



# Saint Luke's East Hospital

## ED Patient Treatment Renovation

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

## PROJECT TEAM

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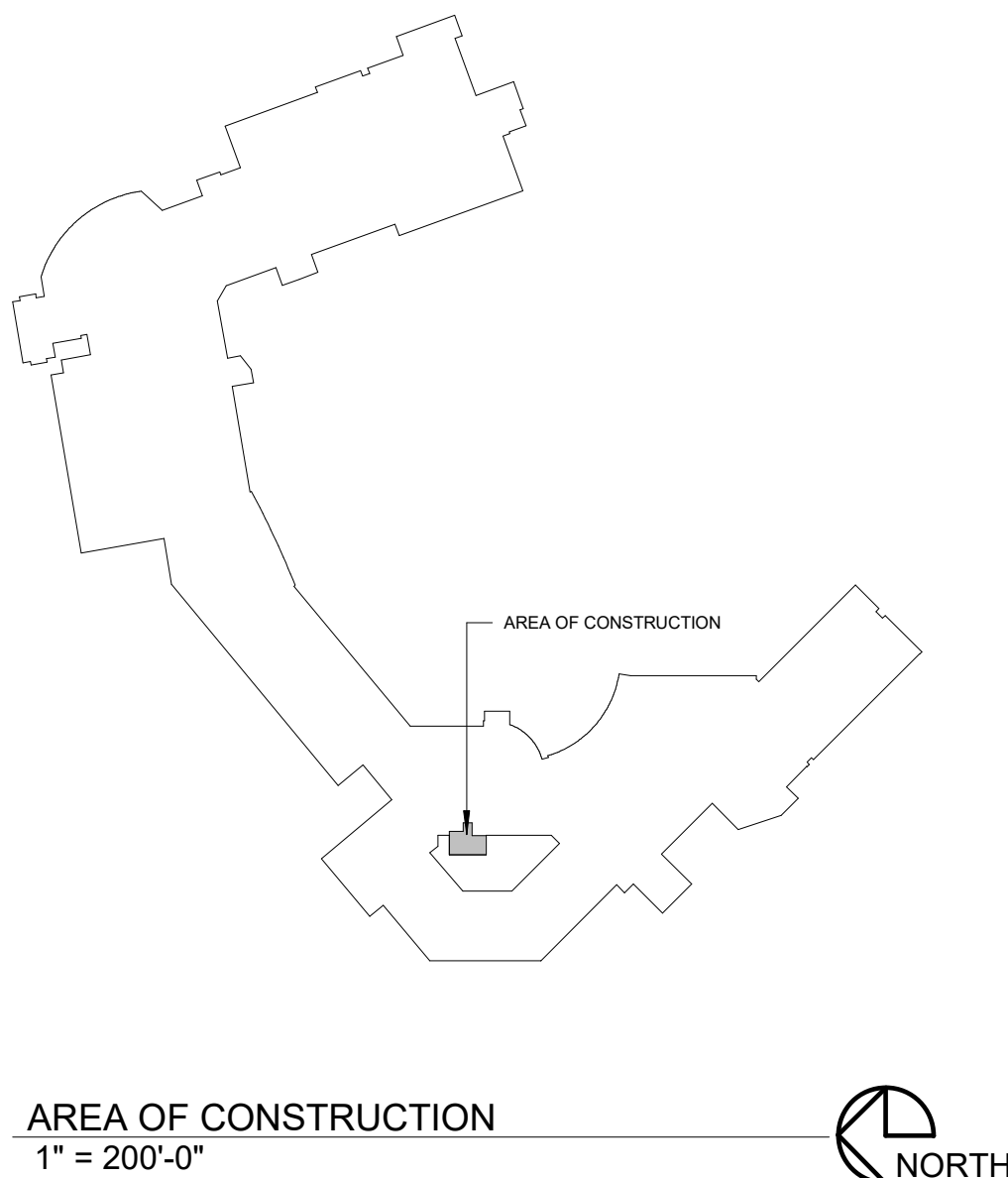
### ABBREVIATIONS

AC.	ACOUSTIC/ACOUSTICAL	FLOR.	FLUORESCENT	PTD.	PAINTED
ADD.	ADDENDUM	FTG.	FOOTING	PG.	PAGE
ADDN.	ADDITION	FND.	FOUNDATION	PLAM.	PLASTIC LAMINATE
ABC.	AGGREGATE BASE COURSE	FR.	FRAME	PAR.	PART
AFF.	ABOVE FINISH FLOOR	F.H.C.	FIRE HOSE CAB.	PNL.	PANEL
AGG.	AGGREGATE	FV.	FIELD VERIFY	PTN.	PARTITION
AC.	AIR CONDITIONING			PR.	PLYWOOD
AL.	ALUMINUM	GA.	GAUGE	PL.	PLATE
ALT.	ALTERNATE	GL.	GLASS / GLAZING	PLBS.	PLUMBING
A.B.	ANCHOR BOLT	GR.	GRADE	PLYWD.	PLYWOOD
ARCH.	ARCHITECT	G.	GRAM	PT.	POINT
ASP.	ASPHALT	GRIL.	GRILLE	P.S.I.	POUNDS PER SQ. IN.
@	AT	GRD.	GRID	P.S.F.	POUNDS PER SQ. FT.
ACT.	ACCTIC CEILING TILE/PANEL	GND.	GROUND	P.C.	PRECAST
ANGLE	ANGLE	G.S.	GAUVANIZED STEEL	P.L.	PROPERTY LINE
		GYP.	GYPSPUM		
		GWB/G.B.	GYPSPUM BOARD		
BLKG.	BLOCKING	H.R.	HAND RAIL	R.	RISER, RISERS
BSMT.	BASEMENT	HDN.	HARDENER	RAD.	RADIUS
B.M.	BENCHMARK	HDW.	HARDWARE	R.D.	ROOF DRAIN
BD.	BOARD	HDWD.	HARDWOOD	RB.	RESILIENT BASE
B.O.	BOTTOM OF BUILDING	HTR.	HEATER	RE.	REFER TO
		HT.	HEIGHT	REG.	REGISTER
CABT.	CABINET	H.P.	HIGH POINT	REQD.	REQUIRED
C.I.P.	CAST IN PLACE	H.M.	HOLLOW METAL	REV.	REVISION
C.B.	CATCH BASIN	HORIZ.	HORIZONTAL	RFG.	ROOFING
C.G.	CEILING	HOSE BB.	HOSE BIB	RCH.	ROUGH
CEM.	CEMENT/CEMENTITIOUS	H.W.	HOT WATER	RM.	ROOM
CG.	CENTIGRAM			RND.	ROUND
CM.	CENTIMETER			R.O.	ROUGH OPENING
CL.	CENTER LINE	IN.	INCH / INCHES	SCHED.	SCHEDULE
CER.	CERAMIC	ID.	INSIDE DIAMETER	S.C.	SEALED CONCRETE
C.T.	CERAMIC TILE	INSUL.	INSULATION	SCR.	SCREW
CHAN.	CHANNEL	INT.	INTERIOR	SECT.	SECTION
CLR.	CLEAR	INV.	INVERT	SEL.	SELECT
C.O.	CLEAN OUT	JAN.	JANITOR	SHG.	SHEATHING
CLOS.	CLOSET	JT.	JOINT	SHT.	SHEET
COL.	COLUMN	JST.	JOIST	SDG.	SIDING
CONC.	CONCRETE	K.P.	KICK PLATE	SLD.	SIMILAR
CONN.	CONNECTION	LAM.	LAMINATED	SM.	SMOOTH
CONSL.	CONSTRUCTION	LB.	POUND	SPEC.	SPECIFICATION
C.J.	CONTROL JOINT	LDG.	LANDING	ST.	STANDARD
CONTR.	CONSTRUCTION JOINT	LTH.	LATH	STD.	STANDARD
CORP.	CORRUGATED	LAV.	LAVATORY	S.S.I.	STAINLESS STEEL
CTR.	COUNTER	LEN.	LENGTH	STRUC.	STRUCTURE
CTSK.	COUNTERSUNK	LOC.	LOCATION	SUSP.	SUSPENDED
C.M.U.	CONCRETE MASONRY UNIT	L.W.C.	LIGHT WEIGHT CONCRETE	SWD.	SWITCHBOARD
		LVR.	LOUVER	SYS.	SYSTEM
		LOC.	LOCATION		
D.P.	DAMP PROOFING	M.O.	MASONRY OPENING	T.	TREAD
DS.	DECREASING	MATL.	MATERIAL	T.C.	TOP OF CURB
DIAG.	DIAGONAL	MFR.	MANUFACTURER	T.G.	TEMPERED GLASS
DIAM.	DIAMETER	MB.	MARKER BOARD	T.O.	TOP OF
DM.	DIMENSION	MECH.	MECHANICAL	T.S.D.	TOP OF STEEL DECK
DISP.	DISPENSER	MTL.	METAL	T.W.	TEACHERS WARDROBE
DWL.	DOWEL	M.L.	METAL LATH	TYP.	TYPICAL
DN.	DOWN	M.	METER		
D.S.	DOWNSPOUT	MIN.	MINIMUM	U.N.O.	UNLESS NOTED OTHERWISE
DWG.	DRAWING	MOLD.	MOLDING		
		MULL.	MULLION	V.	VENT
EA.	EACH	N.G.	NATURAL GRADE	VERT.	VERTICAL
ELEC.	ELECTRIC	NOM.	NOMINAL	V.G.	VERTICAL DRAIN
E.W.C.	ELECTRIC WATER COOLER	N.I.C.	NOT IN CONTRACT	VEST.	VESTIBULE
BL.	ELEVATION	N.T.S.	NOT TO SCALE	V.C.T.	VINYL COMPOSITION TILE
ELEV.	ELEVATOR	NO. / #	NUMBER	VCP.	VITREOUS CLAY PIPE
EQ.	EQUAL				
EQUIP.	EQUIPMENT			W.W.M.	WELDED WIRE MESH
EXH.	EXHAUST			W.C.	WATER CLOSET
EXPAN.	EXPANSION			W.H.	WATER HEATER
E.J.	EXPANSION JOINT			W.F.	WIDE FLANGE
EXIST.	EXISTING			W.	WITH
EXT.	EXTERIOR			W/O.	WITHOUT
				WD.	WOOD
FT.	FEET / FOOT			WDW.	WINDOW
FIN.	FINISH				
FKT.	FLASHING				
FL.	FLOOR				
FLR.	FLOOR DRAIN				
F.D.	FLOOR DRAIN				

### LOCATION PLAN

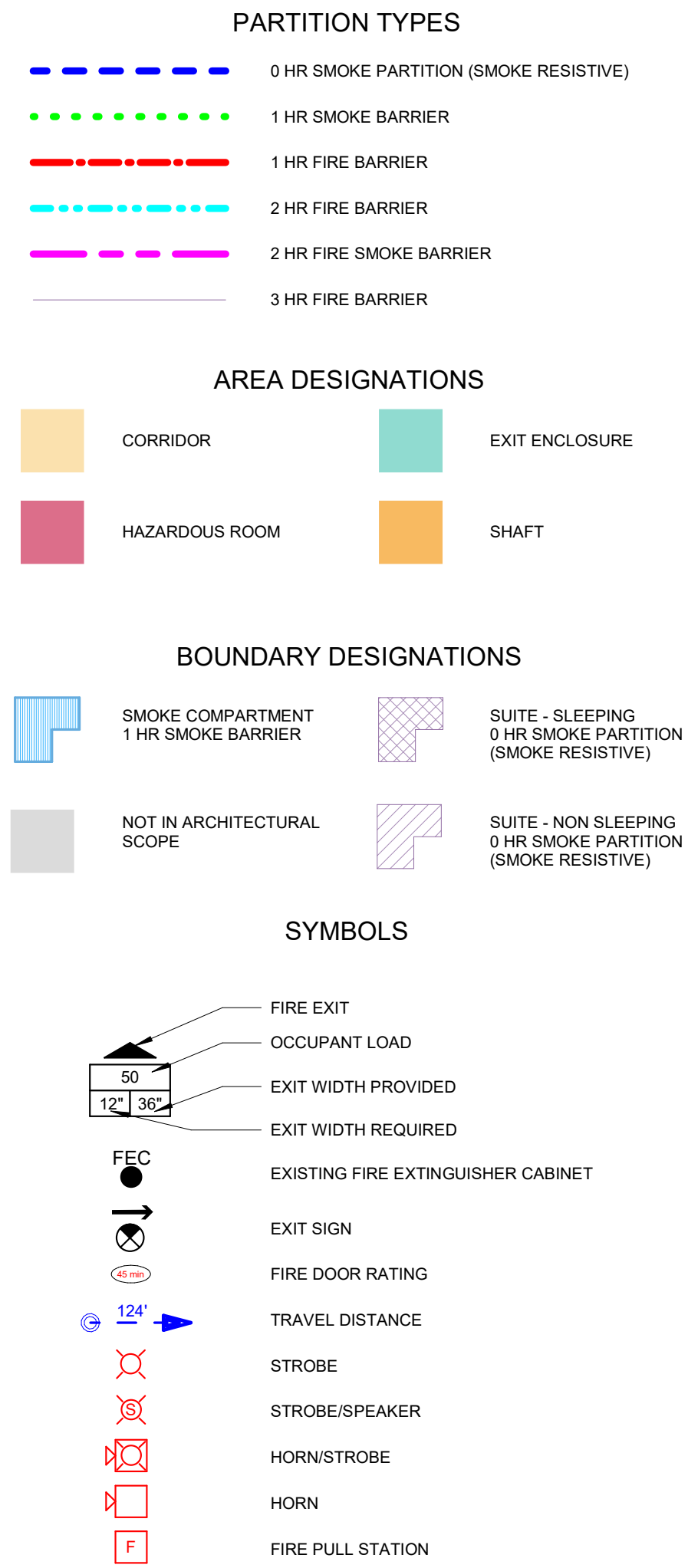


### KEY PLAN



AREA OF CONSTRUCTION  
1" = 200'-0"

### CODE FOOTPRINT LEGEND



### CODE SUMMARY

**PROJECT CONSTRUCTION PURPOSE:** Renovating existing offices into 3 new exam rooms for the ED.

**OWNER:**  
Saint Luke's East Hospital  
120 NE Saint Luke's Blvd  
Lee's Summit, MO 64083

**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  
2018 INTERNATIONAL ELECTRICAL CODE (NFPA 70)  
2018 INTERNATIONAL FIRE CODE  
2012 LIFE SAFETY CODE: NFPA 101 (CHAPTER 20)  
2012 NFPA 101 LIFE SAFETY CODE (LSC)  
2018 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 IBC-301.30  
NOTE: IF CODE REQUIREMENTS OVERLAP, THE MOST STRINGENT SHALL APPLY

**TYPE OF CONSTRUCTION:** TYPE 1-A - SECTION 602.2 (TYPE 1 - 3/2 SPRINKLERED - SECTION 18.1.8.1)  
1-2 - SECTION 308.3 (HEALTHCARE - SECTION 6.1.5)

**OCCUPANCY GROUP:** 785SF  
TOTAL NUMBER OF OCCUPANTS = 6

**DEAD END CORRIDOR LENGTH LIMIT:** 20'

**EXIT ACCESS TRAVEL DISTANCE:** 200'

**AREA OF CONSTRUCTION:** 785+/- SF

**REQUIRED FIRE RESISTANCE RATINGS (IN HOURS):**  
PER NFPA 101 & 101.2

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

### SHEET INDEX

SHEET NUMBER	SHEET NAME
GENERAL	
A000	COVER SHEET & LIFE SAFETY PLAN
A030	PARTITION TYPES, DETAILS, GENERAL NOTES & SYMBOLS
ARCHITECTURE	
A211	OVERALL FLOOR PLAN, RCP, DEMO, AND ELEVATIONS
A700	INTERIOR FINISH PLAN, MATERIAL LEGENDS, SCHEDULES, AND DETAILS
PLUMBING, MECHANICAL, ELECTRICAL	
MP001	MECHANICAL DETAILS AND SCHEDULE
MP002	MECHANICAL SPECIFICATIONS
MP003	MECHANICAL DETAILS AND SCHEDULE
P101	FIRST FLOOR PLUMBING PLAN
P102	FIRST FLOOR MEDICAL GAS PLAN
P501	PLUMBING DETAILS AND SCHEDULES
M101	FIRST FLOOR HVAC PLAN
M102	FIRST FLOOR MECHANICAL PIPING PLAN
M501	MECHANICAL DETAILS AND SCHEDULE
E-002	ELECTRICAL SPECIFICATIONS
E-101	ELECTRICAL DEMOLITION PLAN
E-131	POWER PLAN
E-141	LIGHTING PLAN
E-151	SYSTEMS PLAN
E-501	ELECTRICAL DETAILS
E-601	ELECTRICAL GENERAL NOTES AND SYMBOLS

RELEASED FOR CONSTRUCTION  
As Noted on Plans Review

7/11/2024 10:24:46 AM  
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License - Missouri #A-2011012130

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Missouri: #000958

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LAWRENCE, KS 66044  
(785) 842-6464  
Licensee's Certificate of Authority Number:

**Saint Luke's EAST HOSPITAL**

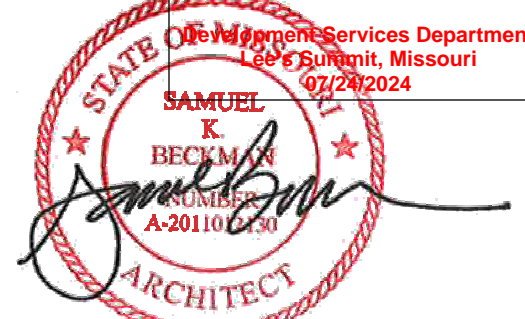
Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

Date	07/10/2024	
Job Number	3-24016	
Drawn By	CN	
Checked By	BD	
Revision		
Number	Date	Description

A1 LIFE SAFETY PLAN  
1/8" = 1'-0"

\*THIS DRAWING IS INTENDED TO BE PRINTED IN COLOR.  
USE BLACK AND WHITE COPIES AT YOUR OWN RISK.





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License - Missouri #A-2011012130



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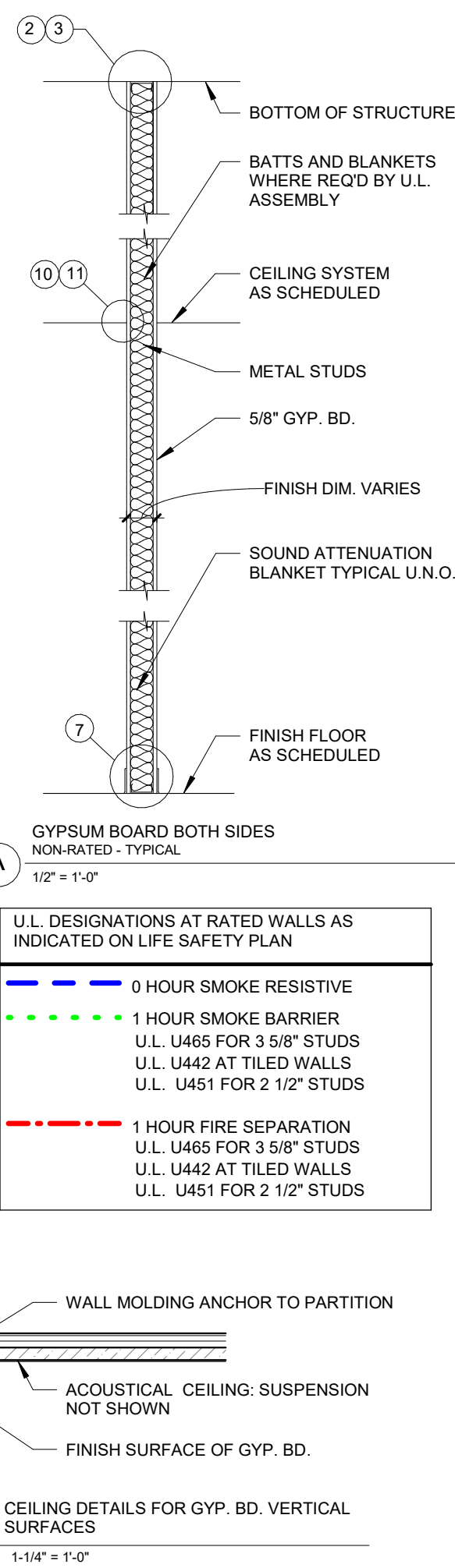
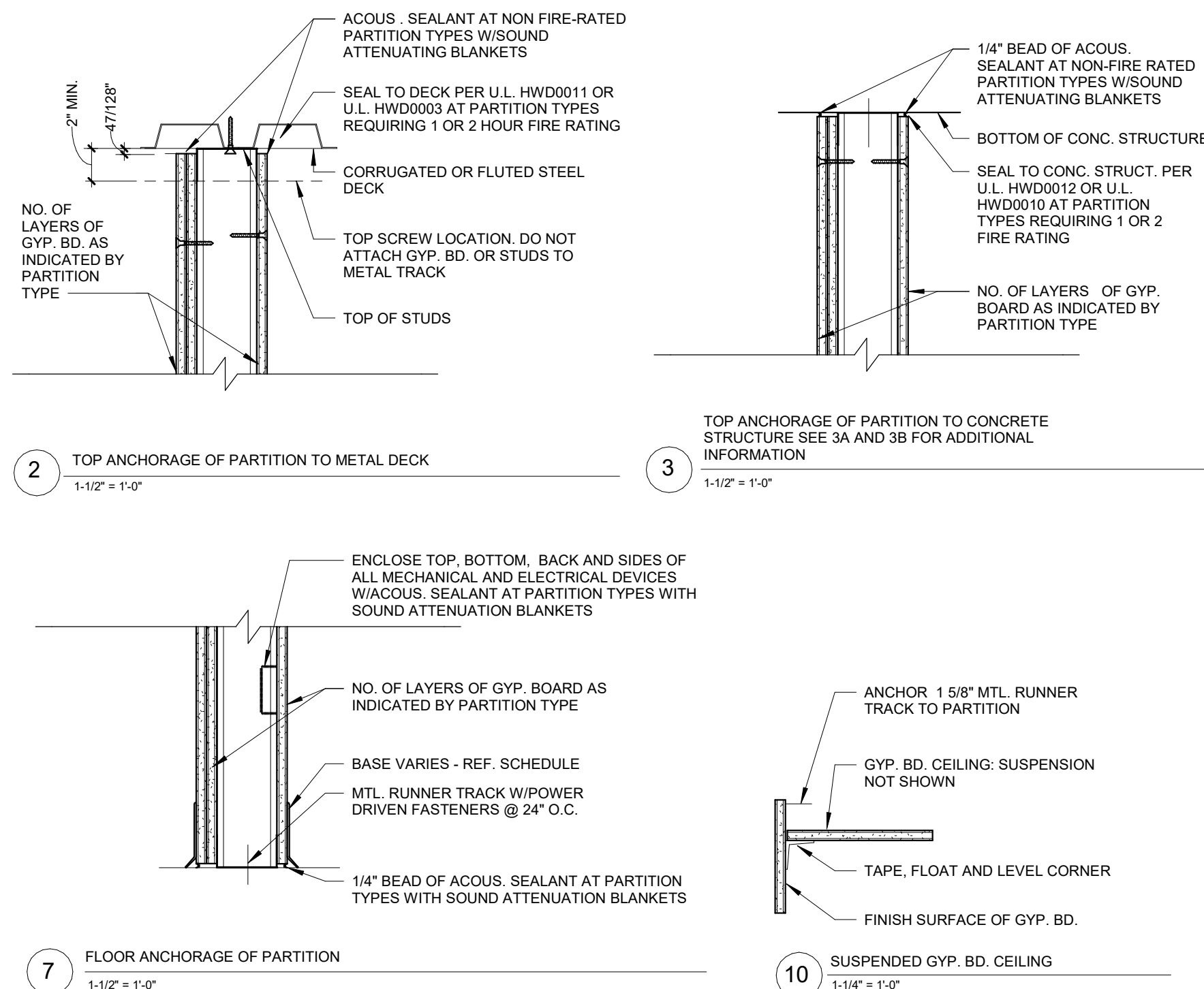
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## PARTITION GENERAL NOTES

- UNLESS NOTED OTHERWISE, ALL INTERIOR METAL STUDS ARE 3/8" THICK. REFER TO SUFFIX SCHEDULE BELOW FOR LOCATIONS OF METAL STUDS OTHER THAN 3/8" THICK. NOTE: STUD THICKNESS (GAUGE) MUST CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SPAN (HEIGHT OF STUD).
- 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. UNLESS NOTED OTHERWISE ON THE FLOOR PLAN, ALL INTERIOR DRYWALL PARTITIONS INDICATED ON THE FLOOR PLAN DRAWING ARE TYPE 'A' PARTITIONS. WHERE OCCURS, RATINGS ARE AS INDICATED ON THE LIFE SAFETY PLAN.
4. ALL STUDS ARE CONTINUOUS FROM FLOOR STRUCTURE TO CEILING STRUCTURE UNLESS NOTED OTHERWISE.
5. METAL STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE.
6. UNLESS NOTED OTHERWISE, ALL GYPSUM BOARD IS TO BE 5/8" THICK "FIRECODE".
7. THE CORRESPONDING RATED ASSEMBLIES ARE INDICATED BELOW THE PARTITION TYPES.
8. PARTITION TYPE DESIGNATIONS ARE INDICATED ON THE FLOOR PLAN DRAWING.
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

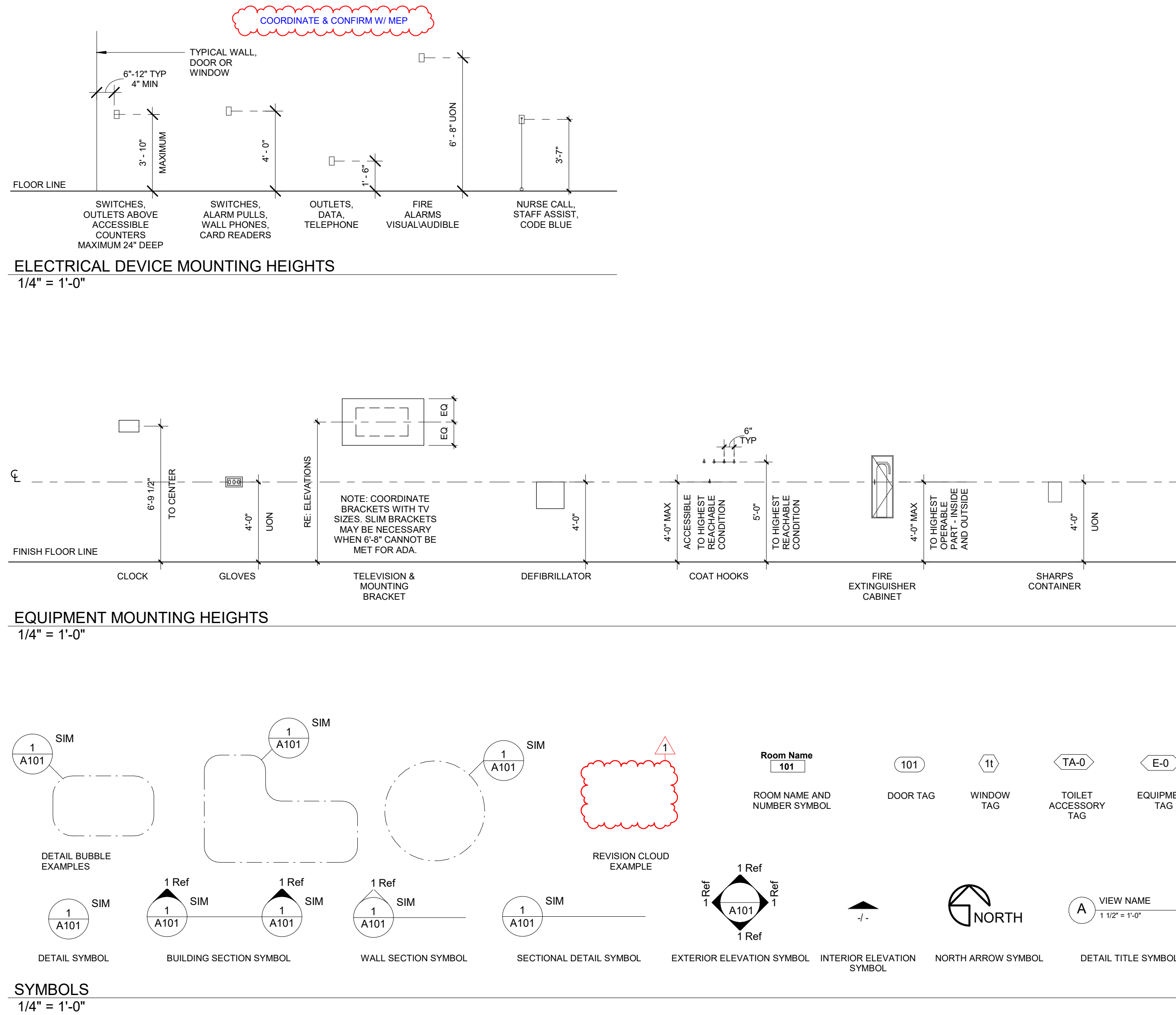


## GENERAL NOTES

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 VERIFIED 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., 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 MANUFACTURER'S 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 COMPLIANCE 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.



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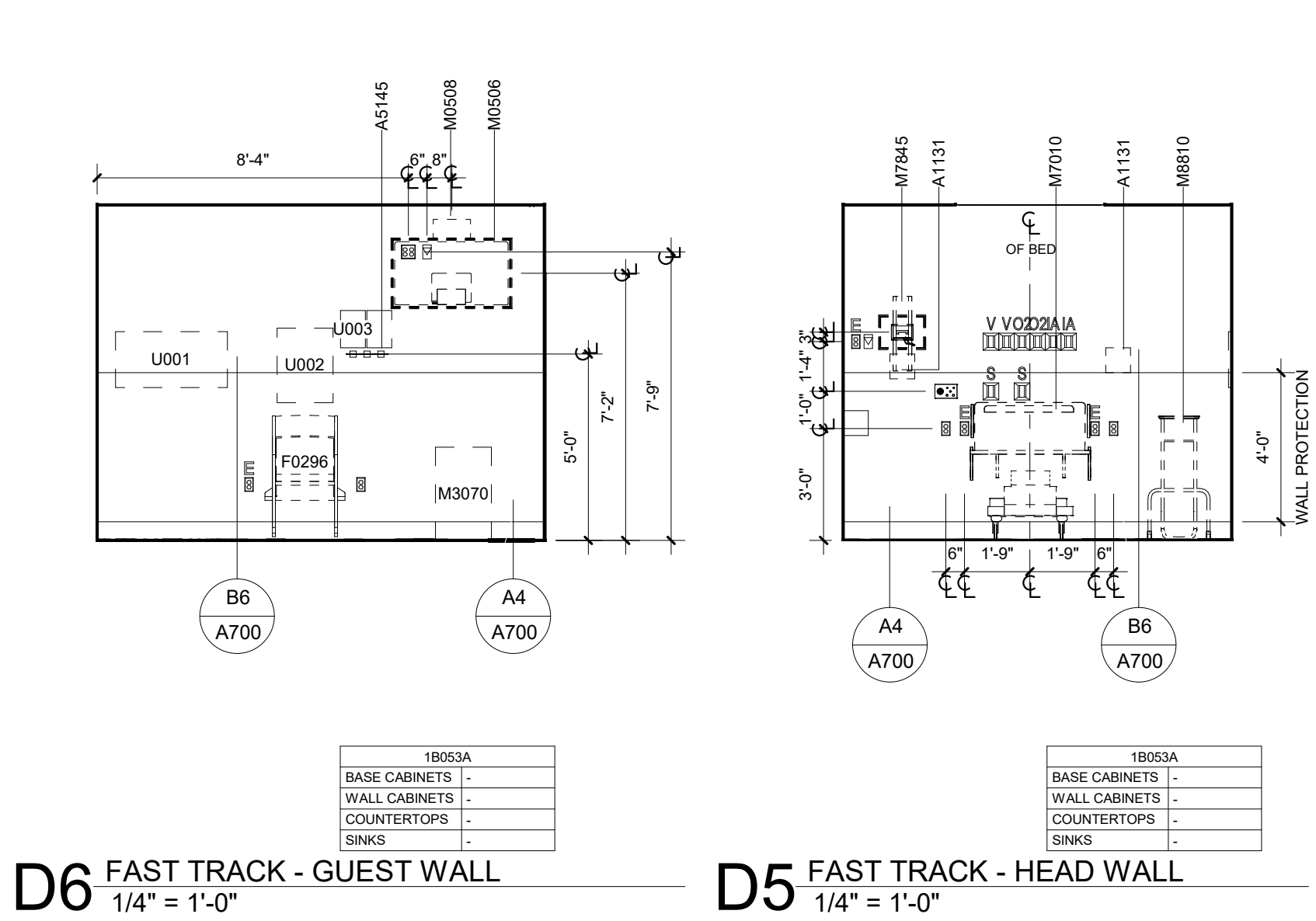
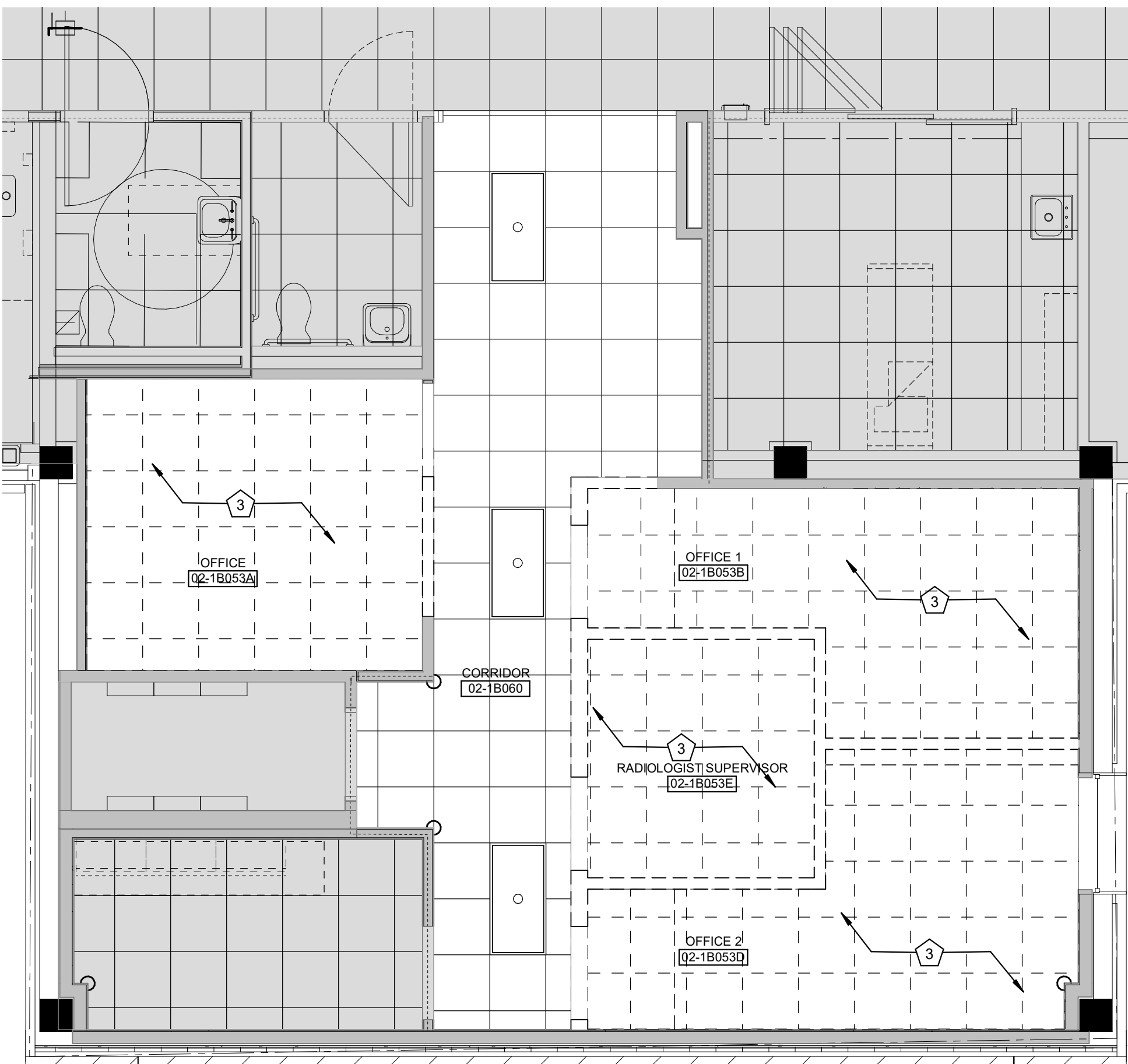
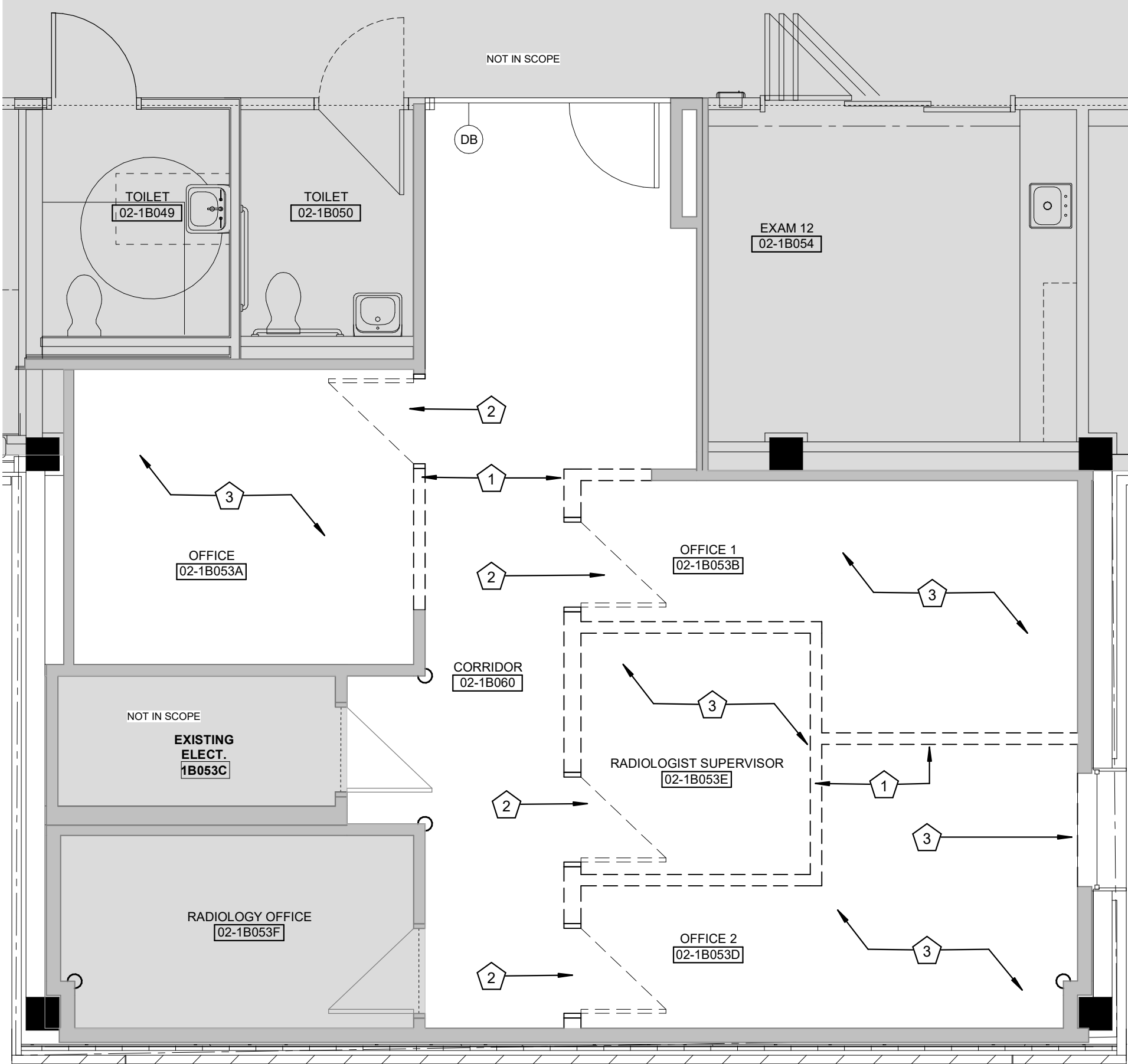
Revision		
Number	Date	Description

A030

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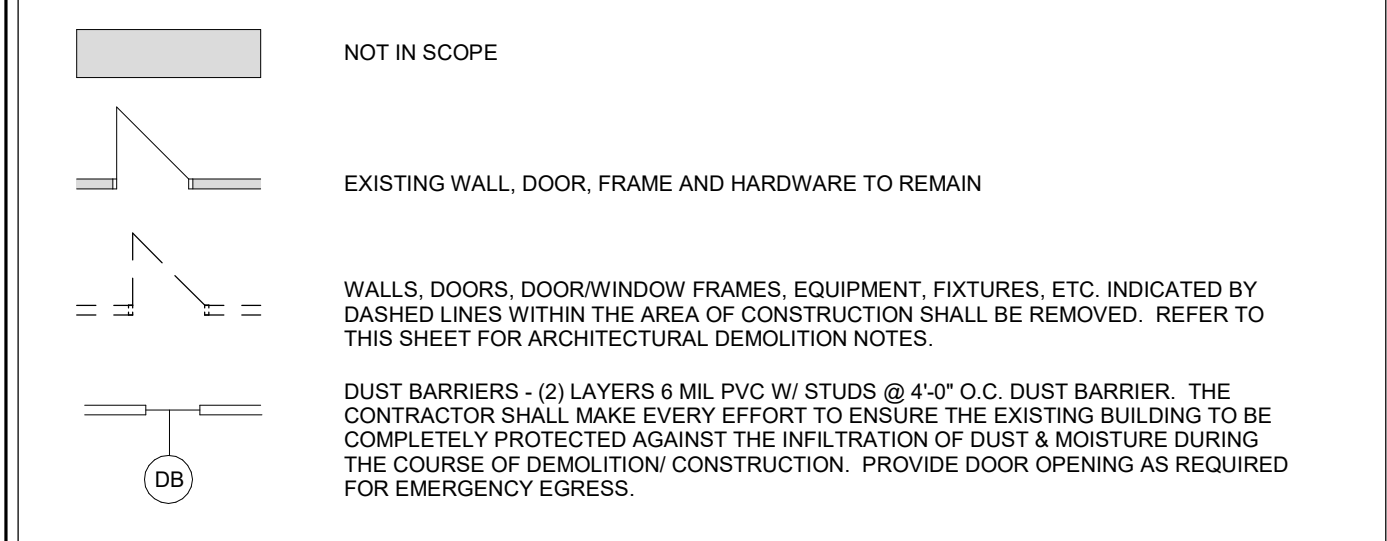
PARTITION TYPES, DETAILS, GENERAL  
NOTES & SYMBOLS



D5 FAST TRACK - HEAD WALL  
1/4" = 1'-0"D4 FAST TRACK - STAFF WALL  
1/4" = 1'-0"D3 TREATMENT ROOM - TYPICAL CASEWORK  
1/4" = 1'-0"D2 TREATMENT ROOM - TYPICAL GUEST WALL  
1/4" = 1'-0"D1 TREATMENT ROOM - TYPICAL HEADWALL  
1/4" = 1'-0"C6 REFLECTED CEILING PLAN - DEMO  
1/4" = 1'-0"A6 FLOOR PLAN - DEMO  
1/4" = 1'-0"

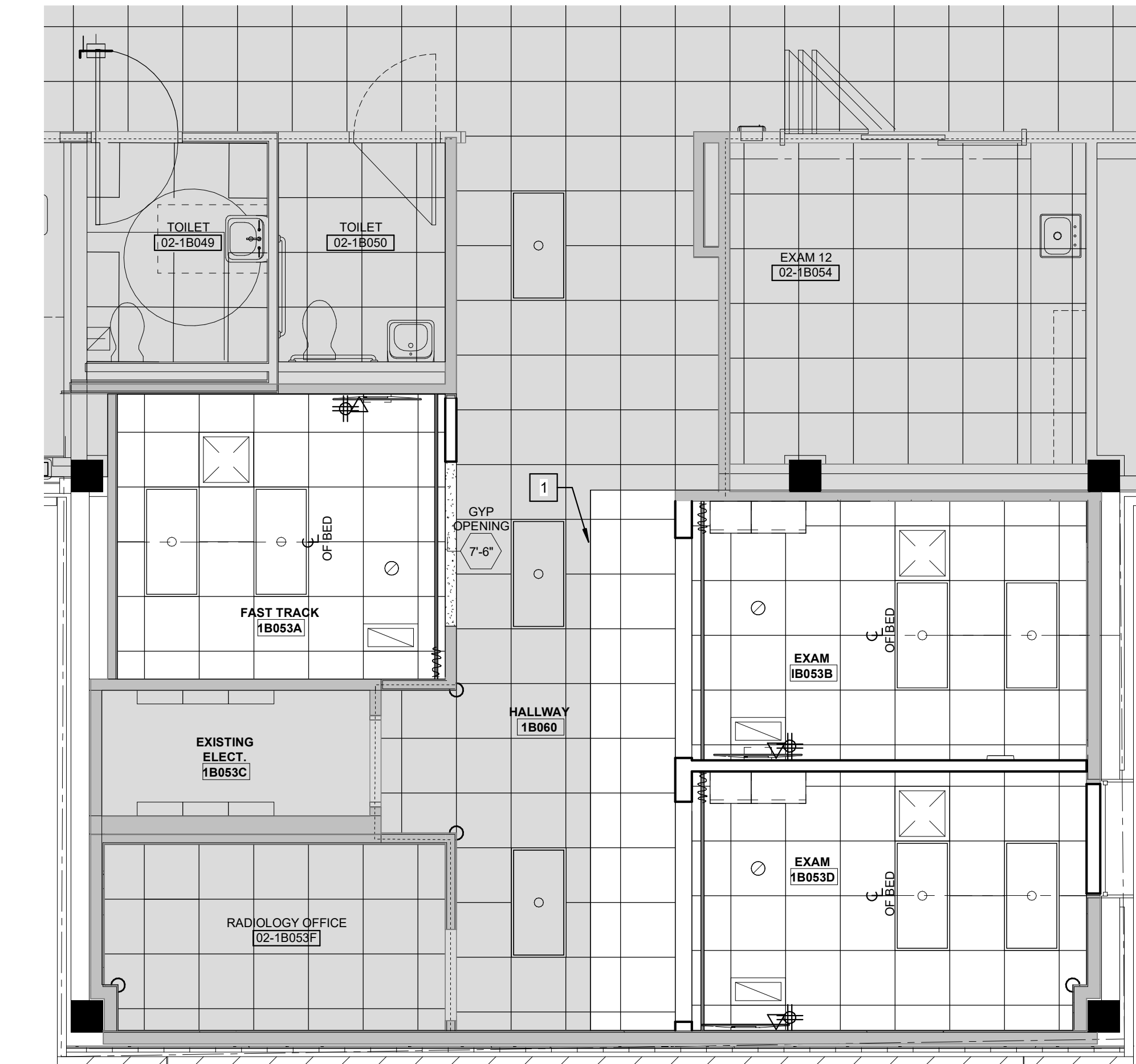
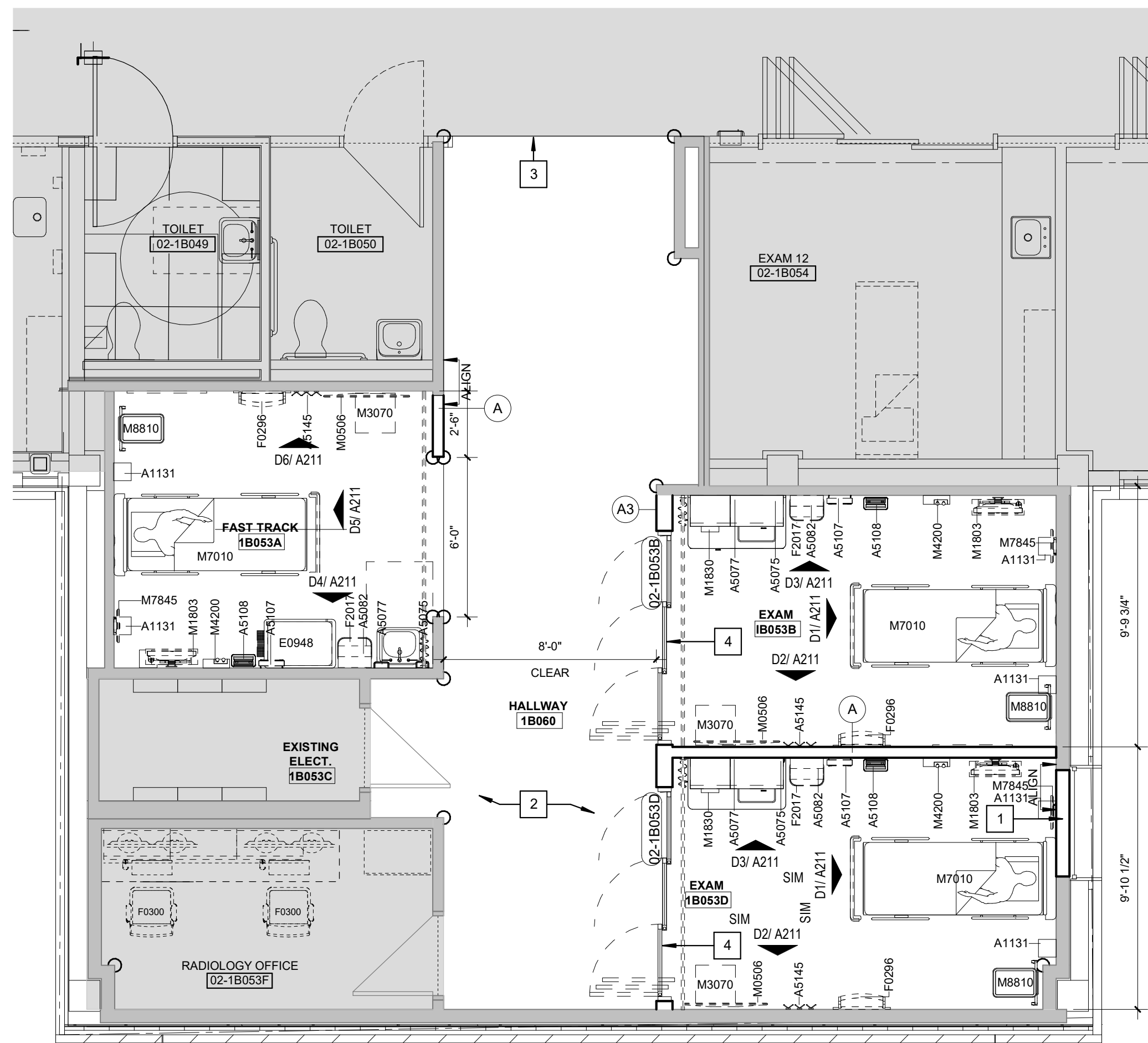
- ### GENERAL DEMOLITION NOTES
- THE OWNER SHALL VACATE THE EXISTING ROOMS AS INDICATED ON THE PLAN AND BE RESPONSIBLE FOR THE REMOVAL OF ANY EQUIPMENT NOT OTHERWISE DESIGNATED PRIOR TO ANY WORK DONE BY THE CONTRACTOR.
  - INSTALL TEMPORARY DUST PARTITION AND/OR BARRIERS AND OTHER METHODS AS MAY BE REQUIRED NECESSARY AS INDICATED ON THE PLAN AND AS NECESSARY TO CONTAIN DEMOLITION/ CONSTRUCTION DUST AND DEBRIS WITHIN THE AREA OF CONSTRUCTION. REFER TO DUST BARRIER "DB" ON THIS SHEET AND THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - 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.
  - 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.
  - THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITHIN OCCUPIED SPACES ABOVE, BELOW AND ADJACENT TO THE WORK. 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.
  - WHERE NEW FINISHES ARE CALLED FOR, REMOVE AND DISCARD EXISTING FLOORING, CEILINGS AND WALL COVERING THROUGHOUT AREA DESIGNATED FOR NEW CONSTRUCTION AND PREP EXISTING FLOOR AND WALL SUBSTRATE TO RECEIVE THE INSTALLATION OF NEW FINISH AS SCHEDULED.
  - SEE NEW WORK PLAN FOR REPAIR AND PREPARATION OF ADJACENT SURFACES.
  - WHERE CEILING IS TO REMAIN, REMOVE ALL DAMAGED CEILING PANELS/ TILES AND REPLACE WITH NEW TO MATCH EXISTING.
  - REMOVE EXISTING PLUMBING FIXTURES AS NOTED. CAP ALL SUPPLY AND WASTE LINES AS REQUIRED. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
  - 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.
  - 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.
  - REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR WORK REQUIRED FOR NEW CONSTRUCTION.
  - 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 REARRANGED WITH FACILITIES.
  - 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.
  - 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.
  - 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.
  - CLEAN AIR GRILLES AND LIGHT FIXTURES THROUGHOUT PROJECT AREA UPON COMPLETION OF WORK.
  - 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.
  - WHERE EXTERIOR WALLS, WINDOWS, AND/OR DOORS ARE BEING REMOVED, THE CONTRACTOR WILL BE RESPONSIBLE TO CONSTRUCT TEMPORARY PARTITIONS AS REQUIRED TO ENSURE THAT THE EXISTING BUILDINGS REMAIN WATERTIGHT, SECURE, AND WITHOUT DRAFTS DURING DEMOLITION WORK. THESE PARTITIONS SHALL REMAIN IN PLACE DURING THE NEW CONSTRUCTION WORK, OR AS REQUIRED TO MAINTAIN THIS SEPARATION.
  - 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.

### DEMOLITION LEGEND



### KEYNOTES - DEMO PLAN

NUMBER	COMMENTS
1	REMOVE PORTION OF WALLS TO COORDINATION WITH NEW CONSTRUCTION
2	CAREFULLY REMOVE EXISTING DOOR AND FRAME, SALVAGE TO OWNER
3	

C2 REFLECTED CEILING PLAN  
1/4" = 1'-0"A2 FLOOR PLAN  
1/4" = 1'-0"

FFE SCHEDULE			
TYPE MARK	DESCRIPTION	RESPON SIBILITY	COMMENTS
A1131	BASKET	OFOI	
A5075	DISPENSER, SOAP	OFOI	
A5077	DISPENSER, HAND SANITIZER	OFOI	BLOCKING AS REQUIRED, RE: SPECS.
A5082	PAPER TOWEL	OFOI	BLOCKING AS REQUIRED, RE: SPECS.
A5107	GLOVE DISPENSER, 3 HOLE	OFOI	BLOCKING AS REQUIRED, RE: SPECS.
A5108	SHARPS, WALL MOUNTED	OFOI	BLOCKING AS REQUIRED, RE: SPECS.
A5145	GARMENT HOOK	OFOI	BLOCKING AS REQUIRED, RE: SPECS.
A5180a	CUBICLE CURTAIN TRACK	OFOI	
A5180b	CUBICLE CURTAIN	OFOI	
E0948	STORAGE CART	OFOI	
F2036	CHAIR, FOLDING, WALL MOUNTED	OFOI	BLOCKING AS REQUIRED, RE: SPECS.
F2017	WASTE RECEPTACLE	OFOI	
F2001	CLOCK	OFOI	
M0506	MONITOR, TELEVISION	OFOI	PROVIDE IN-WALL BLOCKING, POWER & CABLE REQUIRED, RE: MEP. COORDINATE BRACKET TYPE WITH OWNER.
M0508	HELLO CARE SYSTEM	OFOI	POWER REQUIRED, RE: MEP.
M1803	WORKSTATION, WALL MOUNTED	OFOI	BLOCKING AS REQUIRED, RE: SPECS. POWER & DATA REQUIRED, RE: MEP.
M1830	PRINTER, LABEL	OFOI	POWER & DATA REQUIRED, RE: MEP. PROVIDE ERGOTRON SHELF IN FAST TRACK ROOM.
M3070	LINEN HAMPER	OFOI	
M4200	OTOSCOPE	OFOI	BLOCKING AS REQUIRED, RE: SPECS. POWER REQUIRED, RE: MEP.
M7010	BED, PATIENT, ELECTRIC	OFOI	POWER REQUIRED, RE: MEP.
M7845	MONITOR, VITALS	OFOI	BLOCKING AS REQUIRED, RE: SPECS. POWER & DATA REQUIRED, RE: MEP.
M8810	MAYO STAND	OFOI	
U001	SIGNAGE	OFOI	
U002	SIGNAGE	OFOI	
U003	SIGNAGE	OFOI	

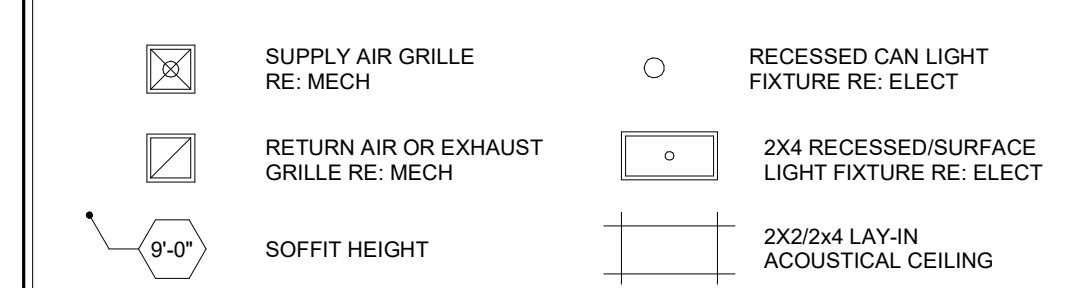
### GENERAL EQUIPMENT NOTES

- FOR ALL OFCI ITEMS, CONTRACTOR TO COORDINATE FINAL EQUIPMENT LOCATION WITH OTHERS.

### REFLECTED CEILING NOTES

- EXISTING MEFP 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.
- CONTRACTOR TO PROVIDE ALL REQUIRED LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET AND COMPLETE THE REQUIREMENTS OF THE NEW CONSTRUCTION.
- ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREP AS REQUIRED FOR NEW FINISH APPLICATION.
- THIS PLAN SHALL BE USED TO COORDINATE THE CEILING LAYOUT WITH MECHANICAL AND ELECTRICAL WORK. VERIFY THE EXACT QUANTITY REQUIRED.
- CONTRACTOR TO REFER TO THE ELECTRICAL PLANS FOR ACTUAL LIGHTING SIZES AND FIXTURE TYPES.
- SEE SPECIFICATIONS AND FINISH SCHEDULE FOR CEILING TYPES.
- REFER TO FINISH FLOOR PLANS FOR MATERIAL LEGEND OF ALL TYPES.
- ALL CEILINGS SHALL BE 9'-0" AFF UNLESS OTHERWISE NOTED.
- REPLACE ANY DAMAGED CEILING TILES.

### CEILING LEGEND



### KEYNOTES - RCP

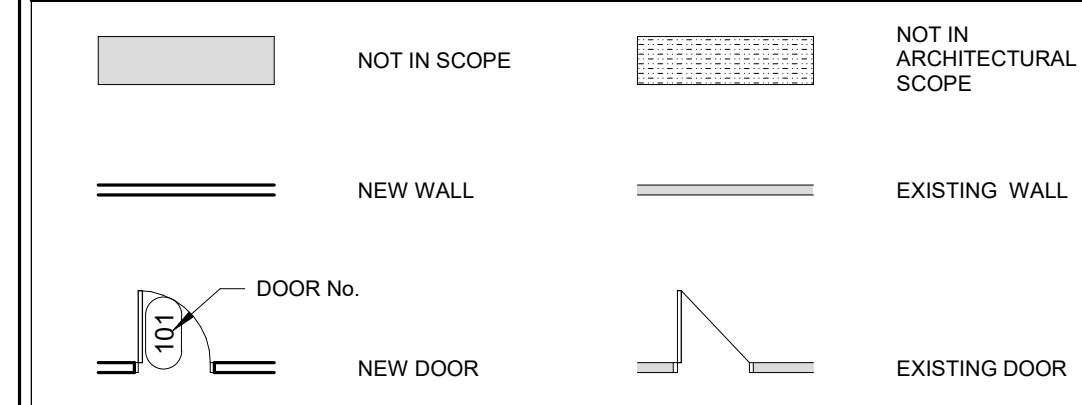
Number	Comments
1	EXTEND GRID AND INSTALL NEW CEILING TILES TO MATCH EXISTING.

### GENERAL PLAN NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH A.D.A. REQUIREMENTS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING CODES AND REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING PERMITS.
- 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.
- IF MATERIAL SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED, DO NOT DISTURB. IMMEDIATELY NOTIFY ARCHITECT AND OWNER. OWNER SHALL COORDINATE WITH CONTRACTOR ON THE REMOVAL OF SUCH ITEMS. WORK MAY PROCEED AFTER HAZARDOUS MATERIAL HAS BEEN REMOVED.
- 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.
- CONTRACTOR SHALL FURNISH AND INSTALL CONCEALED FIRE-TREATED WOOD BLOCKING BEHIND ALL CABINETS, TOILET ACCESSORIES, PLUMBING FIXTURES, AND OTHER WALL MOUNTED ITEMS AS REQUIRED FOR ADEQUATE SUPPORT.
- CONTRACTOR TO PROVIDE ALL REQUIRED LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO MEET AND COMPLETE THE REQUIREMENTS OF THE NEW CONSTRUCTION.
- ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREP AS REQUIRED FOR NEW FINISH APPLICATION.
- DO NOT CLOSE OR OBSTRUCT WALKWAYS, EXITS, OR OTHER FACILITIES USED BY OCCUPANTS OF BUILDINGS WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION.
- CONDUCT ALL OPERATIONS IN A SAFE WORKING MANNER TO PREVENT DAMAGE OR INJURY TO ADJACENT SPACES, BUILDING, STRUCTURE, OTHER FACILITIES, AND PERSONS.
- REFER TO GENERAL NOTES, LEGENDS & SYMBOLS SHEET F FOR ADDITIONAL GENERAL NOTES AS APPLICABLE.
- SEE FINISH SCHEDULE FOR FINISH LOCATION AND SPECIFICATIONS.
- SEE DOOR SCHEDULE FOR DOOR SPECIFICATIONS.

- #### REMODEL/RENOVATION NOTES
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY 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.
  - THE 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.
  - UPON VERIFICATION OF THE EXISTING CONDITIONS, THE CONTRACTOR SHALL DETERMINE AND RECOMMEND THE BEST ACTION TO MINIMIZE THE EXTENT OF REMOVAL WORK FOR INSTALLATION OF NEW WORK.
  - ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED, REPAIRED, AND PREPPED AS REQUIRED FOR NEW FINISH APPLICATION.

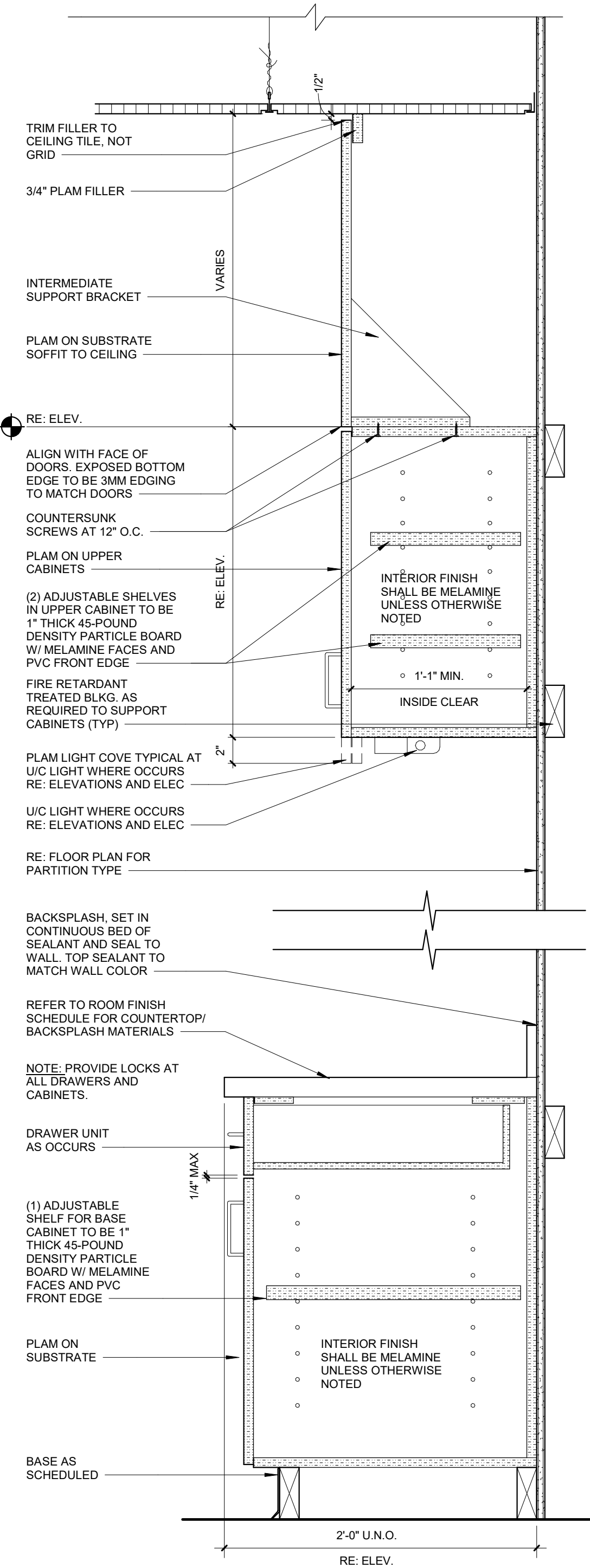
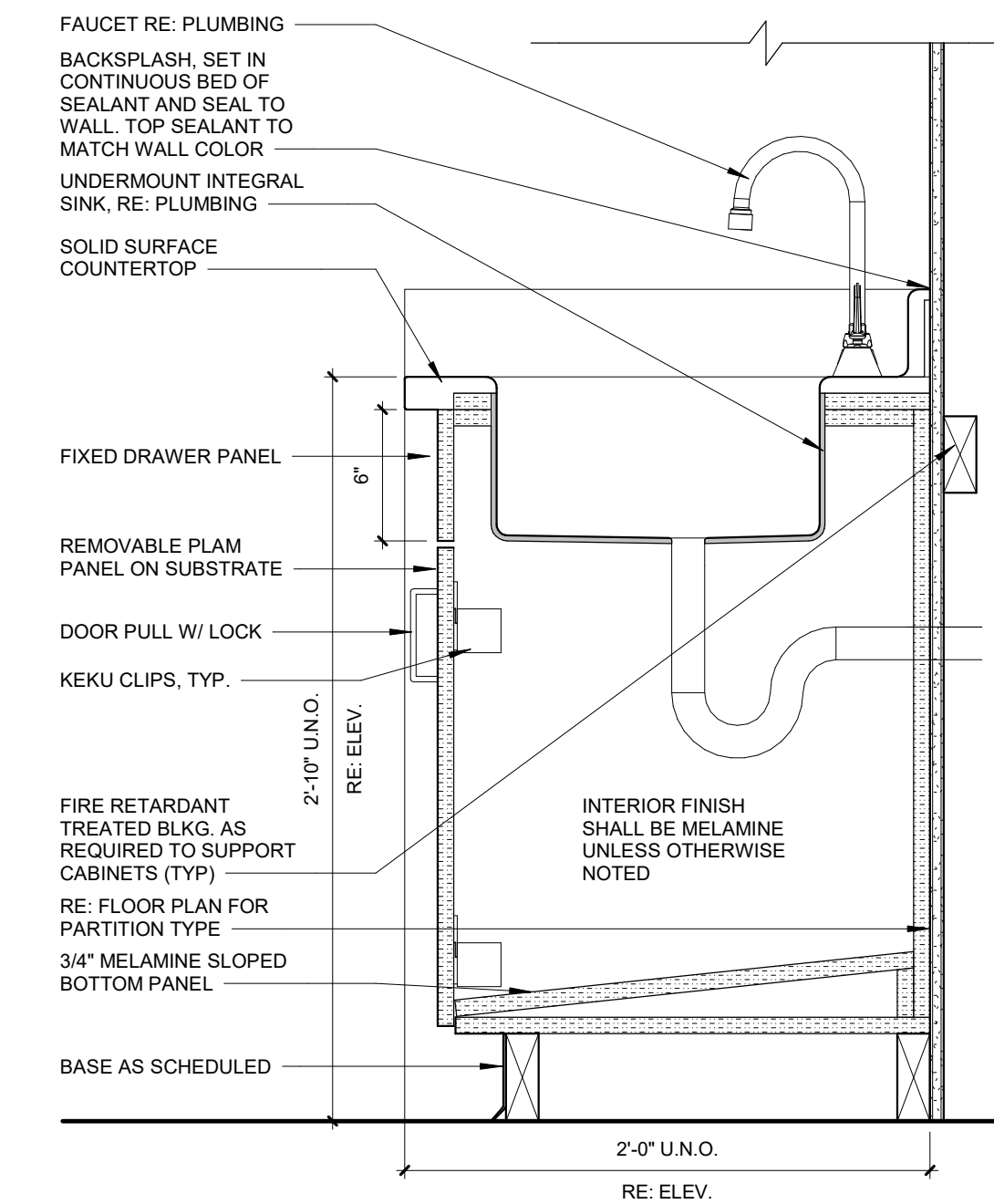
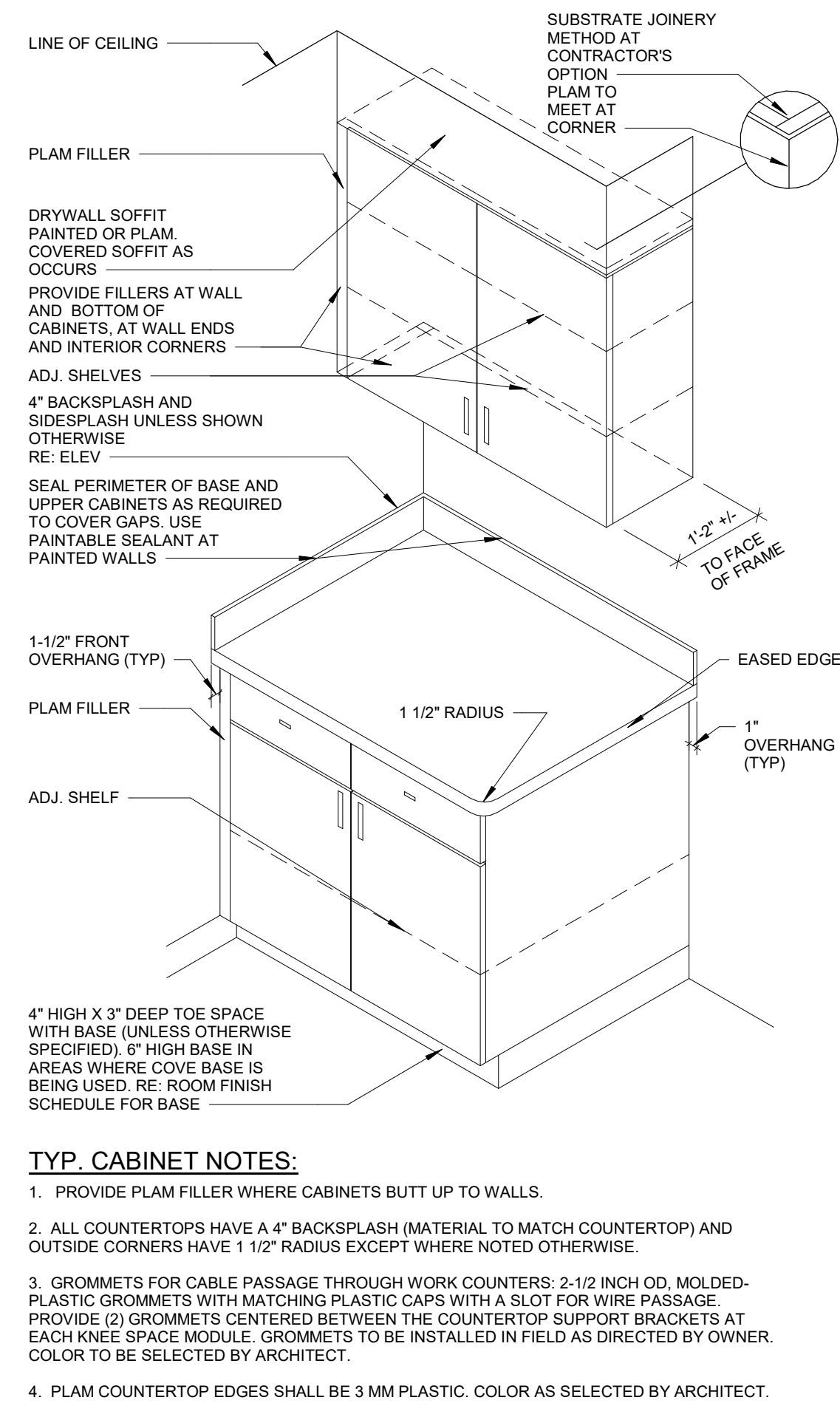
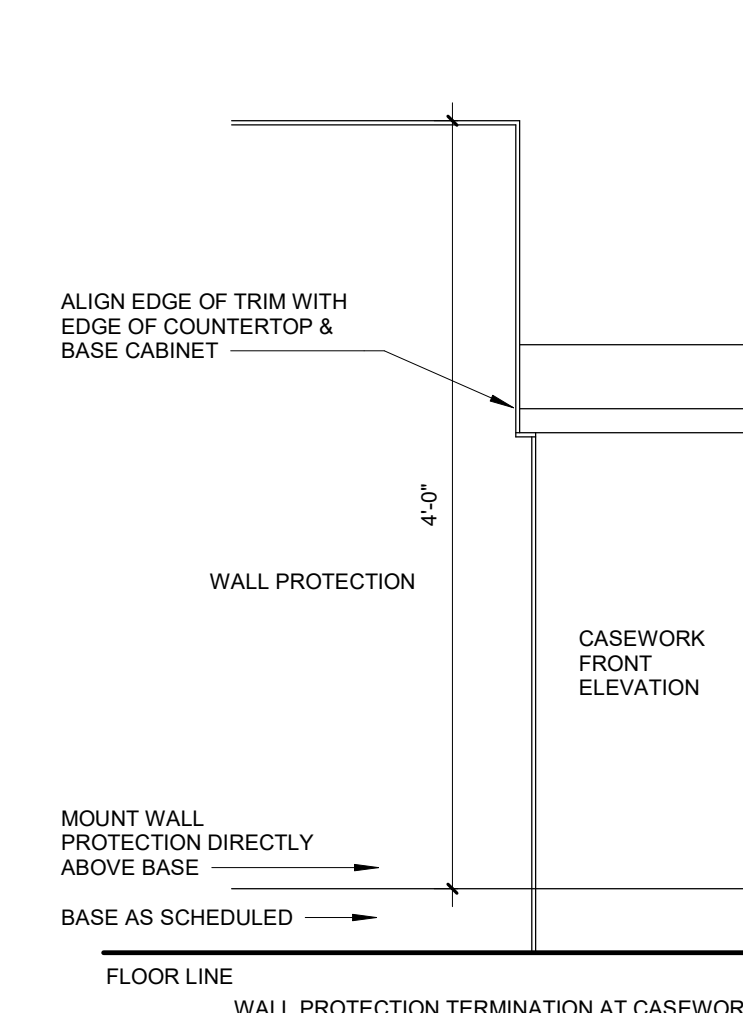
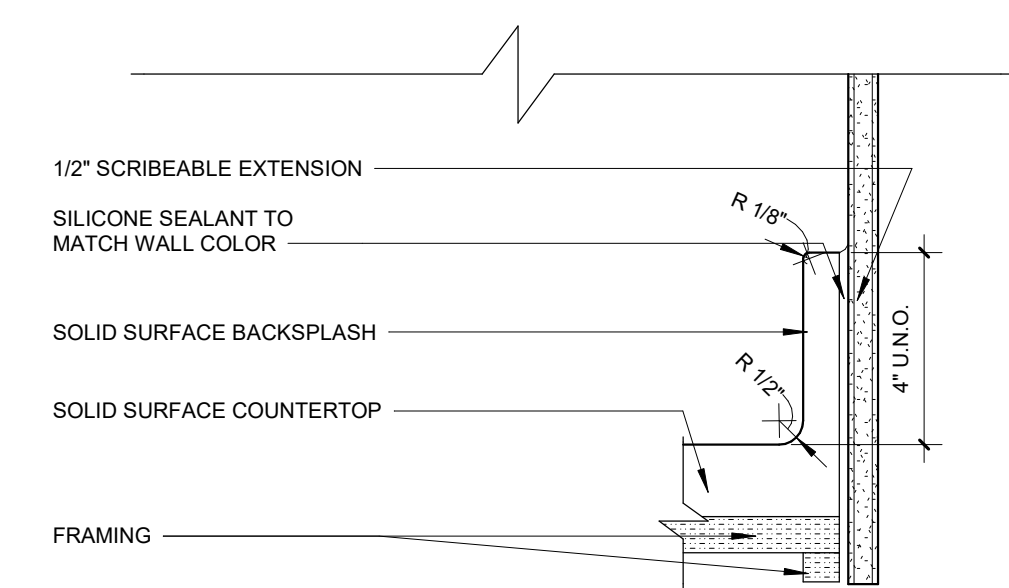
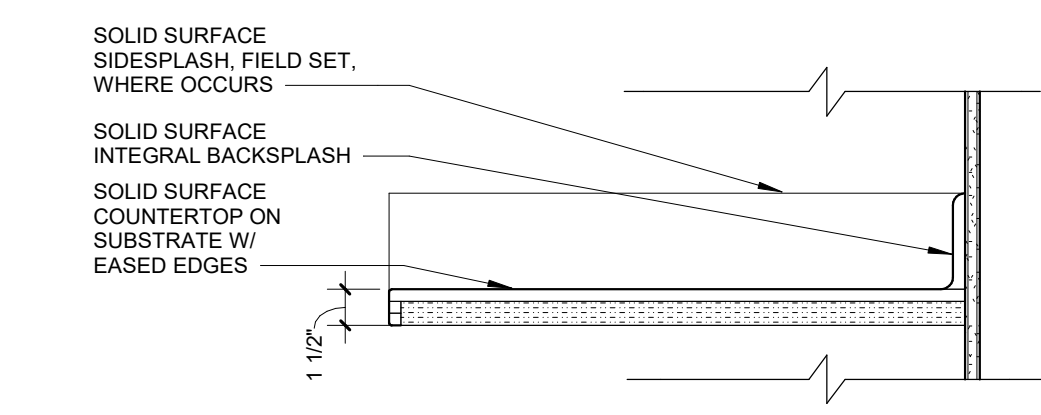
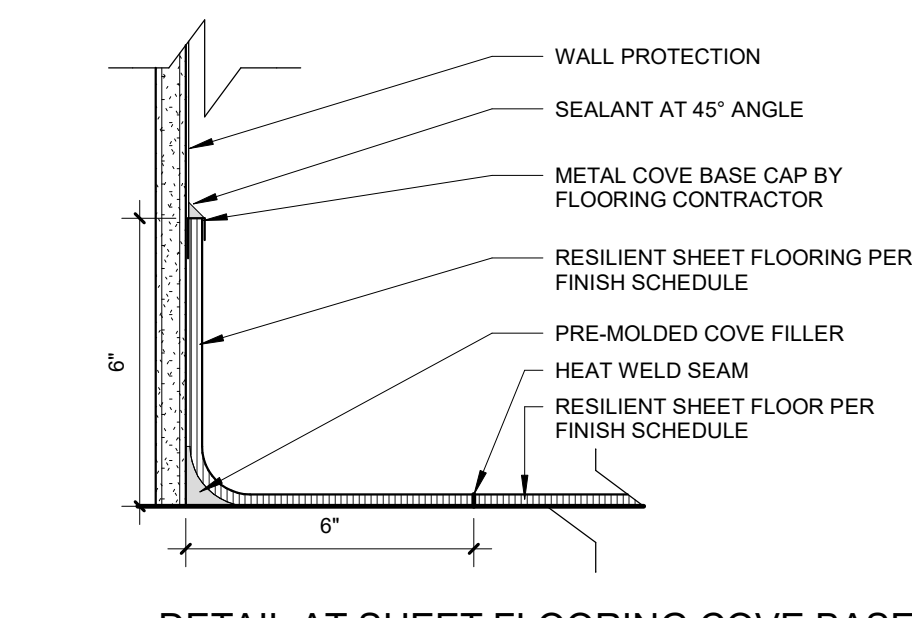
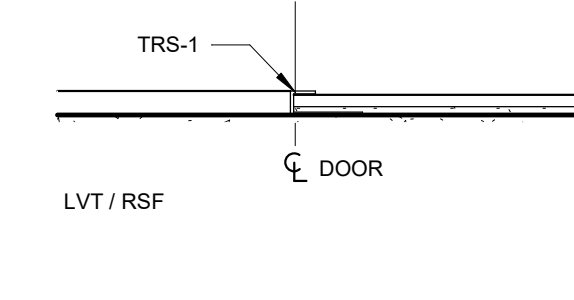
### FLOOR PLAN LEGEND



### KEYNOTES - FLOOR PLAN

NUMBER	COMMENTS
1	COVER EXISTING WINDOW WITH NEW GYP BOARD AND METAL STUD CONSTRUCTION TO MATCH ADJACENT WALL THICKNESS. PROVIDE BLACKED-OUT PANEL AT WINDOW SYSTEM TO BLOCK OUT VIEW OF WALL CONSTRUCTION
2	PAINT WALLS ALONG LENGTH OF CORRIDOR. Tie NEW CEILING GRID INTO EXISTING CEILING SYSTEM
3	NEW FLOORING AND BASE TIED INTO EXISTING. MATCH FINISHES.
4	NEW SPANIEL ICU SLIDING DOORS, ALTERNATE WITH INTEGRAL BLINDS



**C6 DETAIL AT CASEWORK**  
1 1/2" = 1'-0"**C5 DETAIL AT SINK BASE CABINET - SOLID SURFACE**  
1 1/2" = 1'-0"**C4 CASEWORK ISOMETRIC**  
1 1/2" = 1'-0"**B6 TYP- ELEV- OF WALL PROTECTION-CORNER GUARD**  
1" = 1'-0"**A6 DETAIL AT SOLID SURFACE BACKSPLASH**  
3" = 1'-0"**A5 TYPICAL SOLID SURFACE COUNTERTOP**  
1 1/2" = 1'-0"**A4 DETAIL AT SHEET FLOORING COVE BASE TERMINATION & TRANSITION**  
3" = 1'-0"**A3 TRANSITION STRIP DETAILS**  
6" = 1'-0"

INTERIOR FINISH LEGEND							REVISION #
MARK	ITEM	MANUFACTURER	MODEL/ PATTERN	COLOR	SIZE	REMARKS	
FLOOR							
LVT-2	LUXURY VINYL TILE	MANNINGTON	AMTICO STONE	CORINTHIAN MARBLE AROSTV13	18" X 18"	STRAIGHT EDGE ONLY. ASHLAR INSTALLATION.	
RSF-3	RESILIENT SHEET FLOORING	SHAW CONTRACT	NATURELIFE WOOD II 002V	VINTAGE HICKORY 09655	6'-0" ROLL	MATCHING WELD ROD. HETEROGENEOUS FLOORING.	
RSF-5	RESILIENT SHEET FLOORING	MOHAWK	MEDELLA HUES	H5422 WALNUT	6'-7" ROLL	MATCHING WELD ROD. HOMOGENEOUS FLOORING.	
TRS-1	TRANSITION STRIP	SCHLUTER	VINPRO S	BRUSHED CHROME ANODIZED ALUMINUM	-	RE: FLOORING TRANSITION DETAILS	
BASE							
IB-S	INTEGRAL BASE	MOHAWK	MEDELLA HUES	H5422 WALNUT	8" COVE	JMOLD SCHLUTER STRIP AT THE TOP.	
RB-1	RESILIENT BASE	ROPPE	PINNACLE PLUS, PROFILE #65	#129 DOLPHIN	4.5/8"		
WALL							
CG-1	CORNER GUARDS	C/S ACROVYN	SM-20AN-ACROVYN-4000	#933 MISSION WHITE	3"	90 DEGREE. ABOVE BASE TO 48" AFF	
PT-1	PAINT	SHERWIN WILLIAMS	EGGSHELL FINISH	SW7008 ALABASTER	-	FIELD PAINT	
PT-4	PAINT	SHERWIN WILLIAMS	SEAM-GLOSS FINISH	SW7008 ANONYMOUS	-	ALL HOLLOW METAL DOOR AND WINDOW FRAMES	
PT-8	PAINT	SHERWIN WILLIAMS	EGGSHELL FINISH	SW7621 SILVERMIST	-	ACCENT PAINT	
WP-2	WALL PROTECTION	C/S ACROVYN	ACROVYN 4000	#933 MISSION WHITE	4" X 10' SHEETS, .040" THICK	WALL PROTECTION AT 48" AFF. INCLUDE ALL ACCESSORIES AND TRIM PIECES	
CASEWORK							
IB-S	INTEGRAL SINK	WILSONART	AK1413 SQUARE	DESIGNER WHITE	17" X 15-3/8" X 14-3/4"	-	
PLAM-1	PLASTIC LAMINATE	WILSONART	#766K-12	WALNUT HEIGHTS	-	CUSTOM 3MM PVC DOELLEN WALNUT HEIGHTS 870TES. RUN VERTICALLY.	
SSF-1	SOLID SURFACE	WILSONART	9199MG	PEARL MIRAGE	1/2"; 30" X 144" SHEET, 36" X 144" SHEET	-	
CEILING							
ACT-1	ACOUSTIC CEILING TILE	USG	RADAR CLIMA PLUS #2210	WHITE	2' X 2'	SQUARE EDGE, DOWN DX TEE 15/16" GRID SYSTEM	
MISC							
CCT-1	CUBICLE CURTAIN TRACK	INPRO CORPORATION	OPTITRAC CUBICLE TRACK	WHITE	1-1/2" X 3/4"	INCLUDE ALL TRACK AND CARRIER ACCESSORIES.	
ETR	EXISTING TO REMAIN	-	-	-	-	-	

## ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALLS				CASEWORK			CEILING	NOTES	REVISION #
				NORTH	EAST	WEST	SOUTH	BASE CABINETS	WALL CABINETS	COUNTERTOPS			
1B03A	FAST TRACK	RSF-3.5	IB-S	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	-	-	-	ACT-1	2	
1B03D	EXAM	RSF-3.5	IB-S	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	PLAM-1	PLAM-1	SSF-1	IS-1	ACT-1	2
1B060	HALLWAY	LVT-2	RB-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	-	-	-	ACT-1 / ETR	1	
1B05B	EXAM	RSF-3.5	IB-S	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	WP-2 / PT-1	PLAM-1	PLAM-1	SSF-1	IS-1	ACT-1	2

## GENERAL ROOM FINISH SCHEDULE NOTES

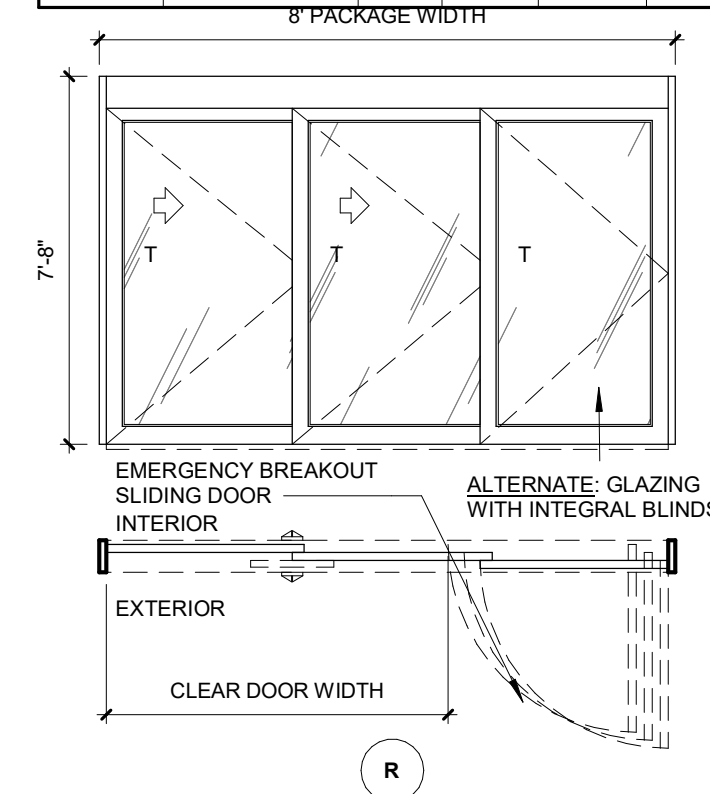
- A) REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR WALL FINISHES, WALL PROTECTION, CORNER GUARDS, WINDOW TREATMENTS, FLOOR FINISH APPLICATION AND LOCATIONS.
- B) ALL SOLID WOOD, WOOD VENEER, AND PLASTIC LAMINATE GRAIN SHALL BE VERTICALLY ORIENTED UNLESS OTHERWISE NOTED.
- C) DOOR FRAMES, HOLLOW METAL WINDOW FRAMES TO BE PT-1 UNLESS OTHERWISE NOTED.
- D) WALL EXPANSION JOINTS TO BE PT-1 UNLESS OTHERWISE NOTED.
- E) ALL ELECTRICAL PANELS AND METAL GRILLES SHALL BE PT-1 TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED.
- F) ALL COLUMNS SURROUND FINISHES TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED.
- G) WHERE A WALL IS INDICATED TO HAVE PARTIAL OR FULL HT WALL PROTECTION, THE ENTIRE WALL IS TO BE PT-1 PRIOR TO WALL PROTECTION INSTALLATION.
- H) EXTEND ALL FINISHES BENEATH, BEHIND, AROUND ALL CASEWORK, EQUIPMENT, SIGNAGE, ETC.
- I) SUBMIT SAMPLES OF ALL FINISHES TO ARCHITECT FOR REVIEW PRIOR TO THE ORDERING OF MATERIAL.
- J) 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.
- K) PROVIDE ALL MAINTENANCE MANUALS AND WARRANTY INFORMATION FOR EACH FINISH MATERIAL TO OWNER AT COMPLETION OF THE PROJECT.
- L) FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE WORK OF FINISH APPLICATIONS.
- M) ALL FINISHES SHALL BE INSTALLED AND MAINTAINED PER MANUFACTURER'S RECOMMENDATION AND INDUSTRY STANDARDS.
- N) 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 MANUFACTURER'S RECOMMENDATIONS.
- O) ALL MATERIAL TO COMPLY WITH FLAME SPREAD CLASSIFICATION EITHER CLASS (1) ONE OR CLASS A DEPENDING ON GOVERNING CODE IN EFFECT.
- P) SMOKE DEVELOPMENT RATING < 450 FOR ALL FINISHES.

## SPECIFIC ROOM FINISH SCHEDULE NOTES

1. TIE IN FINISHES TO EXISTING AT CORRIDOR.
2. RE: E4 / A700 FOR DIRECTION ON SHEET VINYL TRANSITION AND COVE BASE TERMINATION.

## DOOR SCHEDULE

DOOR #	ROOM NAME	DOOR INFORMATION				FRAME INFORMATION				HARDWARE SET	OPENING DETAIL		REMARKS	REV #
		WIDTH	HEIGHT	NO. OF LEAVES	ELEV.	MATL.	ELEV.	MATL.	GLAZING		HEAD	JAMB		
02-1B05B	EXAM	8'-0"	7'-5 3/4"	3	R	ALUM	--	--	--	--	--	--	STANLEY 8600. ALTERNATE: PROVIDE INTERIOR INTEGRAL BLINDS.	
02-1B03D	EXAM	8'-0"	7'-5 3/4"	3	R	ALUM	--	--	--	--	--	--	STANLEY 8600. ALTERNATE: PROVIDE INTERIOR INTEGRAL BLINDS.	
02-1B05B	HALLWAY	6'-0"	9'-0"	1	R	ALUM	--	--	--	--	--	--	STANLEY 8600. ALTERNATE: PROVIDE INTERIOR INTEGRAL BLINDS.	



## DOOR AND HARDWARE NOTES

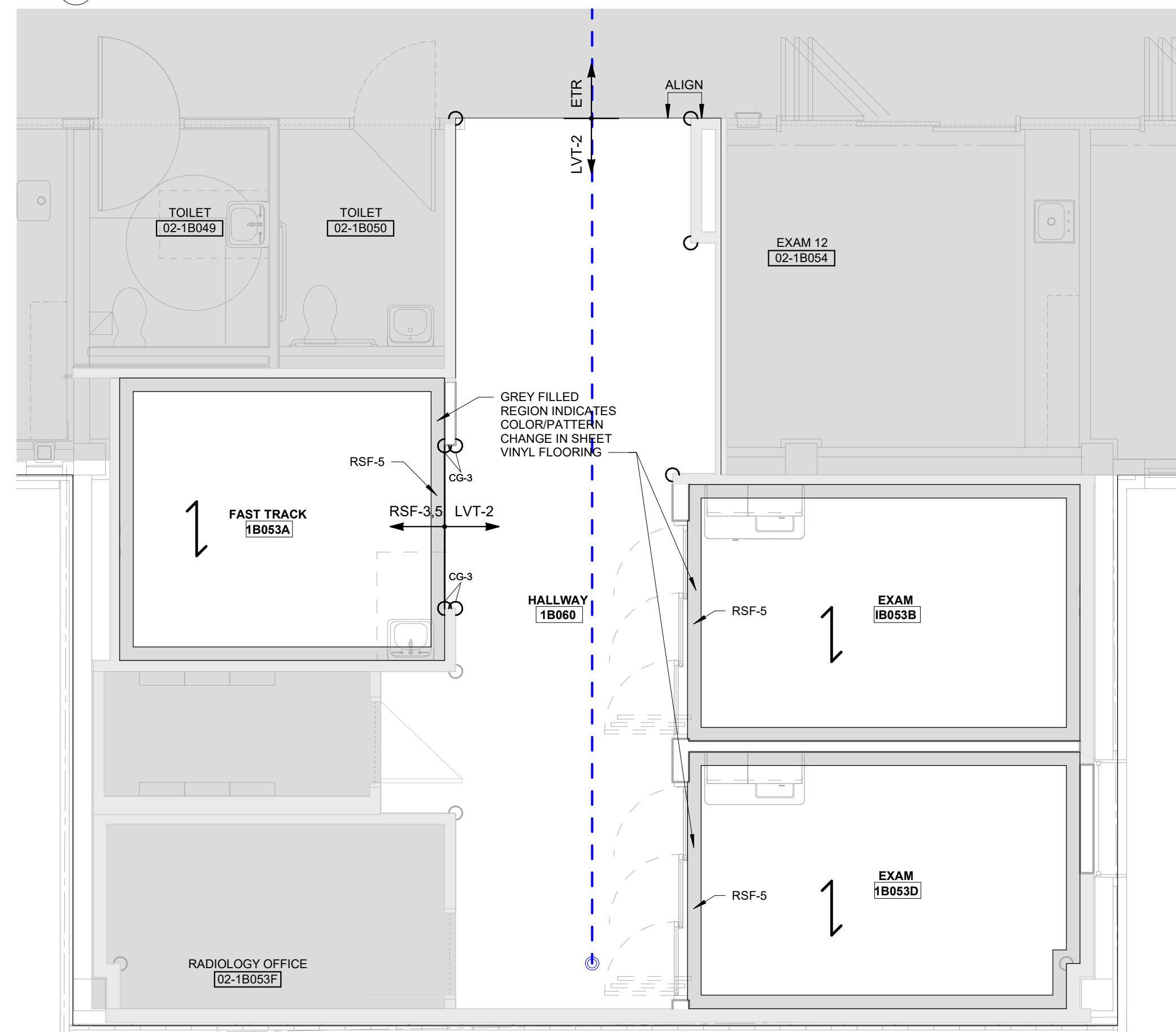
- DOOR OPENING DEVICES SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST. DOOR KNOBS ARE PROHIBITED.
- ALL MEANS OF EGRESS DOORS SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF SPECIAL TOOLS, A KEY, SPECIAL KNOWLEDGE OR EFFORT. DOUBLE KEYED DEAD BOLTS ARE PROHIBITED.
- PROVIDE HARDWARE INCLUDING, BUT NOT LIMITED TO THAT SHOWN IN THE HARDWARE GROUPS FOR THE NORMAL OPERATION AND USE OF EACH DOOR, MAKE RECOMMENDATIONS FOR ADDITIONAL ITEMS IN HARDWARE SUBMITTAL AS REQUIRED.
- ALL HARDWARE SHALL BE IN COMPLIANCE WITH ADA GUIDELINES AND NATIONAL BUILDERS HARDWARE ASSOCIATION STANDARDS.
- HARDWARE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- HARDWARE: FINISH TO BE BUILDING STANDARD UNLESS NOTED OTHERWISE. COORDINATE AND VERIFY WITH HOSPITAL FACILITIES REPRESENTATIVE ON ALL HARDWARE PRIOR TO ORDERING.
- CONTRACTOR TO SUBMIT DOOR AND HARDWARE SHOP DRAWINGS TO OWNER FOR REVIEW PRIOR TO WORK BEING PERFORMED. FAILURE TO SUBMIT DRAWINGS RESULTS IN THE CONTRACTOR ASSUMING ALL RESPONSIBILITY AT THEIR OWN EXPENSE.

## GENERAL CASEWORK NOTES

- GENERAL CASEWORK NOTES APPLY TO ALL INTERIOR ELEVATIONS.
- PROVIDE 3 MM PVC EDGE BANDING ON COUNTERTOP EDGE AND (2) 18 MIN. VINYL EDGING ON DRAWER AND DOOR EDGES UNLESS NOTED OTHERWISE. EDGE BANDING TO MATCH ADJACENT PLAM SURFACE.
- ALL EXPOSED FACES AND SHELVES TO BE WRAPPED WITH PLAM UNLESS NOTED OTHERWISE.
- ALL INTERIOR SURFACES TO BE WHITE MELAMINE UNLESS NOTED OTHERWISE.
- PROVIDE WOOD BLOCKING OR 12" HIGH X 16 GA. CONTINUOUS SHEET METAL BRIDGING IN WALL AS REQUIRED FOR ADEQUATE SUPPORT OF ALL CASEWORK.
- WALL BASE TO BE INSTALLED ON ALL CASEWORK UNLESS NOTED OTHERWISE. REFER TO FINISH SCHEDULE FOR TYPE.
- "P" INDICATES FILLER PANEL, 1-1/2" MIN.
- "EP" INDICATES END PANEL, 1-1/2" MIN.
- PROVIDE FINISHED ENDS AT ALL EXPOSED ENDS OF CASEWORK.
- ALL ELECTRICAL, MECHANICAL, AND PLUMBING ITEMS SHOWN IN ELEVATION ARE FOR REFERENCE AND LOCATION ONLY. REFER TO MEP DRAWINGS FOR SIZES, TYPES AND QUANTITIES.
- ALL SOFFITS ABOVE CASEWORK TO BE PLAM UNLESS NOTES OTHERWISE.

## FINISH FLOOR PLAN LEGEND

- WALL TREATMENT
- FLOOR TRANSITION
- CORNER GUARD
- FLOOR FINISH DIRECTION
1. FOR ALL FLOORING TRANSITIONS, REFER TO TYPICAL TRANSITION DETAILS ON SHEET A700, UNLESS OTHERWISE NOTED ON THIS PLAN.
2. THIS FINISH PLAN IS TO BE USED FOR ADDITIONAL LOCATION CLARIFICATION OF FINISHES NOTED IN FINISH SCHEDULE.

**A2 FINISH PLAN**  
1/4" = 1'-0"

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

## MEP CONSULTANT

PROFESSIONAL ENGINEERING CONSULTANTS  
623 MASSACHUSETTS STREET, SUITE 200  
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(785) 842-6464  
Licensee's Certificate of Authority Number:



Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

Date 07/10/2024  
Job Number 3-24016  
Drawn By CN  
Checked By BD

Revision  
Number Date Description

A700

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INTERIOR FINISH PLAN, MATERIAL LEGENDS, SCHEDULES, AND DETAILS



MECHANICAL ABBREVIATIONS

Ø	ROUND DIAMETER	HTG	HEATING
ABV	ABOVE	IN	INCH
AC	AIR CONDITIONING	INV	INVERT
ADD	ADDENDUM	LB / (#)	POUND
AF	ABOVE FINISHED FLOOR	LBHR	POUNDS PER HOUR
AFMS	AIRFLOW MEASURING STATION	LWT	LEAVING WATER TEMPERATURE
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MAT	MIXED AIR TEMPERATURE
ALT	ALTERNATE	MAX	MAXIMUM
ARCH	ARCHITECT/ARCHITECTURAL	MBH	ONE THOUSAND BTU PER HOUR
BFF	BELOW FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
BFG	BELOW FINISHED GRADE	MCH	MECHANICAL
BLW	BELOW	MFR	MANUFACTURER
BOD	BOTTOM OF DUCT ELEVATION ABOVE FLOOR	MIN	MINIMUM
BOP	BOTTOM OF PIPE ELEVATION ABOVE FLOOR	MISC	MISCELLANEOUS
BOS	BOTTOM OF STEEL	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	NCR	NOISE CRITERIA RATING
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NORMALLY CLOSED
CAP	CAPACITY	NO	NORMALLY OPEN
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CI	CAST IRON	OB	OPPOSED BLADE DAMPER
CLG	CEILING	PC	PLUMBING CONTRACTOR
COP	COEFFICIENT OF PERFORMANCE	PD	PRESSURE DROP
CV	CONSTANT AIR VOLUME	PV	POST INDICATOR VALVE
DB	DECIBELS	PLBG	PLUMBING
DT	DRY BULB TEMPERATURE	PRESS	PRESSURE
DIA	DIAMETER	PVC	POLYVINYL CHLORIDE PIPE
DEMO	DEMOLISH	PSI	POUNDS PER SQUARE INCH
DN	DOWN	PSIG	POUNDS PER SQUARE INCH GAUGE
DP	DIFFERENTIAL PRESSURE	PWR	POWER
EA	EXISTING COMPONENT DESIGNATION	RH	RELOCATED COMPONENT DESIGNATION
EAT	ENTERING AIR TEMPERATURE	RM	ROOM
EC	ELECTRICAL CONTRACTOR	RPM	REVOLUTIONS PER MINUTE
ELEC	ELECTRICAL	SF	SQUARE FEET
ETR	EXISTING TO REMAIN	SP	STATIC PRESSURE
EQUIP	EQUIPMENT	STM	STEAM
EWT	ENTERING WATER TEMPERATURE	TCC	TEMPERATURE CONTROL CONTRACTOR
"F"	DEGREES FAHRENHEIT	TOD	TOP OF DUCT ELEVATION ABOVE FLOOR
FDC	FIRE DEPARTMENT CONNECTION	TOP	TEMPERATURE
FHC	FIRE HOSE CABINET	TEMP	TEMPERATURE
FLR	FLOOR	TYP	TYPICAL
FL	FLOW LINE	UG	UNDERGROUND
FOG	FUEL OIL GAUGE	VAV	VARIABLE AIR VOLUME
FOV	FUEL OIL VENT	VVT	VARIABLE VOLUME AND TEMPERATURE
FPM	FEET PER MINUTE	VCP	VITRIFIED CLAY PIPE
FT	FOOT/FEET	VENT	VENTILATION
GAL	GALLON	VFD	VARIABLE FREQUENCY DRIVE
GC	GENERAL CONTRACTOR	VTR	VENT THROUGH ROOF
GPM	GALLONS PER MINUTE	WB	WET BULB TEMPERATURE
HP	HORSE POWER		
HR	HOSE REEL		

COMPONENT ABBREVIATIONS

AC-#	AIR CONDITIONING UNIT	HWP-#	HEATING WATER PUMP
AD-#	AREA DRAIN	HWPP-#	HEATING WATER PRIMARY PUMP
AHU-#	AIR HANDLING UNIT	HWSP-#	HEATING WATER SECONDARY PUMP
AS-#	AIR SEPARATOR	HRU-#	HEAT RECOVERY UNIT
B-#	BOILER	IL-#	INDOOR UNIT
BF-#	BOTTLE FILLER	L-#	LOUVER
BT-#	BATH TUB	LAV	LAVATORY
CH-#	CHILLER	MAU-#	MAKE-UP AIR UNIT
CRAC-#	COMPUTER ROOM AIR CONDITIONING UNIT	MB-#	MOP BASIN
CQ	CLEANOUT	MSS-#	MINI SPLIT SYSTEM
CT-#	COOLING TOWER	ORD	OVERFLOW ROOF DRAIN
CU-#	AIR COOLED CONDENSING UNIT	OU-#	OUTDOOR UNIT
CUH-#	CABINET UNIT HEATER	PRV	PRESSURE REDUCING VALVE
CWP-#	CHILLED WATER PUMP	RCP-#	RADIANT CEILING PANEL
CWSP-#	CHILLED WATER SECONDARY PUMP	RD	ROOF DRAIN
DWB-#	DOMESTIC WATER BOOSTER PUMP	RE-#	RETURN/RELIEF FAN
DF-#	DRINKING FOUNTAIN / WATER COOLER	RHD-#	ROOF HYDRANT
DHW-#	DOMESTIC HOT WATER CIRCULATING PUMP	RLH-#	ROOF TOP UNIT
EE-#	EMERGENCY EYE WASH	SE-#	SUPPLY AIR FAN
EF-#	EXHAUST FAN	SH-#	SHOWER
EDH-#	ELECTRIC DUCT HEATER	SK-#	SINK
ES-#	EMERGENCY SHOWER	SUMP	SUMP PUMP
ET-#	EXPANSION TANK	ST-#	STEAM TRAP
F-#	FURNACE	TD	TRENCH DRAIN
FCO	FLOOR CLEANOUT	TMV-#	THERMOSTATIC MIXING VALVE
FQU-#	FAN COIL UNIT	TUL-#	TERMINAL UNIT
FD-#	FLOOR DRAIN	UH-#	UNIT HEATER
FS-#	FLOOR SINK	ULH-#	URINAL
FTU-#	FAN POWERED TERMINAL UNIT	UV	ULTRAVIOLET STERILE CONDITIONER
FP-#	FIRE PUMP	WB-#	WALL BOX (PLUMBING UTILITY)
ETR-#	FIN TUBE RADIATOR	WC-#	WATER CLOSET
GI-#	GREASE INTERCEPTOR	WH-#	WATER HEATER
H-#	HUMIDIFIER	WHD-#	WALL HYDRANT
HB-#	HOSE BIBB		

**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.

GENERAL SYMBOLS

① ② ③	REFER TO PLAN NOTES
—	EXISTING COMPONENT PEN WEIGHT
—	DEMOLITION PEN WEIGHT - COMPONENT SHADED
ROOM 111	ROOM CALLOUT
—	AREA NOT IN SCOPE HATCHING
⚠	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
8- M3.6	SECTION LETTER
FC-01	UNIQUE I.D. (FAN COIL UNIT NO. 1) TYPICAL EQUIPMENT CALLOUT EQUIPMENT TYPE (FC=FAN COIL UNIT)

HVAC SYMBOLS

—	LOW VELOCITY SUPPLY AIR DUCT (SA)
—	MEDIUM VELOCITY SUPPLY AIR DUCT (MVSA)
—	RETURN AIR DUCT (RA)
—	EXHAUST AIR DUCT (EA)
—	OUTDOOR AIR DUCT (OA)
—	RELIEF AIR DUCT (RLF)
—	FLUE GAS DUCT (FG)
—	COMBUSTION AIR DUCT (CA)
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.
—	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	FIRE DAMPER (FD) IN WALL / FLOOR
SD	SMOKE DAMPER (SD) IN WALL / FLOOR
FSD	COMBO FIRE/SMOKE DAMPER (FSD) IN WALL / FLOOR
Ⓢ / Ⓣ	THERMOSTAT (TSTAT) / TEMPERATURE SENSOR
Ⓢ / Ⓜ	HUMIDISTAT (HSTAT) / HUMIDITY SENSOR
Ⓜ	PRESSURE SENSOR
Ⓜ	MOTOR
—	SUPPLY FLOW ARROW / RETURN FLOW ARROW
11.1 (200)	EQUIPMENT CALLOUT EQUIPMENT AIRFLOW (CFM)
<b>GRD CALLOUT SYMBOLS</b>	
ROUND	MARK IN SCHEDULE SUPPLY DIFFUSER — SB10 — CONNECTION & RUNOUT SIZE (10"ø) CFM — 250 — ALT → SB10-250
RECTANGULAR	MARK IN SCHEDULE RETURN GRILLE — RB12x12 — CONNECTION & RUNOUT SIZE (12x12) CFM — 250 — ALT → RB12x12-250
SLOT	MARK IN SCHEDULE SLOT DIFFUSER — LSL8-2s — CONNECTION & RUNOUT SIZE (8"ø) CFM — 200 — NUMBER OF SLOTS ALT → LSL8-2s-200

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 0546, 22 0548, AND 23 0548.

PLUMBING SYMBOLS

—	DOMESTIC COLD WATER (CW)
—	DOMESTIC HOT WATER (HW)
—	DOMESTIC HOT WATER RECIRC. (HWR)
—	WASTE (W)
—	BELOW GRADE WASTE (W)
—	VENT
RL	RAINLEADER
ORL	OVERFLOW RAINLEADER
G	NATURAL GAS
LP	LIQUID PROPANE
CA	COMPRESSED AIR
CD	CONDENSATE DRAIN
D	DRAIN
OW	OIL WASTE
GW	GREASE WASTE
IW	INDUSTRIAL WASTE
PW	PRODUCTION WASTE
SCW	SOFT COLD WATER
FCW	FILTERED COLD WATER
RO	REVERSE OSMOSIS WATER
ROR	REVERSE OSMOSIS RETURN WATER
DI	DEIONIZED WATER
DIR	DEIONIZED WATER RETURN
HW 140°	DOMESTIC HOT WATER HIGH TEMP
HWR 140°	DOMESTIC HOT WATER HIGH TEMP RECIRC
FG	FLUE GAS
CA	COMBUSTION AIR
CO / FCO	CLEANOUT (FLOOR)
2-WAY CO	2-WAY CLEANOUT (FLOOR/GRADE)
WCO — CO —	WALL CLEANOUT / END OF LINE CLEANOUT

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
—	CENTRIC / 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
—	PIPE PITCH DOWN / PIPE RISE UP
—	SOLENOID VALVE / PNEUMATIC 3-WAY CONTROL VALVE
—	ELECTRIC 3-WAY / 2-WAY CONTROL VALVE
—	MANUAL / EMERGENCY 3-WAY CONTROL VALVE
—	THERMOMETER / PRESSURE GAUGE
—	STEAM TRAP
—	TEMPERATURE/PRESSURE RELIEF VALVE

MEDICAL GAS SYMBOLS

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

PRESSURE CLASS SCHEDULE

AIR SYSTEM	PRESSURE CLASS	SEAL CLASS	LEAKAGE CLASS	
			ROUND	RECT
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

HVAC DESIGN CONDITIONS

SPACE OR AREA	OUTDOOR AIR SUMMER DBWB	WINTER DB	INDOOR HEATING °F	INDOOR COOLING °F	RELATIVE HUMIDITY %RH	CODE MIN ACH	ACTUAL DESIGN ACH	REMARKS
FAST TRACK/EXAM ROOM	96/77	6	68	72	60	6	6.2	1

MECH. PIPING SYMBOLS

—	HWS	HEATING WATER SUPPLY
—	HWR	HEATING WATER RETURN
—	CWS	CHILLED WATER RETURN
—	CWR	CHILLED WATER RETURN
—	CHWS	CHILLED/HEATING WATER SUPPLY
—	CHWR	CHILLED/HEATING WATER RETURN
—	CS	CONDENSER WATER RETURN
—	CR	CONDENSER WATER RETURN
—	RL	REFRIGERANT LIQUID LINE (SUPPLY)
—	RS	REFRIGERANT SUCTION LINE (RETURN)
—	RLS	REFRIGERANT DUAL TEMPERATURE LINE
—	FOS	FUEL OIL SUPPLY
—	FOR	FUEL OIL RETURN
—	BFW	BOILER FEEDWATER
—	BMW	BOILER MAKEUP WATER
—	LPS	LOW PRESSURE STEAM SUPPLY
—	LPR	LOW PRESSURE STEAM RETURN
—	MPS	MEDIUM PRESSURE STEAM SUPPLY
—	MPR	MEDIUM PRESSURE STEAM RETURN
—	HPS	HIGH PRESSURE STEAM SUPPLY
—	HPR	HIGH PRESSURE STEAM RETURN
11.1 (0.75)	—	EQUIPMENT CALLOUT WATER COIL FLOW (GPM)

GENERAL DEMO. NOTES

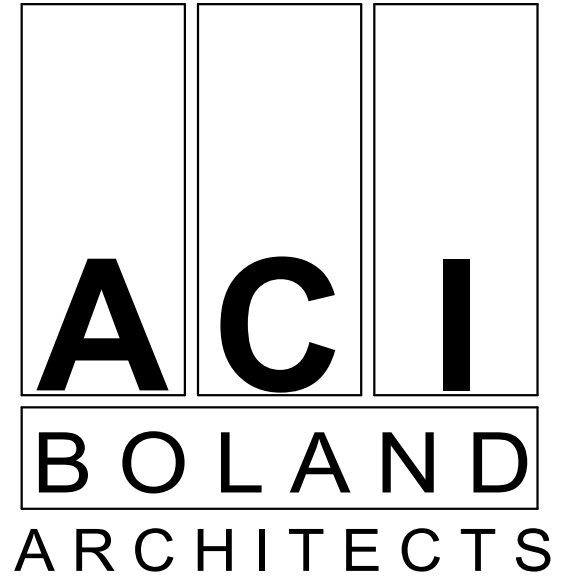
- VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. BRING ANY DISCREPANCIES FROM THE DRAWINGS AND NOTES TO THE ARCHITECT IMMEDIATELY. MINOR CHANGES IN THE SCOPE OF THE DEMOLITION WORK SHALL NOT JUSTIFY AN ADDITIONAL COST.
- REMOVAL OF EXISTING FIXTURES AND EQUIPMENT WILL REQUIRE ISOLATING THE PIPING RISERS OR MAINS VIA SHUT-OFF VALVES. INSTALL NEW ISOLATION VALVES WHERE REQUIRED FOR COMPLETION OF WORK.
- REMOVAL OF EXISTING PLUMBING FIXTURES AND EQUIPMENT, ETC. WILL REQUIRE CAPPING AND SEALING EXISTING MAINS OR BRANCHES AS NECESSARY AND REQUIRED TO ALLOW THE REMAINING SYSTEMS TO FULLY OPERATE WITHOUT DEGRADATION.
- 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.
- ALL DRAINED PIPING RISERS AND MAINS SHALL BE REFILLED WITH PROPER FLUID AND PROPERLY VENTED BY THIS CONTRACTOR, ONCE NEW WORK HAS BEEN INSTALLED.
- COORDINATE WITH GENERAL CONTRACTOR THE REMOVAL AND REPLACEMENT OF ALL EXISTING CEILINGS, WALLS, ETC. AS REQUIRED FOR MECHANICAL DEMOLITION WORK.
- EXISTING PIPING AND EQUIPMENT, ETC., NOT TO BE UTILIZED IN THE COMPLETED BUILDING SHALL BE DISCONTINUED OR REMOVED AS REQUIRED. ALL ENDS OF DISCONTINUED 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 AND PIPE, ETC., ARE REMOVED AND NOT REPLACED, SHALL BE PATCHED NEATLY WITH SIMILAR MATERIAL TO ADJACENT CONSTRUCTION. REFER TO DRAWINGS DELINEATING NEW WORK FOR ADDITIONAL INFORMATION REGARDING SYSTEMS OR PORTIONS OF SYSTEMS WHERE USE IS TO BE DISCONTINUED.
- 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.
- ALL CUTTING AND CHANNELING OF EXISTING BUILDING SHALL BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER WITHOUT REMOVAL OF EXCESS MATERIALS. THE CONTRACTOR SHALL PATCH AND REPLACE WITH MATERIAL SIMILAR TO ADJACENT CONSTRUCTION.
- 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.
- ALL WORK MUST BE COORDINATED AND SCHEDULED WITH THE OWNER AND OCCUPANTS OF THIS BUILDING SO AS TO PROVIDE THE LEAST AMOUNT OF DISRUPTION OF BUILDING ACTIVITIES AS POSSIBLE. MAINTAIN CONDITIONED SPACE FOR ALL OWNER OCCUPIED AREAS DURING CONSTRUCTION.
- ALL ACCESSIBLE ABANDONED PIPING AND DUCTWORK SHALL BE REMOVED AND PROPERLY DISPOSED OF.
- CAP ALL EXISTING PIPING AND DUCTWORK SHOWN TO BE DISCONNECTED AND NOT REUSED AT MAIN. ALL ACCESSIBLE PIPING SHALL BE REMOVED.
- RELOCATE EXISTING DUCTWORK, PIPING, ELECTRICAL CONDUITS, AND CABLING AS NECESSARY TO ACCOMPLISH FINAL INSTALLATION AS SHOWN. ALERT ENGINEER TO ANY MAJOR RELOCATIONS REQUIRED.

GENERAL NOTES

- 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.
- NO PIPING, DUCTWORK, ETC. SHALL PENETRATE STRUCTURAL MEMBERS.
- PROVIDE MISCELLANEOUS CUTTING, PATCHING AND REPAIRING OF FINISHES, ROOF, WALLS, ETC., AS REQUIRED TO ACCOMMODATE THE NEW WORK.
- 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.
- 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.
- REMOVE ALL EXISTING EQUIPMENT, DUCTWORK AND PIPING THAT IS NOT REQUIRED FOR A WORKING INSTALLATION.
- COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION.
- UNLESS OTHERWISE INDICATED, INSTALL ALL SPACE THERMOSTATS AND OTHER OCCUPANT ADJUSTABLE CONTROL DEVICES SAME HEIGHT AS ADJACENT LIGHT SWITCHES, BUT IN NO CASE HIGHER THAN 48 INCHES ABOVE FINISHED FLOOR PER ADA REQUIREMENTS. COORDINATE EXACT HEIGHT WITH ARCHITECT PRIOR TO INSTALLATION.
- ALL CUTTING AND PATCHING SHALL BE CLOSELY COORDINATED WITH THE G.C.
- 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 ARISING FROM LACK OF COORDINATION SHALL NOT JUSTIFY AN INCREASE IN THE CONTRACT AMOUNT.
- ALL DIFFUSERS ARE 4-WAY BLOW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- FLEXIBLE DUCTWORK IS ALLOWED ON RUNOUTS TO SUPPLY DIFFUSERS ONLY. UTILIZE ONLY ABOVE LAY-AN ACCESSIBLE CEILING. DO NOT INSTALL FLEX DUCT ABOVE HARD CEILINGS OR WHERE EXPOSED. A MAXIMUM LENGTH OF 6'-0" MAY BE USED AT EACH CONNECTION.
- SEAL TRANSVERSE AND LONGITUDINAL JOINTS OF ALL DUCTWORK USING HARDCAST DT TAPE AND FTA-20 ADHESIVE OR HARDCAST AFG-1402 "FOIL GRIP" PER MANUFACTURER'S INSTRUCTIONS.
- INSTALL BALANCE DAMPER WITH STAND-OFF AND LOCKING QUADRANT IN AN ACCESSIBLE LOCATION AT EACH RUNOUT TO SUPPLY DIFFUSERS, EXHAUST GRILLES, AND RETURN GRILLES WHERE AIRFLOW IS INDICATED, OR AS INDICATED OTHERWISE.
- ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE FIRE STOPPED BY THE TRADE MAKING THE PENETRATION. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.
- DO NOT ROUTE PIPING OR DUCTWORK OVER ELECTRICAL PANELS OR EQUIPMENT. PIPING OR DUCTWORK SHALL NOT BE ROUTED THROUGH ELEVATOR ROOMS, TELECOM ROOMS OR STRUCTURAL ELEMENTS ROOMS UNLESS SPECIFICALLY SERVING THAT ROOM. COORDINATE WITH E.C. PROVIDE WATER/TIGHT DRIP PAN WITH DRAIN TO NEAREST APPROVED RECEPTOR WHERE REQUIRED.
- COORDINATE SIZE AND LOCATION OF ACCESS DOORS IN CONSTRUCTION REQUIRED FOR ACCESS TO MECHANICAL EQUIPMENT WITH G.C.
- COORDINATE SIZE AND LOCATION OF MECHANICAL EQUIPMENT PADS WITH G.C.
- ALL WORK IS TO CONFORM WITH APPLICABLE CODES AND STANDARDS.
- DUCT SIZES SHOWN ARE ACTUAL INSIDE CLEAR DIMENSIONS. INCREASE SHEET DIMENSIONS AS REQUIRED TO ACCOMMODATE DUCT LINER WHERE LINER IS SPECIFIED.
- ALL EQUIPMENT SUPPORT STANDS SHALL BE PRIMED AND PAINTED WITH EPOXY ENAMEL.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES.
- PAIN INSIDE OF DUCTWORK BLACK ANYWHERE VISIBLE THROUGH FACE OF GRILLE OR DIFFUSER.
- 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"
- 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 BLOWN SIZE FOR FLOW RATE, NOT TO EXCEED 4 PSIG PRESSURE DROP AT DESIGN FLOW.
- UNDERGROUND-TYPE UTILITY MARKER, PROVIDED AND INSTALLED PER SPECIFICATION SECTIONS 220553 AND 230553 AT EVERY 100 FEET FOR ALL UNDERGROUND UTILITIES (INCLUDING HEAT PUMP WELL FIELD). LABEL WITH THE APPROPRIATE UTILITY. EACH VERTICAL GROUND SOURCE HEAT PUMP WELL/BORE SHALL BE LABELED "GCHP WELL #X" WITH APPROPRIATE NUMERIC WELL NUMBER IDENTIFICATION.
- 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 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. CONTROL SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS.
- 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.
- COORDINATE ACCESS TO EQUIPMENT AND VALVES INSTALLED ABOVE HARD CEILINGS AND IN MASONRY CHASSES WITH GENERAL CONTRACTOR. PROVIDE LOOKING 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.
- CONTRACTOR TO INSTALL TEMPORARY FILTERS OVER ALL RETURN AND EXHAUST GRILLES IN WORK AREA DURING CONSTRUCTION.
- THESE DRAWINGS ARE ACCOMPANIED BY SPECIFICATIONS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
- EQUIPMENT THAT REQUIRES MAINTENANCE SHALL BE LOCATED A MINIMUM OF 10'-0" FROM THE BUILDING ROOF EDGE WHERE REQUIRED BY CODE.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF TEMPORARY PARTITIONS.
- SQUARE THROAT NOT ALLOWED ON RADIUS ELBOWS.
- 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.

MECHANICAL SHEET INDEX

MP001	MECHANICAL COVER SHEET
MP002	MECHANICAL SPECIFICATIONS
MP003	MECHANICAL SPECIFICATIONS
P101	FIRST FLOOR PLUMBING PLAN
P102	FIRST FLOOR MEDICAL GAS PLAN
P501	PLUMBING DETAILS AND SCHEDULES
M101	FIRST FLOOR HVAC PLAN
M102	FIRST FLOOR MECHANICAL PIPING PLAN
M501	MECHANICAL DETAILS AND SCHEDULES



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Missouri: #000958



Saint Luke's

EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation

100 NE Saint Luke's Blvd

Lee's Summit, MO 64086

Date	07/10/2024
Job Number	3-24016
Drawn By	KMB
Checked By	EKE

Revision		
Number	Date	Description







F. Hydronic Water Pipe: 1. Insulate heating water supply and return piping through 1-1/2" with 1.5" thick glass fiber pipe insulation and 2" or larger with 2" thick insulation. 2. Insulate chilled water supply and return piping through 1-1/2" with 0.5" thick glass fiber pipe insulation and 2" or larger with 1" thick insulation. G. All pipe insulation to be covered with factory applied flame retardant vapor barrier jacket. Manville Micro-Lok 850 fiberglass AP-1 Plus jacket or equal. 1. Interior concealed fittings and pipe hangers shall be insulated with flexible glass fiber to a thickness equal to the adjoining pipe insulation. Finish by spiral wrapping with white vinyl and apply a brush coat of vapor barrier mastic. Childers CP-30 or equal. 2. Interior exposed fittings shall be insulated with PVC fitting covers installed over flexible glass fiber inserts to a thickness equal to the adjoining pipe insulation. Manville Zeston or equal. Vapor seal all joints with Childers CP-30 or equal. H. In finished rooms or areas where insulated pipes are subject to abuse, additionally finish with .032 embossed aluminum jacking or 30 mil PVC jacketing for a distance of not less than 9 ft. up from finished floor or to finished ceiling level. I. Provide high density inserts at hanger locations between the pipe and pipe shield for pipe sizes 4" and larger. Maintain a continuous vapor barrier through the hangers and match the jacketing of adjoining pipe insulation. J. Outdoor Piping (exposed to weather): Use the same insulation for interior exposed pipes carrying the same product and add: a jacket of .032 embossed aluminum with factory applied vapor barrier. Finish fittings with Foster Sealflo G-P-M 35-30 reinforced with Foster Mast-a-Fab. K. Refrigerant Suction Lines: Insulate with 1" thick and condensate drain lines with 1/2" thick Armstrong AP Armalex, applied in strict accordance with manufacturer's instruction. Finish all exposed piping with two coats of white Armstrong Armalex finish. Manville Aerotube or Owens-Corning O.C. flexible tubing approved equal. 1.2 EQUIPMENT A. Insulate roof drain sumps, with Armstrong Armalex II sheet insulation 1/2" thick. Apply in accordance with manufacturers recommendations. B. Prepare all exposed insulation covering for painting. Apply insulation over clean dry surface. Butt all longitudinal joints tightly together. 1.3 DUCT WRAP INSULATION (EXTERNAL) A. Manufacturers: Johns Manville - CertainTeed - Owens Corning - Knauf. B. Insulate externally all concealed round ducts and rectangular outdoor air ducts with 0.75-pound per cubic foot minimum density fiberglass ductwrap with a Foil-scrim Kraft vapor barrier applied with outward-clinching staples. C. The duct insulation shall have Underwriters Laboratories flame spread rating not to exceed 25 - full contributed rating not to exceed 50 - smoke developed rating not to exceed 50. D. Insulation shall be continuous through partitions, coils, etc. Insulate fire damper sleeves to partitions. 1.4 DUCT INSULATION APPLICATION AND THICKNESS A. Ductwork insulation minimum R-values to comply with the latest adopted year of ASHRAE/IESNA 90.1, based on Climate Zone and duct location, if not adopted, utilize 90.1-2016 values: Exterior Ducts: R-12, Fully Ducted Plenums: R-6, and Un-ducted (Return Air) Plenums: R-1-9. B. Duct Wrap Insulation Thickness: <table><tr><th>DUCT/WORK SYSTEM</th><th>THICKNESS (IN.)</th></tr><tr><td>Hospital, Supply</td><td>1.5</td></tr><tr><td>Hospital, Return, typical room temperature</td><td>None</td></tr><tr><td>Hospital, Return, low room temperature</td><td>1.5</td></tr><tr><td>Duct coils and heating coils on VAV, CV, and FTU Terminal Units (Entire coil must be insulated, including casing, header, and return bends)</td><td>1.5</td></tr></table> SECTION 210500 – FIRE PROTECTION 1.1 GENERAL REQUIREMENTS A. Scope of the Work: The work shall include, but is not necessarily limited to the Sprinkler Systems and any appurtenances common to the systems, generally consisting of pipe, fittings, valves, hangers, covering, painting, cleaning, testing and such other work as is necessary and specified or shown on the drawings. All areas are to be classed "ordinary hazard" unless otherwise noted. Work shall be done by Licensed Sprinkler Contractor. B. Shop Drawings: This Contractor shall submit complete sprinkler system working plans showing sprinkler head locations, all piping locations and sizes, valves, alarms, fire department connections etc., as set forth in National Fire Code 13. Shop drawings shall be sealed by a Licensed Fire Protection Engineer in the State that the project is located. Shop drawings shall be submitted to the City Code Enforcement Authority and the Local Fire Department. After review by the Local Code Enforcement Authority, the Contractor will make any changes and/or additions to the plan and system which the City Code Enforcement Authority or Fire Department deem necessary. Submit final approved plans to Owners Representative. C. Piping systems shall be hydraulically designed per NFPA-13. Calculations for hydraulic designed system shall be submitted with shop drawings. D. Regulations and Permits: All work under this section of the specifications shall comply with all laws, ordinances, rules and regulations of the local authorities having jurisdiction and fire protection layout according to NFPA, Pamphlet #13 and the associated Factory Mutual's approval and shall be subject to the inspection and approval of the authorities having jurisdiction not withstanding anything in this specification to the contrary. The Contractor for the work, under this Division of the specifications, shall obtain and pay for all permits required to initiate and complete the work under this contract. E. Approval: The sprinkler system shop drawings shall be approved by the Local Fire Department and the insuring agency, or as required by the insuring agency before work shall begin on any part of the systems. F. Fire Protection Equipment Guaranteed: All equipment and components furnished under this specification shall be guaranteed for a period of one (1) year from the date of acceptance. Failures of any part of the guaranteed equipment during the guarantee period shall be promptly replaced with new parts by and at the expense of the Contractor. 1.2 SYSTEM DESCRIPTION A. Wet Pipe: System with automatic sprinklers attached to piping system containing water and connected to water supply so that water discharges immediately from sprinklers when they are opened by fire. A wet pipe system shall be utilized at all areas, unless noted otherwise. 1.3 PIPE APPLICATIONS A. Wet pipe sprinkler system piping 2" and smaller shall be one of the following: 1. Standard weight ASTM A53/A53M, Type E, Grade B black steel pipe with threaded ends, gray iron threaded fittings, and threaded joints. 2. Standard weight ASTM A53/A53M, Type E, Grade B black steel pipe with plain ends, steel welded fittings, and welded joints. 3. Thinwall ASTM A135 Schedule 10 black steel pipe with plain ends, welded fittings, and welded joints. B. Wet pipe sprinkler system piping 2-1/2" and larger shall be one of the following: 1. Standard weight ASTM A53/A53M, Type E, Grade B black steel pipe with cut or roll grooved ends, uncoated grooved end fittings for steel piping, grooved end pipe couplings for steel piping, and grooved joints. 2. Standard weight ASTM A53/A53M, Type E, Grade B black steel pipe with plain ends, steel welded fittings, and welded joints. 3. Thinwall ASTM A135 Schedule 10 black steel pipe with roll grooved ends, uncoated grooved end fittings for steel piping, grooved end pipe couplings for steel piping, and grooved joints. 4. Thinwall ASTM A135 Schedule 10 black steel pipe with plain ends, welded fittings, and welded joints.	DUCT/WORK SYSTEM	THICKNESS (IN.)	Hospital, Supply	1.5	Hospital, Return, typical room temperature	None	Hospital, Return, low room temperature	1.5	Duct coils and heating coils on VAV, CV, and FTU Terminal Units (Entire coil must be insulated, including casing, header, and return bends)	1.5	1.4 AUTOMATIC SPRINKLERS AND COMPONENTS A. Sprinklers should be installed in accordance with the latest published standards of the National Fire Protection Association, Factory Mutual, Fire Offices' Committee, governmental agencies, or similar organizations and to meet local codes and ordinances. B. Sprinkler Heads: Type and style as indicated or required by the application. Unless otherwise indicated, provide heads with nominal 1/2-inch discharge orifice, for "Ordinary" temperature range. 165°F temperature rating. 1. Rough brass upright, pendant, or pendant sidewall type heads shall be used in exposed areas without finished ceilings. 2. White painted type heads and white coverplate shall be used in all gyp board ceilings and soffits, plaster ceilings, and lay-in acoustical tile ceilings. 3. Sprinkler heads shall be located in straight line pattern parallel and/or perpendicular to walls of room. Provide additional heads over and above the required quantities for symmetrical installation with regard to lights, structural and aesthetic elements. Particular attention shall be exercised with regard to head locations in all gyp board soffits, ceilings, and aesthetic elements. Where lay-in ceiling tile occurs, sprinkler heads shall be located in the exact center of the tile. 4. Furnish wall-mounted steel cabinet with hinged cover, and with space for minimum of six spare sprinklers plus sprinkler wrench. Include number of sprinklers required by NFPA 13 and sprinkler wrench. Include sprinklers and wrench for each type of sprinkler used on Project. C. Alarm Devices: Vane type waterflow detector, rated to 250 psig and designed for horizontal or vertical installation – supervisory switches – electric alarm bell. SECTION 220400 - PLUMBING 1.1 DOMESTIC WATER PIPING A. Domestic hot, cold and recirculated water pipe: Above grade use ASTM B 88 Type "L" hard drawn copper tube with wrought fittings. Below concrete floors within the building use soft annealed Type "K" copper tubing with no fittings. B. Install water hammer arrestors per PDI-WH 201 and where indicated on the plans. C. Test under 130 psi hydrostatic pressure. 1.2 SANITARY WASTE PIPING A. Grade all waste piping less than 4" in diameter at a uniform fall of not less than 1/4" per foot. Grade piping 4" diameter and greater 1/8" per foot with approval of Administrative Authority. B. Install cleanouts at the base of all vertical stacks, changes in direction, where necessary for easy cleaning, and as indicated on the plans. C. Size cleanouts the full size of the pipe. D. Branch connections and changes in direction made with 45 degree "Y" fittings or long sweep elbows, except only that sanitary tees or short sweep elbows may be used on vertical stacks and closet connections. E. Provide means for expansion in vertical stacks to roof. F. Extend vent stacks full size through the roof. G. Install vent connections on all fixtures, traps, and equipment connected to the soil and waste system and extend vertical not less than 3'-6" above the floor line before connecting to any horizontal run. H. Use standard cast iron soil pipe and fittings with No-Hub joints for waste pipe within the building. I. Below grade waste pipe can be either cast iron as noted above or Schedule 40 solid wall pipe PVC pipe with solvent welded DWV fittings. J. Test soil, waste, and vent piping systems with 10 ft. water column. 1.3 VENT PIPING A. Use cast iron pipe with no-hub joints. 1. Schedule 40 solid wall PVC/DWV plastic pipe with solvent welded DWV fittings will be allowed only in ducted return applications. Plastic pipe is not allowed in return air plenums. 1.4 TRAPS A. Provide traps required, including traps not furnished in combination with the fixtures and equipment. B. Separately trap all fixtures with waste connections with a water sealed trap placed as close to the fixture as possible. C. Provide deep seal traps at floor drains, condensate drain boxes, and where shown on the plans. D. All exposed traps in finished areas shall be of chromium plated cast brass. 1.5 CLEANOUTS A. Manufacturers: Wade - Zurn - Josam - J. R. Smith - Mifab. B. Accessible cleanouts shall be installed as required to clean all horizontal waste lines at no greater than 100 ft. intervals. Plumbing Superintendent on the job shall mark in Red on Blue Line Drawings desired locations and install only following approval of these locations by the Architects Inspector. C. Cleanouts in floors shall be submitted to architect and engineer for review with each floor type identified in submittal. D. Accessories: Clamping collar required in all locations. 1.6 DRAINS A. Manufacturers: Wade - Zurn - Josam - J. R. Smith - Mifab. B. General Floor Drains: Cast iron floor drain with seepage flange and round nickel bronze strainer. 2" outlet shall have a 5" strainer, 3" outlet shall have a 6" strainer, 4" outlet shall have an 8" strainer. C. Accessories: Trap guard on all floor drains subject to evaporation by Pro Set or equivalent. Cast iron soil-P-trap, deep seal. Backwater valves on all drains installed below grade as required. SECTION 224000 - PLUMBING FIXTURES AND TRIM 1.1 PLUMBING FIXTURES - GENERAL A. All fixtures shall be furnished complete with trim. All exposed trim shall be chrome plated brass. China fixtures shall be of the best grade vitreous ware without pit holes or blemishes and the outlines shall be generally true. The Architect reserves the right to reject any pieces which, in his opinion are faulty. B. All fixtures shall be set true and level with solid backing behind lavatory supports. Nipples through the wall to the fixture connection shall be brass and all necessary supports for the fixtures shall be installed before the wall is finished. All fixtures fitting against walls shall have ground backs. All fixtures shall be cleaned before setting, and the installation shall be left ready for use. C. All fixtures indicated to be installed for handicap accessibility to be installed per ADA Standards for Accessible Design. Insulate hot water and drain piping at accessible sinks with pre-manufactured insulating covers. D. Fixtures indicated on the plans must be set and all plumbing connections required for its function installed. 1.2 PLUMBING FIXTURE SCHEDULE A. China Fixture Manufacturers: American Standard - Toto - Kohler - Eljer – Zurn - Sloan. B. Stainless Steel Fixture manufacturers: Elkay - Just - Bradley - Acom. C. Faucet Manufacturers: Delta – Kohler - Chicago Faucets – American Standard - Zurn - Sloan. D. Service Stops: All lavatories, sinks, and tank type closets unless otherwise specified shall be provided with chrome plated loose key quarter-turn stops and flexible risers.	SECTION 226000 - MEDICAL GAS SYSTEMS 1.1 BASIC PIPES AND PIPE FITTINGS A. Vacuum Piping, All Sizes: Seamless Copper tube, hard-temper for exposed locations, Type "L"; or ACR (ASTM B-280) wrought-copper, solder-joint fittings; brazed joints; copper-phosphorus alloy (BCu Series) brazing filler metal. B. Oxygen, and Medical Air, All Sizes: Copper tube, factory cleaned and capped; Type K or L (ASTM B819), and shall bear one of the following markings: OXY, MED, OXY/MED, ACR/OXY, or ACR/MED. Each length of tube shall be permanently labeled, fittings, valves and other devices shall be sealed and marked. Brazed joints, copper-phosphorus alloy (BCu Series) brazing filler metal. Minimum 1000°F melting point. C. All materials, connections and joints shall be in accordance with NFPA 99. D. Medical gas system installers must be ASSE 6010 qualified. 1.2 MEDICAL GAS VALVING A. All valves and tubing shall be specifically prepared for oxygen service and shall conform in all particulars to NFPA 99. All valves shall be ball-type, with teflon seats and adjustable stem packing gland with teflon stem seal, through 2-inch sizes. All ball valves rated at 400 PSIG, actuate from full "ON" to full "OFF" by 90 degree turn of vinyl gripped valve handle. Factory installed copper tubing shall be extended sufficiently to help prevent valve seat damage during soldering. Unless specifically noted or obviously required, main and riser valves located in other than public areas are not required to be installed in box. B. Zone Valves (Valves in Boxes): Box shall be constructed of 18 gauge sheet steel with air dried lacquer finish. The cover frame shall be made of anodized aluminum, chrome plated steel or stainless steel. The finished assembly shall be substantially dust-tight. The frame assembly shall be capable of adjusting for variances in wall thickness up to 1-inch. The frame assembly shall contain an easily removable cover window with pull ring. The window shall conceal exposed piping and valves within the box and shall be labeled "Caution - Medical Gas Shut-Off Valves - Close Only in Emergency". Clear viewing space shall be provided in the window to display the gas service, the area controlled by the valve, and pressure gauges. 1.3 ALARM PANELS A. Area Alarm: Gauge model area alarm panels shall be designed to meet the requirements of NFPA and CSA standards. Alarms shall be U.L. listed as an assembly, and shall include all necessary gauges, factory wiring, transformers, and circuitry requiring only 115 or 230 volt primary power. Internal voltage shall be stepped down to 12 volt closed, control circuit power. Wiring to external switches shall also be at 12 volts. Alarm system shall indicate high and low pressure functions of each gas and vacuum and shall include audible/visual signals and pressure gauges. 1.4 GAS SERVICE OUTLETS A. Provide quick-connect/disconnect type gas service outlet valves with geometric shape indexing to prevent interchangeability between services. Construct to permit one-handed connection and removal of equipment; with positive locking ring which retains equipment stem in valve during use, and with secondary lock-in outlet which prevents equipment from falling to floor when released. Provide automatic secondary service valve which prevents gas flow when primary valve is removed. Braze 8" length of 3/8" piping to valve block. 1.5 CERTIFICATION A. Evaluate and certify medical gas systems, including source equipment, valving, alarms, and station outlets, for mechanical and therapeutic function. Provide certification by Agency independent of facility, system installer and Contractor. Certifier must be ASSE 6030 qualified. Provide full documentation of certification. SECTION 230593 - AIR TEST AND BALANCE 1.1 SCOPE A. The Mechanical Contractor shall procure the services of an independent air balancing agency, fully certified with the National Environmental Balancing Bureau (NEBB) to test air moving equipment and air distribution and exhaust systems and to supervise the balance and adjustment of these systems. All work shall be done under direct supervision of a qualified and licensed Heating and Ventilating Engineer. The mechanical contractor shall provide workmen of the proper trade to make adjustments to the systems as determined by the Engineer. The Contractor shall provide access as required, including any necessary scaffolding, and shall cooperate with testing laboratory personnel. All instruments used in this work shall be accurately calibrated and maintained in good working order. If requested the tests shall be conducted in the presence of the Mechanical Engineer responsible for the project and/or his representative. Air balance and testing shall not begin until the system has been completed and is in full working order. The Contractor shall put all heating, ventilating, and air conditioning systems and equipment into full operation 24 hours prior to the onset of testing and balancing and shall continue the operation of same during each working day until the completion of all test and balance work. The Contractor shall award the test and balance contract upon receipt of his contract to proceed with the air conditioning installation, to allow the Air Balance and Testing Engineer to schedule his work in cooperation with other trades involved and comply with completion date. Upon completion of the air conditioning system installation, the Air Balance and Testing Engineer shall perform the following tests, supervise adjustments and system modifications, and compile the test data as required for evaluation and approval. B. In addition to procuring the services of an air balancing engineer as hereinafter specified the mechanical contractor shall: 1. Clean air filters, ductwork, coils, fans, etc. in the air system to remove all construction dust and debris. 2. Start, lubricate and balance all fans. Change and/or adjust drive pulleys on fans to give required capacity. 3. Supply and install all balancing dampers as required for final balancing as determined by the balancing engineer. 4. Furnish workmen familiar with this project and of the proper trade to assist the balancing engineer in the air and water balancing. Also make available subject to request by the balancing engineer trained servicemen of the control and equipment suppliers to assist as needed during the testing of their portion of the project. 5. Furnish plans, operating manuals, and shop drawings of all equipment installed for use by the Air and Water Balancing Agency. 6. Have all systems in full operation a minimum of 24 hours before Balancing Engineer arrives on job. 1.2 AIR SYSTEM TEST AND BALANCE PROCEDURE A. Procedure: 1. Bring all fans to design RPM. 2. Bring air volume in each air handling system to the design air volume using pitot tube transverse method. 3. Test and record fan motor data. 4. Bring air diffusers and registers to design CFM. 5. Make recommendations for system modifications and adjustments required to facilitate proper system balancing as determined by preceding test. 6. Retest and readjust all system segments affected by system modifications. B. If any issues arise during the test and balance procedure that prevent it from being properly completed, bring issues to owner and engineer before submitting report to investigate.	1.3 HYDRONIC SYSTEM TEST AND BALANCE PROCEDURE A. Procedure: 1. Adjust pumps to deliver total design GPM. a. Measure total water flow and pump TDH. 2. Adjust flow-measuring devices installed in mains and branches (if available) to design water flows. 3. Adjust flow-measuring devices installed at terminals for each space to design water flows. 4. Verify final system conditions. 5. Verify that memory stops have been set and marked with permanent paint or marker. B. If any issues arise during the test and balance procedure that prevent it from being properly completed, bring issues to owner and engineer before submitting report to investigate. 1.4 DATA FILE A. Prepare complete data file on all equipment and devices tested indicating name plate data, design requirements and final operating conditions. Submit a PDF of the final balance report for review. Upon approval of the TAB Report, provide a copy of the revised TAB Report to the Mechanical Contractor for inclusion in the Operation and Maintenance manuals presented to the Owner. 1.5 INSTRUCTION A. At the completion of the balancing, review the operating and maintenance brochures as supplied by the Mechanical Contractor supplement these instructions as determined through balancing experience. Meet with Owner's personnel to review proper operating procedures. B. Warranty that the system is set in accordance with values as established by the plans and specifications. SECTION 230800 - AIR DISTRIBUTION 1.1 DEFINITIONS A. Low Velocity Ductwork: Supply, return, make-up, and exhaust ductwork systems that are sized at 2,000 FPM or lower. B. Medium Velocity Ductwork: Supply ductwork systems sized at greater than 2,000 FPM to 3,000 FPM. C. Low Pressure Ductwork: Ductwork connected to fan systems with a 2" w.c. or less deadhead rating. D. Medium Pressure Ductwork: Ductwork connected to fan systems with greater than 2" w.c. and less than 6" w.c. deadhead rating. 1.2 PERFORMANCE REQUIREMENTS A. Duct construction, including sheet metal thicknesses, seam and joint construction, reinforcements, and hangers and supports, shall comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" and performance requirements and design criteria included in "Duct Schedule" Article. B. All work shall comply with the Mechanical Codes. C. Structural Performance: Duct hangers and supports and seismic restraints shall withstand the effects of gravity and seismic loads and stresses within limits and under conditions described in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" and ASCE/SEI 7. D. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1. 1.3 SHEET METAL DUCT WORK CONSTRUCTION A. The work under this heading includes all sheet metal work as required to complete supply and exhaust systems including ducts, housings, ventilating hoods, exhaust hoods, louvers, dampers, grilles, diffusers, registers, access doors, access panels, etc. B. Duct material shall be galvanized steel unless noted otherwise on the drawings. C. Seal all ducts to Seal Class A per SMACNA's "HVAC Duct Construction Standards - Metal and Flexible". D. Make ductwork and installation in conformance with the applicable local Mechanical Code and Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) HVAC Duct Construction Standards (Latest Edition) amended as follows: 1. Seal all transverse joints, fittings, connections, and seams with Hardcoat D/T tape and FTA adhesive. Hardcoat AFG-1402 "Foil-Grip" applied per manufacturers instructions, or brushed-on liquid based joint and seam sealant. 2. Make all branch connections with 45° entry clinch collar. 3. Round branch duct take-offs shall be high efficiency takeoffs (HETO), made with 45° entry clinched collar and rectangular to round transition. If damper is provided with HETO, it shall meet the requirements of the manual balance damper section below. E. Use square type elbows with turning vanes for changes in direction and fittings for branch ducts. Radius elbows may also be used for duct changes in direction, refer to drawings. F. Offset ducts to clear pipes and obstructions. G. Patch all duct holes airtight after installation. H. All round ductwork shall be a minimum of 26 gauge sheet metal or heavier as required by SMACNA and the Mechanical Code. I. Duct up to 14" diameter shall be a minimum gauge of 26. J. Duct 16" to 26" diameter shall be minimum of 24 gauge. K. Duct 28" to 36" diameter shall be minimum of 22 gauge. L. Duct Cleaning: Clean new and existing duct system(s) before testing, adjusting, and balancing. 1.4 FLEXIBLE CONNECTIONS A. Duct connections to fans and where noted elsewhere on plans, shall be sound and vibration isolation flexible connections made with fire resistant, water proof heavy glass fabric with double coating of neoprene as manufactured by Ventfiltrics, Inc., Ductmate Industries, Inc., Duro Dyne, Inc., or Ward Industries, Inc. Connections shall be not less than 4" long, shall have suitable metal collar frame at each end and shall be made with at least one-inch slack in material to prevent transmission of vibration. 1.5 FLEXIBLE DUCTS A. Outer Duct: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" based on indicated static-pressure class unless otherwise indicated. B. Transverse Joints: Select joint types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-1, "Rectangular Duct/Transverse Joints," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible." C. Longitudinal Seams: Select seam types and fabricate according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Figure 2-2, "Rectangular Duct/Longitudinal Seams," for static-pressure class, applicable sealing requirements, materials involved, duct-support intervals, and other provisions in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible." D. Flexible ducts - Thermaflex Type MKE or equivalent, meeting amended code standards of NFPA and NEFU Pamphlet 90A with U.L. Fire rating of not over 25 flame spread and a developed smoke rating of not over 50. U.L. Standard 181 Class 1 woven and coated fiberglass supported by helically wound spring steel wire. 1" fibrous glass insulation. Aluminized vapor barrier film. Pressure rating of 10 inch wg positive and 2 inch wg negative. A maximum of six feet of flexible duct may be used for each connection to supply diffusers only, only above accessible ceilings. E. Accessories: Strap clamps with stainless steel band and cadmium plated hex screw to tighten band with worm-gear action. F. Installation: Duct connections to collars shall be made in accordance with the duct manufacturer's recommendations. 1.6 GRILLES, REGISTERS, AND DIFFUSERS A. Manufacturers: Titus - Krueger - Price B. Capacity: As indicated on drawings. C. Accessories: As scheduled on the drawings for finish, opposed blade dampers, borders, directional vanes, etc.	1.7 MANUAL VOLUME DAMPERS (UNDER 1500 FPM) A. Manufacturers: Air Balance Inc. - Ruskin - Carnes - Nailor – Greenheck – Pottoff – McGill Airflow or equivalent. B. Features: 20 gauge min. galvanized steel blades - 20 gauge min. galvanized steel frame with blade stops - noncorrosive bearings (Oilite or Nylon) - rectangular dampers to have blade linkage concealed in frame - full width 3/8" minimum square cadmium plated steel axle shaft extending through frame - manual locking quadrant bracketed 1-1/2" minimum from frame to allow for insulation. C. Single blade dampers may be used for duct sizes of 12" high x 36" wide and less. Sizes greater than 12" high or 36" wide shall be multiple opposed blade dampers. 1.8 SINGLE DUCT CONSTANT AND VARIABLE VOLUME AIR TERMINAL UNITS A. Manufacturers: Krueger – Titus – Trane - Price B. Capacity: As scheduled on plans. C. Features: Minimum 22 gage galvanized steel casing with minimum 1/2 inch thick fiber insulation meeting NFPA 90A and UL 181 requirements – airflow measuring ring inside casing with balancing test ports – galvanized steel volume damper with gasket and self-lubricating bearings – multi-point flow sensor – 24 volt electric actuator – factory installed low voltage control transformer and disconnect switch – DDC controller and damper actuator supplied by TCC. D. Hot Water Heating Coil: 1/2 inch copper tube mechanically expanded into aluminum plate fins, leak tested under water to 200 psig pressure, factory installed. SECTION 230923 - TEMPERATURE CONTROL SYSTEMS 1.1 SYSTEM SUMMARY A. The intent of this specification is to provide control strategies for expanding the existing BAS system, and utilizing the same software license agreement for the applications. All equipment as listed on the mechanical drawings/control drawings shown to be controlled by the BAS system shall adhere to this specification. Temperature controls shall match existing. 1.2 QUALITY ASSURANCE A. The Building Automation System (BAS) herein specified shall be fully integrated and installed as a complete package by the Temperature Controls Contractor. The system must be fully compatible with the current system installed at the facility. The system shall include all wiring, electrical conduit, installation supervision, calibration, adjustments, and checkout necessary for a complete and fully operational system. 1.3 MATERIALS AND EQUIPMENT A. General: Provide temperature control products in sizes and capacities indicated consisting of valves, dampers, thermostats, clocks, sensors, controllers, and other components as required for complete installation. Except as otherwise indicated, provide manufacturer's standard materials and components as published in their product information; designed and constructed as recommended by manufacturer, and as required for application indicated. B. Control Valves: Provide selection as determined by manufacturer for installation requirements and pressure class, based on maximum pressure and temperature in piping system. Provide valve size in accordance with scheduled or specified maximum pressure drop across control valve. Equip control valves with electric actuators, with proper shutoff rating for each individual application. C. Thermostats: Thermostats shall be a similar style to existing installed in the facility. Provide 7-day programmable thermostat with fan on/auto and heat/auto/cool switches for automatic heating and cooling operation. Program thermostat for continuous fan operation during occupied periods. Thermostat shall be capable of operating multiple heating and/or cooling stages as scheduled. D. Control Wiring: 1. Provide and install all low-voltage wiring required for temperature control systems under this section excluding power feeder wiring. 2. TCC shall be responsible for all low voltage wiring and raceways. 3. All wiring and installation shall be in accordance with the Electrical Specifications. 1.4 CLOSEOUT PROCEDURES A. Owner's Instructions: Provide services of manufacturer's technical representative to instruct Owner's personnel in operation and maintenance of control systems. SECTION 232113 – HYDRONIC PIPING 1.1 HEATING WATER AND CHILLED WATER A. Install black steel pipe with threaded joints and fittings for 2 inch and smaller, and with welded joints for 2-1/2 inch and larger. B. At Contractors option in lieu of black steel, install Type L, drawn copper tubing with wrought copper fittings and solder joints for 2 inch and smaller, above ground, within building. 1.2 HYDRONIC PIPE INSTALLATION A. Conceal all pipe installations in walls, pipe chases, utility spaces, above ceilings, below grade or floors, unless indicated to be exposed to view. B. Install drains at low points in mains, risers, and branch lines consisting of a tee fitting, 3/4" ball valve, and short 3/4" threaded nipple and cap. C. Install piping at a uniform grade of 1 inch in 40 feet upward in the direction of flow. D. Install unions in pipes 2 inch and smaller, adjacent to each valve, at final connections to each piece of equipment, and elsewhere as indicated. Unions are not required on flanged devices. E. Install nipples or flanges to join dissimilar metals, including copper coil connections with steel pipe. F. Install strainers on the supply side of each control valve, pressure reducing valve, pressure regulating valve, solenoid valve, inline pump, and elsewhere as indicated. G. Install drain valves at low points in mains, risers, branch lines, and elsewhere as required for system drainage. H. Install manual air vents at high points in the system, at heat transfer coils, and elsewhere as required for system air venting. 1.3 PRESSURE INDEPENDENT CONTROL VALVES A. PICV's are acceptable on this project. Refer to Section 200600 for more information.
DUCT/WORK SYSTEM	THICKNESS (IN.)													
Hospital, Supply	1.5													
Hospital, Return, typical room temperature	None													
Hospital, Return, low room temperature	1.5													
Duct coils and heating coils on VAV, CV, and FTU Terminal Units (Entire coil must be insulated, including casing, header, and return bends)	1.5													

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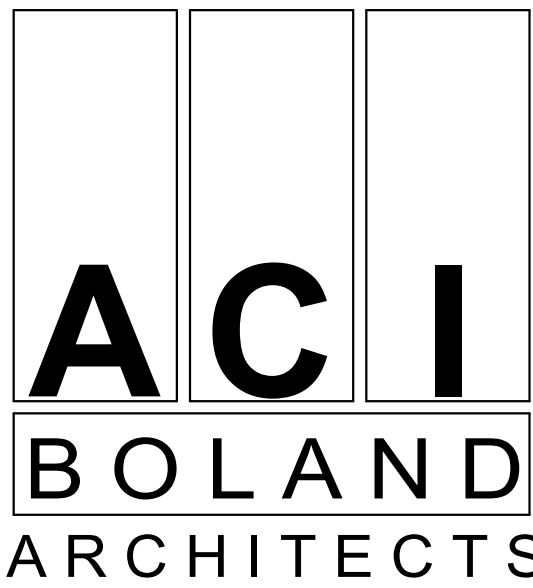
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Revision

Number	Date	Description

MP003  
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MECHANICAL SPECIFICATIONS





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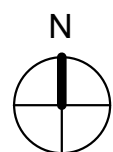
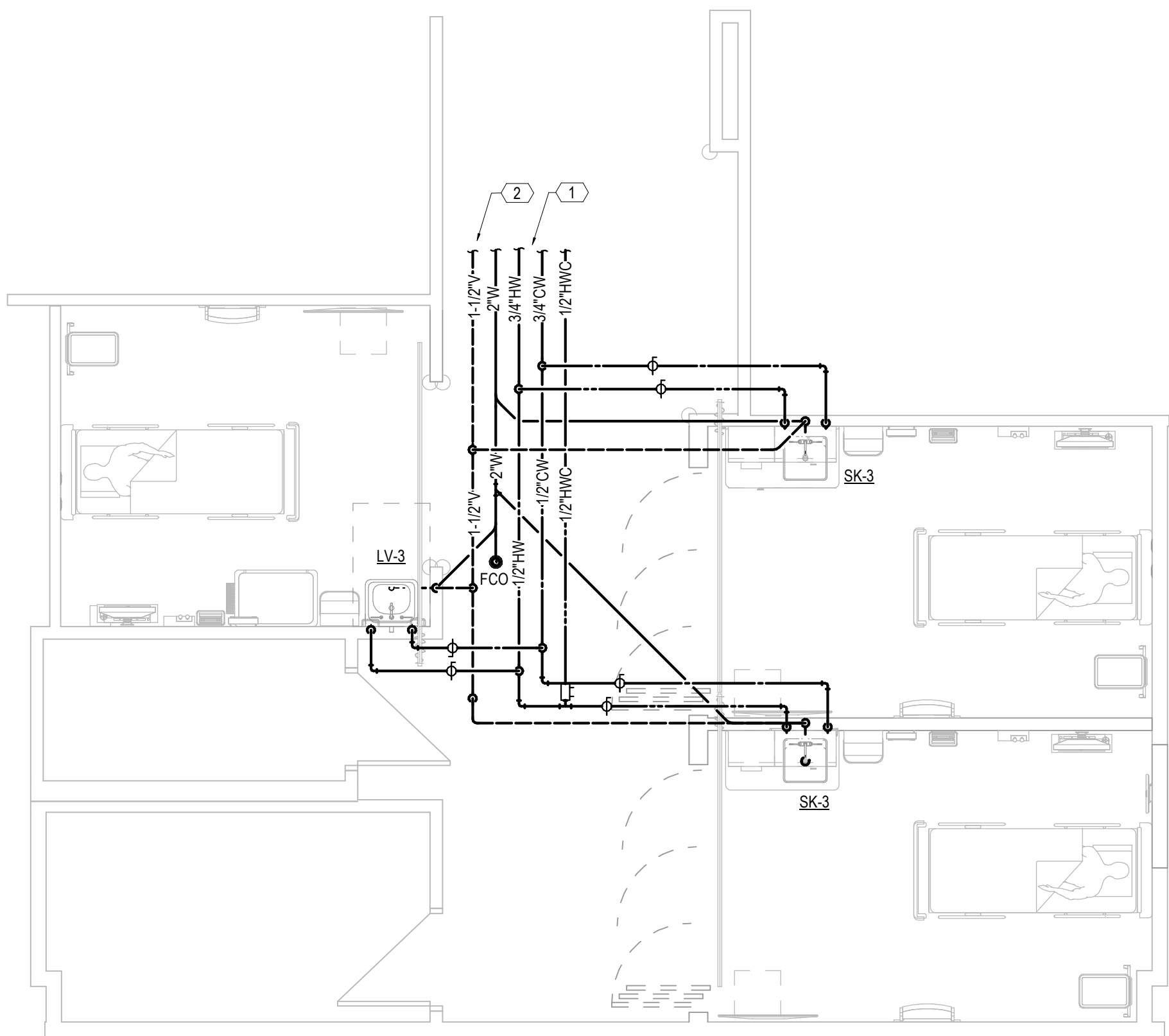
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
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## PLUMBING GENERAL NOTES

1. REFER TO THE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.
2. PROVIDE SLOPE AND DRAINAGE NECESSARY SHOWN ON THESE PLANS. PROVIDE CLEANOUTS ON WASTE, VENT AND STORM PIPING AS REQUIRED BY CODE AND MAINTAINANCE (BASED ON ACTION) FIELD INSTALLATION.
3. PIPING ON EXTERIOR WALLS OR PRE-CAST WALLS TO BE ROUTED IN FRAMED WALL ON INTERIOR SIDE OF WALL.
4. AVOID ROUTING OVER ELECTRICAL ROLLS AND ELECTRICAL PANELS. MAINTAIN N.E.C. CLEARANCES CODED WITH US WITH ELECTRIC CONTRACTOR.
5. ROUTE DOMESTIC HOT WATER DISTRIBUTION PIPES TO BE 1/2" ABOVE THE TOP OF ALL WALL LATHWORKS WITH A 1/2" ROUNDOFF. IF TWO OR MORE LATHWORKS SHARE A 1/2" OR LARGER BRANCH PIPE, THE BRANCH PIPE SHALL BE 1/2" ABOVE THE TOP OF THE LATHWORKS WITH A 1/2" ROUNDOFF.
6. ALL VALVES SHALL BE INSTALLED ABOVE DROP-IN OR THROUGH THE CEILING. SHALL NOT BE ON ACCESS PANELS IN HARD LID CEILINGS.
7. ACCESS PANELS SHALL BE #424, UNLESS NOTED OTHERWISE. PROVIDE 1/2" CLEARANCE TO THE PIPE. EXIST LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS AND EQUIPMENT SCHEDULE. PROVIDE 1/2" CLEARANCE TO THE PANELS WHEREVER REQUIRED BY APPLICABLE CODES.
8. ALL PIPING SHALL BE ROUTED AS HIGH AS POSSIBLE IN THE WALLS TO AVOID THE CEILING. BE UTILIZABLE, ESPECIALLY WHERE CROSSING OTHER PIPES, DUCTS AND ELECTRICAL.
9. PROVIDE 1/2" CLEARANCE TO THE PIPES TO ALL APPLIANCES AND ELECTRICAL.
10. COORDINATE ROUTING OF CONDENSATE DRAIN LINES TO THE EXTERIOR PRIOR TO INSTALLATION TO ENSURE SLOPE CAN BE MET.
11. VERIFY AND REFER TO ARCHITECTURAL DIMENSIONAL DRAWINGS FOR EXIST LOCATIONS OF ALL FIXTURES AND EQUIPMENT.

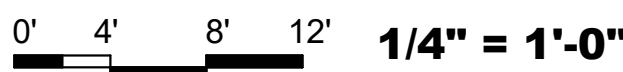
## # SHEET KEYNOTES

- 1 CONTRACT TO CONNECT COLD WATER, HOT WATER, AND HOT WATER RECIRCULATION PIPING TO EXISTING PIPING THE VICINITY. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BID.
- 2 CONTRACTOR TO CONNECT SANITARY SEWER AND VENT PIPING TO EXISTING PIPING THE VICINITY. CONTRACTOR TO FIELD VERIFY EXACT LOCATION PRIOR TO BID.



1

## FIRST FLOOR PLUMBING PLAN



Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

Date	07/10/2024
Job Number	3-24016
Drawn By	KME
Checked By	EKE

Revision		
Number	Date	Description

P101

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## FIRST FLOOR PLUMBING PLAN



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FIRST FLOOR MEDICAL GAS PLAN

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P102

Checked By EKE

Drawn By KMB

Job Number 3-24016

Date 07/10/2024

**Saint Luke's.**  
EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086



Missouri: #000958

Licensee's Certificate of Authority Number:

T: 816.763.9600  
Kansas City, MO 64108

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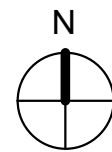
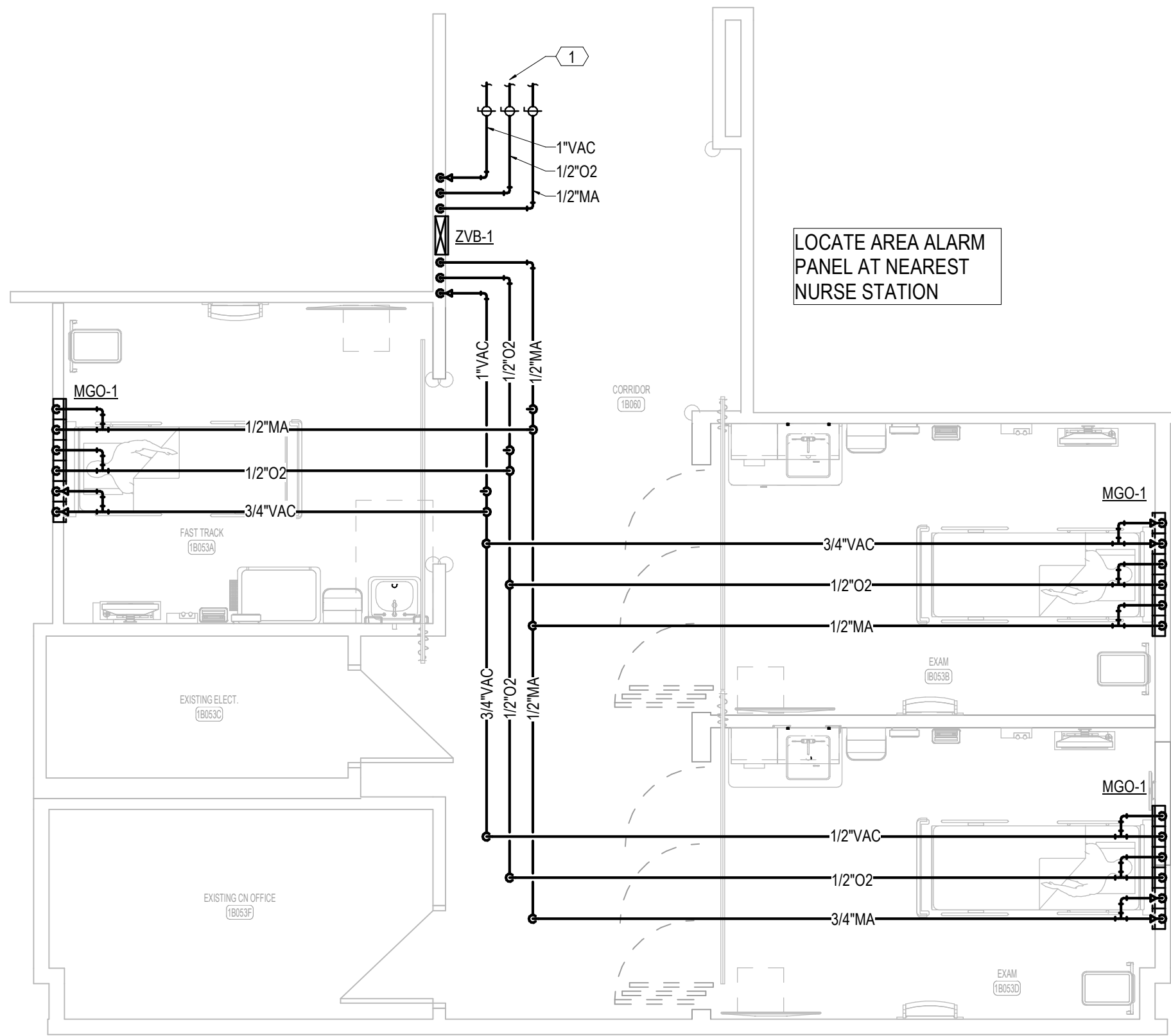
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Lee's Summit, Missouri

#### 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 ARISING 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.

#### # SHEET KEYNOTES

- 1 CONTRACTOR SHALL CONNECT NEW MEDICAL GAS PIPING TO EXISTING PIPING IN VICINITY. FIELD VERIFY EXACT LOCATIONS PRIOR TO BID.



1

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

#### FIRST FLOOR MEDICAL GAS PLAN



PLUMBING FIXTURE SCHEDULE

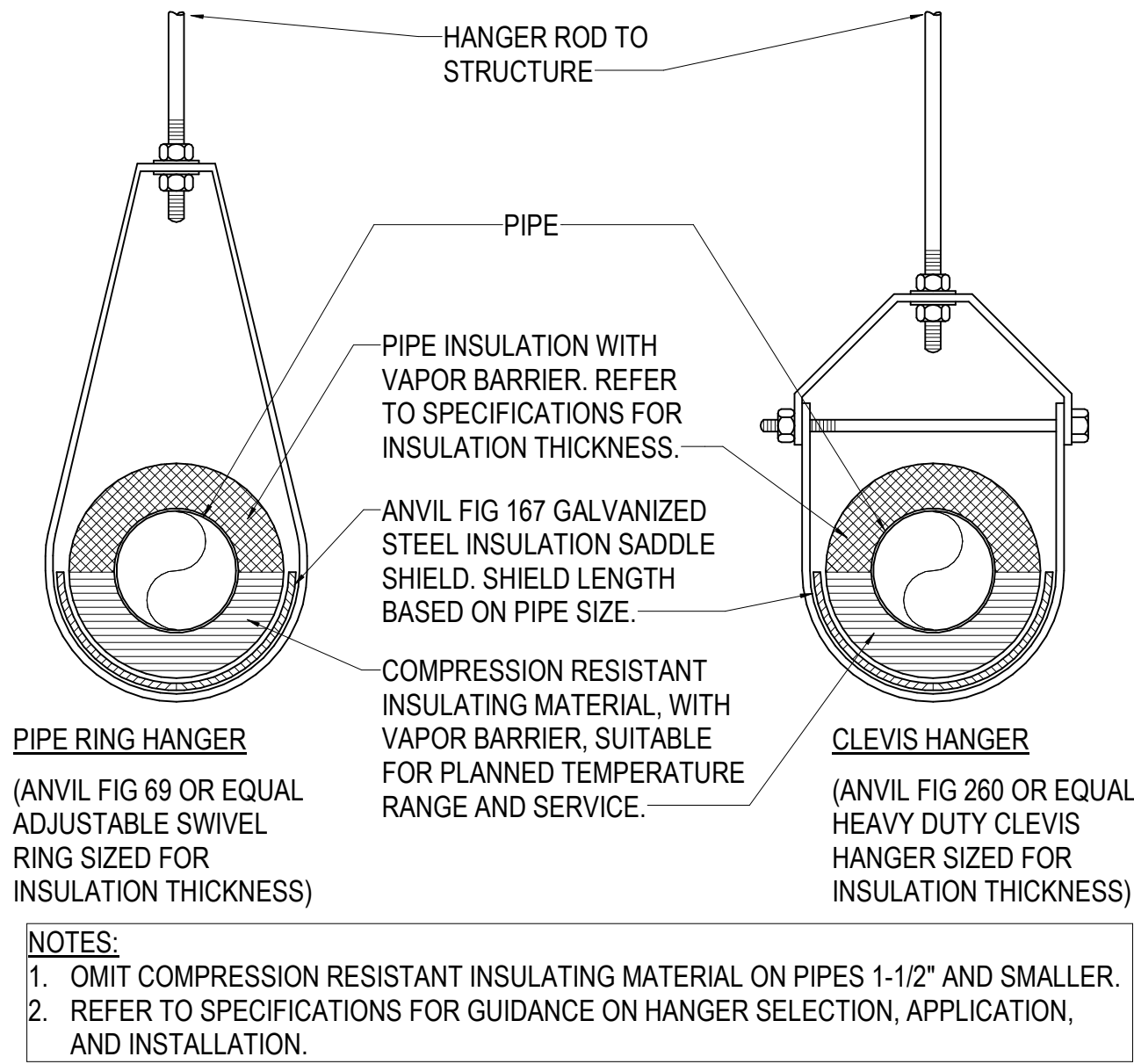
MARK	DESCRIPTION	MANUFACTURER	MODEL	DIMENSIONS	ADA COMPLIANT	MATERIAL AND FINISH	TRIM			CONTROL TYPE	POWER	FLOW		PIPE RUNOUT SIZES				SPECIFICATION
							MANUFACTURER	MODEL	FINISH			GALLONS PER MINUTE (GPM)	GALLONS PER FLUSH (GPF)	COLD WATER	HOT WATER	WASTE	VENT	
LV-3	LAVATORY - WALL HUNG - MANUAL	AMERICAN STANDARD	NO. 0355.012 "LUCERNE"	20-1/2" x 18-1/4"	YES	WHITE VITREOUS CHINA	CHICAGO FAUCET	NO. 895-GN2FC-317-XK		MANUAL	--	1.2	--	1/2"	1/2"	2"	1-1/2"	WALL HUNG LAVATORY WITH 3 HOLES ON 4" CENTERS - 4" WRIST BLADE HANDLES WITH CERAMIC DISC CARTRIDGE AND FLOW CONTROL. AMERICAN STANDARD NO. 2411.015 AMERICAN STANDARD NO. 2411.015 PERFORATED GRID STRAINER DRAIN WITH 1-1/4" TAILPIECE. DEARBORN NO. 510 1-1/2" 17 GAUGE "P" TRAP WITH ADAPTER FOR 1-1/4" TAILPIECE, CLEANOUT AND ESCUTCHEONS. DEARBORN NO. 2712 KOW HOT AND COLD WATER COMPRESSION INLET SUPPLIES WITH STOPS. PROVIDE TRUEBRO "LAVSHIELD" PVC ENCLOSURE MODEL 2018-AS-L1.
SK-3	SINK-INTEGRAL WITH COUNTERTOP	--	--	--	--	--	CHICAGO FAUCET	895-317XKCPR		MANUAL	--	1.0	--	1/2"	1/2"	2"	1-1/2"	INTEGRAL WITH COUNTERTOP - ELKAY NO. LK08 C.P. BRASS GRID STRAINER AND 1-1/2" C.P. BASS TAILPIECE. CHICAGO FAUCET NO. 895-317XKCPR FAUCET, 4" CENTERS, NO. GN2A 5-3/8" SPOUT, NO. 317 4" WRIST BLADE HANDLES AND "FC" FLOW CONTROL DEVICE. DEARBORN NO. 510-17GAUGE 1-1/2" "P" TRAP WITH CLEANOUT AND ESCUTCHEON, DEARBORN NO.2712 KOW HOT AND COLD WATER COMPRESSION INLET SUPPLIES WITH STOPS.

MEDICAL GAS CONNECTION SCHEDULE

REMARKS:									
1. WHERE ZONE VALVE BOXES OR AREA ALARM PANELS ARE LOCATED IN SMOKE WALL, PROVIDE APPROPRIATE PROTECTION AROUND THE BOX TO MAINTAIN THE RATING. A. INDICATE ABNORMAL PRESSURE.									
MARK	MFR.	LOC.	PIPING CONNECTIONS (IN)			ALARM SIGNAL			REMARKS
			OXYGEN	VACUUM	MEDICAL AIR	OXYGEN	VACUUM	MEDICAL AIR	
AAP-1	BEACON MEADES	NURSE STATION				A	A	A	--
ZVB-1	BEACON MEADES	CORRIDOR 1B060	1/2	3/4	1/2				1

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. LOCATE A VACUUM SLIDE AT EACH VACUUM WALL TERMINAL. 3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION FOR MEDICAL GAS WALL OUTLETS.					
MARK	MFR.	OXYGEN (O2)	VAC (VAC)	MEDICAL AIR (MA)	REMARKS
MGO-1	BEACON MEADES	2	2	2	1-3



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Development Services Department  
Summit, Missouri  
7/10/2024

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NUMBER  
PE-2024014186  
07/10/2024

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Missouri: #000958

PEC PROJECT NUMBER: 240219-000  
**PEC**  
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Saint Luke's  
EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

Date07/10/2024  
Job Number3-24016  
Drawn ByKMB  
Checked ByEKE

Revision  
NumberDateDescription

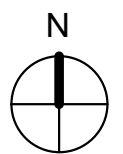
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PLUMBING DETAILS AND SCHEDULES



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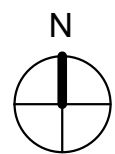
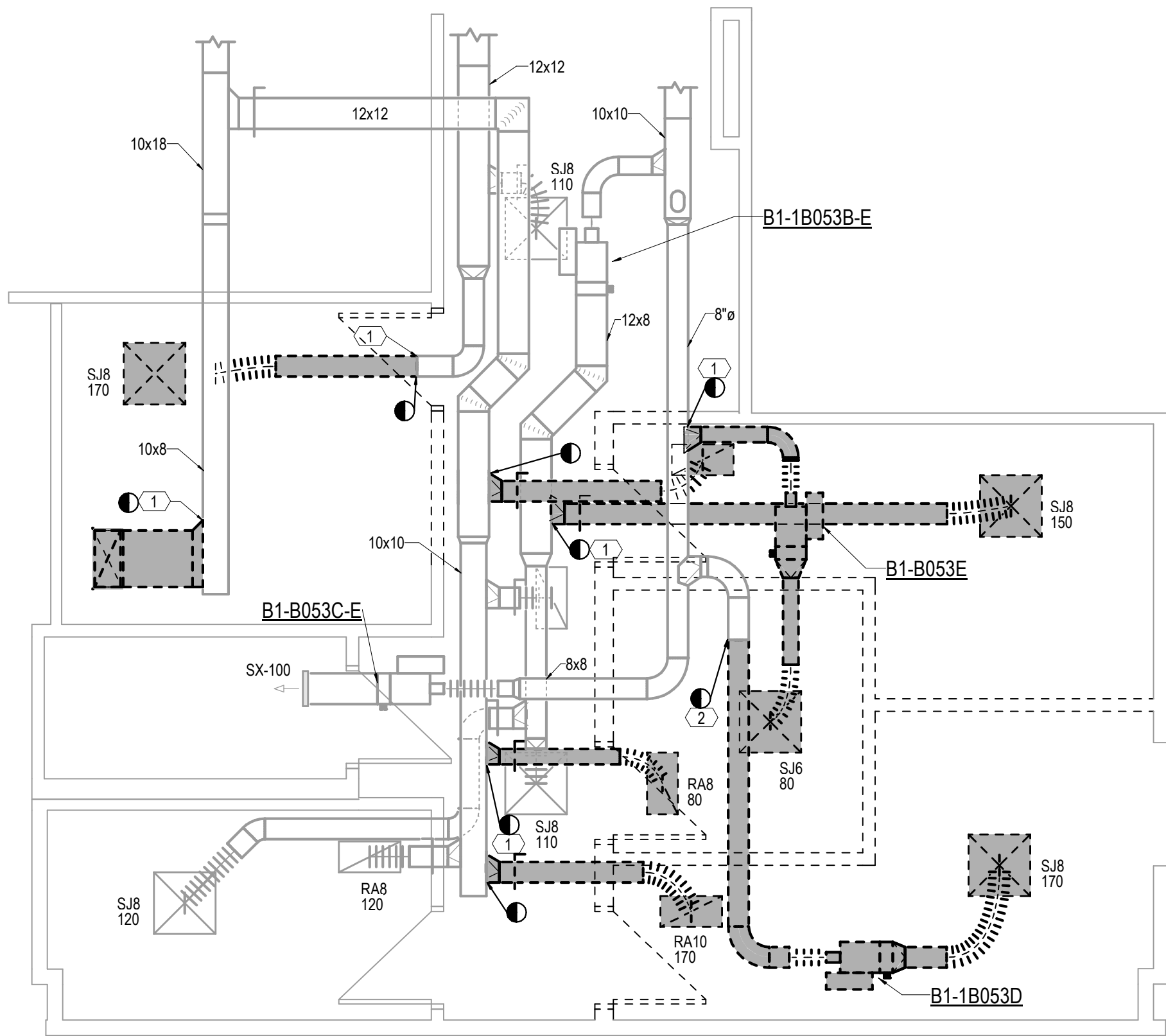
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2

## FIRST FLOOR HVAC PLAN- DEMOLITION

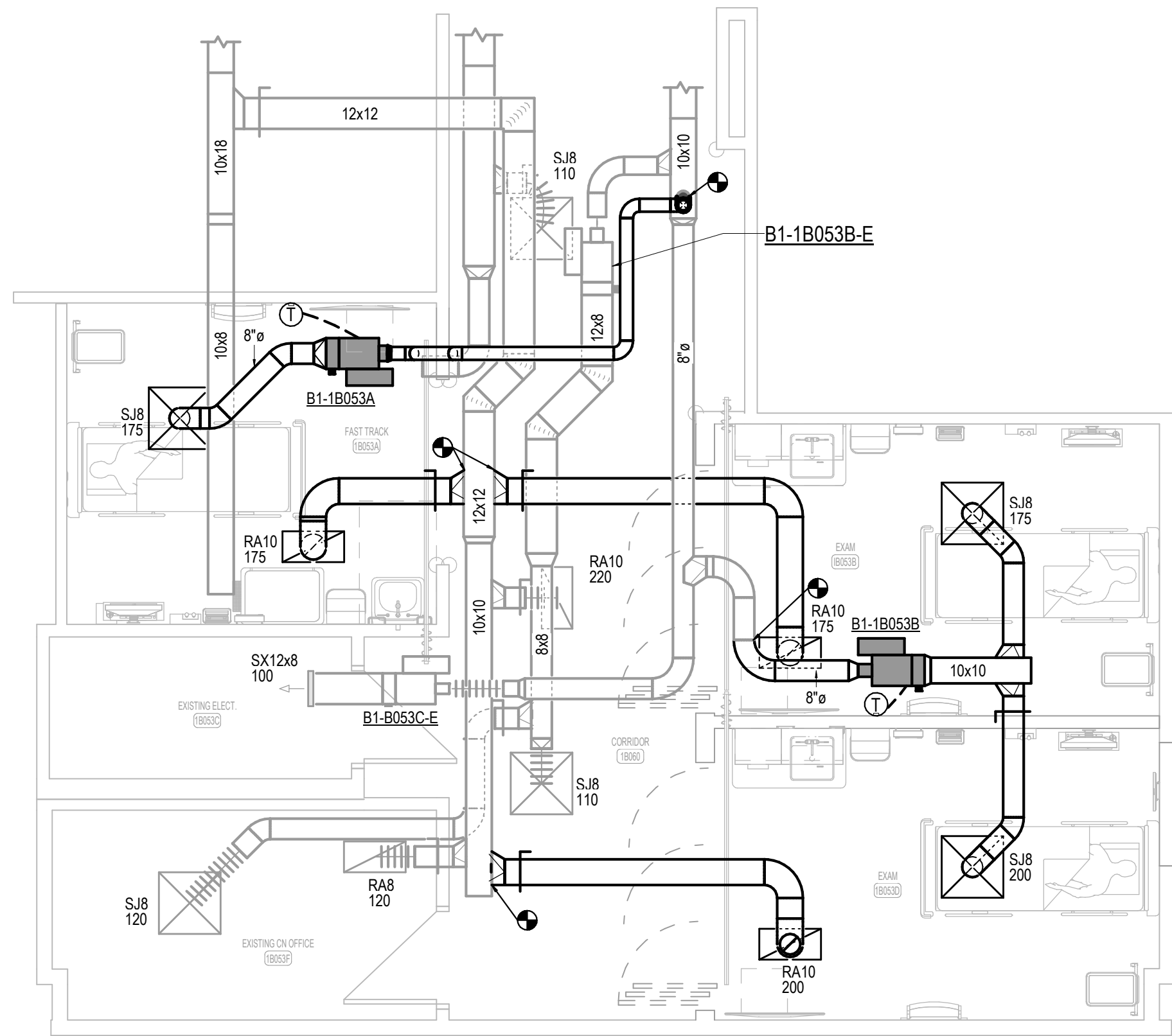
0' 4' 8' 12' 1/4" = 1'-0"



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## FIRST FLOOR HVAC PLAN- NEW WORK

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



### HVAC GENERAL NOTES

- DUCT SIZES SHOWN ARE ACTUAL INSIDE CLEAR DIMENSIONS. INSULATION THICKNESS HAS NOT BEEN ACCOUNTED FOR. DUCTWORK EXPOSED TO SPACE SHALL NOT HAVE EXTERIOR INSULATION.
- 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.
- AVOID ROUTING DUCTWORK OVER ELECTRICAL ROOMS AND ELECTRICAL PANELS. MAINTAIN N.E.C. CLEARANCES. COORDINATE ROUTING WITH ELECTRICAL CONTRACTOR.
- ALL SUPPLY AND EXHAUST AIR BRANCHES FOR DIFFUSERS OR GRILLES SHALL HAVE MANUAL BALANCE DAMPERS. RETURN AIR BRANCHES SHALL HAVE MANUAL BALANCE DAMPERS EXCEPT IN THE CASE OF RETURN AIR PLENUM. 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.
- 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.
- PROVIDE FLEXIBLE DUCT AND PIPE CONNECTIONS TO ALL MOTORIZED EQUIPMENT.
- 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.
- REFER TO GRD SCHEDULE FOR DUCT CONNECTION SIZES. REFER TO TERMINAL BOX SCHEDULE FOR INLET DUCT SIZES.
- 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.

### # SHEET KEYNOTES

- DEMOLISH EXISTING DUCTWORK TO POINT SHOWN AND CAP. SEAL PER SMACNA REQUIREMENTS.
- DEMOLISH EXISTING DUCTWORK TO POINT SHOWN AND PREPARE FOR NEW CONNECTION.



Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

Date 07/10/2024  
Job Number 3-24016  
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Checked By EKE

Revision  
Number Date Description

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FIRST FLOOR HVAC PLAN



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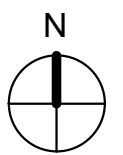


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Lee's Summit, Missouri  
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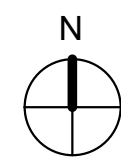
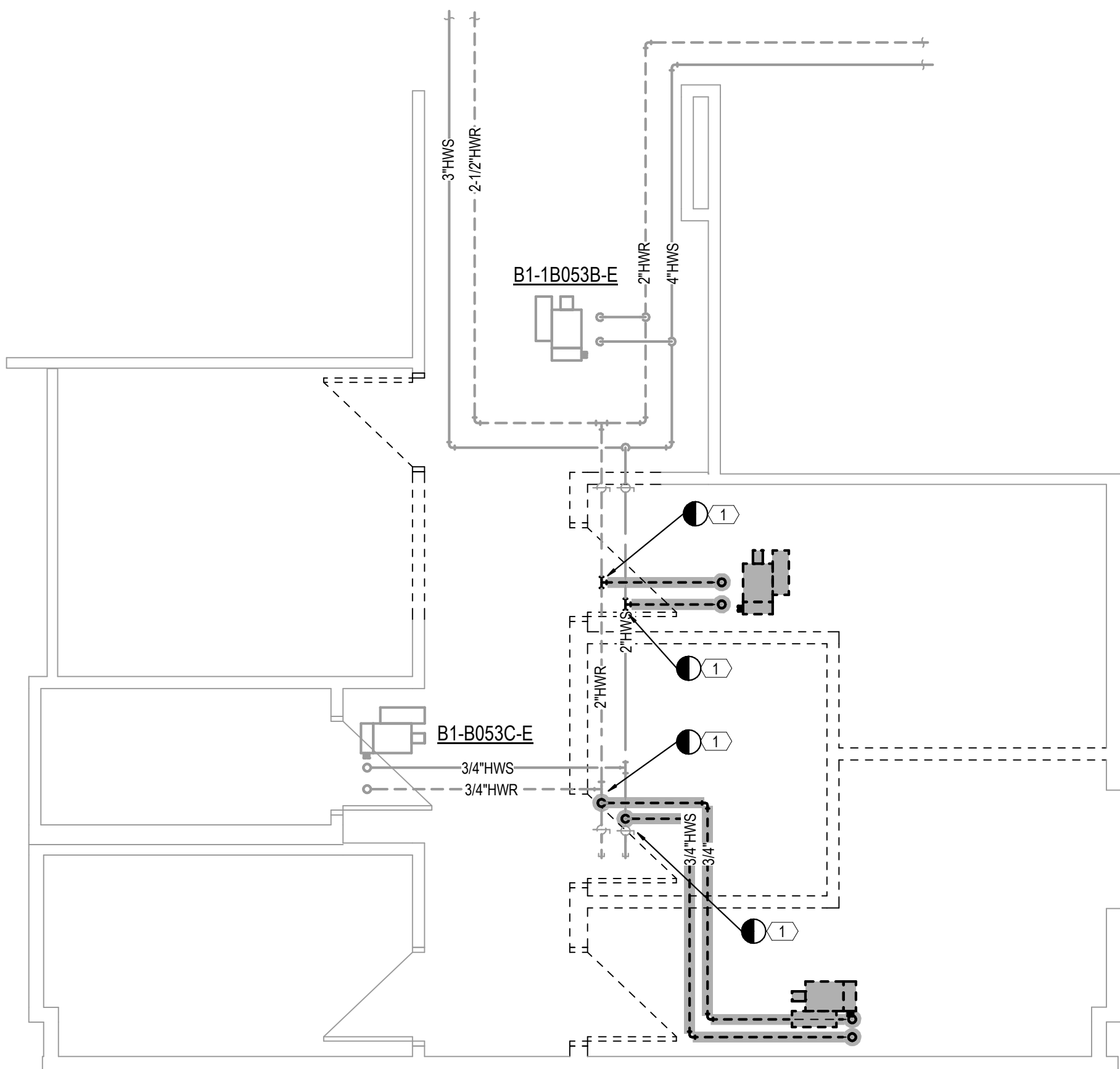
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### FIRST FLOOR MECHANICAL PIPING PLAN- DEMOLITION

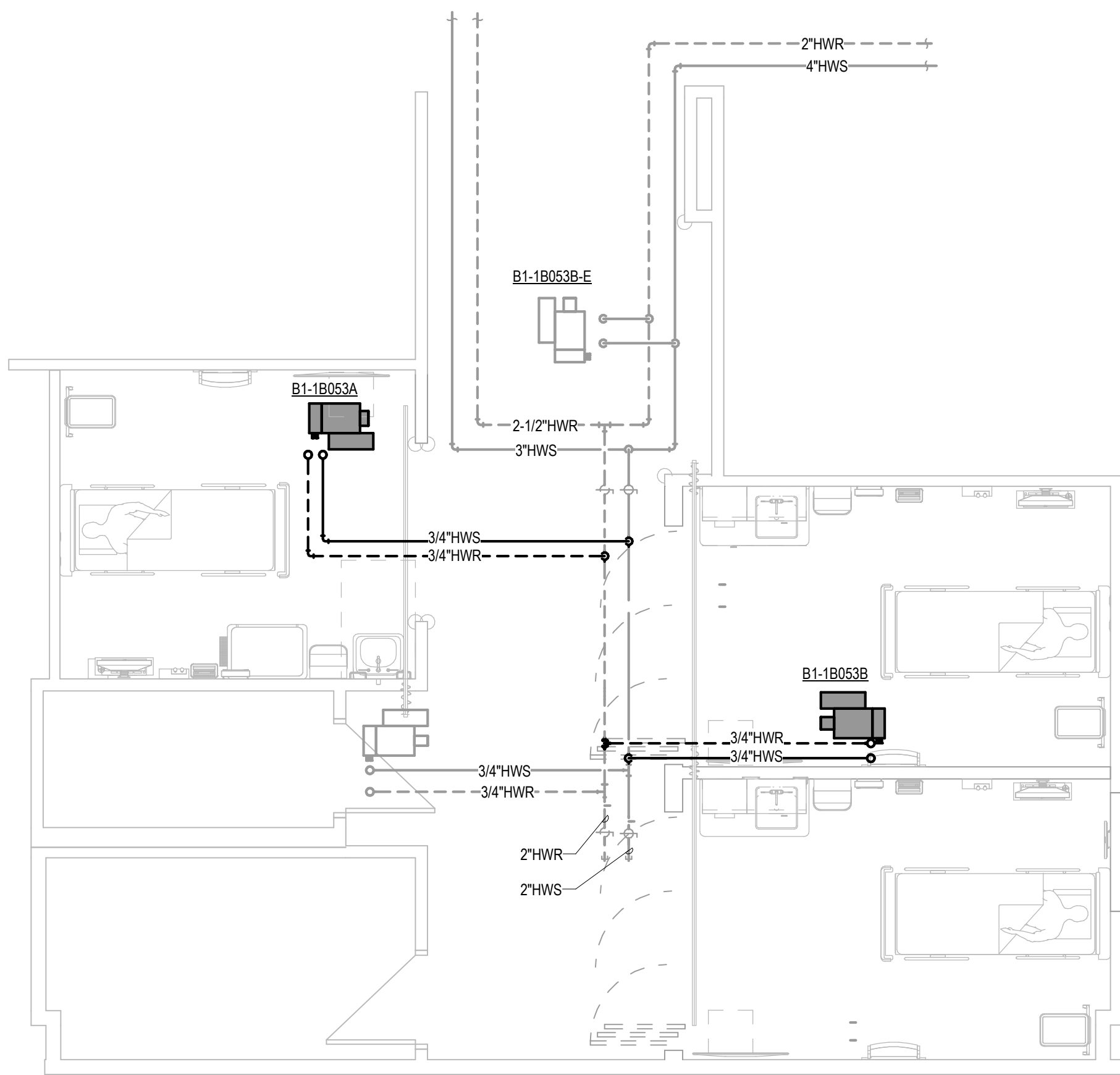
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### FIRST FLOOR MECHANICAL PIPING PLAN-NEW WORK

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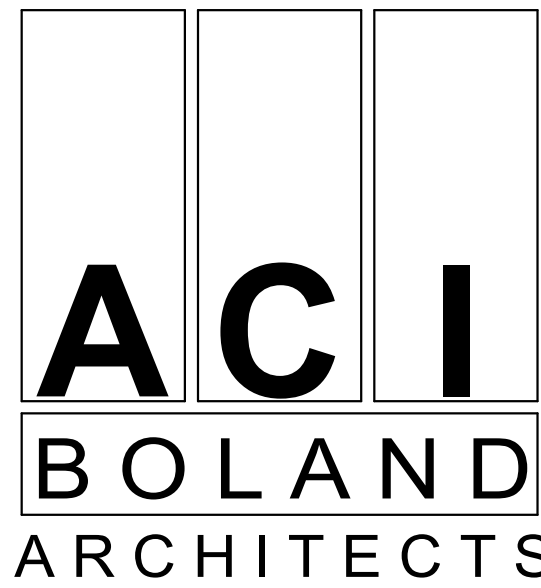
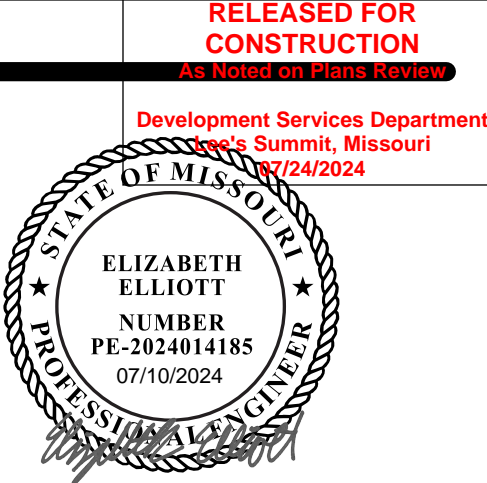


#### MECH. PIPING GENERAL NOTES

1. PIPING ON EXTERIOR WALLS OR PRE-CAST CONCRETE WALLS TO BE ROUTED IN FRAMED WALL ON INTERIOR SIDE OF INSULATION.
2. AVOID ROUTING PIPING OVER ELECTRICAL ROOMS OR ELECTRICAL PANELS. MAINTAIN N.E.C. CLEARANCES. COORDINATE ROUTING WITH ELECTRICAL CONTRACTOR.
3. PROVIDE FLEXIBLE PIPE CONNECTIONS TO ALL MOTORIZED EQUIPMENT.
4. VERIFY ALL EQUIPMENT ACCESS PANELS WITH MANUFACTURER AND ARCHITECT.
5. REFER TO TERMINAL BOX SCHEDULE FOR ALL BRANCH HEATING WATER PIPE SIZES.
6. 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.
7. CONTRACTOR SHALL MAINTAIN MINIMUM 4" CLEAR ABOVE LAY-IN CEILINGS.

#### # SHEET KEYNOTES

- 1 DEMOLISH EXISTING HYDRONIC PIPING TO POINT SHOWN AND CAP AND SEAL.



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Saint Luke's East ED Patient Treatment Renovation  
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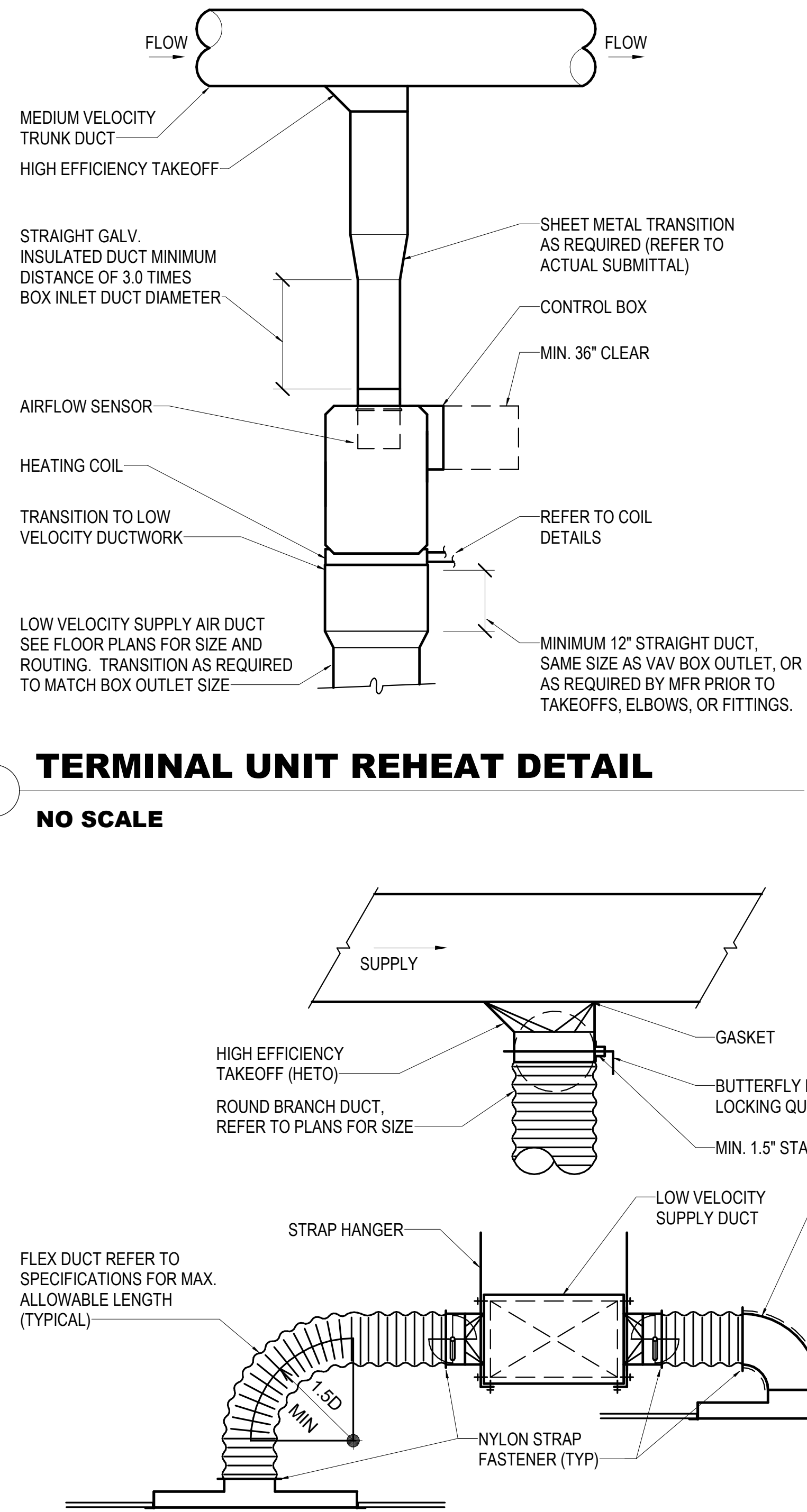
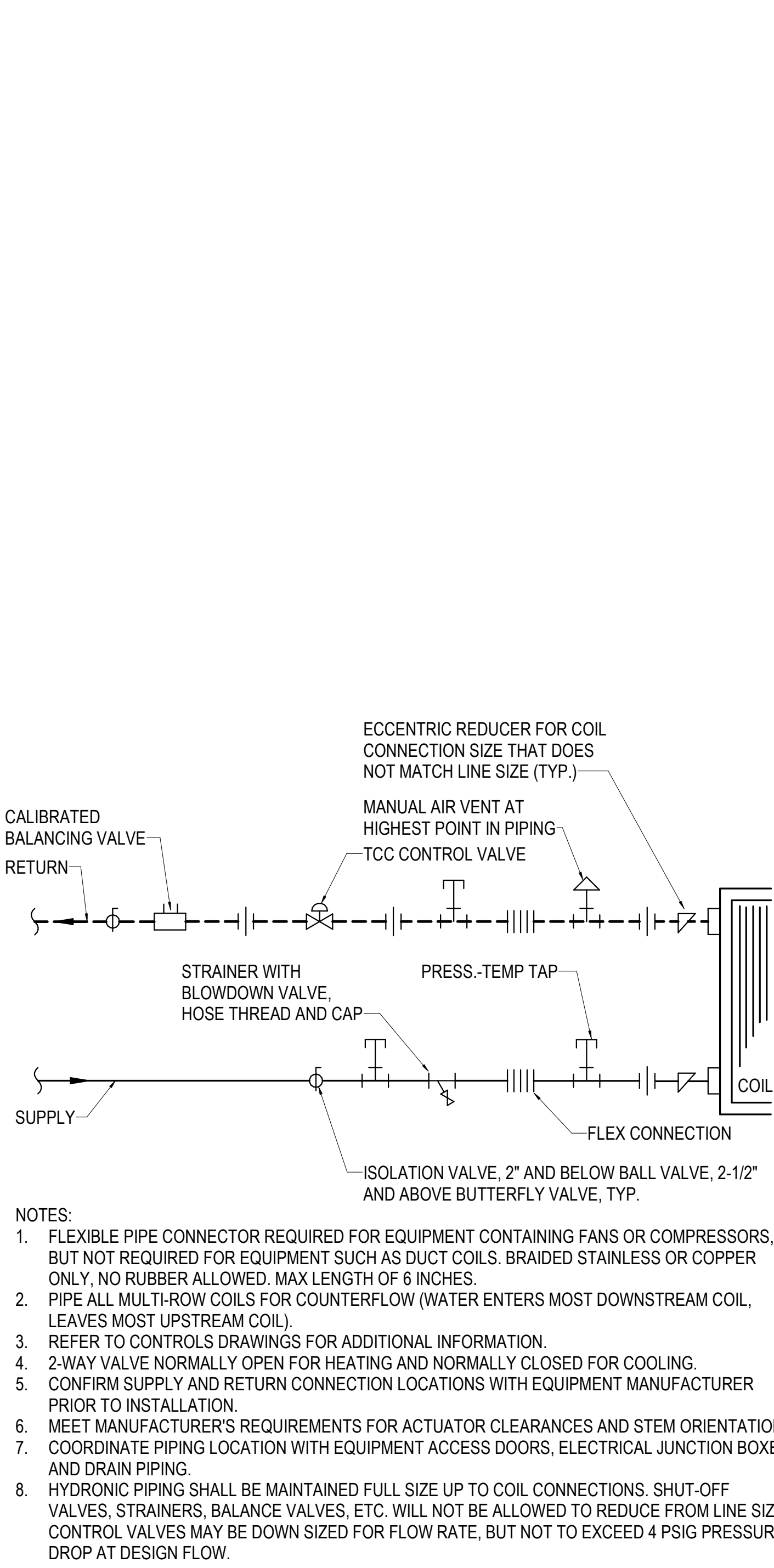
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FIRST FLOOR MECHANICAL PIPING  
PLAN



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 DIFFUSER C = SECURITY GRILLE U = FLOOR MOUNTED SUPPLY 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 NG 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	IMAGE	BASED ON		MOUNT	PANEL SIZE (FACE SIZE)	MATERIAL	BLADE SPACING / SLOT WIDTH	DEFLECTION	COLOR	REMARKS
SJ	SUPPLY DIFFUSER		TITUS	OMNI-AA	LAY-IN	24x24	ALUMINUM	--	--	WHITE	--
RA	RETURN GRILLE		TITUS	350FL	LAY-IN	24x12 (22x10)	ALUMINUM	3/4"	35°	WHITE	--

TERMINAL UNIT SCHEDULE																									
REMARKS: 1. ALL TERMINAL UNITS SHALL BE PROVIDED WITH FLOW-RING SERVICE 'T'. 2. ALL TERMINAL UNITS FOR USE IN HEALTHCARE APPLICATIONS SHALL BE PROVIDED WITH FIBER FREE STERILOC LINER. UNLESS INDICATED OTHERWISE. 3. EXISTING TERMINAL UNIT TO REMAIN .																									
MARK	BASED ON		UNIT SIZE	INLET SIZE (INCH)	PRIMARY AIRFLOW		OP SP (IN WC)	MAX NC RAD	HEATING COIL													ELEC		LINER TYPE	REMARKS
	MFR	MODEL			MAX (CFM)	MIN (CFM)			AIR			HOT WATER COIL										VOLT	PHASE		
									CFM	EAT (°F)	LAT (°F)	CAP. (MBH)	EWT (°F)	LWT (°F)	APD (IN WG)	FLOW (GPM)	WPD (FT H2O)	ROWS	FPI	S & R RUNOUT SIZE (INCH)					
B1-1B053A	TITUS	DESV	6	6"	375	210	0.5	30	375	55	99	10	180	146	0.17	0.6	0.08	2	10	1/2"	120	1	STERILOC	1,2	
B1-1B053B	TITUS	DESV	5	5"	175	100	0.5	30	175	55	92	4	180	152	0.03	0.3	0.08	1	10	1/2"	120	1	STERILOC	1,2	
B1-1B053B-E	TITUS	DESV	5	5"	230	0	0.5	30	230	55	90	7.9	180	140	0.1	0.5	0.3	1	10	1/2"	120	1	STERILOC	3	
B1-8053C-E	TITUS	DESV	4	4"	100	0	0.5	30	100	55	90	3.4	180	140	0.1	0.5	0.3	1	10	1/2"	120	1	STERILOC	3	



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STATE OF MISSOURI  
ELIZABETH ELLIOTT  
NUMBER  
PE-2024014184  
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Saint Luke's  
EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation  
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MECHANICAL DETAILS AND SCHEDULES



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## GENERAL NOTES

HEALTHCARE	
H1.	DO NOT ROUTE BRANCH CIRCUITS OR FEEDERS ABOVE OR BELOW IMAGING ROOMS BECAUSE OF POSSIBLE ELECTROMAGNETIC INTERFERENCE.
H2.	BOND PANELBOARDS SERVING THE SAME PATIENT CARE VICINITY WITH #6 AWG MINIMUM COPPER CONDUCTOR PER NEC ARTICLE 517. THIS INCLUDES NORMAL AND ESSENTIAL PANELBOARDS AND ESSENTIAL PANELBOARDS FED FROM DIFFERENT TRANSFER SWITCHES.
H3.	THE GROUNDING SYSTEM IN PATIENT CARE AREAS SHALL BE TESTED BY VOLTAGE AND IMPEDANCE MEASUREMENTS PER NFPA 99 REQUIREMENTS BY A THIRD-PARTY TESTING AGENCY. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO SUBSTANTIAL COMPLETION AND SHALL BE INCLUDED IN THE FINAL CLOSEOUT DOCUMENTS.
H4.	MEDICAL GAS ALARM CABLING SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. VERIFY ALL REQUIREMENTS WITH THE MEDICAL GAS SUPPLIER. ALL MEDICAL GAS CABLING SHALL BE IN CONDUIT.
H5.	COORDINATE ALL BOX ROUGH-IN AND PATHWAY REQUIREMENTS FOR SOUND SYSTEMS IN OPERATING ROOMS WITH THE EQUIPMENT SUPPLIER
H6.	REFER TO THE SPECIFICATIONS FOR REQUIREMENTS ON COLOR CODING BOXES AND/OR CONDUIT ACCORDING TO THE SPECIFIC BRANCH OF THE ESSENTIAL ELECTRICAL SYSTEM.
H7.	REFER TO THE SPECIFICATIONS FOR REQUIREMENTS ON COLOR CODING OF NAMEPLATES ACCORDING TO THE SPECIFIC BRANCH OF THE ESSENTIAL ELECTRICAL SYSTEM.
H8.	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.
H9.	FOR ISOLATION PANEL CIRCUITS, USE 1" MINIMUM ENT CONDUIT ROUTED AS DIRECT AS POSSIBLE. MAXIMUM OF 2 CIRCUITS PER CONDUIT. REFERENCE SPECIFICATION SECTION 260527 FOR ADDITIONAL REQUIREMENTS.
H10.	ALL PATIENT CARE AREAS (PATIENT ROOMS AND SUPPORT SPACES) SHALL HAVE TWO GROUND PATHS PER N.E.C. ARTICLE 517.
H11.	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.
H12.	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.
H13.	DIGITAL CLOCK WITH INTEGRAL TIMER SHALL BE SIMPLEX #6303-9103 CLOCK WITH #6303-9202 CONTROL STATION OR APPROVED EQUAL. PROVIDE 120V. POWER TO CLOCK AND CONTROL WIRING FROM CLOCK TO CONTROL STATION AS REQUIRED.
H14.	DIGITAL CLOCK SHALL BE SIMPLEX #6334-9125 WITH #6334-9802 MOUNTING BRACKET AND #6334-9803 HARNESS ASSEMBLY OR APPROVED EQUAL. CLOCK SHALL BE 120V. WITH 2-1/2" LED (4) DIGIT DISPLAY.
H15.	HOSPITAL GRADE RECEPTACLES SHALL ONLY BE PROVIDED IN PATIENT CARE AREAS AS DEFINED BY NEC ARTICLE 517.

## GENERAL NOTES

1.	ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).	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.
2.	REFER TO RELATED ARCHITECTURAL, MECHANICAL, STRUCTURAL, AND CIVIL DRAWINGS FOR RELATED INFORMATION.	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
3.	REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.	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.
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.	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, ALIGHT, 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.
5.	COORDINATE OUTLET BOX LOCATIONS WITH MASONRY TO MINIMIZE CUTTING OF BRICK OR BLOCK.	16.	"C" INDICATED ADJACENT TO DEVICE INDICATES DEVICE MOUNTED ABOVE BACKSPLASH OF COUNTER TOP. VERIFY EXACT HEIGHT WITH ARCHITECTURAL PLANS AND ELEVATIONS.
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, WAINSCOTING, 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.		
COMMUNICATION / DATA (ROUGH-IN ONLY)			
T1.	EACH DATA, TELEPHONE, VIDEO, OR OTHER SYSTEMS OUTLET REQUIRES DOUBLE GANG BACKBOX WITH SINGLE GANG PLASTER RING AND 1" C. WITH PULL ROPE STUBBED 6" ABOVE NEAREST ACCESSIBLE CEILING UNLESS OTHERWISE NOTED ON PLANS. CONDUITS STUBBED UP ABOVE CEILINGS SHALL BE TURNED OUT 90 DEGREES. PROVIDE INSULATED BUSHINGS ON ALL CONDUITS. LABEL CONDUIT TO IDENTIFY ITS INTENDED USE (I.E. TELEPHONE, DATA, ETC.).		
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.	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, UNINTERRUPTED 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.
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".	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.
F3.	FAN SHUTDOWN RELAY WIRING SHALL BE LOCATED WITHIN 3 FEET OF THE FAN CONTROLS AND THE WIRING TO THE RELAY SHALL BE MONITORED.		
NURSE CALL (ROUGH-IN ONLY)			
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

SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTING
ABBREVIATIONS					
NL	NIGHT LIGHT - WIRE AHEAD OF CONTROLS		AFF	ABOVE FINISHED FLOOR	
EM	ON EMERGENCY POWER		AFG	ABOVE FINISHED GRADE	
WP	WEATHERPROOF		DF	DRINKING FOUNTAIN - SEE GENERAL NOTE 11	
CT	COUNTERTOP (SEE GEN. NOTE 16)		GAP	GENERATOR ANNUNCIATOR PANEL	
UON	UNLESS OTHERWISE NOTED				
W	WALL				
CONDUIT AND WIRING					
	EMERGENCY CIRCUIT	CLG/WALL		CONDUIT HOME RUN, 1 CIRCUIT. 2#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	MASTER/SLAVE FIXTURE WHIP	CEILING		CONDUIT HOME RUN, 2 CIRCUITS. 4#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	LOW VOLTAGE WIRING	CLG/WALL		CONDUIT HOME RUN, 3 CIRCUITS. 6#12 & 1#12 GRD. - 1/2"C.	CLG/WALL
	CDT RUN 2#12 & 1#12 GRD. - 1/2"C.	CLG/WALL		CONDUIT HOME RUN, 2 CIRCUITS PHASE CONDUCTORS/NEUTRAL CONDUCTOR (#12 UON)	CLG/WALL
	CDT RUN 2#12 & 1#12 GRD. - 3/4"C.	EARTH/FLOOR		SWITCH LEGS (#12 UON)	
	CDT RUN AS NOTED ON PLAN			GROUND CONDUCTOR (#12 UON)	
	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				
LIGHTING, SWITCHES AND SENSORS					
	LIGHT FIXTURE & FIXTURE LETTER	CLG SURF/ RECESSED		SWITCHES (1-POLE, 2-POLE, 3-WAY, 4-WAY)	46" AFF
	STRIP LIGHT FIXTURE & FIXT LETTER	CEILING		SWITCHES (KEYED, PILOT, TIMER)	46" AFF
	LIGHT FIXTURE & FIXTURE LETTER	CLG SURF/ RECESSED		INDICATES SWITCHING SCHEME	
	LIGHT FIXTURE & FIXTURE LETTER	WALL		1 RELAY OCCUPANCY SENSOR SW	46" AFF
	EXIT SIGN (SHADING DENOTES EXIT FACE SIDE)	CEIL/WALL		2 RELAY OCCUPANCY SENSOR SW	46" AFF
	LIGHT FIXTURE & FIXTURE LETTER	WALL		1 RELAY OCCUPANCY SENSOR/ DIMMER SWITCH (GEN NOTE 15)	46" AFF
	FIXTURE WITH SHADED LAMP(S) ON EMERGENCY POWER	CLG SURF/ RECESSED		DIMMER SWITCH (GEN NOTE 15)	46" AFF
	EMERGENCY BATTERY LIGHT FIXT	CEIL/WALL		LOW VOLTAGE SWITCH	46" AFF
	COMB EXIT SIGN/EM BATTERY LIGHT	WALL		ON/OFF SWITCH	46" AFF
	LIGHT FIXTURE & FIXTURE LETTER	POLE		ON/OFF 0-10V DIMMING SWITCH	46" AFF
	LIGHTING TRACK, TRACK FIXTURES, & FIXTURE LETTERS	CEILING		DUAL TECH ON/OFF SENSOR	46" AFF
	PHOTOCELL			16-SCENE WALL CONTROLLER	46" AFF
				DUAL TECH ON/OFF 0-10V DIM SW	46" AFF
				OCCUPANCY SENSOR	CLG/WALL
				LIGHTING CONTROL POWER PACK	
				UL-924 LISTED POWER PACK	
				AV SYSTEM/LIGHTING INTERFACE	
				DAYLIGHT SENSOR	CEILING
POWER					
	SINGLE GROUNDED RECEPTACLE	18" AFF		BRANCH CIRCUIT PANEL AND PANEL DESIGNATION	72" TO TOP
	DUPLEX GROUNDED RECEPTACLE	18" AFF		ELECTRICAL DISTRIBUTION EQUIP	
	DUPLEX GROUNDED RECEPTACLE	CEILING		EQUIPMENT - SEE EQUIPMENT CONNECTION SCHEDULE	
	DOUBLE DUPLEX GROUNDED REC	18" AFF		CONDUIT SLEEVE (GEN NOTE 13)	
	GROUND FAULT DUPLEX REC	18" AFF		CABLE TRAY - WIRE BASKET, LADDER (GEN NOTE 14)	
	GRD FAULT DOUBLE DUPLEX REC	18" AFF		MOTOR	
	DUPLEX GRD REC BOTTOM SWITCHCD	18" AFF		DISCONNECT SWITCH	
	TAMPER-PROOF DUPLEX REC	18" AFF		MANUAL STARTER	
	TAMPER-PROOF GFCI DUPLEX REC	18" AFF		CIRCUIT BREAKER	
	SPECIAL OUTLET (SEE SCHEDULE OR AS NOTED)	FLOOR/WALL		STARTER OR ATS (AS NOTED)	
	SPECIAL DEVICE (AS NOTED)			COMBINATION STARTER/DISC	
	FEEDER DESIGNATION			RELAY	
	JUNCTION BOX - 1-GANG			PUSHBUTTON (1-, 2-, 3-BUTTON)	46" AFF
	JUNCTION BOX - 2-GANG			BOX MOUNTED TRANSFORMER	
	FUSTAT BUSS #SSY	46" AFF		CONTACTOR	
	THERMOSTAT/TEMP SENSOR	46" AFF		METER	
	PLUG LOAD SENSOR	CEILING		PLUGMOLD SURFACE RACEWAY	WALL
	HANDICAP DOOR PUSHBUTTON	36" AFF		BUSDUCT PLUG	
NURSE CALL (ROUGH-IN ONLY)					
	NC STAFF ASSIST STATION WITHOUT AUDIO			NC CONTROL PANEL	WALL
	NC STAFF STATION W/ AUDIO			NC ZONE LIGHT	CEILING
	NC STAFF STATION WITH AUDIO AND CODE BLUE			NC VISUAL SIGNAL	CLG/WALL
	NC PATIENT STATION			NC BED INTERFACE UNIT	
	NC PATIENT STATION WITH CODE BLUE			NC CODE BLUE STATION	
	NC DUTY STATION			NC MASTER STATION	DESKTOP
				NC PRESENCE STATION	
				NC AUXILIARY JACK	
				NC EMERGENCY BATH STATION	
--- SYMBOL LIST IS FOR REFERENCE ONLY. ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT. ---					

## SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING	SYMBOL	DESCRIPTION	MOUNTING
COMMUNICATION / DATA					
	1-DATA OUTLET & JACK (GEN NOTES T1 & T3)	18" AFF		2-DATA OUTLETS & JACKS (GEN NOTES T1 & T3)	18" AFF
	1-VOICE OUTLET & JACK (GEN NOTES T1 & T3)	18" AFF		3-DATA OUTLETS & JACKS (GEN NOTES T1 & T3)	18" AFF
	1-VOICE/1-DATA OUTLET & JACKS (GEN NOTES T1 & T3)	18" AFF		4-DATA OUTLETS & JACKS (GEN NOTES T1 & T3)	18" AFF
	1-VOICE/2-DATA OUTLETS & JACKS (GEN NOTES T1 & T3)	18" AFF		2-VOICE/2-DATA OUTLETS & JACKS (GEN NOTES T1 & T3)	18" AFF
	CABLE TV OR VIDEO OUTLET & CONNECTOR (GEN NOTES T1 & T3)	18" AFF		1-VOICE/3-DATA OUTLETS & JACKS (GEN NOTES T1 & T3)	18" AFF
	VOICE UTP CABLE HOME RUN	GEN NOTE T2		### = TERMINATION ROOM	SEE HOR. CABLE SCHEDULE
	DATA UTP CABLE HOME RUN	GEN NOTE T2		XX = CABLE CONFIGURATION	
	VIDEO COAX CABLE HOME RUN	GEN NOTE T2		FIBER OPTIC CABLE HOME RUN (SINGLE MODE)	GEN NOTE T2
	FIBER OPTIC CABLE HOME RUN (MULTI MODE)	GEN NOTE T2			
FIRE ALARM					
	FIRE ALARM CONTROL PANEL	WALL		FIRE ALARM MANUAL STATION	46" AFF
	FIRE ALARM REMOTE ANNUNCIATOR	WALL		IONIZATION AREA SMOKE DETECTOR (GEN NOTE F2)	
	FIRE ALARM HORN	BOTTOM 80"		PHOTO ELECTRIC AREA SMOKE DETECTOR (GEN NOTE F2)	
	FIRE ALARM VISUAL SIGNAL	CEILING		DUCT SMOKE DETECTOR (GEN NOTE F4)	DUCTWORK
	FIRE ALARM VISUAL SIGNAL	BOTTOM 80"		DUCT SMOKE DETECTOR & FIRE/ SMOKE DAMPER (GEN NOTES F4 & F5)	DUCTWORK
	COMB. F.A. HORN & VISUAL SIGNAL	CEILING		HEAT DETECTOR (GEN NOTE F2)	
	FIRE ALARM SPEAKER	WALL		CARBON MONOXIDE DETECTOR	
	FIRE ALARM SPEAKER	CEILING		CARBON DIOXIDE DETECTOR	
	COMB. F.A. SPEAKER & VIS SIGNAL	BOTTOM 80"		FIRE SPRINKLER PRESSURE SWITCH	
	CHIME	WALL		FIRE SPRINKLER TAMPER SWITCH	SPRKLR RSR
	FIRE SPRINKLER ALARM BELL	WALL		FIRE SPRINKLER WATER FLOW SW	SPRKLR RSR
	ELECTROMAGNETIC DOOR HOLDER	WALL		FIRE ALARM MONITOR MODULE	
	FIRE ALARM RELAY (GEN NOTE F3)				
	FIRE ALARM CONTROL MODULE				
PEN WEIGHT LEGEND					
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK SOLID LINES ARE NEW TO BE INSTALLED			ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK DASHED LINES ARE EXISTING TO BE REMOVED		
	NEW DUPLEX GROUNDED RECEPTACLE			DUPLEX GROUNDED REC TO BE REMOVED	
	NEW LIGHT FIXTURE			LIGHT FIXTURE TO BE REMOVED	
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN HALFTONE SOLID LINES ARE EXISTING TO REMAIN			ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN LIGHT DASHED LINES ARE EXISTING TO BE RELOCATED		
	EXISTING DUPLEX GROUNDED REC TO REMAIN			DUPLEX GROUNDED REC TO BE RELOCATED	
	EXISTING LIGHT FIXTURE TO REMAIN			LIGHT FIXTURE TO BE RELOCATED	
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# ACI

## BOLAND ARCHITECTS

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Kansas City, MO 64108  
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Licensee's Certificate of Authority Number:  
Missouri: #000958



**Saint Luke's**  
EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

Date 07/10/2024  
Job Number 3-24016  
Drawn By RWK  
Checked By DDC

Revision  
Number Date Description



7/10/2024 2:58:14 PM  
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DIVISION 26 - ELECTRICAL

A. General Instructions:

- Codes, Permits and Inspections:
  - Wiring shall be in accordance with latest edition National Electrical Code (NEC), NFPA, and/or applicable local, state, and Utility Company rules, laws, codes, and ordinances.
  - Secure all permits and inspections required for the installation of the electrical work.
  - All work shall comply with the latest edition of the Americans With Disabilities Act (ADA).
  - Pay all fees associated with new utility services.
- Verifications:
  - Verify mounting heights and locations of electrical equipment before installation or rough-in.
  - Verify exact location of electrical service entrance including point of service and system characteristics.
- Wiring Methods:
  - The Electrical Contractor shall cooperate with other Contractors and install equipment in proper sequence so as not to interfere with the progress of other Contractors.
  - All materials shall be new and carry the Underwriter's Label or be "listed" by that group, and be fully equal to makes specified.
  - Use only insulated copper conductors in conduit. Use flexible conduit for connections to motors and similar equipment.
  - All wiring shall be concealed and all outlets shall be flush mounted in finished spaces except as noted otherwise.
  - All systems wiring in return air plenums shall be in conduit or be plenum rated.
- Tests:
  - This Contractor shall be responsible for performing all tests necessary to prevent concealment of defective or improper work.
  - Upon completion of work, test the installation thoroughly and render it free from shorts, grounds or improper connections.
- Guarantee:
  - This Contractor shall guarantee that all defective items of workmanship, material, labor or mechanical operation developing within one (1) year from the date of final acceptance of completed installation shall be replaced to the complete satisfaction of the Owner.
- Workmanship:
  - Electrical equipment shall be installed in a neat and workmanlike manner. Unightly installations shall be removed or reworked at no additional expense to the Owner.
- Identification of Disconnecting Means:
  - Provide a permanent nameplate for each disconnect switch indicating its purpose. The marking shall be of sufficient durability to withstand the environment it is installed in as required by N.E.C. Section 110.22 and 230.72(A).

B. Electrical Equipment:

- Conduits:
  - All conduit installed in earth, concrete, below concrete on earth, or exposed to weather shall be rigid steel or intermediate metal conduit. Electrical metallic tubing for all dry interior runs. Fittings shall be fully approved in accordance with N.E.C
  - Flexible or P.V.C. conduit may be used where not exposed to damage and approved by N.E.C. and local codes.
  - Provide a ground wire sized per N.E.C. Art. 250.122 in all conduits, both metallic and nonmetallic.
  - Conduit shall be installed and sized according to code requirements and protected from damage during construction.
  - Conduit may be re-routed where such action does not adversely affect the intended design or circuiting.
  - Final connections to all kitchen and mechanical equipment shall be with U. L. approved liquidtight conduit. Liquidtight and fittings shall be U.L. listed for grounding.
- Conductors:
  - Conductors shall be copper, generally with 600 volt rated insulation. Branch circuit wiring min. size #12 Type "THW" or "THWN/THHN" as required. Service entrance, feeder conductors Type "THWN/THHN" or "XHHW". Low voltage wire shall be Type "TF" or "TFF" minimum #18 gauge unless noted otherwise. All other types shall be as required by N.E.C.
  - All conductors shall be color coded with type and size marking. Connections to service equipment, feeder panels shall be made with solderless lugs. All splices, taps, connections to service entrance conductors shall be made by bronze solderless lugs. All other splices, connections shall be pressure type connectors.
  - Insulate joints, splices with Scotch #33 plastic tape or plastic moulded jackets.
- Outlet Boxes and Plaster Rings:
  - Outlet boxes shall be galvanized steel of type and size approved for particular installation requirements.
  - Use 4" square box with suitable plaster ring installed flush with finish materials in stud or concrete walls.
  - Use standard octagon boxes for ceiling light outlets. All boxes shall be securely mounted to building construction and flush with finish materials.
- Wall Receptacles:
  - Duplex receptacles shall be "Specification Grade", back or side wired, grounding type. Manufacturer shall be Hubbell or equal.
  - Weatherproof receptacles (indicated WP) shall be weather resistant GFCI duplex receptacles with extra-duty, weatherproof while-in-use metallic cover plate.

- Wall Switches:
  - Wall switches shall be "Specification Grade", 15 or 20A. as required by N.E.C. for the load served
  - Provide mechanically operated single pole, double pole, three way, four way or other types as indicated on the drawings. Manufacturer shall be Hubbell or equal. Maximum load shall be less than 80% of rated capacities.
- Wall Plates and Covers:
  - Flush wiring devices shall be provided with high impact thermoplastic wall plates as made by the PS/Sierra Electrical and Mfg. Co. or equal.
  - Flush junction boxes shall be equipped with blank plates.
  - Surface wiring devices shall be provided with suitable heavy steel coverplates with rounded edges and corners.
- Safety Switches:
  - Furnish safety switches of size and type indicated on drawings.
  - Heavy duty switches shall be fusible unless indicated otherwise. Provide Class "R" fuse clips.
- Starters:
  - Starters shall be NEMA rated with H-O-A switch in cover and a control power transformer for controls.
  - Provide Class 20 melting alloy relays or bimetallic overload relays (as required for load served). Size and install overload relay in field based on motor nameplate current.
- Fuses:
  - Furnish and install Class RK-5 time delay fuses for each active fuseholder, sized as scheduled or required.
  - Provide fuses made by Bussmann or equal.
- Lighting Fixtures and Lamps:
  - Install lighting fixtures. Provide lamps as indicated on the drawings.
  - No substitutions on lighting fixtures except as approved by Engineer prior to bidding.
  - Verify exact locations of fixture outlets so as to cause no interference with piping, equipment and architectural treatment.
  - Ballasts by "Advance" or equal, internally or externally fused, high power factor, V.L.H, fully compatible with lamps and shall carry UL label, ETL and CBM certifications of compliance, even though indicated fixture number may indicate otherwise.
  - Furnish all fixtures with lamps as scheduled and/or required by final fixture selection. Lamps equal to G.E.
- Wiring for Mechanical Equipment:
  - Electrical Contractor to provide all wiring remote from panel to panel. Electrical Contractor to provide all wires for mechanical equipment and controls. All WIRING TO BE IN CONDUIT. ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS. Electrical Contractor shall provide disconnect switch and all power wiring.
  - Provide disconnect switches, starters, and all wiring for mechanical and kitchen equipment unless otherwise noted on plans. Coordinate requirements with equipment suppliers.
- Grounding:
  - Provide system ground as required by N.E.C. and utility company if not already existing.
  - Bond mechanical equipment frames.
  - Bond all service entrance equipment and conduit system.
  - An equipment grounding conductor sized per N.E.C. Art. 250.122 shall be provided in all conduits. The ground wire is required for both metallic and nonmetallic conduit installations.
- Branch Circuit Panels:
  - Branch circuit lighting panels equal to Square D, G.E., Siemens, or Cutler Hammer, with thermal magnetic breakers and ground buses. Load center construction is not permitted. Electrical Contractor shall obtain available short circuit current from local Utility co. Panelboards shall be U.L. listed for available fault current. Breakers and panels shall be fully rated or U.L. series rated with specified fuses (22,000 AIC minimum).
  - Breakers shall have individual plastic cases sized as scheduled. Two pole breakers shall be common trip (single pole units with tie bars are not acceptable).
  - Panel shall be mounted as noted on the drawings. Provide with a hinged door and a neatly typed circuit directory card.
  - Re-assign circuits to properly balance the loads on the phases if final connections and tests show it to be advisable.

- Equipment Supplied By Other Contractors And/Or The Owner:
  - The Electrical Contractor shall furnish, install and connect all wiring, conduit, boxes, toggle switches, thermal switches, disconnect switches, remote pushbutton stations, etc., for all equipment requiring electrical power that is either furnished or specified by other contractors and/or the Owner, shown on drawings or listed below. The E.C. shall receive, install and connect all magnetic starters and controllers, capacitors, power factor correction devices, transformers, alarms, bells, horns, relays, remote switches for equipment supplied by others (i.e. starters or capacitors or power factor correction devices for Mechanical Equip., etc.). In general, all major equipment will be specified to be factory prewired with only service and interconnecting required at the site by the Electrical Contractor; however, the E.C. shall check all Divisions of the specification to verify whether the equipment is specified to be factory prewired. If not, then it shall be the responsibility of the Electrical Contractor to provide the complete wiring of the equipment in accordance with wiring diagrams provided by other Contractors and/or Owner to the Electrical Contractor. All interconnecting of equipment shall be by the Electrical Contractor.
  - All line and low voltage wiring and connections required to control the equipment are a part of this section. All wiring shall be in conduit.
  - It shall be assumed the Contractor is familiar with the equipment to be furnished by the other Contractors and/or the Owner in connection with this work and that provisions for such connections and work have been included in the Contractor's price. In no case will extra remuneration be allowed for such work.
  - Connections to all equipment have been designed from units as specified on the drawings or in the specifications. In the event equipment or control differs on approved mechanical shop drawings it shall be the responsibility of the supplying contractor to coordinate the electrical connections to the units and reimburse electrical contractor for any changes in the electrical system design. These changes shall not involve additional cost to the Owner.
- Contactors And Relays:
  - Shall be as manufactured by Cutler-Hammer, Allen Bradley, G.E. or Square D. They shall be as sized on the drawings.
  - All contactors and relays shall be Tungsten rated.
- Time Switches:
  - Time switches by Tork, Intermatic, or Paragon equal to those indicated below and approved by the Engineer will be acceptable.
  - Exterior lighting or interior time switches shall be 7 day with carry-over.
  - All time switches shall be provided with momentary contacts if required.
  - All time switches shall be provided with manual bypass switches and spring wound carry over mechanisms.
- Photo Electric Controls:
  - Photo Electric Controls by Tork, Intermatic and Paragon equal to those indicated below and approved by the Engineer will be acceptable.
  - Photo Electric Controls (Photo Switches; Photo Cells) shall be rated at 1800W, 120 volts, weatherproof. Mount on roof and orient photo electric controls to the north.
  - Photo-electric controls supplied as a part of a fixture assembly shall be as provided by Fixture Manufacturer.
- Fire Alarm System:
  - All components shall be U.L. listed for use in a fire alarm system. In addition, the system shall have a U.L. listing as a fire alarm system. The entire installation shall be installed and tested as required by NFPA, ADA, Life Safety Code and local requirements.
  - Fire alarm panel shall comply with NFPA 72 and the firealarm system shall comply with NFPA 101 and ADA. Provide initiation zones for each zone shown on the plans. Include adequate indication circuits for all indicating devices shown on the plans or required by code or local authorities. Batteries shall provide enough power to maintain the system for 24 hours plus 5 minutes in alarm.
  - Wiring shall be installed as described below:
    - Initiation circuits- (2) #16 AWG.
    - Signal wiring- (2) #14 AWG.
    - Relay wiring- (2) #16 AWG.
  - Fire Alarm Control Panel shall be equal to Simplex # 4004-9101 with 2 initiation zones, 1 signal circuit, power supply, batteries, and charger.
  - Duct smoke detectors shall be installed in the supply and return ductwork of all HVAC equipment capable of delivering over 2000 CFM. Provide sampling tubes per manufacturers recommendations. Detector shall be equal to Simplex # 2098-9201 with #2098-9649 duct housing and #2098-9806 remote test station.
  - Shut down relays equal to Simplex #2088-9010 shall be provided to shut down power to HVAC equipment over 2000 CFM and to close fire smoke dampers.
  - Photoelectric area smoke detectors shall be equal to Simplex #2098-9201 with #2098-9211 base.
  - A/V signals shall have strobes that comply with ADA and NFPA requirements. Audible signals shall meet NFPA requirements for sound transmission. Separate wiring for horns and strobes to comply with requirements for temporal coding.

- Transistorized Variable Frequency Drive: (Provided by TCC, installed by E.C.).
  - The Variable Frequency Drive (VFD) shall be for use with a standard NEMA B induction motor. Manufacturer shall be AC Tech and must include the following:
    - Individual or simultaneous operation of the VFDs shall not add more than 5% total harmonic voltage distortion to the normal bus.
    - Maximum allowable total and individual harmonic current distortion limits for each odd harmonic shall not exceed limits as set forth by IEEE 519, 1992. If harmonic filters are required to meet these requirements, the VFD manufacturer must provide the filter.
    - The VFD shall be a microprocessor based digital Pulse Width Modulated (PWM) design.
    - The VFD shall be supplied with an input AC line reactor of 5% impedance. Line reactor is to be factory mounted and wired within the VFD enclosure.
    - The VFD shall be equipped with a load AC line reactor of 5% impedance built-in or motor termination filter to prevent voltage rate of rise, reflective voltage amplitude damage, and other potential damage to motor windings and bearings.
  - The PWM VFD shall provide the following design features as standard:
    - Microprocessor logic. The VFD shall be microprocessor based and utilize digital input for all parameter adjustments.
    - Auto restart. The VFD shall automatically attempt to restart after a malfunction or an interruption of power. The number of attempted restarts shall be customer selectable (0 to 5).
    - Digital output displays and input parameter programming.
    - Critical frequency avoidance (Frequency jump points). The VFD shall provide a minimum of two (2) selectable frequency jump points, in 1.5 Hz increments, to be used to avoid critical resonance frequencies of the mechanical system.
    - Motor overload protection. Electronic motor protection shall be provided which is capable of predicting motor winding temperature based on inputting specific parameters including motor design type (TEFC, ODP, or other) and speed range.
  - Enclosure. The drive shall be furnished in a NEMA enclosure most suitable for the installed equipment. Fanned heatsinks and/or cooling fans shall be provided as necessary for proper heat dissipation. Inlet filters are required on all cooling fans, unless they are outside the drive enclosure and no circulated air passes circuit boards, transistors, or other electrical components.
  - Protective features. The VFD shall be designed to meet the following specifications and operate within the following parameters:
    - AC input fuses. The VFD's power circuit shall be fused and isolated internally with respect to ground. Fuses shall provide a minimum of 100,000 A interrupting capacity and shall provide complete Type 2 protection, not allowing any damage to the VFD upon overload or short circuit.
    - Phase loss protection. Phase loss protection shall be provided to prevent single phasing.
    - Phase loss ride through. The VFD shall be capable of continued operation during an intermittent loss of power for 0.1 seconds (6 cycles).
    - Short circuit and ground fault protection. The VFD shall have an instantaneous electronic trip circuit to protect the VFD from output line to line and line to ground short circuits.
    - Transient and surge voltage protection. Transient and surge voltage protection shall be provided through the use of Metal Oxide Varistors (MOV's).
    - Rotating Motor Start. The VFD shall be able to start into a motor rotating in either direction and at any speed, and accelerate to set speed without any time delay, tripping or component loss.
  - Additional features.
    - Operator panel: A door-mounted Softtouch Operator Panel shall be included with selection for Hand/Off/Auto control.
    - Automatic Bypass control circuitry. Bypass control circuitry shall be mounted integrally to the VFD enclosure. The bypass shall utilize an input switch to feed the VFD and isolate the VFD for trouble shooting. An output contactor which is electronically and mechanically interlocked with the bypass starter shall be utilized on the VFD to provide a positive disconnect between the VFD and the motor. Separate Hand/Off/Auto and Inverter/Bypass switches shall be included to allow manual or automatic transfer to across the line operation. A 120V control circuit transformer (fused on both the primary and secondary), auxiliary contacts, and overload relay with adjustable heater settings shall also be included. Any protective shutdown circuits shall function in all modes (hand, auto, or bypass).
    - A 120V control transformer fused on both the primary and the secondary.
    - Disconnect switch. The operating mechanism shall be designed so that the door can be padlocked in the "OFF" position. The switch shall have an interrupting capacity of 65,000 symmetrical amperes.

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STATE OF MISSOURI  
DANIEL S. CROWDER  
NUMBER  
PE-00047717  
EXPIRATION  
07/2025  
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Missouri: #000958  
PROJECT NUMBER: 24016-000  

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Saint Luke's

EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation

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

Date7/10/2024  
Job Number3-24016  
Drawn ByRWK  
Checked ByDDC

Revision  
NumberDateDescription

E-002

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ELECTRICAL SPECIFICATIONS

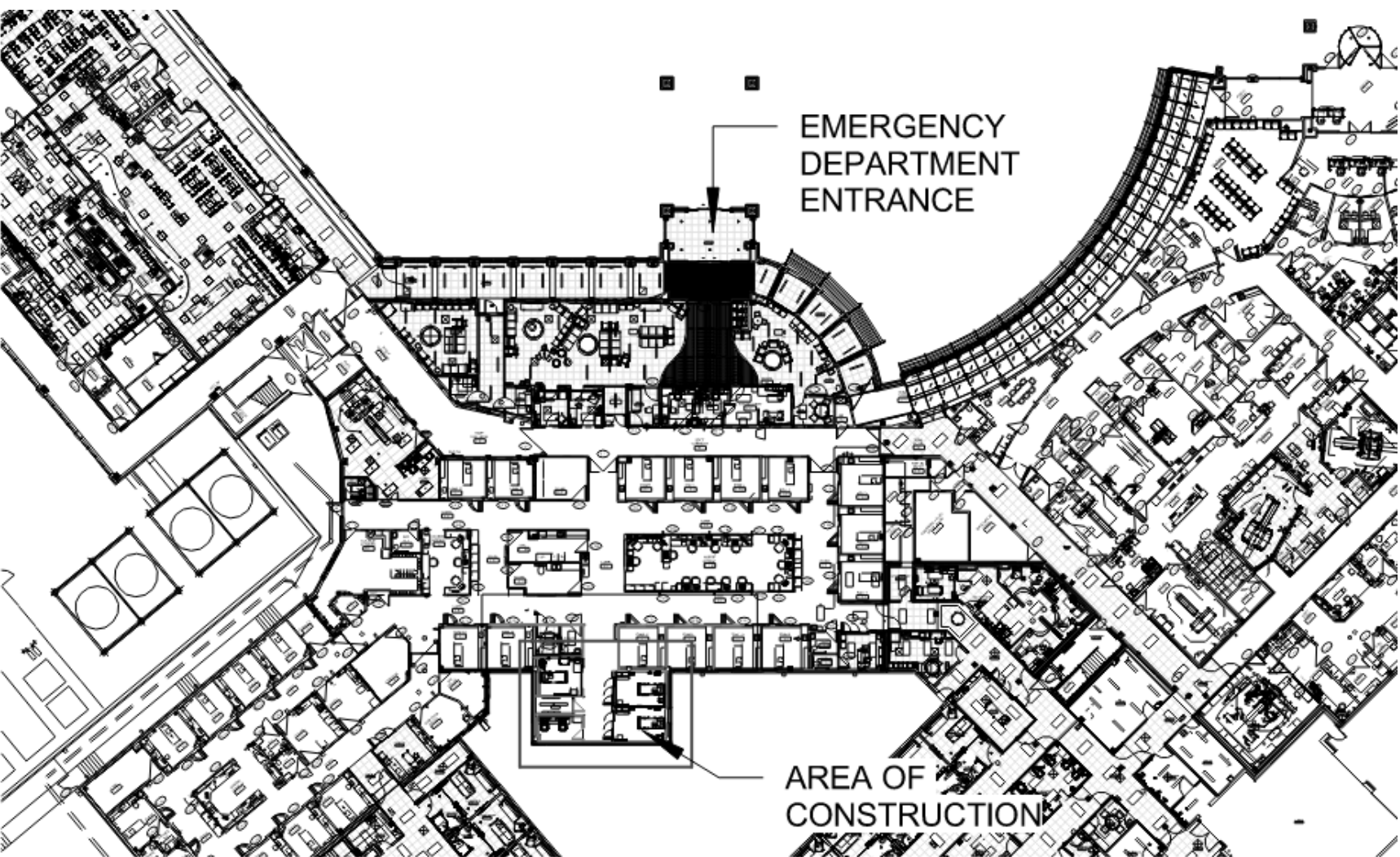


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1 ELECTRICAL DEMOLITION PLAN - 1ST FLOOR  
1/2" = 1'-0"



KEYPLAN

### DEMOLITION GENERAL NOTES

- 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.
- 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.
- ELECTRICAL OUTLETS, ETC. POSSIBLY CONCEALED BY STORAGE SHELVING, CASEWORK, FURNITURE, ETC. ARE NOT SHOWN AND MAY REQUIRE REMOVAL.
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ALL OPENINGS IN EXISTING CONSTRUCTION AFTER REMOVAL OF EQUIPMENT, RACEWAY SYSTEMS, OUTLET BOXES, ETC.
- 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.
- ALL DEVICES SHOWN DASHED ON THE DEMOLITION PLAN(S) SHALL BE REMOVED, UNLESS NOTED OTHERWISE.
- PROVIDE MATCHING BLANK COVERPLATES WHERE DEVICES ARE BEING REMOVED FROM FLUSH-MOUNTED OUTLET BOXES IN EXISTING WALLS TO REMAIN.
- FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK.

### KEYNOTES

- | #  |   |
|----|---|
| D1 | REMOVE AND PRESERVE LIGHT FIXTURES TO BE RELOCATED TO NEW CEILING. PRESERVE CIRCUITRY AND LEAVE CONDUCTORS COILED ABOVE CEILING TO RE-CONNECT TO LIGHTS ONCE RELOCATED. |



Saint Luke's East ED Patient Treatment Renovation  
100 NE Saint Luke's Blvd  
Lee's Summit, MO 64086

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ELECTRICAL DEMOLITION PLAN

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Development Services Department  
Lee's Summit, Missouri  
7/10/2024

STATE OF MISSOURI  
DARIN DOUGLAS CROWDER  
NUMBER  
PE-0000017740  
EXPIRATION  
07/2028  
PROFESSIONAL ENGINEER

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Missouri: #000958

PEC PROJECT NUMBER: 24016-001

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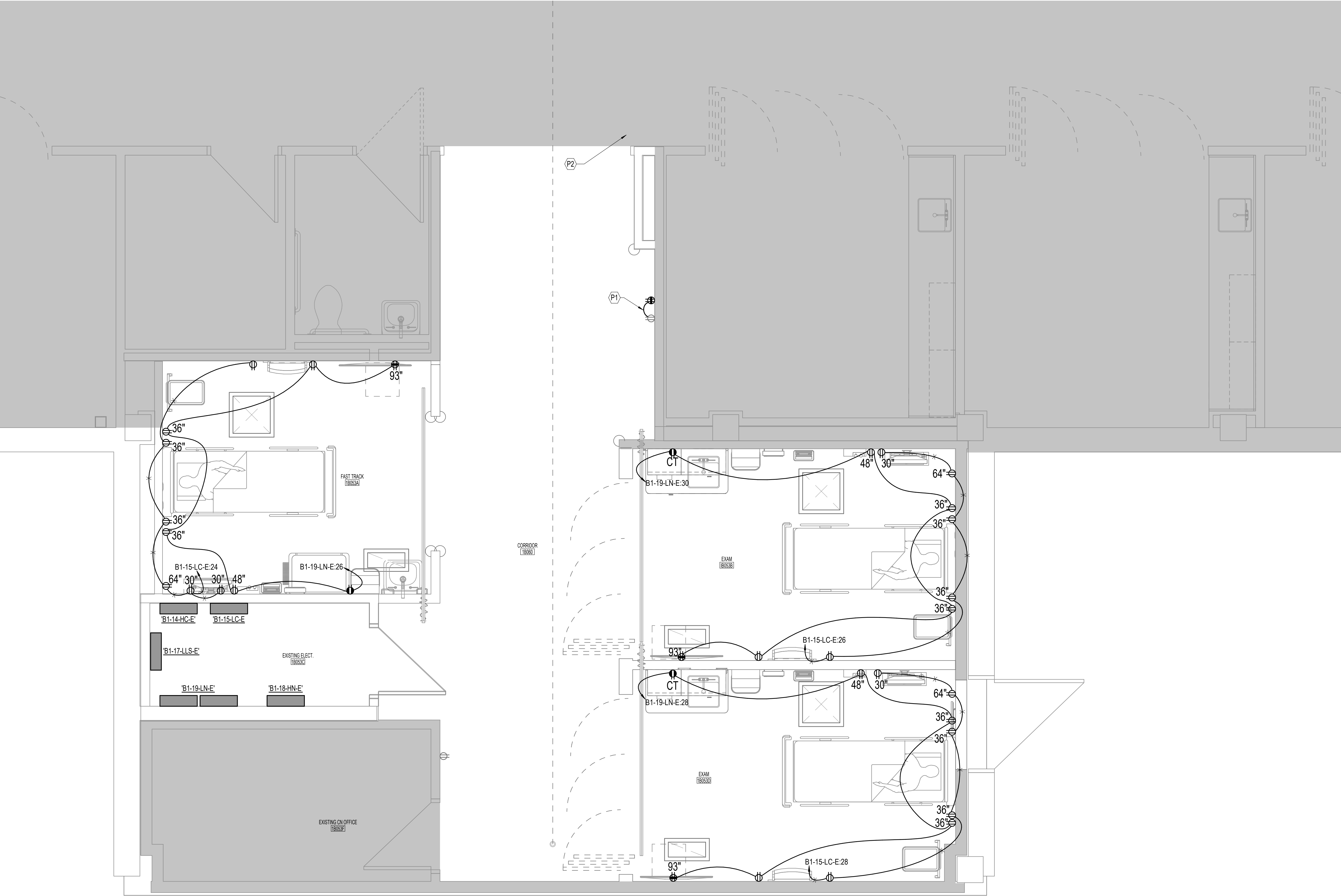


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1 POWER PLAN - 1ST FLOOR

1/2" = 1'-0"



### POWER GENERAL NOTES

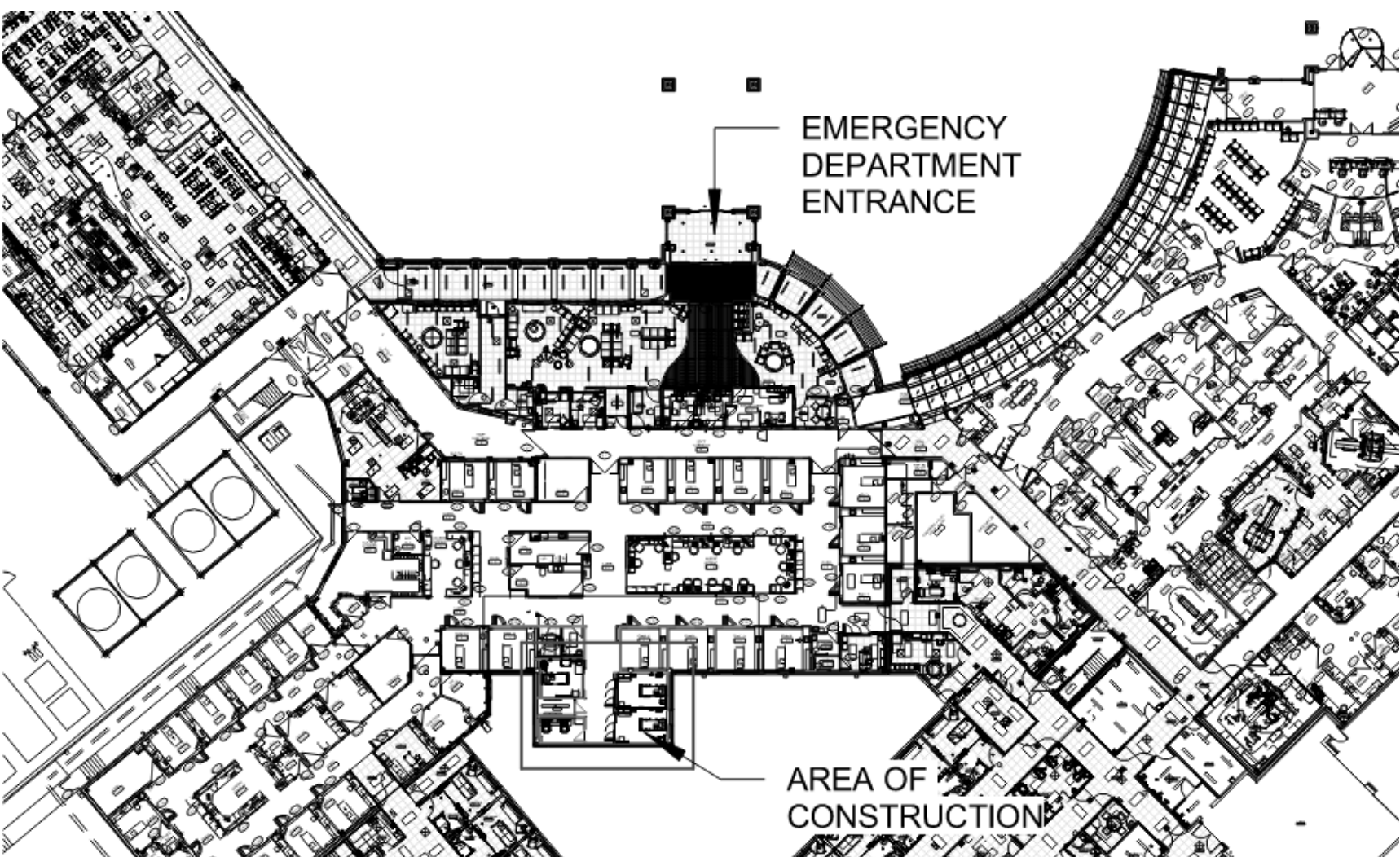
- BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS WITH INDIVIDUAL NEUTRALS. A MAXIMUM OF THREE CIRCUITS (MAXIMUM OF THREE PHASE CONDUCTORS) MAY BE GROUPED IN A SINGLE CONDUIT. WHERE MULTIPLE CIRCUITS ARE LOCATED IN THE SAME RACEWAY, JUNCTION BOX OR ENCLOSURE, NEUTRALS SHALL BE MARKED OR LABELED TO INDICATE WHICH CIRCUIT THEY ARE ASSOCIATED WITH. SEE SPECIFICATION SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR ADDITIONAL INFORMATION.
- A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL CONDUITS.
- FOR CONNECTION REQUIREMENTS TO MECHANICAL UNITS, SEE MECHANICAL EQUIPMENT CONNECTION SCHEDULE.
- REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS OF FIRE RATED WALLS AND CEILINGS AND THE ASSOCIATED U.L. ASSEMBLY NUMBERS.
- 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.
- ALL PIPING, CONDUIT, AND OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) IN FIRE RATED WALLS OR CEILINGS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIAL.
- 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.
- 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.
- FIELD VERIFY THE EXACT LOCATION OF ALL FLOOR BOXES AND POKE THROUGH WITH ARCHITECT PRIOR TO ROUGH-IN.
- PROVIDE ALL ISOLATED GROUND CIRCUITS WITH INDIVIDUAL NEUTRAL CONDUCTORS AND EQUIPMENT GROUND CONDUCTORS.

### KEYNOTES

#

P1 TIE IN NEW RECEPTACLE TO EXISTING CIRCUIT.

P2 TIE NEW MEDICAL GAS ZONE VALVE BOX TO EXISTING MEDICAL GAS LIFE SAFETY CIRCUIT LOCATED AT EXISTING NURSE STATION. FIELD VERIFY LOCATION OF EXISTING MEDICAL GAS ZONE VALVE BOX CIRCUIT AND NEW ZONE VALVE BOX WITH PLUMBING CONTRACTOR.



## Saint Luke's

EAST HOSPITAL

Saint Luke's East ED Patient Treatment Renovation

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

Date	07/10/2024
Job Number	3-24016
Drawn By	RWK
Checked By	DDC

Number	Date	Description

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Lee's Summit, Missouri

7/10/2024

STATE OF MISSOURI

DARIN DOUGLAS CROWDER

NUMBER 19-000017740

EXPIRATION DATE 07/2028

PROFESSIONAL ENGINEER

# ACI

## BOLAND

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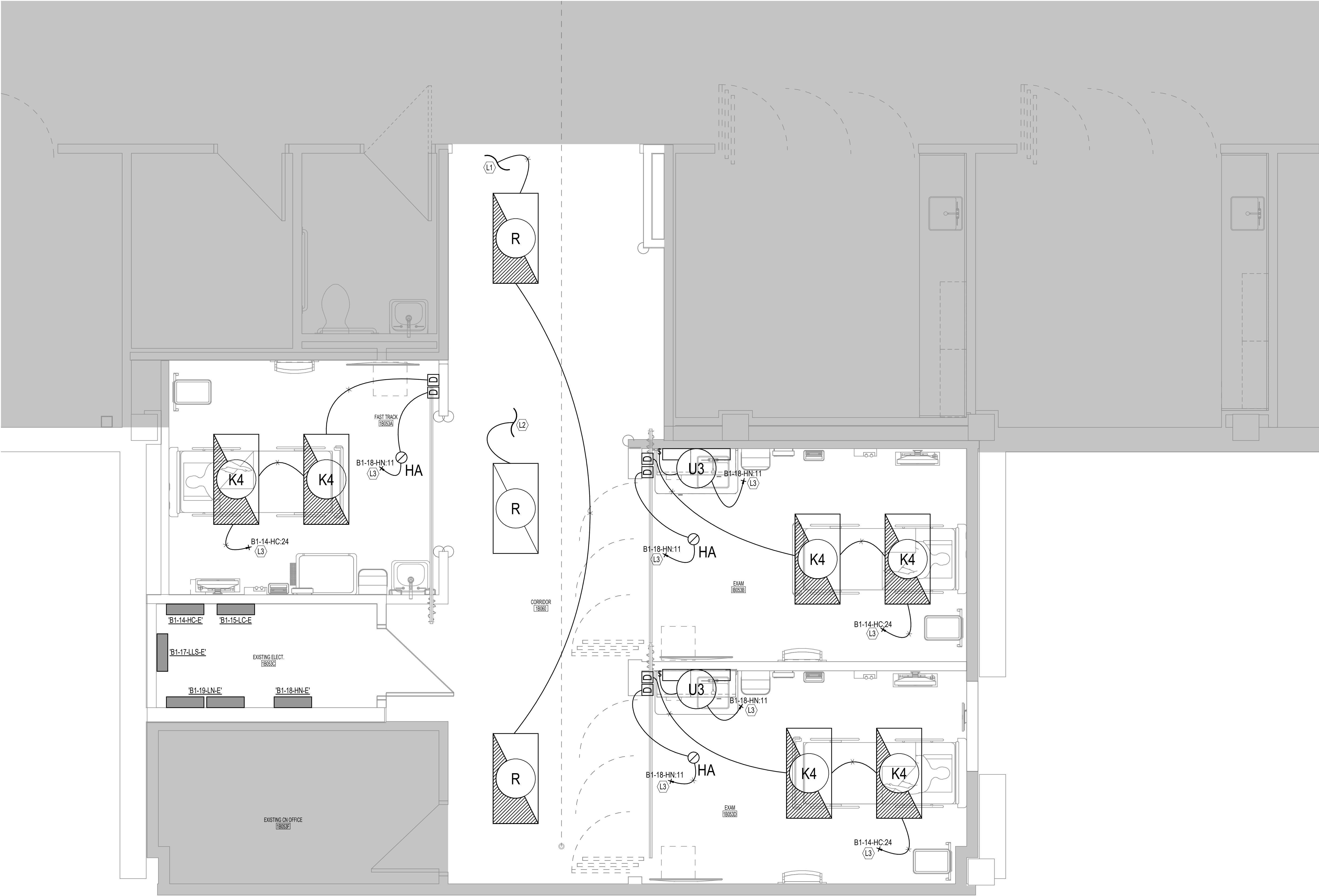
PEC PROJECT NUMBER: 240219-000

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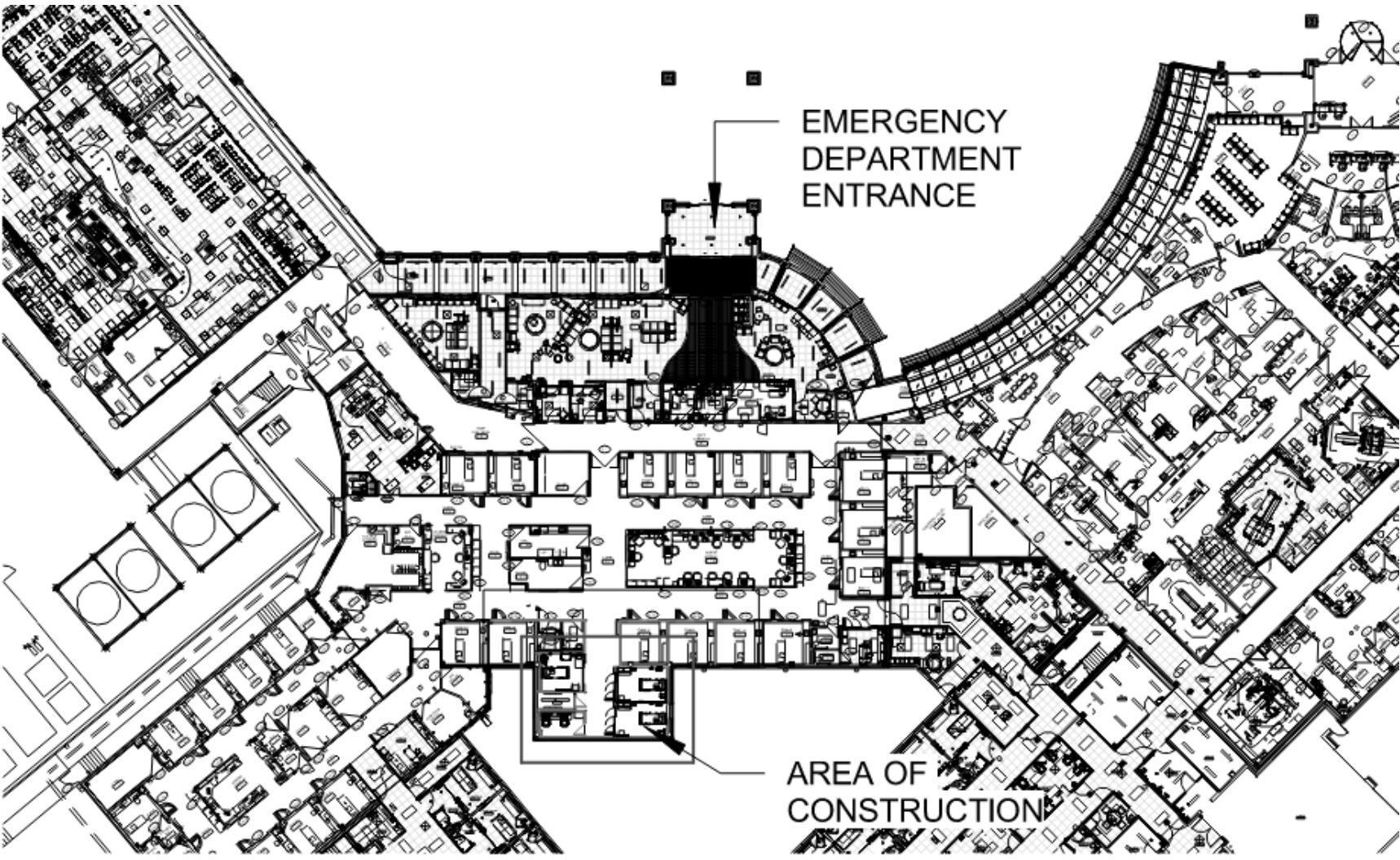
1 LIGHTING PLAN - 1ST FLOOR  
1/2" = 1'-0"

### LIGHTING GENERAL NOTES

- 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.
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- 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.
- 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.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LIGHT FIXTURE LOCATIONS. VERIFY ALL DISCREPANCIES WITH ARCHITECT PRIOR TO ROUGH-IN.

### KEYNOTES

#	
L1	RE-CONNECT TO EXISTING EMERGENCY CIRCUIT AND CONTROLS AFTER RELOCATING EXISTING FIXTURE INTO NEW CEILING.
L2	RE-CONNECT TO EXISTING CIRCUIT AND CONTROLS AFTER RELOCATING EXISTING FIXTURE INTO NEW CEILING.
L3	CONNECT TO SPARE BREAKER CIRCUIT INDICATED ON DRAWINGS. UPDATE PANEL SCHEDULE ACCORDINGLY.



KEYPLAN

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7/10/2024

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PE-000017740  
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PROFESSIONAL ENGINEER

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**Saint Luke's**  
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Date	07/10/2024	
Job Number	3-24016	
Drawn By	RWK	
Checked By	DDC	
Revision		
Number	Date	Description

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LIGHTING PLAN



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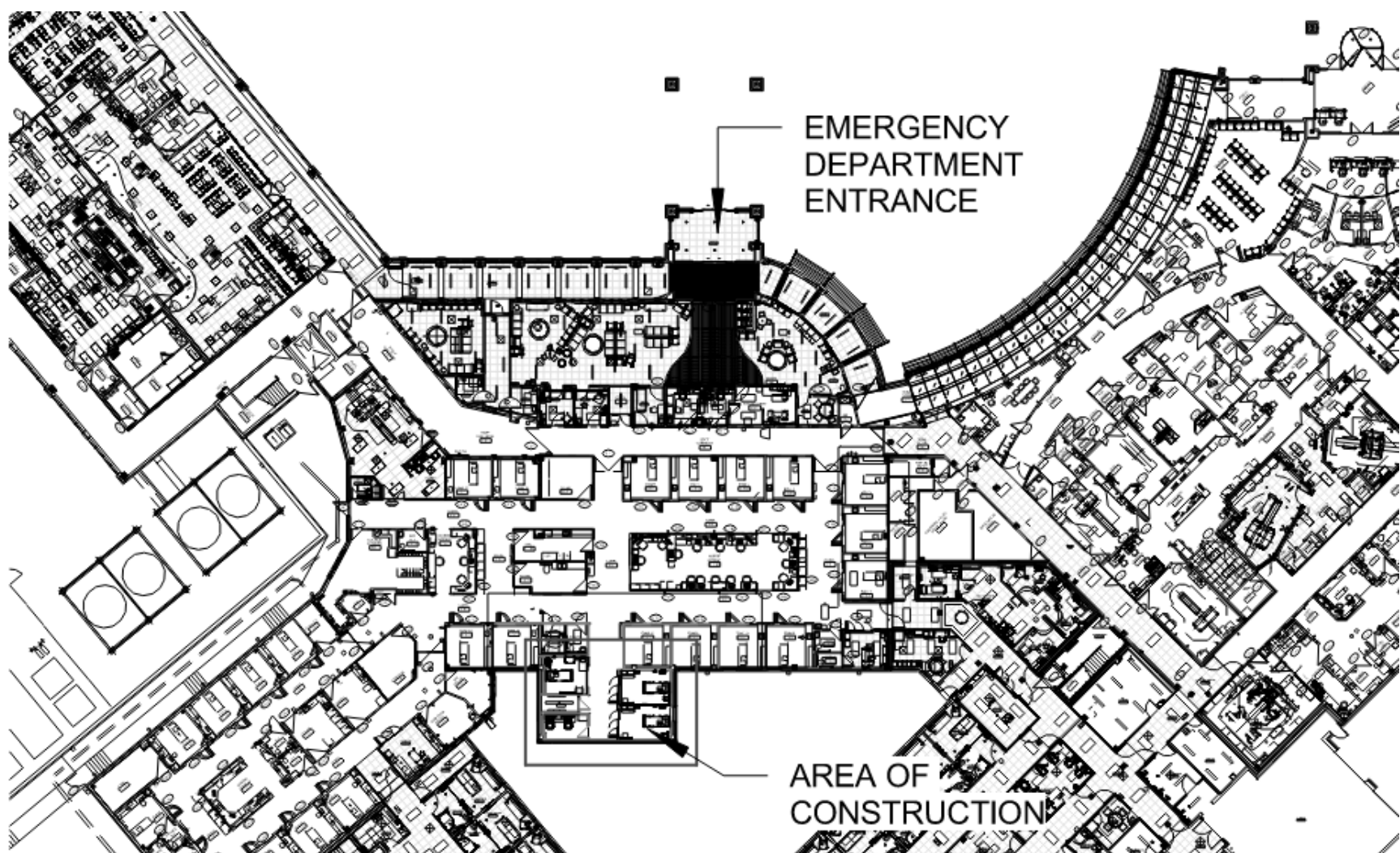
### SYSTEMS GENERAL NOTES

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- 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.
- 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.

### KEYNOTES

- |    |   |
|----|---|
| #  |   |
| S1 | TIE NEW FIRE ALARM SMOKE DETECTOR INTO EXISTING FIRE ALARM INITIATING CIRCUIT.        |
| S2 | TIE NEW FIRE ALARM AUDIO/VISUAL DEVICE INTO EXISTING FIRE ALARM NOTIFICATION CIRCUIT. |

1 SYSTEMS PLAN - 1ST FLOOR  
1/2" = 1'-0"



KEYPLAN

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Development Services Department  
Lee's Summit, Missouri  
7/10/2024

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CROWDER  
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PE-3804017160  
EXPIRATION  
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EAST HOSPITAL

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