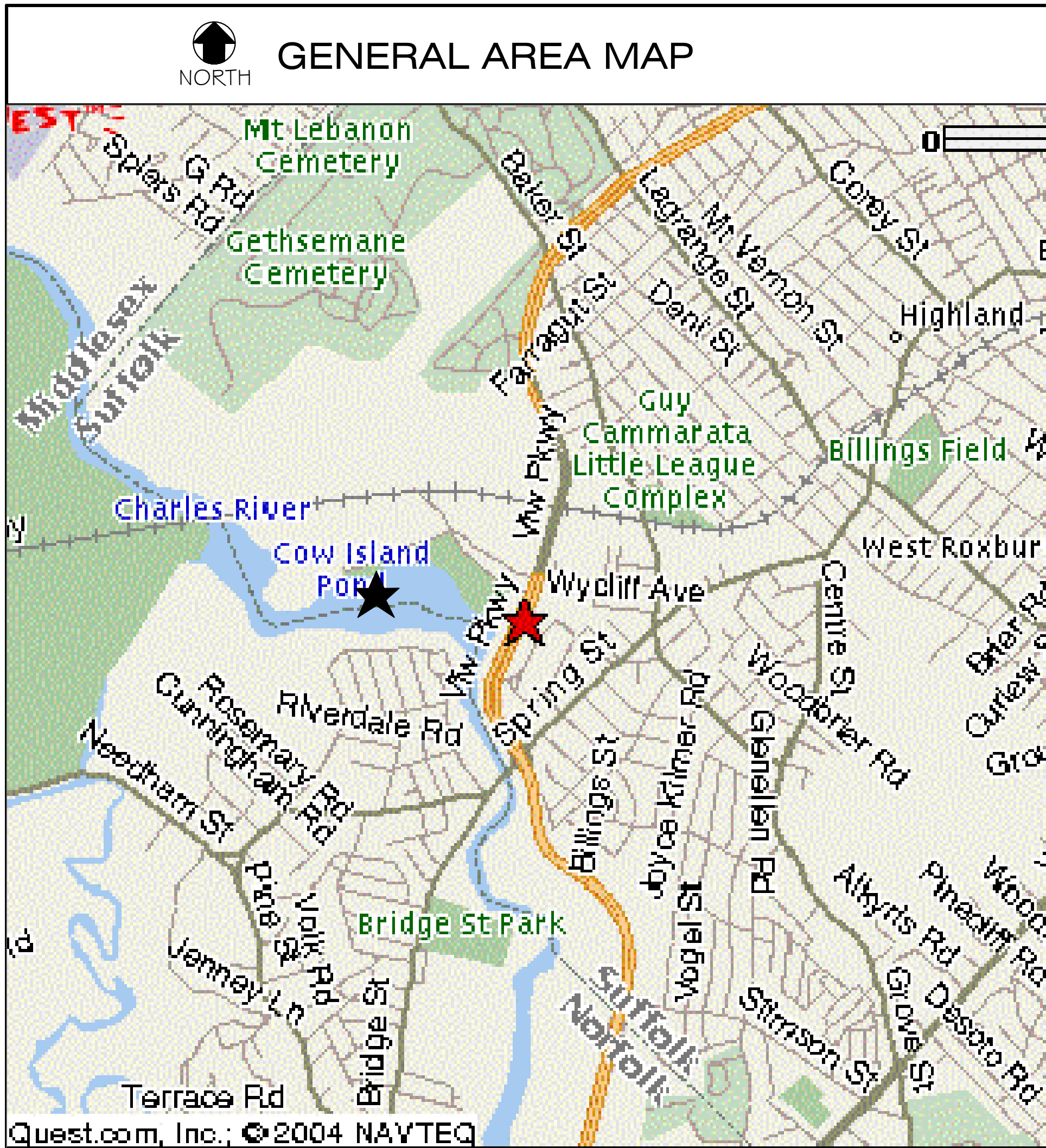
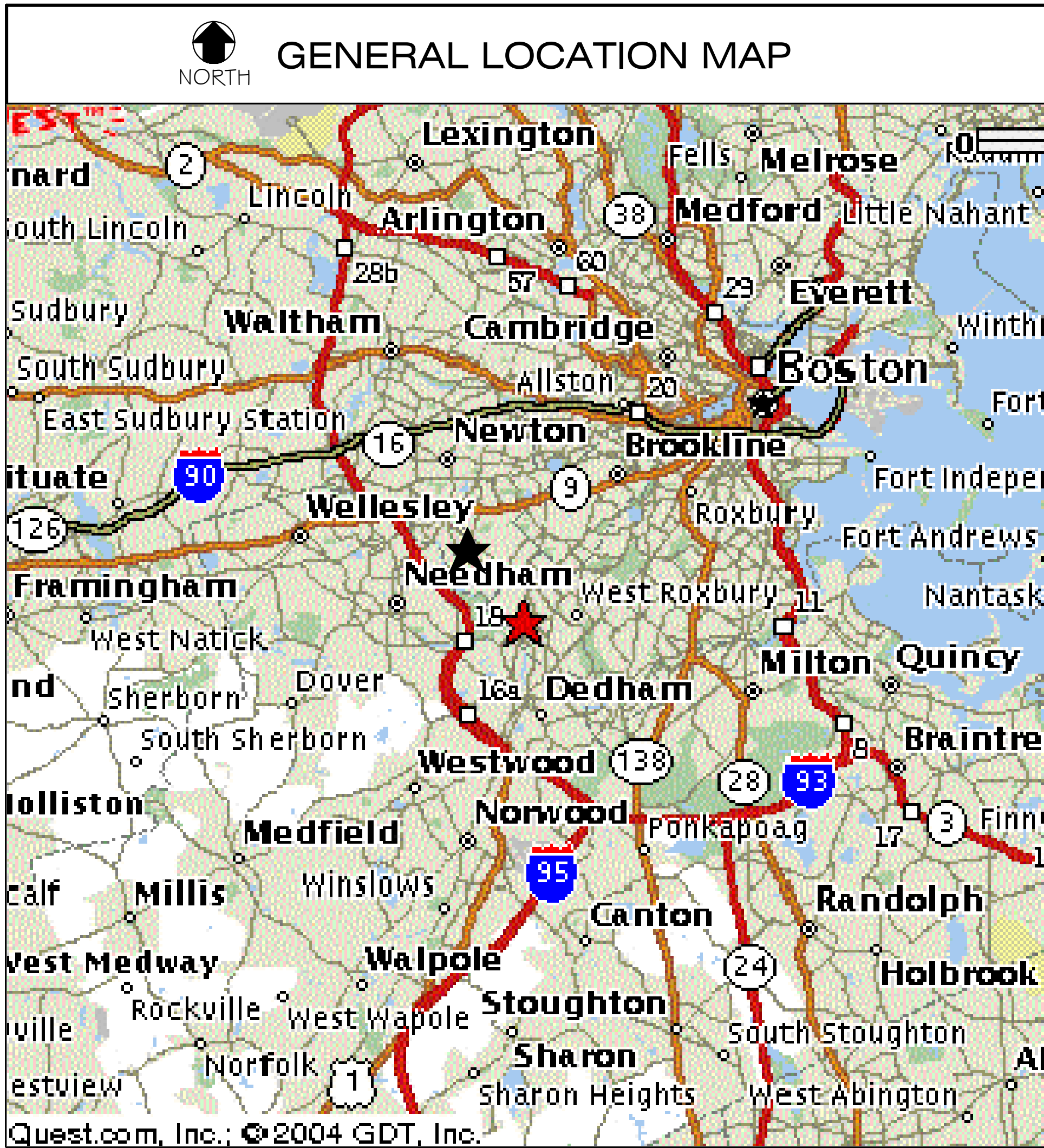




R&F EQUIPMENT REPLACEMENT
PHILIPS ProxiDiagnost N90
WEST ROXBURY VA MEDICAL CENTER
X-RAY ROOM #4 1B-117, BUILDING 1

1400 VFW PARKWAY
WEST ROXBURY, MASSACHUSETTS 02132



PROJECT TEAM:

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3000 MINUTEMAN ROAD
ANDOVER, MA 01810-1099
Service Mgr: Matthew Caron
Phone: (978) 502-6571
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ELECTRICAL
ENGINEERING

 **CONSTRUCTION**
Technology Group, Inc.
2605 N. AIRPORT ROAD
PLANT CITY, FLORIDA 33563
PHONE 813-752-2959
FAX 813-757-6186

INDEX TO DRAWINGS	
SHEET NO.	DESCRIPTION
COVER	KEY PLAN, LOCATION MAP, ABBREVIATIONS, CODES, DESIGN CRITERIA
A-1	BUILDING 1, 1st FLOOR ORIENTATION / REFERENCE PLAN
A-2	DUSTPROOF PARTITION, ILSM PLAN, ICRA PLAN
A-3	DEMOLITION PLAN, DEMOLITION CEILING PLAN
A-4	CONSTRUCTION PLAN, REFLECTED CEILING PLAN
A-5	MEDICAL EQUIPMENT PLAN
A-6	INTERIOR ELEVATIONS
A-7	DOOR, FINISH, MATERIAL / COLOR SCHEDULES, PENETRATION DETAILS
A-8	ARCHITECTURAL SPECIFICATIONS
E-100	ELECTRICAL LEGEND AND NOTES
E-101	KEY PLAN AND NOTES
E-200	LIGHTING PLAN AND FIXTURE SCHEDULE
E-201	POWER PLAN AND NOTES
E-300	REFERENCED VENDOR DRAWINGS
E-400	POWER RISER DIAGRAM AND SCHEDULES
E-500	ELECTRICAL SPECIFICATIONS
ATTACHED TO THESE DOCUMENTS ARE TWENTY-SIX (26) SHEETS, PROJECT NUMBER N-EAS240136B, REVISION B DATED 10-17-2024 OF DRAWINGS PREPARED BY PHILIPS. THESE DRAWINGS PROVIDE DETAILED INFORMATION CONCERNING SITE PREPARATION FOR THEIR X-RAY IMAGING SYSTEM. USE OF THESE DRAWINGS IS REQUIRED FOR REFERENCE AND FOR ADDITIONAL DETAILED INFORMATION.	

ABBREVIATIONS			
AFF. AL.	ABOVE FINISH FLOOR ALUMINUM	MECH. MFR.	MECHANICAL MANUFACTURER
B.O. BD. BLDG. BLK.	BY OTHERS BOARD BUILDING BLOCK	MIN. MISC. M.O. MTL.	MINIMUM MISCELLANEOUS MASONRY OPENING METAL
C.G. C.J. CLG. CONT.	CORNER GUARD CONTROL JOINT CEILING CONTINUOUS	N/A N.E.G. N.T.S.	NOT APPLICABLE NATIONAL ELECTRIC CODE NOT TO SCALE
DIA. DR. D.S.	DIAMETER DOOR DOWNSPOUT	O.C. O.D. OPNG.	ON CENTER OUTSIDE DIAMETER OPENING
ELEC. ELEV. EQ.	ELECTRIC ELEVATION EQUAL	PL. PLAS. LAM. PLYND.	PLATE PLASTIC LAMINATE PLYWOOD
ENC. EXH. EXT.	EXHAUST EXTERIOR	REINF. REQ'D. REV. R.O.	REINFORCING REQUIRED REVISION ROOM ROUGH OPENING
F.D. F.E. FL.	FLOOR DRAIN FIRE EXTINGUISHER FLOOR	S.F. SPEC. SS.	SQUARE FEET SPECIFICATION STAINLESS STEEL
GA. G.C. GL. GYP. BD.	GAUGE GENERAL CONTRACTOR GLASS GYPSUM BOARD	STD. STL. SUSP.	STANDARD STEEL SUSPENDED
H.C. HDWL. H.M. HORIZ.	HANDICAP HARDWARE HOLLOW METAL HORIZONTAL	TEL. T.O.S. TYP.	TELEPHONE TOP OF STEEL TYPICAL
I.D. INSUL. INT.	INSIDE DIAMETER INSULATION INTERIOR	VERT. V.T. V.W.C.	VERTICAL VINYL TILE VINYL WALL COVERING
MATL.	MATERIAL	W/ W.W.F. WD.	WITH WELDED WIRE FABRIC WOOD
CODES			
HTTPS://WWW.CFM.VA.GOV/TIL/SPEC.ASP - MASTER CONSTRUCTION SPECIFICATIONS (PG-18-1)			
NFPA 13 - STANDARD for the INSTALLATION of SPRINKLER SYSTEMS, 2022 EDITION			
NFPA 70 - NATIONAL ELECTRIC CODE, 2023 EDITION			
NFPA 90A - STANDARD for the INSTALLATION of AIR-CONDITIONING and VENTILATING SYSTEMS, 2024 EDITION			
NFPA 99 - STANDARDS FOR HEALTH CARE FACILITIES, 2021 EDITION			
NFPA 101 - LIFE SAFETY CODE, 2021 EDITION			
NFPA NATIONAL FIRE CODES (EXCEPT NFPA 5000 NFPA 900)			
INTERNATIONAL BUILDING CODE, 2021 EDITION			
INTERNATIONAL MECHANICAL CODE, 2021 EDITION			
INTERNATIONAL PLUMBING CODE, 2021 EDITION			
FBI GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITALS 2022 EDITION			
ARCHITECTURAL BARRIERS ACT ACCESSIBILITY STANDARDS (ABAAS) WITH VA SUPPLEMENT, BARRIER FREE DESIGN GUIDE PG-18-13			
SEISMIC CATEGORY PER H-18-8 "LOW", JULY 2023			
DESIGN CRITERIA			
OCCUPANCY CLASSIFICATION - HEALTH CARE OCCUPANCY, INSTITUTIONAL GROUP 1-2			
CONSTRUCTION TYPE - TYPE II (222) - PROTECTED, AUTOMATIC SPRINKLER SYSTEM, 4 OR MORE STORIES			
MAXIMUM TRAVEL DISTANCE TO AN EXIT - 200 FEET			
MAXIMUM DEAD END CORRIDOR LENGTH - 30 FEET			
MINIMUM OCCUPANT LOAD: NO CHANGES			
MEANS OF EGRESS NO CHANGES			
EXIT WIDTH REQUIRED NO CHANGES			
NOTE: NO ADDITIONAL SQUARE FOOTAGE IS BEING ADDED NO ADDITIONAL BEDS ARE BEING ADDED OCCUPANCY CLASSIFICATION IS NOT BEING CHANGED HAZARD RATING IS NOT BEING CHANGED SMOKE AND FIRE ZONES ARE NOT BEING CHANGED OR EFFECTED			
PERMITTING			
VA MEDICAL CENTER VA BOSTON HEALTHCARE SYSTEM, WEST ROXBURY CAMPUS ENGINEERING SERVICE 1400 V.F.W. PARKWAY WEST ROXBURY, MA 02132			
SCOPE OF WORK			
THE GENERAL SCOPE OF WORK INCLUDES ALL GENERAL TRADES, MECHANICAL AND ELECTRICAL WORK TO ALTER EXISTING X-RAY ROOM (4) 1B-117 ON THE 1st FLOOR BUILDING 1 AT THE VA MEDICAL CENTER, WEST ROXBURY, MASSACHUSETTS FOR NEW PHILIPS MEDICAL SYSTEMS X-RAY EQUIPMENT. THERE ARE NO CHANGES TO OCCUPANCY CLASSIFICATION, BUILDING AREA, FIRE OR SMOKE COMPARTMENTS, OR MEANS OF EGRESS.			

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MASSACHUSETTS NO. 30331



R&F EQUIPMENT REPLACEMENT
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X-RAY ROOM #4 1B-117, BUILDING 1

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ISSUED FOR:	DATE:
☐ VA REVIEW	11/01/24
☐ REVIEW	09/30/24
☐ BIDDING	
☐ PERMIT	
☒ CONSTRUCTION	12/16/24

SHEET TITLE

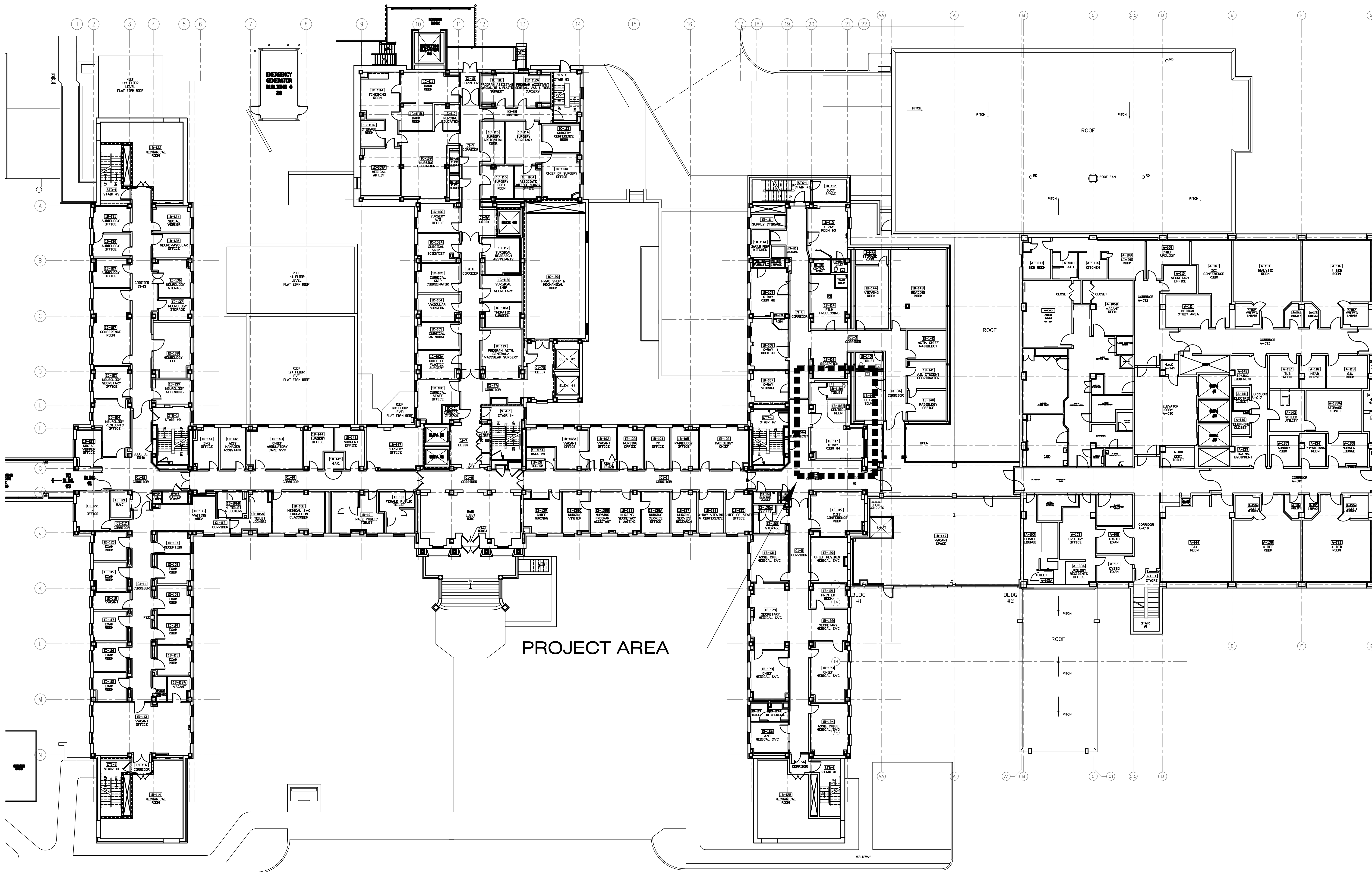
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DATE: SEPT. 30, 2024

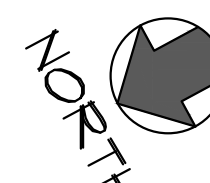
PROJECT NO: 0824-04

SHEET NO:

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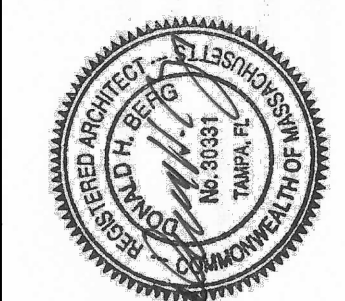
PROJECT AREA



ORIENTATION / REFERENCE BUILDING 1, 1st FLOOR PLAN

SCALE
1/16" = 1'-0"

1



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SHEET TITLE
**ORIENTATION
& REF PLAN**

DATE
SEPT. 30, 2024
PROJECT NO.
0824-04

SHEET NO.

A-1

DUSTPROOF PARTITION

SCALE
3/4" = 1'-0"

1

ILSM PLAN

SCALE
$3/32" = 1'-0"$

2

ICRA PLAN

SCALE
1/4" = 1'-0"

3

- DUST CONTROL NOTES:**

 1. FILTRATION MACHINE SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE AND MEET THE FOLLOWING:
 - PORTABLE FILTRATION AIR MACHINE WITH PRIMARY FILTER, SECONDARY FILTER AND HEPA FILTER; 2-SPEED AND 12" INTAKE COLLAR.
 - FILTER AND RECIRCULATE AIR 6 TIMES PER HOUR.
 - COVER NEGATIVE AIR MACHINE INLET WITH CARBON FILTER.
 - FILTRATION AIR MUST BE RECIRCULATED WITHIN ROOM.
 - 2. GLUE EVERY DUCT WITH 6-MIL POLYETHYLENE AND SEAL WITH DUCT TAPE (NOT SHOWN).

-  DUST PARTITION NOTES:
- AA - DUSTPROOF PARTITION WITH 36" ACCESS OPENING - SEE
DETAIL IA-2 ABOVE.
- BB - WALK-OFF STICKY MATS (24" x 36") ON BOTH SIDES OF
DOOR.

INSTRUCTIONS - INFECTION CONTROL RISK ASSESSMENT

BASED UPON THE TYPE OF CONSTRUCTION ACTIVITY IT IS THE ARCHITECT'S OPINION THAT THE REQUIRED INFECTION CONTROL PRECAUTIONS WILL BE TYPE B, CLASS II.

CLASS II REQUIREMENTS DURING CONSTRUCTION ARE:

1. PROVIDE ACTIVE MEANS TO PREVENT AIRBORNE DUST FROM DISPERSING INTO ATMOSPHERE.
2. WATER MIST WORK SURFACES TO CONTROL DUST WHILE CUTTING.
3. SEAL UNUSED DOORS WITH DUCT TAPE.
4. BLOCK OFF AND SEAL AIR VENTS.
5. PLACE DUCT MAT AT ENTRANCE AND EXIT OF WORK AREA.
6. REMOVE OR ISOLATE HVAC SYSTEM IN AREAS WHERE WORK IS BEING PERFORMED.

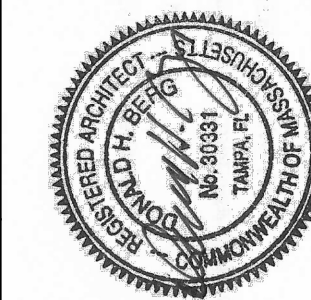
CLASS II REQUIREMENTS UPON COMPLETION OF PROJECT ARE:

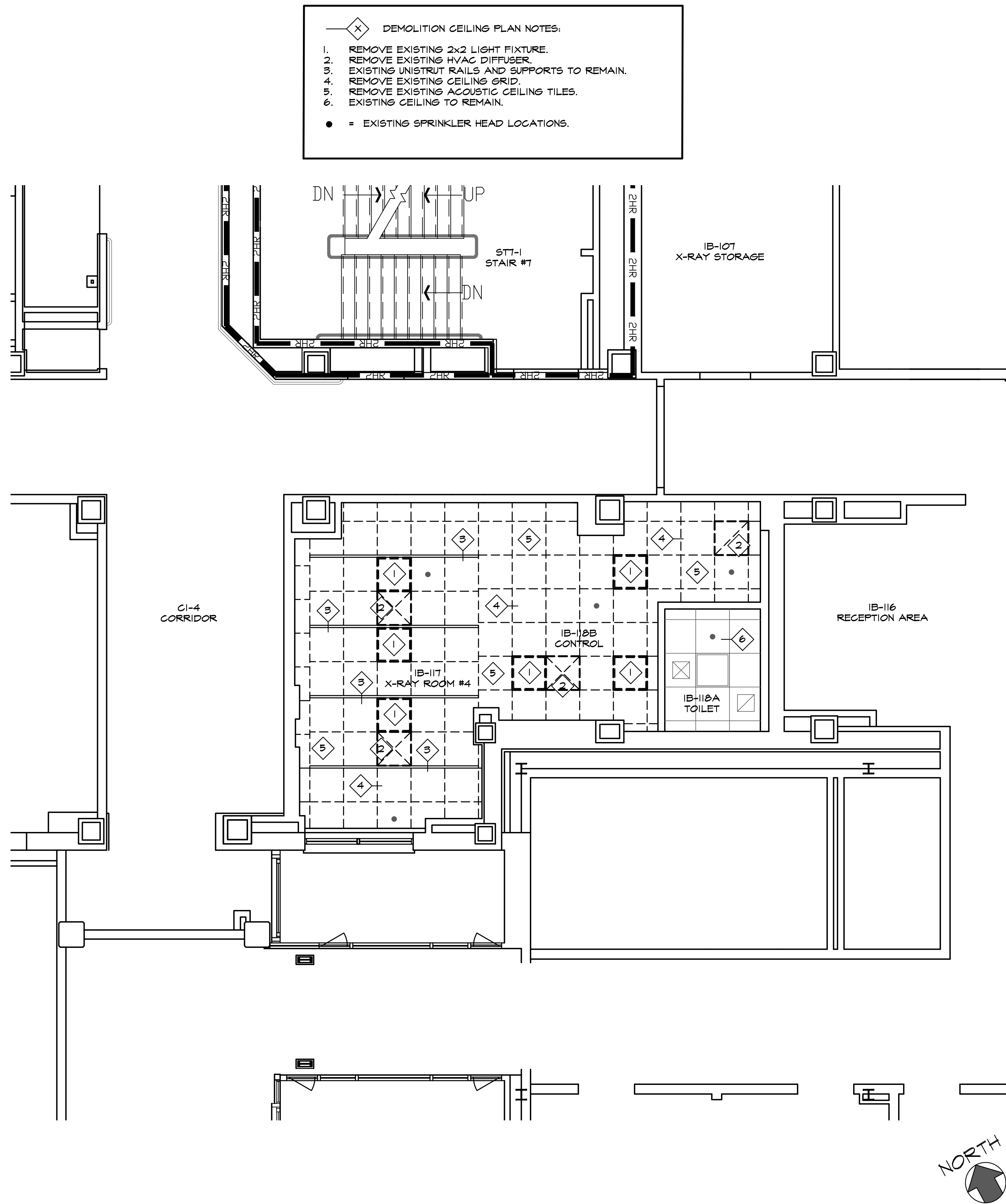
1. WIPE WORK SURFACES WITH DISINFECTANT.
2. CONTAIN CONSTRUCTION WASTE BEFORE TRANSPORT IN TIGHTLY COVERED CONTAINERS.
3. WET MOP AND/OR VACUUM WITH HEPA FILTERED VACUUM BEFORE LEAVING WORK AREA.
4. REMOVE ISOLATION OF HVAC SYSTEM IN AREAS WHERE WORK IS BEING PERFORMED.

NOTE: ALTHOUGH DUSTPROOF PARTITIONS ARE SHOWN ON THESE DRAWINGS, IT IS THE ARCHITECT'S INTENTION THAT ISSUES RELATING TO DEMOLITION, NOISE, CONSTRUCTION DISRUPTIONS TO THE HOSPITAL, HOURS OF WORK FOR SPECIFIC TASKS, ETC. BE DISCUSSED AND RESOLVED DURING THE PRE-CONSTRUCTION MEETING.

SEQUENCE FOR ILSM / ICRA PLAN:

2. INSTALL DUSTPROOF BARRIER IN AREAS WHERE SHOWN.
3. INSTALL WALK-OFF MATS AND HEPA AIR MACHINES VENTED INTO DEDICATED EXHAUST DUCT. CORRIDOR FLOORS WILL BE MOFFED CLEAN DAILY TO REMOVE ANY DUST GENERATED BY THE WORK. NOTE - WALK-OFF MATS AND HEPA AIR MACHINES WILL BE INSPECTED AND MAINTAINED BY THE FIELD SUPERVISOR ON A DAILY BASIS.
4. ALL SIGNS AT ALL SITES AND AT ALL CONSTRUCTION SITES (I.E. DUST NOT ENTER - CONSTRUCTION EMERGENCY CALL NUMBERS, OSHA POSTERS, ETC.)
5. ITEMS 1 - 3 WILL BE INSPECTED AND ACCEPTED BY THE HOSPITAL SAFETY AND INFECTION CONTROL STAFF PRIOR TO DEMOLITION. DEMOLITION AND CONSTRUCTION CAN COMMENCE ONCE THE ABOVE ITEMS ARE COMPLETE AND ACCEPTED BY THE HOSPITAL. ITEMS 1 - 3 WILL BE INSPECTED ON A DAILY BASIS BY THE FIELD SUPERVISOR.

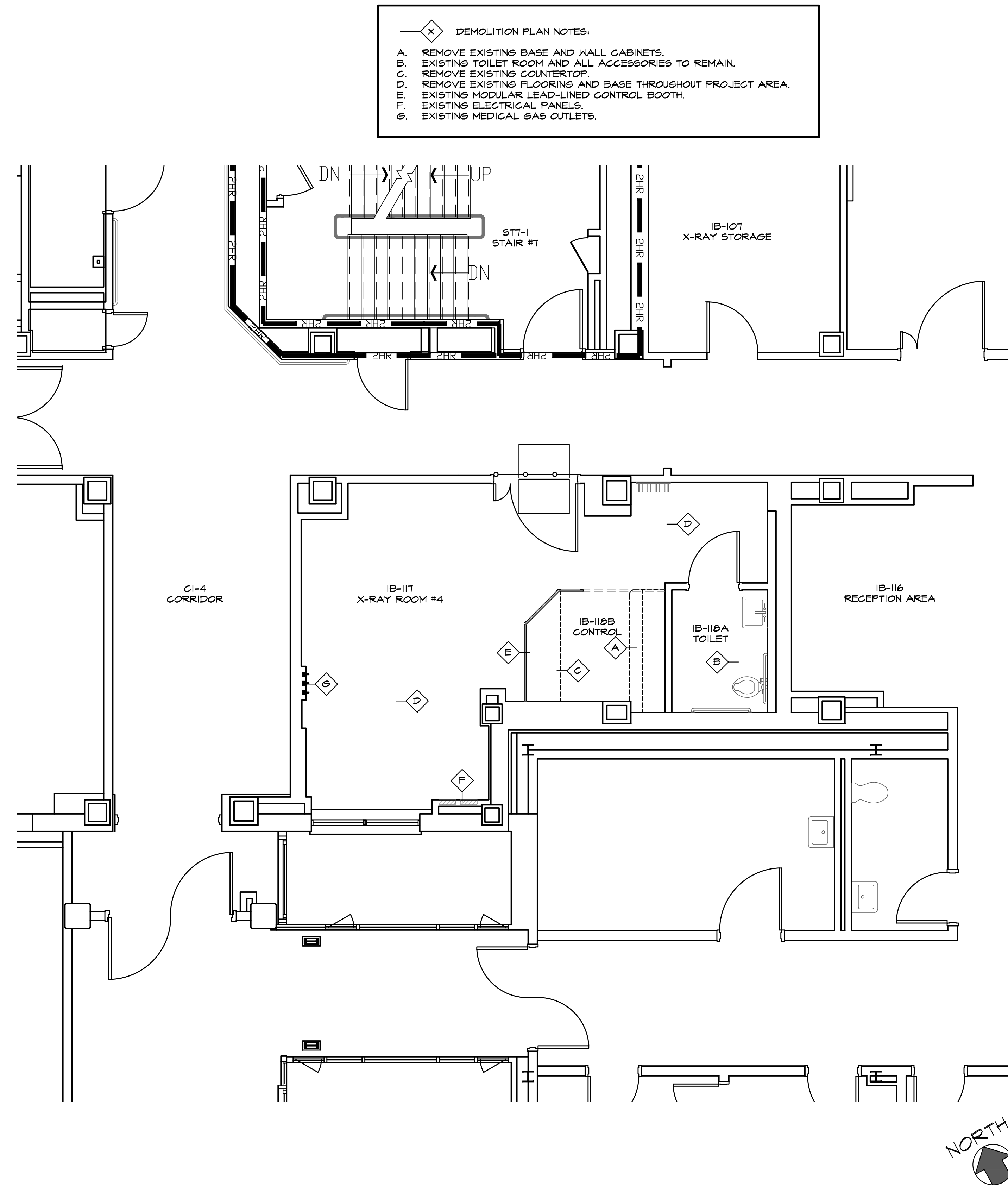




DEMOLITION CEILING PLAN

SCALE
1/4" = 1'-0"

1



DEMOLITION FLOOR PLAN

SCALE
1/4" = 1'-0"

2

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SHEET TITLE
DEMO FLOOR
& CEILING
PLANS

DATE
SEPT. 30, 2024

PROJECT NO.
0824-04

SHEET NO.

A-3

CEILING LEGEND

PHILIPS EQUIPMENT
SUPPORT RAILS SHOWN
FOR COORDINATION

EXISTING UNISTRUT
TO REMAIN

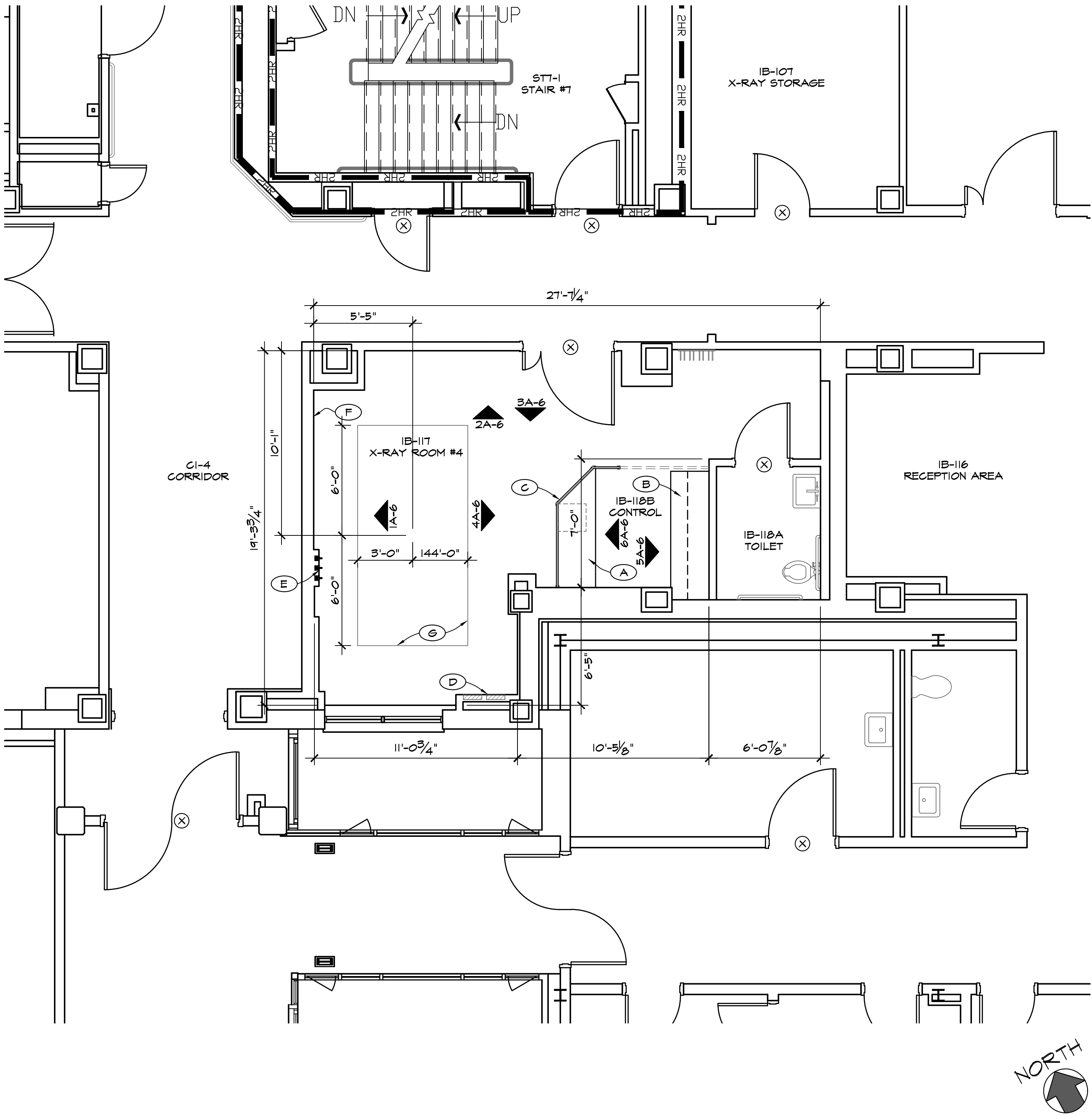
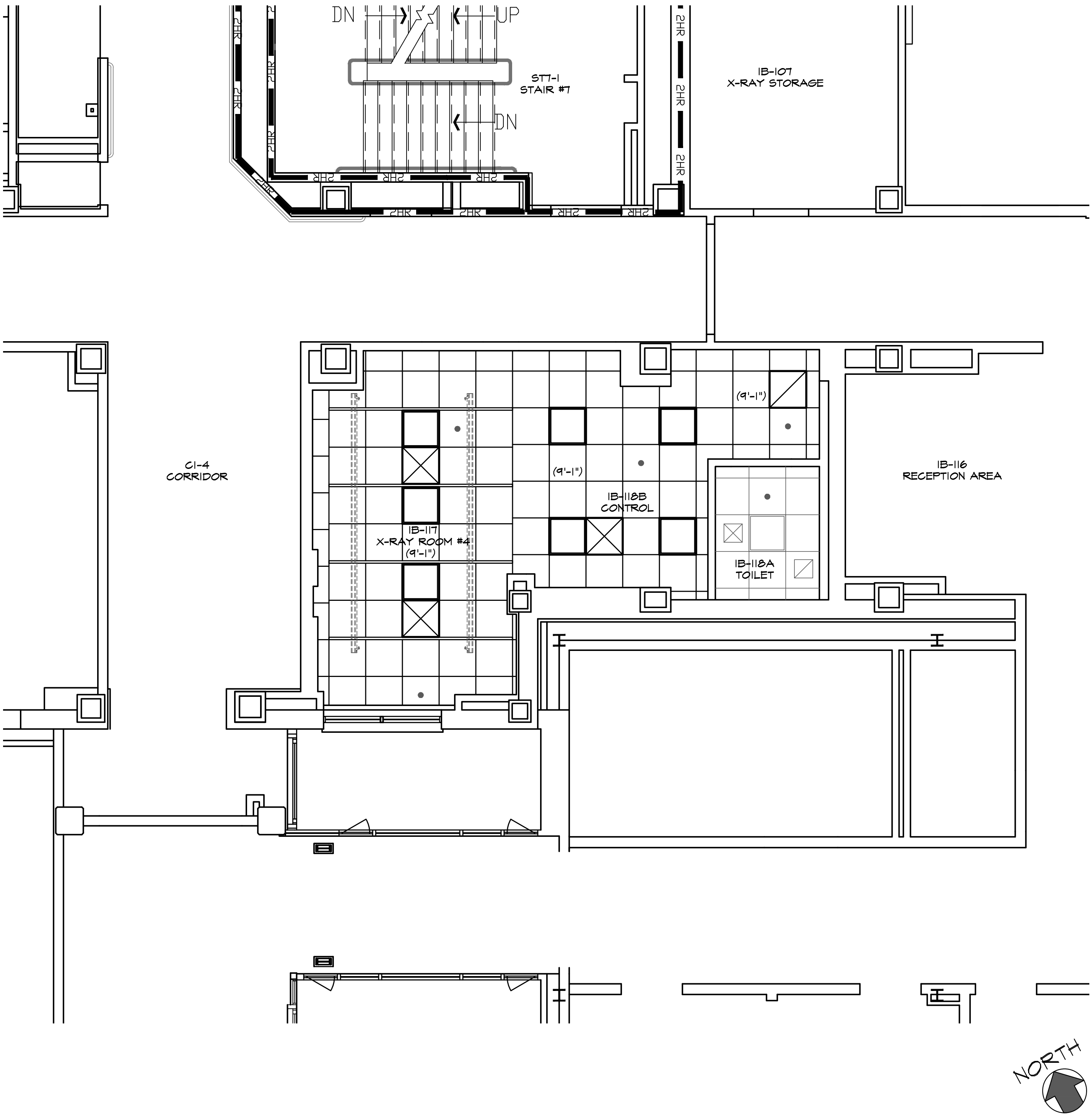
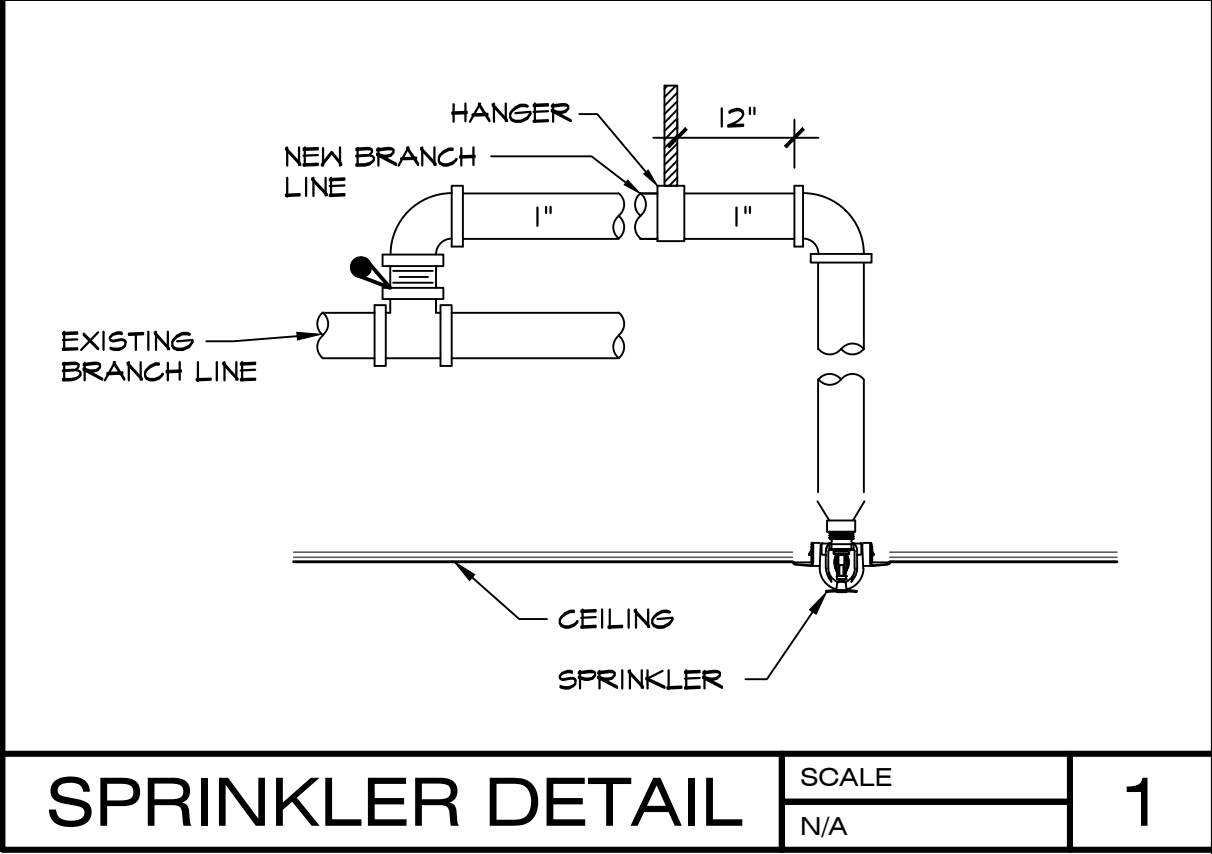
NEW 2x2 LED LIGHT FIXTURE

NEW HVAC SUPPLY DIFFUSER

NEW HVAC RETURN DIFFUSER

SPRINKLER HEAD

NOTE: EXISTING CEILING HEIGHT = 9'-1"



CONSTRUCTION PLAN NOTES:

A. NEW SOLID SURFACE COUNTERTOP WITH 18"x18"x3/4" PLASTIC LAMINATE SHELF BELOW WALL TROUGH.

B. NEW BASE AND WALL CABINETS - MIDMARK SYNTHESIS CASEWORK - VERIFY WALL BLOCKING IS SUFFICIENT FOR PROPER ANCHORAGE / SUPPORT.

C. EXISTING MODULAR LEAD-LINED CONTROL BOOTH PARTITIONS.

D. EXISTING ELECTRIC PANELS.

E. EXISTING MEDICAL GAS OUTLETS.

F. PATCH, REPAIR AND REPAINT GYPSUM BOARD AFTER CONDUIT AND FURRING ARE REMOVED.

G. ACCENT FLOOR COLOR - SEE SHEET A-7.

⊗ = EXISTING DOOR & FRAME TO REMAIN AS IS

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SHEET TITLE

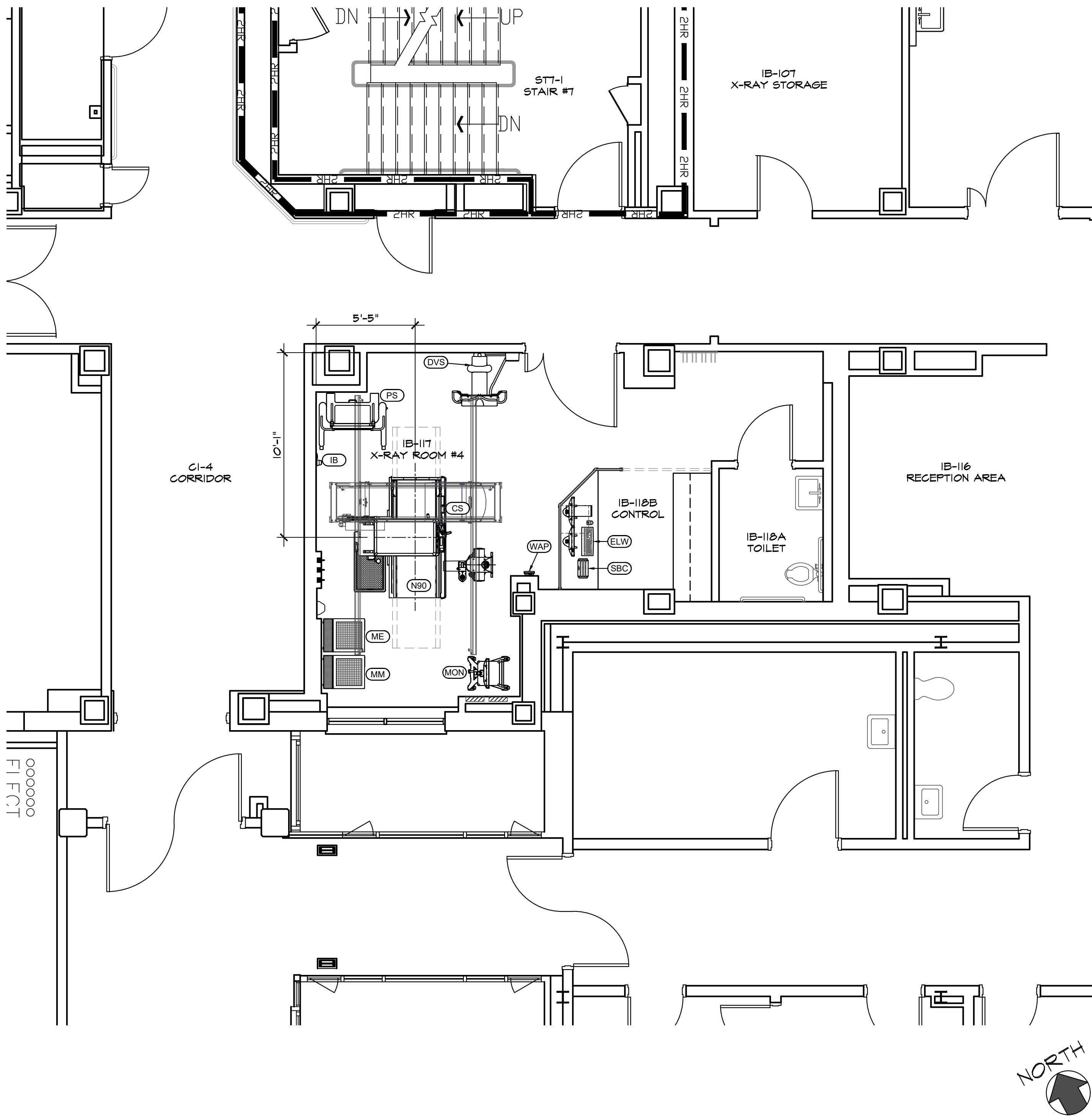
CONSTRUCTION & CEILING PLANS

DATE
SEPT. 30, 2024

PROJECT NO.
0824-04

SHEET NO.
A-4

Equipment Legend				
A Furnished and installed by Philips B Furnished by customer/contractor and installed by customer/contractor C Installed by customer/contractor D Furnished by Philips and installed by contractor E Existing F Future G Optional item furnished by Philips				
	Equipment Designation		Detail Sheet	
	Description	Weight (lbs)	Heat Load (btu/hr)	
A	(N90) ProxiDiagnost N90	3527	1920	AD2
A	(ME) Velara Generator Cabinet (40E Rack)	522	2730	AD3
A	(MM) Geometry Cabinet (40E Rack)	214	1024	AD3
A	(MON) Single LCD Trolley/Cart	68	205	AD4
A	(ELW) Eleva Workspot - Touchscreen Color LCD - Color LCD - Computer (on shelf under counter) - Uninterruptible Power Supply (on shelf under counter) - Keyboard and Mouse	97	682	AD4
A	(WAP) Wi-Fi Access Point	2	--	AD4
A	(SBC) SkyPlate Battery Charger	2	--	AD4
A	(CS) CSM3 Long	879	444	AD2
A	(DVS) BuckyDiagnost VS Digital Tilttable (Right)	618	956	AD3
A	(IB) Indication Box	2	35	AD4
A	(PS) Patient Support	154	--	



MEDICAL EQUIPMENT FLOOR PLAN

SCALE
1/4" = 1'-0"



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REVISIONS	

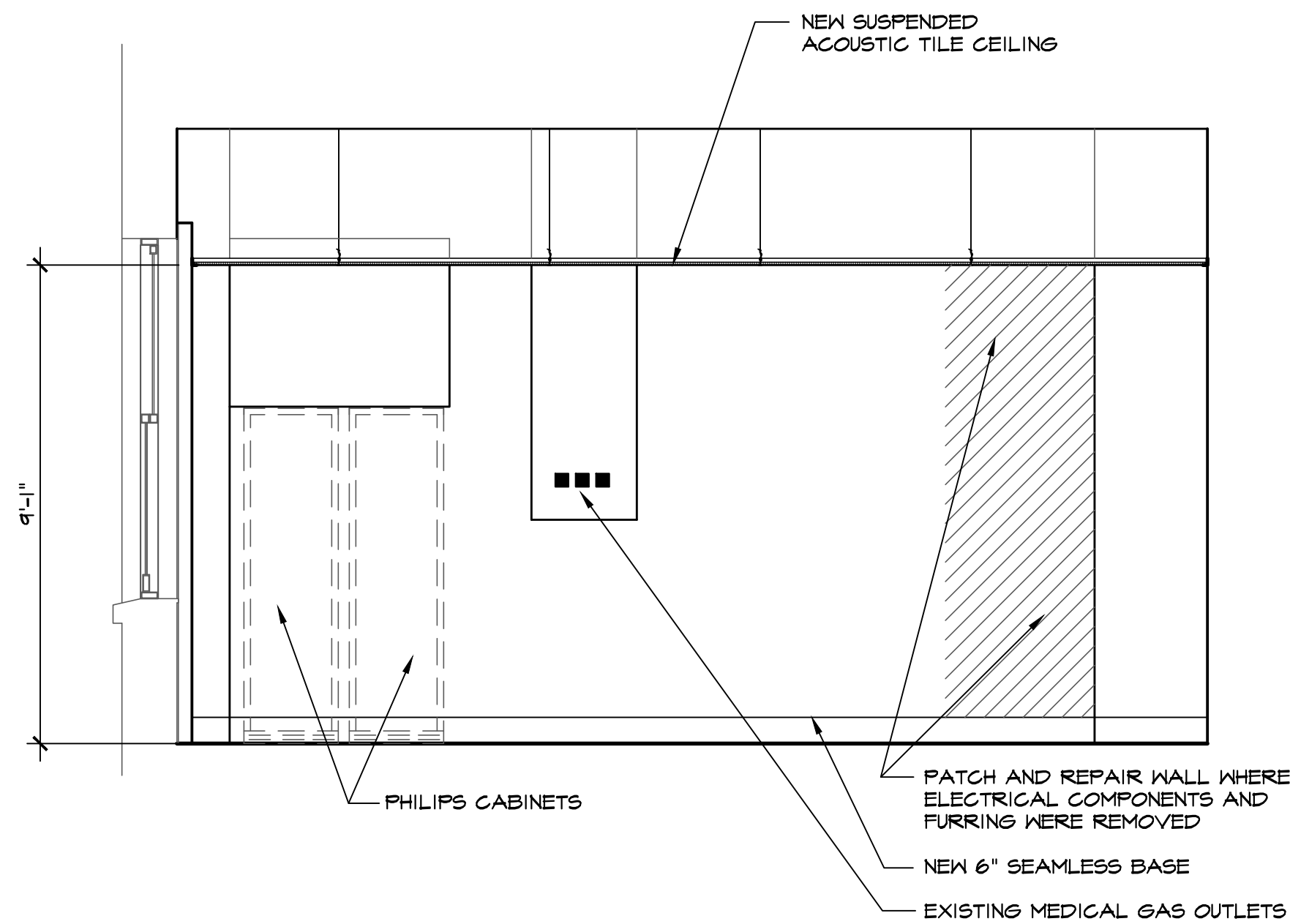
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SHEET TITLE
MEDICAL EQUIPMENT FLOOR PLAN

DATE
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PROJECT NO.
0824-04

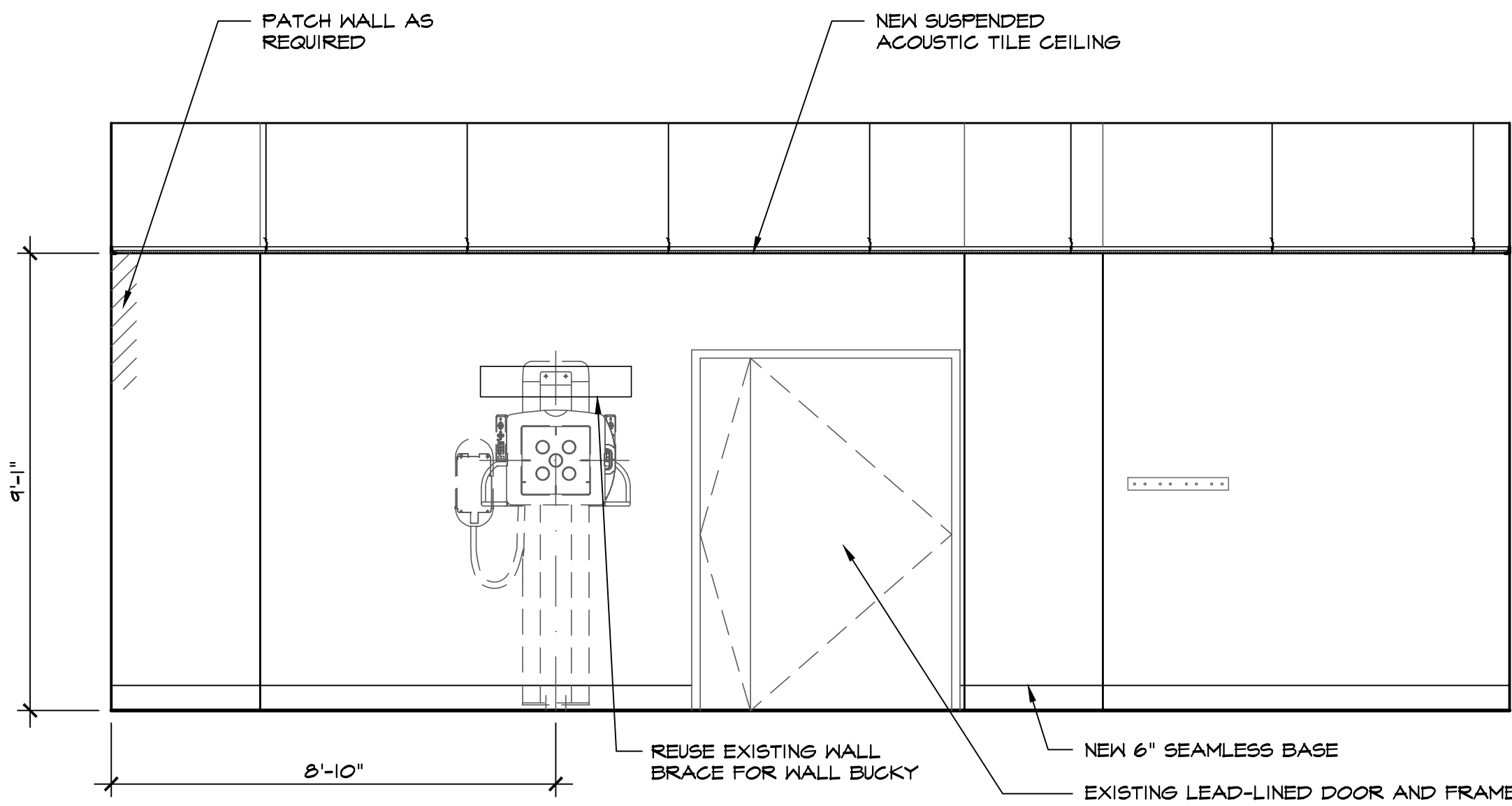
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INTERIOR ELEVATION

SCALE
3/8" = 1'-0"

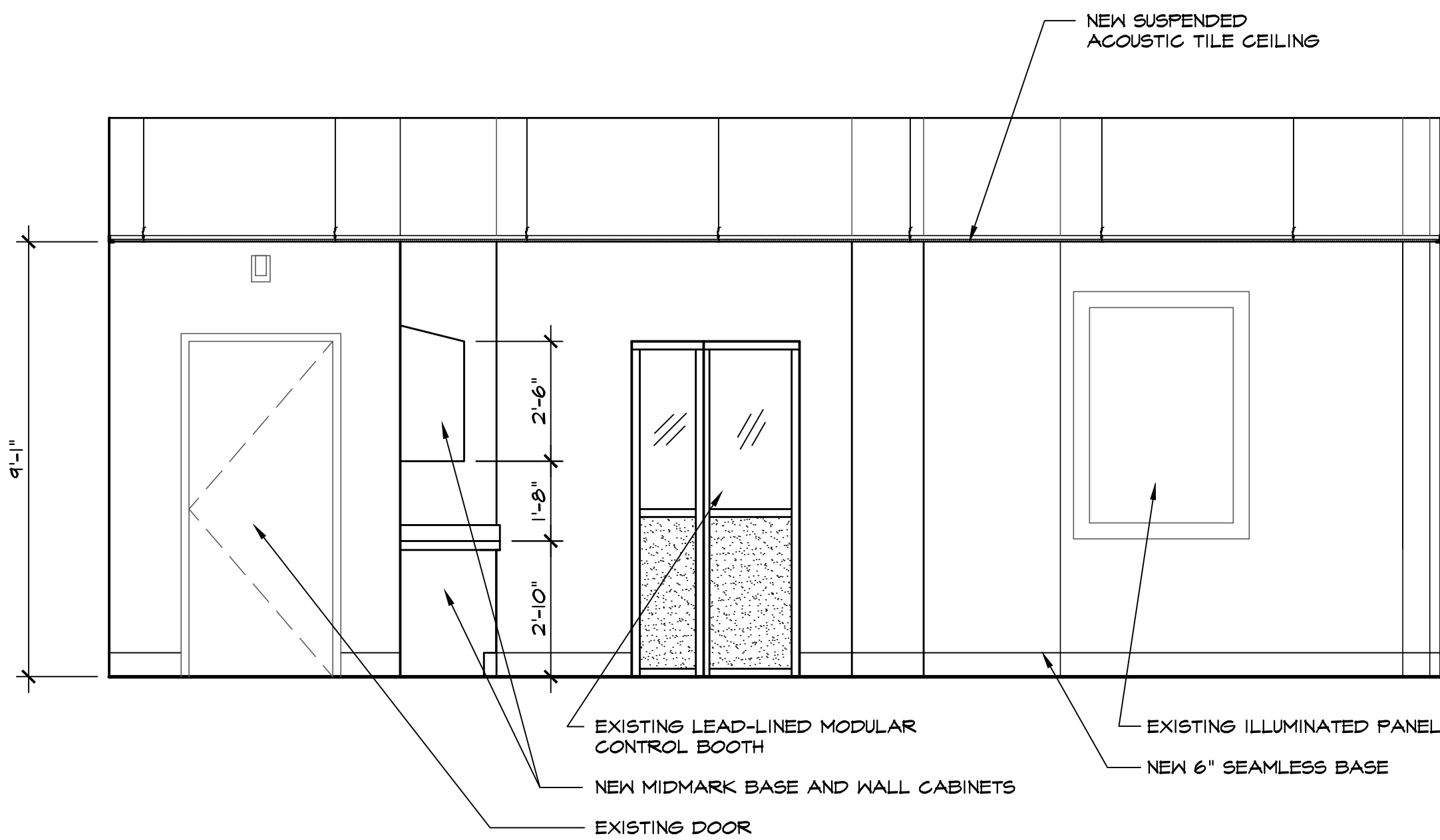
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INTERIOR ELEVATION

SCALE
3/8" = 1'-0"

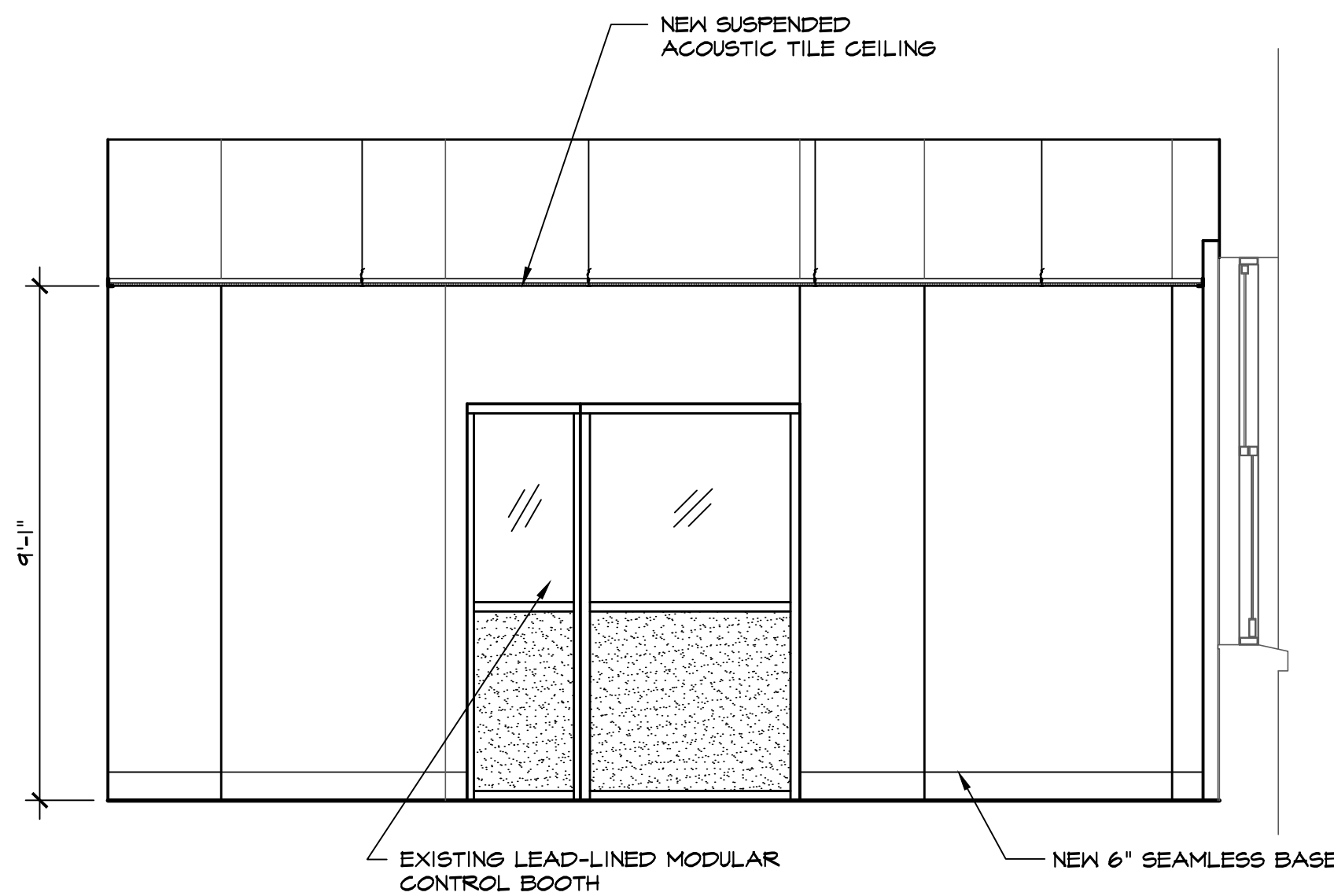
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INTERIOR ELEVATION

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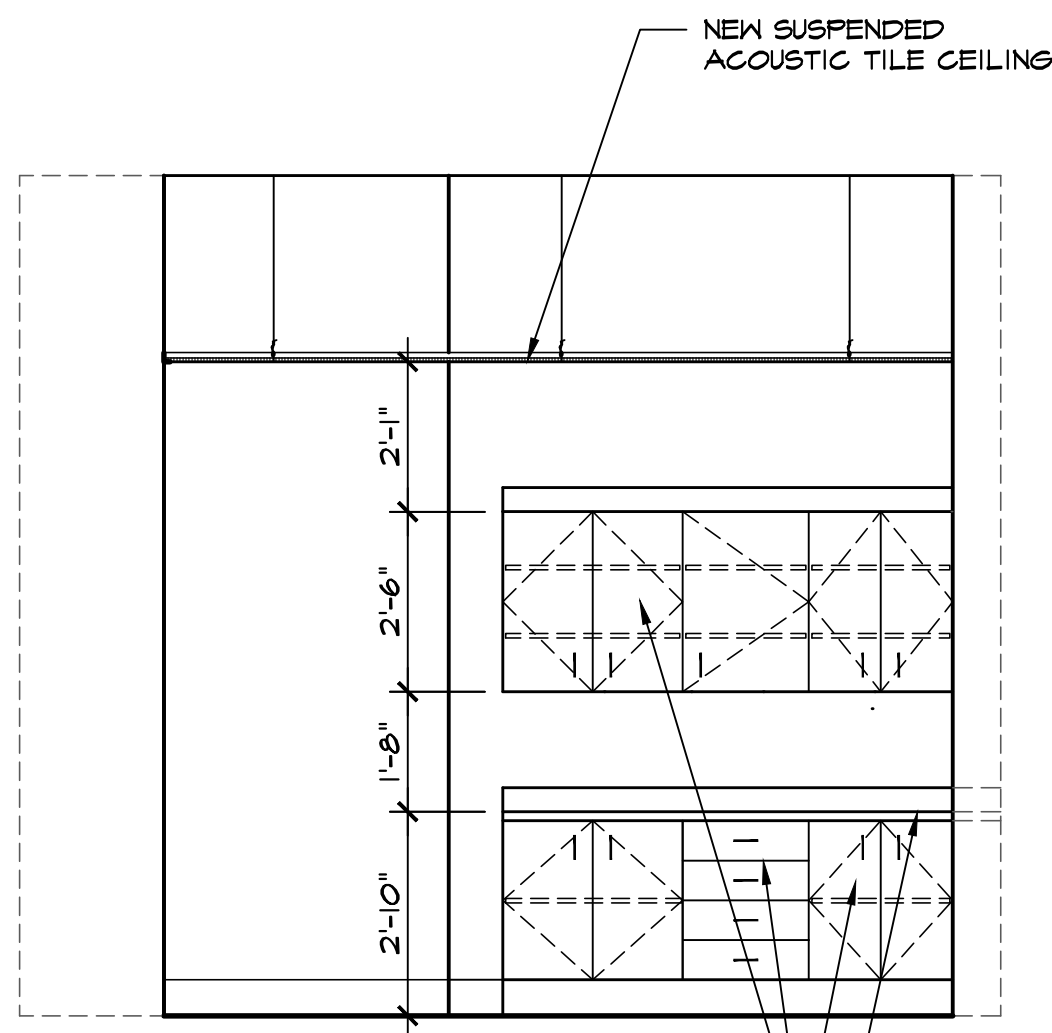
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INTERIOR ELEVATION

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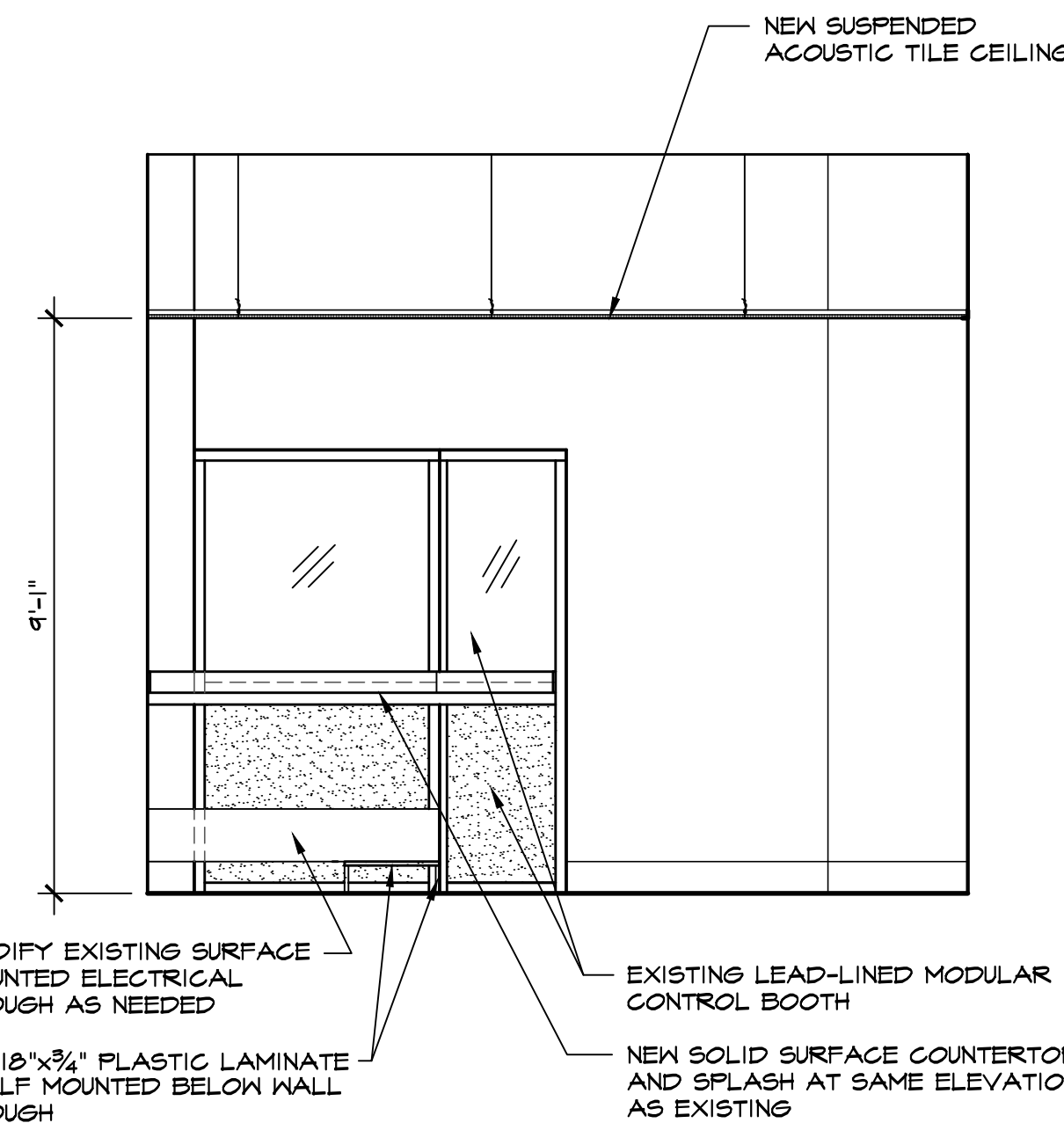
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INTERIOR ELEV.

SCALE
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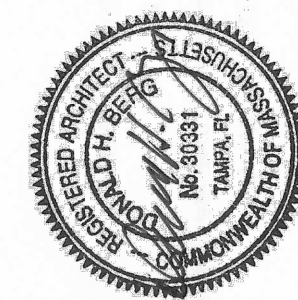
5



INTERIOR ELEVATION

SCALE
3/8" = 1'-0"

6



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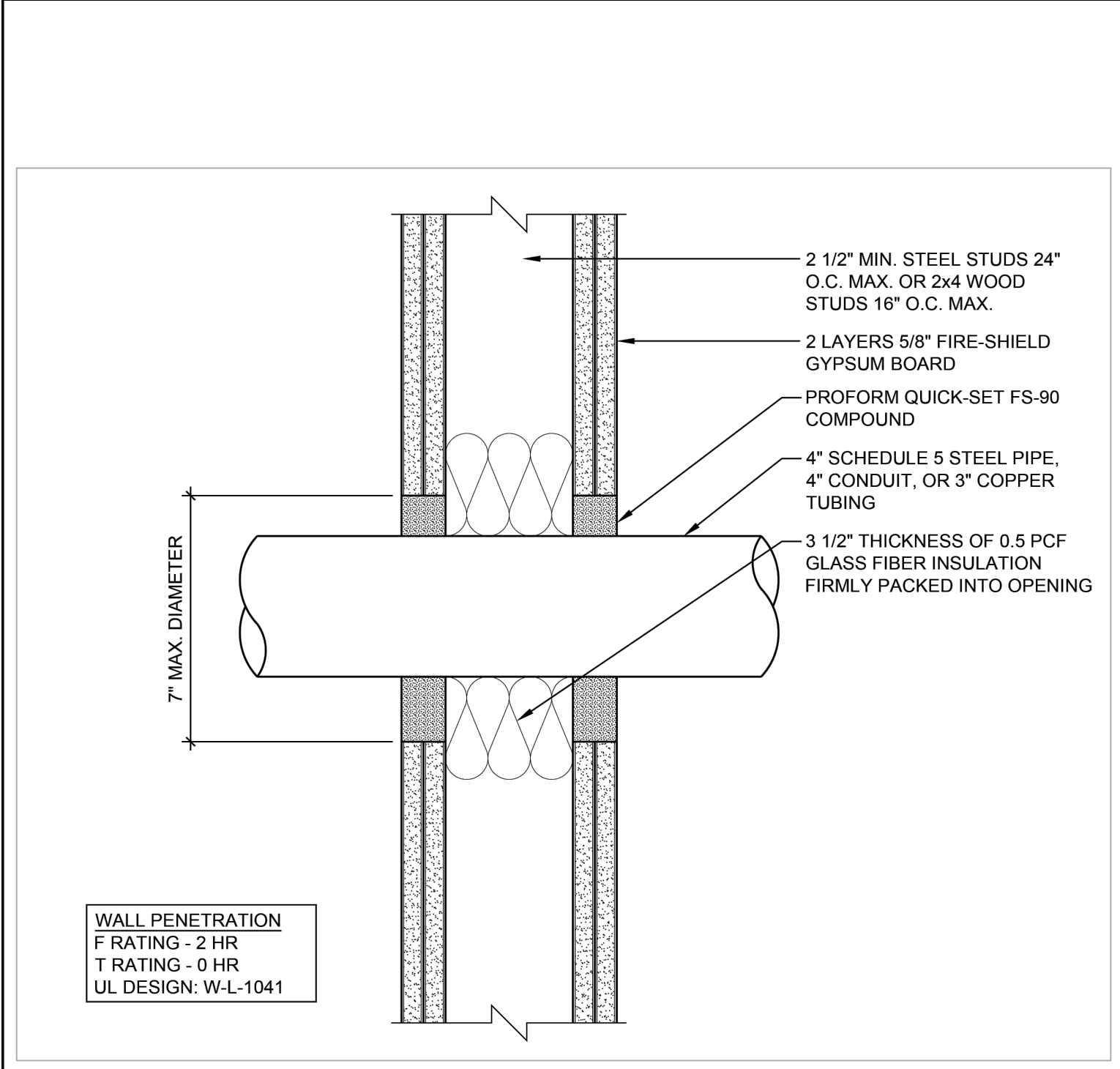
SHEET TITLE
INTERIOR
ELEVATIONS

DATE
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PROJECT NO.
0824-04

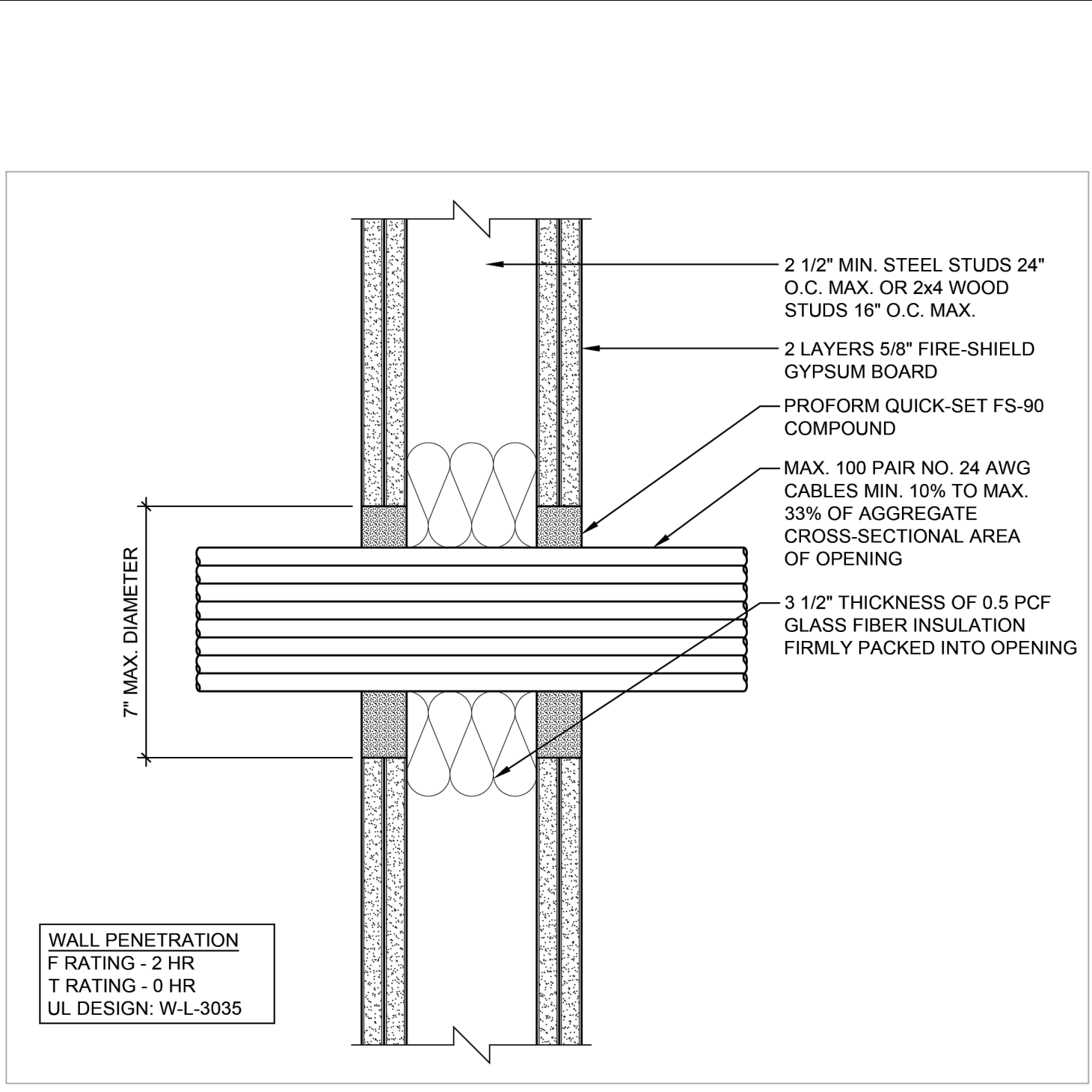
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A-6



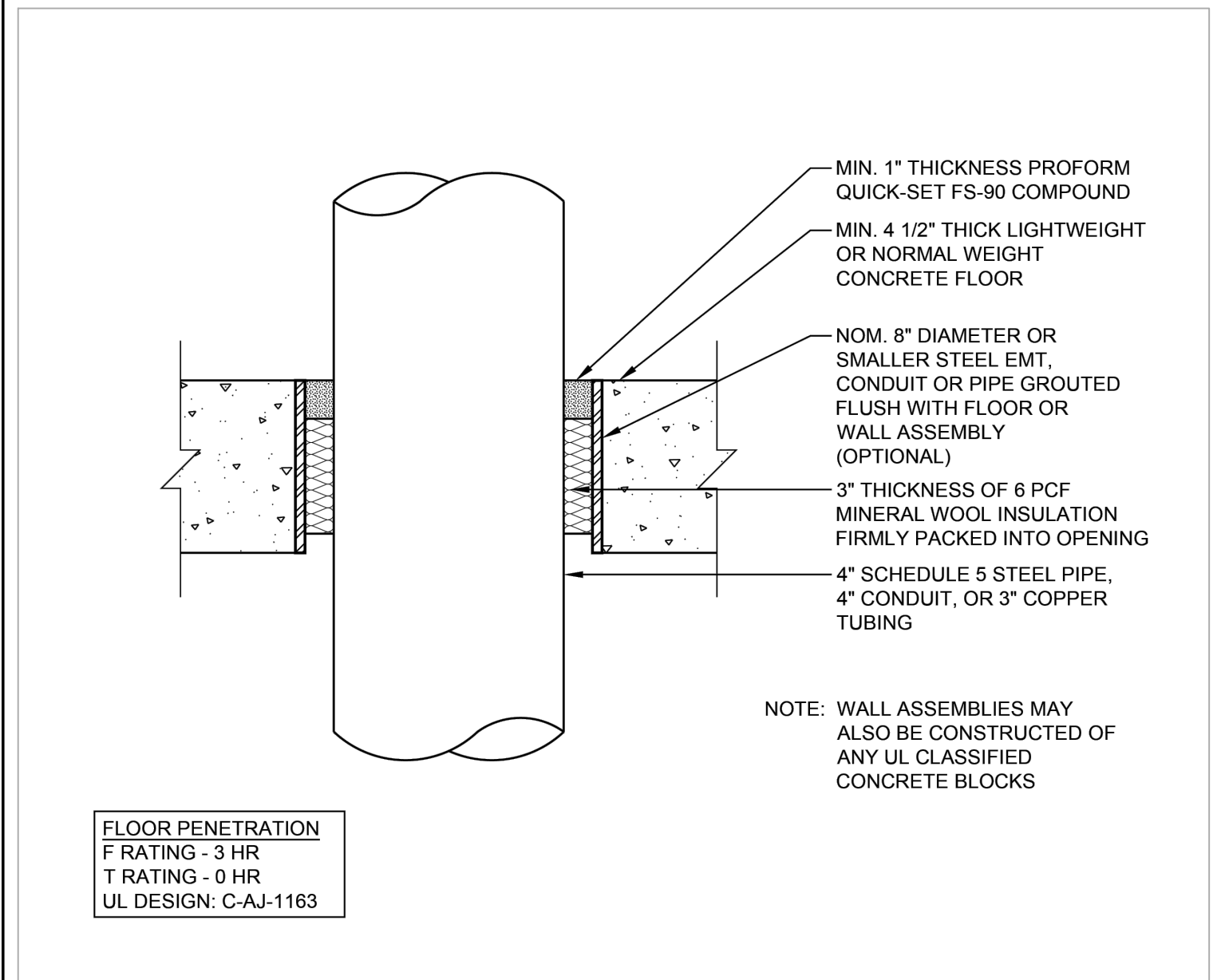
PIPE PENETRATION THROUGH WALL

SCALE N.T.S. 1



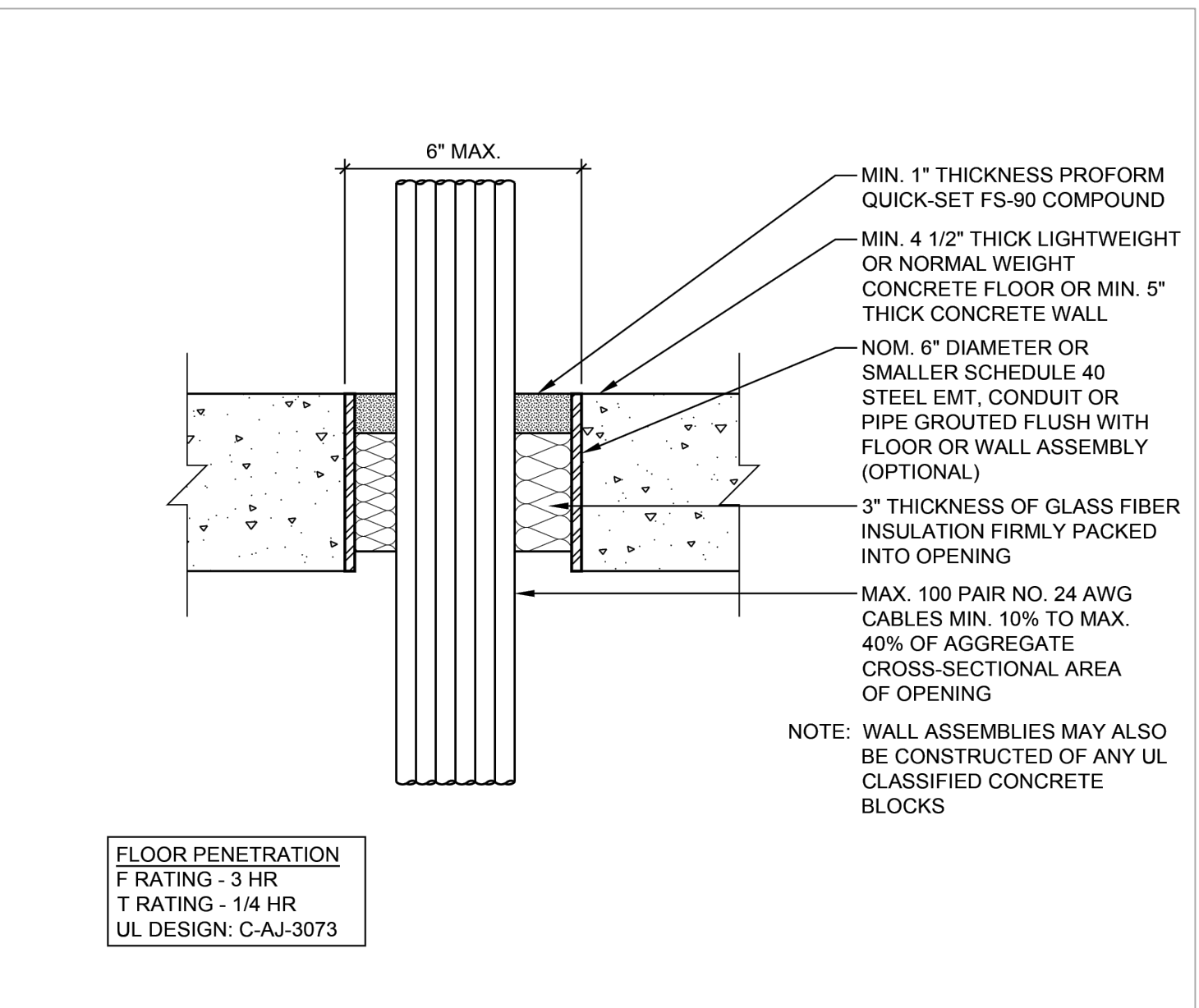
CABLE PENETRATION THROUGH WALL

SCALE N.T.S. 2



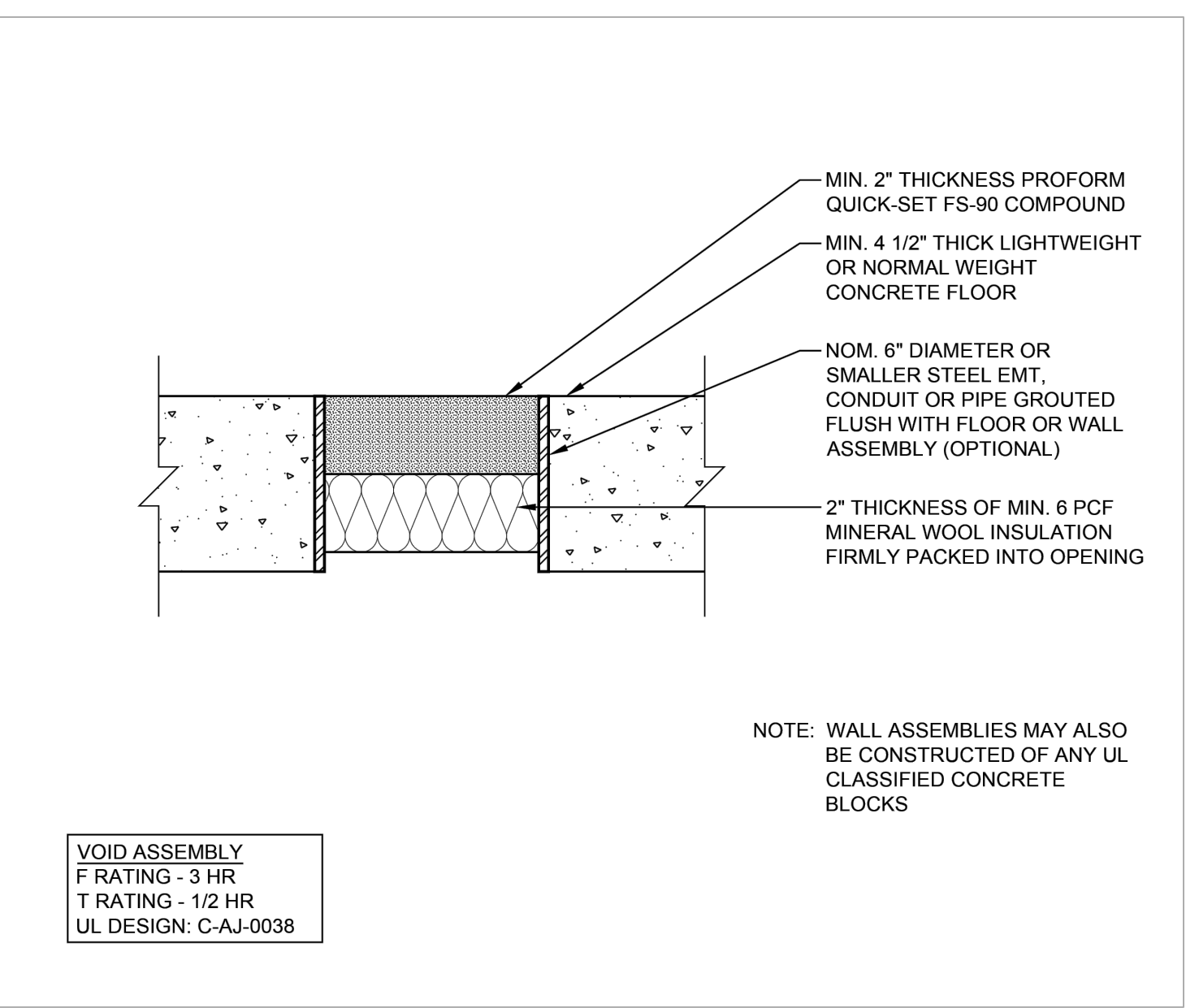
PIPE PENETRATION THROUGH FLOOR

SCALE N.T.S. 3



CABLE PENETRATION THROUGH FLOOR

SCALE N.T.S. 4



VOID FILL ASSEMBLY

SCALE N.T.S. 5

DOOR SCHEDULE								SCALE	6
N/A									
NO.	SIZE	DOOR	FRAME	LABEL	GLASS	ELEV.	HARDWARE	REMARKS	
X	EXISTING TO REMAIN	EXISTING	EXISTING				EXISTING		

RM NUMBER	NAME	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT	REMARKS
IB-117	X-RAY ROOM #4	SV-1, SV-3	SV-2	P-1, P-2	AT-1	9'-1"	NOTE 1
IB-118A	TOILET	-	-	-	-	-	NOTE 2
IB-118B	CONTROL	SV-1	SV-2	P-1	AT-1	9'-1"	-

NOTES:
1. VA WILL SELECT ACCENT WALL.
2. NO WORK THIS ROOM.

DOOR SCHEDULE

SCALE

N/A

6

RM NUMBER	NAME	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT	REMARKS
1B-117	X-RAY ROOM #4	SV-1, SV-3	SV-2	P-1, P-2	AT-1	9'-1"	NOTE 1
1B-118A	TOILET	-	-	-	-	-	NOTE 2
1B-118B	CONTROL	SV-1	SV-2	P-1	AT-1	9'-1"	-

NOTES:

1. VA WILL SELECT ACCENT WALL.

2. NO WORK THIS ROOM.

MATERIAL / COLOR SCHEDULE								SCALE	8
N/A									

DONALD H. BERG, ARCHITECT
3904 TURKEY OAK DRIVE
VAL RICO, FLORIDA 33596
TEL: 813-681-7588

REGISTERED ARCHITECT
NO. 30331
MASSACHUSETTS

R&F EQUIPMENT REPLACEMENT
PHILIPS ProDiagnost N90
WEST ROXBURY VA MEDICAL CENTER
X-RAY ROOM #4 1B-117, BUILDING 1

1400 VFW PARKWAY
WEST ROXBURY, MASSACHUSETTS 02132

REVISIONS

ISSUED FOR:

DATE:

☐ VA REVIEW

11/01/24

☐ REVIEW

09/30/24

☐ BIDDING

☐ PERMIT

☒ CONSTRUCTION

12/16/24

SHEET TITLE

DETAILS
SCHEDULES

DATE
SEPT. 30, 2024

PROJECT NO.
0824-04

SHEET NO.
A-7

		RECEIVED ARCHITECT DONALD H. BERG NO. 30331 MASSACHUSETTS COMM. REG. 10/07 DONALD H. BERG, ARCHITECT 3904 TURKEY OAK DRIVE VAL RICO, FLORIDA 33596 TEL: 813-681-7588 MASSACHUSETTS NO. 30331													
		R&F EQUIPMENT REPLACEMENT PHILIPS ProxiDiagnost N90 WEST ROXBURY VA MEDICAL CENTER X-RAY ROOM #4 1B-117, BUILDING 1 1400 VFW PARKWAY WEST ROXBURY, MASSACHUSETTS 02132													
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		<table><tr><td>ISSUED FOR:</td><td>DATE:</td></tr><tr><td>☐ VA REVIEW</td><td>11/01/24</td></tr><tr><td>☐ REVIEW</td><td>09/30/24</td></tr><tr><td>☐ BIDDING</td><td> </td></tr><tr><td>☐ PERMIT</td><td> </td></tr><tr><td>☒ CONSTRUCTION</td><td>12/16/24</td></tr></table>		ISSUED FOR:	DATE:	☐ VA REVIEW	11/01/24	☐ REVIEW	09/30/24	☐ BIDDING		☐ PERMIT		☒ CONSTRUCTION	12/16/24
ISSUED FOR:	DATE:														
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☐ PERMIT															
☒ CONSTRUCTION	12/16/24														
		SHEET TITLE ARCHITECTURAL SPECIFICATIONS													
		DATE SEPT. 30, 2024													
		PROJECT NO. 0824-04													
		SHEET NO. A-8													

ARCHITECTURAL SPECIFICATIONS		SCALE	1
		N/A	

DIVISION 26 ELECTRICAL REQUIREMENTS

- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE N.E.C., ALL APPLICABLE VA STANDARDS, AND COMPLY WITH THE SPECIFICATIONS.
- ALL MATERIALS SHALL BE NEW AND OF DOMESTIC ORIGIN AND SHALL BEAR UNDERWRITERS' LABEL WHERE APPLICABLE.
- ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST-CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM IS TO BE FULLY OPERABLE AND ACCEPTANCE OF THIS SYSTEM BY THE ENGINEER/ARCHITECT MUST BE A CONDITION OF THE SUB CONTRACT.
- ALL WORK TO BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE.
- CORRECTION OF ANY DEFECTS TO BE COMPLETED WITHOUT ADDITIONAL CHARGE AND TO INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
- ALL REQUIRED INSURANCE TO BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OF PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
- ELECTRICAL INSTALLATION TO MEET ALL STANDARD REQUIREMENTS OF LOCAL POWER AND TELEPHONE COMPANIES.
- MINIMUM WIRE SIZE SHALL BE #12 AWG, EXCLUDING CONTROL WIRINGS, UNLESS OTHERWISE NOTED, ALL CONDUCTORS SHALL BE COPPER WITH THIN THIN INSULATION. CONDUCTORS #10 AND SMALLER SHALL BE SOLID; ALL THOSE #8 AND LARGER TO BE STRANDED, PER N.E.C. 310.3.
- ALL RECESSED OUTLET BOXES IN WALLS OR CEILINGS, SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS, AND BE OF SPECIAL CONSTRUCTION FOR OTHER CLASSIFIED AREAS.
- ALL GENERAL PURPOSE SWITCHES AND RECEPTACLES SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER. COLOR OF DEVICES AND PLATES SHALL BE DICTATED BY ARCHITECT/OWNER TO MATCH BUILDING STANDARD. ALL NEW RECEPTACLES SHALL BE HOSPITAL GRADE, ALL NEW SWITCHES SHALL BE INDUSTRIAL GRADE. ALL DEVICES ON GENERATOR POWER SHALL BE RED WITH "EMERGENCY" ENGRAVED IN BLACK LETTERS. ALL RECEPTACLE AND LIGHT SWITCH COVER PLATES SHALL BE ENGRAVED WITH PAINT FILLED LETTERS (BLACK) TO INDICATE PANEL AND CIRCUIT NUMBER POWERING THE DEVICE.
- IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM, AND PROVIDE ALL NECESSARY DEVICES AND COMPONENTS FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- ALL ELECTRICAL RACEWAYS (METALLIC AND NONMETALLIC) SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE N.E.C.
- LOAD DATA IS BASED ON INFORMATION GIVEN ENGINEER AT THE TIME OF DESIGN. VERIFY ALL EQUIPMENT NAMEPLATE RATINGS BEFORE ORDERING.
- CIRCUITS SHOWN ON PLANS ARE TO DETERMINE LOAD DATA AND PANEL SIZES. THE CONTRACTOR IS TO PROVIDE CIRCUITS AND ROUTING OF CONDUITS TO SUIT JOB CONDITIONS.
- ALL ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN AN APPROVED RACEWAY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL CONDUIT PENETRATIONS. PENETRATION SEALS SHALL BE PER U.L. LISTED ASSEMBLY STANDARDS FOR EACH LOCATION.
- TANDEM AND HALF-SPACE CIRCUIT BREAKERS SHALL NOT BE USED.

DEMOLITION NOTES

- ELECTRICAL PLANS DO NOT INCLUDE A DEMOLITION PLAN FOR THE RENOVATED AREAS. THE RENOVATED AREAS, INCLUDING WALLS, CEILINGS, ETC., TO BE REMOVED ARE SHOWN ON THE ARCHITECTURAL PLANS. MAJOR MECHANICAL EQUIPMENT TO BE REMOVED IS SHOWN ON THE MECHANICAL PLANS. CONTRACTOR SHALL REVIEW THESE PLANS AND COORDINATE WITH THE GENERAL CONTRACTOR ON SITE TO DETERMINE THE EXTENT OF THE DEMOLITION WORK AND PROJECT PHASING REQUIRED AND PROVIDE ACCORDINGLY. ALL ELECTRICAL DEMOLITION WORK SHOWN OR IMPLIED IN THE ELECTRICAL, MECHANICAL, PLUMBING, AND ARCHITECTURAL PLANS SHALL BE PART OF THE ELECTRICAL CONTRACTOR'S WORK.
- ELECTRICAL DEMOLITION WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVING, RECEPTACLES, WIRE, CONDUIT, ETC., AS REQUIRED FOR THE INSTALLATION OF NEW EQUIPMENT AND REMODELING OF THE EXISTING FACILITY AS INDICATED ON THE PLANS.
- CONTRACTOR SHALL REMOVE ANY EXPOSED WIRE, CONDUIT, HANGERS, CLAMPS, ETC., WHICH ARE NOT BEING UTILIZED FOR THE NEW INSTALLATION.
- EXISTING WIRE AND CONDUITS CONCEALED ABOVE CEILING OR IN WALLS AND NOT BEING REUSED SHALL BE REMOVED. EXISTING CONDUITS, WHERE APPLICABLE, MAY BE REUSED.
- REVISE ALL EXISTING PANEL DIRECTORIES TO REFLECT ALL REVISIONS.
- ALL LIGHTING FIXTURES BEING RELOCATED OR SHOWN ON PLANS DENOTED WITH (RE) SHALL BE CLEANED, RE-LAMPED, AND REPAIRED TO PROPER WORKING CONDITION IF REQUIRED.
- THE CONTRACTOR SHALL PROVIDE RUBBER MATS AND PLYWOOD COVERS TO ALL OWNER'S EQUIPMENT SUSCEPTIBLE TO DAMAGE DURING CONSTRUCTION. VERIFY SPECIFIC LOCATIONS WITH OWNER'S AUTHORIZED REPRESENTATIVE.
- ALL WORK SHALL BE PERFORMED DURING TIME PERIODS ACCEPTABLE TO THE OWNER. SCHEDULE ALL WORK WITH THE OWNER'S AUTHORIZED REPRESENTATIVE 48 HOURS BEFORE PROCEEDING.
- CONTRACTOR SHALL VISIT THE JOB SITE AND BE THOROUGHLY FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH THE WORK MUST BE PERFORMED.
- ANY LIGHTING FIXTURES AND LAMPS BEING REMOVED SHALL BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER. COORDINATE DISPOSITION OF ALL FIXTURES WITH OWNER PRIOR TO REMOVAL.

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS.

NOTES

- THE INTERIOR ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS AND EQUIPMENT. METALLIC RACEWAYS SHALL BE CONNECTED TO A DIRECT GROUND AT THE POINT OF ELECTRICAL SERVICE ENTRANCE.
- CONTRACTOR SHALL FIELD VERIFY RECEPTACLE CONFIGURATION, VOLTAGE, PHASE AND AMPERAGE FOR ALL REQUIRED OUTLETS. PROVIDE DEDICATED CIRCUITS AS REQUIRED. ADVISE ENGINEER IF NECESSARY.
- CONTRACTOR SHALL SUPPLY AND INSTALL ALL JUNCTION BOXES, TROUGHS, WIRE, CIRCUIT BREAKERS, ETC., UNLESS OTHERWISE SPECIFIED.
- CONDUIT RUNS ARE SHOWN SCHEMATICALLY. BUILDING CONDITIONS TO DETERMINE THE ACTUAL RUNS.
- CONDUIT ELBOWS TO BE LARGE SNEEPS PER CODE.
- CONTRACTOR SHALL PROVIDE AND COIL A MINIMUM 10'-0" OF SLACK CONDUCTOR FOR CONNECTION TO EQUIPMENT BY OTHERS. IDENTIFY BOTH ENDS OF WIRE.
- CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE CANON SYSTEM INSTALLATION DRAWINGS PRIOR TO START OF CONSTRUCTION.
- ALL CONDUIT USED SHALL BE A MINIMUM 3/4" DIAMETER.
- CONDUITS AND DUCT, ABOVE CEILING, MUST BE INSTALLED AS NEAR TO CEILING AS POSSIBLE TO REDUCE RUN LENGTHS.
- THESE DRAWINGS ARE DIAGRAMMATIC AND INTENDED ONLY TO SHOW THE REQUIRED SCOPE OF WORK. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDUIT RUNS AND THEIR CONDITIONS AS WELL AS THE SUITABILITY OF LOCATING ALL NEW CONDUIT SHOWN ON THE PLANS OR IDENTIFIED IN NOTES.

NOTES

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DRAWINGS AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL PRIOR TO SUBMITTING A BID.
- REPORT ANY DISCREPANCIES TO ARCHITECT OR ENGINEER PRIOR TO BID.
- BIDDERS ARE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF THE WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS INCLUDING BUT NOT LIMITED TO, SERVICE LOCATION, SERVICE LAYOUTS, AND TELEPHONE LOCATION, ETC.
- THE SUBMISSION OF A BID WILL BE EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED, OR FOR ANY DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT OF ANY DISCREPANCIES ENCOUNTERED ON THE PLANS OR IN EXISTING SITE CONDITIONS PRIOR TO SUBMISSION OF BID.
- COORDINATE WITH OTHER TRADES FOR ITEMS IN THEIR SCOPE OF WORK WHICH WOULD REQUIRE ELECTRICAL WORK (DISCONNECTION, RECONNECTION, ETC.) AND ARE NOT INDICATED ON ELECTRICAL DRAWINGS.

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS.

NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND SHALL ALSO COMPLY WITH ALL APPLICABLE VA STANDARDS.
- ALL CONDUCTORS SHALL BE COPPER, CONDUCTOR INSULATION SHALL BE TYPE THHN-THHN THERMOPLASTIC, 75 DEGREE, 600 VOLT OR EQUAL U.O.N.
- THE INTERIOR ELECTRICAL SYSTEMS SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE CODE. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE AT ALL JOINTS AND AT ALL BOXES, CABINETS, FITTINGS AND EQUIPMENT. METALLIC RACEWAYS SHALL BE CONNECTED TO A DIRECT GROUND AT THE POINT OF ELECTRICAL SERVICE ENTRANCE.
- UPON COMPLETION OF WORK, CORRECT ALL PANELBOARD CIRCUIT DIRECTORY CARDS TO REFLECT AS-BUILT CONDITIONS. A SET OF AS-BUILT DRAWINGS SHALL ALSO BE PREPARED AND TURNED OVER TO THE ARCHITECT.
- ALL RACEWAYS SHALL BE PROVIDED WITH EQUIPMENT GROUND CONDUCTOR.
- CONTRACTOR SHALL FIELD VERIFY RECEPTACLE CONFIGURATION, VOLTAGE, PHASE AND AMPERAGE FOR ALL REQUIRED OUTLETS. PROVIDE DEDICATED CIRCUITS AS REQUIRED. ADVISE ENGINEER IF NECESSARY.
- CONTRACTOR SHALL SUPPLY AND INSTALL ALL JUNCTION BOXES, TROUGHS, WIRE, CIRCUIT BREAKERS, ETC., UNLESS OTHERWISE SPECIFIED.
- CONDUIT RUNS ARE SHOWN SCHEMATICALLY. BUILDING CONDITIONS TO DETERMINE THE ACTUAL RUNS.
- CONDUIT ELBOWS TO BE LARGE SNEEPS PER THE CODE.
- CONTRACTOR SHALL PROVIDE AND COIL A MINIMUM 5'-0" OF SLACK CONDUCTOR FOR CONNECTION TO EQUIPMENT BY OTHERS. IDENTIFY BOTH ENDS OF WIRE.
- CONTRACTOR SHALL OBTAIN A COPY OF THE CANON INSTALLATION DRAWINGS PRIOR TO START OF CONSTRUCTION AND COMPLY ACCORDINGLY.
- ALL TELEPHONE AND DATA CABLEING TO BE PROVIDED AND INSTALLED BY OTHER VENDORS. BOXES AND CONDUITS TO ABOVE CEILING BY ELECTRICAL CONTRACTOR.

PROJECT SYMBOLS LEGEND

MOUNTING HEIGHTS SHOWN ARE MAXIMUM/MINIMUM HANDICAPPED ACCESSIBILITY STANDARDS - THEY SHALL NOT BE ALTERED WITHOUT WRITTEN AUTHORIZATION.

NOT ALL DEVICES SHOWN IN LEGEND ARE REQUIRED. REVIEW POWER & LIGHTING PLANS AND DETAILS FOR ITEMS WHICH APPLY TO THIS PROJECT.

- ELECTRICAL**
- FLUORESCENT LIGHT FIXTURE, LETTER INDICATES TYPE
 - INCANDESCENT OR HID LIGHT FIXTURE, LETTER INDICATES TYPE
 - HALL BRACKET LIGHT FIXTURE, LETTER INDICATES TYPE
 - EXIT LIGHT (ARROW INDICATES DIRECTION)
 - BATTERY POWERED EMERGENCY LIGHT
 - SINGLE POLE SWITCH, LOWER CASE LETTER INDICATES LIGHT CONTROLLED, MOUNT 48" AFF. U.O.N.
 - DOUBLE POLE SWITCH, MOUNT 48" AFF. U.O.N.
 - THREE-WAY SWITCH, MOUNT 48" AFF. U.O.N.
 - FOUR-WAY SWITCH, MOUNT 48" AFF. U.O.N.
 - SINGLE POLE SWITCH WITH PILOT LIGHT, MOUNT 48" AFF. U.O.N.
 - KEY OPERATED SINGLE POLE SWITCH, MOUNT 48" AFF. U.O.N.
 - DIMMER SWITCH, MATTS AS NOTED, MOUNT 48" AFF. U.O.N.
 - DUPLEX RECEPTACLE HOSPITAL-GRADE, MOUNT 18" AFF. U.O.N.
 - DUPLEX RECEPTACLE HOSPITAL-GRADE, MOUNT ABOVE COUNTER HEIGHT U.O.N.
 - QUADRAPLEX RECEPTACLE HOSPITAL-GRADE, MOUNT 18" AFF. U.O.N.
 - FLOOR MOUNTED DUPLEX RECEPTACLE HOSPITAL-GRADE.
 - GROUND FAULT INTERRUPTER RECEPTACLE, HOSPITAL-GRADE, MOUNT ABOVE COUNTER HEIGHT U.O.N.
 - DUPLEX RECEPTACLE, ISOLATED GROUND TYPE, HOSPITAL-GRADE, MOUNT AT 18" AFF. U.O.N.
 - 270/480V, 3-PH PANELBOARD
 - LIGHTING OR POWER PANELBOARD
 - QUAD TELEPHONE/DATA WALL OUTLET, PROVIDE SINGLE GANG BOX WITH 1" CONDUIT WITH FULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF. U.O.N.
 - QUAD TELEPHONE/DATA WALL OUTLET, PROVIDE SINGLE GANG BOX WITH 1" CONDUIT WITH FULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX ABOVE COUNTER HEIGHT, U.O.N.
 - DUCT MOUNTED PHOTOELECTRIC SMOKE DETECTOR
 - FAN SHUTDOWN RELAY
 - DUAL-ACTION MANUAL FIRE ALARM PULL STATION (48" AFF. U.O.N.)

- MAIN SWITCHBOARD
- MAIN DISTRIBUTION PANEL
- SPECIAL NOTES, SEE PLANS
- CONDUIT CONCEALED IN WALL OR ABOVE CEILING WITH CONDUCTORS AS SHOWN ON PANEL SCHEDULE U.O.N.
- CONDUIT CONCEALED BELOW FLOOR SLAB OR FINISHED GRADE WITH CONDUCTORS AS SHOWN ON PANEL SCHEDULE U.O.N.
- CONDUIT EXPOSED ON WALL OR CEILING WITH CONDUCTORS AS SHOWN ON PANEL SCHEDULE U.O.N.
- FLEXIBLE CONDUIT NOT TO EXCEED 6 FEET IN LENGTH
- T.V. CAMERA
- T.V. MONITOR
- TELEVISION OUTLET, PROVIDE SINGLE GANG BOX WITH 3/4" CONDUIT WITH FULL WIRE AND INSULATING BUSHING STUBBED INTO CEILING SPACE. MOUNT BOX 18" AFF. U.O.N.
- DISCONNECT SWITCH
- DISCONNECT DESIGNATION (SIZE/POLES/FUSE) "NF" INDICATES NON-FUSED, "DE" INDICATES DUAL ELEMENT FUSES.
- COMBINATION MAGNETIC MOTOR STARTER/DISCONNECT SWITCH
- DRY TYPE TRANSFORMER
- CONTRACTOR (AS NOTED)
- TIME CLOCK
- PHOTO-CELL
- MOTOR PERMANENTLY CONNECTED WITH FLEXIBLE CONDUIT
- JUNCTION BOX (FLUSH MOUNT IN FINISHED AREAS U.O.N.)
- DEVICE AS NOTED
- TELEPHONE BACKBOARD WITH #6 CU. GROUND (SIZE AS NOTED)
- FIRE ALARM AUDIO/VISUAL APPLIANCE (ADA) MOUNTED AT 80" AFF. TO BOTTOM.
- FIRE ALARM STROBE (ADA) (80" AFF. TO BOTTOM).
- PHOTOELECTRIC SMOKE DETECTOR
- DUPLEX RECEPTACLE WITH USB CHARGING PORTS, HUBBELL RUSB20X2, MOUNT AT 18" AFF. U.O.N.

ABBREVIATIONS

EG	EQUIPMENT GROUND	EWG	ELECTRIC WATER COOLER	NL	NIGHT LIGHT	AFG	ABOVE FINISH GRADE
IG	ISOLATED GROUND	EF-EF	EXHAUST FAN	C/T	CURRENT TRANSFORMER	U.O.N.	UNLESS OTHERWISE NOTED
HP	WEATHERPROOF	AH-AH	AIR HANDLING UNIT	EX	EXISTING DEVICE	N.T.S.	NOT TO SCALE
EW	ELECTRIC WATER HEATER	ACC-CU	CONDENSING UNIT	AF	ABOVE FINISH FLOOR	NC	NOT IN CONTRACT

NOTE: MOUNTING HEIGHTS NOTED ARE TO CENTERLINE OF DEVICE SHOWN U.O.N.

EXISTING CONDITION NOTES

GENERAL:

THESE DRAWINGS ARE BASED ON EXISTING DOCUMENTS FOR THE SAID BUILDING AND ON A VISUAL FIELD OBSERVATION. THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO, SERVICE LOCATION AND AVAILABLE BRANCH PANELBOARDS, AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO BID. FAILURE TO DO SO MAY CONSTITUTE THAT THE CONTRACTOR PROVIDE ANY AND ALL ADDITIONAL EQUIPMENT, LABOR, ETC. TO MEET THE INTENDED DESIGN PARAMETERS AT HIS/HER SOLE EXPENSE.

SPECIFIC ITEMS TO BE VERIFIED:

CONTRACTOR SHALL VERIFY LOCATION AND TYPE OF EXISTING SERVICE DISTRIBUTION PANELBOARDS SERVING THE PROJECT AREA.

CONTRACTOR SHALL VERIFY ALL EXISTING FIRE ALARM DEVICES SERVING THE PROJECT AREA. REMOVE ANY EXISTING DEVICES AFFECTED BY RENOVATION AND MAINTAIN CIRCUIT CONTINUITY TO REMAINING DEVICES.

CONTRACTOR SHALL REVISE ALL EXISTING PANEL DIRECTORIES, AS REQUIRED, TO REFLECT ALL REVISIONS. PROVIDE NEW DIRECTORIES FOR PANELS WITH CURRENT DIRECTORIES MISSING.

ELECTRICAL SHEET INDEX

SHEET No.	SHEET TITLE
E-100.00	: ELECTRICAL LEGEND AND NOTES
E-101.00	: KEY PLAN AND DETAILS
E-200.00	: LIGHTING PLAN AND FIXTURE SCHEDULE
E-201.00	: POWER PLAN AND NOTES
E-300.00	: REFERENCED VENDOR DRAWINGS
E-400.00	: POWER RISER AND SCHEDULES
E-500.00	: ELECTRICAL SPECIFICATIONS

SOUHEIL CHEHAYEB, P.E.
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TAMPA, FL 33609

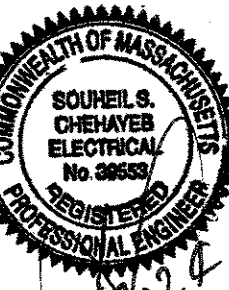
(813) 876-1415
www.chehayeb.com

LIC# 39553

SOUHEIL CHEHAYEB

24-124

DONALD H. BERG, ARCHITECT
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VALRICO, FLORIDA 33596
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R&F EQUIPMENT REPLACEMENT
PHILIPS Prox Diagnostics N90
WEST ROXBURY VA MEDICAL CENTER
X-RAY ROOM (4) 1B117, BUILDING 1

1400 VFW PARKWAY
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SHEET TITLE

ELECTRICAL
LEGEND
AND NOTES

DATE
SEPT. 30, 2024

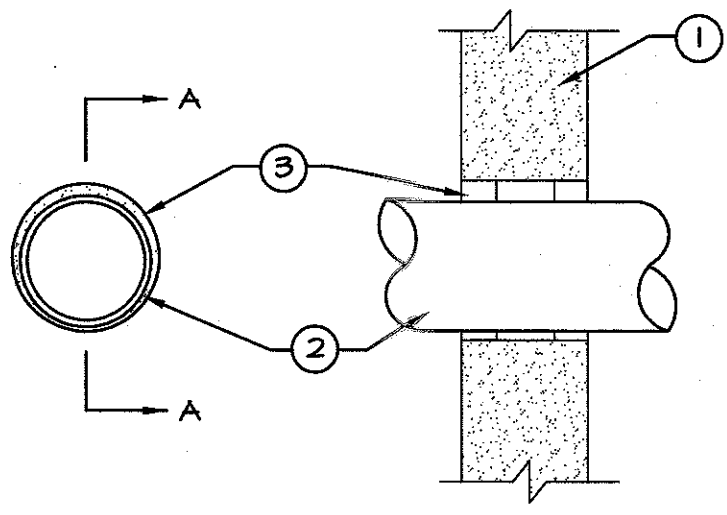
PROJECT NO.
0824-04

SHEET NO.

E-100.00

THROUGH-PENETRATION DETAIL

SYSTEM No. W-J-1048
F RATINGS - 2 HR



1. WALL ASSEMBLY - MIN 6-1/8 IN. THICK NORMAL WEIGHT OR LIGHTWEIGHT (100-150PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY U.L. CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING IS 14-1/8 IN. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAME OF MANUFACTURERS.

2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN 3/8 IN. TO MAX 1 IN. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED.

A. STEEL PIPE

B. IRON PIPE

C. CONDUIT - NOMINAL 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT) OR STEEL CONDUIT. WHEN EMT OR STEEL CONDUIT IS USED T RATINGS IS 1/4 HR.

D. COPPER TUBING

E. COPPER PIPE

3. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 1-1/4 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.

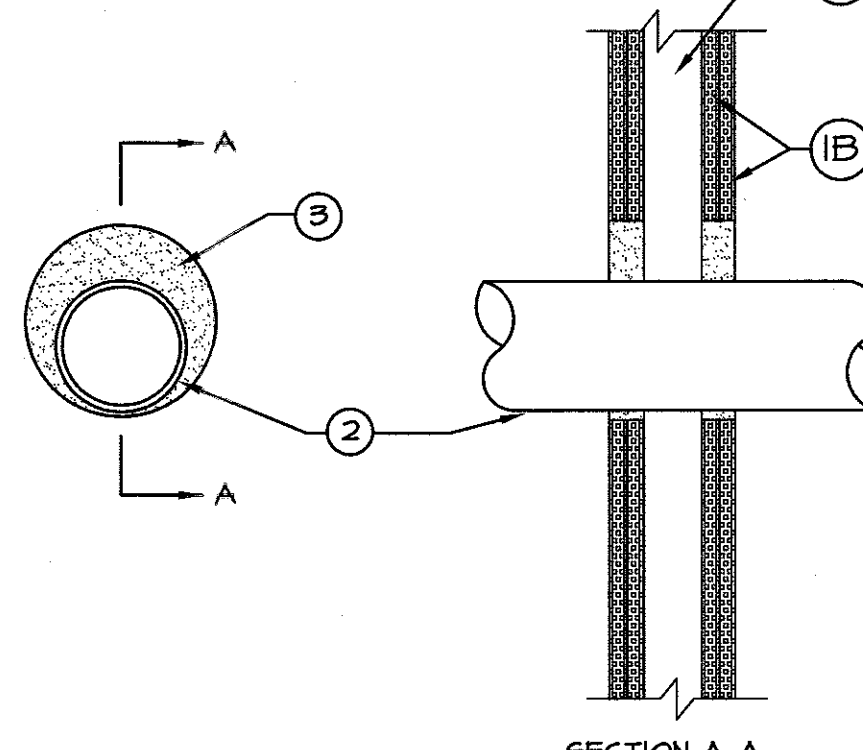
FIRESTOP SYSTEMS, INC. - FLOWGUARD GOLD FIRESTOP SEALANT (RED)

* BEARING THE U.L. CLASSIFICATION MARKING.

P6C

THROUGH-PENETRATION DETAIL

SYSTEM No. W-L-1098
F RATINGS - 1 & 2 HR (SEE ITEM 1)



1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL 1800 OR 1400 SERIES WALL AND PARTITION DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNELS STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN 3-5/8 IN. WIDE AND SPACED MAX 24 IN. O.C.

B. WALLBOARD, GYPSUM* - THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM OF OPENING IS 14-1/8 IN. THE HOURLY F RATINGS OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATINGS OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. THROUGH PENETRANTS - ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN 3/8 IN. TO MAX 1 IN. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED.

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D. COPPER TUBING

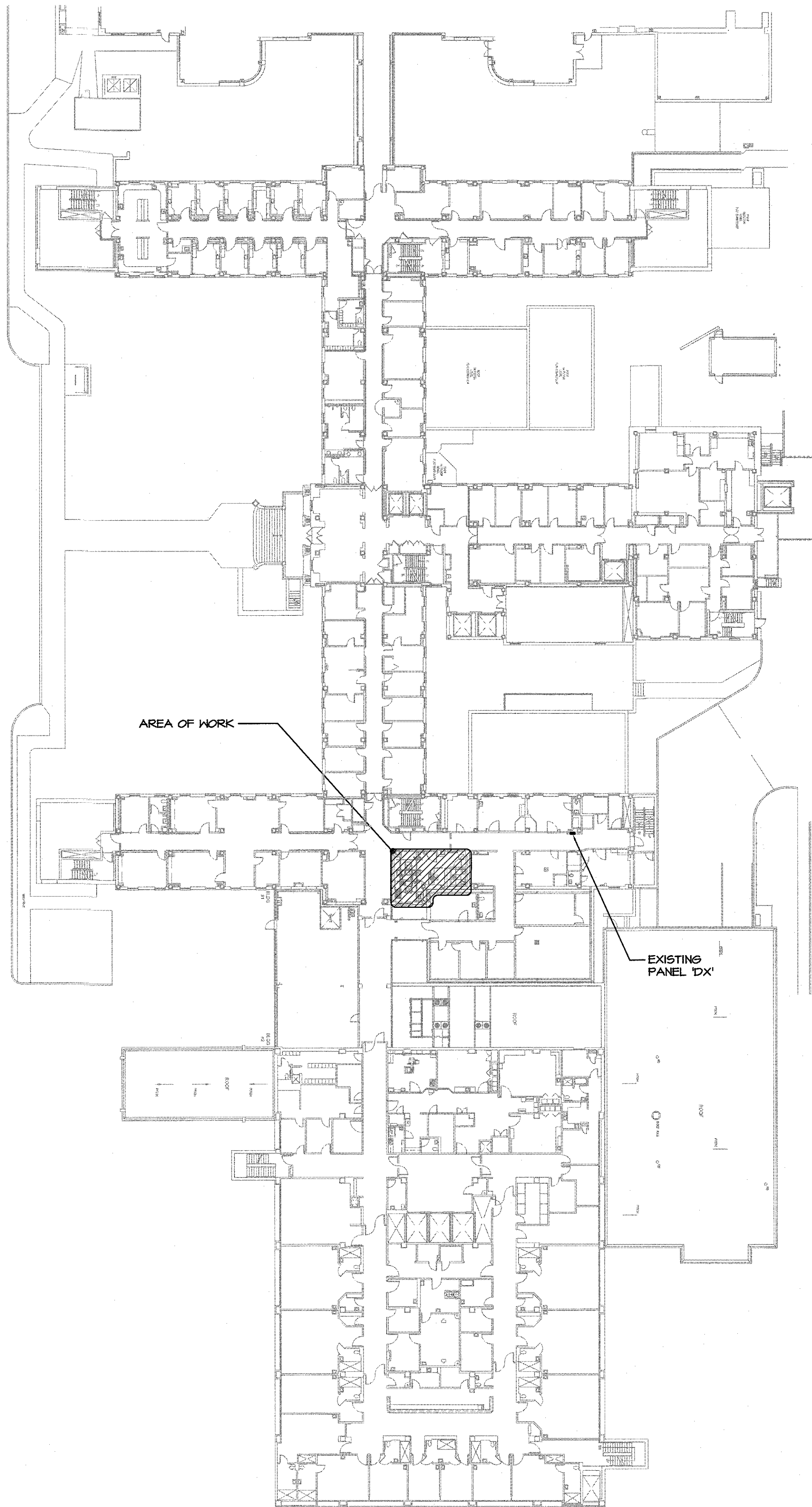
E. COPPER PIPE

3. FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. AND 1-1/4 IN. THICKNESS OF FILL MATERIAL FOR 1 AND 2 HR RATED WALL ASSEMBLIES, RESPECTIVELY, APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.

FIRESTOP SYSTEMS, INC. - 4800DW (RED)

* BEARING THE U.L. CLASSIFICATION MARKING.

P6A



FIRST FLOOR FLOOR
ELECTRICAL
KEY PLAN

SCALE: 1" = 30'-0"

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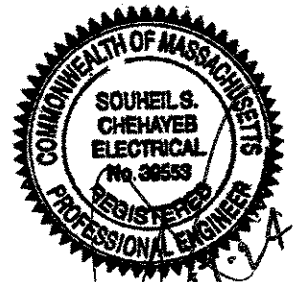
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R&F EQUIPMENT REPLACEMENT
PHILIPS Prodiagnost N90
WEST ROXBURY VA MEDICAL CENTER
X-RAY ROOM (4) 1B117, BUILDING 1
1400 VFW PARKWAY
WEST ROXBURY, MASSACHUSETTS 02132

REVISIONS

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☐ REVIEW	09/30/24
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☐ PERMIT	
☒ CONSTRUCTION	12/16/24

KEY PLAN AND
DETAILS

DATE
SEPT. 30, 2024
PROJECT NO.
0824-04

SHEET NO.

E-101.00

SYSTEM GROUNDING NOTES

1. DEDICATED EARTH CONDUCTOR (GROUND) SHALL BE SAME SIZE AS POWER WIRES AT ALL TIMES FOR ALL ROUTINGS FROM GROUNDED NEUTRAL SOURCE TO PHILIPS EQUIPMENT (REFER TO DETAILS ON DRAWINGS).
2. GROUND THE NEWLY DERIVED NEUTRAL IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. HOWEVER, DO NOT USE ELECTRICAL CONDUITS OR ELECTRICAL RACEWAYS AS GROUNDING ELECTRODES.
3. VERIFY WITH EQUIPMENT SUPPLIER/INSTALLER FOR ALL REQUIRED GROUNDING LOCATIONS AND PROVIDE ACCORDINGLY.
4. ALL METAL DEVICES, INCLUDING METAL SURFACES OF FIXED MEDICAL EQUIPMENT, WITHIN THE PROCEDURE ROOM SHALL BE BONDED WITH MINIMUM #10 AWG CU. ITEMS SHALL INCLUDE, BUT NOT LIMITED TO:
 - a. MEDICAL GAS PIPES AND WATER PIPES
 - b. ALL INTERCOM, TELEPHONE AND NURSE CALL OUTLET BOXES
 - c. ALL EXPOSED CONDUCTIVE SURFACES
 - d. GROUNDING TERMINAL OF ROOM RECEPTACLES
5. ELECTRICAL CONTRACTOR SHALL PERFORM EQUIPOTENTIAL GROUND TESTING IN THE PATIENT CARE AREAS WITH AN APPROVED METER AS STIPULATED IN NFPA 99 SECTION 4.3.3. TESTING REPORTS SHALL BE PROVIDED TO THE ARCHITECT, AND ONE COPY SHALL REMAIN AT THE JOB SITE FOR REFERENCE BY THE INSPECTING AUTHORITIES.

ALARM SYSTEM NOTES

1. CONTRACTOR SHALL COORDINATE WITH THE FACILITY SAFETY OFFICER FOR ALL DEVICE LOCATIONS AND PROVIDE BOX AND CONDUIT FOR ANY NEW DEVICES REQUIRED.
2. MODIFICATION OF EXISTING SYSTEM IS NOT INCLUDED IN THIS PROJECT SCOPE OF WORK.

BUILDING SITE SPECIFIC NOTE

INFORMATION SHOWN ON THIS DRAWING IS BASED ON INFORMATION PROVIDED TO ENGINEER AT TIME OF DESIGN. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES BACK TO ARCHITECT/ENGINEER PRIOR TO BID.

CRITICAL NOTE

THESE ELECTRICAL DRAWINGS WERE CREATED FOR USE WITH PHILIPS PROXIDAGNOST N90 SYSTEM INSTALLATION DRAWINGS. REFER TO THE PLANS NOTED BELOW FOR ADDITIONAL ELECTRICAL DETAILS AND NOTES AND PROVIDE ACCORDINGLY. CONTRACTOR MUST COORDINATE THESE ELECTRICAL DRAWINGS WITH SYSTEM DRAWINGS TO PROVIDE A COMPLETE INSTALLATION. NOTIFY ARCHITECT/ENGINEER IF SYSTEM DRAWINGS ARE NOT AS INDICATED IN THIS NOTE.

PHILIPS DRAWING LIST:

AN GENERAL NOTES
A2 EQUIPMENT LAYOUT
EN ELECTRICAL NOTES
EL ELECTRICAL LEGEND
EI ELECTRICAL LAYOUT
E2 CONDUIT LIST
ED1 ELECTRICAL DETAILS

GENERAL NOTE:

EQUIPMENT LAYOUT, NOTES AND INTERCONNECTION WIRING ARE BASED UPON INFORMATION GIVEN TO THE ENGINEER AT TIME OF DESIGN. THE CONTRACTOR SHALL COORDINATE ALL CONDUIT REQUIREMENTS, ALL CABLING LENGTHS, AND EQUIPMENT LAYOUT OF ACTUAL EQUIPMENT FURNISHED WITH PHILIPS REPRESENTATIVE PRIOR TO START OF CONSTRUCTION.

NOTES

1. THE CONTRACTOR SHALL REMOVE ALL EXISTING WIRINGS AND EQUIPMENT MADE UNNECESSARY BY THE RENOVATION. ALL MATERIALS REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR.
2. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR COORDINATION OF MOUNTING HEIGHTS AND/OR LOCATIONS OF ALL OUTLETS AND WIRING DEVICES.
3. ALL TELEPHONE/DATA JACKS AND CABLING TO BE PROVIDED AND INSTALLED BY OWNER'S VENDOR.
4. (EX) DENOTES EXISTING DEVICE TO REMAIN AS-IS. (R) DENOTES RELOCATED EXISTING DEVICE.
5. GROUND CONDUCTOR SHALL BE INSTALLED IN ENTIRE RACEWAY SYSTEM.
6. REUSE EXISTING JUNCTION BOXES, CONDUIT AND WIRING WHERE APPLICABLE. REMOVE AND DISPOSE OF ALL UNUSED CONDUIT AND WIRING BACK TO ITS SOURCE.
7. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL DEVICE TYPES, LOCATIONS AND QUANTITIES WITH OWNER'S REPRESENTATIVE AND PROVIDE ACCORDINGLY.

NOTICE

1. THESE ELECTRICAL DRAWINGS HAVE BEEN DESIGNED WITH AND SHALL BE BID IN CONJUNCTION WITH THE PHILIPS INSTALLATION AND SITING DRAWING SET. SUBMISSION OF AN ELECTRICAL BID WILL BE CONSIDERED AS EVIDENCE THAT THE PHILIPS DRAWINGS WERE REVIEWED AND THAT ALL INFORMATION SHOWN HAS BEEN INCLUDED IN THE BID. LATER CLAIMS FOR ADDITIONAL COMPENSATION FOR WORK DESCRIBED ON EITHER SET OF DRAWINGS SHALL NOT BE ACCEPTED.
2. ELECTRICAL DRAWINGS INDICATE THE INSTALLATION CONCEPT FOR THE PHILIPS EQUIPMENT. HOWEVER, CONTRACTOR SHALL OBTAIN AND BID EQUIPMENT INSTALLATION WITH PHILIPS INSTALLATION DRAWINGS WHICH INDICATE ADDITIONAL REQUIREMENTS NECESSARY FOR PROPER INSTALLATION.
3. CONTRACTOR SHALL REFER TO INTERIOR ARCHITECTURAL DRAWINGS FOR COORDINATION OF MOUNTING HEIGHTS AND/OR LOCATIONS OF ALL OUTLETS AND WIRING DEVICES.

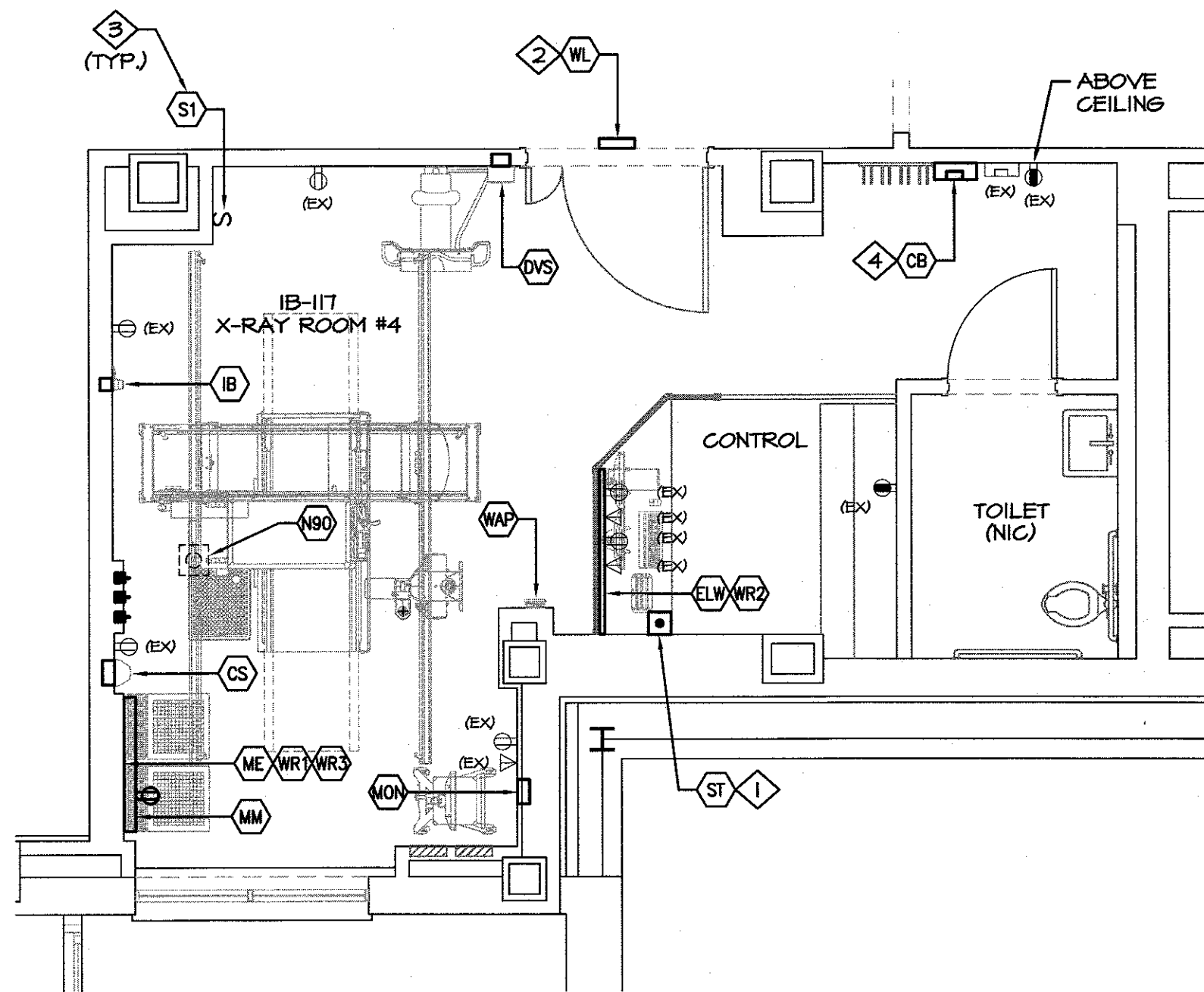
ELECTRICAL CONTRACTOR SHALL COORDINATE CLOSELY WITH PHILIPS REPRESENTATIVE FOR CLARIFICATION OF CABLES AND EQUIPMENT TO BE:

- SUPPLIED/INSTALLED BY PHILIPS
- SUPPLIED/INSTALLED BY CONTRACTOR
- SUPPLIED BY PHILIPS, INSTALLED BY CONTRACTOR
- AVAILABLE THROUGH PHILIPS, SUPPLIED/INSTALLED BY CONTRACTOR

COORDINATION NOTES:

1. THIS SHEET SHALL BE USED IN CONJUNCTION WITH PHILIPS VENDOR REFERENCE DRAWINGS FOR CONNECTION REQUIREMENTS, CONDUITS, BOX SIZES, ETC.
2. INFORMATION SHOWN IN THIS DOCUMENT IS AN EXCERPT OF THE INFORMATION SHOWN ON THOSE DRAWINGS.
3. CONTRACTOR SHALL REFER TO ARCHITECTURAL INTERIOR ELEVATIONS FOR ALL WALL MOUNTED DEVICES AND EQUIPMENT.

CONDUIT AND WIRE SYSTEMS WITHIN THIS PROJECT SHALL COMPLY WITH REQUIREMENTS FOR REDUNDANT GROUNDING PER THE NATIONAL ELECTRICAL CODE ARTICLE 517.13 (A)(B).



LINE LEGEND:

EXISTING TO REMAIN _____
EXISTING TO BE REMOVED - - - - -
NEW WORK THIS SCOPE _____



X-RAY POWER PLAN

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

NOTE:
REFER TO SHEET E-300.00 FOR PHILIPS SYSTEM INFORMATION.

NOTES

1. EMERGENCY STOP FOR ACTIVATION OF SHUNT-TRIP BREAKERS. REFER TO POWER RISER DIAGRAM.
2. EXISTING X-RAY IN USE WARNING LIGHT. VERIFY WITH PHILIPS REP. FOR CONTROL OF SIGN AND MAINTAIN EXISTING CIRCUIT.
3. PHILIPS EQUIPMENT IDENTIFICATION TAG. REFER TO VENDOR REFERENCE DRAWINGS FOR DESCRIPTION.
4. EXISTING SYSTEM MAIN BREAKER (CB) SHALL BE REPLACED. REFER TO POWER RISER DIAGRAM.

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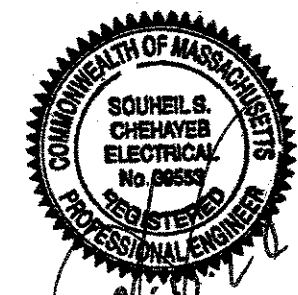
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SHEET TITLE

POWER PLANS
AND NOTES

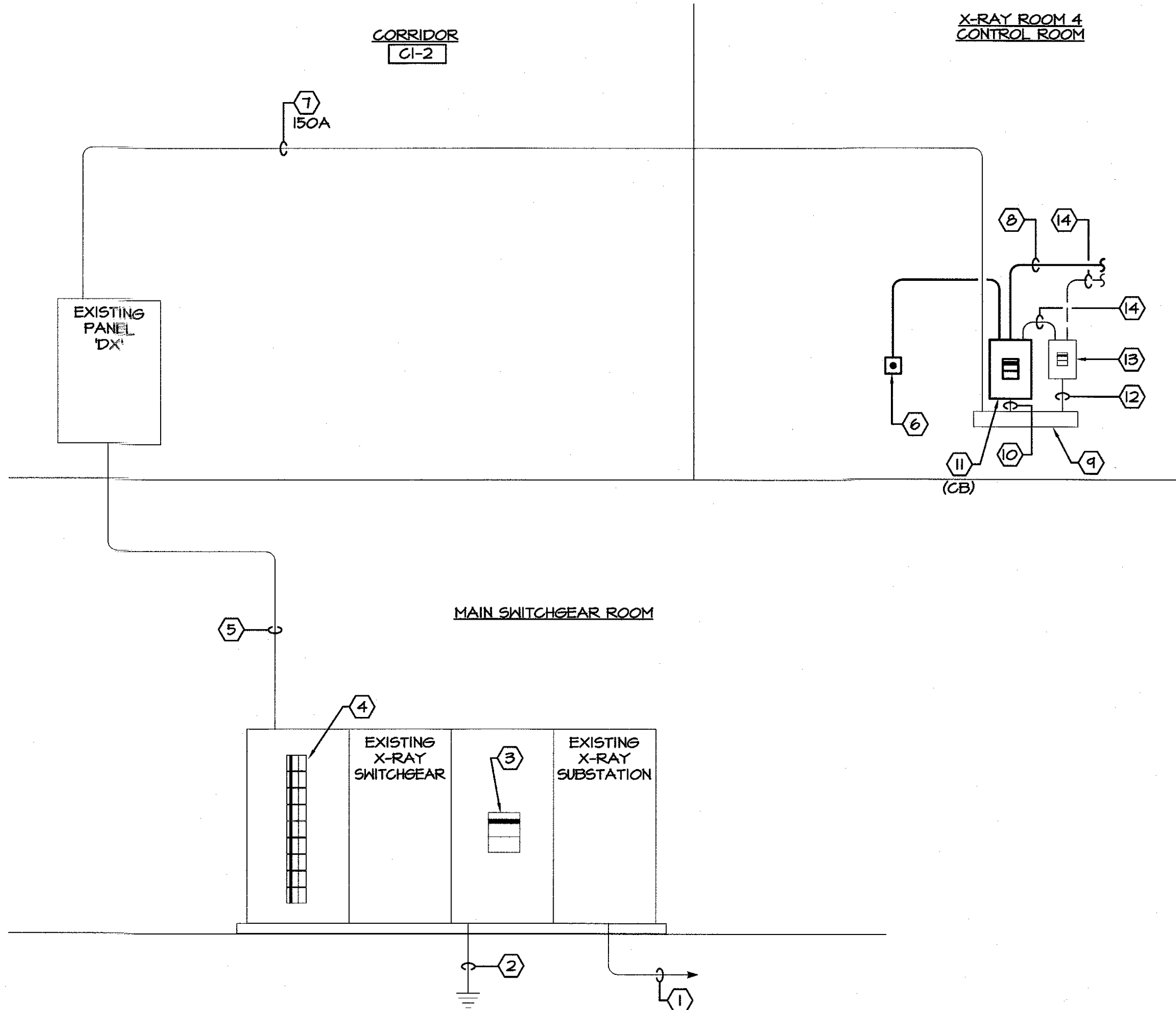
DATE
SEPT. 30, 2024

PROJECT NO.
0824-04

SHEET NO.

E-201.00

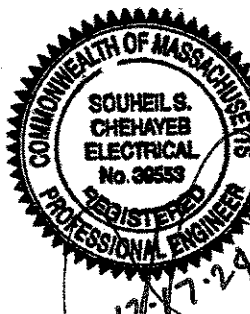
- KEY NOTES**
- ① EXISTING PRIMARY FEEDERS TO REMAIN.
- ② EXISTING SERVICE GROUNDING ELECTRODE CONDUCTOR TO REMAIN.
- ③ EXISTING 1200 AMP, 277/480 VOLT, 3-PHASE MAIN BREAKER TO REMAIN.
- ④ EXISTING DISTRIBUTION BREAKERS TO REMAIN. CONTRACTOR SHALL LOCATE EXISTING 400 AMP, 3-POLE BREAKER SERVING EXISTING PANEL 'DX'. SCHEDULE ALL POWER SHUT DOWNS WITH VA PROJECT MANAGER.
- ⑤ EXISTING PANEL FEEDER (TWO SETS OF 4 #300 kcmil CU WITH GROUND) TO REMAIN. FIELD VERIFY AND NOTIFY ENGINEER IMMEDIATELY IF NOT AS SHOWN.
- ⑥ EMERGENCY SHUNT-TRIP PUSHBUTTON, FLUSH MOUNTED AT 48" A.F.F. CONNECT WITH 2 #10, 1 #10 E.G. IN 3/4" CONDUIT. REFER TO PHILIPS EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION. COMPLETELY REMOVE EXISTING EMERGENCY OFF BUTTONS AND CIRCUITRY.
- ⑦ EXISTING FEEDER TO REMAIN (4 #1/0, 1 #1/0 E.G. IN 2" CONDUIT).
- ⑧ 4 #1, 1 #1 E.G. IN 2" CONDUIT TO PHILIPS EQUIPMENT 'MM'. REFER TO PHILIPS EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION. COMPLETELY REMOVE EXISTING FEEDER TO EXISTING X-RAY UNIT.
- ⑨ EXISTING 10"x10" WIREWAY WITH SCREW-ON COVER TO REMAIN.
- ⑩ EXISTING FEEDER TO REMAIN (4 #1, 1 #1 E.G. IN 1-1/2" CONDUIT) RECONNECT TO NEW BREAKER.
- ⑪ 100 AMP, 3-POLE, 480V, ENCLOSED BREAKER WITH SHUNT-TRIP. BREAKER SHALL BE RATED FOR 35K A.I.C. REFER TO CORRESPONDING ROOM LAYOUT PLAN FOR LOCATION AND REFER TO PHILIPS DRAWINGS FOR ADDITIONAL INFORMATION.
- ⑫ EXISTING FEEDER TO REMAIN (4 #8, 1 #8 E.G. IN 1" CONDUIT).
- ⑬ EXISTING 30 AMP, 3-POLE, 480V, ENCLOSED BREAKER WITH SHUNT-TRIP. BREAKER SHALL REMAIN FOR FUTURE USE AND BE SET IN THE OFF POSITION.
- ⑭ EXISTING FEEDER SHALL BE COMPLETELY REMOVED.



**EXISTING, PARTIAL
POWER RISER DIAGRAM**
NO SCALE

MANUFACTURER: GE				EXISTING PANEL: DX				LOCATION: CORRIDOR C1-2				SPECIAL: FED AT 400 AMPS						
PANEL TYPE: SPECTRA		FED FROM: X-RAY SWBD		277/480 VOLTS		3 PHASE 4		WIRE/SOLID NEUTRAL		AMPERE BUS 600		AMPERE MAIN 600						
35K INTERRUPTING CAPACITY (AIC)				RATED: SERIES - FULL X				MOUNTING: FLUSH X SURFACE -				MAIN TYPE LUGS						
No.	KVA	LD	WIRE	GND	COND	Description	BRKR	A	B	C	BRKR	Description	WIRE	GND	COND	LD	KVA	No.
1	0.0	-	-	-	-	SPARE	FRM 250	34.6			250 FRM	X-RAY EQUIPMENT ROOM 2	EX	EX	EX	-	34.6	2
	0.0	-	-	-	-		TRP 225		34.6		125 TRP					-	34.6	
	0.0	-	-	-	-		TYP SFHA			34.6	SFHA TYP					-	34.6	
3	27.7	-	EX	EX	EX	X-RAY EQUIPMENT ROOM 1	FRM 250	27.7			250 FRM	SPARE	-	-	-	-	0.0	4
	27.7	-	EX	EX	EX		TRP 100		27.7		225 TRP					-	0.0	
	27.7	-	EX	EX	EX		TYP SFHA			27.7	SFHA TYP					-	0.0	
5	17.4	-	EX	EX	EX	X-RAY EQUIPMENT ROOM 4 (NEW EQUIPMENT LOAD)	FRM 250	17.4			-	FRM				-	0.0	
	17.4	-	EX	EX	EX		TRP 150		17.4		-	TRP	SPACE ONLY	-	-	-	0.0	6
	17.4	-	EX	EX	EX		TYP SFHA			17.4	-	TYP				-	0.0	
7	0.0	-	-	-	-	SPACE ONLY	FRM -	0.0			-	FRM				-	0.0	
	0.0	-	-	-	-		TRP -		0.0		-	TRP	SPACE ONLY				0.0	8
	0.0	-	-	-	-		TYP -			0.0	-	TYP				-	0.0	
9	0.0	-	-	-	-	SPACE ONLY	FRM -	0.0			-	FRM				-	0.0	
	0.0	-	-	-	-		TRP -		0.0		-	TRP	SPACE ONLY	-	-	-	0.0	10
	0.0	-	-	-	-		TYP -			0.0	-	TYP				-	0.0	
LEGEND/NOTES:																		
20(L) = PROVIDE HANDLE LOCKING DEVICE FOR THIS BREAKER																		
KVA SUB TOTALS: 79.7 79.7 79.7																		
CONNECTED LOAD KVA: 239.1																		
KVA DEMAND LOAD ADJUSTMENTS																		
+ 25% SPACE HEATING: 0.00																		
+ 25% LIGHTING: 0.00																		
100 % KITCHEN DEMAND: 0.00																		
+ 25% EV CHARGERS: 0.00																		
TOTAL DEMAND KVA: 239.1																		
DEMAND AMPERES: 287.6																		
KITCHEN MULTIPLIER PER NEC TABLE 220.56																		

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☐ REVIEW	04/30/24
☐ BIDDING	
☐ PERMIT	
☒ CONSTRUCTION	12/16/24

SHEET TITLE
**POWER RISER
DIAGRAM**

DATE
SEPT. 30, 2024
PROJECT NO.
0824-04

SHEET NO.

E-400.00

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SPECIFICATIONS - ELECTRICAL

DIVISION 26 - ELECTRICAL

SECTION 260500 COMMON WORK

1. GENERAL

1.01 The following are minimum requirements and shall govern, except that VA Standards and/or drawings shall govern when their requirements are in excess thereof.

2. DRAWINGS AND SPECIFICATIONS

2.01 The architectural, mechanical, electrical and equipment drawings and specifications are hereby incorporated into and become a part of this Division. This Contractor shall examine all such drawings and specifications and become thoroughly familiar with provisions contained herein and the submission of his bid shall be construed as indicating such knowledge.

2.02 Electrical drawings are diagrammatic and are intended to show the approximate locations of equipment and piping. Dimensions given on the plans shall be verified in the field. Drawings may not be scaled to obtain exact dimensions.

2.03 The exact locations of apparatus, fixtures, equipment and conduits shall be ascertained from the Owner's representative in the field, and the work shall be laid out accordingly. Should the Contractor fail to ascertain such locations, the work shall be changed at his own expense when so ordered by the Owner. The Owner reserves the right to make minor changes in the location of conduit and equipment up to the time of installation, without additional cost.

2.04 The electrical drawings and specifications are intended to supplement each other and any material or labor called for in one shall be furnished and supplied even though not specifically mentioned in both. Labor and/or materials neither shown nor specified, but necessary for the completion and proper functioning of the system, shall be provided by this Contractor.

2.05 The work required under these specifications includes all labor, materials, equipment and services necessary to provide lighting and power systems, service entrances, motor controls and connections, branch circuiting, feeders, panels, fixtures, wiring devices, and other items shown on the plans or specified.

2.06 When the specification of an item is not identified with a particular area, the item shall pertain to all areas.

2.07 This Contractor shall furnish such labor and materials as hereinafter specified and as required to complete all electrical connections in accordance with the manufacturer's requirements for all mechanical equipment and Owner's equipment as shown and/or specified.

3. EXAMINATION OF SITE

3.01 Contractor shall visit the site and familiarize himself with existing conditions and satisfy himself as to the nature and scope of work.

4. DEFINITIONS

4.01 "Install" shall mean to place, fix in position, secure, anchor, wire, etc., including necessary adjustments and labor so that equipment or installation will function as specified and intended.

4.02 "Furnish" shall mean to purchase and supply equipment or components.

4.03 "Provide" shall mean to "furnish and install".

4.04 "Or approved equal" shall mean equal in type, design, quality, style, color, etc., as determined by the Engineer/Architect.

5. INTERFERENCES

5.01 It shall be the duty of this Contractor to report any interferences between his work and that of any other Contractor to the Owner or Architect as soon as they are discovered. The Owner or Architect will determine which equipment shall be relocated regardless of which was first installed, and his decision shall be final.

6. MATERIALS AND WORKMANSHIP

6.01 All work shall be installed in a practical and workmanlike manner by competent workmen, skilled in their branch of the trade.

6.02 Unless otherwise specified or indicated on the drawings, all materials shall be new and free from defects.

6.03 All material and equipment shall meet or exceed standards specified by UL, NEMA, ANSI and IEEE wherever such standards have been established.

6.04 From time-to-time during the operation and at the completion thereof, this Contractor shall remove all debris and excess materials caused by his work and he shall leave the area of the operation broom clean.

6.05 All electrical equipment and material shall bear the Underwriter's Laboratories label.

7. SUPPORTS

7.01 This Contractor shall furnish and install all angle iron, channel iron, rods, supports or hangers required to install or mount panelboards, switchboards, or any electrical equipment called for on the plans. In these specifications, or as necessary to mount any piece of electrical equipment, material, or device. Conduit, fixtures, or any electrical devices shall not be supported from steel deck, bridging, ceiling, or ceiling support wires.

8. TEMPORARY CONSTRUCTION POWER AND LIGHTING

8.01 Sufficient temporary power, during construction, for tools and portable equipment shall be provided by the Electrical Contractor. Contractor shall coordinate with Owner.

9. CODES, LAWS, PERMITS AND INSPECTIONS

9.01 Install all work in full accordance with codes, rules and regulations of the VA Design Standards, public utility, and all other authorities having jurisdiction over the premises. This shall include all requirements of the local Building Code, regulations of the State Department of Industrial Relations, OSHA, ADA (Americans with Disabilities Act), and the requirements of the National Electric Code, as interpreted by the Local Inspection Division. All these codes, rules, and regulations are hereby incorporated into this specification.

9.02 Comply with specification requirements which are in excess of code requirements and not in conflict with same.

9.03 The Contractor shall secure all permits and certificates of inspection incidental to the work, required by foregoing authorities. All such certificates shall be delivered to the Owner in duplicate, before final payment on contract will be allowed. The Contractor shall pay all fees, charges and other expenses in connection therewith.

10. FIELD CHANGES (AS BUILT DRAWINGS)

10.01 Keep one (1) set of working drawings and shop drawings at the job site for sole purpose of recording all changes made during construction. After completion of the work and before requesting final payment, the above mentioned drawings shall be delivered to the Owner.

11. LABELING AND NAMEPLATES

11.01 Permanently label switchboards, panelboards, time switches and safety switches indicating equipment or panels and areas which they serve.

11.02 Lighting and appliance panels shall be labeled as shown on drawings.

11.03 Electrical Contractor shall furnish and install identification for pull or junction boxes furnished by him.

11.04 Identify as to use on face of equipment by means of laminated black and white phenolic label with 3/8" letters engraved through black to white.

11.05 Materials

A. Nameplates: Engraved three-layer laminated plastic, white letters on a black background.

11.06 Installation

A. Degrease and clean surfaces to receive nameplates and tape labels.

B. Install nameplates and tape labels parallel to equipment lines.

C. Secure nameplates to equipment fronts using screws, rivets or adhesive. Secure nameplates to inside face of recessed panelboard doors in finished locations.

D. Mark every junction or pull box cover plates with the circuit number(s) of all wires contained therein.

11.07 Wire Identification

A. Provide wire markers on each conductor at terminal strips and at final line and load connections. Identify with branch circuit or feeder number of power and lighting circuits, and with control wire number as indicated on equipment manufacturer's shop drawings for control wiring or as drawings indicate.

B. All wires shall be color coded. Color code branch circuit wiring as follows:

1. Three Phase System:

Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow
Neutral	White	Gray
Ground	Green	Green

2. Switched Wires: Other than colors listed above

3. Travelers Between 3-Way Switches: Purple

4. Isolated Ground: Green with Yellow Stripes

12. GUARANTEE

12.01 In addition to guarantees of equipment by manufacturer of same, this Contractor shall also guarantee equipment provided by him and shall be held for a period of one (1) year to make good any defects in material and workmanship occurring during this period, at his sole expense. This one year period shall start from the date of final occupancy by Owner.

13. SCOPE OF WORK

13.01 Furnish all labor and material necessary to complete the electrical work shown on the drawings, specified herein or required to complete the construction of the building as shown.

13.02 The listing herein of article or material, operation or method, required that the Contractor shall provide and install, unless noted to be supplied by others, each item listed of quality or subject to qualification noted. Each operation shall be performed according to standard practice, manufacturer's instructions and conditions stated, providing, therefore, all necessary labor, equipment, and incidentals.

13.03 The electrical Contractor shall schedule his work to conform to the progress of the other trades and Contractors and employed on this project.

13.04 The electrical work shall include but is not limited to the following:

A. Complete power and lighting distribution systems including panels and light fixtures, as shown on plans.

B. Temporary electric service as required for construction.

C. Testing of all electrical equipment.

14. MANDATORY SHOP DRAWINGS

14.01 Submit all required electrical shop drawings.

14.02 Shop Drawings shall be submitted for:

Panels, Switchgear
All Lighting Fixtures and lamps
All Wiring Devices and Cover Plates

END OF SECTION 260500

SECTION 260519/260533/262726 CONDUCTORS/RACEWAYS/DEVICES

1. CONDUIT

1.01 All wire shall be run in accordance with the applicable codes in corrosion resistant, rigid, threaded, metal conduit or electrical metallic tubing (E.M.T.), unless otherwise specifically stated herein.

A. Conduit below floor slab, exposed to weather, or underground shall be rigid, threaded, galvanized, heavy wall type.

B. Carlon PVC, Type 40 heavy wall conduit may be used underground below floor slab or pavement in lieu of rigid, threaded, galvanized conduit except where prohibited in NEC 511. PVC schedule 40 conduit shall not be run in or above floor slab. PVC conduit shall terminate below floor slab with rigid, threaded metal conduit adapter. Conduit above slab shall be metal.

C. A ground conductor shall be supplied in all conduits and raceways. The ground conductor shall be sized per the N.E.C. or as shown on drawing, whichever is larger.

1.02 Conduit and E.M.T. shall be delivered to the building in 10-foot lengths and each length shall have the Underwriter's Laboratories label.

1.03 Conduit and E.M.T. shall be run concealed in all finished areas of the building.

1.04 E.M.T. connectors and couplers shall be compression type made of steel as manufactured by Thomas & Betts, Steel City, or Appleton. Bends and offsets shall be made with a hickey or power bender without kinking or destroying the smooth bore of the conduit. Paralleled conduits shall run straight and true with offsets uniform and symmetrical. Conduit terminals at boxes and cabinets shall be rigidly secured with locknuts and bushings as required by the National Electrical Code and local electrical code. Insulated bushings shall be used on all conduit 1-1/4" trade size and larger.

1.05 Conduit shall be securely fastened in place at no more than 8-foot centers, and hangers, supports or fastenings shall be provided at each conduit, elbow and at the end of each straight run, terminating at a box or cabinet. Conduit shall not be suspended from the ceiling or ceiling suspension wires.

1.06 Horizontal and vertical conduit runs shall be supported by one-hole malleable straps or other approved metal device with suitable bolts, expansion shield or beam clamp for mounting to building structure or special brackets. Conduit shall be supported from structural steel or joist and independent of other piping. Do not support conduit from metal roof deck or any other support device of another trade.

1.07 Armored cable (BX) or nonmetallic sheathed cable (Romex) shall not be used. No aluminum conduit shall be used.

1.08 Only short runs of flexible metal conduit not over 6' in length and having a ground conductor, shall be used for terminal connections to motors and also for electrical equipment where it is not practical to make final connection with rigid conduit. Flexible conduit exposed to weather shall be Seal-tite.

1.09 Exposed conduit and conduit in ceiling space shall be run parallel to the building structure.

1.10 Conduit system shall conform to all requirements of the National Electrical Code (N.E.C./N.F.P.A.-70) and local codes.

2. CONDUCTORS

2.01 Sizes of conductors for feeders are given on the drawings and no wire smaller than #12 gauge shall be used for branch lighting or power circuits. All wiring shall have the U.L. label and be of 98% conductivity copper. Aluminum wire or aluminum cable is not acceptable.

A. The gauge of all wire shall be in accordance with B45 standard.

2.02 All wire and cable for branch lighting or small power circuits shall have NEC Type "THHN" or "THWN" 600 volt insulation.

2.03 Wire and cable above #10 gauge shall be stranded Type "THHN" insulated for 600 volts

2.04 For special conditions, as provided by the National Electrical Code, Type "RHH, A.V.A." or other required insulation shall be used.

2.05 Where lighting fixtures are used as raceways, 90 degree C. minimum insulated wire shall be used.

3. GROUNDING

3.01 This Contractor shall provide, install and connect a complete system of grounding for all equipment and structures. A good mechanical and electrical connection shall be made with approved grounding connectors.

3.02 Electrical system and equipment grounds shall comply with the N.E.C. as well as all local and state codes and regulations.

3.03 Panels, conduit systems, motor frames, lighting fixtures and other equipment that are part of this installation shall be securely grounded both mechanically and electrically in accordance with all codes.

3.04 A ground conductor shall be supplied in ALL conduit. It shall be an insulated, stranded, annealed copper conductor.

4. TOGGLE SWITCHES AND RECEPTACLES

4.01 All general purpose switches and receptacles color shall be as described in Electrical Requirements - Division 26 on sheet E-100.00.

4.02 Acceptable device manufacturers are Leviton, Arrow Hart, Hubbell, or Pass & Seymour.

4.03 Refer to Electrical Requirements on Sheet E-100.00 for specification of Switches and receptacles.

5. WALL PLATES

5.01 Unless otherwise noted, all plates for wall switches, receptacles and telephone outlets shall be as specified in Construction Documents.

5.02 All plates shall have full contact with the wall and boxes. Edges shall be parallel to the finished walls and ceilings.

6. OUTLETS

6.01 Locations of outlets are shown approximately on the drawings. Contractor shall refer to the shop drawings of the manufacturer of the equipment for the exact location of outlets for fixtures, motors, heaters and their respective control devices. Approximate locations of light fixtures are shown on the drawings.

6.02 Outlet boxes for concealed work shall be pressed steel boxes, galvanized and not less than #12 gauge, except floor boxes which shall be cast iron. Each ceiling outlet designated for a lighting fixture shall have a fixture support secured in place with nuts and bolts. Ceiling boxes shall be four inches (4") round and octagonal with lugs and screws for back plates. Wall outlets shall be four inches (4") square by 1-1/2" deep, single or double cover, except gang boxes of similar depth shall be used at locations requiring more than 2-gang.

6.03 Outlets on the exterior of the building shall be weatherproof type.

6.04 All outlets shall be firmly secured in place. Outlets in finished areas shall be flush with finished ceiling or walls.

7. BRANCH CIRCUIT WIRING

7.01 The Electrical Contractor shall provide and connect a complete system of panels, conduits, wire fittings, boxes, supports and all other miscellaneous materials required for equipment as indicated on the plans and ready for operation by the Owner.

7.02 All circuits shall be color coded.

END OF SECTION 260519/260533/262726

SECTION 262416 PANELBOARDS

1. LIGHTING AND APPLIANCE PANELBOARDS

1.01 Panels shall be copper bus and shall have 20 amp, single, double, or three pole circuit breakers (capable of interrupting available short circuit current) as required in each branch circuit. Where breakers larger than 20 amperes are required, the sizes are noted on the drawings. Breakers shall be bolt-on, quick-make, quick-break and capable of interchanging 1, 2 or 3-pole units. Multiple units shall be common trip. Provide spare breakers in each panel as shown. All lugs shall be U.L. approved CU/AL type.

1.02 Electrical Contractor shall arrange circuits as near as possible to circuit numbers on the drawings. At finish of job, Electrical Contractor shall take current reading checks of respective phases. Contractor shall rearrange some circuit connections to balance the load across all phases as closely as possible.

1.03 Panels shall be mounted as indicated on the drawings. The fronts shall be made of code thickness sheet metal having a door, hinged doors, hinged doors of proper width around the door. Doors shall be provided with an approved lock and shall be keyed alike. Provide new door fronts and keyed doors as required.

1.04 Breakers used for lighting circuits shall be switch duty style.

2. GENERAL (FOR ALL PANELS AND PANELBOARDS)

2.01 Metal framed card holders with typewritten circuit directory must be provided for each panel. Directory shall be clear and designation shall match identification on equipment. Panelboards (switchboard, distribution, power panels and lighting panels) shall be identified by a label on the switch and/or panel door. Provide engraved laminated phenolic nameplates with 3/8" letters engraved through black to white.

2.02 All panels, safety switches, starters and in general, all equipment requiring lugs shall be equipped with solderless type U.L. approved lugs.

2.03 Provide all necessary unistrut, channel, backing and supports to mount switchboard and panelboards securely in place.

END OF SECTION 262416

SECTION 265100 LIGHTING

1. LIGHTING FIXTURES

1.01 All fixtures shall be as shown on Fixture Schedules.

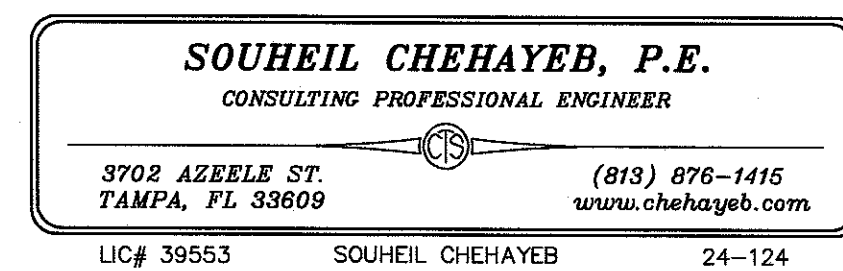
1.02 Unless otherwise indicated, all lighting fixtures shall be furnished and installed by Electrical Contractor as indicated on the Lighting Fixture Schedules, including lamps.

1.03 All fixtures shall bear the Underwriter's Laboratories label and shall be installed according to manufacturer's instruction.

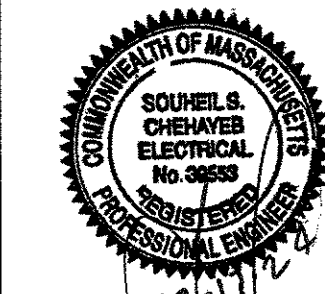
1.04 All fixtures shall be new and undamaged.

1.05 This Contractor shall provide and install all necessary support media for all lighting fixtures including structural steel, angle, rods, etc.. In general, fixtures shall be supported in a manner acceptable to the local inspection authorities. All fixtures shall be firmly supported from beams or joists, and not dependent on suspended ceiling system for support. All fixtures installed in the ceiling grid shall be supported from the building structure (less than 10 lbs - one #12 gauge hangerwire; 10 lbs or more - two #12 gauge hangerwires attached at opposing corners of the fixture).

END OF SECTION 265100



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MASSACHUSETTS NO. 30331



R&F EQUIPMENT REPLACEMENT
PHILIPS Prox Diagnost N90
WEST ROXBURY VA MEDICAL CENTER
X-RAY ROOM (4) 1B17, BUILDING 1
1400 VFW PARKWAY
WEST ROXBURY, MASSACHUSETTS 02132

REVISIONS

ISSUED FOR: DATE:

☐ VA REVIEW	11/01/24
☐ REVIEW	09/30/24
☐ BIDDING	
☐ PERMIT	
☒ CONSTRUCTION	12/16/24

SHEET TITLE

ELECTRICAL
SPECIFICATIONS

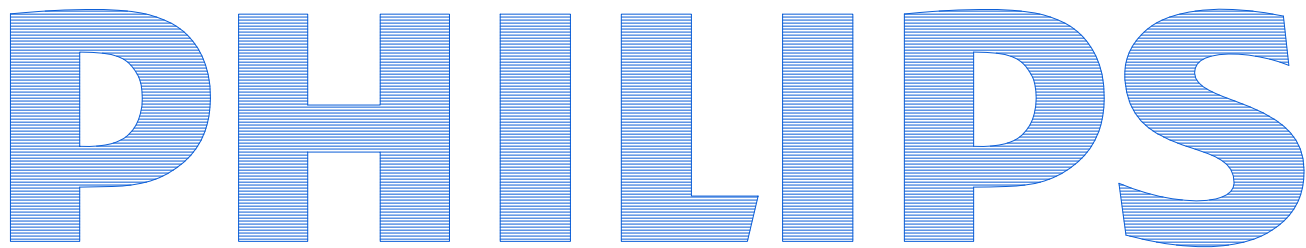
DATE
SEPT. 30, 2024

PROJECT NO.
0824-04

SHEET NO.

E-500.00

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Final Site Preparation Support Document

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



*Photo shown is not site specific.

Revision History			
Note for Architects and/or Contractors: If revisions are listed, these drawings must be thoroughly reviewed so that all changes can be incorporated into your project.			
Rev.	Date	Revision Descriptions	By
A	8/29/2024	Updated room background per old Philips project: N-EAS090786. Created pre-order site preparation support document per quote: Q-00261225.	MM
B	10/17/2024	Updated to final site preparation support document per order: 6600700375.010000. A2, AD4, S1, SD5: Added Patient Support. E2: Highlighted new conduits per PM request.	MM

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Section A - Equipment Plan General Notes ----- AN Site Layout ----- A1 Equipment Layout ----- A2 Ceiling Height Guide ----- A3 Transport Information ----- AD1 Equipment Details ----- AD2 - AD4
Section S - Support Plan Support Notes ----- SN Support Layout - Floor & Wall ----- S1 Support Layout - Ceiling ----- S2-S3 Anchor Reference List ----- SD1 Ceiling Clearance ----- SD2 Support Details ----- SD3 - SD5
Section E - Electrical Plan Electrical Notes ----- EN Electrical Layout and Legend ----- EL - E1 Conduit List ----- E2 Electrical Details ----- ED1
Section N - Network Plan Remote Services Network ----- N1
Section C - Site Readiness Checklist ----- CHK

Project

ProxiDiagnost N90 R1.1

VA Medical Center Boston

Boston, MA

Room: 1B118

Philips Contacts

Project Manager: Matthew Caron

Contact Number: +1 (978) 502-6571

Email: matthew.caron@philips.com

Drawn By: Miguel Maldonado

Project Details

Drawing Number

N-EAS240136 B

Date Drawn: 10/17/2024

Quote: Q-00278074

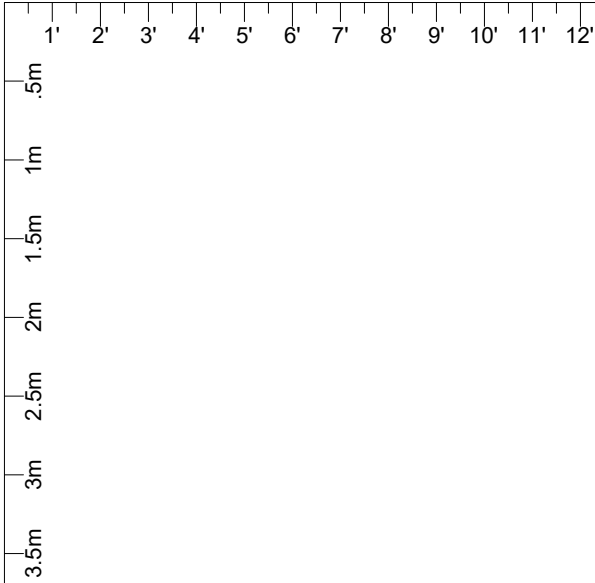
Order: 6600700375.010000

C1



General Specifications 1. Planning, Design, and Implementation Process The multidisciplinary project team should be assembled as early as possible in the design process. The multidisciplinary team should include administrators, clinicians, infection preventionists, architects and other design professionals, facility managers, safety officers, security managers, users of equipment, and support staff relevant to the areas affected by the project as well as those with knowledge of the organization's functional goal for the project. Inclusion of patient advocates/consumers, A/E consultants, and construction specialists should be considered. FGI 2018 APPENDIX A1.2-1.2 2. Responsibility The customer shall be solely responsible, at its expense for preparation of site, including any required structural alterations. The site preparation shall be in accordance with plans and specifications provided by Philips. Compliance with all safety electrical and building codes relevant to the equipment and its installation is the sole responsibility of customer. The customer shall advise Philips of conditions at or near the site which could adversely affect the carrying out of the installation work and shall ensure that such conditions are corrected and that the site is fully prepared and available to Philips before the installation work is due to begin. The customer shall provide all necessary plumbing, carpentry work, or conduit wiring required to attach and install products ready for use. 3. Permits Customer shall obtain all permits and licenses required by federal, state/provincial or local authorities in connection with the construction, installation and operation of the products and related rules, regulations, and shall bear any expense in obtaining same or in complying with any ordinances and statutes. 4. Protection The customer or his contractor, at his own expense, shall obtain the service of a licensed radiation physicist to specify radiation protection. (X-Ray Tube output 150 Kvp max.) 5. Asbestos and Other Toxic Substances Philips assumes that there is no hazardous material contained in project site. The customer is responsible for the removal of any materials, including but not limited to asbestos, deemed hazardous by local authorities, the EPA, OSHA, or any other authority having jurisdiction over the work. If such materials are discovered at any time that the work is proceeding, the work will immediately cease, the owner will be notified, and the work will again proceed after the owner has removed all of the hazardous material from the job site. 6. Labor In the event local labor conditions make it impossible or undersirable to use Philips' regular employees for such installation and connection, such work shall be performed by laborers supplied by the customer, or by an independent contractor chosen by the customer at the customer's expense, and in such case, Philips agrees to furnish adequate engineering supervision for proper completion of the installation. 7. Schedule The general contractor shall provide Philips with a schedule of work to assist in the coordination of delivery of Philips supplied products which are to be installed by the contractor and delivery of the primary equipment. 8. Extended Installation or Turnkey Work by Philips Any room preparation requirements for Philips equipment indicated on these drawings is the responsibility of the customer. If an extended installation or turnkey contract exists between Philips and the customer for room preparation work required by the equipment represented on these drawings, some of the responsibilities of the customer as depicted in these drawings may be assumed by Philips. In the event of a conflict between the work described in the turnkey contract workscope and these drawings, the turnkey contract workscope shall govern. 9. Electromagnetic Interference and Image Quality The Philips digital X-Ray detectors are highly sensitive receivers. Therefore, when determining where in the facility to install the x-ray system, care must be taken to avoid electromagnetic interference (EMI) to ensure optimal image quality. Possible EMI sources can be high power generators, power transformers, high power mains lines or other electromagnetic sources, which are located in the examination room directly or in the environment around the examination room. These EMI sources may emit excessive magnetic noise that could cause artifacts in the digital detector. 10.Avoid Adjacent EMI Sources Do not locate the digital detector in a room adjacent to such an EMI source (next to, above or below). EMI sources can be located also in the wall, floor or ceiling. (21.0)	General Conditions (continued) 11. Detector Location and Additional Sheiding If a location next to an EMI source is unavoidable, ensure the table and/or wallstand and proposed locations for portable detector exposures are away from these sources. The magnetic noise interference is reduced dramatically by locating as far away as possible from the EMI sources. It might be necessary to implement additional means to prevent an interference with the x-ray detector (e.g. additional shielding). (21.0) Minimum Site Preparation Requirements A smooth efficient installation is vital to Philips and their customers. Understanding what the minimum site preparation requirements are will help achieve this goal. The following list clearly defines the requirements which must be fulfilled before the installation can begin. 1. Walls shall be painted or covered, baseboards installed, floors shall be tiled and/or covered, ceiling shall have grid tiles and lighting fixtures installed and operational. 2. Doors and windows, especially radiation protection barriers, installed and finished with lock sets operational. 3. All electrical convenience, conduit, raceway, knockouts, cable openings, chase nipples, and junction boxes installed and operational. 4. Incoming mains power operational and connected to room x-ray breaker. 5. 115v convenience outlets operational. 6. All support structure correctly installed. All channels, pipes, beams and/or other supporting devices should be level, parallel, and free of lateral or longitudinal movements. 7. All contractor-supplied cables pulled and terminated. 8. A dust-free environment in and around the procedure room. 9. All HVAC (heating, ventilating and air conditioning) installed and operational as per specifications. BTUs shown on sheet A1 are average heat capacity. 10. Architectural features such as computer floor, wood floor, casework, bulkheads, installed and finished. When technical cabinets are installed in a closet with doors, it is suggested that the customer install a temperature alarm in the event of an air conditioner failure. 11. All plumbing installed and finished. 12. Philips does not install or connect developing tanks, automatic processors or associated equipment, built in illuminators, cassette pass boxes, loading benches and cabinets, lead protective screens, panels or lead glass window and frame. This is to be done by the customer/contractor. 13. Refer to Transport Information page for clear door openings and corridor widths. Note Once Philips has moved equipment into the suite and started the installation, the contractor shall schedule his work around the Philips installation team on site. It is suggested that a telephone be provided in the room to receive telephone calls. This would alleviate facility staff from answering calls for Philips personnel. Remote Service Diagnostics Medical imaging equipment to be installed by Philips Healthcare is equipped with a service diagnostic feature which allows for remote and on site service diagnostics. To establish this feature, a RJ45 type ethernet 10/100/1000 Mbit network connector must be installed as shown on plan. Access to customer's network via their remote access server is needed for Remote Service Network (RSN) connectivity. All cost with this feature is the responsibility of the customer. (13.0)	HVAC Requirement for General Equipment Locations Heating, ventilation, air conditioning requirement for general equipment locations must maintain temperature at 75° +/- 11°Fahrenheit (24° +/- 6°Celsius) and non-condensing relative humidity at 52.5%, +/- 22.5%. (13.0) Electrical Requirements Proxi Diagnost N90 G 80 Supply Configuration: 3 phase, 3 wire power and ground. Delta. Nominal Line Voltage: 400 or 480 VAC, 60 Hz 380 or 400 VAC, 50 Hz Circuit Breaker: 3 pole, 70 Amps (@ 480V) (17.0)	Project ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118 Philips Contacts Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado Project Details Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000 AN





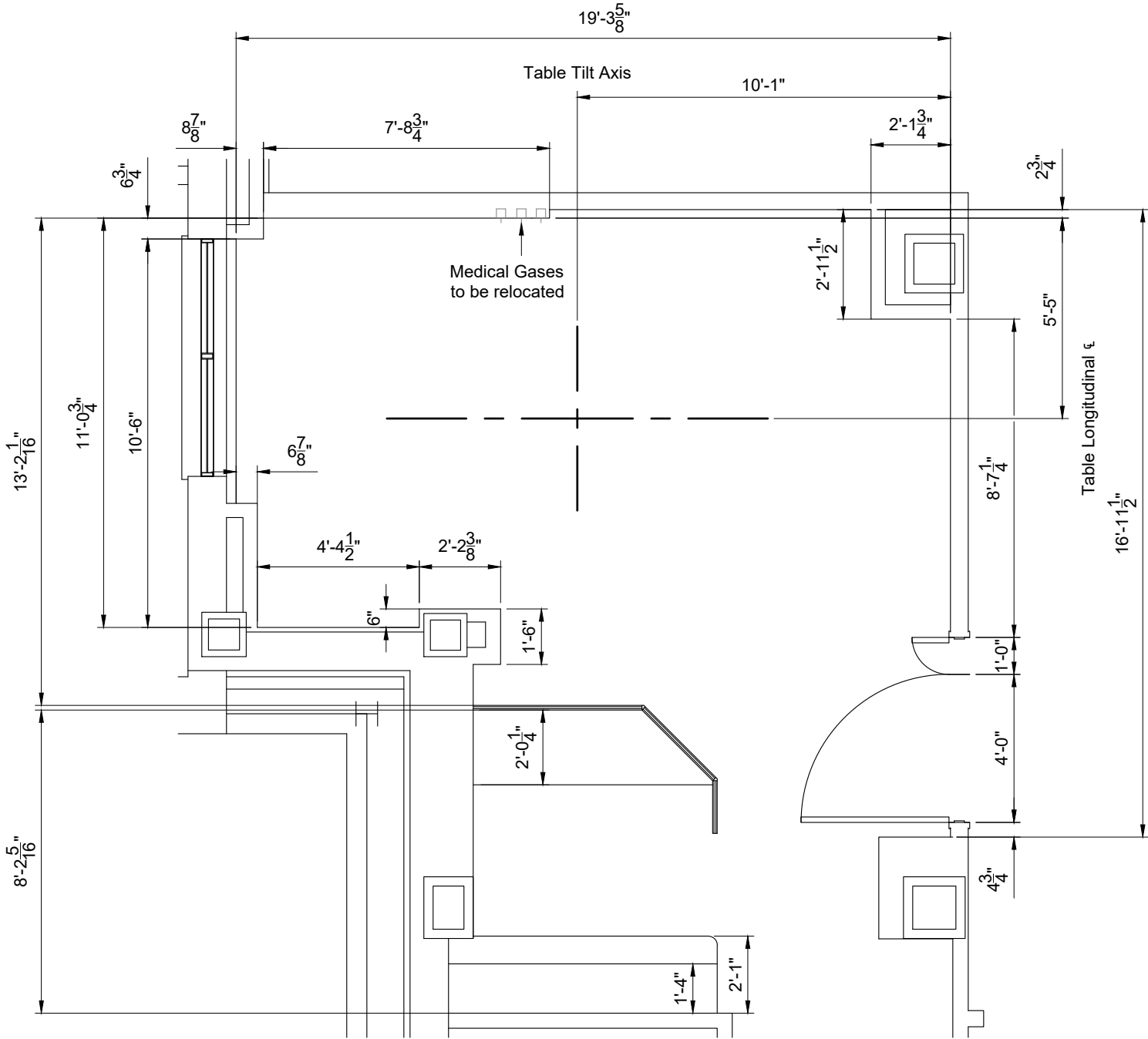
Legend

Walls

New Walls

Existing (to be removed)

Beams or other building construction elements



Site Layout

1/4" = 1'-0"

Recommended Minimum Ceiling Height: 8'-11" (2717mm)
Recommended Maximum Ceiling Height: 10'-6" (3200mm)
Reported Ceiling Height: 9'-6" (2895mm)

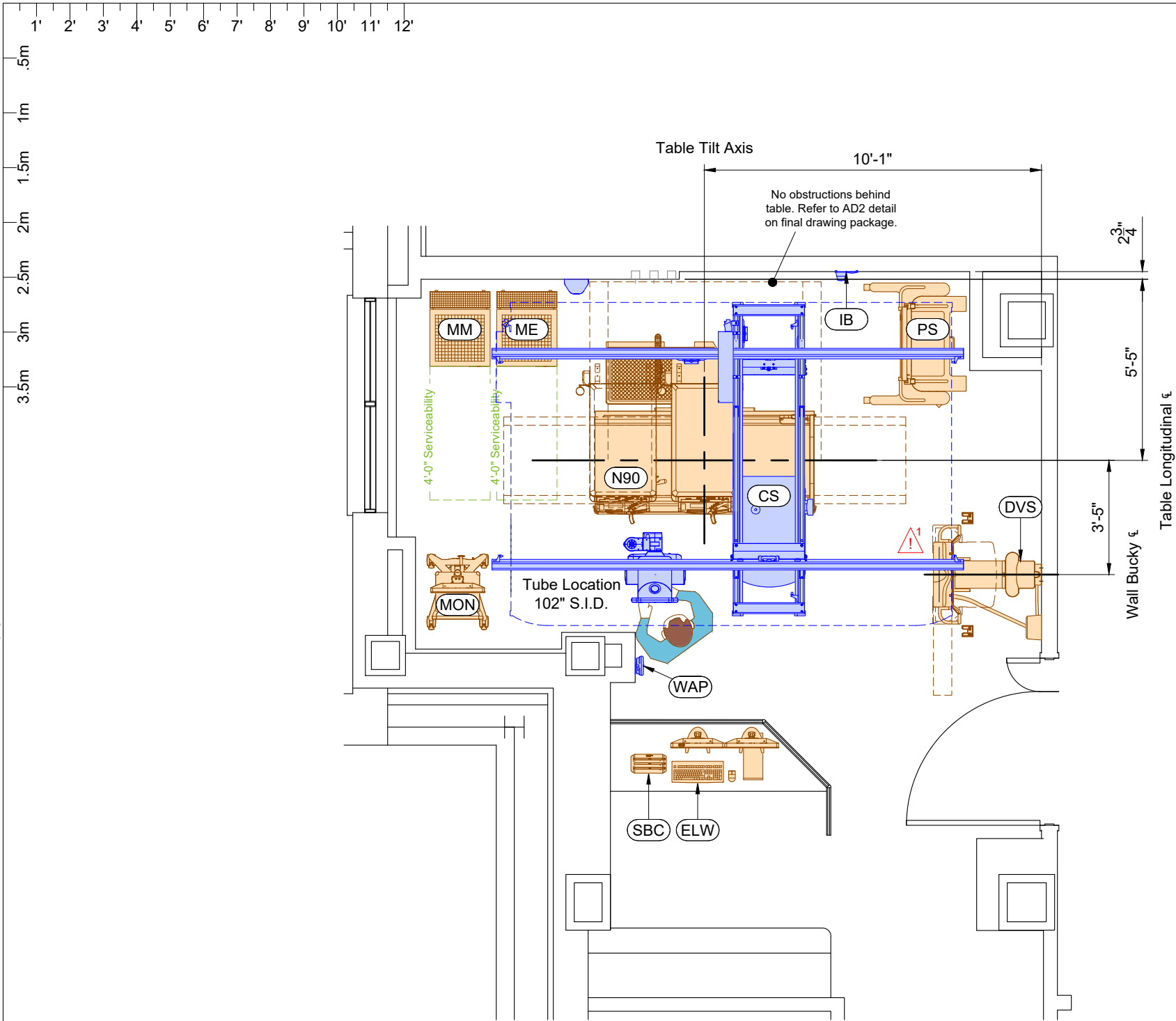
Ceiling Heights other than recommended may impact equipment functionality. See Ceiling Height Guide and consult with Philips.

Ceiling Height measured from finished floor to bottom of Unistrut.

Site Considerations

* Room background was gathered from past drawing #: N-EAS090786 Rev. G dated 06/25/2012 as reference. Existing conditions such as room dimensions, isocenter, Unistrut, soffit, built-ins, etc. to be verified by the customer/contractor before proceeding to Final.

Project Details	Philips Contacts	Project
Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118



Equipment Layout

1/4" = 1'-0"

Recommended Minimum Ceiling Height: 8'-11" (2717mm)
Recommended Maximum Ceiling Height: 10'-6" (3200mm)
Reported Ceiling Height: 9'-6" (2895mm)

Ceiling Heights other than recommended may impact equipment functionality. See Ceiling Height Guide and consult with Philips.

Ceiling Height measured from finished floor to bottom of Unistrut.

Equipment Legend				
A Furnished and installed by Philips B Furnished by customer/contractor and installed by customer/contractor C Installed by customer/contractor D Furnished by Philips and installed by contractor E Existing F Future G Optional item furnished by Philips				
		Equipment Designation	Detail Sheet	
			Description	
			Weight (lbs)	Heat Load (btu/hr)
A	N90	ProxiDiagnost N90	3527	1920 AD2
A	ME	Velara Generator Cabinet (40E Rack)	522	2730 AD3
A	MM	Geometry Cabinet (40E Rack)	214	1024 AD3
A	MON	Single LCD Trolley/Car	68	205 AD4
A	ELW	Eleva Workspot - Touchscreen Color LCD - Color LCD - Computer (on shelf under counter) - Uninterruptible Power Supply (on shelf under counter) - Keyboard and Mouse	97	682 AD4
A	WAP	Wi-Fi Access Point	2	-- AD4
A	SBC	SkyPlate Battery Charger	2	AD4
A	CS	CSM Long	879	444 AD2
A	DVS	BuckyDiagnost VS Digital Tilttable (Right)	618	956 AD3
A	IB	Indication Box	2	35 AD4
A	PS	Patient Support	154	-- AD4

General Notes

- * Any counters, keyboard trays and cabinetry shown to be supplied and installed by contractor. Shelf under control counter for UPS and CPU is required.
- * Field to verify all existing Philips and/or third party equipment will not affect the functionality of the system and its components.

Site Planning Issues and Considerations

-  Exact equipment configuration to be verified with local Philips Sales. Motorized tilting of DVS is listed on quote but functionality of the tilt feature will not be available due to limited room size.
- * Optional stitching shots at 102" S.I.D. will be available. See layout.
- * Shots to Wall Bucky are available below tabletop when tabletop is tilted upright.
- * Relationship of control area to table will not allow full view of patient when table is tilted upright.
- * Access to tube controls may be difficult at 102" S.I.D. position.
- * Access to medical gases may be difficult due to limited room size.
- * Room to be modified as shown on sheet A1.
- * Recommend a customer-provided and -installed door stop to avoid a collision between the door and DVS.
- * Potential trip hazard due to Patient Support fixing plates.

Notes to Philips Field Personnel

- * Longer cables will need to be ordered for cable runs from:
 - "ME" and "MM" to "CS" [45' (14m)]
- * Tabletop to be installed before table base is bolted to the floor.
- * Transverse carriage to be shortened by 4'-0". (2'-0" at the front and 2'-0" at the back)
- * All room dimensions to be verified in field.
- * New electrical boxes for MM/ME/CS will be required to be installed.
- * Verify exact location and configuration of existing Unistrut and electricals with local Philips service for re-use.
- * Field to verify existing conduit lengths, sizes, quantities, and origination and termination points.

Project

ProxiDiagnost N90 R1.1
VA Medical Center Boston
Boston, MA
Room: 1B118

Philips Contacts

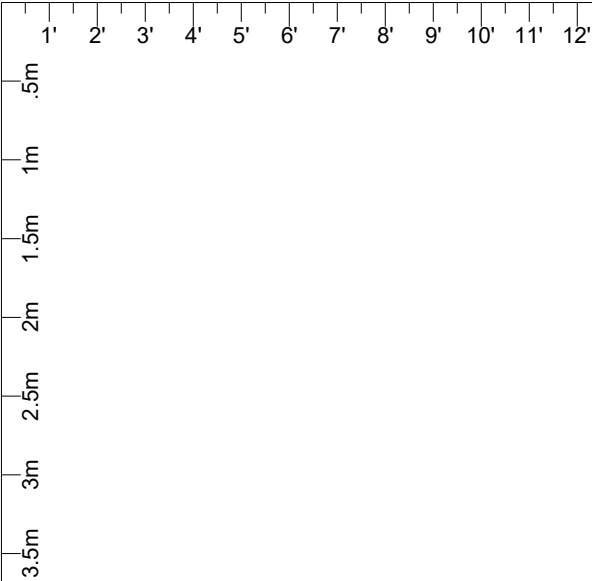
Project Manager: Matthew Caron
Contact Number: +1 (978) 502-6571
Email: matthew.caron@philips.com
Drawn By: Miguel Maldonado

Project Details

Drawing Number
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Date Drawn: 10/17/2024
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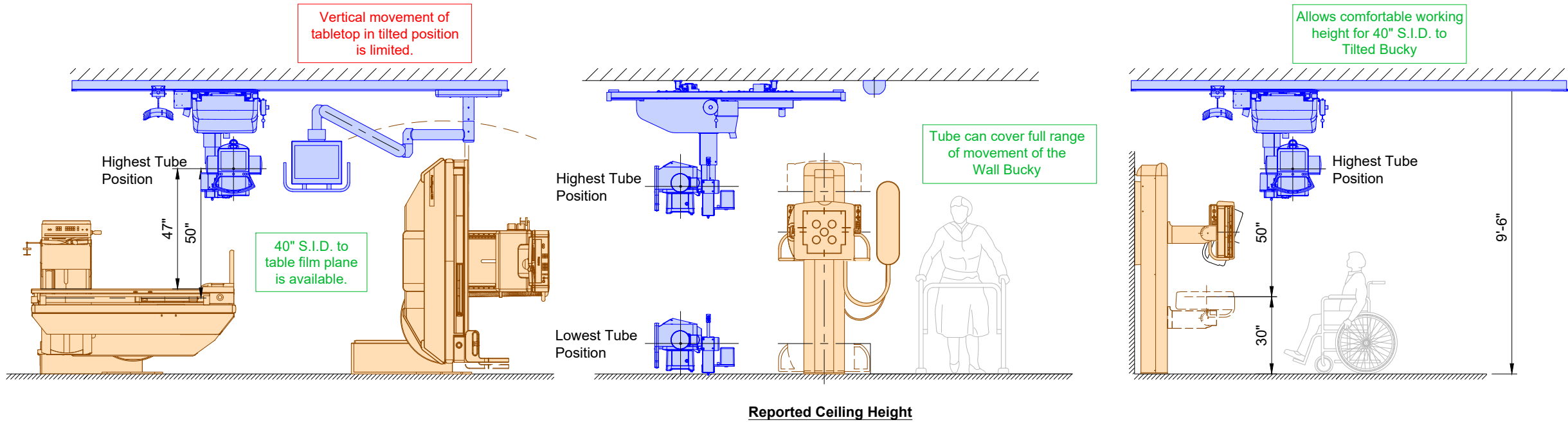
A2

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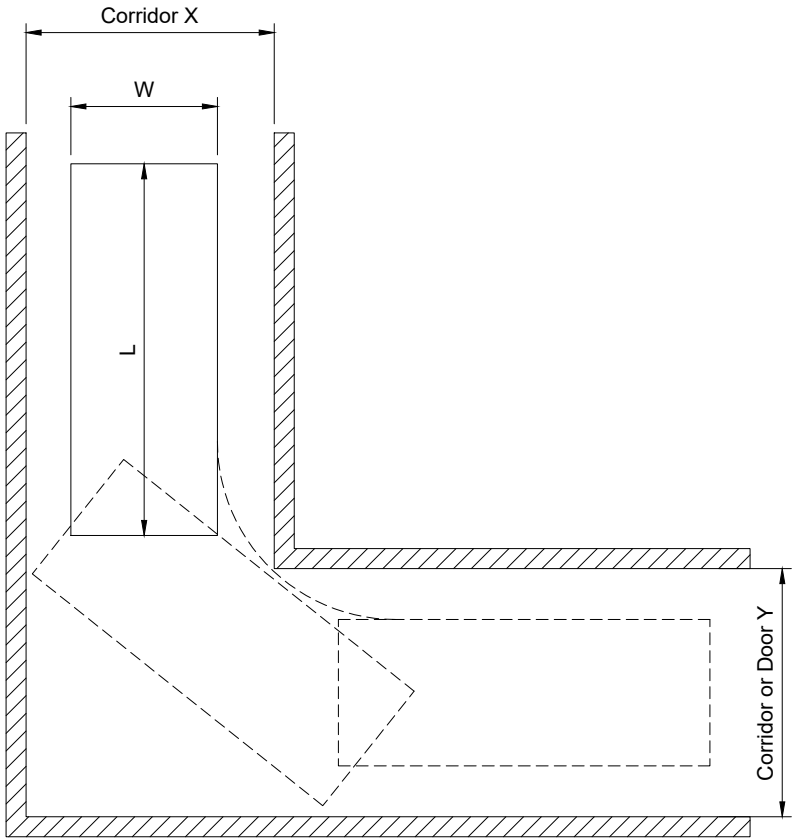
Ceiling Height Guide for Proxi Diagnost System
Not Site Specific

10'-4" to 10'-6" *	No Limitations
8'-11" to 10'-4"	<u>Limitations \ Coverage Losses</u> Vertical movement of tabletop in tilted position is limited
8'-9" to 8'-11"	Limitation noted above, and 40" SID shot to tabletop is not available
8'-7" to 8'-9"	Limitation noted above, and Tube cannot reach highest position of bucky
Below 8'-7"	Limitations noted above, and Tilting bucky must be lowered for 40" SID shot
* Ceiling Heights higher than 10'-6" - consult with Site Planning for limitations/loss of coverage	



Project Details	Philips Contacts	Project
Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118

A3



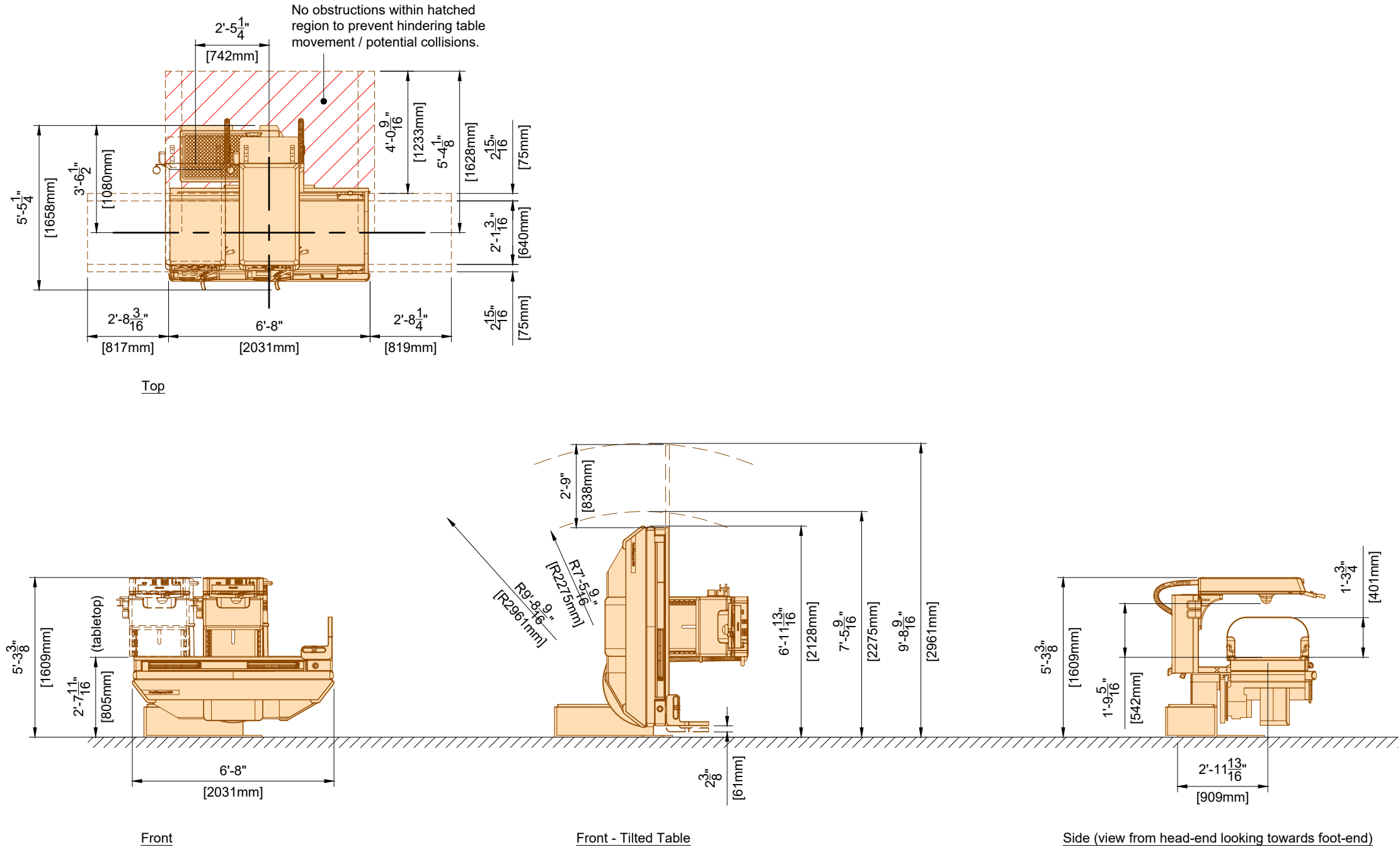
ProxiDiagnost (Tube Crane, Table) Transport Information

	Table Base		X-Ray Module		CSM		
	Crate B Packed	Crate B Unpacked	Crate Packed	Crate B Unpacked	Telescopic Carriage	Longitudinal Carriage Long	Longitudinal Carriage Short
Weight	718 lbs (3195N)	651 lbs (2895N)	1250 lbs (5560N)	1025 lbs (4560N)	326 lbs (1450N)	405 lbs (1800N)	212 lbs (940N)
Height	3'-11" (1.19m)	3'-8" (1.12m)	6'-8" (2.02m)	6'-4" (1.92m)	4'-7" (1.38m)	1'-4" (0.41m)	1'-4" (0.41m)
Length (L)	7'-2" (2.17m)	7'-2" (2.17m)	6'-0" (1.83m)	6'-0" (1.83m)	4'-0" (1.20m)	13'-9" (4.18m)	8'-0" (2.42m)
Width (W)	3'-8" (1.12m)	2'-6" (0.75m)	3'-1" (0.93m)	2'-9" (0.85m)	2'-7" (0.78m)	2'-7" (0.77m)	3'-1" (0.94m)
Width of Corridor "X"	Minimum Width of Corridor/Door "Y"		Minimum Width of Corridor/Door "Y"		Minimum Width of Corridor/Door "Y"	Minimum Width of Corridor/Door "Y"	Minimum Width of Corridor/Door "Y"
3'-4" (1.0m)	corridor X>W	5'-10" (1.78m)	6'-1" (1.84m)	5'-5" (1.65m)	3'-7" (1.07m)	12'-3" (3.72m)	7'-11" (2.4m)
3'-8" (1.1m)	corridor X>W	5'-5" (1.65m)	5'-4" (1.65m)	5'-0" (1.53m)	3'-3" (.99m)	11'-9" (3.58m)	7'-2" (2.17m)
4'-0" (1.2m)	7'-2" (2.17m)	5'-1" (1.54m)	5'-0" (1.53m)	4'-7" (1.40m)	3'-1" (.93m)	11'-4" (3.45m)	6'-8" (2.02m)
4'-4" (1.3m)	6'-6" (1.98m)	4'-9" (1.44m)	4'-8" (1.41m)	4'-3" (1.30m)	2'-11" (.88m)	10'-11" (3.32m)	6'-3" (1.89m)
4'-8" (1.4m)	6'-1" (1.84m)	4'-5" (1.34m)	4'-4" (1.33m)	4'-0" (1.21m)	2'-11" (.88m)	10'-6" (3.20m)	5'-10" (1.77m)
5'-0" (1.5m)	5'-7" (1.72m)	4'-1" (1.25m)	4'-1" (1.25m)	3'-9" (1.14m)	2'-11" (.88m)	10'-2" (3.10m)	5'-6" (1.66m)
5'-3" (1.6m)	5'-4" (1.62m)	3'-10" (1.17m)	3'-10" (1.17m)	3'-6" (1.07m)	2'-11" (.88m)	9'-10" (2.98m)	5'-2" (1.56m)
5'-7" (1.7m)	5'-0" (1.53m)	3'-7" (1.09m)	3'-8" (1.12m)	3'-4" (1.02m)	2'-11" (.88m)	9'-5" (2.87m)	4'-10" (1.47m)
5'-11" (1.8m)	4'-9" (1.45m)	3'-4" (1.02m)	3'-6" (1.07m)	3'-3" (0.98m)	2'-11" (.88m)	9'-1" (2.76m)	4'-8" (1.40m)
6'-3" (1.9m)	4'-6" (1.38m)	3'-2" (0.96m)	3'-5" (1.05m)	3'-2" (0.96m)	2'-11" (.88m)	8'-9" (2.66m)	4'-4" (1.31m)
6'-7" (2.0m)	4'-4" (1.33m)	3'-0" (0.92m)	3'-5" (1.03m)	3'-1" (0.95m)	2'-11" (.88m)	8'-4" (2.55m)	4'-1" (1.24m)

(18.0)

Project Details Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Philips Contacts Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	Project ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118
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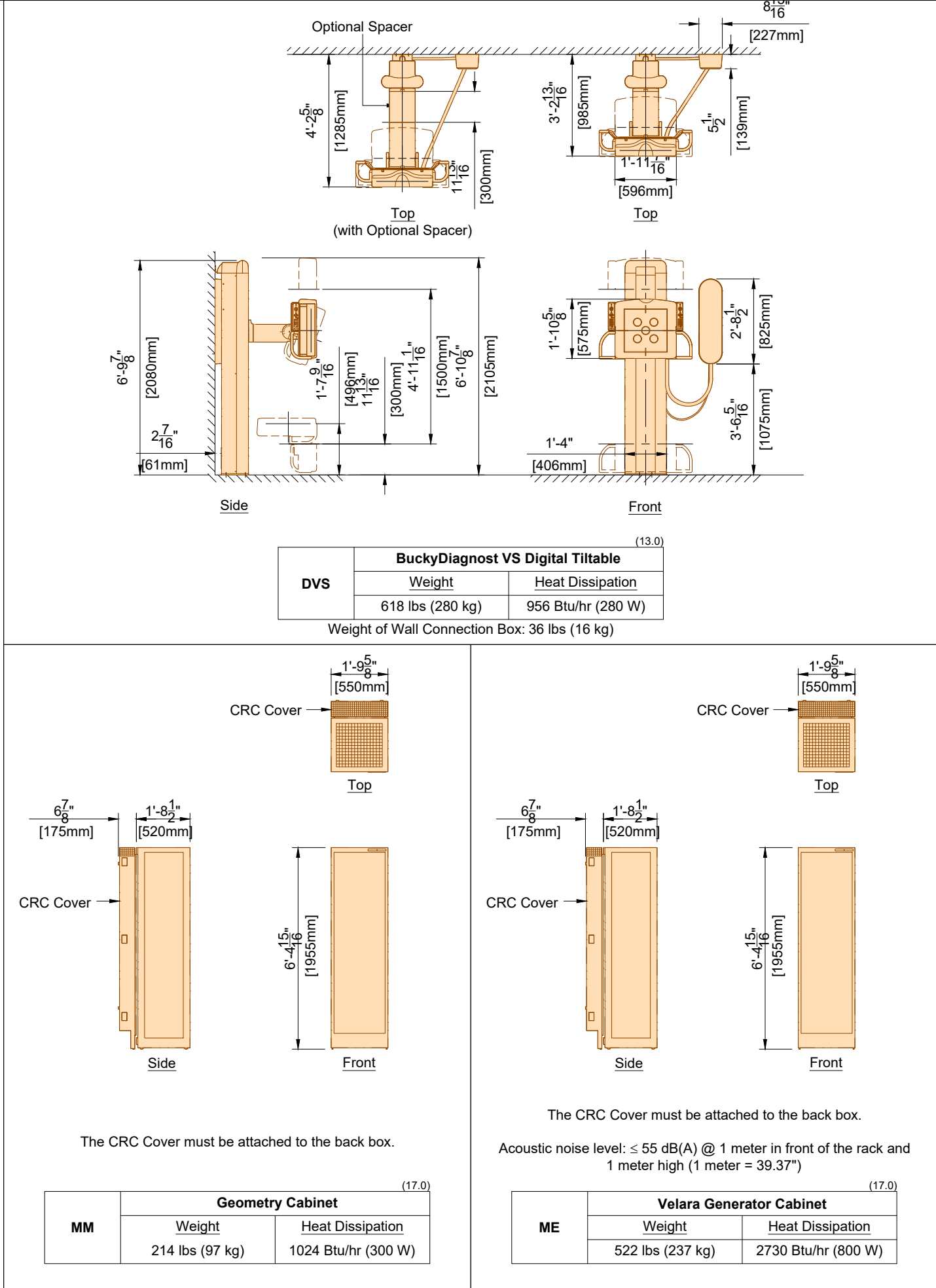
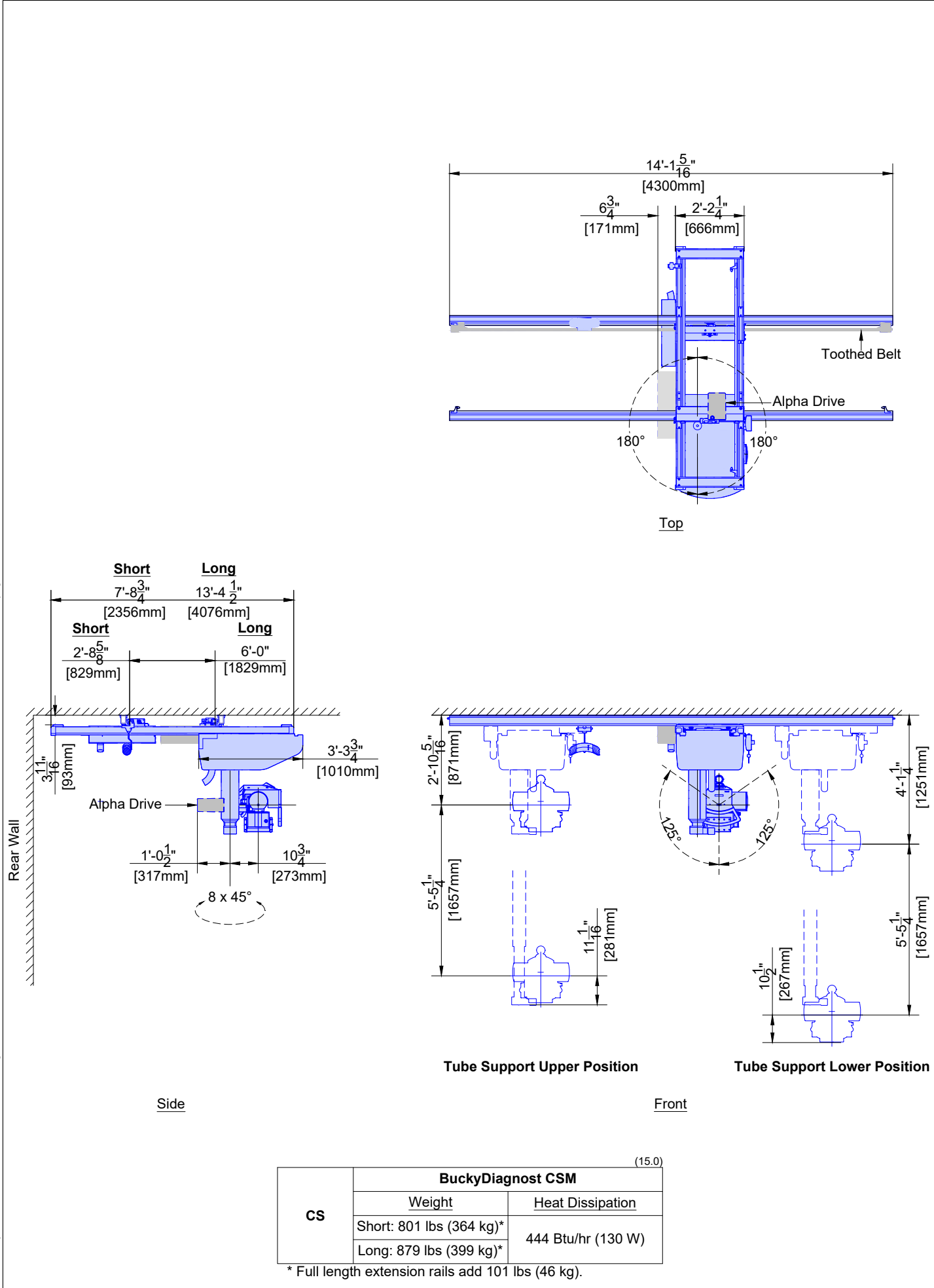
AD1



N90	ProxiDiagnost N90 Stand	
	Weight	Heat Dissipation
	3527 lbs (1600 kg)	1920 Btu/hr (570 W)

(20.0)

AD2	Project Details Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Philips Contacts Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	Project ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118
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PHILIPS

Project

ProxiDiagnost N90 R1.1

VA Medical Center Boston

Boston, MA

Room: 1B118

Philips Contacts

Project Manager: Matthew Caron

Contact Number: +1 (978) 502-6571

Email: matthew.caron@philips.com

Drawn By: Miguel Maldonado

Project Details

Drawing Number: N-EAS240136 B

Date Drawn: 10/17/2024

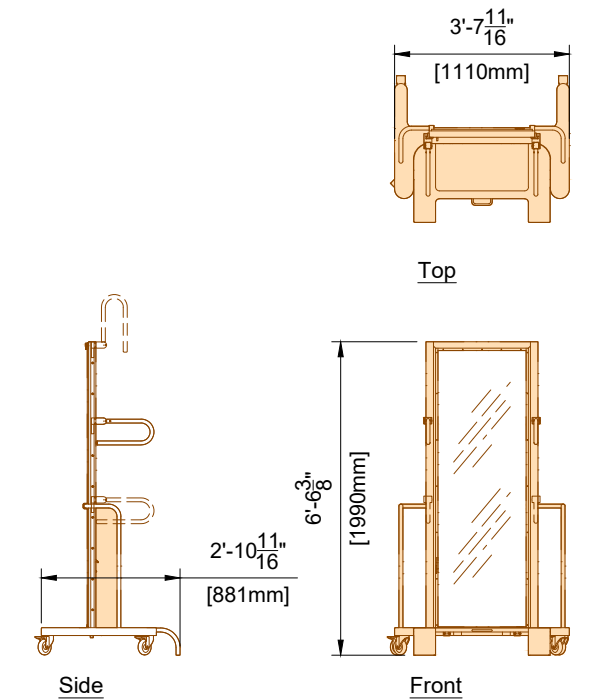
Quote: Q-00278074

Order: 6600700375.010000

AD3

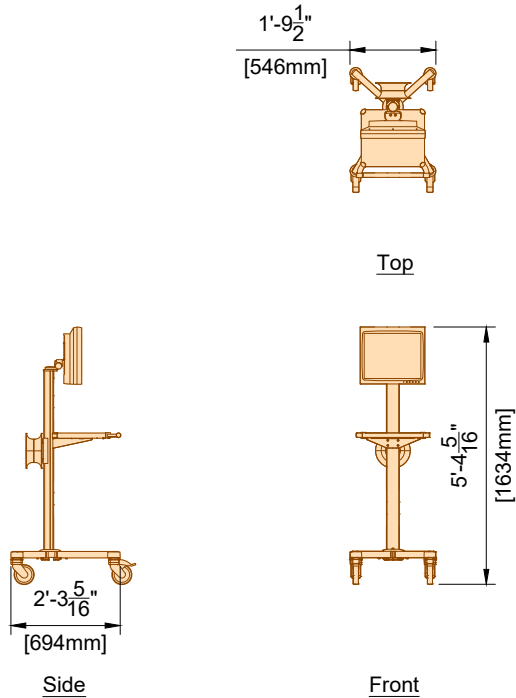
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3.17.2023

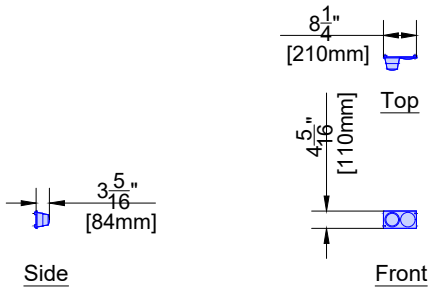


Maximum Patient Weight of 496 lbs (225 kg)
X-Ray filtration of < 0.9mm Al equivalent (13.0)

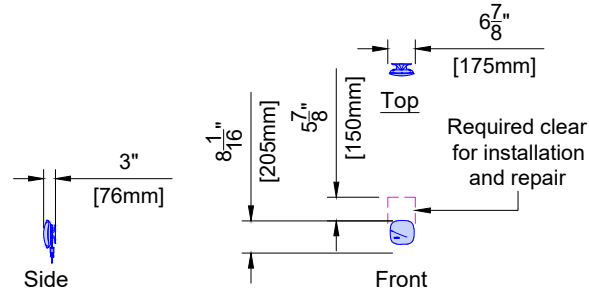
PS	Patient Support	
	Weight	Heat Dissipation
	154 lbs (70 kg)	0 Btu/hr (0 W)



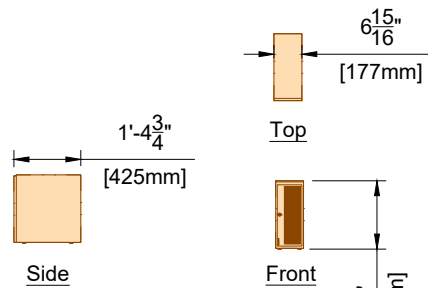
MON	One LCD Monitor Carriage (20.0)	
	Weight	Heat Dissipation
	68 lbs (31 kg)	205 Btu/hr (60 W)



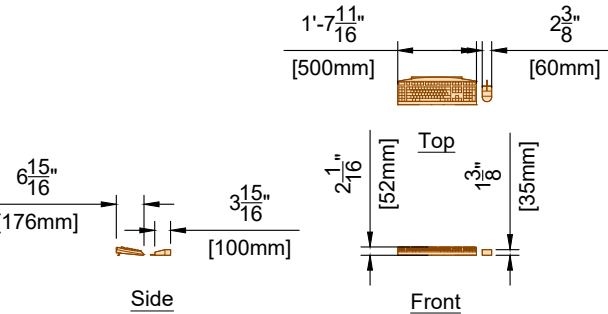
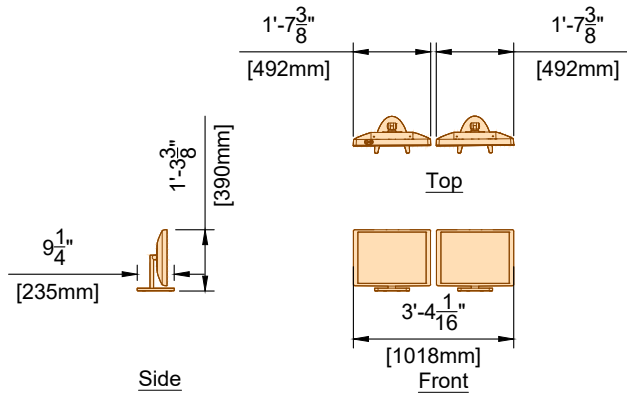
IB	Indication Box (13.0)	
	Weight	Heat Dissipation
	2 lbs (1 kg)	35 Btu/hr (10 W)



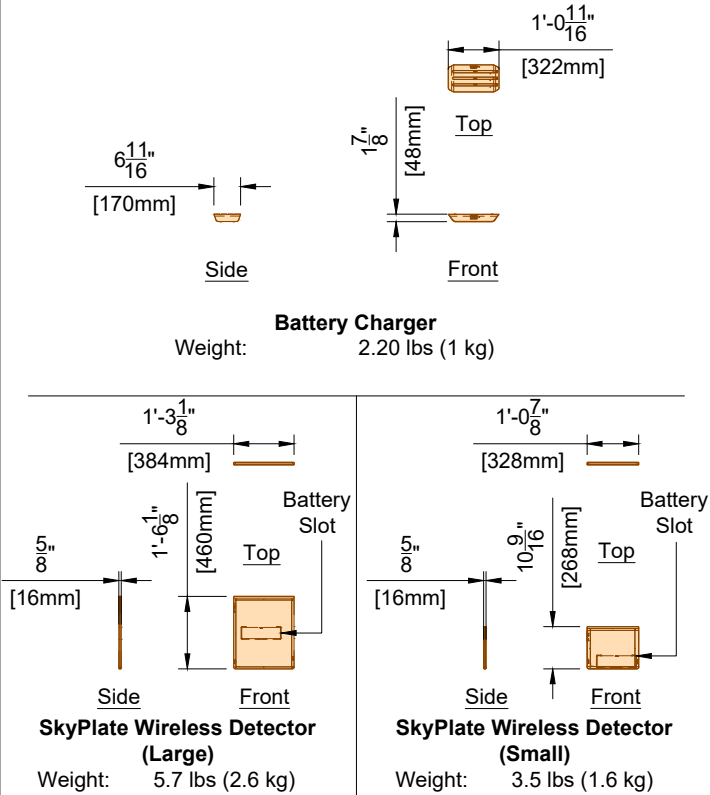
WAP	Wi-Fi Access Point (14.0)	
	Weight	Heat Dissipation
	2.5 lbs (1.12 kg)	--



CPU Tower
Weight: 32 lbs (15 kg)



ELW	Eleva Workspot (17.0)	
	Weight	Heat Dissipation
	121 lbs (58 kg)	786 Btu/hr (230 W)



SBC	SkyPlate Detector and Battery Charger (14.0)	
	Weight	Heat Dissipation
	2.20 lbs (1 kg)	--

Project Details
Drawing Number
N-EAS240136 B
Date Drawn: 10/17/2024
Quote: Q-00278074
Order: 6600700375.010000

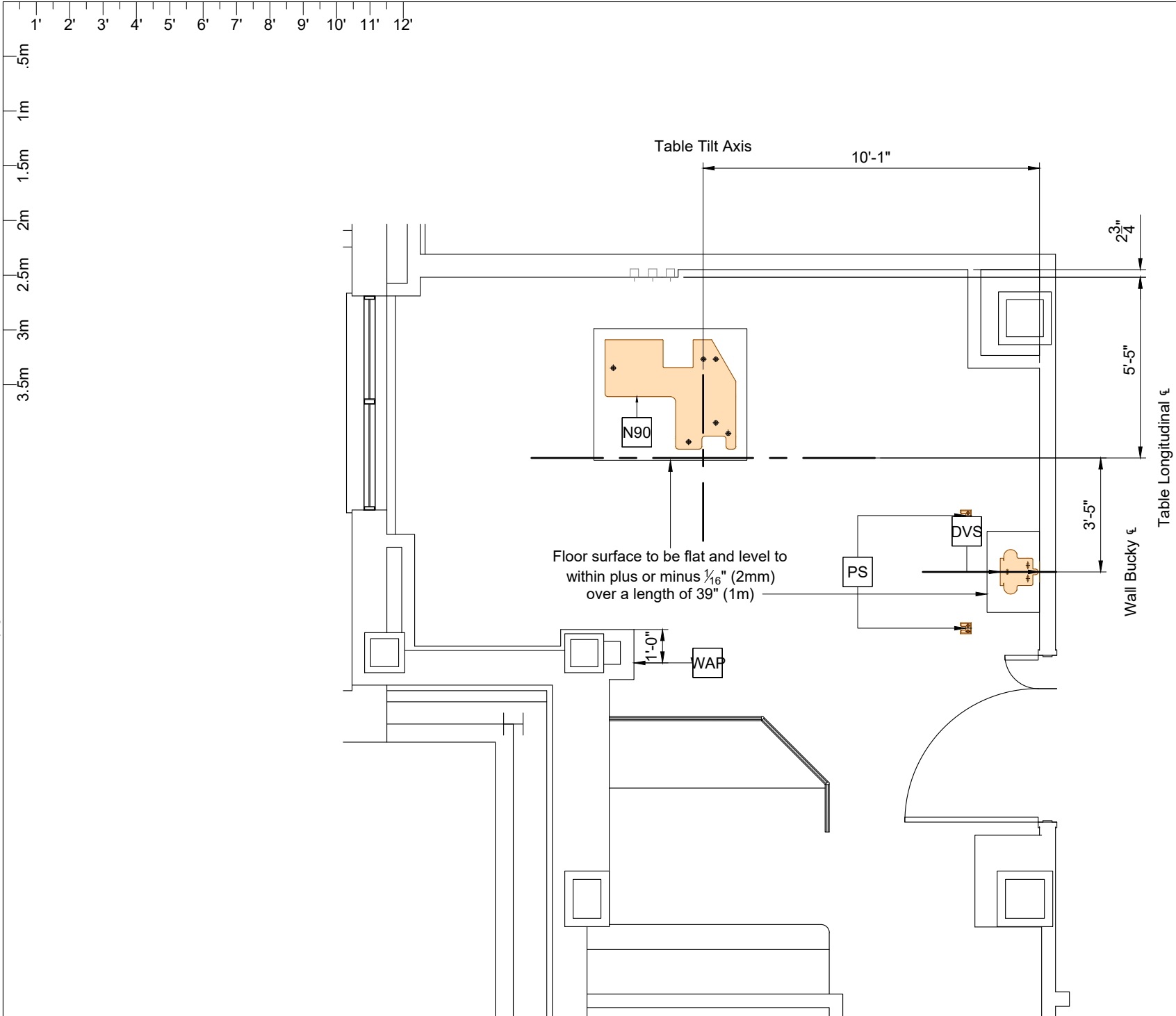
Philips Contacts
Project Manager: Matthew Caron
Contact Number: +1 (978) 502-6571
Email: matthew.caron@philips.com
Drawn By: Miguel Maldonado

Project
ProxiDiagnost N90 R1.1
VA Medical Center Boston
Boston, MA
Room: 1B118

AD4

Equipment Support Information			
1. General The customer shall be solely responsible, at its expense, for preparation of the site, including any required structural alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and building codes. The customer shall be solely responsible for obtaining all construction permits from jurisdictional authority.			
2. Equipment Anchorage Philips provides, with this plan and specifications, information relative to equipment size, weight, shape, anchoring hole locations and forces which may be exerted on anchoring fasteners. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of equipment anchoring to floors, wall and/or ceiling of the building. Any anchorage test required by local authority shall be the customer's responsibility. Stud type anchor bolts should not be specified as they hinder equipment removal for service. Consult with Philips service prior to specifying anchor methods.			
3. Floor Loading and Surface Philips provides, with this plan and specifications, information relative to size, weight and shape of floor mounted equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings confirmation of the structural adequacy of the floor upon which the equipment will be placed. Any load test required by local authority, shall be the customer's responsibility. a. The floor surface upon which Philips equipment (except floor rails) is to be placed/anchored shall be flat and level to within plus or minus 1/16 inch (2mm) over a length of 39" (1m). b. The floor surface upon which Philips floor rails are to be placed/anchored shall be flat and level to within plus or minus 1/4 inch (6mm) over the length of the floor rails.			
4. Ceiling Support Apparatus a. Philips provides, with this plan and specifications, information relative to size, weight and shape of ceiling supported equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of structural support apparatus, fasteners and anchorage to which Philips will attach equipment. Any anchorage and/or load test required by local authority shall be the customer's responsibility. b. Contractor to clearly mark Philips equipment longitudinal centerline on bottom of each structural support. c. The structural support apparatus surface to which Philips equipment is to be attached, shall have horizontal equipment attachment surfaces parallel, square and level to within plus or minus 1/16 inch (2mm). d. Any drilling and/or tapping of holes required to attach Philips equipment to the structural support apparatus shall be the responsibility of the customer. e. Fasteners, anchors (e.g. bolts, spring nuts, lock and flat washers), and strip closures shall be provided by the customer.			
5. Lighting Lighting fixtures shall be placed in such a position that they are not obscured by equipment or its movement, nor shall they interfere with Philips ceiling rails and equipment movement or otherwise adversely affect the equipment. Such lighting fixture locations shall be the sole responsibility of the customer.			
6. Ceiling Obstructions There shall be no obstructions that project below the finished ceiling in the area covered by ceiling suspended equipment travel.			
7. Seismic Anchorage (For Seismic Regions Only) All seismic anchorage hardware, including brackets, backing plates, bolts, etc., shall be supplied and installed by the customer/contractor unless otherwise specified within the support legend on sheet S1. Installation of electronic cabinets to meet seismic anchorage requirements must be accomplished using flush mounted expansion type anchor/bolt systems to facilitate the removal of a cabinet for maintenance. Do not use threaded rod/adhesive anchor systems. Consult with Philips regarding any anchor system issues.			
8. Floor Obstructions/Floor Coverings There shall be no obstructions on the floor (sliding door tracks, etc.) in front of the Philips electronic cabinets. Floor must be clear to allow cabinets to be pulled away from the wall for service. Technical equipment room floor shall be commercial grade "VCT" Vinyl Composition Tile or a flooring material of equal hardness and compression resistance.			
(21.0)			

Project Details	Philips Contacts	Project
Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118
SN		



Support Layout - Floor & Walls

1/4" = 1'-0"
Recommended Minimum Ceiling Height: 8'-9" (2667mm)
Recommended Maximum Ceiling Height: 10'-6" (3200mm)
Reported Ceiling Height: 9'-6" (2895mm)

Ceiling Heights other than recommended may impact equipment functionality.
See Ceiling Height Guide and consult with Philips.

Ceiling Height measured from finished floor to bottom of Unistrut.

Floor & Wall Support Legend

A

Furnished and installed/anchored by Philips (see exceptions - Note 2, below)

B

Furnished by customer/contractor and installed/anchored by customer/contractor

C

Installed/anchored by customer/contractor

D

Furnished by Philips and installed/anchored by contractor

E

Existing

F

Future

G

Optional item furnished by Philips

Item Number

Detail Sheet

Description

D

N90

Floor Plate

SD3

B

N90

Anchorage in floor for floor plate

SD3

B

DVS

Support in wall for BuckyDiagnost VS

SD4

B

DVS

Anchors in floor for BuckyDiagnost VS

SD4

B

DVS

Anchors in wall for BuckyDiagnost VS

SD4

A

VSC

Anchors in wall for BuckyDiagnost VS Connection Box (not shown)

SD4

A

WAP

Wi-Fi Access Point - optional wall mounting

SD3

A

PS

Optional Anchors in floor for Patient Support Floor Fixing Plates (not shown)

SD5

All dimensions must be off of the finished wall.

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

Notes:

1.

Anchors for items that are installed/anchored by customer/contractor shall be provided by customer/contractor.

2.

Anchors for items that are installed/anchored by Philips shall be provided by Philips. If customer's engineering documents specify anchors other than those listed in this document, the anchors shall be provided by customer/contractor and installed by Philips.

3.

In all instances, the wall and/or floor support are the sole responsibility of the customer/contractor. The customer's architect/engineer of record shall specify wall and/or floor support sufficient for the bolt forces shown on the details.

Project

Philips Contacts

Project Details

S1

Project Manager: Matthew Caron

Drawing Number

N-EAS240136 B

Contact Number: +1 (978) 502-6571

Date Drawn: 10/17/2024

Quote: Q-00278074

Email: matthew.caron@philips.com

Order: 6600700375.010000

Drawn By: Miguel Maldonado

Project ProxiDiagnost N90 R1.1

VA Medical Center Boston

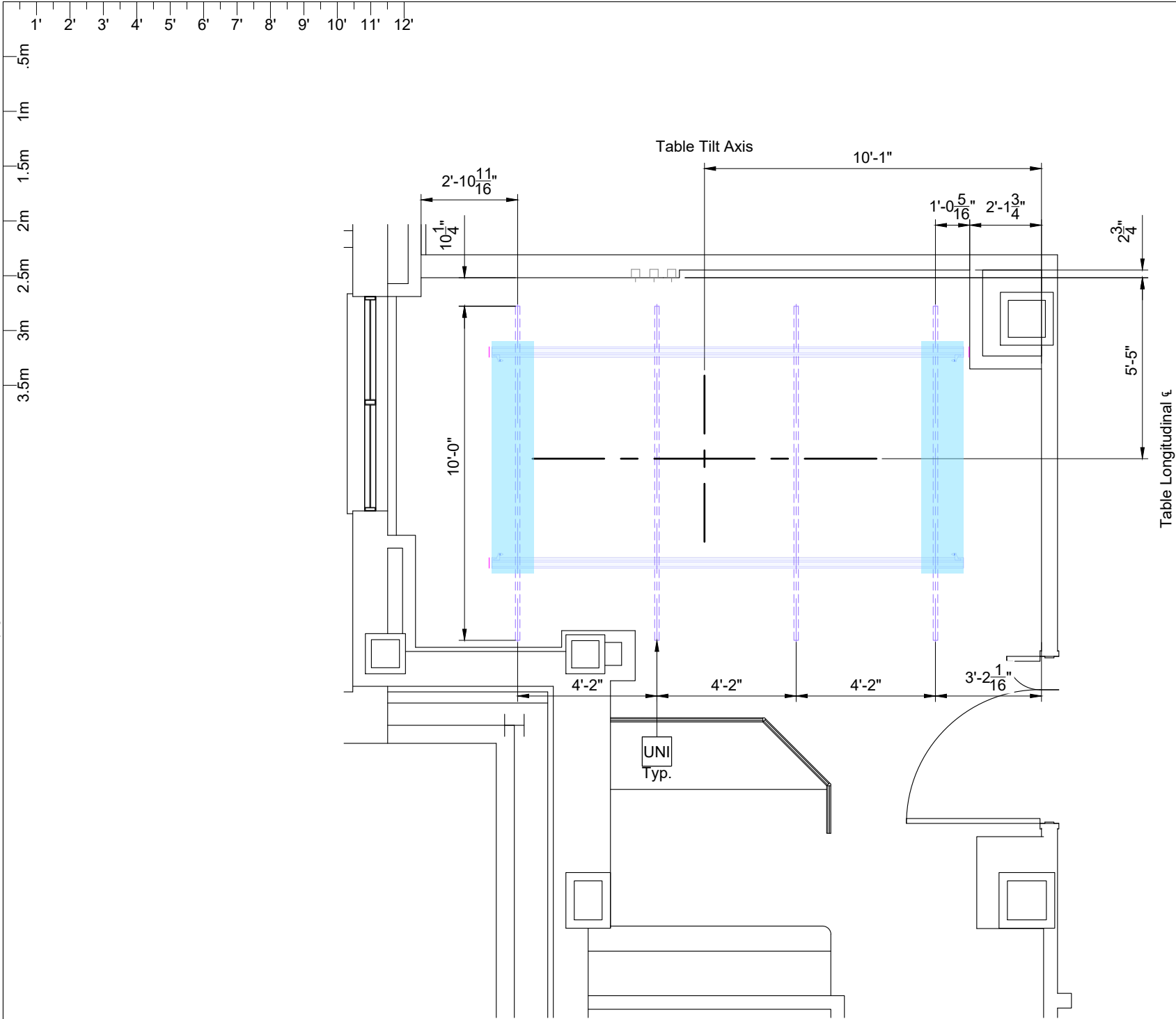
Boston, MA

Room: 1B118

PHILIPS

3.17.2023

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Ceiling Support Layout (Unistrut)

1/4" = 1'-0"
Reported Ceiling Height: 9'-6" (2895mm)

Ceiling Support Legend			
A Furnished and installed by Philips B Furnished by customer/contractor and installed by customer/contractor C Installed by customer/contractor D Furnished by Philips and installed by contractor E Existing F Future G Optional item furnished by Philips			
Item Number		Detail Sheet	
Description			
E	UNI	Unistrut (P1001 or equal)	SD5
All dimensions must be off of the finished wall.			
If a wall is furred out to hide electrical duct or boxes, the dimensions included in this plan must come off of the finished furred wall.			

S2

Project Details

Drawing Number

N-EAS240136 B

Date Drawn: 10/17/2024

Quote: Q-00278074

Order: 6600700375.010000

Philips Contacts

Project Manager: Matthew Caron

Contact Number: +1 (978) 502-6571

Email: matthew.caron@philips.com

Drawn By: Miguel Maldonado

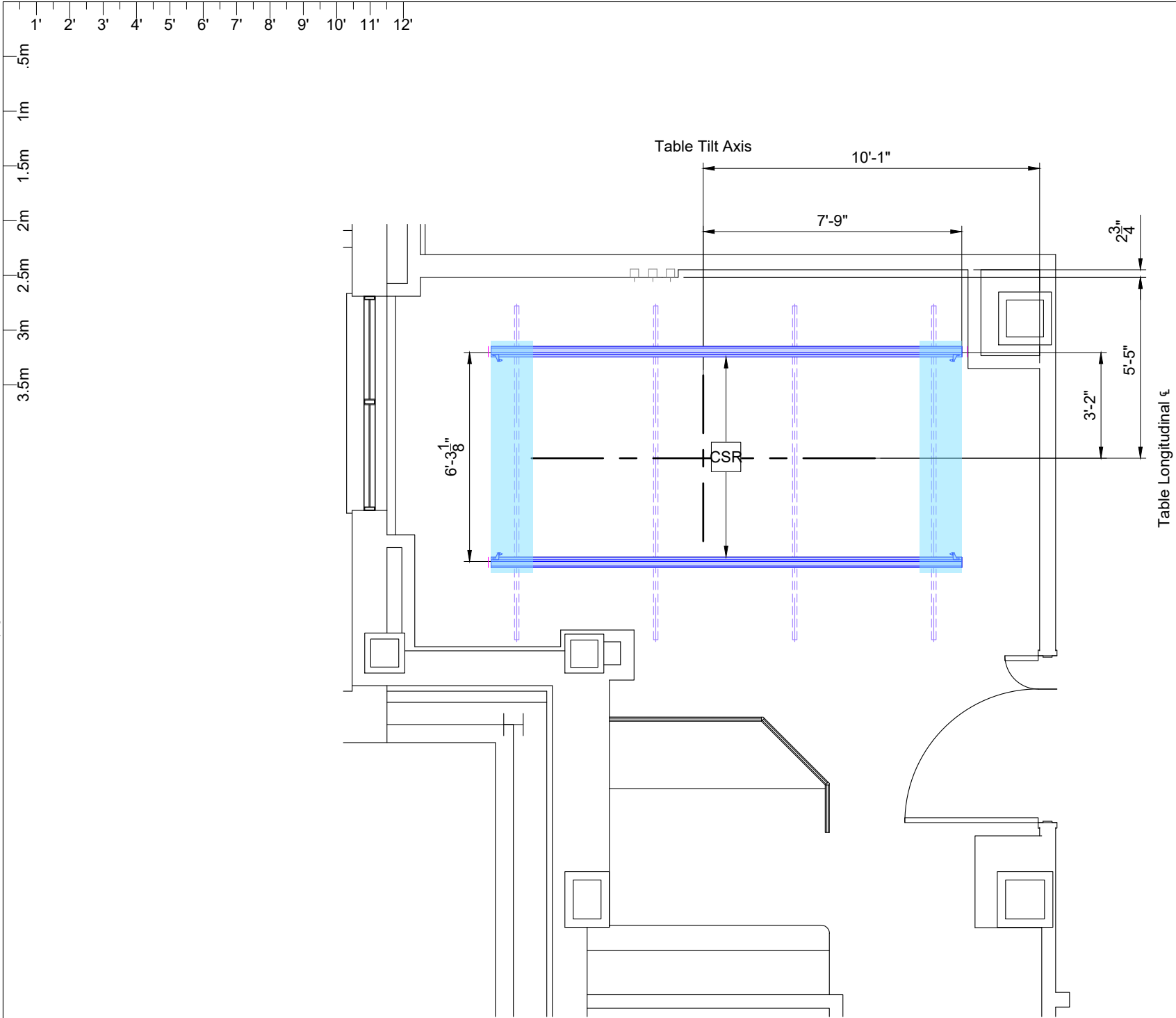
Project

ProxiDiagnost N90 R1.1

VA Medical Center Boston

Boston, MA

Room: 1B118



Ceiling Support Layout (Equipment)

1/4" = 1'-0"
Reported Ceiling Height: 9'-6" (2895mm)

Ceiling Support Legend			
A Furnished and installed by Philips B Furnished by customer/contractor and installed by customer/contractor C Installed by customer/contractor D Furnished by Philips and installed by contractor E Existing F Future G Optional item furnished by Philips			
		Item Number	Detail Sheet
A	CSR	Philips Equipment Rails	SD5

All dimensions must be off of the finished wall.

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

Project	Philips Contacts	Project Details
ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000

S3

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

Equipment	Option	Anchor Style (provided by Phillips)	Anchor Size (provided by Phillips)	Qty.	Support Size & Material (provided & installed by customer/contractor)
Patient Support Floorplates	A	Simpson or Hilti Drop-in with Stainless Steel Phillips Oval Head Screw with dress washer	¼" x 1"L	4	Concrete Slab
	B	Hex Head Lag Bolt with flat washer	#14 x 1"L	4	Wood Frame Floor
Wireless Detector Docking Station	A	SPAX Multipurpose Flat Head Screw	#10 x 1½ "L	2	Drywall with minimum ¾" plywood backing
	B	Round Phillips Head Self Drilling Screw	#10-16 x 1½"	2	Drywall with min. 10 Gauge Steel Backing
	C	Toggler SnapToggle with Round Head Screw	#BA with #10-24 x 2½"L	2	Drywall (5⁄8"D min)
	D	Toggler Alligator with SPAX Multipurpose Flat Head Screw	Toggler Alligator #A6 with SPAX #10 x 1½"L	2	Concrete Wall
BuckyDiagnost VS (Advanced and Digital) Wall Anchorage	A	Through Bolt	⅜" diameter	4	Minimum 10 gauge steel plate¹, or Minimum 4"x 4" Douglas Fir # 2 grade
	B	Self Drilling Tek Screw	# 14	4	Minimum 10 gauge steel plate¹
	C	Lag Screw	7⁄16"	4	Minimum 4" x 4" Douglas Fir # 2 Grade
	D	Toggler Snaptoggle Anchor	⅜" diameter expansion screw	4	Minimum 10 Gauge Steel Plate¹
BuckyDiagnost VS Connection Box	A	SPAX Multipurpose Flat Head Screw	#10 x 1½"L	4	Drywall with Wood Backing
	B	Round Phillips Head Self Drilling Screw	#10-16 x 1½"	4	Drywall with min. 10 Gauge Steel Backing
	C	Toggler SnapToggle with Round Head Screw	#BA with #10-24 x 2½"L	4	Drywall (5⁄8"D min)
	D	Round Phillips Head Self Drilling Screw	# 10-16 x 1½"L	4	Metal junction box or raceway
	E	Toggler Alligator with SPAX Multipurpose Flat Head Screws	Toggler Alligator #A6 with SPAX #10 x 1½"L	4	Concrete Wall or Hollow Concrete Block Wall
Parking Frame for Accessories (RAD)	A	SPAX Multipurpose Flat Head Screw	#10 x 1½" L	4	Drywall with min. ¾" plywood backing
	B	Phillips Round Head Self Drilling Screw	#10-16 x 1½"L	4	Minimum 16 Gauge Steel Backing
	C	Toggler SnapToggle with Round Head Screw	#BA with #10-24 x 2½"L	4	Drywall (5⁄8"D min)
	D	Toggler Alligator with SPAX Multipurpose Flat Head Screw	#A6 with SPAX #10 x 1½"L	4	Concrete Wall
Pediatric Support Parking Stand	A	Hilti KB-TZ with OD flat washer and hex nut	½ x 3¾"L	TBD	Concrete Slab
	B	Long Lag Bolt with ID and OD flat washer	½" x 2½"L	TBD	Wood Frame Floor
Stretch Grip Parking Bracket	A	SPAX Multipurpose Flat Head Screw	#10 x 1½" L	3	Drywall with min. ¾" plywood backing
	B	Toggler SnapToggle with Round Head Screw	#BA with #10-24 x 2½"L	3	Drywall
Tube Crane Box Cover	A	Round Phillips Head Self Drilling Screw	#10-16 x 1½"L	4	Metal junction box or raceway

¹ Unistrut, angle, or c -channel material is preferred.

SD1	Project Details	Philips Contacts	Project
	Drawing Number	Project Manager: Matthew Caron	ProxiDiagnost N90 R1.1
	N-EAS240136 B	Contact Number: +1 (978) 502-6571	VA Medical Center Boston
	Date Drawn: 10/17/2024	Email: matthew.caron@philips.com	Boston, MA
	Quote: Q-00278074	Drawn By: Miguel Maldonado	Room: 1B118
Order: 6600700375.010000			

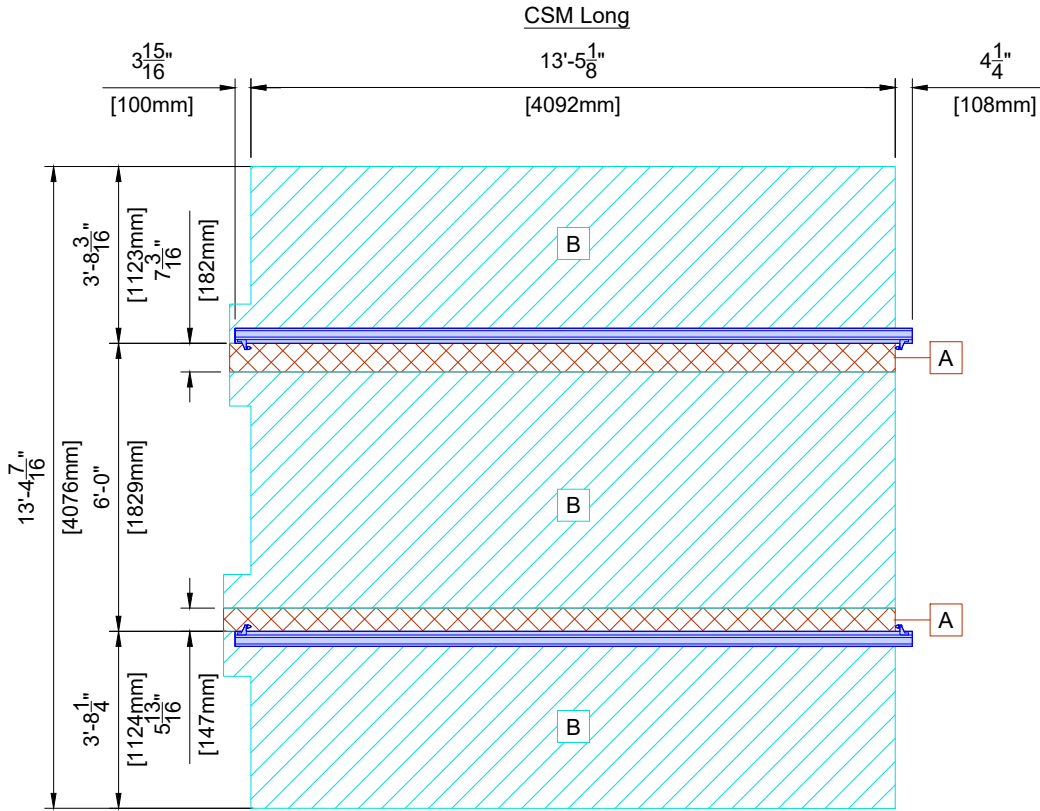


Ceiling Clearance Detail - Restricted Ceiling Area for Objects that Project Below Finished Ceiling
(Not site specific)

- A

Objects that project below finished ceiling are NOT allowed in this area (e.g. lights, smoke detectors, sprinkler heads, soffits, ceiling rails, etc).
- B

Objects that project more than 3.5" below finished ceiling are NOT allowed in this area (e.g. lights, smoke detectors, sprinkler heads, soffits, etc).

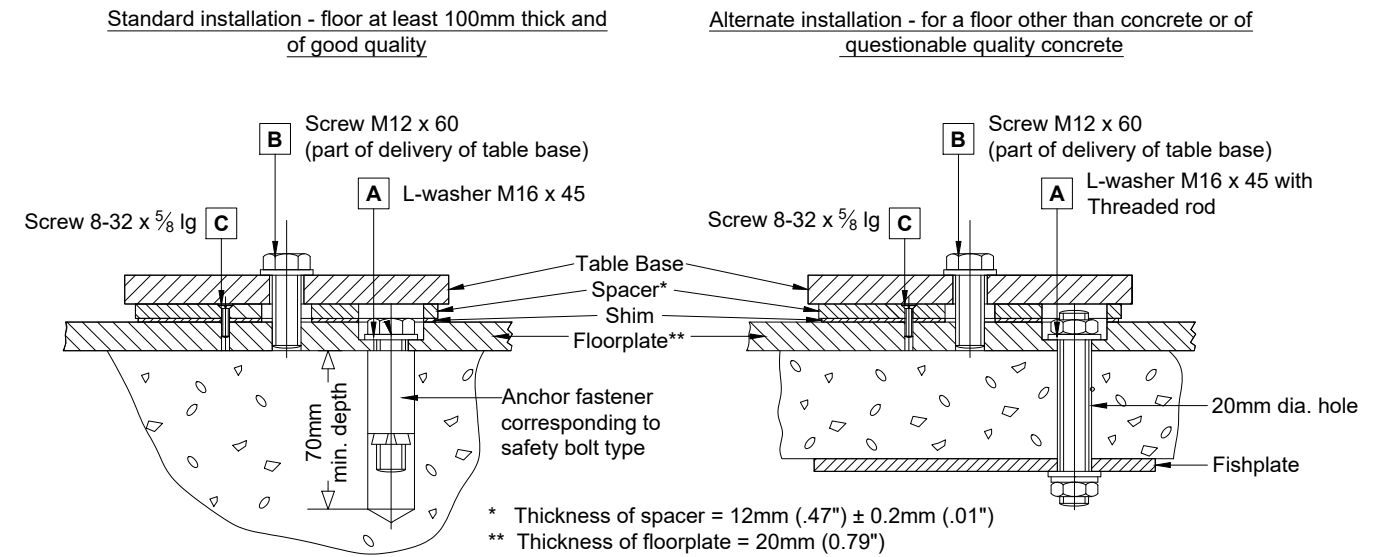


SD2	Project Details Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Philips Contacts Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	Project ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118
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(Not to scale)

Detail - Floor Plate Section

Detail - Plan View of Bolt Locations and Cable Outlet



1. Floor plate may be surface or flush mounted.
2. Floor plate is supplied by Philips and installed by customer.
3. Floor plate must be level within 1.5mm (0.06") across surface of plate.
4. Floor anchors must **NEVER** be filed down or modified during installation.
5. Floor anchors must **NEVER** extend more than 6.35mm (0.25") above floor plate.

(19.0)

(Not to scale)

Mounting Elevation View



(17.0)

Project

ProxiDiagnost N90 R1.1

VA Medical Center Boston
Boston, MA
Room: 1B118

Drawn By: Miguel Maldonado

Order: 6600700375,010000	Drawn By: Miguel Maldonado	Room: 1B118
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Philips Contacts

Project Manager: Matthew Caron

Contact Number: +1 (978) 502-6571
Email: matthew.caron@philips.com

Drawn By: Miguel Maldonado

Project Details

Drawing Number

N-EAS240136 B
Date Drawn: 10/17/2024

Quote: Q-00278074

Order: 6600700375.010000

SD3

3.17.2023

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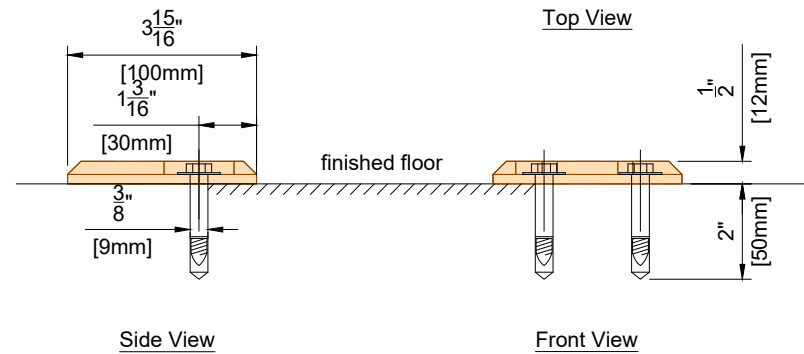
THIS SHEET IS PART OF THE DOCUMENT SET LISTED ON SHEET C1 AND SHOULD NOT BE SEPARATED.

(Not to scale)

Technical drawing of a U-shaped part. The overall width is $3\frac{15}{16}$ " [100mm]. The distance between the centers of the two circular features is 2" [51mm]. The distance from the left edge to the center of the left circular feature is $1\frac{1}{16}$ " [27mm]. The part is shown in a perspective view with a central vertical line indicating symmetry.

The customer's architect/engineer of record shall specify a support sufficient for the bolt forces specified. Anchors will be provided by Philips, and the support is the sole responsibility of the customer/contractor. Below are Philips' pre-evaluated and approved methods of providing support:

Option	Anchor Style (Provided by Philips)	Anchor Size	Anchor Quantity	Support Size & Material (Provided & installed by customer/contractor)
A	Simpson or Hilti drop-in with Stainless Steel Phillips oval-head screw with dress washer	¼" x 1"L	4	Concrete Slab
B	Hex Head Lag Bolt with flat washer	#14 x 1"L	4	Wood Frame Floor



PS

(13.0)

(Not to scale)

Technical drawings of the P1001 Unistrut hanger assembly:

- Front View:** Shows the hanger (pink outline) attached to a ceiling (hatched area) via a Fixing Block (blue hatched area). The hanger is labeled "P1001 (or equal) Unistrut". The ceiling is labeled "Finished Ceiling". The Fixing Block is labeled "Fixing Block".
- Side View:** Shows the hanger's profile with dimensions: a width of $1\frac{1}{4}$ " [32mm] and a height of $5\frac{15}{16}$ " [151mm]. The hanger has a U-shaped top and a rectangular body with a central slot.

Technical drawing of the Clip Rail Detail, showing side and top views with dimensions.

Side View:

- Top dimension: $2\frac{7}{8}$ " [72mm]
- Component: Fixing Block
- Fastener: Self-locking Bolt, M10x40
- Component: Clip Rail

Clip Rail Detail (Top View):

- Top dimension: 4" [101mm]
- Component: Fixing Block
- Bottom dimension: $3\frac{15}{16}$ " [100mm]

- Philips does not specify the overhead equipment support structure. Unistrut (or equal) may or may not be used. If Unistrut are used, it is up to Unistrut and the structural engineer for the project to determine which of it's products are appropriate for each project.
- Finished ceiling must **NOT** be lower than the bottom of the Unistrut in order to prevent damage to the finished ceiling during the installation of clip rails.
- Finished ceiling height to be 1/4" above bottom of Unistrut.
- Nothing shall be attached to the Unistrut with any fastener that protrudes into the Unistrut which would interfere with positioning of the fixing block.
- Fixing blocks for Philips ceiling rails (clip rails) are designed to be installed in P1001 Unistrut.
- The inside of the Unistrut must be clear of obstructions (including paint).
- Unistrut elements must be rigid and comply with the ceiling structure requirements. See SN sheet, item #4 "Ceiling Support Apparatus".

Tube Crane Support Forces	Tension Forces	Compressive Forces
CSM	956 lbs/support	192 lbs/support

(Support = 2 screws into each Fixing Block)
(Seismic area forces - consult seismic calculation documents)

CSR UNI

(13.0)

SD5

3.17.2023

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ProxiDiagnost N90 R1.1
VA Medical Center Boston
Boston, MA
Room: 1B118

Project Manager: Matthew Caron
Contact Number: +1 (978) 502-6571
Email: matthew.caron@philips.com
Drawn By: Miguel Maldonado

Drawing Number
N-EAS240136 B
Date Drawn: 10/17/2024
Quote: Q-00278074
Order: 6600700375.0100

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General Electrical Information 1. General The customer shall be solely responsible, at its expense, for preparation of the site, including any required electrical alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and electrical codes, the customer shall be solely responsible for obtaining all electrical permits from jurisdictional authority. 2. Materials and Labor The customer shall be solely responsible, at its expense, to provide and install all electrical ducts, boxes, conduit, cables, wires, fittings, bushing, etc., as separately specified herein. 3. Electrical Ducts and Boxes Electrical ducts and boxes shall be accessible and have removable covers. Floor ducts and boxes shall have watertight covers. Ducts shall be divided into as many as three separate channels by metal dividers, separately specified herein, to separate wiring and/or cables into groups as follows: Group A: power wiring and/or cables, Group B: signal and/or data and protective ground wiring and/or cables, Group C: x-ray high voltage cables. The use of 90 degree ellis is not acceptable. On ceiling duct and wall duct use 45 degree bends at all corners. All intersecting points in duct to have cross over tunnels supplied and installed by contractor to maintain separation of cables. 4. Conduit Conduit point-to-point runs shall be as direct as possible. Empty conduit runs used for cables may require pull boxes located along the run. Consult with Philips. A pull wire or cord shall be installed in each conduit run. All conduits which enter duct prior to their termination point must maintain separation from other cables via use of dividers, cross over tunnels, or conduit supplied and installed by contractor from entrance into duct to exit from duct. Do not use flex conduit unless approved by Philips Service. 5. Conductors All conductors, separately specified, shall be 75°C stranded copper, rung out and marked. 6. Disconnecting Means A disconnecting means shall be provided as separately specified. 7. Warning Lights and Door Switches "X-ray on" warning lights and x-ray termination door switches should be provided at all entrances to x-ray rooms as required by code. 8. Dimmer Switches X-ray room lights should be provided with dimmer switches. (13.0)	Electrical Notes 1. The contractor will supply & install all breakers, shunt trip and incoming power to the breakers. The exact location of the breakers and shunt trips will be determined by the architect or contractor. 2. The contractor shall supply & install all pull boxes, raceways, conduit runs, stainless steel covers, etc. Conduit/raceways must be free from burrs and sharp edges over its entire length. A Greenlee pull string/measuring tape (part no. 435, or equivalent) shall be provided with conduit runs. 3. All pre-terminated, cut-to-length cables will be supplied and installed by Philips. See Conduit List for information regarding all other cables (e.g. cables to breakers, etc.). 4. Provide and install 4 - 2"(50mm) diameter chase nipples between adjacent wall boxes (not required if raceway installed above and below wall boxes). 5. Electrical raceway shall be installed with removable covers. The raceway should be accessible for the entire length. In case of non - accessible floors, walls and ceilings, an adequate number of access hatches should be supplied to enable installation of cabling. Approved conduits may be substituted. All raceways will be designed in a manner that will not allow cables to fall out of the raceway when the covers are removed. In most cases, this will require above-ceiling raceway to be installed with the covers removable from the top. Raceway system as illustrated on this drawing are based upon length of furnished cables. Any changes in routing of raceway system could exceed maximum allowable length of furnished cables. Conduit or raceway above-ceiling must be kept as near to finished ceiling as possible. 6. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or National Electrical Codes, whichever governs. 7. Convenience outlets are not illustrated. Their number and location are to be specified by the customer/architect. 8. All sections of raceway and conduit shall be grounded with an independent #6AWG green wire that is to be attached using solderless lugs All ceiling mounted structural support members and ceiling plates shall also be grounded. All grounding connections, terminals, etc. shall be installed in a manner to provide accessibility for inspection, maintenance, repair, etc. 9. The contractor is to ensure system cables that run from the system cabinet to the table are not run under the slab in ground floor installations. They need to be run in a trough or a raceway in the floor per NEC section 390 Underfloor Raceway. Conduits may not be allowed in a basement slab. The cables from the cabinets to the table are not certified in a wet environment/area. (20.0)	Electrical Requirements Electrical power distribution at the facility shall comply with: Utilization voltages per ANSI C84.1 - 1982 range A. Voltage to be supplied is 3 phase, 3 wire power and ground (delta or wye) unless otherwise noted in equipment specifications. Phase conductors to be sized for instantaneous voltage drop per NEC 517-73 and Philips recommendations. Neutral and ground conductors to be sized equivalently to phase conductors, unless otherwise noted. Metal conduit shall not be used as the equipment ground conductor. Clamping type surge suppressors are highly recommended in addition to standing facility lighting arrestors. Equipment to be protected from ANSI/IEEE C62.41-1980 location category B impulses. ANSI/NFPA 70 - National Electrical Code (NEC) Article 250 - Grounding Article 517 - Health Care Facilities ANSI/NFPA 99 - Health Care Facilities Code NEMA standard XR 9 - Power Supply Guidelines for X-Ray Machines A clearance of 4'-0" (1220mm) in front of all system cabinets is required for Philip' safe serviceability and to meet NEC requirements. (21.0) Power Quality Guidelines 1. Power supplied to medical imaging equipment must be separate from power feeds to air conditioning, elevators, outdoor lighting, and other frequently switched or motorized loads. Such loads can cause waveform distortion and voltage fluctuations that can hinder high quality imaging. 2. Equipment that utilizes the facility power system to transmit control signals (especially clock systems) may interfere with medical imaging equipment, thus requiring special filtering. 3. The following devices provide a high impedance, nonlinear voltage source, which may affect image quality: static UPS systems, series filters, power conditioners, voltage regulators. Do not install such devices at the mains supply to medical imaging equipment without consulting Philips installation or service personnel. 4. Line impedance is the combined resistance and inductance of the electrical system and includes the impedance of the power source, the facility distribution system, and all phase conductors between the source and the imaging equipment. The minimum conductor size is based on the total line impedance and NEC requirements. Impedance calculations are to be performed by an electrical engineer). (21.0)

EN

Project Details

Drawing Number
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Philips Contacts

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Drawn By: Miguel Maldonado

Project

ProxiDiagnost N90 R1.1
VA Medical Center Boston
Boston, MA
Room: 1B118



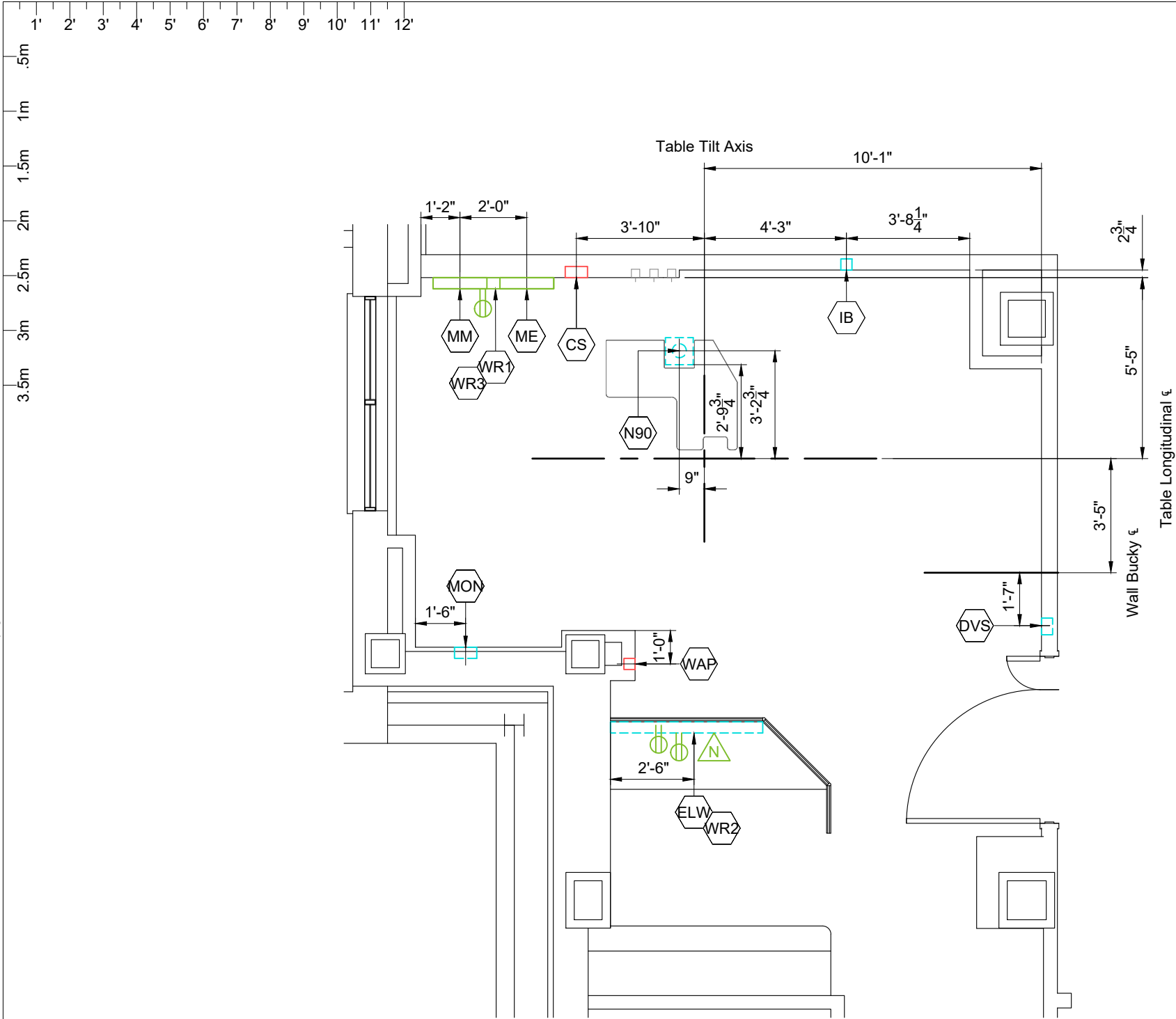
THE DRAWINGS AND RELATED INSTRUCTIONS PROVIDED BY PHILIPS ARE ACCEPTABLE FOR USE BY THE HOSPITAL'S ARCHITECT OR ENGINEER TO USE FOR THE DEVELOPMENT OF CONSTRUCTION DOCUMENTS.

Electrical Legend			
A Furnished and installed by Philips B Furnished and installed by customer/contractor C Installed by customer/contractor D Furnished by Philips and installed by contractor E Existing - Field to verify suitability for reuse F Future G Optional			
	Item Number		Detail Sheet
	Description		
Floor			
E	N90	10" (254mm) W x 10" (254mm) L x 4" (102mm) D floor box, mounted below finished floor with a 5" diameter core drill to cable inlet of table.	ED1
Duplexes and Network Connectors			
B		120V, 15A dedicated duplex outlet. Coordinate exact location with local Philips Service.	
B	N	RJ45 type Ethernet 10/100/1000 Mbit network connector. Access through customer's network to VPN device capable of connecting to the Philips Remote Service Network (RSN) Datacenter is needed. Refer to page N1 for RSN connectivity options. Locate within 10' (3050mm) of network card. Network Fiber optic and Ethernet cabling, connectors, wall boxes, patch panels, etc, are the responsibility of the purchaser. Philips assumes no responsibility for procurement, installation, or maintenance of the components.	N1

Electrical Legend			
A Furnished and installed by Philips B Furnished and installed by customer/contractor C Installed by customer/contractor D Furnished by Philips and installed by contractor E Existing - Field to verify suitability for reuse F Future G Optional			
	Item Number		Detail Sheet
	Description		
	Wall		
B	CB	480V, 3 phase 70 AMP circuit breaker with shunt trip. Run power from breaker to MM, leaving an 8' tail. See Sheet ED1 for power quality requirements. Location per local code or owner requirements. (Not shown on plan)	ED1
B	ST	Shunt Trip (emergency off) Large mushroom-head button on remote control station with contacts to operate feature of CB. (If required by local code or owner, and mandatory for VA and DOD installations). (Not shown on plan)	
B	WL	Warning Light - Provide a surface or flush mounted light fixture above door to indicate when X-Ray is on. Provide a 115V, 15A normally open relay in this fixture. (Not shown on plan)	ED1
B	DS	Door Switch - 120V, 5A switch limited to open when door is open. Mount in upper corner on strike side of main entry door(s) (Cooper no. 1665 or equivalent), if required by local code or physicist of record. (Not shown on plan)	ED1
B	S1	Single pole general purpose ON/OFF switch with red cover. Safety switch is required between scanner unit and "WL" for Philips Service, if a warning light is used. Locate near system disconnect if possible or "MM" wall box. (Not shown on plan)	ED1
B	ME MM	19 1/4" (489mm) W x 67" (1702mm) H x 4" (102mm) D flanged-edge terminal wall box with removable screw-type cover plate, surface mounted 81" (2060mm) A.F.F. to top of box. Conduits to terminate at conduit knock outs provided on top, bottom, or sides of terminal wall box. If raceway is used at top and / or bottom of terminal wall box, remove panel(s) of terminal box by drilling out pop rivets. Top and bottom panels will slide out without the need for cutting. Cutting of the box is prohibited as it will void the UL listing. Weight is approximately 125lbs per box. See ED1 page for wall box ordering instructions.	ED1
B	ELW	Grommet cable opening on "WR2". Location shown is recommended and may be changed - verify relocation with local Philips Service.	
B	WR1	10" (254mm) W x 3 1/2" (89mm) D wall raceway, surface mounted with removable screw-type cover plate. "WR1" is 4" (102mm) A.F.F. to bottom of raceway. "WR1" to be relocated as required for ME/MM backboxes.	ED1
E	WR2	10" (254mm) W x 3 1/2" (89mm) D wall raceway, surface mounted with removable screw-type cover plate. "WR2" is 4" (102mm) A.F.F. to bottom of raceway.	ED1
B	WR3	10" (254mm) W x 4" (102mm) D wall raceway, surface mounted with removable screw-type cover plate. "WR3" is at 81" (2057mm) A.F.F. with removable screw-type cover plate.*	ED1
B	WAP	4" (102mm) W x 4" (102mm) L x 4" (102mm) D wall box with removable screw-type cover plate, flush mounted 12" (305mm) below top of wall to top of box. Location shown is recommended and may be changed - verify relocation with local Philips Service.	
E	DVS	6" (152mm) W x 6" (152mm) L x 4" (102mm) D wall box with removable screw-type cover plate, flush mounted 39" (991mm) A.F.F. to bottom of box.	
E	IB	4" (102mm) W x 4" (102mm) L x 4" (102mm) D wall box with removable screw-type cover plate, flush mounted 84" (2134mm) above finished floor to bottom of box. Location shown is recommended and may be changed - verify relocation with local Philips Service.	
B	CS	8" (203m) W x 8" (203mm) L x 6" (152mm) D wall box, flush mounted with removable screw-type coverplate. Top of box 21" (533mm) below finished ceiling.	
E	MON	8" (203mm) W x 8" (203mm) L x 4" (102mm) D wall box with removable screw type cover plate, flush mounted 6" (152mm) above finished floor.	
*WR1 and / or WR3 are only needed if conduit knock outs within the terminal wall box are not the sufficient size, quantity, or in the proper locations as required. As noted for "ME", the top and bottom panels can be removed by drilling out the pop-rivets and pulling the panel out. Raceway size and length can be changed as needed as long as the raceway is a minimum of 19 1/4" (489mm) in length to cover the entire opening of the removed top or bottom panel(s) and the terminal wall box remains at a mounting height of 81" (2057mm) A.F.F. Raceways cannot be deeper than the terminal wall box, they must fit securely behind the terminal wall box flanged-edge.			

Project Details	Project	
	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118
Project Details	Philips Contacts	
	Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	





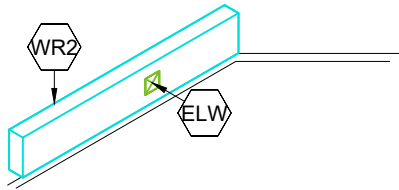
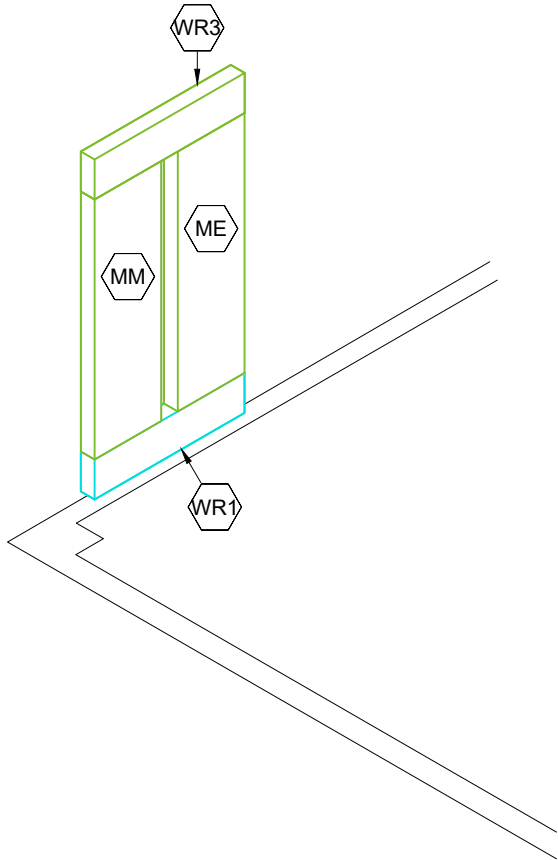
Electrical Layout

1/4" = 1'-0"
Reported Ceiling Height: 9'-6" (2895mm)

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

Project Details	Philips Contacts	Project
Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com Drawn By: Miguel Maldonado	ProxiDiagnost N90 R1.1 VA Medical Center Boston Boston, MA Room: 1B118

Isometric Layout
(Not to scale)



Raceway Diagram
(Not to scale)

Refer to Electrical Legend and Layout - Sheet E1

The use of 90 degree ells is not acceptable; use 45 degree bends at all raceway corners. The use of crossover tunnels at all applicable locations is required.

Conduit Required									
General Notes									
1. All conduit runs must take most direct route point to point. 2. All conduit runs must have a pull string.									
A B C D E F G Conduit supplied/installed by contractor - Philips cables installed by Philips Conduit supplied/installed by contractor - Philips cables installed by contractor Conduits and cables supplied and installed by contractor Conduit existing - cables supplied and installed by Philips Conduit existing - cables supplied by Philips and installed by contractor Conduit existing - cables supplied and installed by contractor Optional equipment, verify with local Philips Service									
* P D G S H C A Power (AC) Power (DC) Ground Signal High Tension Cooling Hose Air Supply Hose									
	Run No.	Conduit		Conduit Quantity	Cable Type (*)	Minimum Conduit Size	Maximum Conduit Length	Special Requirements	
		From	To						
C	1	Power Panel	CB	1	P	Per N.E.C.	Per N.E.C.		
C	2	CB	MM	1	P	2"	50'	8' of the 50' cable to be left as a tail.	
C	3	CB	ST	1	P	3/4"	50'		
C	4	MM	S1	1	P	1/2"	--	Max combined cable length = 50'	
C	5	S1	WL	1	P	1/2"	--		
C	6	MM	DS	1	S	1/2"	50'		
A	7	ME	N90	1	S	2"	39'		
A	8	ME	N90	1	P	2 1/2"	39'		
A/D	9	ME	N90	1	S	2"	39'		
A/D	10	MM	N90	1	P	2 1/2"	39'		
A/D	11	MM	N90	1	S	2 1/2"	39'		
A	12	ELW	N90	1	S	2 1/2"	65'		
A	13	ME	CS	1	P	3"	45'		
A	14	ME	CS	1	S	2"	45'		
A	15	MM	CS	1	P	2 1/2"	45'		
A	16	MM	CS	1	S	2"	45'		
A	17	ME	MM	1	P	2 1/2"	--	Via Raceway. Max cable length = 1' MM and ME cabinets <u>cannot</u> be separated.	
A	18	ME	MM	1	S	2 1/2"	--		
A/D	19	MM	ELW	1	P	2 1/2"	72'		
A/D	20	MM	ELW	1	S	2 1/2"	72'		
A/D	21	MM	MON	1	P	1 1/2"	39'		
A	22	ELW	MON	1	F	1 1/2"	39'		
A/D	23	ME	DVS	1	S	2"	72'		
A	24	MM	DVS	1	P	1 1/2"	72'		
A/D	25	MM	DVS	1	S	2"	72'		
A	26	ELW	DVS	1	S	1 1/2"	88'		
A	27	WAP	ELW	1	P	1 1/2"	65'	Ethernet cable. Conduit if required by local code.	
A/D	28	MM	IB	1	S	1 1/2"	55'		

Project

ProxiDiagnost N90 R1.1

VA Medical Center Boston

Boston, MA

Room: 1B118

Philips Contacts

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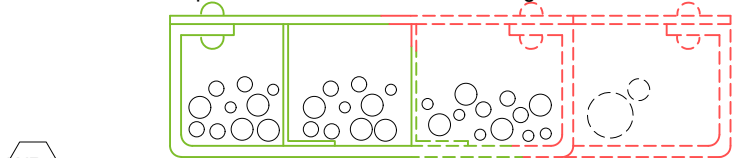
E2

Detail - Cable Trough Divisions

(Not to scale)

Troughs or ducts must be separated by metal barriers into three sections.

1. High voltage (H.T.) cables to be routed separately from all other cables.
2. Power cables and ground cables can be routed together.
3. Signal cables and data cables can be routed together but must be separated from power cables.
4. Video cables to be routed separately from all other cables.
5. It is important that all cables are placed in the appropriate trough and at no given point do any cables from one division cross with cables from another. Trough separation must be continuous from the beginning to the end of the run. Utilize crossover tunnels as appropriate.
6. Trough or ducts: steel with steel dividers grounded to building ground.
7. Contractor to provide cable restraints in all troughs.



WR3
WR1WR2
Power & Ground
Signal & Data
Video
High Tension
(if not in conduit) (if not in conduit)

(21.0)

Detail - Wall Box Ordering Instructions

(To be ordered and installed by Customer/Contractor)

Distinctive Manufacturing Group Method of Business Transactions for Philips Customers
Part# 989801220367 Philips Xray Wall Box

Terminal Blocks will be supplied by Philips and delivered with ME/MM cabinets

- 1) Three ordering methods:
-Email: backbox@thedmgusa.com
-Phone: 260-495-1818
-Fax: 260-495-1822
- 2) Payment Terms - Credit Card Only
-MasterCard
-Visa
-Discover
-American Express
- 3) Lead Time
-3 Week Lead time
- 4) Freight
-All shipments will be shipped on skid
-Freight will be Pre-paid and added (PP+) to the invoice at time of shipment



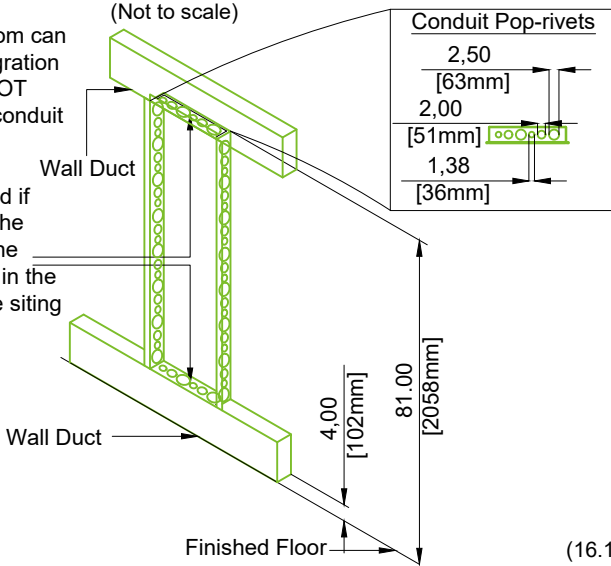
(23.0)

Detail - Wall Box Mounting

(Not to scale)

Pop-rivets on top and bottom can be removed for direct integration with raceway ducts. DO NOT remove top and bottom if conduit hubs are used.

Wall Ducts are only needed if conduit knock outs within the terminal wall box are not the sufficient size, quantity, or in the proper location to meet the siting requirements.



(16.1)

Supplied by Customer / Contractor
Installed by Customer / Contractor

Supplied by Philips \ Installed by Philips

Supplied by Customer / Contractor
Installed by Customer / Contractor

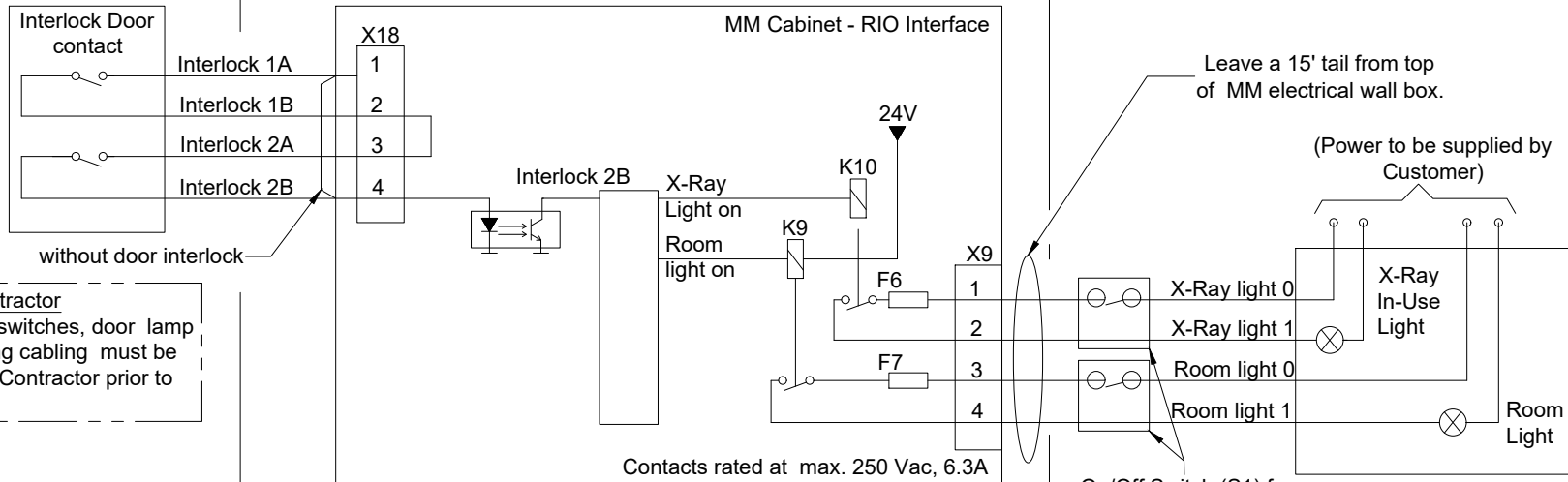


Diagram - Connection of Door Lamp, Room Light and Door Switch

(ProxiDiagnost)

(20.0)

Power Quality Requirements

(Proxi Diagnost N90 80 Generator)

Power Output: 80 kW
Supply Configuration: 3 phase, 3 wire power and ground. Delta.

Nominal Line Voltage: 400 or 480 VAC, 60 Hz
Load Voltage Drop: <2% maximum of nominal voltage between phases
Frequency Variation: 0.5 Hz / min.
Static Power Consumption: 52.3 kW
Current per Phase during Continuous X-ray: <8 A @ 3mA/110kV

Power Consumption at define profile: 870W
- 61.5% Standby
- 37.5% Fluoro
- 1.0% Exposure

Continuous Fluoroscopy: 40 - 125 kV
High Voltage 0.2 - 30 mA
Tube Current

Pulsed Fluoroscopy: 40 - 125 kV
High Voltage 2.5mA - 200mA
Tube Current 0.1 - 30 Hz
Pulse Width

Ground and Neutral Conductor Impedance: <0.1 Ω @ 60Hz maximum

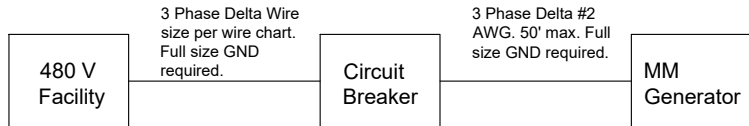
Branch Circuit and Wire Gauge Requirements
(ProxiDiagnost N90 80 Generator)

Circuit Breaker to MM (CB): 3 pole, 70 amperes (@ 480V)
Maximum Current per Phase: 100 kV / 800 mA

Recommended conductor sizes for 1% impedance of branch conductors to circuit breaker (CB).
Based on 20°C copper conductors:

#1 AWG	480 VAC
1/0 AWG	95 feet
2/0 AWG	119 feet
3/0 AWG	150 feet
4/0 AWG	190 feet
5/0 AWG	242 feet
	283 feet

Instantaneous Current 230 A



Maximum copper wire size, circuit breaker (CB) to equipment: #2 AWG, maximum 50' in length, (Customer/contractor provided).

*The ground conductor for the power feeder shall be the same size as the phase conductor wires.

**Residual current device to be installed depending on local regulations.



(20.0)

Project

ProxiDiagnost N90 R1.1
VA Medical Center Boston
Boston, MA
Room: 1B118

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ED1

Philips Healthcare Remote Services Network (RSN)

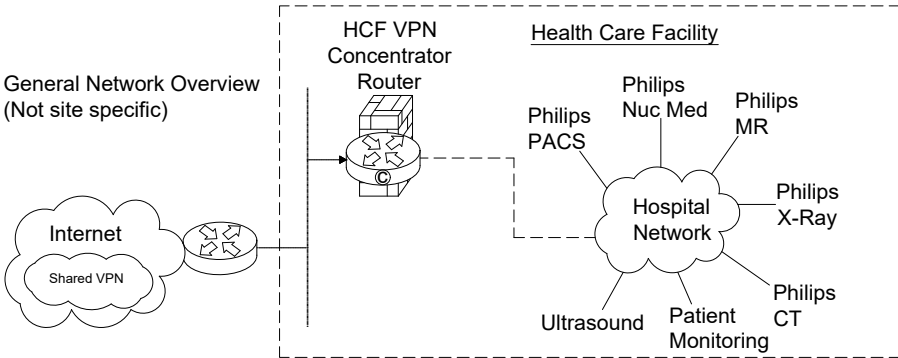
Secure broadband connection required for Philips remote technical support, diagnostics, and applications assistance

Broadband Site-to-Site Connectivity (Preferred)

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

Connectivity Details:

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



Action Required by Hospital:

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

Broadband Router Installed at Health Care Facility

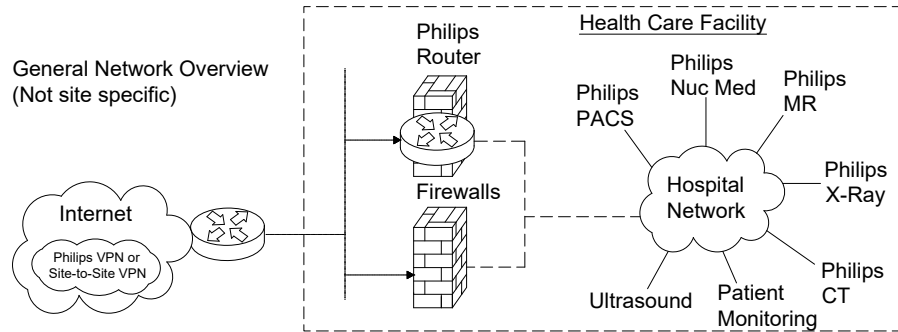
This connectivity method is designed for customers who have a dedicated high speed connection for Philips equipment.

Connectivity Details:

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

Option 1: Parallel to HCF Firewall Connectivity Method

This connectivity method is designed for customers who prefer a Philips RSN Router installed on site utilizing all the security features provided and managed by Philips.

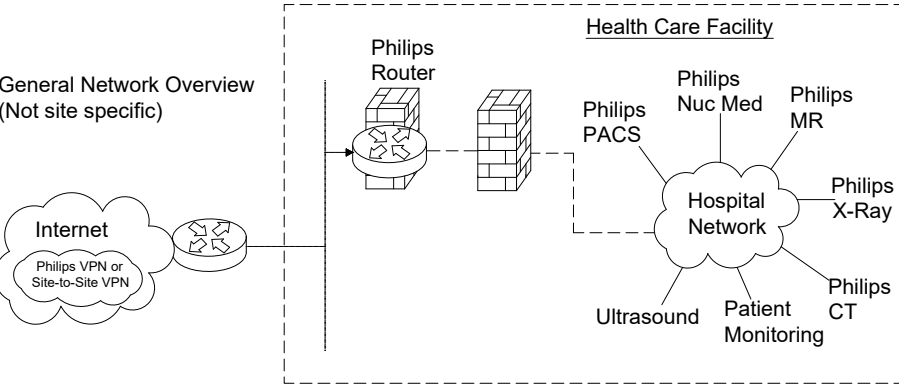


Action Required by Hospital:

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

Option 2: Back End Connected to the HCF Firewall Connectivity Method

This connectivity method is designed for customers who prefer a Philips RSN Router installed on site by setting up an IP-Based policy allowing access thru existing HCF Firewall to Philips equipment.

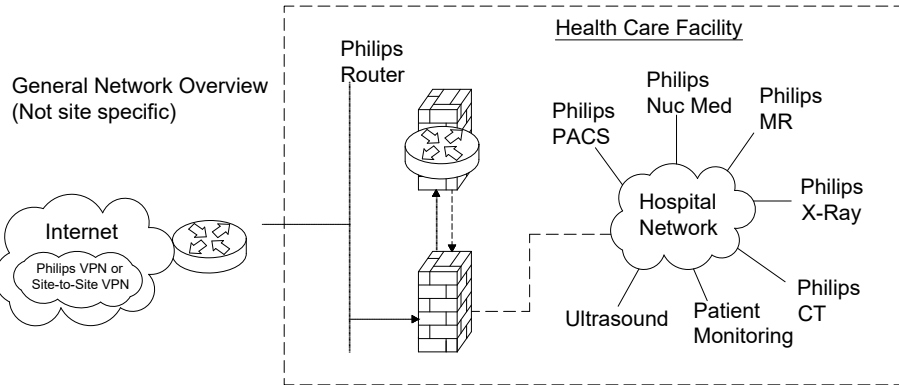


Action Required by Hospital:

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

Option 3: Router Installed Inside the HCF's DZM

This connectivity method is designed for customers who prefer the RSN Router installed inside an existing or new DMZ, allowing access to Philips equipment.



Action Required by Hospital:

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

Network Questionnaire and Customer Network Information Sheet

This information must be available at the moment of system configuration.

Please fill in the appropriate boxes in advance before the system will be delivered.

If a section has a check in brackets, your facility has this licensed option or hardware option and information will be needed.

Header colors indicate the following:

Blue = must be filled in completely

Yellow = Licensed options

White = redundancy or special DICOM option

Highlighted fields have to be filled in by hospital IT

Customer Information	
Hospital name	
IT contact & phone #	
Email address	
X-Ray manager & phone #	
Email address	
Other contact name & phone #	
Email address	

Philips Information (filled in by FSE)	
Project manager & phone #	
Email address	
Service engineer & phone #	
Email address	

Philips X-ray Equipment (filled in by FSE)	
System type	
Site ID or site number	
Eleva software version	
MAC address	
MAC address (WiFi)*	
System SN	
Generator (X-ray control) SN	
Install date	
Room number	
Wall port number	
Sales order #	
FDA 2579 form # **	

* Only in case of MobileDiagnost wDR

** Only for FDA controlled countries

Wired Network Settings	
TCP/IP settings	
Host name (System)	
Use DHCP*	☐ yes ☐ no
IP address	
Subnet mask (only if not DHCP)	
Default gateway (only if not DHCP)	

Network Settings (Wireless Portable Detector & WiFi Access Point)	
Access point information	
Wireless Standard	☐ IEEE 802.11a (5 Ghz) preferred ☐ IEEE 802.11b/g (2.4 Ghz) ☐ IEEE 802.11n ☐ 2.4 GHz ☐ 5GHz ☐ 2.4 GHz/5GHz
Channel	
Ask the local wireless-network-IT administrator (responsible person) to assign a channel according to local wireless network needs. Each access point needs its own exclusive channel. Make sure that two access points, which operate in the same wireless range, use different channels (for example two systems, which operate in neighboring rooms).	

* If DHCP is used, no IP Address, Subnet mask and default gateway is needed

Project	ProxiDiagnost N90 R1.1
	VA Medical Center Boston Boston, MA Room: 1B118
Philips Contacts	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com
	Drawn By: Miguel Maldonado
Project Details	Drawing Number N-EAS240136 B Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000
	N1

Wireless Network Settings (MobileDiagnost wDR Only)	
Access point information	
SSID (access point hospital)	
Security standard	☐ WEP ☐ WPA WPA2
Encryption type	☐ TKIP (RC4) ☐ CCMP (AES) ☐ no encryption
Supported Authentication	☐ PSK ☐ IEEE 802.1x
PSK settings	
Pre Shared Key (WPA/WPA2: min. 8 and max. 63 printable ASCII characters)	(don't type a password here but provide it at the time of installation)
802.1x settings	
Method EAP Protocol	☐ PEAP ☐ EAP-TLS
Client certificate	Provide client certificate (including private key) with entire certificate path at the time of installation. Supported file formats:*.cer *.pfx
Server certificate validation	☐ yes ☐ no
TCP/IP settings	
Use DHCP*	☐ yes ☐ no
IP address	
Subnet mask	
Default gateway	

DICOM Settings (System)	
Name	
AE title	
Port number	
Allow incoming queries	☐ yes ☐ no

PACS - DICOM Store (Export)	
Name	
AE title	
Port number	
IP host name	
IP address	
IS archive	☐ yes ☐ no

PACS - DICOM Store (Backup)	
Name	
AE title	
Port number	
IP host name	
IP address	
IS archive	☐ yes ☐ no

PACS - Query Retrieve	
Name	
AE title	
Port number	
IP host name	
IP address	

RIS Node - DICOM (BWLM)	
Name	
AE title	
Port number	
IP host name	
IP address	

MPPS RIS - DICOM	
Name	
AE title	
Port number	
IP host name	
IP address	

DICOM Default (For All DICOM Nodes)	
Default AE title (must be one of the already defined AE titles)	

Audit Trail Server	
UDP/TCP protocol	
IP host name	
IP address	
Port number	
Format of audit trail	☐ ATNA ☐ Basic security

NTP Time Server	
IP host name	
IP address	
Port number	

Printer I - DICOM Print		
Manufacturer name & type		
Used template		
Printer location		
Name		
AE title		
Port number		
IP host name		
IP address		
Printer Medium: Film Type, Size, Bits		

Printer II - DICOM Print (Backup)		
Manufacturer name & type		
Used template		
Printer location		
Name		
AE title		
Port number		
IP host name		
IP address		
Printer Medium: Film Type, Size, Bits		

Printer III - DICOM Print (Backup)		
Manufacturer name & type		
Used template		
Printer location		
Name		
AE title		
Port number		
IP host name		
IP address		
Printer Medium: Film Type, Size, Bits		

Service Tool: FSF.net (Increment 34+36)

Philips Service Agent (PSA)	
Philips environment	☐ iSSL Enabled ☐ iSSL Enabled with Log Upload ☐ VPN Enabled ☐ VPN Enabled with Log Upload (port 443 outbound shall be open)
Proxy server address	:
Proxy user name	
Proxy password	(don't type a password here but provide it at the time of installation)
Remote Service Gateway	
Network	
Subnet mask	
Gateway	

Service Tool: PSC (Increment 37 and higher)

Remote Connection Tool (RCT)	
Connection type	☐ Internet ☐ VPN (port 443 outbound shall be open)
PRS server	☐ Production
Poll interval	☐ Small – 100 seconds ☐ Medium – 200 seconds ☐ Large – 300 seconds
Configure NAT	
PRS Server NAT Address	
Tunnel Server NAT Address	
PRS Server NAT Port	
Tunnel Server NAT Port	
Remote Service Gateway	
Network	
Subnet mask	
Gateway	

mShield (Network Firewall)	

The following boxes are for any other options necessary or any back up information needed. For example you want to send images to View Forum, or a Research PACS set up.

IP host name	
IP address	
AE title	
Port number	

IP host name	
IP address	
AE title	
Port number	

Project	ProxiDiagnost N90 R1.1	
	VA Medical Center Boston Boston, MA Room: 1B118	
Philips Contacts	Project Manager: Matthew Caron Contact Number: +1 (978) 502-6571 Email: matthew.caron@philips.com	
	Drawn By: Miguel Maldonado	
Project Details	Drawing Number N-EAS240136 B	
	Date Drawn: 10/17/2024 Quote: Q-00278074 Order: 6600700375.010000	
N2		

Instructions

This form is to be used by Project Manager, Contractor, and Service Engineer. Information is used to develop and determine site ready date.

Be sure to contact the Zone Installation Specialist (ZIS), Field Service Engineer (FSE), or National Support Specialist (NSS) if you have questions concerning any of these checklist items.

Site Readiness Checklist

Required Prior to Delivery

- ☐ **Cable Trough/Raceway/Conduit:** Installed, cleaned and locations checked per Philips Final Drawings. Duct covers in place. Cable openings are clear, without sharp edges. **Greenlee** pull strings/measuring tape, (Part # 435, or equivalent), are in place.
 - ☐ **Ceiling (Hard):** Installed and painted.
 - ☐ **Ceiling (Drop-In):** Installed.
 - ☐ **Customer Site Preparation:** Verified per Philips Final Drawings.
 - ☐ **Delivery Path and Truck Parking:** Has been checked with the customer and lead FSE including verifying floor loading, delivery route, elevator capacity, height, width and depth clearances, and a plan for bad weather.
 - ☐ **Doors:** Installed.
 - ☐ **Drawings (Final):** Shows all room obstacles to include millwork, lighting overlay, structure overlay, med gases and plumbing.
 - ☐ **Flooring:** Installed and covered with protective covering (i.e. scratch protection).
 - ☐ **Glass:** Installed.
 - ☐ **HVAC (Climate Equipment):** Installed and operational. Humidity and temperature requirements per Philips Final Drawings.
 - ☐ **Installation Team:** Has received the room drawings and necessary contact phone numbers.
 - ☐ **Millwork:** Completely installed in all rooms.
 - ☐ **Parking:** Parking area identified for installers.
 - ☐ **Permits and Inspections:** Completed by applicable governing authorities. Method statement available and safety meetings attended (OSHDP, AHCA).
 - ☐ **Philips Project Space:** Is clean, free of dust, all construction-related debris and tools have been removed.
 - ☐ **Restroom Facilities:** Toilet facilities, including area to wash up, are available.
 - ☐ **Room Lighting:** Installed and operational.
 - ☐ **Room Security:** Room is secure, with keys and alarm codes provided.
 - ☐ **Site Access:** Is available for after hours. Storage for tools, parts, covers and packing material has been arranged.
 - ☐ **Site Is Safe To Work:** PPE requirements identified (Construction and Hospital). No open Mains, slippery floors, sharp edges, or hazardous goods on site.
 - ☐ **Sprinklers:** Installed.
 - ☐ **Transport & Handling Tools:** Crane, forklift, wheels and trolleys have been specified with the LMP/rigging company. NOTE: If rigging provided by Philips, verify the vendor is on the Philips' Approved Suppliers List.
 - ☐ **Walls:** Installed and final finished, (i.e. final coat painted and/or tiled).
 - ☐ **Existing Equipment:** Is dismantled and removed from the site.
 - ☐ **Floor Levelness:** Checked with Laser Level and is level per Philips Final Drawings.
 - ☐ **System Orientation:** Verified per Philips Final Drawings.
 - ☐ **Table Isocenter:** Verified per Philips Final Drawings.

- ☐ **Mains Power Supply:** Installed per Philips Final Drawings. (Including impedance, isolated grounds, wire size verified, and distribution unit has been installed).
- ☐ **UPS:** Fully installed per Philips Final Drawings, and startup has been scheduled with vendor.
- ☐ **Back Boxes:** Installed with required covers and grommet material per Philips Final Drawings, (i.e. spacing between boxes and height off finished floor).
- ☐ **Ceiling Height:** Verified per Philips Final Drawings
- ☐ **Ceiling Obstructions:** Verify there are no obstructions where Philips rails will be installed
- ☐ **Ceiling Rails:** Pre-delivered and installed (if applicable).
- ☐ **Clearances:** Verified to the closest obstacles, (i.e. walls, cabinets, etc.) in order to lift of the CS, monitor support, etc.
- ☐ **Fixing Blocks:** Provided by Philips, verify the block properly seats in the Unistrut channel with no obstructions, as designed.
- ☐ **Floor Plates (If applicable):** Patient Support and Stand, are installed, isolated, and leveled, at the correct positions per Philips Final Drawings.
- ☐ **Pre-Term Wire Kit:** Philips pre-cabling has been delivered and installed.
- ☐ **Unistrut (P1001 or equal):** Installed and leveled per Philips Final Drawings.
- ☐ **Wall Backing:** Verify it is in place per Philips Final Drawings..

Required Prior to Philips System Power Up

- ☐ **Wall Outlets:** Installed and functional.
- ☐ **Door Interlock Switch:** If required, is installed per Philips Final Drawings.
- ☐ **X-Ray in Use or Warning Light:** If required, is installed per Philips Final Drawings.
- ☐ **Physicist:** If required, verify the Physicist has been scheduled.
- ☐ **Network Connections:** Hardware is installed and active per Philips Final Drawings. All network information provided by facility IT, i.e. IP addresses (static IPs only), AE Titles, SNM, GTWY and DNS server are available.
- ☐ **UPS:** Commissioned and certified by UPS vendor.

Approved for Delivery

Project Manager

Date _____

Service Engineer

Date _____

Project

ProxiDiagnost N90 R1.1

VA Medical Center Boston

Boston, MA
Room: 1B118

Philips Contacts

Project Manager: Matthew Caron

Contact Number: +1 (978) 502-6571

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CHK