER: 22545
CLIENT NUMBER:
DATE: 12-08-2023

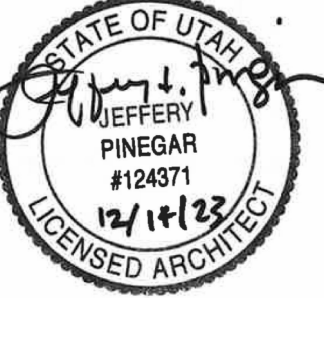


REV	DATE	DESCRIPTION
1	01/09/2024	ADD 001

**INTERMOUNTAIN PARK CITY HOSPITAL
CT / FLUOROSCOPY REMODEL**
900 ROUND VALLEY DR., PARK CITY, UT 84080
CONSTRUCTION DOCUMENTS

OVERALL SITE PLAN

AS101
11/10/2023 8:09:45 AM



REV	DATE	DESCRIPTION
1	01/09/2024	ADD 001

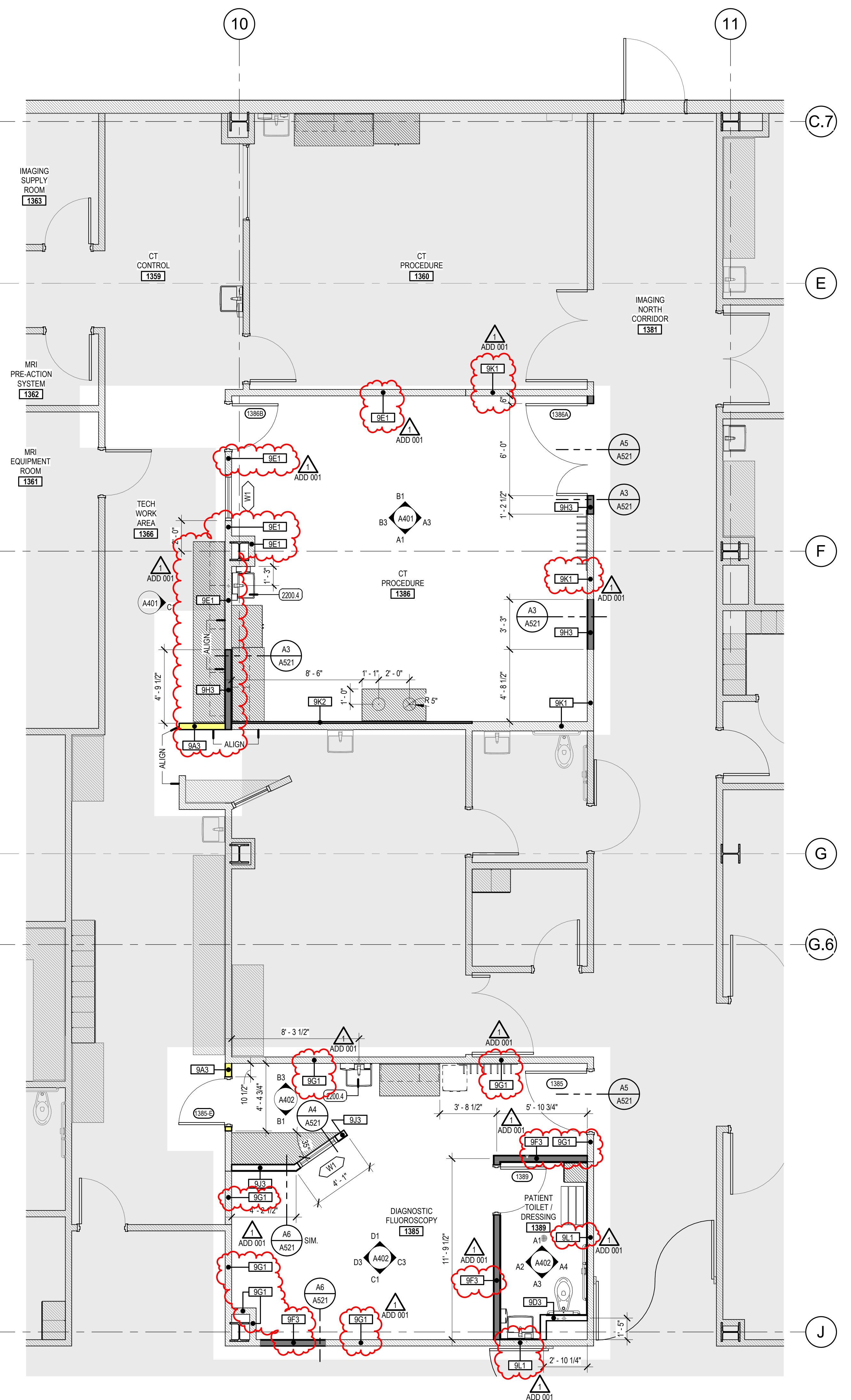
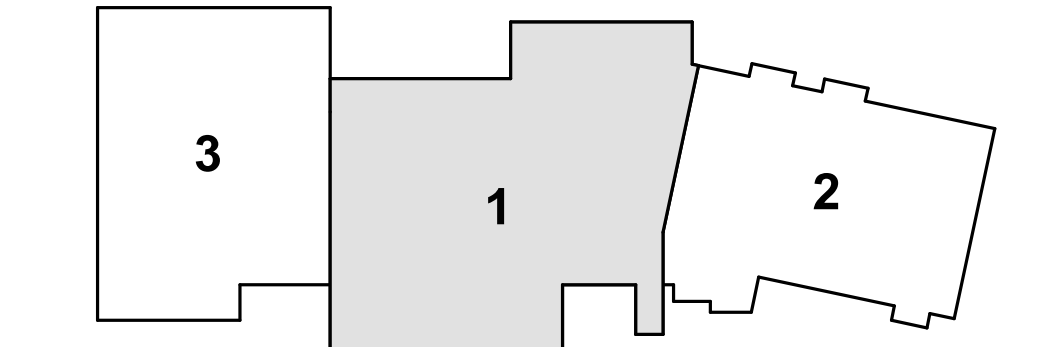
PLAN NOTES

- IT IS BEYOND THE SCOPE OF THIS DRAWING TO SHOW ALL DETAIL AND ASPECTS OF EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS AND DETERMINE THE EXACT AMOUNT OF DEMOLITION NECESSARY FOR IMPLEMENTING THE WORK AS SHOWN IN THE CONSTRUCTION DOCUMENTS.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ANY AND ALL ITEMS TO REMAIN, REPAIR OR REPLACE SUCH ITEMS SHOULD THEY BE DAMAGED BY THE CONTRACTOR.
- CONTRACTOR TO PROTECT EXISTING SITE, PARKING, BUILDING WALLS, STOREFRONT AND ROOF FROM ANY DAMAGE.
- CONTRACTOR TO MAINTAIN PROTECTED EGRESS FOR STAFF AND VISITORS.
- WHERE FLOOR DRAINS ARE INSTALLED, THE FLOOR IS NOT TO SLOPE TOWARD THE DRAIN (REMAINS FLAT) EXCEPT AT THE FOLLOWING LOCATIONS:
A. THICK SET TILE LOCATED IN CONJUNCTION WITH SHOWERS.
B. FLOORS NOT TILED AT SLAB-ON-GRADE LOCATIONS (SUCH AS MECHANICAL ROOMS)
WHERE FLOORS SLOPE, THE MAXIMUM FLOOR SLOPE IS NOT TO EXCEED 2% WHILE THE MINIMUM SLOPE IS NOT TO BE LESS THAN 1%, UNLESS NOTED OTHERWISE
- WHERE CONCRETE PADS ARE CALLED TO BE CONSTRUCTED UNDER EQUIPMENT, THE SLAB IS TO BE 6" THICK U.O., AND IS TO HAVE #4 BARS AT 18" O.C. EACH WAY. COORDINATE DIMENSIONS OF PAD WITH ACTUAL EQUIPMENT INSTALLED.
- AN ELECTRICAL SIGN OFF/APPROVAL IS REQUIRED DURING FRAMING BY ARCHITECT & OWNER OF ALL POWER/DATA/CABLE LOCATIONS PRIOR TO ROUGH-IN.**
- AT ALL ELECTRICAL HOME RUN CIRCUITS ADD A J-BOX IN AN ACCESSIBLE LOCATION ABOVE THE CEILING PRIOR TO BRANCHING.
- THE CONTRACTOR IS TO ENSURE THAT BETWEEN ANY FINISH FLOOR ELEVATION TO 42" A.F.F., GUARDRAILS ARE TO BE CONSTRUCTED AND INSTALLED SO THAT A 4" SPHERE WILL NOT PASS BETWEEN ANY TWO ADJACENT GUARDRAIL COMPONENTS OR BETWEEN THE EDGE OF A GUARDRAIL AND ALL ADJACENT BUILDING ELEMENT SUCH AS A WALL OR FLOOR. AN 8" DIAMETER SPHERE IS NOT TO PASS BETWEEN THE ABOVE MENTIONED COMPONENTS AND ELEMENTS FROM AN ELEVATION 34" A.F.F. AND HIGHER.
- SEE SHEET A500 FOR WALL TYPES AND TYPICAL NOTES.
- REFER TO SHEET A520 FOR TYPICAL INTERIOR WALL CONDITIONS ASSOCIATED WITH METAL STUD PARTITIONS.
- SEE DETAIL ON SHEET A520 FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION DETAILS.
- PROVIDE CONTROL JOINTS IN METAL FRAMED WALLS AT 30 FEET ON CENTER MAXIMUM. LOCATE AT CORNER ABOVE DOORS OR INSIDE CORNER OF PILLASTERS OR OTHER INCONSPICUOUS LOCATION WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO COMMENCING FRAMING. INSTALL PER DETAILS ON SHEET A520 FOR CONTROL JOINTS.
- CONSTRUCT ALL COLUMN WRAPS PER DETAILS A521 & A521, UNLESS NOTED OTHERWISE.
- PROVIDE BLOCKING / BACKING FOR ALL WALL MOUNTED EQUIPMENT. SEE FLOOR PLANS AND INTERIOR ELEVATIONS FOR CABINETS, GRAB BARS ETC. INSTALL BLOCKING AS DETAILED OR AS REQUIRED TO MOUNT SUCH DEVICES. INSTALL PER SHEET A520.
- SEE SHEET A601.2 & A601.3 FOR DOOR AND WINDOW TYPES AND NOTES.

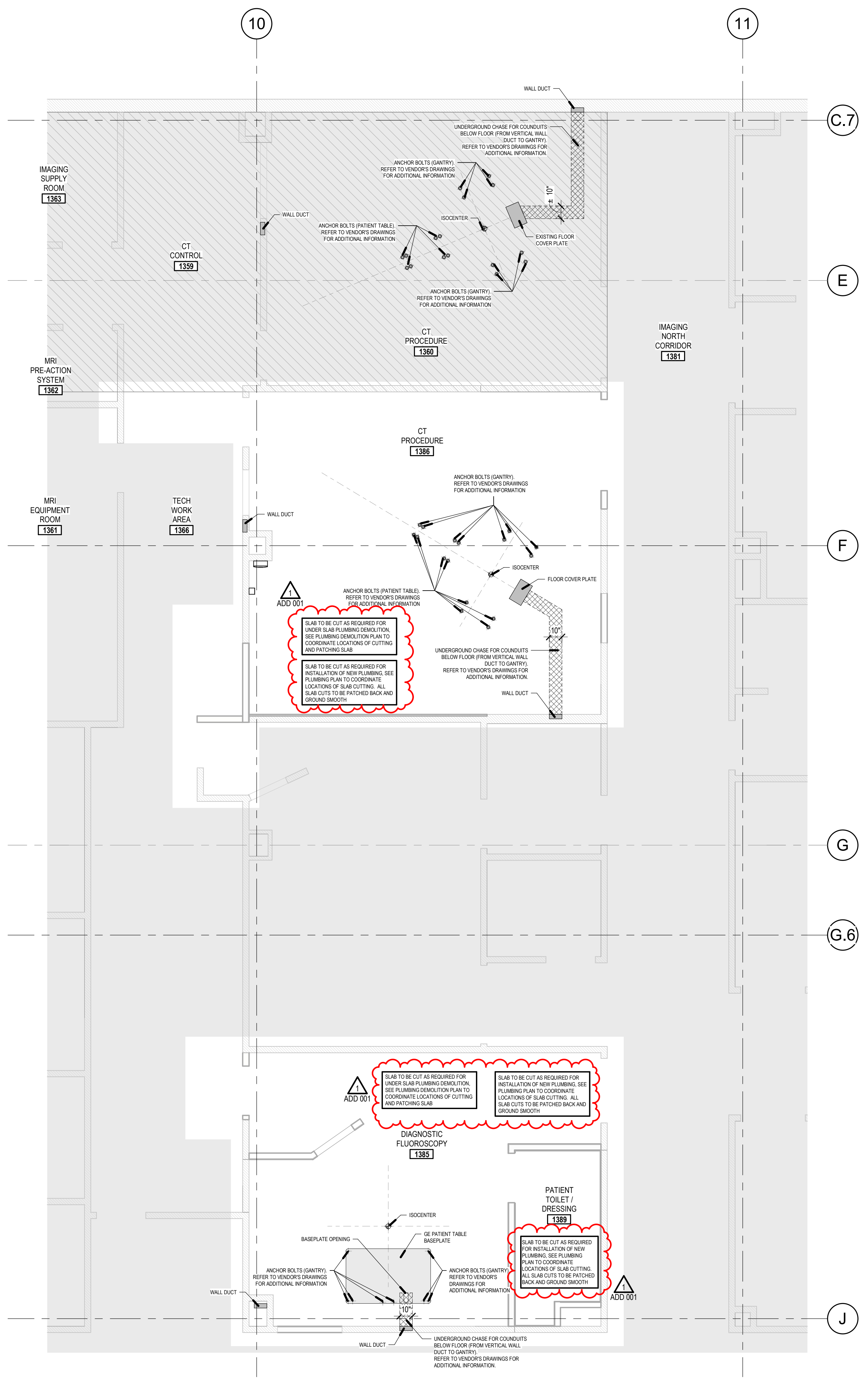
KEYED NOTES

2200.4 SINK (LAVATORY) - FAUCET, WALL HUNG

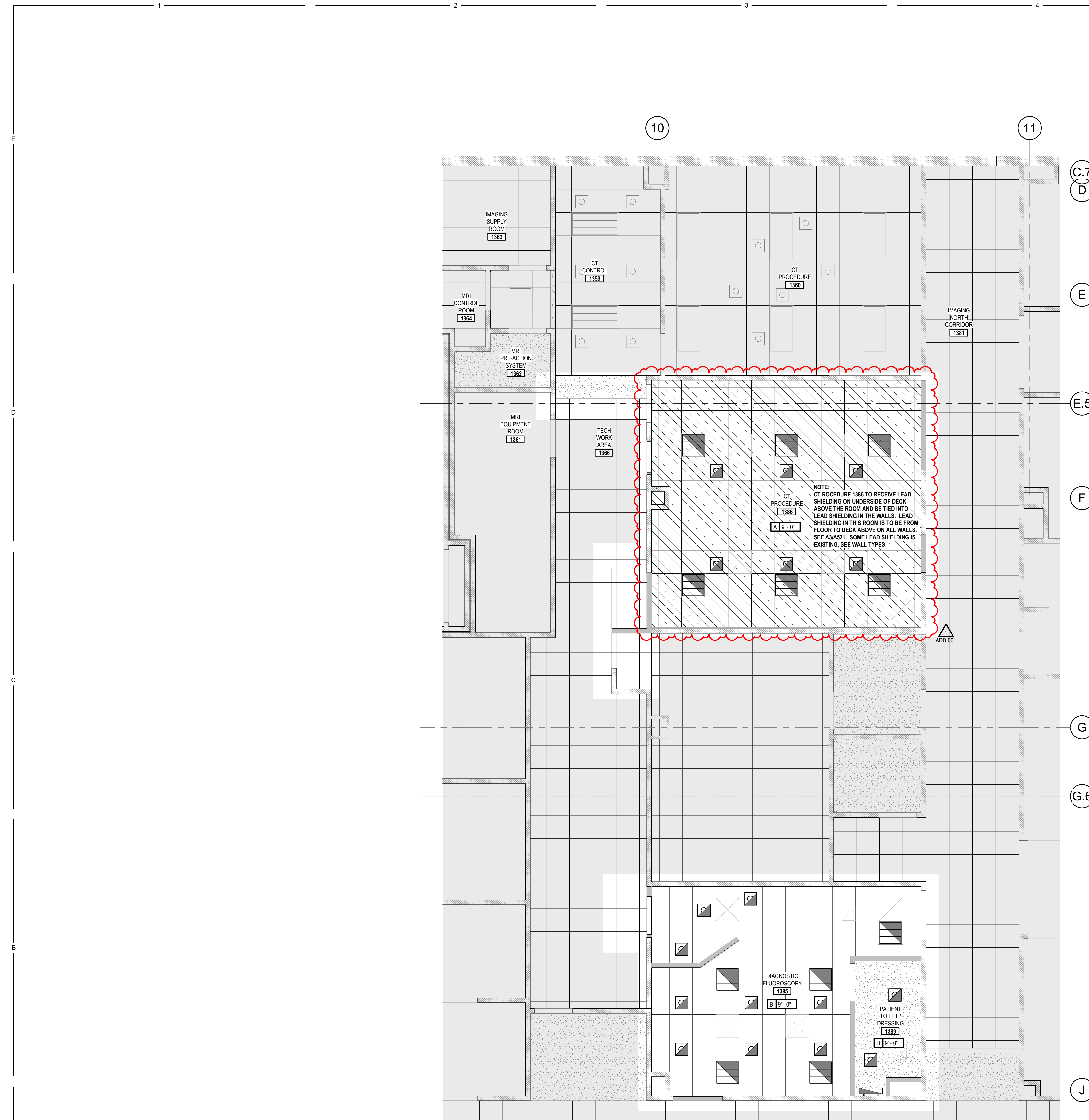
KEY PLAN



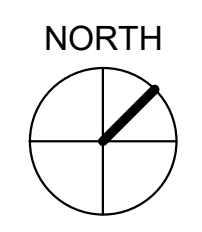
A3 CT PROCEDURE - ANNOTATED & DIMENSION PLAN
SCALE: 1/4" = 1'-0"



A1 ENLARGED CT PROCEDURE - SLAB PLAN
SCALE: 1/4" = 1'-0"



C3 CT PROCEDURE - REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



CEILING LEGEND

	A- SUSPENDED 2' X 2' ACOUSTICAL LAY-IN TILE CEILING
	B- SUSPENDED 2' X 4' ACOUSTICAL LAY-IN TILE CEILING
	C- SUSPENDED 5/8" GYP. BD. CEILING SYSTEM - (1 LAYER) PAINTED
	D- OPEN TO STRUCTURE ABOVE, PAINTED
	E- SUSPENDED 2' X 4' SOIL RESISTANT / WASHABLE ACOUSTICAL LAY-IN TILE CEILING
	F- SUSPENDED 5/8" GYP. BD. CEILING SYSTEM W/ 1/32" LEAD

CEILING SYMBOLS

	2X4 LED FIXTURE
	2X2 LED FIXTURE
	LED LINEAR FIXTURE
	RECESSED CAN LIGHT
	WALL WASH
	EXIT SIGN, SINGLE-SIDED
	EXIT SIGN, DOUBLE-SIDED
	FIRE ALARM
	SPEAKER
	SMOKE DETECTOR
MECHANICAL	
	SUPPLY GRILLE
	RETURN GRILLE
	EXHAUST GRILLE
	LINEAR DIFFUSER
	SPRINKLER HEAD - CEILING MOUNT
	SPRINKLER HEAD - WALL MOUNT
	ACCESS PANEL

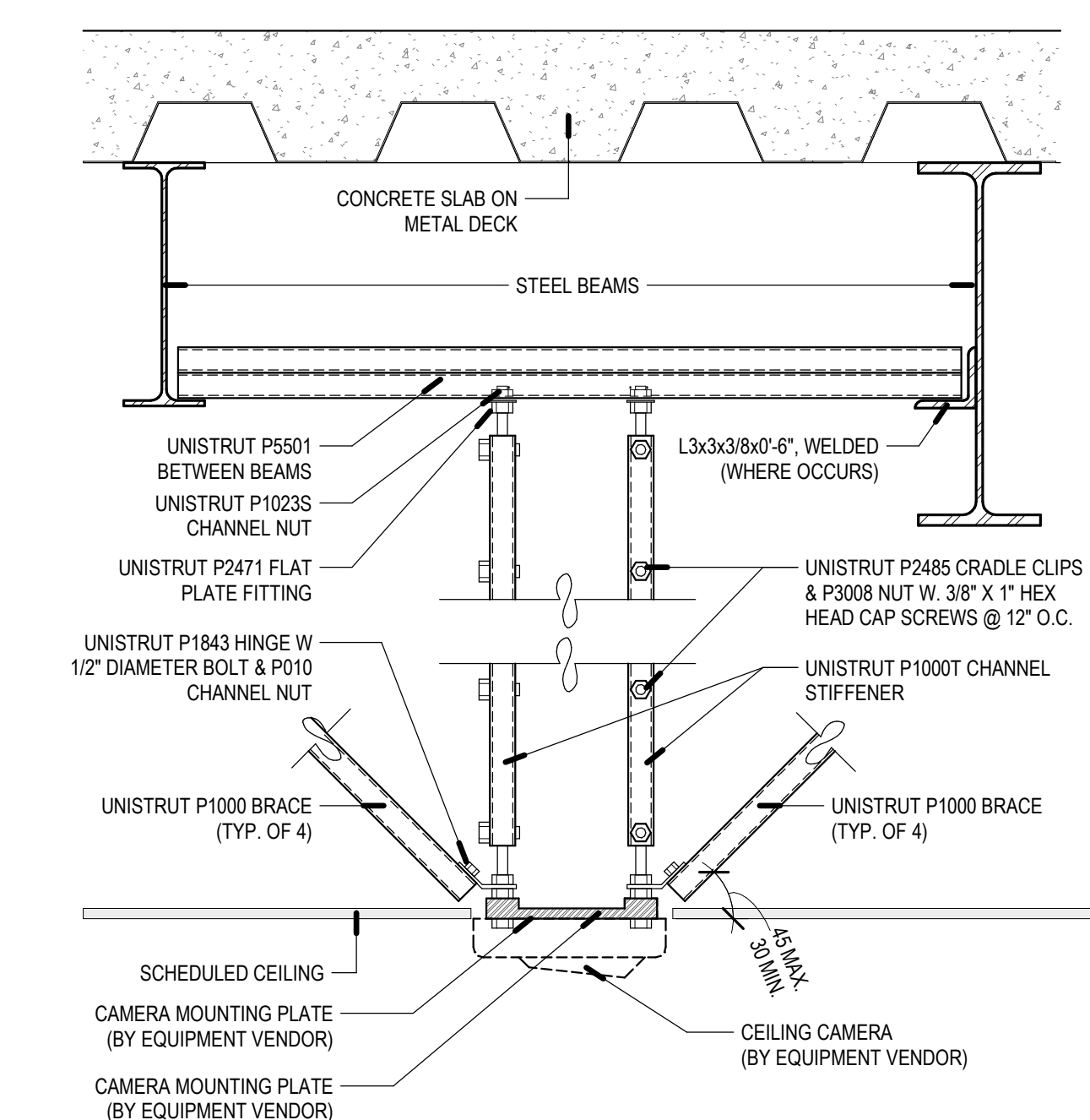
GENERAL CEILING NOTES

1. GRID SUSPENSION SYSTEMS SHALL BE CENTERED WITHIN AREAS INDICATED, UNLESS NOTED OTHERWISE
2. PAINT ALL EXPOSED STRUCTURE, MECHANICAL, DUCTS, ELECTRICAL WORK, PIPING, ETC.
3. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF MECHANICAL GRILLES, AND TO MECHANICAL DRAWINGS FOR QUANTITIES AND TYPES
4. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF LIGHT FIXTURES AND TO ELECTRICAL DRAWINGS FOR QUANTITY AND TYPES
5. MECHANICAL AND ELECTRICAL CONTRACTORS TO COORDINATE WORK WITH SPRINKLER CONTRACTOR TO AVOID CONFLICTS IN FIELD
6. ALL CEILING HEIGHTS ARE ELEVATION ABOVE TOP OF CONCRETE FLOOR SLAB
7. ALL GYPSUM BOARD TYPE C CEILINGS IN RESTROOMS, LOCKER ROOMS, SHOWERS, AND WET AREAS TO BE EPOXY PAINTED
8. SEE SHEET A540 FOR TYPICAL CEILING DETAILS

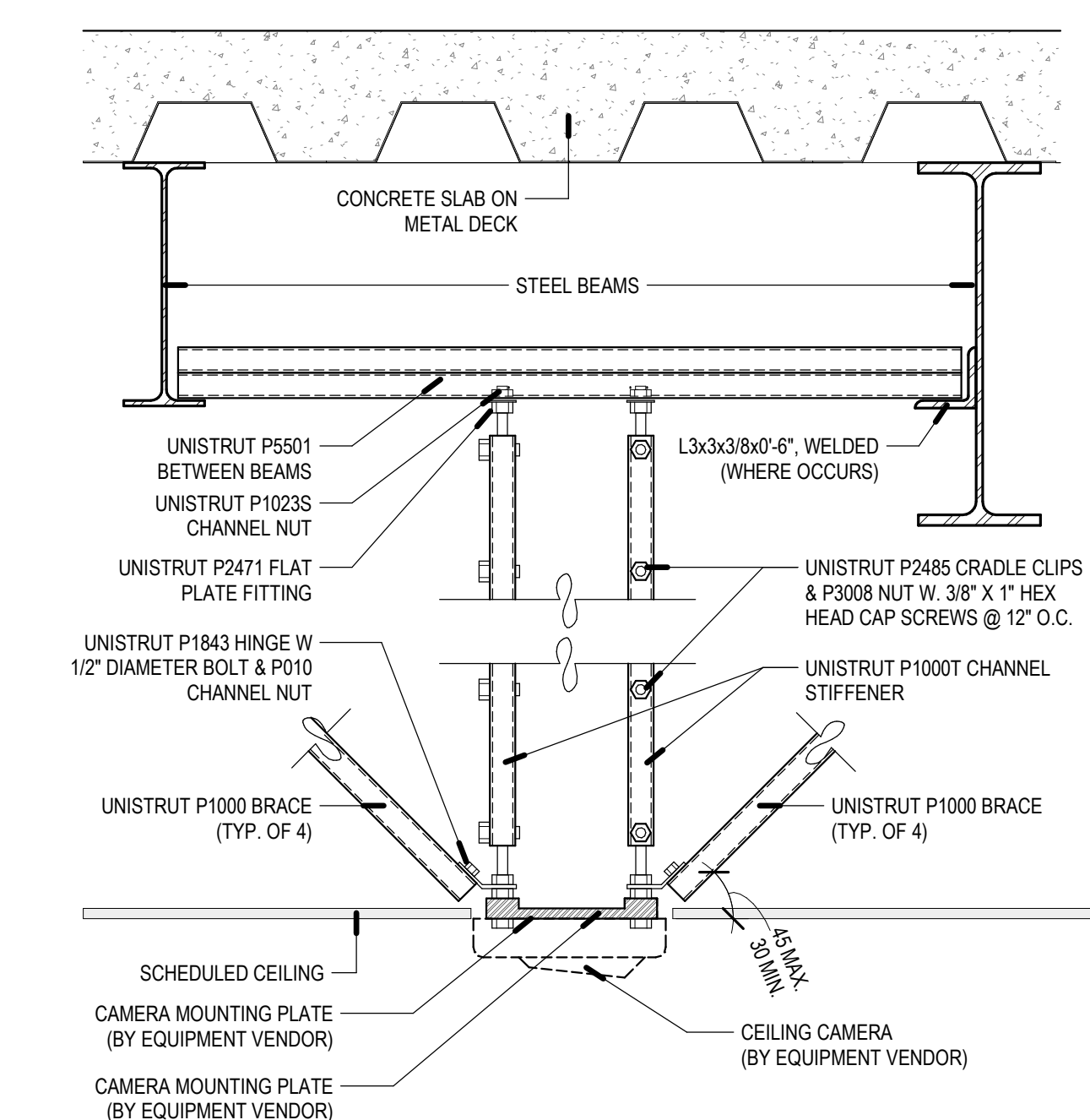
SALT LAKE CITY - HQ
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800
ST. GEORGE
20 N. MAIN ST., #103
ST. GEORGE, UT 84770
435.522.7070
VCBO.COM
VCBO NUMBER: 22545
CLIENT NUMBER: -
DATE: 12-08-2023



REV	DATE	DESCRIPTION
1	01/09/2024	ADD 001



A5 CEILING CAMERA SUPPORT DETAIL (CT SCAN)
SCALE: 1 1/2" = 1'-0"



INTERIOR ELEVATION GENERAL NOTES

- REFER TO SHEET A410 FOR MILLWORK LEGEND AND TYPICAL MILLWORK NOTES; A111 FOR FINISH SCHEDULE & GENERAL FINISH NOTES; A1XX.5 EQUIPMENT PLANS (MULTIPLE SHEETS) FOR ALL EQUIPMENT TYPE AND LOCATIONS.
- FLOOR BASE IS REQUIRED IN EVERY ROOM AND CORRIDOR AS WELL AS AT ALL CASEWORK BASES, U.N.O.
- END PANELS AND FILLER PANELS (AS NEEDED) ARE REQUIRED AT EVERY WALL, BASE AND TALL CASEWORK INSTALLATION, WHETHER SHOWN IN THE ELEVATIONS OR NOT PER DETAILS ON SHEET A570.
- BLOCKING IS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT AND MEDICAL ACCESSORIES. COORDINATE FINAL LOCATIONS WITH OWNER AND ARCHITECT.
- COUNTERTOPS ARE TO BE SUPPORTED EVERY 48" BY MILLWORK OR BRACKETS.
- MATCHING MILLWORK END PANELS ARE TO BE PROVIDED AT EACH UNDERCOUNTER REFRIGERATOR LOCATION PER DETAILS ON SHEET A570.
- REFER TO DETAIL C3/A580 FOR TYPICAL CHAIR RAIL, WHERE OCCURS.
- COORDINATE ALL INTERIOR ELEVATIONS WITH FINISH PLANS (SHEETS A111) AND ROOM FINISH SCHEDULE (SHEET A111).

KEYED NOTES

2-608.3	EXISTING CABINET, REMOVE & SALVAGE FOR REUSE AS SHOWN
2-609.3	EXISTING COUNTERTOP, REMOVE & SALVAGE FOR REUSE AS SHOWN
800.1	DOOR AND FRAME, LEAD LINED
805.1	WINDOW, LEAD LINED FRAME & GLAZING
912.0	SCHEDULED BASE
922.0	SCHEDULED WALL PROTECTION
1003.0	CORNER GUARD
1006.1	DISPENSER, SOAP, NIC
2200.4	SINK (LAVATORY) + FAUCET, WALL HUNG
2603.0	ELECTRICAL PANEL

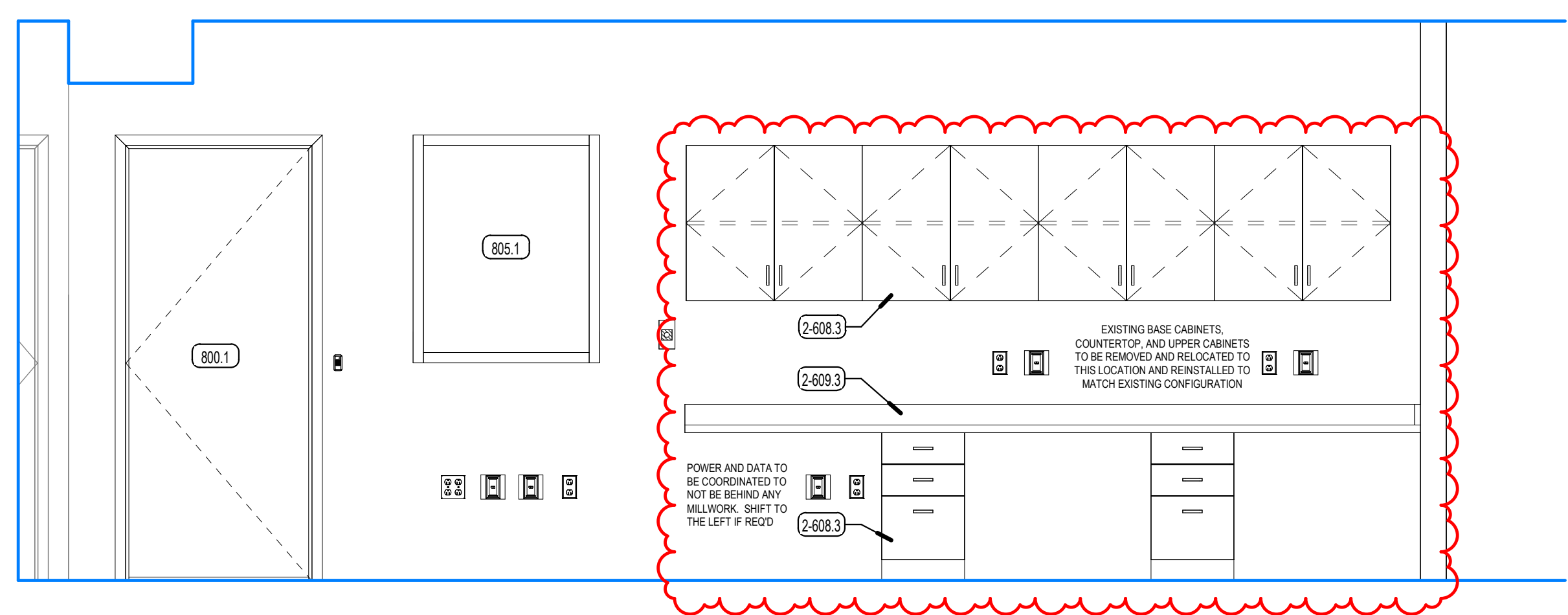
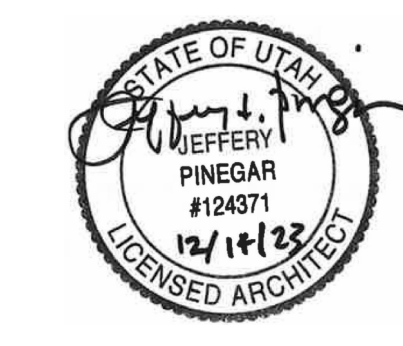
ADD 001

VCBO

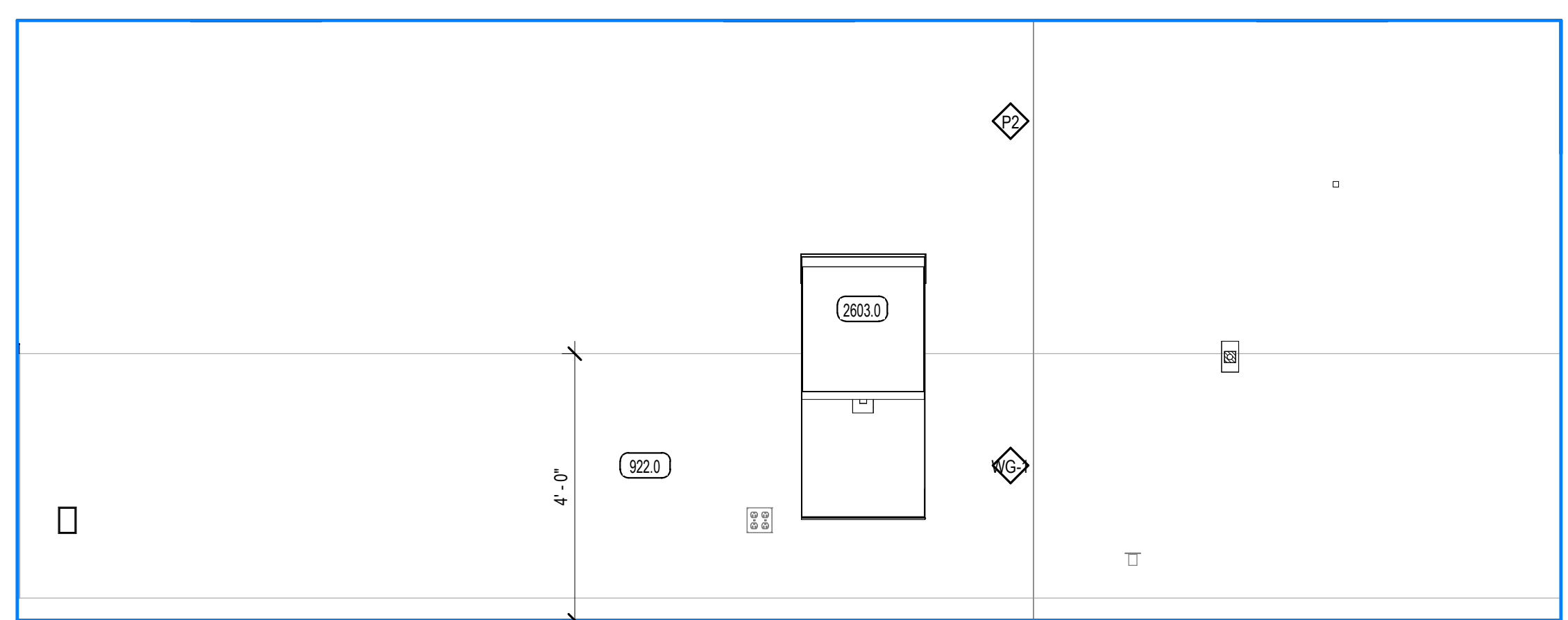
SALT LAKE CITY - HQ
524 SOUTH 600 EAST
SALT LAKE CITY, UT 84102
801.575.8800

ST. GEORGE
20 N. MAIN ST. #103
ST. GEORGE, UT 84770
435.522.7070

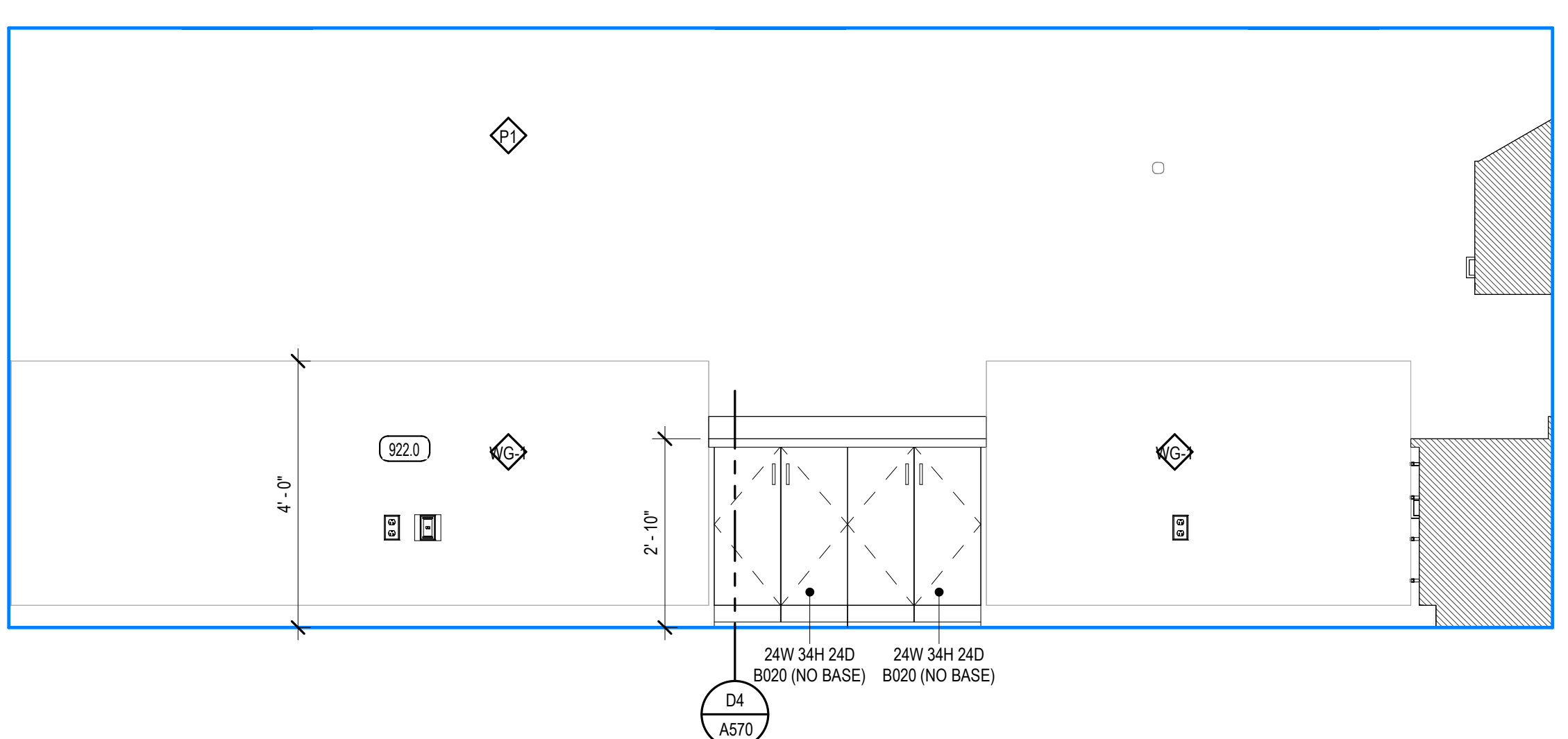
VCBO.COM
VCBO NUMBER: 22545
CLIENT NUMBER: -
DATE: 12-08-2023



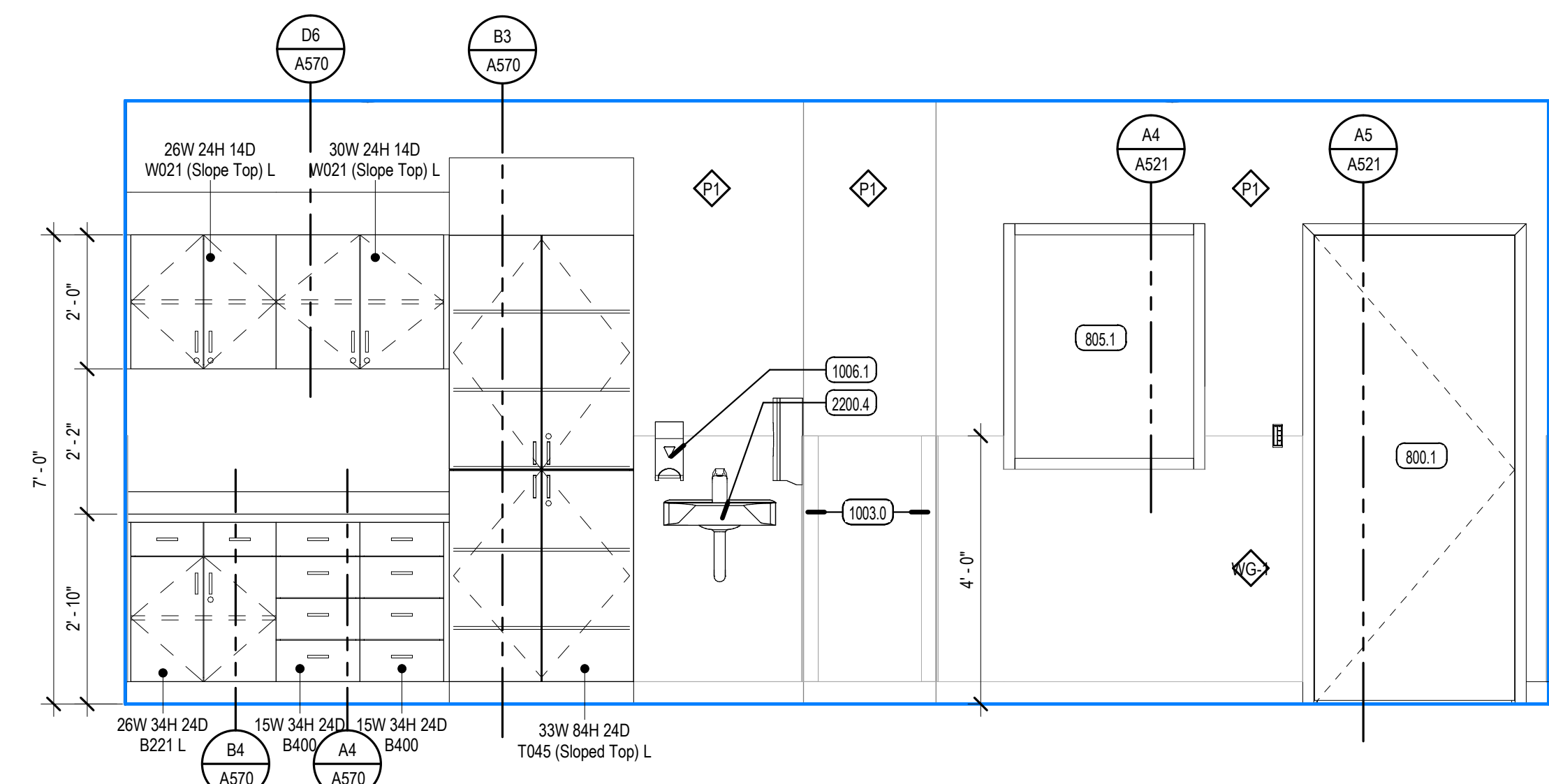
C1 TECH CORE - RIGHT
SCALE: 1/2" = 1'-0"



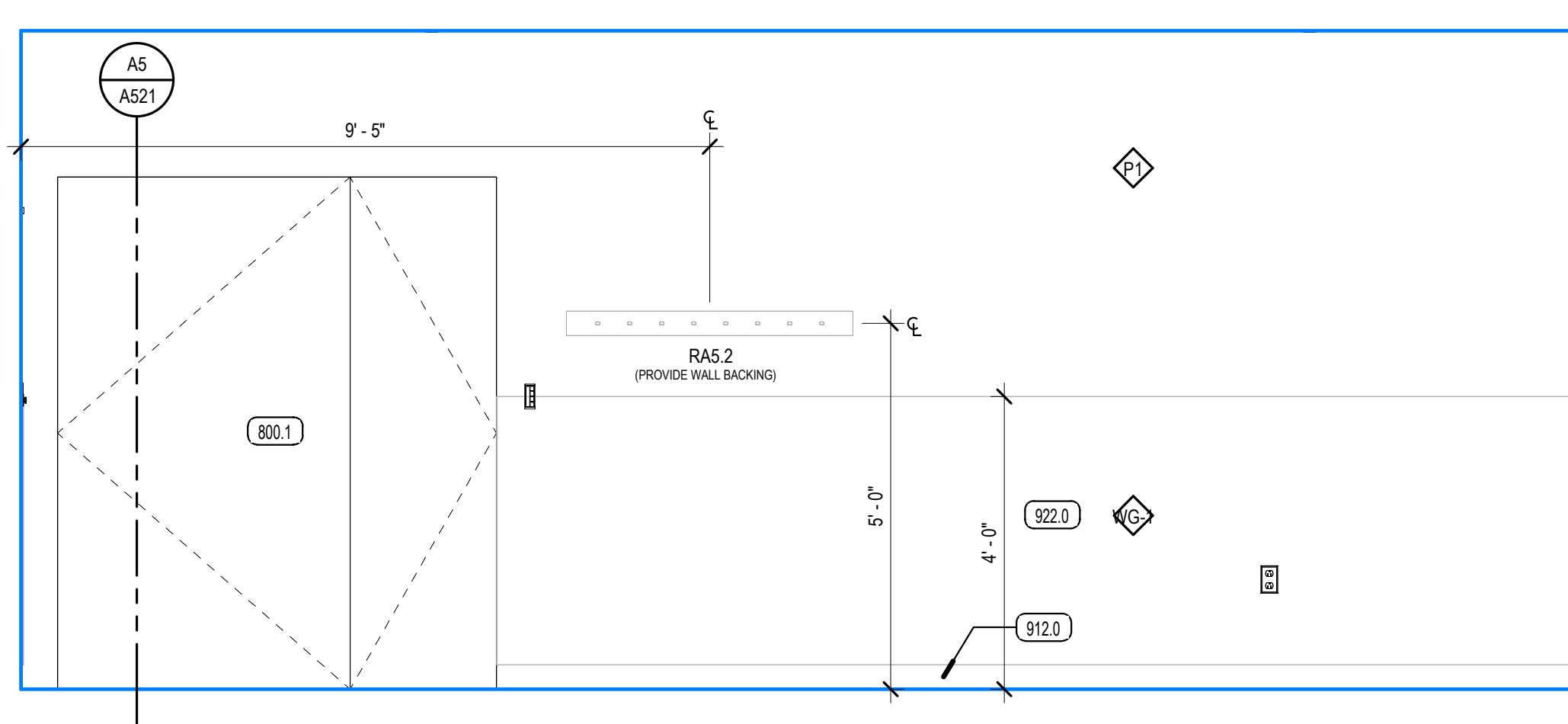
B1 CT PROCEDURE 1386 - NORTH
SCALE: 1/2" = 1'-0"



A1 CT PROCEDURE 1386 - SOUTH
SCALE: 1/2" = 1'-0"



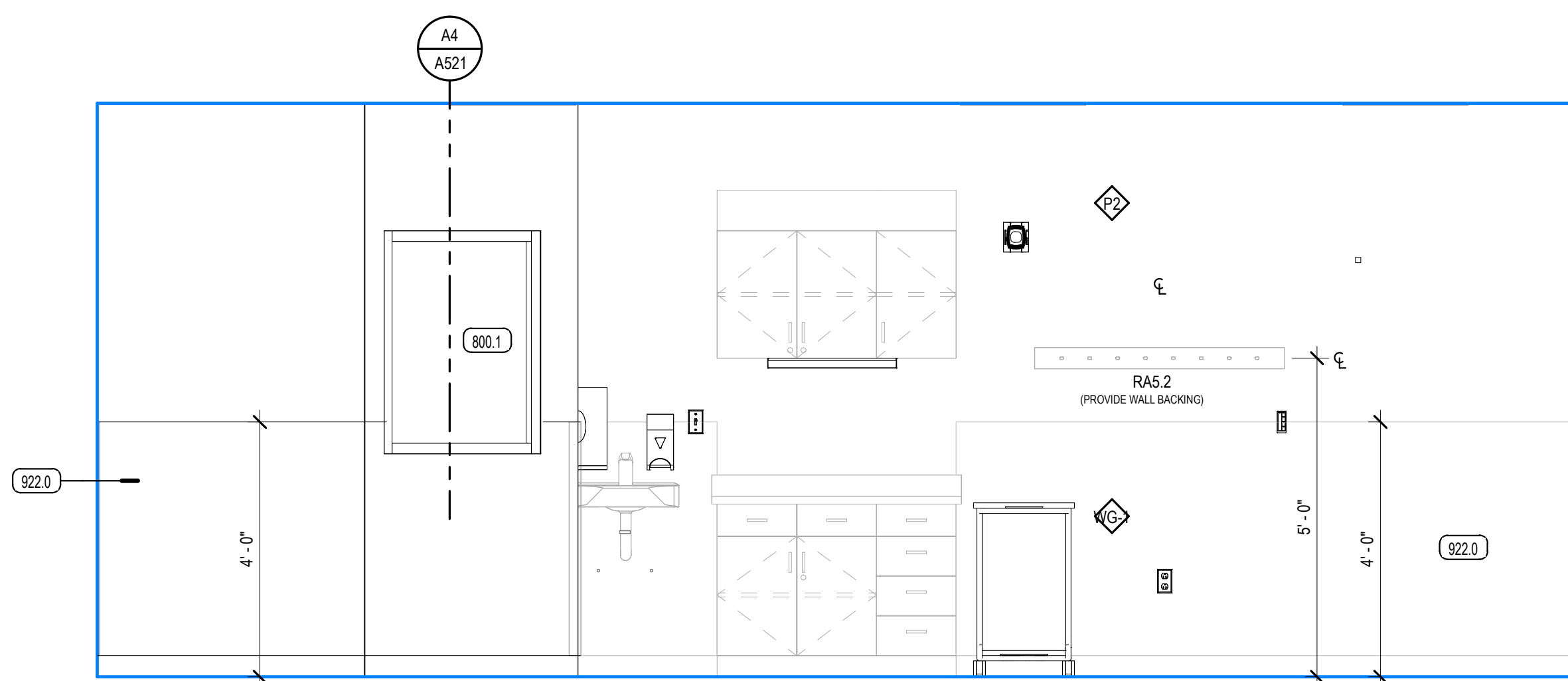
B3 CT PROCEDURE 1386 - WEST
SCALE: 1/2" = 1'-0"



A3 CT PROCEDURE 1386 - EAST
SCALE: 1/2" = 1'-0"

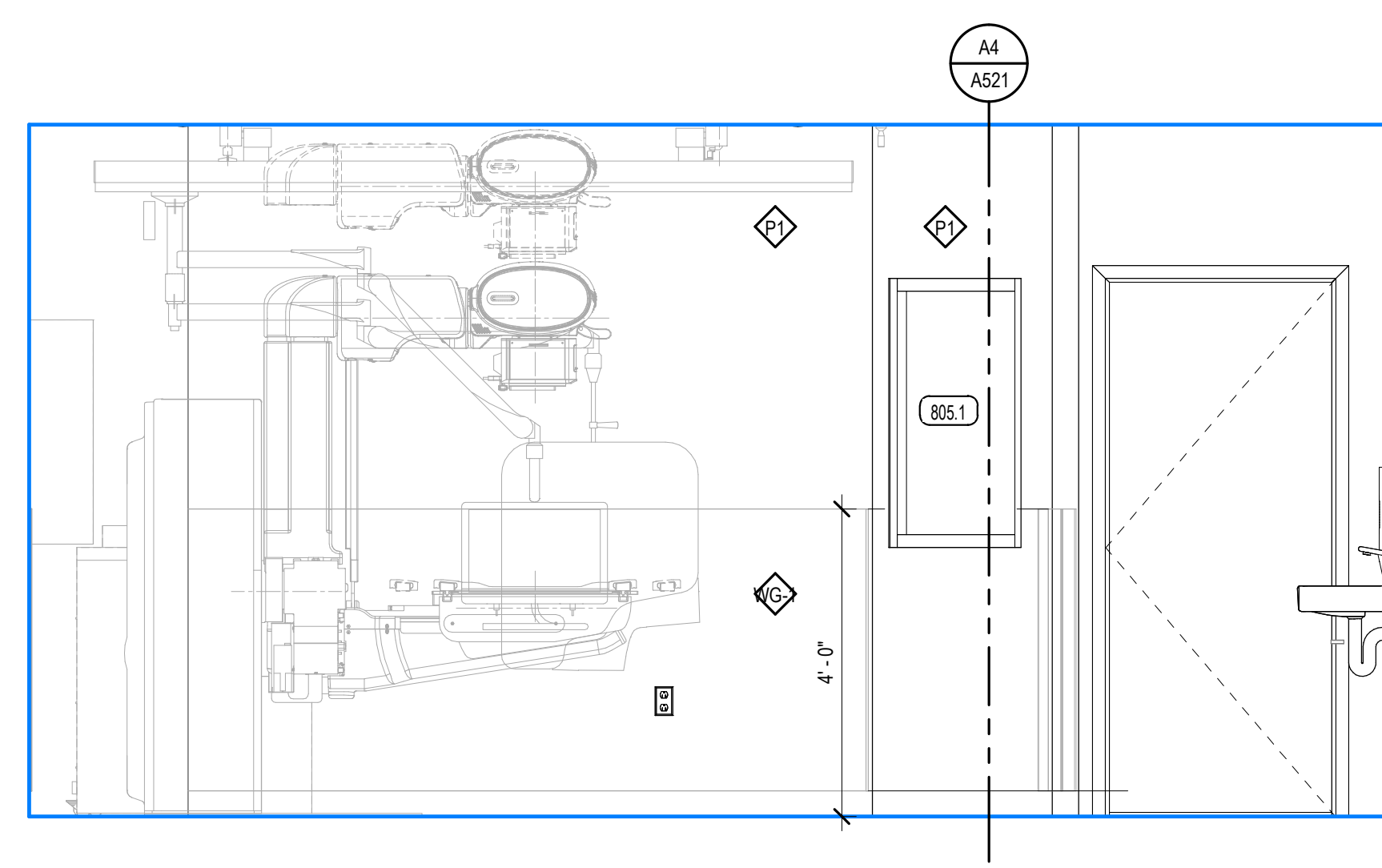
REV	DATE	DESCRIPTION
1	01/09/2024	ADD 001

**INTERMOUNTAIN PARK CITY HOSPITAL
CT / FLUOROSCOPY REMODEL**
900 ROUND VALLEY DR, PARK CITY, UT 84080
CONSTRUCTION DOCUMENTS



D1 DIAGNOSTIC FLUOROSCOPY 1385 - NORTH

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



D3 DIAGNOSTIC FLUOROSCOPY 1385 - WEST

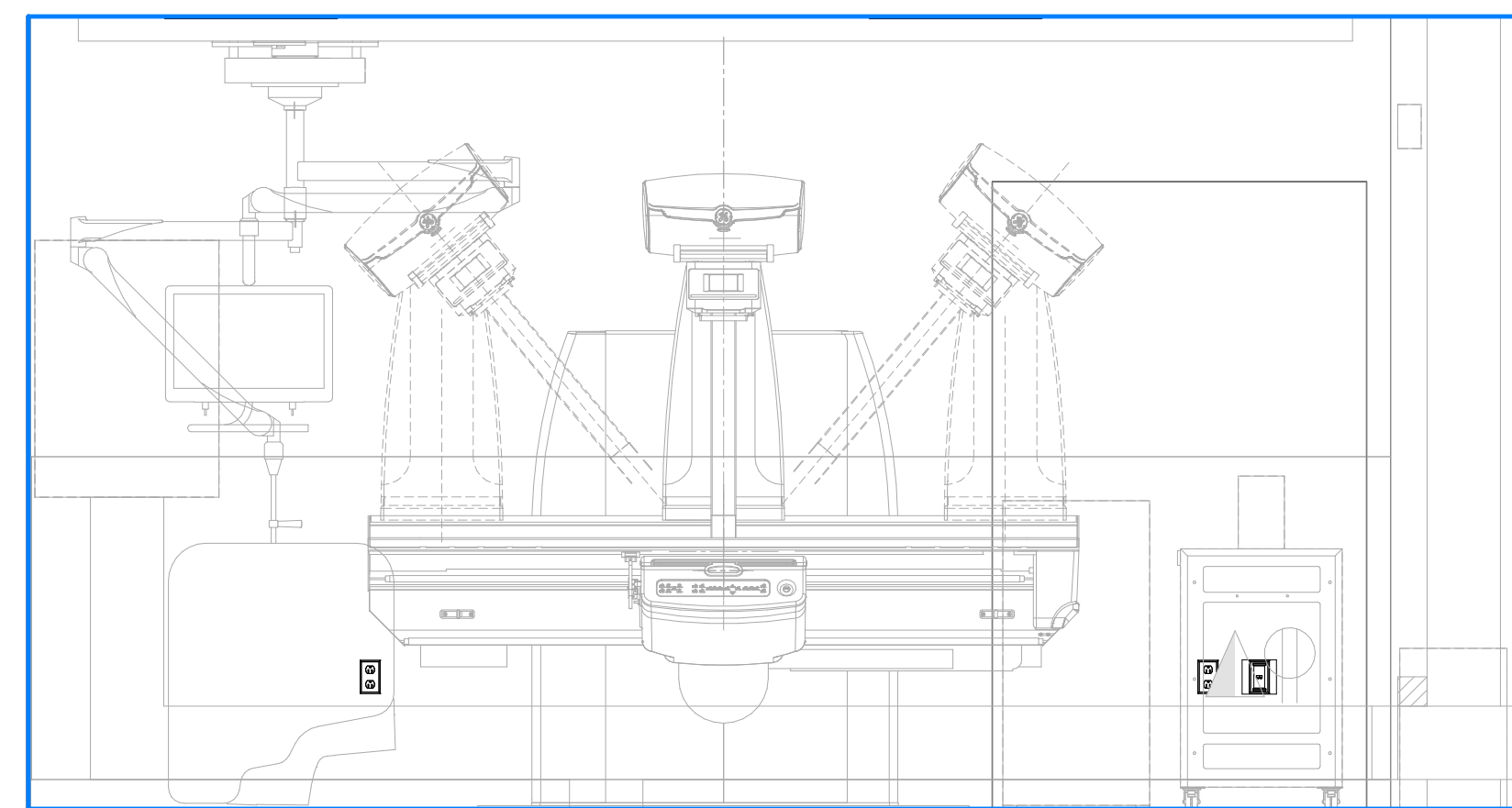
SCALE: 1/2" = 1'-0"

INTERIOR ELEVATION GENERAL NOTES

- REFER TO SHEET A410 FOR MILLWORK LEGEND AND TYPICAL MILLWORK NOTES; A111 FOR FINISH SCHEDULE & GENERAL FINISH NOTES; A1XX.5 EQUIPMENT PLANS (MULTIPLE SHEETS) FOR ALL EQUIPMENT TYPE AND LOCATIONS.
- FLOOR BASE IS REQUIRED IN EVERY ROOM AND CORRIDOR AS WELL AS AT ALL CASEWORK BASES, U.N.O.
- END PANELS AND FILLER PANELS (AS NEEDED) ARE REQUIRED AT EVERY WALL, BASE AND TALL CASEWORK INSTALLATION, WHETHER SHOWN IN THE ELEVATIONS OR NOT PER DETAILS ON SHEET A570.
- BLOCKING IS REQUIRED FOR ALL WALL MOUNTED EQUIPMENT AND MEDICAL ACCESSORIES. COORDINATE FINAL LOCATIONS WITH OWNER AND ARCHITECT.
- COUNTERTOPS ARE TO BE SUPPORTED EVERY 48" BY MILLWORK OR BRACKETS.
- MATCHING MILLWORK END PANELS ARE TO BE PROVIDED AT EACH UNDERCOUNTER REFRIGERATOR LOCATION PER DETAILS ON SHEET A570.
- REFER TO DETAIL C3/A580 FOR TYPICAL CHAIR RAIL, WHERE OCCURS.
- COORDINATE ALL INTERIOR ELEVATIONS WITH FINISH PLANS (SHEETS A111) AND ROOM FINISH SCHEDULE (SHEET A111).

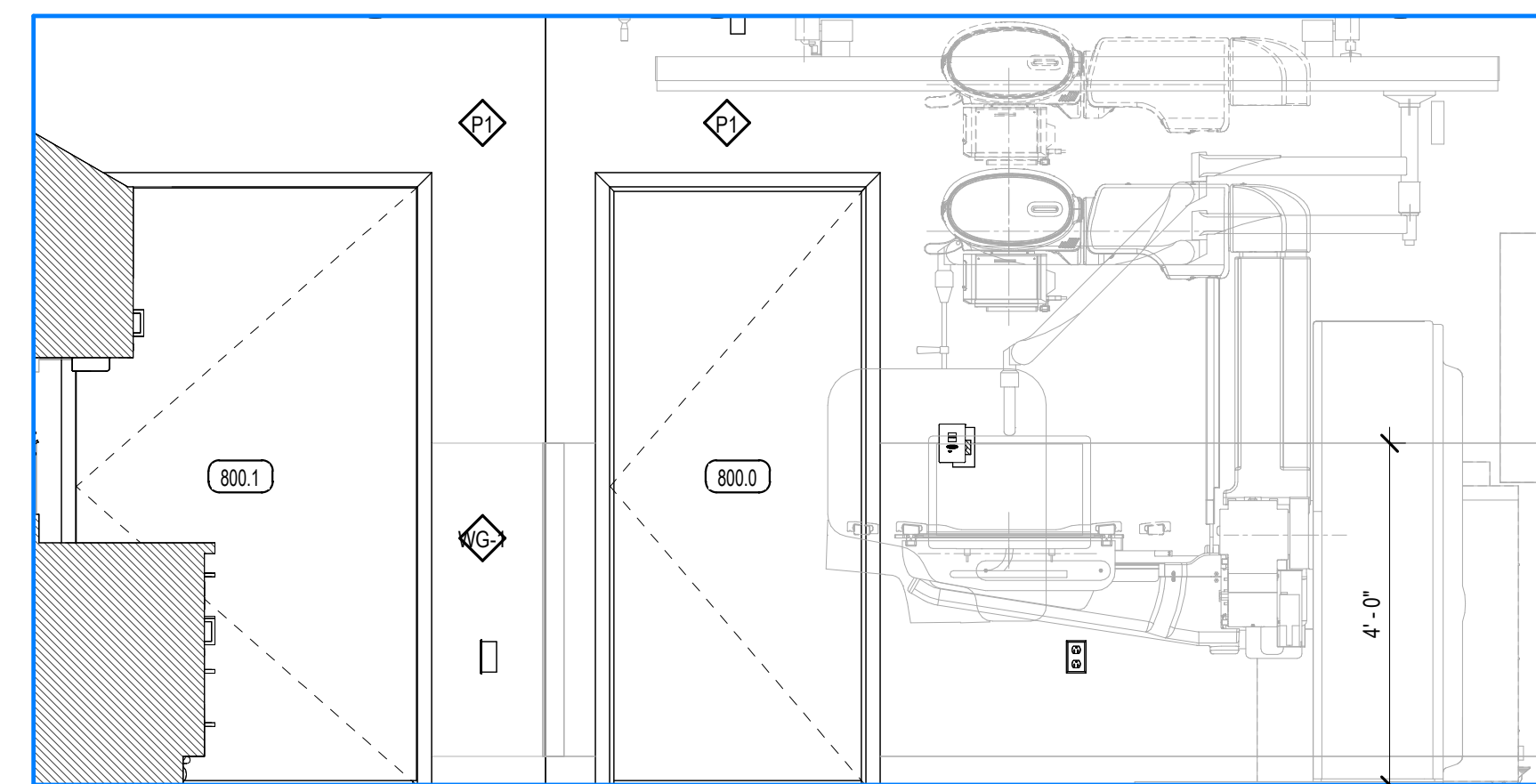
KEYED NOTES

- 800.0 DOOR AND FRAME
- 800.1 DOOR AND FRAME, LEAD LINED
- 805.1 WINDOW, LEAD LINED FRAME & GLAZING
- 922.0 SCHEDULED WALL PROTECTION
- 1003.0 CORNER GUARD
- 1005.0 GRAB BAR
- 1006.1 DISPENSER, SOAP, NIC
- 1006.10 DISPENSER, PAPER TOWELS, FOLDED
- 1010.7 LOCKER BENCH, WALL MOUNTED FOLD DOWN BENCH, PROVIDE BACKING AS REQUIRED
- 2200.4 SINK (LAVATORY) - FAUCET, WALL HUNG
- 2206.0 TOILET, FLOOR MOUNT - FLUSH VALVE
- 2610.0 LIGHT FIXTURE
- 2613.0 STAFF ASSIST CALL



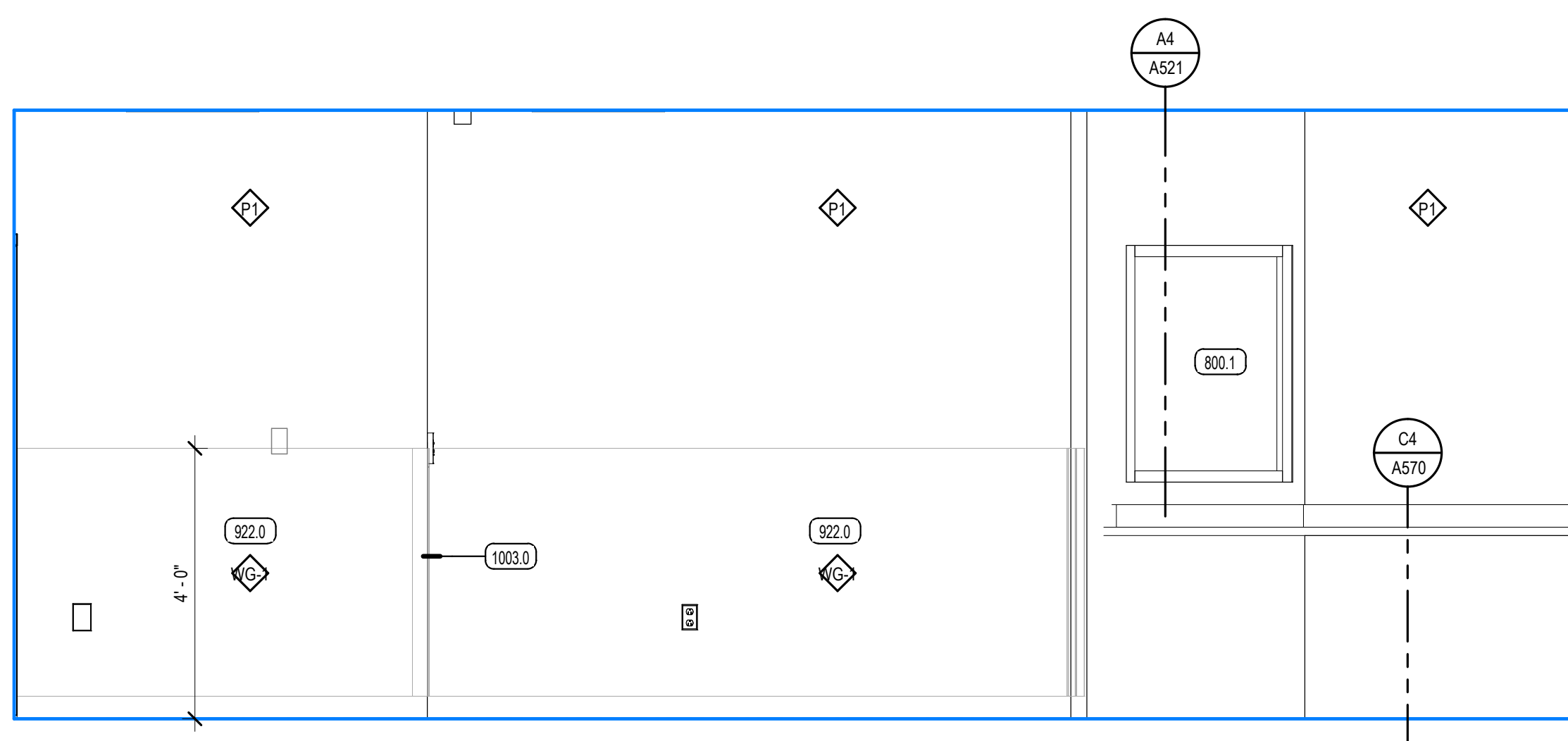
C1 DIAGNOSTIC FLUOROSCOPY 1385 - SOUTH

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



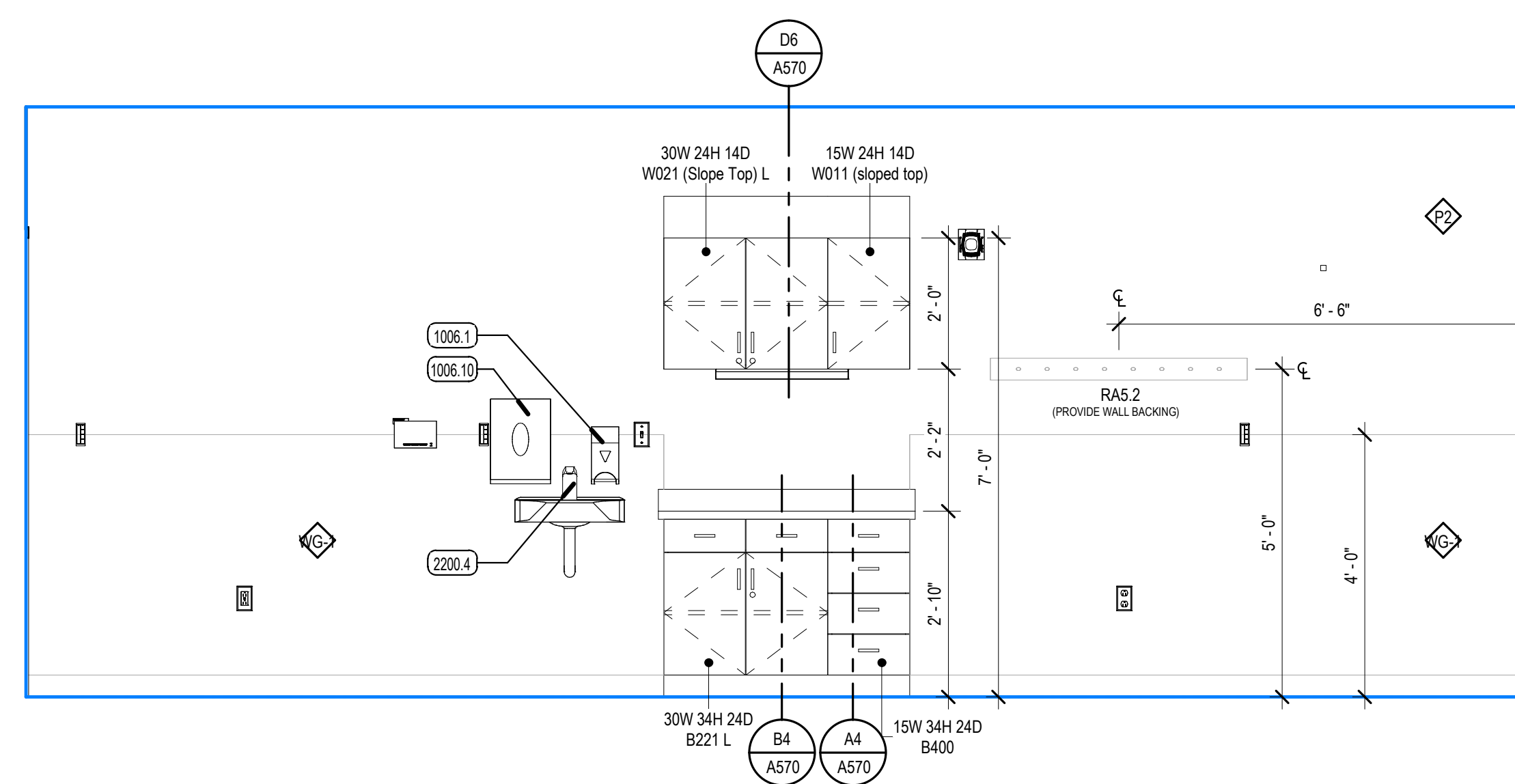
C3 DIAGNOSTIC FLUOROSCOPY 1385 - EAST

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



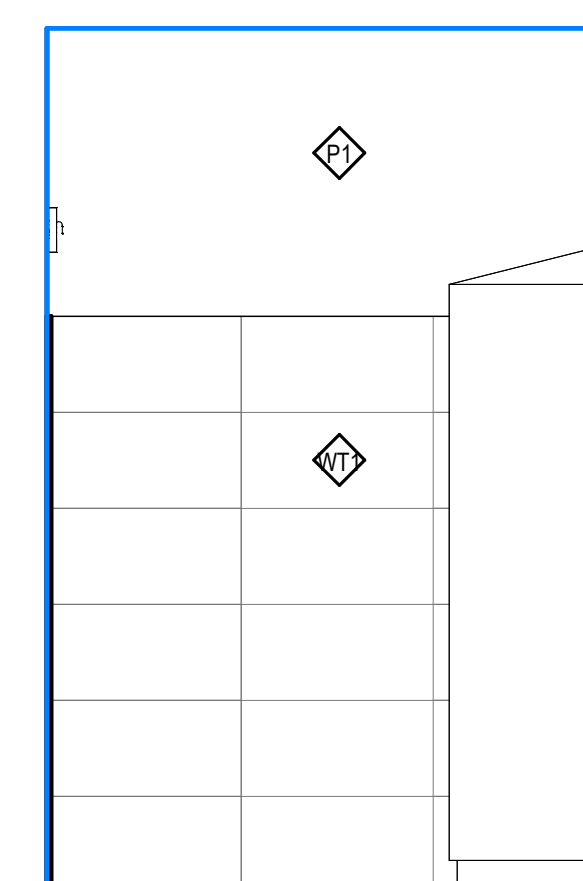
B1 DIAGNOSTIC FLUOROSCOPY 1385 - SOUTH 2

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



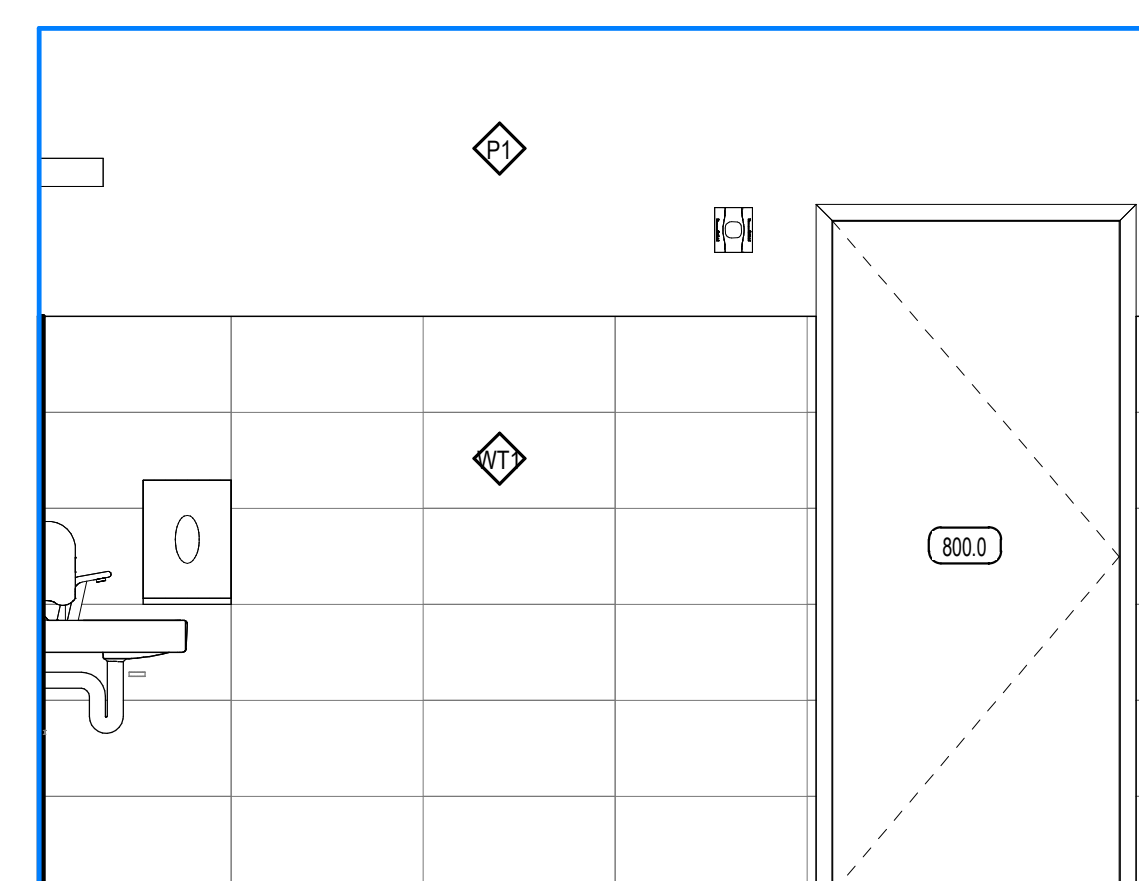
B3 DIAGNOSTIC FLUOROSCOPY 1385 - NORTH 2

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



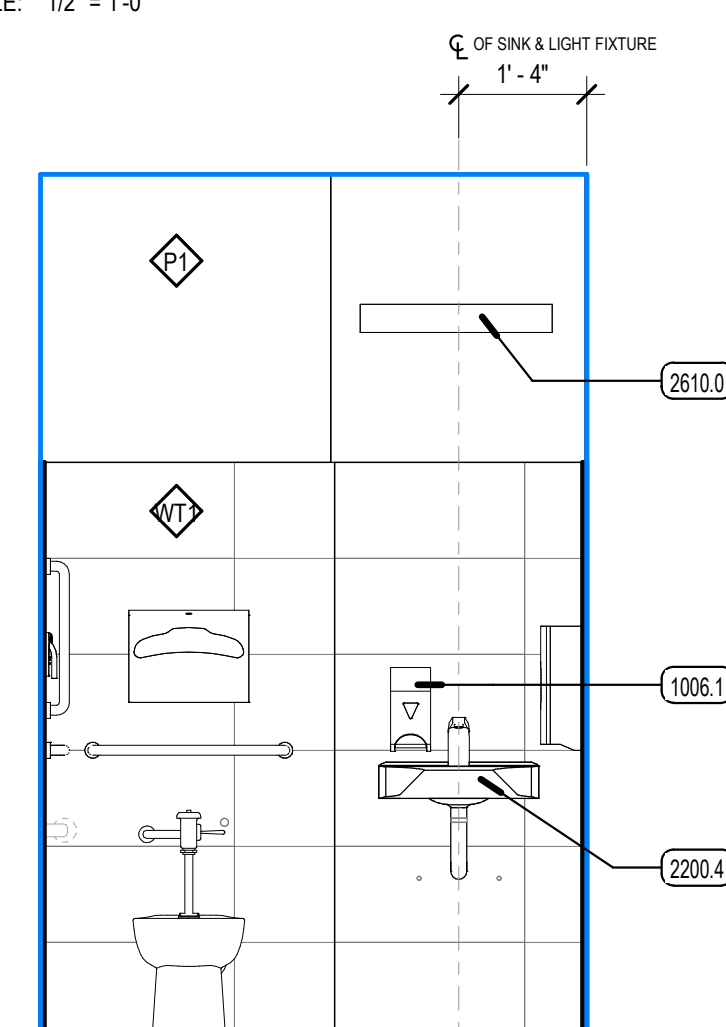
A1 PATIENT TOILET / DRESSING 1389 - NORTH

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



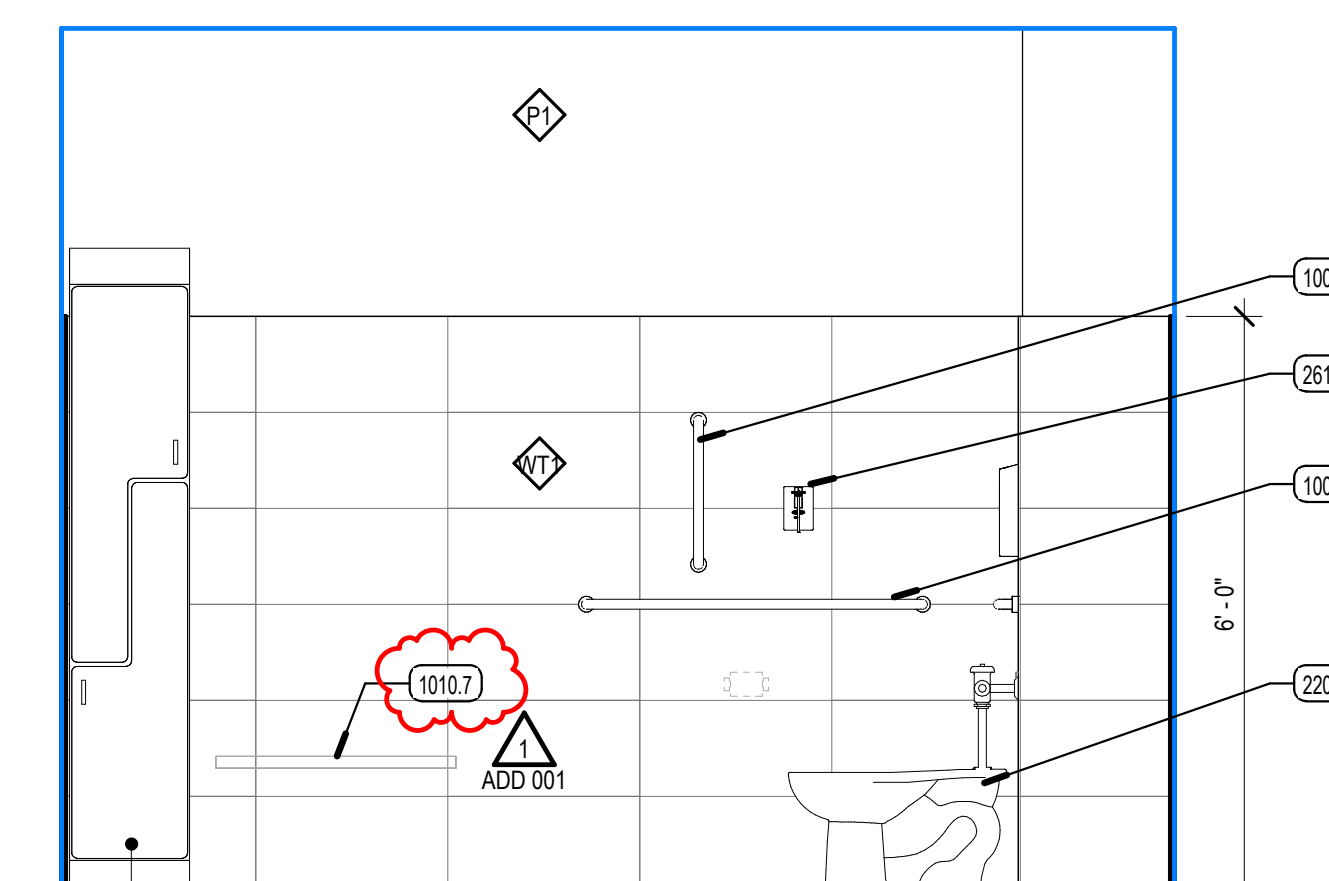
A2 PATIENT TOILET / DRESSING 1389 - WEST

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



A3 PATIENT TOILET / DRESSING 1389 - SOUTH

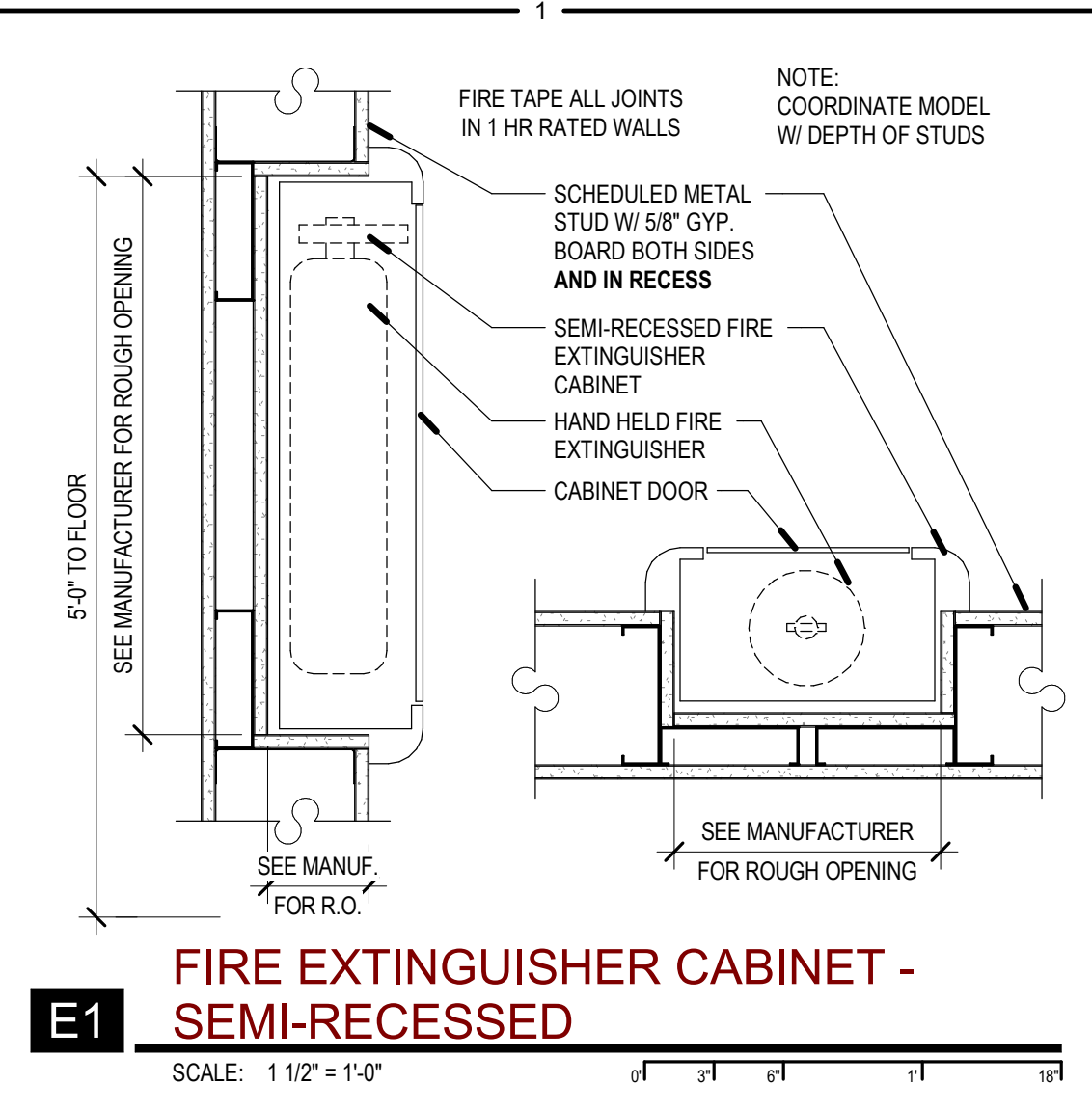
SCALE: 1/2" = 1'-0"



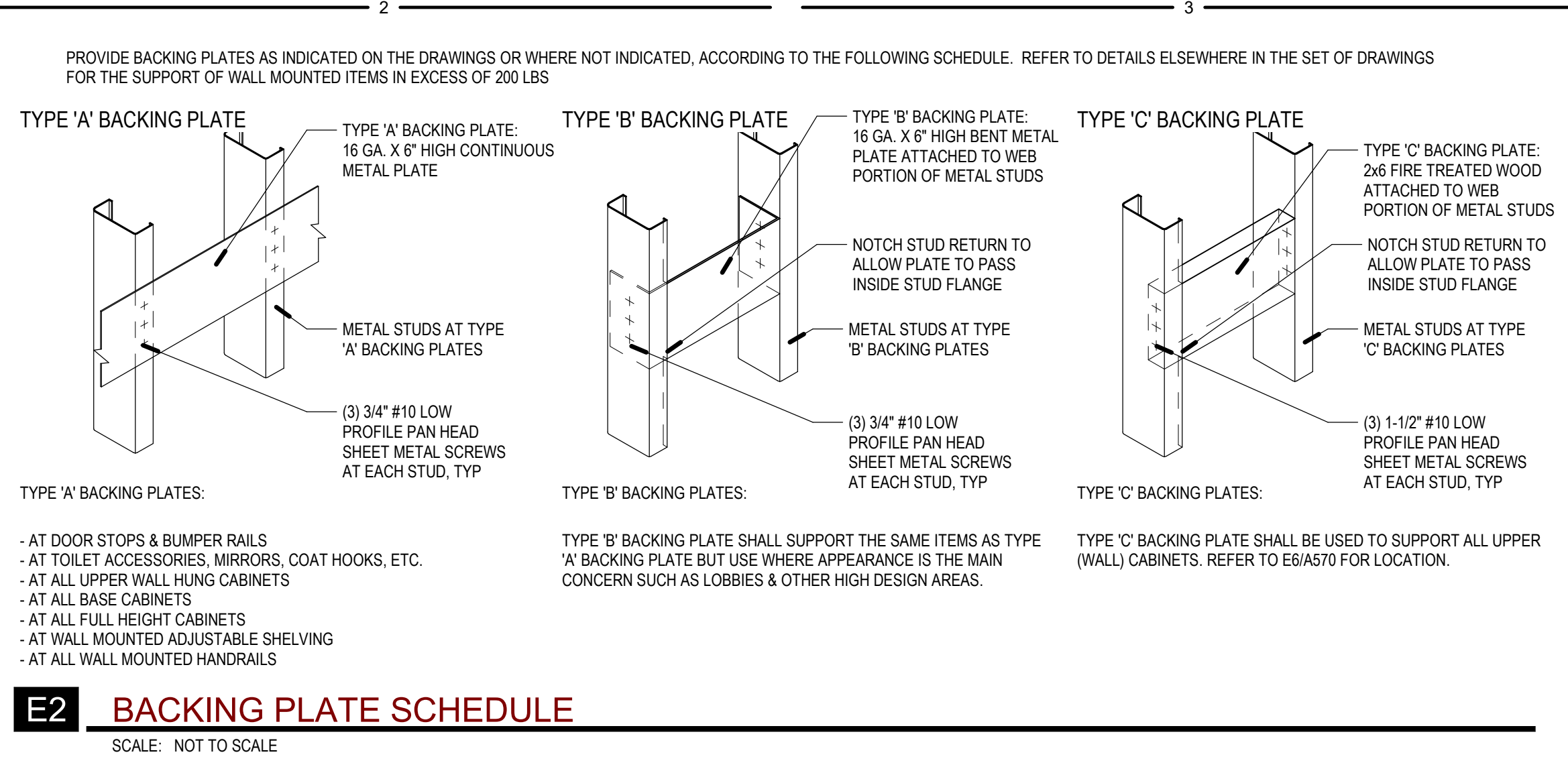
A4 PATIENT TOILET / DRESSING 1389 - EAST

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

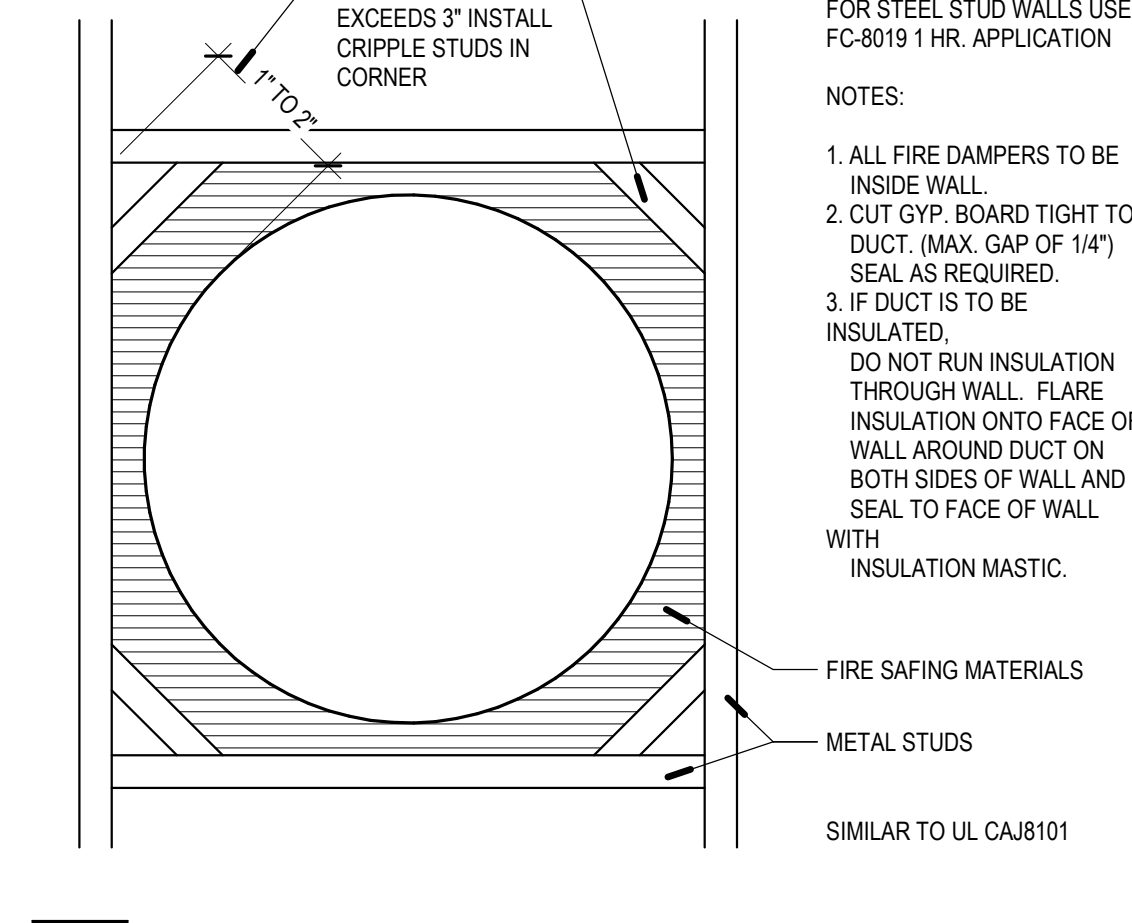




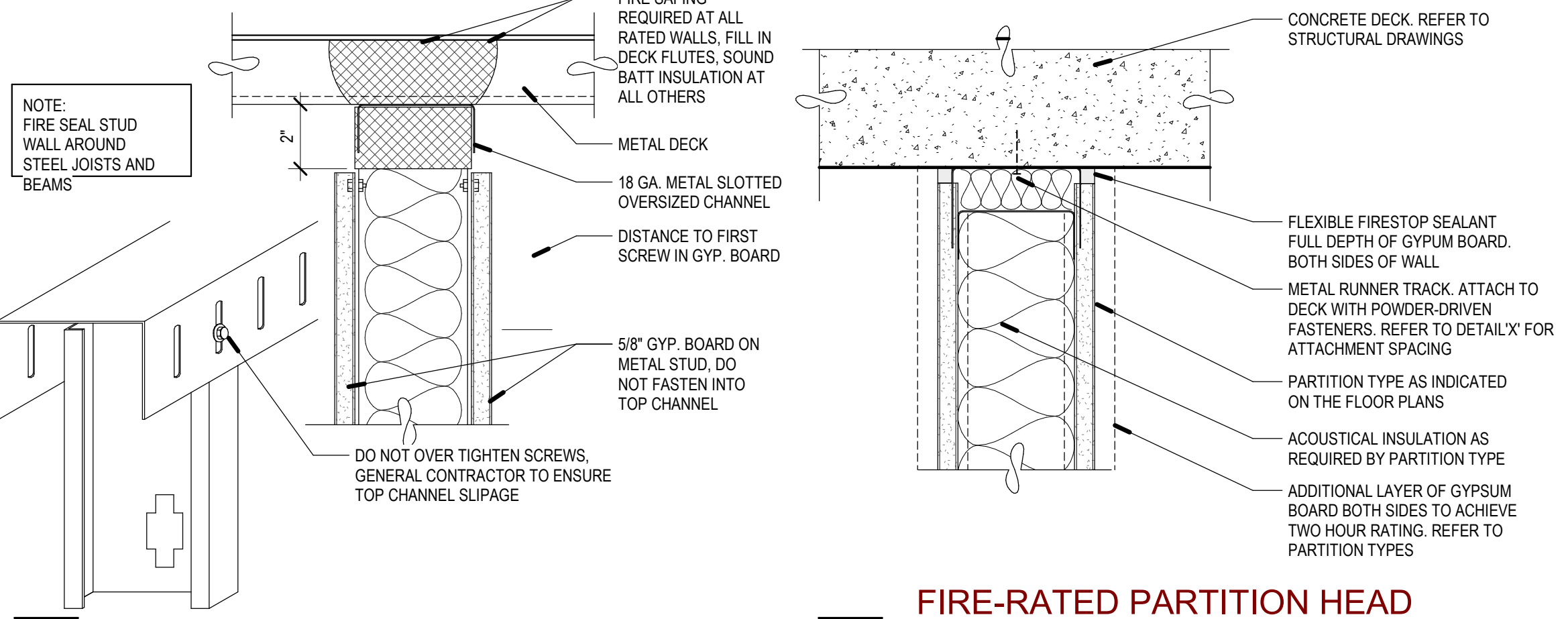
E1 FIRE EXTINGUISHER CABINET - SEMI-RECESSED
SCALE: 1/2" = 1'-0"



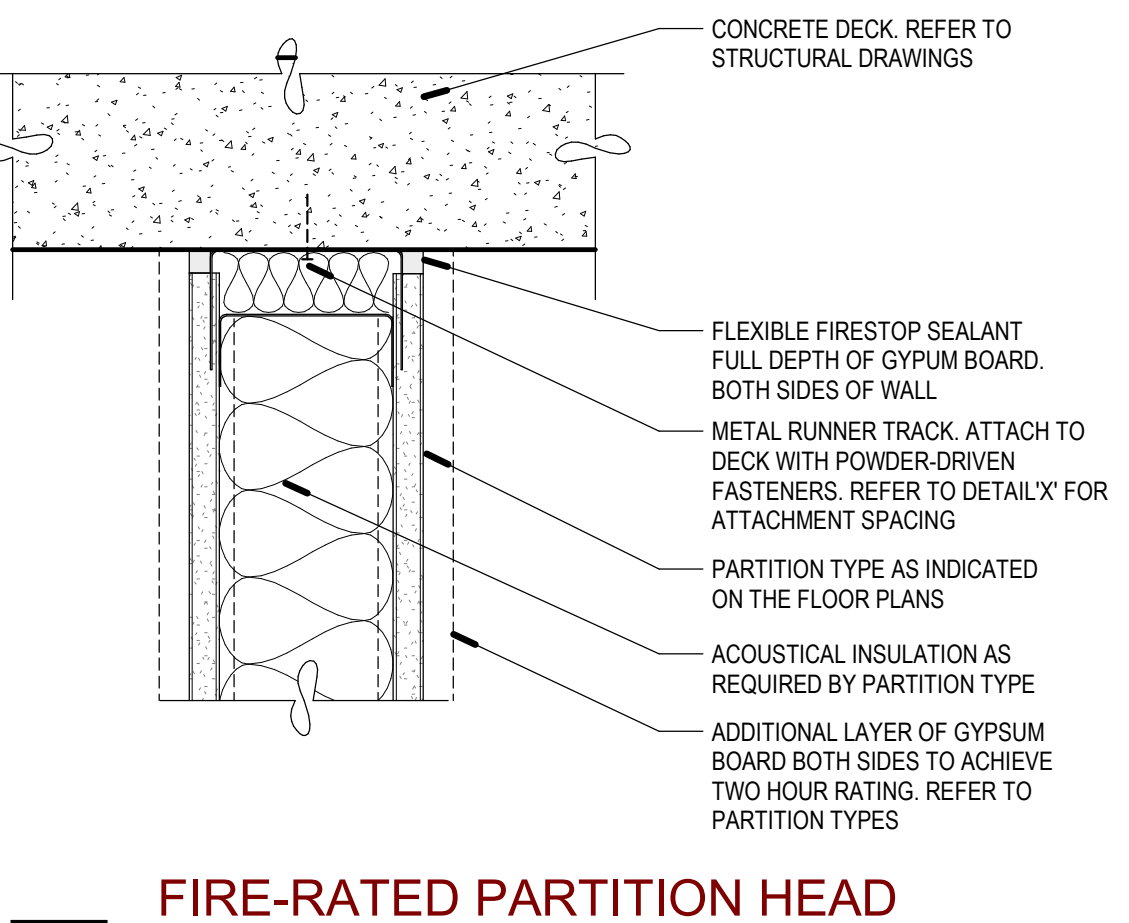
E2 BACKING PLATE SCHEDULE
SCALE: NOT TO SCALE



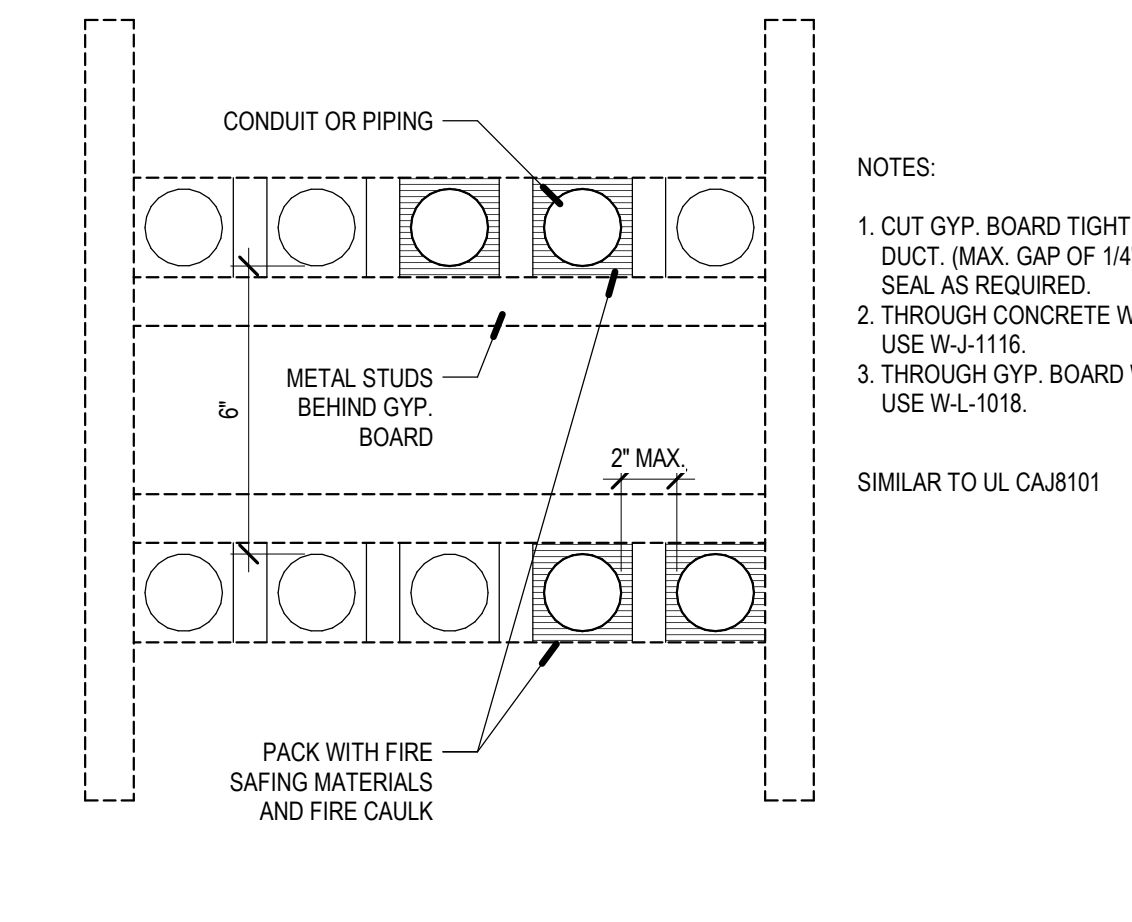
D1 TYP. DUCT OPENING IN RATED WALL
SCALE: NOT TO SCALE



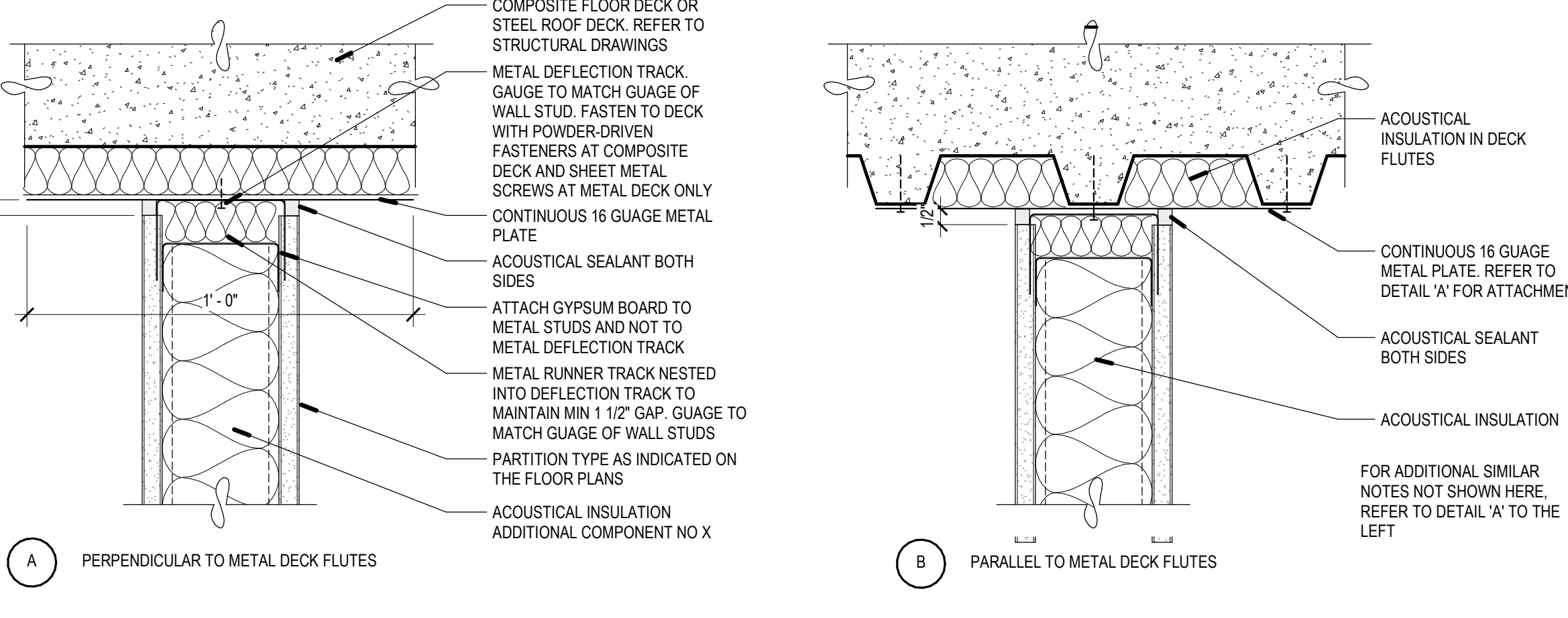
D2 PARTITION SLIP JOINT TYPICAL
SCALE: 3/4" = 1'-0"



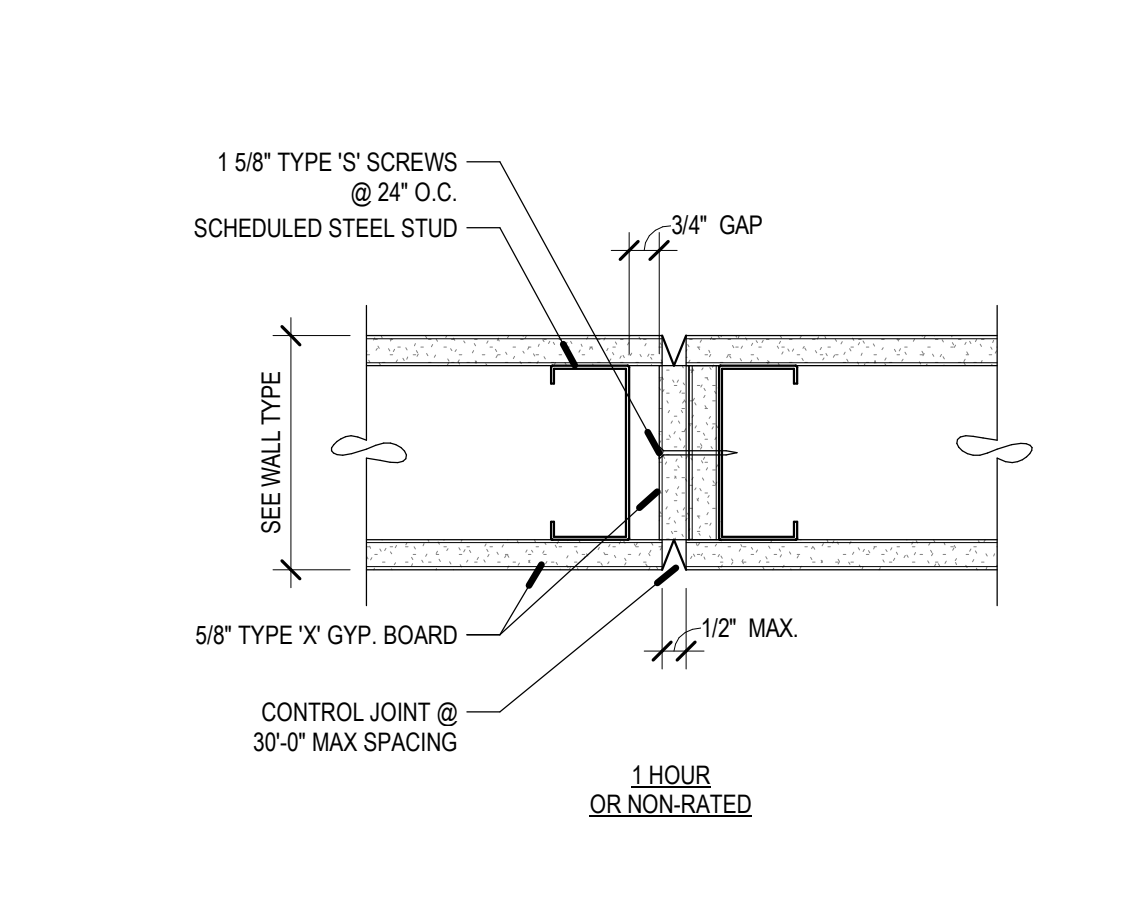
D3 FIRE-RATED PARTITION HEAD DETAIL
SCALE: 3/4" = 1'-0"



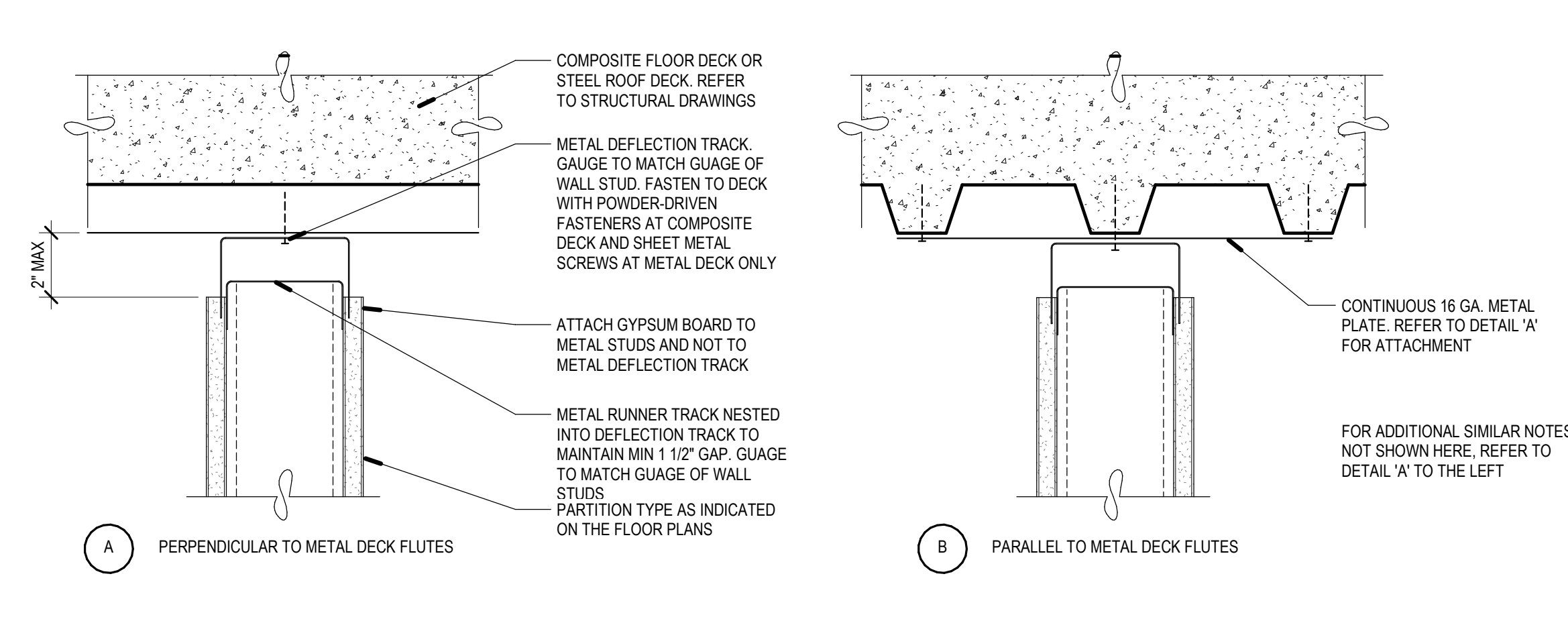
C1 CONDUIT PENETRATION DETAIL
SCALE: 3/4" = 1'-0"



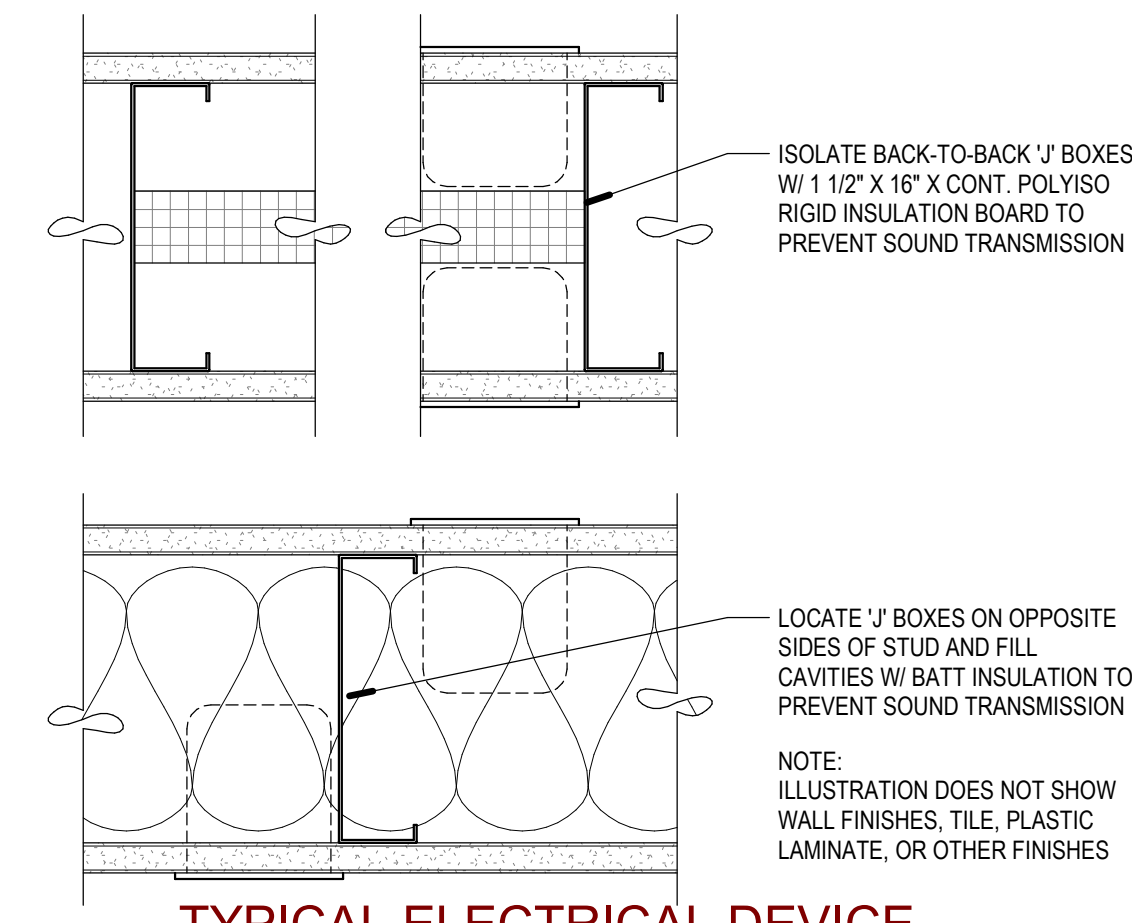
C2 NON-RATED ACOUSTICAL PARTITION HEAD DETAIL
SCALE: 3/4" = 1'-0"



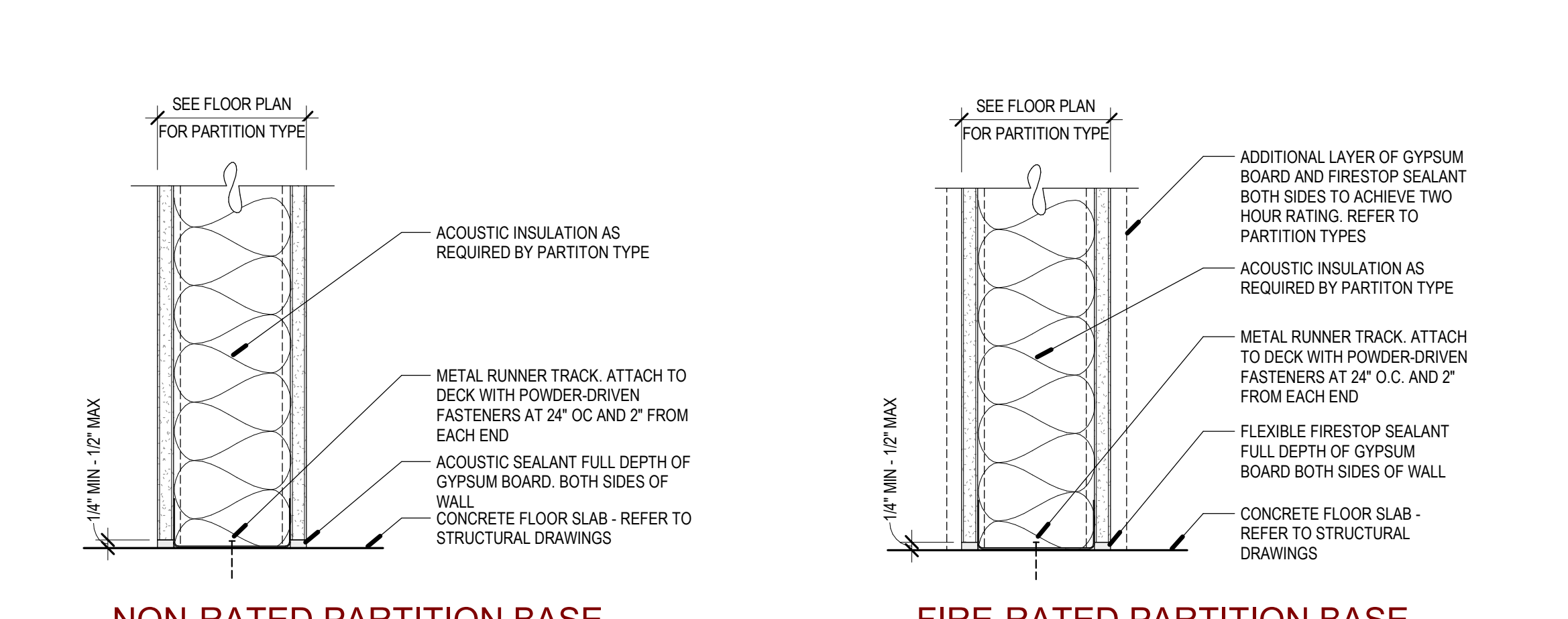
B1 STUD FRAMED CONTROL JOINT
SCALE: 3/4" = 1'-0"



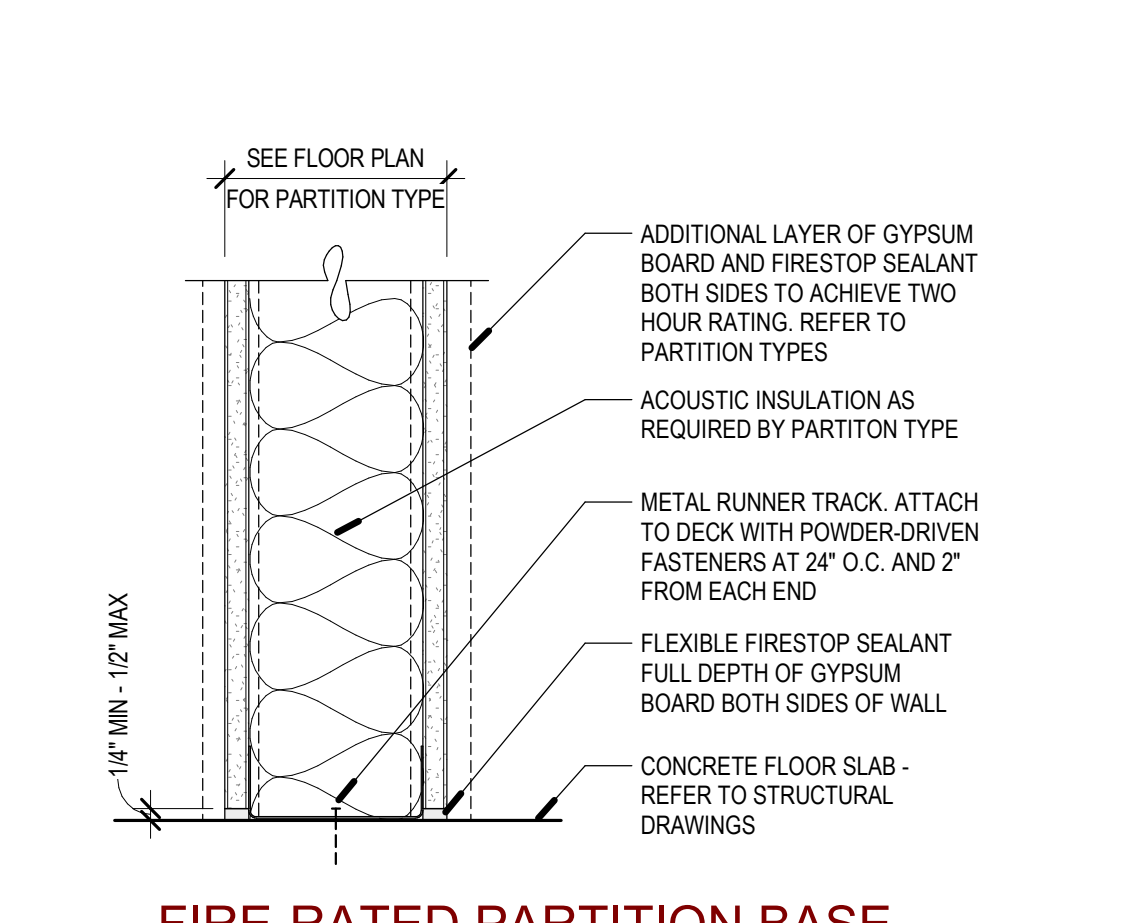
B2 NON-RATED PARTITION HEAD DETAIL
SCALE: 3/4" = 1'-0"



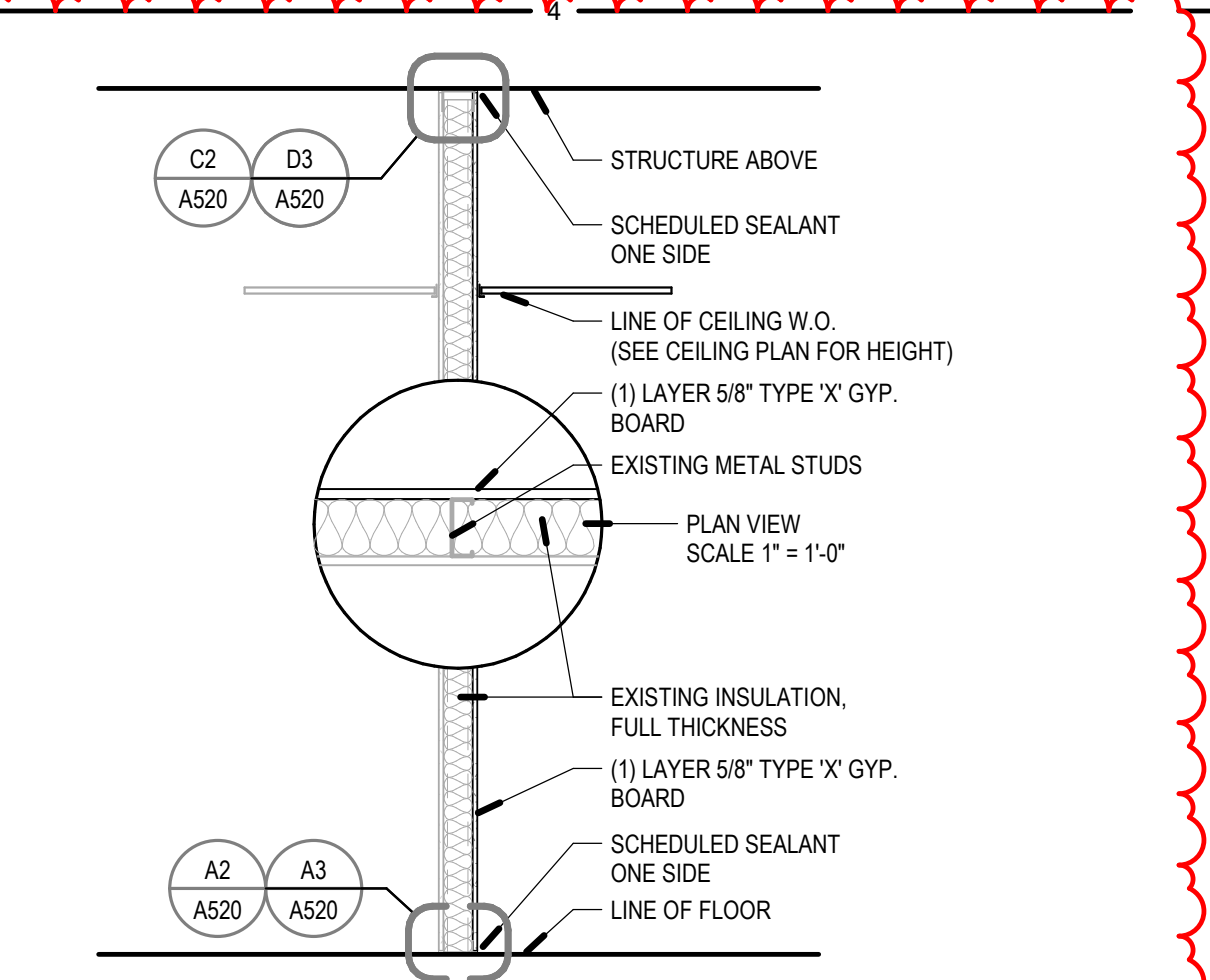
A1 TYPICAL ELECTRICAL DEVICE DETAIL
SCALE: 3/4" = 1'-0"



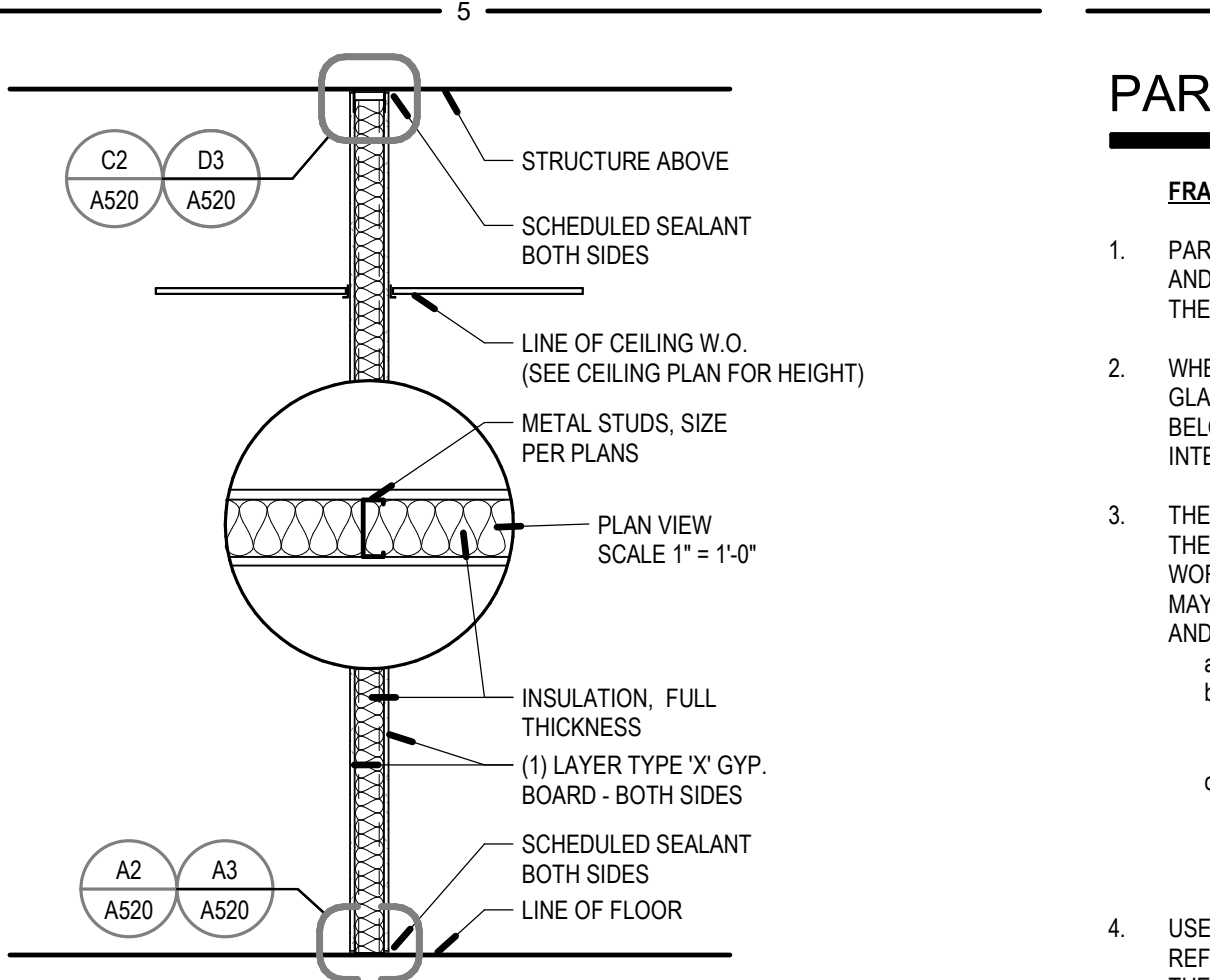
A2 NON-RATED PARTITION BASE DETAIL
SCALE: 3/4" = 1'-0"



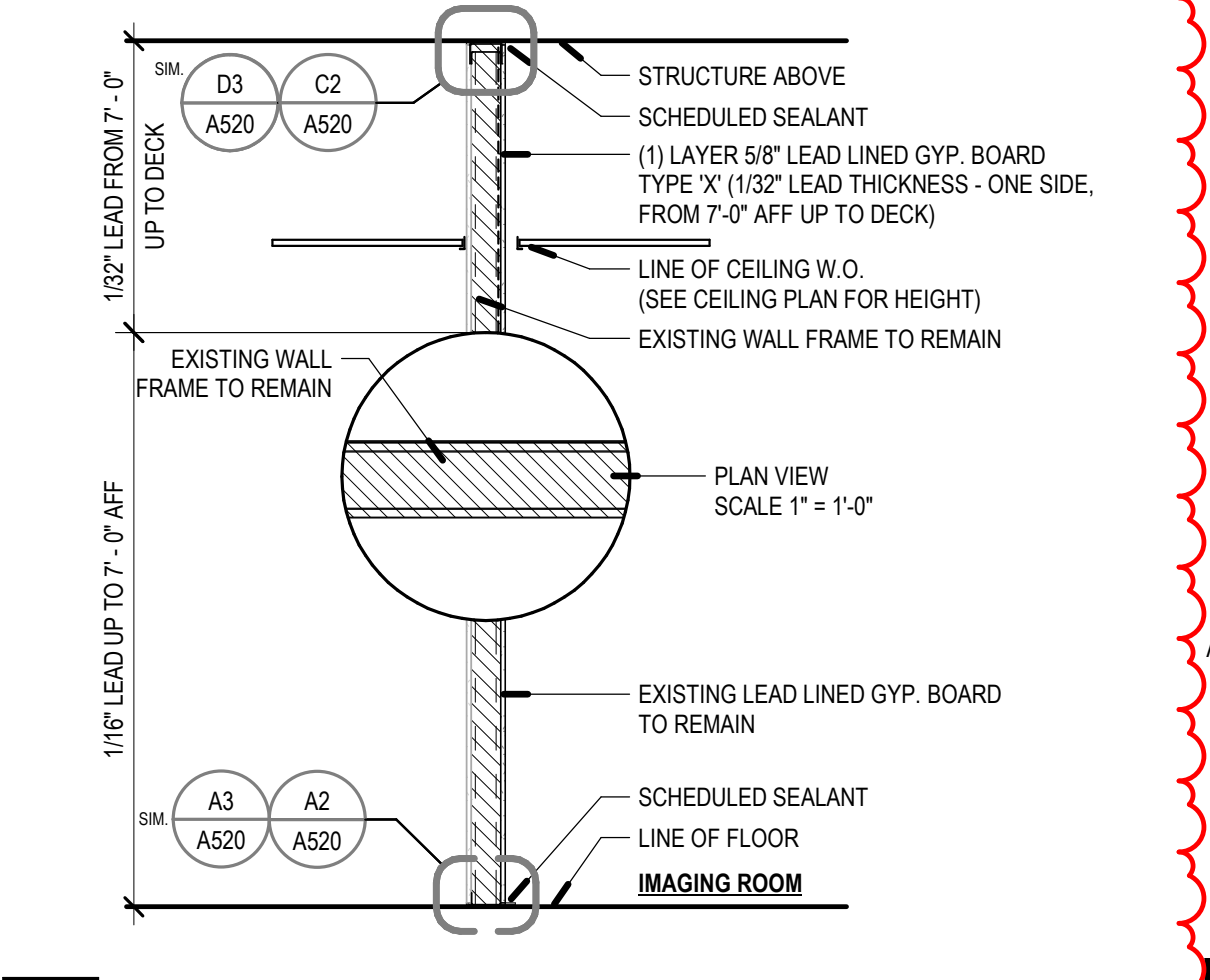
A3 FIRE-RATED PARTITION BASE DETAIL
SCALE: 3/4" = 1'-0"



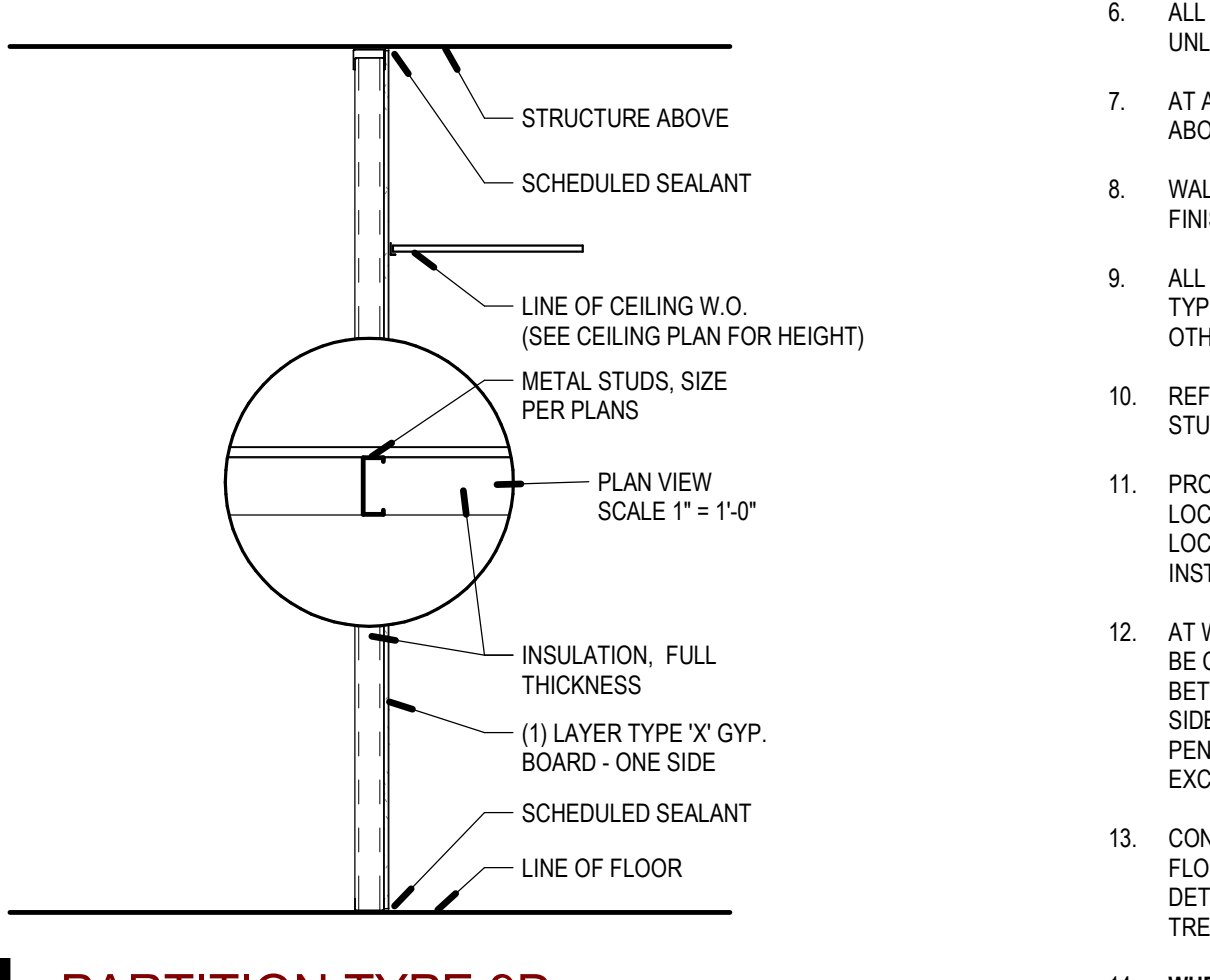
E4 PARTITION TYPE 9L1
SCALE: 1/2" = 1'-0"



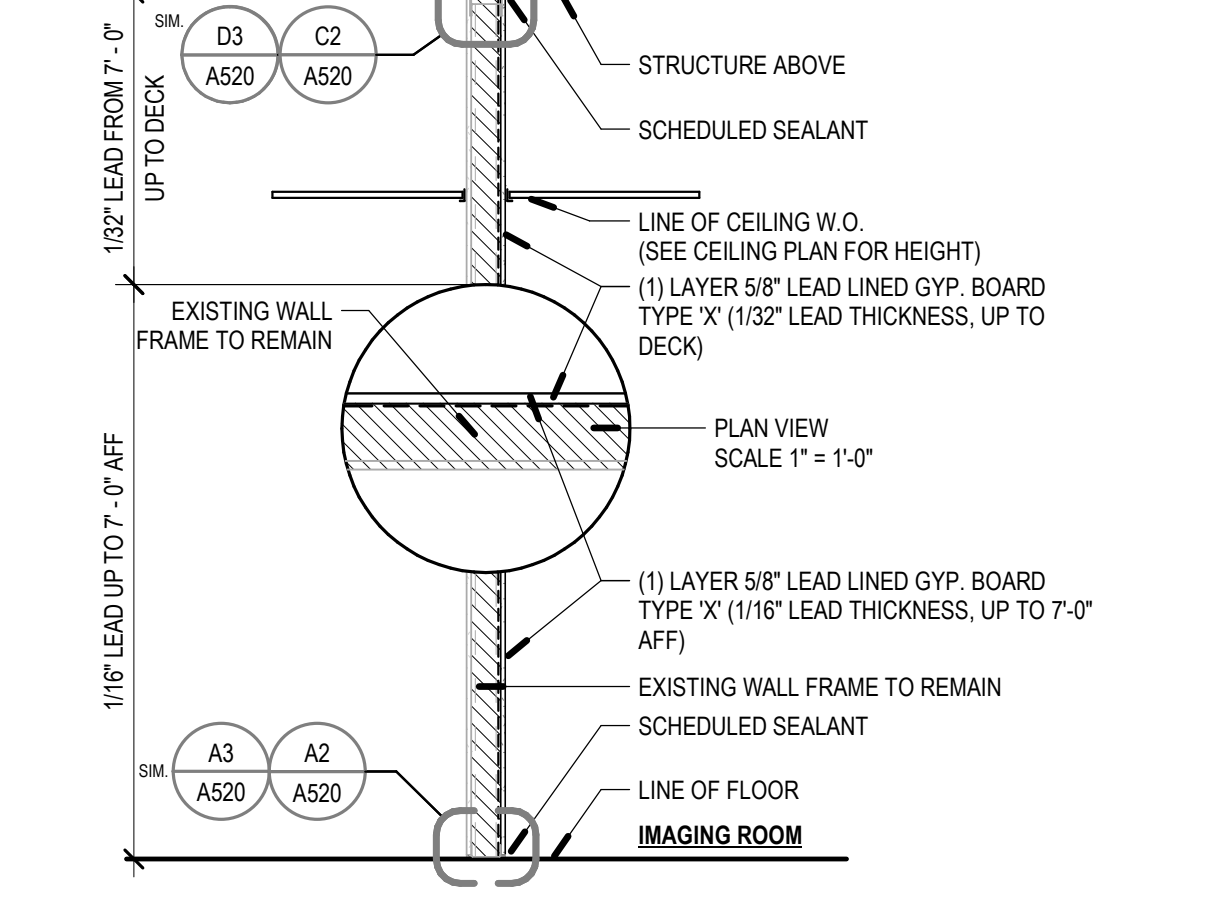
E5 PARTITION TYPE 9Ax AND 9Ax-1 (UL NO. U419)
SCALE: 1/2" = 1'-0"



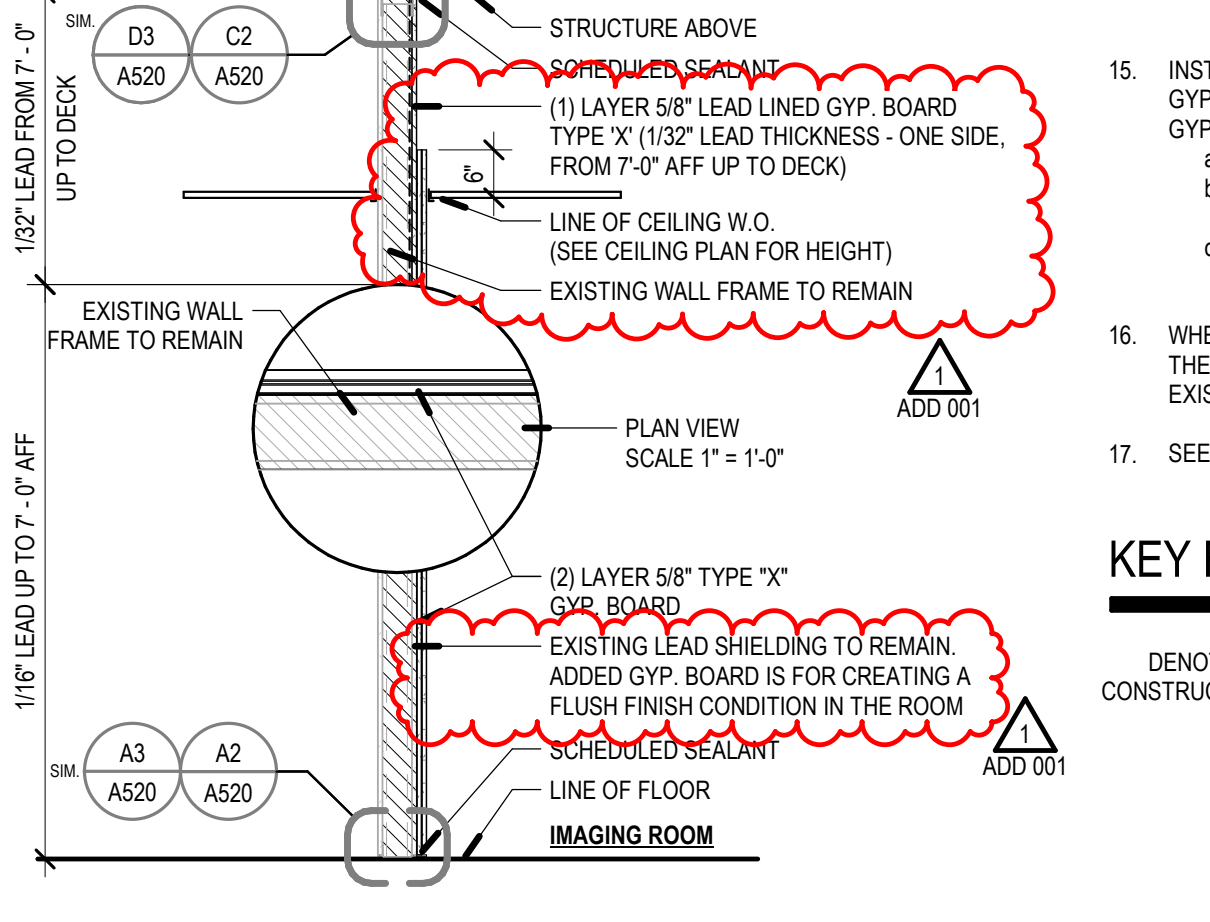
D4 PARTITION TYPE 9E1 - LEAD LINED
SCALE: 1/2" = 1'-0"



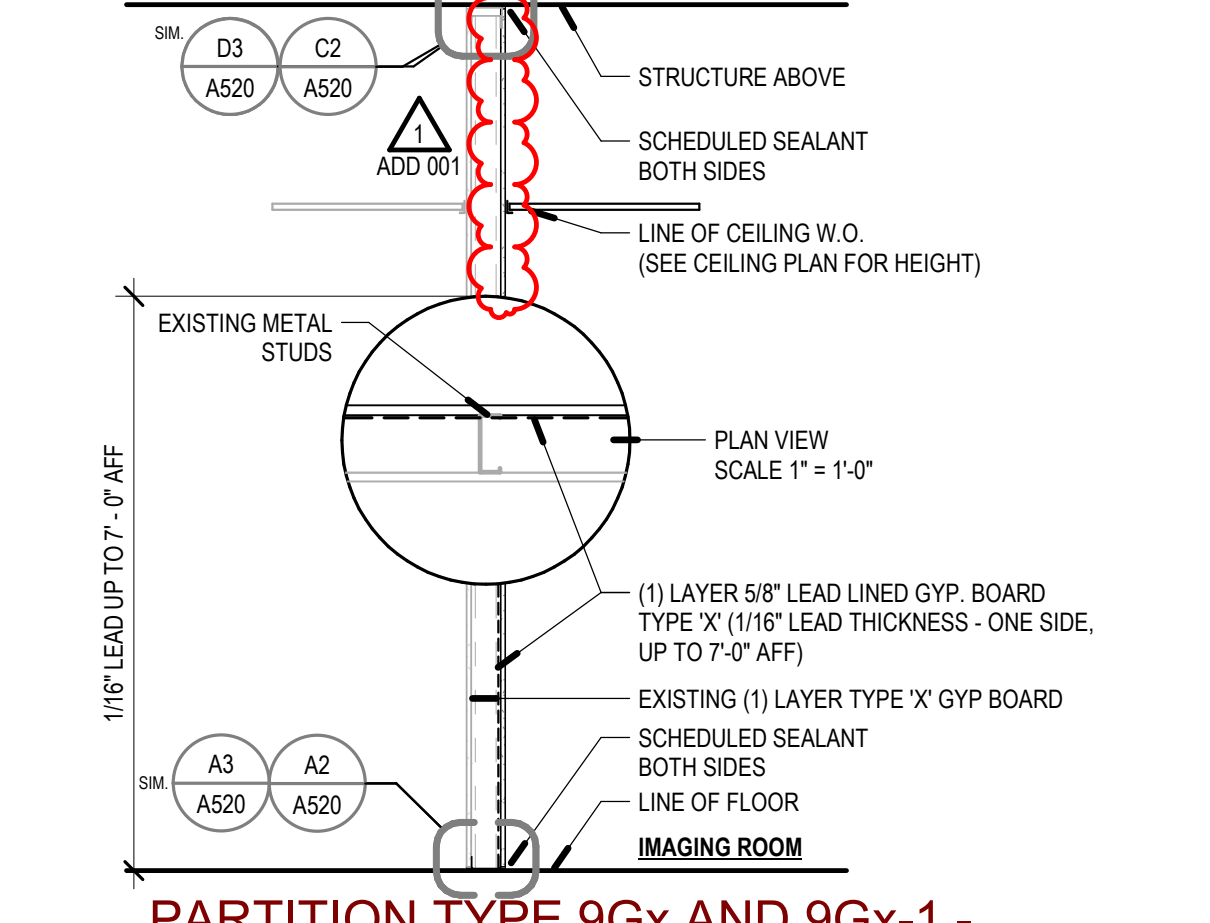
D5 PARTITION TYPE 9Dx
SCALE: 1/2" = 1'-0"



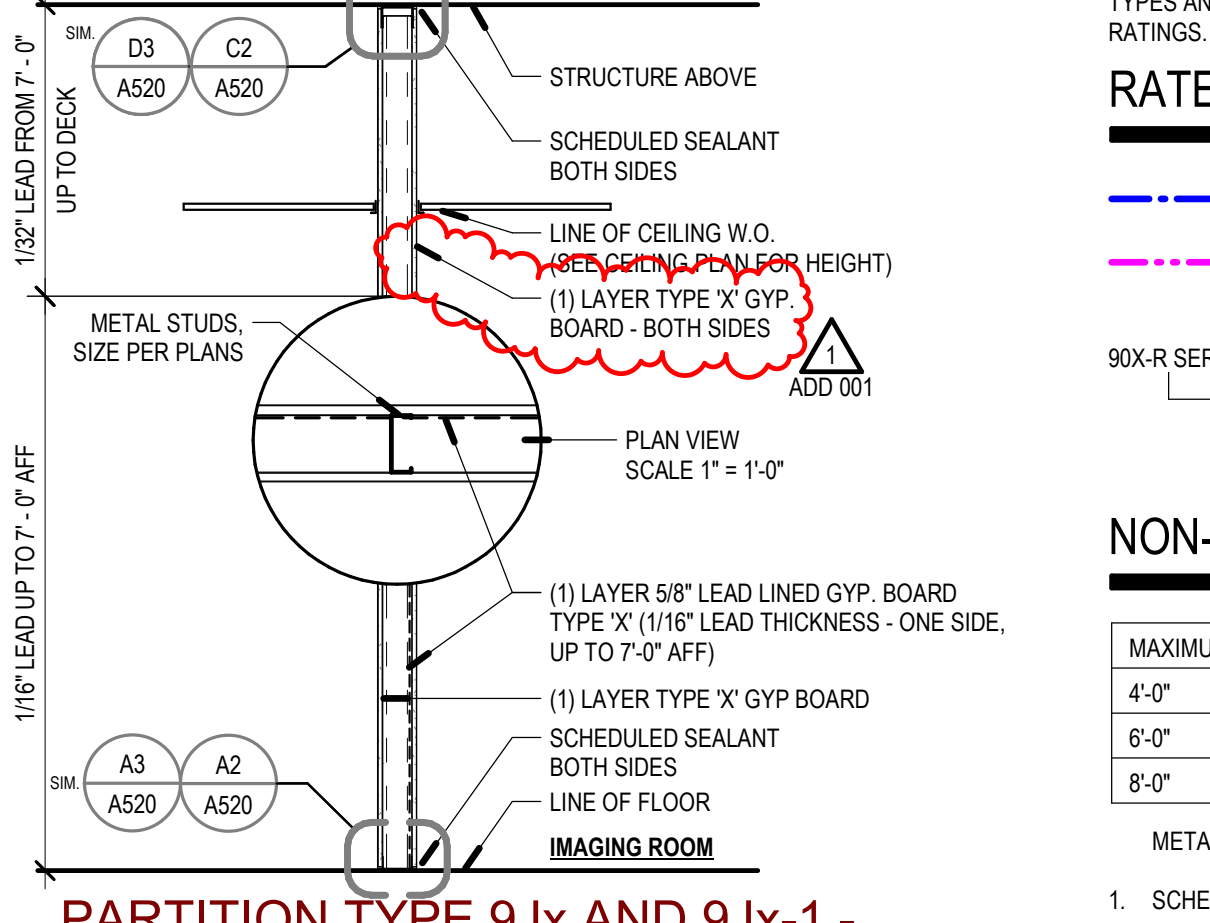
C4 PARTITION TYPE 9K1 - LEAD LINED
SCALE: 1/2" = 1'-0"



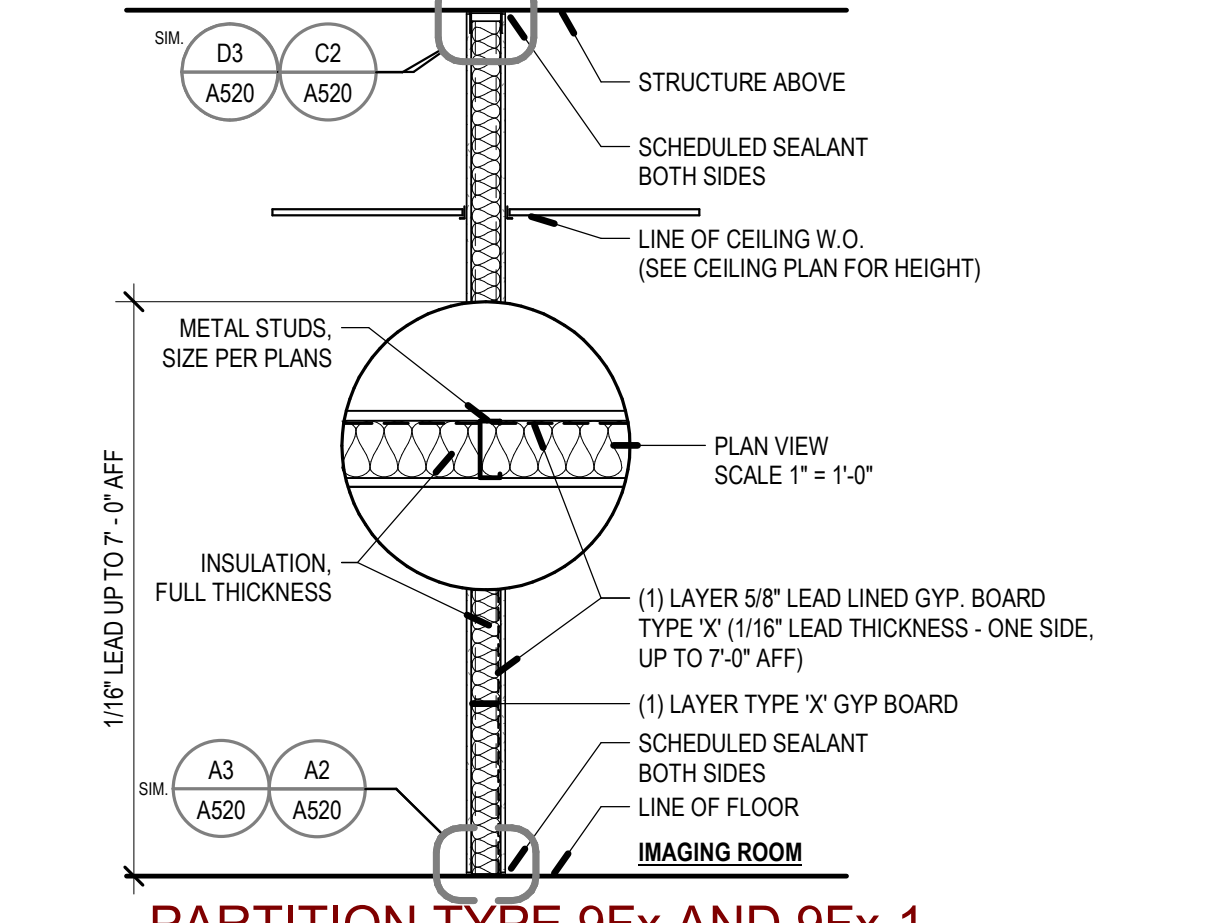
C5 PARTITION TYPE 9K2 - LEAD LINED
SCALE: 1/2" = 1'-0"



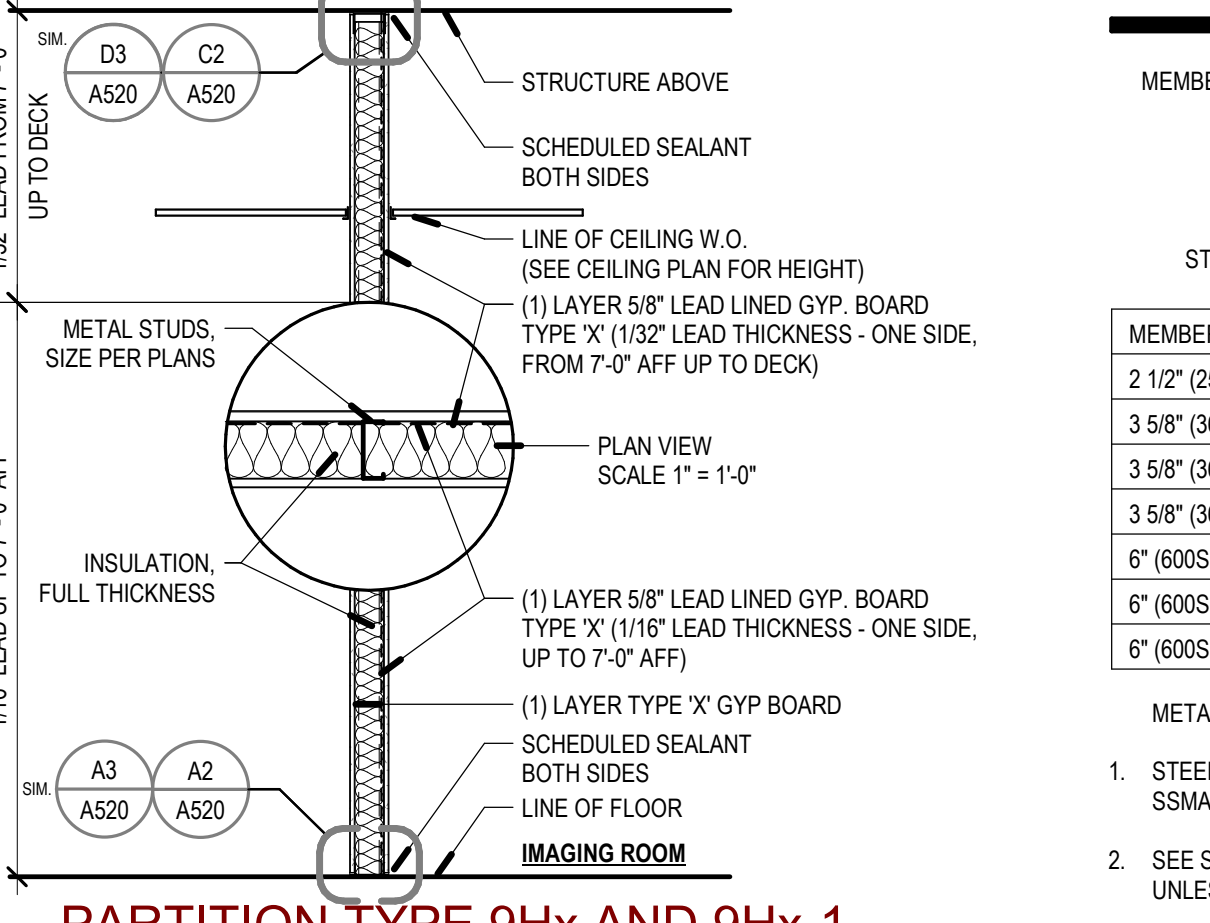
B4 PARTITION TYPE 9Gx AND 9Gx-1 - LEAD LINED
SCALE: 1/2" = 1'-0"



B5 PARTITION TYPE 9Jx AND 9Jx-1 - LEAD LINED
SCALE: 1/2" = 1'-0"



A4 PARTITION TYPE 9Fx AND 9Fx-1 - LEAD LINED
SCALE: 1/2" = 1'-0"



A5 PARTITION TYPE 9Hx AND 9Hx-1 - LEAD LINED
SCALE: 1/2" = 1'-0"

PARTITION AND FRAMING GENERAL NOTES

- FRAMED WALL PARTITIONS**
- PARTITION TYPE INDICATIONS ARE INDEPENDENT OF APPLIED FINISHES. SEE THE FINISH SHEETS AND INTERIOR ELEVATIONS FOR WALL FINISHES INCLUDING THE COURSING AND LAYOUT AND/OR THE DESIGNATIONS ON THE PLANS FOR ADDITIONAL INFORMATION REGARDING APPLIED FINISHES.
 - WHERE PARTITION TYPE DESIGNATION ON FLOOR PLANS IS INTERRUPTED BY DOOR OPENING, GLAZED PARTITION ABOVE INTERRUPTION AND WHERE APPLICABLE (SEE BELOW) IS TO BE THE SAME AS THAT DESIGNATED FOR THE PARTITION IN WHICH THE INTERRUPTION OCCURRED.
 - THE MINIMUM REQUIREMENTS FOR CONSTRUCTION OF EACH PARTITION TYPE AS EXPRESSED BY THE INDICATED REFERENCE ARE INCORPORATED BY REFERENCE AND ARE APPLICABLE TO THE WORK OF THIS PROJECT. HOWEVER, ADDITIONAL AND/OR MORE RESTRICTIVE REQUIREMENTS MAY BE INDICATED BY THE SPECIFICATIONS AND DRAWINGS. SUCH REQUIREMENTS ALSO APPLY AND SHALL GOVERN. SUCH REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO:
 - USE 5/8" THICK GYPSUM BOARD THROUGHOUT UNLESS NOTED OTHERWISE.
 - USE 1/2" OC MAX STUD SPACING UNLESS NOTED OTHERWISE IN THESE DOCUMENTS. THE SPACING STATED BY THE REFERENCED APPROVAL OR TEST REPORT IS THE MAX SPACING IF ALLOWED IN THESE DOCUMENTS.
 - USE STUDS OF GAGE INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS. THE GAGE STATED BY THE REFERENCED APPROVAL OR TEST REPORT IS THE MINIMUM GAGE TESTED. 20 GA (30 MIL) IS THE MINIMUM ALLOWED IN THESE DOCUMENTS.
 - USE STUDS OF DEPTH INDICATED BY THIS SET OF DOCUMENTS. THE DEPTH STATED BY THE REFERENCED APPROVAL OR TEST REPORT IS THE MINIMUM DEPTH TESTED. DEPTH ALLOWED IN THESE DOCUMENTS. SEE STRUCTURAL DOCUMENTS FOR ADDITIONAL INFORMATION PERTAINING TO THE CONSTRUCTION OF CONCRETE, MASONRY AND STUD WALLS.
 - PROVIDE FIRE RATED CONSTRUCTION ASSEMBLIES WHERE INDICATED ON SHEETS G100s AND FLOOR PLAN DRAWINGS.
 - ALL DIMENSIONS ARE CENTER OF STUD OR FACE OF CONCRETE, MASONRY OR ROUGH OPENING UNLESS NOTED OTHERWISE. FACE OF FINISHED WALL WILL BE NOTED AS F.O.W.
 - AT ALL INTERIOR WALLS, STUDS, INSULATION AND GYPSUM BOARD ARE TO EXTEND TO THE DECK ABOVE. UNLESS NOTED OTHERWISE.
 - WALL TYPES NOT NOTED ARE ASSUMED TO MATCH ADJACENT ROOMS. SEE SHEETS FOR FINISHES, NOTIFY ARCHITECT OF ANY DISCREPANCIES.
 - ALL METAL STUD PARTITIONS ARE CONSIDERED ACOUSTICAL PARTITIONS AND ARE TO RECEIVE A TYPE 1 SOUND ATTENUATION BLANKET. THICKNESS TO MATCH STUD DEPTH, UNLESS NOTED OTHERWISE.
 - REFER TO SHEET A520 FOR TYPICAL INTERIOR WALL CONDITIONS ASSOCIATED WITH ALL METAL STUD PARTITIONS.
 - PROVIDE CONTROL JOINTS IN METAL FRAMED WALLS AT APPROXIMATELY 30 FEET ON CENTER. LOCATE AT CORNER ABOVE DOORS OR INSIDE CORNER OF PILASTERS OR OTHER UNUSUALLY LOCATIONS WHERE POSSIBLE. CONSULT WITH ARCHITECT PRIOR TO COMMENCING FRAMING. INSTALL PER DETAILS B2/A520 FOR CONTROL JOINTS.
 - AT WALL OPENINGS FOR PENETRATION OF PIPES, DUCTS, DEVICES, ETC., GYPSUM BOARD IS TO BE CUT TO MATCH THE SHAPE AND DIMENSION OF THE PENETRATING OBJECT AND THE GAP BETWEEN THE OBJECT AND THE WALL IS TO BE SEALED W/ ACOUSTICAL OR FIRE SEALANT ON ALL SIDES WITH A 3/4" JOINT AT ALL SIDES. MAXIMUM OPENING FOR DUCTS OR LARGE PENETRATIONS SHALL BE FRAMED WITH A HEADER, ADD AN ANGLED CORNER BRACE IF THE GAP EXCEEDS 3" FROM FRAMING TO THE OPENING.
 - CONTRACTOR TO PROVIDE BLOTTING / BACKING FOR ALL WALL MOUNTED EQUIPMENT. SEE FLOOR PLANS AND INTERIOR ELEVATIONS FOR CABINETS, GRAB BARS ETC. INSTALL BLOCKING AS DETAILED OR AS REQUIRED TO MOUNT SUCH DEVICES. ALL BLOCKING IS TO BE FIRE RATED/AND TREATED. INSTALL PER SHEET A520.
 - WHERE THERE IS LIMITED WATER EXPOSURE, INSTALL ONE LAYER OF 5/8" TYPE X WATER RESISTANT GYPSUM BOARD PER ASTM C1396 (WHERE GYPSUM BOARD OCCURS) OF BASIC PARTITION AT THE FOLLOWING LOCATIONS:
 - WITHIN 2 FEET HORIZONTALLY AND 4 FEET VERTICALLY OF JANITORS
 - SINKS
 - AT OTHER LOCATIONS, I.E. TOILET ROOMS AND KITCHENS, AND AS INDICATED ON THE ARCHITECTURAL FINISH PLANS AND ELEVATIONS.
 - INSTALL ONE LAYER OF 5/8" GLASS MATT TILE BACKER BOARD IN LIEU OF GYPSUM BOARD (WHERE GYPSUM BOARD OCCURS) OF BASIC PARTITION WHERE THERE IS NO FIRE RATING AND OVER GYPSUM BOARD FACE LAYER AT FIRE RATED PARTITIONS AT THE FOLLOWING LOCATIONS:
 - AT WET LOCATIONS, SUCH AS SHOWER STALLS AND TUB SURROUNDS.
 - WHERE CERAMIC TILE FINISHES ARE INDICATED PER THE FINISH PLANS, AND/OR INTERIOR ELEVATIONS.
 - AT OTHER LOCATIONS AS INDICATED BY THE ARCHITECTURAL FINISH PLANS AND ELEVATIONS.
 - WHERE NEW WALLS OR FURRING ARE INDICATED TO BE DIMENSIONED OFF OF AN EXISTING WALL, THE NEW WALL SHALL BE STRAIGHT AND PLUMB REGARDLESS OF THE CONDITION OF THE EXISTING WALL.
 - SEE DETAIL E2 ON SHEET A520 FOR TYPICAL FIRE EXTINGUISHER CABINET INSTALLATION DETAILS.

KEY FOR PARTITION TYPES

Denotes type of construction (spec. DIVISION) | WALL

3X 0 SERIES	CONCRETE
4X 0 SERIES	MASONRY
5X 0 SERIES	COLD FORMED METAL STUDS, 16ga MIN.
9X 0 SERIES	METAL STUDS

NOMINAL SIZES: V = VARIABLE/MATCH/EXISTING
 1 = 1 5/8" STUDS
 2 = 2 1/2" STUDS
 3 = 3 3/8" STUDS
 4 = 4" STUDS / 4" (NOM) C.M.U.
 6 = 6" STUDS / 6" (NOM) C.M.U.
 8 = 8" STUDS / 8" (NOM) C.M.U.
 10 = 10" (NOM) C.M.U. OR CONC.
 12 = 12" (NOM) C.M.U. OR CONC.

RATED WALL LEGEND

1 HOUR SEPARATION	EXAMPLE: WALL TYPE 9A3-1 IS A ONE HOUR RATED, 3 3/8" METAL STUD WALL WITH 5/8" GYPSUM BOARD ON BOTH SIDES, PER ASSEMBLY REQUIREMENTS.
2 HOUR SEPARATION	

90X-R SERIES
 — FIRE RATING (ONLY WHEN NOTED):
 1 = 1 HOUR RATED ASSEMBLY
 2 = 2 HOUR RATED ASSEMBLY
 3 = 3 HOUR RATED ASSEMBLY

NON-BEARING METAL HEADER SCHEDULE

MAXIMUM SPAN	HEADER	FY
4'-0"	(2) 400S137-43	33 ksi
6'-0"	(2) 600S162-43	33 ksi
8'-0"	(2) 800S162-43	33 ksi

NON-BEARING METAL STUD GAUGE SIZING

MEMBER DEPTH IN 1/100 INCHES | FLANGE WIDTH IN 1/100 INCHES

STYLE (S=STUD OR JOIST) | MATERIAL THICKNESS IN MILS

MEMBER DEPTH	MAX STUD HEIGHT	MIN. GA. & SPACING
2 1/2" (250S125-33)	10'-0"	20g/16" O.C.
3 5/8" (362S125-33)	14'-0"	20g/16" O.C.
3 5/8" (362S162-33)	16'-0"	20g/16" O.C.
3 5/8" (362S162-43)	18'-0"	18g/16" O.C.
6" (600S162-33)	24'-0"	20g/16" O.C.
6" (600S162-43)	26'-0"	18g/16" O.C.
6" (600S162-43-50KS)	28'-0"	16g/16" O.C.

METAL STUD NOTES:
 1. STEEL STUDS SHALL MEET ICC REPORT E-4943P AND THE SSMA STANDARDS. HEIGHT BASED ON SSMA 2001 CATALOG AND PROJECT REQUIREMENTS.
 2. SEE SCHEDULE FOR STUD SPACING AND GAUGE. ALL STUDS AND BRACES SHALL BE 33 KSI UNLESS NOTED OTHERWISE IN THESE DRAWINGS.
 3. AT ALL DOORS PROVIDE TWO TABBED 18 GAUGE STUDS AT BOTH SIDES OF JAMB.
 4. PLEASE NOTE THAT DUE TO THE LARGE FLOOR TO FLOOR HEIGHT 18 GAUGE STUDS WILL BE NECESSARY IN MOST INTERIOR NON LOAD BEARING WALLS. REFER TO THE CHART ABOVE.

VCBO

SALT LAKE CITY - HQ
 524 SOUTH 600 EAST
 SALT LAKE CITY, UT 84102
 801.575.8800

ST. GEORGE
 20 N. MAIN ST., #113
 ST. GEORGE, UT 84770
 435.522.7070

VCBO.COM
 VCBO NUMBER: 22545
 CLIENT NUMBER:
 DATE: 12-08-2023

STATE OF UTAH
 JEFFERY PINEGAR
 #12487
 LICENSED ARCHITECT

REV	DATE	DESCRIPTION
1	01/09/2024	ADD 001

**INTERMOUNTAIN PARK CITY HOSPITAL
 CT / FLUOROSCOPY REMODEL**

900 ROUND VALLEY DR., PARK CITY, UT 84000

CONSTRUCTION DOCUMENTS

TYPICAL INTERIOR FRAMING DETAILS

A520
 11/10/2023 6:59 AM



**Park City Hospital
Park City, UT
United States of America**

A	01/Nov/2023	Final (DC-408145)
REV	DATE	MODIFICATIONS

01 - C1 - Cover Sheet	10 - S3 - Structural Details
02 - C2 - Disclaimer - Site Readiness	11 - M1 - HVAC
03 - A1 - General Notes	12 - E1 - Electrical Notes
04 - A2 - Equipment Layout	13 - E2 - Electrical Layout
05 - A3 - Section Views	14 - E3 - Electrical Elevations
06 - A4 - Equipment Details	15 - E4 - Details-Interconnections
07 - A5 - Equipment Details & Delivery (2)	16 - E5 - Power Requirements
08 - S1 - Structural Notes	
09 - S2 - Structural Layout	



GE Healthcare

Michael Hatch
801-599-6221
Michael.hatch@ge.com

**PRECISION 180
FINAL STUDY**

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

Drawn by	Verified by	Concession	S.O. (GON)	PIM Manual	Rev
REK	REK	-	2010383798.1	5793724-1EN	9
Format	Scale	File Name		Date	Sheet
A3	1/4"=1'-0"	RF-M384261-FIN-00-A.DWG		01/Nov/2023	01/16

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

DISCLAIMER

GENERAL SPECIFICATIONS

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

CUSTOMER RESPONSIBILITIES

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

RADIO-PROTECTION

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

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

CUSTOMER SITE READINESS REQUIREMENTS

REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION	
Description	Document Number*
Product specific Pre-installation Manual	Refer to cover page
*documents can be accessed in multiple languages at https://customer-doc.cloud.gehealthcare.com/#/cdp/dashboard	

- A mandatory component of this drawing set is the GE Healthcare Pre-installation manual. Failure to reference the Pre-installation manual will result in incomplete documentation required for site design and preparation.
- The items on the GE Healthcare Site Readiness Checklist **DOC1809666** are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.
 - Any deviation from these drawings must be communicated in writing to and reviewed by your local GE Healthcare installation project manager prior to making changes.
 - Make arrangements for any rigging, special handling, or facility modifications that must be made to deliver the equipment to the installation site. If desired, your local GE Healthcare installation project manager can supply a reference list of rigging contractors.
 - New construction requires the following;
 1. Secure area for equipment,
 2. Power for drills and other test equipment,
 3. Restrooms.
 - Provide for refuse removal and disposal (e.g. crates, cartons, packing)
 - For CT systems it is required to minimize vibrations within the scan room. It is the customer's responsibility to contract a vibration consultant/engineer to implement site design modifications to meet the GE vibration specification. Refer to the system Pre-installation manual for vibration specifications.

ENVIRONMENTAL SPECIFICATIONS

MAGNETIC INTERFERENCE

To guarantee specified imaging performance :
X-ray tubes and control console equipment must be located in ambient static field of less than 10 gauss.

ACOUSTIC OUTPUT

Measured 1 m from any point in system.

In-use: less than 65 dBA

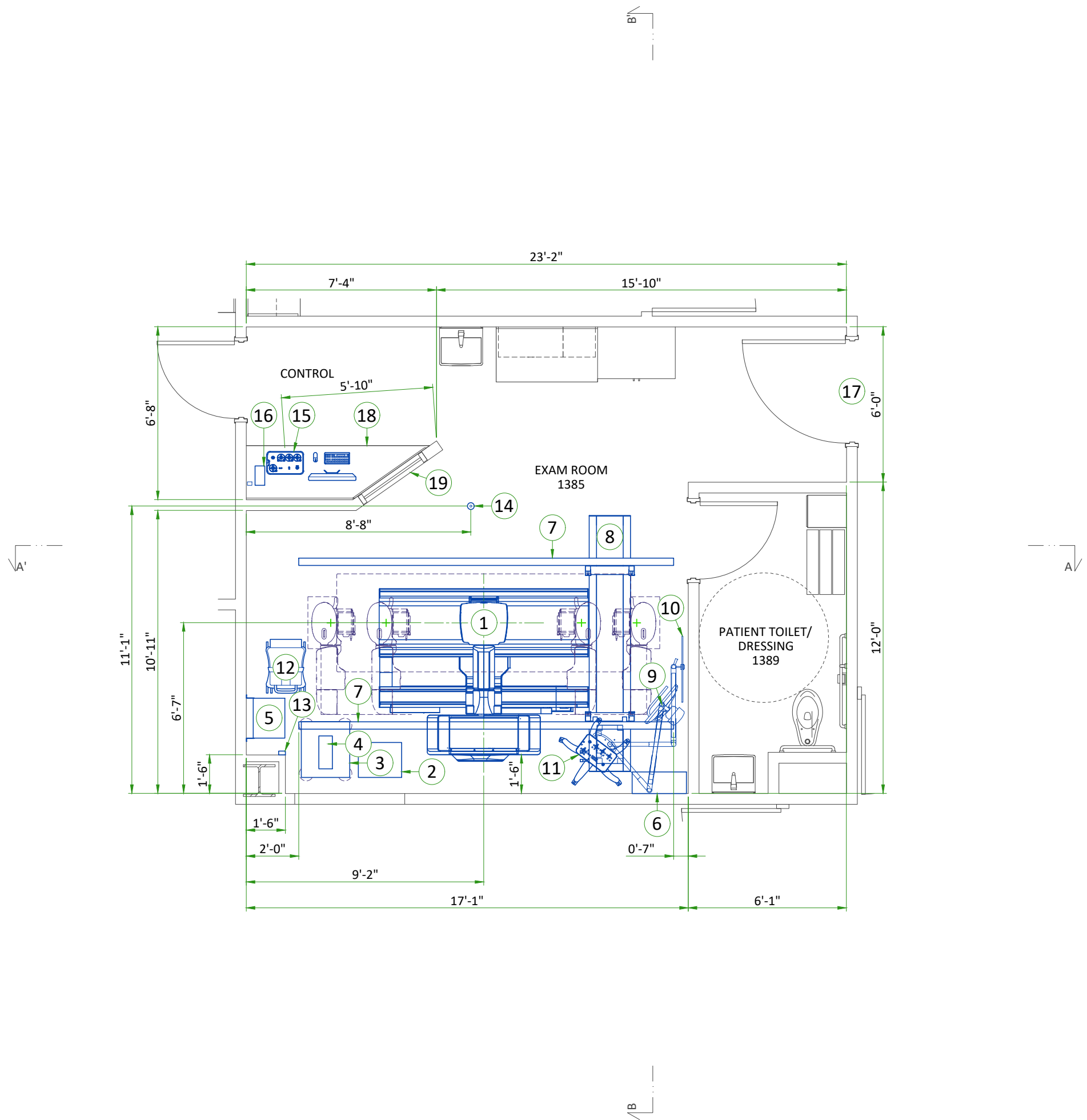
Stand-by: less than 45 dBA

ATMOSPHERIC PRESSURE

Operating atmospheric pressure: 800-1013 hPa

Storage atmospheric pressure: 800-1013 hPa

Refer to the Pre-installation Manual for detailed information about individual components.



LEGEND

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

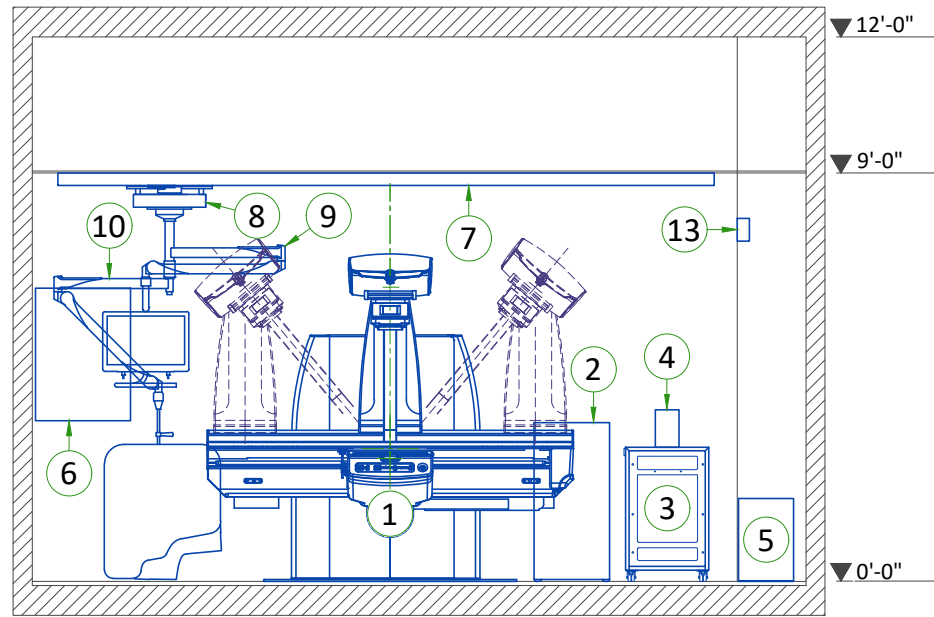
BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
A	1	TABLE WITH OVERFLOOR PLATE	2388	3197	700	1450
A	2	GENERATOR CABINET	3501	201	1026	91
A	3	DIGITAL SYSTEM CABINET	1092	243	320	110
A	4	UPS	-	33	-	14.8
B	5	15kVA STEP-DOWN TRANSFORMER	-	209	-	95
B	6	POWER DISTRIBUTION BOX	-	176	-	80
A	7	4410 mm LONG RAILS	-	-	-	-
A	8	MONITOR SUSPENSION BRIDGE	-	-	-	-
A	9	SINGLE MONITOR SUSPENSION	194	202	57	91.6
A	10	RADIATION SHIELD	-	-	-	-
A	11	IN-ROOM SECONDARY CONSOLE	-	110	-	50
A	12	TIMS 2000 ON CART (TPC)	781	55	229	25
A	13	INTERCOM LOUDSPEAKER	-	1	-	0.4
A	14	INTERCOM MICROPHONE	-	0	-	0.1
A	15	OPERATOR CONSOLE	194	18	57	8
A	16	INTERCOM CONSOLE	-	2	-	0.7
C	17	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1200 mm x 1890 mm [47 in x74 in], CONTINGENT ON A 2600 mm [102 in] CORRIDOR WIDTH				
C	18	COUNTER TOP FOR EQUIPMENT- PROVIDE GROMMETED OPENINGS AS REQUIRED TO ROUTE CABLES				
C	19	CONTROL WALL TO CEILING WITH LEAD GLASS VIEWING WINDOW				

EXAM ROOM HEIGHT

FINISHED FLOOR TO SLAB HEIGHT	12'-0"
FALSE CEILING HEIGHT	9'-0"

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

FRONT VIEW A-A'



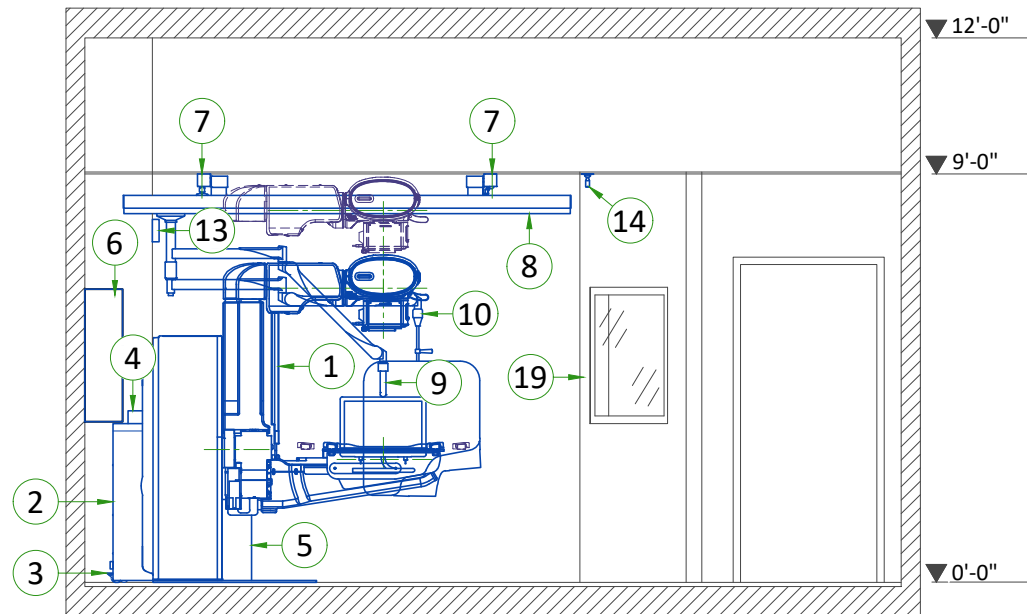
EXAM ROOM CEILING HEIGHTS

RECOMMENDED AND MINIMUM ROOM HEIGHTS			
CONFIGURATION	SPECIFICATION	CEILING HEIGHT	
		mm	ft
Table	Minimum	2600	8'-6"
	Recommended	3000	9'-10"
Overhead Tube Suspension	Minimum	2600	8'-6"
	Recommended	2920	9'-7"
Monitor Suspension	Minimum	2600	8'-6"
	Recommended	2650	8'-8"
Tilting Wall Stand*	Minimum	2400	7'-8"
	Recommended	2800	9'-2"

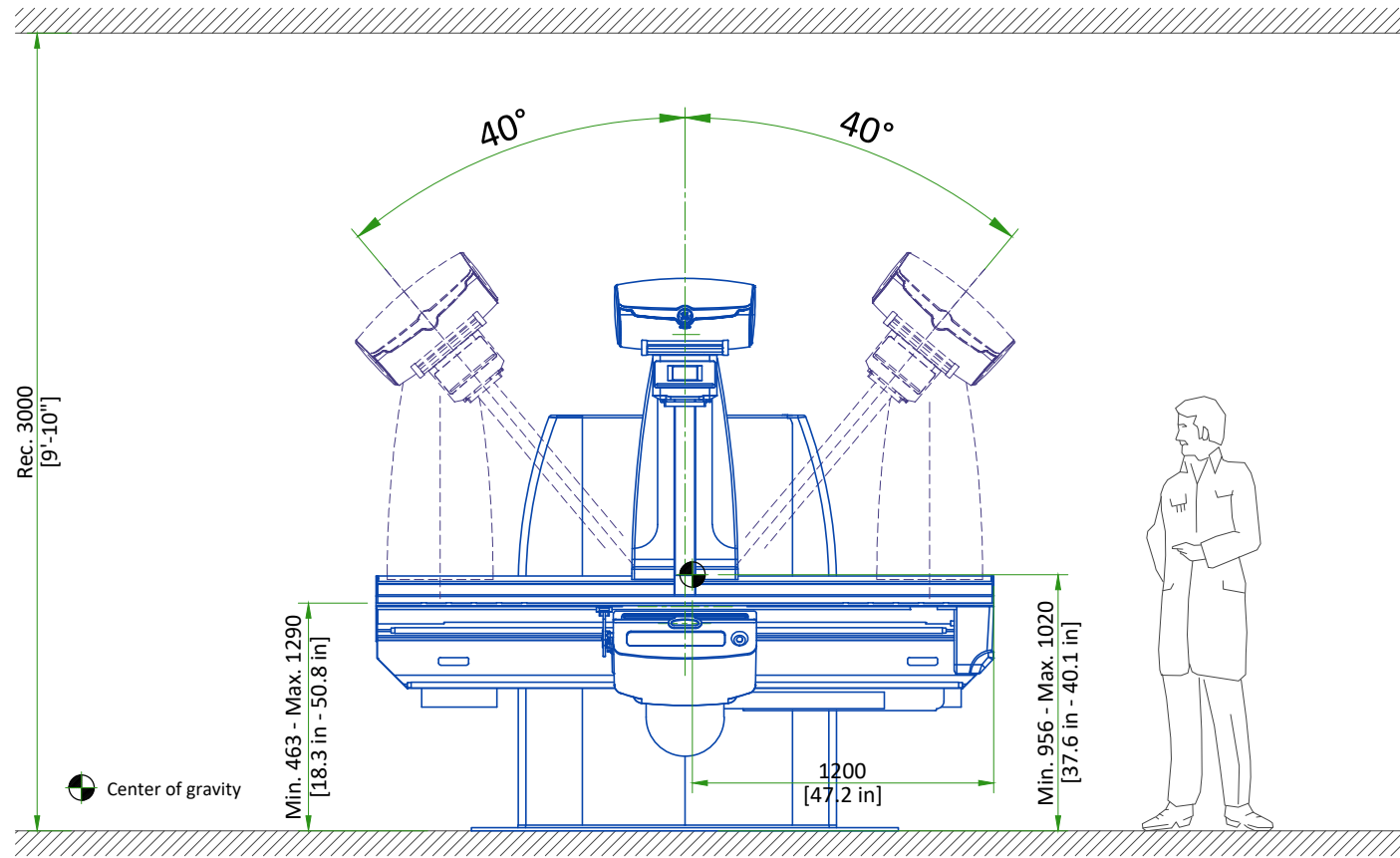
Note : Minimum room height for the table must take into consideration the most protruding object from the ceiling that is in the system area (for example the rails for OTS).

*Not available in USA

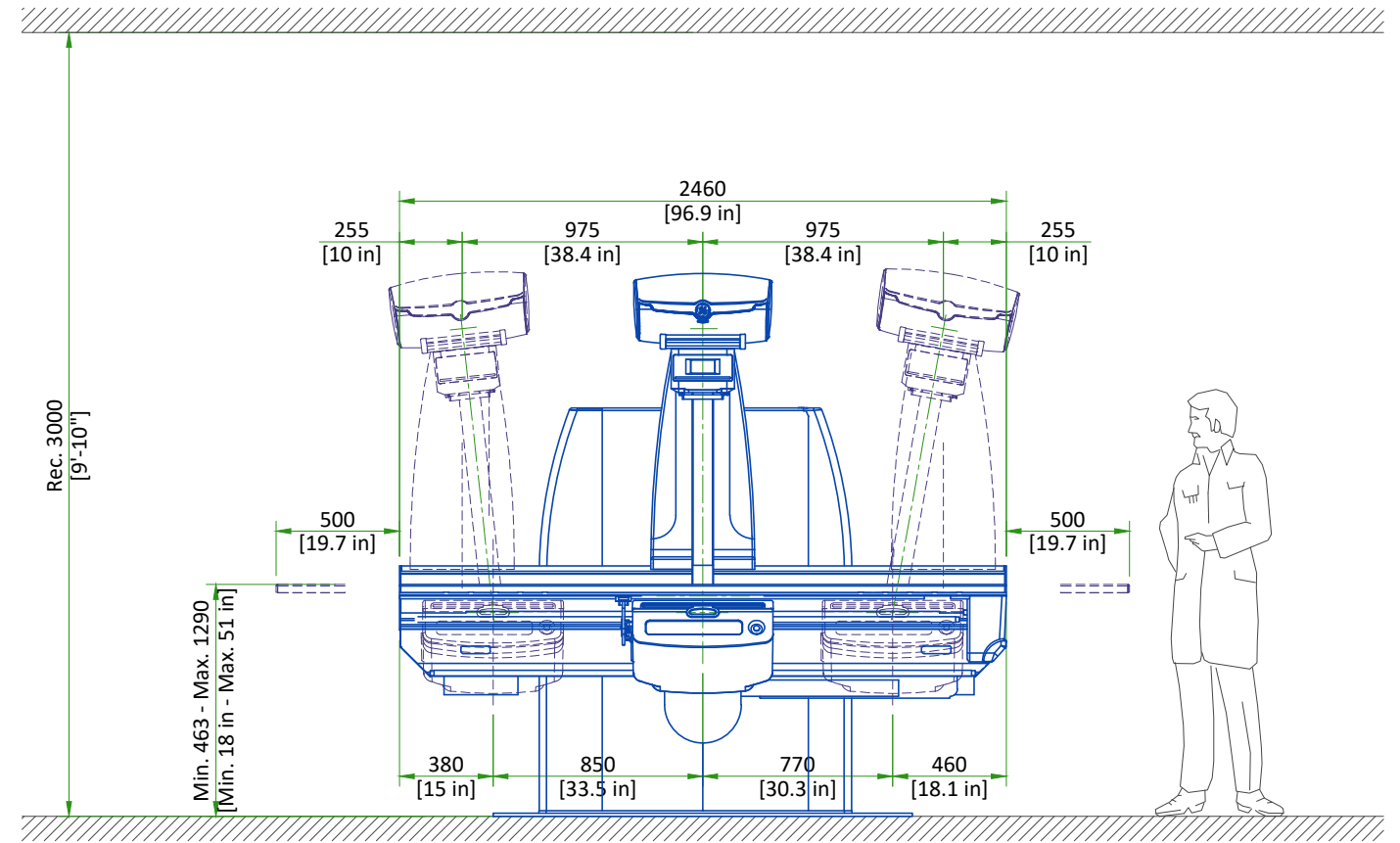
SIDE VIEW B-B'



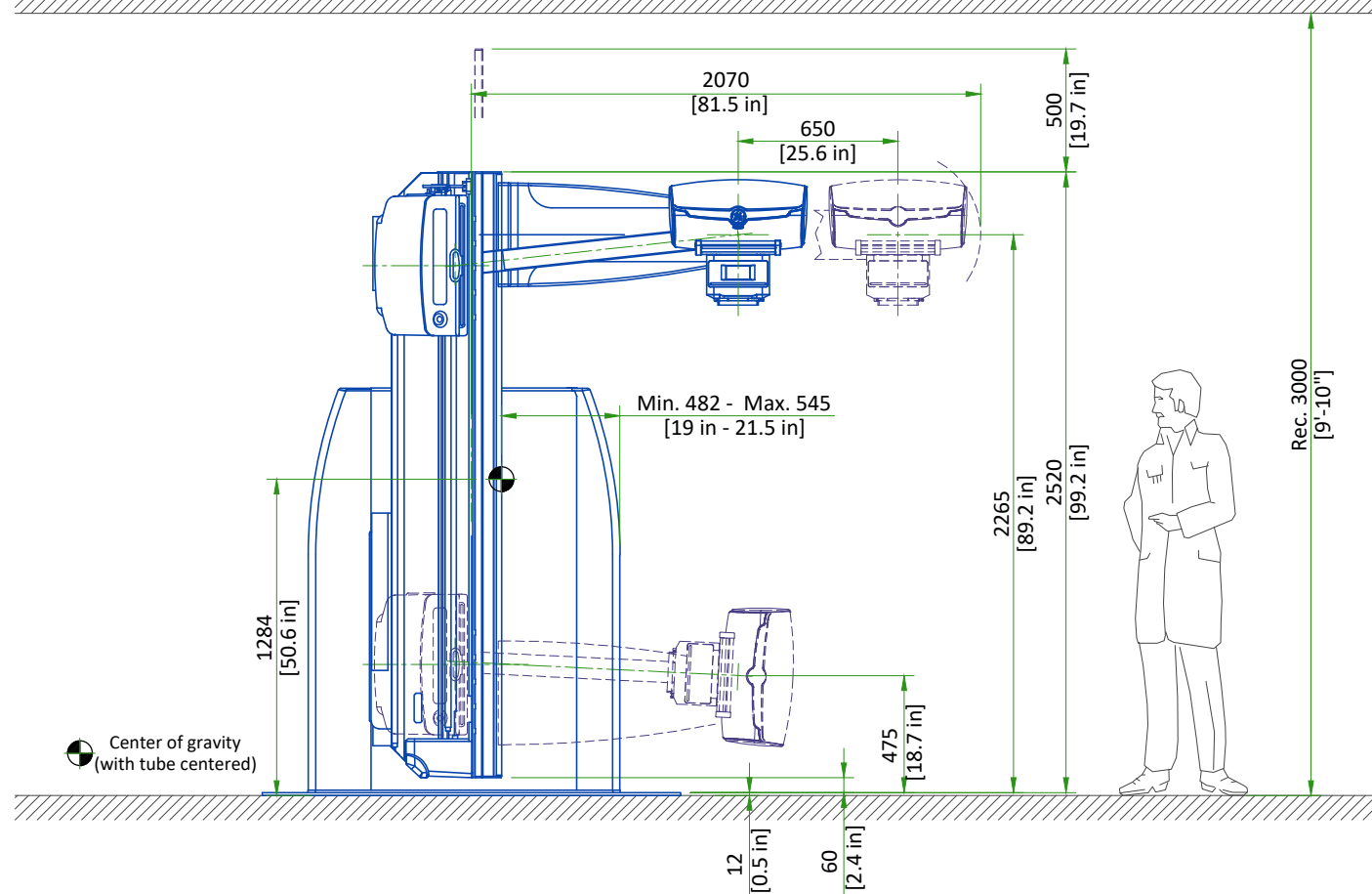
TYPICAL FRONT VIEW AND TUBE ANGULATION



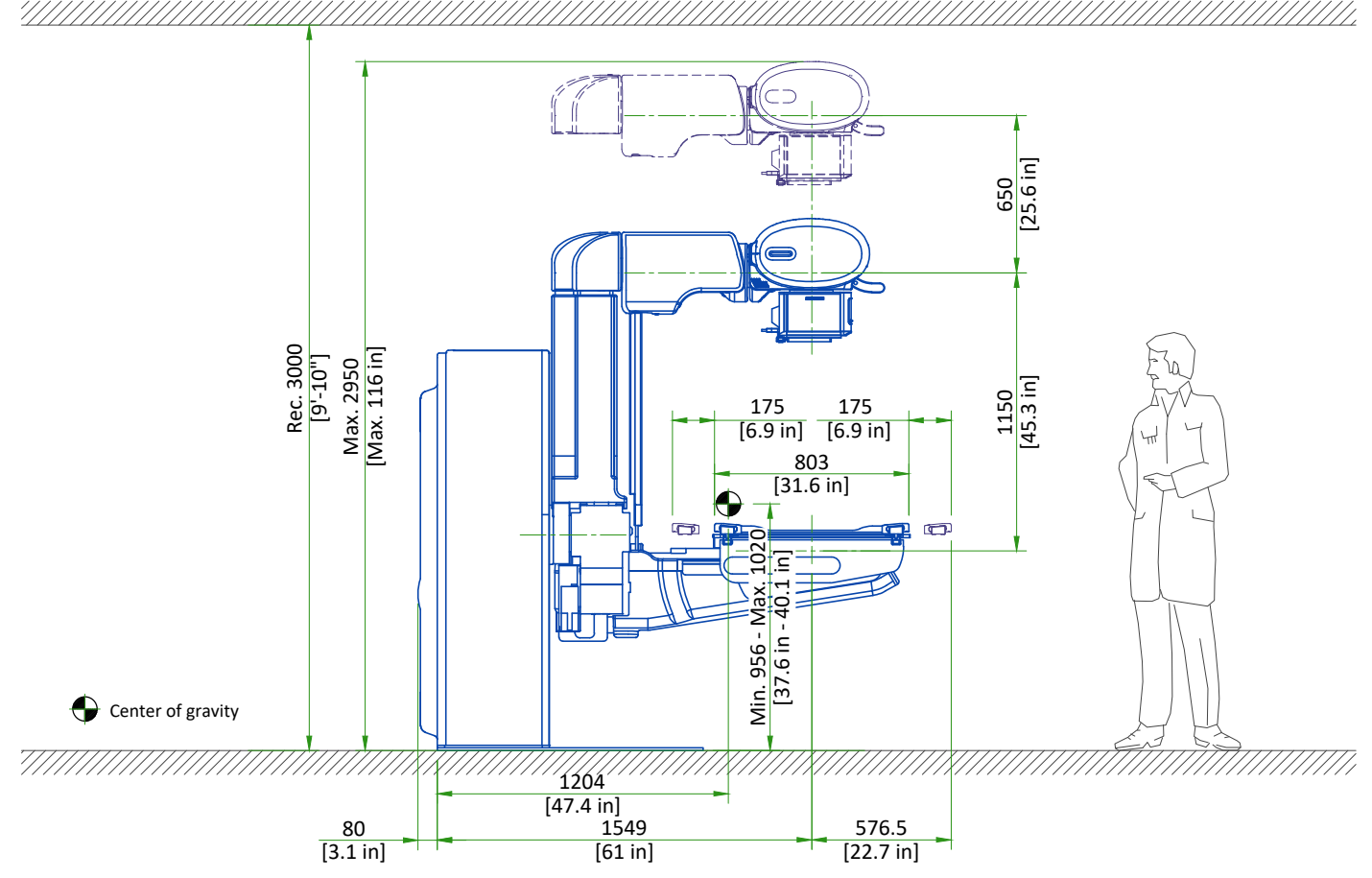
TYPICAL FRONT VIEW AND TUBE TRAVEL



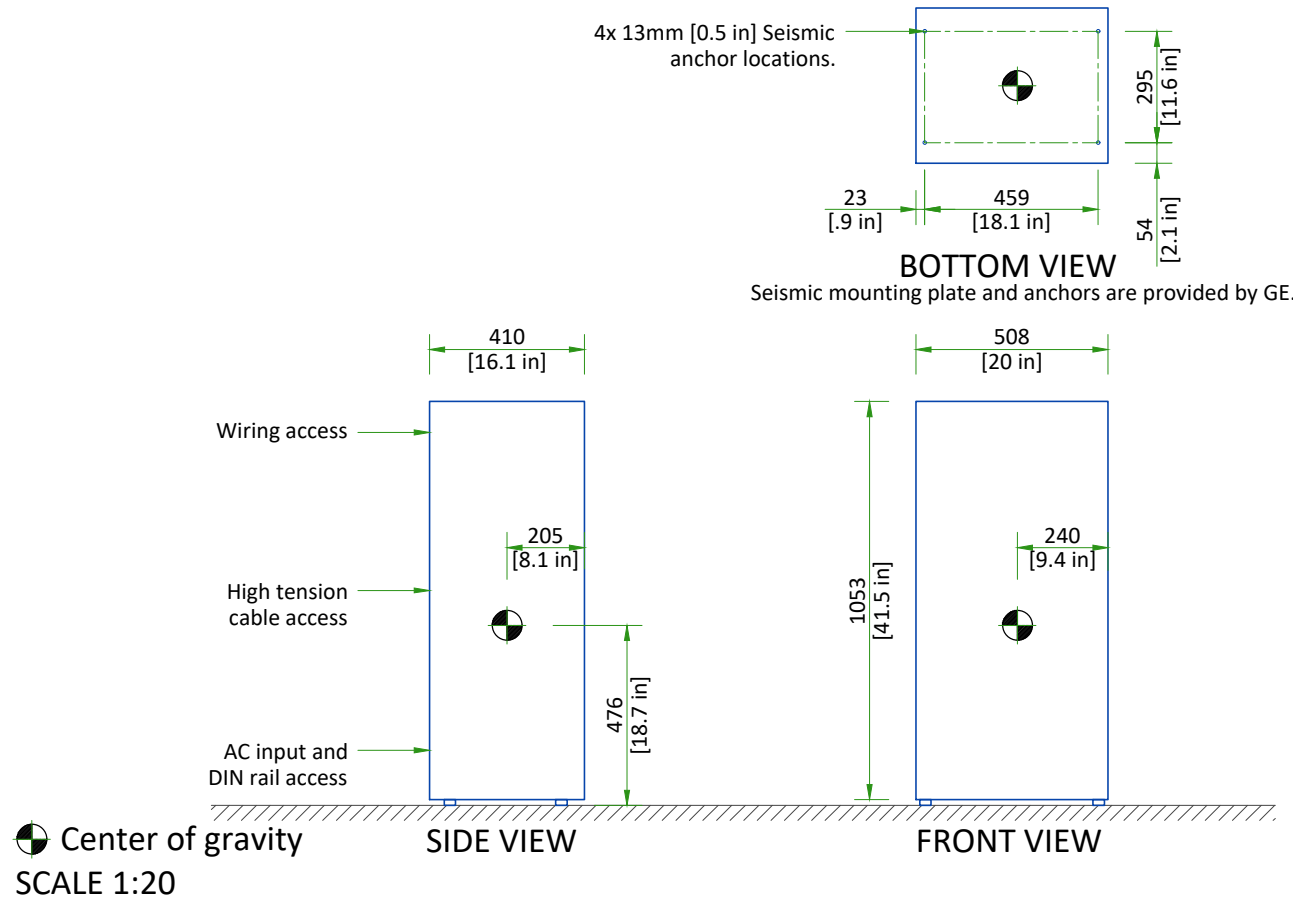
TYPICAL FRONT VIEW WITH TABLE 90°



TYPICAL SIDE VIEW



GENERATOR



DELIVERY

THE CUSTOMER/CONTRACTOR SHOULD:

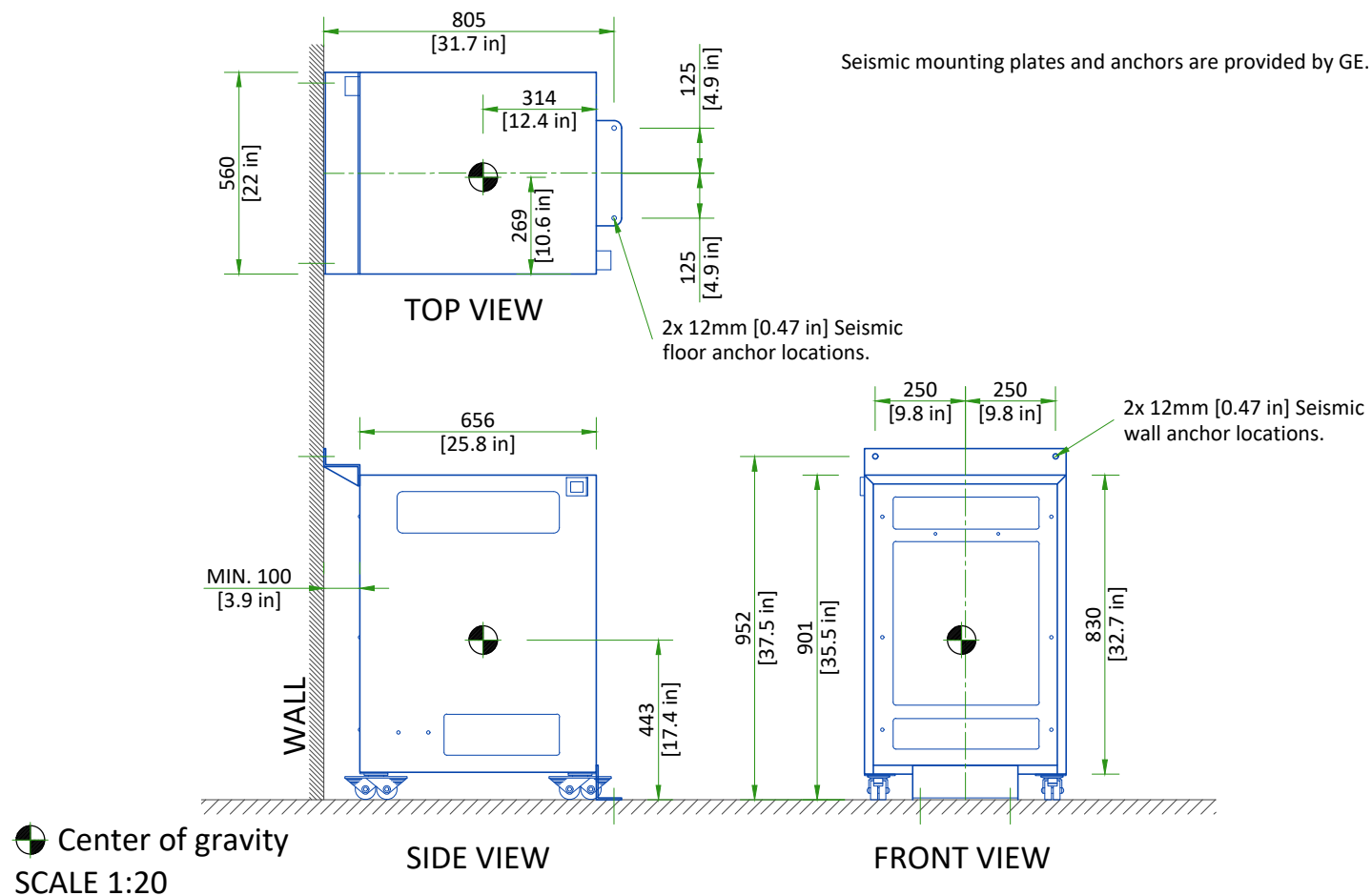
- Provide an area adjacent to the installation site for delivery and unloading of the GE equipment.
- Ensure that the dimensions of all doors, corridors, ceiling heights are sufficient to accommodate the movement of GE equipment from the delivery area into the definitive installation room.
- Ensure that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

The unit (table main frame and body) can be shipped through a 1200 mm [47 in] door width and 1200 mm [47 in] minimum hallway width. The unit can be divided and the major assemblies can be maneuvered through a 1020 mm [40 in] doorway and 1300 mm [51 in] hallway width (Order has to be placed accordingly, table is shipped in one piece by default). The OTS can be shipped through a 900 mm [35 in] door width and 2600 mm [102.4 in] minimum hallway width or through a 1400 mm [55 in] door width and 1800 mm [71 in] minimum hallway width.

DIMENSIONS OF DELIVERY WITH DOLLY TRANSPORT EQUIPMENT

MAJOR ASSEMBLIES	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (kg)
Table main frame and body	2460 [97 in]	1064 [41.9 in]	1859 [73.2 in]	-
Table main frame	2460 [97 in]	650 [25.6]	1859 [73.2 in]	350 [772 lb]
Table body	1269 [50 in]	1005 [39.6 in]	1633 [64.3 in]	620 [1367 lb]
OTS (Optional)	3010 [118.5 in]	744.2 [29.3 in]	-	328 [723 lb]
Monitor Suspension (Optional)	3010 [118.5 in]	744.2 [29.3 in]	-	328 [723 lb]

DIGITAL SYSTEM CABINET



STRUCTURAL NOTES

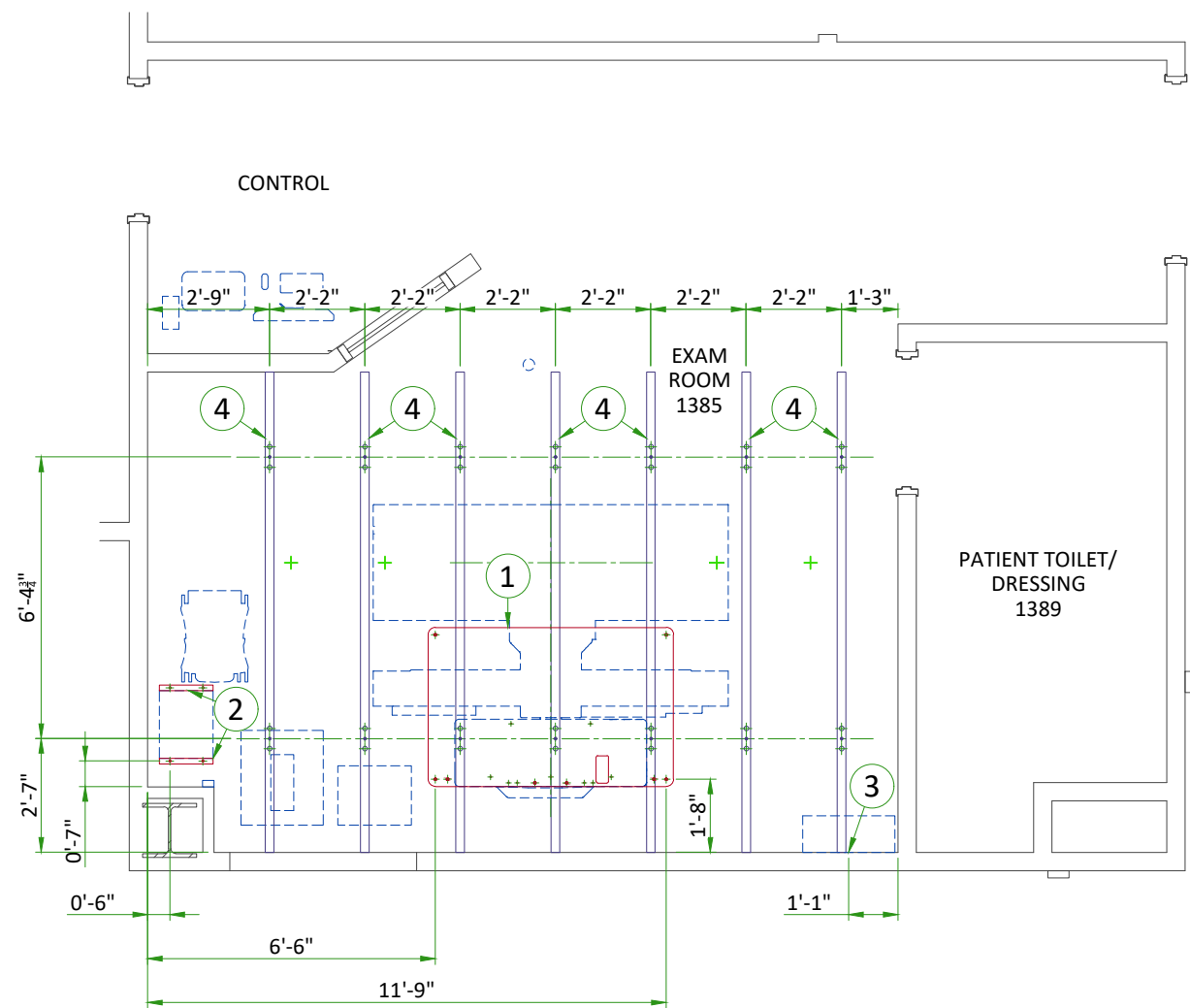
- Methods of support for the steelwork that will permit attachment to structural steel or through bolts in concrete construction should be favored. Do not use concrete or masonry anchors in direct tension.
- All units that are wall mounted or wall supported are to be provided with supports where necessary. Wall supports are to be supplied and installed by the customer or his contractors. See plan for suggested locations.
- Control walls shall be constructed to minimum 2130mm (7'-0") high.
- Dimensions are to finished surfaces of room.
- Customers contractor must provide all penetrations in post tension floors.
- Customers contractor must provide and install any non-standard anchoring. Documents for standard anchoring methods are included with GE equipment drawings for geographic areas that require such documentation.
- Customers contractor must provide and install hardware for "through the floor" anchoring and/or any bracing under access floors. This contractor must also provide floor drilling that cannot be completed because of an obstruction encountered while drilling by the GE installer such as rebar etc.
- It is the customer's responsibility to perform any floor or wall penetrations that may be required. The customer is also responsible for ensuring that no subsurface utilities (e.g., electrical or any other form of wiring, conduits, piping, duct work or structural supports (i.e. post tension cables or rebar)) will interfere or come in contact with subsurface penetration operations (e.g. drilling and installation of anchors/screws) performed during the installation process. To ensure worker safety, GE installers will perform surface penetration operations only after the customer's validation and completion of the "GE surface penetration permit".
- Different anchor types are used to install the components of the system. Refer to Structural Requirements Section(s) of the Pre-Installation Manual for each anchor requirement.
- Refer to the Structural Requirements Section for the required minimum embedment.
- The ground surface must be flat and leveled, maximum tolerance for leveling is ± 1.5 mm per 1 m (0.2 in per 10 feet). A grout pad provided by the contractor is required to meet this specification. The maximum pad thickness is 6.3 mm (0.25 in).

CEILING REQUIREMENTS

The construction and load capability of the ceiling must be sufficient for the installation of the OTS unit. It is the responsibility of the customer or structural engineer to evaluate the best fixation system to be used for the ceiling rails/mounting systems as described in the following layout example under consideration of the options to be installed.

A good ceiling levelness is required. For OTS, a maximum of 7 mm height displacement along the ceiling longitudinal rails is allowed and can be corrected with the use of shims to ensure the rails are as close to perfect level as possible.

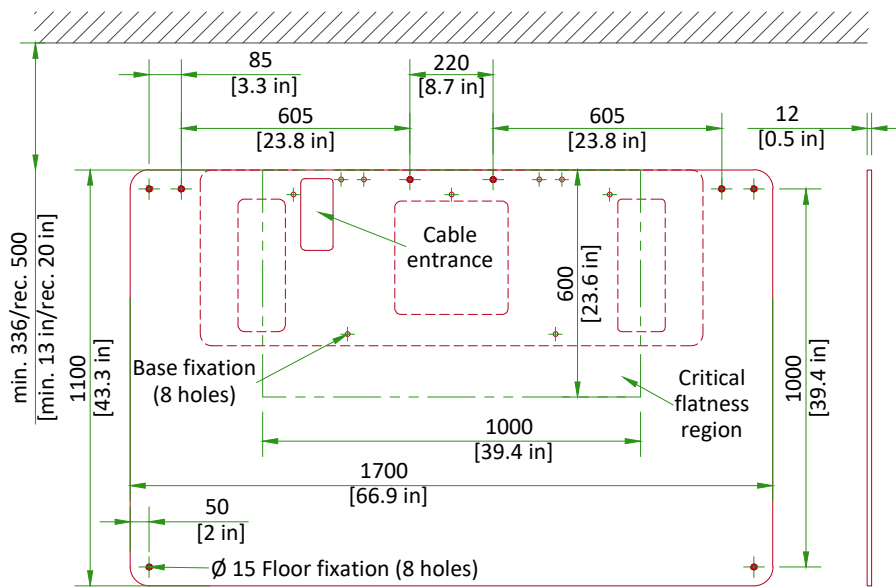
It is recommended that sprinkler heads not be placed between the stationary rails. All sprinkler heads should be mounted so they do not extend downward more than 6.35 mm from the ceiling while in the 'resting' position.



ITEM	DESCRIPTION
(GE SUPPLIED / CONTRACTOR INSTALLED)	
1	Area occupied by GE supplied table baseplate
2	Area occupied by GE supplied transformer
(CONTRACTOR SUPPLIED & INSTALLED)	
3	Support backing, locate as shown.
4	Structural support in ceiling for fastening ceiling supported equipment. Supports to run continuous with no fittings extending below face of channel, run wall to wall, be parallel, square, and in the same horizontal plane, flush with the finished ceiling. Rails are mounted to these supports every 26.0" (660mm) and require 452 lbs. (205 kg) per bolt load. Methods of support that permit attachment to structural steel or through bolts in concrete should be favored. Do not use screw anchors in direct tension.

TABLE FLOOR MOUNTING

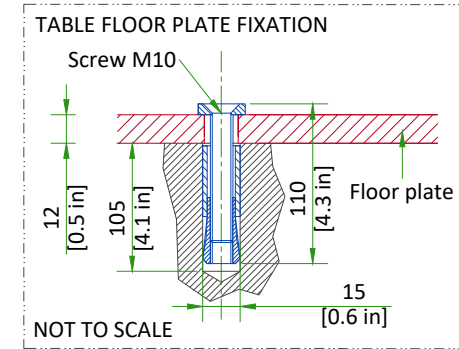
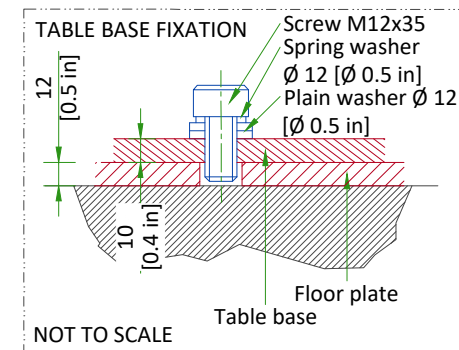
OVERFLOOR PLATE



- Floor plate, M10 screws and washers are delivered with the system.
- The floor thickness must be at least 140 mm [5.5 in].
- Critical flatness region must be flat and level, with deviations of no more than 1.5mm [1/16 in]
 - shims may be used along perimeter of baseplate to improve surface contact

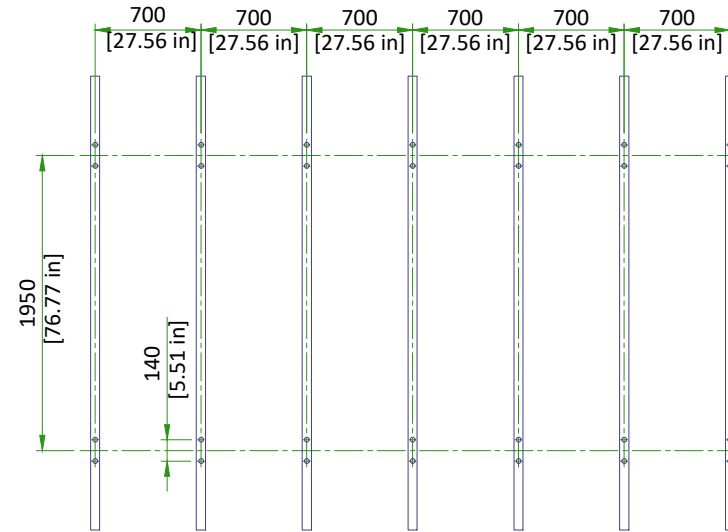
SCALE 1:20

Unit weight: 1025 kg [2260 lb]
 Plate weight: 180 kg [397 lb]
 Total load: 1205 kg [2657 lb]
 Loading area: 1.90 m² [20.5 ft²]
 Floor loading: 805kg / m² [165 lb / ft²]



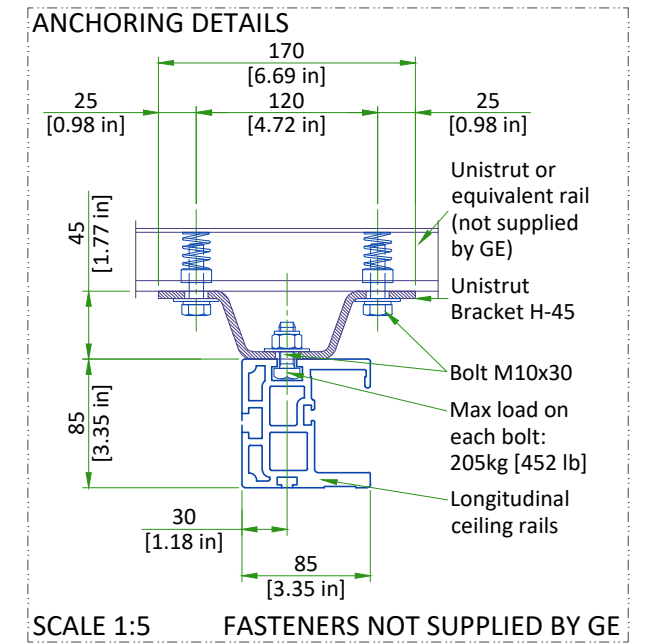
SUSPENSION RAILS MOUNTING SPECIFICATIONS

STRUCTURAL RAILS PERPENDICULAR TO SUSPENSION RAILS



- Rail extremities must be separated from the wall by a 150mm [6in] distance.
- Fire sprinklers, lights, air conditioning returns located in the suspension area must not be below the false ceiling.
- Unistrut or equivalent structural support must be fixed perfectly parallel and on the same plane.
- 660mm [26 in] steps are also possible.
- A good ceiling levelness is required. For OTS, a maximum of 7mm [0.27 in] height displacement along the ceiling longitudinal rails is allowed and can be corrected with the use of shims to ensure the rails are as close to perfect level as possible.

SCALE 1:50



TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

	EXAM ROOM			CONTROL ROOM		
	Min	Recommended	Max	Min	Recommended	Max
Temperature	15°C [59°F]	23°C [73°F]	35°C [95°F]	15°C [59°F]	23°C [73°F]	35°C [95°F]
Relative humidity (1)	75%			75%		
Heat dissipation	max 2.5 kW [8490 BTU/hr]			0.41 kW [1399 BTU/hr]		

STORAGE CONDITIONS

Temperature	-10°C [14°F] to 50°C [122°F]
Relative humidity (1)	10% to 80%

Material should not be stored for more than 90 days.

(1) non-condensing

AIR RENEWAL

According to local standards.

NOTE

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

HEAT DISSIPATION DETAILS

ROOM	DESCRIPTION	STANDBY (kW)	IN-USE (kW)	STANDBY (BTU/hr)	IN-USE (BTU/hr)
Exam Room	Table	0.700	0.700	2388	2388
	Generator	0.022	1.026	75	3500
	Digital Systems Cabinet	0.320	0.320	1092	1092
	Partial UPS	0.050	0.050	N/A	N/A
	Monitor (single)	0.057	0.057	149	149
	Advantech Monitor (single)	0.065	0.065	222	222

CONNECTIVITY REQUIREMENTS

All Digital systems are equipped with Broadband fast Ethernet hardware for Service Diagnostics. The systems equipped with Digital Imaging are capable of placing electronic images on the Hospital image Ethernet Network (DICOM).

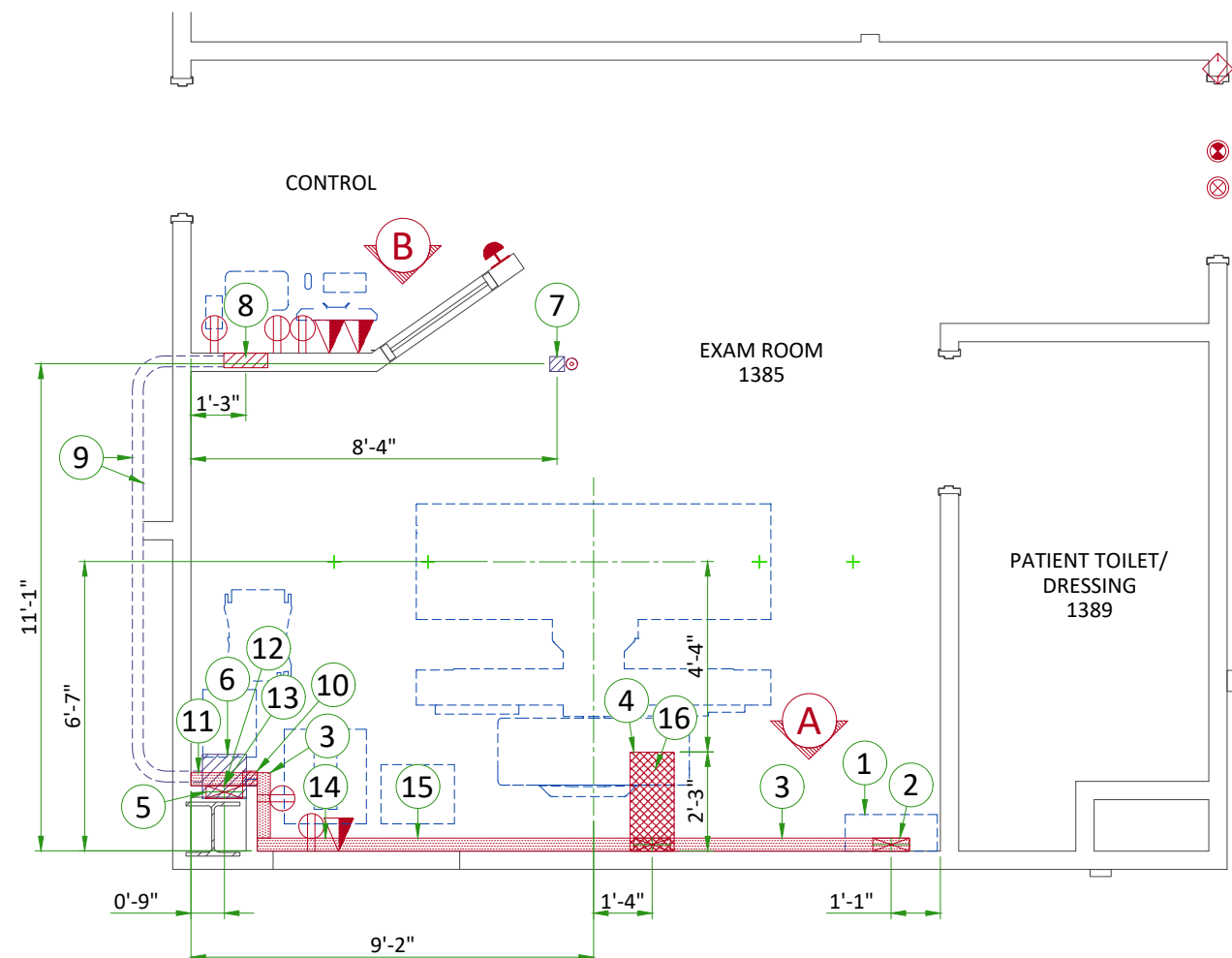
The Digital PC (part of the Digital subsystem) is the connectivity point between the system and the hospital. For a Broadband connection, it is the purchaser's responsibility to provide the connection at the Ethernet port on the Digital PC via a Cat 5 Ethernet cable and the hospital Ethernet connection.

Note: System hardware is rated at 100/1000Mbps transfer rate. Hospital connections must be rated for 100/1000Mbps for optimal performance. One RJ45 Ethernet plus should be present in the room.

ELECTRICAL NOTES

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

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

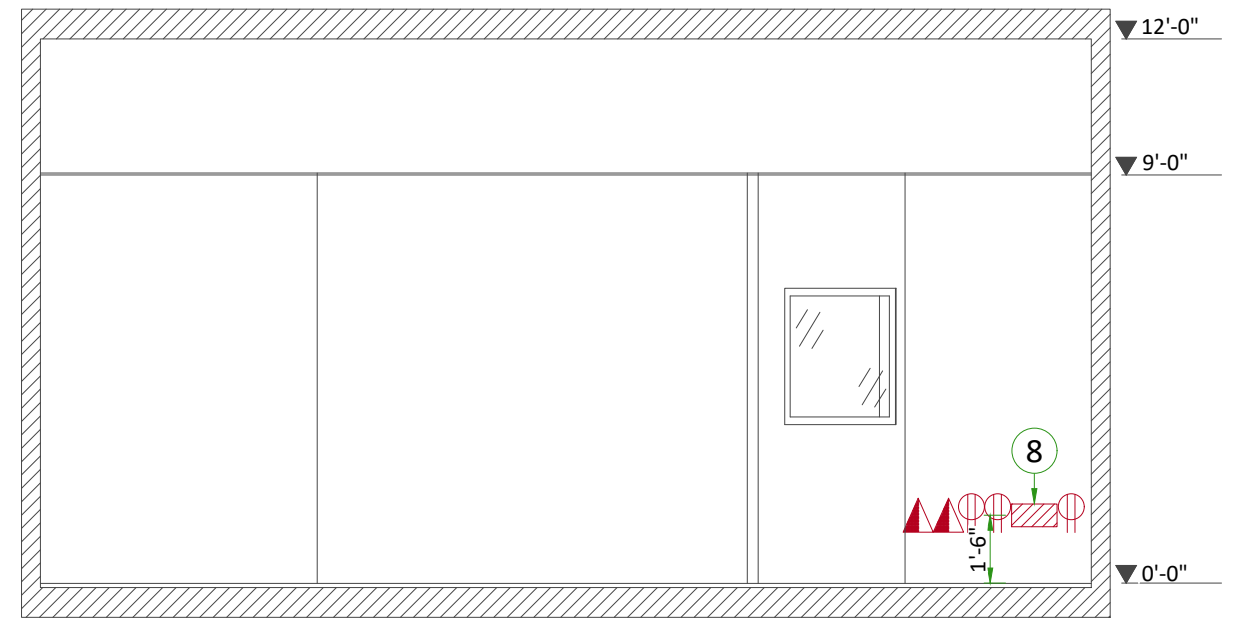
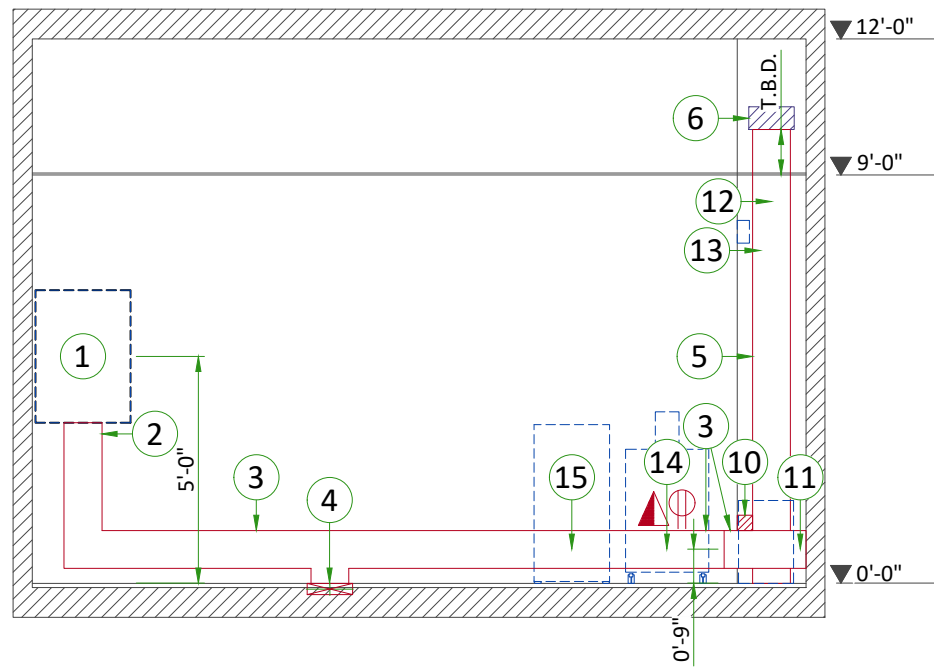


Item	Electrical Layout Item List
1	Power Distribution Box (PDB)
2	10" x 3 1/2" [250 x 100] Surface wall duct to bottom of PDB with minimum 2 dividers
3	10" x 3 1/2" [250 x 100] Surface wall duct with minimum 2 dividers
4	12" x 3" [300 x 100] Trench duct with minimum 2 dividers
5	10" x 3 1/2" [250 x 100] Flush wall duct with minimum 2 dividers
6	Box above ceiling - size per local code
7	Box flush in ceiling - size per local code (Intercom Microphone)
8	Flush box - size per local code (Operator and Intercom Consoles)
9	2 1/2" [64] Conduit above ceiling
10	4" x 4" x 4" [100 x 100 x 100] Box attached to duct (TIMS Readiness Kit)
11	Grommeted opening (Transformer)
12	Grommeted opening (Monitor)
13	Grommeted opening (Intercom Loudspeaker)
14	Grommeted opening (Digital Systems Cabinet)
15	Grommeted opening (Generator Cabinet)
16	Suitable chase nipples, refer to Table Floor Mounting detail on sheet S3 (Table)

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

Cable Length Note:
Routing of cable ductwork, conduits, etc., **must run direct as possible** otherwise may result in the need for greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths point to point).

Additional Conduit Runs (Contractor Supplied and Installed)					
From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size		
			In.	mm	
3 phase power	1 Power Distribution Box	1	As req'd	As req'd	
1 Power Distribution Box	Emergency off	1	1/2	16	
	OTS On/off switch	1	1/2	16	
Warning light	Warning light control	1	1/2	16	
1 phase power		1	As req'd	As req'd	
6 Generator	Door Switch	1	1/2	16	
	6 Intercom Loudspeaker	1	1	25	
8 Intercom Console	7 Intercom Microphone	1	1	25	

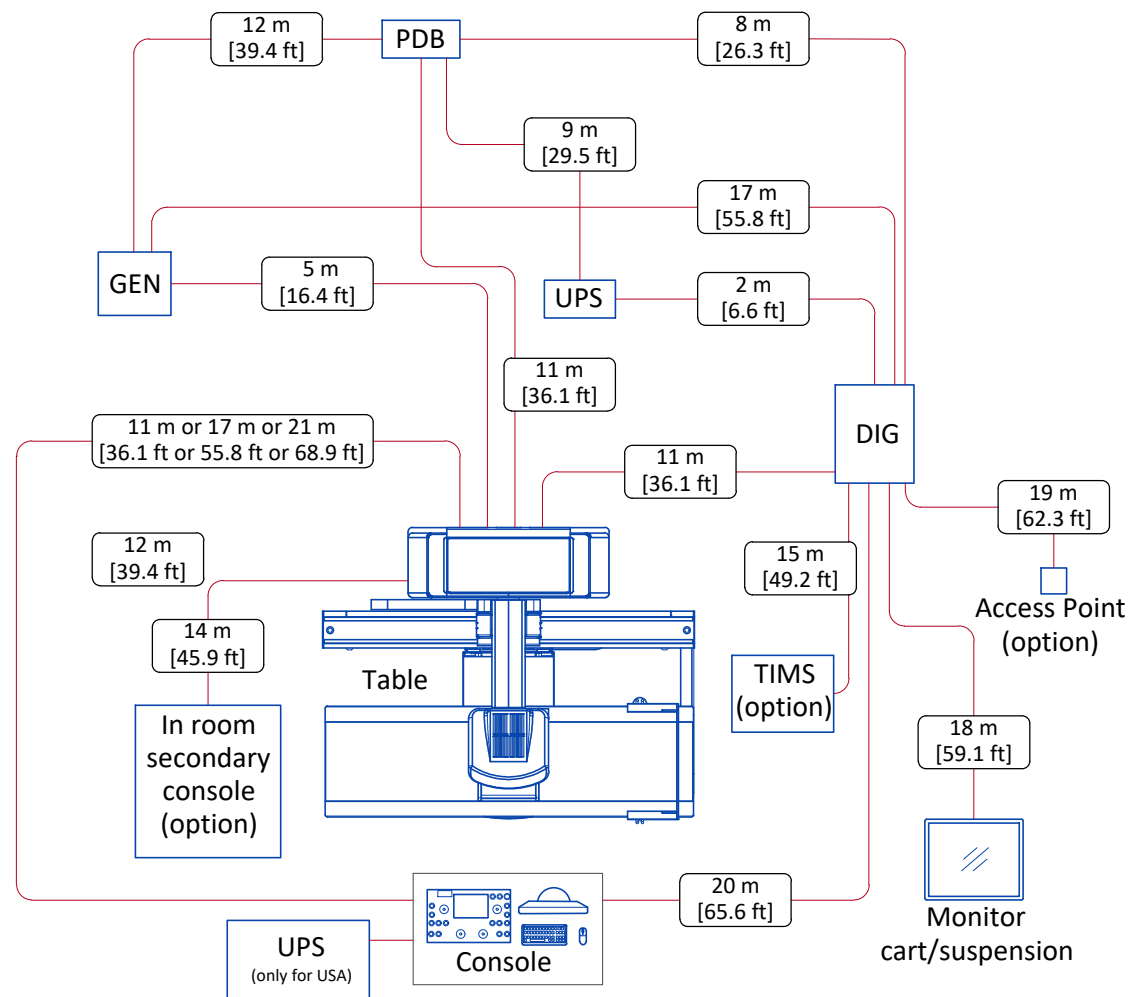


INTERCONNECTION

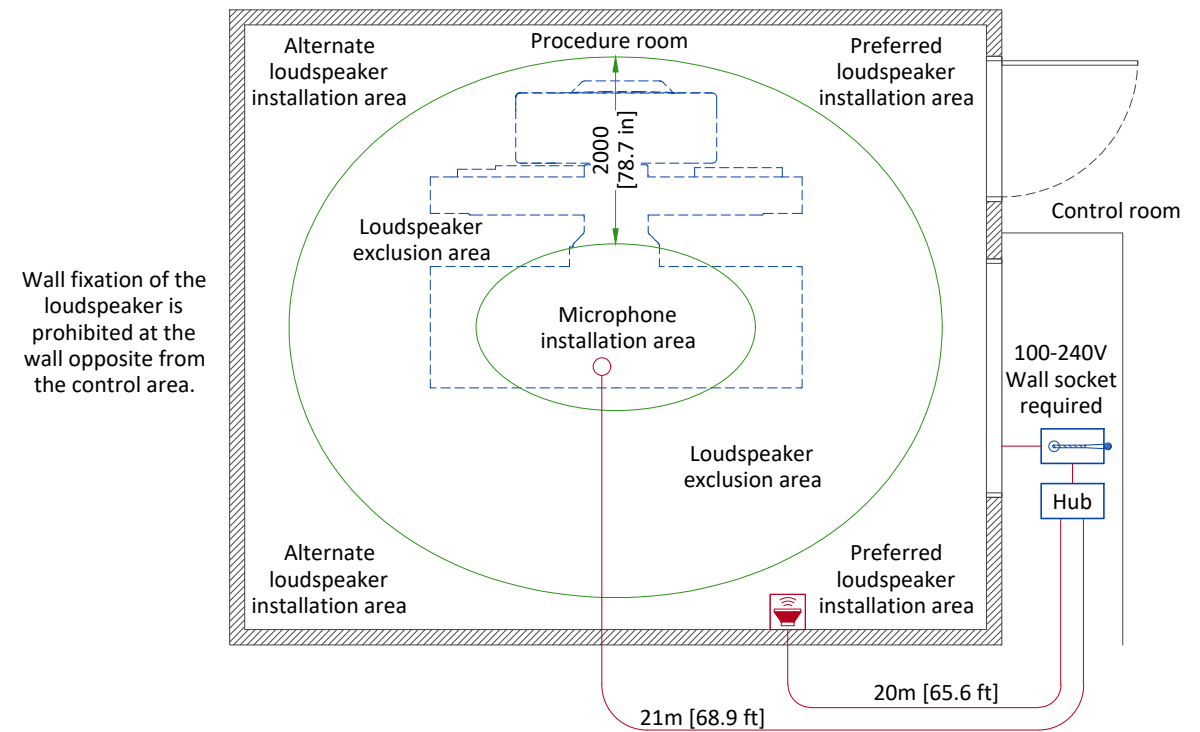
STANDARD CONFIGURATION

LEGEND

- DIG Digital System Cabinet
- GEN Generator Cabinet
- PDB Power Distribution Box
- UPS Uninterruptible Power Supply



CLARSON PUBLIC IV INTERCOM

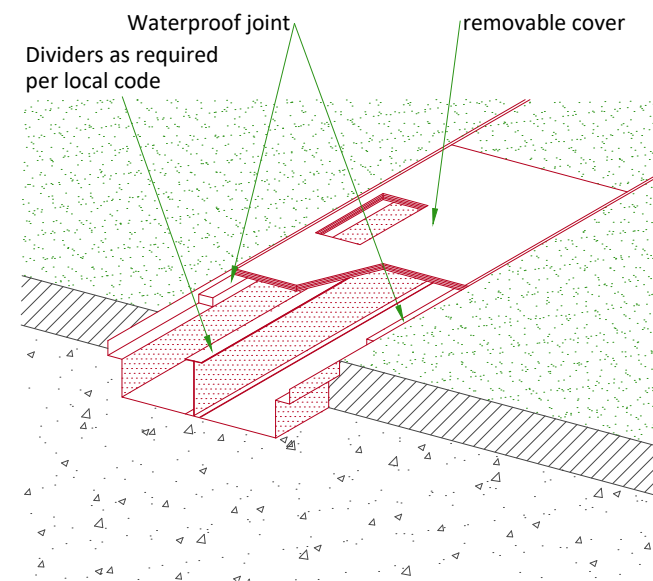


Wall fixation of the loudspeaker is prohibited at the wall opposite from the control area.

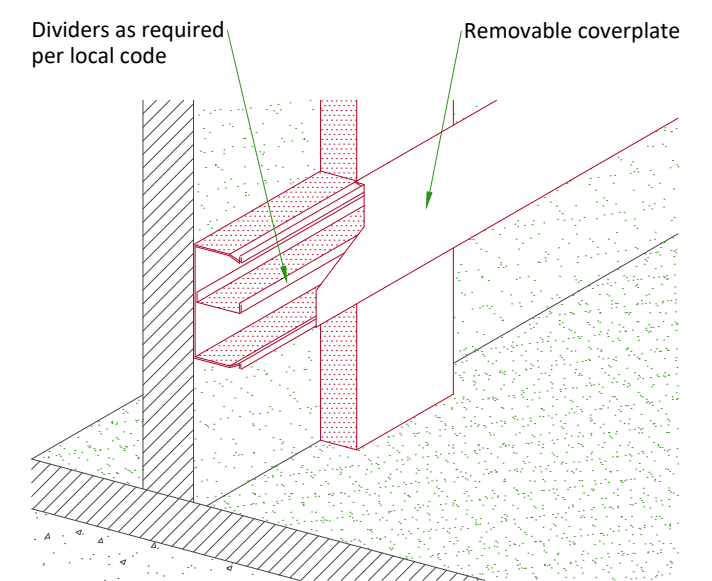
Cables and fasteners are supplied with the intercom kit and installed by the GE FSE. Final position of ceiling microphone to be determined by GE FSE at time of installation to ensure that no collision hazards are possible.

TYPICAL CABLE MANAGEMENT

FLUSH FLOOR DUCT



WALL DUCT



NOT TO SCALE

POWER REQUIREMENTS

GENERATOR TYPE	65 kW	80 kW
POWER SUPPLY	Wye 3 PHASE + G 480V ±10%	
MAINS FREQUENCY	50/60 Hz ± 2%	
LINE INPUT REACTIVE POWER (PEAK)	95 kVA	119 kVA
LINE INPUT ACTIVE POWER	65 kW	80 kW

- Line supply should come into a power distribution box (PDB) containing the protective units and controls. The PDB does not require a neutral line.
- The section of the supply cable should be calculated in accordance with its length and the maximum permissible voltage drops.
- There must be discrimination between supply cable protective device at the beginning of the installation (main low-voltage transformer side) and the protective devices in the PDB.

SUPPLY CHARACTERISTICS

- Power input must be separated from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...)
- All equipment (lighting, power outlets, etc...) installed with GE system components must be powered separately.

GROUND SYSTEM

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

CABLES

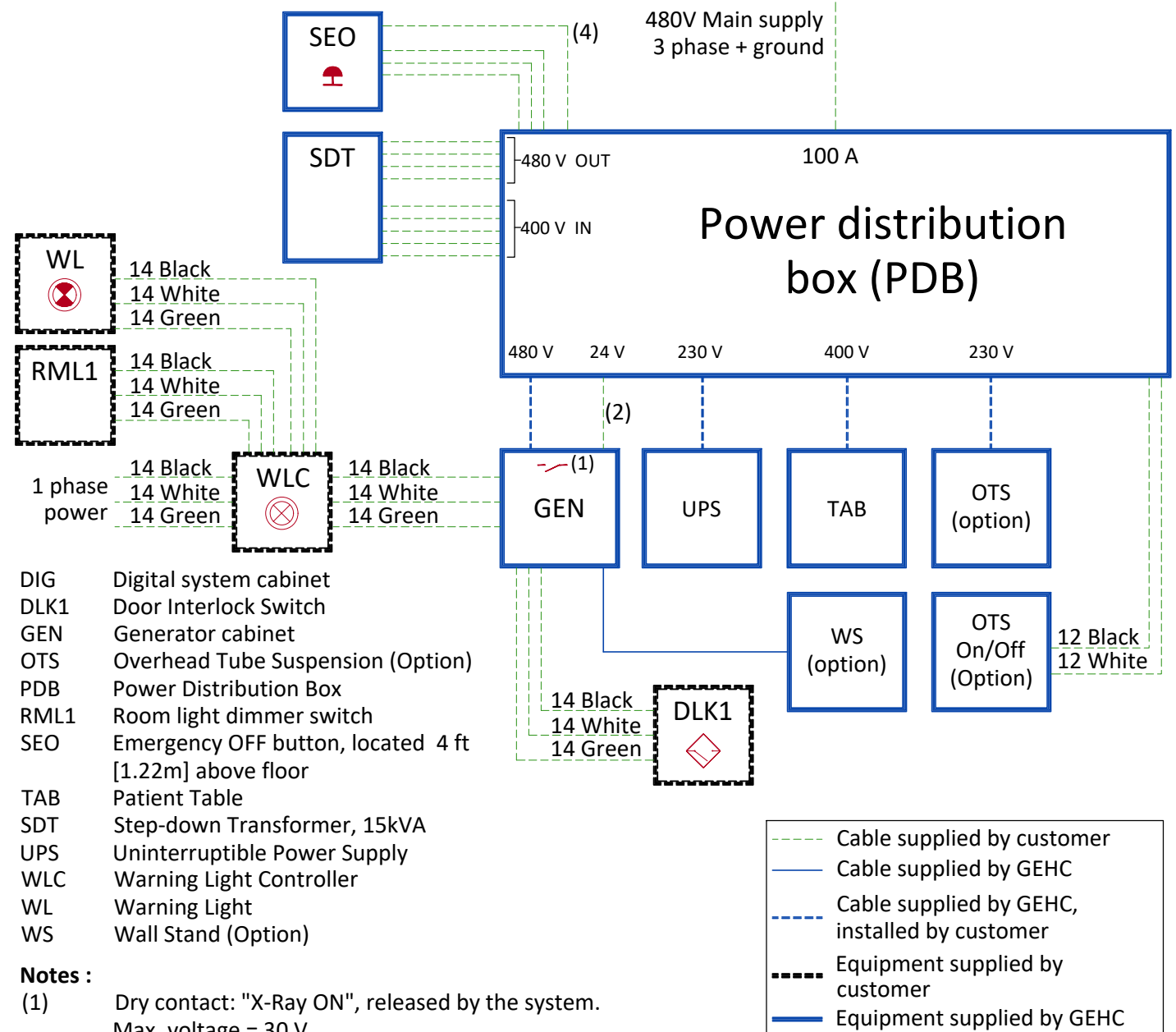
- Power and cable installation must comply with the distribution diagram below.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- Case PDB furnished by GE: The cables for signals and remote control (Y, SEO, L...) will go to PDB with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

CABLEWAYS

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

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

POWER DISTRIBUTION



- DIG Digital system cabinet
- DLK1 Door Interlock Switch
- GEN Generator cabinet
- OTS Overhead Tube Suspension (Option)
- PDB Power Distribution Box
- RML1 Room light dimmer switch
- SEO Emergency OFF button, located 4 ft [1.22m] above floor
- TAB Patient Table
- SDT Step-down Transformer, 15kVA
- UPS Uninterruptible Power Supply
- WLC Warning Light Controller
- WL Warning Light
- WS Wall Stand (Option)

Notes :

- (1) Dry contact: "X-Ray ON", released by the system. Max. voltage = 30 V
- (2) H07RN-F cable with 6.56 ft (2m) extra length on the floor behind the back of generator cabinet (only if required per local requirements)
- (3) Max lug size 8 AWG
- (4) Fourth wire only needed with UPS option for USA

FEEDER TABLE

MINIMUM FEEDER WIRE SIZE IN mm ² AND (AWG)								
INPUT VOLTAGE	MINIMUM FEEDER WIRE LENGTH							
	15m (50')	30m (100')	46m (150')	61m (200')	77m (250')	92m (300')	107m (350')	122m (400')
480 VAC	*35 (3)	*35 (3)	*35 (3)	*35 (3)	35 (2)	50 (1)	70 (1/0)	70 (1/0)

* MINIMUM WIRE SIZE FOR CIRCUIT BREAKER, BASED ON RECOMMENDED OVERCURRENT PROTECTION

GENERAL NOTES

- In all cases qualified personnel must verify that the feeder (at the point of take-off) and the run to the Radiology system meet all the requirements stated in the PIM.
- For a single unit installation, the minimum transformer size is 112.5kva, synthesized power feed is not acceptable. Maximum allowable transient voltage excursions are 2.5% of rated line voltage at a maximum duration of 5 cycles and frequency of 10 times per hour.
- Ground wire will be same size as power cable. Ground will run from the equipment back to the power source/main grounding point and always travel in the same conduit with the feeders and neutral. Neutral must be terminated inside the main disconnect panel and not at any GE cabinet.



**Park City Hospital
Park City, UT
United States of America**

C	08/Nov/2023	Revision (DC-408363); Added injector/monitor
B	02/Nov/2023	Revision (DC-407515)
A	26/Oct/2023	Final (DC-406997)
REV	DATE	MODIFICATIONS

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



GE Healthcare

Michael Hatch
801-599-6221
Michael.hatch@ge.com

REVOLUTION ASCEND FINAL STUDY

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

Drawn by	Verified by	Concession	S.O. (GON)	PIM Manual	Rev
JM	JM	-	5186869	5987663-1EN	3
Format	Scale	File Name		Date	Sheet
A3	1:48	CT-M304750-FIN-02-C.DWG		08/Nov/2023	01/19

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

DISCLAIMER

GENERAL SPECIFICATIONS

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

CUSTOMER RESPONSIBILITIES

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

RADIO-PROTECTION

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

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

CUSTOMER SITE READINESS REQUIREMENTS

REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION	
Description	Document Number*
Product specific Pre-installation Manual	Refer to cover page
*documents can be accessed in multiple languages at https://customer-doc.cloud.gehealthcare.com/#/cdp/dashboard	

- A mandatory component of this drawing set is the GE Healthcare Pre-installation manual. Failure to reference the Pre-installation manual will result in incomplete documentation required for site design and preparation.
- The items on the GE Healthcare Site Readiness Checklist **DOC1809666** are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.
 - Any deviation from these drawings must be communicated in writing to and reviewed by your local GE Healthcare installation project manager prior to making changes.
 - Make arrangements for any rigging, special handling, or facility modifications that must be made to deliver the equipment to the installation site. If desired, your local GE Healthcare installation project manager can supply a reference list of rigging contractors.
 - New construction requires the following;
 1. Secure area for equipment,
 2. Power for drills and other test equipment,
 3. Restrooms.
 - Provide for refuse removal and disposal (e.g. crates, cartons, packing)
 - For CT systems it is required to minimize vibrations within the scan room. It is the customer's responsibility to contract a vibration consultant/engineer to implement site design modifications to meet the GE vibration specification. Refer to the system Pre-installation manual for vibration specifications.

ENVIRONMENT

ALTITUDE

- The system shall meet all functional and performance specifications when placed in a room that is at an elevation of -150 m to 4000 m [-492 ft to 13,124 ft] above sea level.

MAGNETIC FIELD SPECIFICATIONS

- Limit the magnetic interference to guarantee specified imaging performance.

GANTRY:

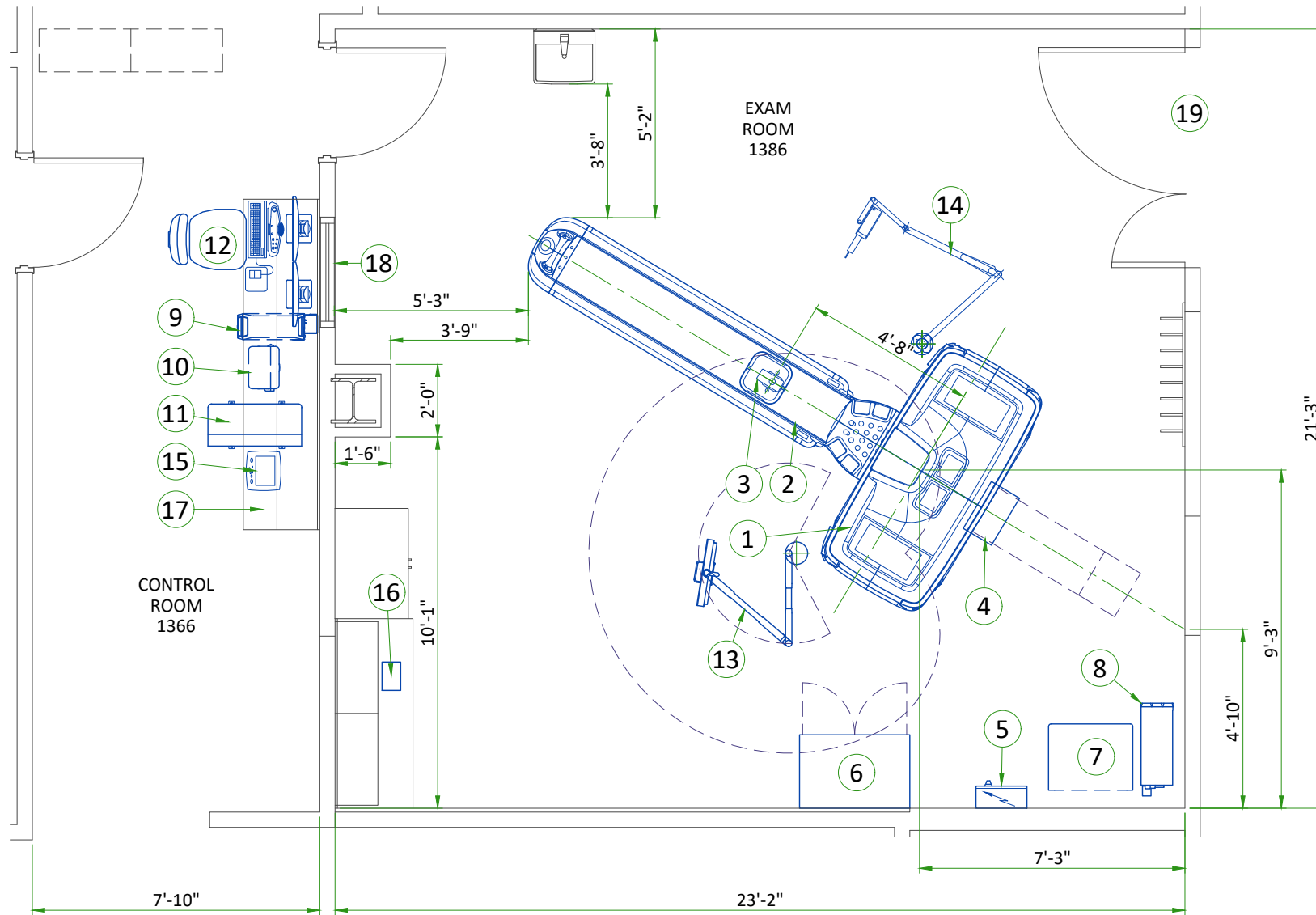
- Ambient static magnetic fields less than 1 Gauss.
- Ambient AC magnetic fields less than 0.01 Gauss peak.

OPERATOR CONSOLE:

- Ambient static magnetic fields less than 10 Gauss.

SYSTEM COMPONENT NOISE LEVEL

- **Maximum Gantry Audible Noise Level:** The maximum ambient noise level is produced by the gantry during a CT scan acquisition. It is less than 70 dBA when measured at a distance of 1 m [3.3 ft] from the nearest gantry surface, in any direction.
- **Maximum Console Audible Noise Level:** The maximum ambient noise levels is less than 54 dBA when measured at a distance of 1 m [3.3 ft] from the nearest console surface, in any direction.



LEGEND

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

BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
A	1	GANTRY	18698	3980	5480	1805
A	2	VT2000 TABLE	1024	1114	300	505
A	3	AUTO PATIENT POSITIONING DEPTH CAMERA	-	7	-	3.2
A	4	REAR CABLE COVER	-	-	-	-
B	5	MAIN DISCONNECT PANEL (MDP)	-	46	-	21
A	6	GE STORAGE CABINET	-	150	-	68
A	7	POWER DISTRIBUTION UNIT (PDU)	3412	816	1000	370
A	8	PARTIAL UPS	2832	265	830	120
A	9	STANDALONE CONSOLE	3207	57	940	26
A	10	POWER BOX	-	22	-	10
A	11	SMART SUBSCRIPTION SERVER FOR CT	6135	121	1798	55
D	12	OPERATOR'S CHAIR	-	-	-	-
D	13	LCD MONITOR ON CEILING	171	68	50	30.9
D	14	INJECTOR ON CEILING	-	79	-	36
D	15	INJECTOR CONTROL	-	-	-	-
A	16	IVY 7800 CARDIAC TRIGGER MONITOR	-	6	-	2.54
C	17	COUNTER TOP FOR EQUIPMENT- PROVIDE GROMMETED OPENINGS AS REQUIRED TO ROUTE CABLES				
C	18	LEAD GLASS WINDOW				
C	19	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1067 mm x 2083 mm [42 in x 82 in], CONTINGENT ON A 2438 mm [96 in] CORRIDOR WIDTH				

EXAM ROOM HEIGHT

FINISHED FLOOR TO SLAB HEIGHT	12'-0"
FALSE CEILING HEIGHT	9'-0"

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

RADIATION PROTECTION LAYOUT

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

SHIELDING REQUIREMENTS:

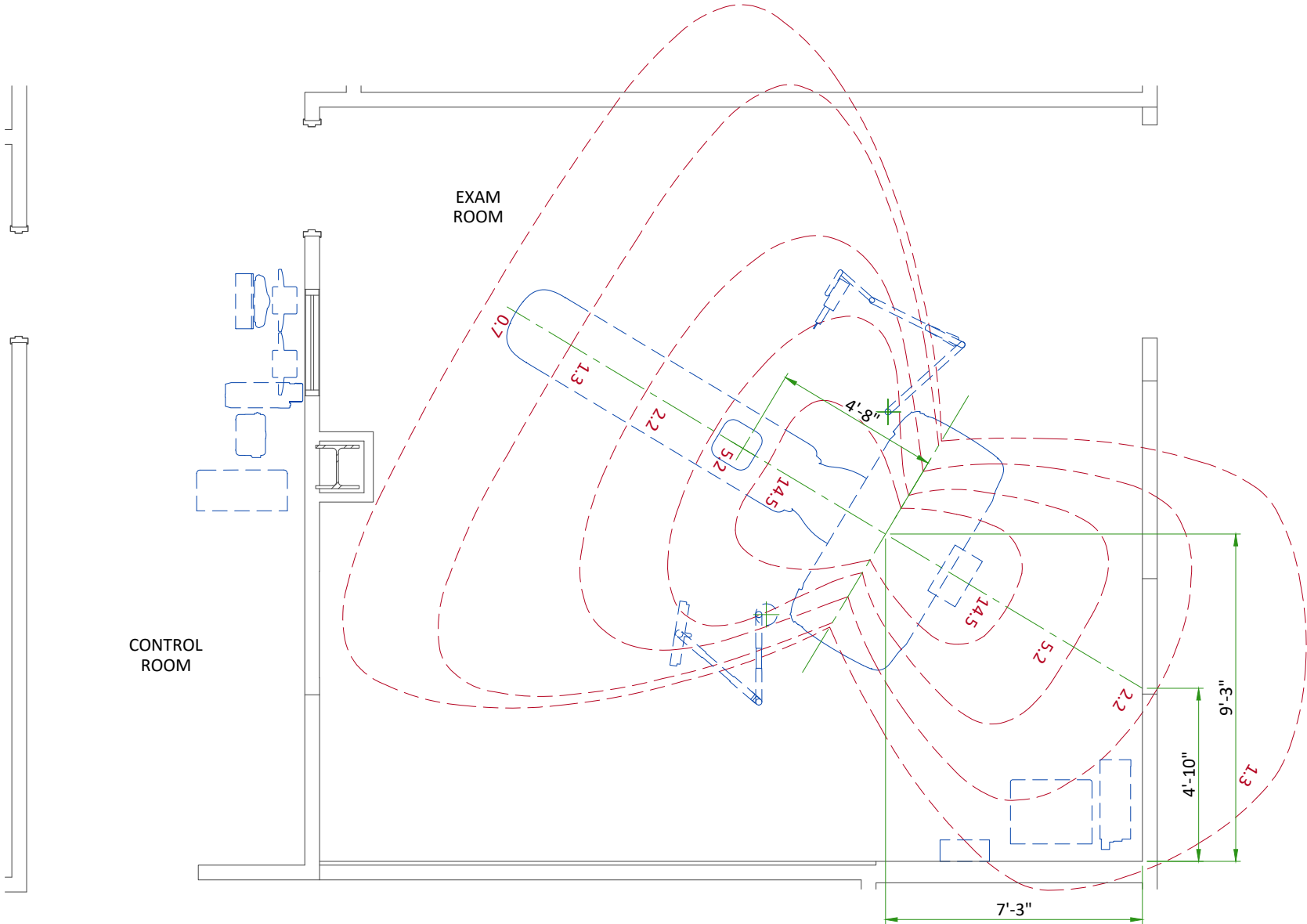
Engage a qualified radiological health physicist to review your scan room shielding requirements, taking into consideration:

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

The illustration on this page depicts measurable radiation levels within the scanning room while scanning a 32 cm CTDI phantom (body) with the technique shown:

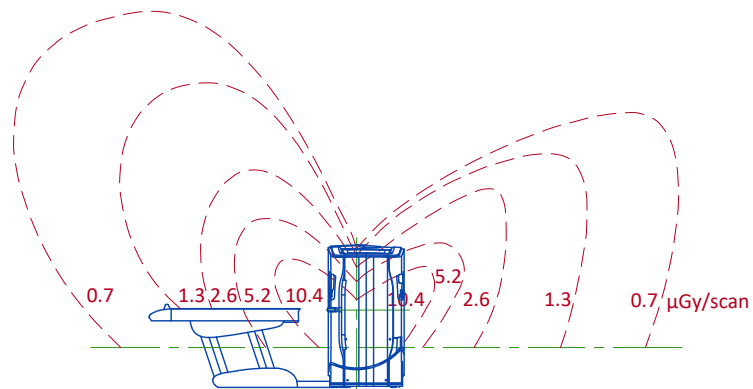
- 140 kV
- 100 mA
- 1 sec
- 40 mm

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

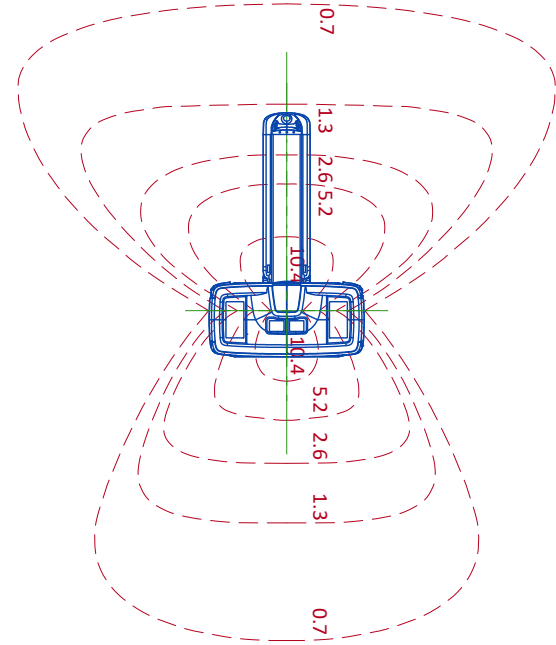
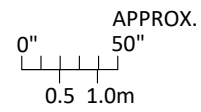


RADIATION SCATTER - HEAD PHANTOM

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



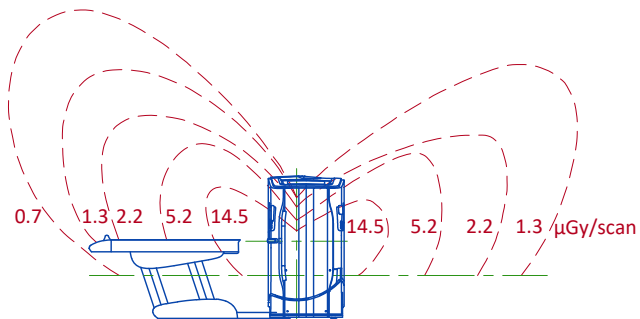
Elevation



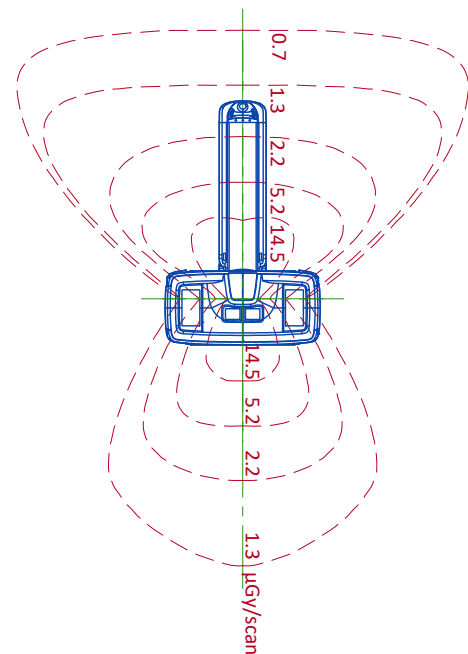
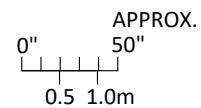
Plan View

RADIATION SCATTER - BODY PHANTOM

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

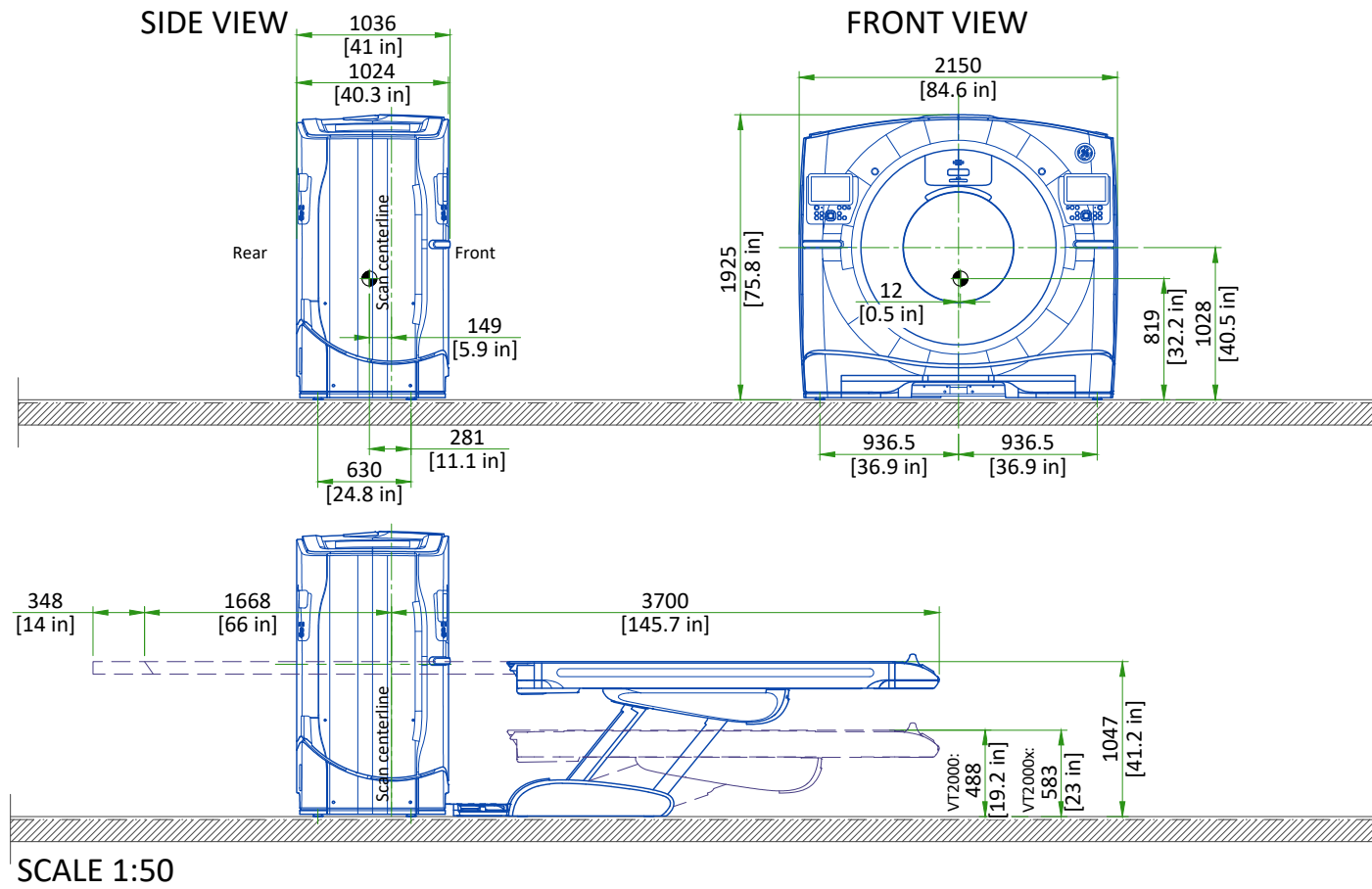


Elevation

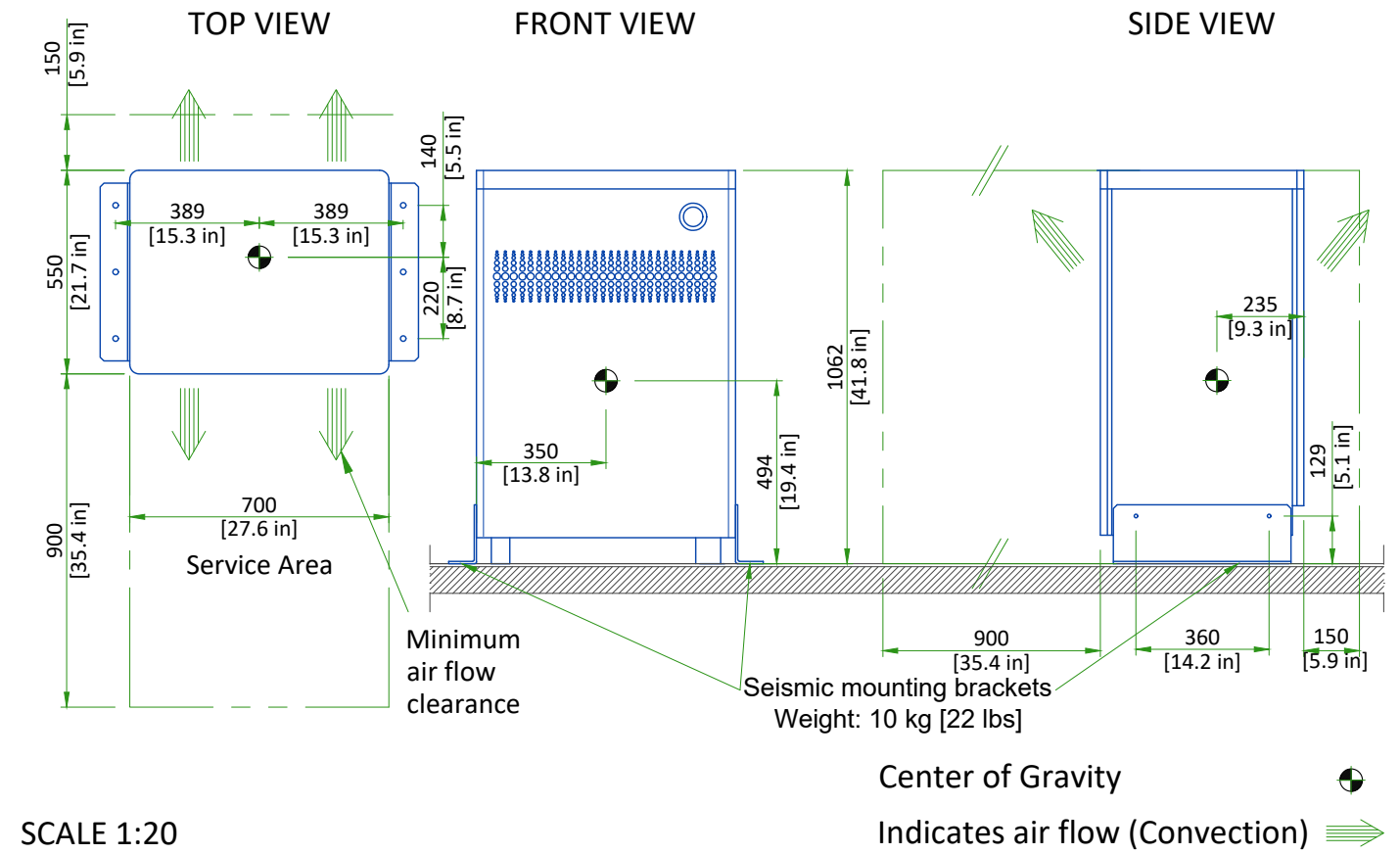


Plan View

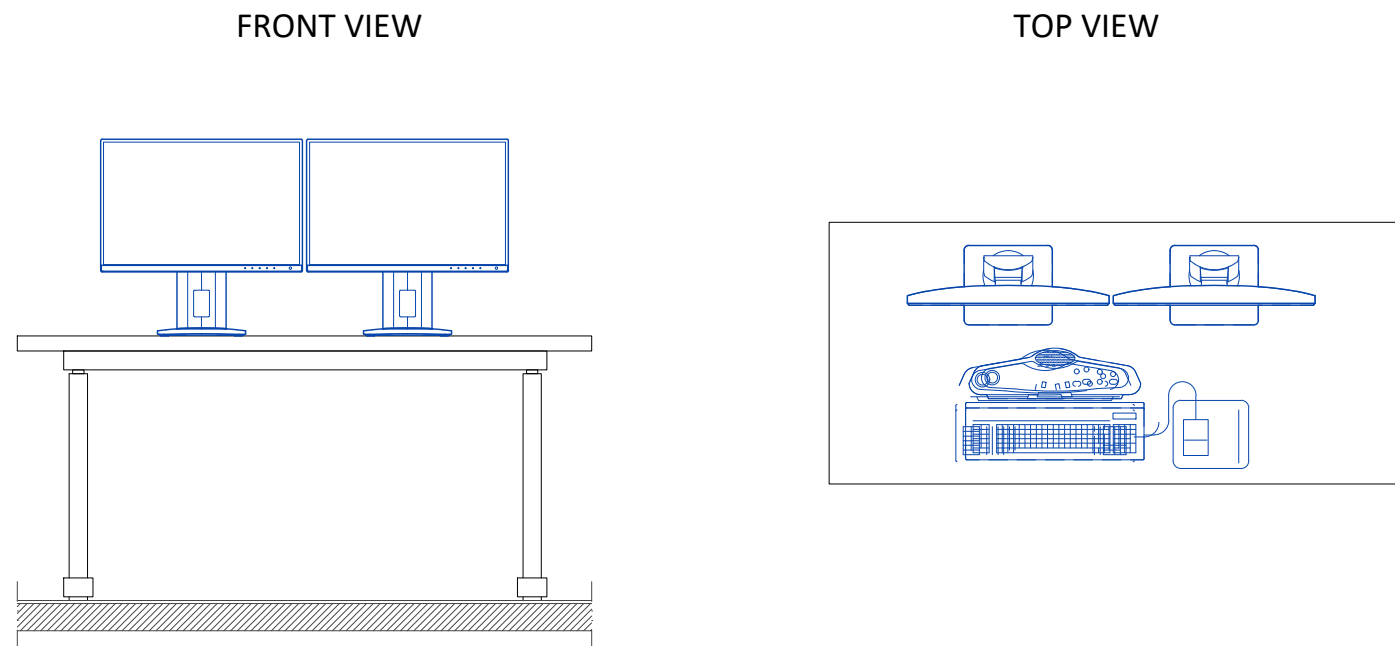
GANTRY WITH VT2000/VT2000X TABLE



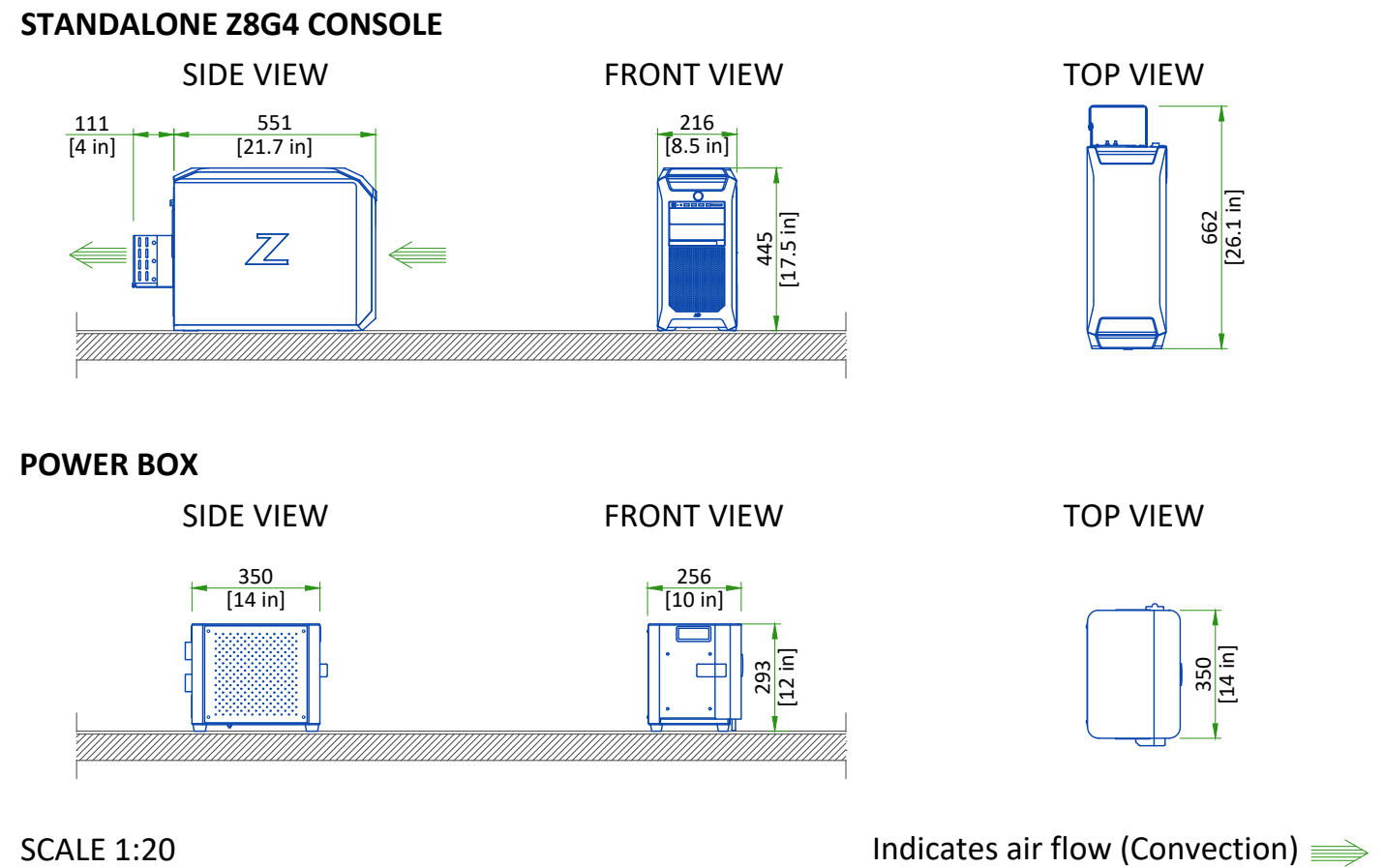
POWER DISTRIBUTION UNIT (PDU)



CUSTOMER SUPPLIED TABLE

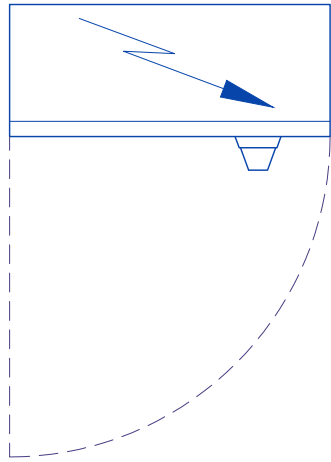


STANDALONE Z8G4 CONSOLE WITH POWER BOX

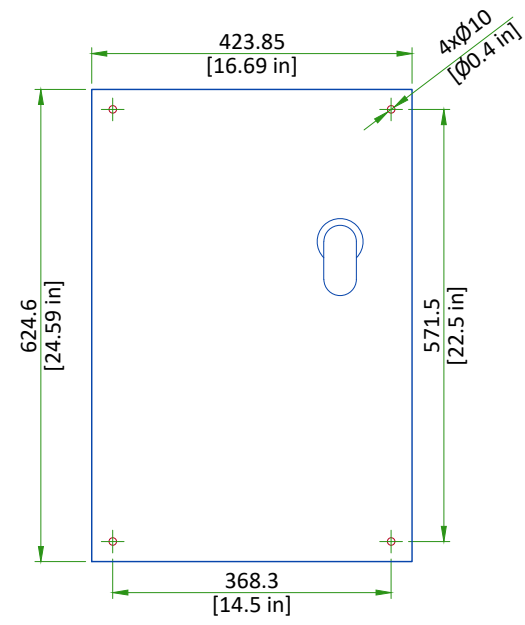


MAIN DISCONNECT PANEL

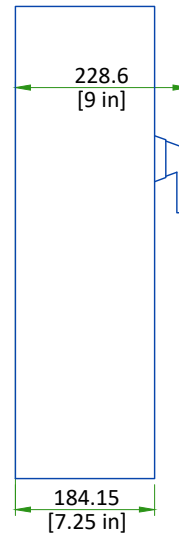
TOP VIEW



FRONT VIEW



SIDE VIEW



SCALE 1:10

DELIVERY

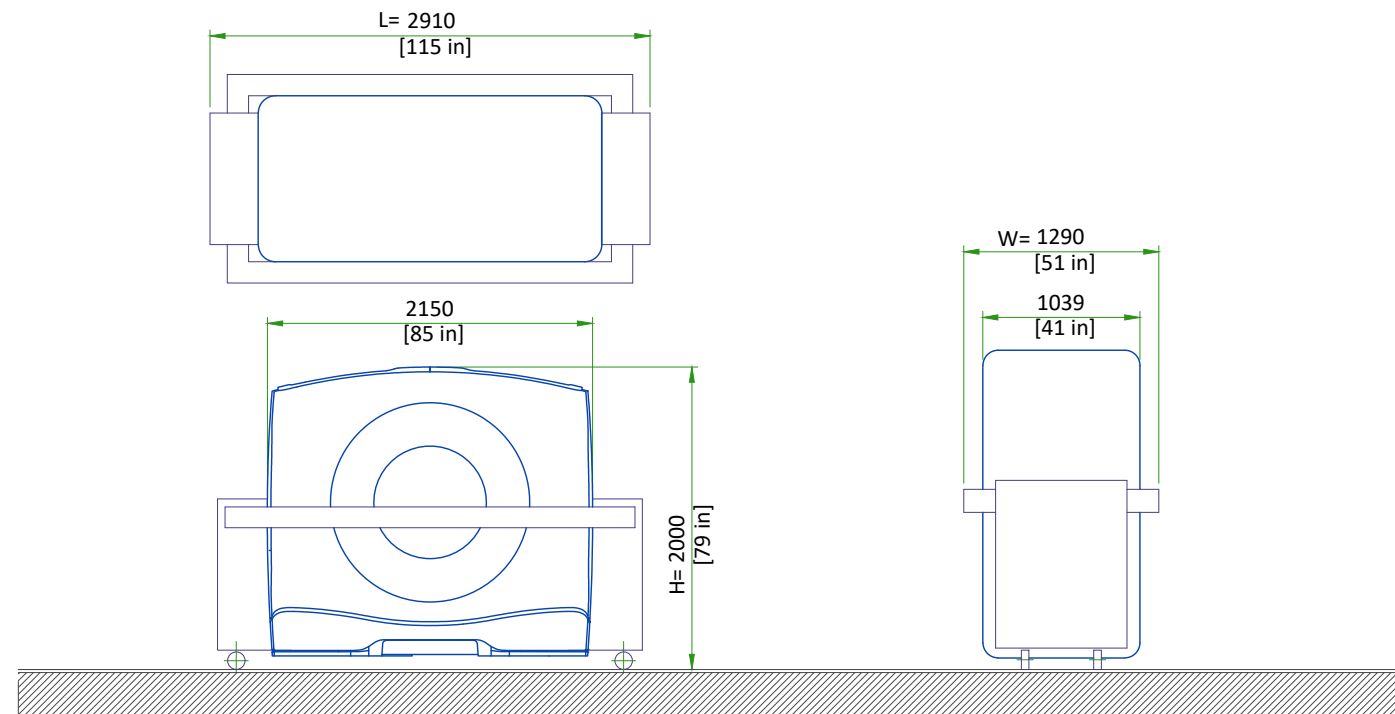
THE CUSTOMER/CONTRACTOR SHOULD:

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

DIMENSIONS OF DELIVERY WITH DOLLY TRANSPORT EQUIPMENT

EQUIPMENT	DIMENSIONS			WEIGHT	
GANTRY	LENGTH	2910 mm	115 in	2035 kg	4486 lbs
	WIDTH	1290 mm	51 in		
	HEIGHT	2000 mm	79 in		
VT2000/VT2000X TABLE	LENGTH	2997 mm	118 in	632 kg	1390 lbs
	WIDTH	762 mm	30 in		
	HEIGHT	1143 mm	45 in		

GANTRY DELIVERY



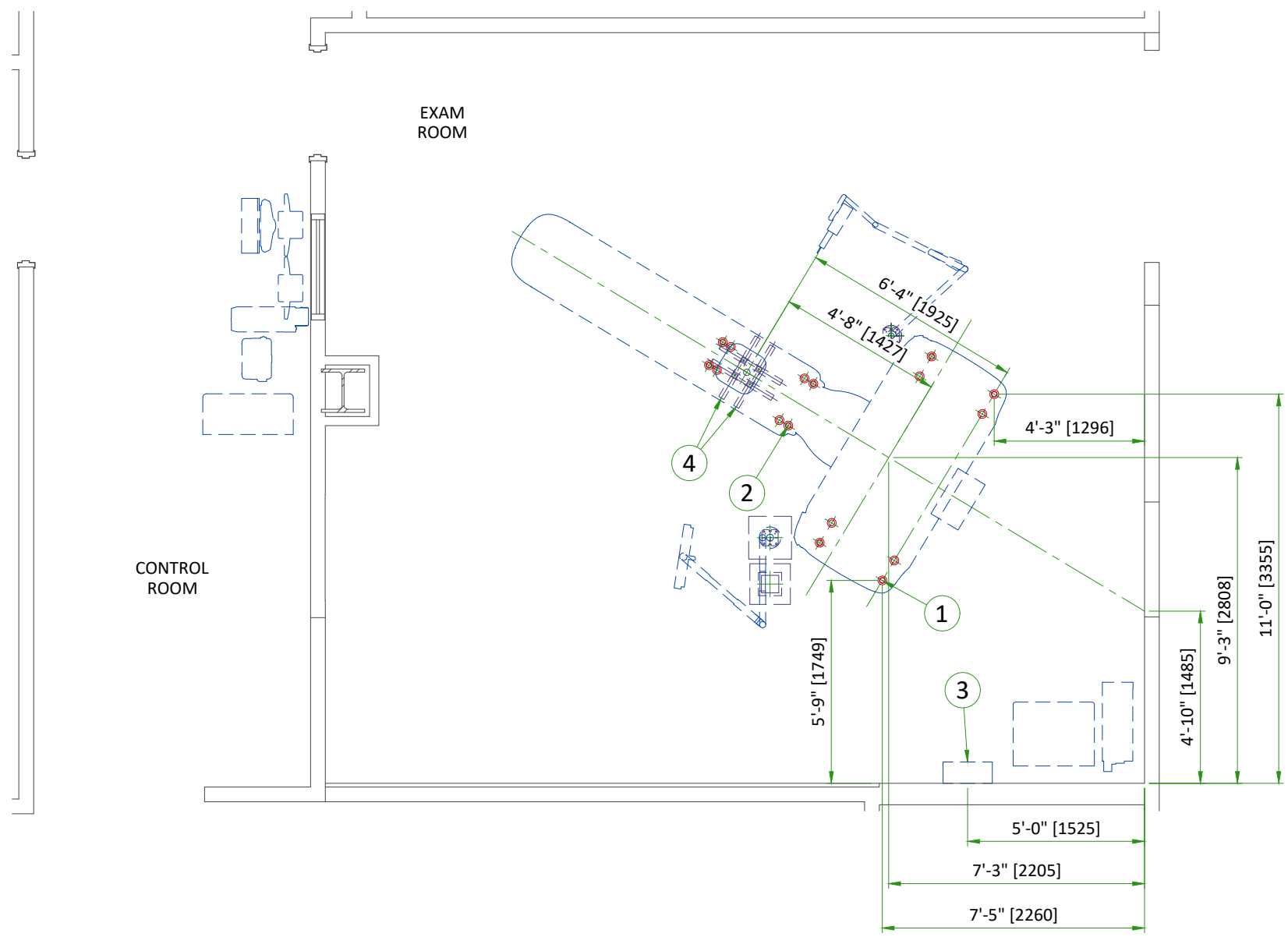
- The gantry is shipped on a dolly equipped with elevating casters (normal shipping configuration).

NOT TO SCALE

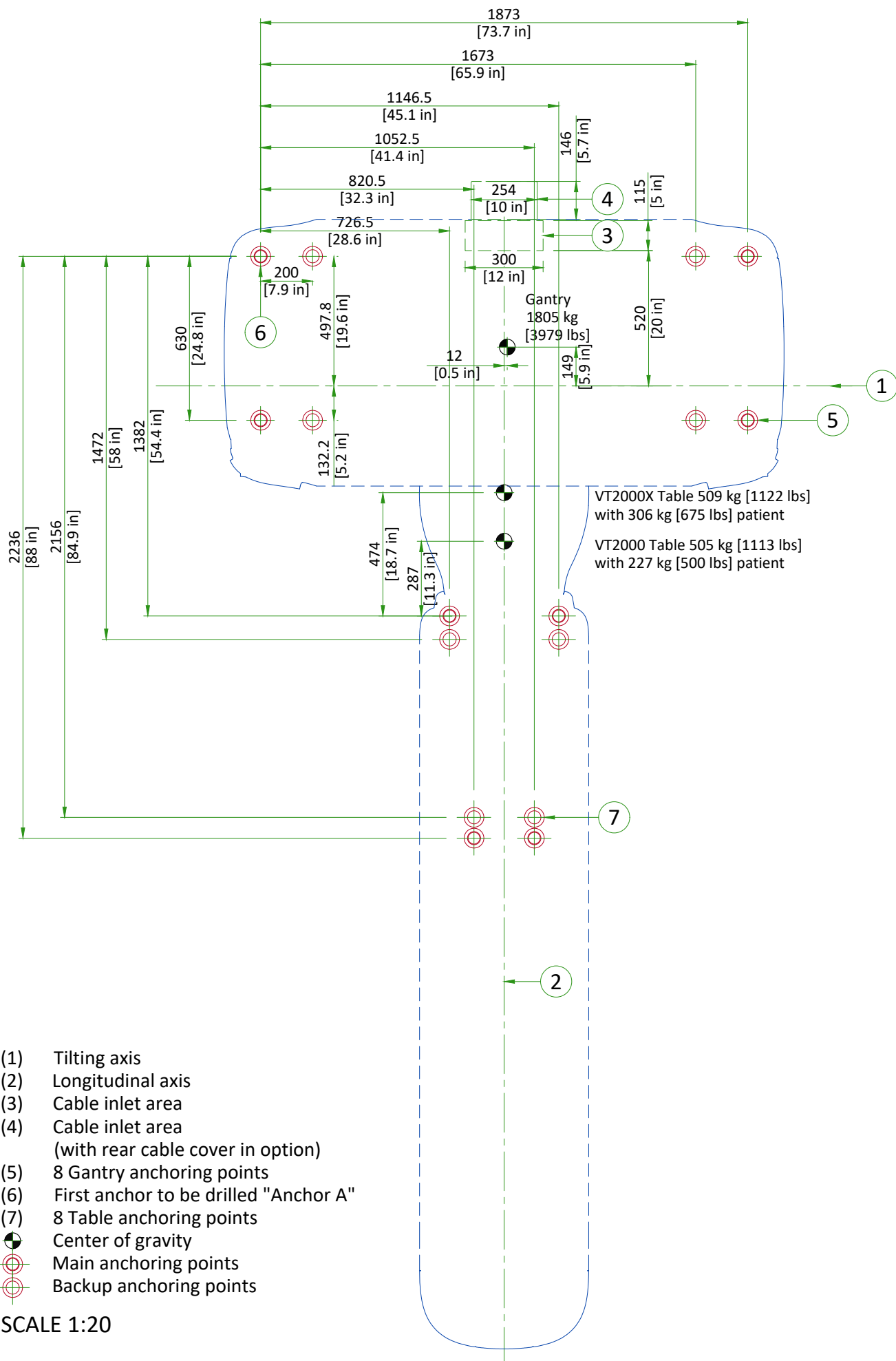
STRUCTURAL NOTES

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

ITEM	DESCRIPTION
(CONTRACTOR SUPPLIED & INSTALLED)	
1	Gantry anchor "A." Refer to Anchoring/loading Distribution To The Floor detail on sheet S3.
2	Table leveling pads. Refer to Anchoring/loading Distribution To The Floor detail on sheet S3.
3	Support Backing, locate as shown
4	Unistrut or equivalent for mounting patient positioning camera mounting plate on ceiling. Support designed and supplied by customer. Supports to be at least 2' [610mm] in length and located per dimensions on Positioning Camera Mounting Plate structural detail.
Dimension Precision Note: Metric dimensions should be referenced when positioning the CT gantry alignment tool.	
Camera Position Note: Position of camera(s) must be calculated and verified by GEHC PMI or Field Engineer for final location accuracy.	



ANCHORING/LOADING DISTRIBUTION TO THE FLOOR

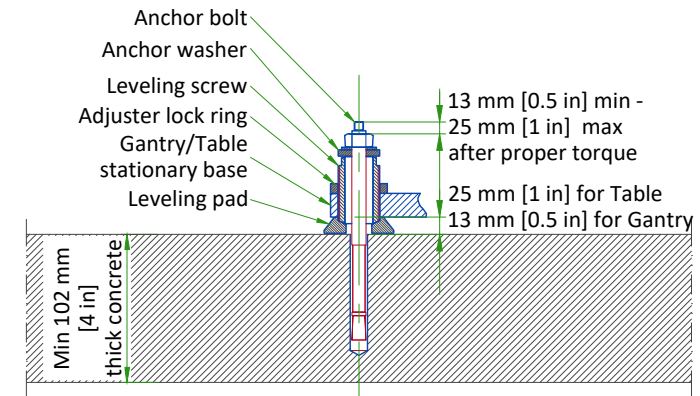


- (1) Tilting axis
- (2) Longitudinal axis
- (3) Cable inlet area
- (4) Cable inlet area
(with rear cable cover in option)
- (5) 8 Gantry anchoring points
- (6) First anchor to be drilled "Anchor A"
- (7) 8 Table anchoring points
- Center of gravity
- Main anchoring points
- Backup anchoring points

SCALE 1:20

FLOOR REQUIREMENTS

GE SUPPLIED TABLE/GANTRY ANCHORS



NOTES:

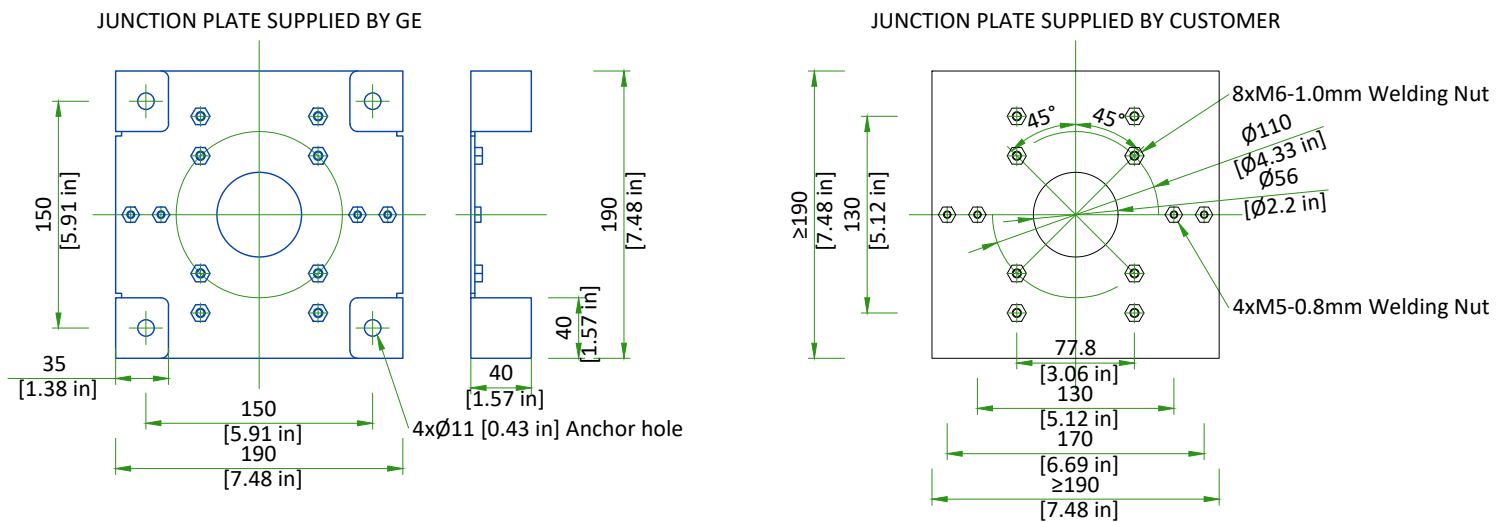
- The distance from central line of anchor to the edge of concrete basement of Gantry/Table should not be less than 178 mm [7 in].
- Torque anchor to 54 Nm (40 ft-lb)

FINISHED FLOOR REQUIREMENTS

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

NOT TO SCALE

POSITIONING CAMERA MOUNTING PLATE



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

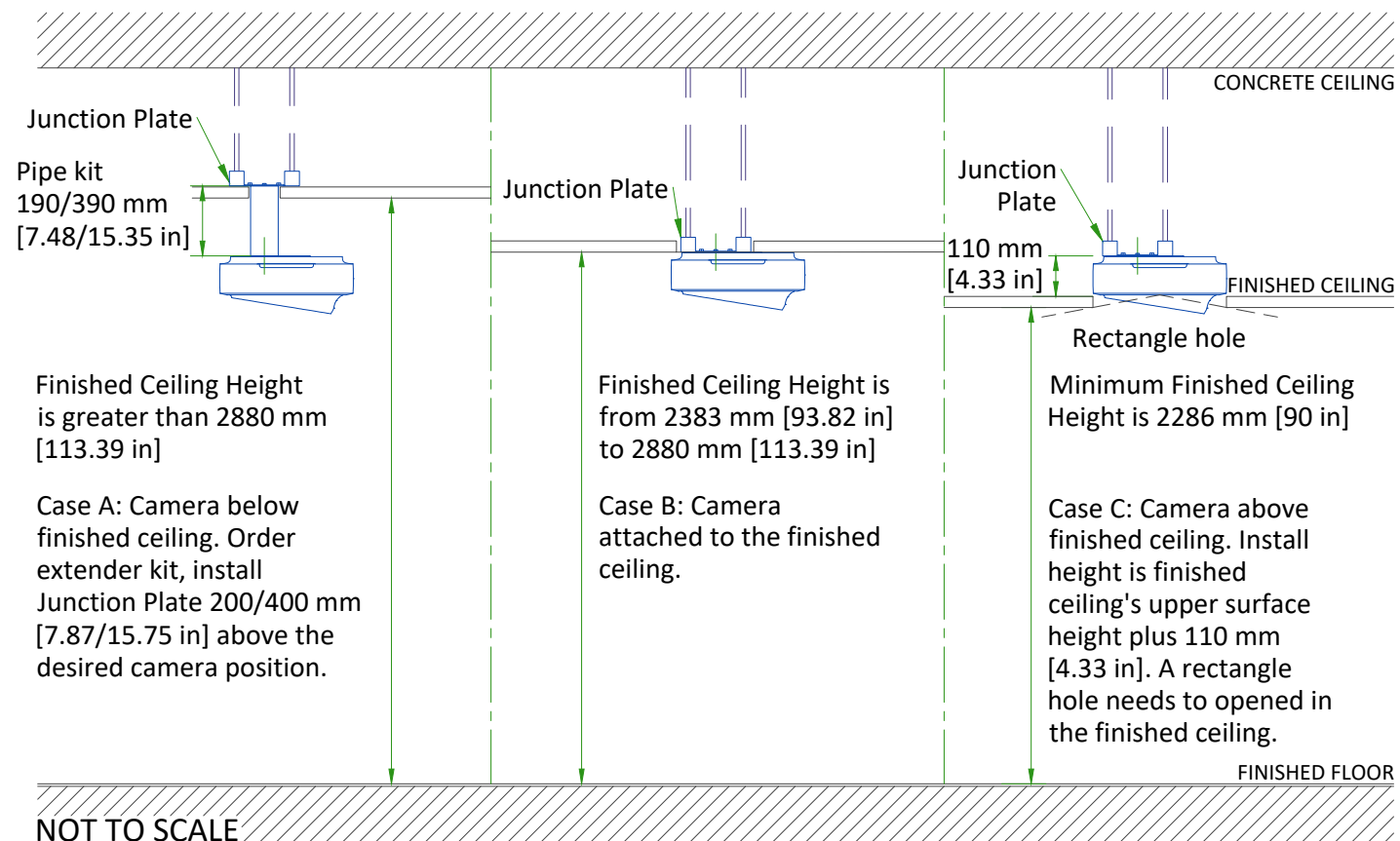
Material: Steel material with a min. tensile strength of 375 MPa
Plate thickness: 2.5 mm [0.10 in]

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

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

NOT TO SCALE

POSITIONING CAMERA INSTALLATION POSITION



TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

	EXAM ROOM			CONTROL ROOM		
	Min	Recommended	Max	Min	Recommended	Max
Temperature (up to 2400 m [7875 ft])	18°C	22°C	26°C	18°C	22°C	26°C
	64°F	72°F	79°F	64°F	72°F	79°F
Temperature (up to 3000 m [9843 ft])	18°C	22°C	25°C	18°C	22°C	25°C
	64°F	72°F	77°F	64°F	72°F	77°F
Temperature (up to 4000 m [13124 ft])	18°C	22°C	23°C	18°C	22°C	23°C
	64°F	72°F	73.4°F	64°F	72°F	73.4°F
Relative humidity (1)	30% to 60%			30% to 60%		

STORAGE CONDITIONS

Temperature	0°C to +30°C
	32°F to +86°F
Temperature gradient	≤ 3°C/h
	≤ 5.4°F/h
Relative humidity (1)	20% to 60%
Humidity gradient	≤ 5%/h

Storage longer than 6 months is not recommended.

(1) Non-condensing

AIR RENEWAL

According to local standards.

NOTE

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

HEAT DISSIPATION DETAILS

ROOM	DESCRIPTION	Max (kW)	Max (BTU)
Exam Room	Gantry	5.48	18700
	Patient Table (Without patient)	0.30	1030
	TOTAL	6	19730
Exam Room or Technical Room*	Power Distribution Unit	1.00	3400
	Partial UPS - Liebert GXT4	0.83	2828
	TOTAL	2	6228
Control Room	Standalone Console	0.84	2860
	LCD Monitor (Total amount of 2 monitors)	0.10	340
	Smart Subscription Server ML350G10	1.8	6134
	TOTAL	3	9334
*Technical Room is not mandatory, the placements of these elements are recommended in the Exam Room.			

ELECTRICAL NOTES

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

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

CONNECTIVITY REQUIREMENTS

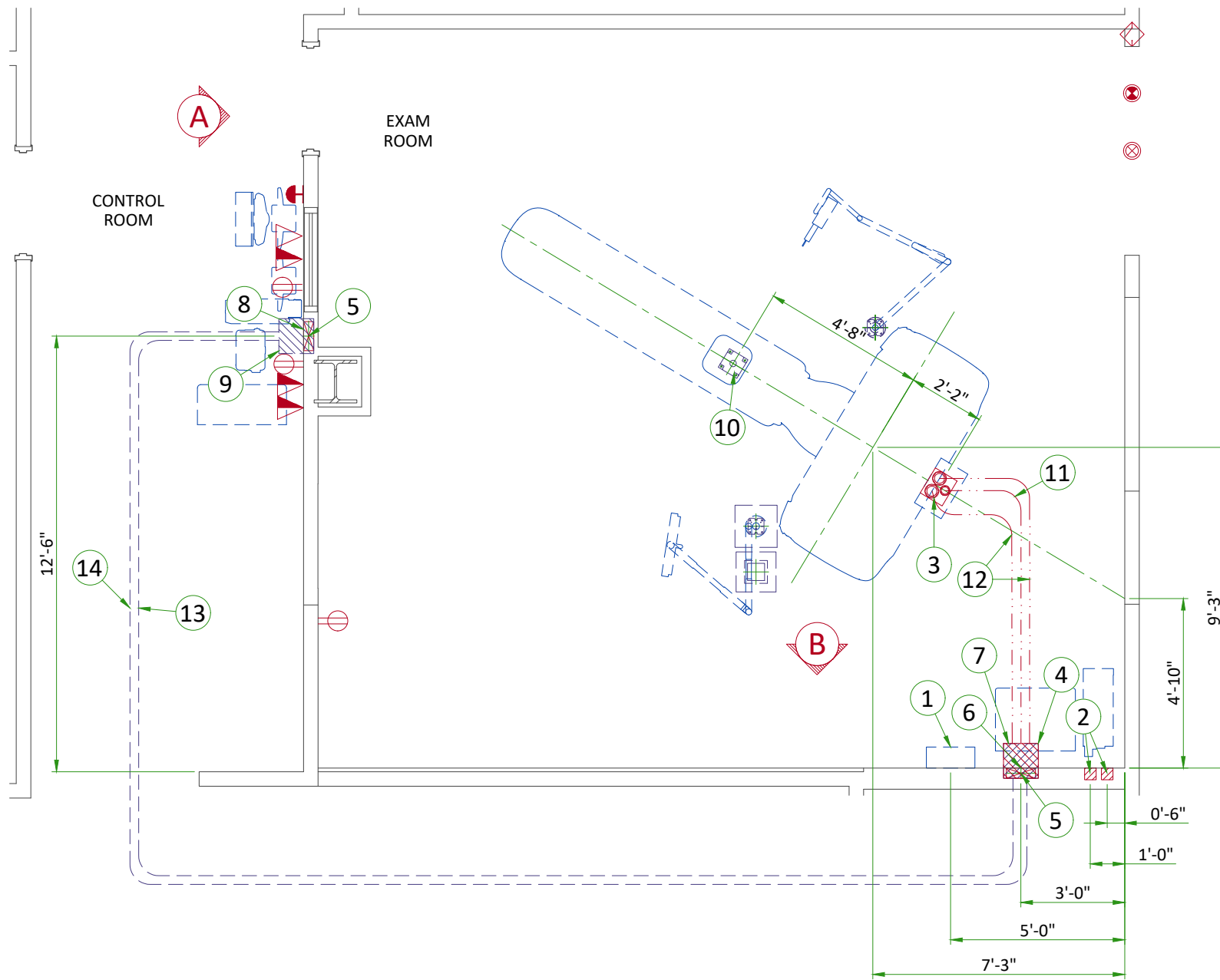
Your new GE Healthcare imaging modality will require local and remote connectivity to enable our full range of digital support:

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

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

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

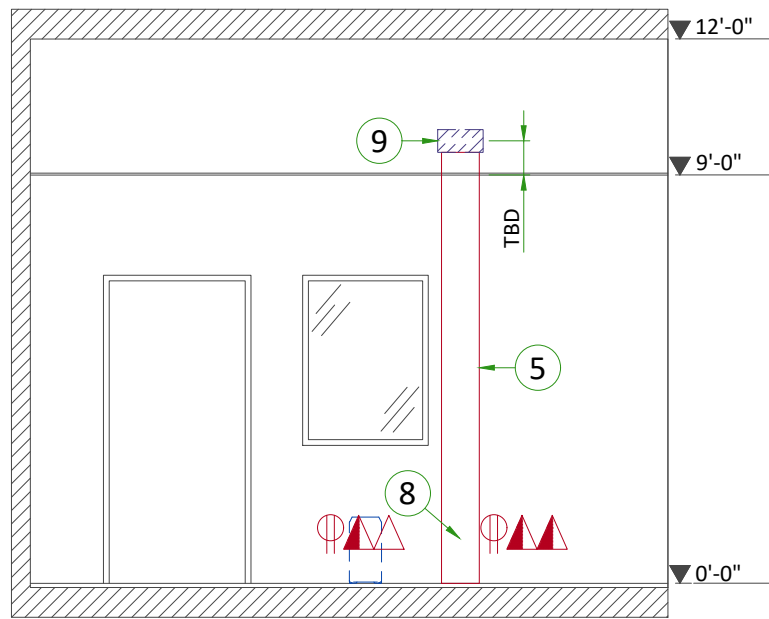
Please provide the GE project manager with the contact information for the resource that can provide information required to set up these connections. GEHC will send out communication to these contacts, which will include the project's Connectivity requirements, and a Connectivity form. This form will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



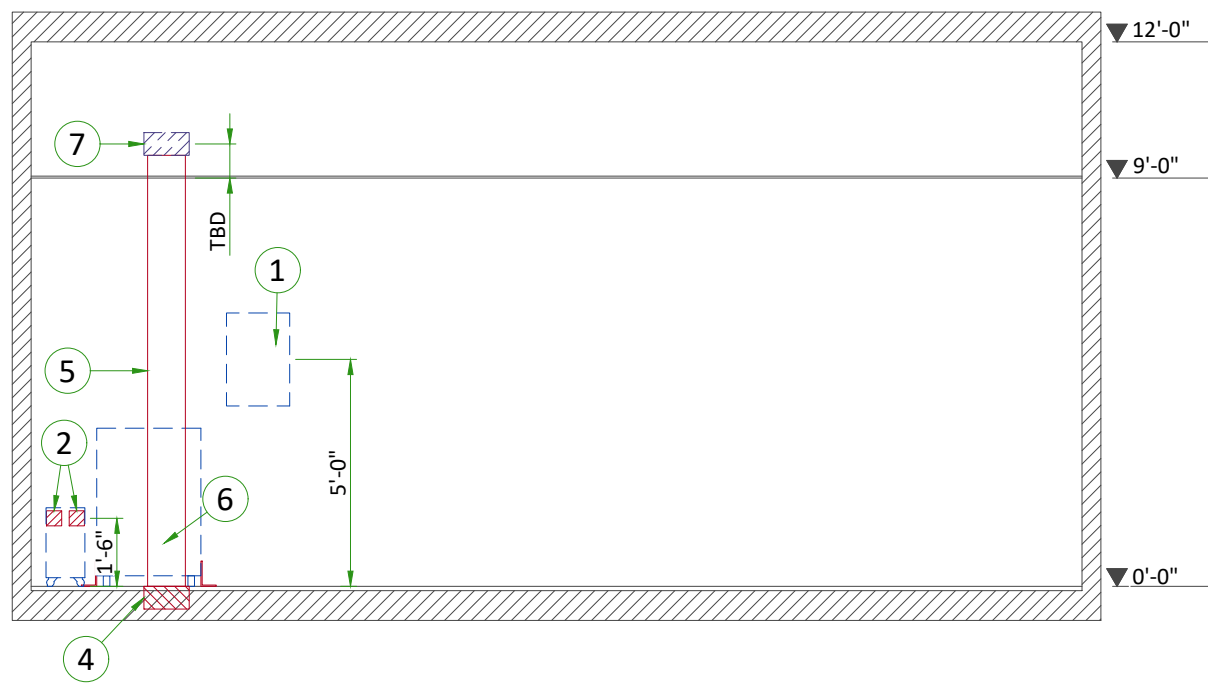
Item	Electrical Layout Item List
1	Main Disconnect Panel (MDP)
2	4" x 4" x 4" [100 x 100 x 100] flush box (Partial UPS)
3	Suitable bushings & lock nuts (Gantry)
4	Flush floor box - size per local code
5	10" x 3 1/2" [250 x 100] flush wall duct with minimum 2 dividers
6	Grommeted opening (Power Distribution Unit)
7	Box above ceiling - size per local code
8	Grommeted opening (Operators Console)
9	Box above ceiling - size per local code
10	Cable inlet to above ceiling (Express Camera)
11	2 1/2" [63] conduit below floor
12	3 1/2" [89] conduit below floor
13	2 1/2" [63] conduit above ceiling
14	3 1/2" [89] conduit above ceiling

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

Additional Conduit Runs (Contractor Supplied and Installed)					
From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size		
			In.	mm	
3 Phase Power	1 Main Disconnect Panel	1	As req'd	As req'd	
	Emergency Off	1	1/2	13	
1 Main Disconnect Panel	7 Power Distribution Unit	1	As req'd	As req'd	
	Door Switch	1	1/2	13	
7 Power Distribution Unit	Warning Light Control	1	1/2	13	
		1	1/2	13	
10 Express Camera	9 Operator's Console	1	1 1/2	38	
1 Main Disconnect Panel	2 Partial UPS	1	1 1/4	30	
7 Power Distribution Unit		1	2	50	



A



B

POWER REQUIREMENTS

POWER SUPPLY	3 PHASES+G 200/220/240/380/400/420/440/460/480 V ± 10%
FREQUENCIES	50/60 Hz ± 3 Hz
MAXIMUM POWER DEMAND	100 kVA
AVERAGE (CONTINUOUS) POWER DEMAND	20 kVA
POWER FACTOR	0.85

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

SUPPLY CHARACTERISTICS

- Power input must be separate from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...).
- All equipment (lighting, power outlets, etc...) installed with GE system components must be powered separately.
- Phase imbalance 2% maximum.
- Transients must be less than 1500V peak. (on a 400V line)

GROUND SYSTEM

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

CABLES

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

CABLEWAYS

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

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

POWER DISTRIBUTION

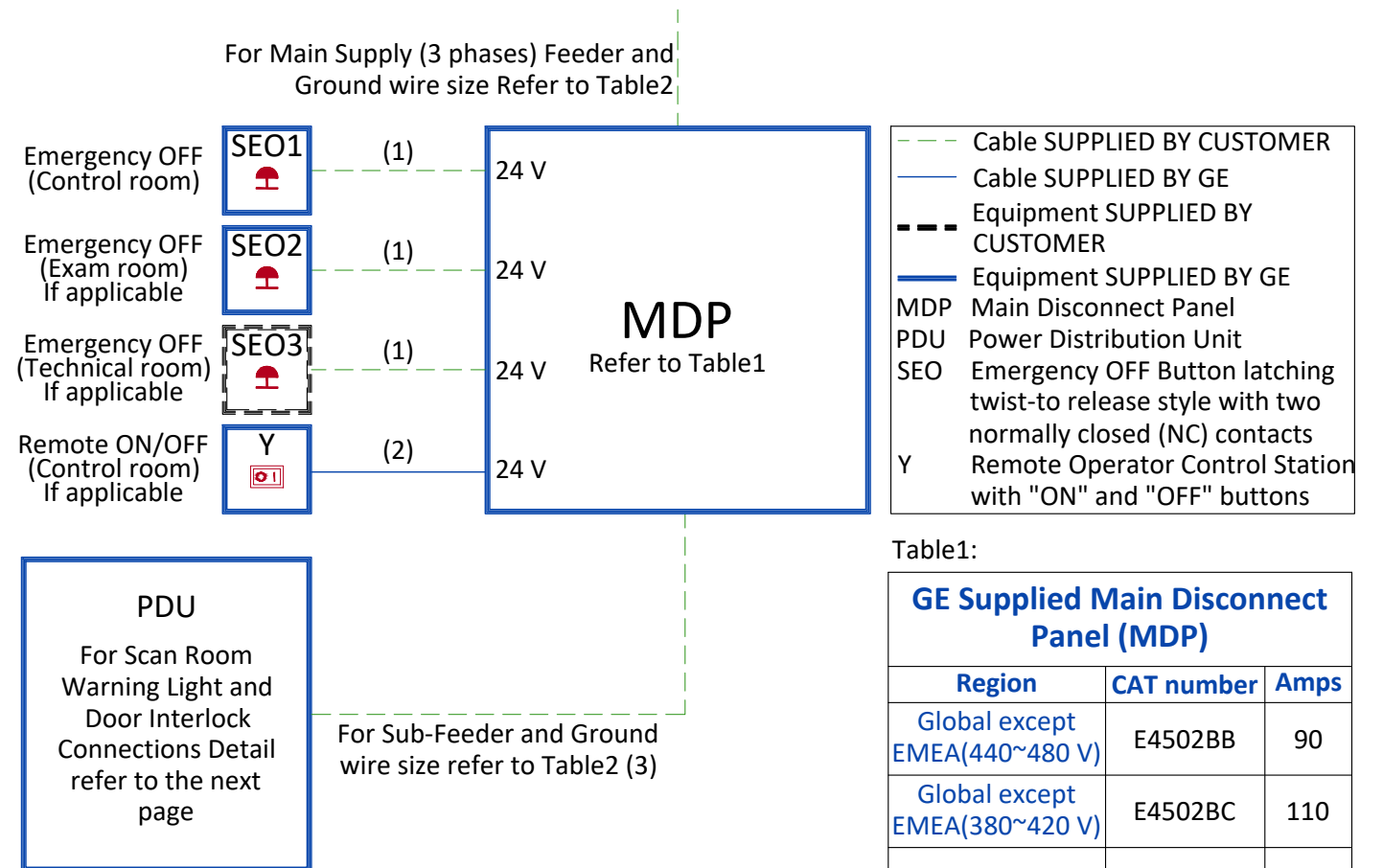


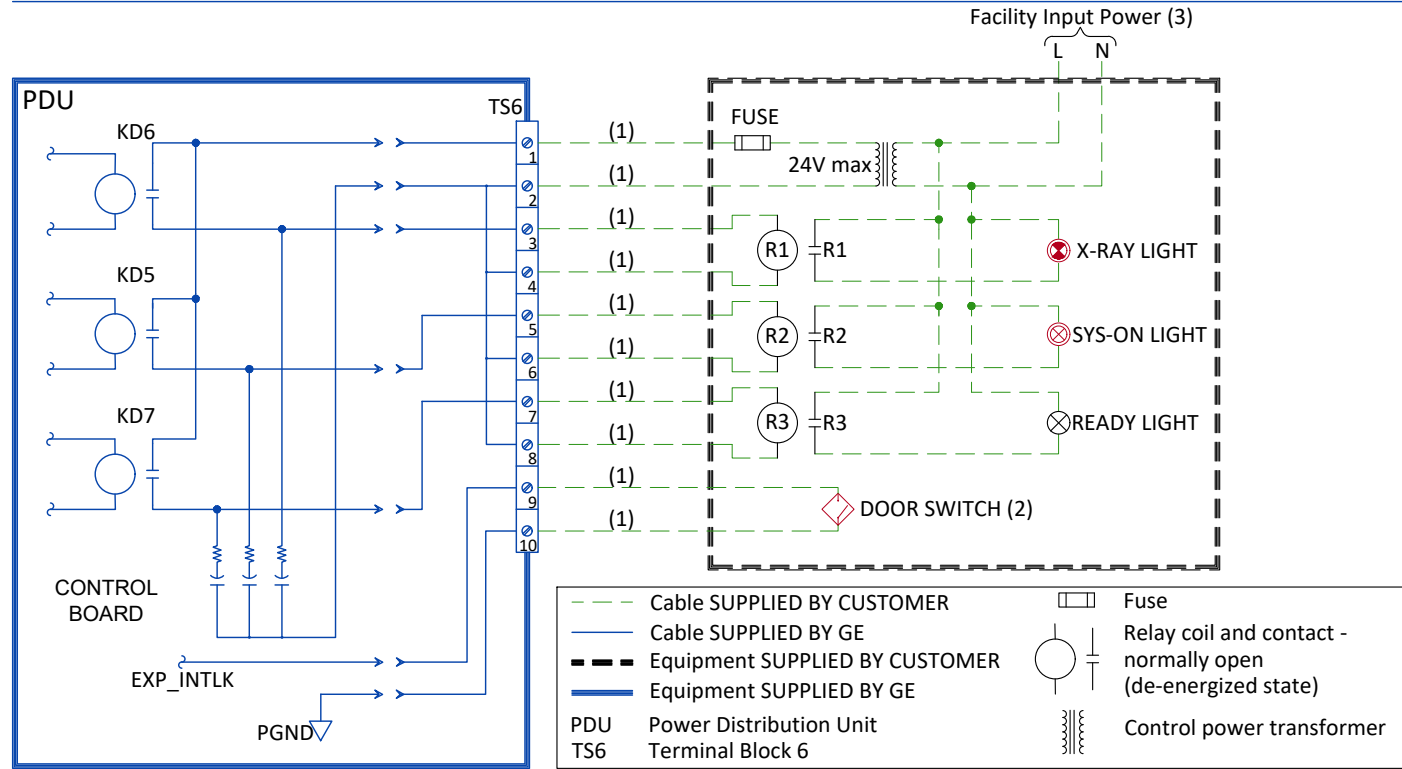
Table2:

Feeder Table									
The information below assumes the use of copper wire, rated 75 C and run in steel conduit. All ampacity is determined in accordance with the National Electrical Code (NFPA 70), Table 310-16 (2002). The ampacity of the circuit protection device listed above determines the minimum feeder size, except where total source regulation limits require a larger size. If the wire size does not match the above lists, please select the nearest wire size as per to local standards.									
Feeder length from Power Substation to MDP - ft (m)	Minimum Wire Size, AWG or MCM (mm ²)/VAC								
	200 VAC	220 VAC	240 VAC	380 VAC	400 VAC	420 VAC	440 VAC	460 VAC	480 VAC
50 (15)	1/0 (55)	1/0 (55)	1/0 (55)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
100 (30)	2/0 (70)	1/0 (55)	1/0 (55)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
150 (46)	4/0 (100)	3/0 (85)	3/0 (85)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
200 (61)	5/0 (125)	4/0 (100)	4/0 (100)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
250 (76)	6/0 (170)	5/0 (125)	5/0 (125)	1 (45)	1 (45)	2 (35)	2 (35)	2 (35)	3 (30)
300 (91)	7/0 (215)	6/0 (170)	5/0 (125)	1/0 (55)	1/0 (55)	1 (45)	1 (45)	2 (35)	2 (35)
350 (107)	8/0 (275)	7/0 (215)	6/0 (170)	2/0 (70)	1/0 (55)	1/0 (55)	1 (45)	1 (45)	1 (45)
400 (122)	8/0 (275)	7/0 (215)	7/0 (215)	2/0 (70)	2/0 (70)	1/0 (55)	1/0 (55)	1/0 (55)	1 (45)
Sub-Feeder length from MDP to PDU - ft (m)									
32 (9.7536)	1/0 (55)	1/0 (55)	1/0 (55)	2 (35)	2 (35)	3 (30)	3 (30)	3 (30)	3 (30)
Grounding									
Run a dedicated 1/0 [55 mm ²] or larger insulated copper ground wire from the power source to the MDP and from MDP to the PDU. Run the ground wire in the same raceway with the three-phase wires.									

Notes :

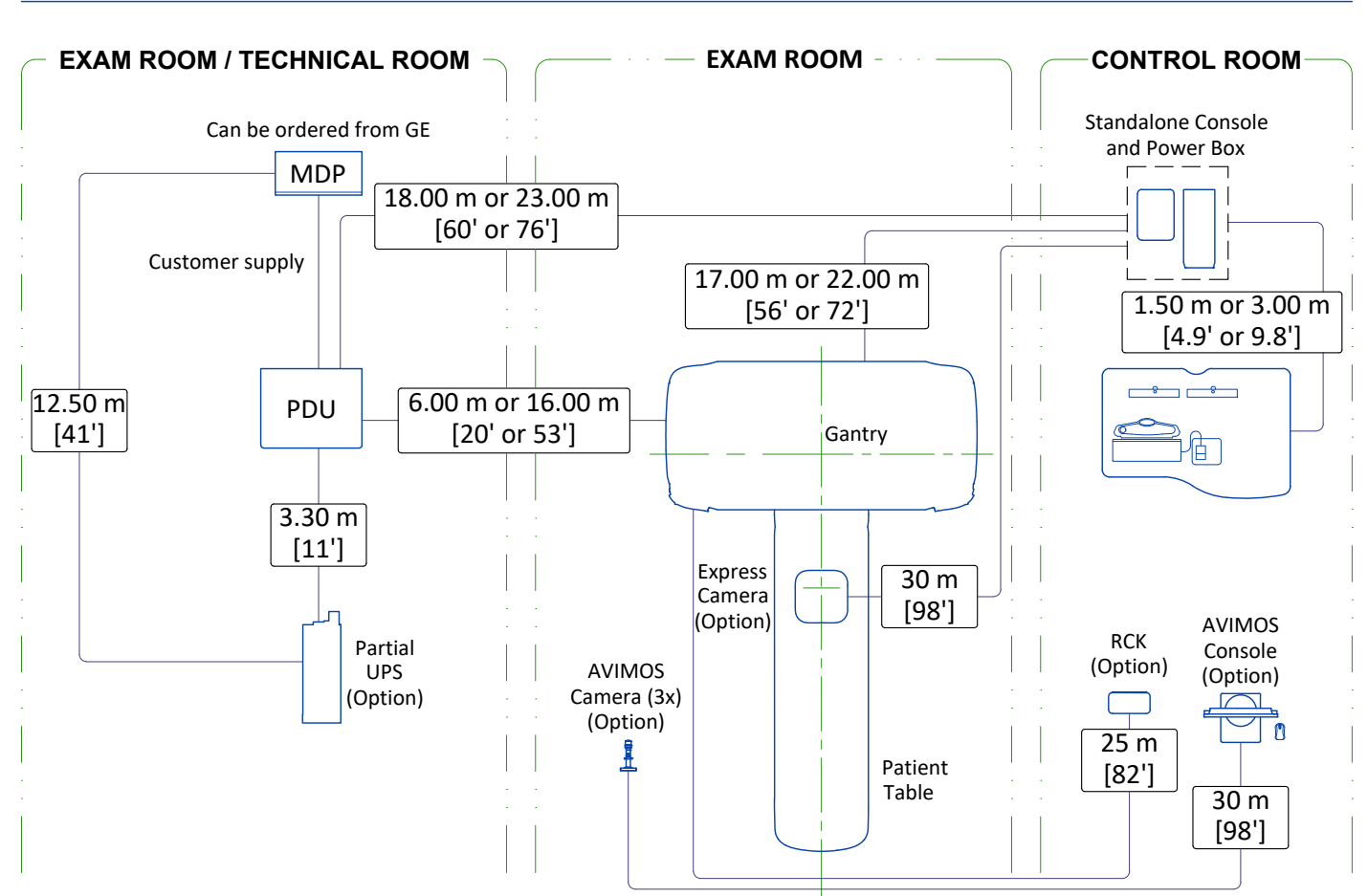
- Wire size: 4x2mm² [14AWG] and 1x2mm² [14AWG] GND
- Power cable: 3 Meter/10', multi-conductor, 24V DC
- GE supplied MDP option E45021BB includes a 10 meter long power cable (H07RN-F) with wire size 4x50mm² and a 50 meter long control cable with wire size 2x1.5mm²

SCAN ROOM WARNING LIGHT AND DOOR INTERLOCK



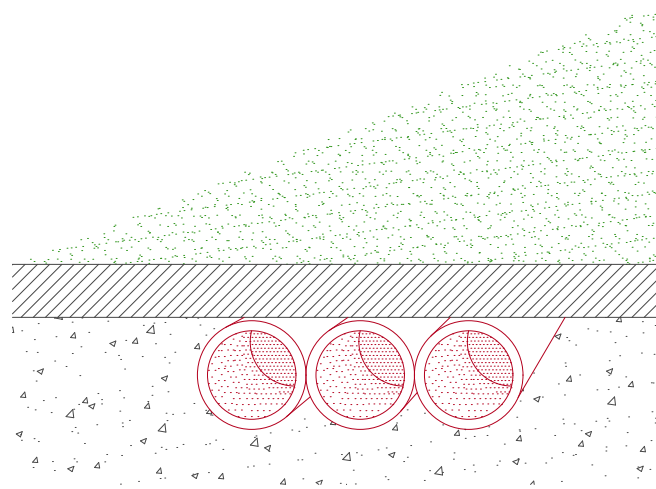
- Notes :**
- (1) Wire size: 2mm² [14 AWG] at 24V
 - (2) Door Interlock circuit is jumpered out if a door switch is not provided.
 - (3) Grounding not shown on the detail, but must comply with local codes.

INTERCONNECTIONS

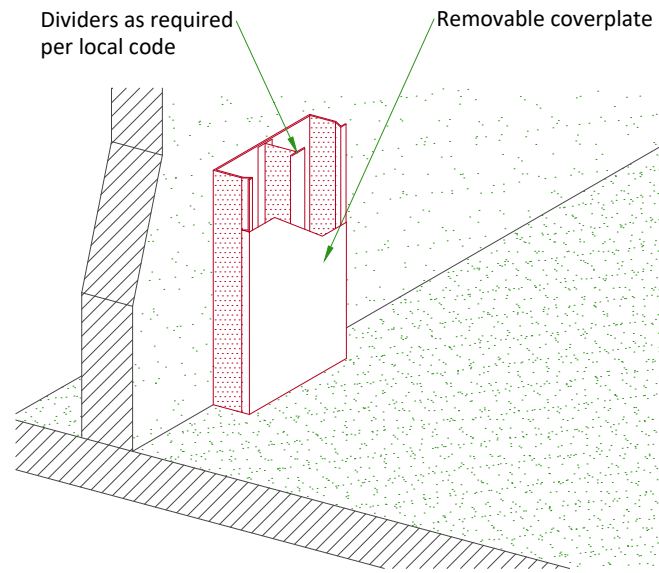


TYPICAL CABLE MANAGEMENT

CONDUIT IN THE FLOOR



VERTICAL DUCT ON WALL



NOT TO SCALE



REV	DATE	MODIFICATIONS
01 - C1 - Cover Sheet		
02 - A2 - Equipment Layout		
03 - S2 - Structural Layout		
04 - S3 - Structural Details (1)		
05 - S5 - Structural Details (3)		
06 - E2 - Electrical Layout		
07 - E3 - Electrical Elevations		

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

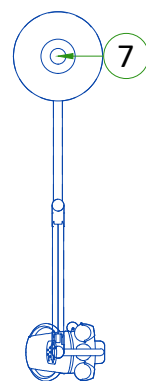
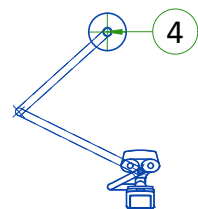
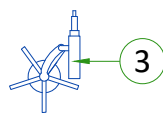
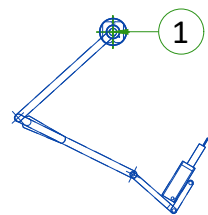
GE does not take responsibility for any damages resulting from changes on drawings made by others. Errors may occur by not referring to the complete set of final issue drawing. GE cannot accept responsibility for any damage due to the partial use of GE final issue drawings, however caused. All dimensions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

Typical



CT AND PET INJECTORS FINAL STUDY

Drawn by	Verified by	Concession	S.O. (GON)	PIM Manual	Rev
RET	CRM	-	-	-	-
Format	Scale	File Name		Date	Sheet
A3	1/4"=1'-0"	EN-CT-TYP-INJECTORS-WEB.DWG		08/Jun/2023	01/07



LEGEND

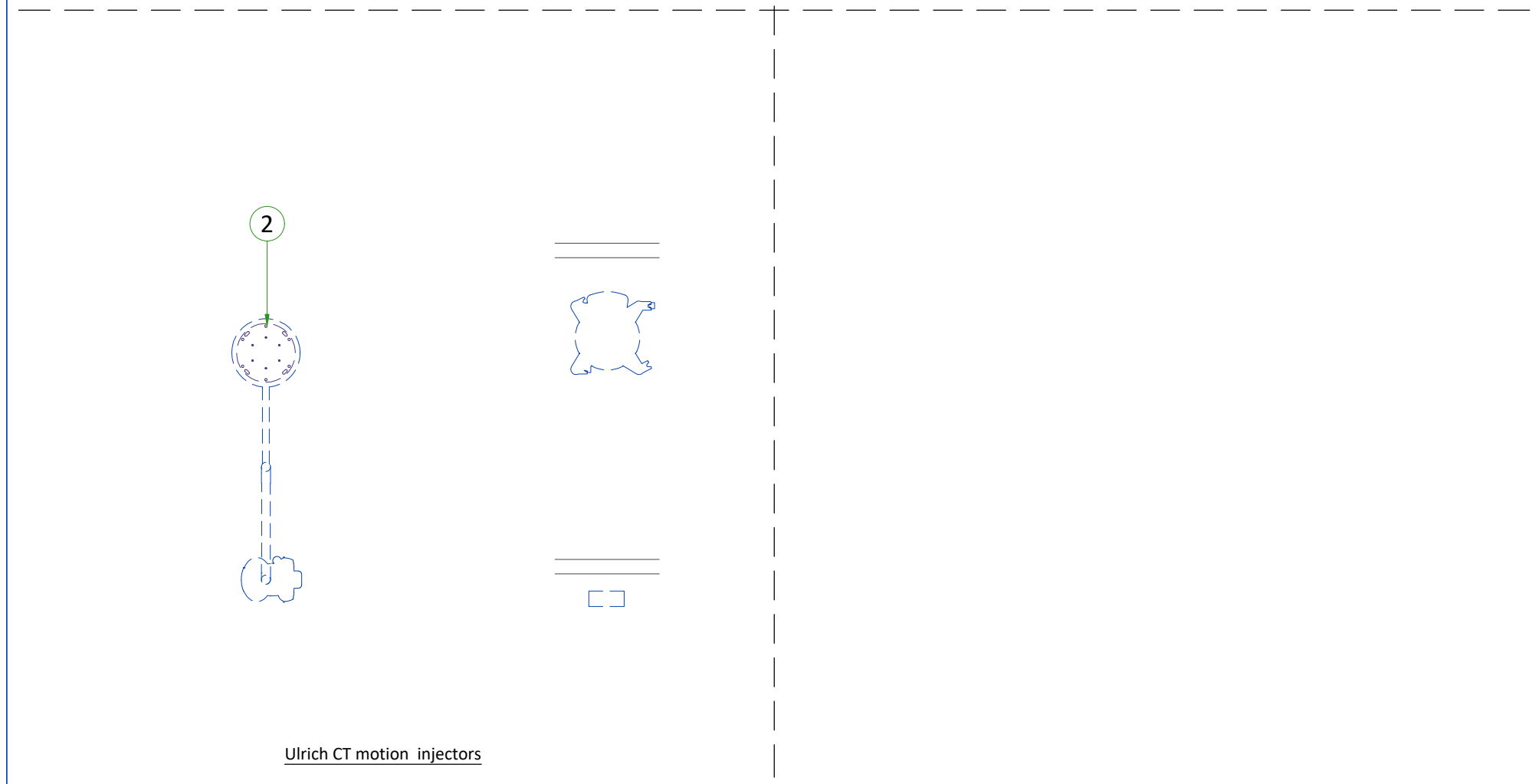
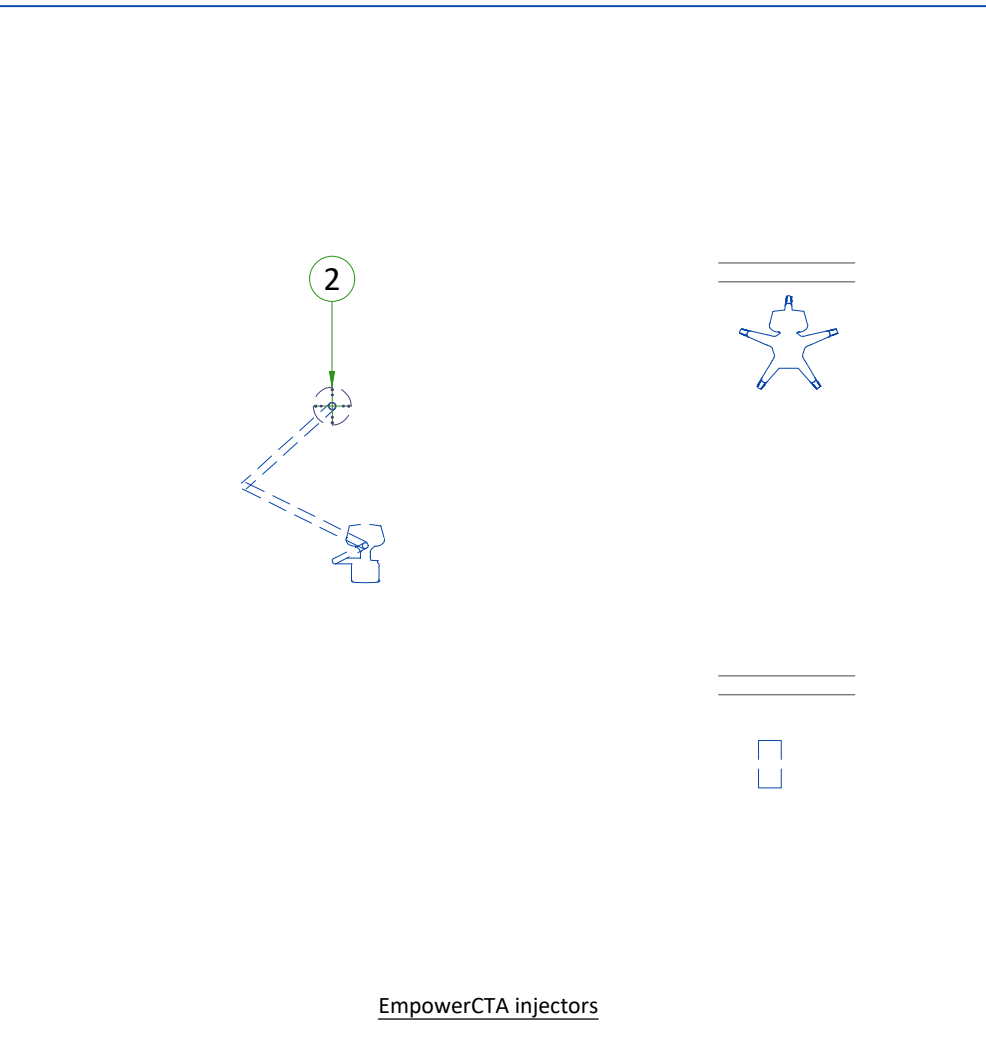
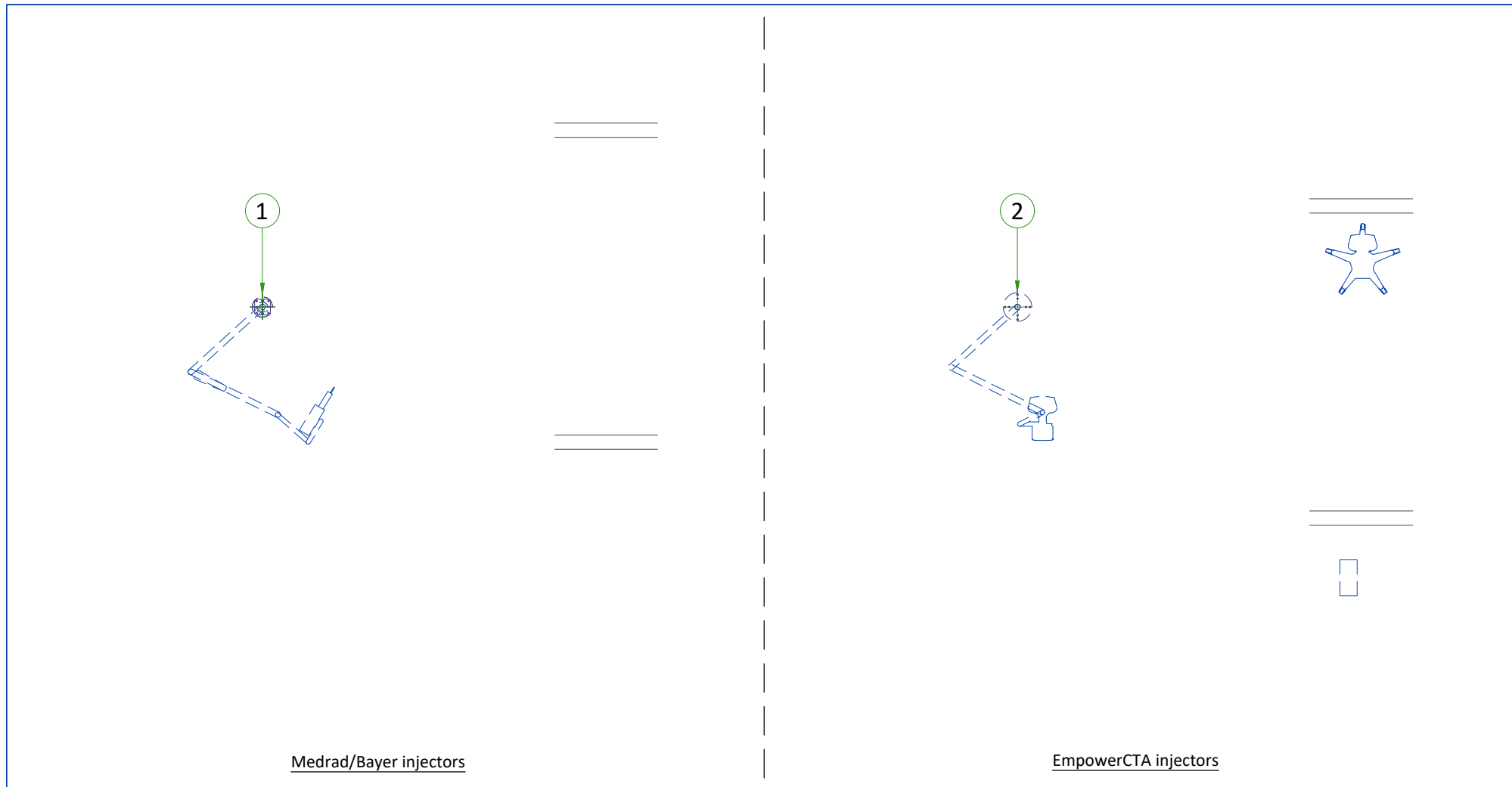
A	GE SUPPLIED	D	AVAILABLE FROM GE
B	GE SUPPLIED/CONTRACTOR INSTALLED	E	EQUIPMENT EXISTING IN ROOM
C	CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED	*	ITEM TO BE REINSTALLED FROM ANOTHER SITE

BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
Medrad/Bayer						
A	1	INJECTOR ON CEILING	-	79	-	36
A	2	INJECTOR CONTROL	-	-	-	-
A	3	INJECTOR ON PEDESTAL	-	-	-	-
EmpowerCTA						
A	4	INJECTOR ON CEILING	-	78	-	35.4
A	5	INJECTOR POWER SUPPLY	-	-	-	-
A	6	INJECTOR ON PEDESTAL	-	-	-	-
Ulrich CT Motion						
A	7	ULRICH CT MOTION INJECTOR ON CEILING	-	66	-	30
A	8	ULRICH CT MOTION INJECTOR CONTROL	-	9	-	4
A	9	ULRICH CT MOTION INJECTOR ON PEDESTAL	-	174	-	79

EXAM ROOM HEIGHT

Finished ceiling height	REC. 9'-0"
-------------------------	------------

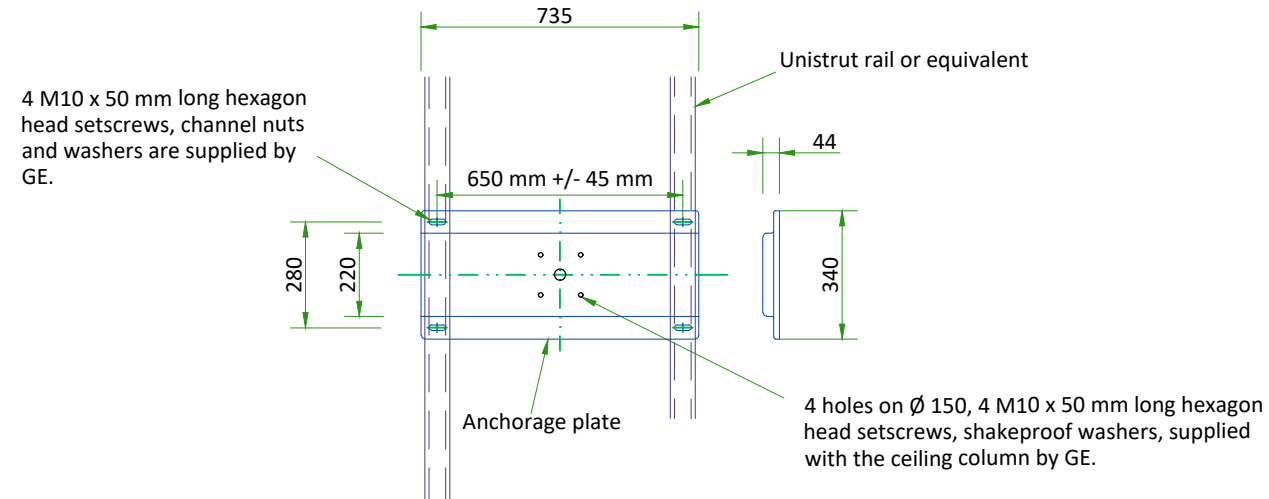
For Accessory Sales: (866) 281-7545 Options 1, 2, 1, 2 or mail to: gehaccessoriesales@ge.com



ITEM	DESCRIPTION
(CONTRACTOR SUPPLIED & INSTALLED)	
1	Structural supports for fastening the overhead counterpoised suspension. Support should run continuous with no fittings extending below face of channel, be parallel, square, and in the same horizontal plane, above finished ceiling. Ensure mounting surface is installed level or plumb within +/- 1 degree, and is structurally sufficient to maintain a level or plumb condition under 110 lb (50kg) system load and maximum system moment of 4400 in-lb (500n-m). Methods of support that will permit attachment to structural steel or through bolts in concrete construction should be favored. Do not use screw anchors in direct tension. 14" x 14" x 1/2" thick steel plate provided by manufacturer. See detail on structural detail sheets.
2	Ceiling support for injector.

KENEX SUSPENSION WITH ANCHORAGE PLATE

ANCHORAGE PLATE FIXED TO RAILS



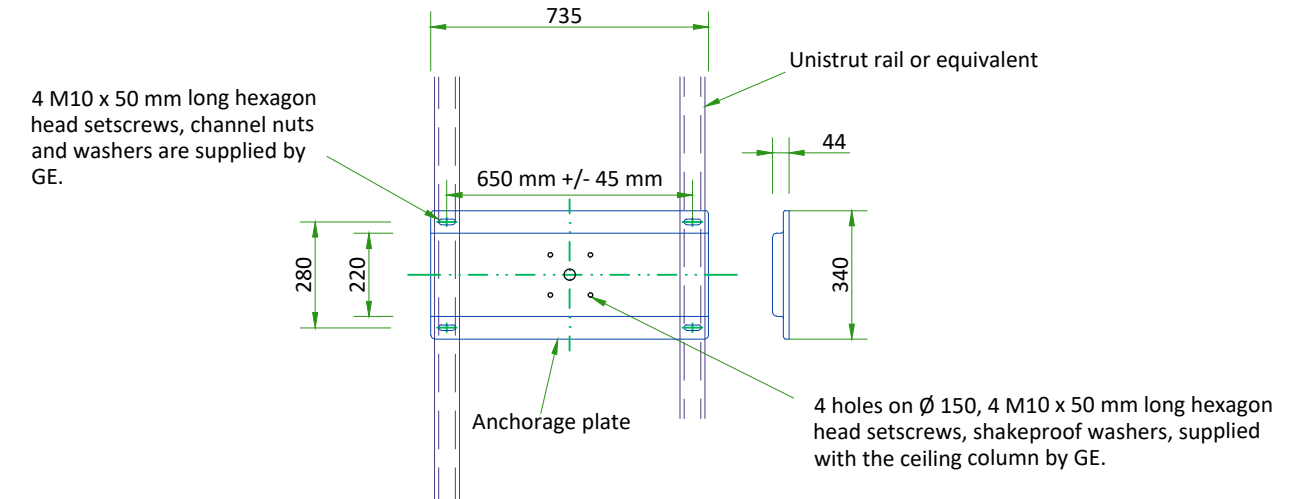
- The installer must ensure that the two ceiling channels at 650 mm +/- 45 mm apart, onto which the Kenex anchorage plate is to be attached, are horizontal and parallel.
- Sectional dimensions of the ceiling channels are 41 x 41 mm. Structural capacity: Unistrut P1000 or equivalent.
- Maximum bolt force = 330 daN
- Weight up to: 71 kg (56 kg system + 15 kg plate)
- The required factor of safety is "4" for attaching to Unistrut or equivalent rails and "6" for attaching to concrete ceiling.

CONSULT KENEX INSTALLATION MANUAL TO DESIGN AND MOUNT THE CEILING SUPPORT.

NOT TO SCALE

KENEX SUSPENSION WITH ANCHORAGE PLATE

ANCHORAGE PLATE FIXED TO RAILS



- The installer must ensure that the two ceiling channels at 650 mm +/- 45 mm apart, onto which the Kenex anchorage plate is to be attached, are horizontal and parallel.
- Sectional dimensions of the ceiling channels are 41 x 41 mm. Structural capacity: Unistrut P1000 or equivalent.
- Maximum bolt force = 330 daN
- Weight up to: 71 kg (56 kg system + 15 kg plate)
- The required factor of safety is "4" for attaching to Unistrut or equivalent rails and "6" for attaching to concrete ceiling.

CONSULT KENEX INSTALLATION MANUAL TO DESIGN AND MOUNT THE CEILING SUPPORT.

NOT TO SCALE

Only applicable to
Medrad/Bayer injectors with
Mavig support structures.

Only applicable to Medrad/Bayer injectors with Mavig support structures.

CEILING SUSPENSION DISCLAIMER

Safety and precautionary comments:

Only qualified, licensed technicians can perform electrical connections, installation, removal and repair. It is strongly recommended that at least two persons perform the installation.

Installing the system: Prior to installation, a structural engineer must confirm that the mounting structure is strong enough to provide proper support for the entire system and any attached end devices. Installation must be completed according to local building codes.

Determination of required installation hardware and torque values for installation of the ceiling column and ceiling track is the sole responsibility of the structural engineer.

Ceiling mounted systems must be installed properly. Failure to follow the instructions provided may lead to a potentially dangerous and unstable condition of the system.

GE and/or MAVIG is not responsible for unauthorized modifications made to the system or use of the system for unintended purposes. GE and/or MAVIG cannot be held liable for improper operation and modifications. Since improper modifications may impair proper operation, safety or reliability of the system, product modifications require written authorization from MAVIG.

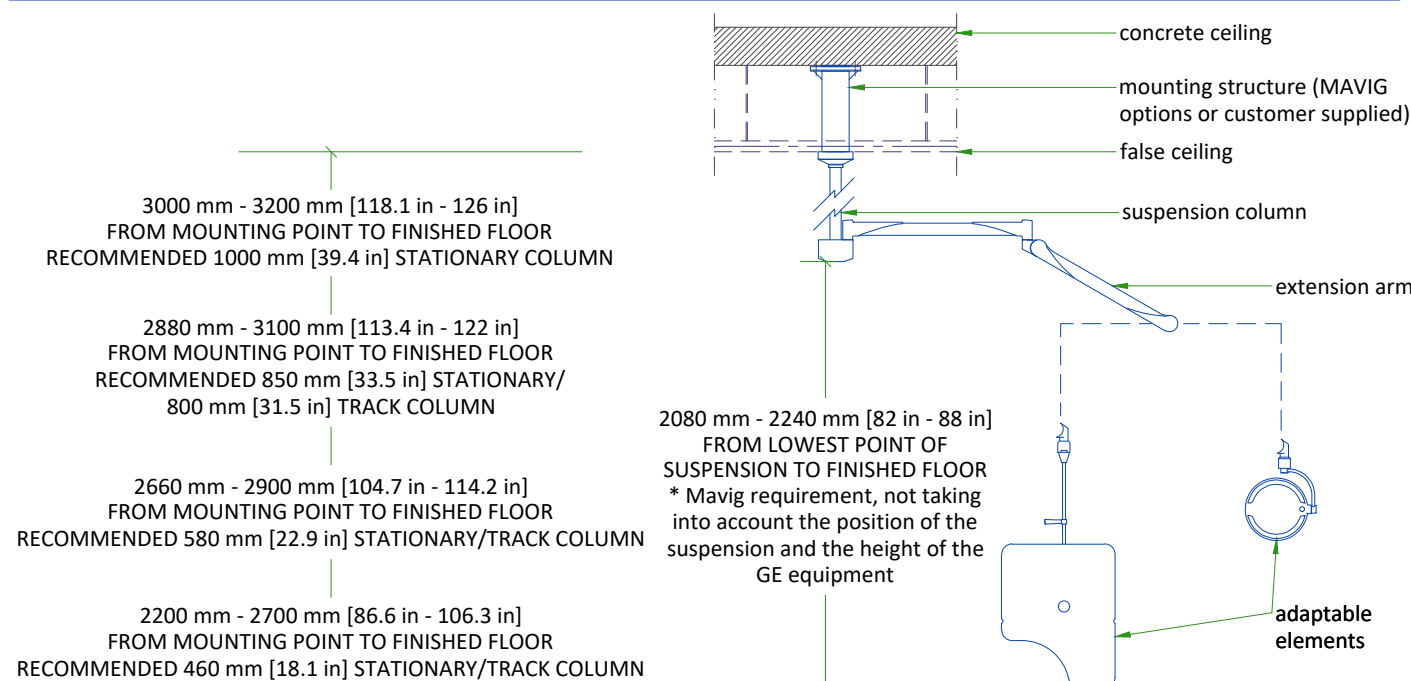
Under GE responsibility or under Customer responsibility, for all pre-installations, whatever is the supporting structure (bridge, chair, Unistrut channel, other channels, direct anchorage in concrete, transversal beam, etc. ...) a certificate must be obtained from a structural engineer.

This certificate shall include the definition of fasteners and of their tightening torque, especially for the non-standard cases described in MAVIG PIM and for which the standard anchoring/screws delivered with product shall not be used but shall be defined (and implemented in most cases) by the structural company.

WARNING:

It is prohibited to alter the length of the ceiling column or remove any securing screws.

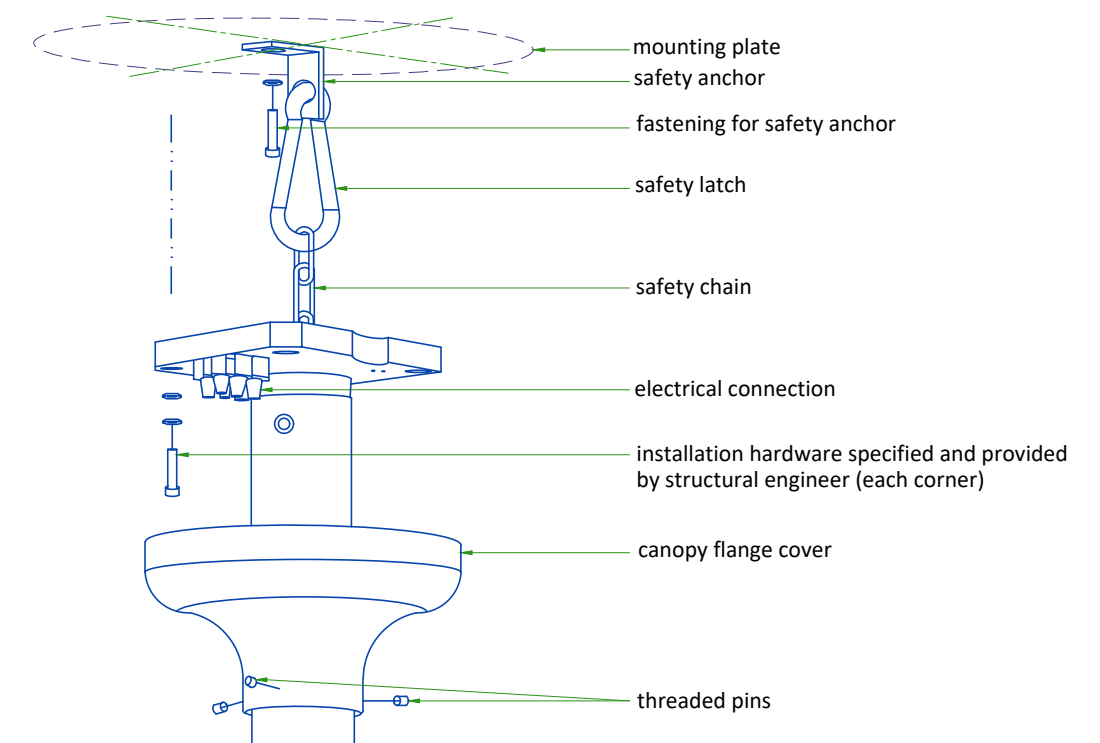
SUSPENSION COLUMN LENGTHS AND INSTALLATION DETAILS



- Available column lengths might differ, please refer to the GE commercial catalog for current selection options
- For rooms with higher mounting point than 3200 mm [126 in], a ceiling construction between structural ceiling and vertical column is suggested which needs to be designed by a structural engineer
- All design and pre-installation activity must be done in accordance of the MAVIG Installation manual
- Contact your GE Project Manager for OEM documentation
- Installation of mounting plate performed by GE or a GE sub-contractor

NOT TO SCALE

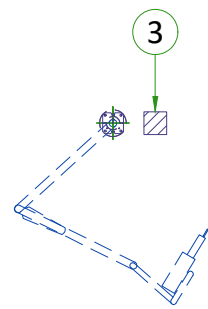
PORTEGRA2 COLUMN ASSEMBLY



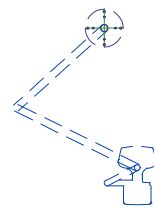
- Safety chain shall be always attached.
- Do not use shims between column and mounting surface.

All design and pre-installation activity must be done in accordance of the MAVIG Installation manual. Contact your GE Project Manager for OEM documentation. Installation of mounting plate performed by GE or a GE sub-contractor.

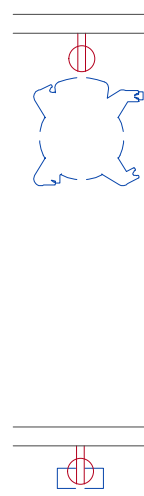
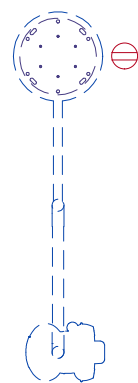
NOT TO SCALE



Medrad/Bayer injectors



EmpowerCTA injectors (wireless)



Ulrich CT motion injectors (wireless)

Typical

CT AND PET INJECTORS

EN-CT-TYP-INJECTORS-WEB.DWG

1/4"=1'-0" Rev A | Date 08/Jun/2023

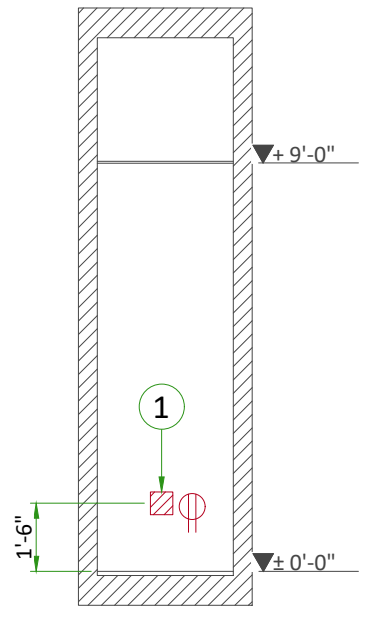
E2 - Electrical Layout

06/07

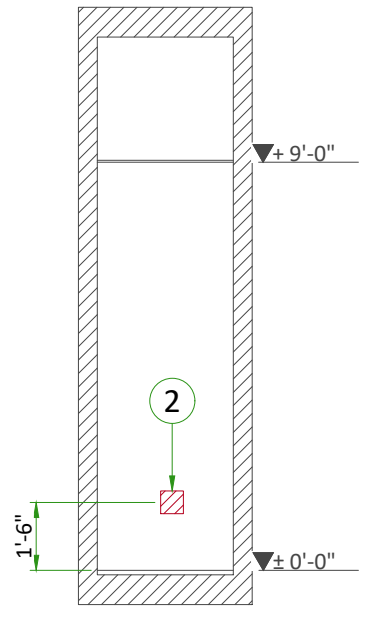
ITEM	DESCRIPTION
1	6" x 6" x 4" [150 x 150 x 100] box (Injector control)
2	6" x 6" x 4" [150 x 150 x 100] box (Injector)
3	6" x 6" x 4" [150 x 150 x 100] box above ceiling Injector)

ITEM	QTY	Outlet Legend for GE Equipment
Ⓢ		Duplex hospital grade, dedicated ceiling outlet 120-v, single phase power
Ⓣ		Duplex hospital grade, dedicated wall outlet 120-v, single phase power

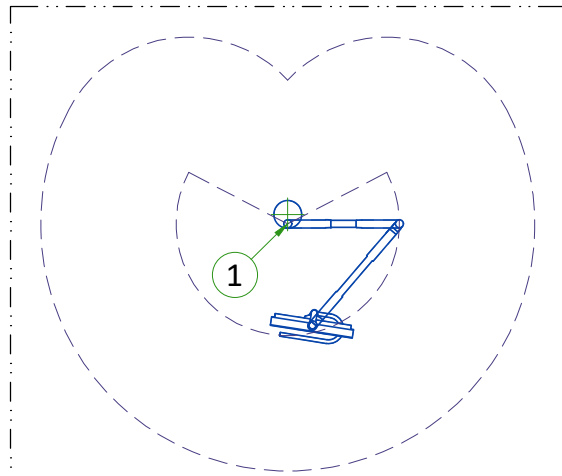
Additional Conduit Runs (Contractor Supplied and Installed)				
From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size	
			In.	mm
2-3 Injector	1 Injector Control	1	2 1/2	64



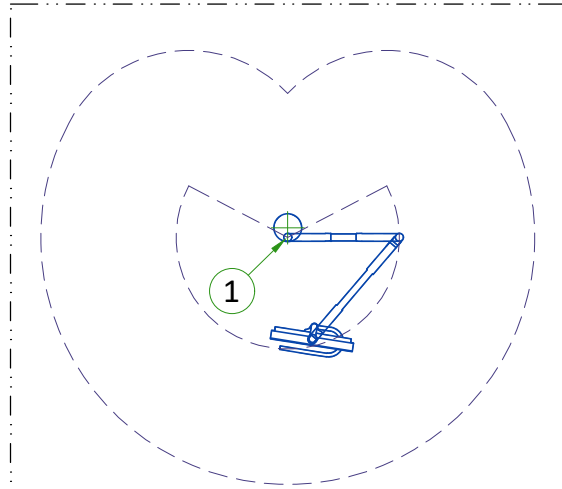
A



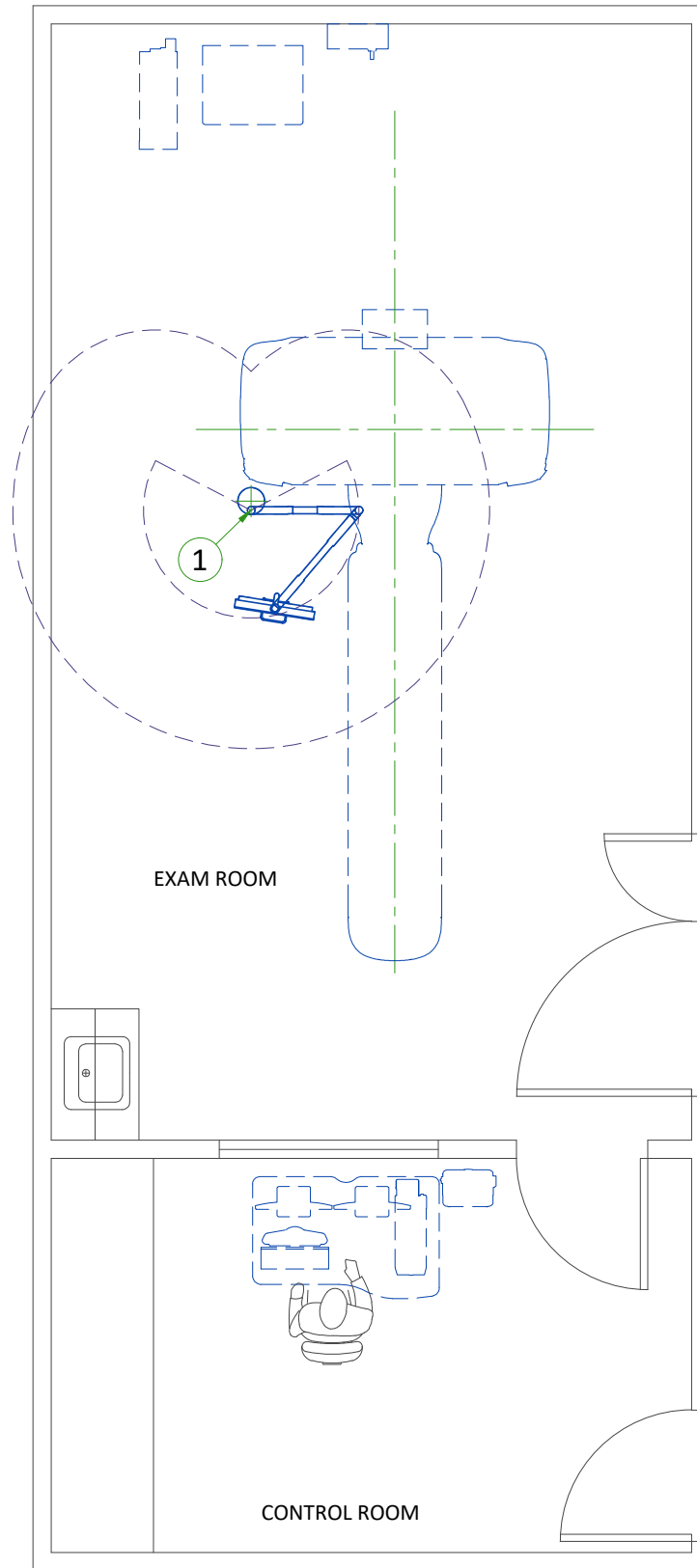
B



B7919FP/MJ/FT, B7877YZ



B7919SC (Revolution CT/Apex Series)



LEGEND

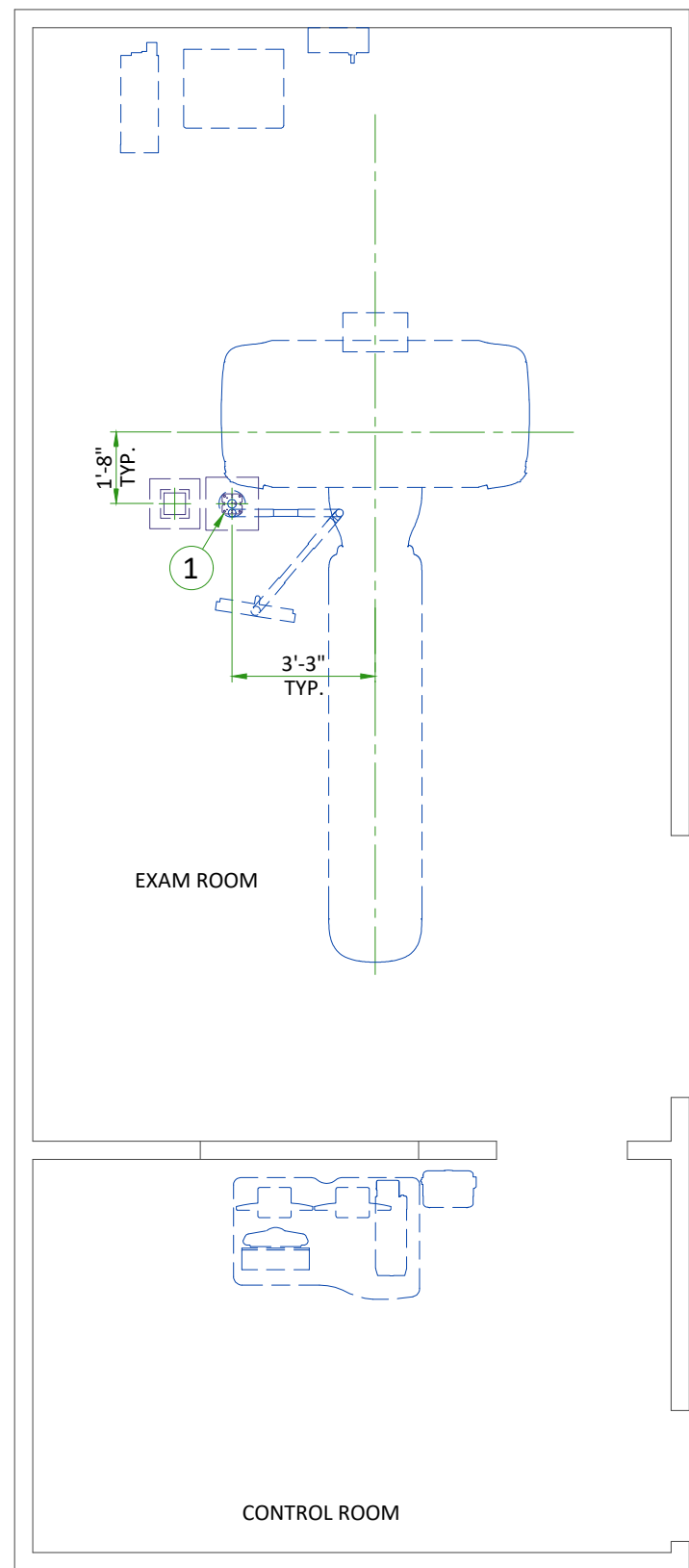
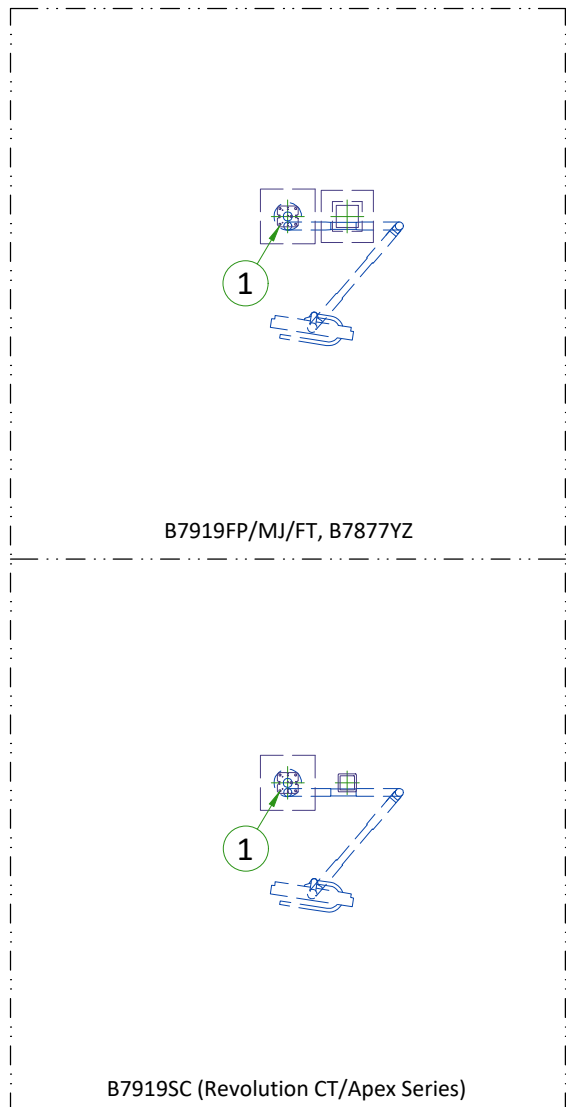
A	GE SUPPLIED	D	AVAILABLE FROM GE
B	GE SUPPLIED/CONTRACTOR INSTALLED	E	EQUIPMENT EXISTING IN ROOM
C	CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED	*	ITEM TO BE REINSTALLED FROM ANOTHER SITE

BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
B	1	SMARTVIEW MONITOR	300	61	88	28

EXAM ROOM HEIGHT

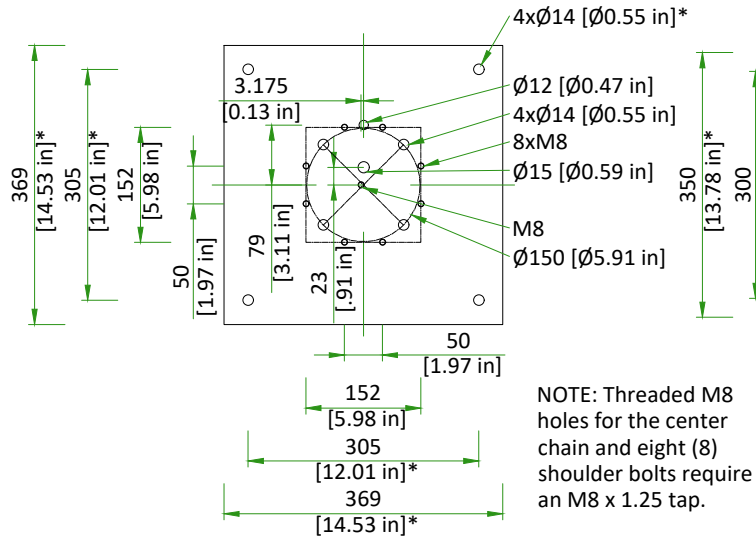
FINISHED FLOOR TO SLAB HEIGHT	TBD
FALSE CEILING HEIGHT	Rec. 9'-0"

ITEM	DESCRIPTION
(CONTRACTOR SUPPLIED & INSTALLED)	
1	Monitor suspension plate (refer to Structural Details)

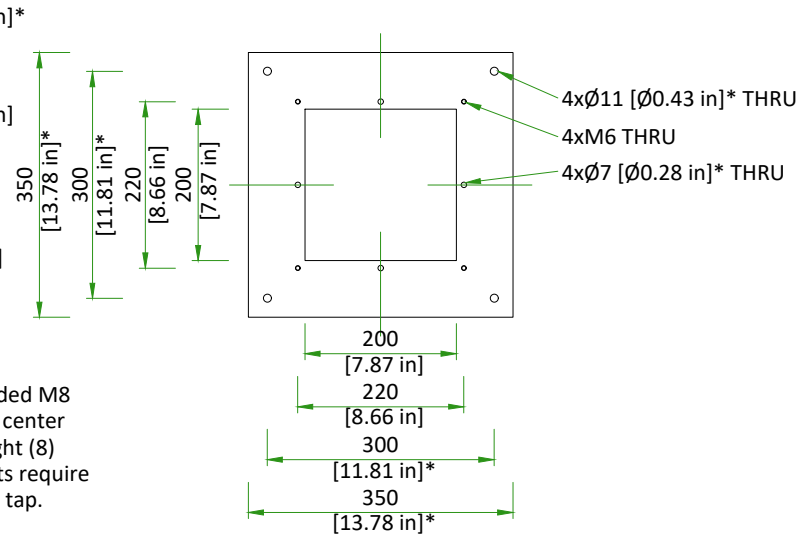


LCD MONITOR MOUNTING PLATES

CUSTOMER SUPPLIED BOOM PEDESTAL MOUNTING PLATE



CUSTOMER SUPPLIED JUNCTION BOX MOUNTING PLATE



- Material for the boom pedestal mounting plate shall be:
- Structural steel between 10-15 mm [0.4-0.6 in] thickness
 - Tensile stress shall be 400 MPa or greater
 - Yield stress shall be 235 MPa or greater

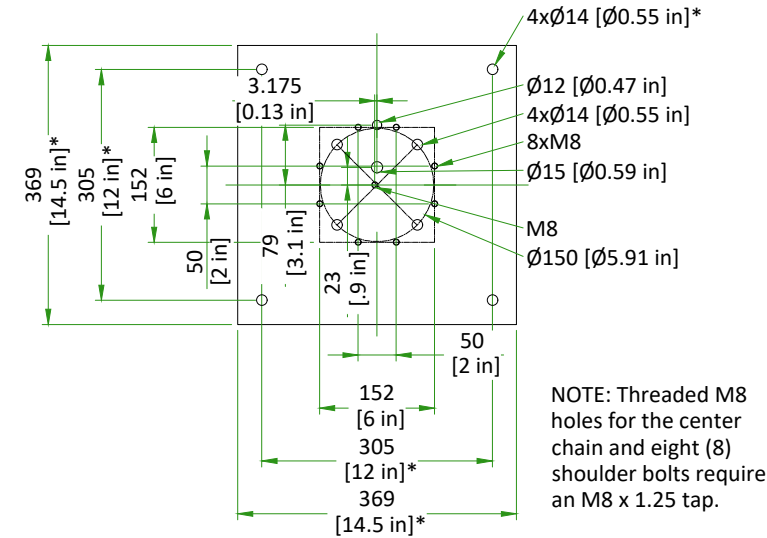
- Material for the junction box mounting plate shall be:
- Structural steel between 8-15 mm [0.3-0.6 in] thickness
 - Tensile stress shall be 400 MPa or greater
 - Yield stress shall be 235 MPa or greater

NOTE: Safety factor on the junction box mounting plate and the boom mounting plate shall be no less than 4 times load. Dimensions marked with an asterisk (*) in the illustration above (and the available engineering drawing provided by the PMI) are for customer reference only. Since the customer supplies this plate, dimensions marked with (*) are minimum size recommendations and may vary, depending on customer ceiling layout. The ceiling mounting plate must be designed by a structural engineer and installed by a qualified contractor prior to the system installation.

NOT TO SCALE

LCD MONITOR MOUNTING PLATES

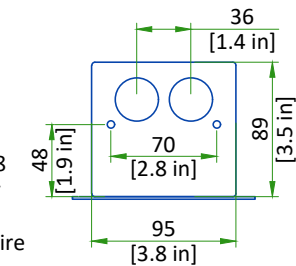
CUSTOMER SUPPLIED BOOM PEDESTAL MOUNTING PLATE



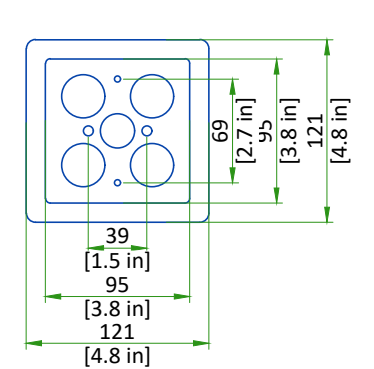
GE SUPPLIED JUNCTION BOX MOUNTING PLATE

The customer must mount the electrical junction box (included in the kit) flush to the ceiling, since a finished cover plate, also included in the kit, mounts directly to the junction box. The electrical junction box is an industry standard, large capacity type (deep), dimensions of which are shown below:

SIDE VIEW



TOP VIEW



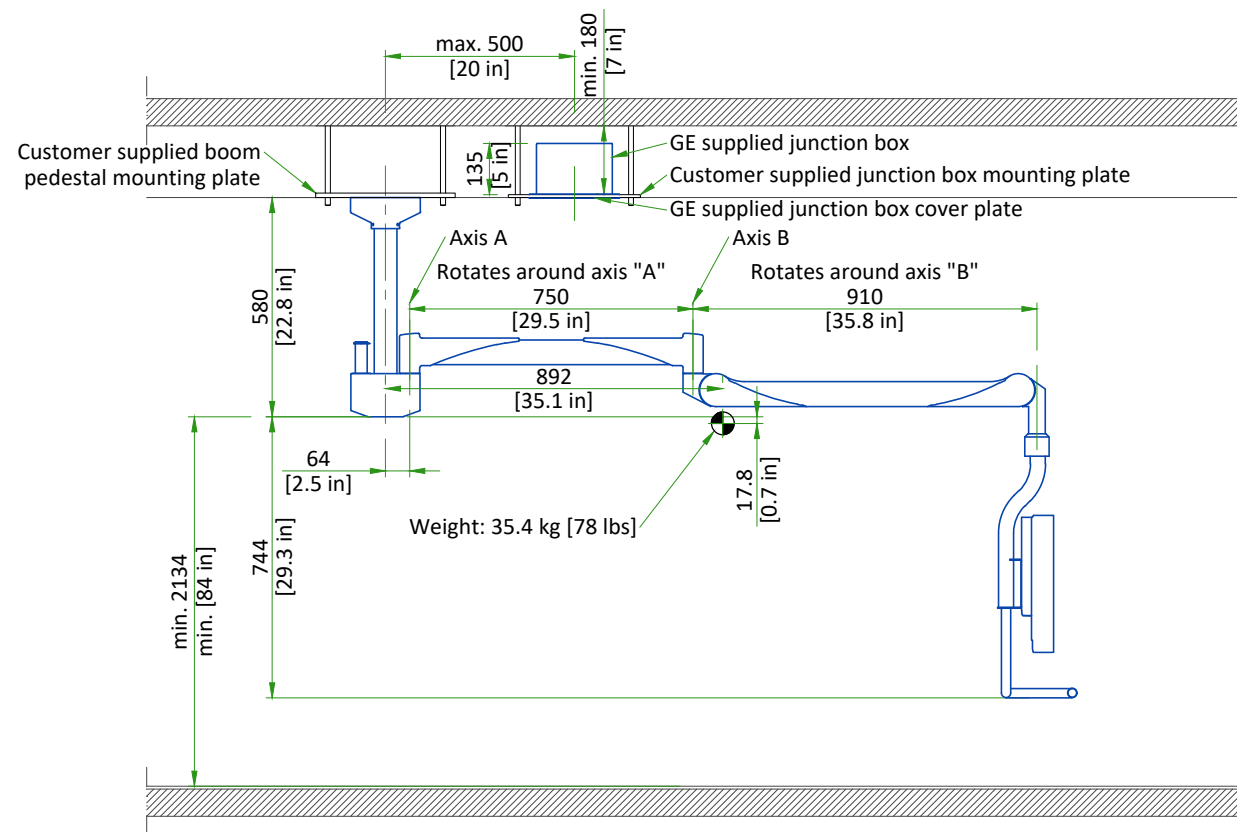
NOTE: Threaded M8 holes for the center chain and eight (8) shoulder bolts require an M8 x 1.25 tap.

- Material for the boom pedestal mounting plate shall be:
- Structural steel between 10-15 mm [0.4-0.6 in] thickness
 - Tensile stress shall be 400 MPa or greater
 - Yield stress shall be 235 MPa or greater

NOTE: Safety factor on the junction box mounting plate and the boom mounting plate shall be no less than 4 times load. Dimensions marked with an asterisk (*) in the illustration above (and the available engineering drawing provided by the PMI) are for customer reference only. Since the customer supplies this plate, dimensions marked with (*) are minimum size recommendations and may vary, depending on customer ceiling layout. The ceiling mounting plate must be designed by a structural engineer and installed by a qualified contractor prior to the system installation.

NOT TO SCALE

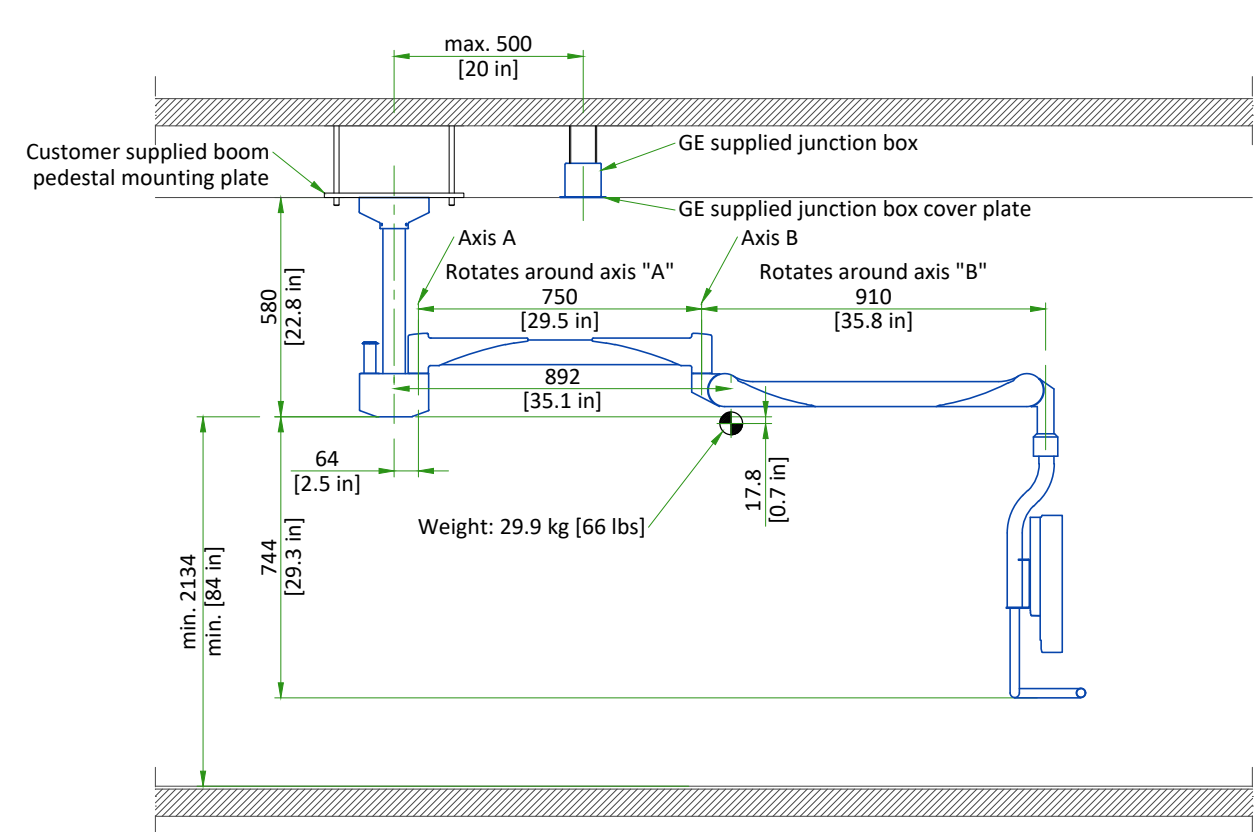
LCD MONITOR SUSPENSION



NOT TO SCALE

Center of Gravity

LCD MONITOR SUSPENSION

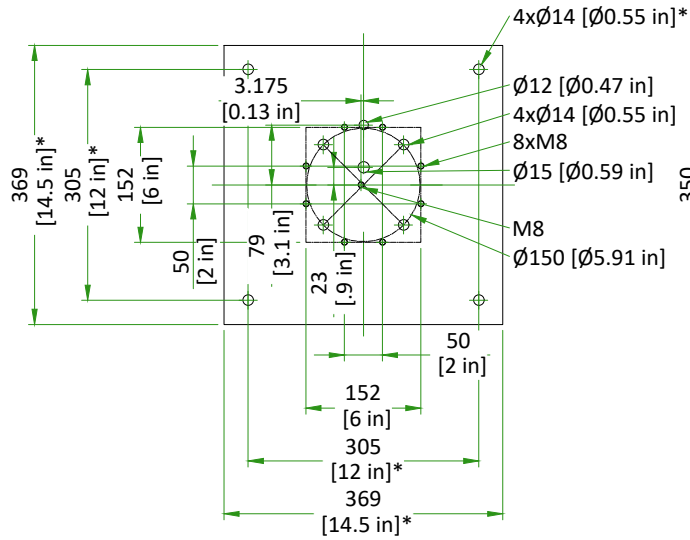


NOT TO SCALE

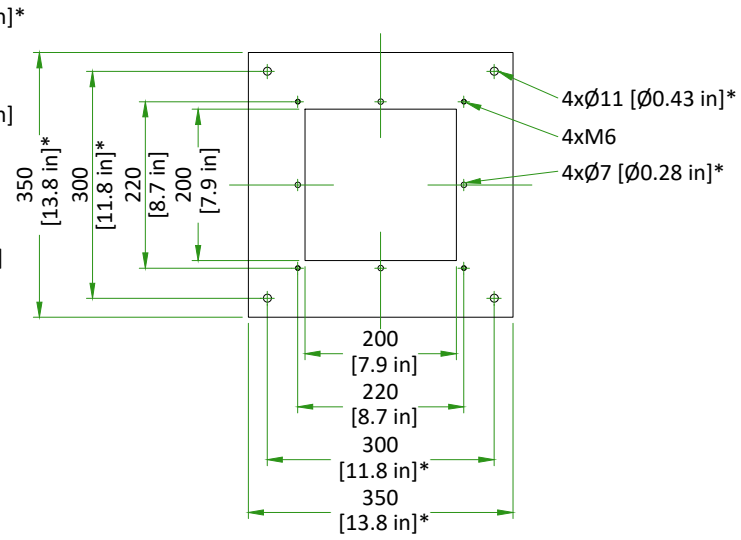
Center of Gravity

LCD MONITOR MOUNTING PLATES

CUSTOMER SUPPLIED BOOM PEDESTAL MOUNTING PLATE



CUSTOMER SUPPLIED JUNCTION BOX MOUNTING PLATE



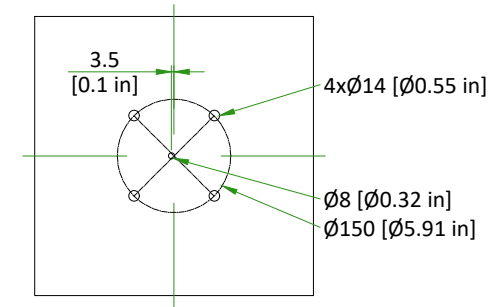
- Threaded M8 holes for the center chain and eight (8) shoulder bolts require an M8 x 1.25 tap.
- The support structure for a ceiling-mounted option using a Mavig pedestal, requires a flush ceiling mounting plate.
- Detailed instruction for hole size and a template is available from Mavig or in their Portegra Installation Manual.
- GE supplied boom weight: 30.9 kg [68 lbs]
- The junction box cover plate assy must be flush mounted to the junction box mounting plate, it's a 240 mm x 240 mm [9.4 in x 9.4 in] centered GE-supplied electrical cover plate assy.
- GE supplied junction box cover plate assembly weight: 1.1 kg [2.4 lbs] (approximately)

NOTE: The customer's architect is responsible for designing and installing the Junction Plates. The system manufacturer will NOT inspect and test that the Junction Plates meet the loading capacity specified (recommend a 6x safety factor). The dimensions marked with "*" are only for customer reference.

NOT TO SCALE

LCD MONITOR MOUNTING PLATES

CUSTOMER SUPPLIED BOOM PEDESTAL MOUNTING PLATE



CUSTOMER SUPPLIED JUNCTION BOX MOUNTING PLATE

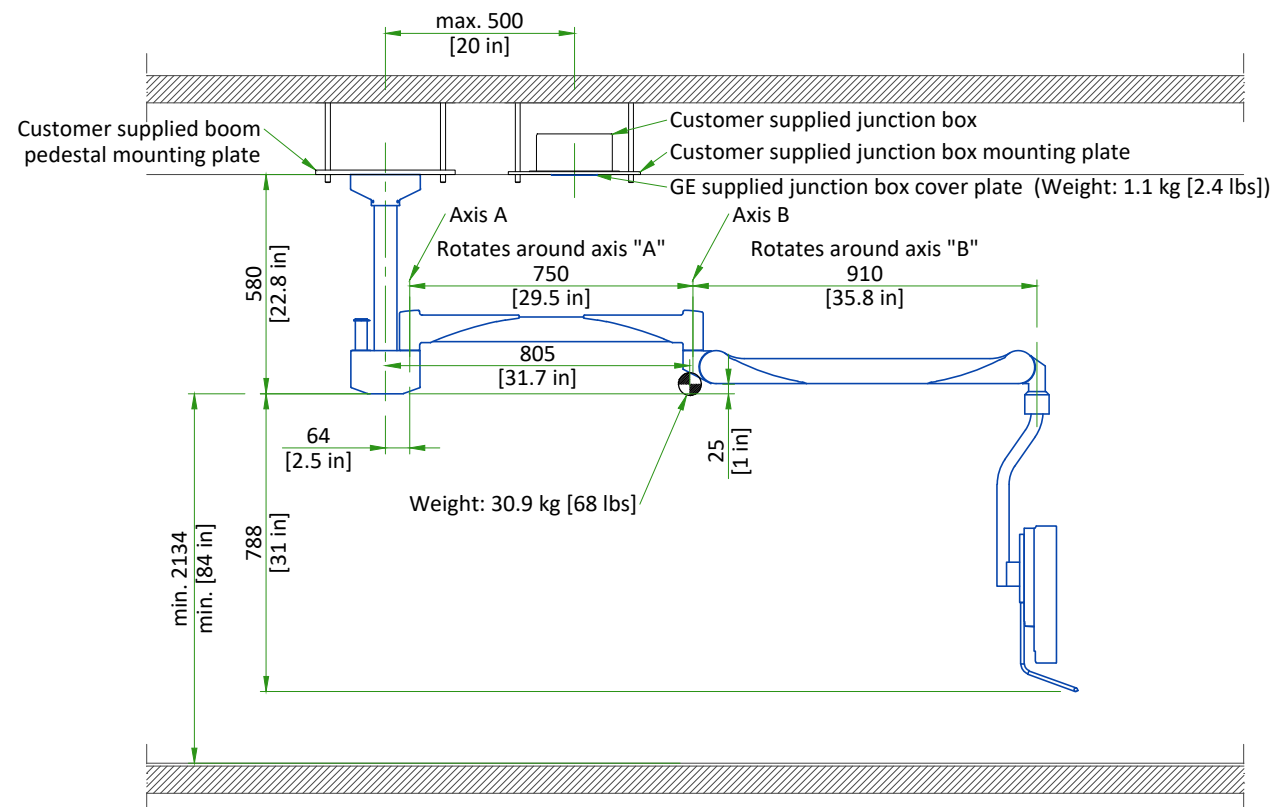
A 152 mm x 152 mm x 102 mm [6 in x 6 in x 4 in] or equivalent ceiling box is required to be flush mounted next to the ceiling plate. There should be two (2) conduits exiting into the box and the box grounded to the mounted plate. The electrical box cover plate must be flush mounted to the finished ceiling and with provision to add a 102 mm x 102 mm [4 in x 4 in] centered GE-supplied electrical cover ceiling plate.

- The support structure for a ceiling-mounted option using a Mavig pedestal, requires a flush ceiling mounting plate.
- Detailed instruction for hole size and a template is available from Mavig or in their Portegra Installation Manual.
- GE supplied boom weight: 30.9 kg [68 lbs]

NOTE: The customer's architect is responsible for designing and installing the Junction Plates. The system manufacturer will NOT inspect and test that the Junction Plates meet the loading capacity specified (recommend a 6x safety factor).

NOT TO SCALE

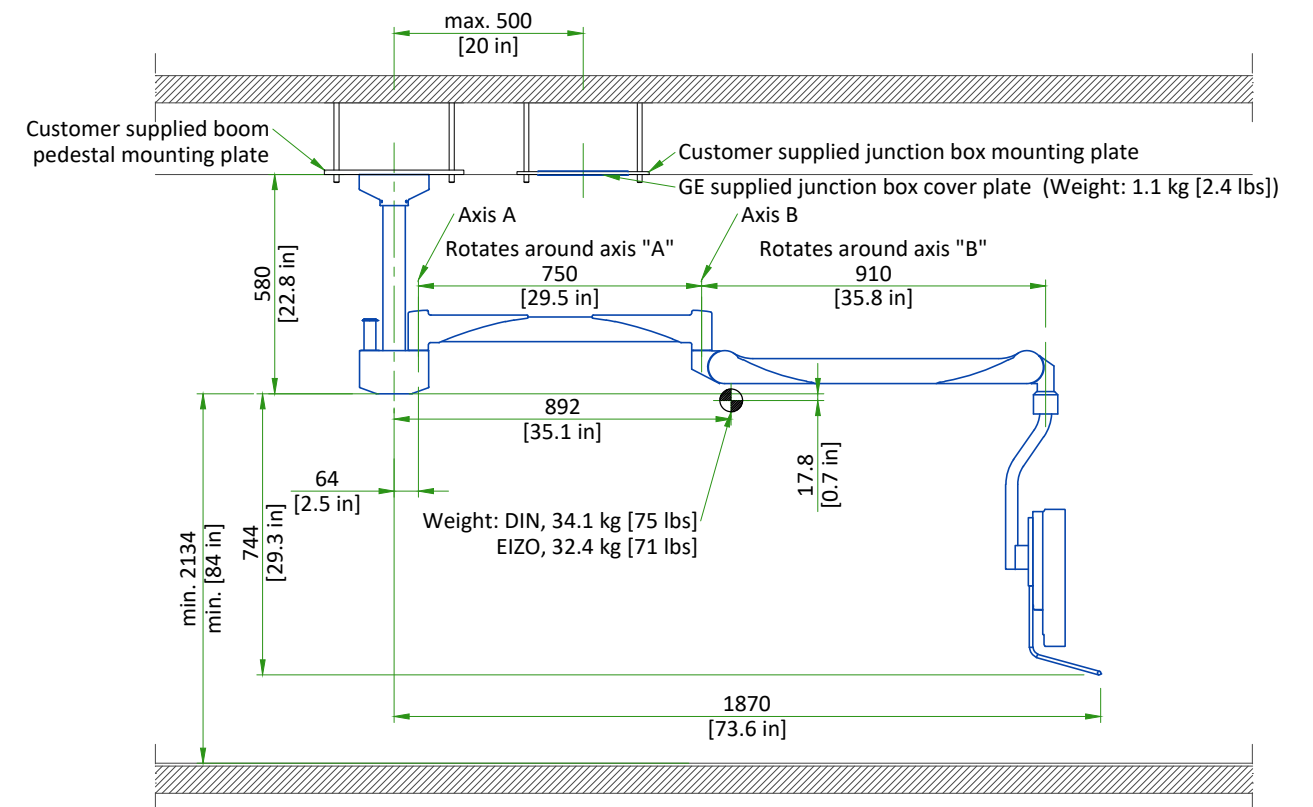
LCD MONITOR SUSPENSION



NOT TO SCALE

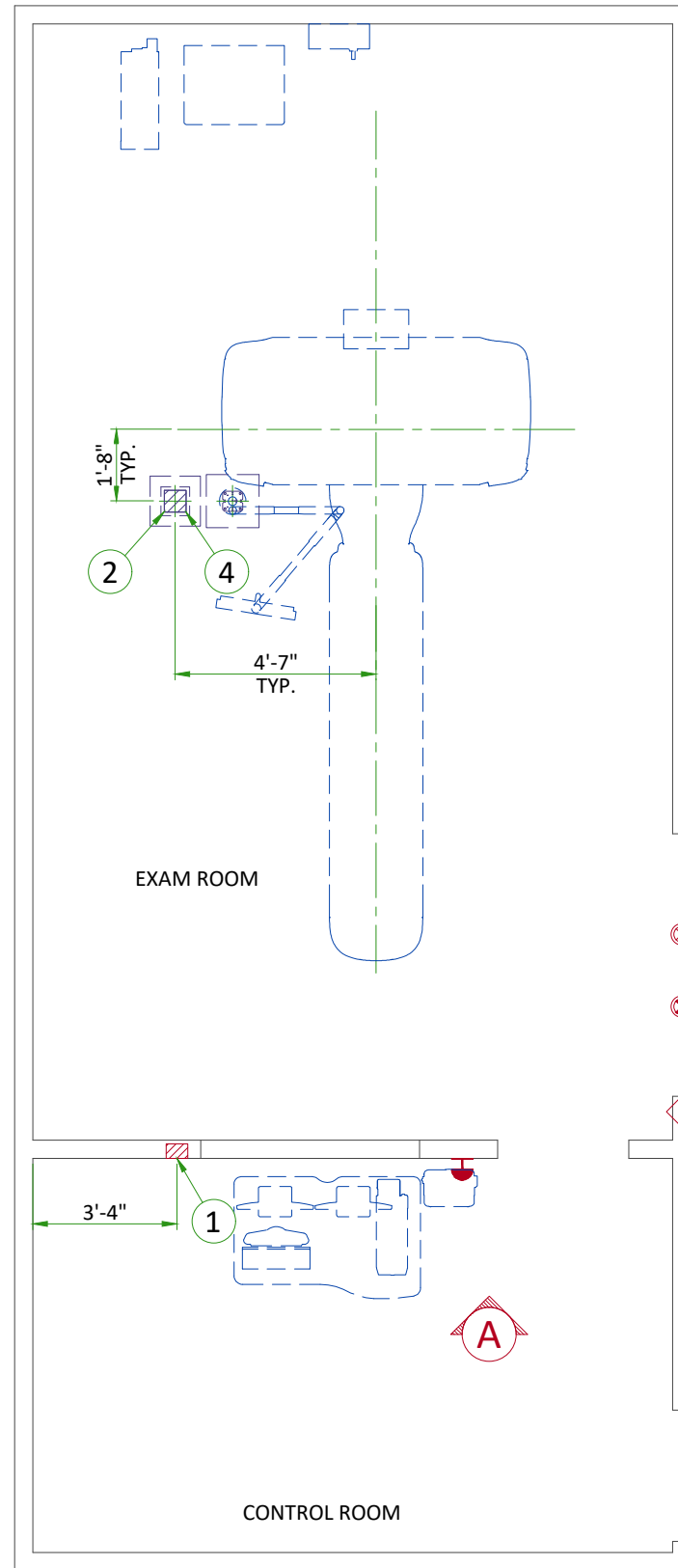
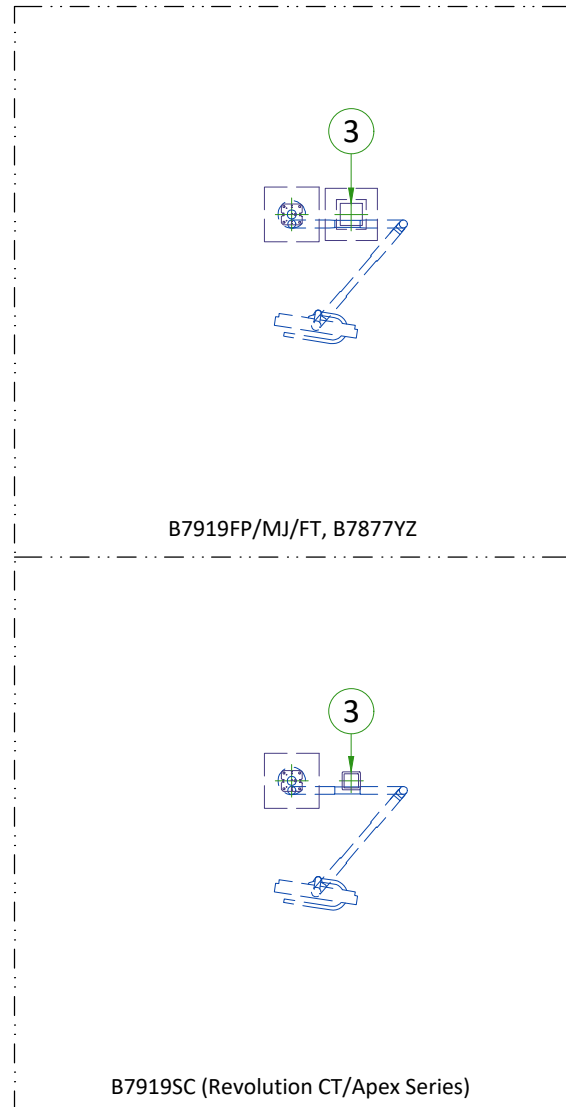
Center of Gravity

LCD MONITOR SUSPENSION



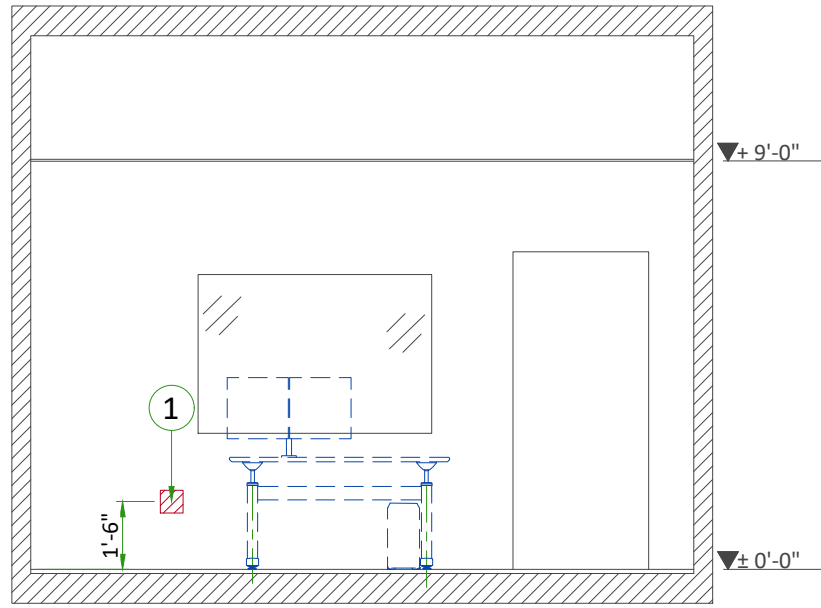
NOT TO SCALE

Center of Gravity



ITEM	DESCRIPTION
1	6" x 6" x 4" [150 x 150 x 100] box (Operator's console)
2	6" x 6" x 4" [150 x 150 x 100] box above ceiling (SmartView monitor)
3	Box above ceiling (SmartView monitor - GE Supplied)

Additional Conduit Runs (Contractor Supplied and Installed)				
From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size	
			In.	mm
2-4 SmartView Monitor	1 Operator's Console	1	1	25
		1	2	50





November 21, 2023

Scott Walton
Imaging Manager
Intermountain Park City Hospital
900 Round Valley Drive
Park City, UT 84060

Dear Mr. Walton,

Enclosed, please find the calculations for the amount of shielding required in **CT Procedure 1386 at Intermountain Park City Hospital, 900 Round Valley Drive, Park City, UT 84060**. The enclosed calculations are based on information provided and current radiation protection operational guidelines with regards to X-ray patient workloads, etc. in NCRP Report No. 147.

Installing the specified **required** shielding will reduce the exposure to less than required levels, i.e. 0.02 mSv/week (2 mrem/week) or 1 mSv/year (100 mrem/year) to members of the general public, and 0.1 mSv/week (10 mrem/week) or 5 mSv/year (500 mrem/year) to occupationally exposed employees. A narrative description of the shielding requirements and recommendations follows.

General Comments:

- Walls are to be constructed with leaded (Pb) drywall of specified thickness with the lead (Pb) extending from the floor to a height of at least seven feet. The screws/nails do NOT need to be capped with lead (Pb). All electrical outlets, switches, and other penetrations of all shielded walls are to be backed with the same thickness of lead (Pb) as the wall that they penetrate.
- The door and jamb are to be lined with the same thickness of lead (Pb) as the wall that they penetrate, unless specified otherwise. Be sure that the leaded doorframe overlaps the lead (Pb) in the gypsum drywall.
- As part of the control booth wall the patient viewing window (at least 1 sq. ft. viewable area) and windowsill must have the same lead (Pb) equivalency as the wall that they penetrate. Be sure that the leaded windowsill overlaps the lead (Pb) in the gypsum drywall. The viewing window center may not be closer than 24 inches to the booth's open edge.
- To guarantee a safe operator's position and to comply with UDWMRC regulations, the exposure switch must be located at least 39 inches (1 meter) from the end of the control barrier.
- While this is not a radiation safety issue per se, with the advent of digital imaging it has become important that the lighting in the control booth be either subdued or dimmable such that the ambient lighting can be optimized for viewing images on computer monitors.

Corporate: 214 E. Huron Street, Ann Arbor, MI 48104 (734) 662-3197 Fax: (734) 662-9224

Regional: 50 E. 91st Street, Suite 211, Indianapolis, IN 46240 (317) 581-1911 Fax: (317) 581-1931

Salt Lake City, UT  Sussex, WI  Springfield, IL

www.mpcphysics.com  mpc@mpcphysics.com

AS REQUIRED BY THE UTAH DIVISION OF WASTE MANGEMENT and RADIATION CONTROL RULE R313-28-32 PLAN REVIEW, YOU MUST SUBMIT A COPY OF THESE LETTERS AND SHIELDING CALCULATIONS TO THE EXECUTIVE SECRETARY WITHIN 14 WORKING DAYS. The address is as follows:

UTAH DIVISION OF WASTE MANGEMENT and RADIATION CONTROL
Doug Hansen, Director
P.O. Box 144880
Salt Lake City, UT 84114-4880

If you do not agree with the factors and assumptions used and find them insufficient, please contact me as my calculations may not be valid.

Keep a copy of these letters and shielding calculations on-site for as long as CT Procedure Room 1386 at Park City Hospital is in service.

WORKLOAD CT ROOM 1386

For the CT scanner room, a workload of 160 patients/week (120 body patients, 40 head patients with 50% of these patients being scanned without and with contrast, which doubles the DLP) was used in the following calculations. I used the typical values for Dose-Length-Product (DLP) for both head and body procedures, as well as typical scatter rates – all as per NCRP Report 147.

CT ROOM 1386 SHIELDING SPECIFICATIONS

For ALARA purposes, recommendations for thicker than required amounts of shielding are stated where deemed appropriate.

Control Booth (Wall, Window, Window Frame):

Required shielding: 1.14 mm lead (Pb) equivalence (1/16" commercially available)
Shielding must extend to the ceiling: 1/32 inch from 7 ft to ceiling

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.006 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

North Wall: CT

Required shielding: 0.97 mm lead (Pb) equivalence (1/16" commercially available)
Shielding must extend to the ceiling: 1/32 inch from 7 ft to ceiling

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0094 mSv/week, which is less than the 0.1 mSv/week limit for a controlled area.

CT ROOM 1386 SHIELDING SPECIFICATIONS, continued**East Wall: Corridor**

Required shielding: 0.92 mm lead (Pb) equivalence (1/16" commercially available)

Shielding must extend to the ceiling: 1/32 inch from 7 ft to ceiling

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0032 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

South Wall: Rad Room/Bathroom

Required shielding: 0.84 mm lead (Pb) equivalence (1/16" commercially available)

Shielding must extend to the ceiling: 1/32 inch from 7 ft to ceiling

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0025 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

West Wall: Tech Area

Required shielding: 1.14 mm lead (Pb) equivalence (1/16" commercially available)

Shielding must extend to the ceiling: 1/32 inch from 7 ft to ceiling

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.006 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

Patient Entrance Door

Required shielding: 0.59 mm lead (Pb) equivalence (1/32" commercially available)

Recommended shielding: 1/16 inch commercially available

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.01 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

Ceiling: Central Sterilization

Required shielding: 1.21 mm lead (Pb) equivalence
1/32 inch Pb in addition to the existing construction.

COMMENT: The existing construction (3.5 in light weight concrete minimum thickness) plus 1/32" Pb will reduce the weekly exposure to approximately 0.0073 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

CT ROOM 1386 SHIELDING SPECIFICATIONS, continued

Floor:

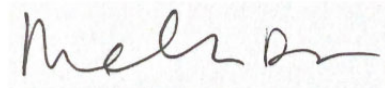
Required shielding: 0 mm lead (Pb) equivalence
 Structure is on grade.

Once the room is constructed and the x-ray equipment is operational, I can perform radiation transmission measurements to verify that the lead shielding has been installed satisfactorily. Please contact me to arrange this testing.

- Proper installation can also be verified via visual evidence such as digital photographs taken during construction which can be submitted to my email. Please contact me for more information on the details of photo verification.

If you have any questions regarding this report, or if I may be of any further assistance, please contact me at mbailey@mpcphysics.com.

Sincerely,

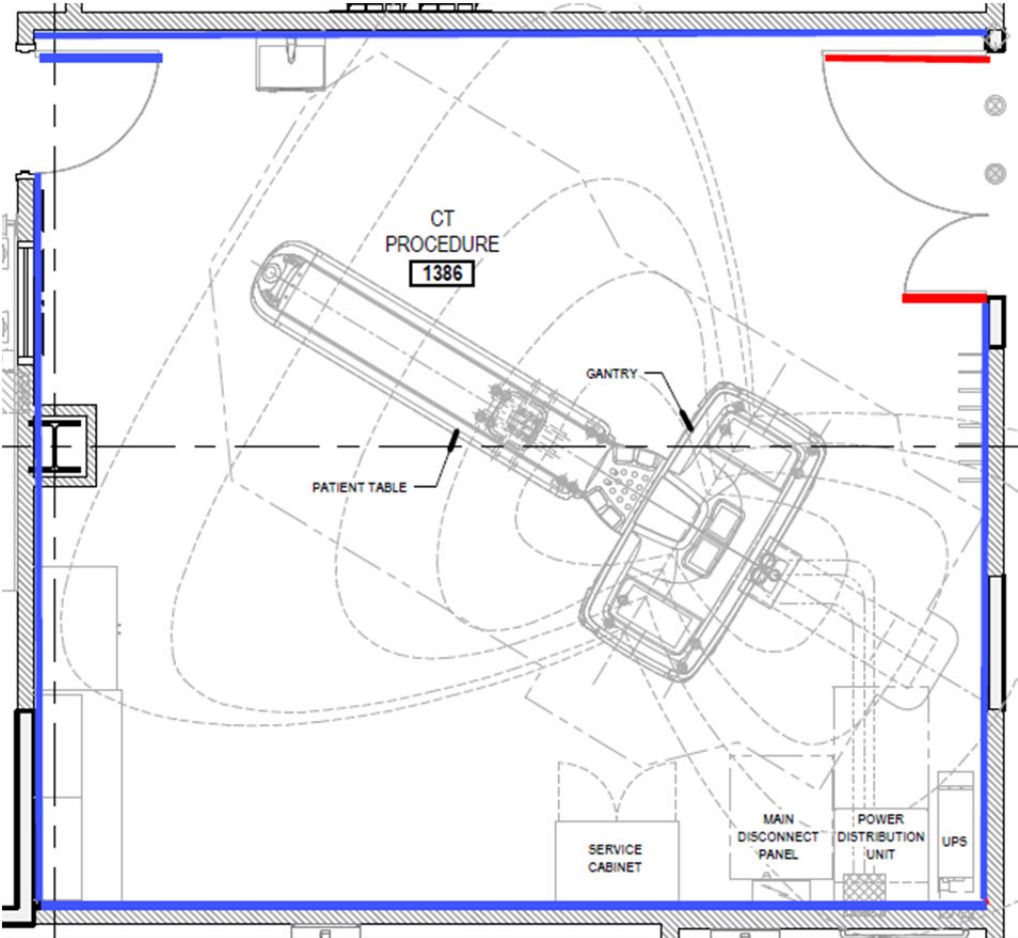


Melissa Bailey
Medical Physicist

CC: Carlos Linan, VCBO
Eric Adams, Intermountain Health

Enclosures: Thickness Drawing
Rad/Fluoro Shielding Calculations

Intermountain Park City Hospital CT Procedure Room 1386 Thickness Drawing



As Low As Reasonably Achievable (ALARA) recommendation: 1/16" for all barriers/doors —————

- 0" Pb shielding —————
- 1/32" Pb shielding —————
- 1/16" Pb shielding —————
- 3/32" Pb Shielding —————

Drawing is intended as a visual depiction of the commercially available lead thickness that meets the required specification. Other thicknesses and materials can be used provided the Pb equivalency meets/exceeds the required specifications in the report.

CT SHIELDING CALCULATIONS

Facility: **Intermountain Park City Hospital**Room: **CT Procedure 1386**Workload: **40** Head Procedures per week**120** Body Procedures per week**50** % of these procedures use contrast material (are scanned twice)Total = **240** procedures per weekTechniques: **120** kVp, for routine body work**Barrier: Control Booth**

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	100.0% Full occupancy
Distance from isocenter to barrier	4.8 m or 16 feet
Incident Scatter	1.83 mGy per week

	required thickness of lead	1.14 mm or <u>1/16</u> inch
	required thickness of standard weight concrete	10.6 cm or <u>4.2</u> inches
anticipated weekly exposure behind 1.6 mm of Pb		0.0060 mGy
anticipated weekly exposure behind 0.8 mm of Pb		0.0530 mGy

Barrier: North wall - CT

Design Exposure Rate (mGy/week)	0.05 - Occupational (2 sources)
Occupancy Factor	100.0% Full occupancy
Distance from isocenter to barrier	3.84 m or 13 feet
Incident Scatter	2.86 mGy per week

	required thickness of lead	0.97 mm or <u>1/16</u> inch
	required thickness of standard weight concrete	9.4 cm or <u>3.7</u> inches
anticipated weekly exposure behind 1.6 mm of Pb		0.0094 mGy
anticipated weekly exposure behind 0.8 mm of Pb		0.0828 mGy

Barrier: East wall - Corridor

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	20.0% Corridors, Patient rooms, Lounges, etc.
Distance from isocenter to barrier	2.94 m or 10 feet
Incident Scatter	4.87 mGy per week

	required thickness of lead	0.92 mm or <u>1/16</u> inch
	required thickness of standard weight concrete	9.0 cm or <u>3.5</u> inches
anticipated weekly exposure behind 1.6 mm of Pb		0.0032 mGy
anticipated weekly exposure behind 0.8 mm of Pb		0.0282 mGy

Barrier: South wall - Rad Room/Bathroom

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	20.0% Corridors, Patient rooms, Lounges, etc.
Distance from isocenter to barrier	3.3 m or 11 feet
Incident Scatter	3.87 mGy per week

	required thickness of lead	0.84 mm or <u>1/16</u> inch
	required thickness of standard weight concrete	8.4 cm or <u>3.3</u> inches
anticipated weekly exposure behind 1.6 mm of Pb		0.0025 mGy
anticipated weekly exposure behind 0.8 mm of Pb		0.0224 mGy

CT SHIELDING CALCULATIONS

Facility: **Intermountain Park City Hospital**Room: **CT Procedure 1386**Workload: **40** Head Procedures per week**120** Body Procedures per week**50** % of these procedures use contrast material (are scanned twice)Total = **240** procedures per weekTechniques: **120** kVp, for routine head work**Barrier: West wall - Tech Area**

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	100.0% Full occupancy
Distance from isocenter to barrier	4.8 m or 16 feet
Incident Scatter	1.83 mGy per week

required thickness of lead	1.14 mm or <u>1/16</u> inch
required thickness of standard weight concrete	10.6 cm or <u>4.2</u> inches
anticipated weekly exposure behind 1.6 mm of Pb	0.0060 mGy
anticipated weekly exposure behind 0.8 mm of Pb	0.0530 mGy

Barrier: Patient Entrance Door

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	12.5% Corridor doors, etc.
Distance from isocenter to barrier	3.9 m or 13 feet
Incident Scatter	2.77 mGy per week

required thickness of lead	0.59 mm or <u>1/32</u> inch
required thickness of standard weight concrete	6.4 cm or <u>2.5</u> inches
anticipated weekly exposure behind 0.8 mm of Pb	0.0100 mGy
anticipated weekly exposure behind 2.2 mm of steel	0.0706 mGy

Barrier: Floor

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	0.0% Unoccupiable
Distance from isocenter to barrier	4.8 m or 16 feet
Incident Scatter	1.83 mGy per week

required thickness of lead	0.00 mm or <u>0</u> inch
required thickness of standard weight concrete	0.0 cm or <u>0</u> inches
anticipated weekly exposure behind 1.6 mm of Pb	0.0000 mGy
anticipated weekly exposure behind 10.2 cm concrete	0.0000 mGy

Barrier: Ceiling- Central Sterile

Design Exposure Rate (mGy/week)	0.02 - Public
Occupancy Factor	100.0% Full occupancy
Distance from isocenter to barrier	4.35 m or 15 feet
Incident Scatter	2.23 mGy per week

required thickness of lead	1.21 mm or <u>1/16</u> inch
required thickness of standard weight concrete	11.1 cm or <u>4.4</u> inches
anticipated weekly exposure behind 1.6 mm of Pb	0.0073 mGy
anticipated weekly exposure behind 10.2 cm concrete	0.0286 mGy



November 21, 2023

Scott Walton
Imaging Manager
Intermountain Park City Hospital
900 Round Valley Drive
Park City, UT 84060

Dear Mr. Walton,

Enclosed, please find the calculations for the amount of shielding required in **Digital Fluoroscopy Room 1385 at Intermountain Park City Hospital, 900 Round Valley Drive, Park City, UT 84060**. The enclosed calculations are based on information provided and current radiation protection operational guidelines with regards to X-ray patient workloads, etc. in NCRP Report No. 147.

Installing the specified **required** shielding will reduce the exposure to less than required levels, i.e. 0.02 mSv/week (2 mrem/week) or 1 mSv/year (100 mrem/year) to members of the general public, and 0.1 mSv/week (10 mrem/week) or 5 mSv/year (500 mrem/year) to occupationally exposed employees. A narrative description of the shielding requirements and recommendations follows.

General Comments:

- Walls are to be constructed with leaded (Pb) drywall of specified thickness with the lead (Pb) extending from the floor to a height of at least seven feet. The screws/nails do NOT need to be capped with lead (Pb). All electrical outlets, switches, and other penetrations of all shielded walls are to be backed with the same thickness of lead (Pb) as the wall that they penetrate.
- The door and jamb are to be lined with the same thickness of lead (Pb) as the wall that they penetrate, unless specified otherwise. Be sure that the leaded doorframe overlaps the lead (Pb) in the gypsum drywall.
- As part of the control booth wall the patient viewing window (at least 1 sq. ft. viewable area) and windowsill must have the same lead (Pb) equivalency as the wall that they penetrate. Be sure that the leaded windowsill overlaps the lead (Pb) in the gypsum drywall. The viewing window center may not be closer than 24 inches to the booth's open edge.
- To guarantee a safe operator's position and to comply with UDWMRC regulations, the exposure switch must be located at least 39 inches (1 meter) from the end of the control barrier.
- While this is not a radiation safety issue per se, with the advent of digital imaging it has become important that the lighting in the control booth be either subdued or dimmable such that the ambient lighting can be optimized for viewing images on computer monitors.

Corporate: 214 E. Huron Street, Ann Arbor, MI 48104 (734) 662-3197 Fax: (734) 662-9224

Regional: 50 E. 91st Street, Suite 211, Indianapolis, IN 46240 (317) 581-1911 Fax: (317) 581-1931

Salt Lake City, UT  Sussex, WI  Springfield, IL

www.mpcphysics.com  mpc@mpcphysics.com

AS REQUIRED BY THE UTAH DIVISION OF WASTE MANGEMENT and RADIATION CONTROL RULE R313-28-32 PLAN REVIEW, YOU MUST SUBMIT A COPY OF THESE LETTERS AND SHIELDING CALCULATIONS TO THE EXECUTIVE SECRETARY WITHIN 14 WORKING DAYS. The address is as follows:

UTAH DIVISION OF WASTE MANGEMENT and RADIATION CONTROL
Doug Hansen, Director
P.O. Box 144880
Salt Lake City, UT 84114-4880

If you do not agree with the factors and assumptions used and find them insufficient, please contact me as my calculations may not be valid.

Keep a copy of these letters and shielding calculations on-site for as long as Digital Fluoroscopy Room 1385 at Park City Hospital is in service.

WORKLOAD Digital Fluoroscopy 1385

For a fluoroscopy room with radiographic capabilities, a workload of 260 mA-min/week fluoroscopy, 40 mA-min/week table projection X-ray and 10 mA/week chest projection X-rays was used in the following calculations. This workload is reasonably accurate for a busy fluoroscopy room.

For ALARA purposes, recommendations for thicker than required amounts of shielding are stated where deemed appropriate.

Control Booth (Wall, Window, Window Frame):

Required shielding: 0.36 mm lead (Pb) equivalence (1/32" commercially available)
Recommended shielding: 1/16" lead (Pb) equivalence

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0224 mSv/week, which is less than the 0.1 mSv/week limit for a controlled area.

North Wall: General Rad Room

Required shielding: 0.35 mm lead (Pb) equivalence (1/32" commercially available)
Recommended shielding: 1/16" lead (Pb) equivalence

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0043 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

DIGITAL FLUORO ROOM 1385 SHIELDING SPECIFICATIONS, continued**East Wall: Corridor**

Required shielding: 0.75 mm lead (Pb) equivalence (1/32" commercially available)
Recommended shielding: 1/16" lead (Pb) equivalence

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0171 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

South Wall: Corridor

Required shielding: 0.36 mm lead (Pb) equivalence (1/32" commercially available)
Recommended shielding: 1/16" lead (Pb) equivalence

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0044 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

West Wall: Tech Work Area

Required shielding: 1.3 mm lead (Pb) equivalence (1/16" commercially available)

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0096 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

Patient Entrance Door

Required shielding: 0.42 mm lead (Pb) equivalence (1/32" commercially available)
Recommended shielding: 1/16" lead (Pb) equivalence

COMMENT: Installation of the required amount of shielding will reduce the weekly exposure to approximately 0.0057 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

Ceiling: Operating Room

Required shielding: 0.49 mm lead (Pb) equivalence
Structure meets the required lead (Pb) equivalency

COMMENT: The existing construction (3.5 in light weight concrete minimum thickness) will reduce the weekly exposure to approximately 0.0053 mSv/week, which is less than the 0.02 mSv/week limit for an uncontrolled area.

DIGITAL FLUORO ROOM 1385 SHIELDING SPECIFICATIONS, continued**Floor:**

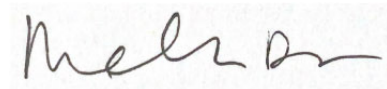
Required shielding: 0 mm lead (Pb) equivalence
Structure is on grade.

Once the room is constructed and the x-ray equipment is operational, I can perform radiation transmission measurements to verify that the lead shielding has been installed satisfactorily. Please contact me to arrange this testing.

- Proper installation can also be verified via visual evidence such as digital photographs taken during construction which can be submitted to my email. Please contact me for more information on the details of photo verification.

If you have any questions regarding this report, or if I may be of any further assistance, please contact me at m Bailey@mpcphysics.com.

Sincerely,

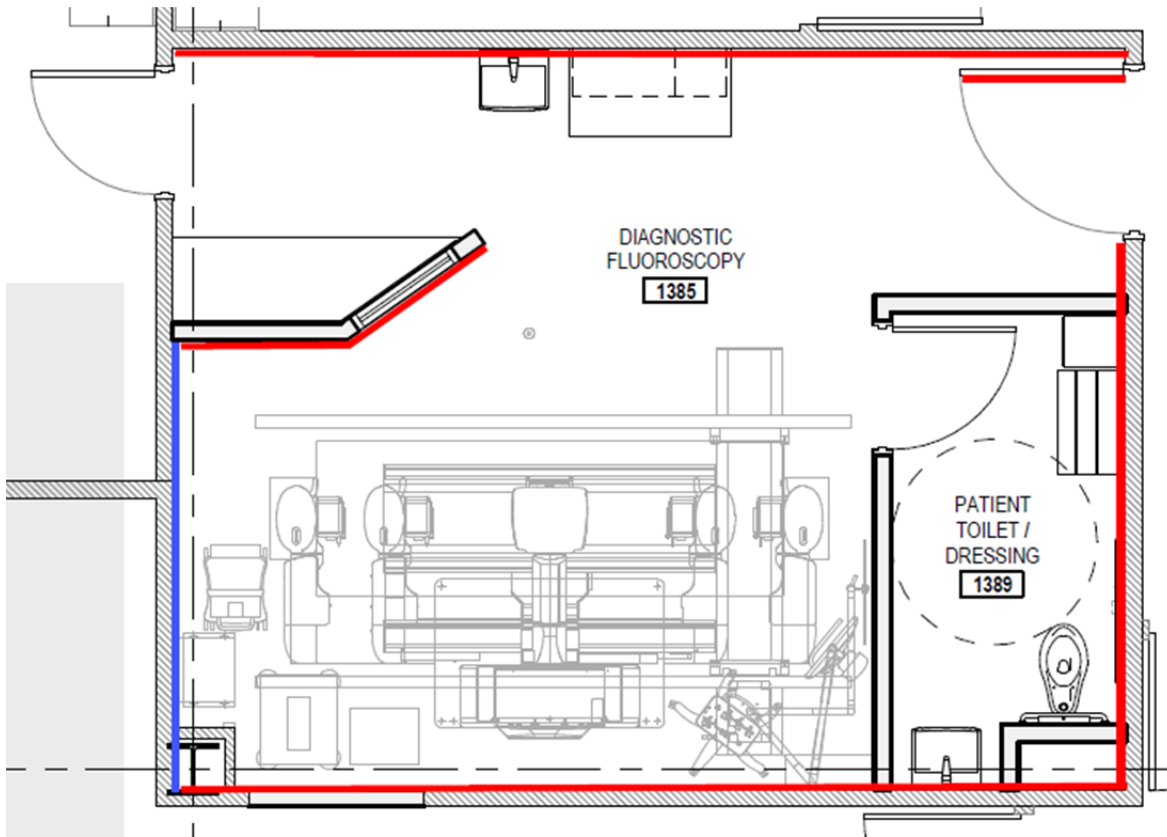


Melissa Bailey
Medical Physicist

CC: Carlos Linan, VCBO
Eric Adams, Intermountain Health

Enclosures: Thickness Drawing
Rad/Fluoro Shielding Calculations

Intermountain Park City Hospital Digital Fluoroscopy Room 1385 Thickness Drawing



As Low As Reasonably Achievable (ALARA) recommendation: 1/16" for all barriers/doors —————

- 0" Pb shielding —————
- 1/32" Pb shielding —————
- 1/16" Pb shielding —————
- 3/32" Pb Shielding —————

Drawing is intended as a visual depiction of the commercially available lead thickness that meets the required specification. Other thicknesses and materials can be used provided the Pb equivalency meets/exceeds the required specifications in the report.

Date: 11/17/2023

Account #: 9999

Facility: Intermountain Park City Hospital

Shielding Report #: -490534292

Room: Digital Fluoroscopy 1385



Physicist: Melissa Bailey

BARRIER: North- Control Booth

WorkLoad Type: R/F Room (fluoro)

Desired Radiation Level (mSv per week): 0.10 Occupational

Occupancy Factor: 100.0% Full Occupancy

Workload (table) in mA min per week: 40

Workload (chest) in mA min per week: 10

Workload (fluoro) in mA min per week: 260

Distance from table tube to barrier (meters): 2.4 or 7.9 ft

Distance from chest tube to barrier (meters): 2.4 or 7.9 ft

Distance from table patient to barrier (meters): 2.4 or 7.9 ft

Distance from chest patient to barrier (meters): 2.4 or 7.9 ft

Fluoro Field Size (sq cm): 730

% of table workload that is Primary: 0% Scatter Only

% of chest workload that is Primary: 0% Scatter Only

Total Radiation incident on barrier (mGy): 1.27

Lead shielding needed: 0.36 mm or 1/32 inch			
Concrete shielding needed: 3.18 cm or 1.3 inches			
Exposure Behind	2.8	cm gypsum =	0.4406 mSv/Week
Exposure Behind	0.8	mm lead =	0.0224 mSv/Week
Exposure Behind	1.6	mm lead =	0.0028 mSv/Week

BARRIER: North- General Rad Room

WorkLoad Type: R/F Room (fluoro)

Desired Radiation Level (mSv per week): 0.02 Public

Occupancy Factor: 50.0% Exam room, etc.

Workload (table) in mA min per week: 40

Workload (chest) in mA min per week: 10

Workload (fluoro) in mA min per week: 260

Distance from table tube to barrier (meters): 3.8 or 12.8 ft

Distance from chest tube to barrier (meters): 3.8 or 12.8 ft

Distance from table patient to barrier (meters): 3.8 or 12.8 ft

Distance from chest patient to barrier (meters): 3.8 or 12.8 ft

Fluoro Field Size (sq cm): 730

% of table workload that is Primary: 0% Scatter Only

% of chest workload that is Primary: 0% Scatter Only

Total Radiation incident on barrier (mGy): 0.48

Lead shielding needed: 0.35 mm or 1/32 inch			
Concrete shielding needed: 3.09 cm or 1.2 inches			
Exposure Behind	2.8	cm gypsum =	0.0839 mSv/Week
Exposure Behind	0.8	mm lead =	0.0043 mSv/Week
Exposure Behind	1.6	mm lead =	0.0005 mSv/Week

BARRIER: East- Corridor	WorkLoad Type: R/F Room (fluoro)
Desired Radiation Level (mSv per week):	0.02 Public
Occupancy Factor:	20.0% Corridors, Patient Rooms, Lounge, etc
Workload (table) in mA min per week:	40
Workload (chest) in mA min per week:	10
Workload (fluoro) in mA min per week:	260
Distance from table tube to barrier (meters):	3.1 or 10.2 ft
Distance from chest tube to barrier (meters):	3.1 or 10.2 ft
Distance from table patient to barrier (meters):	3.1 or 10.2 ft
Distance from chest patient to barrier (meters):	3.1 or 10.2 ft
Fluoro Field Size (sq cm):	730
% of table workload that is Primary:	0% Scatter Only
% of chest workload that is Primary:	100% Through Bucky
Total Radiation incident on barrier (mGy):	4.84

Lead shielding needed: 0.75 mm or 1/32 inch			
Concrete shielding needed: 5.84 cm or 2.3 inches			
Exposure Behind	2.8	cm gypsum =	0.3365 mSv/Week
Exposure Behind	0.8	mm lead =	0.0171 mSv/Week
Exposure Behind	1.6	mm lead =	0.0021 mSv/Week

Bucky / Image receptor attenuation of primary beam is not considered, but typically = 0.85 mm lead, or 7 cm concrete.

BARRIER: Patient Entry Door	WorkLoad Type: R/F Room (fluoro)
Desired Radiation Level (mSv per week):	0.02 Public
Occupancy Factor:	12.5% Doorway, etc.
Workload (table) in mA min per week:	40
Workload (chest) in mA min per week:	10
Workload (fluoro) in mA min per week:	260
Distance from table tube to barrier (meters):	5.5 or 18.3 ft
Distance from chest tube to barrier (meters):	4.1 or 13.5 ft
Distance from table patient to barrier (meters):	5.5 or 18.3 ft
Distance from chest patient to barrier (meters):	5.5 or 18.3 ft
Fluoro Field Size (sq cm):	730
% of table workload that is Primary:	0% Scatter Only
% of chest workload that is Primary:	100% Through Bucky
Total Radiation incident on barrier (mGy):	2.57

Lead shielding needed: 0.42 mm or 1/32 inch			
Concrete shielding needed: 3.61 cm or 1.4 inches			
Exposure Behind	0.8	mm lead =	0.0057 mSv/Week
Exposure Behind	2.2	mm steel =	0.0322 mSv/Week
Exposure Behind	2.8	mm steel =	0.0233 mSv/Week

Bucky / Image receptor attenuation of primary beam is not considered, but typically = 0.85 mm lead, or 7 cm concrete.

BARRIER: South- Corridor	WorkLoad Type: R/F Room (fluoro)
Desired Radiation Level (mSv per week):	0.02 Public
Occupancy Factor:	20.0% Corridors, Patient Rooms, Lounge, etc
Workload (table) in mA min per week:	40
Workload (chest) in mA min per week:	10
Workload (fluoro) in mA min per week:	260
Distance from table tube to barrier (meters):	2.4 or 8 ft
Distance from chest tube to barrier (meters):	2.4 or 8 ft
Distance from table patient to barrier (meters):	2.4 or 8 ft
Distance from chest patient to barrier (meters):	2.4 or 8 ft
Fluoro Field Size (sq cm):	730
% of table workload that is Primary:	0% Scatter Only
% of chest workload that is Primary:	0% Scatter Only
Total Radiation incident on barrier (mGy):	1.24

Lead shielding needed: 0.36 mm or 1/32 inch			
Concrete shielding needed: 3.14 cm or 1.2 inches			
Exposure Behind	2.8	cm gypsum =	0.0859 mSv/Week
Exposure Behind	0.8	mm lead =	0.0044 mSv/Week
Exposure Behind	1.6	mm lead =	0.0005 mSv/Week

BARRIER: West- Tech Work Area	WorkLoad Type: R/F Room (fluoro)
Desired Radiation Level (mSv per week):	0.02 Public
Occupancy Factor:	100.0% Full Occupancy
Workload (table) in mA min per week:	40
Workload (chest) in mA min per week:	10
Workload (fluoro) in mA min per week:	260
Distance from table tube to barrier (meters):	3.2 or 10.7 ft
Distance from chest tube to barrier (meters):	3.2 or 10.7 ft
Distance from table patient to barrier (meters):	3.2 or 10.7 ft
Distance from chest patient to barrier (meters):	3.2 or 10.7 ft
Fluoro Field Size (sq cm):	730
% of table workload that is Primary:	0% Scatter Only
% of chest workload that is Primary:	100% Through Bucky
Total Radiation incident on barrier (mGy):	4.4

Lead shielding needed: 1.30 mm or 1/16 inch			
Concrete shielding needed: 9.42 cm or 3.7 inches			
Exposure Behind	2.8	cm gypsum =	1.5290 mSv/Week
Exposure Behind	0.8	mm lead =	0.0779 mSv/Week
Exposure Behind	1.6	mm lead =	0.0096 mSv/Week

Bucky / Image receptor attenuation of primary beam is not considered, but typically = 0.85 mm lead, or 7 cm concrete.

BARRIER: Floor WorkLoad Type: R/F Room (fluoro)

Desired Radiation Level (mSv per week): 0.02 Public

Occupancy Factor: 0.0% Unoccupiable

Workload (table) in mA min per week: 40

Workload (chest) in mA min per week: 10

Workload (fluoro) in mA min per week: 260

Distance from table tube to barrier (meters): 5.1 or 17 ft

Distance from chest tube to barrier (meters): 4.8 or 16 ft

Distance from table patient to barrier (meters): 4.2 or 14 ft

Distance from chest patient to barrier (meters): 4.8 or 16 ft

Fluoro Field Size (sq cm): 730

% of table workload that is Primary: 0% Scatter Only

% of chest workload that is Primary: 0% Scatter Only

Total Radiation incident on barrier (mGy): 0.4

Lead shielding needed: 0.00 mm or 0 inch			
Concrete shielding needed: 0.00 cm or 0.0 inches			
Exposure Behind	2.8	cm gypsum = 0.0000	mSv/Week
Exposure Behind	0.8	mm lead = 0.0000	mSv/Week
Exposure Behind	1.6	mm lead = 0.0000	mSv/Week

BARRIER: Ceiling- Operating Room WorkLoad Type: R/F Room (fluoro)

Desired Radiation Level (mSv per week): 0.02 Public

Occupancy Factor: 100.0% Full Occupancy

Workload (table) in mA min per week: 40

Workload (chest) in mA min per week: 10

Workload (fluoro) in mA min per week: 260

Distance from table tube to barrier (meters): 3.3 or 11 ft

Distance from chest tube to barrier (meters): 3.6 or 12 ft

Distance from table patient to barrier (meters): 4.2 or 14 ft

Distance from chest patient to barrier (meters): 3.9 or 13 ft

Fluoro Field Size (sq cm): 730

% of table workload that is Primary: 0% Scatter Only

% of chest workload that is Primary: 0% Scatter Only

Total Radiation incident on barrier (mGy): 0.41

Lead shielding needed: 0.49 mm or 1/32 inch			
Concrete shielding needed: 4.08 cm or 1.6 inches			
Exposure Behind	6.9	cm concrete = 0.0053	mSv/Week
Exposure Behind	0.8	mm lead = 0.0073	mSv/Week
Exposure Behind	1.6	mm lead = 0.0009	mSv/Week