Saint Luke's™
EAST HOSPITAL

SAINT LUKE'S EAST HOSPITAL
VAULT #2 LINEAR ACCELERATOR
100 NE SAINT LUKE'S BLVD.
LEE'S SUMMIT, MO 64086

P R O J E C T T E A M

ARCHITECT
ACI BOLAND, INC.

1710 WYANDOTTE STREET
KANSAS CITY, MO 64108
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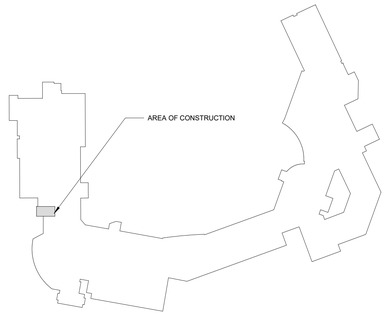
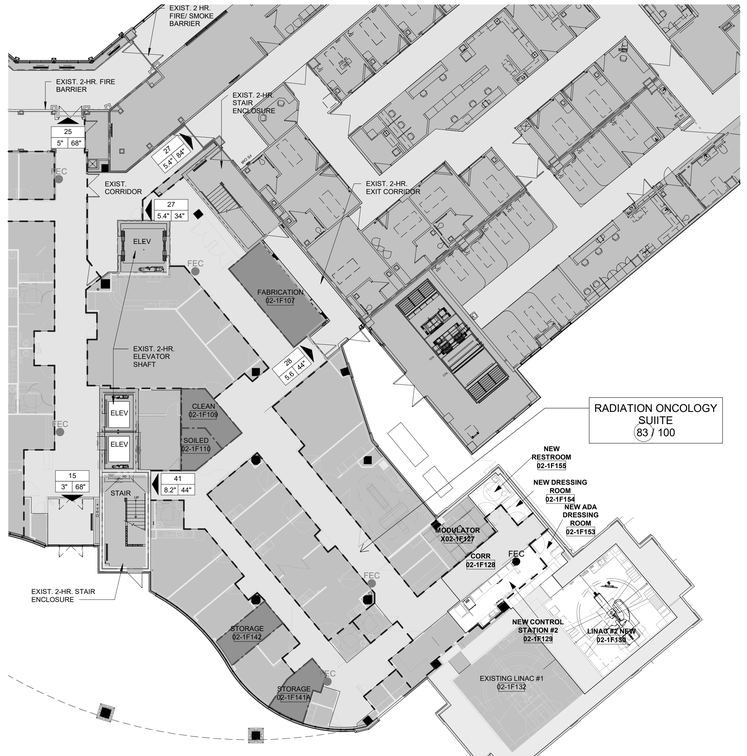
ABBREVIATIONS

ABC	AGGREGATE BASE COURSE	G	GRAM	QBT	QUARRY BASE TILE
ACT	ACOUSTIC CEILING TILE	GA	GAUGE	QT	QUARRY TILE
A/C	AIR CONDITIONING	GALV	GALVANIZED	QTZ	QUARTZ
ADD	ADDENDUM	GD	GRADE		
AFF	ABOVE FINISH FLOOR	GL	GLASS / GLAZING	R	RISER, RISERS
AG	ARCHITECTURAL GLASS	GLT	GLASS WALL TILE	RAD	RADIUS
AGG	AGGREGATE	GND	GROUND	RB	RESILIENT BASE
ALT	ALTERNATE	GRL	GRILLE	RBF	RUBBER FLOOR
ALUM	ALUMINUM	GT	GROUT	RD	ROOF DRAIN
AP	ACRYLIC PANEL	GWB	GYPSUM BOARD	RE	REFER TO
ARCH	ARCHITECT	GYP	GYPSUM	REG	REGISTER
ASF	ARCHITECTURAL SURFACE FINISH	HB	HOSE BIB	REQ'D	REQUIRED
ASP	ASPHALT	HDN	HARDENER	RES	RESINOUS FLOOR
AWC	ACOUSTIC WALLCOVERING	HDW	HARDWARE		RESINOUS WALLCOVERING
AWP	ACOUSTIC WALL PANEL	HDWD	HARDWOOD	REV	REVISION
&	AND	HM	HOLLOW METAL	RF'G	ROOFING
@	AT	HORIZ	HORIZONTAL	RGH	ROUGH
		HP	HIGH POINT	RM	ROOM
BD	BOARD	HR	HANDRAIL	RND	ROUND
BLDG	BUILDING	HT	HEIGHT	RO	ROUGH OPENING
BLKG	BLOCKING	HTR	HEATER	RSF	RESILIENT SHEET FLOOR
BM	BEAM	HW	HOT WATER	RST	RUBBER STAIR TREAD
BO	BOTTOM OF				
BR	BUMPER RAILS	IB	INTEGRAL BASE	S	STAINLESS STEEL SINK
BRC	BRUSHED CONCRETE	IN	INCH / INCHES	SC	SHOWER CURTAIN
BSMT	BASEMENT	INSUL	INSULATION	SCHED	SCHEDULE
		INT	INTERIOR	SCR	SCREW
CBT	CERAMIC BASE TILE	INV	INVERT	SCT	SHOWER CURTAIN TRACK
CC	CUBICLE CURTAIN	IS	INTEGRAL SINK	SDG	SIDING
CCT	CUBICLE CURTAIN TRACK			SECT	SECTION
CEM	CEMENT/CEMENTITIOUS	JAN	JANITOR	SEL	SELECT
CER	CERAMIC	JT	JOINT	SHG	SHEATHING
CFT	CERAMIC FLOOR TILE	JST	JOIST	SHT	SHEET
CG	CORNER GUARD			SIM	SIMILAR
CHR	CHAIR RAIL	KP	KICK PLATE	SLDG	SLIDING
CHAN	CHANNEL			SM	SMOOTH
CIP	CAST IN PLACE	LAM	LAMINATED	SP	SAFETY PADDING
CJ	CONTROL JOINT	LAV	LAVATORY	SPC	SPECIALTY CEILING
	CONSTRUCTION JOINT	LB	POUND	SPEC	SPECIFICATION
CL	CENTER LINE	LG	LENGTH	SPF	SPORTS FLOOR
CLG	CEILING	LNM	LINOLEUM	SQ	SQUARE
CLOS	CLOSET	LOC	LOCATION	SSF	SOLID SURFACE
CLP	COMPACT LAMINATE PANEL	LT	LIGHT	SST	STAINLESS STEEL
CLR	CLEAR	LVR	LOUVER		STAINLESS STEEL CABINET
CM	CENTIMETER	LVT	LUXURY VINYL TILE		STAINLESS STEEL COUNTERTOP
CMU	CONCRETE MASONRY UNIT	LWC	LIGHT WEIGHT CONCRETE	ST	STAINED
CO	CLEAN OUT			STC	STAINED CONCRETE
COL	COLUMN	M	METER	STD	STANDARD
CONC	CONCRETE	MAT	MATERIAL	STN	STONE
CONST	CONSTRUCTION	MAX	MAXIMUM	STRUC	STRUCTURE
CONT	CONTINUOUS	MB	MARKER BOARD	SUSP	SUSPENDED
CPT	CARPET	MC	METAL CABINETS	SW BD	SWITCHBOARD
CR	CRASH RAIL	MECH	MECHANICAL	SYS	SYSTEM
CS	CONCRETE SEALER	MFR	MANUFACTURER		
CST	CULTURED STONE	MIN	MINIMUM	T	TREAD
CWT	CERAMIC WALL TILE	MLDG	MOULDING	TB	TACK BOARD
		MO	MASONRY OPENING	TC	TOP OF CURB
DB	DECIBEL	MP	MOVEABLE PARTITION	TCF	TEXTILE COMPOSITE FLOORING
DGP	DECORATIVE GLASS PANEL	MT	METAL TRIM	TF	TACK FABRIC
DIA	DIAMETER	MTB	METAL BASE	TG	TEMPERED GLASS
DIAG	DIAGONAL	MTL	METAL	TO	TOP OF
DIM	DIMENSION	MTL LATH	METAL LATH	TP	TOILET PARTITION
DISP	DISPENSER	MULL	MULLION	TRS	TRANSITION STRIP
DN	DOWN			TRZ	TERRAZZO FLOORING
DP	DAMP PROOFING	NF	NO FINISH	TSD	TOP OF STEEL DECK
DPC	DYED AND POLISHED CONCRETE	NG	NATURAL GRADE	TUF	TURF
		NIC	NOT IN CONTRACT	TW	TEACHERS WARDROBE
DR	DRAPERY	NO / #	NUMBER	TYP	TYPICAL
DS	DOWNSPOUT	NOM	NOMINAL	TZB	TERRAZZO BASE
DWG	DRAWING	NTS	NOT TO SCALE		
				UNO	UNLESS NOTED OTHERWISE
EA	EACH	OBS	OBSCURE	UP	UPHOLSTERY
ELEC	ELECTRIC	OC	ON CENTER		
ELEV	ELEVATION	OPN'G	OPENING	V	VENT
EJ	EXPANSION JOINT	OA	OVERALL	VCP	VITREOUS CLAY PIPE
EQ	EQUAL	OFS	OVERFLOW SCUPPER	VCT	VINYL COMPOSITION TILE
EQUIP	EQUIPMENT	OD	OVERFLOW DRAIN	VG	VERTICAL GRAIN
ETR	EXISTING TO REMAIN	OHD	OVERHEAD DOOR	VERT	VERTICAL
EWC	ELECTRIC WATER COOLER			VEST	VESTIBULE
EXH	EXHAUST	PBT	PORCELAIN BASE TILE	VET	VINYL ENHANCED TILE
EXIST	EXISTING	PC	POLISHED CONCRETE	VQT	VINYL QUARTZ TILE
EXP	EXPOSED	PD	PAINT DETAIL / PAINT WALL GRAPHIC	VWC	VINYL WALLCOVERING
EXPAN	EXPANSION	PFT	PORCELAIN FLOOR TILE		
EXT	EXTERIOR	PG	PAGE	WC	WALLCOVERING
		PL	PROPERTY LINE	WCT	WAINSCOT
FA	FIRE ALARM	PLAM	PLASTIC LAMINATE	WD	WOOD
FACP	FIRE ALARM CONTROL PANEL	PLBG	PLUMBING	WDB	WOOD BASE
FD	FLOOR DRAIN	PLYWD	PLYWOOD	WDC	WOOD CEILING
FEC	FIRE EXTINGUISHER CABINET	PNL	PANEL	WDF	WOOD FLOOR
FHC	FIRE HOSE CAB	PR	PAIR	WDP	WOOD PANELS
FIN	FINISH	PSF	POUNDS PER SQ FT	WDS	WOOD STAIN
FIXT	FIXTURE	PSI	POUNDS PER SQ IN	WDV	WOOD VENEER
FL	FLASHING	PSTR	PLASTER	WDW	WINDOW
FLR	FLOOR	PT-X	PAINT (No acronym after number always stands for eggshell finish)	WF	WINDOW FILM
FND	FOUNDATION			WH	WATER HEATER
FR	FRAME	PT-XA	PAINT ('A' always stands for epoxy finish)	WOC	WALK OFF CARPET
FRP	FIBERGLASS REINFORCED PANELS	PT-XB	PAINT ('B' always stands for semi-gloss finish)	WOM	WALK OFF MAT
		PT-XC	PAINT ('C' always stands for flat finish)	WP	WALL PROTECTION
FT	FEET / FOOT	PT-XD	PAINT ('D' as needed per project if not listed above)	WS	WALLGLASS SYSTEM
FTG	FOOTING	PTN	PARTITION	WT	WINDOW TREATMENT
FV	FIELD VERIFY	PWT	PORCELAIN WALL TILE	WW	WINDOW WALL
FWP	FABRIC WALL PANEL			WWM	WELDED WIRE MESH
				W/	WITH
				W/O	WITHOUT

LOCATION PLAN



KEY PLAN



First Floor Life Safety Plan - Building "F"
1/16" = 1'-0"

GRAPHIC SCALE
0 16 32 48 64

SHEET INDEX

ARCHITECTURAL SHEETS	
A000	COVER SHEET
A010	PARTITION TYPES & DETAILS
AD201	ENLARGED DEMOLITION FLOOR PLAN
A220	ENLARGED PLAN
A320	ENLARGED REFLECTED CEILING PLAN
A701	FINISH FLOOR PLAN, SCHEDULES, LEGENDS, AND ELEVATIONS
A710	INTERIOR DETAILS

STRUCTURAL SHEETS	
S1.0	STRUCTURAL DETAILS

MECHANICAL, ELECTRICAL, PLUMBING SHEETS	
M-001	MECHANICAL COVER SHEET
M-101	FIRST FLOOR OVERALL PLAN
F-111	FIRST FLOOR FIRE PROTECTION ENLARGED PLAN
P-111	FIRST FLOOR PLUMBING ENLARGED PLAN
P-501	PLUMBING SCHEDULES & DETAILS
M-111	FIRST FLOOR MECHANICAL ENLARGED DEMO PLANS
M-112	FIRST FLOOR HVAC ENLARGED PLAN
M-501	HVAC SCHEDULES & DETAILS
E-001	ELECTRICAL GENERAL NOTES AND SYMBOLS
E-100	ELECTRICAL OVERALL PLAN
E-101	ELECTRICAL DEMOLITION PLAN
E-121	ELECTRICAL POWER PLAN
E-122	ELECTRICAL CONDUIT PLAN
E-132	ELECTRICAL LIGHTING PLAN
E-142	ELECTRICAL SYSTEMS PLAN
E-501	ELECTRICAL DETAILS
E-601	ELECTRICAL ONE-LINE DIAGRAM
E-611	ELECTRICAL SCHEDULES

VENDOR SHEETS	
V-1	VARIAN TRUEBEAM
V-2	VARIAN TRUEBEAM
V-3	VARIAN TRUEBEAM
VRT-1	VISION RT
VRT-2	VISION RT
ARJO-1	ARJO PATIENT LIFT
ARJO-2	ARJO PATIENT LIFT
ARJO-3	ARJO PATIENT LIFT
ARJO-4	ARJO PATIENT LIFT
ARJO-5	ARJO PATIENT LIFT
VAULT-1	NELCO VAULT DOOR
VAULT-2	NELCO VAULT DOOR
VAULT-3	NELCO VAULT DOOR
VAULT-4	NELCO VAULT DOOR
VAULT-5	NELCO VAULT DOOR
VAULT-6	NELCO VAULT DOOR

CODE FOOTPRINT LEGEND

PARTITION TYPES

- 0 HR SMOKE PARTITION (SMOKE RESISTIVE)
- 1 HR SMOKE BARRIER
- 1 HR FIRE BARRIER
- 2 HR FIRE BARRIER
- 2 HR FIRE SMOKE BARRIER
- 3 HR FIRE BARRIER

AREA DESIGNATIONS

- CORRIDOR
- HAZARDOUS ROOM
- NOT IN ARCHITECTURAL SCOPE
- EXIT ENCLOSURE
- SHAFT

SYMBOLS

- 96 / 100 — OCCUPANT LOAD
- LOAD FACTOR
- FIRE EXIT
- 50 / 12" 36" — OCCUPANT LOAD
- EXIT WIDTH PROVIDED
- EXIT WIDTH REQUIRED
- FEC — NEW FIRE EXTINGUISHER CABINET
- FEC — EXISTING FIRE EXTINGUISHER CABINET
- 45 MIN — FIRE DOOR RATING
- 124' — TRAVEL DISTANCE

CODE SUMMARY

PROJECT CONSTRUCTION PURPOSE: NEW LINEAR ACCELERATOR VAULT WITH CONTROL ROOM, TWO DRESSING ROOMS, AND NEW ADA RESTROOM. ALL CONSTRUCTION TO BE INTERIOR RENOVATION WORK OF EXISTING SHELL SPACE.

OWNER:
Saint Luke's East Hospital
100 NE Saint Luke's Blvd
Lee's Summit, MO 64063

DESIGNER:
ACI BOLAND ARCHITECTS
1710 WYANDOTTE ST
KANSAS CITY, MO 64108
PHONE: (816) 763-9600

LOCAL AUTHORITY:
RESPONDING FIRE SERVICE: CITY OF LEE'S SUMMIT MO
LOCAL BUILDING INSPECTION: CITY OF LEE'S SUMMIT MO

CODE INFORMATION:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2017 NATIONAL ELECTRICAL CODE (NFPA 70)
2018 INTERNATIONAL FIRE CODE
2012 LIFE SAFETY CODE (NFPA 101 CHAPTER 20)
2009 ICC/ANSI A117.1 AS AMENDED AND ADOPTED BY THE CITY OF LEE'S SUMMIT
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN / AMERICANS WITH DISABILITIES ACT OF 1990
STATE OF MISSOURI DEPT. OF HEALTH & ENVIRONMENT REFERENCES THE FOLLOWING CODES:
2012 NFPA 101 LIFE SAFETY CODE (LSC)
2018 FGI GUIDELINES FOR DESIGN & CONSTRUCTION OF HOSPITALS & OUTPATIENT FACILITIES
1979 19-CSR-30
NOTE: IF CODE REQUIREMENTS OVERLAP, THE MOST STRINGENT SHALL APPLY

TYPE OF CONSTRUCTION: TYPE 1-A -SECTION 602.2 (TYPE 1 - 332 SPRINKLERED - SECTION 18.1.6.1)

OCCUPANCY GROUP: I-2 -SECTION 308.3 (HEALTHCARE - SECTION 6.1.5)

OCCUPANT LOAD:
TOTAL SQUARE FOOTAGE: SF / = 1,460 SF
TOTAL NUMBER OF OCCUPANTS = 10

DEAD END CORRIDOR LENGTH LIMIT: 20'

EXIT ACCESS TRAVEL DISTANCE: 200'

AREA OF CONSTRUCTION: 1,460+/- SF

REQUIRED FIRE RESISTANCE RATINGS (IN HOURS) PER NFPA 101 A.8.2.1.2:

EXTERIOR BEARING WALLS	3 HR
INTERIOR BEARING WALLS	3 HR
PRIMARY STRUCTURAL FRAME	3 HR
FLOOR CONSTRUCTION	2 HR
ROOF CONSTRUCTION	1 1/2 HR
INTERIOR NON-BEARING WALLS	0 HR

PLUMBING FIXTURE CALCULATIONS: EXISTING TO REMAIN
NO CHANGE IN OCCUPANCY

ACTIVE FIRE SAFETY FEATURES:
- FIRE ALARM SYSTEM - THE FIRE ALARM SYSTEM IS SPECIFIED AS AN ADDRESSABLE TYPE SYSTEM. THE DEVICE TYPE AND LOCATIONS ARE PER THE APPLICABLE CODES AS WELL AS ADA REQUIREMENTS.

- SMOKE CONTROL SYSTEM - ALL DUCTWORK PENETRATING SMOKE RATED WALLS WILL HAVE A SMOKE OR COMBINATION FIRE/SMOKE DAMPER AS INDICATED ON CONSTRUCTION DOCUMENTS. THESE DAMPERS WILL CLOSE UPON DETECTION OF SMOKE BY THE AREA SMOKE DETECTORS OR DUCT SMOKE DETECTORS IN THE AIR HANDLING UNITS.

- FIRE SPRINKLER SYSTEM - SPECIFIED TO BE PER NFPA 13. THE SPRINKLER HEADS ARE SPECIFIED TO BE QUICK RESPONSE TYPE.

- EMERGENCY LIGHTING AND POWER - EMERGENCY LIGHTING, LIFE SAFETY AND CRITICAL LOADS WILL RECEIVE POWER FROM A BACKUP GENERATOR LOCATED OUTSIDE THE MAIN ELECTRICAL ROOM.

- ILLUMINATED EXIT SIGNS

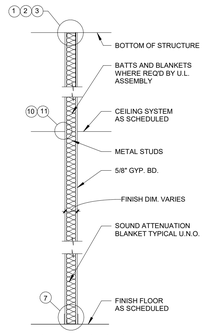
PASSIVE FIRE SAFETY FEATURES:

- SMOKE COMPARTMENTS NO GREATER THAN 22,500 SF

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR

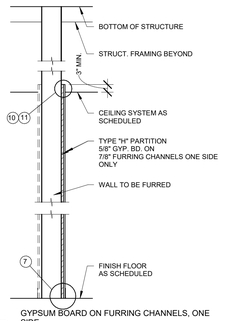
Date
Job Num
Drawn B
Checked

Number

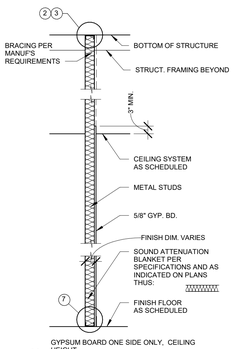


A — GYPSUM BOARD BOTH SIDES
NON-RATED - TYPICAL
1/2" = 1'-0"

U.L. DESIGNATIONS AT RATED WALLS AS INDICATED ON LIFE SAFETY PLAN	
— — —	0 HOUR SMOKE RESISTIVE
- - - -	1 HOUR SMOKE BARRIER U.L. U465 FOR 3 5/8" STUDS U.L. U442 AT TILED WALLS U.L. U451 FOR 2 1/2" STUDS
— · — · —	1 HOUR FIRE SEPARATION U.L. U465 FOR 3 5/8" STUDS U.L. U442 AT TILED WALLS U.L. U451 FOR 2 1/2" STUDS

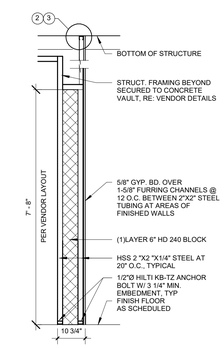


H — GYPSUM BOARD ON FURRING CHANNELS, ONE SIDE
1/2" = 1'-0"

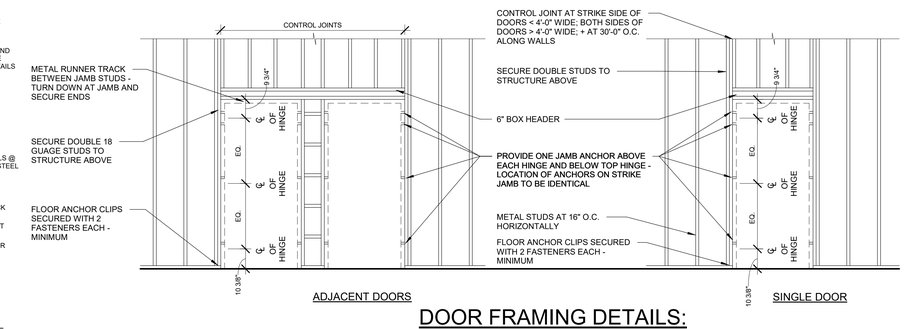


K — GYPSUM BOARD ONE SIDE ONLY, CEILING HEIGHT
1/2" = 1'-0"

NOTE: 1/8 SUFFIX INDICATES 1/8" LEAD-LINED GYP. BD. TO 7'-0" ON INSIDE OF ROOM.



N — LEAD LINED PARTITION RE: VENDOR PLANS
1/2" = 1'-0"



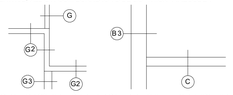
DOOR FRAMING DETAILS:

PARTITION GENERAL NOTES

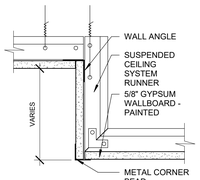
1. UNLESS NOTED OTHERWISE, ALL INTERIOR METAL STUDS ARE 3 5/8" THICK. REFER TO SUFFIX SCHEDULE BELOW FOR LOCATIONS OF METAL STUDS OTHER THAN 3-5/8" THICK. NOTE: STUD THICKNESS (GAUGE) MUST CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SPAN (HEIGHT OF STUD)
2. WHERE THE PARTITION TYPE INDICATION IS SHOWN WITH A NUMERICAL SUFFIX, THE METAL STUD THICKNESS SHALL BE AS SCHEDULED BELOW:

SUFFIX	MTL. STUD THICKNESS
1	1-5/8" MTL. STUDS
2	2-1/2" MTL. STUDS
3	6" MTL. STUDS

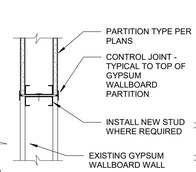
3. ALL STUDS ARE CONTINUOUS FROM FLOOR STRUCTURE TO CEILING STRUCTURE UNLESS NOTED OTHERWISE.
4. METAL STUDS ARE SPACED @ 16" O.C. MAX., UNLESS NOTED OTHERWISE.
5. UNLESS NOTED OTHERWISE, ALL GYPSUM BOARD IS TO BE 5/8" THICK "FIRECODE".
6. THE LOCATION OF A CHANGE IN THE PARTITION TYPE IS INDICATED BY A WALL TAG.



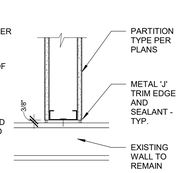
7. THE CORRESPONDING RATED ASSEMBLIES ARE INDICATED BELOW THE PARTITION TYPES.
8. PARTITION TYPE DESIGNATIONS ARE INDICATED ON THE FLOOR PLAN DRAWINGS.
9. PARTITION TYPES DO NOT INCLUDE APPLIED FINISHES CALLED FOR IN THE ROOM FINISH SCHEDULE.
10. AT PARTITION TYPES WHERE MTL. STUDS ARE EXPOSED ON ONE OR BOTH SIDES, CUT STUD 1/4" SHORT AND SCREW BOTH SIDES TO MTL. RUNNER TRACK.



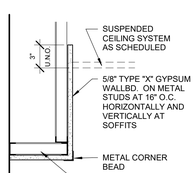
17 — GYPSUM BOARD CEILING DROP
1-1/2" = 1'-0"



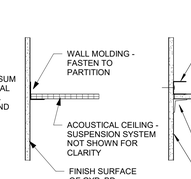
20 — NEW TO EXISTING GYPSUM WALLBOARD WALL INFILL
1-1/2" = 1'-0"



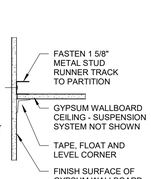
19 — NEW TO EXISTING GYPSUM WALLBOARD WALL CONNECTION
1-1/2" = 1'-0"



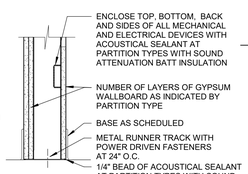
16 — GYPSUM WALLBOARD SOFFIT
1-1/2" = 1'-0"



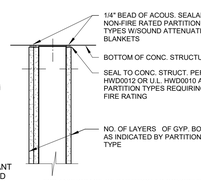
11 — SUSPENDED ACOUST. CEILING SYSTEM
1-1/4" = 1'-0"



10 — SUSPENDED GYPSUM WALLBOARD CEILING
1-1/4" = 1'-0"

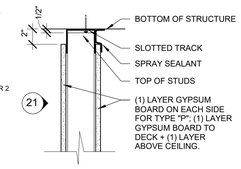


7 — FLOOR ANCHORAGE OF PARTITION
1-1/2" = 1'-0"



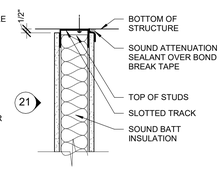
TOP ANCHORAGE OF PARTITION TO CONCRETE STRUCTURE SEE 3A AND 3B FOR ADDITIONAL INFORMATION

3 — 1-1/2" = 1'-0"



NON-RATED TOP ANCHORAGE OF PARTITION TO STRUCTURE USED AT 0-HR SMOKE RESISTIVE PARTITIONS

2 — 1-1/2" = 1'-0"

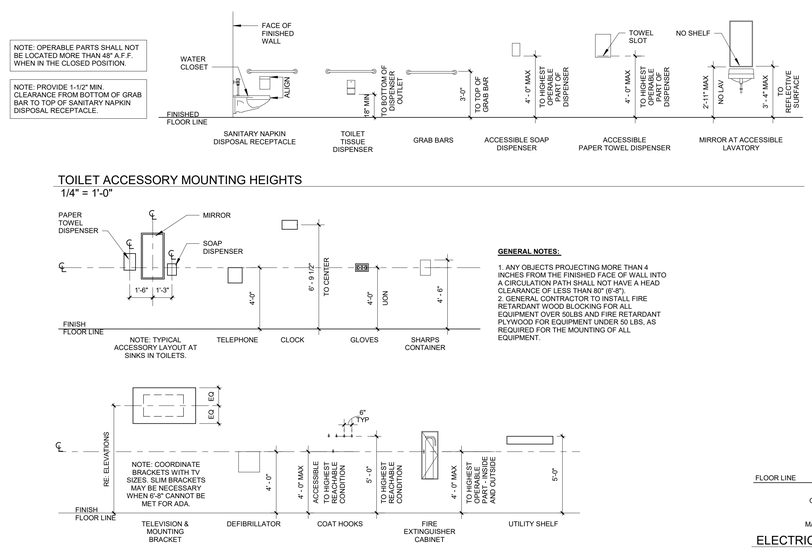


TOP ANCHORAGE OF PARTITION TO STRUCTURE - USED AT NON-RATED SOUND ATTENUATION WALLS

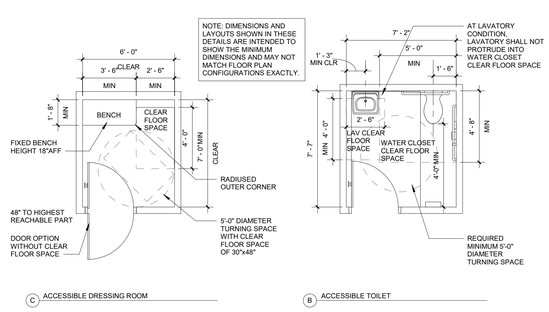
1 — 1-1/2" = 1'-0"

HOLD ALL MEP ITEMS 4" CLEAR BELOW STRUCTURE

PARTITION TYPE DETAILS

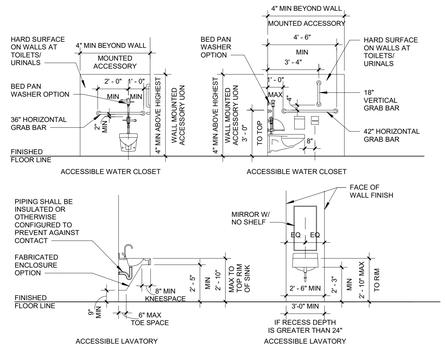


TOILET ACCESSORY MOUNTING HEIGHTS
1/4" = 1'-0"



C — ACCESSIBLE DRESSING ROOM
B — ACCESSIBLE TOILET

GENERAL ADA DIMENSIONS
1/4" = 1'-0"



TYPICAL FIXTURE ELEVATION
1/4" = 1'-0"

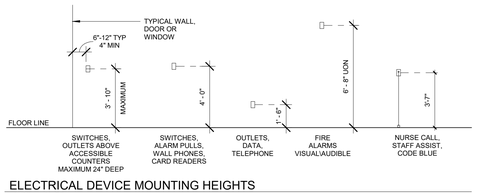
GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH A.D.A. REQUIREMENTS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING CODES AND REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING PERMITS.
3. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THE ARCHITECT OF ANY INCONSISTENCIES OR DISCREPANCIES WITH THE PROJECT DOCUMENTS. ACCESS TO THE SITE AND/OR SPACE UNDER CONSTRUCTION DURING BIDDING AND CONSTRUCTION SHALL BE COORDINATED WITH THE OWNER.
4. DO NOT SCALE DRAWINGS.
5. THE WORD "ALIGN" AND "EQUAL" AS USED IN THESE DOCUMENTS SHALL SUPERSEDE ANY DIMENSIONAL INFORMATION GIVEN.
6. TYPICAL DIMENSIONS ARE TO FACE OF CONCRETE, DRYWALL, CURTAIN WALL, ETC., OR TO COLUMN CENTERLINE. DIMENSIONS AT WINDOWS ARE TYPICALLY TO FACE OF FRAME. REFER TO PLAN DETAILS FOR ADDITIONAL INFORMATION.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING AND CONFIRMING ALL SUBSTRATE CONDITIONS WHERE NEW MATERIALS ARE APPLIED. THE SUBSTRATE SHALL BE SMOOTH AND FREE OF DEFECTS AND SHALL CONFORM TO THE REQUIREMENTS OF THE FINISHED MATERIAL MANUFACTURERS RECOMMENDATIONS.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP.
9. THE GENERAL CONTRACTOR SHALL INSPECT AND CHECK THE ADEQUACY AND INSTALLATION OF THROUGH-WALL FLASHING PRIOR TO COVERING WITH FINISH MATERIALS. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO INSPECTION AGAINST HOLES OR PENETRATIONS, APPROPRIATE LAPPING AND SEALING, AND OVERALL WORKMANSHIP IN CONFORMANCE WITH THE SPECIFICATIONS.

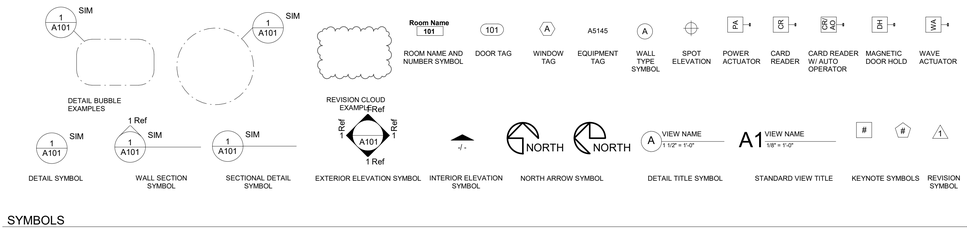
GENERAL NOTES:

1. ANY OBJECTS PROJECTING MORE THAN 4 INCHES FROM THE FINISHED FACE OF WALL INTO A CIRCULATION PATH SHALL NOT HAVE A HEAD CLEARANCE OF LESS THAN 80" (6'-8").
2. GENERAL CONTRACTOR TO INSTALL FIRE RETARDANT WOOD BLOCKING FOR ALL EQUIPMENT OVER 50LBS AND FIRE RETARDANT PLYWOOD FOR EQUIPMENT UNDER 50 LBS, AS REQUIRED FOR THE MOUNTING OF ALL EQUIPMENT.

EQUIPMENT MOUNTING HEIGHTS
1/4" = 1'-0"



ELECTRICAL DEVICE MOUNTING HEIGHTS
1/4" = 1'-0"



SYMBOLS
1/4" = 1'-0"

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SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	
Job Number	3-25014
Drawn By	ME
Checked By	BRD

Revision

Number	Date	Description

A010

PARTITION TYPES & DETAILS

A6 ENLARGED DEMO PLAN - RAD. ONCOLOGY
1/4" = 1'-0"

DEMOLITION LEGEND

NOT IN SCOPE

WALLS, DOORS, DOOR/WINDOW FRAMES, EQUIPMENT, FIXTURES, ETC. INDICATED BY DASHED LINES WITHIN THE AREA OF CONSTRUCTION SHALL BE REMOVED. REFER TO THIS SHEET FOR ARCHITECTURAL DEMOLITION NOTES.

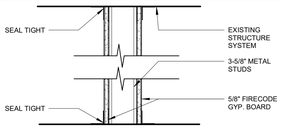
2X2/2x4 LAY-IN ACOUSTICAL CEILING INDICATED BY DASHED LINES WITHIN THE AREA OF CONSTRUCTION SHALL BE REMOVED. REFER TO THIS SHEET FOR ARCHITECTURAL DEMOLITION NOTES.

GENERAL DEMOLITION NOTES

1. THE OWNER SHALL VACATE THE EXISTING ROOMS AS INDICATED ON THE PLAN AND BE RESPONSIBLE FOR THE REMOVAL OF ANY EQUIPMENT NOT OTHERWISE DESIGNATED PRIOR TO ANY WORK DONE BY THE CONTRACTOR.
2. INSTALL TEMPORARY DUST PARTITION AND/OR BARRIERS AND OTHER METHODS AS MAY BE REQUIRED/NECESSARY AS INDICATED ON THE PLAN AND AS NECESSARY TO CONTAIN DEMOLITION/ CONSTRUCTION DUST AND DEBRIS WITHIN THE AREA OF CONSTRUCTION. REFER TO DUST PARTITION "DP" ON THIS SHEET AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. IT IS THE INTENT OF THIS DEMOLITION TO REMOVE ALL EXISTING CONSTRUCTION WHICH CONFLICTS WITH THE INTENT OF THE NEW CONSTRUCTION. EVERY DEMOLITION DETAIL MAY NOT NECESSARILY BE COVERED ON THESE DRAWINGS. FIELD VERIFY THE EXTENT OF ALL DEMOLITION.
4. THE CONTRACTOR SHALL USE EXTREME CARE IN THE PROTECTION OF ALL ADJACENT AREAS FOR IT IS IMPERATIVE TO PROVIDE CONTINUOUS OPERATION OF ALL OCCUPIED AREAS DURING THE DEMOLITION, CONSTRUCTION AND RENOVATION.
5. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITHIN OCCUPIED SPACES ABOVE, BELOW AND ADJACENT TO THE WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MANAGEMENT OF THE OCCUPIED SPACES ABOVE, BELOW, AND ADJACENT TO THE WORK, A MINIMUM OF TWO WEEKS PRIOR TO COMMENCING WORK. SUCH SPACES ARE TO REMAIN OCCUPIED DURING DEMOLITION AND ALL WORK SHALL BE PERFORMED IN SUCH A MANNER TO MINIMIZE DISRUPTION TO OCCUPIED SPACES. EXISTING FLOOR, WALL AND CEILING FINISHES TO REMAIN SHALL BE PROTECTED AND ANY DAMAGE DONE AS A RESULT OF DEMOLITION WORK SHALL BE REPAIRED.
6. WHERE NEW FINISHES ARE CALLED FOR, REMOVE AND DISCARD EXISTING FLOORING, CEILINGS AND WALL COVERING THROUGH-OUT AREA DESIGNATED FOR NEW CONSTRUCTION AND PREP EXISTING FLOOR AND WALL SUBSTRATE TO RECEIVE THE INSTALLATION OF NEW FINISH AS SCHEDULED.
7. SEE NEW WORK PLAN FOR REPAIR AND PREPARATION OF ADJACENT SURFACES.
8. WHERE CEILING IS TO REMAIN, REMOVE ALL DAMAGED CEILING PANELS/ TILES AND REPLACE WITH NEW TO MATCH EXISTING.
9. THE CONTRACTOR SHALL PATCH TO MATCH ADJACENT SURFACES OF EXISTING WALLS, FLOOR, AND CEILINGS IN ALL AREAS THAT REQUIRE THE REMOVAL OF GENERAL MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION WORK AND OF EQUIPMENT AND FIXTURES.
10. IF REMOVAL OR ABANDONMENT OF UTILITY SERVICES WILL AFFECT ADJACENT OCCUPIED BUILDINGS, THEN PROVIDE TEMPORARY UTILITIES THAT BYPASS BUILDINGS AND STRUCTURES TO BE DEMOLISHED AND THAT MAINTAIN CONTINUITY OF SERVICE TO OTHER BUILDINGS AND STRUCTURES.
11. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR WORK REQUIRED FOR NEW CONSTRUCTION.
12. REMOVE, CAP OFF, AND RELOCATE MECHANICAL AS REQUIRED. ELECTRICAL DEVICES, TELEPHONE AND COMMUNICATION LINES, AND PLUMBING LINES WHICH OCCUR IN CONSTRUCTION BEING REMOVED UNLESS NOTED OTHERWISE. OPERATION OF REMAINING SYSTEMS SHALL CONTINUE UNINTERRUPTED EXCEPT AS PREARRANGED WITH FACILITIES.
13. WHERE EXISTING WALLS, CEILINGS, OR FLOORS ARE DAMAGED BY THE CONTRACTOR FOR ACCESS TO SERVICES AND NEW CONSTRUCTION WHICH MAY NOT BE INDICATED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE TO PATCH TO MATCH MATERIAL AND FINISHES TO ORIGINAL CONDITIONS. IF EXISTING FINISHES CANNOT BE MATCHED, THE ENTIRE WALL, CEILING, OR FLOOR SHALL BE REFINISHED TO THE NEAREST CORNER OR POSITIVE BREAKING POINT.
14. WHEN DEMOLITION CAUSES DAMAGE TO FLOOR SLAB, WALL, OR CEILING SURFACES WHICH WILL REMAIN EXPOSED IN THE FINISHED WORK, SUCH CONDITIONS SHALL BE REPAIRED AND LEVELED AS REQUIRED TO RECEIVE NEW FINISHES.
15. WHEN DEMOLITION EXPOSES DAMAGE TO FLOOR SLAB, WALL, OR CEILING SURFACES WHICH WILL REMAIN EXPOSED IN THE FINISHED WORK, SUCH CONDITIONS SHALL BE REPORTED TO THE ARCHITECT AND OWNER WITH A RECOMMENDATION FOR RESOLUTION OF THE CONDITIONS.
16. CLEAN AIR GRILLES AND LIGHT FIXTURES THROUGHOUT PROJECT AREA UPON COMPLETION OF WORK.
17. WHERE EXISTING PHONE, DATA, OR PHONE/DATA OUTLETS ARE REMOVED, THE CONTRACTOR SHALL USE EXTREME CARE IN PULLING WIRE THROUGH THE EXISTING CONDUITS, COIL AND WRAP ABOVE EXISTING CEILING FOR REUSE.
18. PROVIDE SHORING AND BRACING AS REQUIRED DURING DEMOLITION AND CONSTRUCTION TO PRESERVE STABILITY, PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF STRUCTURE AND PROTECT ANY ADJACENT CONSTRUCTION THAT IS TO REMAIN.

KEYNOTES - DEMO PLAN

NUMBER	COMMENTS
1	EXISTING TRUEBEAM CONTROL EQUIPMENT PULL BOX RECESSED IN WALL, TO REMAIN.
2	REMOVE EXISTING DOOR, FRAME, AND EGRESS SIGNAGE. PREP FOR NEW FINISHES
3	NEW DOOR OPENING, COORDINATE WITH NEW CONSTRUCTION. INSTALL BLOCKING FOR NEW SLIDING DOOR TRACK
4	RELOCATE EXISTING POWER AND DATA FOR NEW DOOR OPENING IF NEEDED
5	EXISTING 3" PHYSICS CONDUIT THROUGH WALL, TO REMAIN.
6	EXISTING STEEL SHIELDING
7	REMOVE UPPER FLIPPER BIN TO COORDINATE WITH NEW CONSTRUCTION, TURN OVER TO OWNER.
8	EXISTING 4" PHYSICS CONDUIT THROUGH WALL
9	EXISTING BASE FRAME PIT.
10	DEMOLISH EXISTING CORNER GUARD, TYPICAL IN PROJECT SCOPE.
11	DEMOLISH EXISTING LVT FLOORING AND BASE.
12	DEMOLISH EXISTING CARPET AND BASE TRIM.
13	EXISTING FLOORING TO REMAIN. PROTECT FLOORING DURING CONSTRUCTION.
14	DEMOLISH A SECTION OF THE EXISTING CASEWORK. REFER TO NEW CONSTRUCTION LAYOUT. REMOVE AND RELOCATE SUPPORT BRACKET.
15	DEMOLISH A PORTION OF THE EXISTING HANDRAIL TO COORDINATE WITH NEW CONSTRUCTION
16	EXISTING DOWNSPOUT TO REMAIN. PROTECT
17	DEMO EXISTING CHILLER. PREP FOR NEW. REF. PLUMBING AND VENDOR PLANS
18	DUST BARRIER AND DOOR. GC TO COORDINATE LOCAITON WITH STAFF AND FACILITIES



WHERE DUST PARTITIONS ARE TO REMAIN THROUGH CONSTRUCTION, THEY SHALL BE CONSTRUCTED OF 3-5/8" METAL STUDS WITH CONTINUOUS TOP AND BOTTOM RUNNERS. PARTITIONS SHALL EXTEND TIGHT FROM FLOOR TO THE EXISTING CEILING OR STRUCTURE ABOVE, AND COPED AROUND DUCTS, PIPES, ETC., THAT PENETRATE THE PARTITION. THE ENTIRE PARTITION SHALL BE COVERED WITH 5/8" FIRE RATED GYP. BOARD SCREWED TO STUDS, ALL JOINTS BETWEEN SHEATHING, AT WALLS, AT FLOORS, CEILINGS, AROUND PIPES, ETC., TAPED AND SEALED TIGHT TO ENSURE DUST-PROOFING.

THE CONTRACTOR SHALL COVER AND SEAL IN A DUST-TIGHT MANNER ALL EXISTING OPENINGS, GRILLES, JOINTS AROUND DOORS AND FRAMES, ETC., WITH FIRE RETARDANT SHEET AND/OR TAPE AS APPROPRIATE WHERE SUCH OPENINGS, ETC., OCCUR IN EXISTING PARTITIONS SEPARATING EXISTING AREAS FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ANY DUST BARRIERS AS DETERMINED BY, AND TO THE SATISFACTION OF, THE OWNER.

SMOKE TIGHT (NON-COMBUSTIBLE CONSTRUCTION PARTITION)
1 1/2" = 1'-0"

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SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
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Date	
Job Number	3-25014
Drawn By	ME
Checked By	BRD

Revision

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AD201

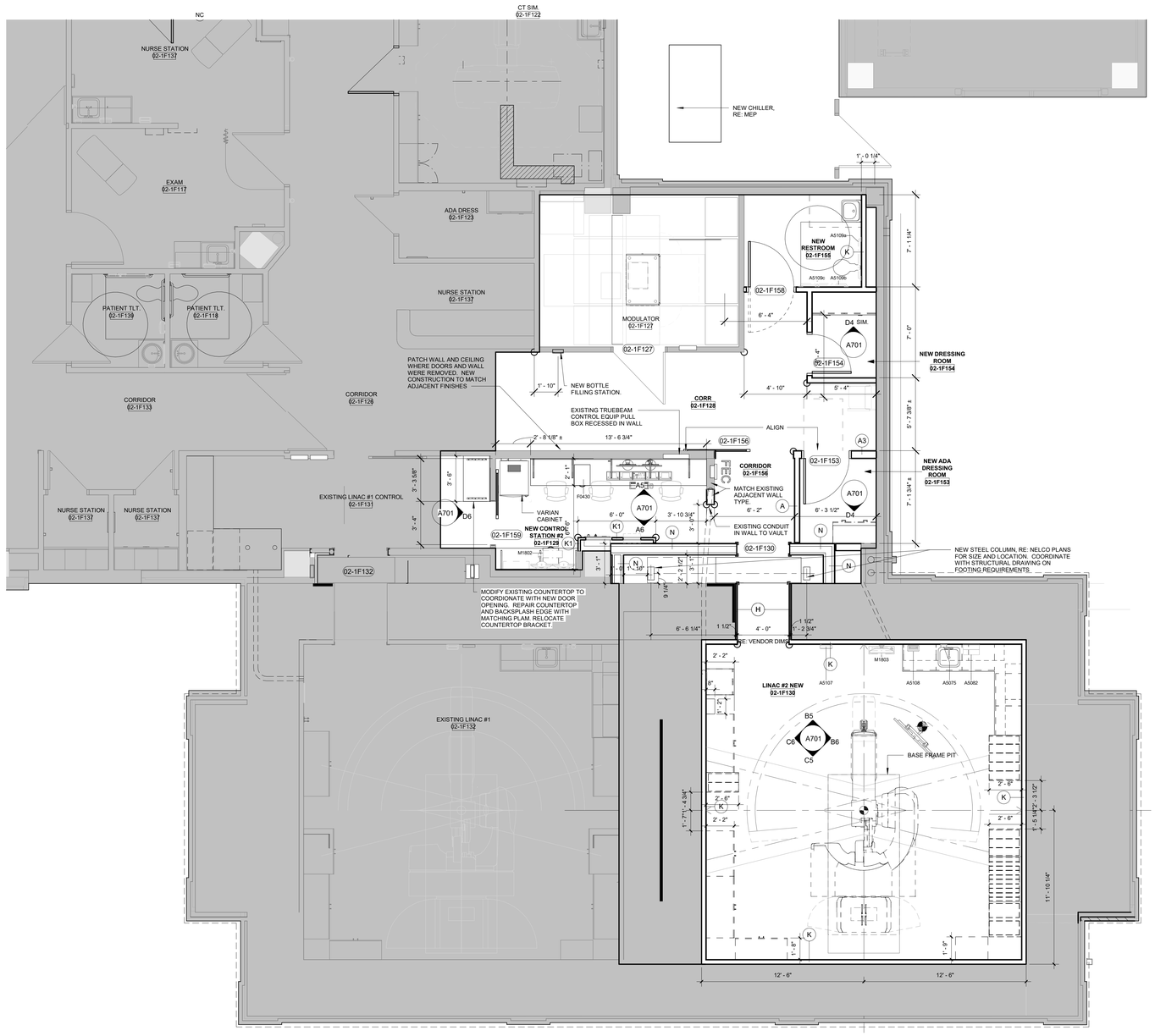
ENLARGED DEMOLITION FLOOR PLAN

FLOOR PLAN LEGEND

- EXISTING / NOT IN SCOPE
- EXISTING WALL
- NEW WALL
- NEW DOOR (H68)
- EXISTING DOOR

FFE SCHEDULE

TYPE MARK	DESCRIPTION	RESPONSIBILITY	COMMENTS
A1000	NOT INCLUDED		
A1066	18" X 24" MIRROR WITH SHELF	CFCI	BLOCKING AS REQUIRED
A5075	SOAP DISPENSER	CFCI	BLOCKING AS REQUIRED
A5082	PAPER TOWEL, HANDS FREE	CFCI	BLOCKING AS REQUIRED
A5107	GLOVE DISPENSER, 3 HOLE	CFCI	BLOCKING AS REQUIRED
A5108	SHARPS CONTAINER	CFCI	BLOCKING AS REQUIRED
A5109a	GRAB BAR, HORIZONTAL, 36"	CFCI	BLOCKING AS REQUIRED
A5109b	GRAB BAR, HORIZONTAL, 42"	CFCI	BLOCKING AS REQUIRED
A5109c	GRAB BAR, VERTICAL, 18"	CFCI	BLOCKING AS REQUIRED
A5180a	CUBICLE CURTAIN TRACK	CFCI	BLOCKING AS REQUIRED
F0430	MOBILE PEDISTAL	VFVI	PROVIDED BY VENDOR
M1802	DUAL COMPUTER MONITOR W/ KEYBOARD AND MOUSE	OFOI	POWER AND DATA AS REQUIRED
M1803	WORKSTATION, WALL MOUNTED	OFCI	BLOCKING AS REQUIRED



A4 ENLARGED PLAN - RAD. ONCOLOGY WEST
1/4"=1'-0"
NORTH

STATE OF MISSOURI SAMUEL K. BECKMAN A-2011012130 ARCHITECT

7/9/2025 08:58:46 AM

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Date	
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Revision

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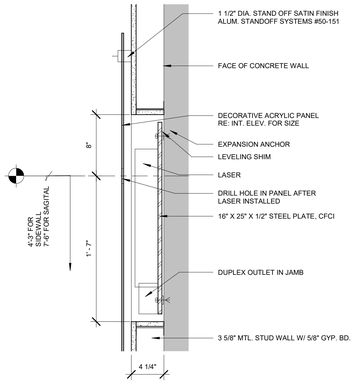
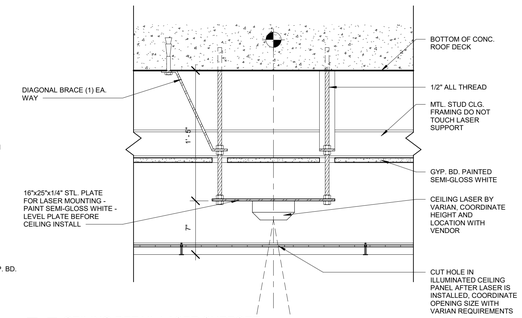
A220

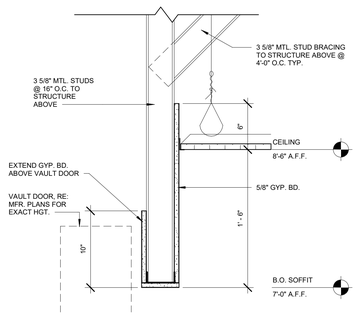
ENLARGED PLAN



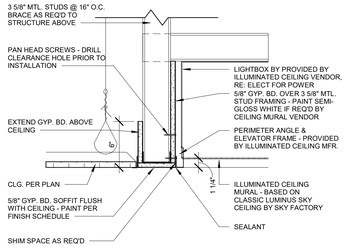
D6 LASER SECTION
1 1/2" = 1'-0"



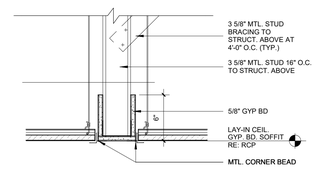
D5 CEILING DETAIL LASER SUPPORT
1 1/2" = 1'-0"



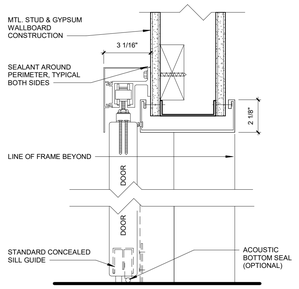
D4 BULKHEAD DTL.
1 1/2" = 1'-0"



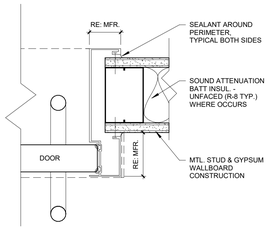
D3 SOFFIT DETAIL
1 1/2" = 1'-0"



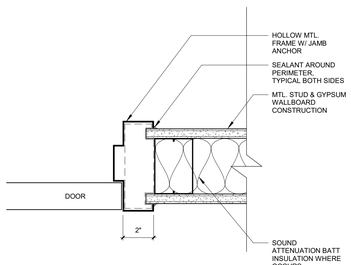
D2 DETAIL AT BULKHEAD
1 1/2" = 1'-0"



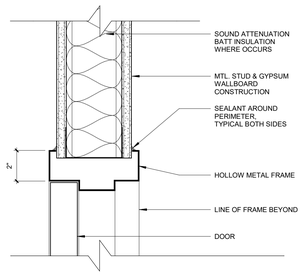
C6 SLIDING BARN DOOR - HEAD & SILL
3" = 1'-0"



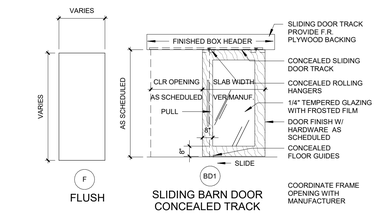
C5 SLIDING BARN DOOR - JAMB @ PULL SIDE
3" = 1'-0"

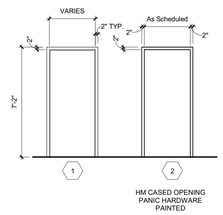


B6 TYPICAL JAMB- HOLLOW METAL DOOR FRAME
3" = 1'-0"



B5 TYPICAL HEAD - HOLLOW METAL DOOR FRAME
3" = 1'-0"





DOOR & FRAME MAT'L LEGEND	
HM	HOLLOW METAL
WD	SOLID CORE WOOD
ETR	EXISTING TO REMAIN
FR	TEMPERED GLASS WITH FROSTED FILM

DOOR AND FRAME ELEVATIONS

Door Number	Room Name	Frame Elevation Width	Height	Elev	Matl.	Door Information Elev	Matl.	Label (Min)	Glaz	Hrdwr Set	Opening Detail Head	Jamb	Remarks
02-1F127	MODULATOR	4' - 0"	7' - 0"		ETR	ETR	SCW	0-HOUR	--				EXISTING DOOR, FRAME AND HARDWARE
02-1F130		6' - 0"	7' - 8"	--	--	VAULT		0-HOUR	-	3	BY MFR	BY MFR	VAULT DOOR BY OTHERS
02-1F153	NEW ADA DRESSING ROOM	3' - 6"	7' - 0"		HM	F	SCW	0-HOUR	--	2	B5A320	B6A320	ENTRANCE
02-1F154	NEW DRESSING ROOM	3' - 0"	7' - 0"		HM	F	SCW	0-HOUR	--	2	B5A320	B6A320	ENTRANCE
02-1F156	CORR	6' - 0"	7' - 0"	--	ALUM	BD1	ALUM	--	FR	4	C6A320	C5A320	SLIDING DOOR WITH FROSTED GLASS, MATCH EXISTING DOOR. BASIS OF DESIGN AD SYSTEMS. DIRTT IS AN APPROVED EQUAL
02-1F158	NEW RESTROOM	3' - 6"	7' - 0"		HM	F	SCW	0-HOUR	--	1	B5A320	B6A320	RESCUE, PRIVACY
02-1F159	NEW CONTROL STATION #2	3' - 4"	7' - 0"	--	ALUM	BD1	SCW	--	FR	5	C6A320	C5A320	38" SLIDING DOOR WITH FROSTED GLASS, RE: AD SYSTEMS

HARDWARE SCHEDULE

Hardware Group No. 1
For use on Door #(s): **02-1F158**

Qty		Description	Catalog Number	Finish	Mfr
1	EA	PIVOT SET	7255 SET	626	IVE
1	EA	PRIVACY LOCK	ND44S RHO	626	SCH
1	EA	RESCUE STRIKE	455 5-3/4	26D	HAG
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	MEETING STILE 8136 6" (152MM) PSA (APPLY AT GAP CREATED BY LOCK/STRIKE)			ZER
2	EA	SITE SEAL	398V	V	ZER

NOTE: RESCUE HARDWARE SET

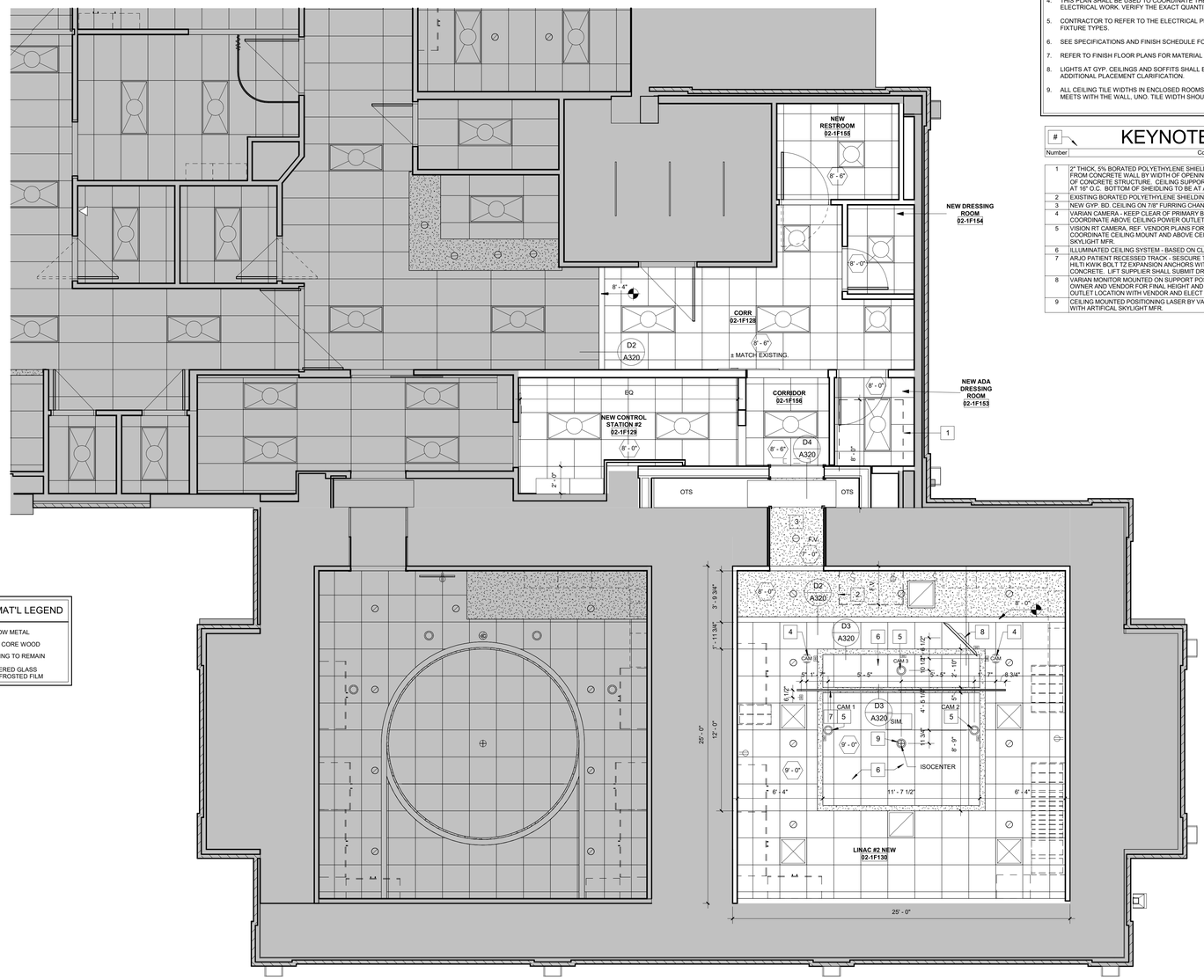
Hardware Group No. 2
For use on Door #(s): **02-1F153, 02-1F154**

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	OFFICE/ENTRANCE LOCK	ND50LD RHO	626	SCH
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	SET	SEALS	2525B	BRN	NGP

Hardware Group No. 3 - VAULT DOOR
For use on Door #(s): **02-1F130**
NOTE: ALL HARDWARE PROVIDED BY VAULT DOOR SUPPLIER.

Hardware Group No. 4
For use on Door #(s): **02-1F156**
Qty Description Catalog Number Finish
NOTE: MATCH EXISTING DOOR 02-1F131 FRAME AND STYLE BY DIRTT (APPROVED EQUAL)
AD SYSTEM IS BASIS OF DESIGN
PROVIDE 0-HOUR SMOKE GASKET

Hardware Group No. 5
For use on Door #(s): **02-1F159**
Provide each BD door(s) with the following:
QTY DESCRIPTION CATALOG NUMBER MFR.
1 EA SLIDING DOOR EXAMSLIDE SYSTEM X BACK TO BACK PULLS ADS



A2 ENLARGED REFLECTED CEILING PLAN
1/4" = 1'-0"

PLAN NORTH

CEILING LEGEND

	RECESSED CAN LIGHT FIXTURE RE: ELECT
	2X4 RECESSED/SURFACE LIGHT FIXTURE RE: ELECT
	2X4 RECESSED/SURFACE EMERGENCY LIGHT FIXTURE RE: ELECT
GJ	GYP BOARD CEILING - PAINTED W/ CONTROL JOINTS PER SPECS
	2X2/2x4 LAY-IN ACOUSTICAL CEILING
	EXIT LIGHT WITH FIXTURE MARK CEILING MOUNTED RE: ELECT
	EXIT LIGHT WITH FIXTURE MARK WALL BRACKET RE: ELECT
	SUPPLY AIR GRILLE RE: MECH
	RETURN AIR OR EXHAUST GRILLE RE: MECH
9'-0"	SOFFIT HEIGHT
9'-0"	CEILING HEIGHT

REFLECTED CEILING NOTES

1. EXISTING MEPFP DEVICES SHOWN ARE BASED ON EXISTING DRAWINGS AND/OR FIELD OBSERVATIONS. THE OWNER/ARCHITECT DOES NOT GUARANTEE THE ACCURACY/LOCATION OR QUANTITY OF EXISTING DEVICES.
2. CONTRACTOR TO PROVIDE ALL REQUIRED LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET AND COMPLETE THE REQUIREMENTS OF THE NEW CONSTRUCTION.
3. ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREP AS REQUIRED FOR NEW FINISH APPLICATION.
4. THIS PLAN SHALL BE USED TO COORDINATE THE CEILING LAYOUT WITH MECHANICAL AND ELECTRICAL WORK. VERIFY THE EXACT QUANTITY REQUIRED.
5. CONTRACTOR TO REFER TO THE ELECTRICAL PLANS FOR ACTUAL LIGHTING SIZES AND FIXTURE TYPES.
6. SEE SPECIFICATIONS AND FINISH SCHEDULE FOR CEILING TYPES.
7. REFER TO FINISH FLOOR PLANS FOR MATERIAL LEGEND OF ALL TYPES.
8. LIGHTS AT GYP. CEILINGS AND SOFFITS SHALL BE CENTERED IN ROOM, TYP. RE: RCP FOR ADDITIONAL PLACEMENT CLARIFICATION.
9. ALL CEILING TILE WIDTHS IN ENCLOSED ROOMS TO BE EQUAL SIZES ON EACH END WHERE IT MEETS WITH THE WALL, UNO. TILE WIDTH SHOULD BE NO SMALLER THAN 0'-6".

KEYNOTES - RCP

Number	Comments
1	2" THICK, 5% BORATED POLYETHYLENE SHIELDING BOARD BY POLYMER INDUSTRIES. EXTEND 8" FROM CONCRETE WALL BY WIDTH OF OPENING IN CONCRETE VAULT. EXTEND UP TO BOTTOM OF CONCRETE STRUCTURE. CEILING SUPPORT STRUCTURE TO USE 3-5/8" 20GA METAL STUDS AT 16" O.C. BOTTOM OF SHEIDLING TO BE AT AT 8'-6" A.F.F.
2	EXISTING BORATED POLYETHYLENE SHIELDING, PROTECT
3	NEW GYP. BD. CEILING ON 7/8" FURRING CHANNELS TIGHT TO CONCRETE STRUCTURE
4	VARIAN CAMERA - KEEP CLEAR OF PRIMARY BEAM ANGLE. VERIFY EXACT LOCATION W/ OWNER. COORDINATE ABOVE CEILING POWER OUTLET LOCATION WITH VENDOR AND ELECT PLANS.
5	VISION RT CAMERA, REF. VENDOR PLANS FOR EXACT MOUNTING AND ELECTRICAL LOCATION. COORDINATE CEILING MOUNT AND ABOVE CEILING ELECTICAL OUTLET WITH ARTIFICAL SKYLIGHT MFR.
6	ILLUMINATED CEILING SYSTEM - BASED ON CLASSIC LUMINUS SKY CEILING BY SKY FACTORY
7	ARJO PATIENT RECESSED TRACK - SESCURE TO CONCRETE STRUCTURE WITH ½" DIAMETER HILTI KWIK BOLT TZ EXPANSION ANCHORS WITH MINIMUM EMBEDMENT OF 3-5/8" INTO CONCRETE. LIFT SUPPLIER SHALL SUBMIT DRAWINGS WITH ENGINEER'S SEAL. VFVI
8	VARIAN MONITOR MOUNTED ON SUPPORT POST. - KEEP CLEAR OF PRIMARY BEAM ANGLE. RE: OWNER AND VENDOR FOR FINAL HEIGHT AND LOCATION. COORDINATE ABOVE CEILING POWER OUTLET LOCATION WITH VENDOR AND ELECT PLANS.
9	CEILING MOUNTED POSITIONING LASER BY VARIAN, RE: D5A320. COORDINATE CEILING MOUNT WITH ARTIFICAL SKYLIGHT MFR.

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SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date
Job Number 3-25014
Drawn By ME
Checked By BRD

Revision
Number Date Description

A320

ENLARGED REFLECTED CEILING PLAN

INTERIOR ROOM FINISH SCHEDULE

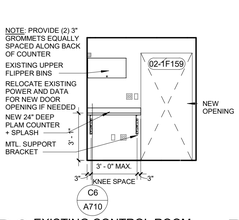
ROOM #	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CASEWORK			Notes
				NORTH (PLAN)	EAST (PLAN)	SOUTH (PLAN)	WEST (PLAN)		BASE CABINETS	UPPER CABINETS	COUNTERTOPS	
02-1F128	CORR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-	-	-	
02-1F129	NEW CONTROL STATION #2	RSF-1	IB-1	PT-1	PT-1	PT-1	PT-1	ACT-1, PT-1C	-	-	SSF-1	
02-1F130	LINAC #2 NEW	RSF-1	IB-1	PT-1A	PT-1A	PT-1A	PT-1A	ACT-2, PT-1C	PLAM-1	PLAM-1	SSF-1	
02-1F153	NEW ADA DRESSING ROOM	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	PLAM-1	-	-	
02-1F154	NEW DRESSING ROOM	LVT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	PLAM-1	-	-	
02-1F155	NEW RESTROOM	RSF-2	IB-2	PT-1A/CWT-1	CWT-1	PT-1A/CWT-1	PT-1A/CWT-1	ACT-1	-	-	-	
02-1F156	CORRIDOR	LVT-2	RB-1	PT-1/HR-1/WP-2	-	PT-1/HR-1/WP-2	-	ACT-1	-	-	-	

SPECIFIC ROOM FINISH SCHEDULE NOTES

1	REFER TO FINISH PLAN FOR CLARIFICATION ON WHERE NEW FINISHES AND EXISTING FINISHES ARE TO MEET AND STOP
2	REFER TO TYPICAL WALL TILE PATTERN ELEVATION ON A700

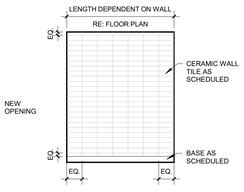
GENERAL ROOM FINISH SCHEDULE NOTES

A	REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR WALL FINISHES, WALL PROTECTION, CORNER GUARDS, WINDOW TREATMENTS, FLOOR FINISH APPLICATION AND LOCATIONS
B	REFER TO TYPICAL ELEVATION OF WALL PROTECTION/CORNER GUARD ON SHEET A710 FOR INSTALLATION HEIGHTS. WALL PROTECTION SHALL NOT BE INSTALLED ON EXTERIOR WALLS UNO.
C	ALL PLASTIC LAMINATE GRAIN SHALL BE VERTICALLY ORIENTED
D	DOOR FRAMES, HOLLOW METAL WINDOW FRAMES TO BE PT-4B
F	WALL EXPANSION JOINTS TO BE PT-1 UNLESS OTHERWISE NOTED
G	ALL ELECTRICAL PANELS AND METAL GRILLES SHALL BE PTD TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED
H	ALL COLUMN SURROUND FINISHES TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED
I	WHERE A WALL IS INDICATED TO HAVE PARTIAL OR FULL HT WALL PROTECTION, THE ENTIRE WALL IS TO BE PTD PRIOR TO WALL PROTECTION INSTALLATION
J	EXTEND ALL FINISHES BENEATH, BEHIND, AROUND ALL CASEWORK, EQUIPMENT, SIGNAGE, ETC
M	SUBMIT SAMPLES OF ALL FINISHES TO ARCHITECT FOR REVIEW PRIOR TO THE ORDERING OF MATERIAL.
N	NO IRREGULARITIES OR IMPERFECTIONS SHALL BE PRESENT IN ANY OF THE MATERIAL BEING INSTALLED. IF SUCH ITEMS ARE IDENTIFIED DURING APPLICATION, WORK SHALL BE STOPPED AND THE ARCHITECT NOTIFIED.
O	PROVIDE ALL MAINTENANCE MANUALS AND WARRANTY INFORMATION FOR EACH FINISH MATERIAL TO OWNER AT COMPLETION OF THE PROJECT.
P	FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE WORK OF FINISH APPLICATIONS.
Q	ALL FINISHES SHALL BE INSTALLED AND MAINTAINED PER MANUFACTURER'S RECOMMENDATION AND INDUSTRY STANDARDS.
R	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING AND CONFIRMING ALL SUBSTRATE CONDITIONS WHERE NEW MATERIALS ARE APPLIED. SUBSTRATE SHALL BE SMOOTH, FREE OF DEFECTS AND SHALL CONFORM TO THE REQUIREMENTS OF THE FINISHED MATERIAL MANUFACTURERS RECOMMENDATIONS.
S	ALL MATERIAL TO COMPLY WITH FLAME SPREAD CLASSIFICATION EITHER CLASS (1) ONE OR CLASS A DEPENDING ON GOVERNING CODE IN EFFECT.
T	SMOKE DEVELOPMENT RATING < 450 FOR ALL FINISHES.



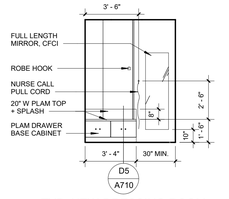
D6 EXISTING CONTROL ROOM
1/4" = 1'-0"

X02-1F131	
BASE CABINETS	-
WALL CABINETS	-
COUNTERTOPS	SSF-1
SINKS	-



D5 TYPICAL WALL TILE PATTERN
1/4" = 1'-0"

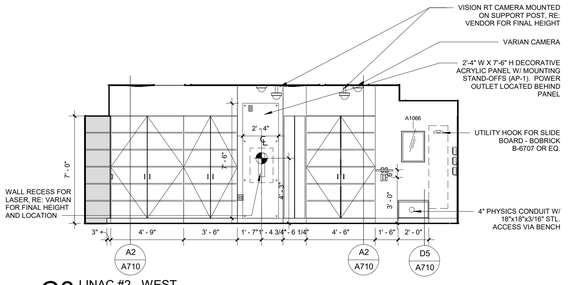
02-1F153	
BASE CABINETS	PLAM-1
WALL CABINETS	-
COUNTERTOPS	-
SINKS	-



D4 TYP. NEW DRESSING ROOM
1/4" = 1'-0"

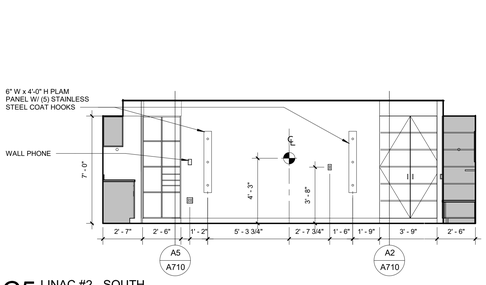
INTERIOR FINISH LEGEND

MARK	ITEM	MANUFACTURER	MODEL/ PATTERN	COLOR	SIZE	REMARKS	REV #
FLOOR							
LVT-1	LUXURY VINYL TILE	MANNINGTON	AMTICO WOOD	REGENCY WALNUT ARROW8200	4 1/2" X 36"	STRAIGHT EDGE ONLY, RANDOM OFFSET INSTALLATION	
LVT-2	LUXURY VINYL TILE	MANNINGTON	AMTICO STONE	CORINTHIAN MARBLE AROSTV13	18" X 18"	STRAIGHT EDGE ONLY. ASHLAR INSTALLATION	
RSF-1	RESILIENT SHEET FLOORING	MOHAWK	MEDELLA HUES	HS311 NATURAL WHITE	6'-7" ROLL	USE MATCHING WELD ROD. HOMOGENEOUS FLOORING.	
RSF-2	RESILIENT SHEET FLOORING	SHAW CONTRACT	TERASU, REED 0797V	PAGODA 96710	6'-6" ROLL	USE MATCHING WELD ROD. HETEROGENEOUS FLOORING	
TRS-1	FLOORING TRANSITION	SCHLUTER	VINPRO S	BRUSHED CHROME ANODIZED ALUMINUM	-	RE: FINISH DETAILS ON SHEET A740	
BASE							
IB-1	INTEGRAL BASE	MOHAWK	MEDELLA HUES	HS311 NATURAL WHITE	6" COVE	J MOLD SCHLUTER STRIP AT TOP. TO BE USED WITH RSF-1	
IB-2	INTEGRAL BASE	SHAW	TERASU, REED 0797V	PAGODA 96710	6" COVE	J MOLD SCHLUTER STRIP AT TOP. TO BE USED WITH RSF-2	
RB-1	RUBBER BASE	ROPPE	PINNACLE PLUS, PROFILE #65	#129 DOLPHIN	4 5/8"	-	
WALL							
AP-1	ACRYLIC PANEL	3FORM	VARIAN ESCORESIN	MATCH EXISTING	1/4" GUAGE	MATCH EXISTING FROM VAULT 1	
CG-1	CORNER GUARD	C/S ACROVYN	SM-20AN-ACROVYN-4000	#933 MISSION WHITE	3", HALF HEIGHT	90 DEGREE. ABOVE BASE TO CEILING. INCLUDE ALL TRIM AND ACCESSORY PIECES	
CG-2	CORNER GUARD	C/S ACROVYN	SSM-25AN-ACROVYN-4000	#933 MISSION WHITE	2", HALF HEIGHT	END WALL. ABOVE BASE TO CEILING. INCLUDE ALL TRIM AND ACCESSORY PIECES	
CG-5	CORNER GUARD	C/S ACROVYN	C0-8 STAINLESS STEEL	#4 STAIN	3.5" WINGS	ABOVE BASE TO CEILING	
CWT-1	CERAMIC WALL TILE	VIRGINA TILE	AMERICAN OLEAN COLOR STORY	ICE WHITE POLISHED	4" x 12"	STACKED INSTALLATION, USE GT-1	
HR-1	HANDRAILS	C/S ACROVYN	HRB-20N	#378 BRUSHED NICKEL	5 5/8" X 3"	RE FLOOR FINISH PLAN FOR LOCATIONS	
PT-1	PAINT	SHERWIN WILLIAMS	EGGSHELL	SW7008 ALABASTER	-	OVERALL PAINT	
PT-1A	PAINT	SHERWIN WILLIAMS	EPOXY MIX, EGGSHELL	SW7008 ALABASTER	-	OVERALL PAINT	
PT-4B	PAINT	SHERWIN WILLIAMS	SEMI-GLOSS	SW7046 ANONYMOUS	-	ALL HOLLOW METAL DOOR AND WINDOW FRAMES	
WP-2	WALL PROTECTION	C/S ACROVYN	ACROVYN 4000	#933 MISSION WHITE	4' X 10' SHEETS, .40" THICK	INCLUDE ALL TRIM AND ACCESSORY PIECES. RE: TYP. WALL PROTECTION ELEVATION ON INT. DTL. SHEET	
CASEWORK							
IS-1	INTEGRAL SINK	WILSONART	AK1413 SQUARE	DESIGNER WHITE	17" X 15 3/8" X 8"	USE WITH SSF-1	
PLAM-1	PLASTIC LAMINATE	WILSONART	#7965K-12	WALNUT HEIGHTS	4' X 8' SHEET	CUSTOM 3MM PVC DOELLKEN WALNUT HEIGHTS 8707E5. RUN VERTICALLY	
SSF-1	SOLID SURFACE	WILSONART	9199MG	PEARL MIRAGE	1/2"; 30" X 144", 36" X 144"	EASED EDGE, TO BE USED WITH PLAM-1	
CEILING							
ACT-1	ACOUSTIC CEILING TILE	USG	RADAR CLIMA PLUS #2210	WHITE	24" X 24"	SQUARE EDGE, DONN DX TEE 15/16" GRID SYSTEM	
ACT-2	ACOUSTIC CEILING TILE	USG	CLEAN ROOM CLIMA PLUS CLASS 100 #56099 UNPERFORATED	WHITE	24" X 24"	VINYL FACED W SQUARE EDGE, DONN CE 15/16" GASKETED TEE GRID SYSTEM	
ICS-1	ILLUMINATED CEILING SYSTEM	SKY FACTORY	ECOPLUS CLASSIC LUMINUS SKY CEILING EP22	TBD PATTERN, MATTE WHITE FRAME	24" x 24"	ILLUMINATED CEILING MURAL	
PT-1C	PAINT	SHERWIN WILLIAMS	FLAT	SW7008 ALABASTER	-	SOFFIT PAINT	
MISC.							
ETR	EXISTING TO REMAIN	-	-	-	-	RE: ROOM FINISH SCHEDULE	
GT-1	GROUT	ULTRACOLOR PLUS FA	#107 IRON	-	-	MINIMAL GROUT LINES	
INT-DR-1	INTERIOR DOOR	VT INDUSTRIES	HIGH PRESSURE DECORATIVE LAMINATE	WILSONART 7965K-12 WALNUT HEIGHTS	-	3MM PVC EDGES, LAMINATED TOPS AND BOTTOMS	
PTM	PATCH TO MATCH	-	-	-	-	-	



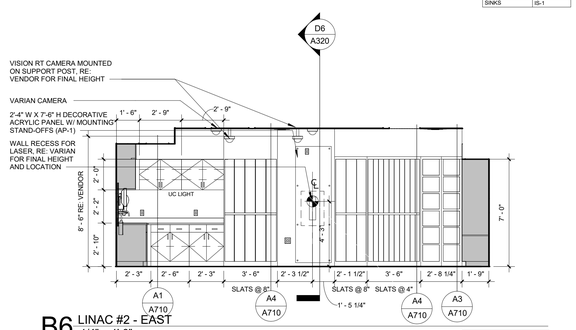
C6 LINAC #2 - WEST
1/4" = 1'-0"

02-1F130	
BASE CABINETS	PLAM-1
WALL CABINETS	PLAM-1
COUNTERTOPS	SSF-1
SINKS	IS-1



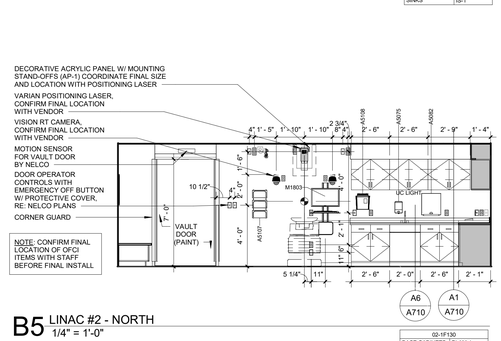
C5 LINAC #2 - SOUTH
1/4" = 1'-0"

02-1F130	
BASE CABINETS	PLAM-1
WALL CABINETS	PLAM-1
COUNTERTOPS	SSF-1
SINKS	IS-1



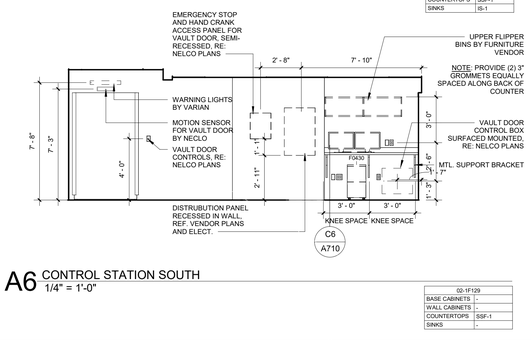
B6 LINAC #2 - EAST
1/4" = 1'-0"

02-1F130	
BASE CABINETS	PLAM-1
WALL CABINETS	PLAM-1
COUNTERTOPS	SSF-1
SINKS	IS-1



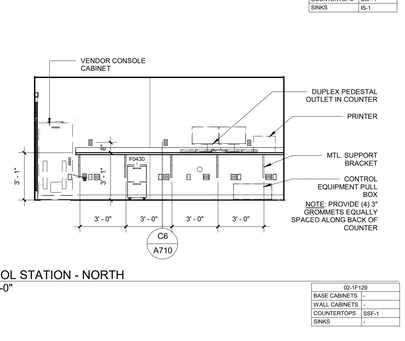
B5 LINAC #2 - NORTH
1/4" = 1'-0"

02-1F130	
BASE CABINETS	PLAM-1
WALL CABINETS	PLAM-1
COUNTERTOPS	SSF-1
SINKS	IS-1



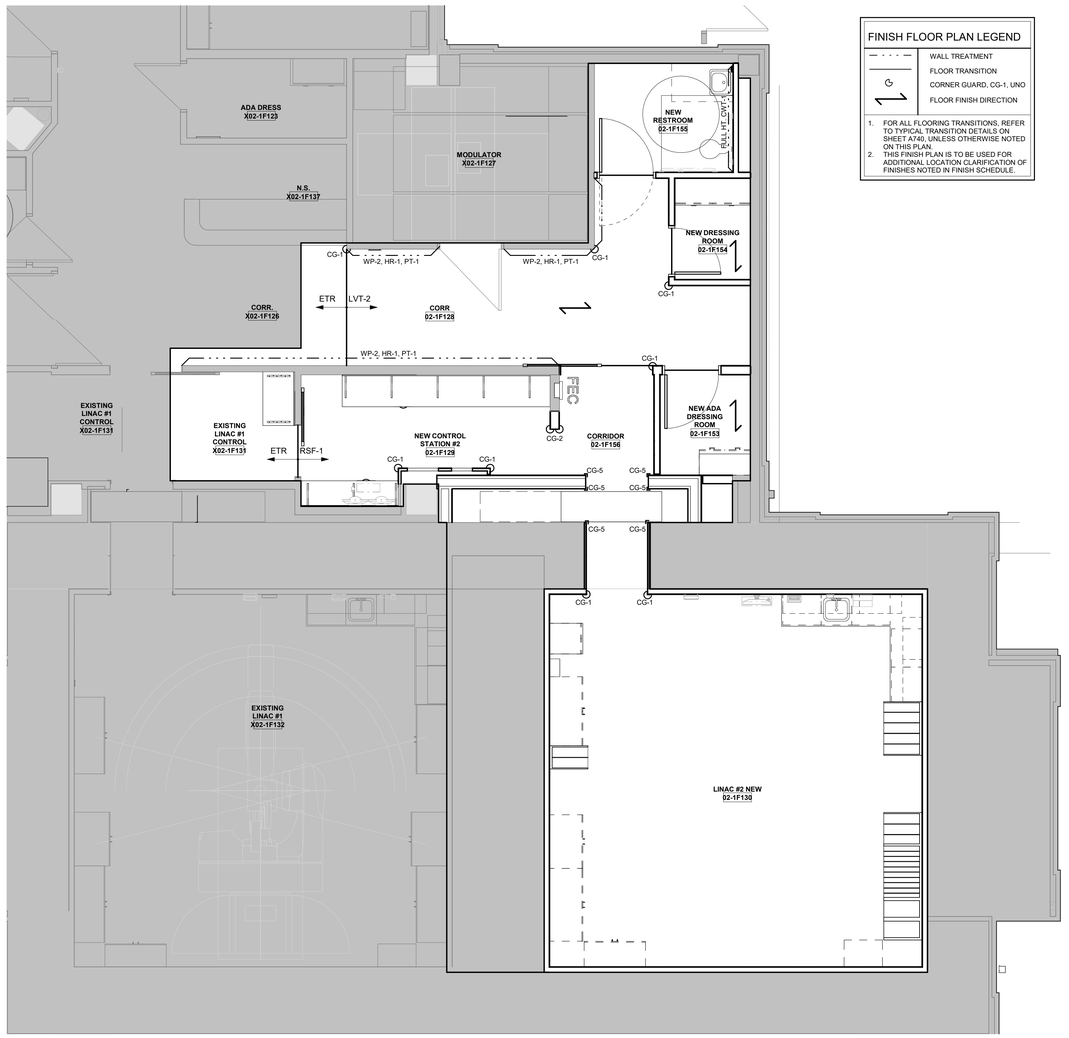
A6 CONTROL STATION SOUTH
1/4" = 1'-0"

02-1F129	
BASE CABINETS	-
WALL CABINETS	-
COUNTERTOPS	SSF-1
SINKS	-



A5 CONTROL STATION - NORTH
1/4" = 1'-0"

02-1F129	
BASE CABINETS	-
WALL CABINETS	-
COUNTERTOPS	SSF-1
SINKS	-



A3 ENLARGED FINISH PLAN - RAD. ONCOLOGY
1/4" = 1'-0"

FINISH FLOOR PLAN LEGEND	
	WALL TREATMENT
	FLOOR TRANSITION
	CORNER GUARD, CG-1, UNO
	FLOOR FINISH DIRECTION

1. FOR ALL FLOORING TRANSITIONS, REFER TO TYPICAL TRANSITION DETAILS ON SHEET A740, UNLESS OTHERWISE NOTED ON THIS PLAN.
2. THIS FINISH PLAN IS TO BE USED FOR ADDITIONAL LOCATION CLARIFICATION OF FINISHES NOTED IN FINISH SCHEDULE.

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SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

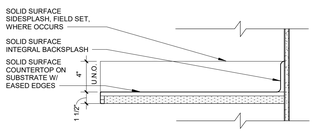
Date	
Job Number	3-25014
Drawn By	ME
Checked By	BRD

Revision

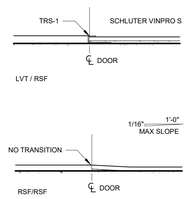
Number	Date	Description

A701

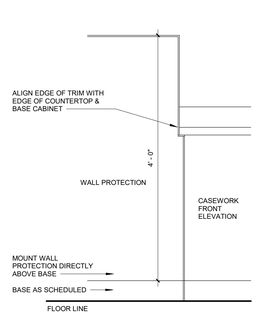
FINISH FLOOR PLAN, SCHEDULES, LEGENDS, AND ELEVATIONS



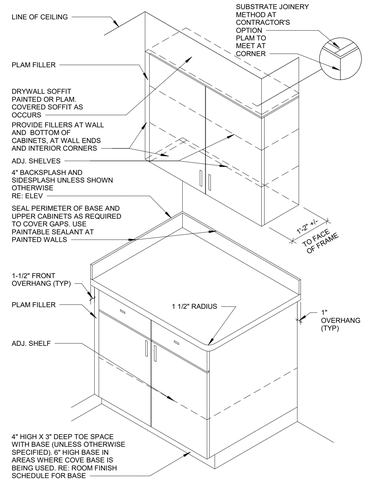
E6 TYPICAL SOLID SURFACE COUNTERTOP
1 1/2" = 1'-0"



E5 TRANSITION STRIP DETAILS
6" = 1'-0"

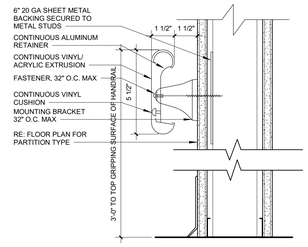


E4 TYP- ELEV- OF WALL PROTECTION-CORNER GUARD
1" = 1'-0"

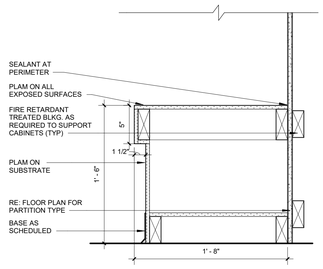


TYP. CABINET NOTES:

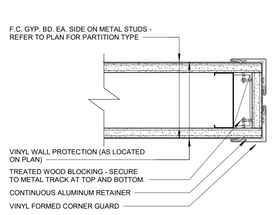
1. PROVIDE PLAM FILLER WHERE CABINETS BUTT UP TO WALLS.
2. ALL COUNTERTOPS HAVE A 4" BACKSPLASH (MATERIAL TO MATCH COUNTERTOP) AND OUTSIDE CORNERS HAVE 1 1/2" RADIUS EXCEPT WHERE NOTED OTHERWISE.
3. GROMMETS FOR CABLE PASSAGE THROUGH WORK COUNTERS: 2-1/2 INCH OD, MOLDED-PLASTIC GROMMETS WITH MATCHING PLASTIC CAPS WITH A SLOT FOR WIRE PASSAGE. PROVIDE (2) GROMMETS CENTERED BETWEEN THE COUNTERTOP SUPPORT BRACKETS AT EACH KNEE SPACE MODULE. GROMMETS TO BE INSTALLED IN FIELD AS DIRECTED BY OWNER. COLOR TO BE SELECTED BY ARCHITECT.
4. PLAM COUNTERTOP EDGES SHALL BE 3 MM PLASTIC. COLOR AS SELECTED BY ARCHITECT.



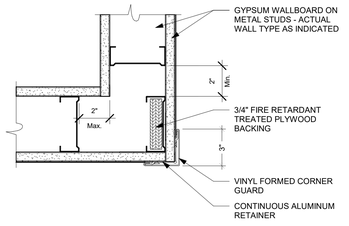
D6 DETAIL AT HANDRAIL
3" = 1'-0"



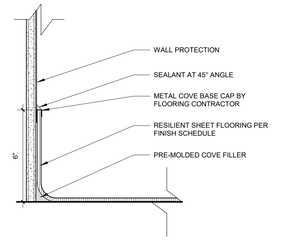
D5 DETAIL AT BUILT IN BENCH
1 1/2" = 1'-0"



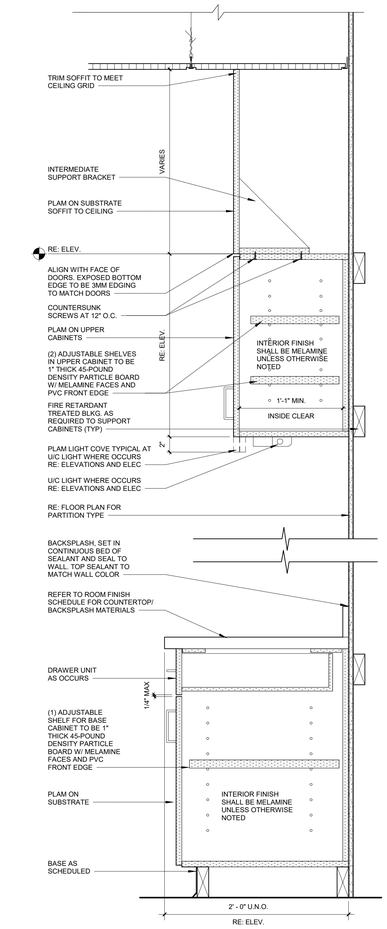
D4 TYPICAL DOUBLE VINYL CORNER GUARD
3" = 1'-0"



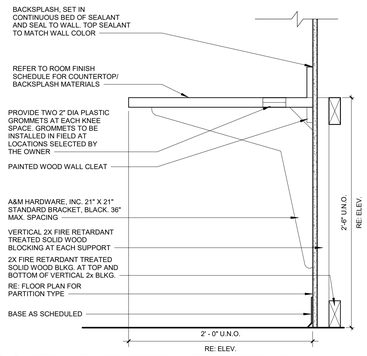
D3 SINGLE VINYL CORNER GUARD
3" = 1'-0"



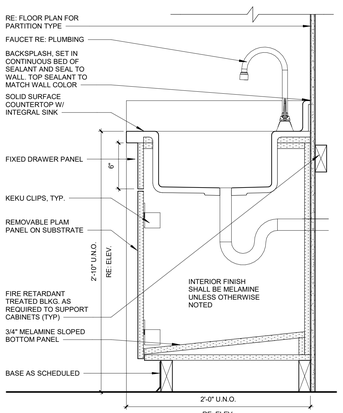
DETAIL AT SHEET FLOORING COVE BASE TERMINATION
D2 3" = 1'-0"



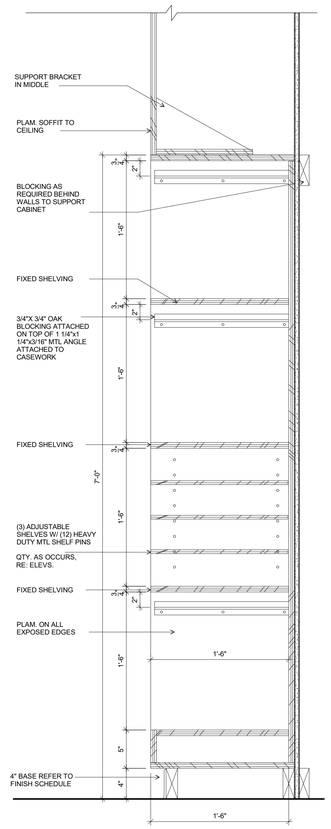
D1 CASEWORK ISOMETRIC
1 1/2" = 1'-0"



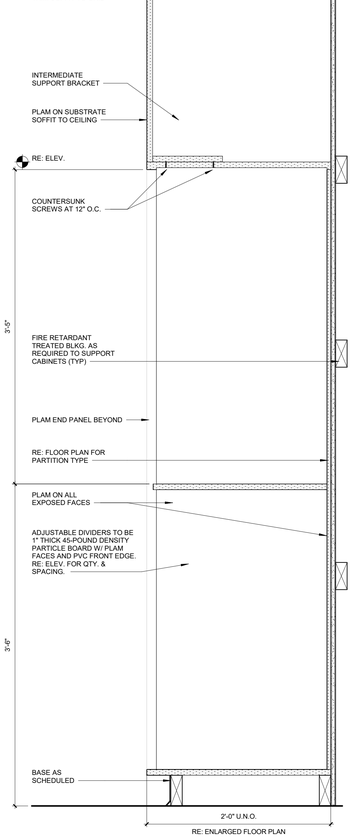
C6 DETAIL AT SUPPORT BRACKET-KNEE SPACE
1 1/2" = 1'-0"



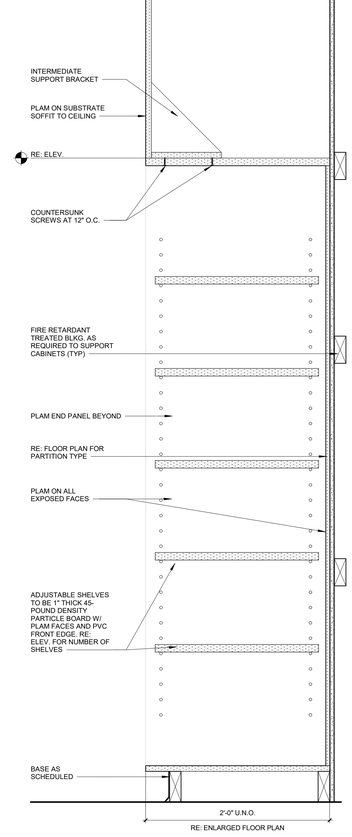
A6 DETAIL AT SINK BASE CABINET - SOLID SURFACE
1 1/2" = 1'-0"



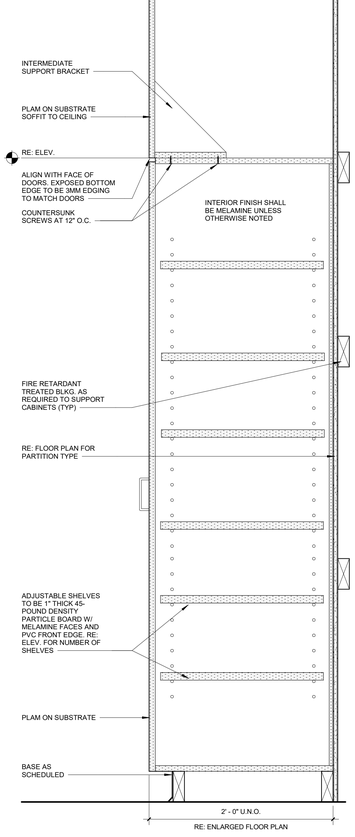
A5 DEATIL AT OPEN SHELVING CABINET
1 1/2" = 1'-0"



A4 DETAIL AT SLAT CABINET
1 1/2" = 1'-0"



A3 DETAIL AT OPEN FULL HT- CABINET
1 1/2" = 1'-0"



A2 DETAIL AT FULL HT- CABINET
1 1/2" = 1'-0"

A1 DETAIL AT CASEWORK
1 1/2" = 1'-0"

STATE OF MISSOURI
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SAINT LUKE'S EAST LEE'S SUMMIT VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	
Job Number	3-25014
Drawn By	ME
Checked By	BRD

Revision

Number	Date	Description

A710

INTERIOR DETAILS

A. GENERAL

1. Before executing anything herein shown, examine actual job conditions. Report any discrepancy, dimensional or otherwise, between mechanical and structural drawings and any other error, omission, or difficulty affecting the work to the Architect and to the Structural Engineer for review.
2. The Owner or his Representative reserves the right to inspect any material, fabrication, or workmanship at any time in field or shop for conformance to the Specifications and Drawings.
3. All details and sections are intended to be typical and shall be construed to apply to any similar situation elsewhere, except where a different detail is shown.

B. DESIGN

1. Codes, specifications and standards (latest editions, unless noted otherwise)
   a. All design and construction shall conform to the International Building Code (IBC 2021) as amended and adopted by the City of Lee's Summit, Missouri.
   b. All construction shall comply with the provisions of the following codes, specifications and standards, except where noted to the contrary on drawings and specifications or where more stringent requirements are specified or shown: AISC "Specifications for Structural Steel for Buildings' Allowable Stress Design and Plastic Design" including the commentary thereto as issued.

C. CONCRETE

1. Concrete used in the Work shall have the following minimum 28-day ultimate compressive strengths:
   a. Slab on metal deck: 4,000 psi
2. Portland Cement: ASTM C 150, Type 1.
3. Reinforcing bars: ASTM A 615 Specifications, Grade 60, deformed. Bend bars cold.

D. STEEL

1. Structural steel: ASTM A992 GR-50 - wide flange; ASTM A36 - channels, angles, plates and bars; ASTM A53, Grade B - pipes; and ASTM A 500, Grade B - tubes.
2. Beam and column connections shall be as shown on plans.
3. High Strength Bolts (steel-to-steel connections): snug-tightened - bearing type.
4. Anchor bolts: ASTM A 307.
5. Welded connections: AWS Standards and Specifications using E70xx electrodes, unless noted otherwise.
6. Quality Assurance:
   a. Installer Qualifications: A qualified installer who participates in the AISC Quality Certification Program and is designated an AISC-Certified Erector.
   b. Fabricator Qualifications: A qualified fabricator who participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant.
   c. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement P1 or SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
   d. Welding: Quality procedures and personnel according to AWS D1.1, "Structural Welding Code - Steel." Primer
7. Primer:
   a. Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer, color Gray.

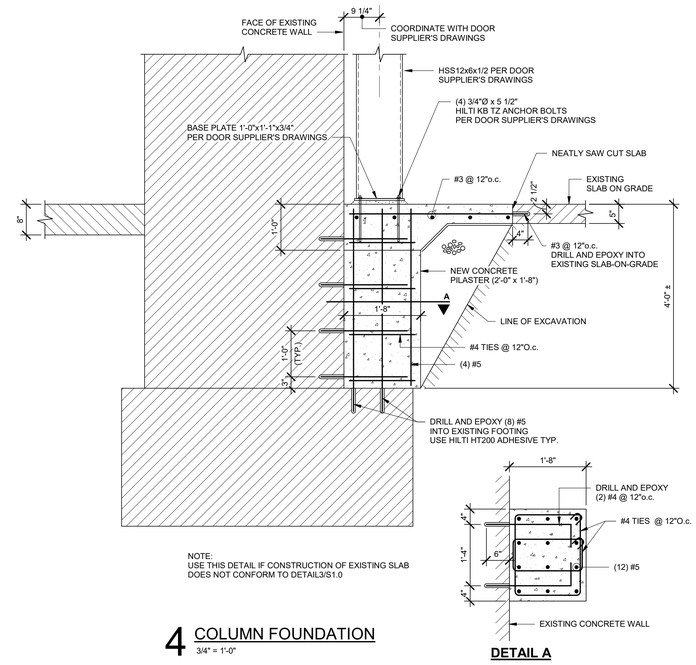
E. CONSTURCTION

1. Provide adequate shoring and/or bracing to the structure during construction to resist forces such as wind and unbalanced loading during construction.
2. See architectural and mechanical requirements for embedded items and sleeves not shown on the structural drawings and to verify size and location of all openings
3. Coordinate the sizes and locations of all miscellaneous metal items required for mechanical and electrical.
4. Requirements for embedded items, sleeves, block outs, duct openings, etc., in the concrete frame shall be submitted (plans and details) to the structural engineer for approval at least two weeks prior to the proposed date of casting concrete. No such items, other than those shown, shall be provided in the structure without the approval of the structural
5. Field verify the location and depth (or height) of all utilities prior to beginning construction in order to provide adequate clearances and to insure noninterruption of service.
6. During welding or any other construction activity that generates sparks intense heat, the contractor shall provide adequate fire protection to the existing structure and contents as a minimum:
   - Remove combustible materials from areas of welding and sparks.
   - Provide fireproof blankets and shields to contain sparks where combustible materials cannot be removed.
7. Prior to drilling/coring into existing concrete slab, beams, columns, and walls scan and locate rebar. Do not cut or damage existing rebar in concrete. If core location cannot be shifted to miss rebar contact the Structural Engineer.

F. SPECIAL INSPECTION

1. The following tests and inspection shall be performed by an independent inspection agency employed by the owner and approved by the structural engineer and the building official. Test and inspection reports shall be submitted to the owner, architect, structural engineer, and building official. Special inspection shall conform to Chapter 17 of the 2018 International Building Code.

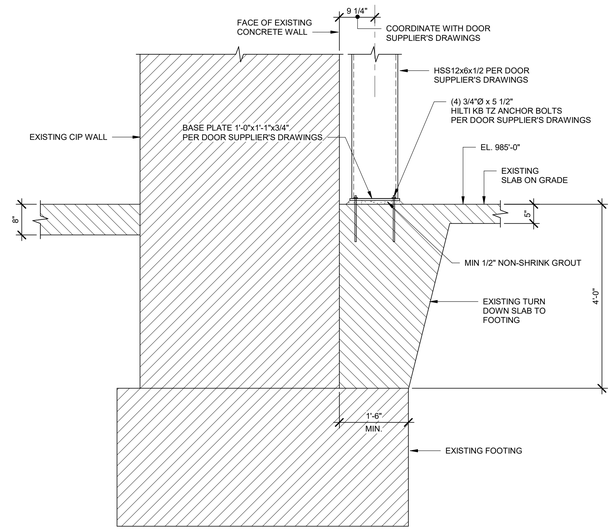
2. Concrete	Continuous	Periodic
a. Placement of Reinforced Concrete	X	
b. Testing of Reinforced Concrete		X
c. Inspection of reinforcing steel	X	
3. Structural steel - 2018 IBC Table 1704.3		
a. Material verification - structural steel, high-strength bolts, nuts, washers.		X
b. Inspection of high-strength bolting - bearing connections.		X
c. Inspection of steel frame.		X
d. Inspection of welding:		
1) Single pass fillet welds >5/16".	X	
2) Single pass fillet welds <5/16".		X
3) Floor and Roof deck.	X	
4) Complete and partial penetration groove welds.	X	
e. In-plant steel inspection. Note: In-plant inspection is not required if steel fabrication plant has AISC certification for steel and SJI certification for steel joists.		X
4. Post-installed anchors in concrete and masonry.	X	



NOTE:
USE THIS DETAIL IF CONSTRUCTION OF EXISTING SLAB DOES NOT CONFORM TO DETAIL3/S1.0

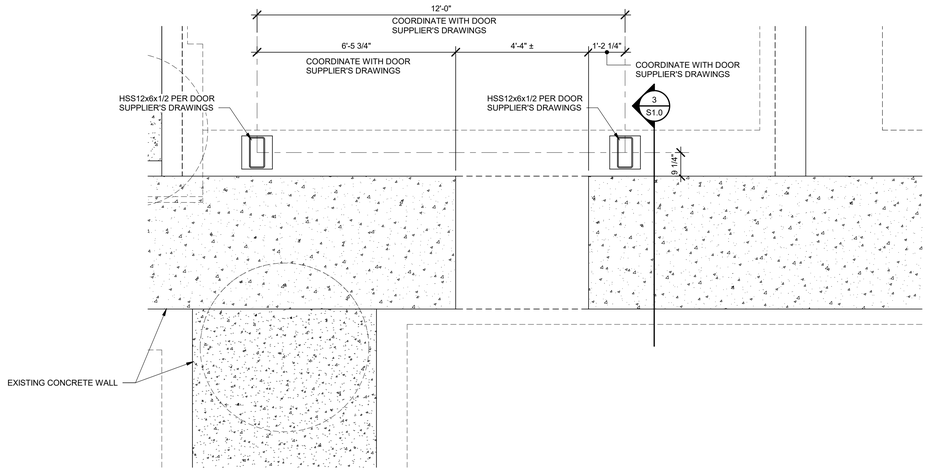
4 COLUMN FOUNDATION
3/4" = 1'-0"

DETAIL A

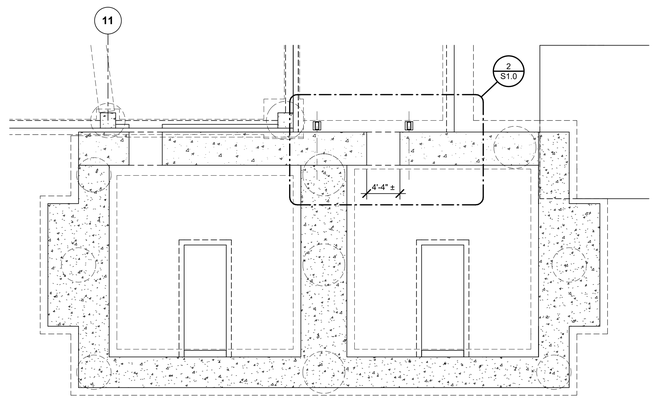


NOTE:
CONTRACTOR SHALL FIELD VERIFY TO CONFIRM IF EXISTING SLAB-ON GRADE WAS TURNED DOWN TO THE TOP OF FOOTING (4'-0" DEEP x 18" MIN. WIDE) AS SHOWN ON DETAIL 3/S1.0.
FIELD VERIFICATION SHALL BE DONE BY DRILLING MULTIPLE HOLES THROUGH THE TURNED DOWN AREA.
CONTRACTOR SHALL CONTACT STRUCTURAL ENGINEER FOR OBSERVATION.
IF CONSTRUCTION OF EXISTING SLAB-ON-GRADE CONFORM TO THIS DETAIL, THEN USE THIS DETAIL FOR NEW COLUMN BASE, OTHERWISE USE DETAIL 4/S1.0

3 COLUMN FOUNDATION
3/4" = 1'-0"



2 ENLARGED COLUMN FOUNDATION PLAN
1/2" = 1'-0"



1 PARTIAL FOUNDATION PLAN OF EXISTING VAULT
1/8" = 1'-0"

STATE OF MISSOURI
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NUMBER PE-23562
PROFESSIONAL ENGINEER
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SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06/25/2025
Job Number	3-25014
Drawn By	G.E.B.
Checked By	K.G.S.

Revision

Number	Date	Description

S1.0

PLANS, DETAILS & GENERAL NOTES

ABBREVIATIONS

Ø	ROUND DIAMETER
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AFMS	AIRFLOW MEASURING STATION
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
BAC	BUILDING AUTOMATION CONTROL
BAS	BUILDING AUTOMATION SYSTEM
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BLW	BELOW
BOD	BOTTOM OF DUCT ELEVATION ABOVE FLOOR
BOP	BOTTOM OF PIPE ELEVATION ABOVE FLOOR
BOS	BOTTOM OF STEEL
BP	BUILDING PRESSURE
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CARBON MONOXIDE
CO	CLEANOUT
CO2	CARBON DIOXIDE
COP	COEFFICIENT OF PERFORMANCE
DB	DECIBELS
DB	DRY BULB TEMPERATURE
DD	DIRECT DRIVE
DEMO	DEMOLISH
DIA	DIAMETER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DS	DOOR SWITCH
DSD	DUCT SMOKE DETECTOR
DSP	DUCT STATIC PRESSURE
DX	DIRECT EXPANSION
(E)	EXISTING COMPONENT DESIGNATION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUNICATED MOTOR
ETR	EXISTING TO REMAIN
EWT	ENTERING WATER TEMPERATURE
°F	DEGREES FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FLR	FLOOR
FL	FLOW LINE
FOFS	FUEL OIL FLOW SWITCH
FOG	FUEL OIL GAUGE
FOV	FUEL OIL VENT
FPM	FEET PER MINUTE
FS	FLOOR SINK
GAL	GALLON
GC	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GPM	GALLONS PER MINUTE
HGB	HOT GAS BYPASS
HSL	HIGH STATIC PRESSURE LIMIT
IFB	INTEGRAL FACE AND BYPASS
INV	INVERT
LAT	LEAVING AIR TEMPERATURE
LB/HR	POUNDS PER HOUR
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MBH	ONE THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MOA	MINIMUM OUTSIDE AIR
MVSA	MEDIUM VELOCITY SUPPLY AIR
NC	NORMALLY CLOSED
NCR	NOISE CRITERIA RATING
NO	NORMALLY OPEN
NO2	NITROGEN DIOXIDE
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OCC	OCCUPANCY
ORD	OVERFLOW ROOF DRAIN
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PIV	POST INDICATOR VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE PIPE
PWR	POWER
(R)	RELOCATED COMPONENT DESIGNATION
RA	RETURN AIR
RD	ROOD DRAIN
RH	RELATIVE HUMIDITY
RP	ROOM PRESSURE
RPC	ROOM PRESSURE CONTROL
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SF	SQUARE FOOT
SMP	SMOKE PURGE
SOI	SAND/OIL INTERCEPTOR
SP	STATIC PRESSURE
TA	TRANSFER AIR
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TCV	TEMPERATURE CONTROL VALVE
TD	TRENCH DRAIN
TOD	TOP OF DUCT ELEVATION ABOVE FLOOR
TOP	TOP OF PIPE ELEVATION ABOVE FLOOR
UG	UNDERGROUND
UV	ULTRAVIOLET STERILE CONDITIONER
VAV	VARIABLE AIR VOLUME
VCP	VITRIFIED CLAY PIPE
VENT	VENTILATION
VFD	VARIABLE FREQUENCY DRIVE
VOC	VOLATILE ORGANIC COMPOUND
VTR	VENT THROUGH ROOF
VVT	VARIABLE VOLUME AND TEMPERATURE
WB	WET BULB TEMPERATURE
WFS	WATER FLOW SWITCH

GENERAL SYMBOLS

- (#) (#) (#) — REFER TO PLAN NOTES
- EXISTING COMPONENT PEN WEIGHT
- DEMOLITION PEN WEIGHT - COMPONENT SHADED
- ROOM 111 — ROOM CALLOUT
- AREA NOT IN SCOPE HATCHING
- 1 — REVISION NUMBER
- CONNECT NEW TO EXISTING - VERIFY EXACT LOCATION
- DISCONNECT FROM EXISTING - VERIFY EXACT LOCATION
- PIPE / DUCT CONTINUATION SYMBOL
- 5 / M3.6 — DETAIL NUMBER / SHEET NUMBER WHERE DRAWN
- B / M3.6 — SECTION LETTER / SHEET NUMBER WHERE DRAWN
- FC-01 — UNIQUE I.D. (FAN COIL UNIT NO. 1) / TYPICAL EQUIPMENT CALLOUT / EQUIPMENT TYPE (FC=FAN COIL UNIT)

PIPE SYMBOLS

- DIRECTION OF FLOW
- PIPE DROP / SIDE CONNECTION / PIPE RISE
- TEE OUTLET DOWN / TEE OUTLET UP
- BOTTOM / TOP CONNECTION, 45° OR 90°
- CAP / CAPPED OUTLET
- BALL VALVE / GLOBE VALVE
- CONCENTRIC / ECCENTRIC REDUCER OR INCREASER
- ANCHOR / FLEXIBLE CONNECTION
- BUTTERFLY VALVE
- CIRCUIT SETTER
- CHECK VALVE
- STRAINER / UNION
- BLIND FLANGE / FLOW METER
- BACKFLOW PREVENTER (BFP)
- PRESSURE REDUCING VALVE / PLUG VALVE
- WATER METER / IRRIGATION WATER METER
- PLUG VALVE / NEEDLE VALVE
- GAS COCK
- PRESSURE REGULATING VALVE / PETE'S PLUG
- WATER HAMMER ARRESTOR (WHA)
- SLEEVE / EXPANSION JOINT
- D R — PIPE PITCH DOWN / PIPE RISE UP
- S P — SOLENOID VALVE / PNEUMATIC 3-WAY CONTROL VALVE
- M M — ELECTRIC 3-WAY / 2-WAY CONTROL VALVE
- EM EM — MANUAL / EMERGENCY 3-WAY CONTROL VALVE
- THERMOMETER / PRESSURE GAUGE
- STEAM TRAP
- TEMPERATURE/PRESSURE RELIEF VALVE

MECH. PIPING SYMBOLS

- HWS — HEATING WATER SUPPLY
- HWR — HEATING WATER RETURN
- CWS — CHILLED WATER RETURN
- CWR — CHILLED WATER RETURN
- RL — REFRIGERANT LIQUID LINE (SUPPLY)
- RS — REFRIGERANT SUCTION LINE (RETURN)
- T1.1 / (0.75) — EQUIPMENT CALLOUT / WATER COIL FLOW (GPM)

PLUMBING SYMBOLS

- DOMESTIC COLD WATER (CW)
- DOMESTIC HOT WATER (HW)
- DOMESTIC HOT WATER RECIRC. (HWC)
- W — WASTE (W)
- BELOW GRADE WASTE (W)
- VENT (V)
- CD — CONDENSATE DRAIN
- D — DRAIN
- CO / FCO — CLEANOUT (FLOOR)
- 2-WAY CO — 2-WAY CLEANOUT (FLOOR/GRADE)
- WCO — CO — WALL CLEANOUT / END OF LINE CLEANOUT

HVAC SYMBOLS

- 24x12 — (UP)DUCT SECTION, POSITIVE PRESSURE- FIRST SIZE IS TOP DIM.(TYP.)
- 24x12 — (DOWN) DUCT SECTION, POSITIVE PRESSURE
- 24x12 — (UP) DUCT SECTION, NEGATIVE PRESSURE
- 24x12 — (DOWN) DUCT SECTION, NEGATIVE PRESSURE
- FLEXIBLE DUCT
- TURNING VANES
- 18x12 — DUCT SIZE, FIRST IS SIDE SHOWN CLEAR INSIDE DIM.
- R — DUCT CHANGE OF ELEVATION RISE(R) DROP(D)
- FLEXIBLE CONNECTION
- SIDE WALL SUPPLY REGISTER
- BALANCE DAMPER - MANUAL LOCKING QUADRANT RECT: OPPOSED BLADE / ROUND: BUTTERFLY
- BALANCE DAMPER - MOTORIZED LOCKING QUADRANT RECT: OPPOSED BLADE / ROUND: BUTTERFLY
- FD — FD — FIRE DAMPER (FD) IN WALL / FLOOR
- SD — SD — SMOKE DAMPER (SD) IN WALL / FLOOR
- FSD — FSD — COMBO FIRE/SMOKE DAMPER (FSD) IN WALL / FLOOR
- T / T — THERMOSTAT (TSTAT) / TEMPERATURE SENSOR
- H / H — HUMIDISTAT (HSTAT) / HUMIDITY SENSOR
- P — PRESSURE SENSOR
- M — MOTOR
- SUPPLY FLOW ARROW / RETURN FLOW ARROW
- T1.1 / (200) — EQUIPMENT CALLOUT / EQUIPMENT AIRFLOW (CFM)

GRD CALLOUT SYMBOLS

ROUND
MARK IN SCHEDULE
SUPPLY DIFFUSER — SB10 / 250 CFM — CONNECTION & RUNOUT SIZE (10"ø)
ALT → SB10-250

RECTANGULAR
MARK IN SCHEDULE
RETURN GRILLE — RB12x12 / 250 CFM — CONNECTION & RUNOUT SIZE (12x12)
ALT → RB12x12-250

SLOT
MARK IN SCHEDULE
SLOT DIFFUSER — LSL8-2s / 200 CFM — CONNECTION & RUNOUT SIZE (8"ø) / NUMBER OF SLOTS
ALT → LSL8-2s-200

MEDICAL GAS SYMBOLS

- O2 — OXYGEN
- MA — MEDICAL COMPRESSED AIR
- VAC — MEDICAL VACUUM
- WAGD — WASTE ANESTHESIA GAS DISPOSAL
- N2O — NITROUS OXIDE
- CO2 — CARBON DIOXIDE
- IA — INSTRUMENT AIR
- N2 — NITROGEN
- ZONE VALVE BOX (ZVB)
- MEDICAL GAS OUTLET (MGO)

HVAC DESIGN CONDITIONS

REMARKS:
1. AMBIENT CONDITIONS ARE BASED ON 2021 ASHRAE WEATHER DATA CONDITIONS, 99.6% HEATING AND 0.4% COOLING VALUES.
2. HOT GAS REHEAT DEHUMIDIFICATION TO MAINTAIN 60% RELATIVE HUMIDITY.

SPACE OR AREA	OUTDOOR AIR SUMMER DB/WB °F	OUTDOOR AIR WINTER DB °F	INDOOR HEATING °F	INDOOR COOLING °F	RELATIVE HUMIDITY %RH	PRESSURE	CODE MIN ACH	ACTUAL DESIGN ACH	REMARKS
LINEAR ACCELERATOR	95.5/75.3	4.5	68	70	60	NR	6	15	1,2
RESTROOM	95.5/75.3	4.5	70	72	60	NEGATIVE	10	10.8	1,2

PRESSURE CLASS SCHEDULE

AIR SYSTEM	PRESSURE CLASS	SEAL CLASS	LEAKAGE CLASS ROUND	LEAKAGE CLASS RECT
DISHWASHER AND LAUNDRY EXHAUST	2 INCH WG (500 PA)	A	3	6
GENERAL EXHAUST	2 INCH WG (500 PA)	A	3	6
LABORATORY EXHAUST DUCTWORK	6 INCH WG (1500 PA)	A	3	6
LOW-PRESSURE SUPPLY	2 INCH WG (500 PA)	A	6	12
MEDIUM PRESSURE SUPPLY (UPSTREAM OF VAV & CV BOXES)	6 INCH WG (1500 PA)	A	3	6
RETURN AND RELIEF	2 INCH WG (500 PA)	A	6	12

SEISMIC RESTRAINTS:

THIS IS A LIFE SAFETY BUILDING WHICH MEANS IT SHALL REMAIN REASONABLY OPERATIONAL IN THE CASE OF A SEISMIC EVENT. THEREFORE ALL STATIONARY EQUIPMENT ON THE FLOOR AND ALL CONCRETE PADS SHALL BE FIXED RIGIDLY TO THE STRUCTURE. ALL ROTATING OR RECIPROCATING OR VIBRATING EQUIPMENT SHALL BE INSTALLED WITH EARTHQUAKE SNUBBERS TO LIMIT MOVEMENT. ALL HANGING EQUIPMENT, PIPING, AND DUCTWORK SHALL BE BRACED TO THE STRUCTURE. REFER TO SPECIFICATION SECTIONS 21 0548, 22 0548, AND 23 0548.

GENERAL DEMO. NOTES

1. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND NOTES TO THE ARCHITECT IMMEDIATELY. MINOR CHANGES IN THE SCOPE OF THE DEMOLITION WORK SHALL NOT JUSTIFY AN ADDITIONAL COST.
2. REMOVAL OF EXISTING FIXTURES AND EQUIPMENT WILL REQUIRE ISOLATING THE PIPING RISERS OR MAINS VIA SHUT-OFF VALVES. INSTALL NEW ISOLATION VALVES WHERE REQUIRED FOR COMPLETION OF WORK.
3. REMOVAL OF EXISTING DUCTWORK, DIFFUSERS, GRILLES, REGISTERS, PLUMBING FIXTURES, ETC. WILL REQUIRE TEMPORARY CAPPING AND SEALING EXISTING MAINS OR BRANCHES AS NECESSARY AND REQUIRED TO ALLOW THE REMAINING SYSTEMS TO FULLY OPERATE WITHOUT DEGRADATION.
4. CONTRACTOR SHALL PROVIDE PROTECTIVE PLASTIC DROP CLOTHS TO PROTECT THE EXISTING OCCUPIED AREAS AND EQUIPMENT FROM DUST AND DEBRIS DURING THE CONSTRUCTION WORK, AND SHALL CLEAN THE AREAS OF ALL CONSTRUCTION DIRT DAILY, AND UPON COMPLETION OF THE WORK.
5. ALL DRAINED PIPING RISERS AND MAINS SHALL BE REFILLED WITH PROPER FLUID AND PROPERLY VENTED BY THIS CONTRACTOR, ONCE NEW WORK HAS BEEN INSTALLED.
6. COORDINATE WITH OWNER THE REMOVAL AND REPLACEMENT OF ALL EXISTING CEILINGS, WALLS, ETC. AS REQUIRED FOR MECHANICAL DEMOLITION WORK.
7. EXISTING DUCTS, PIPING, AND EQUIPMENT, ETC., NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. ALL ENDS OF DISCONTINUED DUCTS AND PIPING SHALL BE CAPPED IN THE NEAREST WALL, CEILING OR FLOOR SO THAT THEY ARE COMPLETELY CONCEALED. OPENINGS LEFT IN WALLS, CEILINGS, ETC., WHERE EQUIPMENT, PIPE, DUCTS, ETC., ARE REMOVED AND NOT REPLACED, SHALL BE PATCHED NEATLY WITH SIMILAR MATERIAL TO ADJACENT CONSTRUCTION.
8. ALL ACCESSIBLE ABANDONED PIPING AND DUCTWORK SHALL BE REMOVED AND PROPERLY DISPOSED OF.
9. EXISTING PIPING, FIXTURES AND EQUIPMENT THAT ARE NOT TO BE REUSED SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE OWNER IF THEY WISH TO RETAIN OWNERSHIP OF SAME. IF NOT, EQUIPMENT SHALL BECOME THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AS SOON AS PRACTICAL AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.
10. ALL CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THIS CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR TO ADJACENT CONSTRUCTION.
11. CUTTING OF STRUCTURAL MEMBERS IS NOT ALLOWED.
12. PORTIONS OF EXISTING SYSTEMS MAY BE SHOWN FOR CLARITY EVEN THOUGH IT MAY NOT BE NECESSARY TO MODIFY OR REVISE THEM. ALL EXISTING SYSTEMS ARE SHOWN BASED ON ORIGINAL OR REMODEL BUILDING DRAWINGS. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
13. WHERE EXISTING DUCTS, PIPING, AND EQUIPMENT, ETC. THAT ARE TO BE UTILIZED IN THE COMPLETED PROJECT CONFLICT WITH NEW CONSTRUCTION AND THE REQUIRED DEMOLITION, THEY SHALL BE RELOCATED AND RECONNECTED TO MAINTAIN THE DESIRED SERVICE. ALERT ENGINEER TO ANY MAJOR RELOCATIONS REQUIRED.
14. ALL CONTRACTORS SHALL GIVE FULL COOPERATION TO THE OWNER IN THE SCHEDULING AND PROCEDURE OF WORK TO PROVIDE THE LEAST AMOUNT OF DISRUPTION AS POSSIBLE. CONTRACTORS SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE FROM FREEZING TO EXISTING SYSTEMS AND SHALL MAINTAIN A CONDITIONED SPACE FOR ALL OWNER OCCUPIED AREAS DURING CONSTRUCTION.

GENERAL NOTES

1. ALL WORK IS TO CONFORM WITH APPLICABLE CODES AND STANDARDS.
2. VERIFY JOB SITE CONDITIONS AND DIMENSIONS BEFORE BEGINNING WORK. PLANS ARE SCHEMATIC IN NATURE. LAYOUT IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS.
3. NO PIPING, DUCTWORK, ETC. SHALL PENETRATE STRUCTURAL MEMBERS.
4. PROVIDE MISCELLANEOUS CUTTING, PATCHING AND REPAIRING OF FINISHES, ROOF, WALLS, ETC., AS REQUIRED TO ACCOMMODATE THE NEW WORK. ALL CUTTING AND PATCHING SHALL BE CLOSELY COORDINATED WITH THE G.C.
5. G.C. IS TO PATCH ANY OPENINGS IN CORRIDORS REQUIRED TO BE CONSTRUCTED TO LIMIT THE TRANSFER OF SMOKE AND IN SMOKE BARRIERS AS REQUIRED TO MEET CODE REQUIREMENTS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT LOCATION, CONFIGURATION AND ROUTING OF EXISTING SYSTEMS REQUIRED TO REMAIN IN OPERATION DURING THE PROJECT TO PREVENT DAMAGE DURING DEMOLITION AND PHASING.
7. REMOVE ALL EXISTING EQUIPMENT, DUCTWORK AND PIPING THAT IS NOT REQUIRED FOR A WORKING INSTALLATION.
8. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION.
9. COORDINATE ROUTING OF PLUMBING, AND HVAC PIPING WITH DUCTWORK, LIGHTS, ARCHITECTURAL CEILING AND STRUCTURAL ELEMENTS. PIPING SHALL RISE AND DROP, JOG OR OFFSET AS REQUIRED TO AVOID CONFLICTS. DUCTWORK SHALL TAKE PRECEDENCE OVER ALL PIPING, EXCEPT WHERE GRADE MUST BE MAINTAINED FOR DRAINAGE. REWORK OF INSTALLED WORK TO RESOLVE CONFLICTS RISING FROM LACK OF COORDINATION SHALL NOT JUSTIFY AN INCREASE IN THE CONTRACT AMOUNT.
10. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE FIRE STOPPED BY THE TRADE MAKING THE PENETRATION. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.
11. DO NOT ROUTE PIPING OR DUCTWORK OVER ELECTRICAL PANELS OR EQUIPMENT. PIPING OR DUCTWORK SHALL NOT BE ROUTED THROUGH ELECTRICAL ROOMS, TELECOM ROOMS OR ELEVATOR EQUIPMENT ROOMS UNLESS SPECIFICALLY SERVING THAT ROOM. MAINTAIN N.E.C. CLEARANCES. COORDINATE WITH E.C. PROVIDE WATERTIGHT DRIP PAN WITH DRAIN TO NEAREST APPROVED RECEPTOR, WHERE REQUIRED.
12. COORDINATE SIZE AND LOCATION OF ACCESS DOORS IN CONSTRUCTION REQUIRED FOR ACCESS TO MECHANICAL EQUIPMENT WITH G.C.
13. COORDINATE SIZE AND LOCATION OF MECHANICAL EQUIPMENT PADS WITH G.C.
14. ALL EQUIPMENT SUPPORT STANDS SHALL BE PRIMED AND PAINTED WITH EPOXY ENAMEL.
15. TEMPERATURE CONTROLS CONTRACTOR (T.C.C.) SHALL FURNISH AND INSTALL ALL LOW VOLTAGE WIRING AND ASSOCIATED CONDUIT REQUIRED FOR MECHANICAL CONTROL SYSTEM. WIRING SHALL BE IN CONDUIT WHEN INSIDE WALLS, IN ROOMS WITH EXPOSED CEILINGS, AND ABOVE HARD CEILINGS. LINE VOLTAGE WIRING AND ASSOCIATED CONDUIT SHALL BE PROVIDED AND INSTALLED BY E.C.. THE CONTROL SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS.
16. ALL CONTROL DAMPERS SHALL BE FURNISHED BY T.C.C. AND INSTALLED BY THE M.C. MOTOR OPERATORS SHALL BE FURNISHED AND INSTALLED BY THE T.C.C.
17. COORDINATE ACCESS TO EQUIPMENT AND VALVES INSTALLED ABOVE 'HARD' CEILINGS AND IN MASONRY CHASES WITH GENERAL CONTRACTOR. PROVIDE LOCKING ACCESS DOORS FOR INSTALLATION BY CONTRACTOR AS REQUIRED TO SERVICE CONCEALED DAMPERS, VALVES AND EQUIPMENT. CEILING ACCESS DOORS FOR FIRE DAMPERS, SMOKE DAMPERS AND FIRE SMOKE DAMPERS FURNISHED AND INSTALLED BY CONTRACTOR.
18. CONTRACTOR TO INSTALL TEMPORARY FILTERS OVER ALL RETURN AND EXHAUST GRILLES IN WORK AREA DURING CONSTRUCTION.
19. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF TEMPORARY PARTITIONS.
20. TERMINAL UNITS, MANUAL BALANCE DAMPERS, HYDRONIC AND PLUMBING VALVES, CIRCUIT SETTERS AND OTHER ACCESSORIES REQUIRING ACCESS SHALL BE ACCESSIBLE VIA A STANDARD LADDER SO COMPONENTS MAY BE REPLACED, REPAIRED, OR UTILIZED WITHOUT THE NEED FOR EXTENSIVE CEILING REMOVAL, SCAFFOLDING OR A MAN LIFT. WHERE POSSIBLE NO MORE THAN 48" ABOVE THE FINISHED CEILING.
21. THESE DRAWINGS ARE ACCOMPANIED BY SPECIFICATIONS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.

NOTE:
ALL GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

MECHANICAL SHEET INDEX

STATE OF MISSOURI
ELIZABETH ELLIOTT
NUMBER PE-2024014185
06/27/2025
REGISTERED PROFESSIONAL ENGINEER

ACI BOLAND ARCHITECTS
ACI/Boland, Inc.
Kansas City | St. Louis
1710 Wyandotte
Kansas City, MO 64108
T: 816.763.9600
Licensee's Certificate of Authority Number: Missouri: #000958

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	VOC
Checked By	EKE

Revision

Number	Date	Description

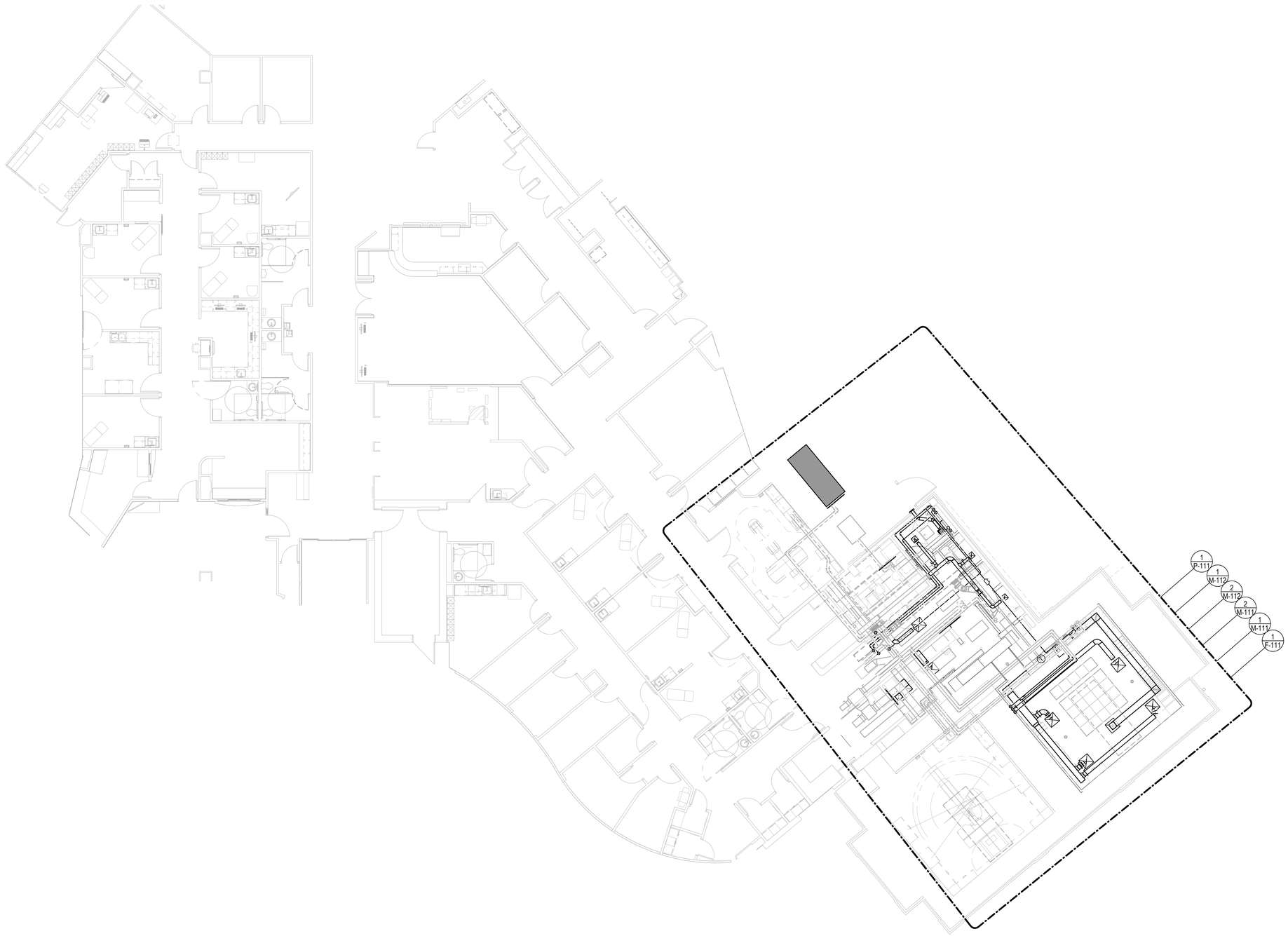
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
623 MASSACHUSETTS ST SUITE 200, LAWRENCE, KS 66044
785-842-0464 www.pec1.com
PEC PROJECT NUMBER: 250200-000

M-001

MECHANICAL COVER SHEET

HVAC GENERAL NOTES

1. DUCT SIZES SHOWN ARE ACTUAL INSIDE CLEAR DIMENSIONS. INCREASE SHEET METAL DIMENSIONS AS REQUIRED TO ACCOMMODATE DUCT LINER, WHERE DUCT LINER IS SPECIFIED. DUCTWORK EXPOSED TO SPACE SHALL NOT HAVE EXTERIOR INSULATION.
2. T-STATS, HUMIDISTATS AND CO2 SENSORS SHALL BE LOCATED NEXT TO LIGHT SWITCH WITHIN THE ROOM SHOWN. COORDINATE WITH GC AND ELECTRICAL CONTRACTOR TO MATCH HEIGHT AND LOCATION, BUT IN NO CASE HIGHER THAN 48 INCHES A.F.F. PER ADA. REQUIREMENTS. COORDINATE EXACT HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION.
3. ALL SUPPLY DIFFUSERS, EXHAUST GRILLES, AND RETURN GRILLES WHERE AIRFLOW IS INDICATED, OR AS INDICATED OTHERWISE, SHALL HAVE MANUAL BALANCE DAMPERS WITH STANDOFF AND LOCKING QUADRANT IN AN ACCESSIBLE LOCATION. FOR PLAN CLARITY, NOT ALL DAMPERS MAY BE SHOWN. WHERE HARD LID CEILINGS PREVENT BALANCE DAMPER ACCESS, CONFIRM WITH GRD SCHEDULE OR CONFIRM WITH ENGINEER TO USE OBD'S OR REMOTE BALANCE DAMPERS IF NOT ALREADY INDICATED.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES.
5. ALL DIFFUSERS ARE 4-WAY BLOW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
6. DUCT CONSTRUCTION SHALL COMPLY WITH SMACNA STANDARDS, WITH A MINIMUM HARD DUCT GAUGE THICKNESS OF 26 GAUGE. MINIMUM THICKNESS STATED SATISFIES APPLICABLE IBC LIFE SAFETY DAMPER EXCEPTIONS.
7. SQUARE THROAT NOT ALLOWED ON RADIUS ELBOWS.
8. FLEXIBLE DUCTWORK IS ALLOWED ON RUNOUTS TO SUPPLY DIFFUSERS ONLY. UTILIZE ONLY ABOVE LAY-IN ACCESSIBLE CEILINGS. DO NOT INSTALL FLEX DUCT ABOVE HARD CEILINGS OR WHERE EXPOSED. A MAXIMUM LENGTH OF 6'-0" MAY BE USED AT EACH CONNECTION.
9. SEAL TRANSVERSE AND LONGITUDINAL JOINTS OF ALL DUCTWORK USING HARDCAST DT TAPE AND FTA-20 ADHESIVE OR HARDCAST AFG-1402 "FOIL GRIP" PER MANUFACTURERS INSTRUCTIONS.
10. ALL DUCTWORK SHALL BE ROUTED AS HIGH AS POSSIBLE WITHIN THE CEILING SPACE. UTILIZE JOIST SPACE WHERE POSSIBLE, ESPECIALLY WHEN CROSSING OTHER DUCT, PIPE, AND ELECTRICAL.
11. PROVIDE FLEXIBLE DUCT AND PIPE CONNECTIONS TO ALL MOTORIZED EQUIPMENT.
12. VERIFY ALL EQUIPMENT ACCESS PANELS WITH MANUFACTURER AND ARCHITECT. ACCESS PANELS SHALL BE 24X24 UNLESS NOTED OTHERWISE LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT AND THE LOCATIONS OF THE EQUIPMENT THEY SERVE.
13. PAINT INSIDE OF DUCTWORK BLACK ANYWHERE VISIBLE THROUGH FACE OF GRILLE OR DIFFUSER.
14. REFER TO GRD SCHEDULE FOR DUCT CONNECTION SIZES. REFER TO TERMINAL BOX SCHEDULE FOR INLET DUCT SIZES.
15. CEILING COORDINATION OF ALL MEP SYSTEMS (LIGHTING, DUCTWORK, DIFFUSERS, ELECTRICAL, ETC.) MUST BE COMPLETED BY THE CONTRACTOR PRIOR TO THE START OF ANY NEW INSTALLATION.
16. IT IS ASSUMED THAT MOST OF THE RETURN AIR AND EXHAUST MAINS ARE MOUNTED HIGH ABOVE THE CEILING. BALANCE DAMPERS IN THE BRANCH DUCTS FROM THESE MAINS SHALL BE IN THE VERTICAL RISE OF BRANCH NO MORE THAN 48" (WHERE POSSIBLE) ABOVE THE GRILLES AND REGISTERS (SO BALANCE TECHNICIANS CAN EASILY ACCESS THEM THROUGH THE CEILING).
17. TERMINAL UNITS SHALL HAVE BOTTOM ELEVATION A MINIMUM 4" ABOVE TOP OF CEILING TILES AND AT MOST 24" ABOVE CEILING. ALL OTHER FLOOR PLANS DO NOT SHOW DUCT ELEVATIONS. FLOOR PLANS DO NOT SHOW ALL DROPS AND RISERS REQUIRED.



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1 **FIRST FLOOR OVERALL PLAN**

0' 4' 8' 12' 1/8" = 1'-0"

ELIZABETH ELLIOTT
NUMBER PE-2024014185
06/27/2025

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Missouri: #000958

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	VOC
Checked By	EKE

Revision

Number	Date	Description

PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
823 MASSACHUSETTS ST SUITE 200, LAWRENCE, KS 66044
785-842-8464 www.pec1.com
PEC PROJECT NUMBER: 250290-000

M-101

FIRST FLOOR OVERALL PLAN

6/27/2025 1:28:44 PM

TEST AND BALANCE NOTE

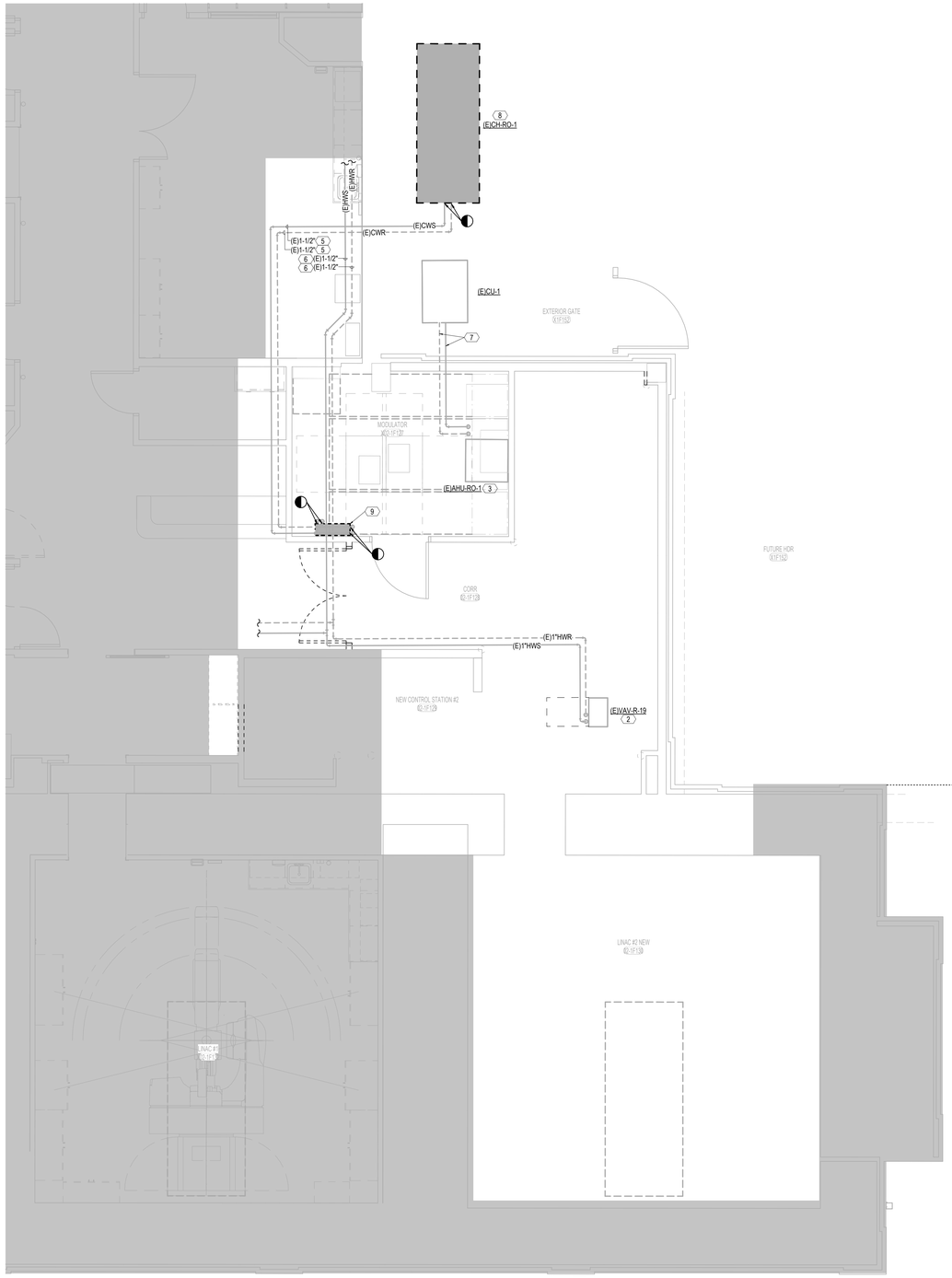
TAB CONTRACTOR TO TEST AND BALANCE SUPPLY AND RETURN DEVICES AND VAV BOXES PRIOR TO DEMOLITION TO ENSURE AS-BUILT DESIGN CONDITIONS.

HVAC DEMO NOTES

1. PLANS ARE SCHEMATIC IN NATURE. LAYOUT IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND NOTES TO THE OWNER'S REPRESENTATIVE IMMEDIATELY. MINOR CHANGES IN THE SCOPE OF THE DEMOLITION WORK SHALL NOT JUSTIFY AN ADDITIONAL COST.
2. DEMOLISH ALL DUCTWORK, PIPING, AND EQUIPMENT SHOWN SHADED, DASHED AND IN A DARK LINE WEIGHT.

SHEET KEYNOTES

1. DEMOLISH EXISTING DUCTWORK AND SUPPORTS BACK TO POINT SHOWN. PREPARE DUCTWORK CONNECTIONS TO BE RECONNECTED IN NEW WORK.
2. EXISTING VAV UNIT, PIPING, DUCTWORK, AND ASSOCIATED CONTROLS TO REMAIN. CLEAN AND ENSURE OPERATION IS IN GOOD WORKING ORDER.
3. EXISTING AIR HANDLING UNIT, PIPING, AND ASSOCIATED CONTROLS TO REMAIN.
4. EXISTING DUCTWORK STUBBED INTO SPACE. PREPARE DUCTWORK CONNECTIONS TO BE CONNECTED IN NEW WORK.
5. EXISTING CHILLED WATER PIPING TO REMAIN.
6. EXISTING HEATING HOT WATER PIPING TO REMAIN.
7. REFRIGERANT PIPING TO REMAIN.
8. DEMOLISH EXISTING CHILLER AND DISCONNECT EXISTING PIPING AND PREPARE FOR CONNECTION TO NEW CHILLER.
9. DEMOLISH EXISTING QUICK CONNECT PANELS (QUANTITY TWO STACKED) AND DISCONNECT EXISTING PIPING AND PREPARE FOR CONNECTION TO NEW QUICK CONNECT PANELS IN SAME PLACE.
10. DEMOLISH EXISTING QUICK CONNECT PANELS (QUANTITY TWO STACKED). SEE PIPING DEMOLITION PLAN FOR ADDITIONAL INFORMATION.
11. DEMOLISH EXISTING CHILLER. SEE PIPING DEMOLITION PLAN FOR ADDITIONAL INFORMATION.



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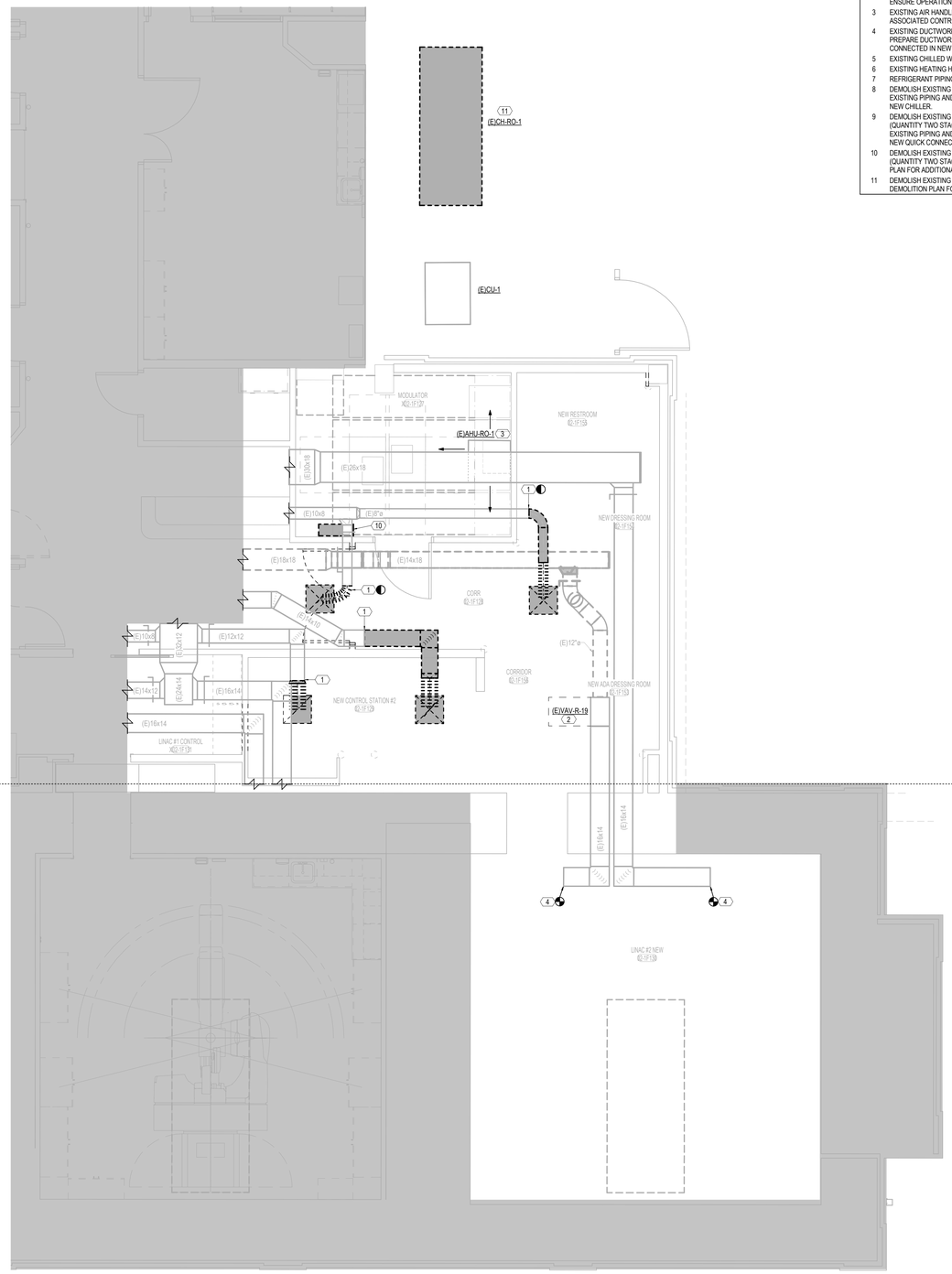
2 FIRST FLOOR MECHANICAL PIPING DEMO ENLARGED PLAN

0' 4' 8' 12' 1/4" = 1'-0"



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1 FIRST FLOOR HVAC DEMO ENLARGED PLAN

0' 4' 8' 12' 1/4" = 1'-0"

STATE OF MISSOURI
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PEC PROJECT NUMBER 25020-000

M-111

FIRST FLOOR MECHANICAL ENLARGED DEMO PLANS

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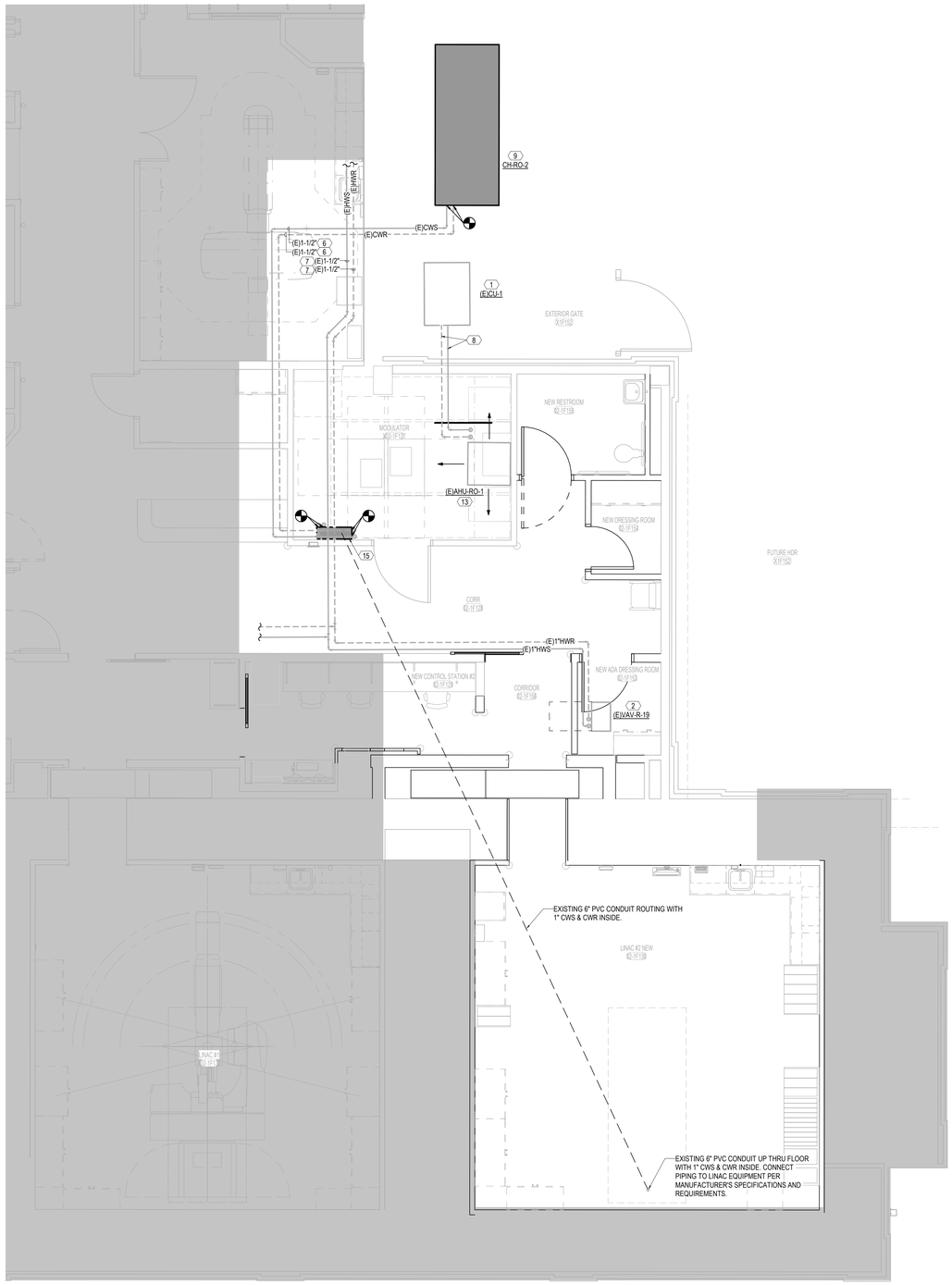

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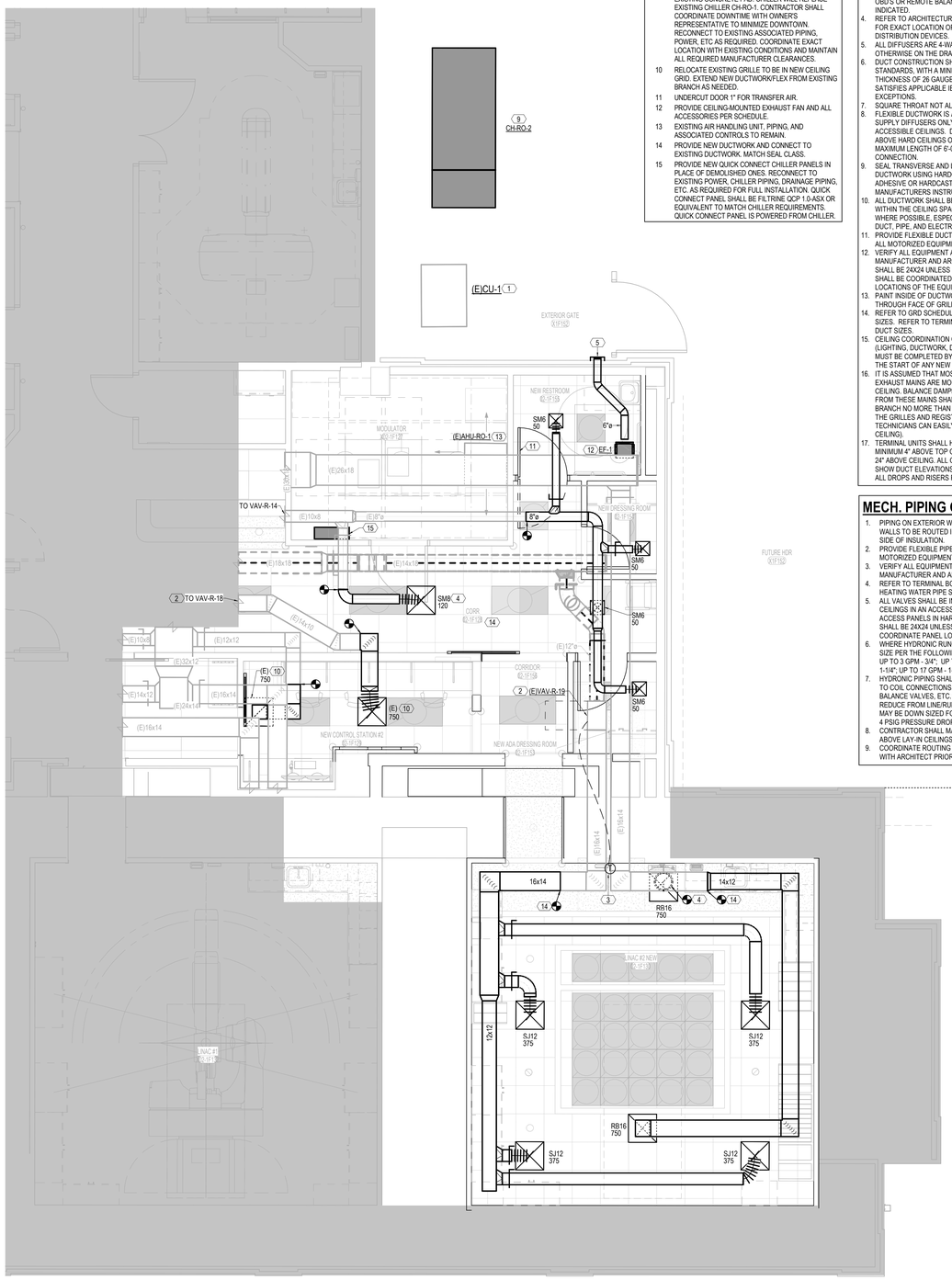
2 FIRST FLOOR MECHANICAL PIPING ENLARGED PLAN

0' 4' 8' 12' 1/4" = 1'-0"



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1 FIRST FLOOR HVAC ENLARGED PLAN

0' 4' 8' 12' 1/4" = 1'-0"

SHEET KEYNOTES

1. EXISTING CONDENSING UNIT, PIPING, AND ASSOCIATED CONTROLS TO REMAIN.
2. EXISTING VAV UNIT, PIPING, DUCTWORK, AND ASSOCIATED CONTROLS TO REMAIN. CLEAN AND ENSURE OPERATION IS IN GOOD WORKING ORDER.
3. INSTALL EXISTING THERMOSTAT ON SITE 48" AFF TO LOCATION SHOWN ON PLAN. EXTEND CONTROL WIRING AS NECESSARY.
4. PROVIDE NEW DIFFUSER/GRILLE. RECONNECT TO EXISTING DUCTWORK AND BALANCE TO AIRFLOW SHOWN ON PLAN.
5. PROVIDE EXHAUST WALL CAP, BACKDRAFT DAMPER, AND FLASHING ON EXTERIOR WALL. MAINTAIN 25'-0" MINIMUM DISTANCE FROM INTAKES.
6. EXISTING CHILLED WATER PIPING TO REMAIN.
7. EXISTING HEATING HOT WATER PIPING TO REMAIN.
8. REFRIGERANT PIPING TO REMAIN.
9. PROVIDE NEW AIR COOLED CHILLER AND INSTALL ON EXISTING CONCRETE PAD. CHILLER WILL REPLACE EXISTING CHILLER CH-RO-1. CONTRACTOR SHALL COORDINATE DOWNTIME WITH OWNER'S REPRESENTATIVE TO MINIMIZE DOWNTOWN. RECONNECT TO EXISTING ASSOCIATED PIPING, POWER, ETC AS REQUIRED. COORDINATE EXACT LOCATION WITH EXISTING CONDITIONS AND MAINTAIN ALL REQUIRED MANUFACTURER CLEARANCES.
10. RELOCATE EXISTING GRILLE TO BE IN NEW CEILING GRID. EXTEND NEW DUCTWORK/FLEX FROM EXISTING BRANCH AS NEEDED.
11. UNDERCUT DOOR 1" FOR TRANSFER AIR.
12. PROVIDE CEILING-MOUNTED EXHAUST FAN AND ALL ACCESSORIES PER SCHEDULE.
13. EXISTING AIR-HANDLING UNIT, PIPING, AND ASSOCIATED CONTROLS TO REMAIN.
14. PROVIDE NEW DUCTWORK AND CONNECT TO EXISTING DUCTWORK. MATCH SEAL CLASS.
15. PROVIDE NEW QUICK CONNECT CHILLER PANELS IN PLACE OF DEMOLISHED ONES. RECONNECT TO EXISTING POWER, CHILLER PIPING, DRAINAGE PIPING, ETC. AS REQUIRED FOR FULL INSTALLATION. QUICK CONNECT PANEL SHALL BE FILTRINE QCP 1.0-ASX OR EQUIVALENT TO MATCH CHILLER REQUIREMENTS. QUICK CONNECT PANEL IS POWERED FROM CHILLER.

HVAC GENERAL NOTES

1. DUCT SIZES SHOWN ARE ACTUAL INSIDE CLEAR DIMENSIONS. INCREASE SHEET METAL DIMENSIONS AS REQUIRED TO ACCOMMODATE DUCT LINER. WHERE DUCT LINER IS SPECIFIED. DUCTWORK EXPOSED TO SPACE SHALL NOT HAVE EXTERIOR INSULATION.
2. T-STATS, HUMIDISTATS AND CO2 SENSORS SHALL BE LOCATED NEXT TO LIGHT SWITCH WITHIN THE ROOM SHOWN. COORDINATE WITH GC AND ELECTRICAL CONTRACTOR TO MATCH HEIGHT AND LOCATION, BUT IN NO CASE HIGHER THAN 48 INCHES A.F.F. PER ADA. REQUIREMENTS. COORDINATE EXACT HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION.
3. ALL SUPPLY DIFFUSERS, EXHAUST GRILLES, AND RETURN GRILLES WHERE AIRFLOW IS INDICATED, OR AS INDICATED OTHERWISE, SHALL HAVE MANUAL BALANCE DAMPERS WITH STANDOFF AND LOCKING QUADRANT IN AN ACCESSIBLE LOCATION. FOR PLAN CLARITY, NOT ALL DAMPERS MAY BE SHOWN. WHERE HARD LID CEILINGS PREVENT BALANCE DAMPER ACCESS, CONFIRM WITH GRD SCHEDULE OR CONFIRM WITH ENGINEER TO USE OBD'S OR REMOTE BALANCE DAMPERS IF NOT ALREADY INDICATED.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES.
5. ALL DIFFUSERS ARE 4-WAY BLOW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
6. DUCT CONSTRUCTION SHALL COMPLY WITH SMACNA STANDARDS, WITH A MINIMUM HARD DUCT GAUGE THICKNESS OF 26 GAUGE. MINIMUM THICKNESS STATED SATISFIES APPLICABLE IBC LIFE SAFETY DAMPER EXCEPTIONS.
7. SQUARE THROAT NOT ALLOWED ON RADIUS ELBOWS.
8. FLEXIBLE DUCTWORK IS ALLOWED ON RUNOUTS TO SUPPLY DIFFUSERS ONLY. UTILIZE ONLY ABOVE LAY-IN ACCESSIBLE CEILINGS. DO NOT INSTALL FLEX DUCT ABOVE HARD CEILINGS OR WHERE EXPOSED. A MAXIMUM LENGTH OF 6'-0" MAY BE USED AT EACH CONNECTION.
9. SEAL TRANSVERSE AND LONGITUDINAL JOINTS OF ALL DUCTWORK USING HARDCAST DT TAPE AND FTA-20 ADHESIVE OR HARDCAST AFG-1402 "FOIL GRIP" PER MANUFACTURERS INSTRUCTIONS.
10. ALL DUCTWORK SHALL BE ROUTED AS HIGH AS POSSIBLE WITHIN THE CEILING SPACE. UTILIZE JOIST SPACE WHERE POSSIBLE, ESPECIALLY WHEN CROSSING OTHER DUCT, PIPE, AND ELECTRICAL.
11. PROVIDE FLEXIBLE DUCT AND PIPE CONNECTIONS TO ALL MOTORIZED EQUIPMENT.
12. VERIFY ALL EQUIPMENT ACCESS PANELS WITH MANUFACTURER AND ARCHITECT. ACCESS PANELS SHALL BE 24X24 UNLESS NOTED OTHERWISE LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT AND THE LOCATIONS OF THE EQUIPMENT THEY SERVE.
13. PAINT INSIDE OF DUCTWORK BLACK ANYWHERE VISIBLE THROUGH FACE OF GRILLE OR DIFFUSER.
14. REFER TO GRD SCHEDULE FOR DUCT CONNECTION SIZES. REFER TO TERMINAL BOX SCHEDULE FOR INLET DUCT SIZES.
15. CEILING COORDINATION OF ALL MEP SYSTEMS (LIGHTING, DUCTWORK, DIFFUSERS, ELECTRICAL, ETC.) MUST BE COMPLETED BY THE CONTRACTOR PRIOR TO THE START OF ANY NEW INSTALLATION.
16. IT IS ASSUMED THAT MOST OF THE RETURN AIR AND EXHAUST MAINS ARE MOUNTED HIGH ABOVE THE CEILING. BALANCE DAMPERS IN THE BRANCH DUCTS FROM THESE MAINS SHALL BE IN THE VERTICAL RISE OF BRANCH NO MORE THAN 48" (WHERE POSSIBLE) ABOVE THE GRILLES AND REGISTERS (SO BALANCE TECHNICIANS CAN EASILY ACCESS THEM THROUGH THE CEILING).
17. TERMINAL UNITS SHALL HAVE BOTTOM ELEVATION A MINIMUM 4" ABOVE TOP OF CEILING TILES AND AT MOST 24" ABOVE CEILING. ALL OTHER FLOOR PLANS DO NOT SHOW DUCT ELEVATIONS. FLOOR PLANS DO NOT SHOW ALL DROPS AND RISERS REQUIRED.

MECH. PIPING GENERAL NOTES

1. PIPING ON EXTERIOR WALLS OR PRE-CAST CONCRETE WALLS TO BE ROUTED IN FRAMED WALL ON INTERIOR SIDE OF INSULATION.
2. PROVIDE FLEXIBLE PIPE CONNECTIONS TO ALL MOTORIZED EQUIPMENT.
3. VERIFY ALL EQUIPMENT ACCESS PANELS WITH MANUFACTURER AND ARCHITECT.
4. REFER TO TERMINAL BOX SCHEDULE FOR ALL BRANCH HEATING WATER PIPE SIZES.
5. ALL VALVES SHALL BE INSTALLED ABOVE DROP-IN CEILINGS IN AN ACCESSIBLE LOCATIONS, OR WITH ACCESS PANELS IN HARD LID CEILINGS. ACCESS PANELS SHALL BE 24X24 UNLESS NOTED OTHERWISE. COORDINATE PANEL LOCATIONS WITH ARCHITECT.
6. WHERE HYDRONIC RUNOUT SIZES ARE NOT INDICATED, SIZE PER THE FOLLOWING:
   UP TO 3 GPM - 3/4"; UP TO 6 GPM - 1"; UP TO 10 GPM - 1-1/4"; UP TO 17 GPM - 1-1/2"
7. HYDRONIC PIPING SHALL BE MAINTAINED FULL SIZE UP TO COIL CONNECTIONS. SHUT-OFF VALVES, STRAINERS, BALANCE VALVES, ETC. WILL NOT BE ALLOWED TO REDUCE FROM LINE/RUNOUT SIZE. CONTROL VALVES MAY BE DOWN SIZED FOR FLOW RATE, NOT TO EXCEED 4 PSIG PRESSURE DROP AT DESIGN FLOW.
8. CONTRACTOR SHALL MAINTAIN MINIMUM 4" CLEAR ABOVE LAY-IN CEILINGS.
9. COORDINATE ROUTING OF CONDENSATE DRAIN LINES WITH ARCHITECT PRIOR TO INSTALLATION.

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Missouri: #000958

SAINT LUKE'S EAST LEE'S SUMMIT VAULT #2 LINEAR ACCELERATOR

100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	VOC
Checked By	EKE

Revision

Number	Date	Description

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
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PEC PROJECT NUMBER: 25020-000

M-112

FIRST FLOOR HVAC ENLARGED PLAN

Autodesk Docs://3-25014 Saint Luke's East Lee's Summit - Radiation Oncology_Urology/25020290-000_MECH_R24.rvt

CHILLER - AIR COOLED

REMARKS:
1. AIR-COOLED DUAL SCROLL COMPRESSOR. PROVIDE WITH HIGH/LOW PRESSURE STAT, FREEZE CONTROL, PUMP-DOWN SOLENOID VALVE, HEAD AND SUCTION GAUGES, THERMOSTATIC EXPANSION VALVE, AND REFRIGERANT SIGHT GLASS AND DEHYDRATOR. UNIT SHALL BE ABLE TO COMMUNICATE WITH THE EXISTING TEMPERATURE CONTROL SYSTEM.
2. PROVIDE WITH INTERAL 170 GALLON STORAGE COOLING TANK.
3. PROVIDE WITH INTERNAL PUMPS, SERVICE VALVES, AND MANUAL BYPASS VALVE.
4. PROVIDE WITH AUTOSWITCHOVER TO CITY WATER.
5. PROVIDE WEATHER-RESISTANT OUTDOOR INSTALLATION.

MARK	MFR	MODEL	TYPE	FLOW (GPM)	CAP (TONS)	EWT (°F)	LWT (°F)	AMBIENT OA TEMP (°F)	PUMP	COMPRESSOR		CONDENSING FAN		ELECTRICAL			REMARKS
										RLA (EACH)	QTY	FLA (EACH)	QTY	VOLT	PH	FLA	
CH-RO-2	FILTRENE	PCP-1500G-A-WP-DUC	SELF-CONTAINED AIR COOLED	16	15	60	45	95	2@ 2HP	17	2	1.1	4	460	3	30	1-5

VAV TERMINAL UNIT SCHEDULE (FOR REFERENCE ONLY)

REMARKS:
1. EXISTING VAV TERMINAL UNIT TO REMAIN. REBALANCE TO NEW AIRFLOWS AND HEATING WATER GPMS.

MARK	MFR	MODEL	UNIT SIZE	INLET SIZE (INCH)	PRIMARY AIRFLOW		HEATING COIL				REMARKS
					MAX (CFM)	MIN (CFM)	AIR		HOT WATER COIL		
							EAT (°F)	LAT (°F)	CAP (MBH)	FLOW (GPM)	
VAV-R-14	TITUS	DESV	10	10	1100	1100	55	85	41.6	2.8	1
VAV-R-18	TITUS	DESV	10	10	750	375	55	85	14.2	0.9	1
VAV-R-19	TITUS	DESV	12	12	1500	1500	55	85	56.7	3.8	1

EXHAUST FAN SCHEDULE

REMARKS:
1. ALL EXHAUST FANS SHALL HAVE PERMANENTLY LUBRICATED BEARINGS AND DISCONNECT SWITCH PROVIDED AND INSTALLED BY EC.
2. INLINE EXHAUST FANS SHALL BE PROVIDED WITH ECM/VFD MOTOR, DISCONNECT SWITCH, FAN SPEED CONTROLLER, WIRING PIGTAIL, BACKDRAFT DAMPER, AND VIBRATION ISOLATORS.

A. EXHAUST FAN SHALL OPERATE WITH ROOM LIGHTS BY E.C.

MARK	MFR	MODEL	SERVES	TYPE	MIN. CAPACITY		FAN RPM	DRIVE	MOTOR (BY M.C.)			WT LBS	REMARKS
					CFM	ESP (IN)			NEC FLA (A)	VOLTAGE (V)	PHASE		
EF-1	GREENHECK	SP-A125	SINGLE RESTROOM	CEILING EXHAUST FAN	110	0.13	989	DIRECT	0.2	115 V	1	17	1,2,A

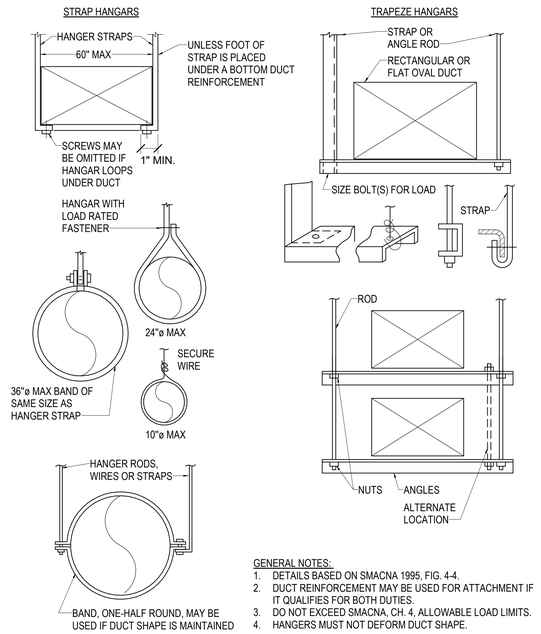
GRILLE, REGISTER, AND DIFFUSER SCHEDULE

FIRST LETTER IN MARK:

S = SUPPLY DIFFUSER
R = RETURN GRILLE
P = PLENUM RETURN GRILLE
E = EXHAUST GRILLE
L = SLOT DIFFUSER
M = LAMINAR FLOW SUPPLY
C = DIFFUSER
U = SECURITY GRILLE...

NOTES:
1. PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED TO ACCOMMODATE ROUND RUNOUTS.
2. PROVIDE ALL LAY-IN GRDs WITH 24x24 LAY-IN PANEL AS REQUIRED.
3. FINISH TO BE WHITE UNLESS OTHERWISE SPECIFIED. COORDINATE AND VERIFY ALL FINISHES WITH ARCHITECT.
4. ALL SELECTIONS ARE BASED ON A MAXIMUM NC OF 25 UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL VERIFY ALL CEILING TYPES AND ASSOCIATED BORDER TYPES.
6. MARKS USED MAY NOT BE IN SEQUENCE.
7. LOUVERED GRILLES TO HAVE FRONT BLADES PARALLEL TO LONG DIMENSION UNLESS WALL MOUNTED.
8. WALL MOUNTED LOUVERED GRILLES TO HAVE FRONT BLADES PARALLEL TO FLOOR.

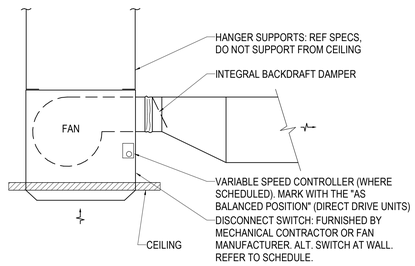
MARK	TYPE	BASED ON		MOUNT	PANEL SIZE (FACE SIZE)	MATERIAL	COLOR	REMARK
		MFR	MODEL					
RB	RETURN GRILLE	TITUS	23RL	LAY-IN	24x24	ALUMINUM	WHITE	--
SJ	SUPPLY DIFFUSER	TITUS	OMNI-AA	LAY-IN	24x24	ALUMINUM	WHITE	--
SM	SUPPLY DIFFUSER	TITUS	TMS-AA	LAY-IN	24x24	ALUMINUM	WHITE	LOUVERED FACE
SM	SUPPLY DIFFUSER	TITUS	TMS-AA	LAY-IN	12x12	ALUMINUM	WHITE	LOUVERED FACE



GENERAL NOTES:
1. DETAILS BASED ON SMACNA 1995, FIG. 4-4.
2. DUCT REINFORCEMENT MAY BE USED FOR ATTACHMENT IF IT QUALIFIES FOR BOTH DUTIES.
3. DO NOT EXCEED SMACNA, CH. 4, ALLOWABLE LOAD LIMITS.
4. HANGERS MUST NOT DEFORM DUCT SHAPE.

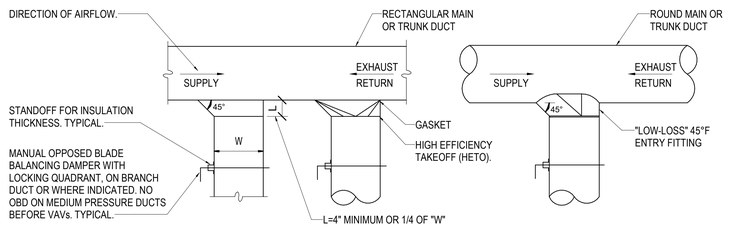
5 DUCTWORK SUPPORT DETAIL

NO SCALE



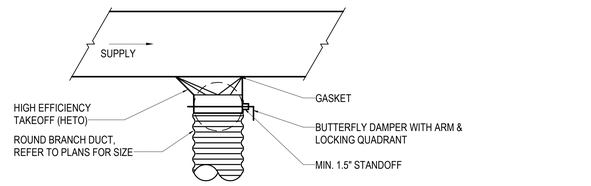
4 EXHAUST FAN DETAIL - CEILING

NO SCALE



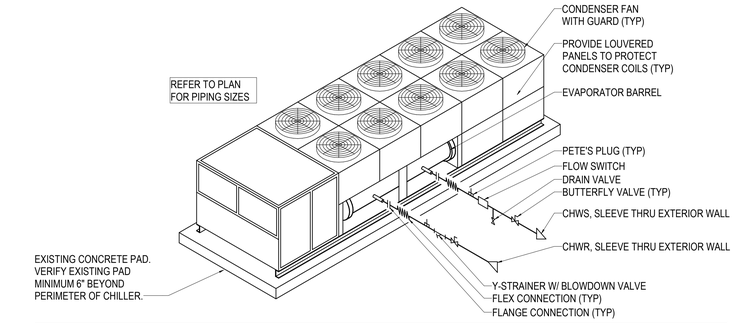
3 DUCT TAKEOFF DETAILS

NO SCALE



1 DIFFUSER INSTALLATION DETAIL

NO SCALE



NOTES:
1. INSULATE PIPING PER SPECIFICATIONS AND PROVIDE PROTECTIVE ALUMINUM JACKET WHERE EXPOSED TO WEATHER.
2. MECH. CONTRACTOR SHALL COORDINATE REQUIREMENTS OF MANUFACTURER RECOMMENDED CLEARANCES FOR SCREEN WALL CONSTRUCTION. CLEARANCES SHALL BE MAINTAINED.
3. EXISTING PIPING SHALL BE RECONNECTED. PROVIDE NEW PIPING ACCESSORIES AS REQUIRED FOR PIPING SHOWN IN ABOVE DETAIL AS NEEDED IF PORTIONS WERE DEMOLISHED WHEN OLD CHILLER WAS REMOVED.

2 CHILLER DETAIL - AIR COOLED

NO SCALE

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M-501

HVAC SCHEDULES & DETAILS

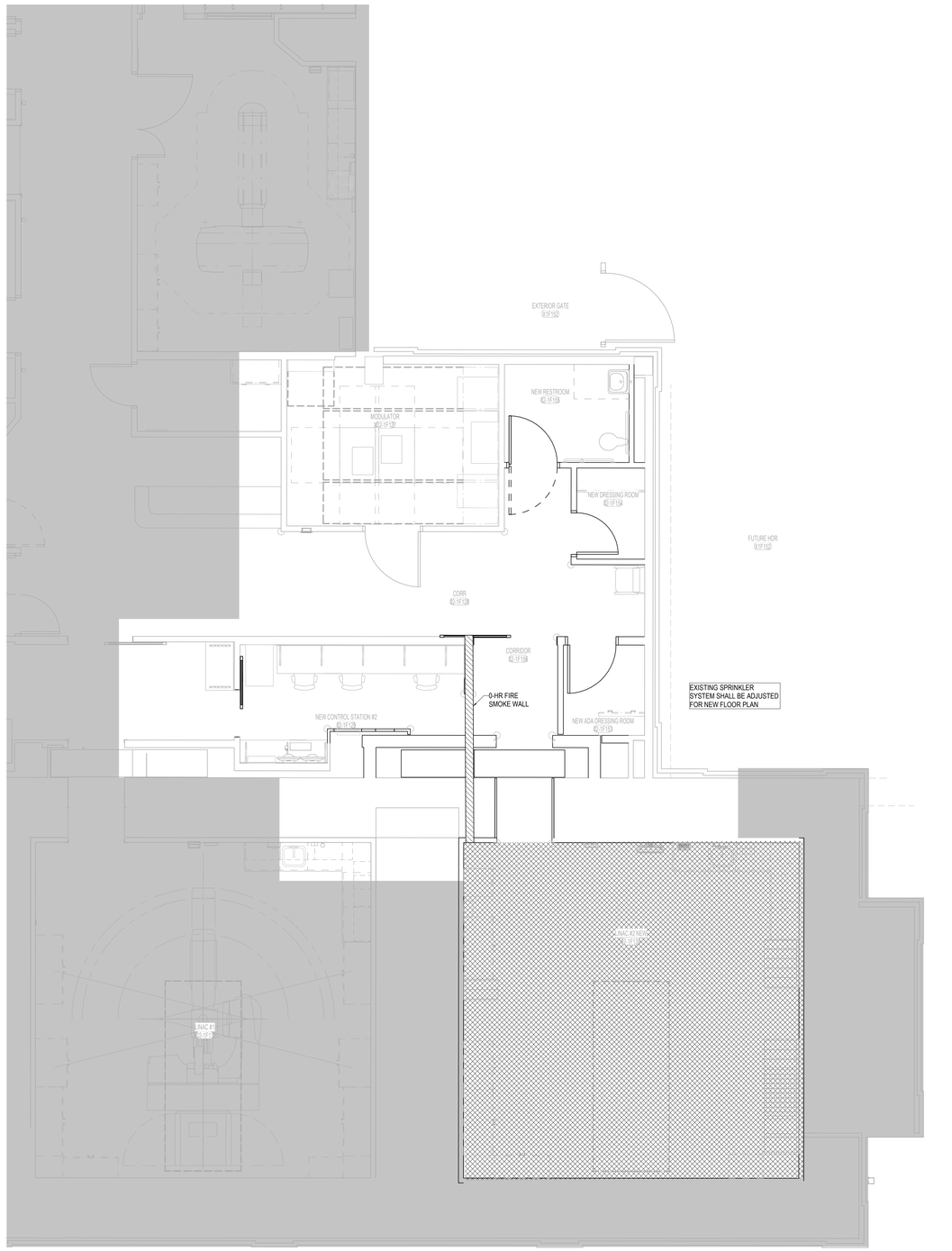
FIRE PROTECTION NOTES

1. PIPING TO BE BLACK IRON WITH SCREWED MALLEABLE IRON FITTINGS OR MECHANICAL GROOVE FITTINGS. SEE SPECIFICATIONS FOR DETAILS AND APPLICATIONS.
2. PIPE HANGERS TO BE U.L. LISTED AND MOUNTED IN ACCORDANCE WITH NFPA-13.
3. DO NOT OBSTRUCT SPRINKLERS WITH OTHER UTILITIES.
4. SEE SPECIFICATIONS FOR SPRINKLER HEAD TYPES AND APPLICATIONS. ALL SPRINKLER HEADS TO BE QUICK-RESPONSE TYPE. ALL SPRINKLER HEADS SHALL BE LOCATED IN EXACT CENTER OF CEILING TILES.
5. FIRE SPRINKLER DESIGN IS THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR. FINAL DESIGN SHALL BE SEALED BY A REGISTERED LICENSED ENGINEER IN THIS STATE. FIRE MARSHALL APPROVED SHOP DRAWINGS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.
6. COORDINATE PIPE ROUTING AND HEAD LOCATIONS WITH OTHER TRADES. PIPING AND HEADS NOT COORDINATED SHALL BE MOVED AT THE CONTRACTOR'S EXPENSE TO ACCOMPLISH CEILING HEIGHTS AS CALLED OUT ON THE ARCHITECT'S DRAWINGS.
7. COORDINATE CLOSELY WITH ALL OTHER TRADES PRIOR TO CONSTRUCTION AND PROVIDE BIM MODEL TO CONSTRUCTION MANAGER FOR COORDINATION AMONG DISCIPLINES IF APPLICABLE.
8. FIRE PROTECTION ENGINEER OF RECORD SHALL DETERMINE HAZARD CLASSIFICATIONS.

HATCH LEGEND:

NO HATCH	[WET] LIGHT HAZARD
	[WET] ORDINARY HAZARD GROUP 1
	[DRY] SPRINKLER SYSTEM

NOTE:
FIRE PROTECTION ENGINEER TO CONFIRM SYSTEM TYPES AND BOUNDARIES.



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1 **FIRST FLOOR FIRE PROTECTION ENLARGED PLAN**

0' 4' 8' 12' **1/4" = 1'-0"**

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F-111

FIRST FLOOR FIRE PROTECTION ENLARGED PLAN

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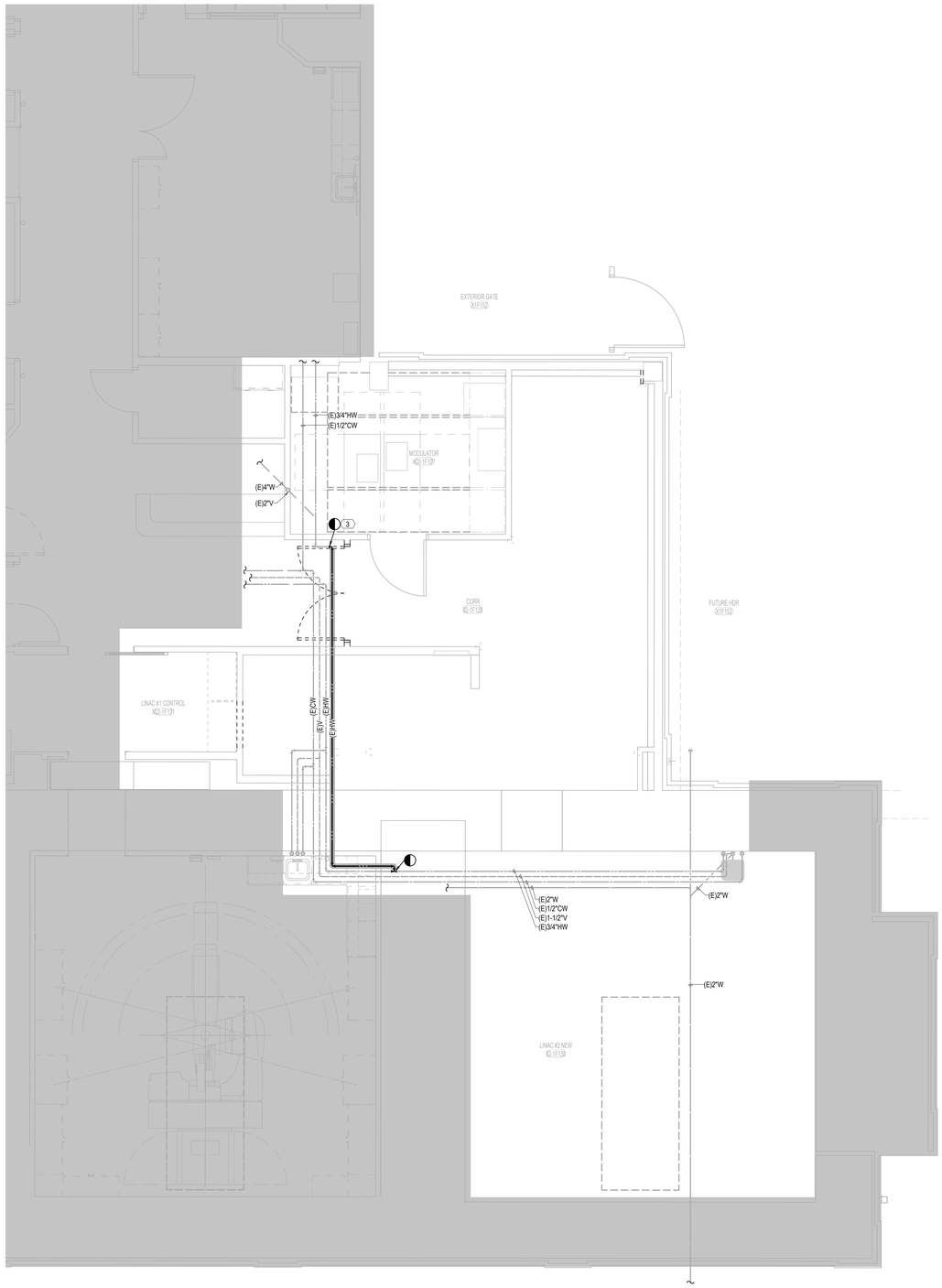

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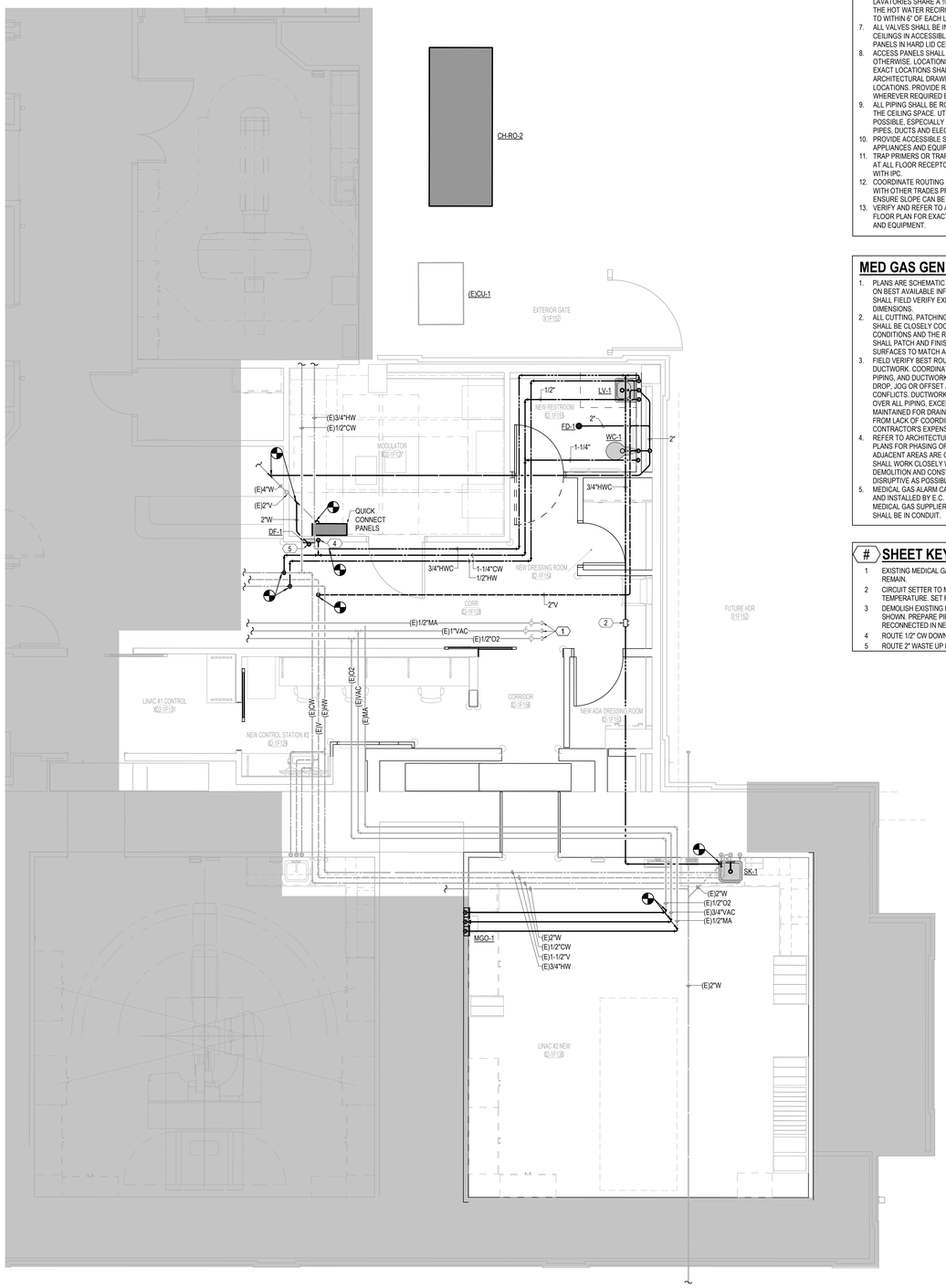
2 FIRST FLOOR PLUMBING ENLARGED DEMO PLAN

0' 4' 8' 12' 1/4" = 1'-0"



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1 FIRST FLOOR PLUMBING ENLARGED PLAN

0' 4' 8' 12' 1/4" = 1'-0"

PLUMBING GENERAL NOTES

1. REFER TO THE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.
2. NOT ALL REQUIRED CLEANOUTS ARE NECESSARILY SHOWN ON THESE PLANS. PROVIDE CLEANOUTS ON WASTE, VENT AND STORM PIPING AS REQUIRED BY CODE AND FOR REASONABLE MAINTENANCE BASED ON ACTUAL FIELD INSTALLATION.
3. PIPING ON EXTERIOR WALLS OR PRE-CAST WALLS TO BE ROUTED IN FRAMED WALL ON INTERIOR SIDE OF INSULATION.
4. TERMINATE PLUMBING VENTS NOT LESS THAN 12" ABOVE ROOF AND A MINIMUM OF 25'-0" FROM MECHANICAL OUTDOOR AIR INTAKES.
5. AVOID ROUTING OVER ELECTRICAL ROOMS AND ELECTRICAL PANELS. MAINTAIN N.E.C. CLEARANCES. COORDINATE ROUTING WITH ELECTRICAL CONTRACTOR.
6. ROUTE DOMESTIC HOT WATER RECIRCULATION PIPES DOWN THE WALL TO WITHIN 2' OF ALL PUBLIC LAVATORIES WITH A ½" RUNOUT. IF TWO OR MORE LAVATORIES SHARE A ½" OR LARGER BRANCH PIPE, THE HOT WATER RECIRCULATION PIPE SHALL CONNECT TO WITHIN 6' OF EACH LAVATORY.
7. ALL VALVES SHALL BE INSTALLED ABOVE DROP-IN CEILINGS IN ACCESSIBLE LOCATIONS, OR WITH ACCESS PANELS IN HARD LID CEILINGS.
8. ACCESS PANELS SHALL BE 24x24, UNLESS NOTED OTHERWISE. LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS AND EQUIPMENT LOCATIONS. PROVIDE RATED ACCESS PANELS WHEREVER REQUIRED BY APPLICABLE CODES.
9. ALL PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE IN THE CEILING SPACE. UTILIZE JOIST SPACE WHEN POSSIBLE, ESPECIALLY WHERE CROSSING OTHER PIPES, DUCTS AND ELECTRICAL.
10. PROVIDE ACCESSIBLE SHUT-OFF VALVES TO ALL APPLIANCES AND EQUIPMENT.
11. TRAP PRIMERS OR TRAP GUARDS SHALL BE INSTALLED AT ALL FLOOR RECEPTORS. INSTALL IN ACCORDANCE WITH IPC.
12. COORDINATE ROUTING OF CONDENSATE DRAIN LINES WITH OTHER TRADES PRIOR TO INSTALLATION TO ENSURE SLOPE CAN BE MET.
13. VERIFY AND REFER TO ARCHITECTURAL DIMENSIONAL FLOOR PLAN FOR EXACT LOCATIONS OF ALL FIXTURES AND EQUIPMENT.

MED GAS GENERAL NOTES

1. PLANS ARE SCHEMATIC IN NATURE. LAYOUT IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS.
2. ALL CUTTING, PATCHING, AND DEMOLITION WORK SHALL BE CLOSELY COORDINATED WITH THE EXISTING CONDITIONS AND THE REQUIRED NEW WORK. G.C. SHALL PATCH AND FINISH PENETRATIONS OF EXISTING SURFACES TO MATCH ADJACENT SURFACES.
3. FIELD VERIFY BEST ROUTING FOR NEW PIPING AND DUCTWORK. COORDINATE WITH EXISTING EQUIPMENT, PIPING, AND DUCTWORK. PIPING SHALL RISE AND DROP, JOG OR OFFSET AS REQUIRED TO AVOID CONFLICTS. DUCTWORK SHALL TAKE PRECEDENCE OVER ALL PIPING, EXCEPT WHERE GRADE MUST BE MAINTAINED FOR DRAINAGE. ANY EXPENSES RISING FROM LACK OF COORDINATION SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
4. REFER TO ARCHITECTURAL SPECIFICATIONS AND PLANS FOR PHASING OF DEMOLITION AND NEW WORK. ADJACENT AREAS ARE OCCUPIED AND CONTRACTOR SHALL WORK CLOSELY WITH OWNER TO SCHEDULE DEMOLITION AND CONSTRUCTION TO BE AS LEAST DISRUPTIVE AS POSSIBLE.
5. MEDICAL GAS ALARM CABLING SHALL BE PROVIDED AND INSTALLED BY E.C. VERIFY REQUIREMENTS WITH MEDICAL GAS SUPPLIER. ALL MEDICAL GAS WIRING SHALL BE IN CONDUIT.

SHEET KEYNOTES

1 EXISTING MEDICAL GASES CAPPED FOR FUTURE TO REMAIN.
2 CIRCUIT SETTER TO MAINTAIN 110 DEG F CIRCULATING TEMPERATURE. SET FLOW TO 1 GPM.
3 DEMOLISH EXISTING HWC PIPING BACK TO POINT SHOWN. PREPARE PIPE CONNECTIONS TO BE RECONNECTED IN NEW WORK.
4 ROUTE 1/2" CW DOWN IN WALL AND CONNECT TO DF-1.
5 ROUTE 2" WASTE UP IN WALL AND CONNECT TO DF-1.

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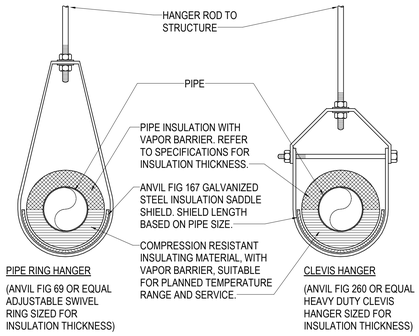
PEC PROJECT NUMBER: 25029-000

P-111

FIRST FLOOR PLUMBING ENLARGED PLAN

PLUMBING FIXTURE SCHEDULE

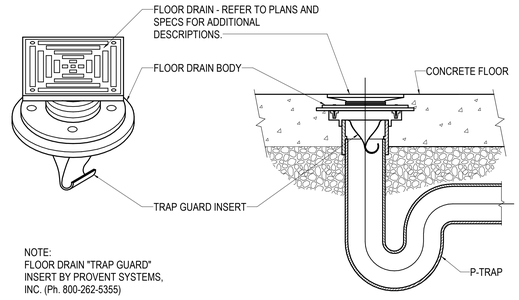
MARK	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS	ADA COMPLIANT	MATERIAL AND FINISH	TRIM					FLOW		PIPE RUNOUT SIZES				SPECIFICATION
							MANUFACTURER	MODEL	FINISH	CONTROL TYPE	POWER	GALLONS PER MINUTE (GPM)	GALLONS PER FLUSH (GPF)	COLD WATER	HOT WATER	WASTE	VENT	
LV-1	LAVATORY - WALL HUNG - SENSOR	KOHLER	K-2031 "GREENWICH"	20-3/4" x 18-1/4", 15" x 10" BOWL	YES	WHITE VITREOUS CHINA	CHICAGO FAUCET CO	116.222.AB.1T	CHROME	SENSOR	BATTERY	0.5	--	1/2"	1/2"	2"	1-1/2"	WALL HUNG LAVATORY WITH CENTERED SINGLE FAUCET HOLE - DRILLED FOR CONCEALED ARM CARRIER - BATTERY POWERED SENSOR FAUCET WITH INTEGRAL ASSE 1070 THERMOSTATIC MIXING VALVE SET TO 105°F, LAMINAR FLOW DEVICE IN BASE OF SPOUT - DRAIN WITH GRID STRAINER - CHROME PLATED WALL SUPPLIES WITH LOOSE KEY QUARTER TURN STOPS - 1-1/4" CHROME PLATED CAST BRASS P-TRAP - FLOOR-MOUNTED CONCEALED ARM CARRIER - INSULATE P-TRAP AND HOT WATER SUPPLY
SK-1	SINK - SINGLE BOWL - INTEGRAL WITH COUNTERTOP	--	--	21-1/2" x 18-1/2" x 5-3/8", 19" x 16" x 5-3/8" BOWL	NO	STAINLESS STEEL, 18 GA	CHICAGO FAUCET CO	116.223.AB.1T	CHROME	SENSOR	BATTERY	1.5	--	1/2"	1/2"	2"	1-1/2"	INTEGRAL COUNTERTOP SINK, COORDINATE NUMBER OF HOLES AND LOCATION WITH G.C. - GOOSENECK DECK MOUNTED SINGLE FAUCET WITH USER ADJUSTABLE TEMPERATURE CONTROL MIXER - ASSE 1070 THERMOSTATIC MIXING VALVE SET TO 110°F, LAMINAR FLOW DEVICE IN BASE OF SPOUT - PROVIDE WITH DUO STRAINER WITH NEOPRENE STOPPER - WALL SUPPLIES WITH LOOSE KEY QUARTER TURN STOPS - 1-1/2" CHROME PLATED CAST BRASS P-TRAP - AMERICAN STANDARD NO. 2411.015 PERFORATED GRID STRAINER DRAIN - DEARBORN NO. 510 1-1/2" 17 GAUGE P-TRAP WITH ADAPTER
DF-1	ELECTRIC WATER COOLER - SINGLE BOTTLE FILLER	ELKAY	LZWSM8K	38-7/8" SPOUT HEIGHT	NO	STAINLESS STEEL	--	--		--	PLUG-IN	1.1	--	1/2"	--	2"	1-1/2"	FILTERED (EWF3000) - CAPACITY OF 8 GPH OF 50 DEGREE WATER AT ARI CONDITIONS - 1-1/2" CAST BRASS P-TRAP - CHROME PLATED SUPPLIES WITH LOOSE KEY QUARTER TURN STOP - INWALL FRAME/PLATE (MFWS100)
FD-1	FLOOR DRAIN	WATTS	FD-100-A	6"ø STRAINER TOP	--	EPOXY COATED CAST IRON	--	--	--	--	--	--	--	--	--	2"	1-1/2"	EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE - REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEPHOLES - ADJUSTABLE ROUND HEEL PROOF NICKLE BRONZE STRAINER - NO HUB OUTLET
WC-1	WATER CLOSET - FLUSH VALVE - FLOOR MOUNTED - ADA	AMERICAN STANDARD	3461.160 "MADERA"	16-1/8" SEAT HEIGHT	YES	WHITE VITREOUS CHINA	--	--	CHROME HANDLE	MANUAL	--	--	1.6	1-1/4"	--	4"	2"	AMERICAN STANDARD ELONGATED BOWL - WATER SAVER FLUSH VALVE - SIPHON JET FLUSH QUIET OPERATION - WHITE, SOLID PLASTIC ELONGATED OPEN FRONT SEAT - FLOOR OUTLET - 1-1/2" TOP SPUD - MOUNT FLUSH VALVE HANDLE ON OPEN SIDE OF ROOM



NOTES:
1. OMIT COMPRESSION RESISTANT INSULATING MATERIAL ON PIPES 1-1/2" AND SMALLER.
2. REFER TO SPECIFICATIONS FOR GUIDANCE ON HANGER SELECTION, APPLICATION, AND INSTALLATION.

1 INSULATED PIPE AT HANGER DETAIL

NO SCALE



NOTE:
FLOOR DRAIN "TRAP GUARD" INSERT BY PROVENT SYSTEMS, INC. (Ph. 800-262-5355)

2 FLOOR DRAIN WITH 'TRAP GUARD' DETAIL

NO SCALE

MEDICAL GAS OUTLET SCHEDULE

REMARKS:
1. MINIMUM RUNOUT SIZE TO BRANCH MAIN TO BE 1/2" FOR OXYGEN AND MED AIR; 3/4" FOR VAC.
2. OUTLETS/INLETS SHALL MATCH EXISTING MANUFACTURER STYLE CURRENTLY BEING USED IN FACILITY.
3. LOCATE A VACUUM SLIDE NEXT TO EACH VACUUM WALL TERMINAL.
4. SEE ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION OF MEDICAL GAS OUTLETS ON WALL.

MARK	DESCRIPTION	OXYGEN (O2)	VAC (VAC)	MEDICAL AIR (MA)	REMARKS
MGO-01	WALL OUTLET	1	1	1	1-4

ELIZABETH ELLIOTT
NUMBER PE-2024014185
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PEC PROJECT NUMBER: 250290-000

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	VOC
Checked By	EKE

Revision

Number	Date	Description

P-501

PLUMBING SCHEDULES & DETAILS

GENERAL NOTES

HEALTHCARE

H1. DO NOT ROUTE BRANCH CIRCUITS OR FEEDERS ABOVE OR BELOW IMAGING ROOMS BECAUSE OF POSSIBLE ELECTROMAGNETIC INTERFERENCE.

H2. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS ON COLOR CODING BOXES AND/OR CONDUIT ACCORDING TO THE SPECIFIC BRANCH OF THE ESSENTIAL ELECTRICAL SYSTEM.

H3. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS ON COLOR CODING OF NAMEPLATES ACCORDING TO THE SPECIFIC BRANCH OF THE ESSENTIAL ELECTRICAL SYSTEM.

H4. THIS IS A LIFE SAFETY BUILDING WHICH MEANS IT SHALL REMAIN REASONABLY OPERATIONAL IN THE CASE OF A SEISMIC EVENT. REFER TO THE SPECIFICATIONS FOR SPECIFIC REQUIREMENTS ON EQUIPMENT BRACING.

H5. ALL PATIENT CARE AREAS (PATIENT ROOMS AND SUPPORT SPACES) SHALL HAVE TWO GROUND PATHS PER N.E.C. ARTICLE 517.

H6. REFER TO MANUFACTURER DRAWINGS FOR ALL IMAGING EQUIPMENT REQUIREMENTS, INCLUDING BUT NOT NOT LIMITED TO CIRCUIT BREAKER SIZE, CABLE TRAY, DUCTS, CONDUITS, CABLES, CONDUCTORS, EPO SWITCHES, AND ALL DEVICES REQUIRED FOR A COMPLETE INSTALLATION.

H7. THE LIFE SAFETY BRANCH AND THE CRITICAL BRANCH OF THE ESSENTIAL ELECTRICAL SYSTEM SHALL BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT AND SHALL NOT ENTER THE SAME RACEWAY, BOXES, OR CABINETS WITH EACH OTHER OR OTHER WIRING PER N.E.C. ARTICLE 517.

H8. ALL RECEPTACLES SHALL BE HOSPITAL GRADE.

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
2. REFER TO RELATED ARCHITECTURAL, MECHANICAL, STRUCTURAL, TECHNOLOGY, AND CIVIL DRAWINGS FOR RELATED INFORMATION.
3. REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
4. E.C. SHALL REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTION OF INTERLOCKING AND CONTROLS OF MECHANICAL UNITS AND THERMOSTAT LOCATIONS.
5. COORDINATE OUTLET BOX LOCATIONS WITH MASONRY TO MINIMIZE CUTTING OF BRICK OR BLOCK.
6. ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
7. CONDUIT RUN W/CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250.122. CONDUIT SIZE AS REQUIRED.
8. WHEN INCREASED CONDUCTOR SIZES ARE SHOWN ON THE PLANS, THE LARGER CONDUCTOR SIZE SHALL BE USED THROUGHOUT THE LENGTH OF THE CIRCUIT, INCLUDING NEUTRAL AND GROUND.
9. E.C. SHALL REFERENCE ARCHITECTURAL FINISH DRAWINGS FOR LOCATIONS AND HEIGHTS OF RIGID WALL COVERINGS, TILE, CHAIR RAIL, WAINSCOATING, ETC. AND ADJUST ELECTRICAL BOX ROUGH-IN HEIGHTS SO THAT COVERPLATES DO NOT PARTIALLY OVERLAP THESE ITEMS.
10. BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS WITH INDIVIDUAL NEUTRALS. A MAXIMUM OF THREE CIRCUITS (MAXIMUM OF THREE PHASE CONDUCTORS) MAY BE GROUPED IN A SINGLE CONDUIT. WHERE MULTIPLE CIRCUITS ARE LOCATED IN THE SAME RACEWAY, JUNCTION BOX OR ENCLOSURE, NEUTRALS SHALL BE MARKED OR LABELED TO INDICATE WHICH CIRCUIT THEY ARE ASSOCIATED WITH. SEE SPECIFICATION SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR ADDITIONAL INFORMATION.
11. JUNCTION BOX OR RECEPTACLE FOR DRINKING FOUNTAINS SHALL BE LOCATED BEHIND THE EQUIPMENT SKIRT UNLESS OTHERWISE NOTED. COORDINATE CONNECTION TYPE AND LOCATION WITH EQUIPMENT PROVIDED.
12. LABEL THE FRONT OF EACH RECEPTACLE COVERPLATE WITH PANEL DESIGNATION AND CIRCUIT NUMBER USING CLEAR THERMAL TRANSFER (ELECTRONIC DYMO) LABELS WITH 1/8" HIGH BLACK LETTERS (OR CONTRASTING COLOR IF COVERPLATES ARE BLACK OR BROWN). LABELS SHALL BE SUITABLE FOR INDOOR/OUTDOOR USE. LABEL THE BACK OF EACH LIGHT SWITCH COVERPLATE WITH PANEL DESIGNATION AND CIRCUIT NUMBER USING A FINE BLACK PERMANENT MARKER.
13. PROVIDE 18" LONG (MIN.) CONDUIT SLEEVES THRU ALL WALLS WHERE CABLES ARE INDICATED OR REQUIRED TO PASS THRU WALLS. PROVIDE BUSHINGS ON BOTH ENDS. SIZE CONDUIT FOR CABLES INSTALLED. AT CABLE TRAYS, PROVIDE ONE 4" CONDUIT SLEEVE FOR EACH 4" WIDTH OF CABLE TRAY. MAXIMUMS SHALL BE:
    1"C. = 10 CABLES
    2 1/2"C. = 20 CABLES
    3"C. = 30 CABLES
    4"C. = 50 CABLES
14. LOCATE CABLE TRAYS 6" ABOVE CEILING. OFFSET TRAY UP AND OVER LIGHT FIXTURES AND DUCTWORK (FIELD VERIFY AND PROVIDE AS REQUIRED). IF PHYSICALLY IMPOSSIBLE TO RUN CABLE TRAY UP AND OVER, THEN PROVIDE CABLE SUPPORT HOOKS FROM STRUCTURE ABOVE, SIZED AND RATED FOR INSTALLED CABLES PLUS 25% SPARE.
15. PROVIDE DIMMER PER THE SPECIFICATIONS. COORDINATE DIMMER TYPE AND WIRING WITH ASSOCIATED LIGHT FIXTURE DIMMING REQUIREMENTS (I.E. 3-WIRE, 0-10V, ELECTRONIC OR MAGNETIC LOW VOLTAGE, ETC.) OR WITH LIGHTING CONTROL SYSTEM PROPRIETARY REQUIREMENTS (I.E. LUTRON, nLIGHT, DALI, ETC.) AS NECESSARY. 3-WIRE DIMMERS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL FOR EACH CONTROL ZONE. 0-10V DIMMERS SHALL BE PROVIDED WITH DIM/ON/OFF CONTROL. COORDINATE PHASE CONTROL OF LED DRIVERS (I.E. REVERSE PHASE, FORWARD PHASE, ETC.) WITH LIGHT FIXTURE MANUFACTURER'S RECOMMENDATIONS. LOW VOLTAGE CONTROL WIRING IS NOT SHOWN ON PLANS FOR CLARITY, BUT SHALL BE PROVIDED AS REQUIRED.
16. "CT" INDICATED ADJACENT TO DEVICE INDICATES DEVICE MOUNTED ABOVE BACKSPLASH OF COUNTER TOP. VERIFY EXACT HEIGHT WITH ARCHITECTURAL PLANS AND ELEVATIONS.

FIRE ALARM

F1. THE FIRE ALARM SYSTEM SHOWN HAS BEEN DESIGNED PER THE REQUIREMENTS OF NFPA 72, 2013 EDITION. DEVICES SHOWN INDICATE DESIGN INTENT AND SHALL BE THE MINIMUM PROVIDED. SYSTEM SUPPLIER SHALL PROVIDE ANY ADDITIONAL CODE REQUIRED DEVICES OR DEVICES REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

F2. FIELD VERIFY LOCATIONS OF AREA SMOKE DETECTORS AND HEAT DETECTORS. DO NOT LOCATE WITHIN 36" OF A HVAC DIFFUSER (SUPPLY OR RETURN), IN A DIRECT AIR FLOW, WITHIN 36" OF A SPRINKLER HEAD, OR WITHIN 36" OF THE TIP OF A CEILING FAN BLADE. SMOKE DETECTORS FOR DOOR RELEASE SHALL BE LOCATED ON THE CENTER LINE OF THE DOOR AND A MAXIMUM OF 5 FEET FROM THE DOOR. THE MINIMUM DISTANCE FROM THE DOOR IS THE DEPTH OF THE WALL SECTION ABOVE THE DOOR, BUT NOT LESS THAN 12".

F3. FAN SHUTDOWN RELAY WIRING SHALL BE LOCATED WITHIN 3 FEET OF THE FAN CONTROLS AND THE WIRING TO THE RELAY SHALL BE MONITORED.

F4. LABEL REMOTE ALARM INDICATOR FOR DUCT MOUNTED SMOKE DETECTORS (I.E. RTU-1 SUPPLY, RTU-2 RETURN, FIRE/SMOKE DAMPER, ETC.). DUCT DETECTORS SHOULD BE LOCATED IN THE AREA BETWEEN 6 AND 10 DUCT EQUIVALENT DIAMETERS OF STRAIGHT, UNITERRUPTED DUCTWORK. DUCT DETECTORS FOR FIRE/SMOKE DAMPERS SHOULD BE LOCATED BETWEEN THE LAST INLET OR OUTLET UPSTREAM OF THE DAMPER AND THE FIRST INLET OR OUTLET DOWNSTREAM OF THE DAMPER.

F5. PROVIDE 120V POWER AND FUSTAT FOR EACH FIRE/SMOKE DAMPER. INTERLOCK WITH FIRE ALARM CONTROL PANEL TO CLOSE THE FIRE/SMOKE DAMPER UPON ANY ALARM AT THE FIRE ALARM CONTROL PANEL AND TO SHUTDOWN THE ASSOCIATED MECHANICAL UNIT.

LOW VOLTAGE ROUGH-IN ONLY

R1. DEVICES AND INFORMATION SHOWN ARE FOR ROUGH-IN PURPOSES ONLY AND ARE NOT INTENDED TO CONVEY TECHNOLOGY DESIGN SCOPE.

NURSE CALL

N1. THE CONTRACTOR SHALL PROVIDE OUTLET BOXES AND 1"C. TO ABOVE NEAREST ACCESSIBLE CEILING FOR ALL NURSE CALL DEVICE LOCATIONS. ALL NURSE CALL DEVICE LOCATIONS SHALL BE COORDINATED WITH THE FINAL DRAWINGS FROM THE NURSE CALL SYSTEM SUPPLIER. COORDINATE ALL REQUIREMENTS WITH THE NURSE CALL SYSTEM SUPPLIER. MOUNTING HEIGHT FOR EMERGENCY BATH STATIONS SHALL BE PER AIA GUIDELINES.

SYMBOL LIST

ONE-LINE

SYMBOL	DESCRIPTION	MOUNTING
LSIG, GFI, ST, K	CIRCUIT BREAKER ACCESSORIES: LSIG = LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT GFI = GROUND FAULT ST = SHUNT TRIP K = KIRK KEY INTERLOCK	
G	INDICATOR LIGHT(G=GREEN, R=RED)	
B	ERMS INDICATING LIGHT & SWITCH)	
	CONTACTS (N.O., N.C.)	
	FUSE	
	CIRCUIT BREAKER	
	OVERLOADS	
	DRAWOUT CONTACTS	
	DISCONNECT SWITCH (SEE EQUIP CONN SCHED) (VOLTAGE / SWITCH SIZE / FUSE SIZE / # OF POLES - NOTED IF EQUIPMENT NOT SCHEDULED)	
	STARTER (SEE EQUIP CONN SCHED) (VOLTAGE / STARTER SIZE / # OF POLES - NOTED IF EQUIPMENT NOT SCHEDULED)	
	GROUND CONNECTION	
	LIGHTNING ARRESTOR	
1	FEEDER DESIGNATION	
SPD	SURGE PROTECTIVE DEVICE	
M	METER (UTILITY / PANEL MOUNTED)	
HP, KW	EQUIPMENT (SINGLE MOTOR / MULTI-MOTOR OR OTHER TYPE AS NOTED)	
VFD	VARIABLE FREQUENCY DRIVE (HP SIZE IF NOT SCHEDULED)	
# A A 2P	FUSIBLE SWITCH (CIRCUIT NUMBER / SWITCH SIZE / FUSE SIZE / # OF POLES) (# OF POLES IF OTHER THAN 3)	
# A A 2P '1'	STARTER WITH FUSIBLE SWITCH (CIRCUIT NUMBER / SWITCH SIZE / FUSE SIZE / # OF POLES / STARTER SIZE) (# OF POLES IF OTHER THAN 3)	
# A 2P, # AF AT 2P	CIRCUIT BREAKER (MOLDED CASE NON-ADJUSTABLE TRIP / ADJUSTABLE TRIP) (CIRCUIT NUMBER / TRIP SIZE / # OF POLES) (FRAME SIZE / TRIP SIZE) (# OF POLES IF OTHER THAN 3)	
	3Ø TRANSFORMER (DELTA PRIMARY / WYE SECONDARY)	
	1Ø TRANSFORMER	
PANEL SPD	PANELBOARD (BUILT-IN SPD)	
N E ATS	TRANSFER SWITCH (ATS = AUTOMATIC, MTS = MANUAL) (AMP SIZE / VOLTAGE / POLES / AIC RATING / NEMA RATING) (NEMA RATING IF OTHER THAN NEMA-1)	
'1' RV AT	MOTOR STARTER [SINGLE SPEED ACROSS-THE-LINE (UON)] (NEMA SIZE / RV AT= REDUCED VOLTAGE / AUTO-TRANSFORMER / SS = SOLID STATE)	

FIRE ALARM

SYMBOL	DESCRIPTION	MOUNTING
'FACP'	FIRE ALARM CONTROL PANEL	WALL
'FAAP'	FIRE ALARM REMOTE ANNUNCIATOR	WALL
'VEP'	VOICE EVACUATION PANEL	WALL
	FIRE ALARM HORN	BOTTOM 80"
C	FIRE ALARM HORN	CEILING
	FIRE ALARM VISUAL SIGNAL	BOTTOM 80"
	FIRE ALARM VISUAL SIGNAL	CEILING
	COMB. F.A. HORN & VISUAL SIGNAL	BOTTOM 80"
C	COMB. F.A. HORN & VISUAL SIGNAL	CEILING
S	FIRE ALARM SPEAKER	WALL
S C	FIRE ALARM SPEAKER	CEILING
	COMB. F.A. SPEAKER & VIS SIGNAL	BOTTOM 80"
C	COMB. F.A. SPEAKER & VIS SIGNAL	CEILING
C F	CHIME	WALL
F	FIRE SPRINKLER ALARM BELL	WALL
DH	ELECTROMAGNETIC DOOR HOLDER	WALL
R	FIRE ALARM RELAY (GEN NOTE F3)	
CM	FIRE ALARM CONTROL MODULE	
MM	FIRE ALARM MONITOR MODULE	
F	FIRE ALARM MANUAL STATION	46"AFF
S, S AC, S UF	PHOTO ELECTRIC AREA SMOKE DETECTOR (GEN NOTE F2)	CLG/WALL ABOVE CLG UNDER FLR
S	DUCT SMOKE DETECTOR (GEN NOTE F4)	DUCTWORK
FSD, SD	DUCT SMOKE DETECTOR & FIRE/ SMOKE DAMPER (FSD) OR SMOKE DAMPER (SD) (GEN NOTES F4 & F5)	DUCTWORK
H, H R, H H	HEAT DETECTOR (GEN NOTE F2) (FIXED TEMPERATURE UON) R = RATE OF RISE H = HIGH TEMPERATURE	
CO	CARBON MONOXIDE DETECTOR	
CO2	CARBON DIOXIDE DETECTOR	
SMOKE	SMOKE CAMERA (EQUAL TO XTRALIS OSID)	WALL (AS HIGH AS POSSIBLE)
PS	FIRE SPRINKLER PRESSURE SWITCH	
TS	FIRE SPRINKLER TAMPER SWITCH	SPRKLR RSR
FS	FIRE SPRINKLER WATER FLOW SW	SPRKLR RSR

COMMUNICATION / DATA

SYMBOL	DESCRIPTION	MOUNTING
	2-GANG COMMUNICATIONS EMPTY OUTLET (GEN NOTE T1)	18"

SECURITY

SYMBOL	DESCRIPTION	MOUNTING
	CCTV CAMERA - BULLET	
	CCTV CAMERA - PAN/TILT/ZOOM	
	CCTV CAMERA - 360° QUAD SENSOR WITH PTZ ATTACHMENT	
	CCTV DOME CAMERA - FIXED (SINGLE SENSOR)	
	CCTV DOME CAMERA - FIXED (DUAL SENSOR)	
	CCTV DOME CAMERA - FIXED (TRI SENSOR/180° PANORAMIC)	
	CCTV DOME CAMERA - FIXED (QUAD SENSOR)	
	CCTV DOME CAMERA - FIXED (360° FISH EYE)	
A	AUTOMATIC DOOR ACTUATOR	
D	DURESS	
DR	REMOTE DOOR RELEASE BUTTON	
LD	LOCKDOWN BUTTON	
'ACS#'	ACCESS CONTROL SYSTEM PANEL	WALL
	DOOR POSITION SWITCH	
M	MAGNETIC LOCK	
CR	CARD READER	46" AFF
CR M	CARD READER - MULLION-MOUNTED	46" AFF
K	KEY PAD	
RE	REQUEST TO EXIT DEVICE (PSHBTN)	WALL
###	DOOR TAG	
IC	INTERCOM	WALL
IC V	VIDEO INTERCOM	WALL
IC VC	VIDEO INTERCOM W/ CARD READER	WALL
IM	INTERCOM MASTER STATION	DESKTOP
'IDS#'	INTRUSION DETECTION SYST PANEL	WALL
	GLASS BREAK SENSOR	
B	SECURITY BEAM DETECTOR	
	SECURITY MOTION DETECTOR	WALL/CLG
	SECURITY 360° MOTION DETECTOR	CEILING
J	JUNCTION BOX	

NURSE CALL

SYMBOL	DESCRIPTION	MOUNTING
S	STAFF STATION (WITH PROGRAMMABLE BUTTONS)	
S#	STAFF STATION WITH SPECIFIED FEATURES (SEE NC SCHEDULE)	
P	PATIENT STATION (WITH PROGRAMMABLE BUTTONS)	
P#	PATIENT STATION WITH SPECIFIED FEATURES (SEE NC SCHEDULE)	
DS	DUTY STATION	
'NCCP'	NURSE CALL CONTROL PANEL	WALL
Z	ZONE LIGHT	CEILING
	DOME LIGHT	CLG/WALL
BI	NC BED INTERFACE UNIT	
CB	CODE BLUE STATION	
NM	MASTER STATION	DESKTOP
X	PRESENCE STATION	
A	AUXILIARY JACK	
BS	EMERGENCY BATH STATION	

- - - SYMBOL LIST IS FOR REFERENCE ONLY. ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT. - - -

SYMBOL LIST

ABBREVIATIONS

SYMBOL	DESCRIPTION	MOUNTING
NL	NIGHT LIGHT - WIRE AHEAD OF CONTROLS	
EM	ON EMERGENCY POWER	
WP	WEATHERPROOF	
CT	COUNTERTOP (SEE GEN. NOTE 16)	
UON	UNLESS OTHERWISE NOTED	
W	WALL	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
DF	DRINKING FOUNTAIN - SEE GENERAL NOTE 11	
GAP	GENERATOR ANNUNCIATOR PANEL	
CLG	CEILING	

CONDUIT AND WIRING

SYMBOL	DESCRIPTION	MOUNTING
	EMERGENCY CIRCUIT	CLG/WALL
	MASTER/SLAVE FIXTURE WHIP	CEILING
	LOW VOLTAGE WIRING	CLG/WALL
	CDT RUN 2#12 & 1#12 GRD.- 1/2"C. OR CDT RUN AS NOTED ON PLAN	CLG/WALL
	CDT RUN 2#12 & 1#12 GRD.- 3/4"C. OR CDT RUN AS NOTED ON PLAN	EARTH/ FLOOR
#10	CONDUIT HOME RUN, 1 CIRCUIT. 2#10 & 1#10 GRD. (GEN. NOTES 7 & 8)	CLG/WALL
	CONDUIT RUN PARTIAL CIRCUIT. 2#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	MISC. EQUIPMENT CONNECTION	
	CONDUIT SEAL OFF	
	CONDUIT HOME RUN, 1 CIRCUIT. 2#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	CONDUIT HOME RUN, 2 CIRCUITS. 4#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	CONDUIT HOME RUN, 3 CIRCUITS. 6#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	CONDUIT HOME RUN, 2 CIRCUITS PHASE CONDUCTORS/ NEUTRAL CONDUCTOR (#12 UON) SWITCH LEGS (#12 UON) GROUND CONDUCTOR (#12 UON)	CLG/WALL

POWER

SYMBOL	DESCRIPTION	MOUNTING
	SINGLE GROUNDED RECEPTACLE	18"
	DUPLEX GROUNDED RECEPTACLE	18"
	DUPLEX GROUNDED RECEPTACLE	CEILING
	DOUBLE DUPLEX GROUNDED REC	18"
	GROUND FAULT DUPLEX REC	18"
	GRD FAULT DOUBLE DUPLEX REC	18"
	DUPLEX GRD REC BOTTOM SWITCHD	18"
	TAMPER-PROOF DUPLEX REC	18"
	TAMPER-PROOF GFCI DUPLEX REC	18"
A	SPECIAL OUTLET (SEE SCHEDULE OR AS NOTED)	FLOOR/WALL
FB#, PT#	FLOOR BOX / POKE-THRU (SEE SCHEDULE OR AS NOTED)	FLOOR
2	FEEDER DESIGNATION	
1J	JUNCTION BOX - 1-GANG	
J	JUNCTION BOX - 2-GANG	
F	FUSTAT BUSS #SSY	46"
TS	THERMOSTAT/TEMP SENSOR	46"
P	PLUG LOAD SENSOR	CEILING
H	HANDICAP DOOR PUSHBUTTON	36" AFF
A	BRANCH CIRCUIT PANEL AND PANEL DESIGNATION	72" TO TOP
	ELECTRICAL DISTRIBUTION EQUIP	
X-X	EQUIPMENT - SEE EQUIPMENT CONNECTION SCHEDULE	
	CONDUIT SLEEVE (GEN NOTE 13)	
	CABLE TRAY - WIRE BASKET, LADDER (GEN NOTE 14)	
M	MOTOR	
	DISCONNECT SWITCH	
$M	MANUAL STARTER	
	CIRCUIT BREAKER	
	STARTER OR ATS (AS NOTED)	
	COMBINATION STARTER/DISC	
R	RELAY	
	PUSHBUTTON (1-, 2-, 3-BUTTON)	46"
T	BOX MOUNTED TRANSFORMER	
C	CONTACTOR	
	METER	
	PLUGMOLD SURFACE RACEWAY	WALL
	BUSDUCT PLUG	

LIGHTING, SWITCHES AND SENSORS

SYMBOL	DESCRIPTION	MOUNTING
A	LIGHT FIXTURE & FIXTURE LETTER	CLG SURF/ RECESSED
A	STRIP LIGHT FIXTURE & FIXTURE LETTER	CEILING
A	LIGHT FIXTURE & FIXTURE LETTER	CLG SURF/ RECESSED
A	LIGHT FIXTURE & FIXTURE LETTER	WALL
A	EXIT SIGN (SHADING DENOTES EXIT FACE SIDE)	CLG/WALL
A	LIGHT FIXTURE & FIXTURE LETTER	WALL
A	FIXTURE WITH SHADED LAMP(S) ON EMERGENCY POWER	CLG SURF/ RECESSED
A	EMERGENCY BATTERY LIGHT FIXT	CEIL/WALL
A	COMBO EXIT SIGN/EM BATTERY LIGHT	WALL
A	LIGHT FIXTURE & FIXTURE LETTER	POLE
A T	LIGHTING TRACK, TRACK FIXTURES, & FIXTURE LETTERS	CEILING
PC	PHOTOCELL	
$ $2 $3 $4	SWITCHES (1-POLE, 2-POLE, 3-WAY, 4-WAY)	46"
$K $P $T	SWITCHES (KEYED, PILOT, TIMER)	46"
a, b, c	INDICATES SWITCHING SCHEME	
M	1 RELAY OCCUPANCY SENSOR SW	46"
2M	2 RELAY OCCUPANCY SENSOR SW	46"
1D	1 RELAY OCCUPANCY SENSOR/ DIMMER SWITCH (GEN NOTE 15)	46"
D	DIMMER SWITCH (GEN NOTE 15)	46"
S	LOW VOLTAGE SWITCH	46"
S 1	ON/OFF SWITCH	46"
S 2	ON/OFF/0-10V DIMMING SWITCH	46"
S 3	DUAL TECH ON/OFF SENSOR	46"
S 4	16-SCENE WALL CONTROLLER	46"
S 5	DUAL TECH ON/OFF/0-10V DIM SW	46"
	OCCUPANCY SENSOR	CLG/WALL
LP	LIGHTING CONTROL POWER PACK	
EP	UL-924 LISTED POWER PACK	
AV	AV SYSTEM/LIGHTING INTERFACE	
DS	DAYLIGHT SENSOR	CEILING

PEN WEIGHT LEGEND

SYMBOL	DESCRIPTION
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK SOLID LINES ARE NEW TO BE INSTALLED	
	NEW DUPLEX GROUNDED RECEPTACLE
	NEW LIGHT FIXTURE
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN HALFTONE SOLID LINES ARE EXISTING TO REMAIN	
	EXISTING DUPLEX GROUNDED REC TO REMAIN
	EXISTING LIGHT FIXTURE TO REMAIN
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK DASHED LINES ARE EXISTING TO BE REMOVED	
	DUPLEX GROUNDED REC TO BE REMOVED
	LIGHT FIXTURE TO BE REMOVED
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN LIGHT DASHED LINES ARE EXISTING TO BE RELOCATED	
	DUPLEX GROUNDED REC TO BE RELOCATED
	LIGHT FIXTURE TO BE RELOCATED

- - - SYMBOL LIST IS FOR REFERENCE ONLY. ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT. - - -

ELECTRICAL SHEET INDEX

SHEET NO.	SHEET TITLE
E-001	ELECTRICAL GENERAL NOTES AND SYMBOLS
E-100	ELECTRICAL OVERALL PLAN
E-101	ELECTRICAL DEMOLITION PLAN
E-121	ELECTRICAL POWER PLAN
E-122	ELECTRICAL CONDUIT PLAN
E-132	ELECTRICAL LIGHTING PLAN
E-142	ELECTRICAL SYSTEMS PLAN
E-501	ELECTRICAL DETAILS
E-601	ELECTRICAL ONE-LINE DIAGRAM
E-611	ELECTRICAL SCHEDULES

STATE OF MISSOURI
BRETT M. WALBRIDGE
NUMBER PE-2019026078
PROFESSIONAL ENGINEER
06/27/2025

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PEC PROJECT NUMBER: 250290-000

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

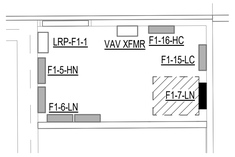
Date	06.27.2025
Job Number	3-25014
Drawn By	JGM
Checked By	JLW

Revision

Number	Date	Description

E-001

ELECTRICAL GENERAL NOTES AND SYMBOLS



E6 ENLARGED PLAN - ELECTRICAL ROOM 1F012
1/4" = 1'-0"

EXISTING BUILDING

E6
E-100

APPROXIMATE LOCATION OF
DISTRIBUTION PANEL DP-F1-F-LN.

PROJECT SCOPE AREA

A4 ELECTRICAL OVERALL PLAN
1/32" = 1'-0"

PLAN NORTH

STATE OF MISSOURI
BRETT M. WALBRIDGE
NUMBER PE-2010024073
PROFESSIONAL ENGINEER
06/27/2025

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SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	JGM
Checked By	JLW

Revision

Number	Date	Description

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
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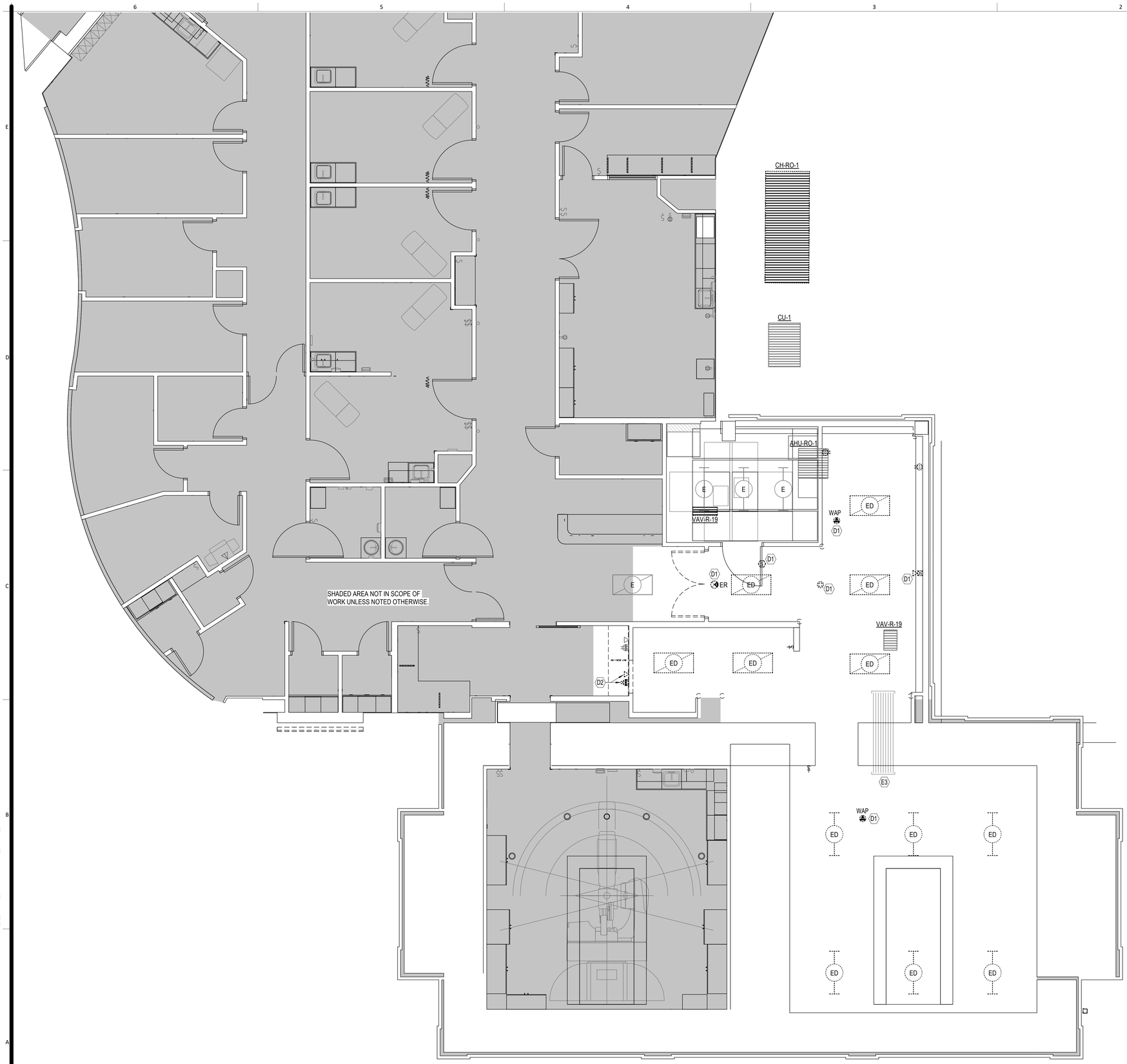
PEC AUTHORITY NUMBER: EGC 000465F
PEC PROJECT NUMBER: 250290-000

E-100

ELECTRICAL OVERALL PLAN



A5 ELECTRICAL DEMOLITION PLAN
1/4" = 1'-0"

PLAN NORTH

DEMOLITION GENERAL NOTES

1. DEMOLITION PLANS SHOW THE GENERAL EXTENT OF THE ELECTRICAL DEMOLITION WORK. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ELECTRICAL SERVICES TO ALL EQUIPMENT BEING REMOVED, SEE MECHANICAL PLANS. OWNER SHALL HAVE THE OPTION TO RETAIN REUSABLE ITEMS, SUCH AS COVERPLATES, RECEPTACLES, LIGHTS, PANELS, ETC. NOT BEING USED IN THE FINISHED WORK. COORDINATE WITH OWNER PRIOR TO STARTING DEMOLITION. PROPERLY AND LEGALLY DISPOSE OF ALL EQUIPMENT AND MATERIALS BEING REMOVED.
2. REMOVE ALL CONDUIT LEFT EXPOSED BY REMOVAL OF WALLS AND CEILINGS IN REMODELED AREAS. PLUG BOTH ENDS OF REMAINING CONDUIT IN WALL OR FLOOR WHERE CUT.
3. ELECTRICAL OUTLETS, ETC. POSSIBLY CONCEALED BY STORAGE SHELVING, CASEWORK, FURNITURE, ETC. ARE NOT SHOWN AND MAY REQUIRE REMOVAL.
4. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ALL OPENINGS IN EXISTING CONSTRUCTION AFTER REMOVAL OF EQUIPMENT, RACEWAY SYSTEMS, OUTLET BOXES, ETC.
5. WHERE EQUIPMENT AND OTHER DEVICES ARE BEING REMOVED, THE CIRCUITING SHALL BE REMOVED, IF POSSIBLE, BACK TO POINT OF SUPPLY. WHERE REQUIRED, CIRCUITING SHALL BE EXTENDED TO MAINTAIN CONTINUITY OF THE CIRCUIT OR OPERATION OF THE SYSTEM.
6. ALL DEVICES SHOWN DASHED ON THE DEMOLITION PLAN(S) SHALL BE REMOVED, UNLESS NOTED OTHERWISE.
7. PROVIDE MATCHING BLANK COVERPLATES WHERE DEVICES ARE BEING REMOVED FROM FLUSH-MOUNTED OUTLET BOXES IN EXISTING WALLS TO REMAIN.
8. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK.

SHEET KEYNOTES

D1	REMOVE DEVICE AND PROTECT DURING CONSTRUCTION FOR REINSTALLATION. REFER TO A5/E-132 AND A5/142 FOR NEW LOCATION(S).
D2	REMOVE QUAD RECEPTACLE AND DATA OUTLET FOR INSTALLATION OF NEW SLIDING DOOR. RECONFIGURE RECEPTACLE CIRCUIT SUCH THAT REMAINING DEVICES ON CIRCUIT REMAIN ACTIVE AFTER DEMOLITION.
E3	(6) 3/4" AND (1) 2" EXISTING CONDUITS ROUTED THROUGH VAULT WALL AND STUBBED FOR FUTURE USE. NEW CIRCUITS ARE TO BE ROUTED THROUGH EXISITING CONDUITS WHERE POSSIBLE.

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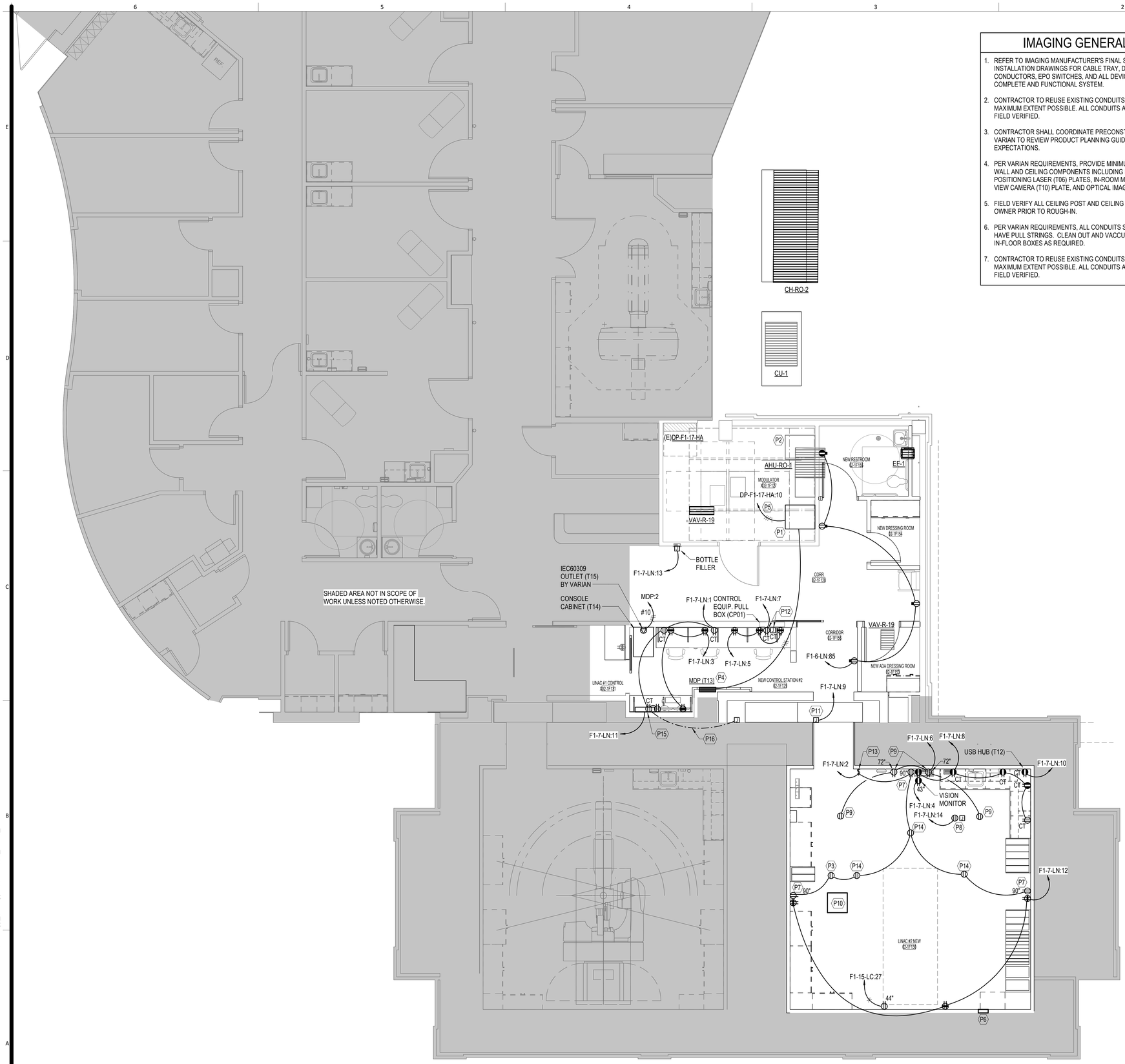
E-101

ELECTRICAL DEMOLITION PLAN



A5 ELECTRICAL POWER PLAN - ENLARGED VIEW
1/4" = 1'-0"

IMAGING GENERAL NOTES

1. REFER TO IMAGING MANUFACTURER'S FINAL SITE SPECIFIC INSTALLATION DRAWINGS FOR CABLE TRAY, DUCTS, CONDUITS, CONDUCTORS, EPO SWITCHES, AND ALL DEVICES REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
2. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.
3. CONTRACTOR SHALL COORDINATE PRECONSTRUCTION MEETING WITH VARIAN TO REVIEW PRODUCT PLANNING GUIDE AND VARIAN CHECKLIST EXPECTATIONS.
4. PER VARIAN REQUIREMENTS, PROVIDE MINIMUM #12 GROUND TO VARIAN WALL AND CEILING COMPONENTS INCLUDING RELAY JUNCTION BOX (T05), POSITIONING LASER (T06) PLATES, IN-ROOM MONITOR (T07) POST, LIVE-VIEW CAMERA (T10) PLATE, AND OPTICAL IMAGING CAMERA (T20) POST.
5. FIELD VERIFY ALL CEILING POST AND CEILING CAMERA LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
6. PER VARIAN REQUIREMENTS, ALL CONDUITS SHALL BE DRY, CLEAN, AND HAVE PULL STRINGS. CLEAN OUT AND VACCUM EXISTING CONDUITS AND IN-FLOOR BOXES AS REQUIRED.
7. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.

POWER GENERAL NOTES

1. BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS WITH INDIVIDUAL NEUTRALS. A MAXIMUM OF THREE CIRCUITS (MAXIMUM OF THREE PHASE CONDUCTORS) MAY BE GROUPED IN A SINGLE CONDUIT. WHERE MULTIPLE CIRCUITS ARE LOCATED IN THE SAME RACEWAY, JUNCTION BOX OR ENCLOSURE, NEUTRALS SHALL BE MARKED OR LABELED TO INDICATE WHICH CIRCUIT THEY ARE ASSOCIATED WITH. SEE SPECIFICATION SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR ADDITIONAL INFORMATION.
2. A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL CONDUITS.
3. FOR CONNECTION REQUIREMENTS TO MECHANICAL UNITS, SEE MECHANICAL EQUIPMENT CONNECTION SCHEDULE.
4. REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF FIRE RATED WALLS AND CEILINGS AND THE ASSOCIATED U.L. ASSEMBLY NUMBERS.
5. FOR ALL PENETRATIONS IN FIRE RATED WALLS AND CEILINGS, PROVIDE AN ASTM E814 COMPLIANT, U.L. LISTED THROUGH PENETRATION FIRE STOPPING SYSTEM THAT IS SPECIFIC TO THE WALL OR CEILING CONSTRUCTION ASSEMBLY. INSTALL SYSTEM IN STRICT COMPLIANCE WITH THE U.L. ASSEMBLY INDICATED IN THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
6. ALL PIPING, CONDUIT, AND OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) IN FIRE RATED WALLS OR CEILINGS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIAL.
7. OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES OR PROTECTED BY OTHER MEANS ALLOWED BY THE SPECIFIC U.L. ASSEMBLY.
8. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF STC RATED WALLS. OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) ON OPPOSITE SIDES OF STC RATED WALLS SHALL BE LIMITED TO TWO OUTLET BOXES PER STUD SPACE AND COVERED WITH "PUTTY PAD" TYPE MOLDABLE FIRE BARRIER.
9. FIELD VERIFY THE EXACT LOCATION OF ALL FLOOR BOXES AND POKE THROUGHS WITH ARCHITECT PRIOR TO ROUGH-IN.
10. PROVIDE ALL ISOLATED GROUND CIRCUITS WITH INDIVIDUAL NEUTRAL CONDUCTORS AND EQUIPMENT GROUND CONDUCTORS.

SHEET KEYNOTES

P1	CONTRACTOR TO PROVIDE 700A/VS SERIES TRANSTECTOR 50 KVA POWER CONDITIONER, 480V INPUT, 480V OUTPUT, MODEL NO. 8DNX-50K-700A/VS.
P2	ALTERNATE BID NO. 1: CONTRACTOR TO REPLACE EXISTING POWER CONDITIONER. TRANSTECTOR
P3	FLUSH MOUNT DUPLEX RECEPTACLE IN CEILING TILE FOR PATIENT LIFT POWER. COORDINATE WITH VENDOR'S INSTALLED LOCATION SO RECEPTACLE IS WITHIN 3' OF RAIL END.
P4	MAIN DISCONNECT PANEL (T13), PROVIDED BY VARIAN, INSTALLED BY THE ELECTRICAL CONTRACTOR.
P5	ROUTE (4) #1 AWG & (1) #4 GROUND IN 2-1/2" C. TO EXISTING 80A;3P CIRCUIT BREAKER IN DISTRIBUTION PANEL DP-F1-17-HA LABELED "FUTURE-TRUEBEAM". ALSO, ROUTE(4) #1 AWG & (1) #4 GROUND IN 2-1/2" C. TO MAIN DISTRIBUTION PANEL LOCATED IN CONTROL ROOM (KEYNOTE P4).
P6	RELAY JUNCTION BOX (T05) TO BE FURNISHED BY VARIAN AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MOUNT AT EYE LEVEL AT APPROXIMATELY 6' BELOW CEILING. EXTEND (2) 2" STUBBED-UP CONDUITS TO RELAY BOX. VERIFY LOCATION WITH VARIAN PRIOR TO INSTALLATION AND WIRE PER VARIAN REQUIREMENTS.
P7	POWER TO POSITIONING LASER (T06) TO BE PROVIDED VIA RELAY BOX (T05). COORDINATE LOCATION SO THAT RECEPTACLE IS WITHIN 3' OF LASER. VERIFY EXACT LOCAITON WITH VARIAN PRIOR TO ROUGH-IN.
P8	FLUSH MOUNT DUPLEX RECEPTACLE IN CEILING TILE FOR POWER TO IN-ROOM MONITOR (T07) AND MICROPHONE (T08). COORDINATE LOCATION SO RECEPTACLE IS WITHIN 4' OF MONITOR AND PLACE IN ADJACENT CEILING TILE TO WHERE THE MOUNTING POST PASSES THROUGH CEILING.
P9	POWER TO CCTV CAMERA (T09). COORDINATE LOCATION SO THAT RECEPTACLE IS WITHIN 1' OF CAMERA. FIELD VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH VARIAN PRIOR TO ROUGH-IN.
P10	FURNISH AND INSTALL ACCESSORY PULLBOX (CP04) SIZED FOR APPLICATION FOR VARIAN IDENTIFY SYSTEM. LOCATION SHOWN IS FOR DRAWING CLARITY, ADJUST LOCATION AS REQUIRED AND IF POSSIBLE AVOID CONDUIT BENDS WITH BOX PLACEMENT. EXTEND (2) 2" AND (1) 3" STUBBED UP CONDUITS TO PULLBOX LOCATION.
P11	INTERLOCK DOOR WITH RELAY BOX (T05) PER VARIAN REQUIREMENTS.
P12	CONTRACTOR TO INSTALL A DUPLEX RECEPTACLE AND EMPTY DOUBLE GANG JUNCTION BOX ABOVE COUNTER FOR OWNER PROVIDED STREAMING DEVICE THAT WILL PLUG INTO AN AUXILIARY PORT ON THE BACK SIDE OF THE LINEAR ACCELERATOR KEYBOARD WITHIN CONTROL ROOM. VERIFY LOCATION WITH OWNER PRIOR TO INSTALLATION.
P13	SWITCH FOR OVERNIGHT SHUT-OFF OF LASERS.PROVIDE THERMAL TRANSFER STYLE LABEL TO INDICATE SWITCH FUNCTION. VERIFY SWITCH LOCATION WITH OWNER PRIOR TO INSTALLATION.
P14	POWER TO OPTICAL IMAGING CAMERA (T09). COORDINATE LOCATION SO THAT RECEPTACLE IS WITHIN 1' OF CAMERA. FIELD VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH VARIAN PRIOR TO ROUGH-IN.
P15	24" X 20" X 6-5/8" VAULT DOOR CONTROL BOX AND 24VDC BATTERY BACKUP BY NELCO. CONDUIT, 120V POWER WIRING, AND JUNCTION BOXES TO OPERATOR TO BE FURNISHED AND INSTALLED BY EC. VERIFY ALL REQUIREMENTS WITH MANUFACTURER'S RECOMMENDATIONS.
P16	EC TO PROVIDE 90VDC WIRING TO MOTOR. CONNECTIONS TO BE MADE BY NELCO. VERIFY FINAL WIRING REQUIREMENTS AND LOCATION WITH MANUFACTURER.

SPECIAL OUTLETS

MARK	DESCRIPTION
IEC60309	IEC 60309 30A 250VAC 2P FURNISHED BY VARIAN, INSTALLED BY CONTRACTOR. PURCHASE FROM VARIAN IF NOT INCLUDED IN LINEAR ACCELERATOR PACKAGE. LOCATE ADJACAENT TO CONSOLE CABINET. DO NOT INSTALL DIRECTLY BEHIND CONSOLE CABINET. FIELD VERIFY LOCATION WITH VARIAN AND ADJUST LOCATION AS REQUIRED.

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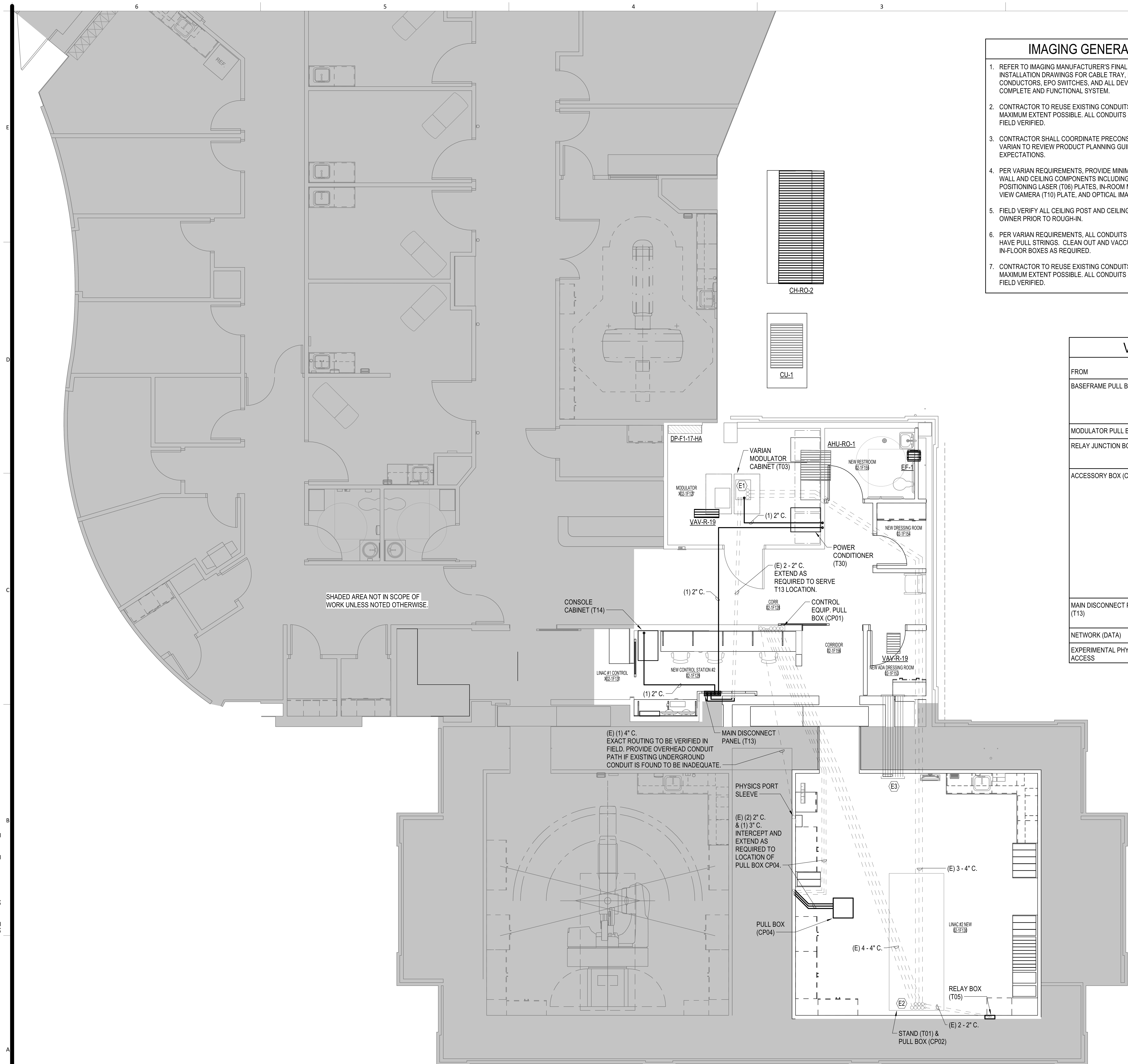
E-121

ELECTRICAL POWER PLAN



A5 ELECTRICAL CONDUIT PLAN
1/4" = 1'-0"
PLAN NORTH

IMAGING GENERAL NOTES

1. REFER TO IMAGING MANUFACTURER'S FINAL SITE SPECIFIC INSTALLATION DRAWINGS FOR CABLE TRAY, DUCTS, CONDUITS, CONDUCTORS, EPO SWITCHES, AND ALL DEVICES REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
2. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.
3. CONTRACTOR SHALL COORDINATE PRECONSTRUCTION MEETING WITH VARIAN TO REVIEW PRODUCT PLANNING GUIDE AND VARIAN CHECKLIST EXPECTATIONS.
4. PER VARIAN REQUIREMENTS, PROVIDE MINIMUM #12 GROUND TO VARIAN WALL AND CEILING COMPONENTS INCLUDING RELAY JUNCTION BOX (T05), POSITIONING LASER (T06) PLATES, IN-ROOM MONITOR (T07) POST, LIVE-VIEW CAMERA (T10) PLATE, AND OPTICAL IMAGING CAMERA (T20) POST.
5. FIELD VERIFY ALL CEILING POST AND CEILING CAMERA LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
6. PER VARIAN REQUIREMENTS, ALL CONDUITS SHALL BE DRY, CLEAN, AND HAVE PULL STRINGS. CLEAN OUT AND VACCUM EXISTING CONDUITS AND IN-FLOOR BOXES AS REQUIRED.
7. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.

CONDUIT PLAN GENERAL NOTES

1. ALL CONDUIT SHOWN IN A LIGHT LINE IS EXISTING TO REMAIN, ROUTED OVERHEAD.
2. ALL CONDUIT SHOWN IN A DARK LINE IS NEW WORK UNDER THIS CONTRACT, ROUTED OVERHEAD.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT DASHED LINE IS NEW WORK UNDER THIS CONTRACT, ROUTED UNDERGROUND.
4. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK DASHED LINE IS NEW WORK UNDER THIS CONTRACT, ROUTED UNDERGROUND.

SHEET KEYNOTES

E1 APPROXIMATE LOCATION OF EXISTING ACCESS PANEL/RECESSED FLOOR BOX BELOW VARIAN MODULATOR (T03) FOR ACCESS TO EXISTING (3) 4" CONDUITS TO STAND (T01) AND (2) 2" CONDUITS TO MDP (T13).

E2 APPROXIMATE LOCATION OF EXISTING ACCESS PANEL/RECESSED FLOOR BOX BELOW STAND (T01) FOR ACCESS TO EXISTING (4) 4" CONDUITS TO PULL BOX (CP01), (3) 4" CONDUITS TO MODULATOR (T03), AND (2) 2" CONDUITS STUBBED WITHIN VAULT SPACE.

E3 (8) 3/4" AND (1) 2" EXISTING CONDUITS ROUTED THROUGH VAULT WALL AND STUBBED FOR FUTURE USE. NEW CIRCUITS ARE TO BE ROUTED THROUGH EXISITING CONDUITS WHERE POSSIBLE.

VARIAN ACCELERATOR CONDUIT SCHEDULE

FROM	TO	QTY	SIZE	UNDERGROUND OR OVERHEAD	EXISTING	DETAILED ON SHEET
BASEFRAME PULL BOX (CP02)	CONTROL EQUIPMENT PULL BOX	4	4"	UNDERGROUND	YES	E-122
	MODULATOR PULL BOX	3	4"	UNDERGROUND	YES	E-122
	RELAY JUNCTION BOX	2	2"	UNDERGROUND	YES	E-122
MODULATOR PULL BOX (CP03)	MAIN DISCONNECT PANEL	2	2"	UNDERGROUND	YES	E-122
RELAY JUNCTION BOX (T05)	WARNING LIGHTS	1	1/2"	OVERHEAD	NO	E-132
	DOOR INTERLOCK	1	1/2"	OVERHEAD	NO	E-142
ACCESSORY BOX (CP04)	EXTEND EXISTING IN-FLOOR CONDUITS FROM CONTROL RM.	2 1	2" 3"	UNDERGROUND UNDERGROUND	YES YES	E-122 E-122
	OPTICAL IMAGING CAMERA	1	3"	OVERHEAD	NO	E-142
	IN-ROOM MONITOR	1	2"	OVERHEAD	NO	E-142
	MICROPHONE (CEILING)	1	1-1/4"	OVERHEAD	NO	E-142
	CCTV CAMERA (QTY 4)	1	1"	OVERHEAD	NO	E-142
	WALL SPEAKER (QTY 2)	1	1"	OVERHEAD	NO	E-142
	USB HUB	1	1"	OVERHEAD	NO	E-142
	LIVE-VIEW CAMERA	1	1-1/4"	OVERHEAD	NO	E-142
MAIN DISCONNECT PANEL (T13)	CONTROL CONSOLE	1	2"	OVERHEAD	NO	E-122
	IEC 60309 RECEPTACLE	1	2"	OVERHEAD	NO	E-121
NETWORK (DATA)		1	1"	OVERHEAD	NO	E-142
EXPERIMENTAL PHYSICS ACCESS	TREATMENT ROOM	1	4"	UNDERGROUND	YES	E-122

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E-122

ELECTRICAL CONDUIT PLAN

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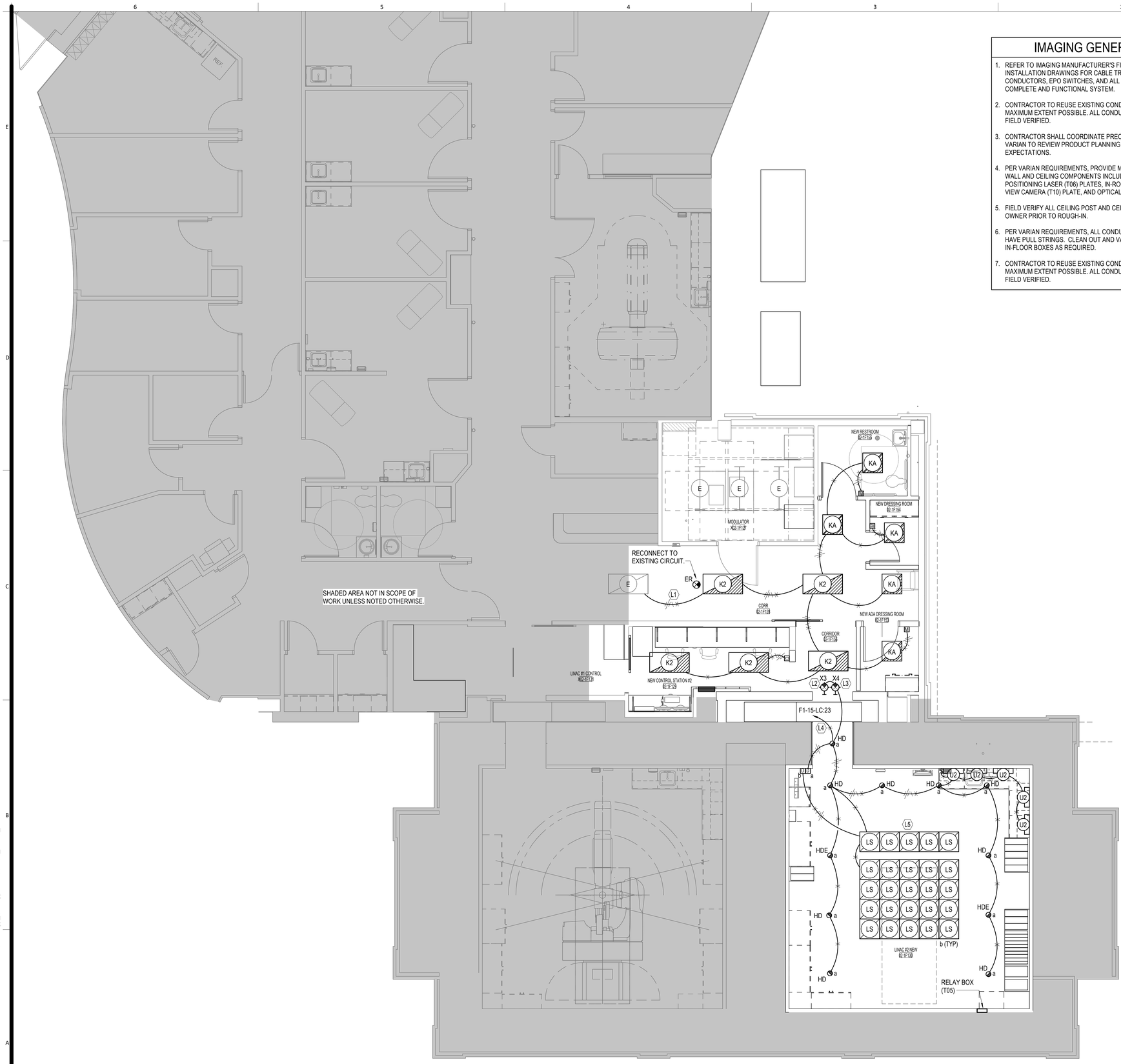

A5 ELECTRICAL LIGHTING PLAN
1/4" = 1'-0"

PLAN NORTH

IMAGING GENERAL NOTES

1. REFER TO IMAGING MANUFACTURER'S FINAL SITE SPECIFIC INSTALLATION DRAWINGS FOR CABLE TRAY, DUCTS, CONDUITS, CONDUCTORS, EPO SWITCHES, AND ALL DEVICES REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
2. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.
3. CONTRACTOR SHALL COORDINATE PRECONSTRUCTION MEETING WITH VARIAN TO REVIEW PRODUCT PLANNING GUIDE AND VARIAN CHECKLIST EXPECTATIONS.
4. PER VARIAN REQUIREMENTS, PROVIDE MINIMUM #12 GROUND TO VARIAN WALL AND CEILING COMPONENTS INCLUDING RELAY JUNCTION BOX (T05), POSITIONING LASER (T06) PLATES, IN-ROOM MONITOR (T07) POST, LIVE-VIEW CAMERA (T10) PLATE, AND OPTICAL IMAGING CAMERA (T20) POST.
5. FIELD VERIFY ALL CEILING POST AND CEILING CAMERA LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
6. PER VARIAN REQUIREMENTS, ALL CONDUITS SHALL BE DRY, CLEAN, AND HAVE PULL STRINGS. CLEAN OUT AND VACCUM EXISTING CONDUITS AND IN-FLOOR BOXES AS REQUIRED.
7. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.

LIGHTING GENERAL NOTES

1. BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS WITH INDIVIDUAL NEUTRALS. A MAXIMUM OF THREE CIRCUITS (MAXIMUM OF THREE PHASE CONDUCTORS) MAY BE GROUPED IN A SINGLE CONDUIT. WHERE MULTIPLE CIRCUITS ARE LOCATED IN THE SAME RACEWAY, JUNCTION BOX OR ENCLOSURE, NEUTRALS SHALL BE MARKED OR LABELED TO INDICATE WHICH CIRCUIT THEY ARE ASSOCIATED WITH. SEE SPECIFICATION SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR ADDITIONAL INFORMATION.
2. A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL CONDUITS.
3. REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF FIRE RATED WALLS AND CEILINGS AND THE ASSOCIATED U.L. ASSEMBLY NUMBERS.
4. FOR ALL PENETRATIONS IN FIRE RATED WALLS AND CEILINGS, PROVIDE AN ASTM E814 COMPLIANT, U.L. LISTED THROUGH PENETRATION FIRE STOPPING SYSTEM THAT IS SPECIFIC TO THE WALL OR CEILING CONSTRUCTION ASSEMBLY. INSTALL SYSTEM IN STRICT COMPLIANCE WITH THE U.L. ASSEMBLY INDICATED IN THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
5. ALL PIPING, CONDUIT, AND OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) IN FIRE RATED WALLS OR CEILINGS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIAL.
6. OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES OR PROTECTED BY OTHER MEANS ALLOWED BY THE SPECIFIC U.L. ASSEMBLY.
7. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF STC RATED WALLS. OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) ON OPPOSITE SIDES OF STC RATED WALLS SHALL BE LIMITED TO TWO OUTLET BOXES PER STUD SPACE AND COVERED WITH "PUTTY PAD" TYPE MOLDABLE FIRE BARRIER.
8. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LIGHT FIXTURE LOCATIONS. VERIFY ALL DISCREPANCIES WITH ARCHITECT PRIOR TO ROUGH-IN.

(#) SHEET KEYNOTES

L1	CONNECT TO EMEGENCY CIRCUIT PORTION OF EXISTING LIGHTING CIRCUIT.
L2	INTERLOCK BEAM-ON LIGHT (CP06) WITH RELAY BOX (T05) PER MANUFACTURER'S INSTRUCTIONS (EACH SIGN REQUIRES SEPARATE CONNECTION).
L3	INTERLOCK XRAY-ON LIGHT (CP06) WITH RELAY BOX (T05) PER MANUFACTURER'S INSTRUCTIONS (EACH SIGN REQUIRES SEPARATE CONNECTION).
L4	INTERLOCK ROOM LIGHTS WITH RELAY BOX (T05) PER MANUFACTURER'S INSTRUCTIONS.
L5	FIELD COORDINATE REMOTE DRIVER LOCATIONS FOR FIXTURE TYPES 'HD' AND 'HDE' WITH VARIAN. LOCATE ABOVE ACCESSIBLE CEILING OUTSIDE OF RADIATION BEAM PATH.

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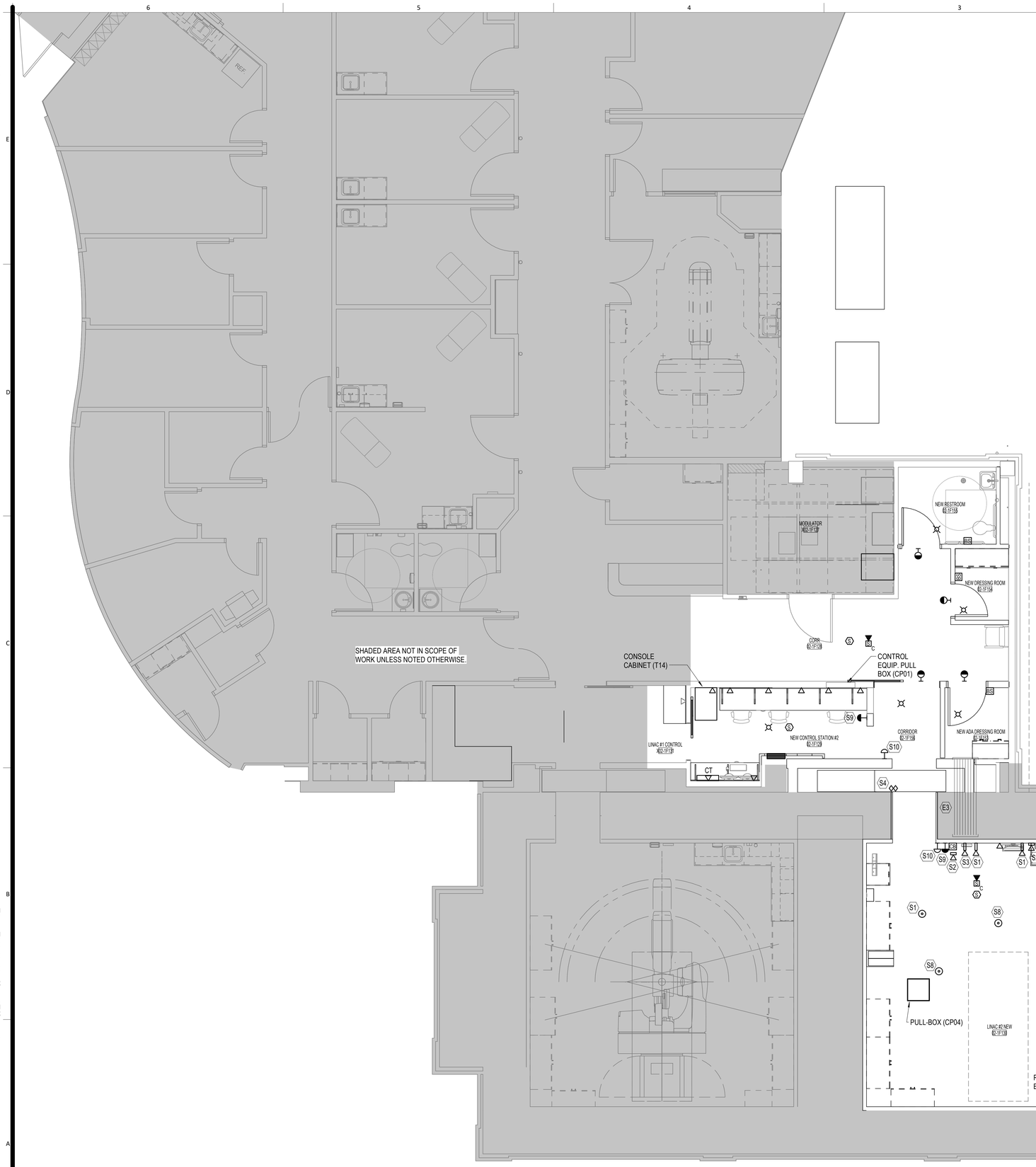
E-132

ELECTRICAL LIGHTING PLAN



A5 ELECTRICAL SYSTEMS PLAN
1/4" = 1'-0"

PLAN NORTH

IMAGING GENERAL NOTES

1. REFER TO IMAGING MANUFACTURER'S FINAL SITE SPECIFIC INSTALLATION DRAWINGS FOR CABLE TRAY, DUCTS, CONDUITS, CONDUCTORS, EPO SWITCHES, AND ALL DEVICES REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
2. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.
3. CONTRACTOR SHALL COORDINATE PRECONSTRUCTION MEETING WITH VARIAN TO REVIEW PRODUCT PLANNING GUIDE AND VARIAN CHECKLIST EXPECTATIONS.
4. PER VARIAN REQUIREMENTS, PROVIDE MINIMUM #12 GROUND TO VARIAN WALL AND CEILING COMPONENTS INCLUDING RELAY JUNCTION BOX (T05), POSITIONING LASER (T06) PLATES, IN-ROOM MONITOR (T07) POST, LIVE-VIEW CAMERA (T10) PLATE, AND OPTICAL IMAGING CAMERA (T20) POST.
5. FIELD VERIFY ALL CEILING POST AND CEILING CAMERA LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
6. PER VARIAN REQUIREMENTS, ALL CONDUITS SHALL BE DRY, CLEAN, AND HAVE PULL STRINGS. CLEAN OUT AND VACCUM EXISTING CONDUITS AND IN-FLOOR BOXES AS REQUIRED.
7. CONTRACTOR TO REUSE EXISTING CONDUITS AND RACEWAYS TO THE MAXIMUM EXTENT POSSIBLE. ALL CONDUITS AND RACEWAYS SHALL BE FIELD VERIFIED.

SYSTEMS GENERAL NOTES

1. REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF FIRE RATED WALLS AND CEILINGS AND THE ASSOCIATED U.L. ASSEMBLY NUMBERS.
2. FOR ALL PENETRATIONS IN FIRE RATED WALLS AND CEILINGS, PROVIDE AN ASTM E814 COMPLIANT, U.L. LISTED THROUGH PENETRATION FIRE STOPPING SYSTEM THAT IS SPECIFIC TO THE WALL OR CEILING CONSTRUCTION ASSEMBLY. INSTALL SYSTEM IN STRICT COMPLIANCE WITH THE U.L. ASSEMBLY INDICATED IN THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
3. ALL PIPING, CONDUIT, AND OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) IN FIRE RATED WALLS OR CEILINGS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIAL.
4. OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES OR PROTECTED BY OTHER MEANS ALLOWED BY THE SPECIFIC U.L. ASSEMBLY.
5. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF STC RATED WALLS. OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) ON OPPOSITE SIDES OF STC RATED WALLS SHALL BE LIMITED TO TWO OUTLET BOXES PER STUD SPACE AND COVERED WITH "PUTTY PAD" TYPE MOLDABLE FIRE BARRIER.
6. WHERE THE SAME DEVICE IS SHOWN IN THE SAME LOCATION ON BOTH THE POWER AND SYSTEMS PLAN, ONLY ONE DEVICE IS REQUIRED. PROVIDE BOTH POWER AND SYSTEMS WIRING AS SHOWN.
7. THE FIRE ALARM SYSTEM SHOWN HAS BEEN DESIGNED PER THE REQUIREMENTS OF NFPA 72. DEVICES SHOWN INDICATE THE DESIGN INTENT AND SHALL BE THE MINIMUM PROVIDED. SYSTEM SUPPLIER SHALL PROVIDE ANY ADDITIONAL CODE REQUIRED DEVICES OR DEVICES REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

SHEET KEYNOTES

#	
E3	(8) 3/4" AND (1) 2" EXISTING CONDUITS ROUTED THROUGH VAULT WALL AND STUBBED FOR FUTURE USE. NEW CIRCUITS ARE TO BE ROUTED THROUGH EXISITING CONDUITS WHERE POSSIBLE.
S1	MOTIONVIEW CCTV CAMERAS (T09) FURNISHED AND INSTALLED BY VARIAN. CAMERA HOUSING IS FURNISHED BY VARIAN, INSTALLED BY CONTRACTOR. FIELD VERIFY LOCATION AND QUANTITY WITH VARIAN AND OWNER PRIOR TO ROUGH-IN. PROVIDE 1" CONDUIT ROUTED TO CCTV MONITOR (T18) VIA EXISTING UNDERGROUND CONDUIT BETWEEN PULL BOXES (CP01) AND (CP04).
S2	WALL MOUNT SPEAKER (T11) FURNISHED BY VARIAN, INSTALLED BY CONTRACTOR. PROVIDE 1" CONDUIT ROUTED TO CONTROL CONSOLE (T17) VIA EXISTING UNDERGROUND CONDUIT BETWEEN PULL BOXES (CP01) AND (CP04). LOCATE OUTSIDE OF PRIMARY BEAM PATH. FIELD VERIFY LOCATION WITH OWNER PRIOR TO ROUGH-IN. PROVIDE CABLE ACCESS WITH 6" OF SPEAKER.
S3	LIVE VIEW CAMERA (T10) FURNISHED AND INSTALLED BY VARIAN. WALL MOUNTING POST IS VARIAN PROVIDED AND CONTRACTOR INSTALLED. URNISH AND INSTALL 2 GANG ELECTRICAL BOX WITH 1-1/4" CONDUIT ROUTED TO CONSOLE CABINET (T14) VIA EXISTING UNDERGROUND CONDUIT BETWEEN PULL BOXES (CP01) AND (CP04). LOCATE ON EITHER SIDE OF ISOCENTER WITH CABLE ACCESS WITHIN 6". FIELD VERIFY LOCATION WITH VARIAN PRIOR TO ROUGH-IN.
S4	DOOR SWITCHES (CP05) FURNISHED AND INSTALLED BY NELCO. PROVIDE 1-1/2" CONDUIT ROUTED TO MODULATOR VIA RELAY JUNCTION BOX (T05) AND INTERLOCK AS REQUIRED.
S5	MICROPHONE (T08) FURNISHED AND INSTALLED BY VARIAN. PROVIDE 1-1/4" CONDUIT ROUTED TO CONTROL CONSOLE (T17) VIA PULL BOX (CP01).
S6	IN-ROOM MONITOR (T07) FURNISHED AND INSTALLED BY VARIAN. PROVIDE 2" CONDUIT ROUTED TO CONSOLE CABINET (T14).
S7	1-GANG ROUGH-IN BOX FOR VARIAN CABLING TO USB HUB (T12). PROVIDE 1" CONDUIT ROUTED TO CONSOLE CABINET (T14) VIA EXISTING UNDERGROUND CONDUIT BETWEEN PULL BOXES (CP01) AND (CP04).
S8	OPTICAL IMAGING CAMERA (T20) AND WIRING FURNISHED AND INSTALLED BY VARIAN. MOUNTING POST INSTALLED BY CONTRACTOR. PROVIDE 3" CONDUIT ROUTED TO CONSOLE CABINET (T14). FIELD VERIFY EXACT LOCATION WITH VARIAN PRIOR TO ROUGH-IN.
S9	FURNISH AND INSTALL EMERGENCY OFF BUTTON (CP07). ALLEN-BRADLEY 800T-FX6AV OR EQUIVALENT WITH FACEPLATE IN PLEXIGLASS ENCLOSURE. CONNECT TO RELAY BOX (T05) PER VARIAN REQUIREMENTS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. FURNISH ALL COMPONENTS FOR A COMPLETE INSTALLATION.
S10	DOOR CONTROL PUSH-BUTTON STATIONS. BACKBOXES TO BE SUPPLIED BY NELCO AND INSTALLED BY EC. VERIFY LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

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06/27/2025

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Missouri: #000958

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	JGM
Checked By	JLW

Revision

Number	Date	Description

PEC
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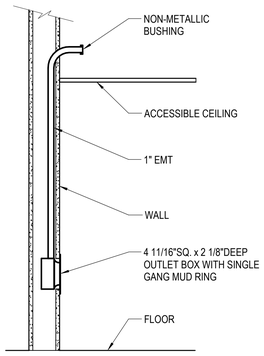
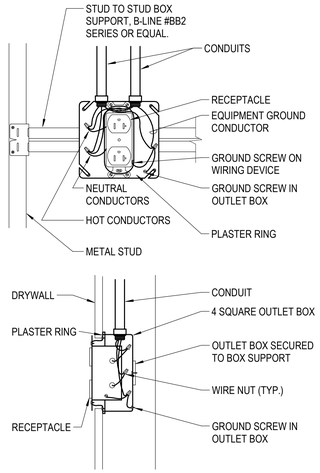
785-842-8464 www.pec1.com
PEC AUTHORITY NUMBER: EGC 000465F
PEC PROJECT NUMBER: 250290-000

E-142

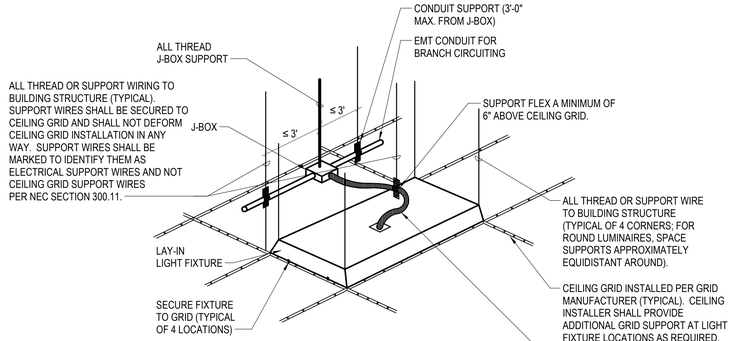
ELECTRICAL SYSTEMS PLAN



TYPICAL TELECOM OUTLET MOUNTING DETAIL
B6 NO SCALE



TYPICAL RECEPTACLE MOUNTING DETAIL
B5 NO SCALE



NOTES:
1. ADDITIONAL LIGHT FIXTURE SUPPORT MAY BE REQUIRED DUE TO POTENTIAL SEISMIC CONDITIONS, BUILDING OCCUPANCY, AND FIXTURE TYPE. REFER TO THE SPECIFICATIONS.
2. MOUNTING AND CONNECTION OF RECESSED CAN LIGHTS SHALL UTILIZE BAR HANGERS SECURED TO GRID.

TYPICAL LAY-IN FIXTURE INSTALLATION
B4 NO SCALE

1/8" / 1/4" — SERVES RTU-1

BREAKER/SWITCH FOR SWITCHBOARD/DISTRIBUTION PANEL/MOTOR CONTROL CENTER

1/8" / 1/4" / 1/4" / 1/4" / 1/4" — SERVES RTU #1 FED FROM DP:** LPJ 200AMP CRITICAL BRANCH

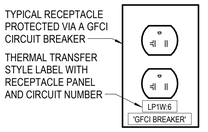
DISCONNECT SWITCH

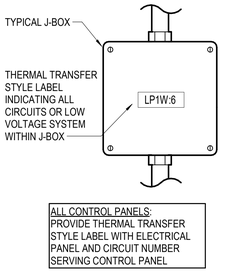
3/8" / 1/4" / 1/4" / 1/4" / 1/8" / 1/8" / 1/8" / 1/4"

PANEL K
FED FROM DP:**
120/208V.,3ø,4W.
10,000 A.I.C.
PHASE A: BLACK NEUTRAL: WHITE
PHASE B: RED GROUND: GREEN
PHASE C: BLUE ISO.GRD.: GRN/YEL
CRITICAL BRANCH

BRANCH CIRCUIT/DISTRIBUTION PANEL

NOTE:
SEE SPECIFICATION SECTION 260500 FOR NAMEPLATE COLOR REQUIREMENTS

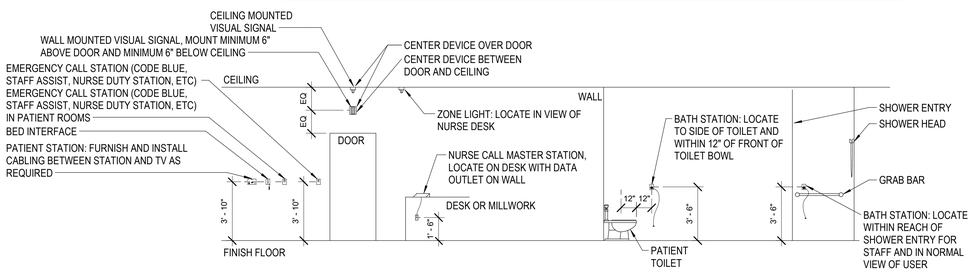




ALL CONTROL PANELS:
PROVIDE THERMAL TRANSFER STYLE LABEL WITH ELECTRICAL PANEL AND CIRCUIT NUMBER SERVING CONTROL PANEL

TYPICAL NAMEPLATES AND LABELS
B2 NO SCALE

ALL DEVICES IN PATIENT ROOM (PATIENT STATION, BED INTERFACE, CODE BLUE, STAFF ASSIST, ETC SHALL BE LOCATED PER THE ARCHITECTURAL HEAD WALL DETAIL AND HOSPITAL'S SPECIFIC LAYOUT STANDARDS

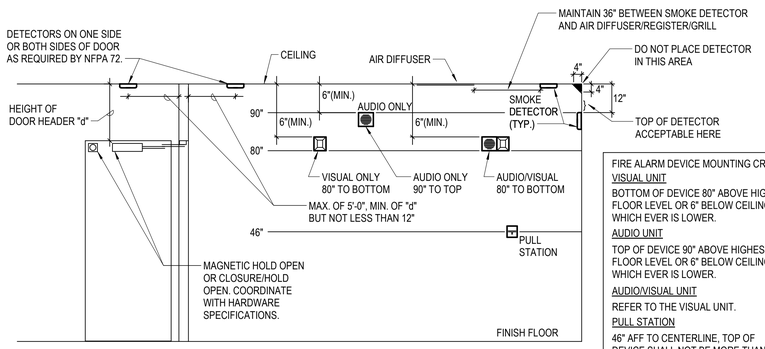


NURSE STATION TERMINOLOGY PER FGI

BATH STATION	:	A WATERPROOF DEVICE USED IN SHOWERS AND BATHS
EMERGENCY CALL STATION	:	A DEVICE TO INDICATE EMERGENCY ASSISTANCE IS NEEDED (I.E. CODE BLUE SIGNAL)
NURSE MASTER STATION	:	A DEVICE LOCATED AT THE CENTRAL NURSE STATION IN A PATIENT UNIT OR CLINICAL DEPARTMENT
PATIENT STATION	:	A DEVICE THAT A PATIENT CAN REACH FROM A BED OR EXAM TABLE OR CHAIR

ALL NURSE CALL DEVICES SHALL BE PROVIDED IN ALL LOCATIONS PER FGI REQUIREMENTS

NURSE CALL MOUNTING DETAIL
A6 1/4" = 1'-0"



FIRE ALARM DEVICE MOUNTING CRITERIA

VISUAL UNIT
BOTTOM OF DEVICE 80" ABOVE HIGHEST FLOOR LEVEL OR 6" BELOW CEILING WHICH EVER IS LOWER.

AUDIO UNIT
TOP OF DEVICE 90" ABOVE HIGHEST FLOOR LEVEL OR 6" BELOW CEILING WHICH EVER IS LOWER.

AUDIO/VISUAL UNIT
REFER TO THE VISUAL UNIT.

PULL STATION
46" AFF TO CENTERLINE, TOP OF DEVICE SHALL NOT BE MORE THAN 48" AFF

GENERAL NOTE
THESE GUIDELINES SHALL BE USED UNLESS MOUNTING HEIGHTS HAVE BEEN SPECIFIED OTHERWISE ON THE DRAWINGS.

FIRE ALARM DEVICE MOUNTING DETAIL
A3 NO SCALE

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Missouri: #000958

SAINT LUKE'S EAST LEE'S SUMMIT VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	JGM
Checked By	JLW

Revision

Number	Date	Description

PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
623 MASSACHUSETTS ST SUITE 200, LAWRENCE, KS 66044
785-842-8464 www.pec1.com
PEC PROJECT NUMBER 250290-000 PEC AUTHORITY NUMBER: EGC 00465F

E-501

ELECTRICAL DETAILS

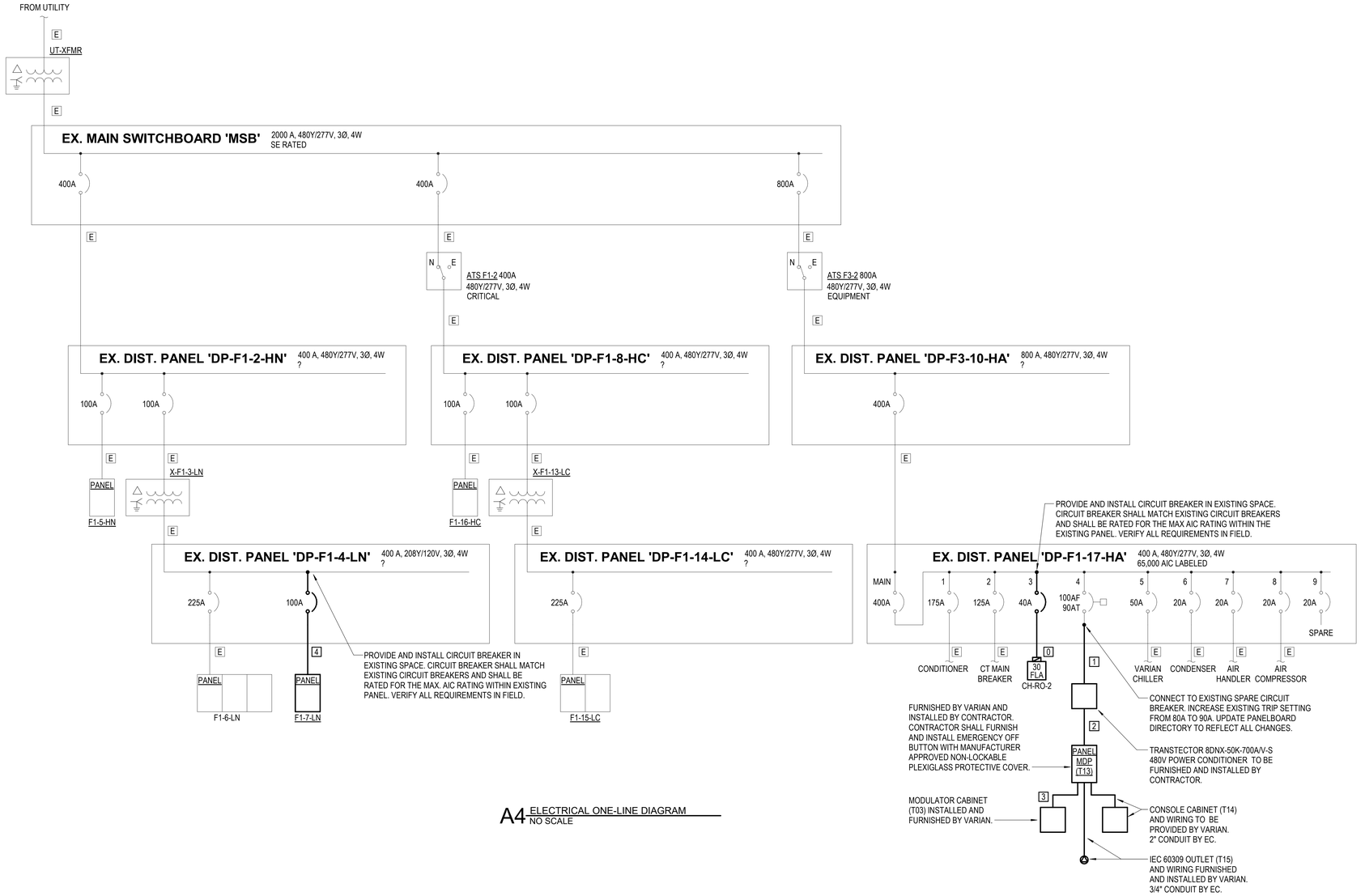
FEEDER SCHEDULE

DESIG.	EQUIPMENT SERVED	CONDUCTORS			GROUND SIZE PER SET	ISOLATED GROUND SIZE	CONDUIT SIZE PER SET	SPARE CONDUIT
		SETS	NO.	SIZE				
E	EXIST FEEDER TO REMAIN	--	--	--	--	--	--	--
0	REF. CONNECTION SCHEDULE	--	--	--	--	--	--	--
1	POWER CONDITIONER	1	4	#1 AWG CU	#1	--	2-1/2"	--
2	MAIN DISCONNECT PANEL:MDP	1	4	#1 AWG CU	#1	--	2-1/2"	--
3	MODULATOR CABINET	1	4	#1 AWG CU	#1	--	2-1/2"	--
4	PANELBOARD:F1-7-LN	1	4	#1 AWG CU	#8	--	2"	--

ONE-LINE DIAGRAM GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS AND/OR SWITCHES ARE THREE POLE.
2. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT LINE, IS EXISTING TO REMAIN.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK LINE, IS NEW WORK UNDER THIS CONTRACT.
4. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK DASHED LINE, IS TO BE REMOVED UNDER THIS CONTRACT.

(#) SHEET KEYNOTES



A4 ELECTRICAL ONE-LINE DIAGRAM
NO SCALE

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Revision

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PEC PROJECT NUMBER: 250290-000 PEC AUTHORITY NUMBER: EGC 000465F

E-601

ELECTRICAL ONE-LINE DIAGRAM

(1) EXIST. PANEL: F1-6-LN

208Y/120 VOLTS, 3 PHASE, 4 WIRE
225 AMP MAIN BKR, SURFACE MTD.
W/GRD. BUS — 10000 AIC LABELED

CIRC NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	P	AMP SIZE	PHASE	AMP SIZE	P	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.	CIRC NO.
1			REC - GENERAL	1	20	A	20	1	REC - 1F109, 1F108, 1F104			2
3			REC - GENERAL	1	20	B	20	1	REC - 1F111, 1F147, 1F148, 1F119			4
5			ICE WATER - 1F100	1	20	C	20	1	REC - 1F112			6
7			REC - 1F128, 1F129	1	20	A	20	1	REC - 1F107			8
9			REC - 1F145	1	20	B	20	1	BANDSAW - 1F107			10
11			MICROWAVE - 1F145	1	20	C	20	1	DRILL PRESS - 1F107			12
13			REC - 1F112	1	20	A	20	1	REC - 1F106			14
15			REC - 1F120	1	20	B	20	1	REC - 1F105			16
17			REC - 1F120	1	20	C	20	1	REC - 1F110			18
19			REC - 1F100	1	20	A	20	1	LRP-F1-1			20
21			COFFEE MAKER - 1F100	1	20	B	20	1	WLC IT APC NETWORK RACK			22
23			REC - 1F105, 1F106	1	20	C	20	1	WLC IT APC PATCH PANEL RACK			24
25			REC - 1F007, 1F019, A115	1	20	A	20	1	WLC IT APC PATCH PANEL RACK			26
27			REC - 1F148	1	20	B	20	1	WLC IT APC PATCH PANEL RACK			28
29			REC - 1F149	1	20	C	20	1	REC - 1F142			30
31			REC - 1F150	1	20	A	20	1	PLUGMOLD - 1F142			32
33			REC - 1F150	1	20	B	20	1	PLUGMOLD - 1F142			34
35			REC - 1F151	1	20	C	20	1	REC - 1F131			36
37			REC - 1F012, 1F014	1	20	A	20	1	REC - 1F131			38
39			PDU - APC #8941	2	30	B	20	1	REC - 1F131			40
41	----	--	----------	--	|	C	20	1	REC - 1F144			42
43			REC - 1F121	1	20	A	20	1	REC - 1F144			44
45			REC - 1F122	1	20	B	20	1	REC - 1F144			46
47			PLUGMOLD - 1F107	1	20	C	20	1	REC - STORAGE			48
49			PLUGMOLD - 1F107	1	20	A	20	1	REC - 1F141			50
51			REC - 1F141A	1	20	B	20	1	COPIER - 1F141A			52
53			REC - 1F137	1	20	C	20	1	REC - 1F116			54
55			MFD - 1F137	1	20	A	20	1	REC - 1F119			56
57			UC LTG - RAD ONCOLOGY	1	20	B	20	1	REC - 1F118, 1F139, 1F140, 1F126			58
59			REC - 1F118	1	20	C	20	1	REC - 1F152			60
61			REC - 1F114	1	20	A	20	1	REC - 1F152			62
63			REC - 1F115	1	20	B	20	1	REC - 1F131			64
65			LTG - LINAC #1	1	20	C	20	1	REC - 1F131			66
67			REC - 1F011	1	20	A	20	1	REC - 1F131			68
69			REC - 1F208	1	20	B	20	1	LTG - LINAC #1			70
71			XVB & UC REF - 1F206	1	20	C	20	1	PLUGMOLD - 1F206			72
73			LTG - 1F200	1	20	A	20	1	PLUGMOLD - 1F206			74
75			LAB - 1F200	1	20	B	20	1	PLUGMOLD - 1F206			76
77			REC - 1F151	1	20	C	20	1	REC - 1F151			78
79			REC - 1F151	1	20	A	20	1	REC - 1F151			80
81			REC - 1F151	1	20	B	20	1	REC - 1F151			82
(2) 83	20	MOTR	EF-1	1	20	C	20	1	SPARE			84
(2) 85	800	RCPT	REC - 1S153, 1F154, 1S155, 1F128	1	20	A	20	1	FURNITURE - 151			86
87			REC - RAD ONC WAITING	1	20	B	20	1	REC - 151			88
89			REC - CHECK-IN 1F201	1	20	C	20	1	REC - BREAK 1F208			90
91			REC - LINAC #1 CONTROL 1F131A	1	20	A	20	1	REC - LINAC #1 CONTROL 1F131A			92
93			REC - LINAC #1 CONTROL 1F131A	1	20	B	20	1	REC - LINAC #1 CONTROL 1F131A			94
95			REC - LINAC #1 CONTROL 1F131A	1	20	C	20	1	REC - LINAC #1 CONTROL 1F131A			96
97			REC - LINAC #1 CONTROL 1F131A	1	20	A	20	1	REC - LINAC 1F132			98
99			REC - LINAC #1 CONTROL 1F131A	1	20	B	20	1	REC - LINAC 1F132			100
101			REC - TRAY ROOM 1F214 STERILIZER	1	20	C	20	1	REC - LINAC 1F132			102
103			REC - 1F216	1	20	A	20	1	REC - 1F204			104
105			REC - 1F215	1	20	B	20	1	REC - 1F203			106
107			REC - 1F205, 1F207, 1F209	1	20	C	20	1	REC - 1F204			108
109			REC - 1F212	1	20	A	20	1	MICROWAVE - 1F208			110
111			REC - 1F210	1	20	B	20	1	REC - 1F208			112
113			REC - 1F215	1	20	C	20	1	COFFEE 1F208			114
115			REC - 1F213	1	20	A	20	1	REC - 1F217			116
117			REC - 1F007A	1	20	B	20	1	MFD - 1F217			118
119			REC - 1F201, 1F202	1	20	C	20	1	REC - 1F217			120
121			MFD - 1F201	1	20	A	20	1	REC - 1F214			122
123			REC - 1F200	1	20	B	20	1	PLUGMOLD - 1F214			124
125			REC - 1F200	1	20	C	20	1	PLUGMOLD - 1F214			126

(1) ALL EXISTING CIRCUIT BREAKERS AND LOADS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE. UPDATE PANEL DIRECTORY TO REFLECT ALL CHANGES.
(2) CONNECT TO EXISTING SPARE CIRCUIT BREAKER.

(1) EXIST. PANEL: F1-15-LC

208Y/120 VOLTS, 3 PHASE, 4 WIRE
225 AMP MAIN BKR, SURFACE MTD.
W/GRD. BUS — 10000 AIC LABELED

CIRC NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	P	AMP SIZE	PHASE	AMP SIZE	P	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.	CIRC NO.
1			REC - ELEC ROOMS	1	20	A	20	1	CUH - 1F001			2
3			UNIT HEATER - FIRST FLOOR	1	20	B	20	1	CUH - 1F011			4
5			REC - MOD RM 1F127	1	20	C	20	1	REC - 1F148, A19			6
7			MFD - 1F101	1	20	A	20	1	FRIDGE - 1F145			8
9			BLANKET WARMER - 1F122	1	20	B	20	1	ICE MAKER - 1F145			10
11			REC - 1F101	1	20	C	20	1	COMPRESSOR - 1F006			12
13			DIVERTER - 1ST FLR XFR UNIT	1	20	A	20	1	REC - IT ROOM 1F014			14
15			JC XFMR - 1F012	1	20	B	20	1	REC - 1F122			16
17			PARKNG GATE CONTROL	1	20	C	20	1	NC CABINET - IT ROOM 1F014			18
19			UPS - IT ROOM	2	100	A	20	1	REC - 1F122			20
21	----	--	----------	--	|	B	20	1	PNEUMATIC TUBE STAT			22
(2) 23	351	LGHT	LTG - LINAC #2	1	20	C	20	1	CRASH CART - 1F140, 1F146			24
25			REC - 1F121	1	20	A	20	1	IMAGING WARNING LIGHTS			26
(2) 27	500	POWR	SUB-ASSEMBLY - LINAC #2	1	20	B			SPACE			28
29			SPACE			C	20	1	REC - NS 1F112			30
31			SPACE			A	20	1	REC - NS 1F137			32
33			REC - ABOVE CEILING 1F205	1	20	B	20	1	LTG/REC - GAS MANIFOLD RM			34
35			EF - GAS MANIFOLD RM	1	20	C	20	1	VAULT ACCESS CONTROL PANEL			36
37			REC - 1F211 L6-30	2	30	A	20	1	REC - 1F211			38
39	----	--	----------	--	|	B	20	1	REC - 1F211			40
41			FRIDGE - 1F208	1	20	C	20	1	REC - AF201			42

(1) ALL EXISTING CIRCUIT BREAKERS AND LOADS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE. UPDATE PANEL DIRECTORY TO REFLECT ALL CHANGES.
(2) PROVIDE AND INSTALL CIRCUIT BREAKER IN EXISTING SPACE. CIRCUIT BREAKER SHALL MATCH EXISTING CIRCUIT BREAKERS AND SHALL BE RATED FOR THE MAX AIC RATING WITHIN THE EXISTING PANEL. VERIFY ALL REQUIREMENTS IN FIELD.

(1)(2)(3)(4) (P.E.C.)

LIGHTING FIXTURE SCHEDULE

1. GENERAL CONTRACTOR SHALL PROVIDE FIREPROOFING AROUND RECESSED FIXTURES INSTALLED IN FIRE RATED CEILING PER U.L. REQUIREMENTS. ELECTRICAL CONTRACTOR WILL COORDINATE.
2. MANUFACTURERS LISTED IN THIS SCHEDULE OR APPROVED BY WRITTEN ADDENDUM WILL BE THE ONLY APPROVED MANUFACTURERS TO BID THE LIGHTING FIXTURES FOR THIS PROJECT. CONTRACTORS AND SUPPLIERS USING PRICING FROM MANUFACTURERS NOT LISTED ON SCHEDULE OR BY ADDENDUM DO SO AT THEIR OWN RISK.
3. LIGHT FIXTURE SELECTIONS ARE BASED ON THE MANUFACTURER IN THE LEFT MOST COLUMN AS LISTED IN THE SCHEDULE. FIXTURES APPROVED AS EQUALS IN THIS SCHEDULE OR BY ADDENDUM SHALL BE EQUAL TO THE UNIT SPECIFIED IN THE LEFT MOST COLUMN, IE: SPRING LOADED LATCHES, POST PAINTED FINISH, PHOTOMETRICS.
4. ALL LIGHT FIXTURES SHALL BE SECURED TO THE CEILING FRAMING SYSTEM BY MECHANICAL MEANS (SUCH AS BOLTS, SCREWS, OR RIVETS) OR BY CLIPS IDENTIFIED FOR USE WITH THE TYPE OF CEILING FRAMING MEMBER AND LIGHT FIXTURE.
5. LIGHT FIXTURES SHALL BE PROVIDED WITH 0-10V DIMMING DRIVERS. DRIVERS SHALL BE CAPABLE OF DIMMING TO A MINIMUM OF 10% TOTAL LIGHT OUTPUT. LED DRIVERS SHALL HAVE A DISCONNECTING MEANS MEETING THE REQUIREMENTS OF NEC SECTION 410.130(G), EXCEPT FOR THOSE INSTALLED IN CORD AND PLUG CONNECTED FIXTURES. WHERE APPLICABLE, WHEN DIMMING SWITCHES ARE NOT PROVIDED AS PART OF THE DESIGN, CONTRACTOR SHALL CAP OFF THE 0-10V DIMMING WIRES FOR FUTURE EXTENSION BY THE OWNER.
6. PROVIDE ARROWS AND FACES AS INDICATED ON THE DRAWINGS.
7. TO COMPLY WITH NEC SECTION 410.130(G), ALL EXISTING OR RELOCATED LIGHT FIXTURES WITHOUT A BALLAST OR DRIVER DISCONNECTING MEANS SHALL HAVE A BALLAST OR DRIVER DISCONNECTING MEANS INSTALLED UNDER ANY OF THE FOLLOWING CONDITIONS:
   a. WHEN AN EXISTING BALLAST OR DRIVER IS REPLACED.
   b. WHEN AN EXISTING LIGHT FIXTURE IS RELOCATED.
   c. WHEN AN EXISTING LIGHT FIXTURE IS RECIRCUITED.

MARK	DESCRIPTION	MANUFACTURER 1 CATALOG NUMBER	LIGHT SOURCE #	TYPE	WATTS	VOLTS	LENS/LOUVER/FINISH	DIMENSIONS W	L	D	REF. NOTE	REMARKS
E	EXISTING FIXTURE TO REMAIN		1		0							
ED	EXISTING FIXTURE TO BE REMOVED		1		0							
ER	EXISTING FIXTURE TO BE RELOCATED		1		0							
HD	6" RECESSED DOWNLIGHT W/LENS	WILLIAMS 6DR-TL-L30/835-DIM-UNV-LW-OF-WH-MWT-N-F1	1	LED	27	UNV	SEMI-CLEAR	1.17	1.32	0.63		3000LM; 3500K; 80CRI; PROVIDE W/ REMOTE DRIVER
HDE	6" RECESSED DOWNLIGHT W/LENS W/BATTERY	WILLIAMS 6DR-TL-L30/835-DIM-UNV-LW-OF-WH-MWT-N-F1-EM/10W	1	LED	27	UNV	SEMI-CLEAR	1.17	1.32	0.63		3000LM; 3500K; 80CRI; PROVIDE W/ REMOTE DRIVER; PROVIDE W/ EM BATTERY.
K2	2X4 LAY-IN	WILLIAMS PT-24-L49/835-RA-DIM-UNV	1	LED	37	UNV	ACRYLIC	2.0	4.0	0.33		4900LM; 3500K; 80CRI
KA	2X2 LAY-IN	WILLIAMS PT-22-L43/835-RA-DIM-UNV	1	LED	32	UNV	ACRYLIC	2.0	2.0	0.33		4300LM; 3500K; 80CRI
LS	LUMINOUS SKY CEILING	BY OTHERS	1	LED	0	UNV	ACRYLIC	2.0	2.0	0.33		FURNISHED BY GC AND WIRED BY EC. MAKE ALL CONNECTIONS AS REQUIRED.
U2	2' UNDER CABINET	WILLIAMS 1SF-2-2'-835-DMA-DIM-UNV	1	LED	11	UNV	ACRYLIC	0.38	2.0	0.08		742 LUMENS; 90 CRI; 3500K
X3	BEAM-ON LIGHT	LITHONIA LE-P-1-R-SW19	1	LED	5	UNV	CAST ALUMINUM	0.63	1.0	0.13		RED W/OUT BATT., SIGN READS "BEAM ON".
X4	X-RAY ON LIGHT	LITHONIA LE-P-1-R-SW16	1	LED	5	UNV	CAST ALUMINUM	0.63	1.0	0.13		RED W/OUT BATT., SIGN READS "X-RAY IN USE".

(1)(2)(3)

EQUIPMENT CONNECTION SCHEDULE

MECHANICAL EQUIPMENT CONNECTIONS

UNIT DESIG	UNIT VOLTAGE	LOAD H.P.	LOAD FLA	LOAD KVA	PANEL DEVICE CIRCUIT NUMBER	PANEL DEVICE BKR. AMPS	PANEL DEVICE SW. AMPS	PANEL DEVICE FUSE AMPS	PANEL DEVICE E	PANEL DEVICE NEMA STARTER SIZE	DEVICE AT UNIT BKR. AMPS	DEVICE AT UNIT SW. AMPS	DEVICE AT UNIT FUSE AMPS	DEVICE AT UNIT E	DEVICE AT UNIT NEMA STARTER SIZE	DEVICE AT UNIT OTHER	S F S	FEEDER DESCRIPTION OR SEE THE FEEDER SCHEDULE	REMARKS OR SEE THE INDICATED NOTES BELOW
EF	EXHAUST FAN																		
1	120/1	0.17A	0.2	0.02	F1-6-LN:83	20			1							FUSTAT	1	2 #12 AWG THWN; #12 AWG GRD; 1/2"C.	CONTROL WITH LIGHTS
CH-RO	CHILLER																		
2	480/3	7.5	28.8	23.94	DP-F1-17-HA:3	40			3			60	35	3		NEMA-3R	1	3 #8 AWG THWN; #10 AWG GRD; 3/4"C.	

(1) ALL CONNECTIONS AND ELECTRICAL EQUIPMENT LISTED IN SCHEDULE SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. FIELD VERIFY CONNECTION REQUIREMENTS AND EQUIPMENT PROVIDED BY OTHERS PRIOR TO ROUGH-IN.
(2) REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTIONS OF INTERLOCKING, THERMOSTAT LOCATIONS, EXHAUST FAN CONTROL SWITCHES, AND OTHER CONTROLS OF MECHANICAL EQUIPMENT.
(3) SIZE FUSES FOR MOTOR FUSTATS BASED ON 125% OF MANUFACTURER'S NAMEPLATE FULL LOAD AMPERAGE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

PANELBOARD: F1-7-LN

208Y/120 VOLTS, 3 PHASE, 4 WIRE
100 AMP MLO, SURFACE MTD.
W/GRD. BUS — 10000 AIC LABELED

CIRC NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	P	AMP SIZE	PHASE	AMP SIZE	P	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.	CIRC NO.
1	800	RCPT	REC - CONTROL #2 1F129 COUNTER	1	20	A	20	1	LINAC #2 AIMING LASERS/CAMERAS	POWR	1400	2
3	1200	RCPT	REC - CONTROL #2 1F129 NORTH	1	20	B	20	1	LINAC #2 VISION MONITOR	POWR	500	4
5	1200	RCPT	REC - CONTROL #2 1F129 SOUTH	1	20	C	20	1	LINAC #2 CAMERAS	POWR	800	6
7	500	POWR	STREAMING - CONTROL #2 1F129	1	20	A	20	1	REC - LINAC #2 COUNTER	RCPT	1000	8
9	500	POWR	LINAC #2 DOOR RELAY	1	20	B	20	1	LINAC #2 USB HUB	POWR	200	10
11	500	POWR	LINAC #2 DOOR CONTROLLER	1	20	C	20	1	LINAC #2 IN-ROOM MONITOR	POWR	500	12
(1) 13	120	POWR	BOTTLE FILLER - CORR 02-1F-128	1	20	A	20	1	SPARE			14
15			SPARE	1	20	B	20	1	SPARE			16
17			SPARE	1	20	C	20	1	SPARE			18
19			SPARE	1	20	A	20	1	SPARE			20
21			SPACE			B			SPACE			22
23			SPACE			C			SPACE			24
25			SPACE			A			SPACE			26
27			SPACE			B			SPACE			28
29			SPACE			C			SPACE			30

(1) GFCI BREAKER SHALL PROVIDE GROUND FAULT PERSONEL PROTECTION PER NEC.

PANELBOARD: F1-7-LN

	CONNECTED KVA: PH-A	PH-B	PH-C	TOTAL	DEMAND FACTOR	KVA	CONT. FACT	SIZING AMPS: TOTAL	PH-A	PH-B	PH-C
Receptacle	1.8	1.2	1.2	4.2	1	4.2	1	11.7	15.0	10.0	10.0
Power	2.0	1.2	1.8	5.0	1	5.0	1	13.9	16.8	10.0	15.0
Spare					0.2	1.8	1	5.1	5.1	5.1	5.1
TOTAL KVA:	3.8	2.4	3.0	9.2		11.1		TOTAL AMPS:	PH-A	PH-B	PH-C
TOTAL AMPS:	31.8	20.0	25.0	25.6				30.7	37.0	25.1	30.1

BRETT M. WALBRIDGE
NUMBER PE-2011026073
PROFESSIONAL ENGINEER
06/27/2025

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PEC PROJECT NUMBER: 226269-000

SAINT LUKE'S EAST LEE'S SUMMIT
VAULT #2 LINEAR ACCELERATOR
100 NE Saint Luke's Blvd.
Lee's Summit, MO 64086

Date	06.27.2025
Job Number	3-25014
Drawn By	JGM
Checked By	JLW

Revision

Number	Date	Description

E-611

ELECTRICAL SCHEDULES