3/30/2020 11:45:40 AM

Saint Luke's East Hospital

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

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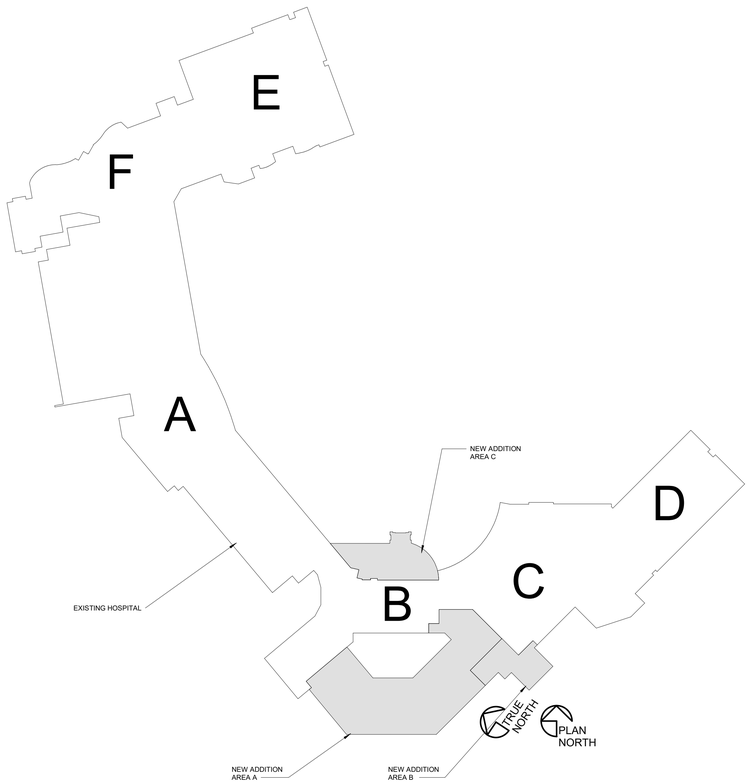
ABBREVIATIONS

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

LOCATION PLAN



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E5.1 ELECTRICAL COMMUNICATIONS DETAILS
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Saint Luke's East Hospital
Flex Capacity Expansion
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Date	03.30.20
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Drawn By	Author
Checked By	Checker

Revision

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COVER SHEET

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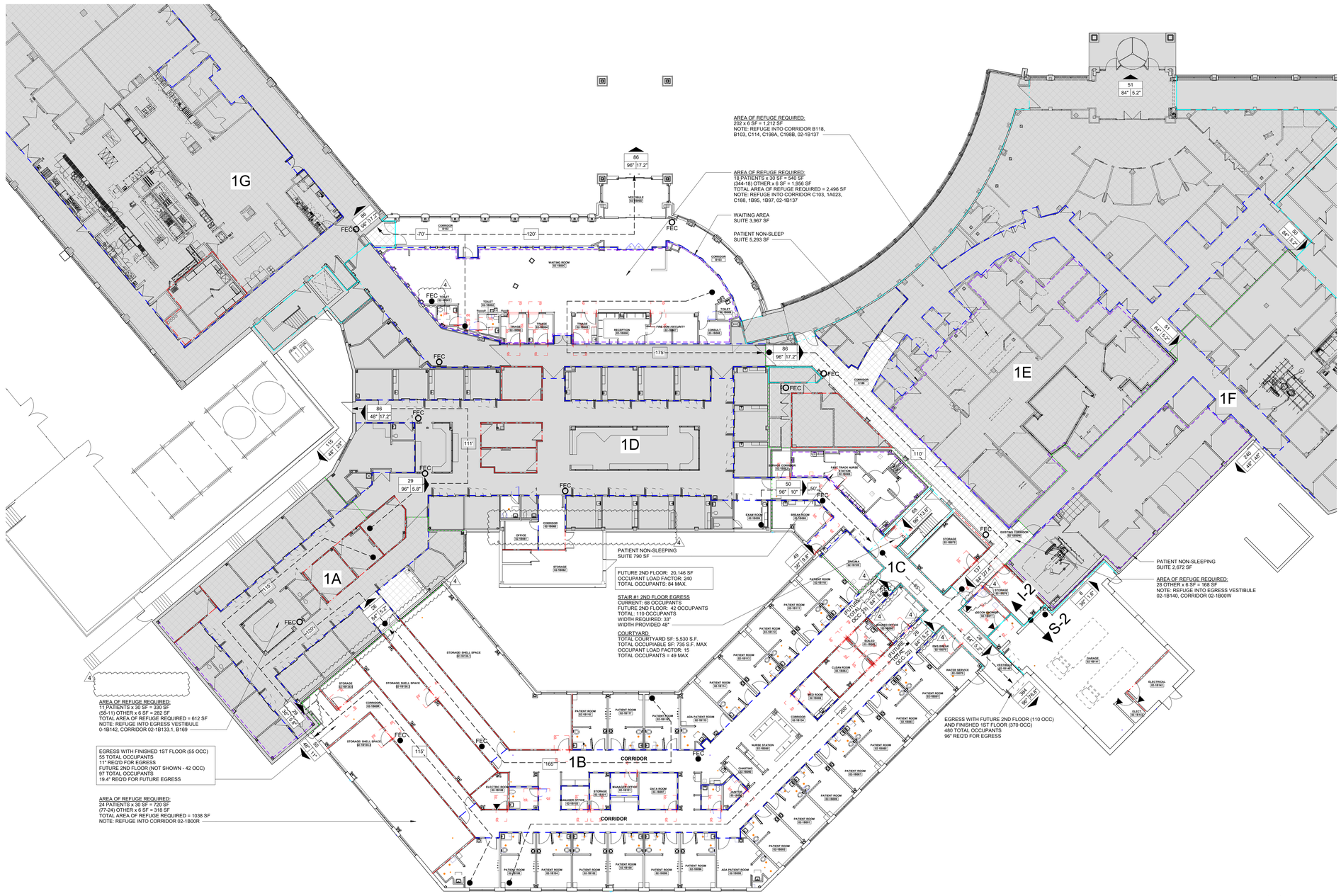

A1 LIFE SAFETY PLAN
1/16" = 1'-0"

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

LIFE SAFETY LEGEND

- OCCUPANT LOAD
- EXIT WIDTH PROVIDED
- EXIT WIDTH REQUIRED
- EXIT
- FEC — NEW FIRE EXTINGUISHER CABINET W/ 75' TRAVEL DISTANCE BETWEEN
- FEC — EXISTING FIRE EXTINGUISHER CABINET W/ 75' TRAVEL DISTANCE BETWEEN
- AREA NOT IN SCOPE OF CONSTRUCTION
- SUITE BOUNDARY
- 0 HR SMOKE PARTITION (SMOKE RESISTIVE)
- 1 HR SMOKE BARRIER
- 1 HR FIRE BARRIER
- 2 HR FIRE BARRIER
- 2 HR FIRE SMOKE BARRIER
- 3 HR FIRE BARRIER

SMOKE COMPARTMENT

1A	EXISTING: 5,769 SF.	OCCUPANT LOAD: 5,773/100 = 58
1B	NEW: 18,439 SF.	OCCUPANT LOAD: 18,337/240 = 77
1C	NEW: 6,652 SF.	OCCUPANT LOAD: 6,652/240 = 28
1D	EXISTING: 19,051 SF.	OUT-PATIENT: 16,362/100 = 164 OCC WAITING AREA: 2,689/15 = 180 OCC TOTAL OCCUPANTS: 344 OCC
1E	EXISTING: 20,175 SF.	OCCUPANT LOAD: 20,175/100 = 202 OCC
1F	EXISTING: 9,830 SF.	OCCUPANT LOAD: 9,830 SF/100 = 99 OCC
1G	EXISTING: 16,039 SF.	OCCUPANT LOAD: 16,039/100 = 161 OCC

CODE SUMMARY

Project Construction Purpose: New 24 bed addition and renovation to existing waiting room

Project Address: 100 NE Saint Luke's Boulevard

Owner Information
Saint Luke's East Hospital
100 NE Saint Luke's Boulevard
Lee's Summit, MO 64086

Designer Information
ACI Boland Architects
1710 Wyandotte St.
Kansas City, MO 64108
Phone: (816) 763-9600
Fax: (816) 763-9757

Code Information
2018 International Building Code
2018 International Plumbing Code
2018 International Mechanical Code
2018 International Fuel Gas Code
2018 International Fire Code
2017 National Electrical Code
2009 ICC/ANSI A117.1 as amended and adopted by the City of Lee's Summit

State of Missouri Dept. of Health & Environment references the following codes:
2012 NFPA 101 Life Safety Code (LSC)
2014 FGI Guidelines for Design & Construction of Hospitals & Outpatient Facilities

Note: If code requirements overlap, the most stringent shall apply. All code summary references list IBC section numbers. NFPA section numbers are in parentheses after or below.

Local Authority
Responding Fire Service: Lee's Summit Fire Department
Local Building Inspection: Lee's Summit, MO -Codes Administration Department

Type of Construction: Type 1-A - Section 602.2 (Type 1 - 332 Sprinklered - Section 18.1.6.1)

Building Occupancy Group: I-2 - Section 308.3 (Healthcare - Section 6.1.5) S-2 - Section 311.3

Area of construction:

Area of Addition:	26,590sf
Area of Remodel:	5,503sf
Total Area:	32,093sf
Waiting Area:	2,689sf
In-Patient:	27,154sf
Ambulance Garage:	2,250sf

Occupant Load Factor: Table 1004.5 (Table 7.3.1.2)

Waiting Area:	15 net
In-Patient:	240 gross

Occupant Load:

Waiting:	2,689/15 =	180 Occupants
In-Patient:	27,154/240 =	114 Occupants
Ambulance Garage:	2,250/300 =	8 Occupants
Total		302 Occupants

Required Egress Width Per Occupant Served: Section 1005.3.1 & 1005.3.2 (Table 7.3.3.1)

Stairways:	.3"/Occupant	N/A
Other:	.2"/Occupant	60.6" required; 384" provided

Required Fire Resistance Ratings (in hours): Table 601 (Table A,B,2.1.2)

Exterior Bearing Walls	3 HR
Interior Bearing Walls	3 HR
Exterior Non-bearing Walls	0 HR
Interior Non-bearing Walls	0 HR
Primary Structural Frame	3 HR
Shaft Enclosure	2 HR
Floor Construction	2 HR
Roof Construction	1 1/2 HR
Stairway Enclosure	2 HR (IBC 1022.2)

Corridor Wall Construction: Section 407.3 (Section 18.3.6.2.3) Smoke Partition

Exit Access Travel Distance: Table 1017.2 (Section 18.2.6.2.1) 200 ft.

Smoke Compartments: Section 407.5.1 (Section 18.3.7.1) 22,500 s.f. max.

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 in basement energy center.

- Illuminated Exit Signs

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03.30.20
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4	04.10.20	Bid Pkg 3 - ADD 01

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LIFE SAFETY PLAN

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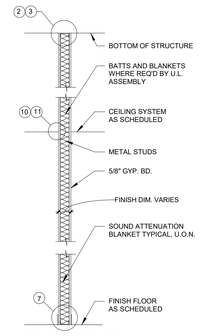
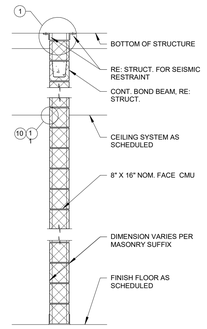


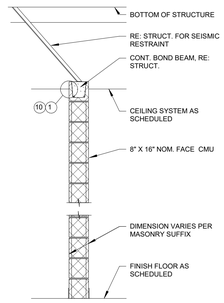
A GYPSUM BOARD BOTH SIDES NON-RATED - TYPICAL
1/2" = 1'-0"

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

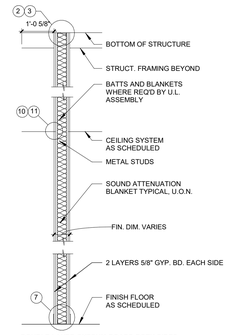


B CMU WALL TO STRUCTURE ABOVE NON-RATED - TYPICAL
1/2" = 1'-0"

U.L. DESIGNATIONS AT RATED WALLS AS INDICATED ON LIFE SAFETY PLAN	
1 HOUR FIRE SEPARATION	U.L. U905
2 HOUR FIRE SEPARATION	U.L. U905
3 HOUR FIRE SEPARATION	U.L. U901

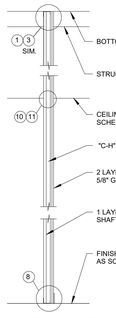


C CMU WALL CEILING HEIGHT
1/2" = 1'-0"



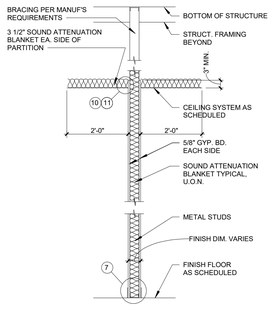
D **DOUBLE LAYER GYPSUM BOARD BOTH SIDES** RATED - UNLESS OTHERWISE NOTED
1/2" = 1'-0"

U.L. DESIGNATIONS AT RATED WALLS AS INDICATED ON LIFE SAFETY PLAN	
2 HOUR FIRE SEPARATION	U.L. U411 U443 AT TILED WALLS

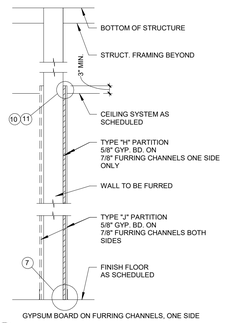


F GYPSUM BOARD CAVITY SHAFT WALL RATED - UNLESS OTHERWISE NOTED
1/2" = 1'-0"

U.L. DESIGNATIONS AT RATED WALLS AS INDICATED ON LIFE SAFETY PLAN	
1 HOUR FIRE SEPARATION	U.L. U469
2 HOUR FIRE SEPARATION	U.L. U438

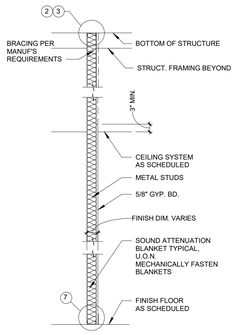


G GYPSUM BOARD CEILING HEIGHT
1/2" = 1'-0"



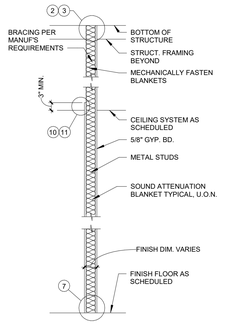
H GYPSUM BOARD ON FURRING CHANNELS, ONE SIDE
1/2" = 1'-0"

J GYPSUM BOARD ON FURRING CHANNELS, BOTH SIDE
1/2" = 1'-0"



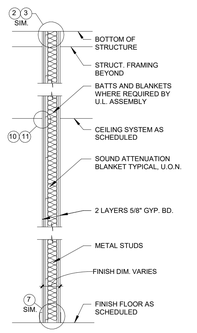
K GYPSUM BOARD ONE SIDE ONLY, CEILING HEIGHT
1/2" = 1'-0"

L GYPSUM BOARD ONE SIDE ONLY, FULL HEIGHT
1/2" = 1'-0"



P 0 HR PARTITION - GYPSUM BOARD TO STRUCTURE ON ONE SIDE, ABOVE CEILING ON OTHER
1/2" = 1'-0"

0 HR. SMOKE RESISTIVE



Q 5/8" GYP. BD. STC 60 SOUND PARTITION NON-RATED - TYPICAL
1/2" = 1'-0"

U.L. DESIGNATIONS AT RATED WALLS AS INDICATED ON LIFE SAFETY PLAN	
1 HOUR FIRE SEPARATION	U.L. U454
2 HOUR FIRE SEPARATION	U.L. U454

PARTITION GENERAL NOTES

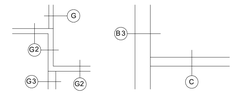
1. UNLESS NOTED OTHERWISE, ALL INTERIOR METAL STUDS ARE 3 5/8" THICK. REFER TO SUFFIX SCHEDULE BELOW FOR LOCATIONS OF METAL STUDS OTHER THAN 3-5/8" THICK. NOTE: STUD THICKNESS (GAUGE) MUST CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR SPAN (HEIGHT OF STUD)
2. WHERE THE PARTITION TYPE INDICATION IS SHOWN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

SUFFIX	MTL. STUD THICKNESS
1	1-5/8" MTL. STUDS
2	2-1/2" MTL. STUDS
3	6" MTL. STUDS
4	(2) 6" MTL. STUDS

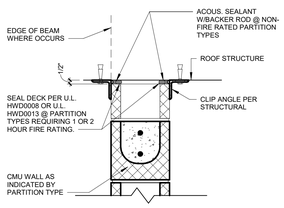
3. UNLESS NOTED OTHERWISE, ALL INTERIOR DRYWALL PARTITIONS INDICATED ON THE FLOOR PLAN DRAWING ARE TYPE 'A' PARTITIONS. WHERE OCCURS, RATINGS ARE AS INDICATED ON THE LIFE SAFETY PLANS.
4. UNLESS NOTED OTHERWISE, ALL CMU PARTITIONS ARE 7-5/8", 8" NOMINAL. REFER TO SUFFIX SCHEDULE BELOW FOR LOCATIONS OF CMU PARTITIONS OTHER THAN 8" NOMINAL.
5. WHERE THE PARTITION TYPE INDICATION IS SHOWN WITH A NUMERICAL SUFFIX, THE CMU THICKNESS SHALL BE AS SCHEDULED BELOW:

SUFFIX	CMU THICKNESS
1	ACTUAL 3-5/8", 4" NOMINAL
2	ACTUAL 5-5/8", 6" NOMINAL
3	ACTUAL 11-5/8", 12" NOMINAL

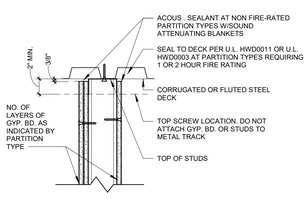
6. UNLESS NOTED OTHERWISE, ALL INTERIOR MASONRY PARTITIONS INDICATED ON THE FLOOR PLAN DRAWING ARE TYPE 'B' PARTITIONS. WHERE OCCURS, RATINGS ARE AS INDICATED ON THE LIFE SAFETY PLANS.
7. ALL STUDS ARE CONTINUOUS FROM FLOOR STRUCTURE TO CEILING STRUCTURE UNLESS NOTED OTHERWISE.
8. METAL STUDS ARE SPACED @ 16" O.C. MAX., UNLESS NOTED OTHERWISE.
9. UNLESS NOTED OTHERWISE, ALL GYPSUM BOARD IS TO BE 5/8" THICK "FIRECODE".
10. THE LOCATION OF A CHANGE IN THE PARTITION TYPE IS INDICATED BY A WALL TAG.



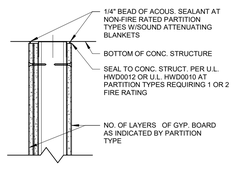
11. THE CORRESPONDING RATED ASSEMBLIES ARE INDICATED BELOW THE PARTITION TYPES.
12. PARTITION TYPE DESIGNATIONS ARE INDICATED ON THE FLOOR PLAN DRAWINGS.
13. PARTITION TYPES DO NOT INCLUDE APPLIED FINISHES CALLED FOR IN THE ROOM FINISH SCHEDULE.
14. AT PARTITION TYPES WHERE MTL. STUDS ARE EXPOSED ON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



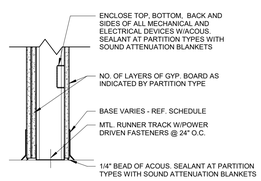
1 TOP ANCHORAGE OF PARTITION TO CONCRETE DECK/BEAM
1-1/2" = 1'-0"



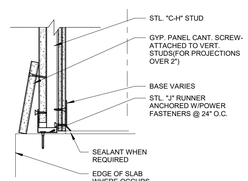
2 TOP ANCHORAGE OF PARTITION TO METAL DECK
1-1/2" = 1'-0"



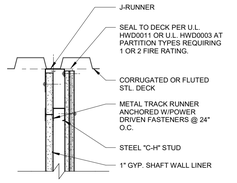
3 TOP ANCHORAGE OF PARTITION TO CONCRETE STRUCTURE SEE 3A AND 3B FOR ADDITIONAL INFORMATION
1-1/2" = 1'-0"



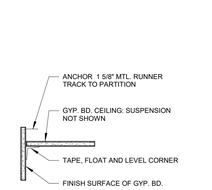
7 FLOOR ANCHORAGE OF PARTITION
1-1/2" = 1'-0"



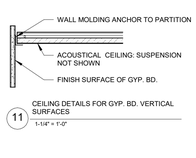
8 FLOOR ANCHORAGE OF SHAFT WALL
1-1/2" = 1'-0"



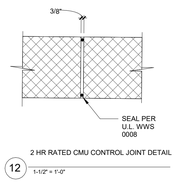
9 TOP ANCHORAGE OF CAVITY SHAFT WALL
1-1/2" = 1'-0"



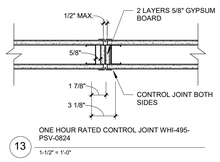
10 SUSPENDED GYP. BD. CEILING
1-1/4" = 1'-0"



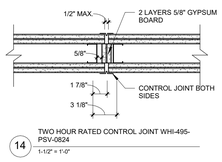
11 CEILING DETAILS FOR GYP. BD. VERTICAL SURFACES
1-1/4" = 1'-0"



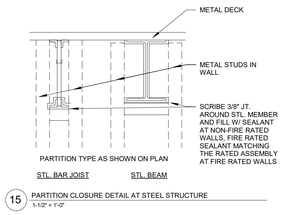
12 2 HR RATED CMU CONTROL JOINT DETAIL
1-1/2" = 1'-0"



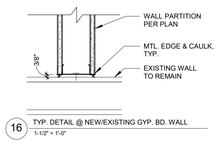
13 ONE HOUR RATED CONTROL JOINT WHI-495-PSV-0824
1-1/2" = 1'-0"



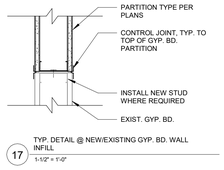
14 TWO HOUR RATED CONTROL JOINT WHI-495-PSV-0824
1-1/2" = 1'-0"



15 PARTITION CLOSURE DETAIL AT STEEL STRUCTURE
1-1/2" = 1'-0"



16 TYP. DETAIL @ NEW/EXISTING GYP. BD. WALL
1-1/2" = 1'-0"



17 TYP. DETAIL @ NEW/EXISTING GYP. BD. WALL INFILL
1-1/2" = 1'-0"

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Licensee's Certificate of Authority Number: # 00127265

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.20
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description

A0.2

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PARTITION TYPES AND DETAILS

BID PACKAGE #3 3.30.2020

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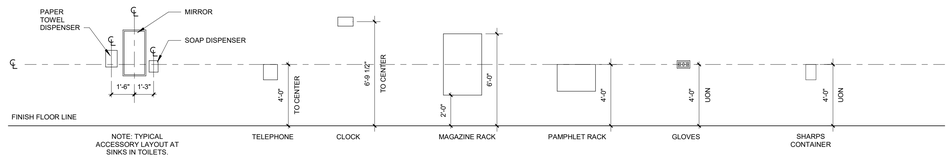
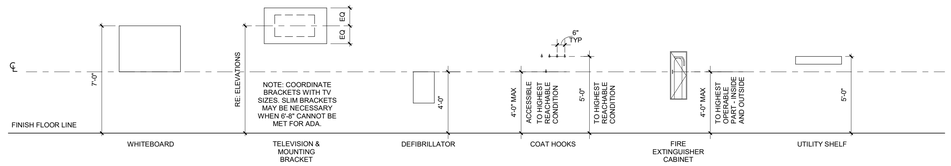
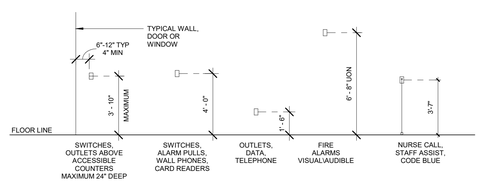




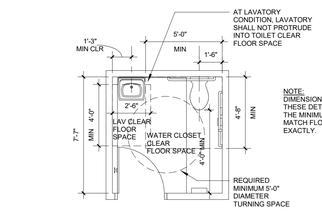
EQUIPMENT MOUNTING HEIGHTS
1/4" = 1'-0"

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.



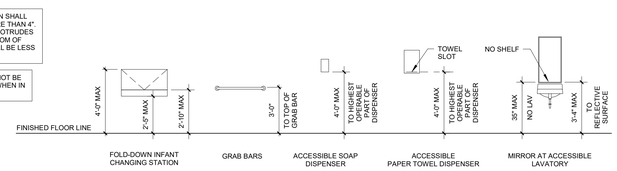
ELECTRICAL DEVICE MOUNTING HEIGHTS
1/4" = 1'-0"

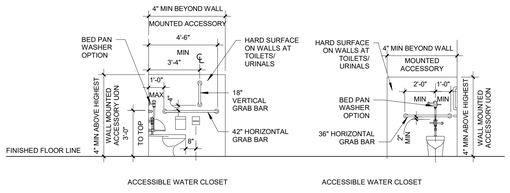


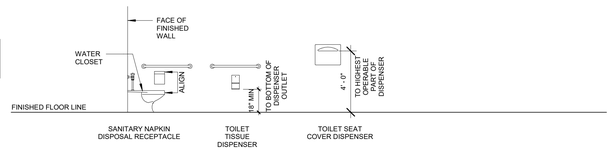
GENERAL ADA TOILET DIMENSIONS
1/4" = 1'-0"

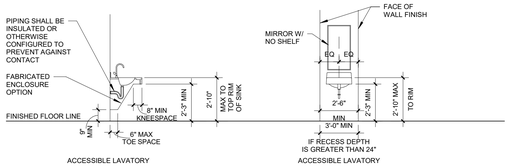
NOTE: INFANT CHANGING STATION SHALL NOT PROTRUDE FROM WALL MORE THAN 4". IF INFANT CHANGING STATION PROTRUDES MORE THAN 4" FROM WALL, BOTTOM OF INFANT CHANGING STATION SHALL BE LESS THAN 27" ABOVE FINISH FLOOR.

NOTE: OPERABLE PARTS SHALL NOT BE LOCATED MORE THAN 48" A.F.F. WHEN IN THE CLOSED POSITION.



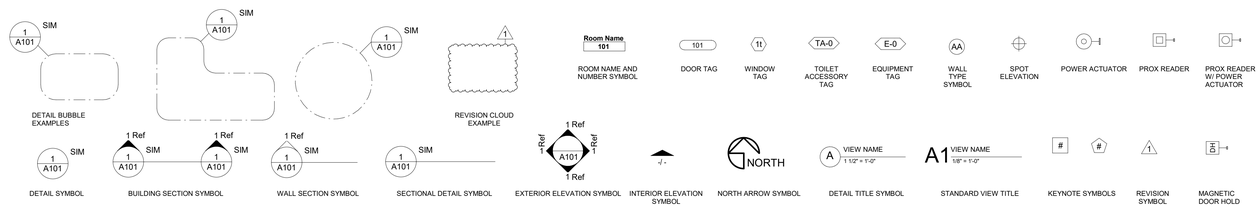






TOILET ACCESSORY MOUNTING HEIGHTS
1/4" = 1'-0"

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



SYMBOLS
1/4" = 1'-0"

GENERAL NOTES

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

WASH ROOM ACCESSORIES SCHEDULE XXXXX

JSN	DESCRIPTION	RESPONSIBILITY	COMMENTS
A5075	DISPENSER, SOAP	OFCI	PROVIDE IN WALL BLOCKING
A5082	AUTOMATIC PAPER TOWEL DISPENSER	OFCI	PROVIDE IN WALL BLOCKING
A5109b	GRAB BAR, HORIZONTAL, 42"	CFCI	PROVIDE IN WALL BLOCKING
A5109c	GRAB BAR VERTICAL 18"	CFCI	PROVIDE IN WALL BLOCKING
A5180b	CUBICLE CURTAIN, L-SHAPE	OFOI	TRACK TO BE CFCI
A5196	TOILET TISSUE DISPENSER, RECESSED	OFCI	PROVIDE IN WALL BLOCKING
F2010	STEP TRASHCAN	OFOI	

FFE SCHEDULE XXXXX

JSN	DESCRIPTION	RESPONSIBILITY	COMMENTS
A1011	PHONE, DESK	OFOI	PROVIDE PHONE CONNECTION, RE: MEP
A1032	CUBBY LOCKER, 5 TIER	VFVI	PROVIDED BY JOHN A. MARSHALL
A1066	MIRROR, STAINLESS STEEL FRAME	CFCI	PROVIDE IN WALL BLOCKING
A1090	MIRROR, STAINLESS STEEL FRAME & SHELF	CFCI	PROVIDE IN WALL BLOCKING
A5075	DISPENSER, SOAP	OFCI	PROVIDE IN WALL BLOCKING
A5077	HAND SANITIZER		
A5077	HAND SANITIZER	OFCI	
A5080	DISPENSER, PAPER TOWEL	OFCI	PROVIDE IN WALL BLOCKING
A5082		OFCI	PROVIDE IN WALL BLOCKING
A5107	GLOVE DISPENSER, 3 SIZE		
A5107	GLOVE DISPENSER, 3 SIZE	OFCI	PROVIDE IN WALL BLOCKING
A5108	SHARPS CONTAINER	OFCI	PROVIDE IN WALL BLOCKING
A5109a	GRAB BAR, HORIZONTAL, 36"	CFCI	PROVIDE IN WALL BLOCKING
A5109b	GRAB BAR, HORIZONTAL, 42"	CFCI	PROVIDE IN WALL BLOCKING
A5109c	GRAB BAR VERTICAL 18"	CFCI	PROVIDE IN WALL BLOCKING
A5135	SHELF, UTILITY, W/ MOP BROOM HOLDER	CFCI	PROVIDE IN WALL BLOCKING
A5145	HOOK, GARMENT, DOUBLE	CFCI	PROVIDE IN WALL BLOCKING
A5170	Rod, Shower Curtain		
A5180a	CUBICLE CURTAIN, STRAIGHT	OFOI	TRACK TO BE CFCI
A5180b	CUBICLE CURTAIN, L-SHAPE	OFOI	TRACK TO BE CFCI
A5196	TOILET TISSUE DISPENSER, RECESSED	OFCI	PROVIDE IN WALL BLOCKING
A6165	PNUEMATIC TUBE STATION	CFCI	RE: MEP FOR ADDITIONAL INFORMATION
E0075	DESK, L-SHAPED	VFVI	PROVIDED BY JOHN A. MARSHALL
E0945	CRASH CART	OFOI	PROVIDE EMERGENCY POWER, RE: MEP
F0205	SIDE CHAIR, W/ ARMS	VFVI	PROVIDED BY JOHN A. MARSHALL
F0225	CHAIR, DINING	VFVI	PROVIDED BY JOHN A. MARSHALL
F0250	CHAIR, LOUNGE	VFVI	PROVIDED BY JOHN A. MARSHALL
F0265	TREATMENT RECLINER	VFVI	PROVIDED BY JOHN A. MARSHALL
F0300	CHAIR, TASK	VFVI	PROVIDED BY JOHN A. MARSHALL
F0410	CABINET, BBF, MOBILE PEDESTAL	VFVI	PROVIDED BY JOHN A. MARSHALL
F0415	LATERAL FILE CABINET	VFVI	PROVIDED BY JOHN A. MARSHALL
F0430	CABINET, BBF, MOBILE PEDESTAL	VFVI	PROVIDED BY JOHN A. MARSHALL
F0515	LINEN CART	OFOI	
F0600	CREDENZA	VFVI	PROVIDED BY JOHN A. MARSHALL
F0795	TABLE, DINING, ROUND	VFVI	PROVIDED BY JOHN A. MARSHALL
F2010	STEP TRASHCAN	OFOI	
F2550	SHRED IT BOX	OFOI	
F3065	WHITEBOARD/BULLETIN BOARD COMBO UNIT	OFCI	PROVIDE IN WALL BLOCKING
F3235	RACK, HAT-COAT, FLOOR STANDING	VFVI	PROVIDED BY JOHN A. MARSHALL
K1550	COFFEE MAKER	OFOI	PROVIDE POWER & WATER LINE, RE: MEP
K4665	MICROWAVE	OFOI	PROVIDE POWER, RE: MEP
M0506	WALL MOUNTED TELEVISION	OFOI	BRACKET, OFCI; PROVIDE IN WALL BLOCKING, POWER & CABLE, RE: MEP; COORDINATE FINAL TV SIZE, BRACKET, & MOUNTING HEIGHT WITH OWNER
M1801	COMPUTER MONITOR	OFOI	PROVIDE POWER & DATA, RE: MEP
M1801a	COMPUTER, DUAL MONITOR	OFOI	PROVIDE POWER & DATA, RE: MEP
M1802	WALL MOUNTED COMPUTER	OFCI	
M1825	PRINTER, COMPUTER	OFOI	PROVIDE POWER & DATA, RE: MEP
M1840	PRINTER/COPIER/FAX COMBINATION	OFOI	PROVIDE POWER & DATA, RE: MEP
M2055	WIRE SHELVING 48"Wx18"Dx74"H	VFVI	PROVIDED BY METRO SHELVING
M3070	LINEN HAMPER	OFOI	
M3072	INFECTIOUS WASTE BIN	OFOI	
M3105	BLANKET WARMER	OFOI	PROVIDE POWER, RE: MEP
M3150a	ONE CELL CABINET	OFOI	PROVIDE POWER, RE: MEP
M3150b	OMNICELL MEDS DISPENSING UNIT	OFOI	PROVIDE POWER, RE: MEP
M4255	IV POLE	OFOI	
M4655	STRETCHER	OFOI	
M7010	PATIENT BED	OFOI	PROVIDE FLOOR STOP & POWER, RE: MEP
M9025	EXAM TABLE	OFOI	
R4400	COUNTERTOP ICE/WATER MACHINE	OFOI	PROVIDE POWER & WATER LINE, RE: MEP
R6200	MEDS REFRIGERATOR	OFOI	PROVIDE POWER & DATA, RE: MEP
R7250	REFRIGERATOR/FREEZER, 20 CU FT	OFOI	PROVIDE POWER & WATER LINE, RE: MEP
U1000	23" CAREVIEW MONITOR	OFOI	PROVIDE POWER & DATA, RE: MEP
U1001	PHILIPS DUAL MONITOR	OFOI	PROVIDE POWER & DATA, RE: MEP
U1002	VOLTOMETER	OFOI	PROVIDE POWER, RE: MEP
U1003	PLY FOLD CHAIR	VFVI	
U1005	BIN, CHEMOTHERAPY WASTE	OFOI	
U1006	FOLD DOWN NIGHT STAND	VFVI	PROVIDED BY JOHN A. MARSHALL; IN-WALL BLOCKING CFCI
U1007	CABINET, COMM.	OFOI	
U1008	HAZARDOUS WASTE BIN	OFOI	
U1009	NOURISH CART	OFOI	
U1010	CAREVIEW CAMERA	OFOI	PROVIDE POWER & DATA; RE: MEP

STATE OF MISSOURI SAMUEL K. BECKMAN A-2011012130 ARCHITECT
03.30.20
Samuel K. Beckman - Architect
License - Missouri #A-2011012130

ACI BOLAND ARCHITECTS
1710 Wyandotte
Kansas City, MO 64108
T: 816.763.9600

ACI/Boland, Inc.
Kansas City | St. Louis
Licensee's Certificate of Authority Number: Missouri: #000958

CIVIL CONSULTANT
McClure Engineering Company
1700 Swift Ave., Suite 100
North Kansas City, MO 64116
Phone Number: 816.756.0444
Licensee's Certificate of Authority Number: # E-2002023253

STRUCTURAL CONSULTANT
Structural Engineering Associates
1000 Walnut Street, Suite 1570
Kansas City, MO 64106
Phone Number: 816.421.1042
Licensee's Certificate of Authority Number: # 000396

MEP CONSULTANT
W.L. Cassell & Associates, Inc. now IMEG
1600 Baltimore, Suite 300
Kansas City, MO 64108
Phone Number: 816.842.8437
Licensee's Certificate of Authority Number: # 00127265

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.20
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description

BID PACKAGE #3 3.30.2020

A0.3

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GENERAL NOTES, LEGENDS & SYMBOLS

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ONLINE CERTIFICATIONS DIRECTORY

Design No. U465
BXUV.U465
Fire-resistance Ratings - ANSI/UL 263

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

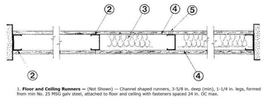
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U465

August 01, 2016

Nonbearing Wall Rating — 1 HR.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners** — (Not Shown) — Channel shaped runners, 3-5/8 in. deep (min), 1-1/4 in. legs, formed from min No. 25 MSG galv steel, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 — Channel shaped, min 3-5/8 in. deep, attached to floor and ceiling with fasteners 24 in. OC max.

ALLSTEEL & SYSPUMP INDUSTRIES — Type SUPREME Framing System

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME Framing System

QUAD, RUN BUILDING MATERIALS INC — Type SUPREME Framing System

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

2B. **Framing Members* — Steel Studs** — Not Shown — In lieu of Item 2 — For use with Item 1B, proprietary channel shaped steel studs, 3 1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less in length than assembly height.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™

CRACO MFG INC — SmartStud20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

2C. **Steel Studs —** (As an alternate to Item 2, For use with Item 4E) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2D. **Framing Members* — Steel Studs —** As an alternate to Items 2 through 2C — For use with Item 1D and 4G only, proprietary channel shaped steel studs, min 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA METAL FRAMING — ProSTUD

RAM SALES L L C — Ram ProSTUD

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD

2E. **Framing Members* — Floor and Ceiling Runners** — Not Shown — In lieu of Item 2 — For use with Item 1E, proprietary channel shaped steel studs, 3 5/8 in. wide by min 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1 in. less in length than assembly height.

TELLING INDUSTRIES L L C — TRUE-STUD™

2F. **Framing Members* — Steel Studs —** As an alternate to Items 2 through 2E — For use with Item 1F, channel shaped studs, min 3-5/8 in. wide fabricated from min 25 MSG steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

KIREI (HONG KONG) LTD — Type KIREI

2G. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 through 2F — For use with Item 1G. Proprietary channel shaped studs, minimum 3-5/8 in. wide, Studs to be cut 1/2 in. less than the assembly height.

STUDCO BUILDING SYSTEMS — CRICSTUD

2H. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1I, proprietary channel shaped steel studs, 3 1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.

TELLING INDUSTRIES L L C — Viper20™

2I. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 3-5/8 in. deep (min), spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.

EB METAL INC — EB Stud

2J. **Framing Members* — Steel Studs —** In lieu of Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 3-5/8 in. deep (min), spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.

OLMAR SUPPLY INC — PRIMESTUD

2K. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1B (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudMax™

3. **Batts and Blankets*** — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.

See **Batts and Blankets** (BZJZ) category for names of Classified companies.

3A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product.

U S GREENFIBER L L C — INSTOSS 3967/45 for use with wet or dry application. INSTOSS/D and INSTOSS/D are to be used for dry application only

3B. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) and Item 3A — Spray applied cellulose insulation having a flame spread index of 25 or less when tested in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

3C. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.3 lb/ft³.

INTERNATIONAL CELLULOSE CORP — Cellser-RL

3D. **Batts and Blankets*** — For use with Item 8. Nom 3 in. thick, minimum 3.4 pcf mineral wool batts, friction fit between the studs and floor and ceiling runners.

See **Batts and Blankets** (BZJZ) category for names of manufacturers.

3E. **Batts and Blankets*** — For use with Item 4P. Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.

See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4. **Gypsum Board*** — 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints centered on a stud and staggered min 1 stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 12 in. OC (channels), gypsum board & shaftliner attached to 1 in. form Type S steel screws spaced 12 in. OC.

ACADIA DRYWALL SUPPLIES LTD — Type X, 5/8 Type X, Type Bluegrass Exterior Sheathing

AMERICAN GYPSUM CO — Types AG-C, AGX-1, M-Glass

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, optional for use with Type USGX)

CERTAINTEED GYPSUM INC — Types L, EGRG, GlasRoc, Type X, Type X-L, Type C, SilentFX, 5/8" East-Lite Type X

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC2A, LGFC2A, LGFC-C/A, LGFC-WO, LGLLX

GEORGIA-PACIFIC GYPSUM L L C — Types S, S, S, C, DAP, DD, DA, DAFC, DGG, DD, GPTile, LS, Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Type C, Type X, Fire-C, GreenGlass Type C, Type X ColorPlus Guard Sheathing Gypsum Board, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing - Type LWX, Type X, Fire-C, GreenGlass Type C, Type X ColorPlus Guard Sheathing Gypsum Board, Type LWX, Veneer Plaster Base - Type LWX, Water Rated - Type LWX, Sheathing - Type LWX, Type LWX, Type DGLZW, Water Rated - Type DGLZW, Sheathing - Type DGLZW

NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSHK-C, FSHK-C, FSW-C, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSL

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-C, PG-S, PG-11, PGS-WRS

PANEL REY S A — Types GREX, PRC, PRC2, PRX, RHX, MDX, ETX

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc ProTect, Gyproc FireStop MR, Gyproc FireStop MDTECH, Gyproc FireStop ACTIVAir, Gyproc FireStop MR ACTIVAir, Gyproc FireStop MDTECH ACTIVAir, Gyproc Ductwise, Gyproc Ductwise MR, Gyproc Ductwise MDTECH, Gyproc Ductwise ACTIVAir, Gyproc Ductwise MR ACTIVAir, Gyproc Ductwise MDTECH ACTIVAir

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME Framing System

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME Framing System

UNITED METAL PRODUCTS INC — Type SUPREME Framing System

2L. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1L, proprietary channel shaped steel studs, 3-5/8 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

2M. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1M, proprietary channel shaped steel studs, 3-5/8 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK

RAM SALES L L C — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

2N. **Framing Members* — Steel Studs —** As an alternate to Items 2 through 2M — For use with Item 1N, channel shaped studs, min 3-5/8 in. deep, fabricated from min 25 MSG galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

CGC INC — Type ULX

USG BORAL DRYWALL L L C SPZ — Type C, SCX

USG MEXICO S A DE C V — Type AR, C, IP-AR, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, optional for use with Type USGX)

4A. **Gypsum Board*** — (As alternate to Item 4) — Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board & shaftliner attached to 1 in. form Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical end and bottom edges and 12 in. OC in the field when panels are applied vertically. When used in multi-layer systems, gypsum panels to be installed horizontally.

CERTAINTEED GYPSUM INC — Type X, Type X-L, Type C, Type EGRG/ GlasRoc

CGC INC — Types AC, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, optional for use with Type USGX)

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC2A, LGFC2A, LGFC-C/A, LGFC-WO

GEORGIA-PACIFIC GYPSUM L L C — Types DAP, DAFC, DGG, DS

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc ProTect, Gyproc FireStop MR, Gyproc FireStop MDTECH, Gyproc FireStop ACTIVAir, Gyproc FireStop MR ACTIVAir, Gyproc FireStop MDTECH ACTIVAir, Gyproc Ductwise, Gyproc Ductwise MR, Gyproc Ductwise MDTECH, Gyproc Ductwise ACTIVAir, Gyproc Ductwise MR ACTIVAir, Gyproc Ductwise MDTECH ACTIVAir

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL L L C SPZ — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

4B. **Gypsum Board*** — (As an alternate to Items 4 or 4A) — Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in.

CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

USG MEXICO S A DE C V — Types AR, IP-AR

4C. **Gypsum Board*** — As an alternate to Items 4, 4A, and 4B — Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 8 in. OC., with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered or backed by steel framing.

4D. **Gypsum Board*** — As an alternate to Items 4, 4A, 4B, and 4C — Nom. 5/8 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered and need not be backed by steel framing. Panels fastened to framing with 1 in. long Type S bugle head steel screws, spaced 8 in. OC along vertical edges and 12 in. OC along vertical edges and in the field. To be used with Steel Batten Strips (see Item 9A) or Lead Discs (see Item 10A).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4K. **Gypsum Board*** — As an alternate to Item 4 and 4A, not for use with Items 1D, 1E, 2D and 2E) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 4 and 4A.

CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

4L. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 in long with a max thickness of 0.040 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, minimum 2 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201C, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type XPF - Lead Lined Drywall

4M. **Gypsum Board*** — (For use with Item 8) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 8) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board(Item 8). Gypsum board & shaftliner attached to 1 in. form Type S screws spaced 8 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type FSKC, Type C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC2A

GEORGIA-PACIFIC GYPSUM L L C — Type PG-C

PANEL REY S A — Types PRC, PRC2

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop MDTECH, Gyproc FireStop ACTIVAir, Gyproc FireStop MR ACTIVAir, Gyproc FireStop MDTECH ACTIVAir, Gyproc Ductwise, Gyproc Ductwise MR, Gyproc Ductwise MDTECH, Gyproc Ductwise ACTIVAir, Gyproc Ductwise MR ACTIVAir, Gyproc Ductwise MDTECH ACTIVAir

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

USG BORAL DRYWALL L L C SPZ — Type C

4N. **Wall and Partition Facings and Accessories*** — (As an alternate to Item 4) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type Quietrock ES

4O. **Gypsum Board*** — (As an alternate to Items 4 through 4P) — For use with Items 1E and 2E only, 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4. Joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Joints oriented vertically and staggered on opposite sides of the assembly.

UNITED STATES GYPSUM CO — Type SCX

USG BORAL DRYWALL L L C SPZ — Type SCX

4Q. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A).

MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4R. **Gypsum Board*** — (As an alternate to Item 4 and 4A, not for use with Items 1D, 1E, 2D and 2E) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 4 and 4A.

CGC INC — Type ULX

UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

4S. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 in long with a max thickness of 0.040 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, minimum 2 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201C, Grade "C".

RADIATION PROTECTION PRODUCTS INC — Type XPF - Lead Lined Drywall

4T. **Gypsum Board*** — (As an alternate to Items 4 through 4S) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type Quietrock ES

4U. **Gypsum Board*** — (As an alternate to Items 4 through 4T) — For use with Items 1E and 2E only, 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4. Joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board fastened to each side of framing with 1 in. long Type S bugle head steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Joints oriented vertically and staggered on opposite sides of the assembly.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC5A, LGFC-C/A

NATIONAL GYPSUM CO — Types FSW

UNITED STATES GYPSUM CO — Type SCX

USG BORAL DRYWALL L L C SPZ — Type SCX

4V. **Gypsum Board*** — (As an alternate to Items 4 through 4U) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type Quietrock ES

5. **Joint Tape and Compound** — Vinyl, dry or premixed joint compound, applied to two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first coat of joint compound over all joints. As an alternate, nom 5/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction. Only products which bear UL's Mark are considered Certified.

6. **Steel Framing Members* —** (Not Shown) — (Optional on one or both sides) — As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max .24 in. OC perpendicular to studs. Channels secured to studs as described in Item 5. Ends of adjoining channels overlapped 4 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.

b. **Steel Framing Members —** Used to attach furring channels (Item 6a) to studs (Item 2). Clips spaced max. 48 in. OC. GENESCLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 5-/12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

6B. **Framing Members* —** (Not Shown) — (Optional on one or both sides) — As an alternate to Item 6, furring channel and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced max .24 in. OC perpendicular to studs. Channels secured to studs as described in Item 5. Ends of adjoining channels overlapped 4 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Optional: Steel stiffeners 12 in. long, formed of min No. 25 MSG galv steel, fastened to the web of the furring channels with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.

b. **Steel Framing Members —** Used to attach furring channels (Item 6a) to studs (Item 2). Clips spaced max. 48 in. OC. GENESCLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, 5/12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PLITEQ INC — Type Genie Clip

6C. **Steel Framing Members —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 5. Ends of adjoining channels overlapped 4 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Type steel joists formed into steel channels with screws spaced 8 in. OC. approximately 1/2 in. from joint edge.

b. **Steel Framing Members —** Used to attach furring channels (Item 6Ca) to studs. Clips spaced 24 in. OC., and secured to studs with No. 10 x 2-1/2 in. coarse drywall screw through the center hole in clips. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILIMOUNT Sound Isolation Clips - Type A237R

7. **Wall and Partition Facings and Accessories*** — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the steel framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

8. **Mineral and Fiber Board*** — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to studs and floor and ceiling runners with 1-5/8 in. long Type S bugle head screws, spaced 12 in. OC at edges and in all intermediate framing. The required UL Classified gypsum board layer (Item 4M) is to be installed over the Mineral and Fiber Boards. Batts and Blankets, Item 3G, are optional, but not required.

HOMASOTE CO — Homasote Type 440-32

9. **Lead Batten Strips** — (Not Shown, For Use With Item 4K) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the face of studs and attached to the stud with the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, minimum 2 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201C, Grade "C".

9A. **Lead Batten Strips** — (Not Shown, for use with Item 4J) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.040 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws at the top of the strip and one at the bottom of the strip. Lead discs, minimum 2 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201C, Grade "C".

10. **Lead Discs or Tabs** — (Not Shown, For Use With Item 4G) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional with other fasteners - Nom 1/4 in. diam by max 0.125 in. thick lead disc-compression fitted or adhered over steel screw heads or min 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead plate-pin gypsum boards (Item 4C) with pre-punched holes for fastener penetration. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201C, Grade "C".

10A. **Lead Discs** — (Not Shown, for use with Item 4J) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over the screw heads. Lead discs to have a purity of 99.5% meeting the Federal specification QQ-L-200F, Grades "B, C or D".

11. **Adhesive** — Not Shown — (For use with Item 8) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 8).

12. **Wall and Partition Facings and Accessories*** — (Optional, Not Shown) — For use with Items 1 to 11, Items 2 to 2L, Item 3, Items 4 to 4L, Item 5 and Item 6. For maximum fire rating of 1 hour. On one side of the wall, over the first layer of gypsum board, install 10 mil thick polyethylene vapour retarder. Over the vapour retarder, install 1 in. thick panels installed with TSS staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When Reflektor membrane is used as additional layer of Gypsum Board that is applied to the side of the wall that is exposed to the fire, the Reflektor shall be the first layer of Gypsum Board applied. An additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 4 to Item 4S except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 3, Item 3A, Item 3B, Item 3C, Item 3D or Item 3E. Install resilient channels as per Item 6 or Item 6B as per Item 6. Over the Resilient Channels install 3/4 inch thick SilentFX fibreglass panel secured to the Resilient Channels with drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SilentFX panel, install the required gypsum board layer(s) as per Item 4 to Item 4S except the fastener length shall be increased by a minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

MSL — Reflektor membrane, SONOpan panel

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

ONLINE CERTIFICATIONS DIRECTORY

System No. HW-D-0044
XHBN.HW-D-0044
Joint Systems

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field. When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

XHBN - Joint Systems

XHBN7 - Joint Systems Certified for Canada

See General Information for Joint Systems

See General Information for Joint Systems Certified for Canada

System No. HW-D-0044

December 08, 2015

ANSI/UL2079	CAN/ULC S115
Assembly Ratings — 1, 2, 3 and 4 Hr (See Item 2)	F Ratings — 1, 2, 3, and 4 Hr (See Item 2)
Nominal Joint Widths — 1-1/2 and 2-1/2 In. (See Item 3)	FT Ratings — 1, 2, 3, and 4 Hr (See Item 2)
Class II Movement Capabilities — 40 or 50% Compression or Extension (See Item 3)	FH Ratings — 1, 2, 3, and 4 Hr (See Item 2)
L Rating At Ambient — Less Than 1 CFM/Lin Ft	FTH Ratings — 1, 2, 3, and 4 Hr (See Item 2)
L Rating At 400 F — Less Than 1 CFM/Lin Ft	Nominal Joint Widths — 1-1/2 and 2-1/2 In. (See Item 3)
	Class II Movement Capabilities — 40 or 50% Compression or Extension (See Item 3)
	L Rating At Ambient — Less Than 1 CFM/Lin Ft
	L Rating At 400 F — Less Than 1 CFM/Lin Ft

1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete.

2. **Wall Assembly** — 1, 2, 3 or 4 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in UL Fire Resistance Directory for Type U400 or U400 Series Fire Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners** — Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B). When deflection channel (Item 3A) is used, the floor runner channel shall be sized to allow a 1/2 in. (13 mm) gap for the full height of deflection channel and the ceiling runner channel with a 3/4 in. (19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. The ceiling runner shall be sized for the full height of ceiling runner shall be min 3/4 in. (19 mm) greater than nominal stud width. Ceiling runner to be secured to concrete floor slab with steel masonry anchors spaced max 24 in. (610 mm) OC.

B. **Steel Stud or Furring Channel Studs** — Wall studs shall be min 3-1/2 in. (89 mm) wide. Studs shall be cut to length to have a clearance of 1/2 in. (13 mm) from the top of the ceiling runner in Item 2A. Slotted ceiling runner to consist of galv steel channel with slotted flan

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KRIB (HONG KONG) LTD — Type KRIB

1F. **Floor and Ceiling Runners** — (Not Shown) — Channel shaped, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below, attached to floor and ceiling with fasteners spaced max 24 in. OC.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track V1100

FUSION BUILDING PRODUCTS — Viper20™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track

1G. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 • For use with Item 2G, channel shaped, min 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.
TELLING INDUSTRIES L L C — Viper20™ Track

1H. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 • For use with Item 2J. Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
BAILEY METAL PRODUCTS LTD — Type PLATINUM PLUS

1I. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 • For use with Item 2K, Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
OEG BUILDING MATERIALS — OEG Track

1K. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 • For use with Item 2M, channel shaped, min 2-1/2 in. deep, formed of min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners 24 in. OC. max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X Track

1L. **Framing Members* — Floor and Ceiling Runners** — (Not Shown) — As an alternate to Item 1 • For use with Item 2N. Channel shaped, min. 2-1/2 in. deep, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D25

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D25

QUAK, RUN BUILDING MATERIALS INC — Type SUPREME D25

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D25
STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D25

UNITED METAL PRODUCTS INC — Type SUPREME D25

1M. **Floor and Ceiling Runner —** (Not shown) • As an alternate to Item 1, For use with Items 2D and 4D • Min 25 MSG galv steel, 1-5/8 in. deep (min), attached to floor and ceiling with fasteners 24 in. OC. max.

2. **Stud Studs —** Min 2-1/2 in. deep, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

2A. **Framing Members* — Stud Studs —** As an alternate to Item 2 — For use with Item 1G, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™

FUSION BUILDING PRODUCTS — Viper20™

IMPERIAL MANUFACTURING GROUP INC — Viper20™

QUAK, RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2B. **Steel Studs —** (As an alternate to Item 2, For use with Item 4D, 4H, and 4J) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2C. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1C, channel shaped studs, min 2-1/2 in. wide fabricated from min 0.015 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA METAL FRAMING — ProSTUD

RAM SALES L L C — Ram ProSTUD
STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD

2D. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1D, channel shaped studs, min 2-1/2 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
TELLING INDUSTRIES L L C — TRUE-STUD™

2E. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1E, channel shaped studs, min 2-1/2 in. wide fabricated from min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
KRIB (HONG KONG) LTD — Type KRIB

2F. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1G, channel shaped studs, min 2-1/2 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
TELLING INDUSTRIES L L C — Viper20™

2G. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, Min 2-1/2 in. deep, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
EB METAL INC — NITROSTUD

2H. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, Min 2-1/2 in. deep, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
OLMAR SUPPLY INC — PRIMESTUD

2I. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1A (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 5/8 to 3/4 in. less than assembly height.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Stud/ine™

2J. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1H, channel shaped, min 3-5/8 in. wide, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
BAILEY METAL PRODUCTS LTD — Type PLATINUM PLUS

2K. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1I, channel shaped studs, min 3-1/2 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
STEEL INVESTMENT GROUP L L C — AlphaSTUD

2L. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1J, channel shaped studs, Min 2-1/2 in. deep, formed of min 25 MSG galv steel max stud spacing 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
OEG BUILDING MATERIALS — OEG Stud
2M. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1K, channel shaped studs, min 2-1/2 in. deep, formed of min. 25 MSG (0.018 in. min. bare metal thickness , spaced a ma of 2 in. . . Studs to be cut 3/ in. less than assembly height.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X

2N. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1L, channel shaped studs, min depth 2•1/2 in. deep, spaced a ma of 2 in. . . Studs to be cut 3/ in less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D25

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D25

QUAK, RUN BUILDING MATERIALS INC — Type SUPREME D25

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D25

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D25

UNITED METAL PRODUCTS INC — Type SUPREME D25

2 . . **Framing Members* — Steel Studs —** As an alternate to Item 2 For use with Items 1M and • channel shaped studs min 1•5/8 in. deep, formed of 25 MSG galv steel, ma stud spacing 2 in. . . Studs cut 3/8 in. to 3/ in. less than assembly height.

3. **Batts and Blankets*** — (ptional — Mineral wool or glass fiber batts partially or completely filling stud cavity.
See **Batts and Blankets** (BXZ. category for names of manufacturers

ROCKWOOL — Type AFB, min. density 1.69 pcf / 27.0 kg/m³

ROCKWOOL MALAYSIA SDN BHD — Type Acoustical Fire Batts

3A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3 — (100% Borate Formulation — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 2.7 lbs/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lbs/ft³, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INSTRIS, BNST 5 and BNSTTOLD for use with wet or dry application. BNSTRSLD and BNSTTRLD are to be used for dry application only.

3B. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3 — Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of . 3 pounds per cubic ft.
NU-WOOL CO INC — ellulose Insulation

3 . **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3 — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be . 3.0 lbs/ft³.
INTERNATIONAL CELLULOSE CORP — ellue-RL

3D. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 3) — Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or nonwoven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 3.79 lbs/ft³.
APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation

4. **Gypsum Board*** — 5/8 in. thick, outer layer paper, glass mat or vinyl surfaced. (Laminated System) Gypsum board applied vertically in two layers. Inner layer attached to studs with 1 in. long Type S sheet-screws spaced 8 in. OC along vertical edges, and 12 in. OC in the field and outer layer laminated to inner layer with joint compound, applied with a notched spreader producing continuous beads of compound about 3/8 in. in diameter, spaced not greater than 2 in. OC. Joints of laminated outer layer offset 12 in. from inner layer joints Outer layer gypsum board attached to floor and ceiling runner track with 1•5/8 in. long Type S steel screws spaced 12 in. OC.
Optional, (Sheet Attached System) Inner layer attached to studs with 1 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges. Outer layer attached to the studs over the inner layer with 1•5/8 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges and 12 in. OC to the floor and ceiling runners. Joints of inner and outer layers offset from inner layer joints. Joints of outer layer may be taped or untaped.
Nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced.

AMERICAN GYPSUM CO — Types AGvC, AGtX-1, M-Glass, AGX-1T, LightRoc

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, GlasRoc•2, Type X, Type X-1, Type C, or 5/8" EasiLite Type X

CGC INC — Type AR, C, IP•AR, IP•X1, IP•X2, IPC•AR, SCX, SHX, USGX, WRC or WRX

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFCGX, LGFCGSX, LGFC•CVX, LGFC•WD, LGLLX, CLLX

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPYSG, LS, TS•C, Type X, Veneer Plaster Base•Type X, Water Rated•Type X, Sheathing Type•X, Soffit•Type X, GreenGlass Type X, Type X ContentGuard Sound Deadening Gypsum Board, Type LVIX, Veneer Plaster Base•Type LVIX, Water Rated•Type LVIX, Sheathing Type•LVIX, Soffit•Type LVIX, Type DGUX, Water Rated•Type DGUX, Sheathing Type• DGUX, Soffit•Type DGUX, Type LVIX, Veneer Plaster Base – Type LVIX, Water Rated – Type LVIX, Sheathing – Type LVIX, Soffit – Type LVIX, Type DGLVW, Water Rated • Type DGLVW, Sheathing • Type DGLVW

GYPSEMNA CO LLC — Types MRFW, FW, TF

4A. **Gypsum Board*** — As an alternate to Items 4 through 4N) — Two layers of 5/8 in. thick gypsum board applied vertically or horizontally. Inner layer attached to studs with 1 in. long Type S sheet-screws spaced 16 in. OC in the field and vertical edges and along top and bottom tracks. Outer layer attached to studs with 1•5/8 in.long Type S screws spaced 16 in. OC in the field and vertical edges and along the top and bottom tracks. Vertical joints are centered over studs and staggered between layers and on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Horizontal edge joints and horizontal butt joints in adjacent layers need not be staggered.
NATIONAL GYPSUM CO — Type FSLX

4B. **Gypsum Board*** — (As an alternate to Items 4 through 4D) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types Quietrock ES

4C. **Gypsum Board*** — (As an alternate to Items 4 through 4E) —5/8 in. thick, applied vertically or horizontally as the outer layer to one side of the assembly. Horizontal joints need not be backed by steel framing. Secured as described in Item 4 for the direct attached system. Wire tied in widths other than 48 in., gypsum panels to be installed horizontally.
CERTAINTEED GYPSUM INC — Type SilentX

4D. **Gypsum Board*** — As an alternate to Item 4 — Nom. 5/8 in. thick, inner layer attached vertically to studs with 1 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges. Outer layer attached to the studs horizontally over the inner layer with 1•5/8 in.long Type S steel screws spaced 16 in. OC in the field and along the vertical edges and 12 in. OC to the floor and ceiling runners. Joints of outer layer must be taped. Nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard.
CABOT MANUFACTURING ULC — Type Blueglass Exterior Sheathing

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-11, PGS-WRS

4H. **Gypsum Board*** — (Not Shown) — (As an alternate to Items 4. For direct attachment only to steel studs Item 2B) — For Direct Application to Studs Only• For use as the base layer on one or both sides of the wall. Nom 5/8 in. thick lead backed gypsum panels with bevelled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1•5/8 in. long Type S 12 steel screws spaced 8 in. OC at perimeter and 12 in OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Fasteners for face layer gypsum panels when installed over lead backed gypsum board (Item 6) and optional at remaining stud locations.
Fasteners for face layer gypsum panels when installed over lead backed gypsum board (Item 6A) and optional at remaining stud locations as described in Item 4. To be used with Lead Batten Strips (see Item 5A) or Lead Discs (see Item 6A).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4I. **Gypsum Board*** — (As an alternate to Item 4. not for use with Items 1C and 2C or 1L and 2N) — Nom. 5/8 in. thick gypsum panels with bevelled, square or tapered edges installed as described in Item 4.
CGC INC — Type SLX
UNITED STATES GYPSUM CO — Type ULX

USG MEXICO S A DE C V — Type ULX

4J. **Gypsum Board*** — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2B) — Nom 5/8 in. thick lead backed gypsum panels with bevelled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1•1/4 in. long Type S•12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations as described in Item 4. To be used with Lead Batten Strips (see Item 5A) or Lead Discs (see Item 6A). Fasteners for face layer gypsum panels when installed over lead backed gypsum board (Item 6) and optional at remaining stud locations as described in Item 4.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4K. **Gypsum Board** — (As an alternate to Items 4 through 4J, not for use with Items 1C and 2C) — Two layers of nominal 15 mm thick gypsum board applied vertically. Inner layer attached to studs with No. 3.5 x 1•3/8 in. long bugle head, self-drilling screws spaced 23•5/8 in. OC in the field and 15•3/4 in. OC in the perimeter, with the first screw 2 in. from the edge. Outer layer attached to the studs over the inner layer with No. 3.5 x 1•3/4 in. long bugle head, self-drilling screws spaced 11•13/16 in. OC in the field and 7•7/8 in. OC in the perimeter, with the first screw 3/4 in. from the edge. Outer layer screws staggered from inner layer screws. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layer staggered one stud cavity. Self-adhesive fiberglass mesh (9x9 mesh) tape, nom 2 in. wide, applied over all joints of outer layer panels. Dry or premixed joint compound applied in two coats to joints over the mesh tape and screw heads of outer layer.
GYPSEMNA CO LLC — Types MRFW, FW, TF

4L. **Gypsum Board*** — (As an alternate to Items 4 through 4K) — Two layers of 5/8 in. thick gypsum board applied vertically or horizontally. Inner layer attached to studs with 4•x 1 in. long bugle head screws spaced 12 in. OC along the top and bottom tracks and 16 in. OC in the field and along the vertical edges. Outer layer attached to the studs with 4•x 1-5/8 in. long bugle head screws spaced 12 in. OC along the top and bottom tracks and 16 in. OC in the field and along the vertical edges. Vertical joints are centered over studs and staggered between layers and on opposite sides of the wall. Horizontal joints on the face layer are staggered 12 in. from the base layer. Horizontal joints need not to be backed by steel framing.
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFCGX, LGFCSX, LGFC•CVX, LGFC•WD

4M. **Wall and Partition Facings and Accessories*** — (As an alternate to Items 4 through 4L) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type Quietrock 527.

4N. **Gypsum Board*** — (As an alternate to Item 4 through 4M) — For direct application to studs only • Four layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. When applied horizontally, base layer secured to studs with 1 in. Type S screws spaced 24 in. OC. Second layer installed with joints offset 12 in. from base layer and secured with 1 in. Type S screws spaced 24 in. OC. Third layer installed with joints in line with base layer and secured with 1•1/2 in. Type S screws spaced 16 in. OC. Fourth layer installed with joints in line with second layer and secured with 1•5/8 in. Type S screws spaced 12 in. OC. For all layers, screws offset 4 in. from previous layer. When applied vertically, base layer secured with 1 in. Type S screws spaced 24 in. OC. Second layer secured with joints offset one stud cavity and secured with 1 in. Type S screws spaced 24 in. OC. Third layer installed with joints in line with base layer and secured with 1•1/2 in. Type S screws spaced 12 in. OC. Fourth layer secured with joints in line with second layer and secured with 1•5/8 in. Type S screws spaced 8 in. OC along vertical edges and 12 in. OC in the field. For all layers, screws offset 4 in. from previous layer.
NATIONAL GYPSUM CO — Type FSW

4O. **Gypsum Board*** — (As an alternate to Items 4 through 4N) — Two layers of 5/8 in. thick gypsum board applied vertically or horizontally. Inner layer attached to studs with 1 in. long Type S screws spaced 16 in. OC in the field and vertical edges and along top and bottom tracks. Outer layer attached to studs with 1•5/8 in.long Type S screws spaced 16 in. OC in the field and vertical edges and along the top and bottom tracks. Vertical joints are centered over studs and staggered between layers and on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Horizontal edge joints and horizontal butt joints in adjacent layers need not be staggered.
NATIONAL GYPSUM CO — Type FSLX

4P. **Wall and Partition Facings and Accessories*** — (As an alternate to Item 4) — Nominal 1•5/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type Quietrock 545

5. **Lead Batten Strips** — (Not Shown, For Use With Item 4D) — Lead batten strips, min 1•1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S•8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ•L•201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4D) and optional at remaining stud locations. Required behind vertical joints.

5A. **Lead Batten Strips —** (Not Shown, for use with Item 4H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S•8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ•L•201f, Grade "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4D) and optional at remaining stud locations. Required behind vertical joints.

6. **Lead Disc or Tabs** — (Not Shown, For Use With Item 4D) — Used in lieu of or in addition to the lead batten strips (Item 5) or optional at other locations • Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1•1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ•L•201f, Grade "C".

6A. **Lead Discs —** (Not Shown, for use with Item 4H) — May 5/16 in. diam by max0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ•L•201f, Grades "B, C or D".

7. **Mineral and Fiber Board*** — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to studs and floor and ceiling runners with 1•5/8 in. long Type S steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440•32

7A. **Mineral and Fiber Board —** (Optional, Not Shown) — For optional use as an additional layer on one side of wall. • Nom 1/2 in. thick, 4 ft wide, square edge fiber board panels applied vertically. Attached to studs on one side of the wall in between the wood stud studs and the UL Classified Gypsum Board (Item 4). Fiber boards installed with 1•1/4 in. long. Type S steel screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 4) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
BLUE RIDGE FIBERBOARD INC — SoundStop

8. **Furring Channels** — (Optional, Not Shown — not for use with Items 4D, 4H, 4J, or 4N) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S•12 steel screws.

8A. **Framing Members*** — (Optional on one or both sides, Not Shown — not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 8A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.
b. **Steel Framing Members —** Used to attach furring channels (Item 8Aa) to studs. Clips spaced 48 in. OC, and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
PAC INTERNATIONAL L L C — Types RSIK•1, RSIK•V, RSIC•1 (2.75), RSIC•V (2.75)

8B. **Framing Members*** — (Optional on one or both sides, Not Shown — Not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.
b. **Steel Framing Members —** Used to attach furring channels (Item 8Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2•1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
STUCCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips • Type A237R

8C. **Steel Framing Members*** — (Optional on one or both sides. Not Shown — Not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 8Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.
b. **Steel Framing Members*** — Used to attach furring channels (Item 8Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2•1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

8D. **Steel Framing Members*** — (Optional on one or both sides. Not Shown — Not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Phillips bugle-head screws, one at the top of the strip and one at the bottom of the strip. Resilient channels attached to resilient channels as described in Item 4.
b. **Steel Framing Members —** Used to attach resilient channels (Item 8Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2•1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan•head self•drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC• Assurance Clip

6. **Barrier Mesh —** (Optional, Not Shown) • Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel-drill screws (self-tapping screws). Gypsum Board (Item 4) to be installed after the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the attachment pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.
CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020•03•11

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UL Product iQ™

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire•resistance Ratings • ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings • CAN/ULC•S101 Certified for Canada
Design Criteria and Allowable Variances

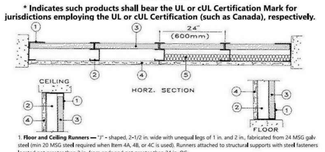
Design No. U469

March 12, 2020

Assembly Rating — 1 HR

Nonbearing Wall

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners —** "J" • shaped, 2•1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel (min 20 MSG when steel is protected), attached to floor and ceiling runners with fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

2. **Steel Studs —** "C•H" shaped studs, 2•1/2 in. wide by 1•1/2 in. deep, fabricated from min 25 MSG galv steel (min 20 MSG when steel is protected) spaced 24 in. OC when installed vertically and staggered 12 in. from base layer screws in adjacent studs. Vertically restrained walls require studs to be cut 3/8 in. less than floor to ceiling height.

3. **Gypsum Board*** — 1 in. thick gypsum wallboard liner panels, supplied in nominal 24 in. or 600 mm widths. Vertical edges inserted in "H" shaped section of "C•H" studs. Free edge of end panels attached to long leg of "J" runners with 1•5/8 in. long Type S head steel screws spaced not greater than 12 in. OC.
CERTAINTEED GYPSUM INC — Types Shaftliner, EGRG Shaftliner or Glasroc Shaftliner

CGC INC — Type SLX.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFCSL

GEORGIA-PACIFIC GYPSUM L L C — Types TP•L DGGSL, and TRSL

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. **Gypsum Board*** — 5/8 in. thick, 4 ft or 1200 mm wide, applied vertically and attached to studs with 1 in. long Type S steel screws spaced 12 in. OC along the edges and in the field of the boards.
AMERICAN GYPSUM CO — Types AGvC-L

CABOT MANUFACTURING ULC — 5/8 Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X, Type X-1.

CGC INC — Types C, IP•X1, IP•X2, IPC•AR, SCX, ULX, or WRC.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Types LGFC•C, LGFC•CVX, LGFCSA
GEORGIA•PACIFIC GYPSUM L L C — Types 5, DAPC, Type X, Veneer Plaster Base • Type X, Water Rated • Type X, Sheathing • Type X, Soffit • Type X, Type TS•C, Type LVIX, Veneer Plaster Base•Type LVIX, Water Rated•Type LVIX, Sheathing Type• LVIX, Soffit•Type LVIX, Type DGSIX, Water Rated•Type DGSIX, Sheathing Type• DGSIX, Soffit•Type DGSIX, Type LVIX, Veneer Plaster Base – Type LVIX, Water Rated – Type LVIX, Sheathing – Type LVIX, Soffit – Type LVIX, Type DGLVW, Water Rated • Type DGLVW, Sheathing • Type DGLVW, Type DAP, Type DS.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG•11, PGS•C, PGS•WRS

SAINT•GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Ax, Gyproc FireStop MR ACTIV'Ax, Gyproc FireStop M2TECH ACTIV'Ax, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Ax, Gyproc DuraLine MR ACTIV'Ax, Gyproc DuraLine M2TECH ACTIV'Ax

THAI GYPSUM PRODUCTS PCL — Type C, Type X

UNITED STATES GYPSUM CO — Types C, C FIRX•G, IP•AR, IP•X1, IP•X2, IPC•AR, SCX, SHX, ULX, ULIX or WRC.

USG BORAL DRYWALL SFZ LLC — Types C, SCX

USG MEXICO S A DE C V — Types C, IP•X1, IP•X2, IPC•AR, SCX, ULX, or WRC.

4A. **Gypsum Board*** — Not Shown • As an Alternate to Item 4. Nom 5/8 in. thick lead backed gypsum panels with bevelled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1

2. **Normal Weight or Lightweight Concrete —** Normal weight concrete, carbonate or siliceous aggregate, 147 to 153 pcf unit weight, 3500 psi compressive strength, vibrated. Lightweight concrete, expanded shale, or slate aggregate by rotary-kiln method, or expanded clay aggregate by rotary-kiln or sintered-grate method, 3000 psi compressive strength, vibrated, 4 to 7 percent entrained air.

Restrained Assembly Rating Hr	Concrete (Type)	Concrete Unit Weight pcf	Concrete Thkns In.
1	Normal Weight	147+153	3+1/2
1+1/2	Normal Weight	147+153	4
2	Normal Weight	147+153	4+1/2
3	Normal Weight	147+153	5+1/4
3/4 or 1 (See Item 6)	Lightweight	107+113	2+1/2
1	Lightweight	107+120	2+5/8
1+1/2	Lightweight	107+113	3
2**	Lightweight	107+113	3+1/4
2**	Lightweight	107+116	3+1/4*
2	Lightweight	114+120	3+1/2
3	Lightweight	107+113	4+3/16
3	Lightweight	114+120	4+7/16

*For use with 2 or 3 in. steel floor and form units only.

**When optional items 7 and 11 are used, the Restrained Assembly Ratings of the 3+1/4 in. lightweight concrete thicknesses are reduced to 1+1/2 h.

3. **Welded Wire Fabric —** 6x6, 10x10 SWG.

4. **Steel Floor and Form Units* —** Composite 1-1/2, 1-5/8, 2 or 3 in. deep galv units or 4-1/2 in. deep noncomposite galv units. Fluted units may be uncoated or phosphatized/painted. Min gauges are 22 MSG for fluted and 20/20 MSG for cellular units. The following combinations of units may be used:

(1) all 18, 24, 26, 28 or 36 in. wide cellular.

(2) all fluted.

(3) one or two 3 in. deep, 12 in. wide, 18/18 MSG min cellular, alternating with 3 in. deep fluted or other cellular.

(4) any blend of fluted and 18, 24, 26, 28 or 36 in. wide cellular.

(5) 3 in. deep, 30 in. wide cellular with 6-1/8 in. wide valley along side joints may be used when 3/8 in. diam reinforcing bars are placed 1-1/2 in. to each side of side joints and 1 in. above bottom of unit.

(6) Corrugated, 1-5/16 in. deep, 30 in. wide, 24 MSG min galv units with shear wires factory welded to deck corrugations. Welded to supports 12 in. OC through welding washers. For shear wire spacing of 8 in. or less, the steel deck stress shall not exceed 20 KSI. For shear wire spacing greater than 8 in. OC but less than or equal to 12 in. OC, steel deck stress shall not exceed 12 KSI.
ASC STEEL DECK, DIV OF ASC PROFILES L L C — 32 in. wide Types NH+32, NHN+32, NH+32; 36 in. wide Types BH+36, BHN+36, BHN-35+1/4, BHR+36, BHR+36A, ZXH+36, ZXHN+36, ZXHR+36A, ZXH+36, ZXHR+36A, ZXH+36, ZXHR+36, ZXHR+36A, 3RH-36, 3HR+36, DGSN36-18, DGSR36+08. All units may be galvanized or Prime Shield. Noncellular decks may be (a) 1-1/2 in. deep, 24 in. wide, 22 MSG or thicker fluted with clear spans not more than 7 ft, 8 in.

(b) 1-1/2 in. deep, 24 in. wide, 20 MSG or thicker fluted with clear spans not more than 8 ft, 8 in.

(c) 1-1/2 in. deep, 24 in. wide, 16 MSG or thicker fluted and 18/18 MSG or thicker cellular with clear spans not more than 9 ft, 11 in.

(d) 3 in. deep, 36 in. wide, 18 MSG or thicker fluted and 24 in. wide, 20/18 MSG or thicker cellular with clear spans not more than 13 ft, 2 in.

5. **Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying in more than one coat to the beam to the final thicknesses shown below. Beam surfaces shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 23 and 21 pcf, respectively for Type PI-20. Min avg and min ind density of 18 and 16 pcf, respectively for Type CP-2.

Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr	Spray Applied Fire Resistive Mtl Thkns In.
1	1, 1-1/2, 2	1/2
1+1/2	1, 1-1/2, 2, 3	3/4
2	2, 3	15/16
3	3	1+7/16

The thickness of material required on the steel joist for the various Ratings are shown in the following table:

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Type of Concrete Slab	Spray Applied Fire Resistive Mtl Thkns In. Joist & Bridging
1	1	NW or LW	1+1/2
1+1/2	1+1/2	NW or LW	1+7/8
2	2	NW or LW	2+3/8
3	3	NW or LW	3

ISOLATEK INTERNATIONAL — Types CP-2, PI-20.

NEWKEM PRODUCTS CORP — Type CP-2.

5A. **Alternate Spray-Applied Fire Resistive Materials* —** Applied by mixing with water according to instructions on each bag of mixture and spraying in one or more coats as necessary to the beam to the final thicknesses shown below. Beam surfaces shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 40 and 44 pcf, respectively. For a method of density determination, refer to Design Information Section.

Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr	Min Thkns
1	1, 1-1/2, 2	9/16
1+1/2	1, 1-1/2, 2, 3	7/8
2	2, 3	1+1/8
3	3	1+11/16

GREENTECH ASIA PACIFIC SDN BDH — Type M-8, investigated for exterior use.

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Types M-8 or TG. Types M-8 and TG investigated for exterior use.

ISOLATEK INTERNATIONAL — Type M-8 or TG. Types M-8 and TG investigated for exterior use.

NEWKEM PRODUCTS CORP — Type M-8 or TG. Types M-8 and TG investigated for exterior use.

6. **Shear-Connector Studs —** (Optional) — Studs 3/4 in. diam by 3 in. long, for 1-1/2 in. deep form units to 5-1/4 in. long for 3 in. deep form units, headed type or equivalent per AISC specifications. Welded to the top flange of the beam through the steel form units.

7. **Electrical Inserts* —** (Not shown) Classified as "Outlet Boxes and Fittings Classified for Fire Resistance."

(1) **H. H. Robertson Co. —** Present Inserts. For use with 2-1/2 in. lightweight concrete topping over QL-WKX steel floor units. Installed over factory-punched holes in floor units per accompanying installation instructions. Spacing shall not be more than one insert in each 14 sq ft of floor area with spacing along floor units not less than 48 in. OC. The holes cut in insert cover for passage of wires shall be no more than 1/8 in. larger diam than wire. Restrained Assembly Rating is 3/4 hr with Tapmate B+5+1 and 1 hr with Tapmate B+F5+2 inserts.
H H ROBERTSON — Tapmate B+F5+1, B+F5+2, Series 93B.

(2) **Wiremold Co. —** After set Inserts. Single-service after set inserts installed per accompanying installation instructions in 2-1/2 in. diam hole core-drilled through min 3-1/4 in. thick concrete topping to top of crest of any min 3 in. deep cellular steel floor unit specified under Item 3. Spacing shall be no more than one insert in each 10 sq ft of floor area in each span with a min center to center spacing of 16 in. If the high potential and low potential raceways of the cellular steel floor unit are separated by a valley filled with concrete, the center to center spacing of the high potential and low potential single-service after set inserts may be reduced to a min of 7-1/2 in. Restrained Assembly Rating is 2 hr or less with internally protected type 436 after set insert with Type M+, M6- or M8- Series single-service activation fitting.
WIREMOLD CO — Internally protected Type 436 after set insert with Type M+, M6- or M8- Series single-service activation fitting.

8. **Mineral and Fiber Boards* —** (Optional, not shown). Applied over concrete floor with no restriction on board thickness. When mineral and fiber boards are used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr. See Mineral and Fiber Board (CERZ) category for names of manufacturers.

9. **Roof Covering Materials* —** (Optional, not shown) — Consisting of materials compatible with insulations described herein which provide Class A, B or C coverings. See Built-Up Roof Covering Materials in Building Materials Directory.

10. **Insulating Concrete —** (Optional, not shown) — Various types of insulating concrete prepared and applied in the thickness indicated:

A. **Vermiculite Concrete —** (Optional, not shown)

1. Blend 6 to 8 cu ft of **Vermiculite Aggregate*** to 94 lb Portland Cement and air entraining agent. Min thickness of 2 in. as measured to the top surface of the structural concrete or foamed plastic (Item 11) when it is used.
MANDOVAL LTD

MANDOVAL VERMICULITE PRODUCTS INC

2. Blend 3.5 cu ft of **Vermiculite Aggregate*** to 94 lb Portland Cement. Slurry coat, 1/8 in. thickness beneath foamed plastic (Item 11) when used; 1 in. min topping thickness.
ELASTIZELL CORP OF AMERICA

MANDOVAL LTD

MANDOVAL VERMICULITE PRODUCTS INC

Vermiculite concrete may be covered with Roof Covering Materials (Item 9).

B. **Cellular Concrete-Roof Topping Mixture* —** Concentrate mixed with water and Portland cement per manufacturers specifications. Min. thickness of 2-in. as measured to the top surface of the structural concrete or foamed plastic (Item 11A) when used. Cast dry density and 28-day min compressive strength of 190 psi as determined with ASTM C495+66.
AERIX INDUSTRIES — Cast dry density of 37 (+ or -) 3.0 pcf.

CELCORE INC — Cast dry density of 31 (+ or +) 3.0 pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf. Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or +) 3.0 pcf.

C. **Cellular Concrete — Roof Topping Mixture* —** Concentrate mixed with water and Portland cement per manufacturers specifications. 28-day min compressive strength of 190 psi as determined with ASTM C495+66.
SIPLAST INC — Mix No. 1 or 2. Cast dry density of 32 to 35 pcf for Mix No. 1 or 36 to 39 pcf for Mix No. 2.

D. **Perlite Concrete —** 6 cu ft of **Perlite Aggregate*** to 94 lb of Portland Cement and 1-1/2 pt air entraining agent. Min thickness 2 in. as measured to the top surface of structural concrete or foamed plastic (Item 11A) when it is used. See Perlite Aggregate (CFFX) in Fire Resistance Directory for names of manufacturers.

E. **Cellular Concrete — Roof Topping Mixture* —** Foam concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 30 to 36 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86.
AERIX INDUSTRIES — Mix No. 3.

SIPLAST INC — Mix No. 3.

11. **Foamed Plastic* —** (Optional, not shown) — For use only with vermiculite (Item 10A) or cellular (Item 10C) concretes-Rigid polystyrene foamed plastic insulation having dots and/or holes sandwiched between vermiculite concrete slurry which is applied to the normal or lightweight concrete surface and vermiculite concrete topping (Item 10A).
SIPLAST INC

VERMICULITE PRODUCTS INC

11A. **Foamed Plastic* —** (Optional, not shown) — For use only with cellular concrete. Nom 24 by 48 in. polystyrene foamed plastic insulation boards having a density of 1.0 + 0.1 pcf encapsulated within cellular concrete topping (Item 10B). Each insulation board shall contain six nom 3 in. diam holes oriented in two rows of three holes each with the holes spaced 12 in. OC, transversely and 16 in. OC longitudinally.
See **Foamed Plastic*** (BRYX) category in the Building Materials Directory or Foamed Plastic* (CCVW) category in the Fire Resistance Directory for list of manufacturers.

12. **Foamed Plastic* —** (Optional, not shown). Polyisocyanurate roof insulation applied over concrete floor with no restriction on insulation thickness. When polyisocyanurate insulation is used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr. See Foamed Plastic (CCVW) category for list of manufacturers.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2019-10-08

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UL Product iQ™

BXUV.X661 -

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BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-Resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances.

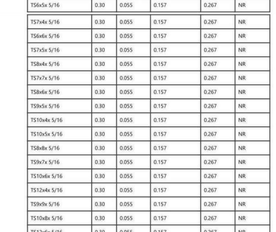
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances.

Design No. X661

December 11, 2013

Ratings - 1, 1-1/2, 2, and 3 Hr. (See Item 3 and 4)

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Steel Tube Column —** Hollow structural steel columns with the minimum sizes shown in the tables below. Columns shall be free of dirt, loose scale and oil.

2. **Primer Coating —** Two Component Epoxy or Phenolic Modified Alkyd applied at 0.002 in. dry film thickness.

3. **Mastic & Intumescent Coating* —** Coating spray or brush applied in accordance with the manufacturer's instructions at the minimum average dry thickness shown in the table below. The thickness shown does not include primer thickness.

Size	A/P	1 Hr. In.	1-1/2 Hr. In.	2 Hr. In.	3 Hr. In.
TS4x4x 1/4	0.24	0.073	0.226	0.367	NR
TS4.5x4.5x 1/4	0.24	0.073	0.226	0.367	NR
TS5x4x 1/4	0.24	0.073	0.226	0.367	NR
TS5x5x 1/4	0.24	0.073	0.226	0.367	NR
TS6x4x 1/4	0.24	0.073	0.226	0.367	NR
TS5.5x5.5x 1/4	0.24	0.073	0.226	0.367	NR
TS6x5x 1/4	0.24	0.073	0.226	0.367	NR
TS7x4x 1/4	0.24	0.073	0.226	0.367	NR
TS6x6x 1/4	0.24	0.073	0.226	0.367	NR
TS7x5x 1/4	0.24	0.073	0.226	0.367	NR
TS8x4x 1/4	0.24	0.073	0.226	0.367	NR
TS7x6x 1/4	0.24	0.073	0.226	0.367	NR
TS8x5x 1/4	0.24	0.073	0.226	0.367	NR
TS7x7x 1/4	0.24	0.073	0.226	0.367	NR
TS8x6x 1/4	0.24	0.073	0.226	0.367	NR
TS9x5x 1/4	0.24	0.073	0.226	0.367	NR
TS10x4x 1/4	0.24	0.073	0.226	0.367	NR
TS10x5x 1/4	0.24	0.073	0.226	0.367	NR
TS8x8x 1/4	0.24	0.073	0.226	0.367	NR
TS9x7x 1/4	0.24	0.073	0.226	0.367	NR
TS10x6x 1/4	0.24	0.073	0.226	0.367	NR
TS12x4x 1/4	0.24	0.073	0.226	0.367	NR
TS9x9x 1/4	0.24	0.073	0.226	0.367	NR
TS10x8x 1/4	0.24	0.073	0.226	0.367	NR
TS12x5x 1/4	0.24	0.073	0.226	0.367	NR
TS14x4x 1/4	0.24	0.073	0.226	0.367	NR
TS10x6x 1/4	0.24	0.073	0.226	0.367	NR
TS12x6x 1/4	0.24	0.073	0.226	0.367	NR
TS10x10x 1/4	0.24	0.073	0.226	0.367	NR
TS12x8x 1/4	0.24	0.073	0.226	0.367	NR
TS14x6x 1/4	0.24	0.073	0.226	0.367	NR
TS12x10x 1/4	0.24	0.073	0.226	0.367	NR
TS14x8x 1/4	0.24	0.073	0.226	0.367	NR
TS14x10x 1/4	0.24	0.073	0.226	0.367	NR
TS14x12x 1/4	0.24	0.073	0.226	0.367	NR
TS4x4x 5/16	0.30	0.055	0.157	0.267	NR
TS4.5x4.5x 5/16	0.30	0.055	0.157	0.267	NR
TS5x4x 5/16	0.30	0.055	0.157	0.267	NR
TS5x5x 5/16	0.30	0.055	0.157	0.267	NR
TS6x4x 5/16	0.30	0.055	0.157	0.267	NR
TS5.5x5.5x 5/16	0.30	0.055	0.157	0.267	NR
TS6x5x 5/16	0.30	0.055	0.157	0.267	NR
TS7x4x 5/16	0.30	0.055	0.157	0.267	NR
TS6x6x 5/16	0.30	0.055	0.157	0.267	NR
TS7x5x 5/16	0.30	0.055	0.157	0.267	NR
TS8x4x 5/16	0.30	0.055	0.157	0.267	NR
TS7x6x 5/16	0.30	0.055	0.157	0.267	NR
TS8x5x 5/16	0.30	0.055	0.157	0.267	NR
TS7x7x 5/16	0.30	0.055	0.157	0.267	NR
TS8x6x 5/16	0.30	0.055	0.157	0.267	NR
TS9x5x 5/16	0.30	0.055	0.157	0.267	NR
TS10x4x 5/16	0.30	0.055	0.157	0.267	NR
TS10x5x 5/16	0.30	0.055	0.157	0.267	NR
TS8x8x 5/16	0.30	0.055	0.157	0.267	NR
TS9x7x 5/16	0.30	0.055	0.157	0.267	NR
TS10x6x 5/16	0.30	0.055	0.157	0.267	NR
TS12x4x 5/16	0.30	0.055	0.157	0.267	NR
TS9x9x 5/16	0.30	0.055	0.157	0.267	NR
TS10x8x 5/16	0.30	0.055	0.157	0.267	NR
TS12x5x 5/16	0.30	0.055	0.157	0.267	NR
TS14x4x 5/16	0.30	0.055	0.157	0.267	NR
TS10x10x 5/16	0.30	0.055	0.157	0.267	NR
TS12x8x 5/16	0.30	0.055	0.157	0.267	NR
TS14x6x 5/16	0.30	0.055	0.157	0.267	NR
TS12x10x 5/16	0.31	0.053	0.151	0.258	NR
TS14x8x 5/16	0.31	0.053	0.151	0.258	NR
TS14x10x 5/16	0.31	0.053	0.151	0.258	NR
TS14x12x 5/16	0.31	0.053	0.151	0.258	NR
TS4x4x 3/8	0.34	0.047	0.128	0.224	NR
TS4.5x4.5x 3/8	0.35	0.047	0.128	0.224	NR
TS5x4x 3/8	0.35	0.047	0.128	0.224	NR
TS5x5x 3/8	0.35	0.047	0.128	0.224	NR
TS6x4x 3/8	0.35	0.047	0.128	0.224	NR
TS5.5x5.5x 3/8	0.35	0.047	0.128	0.224	NR
TS6x5x 3/8	0.35	0.047	0.128	0.224	NR
TS7x4x 3/8	0.35	0.047	0.128	0.224	NR
TS6x6x 3/8	0.36	0.046	0.123	0.217	NR
TS7x5x 3/8	0.36	0.046	0.123	0.217	NR
TS8x4x 3/8	0.36	0.046	0.123	0.217	NR
TS7x7x 3/8	0.36	0.046	0.123	0.217	NR
TS8x6x 3/8	0.36	0.046	0.123	0.217	NR
TS9x5x 3/8	0.36	0.046	0.123	0.217	NR
TS10x4x 3/8	0.36	0.046	0.123	0.217	NR
TS10x5x 3/8	0.36	0.046	0.123	0.217	NR
TS8x8x 3/8	0.36	0.046	0.123	0.217	NR
TS9x7x 3/8	0.36	0.046	0.123	0.217	NR
TS10x6x 3/8	0.36	0.046	0.123	0.217	NR
TS12x4x 3/8	0.36	0.046	0.123	0.217	NR
TS9x9x 3/8	0.36	0.046	0.123	0.217	NR
TS10x8x 3/8	0.36	0.046	0.123	0.217	NR
TS12x5x 3/8	0.36	0.046	0.123	0.217	NR
TS14x4x 3/8	0.36	0.046	0.123	0.217	NR
TS10x10x 3/8	0.36	0.046	0.123	0.217	NR
TS12x6x 3/8	0.36	0.046	0.123	0.217	NR
TS14x6x 3/8	0.36	0.046	0.123	0.217	NR
TS12x8x 3/8	0.36	0.046	0.123	0.217	NR
TS14x8x 3/8	0.36	0.046	0.123	0.217	NR
TS12x10x 3/8	0.36	0.046	0.123	0.217	NR
TS14x10x 3/8	0.36	0.046	0.123	0.217	NR
TS14x12x 3/8	0.36	0.046	0.123	0.217	NR
TS4x4x 1/2	0.45	0.038	0.097	0.175	0.319
TS4.5x4.5x 1/2	0.45	0.038	0.097	0.175	0.319
TS5x4x 1/2	0.45	0.038	0.097	0.175	0.319
TS5x5x 1/2	0.46	0.037	0.094	0.172	0.319
TS6x4x 1/2	0.46	0.037	0.094	0.172	0.319
TS6x5x 1/2	0.46	0.037	0.094	0.172	0.319
TS7x4x 1/2	0.46	0.037	0.094	0.172	0.319
TS6x6x 1/2	0.46	0.037	0.094	0.172	0.319
TS7x5x 1/2	0.46	0.037	0.094	0.172	0.319
TS8x4x 1/2	0.46	0.037	0.094	0.172	0.319
TS7x7x 1/2	0.47	0.037	0.092	0.168	0.319
TS8x6x 1/2	0.47	0.037	0.092	0.168	0.319
TS9x5x 1/2	0.47	0.037	0.092	0.168	0.319
TS10x4x 1/2	0.47	0.037	0.092	0.168	0.319
TS8x8x 1/2	0.47	0.037	0.092	0.168	0.319
TS9x7x 1/2	0.47	0.037	0.092	0.168	0.319
TS10x6x 1/2	0.47	0.037	0.092	0.168	0.319
TS12x4x 1/2	0.47	0.037	0.092	0.168	0.319
TS9x9x 1/2	0.48	0.036	0.091	0.166	0.319
TS10x8x 1/2	0.48	0.036	0.091	0.166	0.319
TS12x5x 1/2	0.48	0.036	0.091	0.166	0.319
TS14x4x 1/2	0.48	0.036	0.091	0.166	0.319
TS10x10x 1/2	0.48	0.036	0.091	0.166	0.319
TS12x6x 1/2	0.48	0.036	0.091	0.166	0.319
TS14x6x 1/2	0.48	0.036	0.091	0.166	0.319
TS12x8x 1/2	0.48	0.036	0.091	0.166	0.319
TS14x8x 1/2	0.48	0.036	0.091	0.166	0.319
TS12x10x 1/2	0.48	0.036	0.091	0.166	0.319
TS14x10x 1/2	0.48	0.036	0.091	0.166	0.319
TS14x12x 1/2	0.48	0.036	0.091	0.166	0.319
TS4x4x 5/8	0.49	0.036	0.089	0.164	0.319
TS4.5x4.5x 1/2	0.49	0.036	0.089	0.164	0.319
TS5x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS5x5x 1/2	0.49	0.036	0.089	0.164	0.319
TS6x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS6x5x 1/2	0.49	0.036	0.089	0.164	0.319
TS7x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS6x6x 1/2	0.49	0.036	0.089	0.164	0.319
TS7x5x 1/2	0.49	0.036	0.089	0.164	0.319
TS8x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS7x7x 1/2	0.49	0.036	0.089	0.164	0.319
TS8x6x 1/2	0.49	0.036	0.089	0.164	0.319
TS9x5x 1/2	0.49	0.036	0.089	0.164	0.319
TS10x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS8x8x 1/2	0.49	0.036	0.089	0.164	0.319
TS9x7x 1/2	0.49	0.036	0.089	0.164	0.319
TS10x6x 1/2	0.49	0.036	0.089	0.164	0.319
TS12x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS9x9x 1/2	0.49	0.036	0.089	0.164	0.319
TS10x8x 1/2	0.49	0.036	0.089	0.164	0.319
TS12x5x 1/2	0.49	0.036	0.089	0.164	0.319
TS14x4x 1/2	0.49	0.036	0.089	0.164	0.319
TS10x10x 1/2	0.49	0.036	0.089	0.164	0.319
TS12x6x 1/2	0.49	0.036	0.089	0.164	0.319
TS14x6x 1/2	0.49	0.036	0.089	0.164	0.319
TS12x8x 1/2	0.49	0.036	0.089	0.164	0.319
TS14x8x 1/2	0.49	0.036	0.089	0.164	0.319
TS12x10x 1/2	0.49	0.036	0.089	0.164	0.319
TS14x10x 1/2	0.49	0.036	0.089	0.164	0.319
TS14x12x 1/2	0.49	0.036	0.089	0.164	0.319
TS4x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS4.5x4.5x 5/8	0.61	0.031	0.075	0.140	0.319
TS5x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS5x5x 5/8	0.61	0.031	0.075	0.140	0.319
TS6x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS5.5x5.5x 5/8	0.61	0.031	0.075	0.140	0.319
TS6x5x 5/8	0.61	0.031	0.075	0.140	0.319
TS7x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS6x6x 5/8	0.61	0.031	0.075	0.140	0.319
TS7x5x 5/8	0.61	0.031	0.075	0.140	0.319
TS8x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS7x7x 5/8	0.61	0.031	0.075	0.140	0.319
TS8x6x 5/8	0.61	0.031	0.075	0.140	0.319
TS9x5x 5/8	0.61	0.031	0.075	0.140	0.319
TS10x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS8x8x 5/8	0.61	0.031	0.075	0.140	0.319
TS9x7x 5/8	0.61	0.031	0.075	0.140	0.319
TS10x6x 5/8	0.61	0.031	0.075	0.140	0.319
TS12x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS9x9x 5/8	0.61	0.031	0.075	0.140	0.319
TS10x8x 5/8	0.61	0.031	0.075	0.140	0.319
TS12x5x 5/8	0.61	0.031	0.075	0.140	0.319
TS14x4x 5/8	0.61	0.031	0.075	0.140	0.319
TS10x10x 5/8	0.61	0.031	0.075	0.140	0.319
TS12x6x 5/8	0.61	0.031	0.075	0.140	0.319
TS14x6x 5/8	0.61	0.031	0.075	0.140	0.319
TS12x8x 5/8	0.61	0.031	0.075	0.140	0.319
TS14x8x 5/8	0.61	0.031	0.075	0.140	0.319
TS12x10x 5/8	0.61	0.031	0.075	0.140	0.319
TS14x10x 5/8	0.61	0.031	0.075	0.140	0.319
TS14x12x 5/8	0.61	0.031	0.075	0.140	0.319
TS4x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS4.5x4.5x 3/4	0.70	0.029	0.068	0.129	0.319
TS5x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS5x5x 3/4	0.70	0.029	0.068	0.129	0.319
TS6x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS5.5x5.5x 3/4	0.70	0.029	0.068	0.129	0.319
TS6x5x 3/4	0.70	0.029	0.068	0.129	0.319
TS7x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS6x6x 3/4	0.70	0.029	0.068	0.129	0.319
TS7x5x 3/4	0.70	0.029	0.068	0.129	0.319
TS8x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS7x7x 3/4	0.70	0.029	0.068	0.129	0.319
TS8x6x 3/4	0.70	0.029	0.068	0.129	0.319
TS9x5x 3/4	0.70	0.029	0.068	0.129	0.319
TS10x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS8x8x 3/4	0.70	0.029	0.068	0.129	0.319
TS9x7x 3/4	0.70	0.029	0.068	0.129	0.319
TS10x6x 3/4	0.70	0.029	0.068	0.129	0.319
TS12x4x 3/4	0.70	0.029	0.068	0.129	0.319
TS9x9x 3/4	0.70	0.029	0.068	0.129	0.319
TS10x8x 3/4	0.70	0.029	0.068	0.129	0.319
TS12x5x 3/4	0.70	0.029	0.068	0.129	0.319
TS14x4x 3/4	0.70	0.029

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DEMOLITION LEGEND

NOT IN SCOPE

EXISTING TO REMAIN

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

EXISTING DOOR, FRAME AND HARDWARE TO REMAIN

REMOVE EXISTING DOOR AND HARDWARE, EXISTING FRAME TO REMAIN. PREPARE FRAME FOR NEW DOOR AND HARDWARE.

REMOVE EXISTING DOOR, FRAME AND HARDWARE COMPLETELY. PREPARE EXISTING CONSTRUCTION TO REMAIN AS REQUIRED FOR NEW CONSTRUCTION.

REMOVE EXISTING DOOR, FRAME, HARDWARE AND WALL CONSTRUCTION COMPLETELY.

DP — DUST PARTITIONS - THE CONTRACTOR SHALL MAKE EVERY EFFORT TO ENSURE THE EXISTING BUILDING TO BE COMPLETELY PROTECTED AGAINST INFILTRATION OF DUST AND MOISTURE DURING THE COURSE OF DEMOLITION/ CONSTRUCTION WITH DUST PARTITIONS ACROSS CORRIDORS AND OPENINGS THRU EXISTING WALLS. ALL CONSTRUCTION WORK CREATING ANY TYPE OF DUST THROUGHOUT THE BUILDING SHALL BE SHIELDED BY DUST PROTECTION. PROVIDE DOOR OPENING AS REQUIRED FOR EMERGENCY EGRESS.

DB — (2) LAYERS 6 MIL PVC W/ STUDS @ 4'-0" O.C. DUST BARRIER. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO ENSURE THE EXISTING BUILDING TO BE COMPLETELY PROTECTED AGAINST THE INFILTRATION OF DUST & MOISTURE DURING THE COURSE OF DEMOLITION/ CONSTRUCTION. PROVIDE DOOR OPENING AS REQUIRED FOR EMERGENCY EGRESS.

KEYNOTES - DEMO PLAN

NUMBER	COMMENTS
1	DEMO EXISTING TLT. FIXTURES & ACCESSORIES
2	OWNER TO REMOVE EXIST. FURN. &/ OR EQUIP.
3	DEMO EXIST. FLOORING & PREP FOR NEW FLOORING
4	DEMO BRICK & STUD WALL FOR NEW CORRIDOR OPENING
5	DEMO EXIST. ALUM. FRAMED WINDOW
6	DEMO EXIST. STOREFRONT SYSTEM
7	~~DEMO EXIST. STUD WALL~~
8	DEMO EXISTING DOOR AND FRAME
9	DEMO EXISTING INSULATED GLAZING & ALUM. SYSTEM.
10	DEMO FINISHES AND FRAMING AROUND EXIST. COLUMNS. COLUMNS TO REMAIN.
11	NOT USED
12	DEMO EXIST. BRICK & STUD WALL
13	REMOVE EXISTING REVOLVING DOOR
14	REMOVE EXISTING OVERHEAD DOOR UNIT
15	DEMO PORTION OF EXISTING SLAB, FOUNDATION & ROOF STRUCTURE ABOVE. RE: STRUCTURAL
16	NOT USED
17	DEMO EXISTING BRICK & CONCRETE MASONRY UNIT WALL
18	REMOVE EXISTING VENDING MACHINES
19	DEMO EXISTING CASEWORK
20	DEMO EXISTING CASEWORK & SINK
21	DEMO EXISTING BRICK
22	DEMO EXISTING GLASS SKYLIGHT SYSTEM
23	DEMO EXISTING CEILING TILE AND LIGHT FIXTURES, PROTECT AND SALVAGE MECH. GRILLS AND ALL ADDITIONAL CEILING MOUNTED FIXTURES FOR NEW CONST. GRID TO REMAIN
24	REMOVE EXISTING WALL SCONCES, TYP. CAP OFF ELECTRICAL LEADS, PATCH WALLS
25	DEMO PORTION OF EXISTING CMU WALL
26	REMOVE EXISTING WALL COVERING, TYP.
28	DEMO EXIST. TILE FLOOR & TILE BASE. PREP FOR NEW FLOORING. PATCH WALLS @ REMOVED TILE BASE.
29	DEMO EXIST. FLOORING & TILE BASE. PREP FOR NEW FLOORING. PATCH WALLS @ REMOVED TILE BASE.
30	REMOVE EXISTING HANDRAILS. TO BE REPLACED WITH NEW.
31	RELOCATE EXISTING FIRE ALARM PANELS. RE: ELECTRICAL
32	EXISTING CASEWORK TO REMAIN
33	REMOVE EXISTING DOOR, SALVAGE HARDWARE, FRAME TO REMAIN

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

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

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

GENERAL DEMOLITION NOTES

1. THE OWNER SHALL VACATE THE EXISTING ROOMS AS INDICATED ON THE PLAN AND BE RESPONSIBLE FOR THE REMOVAL OF ANY EQUIPMENT WHICH IS TO REMAIN THE PROPERTY OF THE OWNER PRIOR TO ANY WORK DONE BY THE CONTRACTOR FOR THIS PORTION OF THE SEQUENCE.

2. INSTALL TEMPORARY DUST PROTECTION/ PARTITION AS INDICATED ON THE PLAN TO CONTAIN DEMOLITION/ CONSTRUCTION DUST AND DEBRIS WITHIN THE AREA OF CONSTRUCTION. REFER TO DUST PARTITION "DP" ON THIS SHEET.

3. IT IS THE INTENT OF THIS DEMOLITION TO REMOVE ALL EXISTING CONSTRUCTION WHICH CONFLICTS WITH THE INTENT OF THE NEW CONSTRUCTION. EVERY DEMOLITION DETAIL MAY NOT NECESSARILY BE COVERED ON THESE DRAWINGS. FIELD VERIFY THE EXTENT OF ALL DEMOLITION.

4. THE CONTRACTOR SHALL USE EXTREME CARE IN THE PROTECTION OF ALL ADJACENT AREAS FOR IT IS IMPERATIVE TO PROVIDE CONTINUOUS OPERATION OF ALL OCCUPIED AREAS DURING THE DEMOLITION, CONSTRUCTION AND RENOVATION WITHIN THIS AND ALL SEQUENCES OF CONSTRUCTION.

5. ALL PARTITIONS, DOORS, EQUIPMENT, ETC. INDICATED BY DASHED LINES ON THIS PLAN SHALL BE REMOVED.

6. ALL DEMOLITION DESCRIBED IN THESE DOCUMENTS SHALL BE COORDINATED WITH PHASING WORK REQUIRED TO COMPLETE THE WORK.

7. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK W/ OCCUPIED SPACES BELOW AND SHALL NOTIFY OWNER 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.

8. IN AREAS SCHEDULED FOR DEMOLITION, THE CONTRACTOR SHALL REMOVE ALL ACCESSORIES, GRAB BARS, MIRRORS, SOAP AND PAPER TOWEL DISPENSERS, SHELVES, BULLETIN BOARDS, ETC., SHALL BE TURNED OVER TO THE OWNER, EXCEPT FOR RELOCATED ITEMS.

9. 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.

10. AT DISSIMILAR FLOOR ELEVATIONS, AFTER THE EXISTING CONSTRUCTION HAS BEEN REMOVED, FEATHER EPOXY GROUT TOPPINGS TO EACH FLOOR ELEVATION AND GRIND SMOOTH. AT DISSIMILAR FLOOR MATERIALS, AND/OR AT JUNCTIONS BETWEEN EXISTING FLOOR, PROVIDE THE APPROPRIATE TRANSITION STRIP AT THE EDGE.

11. AT VARIATIONS IN WALL SURFACES AFTER THE EXISTING CONSTRUCTION HAS BEEN REMOVED, FEATHER JOINT COMPOUND AND SAND SMOOTH.

12. WHERE CEILING IS TO REMAIN, REMOVE ALL DAMAGED CEILING PANELS/ TILES AND REPLACE WITH NEW TO MATCH EXISTING.

13. REMOVE AND RETURN TO THE OWNER ALL EXISTING PLUMBING FIXTURES. CAP ALL SUPPLY AND WASTE LINES AS REQUIRED. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

14. THE CONTRACTOR SHALL PATCH TO MATCH ADJACENT SURFACES OF EXISTING WALLS AND FLOORS IN ALL AREAS THAT REQUIRE THE REMOVAL OF GENERAL MECHANICAL, ELECTRICAL AND PLUMBING WORK AND OF EQUIPMENT AND FIXTURES.

15. THE CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY TEMPORARY RELOCATION AND MAINTENANCE OF ALL EXISTING UTILITIES WHICH ARE CURRENTLY IN USE AND WHICH MUST BE TEMPORARILY RELOCATED DURING CONSTRUCTION OF NEW AREAS AND RENOVATION OF EXISTING AREAS THROUGH EACH SEQUENCE OF CONSTRUCTION.

16. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR WORK REQUIRED IN THIS STEP OF THE SEQUENCE OF CONSTRUCTION.

17. WHERE REMOVAL OF EXISTING PARTITIONS, EQUIPMENT, ETC. DISTURBS EXISTING MECHANICAL, PLUMBING OR ELECTRICAL SERVICES, THE CONTRACTOR SHALL MAKE PERMANENT REVISIONS AS REQUIRED AND IF NECESSARY, PROVIDE TEMPORARY SERVICES TO AREAS NOT SCHEDULED FOR DEMOLITION AND RENOVATION.

18. WHERE EXISTING WALLS, CEILINGS, OR FLOORS ARE DAMAGED BY THE CONTRACTOR FOR ACCESS TO SERVICES AND NEW CONSTRUCTION WHICH MAY NOT BE SCHEDULED OR SHOWN ON THE DRAWINGS, 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.

19. WHEN DEMOLITION CAUSES OR EXPOSES 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.

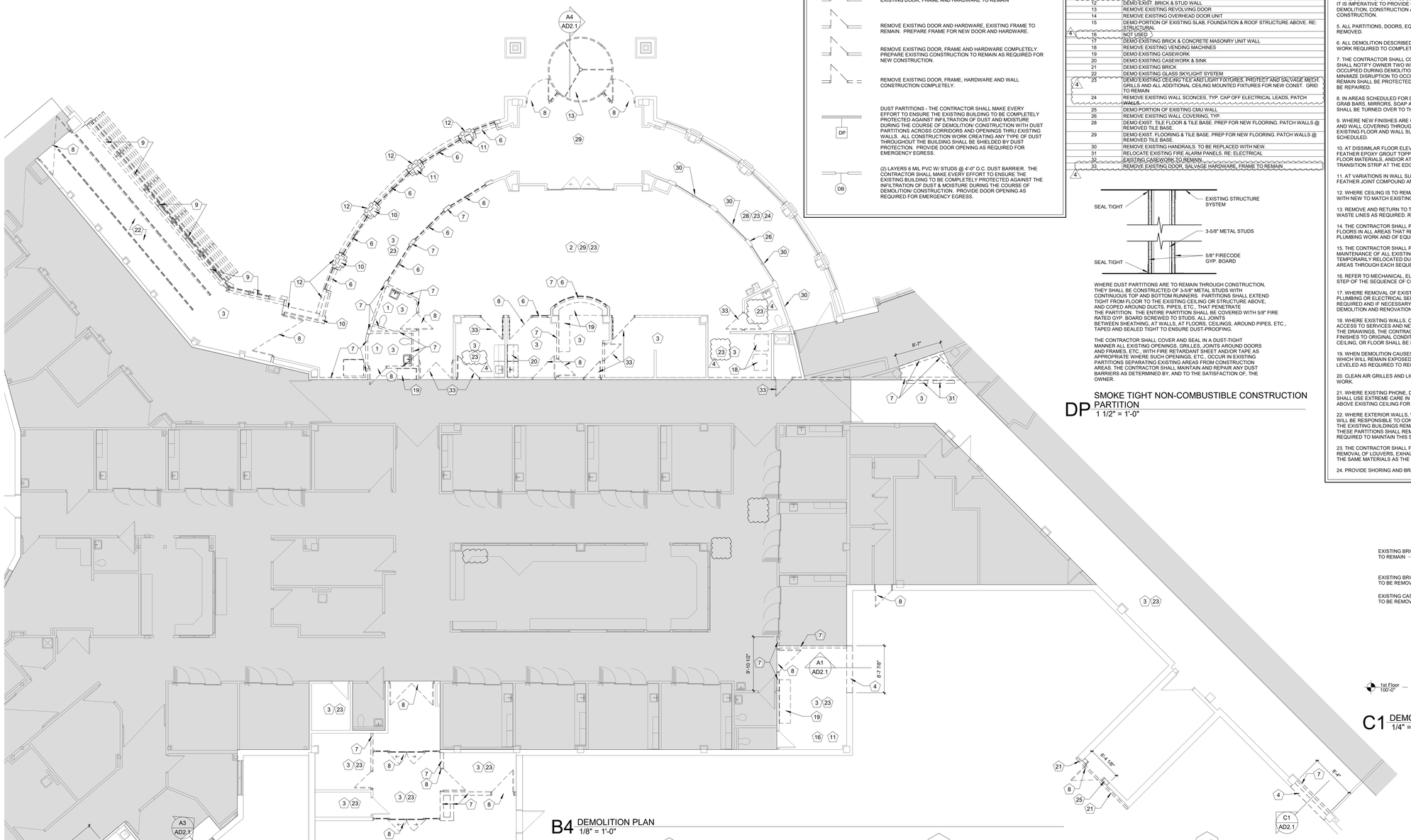
20. CLEAN AIR GRILLES AND LIGHT FIXTURES THROUGHOUT PROJECT AREA UPON COMPLETION OF WORK.

21. 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.

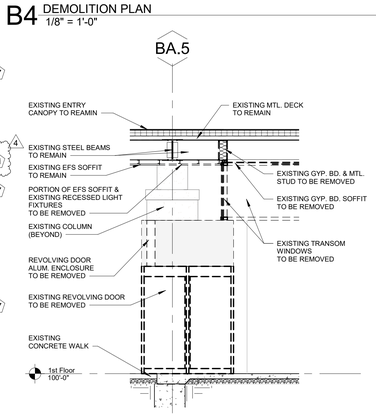
22. WHERE EXTERIOR WALLS, WINDOWS, AND/OR DOORS ARE BEING REMOVED, THE CONTRACTOR WILL BE RESPONSIBLE TO CONSTRUCT TEMPORARY PARTITIONS AS REQUIRED TO ENSURE THAT THE EXISTING BUILDINGS REMAIN WATERTIGHT AND WITHOUT DRAFTS DURING DEMOLITION WORK. THESE PARTITIONS SHALL REMAIN IN PLACE DURING THE NEW CONSTRUCTION WORK, OR AS REQUIRED TO MAINTAIN THIS SEPARATION.

23. THE CONTRACTOR SHALL FILL ALL OPENINGS IN EXTERIOR WALLS RESULTING FROM THE REMOVAL OF LOUVERS, EXHAUST FANS, ETC. THE OPENINGS SHALL BE FILLED FLUSH WITH AND OF THE SAME MATERIALS AS THE SURROUNDING WALLS.

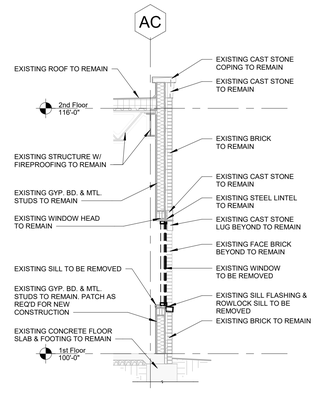
24. PROVIDE SHORING AND BRACING AS REQUIRED DURING DEMOLITION AND NEW CONSTRUCTION.



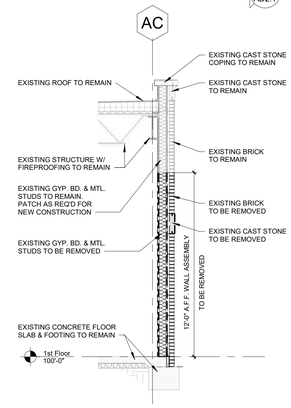
B4 DEMOLITION PLAN
1/8" = 1'-0"



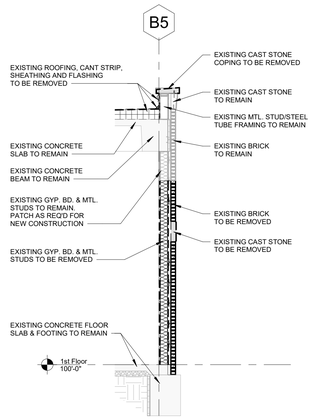
A4 DEMO @ VESTIBULE
1/4" = 1'-0"



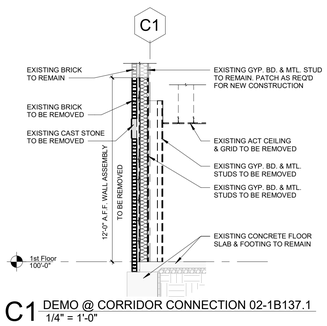
A3 DEMO @ EXISTING WALL 02-1B138.1
1/4" = 1'-0"



A2 DEMO @ CORRIDOR CONNECTION 02-1B00Q
1/4" = 1'-0"



A1 DEMO @ CORRIDOR CONNECTION 02-1B00M
1/4" = 1'-0"



C1 DEMO @ CORRIDOR CONNECTION 02-1B137.1
1/4" = 1'-0"

STATE OF MISSOURI SAMUEL K. BECKMAN A-2011012130 ARCHITECT
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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01

BID PACKAGE #3 03.30.2020

AD2.1

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DEMOLITION PLAN

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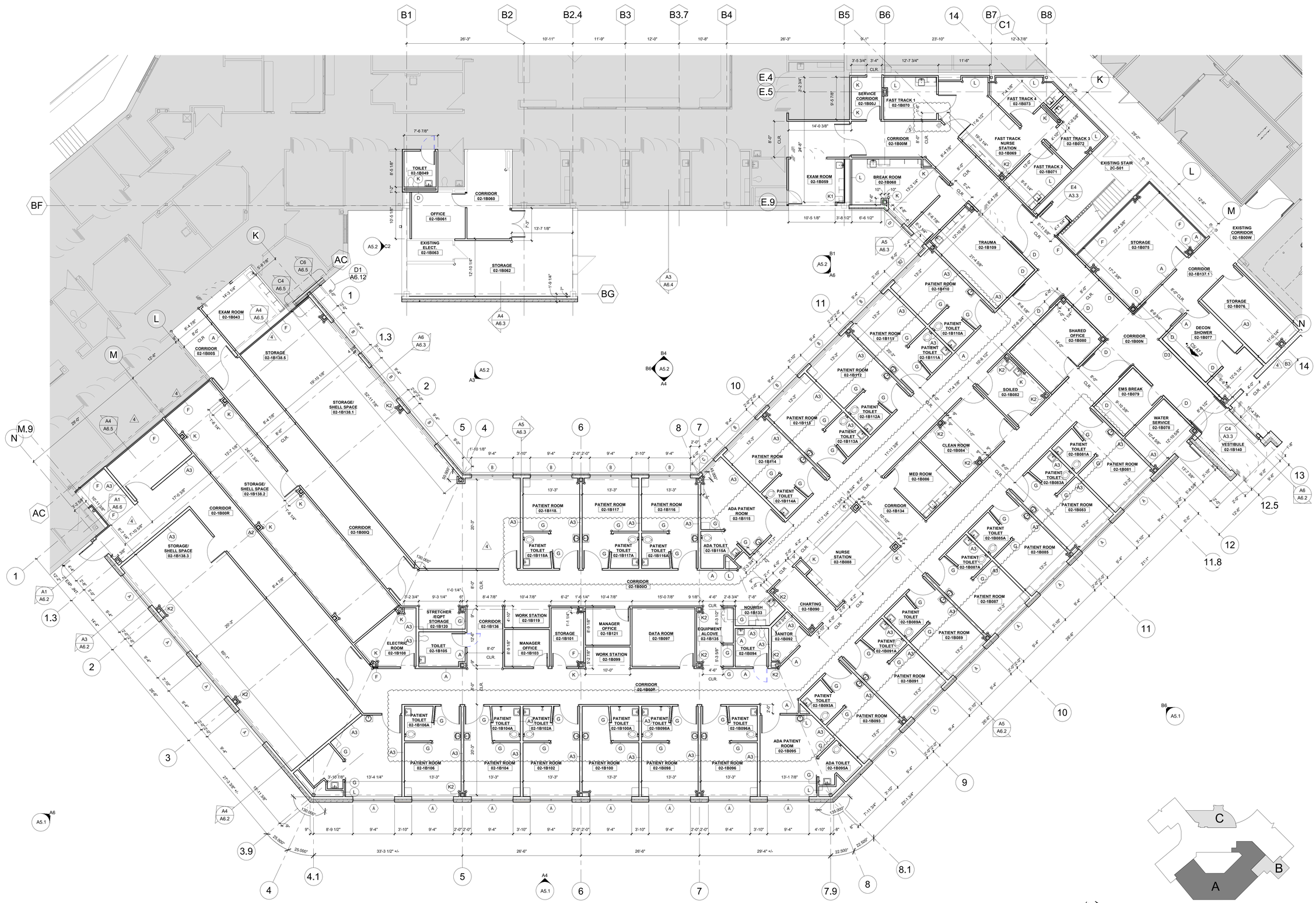

A1 DIMENSION PLAN - AREA A
1/8" = 1'-0"

TRUE NORTH
PLAN NORTH

KEY PLAN - AREA A
1" = 100'-0"

STATE OF MISSOURI
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4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

BID PACKAGE #1 04.17.2020

A2.1

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FLOOR PLAN DIMENSION PLAN - AREA A

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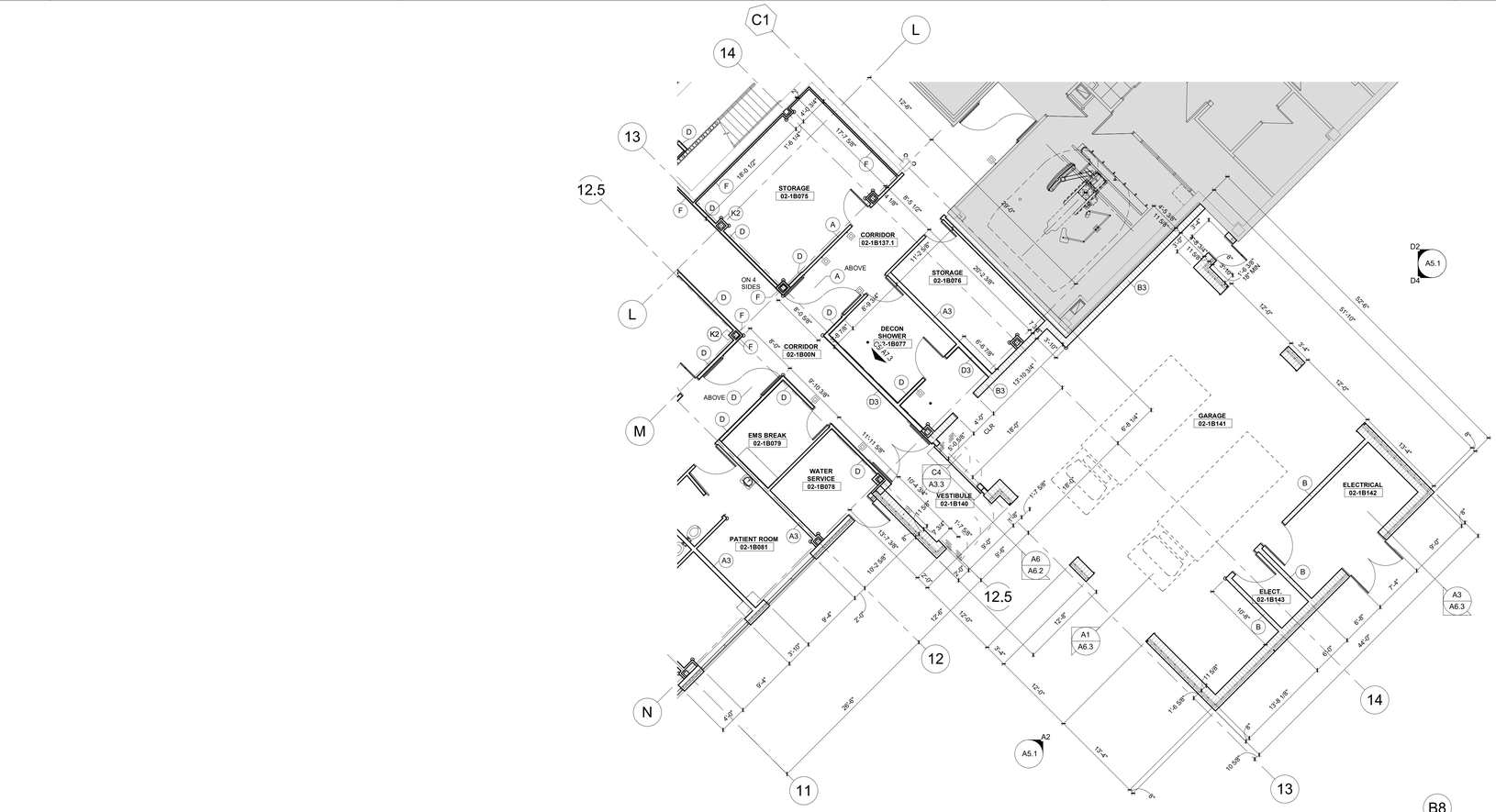
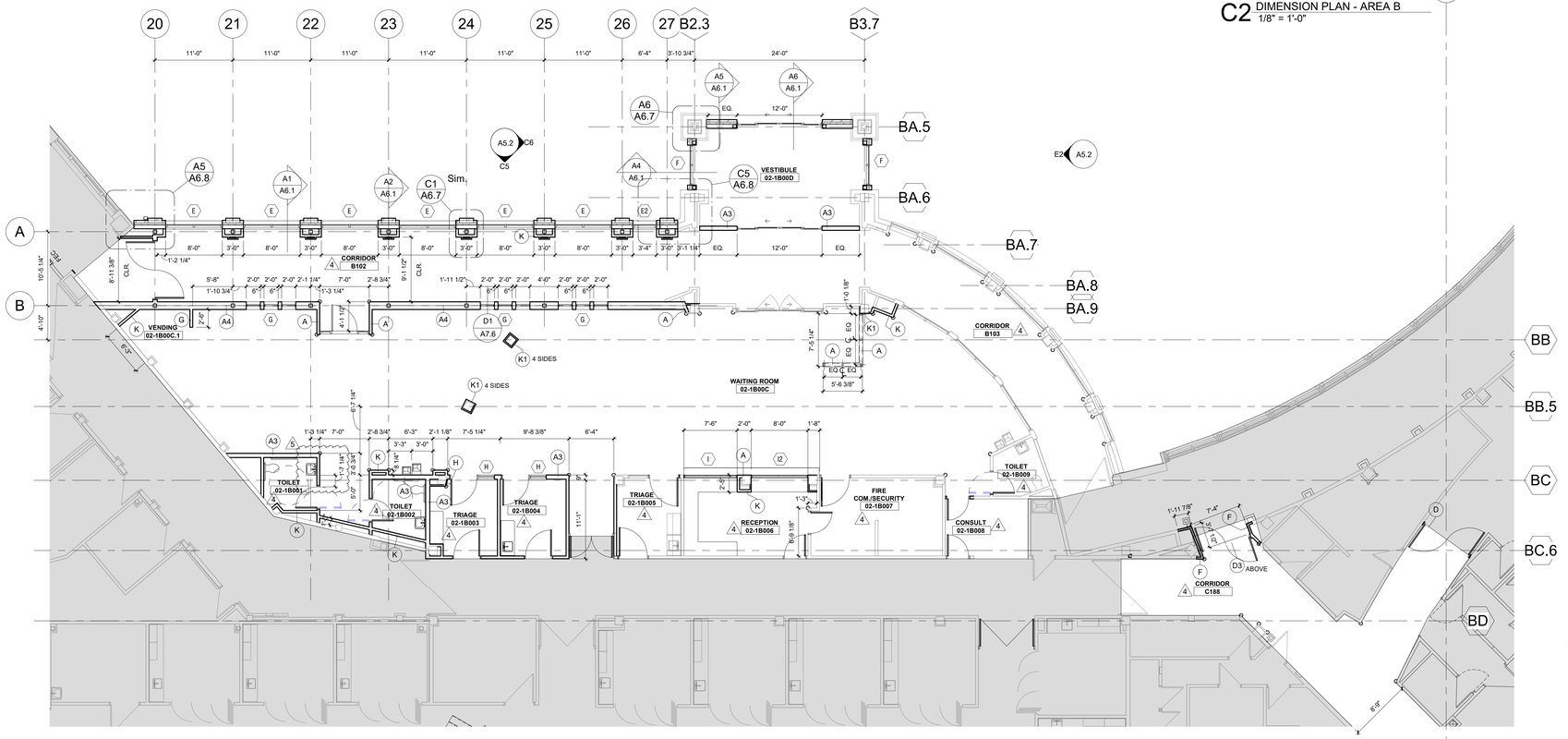
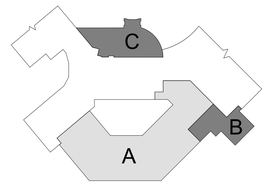


C2 DIMENSION PLAN - AREA B
1/8" = 1'-0"



A2 DIMENSION PLAN - AREA C
1/8" = 1'-0"



KEY PLAN - AREA B & AREA C
1" = 100'-0"

TRUE NORTH
PLAN NORTH

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Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

BID PACKAGE #4 04.17.2020

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FLOOR PLAN DIMENSION PLAN - AREA B & C

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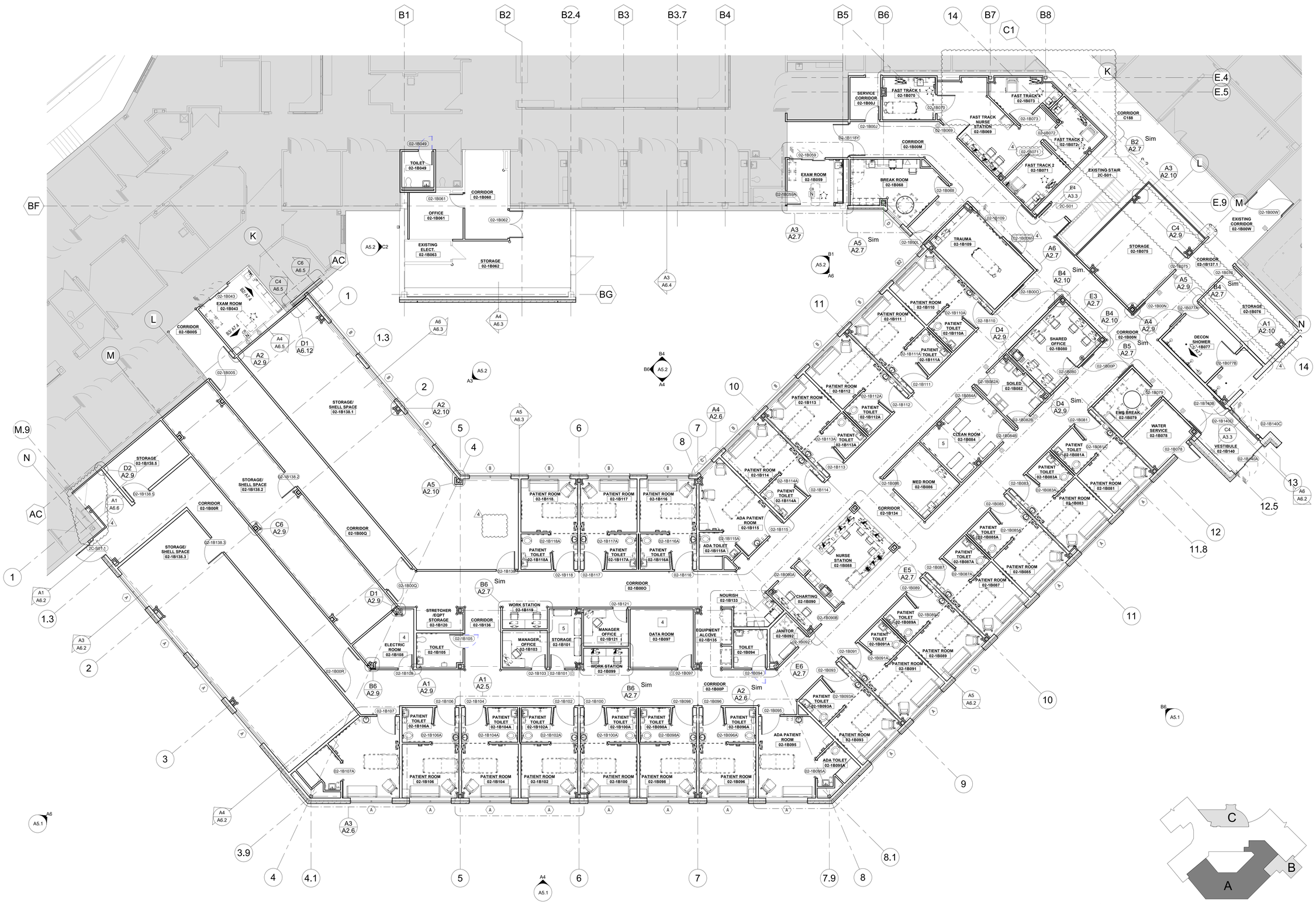
KEYNOTES - FLOOR PLAN

NUMBER	COMMENTS
1	LOCATION OF TUBE STEEL SUPPORTS, RE: DIMENSION PLAN
2	DRINKING FOUNTAINS WITH BOTTLE FILLER
3	ALIGN WITH EXISTING WALL
4	PROVIDE FIRE TREATED PLYWOOD UP TO 8'-0" AFF ON ALL WALLS WITHIN ROOM. RE: ROOM FINISH SCHEDULE FOR PAINT
5	PLUG MOLD TO BE PROVIDED THIS ROOM, RE: MEP



A1 ANNOTATION PLAN - AREA A
1/8" = 1'-0"

TRUE NORTH
PLAN NORTH

KEY PLAN - AREA A
1" = 100'-0"

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SAMUEL K. BECKMAN
A-2011012130
ARCHITECT
03.30.20

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4	04.10.20	Bid Pkg 3 - ADD 01

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FLOOR PLAN ANNOTATION PLAN - AREA A

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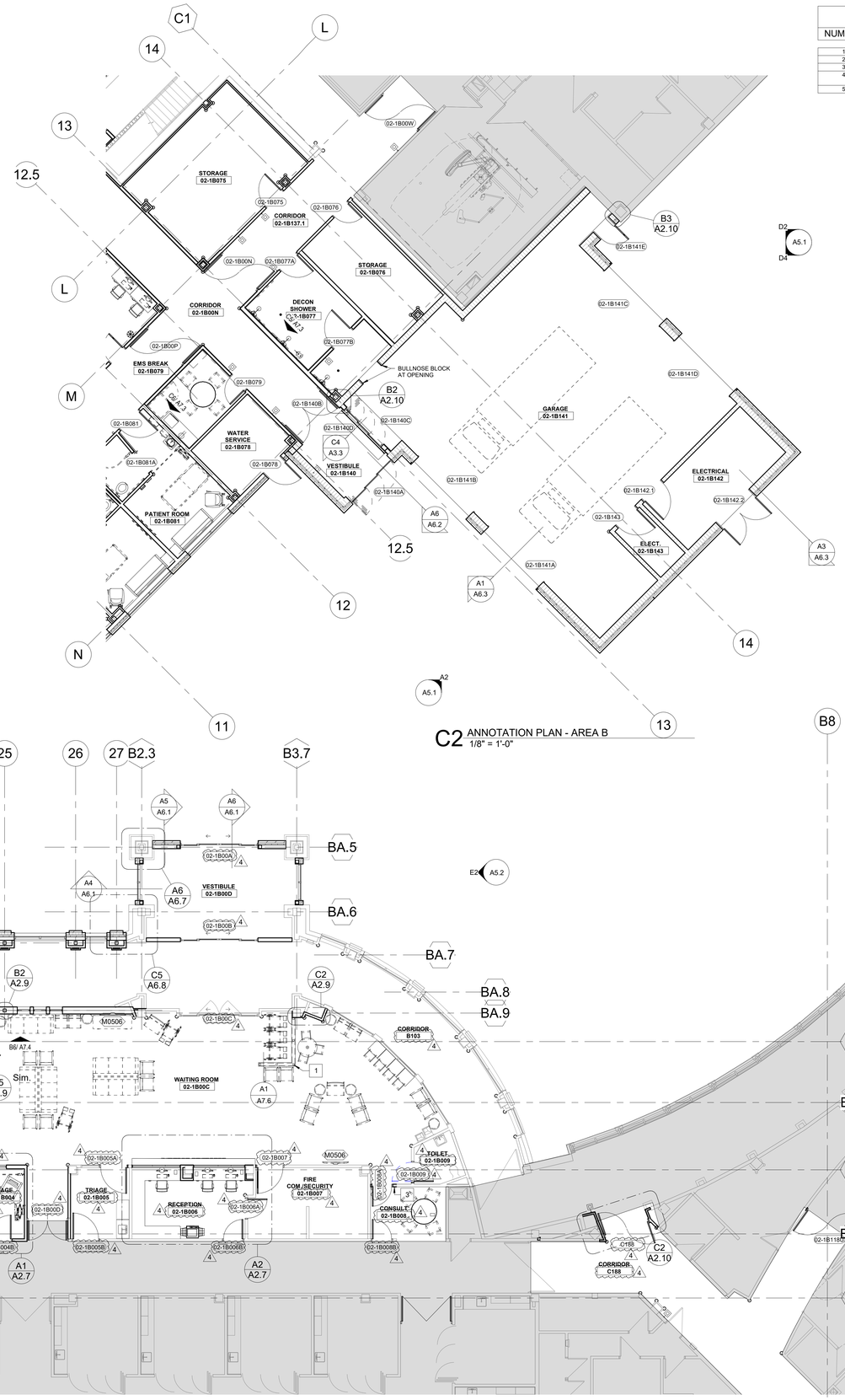
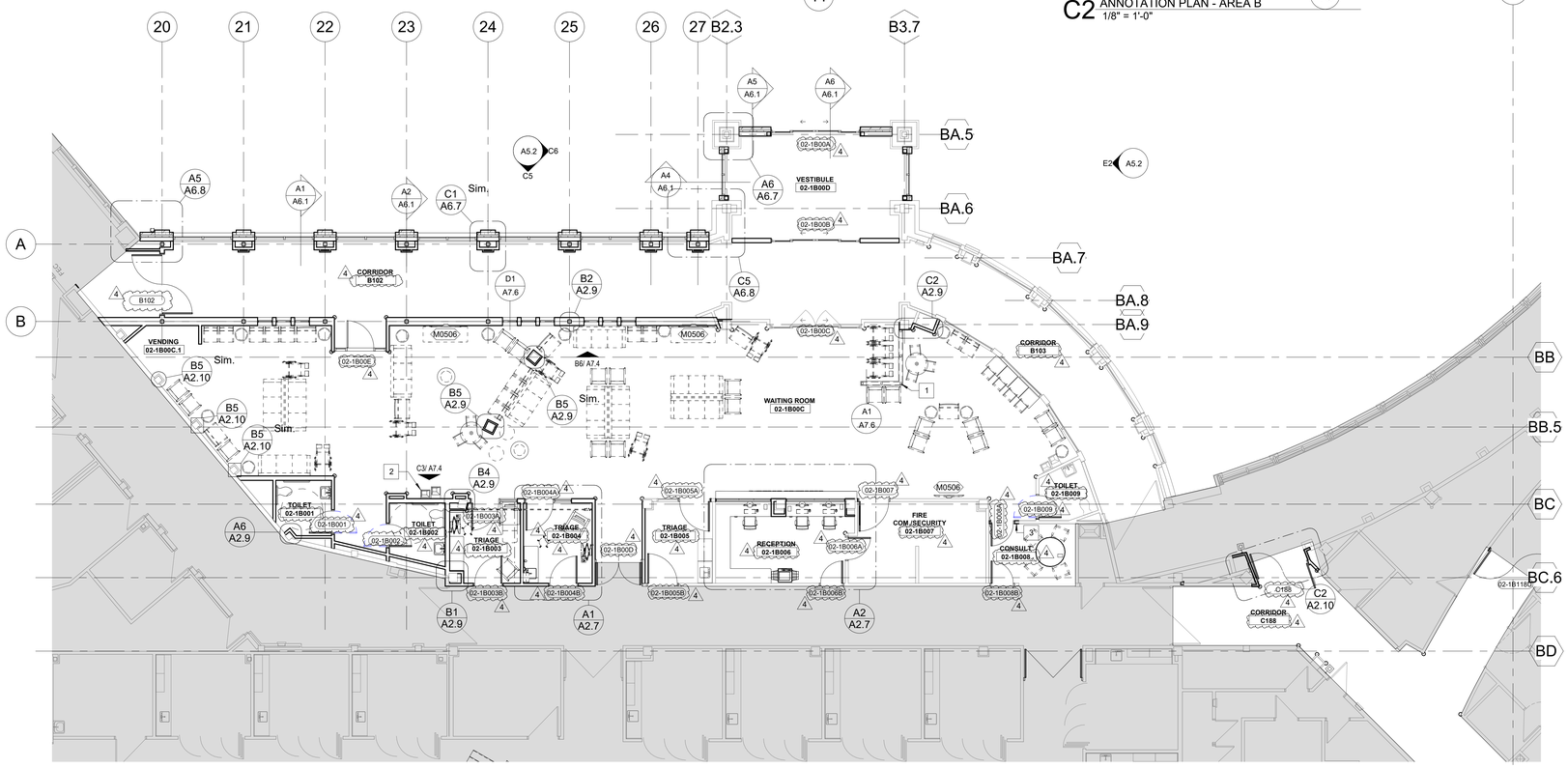
KEYNOTES - FLOOR PLAN

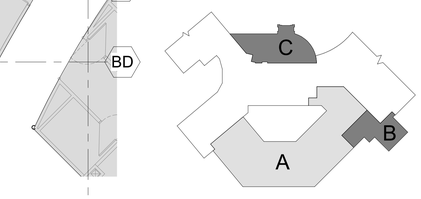
NUMBER	COMMENTS
1	LOCATION OF TUBE STEEL SUPPORTS, RE: DIMENSION PLAN
2	DRINKING FOUNTAINS WITH BOTTLE FILLER
3	ALIGN WITH EXISTING WALL
4	PROVIDE FIRE TREATED PLYWOOD UP TO 8'-0" AFF ON ALL WALLS WITHIN ROOM. RE: ROOM FINISH SCHEDULE FOR PAINT.
5	PLUG MOLD TO BE PROVIDED THIS ROOM, RE: MEP



C2 ANNOTATION PLAN - AREA B
1/8" = 1'-0"



A2 ANNOTATION PLAN - AREA C
1/8" = 1'-0"



KEY PLAN - AREA B & AREA C
1" = 100'-0"

TRUE NORTH
PLAN NORTH

STATE OF MISSOURI
SAMUEL K. BECKMAN
A-2011012130
ARCHITECT
03.30.20

Samuel K. Beckman - Architect
License - Missouri #A-2011012130

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01

A2.4

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FLOOR PLAN ANNOTATION PLAN - AREA B & C

BID PACKAGE #3 03.30.2020

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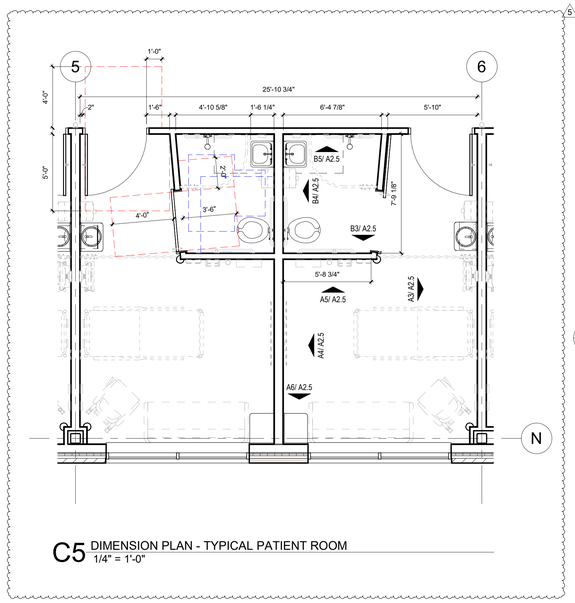
4/17/2020 9:13:55 AM

KEYNOTES - RCP

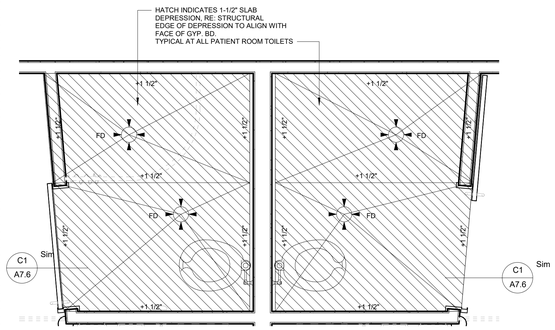
Number	Comments
1	NEW ARCHED SOFFIT TO MATCH EXISTING ARCHED SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.
2	FACE OF SOFFIT TO BE SAME PAINT COLOR AS ADJACENT WALL
3	ALL MANUAL ROLLER SHADES BY OTHERS
4	NEW CEILING, GRID AND LIGHTS, REINSTALL EXIST. MECH. GRILLS.
5	NEW SOFFIT TO MATCH EXISTING WINDOW SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.

ROOM FINISH SCHEDULE - TYP. PATIENT ROOM

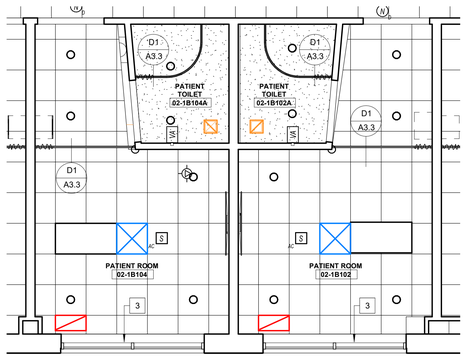
ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALLS				CASEWORK			CEILING	NOTES
				NORTH	EAST	SOUTH	WEST	BASE CABINETS	UPPER CABINETS	COUNTERTOPS		
02-1B102	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-1.2 / P-1	P-1	WP-2 / P-1.8	PL-1	PL-1	SS-1	ACT-1	
02-1B102A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5	
02-1B104	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-2 / P-1.8	P-1	WP-1.2 / P-1	PL-1	PL-1	SS-1	ACT-1	
02-1B104A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5	



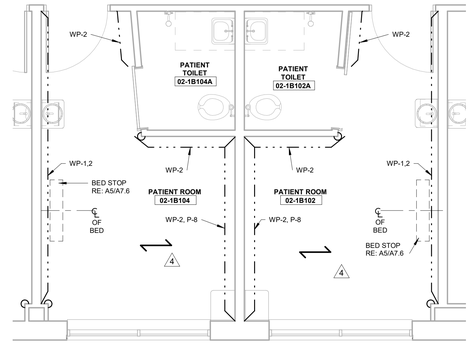
C5 DIMENSION PLAN - TYPICAL PATIENT ROOM
1/4" = 1'-0"



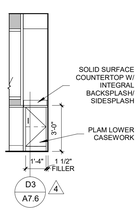
C4 TYPICAL SLAB RECESS AND SLOPING PLAN AT PATIENT ROOM TOILETS
1/2" = 1'-0"



C3 RCP - TYP. ENLARGED PATIENT ROOMS
1/4" = 1'-0"

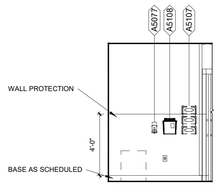


C1 FINISH FLOOR PLAN - TYP. PATIENT ROOM
1/4" = 1'-0"



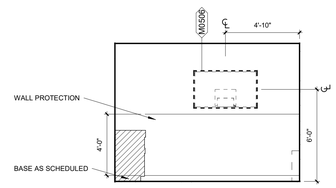
A6 02-1B102 - TYP. PATIENT ROOM - SOUTH
1/4" = 1'-0"

NOTE: ORIENTATION VARIES DEPENDING ON ROOM LAYOUT.

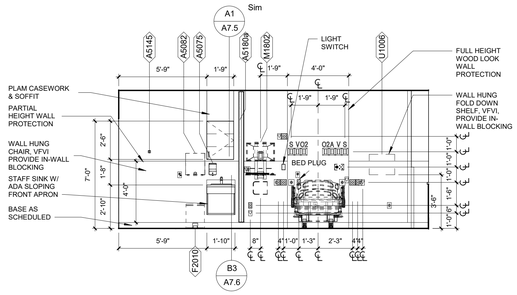


A5 TYP. PATIENT ROOM - STAFF WALL NORTH
1/4" = 1'-0"

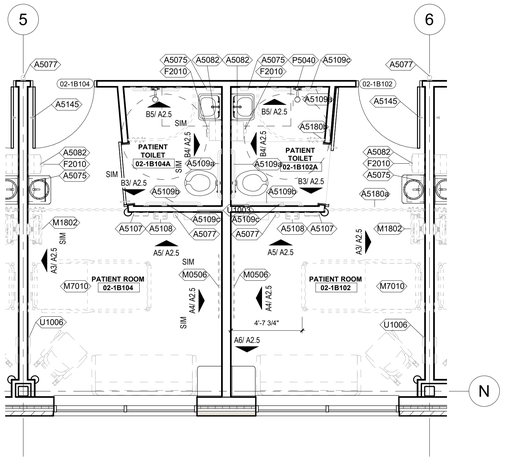
NOTE: ORIENTATION VARIES DEPENDING ON ROOM LAYOUT.



A4 TYP. PATIENT ROOM - FOOTWALL WEST
1/4" = 1'-0"



A3 TYP. PATIENT ROOM - HEADWALL
1/4" = 1'-0"



A1 ENLARGED PLAN - TYPICAL PATIENT ROOM
1/4" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	04.17.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

BID PACKAGE #4 04.17.2020

A2.5

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TYPICAL PATIENT ROOM

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4/10/2020 4:45:24 PM

KEYNOTES - RCP

Number	Comments
1	NEW ARCHED SOFFIT TO MATCH EXISTING ARCHED SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.
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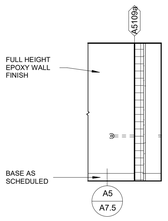
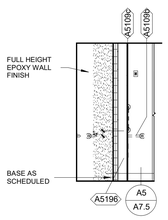
3	ALL MANUAL ROLLER SHADES BY OTHERS
4	NEW CEILING, GRID AND LIGHTS, REINSTALL EXIST. MECH. GRILLS.
5	NEW SOFFIT TO MATCH EXISTING WINDOW SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.

ROOM FINISH SCHEDULE - ADA PATIENT ROOM

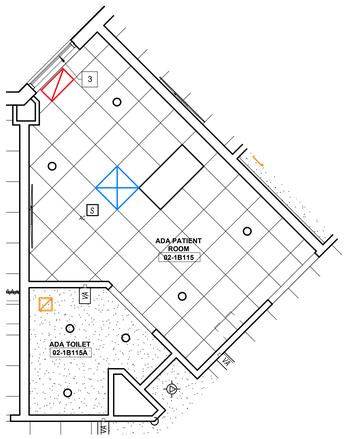
ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALLS				CASEWORK			CEILING	NOTES
				NORTH	EAST	SOUTH	WEST	BASE CABINETS	UPPER CABINETS	COUNTERTOPS		
02-1B095	ADA PATIENT ROOM	SV-3	RWB-1	WP-2 / P-8	WP-2 / P-1	P-1	WP-1, 2 / P-1	PL-1	PL-1	SS-1	ACT-1	
02-1B095A	ADA TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5	
02-1B107	ADA PATIENT ROOM	SV-3	RWB-1	WP-2 / P-8	WP-1,2 / P-1	P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1	
02-1B107A	ADA PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5	
02-1B115	ADA PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1	
02-1B115A	ADA TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5	



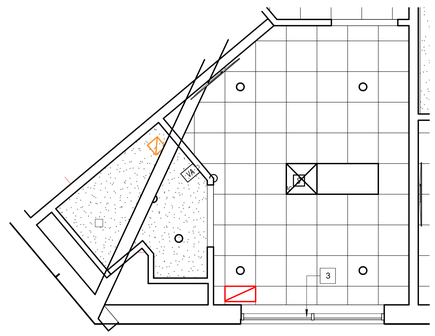
E6 TYP. ADA PATIENT TOILET - WEST
1/4" = 1'-0"



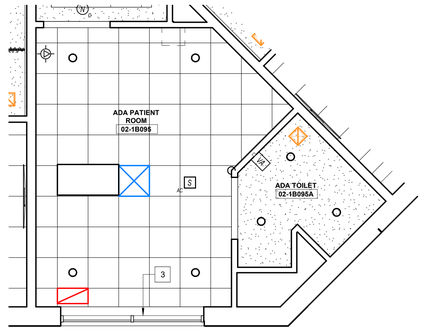
E5 TYP. ADA PATIENT TOILET - NORTH
1/4" = 1'-0"



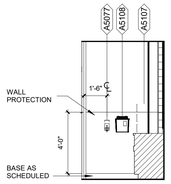
D4 02-1B115 - ADA PATIENT ROOM - RCP
1/4" = 1'-0"



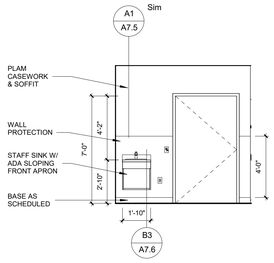
D3 02-1B107 - ADA PATIENT ROOM - RCP
1/4" = 1'-0"



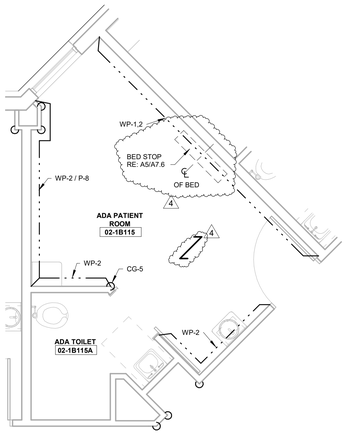
D2 02-1B095 - ADA PATIENT ROOM - RCP
1/4" = 1'-0"



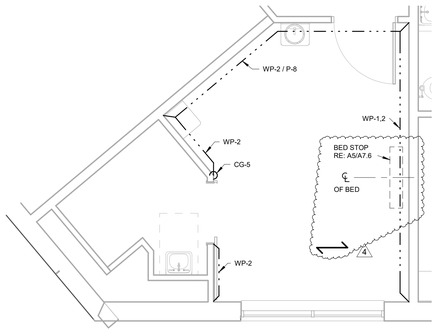
D6 TYP. ADA PATIENT ROOM - STAFF WALL
1/4" = 1'-0"



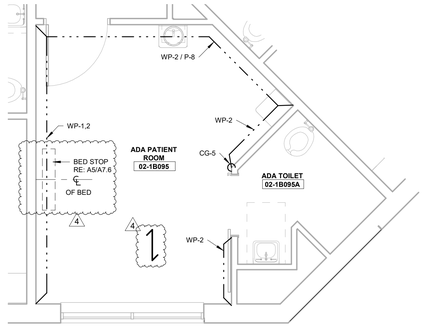
D5 TYP. ADA PATIENT ROOM SINK
1/4" = 1'-0"



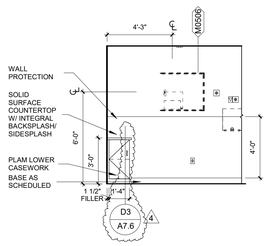
C4 02-1B115 - ADA PATIENT ROOM - FINISH FLOOR PLAN
1/4" = 1'-0"



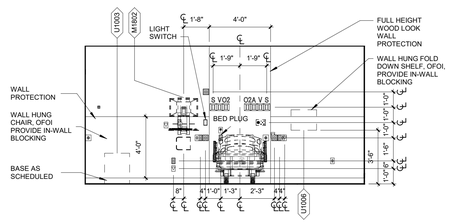
C3 02-1B107 - ADA PATIENT ROOM - FINISH FLOOR PLAN
1/4" = 1'-0"

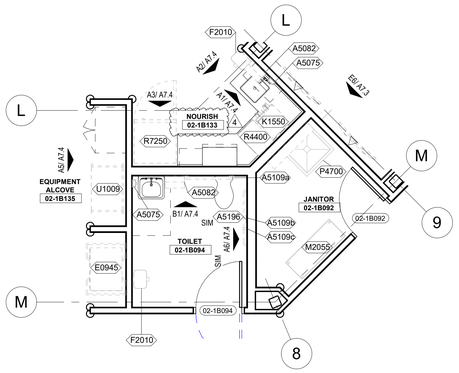


C2 02-1B095 - ADA PATIENT ROOM - FINISH FLOOR PLAN
1/4" = 1'-0"

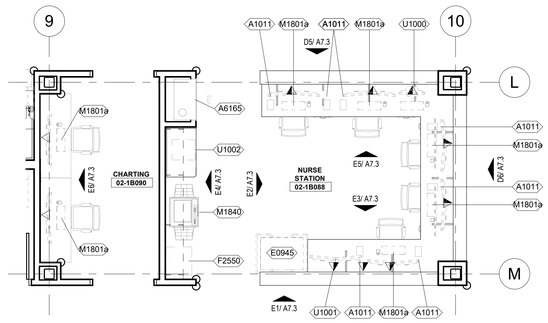


C6 TYP. ADA PATIENT ROOM - FOOTWALL
1/4" = 1'-0"

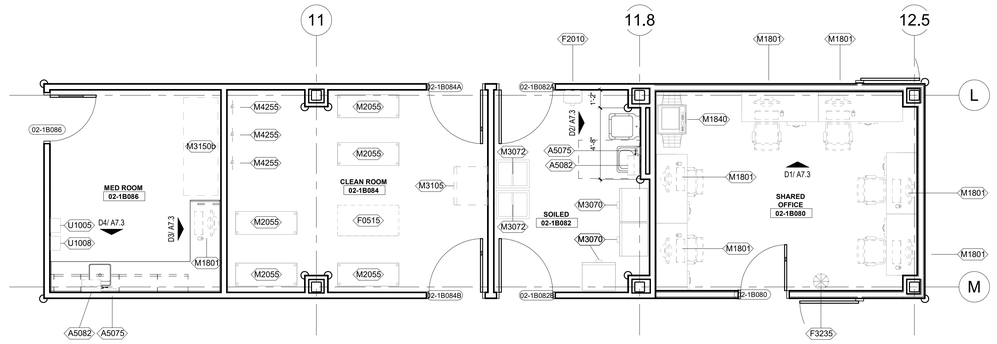

U1003
M1802
LIGHT SWITCH
1'-8"
4'-0"
1'-9"
1'-9"
FULL HEIGHT WOOD LOOK WALL PROTECTION
WALL HUNG FOLD DOWN SHELF, OFOI, PROVIDE IN-WALL BLOCKING
WALL PROTECTION
WALL HUNG CHAIR, OFOI PROVIDE IN-WALL BLOCKING
BASE AS SCHEDULED
S V02
O2A V S
BED PLUG
9'-3"
4'-0"
1'-0"
1'-0"
1



E6 02-1B133 NOURISH, JANITOR, TOILET
1/4" = 1'-0"

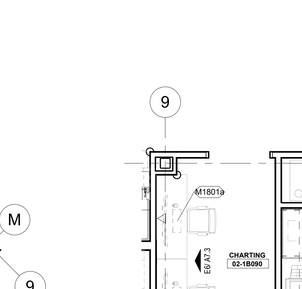


E5 STAFF CORE - ENLARGED
1/4" = 1'-0"

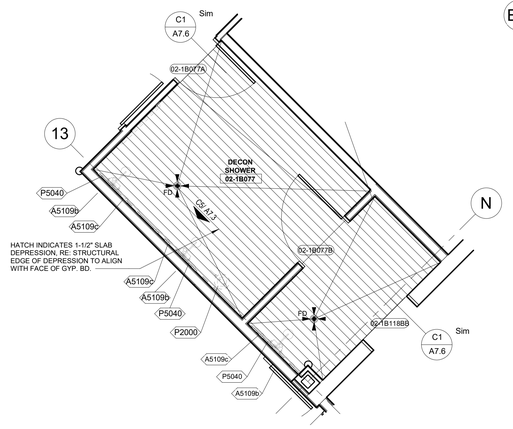


E3 STAFF CORE - ENLARGED
1/4" = 1'-0"

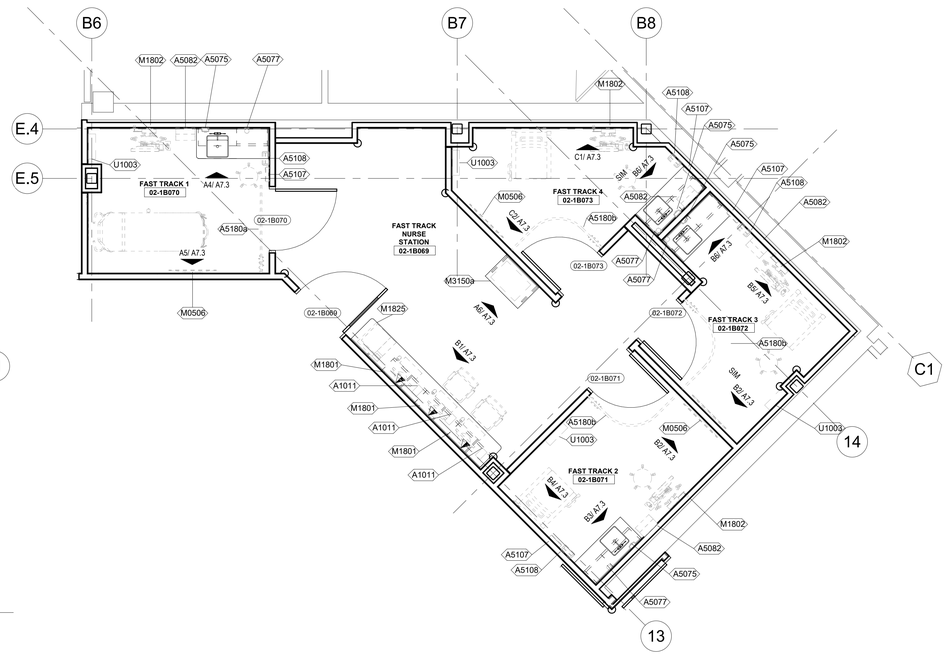
B6 02-1B099 - NURSE STATION ALCOVE - ENLARGED
1/4" = 1'-0"



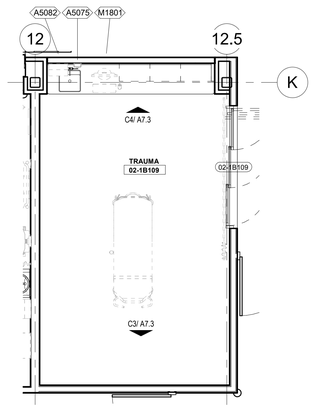
B5 02-1B079 - EMS BREAK ROOM - ENLARGED
1/4" = 1'-0"



B4 02-1B077 - DECON SHOWER - ENLARGED
1/4" = 1'-0"



B2 02-1B069 - FAST TRACK - ENLARGED
1/4" = 1'-0"



A6 02-1B109 TRAUMA
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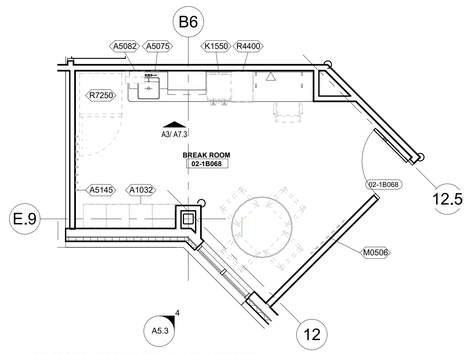

A5 02-1B068 - BREAK ROOM - ENLARGED
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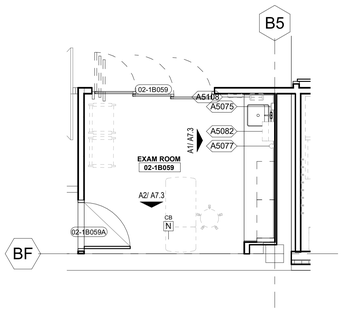

A3 02-1B059 - EXAM ROOM
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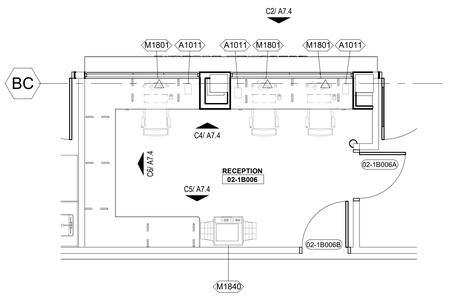
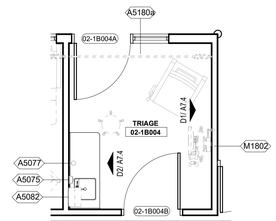


A2 02-1B004 - RECEPTION
1/4" = 1'-0"



A1 02-1B002 - TRIAGE
1/4" = 1'-0"

STATE OF MISSOURI
SAMUEL K. BECKMAN
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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01

A2.7

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ENLARGED PLANS

BID PACKAGE #3 03.30.2020

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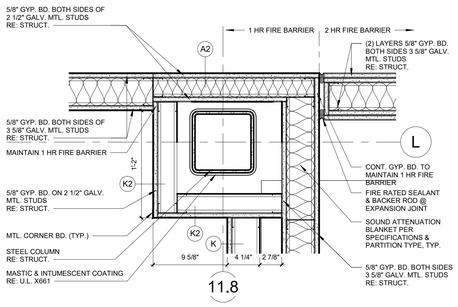
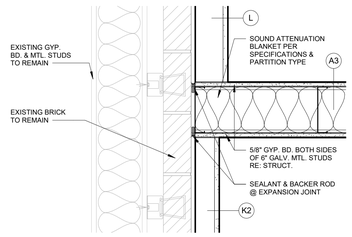


D4 STEEL COLUMN @ 1 HR FIRE BARRIER
1 1/2" = 1'-0"



D2 1 HR FIRE BARRIER @ EXISTING EXTERIOR WALL
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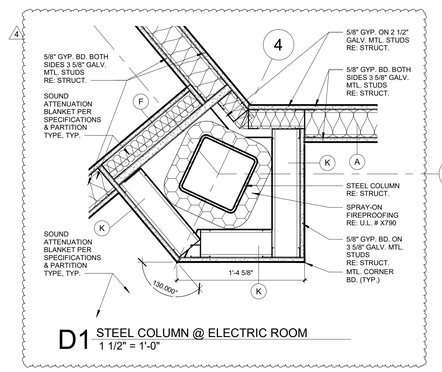
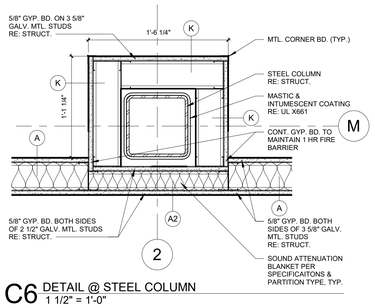
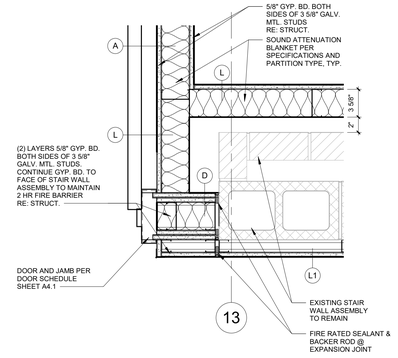


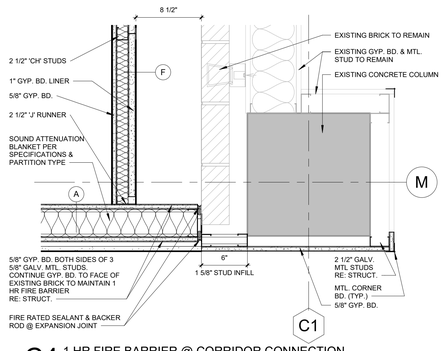
D1 STEEL COLUMN @ ELECTRIC ROOM
1 1/2" = 1'-0"



C6 DETAIL @ STEEL COLUMN
1 1/2" = 1'-0"



C5 2 HR FIRE BARRIER @ CORRIDOR CONNECTION
1 1/2" = 1'-0"



C4 1 HR FIRE BARRIER @ CORRIDOR CONNECTION
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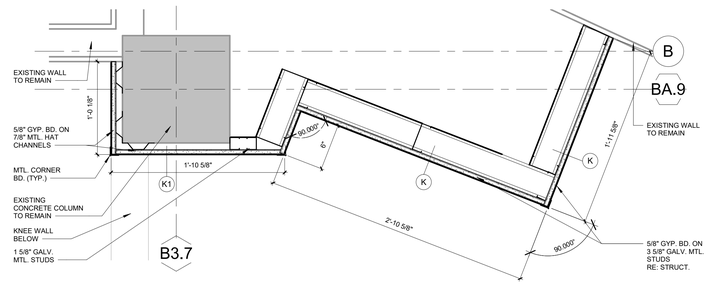

C2 CONCRETE COLUMN @ WAITING ROOM
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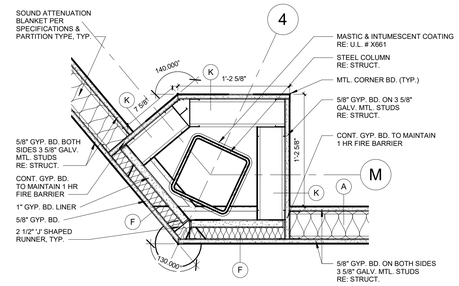
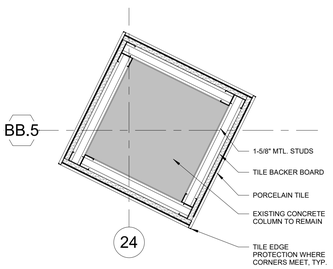


B6 STEEL COLUMN @ ELECTRIC ROOM
1 1/2" = 1'-0"



B5 TYP. CONCRETE COLUMN @ WAITING ROOM
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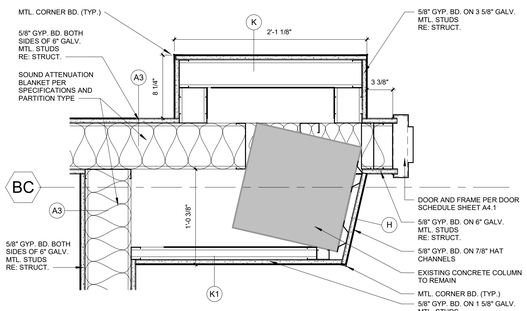
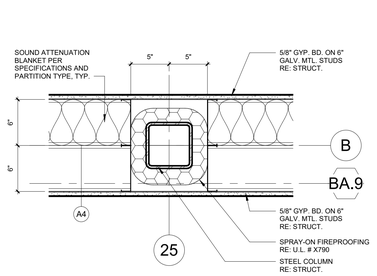


B4 CONCRETE COLUMN @ TRIAGE
1 1/2" = 1'-0"



B2 DETAIL @ TUBE STEEL COLUMN
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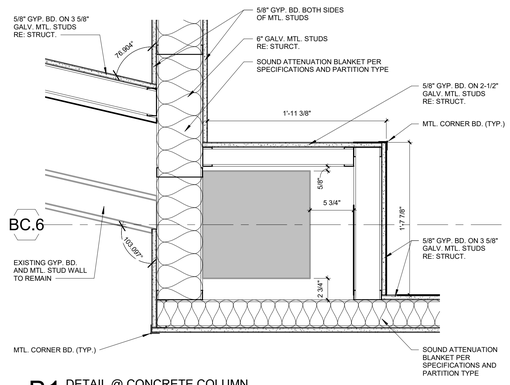
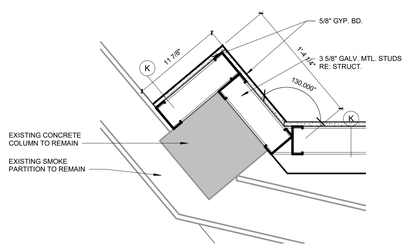


B1 DETAIL @ CONCRETE COLUMN
1 1/2" = 1'-0"



A6 DETAIL @ CONCRETE COLUMN
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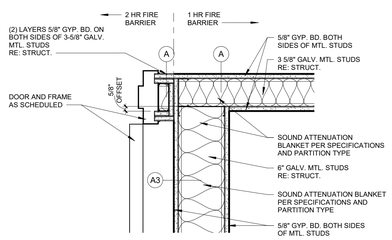
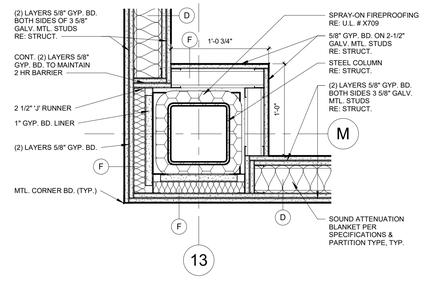
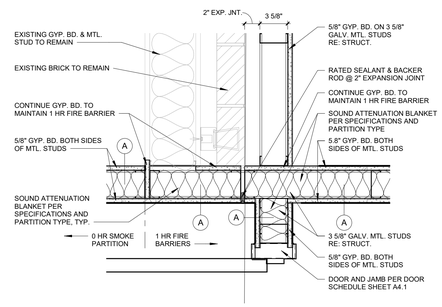


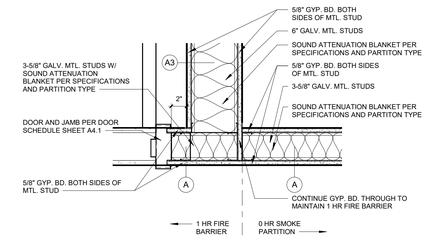
A5 2 HR FIRE BARRIER @ 1 HR FIRE BARRIER
1 1/2" = 1'-0"



A4 STEEL COLUMN @ 2 HR FIRE BARRIER
1 1/2" = 1'-0"



A2 1 HR FIRE BARRIER @ CORRIDOR CONNECTION
1 1/2" = 1'-0"



A1 1 HR FIRE BARRIER @ 0 HR SMOKE PARTITION
1 1/2" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01

A2.9

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PLAN DETAILS

BID PACKAGE #3 03.30.2020

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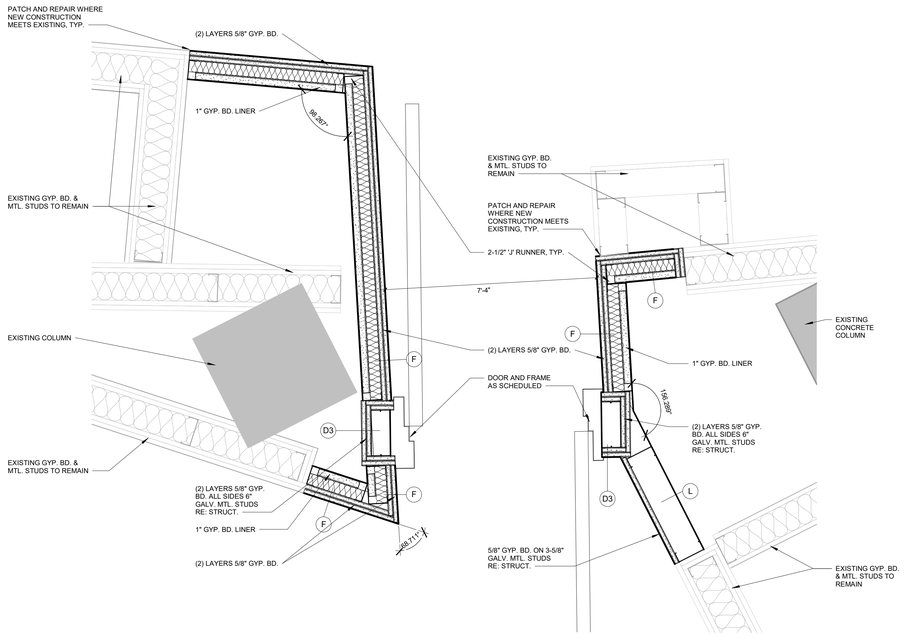

C2 2 HR FIRE BARRIER @ CORRIDOR CONNECTION
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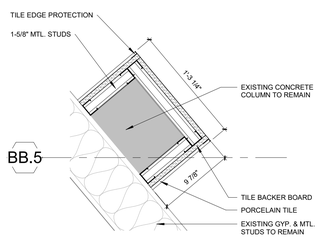

B5 TYP CONCRETE COLUMN @ WAITING ROOM
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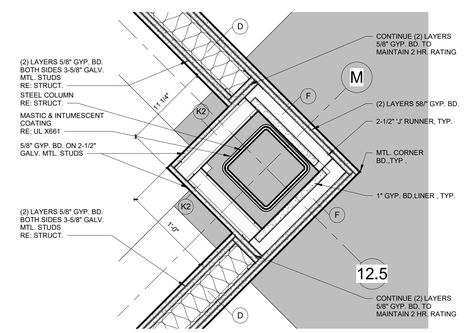
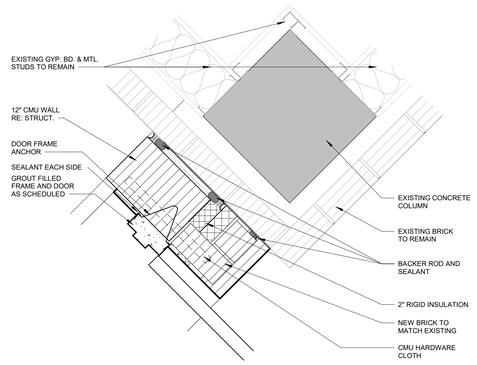


B4 COLUMN @ 2 HR CORNER
1 1/2" = 1'-0"



B3 Detail 2
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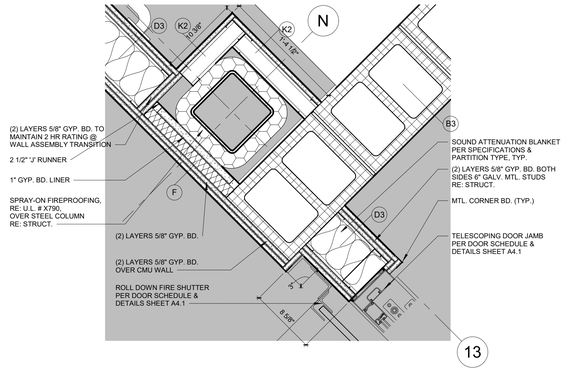
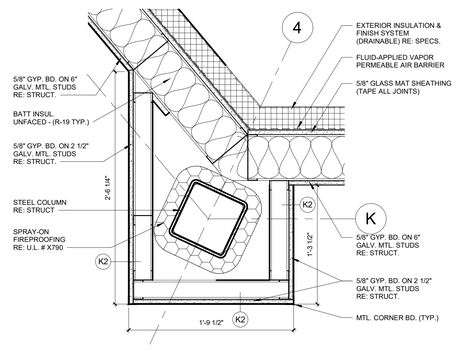
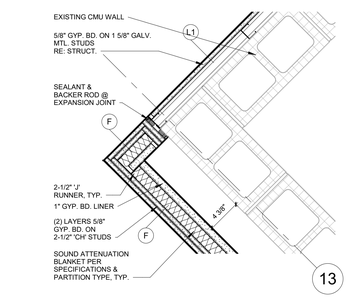


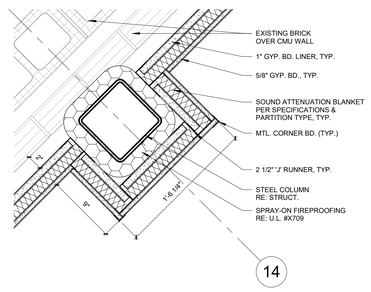
B2 FIRE SHUTTER @ 2 HR WALL
1 1/2" = 1'-0"



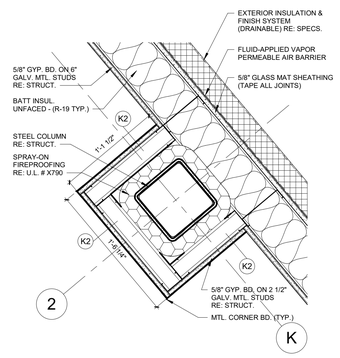
A5 STEEL COLUMN @ EXTERIOR WALL
1 1/2" = 1'-0"



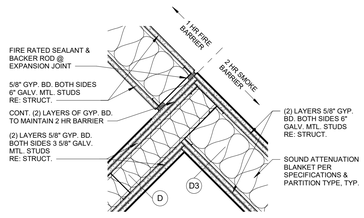
A4 2 HR CORRIDOR WALL @ STAIR
1 1/2" = 1'-0"



A3 2 HR WALL @ COLUMN
1 1/2" = 1'-0"



A2 STEEL COLUMN @ EXTERIOR WALL
1 1/2" = 1'-0"



A1 1 HR FIRE BARRIER @ 2 HR SMOKE BARRIER
1 1/2" = 1'-0"

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03.30.20

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A2.10

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PLAN DETAILS

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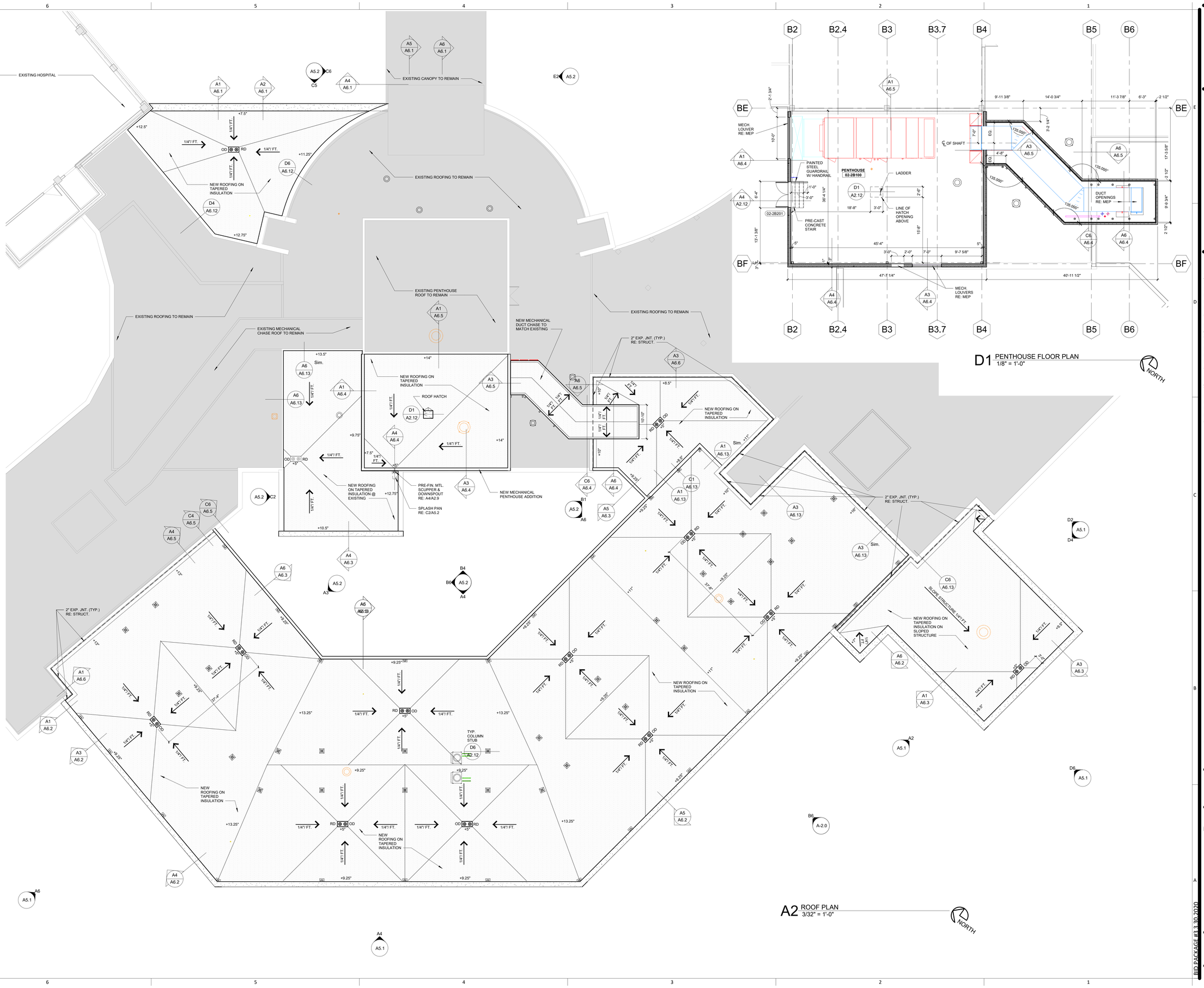
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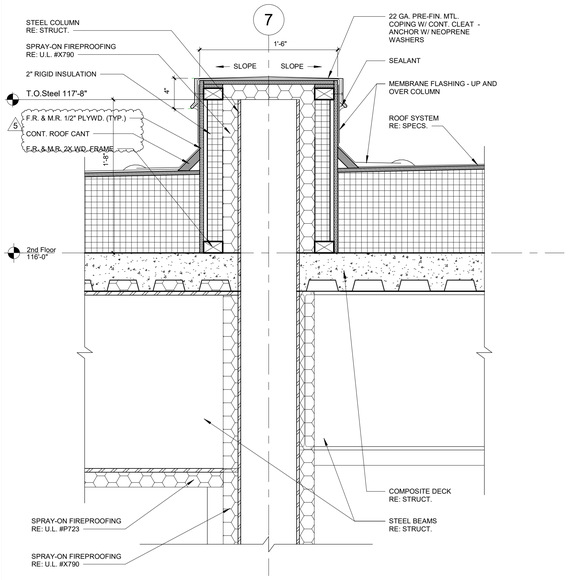
EXISTING CANOPY TO REMAIN
EXISTING ROOFING TO REMAIN
NEW ROOFING ON TAPERED INSULATION
EXISTING PENTHOUSE ROOF TO REMAIN
EXISTING MECHANICAL CHASE ROOF TO REMAIN
NEW MECHANICAL DUCT CHASE TO MATCH EXISTING
ROOF HATCH
NEW ROOFING ON TAPERED INSULATION @ EXISTING
PRE-FIN. MTL. SCUPPER & DOWNSPOUT RE: A4/A2.9
SPLASH PAN RE: C2/A5.2
NEW MECHANICAL PENTHOUSE ADDITION
2" EXP. JNT. (TYP.) RE: STRUCT.
NEW ROOFING ON TAPERED INSULATION ON SLOPED STRUCTURE
SLOPE STRUCTURE 1/4"/ FT.
TYP. COLUMN STUB
NEW ROOFING ON TAPERED INSULATION
NEW ROOFING ON TAPERED INSULATION
NEW ROOFING ON TAPERED INSULATION

4/17/2020 9:14:00 AM



D6 TYPICAL COLUMN STUB DETAIL
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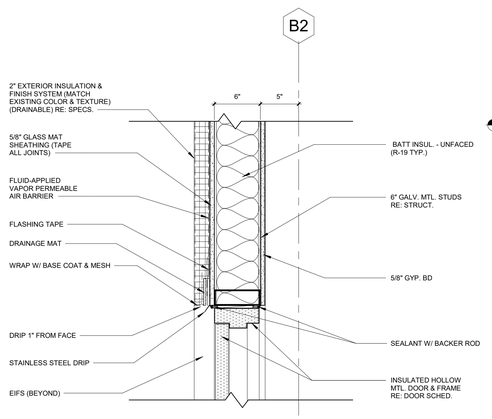
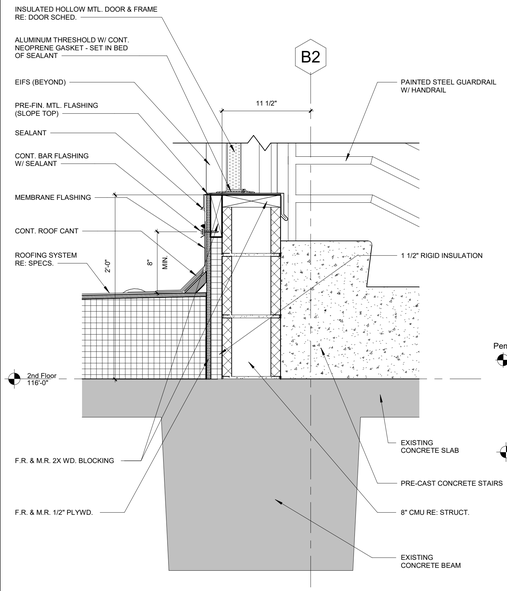


C6 SECTION DETAIL @ PENTHOUSE DOOR HEAD
1 1/2" = 1'-0"



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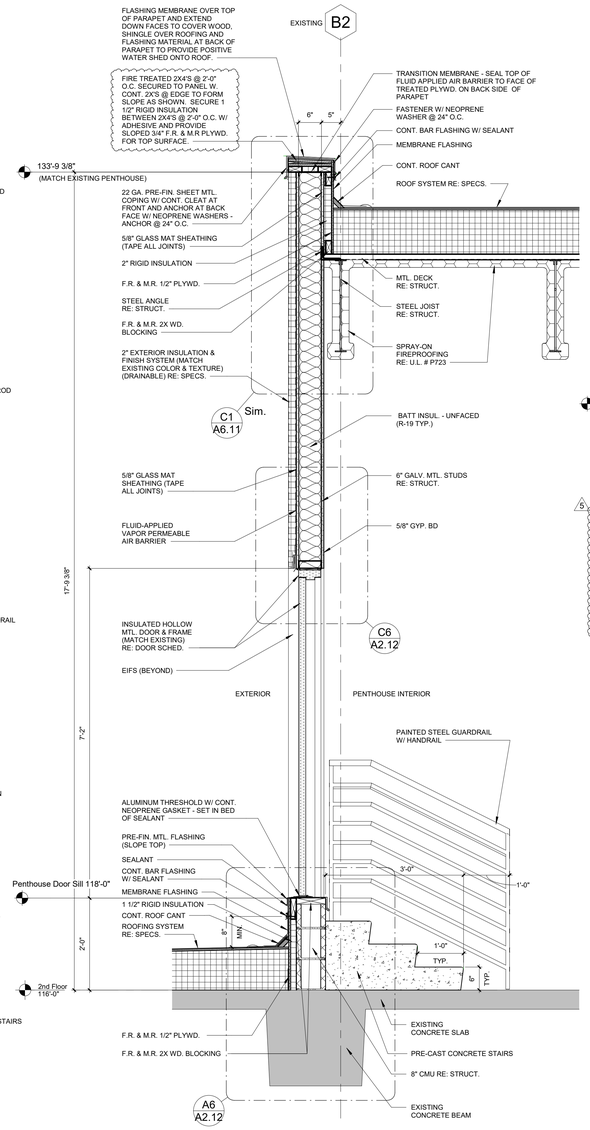
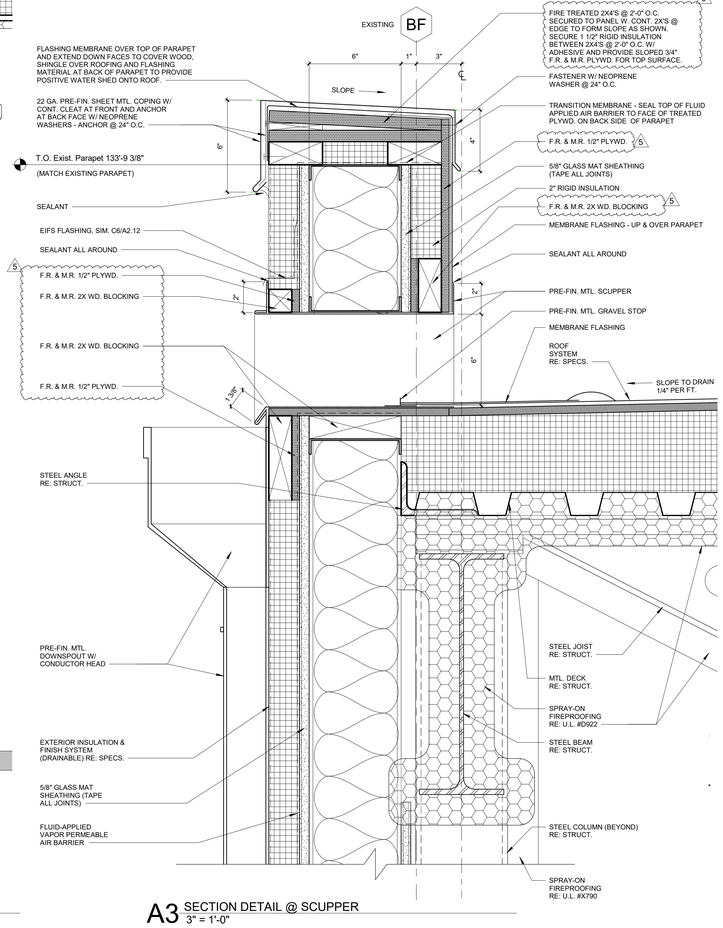
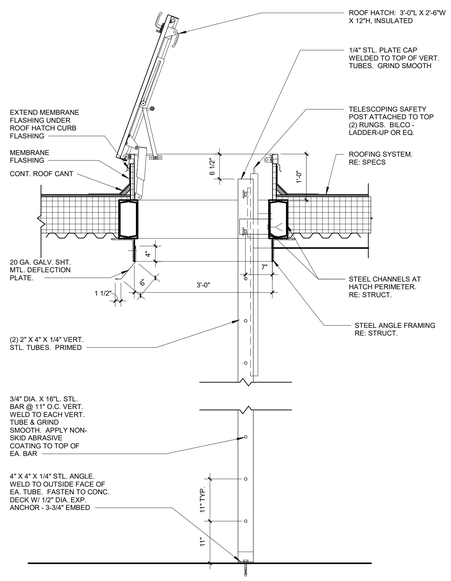
1 1/2" = 1'-0"



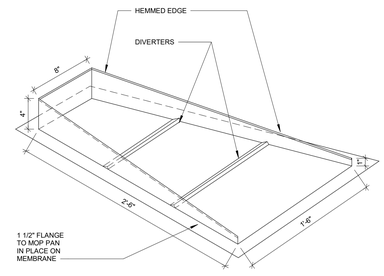
A4 WALL SECTION - PENTHOUSE DOOR
3/4" = 1'-0"



A3 SECTION DETAIL @ SCUPPER
3" = 1'-0"



D1 ROOF HATCH (SCUTTLE) AND LADDER DETAIL
3/4" = 1'-0"



C1 SPLASH PAN DETAIL
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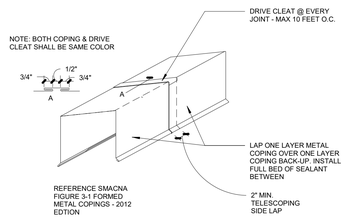
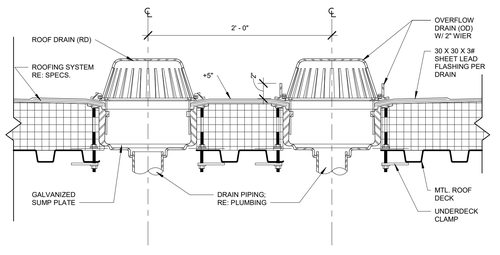


B1 COPING DRIVE CLEAT
3/4" = 1'-0"



A1 ROOF DRAIN & OVERFLOW DRAIN SUMP DETAIL
1 1/2" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	04.17.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC/ GP

Revision

Number	Date	Description
5	04.17.20	City Comments - ASI3

A2.12

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ROOF DETAILS

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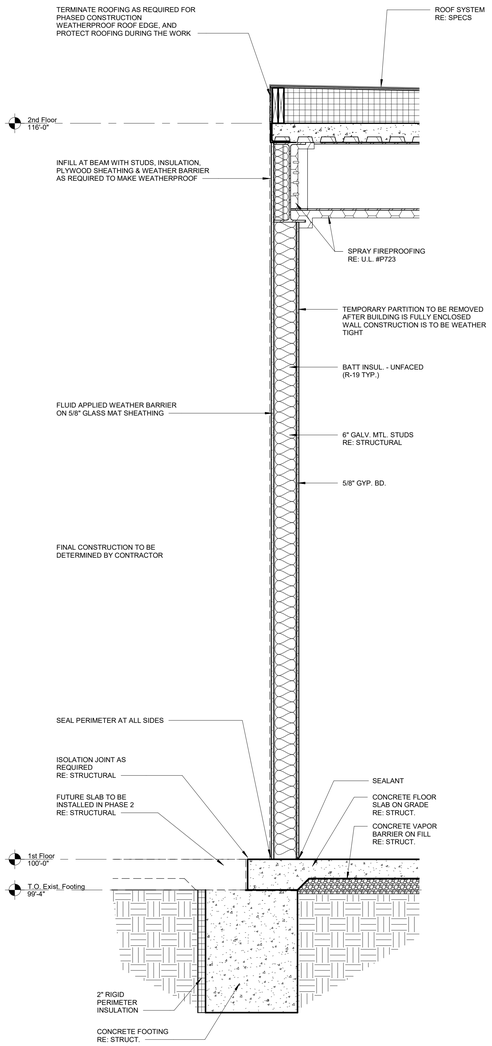
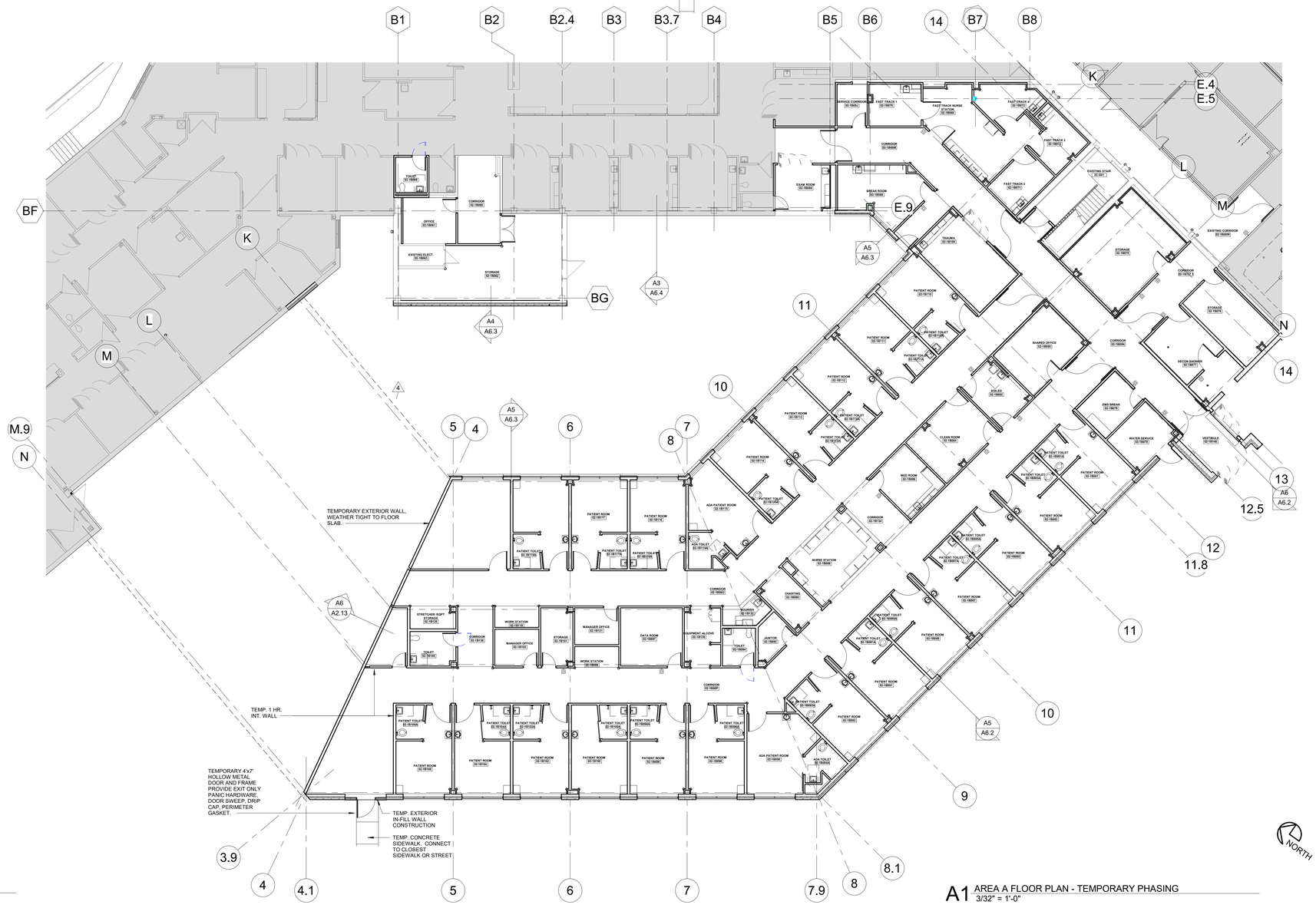
D1 AREA A FLOOR PLAN - TEMPORARY PHASING LIFE SAFETY PLAN
1/16" = 1'-0"



A6 WALL SECTION - TEMPORARY ENCLOSURE
3/4" = 1'-0"



A1 AREA A FLOOR PLAN - TEMPORARY PHASING
3/32" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	04.17.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

BID PACKAGE #4 04.17.2020

A2.13

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AREA A FLOOR PLAN - PHASING ALTERNATE
5

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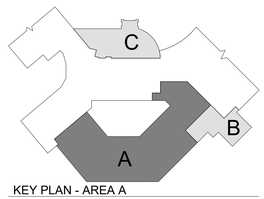
A3 OVERALL REFLECTED CEILING PLAN
1/8" = 1'-0"



KEY PLAN - AREA A
1" = 100'-0"

KEYNOTES - RCP

Number	Comments
1	NEW ARCHED SOFFIT TO MATCH EXISTING ARCHED SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.
2	FACE OF SOFFIT TO BE SAME PAINT COLOR AS ADJACENT WALL
3	ALL MANUAL ROLLER SHADES BY OTHERS

CEILING LEGEND

- RECESSED CAN LIGHT FIXTURE RE: ELECT
- 2'X4' RECESSED/SURFACE LED LIGHT FIXTURE RE: ELECT
- 2'X2' RECESSED/SURFACE LED LIGHT FIXTURE RE: ELECT
- 4"X4' RECESSED/SURFACE LED LIGHT FIXTURE RE: ELECT
- SURFACE-MOUNTED LIGHT FIXTURE RE: ELECT
- PENDANT LIGHT FIXTURE RE: ELECT
- WALL SCONCE LIGHT FIXTURE RE: ELECT
- C2 GYP BOARD CEILING - PAINTED W/ CONTROL JOINTS PER SPECS
- 2X2/2x4 LAY-IN ACOUSTICAL CEILING
- EXIT LIGHT WITH FIXTURE MARK CEILING MOUNTED RE: ELECT
- EXIT LIGHT WITH FIXTURE MARK WALL BRACKET RE: ELECT
- SUPPLY AIR GRILLE RE: MECH
- RETURN AIR OR EXHAUST GRILLE RE: MECH
- 9'-0" SOFFIT HEIGHT
- 9'-0" CEILING HEIGHT

GENERAL NOTES

1. THIS PLAN SHALL BE USED TO COORDINATE THE CEILING LAYOUT WITH MECHANICAL AND ELECTRICAL WORK. VERIFY THE EXACT QUANTITY REQUIRED.
2. CONTRACTOR TO REFER TO THE ELECTRICAL PLANS FOR ACTUAL LIGHTING SIZES AND FIXTURE TYPES.
3. SEE SPECIFICATIONS FOR CEILING TYPES.
4. REFER TO ARCHITECTURAL FLOOR PLANS FOR MATERIAL LEGEND OF ALL TYPES.
5. ALL CEILINGS SHALL BE 9'-0" AFF UNLESS OTHERWISE NOTED.

KEYNOTES - RCP

Number	Comments
1	NEW ARCHED SOFFIT TO MATCH EXISTING ARCHED SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.
2	FACE OF SOFFIT TO BE SAME PAINT COLOR AS ADJACENT WALL
3	ALL MANUAL ROLLER SHADES BY OTHERS

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A3.1

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REFLECTED CEILING PLAN - AREA A

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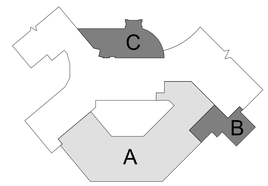
C2 REFLECTED CEILING PLAN- AREA B
1/8" = 1'-0"

KEYNOTES - RCP

Number	Comments
1	NEW ARCHED SOFFIT TO MATCH EXISTING ARCHED SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.
2	FACE OF SOFFIT TO BE SAME PAINT COLOR AS ADJACENT WALL
3	ALL MANUAL ROLLER SHADES BY OTHERS
4	NEW CEILING, GRID AND LIGHTS. REINSTALL EXIST. MECH. GRILLS.
5	NEW SOFFIT TO MATCH EXISTING WINDOW SOFFIT IN CORRIDOR 02-1B007.1. FIELD VERIFY DIMENSIONS.



KEY PLAN - AREA B & AREA C
1" = 100'-0"

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4	04.10.20	Bid Pkg 3 - ADD 01

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REFLECTED CEILING PLAN - AREA B & C

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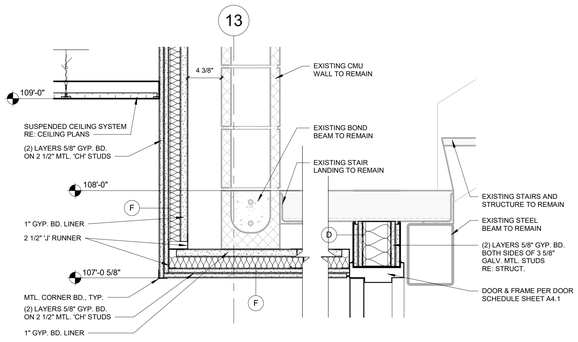
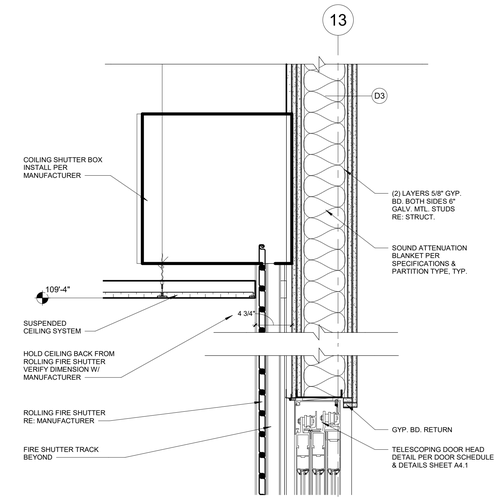
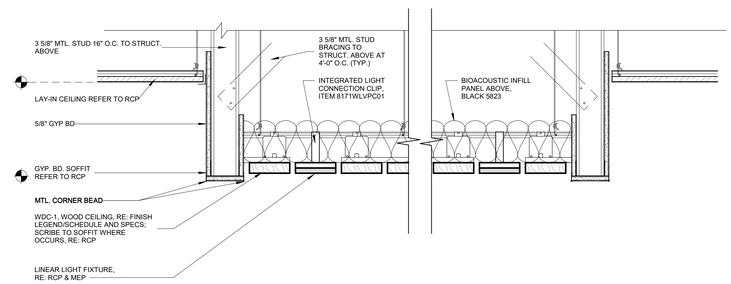


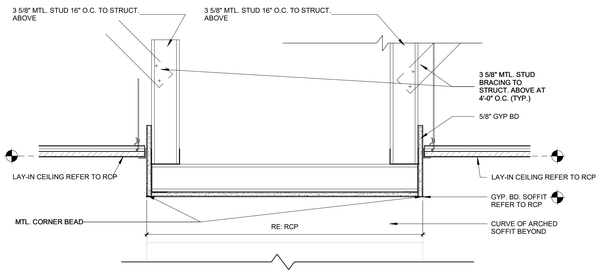
E4 DETAIL @ STAIR CEILING
1 1/2" = 1'-0"



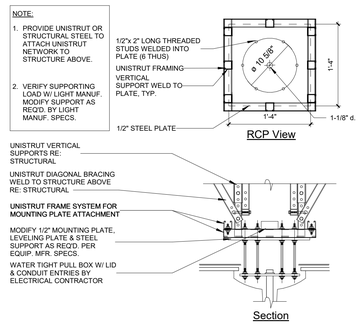
C4 DETAIL AT ROLLING FIRE SHUTTER
1 1/2" = 1'-0"



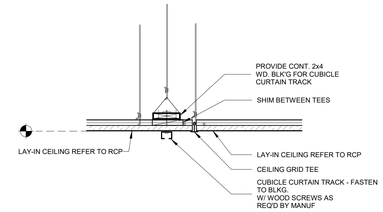
B4 DETAIL AT WOOD CEILING
1 1/2" = 1'-0"



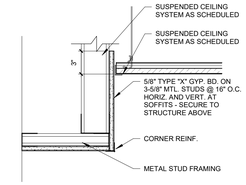
A4 DETAIL AT ARCHED SOFFIT
1 1/2" = 1'-0"



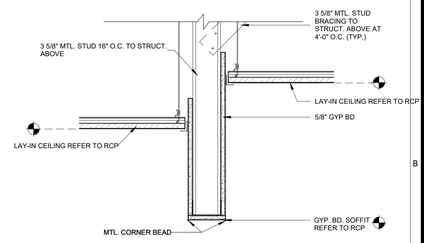
A2 LIGHT SUPPORT
1" = 1'-0"



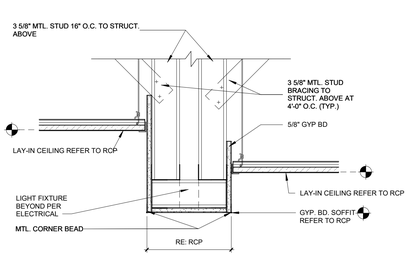
D1 CUBICLE CURTAIN TRACK DTL.
1 1/2" = 1'-0"



C1 GYPSUM BOARD SOFFIT
1 1/2" = 1'-0"



B1 BULKHEAD DETAIL
1 1/2" = 1'-0"



A1 SOFFIT DTL.
1 1/2" = 1'-0"

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REFLECTED CEILING PLAN DETAILS

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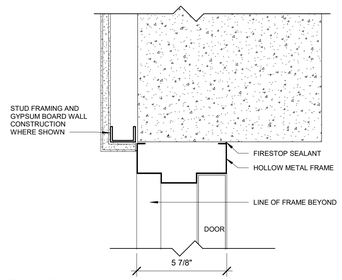
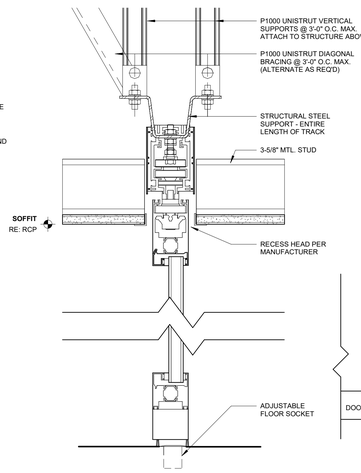
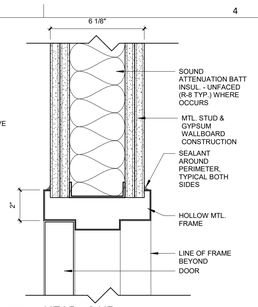


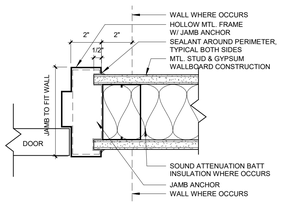
E6 HEAD - MASONRY
3" = 1'-0"



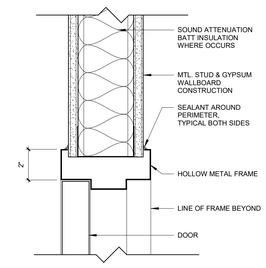
D5 TELESCOPING DOOR HEAD & SILL DETAILS
3" = 1'-0"



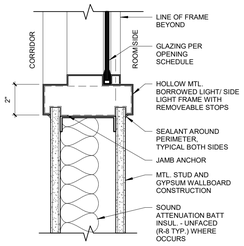
E5 HEAD - 2 HR
3" = 1'-0"



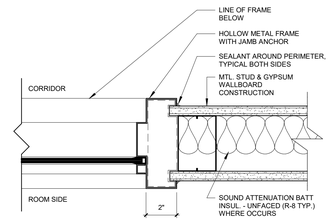
E4 TYPICAL HOLLOW METAL FRAME
3" = 1'-0"



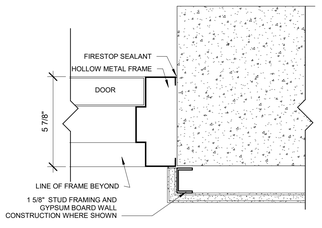
E3 TYPICAL HEAD- HOLLOW METAL DOOR FRAME
3" = 1'-0"



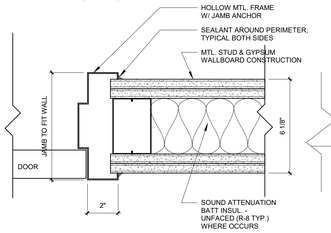
E2 SILL - HOLLOW MTL. SIDELITE/ BORROWED LITE FRAME
3" = 1'-0"



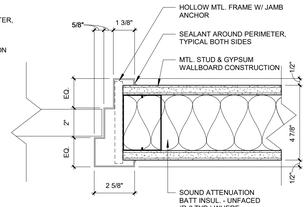
E1 JAMB - HOLLOW MTL. SIDELITE/ BORROWED LITE FRAME
3" = 1'-0"



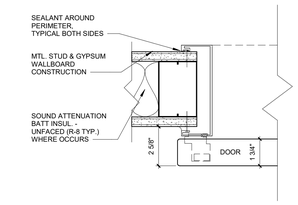
D6 JAMB - MASONRY
3" = 1'-0"



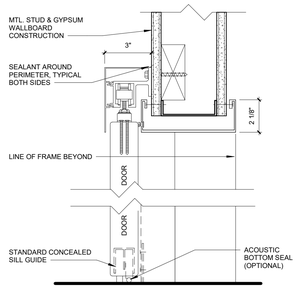
D4 JAMB - 2 HR
3" = 1'-0"



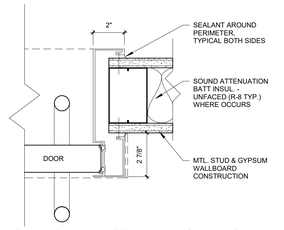
D3 JAMB - DOUBLE EGRESS FRAME
3" = 1'-0"



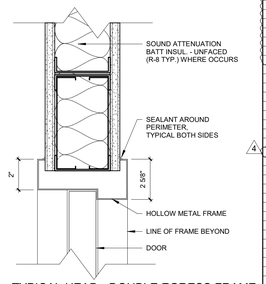
C6 SLIDING BARN DOOR - JAMB @ SILL GUIDE
3" = 1'-0"



C5 SLIDING BARN DOOR - HEAD & SILL
3" = 1'-0"



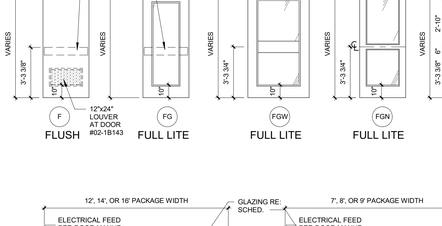
C4 SLIDING BARN DOOR - JAMB @ PULL SIDE
3" = 1'-0"

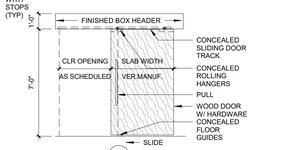


C3 TYPICAL HEAD - DOUBLE EGRESS FRAME
3" = 1'-0"

B3 JAMB-RESCUE HARDWARE-HEAD SIM.
3" = 1'-0"

A3 JAMB - CASED OPENING-HEAD SIM.
3" = 1'-0"

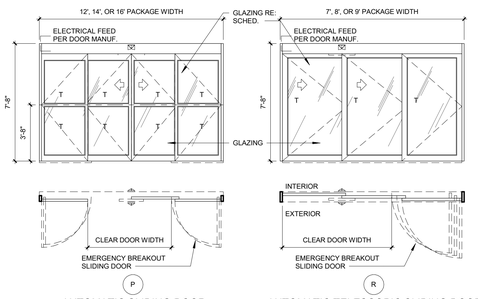




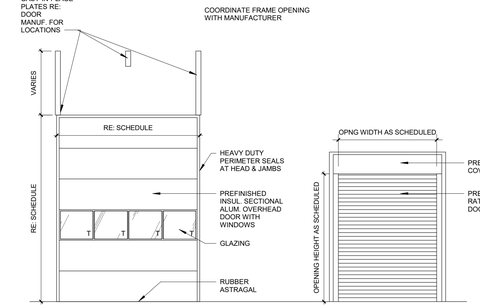
SLIDING BARN DOOR CONCEALED TRACK

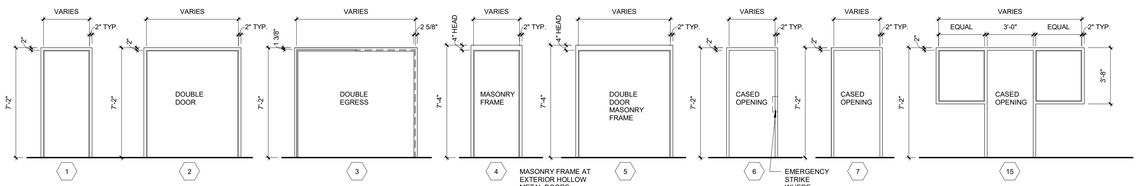
NOTE: UNDERCUT DOOR AT ALL PATIENT TOILET ROOM DOORS

COORDINATE FRAME OPENING WITH MANUFACTURER



DOOR ELEVATIONS:





FRAME ELEVATIONS:

DOOR SCHEDULE

DOOR #	ROOM NAME	DOOR INFORMATION WIDTH	HEIGHT	NO. OF LEAVES	ELEV.	MATL.	FRAME INFORMATION ELEV.	MATL.	GLAZING	LABEL (MIN)	HARDWARE SET	OPENING DETAIL HEAD	JAMB	REMARKS	REVISION #
02-1B00A	VESTIBULE	12'-0"	8'-0"	4	P	ALUM	--	ALUM	T	--	29	A3/A6.8	D5/A6.7	CARD READER & AUTO OPENER	
02-1B00B	VESTIBULE	12'-0"	8'-0"	4	P	ALUM	--	ALUM	T	--	29	A3/A6.8	D5/A6.7	CARD READER & AUTO OPENER	
02-1B000	WAITING ROOM	3'-0"	7'-0"	2	F	WD	2	HM	--	0 hr	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B00E	WAITING ROOM	3'-6"	7'-0"	1	FGN	ALUM	--	ALUM	T	--	12	E3	--		
02-1B00J	SERVICE CORRIDOR	3'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	13	E3	E4	CARD READER	
02-1B00L	CORRIDOR	3'-0"	7'-0"	1	FG	ALUM	1	ALUM	--	--	05	B1/A6.9	A1/A6.9		
02-1B00M	CORRIDOR	3'-10"	7'-0"	2	N	WD	3	HM	FR	90 min	08	C3/A4.1	D3/A4.1	CARD READER & AUTO OPENER	
02-1B00N	CORRIDOR	3'-10"	8'-6"	2	N	WD	3	HM	FR	90 min	07	C3/A4.1	D3/A4.1	CARD READER	
02-1B00O	CORRIDOR	3'-10"	7'-0"	2	N	WD	3	HM	FR	90 min	06	C3/A4.1	D3/A4.1	MAG. HOLD OPEN	
02-1B00P	CORRIDOR	3'-10"	7'-0"	2	N	WD	3	HM	FR	90 min	06	C3/A4.1	D3/A4.1	MAG. HOLD OPEN	
02-1B00Q		3'-6"	7'-0"	2	N	WD	3	HM	FR	0 hr	06	C3/A4.1	D3/A4.1	CARD READER	
02-1B00R		3'-6"	7'-0"	2	N	WD	3	HM	FR	0 hr	06	C3/A4.1	D3/A4.1	CARD READER	
02-1B00S	CORRIDOR	3'-6"	7'-0"	2	N	WD	3	HM	FR	0 hr	07	C3/A4.1	D3/A4.1	CARD READER & AUTO OPENER	
02-1B00W	EXISTING CORRIDOR	3'-10"	8'-6"	2	N	WD	3	HM	FR	45 min	10	C3/A4.1	D3/A4.1	CARD READER & AUTO OPENER	
02-1B001	TOILET	3'-0"	7'-0"	1	F	WD	1	HM	--	--	24	E3	B3	RESCUE HARDWARE	
02-1B002	TOILET	3'-0"	7'-0"	1	F	WD	1	HM	--	--	24	E3	B3	RESCUE HARDWARE	
02-1B003A	TRIAGE	3'-8"	7'-0"	1	F	WD	1	HM	--	--	21	E3	E4		
02-1B003B	TRIAGE	3'-8"	7'-0"	1	F	WD	1	HM	--	--	20	E3	E4		
02-1B004A	TRIAGE	3'-8"	7'-0"	1	F	WD	1	HM	--	0 hr	21	E3	E4		
02-1B004B	TRIAGE	3'-8"	7'-0"	1	F	WD	1	HM	--	0 hr	20	E3	E4		
02-1B005A	TRIAGE	4'-0"	7'-0"	1	F	WD	1	HM	--	--	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B005B	TRIAGE	4'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B006A	FIRE COM./SECURITY	3'-0"	7'-0"	1	F	WD	1	HM	--	--	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B006B	RECEPTION	3'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B007	FIRE COM./SECURITY	4'-0"	7'-0"	1	G	WD	1	HM	--	--	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B008A	CONSULT	3'-0"	7'-0"	1	F	WD	1	HM	--	--	20	E3	E4		
02-1B008B	CONSULT	3'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	20	E3	E4		
02-1B009	WAITING ROOM	3'-0"	7'-0"	1	F	WD	1	HM	--	--	ETR	--	--	EXISTING FRAME AND HARDWARE TO REMAIN	
02-1B043	EXAM ROOM	7'-11 1/2"	7'-3 3/4"	3	R	ALUM	--		T	--	28	REF. SECT.	REF. SECT.	RELOCATED EXISTING DOOR AND HRDWR	
02-1B049	TOILET	3'-0"	7'-0"	1	F	WD	1	HM	--	--	23	E3	B3	RESCUE HARDWARE	
02-1B059	EXAM ROOM	7'-11 1/2"	7'-3 3/4"	3	R	ALUM	--		T	--	28	REF. SECT.	REF. SECT.		
02-1B059A	EXAM ROOM	3'-0"	7'-0"	1	F	WD	1	HM	--	--	22	E3	E4		
02-1B061	OFFICE	3'-0"	7'-0"	1	F	WD	1	HM	T	0 hr	20	E3	E4		
02-1B062	STORAGE	3'-0"	7'-0"	2	F	WD	2	HM	FR	0 hr	18	E3	E4		
02-1B068	BREAK ROOM	3'-0"	7'-0"	1	N	WD	1	HM	T	0 hr	13	E3	E4	CARD READER	
02-1B069	FAST TRACK NURSE STATION	4'-0"	7'-0"	1	G	WD	1	HM	--	0 hr	15	E3	E4	CARD READER & AUTO OPENER	
02-1B070	FAST TRACK 1	4'-0"	7'-0"	1	F	WD	1	HM	--	--	20	E3	E4		
02-1B071	FAST TRACK 2	3'-6"	7'-0"	1	F	WD	1	HM	--	--	20	E3	E4		
02-1B072	FAST TRACK 3	3'-6"	7'-0"	1	F	WD	1	HM	--	--	20	E3	E4		
02-1B073	FAST TRACK 4	3'-6"	7'-0"	1	F	WD	1	HM	--	--	20	E3	E4		
02-1B075	STORAGE	3'-6"	7'-0"	1	F	WD	1	HM	--	90 min	17	E5	D4		
02-1B076	STORAGE	3'-0"	7'-0"	1	F	WD	1	HM	--	45 min	16	E3	E4		
02-1B077A	DECON SHOWER	3'-6"	7'-0"	1	F	FRP	1	ALUM	--	0 hr	19	E5	D4		
02-1B077B	DECON SHOWER	4'-0"	7'-0"	1	F	FRP	1	ALUM	--	90 min	19	E5	D4		
02-1B078	WATER SERVICE	3'-6"	7'-0"	1	F	HM	1	HM	--	--	02	B1A6.9	A1/A6.9	CARD READER	
02-1B079	EMS BREAK	3'-0"	7'-0"	1	F	WD	1	HM	--	90 min	13	E5	D4	CARD READER	
02-1B080	SHARED OFFICE	3'-0"	7'-0"	1	N	WD	1	HM	FR	0 hr	14	E5	D4	CARD READER	
02-1B081	PATIENT ROOM	4'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	25	E3	E4		
02-1B081A	PATIENT TOILET	3'-6"	7'-0"	1	SB	WD	--	ALUM	--	--	27	C5/A4.1	C4&C6/A4.1	3'-6" CLR. OPENING & UNDERCUT	
02-1B082A	SOILED	3'-6"	7'-0"	1	F	WD	1	HM	--	45 min	13	E3	E4	CARD READER	
02-1B082B	SOILED	3'-6"	7'-0"	1	F	WD	1	HM	--	45 min	13	E3	E4	CARD READER	
02-1B083	PATIENT ROOM	4'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	25	E3	E4		
02-1B083A	PATIENT TOILET	3'-6"	7'-0"	1	SB	WD	--	ALUM	--	--	27	C5/A4.1	C4&C6/A4.1	3'-6" CLR. OPENING & UNDERCUT	
02-1B084A	CLEAN ROOM	3'-6"	7'-0"	1	N	WD	1	HM	FR	45 min	13	E3	E4	CARD READER	
02-1B084B	CLEAN ROOM	3'-6"	7'-0"	1	N	WD	1	HM	FR	45 min	13	E3	E4	CARD READER	
02-1B085	PATIENT ROOM	4'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	25	E3	E4		
02-1B085A	PATIENT TOILET	3'-6"	7'-0"	1	SB	WD	--	ALUM	--	--	27	C5/A4.1	C4&C6/A4.1	3'-6" CLR. OPENING & UNDERCUT	
02-1B086	MED ROOM	3'-0"	7'-0"	1	G	WD	1	HM	T	0 hr	13	E3	E4	CARD READER	
02-1B087	PATIENT ROOM	4'-0"	7'-0"	1	F	WD	1	HM	--	0 hr	25	E3	E4		
02-1B088	PATIENT ROOM	4'-0"	7'-0"	1	F	WD	1	HM	--	--	25	E3	E4		
02-1B088A	PATIENT TOILET	3'-6"	7'-0"	1	SB	WD	--	ALUM	--	--	27	C5/A4.1	C4&C6/A4.1	3'-6" CLR. OPENING & UNDERCUT	
02-1B088B	GARAGE	4'-0"	7'-0"	--	--	--	--	HM	--	--	--	--	--	BULLNOSE BLOCK OPENING	
02-1B118G	CORRIDOR	3'-10"	7'-0"	2	N	WD	3	HM	--	90 min	07	C3/A4.1	D3/A4.1		
02-1B118Y	CORRIDOR	3'-6"	7'-0"	2	N	WD	3	HM	FR	45 min	06	C3/A4.1	D3/A4.1	MAG. HOLD OPEN	
02-1B121	MANAGER OFFICE	3'-0"	7'-0"	1	N	WD	1	HM	T	--	20	E3	E4		
02-1B138.1		4'-0"	7'-0"	1	F	WD	1	HM	--	90 min	17	E3	E4		
02-1B138.2	STORAGE/ SHELL SPACE	4'-0"	7'-0"	1	F	WD	1	HM	--	90 min	17	E3	E4		
02-1B138.3	STORAGE/ SHELL SPACE	4'-0"	7'-0"	1	F	WD	1	HM	--	90 min	16	E3	E4		
02-1B138.5	STORAGE	4'-0"	7'-0"	1	N	WD	1	HM	FR	45 min	16	E3	E4	CARD READER	
02-1B140A	VESTIBULE	8'-11 1/2"	7'-11 3/4"	3	R	ALUM	--		T	--	29	C6/A6.9	REF. SECT.	AUTO OPENER	
02-1B140B	VESTIBULE	3'-10"	8'-6"	2	N	WD	2	HM	FR	90 min	09	E5 SIM.	D4 SIM.	CARD READER & AUTO OPENER	
02-1B140C	VESTIBULE	7'-11 1/2"	7'-3 3/4"	3	R	ALUM	--		T	--	29	REF. SECT.	REF. SECT.	AUTO OPENER	
02-1B140D	VESTIBULE	8'-11"	11'-4"	--	RR	HM	--		--	90 min	30	B2/A2.10	C4/A3.3	2 HR RATED COILING DOOR	
02-1B141A	GARAGE	12'-0"	12'-0"	--	QQ	ALUM	--	STEEL	T	--	26	C1/A6.10	A1/A6.10		
02-1B141B	GARAGE	12'-0"	12'-0"	--	QQ	ALUM	--	STEEL	T	--	26	C1/A6.10	A1/A6.10		
02-1B141C	GARAGE	12'-0"	12'-0"	--	QQ	ALUM	--	STEEL	T	--	26	C1/A6.10	A1/A6.10	"AMBULANCE ENTRANCE" SIGNAGE ON OUTSIDE FACE OF DOOR, MATCH EXISTING	4
02-1B141D	GARAGE	12'-0"	12'-0"	--	QQ	ALUM	--	STEEL	T	--	26	C1/A6.10	A1/A6.10	"AMBULANCE ENTRANCE" SIGNAGE ON OUTSIDE FACE OF DOOR, MATCH EXISTING	
02-1B141E	GARAGE	3'-0"	7'-0"	1	N	HM	1	HM	T	--	02	B1/A6.9SIM	A1/A6.9SIM	CARD READER	
02-1B142.1	GARAGE	4'-0"	7'-0"	1	F	HM	1	HM	--	45 min	16	E6	D6		
02-1B142.2	ELECTRICAL	3'-6"	7'-0"	2	F	HM	5	HM	--	--	01	B1/A6.9SIM	A1/A6.9SIM		
02-1B143	ELECT.	4'-0"	7'-0"	1	F	HM	1	HM	--	0 hr	16	E6	D6	24"X12" REGULAR LOUVER	
02-2B201	PENTHOUSE	3'-0"	7'-0"	2	F	HM	2	HM	--	--	04	C6/A2.12	C6/A2.12		
2C-S01	EXISTING STAIR	4'-0"	7'-0"	1	N	WD	1	HM	FR	90 min	11	E4/A3.3	D4	CARD READER	
2C-S01.1	CORRIDOR	4'-0"	7'-0"	1	N	WD	1	HM	T	--	03	B1/A6.9	A1/A6.9		
B102	CORRIDOR	4'-0"	7'-0"	2	N	WD	3	HM	FR	90 min	06	C3/A4.1	D3/A4.1	MAG. HOLD OPEN	4
B103		4'-0"	7'-0"	1	F	WD	1	HM	--	--	--				
C108	CORRIDOR	3'-6"	7'-0"	2	N	WD	3	HM	FR	90 min	10	C3/A4.1	D3/A4.1	CARD READER & AUTO OPENER	

DOOR & FRAME MATERIAL LEGEND

PL-1	LAMINATE. WALNUT HEIGHTS #7965K-12	PTM	PAINT TO MATCH
FR	FIRE-RATED, IMPACT RESISTANT SAFETY GLAZING	ALUM	ALUMINUM
0-HR	0-HR SMOKE RESISTIVE OPENING	HM	HOLLOW METAL
T	1/4" CLEAR, TEMPERED GLAZING	WD	SOLID CORE WOOD
ETR	EXISTING TO REMAIN	FRP	FIBER REINFORCED PANEL
EXIST.	EXISTING		

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03.30.20
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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01

BID PACKAGE #3 03.30.2020

A4.1

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DOOR AND FRAME SCHEDULE AND DETAILS

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INTERIOR FINISH LEGEND

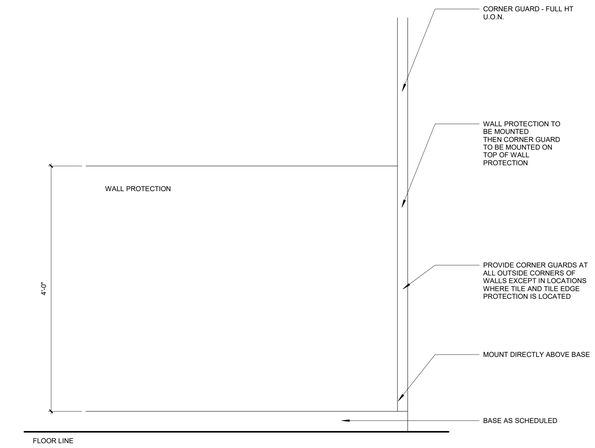
MARK	ITEM	MANUFACTURER	MODEL/ PATTERN	COLOR	SIZE	REMARKS	REVISION #
FLOOR							
CS-1	CONCRETE SEALED	PER SPECIFICATIONS	PER SPECIFICATIONS	-	-	REFER TO ARCHITECTURAL SPEC.	
LVT-1	LUXURY VINYL TILE	MANNINGTON	AMTICO WOOD	AROW8200 REGENCY WALNUT	4-1/2" X 36"	ALL CAMPUSES - SPECIFY STRAIGHT EDGE ONLY RANDOM INSTALL	
LVT-2	LUXURY VINYL TILE	MANNINGTON	AMTICO STONE	CORINTHIAN MARBLE AROSTV13	18" X 18"	ALL CAMPUSES - EXAMS, CORRIDORS, STAIR LANDING, SPECIFY STRAIGHT EDGE ONLY GRAIN	
PT-3	PORCELAIN TILE	ERGON	STONE PROJECT EMLSPBR122AF	BROWN	12" X 24"	1/3 OFFSET INSTALL, USE GROUT GR-2 OR GR-1 IN WET AREAS	
RF-1	EPOXY FLOORING	DESCO	QUARTZ CREMONA TG	S90714-434TG	-	INTEGRAL BASE UP TO 6", TEXTURE TO BE ORANGE PEEL.	
SDT-1	STATIC DISSIPATIVE TILE	ARMSTRONG	EXCELON SDT	MARBLE BEIGE 51950	12" X 12"	MONOLITHIC INSTALLATION	
SV-1	HOMOGENEOUS SHEET VINYL	ARMSTRONG	MEDINTONE, DIAMOND 10	#H3311 NATURAL WHITE	6'-0" ROLL	WELD ROD W0288; ALL CAMPUS/MOB-CLINICAL - STAFF SUPPORT SERVICES	
SV-2	HETEROGENEOUS SHEET VINYL	ARMSTRONG	REJUVENATIONS CLASSICS	#34335 LITHOS STONE PHYLLITE	6'-0" ROLL	WELD ROD W0739; ALL CAMPUS/MOB - RESTROOMS IN PATIENT CARE, STAFF, CLEAN, STERILE AND JANITOR ROOMS	
SV-3	HETEROGENEOUS SHEET VINYL	PARTERRE	REMEDY HEALTH FLOOR	#T-903 NATURAL WALNUT	6'-0" ROLL	WELD ROD T903W; ALL CAMPUSES/MOB PATIENT CARE ROOMS AND EXAM ROOMS	
WOC-1	WALK-OFF CARPET	TARKETT	ASSERTIVE STRIA - #04839	LEAD SHOT #26207	6'-0" ROLL OR 24" X 24" TILE	INSTALLATION VERTICAL ASHLAR	
BASE							
IB-1	INTEGRAL BASE	ARMSTRONG	MEDINTONE, DIAMOND 10	#H3311 NATURAL WHITE	6" COVE	J' MOLD SCHLUTER STRIP AT TOP; TO BE USED WITH SV-1	
IB-2	INTEGRAL BASE	ARMSTRONG	REJUVENATIONS CLASSICS	#34335 LITHOS STONE PHYLLITE	6" COVE	J' MOLD SCHLUTER STRIP AT TOP; TO BE USED WITH SV-2	
IB-3	INTEGRAL RESINOUS BASE	DESCO	QUARTZ CREMONA TG	S90714-434TG	6" COVE	6" INTEGRAL RESINOUS BASE. TEXTURE TO BE ORANGE PEEL.	
MTB-1	METAL COVE BASE TRIM	SCHLUTER	DILEX-AHK	STAINLESS STEEL	-	TO BE USED WITH PT-2 AND PT-3; PUBLIC RESTROOMS	
RWB-1	RUBBER WALL BASE	ROPPE	PINNACLE PLUS, PROFILE #65	#110 BROWN	4-5/8"	ALL CAMPUSES - PUBLIC SPACES	
RWB-2	RUBBER WALL BASE	ROPPE	PINNACLE	#110 BROWN	4" COVE	ALL CAMPUSES - SUPPORT SERVICES SPACE	
WALL							
CG-3	CORNER GUARDS	CS ACROVYN	SM-20AN-ACROVYN 4000	#658 PUMICE	3"	90 DEGREE, ABOVE BASE TO CEILING/INCLUDE ALL TRIM AND ACCESSORIES PIECES; TYPICAL	
CG-4	CORNER GUARDS	CS ACROVYN	SM-25AN-ACROVYN 4000	#658 PUMICE	2"	END WALL, ABOVE BASE TO CEILING/INCLUDE ALL TRIM AND ACCESSORIES PIECES; TYPICAL	
CG-5	CORNER GUARDS	CS ACROVYN	SM-20AN-ACROVYN 4000	#658 PUMICE	3" X 3"	SURFACE 135 DEGREE, ABOVE BASE TO CEILING/INCLUDE ALL TRIM AND ACCESSORIES PIECES; TYPICAL	
EP-1	EPOXY PAINT	SHERWIN WILLIAMS	SW7036	ACCESSIBLE BEIGE	-	FIELD PAINT, EPOXY FINISH	
EP-5	EPOXY PAINT	SHERWIN WILLIAMS	SW7007	BRIGHT WHITE	-	CEILING PAINT, EPOXY FINISH	
EP-8	EPOXY PAINT	SHERWIN WILLIAMS	SW7621	SILVER MIST	-	ACCENT PAINT, EPOXY FINISH	
HR-1	HANDRAILS	CS ACROVYN	HRB-20N	#378 BRUSHED NICKEL	5 5/8" X 3"	VERIFY WITH EXISTING CENTER WHAT HANDRAILS ARE INSTALLED. THIS SPECIFICATION IS ANY NEW FACILITIES THAT NEED HANDRAILS GOING FORWARD.	
P-1	PAINT	SHERWIN WILLIAMS	SW7036	ACCESSIBLE BEIGE	-	FIELD PAINT, EGGSHELL FINISH	
P-4	PAINT	SHERWIN WILLIAMS	SW7509	TIKI HUT	-	DOOR FRAME PAINT, SEMI-GLOSS FINISH	
P-5	PAINT	SHERWIN WILLIAMS	SW7007	BRIGHT WHITE	-	CEILING PAINT, FLAT FINISH	
P-7	PAINT	SHERWIN WILLIAMS	SW9221	MOODY BLUE	-	ACCENT PAINT, EGGSHELL FINISH	
P-8	PAINT	SHERWIN WILLIAMS	SW7621	SILVER MIST	-	ACCENT PAINT, EGGSHELL FINISH	
PT-2	PORCELAIN TILE	ISC SURFACES	AMERICAN OLEAN	SCENE SHORE	12" X 24"	1/3 OFFSET INSTALL, USE GR-2 OR GR-1 IN WET AREAS, MINIMUM GROUT SIZE	
RF-2	EPOXY WALL	DESCO	QUARTZ CREMONA TG	S90513-382TG	-	TO BE APPLIED ABOVE RF-1, USE METAL TRIM CAP STAINLESS STEEL. TEXTURE TO BE ORANGE PEEL.	
WP-1	WALL PROTECTION	CS ACROVYN	CHAMELEON COLLECTION .040	#1350 SABLE ELM	4' X 10' SHEETS	PATIENT ROOM HEADWALL	
WP-2	WALL PROTECTION	CS ACROVYN	.040 ACROVYN 4000	#658 PUMICE	4' X 10' SHEETS	WALL PROTECTION AT 48" AFF INCLUDED ALL ACCESSORIES	
WT-4	WALL TILE	LUNADA BAY	LUNADA BAYTILE TOZEN	AHOU - FINISH NATURAL	1" X 2" BRICK	ACCENT WALL TILE	
CASEWORK							
EB-1	EDGE BANDING	DOELLKEN	8707E5	WALNUT HEIGHTS	-	3MM	
IS-1	INTEGRAL SINK	CORIAN	BONE	-	30" X 144" SHEET; 36" X 144" SHEET	ALL CAMPUSES	
PL-1	HIGH PRESSURE LAMINATE	WILSONART	#7965K-12	WALNUT HEIGHTS	-	CUSTOM 3MM PVC DOELLKEN WALNUT HEIGHTS 8707E5; ALL CAMPUSES - BASE AND UPPER CABINETS; MOB - RECEPTION, PUBLIC SPACES AND MILLWORK.	
QTZ-1	QUARTZ SURFACE	CAMBRIA	DARLINGTON	-	55" X 120" SLAB	2 CM, 3 CM SEAOLIFF EDGE PROFILE; ALL CAMPUSES - TRANSACTION COUNTER TOPS	
SS-1	SOLID SURFACE	CORIAN	CLAM SHELL	-	1/2"; 30" X 144" SHEET; 36" X 144" SHEET	ALL CAMPUSES - BULLNOSE EDGE AT RECEPTION DESK AND NURSE STATIONS. ALL CAMPUSES - PATIENT TOILET COUNTER TOPS MOB - WET COUNTER TOPS, RESTROOMS, BEHIND HAND DRYERS	
SS-2	SOLID SURFACE	CORIAN	BONE	-	1-1/2"; 30" X 144" SHEET; 36" X 144" SHEET	ALL CAMPUSES - INTERIOR WINDOW SILLS/TRANSITION AT RESTROOM FLOOR FROM DESCO FLOORING TO LVT. FLOOR ONLY WALL BASE AT DOOR TRANSITION TO BE WRAPPED WITH DESCO.	
CEILING							
ACT-1	ACOUSTIC CEILING TILE	USG	RADAR CLIMA PLUS #2210	WHITE	2' X 2'	SQUARE EDGE, DONN DX TEE 15/16" GRID SYSTEM; ALL CAMPUSES - PUBLIC SPACES/BACK OF HOUSE. RE: ROOM FINISH SCHEDULE FOR AREAS W/ HOLD DOWN CLIPS.	
ACT-3	ACOUSTIC CEILING TILE	USG	CLEAN ROOM CLIMA PLUS CLASS 100 #56099 (UNPERFORATED)	WHITE	2' X 2'	VINYL FACED W/ SQUARE EDGE, DONN DX 15/16" TEE GRID SYSTEM; ALL CAMPUSES - CLEAN ROOMS, SOILED, PROCEDURE & LABORATORY	4
WDC-1	WOOD CEILING	ARMSTRONG	669IW1 WOODWORKS LINEAR VENEERED PANELS	NATURAL VARIATIONS WALNUT	2' X 8', 6" NOMINAL WIDE PLANKS	UTILIZE B171W1/VPCO1 INTEGRATED LIGHT CONNECTION CLIP. RE: RCP AND MEP DRAWINGS FOR LIGHTING LOCATIONS AND COORDINATION.	
MISC.							
CC-1	CUBICLE CURTAIN	-	-	-	-	CUBICLE CURTAIN TO BE OFOI	4
ETR	EXISTING TO REMAIN	-	-	-	-	-	
EXP	EXPOSED	-	-	-	-	-	
GR-1	GROUT	MAPEI	ULTRACOLOR PLUS	#11 SAHARA BEIGE	MINIMAL GROUT LINES	USE WITH PT-2, PT-3 AND WT-4 - EPOXY GROUT IN WET AREAS	
SC-1	SHOWER CURTAIN	INPRO	-	-	-	LOCATED IN PATIENT ROOM TOILETS	
TEP-1	TILE EDGE PROTECTION	SCHLUTER	QUADEC	STAINLESS STEEL	-	METAL TRIM PIECE; PUBLIC RESTROOMS	
TRS-1	TRANSITION STRIP	SCHLUTER	RENO-U	CLEAR SATIN ANODIZED ALUMINUM	-	-	
TRS-2	TRANSITION STRIP	SCHLUTER	SCHIENE	CLEAR SATIN ANODIZED ALUMINUM	-	-	
TRS-3	TRANSITION STRIP	TARKETT	CTA-XX-A ADAPTOR	TO BE SELECTED BY ARCHITECT	-	-	

GENERAL ROOM FINISH SCHEDULE NOTES

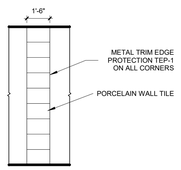
A	REFER TO FINISH PLAN AND INTERIOR ELEVATIONS FOR WALL FINISHES, WALL PROTECTION, CORNER GUARDS, WINDOW TREATMENTS, FLOOR FINISH APPLICATION AND LOCATIONS
B	ALL SOLID WOOD, WOOD VENEER, AND PLASTIC LAMINATE GRAIN SHALL BE VERTICALLY ORIENTED UNLESS OTHERWISE NOTED
C	DOOR FRAMES, HOLLOW METAL WINDOW FRAMES TO BE P-4 UNLESS OTHERWISE NOTED
D	ALL FACES AND UNDERSIDES OF SOFFITS AND HEADERS TO BE P-1 UNLESS OTHERWISE NOTED
E	WALL EXPANSION JOINTS TO BE P-1 UNLESS OTHERWISE NOTED
F	ALL ELECTRICAL PANELS AND METAL GRILLES SHALL BE PTD TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED
G	ALL COLUMN SURROUND FINISHES TO MATCH ADJACENT WALL SURFACE UNLESS OTHERWISE NOTED
H	WHERE A WALL IS INDICATED TO HAVE PARTIAL OR FULL HT WALL PROTECTION, THE ENTIRE WALL IS TO BE PTD PRIOR TO WALL PROTECTION INSTALLATION
I	EXTEND ALL FINISHES BENEATH, BEHIND, AROUND ALL CASEWORK, EQUIPMENT, SIGNAGE, ETC
J	ALL WINDOW SILLS TO BE SS-2
K	REFER TO DETAIL OF TYPICAL ELEVATION OF WALL PROTECTION/CORNER GUARD MOUNTING HEIGHTS SHOWN ON A4.2.

SPECIFIC ROOM FINISH SCHEDULE NOTES

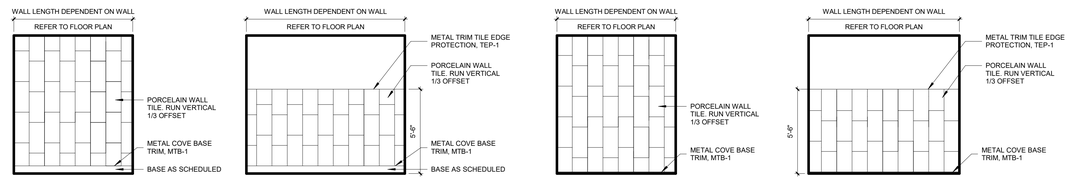
1	FACE OF SOFFIT TO BE SAME PAINT COLOR AS ADJACENT WALL. UNDERSIDE OF SOFFIT TO BE P-7.
2	REFER TO TYPICAL TOILET WALL TILE PATTERN DETAIL SHOWN ON A4.2 FOR MORE DIRECTION ON INSTALLATION.
3	ACT CEILINGS IN THIS AREA TO HAVE HOLD DOWN CLIPS.
4	LEAVE ONE AREA WHERE LABEL IS SHOWN, UNPAINTED, ON EACH PLYWOOD WALL IN THIS ROOM.
5	NEW CEILING AND GRID. REINSTALL EXISTING MECH GRILLS AND NEW LIGHTS. REF. MEP



A6 TYPICAL ELEVATION OF WALL PROTECTION / CORNER GUARD
1" = 1'-0"



A4 TYPICAL WAITING ROOM COLUMN TILE PATTERN
1/4" = 1'-0"



A3 TYPICAL TOILET WALL TILE PATTERN
1/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CASEWORK BASE CABINETS	CASEWORK UPPER CABINETS	CASEWORK COUNTERTOPS	CEILING	NOTES	REVISION #
02-1B00C	WAITING ROOM	LVT-1, 2	RWB-1	WP-2 / P-1 / PT-2	WP-2 / P-1 / PT-2	WP-2 / P-1, 8 / PT-2 / WT-4	WP-2 / P-1 / PT-2	-	-	SS-1	ACT-1 / WDC-1 / P-1,7		
02-1B00C.1	VENDING	LVT-2	RWB-1	P-1	P-1	P-1	P-1	-	-	-	ACT-1		
02-1B00D	VESTIBULE	WOC-1	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1	3	
02-1B00J	SERVICE CORRIDOR	LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1		
02-1B00M	CORRIDOR	LVT-1 / LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1 / P-7		
02-1B00N	CORRIDOR	LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1		
02-1B00O	CORRIDOR	LVT-1 / LVT-2	RWB-1	WP-2 / P-1 / HR-1	WP-2 / P-1 / HR-1	WP-2 / P-1 / HR-1	WP-2 / P-1 / HR-1	-	-	-	ACT-1 / P-7		
02-1B00P	CORRIDOR	LVT-1 / LVT-2	RWB-1	WP-2 / P-1 / HR-1	WP-2 / P-1 / HR-1	WP-2 / P-1 / HR-1	WP-2 / P-1 / HR-1	-	-	-	ACT-1 / P-7		
02-1B00Q	CORRIDOR	LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1		
02-1B00R	CORRIDOR	LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1		
02-1B00S	CORRIDOR	LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	-	ACT-1		
02-1B00W	EXISTING CORRIDOR	LVT-2	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1		
02-1B001	TOILET	PT-3	MTB-1	PT-2 / EP-1	PT-2 / EP-1	PT-2 / EP-1	PT-2 / EP-1	-	-	-	ACT-1	2	
02-1B002	TOILET	PT-3	MTB-1	PT-2 / EP-1	PT-2	PT-2 / EP-1	PT-2 / EP-1	-	-	-	ACT-1	2	
02-1B003	TRIAGE	SV-3	RWB-2	WP-2 / P-1	WP-2 / P-8	WP-2 / P-1	WP-2 / P-1	PL-1	-	SS-1	ACT-1		
02-1B004	TRIAGE	SV-3	RWB-2	WP-2 / P-1	WP-2 / P-8	WP-2 / P-1	WP-2 / P-1	PL-1	-	SS-1	ACT-1		
02-1B005	TRIAGE	SV-3	RWB-2	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-8	PL-1	-	SS-1	ACT-1	5	
02-1B006	RECEPTION	LVT-1	RWB-2	P-1	P-1	P-8	P-1	-	-	QTZ-1	ACT-1 / P-5	4	
02-1B008	CONSULT	LVT-1	RWB-1	P-1	P-1	P-8	P-1	-	-	-	ACT-1	5	
02-1B009	TOILET	PT-3	MTB-1	PT-2	PT-2 / EP-1	PT-2 / EP-1	PT-2 / EP-1	-	-	-	ACT-1	2, 5	
02-1B043	EXAM ROOM	SV-1	IB-1	WP-2 / P-1	WP-2 / P-8	WP-2 / P-1	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B049	TOILET	SV-2	IB-2	PT-2 / EP-1	PT-2 / EP-1	PT-2	PT-2 / EP-1	-	-	-	ACT-1		
02-1B059	EXAM ROOM	SV-1	IB-1	WP-2 / P-1	P-1	WP-2 / P-8	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B060	CORRIDOR	PATCH/MATCH	PATCH/MATCH	PATCH/MATCH	PATCH/MATCH	PATCH/MATCH	PATCH/MATCH	-	-	-	ACT-1		
02-1B061	OFFICE	LVT-1	RWB-2	P-1	P-1	P-8	P-1	-	-	-	ACT-1		
02-1B062	STORAGE	ETR	ETR	ETR / P-1	ETR	ETR	ETR / P-1	-	-	-	ETR		
02-1B063	EXISTING ELECT.	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR		
02-1B068	BREAK ROOM	LVT-1	RWB-2	P-1	P-1	P-8	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B069	FAST TRACK NURSE STATION	LVT-2	RWB-1	P-1	P-1	P-1	P-1	-	-	-	ACT-1		
02-1B070	FAST TRACK 1	SV-1	IB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-8	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B071	FAST TRACK 2	SV-1	IB-1	WP-2 / P-8	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B072	FAST TRACK 3	SV-1	IB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-8	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B073	FAST TRACK 4	SV-1	IB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-8	WP-2 / P-1, 8	PL-1	PL-1	SS-1	ACT-1		
02-1B075	STORAGE	CS-1	RWB-2	P-1	P-1	P-1	P-1	-	-	-	EXP		
02-1B076	STORAGE	CS-1	RWB-2	P-1	P-1	P-1	P-1	-	-	-	EXP		
02-1B077	DECON SHOWER	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B078	WATER SERVICE	CS-1	RWB-2	EP-1	EP-1	EP-1	EP-1	-	-	-	EP-5		
02-1B079	EMS BREAK	LVT-1	RWB-2	P-1	P-1	P-1	P-8	PL-1	-	SS-1	ACT-1		
02-1B080	SHARED OFFICE	LVT-1	RWB-2	P-1	P-8	P-1	P-1	-	-	-	ACT-1		
02-1B081	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B081A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B082	SOILED	SV-1	IB-1	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-1	-	-	-	ACT-3		
02-1B083	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1,8	P-1	WP-1,2 / P-1	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B083A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B084	CLEAN ROOM	SV-1	IB-1	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-1	-	-	-	ACT-3		
02-1B085	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B085A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B086	MED ROOM	SV-1	IB-1	WP-2 / P-1	P-1	WP-2 / P-1	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B087	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1,8	P-1	WP-1,2 / P-1	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B087A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B088	NURSE STATION	LVT-1	RWB-1	P-8	P-8	P-8	P-8	WP-1	-	SS-1 / QTZ-1	ACT-1 / P-7		
02-1B089	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B089A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B090	CHARTING	LVT-1	RWB-1	P-8	P-8	P-8	P-8	-	-	-	ACT-1 / P-8		
02-1B091	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1,8	P-1	WP-1,2 / P-1	WP-2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B091A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B092	JANITOR	CS-1	RWB-2	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-1	-	-	-	EXP		
02-1B093	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	WP-1, 2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B093A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B094	TOILET	SV-2	IB-2	PT-2	PT-2 / EP-1	PT-2 / EP-1	PT-2 / EP-1	-	-	-	ACT-1	2	
02-1B095	ADA PATIENT ROOM	SV-3	RWB-1	WP-2 / P-8	WP-2 / P-1	P-1	WP-1, 2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B095A	ADA TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B096	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-2 / P-1,8	P-1	WP-1,2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B096A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B097	DATA ROOM	SDT-1	RWB-2	P-1	P-1	P-1	P-1	-	-	-	EXP	4	
02-1B098	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1		
02-1B098A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B099	WORK STATION	LVT-1	RWB-1	P-7	P-7	-	P-7	-	-	-	P-7	1	
02-1B100	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-2 / P-1,8	P-1	WP-1,2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B100A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B101	STORAGE	LVT-2	RWB-2	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1	-	-	-	ACT-1		
02-1B102	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1		
02-1B102A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B103	MANAGER OFFICE	LVT-1	RWB-2	P-8	P-1	P-1	P-1	-	-	-	ACT-1		
02-1B104	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-2 / P-1,8	P-1	WP-1,2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B104A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B105	TOILET	SV-2	IB-2	PT-2 / EP-1	PT-2 / EP-1	PT-2 / EP-1	PT-2	-	-	-	ACT-1	2	
02-1B106	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-1,2 / P-1	P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1		
02-1B106A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B107	ADA PATIENT ROOM	SV-3	RWB-1	WP-2 / P-8	WP-1,2 / P-1	P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1		
02-1B107A	ADA PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B108	ELECTRIC ROOM	CS-1	RWB-2	P-1	P-1	P-1	P-1	-	-	-	EXP	4	
02-1B109	TRAUMA	SV-1	IB-1	WP-2 / EP-1	WP-2 / EP-1	WP-2 / EP-8	EP-1	-	-	-	ACT-3		
02-1B110	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	WP-2 / P-1	WP-2 / P-1,8	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B110A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B111	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1,8	WP-2 / P-1	WP-1,2 / P-1	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B111A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B112	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	WP-2 / P-1	WP-2 / P-1,8	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B112A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B113	PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1,8	WP-2 / P-1	WP-1,2 / P-1	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B113A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B114	PATIENT ROOM	SV-3	RWB-1	WP-1,2 / P-1	WP-2 / P-1	WP-2 / P-1,8	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B114A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B115	ADA PATIENT ROOM	SV-3	RWB-1	WP-2 / P-1	WP-2 / P-1	WP-2 / P-1,8	P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B115A	ADA TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B116	PATIENT ROOM	SV-3	RWB-1	P-1	WP-1,2 / P-1	WP-2 / P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1		
02-1B116A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B117	PATIENT ROOM	SV-3	RWB-1	P-1	WP-2 / P-1,8	WP-2 / P-1	WP-1,2 / P-1	PL-1	PL-1	SS-1	ACT-1		
02-1B117A	PATIENT TOILET	RF-1	IB-3	RF-2	RF-2	RF-2	RF-2	-	-	-	EP-5		
02-1B118	PATIENT ROOM	SV-3	RWB-1	P1	WP-1,2 / P-1	WP-2 / P-1	WP-2 / P-1,8	PL-1	PL-1	SS-1	ACT-1		
02-1B119	WORK STATION	LVT-1	RWB-1	-	P-7	P-7

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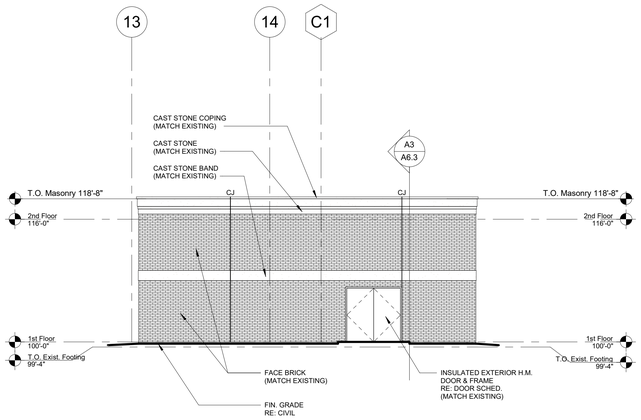
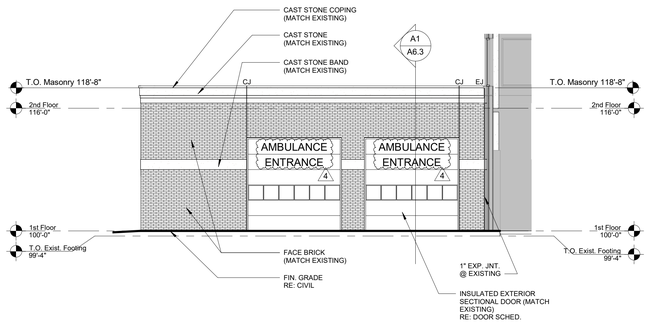


D6 SOUTH GARAGE EXTERIOR ELEVATION
1/8" = 1'-0"



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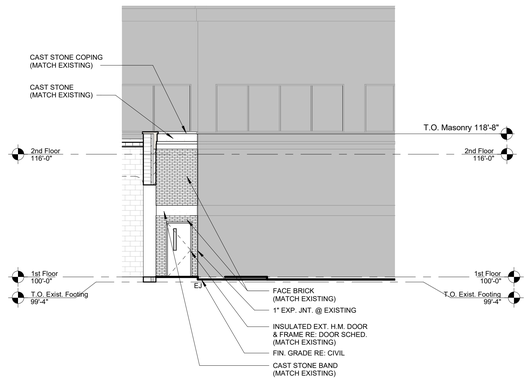
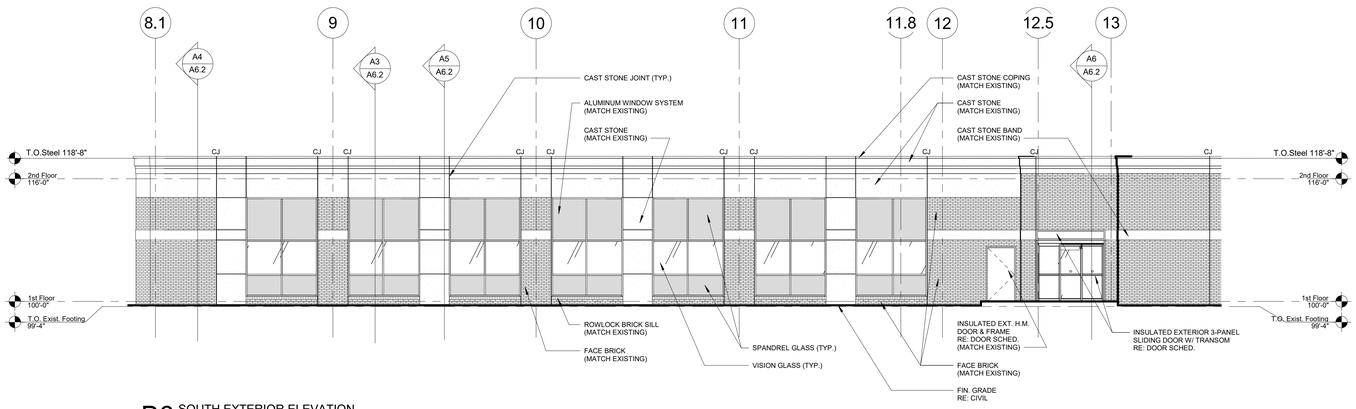
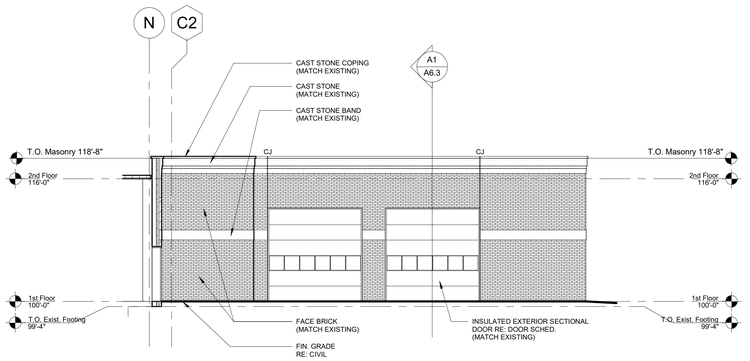
1/8" = 1'-0"



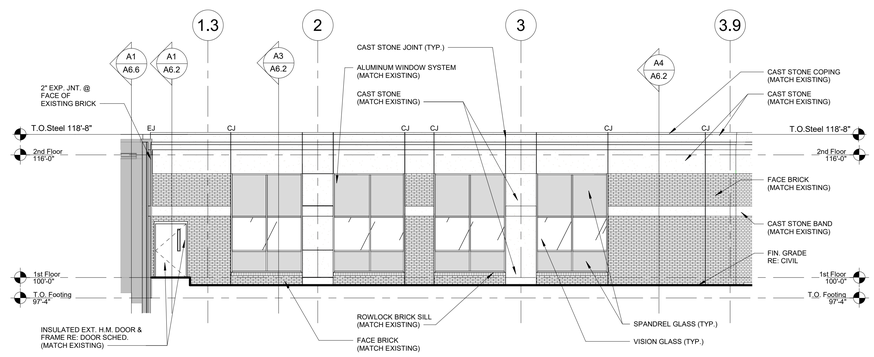
D2 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"



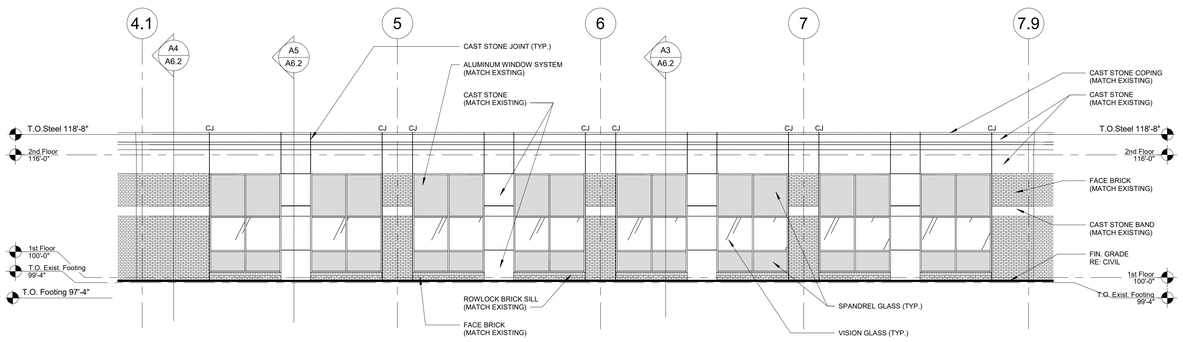
B6 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"



A2 WEST GARAGE EXTERIOR ELEVATION
1/8" = 1'-0"



A6 WEST EXTERIOR ELEVATION
1/8" = 1'-0"



A4 SOUTHWEST EXTERIOR ELEVATION
1/8" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC/ GP

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01

BID PACKAGE #3 03.30.2020

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EXTERIOR ELEVATIONS

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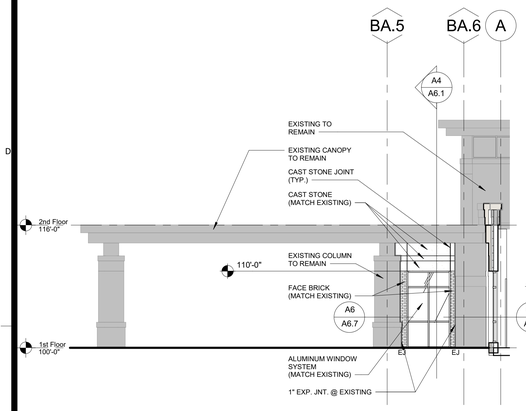
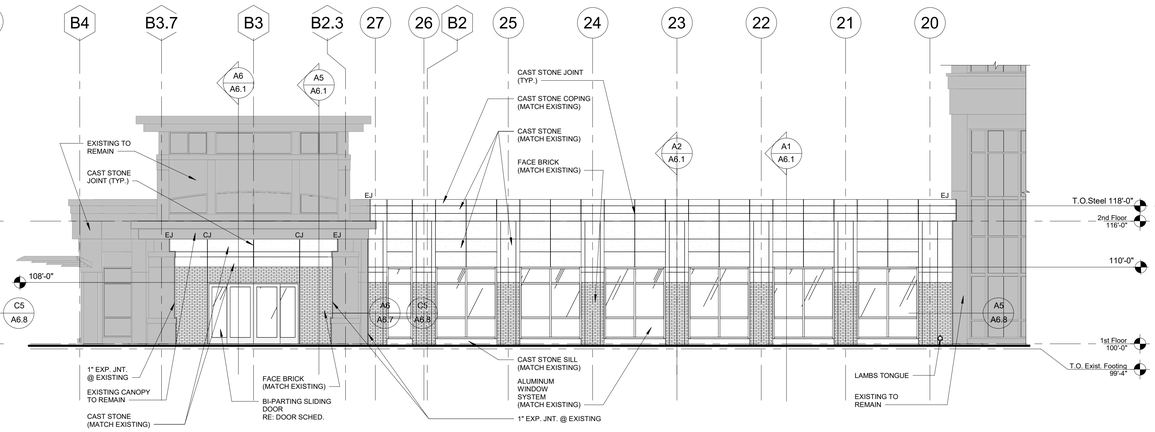
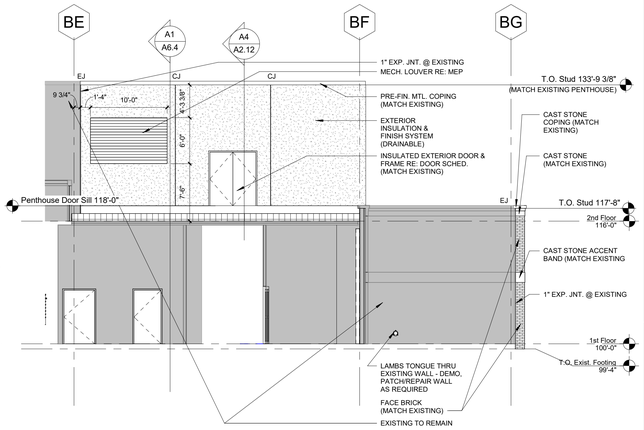


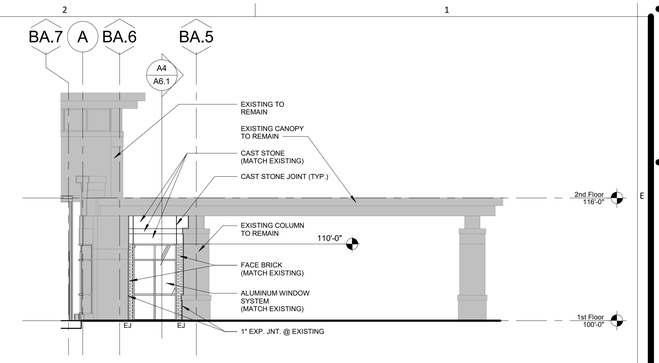
C6 NORTHEAST VESTIBULE EXTERIOR ELEVATION
1/8" = 1'-0"



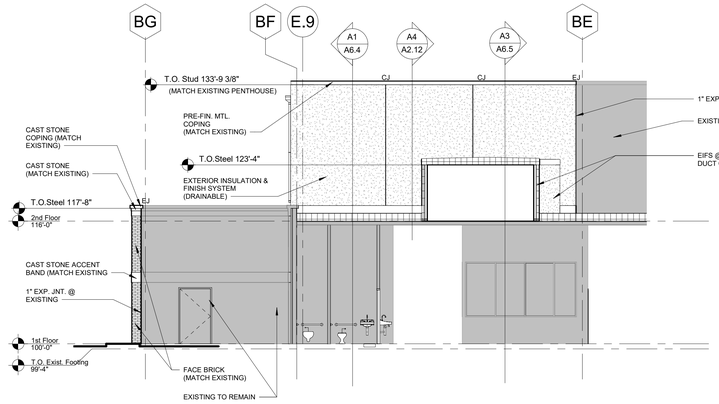
C5 NORTHEAST WAITING EXTERIOR ELEVATION
1/8" = 1'-0"



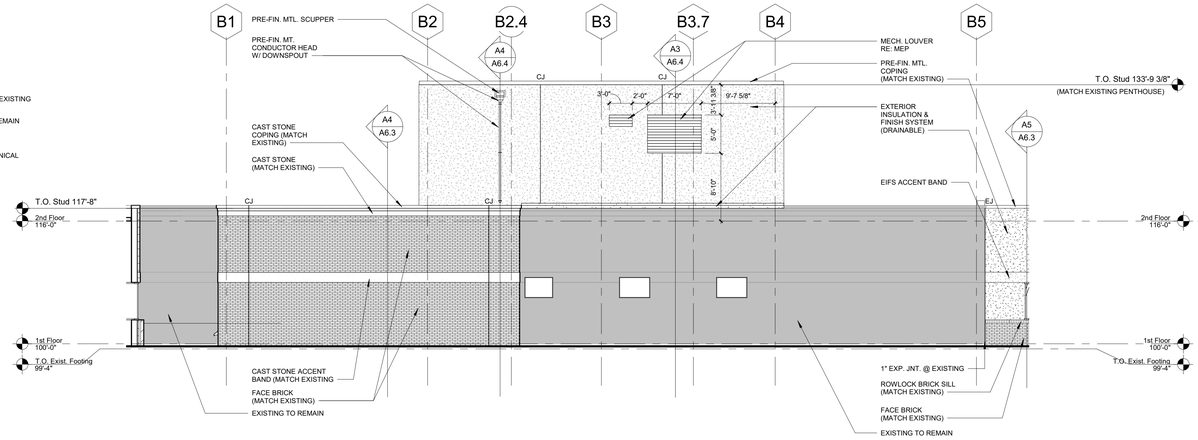
C2 NORTHEAST PENTHOUSE EXTERIOR ELEVATION
1/8" = 1'-0"



E2 SOUTHEAST VESTIBULE EXTERIOR ELEVATION
1/8" = 1'-0"

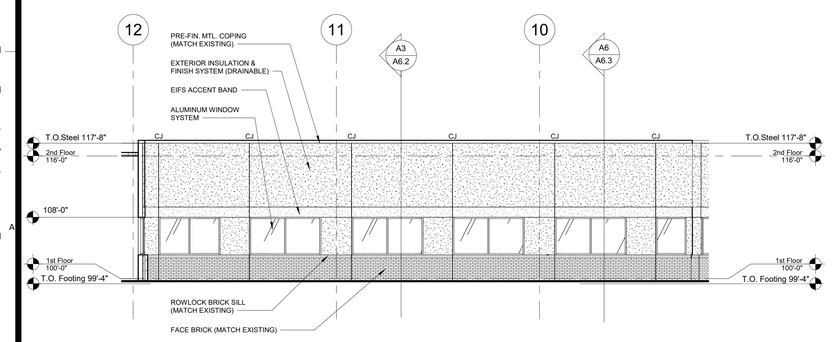


B6 SOUTHEAST PENTHOUSE EXTERIOR ELEVATION
1/8" = 1'-0"

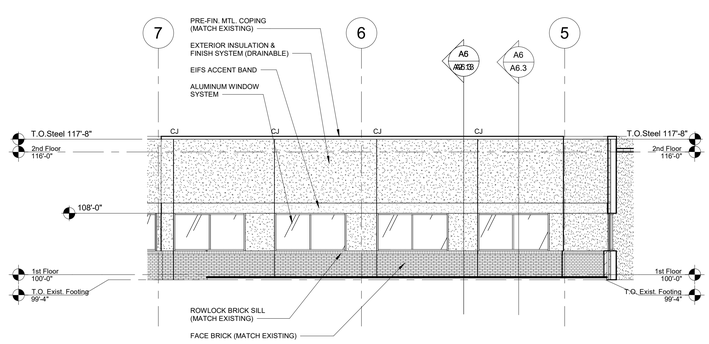


B4 SOUTHWEST COURTYARD EXTERIOR ELEVATION
1/8" = 1'-0"

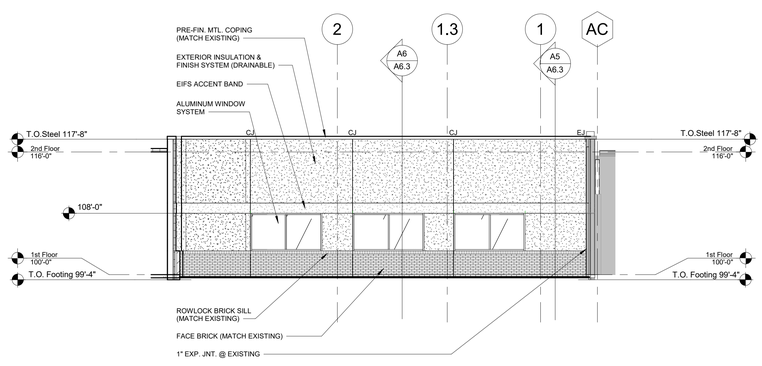
B1 WEST COURTYARD EXTERIOR ELEVATION
1/8" = 1'-0"



A6 NORTH COURTYARD EXTERIOR ELEVATION
1/8" = 1'-0"



A4 NORTHEAST COURTYARD EXTERIOR ELEVATION
1/8" = 1'-0"



A3 EAST COURTYARD EXTERIOR ELEVATION
1/8" = 1'-0"

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Checked By	WC/ GP

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EXTERIOR ELEVATIONS

BID PACKAGE #3 3.30.2020

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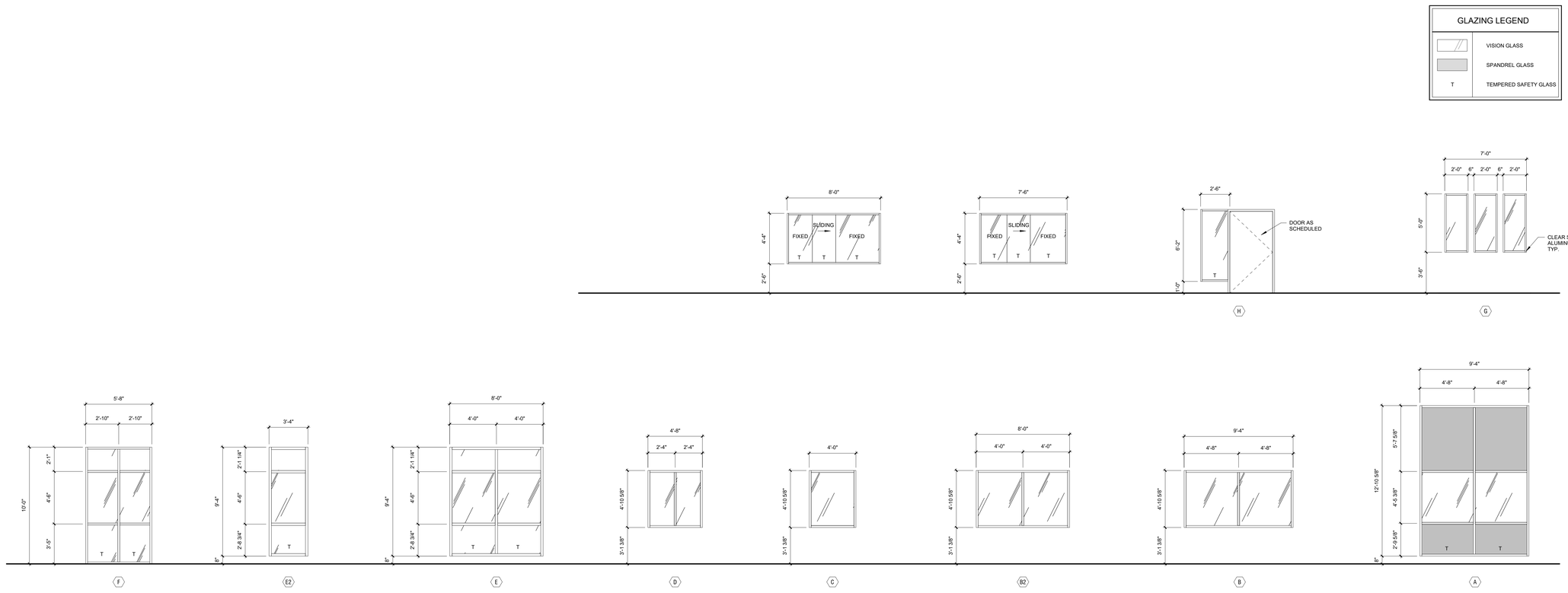

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Saint Luke's East Hospital
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Lee's Summit, MO 64086

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Revision

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GLAZING ELEVATIONS

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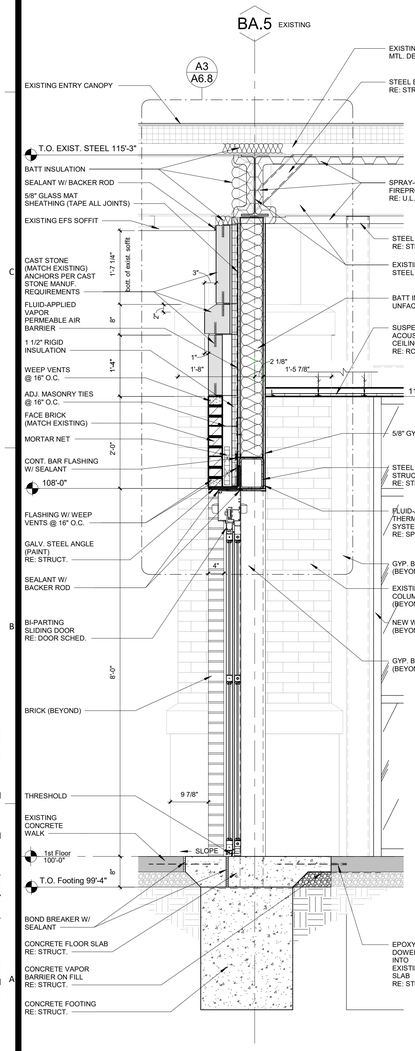
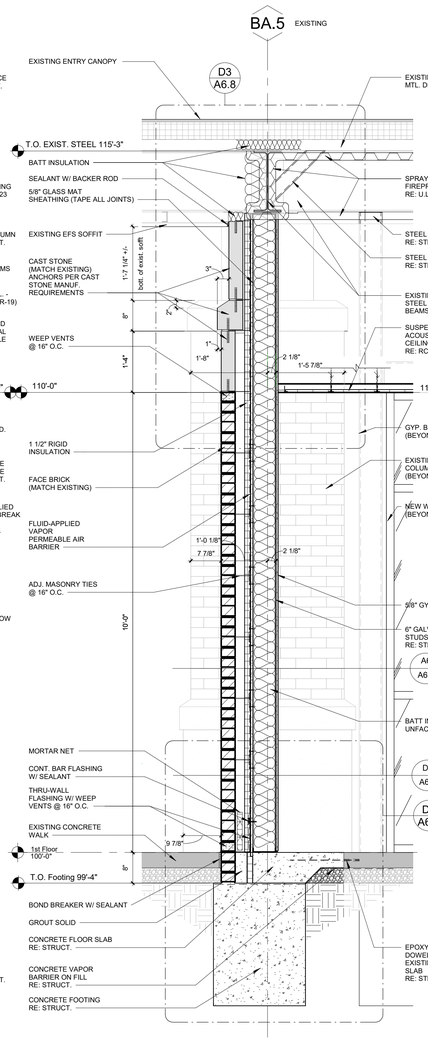
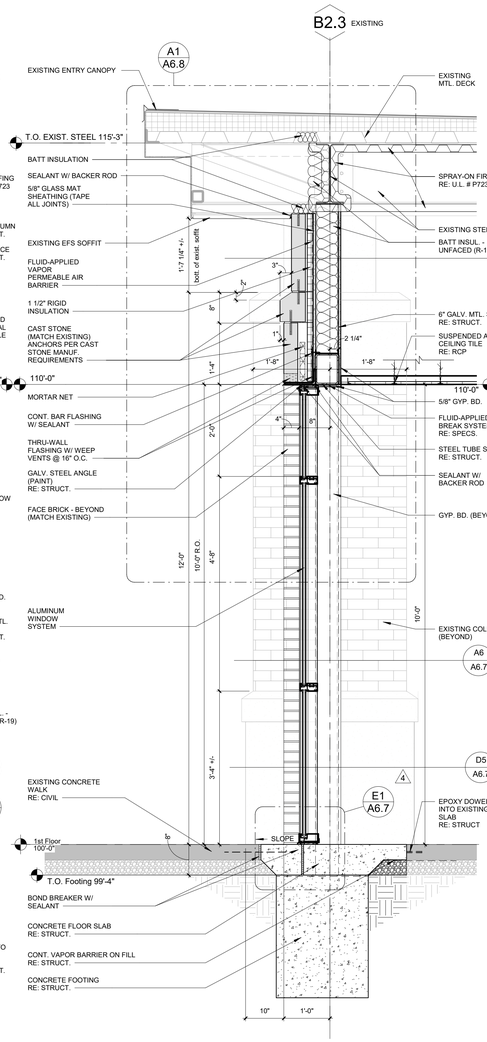


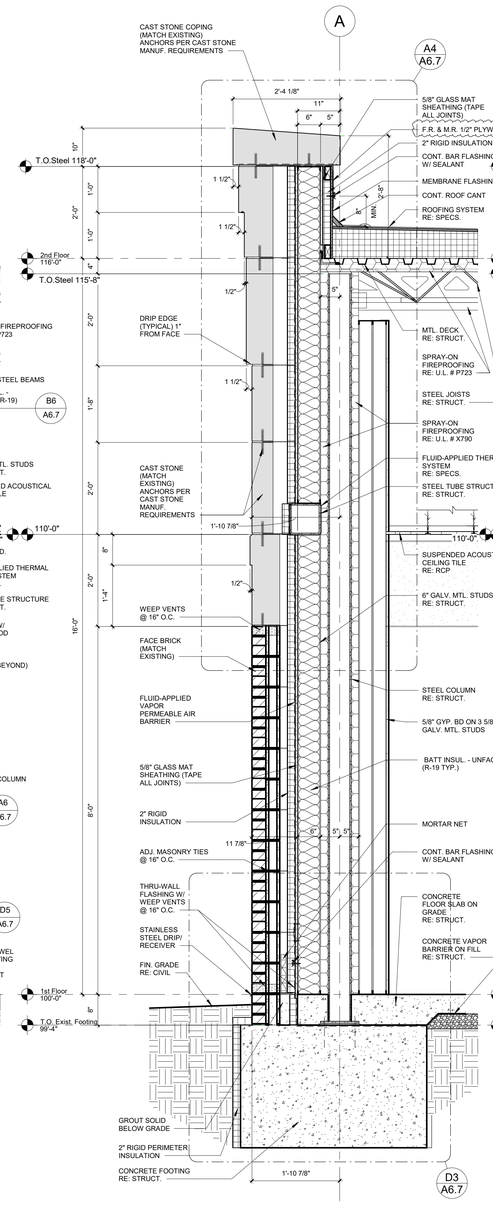
A6 WALL SECTION @ VESTIBULE
3/4" = 1'-0"



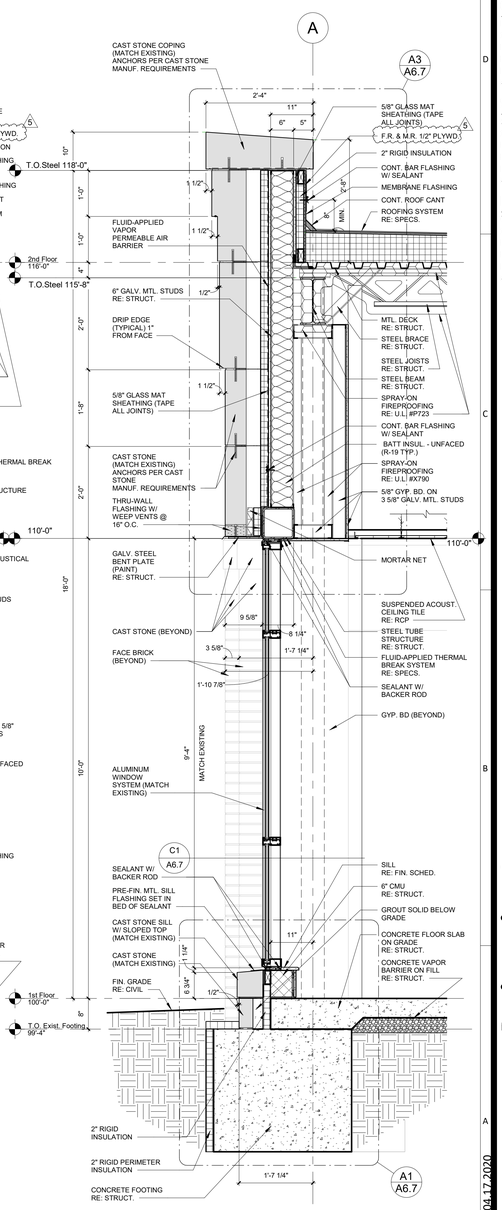
A5 WALL SECTION @ VESTIBULE
3/4" = 1'-0"



A4 WALL SECTION @ VESTIBULE
3/4" = 1'-0"



A2 WALL SECTION
3/4" = 1'-0"



A1 WALL SECTION
3/4" = 1'-0"

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Saint Luke's East Hospital
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Date	04.17.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC GP

Revision

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4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

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WALL SECTIONS

BID PACKAGE #1 04.17.2020

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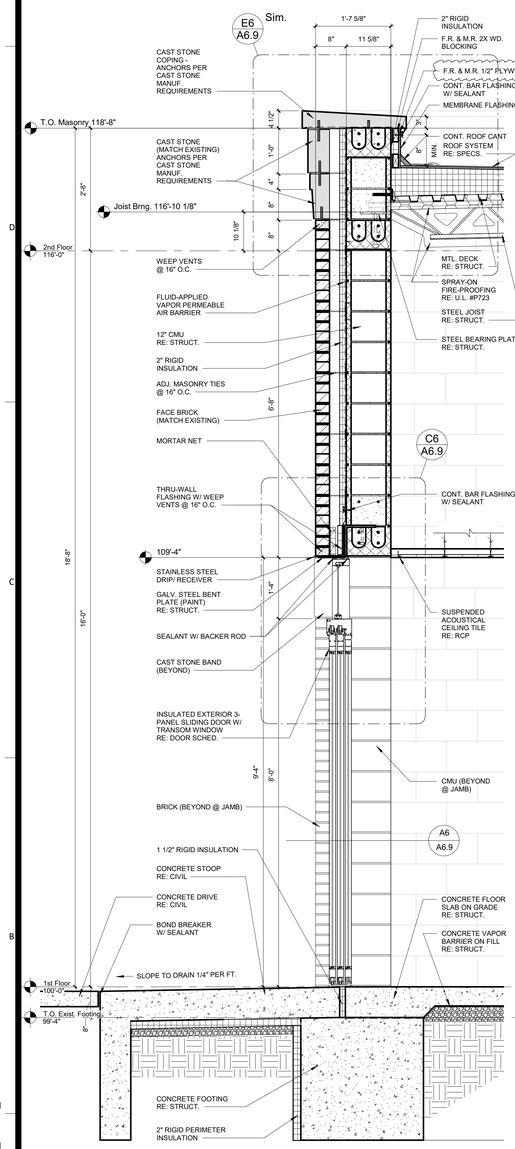

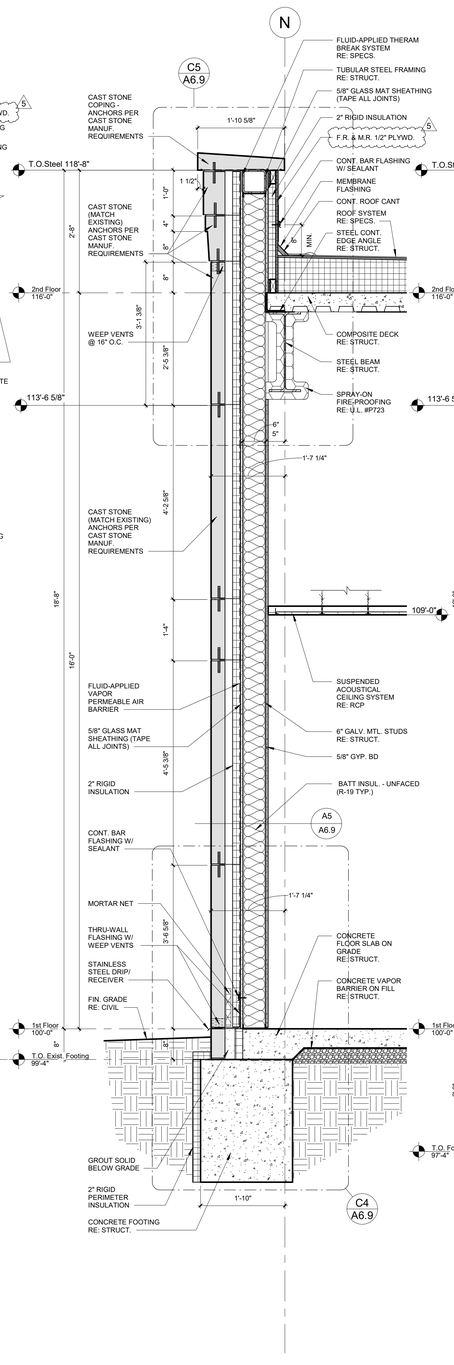

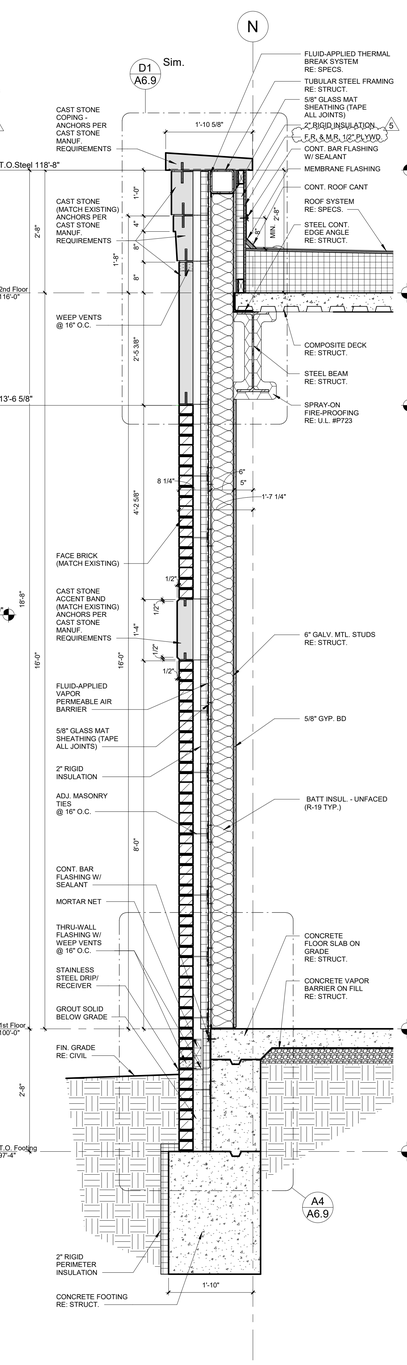

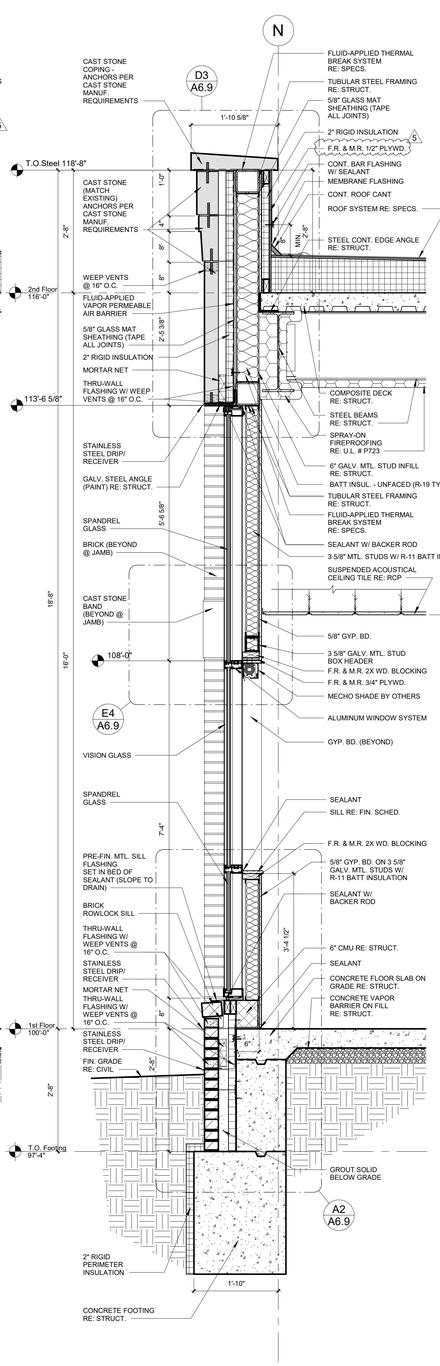

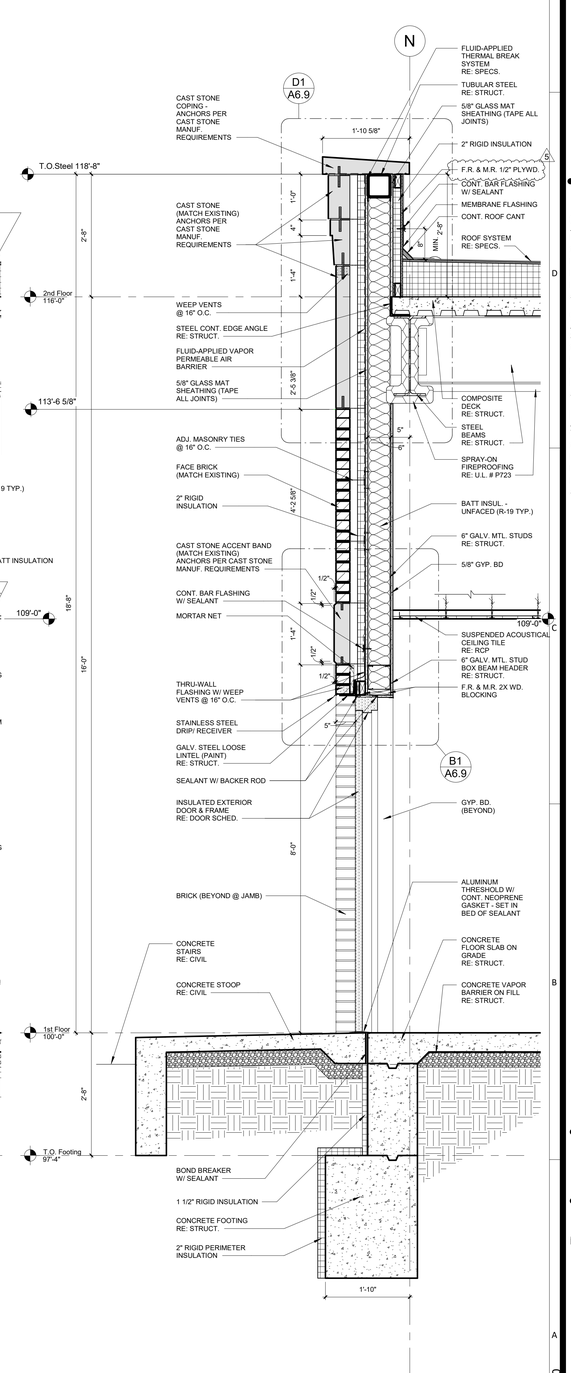

A6 WALL SECTION @ SLIDING DOOR
3/4" = 1'-0"

A5 WALL SECTION
3/4" = 1'-0"

A4 WALL SECTION
3/4" = 1'-0"

A3 WALL SECTION
3/4" = 1'-0"

A1 WALL SECTION @ ENTRY DOOR
3/4" = 1'-0"

STATE OF MISSOURI
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5	04.17.20	City Comments - ASI3

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WALL SECTIONS

BID PACKAGE #4 04.17.2020

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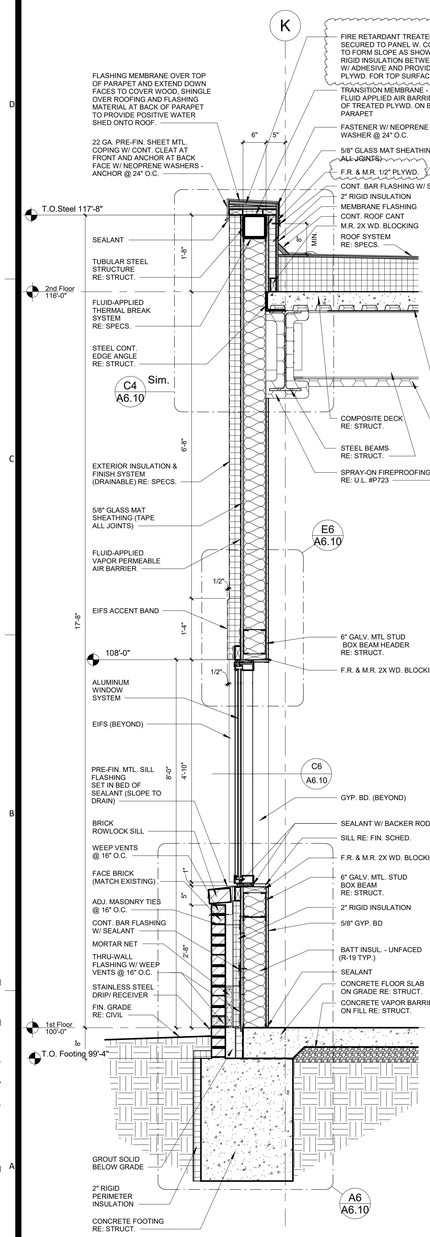
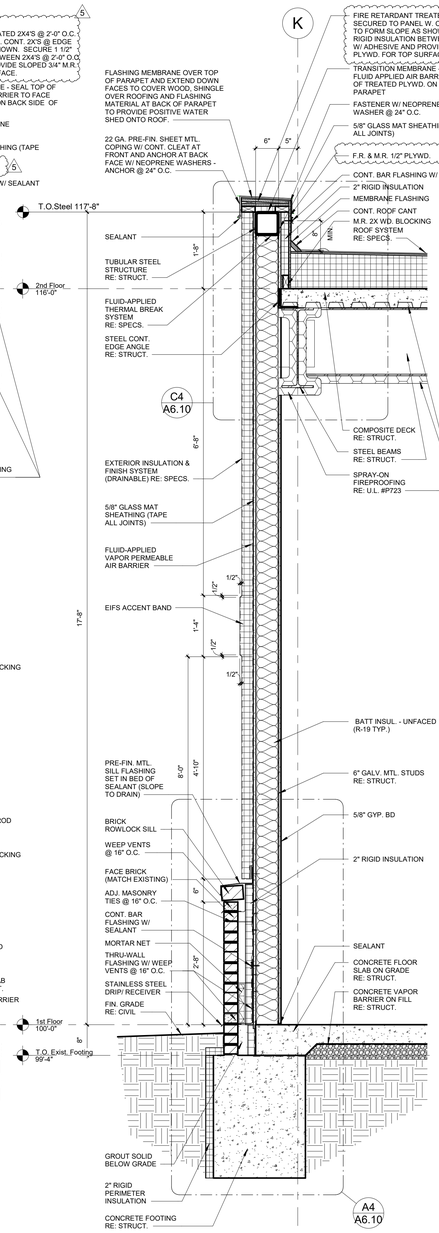
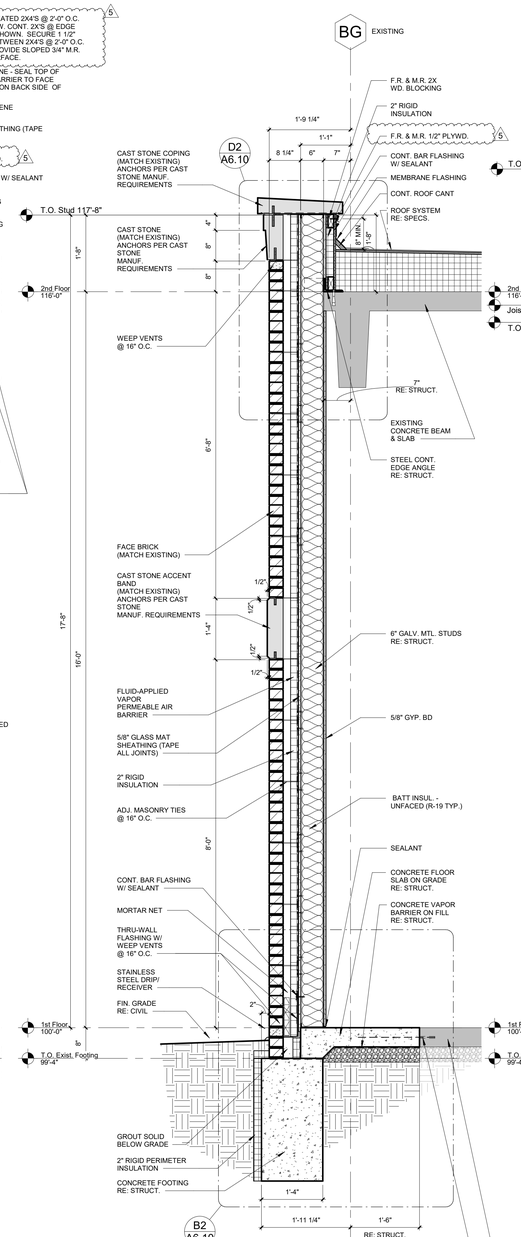


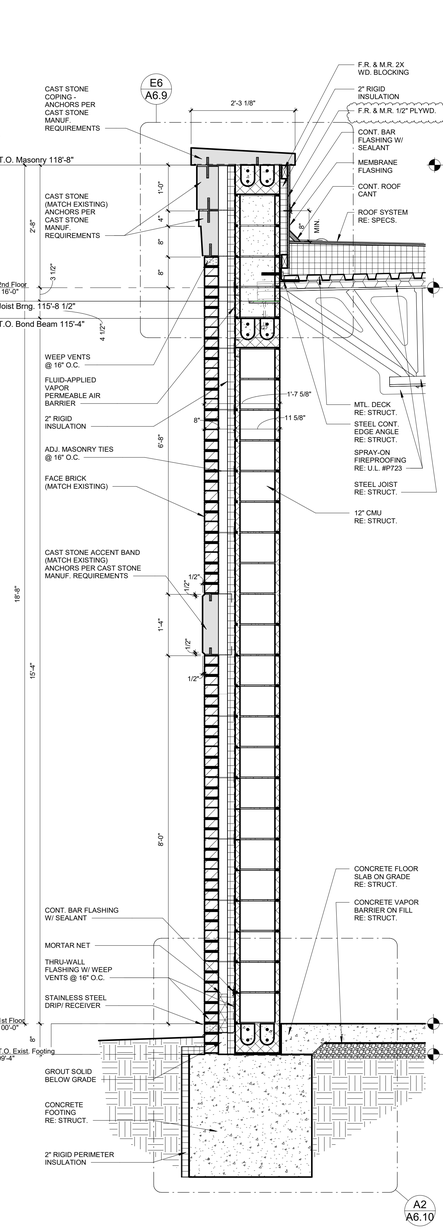
A6 WALL SECTION @ COURTYARD
3/4" = 1'-0"



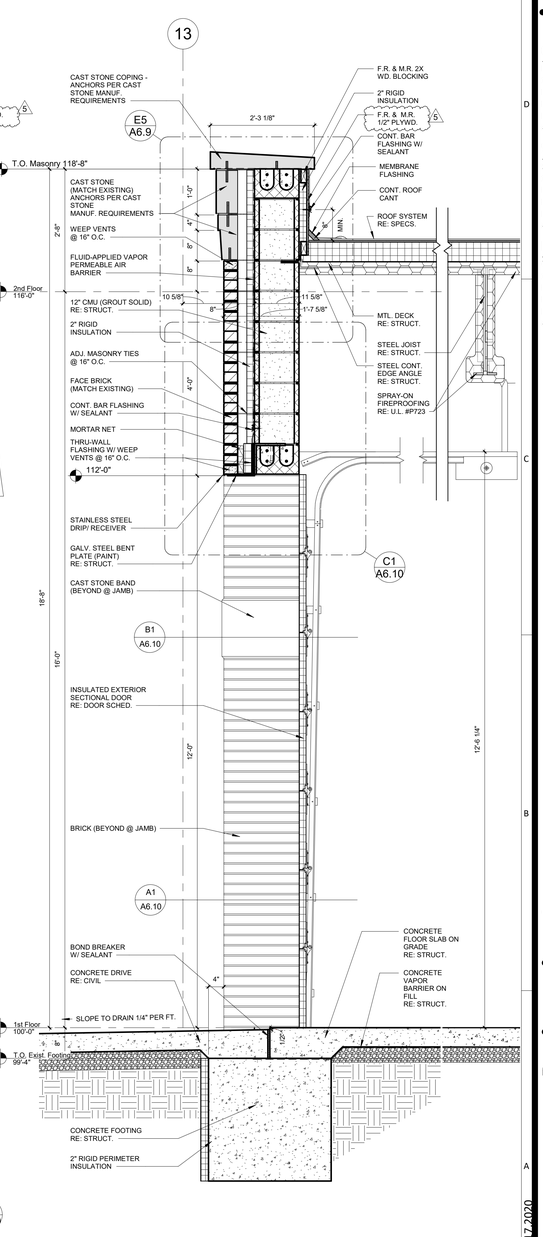
A5 WALL SECTION @ COURTYARD
3/4" = 1'-0"



A4 WALL SECTION @ COURTYARD
3/4" = 1'-0"



A3 WALL SECTION
3/4" = 1'-0"



A1 WALL SECTION @ SECTIONAL DOOR
3/4" = 1'-0"

STATE OF MISSOURI
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03.30.20
Samuel K. Beckman - Architect
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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	04.17.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC/ GP

Revision

Number	Date	Description
5	04.17.20	City Comments - ASI3

A6.3

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WALL SECTIONS

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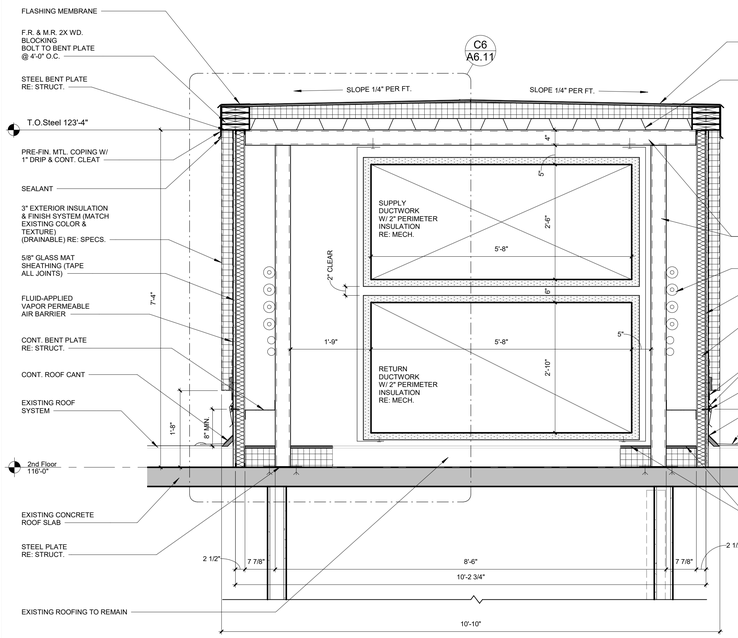
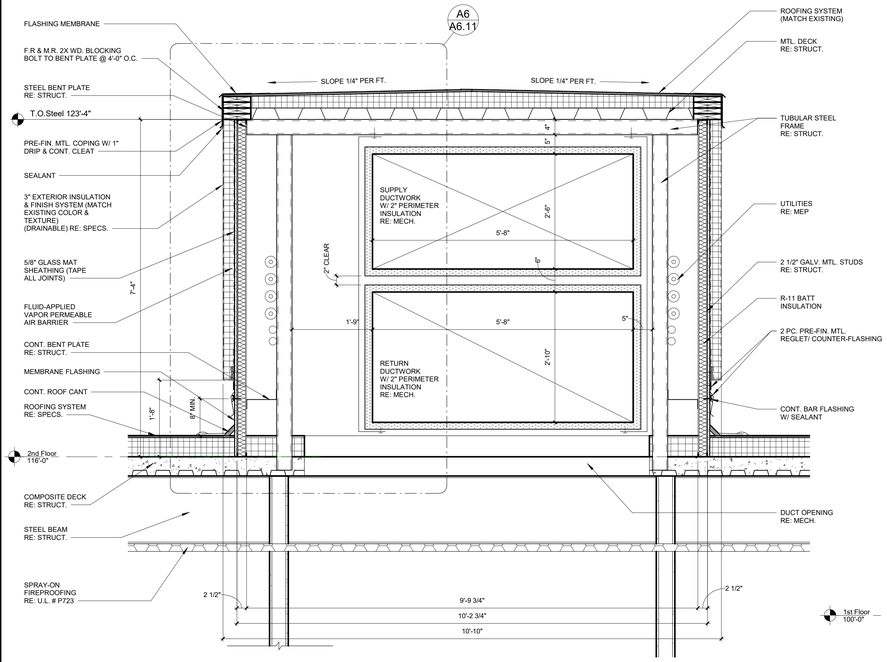
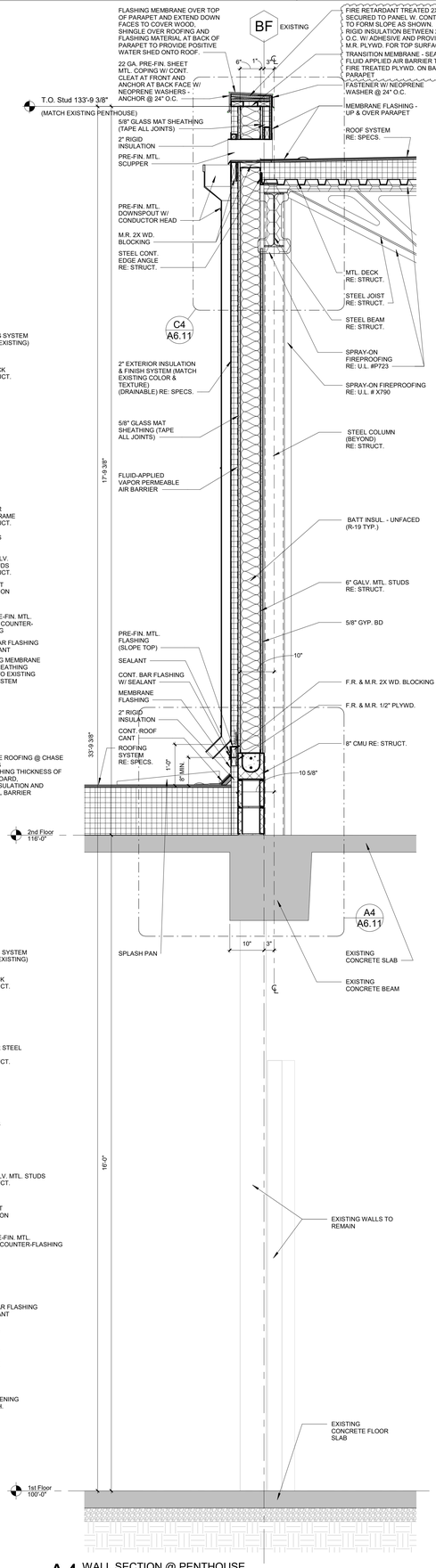


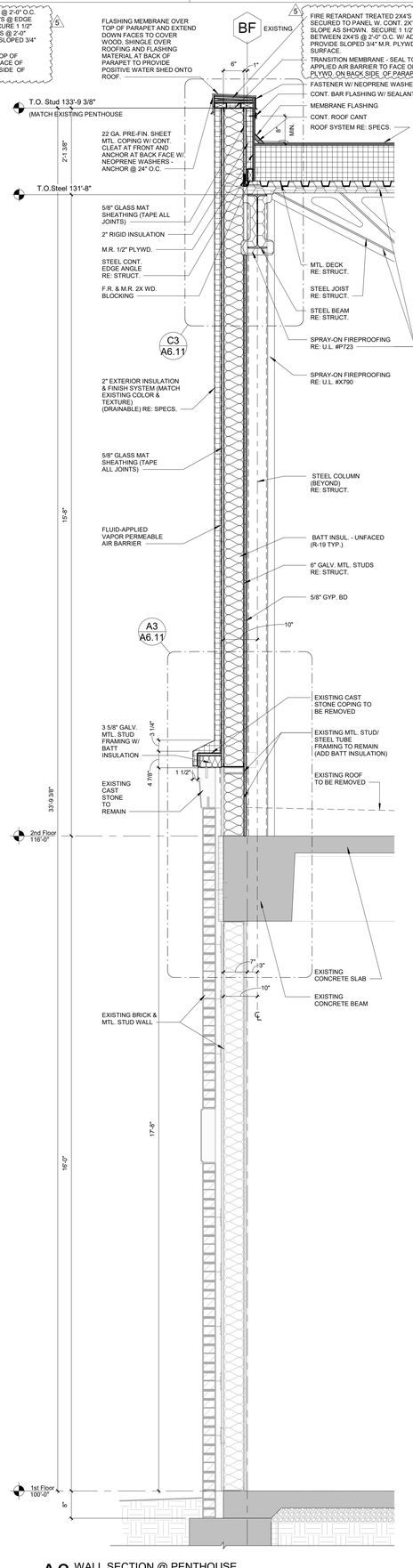
C6 MECHANICAL DUCT CHASE @ EXISTING ROOF
3/4" = 1'-0"



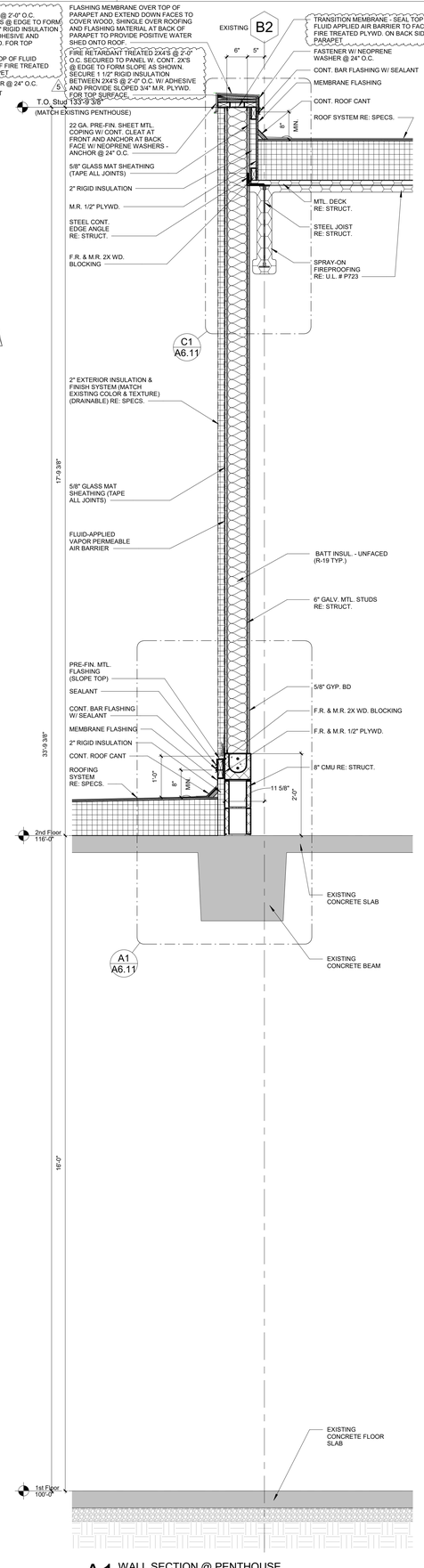
A6 MECHANICAL DUCT CHASE @ NEW ROOF
3/4" = 1'-0"



A4 WALL SECTION @ PENTHOUSE
3/4" = 1'-0"



A3 WALL SECTION @ PENTHOUSE
3/4" = 1'-0"



A1 WALL SECTION @ PENTHOUSE
3/4" = 1'-0"

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WALL SECTIONS

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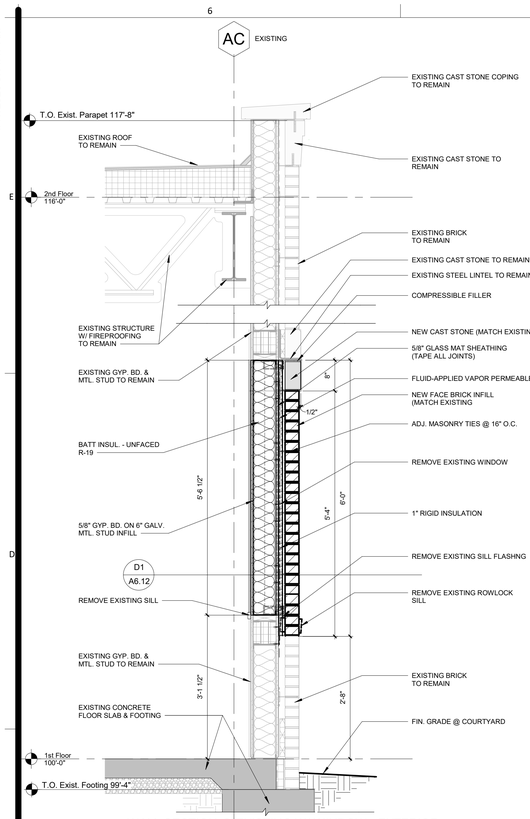
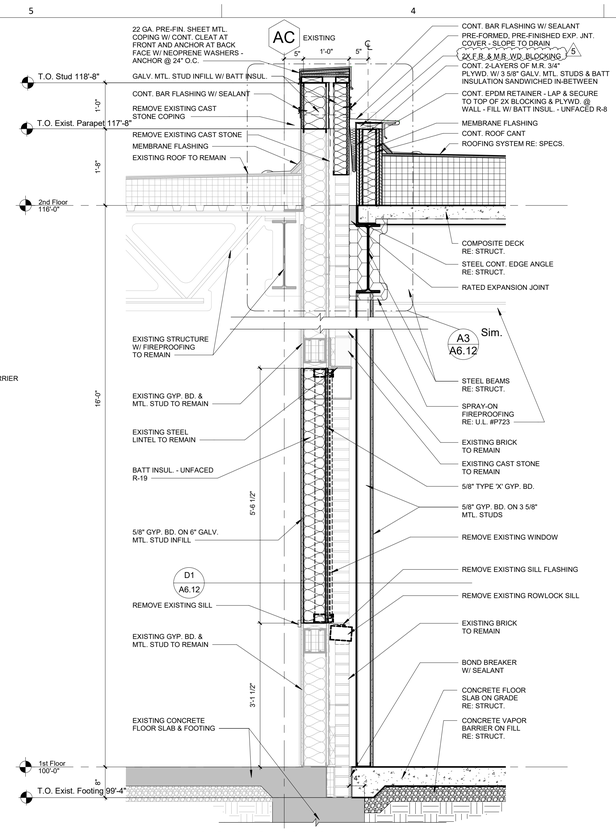
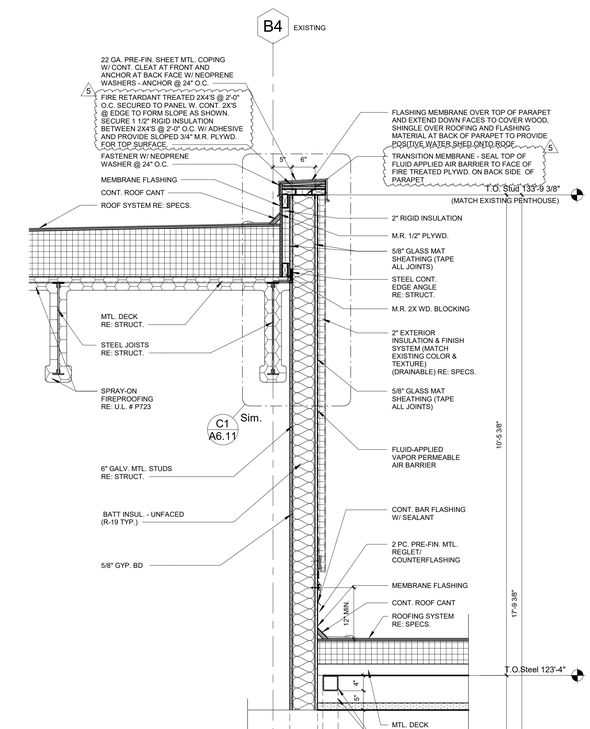


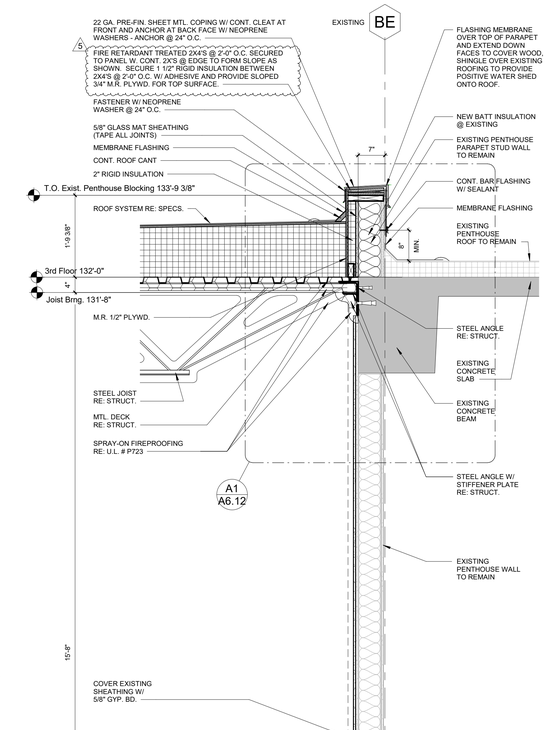
C6 WALL SECTION @ EXISTING W/ WINDOW - EXTERIOR COURTYARD
3/4" = 1'-0"



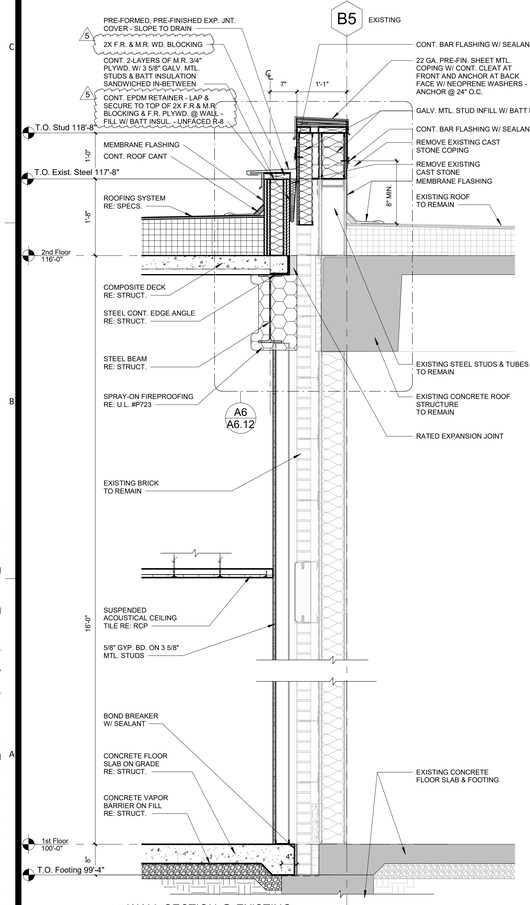
C4 WALL SECTION @ EXISTING W/ WINDOW - INTERIOR
3/4" = 1'-0"



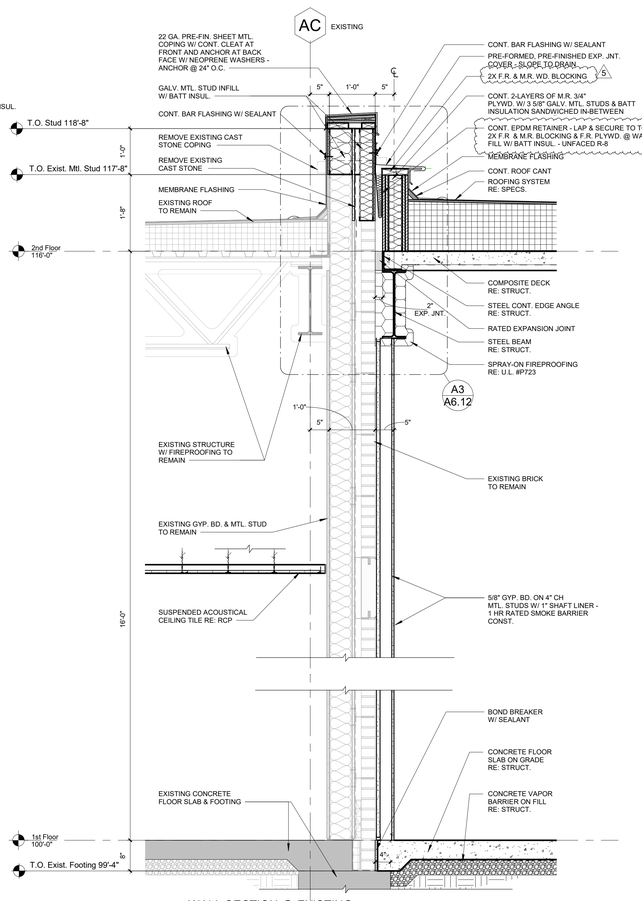
A3 WALL SECTION @ PENTHOUSE/ MECH. CHASE
3/4" = 1'-0"



A1 WALL SECTION @ PENTHOUSE
3/4" = 1'-0"



A6 WALL SECTION @ EXISTING
3/4" = 1'-0"



A4 WALL SECTION @ EXISTING
3/4" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	04.17.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC/ GP

Revision

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5	04.17.20	City Comments - ASI3

A6.5

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WALL SECTIONS

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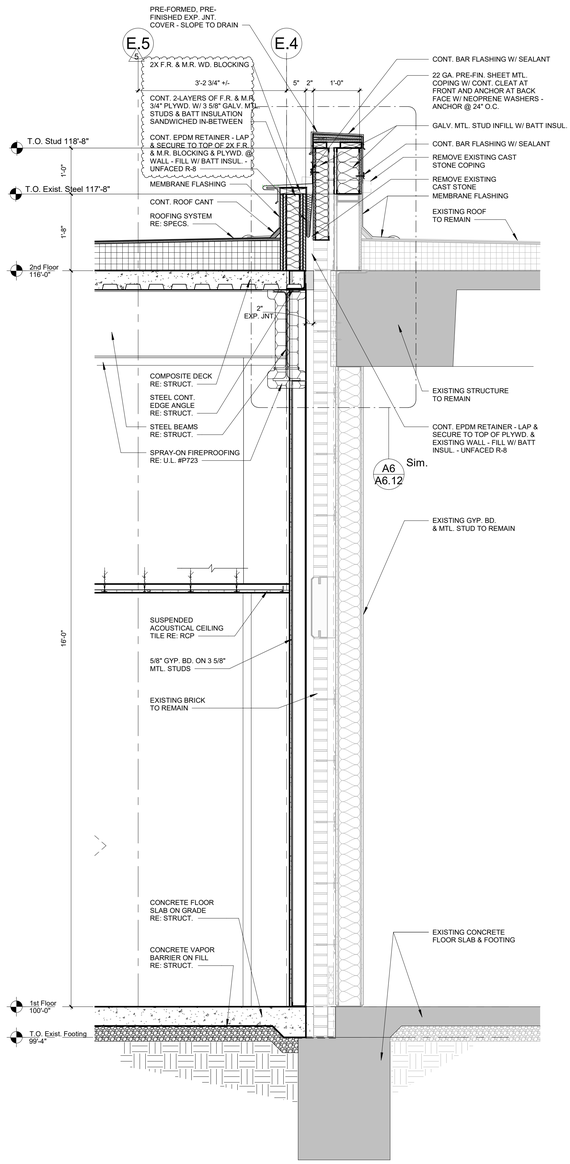
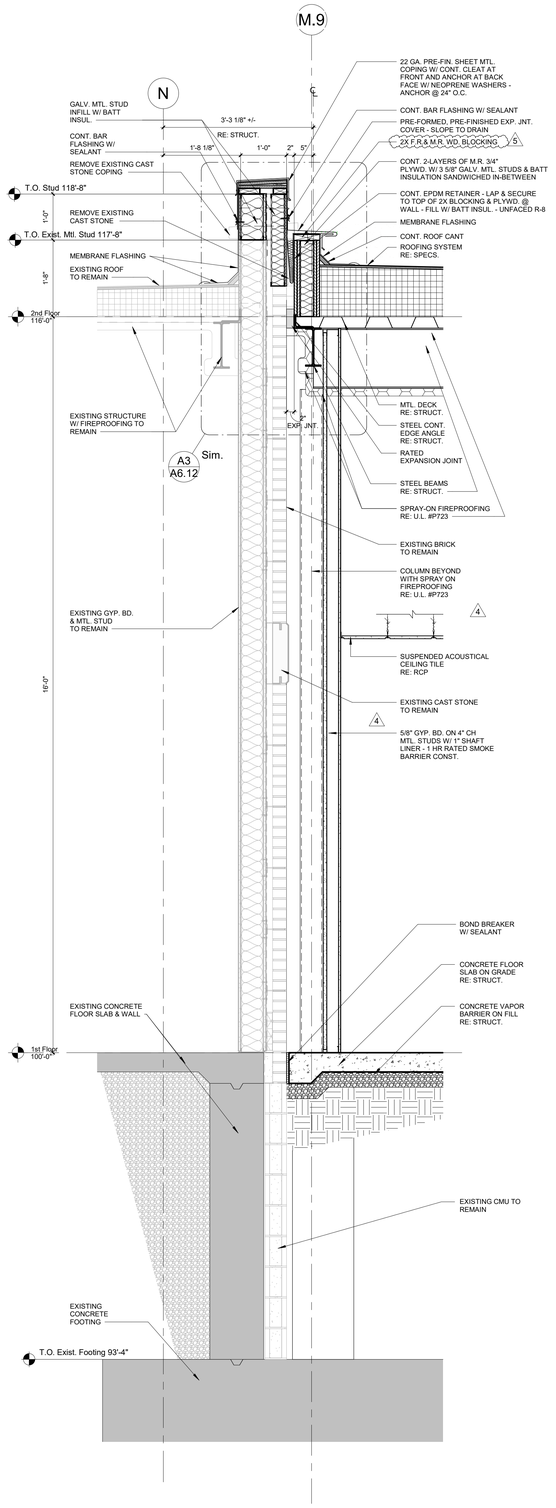


A3 WALL SECTION @ EXISTING
3/4" = 1'-0"



A1 WALL SECTION @ EXISTING
3/4" = 1'-0"

SAMUEL K. BECKMAN A-2011012130 ARCHITECT
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4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

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WALL SECTIONS

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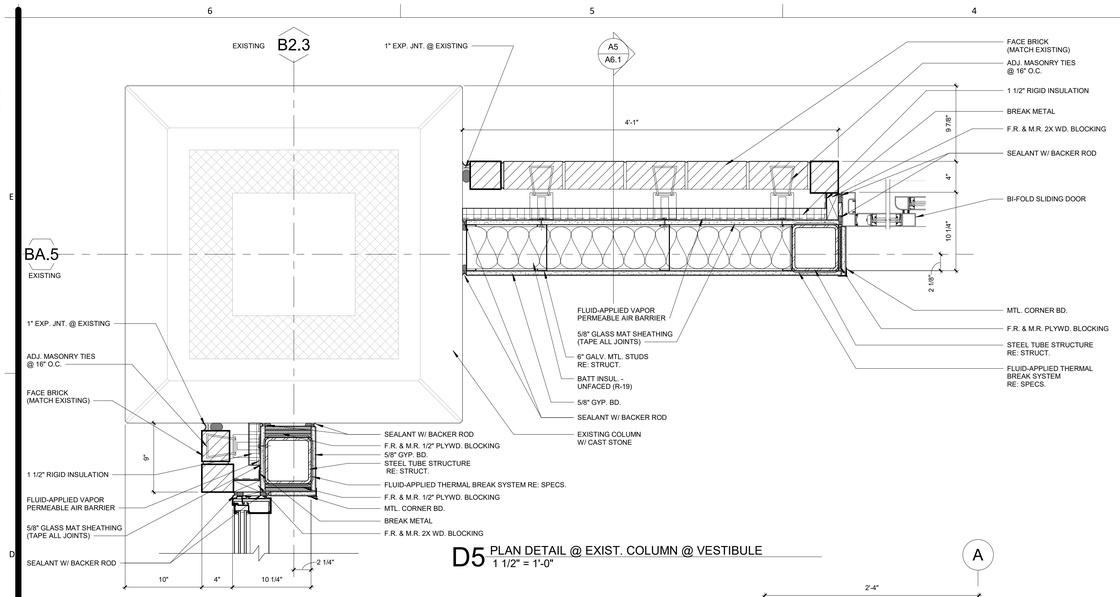
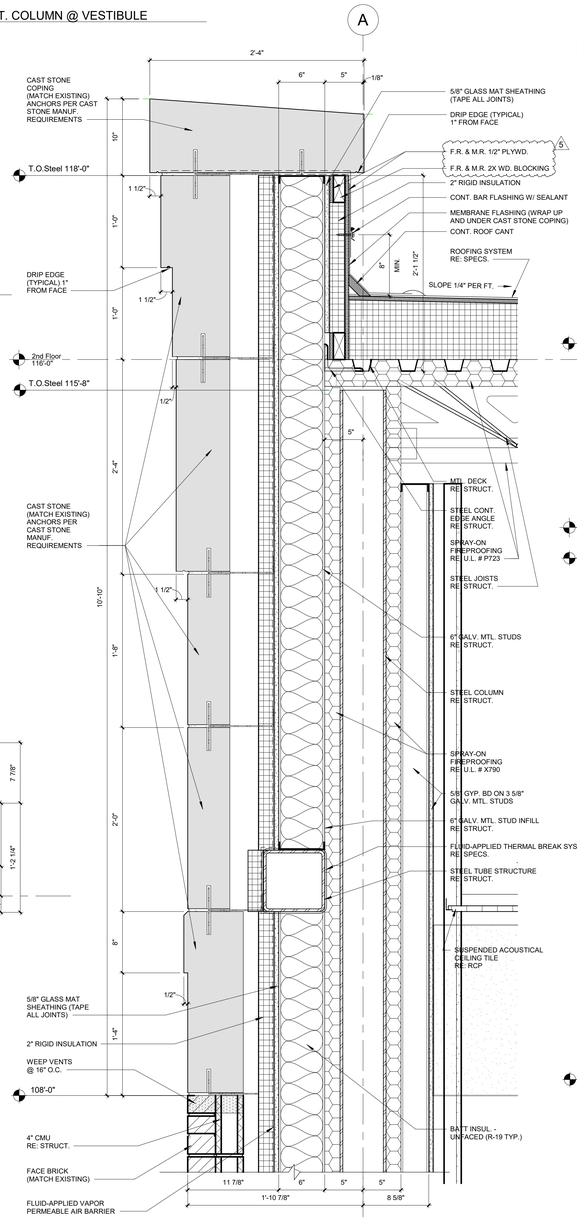


D5 PLAN DETAIL @ EXIST. COLUMN @ VESTIBULE
1 1/2" = 1'-0"



A4 SECTION DETAIL @ PARAPET
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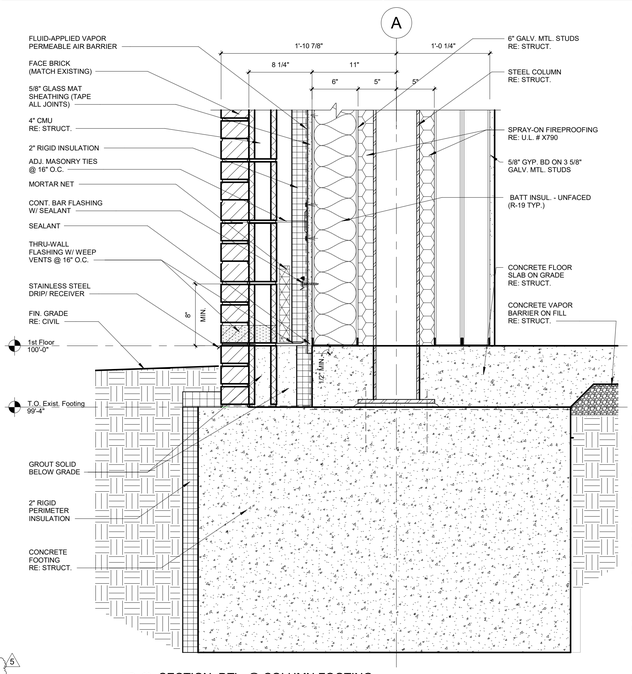
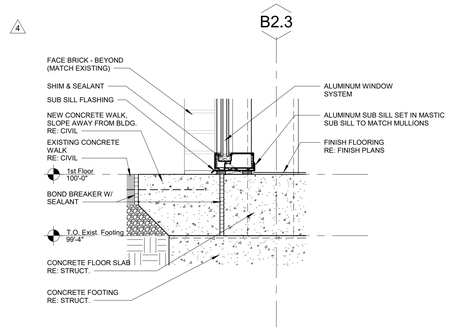
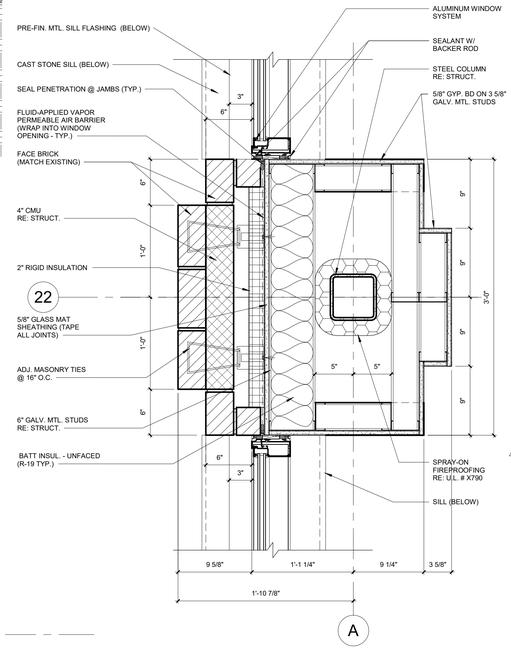


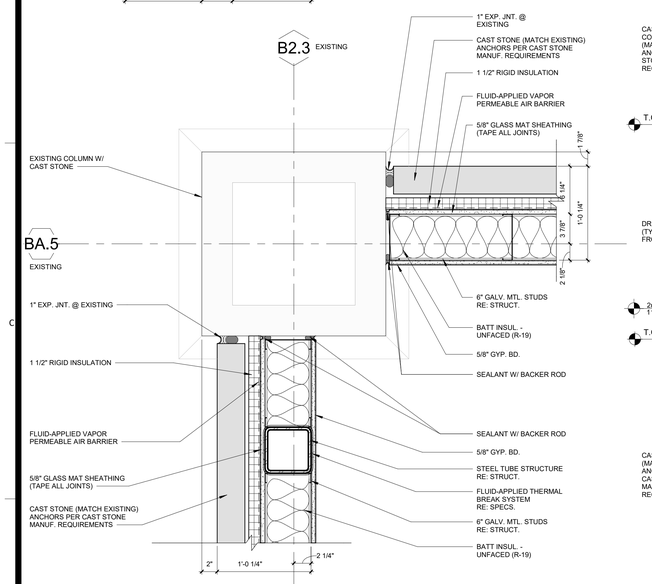
D3 SECTION DTL. @ COLUMN FOOTING
1 1/2" = 1'-0"



E1 STOREFRONT SILL DETAIL
1 1/2" = 1'-0"

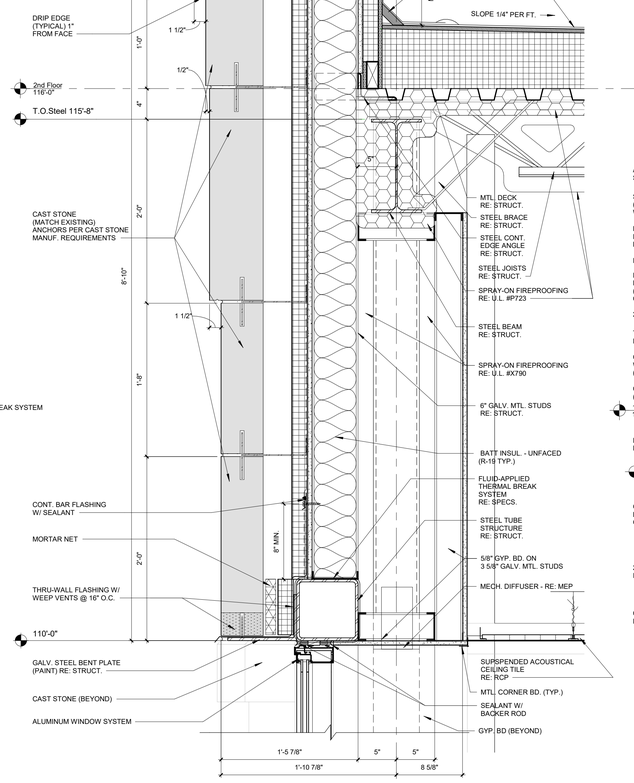


C1 PLAN DETAIL @ WINDOW JAMB
1 1/2" = 1'-0"



A6 PLAN DETAIL @ VESTIBULE
1 1/2" = 1'-0"

A4 SECTION DETAIL @ PARAPET
1 1/2" = 1'-0"



A3 SECTION DETAIL @ PARAPET
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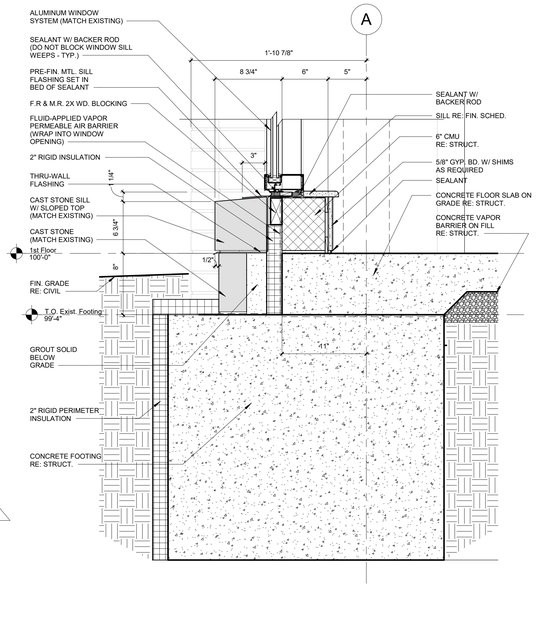

A1 SECTION DTL. @ WINDOW SILL
1 1/2" = 1'-0"

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4	04.10.20	Bid Pkg 3 - ADD 01
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PLAN & SECTION DETAILS

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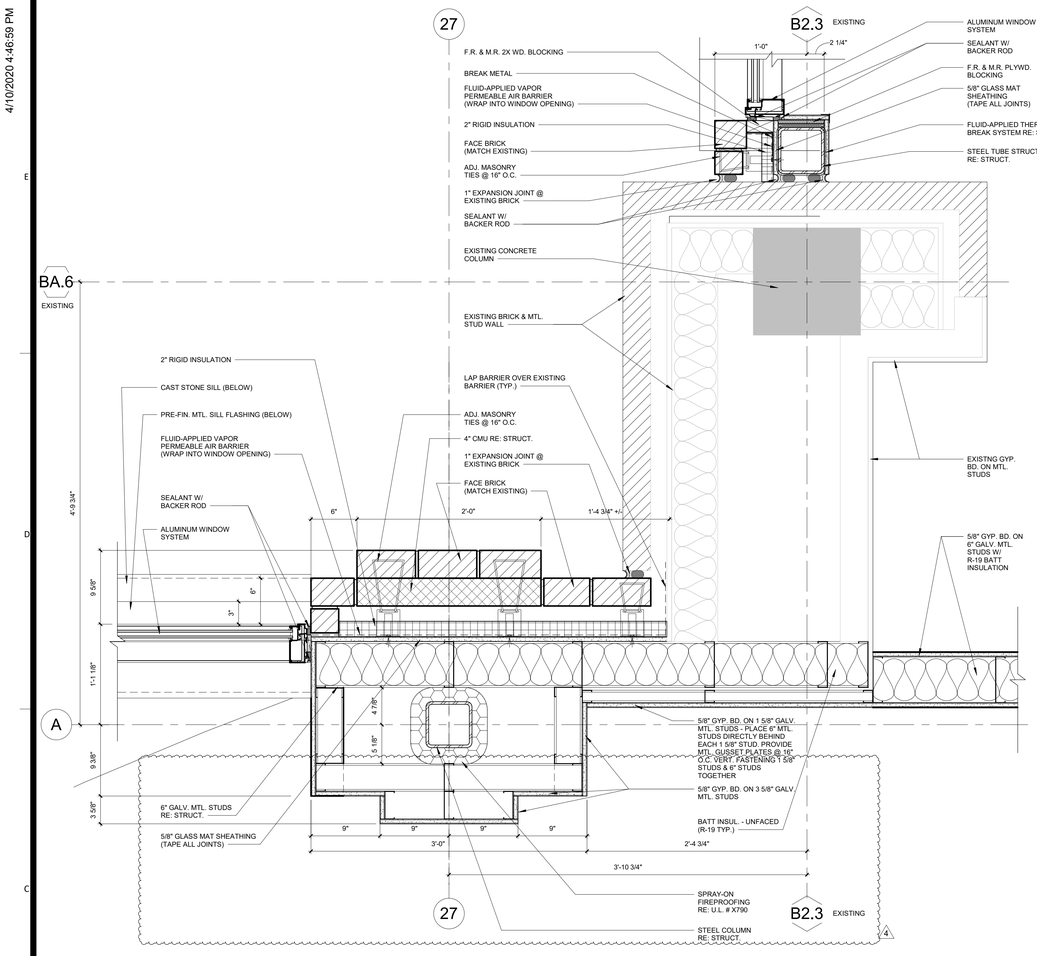

C5 PLAN DETAIL @ VESTIBULE
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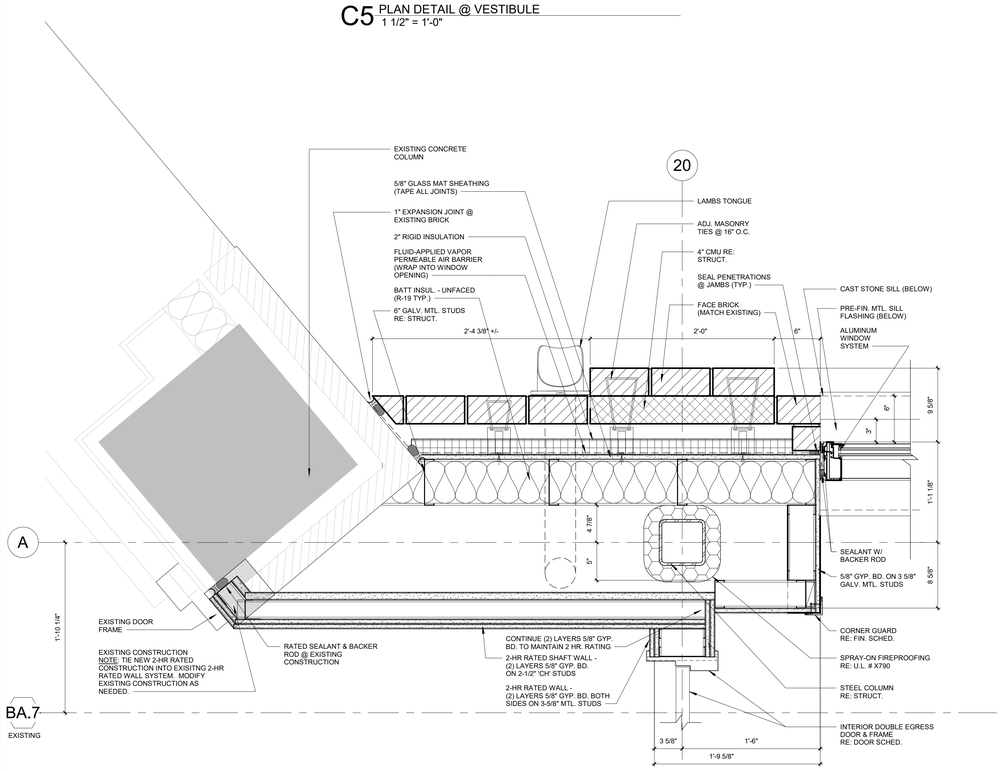
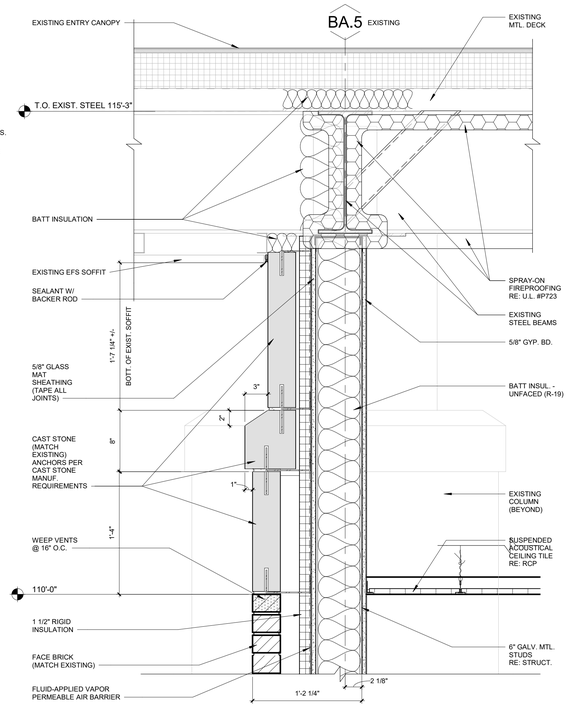


A5 PLAN DETAIL @ EXISTING
1 1/2" = 1'-0"



D3 SECTION DETAIL @ VESTIBULE
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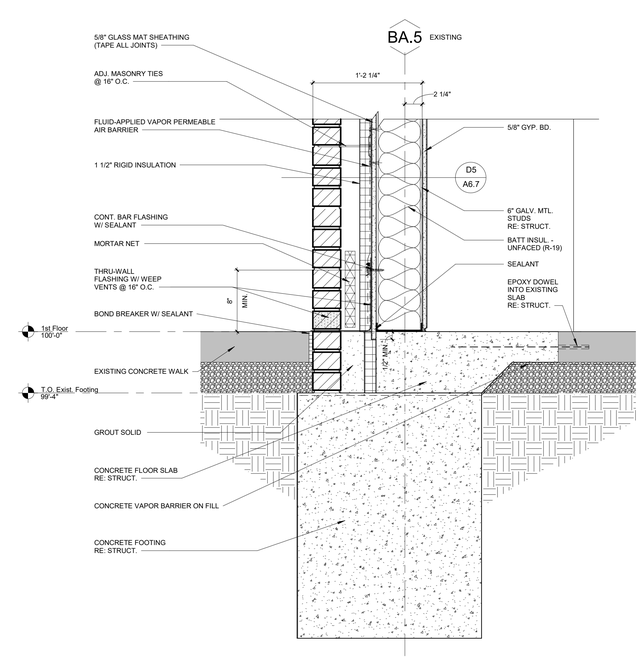

D1 SECTION DETAIL @ VESTIBULE
1 1/2" = 1'-0"

A3 SECTION DETAIL @ VESTIBULE
1 1/2" = 1'-0"

A1 SECTION DETAIL @ VESTIBULE
1 1/2" = 1'-0"

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4	04.10.20	Bid Pkg 3 - ADD 01

BID PACKAGE #3 03.30.2020

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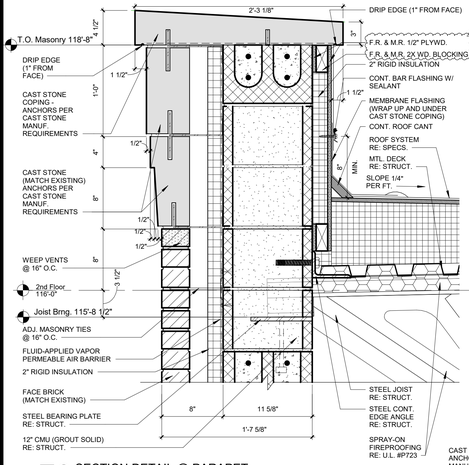
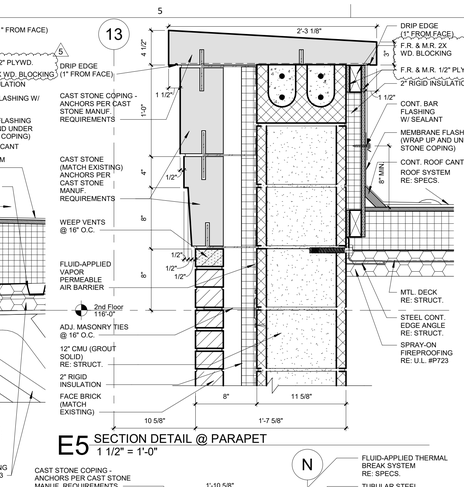
PLAN & SECTION DETAILS



E6 SECTION DETAIL @ PARAPET
1 1/2" = 1'-0"



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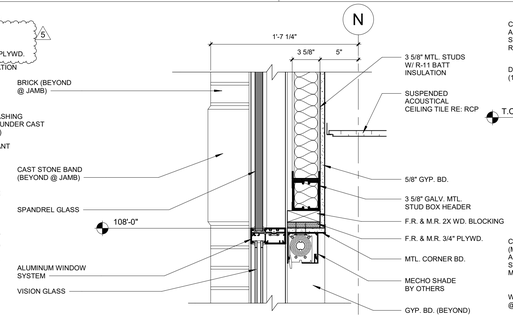

E4 SECTION DETAIL @ MECHO SHADE
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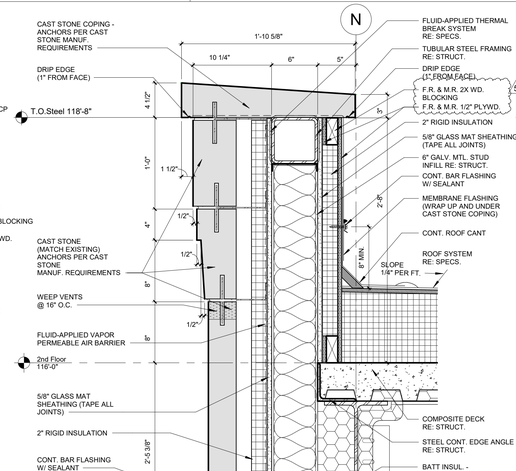
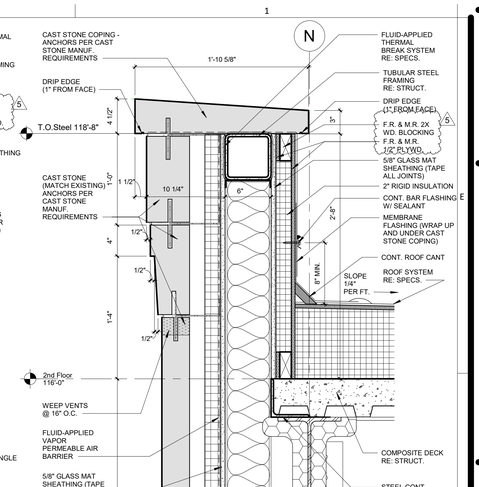
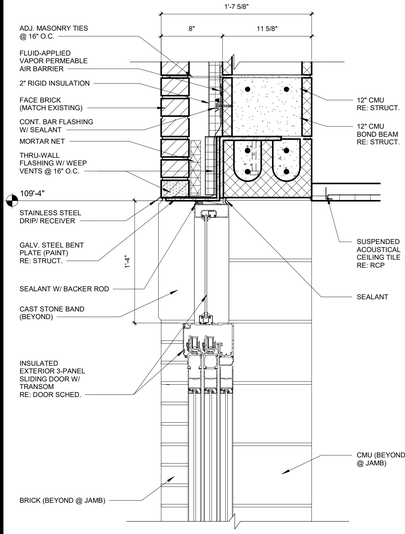


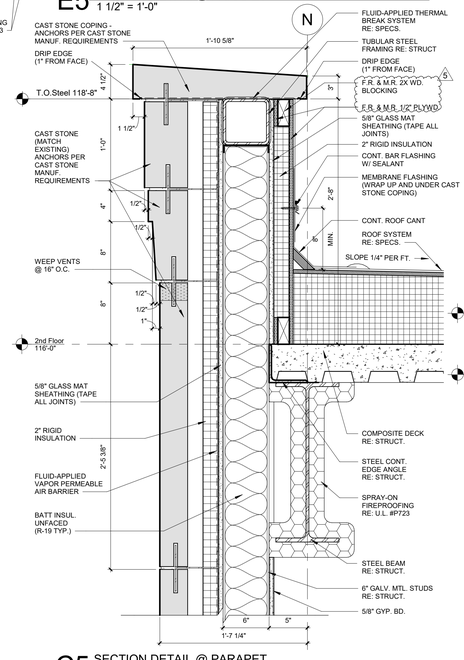
D3 SECTION DTL. @ PARAPET
1 1/2" = 1'-0"



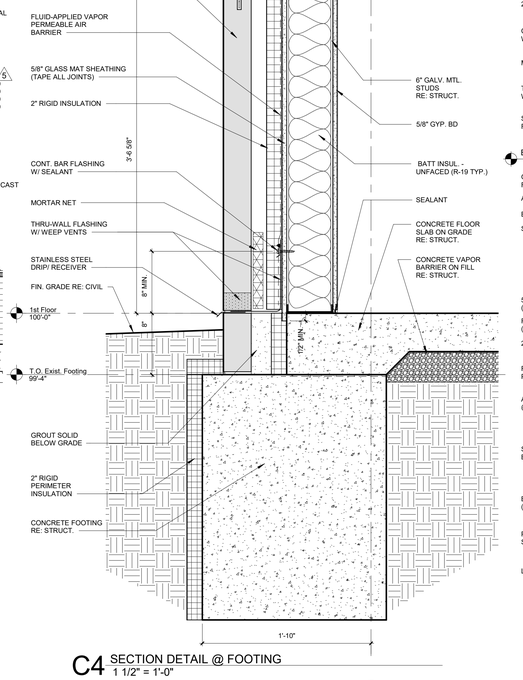
D1 SECTION DTL. @ PARAPET
1 1/2" = 1'-0"



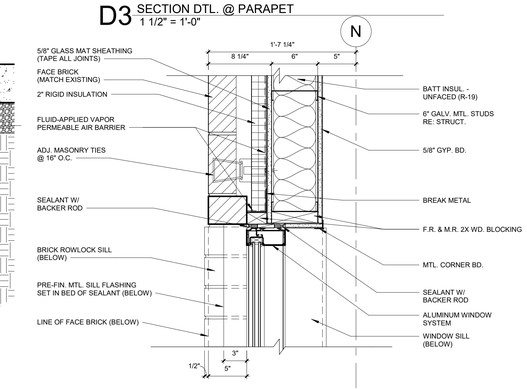
C6 SECTION DTL. @ SLIDING DOOR HEAD
1 1/2" = 1'-0"



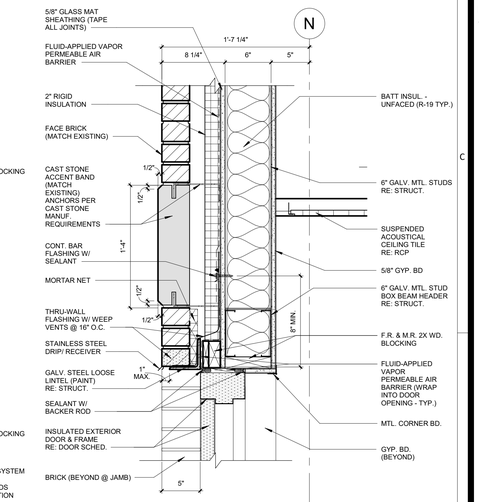
C5 SECTION DETAIL @ PARAPET
1 1/2" = 1'-0"



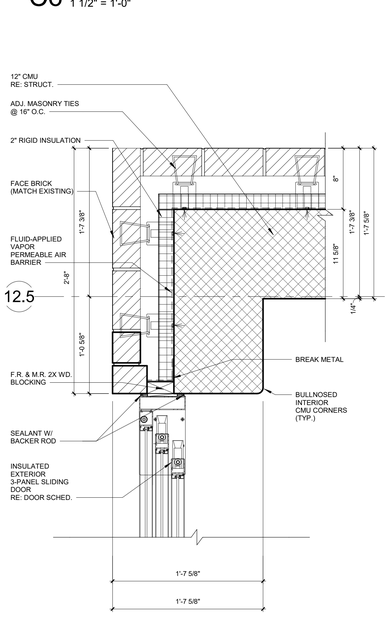
C4 SECTION DETAIL @ FOOTING
1 1/2" = 1'-0"



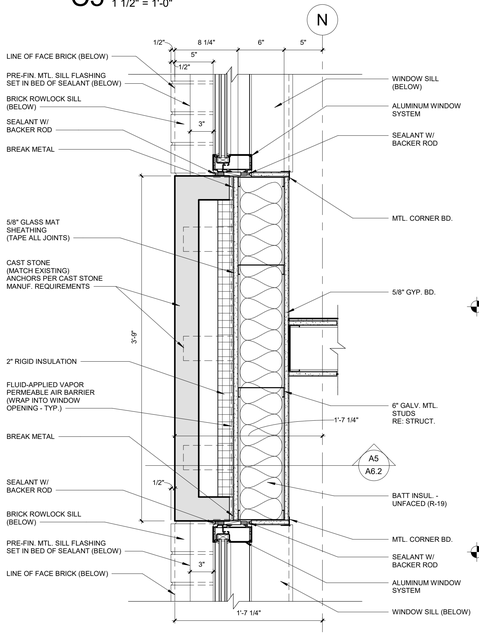
C2 PLAN DTL. @ WINDOW JAMB
1 1/2" = 1'-0"



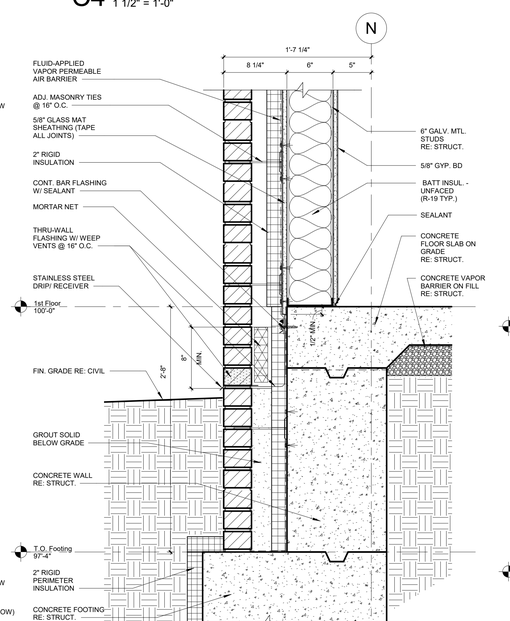
B1 SECTION DTL. @ EXTERIOR DOOR HEAD
1 1/2" = 1'-0"



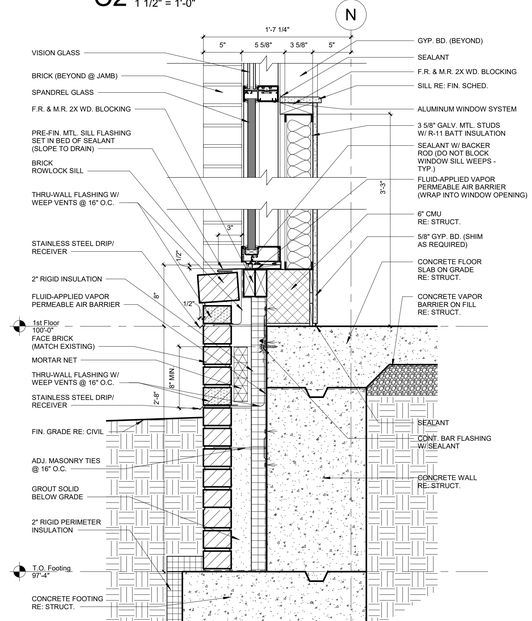
A6 PLAN DETAIL @ DOOR JAMB
1 1/2" = 1'-0"



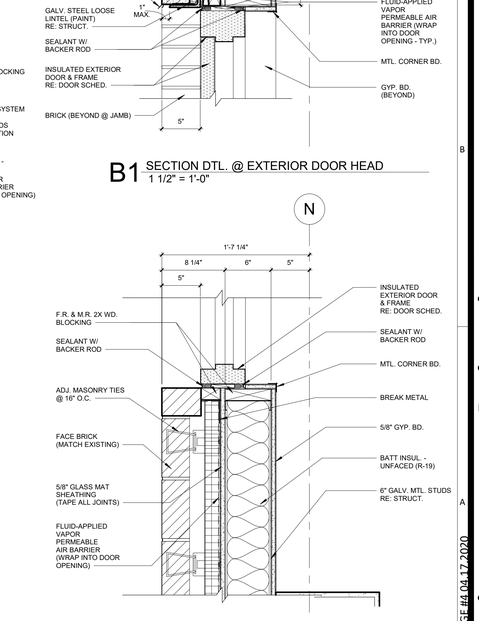
A5 PLAN DTL. @ WINDOW JAMB
1 1/2" = 1'-0"



A4 SECTION DETAIL @ FOOTING
1 1/2" = 1'-0"



A2 SECTION DTL. @ WINDOW SILL
1 1/2" = 1'-0"



A1 PLAN DTL. @ EXTERIOR DOOR JAMB
1 1/2" = 1'-0"

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

Date	04.17.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC/ GP

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5	04.17.20	City Comments - ASI3

BID PACKAGE #4 04.17.2020

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PLAN & SECTION DETAILS

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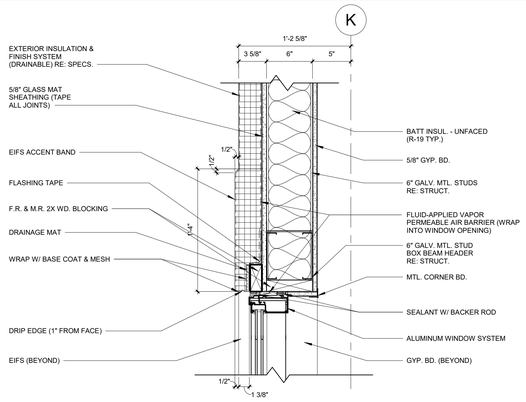
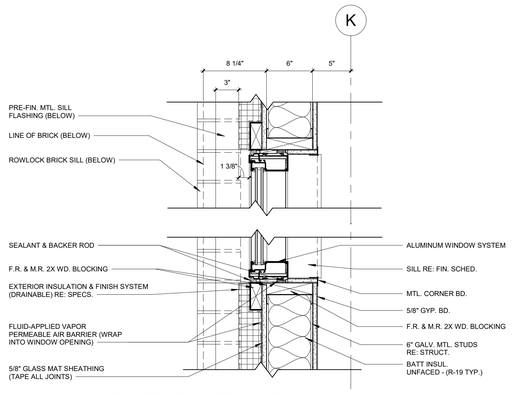
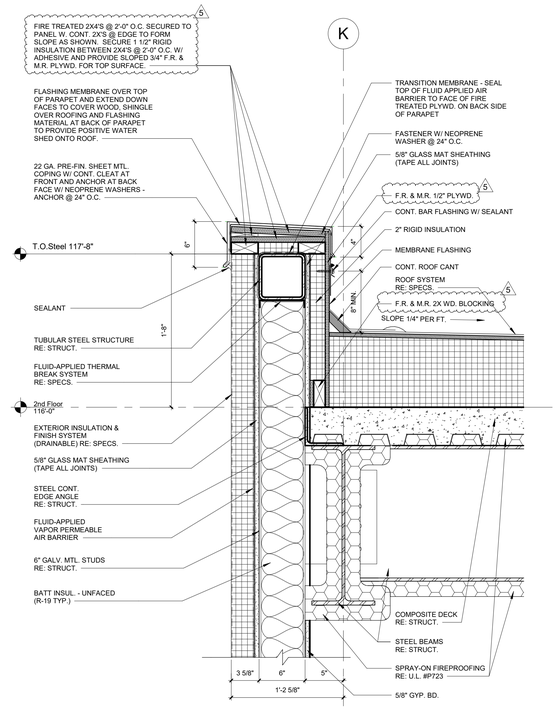


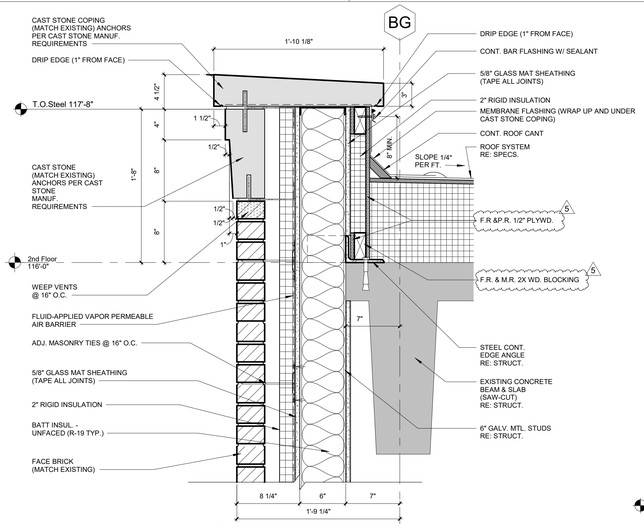
E6 SECTION DETAIL @ WINDOW HEAD
1 1/2" = 1'-0"



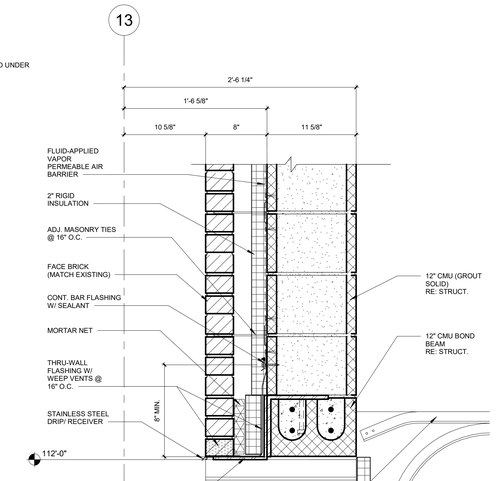
C6 PLAN DTL. @ WINDOW JAMB
1 1/2" = 1'-0"



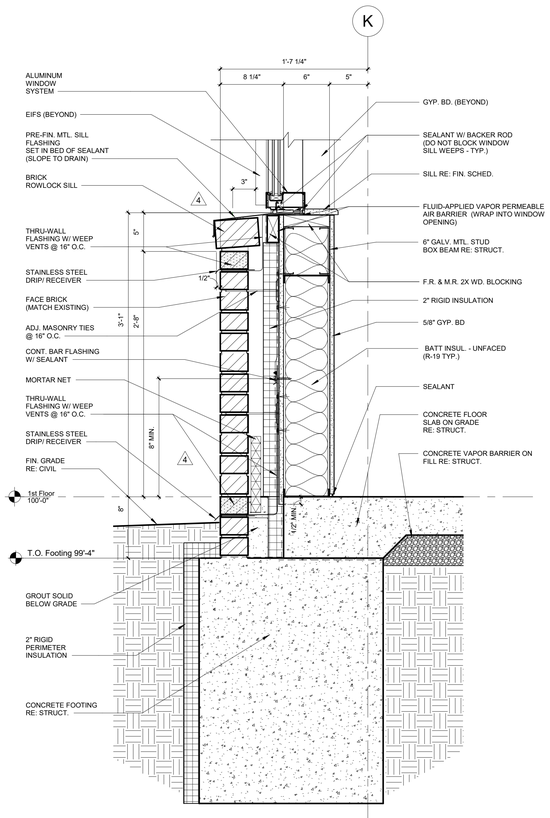
C4 SECTION DETAIL @ PARAPET
1 1/2" = 1'-0"



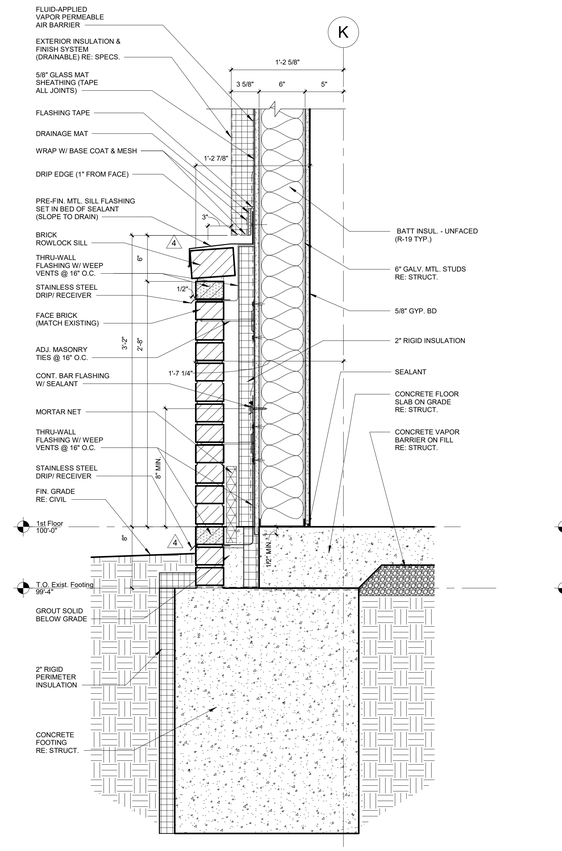
D2 SECTION DETAIL @ PARAPET
1 1/2" = 1'-0"



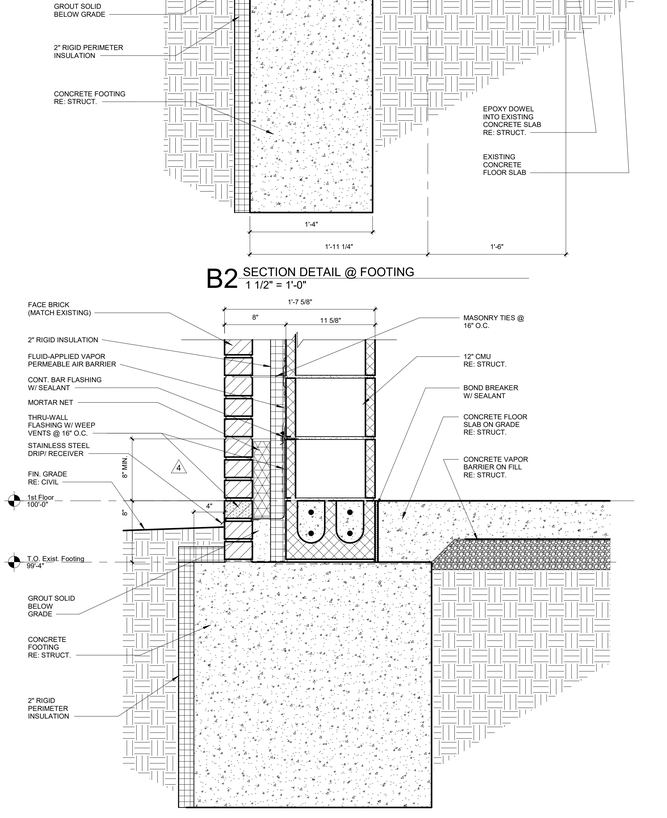
C1 SECTION DTL. @ SECTIONAL DOOR HEAD
1 1/2" = 1'-0"



A6 SECTION DETAIL @ FOOTING
1 1/2" = 1'-0"



A4 SECTION DETAIL @ FOOTING
1 1/2" = 1'-0"



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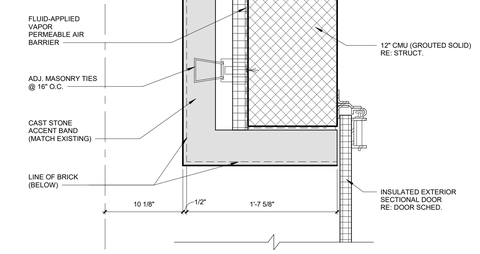
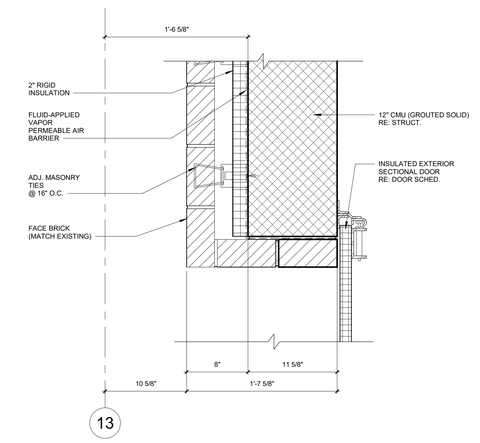
1 1/2" = 1'-0"



B1 PLAN DETAIL @ SECTIONAL DOOR JAMB
1 1/2" = 1'-0"

A2 SECTION DETAIL @ FOOTING
1 1/2" = 1'-0"



A1 PLAN DETAIL @ SECTIONAL DOOR JAMB
1 1/2" = 1'-0"

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BID PACKAGE #4 04.17.2020

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ARCHITECT
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Saint Luke's East Hospital
Flex Capacity Expansion
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Lee's Summit, MO 64086

Date	04.17.2020
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Checked By	WC/ GP

Revision

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4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

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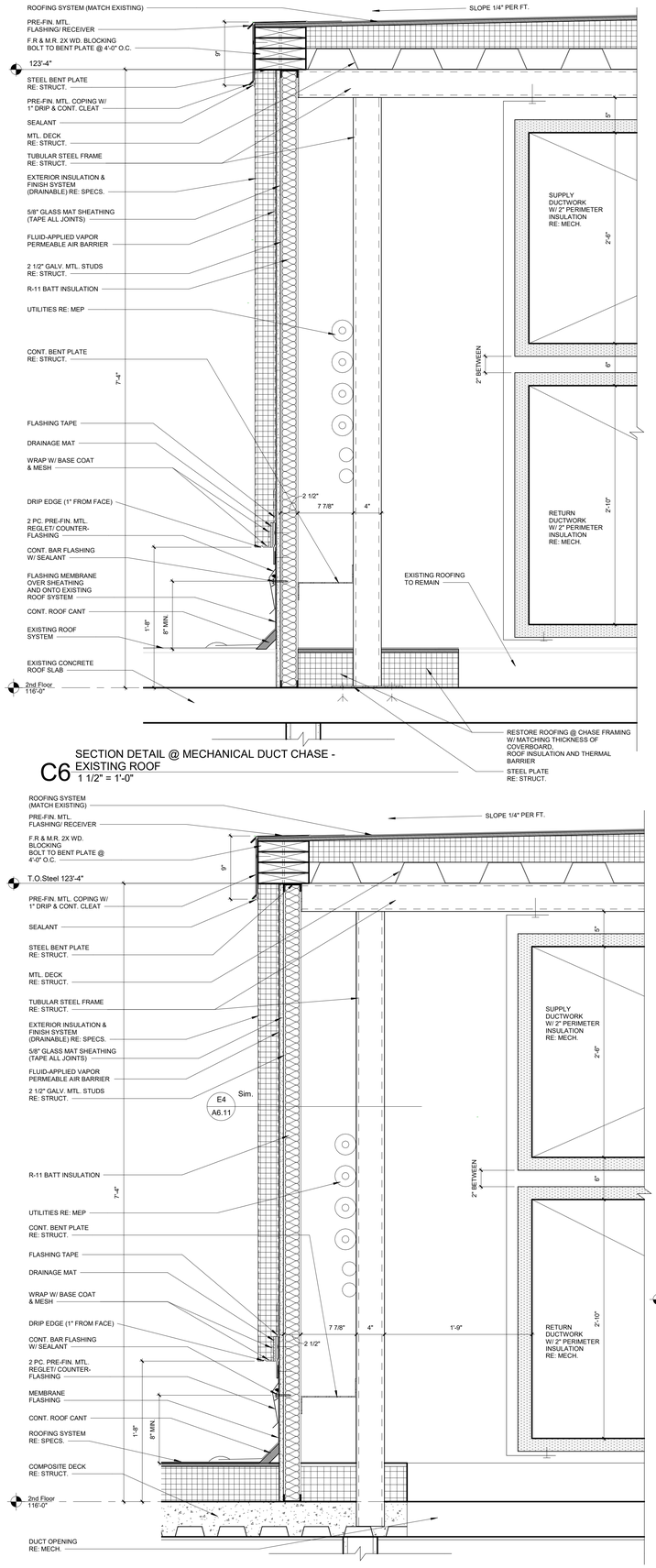
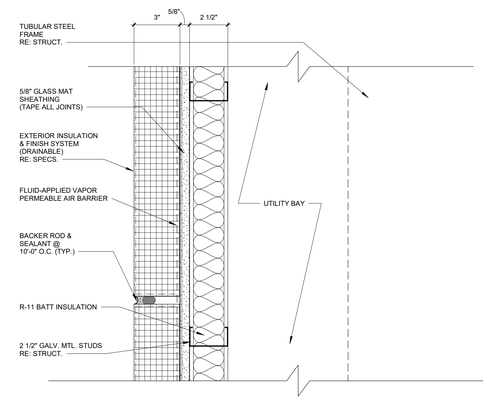
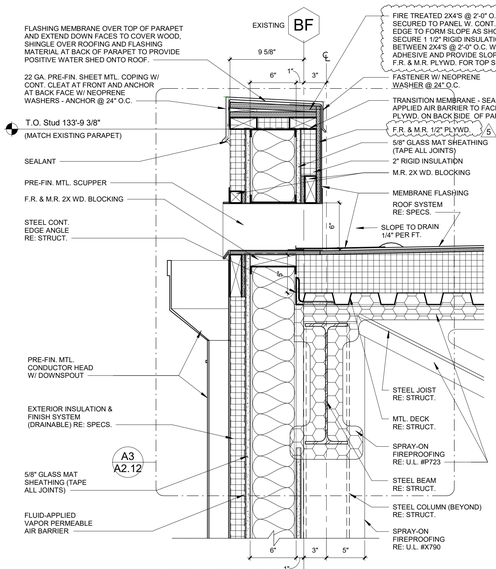


C6 SECTION DETAIL @ MECHANICAL DUCT CHASE - EXISTING ROOF
1 1/2" = 1'-0"

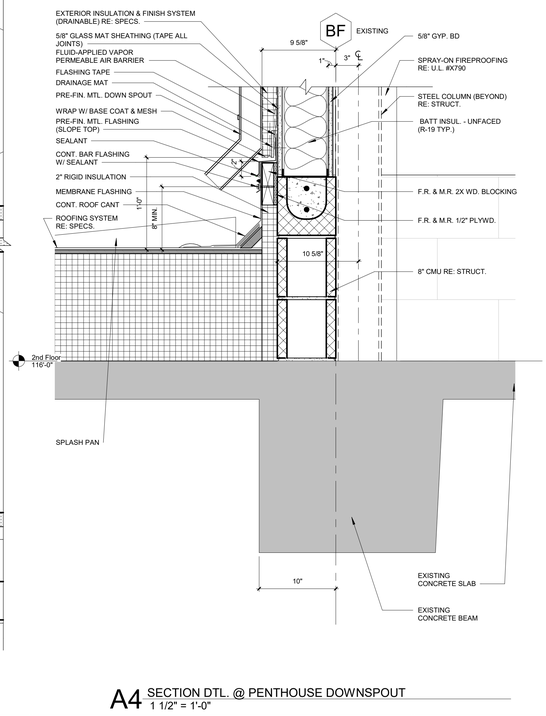
A6 SECTION DETAIL @ MECHANICAL DUCT CHASE - NEW ROOF
1 1/2" = 1'-0"



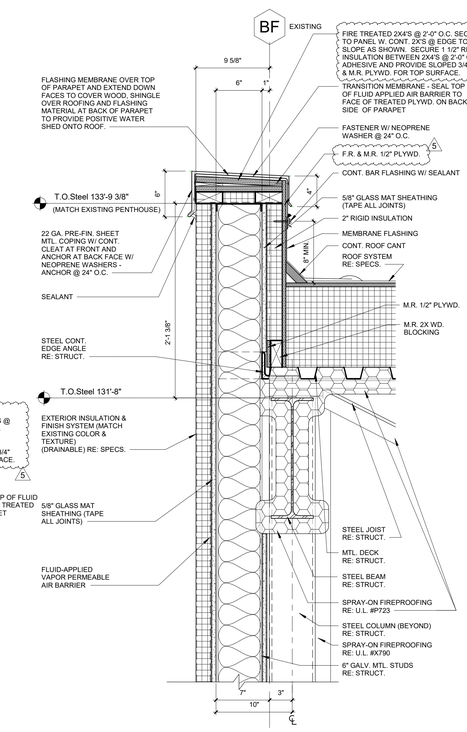
E4 MECHANICAL CHASE EIFS JOINT
3" = 1'-0"



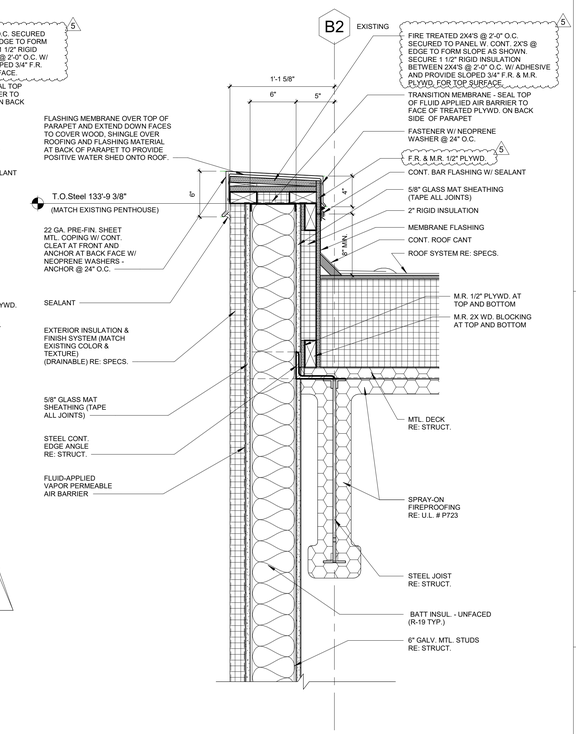
C4 SECTION DTL. @ PENTHOUSE SCUPPER
1 1/2" = 1'-0"



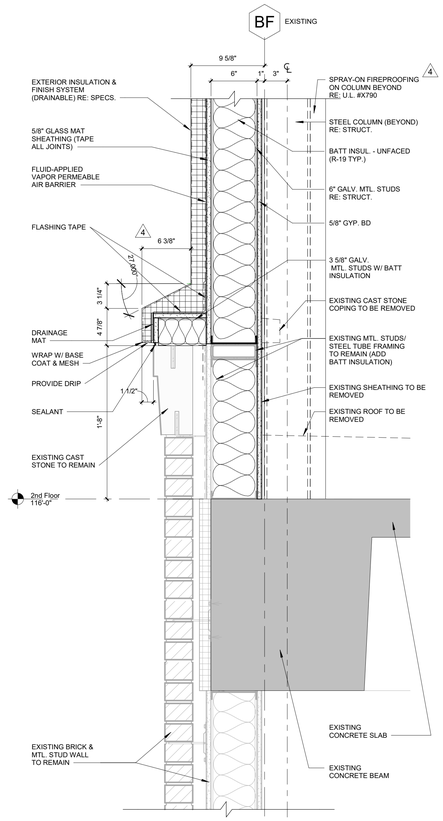
A4 SECTION DTL. @ PENTHOUSE DOWNSPOUT
1 1/2" = 1'-0"



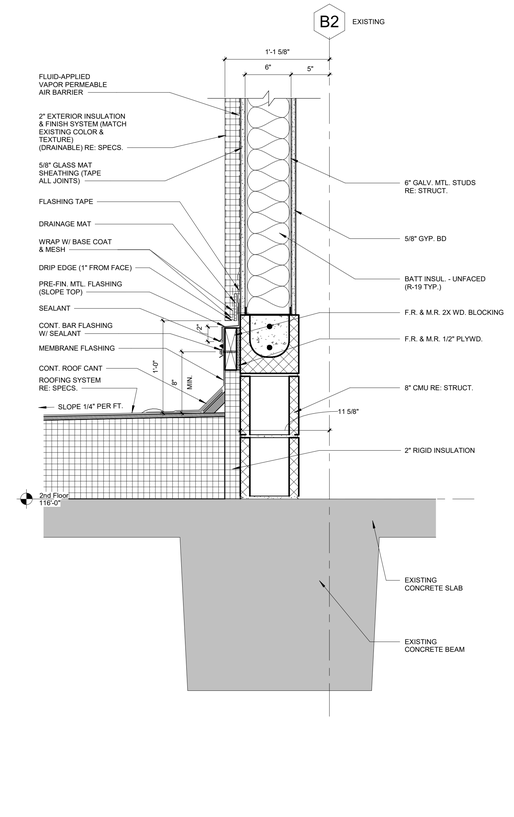
C3 SECTION DTL. @ PENTHOUSE PARAPET
1 1/2" = 1'-0"



C1 SECTION DTL. @ PENTHOUSE PARAPET
1 1/2" = 1'-0"



A3 SECTION DTL. @ PENTHOUSE SILL
1 1/2" = 1'-0"



A1 SECTION DTL. @ PENTHOUSE SILL
1 1/2" = 1'-0"

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4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

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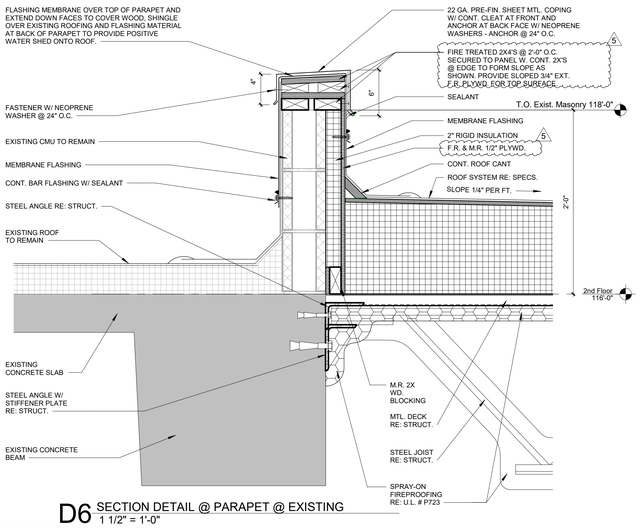
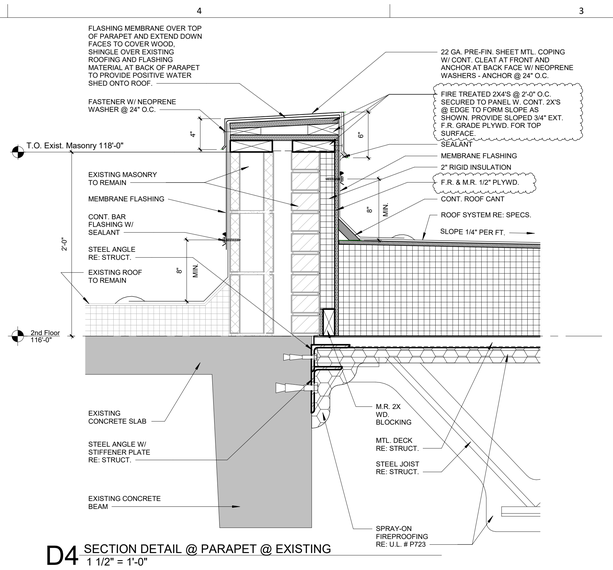


D6 SECTION DETAIL @ PARAPET @ EXISTING
1 1/2" = 1'-0"



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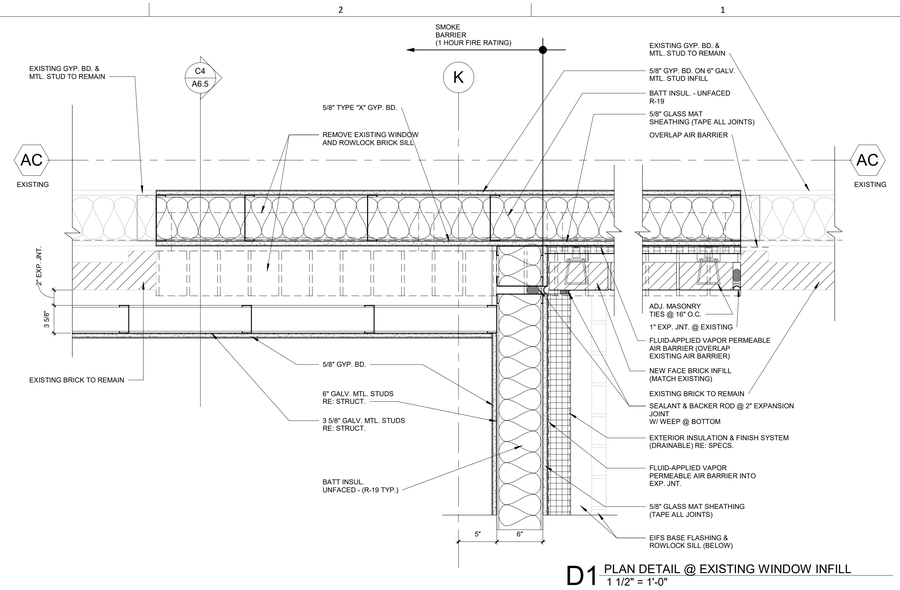
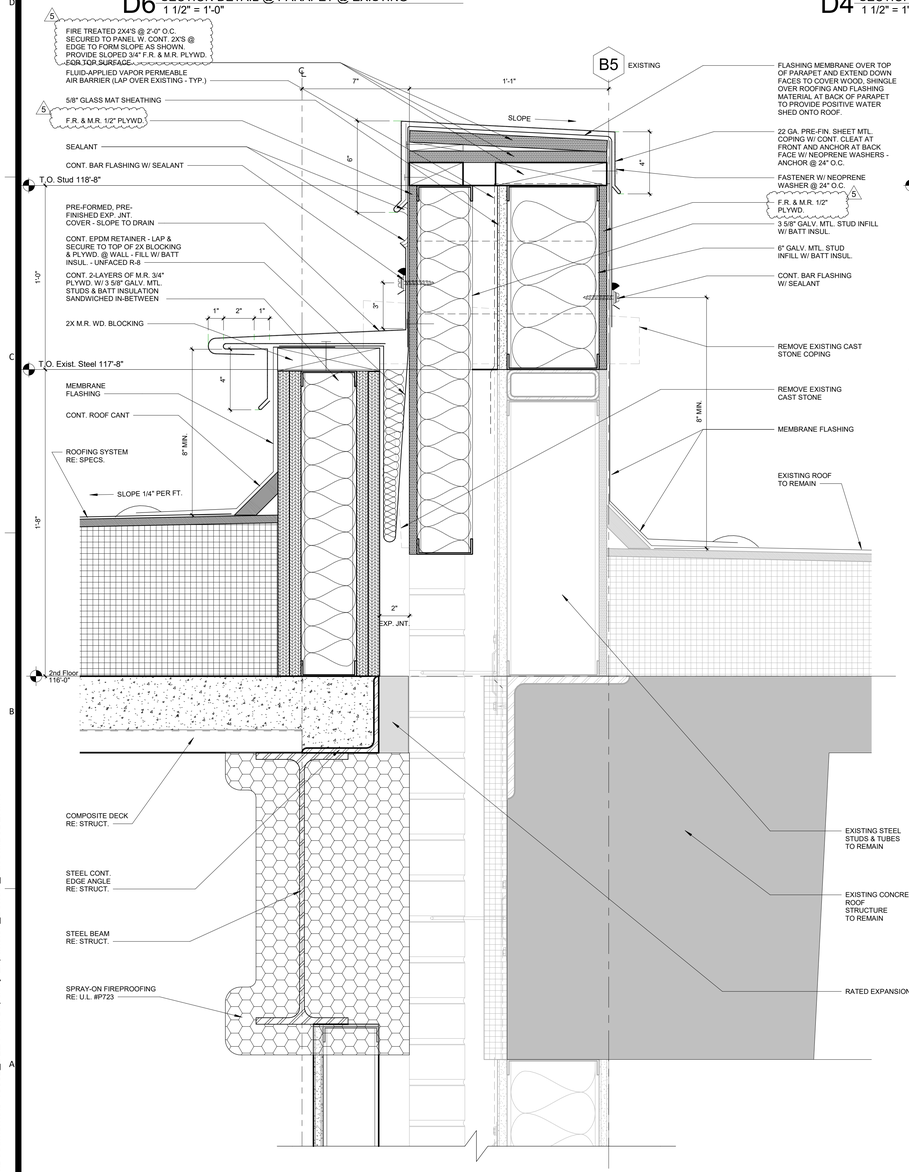
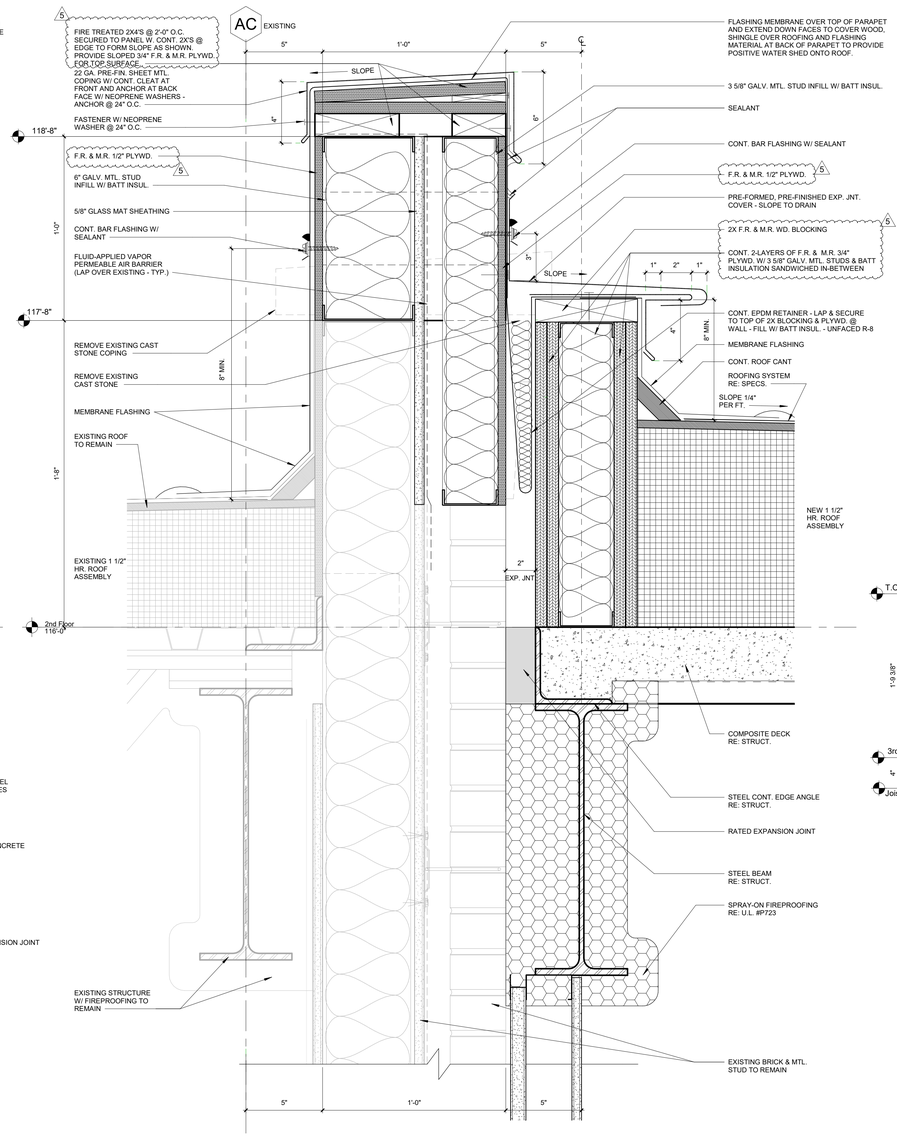


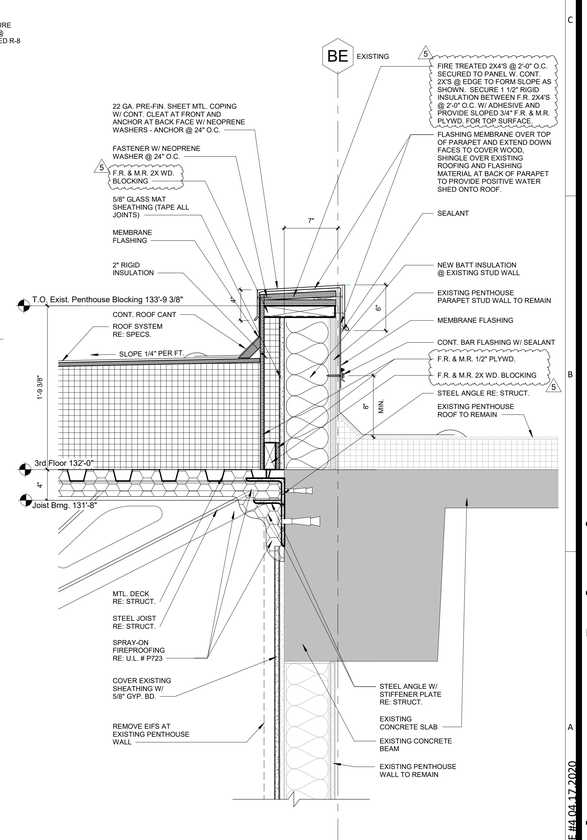
D1 PLAN DETAIL @ EXISTING WINDOW INFILL
1 1/2" = 1'-0"



A6 SECTION DETAIL @ EXPANSION JOINT
3" = 1'-0"



A3 SECTION DETAIL @ EXPANSION JOINT
3" = 1'-0"



A1 SECTION DETAIL @ PARAPET
1 1/2" = 1'-0"

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03.30.20

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PLAN & SECTION DETAILS

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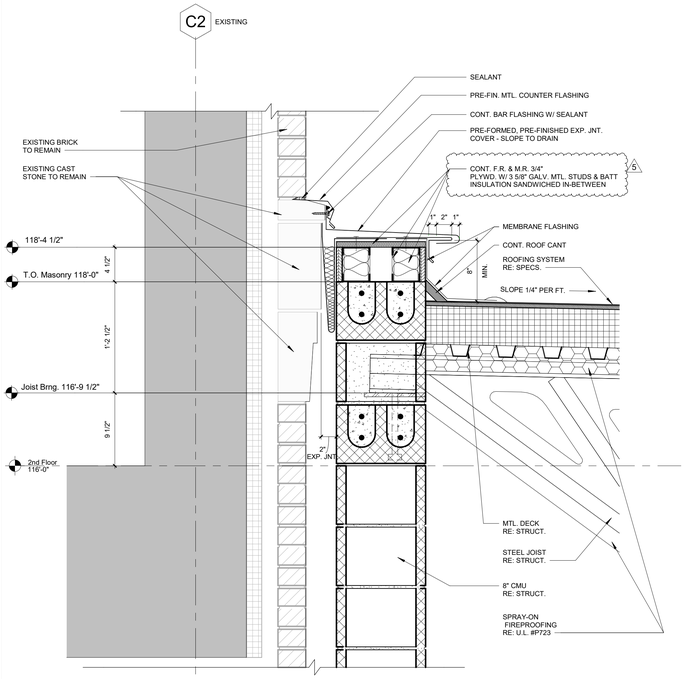
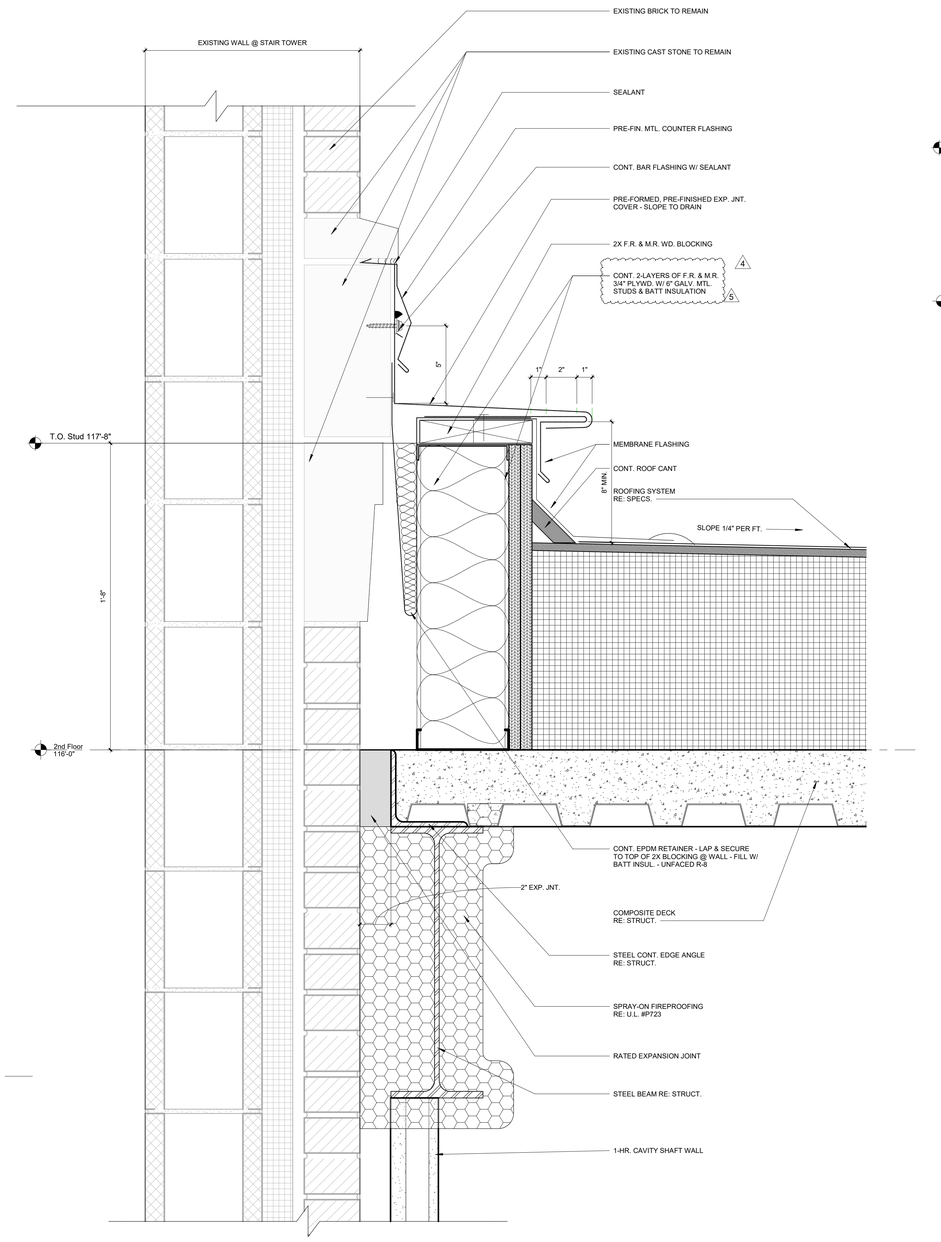
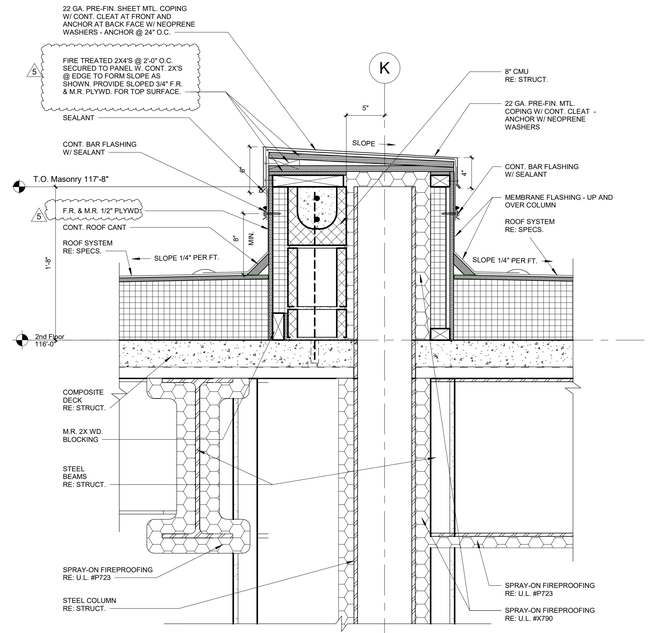


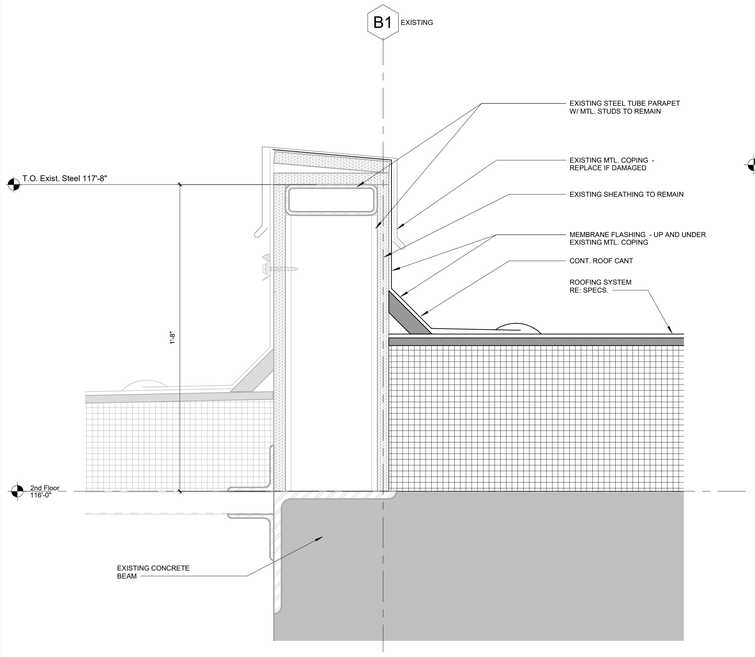
C6 SECTION DETAIL @ EXPANSION JOINT
1 1/2" = 1'-0"



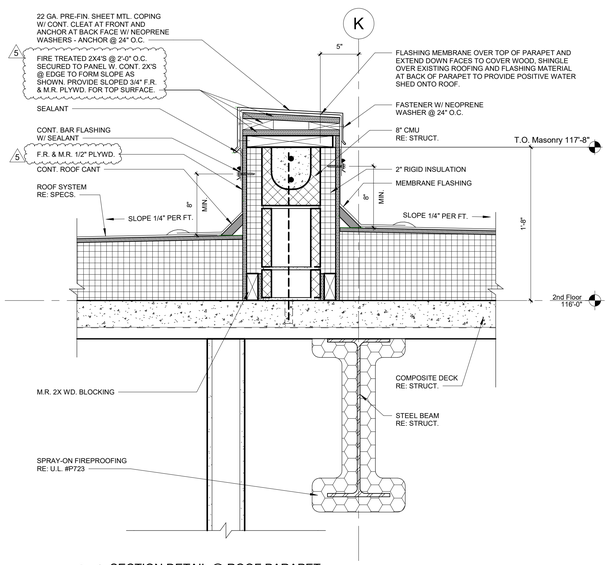
A3 SECTION DETAIL @ EXPANSION JOINT
3" = 1'-0"



C1 SECTION DETAIL @ ROOF PARAPET-COLUMN STUB
1 1/2" = 1'-0"



A6 SECTION DETAIL @ PARAPET @ EXISTING
3" = 1'-0"



A1 SECTION DETAIL @ ROOF PARAPET
1 1/2" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	04.17.2020
Job Number	3-19092
Drawn By	BJG
Checked By	WC/ GP

Revision

Number	Date	Description
4	04.10.20	Bid Pkg 3 - ADD 01
5	04.17.20	City Comments - ASI3

BID PACKAGE #4 04.17.2020

A6.13

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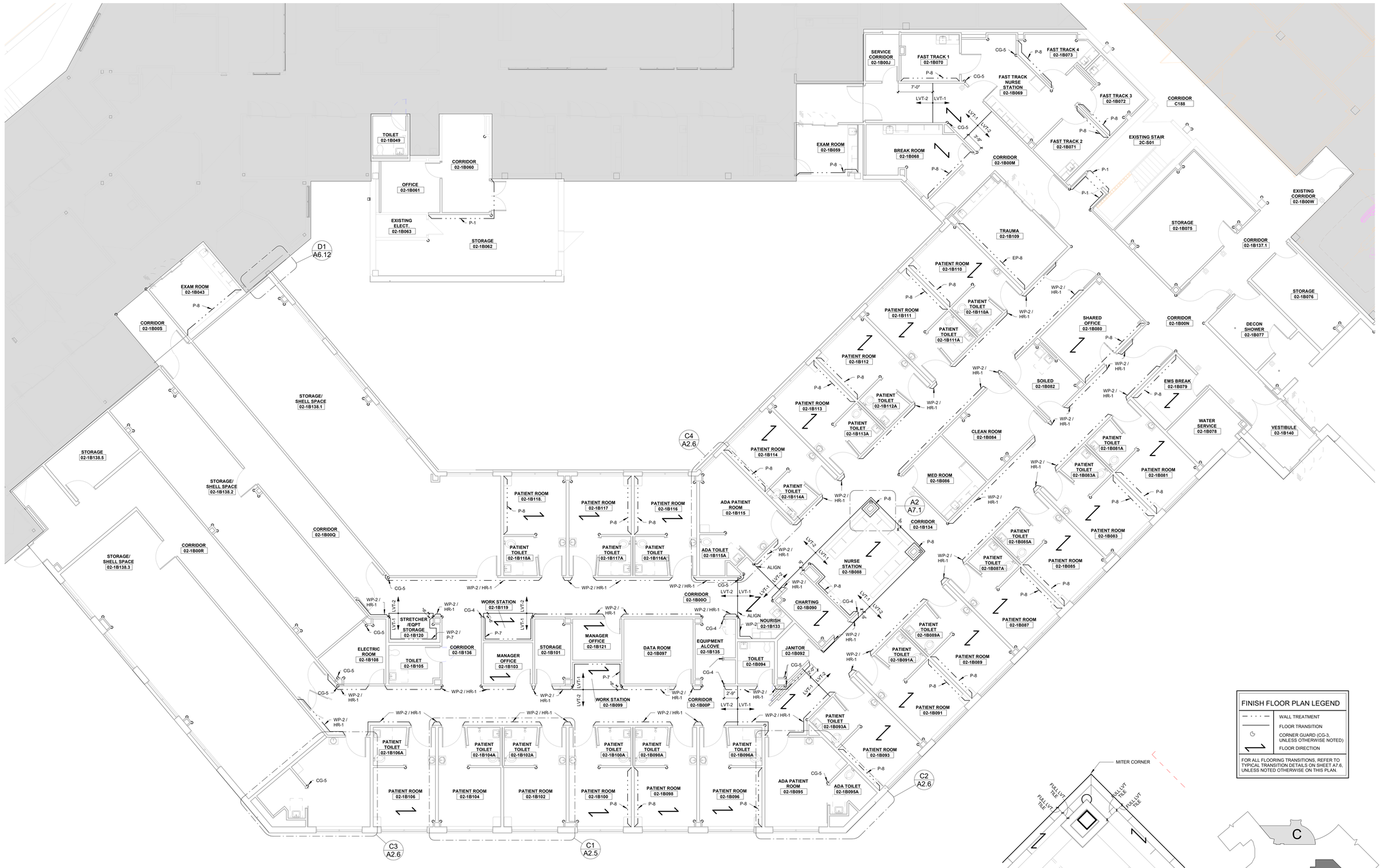
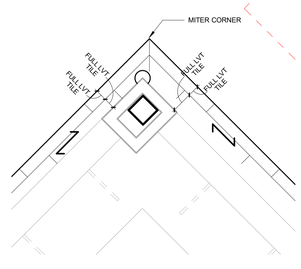
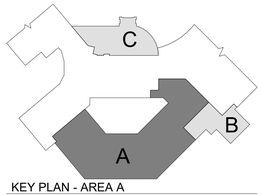
PLAN & SECTION DETAILS

4/10/2020 4:53:13 PM







A3 OVERALL FLOOR FINISH PLAN
1/8" = 1'-0"

TRUE NORTH
PLAN NORTH

A2 FLOOR TRANSITION PATTERN
1/2" = 1'-0"

KEY PLAN - AREA A
1" = 100'-0"

FINISH FLOOR PLAN LEGEND	
	WALL TREATMENT
	FLOOR TRANSITION
	CORNER GUARD (CG-3, UNLESS OTHERWISE NOTED)
	FLOOR DIRECTION

FOR ALL FLOORING TRANSITIONS, REFER TO TYPICAL TRANSITION DETAILS ON SHEET A7.6, UNLESS NOTED OTHERWISE ON THIS PLAN.

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

Date	03.30.2020
Job Number	3-19092
Drawn By	KB
Checked By	Checker

Revision

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4	04.10.20	Bid Pkg 3 - ADD 01

BID PACKAGE #3 03.30.2020

A7.1

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FLOOR FINISH PLAN - AREA A

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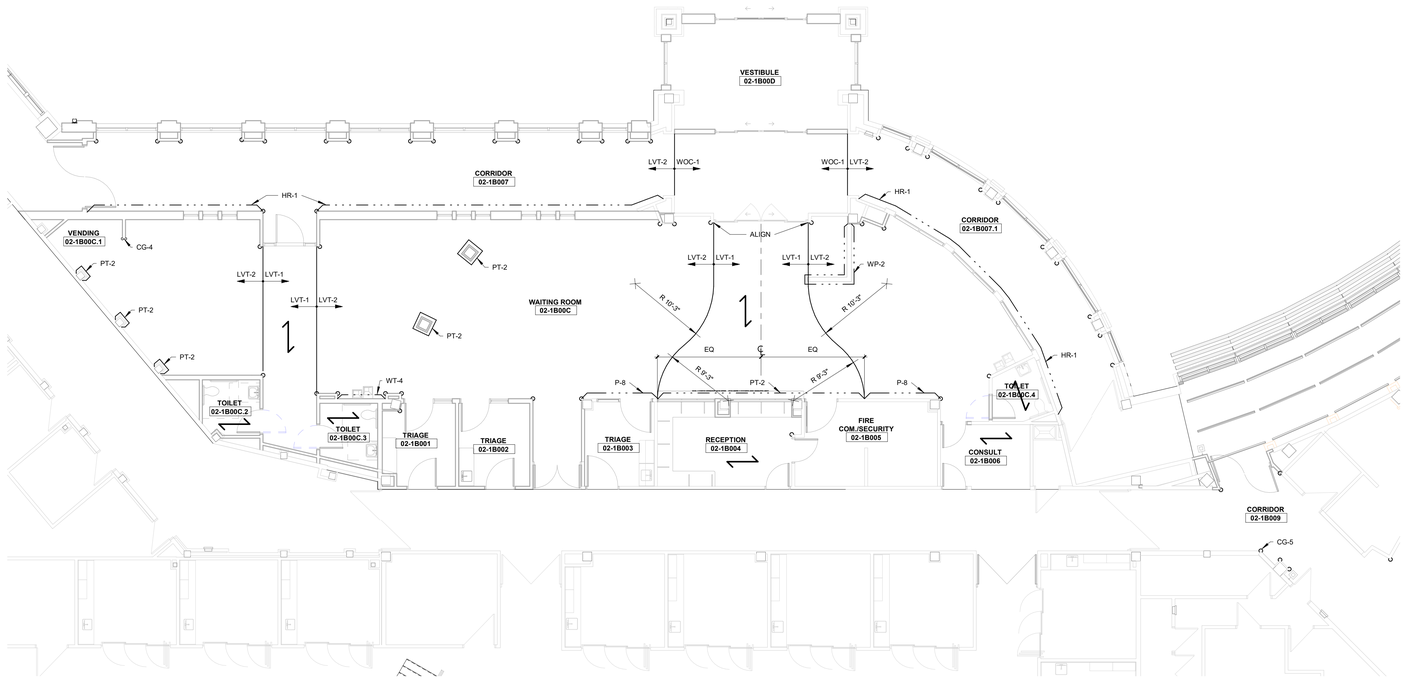
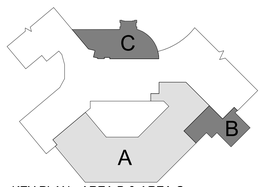
C2 FLOOR FINISH PLAN - AREA B
1/8" = 1'-0"



A2 FLOOR FINISH PLAN - AREA C
1/8" = 1'-0"

FINISH FLOOR PLAN LEGEND	
	WALL TREATMENT
	FLOOR TRANSITION
	CORNER GUARD (CG-3, UNLESS OTHERWISE NOTED)
	FLOOR DIRECTION

FOR ALL FLOORING TRANSITIONS, REFER TO TYPICAL TRANSITION DETAILS ON SHEET A7.6, UNLESS NOTED OTHERWISE ON THIS PLAN.



KEY PLAN - AREA B & AREA C
1" = 100'-0"

TRUE NORTH
PLAN NORTH

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Checked By	Checker

Revision

Number	Date	Description

A7.2

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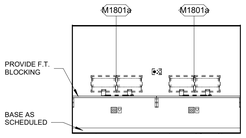
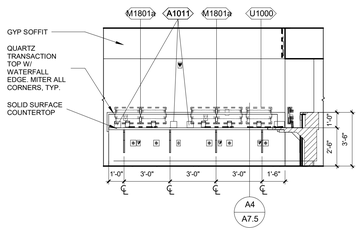
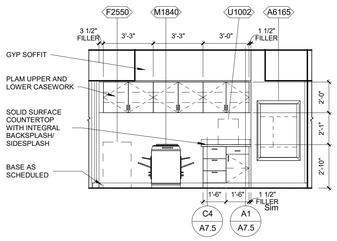
FLOOR FINISH PLAN - AREA B & C



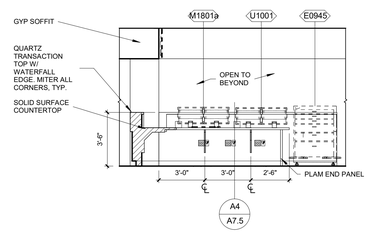
E6 02-1B090 - CHARTING - SOUTH
1/4" = 1'-0"



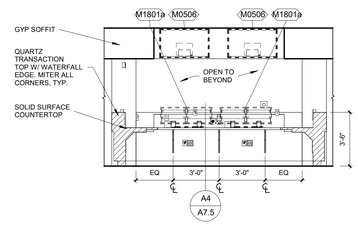
E5 02-1B088 - NURSE STATION - WEST
1/4" = 1'-0"



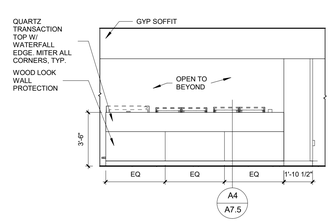
E4 02-1B088 - NURSE STATION - SOUTH
1/4" = 1'-0"



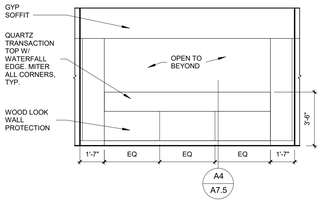
E3 02-1B088 - NURSE STATION - EAST
1/4" = 1'-0"



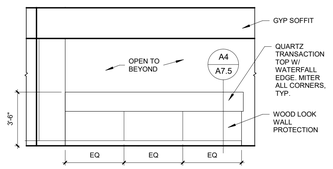
E2 02-1B088 - NURSE STATION - NORTH
1/4" = 1'-0"



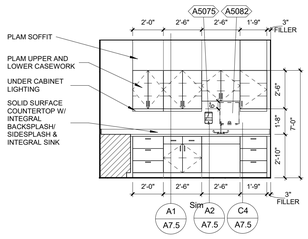
E1 02-1B088 - NURSE STATION SIDE - WEST
1/4" = 1'-0"



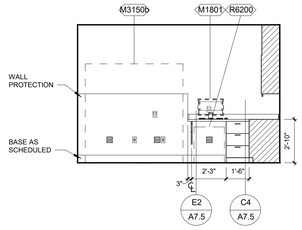
D6 02-1B088 - NURSE STATION FRONT - SOUTH
1/4" = 1'-0"



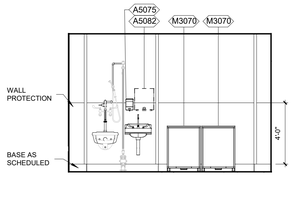
D5 02-1B088 - NURSE STATION SIDE - EAST
1/4" = 1'-0"



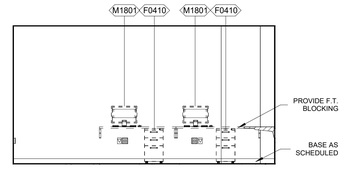
D4 02-1B086 - MED ROOM - EAST
1/4" = 1'-0"



D3 02-1B086 - MED ROOM - NORTH
1/4" = 1'-0"



D2 02-1B082 - SOILED - EAST
1/4" = 1'-0"



D1 02-1B080 - SHARED OFFICE -WEST
1/4" = 1'-0"

C6 02-1B079 EMS BREAK ROOM - SOUTH
1/4" = 1'-0"

C5 02-1B077 - DECON SHOWER - SOUTH
1/4" = 1'-0"

C4 02-1B109 - TRAUMA - WEST
1/4" = 1'-0"

C3 02-1B109 - TRAUMA - EAST
1/4" = 1'-0"

C2 02-1B073 - FAST TRACK 4 - SOUTH
1/4" = 1'-0"

C1 02-1B073 - FAST TRACK 4 - NORTH
1/4" = 1'-0"

B6 02-1B072 - FAST TRACK 3 - WEST
1/4" = 1'-0"

B5 02-1B072 - FAST TRACK 3 - NORTH
1/4" = 1'-0"

B4 02-1B071 - FAST TRACK 2 - SOUTH
1/4" = 1'-0"

B3 02-1B071 - FAST TRACK 2 - EAST
1/4" = 1'-0"

B2 02-1B071 - FAST TRACK 2 - NORTH
1/4" = 1'-0"

B1 02-1B069 - FAST TRACK NURSE STATION - SOUTH
1/4" = 1'-0"

A6 02-1B069 - FAST TRACK NURSE STATION - NORTH
1/4" = 1'-0"

A5 02-1B070 - FAST TRACK 1 - SOUTH
1/4" = 1'-0"

A4 02-1B070 - FAST TRACK 1 - NORTH
1/4" = 1'-0"

A3 02-1B068 - BREAK ROOM - NORTH
1/4" = 1'-0"

A2 02-1B059 - EXAM ROOM - SOUTH
1/4" = 1'-0"

A1 02-1B059 - EXAM ROOM - EAST
1/4" = 1'-0"

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BID PACKAGE #3 3.30.2020

A7.3

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INTERIOR ELEVATIONS

3/30/2020 11:52:17 AM

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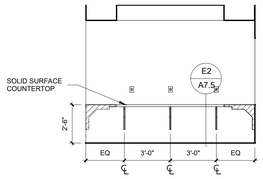
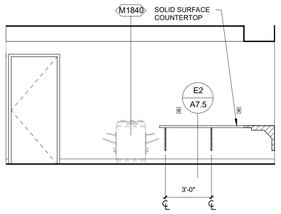
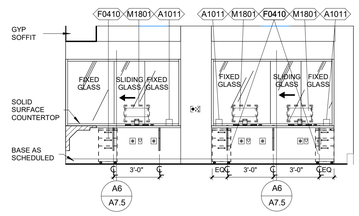


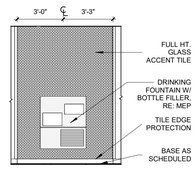
C6 02-1B004 - RECEPTION - WEST
1/4" = 1'-0"



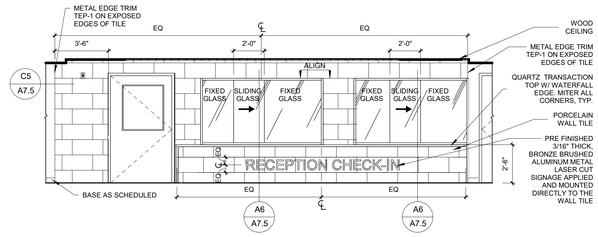
C5 02-1B004 - RECEPTION - SOUTH
1/4" = 1'-0"



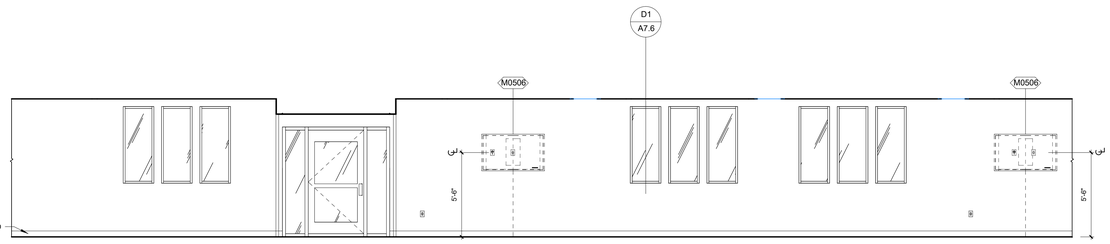
C4 02-1B004 - RECEPTION - NORTH
1/4" = 1'-0"



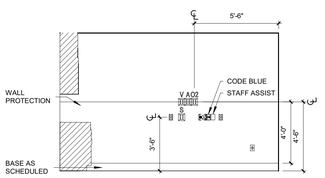
C3 02-1B00C - WAITING - SOUTH
1/4" = 1'-0"



C2 02-1B00C - RECEPTION DESK - SOUTH
1/4" = 1'-0"



B6 02-1B00C - WAITING - NORTH
1/4" = 1'-0"



B3 02-1B043 - EXAM ROOM - EAST
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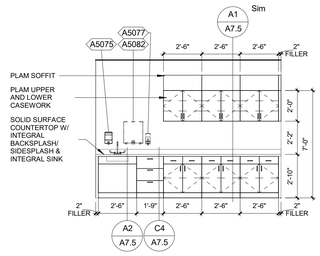
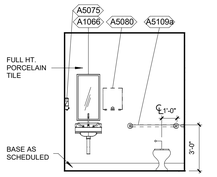
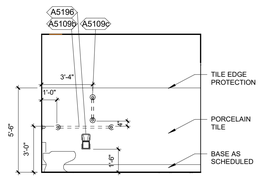


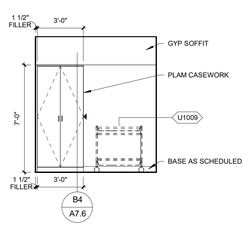
B2 02-1B043 - EXAM ROOM - NORTH
1/4" = 1'-0"



B1 02-1B105 - TYP. TOILET - WEST
1/4" = 1'-0"



A6 02-1B105 - TYP. TOILET - NORTH
1/4" = 1'-0"



A5 02-1B135 - CORRIDOR - EAST
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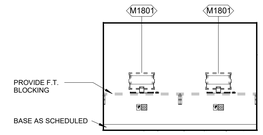
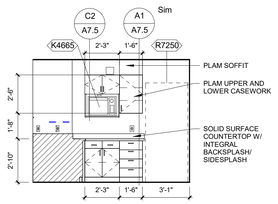
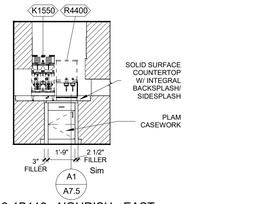


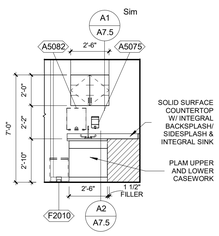
A4 02-1B099 - NURSE STATION ALCOVE - NORTH
1/4" = 1'-0"



A3 02-1B116 - NOURISH - SOUTH
1/4" = 1'-0"



A2 02-1B116 - NOURISH - EAST
1/4" = 1'-0"



A1 02-1B116 - NOURISH - NORTH
1/4" = 1'-0"

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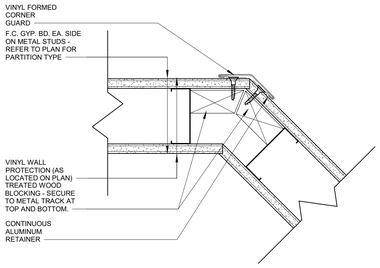
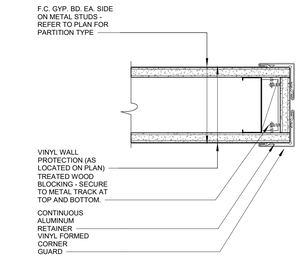
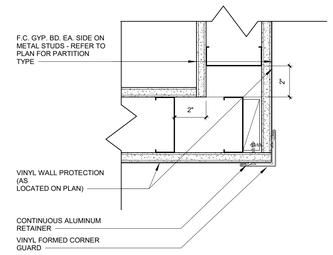
INTERIOR ELEVATIONS



E6 TYPICAL ANGLED VINYL CORNER GUARD
3" = 1'-0"



E5 TYPICAL DOUBLE VINYL CORNER GUARD
3" = 1'-0"



E4 TYPICAL SINGLE VINYL CORNER GUARD
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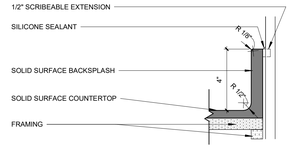
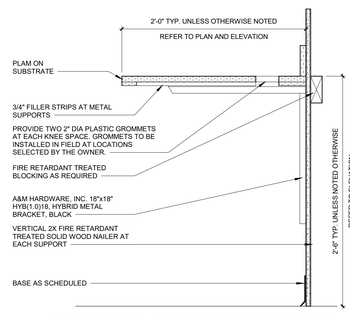
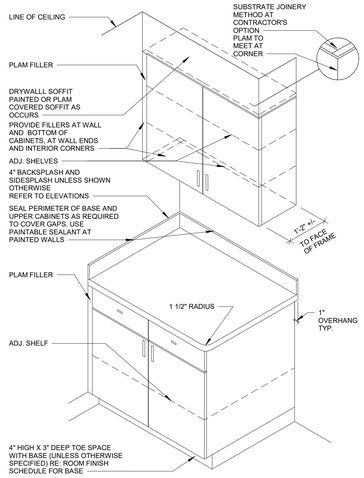


E3 SECTION DETAIL AT SOLID SURFACE BACKSPLASH
3" = 1'-0"

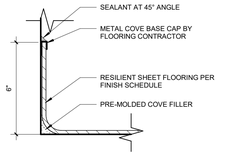


E2 SECTION DETAIL AT SUPPORT BRACKET / KNEE SPACE
1 1/2" = 1'-0"

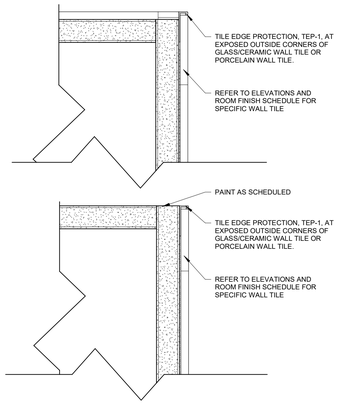


TYP. CABINET NOTES:

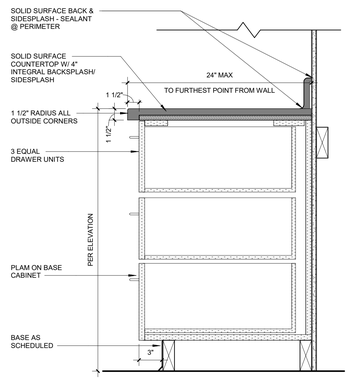
1. PROVIDE PLAM FILLER WHERE CABINETS BUTT UP TO WALLS.
2. ALL COUNTERTOPS HAVE A 4" BACKSPLASH (MATERIAL TO MATCH COUNTERTOP) AND OUTSIDE CORNERS HAVE 1 1/2" RADIUS EXCEPT WHERE NOTED OTHERWISE.
3. CASEWORK MFR. TO SUPPLY (2) - 2" [GROMMETS PER KNEESPACE. GROMMETS TO BE INSTALLED IN FIELD AS DIRECTED BY OWNER. COLOR TO BE SELECTED BY ARCHITECT.
4. PLASTIC LAMINATE COUNTERTOP EDGES SHALL BE 3 MM PLASTIC. COLOR AS SELECTED BY ARCHITECT)



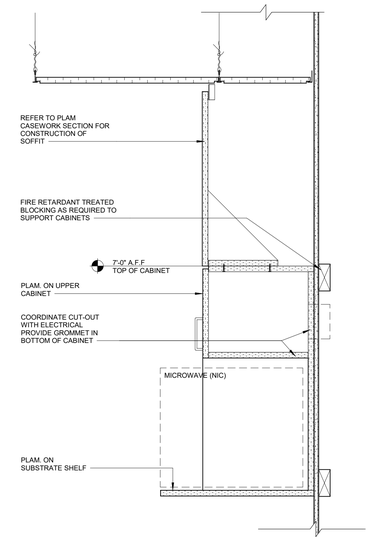
D6 RESILIENT SHEET COVE BASE TERMINATION
3" = 1'-0"



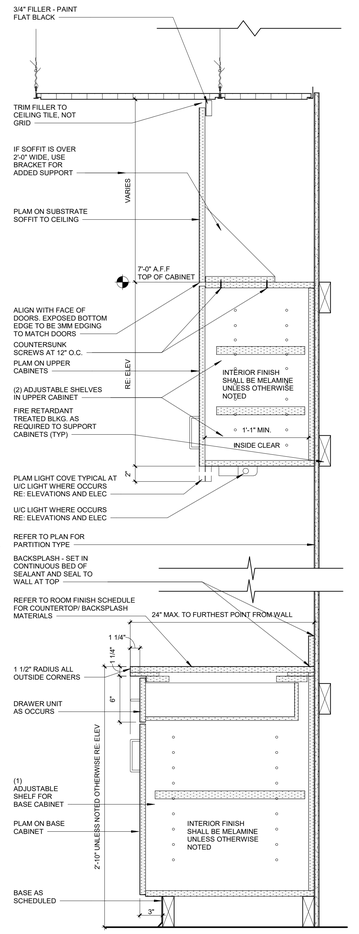
C5 DETAIL AT TERMINATION OF WALL TILE
6" = 1'-0"



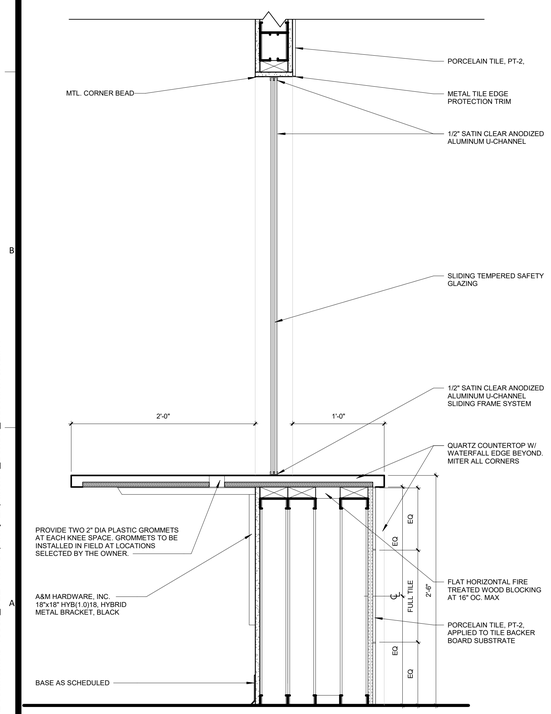
C4 DRAWER SECTION
1 1/2" = 1'-0"



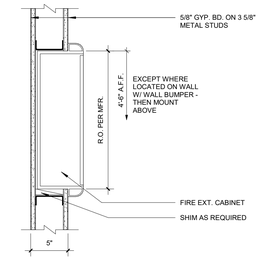
C2 WALL-MOUNTED MICROWAVE SHELF
1 1/2" = 1'-0"



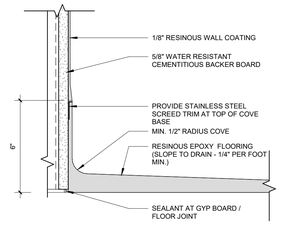
A1 CASEWORK SECTION
1 1/2" = 1'-0"



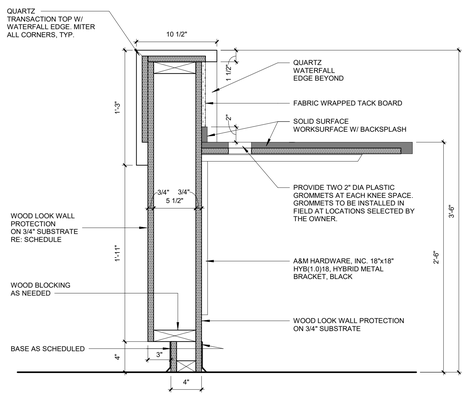
A6 DETAIL AT RECEPTION DESK
1 1/2" = 1'-0"



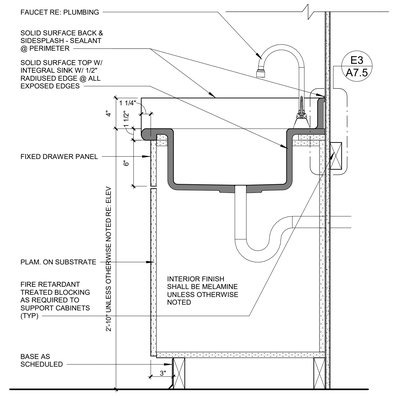
B5 DETAIL AT FFE CABINET
1 1/2" = 1'-0"



A5 SHOWER BASE DETAIL
3" = 1'-0"



A4 SECTION AT NURSE STATION
1 1/2" = 1'-0"



A2 SINK BASE CABINET SECTION
1 1/2" = 1'-0"

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INTERIOR DETAILS

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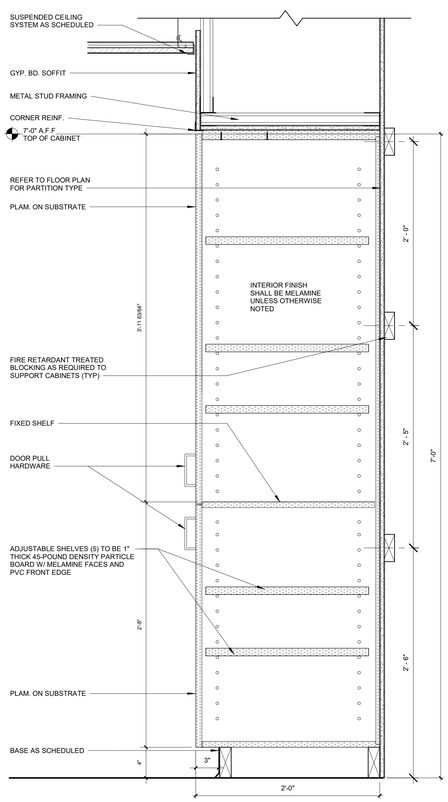
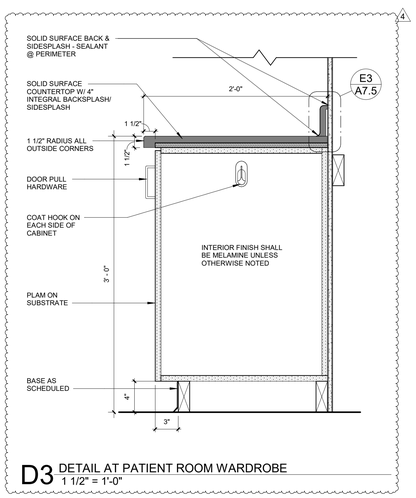
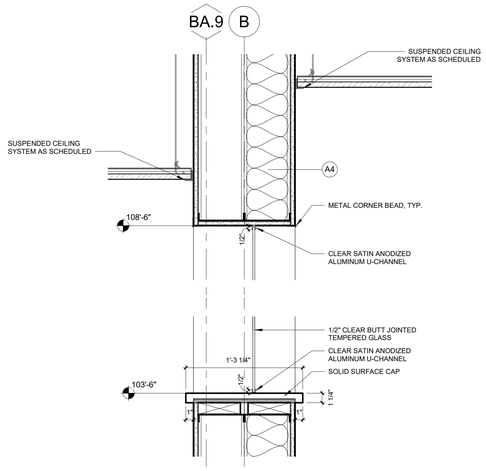


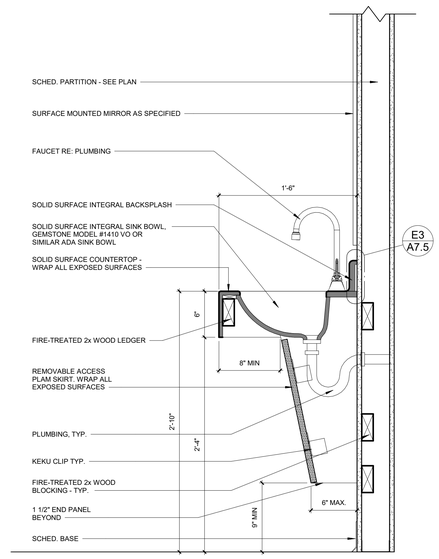
B4 DETAIL AT FULL HEIGHT CABINET
1 1/2" = 1'-0"



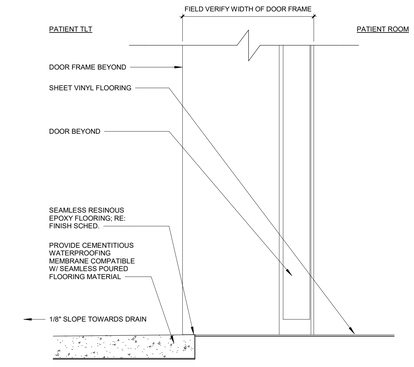
D3 DETAIL AT PATIENT ROOM WARDROBE
1 1/2" = 1'-0"



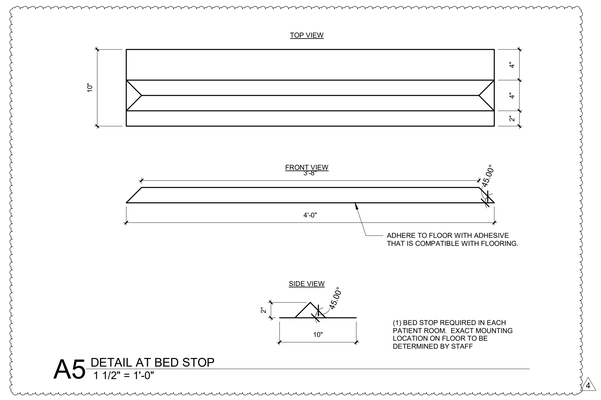
D1 WINDOW @ WAITING ROOM
1 1/2" = 1'-0"



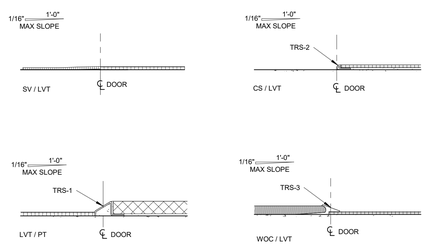
B3 SINK BASE CABINET SECTION
1 1/2" = 1'-0"



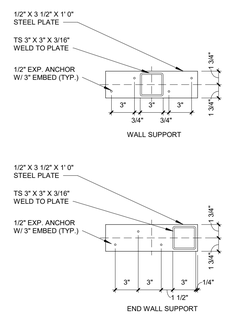
C1 PATIENT TOILET FLOORING TRANSITION
3" = 1'-0"



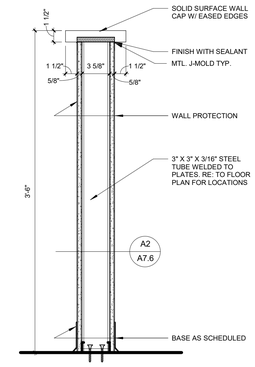
A5 DETAIL AT BED STOP
1 1/2" = 1'-0"



A4 TRANSITION STRIP DETAILS
6" = 1'-0"



A2 DETAIL AT HALF HT. WALL BASE PLATE
1 1/2" = 1'-0"



A1 DETAIL AT HALF HT. WALL
1 1/2" = 1'-0"

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INTERIOR DETAILS

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ABBREVIATIONS

ABBREV.	DESCRIPTION
AAV	AUTOMATIC AIR VENT
ABAN	ABANDON
ABV	ABOVE
AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
ACU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AF	AFTER FILTER
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AMB	AMBIENT
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
ATM	ATMOSPHERE
ATMV	ATMOSPHERIC VENT
AWT	AVERAGE WATER TEMPERATURE
BB	BAR BARRIER
BDD	BACKDRAFT DAMPER
BFWP	BOILER FEED WATER PUMP
BFW	BOILER FEED WATER
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BLWDN	BLOWDOWN
BS	BLOWDOWN SEPARATOR
BLR	BOILER
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BOD	BOTTOM OF DUCT
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
C	CONVERTER
CC	CENTER TO CENTER
CC	COOLING COIL
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFP	CHEMICAL FEED PUMP
CHD	CONCEALED HAND DAMPER W/ REMOTE OPERATOR
CH	CHILLER
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
COND	CONDENSATE
CONDR	CONDENSOR
CONN	CONNECTION
CONT	CONTINUATION/CONTINUOUS
CONV	CONVECTOR
COP	COEFFICIENT OF PERFORMANCE
CP	CONTROL PANEL
CPF	CHEMICAL POT FEEDER
CRP	CONDENSATE RETURN PUMP
CT	COOLING TOWER
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
DB	DRY BULB
DEG	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DLV	DOOR LOUVER
DMPR	DAMPER
DN	DOWN
DR	DRAIN
DWG	DRAWING
EX	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EDBT	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EFF	EFFICIENCY
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
ENT	ENTERING
EQ	EQUAL
ET	EXPANSION TANK
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERIOR
EWBT	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
FA	FACE AREA
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER
FF	FINAL FILTER
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FLA	FULL LOAD AMP
FMD	FLOW MEASURING DEVICE
FPM	FEET PER MINUTE
FSD	FIRE AND SMOKE DAMPER
FSS	FLOW SENSING SWITCH
FT	FEET

ABBREVIATIONS

ABBREV.	DESCRIPTION
FTR	FINNED TUBE RADIATION
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GRD	GROUND
GPM	GALLON PER MINUTE
GRL	GRILLE
GSNK	GOOSENECK
HC	HEATING COIL
HX	HEAT EXCHANGER
HORIZ	HORIZONTAL
HP	HORSEPOWER
HP	HIGH PRESSURE
HPT	HIGH POINT
HTG	HEATING
HZ	HERTZ
IN	INCHES
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LD	LINEAR DIFFUSER
LDBT	LEAVING DRY BULB TEMPERATURE
LWBT	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	MOTORIZED DAMPER
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBTU	BRITISH THERMAL UNIT (1000)
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPWT	OPERATING WEIGHT
P	PUMP
PA	PIPE ANCHOR
PCF	POUNDS PER CUBIC FOOT
PEN	PENETRATION
PERF	PERFORATOR
PL	PLATE
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH (ABSOLUTE)
PSIG	POUNDS PER SQUARE INCH (GAUGE)
RA	RETURN AIR
RD	RETURN DIFFUSER
RET	RETURN
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
S	STEAM TRAP
SA	SUPPLY AIR
SD	SUPPLY DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SP	STATIC PRESSURE
SQ FT	SQUARE FEET
SRV	SAFETY RELIEF VALVE
SS	STEAM SEPARATOR
SST	STAINLESS STEEL
ST	SOUND ATTENUATOR
STM	STEAM
STRUCT	STRUCTURAL
TEMP	TEMPERATURE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TG	TRANSFER GRILLE
THK	THICK
TNL	TUNNEL
TYP	TYPICAL
UFD	UNDERFLOOR DUCT
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VIF	VERIFY IN FIELD
W	WITH
WB	WET BULB
WC	WATER COLUMN
WF	WATER FILTER
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
W/O	WITHOUT
WT	WEIGHT
WS	WATER SOFTENER

MECHANICAL SHEET METAL SYMBOLS

- EXISTING DUCTWORK TO REMAIN
- EXISTING DUCTWORK TO BE REMOVED
- NEW DUCTWORK
- HAND DAMPER IN DUCT (HD)
- HAND DAMPER IN CONCEALED DUCT W/ CONCEALED DAMPER ACTUATOR (HD)
- HUMIDIFIER IN DUCT
- FIRE DAMPER WITH HINGED ACCESS DOOR (B) DENOTES 'B' STYLE DAMPER (B, AD)
- SMOKE DAMPER WITH HINGED ACCESS DOOR (AD)
- COMBINATION FIRE/SMOKE DAMPER WITH HINGED ACCESS DOOR (AD)
- RECTANGULAR TO ROUND BRANCH CONNECTION FROM MAIN DUCT
- RECTANGULAR TO ROUND BRANCH CONNECTION FROM MAIN DUCT WITH HAND DAMPER IN ROUND SECTION
- RECTANGULAR TO ROUND TRANSITION
- RECTANGULAR TO ROUND TRANSITION WITH HAND DAMPER
- CEILING SUPPLY OUTLET (A) DENOTES DIFFUSER TYPE. (300) DENOTES CFM. SEE SCHEDULE FOR SIZE. ARROWS INDICATE DIRECTION OF THROW. NO ARROWS INDICATE 4-WAY THROW. (A) 300
- CEILING SUPPLY OUTLET WITH FLEXIBLE DUCT CONNECTION. (A) DENOTES DIFFUSER TYPE. (300) DENOTES CFM. SEE SCHEDULE FOR FACE SIZE AND FLEXIBLE DUCT (NECK) SIZE. ARROWS INDICATE DIRECTION OF THROW. NO ARROWS INDICATE 4-WAY THROW. (A) 300
- CEILING RETURN OR EXHAUST GRILLE (A) DENOTES GRILLE TYPE. (300) DENOTES CFM. SEE SCHEDULE FOR SIZE. (A) 300
- WALL SUPPLY GRILLE (A) DENOTES GRILLE TYPE. (600) DENOTES CFM. SEE SCHEDULE FOR SIZE. (A) 600
- WALL RETURN OR EXHAUST GRILLE (A) DENOTES GRILLE TYPE. (600) DENOTES CFM. SEE SCHEDULE FOR SIZE. (A) 600
- VARIABLE AIR VOLUME BOX (VAV) 1-1
- VARIABLE AIR VOLUME BOX WITH REHEAT COIL (VAV) 1-1
- RECTANGULAR DUCT TRANSITION IN SINGLE LINE DUCTWORK
- RECTANGULAR TO ROUND TRANSITION IN SINGLE LINE DUCTWORK
- CEILING RETURN GRILLE WITH LINED BOOT ABOVE FINISH CEILING - FREE AREA OF BOOT = 2/3 OF GRILLE FACE. (A) DENOTES GRILLE TYPE. (300) DENOTES CFM. SEE DIFFUSER SCHEDULE FOR SIZE. (A) 300
- LINED RETURN AIR BOOT WITH TURNING VANES ABOVE CEILING - SIZE OF BOOT IS INDICATED ON DRAWINGS
- DUAL DUCT MIXING BOX (DD) 1-1
- DUAL DUCT MIXING BOX - HIGH PERFORMANCE BLENDING (DD) 1-1

TEMPERATURE CONTROLS SYMBOLS

- PNEUMATIC PIPING
- ELECTRIC WIRING
- PARALLEL BLADE DAMPER
- OPPOSED BLADE DAMPER
- HUMIDIFIER
- AVERAGE SENSING ELEMENT
- AIR FLOW PROBE
- DAMPER ACTUATOR
- (M) PILOT POSITIONER
- 1-1/2" AIR GAGE
- 3-1/2" DIAL THERMOMETER
- ROOM THERMOSTAT
- MOTOR STARTER
- (M) MAIN AIR SUPPLY 20 PSIG
- (D) DUAL PRESSURE AIR SUPPLY
- (WU) WARM UP
- DP DIFFERENTIAL PRESSURE SWITCH
- ES END SWITCH
- HL HIGH LIMIT SWITCH
- HS HUMIDITY SENSOR
- HX HEAT EXCHANGER
- SD SMOKE DETECTOR
- SP STATIC PRESSURE SENSOR
- TS TEMPERATURE SENSOR
- VFD VARIABLE FREQUENCY DRIVE
- VS VELOCITY SENSOR
- ▲ LOCATED IN CONTROL CABINET
- △ LOCATED ON CONTROL CABINET DOOR
- AI ANALOG INPUT
- AO ANALOG OUTPUT
- AO-P ANALOG OUTPUT PNEUMATIC
- C COMMON
- DA DIRECT ACTING
- DDC DIRECT DIGITAL CONTROL
- DI DIGITAL INPUT
- DO DIGITAL OUTPUT
- EP ELECTRIC TO PNEUMATIC SWITCH
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- PE PNEUMATIC TO ELECTRIC SWITCH
- POF PROOF OF FLOW
- RA REVERSE ACTING
- R-C RECEIVER-CONTROLLER
- S/S START/STOP
- CR CURRENT RELAY
- DI-P DIGITAL INPUT PNEUMATIC
- PN PNEUMATIC

MECHANICAL PIPING SYMBOLS

- EXISTING PIPING TO REMAIN
- EXISTING PIPING TO BE REMOVED
- NEW PIPING
- HWS HOT WATER SUPPLY
- HWR HOT WATER RETURN
- LPS STEAM SUPPLY (LOW PRESSURE)
- LPR STEAM RETURN (LOW PRESSURE)
- MPS STEAM SUPPLY (MEDIUM PRESSURE)
- MPR STEAM RETURN (MEDIUM PRESSURE)
- HPS STEAM SUPPLY (HIGH PRESSURE)
- HPR STEAM RETURN (HIGH PRESSURE)
- SV STEAM RELIEF VENT
- CWS CHILLED WATER SUPPLY
- CWR CHILLED WATER RETURN
- CHS CHILLED/HOT WATER SUPPLY
- CHR CHILLED/HOT WATER RETURN
- SWS SECONDARY WATER SUPPLY
- SWR SECONDARY WATER RETURN
- TS COOLING TOWER SUPPLY
- TR COOLING TOWER RETURN
- RS REFRIGERANT SUCTION PIPING
- RL REFRIGERANT LIQUID PIPING
- HG HOT GAS PIPING
- GS GLYCOL SUPPLY PIPING
- GR GLYCOL RETURN PIPING
- PD PUMP DISCHARGE
- CD CONDENSATE DRAIN PIPING
- CDS CONDENSER WATER SUPPLY
- CDR CONDENSER WATER RETURN
- SMS SNOW MELTING SYSTEM SUPPLY
- SMR SNOW MELTING SYSTEM RETURN
- (T) THERMOSTAT
- (H) HUMIDISTAT
- CONNECTION - NEW TO EXISTING
- FLOAT AND THERMOSTATIC TRAP
- SHUT-OFF VALVE
- BALANCING VALVE
- GLOBE VALVE
- CHECK VALVE (SWING OR CUSHION)
- CONTROL VALVE
- LUBRICATED PLUG COCK
- SOLENOID VALVE
- PRESSURE RELIEF VALVE
- PRESSURE REDUCING VALVE
- WYE STRAINER
- UNION
- PIPE ANCHOR
- FLOW ELEMENTS
- DIRECTION OF FLOW IN PIPES
- DIRECTION OF PITCH IN PIPES
- RISE AND DROP IN PIPING
- BRANCH PIPING CONNECTION (TOP OF PIPE)
- BRANCH PIPING CONNECTION (BOTTOM OF PIPE)
- WELDED ELBOW
- EXPANSION JOINT

MEDICAL GAS SYMBOLS

- NO NITROUS OXIDE PIPING
- N NITROGEN PIPING
- O OXYGEN PIPING
- SA SURGICAL AIR PIPING
- A MEDICAL AIR PIPING
- V VACUUM PIPING
- EVAC MEDICAL GAS EVACUATION PIPING
- CVAC LASER SMOKE EXHAUST PIPING
- NOV NITROUS OXIDE VENT PIPING
- NV NITROGEN VENT PIPING
- V V VACUUM VENT PIPING
- SAI SURGICAL AIR INTAKE PIPING
- CA COMPRESSED AIR PIPING
- CO2 CARBON DIOXIDE PIPING
- NO NITROUS OXIDE OUTLET
- N NITROGEN OUTLET
- O OXYGEN OUTLET
- SA SURGICAL AIR OUTLET
- A MEDICAL AIR OUTLET
- V VACUUM OUTLET
- EVAC MEDICAL GAS EVACUATION OUTLET
- CHECK VALVE
- LOCKABLE SERVICE SHUT-OFF VALVE
- PS PRESSURE SWITCH
- MEDICAL GAS ZONE VALVE
- NCP NITROGEN CONTROL PANEL

PLUMBING SYMBOLS

- C COLD WATER PIPING
- H HOT WATER PIPING
- HC HOT WATER CIRCULATING PIPING
- VENT PIPING
- WASTE PIPING
- SW SAFE WASTE PIPING
- DS DOWNSPOUT PIPING
- EDS EMERGENCY DOWNSPOUT PIPING
- G GAS PIPING
- FOS FUEL OIL SUPPLY PIPING
- FOR FUEL OIL RETURN PIPING
- A ACID WASTE PIPING
- A ACID VENT PIPING
- DI DEIONIZED WATER PIPING
- SC SOFT COLD WATER PIPING
- RO REVERSE OSMOSIS WATER PIPING
- ETO ETHYLENE OXIDE PIPING
- PD PUMP DISCHARGE
- TW TEMPERED WATER PIPING
- DW DRINKING WATER PIPING
- CA COMPRESSED AIR PIPING
- (CA) COMPRESSED AIR OUTLET
- CO CLEANOUT
- FCO FLUSH CLEANOUT
- RD ROOF DRAIN
- ERD EMERGENCY ROOF DRAIN
- FD FLOOR DRAIN
- FFD FLOOR DRAIN WITH FUNNEL
- SFD SAFE WASTE FLOOR DRAIN
- HB HOSE BIBB
- WH WALL HYDRANT
- VTR VENT THRU ROOF
- SHUT-OFF VALVE
- BALANCING VALVE
- GLOBE VALVE
- CHECK VALVE (SWING OR CUSHION)
- CONTROL VALVE
- LUBRICATED PLUG COCK
- SOLENOID VALVE
- PRESSURE RELIEF VALVE
- PRESSURE REDUCING VALVE
- WYE STRAINER
- UNION
- PIPE ANCHOR
- FLOW ELEMENTS
- DIRECTION OF FLOW IN PIPES
- DIRECTION OF PITCH IN PIPES
- RISE AND DROP IN PIPING
- BRANCH PIPING CONNECTION (TOP OF PIPE)
- BRANCH PIPING CONNECTION (BOTTOM OF PIPE)
- WELDED ELBOW
- EXPANSION JOINT

FIRE PROTECTION SYMBOLS

- SP STANDPIPE PIPING (WET TYPE)
- SPD STANDPIPE PIPING (DRY TYPE)
- PSP PRESSURIZED STANDPIPE PIPING
- S SPRINKLER PIPING (WET TYPE)
- SD SPRINKLER PIPING (DRY TYPE)
- F FIRE SERVICE PIPING
- ID INSPECTOR TEST DRAIN
- FPS FIRE PUMP SUCTION PIPING
- FHC FIRE HOSE CABINET
- PIV POST INDICATOR VALVE
- EXISTING SPRINKLER HEAD
- NEW SPRINKLER HEAD
- FV FIRE DEPARTMENT HOSE VALVE
- FS SPRINKLER FLOW INDICATOR SWITCH
- TS TAMPER SWITCH
- FIRE DEPARTMENT CONNECTION

PROJECT MECHANICAL GENERAL NOTES

(THESE NOTES APPY TO ALL MECHANICAL SHEETS)

1. THE LOCATION OF ALL STRUCTURAL OPENINGS SHALL BE AS INDICATED ON THE MECHANICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS. COORDINATE EXACT SIZES OF OPENINGS REQUIRED.
2. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
3. CONTRACTOR SHALL FIELD VERIFY CLEARANCE ABOVE THE CEILING AND NOTIFY THE ENGINEER ABOUT POSSIBLE CONFLICTS.
4. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND SPACE CONDITIONS AT ALL TIMES.
5. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE ALL WORK WITH ALL OTHER TRADES. THE SHOP DRAWINGS PREPARED BY THIS CONTRACTOR SHALL INDICATE SPACE ALLOWANCES FOR ALL WORK OF ALL OTHER TRADES AND SHALL BE SIGNED OFF BY ALL OTHER CONTRACTORS.
6. CONTRACTOR SHALL VERIFY ON-SITE ALL CONDITIONS AND MEASUREMENTS SHOWN ON CONTRACT DRAWINGS.
7. ALL SUPPORTS FOR MECHANICAL EQUIPMENT ARE BASED ON PRELIMINARY INFORMATION FROM ONE MANUFACTURER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING SIZES FROM CERTIFIED DRAWINGS OF EQUIPMENT BEING SUBMITTED AND SHALL MAKE ANY STRUCTURAL MODIFICATIONS REQUIRED WITHOUT ANY ADDITIONAL COST TO THE OWNER.
8. ALL NEW EQUIPMENT FURNISHED BY THE MECHANICAL CONTRACTOR SHALL BE MANUFACTURED INTO COMPONENTS THAT CAN BE MOVED INTO THE BUILDING THROUGH AVAILABLE BUILDING OPENINGS. IF ADDITIONAL BUILDING OPENINGS ARE REQUIRED, THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND MAKE ALL PROVISIONS TO MOVE EQUIPMENT INTO FINAL LOCATION.
9. WHERE EQUIPMENT AND/OR PIPING AND/OR DUCTWORK IS NOTED TO BE DEMOLISHED, COORDINATE WITH GENERAL CONTRACTOR PRIOR TO REMOVAL OR ENSURE THAT REMOVAL OF EQUIPMENT FALLS WITHIN PRESENT CONSTRUCTION LIMITS AND SCOPE OF WORK.
10. WHERE REFRIGERANT PIPING OR SYSTEM ARE TO BE DEMOLISHED, RECLAIM ALL REFRIGERANT PER GUIDELINES AND STORE OR DISPOSE OF AS REQUIRED.
11. ALL STORED AND/OR PARTIALLY INSTALLED SHEET METAL, PIPING, AND EQUIPMENT SHALL BE PROTECTED FROM WEATHER. CONTRACTOR SHALL COVER OPEN ENDS AT END OF WORK DAY.
12. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE BUILDING CODE REQUIREMENTS AND PROVIDE ALL REQUIRED CONTROLLED INSPECTIONS FOR HIS WORK.
13. DUCTWORK SHALL BE INSULATED PER SPECIFICATIONS OR AS NOTED ON DRAWINGS. ALL DUCT JOINTS AND SEAMS SHALL BE SEALED PER SPECIFICATIONS.
14. DUCT AND PLENUM SIZES INDICATED ON THE DRAWINGS ARE SHEET METAL DIMENSIONS.
15. MANUAL DAMPERS SHALL BE PROVIDED IN ALL DUCT BRANCHES AND IN ALL BRANCHES TO INDIVIDUAL DIFFUSERS, GRILLES AND REGISTERS.
16. CONTRACTOR SHALL FURNISH AND INSTALL CONCEALED DAMPER ACTUATORS AND DAMPER WHERE DAMPERS ARE INSTALLED IN INACCESSIBLE CEILINGS.
17. EXACT LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES DETAILED ON THE ARCHITECTURAL REFLECTIVE CEILING PLAN, AND ARCHITECTURAL ROOM ELEVATIONS.
18. ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF LOCAL REGULATIONS, PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).
19. PROVIDE METAL COVER PLATES FOR ALL PIPES LOCATED AT FLOOR LEVEL TO PREVENT PIPE DAMAGE. PLATES SHALL NOT BE DAMAGED BY NORMAL MAINTENANCE TRAFFIC.
20. ALL BRANCH PIPING TO VAV BOXES, FCUS, OR OTHER COMPONENTS SHALL BE MINIMUM OF 3/4" UNLESS NOTED OTHERWISE.
21. PROVIDE MANUAL AIR VENTS, DRAINS AND RELIEF VALVES AS REQUIRED AT THE HIGH AND LOW POINTS IN THE SYSTEM.
22. PROVIDE VALVED AND CAPPED CONNECTIONS FOR DRAINAGE AT ALL LOW POINTS OF PIPING SYSTEM.
23. MINIMUM PITCH SHALL BE SUFFICIENT TO INSURE ADEQUATE VENTING OR DRAINAGE.
24. CONTRACTOR SHALL COORDINATE INSTALLATION OF HORIZONTAL PIPE RUNS IN THE CEILING PLENUMS WITH ALL TRADES.
25. PROVIDE REDUCER FITTINGS FOR CHANGE IN PIPE SIZE AND FOR FINAL CONNECTION AT EQUIPMENT AND AS REQUIRED TO PERMIT DRAINAGE AND VENTING.
26. ALL PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS.
27. THERMOSTAT AND/OR HUMIDISTAT LOCATIONS SHALL BE COORDINATED WITH LIGHT SWITCHES. FINAL LOCATIONS OF THERMOSTAT AND/OR HUMIDISTAT SHALL BE COORDINATED WITH ARCHITECT AND ENGINEER.
28. INSTALL BREAK GLASS SWITCHES FOR EMERGENCY SHUTDOWN FOR CHILLER ROOM, BOILER ROOM, AND ALL REQUIRED PRESSURE VESSELS.
29. MECHANICAL CONTRACTOR IS RESPONSIBLE TO FURNISH DISCONNECT SWITCHES AND MOTOR STARTERS FOR ALL HVAC EQUIPMENT. FOR INSTALLATION AND WIRING. MECHANICAL CONTRACTOR SHALL COORDINATE ELECTRICAL CONTRACTOR AND ELECTRICAL SPECIFICATIONS.
30. MECHANICAL CONTRACTOR IS RESPONSIBLE TO INSTALL DUCT MOUNTED SMOKE DETECTOR AS INDICATED ON DESIGN DRAWINGS. DUCT MOUNTED SMOKE DETECTORS ARE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR PER ELECTRICAL SPECIFICATIONS.
31. PROVIDE ESCUTCHEONS AND SEALING OF ALL PENETRATIONS OF FIRE SEPARATIONS IN ACCORDANCE DETAIL DRAWINGS AND PER APPLICABLE CODES AS REFERENCE ON ARCHITECTURAL CODE SHEETS.
32. THIS IS A 24 HOUR OPERATING FACILITY, SO SOME WORK MAY HAVE TO BE DONE AFTER NORMAL WORKING HOURS OR ON WEEKENDS AT NO ADDITIONAL COST TO OWNER. SYSTEM SHUT DOWNS SHALL BE COORDINATED AND SCHEDULE WITH OWNER AT LEAST TWO WEEKS IN ADVANCE.

PROJECT PLUMBING GENERAL NOTES

(THESE NOTES APPY TO ALL PLUMBING SHEETS)

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND SPACE CONDITIONS AT ALL TIMES.
2. COORDINATE PLUMBING SYSTEMS WITH WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
3. MAINTENANCE LABEL SHALL BE AFFIXED TO ALL PLUMBING EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED TO OWNER.
4. CONTRACTOR SHALL REFER TO ALL THE ARCHITECTURAL DRAWINGS FOR PLUMBING RELATED WORK.
5. PLUMBING CONTRACTOR IS RESPONSIBLE TO FURNISH DISCONNECT SWITCHES AND MOTOR STARTERS FOR ALL PLUMBING EQUIPMENT. FOR INSTALLATION AND WIRING. PLUMBING CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND ELECTRICAL SPECIFICATIONS.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS INCLUDING BUT NOT LIMITED TO ENTERING MANHOLES, USE OF WATER FROM LOW PRESSURE HYDRANTS, DEMOLITION AND NEW WORK, ETC. PRIOR TO COMMENCEMENT OF WORK.
7. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE ALL FITTINGS, TRANSITIONS, VALVES AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
8. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO ALL APPLICABLE LOCAL CODES AND REGULATIONS AS REFERENCED ON ARCHITECTURAL CODE PLANS.
9. WHERE EQUIPMENT AND/OR PIPING IS NOTED TO BE DEMOLISHED, COORDINATE WITH GENERAL CONTRACTOR PRIOR TO REMOVAL TO ENSURE THAT REMOVAL OF EQUIPMENT FALLS WITHIN PRESENT CONSTRUCTION LIMITS AND SCOPE OF WORK. DEMOLITION PLANS SHOW GENERAL INTENT OF DEMOLITION WORK, NOT ALL DEMO WORK MAY BE SHOWN. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ITEMS NOT REQUIRED TO REMAIN.

PROJECT FIRE PROTECTION GENERAL NOTES

(THESE NOTES APPY TO ALL FIRE PROTECTION SHEETS)

1. COORDINATE FIRE PROTECTION SYSTEMS WITH WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS AS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
2. COMPLETE SPRINKLER INSTALLATION WITH ALL EQUIPMENT, SPRINKLER HEADS, PIPES, FITTINGS, DRAINS AND HANGERS.
3. UNLESS OTHERWISE NOTED, ALL CONTROL VALVES SHALL BE PROVIDED WITH TAMPER SWITCHES.
4. SPRINKLER PIPING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE. HANGERS AND SUPPORTS SHALL BE UL LISTED APPROVED FOR USE IN SPRINKLER SYSTEMS. WHERE FIELD CONDITIONS DO NOT PERMIT SUPPORTING FROM THE BUILDING STRUCTURE, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED. NO SPRINKLER PIPING SHALL BE HUNG FROM THE PIPING OF OTHER TRADES OR MECHANICAL SYSTEMS.
5. MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED BETWEEN TOP OF STORAGE AND SPRINKLER DEFLECTOR.
6. FIRE SPRINKLER CONTRACTOR SHALL OBTAIN APPROVAL FROM THE FIRE MARSHAL AND AUTHORITIES HAVING JURISDICTION FOR THE SPRINKLER SYSTEM PRIOR TO INSTALLATION.
7. FIRE SPRINKLER CONTRACTOR SHALL PREPARE AND SUBMIT PRIOR TO ANY FABRICATION AND INSTALLATION OF ALL NECESSARY DRAWINGS AND/OR DOCUMENTS FOR THE PROVISION AND INSTALLATION OF A FULLY AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT THE BUILDING, IN ACCORDANCE WITH AND SUBJECT TO THE INTERNATIONAL BUILDING AND FIRE CODES AND THE AUTHORITIES HAVING JURISDICTION.
8. ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING AND FIRE CODES, AND ALL LOCAL FIRE DEPARTMENT REQUIREMENTS.
9. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.

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BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
3-30-2020
Bruce E. Hart - Engineer
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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

PM000

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SYMBOLS, ABBREVIATIONS, & GENERAL NOTES

BID PACKAGE #3 3.27.2020

3/27/2020 4:30:39 PM

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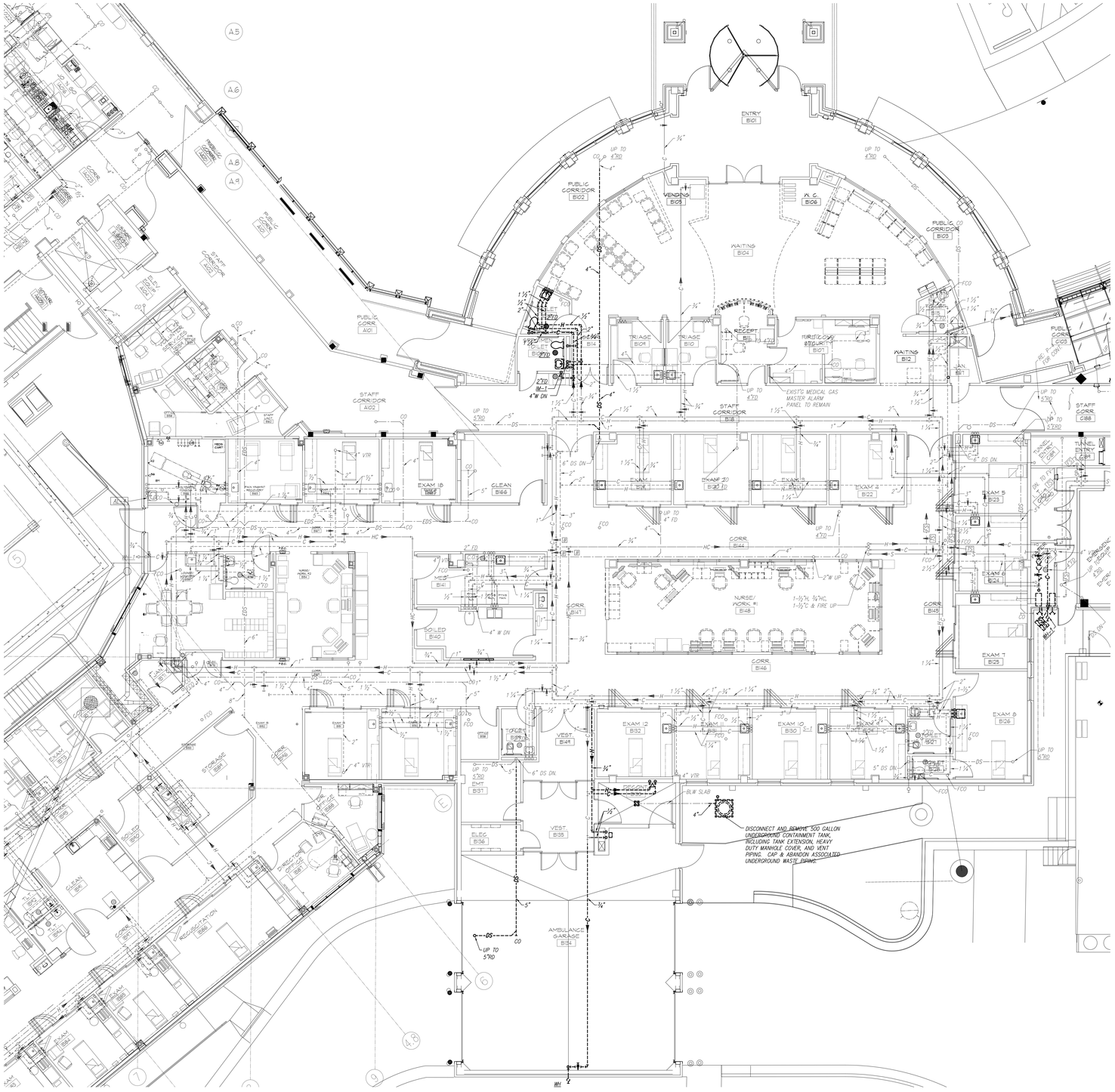
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET PM000.
2. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. WORK SHOWN DASHED BOLD IS WORK TO BE REMOVED.
3. THIS IS A 24 HOUR OPERATING FACILITY. THEREFORE SOME WORK MAY NEED TO BE COMPLETED AFTER NORMAL WORKING HOURS OR DURING WEEKENDS AT NO EXTRA COST TO OWNER. ALL SHUTDOWNS SHALL BE COORDINATED AND SCHEDULED WITH OWNER.
4. FIELD VERIFY ALL EXISTING PIPE SIZES AND LOCATIONS PRIOR TO STARTING WORK.



PLUMBING DEMOLITION PLAN - FIRST FLOOR

SCALE: 1/8" = 1'-0"

NORTH

STATE OF MISSOURI
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3/30/2020

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Revision

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DP1

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PLUMBING DEMOLITION PLAN - FIRST FLOOR

BID PACKAGE #3 3.27.2020

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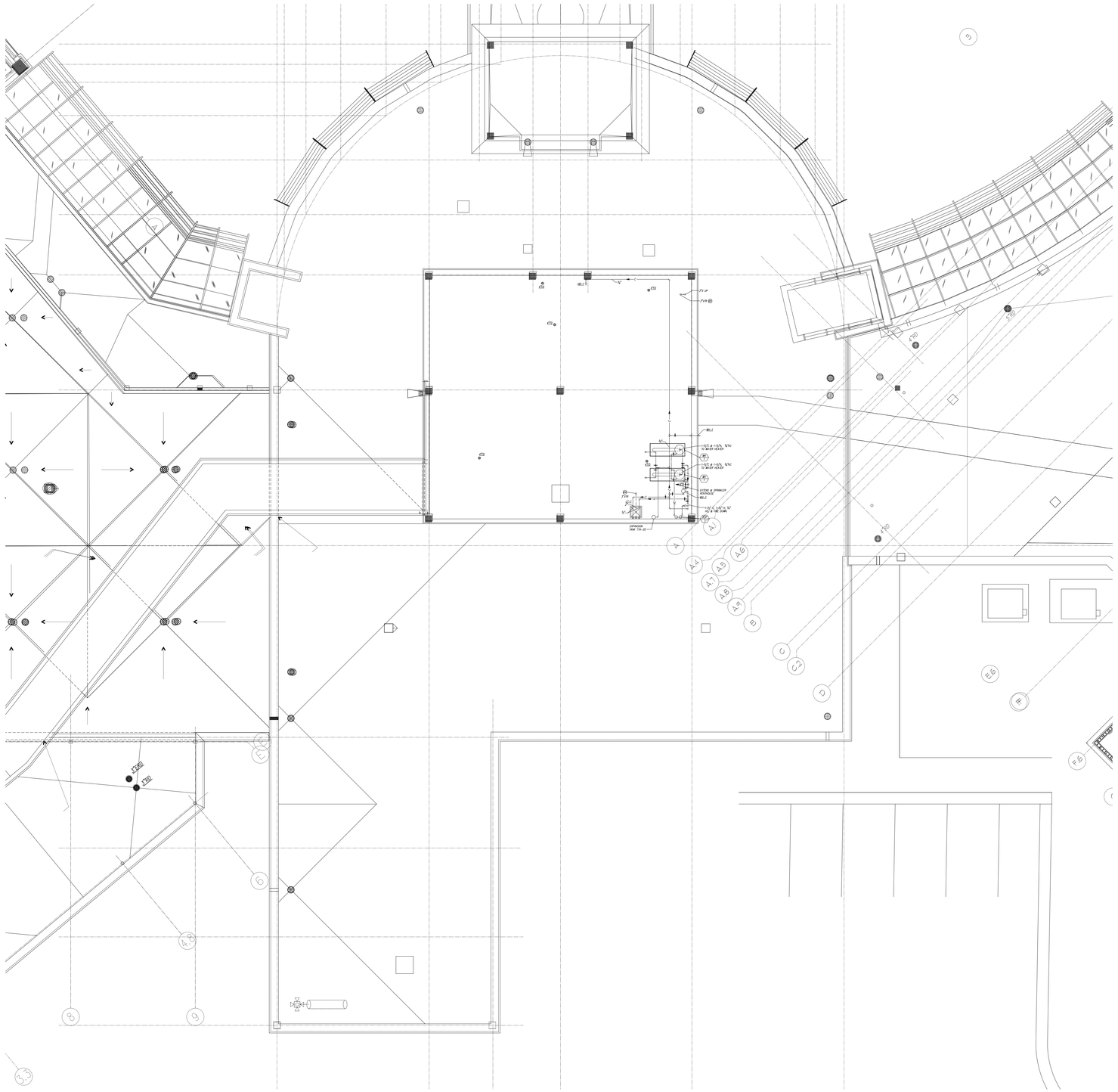

PLUMBING DEMOLITION PLAN - PENTHOUSE/ROOF

SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET PM000.
2. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. WORK SHOWN DASHED BOLD IS WORK TO BE REMOVED.
3. THIS IS A 24 HOUR OPERATING FACILITY. THEREFORE SOME WORK MAY NEED TO BE COMPLETED AFTER NORMAL WORKING HOURS OR DURING WEEKENDS AT NO EXTRA COST TO OWNER. ALL SHUTDOWNS SHALL BE COORDINATED AND SCHEDULED WITH OWNER.
4. FIELD VERIFY ALL EXISTING PIPE SIZES AND LOCATIONS PRIOR TO STARTING WORK.

KEYED DEMOLITION NOTES:

(1) NOT USED

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3/30/2020

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W.L. Cassell & Associates, Inc. now IMEG
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Phone Number: 816.842.8437
Licensee's Certificate of Authority Number: 000396

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

DP2

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PLUMBING DEMOLITION PLAN - PENTHOUSE/ROOF

BID PACKAGE #3 3.27.2020

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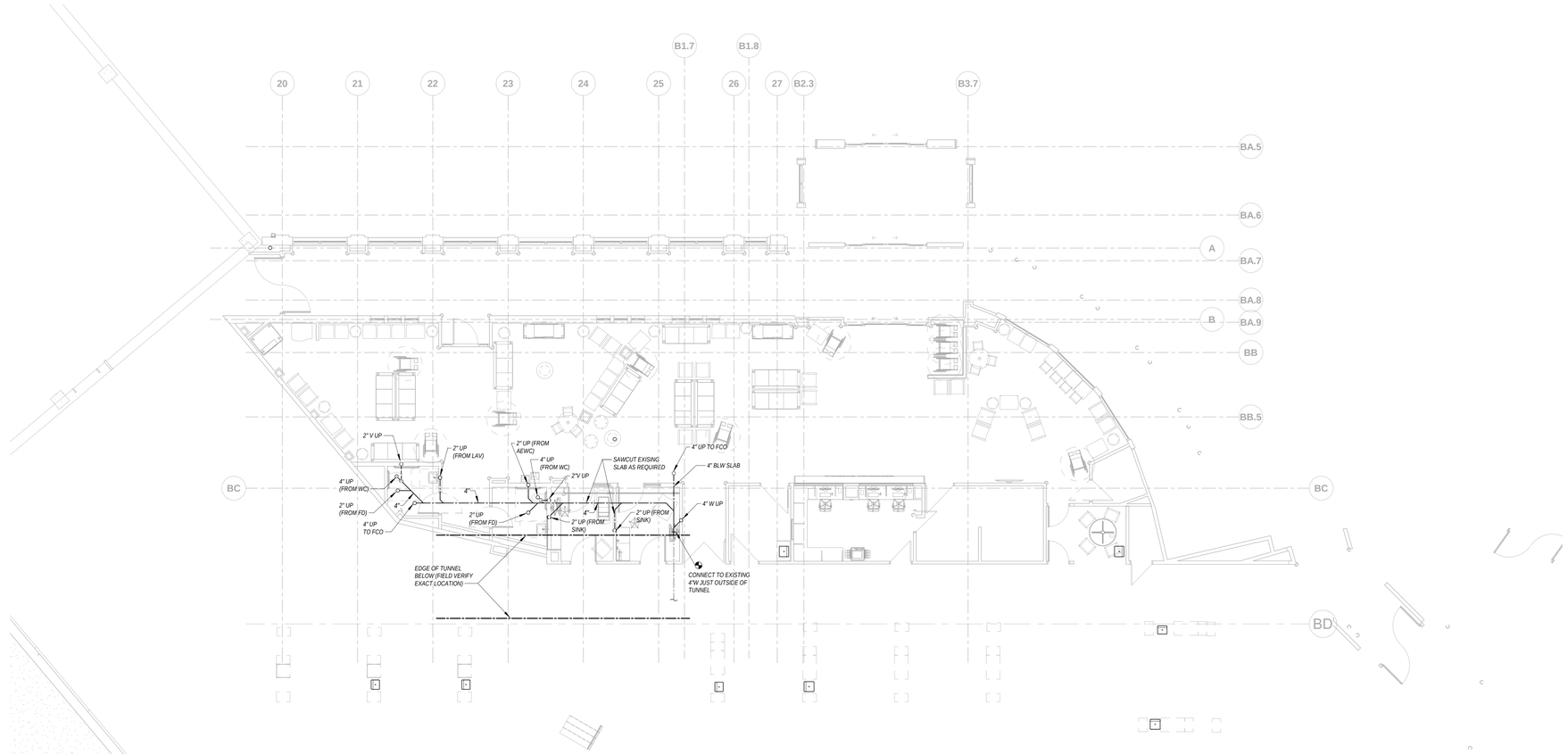

1 PLUMBING PLAN - UNDERSLAB AREA 1
1/8" = 1'-0"

NORTH

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
3-30-2020
Bruce E. Hart - Engineer
License - Missouri #E-22817

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PLUMBING PLAN - UNDERSLAB AREA 1

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4/10/2020 5:01:47 PM

GENERAL NOTES

1 REFER TO GENERAL NOTES ON SHEET PM000.

KEYED NOTES 0

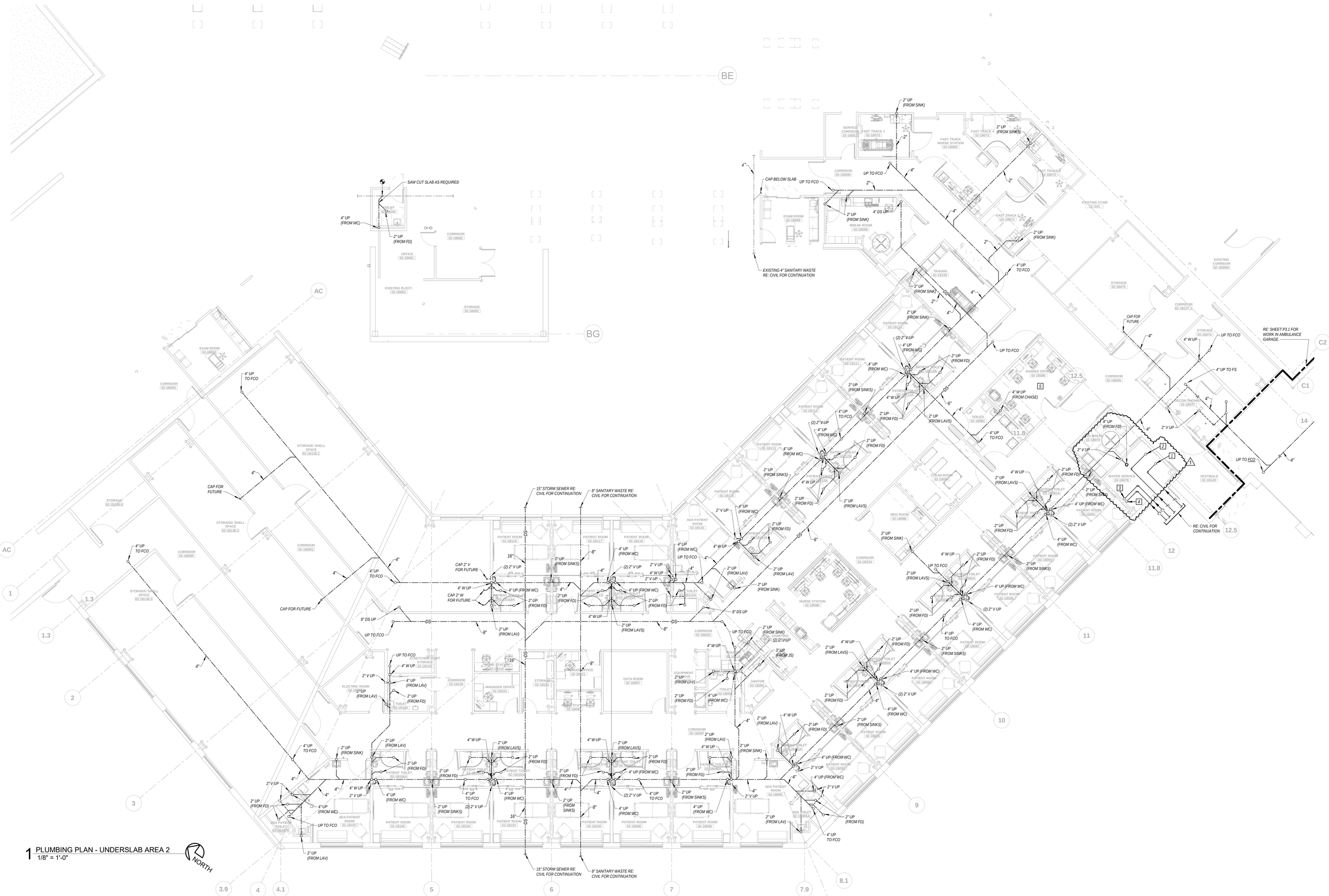
1 4" FIRE SERVICE UP TO VERTICAL BACKFLOW PREVENTER, TO SERVE BUILDING "C".

2 NEW FIRE SERVICE (SIZE AS REQUIRED) UP TO NEW VERTICAL BACKFLOW PREVENTER, TO SERVE BUILDING "B" (INCLUDING NEW ADDITIONS AND FUTURE SECOND FLOOR).

3 3" COLD WATER SERVICE UP, TO SERVE BUILDING "C".

4 4" COLD WATER SERVICE UP, TO SERVE BUILDING "B" (INCLUDING NEW ADDITIONS).

5 NO PIPING SHALL BE ROUTED BELOW SHARED OFFICE 1B080 (FUTURE ELEVATOR LOCATION).



1 PLUMBING PLAN - UNDERSLAB AREA 2
1/8" = 1'-0"

NORTH

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BID PACKAGE #3 3.27.2020

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Revision

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1	4.10.20	ADDENDUM #1

P0.2

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PLUMBING PLAN - UNDERSLAB AREA 2

3/27/2020 4:53:54 PM

GENERAL NOTES

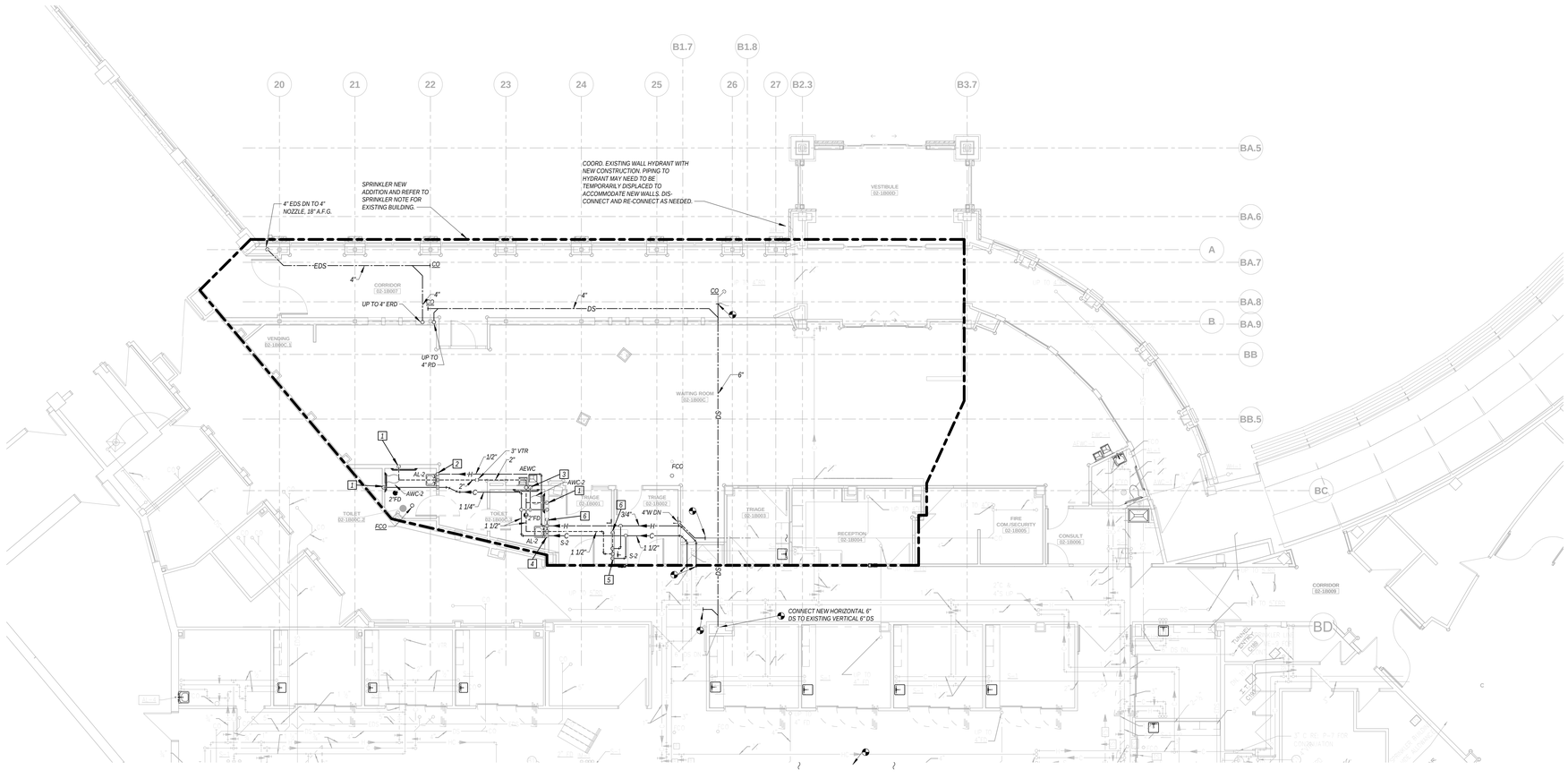
1 *SEE SHEET PM000 FOR GENERAL NOTES AND SYMBOLS LISTS.*

SPRINKLER NOTE

1 *SPRINKLER CONTRACTOR SHALL DISCONNECT, REMOVE, AND RELOCATE ANY AND/OR ALL SPRINKLER PIPING AND SPRINKLER HEADS AS REQUIRED BY MECHANICAL, ELECTRICAL, AND GENERAL CONTRACTORS. AFTER ALL LARGER DUCTWORK AND PIPING HAVE BEEN INSTALLED, SPRINKLER CONTRACTOR SHALL REINSTALL SPRINKLER PIPING AND HEADS REQUIRED TO SPRINKLER REMODELED SPACE. SPRINKLER CONTRACTOR SHALL ALSO INSTALL NEW SPRINKLER HEADS AND/OR PIPING AS REQUIRED BY REMODEL OF SPACE.*

KEYED NOTES 0

1 *1-1/4" C DN TO WATER CLOSET AND 2" V DN THRU SLAB.*
2 *½" C, ½" H AND 1-1/2" V DN TO LAV OR SINK. EXTEND 2" WASTE FROM FIXTURE DN IN WALL THRU SLAB.*
3 *½" C AND 1-1/2" V DN TO WATER COOLER. EXTEND 2" WASTE FROM FIXTURE DN IN WALL THRU SLAB.*
4 *½" C, ½" H AND 1-1/2" V DN TO TEO (2) FIXTURES, OFFSET 2" WASTE FROM FIXTURES HORIZONTALLY IN WALL AS REQUIRED TO AVOID WORK IN TUNNEL BELOW.*
5 *½" C, ½" H AND 1-1/2" V DN TO SINK. OFFSET 2" WASTE FROM FIXTURE HORIZONTALLY IN WALL AS REQUIRED TO AVOID WORK IN TUNNEL BELOW.*
6 *2" WASTE DN THRU SLAB. COORDINATE EXACT LOCATION TO AVOID WORK IN TUNNEL BELOW THE FIXTURE(S).*



1 PLUMBING PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

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PLUMBING PLAN - FIRST FLOOR AREA 1

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SPRINKLER NOTE

1 SPRINKLER CONTRACTOR SHALL DISCONNECT, REMOVE, AND RELOCATE ANY AND/OR ALL SPRINKLER PIPING AND SPRINKLER HEADS AS REQUIRED BY MECHANICAL, ELECTRICAL, AND GENERAL CONTRACTORS. AFTER ALL LARGER DUCTWORK AND PIPING HAVE BEEN INSTALLED, SPRINKLER CONTRACTOR SHALL REINSTALL SPRINKLER PIPING AND HEADS REQUIRED TO SPRINKLER REMODELED SPACE. SPRINKLER CONTRACTOR SHALL ALSO INSTALL NEW SPRINKLER HEADS AND/OR PIPING AS REQUIRED BY REMODEL OF SPACE.

GENERAL NOTES

1 SEE SHEET PM000 FOR GENERAL NOTES AND SYMBOLS LISTS.

KEYED NOTES 0

1 4" VERTICAL BACKFLOW PREVENTER AND FIRE SERVICE DOWN. THIS LINE SHALL SERVE BUILDING "C".
2 NEW VERTICAL BACKFLOW PREVENTER (SIZE AS REQUIRED) AND FIRE SERVICE DOWN. THIS LINE SHALL SERVE BUILDING "B" (INCLUDING NEW ADDITIONS AND FUTURE SECOND FLOOR).
3 CONNECT 4" F TO EXISTING 4" F SERVING BUILDING "C" WHERE IT WAS CUT DURING DEMOLITION.
4 CONNECT 4" F TO EXISTING 4" F SERVING BUILDING "B" WHERE IT WAS CUT DURING DEMOLITION.
5 CONNECT 3" C TO EXISTING 3" C SERVING BUILDING "C" WHERE IT WAS CUT DURING DEMOLITION.
6 CONNECT 3" C TO EXISTING 3" C SERVING BUILDING "B" WHERE IT WAS CUT DURING DEMOLITION.
7 1-1/4" C AND 2" V DOWN TO WATER CLOSET, AND 1/2" C, 1/2" H AND 1-1/2" V DOWN TO LAVATORY. ROUTE 2"W FROM LAV IN WALL AND CONNECT TO 4"W FROM WATER CLOSET ABOVE SLAB.
8 1/2" C, 1/2" H AND 1-1/2" V DN TO SINK. ROUTE 2"W FROM SINK THRU BRICK WALL ABOVE SLAB AND THRU DOWN IN NEW STUD WALL OF BREAK ROOM AND DOWN THRU NEW SLAB.
9 COORDINATE EXACT LOCATION OF THIS DS RISER WITH ARCHITECT, TO ENSURE IT WILL NOT INTERFERE WITH FUTURE FINISH-OUT OF PATIENT TOILET ROOM IN THIS AREA.
10 ½"C AND ½"H DN TO SHOWER.
11 ½"C, ½"H AND 1 ½"V DN TO BACK-TO-BACK LAVATORIES.
12 ½"C, ½"H AND 1 ½"V DN TO BACK-TO-BACK WATER CLOSETS. PROVIDE 2"V BRANCH CONNECTION IN WALL AND (2)2"V DN THRU SLAB. ALSO PROVIDE 4"W DN THRU SLAB, AND UP TO 12" ABV CEILING AND CAP FOR FUTURE CONNECTION.
13 NO PIPING SHALL BE ROUTED THRU SHARED OFFICE 18080 (FUTURE ELEVATOR LOCATION).
14 STACK 3" REDUCED PRESSURE BACKFLOW PREVENTER (TO SERVE BUILDING "C") AND 4" REDUCED PRESSURE BACKFLOW PREVENTER (TO SERVE BUILDING "B" INCLUDING NEW ADDITIONS AND FUTURE SECOND FLOOR) ON WALL. INSTALL AT ELEVATIONS PER CITY OF LEE'S SUMMIT REQUIREMENTS.
15 ROUND DROP TO OBTAIN CLEARANCE OVER FUTURE PIPING. INSTALL BOOK VALVE, SOLENOID, AND CONTROL BOX ABOVE LAY-IN CEILING OF CORRIDOR, NOT ABOVE SHEET ROCK CEILING OF DECON SHOWER ROOM.

1 PLUMBING PLAN - FIRST FLOOR AREA 2
1/8" = 1'-0"

NORTH

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BID PACKAGE #E3 3.27.2020

STATE OF MISSOURI
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Drawn By	MJL
Checked By	BEH

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1	4.10.20	ADDENDUM #1

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PLUMBING PLAN - FIRST FLOOR AREA 2

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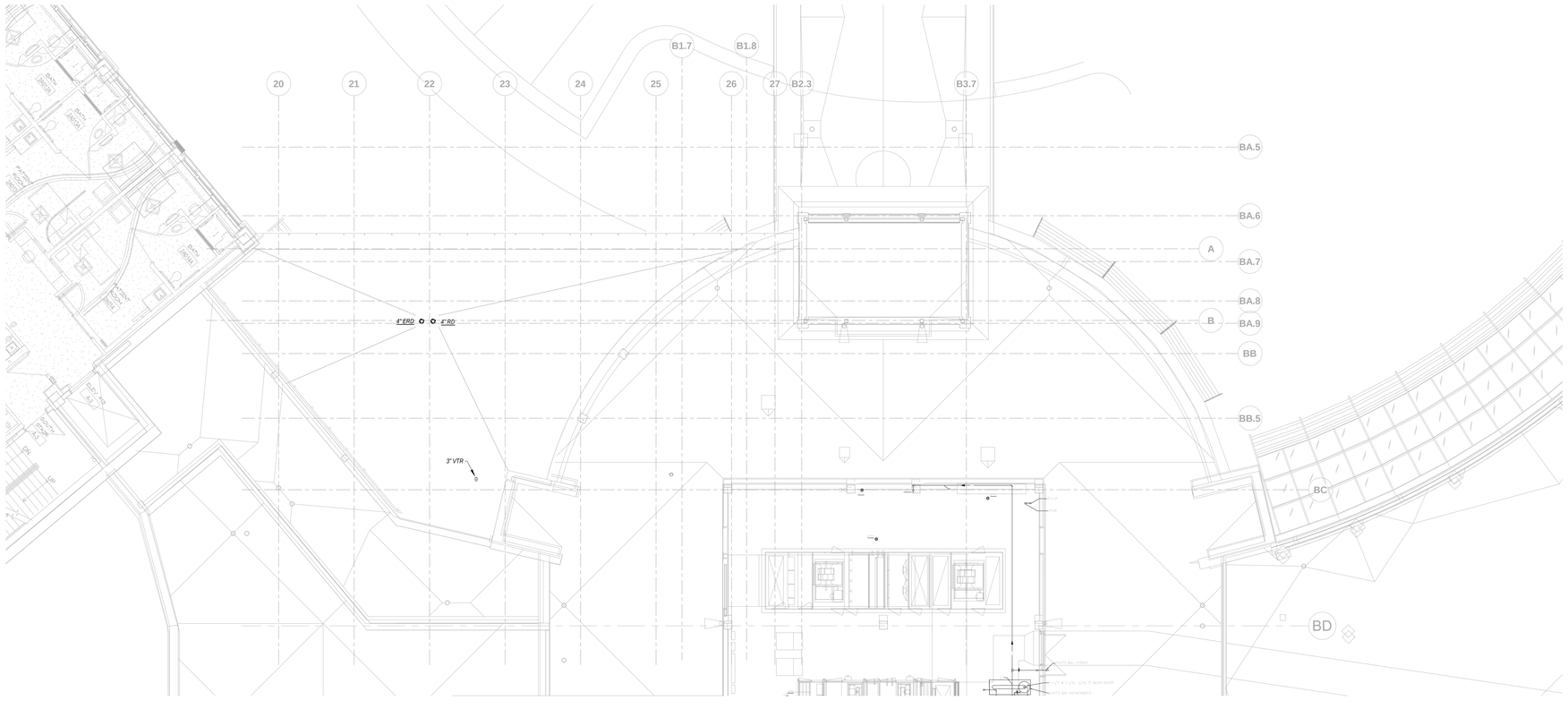

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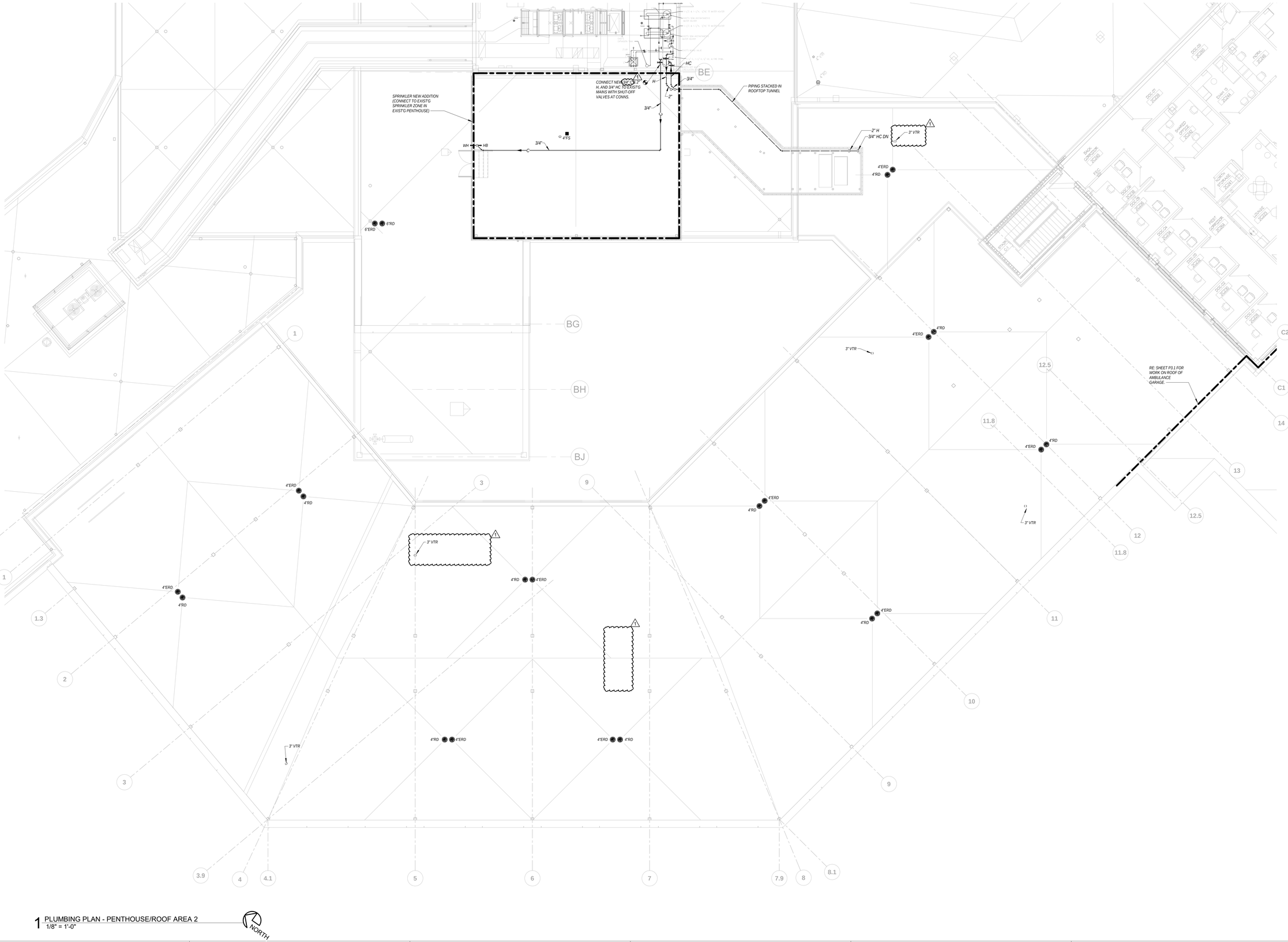
GENERAL NOTES

1 SEE SHEET PM000 FOR GENERAL NOTES AND SYMBOLS LISTS.



1 PLUMBING PLAN - PENTHOUSE/ROOF AREA 2
1/8" = 1'-0"

NORTH

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BID PACKAGE #3 3.27.2020

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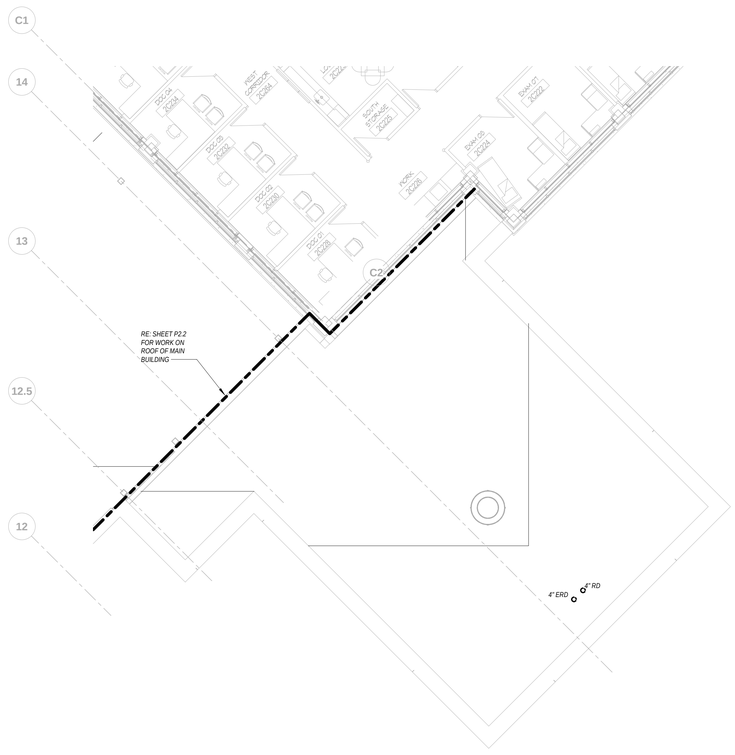
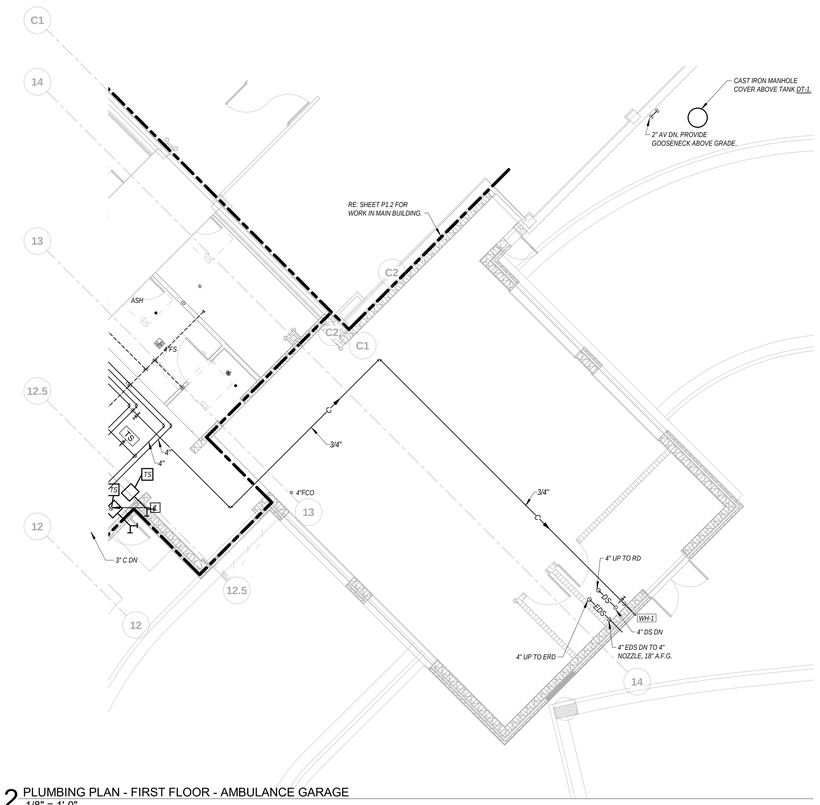
PLUMBING PLAN - PENTHOUSE/ROOF AREA 2



3 PLUMBING PLAN - ROOF - AMBULANCE GARAGE
1/8" = 1'-0"



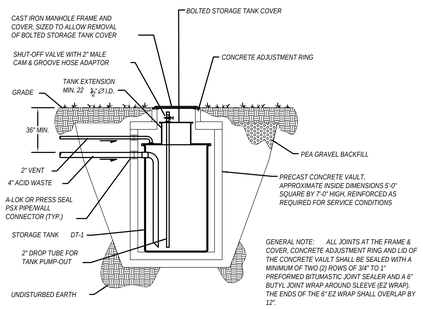
2 PLUMBING PLAN - FIRST FLOOR - AMBULANCE GARAGE
1/8" = 1'-0"

STORAGE TANK SCHEDULE

PLAN MARK	MANUF.	UNIT TYPE	TANK MATERIAL	SERVICE	CAPACITY (GALLONS)	DIMENSIONS	NOTES
DT-1	ORION	SINGLE-WALL UNDERGROUND	HIGH-DENSITY POLYETHYLENE RESIN	DECONTAMINATION SHOWER WASTEWATER	500	48" Ø x 6'-0"	1

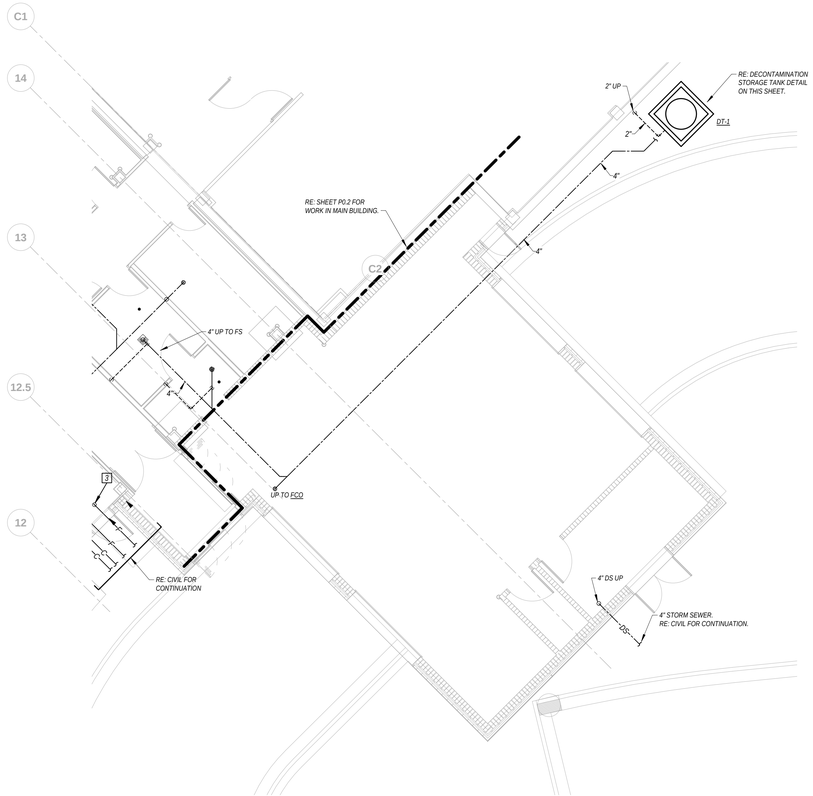
NOTES:

1. FURNISH TYPE 4 TANK WITH WELDED COVER AND 24" MANWAY EXTENSION WITH COMPOSITE (PLASTIC/STEEL) BOLTED COVER. INSTALL TANK IN PRECAST CONCRETE VAULT WITH CONCRETE ADJUSTMENT RINGS AND HEAVY DUTY CAST IRON MANHOLE FRAME AND COVER. REFER TO DECONTAMINATION STORAGE TANK DETAIL FOR ADDITIONAL REQUIREMENTS.



GENERAL NOTE: ALL JOINTS AT THE FRAME & COVER, CONCRETE ADJUSTMENT RING AND LID OF THE CONCRETE VAULT SHALL BE SEALED WITH A MINIMUM OF TWO (2) ROWS OF 3/4" TO 1" PREFORMED BITUMASTIC JOINT SEALER AND A 6" BUTYL JOINT WRAP AROUND SLEEVE (EZ WRAP). THE ENDS OF THE 6" EZ WRAP SHALL OVERLAP BY 12".

4 DECONTAMINATION STORAGE TANK DETAIL
NOT TO SCALE



1 PLUMBING PLAN - UNDERSLAB - AMBULANCE GARAGE
1/8" = 1'-0"

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PLUMBING PLANS - AMBULANCE GARAGE

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DRAIN SCHEDULE

MARK	FIXTURE	DESCRIPTION	MANUFACTURER & MODEL No.	CONNECTION SIZE			
				WASTE	VENT	HOT	COLD
FS	FLOOR SINK	ZURN MODEL Z-1902 12"x12" A.R.E. "SANI-FLOR" RECEPTOR, 10" SUMP DEPTH, CAST-IRON BODY AND SQUARE SLOTTED LIGHT-DUTY GRATE WITH WHITE ACID-RESISTING PORCELAIN ENAMEL INTERIOR AND TOP, WITH WHITE ABS ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER.		AS NOTED ON DRWG'S	AS NOTED ON DRWG'S	---	---
FD	FLOOR DRAIN BELOW GRADE	CAST IRON DRAIN WITH INTEGRAL TRAP WITH INTEGRAL CLAMPING COLLAR, SEEPAGE OPENINGS AND 7" MINIMUM DIAMETER SATIN NICKEL BRONZE STRAINER WITH VANDAL PROOF SCREW AND PROSET TRAP GUARD	WADE 1120 SERIES	AS NOTED ON DRWG'S	AS NOTED ON DRWG'S	---	---
RD	ROOF DRAIN	CAST IRON ROOF DRAIN WITH FLANGE, COMBINATION FLASHING RING AND GRAVEL STOP, EXTENSION COLLARS, UNDERDECK CLAMP AND CAST IRON DOME AND DECKING CLAMP.	WADE MODEL 3000	AS NOTED ON DRWG'S	---	---	---
ERD	EMERGENCY ROOF DRAIN	SAME AS "RD-1" WITH 2" DAM OPTION.	WADE MODEL 3000	AS NOTED ON DRWG'S	---	---	---

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	DESCRIPTION	ACCESSORIES	MANUFACTURER & MODEL No.	CONNECTION SIZE			
					WASTE	VENT	HOT	COLD
AL	ACCESSIBLE LAVATORY	VITREOUS 20 1/2"x18 1/2" CHINA WALL HUNG LAVATORY WITH INTEGRAL BACK, FRONT OVERFLOW AND SIDE SPLASH SHIELDS FOR CONCEALED ARMS. 4" CENTER FAUCET HOLES. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.	CHICAGO FAUCET NO. 895-GN2FC-317-XK FAUCET, 4" CENTERS, 5-1/4" SPOUT, NO.317 4" WRIST BLADE HANDLES WITH CERAMIC DISC CARTRIDGE & FLOW CONTROL, AMERICAN STANDARD NO. 2411.015 PERFORATED GRID STRAINER DRAIN WITH 1-1/2" TAILPIECE. DEARBORN NO. 510 1/2" 17 GAUGE "P" TRAP WITH ADAPTER FOR 1/2" TAILPIECE, CLEANOUT AND ESCUTCHEONS. DEARBORN NO. 2712 KCW HOT AND COLD WATER COMPRESSION INLET SUPPLIES WITH STOPS. PROVIDE TRUEBRO "LAVSHIELD" PVC ENCLSOURE MODEL 2018-AS-L1.	AMERICAN STANDARD NO. 0355.012 "LUCERNE" WALL HUNG LAVATORY.	2"	1-1/2"	1/2"	1/2"
AL-2	ACCESSIBLE LAVATORY W/ SENSOR	VITREOUS 20 1/2"x18 1/2" CHINA WALL HUNG LAVATORY WITH INTEGRAL BACK, FRONT OVERFLOW AND SIDE SPLASH SHIELDS FOR CONCEALED ARMS. SINGLE CENTER FAUCET HOLE. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.	CHICAGO FAUCET 116.222.AB.1 SINGLE HOLE, DECK MOUNTED, TRADITIONAL ELECTRONIC LAVATORY FAUCET WITH INFRARED SENSOR. DUAL SUPPLY FOR HOT AND COLD, ADJUSTABLE TEMPERATURE CONTROL MIXER, 6 VOLT LITHIUM CRP2 BATTERY. AMERICAN STANDARD NO. 2411.015 PERFORATED GRID STRAINER DRAIN WITH 1-1/2" TAILPIECE. DEARBORN NO. 510 1- 1/2" 17 GAUGE "P" TRAP WITH ADAPTER FOR 1/2" TAILPIECE, CLEANOUT AND ESCUTCHEONS. DEARBORN NO. 2712 KCW HOT AND COLD WATER COMPRESSION INLET SUPPLIES WITH STOPS. PROVIDE TRUEBRO "LAVSHIELD" PVC ENCLSOURE MODEL 2018-AS-L1.	AMERICAN STANDARD NO. 0356.412 "LUCERNE" WALL HUNG LAVATORY.	2"	1-1/2"	1/2"	1/2"
AEWC	ELECTRIC WATER COOLER W/ BOTTLE FILLER	SELF-CONTAINED AIR COOLED BARRIER FREE ELECTRIC WATER COOLER AND BOTTLE FILLING STATION, 120 VOLT MOTOR, STAINLESS STEEL RECEPTOR & BACKSPLASH WITH STAINLESS STEEL LOWER SHROUD, FRONT PUSH BAR, INSULATED WATER COOLER, THERMOSTAT, OVERLOAD PROTECTION ON MOTOR & PLUG-IN, 3-WIRE GROUNDING TYPE SERVICE CORD. BUBBLER AND WATER PRESSURE REGULATOR, CAPACITY 8 GPH OF 80 DEGREES TO 50 DEGREES WATER WITH 90 DEGREES ROOM TEMPERATURE. ASSIST THE ELECTRICAL CONTRACTOR IN LOCATING RECEPTACLE BACK OF DRINKING FOUNTAIN. SET RIM PER ARCHITECTURAL DRAWINGS.	"P" TRAP CUT OFF VALVE, SUITABLE STEEL SUPPORTS FOR MOUNTING FOUNTAIN, INSULATE "P" TRAP FROM DRAIN CONNECTION TO VERTICAL WASTE WITH 1/2" ARMAFLEX INSULATION.	ELKAY EZSTLBWS	1-1/2"	1-1/2"	—	1/2"
AWC	ACCESSIBLE FLR. MTD. FLR. OUTLET WATER CLOSET W/BEDPAN	VITREOUS CHINA, WATER SAVER, 1.6 GPF SIPHON JET FLUSH ACTION, ELONGATED BOWL, FLOOR OUTLET, 1-1/2" TOP SPUD.	SLOAN ROYAL FLUSHOMETER BPW-1155-1.6 BEDPAN FOR ADA INSTALLATION WITH GRAB BAR OFFSET, QUIET OPERATING, WITH VACUUM BREAKER, DIVERTING VALVE ASSEMBLY, SPRAY ARM, 1" I.P.S. SCREWDRIVER BAK-CHEK ANGLE STOP FOR PROTECTIVE CAP ADJUSTABLE TAIL PIECE AND STOPS. CHURCH 9400 SSC ELONGATED OPEN FRONT SEAT (LESS COVER) STAINLESS STEEL HINGE WITH CHECK STOP. FLOOR MOUNTING KIT, SECURELY BOLT FIXTURE TO FLOOR. FURNISH WITH FLOOR FLANGE AND WAX RING.	AMERICAN STANDARD 3462.001 "MADERA" 16-1/2" ELONGATED FLUSH VALVE TOILET	4"	2"	—	1 1/4"
AWC-2	ACCESSIBLE FLR. MTD. FLR. OUTLET WATER CLOSET W/ SENSOR	VITREOUS CHINA, WATER SAVER, 1.6 GPF SIPHON JET FLUSH ACTION, ELONGATED BOWL, FLOOR OUTLET, 1-1/2" TOP SPUD.	SLOAN OPTIMA G2 ROYAL FLUSHOMETER 8111, 1.6 GPF LOW CONSUMPTION FLUSH VALVE, ADA BATTERY POWERED SENSOR, OVER-RIDE BUTTON, QUIET OPERATING, WITH VACUUM BREAKER AND STOPS. CHURCH 9500SSC OPEN FRONT SEAT LESS COVER WITH STAINLESS STEEL HINGE AND CHECK STOP. FLOOR MOUNTING KIT. SECURELY BOLT FIXTURE TO FLOOR. FURNISH WITH FLOOR FLANGE AND WAX RING.	AMERICAN STANDARD 3461.001 "MADERA" 16-1/2" ELONGATED FLUSH VALVE TOILET	4"	2"	—	1-1/2"
AWC-3	ACCESSIBLE FLR. MTD. BACK OUTLET WATER CLOSET W/ SENSOR	VITREOUS CHINA, WATER SAVER, 1.6 GPF SIPHON JET FLUSH ACTION, ELONGATED BOWL, FLOOR MOUNTED WITH RIM AT 16-1/2", BACK OUTLET, 1-1/2" TOP SPUD.	SLOAN ROYAL OPTIMA PLUS 8111 LOW CONSUMPTION BATTERY POWERED SENSOR OPERATED FLUSH VALVE, QUIET OPERATING, WITH VACUUM BREAKER COMPLETE WITH INFRARED SENSOR, OVERRIDE BUTTON. CHURCH 9500SSC OPEN FRONT SEAT LESS COVER WITH STAINLESS STEEL HINGE AND CHECK STOP. FLOOR MOUNTING KIT. SECURELY BOLT FIXTURE TO FLOOR. FURNISH WITH FLOOR FLANGE AND WAX RING.	AMERICAN STANDARD 3695.001 "PRIOLO" 16-1/2" ELONGATED FLUSH VALVE TOILET	4"	2"	—	1-1/2"
CM	COFFEE MACHINE	ROUGH IN 1/2" COLD WATER	CUTOFF VALVE AND WATTS "9BD" BACK FLOW PREVENTER ON COLD SUPPLY.	———————	—	—	—	1/2"
CS	CLINIC SERVICE SINK	VITREOUS CHINA SERVICE SINK WITH FLUSHING RIM, INTEGRAL TRAP, 4" WALL OUTLET AND 1-1/2" TOP SPUD.	THREE (3) NO. 7832.017 STAINLESS STEEL SPRING TYPE RIM GUARDS. SLOAN NO. 117-HO "ROYAL" FLUSH VALVE AND CHICAGO FAUCET NO. 910-G777-19XKCP WALL MOUNTED PEDAL VALVE BED PAN CLEANER, CHICAGO FAUCET 814VB CP VACUUM BREAKER, ANGLE SPRAY NOZZLE WITHOUT VALVE. WHITE VINYL HOSE WITH HOOK. CONCEALED CARRIER WITH FLANGE SUPPORT BOLTED TO WALL.	AMERICAN STANDARD NO. 9512.013	4"	2"	1/2"	1"
DSH	DECONTAM SHOWER	4" FLOOR SINK FS AS SCHEDULED	POWERS HYDROGAURD XP SERIES MODEL ES-150 THERMOSTATIC MIXING VALVE WITH ASSE 1071 LISTING FOR SUPPLYING TEPID WATER TO EMERGENCY FIXTURES IN A RANGE OF FLOW RATES FROM A MINIMUM FLOW OF 1.0 GPM (TO ASSE 1071) UP TO A MAXIMUM FLOW OF 12.3 GPM AT 60 PSI. VALVE SHALL HAVE INTEGRAL CHECKSTOPS TO PREVENT CROSS FLOW AND SHALL HAVE A LOCKABLE MEANS OF SECURING THE OUTLET TEMPERATURE. TWO (2) HAND SHOWERS: EACH HAND SHOWER SHALL BE CHICAGO FAUCET #778-S777-19KCP, POLISHED CHROME PLATED BRASS FULL FLOW MALE HOSE SPRAY WITH 67" WHITE VINYL HOSE WITH INSULATED HANDLE - (TOTAL LENGTH 72"). TWO (2) HAND SHOWER PUSHBUTTON ASSEMBLIES; EACH ASSEMBLY SHALL BE POWERS HYDROGAURD ESP MODEL 447 WITH PIEZO SENSOR PUSHBUTTON, SLOW-CLOSING SOLENOID VALVE, AND CONTROL BOX WITH ADJUSTABLE RUN TIME. ALSO PROVIDE A FLUSH-TO-CEILING DRENCH SHOWER, HAWS MODEL 8169 "AXION MSR" STAINLESS STEEL SHOWERHEAD WITH 20 GPM FLOW CONTROL, STAY-OPEN BALL VALVE, AND STAINLESS STEEL 44" PULL ROD WITH TRIANGULAR HANDLE. PROVIDE A SEPARATE THERMOSTATIC MIXING VALVE WITH ASSE 1071 LISTING TO SERVE THE DRENCH SHOWER. THAT MIXING VALVE SHALL BE HAWS MODEL 9201H "AXION" LEAD FREE, WITH FLOW RATE UP TO 31 GPM. INSTALL BOTH MIXING VALVES, HAND SHOWER SOLENOIDS, AND CONTROL BOX IN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING OF CORRIDOR (NOT ABOVE SHEET ROCK CEILING OF DECON SHOWER). EXTEND TEMPERED WATER PIPING FROM OUTLET OF FIRST MIXING VALVE TO EACH HAND SHOWER. MOUNT HAND SHOWERS ON WALL OF DECON SHOWER ROOM AS INDICATED ON ARCHITECTURAL DRAWINGS, WITH WALL CONNECTIONS AT 6'-6" AFF. MOUNT EACH PUSHBUTTON ON WALL BELOW RESPECTIVE HAND SHOWER. EXTEND TEMPERED WATER PIPING FROM OUTLET OF SECOND MIXING VALVE TO DRENCH SHOWER. MOUNT DRENCH SHOWER HEAD IN CEILING AT CENTER OF DECON SHOWER ROOM, ALONG WITH SUPPLIED ESCUTCHEON AND PULL ROD. ALSO FURNISH AND INSTALL SEPARATE ACCESSIBLE EXTERNAL CHECK VALVES WITH CUT-OFF VALVE ON HOT & COLD SUPPLIES TO EACH MIXING VALVE. EXTERNAL CHECK VALVES SHALL BE WATTS #600 SERIES "MAXI-FLO".	SEE ACCESSORIES	4"	2"	1"	1"
IM	ICE MACHINE	RECESSED METAL POWDER COATED BOX FOR ICE MACHINE WITH 2" DRAIN	CUTOFF VALVE AND WATTS "9BD" BACK FLOW PREVENTER ON COLD SUPPLY. COORDINATE MOUNTING LOCATION WITH ICE MACHINE AND ARCHITECT.	GUY GRAY NO RMDW1AB	2"	1-1/2"	—	1/2"
JS	JANITOR'S SINK	24"x24"x12" PRECAST TERRAZZO NEOCORNER DROP FRONT FLOOR SERVICE SINK WITH STAINLESS STEEL CAPS, 3" CAST BRASS DRAIN, STAINLESS STEEL STRAINER PLATE, AND STAINLESS STEEL WALL GUARDS. NUMBER OF WALL GUARDS AS REQUIRED PER LOCATION. WALL MOUNTED	CHICAGO FAUCET NO. 897XK C.P. SERVICE SINK FITTING WITH VACUUM BREAKER, 3/4" HOSE THREAD ON SPOUT. ADJUSTABLE WALL BRACE, PAIL HOOK AND 1/2" FLANGED FEMALE ADJUSTABLE ARMS WITH INTEGRAL STOPS AND CHROME FINISH. CAULK BETWEEN WALL AND FLANGE WITH G.E. SILICONE SEALANT. FURNISH AND INSTALL SEPARATE ACCESSIBLE EXTERNAL CHECK VALVE WITH CUT-OFF VALVE ON HOT & COLD WATER SUPPLIES. EXTERNAL CHECK VALVES SHALL BE WATTS #600 SERIES "MAXI-FLO".	FIAT NO. TSBC-6010 FLOOR SERVICE BASIN	3"	2"	1/2"	1/2"
S-1	SINK	SINK INTEGRAL WITH COUNTERTOP	ELKAY NO. LK-8 C.P. BRASS GRID STRAINER AND 1-1/2" C.P. BRASS TAILPIECE. CHICAGO FAUCET NO. 895-317XKCPR FAUCET, 4" CENTERS, NO. GN2A 5-3/8" SPOUT, NO. 317 4" WRIST BLADE HANDLES AND NO. E3 AERATOR. DEARBORN NO. 510-17 GAUGE 1-1/2" "P" TRAP WITH CLEANOUT AND ESCUTCHEON. DEARBORN NO. 2712 KCW HOT AND COLD WATER COMPRESSION INLET SUPPLIES WITH STOPS.	SINK INTEGRAL WITH COUNTERTOP	2"	1-1/2"	1/2"	1/2"
S-2	CRITICAL AREA SINK	SINK INTEGRAL WITH COUNTERTOP	ELKAY NO. LK-8 C.P. BRASS GRID STRAINER AND 1-1/2" C.P. BRASS 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. 510-17 GAUGE 1-1/2" "P" TRAP WITH CLEANOUT AND ESCUTCHEON. DEARBORN NO. 2712 KCW HOT AND COLD WATER COMPRESSION INLET SUPPLIES WITH STOPS.	SINK INTEGRAL WITH COUNTERTOP	2"	1-1/2"	1/2"	1/2"
SH	SHOWER	2" FLOOR DRAIN AS SPECIFIED	POWERS NO. E420 THERMOSTATIC WATER MIXER WITH 1/2" STRAINER AND INTERNAL CHECK STOPS, CHICAGO FAUCET 778-9K CP WALL SPOUT WITH VACUUM BREAK & NO 151 HAND & WALL SHOWER, 60" FLEXIBLE RUBBER LINED METAL HOSE, NYLON AND CHROME HAND SPRAY, 24" CHROME PLATED ADJUSTING BAR. MOUNT ADJUSTING BAR SO THAT WALL SHOWER HEAD IS ADJUSTABLE FROM 6' TO 4'. FURNISH AND INSTALL SEPARATE ACCESSIBLE EXTERNAL CHECK VALVE WITH CUT-OFF VALVE ON HOT & COLD WATER SUPPLIES TO MIXING VALVES. EXTERNAL CHECK VALVES SHALL BE WATTS #600 SERIES "MAXI-FLO".	---	2"	1-½"	½"	½"

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description
1	4.10.20	ADDENDUM #1

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P4.0

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PLUMBING SCHEDULES & RISER DIAGRAMS

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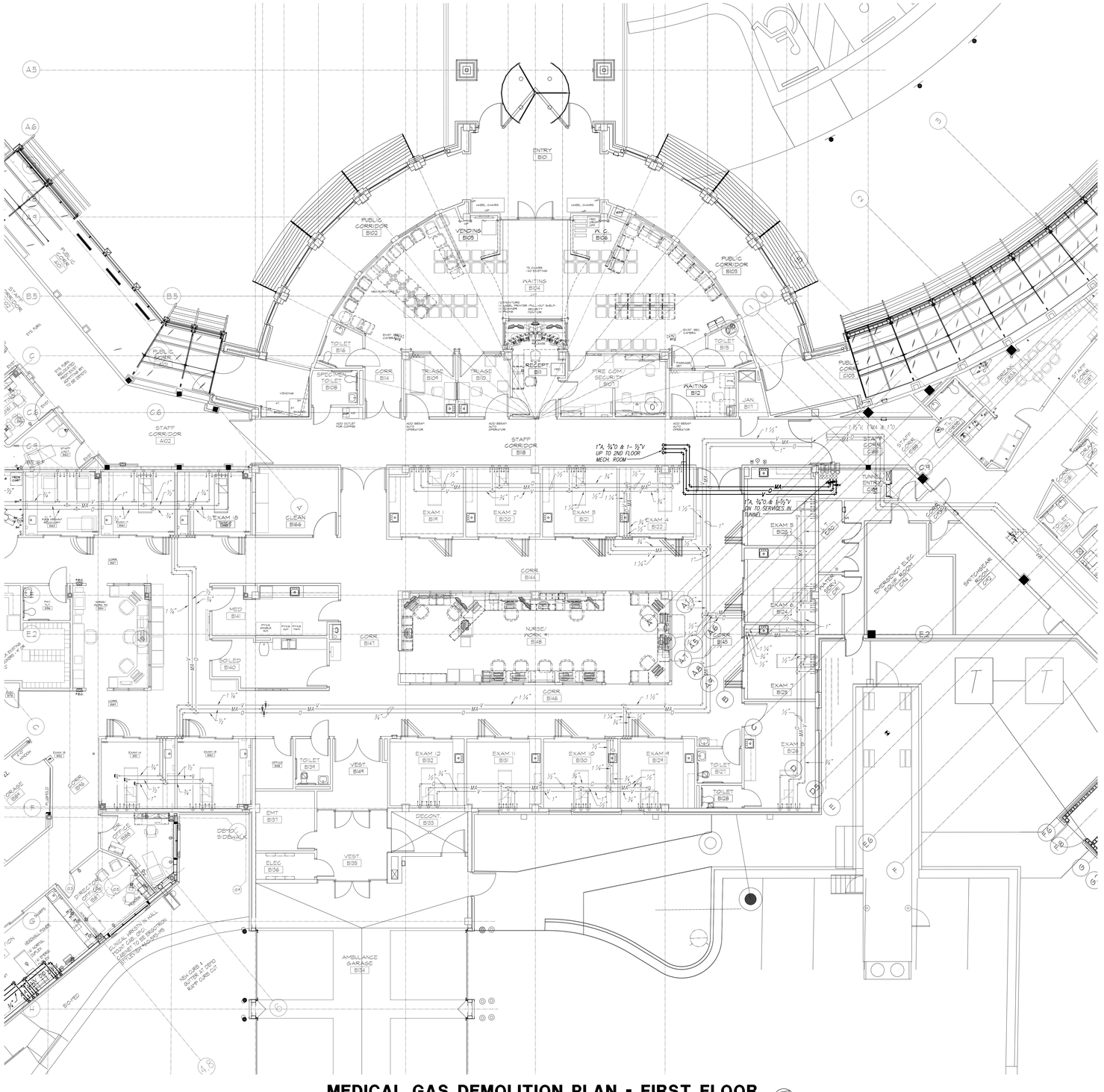
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET PM000.
2. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. WORK SHOWN DASHED BOLD IS WORK TO BE REMOVED.
3. THIS IS A 24 HOUR OPERATING FACILITY. THEREFORE SOME WORK MAY NEED TO BE COMPLETED AFTER NORMAL WORKING HOURS OR DURING WEEKENDS AT NO EXTRA COST TO OWNER. ALL SHUTDOWNS SHALL BE COORDINATED AND SCHEDULED WITH OWNER.
4. FIELD VERIFY ALL EXISTING PIPE SIZES AND LOCATIONS PRIOR TO STARTING WORK.

KEYED DEMOLITION NOTES:

(1) NOT USED



MEDICAL GAS DEMOLITION PLAN - FIRST FLOOR

SCALE: 1/8" = 1'-0"

NORTH

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DMG1

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MEDICAL GAS DEMOLITION PLAN - FIRST FLOOR

2019-150 DMG1.dwg

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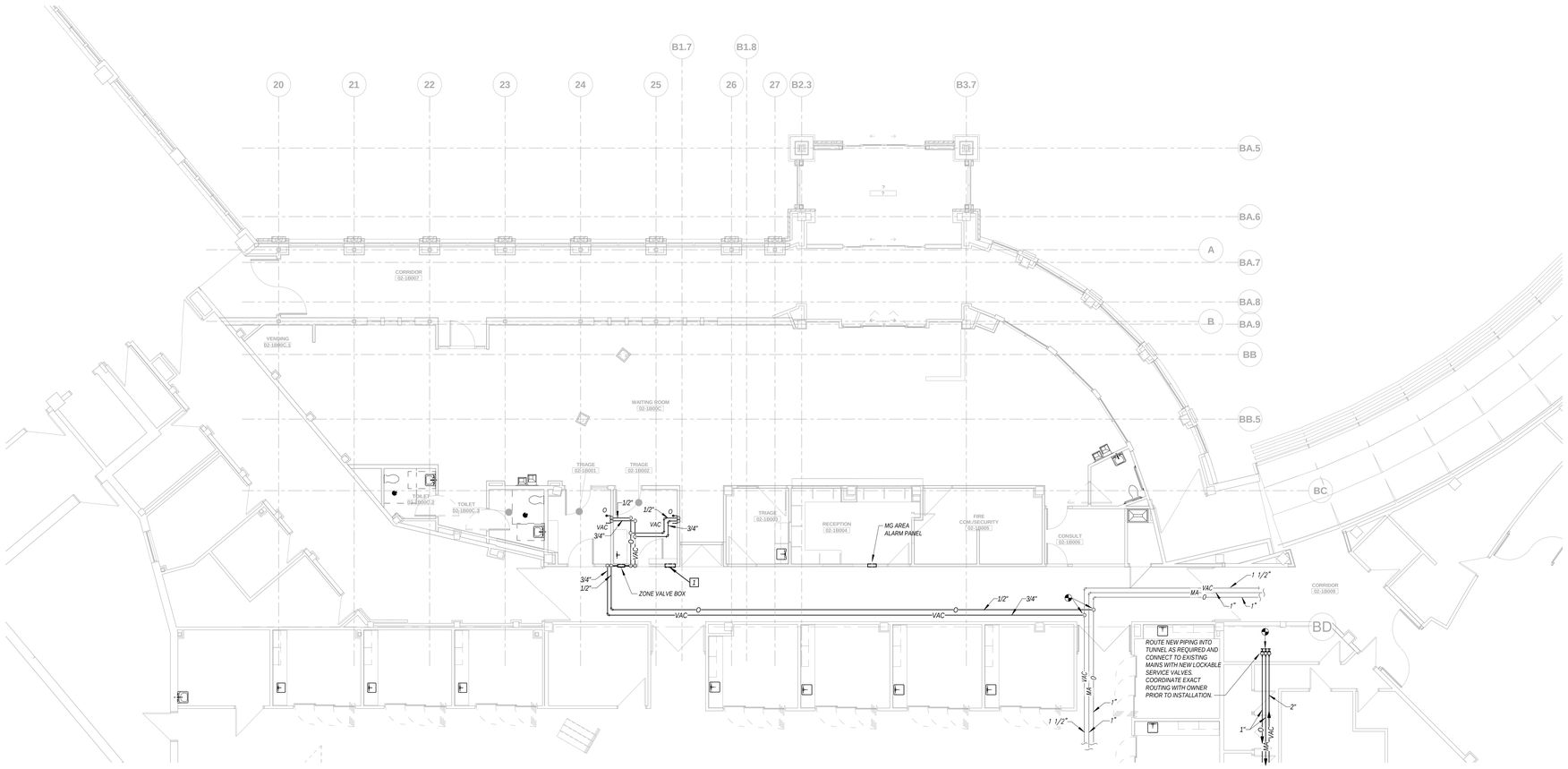
MEDICAL GAS GENERAL NOTES

1 REFER TO GENERAL NOTES ON SHEET PM000.
2 ALL ZONE VALVES SHALL FACE CORRIDORS.
3 COORDINATE EXACT QUANTITIES AND LOCATIONS OF MEDICAL GAS OUTLETS/ INLETS WITH ARCHITECTURAL ELEVATIONS.

KEYED NOTES

1 PROVIDE CRC – INTEGRATED ROOM MONITOR (IRM) ABOVE CEILING WITH THREE (3) DPTS FOR EACH TRIAGE ROOM WITH ADDITIONAL WALL PLATE FOR REFERENCE SENSOR IN STAFF CORRIDOR.



1 MEDICAL GAS PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

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MG1.1

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MEDICAL GAS PLAN - FIRST FLOOR AREA 1

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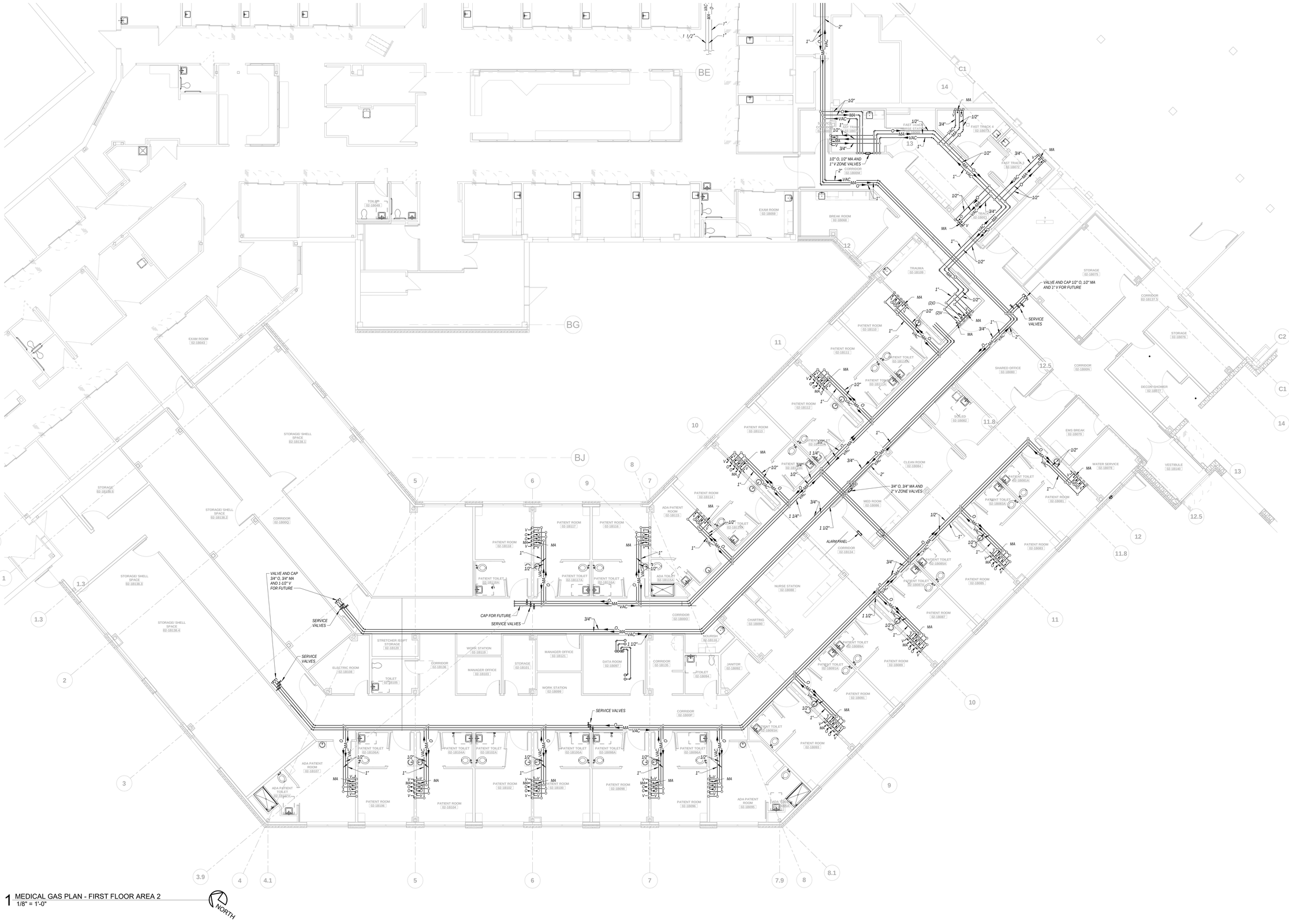
MEDICAL GAS GENERAL NOTES

1 REFER TO GENERAL NOTES ON SHEET PM000.
2 ALL ZONE VALVES SHALL FACE CORRIDORS.
3 COORDINATE EXACT QUANTITIES AND LOCATIONS OF MEDICAL GAS OUTLETS/ INLETS WITH ARCHITECTURAL ELEVATIONS.



1 MEDICAL GAS PLAN - FIRST FLOOR AREA 2
1/8" = 1'-0"

NORTH

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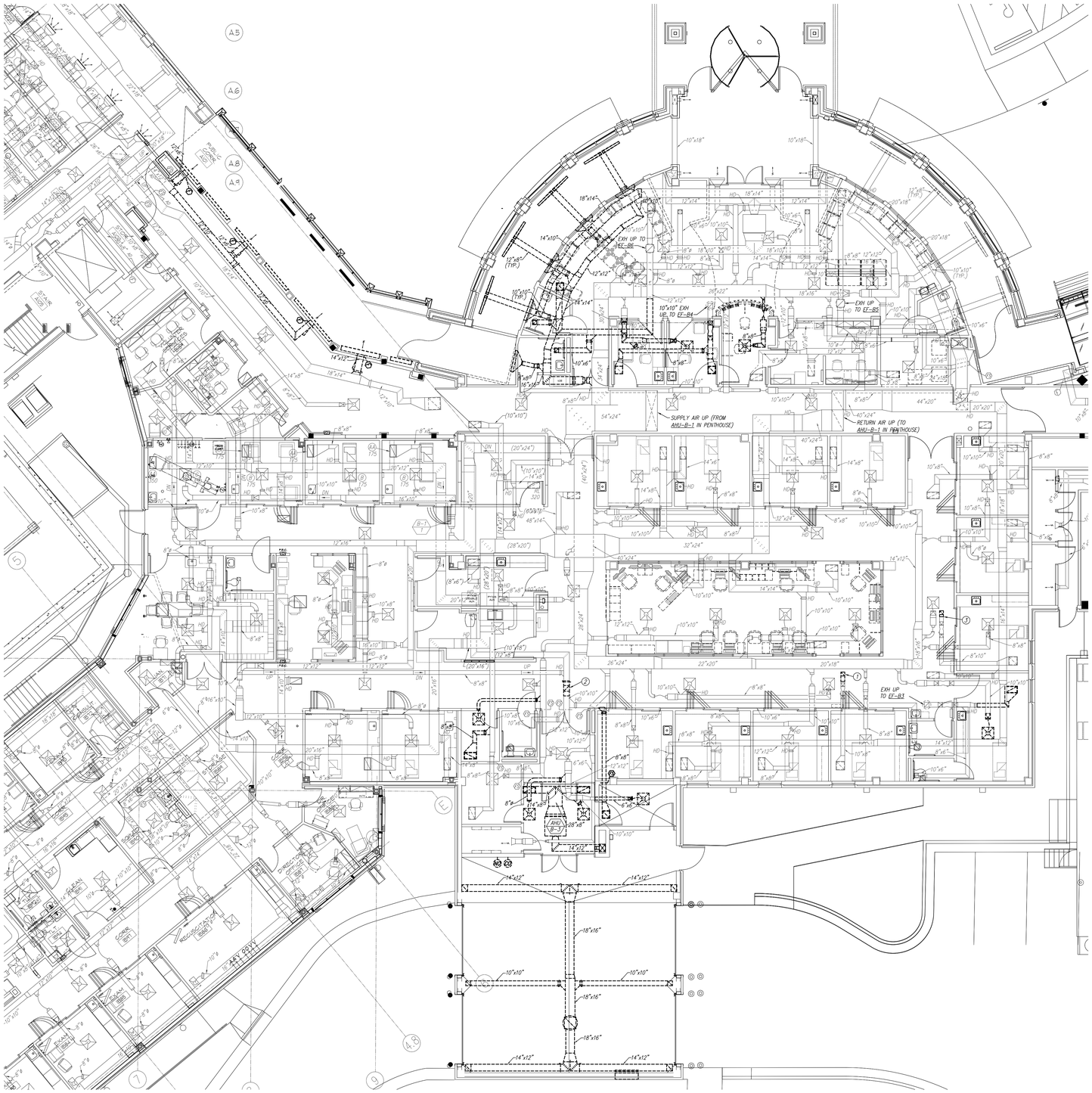
MEDICAL GAS PLAN - FIRST FLOOR AREA 2


SUPPLY AIR UP (FROM AHU-B-1 IN PENTHOUSE)
RETURN AIR UP (TO AHU-B-1 IN PENTHOUSE)
EXH UP TO EF-B6
EXH UP TO EF-B4
EXH UP TO EF-B5
EXH UP TO EF-B3
EXH UP TO EF-B2
EXH UP TO EF-B1
EXH UP TO EF-B8
EXH UP TO EF-B9
KEY POST
DIRECTOR OF SECURITY
SECURITY
CLEAN
DOCK
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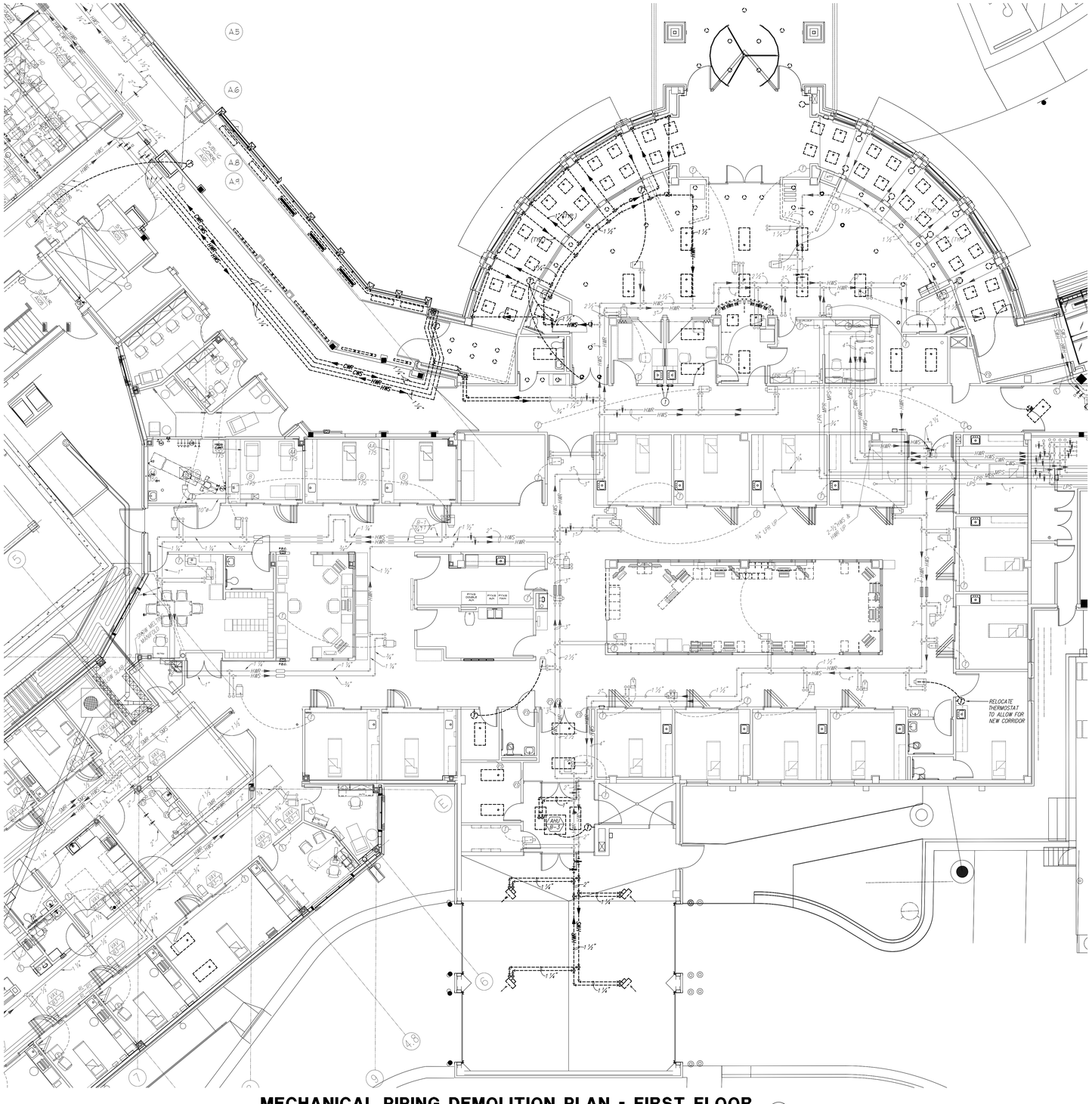

MECHANICAL PIPING DEMOLITION PLAN - FIRST FLOOR

SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEETS PM000 AND DM1.

KEYED NOTES:

(1) DISCONNECT AND REMOVE ROOM PRESSURE MONITORS SERVING TRIAGE ROOMS.

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Revision

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DMP1

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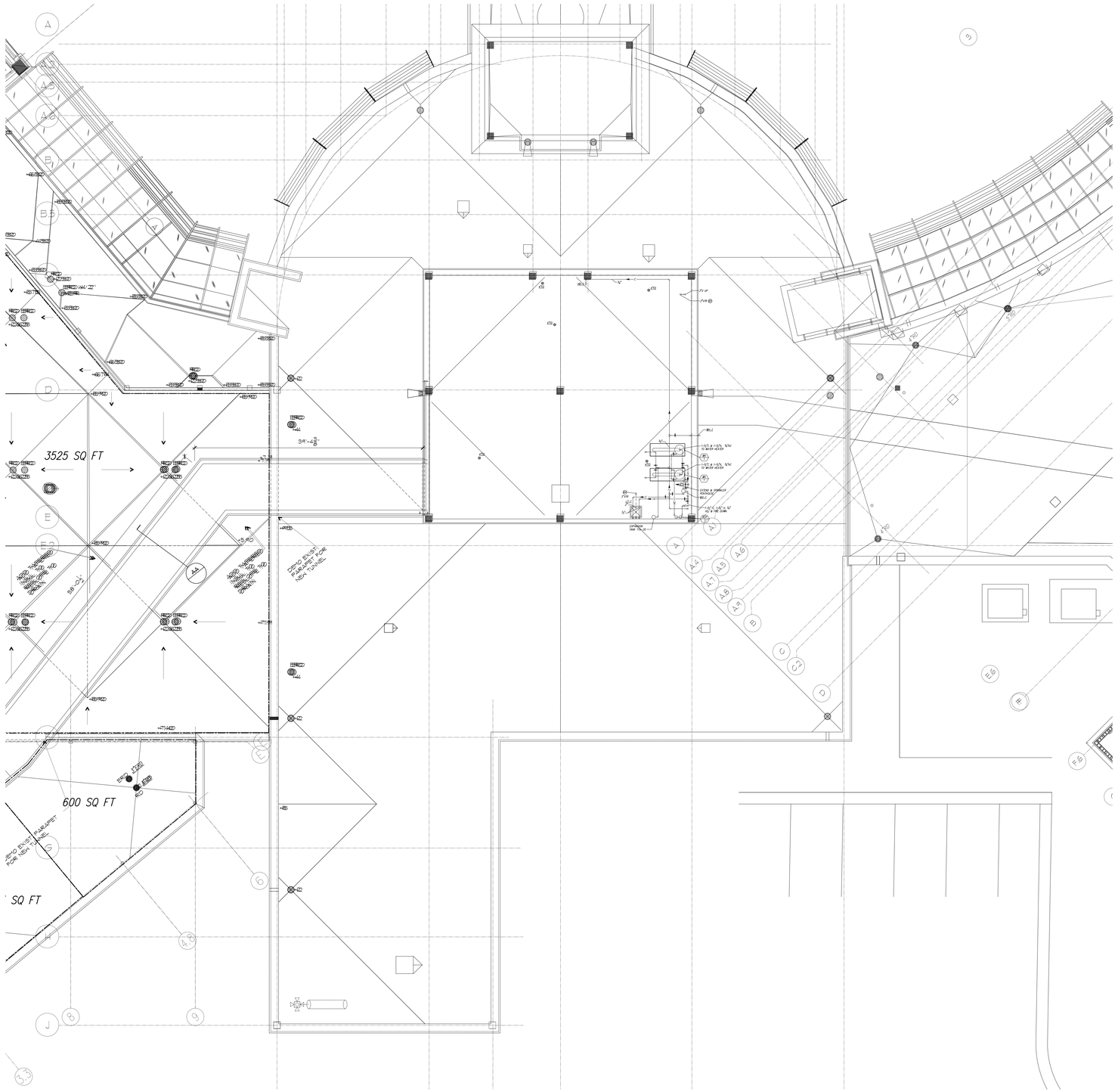
MECHANICAL PIPING DEMOLITION PLAN - FIRST FLOOR 2



MECHANICAL DEMOLITION PLAN - PENTHOUSE/ROOF

SCALE: 1/8" = 1'-0"

NORTH

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON SHEET PM000.
2. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. WORK SHOWN DASHED BOLD IS WORK TO BE REMOVED.
3. THIS IS A 24 HOUR OPERATING FACILITY. THEREFORE SOME WORK MAY NEED TO BE COMPLETED AFTER NORMAL WORKING HOURS OR DURING WEEKENDS AT NO EXTRA COST TO OWNER. ALL SHUTDOWNS SHALL BE COORDINATED AND SCHEDULED WITH OWNER.
4. FIELD VERIFY ALL EXISTING PIPE SIZES AND LOCATIONS PRIOR TO STARTING WORK.

KEYED DEMOLITION NOTES:

(1) NOT USED

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

3/30/2020

Bruce E. Hart - Engineer
License - Missouri # E-22817

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Licensee's Certificate of Authority Number: 000396

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

DM2

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MECHANICAL DEMOLITION PLAN - PENTHOUSE/ROOF

BID PACKAGE #3 3.27.2020

2019-150 DM2.dwg

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MECHANICAL GENERAL NOTES

1 *REFER TO GENERAL NOTES ON SHEET PM000.*

2 *AT CONCLUSION OF PROJECT (IN ADDITION TO TESTING, ADJUSTING, AND BALANCING WORK CALLED OUT ON THE PLAN), CONTRACTOR SHALL TAKE AIRFLOW READINGS AT ALL SUPPLY DIFFUSERS, EXHAUST GRILLES, AND RETURN GRILLES IN THE E.D. WAITING ROOM AREA (INCLUDING SUPPORTING SPACES) AND SUBMIT THEM IN A WRITTEN REPORT TO ENGINEER. THIS INCLUDES SUPPORTING SPACES SUCH AS RECEPTION, TRIAGE, FIRE COMMAND, CONSULT, JANITOR, AND TOILET ROOMS. INCLUDE A PLAN IN THE REPORT SHOWING LOCATION OF EACH INDIVIDUAL DIFFUSER/GRILLE AND ITS AIRFLOW READING.*

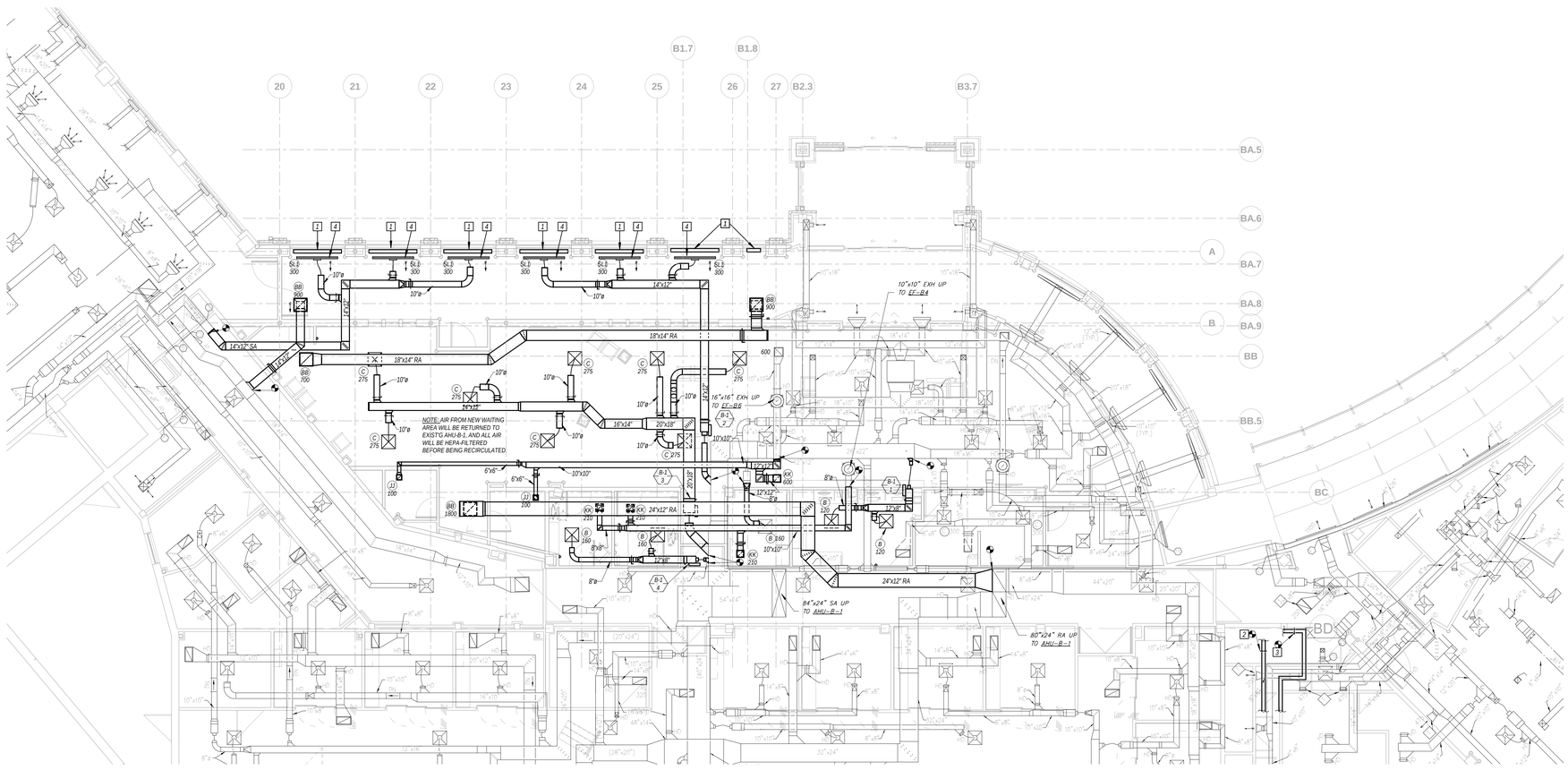
KEYED NOTES 0

1 *FINNED TUBE RADIATOR, FLOOR MOUNTED WITH FRONT INLET AND TOP OUTLET, 7'-0" LONG x 4½" WIDE x 10" HIGH, WITH 1" COPPER TUBE AND 4¼" SQUARE ALUMINUM FINS SPACED AT 50/LINEAL FOOT. PROVIDE CONTINUOUS ENCLOSURE FROM COLUMN TO COLUMN AND BALANCE TO 3 GPM.*

2 *CONNECT TO EXISTING VALVED AND CAPPED 6" CWS AND 6" CWR LINES AS REQUIRED AND EXTEND NEW 6" CHILLED WATER PIPING INTO NEW ADDITION. ROUTE 6" CWS AND 6" CWR UP THRU ROOF INTO NEW ROOFTOP TUNNEL AND BACK TO NEW PENTHOUSE ADDITION TO SERVE NEW AIR HANDLING UNIT AHU-B-5.*

3 *CONNECT TO EXISTING VALVED AND CAPPED 4" HWS AND 4" HWR LINES AS REQUIRED AND EXTEND NEW 4" HEATING HOT WATER PIPING INTO NEW ADDITION TO SERVE NEW SINGLE DUCT BOX REHEAT COILS, HOT WATER UNIT HEATERS AND HOT WATER AIR CURTAIN.*

4 *DIRECT HALF OF SLOT AIRFLOW TO GLASS AND HALF INTO ROOM.*



1 MECHANICAL PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

3-30-2020

Bruce E. Hart - Engineer
License - Missouri #E-22817

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M1.1

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MECHANICAL PLAN - FIRST FLOOR AREA 1

BID PACKAGE #3 3.27.2020

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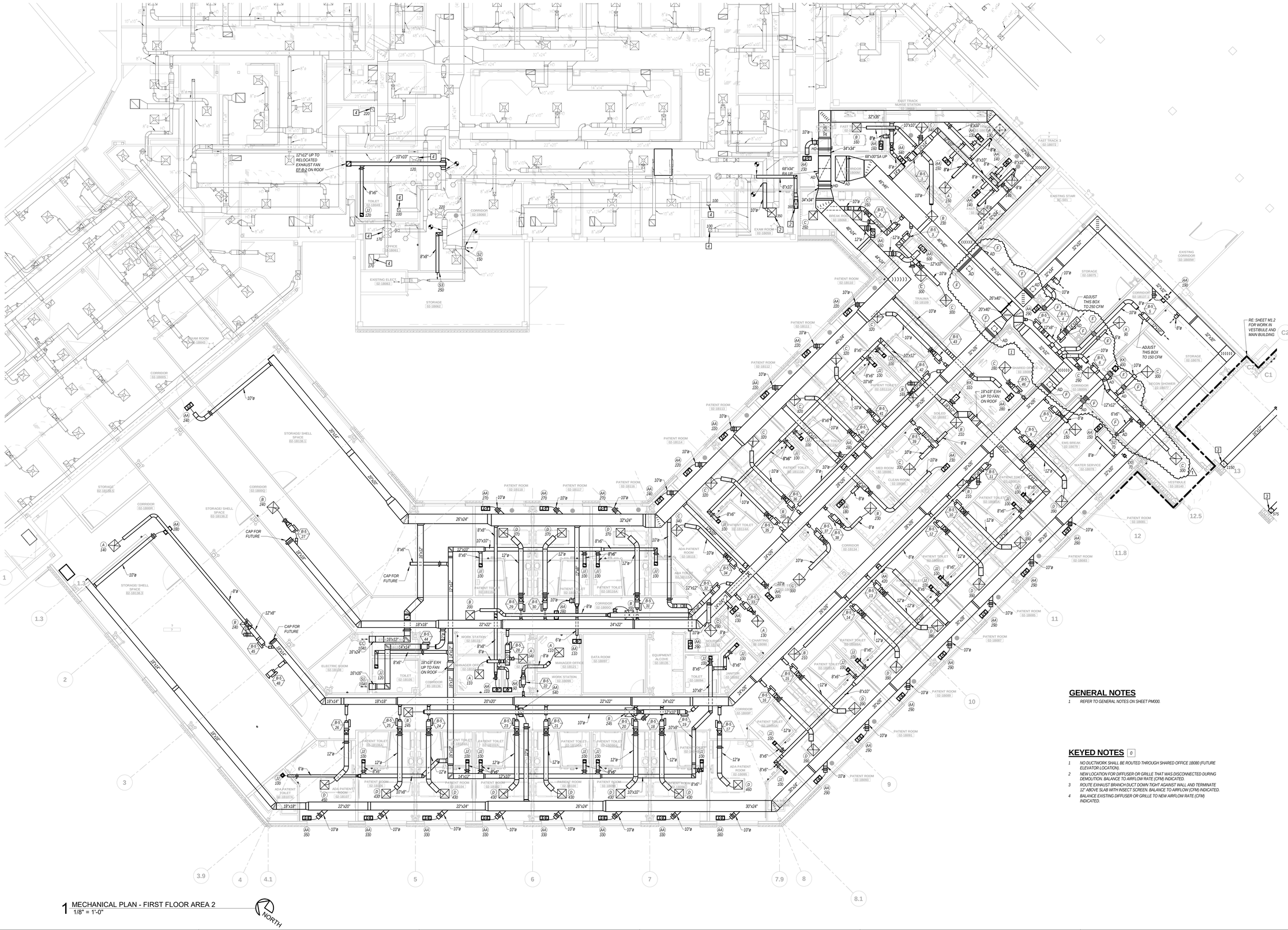
12"x12" UP TO RELOCATED EXHAUST FAN EF-B-2 ON ROOF
CAP FOR FUTURE
18"x18" EXH UP TO FAN ON ROOF
18"x28" EXH UP TO FAN ON ROOF
ADJUST THIS BOX TO 250 CFM
ADJUST THIS BOX TO 150 CFM
RE: SHEET M1.2 FOR WORK IN VESTIBULE AND MAIN BUILDING
EXAM ROOM 02-18043
CORRIDOR 02-18005
STORAGE/ SHELL SPACE 02-18138.1
STORAGE/ SHELL SPACE 02-18138.2
STORAGE/ SHELL SPACE 02-18138.3
CORRIDOR 02-18009
CORRIDOR 02-18009Q
STORAGE 02-18058.5
CORRIDOR 02-18008
OFFICE 02-18061
TOILET 02-18049
EXISTING ELEC'L 02-18063
STORAGE 02-18062
EXAM ROOM 02-18059
FAST TRACK NURSE STATION 02-18068
FAST TRACK 2 02-18071
FAST TRACK 3 02-18072
CORRIDOR 02-18000
DRS WK STA 02-18066
EXISTING STAIR 3C-001
EXISTING CORRIDOR 02-18009W
STORAGE 02-18075
CORRIDOR 02-18137.1
STORAGE 02-18076
PATIENT ROOM 02-18110
TRAUMA 02-18108
PATIENT ROOM 02-18111
PATIENT ROOM 02-18112
PATIENT TOILET 02-18111A
PATIENT ROOM 02-18113
SOILED 02-18082
PATIENT ROOM 02-18114
PATIENT TOILET 02-18113A
SHARED OFF 02-18080
CORRIDOR 02-18009
NEOON SHOWER 02-18077
MED ROOM 02-18098
CLEAN ROOM 02-18094
PATIENT TOILET 02-18095A
EMS BREAK 02-18079
WATER SERVICE 02-18078
VESTIBULE 02-18145
PATIENT ROOM 02-18081
PATIENT ROOM 02-18088
PATIENT ROOM 02-18087
PATIENT ROOM 02-18098
PATIENT ROOM 02-18091
PATIENT ROOM 02-18093
PATIENT ROOM 02-18107
ADA PATIENT TOILET 02-18107A
ADA PATIENT ROOM 02-18115
ADA PATIENT ROOM 02-18095
ELECTRIC ROOM 02-18106
TOILET 02-18105
CORRIDOR 02-18136
MANAGER OFFICE 02-18121
WORK STATION 02-18119
WORK STATION 02-18099
DATA ROOM 02-18097
EQUIPMENT ALCOVE 02-18135
NOURISH 02-18116
CHARTING 02-18095
JANITOR 02-18092
CORRIDOR 02-18009P
PATIENT TOILET 02-18095A
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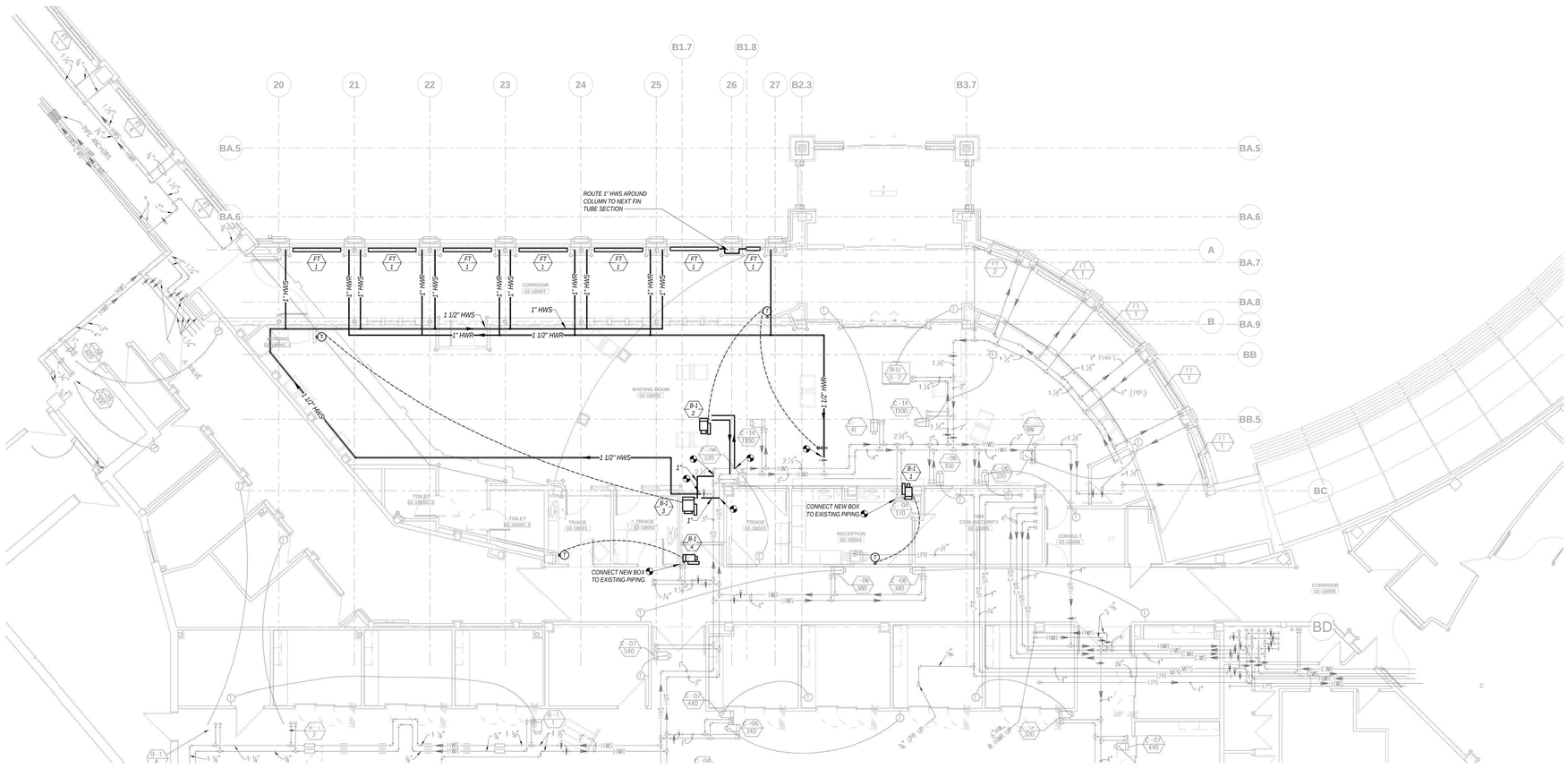
MECHANICAL PIPING GENERAL NOTES

1 *SEE SHEET PM000 FOR GENERAL NOTES AND SYMBOLS LISTS.*

2 *BRANCH PIPING TO BE 3/4" MINIMUM UNLESS NOTED OTHERWISE.*

3 *THERMOSTAT OR OTHER SENSOR MOUNTING AND PLACEMENT SHALL COORDINATE WITH OTHER TRADES AND FINISH SURFACES TO BE MOUNTED TO.*



1 MECHANICAL PIPING PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
3-30-2020
Bruce E. Hart - Engineer
License - Missouri #E-22817

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Licensee's Certificate of Authority Number: 000396

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

MP1.1

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MECHANICAL PIPING PLAN - FIRST FLOOR AREA 1

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MECHANICAL PIPING GENERAL NOTES

1. SEE SHEET PM000 FOR GENERAL NOTES AND SYMBOLS LISTS.
2. BRANCH PIPING TO BE 3/4" MINIMUM UNLESS NOTED OTHERWISE.
3. THERMOSTAT OR OTHER SENSOR MOUNTING AND PLACEMENT SHALL COORDINATE WITH OTHER TRADES AND FINISH SURFACES TO BE MOUNTED TO.

KEYED NOTES [0]

1. DISCONNECT, REMOVE, AND RELOCATE EXISTING CEILING RECESSED CABINET UNIT HEATER AND PIPING/VALVES AND INSTALL ABOVE EXTERIOR DOOR. EXTEND HWS AND HWR PIPING AND MAKE NEW CONNECTION AS NECESSARY.
2. 3" HWS, 3" HWR, 6" CWS, AND 6" CWR UP INTO ROOF TUNNEL. KEEP PIPING TO SIDE OF TUNNEL AND COORDINATE WITH DUCTWORK.
3. ROUTE 1 1/8" AND 7/8" REFRIGERANT PIPING UP TO CONDENSER ON ROOF. MAKE CONNECTIONS TO IN-ROW COOLER AS REQUIRED.
4. PROVIDE 3/4" CONDENSATE DRAIN FROM IN ROW COOLER CONDENSATE PUMP. INCLUDE CHECK VALVE ON PIPING OUTLET AND COMBINE TO ROUTE TO TURN OVER JANITOR'S SINK.
5. IN ROW COOLERS FOR DATA ROOM. RE: EC DRAWINGS FOR ADDITIONAL DETAILS.

PROVIDE NEW THERMOSTAT AND CONNECT TO EXISTING BOX.

PROVIDE NEW THERMOSTAT AND CONNECT TO EXISTING BOX.

VALVE AND CAP FOR FUTURE EXTENSION.

VALVE AND CAP FOR FUTURE EXTENSION.

ROUTE 3/4" CD ON TO B5-1

RE: SHEET MP1.2 FOR WORK IN VESTIBULE AND MAIN BUILDING

1 MECHANICAL PIPING PLAN - FIRST FLOOR AREA 2
1/8" = 1'-0"

NORTH

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
3-30-2020

Bruce E. Hart - Engineer
License - Missouri #E-22817

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

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

MP1.2

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MECHANICAL PIPING PLAN - FIRST FLOOR AREA 2

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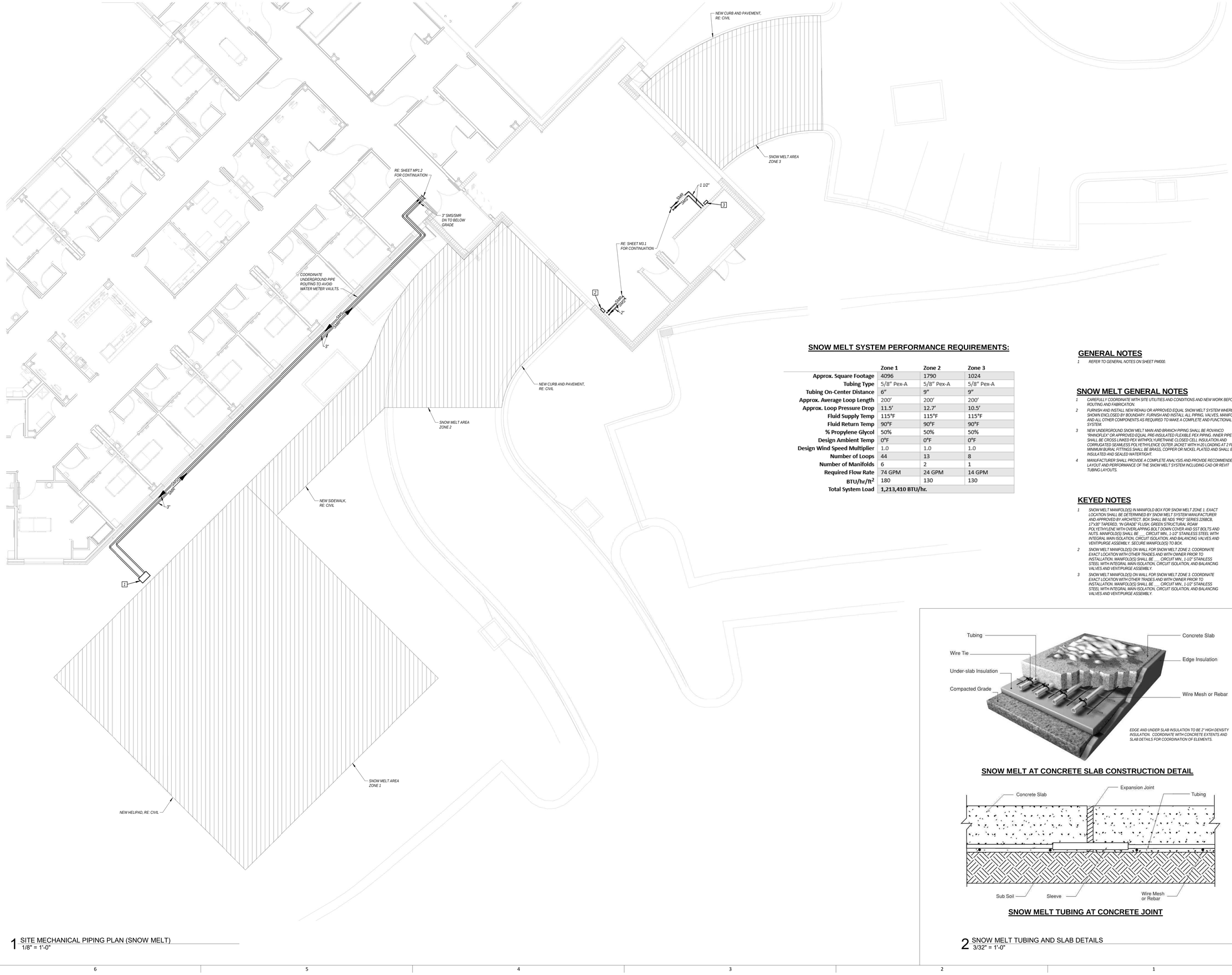

1 SITE MECHANICAL PIPING PLAN (SNOW MELT)
1/8" = 1'-0"

SNOW MELT SYSTEM PERFORMANCE REQUIREMENTS:

	Zone 1	Zone 2	Zone 3
Approx. Square Footage	4096	1790	1024
Tubing Type	5/8" Pex-A	5/8" Pex-A	5/8" Pex-A
Tubing On-Center Distance	6"	9"	9"
Approx. Average Loop Length	200'	200'	200'
Approx. Loop Pressure Drop	11.5'	12.7'	10.5'
Fluid Supply Temp	115°F	115°F	115°F
Fluid Return Temp	90°F	90°F	90°F
% Propylene Glycol	50%	50%	50%
Design Ambient Temp	0°F	0°F	0°F
Design Wind Speed Multiplier	1.0	1.0	1.0
Number of Loops	44	13	8
Number of Manifolds	6	2	1
Required Flow Rate	74 GPM	24 GPM	14 GPM
BTU/hr/ft²	180	130	130
Total System Load	**1,213,410 BTU/hr.**		

GENERAL NOTES

1 REFER TO GENERAL NOTES ON SHEET PM000.

SNOW MELT GENERAL NOTES

1 CAREFULLY COORDINATE WITH SITE UTILITIES AND CONDITIONS AND NEW WORK BEFORE ROUTING AND FABRICATION.

2 FURNISH AND INSTALL NEW REHAU OR APPROVED EQUAL SNOW MELT SYSTEM WHERE SHOWN ENCLOSED BY BOUNDARY. FURNISH AND INSTALL ALL PIPING, VALVES, MANIFOLDS AND ALL OTHER COMPONENTS AS REQUIRED TO MAKE A COMPLETE AND FUNCTIONAL SYSTEM.

3 NEW UNDERGROUND SNOW MELT MAIN AND BRANCH PIPING SHALL BE ROVANCO "RHINOFLEX" OR APPROVED EQUAL PRE-INSULATED FLEXIBLE PEX PIPING. INNER PIPE SHALL BE CROSS LINKED PEX WITHPOLYURETHANE CLOSED CELL INSULATION AND CORRUGATED SEAMLESS POLYETHYLENCE OUTER JACKET WITH H-20 LOADING AT 2 FEET MINIMUM BURIAL FITTINGS SHALL BE BRASS, COPPER OR MONEL PLATED AND SHALL BE INSULATED AND SEALED WATERTIGHT.

4 MANUFACTURER SHALL PROVIDE A COMPLETE ANALYSIS AND PROVIDE RECOMMENDED LAYOUT AND PERFORMANCE OF THE SNOW MELT SYSTEM INCLUDING CAD OR REVIT TUBING LAYOUTS.

KEYED NOTES

1 SNOW MELT MANIFOLD(S) IN MANIFOLD BOX FOR SNOW MELT ZONE 1. EXACT LOCATION SHALL BE DETERMINED BY SNOW MELT SYSTEM MANUFACTURER AND APPROVED BY ARCHITECT. BOX SHALL BE NDS "PRO" SERIES 226BCB, 17"x30" TAPERED, "IN GRADE" FLUSH, GREEN STRUCTURAL ROAM POLYETHYLENE WITH OVERLAPPING BOLT DOWN COVER AND SST BOLTS AND NUTS. MANIFOLD(S) SHALL BE ____ CIRCUIT MIN., 1-1/2" STAINLESS STEEL WITH INTEGRAL MAIN ISOLATION, CIRCUIT ISOLATION, AND BALANCING VALVES AND VENT/PURGE ASSEMBLY. SECURE MANIFOLD(S) TO BOX.

2 SNOW MELT MANIFOLD(S) ON WALL FOR SNOW MELT ZONE 2. COORDINATE EXACT LOCATION WITH OTHER TRADES AND WITH OWNER PRIOR TO INSTALLATION. MANIFOLD(S) SHALL BE ____ CIRCUIT MIN., 1-1/2" STAINLESS STEEL WITH INTEGRAL MAIN ISOLATION, CIRCUIT ISOLATION, AND BALANCING VALVES AND VENT/PURGE ASSEMBLY.

3 SNOW MELT MANIFOLD(S) ON WALL FOR SNOW MELT ZONE 3. COORDINATE EXACT LOCATION WITH OTHER TRADES AND WITH OWNER PRIOR TO INSTALLATION. MANIFOLD(S) SHALL BE ____ CIRCUIT MIN., 1-1/2" STAINLESS STEEL WITH INTEGRAL MAIN ISOLATION, CIRCUIT ISOLATION, AND BALANCING VALVES AND VENT/PURGE ASSEMBLY.

EDGE AND UNDER SLAB INSULATION TO BE 2" HIGH DENSITY INSULATION. COORDINATE WITH CONCRETE EXTENTS AND SLAB DETAILS FOR COORDINATION OF ELEMENTS.

SNOW MELT AT CONCRETE SLAB CONSTRUCTION DETAIL

SNOW MELT TUBING AT CONCRETE JOINT

2 SNOW MELT TUBING AND SLAB DETAILS
3/32" = 1'-0"

BRUCE ELDON HART NUMBER E-22817 PROFESSIONAL ENGINEER STATE OF MISSOURI
3-30-2020
Bruce E. Hart - Engineer
License - Missouri #E-22817

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description

BID PACKAGE #3 3.27.2020

MP1.3

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MECHANICAL PIPING PLAN - SITE

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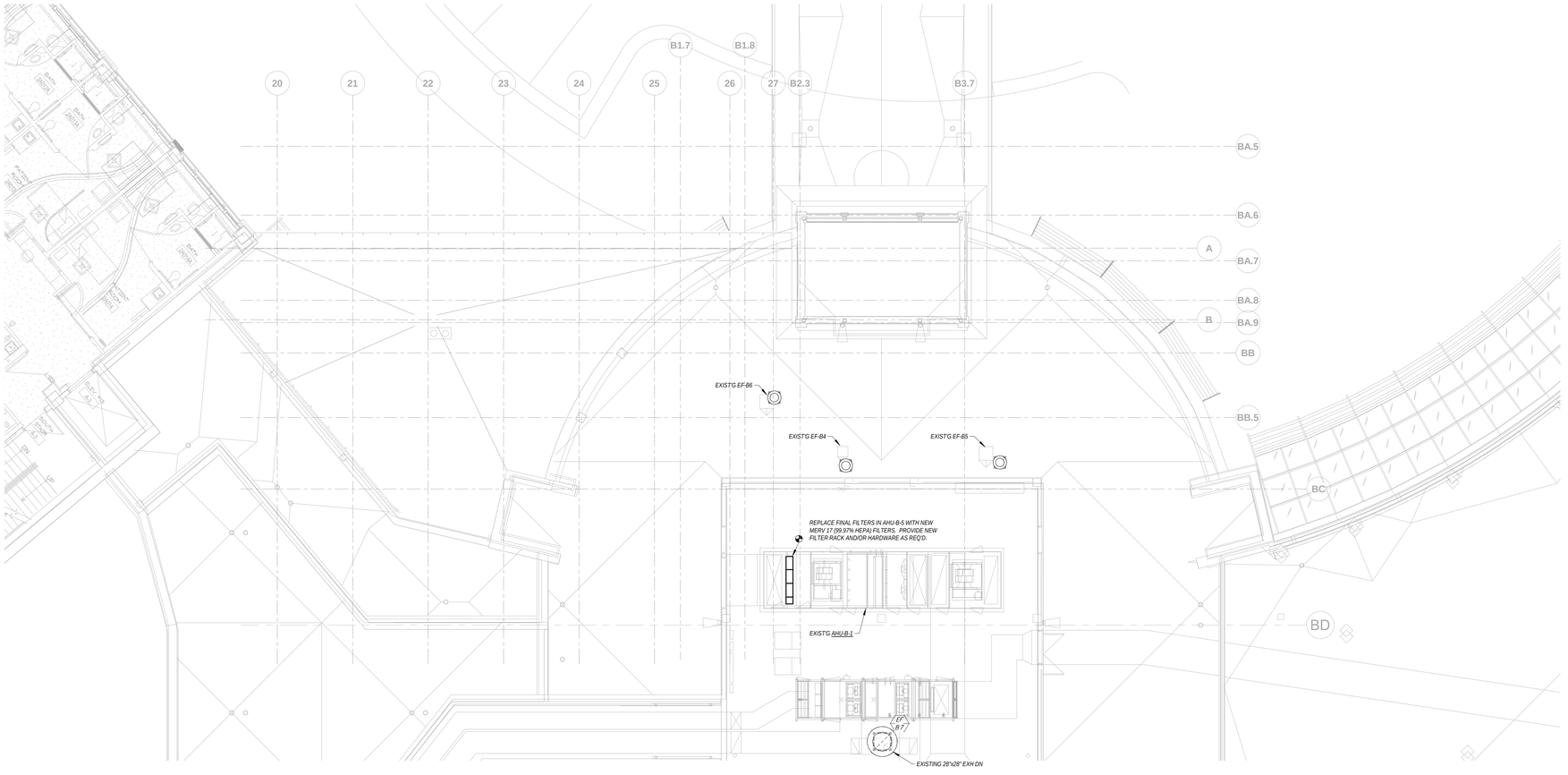

1 MECHANICAL PLAN - ROOF AREA 1
1/8" = 1'-0"

NORTH

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER

3-30-2020

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MECHANICAL PLAN - PENTHOUSE/ROOF AREA 1

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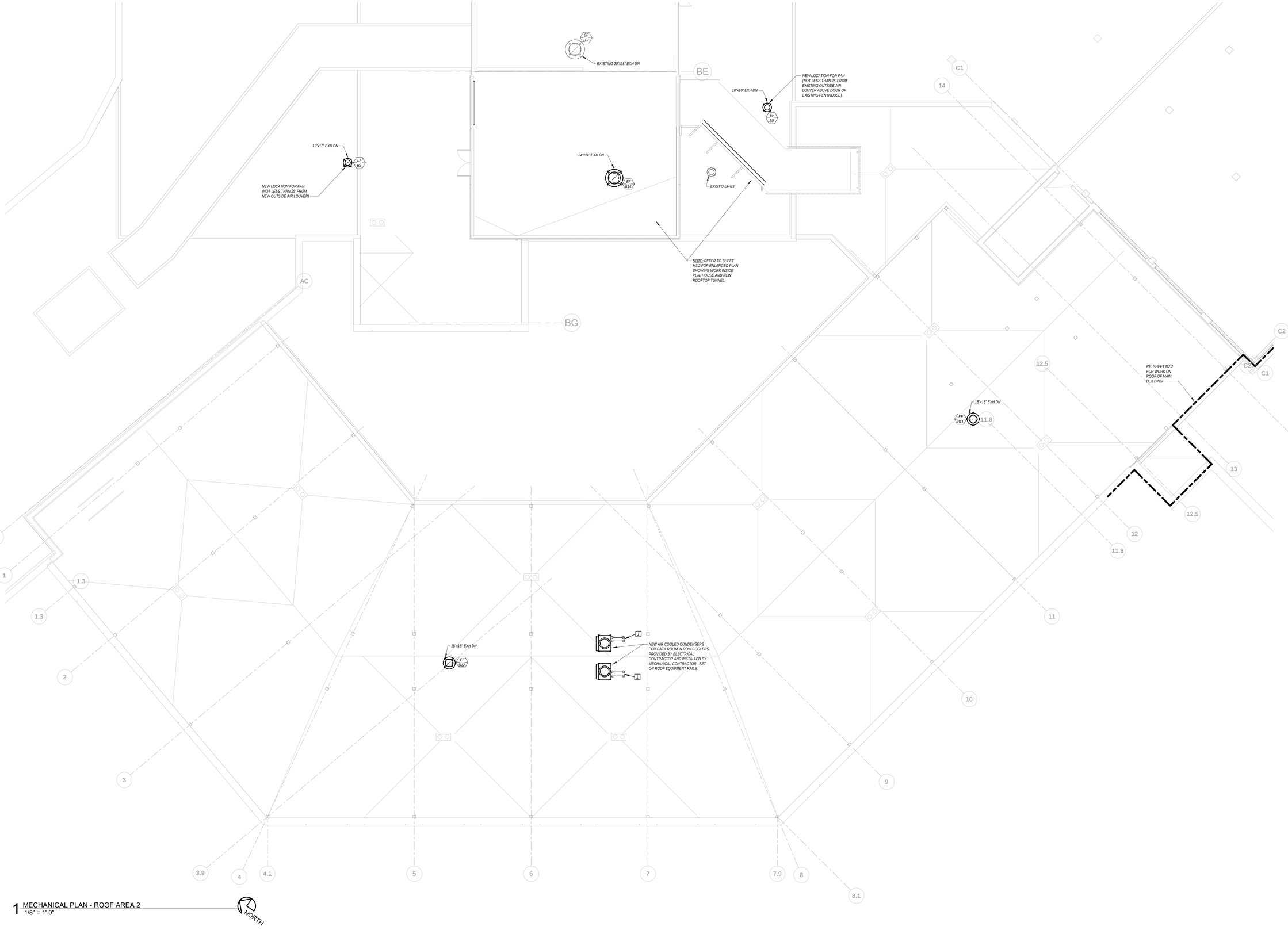
GENERAL NOTES

1 REFER TO GENERAL NOTES ON SHEET PM000.

KEYED NOTES

1 ROUTE 1 1/8" AND 7/8" REFRIGERANT PIPING DOWN THRU ROOF. RE: DETAIL FOR PIPING PENETRATION.



1 MECHANICAL PLAN - ROOF AREA 2
1/8" = 1'-0"

NORTH

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MECHANICAL PLAN - ROOF AREA 2

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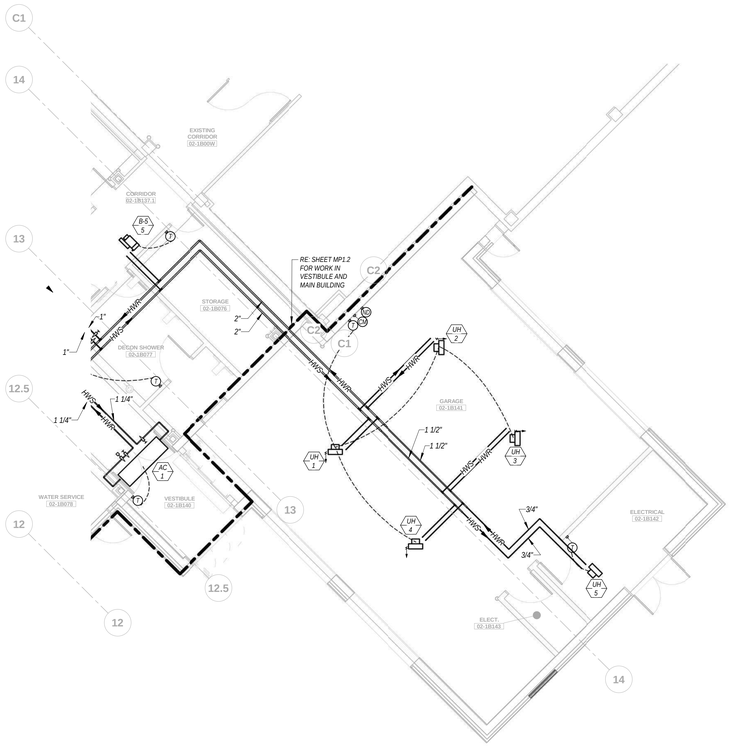
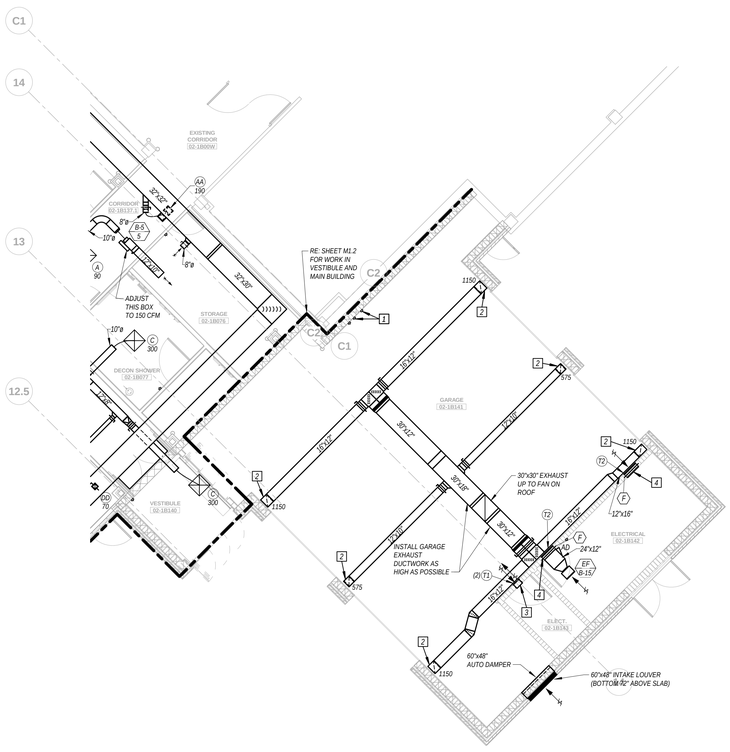
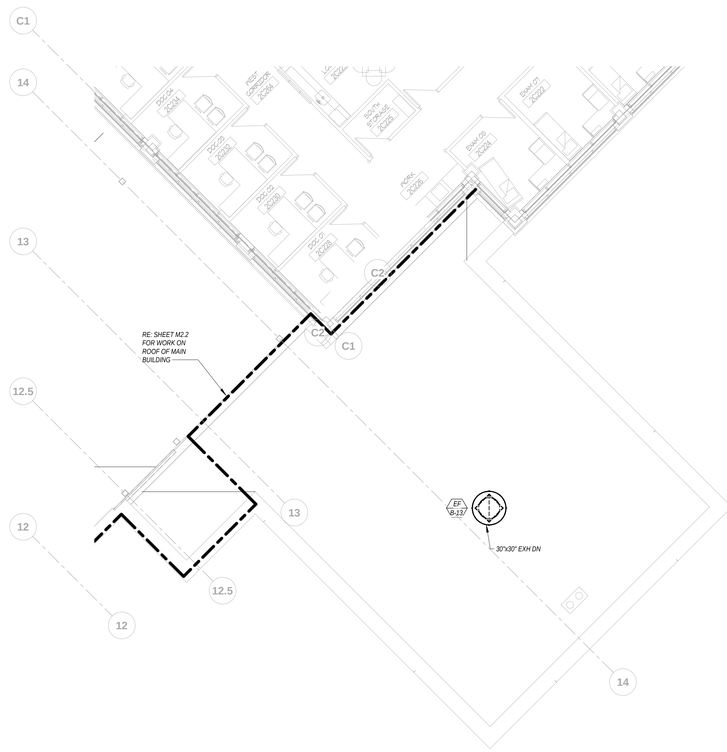


1 AMBULANCE GARAGE FLOOR MECHANICAL PIPING PLAN
1/8" = 1'-0"



2 AMBULANCE GARAGE FLOOR MECHANICAL PLAN
1/8" = 1'-0"



3 AMBULANCE GARAGE ROOF MECHANICAL PLAN
1/8" = 1'-0"

GENERAL NOTES

1 *REFER TO GENERAL NOTES ON SHEET PM000.*

KEYED NOTES 0

1 *PROVIDE AND INSTALL CARBON MONOXIDE AND NITROGEN DIOXIDE ALARMS AND CONNECT TO EXISTING JOHNSON METASYS BUILDING MANAGEMENT SYSTEM.*

2 *ROUTE EXHAUST BRANCH DUCT DOWN TIGHT AGAINST WALL AND TERMINATE 12" ABOVE SLAB WITH INSECT SCREEN. BALANCE TO AIRFLOW (CFM) INDICATED.*

3 *INSTALL TWO (2) TRANSFER GRILLES TO ALLOW AIR EXCHANGE. UPPER GRILLE SHALL BE INSTALLED ON GARAGE SIDE OF WALL WITH TOP OF GRILLE JUST BELOW GARAGE EXHAUST DUCTWORK AND WITH SHEET METAL SLEEVE THRU WALL. LOWER GRILLE SHALL BE INSTALLED IN THE DOOR (ON GARAGE SIDE) WITH BOTTOM OF GRILLE 12" ABOVE SLAB.*

4 *INSTALL TRANSFER GRILLE ON GARAGE SIDE OF WALL WITH TOP OF GRILLE JUST BELOW GARAGE EXHAUST DUCTWORK AND WITH FIRE DAMPER SLEEVE THRU WALL (VERY BOTTOM OF SLEEVE WILL BE ABOVE TOP OF ELECTRICAL EQUIPMENT PRIOR TO INSTALLATION).*

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MECHANICAL PLANS - AMBULANCE GARAGE

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REPLACE FINAL FILTERS IN AHU-B-5 WITH NEW MERV 17 (99.97% HEPA) FILTERS. PROVIDE NEW FILTER RACK AND/OR HARDWARE AS REQ'D.

EXISTG AHU-B-1

EXISTG AHU-B-4

OUTSIDE AIR

120"x72" INTAKE LOUVER

AHU B-5

75"x12" MIN. OA

109"x30" MIN. OA

68"x34" RA

68"x30" SA

34"x34" RA

34"x34" RA

RETURN FAN WALL STACKED ABOVE SUPPLY AIR TUNNEL

PENTHOUSE 02-28100

36"x18" RLF

60"x24" RLF

RE: SHEET M2.2 FOR WORK ON ROOF OUTSIDE OF ROOFTOP TUNNEL

60"x30" SA 68"x34" RA

68"x30" SA 68"x34" RA

68"x30" SA DN

68"x34" RA DN

SNOWMELT SYSTEM SKID-MOUNTED EQUIPMENT PACKAGE

FUTURE AHU

RE: SHEET M2.2 FOR WORK ON ROOF OUTSIDE OF ROOFTOP TUNNEL

NEW LOCATIONS FOR RELIEF AIR LOUVERS

1 MECHANICAL PLAN - PENTHOUSE AND ROOFTOP TUNNEL
1/4" = 1'-0"

NORTH

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Number	Date	Description
1	4.10.20	ADDENDUM #1

BID PACKAGE #3 3.27.2020

M3.2

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MECHANICAL PLAN - PENTHOUSE

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UNIT HEATER SCHEDULE

MARK	MANUFACTURER	MODEL	TYPE	SUPPLY FAN		HEATING COIL					MOTOR DATA			REMARKS
				CFM	E.S.P. (IN. W.G.)	EWT (F°)	LWT (F°)	GPM	CAPACITY (BTU/HR)	MAX WPD (FT.)	HP	VOLTS	PHASE	
1	SIGMA	030H	HORIZONTAL UNIT HEATER	520	0.00	180	160	2.6	25,500	5.00	0.05	115	1	
2	SIGMA	030H	HORIZONTAL UNIT HEATER	520	0.00	180	160	2.6	25,500	5.00	0.05	115	1	
3	SIGMA	030H	HORIZONTAL UNIT HEATER	520	0.00	180	160	2.6	25,500	5.00	0.05	115	1	
4	SIGMA	030H	HORIZONTAL UNIT HEATER	520	0.00	180	160	2.6	25,500	5.00	0.05	115	1	
5	SIGMA	015H	HORIZONTAL UNIT HEATER	420	0.00	180	160	2.3	22,400	5.00	0.05	115	1	

NOTES:
1 PROVIDE WITH UNIT MOUNT TOGGLE DISCONNECT SWITCH.

AIR CURTAIN SCHEDULE

MARK	MANUF.	MODEL NO.	MAX CFM	VOLTAGE (V)	PHASE	ENTERING WATER TEMP.	HEATING CAPACITY (BTUH)	GPM	FANS	
									NO.	HP
1	MARS AIR SYSTEMS	PH1084-2WH-PW	3,160	460		180 °F	96,000	8.0	2	0.5

NOTES:
1 PROVIDE WITH UNIT WITH MCPA-1VH-VR CONTROL PANEL WITH INTEGRAL NON-FUSED DISCONNECT

VAV BOX SCHEDULE AHU-B-1

TYPE	MARK	MANUFACTURER	MODEL	INLET SIZE (IN.)	OUTLET		BOX CFM	HEATING CFM	HEATING COIL				
					WIDTH (IN.)	HEIGHT (IN.)			EAT (°F)	LAT (°F)	BTUH	GPM	MIN. NO. OF ROWS
B-1	1	TITUS	DESV	5"	12"	8"	240	240	55	100	11,800	0.8	2
B-1	2	TITUS	DESV	9"	14"	13"	900	900	55	100	44,100	3	2
B-1	3	TITUS	DESV	14"	20"	18"	2200	2200	55	100	107,900	7.3	2
B-1	4	TITUS	DESV	6"	12"	8"	320	320	55	100	15,700	1.1	2

VAV BOX SCHEDULE AHU-B-5

TYPE	MARK	MANUFACTURER	MODEL	INLET SIZE (IN.)	OUTLET		BOX CFM	HEATING CFM	HEATING COIL				
					WIDTH (IN.)	HEIGHT (IN.)			EAT (°F)	LAT (°F)	BTUH	GPM	MIN. NO. OF ROWS
B-5	1	TITUS	DESV	12"	16"	15"	1290	1290	55	85	42,200	2.8	2
B-5	2	TITUS	DESV	8"	12"	10"	500	500	55	85	16,400	1.1	2
B-5	3	TITUS	DESV	8"	12"	10"	600	600	55	85	19,600	1.3	2
B-5	4	TITUS	DESV	10"	14"	13"	1000	1000	55	85	32,700	2.2	2
B-5	5	TITUS	DESV	8"	12"	10"	540	540	55	85	17,700	1.2	2
B-5	6	TITUS	DESV	8"	12"	10"	670	670	55	100	32,900	2.2	2
B-5	7	TITUS	DESV	5"	12"	8"	150	150	55	85	4,900	0.5	2
B-5	8	TITUS	DESV	6"	12"	8"	380	380	55	85	12,400	0.8	2
B-5	9	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	10	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	11	TITUS	DESV	7"	12"	10"	420	420	55	85	13,700	0.9	2
B-5	12	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	13	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	14	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	15	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	16	TITUS	DESV	7"	12"	10"	390	390	55	100	19,100	1.3	2
B-5	17	TITUS	DESV	7"	12"	10"	460	460	55	100	22,600	1.5	2
B-5	18	TITUS	DESV	7"	12"	10"	430	430	55	100	21,100	1.4	2
B-5	19	TITUS	DESV	7"	12"	10"	490	490	55	85	16,000	1.1	2
B-5	20	TITUS	DESV	7"	12"	10"	430	430	55	100	21,100	1.4	2
B-5	21	TITUS	DESV	7"	12"	10"	430	430	55	100	21,100	1.4	2
B-5	22	TITUS	DESV	5"	12"	8"	110	110	55	85	3,600	0.5	2
B-5	23	TITUS	DESV	7"	12"	10"	430	430	55	100	21,100	1.4	2
B-5	24	TITUS	DESV	7"	12"	10"	430	430	55	100	21,100	1.4	2
B-5	25	TITUS	DESV	7"	12"	10"	430	430	55	100	21,100	1.4	2
B-5	26	TITUS	DESV	7"	12"	10"	450	450	55	100	22,100	1.5	2
B-5	27	TITUS	DESV	6"	12"	8"	240	240	55	100	11,800	0.8	2
B-5	28	TITUS	DESV	7"	12"	10"	250	250	55	85	8,200	0.6	2
B-5	29	TITUS	DESV	6"	12"	8"	370	370	55	100	18,100	1.2	2
B-5	30	TITUS	DESV	6"	12"	8"	370	370	55	100	18,100	1.2	2
B-5	31	TITUS	DESV	6"	12"	8"	370	370	55	100	18,100	1.2	2
B-5	32	TITUS	DESV	8"	12"	10"	690	690	55	85	22,600	1.5	2
B-5	33	TITUS	DESV	5"	12"	8"	130	130	55	85	4,300	0.5	2
B-5	34	TITUS	DESV	6"	12"	8"	340	340	55	100	16,700	1.1	2
B-5	35	TITUS	DESV	6"	12"	8"	320	320	55	100	15,700	1.1	2
B-5	36	TITUS	DESV	6"	12"	8"	320	320	55	100	15,700	1.1	2
B-5	37	TITUS	DESV	6"	12"	8"	300	300	55	85	9,800	0.7	2
B-5	38	TITUS	DESV	5"	12"	8"	230	230	55	85	7,500	0.5	2
B-5	39	TITUS	DESV	8"	12"	10"	540	540	55	85	17,700	1.2	2
B-5	40	TITUS	DESV	6"	12"	8"	320	320	55	100	15,700	1.1	2
B-5	41	TITUS	DESV	6"	12"	8"	320	320	55	100	15,700	1.1	2
B-5	42	TITUS	DESV	6"	12"	8"	330	330	55	85	10,800	0.7	2
B-5	43	TITUS	DESV	6"	12"	8"	320	320	55	100	15,700	1.1	2
B-5	44	TITUS	DESV	10"	14"	13"	1040	0	55	55	0	0.5	2
B-5	45	TITUS	DESV	6"	12"	8"	380	380	55	85	12,400	0.8	2
B-5	46	TITUS	DESV	6"	12"	8"	230	230	55	85	7,500	0.5	2
B-5	48	TITUS	DESV	8"	12"	10"	600	600	55	100	29,400	2	2

SNOW MELT SYSTEM SCHEDULE

AREA SERVED	MANUFACTURER	PUMP CATALOG NUMBER	GPM	PUMP HEAD (FT.)	MOTOR DATA			SNOW MELT DATA				HEATING WATER DATA			NO. CIRCUITS
					MIN HP	RPM	PHASE	AREA	TOTAL BTUH LOAD	SUPPLY TEMP	RETURN TEMP.	EWT	LWT	GPM	
HELIPAD, SIDEWALK, DRIVEWAYS	REHAU	TACO KV2007D-4P-PM	110	50	3	1760	460/3	7000 S.F.	1,300,000	115	90	180	155	107	65

NOTES:
1 PROVIDE 35% POLYPROPELENE GLYCOL MIXTURE.
2 PROVIDE WITH TACO MODEL CX-130-12S EXPANSION TANK.
3 PROVIDE WITH AXIOM INDUSTRIES MODEL DMF300 GLYCOL FEEDER WITH 17-GALLON TANK, PUMP, CONTROLS AND LOW-LEVEL ALARM PANEL WITH OUTPUT FOR REMOTE MONITORING.
4 PROVIDE CUSTOM TIGERFLOW OR EQUIVALENT SKID MOUNTED PACKAGE NOT LIMITED TO SNOW MELT PUMP WITH VFD, TACO BRAZED PLATE HEAT EXCHANGER, TACO MODEL 4903AD-12S 3" AIR SEPARATOR W/AUTO AIR VENT, 2" SUCTION DIFFUSER W/STAINER, BUTTERFLY ISOLATION VALVES, 50# RELIEF VALVE & BALANCING VALVES.
5 PROVIDE SINGLE POINT 460V/3-PHASE POWER CONNECTION FOR SKID.

AIR HANDLING UNIT SCHEDULE

PLAN MARK	AREA SERVED	MANUFACTURER MODEL NO.	TYPE	TOTAL CFM	MIN. O.A. CFM	AIR BLENDER P.D. IN. W.C.	PRE-FILTERS				HOT WATER COIL									CHILLED WATER COIL									SUPPLY AND RETURN AIR FANS	FINAL FILTERS				HUMIDIFIER			ULTRAVIOLET LIGHTS	MOTOR CONTROL DATA			OP. WT. LBS.	REMARKS
							EFF.	AREA SQ. FT.	INITIAL P.D IN. W.C.	FINAL P.D. IN. W.C.	FACE AREA SQ. FT.	ENT. AIR FDB	LVG. AIR FDB	ROWS/ FINS	P.D. IN. W.C.	EWT °F	FLOW GPM	P.D. FT.	FACE AREA SQ. FT.	ENT. AIR FDB/FWB	LVG. AIR FDB/FWB	ROWS/ FINS	P.D. IN. W.C.	EWT °F	FLOW GPM	P.D. FT.		EFF.	AREA SQ. FT.	INITIAL P.D IN. W.C.	FINAL P.D. IN. W.C.	STM. PR. PSI	FLOW LBS/HR	NO. OF MANIFOLDS		STARTER/ DISC. SWITCH	LOCAL CONTROL DEVICES @ STARTER	MISC. CONTROL DEVICES & NOTES		
EXIST'G TO REMAIN	AHU B-1	EMERGENT CARE	TEMTROL (WF) DH41	DRAW-THRU SINGLE DUCT	20,000	6,000	0.25	30%	42	0.30	0.90	-	-	-	-	-	-	-	44	83.2/68.0	51.0/50.3	8/8	1.0	43	141	17	FANS IN AHU-B-1, WERE REPLACED WITH NEW FANS WALLS IN 2017. SUPPLY FAN WALL WAS SIZED FOR 20,000 CFM AT 7" T.S.P. AND HAS CAPACITY FOR ADDITIONAL AIRFLOW.	99.97%	42	1.0	1.5	15	200	3	YES	VFD WITH DISCONNECT SWITCH	HOA SWITCH IN VFD COVER	CONTROLLED BY METASYS	22,000	
NEW	AHU B-5	FLEX CAPACITY EXPANSION	TEMTROL	DRAW-THRU SINGLE DUCT	28,000	5,600	0.25	MERV8	56	0.30	1.0	-	-	-	-	-	-	-	58.3	80.0/67.2	50.0/50.0	8/10	1.0	43	182	14.7	SEE FAN WALL SCHEDULE BELOW.	MERV 14	56	1.0	1.5	15	230	TBD	YES	VFDS WITH DISC. SW (ONE VFD PER MOTOR)	HOA SWITCH IN VFD COVER	CONTROLLED BY BMS	21,700	INSTALL SST DRAIN PAN WITH 2" HIGH SIDES UNDER ENTIRE UNIT WITH TWO 1" DRAIN CONNECTIONS AT ENDS. ROUTE DRAIN PIPES TO FLOOR DRAIN.

NOTES:
1. MAXIMUM LENGTH OF AHU SHALL BE 26'-5". MAXIMUM WIDTH SHALL BE 9'-8". MAXIMUM HEIGHT OF MAIN AIR TUNNEL SHALL BE 8'-4 1/2". MAXIMUM OVERALL HEIGHT (INCLUDING RETURN FAN CABINET) SHALL BE 12'-10 1/2".
2. COMBINATIONS OF 24"x24" AND/OR 24"x12" FILTERS ONLY MAY BE USED.

REPLACE FINAL FILTERS IN EXIST'G AHU-B-1 WITH NEW MERV 17 (99.97% HEPA) FILTERS. PROVIDE NEW FILTER RACK AND/OR HARDWARE AS REQ'D.

DIFFUSER AND GRILLE SCHEDULE

PLAN MARK	SERVICE	MANUFACTURER	MODEL	STYLE	FACE SIZE (IN.)	NECK SIZE (IN.)	BORDER TYPE	FINISH	REMARKS
A	SUPPLY	TITUS	OMNI	SQUARE PLAQUE	24x24	6	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
B	SUPPLY	TITUS	OMNI	SQUARE PLAQUE	24x24	8	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
C	SUPPLY	TITUS	OMNI	SQUARE PLAQUE	24x24	10	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
D	SUPPLY	TITUS	OMNI	SQUARE PLAQUE	24x24	12	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
E	SUPPLY	TITUS	OMNI	SQUARE PLAQUE	24x24	14	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
S1	SUPPLY	TITUS	272RS	DOUBLE DIRECTION SUPPLY GRILLE	18x18	16x16	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
S2	SUPPLY	TITUS	272RS	DOUBLE DIRECTION SUPPLY GRILLE	8x8	6x6	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
S3	SUPPLY	TITUS	272RS	DOUBLE DIRECTION SUPPLY GRILLE	10x10	8x8	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
SL1	SUPPLY	TITUS	FL-30	LINEAR SLOT, HIGH THROW	2.5" SLOT	10	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	PROVIDE WITH 60" INSULATED PLENUM W/ NECK SIZE AS SHOWN. LINEAR SLOT LENGTH WILL BE AS NOTED ON PLAN.
T1	TRANSFER	TITUS	30RL	HEAVY DUTY BAR GRILLE	14x14	12x12	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
T2	TRANSFER	TITUS	30RL	HEAVY DUTY BAR GRILLE	26x14	24x12	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
AA	RETURN	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	24x12	22x10	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
BB	RETURN	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	24x24	22x22	LAY-IN	COLOR AS DIRECTED BY ARCHITECT	
CC	RETURN	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	18x26	16x24	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
DD	RETURN	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	8x8	6x6	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
JJ	EXHAUST	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	10x10	8x8	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
KK	EXHAUST	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	14x14	12x12	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	
LL	EXHAUST	TITUS	23RL	LOUVERED FACE 45 DEGREE DEFLECTION	18x18	16x16	SURFACE MOUNTED	COLOR AS DIRECTED BY ARCHITECT	

EXHAUST AIR FAN SCHEDULE

	PLAN MARK	AREA SERVED	MANUFACTURER MODEL NO.	TYPE	DESIGN CFM	FAN CFM	WHEEL SIZE	S.P. (IN. W.G.)	TIP SPEED FPM	SPEED RPM	BHP	MOTOR		MOTOR CONTROL DATA			REMARKS
												HP	VOLTS/PHASE	STARTER/ DISC. SWITCH	LOCAL CONTROL DEVICES @ STARTER	MISC. CONTROL DEVICES & NOTES	
DEMO	EF B-01	OLD AMBULANCE GARAGE	COOK ACE-B 270C 7B	DOWN BLAST CENTRIFUGAL	4,700	5,200	27"	0.375	3,700	525	0.69	1.0	480/3 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1
EXIST'G, RELOCATE & REBALANCE AS REQ'D	EF B-02	ROOMS B140, B139 B127, B133	COOK ACE-B 100C 2B	DOWN BLAST CENTRIFUGAL	620	700	10"	0.375	4,000	1,540	0.103	0.167	120/ 1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1
EXIST'G TO REMAIN	EF B-03	ROOMS B126, & 128	COOK ACE-B 100C 3B	DOWN BLAST CENTRIFUGAL	450	500	10"	1.0	5,400	2,040	0.19	0.25	120/ 1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1. WHEEL SIZE REDUCED.
EXIST'G, RELOCATE & REBALANCE AS REQ'D	EF B-04	ROOMS B109 & B110	COOK ACE-B 100C 3B	DOWN BLAST CENTRIFUGAL	420	470	10"	1.0	5,300	1,750	0.18	0.25	120/ 1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1. WHEEL SIZE REDUCED.
EXIST'G TO REMAIN	EF B-05	ROOMS B104, B115 & B117	COOK ACE-B 165C 3B	DOWN BLAST CENTRIFUGAL	1,400	1,550	16 1/2"	0.375	3,400	780	0.16	0.25	120/ 1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1
EXIST'G, REBALANCE AS REQ'D	EF B-06	ROOMS B104, B108 & B117	COOK ACE-B 165C 3B	DOWN BLAST CENTRIFUGAL	1,400	1,550	16 1/2"	0.375	3,400	780	0.16	0.25	120/ 1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1
EXIST'G TO REMAIN	EF B-07	PENTHOUSE	COOK ACE-B 300C 8B	DOWN BLAST CENTRIFUGAL	5,600	5,600	30"	0.375	3,500	450	0.72	1.0	480/3 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	SUMMER VENTILATION
EXIST'G, RELOCATE & REBALANCE AS REQ'D	EF B-08	ROOM B129	COOK ACE-B 100C 2B	DOWN BLAST CENTRIFUGAL	320	350	10"	1.0	5,300	2,007	0.13	1/6	120/1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1. WHEEL SIZE REDUCED.
EXIST'G, RELOCATE & REBALANCE AS REQ'D	EF B-09	ROOM B125	COOK ACE-B 100C 2B	DOWN BLAST CENTRIFUGAL	320	350	10"	1.0	5,300	2,007	0.13	1/6	120/1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-1. WHEEL SIZE REDUCED.
EXIST'G TO REMAIN	EF B-10	(PRIOR ADDITION)															
NEW	EF B-11	FCE ADDITON 1ST FLOOR SE	COOK ACE-D 150C17D(VF)	DOWN BLAST CENTRIFUGAL	2010	2450	15"	0.75	5620	1430	0.64	3/4	115/ 1 ∅	NON-FUSED DISC, SW UNDER MOTOR COVER	MOTOR MOUNTED SPEED CONTROL	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-5 (1)
NEW	EF B-12	FCE ADDITON 1ST FLOOR NW	COOK ACE-D 150C17D(VF)	DOWN BLAST CENTRIFUGAL	1420	2000	15"	0.75	4950	1260	0.43	3/4	115/1∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	INTERLOCKED WITH AHU B-5 (1)
NEW	EF B-13	NEW AMBULANCE GARAGE	COOK ACE-B 300C7B	DOWN BLAST CENTRIFUGAL	5750	6350	30"	0.375	3700	470	0.92	1	460/3 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	(1) (2)
NEW	EF B-14	NEW PENTHOUSE ADDITION	COOK ACE-B 270C6B	DOWN BLAST CENTRIFUGAL	4350	4800	27"	0.375	3540	500	0.68	3/4	115/1 ∅	COMB. MAG. STARTER W/ DISC. SWITCH	HOA SWITCH IN STARTER COVER	CONTROLLED BY METASYS	SUMMER VENTILATION (1) (2)
NEW	EF B-15	ELEC. RM 02-1B142	COOK GNVF-700	INLINE WITH EC MOTOR	600	660	7"	0.375	2830	1450	150W	4.4A	115/1 ∅	INETEGRAL RECEPTACLE	MOTOR MOUNTED SPEED CONTROL	CONTROLLED BY METASYS	SUMMER VENTILATION

NOTES:
1. PROVIDE FAN WITH FACTORY MOUNTED DISCONNECT SWITCH, HINGED BASE KIT, 18" TALL ROOF CURB AND GRAVITY BACKDRAFT DAMPER.
2. PROVIDE FAN WITH PREMIUM EFFICENCY MOTOR.

FINTUBE RADIATOR SCHEDULE

MARK	MANUFACTURER	MODEL	ENCLOSURE STYLE	TUBE LENGTH	TUBE		FINS			EAT (°F)	AVG. WATER TEMP. (°F)	BTUH/FT.
					MATERIAL	SIZE	MATERIAL	SIZE	FINS/FT.			
FT-1	SIGMA	24C100	SWE-10TF - FLOOR MOUNT TOP OUTLET FRONT INLET	AS NOTED ON DRWGS	COPPER	1"	ALUMINUM	4.25"	50	65	170	760

NOTES:
1 PROVIDE MOUNTING BRACKETS FOR MOUNTING AND END CAPS AND COVERS FOR CONTINUOUS INSTALLATION BETWEEN WINDOW BAYS.

FAN WALL SCHEDULE

PLAN MARK	FAN TYPE	ARRAY SIZE	TOTAL CFM	CFM PER FAN	TOTAL S.P. IN. W.C.	TOTAL HP	NUMBER OF FANS	MOTOR HP PER FAN	VOLTS/PH
AHU-B-5 SUPPLY AIR	FAN WALL	3 WIDE x 2 HIGH	28,000	4667	8.25	72	6	12	460/3
AHU-B-5 RETURN AIR	FAN WALL	3 WIDE x 1 HIGH	25,200	8400	2.5	25.5	3	8.5	460/3

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STATE OF MISSOURI
3-30-2020
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Saint Luke's East Hospital
Flex Capacity Expansion
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Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description
1	4.10.20	ADDENDUM #1

M4.0

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MECHANICAL SCHEDULES

BID PACKAGE #3 3.27.2020

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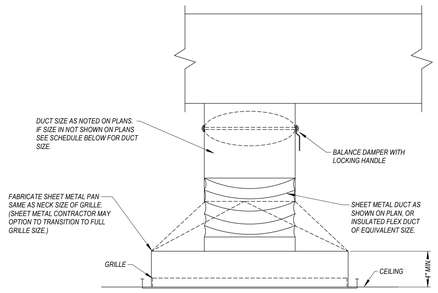
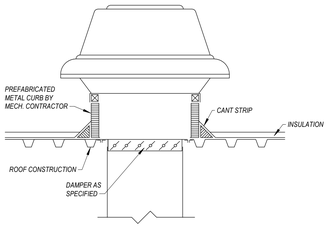
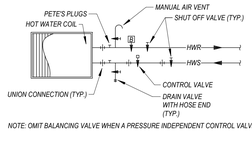


DUCT CONNECTION SIZE FOR RETN./EXH. GRILLE	
CFM RANGE	DUCT SIZE
0-100	6" Ø
100-250	8" Ø
250-400	10"Ø
400-650	12" Ø
650-950	14" Ø

14 TYPICAL CONNECTION FOR RETURN OR EXHAUST

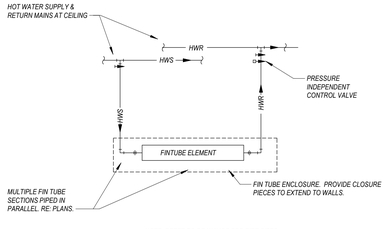


15 EXHAUST FAN DETAIL



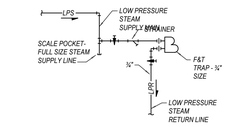
NOTE: OMIT BALANCING VALVE WHEN A PRESSURE INDEPENDENT CONTROL VALVE IS USED.

16 HOT WATER REHEAT COILS CONNECTION DETAIL

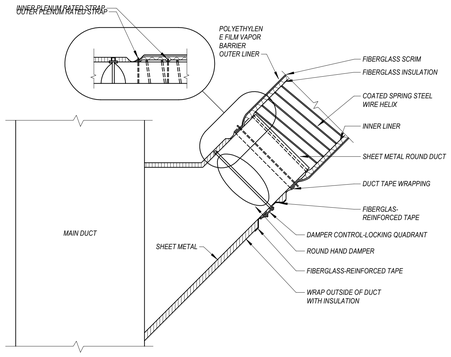


NOTE: REFER TO DRAWINGS FOR PIPE SIZES

17 FINTUBE RADIATOR CONNECTION DETAIL

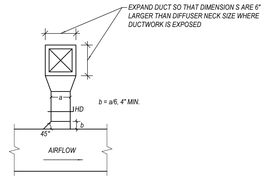


10 LOW PRESSURE END OF MAIN STEAM TRAP DETAIL

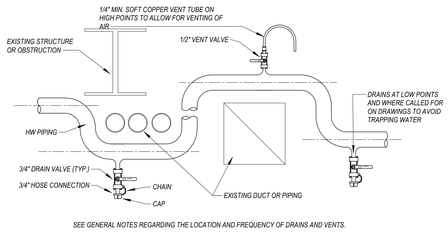


11 FLEXIBLE DUCT CONNECTION DETAIL

12 DETAIL OF PIPING PENETRATING ROOF CONSTRUCTION

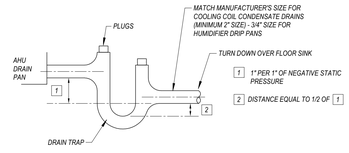


13 TYPICAL DETAIL OF BRANCH TAKE OFF AND RECT. NECK DIFFUSER CONN.



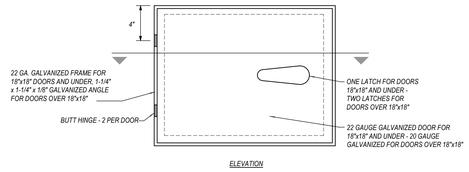
SEE GENERAL NOTES REGARDING THE LOCATION AND FREQUENCY OF DRAINS AND VENTS.

6 HEATING WATER LOOP VENT & DRAIN DETAIL

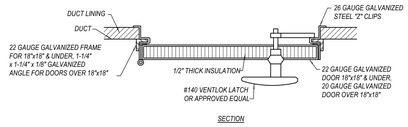


DRAW THRU AHU

1 AHU DRAIN PAN TRAP DETAIL

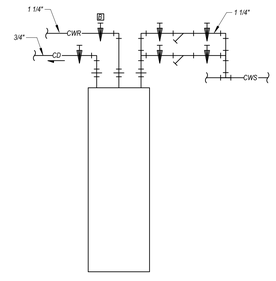


ELEVATION

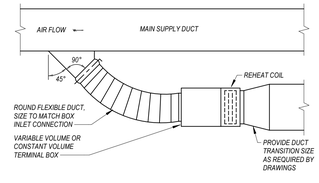


SECTION

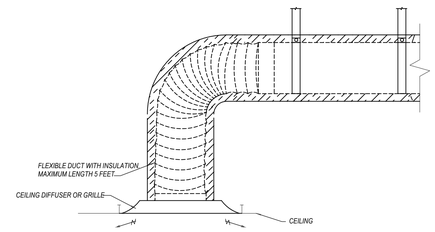
7 TYPICAL DUCT ACCESS DOOR



8 TYPICAL SKETCH OF CONNS. TO IN-ROW COOLERS SERVING I.T. CLOSETS

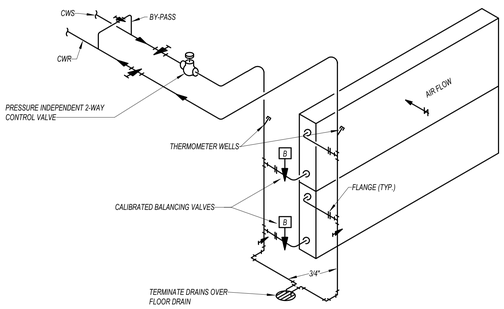


9 SINGLE DUCT TERMINAL BOX CONNECTIONS DETAIL

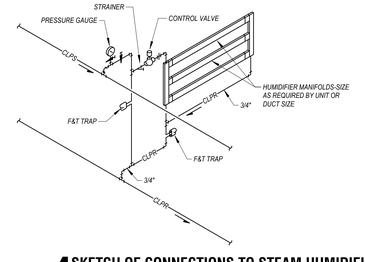


(SEE DRAWINGS FOR EXACT LOCATIONS AND NO. REQUIRED)

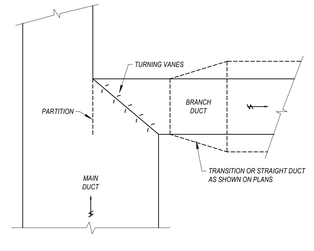
2 DETAIL OF SUPPLY DIFFUSER CONNECTIONS



3 SKETCH OF CONNECTIONS TO 2-HIGH WATER COIL



4 SKETCH OF CONNECTIONS TO STEAM HUMIDIFIER



5 BRANCH DUCT CONNECTION FROM MAIN SUPPLY DUCT DETAIL

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Date	03.30.2020
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Drawn By	MJL
Checked By	BEH

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Number	Date	Description

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MECHANICAL DETAILS

BID PACKAGE #3 3.27.2020

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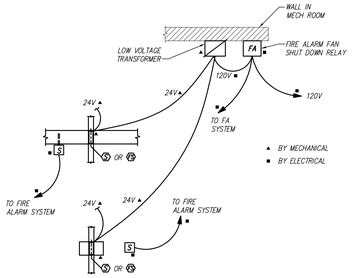
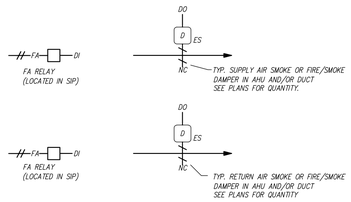


NOTE: DETECTOR CAN BE INSTALLED ON EITHER SIDE OF THE DAMPER, BUT MUST BE LOCATED WITHIN 5' OF THE DAMPER.

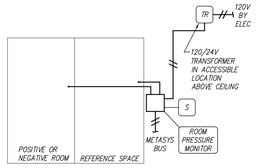
TYPICAL SMOKE OR COMBINATION FIRE/SMOKE DAMPER WIRING DIAGRAM



TYPICAL SMOKE DAMPER CONTROL

NOTT TO SCALE

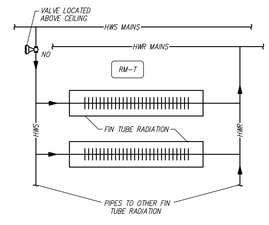
SMOKE DAMPER CONTROL WITH SUPPLY AND RETURN FANS – THE SUPPLY AND RETURN SMOKE DAMPERS SHALL BE INTERLOCKED WITH THEIR RESPECTIVE FAN TO OPEN WHEN THE RESPECTIVE FAN IS ON AND CLOSE WHEN THE FAN IS OFF. END SWITCHES AT SMOKE DAMPERS SHALL PREVENT FAN OPERATION UNTIL DAMPERS ARE PROVEN OPEN. A TIME DELAY RELAY SHALL BE PROVIDED SO THAT THE DAMPERS CLOSE 30 SECONDS (ADJ.) AFTER FANS ARE COMMANDED OFF.



SEQUENCE OF OPERATION

THE ROOM PRESSURE MONITOR SHALL MONITOR AND DISPLAY THE PRESSURE OF THE ROOM, RELATIVE TO THE REFERENCE SPACE (AS NOTED ON THE DRAWINGS). IF THE PRESSURE DIFFERENTIAL IS OUTSIDE THE ACCEPTABLE RANGE, THE MONITOR SHALL SOUND AN AUDIBLE ALARM AND SHALL ALSO SIGNAL AN ALARM ON THE TEMPERATURE CONTROL SYSTEM. FOR A POSITIVE PRESSURE ROOM, THE ACCEPTABLE RANGE IS 0.02" W.G. OR ABOVE. FOR A NEGATIVE PRESSURE ROOM, THE ACCEPTABLE RANGE IS BETWEEN –0.01" W.G. AND –0.03" W.G. THE OPERATOR SHALL HAVE THE ABILITY TO DISPLAY & LOG PRESSURES AND ALARMS VIA THE OPERATION WORKSTATION.

TYPICAL ROOM PRESSURE MONITOR CONTROL DIAGRAM

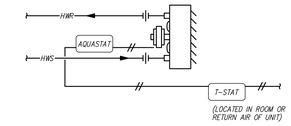


THE ROOM TEMPERATURE SENSOR SHALL MODULATE THE BOX REHEAT COIL. ON CONTINUED SENSING OF LOWER TEMPERATURE, AFTER THE BOX REHEAT COIL VALVE IS FULL OPEN, THE HOT WATER VALVE FOR FIN TUBE RADIATION SHALL BE MODULATED OPEN TO MAINTAIN SET POINT.

TYPICAL FIN TUBE RADIATION DIAGRAM

NOT TO SCALE

(CONTROL IN SEQUENCE WITH SINGLE DUCT BOX SERVING THE AREA.)



THE ELECTRIC RETURN AIR OR ROOM THERMOSTAT SHALL CYCLE THE FAN TO MAINTAIN THE SET POINT. THE FAN WILL NOT BE ENERGIZED IF THERE IS NO HOT WATER AS SENSED BY THE AQUASTAT.

TYPICAL UNIT HEATER DIAGRAM

NOT TO SCALE

GENERAL CONTROL NOTES

1. DIAGRAMS INDICATE GENERAL LOCATIONS OF SENSORS, VALVES, DAMPERS, AND OTHER CONTROL DEVICES FOR INTENT OF SEQUENCE. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS BASED ON FIELD CONDITIONS.
2. CONTROL PIPING, CONTROL WIRING, SWITCHES, RELAYS, ACCESSORIES, ETC. REQUIRED FOR CONTROL SEQUENCE ARE NOT SHOWN.
3. ALL POWER WIRING (120 VOLT OR HIGHER) FOR EQUIPMENT MOTORS, WIRING SPECIFICALLY SHOWN ON THESE DRAWINGS, WIRING SHOWN ON ELECTRICAL PLANS AND FIRE ALARM WIRING TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. ALL REMAINING CONTROL WIRING REQUIRED FOR CONTROL SEQUENCE, TO BE FURNISHED AND INSTALLED BY CONTROL CONTRACTOR.
4. SEE ELECTRICAL DRAWINGS FOR LOCATIONS OF ALL TEMPERATURE CONTROL PANELS, SAFETY INTERLOCK PANELS, AND TRANSFORMER PANELS.

SYMBOLS LIST FOR CONTROL DIAGRAMS

(NOT ALL SYMBOLS MAY BE USED)

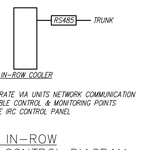
———	PNEUMATIC PIPING
–//–	ELECTRIC WIRING BY ELECTRICAL CONTRACTOR
	PARALLEL BLADE DAMPER
	OPPOSED BLADE DAMPER
	HUMIDIFIER
	AVERAGE SENSING ELEMENT
	AIR FLOW PROBE
	EMERGENCY PUSH BUTTON
	CONTROL VALVE
T	TEMPERATURE INDICATION
F	FLOW CONTROL DEVICE
	ULTRASONIC FLOW METER
DP	DIFFERENTIAL PRESSURE SENSOR
ES	END SWITCH
HL	HIGH LIMIT HUMIDITY CONTROLLER
H	HUMIDITY SENSOR
HE	HEAT EXCHANGER
AF	AIR FLOW SWITCH
SD	SMOKE DETECTOR
SP	STATIC PRESSURE SENSOR
T	TEMPERATURE SENSOR
VFD	VARIABLE FREQUENCY DRIVE
VFD ✳	VARIABLE FREQUENCY DRIVE (USED FOR SOFT–START)
VP	VELOCITY PROBE
POF	PROOF OF FLOW
S/S	START/STOP
CO	CARBON MONOXIDE SENSOR
NO	NITROGEN DI–OXIDE SENSOR
FM	FLOW MEASUREMENT
LF	LOW FIRE SENSOR
L	LEVEL SENSOR
S	STATUS (MONITORING ONLY)
P	PILOT POSITIONER
D	DAMPER OPERATOR
LL	LOW LIMIT
RM–T	ROOM TEMPERATURE SENSOR
RM–H	ROOM HUMIDITY SENSOR
ISO–VLV	ISOLATION VALVE (TWO POSITION)
EP	ELECTRIC TO PNEUMATIC SWITCH
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
VLV	VALVE
TS	TOWER SUPPLY
TR	TOWER RETURN
SE	STACK ECONOMIZER
BF	BOILER FEED
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN

LIGHTING RELAYS

BASED ON OCCUPIED COMMAND FOR SELECTED AREAS AS DETERMINED BY THE OPERATOR FROM THE BMS, THE RESPECTIVE LIGHTING RELAY SHALL BE ENERGIZED TO TURN THE LIGHTS ON. LIGHTS SHALL BE TURNED OFF ON UNOCCUPIED COMMAND

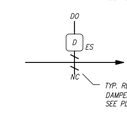
LIGHTING CONTROL DIAGRAM

SEE LIGHTING PLANS FOR RELAY PANEL LOCATIONS AND NUMBER OF RELAYS



BMS SHALL INTEGRATE VIA UNITS NETWORK COMMUNICATION CARD ALL APLICABLE CONTROL & MONITORING POINTS AVAILABLE AT THE IRC CONTROL PANEL

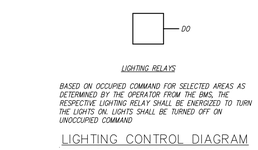
TYPICAL IN–ROW COOLER CONTROL DIAGRAM



SEQUENCE OF OPERATION:

FAN SHALL BE ENABLED AND DISABLED FROM THE BMS. FAN STATUS SHALL BE MONITORED.

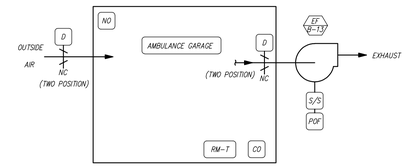
TYPICAL EXHAUST FAN CONTROL DIAGRAM



SEQUENCE OF OPERATION

PUMP VFD SHALL BE INTERFACED WITH BUILDING MANAGEMENT SYSTEM FOR FULL CONTROL, AND SPEED SHALL BE SET MANUALLY TO OPERATE AT CONSTANT SPEED. HEATING HOT WATER CONTROL VALVE SHALL MODULATE AS REQUIRED TO MAINTAIN 115° F (ADJ.) SUPPLY LOOP TEMPERATURE TO SNOWMELT LOOP, AS MEASURED BY TEMPERATURE SENSOR (TS1). TEMPERATURE SENSORS TS2, TS3, & TS4 SHALL SEND TEMPERATURE DATA BACK TO BMS. IF SENSOR TS2 SENSES A RETURN TEMPERATURE BELOW 35° F, THE SNOWMELT PUMP SHALL STOP AND AN ALARM SHALL BE GENERATED ON OPERATOR WORKSTATION. SYSTEM SHALL ALSO MONITOR STATUS OF LOW LEVEL ALARM PROVIDED WITH GLYCOL FEEDER, AND IF ACTIVATED, AN ALARM SHALL BE GENERATED ON OPERATOR WORKSTATION.

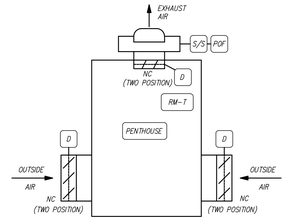
SNOW MELT SYSTEM CONTROL DIAGRAM



THE ROOM TEMPERATURE SENSOR SHALL OPEN (NC) TWO POSITION OUTSIDE AIR DAMPERS, OPEN (NC) TWO POSITION EXHAUST AIR DAMPERS AND ENERGIZE EXHAUST FAN TO MAINTAIN SET POINT. THE CARBON MONOXIDE SENSOR OR NITROGEN DI–OXIDE SENSOR SHALL OPEN (NC) TWO POSITION OUTSIDE AIR DAMPERS, OPEN (NC) TWO POSITION EXHAUST AIR DAMPERS AND ENERGIZE EXHAUST FAN WHENEVER HIGHER CONCENTRATION OF CARBON MONOXIDE OR NITROUS OXIDE ARE SENSED. AN ALARM WILL BE GENERATED AT THE WORKSTATION WHENEVER CARBON MONOXIDE SENSOR OR NITROUS OXIDE SENSOR IS ACTIVATED.

AMBULANCE GARAGE VENTILATION SYSTEM DIAGRAM

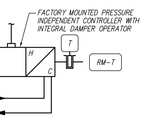
NOT TO SCALE



THE ROOM TEMPERATURE SENSOR SHALL OPEN (NC) TWO POSITION OUTSIDE AIR DAMPERS, OPEN (NC) TWO POSITION EXHAUST AIR DAMPERS AND ENERGIZE EXHAUST FAN TO MAINTAIN SET POINT.

TYPICAL PENTHOUSE VENTILATION SYSTEM DIAGRAM

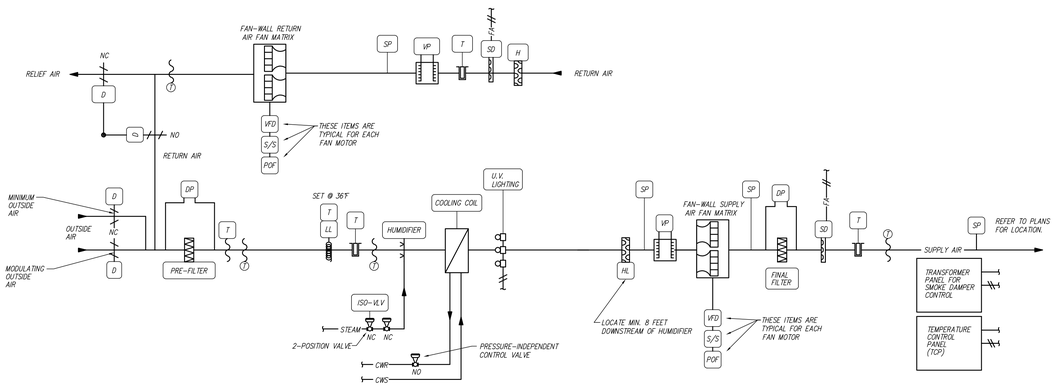
NOT TO SCALE



SEQUENCE OF OPERATION

THE ROOM TEMPERATURE SENSOR SHALL MODULATE THE BOX AIR FLOW TO MAINTAIN SET POINT. ON DECREASING TEMPERATURES WITH MINIMUM AIR FLOW, THE ROOM TEMPERATURE SENSOR SHALL MODULATE REHEAT COIL VALVE TO MAINTAIN SET POINT. ON CONSTANT VOLUME BOXES AIRFLOW SHALL REMAIN FIXED AND REHEAT VALVE SHALL BE MODULATED TO MAINTAIN ROOM TEMPERATURE SETPOINTS. THE OPERATOR WILL HAVE THE ABILITY TO ADJUST, OVERRIDE, AND DISPLAY TEMPERATURES AND SET POINTS FROM THE WORKSTATION.

TYPICAL VARIABLE VOLUME OR CONSTANT VOLUME BOX CONTROL DIAGRAM



SUPPLY FANS START/STOP (STATIC PRESSURE CONTROL) – THE SUPPLY FANS WILL BE STARTED AUTOMATICALLY ACCORDING TO THE SCHEDULE FOR THE OCCUPIED COMMAND SET BY THE OPERATOR. IF THE SUPPLY FANS STATUS DOES NOT MATCH THE COMMANDED VALUE WITHIN 30 SECONDS (ADJ.) AN ALARM WILL BE SENT TO THE OPERATOR WORKSTATION. WHEN THE STATUS IS SENSED, THE UNIT'S OCCUPIED CONTROL SEQUENCE WILL BEGIN AND THE FAN SPEED WILL BE MODULATED TO MAINTAIN THE MINIMUM DUCT STATIC PRESSURE TO A SETPOINT OF 1.5" W.C. (ADJ.). SEVERAL DUCT STATIC PRESSURE SENSORS SHALL BE LOCATED WITHIN THE DUCT, THE LOWEST SIGNAL SHALL CONTROL FAN SPEED.

RETURN FANS START/STOP (VOLUME MATCH) – WHEN THE SUPPLY FANS ARE STARTED A COMMAND TO THE RETURN FANS WILL BE SENT. IF THE RETURN FANS STATUS DOES NOT MATCH THE COMMANDED VALUE WITHIN 30 SECONDS (ADJ.) AN ALARM WILL BE SENT TO THE OPERATOR WORKSTATION. WHEN THE RETURN FANS STATUS IS SENSED THE FAN SPEED WILL BE MODULATED TO MAINTAIN A FIXED AIR FLOW DIFFERENTIAL BETWEEN SUPPLY AIR AND RETURN AIR. VOLUME PROBES AT THE INLET OF SUPPLY AND RETURN FANS SHALL MEASURE AIR FLOWS.

AIR CONTROL CONSTANT – THE SUPPLY TEMPERATURE SETPOINT SHALL BE CONTROLLED TO MAINTAIN THE DISCHARGE TEMP. AT 55°F (ADJ.).

MINIMUM OUTSIDE AIR CONTROL – WHEN THE SUPPLY FAN IS ON, THE MINIMUM (NC) OUTSIDE AIR DAMPER WILL OPEN. WHEN THE SUPPLY FAN IS OFF, THE MINIMUM (NC) OUTSIDE AIR DAMPER WILL BE CLOSED.

ECONOMIZER CONTROL, DRYBULB SWITCHOVER WITH MINIMUM OVERRIDE – WHEN THE OUTSIDE AIR TEMP. IS BELOW 50°F (ADJ.), THE (NC) MODULATING OUTSIDE (NC) RETURN AND (NC) RELIEF AIR DAMPERS SHALL MODULATE IN SEQUENCE TO MAINTAIN A DISCHARGE AIR TEMPERATURE SETPOINT. WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 55°F (ADJ.), THE (NC) MODULATING OUTSIDE AIR DAMPER SHALL CLOSE. IF THE MIXED AIR SENSOR SENSES TEMPERATURE BELOW 43°F, IT WILL OVERRIDE TO CLOSE MODULATING OUTSIDE AIR DAMPER.

HUMIDIFIER CONTROL – WHEN THE OUTSIDE AIR TEMP. IS ABOVE 60°F (ADJUSTABLE), OR WHEN THE SUPPLY FAN IS OFF, THE 2–POSITION ISOLATION VALVE SHALL BE CLOSED. OTHERWISE, THE ISOLATION VALVE SHALL OPEN AND THE CONTROL VALVE SHALL MODULATE TO MAINTAIN THE RETURN AIR HUMIDITY SETPOINT (40% RH, ADJUSTABLE). IF THE DISCHARGE AIR HUMIDITY EXCEEDS 65% RH, THE CONTROL VALVE SHALL BE PROPORTIONALLY OVERRIDDEN CLOSED BY THE HIGH LIMIT CONTROLLER. IF THE DISCHARGE HUMIDITY CONTINUES TO RISE, THE 2–POSITION ISOLATION VALVE SHALL CLOSE AND AN ALARM SHALL BE GENERATED ON THE OPERATOR WORKSTATION.

CHILLED WATER COOLING COIL CONTROL – THE CHILLED WATER COOLING COIL VALVE SHALL MODULATE TO MAINTAIN THE SUPPLY AIR SETPOINT.

FILTER MONITORING – DIFFERENTIAL PRESSURE SWITCHES SHALL MONITOR THE STATUS OF EACH AIR HANDLING UNIT'S FILTERS, AND SIGNAL AN ALARM AT THE OPERATOR WORKSTATION IF THE FILTER IS DIRTY.

SAFETIES – IF LOW LIMIT TEMPERATURE SWITCH SENSES A TEMP. BELOW 36°F (ADJ.) ALONG ANY 16 INCHES SECTION OF ITS ELEMENT. THE SUPPLY FAN AND RETURN FAN WILL BE SHUTDOWN.

IF THE SUPPLY OR RETURN DUCT SMOKE DETECTOR SENSES PARTICLES OF COMBUSTION IN ITS RESPECTIVE DUCT, THE SUPPLY FAN AND RETURN FAN WILL BE SHUTDOWN.

IF THE LOW STATIC PRESSURE SENSOR LOCATED PRIOR TO THE RETURN FAN SENSES A PRESSURE LESS THAN 3" NEGATIVE SUCTION PRESSURE, THE RETURN FAN WILL BE SHUTDOWN.

IF THE HIGH STATIC PRESSURE SENSOR LOCATED AFTER THE SUPPLY FAN SENSES A PRESSURE HIGHER THAN 6" POSITIVE STATIC PRESSURE, THE SUPPLY FAN WILL BE SHUTDOWN.

ALL OF THE SAFETY DEVICES SHALL BE MANUAL RESET TYPE. THE DEVICE, WHEN TRIPPED, MUST BE MANUALLY RESET BEFORE RESTARTING THE AIR HANDLING UNIT.

SMOKE DETECTOR CONTROL – WHEN THE SUPPLY OR RETURN AIR SMOKE DETECTOR SENSES COMBUSTION PRODUCTS, THEY WILL STOP THE SUPPLY AND RETURN FANS, AND GENERATE A GENERAL FIRE ALARM THROUGH THE FIRE ALARM SYSTEM AND GENERATE AN ALARM ON THE METASYS NETWORK.

FIRE MODE CONTROL – WHEN SIGNALED TO FIRE MODE THROUGH THE METASYS NETWORK (CAN BE DONE MANUALLY OR VIA SOFTWARE INTERLOCK) THE SUPPLY FAN WILL STOP, THE RETURN FAN WILL CONTINUE TO OPERATE (THE RETURN FAN WILL OPERATE AT 75% OF FULL SPEED), THE OUTSIDE AND RETURN AIR DAMPERS WILL CLOSE AND THE RELIEF AIR DAMPER WILL OPEN FOR SMOKE REMOVAL. AN ALARM MESSAGE WILL BE GENERATED EVERY 15 MINUTES: "THE UNIT IS IN FIRE MODE."

SMOKE PURGE MODE CONTROL – THE SMOKE PURGE BYPASS SWITCH AT THE SAFETY INTERLOCK PANEL MUST BE MANUALLY ACTIVATED TO BYPASS THE SMOKE DETECTOR CONTROL IF A UNIT DETECTOR IS TRIPPED. WHEN THE OPERATOR ON THE METASYS NETWORK MANUALLY ACTIVATES THE SMOKE PURGE COMMAND OR THE BYPASS SWITCH IS ACTIVATED, THE SUPPLY AND RETURN FANS SHALL RUN, OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL BE OPEN AND THE RETURN AIR DAMPER SHALL BE CLOSED. AN ALARM MESSAGE WILL BE GENERATED EVERY 15 MINUTES: "THE UNIT IS IN SMOKE PURGE MODE."

SHUTDOWN – WHEN THE UNIT IS SHUTDOWN BY EITHER A STOP COMMAND OR A SYSTEM SAFETY, THE UNIT WILL BE SET AS FOLLOWS:

BOTH OUTSIDE AIR DAMPERS WILL BE CLOSED
RETURN AIR DAMPER WILL BE OPEN
RELIEF AIR DAMPER WILL BE CLOSED
COOLING VALVE WILL BE CLOSED (OPENS ON LOSS OF AIRFLOW SAFETY AND LOW TEMPERATURE SAFETY)
HUMIDIFIER WILL BE COMMANDED TO 0% AND OFF
SUPPLY FANS WILL BE OFF
RETURN FANS WILL BE OFF

AIR HANDLING UNIT CONTROL DIAGRAM & SEQUENCE OF OPERATION – AHU–B5

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Licensee's Certificate of Authority Number: 000396

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	MJL
Checked By	BEH

Revision

Number	Date	Description
1	4.10.20	ADDENDUM #1

M6.0

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MECHANICAL CONTROL DIAGRAMS 2

BID PACKAGE #3 3.27.2020

Date: 10.9.19 - 15:51:52

ELECTRICAL SYMBOLS LIST

(ALL MAY NOT APPLY)

POWER SYMBOLS

- HOMERUN TO SOURCE AS NOTED
- CONDUIT IN WALL OR CEILING CONSTRUCTION WITH ONE PHASE WIRE, ONE NEUTRAL WIRE AND ONE GROUND WIRE. CONDUIT IN FLOOR OR BELOW GRADE CONSTRUCTION WITH ONE PHASE WIRE, ONE NEUTRAL WIRE AND ONE GROUND WIRE
- CONDUIT WITH WIRING (TWO PHASE WIRES, NEUTRAL AND GROUND WIRE)
- CONDUIT WITH #10 WIRE THROUGHOUT ENTIRE CIRCUIT
- PARTIAL CIRCUIT, HOMERUN TO SOURCE AS NOTED
- LOW VOLTAGE WIRING
- EXISTING CONDUIT WITH NEW WIRE
- PANELBOARD (DOUBLE LINE INDICATES FRONT OF PANELBOARD)
- DISCONNECTING SWITCH
- COMB. MOTOR STARTER AND DISC. SWITCH
- NF — NF DENOTES NON-FUSED
- VFD — VARIABLE FREQUENCY DRIVE
- VFD — VARIABLE FREQUENCY DRIVE WITH DISCONNECTING MEANS
- TCP — TEMPERATURE CONTROL PANEL
- MOTOR CONNECTION
- MECHANICAL VAV BOX
- MECHANICAL MIXING BOX
- TRANSFORMER
- SINGLE RECEPTACLE
- DUPLEX CONVENIENCE RECEPTACLE
- FOURPLEX CONVENIENCE RECEPTACLE
- HEAVY DUTY OUTLET - WITH NEMA CONFIGURATION — X-YZR
- CONVENIENCE RECEPTACLE - TOP HALF SWITCHED
- GROUND FAULT CIRCUIT INTERRUPTER — GFCI
- ISOLATED GROUND RECEPTACLE — IG
- CONVENIENCE RECEPTACLE - MOUNTED HORIZONTALLY
- NUMBER INDICATES MOUNTING HEIGHT OF DEVICE CENTER LINE ABOVE FLOOR) IF OTHER THAN SPECIFIED HEIGHT — 48
- ELECTRIC WATER COOLER — EWC
- JUNCTION BOX FOR ELECTRIC WATER COOLER — J EWC
- FLOOR OUTLET - DUPLEX RECEPTACLE
- FLOOR OUTLET - FOURPLEX RECEPTACLE
- CEILING DROP
- FLOOR POKE THROUGH - DUPLEX RECEPTACLE — FPT
- JUNCTION BOX — J
- WALL MOUNTED JUNCTION BOX — J
- JUNCTION BOX MOUNTED OVER CEILING — J CC
- FLOOR JUNCTION BOX — J
- ELECTRIC THERMOSTAT - WALL MOUNTED — T
- PUSHBUTTON - WALL MOUNTED — P
- PUSHBUTTON WITH PILOT LIGHT — P
- BELL OR BUZZER — B
- P — SINGLE CIRCUIT PLUGMOLD
- P_2 — TWO CIRCUIT PLUGMOLD
- SR — SURFACE RACEWAY
- BUSHING AT END OF CONDUIT
- CM — INDICATES DEVICE THAT SHALL BE MOUNTED ABOVE OR OTHER THAN SPECIFIED HEIGHT REFER TO ARCHITECTURAL DETAILS AND ELEVATIONS AND COORDINATE EXACT LOCATION OF DEVICE. WHERE DEVICES ARE NOT SHOWN IN ARCHITECTURAL DETAILS, CONTRACTOR SHALL CONFIRM EXACT MOUNTING LOCATION WITH ARCHITECT.
- EM — INDICATES LIGHT OR DEVICE CONNECTED TO EMERGENCY POWER OR FURNISHED WITH A BATTERY PACK CONNECTED TO A NON-SWITCHED HOT WIRE
- EX — EXISTING DEVICE, LIGHT, OR CONDUIT & WIRE TO REMAIN
- N — NEW DEVICE IN EXISTING OUTLET BOX
- NL — INDICATES NIGHT LIGHT FIXTURE CONNECTED TO A NON-SWITCHED HOT WIRE
- R — EXISTING DEVICE, LIGHT, OR CONDUIT & WIRE TO BE REMOVED
- RB — EXISTING DEVICE OR LIGHT TO BE REMOVED WITH BLANK COVER ON OUTLET BOX
- RL — EXISTING DEVICE OR LIGHT RELOCATED
- RN — EXISTING DEVICE OR LIGHT TO BE REMOVED AND OUTLET BOX REUSED FOR NEW DEVICE OR LIGHT
- RT — RAINTIGHT DEVICE - NEMA 3R
- TP — TAMPER-PROOF DEVICE
- WP — WEATHER-PROOF DEVICE
- VUH — VERTICAL UNIT HEATER. REFER TO DETAIL FOR ALL WIRING REQUIRED. REFER TO FLOOR PLANS FOR LOCATIONS.
- LK — DEVICE WITH LOCKABLE COVERPLATE
- USB — RECEPTACLE FURNISHED WITH (1) TYPE-A AND (1) TYPE-C USB OUTLET.

LIGHTING SYMBOLS

- CEILING MOUNTED LIGHT FIXTURE
- CEILING MOUNTED WALL WASH LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- CEILING MOUNTED FLUORESCENT LIGHT FIXTURE
- WALL MOUNTED FLUORESCENT LIGHT FIXTURE
- TRACK LIGHT FIXTURE — X - INDICATES TYPE OF 4AMABLE LIGHT FIXTURE; Y - INDICATES TYPE OF TRACK — X, Y
- POLE MOUNTED LIGHT FIXTURE
- CEILING MOUNTED EXIT LIGHT
- WALL MOUNTED EXIT LIGHT
- CEILING MOUNTED EXIT LIGHT W/DIRECTIONAL ARROW
- WALL MOUNTED EXIT LIGHT W/DIRECTIONAL ARROW
- SHADING DENOTES FACE DIRECTION OF EXIT LIGHT
- BATTERY OPERATED EMERGENCY LIGHT - WALL MOUNTED
- BATTERY OPERATED EMERGENCY LIGHT - CEILING MOUNTED
- SINGLE POLE SWITCH
- S_2 — DOUBLE POLE SWITCH
- S_3 — THREE WAY SWITCH
- S_4 — FOUR WAY SWITCH
- S_K — KEYED SWITCH
- S_M — MOMENTARY SWITCH
- S_P — SWITCH WITH PILOT LIGHT
- S_T — THERMAL MOTOR PROTECTION SWITCH
- S_{LV} — LOW VOLTAGE SWITCH
- D_B — DIMMER - NUMBER (X 100) EQUALS WATTAGE
- D_F — FLUORESCENT DIMMER
- D_{LV} — LOW-VOLTAGE DIMMER
- D_{3W} — 3-WAY DIMMER
- X- S_Y — MULTIPLE SWITCHES — X - INDICATES HOW MANY; Y - INDICATES WHAT TYPE OF SWITCH
- X- D_Y — MULTIPLE DIMMERS — X - INDICATES HOW MANY; Y - INDICATES WHAT TYPE OF DIMMER
- S_{TS} — WATTSTOPPER DIGITAL TIME SWITCH: TS-400
- CS_{XX} — WATTSTOPPER DIRITAL LIGHTING MANAGEMENT CONTROL STATION KEYPAD WITH PROGRAMMABLE FUNCTION BUTTONS. REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS. XX INDICATES TYPE: S1: ONE BUTTON KEYPAD; S2: TWO BUTTON KEYPAD; S3: THREE BUTTON KEYPAD; S4: FOUR BUTTON KEYPAD; S8: EIGHT BUTTON KEYPAD; D1: ONE ROCKER BUTTON KEYPAD
- S_{MS} — WATTSTOPPER DUAL TECHNOLOGY LINE VOLTAGE WALL OCCUPANCY SENSOR: DSW-301
- WATTSTOPPER DUAL TECHNOLOGY CEILING OCCUPANCY SENSOR WITH POWER PACK: DT-300 AND BZ-150
- S_{MS-0} — WATTSTOPPER DUAL TECHNOLOGY 0-10 VOLT DIMMING WALL SWITCH OCCUPANCY SENSOR: DW-311
- PC — WATTSTOPPER DLM SYSTEM PHOTO CELL: LMLS-500
- WATTSTOPPER DLM SYSTEM DUAL TECHNOLOGY CEILING MOTION SENSOR: LMDC-100
- EM — WATTSTOPPER EMERGENCY LIGHTING CONTROL UNIT. UPON LOSS OF NORMAL POWER, EMERGENCY LIGHTING SHALL BE BROUGHT TO FULL BRIGHTNESS REGARDLESS OF SWITCH POSITION. PROVIDE ALL LOW VOLTAGE CABLINGS AS REQUIRED: ELCU-200
- BMS — WATTSTOPPER DIGITAL LIGHTING MANAGEMENT INPUT/OUTPUT INTERFACE FOR BMS CONTROL OF LIGHTING. PROVIDE ALL LOW VOLTAGE CABLING AS REQUIRED: LMIN-104
- RC — WATTSTOPPER DIGITAL LIGHTING MANAGEMENT ROOM CONTROLLER. REFER TO DETAILS FOR SYSTEM INTERCONNECTION REQUIREMENTS. X INDICATES TYPE. A: ONE RELAY SWITCHING CONTROLLER: LMRC-101; B: TWO RELAY SWITCHING CONTROLLER: LMRC-102; C: ONE RELAY SWITCHING OR 0-10V DIMMING CONTROLLER: LMRC-211; D: TWO RELAY SWITCHING OR 0-10V DIMMING CONTROLLER: LMRC-212; E: THREE RELAY SWITCHING OR 0-10V DIMMING CONTROLLER: LMRC-213

HOSPITAL SYMBOLS

- N — NURSE CALL PATIENT STATION - SINGLE
- N — NURSE CALL PATIENT STATION - DOUBLE
- N — NURSE CALL MASTER
- N — NURSE CALL DOME LIGHT
- N — NURSE CALL ZONE LIGHT
- N — NURSE CALL DUTY STATION
- N — NURSE CALL STAFF STATION
- N — NURSE CALL EMERGENCY STATION
- N — NURSE CALL EMERGENCY PULL CORD STATION
- N — NURSE CALL CODE BLUE STATION
- N — NURSE CALL STAFF LOCATOR
- N — NURSE ASSISTANCE CALL STATION
- M — PATIENT MONITORING OUTLET
- G — EQUIPOTENTIAL GROUNDING MODULE
- TA — TIME AND ATTENDANCE STATION
- XVB — X-RAY VIEW BOX

COMMUNICATION SYMBOLS

- TELEPHONE OUTLET WITH 3/4" CONDUIT INTO ACCESSIBLE CEILING SPACE
- D — DATA OUTLET WITH 3/4" CONDUIT INTO ACCESSIBLE CEILING SPACE. "x" IS NUMBER OF CABLES AND JACKS TO PROVIDE, IF OTHER THAN ONE (1).
- TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT INTO ACCESSIBLE CEILING SPACE
- 48 — WALL MOUNTED TELEPHONE OUTLET - NUMBER INDICATES HEIGHT ABOVE FINISHED FLOOR
- FLOOR OUTLET - TELEPHONE
- FLOOR OUTLET - DATA
- FLOOR OUTLET - TELEPHONE/DATA
- FLOOR POKE THROUGH - TELEPHONE
- FLOOR POKE THROUGH - DATA
- FLOOR POKE THROUGH - TELEPHONE/DATA
- CEILING SPEAKER
- WALL MOUNTED SPEAKER
- HORN TYPE SPEAKER
- VOLUME CONTROL
- TV — TELEVISION OUTLET WITH 3/4" CONDUIT INTO ACCESSIBLE CEILING SPACE, AND ONE (1) EACH RG6 COAX AND CATEGORY 6 DATA CABLES/JACKS
- INTERCOM STAFF STATION
- IC — INTERCOM MASTER STATION
- CLOCK OUTLET
- DOUBLE DIAL CLOCK - CEILING MOUNTED
- DOUBLE DIAL CLOCK - WALL MOUNTED
- J — MICROPHONE OUTLET WITH 3/4" CONDUIT INTO ACCESSIBLE CEILING SPACE — MC
- WIRELESS ACCESS POINT (WAP) OUTLET. PROVIDE IN STEEL BACK-BOX MOUNTED ABOVE CEILING, WITH STEEL FACEPLATE, TWO (2) CATEGORY 6A PLENUM CABLES AND JACKS. PROVIDE 10-FOOT SERVICE LOOP IN EACH CABLE ADJACENT TO OUTLET, FOR OUTLET RELOCATION AS NEEDED BASED ON OWNER'S WIRELESS COVERAGE SURVEY.

SECURITY SYMBOLS

- TV — FIXED CCTV CAMERA
- TV — MO — CCTV CAMERA WITH MOTORIZED DOME
- TV — PTTZ — CCTV CAMERA WITH PAN/TILT/ZOOM
- MD — SECURITY MOTION DETECTOR
- PR — PROXIMITY READER (CARD READER)
- IA — INTRUSION ALARM
- ES — ELECTRIC DOOR STRIKE
- DLC — DOOR LOGIC CONTROLLER

FIRE ALARM SYMBOLS

- B — MANUAL PULL STATION
- B — WALL MOUNTED FIRE ALARM SPEAKER
- S — COMBINATION PULLSTATION/HORN
- S — SMOKE DETECTOR
- S — SMOKE DETECTOR - DUCT MOUNTED
- S — E — SMOKE DETECTOR - ELEVATOR LOBBY
- AC — SMOKE DETECTOR WITH AUXILIARY CONTACTS FOR USE IN PATIENT ROOMS AND TREATMENT ROOMS, INCLUDING NURSE CALL RELAY LOCATED AT NURSE CALL LIGHT
- H — HEAT DETECTOR
- DH — DOOR HOLDER - WALL MOUNTED
- DH — F — DOOR HOLDER - FLOOR MOUNTED
- DC — DOOR CLOSER
- FD — FAN SHUT-DOWN RELAY
- FS — SPRINKLER FLOW SWITCH
- TS — SPRINKLER VALVE TAMPER SWITCH
- VA — 75 — VISUAL/AUDIBLE ALARM - NUMBER INDICATES CANDELA OUTPUT, LACK OF NUMBER INDICATES 15/75 CANDELA OUTPUT
- VA — 75 — VISUAL ALARM - NUMBER INDICATES CANDELA OUTPUT, LACK OF NUMBER INDICATES 15/75 CANDELA OUTPUT
- R — AREA OF RESCUE STATION
- R — M — AREA OF RESCUE - MASTER STATION
- PIV — POST INDICATOR VALVE
- FACP — FIRE ALARM CONTROL PANEL (DOUBLE LINE INDICATES FRONT OF PANEL)
- FAA — FIRE ALARM ANNUNCIATOR (DOUBLE LINE INDICATES FRONT OF PANEL)
- AI — ADDRESSABLE INTERFACE MODULE
- AI — R — ADDRESSABLE INTERFACE MODULE WITH RELAY

TEMPERATURE CONTROLS SYMBOLS

- IR — INTER RELAY
- EP — ELECTRIC TO PNEUMATIC SWITCH
- PE — PNEUMATIC TO ELECTRIC SWITCH
- DP — DIFFERENTIAL PRESSURE SWITCH
- T1 — THERMOSTAT - SEE TEMP. CONT. DRAWING
- T2 — THERMOSTAT - SEE TEMP. CONT. DRAWING

ELECTRICAL ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A	AMPERES(AMPS)	LTG	LIGHTING
AFF	ABOVE FINISHED FLOOR		
AFG	ABOVE FINISHED GRADE	MCB	MAIN CIRCUIT BREAKER
AG	ABOVE GRADE	MECH	MECHANICAL
AIC	AMPS INTERRUPTING CURRENT	MERC (MV)	MERCURY VAPOR
APPROX.	APPROXIMATE	MH	METAL HALIDE
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUGS ONLY
		MTD	MOUNTED
BLDG	BUILDING	MTG	MOUNTING
		MV	MEDIUM VOLTAGE
C	CONDUIT		
CB	CIRCUIT BREAKER	N	NEUTRAL
CKT	CIRCUIT	NC	NORMALLY CLOSED
CL	CENTER LINE	NEC	NATIONAL ELECTRICAL CODE
CLG	CEILING	NEMA	NAT'L ELEC MFR ASSOCIATION
CM	COORDINATE MOUNTING	NF	NON-FUSED
CO	CONDUIT ONLY	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	NL	NIGHT LIGHT (NON-SWITCHED LIGHT)
CU	COPPER	NO	NORMALLY OPEN
		NO.	NUMBER
DISC	DISCONNECT	NTS	NOT TO SCALE
DP	DISTRIBUTION PANEL		
DPDT	DOUBLE POLE DOUBLE THROW	PB	PULL BOX
DPST	DOUBLE POLE SINGLE THROW	PF	POWER FACTOR
DWG	DRAWING	PH	PHASE
		PNL	PANEL, PANELBOARD
EM	INDIC. LIGHT OR DEVICE IS ON EMERG. POWER	PRI	PRIMARY
EMT	ELECTRICAL METALLIC TUBING	PVC	POLYVINYL CHLORIDE CONDUIT
EQUIP	EQUIPMENT	PWR	POWER
ETR	EXISTING TO REMAIN		
		RGS	RIGID GALVANIZED STEEL CONDUIT
F	FUSED		
FC	FOOTCANDLE	SEC	SECONDARY
FDR	FEEDER	SPEC	SPECIFICATION
FLA	FULL LOAD AMPS	SPST	SINGLE POLE SINGLE THROW
FLR	FLOOR	STD	STANDARD
FLUOR	FLUORESCENT	SPKR	SPEAKER
FT	FOOT, FEET	SWT	SWITCH
		SWBD	SWITCH BOARD
G,GFI,GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SWGR, SG	SWITCH GEAR
GEC	GROUNDING ELECTRODE CONDUCTOR		
GND	GROUND	TELE	TELEPHONE
		TEMP	TEMPERATURE
HID	HIGH INTENSITY DISCHARGE	T'STAT	THERMOSTAT
HMC	HAZARDOUS MATERIAL CONTRACTOR	TV	TELEVISION
HPS	HIGH PRESSURE SODIUM	TYP	TYPICAL
HZ	HERTZ		
		UG	UNDERGROUND
IG	ISOLATED GROUND	UL	UNDERWRITERS LABORATORY
IN	INCHES	UON	UNLESS OTHERWISE NOTED
INC	INCANDESCENT	UPS	UNINTERRUPTABLE POWER SUPPLY
ISC (AIC)	SHORT CIRCUIT CURRENT		
		V	VOLTS
J, JB	JUNCTION BOX	VA	VOLTAMPERES
		VFD	VARIABLE FREQUENCY DRIVE
KA	KILOAMPS		
KV	KILOVOLTS	W	WATTS (OR WIRE)
KVA	KILOVOLT AMPS	WI	WITH
KW	KILOWATTS	W/O	WITHOUT
KWH	KILOWATT HOURS	WP	WEATHERPROOF
		WT	WATERTIGHT
		XFMR	TRANSFORMER

GENERAL NOTES

(THESE NOTES APPY TO ALL ELECTRICAL SHEETS)

1. A MAXIMUM OF SIX(6) CURRENT - CARRYING WIRES SHALL BE INSTALLED IN ANY ONE(1) CONDUIT. ALL BRANCH CIRCUITS EXCEPT MOTOR CIRCUITS SHALL BE INSTALLED WITH A DEDICATED NEUTRAL WIRE.
2. COORDINATE ALL WORK WITH OTHER TRADES. OFFSET PANELS, LIGHTS, RECEPTACLES AND CONDUIT AS REQUIRED. APPROVAL MUST BE OBTAINED FROM ARCHITECT PRIOR TO OFFSETTING ANY DEVICE OR EQUIPMENT.
3. CONTRACTOR SHALL COORDINATE ALL SHUT DOWNS WITH OWNER. NO SHUT DOWNS SHALL BE PERFORMED WITHOUT RECEIVING PRIOR APPROVAL FROM OWNER.
4. COORDINATE WITH ALL OTHER TRADES AND DISCONNECT OR REMOVE ELECTRICAL WIRING, EQUIPMENT, ETC. TO MAKE SITE SAFE FOR DEMOLITION BY OTHER CONTRACTORS. REFER TO CIVIL PLANS FOR SITE DEMOLITION THAT MAY NOT BE SHOWN ON ELECTRICAL SHEETS.
5. CONTRACTOR SHALL COORDINATE ALL PRIMARY VOLTAGE UTILITY WORK WITH OWNER AND ELECTRICAL UTILITY.
6. NO CONDUIT OR DEVICES IN FINISHED AREAS SHALL BE SURFACE MOUNTED. CONTRACTOR SHALL RECESS OR CONCEAL CONDUITS AND DEVICES AS REQUIRED. WHERE WALL TRENCHING IS REQUIRED, SAME SHALL BE APPROVED BY ARCHITECT.
7. CONTRACTOR SHALL GAIN APPROVAL FROM ARCHITECT PRIOR TO INSTALLING ANY SURFACE MOUNTED DEVICES.
8. WHERE FLOOR TRENCHING IS REQUIRED, THE CONTRACTOR SHALL TRENCH TO NEAREST WALL AS REQUIRED. FLOOR SHALL BE PATCHED TO MATCH ADJACENT SURFACES. COORDINATE WITH ARCHITECT FOR ANY TRENCHING REQUIRED.
9. ALL LOW-VOLTAGE CABLING SHALL BE PLENUM RATED. THIS IS NOT LIMITED TO, BUT SHOULD INCLUDE, ALL FIRE ALARM CABLING.
10. CONTRACTOR SHALL RE-LABEL AND UPDATE SCHEDULES IN ALL EXISTING-TO-REMAIN PANELBOARDS AT THE COMPLETION OF THE PROJECT. PROVIDE NEW TYPED DIRECTORIES FOR EXISTING PANELBOARDS TO REFLECT ALL WORK DONE AS PART OF THIS PROJECT.
11. ALL EXISTING CONDUIT AND WIRING BEING CONNECTED TO NEW WORK THAT IS NOT IN COMPLIANCE WITH THE NEC SHALL BE CORRECTED AS REQUIRED.
12. AFTER COMPLETION OF NEW WORK, REMOVE ALL TEMPORARY EQUIPMENT, CONDUIT, AND WIRING NOT REQUIRED TO REMAIN.
13. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK.
14. ALL EXISTING ITEMS REMOVED DURING DEMOLITION SHALL BE TURNED OVER TO OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOVING THE ITEMS TO A STORAGE LOCATION AS DETERMINED BY THE OWNER. ANY ITEMS THAT ARE NOT TO BE KEPT BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR. COORDINATE AS REQUIRED.
15. ELECTRICAL SERVICE SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
16. ALL CONDUITS SHALL BE HELD AS HIGH AND AS TIGHT AS POSSIBLE TO THE STRUCTURE SUPPORTING THE FLOOR ABOVE AREA WHERE INSTALLATION OCCURS. COORDINATE WITH OTHER TRADES AS REQUIRED.
17. COORDINATE THE ROUTING OF ALL CONDUITS WITH OTHER TRADES. MAKE OFFSETS AS REQUIRED. FURNISH AND INSTALL JUNCTION AND PULL BOXES AS REQUIRED. ROUTING SHOWN ON PLANS IS DIAGRAMMATIC.
18. CONTRACTOR SHALL REROUTE, RELOCATE, OR REMOVE ANY CONDUIT, FIXTURES, OR OTHER EXISTING ELECTRICAL DEVICES AS REQUIRED FOR NEW WORK. MAINTAIN AND RESTORE POWER TO ALL EXISTING DEVICES BEING SERVED IN UNDISTURBED AREAS, AND DEVICES THAT ARE SHOWN AS EXISTING TO REMAIN.
19. ALL CIRCUITS FROM EXISTING-TO-REMAIN PANELBOARDS THAT HAVE THEIR ENTIRE LOAD REMOVED AND ARE NOT REQUIRED TO BE REUSED TO SERVE NEW LOADS, AS SHOWN ON NEW WORK DRAWINGS, SHALL HAVE THEIR CONDUIT AND WIRE REMOVED BACK TO THEIR PANELBOARD AND THEIR ASSOCIATED BREAKER SHALL BE LABELED AS A SPARE. CONDUIT THAT IS LOCATED IN THE FLOOR SLAB OR ABOVE INACCESSIBLE CEILING SHALL BE ABANDONED IN PLACE; HOWEVER, ALL CONDUCTORS SHALL BE REMOVED.
20. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL DEVICES, LIGHT FIXTURES, ELECTRICAL EQUIPMENT SHOWN DARK AND DASHED ON THE DEMOLITION PLANS. DEVICES SHOWN LIGHT ARE EXISTING TO REMAIN.
21. THE CONTRACTOR SHALL VERIFY THE OPERATION OF ALL DEVICES THAT ARE EXISTING TO REMAIN. ALL NON-OPERATIONAL DEVICES SHALL BE CORRECTED OR REPLACED AS REQUIRED. REPLACE ALL DAMAGED AND MISSING COVERPLATES IN AREAS OF NEW WORK AS REQUIRED.
22. COORDINATE REMOVAL OF ALL COMMUNICATION WIRING WITH OWNER. ALL ABANDONED COMMUNICATION CABLING SHALL BE REMOVED AS REQUIRED. COORDINATE REMOVAL WITH OWNER.
23. ALL CONDUIT, WIRING, DEVICES AND EQUIPMENT TO BE REMOVED MAY NOT BE SHOWN. HOWEVER, ALL ITEMS NOT REQUIRED TO REMAIN SHALL BE REMOVED.
24. THE CONTRACTOR SHALL MATCH THE RATINGS AND CHARACTERISTICS OF ALL NEW CIRCUIT BREAKERS BEING FURNISHED TO THOSE OF THE EXISTING BREAKERS IN EXISTING PANELBOARDS.
25. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ELEVATIONS FOR EXACT LOCATION OF LIGHT FIXTURES.
26. ALL RECEPTACLES INSTALLED IN BATHROOMS OR WITHIN SIX FEET OF ANY SINK SHALL BE GFI PROTECTED.
27. ALL LOW-VOLTAGE ELECTRICAL CONNECTIONS ON THE SITE, EXTERIOR OF BUILDING, OR IN TUNNELS SHALL BE MADE USING WATERPROOF CONNECTORS.

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PROFESSIONAL ENGINEER
3-30-2020

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	LLD
Checked By	BEH

Revision

Number	Date	Description

E000

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SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

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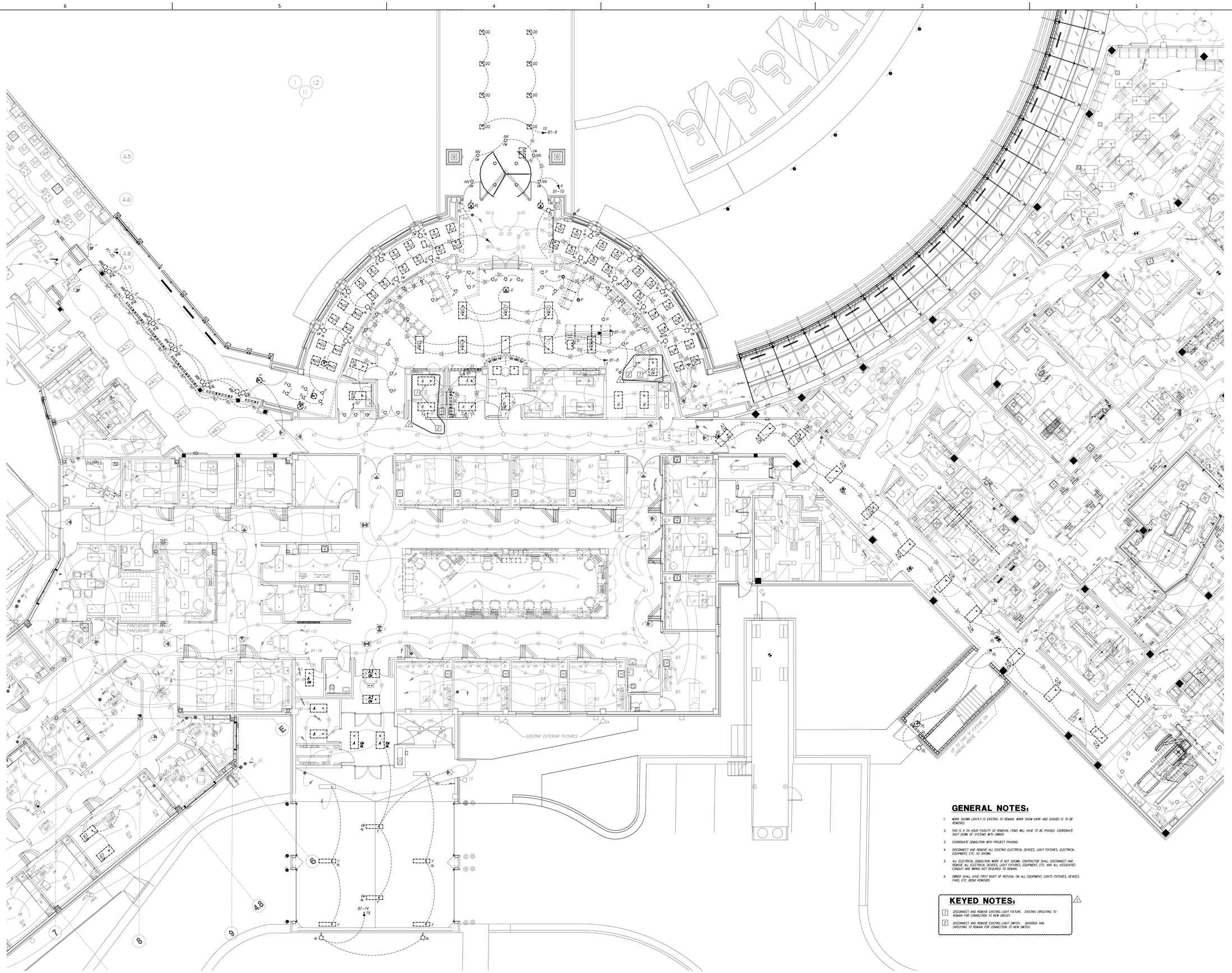

GENERAL NOTES:

1. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. WORK SHOW DARK AND DASHED IS TO BE REMOVED.
2. THIS IS A 24 HOUR FACILITY SO REMOVAL ITEMS WILL HAVE TO BE PHASED. COORDINATE SHUT DOWN OF SYSTEMS WITH OWNER.
3. COORDINATE DEMOLITON WITH PROJECT PHASING.
4. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL DEVICES, LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. AS SHOWN.
5. ALL ELECTRICAL DEMOLITON WORK IS NOT SHOWN. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES, LIGHT FIXTURES, EQUIPMENT, ETC. AND ALL ASSOCIATED CONDUIT AND WIRING NOT REQUIRED TO REMAIN.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT, LIGHTS FIXTURES, DEVICES, FANS, ETC. BEING REMOVED.

KEYED NOTES:

1. 1 DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE. EXISTING CIRCUITING TO REMAIN FOR CONNECTION TO NEW CIRCUIT.
2. 2 DISCONNECT AND REMOVE EXISTING LIGHT SWITCH. BACKBOX AND CIRCUITING TO REMAIN FOR CONNECTION TO NEW SWITCH.

PARTIAL FIRST FLOOR LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

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1	04.10.20	ADDENDUM #1

DEL1

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FIRST FLOOR LIGHTING DEMOLITION PLAN 2

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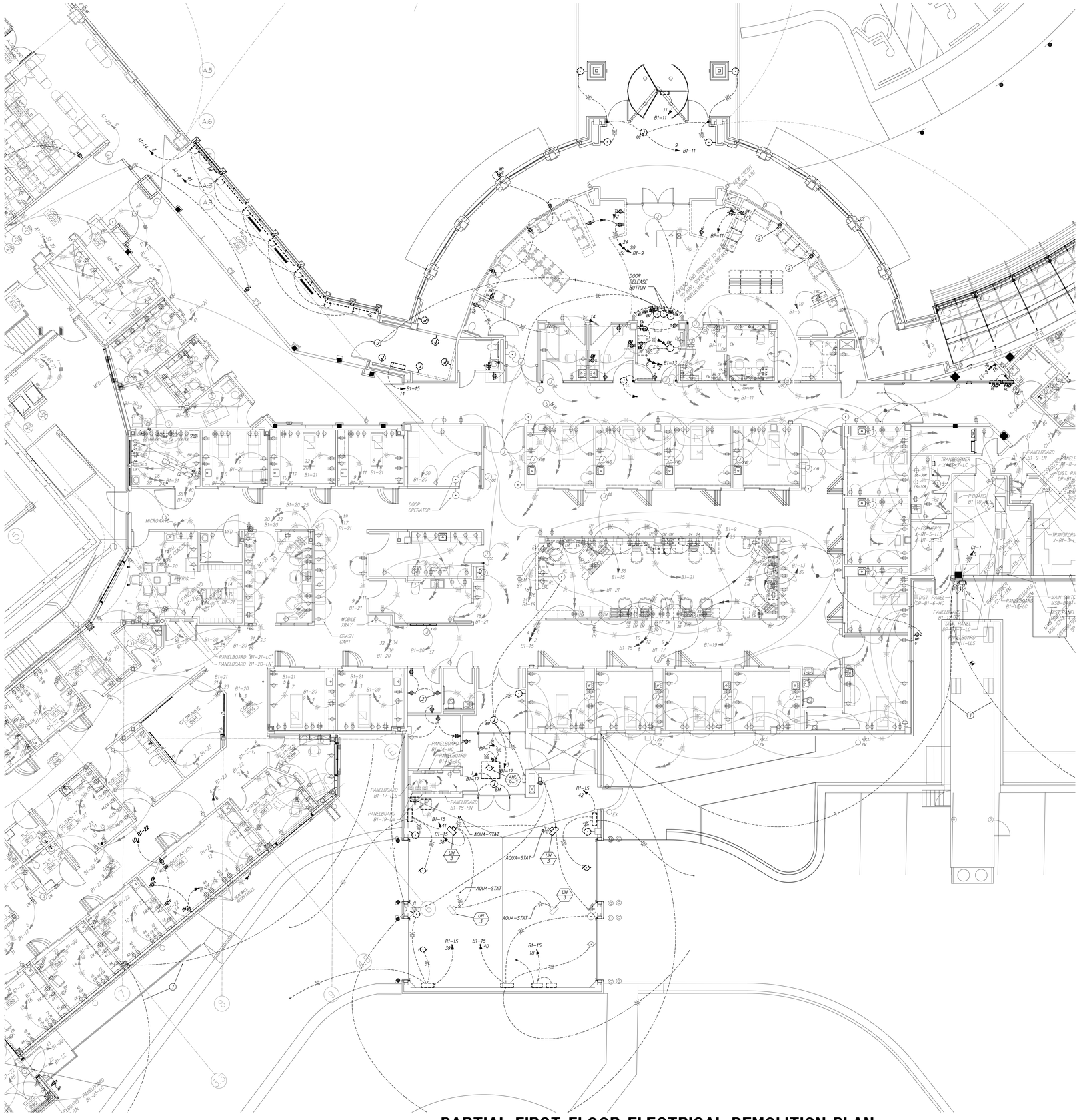

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3. COORDINATE DEMOLITION WITH PROJECT PHASING.
4. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL DEVICES, LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. AS SHOWN.
5. ALL ELECTRICAL DEMOLITION WORK IS NOT SHOWN. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES, LIGHT FIXTURES, EQUIPMENT, ETC. AND ALL ASSOCIATED CONDUIT AND WIRING NOT REQUIRED TO REMAIN.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT, LIGHTS FIXTURES, DEVICES, FANS, ETC. BEING REMOVED.

KEYED NOTES:

1. DISCONNECT AND REMOVE PORTION OF EXISTING GROUND LOOP WHICH IS AREA OF NEW CONSTRUCTION. REFER TO SHEET E2.0 FOR NEW GROUND LOOP EXTENSION. (TYPICAL)
2. DISCONNECT AND REMOVE EXISTING DEVICE. BACKBOX AND CIRCUITING TO REMAIN FOR CONNECTION TO NEW DEVICE.

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PARTIAL FIRST FLOOR ELECTRICAL DEMOLITION PLAN 2

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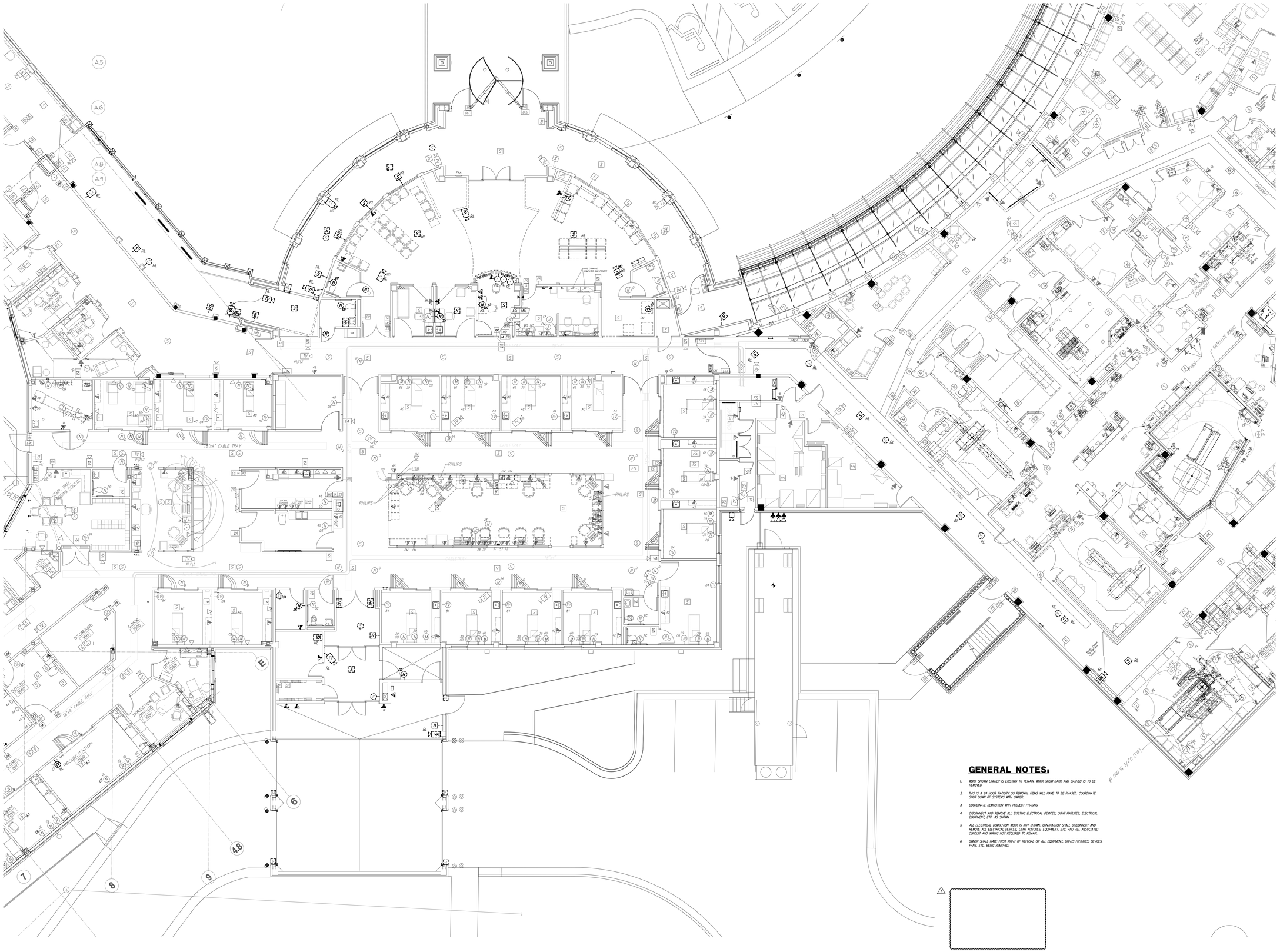

GENERAL NOTES:

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3. COORDINATE DEMOLITION WITH PROJECT PHASING.
4. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL DEVICES, LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. AS SHOWN.
5. ALL ELECTRICAL DEMOLITION WORK IS NOT SHOWN. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES, LIGHT FIXTURES, EQUIPMENT, ETC. AND ALL ASSOCIATED CONDUIT AND WIRING NOT REQUIRED TO REMAIN.
6. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT, LIGHTS FIXTURES, DEVICES, FANS, ETC. BEING REMOVED.

PARTIAL FIRST FLOOR COMMUNICATIONS DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

NORTH

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1	04.10.20	ADDENDUM #1

DEC1

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FIRST FLOOR COMMUNICATIONS DEMOLITION PLAN

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ELECTRICAL LIGHTING GENERAL NOTES

1 REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.

KEYED NOTES

1 FURNISH AND INSTALL WATTSTOPPER ELCU-200 LIGHTING CONTROL RELAY, WITH NORMAL AND EMERGENCY LIGHTING CONTROLLED TOGTHER, TO BYPASS ROOM CONTROL AND BRING LIGHTS TO FULL BRIGHTNESS UPON LOSS OF NORMAL POWER. REFER TO DETAIL ON SHEET E5.0 FOR FURTHER INFORMATION.

2 FURNISH AND INSTALL WATTSTOPPER DLM, IMP-101 DIGITAL INPUT/OUTPUT INTERFACE FOR BMS CONTROL OF WAITING AREA LIGHTING.

3 FURNISH AND INSTALL WATTSTOPPER DLM LMRC-211, 0-10 V DIMMING ROOM CONTROLLER. LOW LEVEL LIMIT, OFF POSITION TO BE SET TO MAINTAIN 1 F.C. LIGHT LEVEL THROUGHOUT WAITING AREA. FURNISH AND INSTALL ALL CAT 6 CONTROL WIRING TO DEVICES AS REQUIRED.

4 EXTEND AND CONNECT TO EXISTING SPARE CIRCUIT BREAKER(S) IN PANELBOARD SPECIFIED.

5 FURNISH AND INSTALL WATTSTOPPER DLM LMRC-211, 0-10 V DIMMING ROOM CONTROLLER. FURNISH AND INSTALL ALL CAT 6 CONTROL WIRING TO DEVICES AS REQUIRED.

6 EXTEND AND CONNECT TO EXISTING CORRIDOR EMERGENCY LIGHTING CIRCUIT.

7 EXTEND AND CONNECT TO EXISTING NON-SWITCHED EXIT LIGHT CIRCUIT.

8 FURNISH AND INSTALL WATTSTOPPER DLM LMRC-211, 0-10 V DIMMING ROOM CONTROLLER. LOW LEVEL LIMIT, OFF POSITION TO BE SET TO MAINTAIN 1 F.C. LIGHT LEVEL THROUGHOUT CORRIDOR. FURNISH AND INSTALL ALL CAT 6 CONTROL WIRING TO DEVICES AS REQUIRED.

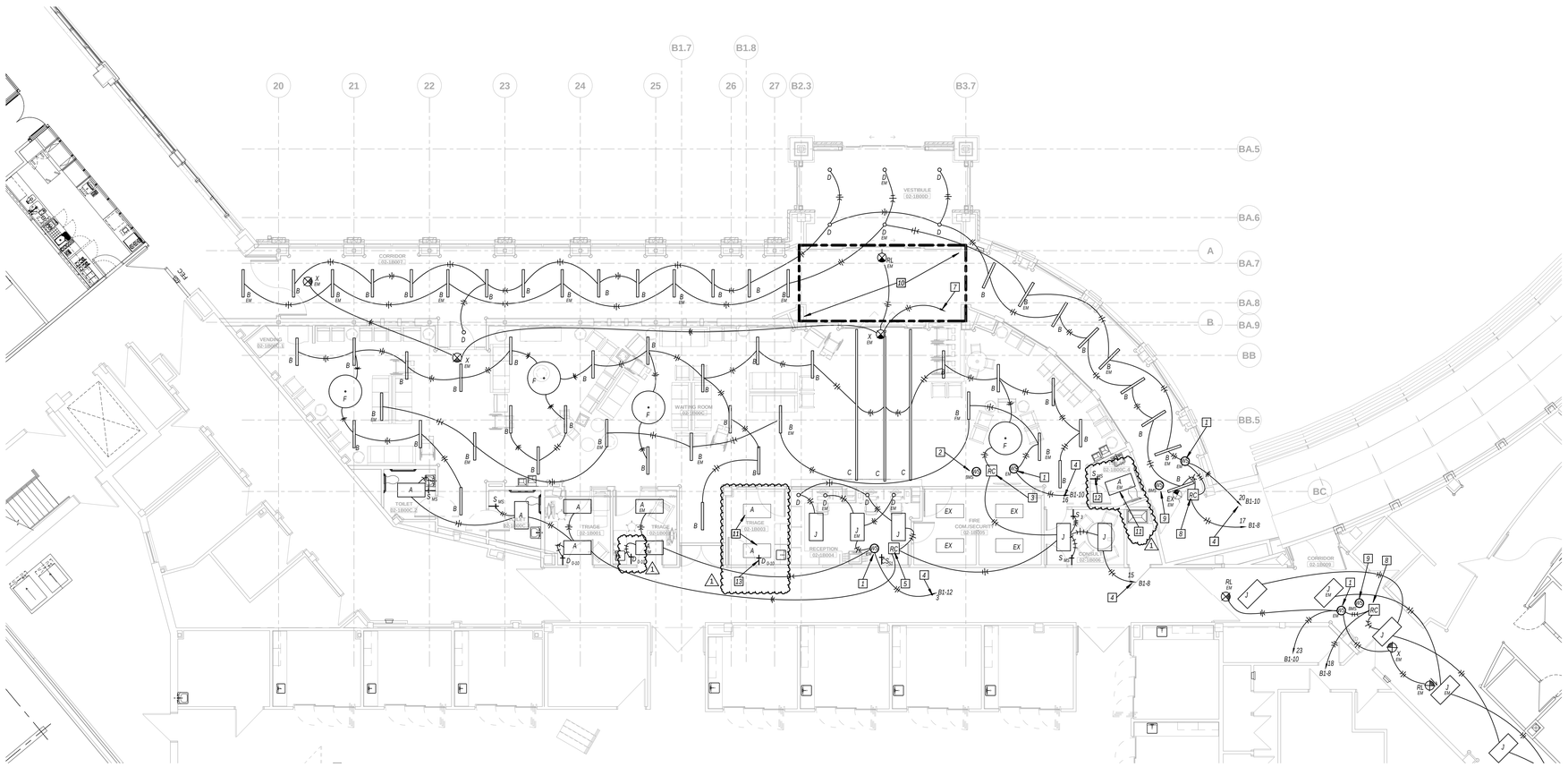
9 FURNISH AND INSTALL WATTSTOPPER DLM, IMP-101 DIGITAL INPUT/OUTPUT INTERFACE FOR BMS CONTROL OF CORRIDOR LIGHTING.

10 EXISTING VESTIBULE LIGHTING TO REMAIN.

11 FURNISH AND INSTALL NEW LIGHTING FIXTURE AND CONNECT TO EXISTING ROOM LIGHTING CIRCUIT.

12 FURNISH AND INSTALL NEW MOTION SENSOR SWITCH IN EXISTING BACKBOX AND CONNECT TO EXISTING CIRCUIT.

13 FURNISH AND INSTALL NEW DIMMING SWITCH IN EXISTING BACKBOX AND CONNECT TO EXISTING CIRCUIT.



1 LIGHTING PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

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Saint Luke's East Hospital
Flex Capacity Expansion
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Date	03.30.2020
Job Number	3-19092
Drawn By	LLD
Checked By	BEH

Revision

Number	Date	Description
1	4.10.20	ADDENDUM 1

EL1.1

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LIGHTING PLAN - FIRST FLOOR AREA 1

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ELECTRICAL LIGHTING GENERAL NOTES

1 REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.

KEYED NOTES

1 CEILING MOUNTED EXAMINATION LIGHT FURNISHED BY OWNER AND INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE FLUSH MOUNTED JUNCTION BOX AND STRUCTURAL COMPONENTS FOR SUPPORT OF FIXTURE AND INSTALL PER MANUFACTURER'S INSTRUCTIONS.

2 FURNISH AND INSTALL WATTSTOPPER DLM LMRC-211, 0-10 V DIMMING ROOM CONTROLLER. LOW LEVEL LIMIT, OFF POSITION TO BE SET TO MAINTAIN 1 F.C. LIGHT LEVEL THROUGHOUT CORRIDOR. FURNISH AND INSTALL ALL CAT 6 CONTROL WIRING TO DEVICES AS REQUIRED.

3 FURNISH AND INSTALL WATTSTOPPER ELCU-200 LIGHTING CONTROL RELAY, WITH NORMAL AND EMERGENCY LIGHTING CONTROLLED TOGTHER, TO BYPASS ROOM CONTROL AND BRING LIGHTS TO FULL BRIGHTNESS UPON LOSS OF NORMAL POWER. REFER TO DETAIL ON SHEET E5.0 FOR FURTHER INFORMATION.

4 EXTEND AND CONNECT TO EXISTING CIRCUIT.

5 EXTEND AND CONNECT TO EXISTING CORRIDOR NORMAL LIGHTING CIRCUIT.

6 EXTEND AND CONNECT TO EXISTING CORRIDOR EMERGENCY LIGHTING CIRCUIT.

7 EXTEND AND CONNECT TO EXISTING SPARE CIRCUIT BREAKER(S) IN PANELBOARD SPECIFIED.

8 EXTEND AND CONNECT TO RECEPTACLE CIRCUIT. SEE SHEET EP1.2 FOR CONTINUATION.

9 FURNISH AND INSTALL WATTSTOPPER DLM, IMP-101 DIGITAL INPUT/OUTPUT INTERFACE FOR BMS CONTROL OF CORRIDOR LIGHTING.

10 REFER TO TYPICAL ADA PATIENT ROOM LIGHTING PLAN ON THIS SHEET FOR SWITCHING AND CIRCUITING OF FIXTURES WITHIN THIS ROOM.

11 REFER TO TYPICAL PATIENT ROOM LIGHTING PLAN ON THIS SHEET FOR SWITCHING AND CIRCUITING OF FIXTURES WITHIN THIS ROOM.

12

1 LIGHTING PLAN - FIRST FLOOR AREA 2
1/8" = 1'-0"

NORTH

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Checked By	BEH

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EL1.2

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LIGHTING PLAN - FIRST FLOOR AREA 2

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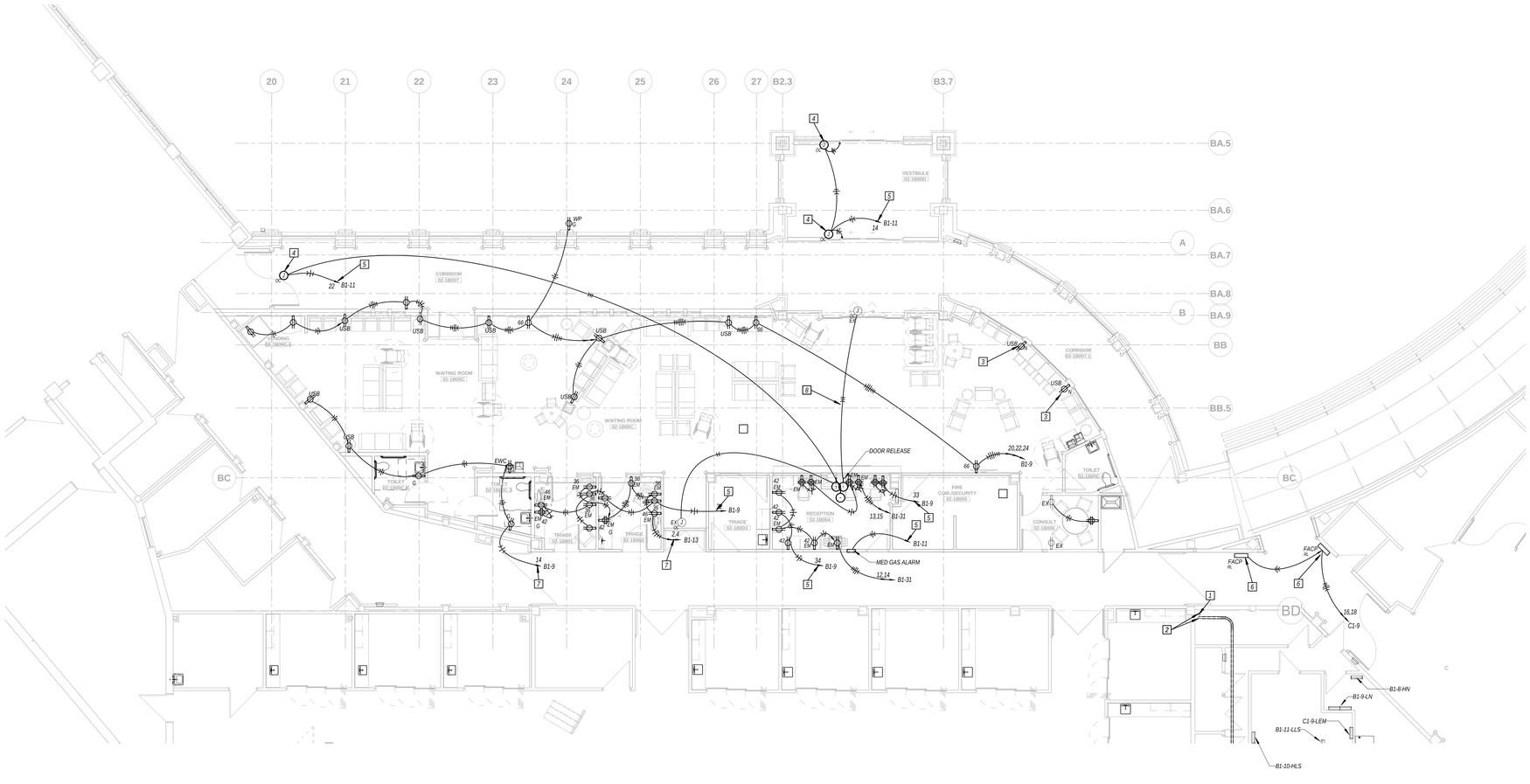
ELECTRICAL POWER GENERAL NOTES

1 *REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.*

KEYED NOTES

1 *EXTEND EMERGENCY FEEDER DOWN IN TUNNEL AND EXTEND TO EMERGENCY DISTRIBUTION BOARD IN ENERGY CENTER. REFER TO SHEET E6.0 FOR FURTHER INFORMATION.*
2 *CONDUIT UP TO ROOF. SEE SHEET E2.2 FOR ADDITIONAL INFORMATION.*
3
4 *EXTEND AND CONNECT TO AUTOMATIC DOOR OPERATOR. MAKE ALL CONNECTIONS AS REQUIRED BY DOOR MANUFACTURER.*
5 *EXTEND AND CONNECT TO EXISTING SPARE CIRCUIT BREAKER(S) IN PANELBOARD SPECIFIED.*
6 *RECONNECT RELOCATED FIRE ALARM PANEL TO EXISTING CIRCUITING.*
7 *EXTEND AND CONNECT TO EXISTING CIRCUIT BREAKER(S) MADE SPARE DURING DEMOLITION PORTION OF PROJECT.*
8 *EXTEND AND CONNECT TO DOOR OPERATOR FOR DOOR RELEASE.*



1 ELECTRICAL PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

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ELECTRICAL PLAN - FIRST FLOOR AREA 1

ELECTRICAL POWER GENERAL NOTES

1 REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.

KEYED NOTES

1 TEMPERATURE CONTROL TRANSFORMER PANEL FURNISHED BY MECHANICAL CONTRACTOR.
2 FIRE ALARM EXTENDER PANEL.
3 AMBULANCE GARAGE DOOR CONTROLLER AND PUSHPAD FURNISHED BY OTHERS.
4 FURNISH AND INSTALL 20A, 1P DISCONNECT SWITCH ABOVE ACCESSIBLE CEILING FOR CONNECTION TO SHADE MOTOR. MAKE ALL CONNECTIONS TO MOTOR AS REQUIRED. (TYPICAL)
5 FURNISH AND INSTALL DEVICE IN EXISTING BACKBOX AND CONNECT TO EXISTING CIRCUIT.
6 EXTEND AND CONNECT TO UNDERCABINET LIGHT FIXTURE. SEE SHEET EL1.2 FOR CONTINUATION.
7 REFER TO TYPICAL ADA PATIENT ROOM ELECTRICAL PLAN ON SHEET E3.2 FOR COMPLETE CIRCUITING INFORMATION.
8 REFER TO TYPICAL PATIENT ROOM ELECTRICAL PLAN ON SHEET E3.2 FOR COMPLETE CIRCUITING INFORMATION.
9
10 EXTEND AND CONNECT TO AUTOMATIC DOOR OPERATOR. MAKE ALL CONNECTIONS AS REQUIRED BY DOOR MANUFACTURER.
11
12 EXTEND AND CONNECT TO EXISTING SPARE CIRCUIT BREAKER(S) IN PANELBOARD SPECIFIED.
13 REFER TO ENLARGED COMMUNICATIONS ROOM PLAN ON THIS SHEET FOR CIRCUITING OF EQUIPMENT.
14 EXTEND AND CONNECT TO EXISTING CIRCUIT BREAKER(S) MADE SPARE DURING DEMOLITION PORTION OF PROJECT.
15 GARAGE DOOR PRESSURE SENSOR PAD FURNISHED BY OTHERS.
16 REFER TO DETAIL SHEET ES.0 FOR ALL REQUIRED CONNECTIONS TO UNIT HEATER. (TYPICAL)
17 FURNISH AND INSTALL 20A, 1P CIRCUIT BREAKER IN EXISTING PANELBOARD TO SERVE NEW LOAD.
18 DROP CONDUIT AND WIRING DOWN IN COLUMN TO DEVICES MOUNTED IN PARTIAL HEIGHT WALL.
19 DROP CONDUIT AND WIRING DOWN IN WALL AND EXTEND BELOW GRADE TO ATS-20.
20 EXTEND AND CONNECT TO EXISTING CIRCUIT.

EXISTING ELECTRICAL EQUIPMENT TO REMAIN

NURSE CALL HEADEND

DOOR ACCESSS PANEL

PNEUMATIC TUBE

MED GAS ALARM

DOOR RELEASE

1 ELECTRICAL PLAN - FIRST FLOOR AREA 2
1/8" = 1'-0"

NORTH

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ELECTRICAL PLAN - FIRST FLOOR AREA 2

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ELECTRICAL COMMUNICATIONS GENERAL NOTES

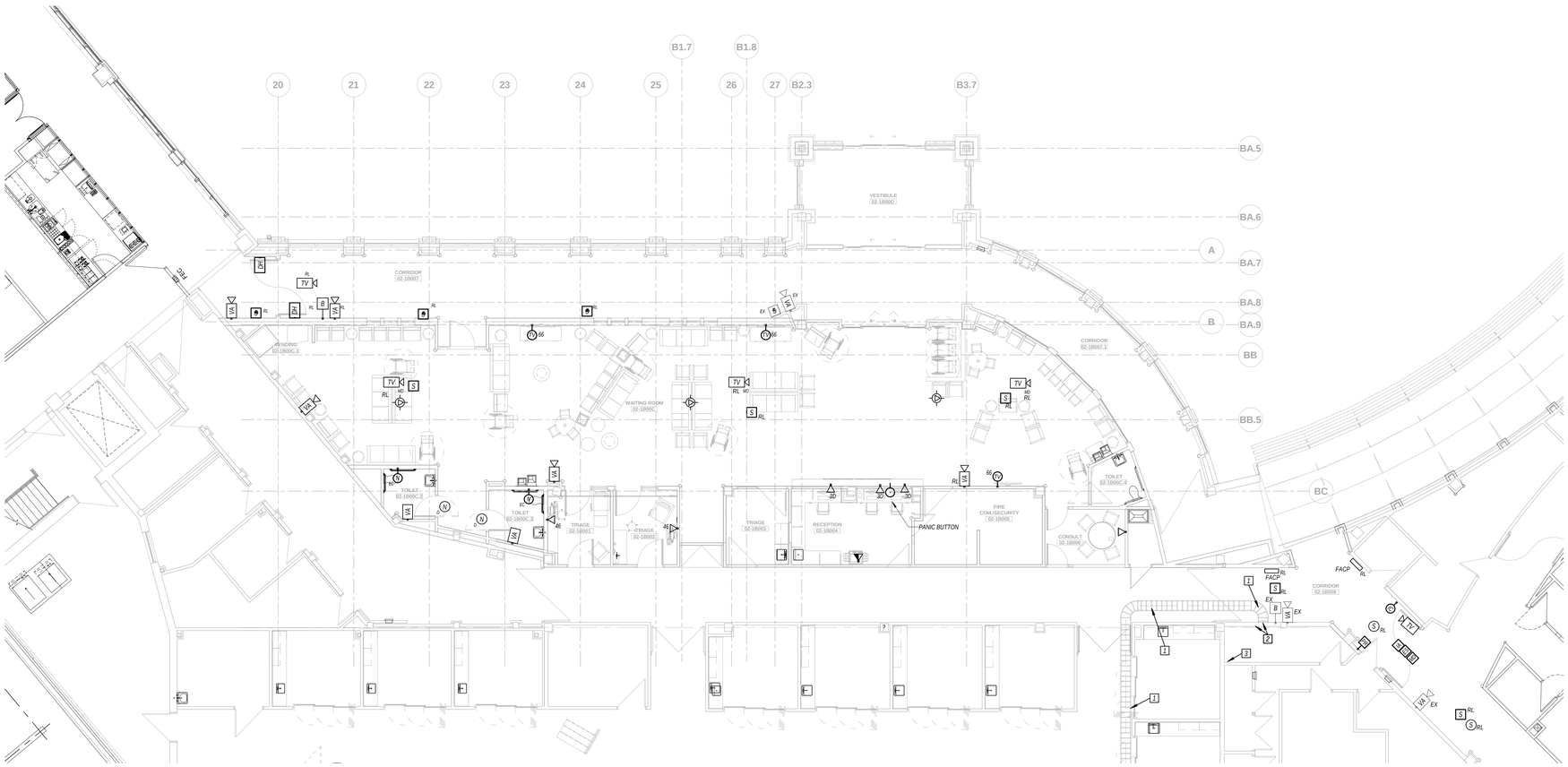
1 *REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.*

KEYED NOTES

1 *EXISTING 18"W x 4"D CABLE TRAY ABOVE CEILING.*

2 *ROUTE COPPER BACKBONE AND PRIMARY FIBER OPTIC BACKBONE CABLE INTO UTILITY TUNNEL, AND NORTHWARD TO CORE I.T. ROOM A032. ROUTE SECONDARY/REDUNDANT FIBER OPTIC BACKBONE CABLE SOUTHWARD THROUGH UTILITY TUNNEL TO CORE I.T. ROOM A032.*

3 *PROVIDE FROM NEW DATA ROOM, TV BACKBONE 1/2" HARDLINE PLENUM CABLE. LEVAE 10-FOOT SERVICE LOOPS AND TERMINATE BOTH ENDS. COORDINATE TERMINATIONS AND LOCATIONS WITH TV SERVICE PROVIDER.*



1 COMMUNICATIONS PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

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COMMUNICATIONS PLAN - FIRST FLOOR AREA 1

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ELECTRICAL COMMUNICATIONS GENERAL NOTES

1 REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.

KEYED NOTES 0

1 LINE WALL WITH 3/4" FIRE RETARDANT PLYWOOD. INSTALL AT 3'-6" AFF TO 7'-6" AFF. PAINT WITH TWO COATS TO MATCH ROOM. LEAVE FIRE RATING SEALS UNPAINTED. ANCHOR TO WALL STRUCTURE.
2 DOOR ACCESS CONTROL CABINET AND POWER SUPPLIES.
3 18"-WIDE LADDER RUNWAY. MOUNT AT 7'-6" AFF AND ANCHOR TO WALL STRUCTURE AT MAXIMUM SPANS OF 8-FOOT. WHERE RUNWAY GOES OVER EQUIPMENT CABINETS, ANCHOR TO EACH CABINET USING MANUFACTURER - RECOMMENDED HARDWARE.
4 NETWORK SWITCH / PATCH PANEL EQUIPMENT CABINET.
5 NETWORK SWITCH / PATCH PANEL OVERFLOW EQUIPMENT CABINET.
6 IN-ROW COOLING UNIT, AIR-COOLED.
7 VOICE PATCH PANEL / UPS EQUIPMENT CABINET.
8 TELECOMMUNICATIONS GROUND BUSBAR (TGB). MOUNT AT 7'-0" AFF.
9 PROVIDE CAMERA WITH TEMPERATURE AND HUMIDITY MONITORING, AT 6'-10" AFF. WITH NETWORK CONNECTION WITHIN ROOM. COORINATE EXACT LOCATION WITH OWNER I.T., REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
10 NURSE CALL CABINET.

KEYED NOTES 0

11 12"-WIDE RUNWAY, MOUNT AT 7'-6" AFF AND ANCHOR TO WALL STRUCTURE AT MAXIMUM SPANS OF 8-FOOT.
12 PROVIDE 18"-WIDE LADDER RUNWAY VERTICALLY ANCHORED TO WALL, FROM 6" AFF UP TO 7'-0" AFF. COORDINATE LOCATION WITH EZ-PATH FLOOR ASSEMBLY, REFER TO SHEET E3.
13 THREE (3) STI SERIES 44 EZ-PATH SLEEVES ABOVE CEILING, BY FIRESTOP CONTRACTOR.
14 PROVIDE 12"W x 4"D WIRE MESH BASKET TYPE CABLE TRAY ABOVE CEILING. NOTE NO. 0858
15 COORDINATE EXACT NUMBER OF TAMPER AND FLOW SWITCHES WITH FIRE PROTECTION DRAWINGS.
17 FURNISH AND INSTALL FIRE ALARM INTERFACE TO COILING DOOR. MAKE ALL CONNECTIONS AS REQUIRED BU DOOR MANUFACTURER.
18 PROVIDE TWO (2) 4" CONDUITS ABOVE CEILING, FOR REDUNDANT BACKBONE CABLE PATHWAYS EN ROUTE FROM BUILDING ADDITION AREA, TO EXISTING CABLE TRAY ROUTING TO UTILITY TUNNEL.
19 EXISTING 18"W x 4"D CABLE TRAY ABOVE CEILING.
20 ONE (1) STI SERIES 44 EZ-PATH SLEEVE ABOVE CEILING, BY FIRESTOP CONTRACTOR.

PANIC BUTTON
RED PHONE
PNEUMATIC TUBE
PHILIPS MONITOR
USB JUMPER
FIRE ALARM EXTENDER

1 COMMUNICATIONS PLAN - FIRST FLOOR AREA 1
1/8" = 1'-0"

NORTH

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1	4.10.20	ADDENDUM 1

EC1.2

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COMMUNICATIONS PLAN - FIRST FLOOR AREA 2

ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

NORTH

GENERAL NOTES:

1. REFER TO SHEET E00 FOR ADDITIONAL GENERAL NOTES THAT APPLY TO THIS SHEET.
2. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. NEW WORK IS SHOWN DARK.
3. ALL CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL FIELD DETERMINE EXACT ROUTING.

KEYED NOTES:

1. EXISTING EVERGY UTILITY SWITCH TO REMAIN.
2. UTILITY TRANSFORMER TO BE DISCONNECTED AND REMOVED. EXISTING UTILITY FEEDER TO BE REMOVED.
3. NEW EVERGY TRANSFORMER TO FEED NEW SWITCHGEAR MSG-B1-24-HN(A) AND TEMPORARY FEEDER TO EXISTING SWITCHBOARD MSB-B1-1-HN. REFER TO CIVIL ENGINEERING PLANS FOR EXACT LOCATION. REFER TO ELECTRICAL RISER DIAGRAM SHEET E6.0 FOR ADDITIONAL INFORMATION.
4. NEW EVERGY TRANSFORMER TO FEED NEW SWITCHGEAR MSG-B1-24-HN(B) AND FEEDER TO EXISTING SWITCHBOARD MSB-C1-1-HN. REFER TO CIVIL ENGINEERING PLANS FOR EXACT LOCATION. REFER TO ELECTRICAL RISER DIAGRAM SHEET E6.0 FOR ADDITIONAL INFORMATION.
5. FURNISH AND INSTALL 2 SETS (4-#250 MCMM IN EA 3"C) TEMPORARY FEEDER BELOW GRADE FROM UTILITY TRANSFORMER TO EXISTING SWITCHBOARD MSB-B1-1-HN. ⚠1
6. FURNISH AND INSTALL FEEDER BELOW GRADE FROM UTILITY TRANSFORMER TO BUILDING 'C' SWITCHBOARD, MSB-C1-1-HN. REFER TO ELECTRICAL RISER SHEET E6.0 FOR ADDITIONAL INFORMATION..
7. FURNISH AND INSTALL FEEDER BELOW GRADE FROM UTILITY TRANSFORMER TO NEW SWITCHGEAR, MSG-B1-24-HN. REFER TO ELECTRICAL RISER SHEET E6.0 FOR ADDITIONAL INFORMATION..
8. FURNISH AND INSTALL 200A, 3P, WEATHERPROOF DISCONNECT SWITCH FUSED AT 150A.
9. FURNISH AND INSTALL RUSSELLSTOLL DF2504FRAB RECEPTACLE FOR MOBILE MRI CONNECTION. REFER TO VENDOR DRAWINGS FOR ADDITIONAL INSTALLATION INFORMATION.
10. 4-#1/0AL, 1-#1/0 GROUND IN 2"C.
11. 8' LONG, ¾" DIAMETER GALVANIZED STEEL GROUNDING ELECTRODE ROD INSTALLED WITHIN GRADE THAT IS EXPOSED TO WEATHER AND LOCATED WITHIN 5' OF SERVICE DISCONNECT SWITCH. EXTEND #1/0 BARE COPPER GRAOUND FROM NEW DRIVEN GROUND ROD TO DISCONNECT SWITCH GROUND STUD AND #6 BARE COPPER GROUND FROM GROUND ROD TO TRAILER GROUND LUG. REFER TO MOBILE MRI VENDOR DRAWINGS FOR ADDITIONAL INFORMATION.
12. FURNISH AND INSTALL TWO (2) TELEPHONE HUBBEL PH-6595, TWO (2) MODEM HUBBEL PH-6595, AND ONE (1) DATA CAT6, LEVITON 41108-RWS WEATHERPROOF DROPS.
13. 8' LONG 3/4" DIAMETER GALVANIZED STEEL GROUNDING ELECTRODE ROD INSTALLED WITHIN GRADE THAT IS EXPOSED TO THE WEATHER. (TYPICAL)
14. FURNISH AND INSTALL #3/0 BARE COPPER CONDUCTOR FOR GROUNDING ELECTRODE GROUND RING AS REQUIRED. MINIMUM 18" BURY. CO-ORDINATE ROUTING WITH FOUNDATION AND OTHER UTILITIES IN THE AREA. (TYPICAL)
15. EXTEND AND CONNECT TO EXISTING GROUND LOOP. REWORK EXISTING GROUND LOOP AS REQUIRED FOR CONSTRUCTION OF NEW BUILDING.

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	LLD
Checked By	BEH

Revision

Number	Date	Description
⚠1	04.10.20	ADDENDUM #1

BID PACKAGE #3 3.27.2020

E2.0

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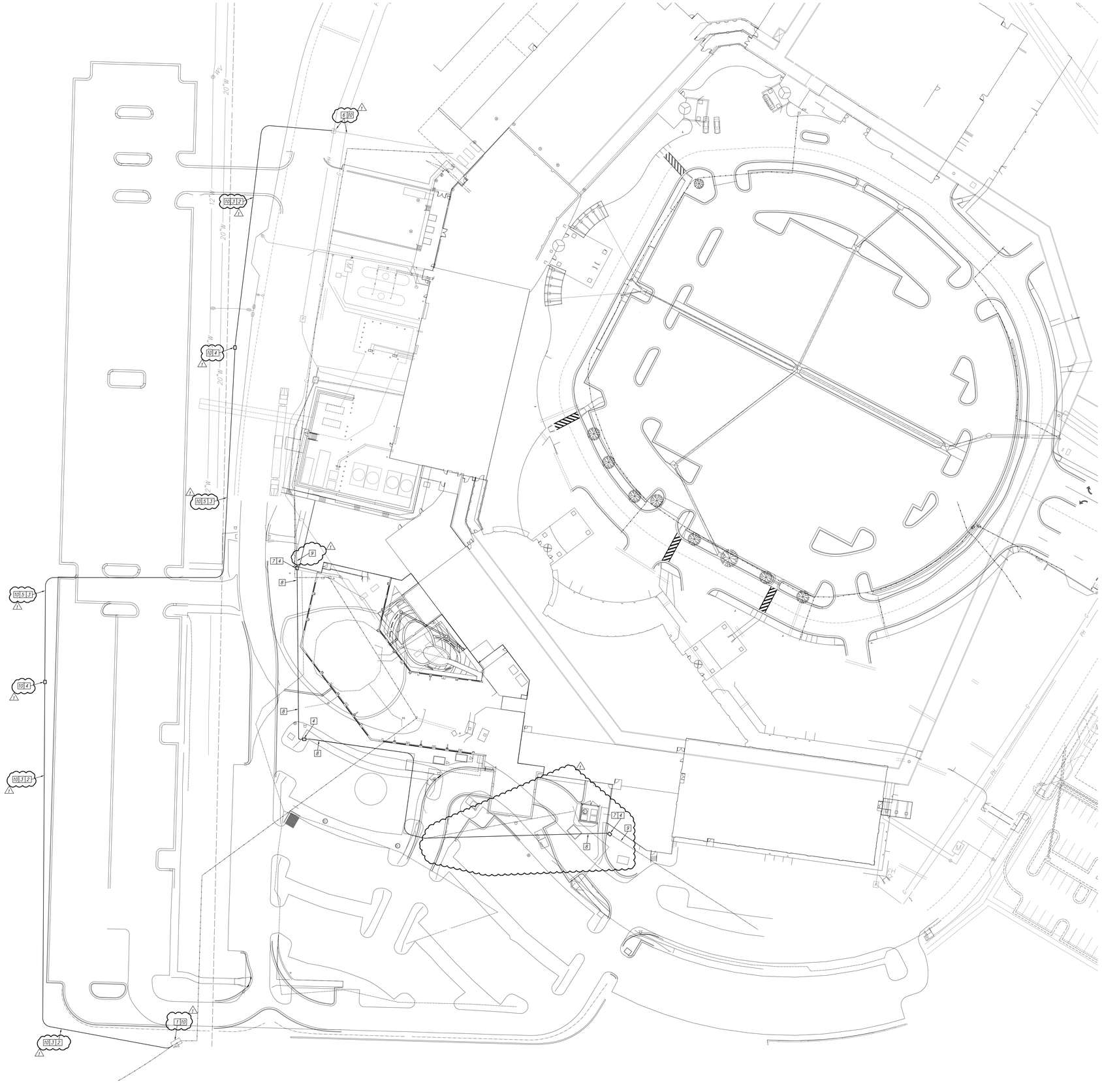
ELECTRICAL SITE PLAN



COMMUNICATIONS SITE PLAN

SCALE: 1" = 40'-0"

GENERAL NOTES:

1. REFER TO SHEET E00 FOR ADDITIONAL GENERAL NOTES THAT APPLY TO THIS SHEET.
2. WORK SHOWN LIGHTLY IS EXISTING TO REMAIN. NEW WORK IS SHOWN DARK.
3. ALL CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL FIELD DETERMINE EXACT ROUTING.
4. PRIOR TO PERFORMING WORK, COORDINATE SCHEDULE WITH OWNER I.T. DEPARTMENT.
5. REFER TO SPECIFICATION SECTIONS 260543 AND 260533 FOR ADDITIONAL REQUIREMENTS.

KEYED NOTES:

1. PULL EXISTING 24-STRAND SINGLE-MODE DARK FIBER OPTIC CABLE BACK FROM BUILDING, COIL MINIMUM 60-FOOT LENGTH SERVICE LOOP IN EXISTING HANDHOLE, AND PROVIDE SPLICE CASE WITH FUSION SPLICES TO NEW 24-STRAND SINGLE-MODE FIBER OPTIC CABLE.
2. PROVIDE 1.25" HDPE CONTINUOUS CONDUIT AT MINIMUM 36" BURY DEPTH, FROM EXISTING HANDHOLE TO NEW HANDHOLE.
3. PROVIDE 24-STRAND SINGLE-MODE INDOOR/OUTDOOR OFNP PLENUM FIBER OPTIC CABLE THROUGH HDPE CONDUIT, AND PROVIDE MINIMUM 60-FOOT LENGTH SERVICE LOOP IN EACH HANDHOLE.
4. PROVIDE IN-GRADE HANDHOLE, QUAZITE #PG2436BA36 WITH ANSI TIER 22 LID, #PG2436HH0012 WITH "COMMUNICATIONS" LABEL.
5. PROVIDE 1.25" HDPE CONTINUOUS CONDUIT AT MINIMUM 36" BURY DEPTH, BETWEEN NEW HANDHOLES.
6. EXTEND NEW 24-STRAND SINGLE-MODE FIBER OPTIC CABLE THROUGH EXISTING HANDHOLE AND CONDUIT, INTO EXISTING CORE I.T. ROOM A032. TERMINATE VIA FUSION SPLICES IN EXISTING RACK. PROVIDE RACK-MOUNT FUSION TERMINATION ENCLOSURE, COORDINATE LOCATION WITH OWNER I.T. DEPARTMENT.
7. INTERCEPT TWO (2) EXISTING EMPTY 4" CONDUITS AT NEW IN-GRADE HANDHOLE.
8. PROVIDE TWO (2) 4" SCHEDULE 40 PVC CONDUITS AT MINIMUM 36" BURY DEPTH, BETWEEN HANDHOLES. PROVIDE 1,250-POUND STRENGTH MULE TAPE THROUGH-OUT CONDUITS.
9. TWO (2) EXISTING EMPTY 4" CONDUITS.
10. THIS PORTION OF SITE DARK FIBER OPTIC PATHWAY AND CABLING SCOPE OF WORK SHALL BE SUB-CONTRACTED TO K & W UNDERGROUND, CONTACT SCOTT PLUMB (913) 782-7387

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Date	03.30.2020
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Drawn By	RED
Checked By	BEH

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1	4.10.20	ADDENDUM 1

E2.1

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COMMUNICATIONS SITE PLAN

BID PACKAGE #3 3.27.2020

2019-150 E2.1.dwg

ELECTRICAL POWER GENERAL NOTES

1 REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.

KEYED NOTES

1 RUN CONDUIT ACROSS ROOF TO TUNNEL ACCESS. EXTEND EMERGENCY FEEDER DOWN IN TUNNEL AND EXTEND TO EMERGENCY DISTRIBUTION BOARD IN ENERGY CENTER. EXTEND NORMAL FEEDER ACROSS FIRST FLOOR TO NEW BUILDING 'B' SWITCHGEAR. REFER TO SHEETS E2.1 AND E6.0 FOR FURTHER INFORMATION.

2 EXTEND CIRCUITING FROM RELOCATED EXHAUST FAN AND CONNECT TO EXISTING STARTER DISCONNECT SWITCH LOCATED IN EXISTING PENTHOUSE.

3 FURNISH AND INSTALL UNISTRUT SUPPORT AS REQUIRED FOR MOUNTING OF EQUIPMENT.

4 EXTEND AND CONNECT TO EXISTING SPARE CIRCUIT BREAKER(S) IN PANELBOARD SPECIFIED.

5 EXTEND AND RECONNECT TO EXISTING EXTERIOR LIGHT CIRCUIT.

6 EXHAUST FAN STARTER DISCONNECT SWITCHES FURNISHED BY MECHANICAL CONTRACTOR.

7 FURNISH AND INSTALL NEW 30A, 1P CIRCUIT BREAKER IN PANEL TO FEED NEW LOAD.

8 EXHAUST FAN LOCATED ON ROOF ABOVE.

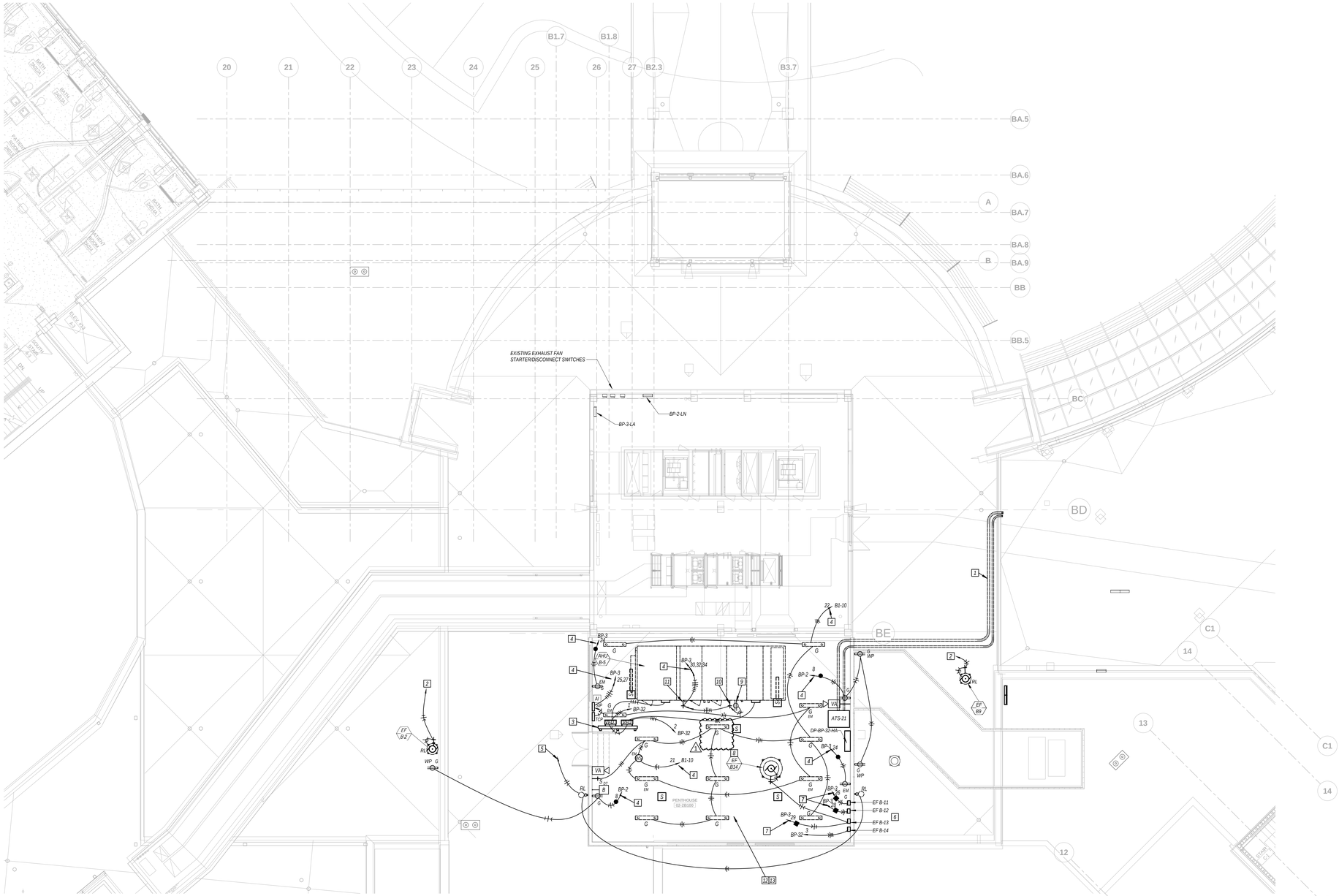
9 RECEPTACLE FACTORY MOUNTED ON AHU.

10 EXTEND AND CONNECT TO LIGHT FIXTURES MOUNTED WITHIN AIR HANDLING UNIT. MAKE ALL CONNECTIONS AS REQUIRED BY AHU MANUFACTURER.

11 EXTEND AND CONNECT TO UV LIGHT FIXTURES WITH AHU. MAKE ALL CONNECTIONS AS REQUIRED BY AHU MANUFACTURER.

12 REWORK EXISTING LIGHTNING PROTECTION SYSTEM AND EXTEND AS REQUIRED.

13 FURNISH AND INSTALL LIGHTNING PROTECTION SYSTEM FOR ALL NEW STRUCTURES TO THE EXTEND REQUIRED.



1 ELECTRICAL PLAN - PENTHOUSE/ROOF AREA 1
1/8" = 1'-0"

NORTH

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BID PACKAGE #3 3.27.2020

E2.2

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ELECTRICAL PLAN - PENTHOUSE/ROOF AREA 1

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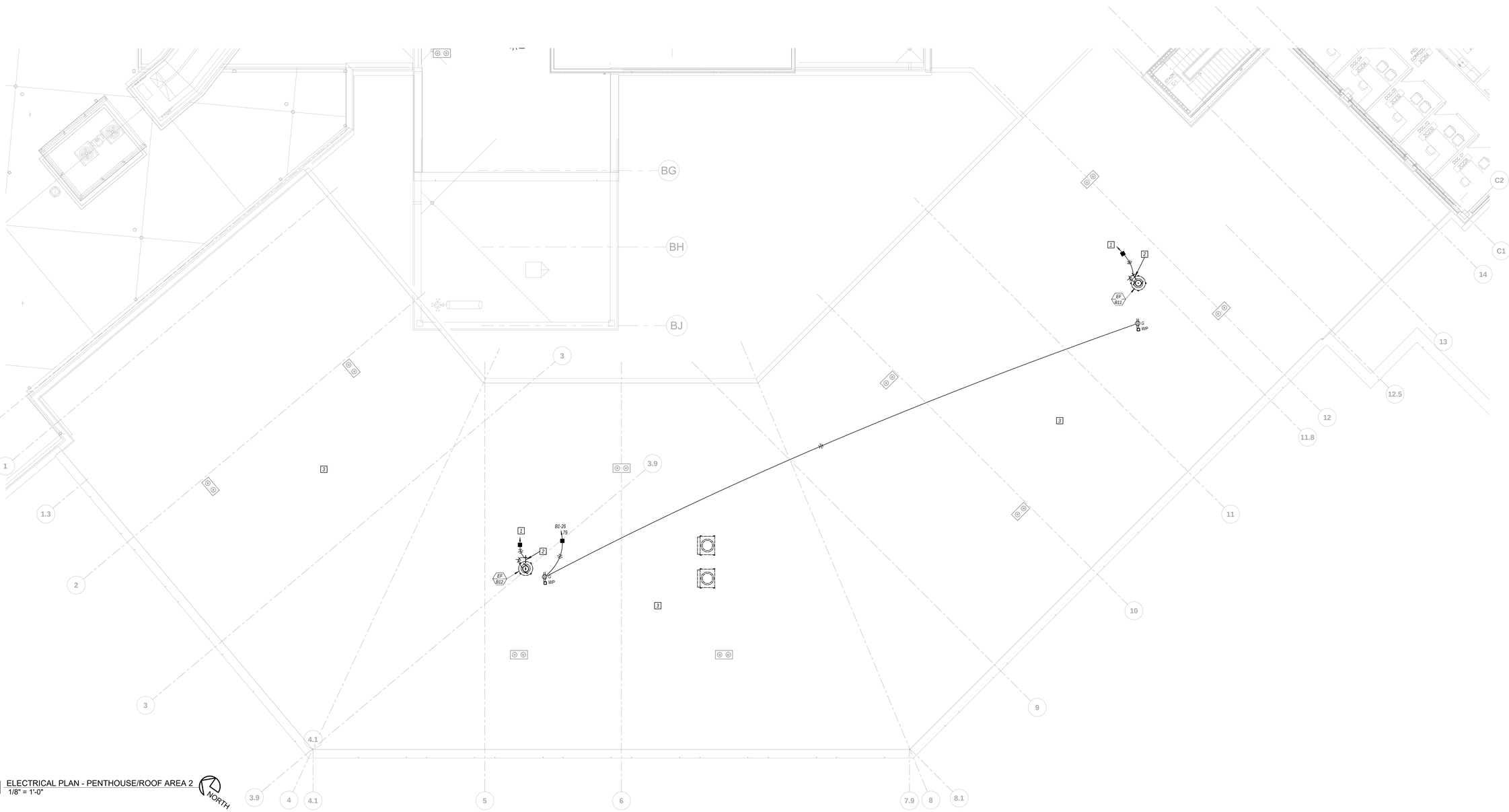
ELECTRICAL POWER GENERAL NOTES

1 *REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.*

KEYED NOTES

1 *EXTEND AND CONNECT TO EXHAUST FAN STARTER DISCONNECT SWITCH IN PENTHOUSE.*
2 *FURNISH AND INSTALL 30AMP, 1P WEATHERPROOF TOGGLE-TYPE DISCONNECT SWITCH ON FAN HOUSING.*
3 *FURNISH AND INSTALL LIGHTNING PROTECTION SYSTEM FOR ALL NEW STRUCTURES TO THE EXTEND REQUIRED.*



1 ELECTRICAL PLAN - PENTHOUSE/ROOF AREA 2
1/8" = 1'-0"

NORTH

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E2.3

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ELECTRICAL PLAN - PENTHOUSE/ROOF AREA 2

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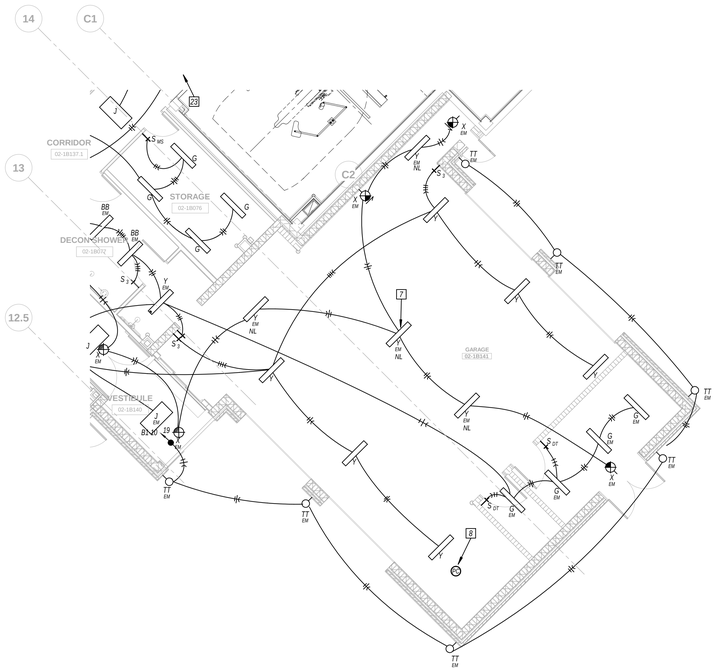
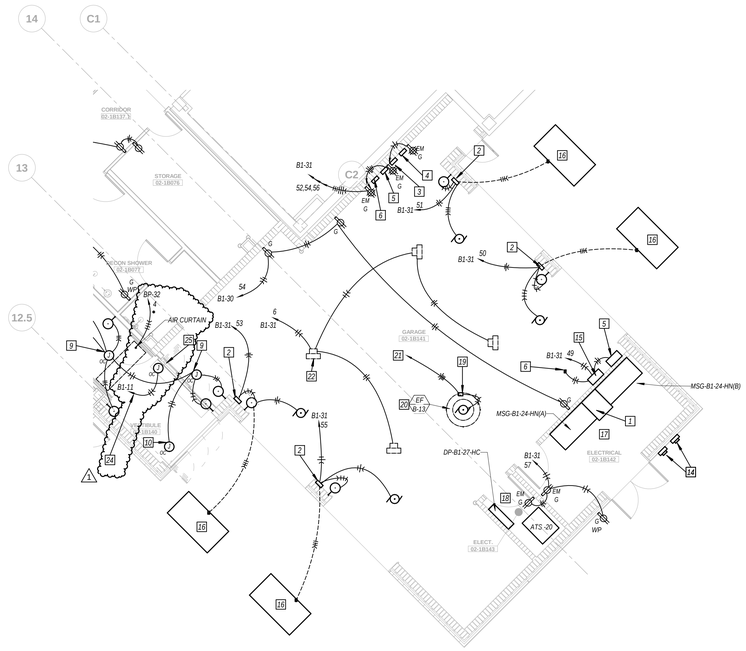


1 AMBULANCE GARAGE LIGHTING PLAN
1/8" = 1'-0"



2 AMBULANCE GARAGE ELECTRICAL PLAN
1/8" = 1'-0"

3 AMBULANCE GARAGE COMMUNICATIONS PLAN
1/8" = 1'-0"

ELECTRICAL POWER GENERAL NOTES

1 REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.

KEYED NOTES

1 SECTION PREPARED FOR FUTURE TIE-BREAKER, EQUIPED WITH FEED-THRU BUS. ONLY ONE MAIN SHALL BE ENERGIZED AT A TIME. REFER TO SWITCHGEAR DETAIL ON SHEET E5.0 FOR FURTHER INFORMATION.
2 AMBULANCE GARAGE DOOR CONTROLLER AND PUSHPAD FURNISHED BY OTHERS.
3 MARCER RADIO EQUIPMENT MOUNTED ON SHELF. CORRIDATE EXACT RECEPTACLE LOCATION WITH SHELF HEIGHT.
4 HEAR RADIO EQUIPMENT.
5 20A/4-POLE LIGHTING CONTACTOR WITH 120V COIL FOR HELIPAD LIGHTS. CONTACTOR TO BE CONTROLLED BY "CONTROL 3" OF RADIO CONTROLLER. VERIFY WHETHER CONTACTOR SHALL BE ELECTRICALLY OR MECHANICALLY HELD TYPE WITH RADIO CONTROLLER MANUFACTURER'S REP.
6 REMOTE ANTENNA FOR RADIO CONTROLLER WITH 50 FEET OF COAXIAL CABLE. COORDINATE EXACT LOCATION ON ROOF WITH ARCHITECT. PROVIDE SUPPORT FOR ANTENNA PER MANUFACTURER'S RECOMMENDATION.
7 PENDANT MOUNT WITH BOTTOM OF FIXTURE AT 12'-6" ABOVE FINISHED FLOOR. (TYPICAL)
8 FURNISH AND INSTALL PHOTOCELL, MOUNTED ON ROOF FOR CONTROL OF EXTERIOR LIGHTING FIXTURES. FIELD COORDINATE EXACT LOACTION OF PHOTOCELL.
9 EXTEND AND CONNECT TO AUTOMATIC DOOR OPERATOR. MAKE ALL CONNECTIONS AS REQUIRED BY DOOR MANUFACTURER.
10
11 FURNISH AND INSTALL FIRE ALARM INTERFACE TO COILING DOOR. MAKE ALL CONNECTIONS AS REQUIRED BU DOOR MANUFACTURER.
12 EXTEND 4 PAIR CAT 5 CABLE TO EMERGENCY RADIO EQUIPMENT LOCATED IN MD/NURSE WORK B148.
13 COORDINATE LOCATION WITH SHELF MOUNTING HEIGHT.
14 ELECTRICAL UTILITY METER. MOUNT ON BUILDING PER EVERGY REQUIREMENTS.
15 RADIO CONTROLLER FOR HELIPORT LIGHTS. CROUSE HINDS #RC-175A.
16 GARAGE DOOR PRESSURE SENSOR PAD FURNISHED BY OTHERS.
17 FURNISH AND INSTALL FOUR(4)2" SPARE CONDUITS WITH PULL STRING FROM ELEC ROOM TO ABOVE ACCESSIBLE CEILING IN CORRIDOR 02-1800N FOR FUTURE USE.
18 FURNISH AND INSTALL TWO(2) 2" SPARE CONDUITS WITH PULL STRING FROM ELEC ROOM TO ABOVE ACCESSIBLE CEILING IN CORRIDOR 02-1800N FOR FUTURE USE.
19 FURNISH AND INSTALL 30 AMP, 3P WEATHERPROOF DISCONNECT SWITCH MOUNTED ON FAN HOUSING.
20 EXHAUST FAN LOCATED ON ROOF ABOVE.
21 EXTEND AND CONNECT TO EXHAUST FAN STARTER DISCONNECT SWITCH IN PENTHOUSE.
22 REFER TO DETAIL SHEET E5.0 FOR ALL REQUIRED CONNECTIONS TO UNIT HEATER. (TYPICAL)
23 EXTEND AND CONNECT TO EXISTING CIRCUIT.
24 FURNISH AND INSTALL 20A, 1P CIRCUIT BREAKER IN EXISTING PANELBOARD TO SERVE NEW LOAD.
1 25 MAKE ALL CONNECTIONS TO FIRE SHUTTER COILING DOOR AS REQUIRED BY DOOR MANUFACTURER.

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AMBULANCE GARAGE ELECTRICAL PLANS

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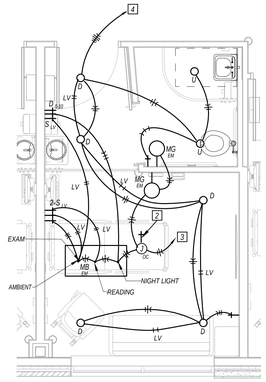
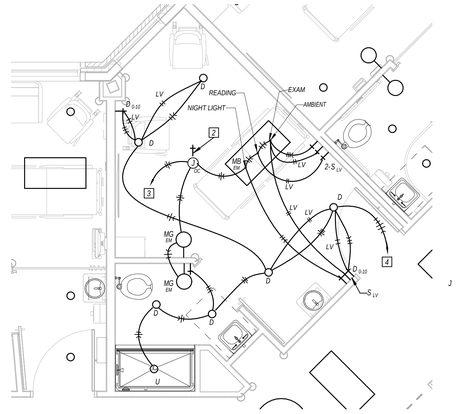
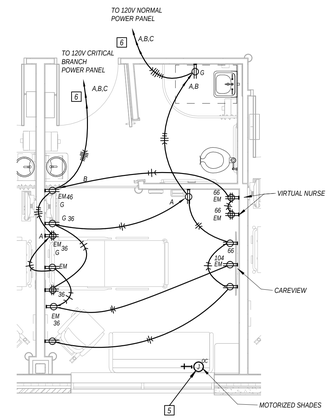


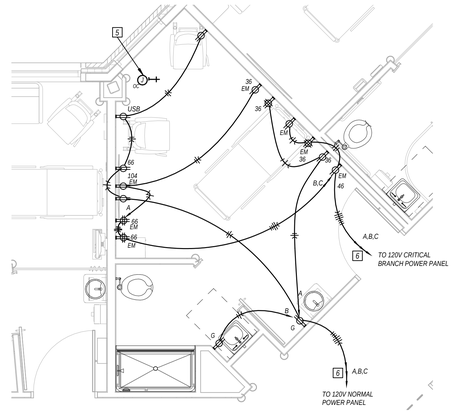
1 TYPICAL PATIENT ROOM LIGHTING PLAN
1/4" = 1'-0"



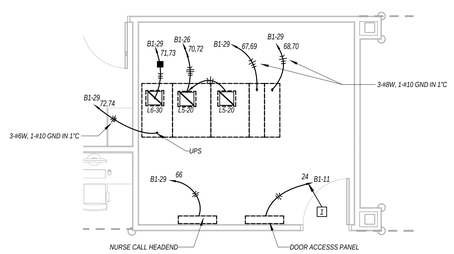
2 TYPICAL ADA PATIENT ROOM LIGHTING PLAN
1/4" = 1'-0"



3 TYPICAL PATIENT ROOM ELECTRICAL PLAN
1/4" = 1'-0"



4 TYPICAL ADA PATIENT ROOM ELECTRICAL PLAN
1/4" = 1'-0"



5 ENLARGED COMMUNICATIONS ROOM ELECTRICAL PLAN
1/4" = 1'-0"

ELECTRICAL POWER GENERAL NOTES

1 *REFER TO SHEET E000 FOR GENERAL NOTES. NOT ALL GENERAL NOTES MAY APPLY TO THIS SHEET.*

KEYED NOTES

1 *EXTEND AND CONNECT TO EXISTING SPARE CIRCUIT BREAKER(S) IN PANELBOARD SPECIFIED.*
2 *FURNISH AND INSTALL 20 AMP, 1 POLE DISCONNECT SWITCH ABOVE ACCESIBLE CEILING TO ALLOW FOR ISOLATION OF PATIENT LIGHTING FOR MAINTENANCE.*
3 *REFER TO LIGHTING PLAN SHEET FOR CONTINUATION OF CRITICAL BRANCH POWER CIRCUIT.*
4 *REFER TO LIGHTING PLAN SHEET FOR CONTINUATION OF NORMAL POWER CIRCUIT.*
5 *REFER TO ELECTRICAL PLAN SHEET FOR CIRCUITING OF SHADES.*
6 *REFER TO ELECTRICAL PLAN SHEET FOR PANEL AND CIRCUIT NUMBERS.*

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ENLARGED ELECTRICAL PLANS

Lighting Fixture Schedule

TYPE	MANUFACTURER/MODEL	FIXTURE DESCRIPTION	MOUNTING	DRIVER/BALLAST	LAMP	VOLTAGE	328LFSched Wattage
							5 W
A	WILLIAMS 50 LED SERIES	2'x4' TROFFER FIXTURE FOR LED SOURCE. 0.125" PRISMATIC ACRYLIC LENS. SPRING LOADED CAM ACTION LATCHED. FIXTURE STEEL DOOR WITH MITERED CORNERS. ALL FIXTURE STEEL POST PAINTED BAKED WHITE ENAMEL. FURNISH WITH ALL HARDWARE AS REQUIRED FOR MOUNTING.	RECESSED	INTEGRAL 1%, 0-10V DIMMING DRIVER.	INTEGRAL 3500K CCT, 9000 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	72 W
A1	WILLIAMS 50 LED SERIES	2'x4' TROFFER FIXTURE FOR LED SOURCE. 0.125" PRISMATIC ACRYLIC LENS. SPRING LOADED CAM ACTION LATCHED. FIXTURE STEEL DOOR WITH MITERED CORNERS. ALL FIXTURE STEEL POST PAINTED BAKED WHITE ENAMEL. FURNISH WITH ALL HARDWARE AS REQUIRED FOR MOUNTING.	RECESSED	INTEGRAL 1%, 0-10V DIMMING DRIVER.	INTEGRAL 3500K CCT, 5900 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	48 W
B	WILLIAMS MX4R SERIES	4"x4' GRID MOUNT FIXTURE FOR LED SOURCE. FLAT DIFFUSE ACRYLIC LENS.	RECESSED	INTEGRAL 1%, 0-10V DIMMING DRIVER.	INTEGRAL 3500K CCT, 1500 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	14 W
BB	WILLIAMS 96 LED SERIES	4' INDUSTRIAL FULLY ENCLOSED AND GASKETEED FIXTURE FOR USE IN WET ENVIRONMENT. FIBERGLASS HOUSING WITH POLYCARBONATE LATCHES. FROSTED ACRYLIC INPACT RESISTANT SHIELD. WATERTITE HUB.	SURFACE	INTEGRAL ELECTRONIC NON-DIMMING DRIVER	INTEGRAL 3500K CCT, 6200 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	48 W
C	XAL PANO	3.25' RECESSED LED SLOT FIXTURE FOR USE IN WOOD WORK CEILING. OPAL COVER. CONTINUOUS LENGTH OF WOOD PANEL.	RECESSED	REMOTE 1%, 0-10V DIMMING DRIVER.	3500K CCT, 450 LUMEN PER FT, 80 CRI	120-277V	53 W
D	WILLIAMS 6DR SERIES	6" APERATURE DOWNLIGHT FOR LED SOURCE. WIDE DISTRIBUTION. F. FURNISH WITH SATIN GLOW ACCENT CONE AND FLUSH LENS. FURNISH WITH ALL REQUIRED MOUNTING HARDWARE.	RECESSED	0-10V ELECTRONIC DIMMING DRIVER	INTEGRAL 3500 K CCT, 3000 LUMENS DELIVERED MINIMUM 80 CRI LED	120-277V	37 W
F	LIGHTART SLIM RING	57.5' DECORATIVE CIRCLE PENDANT WITH WHITE OPAL DIFFUSER. SHADE COLOR AS DIRECTED BY ARCHITECT. WHITE CANOPY AND CABLES. CABLES TO CANOPY MOUNTING, FIELD ADJUSTABLE LENGTH	PENDANT MOUNT	INTEGRAL 1%, 0-10V DIMMING DRIVER.	3500 LED	120-277V	65 W
G	WILLIAMS 76 LED SERIES	NOMINAL 4' STRIP FIXTURE FOR LED SOURCE. ALL FIXTURE STEEL POST PAINTED BAKED WHITE ENAMEL FURNISH WITH 14 GA WIREGUARD. SUSPEND FIXTURE AT 8'-0" A.F.F.	SUSPENDED	INTEGRAL ELECTRONIC NON-DIMMING DRIVER	INTEGRAL 3500K CCT, 5300 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	36 W
J	WILLIAMS PT SERIES	2'x4' DIRECT/INDIRECT TROFFER FOR LED SOURCE. LINEAR SMOOTH CURVED PRISMATIC LENS WITH SURFACE RELIEF DIFFUSER. FIXTURE STEEL PAINTED BAKED WHITE ENAMEL. 1-1/2" TELESCOPING HOUSING. DLC LISTED. FURNISH WITH ALL HARDWARE AS REQUIRED FOR MOUNTING TYPE INDICATED.	RECESSED	INTEGRAL 1%, 0-10V DIMMING DRIVER.	INTEGRAL 3500K CCT, 5800 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	49 W
M1	WILLIAMS 1SF LED SERIES	3' UNDERCABINET FIXTURE WITH SOLID FRONT AND BOTTOM ACRYLIC LENS DIFFUSER. INTEGRAL ROCKER SWITCH.	SURFACE	INTEGRAL LED DRIVER	INTEGRAL 3500K CCT, 1200 LUMENS DELIVERED. MIN 80 CRI LED	120V	21 W
M2	WILLIAMS 1SF LED SERIES	2' UNDERCABINET FIXTURE WITH SOLID FRONT AND BOTTOM ACRYLIC LENS DIFFUSER. INTEGRAL ROCKER SWITCH.	SURFACE	INTEGRAL LED DRIVER	INTEGRAL 3500K CCT, 1200 LUMENS DELIVERED. MIN 80 CRI LED	120V	14 W
MB	VISA LIGHTING UNITY SERIES LED	2'x4' MULTI-FUNTION PATIENT LIGHTING GRID MOUNT FIXTURE FOR 14800 LUMEN, 3500K, THREE FUNCTION LED PACKAGE AND AMBER NIGHT LIGHT. ALL FIXTURE STELL POST PAINTED BAKED WHITE ENAMEL. OYSTER LINEN DIFFUSER. FURNISH WITH CONTROLLER TO ALLOW PATIENT CONTROL OF AMBIENT AND REDING LIGHT THRU PILLOW SPEAKER (FURNISHED BY NURSE CALL PROVIDER).	RECESSED	INTEGRAL ELECTRONIC NON-DIMMING DRIVER	INTEGRAL 3500K CCT, 3500 LUMENS DELIVERED,MIN 80 CRI LED (TBD).	120-277V	89 W
MG	KENALL MCSL-VO SERIES	LOW LEVEL SEMI-RECESSED NIGHT LIGHT WITH AMBER MODULE. CAST ALUMINUM HOUSING WITH UV STABILIZED HIGH IMPACT RESISTANT INJECTION MOLDED PEARLESCENT POLYCARBONATE LENS. MATTE WHITE FINISH. INTEGRAL PHOTOCELL. MOUNT AT 12" A.F.F.	SURFACE-WALL	INTEGRAL LED DRIVER	INTEGRAL LED	120V	4 W
N	WILLIAMS AX2WUD	2'L 4' WALL MOUNT UP AND DOWN LIGHT FIXTURE FOR LED SOURCE. EXTRUDED ALUMINUM HOUSING WITH FROSTED ACRYLIC LENS.	SURFACE-WALL	INTEGRAL 1%, 0-10V DIMMING DRIVER.	3500K, 2400 LUMEN UP AND 2400 LUMEN DOWN, 80 CRI	277 V	60 W
P	SHAPER 102-S SERIES	42" DIAMETER NATURAL ALUMINUM DRUM FIXTURE WITH NATURAL FLAX VINYL COATED SHADE.	SURFACE	0-10V DIMMING BALLAST	FOUR (4) 3500k 42 W CFL LED REPLACEMENT LAMPS	277 V	168 W
TT	TBD	EXTERIOR WALL MOUNT DIRECTIONAL FIXTURE FOR LED SOURCE. DIE-CAST ALUMINUM HOUSING WITH SAFETY GLASS LENS. COORDINATE FINISH COLOR WITH ARCHITECT. UL LISTED FOR WET LOCATION USE. MOUNT FIXTURE 8'-0" ABOVE GRADE UNLESS NOTED OTHERWISE. FURNISH AND INSTALL ROOF MOUNTED PHOTOCELL FOR CONTROLL OF ALL TYPE TT FIXTURES.	SURFACE-WALL	INTEGRAL ELECTRONIC DRIVER	INTEGRAL 3000K CCT, 85 CRI 1680 LUMEN	120-277V	18 W
U	KIRLIN LIGHTING LRR-05435 SERIES	5" APERATURE DEAD-FRONT SHOWER DOWNLIGHT FIXTURE WITH ACRYLIC LENS. WET LOCATIN LISTED.D	RECESSED	INTEGRAL ELECTRONIC NON-DIMMING DRIVER	3000K, CCT 1287 LUMENS DELIVERED LED	120V	27 W
X	WILLIAMS EXIT SERIES	LED LIT EXIT SIGN, WHITE HOUSING WITH RED LETTERING. FURNISH WITH NECESSARY MOUNTING HARDWARE FOR CEILING OR WALL MOUNTING AND CONFIGURE FACES AND ARROWS AS SHOWN ON PLAN	PER DRAWINGS	INTEGRAL LED DRIVER	INTEGRAL LED	277V	5 W
Y	WILLIAMS EGL2 LED SERIES	4' INDUSTRIAL FULLY ENCLOSED AND GASKETEED FIXTURE. FIBERGLASS HOUSING WITH POLYCARBONATE LATCHES. FROSTED ACRYLIC INPACT RESISTANT SHIELD. WATERTITE HUB.	SURFACE	INTEGRAL ELECTRONIC NON-DIMMING DRIVER	INTEGRAL 4000K CCT, 10000 LUMENS DELIVERED. MIN 80 CRI LED	120-277V	89 W
Z	TECH LIGHTING ECHO	CLEAR TRANSLUCENT CYLINDER OVER WHITE GLASS CYLINDER PENDANT FIXTURE WITH REPLACEABLE LED MODULE. SATIN NICKEL FINISH. FEILD CUTABLE SUSPENSION CABLE. FREEJACK MOUNTING WITH FLUSH CANOPY.	PENDANT MOUNT	0-10V ELECTRONIC DIMMING DRIVER	300K LED	120-277 V	16 W

Switchboard: MSG-B1-24-HN(A)

Location: ELECTRICAL 02-1B142 — **Volts:** 480/277 Wye — **A.I.C. Rating:** 65K
Supply From: — **Phases:** 3 — **Mains Type:** MCB
Mounting: — **Wires:** 4 — **Mains Rating:** 1200 A
Enclosure: — **MCB Rating:** 1200 A

Notes:
1. ALL CIRCUIT BREAKERS WITHIN THIS EQUIPMENT SHALL BE FURNISHED WITH GROUND FAULT PROTECTION AS SPECIFIED. 2. FURNISH WITH INTEGRAL SURGE SUPPRESSION AND DISCONNECT SWITCH FOR SAME. 3. EQUIPMENT SHALL BE U.L. LISTED AS SERVICE ENTRANCE EQUIPMENT.

CKT	Circuit Description	# of Poles	Frame Size	Trip Size	Load	Wire and Conduit Size
1	B1-25-HN	3	150 A	150 A	91 A	4-#1/0W, 1-#6 GND IN 2"C
2	ATS-20	3	250 A	250 A	73 A	4-#250 MCMW, 1-#4 GND IN 3"C
3	SPARE	--	150 A	--	0 A	--
4	SPARE	--	150 A	--	0 A	--
5	TVSS	--	--	--	0 A	--
				Total Conn. Load:	136294 VA	
				Total Amps:	164 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	13682 VA	100.00%	13682 VA	
Other	5390 VA	100.00%	5390 VA	Total Conn. Load: 136294 VA
Power	360 VA	100.00%	360 VA	Total Est. Demand: 82863 VA
Receptacle	116862 VA	54.28%	63431 VA	Total Conn. Current: 164 A
				Total Est. Demand Current: 100 A

Notes:

Switchboard: MSG-B1-24-HN(B)

Location: ELECTRICAL 02-1B142 — **Volts:** 480/277 Wye — **A.I.C. Rating:** 65K
Supply From: — **Phases:** 3 — **Mains Type:** MCB
Mounting: — **Wires:** 4 — **Mains Rating:** 1200 A
Enclosure: — **MCB Rating:** 1200 A

Notes:
1. ALL CIRCUIT BREAKERS WITHIN THIS PIECE OF EQUIPMENT SHALL BE FURNISHED WITH GROUND FAULT PROTECTION AS SPECIFIED. 2. FURNISH WITH INTEGRAL SURGE SUPPRESSOR AND DISCONNECT SWITCH FOR SAME. 3. EQUIPMENT SHALL BE U.L. LISTED AS SERVICE ENTRANCE EQUIPMENT.

CKT	Circuit Description	# of Poles	Frame Size	Trip Size	Load	Wire and Conduit Size
1	ATS-21	3	250 A	250 A	51 A	4-#250 MCMW, 1-#4 GND IN 3"C
2	MSB-B1-1-HN	3	600 A	600 A	401 A	2 SETS(4-#350MCMW, 1-#1GND IN 3"C)
3	SPARE	--	150 A	--	0 A	--
4	SPARE	--	150 A	--	0 A	--
5	TVSS	--	--	--	0 A	--
				Total Conn. Load:	376169 VA	
				Total Amps:	452 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Motor	1745 VA	100.00%	1745 VA	
Other	374424 VA	100.00%	374424 VA	Total Conn. Load: 376169 VA
Power	0 VA	0.00%	0 VA	Total Est. Demand: 376169 VA
				Total Conn. Current: 452 A
				Total Est. Demand Current: 452 A

Notes:

Branch Panel: B1-25-HN

Location: ELECTRIC ROOM 02-1B108 — **Volts:** 480/277 Wye — **A.I.C. Rating:** 10 K
Supply From: MSG-B1-24-HN(A) — **Phases:** 3 — **Mains Type:** MCB
Mounting: Surface — **Wires:** 4 — **Mains Rating:** 150 A
Enclosure: Type 1 — **MCB Rating:** 150 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1				1845...	1932...					1	20 A	LIGHTING ROOM 02-1B100, 02-1B102,...	2
3	X-B1-26-LN	125 A	3			2373...	1636...			1	20 A	LIGHTING ROOM 02-1B087, 02-1B089,...	4
5								2306...	1178...	1	20 A	LIGHTING ROOM 02-1B116, 02-1B117, 02-1B118	6
7	LIGHTING EMS BREAK 02-1B079	20 A	1	969 VA	956 VA					1	20 A	LIGHTING PATIENT ROOM 02-1B113	8
9	LIGHTING ROOM 02-1B103, 02-1B105	20 A	1			666 VA	1988...			1	20 A	CORRIDOR 02-1B00O	10
11	LIGHTING	20 A	1					900 VA	0 VA	1	20 A	SPARE	12
13	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	14
15	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	16
17	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	18
19	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		22315 VA		28026 VA		25144 VA					
		Total Amps:		81 A		103 A		92 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	9910 VA	100.00%	9910 VA	
Other	482 VA	100.00%	482 VA	Total Conn. Load: 75485 VA
Power	360 VA	100.00%	360 VA	Total Est. Demand: 48119 VA
Receptacle	64732 VA	57.72%	37366 VA	Total Conn. Current: 91 A
				Total Est. Demand Current: 58 A

Notes:

Branch Panel: B1-26-LN

Location: ELECTRIC ROOM 02-1B108 — **Volts:** 120/208 Wye — **A.I.C. Rating:** 10K
Supply From: X-B1-27-LN — **Phases:** 3 — **Mains Type:** MCB
Mounting: Surface — **Wires:** 4 — **Mains Rating:** 250 A
Enclosure: Type 1 — **MCB Rating:** 250 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	RECEPTACLE ADA PATIENT ROOM 02-1B107	20 A	1	360 VA	0 VA					1	20 A	SHADES 02-1B107, 02-1B106, 02-1B104	2
3	RECEPTACLE ADA PATIENT ROOM 02-1B107	20 A	1			720 VA	0 VA			1	20 A	SHADES 02-1B102, 02-1B100, 02-1B098	4
5	RECEPTACLE ADA PATIENT TOILET 02-1B107A	20 A	1					180 VA	0 VA	1	20 A	SHADES 02-1B096, 02-1B095, 02-1B093	6
7	RECEPTACLE PATIENT TOILET 02-1B104A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE PATIENT TOILET 02-1B106A	8
9	RECEPTACLE PATIENT ROOM 02-1B104	20 A	1			360 VA	720 VA			1	20 A	RECEPTACLE PATIENT ROOM 02-1B106	10
11	RECEPTACLE PATIENT ROOM 02-1B104	20 A	1					720 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B106	12
13	RECEPTACLE PATIENT TOILET 02-1B102A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE PATIENT TOILET 02-1B100A	14
15	RECEPTACLE PATIENT ROOM 02-1B102	20 A	1			180 VA	720 VA			1	20 A	RECEPTACLE PATIENT ROOM 02-1B100	16
17	RECEPTACLE PATIENT ROOM 02-1B102	20 A	1					720 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B100	18
19	RECEPTACLE PATIENT TOILET 02-1B098A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE PATIENT TOILET 02-1B096A	20
21	RECEPTACLE PATIENT ROOM 02-1B098	20 A	1			360 VA	720 VA			1	20 A	RECEPTACLE PATIENT ROOM 02-1B096	22
23	RECEPTACLE PATIENT ROOM 02-1B098	20 A	1					720 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B096	24
25	RECEPTACLE ADA TOILET 02-1B095A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE PATIENT TOILET 02-1B093A	26
27	RECEPTACLE ADA PATIENT ROOM 02-1B095	20 A	1			360 VA	720 VA			1	20 A	RECEPTACLE PATIENT ROOM 02-1B093	28
29	RECEPTACLE ADA PATIENT ROOM 02-1B095	20 A	1					720 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B093	30
31	RECEPTACLE PATIENT TOILET 02-1B091A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE PATIENT TOILET 02-1B089A	32
33	RECEPTACLE PATIENT ROOM 02-1B091	20 A	1			720 VA	360 VA			1	20 A	RECEPTACLE PATIENT ROOM 02-1B089	34
35	RECEPTACLE PATIENT ROOM 02-1B091	20 A	1					360 VA	720 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B089	36
37	SHADES 02-1B091, 02-1B089	20 A	1	0 VA	1025...								38
39	SHADES ROOM 02-1B116, 02-1B117, 02-1B118	20 A	1			0 VA	1065...			3	100 A	B1-30-LN	40
41	SHADES ROOM 02-1B114, 02-1B115	20 A	1					0 VA	1101...				42
43	RECEPTACLE PATIENT TOILET 02-1B118A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE PATIENT TOILET 02-1B117A	44
45	RECEPTACLE PATIENT ROOM 02-1B118	20 A	1			720 VA	360 VA			1	20 A	RECEPTACLE PATIENT ROOM 02-1B117	46
47	RECEPTACLE PATIENT ROOM 02-1B118	20 A	1					360 VA	720 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B117	48
49	RECEPTACLE PATIENT TOILET 02-1B116A	20 A	1	180 VA	180 VA					1	20 A	RECEPTACLE ADA TOILET 02-1B115A	50
51	RECEPTACLE PATIENT ROOM 02-1B116	20 A	1			360 VA	360 VA			1	20 A	RECEPTACLE ADA PATIENT ROOM 02-1B115	52
53	RECEPTACLE PATIENT ROOM 02-1B116	20 A	1					720 VA	900 VA	1	20 A	RECEPTACLE ADA PATIENT ROOM 02-1B115	54
55	RECEPTACLE PATIENT ROOM 02-1B114	20 A	1	720 VA	540 VA					1	20 A	RECEPTACLE ROOM 02-1B00P, 02-1B00O,...	56
57	RECEPTACLE PATIENT TOILET 02-1B114A	20 A	1			180 VA	360 VA			1	20 A	RECEPTACLE NURSE STATION 02-1B088	58
59	RECEPTACLE PATIENT ROOM 02-1B114	20 A	1					360 VA	360 VA	1	20 A	RECEPTACLE NURSE STATION 02-1B088	60
61	RECEPTACLE ROOM 02-1B105, 02-1B108	20 A	1	360 VA	360 VA					1	20 A	RECEPTACLE NURSE STATION 02-1B088	62
63	RECEPTACLE ROOM 02-1B00P, 02-1B000,...	20 A	1			1440...	360 VA			1	20 A	RECEPTACLE WORK STATION 02-1B119	64
65	RECEPTACLE MANAGER OFFICE 02-1B103	20 A	1					720 VA	892 VA	1	20 A	PLUGMOLD STORAGE 02-1B101	66
67	RECEPTACLE MANAGER OFFICE 02-1B121	20 A	1	720 VA	1719...					1	20 A	PLUGMOLD STORAGE 02-1B101	68
69	RECEPTACLE WORK STATION 02-1B099	20 A	1			360 VA	180 VA			1	20 A	CEILING RECEPTACLE DATA ROOM 02-1B097	70
71	RECEPTACLE DATA ROOM 02-1B097	20 A	1					360 VA	180 VA	1	20 A	CEILING RECEPTACLE DATA ROOM 02-1B097	72
73	RECEPTACLE NOURISH 02-1B116	20 A	1	180 VA	360 VA					1	20 A	RECEPTACLE CHARTING 02-1B090	74
75	MICROWAVE NOURISH 02-1B116	20 A	1			1200...	1260...			1	20 A	RECEPTACLE ROOM 02-1B00KKKK, 11, 79,...	76
77	COFFEE NOURISH 02-1B116	20 A	1					180 VA	720 VA	1	20 A	RECEPTACLE	78
79	ROOFTOP RECEPTACLES	20 A	1	360 VA	0 VA					1	20 A	SPARE	80
81	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	82
83	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	84
85	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	86
87	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	88
89	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	90
91	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	92
93	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	94
95	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	96
97	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	98
99	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	100
101	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	102
103	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	104
105	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	106
107	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	108
109	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	110
111	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	112
113	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	114
115	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	116
117	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	118
119	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	120
121	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	122
123	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	124
125	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	126
		Total Load:		18458 VA		23736 VA		23066 VA					
		Total Amps:		154 A		204 A		198 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	168 VA	100.00%	168 VA	
Power	360 VA	100.00%	360 VA	Total Conn. Load: 65260 VA
Receptacle	64732 VA	57.72%	37366 VA	Total Est. Demand: 37894 VA
				Total Conn. Current: 181 A
				Total Est. Demand Current: 105 A

Notes:

Distribution Panel: DP-B1-27-HC

Location: ELECT. 02-1B143 — **Volts:** 480/277 Wye — **A.I.C. Rating:** 65K
Supply From: ATS-20 — **Phases:** 3 — **Mains Type:** MCB
Mounting: Surface — **Wires:** 4 — **Mains Rating:** 250 A
Enclosure: Type 1 — **MCB Rating:** 250 A

Notes:
1. FURNISH WITH MAXIMUM HEIGHT ENCLOSURE WITH FULL BUSSING. ANY EXTRA SPACE WINTIN PANEL SHALL BE EQUIPPED WITH PROVISIONS FOR FUTURE SWITCHES.
2. FURNISH WITH INTEGRAL SURGE SUPPESSOR AND DISCONNECT SWITCH FOR SAME

CKT	Circuit Description	# of Poles	Switch Size	Fuse Size	Load	Wire and Conduit Size
1	B1-28-HC	3	150 A	150 A	73 A	4 - #1/0W, 1-#6 GND IN 2"C (1)
2	SPARE	--	150 A	--	0 A	--
3	SPARE	--	150 A	--	0 A	--
4						
5						
6						
7						
8						
9						
10						
11						
12	TVSS	--	--	--	0 A	--
					60810 VA	
				Total Amps:	73 A	

Legend:

Branch Panel: B1-28-HC

Location: ELECTRIC ROOM 02-1B108 — **Volts:** 480/277 Wye — **A.I.C. Rating:** 10K
Supply From: DP-B1-27-HC — **Phases:** 3 — **Mains Type:** MCB
Mounting: Surface — **Wires:** 4 — **Mains Rating:** 150 A
Enclosure: Type 1 — **MCB Rating:** 150 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1				1887...	1455...					1	20 A	OTHER ADA PATIENT ROOM 02-1B107	2
3	X-B1-29-LC	125 A	3			1999...	873 VA			1	20 A	OTHER ROOM 02-1B118, 02-1B117, 02-1B116	4
5								1817...	812 VA	1	20 A	LIGHTING ROOM 02-1B077	6
7	LIGHTING	20 A	1	632 VA	0 VA					1	20 A	SPARE	8
9	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	10
11	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	12
13	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	14
15	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	16
17	SPARE	20 A	1					0 VA					18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		20957 VA		20871 VA		18981 VA					
		Total Amps:		77 A		76 A		69 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	3772 VA	100.00%	3772 VA	
Other	4908 VA	100.00%	4908 VA	Total Conn. Load: 60810 VA
Power	0 VA	0.00%	0 VA	Total Est. Demand: 39745 VA
Receptacle	52130 VA	59.59%	31065 VA	Total Conn. Current: 73 A
				Total Est. Demand Current: 48 A

Notes:

STATE OF MISSOURI
BRUCE ELDON HART
NUMBER E-22817
PROFESSIONAL ENGINEER
3-30-2020
Bruce E. Hart - Engineer
License - Missouri #E-22817

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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	LLD
Checked By	BEH

Revision

Number	Date	Description
1	4.10.20	ADDENDUM 1

BID PACKAGE #3 3.27.2020

E4.0

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ELECTRICAL SCHEDULES

Branch Panel: B1-29-LC

Location: ELECTRIC ROOM 02-1B108 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10K
Supply From: X-B1-28-LC | **Phases:** 3 | **Mains Type:** MCB
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 250 A
Enclosure: Type 1 | **MCB Rating:** 250 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	RECEPTACLE ADA PATIENT ROOM 02-1B107	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B106	2
3	RECEPTACLE ADA PATIENT ROOM 02-1B107	20 A	1		360 VA	540 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B106	4
5	RECEPTACLE ADA PATIENT ROOM 02-1B107	20 A	1			540 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B106	6
7	RECEPTACLE PATIENT ROOM 02-1B104	20 A	1	360 VA	540 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B102	8
9	RECEPTACLE PATIENT ROOM 02-1B104	20 A	1		540 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B102	10
11	RECEPTACLE PATIENT ROOM 02-1B104	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE PATIENT TOILET 02-1B102A	12
13	RECEPTACLE PATIENT ROOM 02-1B100	20 A	1	540 VA	360 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B098	14
15	RECEPTACLE PATIENT ROOM 02-1B100	20 A	1		360 VA	540 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B098	16
17	RECEPTACLE PATIENT ROOM 02-1B100	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B098	18
19	RECEPTACLE PATIENT ROOM 02-1B096	20 A	1	360 VA	540 VA		1	20 A	RECEPTACLE ADA PATIENT ROOM 02-1B095	20
21	RECEPTACLE PATIENT ROOM 02-1B096	20 A	1		540 VA	360 VA	1	20 A	RECEPTACLE ADA PATIENT ROOM 02-1B095	22
23	RECEPTACLE PATIENT ROOM 02-1B096	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE ADA PATIENT ROOM 02-1B095	24
25	RECEPTACLE PATIENT ROOM 02-1B093	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B091	26
27	RECEPTACLE PATIENT ROOM 02-1B093	20 A	1		540 VA	540 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B091	28
29	RECEPTACLE PATIENT ROOM 02-1B093	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B091	30
31	RECEPTACLE PATIENT ROOM 02-1B089	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B118	32
33	RECEPTACLE PATIENT ROOM 02-1B089	20 A	1		540 VA	540 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B118	34
35	RECEPTACLE PATIENT ROOM 02-1B089	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B118	36
37	RECEPTACLE PATIENT ROOM 02-1B117	20 A	1	540 VA	540 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B116	38
39	RECEPTACLE PATIENT ROOM 02-1B117	20 A	1		360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B116	40
41	RECEPTACLE PATIENT ROOM 02-1B117	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B116	42
43	RECEPTACLE ADA PATIENT ROOM 02-1B115	20 A	1	540 VA	540 VA		1	20 A	RECEPTACLE ROOM 02-1B113, 02-1B114	44
45	RECEPTACLE ADA PATIENT ROOM 02-1B115	20 A	1		360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B114	46
47	RECEPTACLE ADA PATIENT ROOM 02-1B115	20 A	1			360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B114	48
49	PNEUMATIC TUBE STATION 02-1B00UU	20 A	1	180 VA	500 VA		1	20 A	CRASH CART NURSE STATION 02-1B088	50
51	PHONE CHARGE STATION NURSE STATION...	20 A	1		1000...	360 VA	1	20 A	RECEPTACLE NURSE STATION 02-1B088	52
53	MFD NURSE STATION 02-1B088	20 A	1			180 VA	360 VA	1	20 A	RECEPTACLE NURSE STATION 02-1B088	54
55	RECEPTACLE NURSE STATION 02-1B088	20 A	1	360 VA	180 VA		1	20 A	RECEPTACLE ELECTRIC ROOM 02-1B108	56
57	RECEPTACLE NURSE STATION 02-1B088	20 A	1		360 VA	0 VA	1	20 A	VAV TRANSFORMER PANEL ELECTRIC ROO...	58
59	RECEPTACLE NURSE STATION 02-1B088	20 A	1			360 VA	180 VA	1	20 A	RECEPTACLE MANAGER OFFICE 02-1B103	60
61	RECEPTACLE WORK STATION 02-1B099	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE WORK STATION 02-1B119	62
63	RECEPTACLE MANAGER OFFICE 02-1B121	20 A	1		180 VA	1628...	1	20 A	PLUGMOLD STORAGE 02-1B101	64
65	RECEPTACLE DATA ROOM 02-1B097	20 A	1			360 VA	0 VA	1	20 A	NURSE CALL HEADEND DATA ROOM 02-1B097	66
67	IN-ROW COOLER DATA ROOM 02-1B097	40 A	2	0 VA	0 VA						68
69					0 VA	0 VA	2	20 A	RECEPTACLE DATA ROOM 02-1B097	70
71	L6-30 DATA ROOM 02-1B097	30 A	2			0 VA	2000...				72
73				0 VA	2000...		2	50 A	UPS DATA ROOM 02-1B097		74
75	CRASH CART CORRIDOR 02-1B135	20 A	1		180 VA	360 VA	1	20 A	RECEPTACLE CHARTING 02-1B090	76
77	REFRIGERATOR NOURISH 02-1B116	20 A	1			180 VA	0 VA	1	20 A	SPARE	78
79	ICE NOURISH 02-1B116	20 A	1	750 VA	7160...						80
81	SPARE	20 A	1		0 VA	8730...					82
83	SPARE	20 A	1			0 VA	8610...	3	100 A	B1-31-LC	84
85	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		86
87	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		88
89	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	90
91	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		92
93	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		94
95	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	96
97	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		98
99	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		100
101	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	102
103	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		104
105	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		106
107	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	108
109	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		110
111	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		112
113	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	114
115	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		116
117	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		118
119	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	120
121	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		122
123	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		124
125	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	126
			Total Load:	18870 VA	19998 VA	18170 VA					
			Total Amps:	158 A	168 A	151 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Other	4908 VA	100.00%	4908 VA	
Power	0 VA	0.00%	0 VA	**Total Conn. Load:** 57038 VA
Receptacle	52130 VA	59.59%	31065 VA	**Total Est. Demand:** 35973 VA
				Total Conn. Current: 158 A
				Total Est. Demand Current: 100 A

Notes:

Branch Panel: B1-30-LN

Location: SERVICE CORRIDOR 02-1B00J | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10K
Supply From: B1-26 | **Phases:** 3 | **Mains Type:** MCB
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: Type 1 | **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	RECEPTACLE EXAM ROOM 02-1B059	20 A	1	540 VA	561 VA		1	20 A	RECEPTACLE FAST TRACK 4 02-1B073	2
3	RECEPTACLE EXAM ROOM 02-1B059	20 A	1		360 VA	561 VA	1	20 A	RECEPTACLE FAST TRACK 3 02-1B072	4
5	REFRIGERATOR BREAK ROOM 02-1B068	20 A	1			1500...	561 VA	1	20 A	RECEPTACLE FAST TRACK 2 02-1B071	6
7	RECEPTACLE FAST TRACK NURSE STATION...	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE BREAK ROOM 02-1B068	8
9	RECEPT AND UC LGTS FAST TRACK NURSE...	20 A	1		222 VA	1500...	1	20 A	MICROWAVE BREAK ROOM 02-1B068	10
11	RECEPTACLE ROOM 02-1B00M, 02-1B069	20 A	1			900 VA	1400...	1	20 A	COFFEE MAKER BREAK ROOM 02-1B068	12
13	RECEPTACLE DECON SHOWER 02-1B077	20 A	1	720 VA	180 VA		1	20 A	RECEPTACLE PATIENT TOILET 02-1B085A	14
15	RECEPTACLE FAST TRACK 1 02-1B070	20 A	1		561 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B085	16
17	RECEPTACLE PATIENT TOILET 02-1B087A	20 A	1			180 VA	720 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B085	18
19	RECEPTACLE PATIENT ROOM 02-1B087	20 A	1	360 VA	0 VA						20
21	RECEPTACLE PATIENT ROOM 02-1B087	20 A	1		720 VA	0 VA	1	20 A	SHADES ROOM 02-1B087, 02-1B085	22
23	RECEPTACLE PATIENT TOILET 02-1B083A	20 A	1			180 VA	180 VA	1	20 A	RECEPTACLE PATIENT TOILET 02-1B081A	24
25	RECEPTACLE PATIENT ROOM 02-1B083	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B081	26
27	RECEPTACLE PATIENT ROOM 02-1B083	20 A	1		720 VA	720 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B081	28
29	RECEPTACLE PATIENT TOILET 02-1B113A	20 A	1			180 VA	180 VA	1	20 A	RECEPTACLE PATIENT TOILET 02-1B112A	30
31	RECEPTACLE PATIENT ROOM 02-1B113	20 A	1	360 VA	720 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B112	32
33	RECEPTACLE PATIENT ROOM 02-1B113	20 A	1		720 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B112	34
35	RECEPTACLE PATIENT TOILET 02-1B111A	20 A	1			180 VA	180 VA	1	20 A	RECEPTACLE PATIENT TOILET 02-1B110A	36
37	RECEPTACLE PATIENT ROOM 02-1B111	20 A	1	360 VA	720 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B110	38
39	RECEPTACLE PATIENT ROOM 02-1B111	20 A	1		720 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B110	40
41	RECEPTACLE BREAK ROOM 02-1B068	20 A	1			900 VA	720 VA	1	20 A	RECEPTACLE ROOM 02-1B137.1, 02-1B075,...	42
43	RECEPTACLE TRAUMA 02-1B109	20 A	1	360 VA	720 VA		1	20 A	RECEPTACLE SHARED OFFICE 02-1B080	44
45	RECEPTACLE TRAUMA 02-1B109	20 A	1		540 VA	540 VA	1	20 A	RECEPTACLE SHARED OFFICE 02-1B080	46
47	MFD SHARED OFFICE 02-1B080	20 A	1			180 VA	360 VA	1	20 A	RECEPTACLE SHARED OFFICE 02-1B080	48
49	RECEPTACLE SHARED OFFICE 02-1B080	20 A	1	360 VA	1080...		1	20 A	RECEPTACLE ROOM 02-1B082, 02-1B00P,...	50
51	RECEPTACLE SHARED OFFICE 02-1B080	20 A	1		540 VA	402 VA	1	20 A	MED ROOM 02-1B086	52
53	RECEPTACLE CLEAN ROOM 02-1B084	20 A	1			773 VA	540 VA	1	20 A	RECEPTACLE GARAGE 02-1B139	54
55	RECEPTACLE CLEAN ROOM 02-1B084	20 A	1	1058...	0 VA		1	20 A	SHADES ROOM 02-1B111, 02-1B110	56
57	REFRIGERATOR EMS BREAK 02-1B079	20 A	1		750 VA	0 VA	1	20 A	SHADES ROOM 02-1B112, 02-1B113	58
59	MICROWAVE EMS BREAK 02-1B079	20 A	1			1200...	0 VA	1	20 A	SPARE	60
61	RECEPTACLE EMS BREAK 02-1B079	20 A	1	720 VA	0 VA						62
63	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		64
65	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	66
67	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		68
69	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		70
71	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	72
73	SPARE	20 A	1	0 VA	0 VA		1	20 A	SPARE		74
75	SPARE	20 A	1		0 VA	0 VA	1	20 A	SPARE		76
77	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	78
79	SPARE	20 A	1	0 VA	0 VA						80
81	SPARE	20 A	1		0 VA	0 VA					82
83	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	84
			Total Load:	10259 VA	10656 VA	11014 VA					
			Total Amps:	85 A	89 A	92 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	168 VA	100.00%	168 VA	
Power	0 VA	0.00%	0 VA	**Total Conn. Load:** 31929 VA
Receptacle	31761 VA	65.74%	20880 VA	**Total Est. Demand:** 21048 VA
				Total Conn. Current: 89 A
				Total Est. Demand Current: 58 A

Notes:

Branch Panel: B1-31-LC

Location: SERVICE CORRIDOR 02-1B00J | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10K
Supply From: B1-29 | **Phases:** 3 | **Mains Type:** MCB
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: Type 1 | **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	RECEPTACLE FAST TRACK 1 02-1B070	20 A	1	360 VA	360 VA		1	20 A	RECEPTACLE FAST TRACK 4 02-1B073	2
3	MFD FAST TRACK NURSE STATION 02-1B069	20 A	1			1200...	360 VA	1	20 A	RECEPTACLE FAST TRACK 3 02-1B072	4
5	OMNICELL FAST TRACK NURSE STATION...	20 A	1				1000...	528 VA	1	20 A	UNIT HEATERS	6
7	RECEPTACLE FAST TRACK NURSE STATION...	20 A	1	360 VA	360 VA				1	20 A	RECEPTACLE EXAM ROOM 02-1B059	8
9	RECEPTACLE FAST TRACK NURSE STATION...	20 A	1			1380...	0 VA		1	20 A	RECEPTACLE TRAUMA 02-1B109	10
11	RECEPTACLE FAST TRACK 4 02-1B073	20 A	1				360 VA	180 VA	1	20 A	MFD RECEPTION 02-1B004	12
13	RECEPTACLE SPACE 02-1B00AA	20 A	1	360 VA	540 VA				1	20 A	RECEPTACLE SPACE 02-1B00AA	14
15	RECEPTACLE SPACE 02-1B00AA	20 A	1			360 VA	540 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B085	16
17	RECEPTACLE PATIENT ROOM 02-1B087	20 A	1				360 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B085	18
19	RECEPTACLE PATIENT ROOM 02-1B087	20 A	1	360 VA	360 VA				1	20 A	RECEPTACLE PATIENT ROOM 02-1B085	20
21	RECEPTACLE PATIENT ROOM 02-1B087	20 A	1			360 VA	540 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B083	22
23	RECEPTACLE PATIENT ROOM 02-1B081	20 A	1				540 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B083	24
25	RECEPTACLE PATIENT ROOM 02-1B081	20 A	1	360 VA	360 VA				1	20 A	RECEPTACLE PATIENT ROOM 02-1B083	26
27	RECEPTACLE PATIENT ROOM 02-1B081	20 A	1			180 VA	540 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B113	28
29	RECEPTACLE PATIENT ROOM 02-1B112	20 A	1				540 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B113	30
31	RECEPTACLE PATIENT ROOM 02-1B112	20 A	1	360 VA	360 VA				1	20 A	RECEPTACLE PATIENT ROOM 02-1B113	32
33	RECEPTACLE PATIENT ROOM 02-1B112	20 A	1			360 VA	540 VA		1	20 A	RECEPTACLE PATIENT ROOM 02-1B111	34
35	RECEPTACLE PATIENT ROOM 02-1B110	20 A	1				540 VA	360 VA	1	20 A	RECEPTACLE PATIENT ROOM 02-1B111	36
37	RECEPTACLE PATIENT ROOM 02-1B110	20 A	1	360 VA	360 VA				1	20 A	RECEPTACLE PATIENT ROOM 02-1B111	38
39	RECEPTACLE PATIENT ROOM 02-1B110	20 A	1			360 VA	750 VA		1	20 A	ICE/WATER BREAK ROOM 02-1B068	40
41	SPACE	--	--				0 VA	2222...	1	20 A	BLANKET WARMER CLEAN ROOM 02-1B084	42
43	RECEPTACLE TRAUMA 02-1B109	20 A	1	360 VA	1200...				1	20 A	PLUGMOLD CLEAN ROOM 02-1B084	44
45	RECEPTACLE TRAUMA 02-1B109	20 A	1			360 VA	180 VA		1	20 A	RECEPTACLE MED ROOM 02-1B086	46
47	RECEPTACLE MED ROOM 02-1B086	20 A	1					180 VA	540 VA	1	20 A	RECEPTACLE MED ROOM 02-1B086	48
49	HELIPAD LIGHTING CONTROLS GARAGE...	20 A	1	0 VA	200 VA						50
51	AMBULANCE GARAGE DOOR 02-1B139	20 A	1			0 VA	180 VA		1	20 A	AMBULANCE GARAGE DOOR 02-1B139	52
53	AMBULANCE GARAGE DOOR 02-1B139	20 A	1				0 VA	180 VA	1	20 A	RECEPTACLE GARAGE 02-1B139	54
55	AMBULANCE GARAGE DOOR 02-1B139	20 A	1	0 VA	180 VA						56
57	RECEPTACLE ROOM C-5, C-4	20 A	1			540 VA	0 VA		1	20 A	SPARE	58
59	SPARE	20 A	1				0 VA	0 VA	1	20 A	SPARE	60
61	SPARE	20 A	1	0 VA	0 VA				1	20 A	SPARE	62
63	SPARE	20 A	1			0 VA	0 VA		1	20 A	SPARE	64
65	SPARE	20 A	1				0 VA	0 VA	1	20 A	SPARE	66
67	SPARE	20 A	1	0 VA	0 VA				1	20 A	SPARE	68
69	SPARE	20 A	1			0 VA	0 VA		1	20 A	SPARE	70
71	SPARE	20 A	1				0 VA	0 VA	1	20 A	SPARE	72
73	SPARE	20 A	1	0 VA	0 VA				1	20 A	SPARE	74
75	SPARE	20 A	1			0 VA	0 VA		1	20 A	SPARE	76
77	SPARE	20 A	1				0 VA	0 VA	1	20 A	SPARE	78
79	SPARE	20 A	1	0 VA	0 VA				1	20 A	SPARE	80
81	SPARE	20 A	1			0 VA	0 VA		1	20 A	SPARE	82
83	SPARE	20 A	1				0 VA	0 VA	1	20 A	SPARE	84
			Total Load:	7160 VA		8730 VA		8610 VA			
			Total Amps:	60 A		75 A		74 A			

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Other	728 VA	100.00%	728 VA	
Power	0 VA	0.00%	0 VA	**Total Conn. Load:** 24500 VA
Receptacle	23772 VA	71.03%	16886 VA	**Total Est. Demand:** 17614 VA
				Total Conn. Current: 68 A
				Total Est. Demand Current: 49 A

Notes:

Distribution Panel: DP-BP-32-HA

Location: PENTHOUSE 02-2B100 | **Volts:** 480/277 Wye | **A.I.C. Rating:** 22K
Supply From: ATS-21 | **Phases:** 3 | **Mains Type:** MCB
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 250 A
Enclosure: Type 1 | **MCB Rating:** 250 A

Notes:
1. FURNISH WITH MAXIMUM HEIGHT ENCLOSURE WITH FULL BUSSING. ANY EXTRA SPACE WITHIN PANEL SHALL VE EQUIPPED WITH PROVISIONS FOR FUTURE SWITCHES.
2. FURNISH WITH INTEGRAL SURGE SUPPRESSION AND DISCONNECT SWITCH FOR SAME.

CKT	Circuit Description	# of Poles	Switch Size	Fuse Size	Apparent Load	Wire and Conduit Size
1	AHU B-5 RETURN FANWALL	3	60 A	40 A	11340 VA	3-#8W, 1-#10 GND IN 1"C
2	AHU B-5 SUPPLY FANWALL	3	100 A	100 A	28296 VA	3-#1W, 1-#8 GND IN 1-1/2"C
3	EF B-14	3	15 A	15 A	1745 VA	3-#12W, 1-#12 GND IN 3/4C
4	AIR CURTAIN VESTIBULE 02-1B140	3	20 A	20 A	1000 VA	3-#12W, 1-#12 GND IN 3/4"C
5						
6						
7						
8						
9						
10						
11						
12	TVSS	--	--	--	--	--
					42381 VA	
				Total Amps:	51 A	

Legend:

TRANSFER SWITCH SCHEDULE

DESIGN.	EQUIPMENT SERVED	SIZE (AMPACITY)	POLES	TRANSITION	PRIORITY	LOAD SHEDDING
ATS -20	DP-B1-27-HC	250	4 POLE	CLOSED W/ BYPASS ISOLATION	2	MANUAL
ATS-21	DP-BP-32-HA	250	4 POLE	CLOSED W/ BYPASS ISOLATION	3	

BRUCE ELDON HART — NUMBER E-22817 — STATE OF MISSOURI — PROFESSIONAL ENGINEER
3-30-2020
Bruce E. Hart - Engineer
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Licensee's Certificate of Authority Number:

MEP CONSULTANT
W.L. Cassell & Associates, Inc. now IMEG
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Licensee's Certificate of Authority Number: 000396

Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	Author
Checked By	Checker

Revision

Number	Date	Description
1	4.10.20	ADDENDUM 1

E4.1

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ELECTRICAL SCHEDULES

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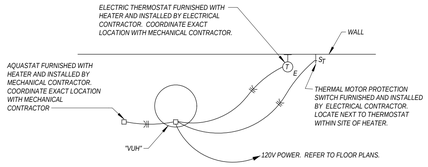
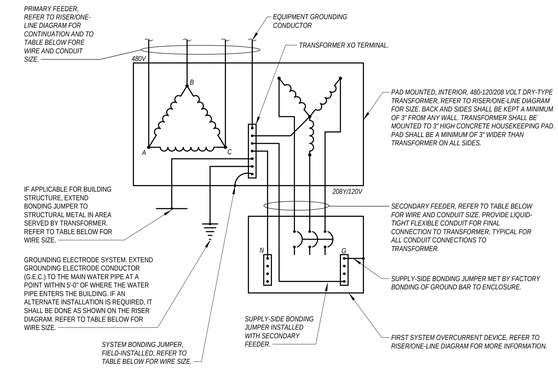


NOTES:

1. ALL WIRING SHALL BE FURNISHED AT EACH LOCATION DESIGNATED WITH "VUH" ON ELECTRICAL PLANS. ALL WIRING SHOWN IN THIS DETAIL IS NOT SHOWN ON THE ELECTRICAL PLANS BUT SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR.
2. COORDINATE LOCATION OF ALL DEVICES WITH ALL OTHER TRADES.

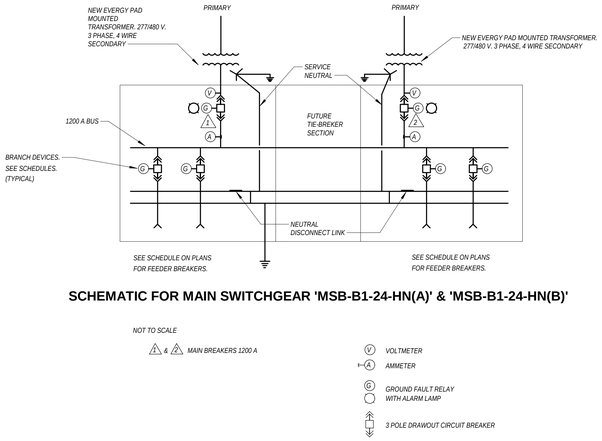
1 VUH DETAIL



TRANSFORMER SIZE (KVA)	PRIMARY O.C. (AMPS) 1	PRIMARY FEEDER SIZE (WIRE, EQUIPMENT GROUND WIRE, CONDUIT) 2	SECONDARY O.C. (AMPS) 3	SECONDARY FEEDER SIZE (WIRE, SUPPLY-SIDE BONDG JUMPER, CONDUIT)	GROUNDING ELECTRODE CONDUCTOR (G.E.C.) SIZE (WIRE, CONDUIT) 2	SYSTEM AND STRUCTURAL METAL BONDG JUMPER SIZE (WIRE, CONDUIT) 2
15	25	3-#10 W, 1-#10 GND IN 3/4" C.	50	4-#6 W, 1-#8 GND IN 1" C.	#8 GND IN 3/4" C.	#8 GND IN 3/4" C.
30	50	3-#6 W, 1-#10 GND IN 1" C.	100	4-#1 W, 1-#6 GND IN 1-1/2" C.	#6 GND IN 3/4" C.	#6 GND IN 3/4" C.
45	70	3-#4 W, 1-#8 GND IN 1" C.	150	4-#1/0 W, 1-#6 GND IN 2" C.	#6 GND IN 3/4" C.	#6 GND IN 3/4" C.
75	125	3-#1 W, 1-#6 GND IN 1-1/2" C.	250	4-#250 MCM W, 1-#2 GND IN 3" C.	#2 GND IN 3/4" C.	#2 GND IN 3/4" C.
112.5	175	3-#2/0 W, 1-#6 GND IN 2" C.	400	2 SETS OF: 4-#3/0 MCM W, 1-#6 GND IN 2" C.	#1/0 GND IN 3/4" C.	#1/0 GND IN 3/4" C.
150	225	3-#4/0 W, 1-#4 GND IN 2" C.	500	2 SETS OF: 4-#250 MCM W, 1-#4 GND IN 2" C.	#1/0 GND IN 3/4" C.	#1/0 GND IN 3/4" C.
225	350	3-#500 MCM W, 1-#3 GND IN 4" C.	800	3 SETS OF: 4-#400 MCM W, 1-#3 GND IN 3" C.	#2/0 GND IN 3/4" C.	#2/0 GND IN 3/4" C.
300	450	2 SETS OF: 3-#4/0 W, 1-#2 GND IN 2 1/2" C.	1000	3 SETS OF: 4-#500 MCM W, 1-#1/0 GND IN 4" C.	#3/0 GND IN 3/4" C.	#4/0 GND IN 3/4" C.
500	700	2 SETS OF: 3-#500 MCM W, 1-#1/0 GND IN 4" C.	1600	5 SETS OF: 4-#500 MCM W, 1-#1/0 GND IN 4" C.	#3/0 GND IN 3/4" C.	#350 MCM GND IN 1" C.

TABLE NOTES:
1. REFER TO RISER DIAGRAM FOR LOCATION OF THE PRIMARY OVER-CURRENT PROTECTION DEVICE.
2. MINIMUM WIRE, GROUND WIRE AND CONDUIT SIZES. LARGER SIZES, IF REQUIRED, SHALL BE NOTED ON RISER DIAGRAM.
3. THE SECONDARY OVER-CURRENT PROTECTION DEVICE SHALL BE LOCATED WITHIN 10'-0" OF THE TRANSFORMER PER THE NEC.

2 DETAIL OF 480-120/208 VOLT TRANSFORMER INSTALLATION



SCHEMATIC FOR MAIN SWITCHGEAR 'MSB-B1-24-HN(A)' & 'MSB-B1-24-HN(B)'

NOT TO SCALE

1 & 2 MAIN BREAKERS 1200 A

V VOLTMETER

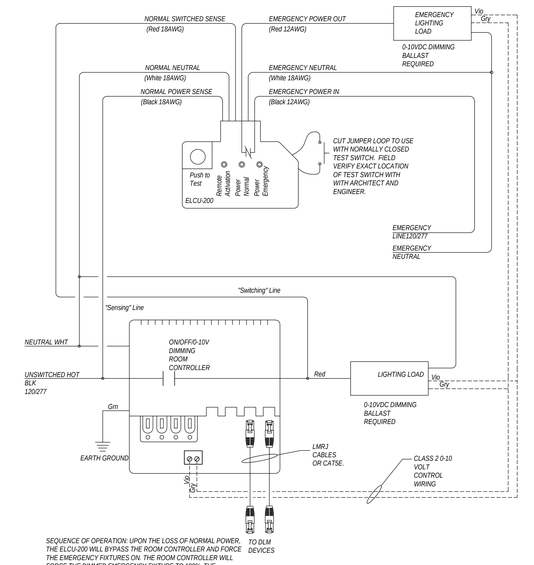
A AMMETER

G GROUND FAULT RELAY WITH ALARM LAMP

3 POLE DRAWOUT CIRCUIT BREAKER

NOTE: EVERGY METERING TO BE LOCATED AT BUILDING ENTRANCE.

3 SWITCHGEAR DETAIL



SEQUENCE OF OPERATION: UPON THE LOSS OF NORMAL POWER, THE ELCU-200 WILL BYPASS THE ROOM CONTROLLER AND FORCE THE EMERGENCY FIXTURES ON. THE ROOM CONTROLLER WILL FORCE THE DIMMED EMERGENCY FIXTURE TO 100%. THE ELCU-200 IS UL924 LISTED.

4 DETAIL OF ELCU-200 EMERGENCY LIGHTING RELAY

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PROFESSIONAL ENGINEER
3-30-2020
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Saint Luke's East Hospital
Flex Capacity Expansion
100 NE Saint Luke's Blvd
Lee's Summit, MO 64086

Date	03.30.2020
Job Number	3-19092
Drawn By	LLD
Checked By	BEH

Revision

Number	Date	Description

E5.0

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ELECTRICAL DETAILS

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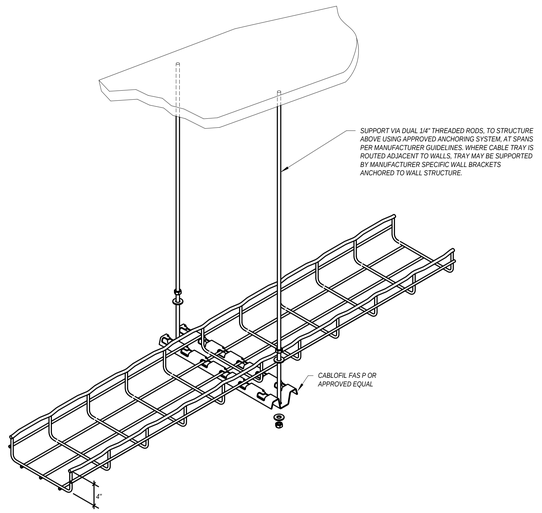
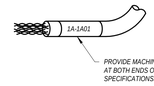
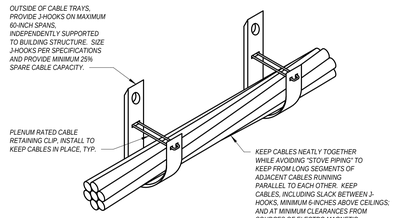


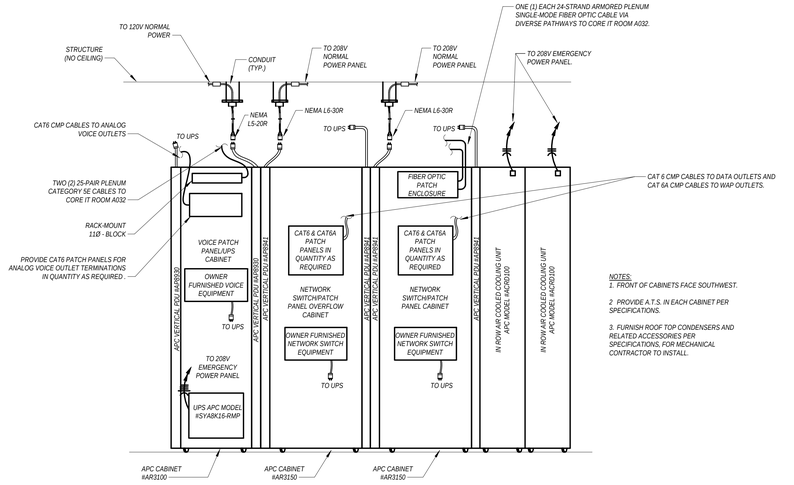
8 DETAIL OF CABLE TRAY SUPPORT
N.T.S.



4 CABLE LABELING DETAIL
N.T.S.

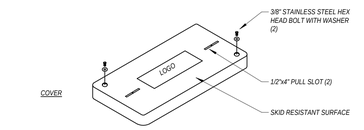


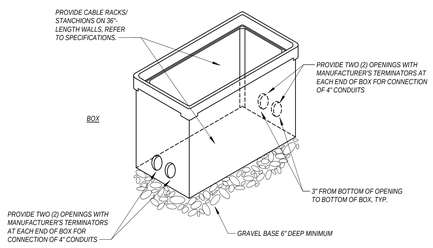
5 CABLE SUPPORT DETAIL
N.T.S.



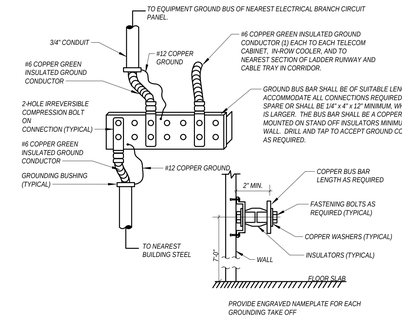
NOTES:
1. FRONT OF CABINETS FACE SOUTHWEST.
2. PROVIDE A T.S. IN EACH CABINET PER SPECIFICATIONS.
3. FURNISH ROOF TOP CONDENSERS AND RELATED ACCESSORIES PER SPECIFICATIONS. FOR MECHANICAL CONTRACTOR TO INSTALL.

1 I.T. ROOM ELEVATION
N.T.S.

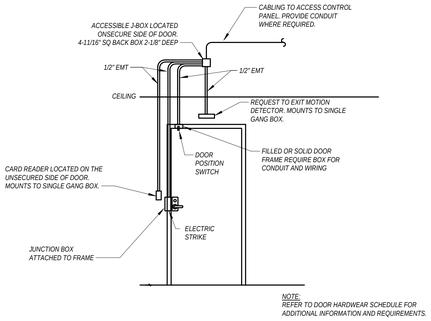




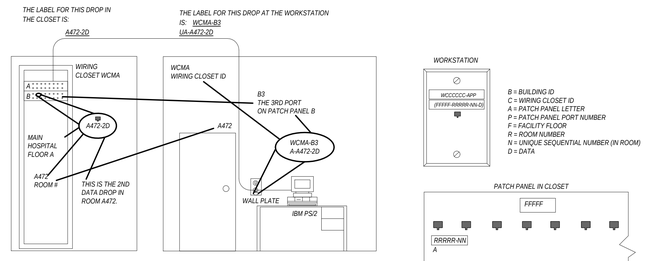
9 COMMUNICATIONS HANDHOLE DETAIL
N.T.S.



6 TELECOMMUNICATION GROUND BUSBAR (TGB)
N.T.S.



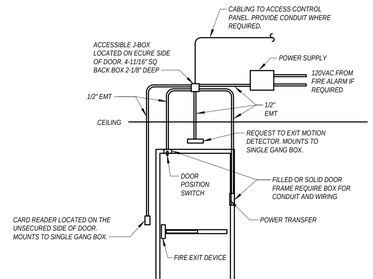
2 DETAIL OF TYPICAL ACCESS CONTROL DOOR WITH ELECTRIC STRIKE
N.T.S.



WORKSTATION
THE WORKSTATION LABEL WILL BE BASED ON THE LOCATION OF THE DESTINATION IN THE WIRING CLOSET. THE LABEL WILL BE PREFIXED WITH THE WIRING CLOSET IDENTIFICATION. THIS IDENTIFICATION IS CROSS REFERENCED IN AN ATTACHED DOCUMENT. A DASH WILL SEPARATE THE PREFIX FROM THE SUFFIX. THE SUFFIX WILL CONSIST OF THE DESTINATION PATCH PANEL LETTER. THE PATCH PANEL LETTER IS DETERMINED BY A LABEL ON THE PATCH PANEL IN THE WIRING CLOSET. THE REMAINDER OF THE SUFFIX WILL CORRESPOND WITH THE PORT NUMBER ON THE PATCH PANEL IN THE WIRING CLOSET.

WIRING CLOSET
THE WIRING CLOSET LABEL WILL BE BASED ON THE LOCATION OF THE DESTINATION ROOM. THE LABEL WILL BE PREFIXED WITH THE ROOM NUMBER. A DASH WILL SEPARATE THE PREFIX FROM THE SUFFIX. THE SUFFIX IS DETERMINED BY THE NUMBER OF DROPS IN THE ROOM. THIS NUMBER IS CONVERTED INTO AN ALPHABETIC REPRESENTATION I.E. A=1, B=2 AND C=3.

7 TYPICAL SLHS DATA CABLE LABELING STANDARD
N.T.S.



3 DETAIL OF TYPICAL ACCESS CONTROL DOOR WITH FIRE EXIT DEVICE
N.T.S.

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COMMUNICATIONS DETAILS

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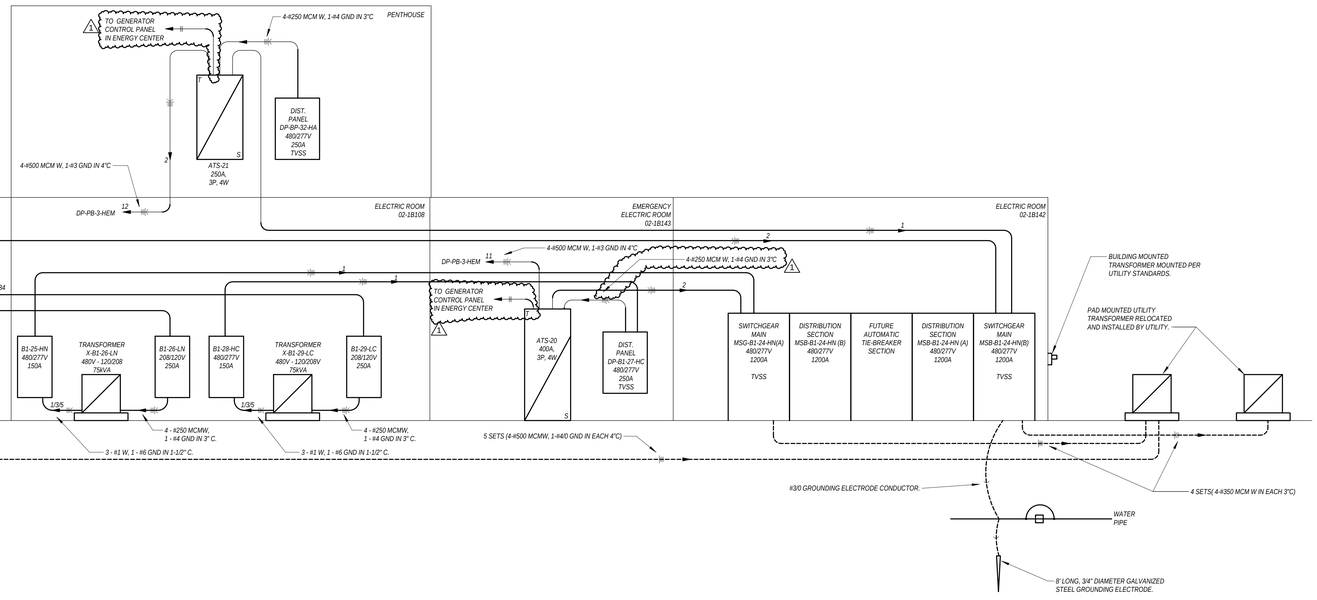

NOTE: REFER TO ELECTRICAL PANEL SCHEDULES FOR FEEDER SIZES NOT INDICATED ON RISER DIAGRAM.

PARTIAL BUILDING 'B' ELECTRICAL RISER DIAGRAM

SCALE:N.T.S.

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ELECTRICAL RISER DIAGRAM

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