

IUB RESEARCH LAB RENOVATIONS

CLIENT PROJECT NO. - 20240397

INDIANA UNIVERSITY BLOOMINGTON

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

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MARK	DATE	DESCRIPTION
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BIDDING SET
JANUARY 9, 2025

COVER SHEET

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729 E 3RD ST, BLOOMINGTON, IN 47405
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MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2

But q. du

DATE	
BSALS PROJECT NO.	00360477

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ARCHITECTURAL GENERAL NOTES

- | | |
|----|---|
| A. | VERIFY WITH OWNER REQUIREMENTS FOR EQUIPMENT (MOUNTING HEIGHTS, LOCATIONS AND SIZES) INCLUDING OWNER FURNISHED EQUIPMENT INSTALLED ITEMS. |
| B. | VERIFY EXISTING CONDITIONS PRIOR TO ANY FABRICATION OR CONSTRUCTION, IF EXISTING CONDITIONS ARE DIFFERENT THAN SHOWN, NOTIFY ARCHITECT/ENGINEER IMMEDIATELY. |
| C. | FRAMING OF CEILING SHALL BE IN ACCORDANCE WITH SECTION 05 00 00 SHALL BE FIREPROOFED IN ACCORDANCE WITH SPECIFICATION SECTION 07 8100. |
| D. | ADVISE ARCHITECT WHERE 16" MINIMUM ADA REQUIRED CLEARENCE ADJACENT TO STRIKE OF DOOR ON SWING SIDE OF DOOR & 12" MINIMUM ON OPPOSITE SIDE OF DOOR CANNOT BE PROVIDED. |
| E. | REFER TO MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZES AND LOCATIONS OF EQUIPMENT PADS. |
| F. | VERIFY FINAL LOCATION OF PUSH PADS, CARD READERS AND TOUCHLESS ACTUATORS WITH OWNER BEFORE INSTALLATION. |
| G. | VERIFY LOCATIONS OF ALL WALL AND CEILING MATERIAL, TILE CEILINGS IN ISOLATION AND PROCEDURE ROOMS. |

	NEW GRIDLINE
	GRID DESIGNATION
	EXISTING GRIDLINE
	EXTERIOR ELEVATION SYMBOL
	BUILDING SECTION SYMBOL
	WALL SECTION SYMBOL
	INTERIOR ELEVATION SYMBOL (MULTIPLE)
	INTERIOR ELEVATION SYMBOL
	INTERIOR SECTION SYMBOL
	DETAIL SECTION SYMBOL
	ENLARGED PLAN AND PLAN DETAIL CALLOUT
	ROOM TAG
	INTERIOR PARTITION TAG
	BUILDING ASSEMBLY TAG
	TOILET ACCESSORY TAG
	WINDOW TAG
	DOOR TAG
	ACTUATOR CONTROL TAG
	MATERIAL TAG
	REVISION CLOUD TAG
	REVISION CLOUD

1 / A101 ← MATCHLINE

LEVEL 1
14'-8" ← LEVEL SYMBOL

1
A101 VIEW NAME
1/8" = 1'-0" ← VIEW TITLE

← NORTH ARROW

NOTE: NOT ALL ABBREVIATIONS USED ON PROJECT

ACE	ARCHITECT/ENGINEER			RB	RESILIENT BASE
ACT	ACoustICAL CEILING TILE	GA	GLASS	RCP	REFLECTED CEILING PLAN
ADA	AMERICAN WITH DISABILITIES ACT	GLV	GLASS (VANNE/ED)	RCP	RECEPTION
ADH	ADHESIVE	GL	GLASS	RO	ROOF DRAIN
ADJ	ADJACENT	GLT	GLASS TILE	REBAR	REINFORCING STEEL BARS
AFF	ACCESS FLOORING	GLZ	GLASS	REC	RECESSED
AHU	AIR HANDLING UNIT	GYP	GYP SUM	RECP	RECEP
ALT	ALTERNATE	GYP BD	GYP SUM BOARD	REF	REFERENCE (REFER TO)
AL	ALUMINUM			REG	REGISTER
ALUM	ALUMINUM	H	HIGH	REIN	REINFORCEMENT
ANOD	ANODIZED	HAZ	HAZARD	RECO	REQUIRED
APPROX	APPROXIMATELY	HCP	HANDICAPPED	REST	RESTROOM
ARCH	ARCHITECT(TURAL)	HCP	HANDICAPPED	REV	REVISION
AUTO	AUTOMATIC	HOW	HOLLOW	RF	RUBBER FLOORING
		HO	HOLD OPEN	RFI	REQUEST FOR INFORMATION
		HORIZ	HORIZONTAL	RO	ROOM
		HOURS	HOURS (IF FIRE RESISTANCE RATING), OR HANDRAIL	RO	ROOM OPENING
		HSPKG	HOUSEKEEPING	RS	ROLLER SHADE
		HT	HEIGHT	RS	RESILIENT STAIR TREAD
BL	BLINDS				
BLDG	BUILDING				
BLKHD	BULKHEAD				
BOT	BOTTOM	IBC	INTERNATIONAL BUILDING CODE		
BR	BUMP RAIL	IDN	INSIDE DIAMETER (DIMENSION)	S	SOUTH
BSMT	BASEMENT	IDEN	IDENTIFICATION	SC	SEALED CONCRETE
BTWN	BETWEEN	INFO	INFORMATION	SCWD	SOLID CORE WOOD DOOR
		INSUL	INSULATION	SDT	STATIC DISSIPATIVE TILE
		INT	INTERIOR	SF	SQUARE FOOT (FEET)
				SGD	SLIDING GLASS DOOR
				SGL	SINGLE
CC	CUBICLE CURTAIN	LAV	LAVATORY	SHR	SHOWER
CFCI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED	LBS	POUNDS	SHM	SHIM
CFOI	CONTRACTOR FURNISHED/OWNER INSTALLED	LED	LIGHT EMITTING DIODE	SPEC	SPECIFICATION
CS	CORNER GUARD	LSF	LIQUOLEUM SHEET FLOORING	SPKR	SPEAKER
CJ	CONTROL JOINT	LTF	LIQUOLEUM TILE FLOORING	SQ	SQUARE
CL	CENTER LINE	LVT	LUXURY VINYL TILE	SS	SOLID SURFACE
CLG	CEILING	LWC	LIGHTWEIGHT CONCRETE	SST	STAINLESS STEEL
CLR	CLEARANCE			STC	SOUND TRANSMISSION CLASS
CMU	CONCRETE MASONRY UNIT			STD	STANDARD
COL	COLUMN	MATL	MATERIAL	STL	STEEL
CONC	CONCRETE	MAXIM	MAXIMUM	STOR	STORAGE
CONST	CONSTRUCTION	MB	MARKER BOARD	STRUCT	STRUCTURE(AL)
COORD	COORDINATE	MECH	MECHANICAL	SUB	SUBSTITUTE
CORR	CORRIDOR	MEP	MECHANICAL, ELECTRICAL AND PLUMBING	SV	SHEET VINYL
CPT	CARPET	MFD	MANUFACTURED		
CR	CARD READER, CRASH RAIL OR CHAIR RAIL	MFG	MANUFACTURING		
CS	CAST STONE OR CULTURED STONE	MFR	MANUFACTURER	T/	TOP OF
CT	CERAMIC TILE	MIN	MINIMUM	TA	TOUCHLESS ACTUATOR
CTB	CERAMIC TILE BASE	MISC	MISCELLANEOUS	TB	TACKBOARD
CTR	CENTER	MOS	MOSAIC OPENING	TEL	TELEPHONE
CURT	CURTAIN	MT	MOSAIC TILE	TEMP	TEMPORARY (TEMPERATURE)
CWT	CERAMIC WALL TILE	MTD	MOUNTED	TF	TACKABLE FABRIC
		METAL	METAL	THK	THICKNESS
				THRU	THROUGH
				TOC	TOP OF CONCRETE
D	DEPTH (DEEP)	N	NORTH	TOS	TOP OF STEEL
DAFS	DIRECT APPLIED FINISH SYSTEM	NOM	NOMINAL	TS	TUBE STEEL
DEMO	DEMOLITION	NTS	NOT TO SCALE	TSTAT	THERMOSTAT
DEPT	DEPARTMENT			TV	TELEVISION
DF	DRINKING FOUNTAIN			TYP	TYPICAL
DG	DECORATIVE GLASS			TZ	TERRAZZO FLOORING
DIA	DIAMETER			TZB	TERRAZZO BASE
DIAL	DIAGONAL	OC	ON CENTER		
DM	DIMENSION	OD	OUTSIDE DIAMETER (DIMENSION)		
DISP	DISPENSER	OFOI	OWNER FURNISHED/CONTRACTOR INSTALLED		
DN	DOWN	OFOI	OWNER FURNISHED/OWNER INSTALLED	UL	UNDERWRITER'S LABORATORIES
DP	DECORATIVE PANEL	OH	OPPOSITE HAND		UNLESS NOTED OTHERWISE
DR	DOOR	OH DR	OVERHEAD (COLING) DOOR	UTIL	UTILITY
DTL	DETAIL	OPNG	OPENING		
DWG	DRAWING	OPP	OPPOSITE		
DWGS	DRAWINGS	OR	OPERATING ROOM		
		ORIG	ORIGINAL		
		OVHD	OVERHEAD	VAR	VARIES
E	EAST			VB	VINYL BASE
EA	EACH			VCT	VINYL COMPOSITION TILE
ECT	ET EXTERIA (AND SO FORTH)			VERT	VERTICAL
EFS	ET FTERIA (AND SO FORTH)	P	PAINT	VEST	VESTIBULE
EJ	EXPANSION JOINT	PB	PUSH BUTTON	VE	VINYL ENHANCED TILE
EL	ELEVATION	PERF	PERFORATED	VF	VINYL IN FIELD
ELEC	ELECTRICAL	PL	PROPERTY LINE, OR PLASTIC LAMINATE	VWC	VINYL WALL COVERING
ELEV	ELEVATOR	PLAM	PLASTIC LAMINATE		
ENGR	ENGINEER	PLBG	PLUMBING		
ENG	ENGINEERING	PLYWD	PLYWOOD		
EOS	EDGE OF SLAB	PME	PAINT OR PATCH TO MATCH EXISTING		
EP	EPOXY PAINT	PNEU	PNEUMATIC	W	WEST (WIDE)
EPO	EMERGENCY POWER OFF	PP	PUSH/PULL (PUSH PAD)	W/	WITH
EQ	EQUAL	PR	PAIR	W/O	WITHOUT
EQUIP	EQUIPMENT	PREFAB	PREFABRICATE	WO	WOOD
ETR	EXISTING TO REMAIN	PREP	PREPARATION	WOW	WINDOW
EW	ELECTRIC WATER COOLER	PREV	PREVIOUS	WF	WIDE FLANGE
EWS	EYE WASH STATION	PREV	PREVIOUS PER SQUARE INCH	WM	WALK-OFF MAT
EXH	EXHAUST	PT	PORCELAIN TILE	WPT	WORKING POINT
EXIST	EXISTING	PTB	PORCELAIN TILE BASE	WR	WEATHER RESISTANT
		PTN	PARTITION	WT	WEIGHT
		FWR	WATER	WWV	WOOD VENEER WALL COVERING
				WWF	WELDED WIRE FABRIC
FB	FABRIC	QT	QUARRY TILE		
FD	FLOOR DRAIN	QTY	QUANTITY		
FOTN	FOUNDATION	OZ	QUARTZ SURFACE		
FE	FIRE EXTINGUISHER				
FEC	FIRE EXTINGUISHER CABINET				
FF	FINISH FACE				
FIXT	FIXTURE				
FLR	FLOOR				
FP	FIREPROOF				
FRP	FIBER REINFORCED PANEL				
FRMG	FRAMING				
FTNR	FASTENER				
FT	FOOT (FEET)				
FTG	FOOTING				
FURN	FURNITURE				
FWC	FABRIC WALLCOVERING				

FINISH SCHEDULE - INTERIOR

SPECIFICATION SECTION	MARK	DESCRIPTION	MANUFACTURER	STYLE/MODEL	COLOR	SIZE	COMMENTS	CONTACT
CONCRETE FLOOR FINISH								
	SC1	CONCRETE FLOOR FINISH, HIGH GLOSS CLEAR SEALER						
PAINTS AND COATINGS								
09 9000	P1	PAINT	SHERWIN WILLIAMS	SW 7042	SHOJI WHITE			KAREN GALVIN: KAREN.E.GALVIN@SHERWIN.COM
09 9000	P2	PAINT	SHERWIN WILLIAMS	SW 7005	PURE WHITE			KAREN GALVIN: KAREN.E.GALVIN@SHERWIN.COM
09 9000	P3	PAINT	TBD (MATCH SIMON)	TBD (MATCH SIMON)	TBD (MATCH SIMON)			KAREN GALVIN: KAREN.E.GALVIN@SHERWIN.COM
09 9000	P4	PAINT	SHERWIN WILLIAMS	SW 7046	ANONYMOUS			KAREN GALVIN: KAREN.E.GALVIN@SHERWIN.COM
09 9000	P5	PAINT	SHERWIN WILLIAMS	SW 7675	SEALSKIN			KAREN GALVIN: KAREN.E.GALVIN@SHERWIN.COM
09 9000	P6	PAINT	TBD (MATCH SIMON FRAMES)	TBD (MATCH SIMON FRAMES)	TBD (MATCH SIMON FRAMES)			KAREN GALVIN: KAREN.E.GALVIN@SHERWIN.COM
RESILIENT BASE								
09 6500	RB1	RESILIENT BASE	ROPPE	THERMOSET RUBBER COVE BASE	129 DOLPHIN	4" H		JOE TUFFNER: 830 947 8854
09 6500	RB2	RESILIENT BASE	TARKETT	THERMOSET RUBBER COVE BASE	63 BURNT UMBER	4" H		DOUG EDWARDS: DOUG.EDWARDS@TARKETT.COM
09 6500	RB3	RESILIENT BASE	TBD (MATCH SIMON)	TBD (MATCH SIMON)	TBD (MATCH SIMON)	TBD (MATCH SIMON)		
RESILIENT FLOORING								
09 6500	LYT1	LUXURY VINYL TILE	TBD (MATCH CHEMISTRY)	TBD (MATCH CHEMISTRY)	TBD (MATCH CHEMISTRY)	TBD (MATCH CHEMISTRY)		
09 6500	RF1	RUBBER SHEET FLOORING	NORA SYSTEMS	6506	CASHMERE	3.0MM THICK, 48" WIDE SHEET		ROB GROM: ROB.GROM@NORA.COM
09 6500	RF2	VINYL SHEET FLOORING	TARKETT	IQ OPTIMA	205 SOFT WARM WHITE	2.0MM THICK, 2M WIDE SHEET		DOUG EDWARDS: DOUG.EDWARDS@TARKETT.COM
09 6500	RF3	VINYL SHEET FLOORING	TBD (MATCH SIMON)	TBD (MATCH SIMON)	TBD (MATCH SIMON)	TBD (MATCH SIMON)		
09 6500	SDT1	STATIC DISSIPATIVE TILE	TARKETT	IQ GRANIT SD	0395 LIGHT GREY	24" X 24"		DOUG EDWARDS: DOUG.EDWARDS@TARKETT.COM
09 6500	VCT1	VINYL COMPOSITION TILE	TARKETT	VCT II	325 DUNES CB	12" X 12"		DOUG EDWARDS: DOUG.EDWARDS@TARKETT.COM
TILE CARPETING								
06 6813	CPT1	CARPET TILE	TARKETT	ACCENTUATE SERIES 04119 ESPARTO	45206 BARK CLOTH	24" X 24"	MONOLITHIC INSTALLATION, RUNNING NORTH/SOUTH U.N.O.	DOUG EDWARDS: DOUG.EDWARDS@TARKETT.COM
WALL PROTECTION								
10 2600	CG1	CORNER GUARD	CONSTRUCTION SPECIALTIES	CO-8	STAINLESS STEEL	2" WING, 7'-2" TO TOP (6'-10" UNIT HEIGHT)		AMY BAKER FEHRBACH: Amy@wmbakero.com, 317 407 2534

CEILING SCHEDULE

TYPE MARK	DESCRIPTION	BASIS OF DESIGN MANUFACTURER	CEILING TYPE				SUSPENSION SYSTEM			
			STYLE NAME	MODEL #	SIZE	COLOR	GRID SYSTEM		SIZE	COLOR
ACT-1	ACOUSTICAL TILE CEILING SYSTEM	USG INTERIORS, INC.	PREMER HI-LITE CLIMAPLUS	1057G	2 X 2	WHITE	ARMSTRONG PRELUDE 1516"		2 X 2	WHITE

4 BASE DETAIL - INTEGRAL COVER
A000 3" = 1'-0"

RESILIENT

METAL TRANSITION STRIP (SCHLUTER-SCHIENE, OR EQUAL)

RESILIENT

CONCRETE SLAB - LEVEL AS REQUIRED

PROVIDE TROWELABLE UNDERLAYMENT AS REQUIRED TO ALLOW FOR FLUSH AND LEVEL TRANSITION.

3 FLOOR TRANSITION - RESILIENT TO RESILIENT 03
A000 6" = 1'-0"

Diagram illustrating a floor transition detail. The components shown are:

- RESILIENT
- METAL TRANSITION STRIP (SCHLUTER-SCHIENE, OR EQUAL)
- CARPET
- CONCRETE SLAB - LEVEL AS REQUIRED

PROVIDE TROWELABLE UNDERLAYMENT AS REQUIRED TO ALLOW FOR FLUSH AND LEVEL TRANSITION.

2 FLOOR TRANSITION - RESILIENT TO CARPET 02
A000 6" = 1'-0"

Diagram illustrating the placement of a resilient reducer strip (Tarket or equal, color TBD) and resilient material at a concrete slab joint. The concrete slab is shown at the required level. The resilient material is placed on top of the resilient reducer strip.

1 FLOOR TRANSITION - CONCRETE TO RESILIENT 01
A000 6" = 1'-0"

1/24/2025 1:53:28 PM Autodesk Docs:00360477 - IUB Research Lab Renovations:00360477-CHEN_ARCH_BSALS_A002

FIRE RATING
0 B3S

DESCRIBES FIRE RATING OF PARTITION.
0: NOT RATED
1: 1 HR RATED
2: 2 HR RATED
3: 3 HR RATED
P: SMOKE PARTITION
W: SMOKE BARRIER
X: 1 HR FIRE/SMOKE BARRIER
Y: 2 HR FIRE/SMOKE BARRIER
Z: 3 HR FIRE/SMOKE BARRIER

CONSTRUCTION
0 B 3S

DESCRIBES CONSTRUCTION OF PARTITION.
A: SINGLE LAYER OF GYPSUM BOARD ON ONE SIDE
B: SINGLE LAYER OF GYPSUM BOARD ON BOTH SIDES
C: DOUBLE LAYER OF GYPSUM BOARD ON ONE SIDE, SINGLE LAYER ON OTHER SIDE
D: DOUBLE LAYER OF GYPSUM BOARD ON BOTH SIDES
E: DOUBLE LAYER OF GYPSUM BOARD ON SINGLE SIDE
F: TRIPLE LAYER OF GYPSUM BOARD ON SINGLE SIDE
S: SHAFT WALL ASSEMBLY
M: MASONRY (CMU)
K: CONCRETE
V: VAPOR RETARDER ON INSIDE FACE, CONTINUE TO DECK ABOVE.

WIDTH
1B 3S

DESCRIBES WIDTH OF THE PRIMARY STRUCTURAL SYSTEM OF PARTITION.
0: 7/8"
1: 1 5/8"
2: 2 1/2"
3: 3 5/8"
4: 4"
6: 6" OR 5 5/8"
8: 8" OR 7 5/8"
10: 10"
12: 12" OR 11 5/8"
62: 6" WITH 2 1/2" DOUBLE STUDS
63: 6" WITH 3 5/8" STAGGERED STUDS

HEIGHT
0B3 S

DESCRIBES VERTICAL EXTENT & ACOUSTICAL ATTRIBUTES OF PARTITION.
S: EXTEND TO DECK OR STRUCTURE WITH ACOUSTICAL BATTS & SEALANT
D: EXTEND TO DECK OR STRUCTURE
C: PARTITION TO STOP 6" ABOVE FINISHED CEILING
P: PARTIAL HEIGHT WALL

INTERIOR PARTITION SCHEDULE								
TYPE	CONSTRUCTION				ACOUSTIC		COMMENTS	
	ASSEMBLY		THICKNESS	HEIGHT	STC	INSULATION		
	SURFACE 1	CORE						
0A1C	5/8" GYPSUM WALLBOARD	1 1/2" FURRING	-	2 1/4"	6" ABOVE CEILING	N/A	VARIES	
0A1VC	5/8" GYPSUM WALLBOARD	1 1/2" FURRING	-	2 1/4"	6" ABOVE CEILING	N/A	No	
0A2C	5/8" GYPSUM WALLBOARD	2 1/2" METAL STUD	-	3 1/8"	6" ABOVE CEILING	N/A	NO	
0A3C	5/8" GYPSUM WALLBOARD	3 5/8" METAL STUD	-	4 1/4"	6" ABOVE CEILING	N/A	VARIES	
0A3S	5/8" GYPSUM WALLBOARD	3 5/8" METAL STUD	-	4 1/4"	DECK/STRUCTURE	N/A	VARIES	
0A3VS	5/8" GYPSUM WALLBOARD	3 5/8" METAL STUD	-	4 1/4"	DECK/STRUCTURE	N/A	No	
0A6C	5/8" GYPSUM WALLBOARD	6" METAL STUD	-	6 5/8"	6" ABOVE CEILING	N/A	YES	
0A6S	5/8" GYPSUM WALLBOARD	6" METAL STUD	-	6 5/8"	DECK/STRUCTURE	N/A	No	
0B3C	5/8" GYPSUM WALLBOARD	3 5/8" METAL STUD	5/8" GYPSUM WALLBOARD	4 7/8"	6" ABOVE CEILING	VARIES	VARIES	
0B3D	5/8" GYPSUM WALLBOARD	3 5/8" METAL STUD	5/8" GYPSUM WALLBOARD	4 7/8"	DECK/STRUCTURE		NO	
0B3S	5/8" GYPSUM WALLBOARD	3 5/8" METAL STUD	5/8" GYPSUM WALLBOARD	4 7/8"	DECK/STRUCTURE	42	YES	
0B6C	5/8" GYPSUM WALLBOARD	6" METAL STUD	5/8" GYPSUM WALLBOARD	7 1/4"	6" ABOVE CEILING	43	YES	
0B6S	5/8" GYPSUM WALLBOARD	6" METAL STUD	5/8" GYPSUM WALLBOARD	7 1/4"	DECK/STRUCTURE	43	YES	
0B6VS	5/8" GYPSUM WALLBOARD	6" METAL STUD	5/8" GYPSUM WALLBOARD	7 1/4"	DECK/STRUCTURE	43	Yes	

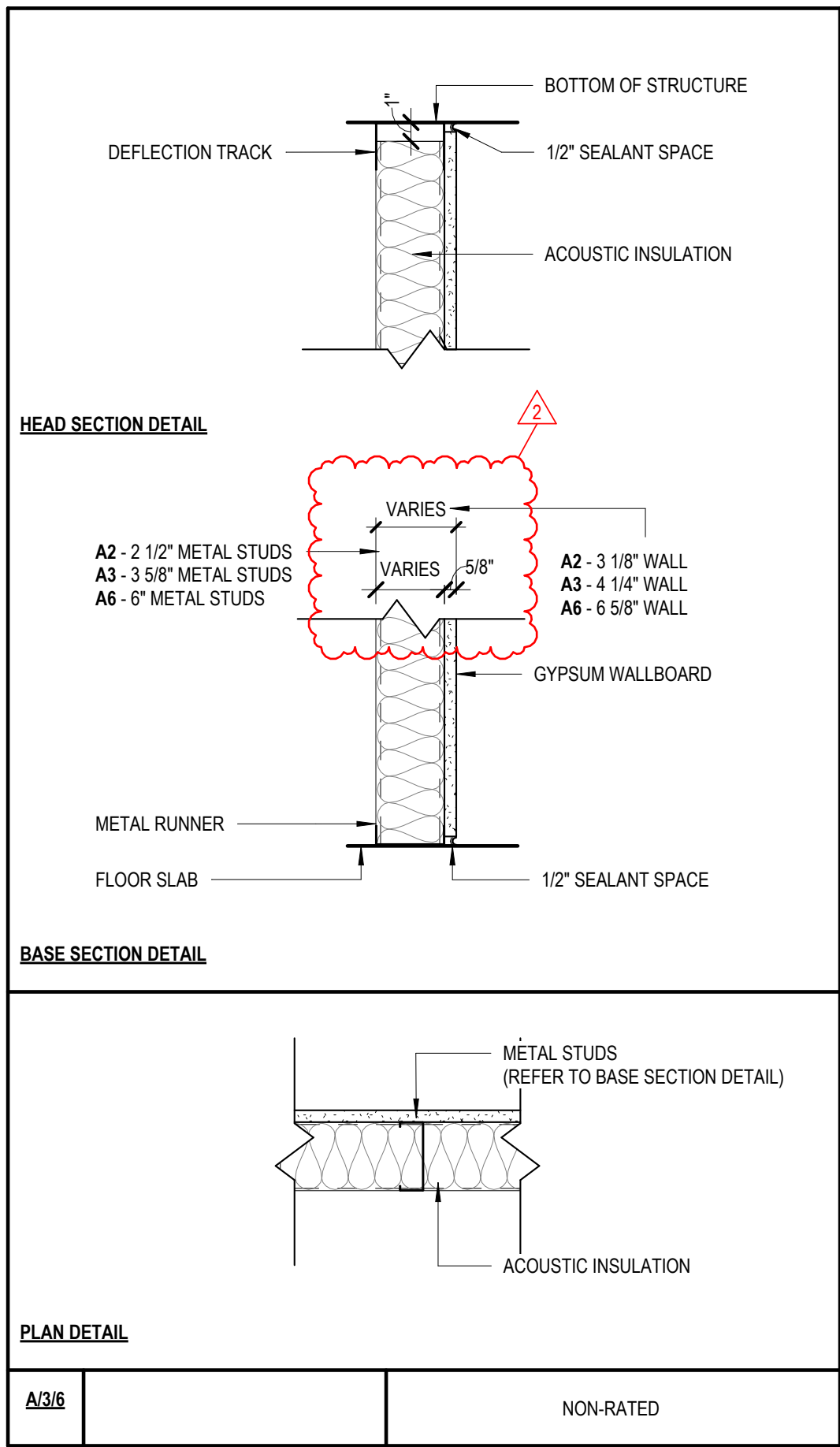
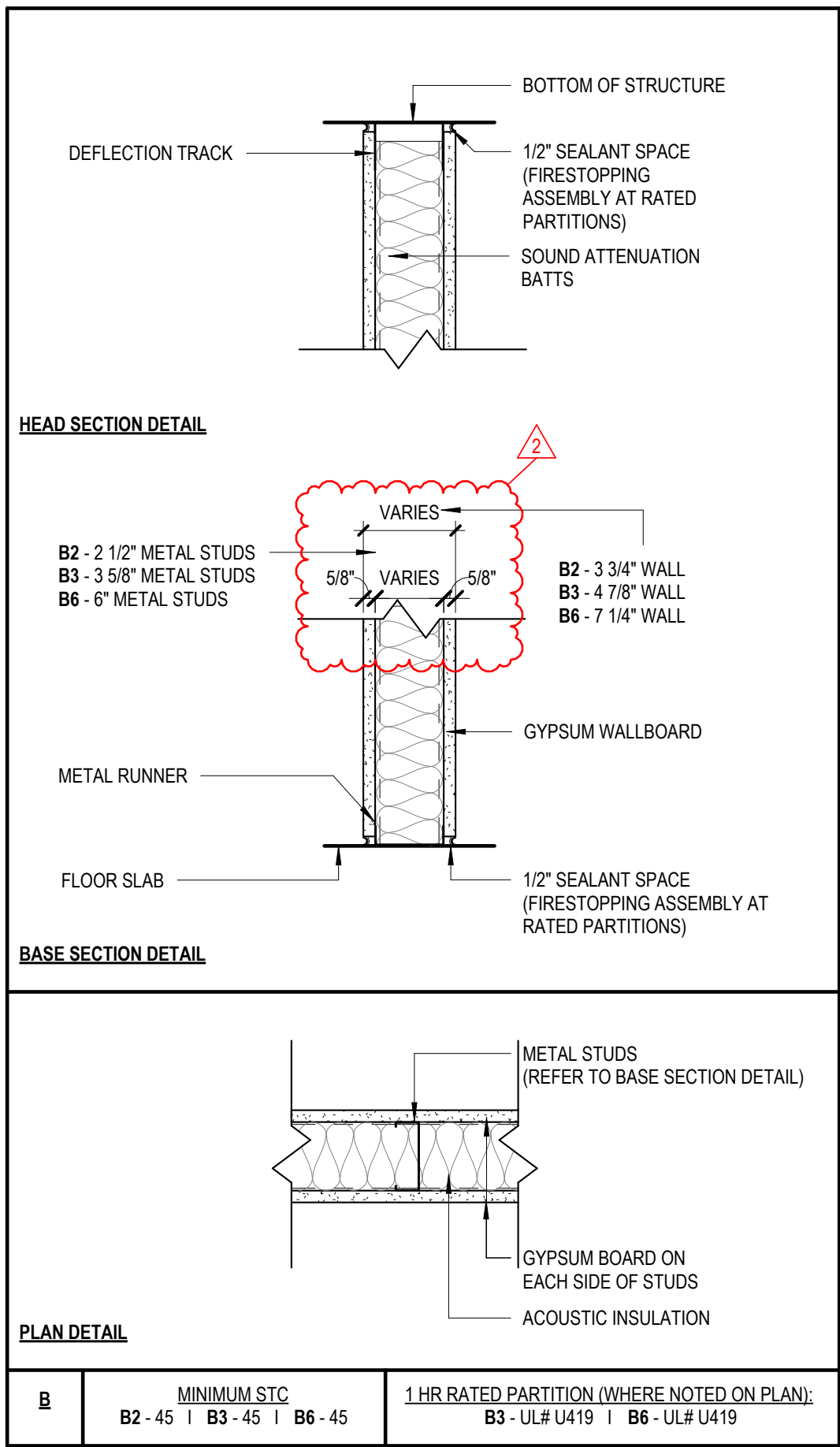
INTERIOR PARTITION LEGEND

INTERIOR PARTITION TAG

ZZ — INTERIOR PARTITION TAG

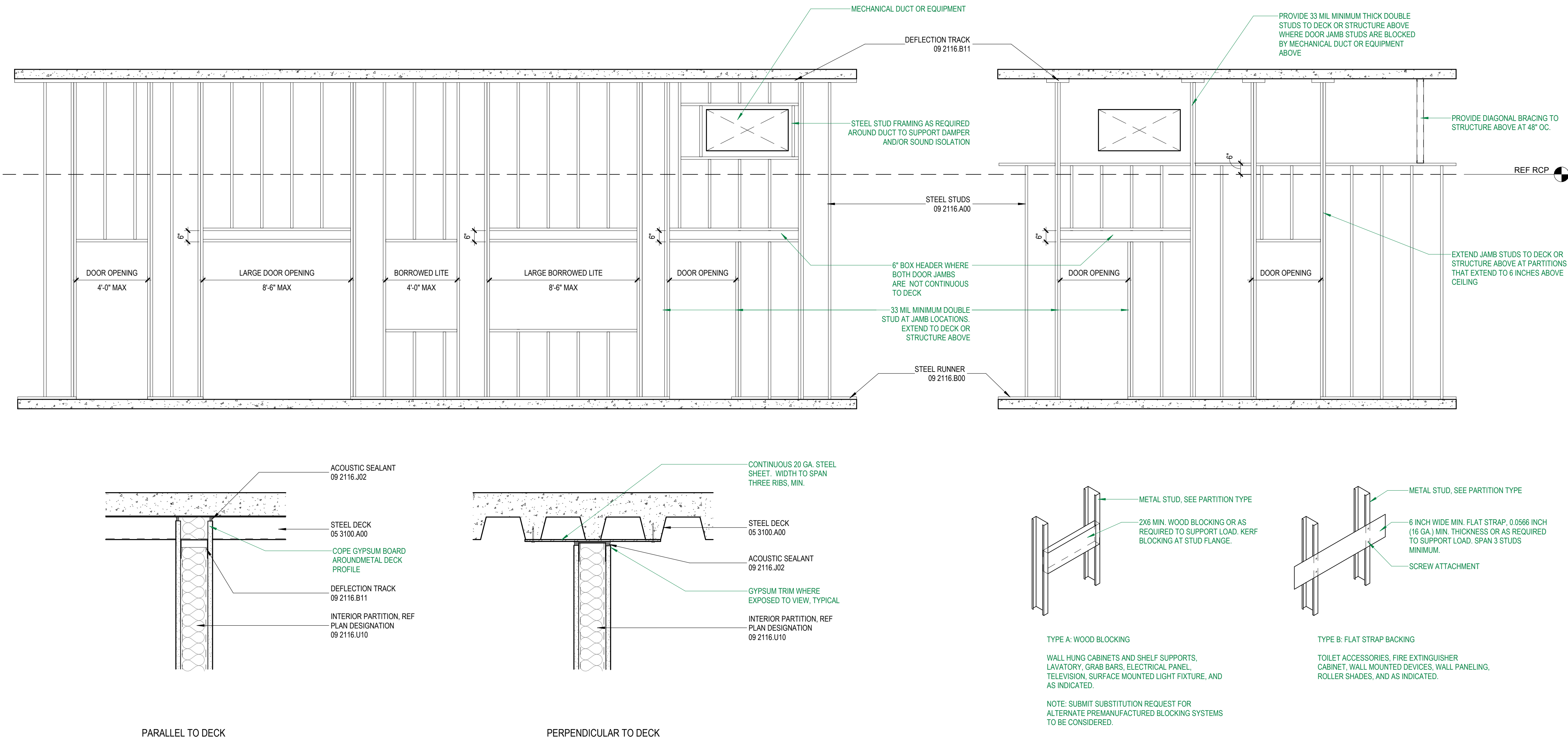
INTERIOR PARTITION NOTES

- A. ALL INTERIOR GYPSUM BOARD PARTITIONS SHALL BE TYPE **0B3S** UNLESS NOTED OTHERWISE.
B. REFER TO SHEET A500 FOR TYPICAL LOCATION OF INTERIOR DOOR OPENINGS.
C. REFER TO A500 SHEET FOR OPENING SCHEDULE AND REFER TO SPECIFICATIONS FOR HARDWARE INFORMATION.



5
A002 INTERIOR PARTITION - B
1 1/2" = 1'-0"

1
A002 INTERIOR PARTITION - A
1 1/2" = 1'-0"



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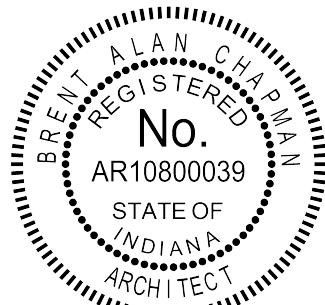
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729 E 3RD ST., BLOOMINGTON, IN 47405
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212 S HAWTHORNE DR., BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2
1	01/17/25	ADDENDUM 1



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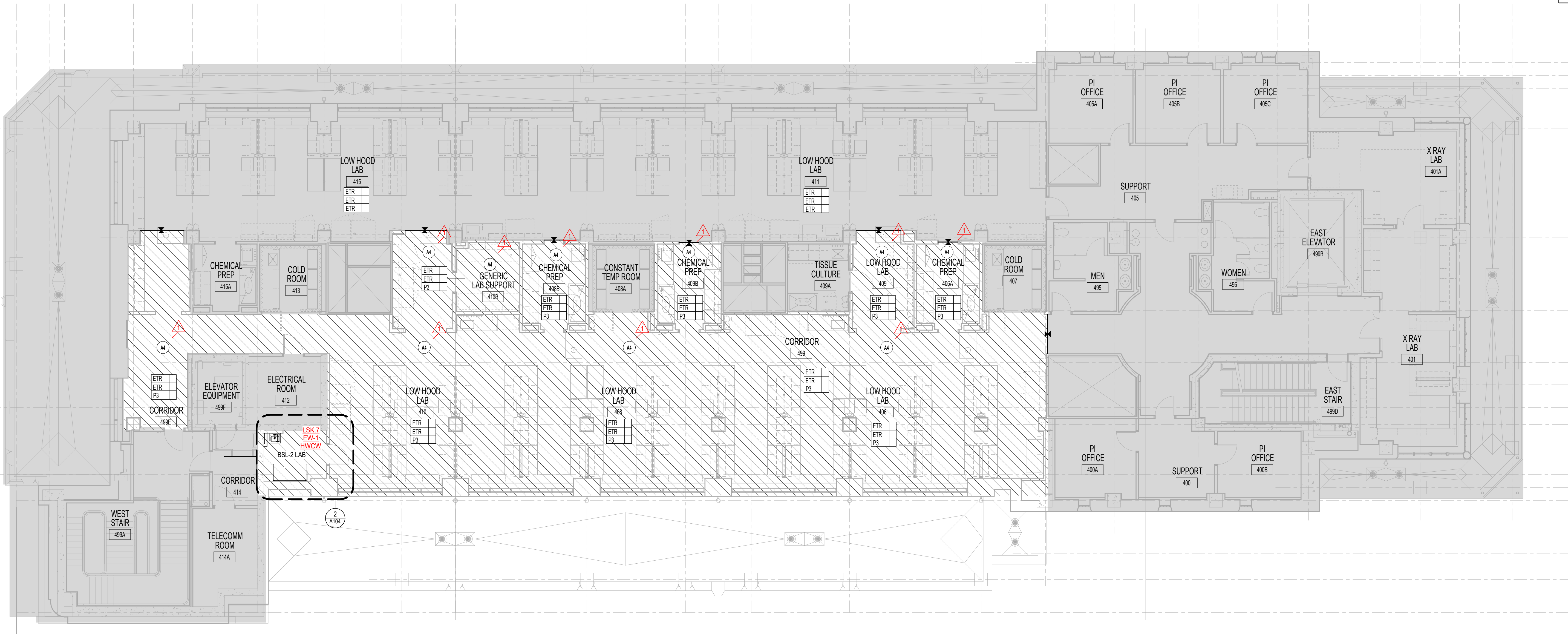
INTERIOR PARTITION SCHEDULE & DETAILS

DATE
BSALS PROJECT NO. 00360477

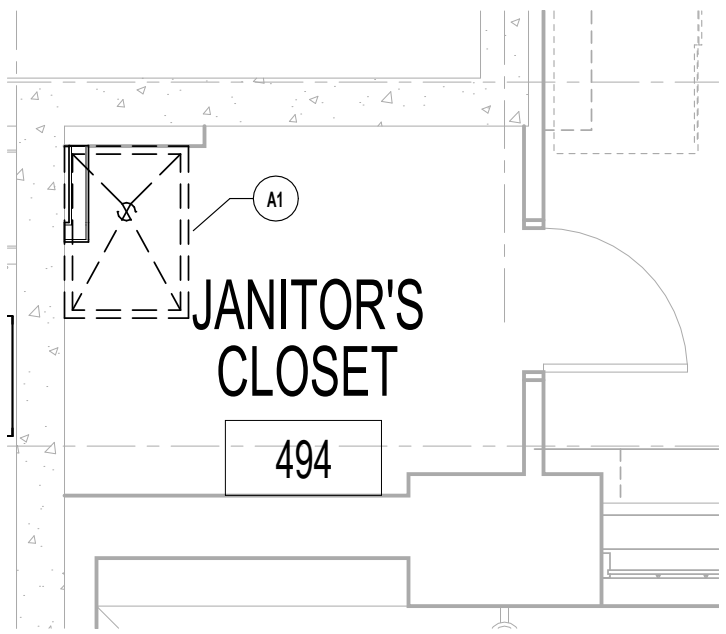
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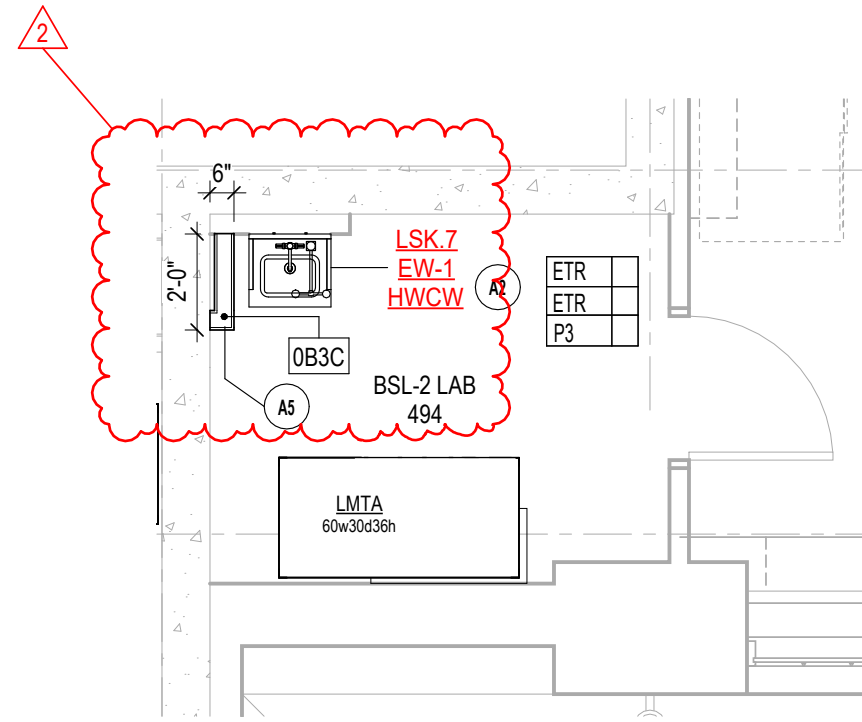
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3
A104
494 ENLARGED FLOOR PLAN DEMO
1/4" = 1'-0"



2
A104
494 ENLARGED FLOOR PLAN
1/4" = 1'-0"



KEYNOTE SCHEDULE	
NUMBER	TEXT
A1	REMOVE EXISTING FLOOR SINK AND PATCH HOLE TO MATCH EXISTING FLOOR CONSTRUCTION.
A2	PROVIDE NEW HANDWASH SINK AND ALL ASSOCIATED TRIM AND PIPING.
A4	EXISTING CEILING TO REMAIN.
A5	DIMENSIONS SHOWN FOR REFERENCE. WALL TO WRAP EXISTING SPRINKLER PIPE.

PHASING LEGEND	
APPROXIMATE PHASE DURATION	
	PHASE I CONSTRUCTION (02.17.25 - 08.01.25)
	PHASE II CONSTRUCTION (05.05.25 - 12.01.25)

ARCHITECTURAL PLAN LEGEND

ARCHITECTURAL PLAN NOTES

- DIMENSIONS ARE TO FACE OF PARTITION UNLESS NOTED OTHERWISE.
- LOCATE DOOR FRAMES 4 INCHES FROM EDGE OF FRAME TO ADJACENT INTERSECTING WALL UNLESS DIMENSIONED OTHERWISE.
- INTERIOR PARTITIONS TO BE TYPE 083S UNLESS NOTED OTHERWISE.
- COLUMN SURROUNDS TO BE WALL TYPE 0A30 UNLESS NOTED OTHERWISE.
- PROVIDE TWO 33 MIL MIN. THICK STUDS TO STRUCTURE ABOVE AT DOOR AND BORROWED LITE JAMBS AND PARTITION CORNERS.
- SMOKE AND FIRE RATED PARTITIONS TO BE CONTINUOUS THROUGH AND ABOVE DOOR AND WINDOW OPENINGS.
- PROVIDE FIRESTOPPING WHERE CYPSSUM WALL BOARD MEETS APPLIED FIRE PROTECTION ON COLUMNS, BEAMS, AND METAL DECK AT FIRE RATED PARTITIONS.
- WHERE CYPSSUM BOARD COLUMN SURROUNDS ARE ADJACENT TO CASEWORK, THE DEPTH OF THE COLUMN SURROUND SHALL EXTEND 1" BEYOND FACE OF CASEWORK OR EDGE OF COUNTERTOP.

FINISH PLAN NOTES

- PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT / INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- REFER TO REFLECTED CEILING PLAN(S) FOR CEILING FINISHES.
- ALL FLOOR MATERIAL TRANSITIONS SHALL BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION.
- ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS U.N.O.
- REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE (SC).
- REFER TO SHEET (A000) FOR FLOOR TRANSITION DETAILS.
- REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- NEW AND EXISTING HOLLOW METAL DOORS, DOOR FRAMES, AND WINDOW FRAMES SHALL BE PAINTED (P6), ONLY IF ADJACENT WALL IS SCHEDULED TO RECEIVE NEW PAINT / WALL FINISH OR U.N.O.
- PAINT ALL WALL MOUNTED GRILLES, VENTS, ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL U.N.O.
- ALL EXPOSED MEP EQUIPMENT (INCLUDING CONDUIT, FIRE PROTECTION, CABLE TRAY, ETC.) TO REMAIN UNPAINTED, U.N.O.
- FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETS, CASEWORK, CHALK AND TACK, MARKERBOARDS, LOCKERS ETC.
- BOTTOM OF ALL CORNER GUARDS SHALL BE MOUNTED ABOVE FINISHED WALL BASE, U.N.O.
- FURNITURE INDICATED BY DASHED/GRAY LINES SHALL BE OWNER FURNISHED, OWNER INSTALLED.

ROOM FINISH TAG

ROOM		ROOM NAME & NUMBER
FLOOR FINISH	OPT 1	A
BASE FINISH	RS1	A
WALL FINISH	PI	C

ROOM FINISH TAG REMARKS

- BASE TO BE INTEGRAL, U.N.O. REFER TO A000.4 FOR DETAIL.
- RESILIENT BASE (RB3) TO BE APPLIED TO CASEWORK ONLY.
- .
- .
- .
- .

OTHER SYMBOLS

- ACCENT WALL MATERIAL TAG
- PATTERN DIRECTION SYMBOL
- FLOOR TRANSITION SYMBOL
- FINISH STARTING POINT
- CONTROL JOINT

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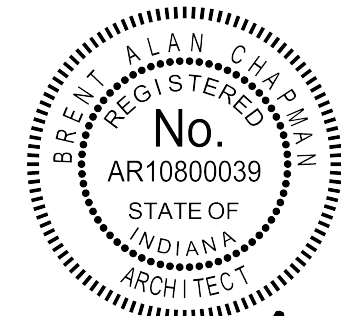
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CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2
1	01/17/25	ADDENDUM 1



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BL070 SIMON -
ARCHITECTURAL/DIMENSION
PLAN - LEVEL 4

DATE	JAN 1, 2017
BSALS PROJECT NO.	00360477

A104

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CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

ARCHITECTURAL PLAN LEGEND

ARCHITECTURAL PLAN NOTES

- DIMENSIONS ARE TO FACE OF PARTITION UNLESS NOTED OTHERWISE.
- LOCATE DOOR FRAMES 4 INCHES FROM EDGE OF FRAME TO ADJACENT INTERSECTING WALL UNLESS DIMENSIONED OTHERWISE.
- INTERIOR PARTITIONS TO BE TYPE 083S UNLESS NOTED OTHERWISE.
- COLUMN SURROUNDS TO BE WALL TYPE A030 UNLESS NOTED OTHERWISE.
- PROVIDE TWO 33 MIL MIN. THICK STUDS TO STRUCTURE ABOVE AT DOOR AND BORROWED LITE JAMBS AND PARTITION CORNERS.
- SMOKE AND FIRE RATED PARTITIONS TO BE CONTINUOUS THROUGH AND ABOVE DOOR AND WINDOW OPENINGS.
- PROVIDE FIRESTOPPING WHERE GYPSUM WALL BOARD MEETS APPLIED FIRE PROTECTION ON COLUMNS, BEAMS, AND METAL DECK AT FIRE RATED PARTITIONS.
- WHERE GYPSUM BOARD COLUMN SURROUNDS ARE ADJACENT TO CASEWORK, THE DEPTH OF THE COLUMN SURROUND SHALL EXTEND 1" BEYOND FACE OF CASEWORK OR EDGE OF COUNTERTOP.

FINISH PLAN NOTES

- A. PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT / INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- B. REFER TO REFLECTED CEILING PLANS FOR CEILING FINISHES.
- C. ALL FLOOR MATERIAL TRANSITIONS SHALL BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION.
- D. ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS U.N.O.
- E. REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE (SC).
- F. REFER TO SHEET (A000) FOR FLOOR TRANSITION DETAILS.
- G. REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- H. NEW AND EXISTING HOLLOW METAL DOORS, DOOR FRAMES, AND WINDOW FRAMES SHALL BE PAINTED (PS), ONLY IF ADJACENT WALL IS SCHEDULED TO RECEIVE NEW PAINT / WALL FINISH OR U.N.O.
- I. PAINT ALL WALL MOUNTED GRILLES, VENTS, ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL U.N.O.
- J. ALL EXPOSED MEP EQUIPMENT (INCLUDING CONDUIT, FIRE PROTECTION, CABLE TRAY, ETC) TO REMAIN UNPAINTED, U.N.O.
- K. FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK, CHALK AND TACK / MARKERBOARDS, LOCKERS ETC.
- L. BOTTOM OF ALL CORNER GUARDS SHALL BE MOUNTED ABOVE FINISHED WALL BASE, U.N.O.
- M. FURNITURE, INDICATED BY DASHED/GRAY LINES SHALL BE OWNER FURNISHED, OWNER INSTALLED.

ROOM FINISH TAG

	ROOM	
	101	
FLOOR FINISH	CPT1	a
BASE FINISH	RB1	b
WALL FINISH	P1	c



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CLIENT PROJECT NO. - 20240397

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MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2
1	01/17/25	ADDENDUM 1

ARCHITECTURAL PLAN LEGEND

ARCHITECTURAL PLAN NOTES

- DIMENSIONS ARE TO FACE OF PARTITION UNLESS NOTED OTHERWISE.
- LOCATE DOOR FRAMES 4 INCHES FROM EDGE OF FRAME TO ADJACENT INTERSECTING WALL UNLESS DIMENSIONED OTHERWISE.
- INTERIOR PARTITIONS TO BE TYPE 083S UNLESS NOTED OTHERWISE.
- COLUMN SURROUNDS TO BE WALL TYPE 0A3D UNLESS NOTED OTHERWISE.
- PROVIDE TWO 33 MIL MIN. THICK STUDS TO STRUCTURE ABOVE AT DOOR AND BORROWED LITE JAMBS AND PARTITION CORNERS.
- SMOKE AND FIRE RATED PARTITIONS TO BE CONTINUOUS THROUGH AND ABOVE DOOR AND WINDOW OPENINGS.
- PROVIDE FIRESTOPPING WHERE GYPSUM WALL BOARD MEETS APPLIED FIRE PROTECTION ON COLUMNS, BEAMS, AND METAL DECK AT FIRE RATED PARTITIONS.
- WHERE GYPSUM BOARD COLUMN SURROUNDS ARE ADJACENT TO CASEWORK, THE DEPTH OF THE COLUMN SURROUND SHALL EXTEND 1" BEYOND FACE OF CASEWORK OR EDGE OF COUNTERTOP.

FINISH PLAN NOTES

- A. PATTERN NAME, COLOR AND NUMBER FOR EACH MATERIAL ARE GIVEN WHENEVER POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT / INTERIOR DESIGNER TO ENSURE THAT THE CORRECT MATERIAL IS INSTALLED.
- B. REFER TO REFLECTED CEILING PLANS FOR CEILING FINISHES.
- C. ALL FLOOR MATERIAL TRANSITIONS SHALL BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION.
- D. ALL FLOORING SHALL BE INSTALLED PERPENDICULAR TO ROOM WALLS U.N.O.
- E. REFER TO PROJECT MANUAL SECTION "CAST-IN-PLACE CONCRETE" FOR SPECIFICATIONS FOR SEALED CONCRETE (SC).
- F. REFER TO SHEET (A000) FOR FLOOR TRANSITION DETAILS.
- G. REFER TO MANUFACTURER'S INSTRUCTIONS FOR CARPET TILE INSTALLATION PATTERNS AS INDICATED.
- H. NEW AND EXISTING HOLLOW METAL DOORS, DOOR FRAMES, AND WINDOW FRAMES SHALL BE PAINTED (PS), ONLY IF ADJACENT WALL IS SCHEDULED TO RECEIVE NEW PAINT / WALL FINISH OR U.N.O.
- I. PAINT ALL WALL MOUNTED GRILLES, VENTS, ELECTRICAL PANELS, ACCESS PANELS, ETC. TO MATCH ADJACENT WALL U.N.O.
- J. ALL EXPOSED MEP EQUIPMENT (INCLUDING CONDUIT, FIRE PROTECTION, CABLE TRAY, ETC) TO REMAIN UNPAINTED, U.N.O.
- K. FINISH BEHIND FIXED EQUIPMENT SUCH AS CABINETRY, CASEWORK, CHALK AND TACK / MARKERSBOARDS, LOCKERS ETC.
- L. BOTTOM OF ALL CORNER GUARDS SHALL BE MOUNTED ABOVE FINISHED WALL BASE, U.N.O.
- M. FURNITURE INDICATED BY DASHED/GRAY LINES SHALL BE OWNER FURNISHED, OWNER INSTALLED.

ROOM FINISH TAG

ROOM	ROOM NAME & NUMBER
101	
101	
101	
101	

ROOM FINISH TAG REMARKS

- a. BASE TO BE INTEGRAL, U.N.O. REFER TO A000-4 FOR DETAIL.
- b. RESILIENT BASE (RB3) TO BE APPLIED TO CASEWORK ONLY.
- c. .
- d. .
- e. .

OTHER SYMBOLS

- PI ACCENT WALL MATERIAL TAG
- PATTERN DIRECTION SYMBOL
- FLOOR TRANSITION SYMBOL
- FINISH STARTING POINT
- CONTROL JOINT

KEYNOTE SCHEDULE

NUMBER	TEXT
A01	FURNITURE SHOWN FOR REFERENCE PURPOSES ONLY.
A02	REPAIR AND REPAINT FIN TUBE ENCLOSURES AS NEEDED TO RESTORE FUNCTIONALITY AND APPEARANCE.
A06	OFFSET WALL 1/2" FROM THE EXISTING WALLS.
A16	REPAIR GYPSUM BOARD AFTER REPAIRING/RE-INSTALLING FIN TUBE PIPING (TYP).
A17	ALIGN

EQUIPMENT SCHEDULE

#	NAME	SCOPE	COMMENTS
070	MONITOR WALL MOUNTED 70"	Q.F.O.I.	
900	GENERIC EQUIPMENT	Q.F.O.I.	
930	30" x 32" RH	VARIES	
950	MARKERBOARD 48X72	Q.F.O.I.	



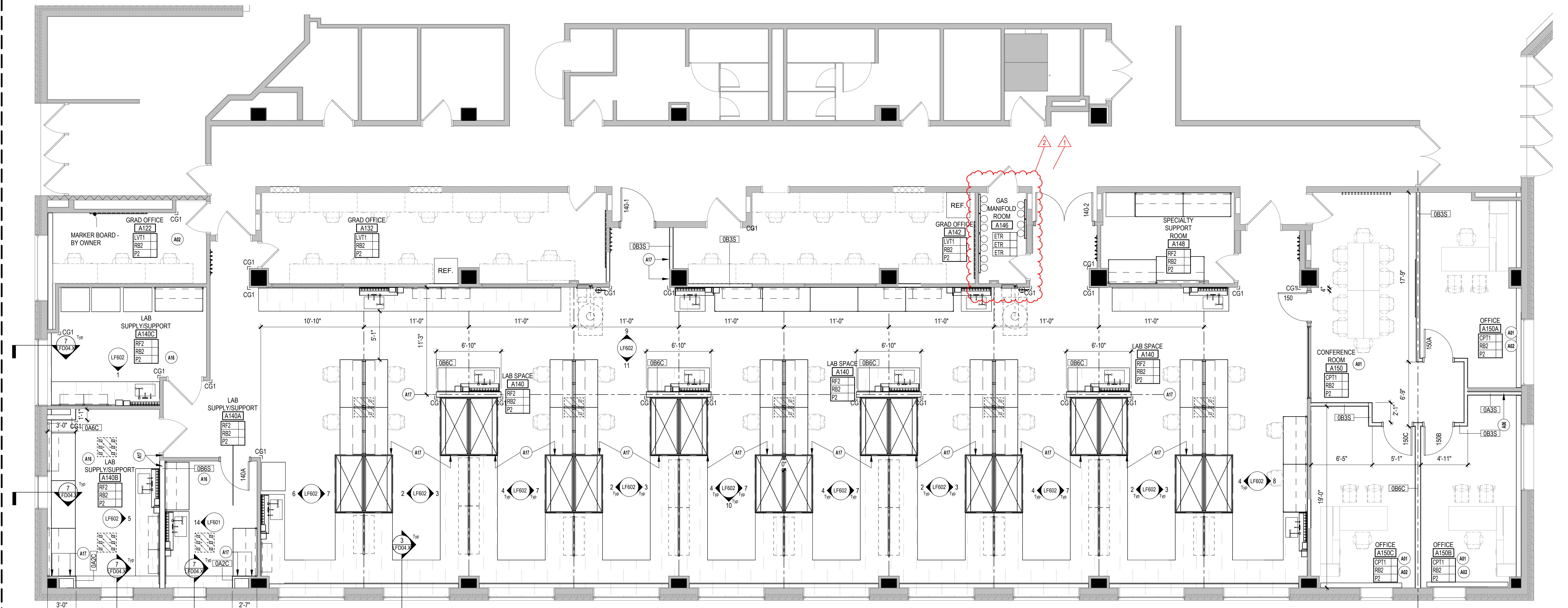
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BL072 CHEMISTRY -
ARCHITECTURAL/DIMENSION
PLAN - LEVEL 1

DATE
BSALS PROJECT NO. 00360477

A111B

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1 CHEMISTRY - ARCHITECTURAL PLAN - FIRST FLOOR - A140/A150
A111B 3/16" = 1'-0"

REFLECTED CEILING PLAN LEGEND

REFLECTED CEILING PLAN NOTES

- A. ACOUSTICAL CEILING SYSTEMS TO BE INSTALLED AT 9'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE.
- B. ACOUSTICAL CEILING SYSTEM TO BE TYPE ACT - 1, UNLESS NOTED OTHERWISE.
- C. GYPSUM BOARD BULKHEADS TO BE INSTALLED AT 8'-10" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE. REFER TO 04500 FOR TYPICAL BULKHEAD DETAIL.
- D. CENTER ITEMS SHOWN IN ACOUSTICAL CEILING TILES, UNLESS INDICATED OTHERWISE.
- E. EXPOSED VERTICAL FACES OF SOFFITS/BULKHEADS TO RECEIVE 5/8 INCH GYPSUM WALL BOARD UNLESS INDICATED OTHERWISE.
- F. INSTALL CONTROL JOINTS IN GYPSUM BOARD WALLS, CEILINGS AND BULKHEADS AS INDICATED ON THE DIMENSION PLANS, REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND AS INDICATED IN THE SPECIFICATIONS.
- G. LOCATE ALL DEVICES, EQUIPMENT, AND/OR JUNCTION BOXES REQUIRING ACCESS IN ACCESSIBLE CEILING LOCATIONS. AVOID LOCATING ITEMS REQUIRING ACCESS IN HARD CEILINGS OR SHARE ACCESS POINTS. COORDINATE ACCESS PANELS WHERE REQUIRED WITH ARCHITECT PRIOR TO INSTALLATION.
- H. FIRE PROTECTION EQUIPMENT SHOWN FOR COORDINATION PURPOSES ONLY. SEE FIRE PROTECTION DRAWINGS FOR SPRINKLER SYSTEM.
- I. MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING LIGHT FIXTURES, MECHANICAL DIFFUSERS AND GRILLES, ARE SHOWN ON REFLECTED CEILING PLANS FOR REFERENCE ONLY.

CEILING TAG

- ACT1 - CEILING TYPE, REFERENCE CEILING SCHEDULE
- +10'-0" - CEILING HEIGHT ABOVE ASSOCIATE LEVEL

OTHER CEILING SYMBOLS

- ◇ - CONTROL JOINT
- RS1 - Manual Roller Shade
- RS2 - Motorized Roller Shade

KEYNOTE SCHEDULE

NUMBER	TEXT
C01	SEE SHEET A500 FOR BULKHEAD DETAIL.
C02	COORDINATE CEILING OPENING WITH MECHANICAL.

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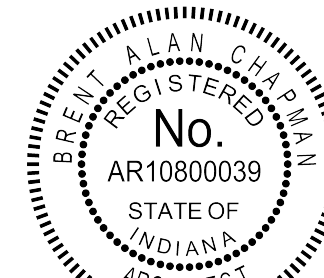
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BIDDING SET
JANUARY 9, 2025



MARK	DATE	DESCRIPTION
2	Date 2	Revision 2
1	01/17/25	ADDENDUM 1



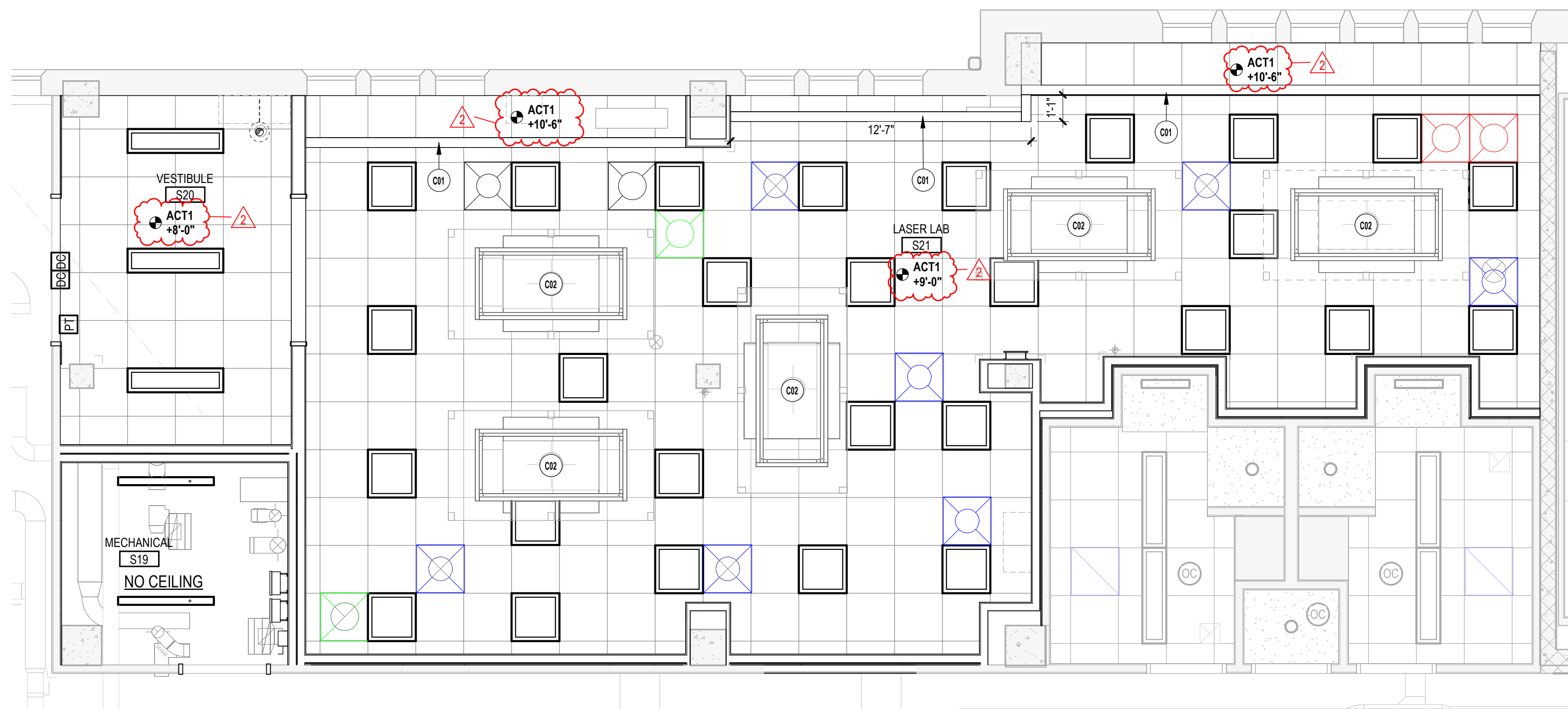
B. A. C.

BL027 SWAIN - REFLECTED
CEILING PLAN -
BASEMENT/SUB-BASEMENT
LEVEL

DATE JANUARY 9, 2025
BSALS PROJECT NO. 00360477

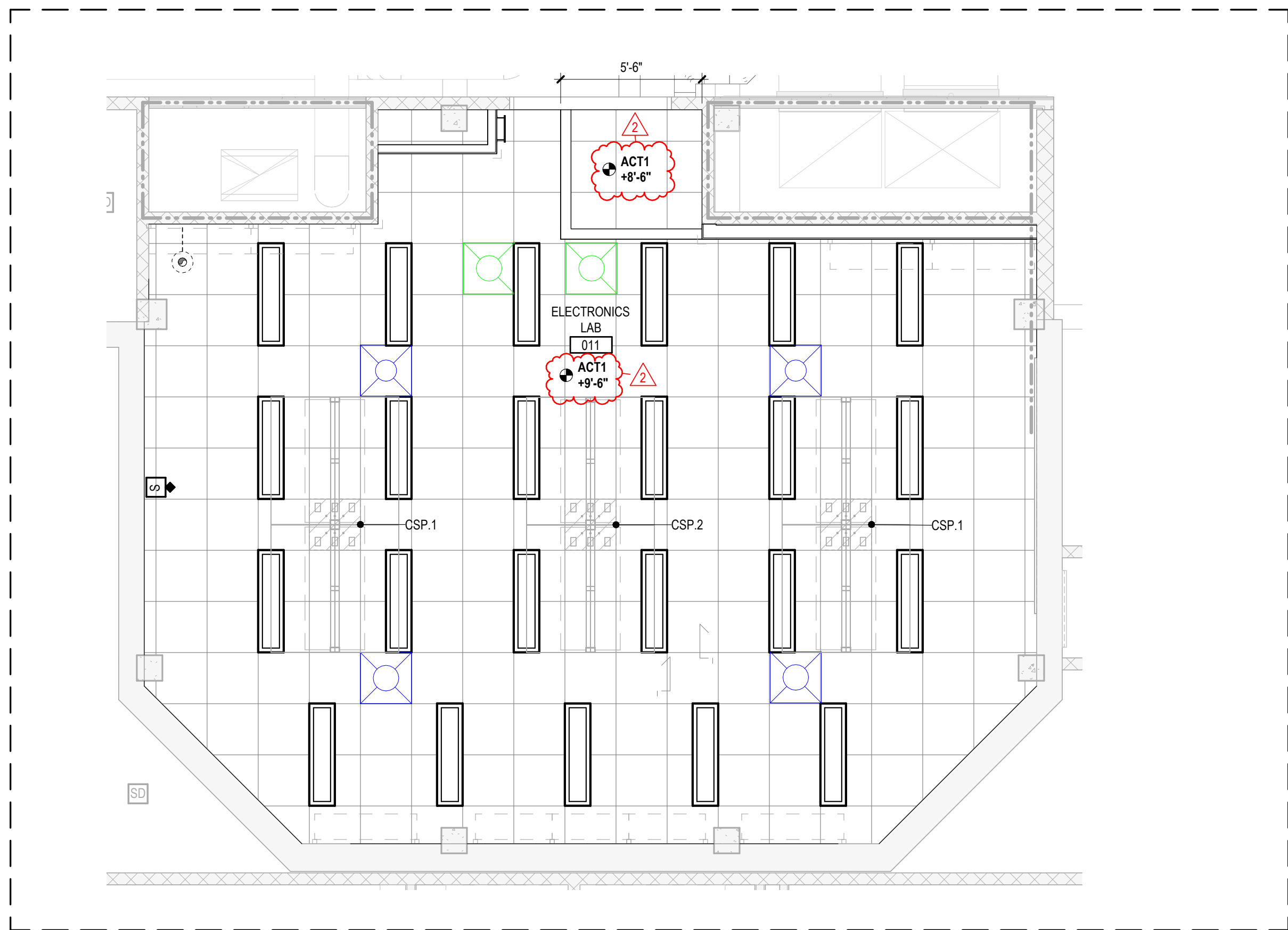
A130

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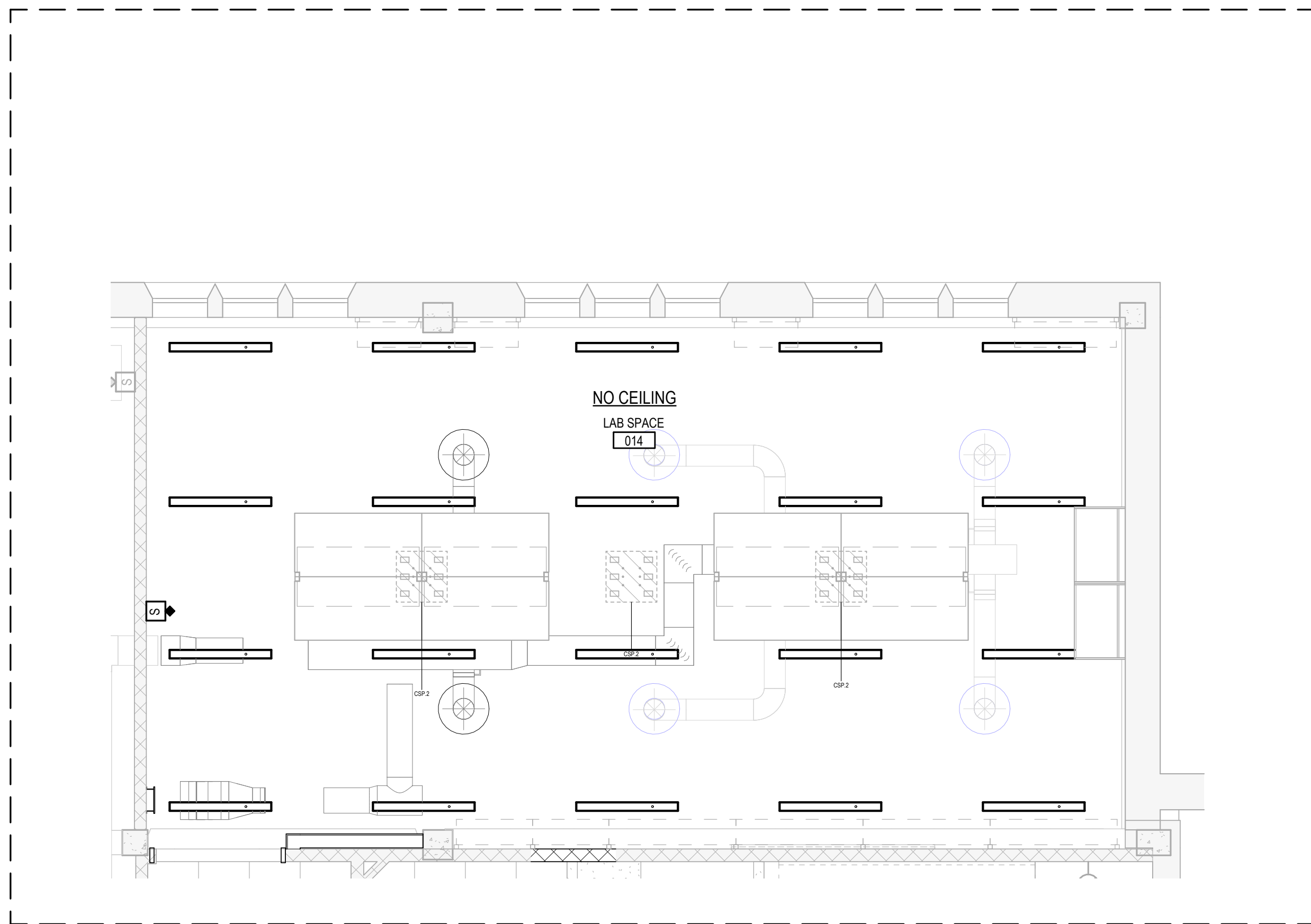
1 SWAIN- ENLARGED RCP - SUB-BASEMENT LEVEL S19/20
A130 1/4" = 1'-0"

ALTERNATE #1



3 SWAIN- ENLARGED RCP - BASEMENT LEVEL - 011
A130 1/4" = 1'-0"

ALTERNATE #1



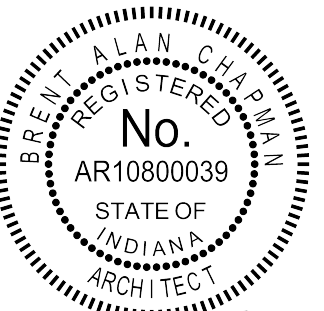
2 SWAIN- ENLARGED RCP - BASEMENT LEVEL - 13/14
A130 1/4" = 1'-0"

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MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2
1	01/17/25	ADDENDUM 1



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BL072 CHEMISTRY -
REFLECTED CEILING PLAN
- LEVEL 1

DATE	
BSALS PROJECT NO.	00360477

A131A

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REFLECTED CEILING PLAN LEGEND

REFLECTED CEILING PLAN NOTES

- A. ACoustical CEILING SYSTEMS TO BE INSTALLED AT 9'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE.
- B. ACoustical CEILING SYSTEM TO BE TYPE ACT-1, UNLESS NOTED OTHERWISE.
- C. GYPSUM BOARD BULKHEADS TO BE INSTALLED AT 8'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE. REFER TO 610.00 FOR TYPICAL BULKHEAD DETAIL.
- D. CENTER ITEMS SHOWN IN ACoustical CEILING TILES, UNLESS NOTED OTHERWISE.
- E. EXPOSED VERTICAL FACES OF SOFFITS/BULKHEADS TO RECEIVE 5/8" (12) GYPSUM WALL BOARD UNLESS INDICATED OTHERWISE.
- F. JOINT CONTROL JOINTS TO BE LOCATED AT 4'-0" ONCE SPACED AND BULKHEADS AS INDICATED ON THE DIMENSION PLANS. REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND AS INDICATED IN THE SPECIFICATIONS.
- G. LOCATE ALL DEVICES, EQUIPMENT, AND/OR JUNCTION BOXES TO BE INSTALLED IN ACCESSIBLE CEILING LOCATIONS. AVOID LOCATING ITEMS REQUIRING ACCESS IN HARD CEILING CLINGS. PROVIDE ACCESS, COORDINATE WITH MECHANICAL, ELECTRICAL AND REQUIRED WITH ARCHITECT PRIOR TO INSTALLATION.
- H. FIRE PROTECTION EQUIPMENT SHOWN FOR COORDINATION ONLY. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR SPRINKLER SYSTEM.
- I. MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS, INCLUDING LIGHT FIXTURES, MECHANICAL DIFFUSERS AND GRILLES, ARE SHOWN ON REFLECTED CEILING PLANS FOR REFERENCE ONLY.


CEILING TAG


ACT1
+10'-0"


CEILING TYPE, REFERENCE CEILING SCHEDULE

CEILING HEIGHT ABOVE ASSOCIATE LEVEL

OTHER CEILING SYMBOLS

 **CONTROL JOINT**

 **RS1 - Manual Roller Shade**

 **RS2 - Motorized Roller Shade**

KEYNOTE SCHEDULE

NUMBER	TEXT
--------	------

ALTERNATE #3

RCP - ENLARGED 103/105
1/4" = 1'-0"

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1/24/2025 1:55:48 PM Autodesk Docs:00360477 - IUB Research Lab Renovations:00360477-CHEM_ARCH_BSALS_A1311

1 RCP - ENLARGED A140
A131B 3/16" = 1'-0"



REFLECTED CEILING PLAN LEGEND

REFLECTED CEILING PLAN NOTES

- ACOUSTICAL CEILING SYSTEMS TO BE INSTALLED AT 9'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE.
- ACOUSTICAL CEILING SYSTEM TO BE TYPE ACT - 1, UNLESS NOTED OTHERWISE.
- GYPSUM BOARD BULKHEADS TO BE INSTALLED AT 8'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE. REFER TO 6/6500 FOR TYPICAL BULKHEAD DETAIL.
- CENTER ITEMS SHOWN IN ACOUSTICAL CEILING TILES, UNLESS INDICATED OTHERWISE.
- EXPOSED VERTICAL FACES OF SOFFITS/BULKHEADS TO RECEIVE 5/8 INCH GYPSUM WALL BOARD UNLESS INDICATED OTHERWISE.
- INSTALL CONTROL JOINTS IN GYPSUM BOARD WALLS, CEILINGS AND BULKHEADS AS INDICATED ON THE DIMENSION PLANS, REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND AS INDICATED IN THE SPECIFICATIONS.
- LOCATE ALL DEVICES, EQUIPMENT, AND/OR JUNCTION BOXES REQUIRING ACCESS IN ACCESSIBLE CEILING LOCATIONS. AVOID LOCATING ITEMS REQUIRING ACCESS IN HARD CEILINGS OR SHARE ACCESS POINTS. COORDINATE ACCESS PANELS WHERE REQUIRED WITH ARCHITECT PRIOR TO INSTALLATION.
- FIRE PROTECTION EQUIPMENT SHOWN FOR COORDINATION PURPOSES ONLY. SEE FIRE PROTECTION DRAWINGS FOR SPRINKLER SYSTEM.
- MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING LIGHT FIXTURES, MECHANICAL DIFFUSERS AND GRILLES, ARE SHOWN ON REFLECTED CEILING PLANS FOR REFERENCE ONLY.

CEILING TAG

- ACT-1
+10'-0"
- CEILING TYPE, REFERENCE CEILING SCHEDULE
- CEILING HEIGHT ABOVE ASSOCIATE LEVEL

OTHER CEILING SYMBOLS

- CONTROL JOINT
- RS1 - Manual Roller Shade
- RS2 - Motorized Roller Shade

KEYNOTE SCHEDULE

NUMBER	TEXT
A14	NEW GYPSUM BOARD CEILING

BSA

BSA LifeStructures
9365 Counselors Row, Suite 300
Indianapolis, IN 46240-1478
ph 317.819.7878 fx 317.819.7288

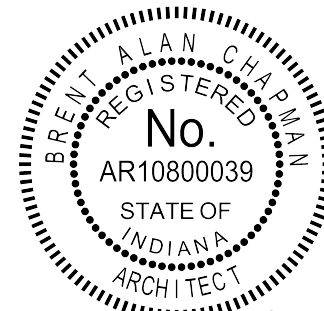
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2



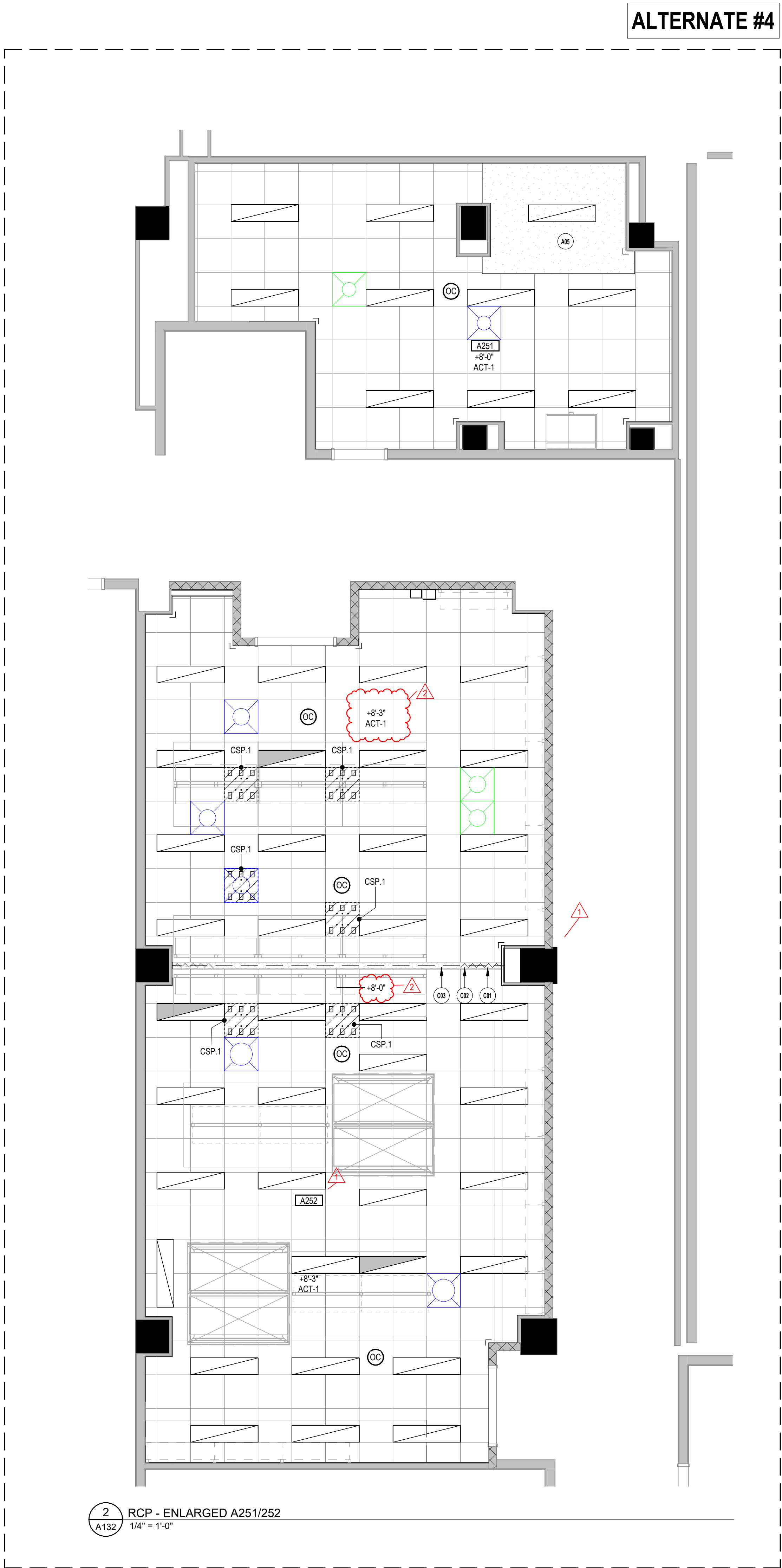
But A. Chu

BL072 CHEMISTRY -
REFLECTED CEILING PLAN
- LEVEL 1

DATE
BSALS PROJECT NO. 00360477

A131B

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REFLECTED CEILING PLAN LEGEND

REFLECTED CEILING PLAN NOTES

A. ACOUSTICAL CEILING SYSTEMS TO BE INSTALLED AT 9'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE.

B. ACOUSTICAL CEILING SYSTEM TO BE TYPE ACT - 1, UNLESS NOTED OTHERWISE.

C. GYPSUM BOARD BULKHEADS TO BE INSTALLED AT 8'-0" ABOVE ASSOCIATED LEVEL, UNLESS NOTED OTHERWISE. REFER TO 6/A500 FOR TYPICAL BULKHEAD DETAIL.

D. CENTER ITEMS SHOWN IN ACOUSTICAL CEILING TILES, UNLESS INDICATED OTHERWISE.

E. EXPOSED VERTICAL FACES OF SOFFITS/BULKHEADS TO RECEIVE 5/8 INCH GYPSUM WALL BOARD UNLESS INDICATED OTHERWISE.

F. INSTALL CONTROL JOINTS IN GYPSUM BOARD WALLS, CEILINGS AND BULKHEADS AS INDICATED ON THE DIMENSION PLANS, REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND AS INDICATED IN THE SPECIFICATIONS.

G. LOCATE ALL DEVICES, EQUIPMENT, AND/OR JUNCTION BOXES REQUIRING ACCESS IN ACCESSIBLE CEILING LOCATIONS. AVOID LOCATING ITEMS REQUIRING ACCESS IN HARD CEILINGS OR SHARE ACCESS POINTS. COORDINATE ACCESS PANELS WHERE REQUIRED WITH ARCHITECT PRIOR TO INSTALLATION.

H. FIRE PROTECTION EQUIPMENT SHOWN FOR COORDINATION PURPOSES ONLY. SEE FIRE PROTECTION DRAWINGS FOR SPRINKLER SYSTEM.

I. MECHANICAL, ELECTRICAL AND PLUMBING ITEMS, INCLUDING LIGHT FIXTURES, MECHANICAL DIFFUSERS AND GRILLES, ARE SHOWN ON REFLECTED CEILING PLANS FOR REFERENCE ONLY.

CEILING TAG

ACT1
+10'-0"
CEILING TYPE, REFERENCE CEILING SCHEDULE
CEILING HEIGHT ABOVE ASSOCIATE LEVEL

OTHER CEILING SYMBOLS

CONTROL JOINT

RS1 - Manual Roller Shade
RS2 - Motorized Roller Shade

KEYNOTE SCHEDULE	
NUMBER	TEXT
A05	PAINT EXISTING CONCRETE STRUCTURE
C01	SEE SHEET A500 FOR BULKHEAD DETAIL
C02	REINSTALL CURTAIN WALL TRACK SALVAGED DURING DEMOLITION
C03	BOTTOM OF BULKHEAD TO MATCH EXISTING.

BSA

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9365 Counselors Row, Suite 300
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**IUB
RESEARCH
LAB
RENOVATIONS**

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BL027 SWAIN WEST
729 E 3RD ST., BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR., BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

**BIDDING SET
JANUARY 9, 2025**

MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2
1	01/17/25	ADDENDUM 1

STATE OF INDIANA
REGISTERED ARCHITECT
No. AR10800039
Bart A. Ch...

**BL072 CHEMISTRY -
REFLECTED CEILING PLAN
- LEVEL 2**

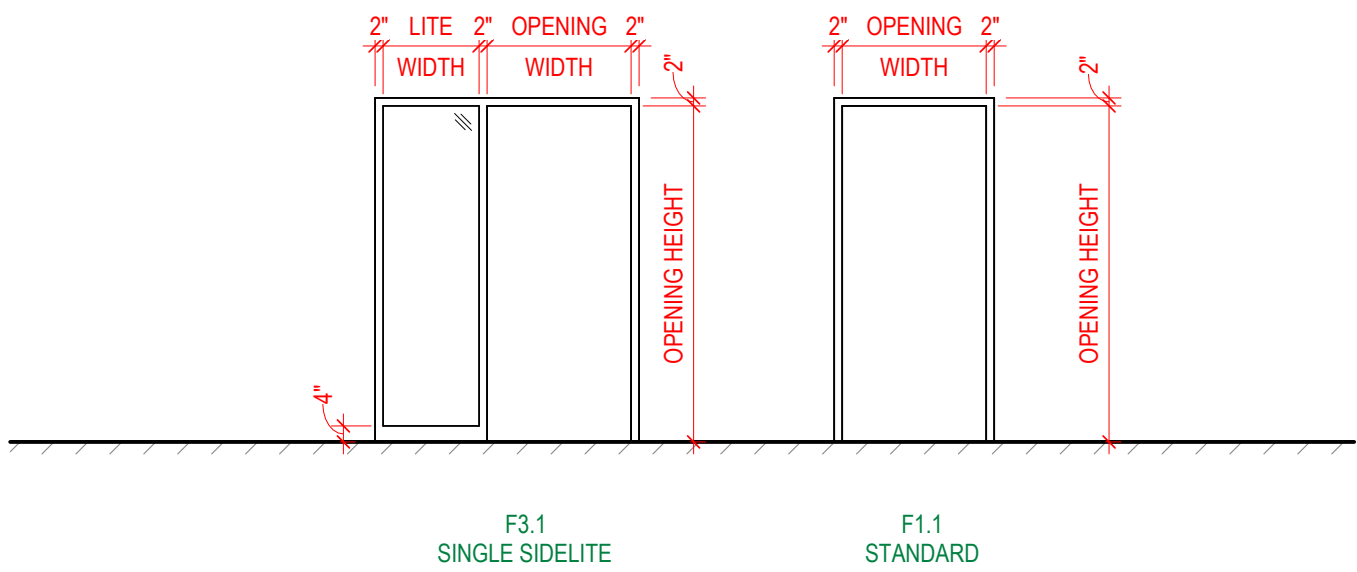
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BSALS PROJECT NO. 00360477

A132

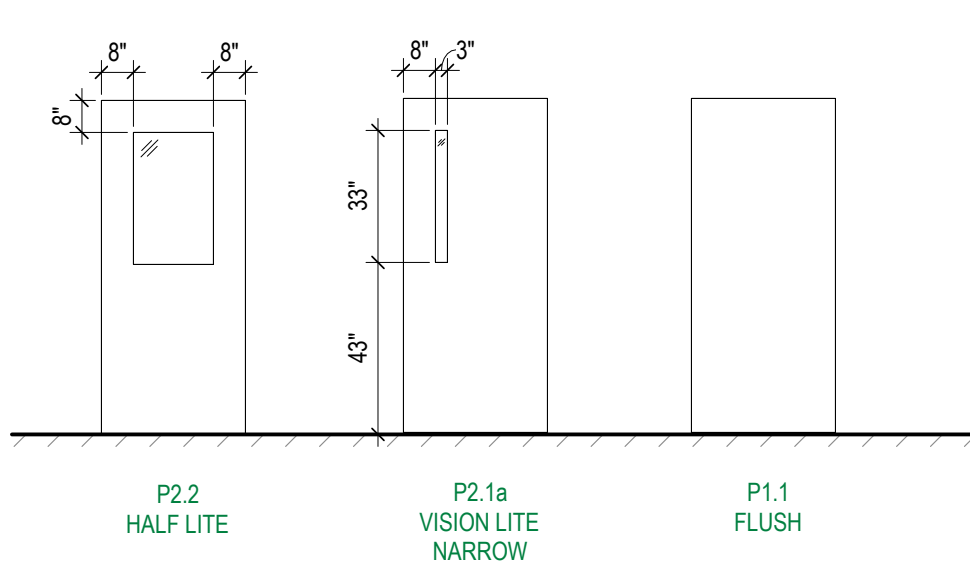
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OPENING SCHEDULE																	
OPENING NUMBER	ROOMS		OPENING				PANEL				FRAME				GLASS TYPE	COMMENTS	
	ROOM A	ROOM B	TYPE	WIDTH	HEIGHT	MATERIAL	WIDTH		TYPE	MATERIAL	TYPE	SIDELITE WIDTH HINGE SIDE	LATCH SIDE	DETAIL SET			
							PRIMARY	SECONDARY									PRIMARY
103E	GRAD OFFICE	OFFICE	SW1	3'-0"	7'-0"	WD	3'-0"	0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
105	GRAD OFFICE	LAB SPACE	SW1	3'-6"	7'-0"	WD	3'-6"	0"	P2.1a : VISION LITE NARROW	--	HM	F3.1b : SIDELITE LATCH SIDE	0"	2'-0"	4/A500	G1	
140-1	LAB SPACE	CORRIDOR	SW1	3'-6"	7'-0"	WD	3'-6"	0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	3/A500	G1	
140-2	LAB SPACE	CORRIDOR	SW2	6'-0"	7'-0"	WD	3'-0"	3'-0"	P2.1a : VISION LITE NARROW	P2.1a : VISION LITE NARROW	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
140A	LAB SPACE	LAB SUPPLY/SUPPORT	SW1	3'-0"	7'-0"	WD	3'-0"	0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
150	LAB SPACE	CONFERENCE ROOM	SW1	3'-0"	7'-0"	WD	3'-0"	0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
150A	CONFERENCE ROOM	OFFICE	SW1	3'-0"	7'-0"	WD	3'-0"	0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
150B	CONFERENCE ROOM	OFFICE	SW1	3'-0"	7'-0"	WD	3'-0"	0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
180C	CONFERENCE ROOM	OFFICE	SW1	3'-6"	7'-0"	WD	3'-0"	3'-0"	P2.1a : VISION LITE NARROW	--	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	
S20	LASER LAB	VESTIBULE	SW2	6'-0"	7'-0"	HM	3'-0"	3'-0"	P2.2 : HALF LITE	P2.2 : HALF LITE	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	--
S20A	CORRIDOR	VESTIBULE	SW2	6'-0"	7'-0"	HM	3'-0"	3'-0"	P2.2 : HALF LITE	P2.2 : HALF LITE	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	CARD READER, MATCH EXISTING DOOR SLAB DESIGN, ALTERNATE #1
S20B	CORRIDOR	MECHANICAL	SW1	3'-6"	7'-0"	HM	3'-6"	0"	P1.1 : FLUSH	--	HM	F1.1 : STANDARD	0"	0"	4/A500	--	MATCH EXISTING DOOR SLAB DESIGN.
S20C	LAB SPACE	CORRIDOR	SW2	5'-0"	7'-0"	HM	2'-6"	2'-6"	P2.2 : HALF LITE	P2.2 : HALF LITE	HM	F1.1 : STANDARD	0"	0"	4/A500	G1	CARD READER, MATCH EXISTING DOOR SLAB DESIGN

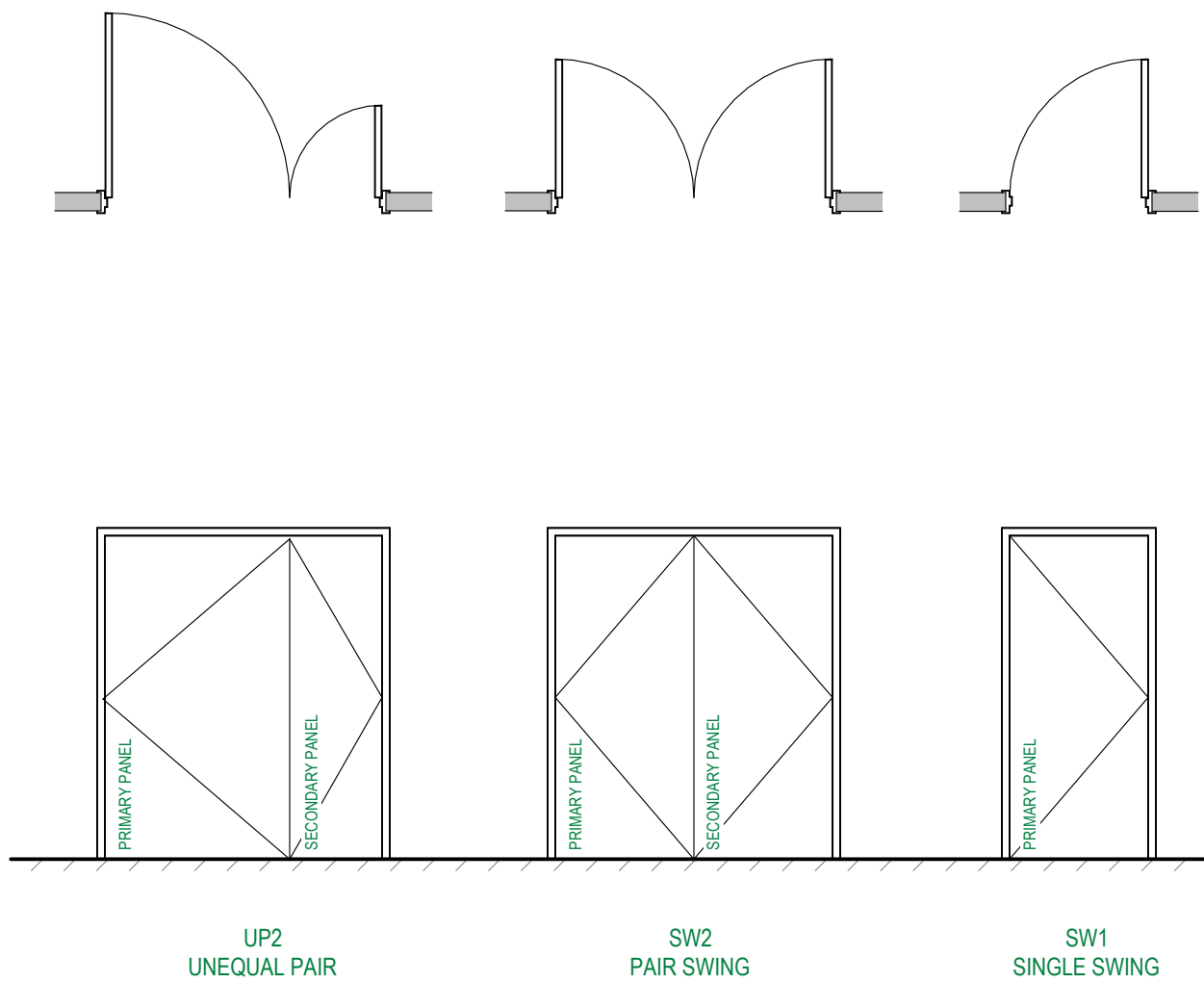
OPENING LEGEND	
GENERAL OPENING NOTES 1. REFER TO SPECIFICATION SECTION 087100 FOR DOOR HARDWARE INFORMATION	
OPENING SCHEDULE NOTES A. PANEL MATERIAL: HM = HOLLOW METAL WD = WOOD AL = ALUMINUM FG = FIBERGLASS B. FRAME MATERIAL: HM = HOLLOW METAL SF = ALUMINUM STOREFRONT CW = ALUMINUM CURTAIN WALL AG = ALL GLASS SSF = SPECIALTY STOREFRONT FSF = FIRE-RATED STOREFRONT C. HOLLOW METAL FRAMES TO BE 2" WIDE x 5 7/8" DEEP FRAMES, UNLESS NOTED OTHERWISE D. FRAME TYPES ARE SHOWN AS SEEN FROM THE PUBLIC APPROACH SIDE OF FRAME	
DOOR FRAME LOCATION	



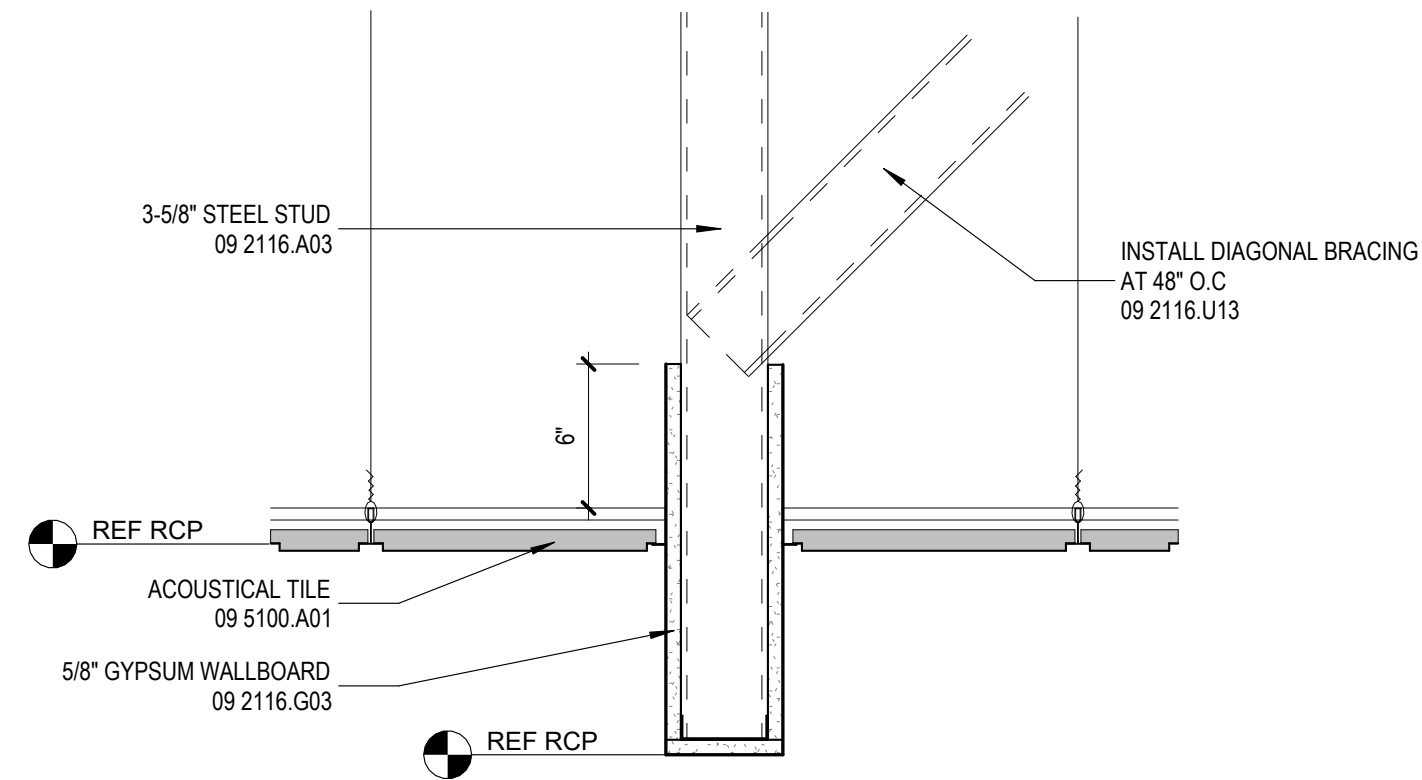
○ FRAME TYPES
1/4" = 1'-0"



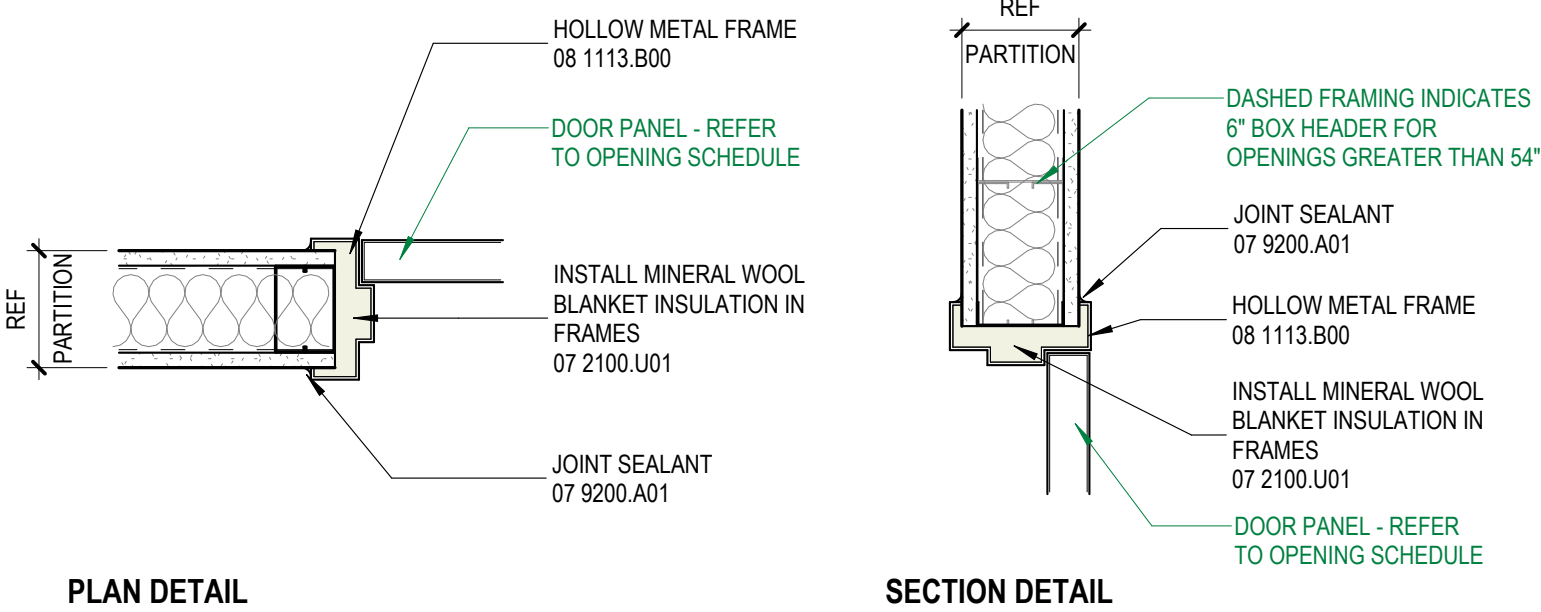
○ PANEL TYPES
1/4" = 1'-0"



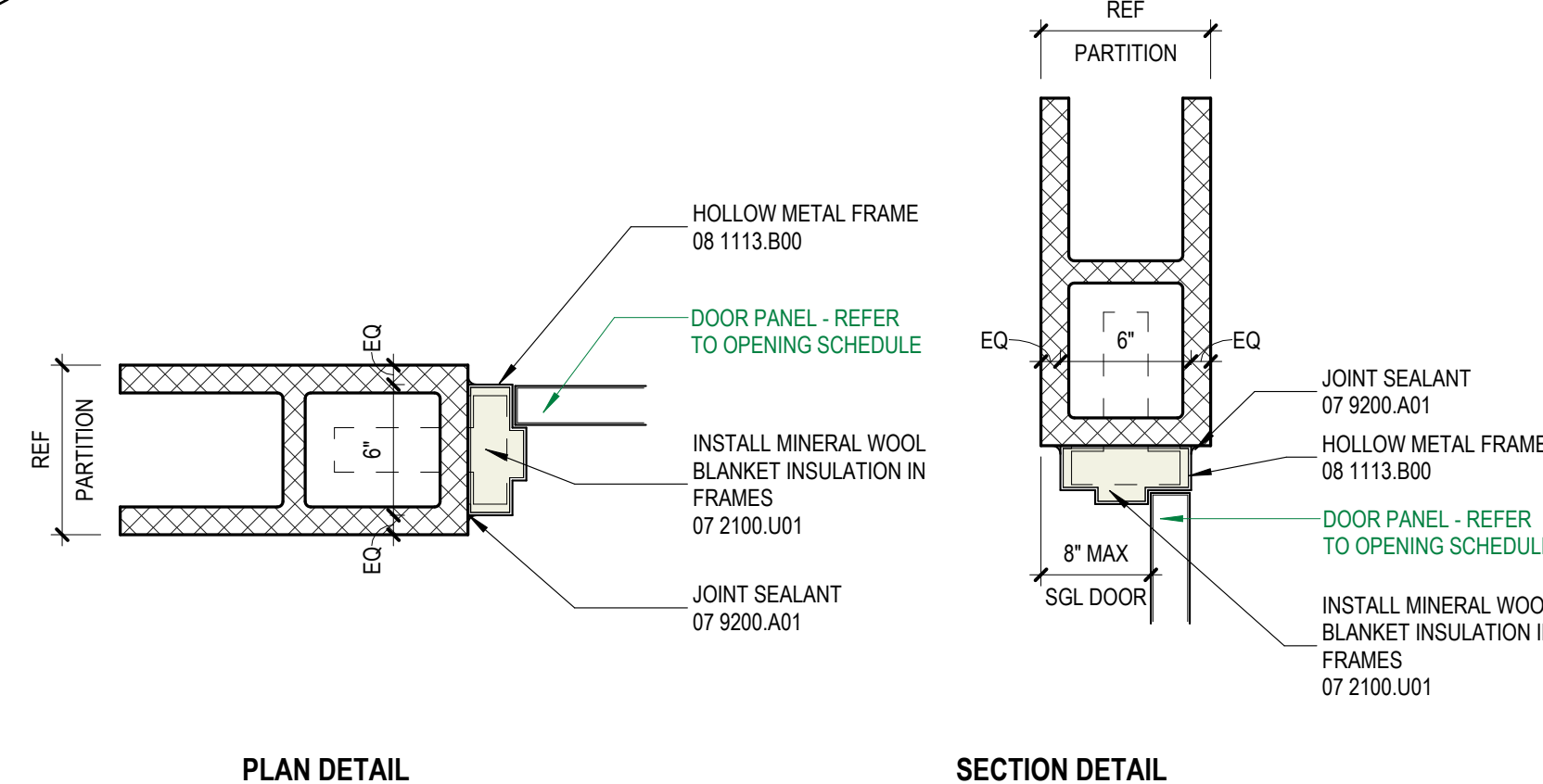
○ OPENING TYPE
1/4" = 1'-0"



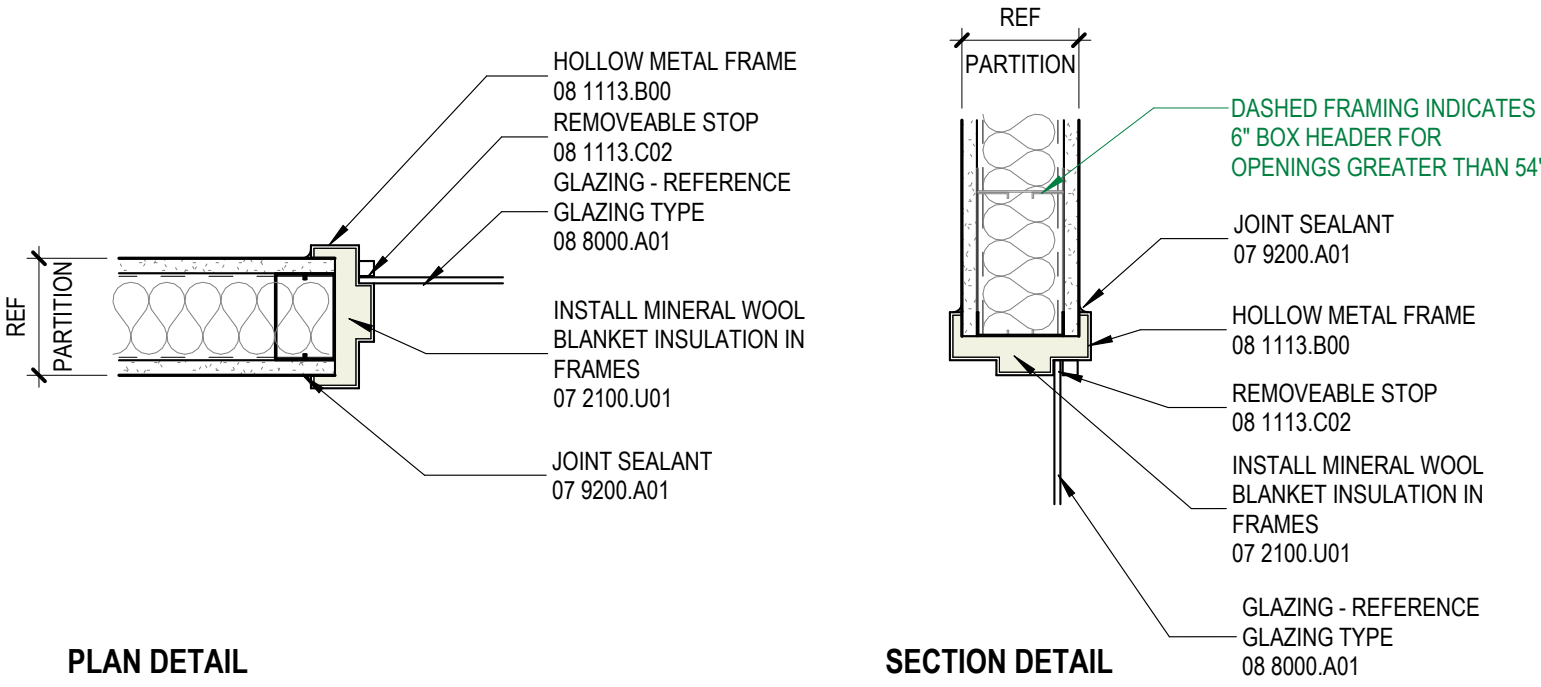
6 SINGLE STUD BULKHEAD DETAIL
A500 1 1/2" = 1'-0"



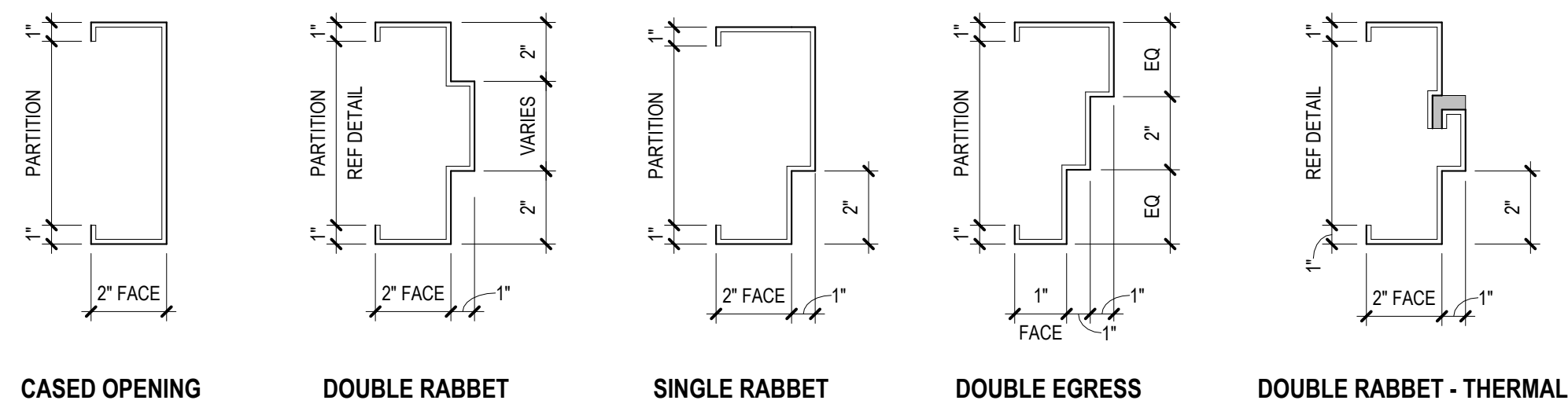
4 TYPICAL HM FRAME AT GYPSUM PARTITION DETAIL SET
A500 1 1/2" = 1'-0"



3 TYPICAL HM FRAME AT CMU PARTITION DETAIL SET
A500 1 1/2" = 1'-0"



2 BORROWED LITE HM FRAME AT GLAZED OPENING DETAIL SET
A500 1 1/2" = 1'-0"



1 HOLLOW METAL FRAME TYPES
A500 3" = 1'-0"

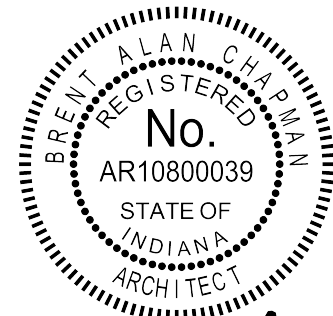
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
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2	01/27/25	ADDENDUM 2
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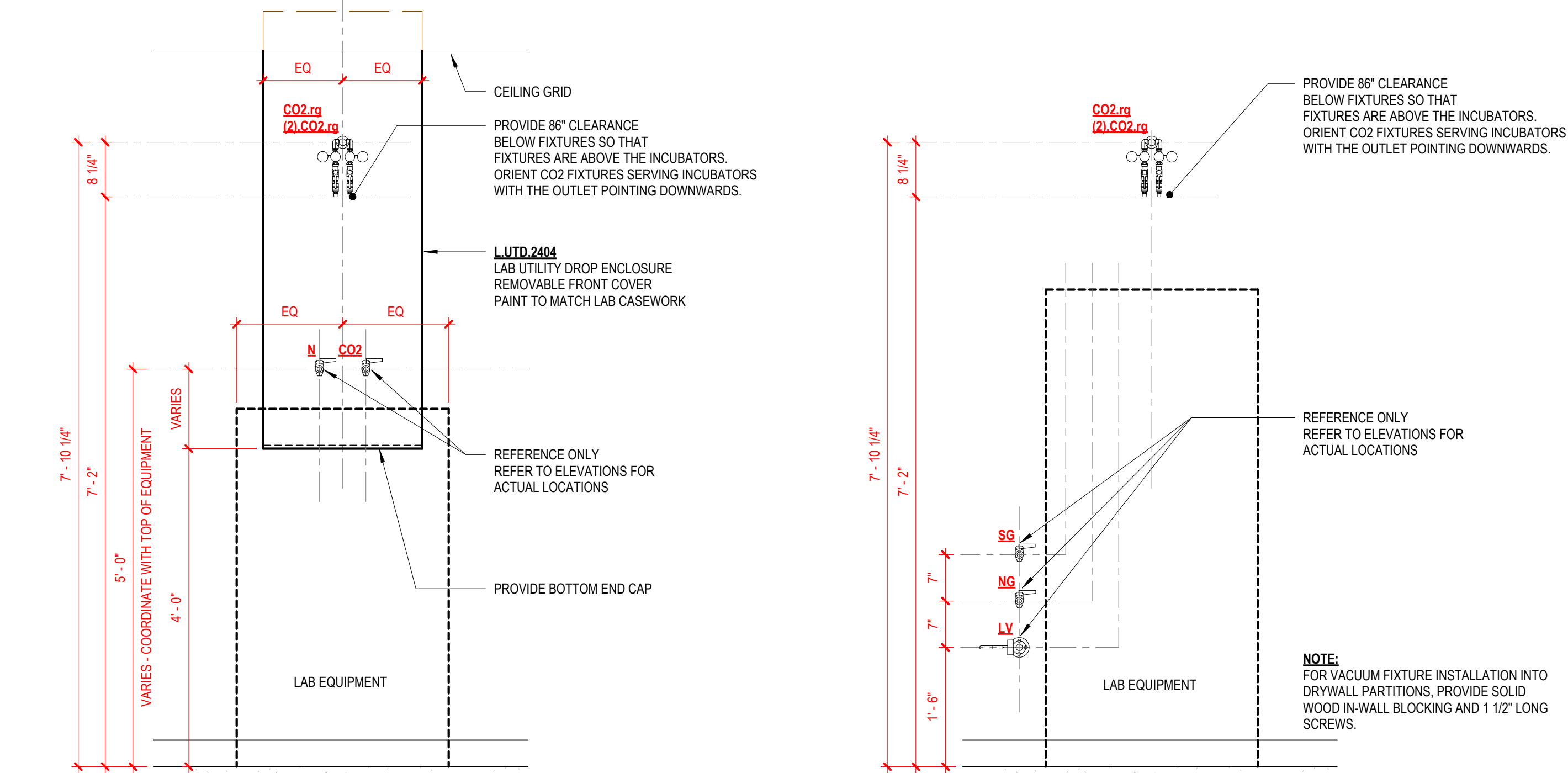


But q. dm

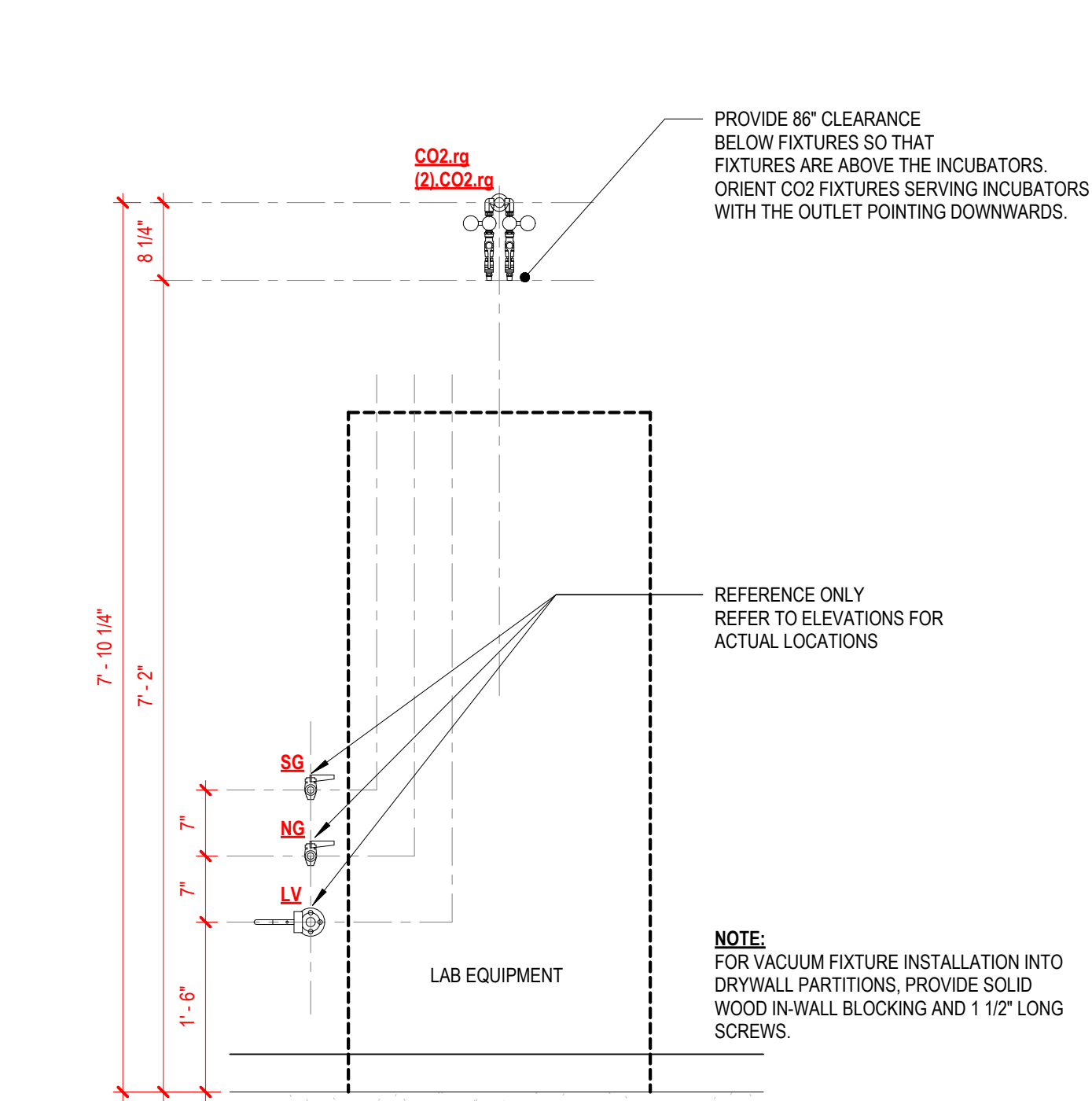
OPENING SCHEDULES,
OPENING DETAILS &
ELEVATIONS

DATE
BSALS PROJECT NO. 00360477

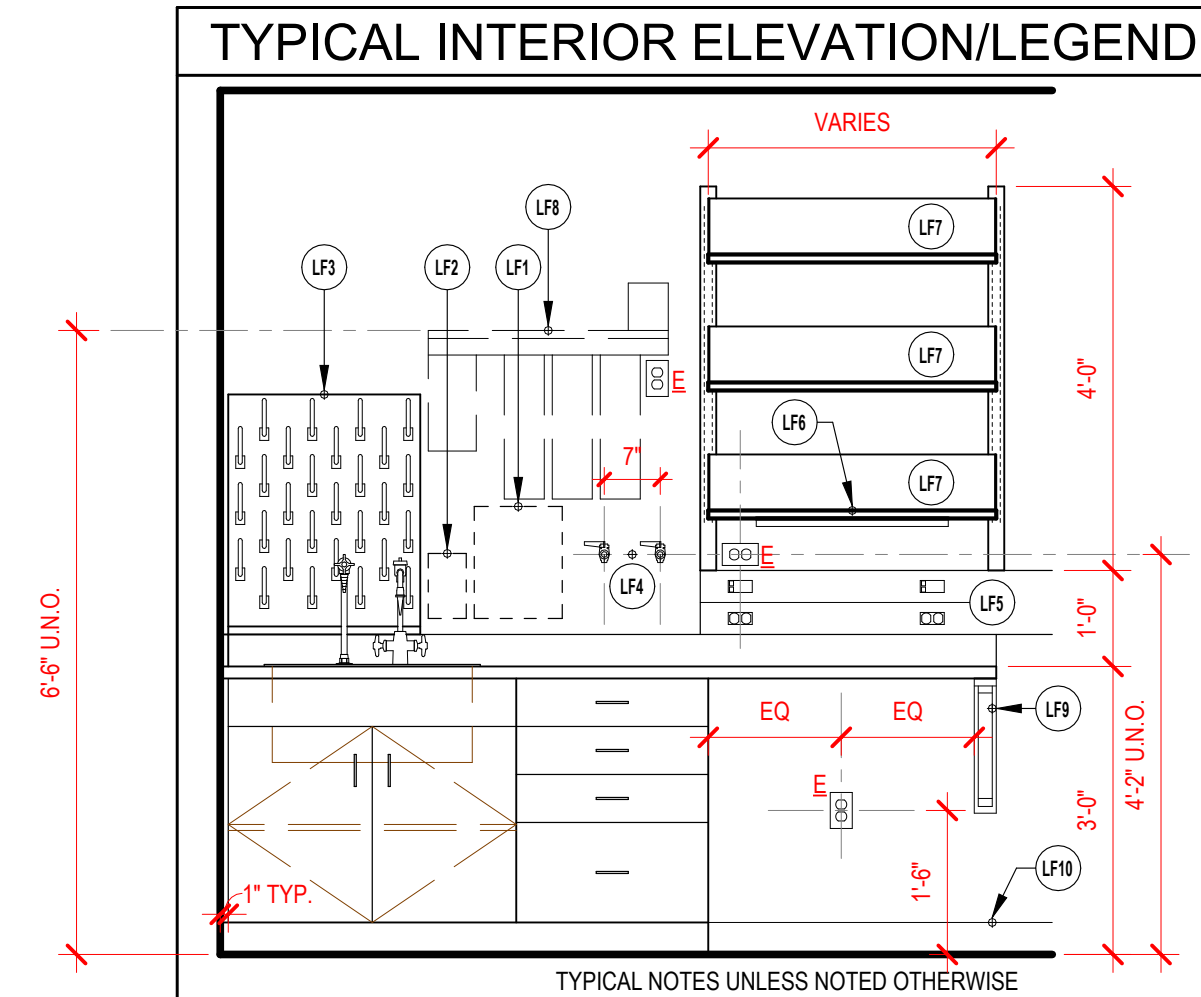
A500



12 TYPICAL WALL SERVICE FITTINGS ELEVATION - AT EXTERIOR WALL
F000.Y 3/4" = 1'-0"



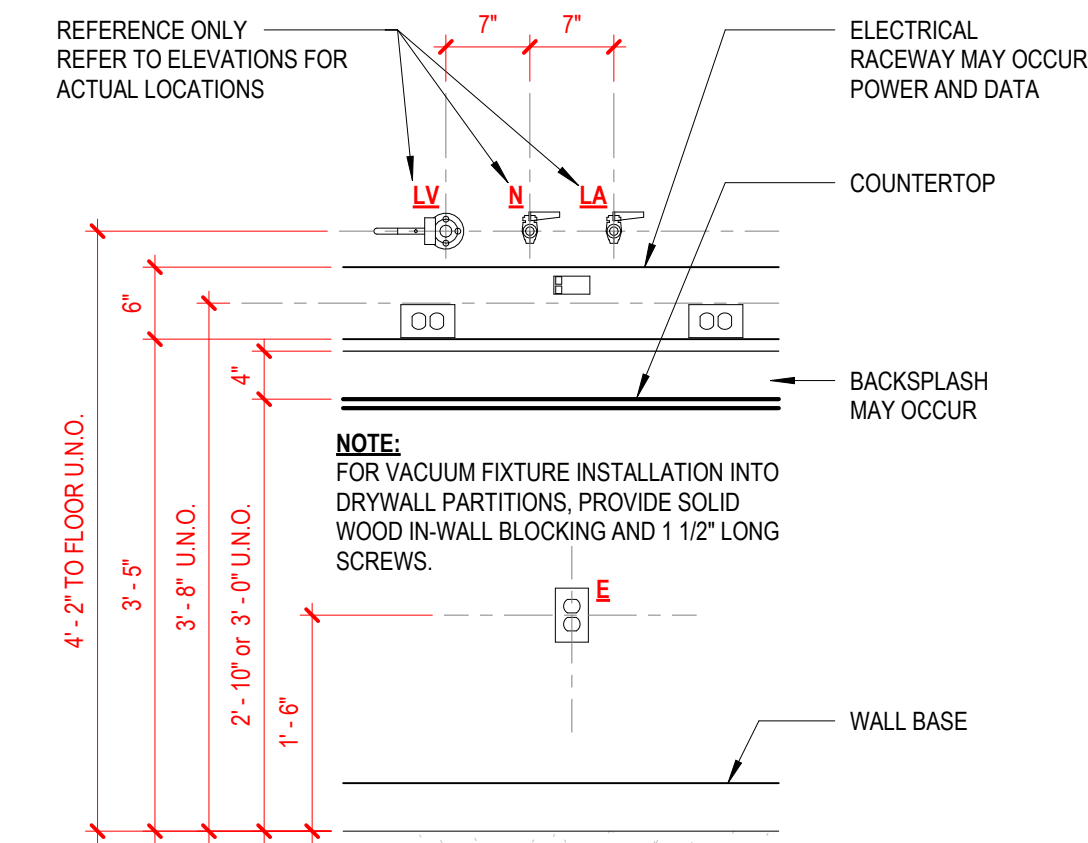
11 TYPICAL WALL SERVICE FITTINGS ELEVATION - STACKED
F000.Y 3/4" = 1'-0"



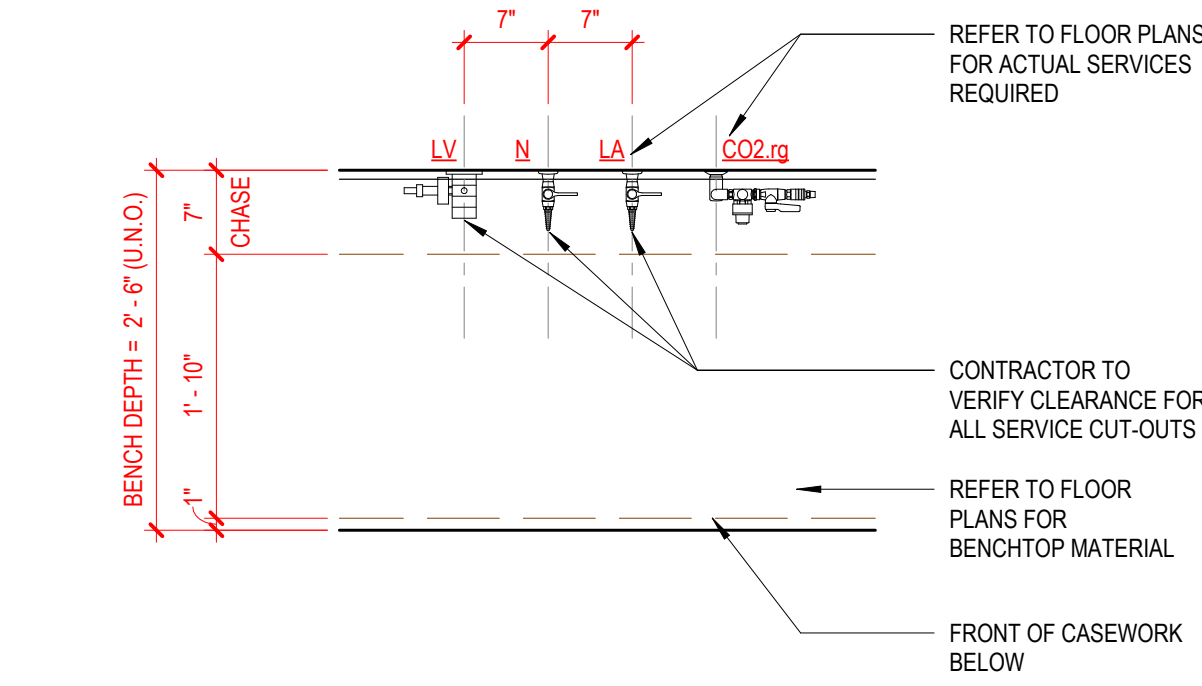
- LEGEND INDICATES GRAPHIC REPRESENTATION OF CASEWORK ELEMENTS, NOT A TYPICAL LAYOUT.
- ALL NOTES ARE TYPICAL UNLESS OTHERWISE NOTED (U.N.O.) AND EVERY INSTANCE MAY NOT BE NOTED ON LAB INTERIOR ELEVATIONS.
- RACEWAY MOUNTING HEIGHT TO BE COORDINATED WITH COUNTERTOP HEIGHT, LAB SINK LOCATIONS, WALL-HUNG LAB COMPONENTS, ETC.

LAB - TYPICAL INTERIOR ELEVATION
1/2" = 1'-0"

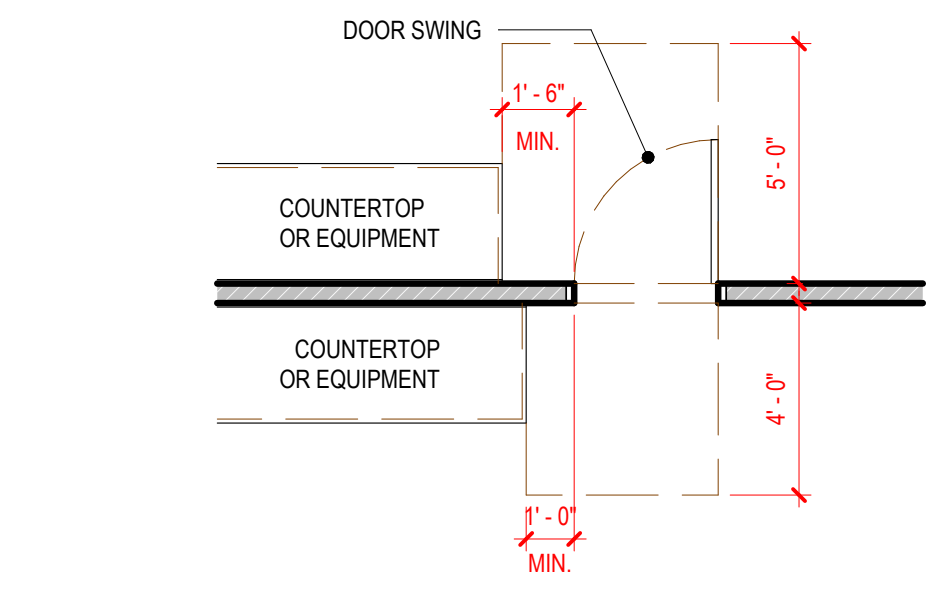
KEYNOTE SCHEDULE	
NUMBER	TEXT
LF1	
LF2	
LF3	
LF4	
LF5	
LF6	
LF7	
LF8	
LF9	
LF10	



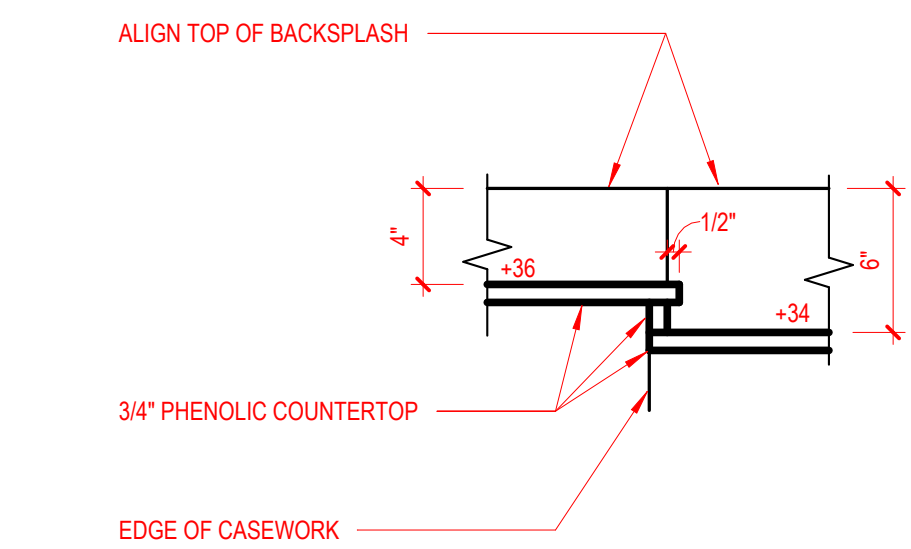
9 TYPICAL WALL SERVICE FITTINGS ELEVATION - SIDE BY SIDE
F000.Y 3/4" = 1'-0"



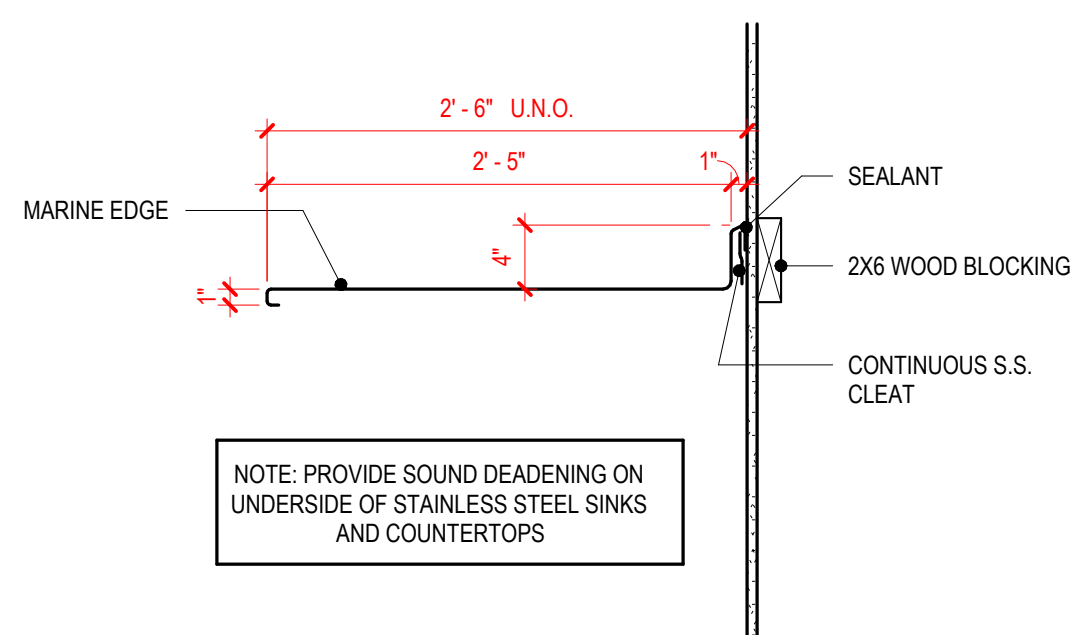
10 TYPICAL WALL SERVICE FITTINGS PLAN
F000.Y 3/4" = 1'-0"



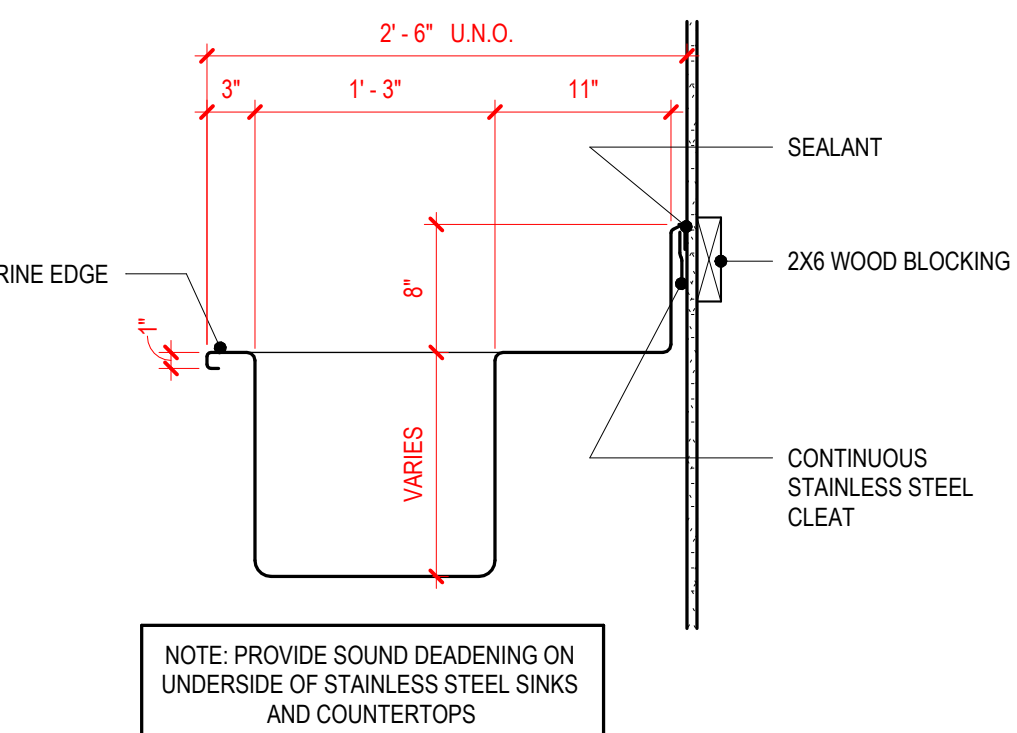
13 LAB INTERIOR DOOR CLEARANCES (ADA COMPLIANT)
F000.Y 1/4" = 1'-0"



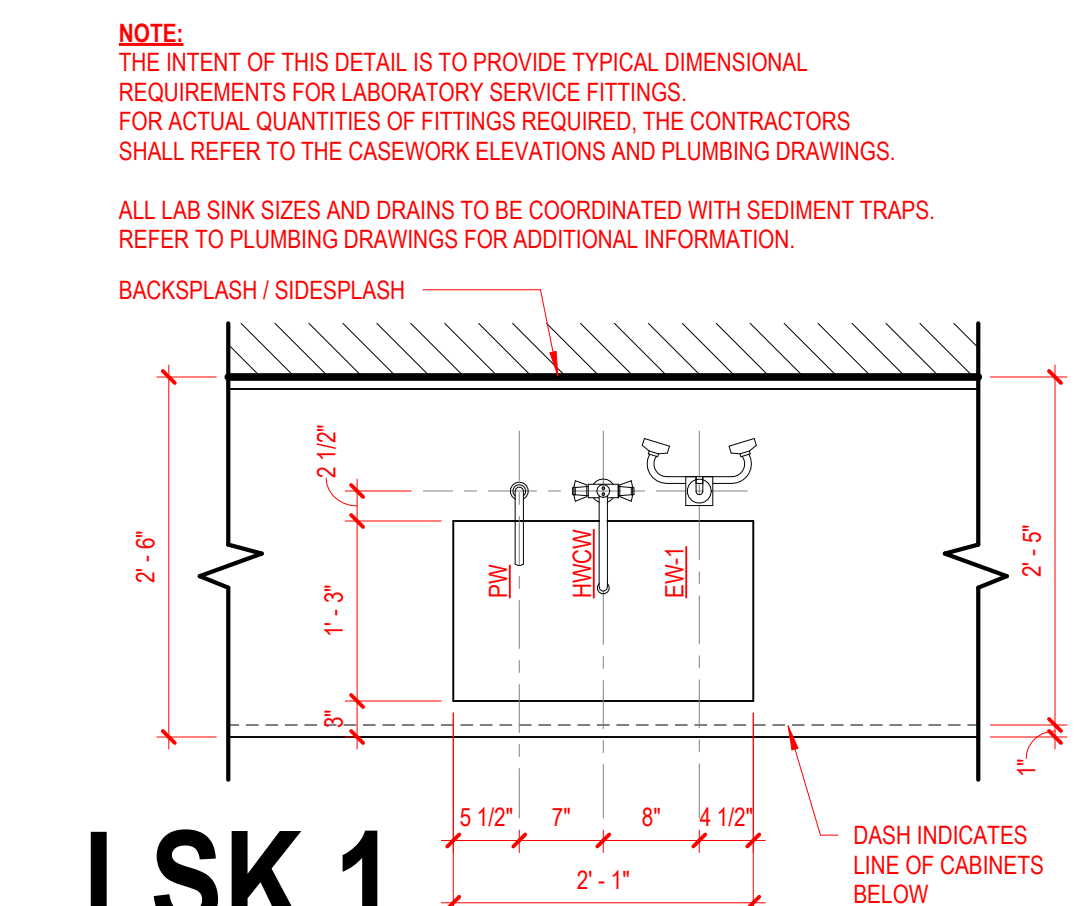
8 COUNTERTOP TRANSITION
F000.Y 1 1/2" = 1'-0"



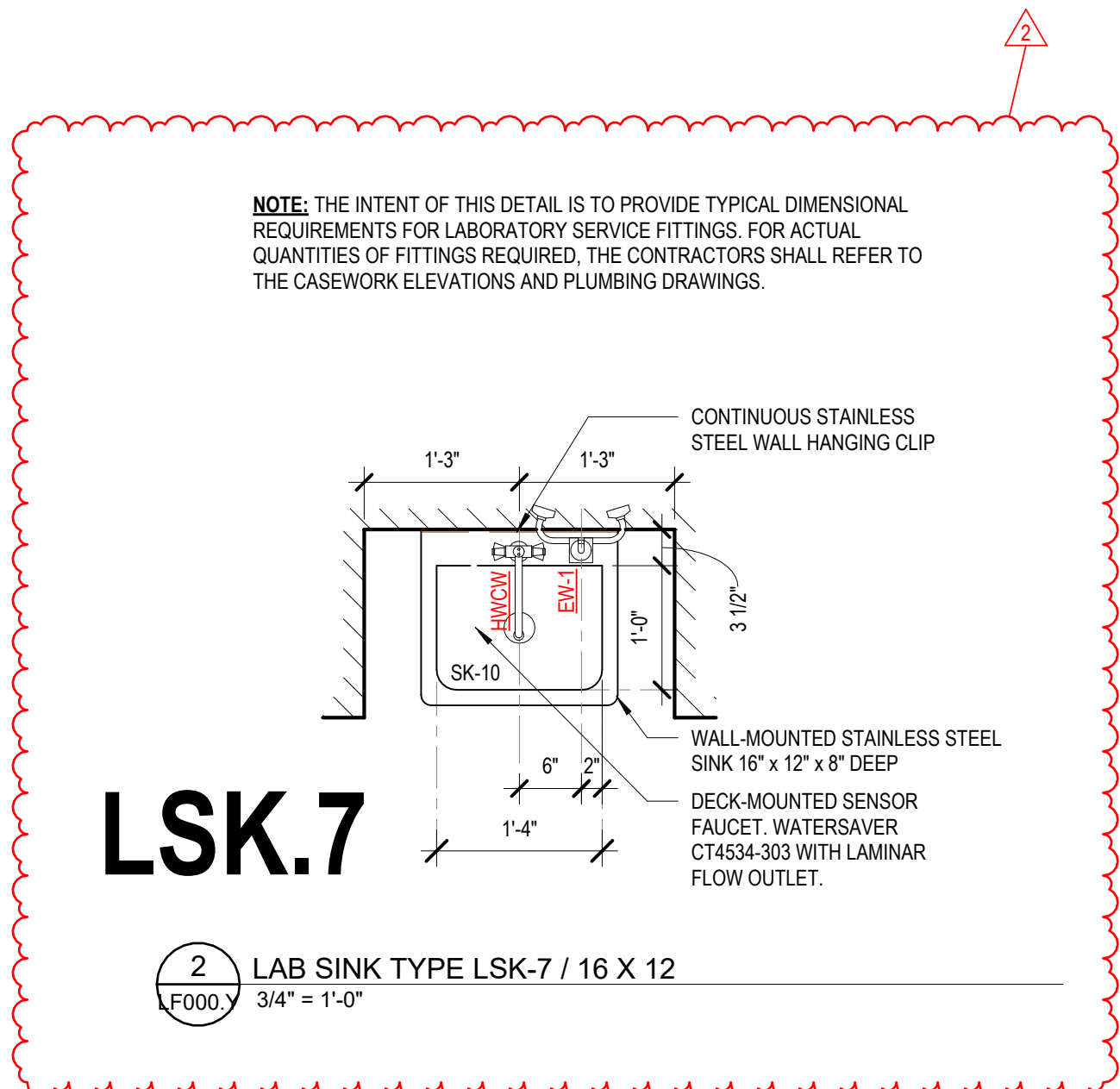
7 STAINLESS STEEL TOP - SECTION
F000.Y 1" = 1'-0"



6 STAINLESS STEEL SINK - SECTION
F000.Y 1" = 1'-0"



1 LSK.1 - 25w15d10h - TYPICAL LAB
F000.Y 3/4" = 1'-0"

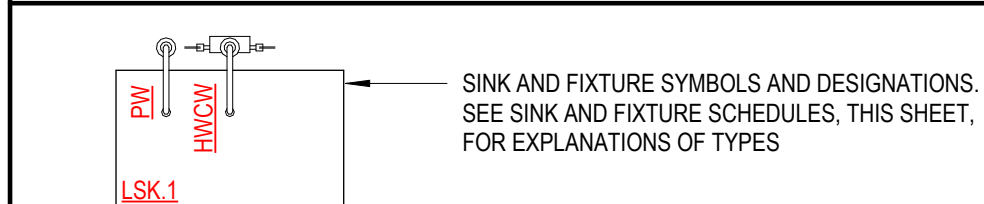


2 LAB SINK TYPE LSK-7 / 16 X 12
F000.Y 3/4" = 1'-0"

LABORATORY BENCHTOP SCHEDULE

PH	LAB GRADE SOLID PHENOLIC BENCHTOP.
EP	LAB GRADE EPOXY BENCHTOP.
ST	STAINLESS STEEL BENCHTOP.

SINK AND FIXTURE SYMBOLS



LABORATORY FIXTURE SCHEDULE

MOBILE BENCHES VALVES	
WATERSAVER	CT2880
WATERSAVER	CT2880-141WSA
VACUUMBRAND	A5-VCL02
DECK MOUNTED VALVES ON COUNTERTOPS	
WATERSAVER	CT2880-231WSA
VACUUMBRAND	A5-VCL02
WALL VALVES	
WATERSAVER	CT2873-366V-178FT
WATERSAVER	CT4303-364
WATERSAVER	CT2873-366V-758WSA
WATERSAVER	L4203-364-178FT
WATERSAVER	L4203-364EL-179FT
WATERSAVER	CT3173-364-758SNC
WATERSAVER	CT4100-158FT
VACUUMBRAND	A5VCL02
WATER FIXTURES	
HWCV	WATERSAVER CT414-8VB-CT80055
CW	WATERSAVER CT614VB-H28
PW	WATERSAVER CT7853-8
PW-2	WATERSAVER L7854L-8
SPR-1	WATERSAVER CTRP1711WSA-BH
SPR-2	WATERSAVER CTRP411SNC-BH
EMERGENCY SHOWER AND EYEWASH FIXTURES	
RSS	WATERSAVER SSSP2150
EW-1	WATERSAVER EW849
EW2	ISS2-FSH-HG-VB

SERVICE FITTING INFORMATION

THE INTENT OF THESE DETAILS IS TO PROVIDE TYPICAL DIMENSIONAL REQUIREMENTS FOR LABORATORY SERVICE FITTINGS. FOR ACTUAL QUANTITIES OF FITTINGS REQUIRED, THE CONTRACTORS SHALL REFER TO THE CASEWORK ELEVATIONS AND PLUMBING DRAWINGS.

GENERAL NOTES: LAB FURNISHING (LF)

- ALL WALL BENCHTOPS AND MOVABLE TABLES SHALL BE 30" DEEP INCLUDING WALL BENCH BACK SPLASH (UNLESS OTHERWISE NOTED).
- ALL ISLAND BENCHTOPS SHALL BE 60" DEEP (UNLESS OTHERWISE NOTED).
- ALL BENCHES AND TABLES SHALL BE 36" HIGH (UNLESS OTHERWISE NOTED).
- ALL BENCHTABLE TOPS TO BE 3/4" LAB GRADE SOLID PHENOLIC (UNLESS OTHERWISE NOTED).
- ALL BACK AND SIDE SPLASHES TO BE 3/4" THICK AND 4" HIGH. PIPEDROP CURBS TO BE 3/4" THICK AND 5" HIGH (UNLESS OTHERWISE NOTED).
- PROVIDE SIDESPLASHES AT ALL BENCHTOPS AGAINST FUME HOODS AND/OR ADJACENT WALLS.
- OVERALL LENGTH OF BENCHTOPS SHALL BE DETERMINED BY CASEWORK SIZES AND DIMENSIONS AS INDICATED ON PLANS. TOPS SHALL OVERHANG 1/2" AT EACH END AND 1" FROM FRONT OF BASE CABINETS AND TABLES. WHEN OVERALL DIMENSIONS ARE GIVEN, 1/2" OVERHANG IS NOT INCLUDED.
- ALL CASEWORK, FUME HOODS AND ANY OTHER FURNISHINGS WITH EXPOSED TO VIEW BACKS AND SIDES SHALL BE FINISHED.
- INSTALL CLOSURE PANELS BETWEEN BACK OF CABINETS OR HOODS AND WALLS AT EXPOSED ENDS AND BETWEEN BASE CABINETS AND/OR HOODS THAT ARE SET BACK TO BACK.
- ALL PENETRATIONS THROUGH BENCHTOP SHALL BE SEALED WITH SEALANT.
- BACKS OF COUNTERTOPS AND SPLASHES AGAINST WALLS SHALL BE SEALED TO THE WALL WITH SEALANT.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATIONS.
- COLORS FOR ALL COMPONENTS OF THE PROJECT INDICATED ON THESE DRAWINGS ARE AS INDICATED IN THE SPECIFICATIONS.
- FREE STANDING SHELVING AND CASEWORK LESS THAN 18" DEEP SHALL BE SECURED TO PREVENT TIPPING. SUBMIT SHOP DRAWINGS OF ATTACHMENT PRIOR TO INSTALLATION.
- SAFETY SHOWER / EYEWASH UNITS SHALL COMPLY WITH ANSI STANDARDS FOR USABILITY BY THE PHYSICALLY DISABLED. SAFETY SHOWER / EYEWASH UNITS SHALL BE FURNISHED UNDER SECTION 123000 FOR INSTALLATION UNDER DIVISION 22.
- FOR LABORATORY SERVICE FITTING TYPES, LOCATIONS AND ORDER, SEE LABORATORY FURNISHING PLANS. THESE FITTINGS SHALL BE PROVIDED UNDER SECTION 123000 FOR INSTALLATION UNDER DIVISION 22.
- WHERE NO FUME HOOD OCCURS ADJACENT TO CORROSIVE STORAGE CABINETS, ROUTE VENT PIPE (IN PIPE CHASE) TO FUME HOOD AND EXTEND 4" ABOVE FUME HOOD WORK SURFACE BEHIND BAFFLE.
- ALL SMOKE EXHAUST SHOWN ON THESE DRAWINGS, INCLUDING FLEXIBLE DUCT HOSE, SHALL BE PROVIDED UNDER SECTION 123000, DIVISION 23 SHALL MAKE FINAL CONNECTION TO SMOKE.
- INSTALLATION OF EQUIPMENT, SUPPORTS OR ANY OTHER ITEMS THAT MAY INTERFERE WITH LIGHTING, STRUCTURAL OR MECHANICAL SYSTEMS, SHALL BE CAREFULLY COORDINATED. NOTIFY OWNERS REPRESENTATIVE OF DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
- UNLESS OTHERWISE NOTED, ALL MISCELLANEOUS CHANNELS, BRACKETS AND FITTINGS INDICATED ON ALL LABORATORY FURNISHING DRAWINGS SHALL BE SUPPLIED, INSTALLED, AND PAINTED UNDER SECTION 123000.
- CONTRACTOR SHALL EXAMINE ALL LABORATORY FURNISHING PLANS AND COORDINATE WITH REFLECTED CEILING PLANS FOR PROPER VERTICAL SERVICE COLUMN & PIPE DROP ENCLOSURE HEIGHTS.
- HEAVY DUTY UNISTRUT AND OTHER STRUCTURALLY ANCHORED AND SUSPENDED DEVICES WHICH REQUIRE COORDINATION WITH OTHER TRADES SHALL BE THE RESPONSIBILITY OF SECTION 123553 (UNLESS OTHERWISE NOTED). ADDITIONAL FRAMING MAY BE REQUIRED TO ACCOMMODATE ANCHORAGE AROUND DUCTWORK OR OTHER OBSTRUCTIONS.
- ALL MARKER BOARDS, COAT RACKS, AND FIRE EXTINGUISHERS ARE INDICATED ON THE "LF" DRAWINGS FOR COORDINATION ONLY.
- SERVICE FITTING SHOWN ON THE "LF" PLAN DRAWINGS ARE FOR LOCATION ONLY. REFER TO DETAILS AND SPECIFICATIONS FOR ACTUAL FITTINGS.
- ELECTRICAL DEVICES SHALL BE PROVIDED UNDER DIVISION 26. ELECTRICAL DEVICES SHOWN ON THE "LF" DRAWINGS ARE FOR THE LOCATION OF CASEWORK CUTOUTS. DEVICES SHOWN AT CONSTANT TEMPERATURE ROOMS, FUME HOODS, VERTICAL SERVICE COLUMNS, VACUUM PUMP CABINETS, ACID CABINETS AND FLEXIBLE LABORATORY FURNITURE SYSTEM SHALL BE PROVIDED BY THE EQUIPMENT SUPPLIER.
- ALL WALL MOUNTED RACKS SHALL BE MOUNTED (40" A.F.F.) TO THE BOTTOM OF THE RACEWAY (UNLESS OTHERWISE NOTED).
- ALL CASEWORK, SINKS, SHELVING, AND SUPPORTS INSIDE CONSTANT TEMPERATURE ROOMS SHALL BE STAINLESS STEEL CONSTRUCTION (UNLESS OTHERWISE NOTED).
- FOR CSP - CEILING SERVICE PANELS, CONTRACTOR SHALL REVIEW ALL REFLECTED CEILING PLANS.

TYPICAL LAB ABBREVIATIONS

ADA	AMERICAN DISABILITIES ACT
AF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL DOCUMENTS
BSC	BIO SAFETY CABINET
CFCI	CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
CFM	CUBIC FEET PER MINUTE
CLNG	CEILING
CLR	CLEAR OR CLEARANCE
CR-TOP	CR - TOP - TEMPERATURE CONTROL PANEL
DIA	DIAMETER
DIV	DIVISION
EM	EMERGENCY POWER OUTLET
EQUIP	EQUIPMENT
EP	ELECTRICAL PANEL
FEB	FIRE EXTINGUISHER ON BRACKET
FEC	FIRE EXTINGUISHER CABINET
FH	FUME HOOD
FHCP	FUME HOOD CLOSER PANEL
FHP	FUME HOOD FILLER PANEL
FP	FILLER PANEL
GA	GAUGE
GC	GENERAL CONTRACTOR
HD	HEAVY DUTY
HRV	HOSE REEL VALVE CABINET
HWCV	HOT WATER - COLD WATER
KS	KNEE SPACE
LEWH#	EQUIPMENT EXHAUST (DIAMETER)
L.HKS#	LAB COAT HOOKS (COUNT)
L.DRR#	LAB DRYING RACK (DIMENSIONS)
L.SKR#	LAB SINK (P)
L.SINKL	LAB SINK (L)
L.SSS#	LAB STAINLESS STEEL SHELF (DIMENSIONS)
L.UTD#	LAB UTILITY DROP (DIMENSIONS)
LB	LAB BENCH
LT	LAB TABLE
MAX	MAXIMUM
MIN	MINIMUM
MKB	MARKERBOARD
MTD	MOUNTED
NYS	NOT TO SCALE
OC	ON CENTER
OCFI	OWNER FURNISHED / OWNER INSTALLED
OCFI	OWNER FURNISHED / CONTRACTOR INSTALLED
OH	OPPOSITE HAND
OHV	OVERHEAD
PHEN (PH)	PHENOLIC
REF	REFRIGERATOR
S	SINK
SK	SINK
SPEC	SPECIFICATIONS
STS (SS)	STAINLESS STEEL
TEMP	TEMPERATURE
TYP	TYPICAL
UC	UNDER COUNTER
UNO	UNLESS NOTED OTHERWISE

TYPICAL LAB SERVICE ABBREVIATIONS

CA	LABORATORY COMPRESSED AIR
CO2	CARBON DIOXIDE
CW	POTABLE COLD WATER
EW	EYEWASH
HW	POTABLE HOT WATER
HWCV	HOT WATER - COLD WATER
LA	LABORATORY AIR (15 PSI)
LA100	LABORATORY AIR (100 PSI)
N	NITROGEN
RO	REVERSE OSMOSIS
RSS	RECESSED SAFETY STATION
SPR	SPRAYER / PRE-RINSE UNIT

DRAWING INDEX - LAB

Sheet Number	Sheet Name
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BSA

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9365 Counselors Row, Suite 300
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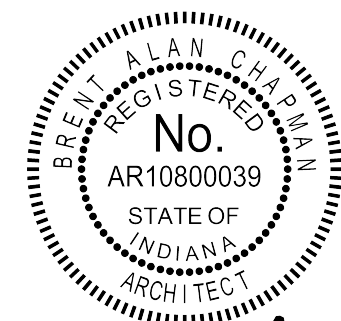
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CLIENT PROJECT NO. - 20240397

BIDDING SET JANUARY 9, 2025

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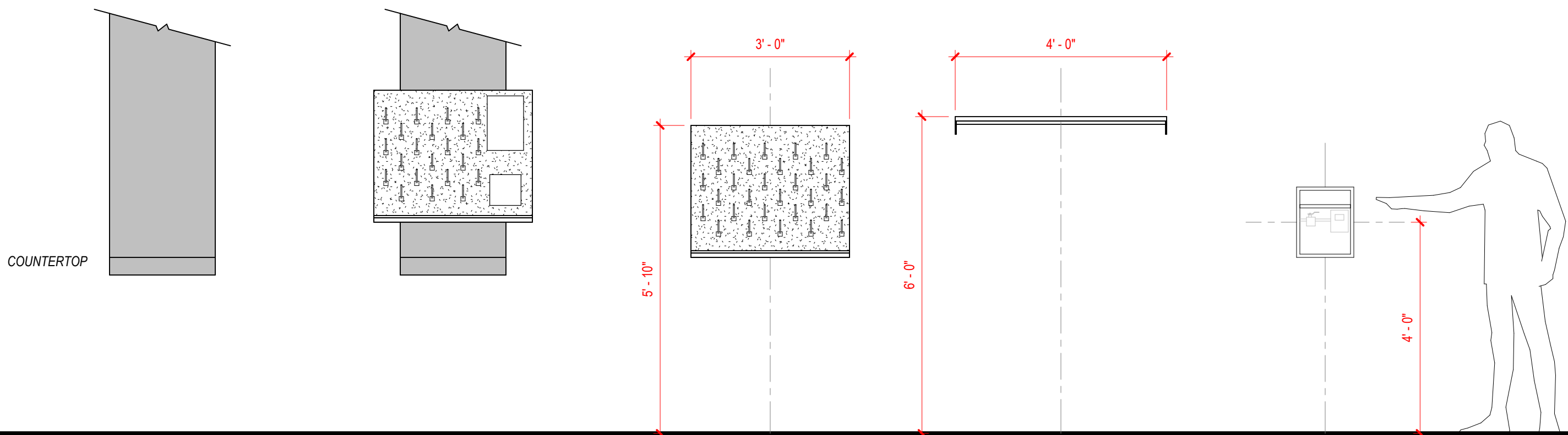
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LAB GENERAL NOTES AND FIXTURE SCHEDULES

DATE
BSALS PROJECT NO. 00360477

LF000.Y

1/24/2025 1:54:45 PM Autodesk Docs:J0636477 - IUB Research Lab Renovations:00360477-CHEN_ARCH_LBALS_LB4-nt



UTL.DRP.
24" W LAB UTILITY DROP
(EXTERIOR WALLS, AND ISLANDS)
MATCH LAB CASEWORK COLOR

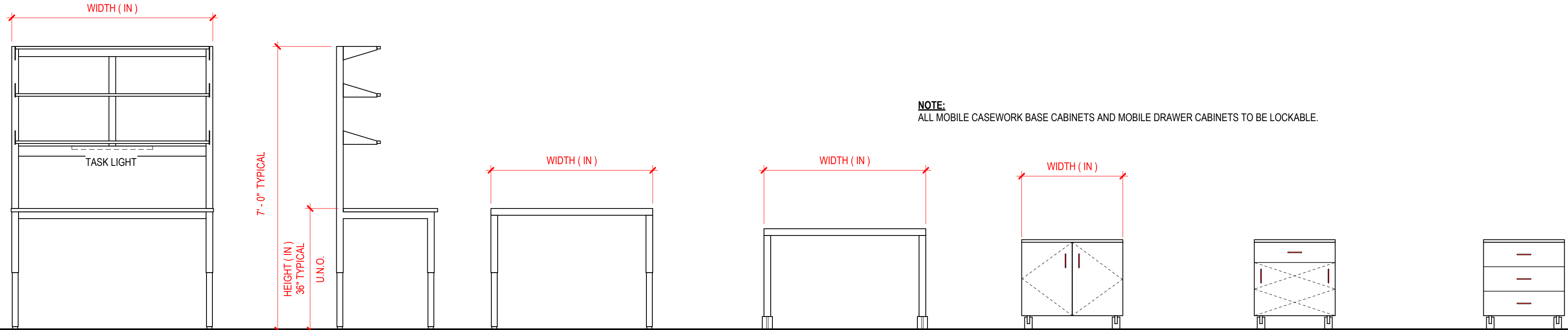
PIPE.DRP.
LAB UTILITY DROP WITH
DRYING RACK
(EXTERIOR WALLS)
MATCH LAB CASEWORK COLOR

xxxx.DRY.R
36"x30" DRYING RACK

xxxx.ST.SH
STAINLESS STEEL
SHELF 48"x10"

GEC
GAS EMERGENCY CABINET
(SHUT OFF VALVE)
AT +48" A.F.F.

LAB ACCESSORIES



LMBA
LAB MOBILE BENCH
WITH ADJUSTABLE SHELVING
(3 TURRETS.)

LMTA
LAB MOBILE TABLE

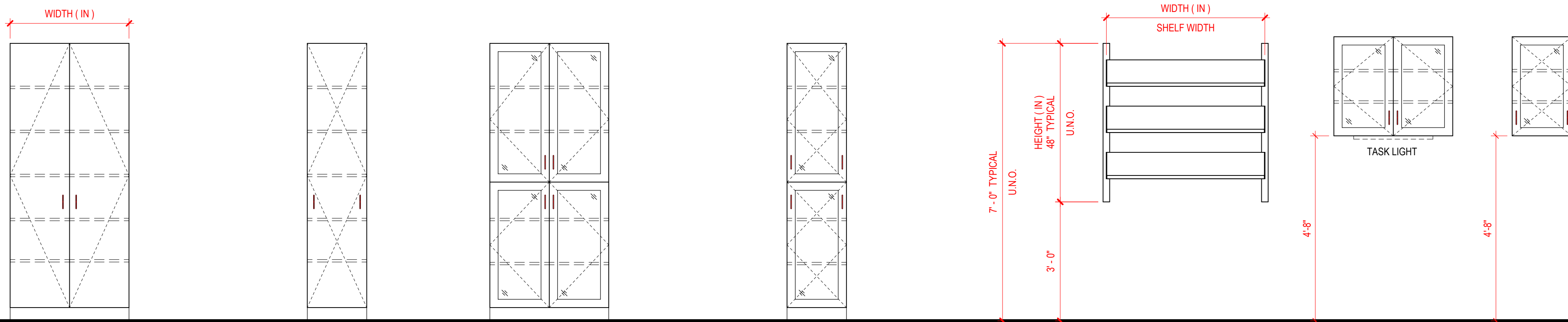
LMTB
LAB MOBILE TABLE
ON LOCKING CASTERS AT +30"

LMCA
MOBILE CASEWORK WITH
ANTI-TIP MECHANISM
DOUBLE DOOR

LMCBL or LMCBR
MOBILE CASEWORK WITH
ANTI-TIP MECHANISM
SINGLE DOOR SINGLE DRAWER

LMCC
MOBILE CASEWORK WITH
ANTI-TIP MECHANISM
3-DRAWER UNIT

LAB CASEWORK - MOBILE BENCHES AND TABLES



LTA
DBL DOOR
TALL STORAGE CABINET
ADJUSTABLE SHELVES
PROVIDE LOCKS

LTAL or LTAR
SGL DOOR
TALL STORAGE CABINET
ADJUSTABLE SHELVES
PROVIDE LOCKS

LTE
DBL DOOR WITH GLASS - SPLIT
TALL STORAGE CABINET
ADJUSTABLE SHELVES
PROVIDE LOCKS

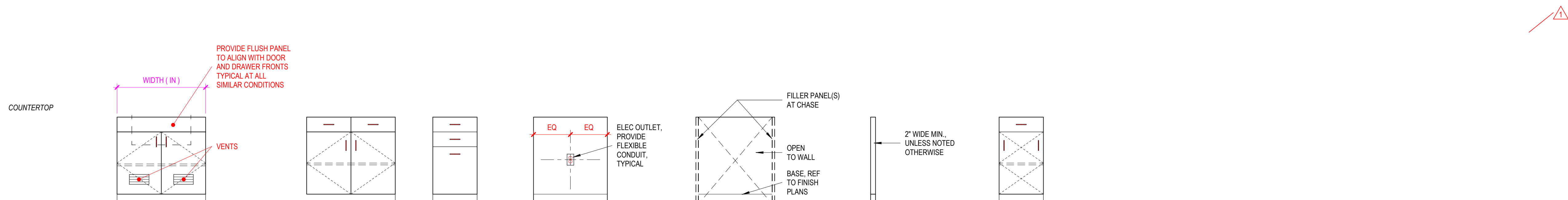
LTLEL or LTER
SGL DOOR WITH GLASS - SPLIT
TALL STORAGE CABINET
ADJUSTABLE SHELVES
PROVIDE LOCKS

LWSA

LWB
DOUBLE DOOR
WALL CABINET
WITH GLASS DOORS
PROVIDE LOCKS

LWBL or LWBR
DOUBLE DOOR
WALL CABINET
PROVIDE LOCKS

LAB CASEWORK - FULL HEIGHT CABINETS



LBSS
DBL DOOR SINK - VENTED
BASE CABINET
PROVIDE LOCKS

LBFB
DBL DOOR - DBL DRAWER
BASE CABINET
ADJUSTABLE HT SHELF
PROVIDE LOCKS

LBH
(3) DRAWER UNIT
BASE CABINET
PROVIDE LOCKS

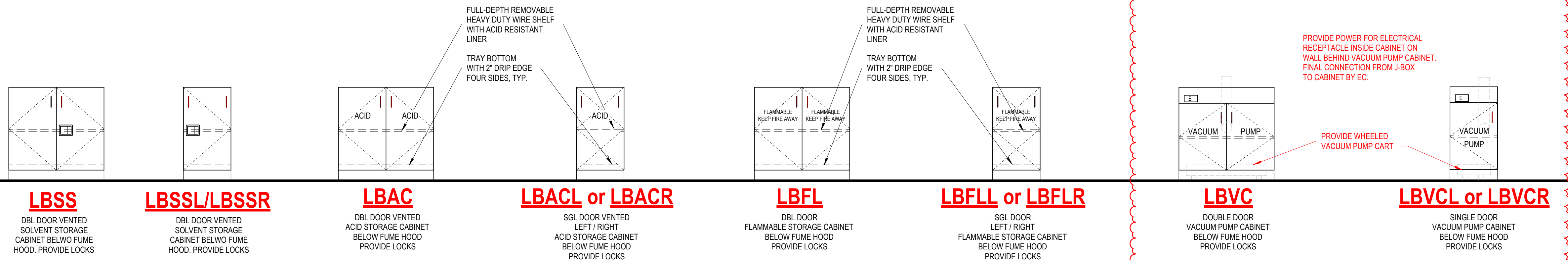
LBKS
KNEE SPACE
REMOVABLE PANEL

LBOS
OPEN SPACE
NO PANEL

LBEP
FINISHED END PANEL

LBEL or LBER
SGL DOOR - SGL DRAWER
LEFT / RIGHT
BASE CABINET
ADJUSTABLE HT SHELF
PROVIDE LOCKS

LAB CASEWORK - BASE CABINETS - TYPICAL



LBSS
DBL DOOR VENTED
SOLVENT STORAGE
CABINET BELOW FUME
HOOD. PROVIDE LOCKS

LBSSL/LBSSR
DBL DOOR VENTED
SOLVENT STORAGE
CABINET BELOW FUME
HOOD. PROVIDE LOCKS

LBAC
DBL DOOR VENTED
ACID STORAGE CABINET
BELOW FUME HOOD
PROVIDE LOCKS

LBACL or LBACR
SGL DOOR VENTED
ACID STORAGE CABINET
BELOW FUME HOOD
PROVIDE LOCKS

LBFL
DBL DOOR
FLAMMABLE STORAGE CABINET
BELOW FUME HOOD
PROVIDE LOCKS

LBFL or LBFLR
SGL DOOR
FLAMMABLE STORAGE CABINET
BELOW FUME HOOD
PROVIDE LOCKS

LBVC
DOUBLE DOOR
VACUUM PUMP CABINET
BELOW FUME HOOD
PROVIDE LOCKS

LBVCL or LBVCR
SINGLE DOOR
VACUUM PUMP CABINET
BELOW FUME HOOD
PROVIDE LOCKS

GENERAL NOTES: LAB FURNISHING (LF)

- ALL WALL BENCHTOPS AND MOVABLE TABLES SHALL BE 30" DEEP INCLUDING WALL BENCH BACK SPLASH (UNLESS OTHERWISE NOTED).
- ALL ISLAND BENCHTOPS SHALL BE 60" DEEP (UNLESS OTHERWISE NOTED).
- ALL BENCHES AND TABLES SHALL BE 36" HIGH (UNLESS OTHERWISE NOTED).
- ALL BENCHTABLE TOPS TO BE 3/4" LAB GRADE SOLID PHENOLIC (UNLESS OTHERWISE NOTED).
- ALL BACK AND SIDE SPLASHES TO BE BE 3/4" THICK AND 4" HIGH. PIPEDROP CURBS TO BE 3/4" THICK AND 5" HIGH (UNLESS OTHERWISE NOTED).
- PROVIDE SIDESPLASHES AT ALL BENCHTOPS AGAINST FUME HOODS AND/OR ADJACENT WALLS.
- OVERALL LENGTH OF BENCHTOPS SHALL BE DETERMINED BY CASEWORK SIZES AND DIMENSIONS AS INDICATED ON PLANS. TOPS SHALL OVERHANG 1/2" AT EACH END AND 1" FROM FRONT OF BASE CABINETS AND TABLES. WHEN OVERALL DIMENSIONS ARE GIVEN, 1/2" OVERHANG IS NOT INCLUDED.
- ALL CASEWORK, FUME HOODS AND ANY OTHER FURNISHINGS WITH EXPOSED TO VIEW BACKS AND SIDES SHALL BE FINISHED.
- INSTALL CLOSURE PANELS BETWEEN BACK OF CABINETS OR HOODS AND WALLS AT EXPOSED ENDS AND BETWEEN BASE CABINETS AND/OR HOODS THAT ARE SET BACK TO BACK.
- ALL PENETRATIONS THROUGH BENCHTOP SHALL BE SEALED WITH SEALANT.
- BACKS OF COUNTERTOPS AND SPLASHES AGAINST WALLS SHALL BE SEALED TO THE WALL WITH SEALANT.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATIONS.
- COLORS FOR ALL COMPONENTS OF THE PROJECT INDICATED ON THESE DRAWINGS ARE AS INDICATED IN THE SPECIFICATIONS.
- FREE STANDING SHELVING AND CASEWORK LESS THAN 18" DEEP SHALL BE SECURED TO PREVENT TIPPING. SUBMIT SHOP DRAWINGS OF ATTACHMENT PRIOR TO INSTALLATION.
- SAFETY SHOWER / EYEWASH UNITS SHALL COMPLY WITH ANSI STANDARDS FOR USABILITY BY THE PHYSICALLY DISABLED. SAFETY SHOWER / EYEWASH UNITS SHALL BE FURNISHED UNDER SECTION 123000 FOR INSTALLATION UNDER DIVISION 22.
- FOR LABORATORY SERVICE FITTING TYPES, LOCATIONS AND ORDER, SEE LABORATORY FURNISHING PLANS. THESE FITTINGS SHALL BE PROVIDED UNDER SECTION 123000 FOR INSTALLATION UNDER DIVISION 22.
- WHERE NO FUME HOOD OCCURS ADJACENT TO CORROSIVE STORAGE CABINETS, ROUTE VENT PIPE (IN PIPE CHASE) UP NEAREST PIPE DROP ENCLOSURE TO EXHAUST DUCT SYSTEM FOR CONNECTION UNDER DIVISION 23.
- WHERE FUME HOOD OCCURS ADJACENT TO CORROSIVE STORAGE CABINETS, ROUTE VENT PIPE (IN PIPE CHASE) TO FUME HOOD AND EXTEND 4" ABOVE FUME HOOD WORK SURFACE BEHIND BAFFLE.
- ALL SNORKEL EXHAUST SHOWN ON THESE DRAWINGS, INCLUDING FLEXIBLE DUCT HOSE, SHALL BE PROVIDED UNDER SECTION 123000. DIVISION 23 SHALL MAKE FINAL CONNECTION TO SNORKEL.
- INSTALLATION OF EQUIPMENT, SUPPORTS OR ANY OTHER ITEMS THAT MAY INTERFERE WITH LIGHTING, STRUCTURAL OR MECHANICAL SYSTEMS, SHALL BE CAREFULLY COORDINATED. NOTIFY OWNER'S REPRESENTATIVE OF DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
- UNLESS OTHERWISE NOTED, ALL MISCELLANEOUS CHANNELS, BRACKETS AND FITTINGS INDICATED ON ALL LABORATORY FURNISHING DRAWINGS SHALL BE SUPPLIED, INSTALLED, AND PAINTED UNDER SECTION 123000.
- CONTRACTOR SHALL EXAMINE ALL LABORATORY FURNISHING PLANS AND COORDINATE WITH RELEVANT CEILING PLANS FOR PROPER VERTICAL SERVICE COLUMN & PIPE DROP ENCLOSURE HEIGHTS.
- HEAVY DUTY UNISTRUT AND OTHER STRUCTURALLY ANCHORED AND SUSPENDED DEVICES REQUIRE COORDINATION WITH OTHER TRADES SHALL BE THE RESPONSIBILITY OF SECTION 123553 (UNLESS OTHERWISE NOTED). ADDITIONAL FRAMING MAY BE REQUIRED TO ACCOMMODATE ANCHORAGE AROUND DUCTWORK OR OTHER OBSTRUCTIONS.
- ALL MARKER BOARDS, COAT RACKS, AND FIRE EXTINGUISHERS ARE INDICATED ON THE "LF" DRAWINGS FOR COORDINATION ONLY.
- SERVICE FITTING SHOWN ON THE "LF" PLAN DRAWINGS ARE FOR LOCATION ONLY. REFER TO DETAILS AND SPECIFICATIONS FOR ACTUAL FITTINGS.
- ELECTRICAL DEVICES SHALL BE PROVIDED UNDER DIVISION 26. ELECTRICAL DEVICES SHOWN ON THE "LF" DRAWINGS ARE FOR THE LOCATION OF CASEWORK CUTOUPS. DEVICES SHOWN AT CONSTANT TEMPERATURE ROOMS, FUME HOODS, VERTICAL SERVICE COLUMNS, VACUUM PUMP CABINETS, ACID CABINETS AND FLEXIBLE LABORATORY FURNITURE SYSTEM SHALL BE PROVIDED BY THE EQUIPMENT SUPPLIER.
- ALL WALL MOUNTED RACEWAYS SHALL BE MOUNTED (40" A.F.F.) TO THE BOTTOM OF THE RACEWAY (UNLESS OTHERWISE NOTED).
- ALL CASEWORK, SINKS, SHELVING, AND SUPPORTS INSIDE CONSTANT TEMPERATURE ROOMS SHALL BE STAINLESS STEEL CONSTRUCTION (UNLESS OTHERWISE NOTED).
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TYPICAL LAB ABBREVIATIONS

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APF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL DOCUMENTS
BSC	BIO SAFETY CABINET
CPCI	CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
CFM	CUBIC FEET PER MINUTE
CLNG	CEILING
CLR	CLEAR OR CLEARANCE
CR-TCP	COLD ROOM - TEMPERATURE CONTROL PANEL
DIA	DIAMETER
DIV	DIVISION
EM	EMERGENCY POWER OUTLET
EQUIP	EQUIPMENT
EP	ELECTRICAL PANEL
FEB	FIRE EXTINGUISHER ON BRACKET
FEC	FIRE EXTINGUISHER CABINET
FH	FUME HOOD
FHCP	FUME HOOD CLOSER PANEL
FHFP	FUME HOOD FILLER PANEL
FP	FILLER PANEL
GA	GAUGE
GC	GENERAL CONTRACTOR
HD	HEAVY DUTY
HRV	HOSE REEL VALVE CABINET
HWCV	HOT WATER - COLD WATER
KS	KNEE SPACE
L EXH #	EQUIPMENT EXHAUST (DIAMETER)
L HK#	LAB COAT HOOKS (COUNT)
L DRK #	LAB DRYING RACK (DIMENSIONS)
L SK #	LAB SINK (#)
L SNKL	LAB SNORKEL
L SSS #	LAB STAINLESS STEEL SHELF (DIMENSIONS)
L LUTD #	LAB UTILITY DROP (DIMENSIONS)
LB	LAB BENCH
LT	LAB TABLE
MAX	MAXIMUM
MIN	MINIMUM
MMB	MARKERBOARD
MTD	MOUNTED
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED / OWNER INSTALLED
OFCL	OWNER FURNISHED / CONTRACTOR INSTALLED
OH	OPPOSITE HAND
O/H	OVERHEAD
PHEN (PH)	PHENOLIC
REF	REFRIGERATOR
S	LIGHT SWITCH
SIM	SIMILAR
SK	SINK
SPEC	SPECIFICATIONS
STS (SS)	STAINLESS STEEL
TEMP	TEMPERATURE
TYP	TYPICAL
UC	UNDER COUNTER
UNO	UNLESS NOTED OTHERWISE

TYPICAL LAB SERVICE ABBREVIATIONS

CA	LABORATORY COMPRESSED AIR
CO2	CARBON DIOXIDE
CW	POTABLE COLD WATER
EW	EYEWASH
HW	POTABLE HOT WATER
HWCV	HOT WATER - COLD WATER
LA	LABORATORY AIR (15 PSI)
LA100	LABORATORY AIR (100 PSI)
N	NITROGEN
RO	REVERSE OSMOSIS
RSS	RECESSED SAFETY STATION
SPR	SPRAYER / PRE-RINSE UNIT

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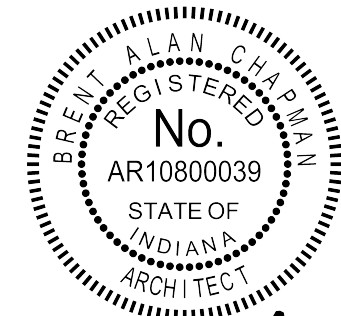
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	01/27/25	ADDENDUM 2
1	01/17/25	ADDENDUM 1



But q. dm

LAB CASEWORK MENU

DATE
BSALS PROJECT NO. 00360477

LF001.Y

KEYNOTE SCHEDULE			
NUMBER	TEXT		
A13	GENERIC EQUIPMENT FOR REFERENCE PURPOSE ONLY. OWNER FURNISHED AND INSTALLED.		
A17	ALIGN		
A19	CEILING SERVICE PANEL - 1. SEE LAB DETAILS LF000.X		

EQUIPMENT SCHEDULE			
#	NAME	SCOPE	COMMENTS
001	POWER CONDITIONER	O.F.O.I	
002	HELIUM RECOVERY MANIFOLD	C.F.C.I	
003	NANOACUITY UPHLC	O.F.O.I	
004	HEAT EXCHANGER	O.F.O.I	
005	FLAMMABLES CABINET	O.F.O.I	
006	AGILENT 6500	O.F.O.I	
007	TIMSTOF	O.F.O.I	
008	BRUKER HCT	O.F.O.I	
009	SCIEX 6500	O.F.O.I	
020	CONTROL CONSOLE	O.F.O.I	
023	MAGNET MONITOR	O.F.O.I	
040	CRYOREFRIGERATOR	O.F.O.I	
050	AGILENT 1250	O.F.O.I	
080	30 FZR	O.F.O.I	
090	20 FZR	O.F.O.I	
100	FRIDGE FZR	O.F.O.I	
329	BRUKER SOLARIX SERIES	O.F.O.I	
900	GENERIC EQUIPMENT	O.F.O.I	
950	MARKERBOARD 46X72	O.F.O.I	

LAB FURNISHINGS SCHEDULE			
NUMBER	NAME	DESCRIPTION	REMARKS
L 2 TNK	2.TNK	GAS CYLINDER TANK	
L C HK5	(2) TRIPLE C HK5	COAT HOOKS	
90.DRY R 9630	90.DRY R	PEG BOARD DRYING RACK	
L FEB	FEB	FIRE EXTINGUISHER	
L FH 72	FH 72	FUME HOOD FH 72	
L PTD	PTD	PAPER TOWEL DISPENSER	
LSB	LSB	SOLO DISPENSER	
SSS4810	SSS4810	STAIN FSS STEEL SHIP F	

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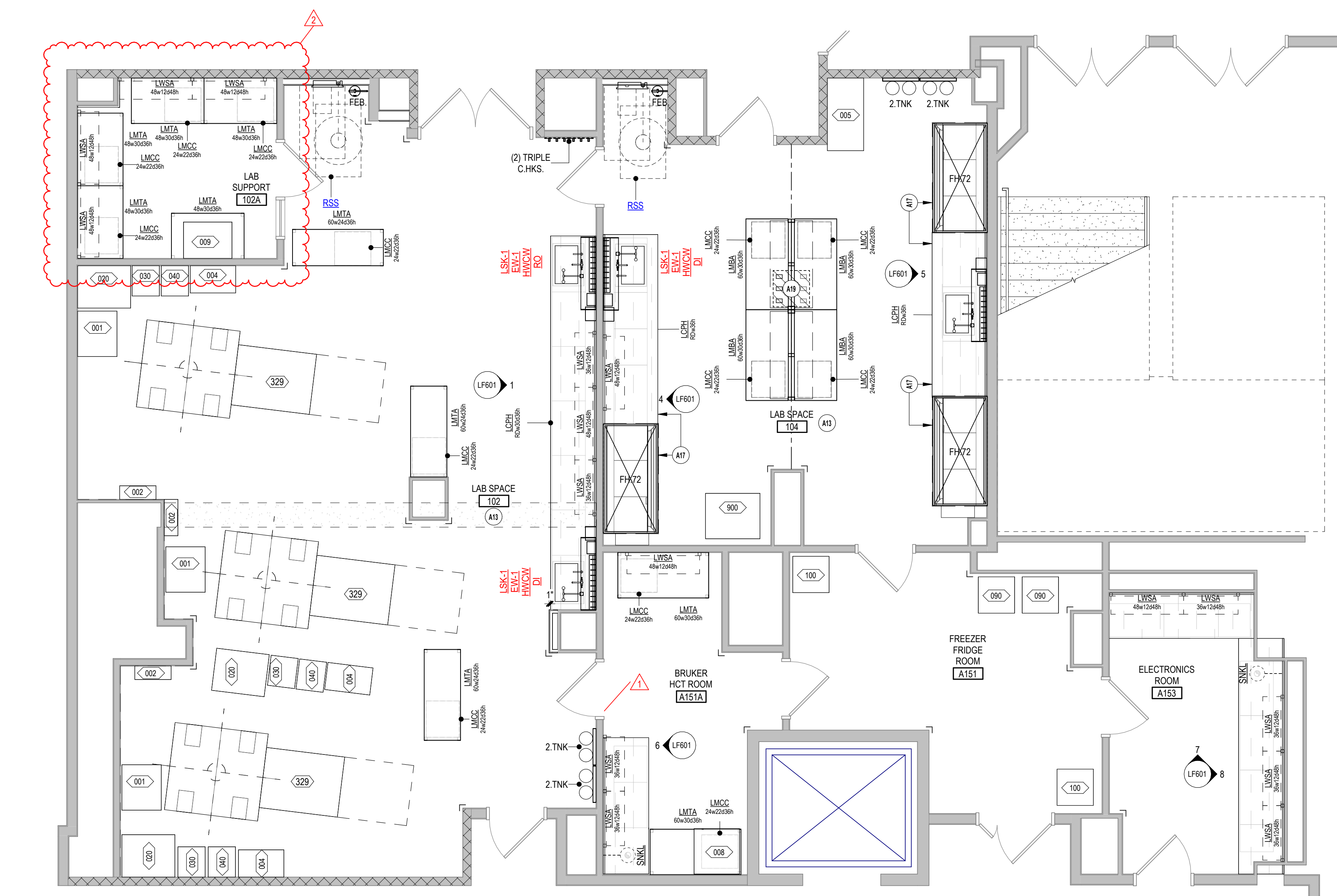
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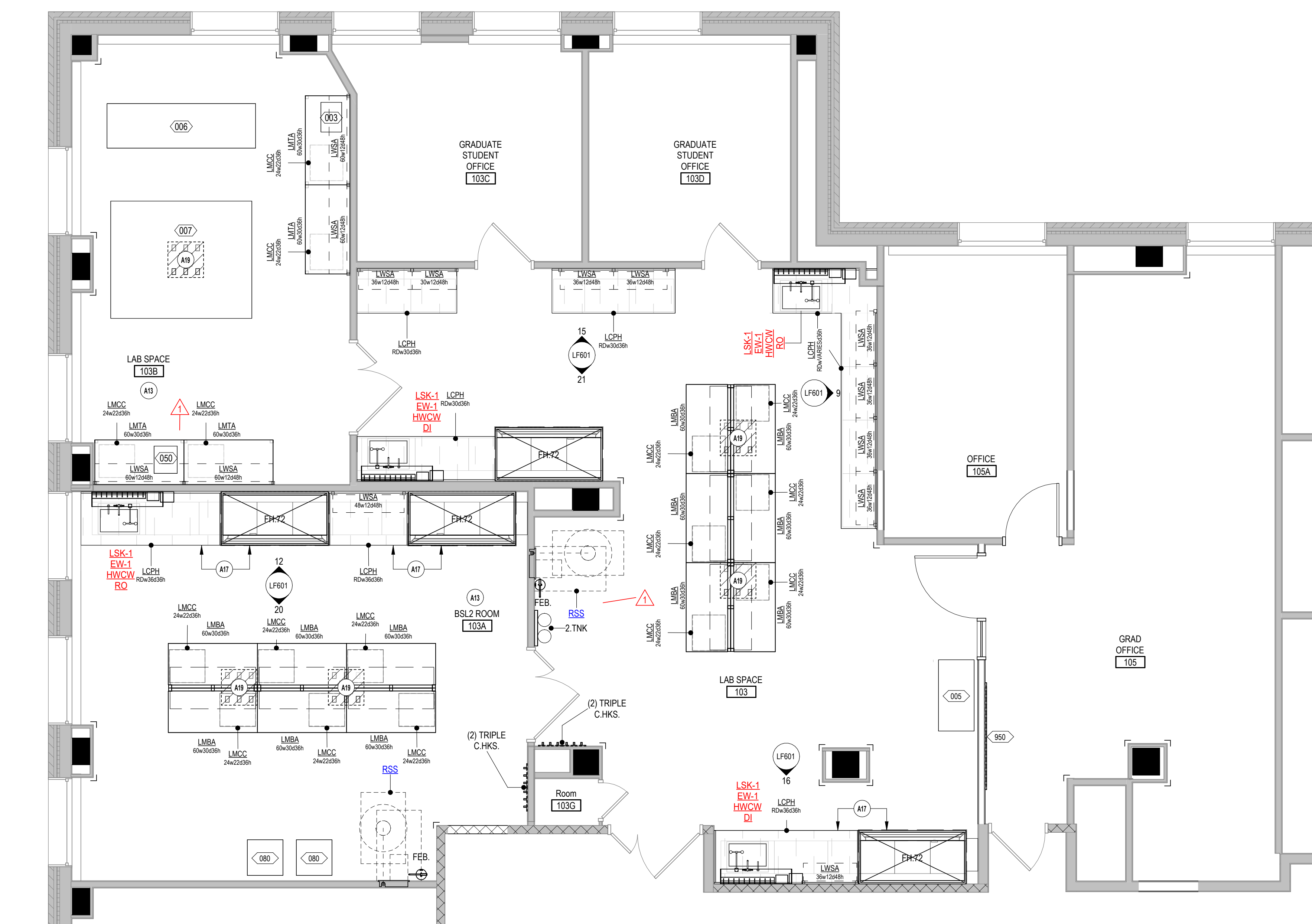
BL072 CHEMISTRY -
ENLARGED LAB
FURNISHING PLAN - LEVEL
1

DATE	
BSALS PROJECT NO.	00360477

© BSA LifeStructures Inc.



1 CHEMISTRY - LAB FURNISHING PLAN - FIRST FLOOR - 102/104/A151
E411A 1/4" = 1'-0"



CHEMISTRY - LAB FURNISHING PLAN - FIRST FLOOR - 103/105

INTERIOR ELEVATION LEGEND

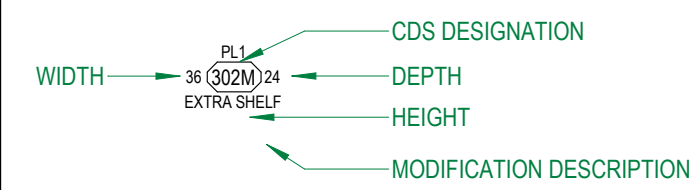
INTERIOR ELEVATION NOTES

- A. REFER TO FLOOR PLANS AND THE EQUIPMENT SCHEDULE FOR EQUIPMENT. COORDINATE CONNECTIONS. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- B. ALL DIMENSIONS ARE TAKEN TO THE FACE OF FINISHED MATERIAL, UNLESS NOTED OTHERWISE.
- C. REFER TO PLUMBING DRAWINGS FOR LAVATORIES AND SINK TYPES. REFER TO ARCHITECTURAL AND/OR INTERIOR DRAWINGS FOR SOLID SURFACE SINK TYPES.

CASEWORK NOTES

- A. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF CABINETS.
- B. CONSTRUCT GYPSUM BOARD BULKHEADS ABOVE UPPER CABINETS TO BE 1" DEEPER AND LONGER THAN CABINETS BELOW, UNLESS NOTED OTHERWISE.
- C. COORDINATE ALL WALL DEVICES TO AVOID CONFLICT WITH CASEWORK AND COUNTERTOPS.
- D. COORDINATE SUPPORT BRACKET LOCATIONS WITH UNDER COUNTER EQUIPMENT INDICATED ELSEWHERE IN CONTRACT DOCUMENTS.
- E. ALL CASEWORK SHALL BE FINISHED IN PLASTIC LAMINATE, UNLESS NOTED OTHERWISE.
- F. PROVIDE 1" MINIMUM FILLER PANELS AT ALL LOCATIONS WHERE CABINETS ABUT A WALL.
- G. PROVIDE A 4" HIGH INTEGRAL BACK SPLASH ON ALL COUNTERS WITH RECESSED SINKS. INSTALL SIDE/END SPLASHES WHERE THESE COUNTERS ABUT A WALL.
- H. PROVIDE ADJUSTABLE SHELVING WITHIN ALL WALL AND BASE CABINETS AS SHOWN BY DASHED LINE.
- I. BOTTOM OF UPPER CABINETS TO BE FINISHED TO MATCH VERTICAL FACES.
- J. ALL BASE CABINETS SHALL BE 24" DEEP UNLESS NOTED OTHERWISE.
- K. PROVIDE 12" CLEAR INTERIOR DIMENSION ON ALL UPPER WALL CABINETS, UNLESS NOTED OTHERWISE.
- L. ALL CABINET/CASEWORK PULLS TO BE TYPE ____ UNLESS NOTED OTHERWISE.

CASEWORK DESIGN SERIES TAG



INTERIOR ELEVATION SYMBOLS

CPT-1 MATERIAL TAG, REFERENCE FINISH SCHEDULES

IUB
RESEARCH
LAB
RENOVATIONSBL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

EQUIPMENT SCHEDULE			
#	NAME	SCOPE	COMMENTS
005	FLAMMABLES CABINET	O.F.O.I.	
007	TIMSTOFF	O.F.O.I.	
050	AGILENT 1290	O.F.O.I.	
080	-80 FZR	O.F.O.I.	
329	BRUKER SOLARIX SERIES	O.F.O.I.	
900	GENERIC EQUIPMENT	O.F.O.I.	
950	MARKERBOARD 48X72	O.F.O.I.	

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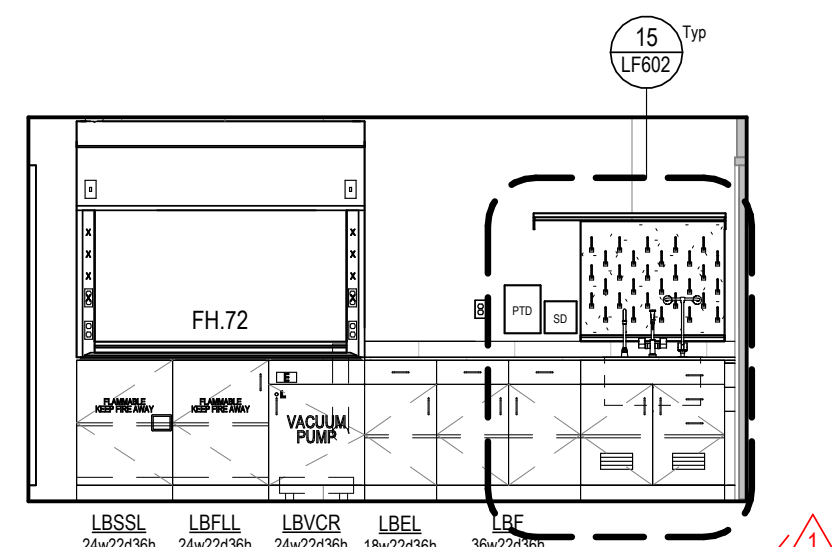
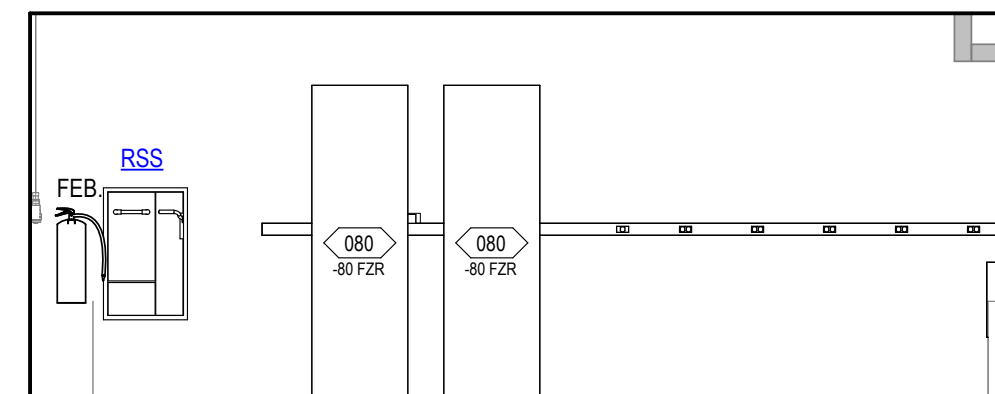
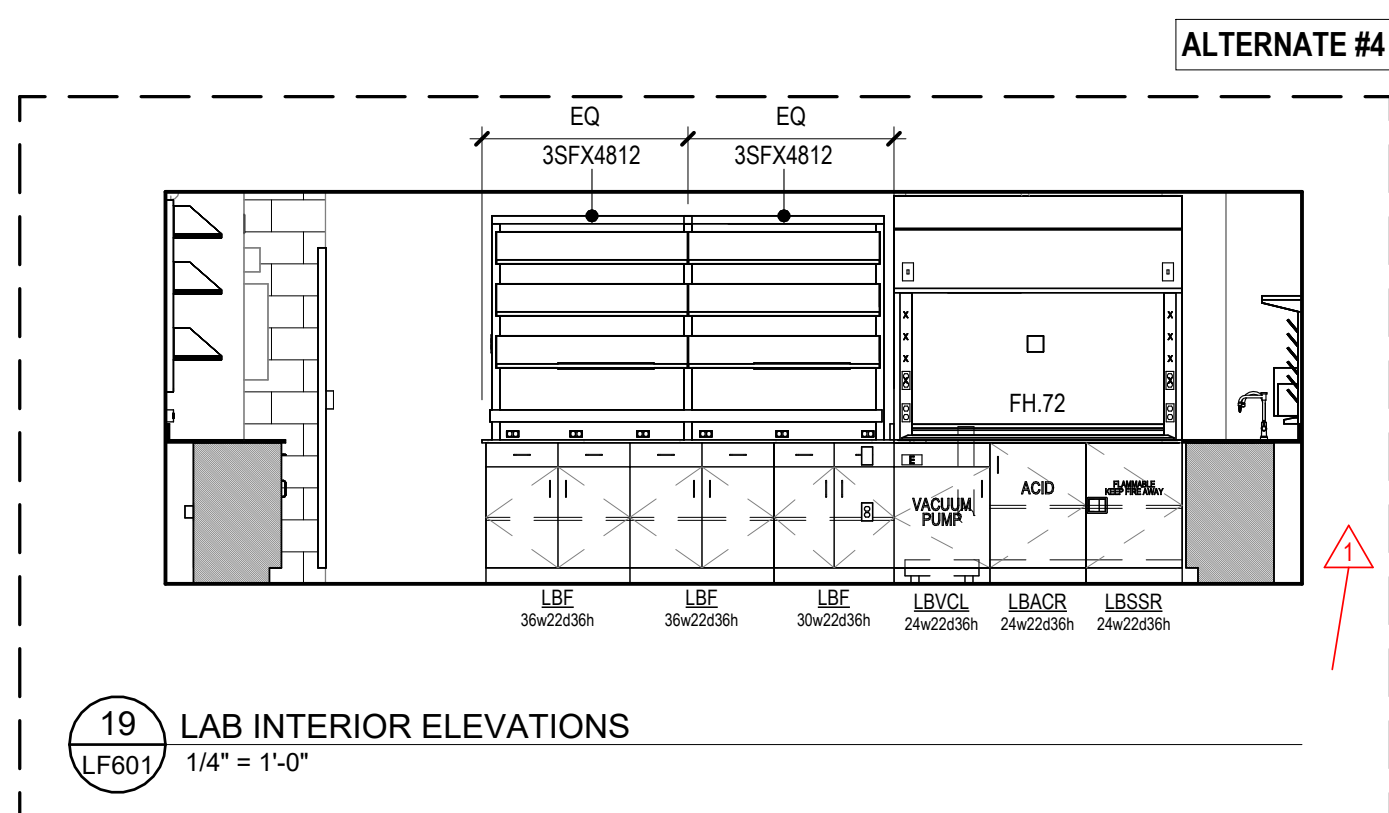
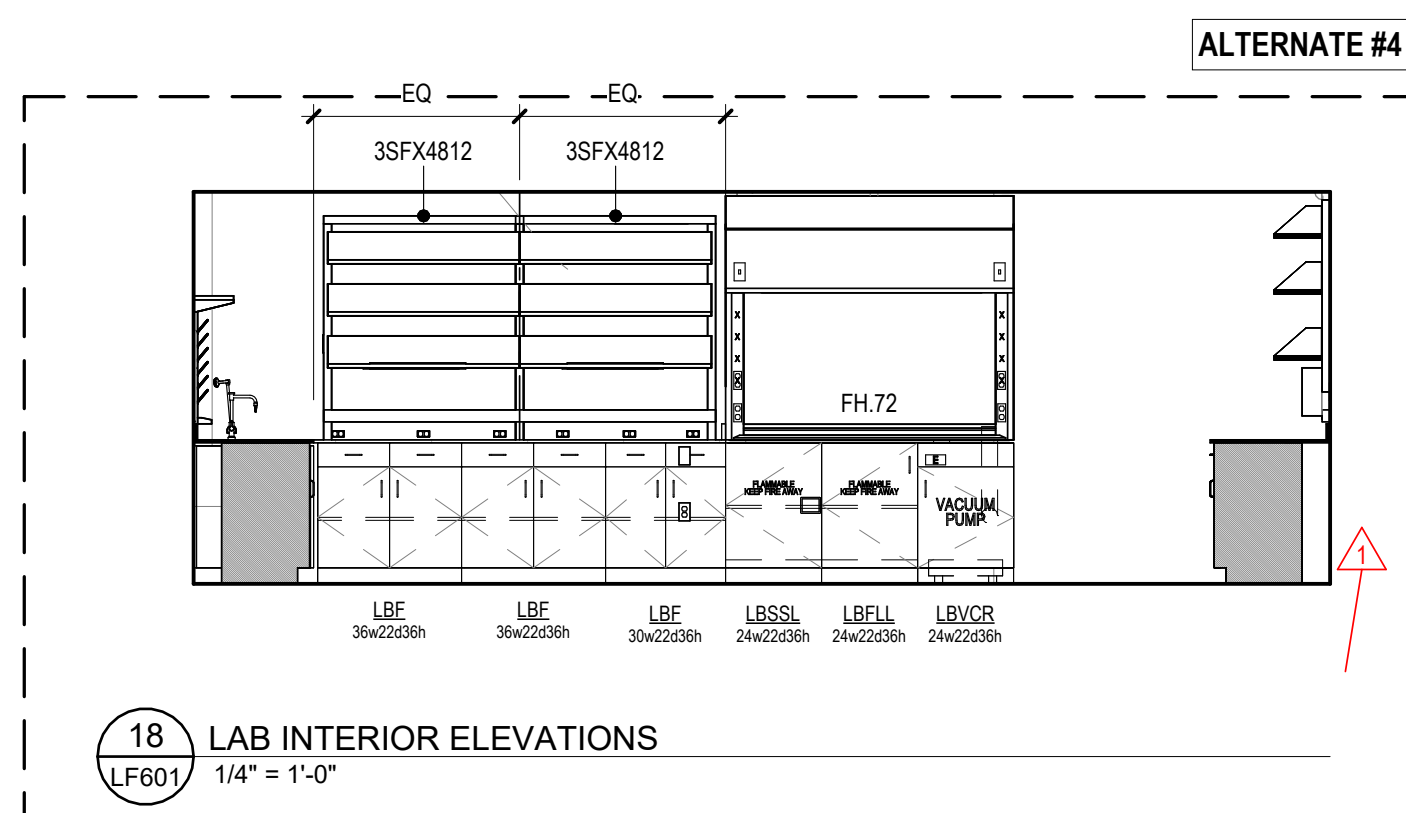
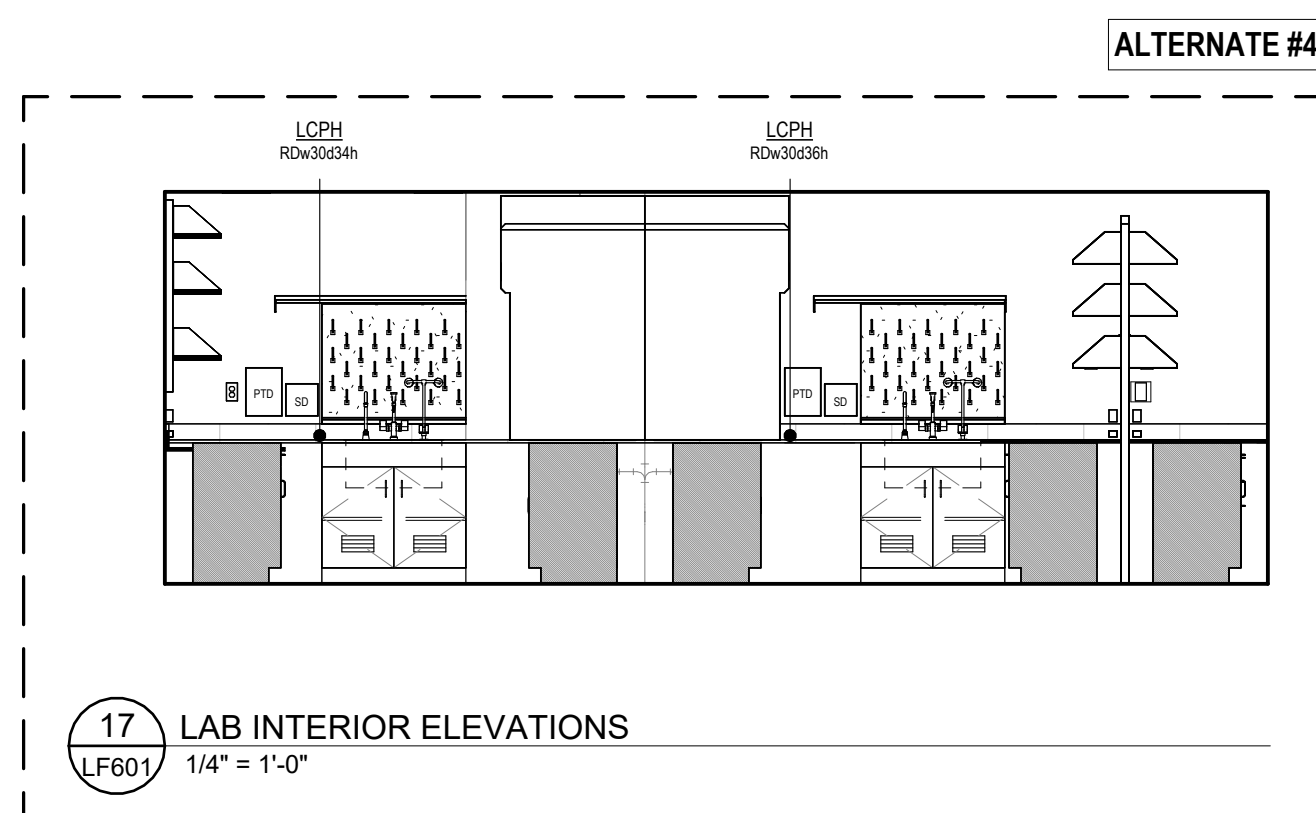
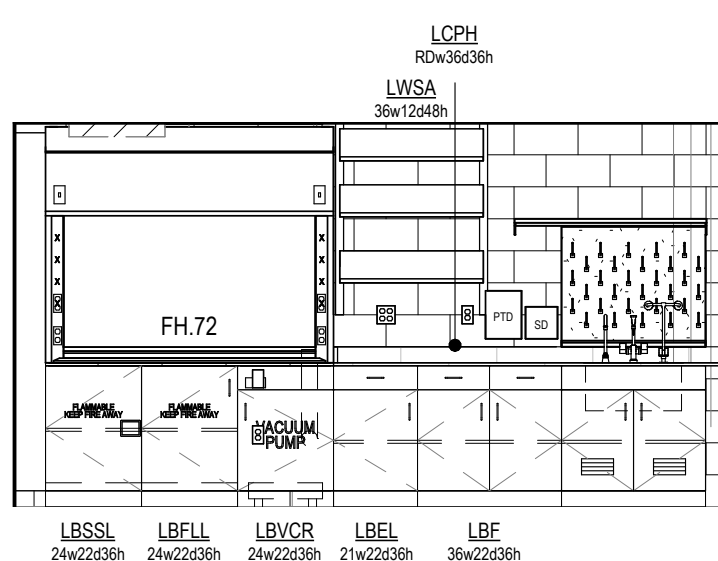
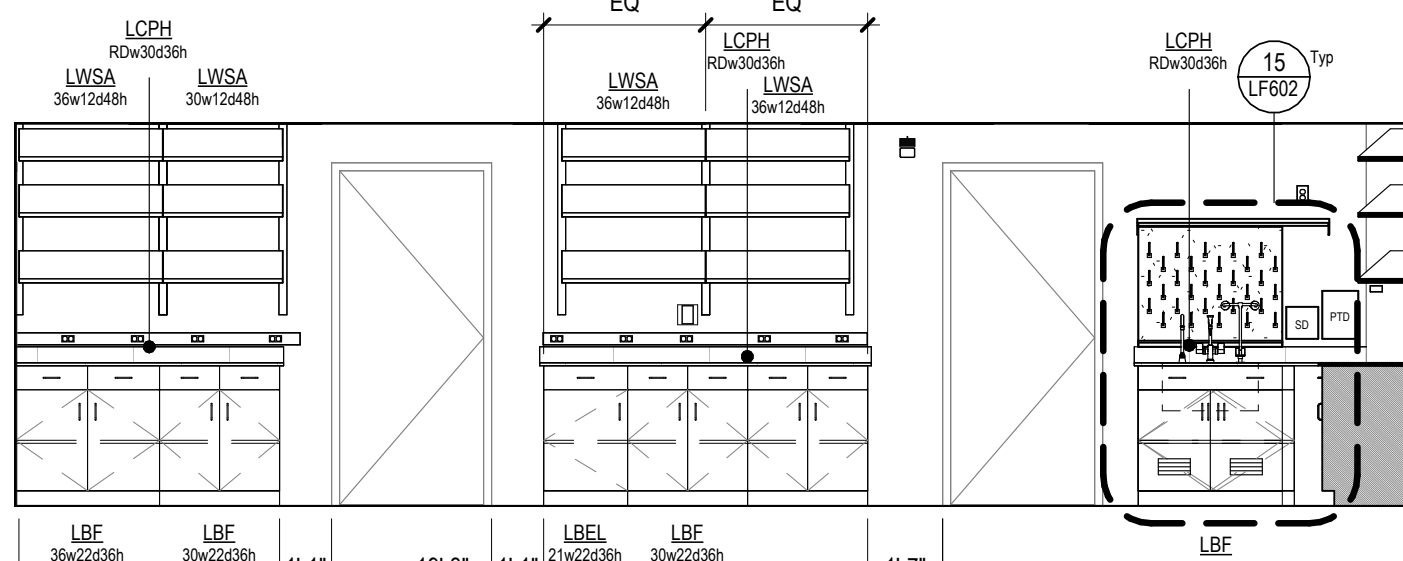
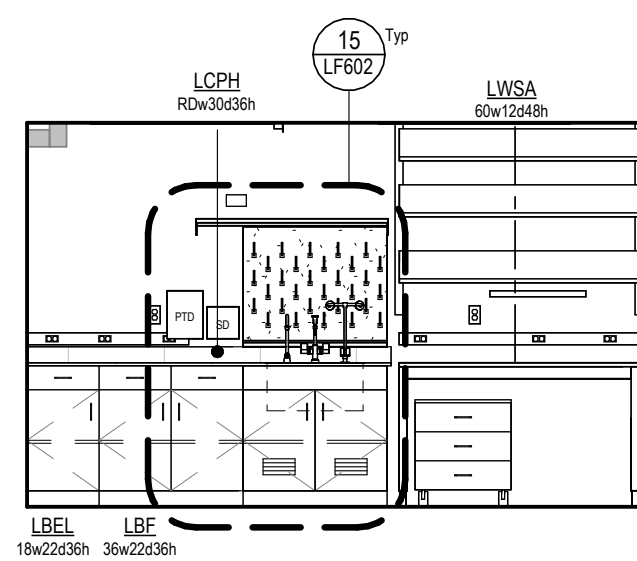
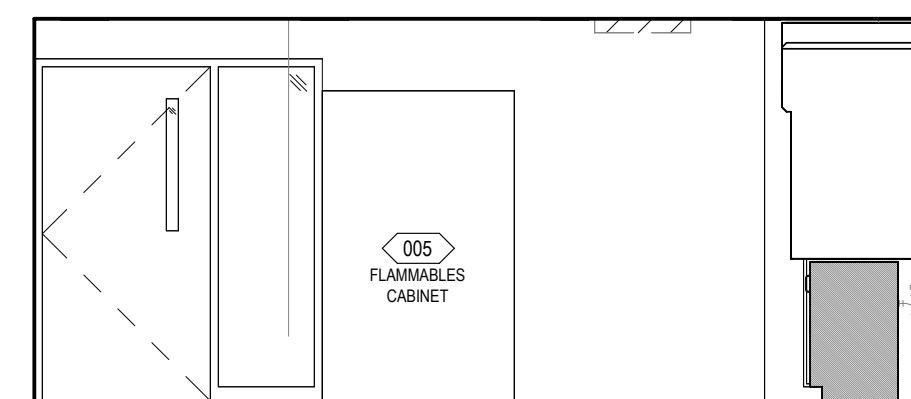
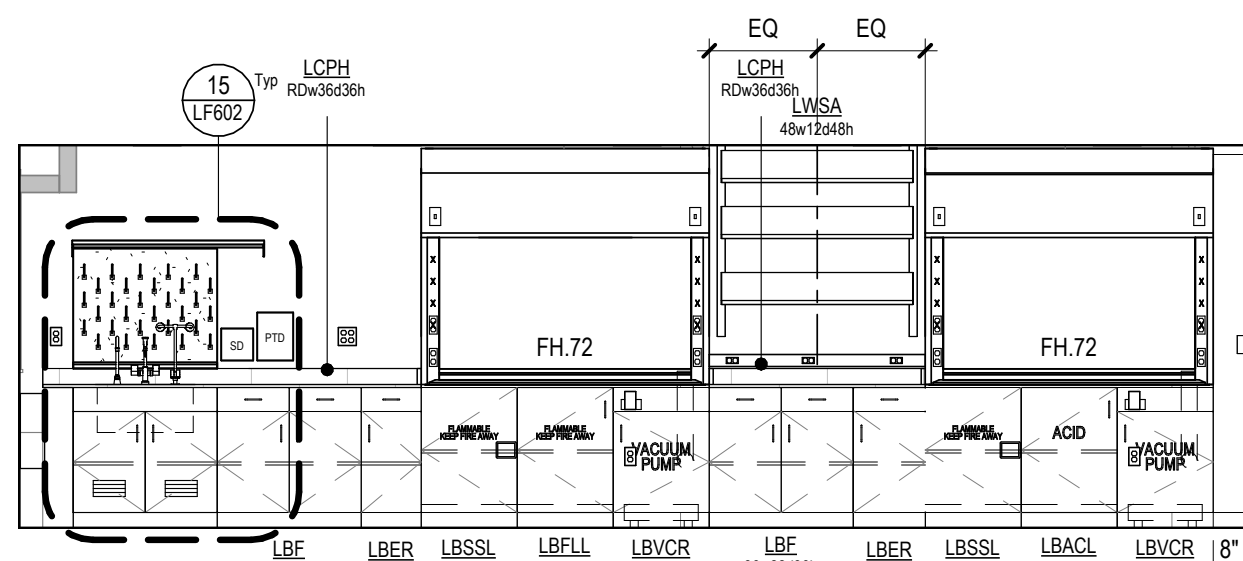
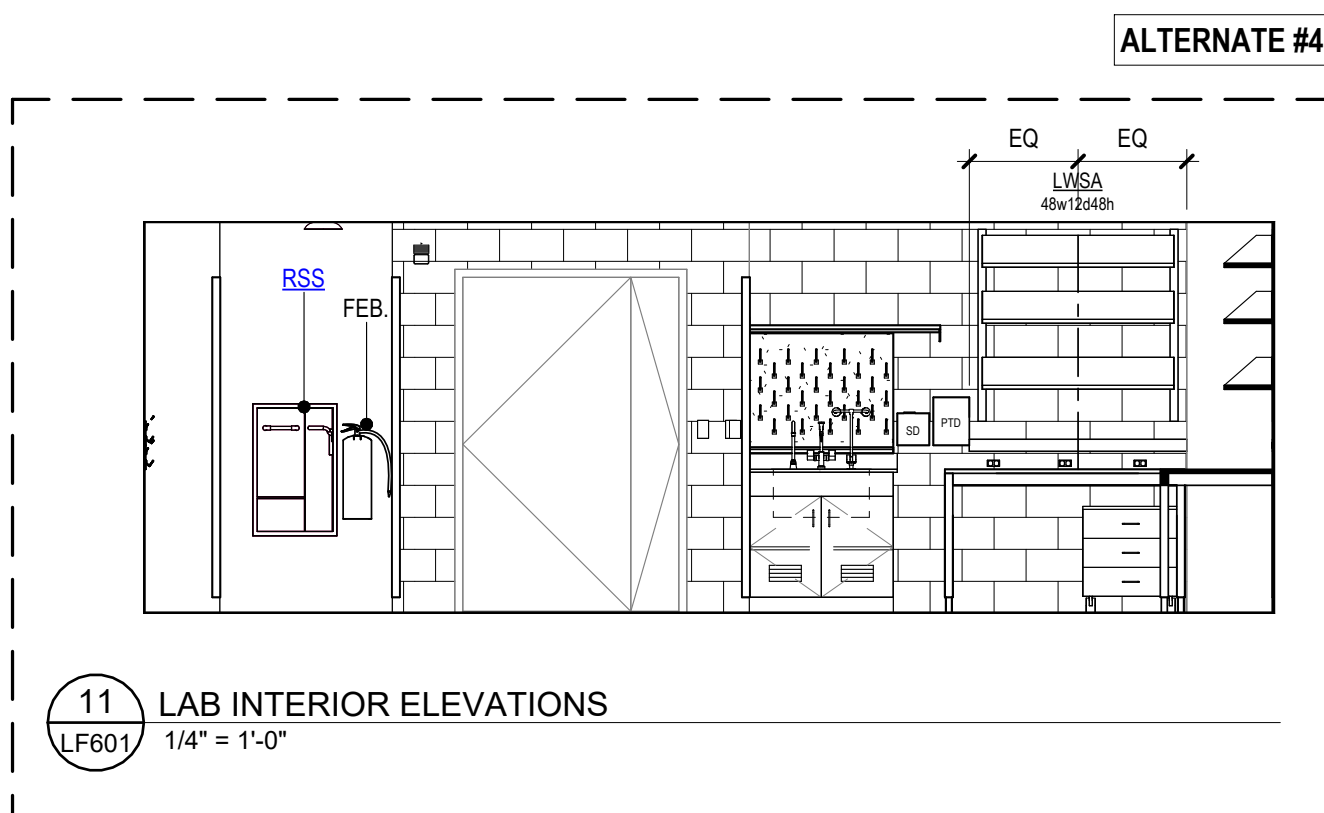
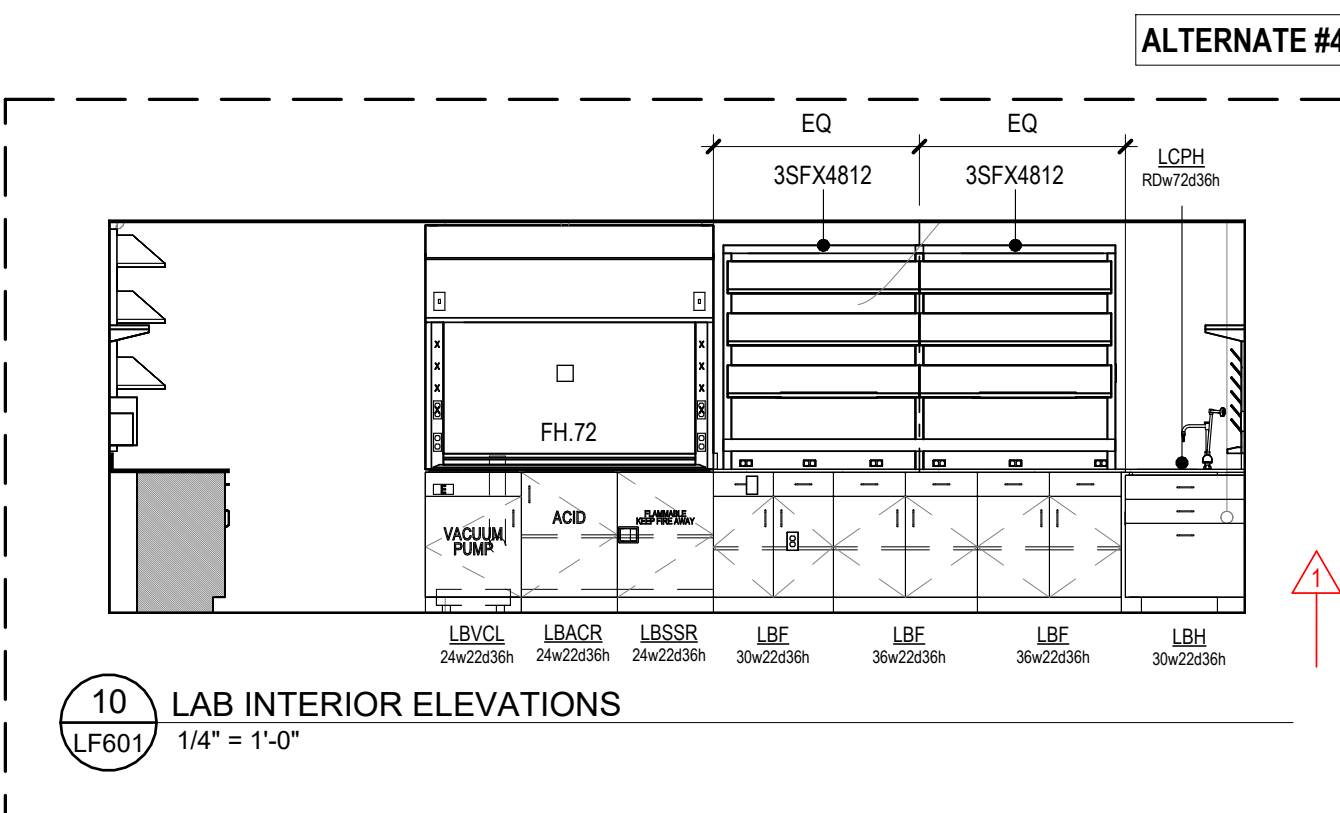
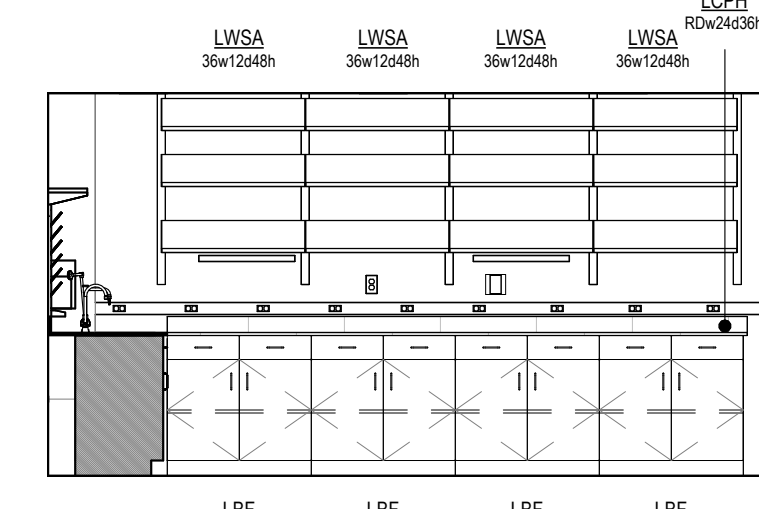
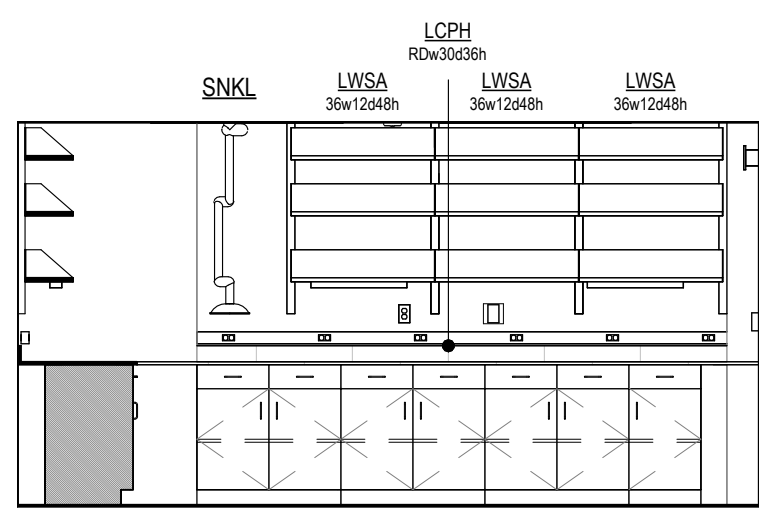
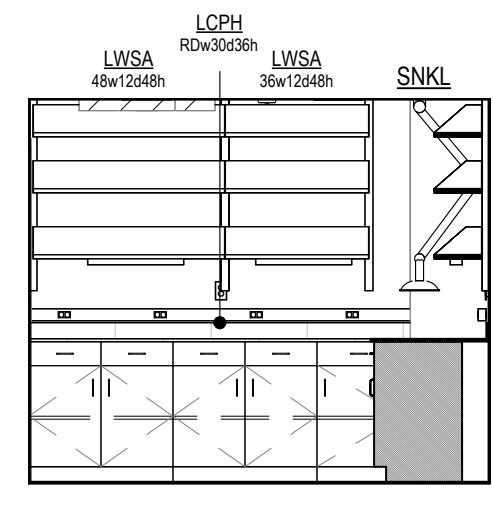
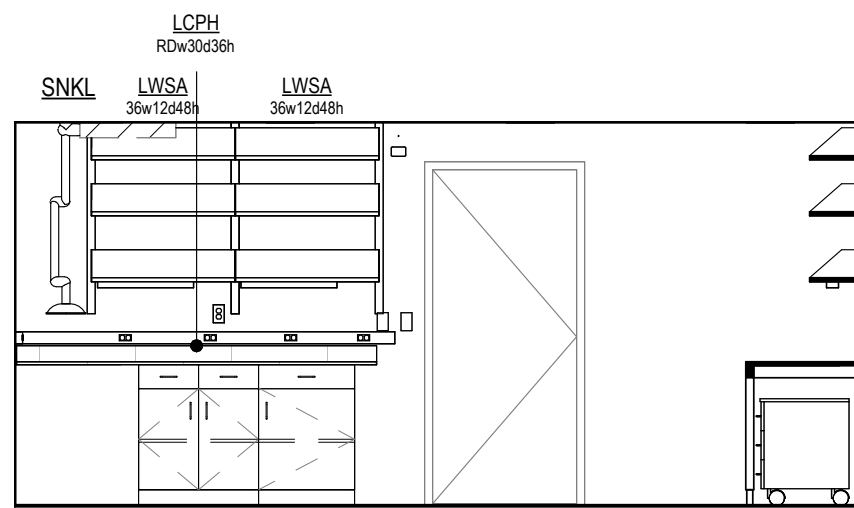
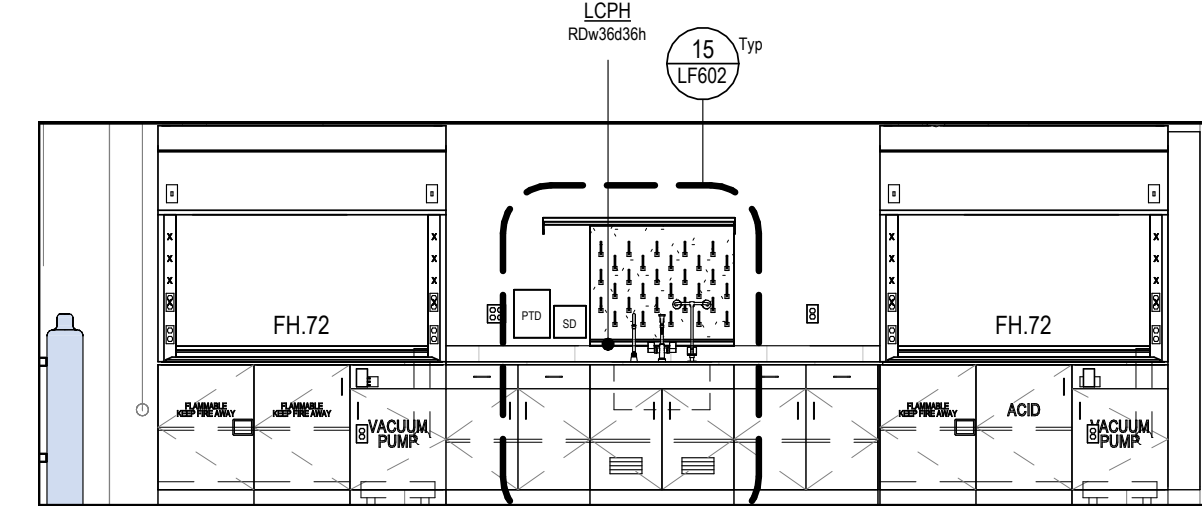
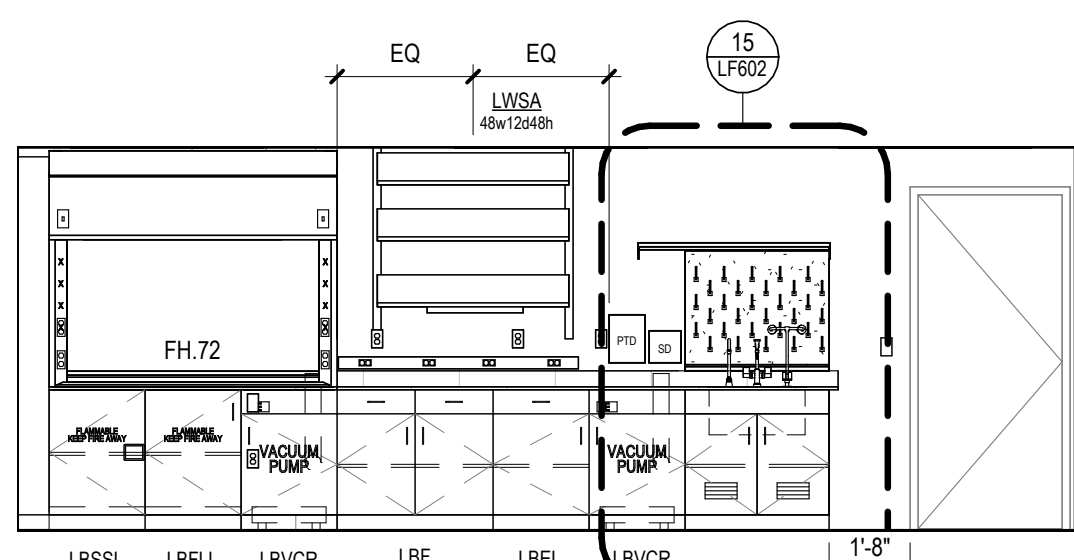
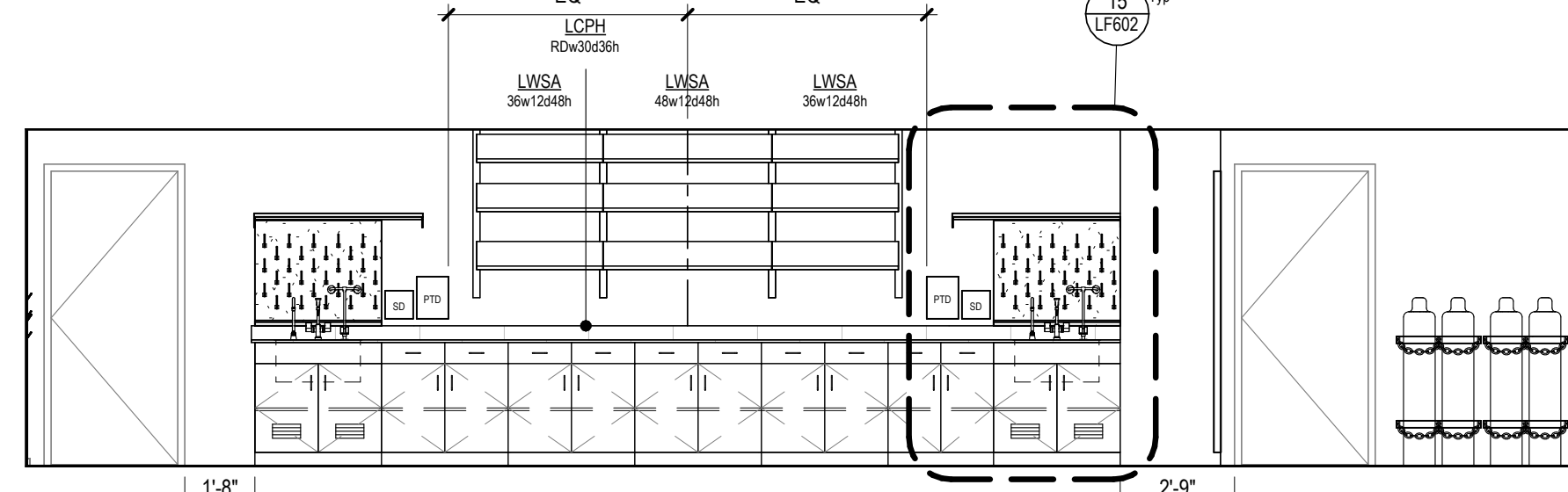


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BL072 CHEMISTRY - LAB
INTERIOR ELEVATIONSDATE
BSALS PROJECT NO. 00360477

LF601

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21 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"20 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"19 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"18 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"17 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"16 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"15 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"14 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"13 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"12 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"11 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"10 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"9 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"8 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"7 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"6 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"5 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"4 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"1 LAB INTERIOR ELEVATIONS
1/4" = 1'-0"

IUB
RESEARCH
LAB
RENOVATIONSBL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	27 JAN 2025	ADDENDUM TWO
1	17 JAN 2025	ADDENDUM ONE

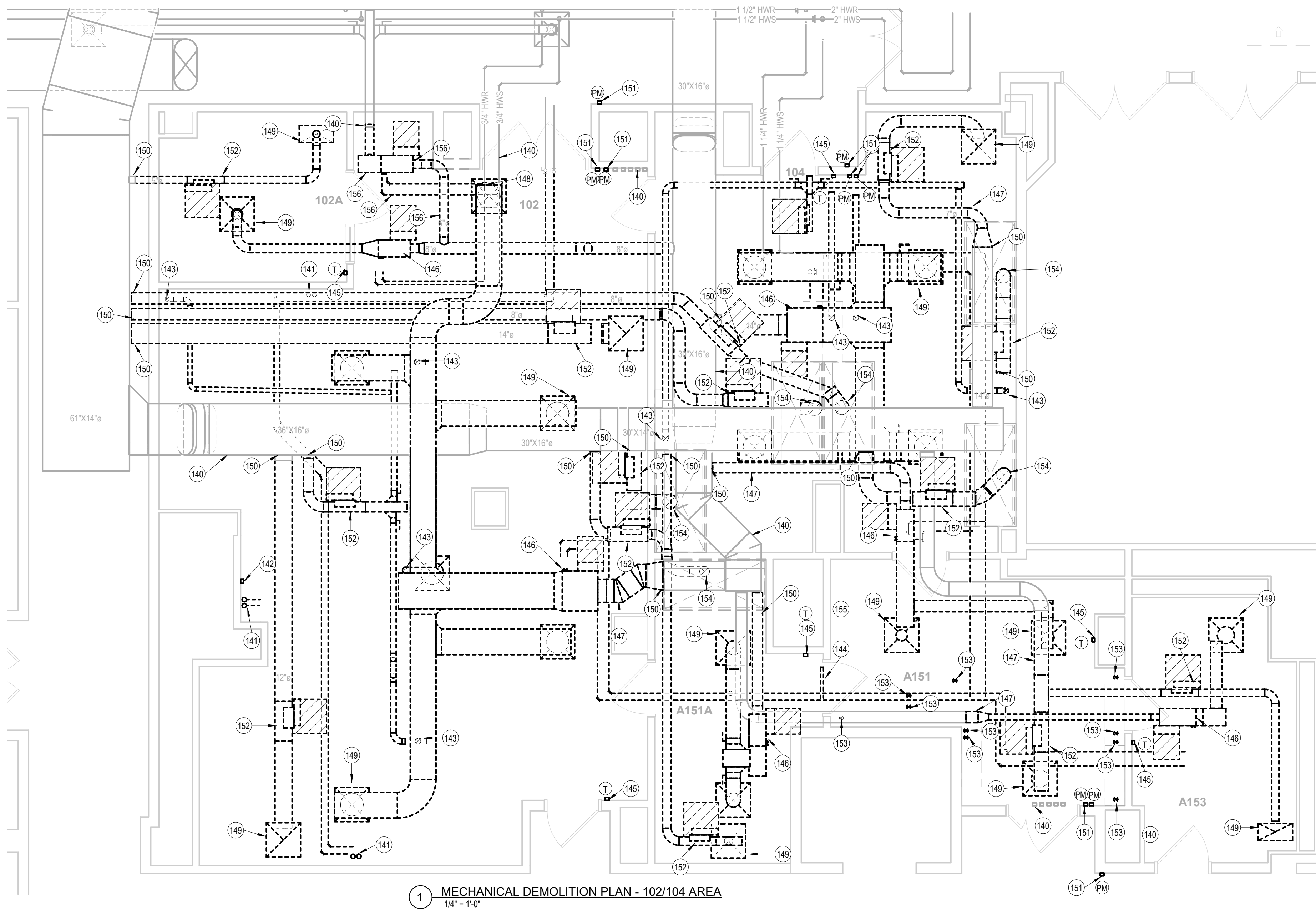
REGISTERED PROFESSIONAL ENGINEER
No. PE19500446
STATE OF INDIANA
JANUARY 1, 2019

P. HAYES

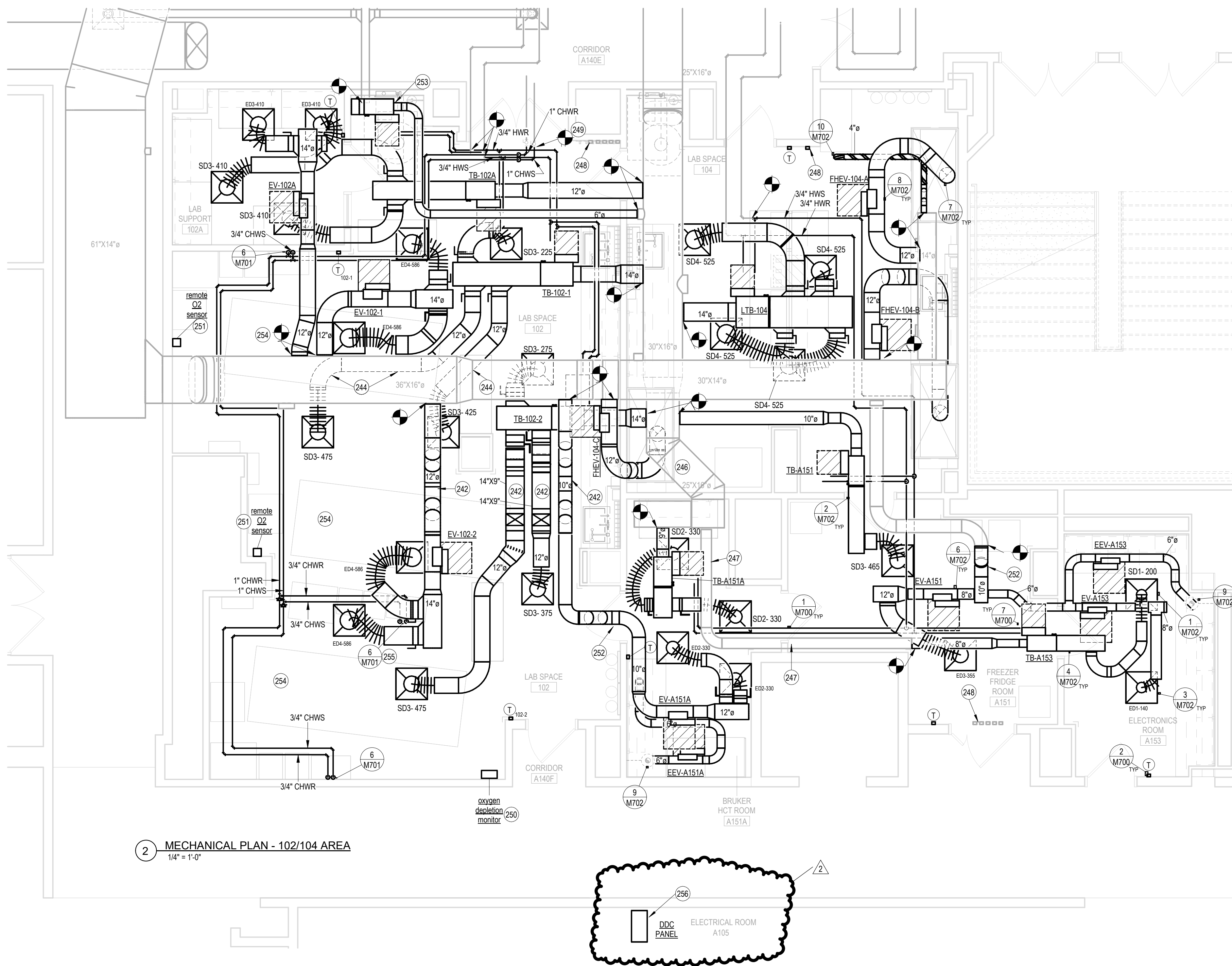
MECHANICAL PLANS -
CH 102/104 AREADATE JAN 6, 2025
BSALS PROJECT NO. 00360477

M211

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X00	DEMOLITION PLAN NOTES
140	EXISTING TO REMAIN.
141	REMOVE CHWS AND CHWR PIPE DROP, PIPING AND FITTINGS, HANGERS AND SUPPORTS COMPLETE.
142	REMOVE OXYGEN DEPLETION SENSOR SUITABLE FOR REUSE. REMOVE WIRING COMPLETE. PROVIDE OXYGEN DEPLETION SENSOR SUITABLE FOR REUSE TO CHAD SCHAEFFER AND DISPOSE OF AS DIRECTED.
143	REMOVE DUCT DROP THROUGH CEILING AND HANGERS COMPLETE.
144	REMOVE TRANSFER GRILLE OVER DOORWAY. COORDINATE WITH GENERAL TRADES TO INFILL WALL.
145	REMOVE THERMOSTAT, CONTROLS CABLING, CONDUIT, TUBING, AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
146	REMOVE TERMINAL BOX AND HANGERS. REMOVE TERMINAL BOX CONTROLLER AND ACTUATOR, HYDRONIC CONTROL VALVE, AND PIPED ACCESSORIES. REMOVE CONTROLS CABLING, TUBING, CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
147	REMOVE DUCTWORK AND HANGERS COMPLETE.
148	REMOVE PIPING AND HANGERS BACK TO THE POINT INDICATED AND PREPARE FOR RECONNECTION.
149	REMOVE DIFFUSER(S), DUCTWORK, AND HANGERS COMPLETE.
150	CAP DUCTWORK AND SEAL CAP SUITABLE FOR ZERO AUDIBLE LEAKAGE AT 4" W.G.
151	REMOVE PRESSURE MONITORING, TUBING, SENSOR, AND CONTROLS CABLING SUITABLE FOR REUSE. REMOVE CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX. DELIVER PRESSURE MONITORING, TUBING, SENSOR, AND CONTROLS CABLING SUITABLE FOR REUSE TO THE FUME HOOD TECHNICIAN OF JANA CRAGEN-REESE (812) 855-1820 AND DISPOSE OF COMPONENTS AS DIRECTED.
152	REMOVE AFCV AND HANGERS. REMOVE AFCV CONTROLLER AND ACTUATOR. REMOVE CONTROLS CABLING, CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
153	REMOVE DUCT DROP THROUGH CEILING AND HANGERS COMPLETE DOWN TO FLAMMABLE STORAGE CABINET. REMOVE FSC SMALL DIAMETER DUCTWORK/PIPE ABOVE CEILING (NOT ILLUSTRATED) COMPLETE.
154	REMOVE DUCTWORK AND HANGERS COMPLETE DOWN TO FUME HOOD. REMOVE FUME HOOD MONITOR AND SASH-SENSING CONTROL COMPONENTS SUITABLE FOR REUSE. DELIVER FUME HOOD MONITOR AND SASH-SENSING CONTROL COMPONENTS SUITABLE FOR REUSE TO THE FUME HOOD TECHNICIAN OF JANA CRAGEN-REESE (812) 855-1820 AND DISPOSE OF COMPONENTS AS DIRECTED.
155	REMOVE TWENTY LINEAL FEET OF ABANDONED PIPING OVER THIS ROOM AND CAP REMAINING.
156	REMOVE TERMINAL BOX SUITABLE FOR REUSE / RELOCATION. REMOVE HYDRONIC PIPING AND CONTROLS SUITABLE FOR REUSE / RELOCATION. REMOVE PIPING AND DUCTWORK AS REQUIRED TO RELOCATION.



X00	PLAN NOTES
242	TOP OF DUCT SHALL BE MINIMUM 9'-6" AFF WHERE PASSING UNDER THIS BEAM. TYPICAL EACH DUCT RUN. TOP OF PIPE AND CONDUIT SHALL BE MINIMUM 9'-6" AFF WHERE PASSING UNDER THIS BEAM. TYPICAL EACH PIPE RUN AND CONDUIT RUN. COORDINATE WITH ALL TRADES.
244	TOP OF DUCT SHALL BE MINIMUM 10'-1" AFF WHERE PASSING UNDER THIS EXHAUST DUCT MAIN. TYPICAL.
246	PROVIDE IN THE BID TO REMOVE/REPLACE/REPAIR TEN LINEAL FEET OF EXTERNAL DUCTWRAP INSULATION ON THIS SUPPLY DUCT. PROTECT THE INSULATION VAPOR BARRIER DURING DEMOLITION AND CONSTRUCTION.
247	PROVIDE IN THE BID TO REMOVE AND REPLACE EXTERNAL INSULATION WITH ACTUAL FIBERGLAS DUCTWRAP INSULATION ON THIS EXIST DUCT RUN. PROVIDE IN THE BID TO ADD FOUR FITTINGS TO THIS EXISTING DUCT RUN TO ALLOW FOR NEW INSTALLATIONS.
248	COORDINATE BAS CONTROL TRANSFORMER LOCATION WITH THE CONTROL SUPPLIER AND THE ELECTRICAL TRADES FURNISHING THE 120V POWER.
249	PROVIDE REDUCER AS REQUIRED AT TIE-IN TO EXIST CHW VALVES.
250	PROVIDE OXYGEN DEPLETION MONITOR, MOUNT AT 4'-0" AFF. MONITOR (120V, 10-30% OXYGEN RANGE, +/- 1.0% FULL SCALE ACCURACY, ELECTROCHEMICAL OXYGEN SENSOR, INTERNALLY MOUNTED 85 DB AUDIBLE ALARM AND VISUAL ALARM INDICATION, 4 YEAR SENSOR AND ELECTRONICS WARRANTY, QTY TWO REMOTE SENSORS), SIMILAR TO ALPHA OMEGA INSTRUMENTS SERIES 1300 MODEL. VERIFY RESEARCHER EQUIPMENT LOCATIONS WITHIN ROOM AND OXYGEN DEPLETION MONITOR LOCATION AND REMOTE SENSOR LOCATIONS DIRECTLY WITH THE OWNER ONE WEEK PRIOR TO FABRICATING REMOTE SENSOR CONDUIT/CABLING AND PRIOR TO MOUNTING ANY OF THE SYSTEM DEVICES. COORDINATE THE LOCATION OF THE MONITOR WITH THE ELECTRICAL CONTRACTOR PRIOR TO THE EC INSTALLATION OF ANY OF THE POWER CONDUIT FOR THE MONITOR.
251	PROVIDE OXYGEN DEPLETION MONITOR REMOTE SENSOR, MOUNT AT 4'-0" AFF. VERIFY RESEARCHER EQUIPMENT LOCATIONS WITHIN ROOM AND OXYGEN DEPLETION REMOTE SENSOR LOCATIONS DIRECTLY WITH THE OWNER ONE WEEK PRIOR TO FABRICATING CONDUIT/CABLING AND PRIOR TO MOUNTING ANY OF THE DEVICES. ROUTE AND HANG CONDUIT ABOVE THE CEILING BUT NOT ABOVE ANY OF THE THREE CEILING OPENINGS. THE MECHANICAL CONTRACTOR SHALL INCLUDE THE COMPLETE BID SCOPE TO FURNISH, MOUNT, INSTALL, WIRE IN, EMT CONDUIT, LABEL CONDUIT, STARTUP AND COMMISSION THE COMPLETE OXYGEN DEPLETION MONITORING SYSTEM INCLUDING THE REMOTE SENSORS.
252	PROVIDE TOP OF DUCT TIGHT TO BOTTOM OF BEAM.
253	RELOCATED TERMINAL BOX, HYDRONIC PIPING ACCESSORIES, AND CONTROLS. RECORD AIRFLOW MIN AND MAX SETTINGS.
254	COORDINATE WITH ALL TRADES SO THAT THE BOTTOM OF EVERY PIPE, CONDUIT, AND DUCT (INCLUDING PIPE HANGERS AND DUCT HANGERS) LOCATED DIRECTLY ABOVE THIS 6'X6' AREA WHERE THERE IS NO CEILING GRID NOR CEILING TILE IS NO LOWER THAN 10'-1" AFF.
256	AT THIS LOCATION PROVIDE DETAIL STRAINERS AND VALVES LOCATED TO THE 10' X 10' AREA. COORDINATE LOCATION OF IP DATA JACK FOR BAS CONTROL USE WITH THE CONTROL SUPPLIER AND THE ELECTRICAL TRADES FURNISHING THE DATA JACK. MOUNT DATA JACK AT 7'-6" AFF UNLESS DIRECTED OTHERWISE. COORDINATE BAS 120V POWER LOCATION WITH THE CONTROL SUPPLIER AND THE ELECTRICAL TRADES FURNISHING THE 120V POWER. PRIOR TO INSTALLING ANY CONDUIT, SUBMIT A CONFIRMING RFI THROUGH EUBUDER WHICH INCLUDES LABELED PHOTOS OF ALL FOUR WALLS OF THE ELECTRICAL ROOM WITH THE PROPOSED LOCATION OF THE NEW DDC PANEL (WITH ALL SUBCOMPONENTS AUX PANEL, WIRE TROUGH, ETC.) ILLUSTRATED WITH DIMENSIONS ON THE PHOTOS FOR IUB CONFIRMATION OF PROPOSED LOCATION.



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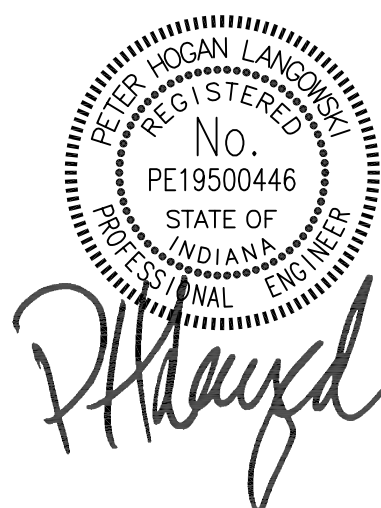
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
1	27 JAN 2025	ADDENDUM TWO



MECHANICAL PLANS -
CH A140 AREA

DATE	JAN 6, 2025
BSALS PROJECT NO.	00360477

M213

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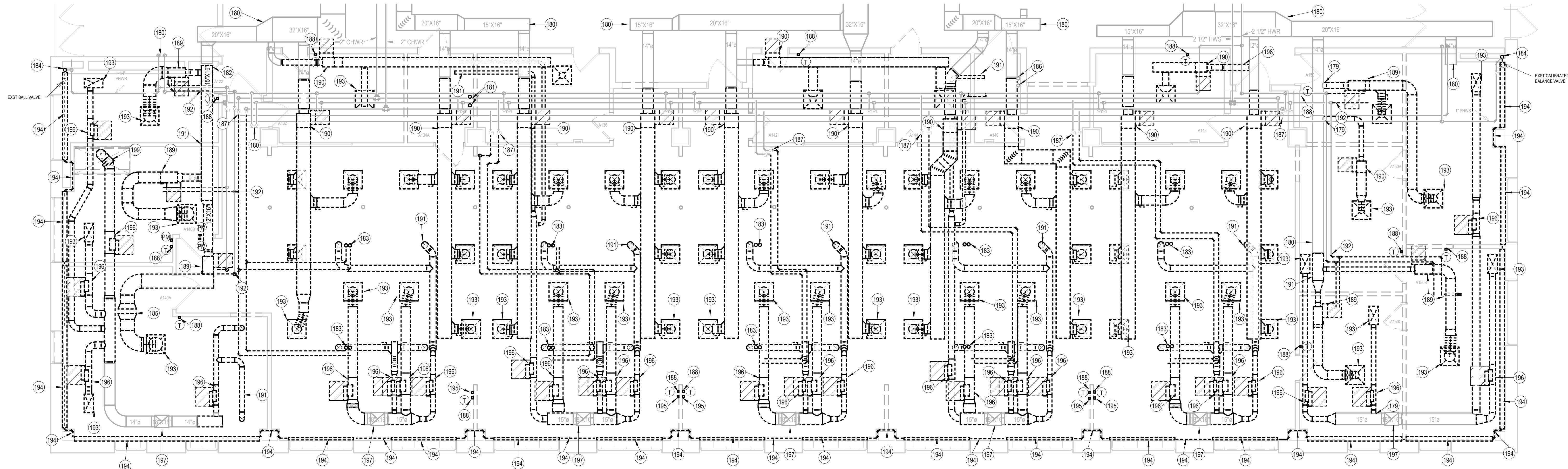
X00	DEMOLITION PLAN NOTES
179	CAP DUCTWORK AND SEAL CAP SUITABLE FOR ZERO AUDIBLE LEAKAGE AT 4" W.G.
180	EXISTING TO REMAIN.
181	REMOVE 1-1/4" CHW VALVE IN EACH CHW PIPE DROP. REMOVE PORTIONS OF PIPING AS REQUIRED TO CAP ABOVE CEILING.
182	REMOVE SUPPLY DUCT MAIN AND HANGERS COMPLETE BACK TO EDGE OF PROJECT AREA AND PREPARE FOR RECONNECTION.
183	REMOVE CHW PIPE DROP, PIPING, AND HANGERS COMPLETE.
184	REMOVE THE EXIST VERTICAL PIPE DOWN WHICH SERVES THE EXIST FTR IN ORDER TO UTILIZE THAT VERTICAL SPACE FOR THE NEW VERTICAL PIPING. THE NEW FTR PHW PIPING EXITS THE WALL AT A DIFFERENT ELEVATION THAN THE EXIST PIPE EXITED THE WALL.
185	REMOVE FILTER HOUSING COMPLETE.
186	EXISTING CHW PIPE DROPS TO REMAIN IN THIS LOCATION.
187	EXISTING CHW VALVES TO REMAIN. PROVIDE THREADED CAPPED NIPPLE IN THE OUTLET OF EACH VALVE. INSULATE THE PIPE, VALVE, AND CAP.
188	REMOVE THERMOSTAT, CONTROLS CABLING, TUBING, CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
189	REMOVE TERMINAL BOX AND HANGERS. REMOVE TERMINAL BOX CONTROLLER AND ACTUATOR, HYDROVIC CONTROL VALVE, AND PIPED ACCESSORIES. REMOVE CONTROLS CABLING, TUBING, CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
190	REMOVE TERMINAL BOX AND HANGERS. REMOVE TERMINAL BOX CONTROLLER AND ACTUATOR. REMOVE CONTROLS CABLING, CONDUIT, TUBING, AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
191	REMOVE DUCTWORK AND HANGERS COMPLETE.

X00	DEMOLITION PLAN NOTES
192	REMOVE PIPING AND HANGERS BACK TO AT LEAST THE POINT INDICATED AND PREPARE FOR RECONNECTION.
193	REMOVE DIFFUSERS, DUCTWORK, AND HANGERS COMPLETE.
194	REMOVE FTR ELEMENT AND FTR ELEMENT HANGERS. REMOVE PHW PIPING BETWEEN ELEMENT AND PIPE HANGERS. REMOVE FTR WALL MOUNT ENCLOSURE AND BACKPLATE AND ENCLOSURE MOUNTING HANGERS COMPLETE. REMOVE PHW PIPING BETWEEN ENCLOSURES COMPLETE, INCLUDING THAT PIPING WITHIN CMV COLUMN WRAPS. THAT PIPING WITHIN GYPSOBOARD COLUMN WRAPS, AND THAT PIPING WITHIN PERPENDICULAR SUBDIVIDING INTERIOR PARTITION WALLS.
195	REMOVE VENTILATION SWITCH, TUBING, CONTROLS CABLING, CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
196	COORDINATE AFOV AND HANGERS. REMOVE AFOV CONTROLLER AND ACTUATOR. REMOVE CONTROLS CABLING, CONDUIT AND WIREMOLD COMPLETE BACK TO JUNCTION BOX.
197	CAP THE EXISTING EXHAUST DUCT RISERS ON BOTH SIDES OF THE RISER PRIOR TO BEGINNING ANY DEMOLITION. SEQUENCE THE CONSTRUCTION OF NEW DUCTWORK CONNECTIONS TO MINIMIZE OPEN DUCTWORK AND ITS IMPACT ON FUME HOODS ON THIS EXHAUST SYSTEM.
198	COORDINATE HALLWAY GYPSOBOARD CEILING PARTIAL DEMOLITION AND REBUILD WORK WITH THE DEMOLITION AND NEW WORK IN THIS AREA.
199	REMOVE DUCTWORK AND HANGERS COMPLETE DOWN TO FUME HOOD. REMOVE FUME HOOD MONITOR AND SASH-SENSING CONTROL COMPONENTS SUITABLE FOR REUSE. DELIVER FUME HOOD MONITOR AND SASH-SENSING CONTROL COMPONENTS SUITABLE FOR REUSE TO THE FUME HOOD TECHNICIAN OF JANA CRAGEN-REESE (812) 855-1820 AND DISPOSE OF COMPONENTS AS DIRECTED.

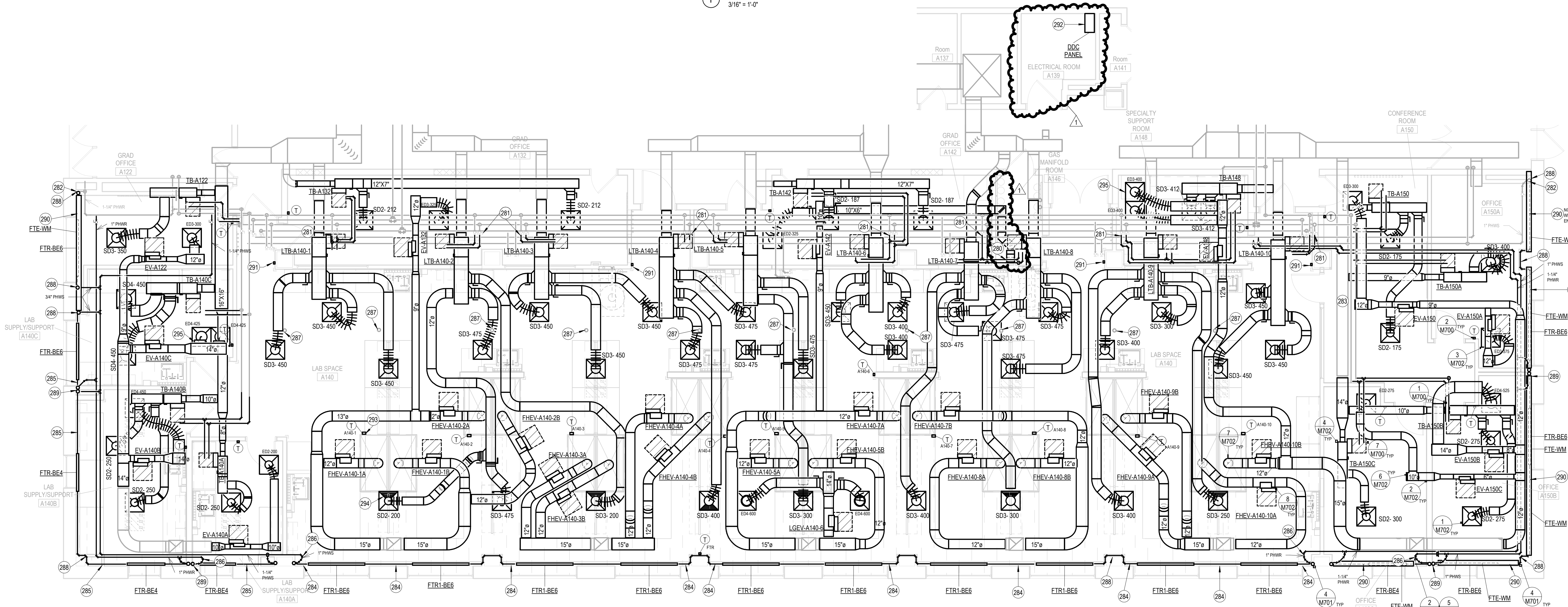
ADDITIONAL GENERAL NOTES
1. POINT OF CONNECTION SYMBOLS ARE NOT ILLUSTRATED ON THIS SHEET. ALL LOCATIONS WHERE BOLD ILLUSTRATED NEW WORK ADJOINS LIGHT HALF-TONED EXISTING SYSTEMS (PIPE, DUCT) ARE A POINT OF CONNECTION.

X00	PLAN NOTES
280	EXTEND EXHAUST DUCT THROUGH THE CEILING AND TERMINATE OPEN-ENDED ON THE BOTTOM WITH BOTTOM 9" AFF. INSTALL EXPANDED METAL ACROSS OPEN DUCT END. BALANCE TO 50 CFM.
281	EXTEND THE EXIST 3/4" HWHS/HR PIPING FROM THE EXISTING HWHS/HR VALVES. PROVIDE A 12" LENGTH OF INSULATION ON THE EXISTING PIPING WHERE IT IS BARE.
282	PROVIDE A NEW VERTICAL PIPE DOWN IN THE SAME LOCATION AS THE EXIST WHICH WAS REMOVED. PROVIDE A BALL VALVE IN THE NEW VERTICAL PIPE AT THE TIE-IN TO THE EXIST PHW. NEW FTR PHW PIPING EXITS THE WALL AT A DIFFERENT ELEVATION THAN THE EXIST PIPE EXITED THE WALL.
283	PROVIDE TEN LINEAL FEET OF DUCT INSULATION REPAIR TO THIS DUCT WHICH REMAINS. PROTECT EXIST INSULATION DURING CONSTRUCTION.
284	COORDINATE ROUTING AND HANGERS FOR 1" PHWS (UNINSULATED) PIPING BETWEEN THE FTR BARE ELEMENT SEGMENTS INSIDE OF THE GENERAL TRADES. FURNISHED/CONSTRUCTED FTR STUB WALL ENCLOSURES. TYPICAL ALL LOCATIONS WITH FTR SIZE (1" PIPE SIZE) ELEMENTS. SEE ARCHITECTURAL DETAILS. MOUNT PIPING AND FTR CENTERLINE APPROXIMATELY 28" AFF.
285	COORDINATE ROUTING AND HANGERS FOR 3/4" PHWS (UNINSULATED) PIPING BETWEEN THE FTR BARE ELEMENT SEGMENTS INSIDE OF THE GENERAL TRADES. FURNISHED/CONSTRUCTED FTR STUB WALL CAVITY ENCLOSURES. SEE ARCHITECTURAL DETAILS. MOUNT PIPING AND FTR CENTERLINE APPROXIMATELY 28" AFF.
286	INSTALL THE NEW FTR CONTROL VALVE ABOVE THE CEILING OF THE ROOM WHICH HAS THE FTR WHICH IS CONTROLLED BY THE VALVE. LOCATE SHUTOFF VALVE, STRAINER, PIT PORTS AND OTHER DETAIL COMPONENTS ABOVE THE CEILING OF THE ROOM WHICH THE FTR SERVES. TYPICAL FOR EACH ROOM/LEVEL ZONE OF FTR.
287	COORDINATE WITH THE PLUMBING TRADES TO LOCATE NEW SLOPED DRAIN PIPING TO ALLOW DUCTWORK TO PASS. TYPICAL ALL LOCATIONS.
288	COORDINATE EXIST WALL REPAIR WITH GENERAL TRADES FOR THE REMOVAL OF EXIST FTR PIPING AND THE INSTALLATION OF NEW FTR PIPING. TYPICAL ALL WALL, CHASE AND COLUMN WRAP LOCATIONS.

X00	PLAN NOTES
289	COORDINATE EXIST WALL REPAIR AND ADJOINING NEW WALL CONSTRUCTION WITH GENERAL TRADES FOR THE INSTALLATION OF NEW VERTICAL AND HORIZONTAL FTR PIPING INSIDE THE WALL CAVITY SO THAT PIPING IS NOT VISIBLE FROM THE ROOM. TYPICAL ALL NEW WALL, CHASE AND COLUMN WRAP LOCATIONS.
290	COORDINATE ROUTING AND HANGERS FOR 3/4" PHWS (UNINSULATED) PIPING BETWEEN THE FTR BARE ELEMENT SEGMENTS INSIDE OF THE MECHANICAL TRADES FURNISHED NEW FTR WALL MOUNTED METAL ENCLOSURES. COORDINATE REQUIRED WALL SUPPORTS WITH GENERAL TRADES AND COORDINATE THE SUBSEQUENT EXIST WALL REPAIR WITH GENERAL TRADES.
291	COORDINATE BAS CONTROL TRANSFERMER LOCATION WITH THE CONTROL SUPPLIER AND THE ELECTRICAL TRADES FURNISHING THE DATA JACK.
292	COORDINATE LOCATION OF IF DATA JACK FOR BAS CONTROL. USE WITH THE CONTROL SUPPLIER AND THE ELECTRICAL TRADES FURNISHING THE DATA JACK. MOUNT DATA JACK AT 7'-6" AFF UNLESS DIRECTED OTHERWISE. COORDINATE BAS 120V POWER LOCATION WITH THE CONTROL SUPPLIER AND THE ELECTRICAL TRADES FURNISHING THE 120V POWER. PRIOR TO INSTALLING ANY CONDUIT, SUBMIT A CONFIRMING RFI THROUGH EUBUILDER WHICH INCLUDES LABELED PHOTOS OF ALL FOUR WALLS OF THE ELECTRICAL ROOM WITH THE PROPOSED LOCATION OF THE NEW DDC PANEL (WITH ALL SUBCOMPONENTS AUX PANEL, WIRE TROUGH, ETC.) ILLUSTRATED WITH DIMENSIONS ON THE PHOTOS FOR IUB CONFIRMATION OF PROPOSED LOCATION.
293	REMOVE FUME HOOD MONITOR AND SASH-SENSING CONTROL COMPONENTS SUITABLE FOR REUSE. DELIVER FUME HOOD MONITOR AND SASH-SENSING CONTROL COMPONENTS SUITABLE FOR REUSE TO THE FUME HOOD TECHNICIAN OF JANA CRAGEN-REESE (812) 855-1820 AND DISPOSE OF COMPONENTS AS DIRECTED.
294	INSTALL DIFFUSER BLANK OFF PLATE IN THE QUADRANT INDICATED PRIOR TO TAB WORK COMMENCING. TYPICAL ALL DIFFUSERS WITH HIGHLIGHTED QUADRANTS.
295	NO VOLUME DAMPERS REQUIRED IN THESE GRILLE RUNOUT DUCTS.

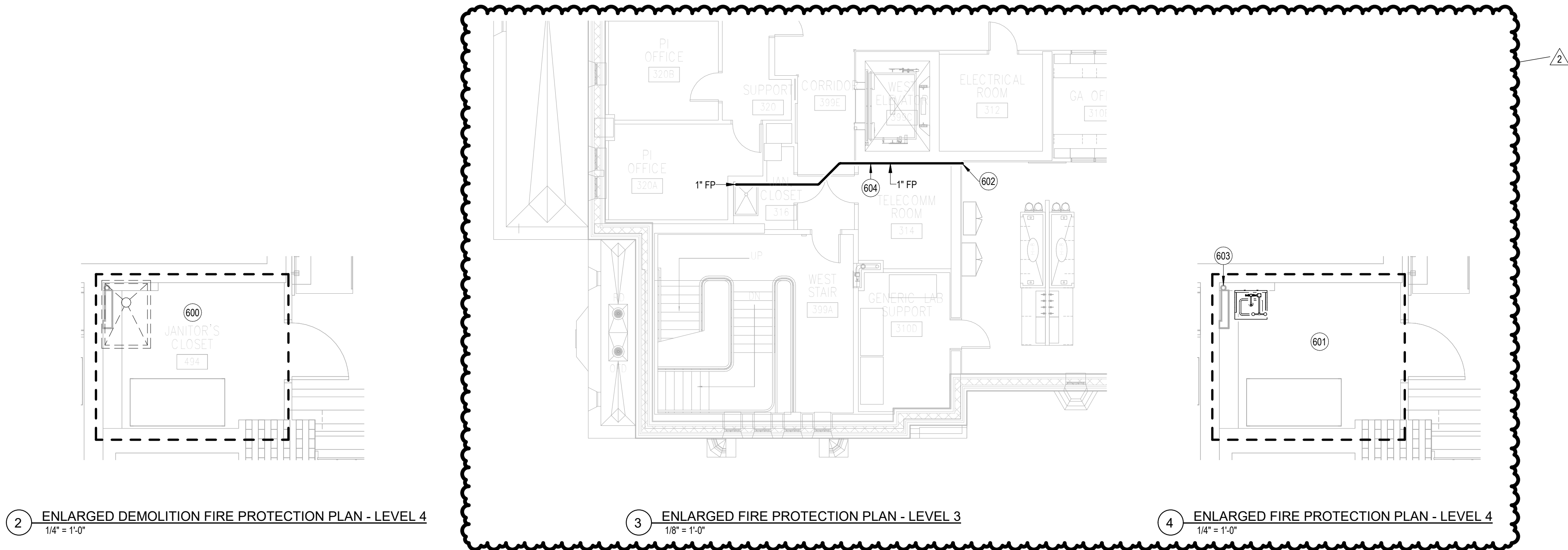


1 MECHANICAL DEMOLITION PLAN - A140 AREA
3/16" = 1'-0"



2 MECHANICAL PLAN - A140 AREA
3/16" = 1'-0"

X00	PLAN NOTES
600	REMOVE EXISTING UPRIGHT SPRINKLER, PIPING AND PREPARE PIPING FOR FUTURE CONNECTION
601	PROVIDE NEW SPRINKLER HEAD IN NEW CEILING.
602	EXTEND NEW FIRE PROTECTION PIPE FROM JANITOR'S CLOSET 494 DOWN TO JANITOR'S CLOSET 316 ONE LEVEL 3.
603	CONNECT TO EXISTING FIRE PROTECTION PIPE AND ROUTE TO MOP BASIN IN JANITOR'S CLOSET 316 ON LEVEL 3.
604	PAN FIRE PROTECTION PIPE ROUTED IN THE ELECOM ROOM IN IT'S ENTIERTY. ROUTE PAN DRAIN TO JANITOR'S CLOSET 316.



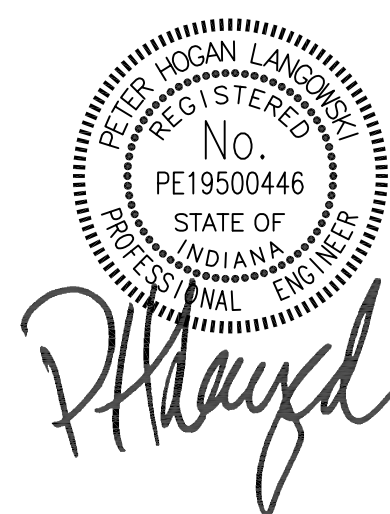
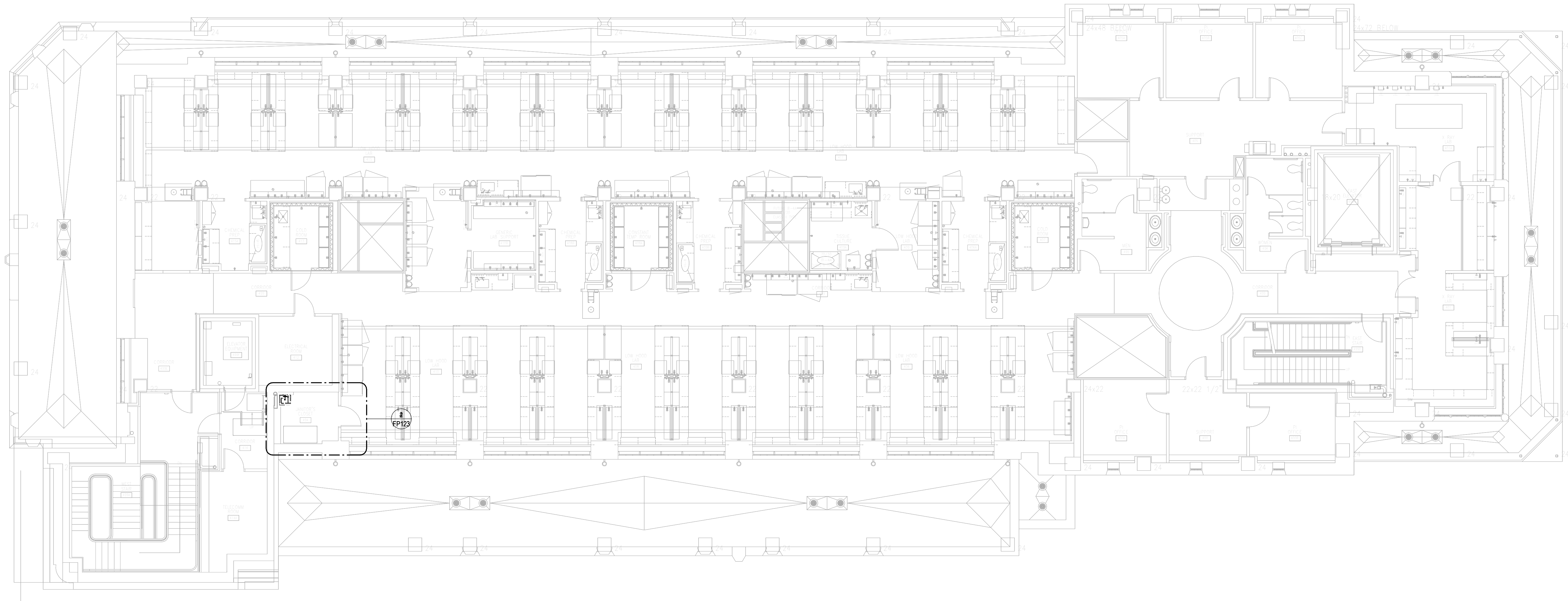
IUB
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CLIENT PROJECT NO. - 20240397

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JANUARY 9, 2025

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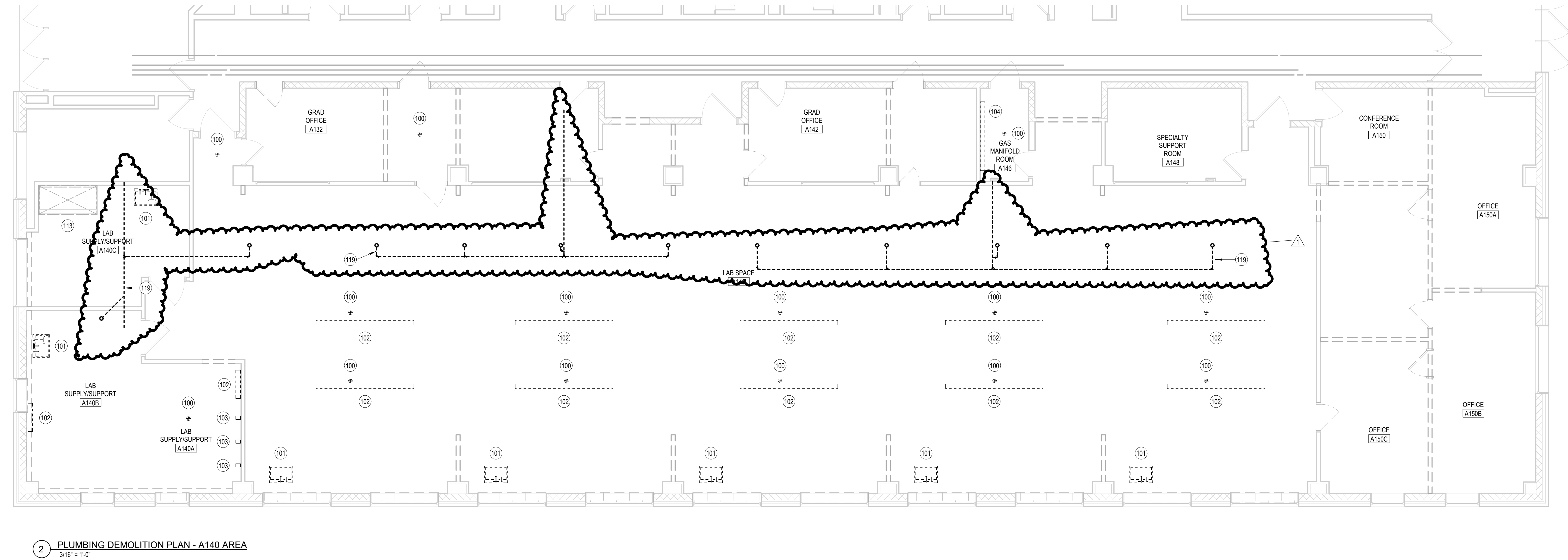
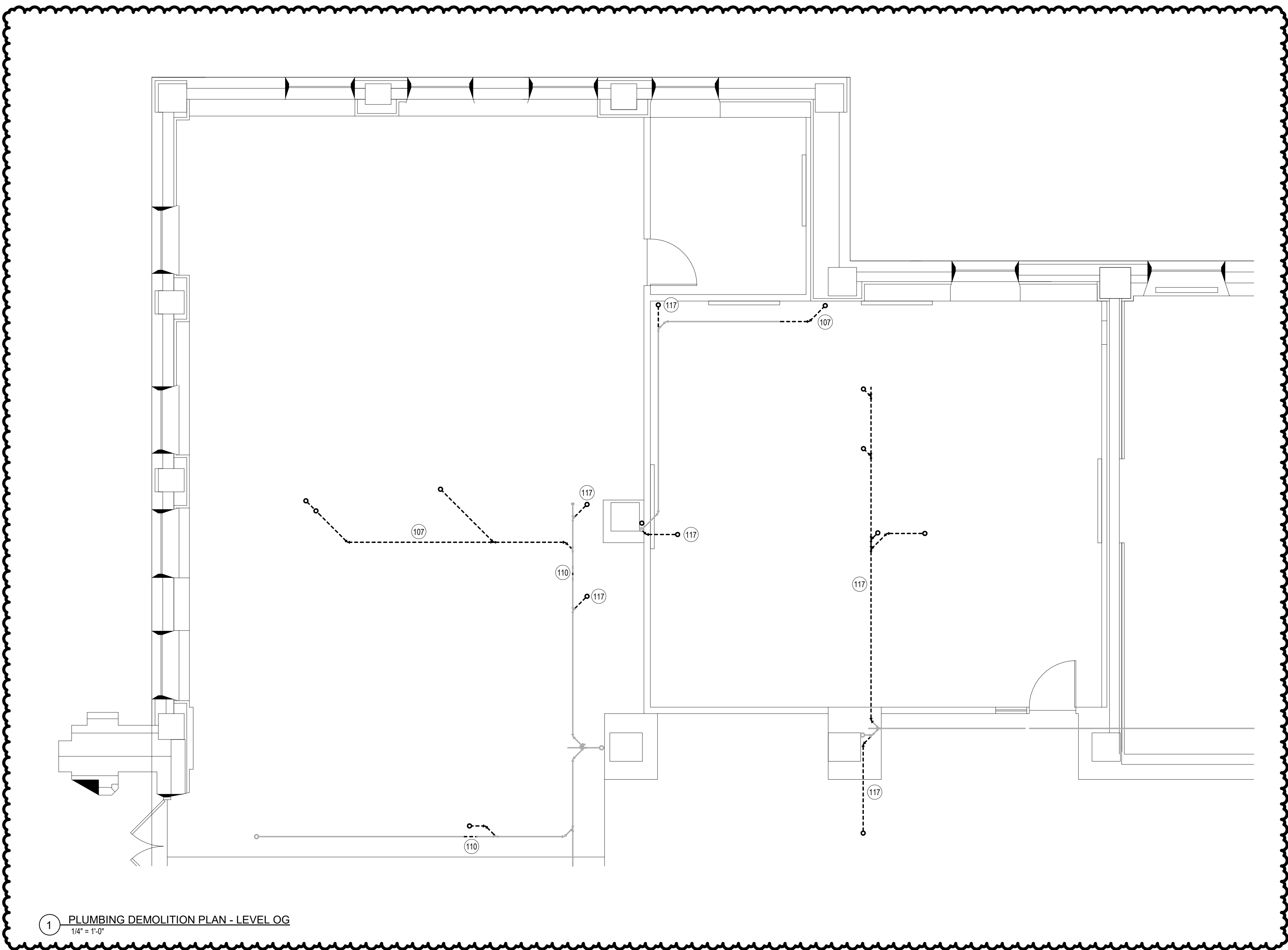


BL070 SIMON - FIRE
PROTECTION PLAN - LEVEL
4

DATE JAN 5, 2017
BSALS PROJECT NO. 00360477

FP123

X00	PLAN NOTES
100	REMOVE EXISTING FLOOR DRAIN AND ALL ASSOCIATED SANITARY PIPING BACK TO MAIN AND CAP. PATCH INFILL TO MATCH EXISTING CONCRETE.
101	REMOVE EXISTING SINK AND ALL ASSOCIATED TRIM BACK TO MAIN. PREPARE PIPE FOR NEW CONNECTION.
102	REMOVE EXISTING LAB GAS PIPING BACK TO MANIFOLD AND ALL ASSOCIATED TRIM ON BRACKET. REMOVE EXISTING COLD WATER PIPING BACK TO MAIN AND CAP.
103	REMOVE EXISTING LAB GAS BOX CONNECTION AND ALL ASSOCIATED PIPING BACK TO MAIN AND CAP.
104	REMOVE EXISTING LAB GAS MANIFOLD AND ALL ASSOCIATED PIPING TO EXISTING GAS BRACKETS AND TRIM.
107	REMOVE EXISTING SPECIAL WASTE PIPE AND FITTINGS AND PREPARE EXISTING PIPE FOR FUTURE CONNECTION.
110	REMOVE SEGMENT OF PIPE AND PREPARE PIPE FOR FUTURE CONNECTION.
113	REMOVE EXISTING SPECIAL WASTE ABOVE/BELOW FLOOR, LAB GASSES, WATER AND VENT PIPING FROM FUME HOOD BACK TO MAIN AND CAP.
117	REMOVE EXISTING SPECIAL WASTE PIPE BACK TO MAIN AND CAP.
119	REMOVE EXISTING SPECIAL WASTE PIPING, FITTINGS, AND HANGERS COMPLETE.

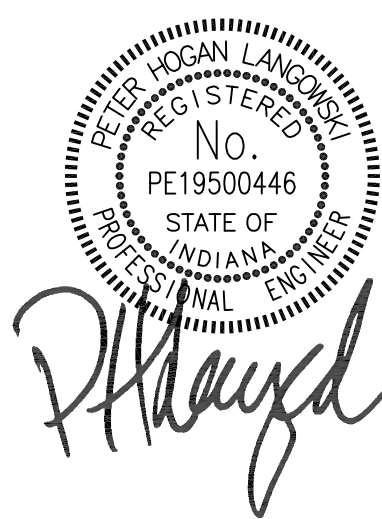


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BL072 CHEMISTRY -
PLUMBING DEMOLITION
PLANS

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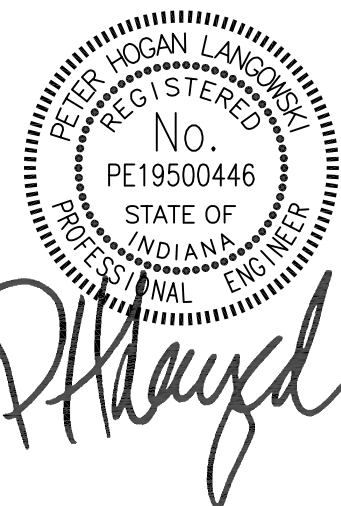
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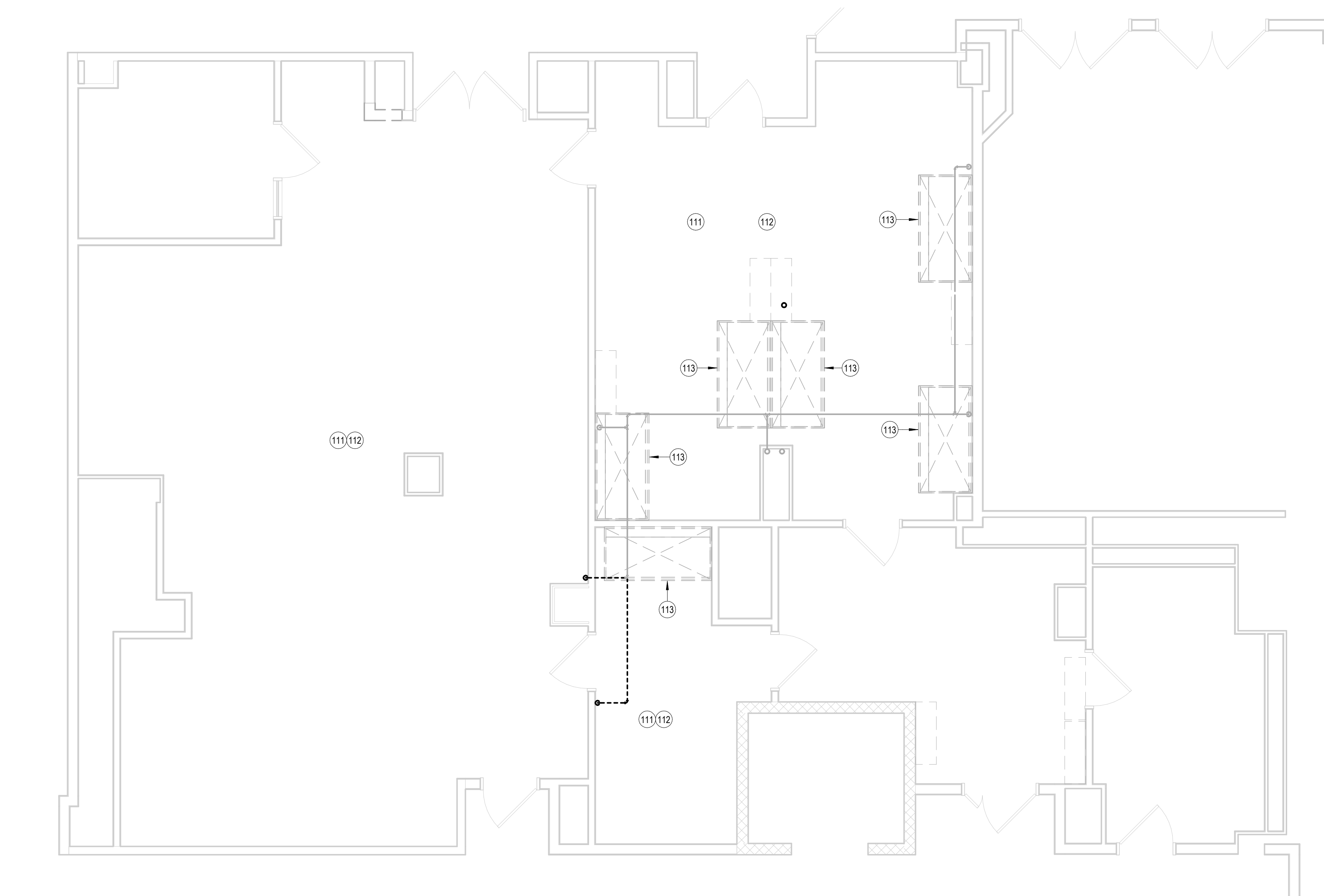
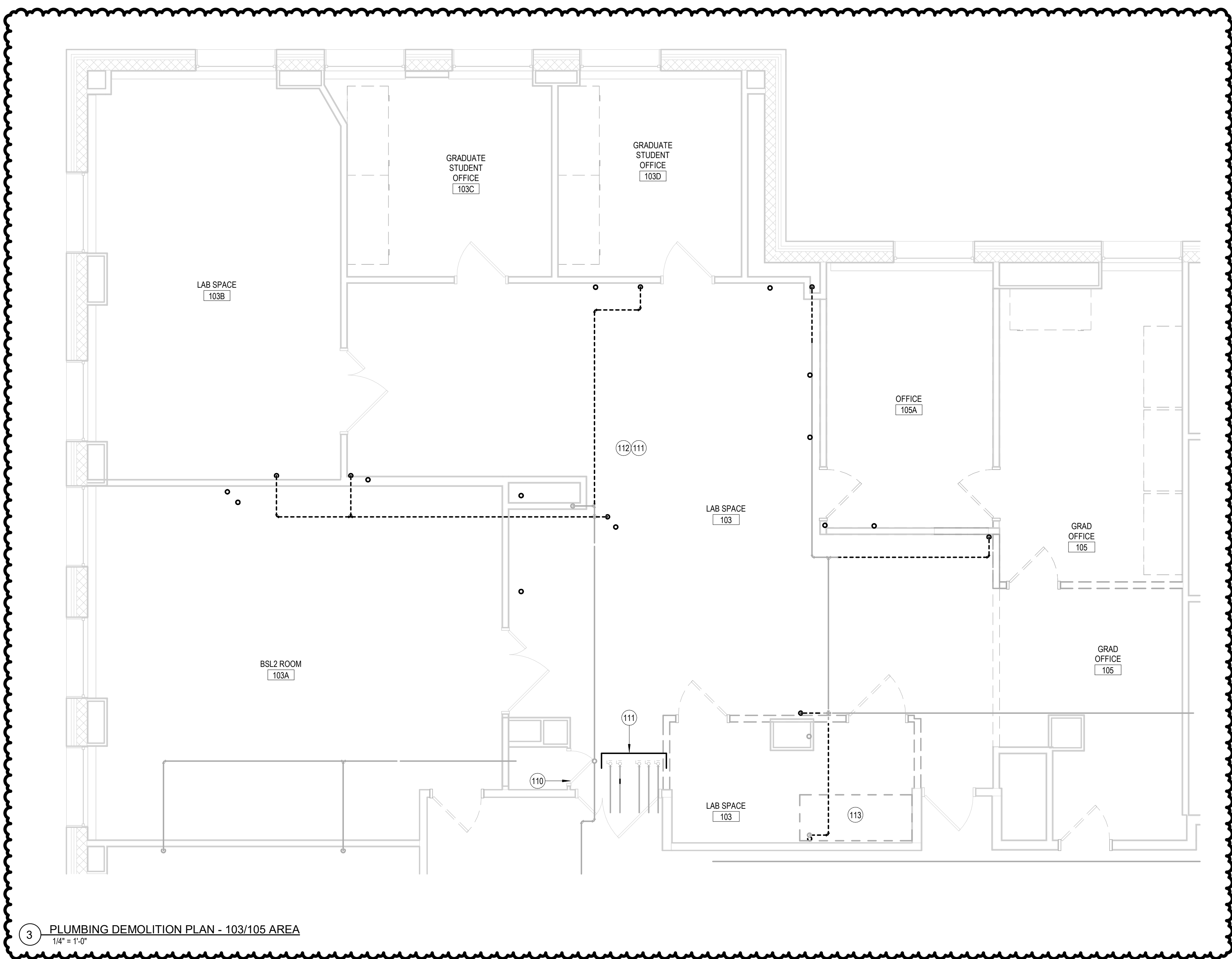
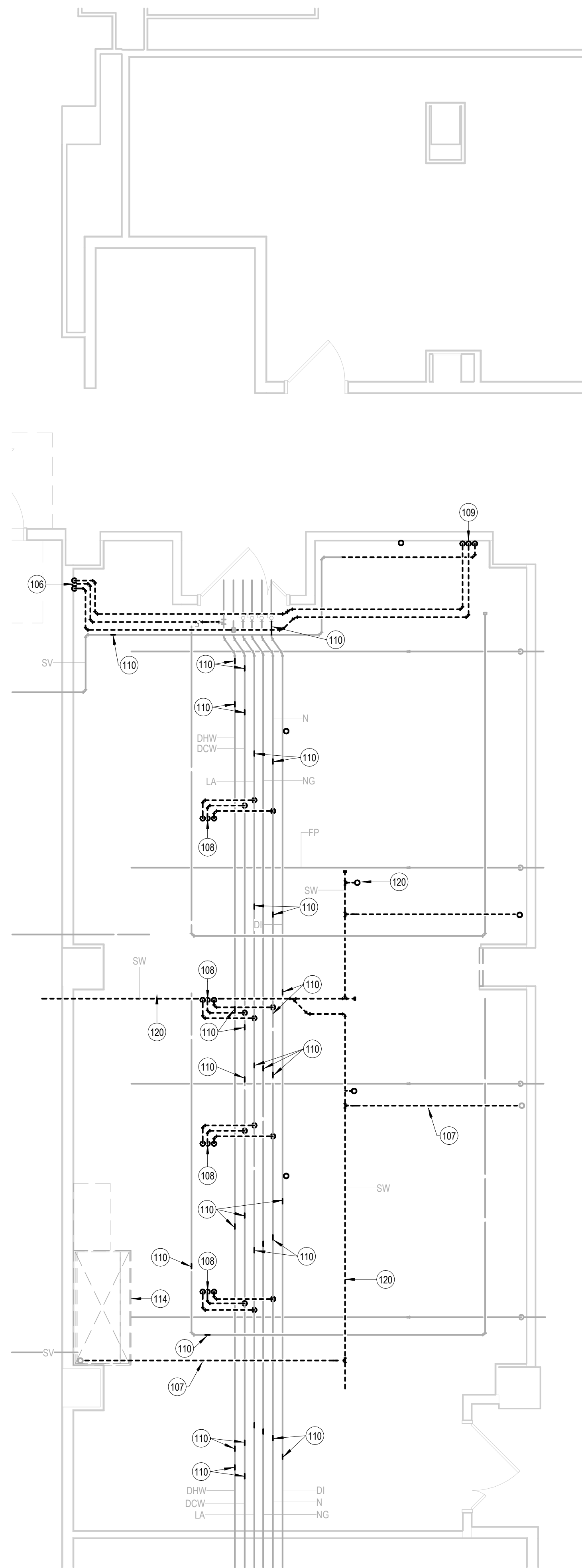
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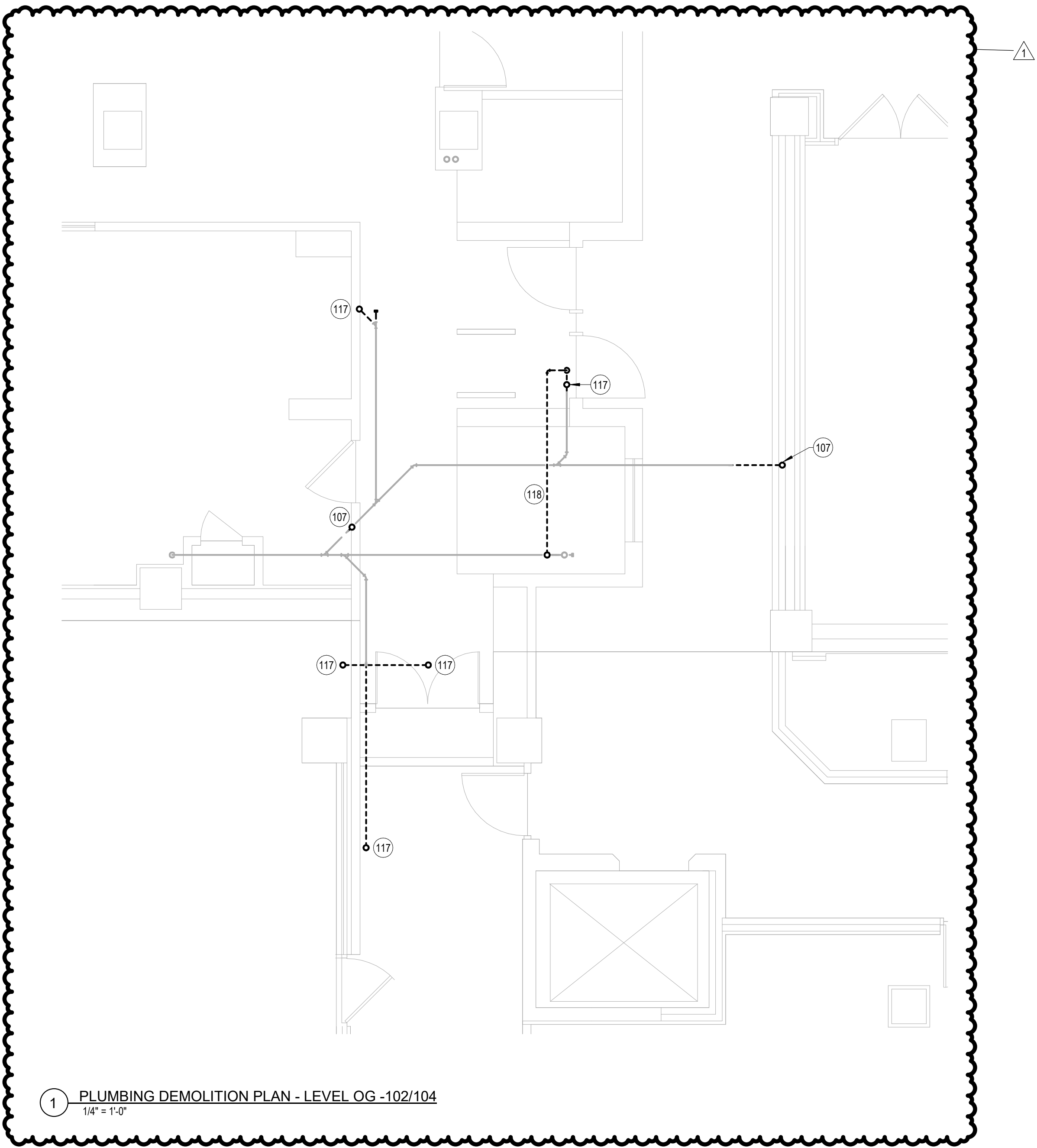
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PLANSDATE: JAN 1, 2017
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X00	PLAN NOTES
106	REMOVE EXISTING COLD, HOT AND LAB AIR BACK TO POINT INDICATED ON DRAWINGS. PREPARE COLD AND HOT WATER FOR FUTURE CONNECTION.
107	REMOVE EXISTING SPECIAL WASTE PIPE AND FITTINGS AND PREPARE EXISTING PIPE FOR FUTURE CONNECTION.
108	REMOVE EXISTING LAB AIR, COLD WATER AND NITROGEN BACK TO MAIN AND CAP.
109	REMOVE COLD WATER AND LAB AIR PIPING BACK TO MAIN AND CAP.
110	REMOVE SEGMENT OF PIPE AND PREPARE PIPE FOR FUTURE CONNECTION.
111	REMOVE ALL COLD WATER, HOT WATER, LAB AIR AND NITROGEN BACK TO MAIN VALVES AND PREPARE PIPE FOR FUTURE CONNECTION.
112	REMOVE ALL EXISTING SPECIAL WASTE AND VENT ALONG WITH ALL ASSOCIATED TRIM BACK TO MAIN AND PREPARE PIPE FOR NEW CONNECTION.
113	REMOVE EXISTING SPECIAL WASTE ABOVE/BELOW FLOOR, LAB GASSES, WATER AND VENT PIPING FROM FUME HOOD BACK TO MAIN AND CAP.
114	REMOVE EXISTING SPECIAL WASTE ABOVE/BELOW FLOOR, VENT, LAB GASSES AND WATER PIPING FROM FUME HOOD BACK TO MAIN AND CAP.
120	REMOVE EXISTING SPECIAL WASTE PIPING, FITTINGS, AND HANGERS COMPLETE.

1 PLUMBING DEMOLITION PLAN - 102/104 AREA
1/4" = 1'-0"2 PLUMBING DEMOLITION PLAN - A251 / A252 AREA
1/4" = 1'-0"



1 PLUMBING DEMOLITION PLAN - LEVEL OG -102/104
1/4" = 1'-0"

X00	PLAN NOTES
107	REMOVE EXISTING SPECIAL WASTE PIPE AND FITTINGS AND PREPARE EXISTING PIPE FOR FUTURE CONNECTION.
117	REMOVE EXISTING SPECIAL WASTE PIPE BACK TO MAIN AND CAP.
118	REMOVE EXISTING VENT BACK TO MAIN AND CAP. REMOVE EXISTING VENT UP SHAFT TO FITTING AND CAP.

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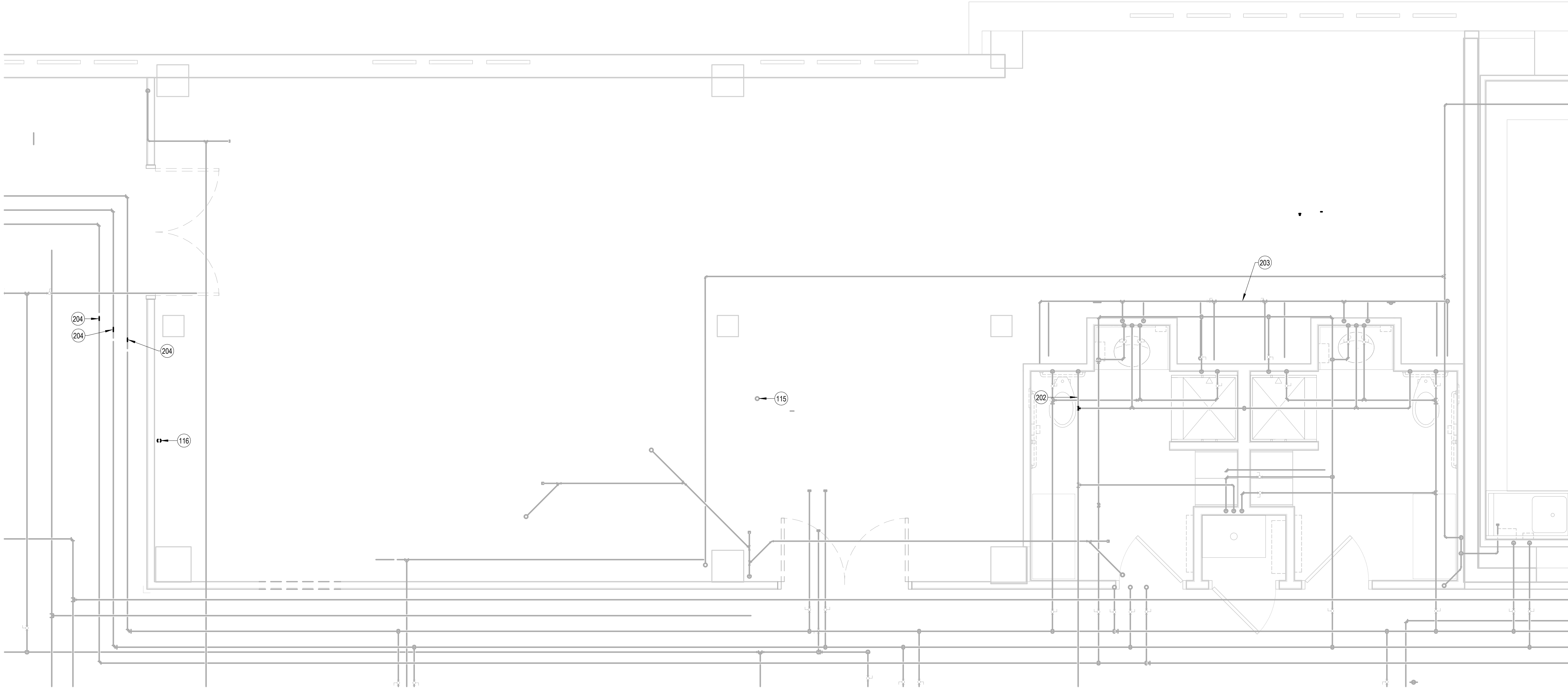
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PLANS

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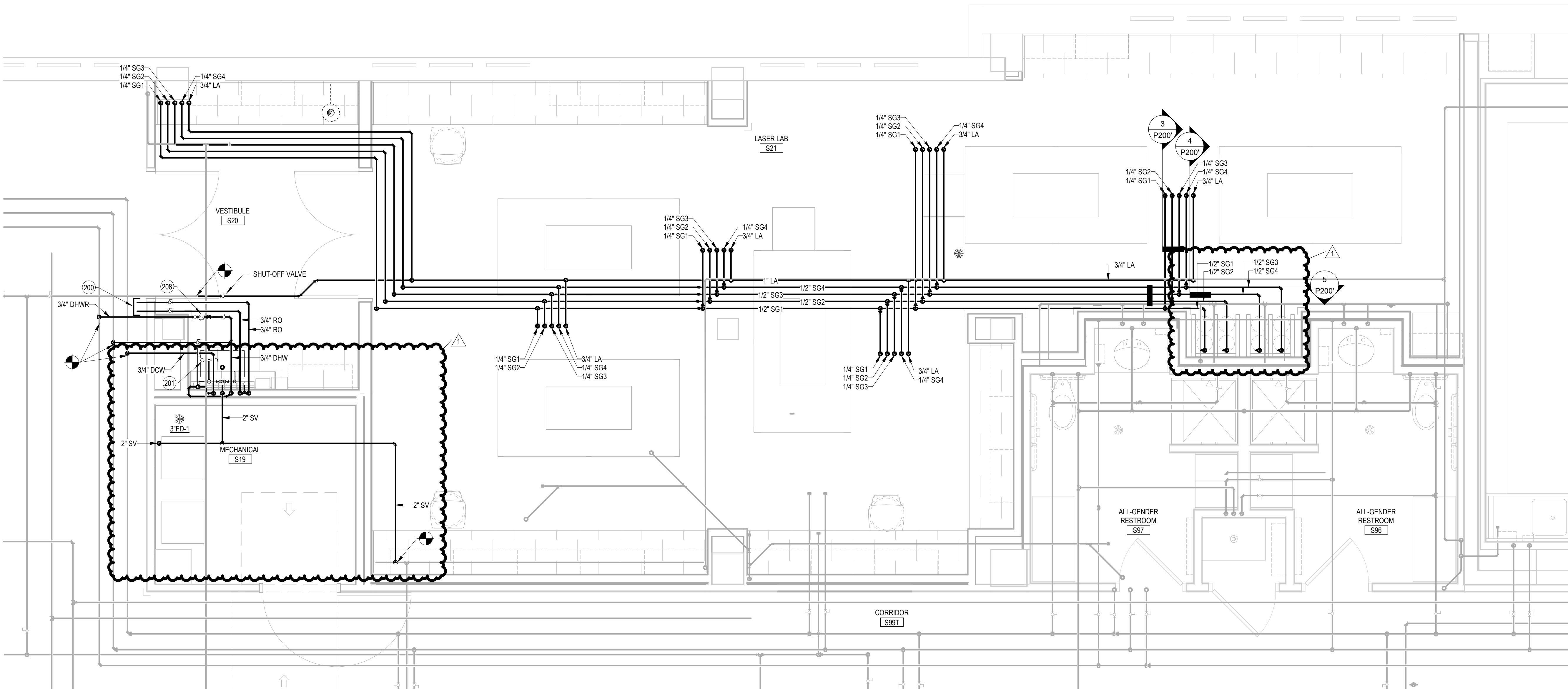
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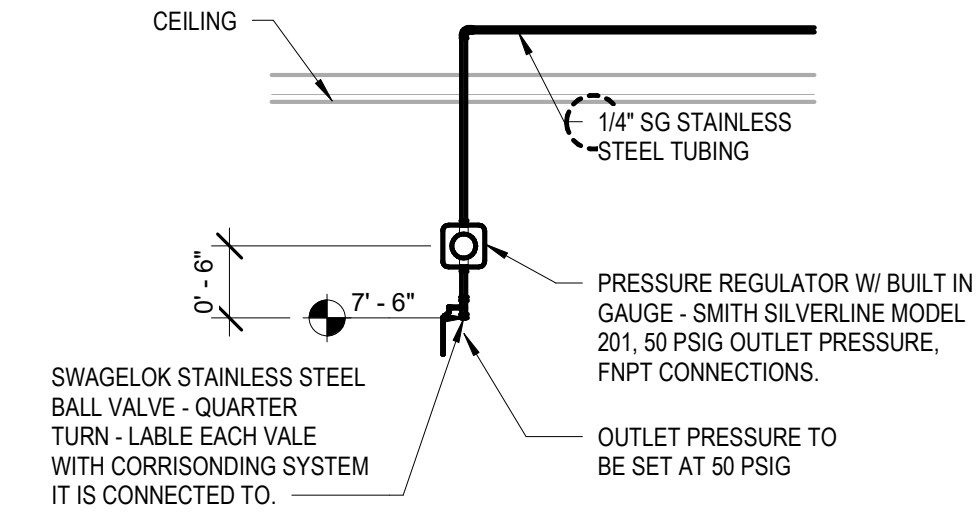


1 PLUMBING DEMOLITION SUB-BASEMENT PLAN - ROOM S19/S20 AREA
3/8" = 1'-0"

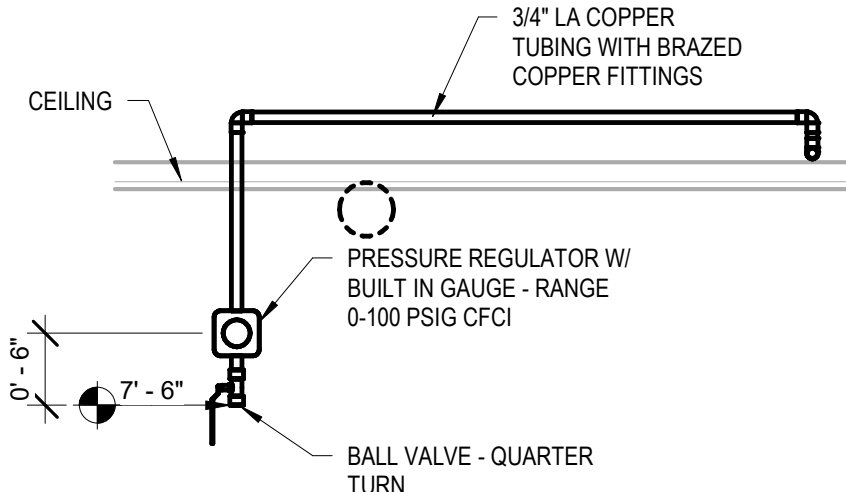


2 PLUMBING SUB-BASEMENT PLAN - ROOM S19/S20 AREA
3/8" = 1'-0"

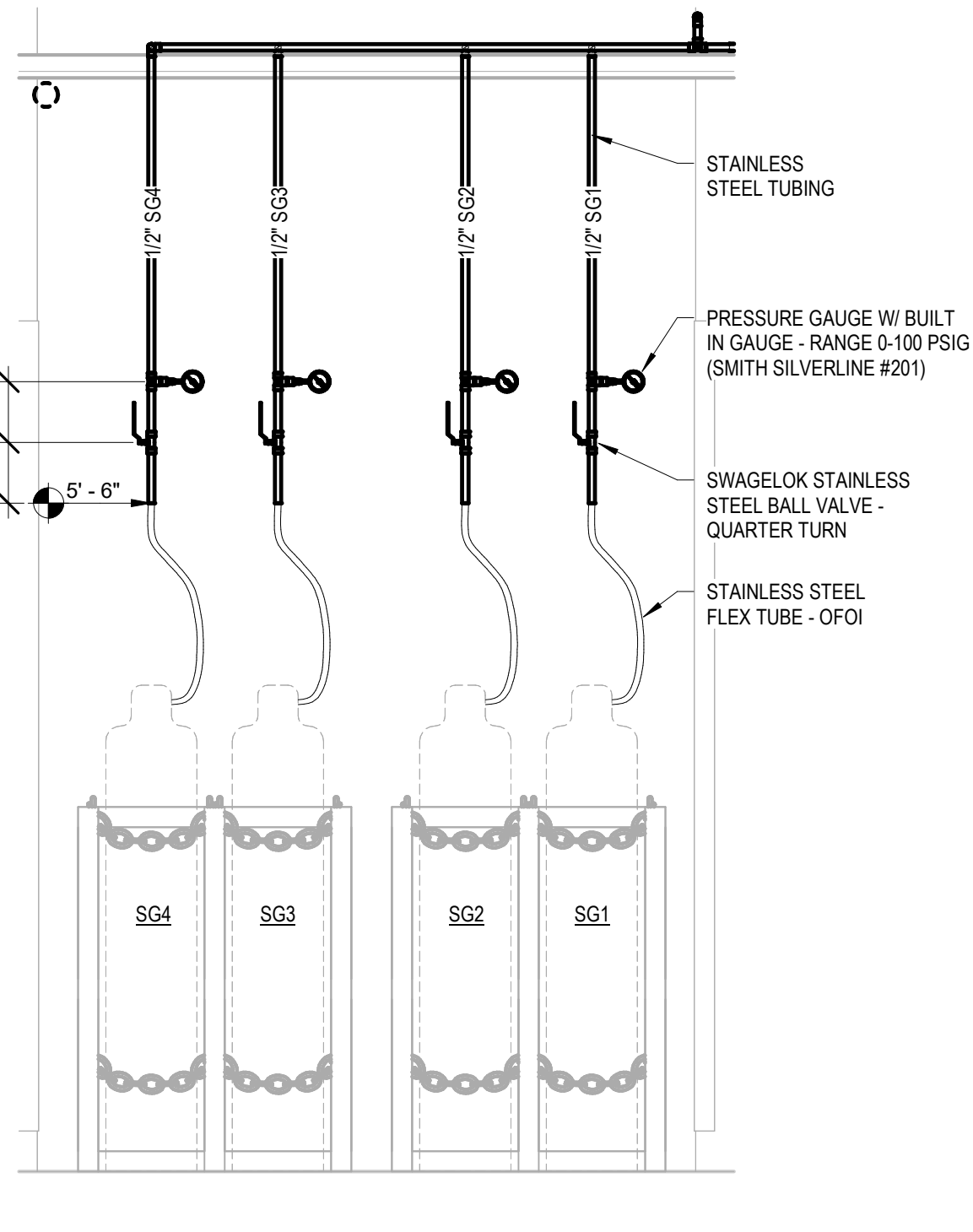
X00	PLAN NOTES
115	REMOVE EXISTING STUB UP BELOW SLAB AND CAP. PATCH CONCRETE TO MATCH EXISTING CONCRETE.
116	REMOVE EXISTING STUB UP BELOW FLOOR AND PREPARE PIPE FOR FUTURE CONNECTION. PATCH CONCRETE TO MATCH EXISTING CONCRETE.
200	CONNECT NEW 3/4" RO WATER LOOP TO EXISTING RO SYSTEM.
201	PROVIDE NEW THERMO MIXING VALVE UNDER SINK TO EMERGENCY EYE WASH. SET THERMO MIXING VALVE AT 72 DEGREE AT 3 GPM.
202	REMOVE EXISTING VENT TEE AND PREPARE PIPE FOR FUTURE CONNECTION.
203	RAISE EXISTING HOT/COLD WATER PIPING AS NEEDED TO AVOID NEW CEILING.
204	REMOVE SECTION OF EXISTING PIPING AND PREPARE PIPE FOR FUTURE CONNECTION.
208	PROVIDE CIRCUIT SETTER ASSEMBLY AND SET AT 1.0 GPM.



3 TYPICAL SG PIPE SECTION - TWENTY-FOUR LOCATIONS
3/4" = 1'-0"



4 LA CEILING SECTION - TYPICAL SIX LOCATIONS
3/4" = 1'-0"



5 SG TANKS CONNECTIONS
3/4" = 1'-0"

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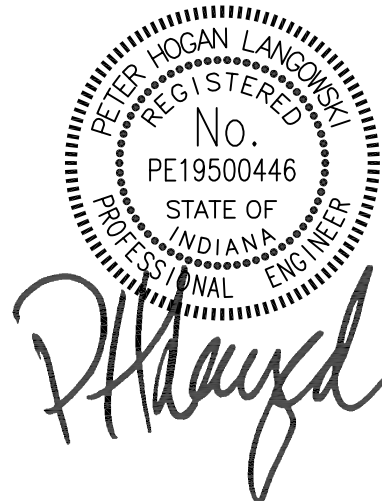
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BL027 SWAIN -
SUB-BASEMENT PLANS SW
S19-S21 AREA

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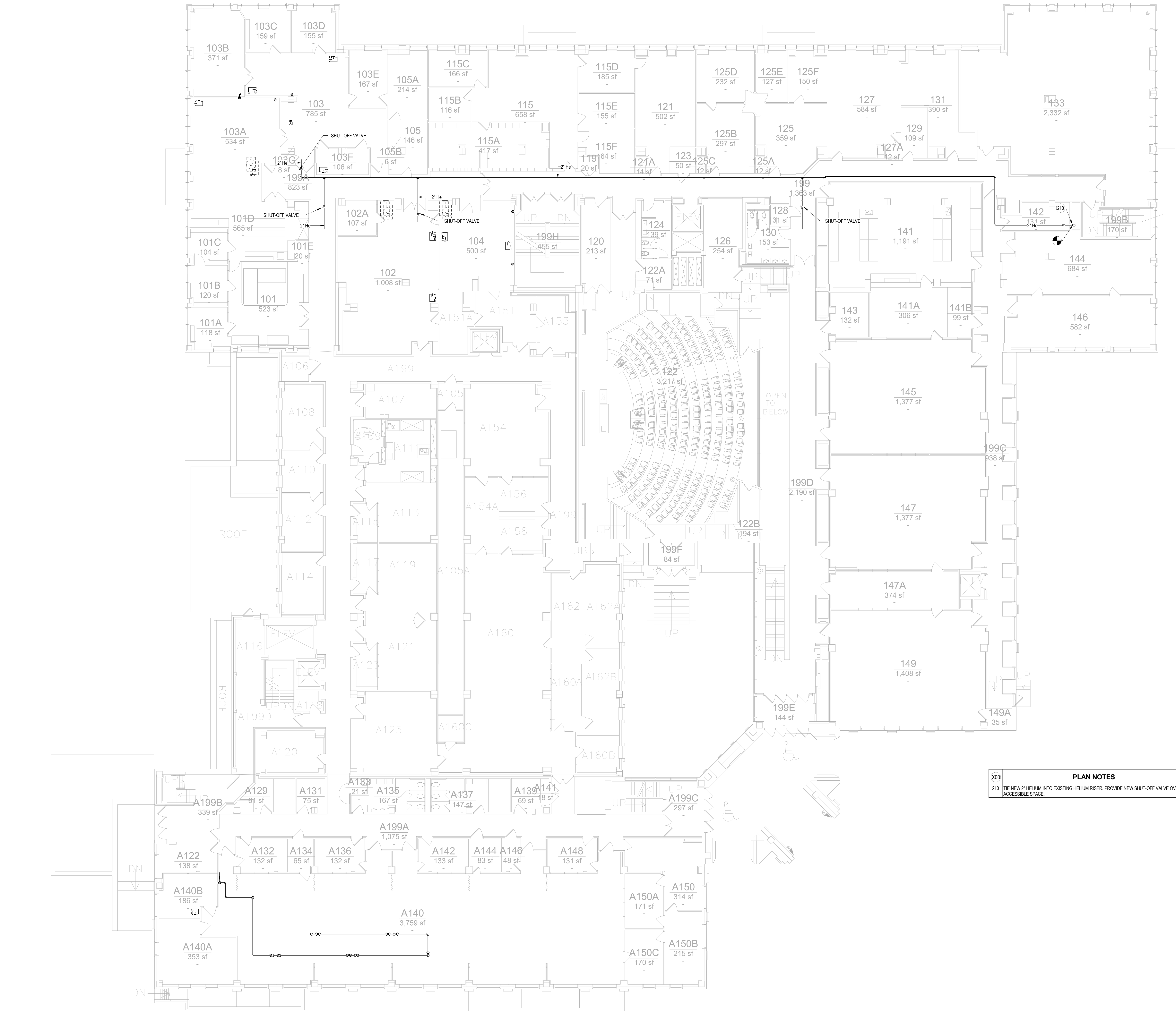
BL072 CHEMISTRY -
OVERALL FLOOR PLAN -
LEVEL 1

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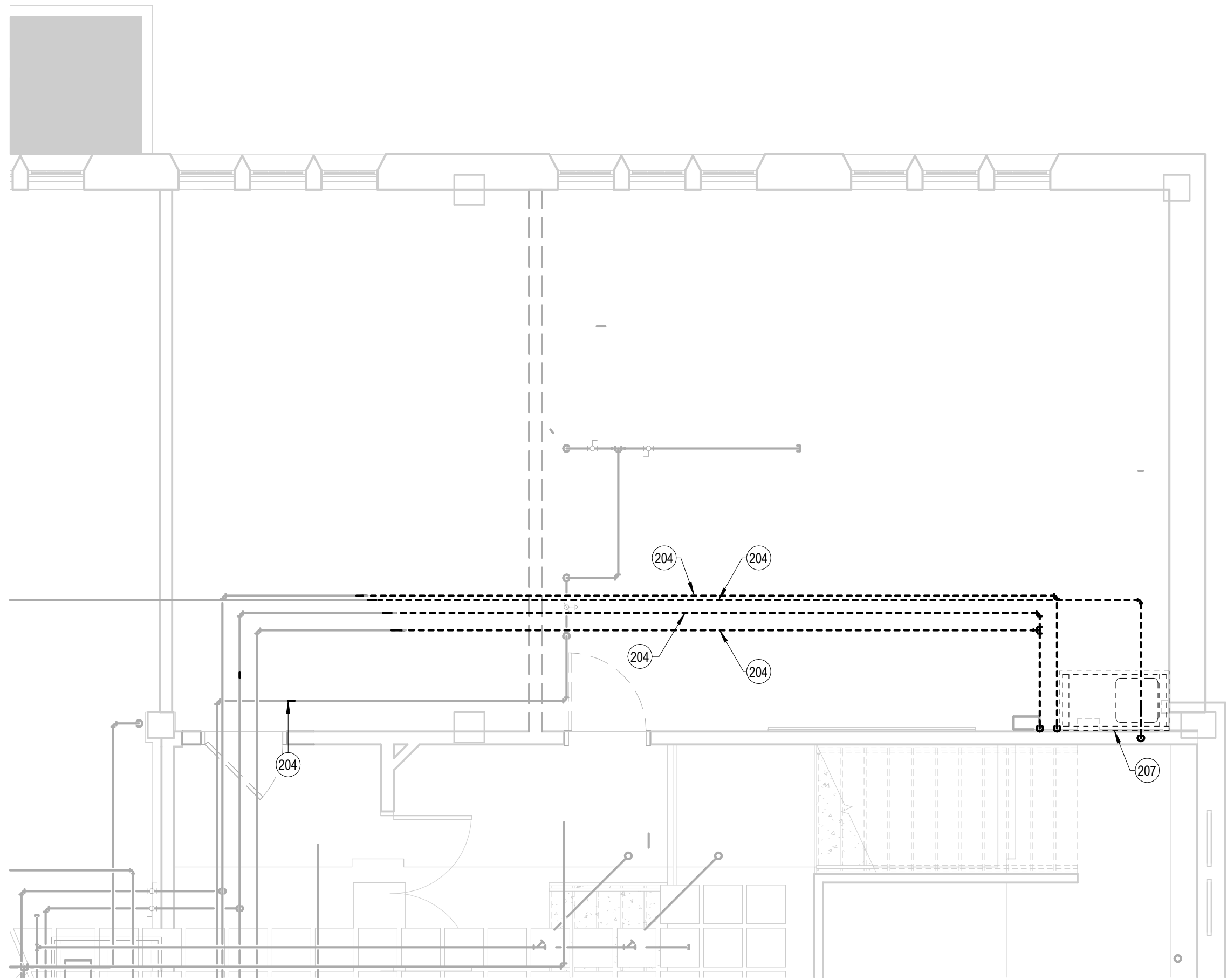
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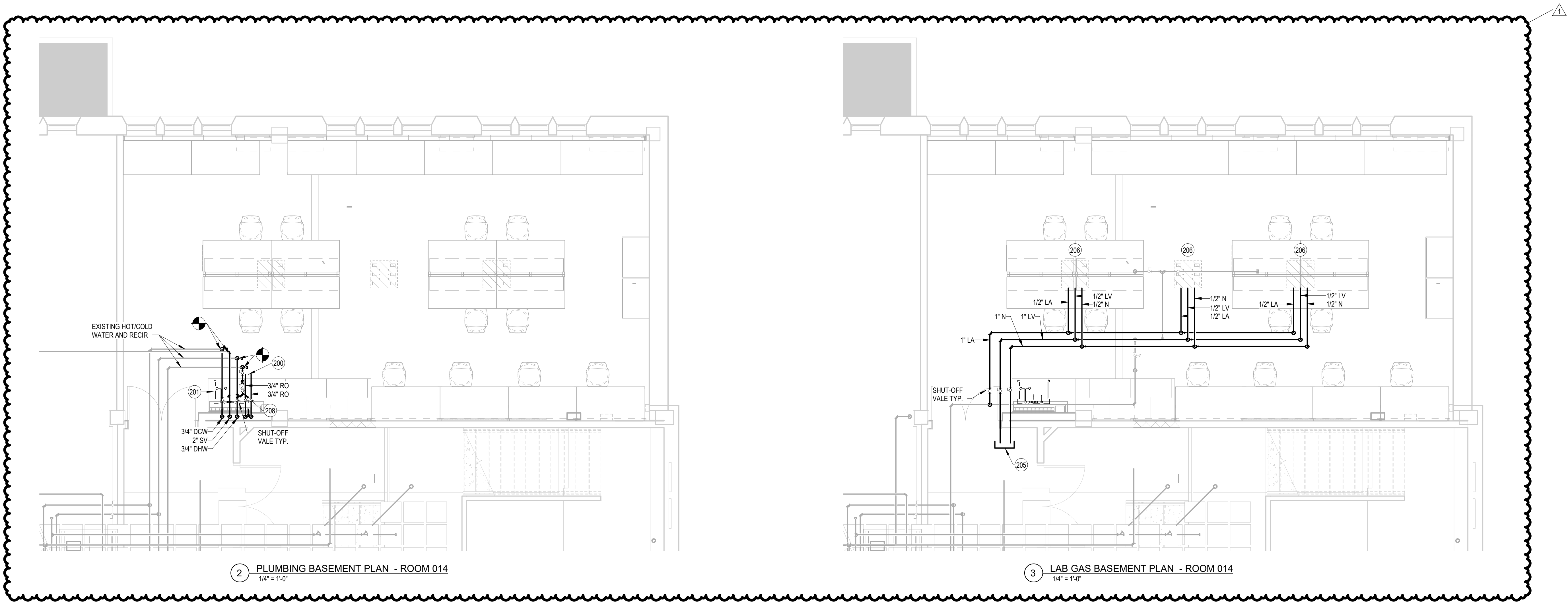
MARK	DESCRIPTION
X00	PLAN NOTES
210	TIE NEW 'Z' HELIUM INTO EXISTING HELIUM RISER. PROVIDE NEW SHUT-OFF VALVE OVER ACCESSIBLE SPACE.

1 OVERALL CHEMISTRY FLOOR PLAN - LEVEL 1
3/32" = 1'-0"

	PLAN NOTES
X00	
200	CONNECT NEW 3/4" RO WATER LOOP TO EXISTING RO SYSTEM.
201	PROVIDE NEW THERMO MIXING VALVE UNDER SINK TO EMERGENCY EYE WASH. SET THERMO MIXING VALVE AT 72 DEGREE AT 3 GPM.
204	REMOVE SECTION OF EXISTING PIPING AND PREPARE PIPE FOR FUTURE CONNECTION.
205	CONNECT LAB VACUUM AND NITROGEN TO BUILDINGS EXISTING SYSTEM.
206	CONNECT LAB NITROGEN, LAB AIR AND LAB VACUUM PIPING TO CEILING SERVICE PANELS. SEE LAB DRAWINGS FOR DETAIL CONNECTION.
207	REMOVE EXISTING SINK AND ALL ASSOCIATED TRIM. REMOVE SANITARY BACK TO MAIN AND CAP.
208	PROVIDE CIRCUIT SETTER ASSEMBLY AND SET AT 1.0 GPM.



1 PLUMBING DEMOLITION BASEMENT PLAN - ROOM 014
1/4" = 1'-0"



2 PLUMBING BASEMENT PLAN - ROOM 014
1/4" = 1'-0"

3 LAB GAS BASEMENT PLAN - ROOM 014
1/4" = 1'-0"

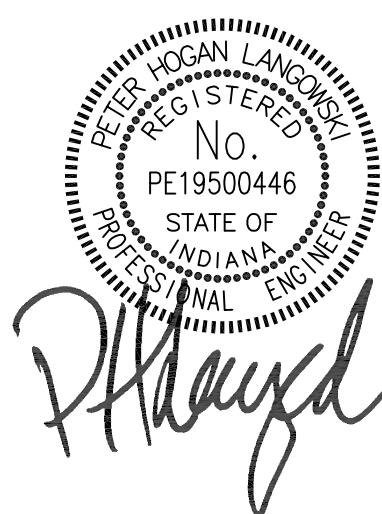
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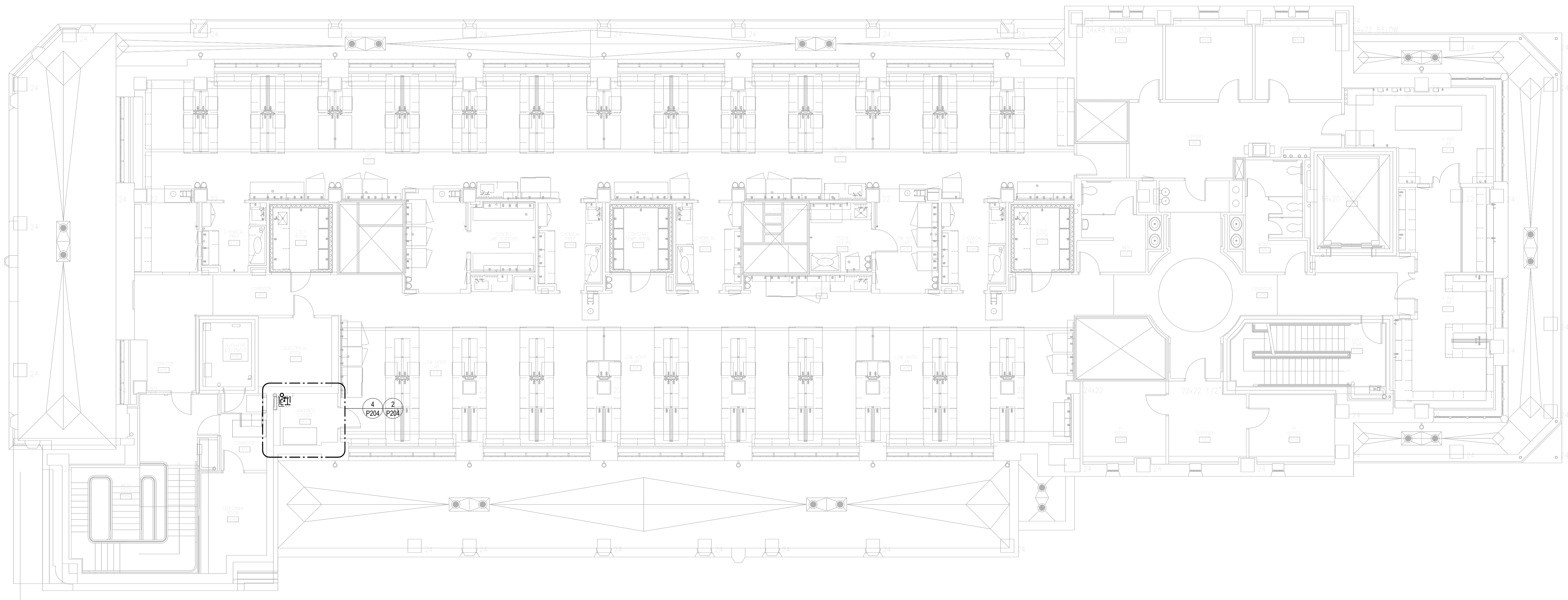
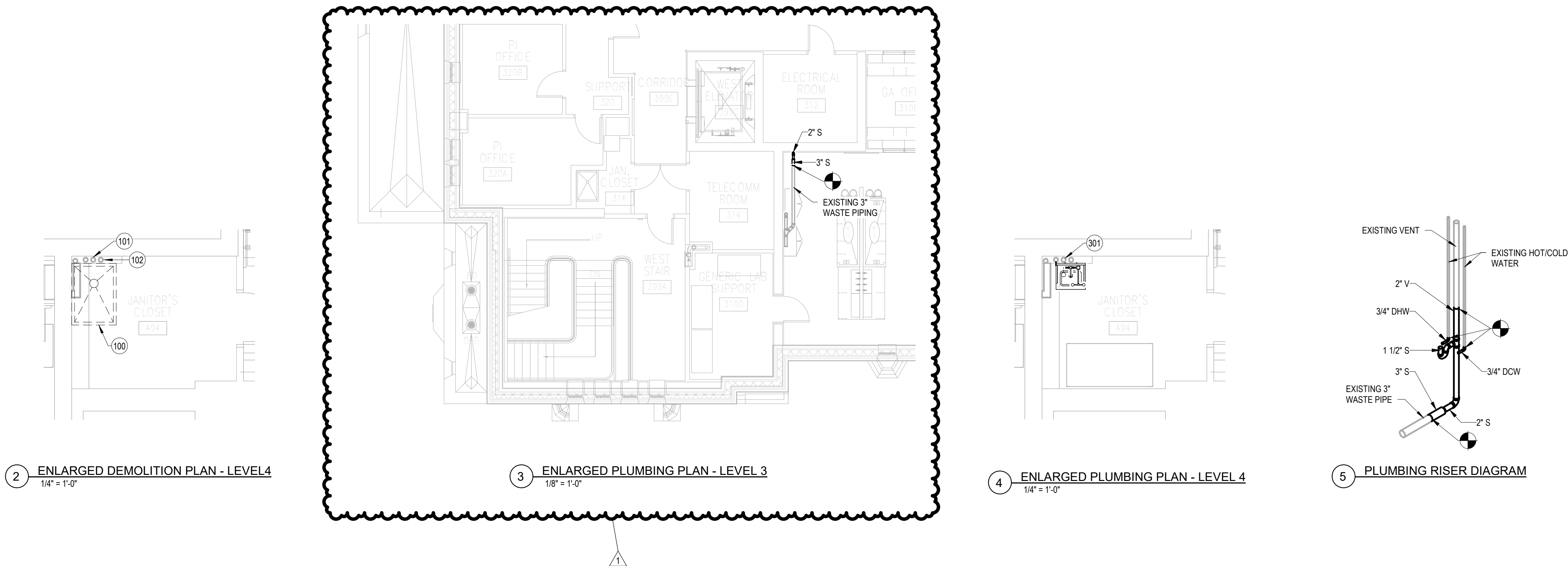


BL027 SWAIN - BASEMENT
PLAN SW 014

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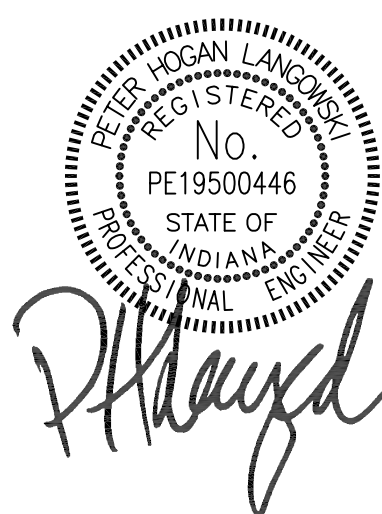
X00	PLAN NOTES
100	REMOVE EXISTING MOP SINK ALONG WITH SANITARY TRAP, PIPE AND FITTING IN CEILING SPACE BELOW. PREPARE SANITARY PIPE FOR FUTURE CONNECTION
101	REMOVE SECTION OF VENT IN WALL AND PREPARE PIPE FOR FUTURE WALL HUNG HAND SINK
102	REMOVE FAUCET OFF WALL AND PREPARE HOT AND COLD WATER PIPING FOR FUTURE CONNECTION
301	PROVIDE NEW SANITARY PIPE IN WALL AND VENT SECTION CONNECTED TO EXISTING IN WALL

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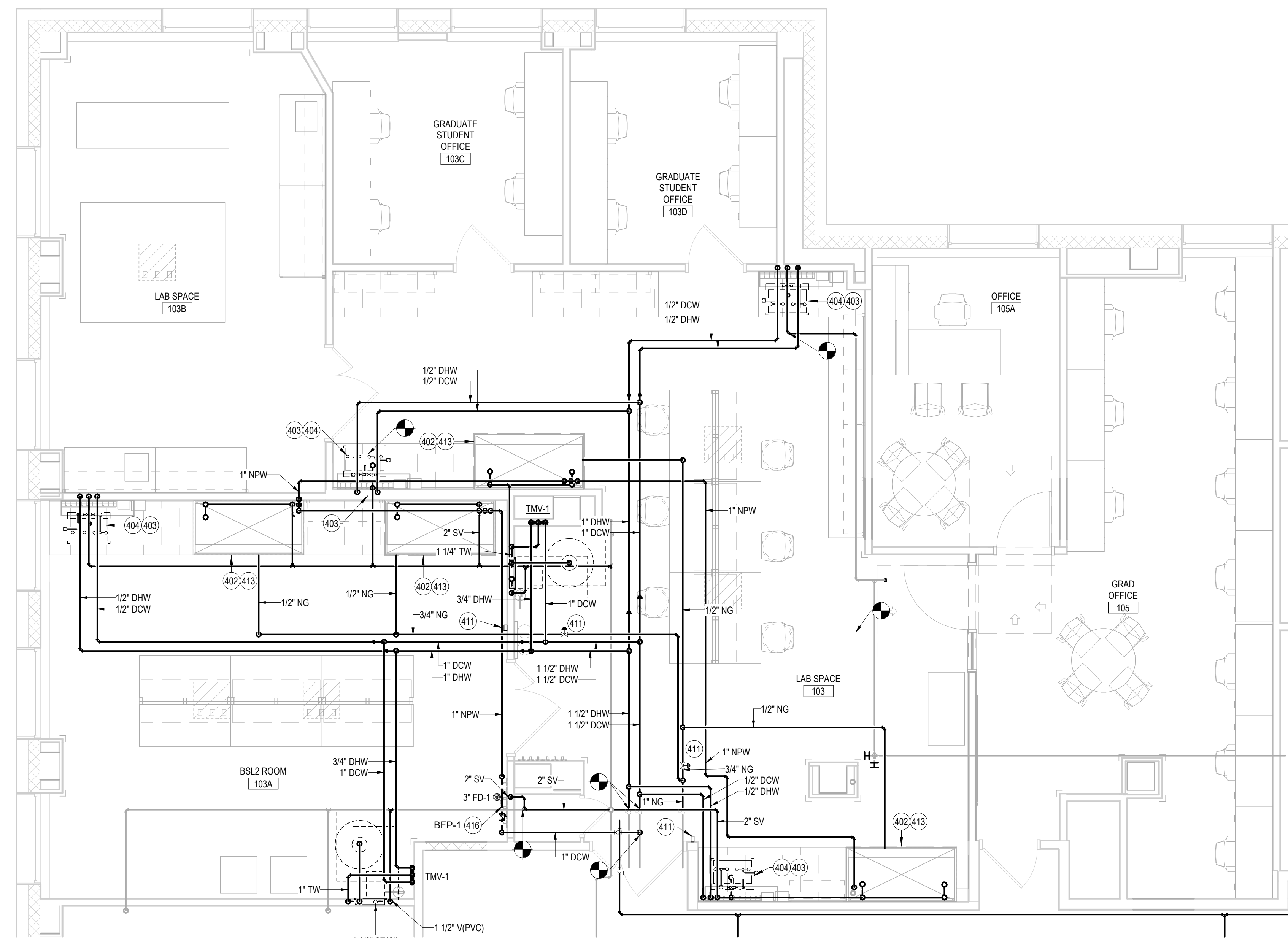
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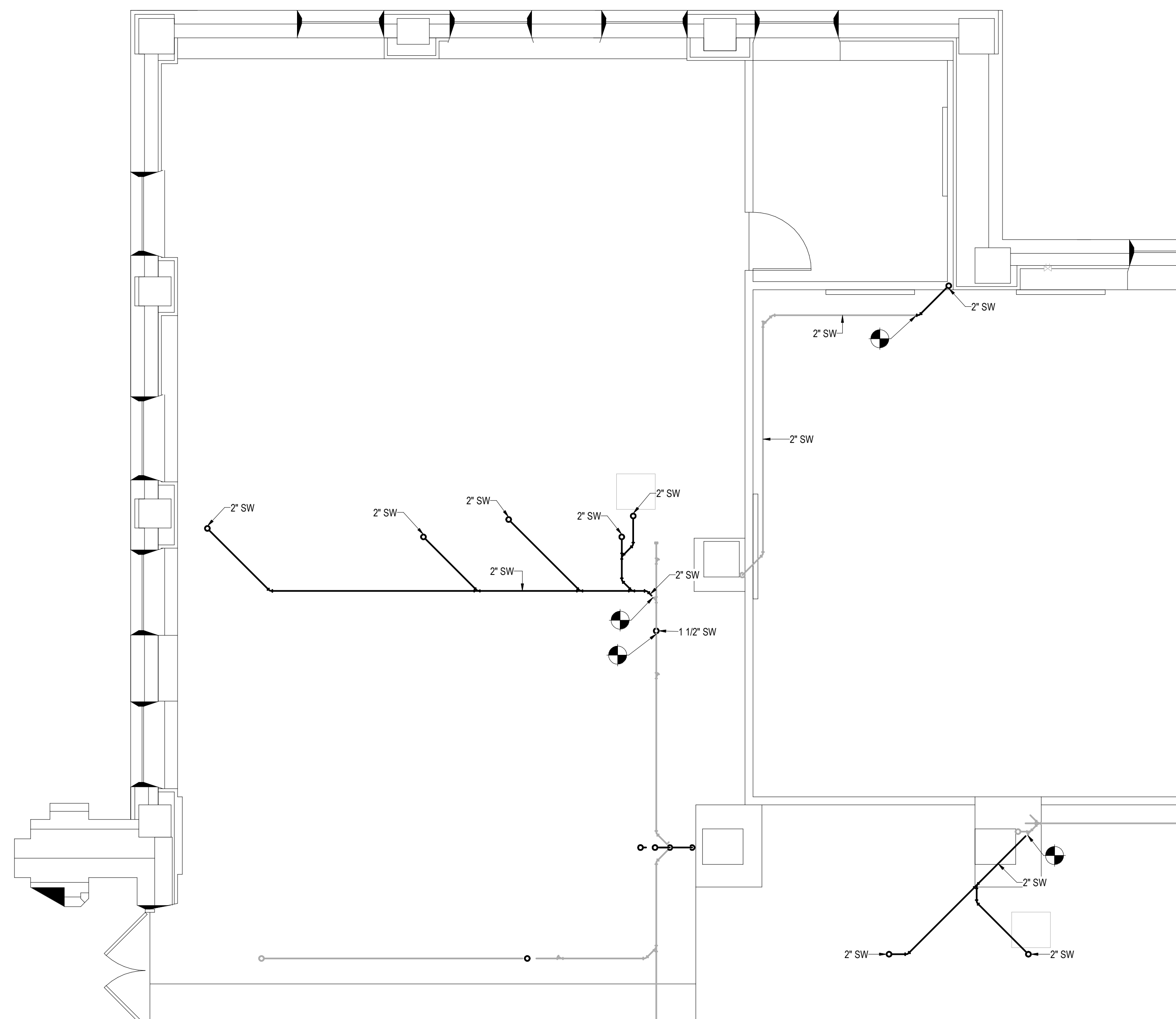
BL070 SIMON - PLUMBING
FLOOR PLAN - LEVEL 4DATE: JAN 1, 2017
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P204

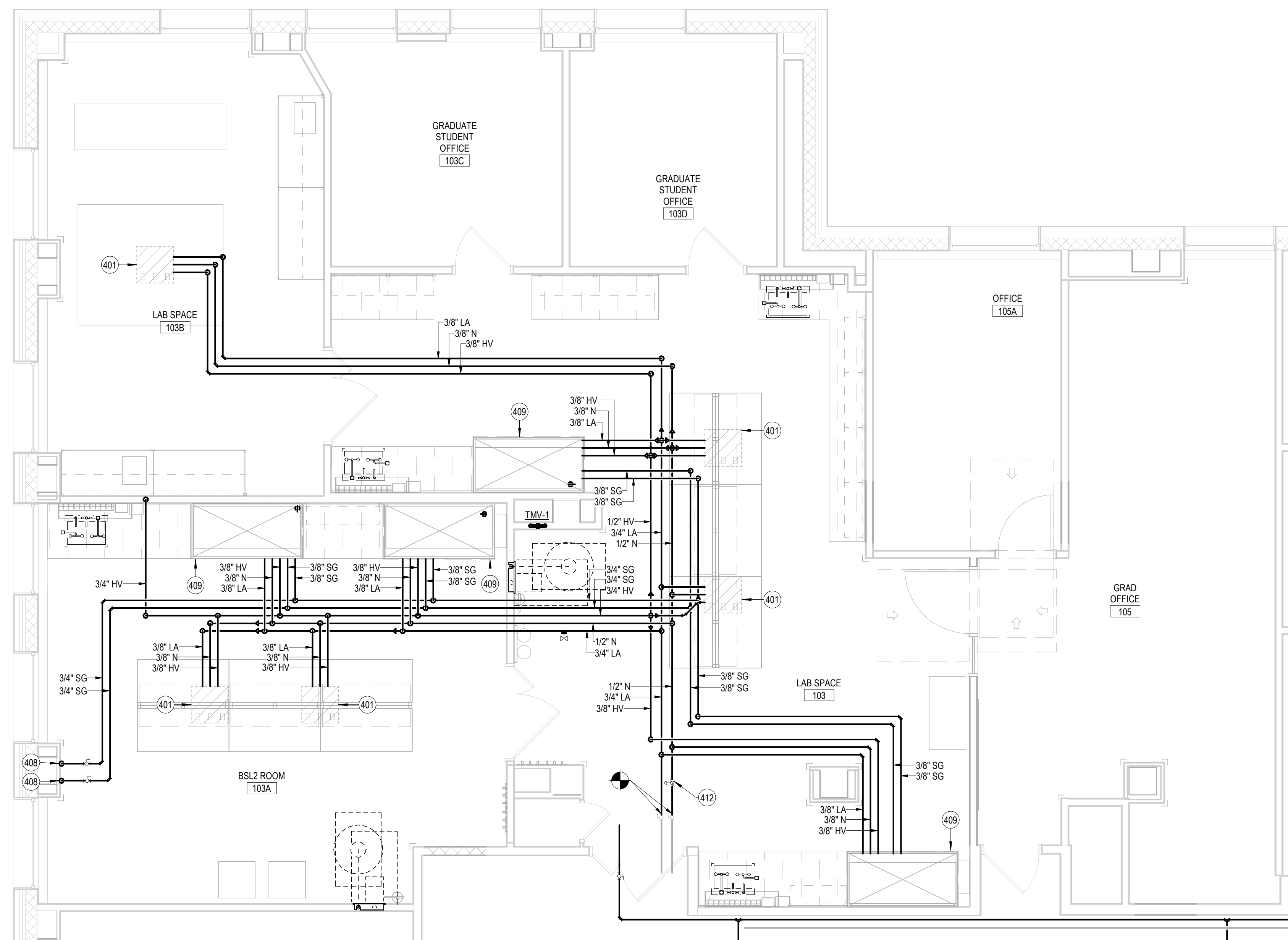
X00	PLAN NOTES
401	PROVIDE 3/8" NITROGEN, 3/8" LAB AIR, AND 3/8" LAB VACUUM TO CEILING SERVICE PANEL.
402	PROVIDE COLD WATER, NATURAL GAS, NITROGEN, LAB AIR, LAB VACUUM AND SPECIAL GAS TO FUME HOOD.
403	PROVIDE 1/2" RD WATER, 1/2" HOT/COLD WATER, 2" SANITARY AND 2" VENT. ROUTE VENT TO NEAREST VENT UP.
404	PROVIDE NEW THERMO MIXING VALVE UNDER SINK TO EMERGENCY EYE WASH. SET THERMO MIXING VALVE AT 72 DEGREE AND FLOW OF 3 GPM.
408	PROVIDE LAB GAS MANIFOLD MATHESON - 54 SERIES PROTOCOL STATION WITH 6510A SINGLE STAGE HIGH PURITY REGULATOR FOR SPECIAL GAS WITH WALL SUPPORTS ANCHORS FOR TANKS. ROUTE GAS PIPE TO EACH FUME HOOD CONNECTIONS ONE ON EACH SIDE.
409	PROVIDE NITROGEN, SPECIAL GAS, LAB AIR AND LAB VACUUM TO FUME HOODS
411	PROVIDE EMERGENCY SHUT-OFF BUTTON AND SOLENOID VALVE FOR NATURAL GAS. PROVIDE WIRE AND CONDUIT COMPLETE FROM POWER SOURCE TO BUTTON TO VALVE. COORDINATE POWER SOURCE VOLTAGE AND LOCATION WITH ELECTRICAL TRADES. MANUFACTURER BURNABY - MODEL MESO AUXILIARY SHUT-OFF AND ASCO GAS SHUT-OFF VALVE (ALUMINUM BODY, 2-WAY NORMALLY CLOSED). MOUNT BUTTON AT 4'-0" AFF AND PROVIDE WALL MOUNTED SIGNAGE "NATURAL GAS SHUTOFF".
412	PROVIDE ALICAT MAS FLOW METER MCS SERIES FOR NITROGEN GAS PIPING.
413	PROVIDE SPECIAL WASTE PIPING AND VENT TO TWO CUP SINKS. ROUTE PIPING BEHIND HOOD AND CONNECT TO WASTE PIPE FROM SINK.
416	PROVIDE 1" BACKFLOW PREVENTER FOR NPW PIPING SERVICE TO FUME HOODS. CONNECT COMPLETE TO EACH HOOD'S WATER CONNECTION (TWO CUP SINK FIXTURES). SEE BACKFLOW PREVENTION DETAIL FOR ADDITIONAL REQUIREMENTS.



1 PLUMBING PLAN - 103/105 AREA
1/4" = 1'-0"



2 PLUMBING PLAN - LEVEL OG
1/4" = 1'-0"



3 LAB GAS PLAN - 103/105 AREA
1/4" = 1'-0"

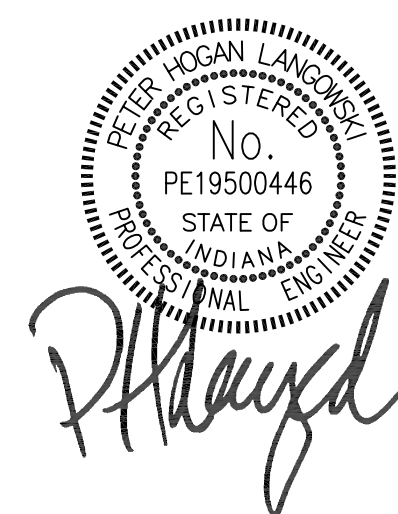
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BL072 CHEMISTRY -
PLUMBING PLAN - CH
103/105 AREA

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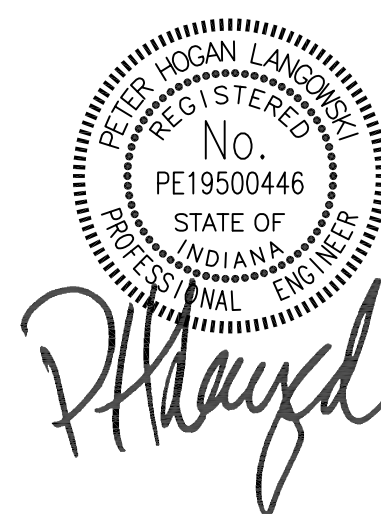
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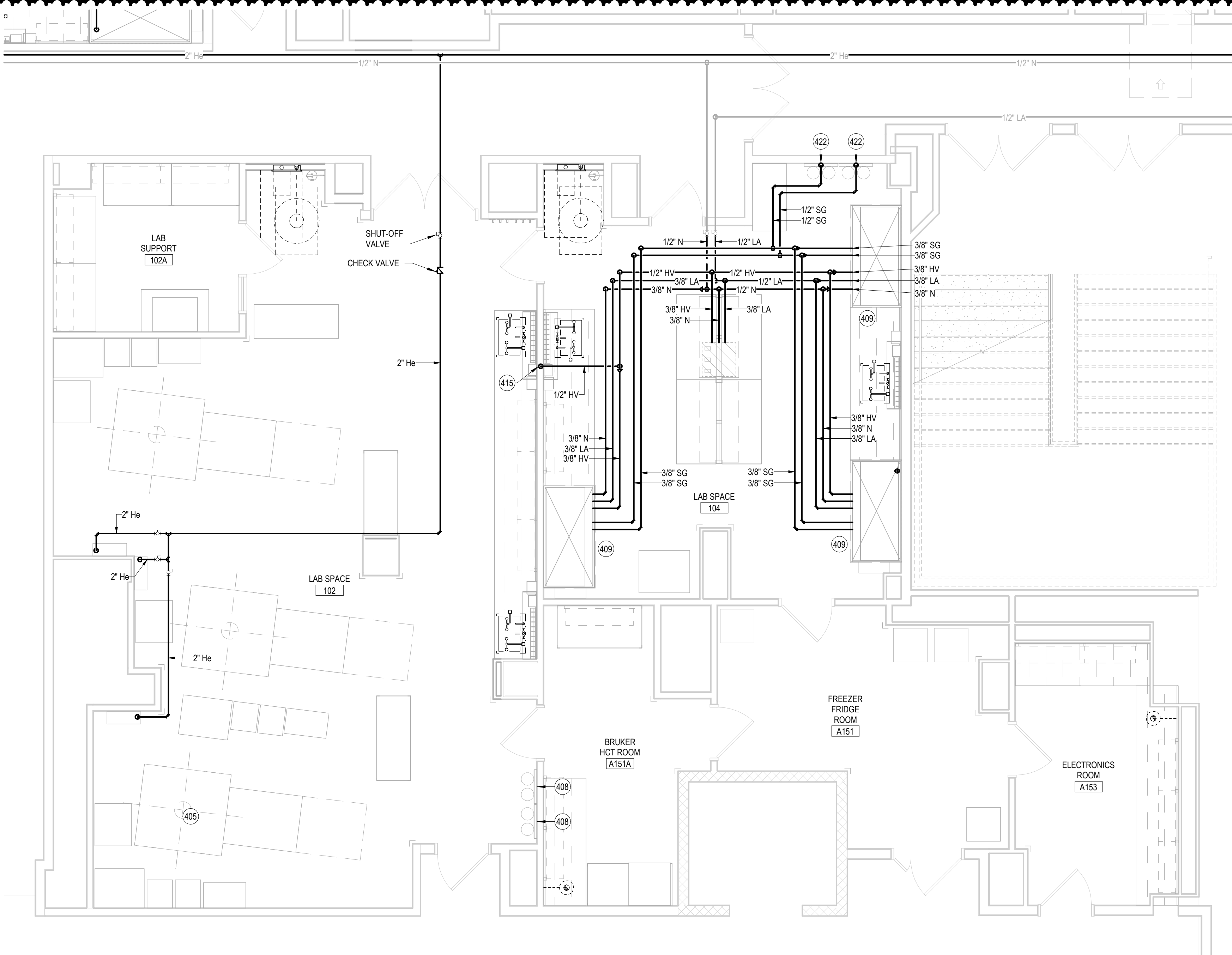
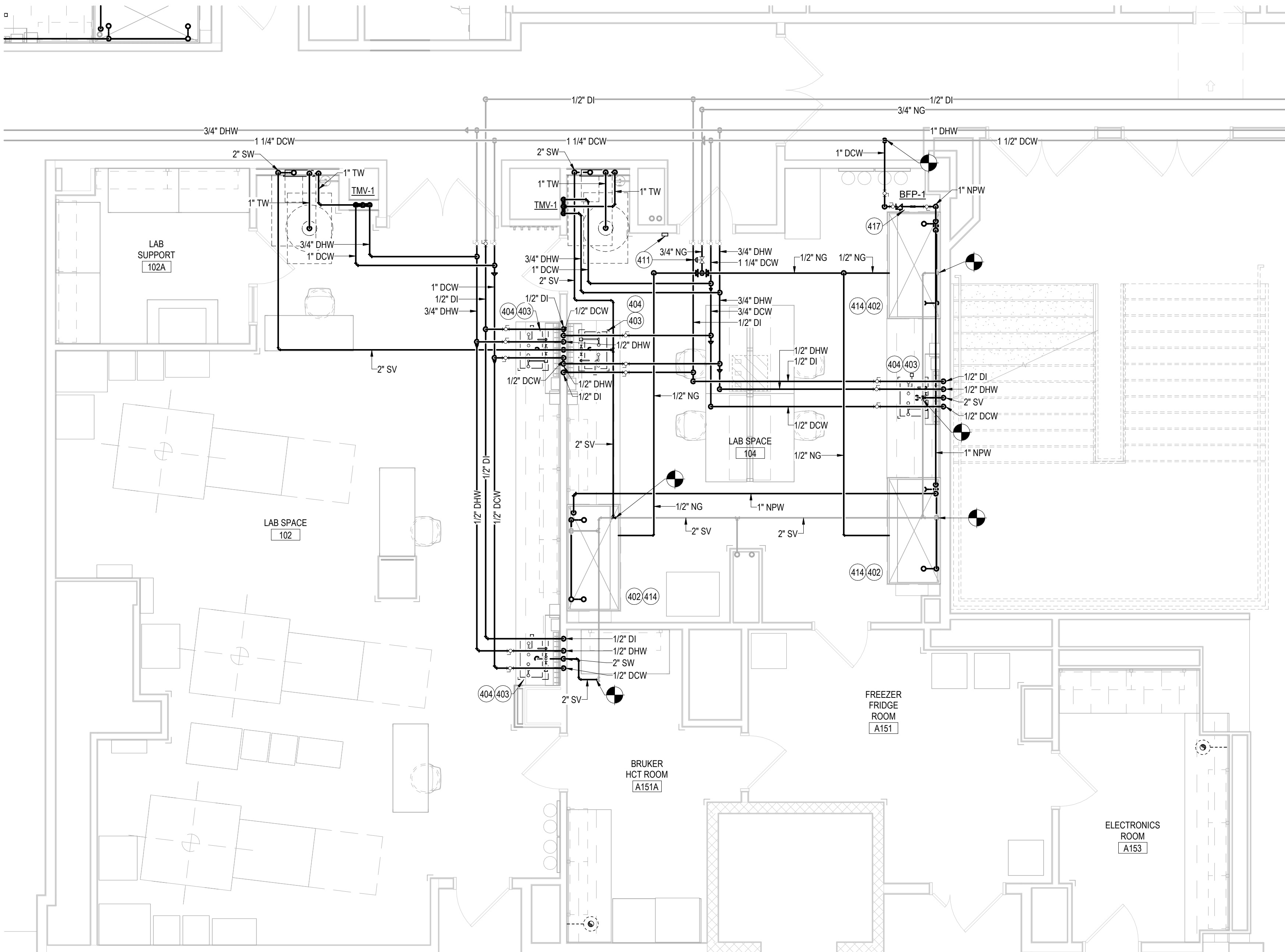
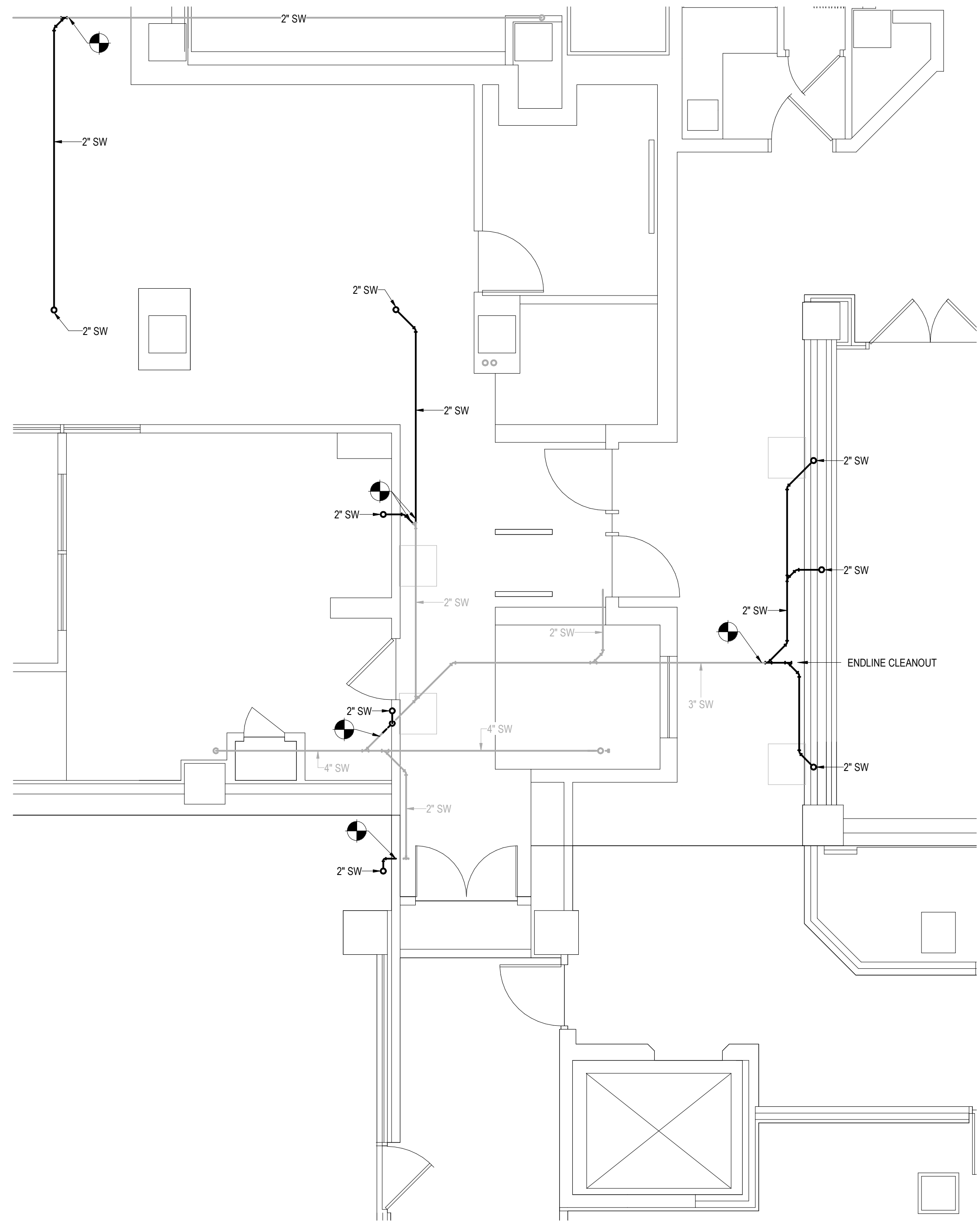
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PLUMBING PLAN - CH
102/104 AREADATE JAN 1, 2017
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X00	PLAN NOTES
402	PROVIDE COLD WATER, NATURAL GAS, NITROGEN, LAB AIR, LAB VACUUM AND SPECIAL GAS TO FUME HOOD.
403	PROVIDE 1/2" RO WATER, 1/2" HOT/COLD WATER, 2" SANITARY AND 2" VENT. ROUTE VENT TO NEAREST VENT UP.
404	PROVIDE NEW THERMO MIXING VALVE UNDER SINK TO EMERGENCY EYE WASH. SET THERMO MIXING VALVE AT 72 DEGREE AND FLOW OF 3 GPM.
405	PROVIDE 3/8" NITROGEN, 3/8" LAB AIR, AND 3/8" LAB VACUUM TO CEILING SERVICE PANEL.
406	PROVIDE LAB GAS MANIFOLD MATHESON - 54 SERIES PROTOCOL STATION WITH 6510A SINGLE STAGE HIGH PURITY REGULATOR FOR SPECIAL GASES WITH WALL SUPPORTS. ANCHORS FOR TANKS. ROUTE GAS PIPE TO EACH FUME HOOD CONNECTIONS ONE ON EACH SIDE.
408	PROVIDE NITROGEN, SPECIAL GAS, LAB AIR AND LAB VACUUM TO FUME HOODS.
411	PROVIDE EMERGENCY SHUT-OFF BUTTON AND SOLENOID VALVE FOR NATURAL GAS. PROVIDE WIRE AND CONDUIT COMPLETE FROM POWER SOURCE TO BUTTON TO VALVE. COORDINATE POWER SOURCE VOLTAGE AND LOCATION WITH ELECTRICAL TRADES. MANUFACTURER BURNABY - MODEL MESO AUXILIARY SHUT-OFF AND ASCO GAS SHUTOFF VALVE (ALUMINUM BODY, 2-WAY NORMALLY CLOSED). MOUNT BUTTON AT 4'-0" AFF AND PROVIDE WALL MOUNTED SIGNAGE: "NATURAL GAS SHUTOFF".
414	PROVIDE SPECIAL WASTE AND VENT TO CUP SINK IN FUME HOOD. CONNECT VENT TO EXISTING 2" VENT AT ELEVATION NO LOWER THAN 6" ABOVE FLOODED RIM OF CUP SINK.
415	VACUUBRAND OIL FREE PUMP AND DISTRIBUTION TUBING PROVIDED BY LAB FURNISHINGS TRADES. ALL VACUUM PIPING TO CEILING SERVICE PANELS AND OTHER VACUUM TURRETS PROVIDED BY LAB FURNISHINGS TRADES.
417	PROVIDE 1" BACKFLOW PREVENTER FOR NPW PIPING SERVICE TO FUME HOODS. CONNECT COMPLETE TO EACH HOOD'S WATER CONNECTION (TWO CUP SINK FIXTURES). SEE BACKFLOW PREVENTION DETAIL FOR ADDITIONAL REQUIREMENTS.
422	PROVIDE A SINGLE STAINLESS SG TUBE RUNNING DOWN THE WALL AT THE TANKS, THE TUBE WOULD END AT 5'-6" AFF WITH A BALL VALVE AT 6'-0" AFF AND A 0-100 PSIG PRESSURE GAUGE AT 6'-6" AFF. CYLINDERS AND PRESSURE REGULATORS AND HOISING ARE THEN OPRD.

2 LAB GAS PLAN - 102/104 AREA
1/4" = 1'-0"1 PLUMBING PLAN - 102/104 AREA
1/4" = 1'-0"3 PLUMBING PLAN - LEVEL OG-AREA 102/104
1/4" = 1'-0"

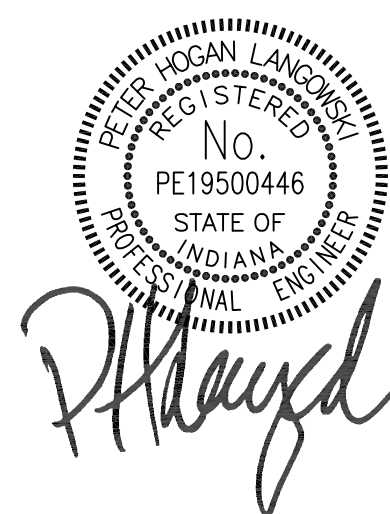
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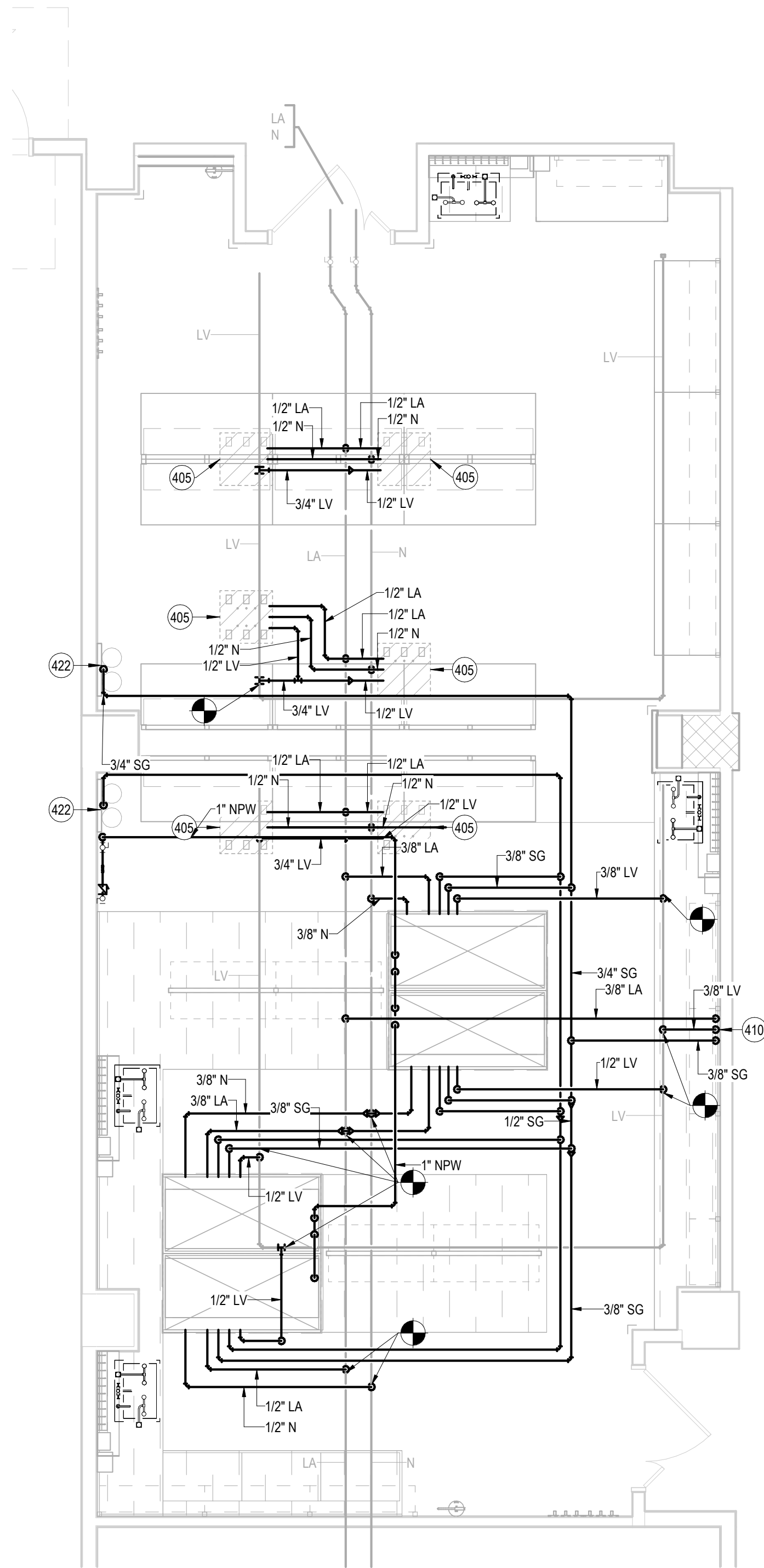
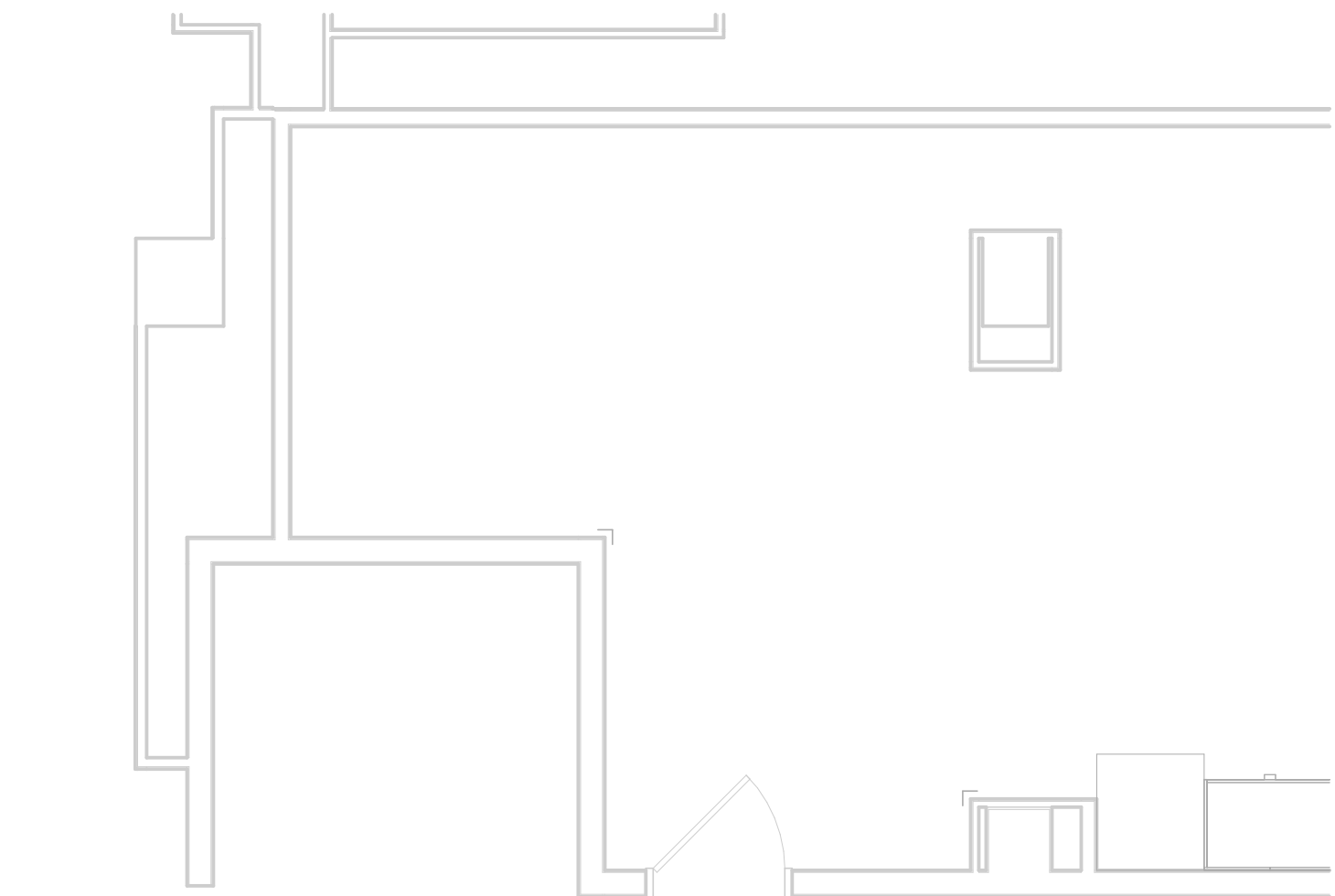


BL072 CHEMISTRY -
PLUMBING PLAN - CH
A251/A252 AREA

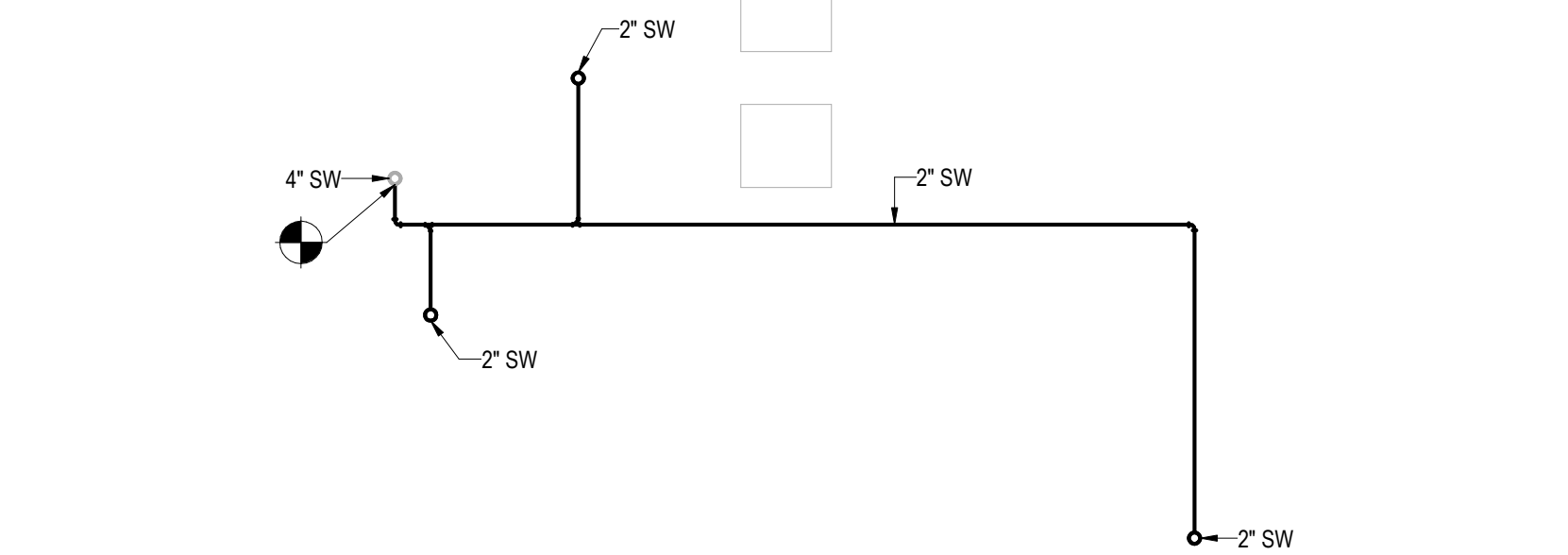
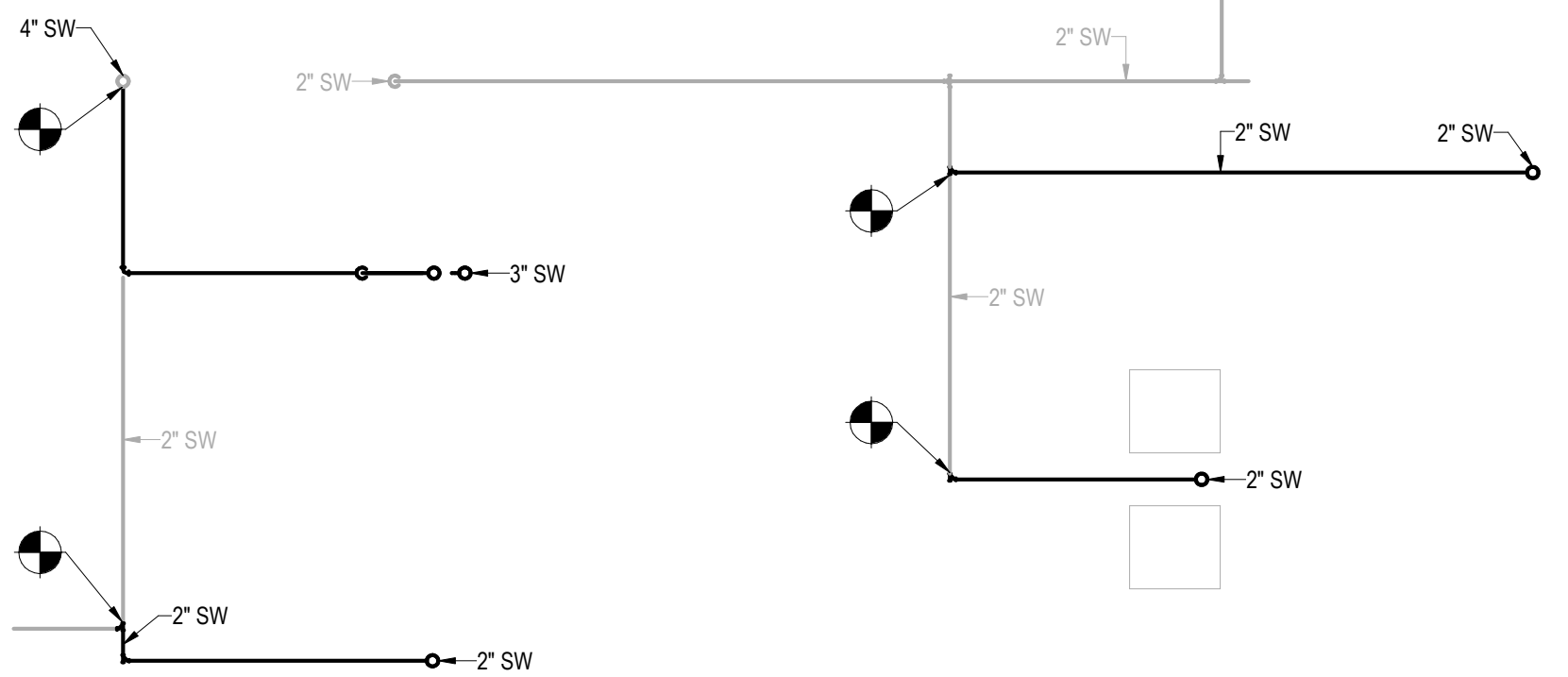
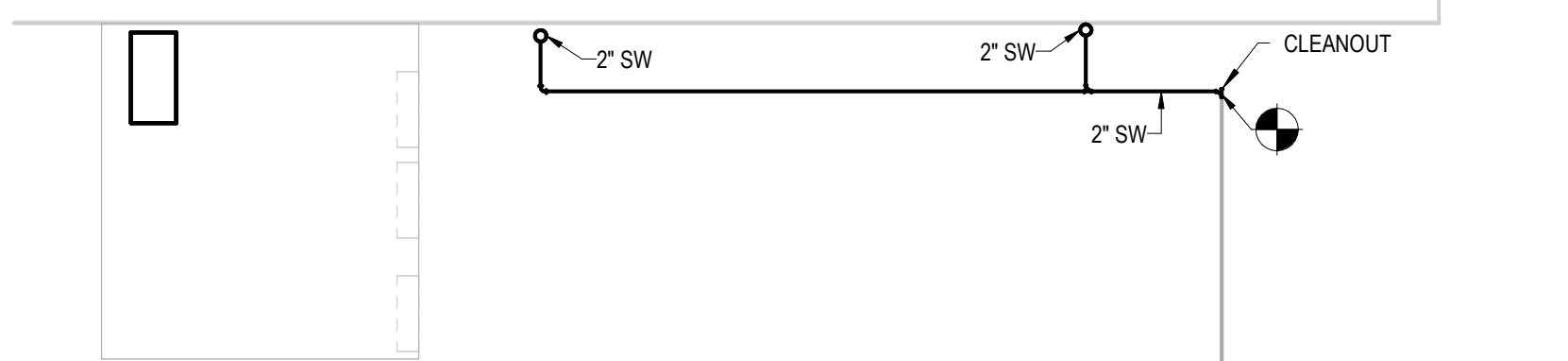
DATE 27 JAN 2025 JAN 5, 2017
BSALS PROJECT NO. 00360477

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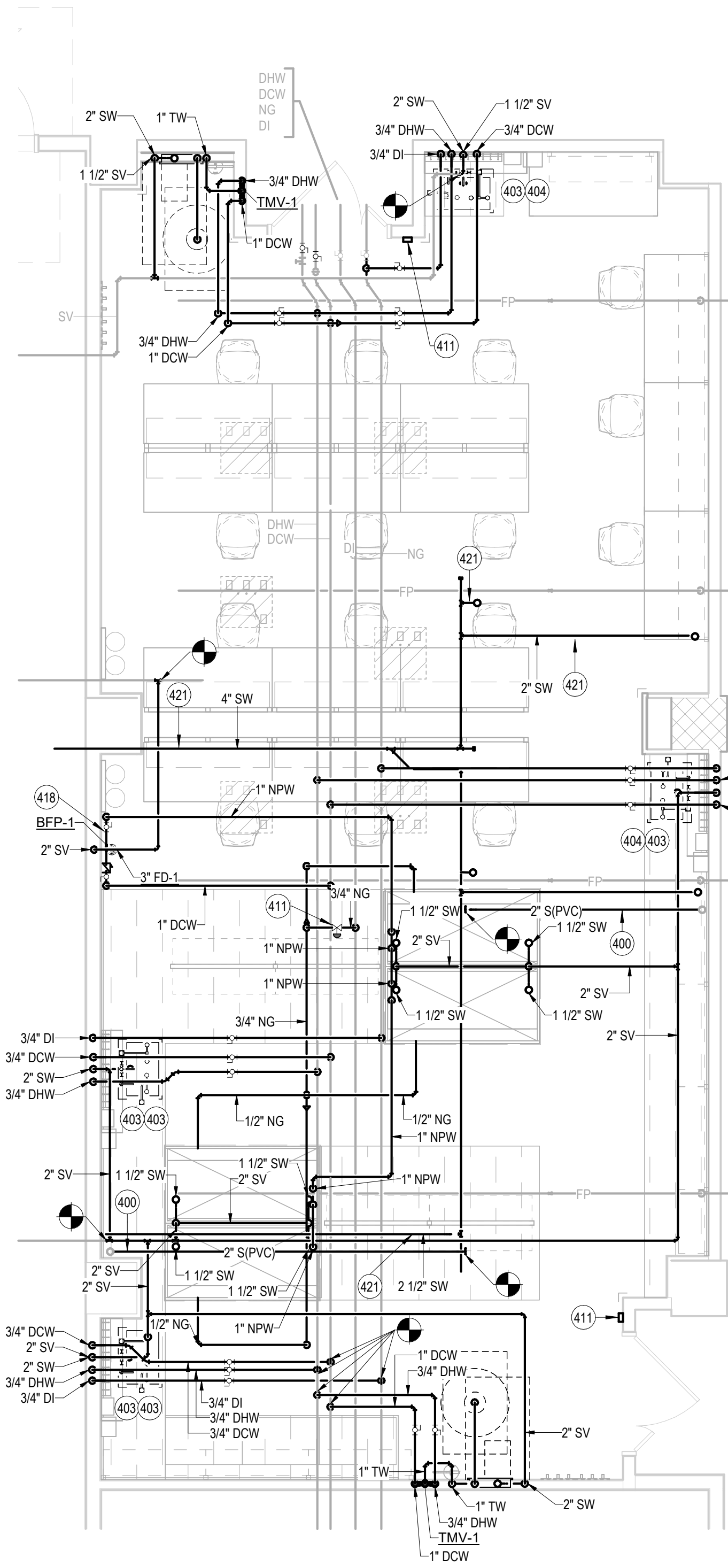
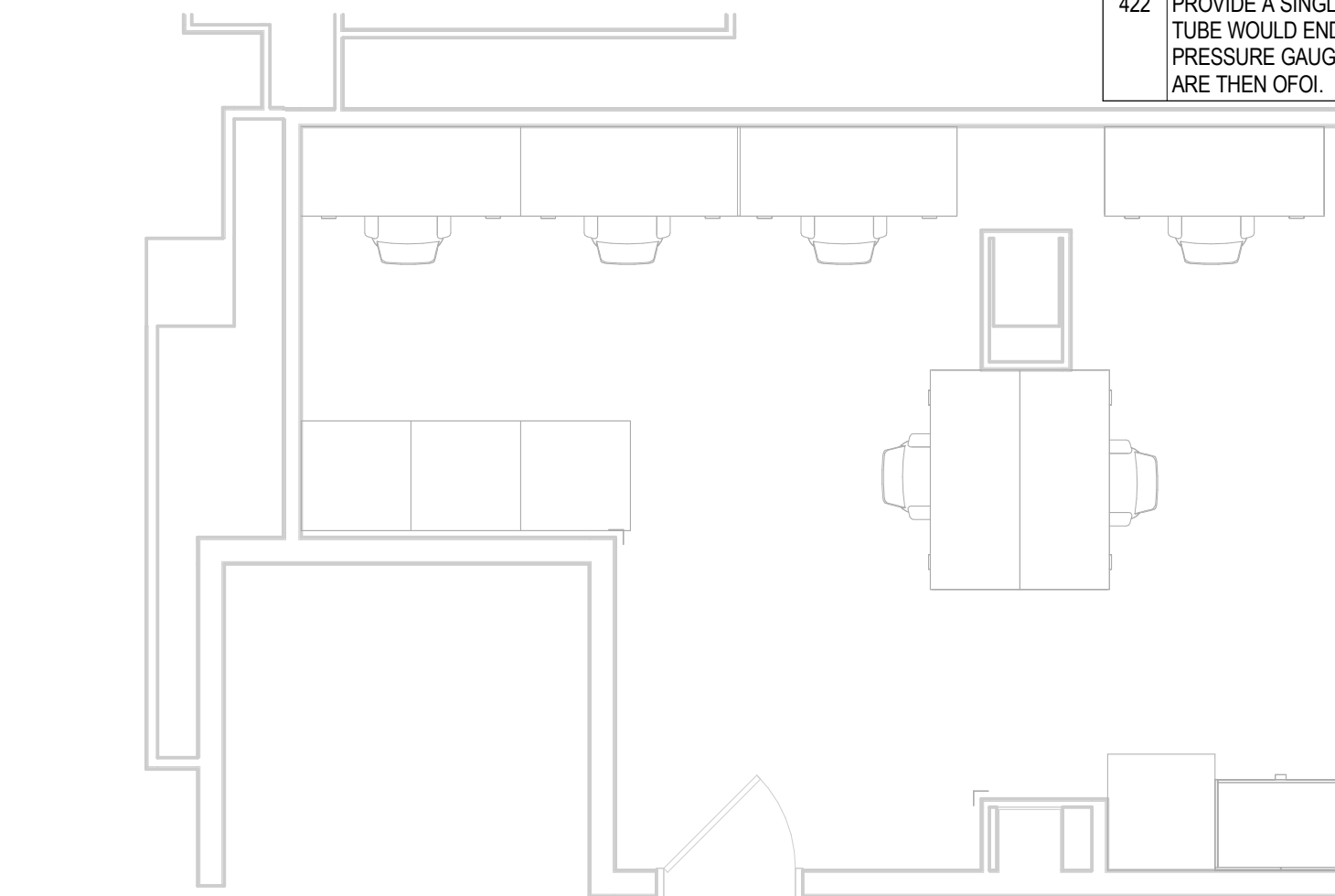
X00	PLAN NOTES
400	REROUTE NEW WASTE PIPING TO AVOID MECHANICAL DUCT WORK AND HYDRONIC PIPING.
403	PROVIDE 1/2" RO WATER, 1/2" HOT/COLD WATER, 2" SANITARY AND 2" VENT. ROUTE VENT TO NEAREST VENT UP.
404	PROVIDE NEW THERMO MIXING VALVE UNDER SINK TO EMERGENCY EYE WASH. SET THERMO MIXING VALVE AT 72 DEGREE AND FLOW OF 3 GPM.
405	PROVIDE 3/8" NITROGEN, 3/8" LAB AIR, AND 3/8" LAB VACUUM TO CEILING SERVICE PANEL.
410	PROVIDE NITROGEN, LAB AIR, AND LAB VACUUM WITH BALL VALVE AND QUICK CONNECT 6'-6" ABOVE COUNTER TOP.
411	PROVIDE EMERGENCY SHUT-OFF BUTTON AND SOLENOID VALVE FOR NATURAL GAS. PROVIDE WIRE AND CONDUIT COMPLETE FROM POWER SOURCE TO BUTTON TO VALVE. COORDINATE POWER SOURCE VOLTAGE AND LOCATION WITH ELECTRICAL TRADES. MANUFACTURER BURNABY - MODEL MESSO AUXILIARY SHUT-OFF AND ASCO GAS SHUT-OFF VALVE (ALUMINUM BODY, 2-WAY NORMALLY CLOSED). MOUNT BUTTON AT 4'-0" AFF AND PROVIDE WALL MOUNTED SIGNAGE: "NATURAL GAS SHUT-OFF".
418	PROVIDE 1" BACKFLOW PREVENTER FOR NPW PIPING SERVICE TO FUME HOODS. CONNECT COMPLETE TO EACH HOOD'S WATER CONNECTION (TWO CUP SINK FIXTURES). SEE BACKFLOW PREVENTION DETAIL FOR ADDITIONAL REQUIREMENTS.
421	PROVIDE SPECIAL WASTE PIPING, FITTINGS, AND HANGERS FROM PENETRATION OF THIRD FLOOR SLAB ABOVE TO THE CONNECTION TO THE STACK. COORDINATE ROUTING WITH ALL NEW INSTALLATIONS (DUCTWORK, PIPING, CONDUIT, ETC.) AND ANY EXISTING INSTALLATIONS TO REMAIN.
422	PROVIDE A SINGLE STAINLESS SS TUBE RUNNING DOWN THE WALL AT THE TANKS. THE TUBE WOULD END AT 5'-6" AFF WITH A BALL VALVE AT 6'-0" AFF AND A 0-100 PSIG PRESSURE GAUGE AT 6'-6" AFF. CYLINDERS AND PRESSURE REGULATORS AND HOSES ARE THEN OTOI.



1 LAB GAS PLAN - A251/A252 AREA
1/4" = 1'-0"

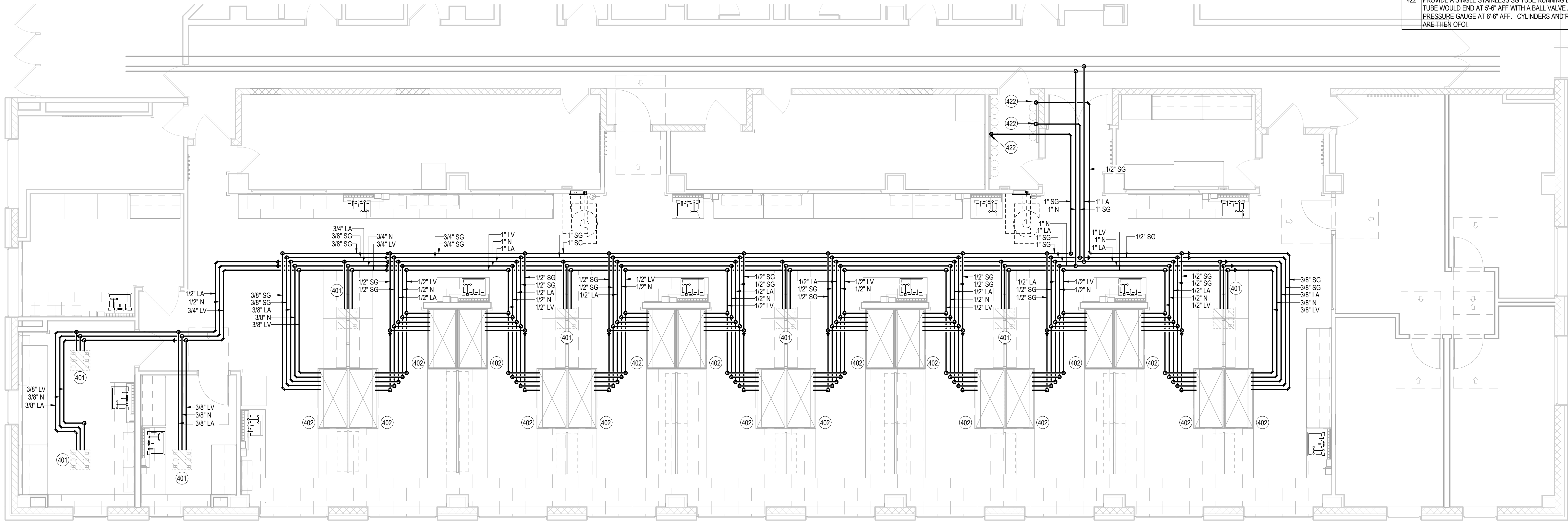


2 FIRST FLOOR SANITARY - CH A251/A252 AREA
1/4" = 1'-0"

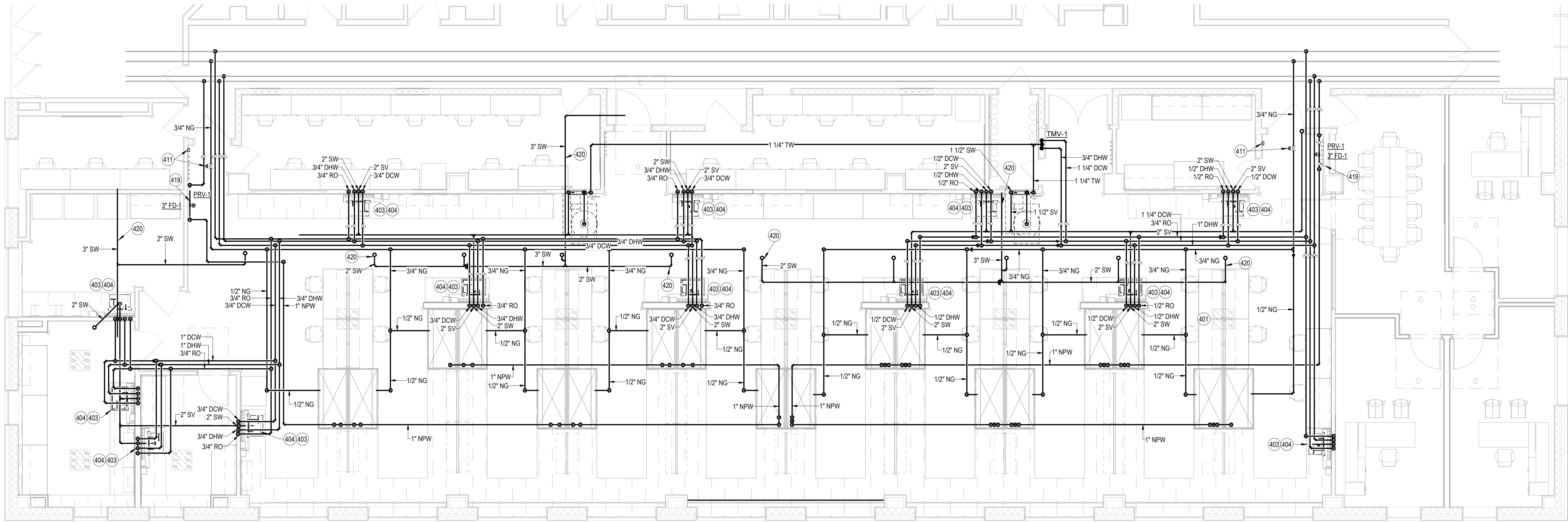


3 PLUMBING PLAN - A251 / A252 AREA
1/4" = 1'-0"

X00	PLAN NOTES
401	PROVIDE 3/8" NITROGEN, 3/8" LAB AIR, AND 3/8" LAB VACUUM TO CEILING SERVICE PANEL.
402	PROVIDE COLD WATER, NATURAL GAS, NITROGEN, LAB AIR, LAB VACUUM AND SPECIAL GAS TO FUME HOOD.
403	PROVIDE 1/2" RO WATER, 1/2" HOT/COLD WATER, 2" SANITARY AND 2" VENT. ROUTE VENT TO NEAREST VENT UP.
404	PROVIDE NEW THERMO MIXING VALVE UNDER SINK TO EMERGENCY EYE WASH. SET THERMO MIXING VALVE AT 72 DEGREE AND FLOW OF 3 GPM.
411	PROVIDE EMERGENCY SHUT-OFF BUTTON AND SOLENOID VALVE FOR NATURAL GAS. PROVIDE WIRE AND CONDUIT COMPLETE FROM POWER SOURCE TO BUTTON TO VALVE. COORDINATE POWER SOURCE VOLTAGE AND LOCATION WITH ELECTRICAL TRADES. MANUFACTURER BURNABY - MODEL MESO AUXILIARY SHUT-OFF AND ASCO GAS SHUT-OFF VALVE (ALUMINUM BODY, 2-WAY NORMALLY CLOSED). MOUNT BUTTON AT 4'-0" AFF AND PROVIDE WALL MOUNTED SIGNAGE: "NATURAL GAS SHUTOFF".
419	PROVIDE 1" BACKFLOW PREVENTER FOR NPW PIPING SERVICE TO FUME HOODS. CONNECT COMPLETE TO EACH HOOD'S WATER CONNECTION (TWO CUP SINK FIXTURES). SEE BACKFLOW PREVENTION DETAIL FOR ADDITIONAL REQUIREMENTS.
420	PROVIDE SPECIAL WASTE PIPING, FITTINGS, AND HANGERS FROM PENETRATION OF SECOND FLOOR SLAB ABOVE TO THE CONNECTION TO THE STACK. COORDINATE ROUTING WITH ALL NEW INSTALLATIONS (DUCTWORK, PIPING, CONDUIT, ETC.) AND ANY EXISTING INSTALLATIONS TO REMAIN.
422	PROVIDE A SINGLE STAINLESS SG TUBE RUNNING DOWN THE WALL AT THE TANKS. THE TUBE WOULD END AT 5'-6" AFF WITH A BALL VALVE AT 6'-0" AFF AND A 0-100 PSIG PRESSURE GAUGE AT 6'-6" AFF. CYLINDERS AND PRESSURE REGULATORS AND HOISING ARE THEN OFF.



1 LAB GAS PLAN - A140 AREA
3/16" = 1'-0"



2 PLUMBING PLAN - A140 AREA
3/16" = 1'-0"

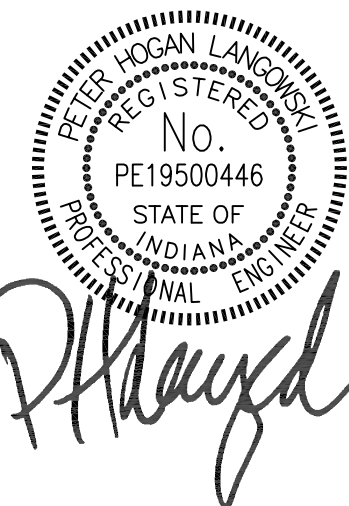
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	27 JAN 2025	ADDENDUM TWO
1	17 JAN 2025	ADDENDUM ONE



BL072 CHEMISTRY -
PLUMBING PLANS -
CH A140 AREA

DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

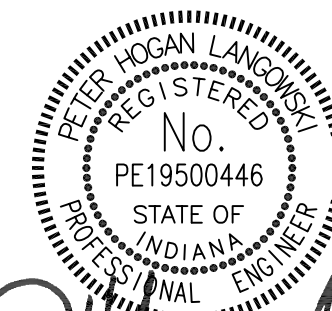
P213

IUB
RESEARCH
LAB
RENOVATIONSBL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

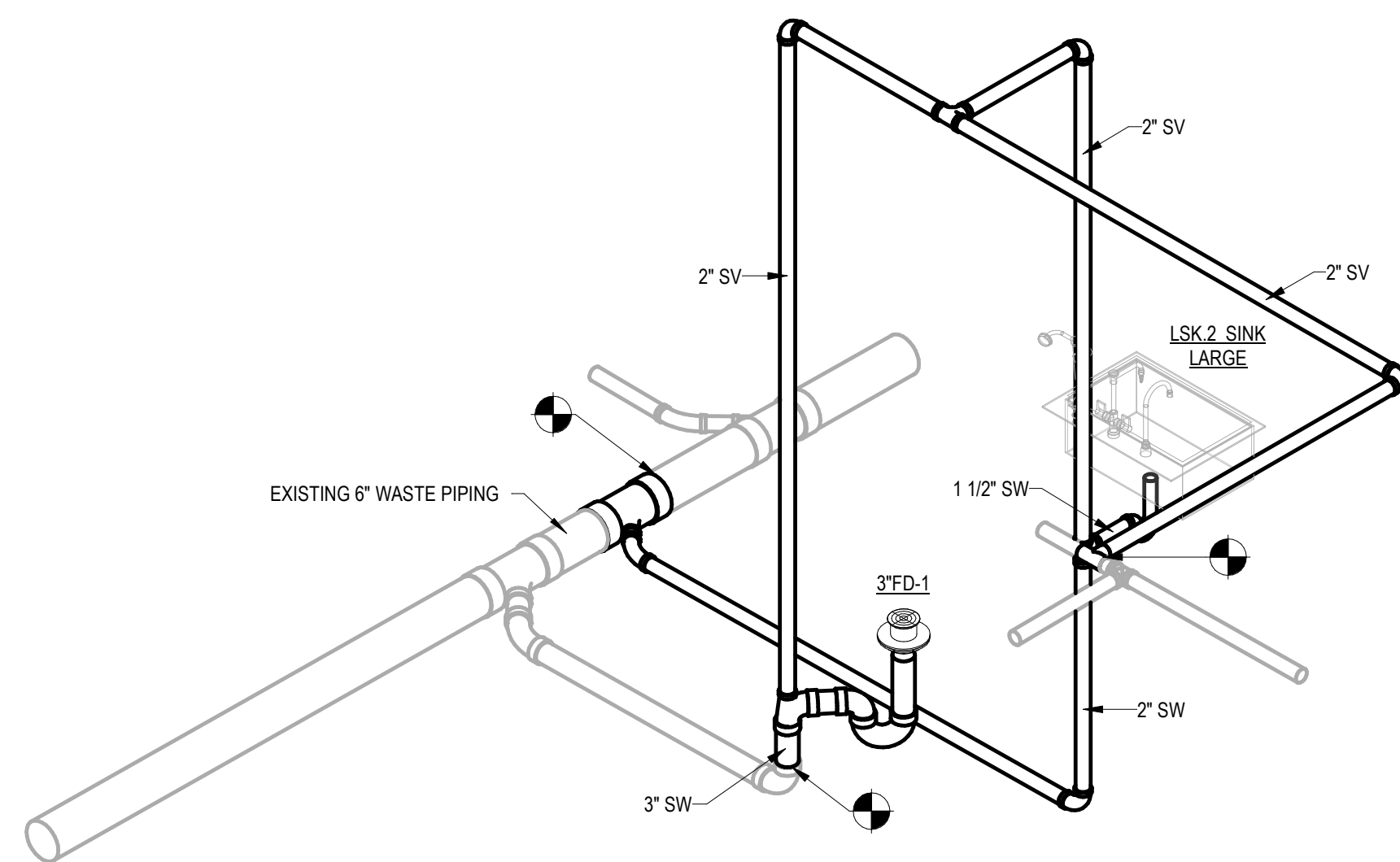
BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	27 JAN 2025	ADDENDUM TWO
1	17 JAN 2025	ADDENDUM ONE

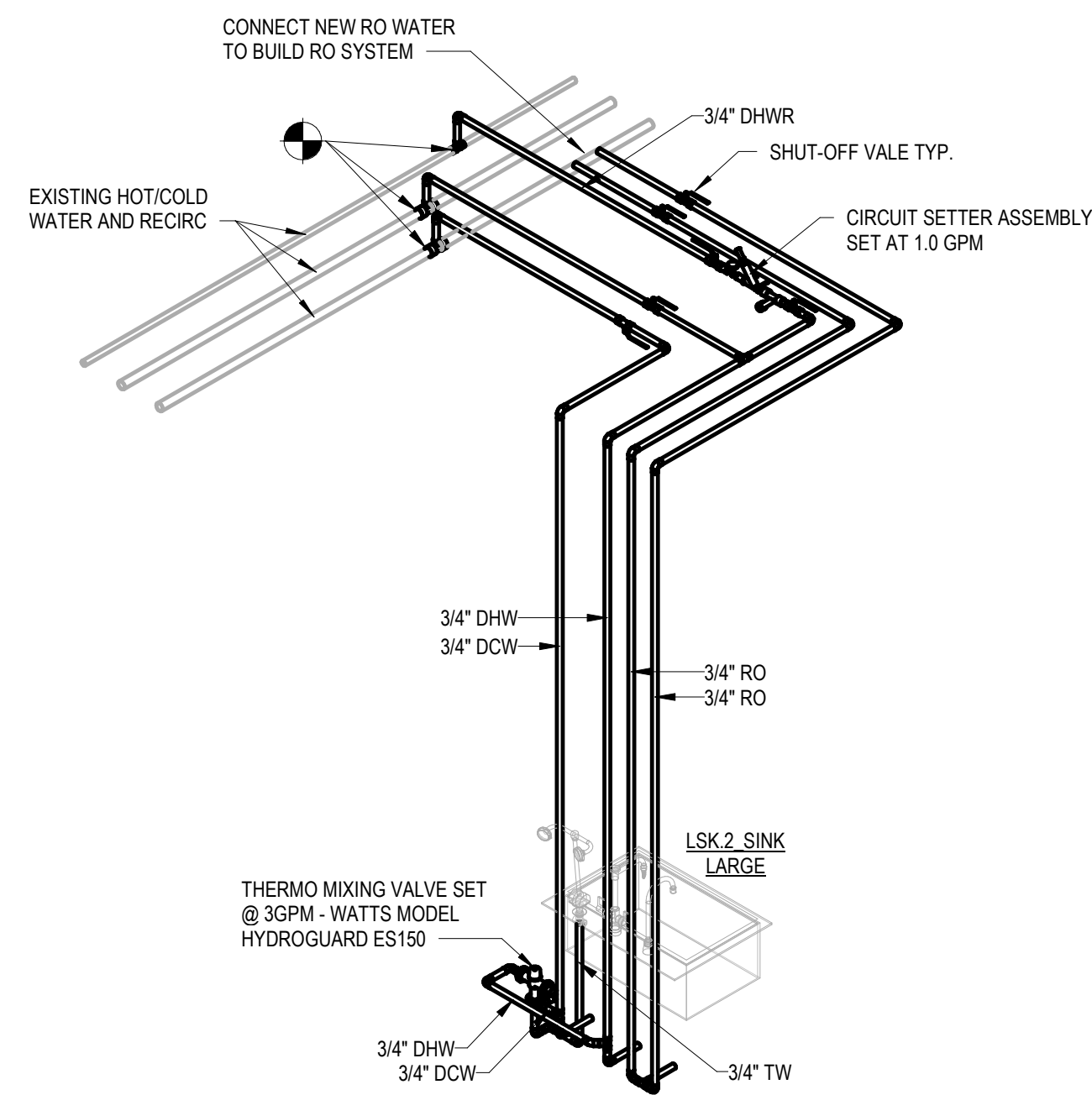
*P. Hays*BL027 SWAIN - PLUMBING
RISER DIAGRAMSDATE: NOV 27, 2024
BSALS PROJECT NO. 00360477

P400

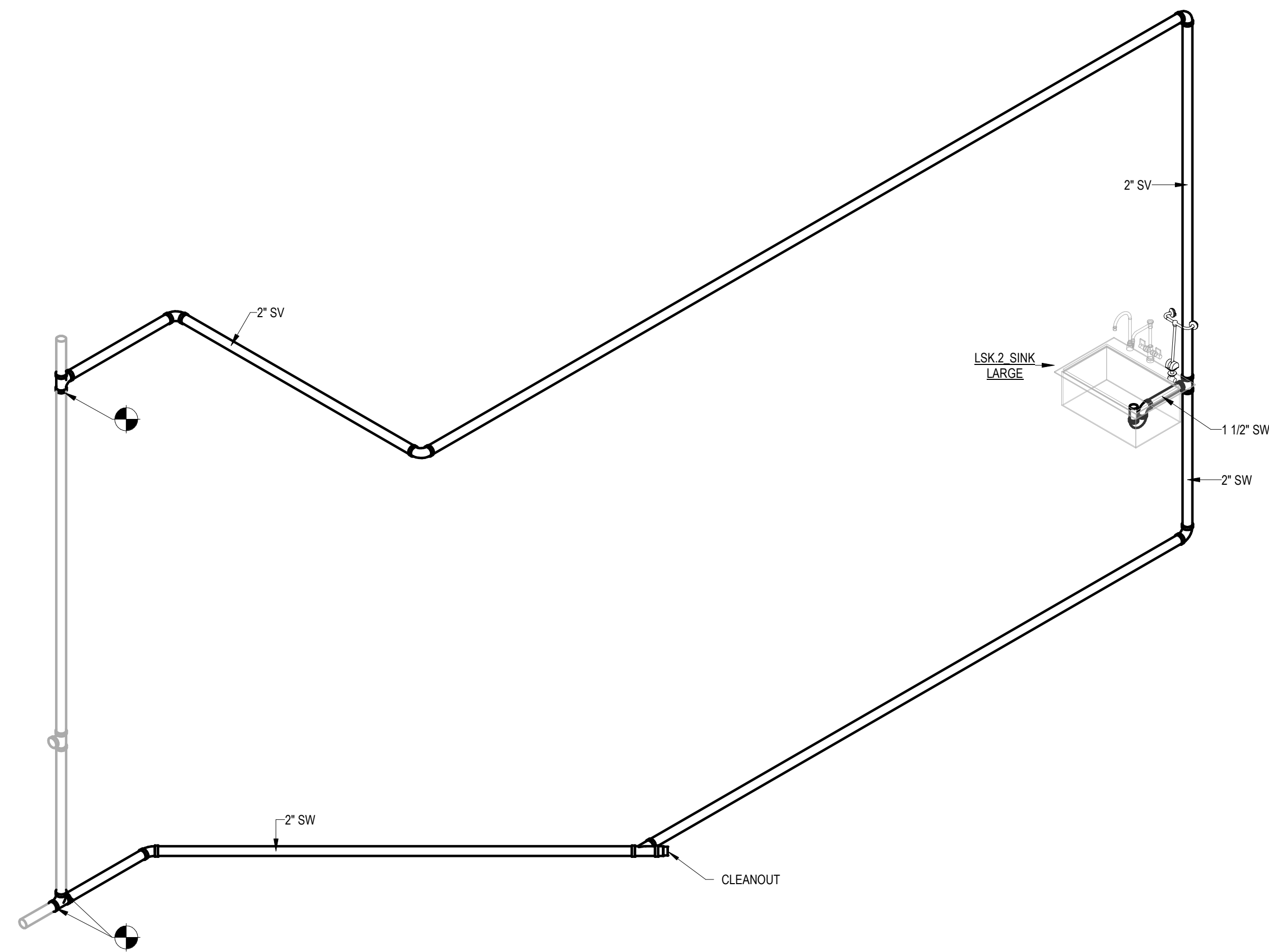
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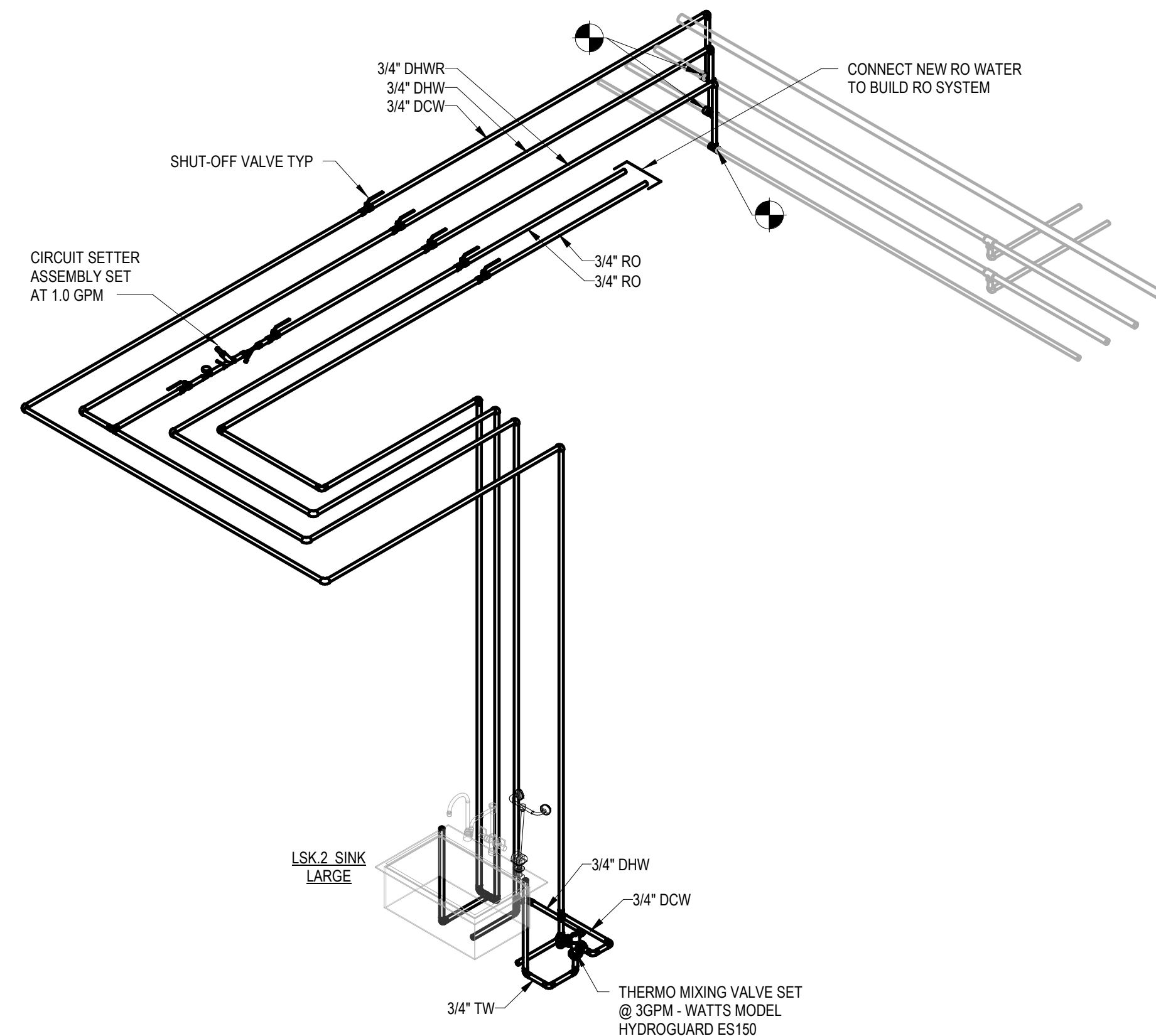
1 PW RISER DIAGRAM - S19-S21



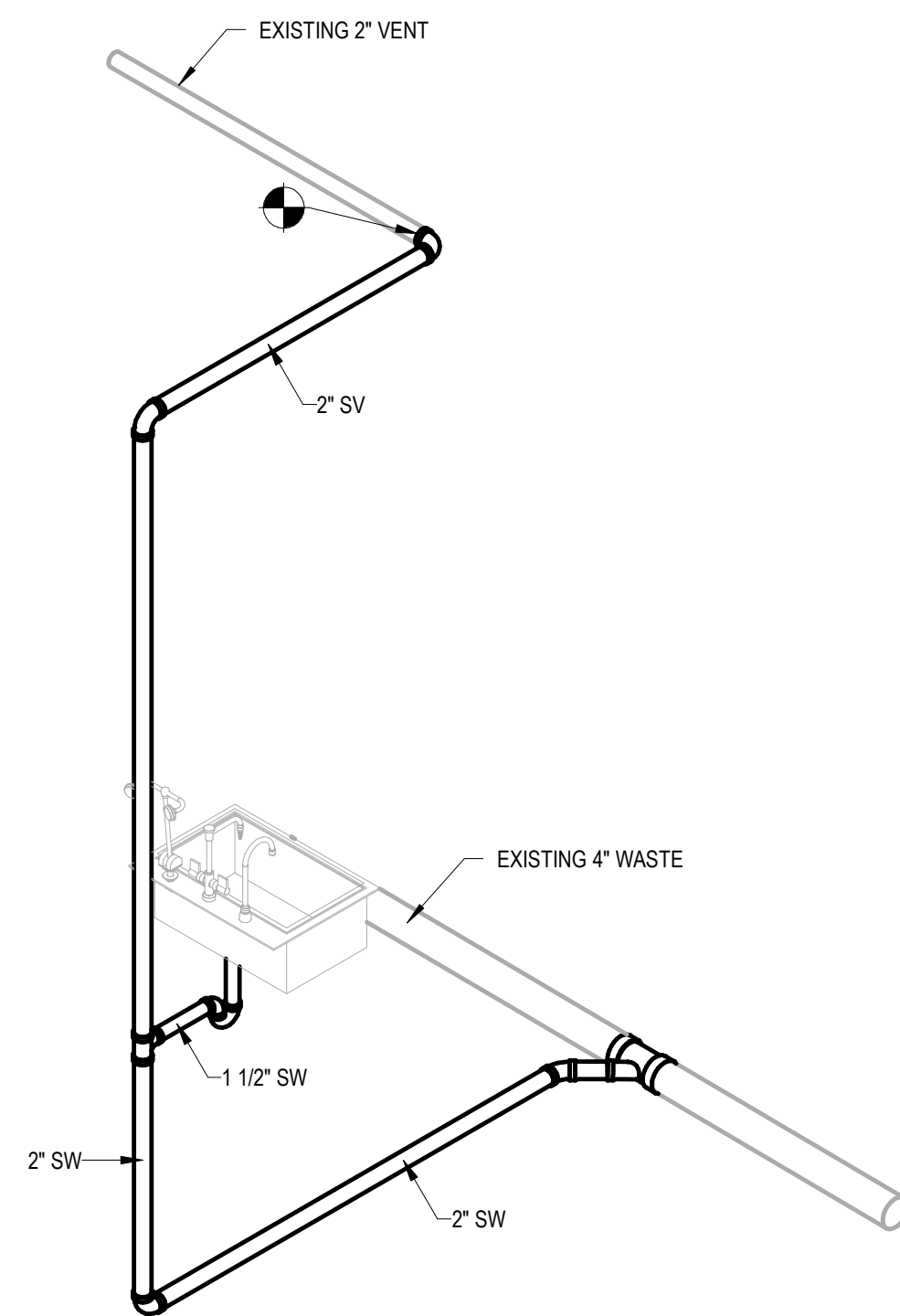
2 LAB WATER RISER DIAGRAM - S19-S21



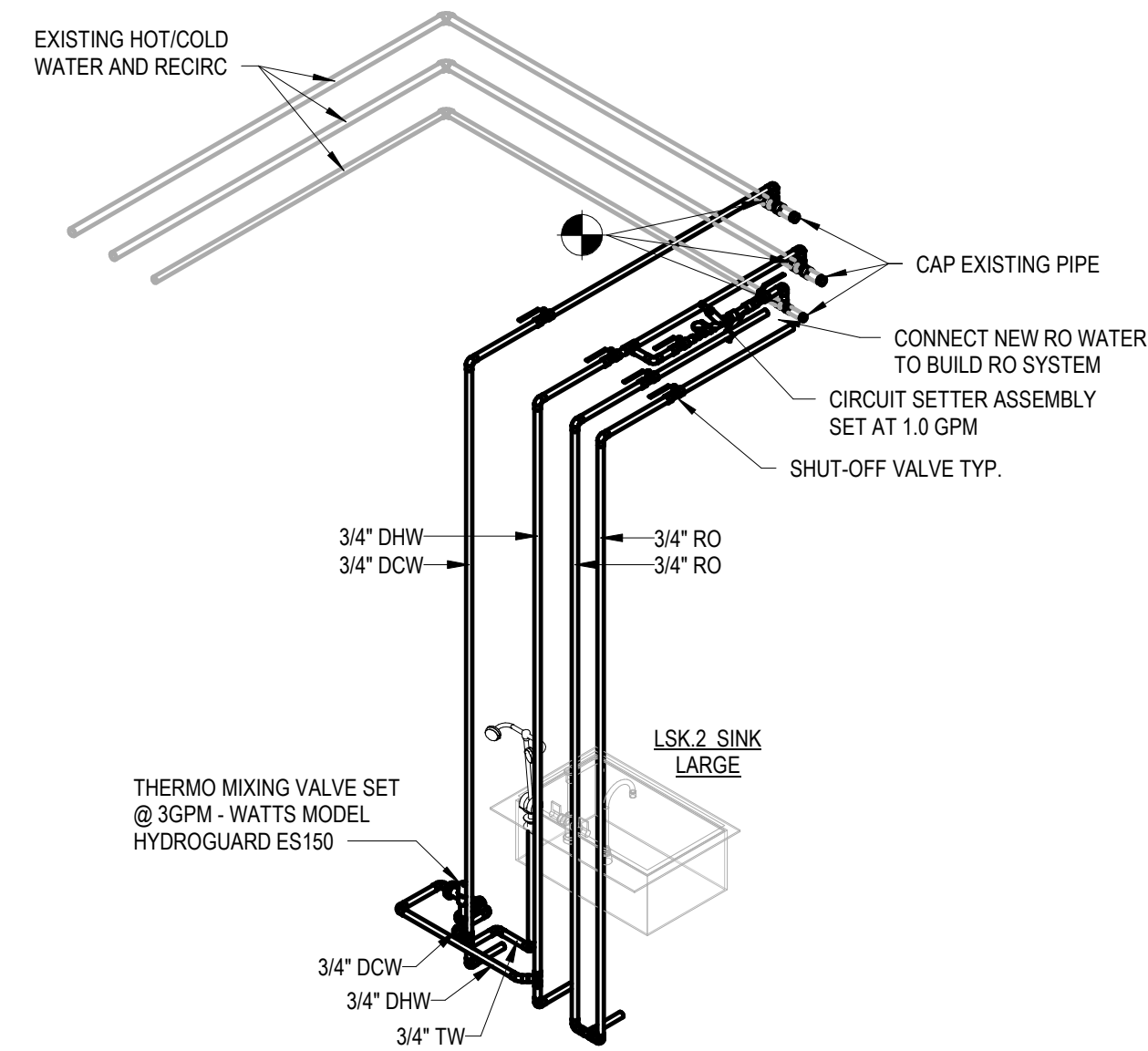
3 PW RISER DIAGRAM - SW 011



4 LAB WATER RISER DIAGRAM - SW 011



5 PW RISER DIAGRAM - SW 014



6 LAB WATER RISER DIAGRAM - SW 014

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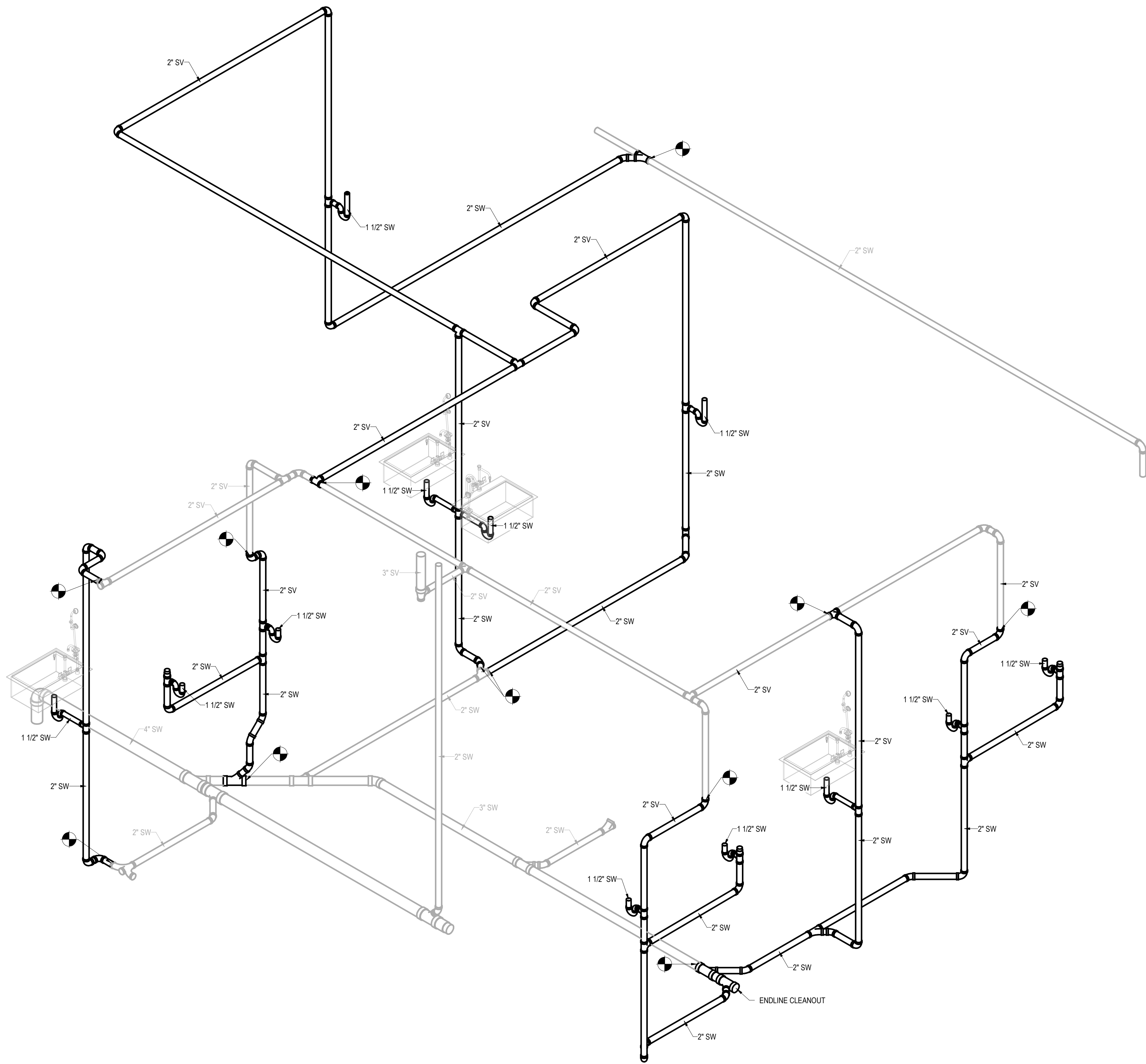


BL072 CHEMISTRY -
PLUMBING RISER DIAGRAM

DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

P401

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3 WASTE RISER DIAGRAM - AREA 102/104

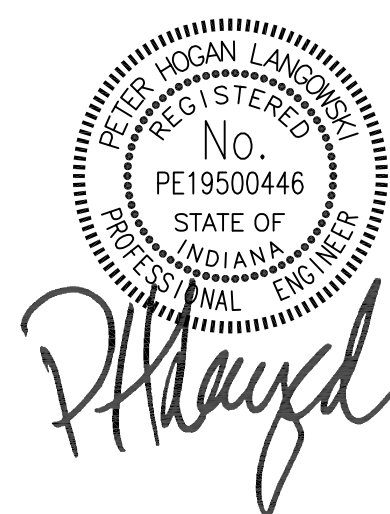
IUB
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RENOVATIONS

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
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CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	27 JAN 2025	ADDENDUM TWO
1	17 JAN 2025	ADDENDUM ONE

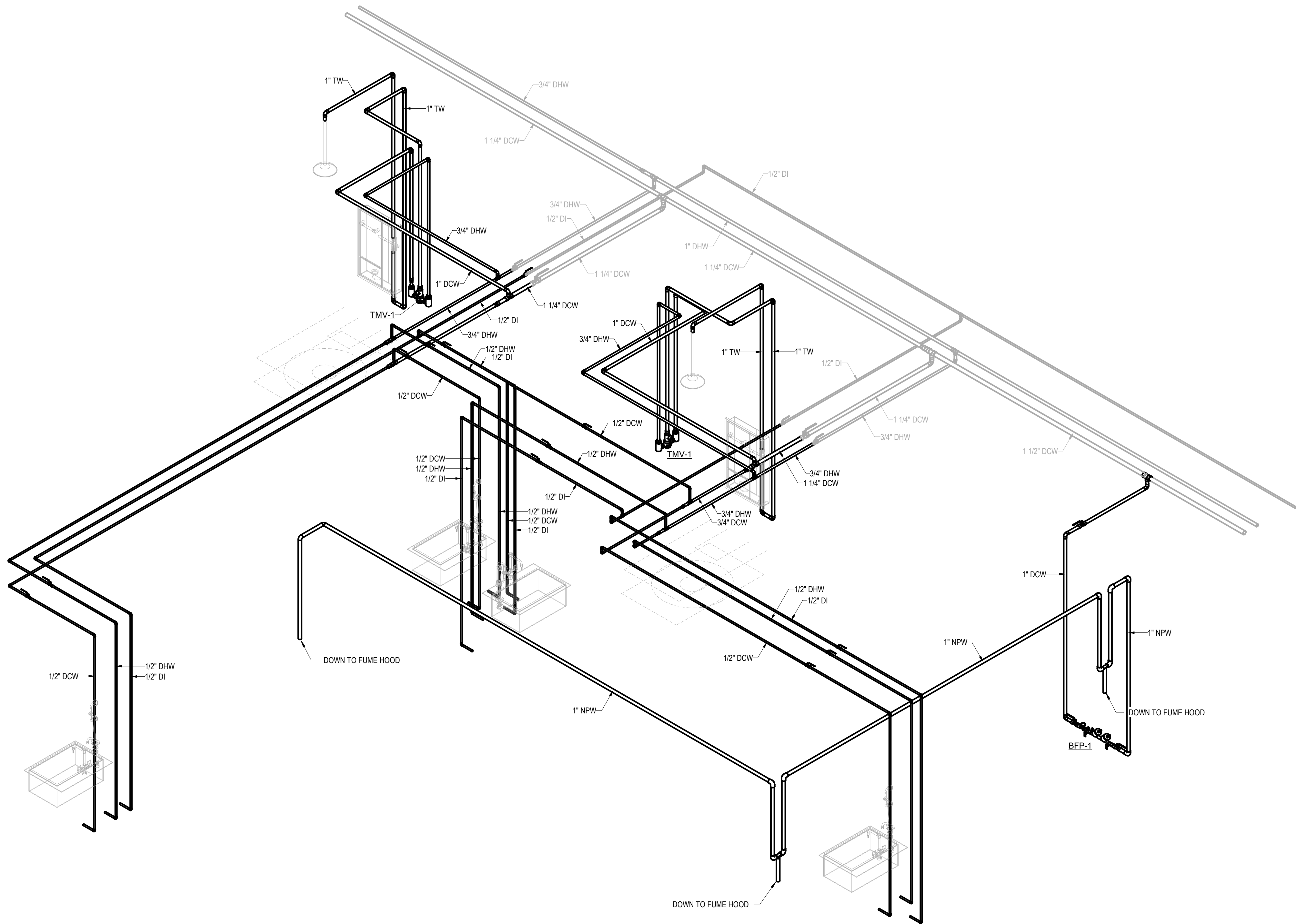


BL072 CHEMISTRY -
WATER RISER DIAGRAM

DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

P402

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1 WATER RISER DIAGRAM - AREA 102/104

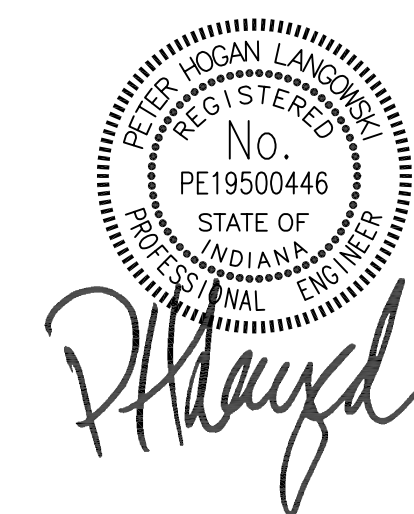
IUB
RESEARCH
LAB
RENOVATIONS

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
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BIDDING SET
JANUARY 9, 2025

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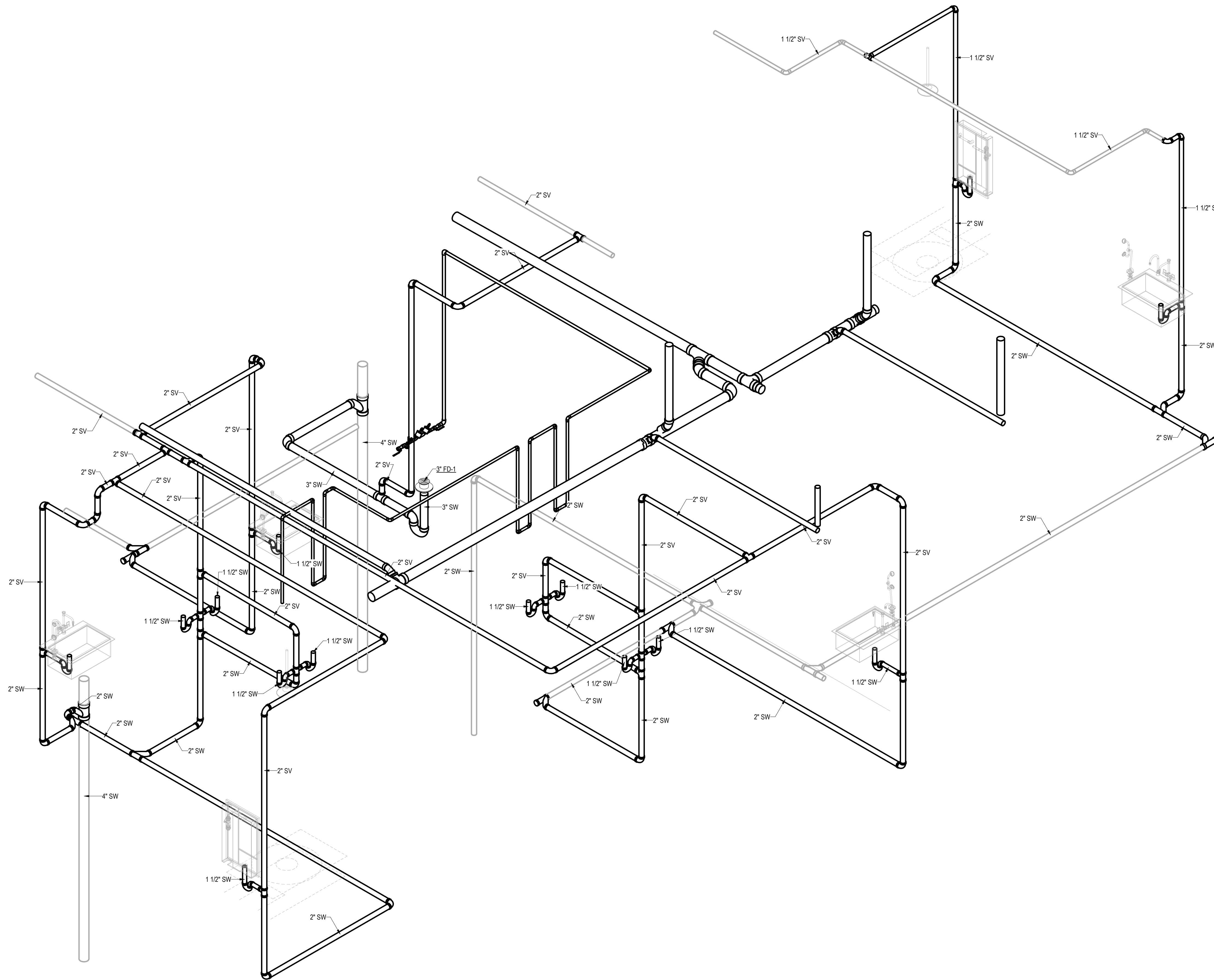


BL072 CHEMISTRY -
PLUMBING RISER DIAGRAM

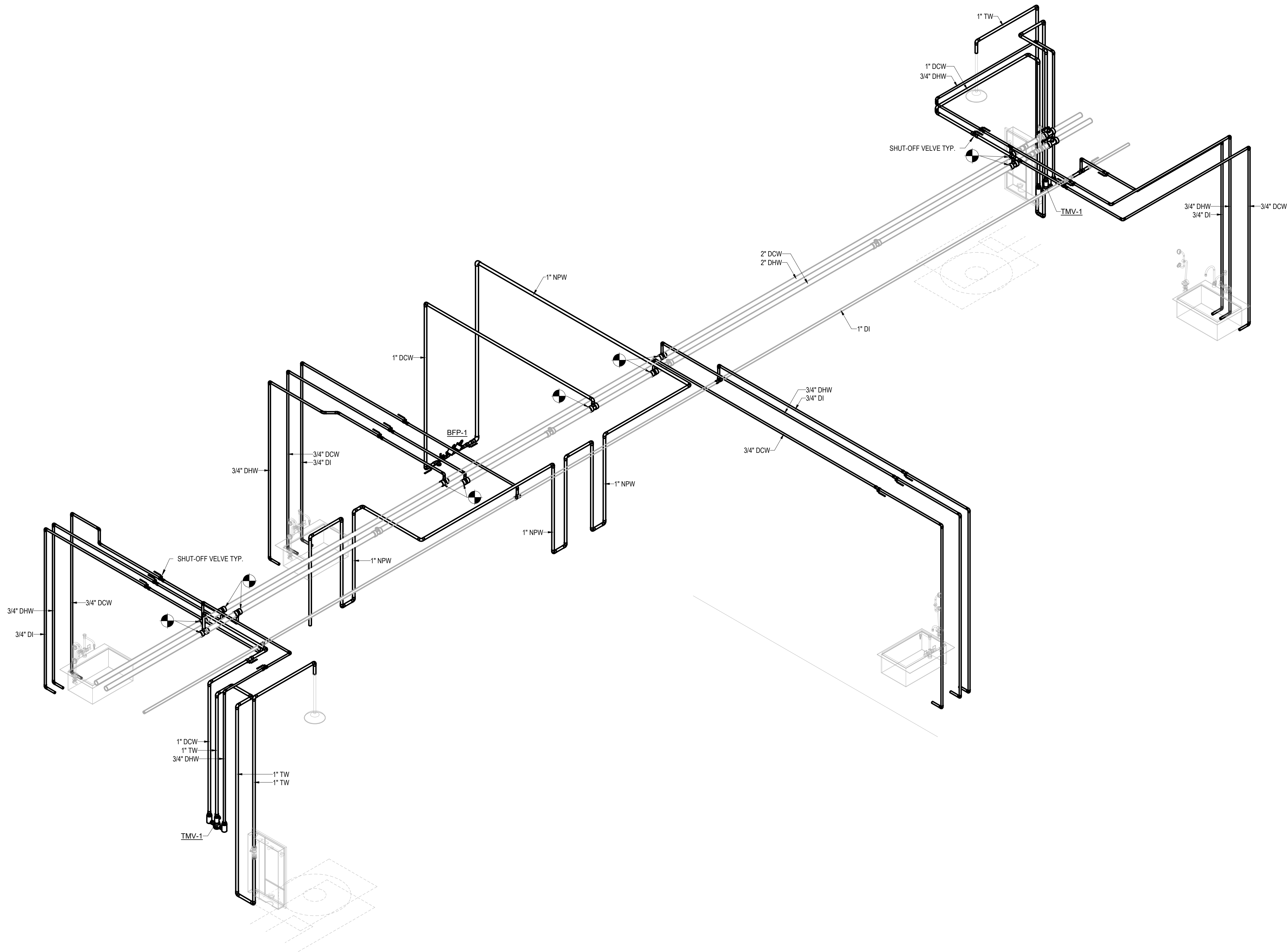
DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

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1 SANITARY RISER DIAGRAM A251/A252



1 WATER RISER DIAGRAM - AREA A251/A25255

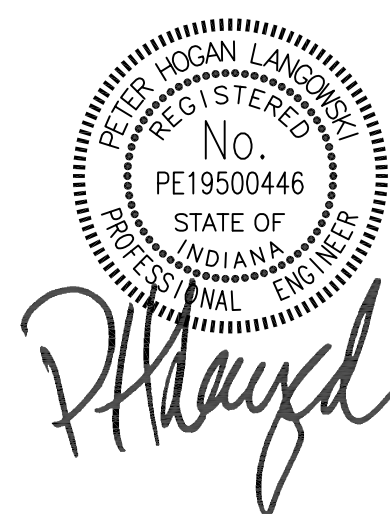
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
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BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

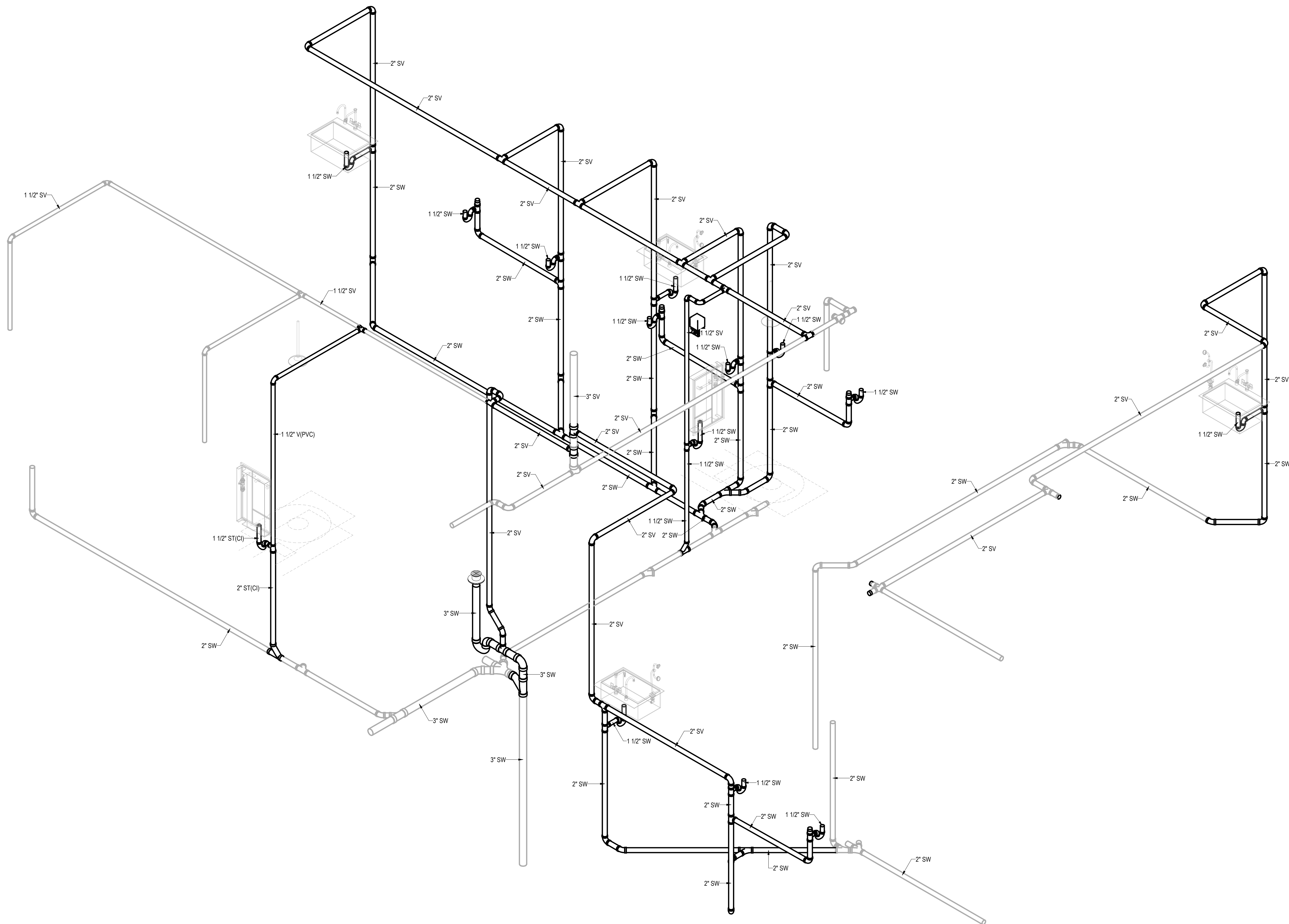
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1	17 JAN 2025	ADDENDUM ONE



BL072 CHEMISTRY -
PLUMBING RISER DIAGRAM

DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

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1 WASTE RISER DIAGRAM - AREA 103/105

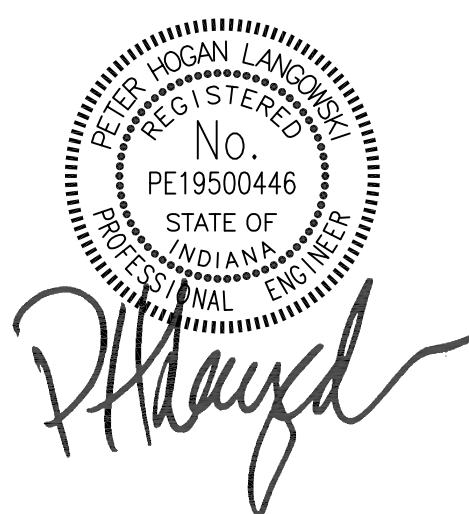
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BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	27 JAN 2025	ADDENDUM TWO
1	17 JAN 2025	ADDENDUM ONE



BL072 CHEMISTRY -
PLUMBING RISER DIAGRAM

DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

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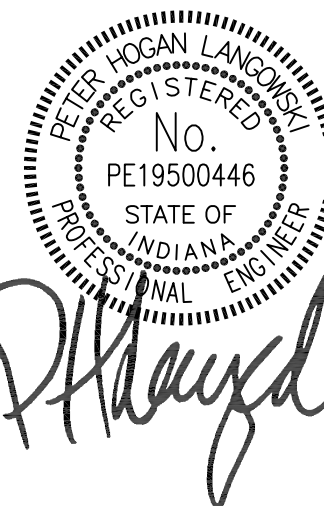
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BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
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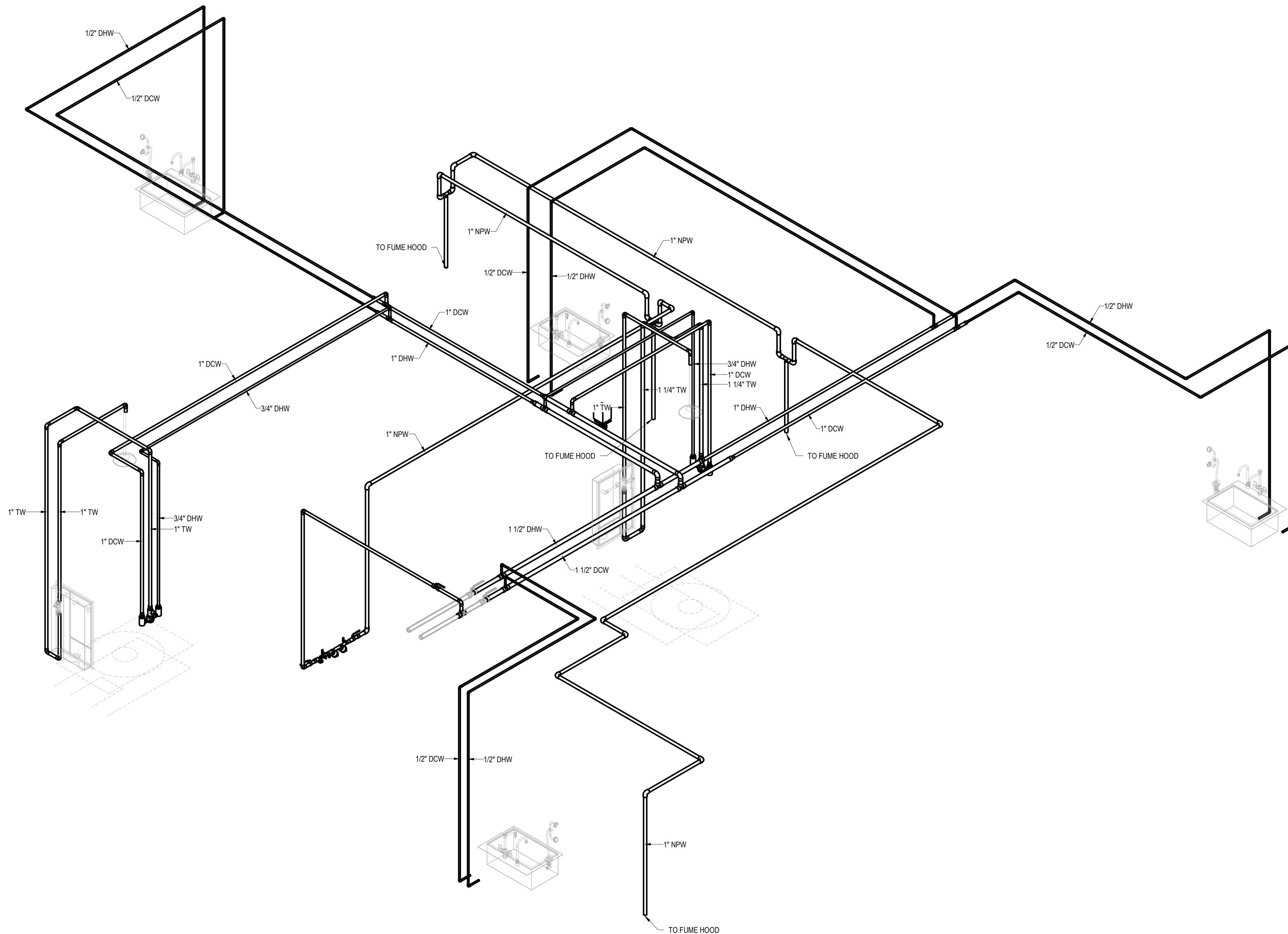
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PLUMBING RISER DIAGRAM

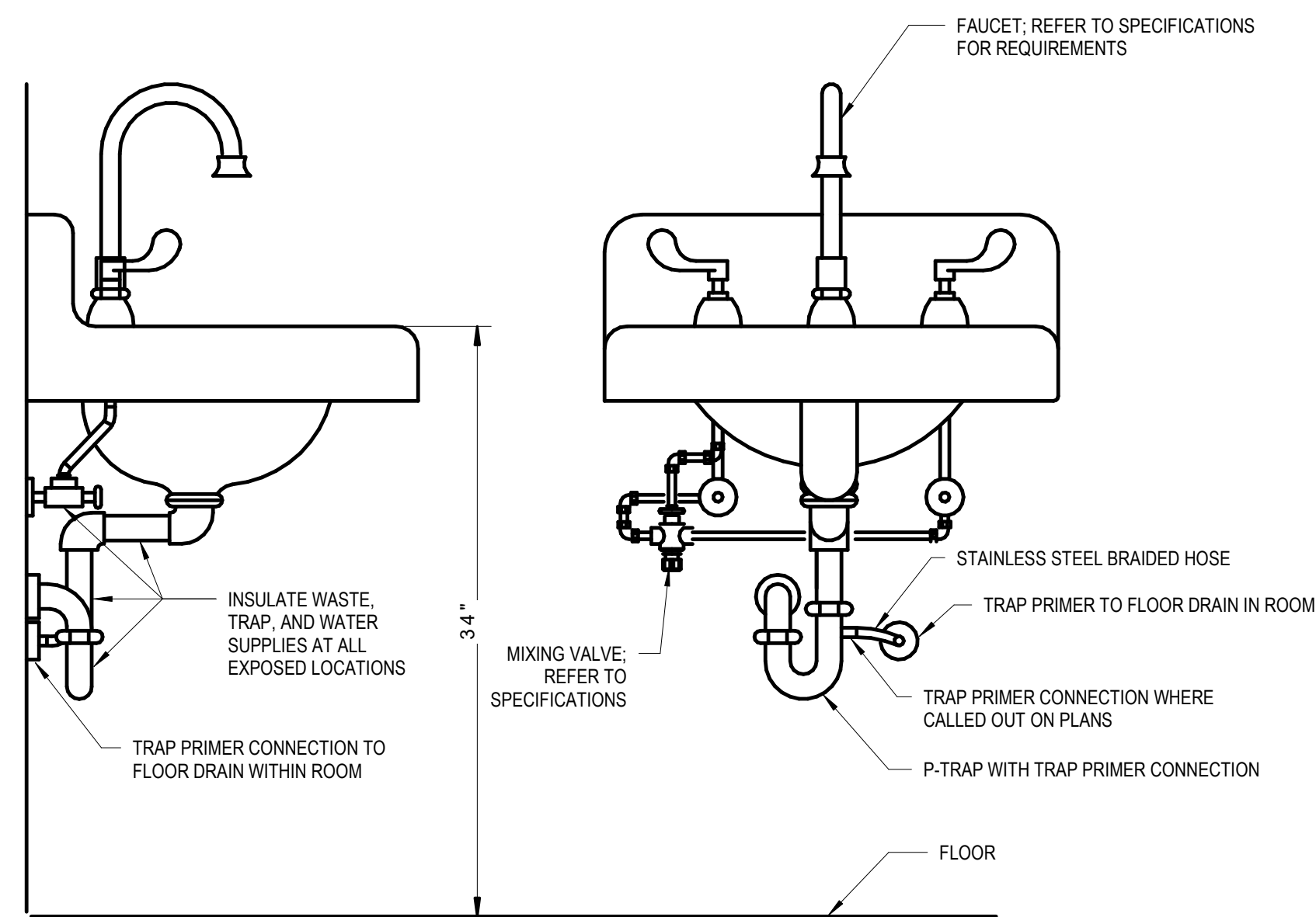
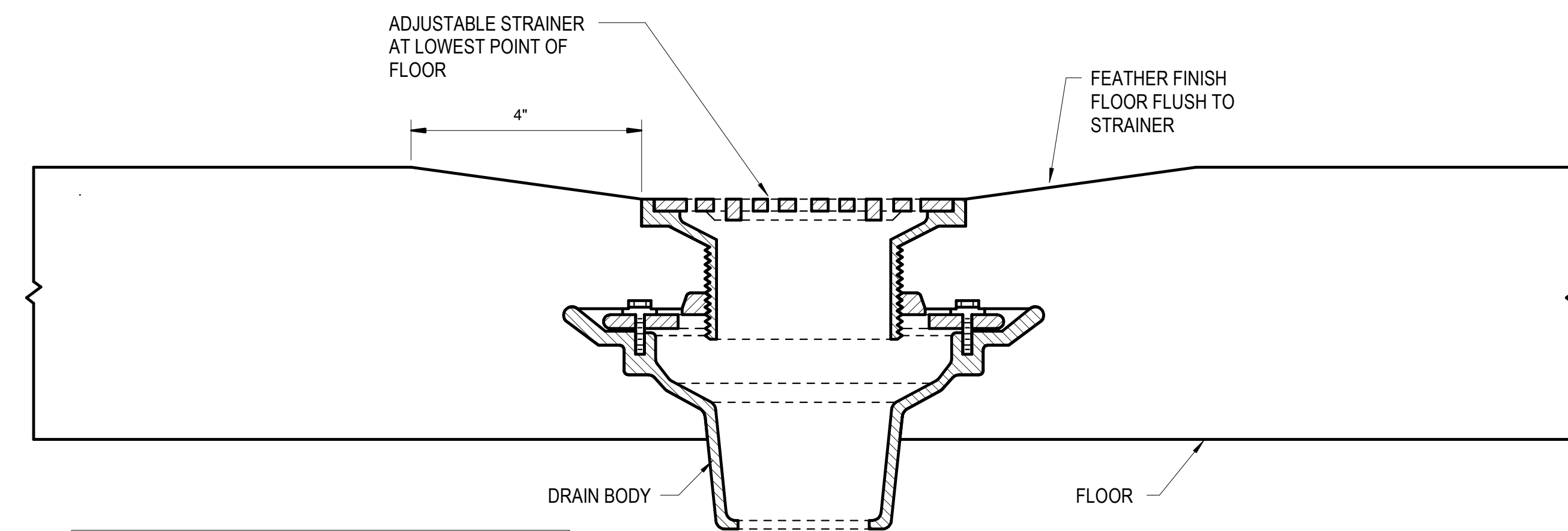
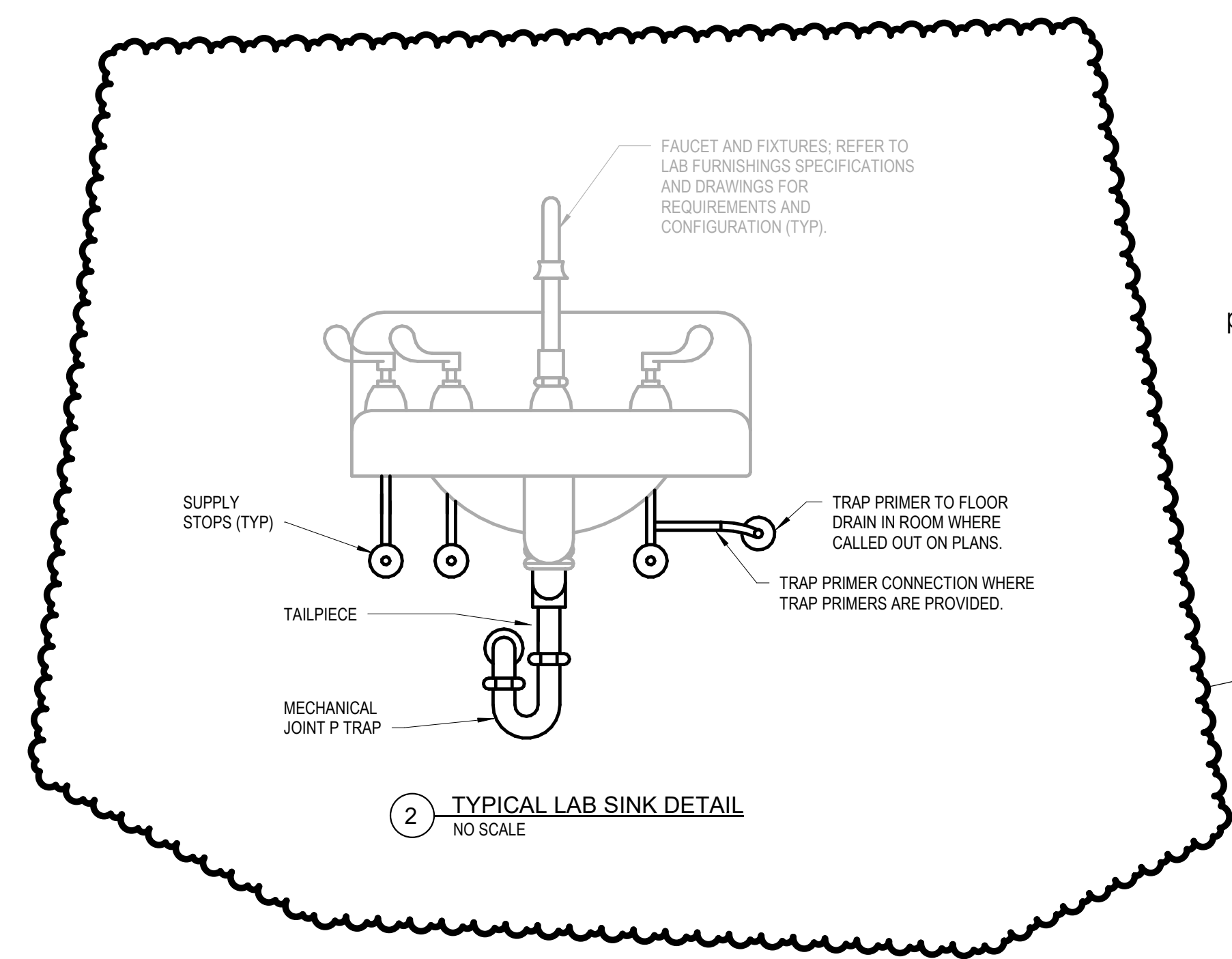
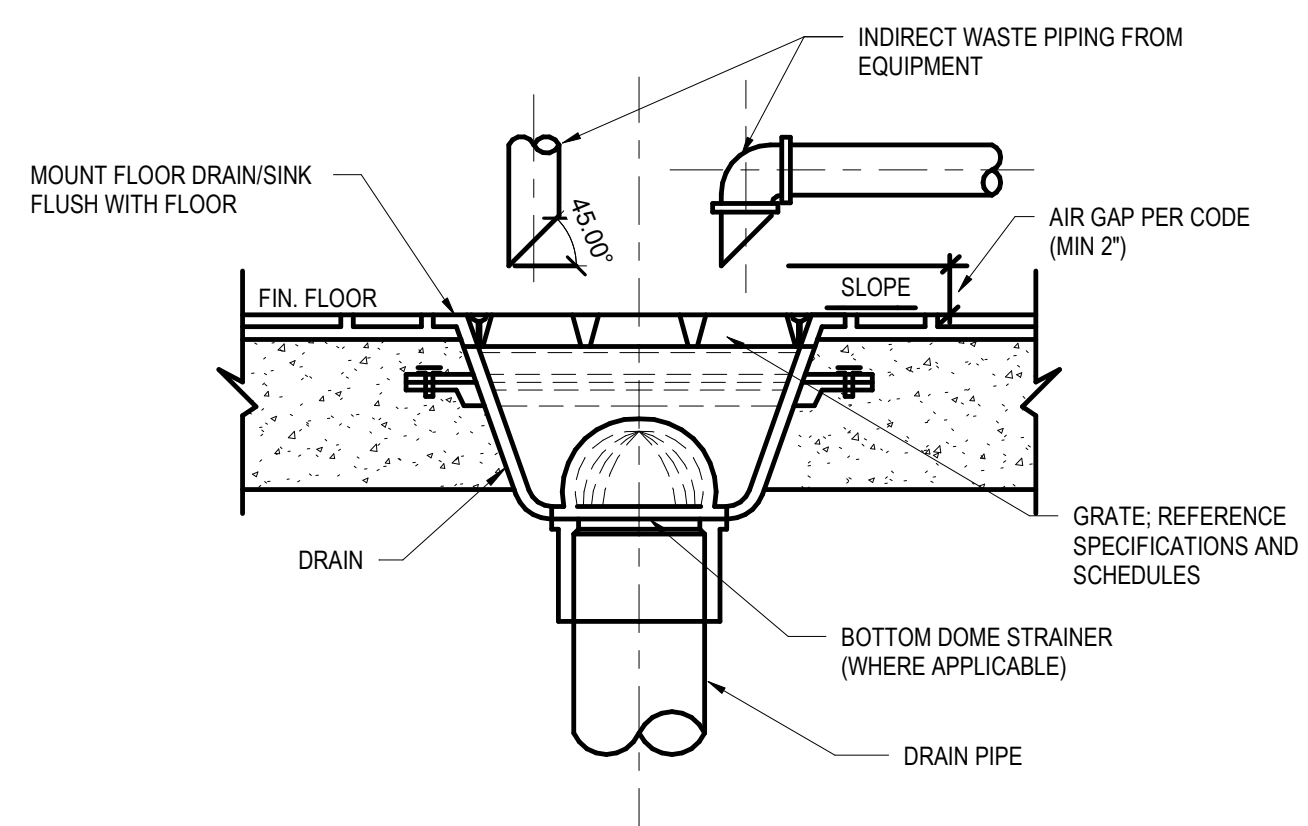
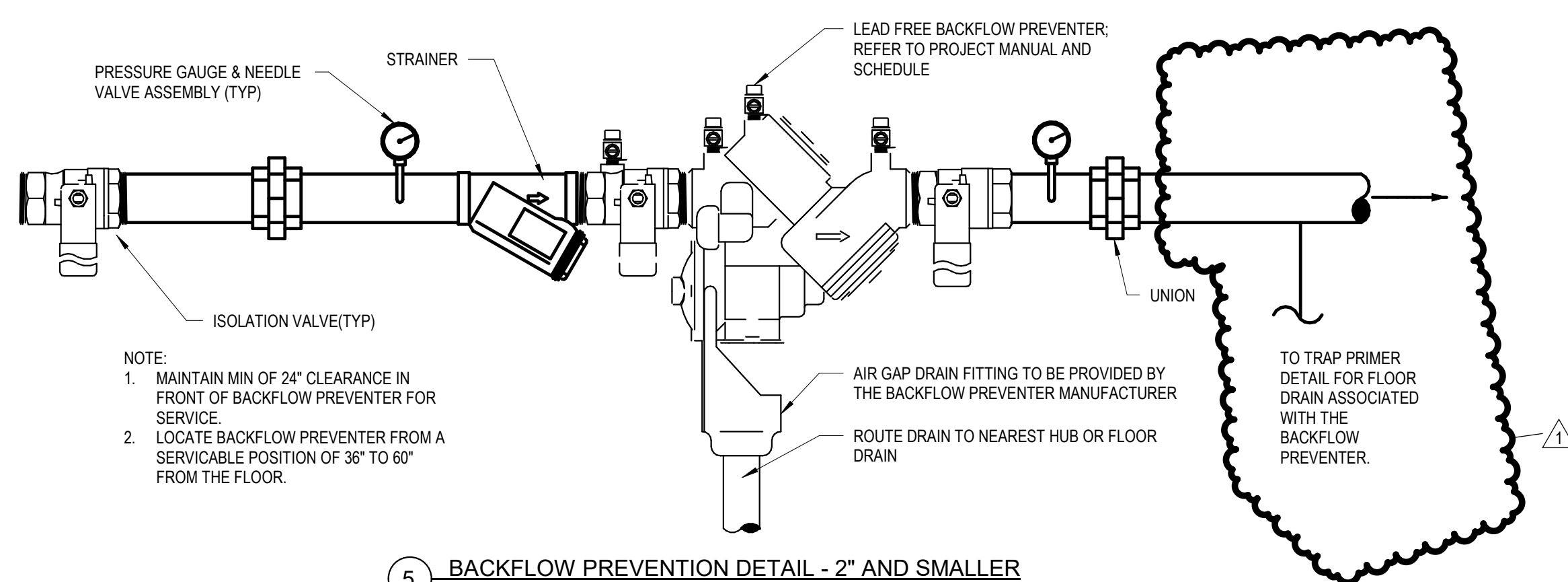
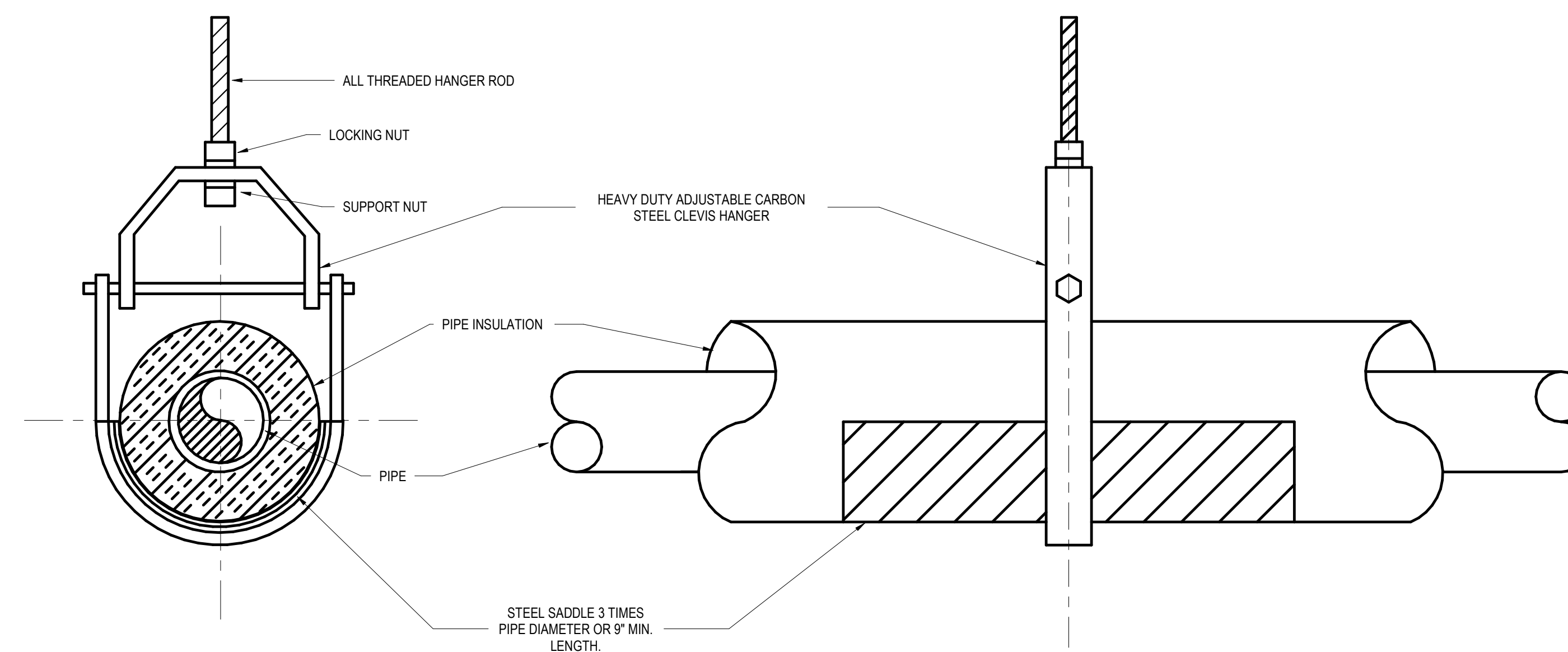
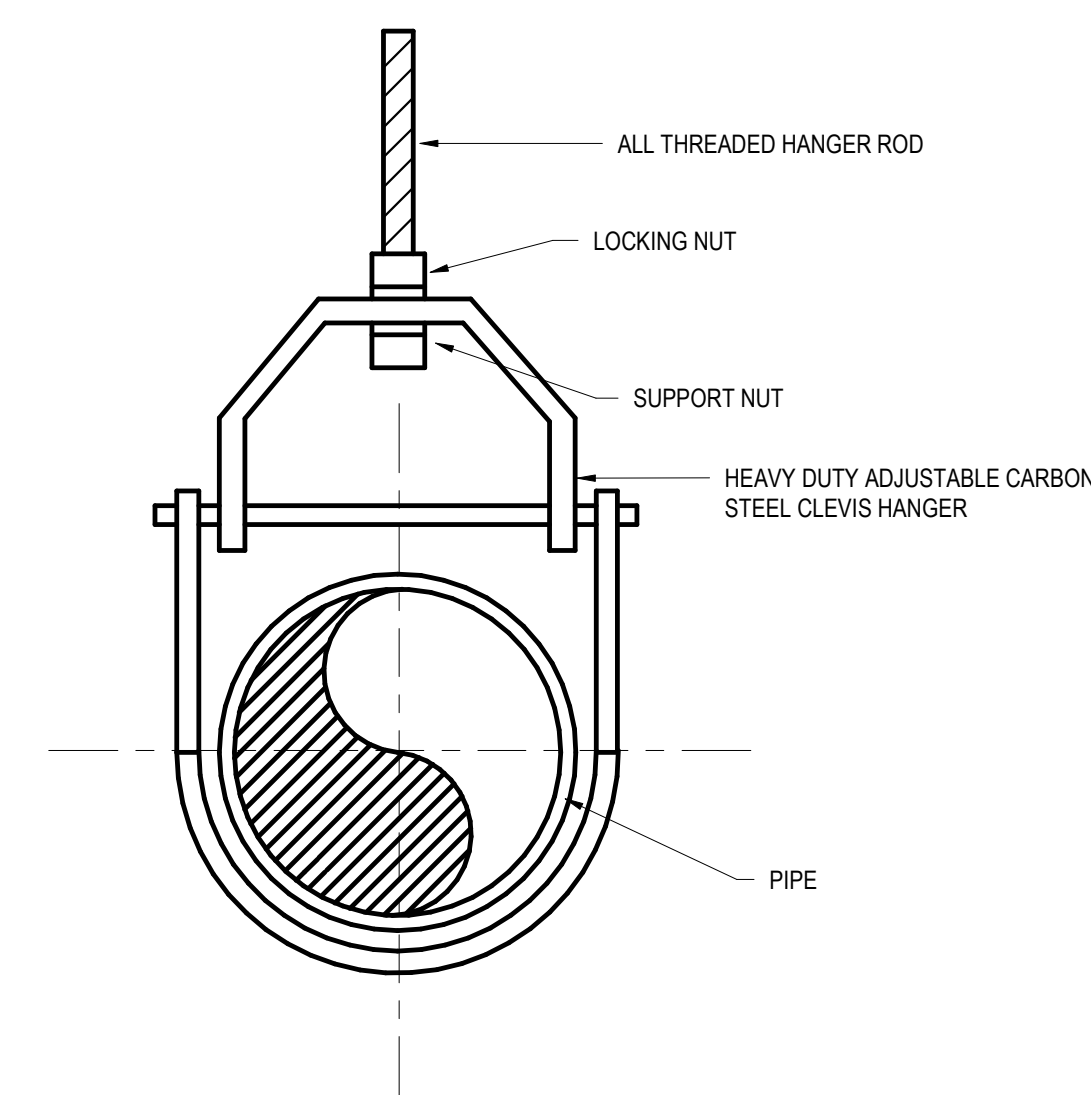
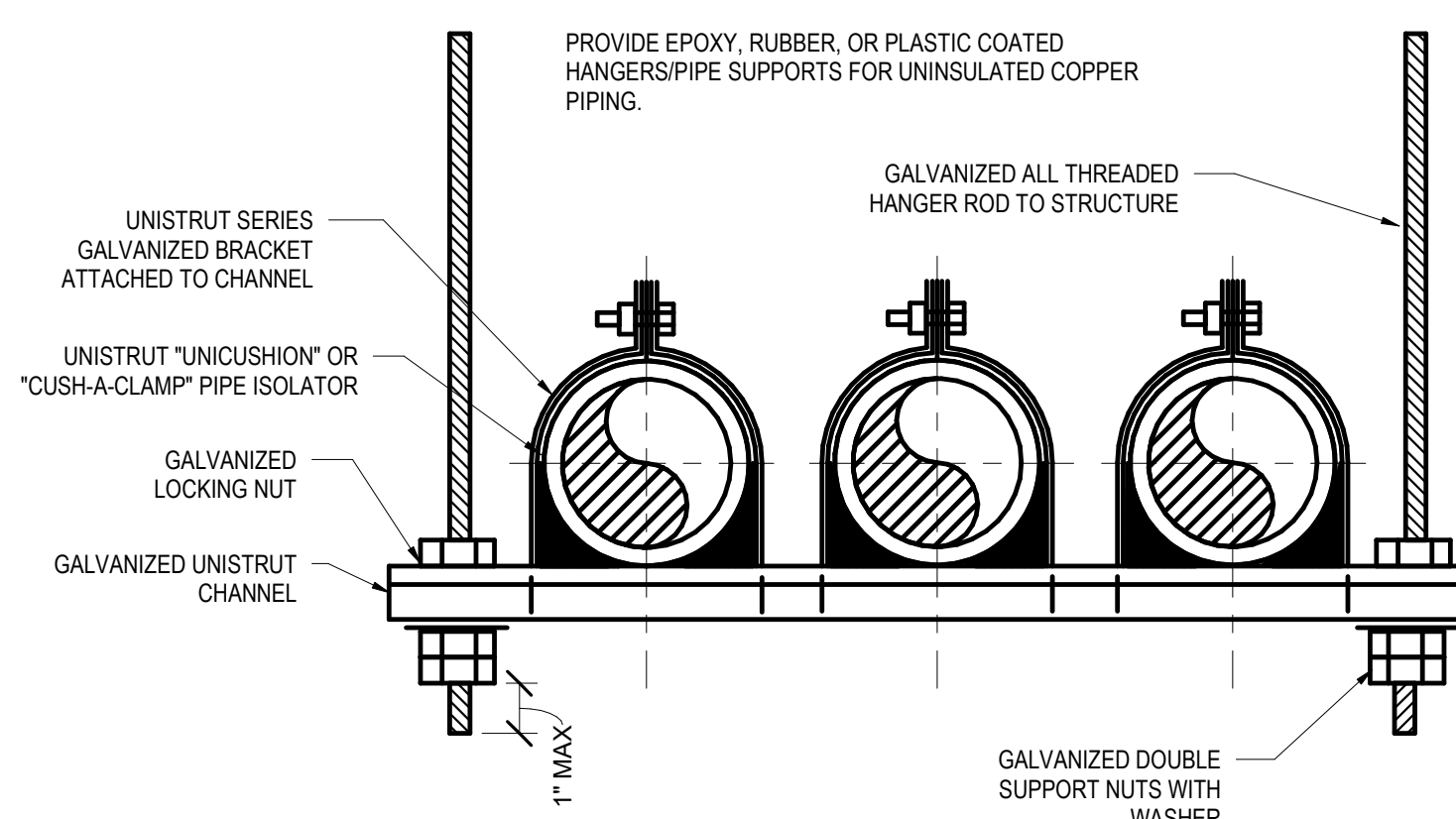
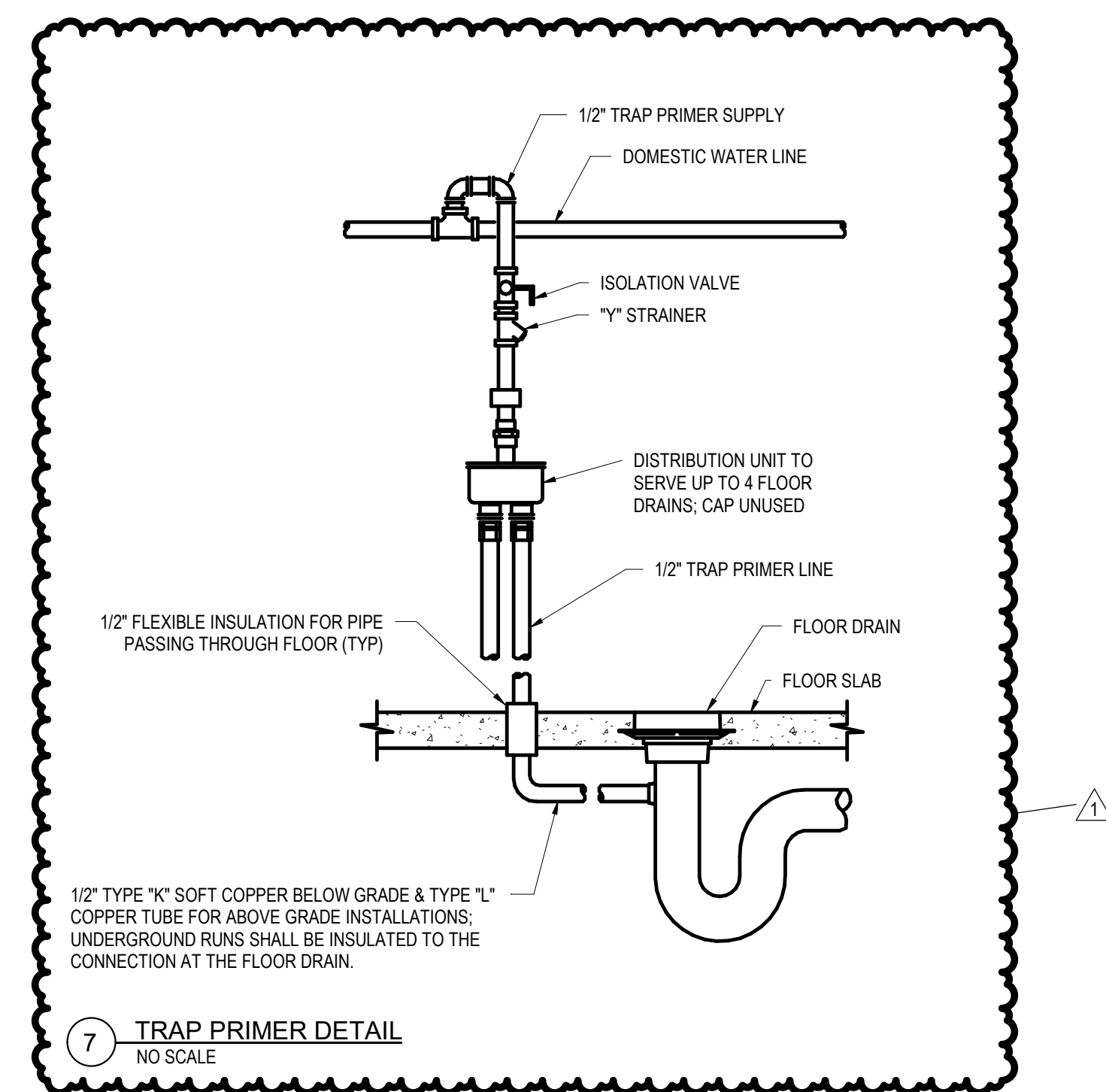
DATE JAN 1, 2017
BSALS PROJECT NO. 00360477

P406

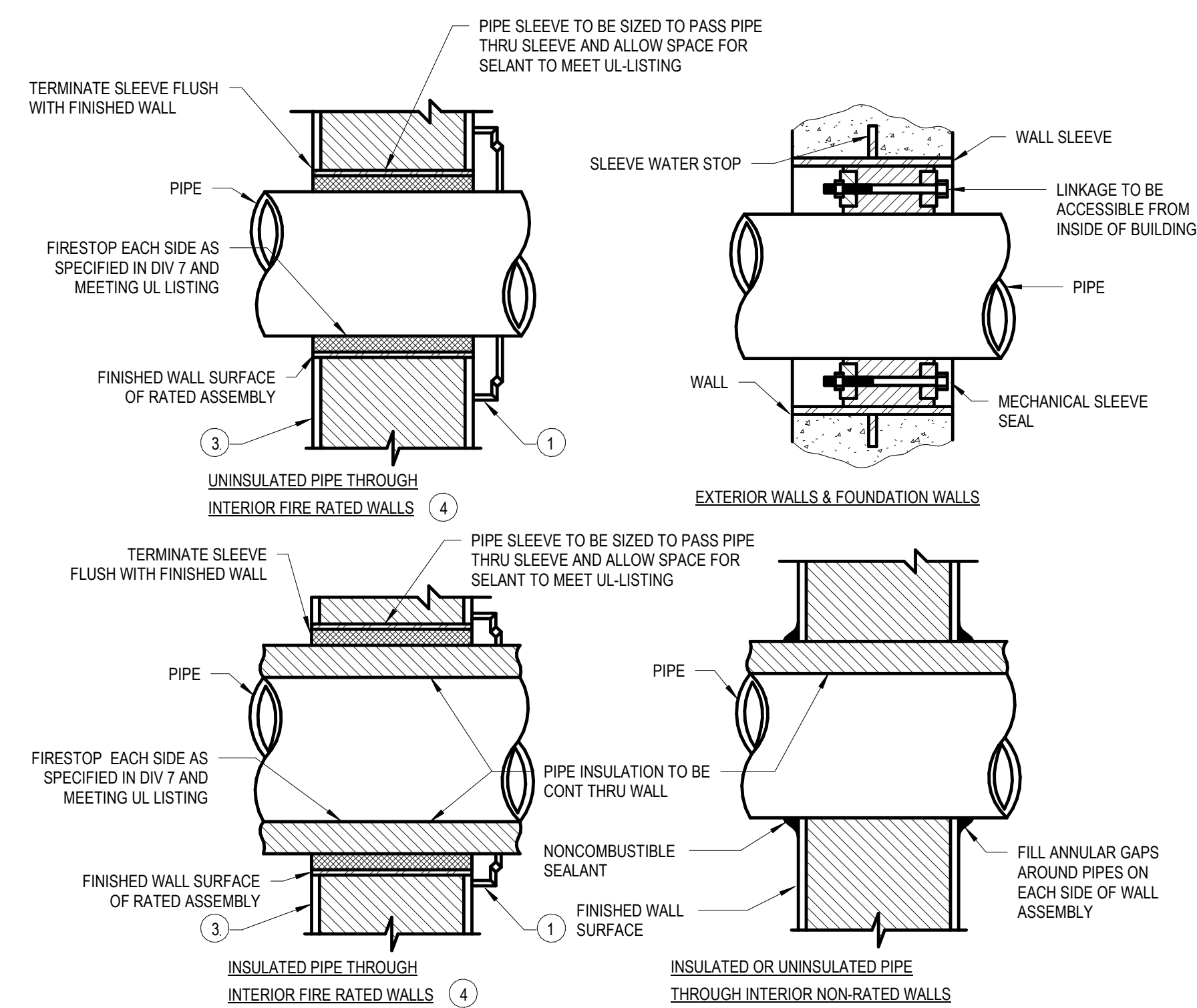
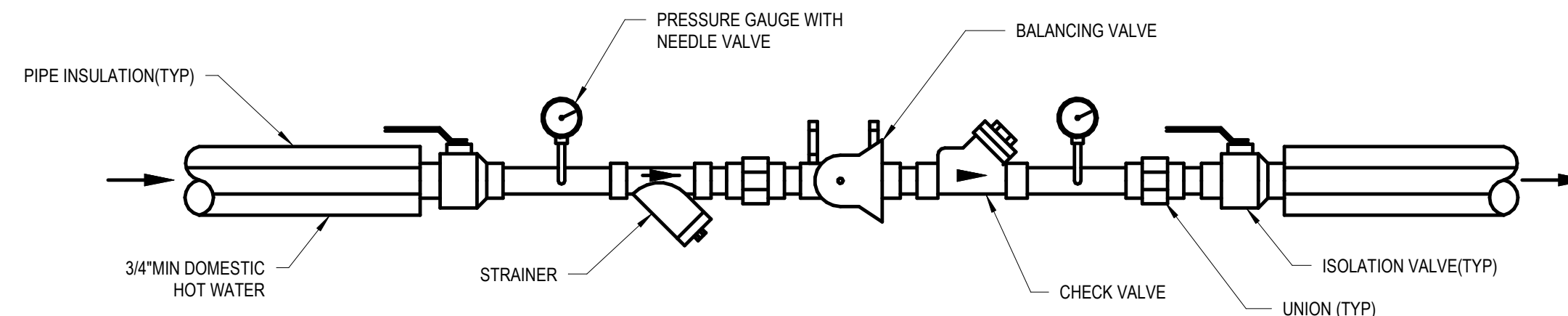
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1 WATER RISER DIAGRAM - AREA 103/105

**1 TYPICAL WHEELCHAIR LAVATORY DETAIL**
NO SCALECOORDINATION NOTES: (DELETE FROM FINAL DETAIL)
1. COORDINATE FLOOR SLOPING REQUIREMENTS WITH ARCHITECT**3 FLOOR DRAIN DETAIL**
NO SCALE**2 TYPICAL LAB SINK DETAIL**
NO SCALENOTES
1. FLOOR DRAINS RECEIVING CLEAR-WATER WASTE SHALL BE PROVIDED WITH EXTENDED RIM SET 2-INCHES ABOVE FINISHED FLOOR.
2. DRAINS RECEIVING CLEAR-WATER WASTE SHALL BE CONNECTED TO THE STORM DRAINAGE SYSTEM.**4 INDIRECT DRAIN DETAIL - FLOOR DRAIN**
NO SCALENOTE:
1. MAINTAIN MIN OF 24" CLEARANCE IN FRONT OF BACKFLOW PREVENTER FOR SERVICE.
2. LOCATE BACKFLOW PREVENTER FROM A SERVICABLE POSITION OF 36" TO 60" FROM THE FLOOR.**5 BACKFLOW PREVENTION DETAIL - 2" AND SMALLER**
NO SCALENOTES:
1. PROVIDE EPOXY, RUBBER, OR PLASTIC COATED HANGERS/PIPE SUPPORTS FOR UNINSULATED COPPER PIPING.**8 PIPE HANGER DETAILS**
NO SCALE

1/2" TYPE "K" SOFT COPPER BELOW GRADE & TYPE "L" COPPER TUBE FOR ABOVE GRADE INSTALLATIONS; UNDERGROUND RUNS SHALL BE INSULATED TO THE CONNECTION AT THE FLOOR DRAIN.

7 TRAP PRIMER DETAIL
NO SCALENOTES:
1. PROVIDE ESCUTCHEON PLATE FLUSH AGAINST WALL AND OF SIZE TO COMPLETELY COVER OPENING IN EXPOSED AREAS ONLY.
2. SEE SPECIFICATION SECTIONS FOR FURTHER REQUIREMENTS.
3. LOCATE FIRESTOP LABEL ON EACH SIDE OF PENETRATION SO THAT IT IS VISIBLE FROM AN ACCESSIBLE LOCATION ABOVE CEILING.
4. INCLUDES FIRE WALLS, FIRE BARRIERS, SMOKE BARRIERS, AND FIRE PARTITIONS.**6 PIPE PENETRATION DETAILS**
NO SCALENOTES:
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO FLOOR PLANS FOR LOCATIONS AND FLOW RATES(WHERE APPLICABLE).
3. INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE REDUCERS AND ADAPTERS AS REQUIRED.
5. PROVIDE MINIMUM STRAIGHT PIPE UPSTREAM AND DOWNSTREAM OF FLOW CONTROL VALVE AS REQUIRED BY MANUFACTURER.**9 DOMESTIC HOT WATER BALANCE STATION DETAIL**
NO SCALE**IUB
RESEARCH
LAB
RENOVATIONS**BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

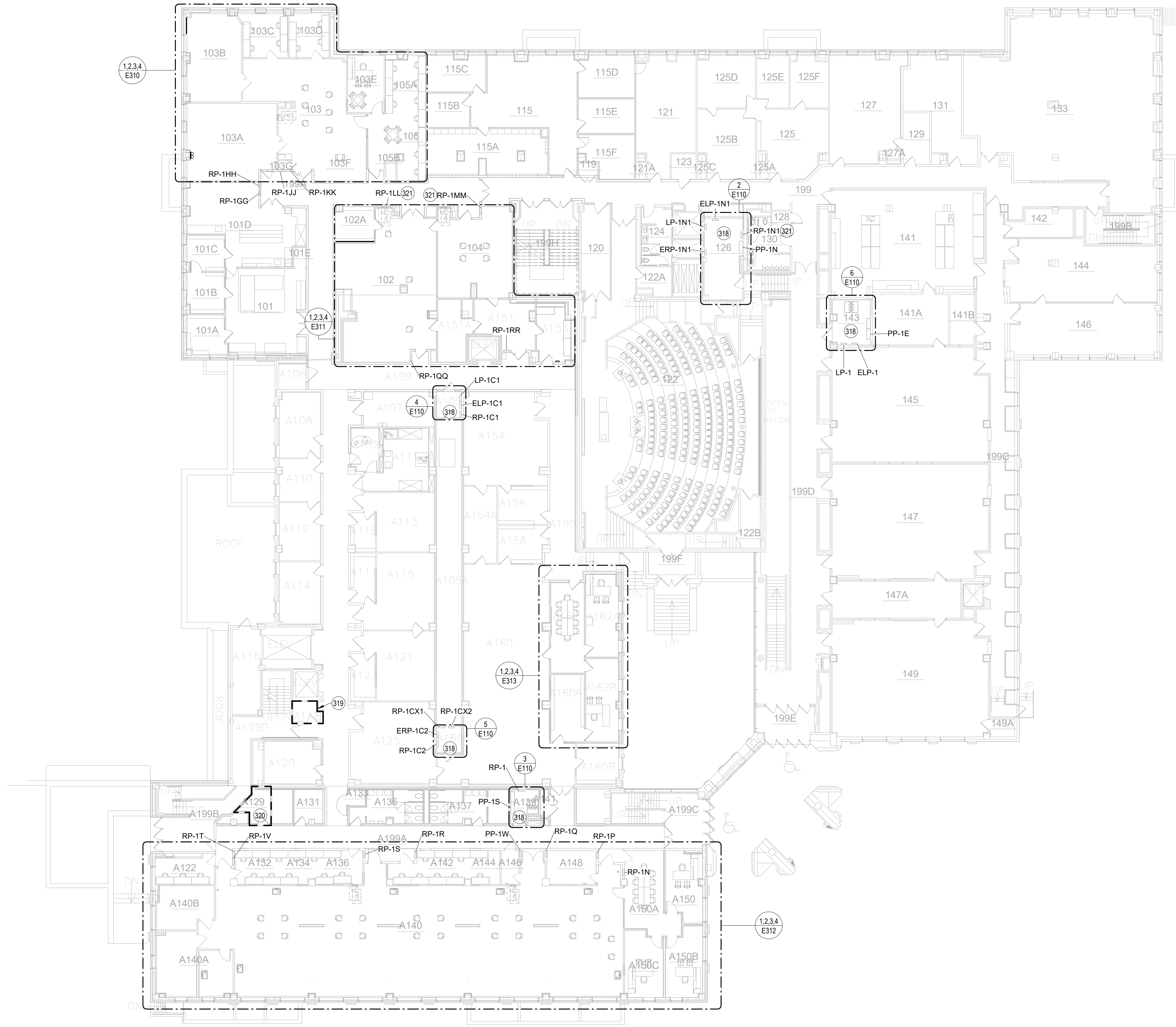
**BIDDING SET
JANUARY 9, 2025**

MARK	DATE	DESCRIPTION
2	27 JAN 2025	ADDENDUM TWO
1	17 JAN 2025	ADDENDUM ONE

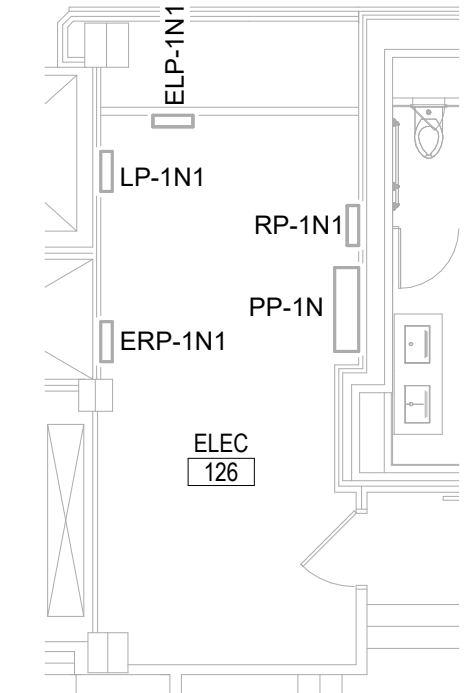
**PLUMBING DETAILS**DATE: JAN 1, 2017
BSALS PROJECT NO. 00360477**P500**

GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

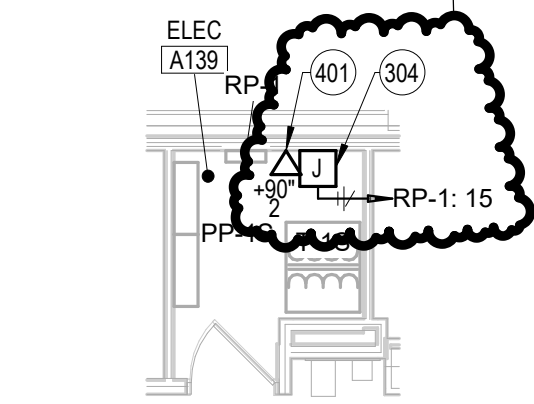
NO	PLAN NOTES
304	304 DDC PANEL CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
308	308 EXISTING ELECTRICAL ROOM SERVING THE PROJECT SCOPE. REFER TO ENLARGED PLANS ON THIS SHEET FOR ADDITIONAL INFORMATION.
319	319 EXISTING TELECOM ROOM AT J18 SERVING THE PROJECT SCOPE. EXISTING TELECOM EQUIPMENT TO REMAIN AND BE RE-ROUTED. DATA CABLES SHALL BE ROUTED AND TERMINATED AT EXISTING SWITCHES. COORDINATE WITH UTIS TO PROVIDE NEW SWITCHES AS REQUIRED TO SUPPORT NEW CABLE COUNT.
320	320 EXISTING FACE IS LOCATED IN THIS ROOM.
321	321 REMOVE AND REPLACE ALL BRANCHED BREAKERS IN THIS PANEL WITH TYPE COP-VH. REFER TO PANEL SCHEDULES FOR EXACT BREAKER TYPES AND SIZES REQUIRED TO SERVE PANEL.
401	401 DDC PANEL DATA JACE ALL BRANCHED INSTALLATION WITH CONTROLS CONTRACTOR FOR



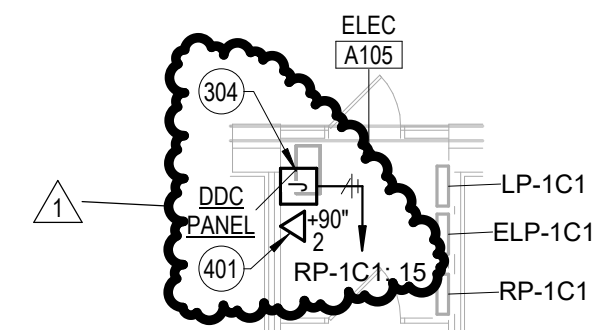
1 FIRST FLOOR ELECTRICAL COMPOSITE PLAN
1/16" = 1'-0"



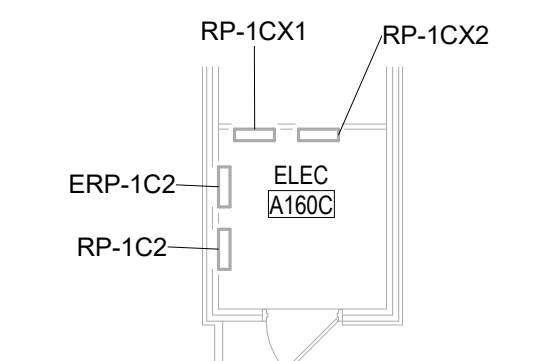
2 ELECTRICAL ROOM 126
1/8" = 1'-0"



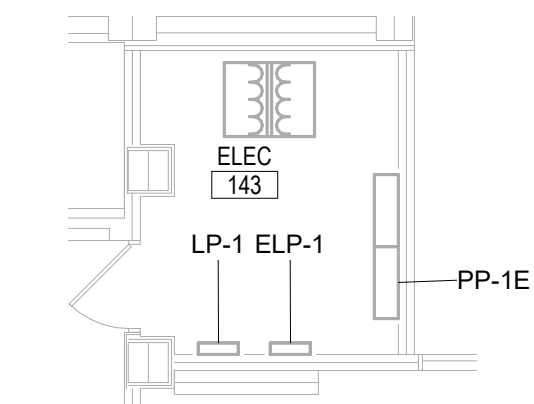
3 ELECTRICAL ROOM A139
1/8" = 1'-0"



4 ELECTRICAL ROOM A105
1/8" = 1'-0"



5 ELECTRICAL ROOM A160C
1/8" = 1'-0"



6 ELECTRICAL ROOM 143
1/8" = 1'-0"

**IUB
RESEARCH
LAB
RENOVATIONS**

BL072 CHEMISTRY
800 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
212 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
1	1/27/25	ADDENDUM #2



CHEMISTRY FIRST FLOOR ELECTRICAL PLANS

DATE	JANUARY 9, 2025
BSALS PROJECT NO.	00360477

E110

[illegible]

PLAN NOTES	
X001	
401	PROVIDE PATHWAY TO ABOVE CEILING WITH PULL STRING AND BACK BOX AT ALL LOCATIONS SHOWN WITH DATA "Y" FOR FUTURE CONNECTIONS. PROVIDE BLANK COVER PLATE.
402	PROVIDE PATHWAY TO CABLE TRAY AT ALL CEILING SERVICE PANEL LOCATIONS SHOWN WITH DATA "Y" FOR FUTURE CONNECTIONS. PROVIDE BLANK STAINLESS STEEL COVER PLATE.
403	CEILING SERVICE PANEL. PROVIDE DATA OUTLETS AS SHOWN. REFER TO LF DRAWINGS, POWER DRAWINGS, AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.
410	NEW LOCATION OF RELOCATED WAP. PROVIDE DATA DROPS ABOVE CEILING AND COORDINATE INSTALLATION OF WAP WITH UTIS.
413	NEW WIRELESS ACCESS POINT. EC SHALL PROVIDE DATA CABLING AND TERMINATE JACKS. UTIS SHALL PROVIDE AND INSTALL WAP COORDINATE WITH UTIS FOR ADDITIONAL REQUIREMENTS.

DEMOLITION GENERAL NOTES

A. REFER TO SHEET 001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. ELECTRICAL CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.

C. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTION, RELOCATING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL, ALL CUTTING, REMOVING, REPAIRING, REFINISHING, REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.

D. REMOVE ALL LIGHT FIXTURES, RECEPTACLES, SWITCHES, ETC. AND ASSOCIATED WIRING AS INDICATED.

E. REMOVE ALL CONDUIT AND BOXES NOT TO BE USED FOR NEW WORK.

F. IN REMODELED/ALTERED AREA ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGHOUT THE REMODELED AREAS TO BE REMOVED AND DISCONNECTED AT THE POINT OF ENTRY TO THE BUILDING THAT ARE TO REMAIN SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE OF THE BUILDING.

G. WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO MAINTAIN ON THEIR RESPECTIVE CIRCUITS.

H. THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES BEING REMOVED.

I. IT IS MANDATORY THE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF EXISTING BUILDING (THE SPECIFIC AREAS) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE BEYOND THE EXISTING BUILDING'S OPERATIONAL HOURS.

J. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXISTING BUILDING SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDING POWER, LIGHTING, TELEPHONE, ETC. WITH AN ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECTS OF THE ELECTRICAL CONTRACTOR'S REMOVED COMPLETE, CUT & PATCH DURATION. REFER TO ARCHITECTURAL PLANS FOR WALL TYPES. REFER TO DISPOSITION 28 "COMMON WORK RESULTS FOR ELECTRICAL".

K. REMOVE ALL CONDUIT AND BOXES IN BLACK WALLS NOTED TO BE REMOVED, SHALL HAVE THE CONDUIT REMOVED AND CONDUIT PULLED OUT OF THE WALL WHERE POSSIBLE. IF REMOVAL IS NOT POSSIBLE, THEY SHALL BE ABANDONED IN PLACE. BLACK WALLS SHOULD NOT BE DEMOLISHED TO REMOVE THESE ITEMS. EXISTING CONDUIT AND BOXES IN BLACK WALLS SHALL BE REMOVED AND REMOVED COMPLETE, CUT & PATCH DURATION. REFER TO ARCHITECTURAL PLANS FOR WALL TYPES. REFER TO DISPOSITION 28 "COMMON WORK RESULTS FOR ELECTRICAL".

LIGHTING GENERAL NOTES

- A. REFER TO SHEET 0019 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
- B. REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUITS SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONNECTED TO EXISTING CIRCUITS SHALL BE IDENTIFIED BY RED TAPE OR RED MARKS IN FIELD.
- C. CONNECT ALL WIRE AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
- D. PROVIDE OCCUPANCY / VACANCY SENSOR, POWER PAKS, AND ADDITIONAL DELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
- E. PROVIDE SUSPENSION MOUNT LIGHT FIXTURES SHALL BE AT +0' @ ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
- F. WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1' ABOVE EXIT OPENING AND UNLESS OTHERWISE SPECIFIED, CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.
- G. ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASOUND) LIGHTING SENSORS.
- H. ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
- I. OCCUPANCY SENSORS WILL NOT BE PROVIDED WITH A FINISHED CABLE SHALL BE MOUNTED TO A JUNCTION BOX AT +0' @ -4" AFF. RIGIDLY SUPPORT J-BOX FROM THE DECK.
- J. OCCUPANCY SENSORS TO BE COORDINATED WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL TO MEETING DESIRED CONTROL, TIME DELAY, SENSITIVITY, OCCUPANCY, ETC.

POWER GENERAL NOTES

- A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES. REFER TO MPE SERIES DRAWINGS FOR PLUMBING AND MECHANICAL REQUIREMENTS.
- B. REFER TO ARCHITECTURAL DETAILS, DETAILS AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.
- C. ALL ELECTRICAL DEVICES SHALL BE OF THE TYPE TO BE OF THE TYPE. THE DEVICES MAY OR MAY NOT BE IDENTIFIED AS QFO ON THE PLANS BUT SHALL BE PROVIDED ACCORDING TO THE REQUIREMENT. COORDINATE WITH ARCHITECTURAL.
- D. ALL ELECTRICAL DEVICES SHALL BE PROVIDED AS NOTED.
- E. THE ELECTRICAL CONTRACTOR SHALL VERIFY CORD AND PLUG CONNECTED EQUIPMENT CORD CONFIGURATION AND PROVIDE MATCHING RECEPTACLE AS REQUIRED.
- F. ELECTRICAL SERVICES SHALL NOT ROUTE THROUGH ANY IDF ROOM UNLESS DIRECTLY SERVING THAT ROOM.
- G. REFER TO SECTION 28 SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR MINIMUM CONDUIT SIZE REQUIREMENTS BASED ON TOTAL CIRCUIT DISTANCE.
- H. REFER TO SECTION 28 SECTION "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS" FOR ADDITIONAL GROUNDING REQUIREMENTS FOR FLAMMABLE STORAGE CABINETS, SOLVENT CABINETS, ETC.
- I. AS NOTED, SUPPLY AND PROVIDE THE LAB CEILING SERVICE PANEL(S) AND BACK BOXES. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING DEVICES, COVERPLATES, AND CONNECTIONS OF DEVICES. E.C. SHALL PROVIDE BLANK STAINLESS STEEL COVERS FOR ALL UNNEEDED DEVICES.
- J. PROVIDE CONTROL WIRING FROM VARIABLE FREQUENCY CONTROLLER THROUGH AUXILIARY CABLE AT ASSOCIATED DISCONNECT SWITCH FOR OPENING OF CONTROL CIRCUIT PRIOR TO PLUG PLUGGING OF EQUIPMENT. WIRING TO BE DEDICATED CONTROL SEPARATE FROM THE POWER WIRING.

SYSTEMS GENERAL NOTES

- A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
- B. PROVIDE CONDUIT SLEEVES TO SERVE ALL LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO COMMUNICATIONS, STRUCTURED CABLES, ACCESS CONTROL, VIDEO SURVEILLANCE, PULSE CLOCKS, AND AUDIO VISUAL SYSTEMS. COORDINATE WITH ARCHITECTURAL LINE SAFETY PLAN FOR FIRE AND SMOKE WALL/FLOOR LOCATIONS AND PENETRATIONS. PROVIDE PENETRATION SYSTEMS AS REQUIRED.
- C. REFER TO DRAWING SPECIFICATIONS FOR ADDITIONAL INFORMATION. MINIMUM CONDUIT SLEEVE SIZE SHALL BE 2" WITH PLASTIC BUSHINGS ON BOTH ENDS.
- D. PROVIDE SERVING LOW VOLTAGE SYSTEMS BY CONTRACTOR.
- E. WIRE AND DISPS EXISTING WIRING TO MEET REQUIREMENTS.
- F. HOOKS SHALL PUT STRINGS IN ROUGHNESS.
- F. PROVIDE BANG COVER PLATES FOR UNUSED OUTLET BOXES.
- G. ALL FINISHED ROOMS AND AREAS SHALL BE PROVIDED WITH SMOKE DETECTORS. SHALL BE PAINTED. COORDINATE PAINTING OF EQUIPMENT WITH DIVISION 9 CONTRACTOR. DO NOT PAINT LOW VOLTAGE SYSTEMS CABLEING. DO NOT PAINT FIRE ALARM CABLEING.
- H. PROVIDE EXPANSION OF EXISTING FIRE ALARM SYSTEM AS INDICATED ON DRAWINGS AND SPECIFICATIONS. PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO EXPAND EXISTING FIRE ALARM SYSTEM COMPLETE.
- I. NOTIFY THE CITY OF LOS ANGELES OF THE EXISTING FIRE ALARM PANEL SHALL COMPLETE THAT THE FIRE ALARM SYSTEM BE RECERTIFIED PRIOR TO PROJECT COMPLETION. ALL KNOWN TROUBLE CONDITIONS SHALL BE DOCUMENTED TO THE PROJECT OWNER PRIOR TO PROJECT COMPLETION. THE PROJECT OWNER SHALL BE RESPONSIBLE FOR THE RECERTIFICATION OF THE SYSTEM.
- J. ALL MODIFIED INITIATING LOOPS SHALL BE RETESTED COMPLETE. PRIOR TO PROJECT CERTIFICATION TO ENSURE THAT THE ENTIRE ADDRESSABLE LOOP IS STILL OPERATIONAL.
- K. ALL MODIFIED NOTIFICATION CIRCUITS SHALL HAVE ALL DEVICES RETESTED ON THE PROJECT. DEVICES HAVE BEEN MODIFIED. END OF LINE DEVICES SHALL BE LABELED AT THE DEVICE WHERE THE EOL IS PLACED. EOL LOCATIONS SHALL BE NOTED ON THE PROJECT DOCUMENTS. REVISED VOLTAGE DROP AND BATTERY CALCULATIONS TO BE SUBMITTED TO THE PROJECT OWNER PRIOR TO PROJECT COMPLETION.
- L. ALL REQUIRED CERTIFICATION DOCUMENTATION TO BE SUBMITTED FOR NFPA REQUIREMENTS.
- M. THE FIRE ALARM VENDOR IS INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.
- N. DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3'FEET OF AN AIR DIFFUSER.
- O. SYNCHRONIZE ALL VISUAL DEVICES.
- P. A VISUAL NOTIFICATION SIGNAL SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.
- Q. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN FIRE ALARM EMT CONDUIT WITH A BRIGHT RED TOP COAT.
- R. DOOR NUMBERS ARE SHOWN FOR REFERENCE TO THE DOOR HARDWARE SCHEDULE FOR NUMBERS WITH ELECTRIFIED HARDWARE.



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CLIENT PROJECT NO. - 20240397

 **KEYPLAN**
PLAN NORTH

MARK	DATE	DESCRIPTION
2	1/27/25	ADDENDUM #2
1	1/17/25	ADDENDUM #1



DATE	JANUARY 9, 2025
BSALS PROJECT NO.	00360477

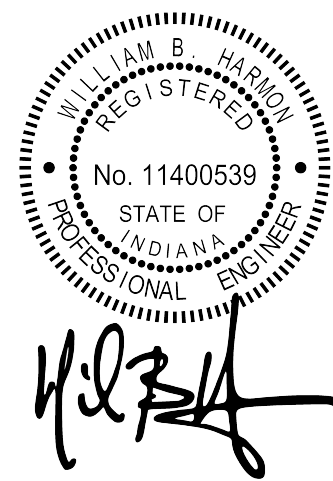
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RENOVATIONSBL072 CHEMISTRY
300 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
12 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
1	1/27/25	ADDENDUM #2

CHEMISTRY FIRST FLOOR
ELECTRICAL PLANS
-103/105 LABS & OFFICESDATE JANUARY 9, 2025
BSALS PROJECT NO. 00360477

E310

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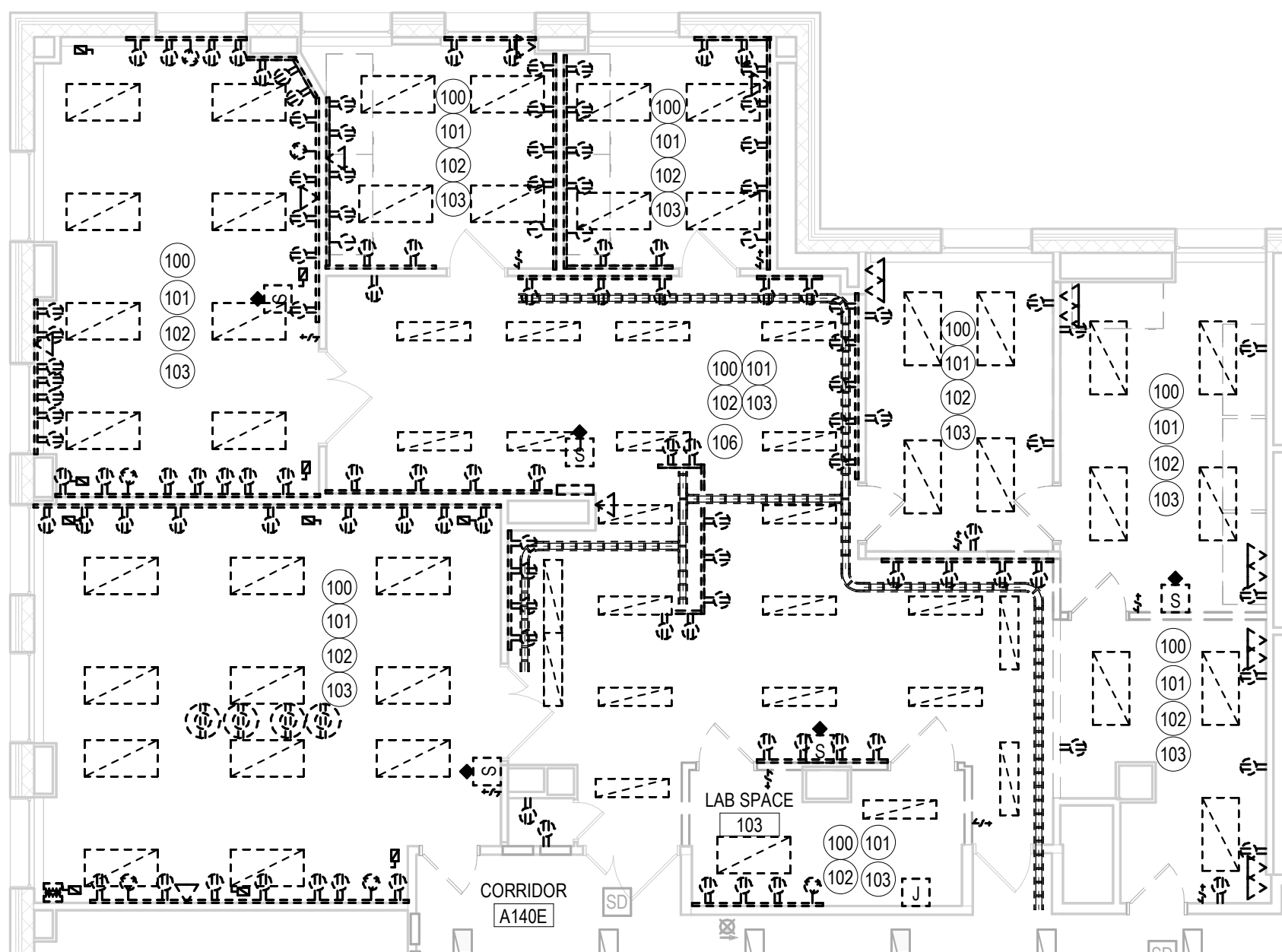
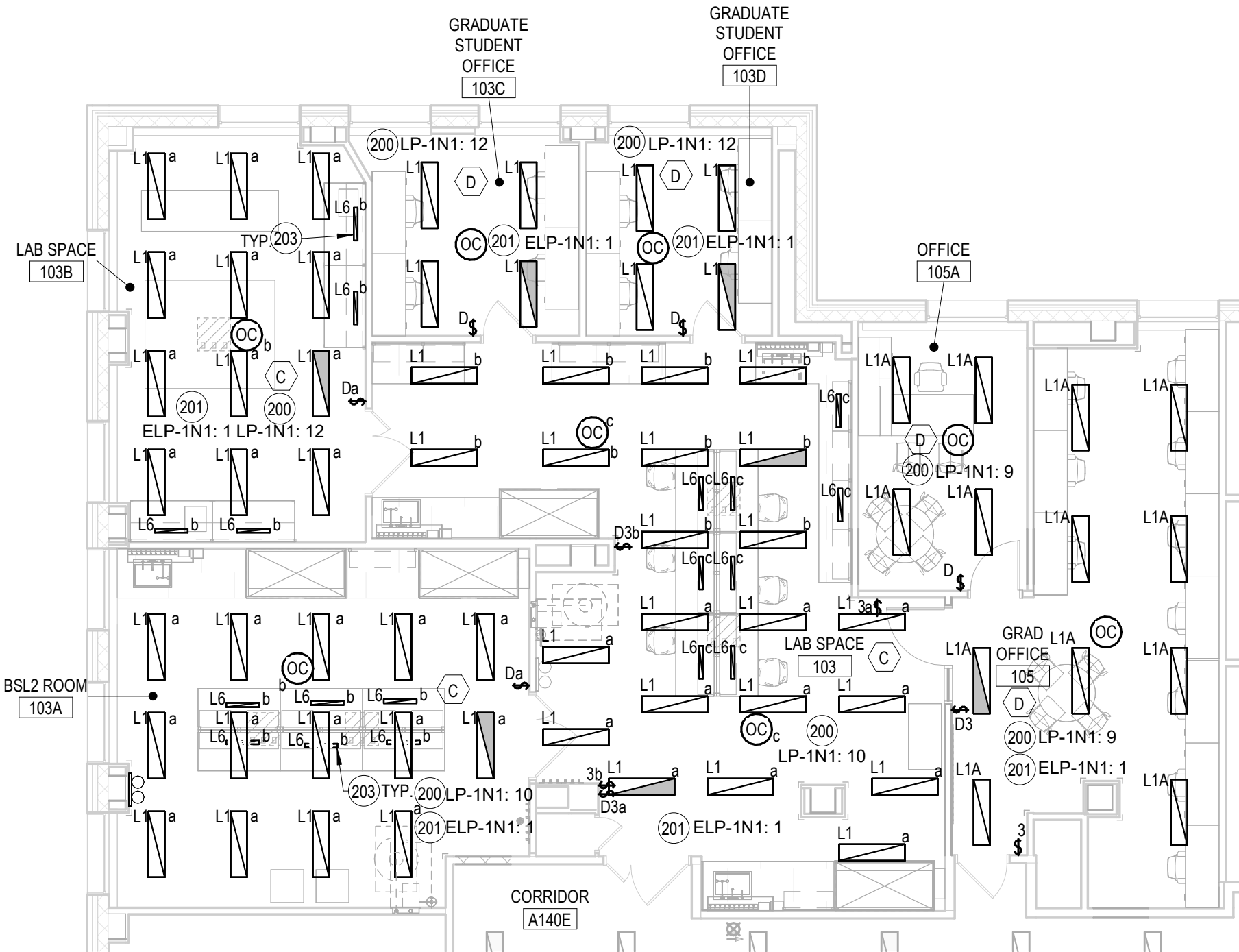
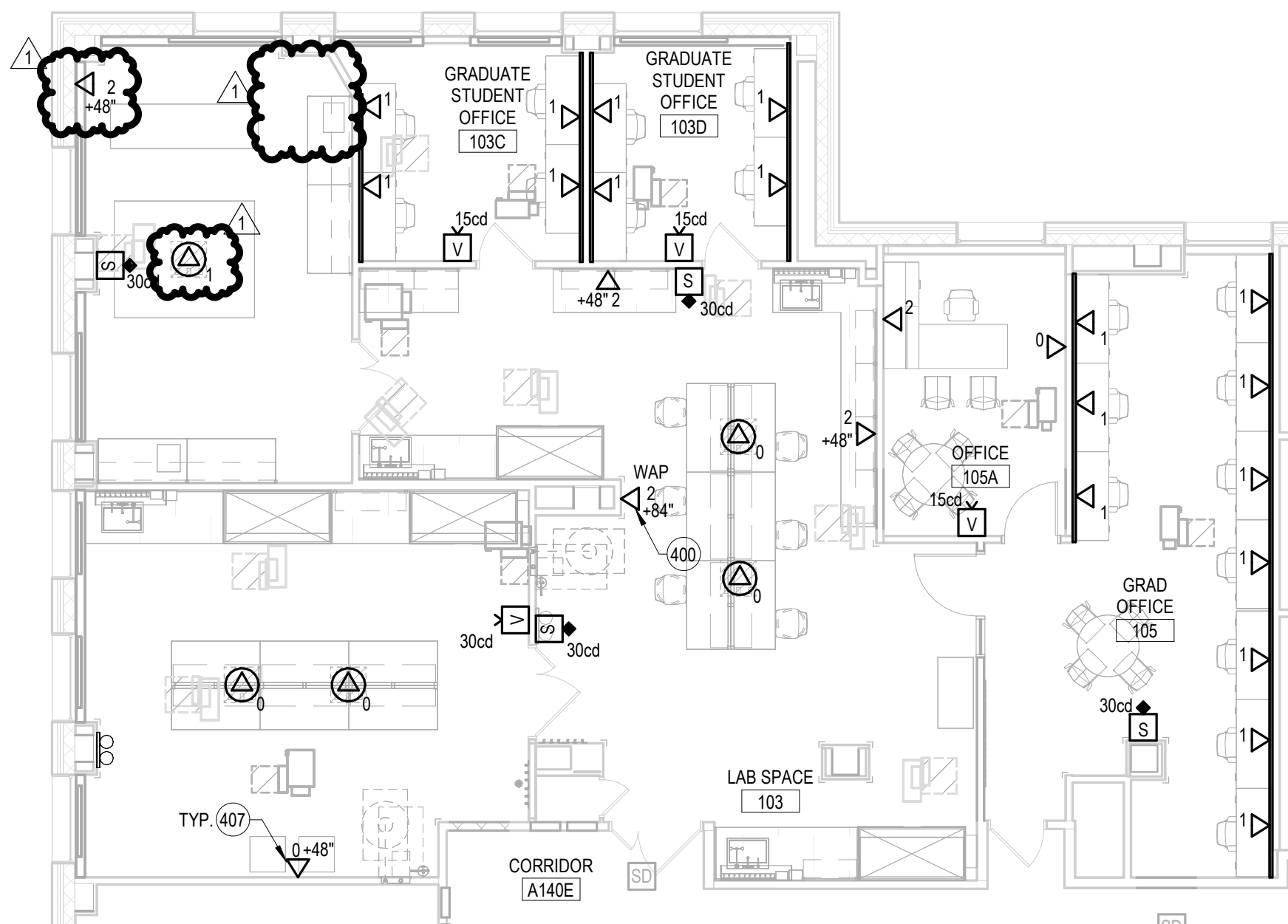
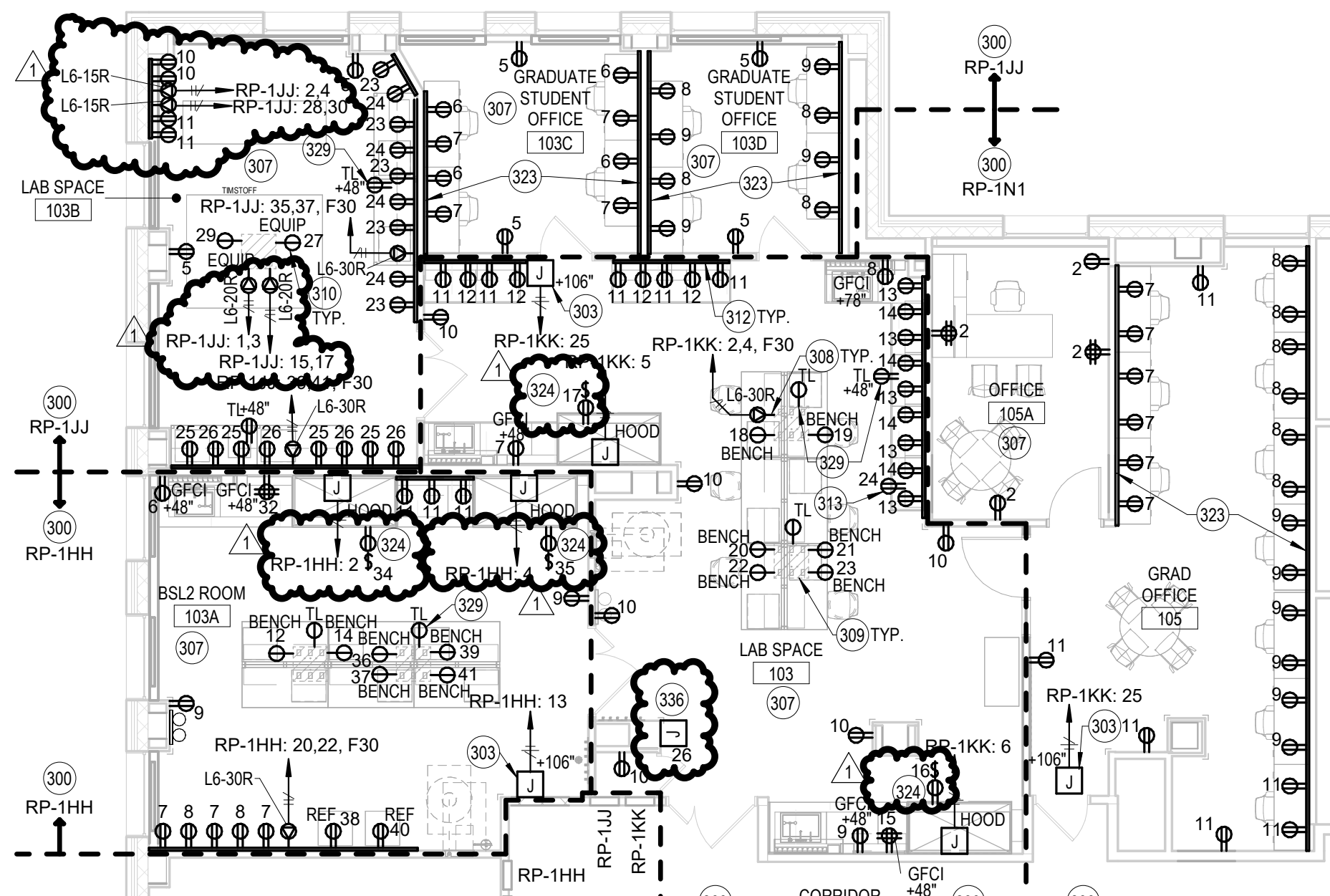
LIGHTING CONTROL MATRIX SCHEDULE									
CONTROL TYPE	AUTO ON	MANUAL ON	AUTO OFF	MANUAL OFF	DAYLIGHT DIMMING	DAYLIGHT SENSING	EGRESS SENSOR	IR OCCUPANCY SENSOR	LINE VOLTAGE SWITCHING
A	x	x	x	x	x	x	x	x	x
B	x	x	x	x	x	x	x	x	x
C	x	x	x	x	x	x	x	x	x
D	x	x	x	x	x	x	x	x	x

CONTROL REMARKS

SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACES FOR OCCUPANT SAFETY.

SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACES FOR OCCUPANT SAFETY.

SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS.

1 ELECTRICAL DEMOLITION PLAN - LABS 103, 103C, 103D, 103E, 105
1/8" = 1'-0"2 LIGHTING PLAN - LABS 103, 103C, 103D, 103E, 105
1/8" = 1'-0"4 SYSTEMS PLAN - LABS 103, 103C, 103D, 103E, 105
1/8" = 1'-0"3 POWER PLAN - LABS 103, 103C, 103D, 103E, 105
1/8" = 1'-0"

X00	PLAN NOTES
100	DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS WITHIN THIS ROOM UNLESS NOTED OTHERWISE. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION WITHIN THE ROOM AND PREP FOR RECONNECTION IN NEW WORK. IN LOCATIONS WHERE NEW LED LIGHTING REQUIRE LESS CIRCUITS THAN EXISTING REMOVE UNUSED CIRCUITS BACK TO SOURCE AND LABEL BREAKER "SPARE".
101	DISCONNECT AND REMOVE ALL RECEPTACLES AND POWER CONNECTIONS WITHIN THIS SPACE INCLUDING CONDUIT AND WIRING BACK TO SOURCE UNLESS NOTED OTHERWISE.
102	DISCONNECT AND REMOVE ALL DATA JACKS WITHIN THIS SPACE INCLUDING WIRING BACK TO SOURCE AND PATHWAY BACK TO CORRIDOR CABLE TRAY UNLESS NOTED OTHERWISE.
103	DISCONNECT AND REMOVE ALL FIRE ALARM DEVICES WITHIN THIS ROOM. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION ABOVE CEILING AND PREP FOR REINSTALLATION IN NEW WORK.
106	DISCONNECT AND REMOVE CABLE TRAY BELOW EXISTING CEILING IN THIS ROOM COMPLETE.
200	CONNECT ALL NORMAL LIGHT FIXTURES WITHIN THIS SPACE TO EXISTING 277V, 1PH, 20A CIRCUIT SHOWN FROM PANEL INDICATED MADE AVAILABLE DURING DEMOLITION.
201	EGRESS FIXTURES IN THIS ROOM SHALL BE CONTROLLED WITH OTHER FIXTURES WITHIN THE ROOM AS SHOWN UNDER NORMAL OPERATION. PROVIDE UL624 LISTED TRANSFER DEVICE FOR EGRESS FIXTURES WITHIN THIS ROOM. UPON LOSS OF POWER, THE UL624 TRANSFER DEVICE SHALL TRANSFER POWER TO UNSWITCHED EGRESS CIRCUIT SHOWN FROM PANEL INDICATED. PROVIDE NORMAL POWER, EMERGENCY POWER, AND SENSING CIRCUIT AS REQUIRED.
203	TASK LIGHTS SHALL BE CORD AND PLUG CONNECTED TO CONTROLLED RECEPTACLE LOCATIONS.
300	CONNECT ALL NEW RECEPTACLES IN THIS AREA TO 120V, 20A, 1PH, NORMAL CIRCUIT SHOWN FROM PANEL INDICATED UNLESS SPECIFICALLY NOTED OTHERWISE.
303	HVAC CONTROLS TRANSFORMER. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION ABOVE CEILING WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
307	THERE ARE WALLS IN THIS ROOM THAT ARE CMU OR CONCRETE. ALL CONDUIT DROPS TO OUTLETS, DUAL CHANNEL RACEWAYS, ETC. SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS TO ENSURE CONDUIT(S) DO NOT IMPEDE OTHER WALL MOUNTED ITEMS. ALL CONDUIT SURFACE MOUNTED TO WALLS SHALL BE ROUTED NEATLY. PLUMB, SQUARE TO BUILDING LINES AND PAINTED TO MATCH WALL COLOR.
308	CEILING SERVICE PANEL RECEPTACLES LABELED WITH 16-20P OR 16-30P SHALL BE PROVIDED WITH AN SO CORD ASSEMBLY CONSISTING OF: (1) NEMA TWIST LOCKING PLUG MATCHING LABEL, 8'-0" OF (3/16" WIRE SO CORD), (1) NEMA TWIST LOCKING CONNECTOR BODY MATCHING LABEL, AND STRAIN RELIEF DEVICES. REFER TO SO CORD DETAIL ON SHEET 0000 UNLESS NOTED OTHERWISE.
309	LAB CEILING SERVICE PANEL. PROVIDE 15-20R RECEPTACLES FOR ALL RECEPTACLES TAGGED "BENCH". QUANTITY AS SHOWN ON THE DRAWINGS. REFER TO ARCHITECTURAL "LIT" SERIES DRAWINGS FOR ADDITIONAL INFORMATION. EC SHALL PROVIDE WIRING DEVICE, STAINLESS STEEL FACEPLATE, WIRING AND CONNECTION. CSP AND BACK BOX SHALL BE BY LAB FURNISHINGS CONTRACTOR. EC SHALL PROVIDE BLANK STAINLESS STEEL PLATES ON ALL UNUSED ELECTRICAL DATA OPENINGS IN PANELS.
310	CEILING SERVICE PANEL RECEPTACLES LABELED "EQUIP" SHALL BE 15-20R RECEPTACLES PROVIDED WITH AN SO CORD ASSEMBLY CONSISTING OF: (1) NEMA 15-20P, 8'-0" OF (3/16" WIRE SO CORD), (1) NEMA 5-20R, AND STRAIN RELIEF DEVICES. REFER TO SO CORD DETAIL ON SHEET 0000 UNLESS NOTED OTHERWISE.
312	SINGLE CHANNEL RACEWAY WIRING/OLD AL3300 OR SIMILAR. RACEWAY SHALL BE MOUNTED AT -3'-6" AFF TO CENTER OF RACEWAY UNLESS NOTED OTHERWISE.
313	PROVIDE DEDICATED RECEPTACLE FOR VACUUM PUMP LOCATED IN BACK OF CABINET. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION OF ROUGH-IN WITH PLUMBING CONTRACTOR AND LAB FURNISHINGS CONTRACTOR PRIOR TO ROUGH-IN.
323	DUAL CHANNEL RACEWAY WIRING/OLD AL5400 OR SIMILAR. RACEWAY SHALL BE MOUNTED AT -3'-6" AFF TO CENTER OF RACEWAY UNLESS NOTED OTHERWISE.
324	PROVIDE DEDICATED 120V, 20A, 1P CIRCUIT FOR VACUUM PUMP. INSTALL OUTLET IN BACK OF CABINET AND INSTALL SWITCH CONTROLLING OUTLET ON FACE OF CABINET. REFER TO LIT DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ROUGH-INS WITH LAB FURNISHINGS CONTRACTOR.
329	ALL RECEPTACLES LABELED "TL" SHALL BE LABELED TO INDICATE THAT THEY ARE CONTROLLED. CONNECT COMPLETE TO 120V, 20A, 1PH CIRCUIT SHOWN FROM PANEL INDICATED.
336	NATURAL GAS EPO AND SOLENOID. COORDINATE EXACT LOCATION IN THE FIELD WITH PLUMBING CONTRACTOR. CONNECT COMPLETE TO 120V, 1PH, 20A CIRCUIT SHOWN FROM PANEL INDICATED.
407	PROVIDE PATHWAY TO ABOVE CEILING WITH PULL STRING AND BACK BOX AT ALL LOCATIONS SHOWN WITH DATA "P" FOR FUTURE CONNECTIONS. PROVIDE BLANK COVER PLATE.

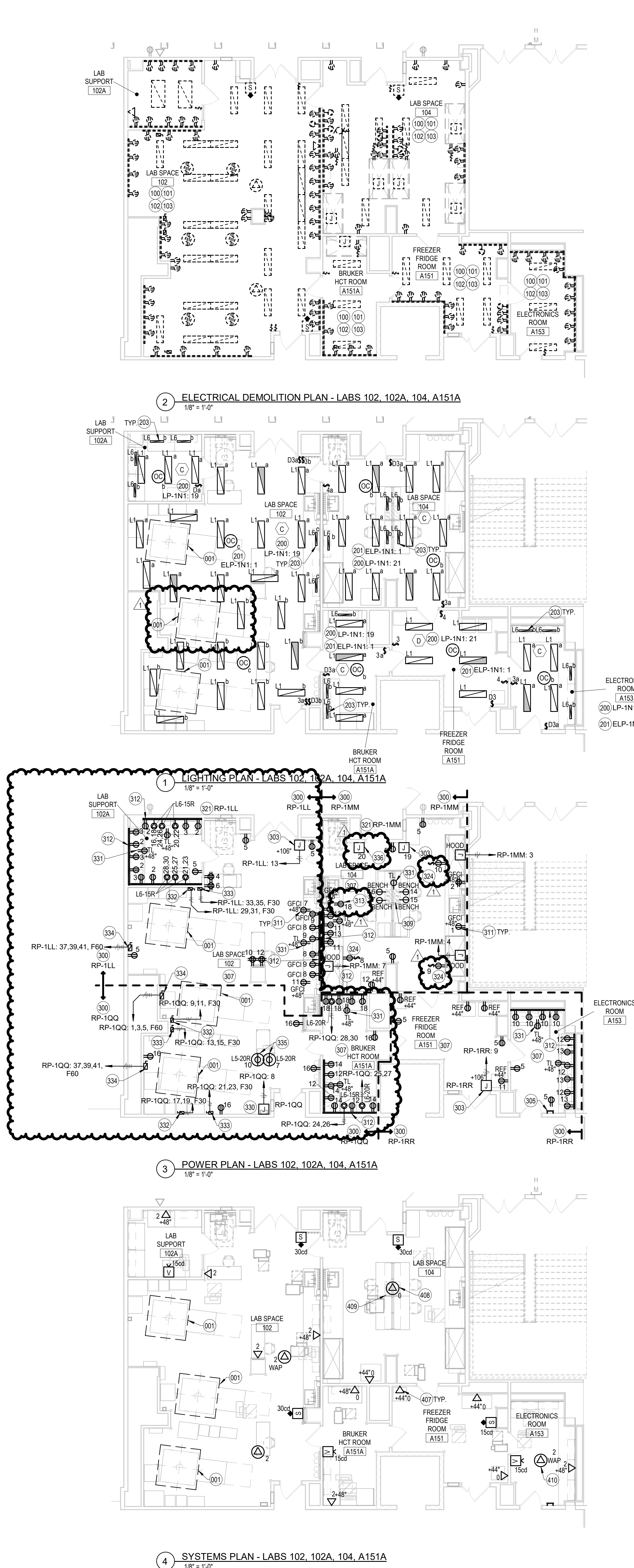
DEMOLITION GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	ELECTRICAL CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.
C.	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTION, RELOCATING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND FINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
D.	REMOVE ALL LIGHT FIXTURES, RECEPTACLES, SWITCHES, ETC. AND ASSOCIATED WIRING AS INDICATED.
E.	REMOVE ALL CONDUIT AND BOXES NOT TO BE USED FOR NEW WORK.
F.	IN REMODELED/ALTERED AREA ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGHOUT THE REMODELED AREAS TO SERVE (OR BE SERVED FROM) EXISTING ADJACENT, REMOVE, OR SURROUNDING THAT ARE TO REMAIN SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
G.	WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO MAINTAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.
H.	THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES BEING REMOVED.
I.	IT IS MANDATORY THE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT ON CONTINUING OPERATION INCLUDING POWER, LIGHTING, TELEPHONE, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION SHALL HAVE WRITTEN APPROVAL AND BE ARRANGED WITH THE OWNER THROUGH THE GENERAL CONTRACTOR A MINIMUM OF TWO (2) WEEKS IN ADVANCE.
J.	EXISTING CONDUIT AND BOXES IN BLOCK WALLS NOTED TO BE REMOVED, SHALL HAVE THE BOX REMOVED AND CONDUIT PULLED OUT OF THE WALL WHERE POSSIBLE. IF REMOVAL IS NOT POSSIBLE, THEY SHALL BE ABANDONED IN PLACE. BLOCK WALLS SHOULD NOT BE DEMOLISHED TO REMOVE THESE ITEMS. EXISTING CONDUIT AND BOXES IN STUD WALLS NOTED TO BE REMOVED SHALL BE REMOVED COMPLETE, CUT & PATCH DRYWALL. REFER TO ARCHITECTURAL PLANS FOR WALL TYPES. REFER TO DIVISION 26 "COMMON WORK RESULTS FOR ELECTRICAL".

LIGHTING GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUITS SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONNECTED LOAD SHALL NOT EXCEED 3000VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
C.	CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
D.	PROVIDE ALL OCCUPANCY / VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INTENDED TO HAVE SUCH CONTROL.
E.	BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT -4'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
F.	WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.
G.	ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
H.	ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
I.	OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT -4'-0" AFF. RIGIDLY SUPPORT J-BOX FROM THE DECK.
J.	SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
K.	ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

POWER GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO MFC SERIES DRAWINGS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
C.	REFER TO ARCHITECTURAL SCHEDULES, DETAILS AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.
D.	ALL 120V/1PH RECEPTACLES WITHIN SIX FEET OF A SINK SHALL BE GFCI TYPE. THE DEVICES MAY OR MAY NOT BE IDENTIFIED AS GFCI ON THE PLANS BUT SHALL BE PROVIDED ACCORDING TO THE REQUIREMENT. COORDINATE WITH ARCHITECTURAL, LAB FURNISHINGS, AND PLUMBING DRAWINGS.
E.	THE ELECTRICAL CONTRACTOR SHALL VERIFY CORD AND PLUG CONNECTED EQUIPMENT CORD CONFIGURATION AND PROVIDE MATCHING RECEPTACLE AS REQUIRED.
F.	ELECTRICAL SERVICES SHALL NOT ROUTE THROUGH ANY IDF ROOM UNLESS DIRECTLY SERVING THAT ROOM.
G.	REFER TO DIVISION 26 SECTION 1 "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS" FOR ADDITIONAL GROUNDING REQUIREMENTS FOR FLAMMABLE STORAGE CABINETS, SOLVENT CABINETS, ETC.
H.	REFER TO DIVISION 26 SECTION 1 "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS" FOR ADDITIONAL GROUNDING REQUIREMENTS FOR FLAMMABLE STORAGE CABINETS, SOLVENT CABINETS, ETC.
I.	LAB CASEWORK SUPPLIER SHALL PROVIDE THE LAB CEILING SERVICE PANEL(S) AND BACK BOXES. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING DEVICES, COVERPLATES, AND CONNECTION OF DEVICES. EC SHALL PROVIDE BLANK STAINLESS STEEL COVER PLATES FOR UNUSED CSP BOXES.
J.	PROVIDE CONTROL WIRING FROM VARIABLE FREQUENCY CONTROLLER THROUGH AUXILIARY CONTACT AT ASSOCIATED DISCONNECT SWITCH FOR OPENING OF CONTROL CIRCUIT PRIOR TO OPENING OF DISCONNECT. ROUTE CONTROL WIRING IN A DEDICATED CONDUIT SEPARATE FROM THE POWER WIRING.
K.	TASK LIGHT RECEPTACLES ARE LABELED "TL" THESE RECEPTACLES SHALL BE CONTROLLED BY THE OCCUPANCY SENSORS IN THE ROOM THEY SERVE.

SYSTEMS GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	PROVIDE CONDUIT SLEEVES TO SERVE ALL LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELECOMMUNICATIONS STRUCTURED CABLING, ACCESS CONTROL VIDEO SURVEILLANCE, POE CLOCKS, AND AUDIO VISUAL SYSTEMS. COORDINATE WITH ARCHITECTURAL LIFE SAFETY PLAN FOR FIRE AND SMOKE WALL/FLOOR LOCATIONS AND FIRE RATINGS. PROVIDE RATED CONDUIT PENETRATION SYSTEMS AS REQUIRED. REFER TO DIVISION 7 SPECIFICATIONS FOR ADDITIONAL INFORMATION. MINIMUM CONDUIT SLEEVE SIZE SHALL BE 2" WITH PLASTIC BUSHINGS ON BOTH ENDS.
C.	JACKS SERVING LOW VOLTAGE SYSTEMS BY CONTRACTOR.
D.	MDF AND IDF ARE EXISTING TO REMAIN.
E.	PROVIDE PULL STRINGS IN ROUGH-INS.
F.	PROVIDE BLANK COVER PLATES FOR UNUSED OUTLET BOXES.
G.	IN FINISHED ROOMS AND AREAS, EXPOSED CONDUITS, J-BOXES, SUPPORTS, ETC. SHALL BE PAINTED. COORDINATE PAINTING OF EXPOSED EQUIPMENT WITH DIVISION 9 CONTRACTOR. DO NOT PAINT LOW VOLTAGE SYSTEMS CABLING. DO NOT PAINT FIRE ALARM CONDUIT.
H.	PROVIDE EXPANSION OF EXISTING FIRE ALARM SYSTEM AS INDICATED ON DRAWINGS AND SPECIFICATIONS. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO EXPAND EXISTING FIRE ALARM SYSTEM COMPLETE.
I.	MODIFICATIONS TO, OR EXPANSION OF, THE EXISTING FIRE ALARM PANEL SHALL REQUIRE THAT THE FIRE ALARM SYSTEM BE RECERTIFIED PRIOR TO PROJECT COMPLETION. ALL KNOWN TROUBLE CONDITIONS SHALL BE DOCUMENTED TO THE PROJECT TEAM AND OWNER PRIOR TO ANY CHANGES. EXISTING TROUBLE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE OWNER TO BE RESOLVED PRIOR TO RECERTIFICATION OF THE SYSTEM.
J.	ALL MODIFIED INITIATING LOOPS SHALL BE RETESTED COMPLETE, PRIOR TO PROJECT CERTIFICATION TO ENSURE THAT THE ENTIRE ADDRESSABLE LOOP IS STILL OPERATIONAL.
K.	ALL MODIFIED NOTIFICATION CIRCUITS SHALL HAVE ALL DEVICES RETESTED ON LOOPS THAT HAVE BEEN MODIFIED. END OF LINE DEVICES SHALL BE LABELED AT THE DEVICE WHERE THE EOL IS PLACED. EOL LOCATIONS SHALL BE NOTED ON THE PROJECT DOCUMENTS. REVISED VOLTAGE DROP AND BATTERY CALCULATIONS TO BE RESUBMITTED FOR MODIFIED CIRCUITS.
L.	ALL REQUIRED CERTIFICATION DOCUMENTATION TO BE SUBMITTED PER NFPA REQUIREMENTS.
M.	THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.
N.	DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3'-FEET OF AN AIR DIFFUSER.
O.	SYNCHRONIZE ALL VISUAL DEVICES.
P.	A VISUAL INDICATOR SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.
Q.	ALL FIRE ALARM WIRING SHALL BE INSTALLED IN FIRE ALARM EMT CONDUIT WITH A BRIGHT RED TOPCOAT.

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PLAN NOTES	
X00	
001	AREA INSIDE THIS BOX IS THE CLEARANCE AREA FOR THE EQUIPMENT AND SHALL BE KEPT CLEAR TO 4'-7 7/8\"
100	DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS WITHIN THIS ROOM UNLESS NOTED OTHERWISE. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION WITHIN THE ROOM AND PREP FOR RECONNECTION IN NEW WORK. IN LOCATIONS WHERE NEW LED LIGHTING REQUIRED, LESS CIRCUITS THAN EXISTING REMOVE UN-USED CIRCUITS BACK TO SOURCE AND LABEL BREAKER \"SPARE\".
101	DISCONNECT AND REMOVE ALL RECEPTACLES AND POWER CONNECTIONS WITHIN THIS SPACE INCLUDING CONDUIT AND WIRING BACK TO SOURCE UNLESS NOTED OTHERWISE. DISCONNECT AND REMOVE ALL DATA JACKS WITHIN THIS SPACE INCLUDING WIRING BACK TO SOURCE AND PATHWAY BACK TO CORRIDOR CABLE TRAY UNLESS NOTED OTHERWISE.
102	DISCONNECT AND REMOVE ALL FIRE ALARM DEVICES WITHIN THIS ROOM. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION ABOVE CEILING AND PREP FOR REINSTALLATION IN NEW WORK.
103	CONNECT ALL NORMAL LIGHT FIXTURES WITHIN THIS SPACE TO EXISTING 277V, 1PH, 20A CIRCUIT SHOWN FROM PANEL. PROVIDE MADE AVAILABLE DURING DEMOLITION.
201	EGRESS FIXTURES IN THIS ROOM SHALL BE CONTROLLED WITH OTHER FIXTURES WITHIN THE ROOM AS SHOWN UNDER NORMAL OPERATION. PROVIDE UL624 LISTED TRANSFER DEVICE FOR EGRESS FIXTURES WITHIN THIS ROOM. UPON LOSS OF POWER, THE UL624 TRANSFER DEVICE SHALL TRANSFER POWER TO UNWITNESSED EGRESS CIRCUIT SHOWN FROM PANEL INDICATED. PROVIDE NORMAL POWER, EMERGENCY POWER, AND SENSING CIRCUIT AS REQUIRED.
203	TASK LIGHTS SHALL BE CORD AND PLUG CONNECTED TO CONTROLLED RECEPTACLE LOCATIONS.
300	CONNECT ALL NEW RECEPTACLES IN THIS AREA TO 120V, 20A, 1PH, NORMAL CIRCUIT SHOWN FROM PANEL INDICATED UNLESS SPECIFICALLY NOTED OTHERWISE.
303	HVAC CONTROLS TRANSFORMER. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION ABOVE CEILING WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
305	PROVIDE NEW 12 INCH WIDE BY 2 INCH TALL GROUND BAR INSIDE LAB. LOCATED APPROXIMATELY 12 INCHES BELOW FINISHED CEILING. CONNECT COMPLETE TO GROUND BUS INSIDE PANEL. RP-1RR WITH #10 GROUND CONDUCTOR. THIS GROUND BAR SHALL BE CLEARLY IDENTIFIED WITH LABEL READING \"INSTRUMENT GROUND BAR\". GROUND CONDUCTOR SHALL BE RUN IN PVC CONDUIT BACK TO PANEL.
307	THERE ARE WALLS IN THIS ROOM THAT ARE CMU OR CONCRETE. ALL CONDUIT DROPS TO OUTLETS, DUAL CHANNEL RACEWAYS, ETC. SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS TO ENSURE CONDUITS) DO NOT IMPEDE OTHER WALL MOUNTED ITEMS. ALL CONDUIT SURFACE MOUNTED TO WALLS SHALL BE ROUTED NEATLY. PLUMB, SQUARE TO BUILDING LINES AND PAINTED TO MATCH WALL. COLOR, 20.
309	LAB CEILING SERVICE PANEL. PROVIDE 15-20R RECEPTACLES FOR ALL RECEPTACLES TAGGED \"BENCH\". QUANTITY AS SHOWN ON THE DRAWINGS. REFER TO ARCHITECTURAL \"LIT\" SERIES DRAWINGS FOR ADDITIONAL INFORMATION. EC SHALL PROVIDE WIRING DEVICE, STAINLESS STEEL FACEPLATE, WIRING AND CONNECTION. CSP AND BACK BOX SHALL BE BY LAB FURNISHINGS CONTRACTOR. EC SHALL PROVIDE BLANK STAINLESS STEEL PLATES ON ALL UNUSED ELECTRICAL DATA OPENINGS IN PANELS.
311	PROVIDE DEDICATED CIRCUIT FOR FUTURE DI WATER TREATMENT SYSTEM. COORDINATE PLACEMENT OF POWER WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN. TYPICAL OF ALL LAB SINKS WITH RECEPTACLE ABOVE.
312	SINKS, CHASEWAYS, AND CHASEWAYS SHALL BE PROVIDED WITH BLANK STAINLESS STEEL COVER PLATES.
313	PROVIDE DEDICATED RECEPTACLE FOR VACUUM PUMP LOCATED IN BACK OF CABINET. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION OF ROUGH-IN WITH PLUMBING CONTRACTOR AND LAB FURNISHINGS CONTRACTOR PRIOR TO ROUGH-IN.
314	REFER TO PANEL SCHEDULES FOR EXACT BREAKER TYPES AND SIZES REQUIRED TO SERVE NEW SPACE.
324	PROVIDE DEDICATED 120V, 20A, 1P CIRCUIT FOR VACUUM PUMP. INSTALL OUTLET IN BACK OF CABINET AND INSTALL SWITCH CONTROLLING OUTLET ON FACE OF CABINET. REFER TO L.F. DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ROUGH-INS WITH LAB FURNISHINGS CONTRACTOR.
330	PROVIDE 120V, 20A, 1PH CIRCUIT SHOWN FROM PANEL INDICATED FOR OXYGEN DEPLETION MONITOR. COORDINATE EXACT LOCATION IN THE FIELD WITH MECHANICAL CONTRACTOR.
331	ALL RECEPTACLES LABELED \"TL\" SHALL BE LABELED TO INDICATE THAT THEY ARE CONTROLLED. CONNECT COMPLETE TO 120V, 20A 1PH CIRCUIT RP-1LL THROUGH PANEL INDICATED.
332	PROVIDE 208V, 30A, 2P FUSED DISCONNECT IN NEMA 1 ENCLOSURE FOR CRYOPREFRIGERATOR. FUSED PER USER EQUIPMENT REQUIREMENTS. COORDINATE FUSE SIZE WITH EXACT EQUIPMENT TO BE INSTALLED AT THIS LOCATION.
333	PROVIDE 208V, 30A, 2P FUSED DISCONNECT IN NEMA 1 ENCLOSURE FOR HEAT EXCHANGER. FUSED PER USER EQUIPMENT REQUIREMENTS. COORDINATE FUSE SIZE WITH EXACT EQUIPMENT TO BE INSTALLED AT THIS LOCATION.
334	PROVIDE 208V, 60A, 3P FUSED DISCONNECT IN NEMA 1 ENCLOSURE FOR POWER CONDITIONER/BUCK BOOST TRANSFORMER. FUSED PER USER EQUIPMENT REQUIREMENTS. COORDINATE FUSE SIZE WITH EXACT EQUIPMENT TO BE INSTALLED AT THIS LOCATION.
335	15-20R RECEPTACLES SHALL BE PROVIDED WITH AN SO CORD ASSEMBLY CONSISTING OF: (1) NEMA L5-20P, 8'-0\"
336	NATURAL GAS EPO AND SOLIDBOND. COORDINATE EXACT LOCATION IN THE FIELD WITH PLUMBING CONTRACTOR. CONNECT COMPLETE TO 120V, 1PH, 20A CIRCUIT SHOWN FROM PANEL INDICATED.
400	LOCATIONS SHOWN WITH DATA \"V\" FOR FUTURE CONNECTIONS. PROVIDE BLANK COVER PLATE.
408	PROVIDE PATHWAY TO CORRIDOR AT ALL CEILING SERVICE PANEL LOCATIONS SHOWN WITH DATA \"V\" FOR FUTURE CONNECTIONS. PROVIDE BLANK STAINLESS STEEL COVER PLATE.
409	CEILING SERVICE PANEL. PROVIDE DATA OUTLETS AS SHOWN. REFER TO L.F. DRAWINGS, POWER DRAWINGS, AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.
410	NEW WIRELESS ACCESS POINT. EC SHALL PROVIDE DATA CABLEING AND TERMINATE JACKS. UITS SHALL PROVIDE AND INSTALL WAP COORDINATE WITH UITS FOR ADDITIONAL REQUIREMENTS.

DEMOLITION GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	ELECTRICAL CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.
C.	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTION, RELOCATING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, ABANDONING, REPAIRING, REPLACING AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
D.	REMOVE ALL LIGHT FIXTURES, RECEPTACLES, SWITCHES, ETC. AND ASSOCIATED WIRING AS INDICATED.
E.	REMOVE ALL CONDUIT AND BOXES NOT TO BE USED FOR NEW WORK.
F.	IN REMODELED/ALTERED AREA ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGHOUT THE REMODELED AREAS TO SERVE OR BE SERVED FROM EXISTING ADJACENT, REMOTE, OR SURROUNDING THAT ARE TO REMAIN) SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
G.	WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO MAINTAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.
H.	THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES BEING REMOVED.
I.	IT IS MANDATORY THE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDING POWER, LIGHTING, TELEPHONE, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION SHALL HAVE WRITTEN APPROVAL AND BE ARRANGED WITH THE OWNER THROUGH THE GENERAL CONTRACTOR A MINIMUM OF TWO (2) WEEKS IN ADVANCE.
J.	EXISTING CONDUIT AND BOXES IN BLOCK WALLS NOTED TO BE REMOVED, SHALL HAVE THE BOX REMOVED AND CONDUIT PULLED OUT OF THE WALL WHERE POSSIBLE. IF REMOVAL IS NOT POSSIBLE, THEY SHALL BE ABANDONED IN PLACE. BLOCK WALLS SHOULD NOT BE DEMOLISHED TO REMOVE THESE ITEMS. EXISTING CONDUIT AND BOXES IN STUD WALLS NOTED TO BE REMOVED SHALL BE REMOVED COMPLETE, CUT & PATCH DRYWALL. REFER TO ARCHITECTURAL PLANS FOR WALL TYPES. REFER TO DIVISION 26 \"COMMON WORK RESULTS FOR ELECTRICAL\".

LIGHTING GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUIT SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONTINUOUS LOAD SHALL NOT EXCEED 3000VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
C.	CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
D.	PROVIDE ALL OCCUPANCY / VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
E.	BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT +9'-0\"
F.	WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0\"
G.	ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
H.	ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
I.	OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT +9'-0\"
J.	SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
K.	ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

POWER GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUIT SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONTINUOUS LOAD SHALL NOT EXCEED 3000VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
C.	CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
D.	PROVIDE ALL OCCUPANCY / VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
E.	BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT +9'-0\"
F.	WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0\"
G.	ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
H.	ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
I.	OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT +9'-0\"
J.	SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
K.	ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

SYSTEMS GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUIT SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONTINUOUS LOAD SHALL NOT EXCEED 3000VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
C.	CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
D.	PROVIDE ALL OCCUPANCY / VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
E.	BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT +9'-0\"
F.	WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0\"
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H.	ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
I.	OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT +9'-0\"
J.	SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
K.	ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

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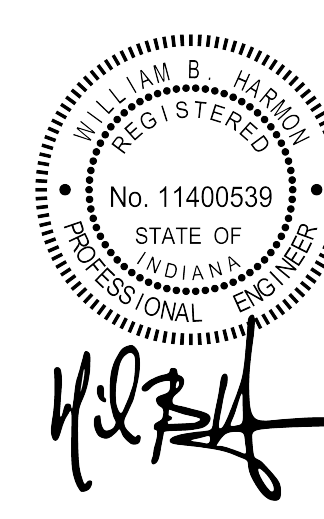
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
300 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
12 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
1	1/27/25	ADDENDUM #2



CHEMISTRY FIRST FLOOR
ELECTRICAL PLANS
-102/104 LABS

DATE JANUARY 9, 2025
BSALS PROJECT NO. 00360477

LIGHTING CONTROL MATRIX SCHEDULE									
CONTROL TYPE	AUTO ON	MANUAL ON	AUTO OFF	MANUAL OFF	D-DIMMING	DAYLIGHT HARVESTING	TASK LIGHTING ON SENSOR	IR PARTITION SENSOR	LINE VOLTAGE SWITCHING
A	X	X	X	X					
B	X	X	X	X					
C	X	X	X	X					
D	X	X	X	X					

CONTROL REMARKS	
A	SWITCHLEGS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACES FOR OCCUPANT SAFETY.
B	SWITCHLEGS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACE FOR OCCUPANT SAFETY.
C	SWITCHLEGS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS.
D	SWITCHLEGS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS.

E311



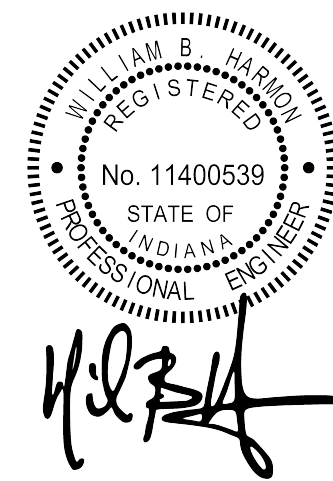
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IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
300 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
12 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025



CHEMISTRY FIRST FLOOR
ELECTRICAL PLANS - A140
LABS AND OFFICES

DATE JANUARY 9, 2025
BSALS PROJECT NO. 00360477

E312

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- ### DEMOLITION GENERAL NOTES
- REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
 - ELECTRICAL CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.
 - ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTION, RELOCATING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, REMOVAL, REPAIRING, REPLACING AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
 - REMOVE ALL LIGHT FIXTURES, RECEPTACLES, SWITCHES, ETC. AND ASSOCIATED WIRING AS INDICATED.
 - REMOVE ALL CONDUIT AND BOXES NOT TO BE USED FOR NEW WORK.
 - IN REMODELED/ALTERED AREA ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGHOUT THE REMODELED AREAS TO SERVE AREAS SERVING FROM EXISTING ADJACENT, REMOTE, OR SUBORDINATING THAT ARE TO REMAIN SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
 - WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO MAINTAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.
 - THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES BEING REMOVED.
 - IT IS MANDATORY THE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE ABSOLUTELY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT ON CONTINUING OPERATION INCLUDING POWER, LIGHTING, TELEPHONE, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION SHALL HAVE WRITTEN APPROVAL AND BE ARRANGED WITH THE OWNER THROUGH THE GENERAL CONTRACTOR A MINIMUM OF TWO (2) WEEKS IN ADVANCE.
 - EXISTING CONDUIT AND BOXES IN BLOCK WALLS NOTED TO BE REMOVED, SHALL HAVE THE BOX REMOVED AND CONDUIT PULLED OUT OF THE WALL WHERE POSSIBLE. IF REMOVAL IS NOT POSSIBLE, THEY SHALL BE ABANDONED IN PLACE. BLOCK WALLS SHOULD NOT BE DEMOLISHED TO REMOVE THESE ITEMS. EXISTING CONDUIT AND BOXES IN STUD WALLS NOTED TO BE REMOVED SHALL BE REMOVED COMPLETE, CUT & PATCH DRYWALL. REFER TO ARCHITECTURAL PLANS FOR WALL TYPES. REFER TO DIVISION 26 "COMMON WORK RESULTS FOR ELECTRICAL".

- ### LIGHTING GENERAL NOTES
- REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
 - REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUIT SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONNECTED LOAD SHALL NOT EXCEED 3000VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
 - CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
 - PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
 - BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT -9'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
 - WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.
 - ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
 - ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
 - OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT -9'-0" AFF. RIGIDLY SUPPORT J-BOX FROM THE DECK.
 - SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
 - ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

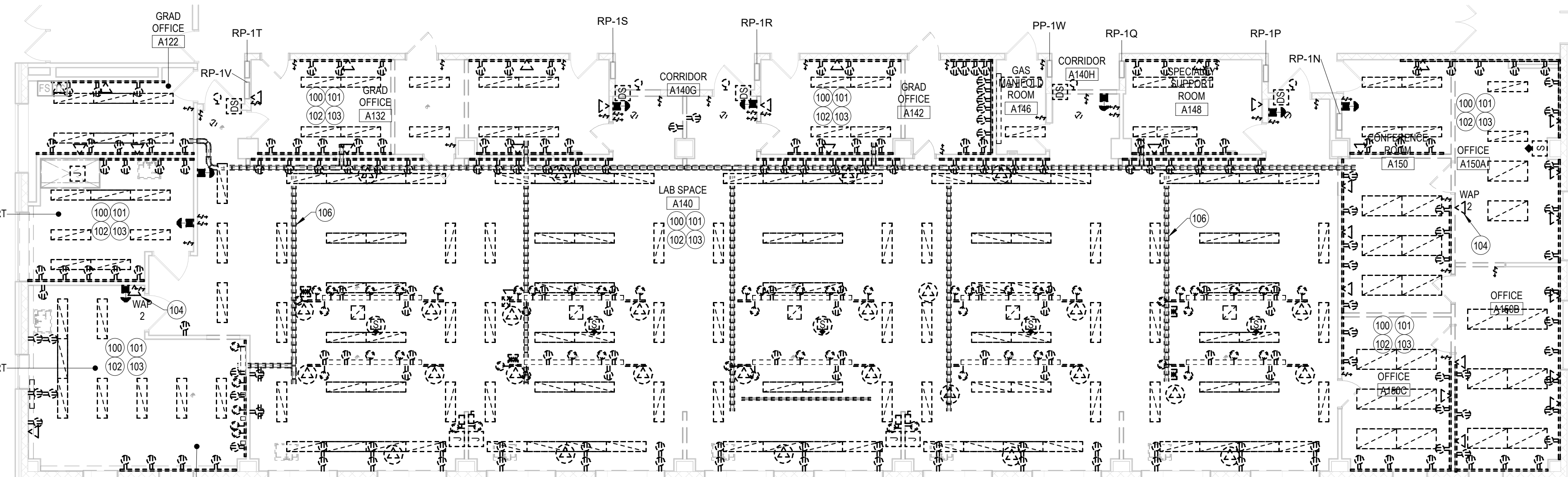
- ### POWER GENERAL NOTES
- REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
 - REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUIT SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONNECTED LOAD SHALL NOT EXCEED 3000VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
 - CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
 - PROVIDE ALL OCCUPANCY/VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
 - BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT -9'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
 - WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.
 - ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
 - ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR HVAC CONTROLS.
 - OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT -9'-0" AFF. RIGIDLY SUPPORT J-BOX FROM THE DECK.
 - SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
 - ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

- ### SYSTEMS GENERAL NOTES
- REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
 - PROVIDE CONDUIT SLEEVES TO SERVE ALL LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELECOMMUNICATIONS STRUCTURED CABLING, ACCESS CONTROL VIDEO SURVEILLANCE, POE CLOCKS, AND AUDIO VISUAL SYSTEMS. COORDINATE WITH ARCHITECTURAL LIFE SAFETY PLAN FOR FIRE AND SMOKE WALL/FLOOR LOCATIONS AND FIRE RATINGS. PROVIDE RATED CONDUIT PENETRATION SYSTEMS AS REQUIRED. REFER TO DIVISION 7 SPECIFICATIONS FOR ADDITIONAL INFORMATION. MINIMUM CONDUIT SLEEVE SIZE SHALL BE 2" WITH PLASTIC BUSHINGS ON BOTH ENDS.
 - J-HOOKS SERVING LOW VOLTAGE SYSTEMS BY CONTRACTOR.
 - MDF AND IDPs ARE EXISTING TO REMAIN.
 - PROVIDE PULL STRINGS IN ROUGH-IN.
 - PROVIDE BLANK COVER PLATES FOR UNUSED OUTLET BOXES.
 - IN FINISHED ROOMS AND AREAS, EXPOSED CONDUITS, J-BOXES, SUPPORTS, ETC. SHALL BE PAINTED. COORDINATE PAINTING OF EXPOSED EQUIPMENT WITH DIVISION 5 CONTRACTOR. DO NOT PAINT LOW VOLTAGE SYSTEMS CABLING. DO NOT PAINT FIRE ALARM CONDUIT.
 - PROVIDE EXPANSION OF EXISTING FIRE ALARM SYSTEM AS INDICATED ON DRAWINGS AND SPECIFICATIONS. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO EXPAND EXISTING FIRE ALARM SYSTEM COMPLETE.
 - MODIFICATIONS TO, OR EXPANSION OF, THE EXISTING FIRE ALARM PANEL SHALL REQUIRE THAT THE FIRE ALARM SYSTEM BE RECERTIFIED PRIOR TO PROJECT COMPLETION. ALL KNOWN TROUBLE CONDITIONS SHALL BE DOCUMENTED TO THE PROJECT TEAM AND OWNER PRIOR TO ANY CHANGES. EXISTING TROUBLE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE OWNER TO BE RESOLVED PRIOR TO RECERTIFICATION OF THE SYSTEM.
 - ALL MODIFIED INITIATING LOOPS SHALL BE RETESTED COMPLETE, PRIOR TO PROJECT CERTIFICATION TO ENSURE THAT THE ENTIRE ADDRESSABLE LOOP IS STILL OPERATIONAL.
 - ALL MODIFIED NOTIFICATION CIRCUITS SHALL HAVE ALL DEVICES RETESTED ON LOOPS THAT HAVE BEEN MODIFIED. END OF LINE DEVICES SHALL BE LABELED AT THE DEVICE WHERE THE EOL IS PLACED. EOL LOCATIONS SHALL BE NOTED ON THE PROJECT DOCUMENTS. REVISED VOLTAGE DROP AND BATTERY CALCULATIONS TO BE RESUBMITTED FOR MODIFIED CIRCUITS.
 - ALL REQUIRED CERTIFICATION DOCUMENTATION TO BE SUBMITTED PER NFPA REQUIREMENTS.
 - THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC. AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.
 - DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3'-0" OF AN AIR DIFFUSER.
 - SYNCHRONIZE ALL VISUAL DEVICES.
 - A VISUAL INDICATOR SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.
 - ALL FIRE ALARM WIRING SHALL BE INSTALLED IN FIRE ALARM EMT CONDUIT WITH A BRIGHT RED TOPCOAT.

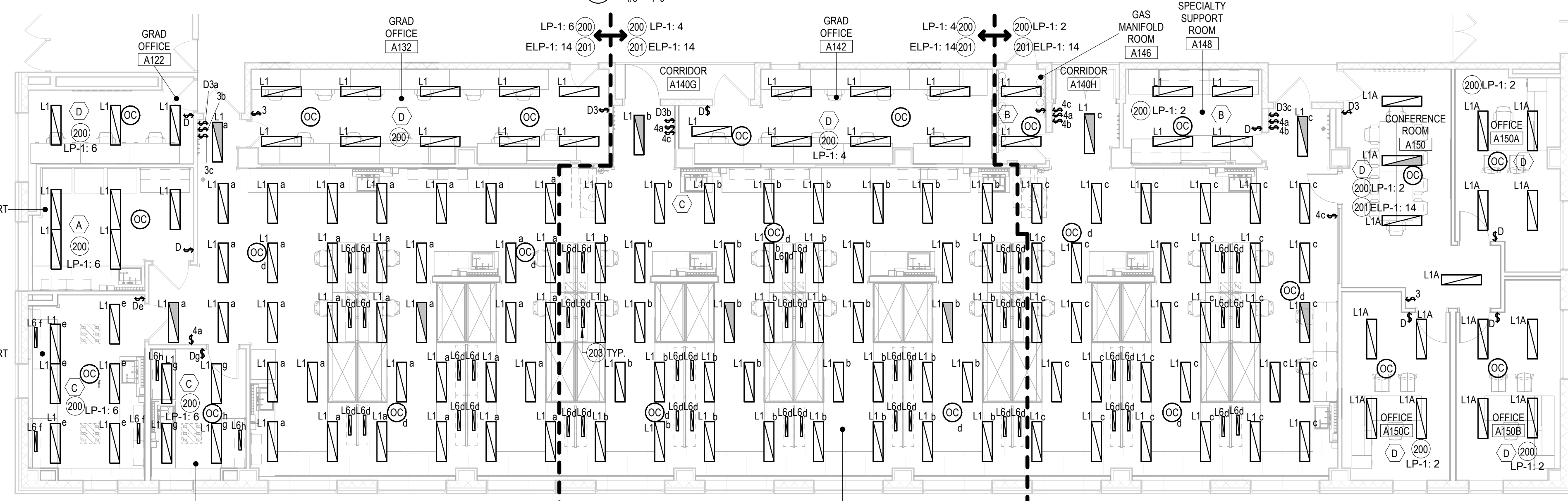
LIGHTING CONTROL MATRIX SCHEDULE

CONTROL TYPE	AUTO ON	MANUAL ON	AUTO OFF	MANUAL OFF	DAY/LIGHT HARVESTING	IR PARTITION SENSOR	LINE VOLTAGE SWITCHING	SWITCHED RECEPTACLE	CONTROL REMARKS
A	x	x	x	x					SWITCHLEGS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACES FOR OCCUPANT SAFETY.
B	x	x	x	x					SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACE FOR OCCUPANT SAFETY.
C	x	x	x	x	x				SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS.
D	x	x	x	x					SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS.

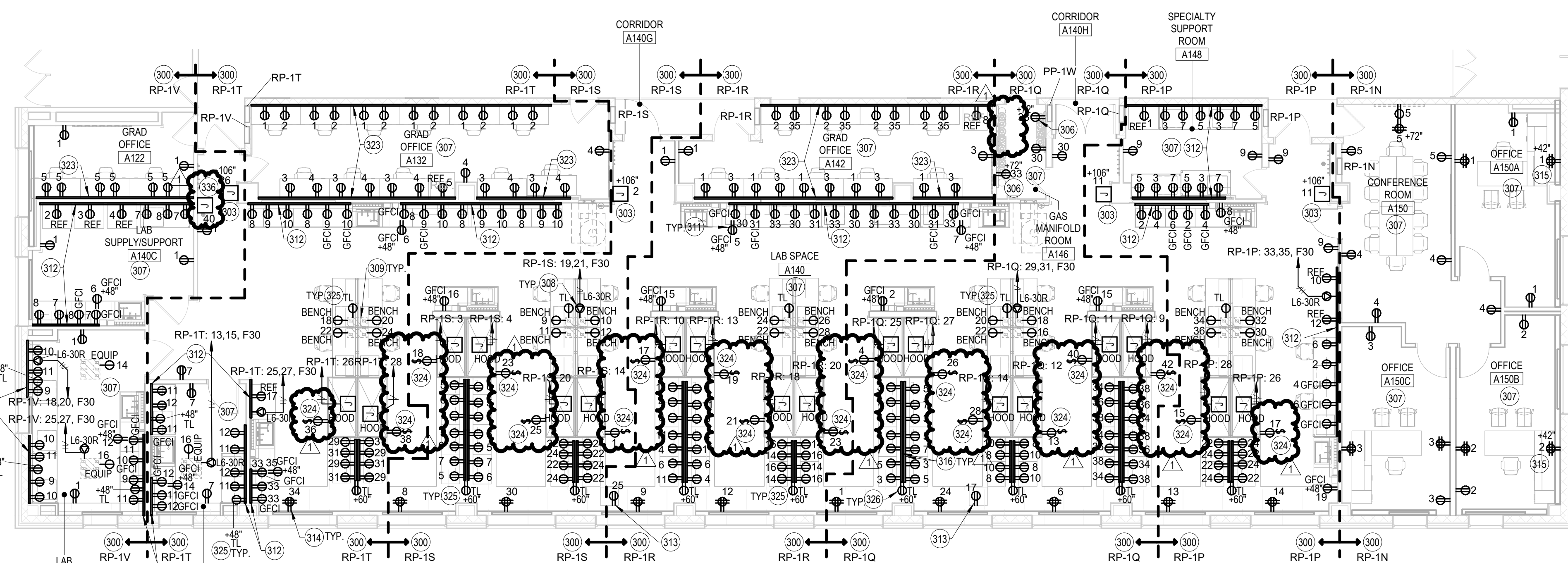
- ### PLAN NOTES
- DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS WITHIN THIS ROOM UNLESS NOTED OTHERWISE. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION WITHIN THE ROOM AND PREP FOR RECONNECTION IN NEW WORK. IN LOCATIONS WHERE NEW LED LIGHTING REQUIRES LESS CIRCUITS THAN EXISTING REMOVE UNUSED CIRCUITS BACK TO SOURCE AND LABEL BREAKER "SPARE".
 - DISCONNECT AND REMOVE ALL RECEPTACLES AND POWER CONNECTIONS WITHIN THIS SPACE INCLUDING CONDUIT AND WIRING BACK TO SOURCE UNLESS NOTED OTHERWISE.
 - DISCONNECT AND REMOVE ALL DATA JACKS WITHIN THIS SPACE INCLUDING WIRING BACK TO SOURCE AND PATHWAY BACK TO CORRIDOR CABLE TRAY UNLESS NOTED OTHERWISE.
 - DISCONNECT AND REMOVE ALL FIRE ALARM DEVICES WITHIN THIS SPACE. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION ABOVE CEILING AND PREP FOR REINSTALLATION IN NEW WORK.
 - WIRELESS ACCESS POINT, COORDINATE REMOVAL WITH UITS. DISCONNECT AND REMOVE DATA JACK BACK TO ACCESSIBLE LOCATION IN THE ROOM. PREP FOR RELOCATION IN NEW WORK.
 - DISCONNECT AND REMOVE CABLE TRAY BELOW EXISTING CEILING IN THIS ROOM COMPLETE.
 - CONNECT ALL NORMAL LIGHT FIXTURES WITHIN THIS SPACE TO EXISTING 277V, 1PH, 20A CIRCUIT SHOWN FROM PANEL. INDICATED MADE AVAILABLE DURING DEMOLITION.
 - EGRESS FIXTURES IN THIS ROOM SHALL BE CONTROLLED WITH OTHER FIXTURES WITHIN THE ROOM AS SHOWN UNDER NORMAL OPERATION. PROVIDE UL924 LISTED TRANSFER DEVICE FOR EGRESS FIXTURES WITHIN THIS ROOM. UPON LOSS OF POWER, THE UL924 TRANSFER DEVICE SHALL TRANSFER POWER TO UNWITTED EGRESS CIRCUIT SHOWN FROM PANEL INDICATED. PROVIDE NORMAL POWER, EMERGENCY POWER, AND SENSING CIRCUIT AS REQUIRED.
 - TASK LIGHTS SHALL BE CORD AND PLUG CONNECTED TO CONTROLLED RECEPTACLES WITHIN THE SPACE. REFER TO POWER PLAN FOR CONTROLLED RECEPTACLE LOCATIONS.
 - CONNECT ALL NEW RECEPTACLES IN THIS AREA TO 120V, 20A, 1PH, NORMAL CIRCUIT SHOWN FROM PANEL. INDICATED MADE AVAILABLE DURING DEMOLITION.
 - HVAC CONTROLS TRANSFORMER. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL. INDICATED. COORDINATE EXACT LOCATION ABOVE CEILING WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
 - GAS TANK MANIFOLD POWER SUPPLY CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL. INDICATED. COORDINATE LOCATION OF RECEPTACLES WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
 - THERE ARE WALLS IN THIS ROOM THAT ARE CMU OR CONCRETE. ALL CONDUIT DROPS TO OUTLETS, DUAL CHANNEL RACEWAYS, ETC. SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS TO ENSURE CONDUITS DO NOT IMPEDE OTHER WALL MOUNTED ITEMS. ALL CONDUIT SURFACE MOUNTED TO WALLS SHALL BE ROUTED TO NEATLY, PLUMB, SQUARE TO BUILDING LINES AND PAINTED TO MATCH WALL COLOR.
 - CEILING SERVICE PANEL RECEPTACLES LABELED WITH "16-30R" OR "16-30R" SHALL BE PROVIDED WITH AN S0 CORD ASSEMBLY CONSISTING OF (1) NEMA TWIST LOCKING PLUG MATCHING LABEL, (2) 8' OF (3/8") WIRE SO CORD, (3) NEMA TWIST LOCKING CONNECTOR BODY MATCHING LABEL, AND STRAIN RELIEF DEVICES. REFER TO S0 CORD DETAIL ON SHEET E001. UNLESS NOTED OTHERWISE.
 - LAB CEILING SERVICE PANEL. PROVIDE LS-20R RECEPTACLES FOR ALL RECEPTACLES TAGGED "BENCH". QUANTITY AS SHOWN ON THE DRAWINGS. REFER TO ARCHITECTURAL "LFD" SERIES DRAWINGS FOR ADDITIONAL INFORMATION. EC SHALL PROVIDE WIRING DEVICE, STAINLESS STEEL, FACELATE, WIRING AND CONNECTION CSP AND BACK BOX SHALL BE BY LAB FURNISHINGS CONTRACTOR. EC SHALL PROVIDE BLANK STAINLESS STEEL PLATES ON ALL UNUSED ELECTRICAL/DATA OPENINGS IN PANELS.
 - PROVIDE DEDICATED CIRCUIT FOR FUTURE DI WATER TREATMENT SYSTEM. COORDINATE PLACEMENT OF POWER WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN. TYPICAL OF ALL LAB SINKS WITH RECEPTACLE ABOVE.
 - SINGLE CHANNEL RACEWAY WIREMOLD AL3000 OR SIMILAR RACEWAY SHALL BE MOUNTED AT -5'-0" AFF TO CENTER OF RACEWAY UNLESS NOTED OTHERWISE.
 - PROVIDE DEDICATED RECEPTACLE FOR VACUUM PUMP LOCATED IN BACK OF CABINET. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL. INDICATED. COORDINATE EXACT LOCATION OF ROUGH-IN WITH PLUMBING CONTRACTOR AND LAB FURNISHINGS CONTRACTOR PRIOR TO ROUGH-IN.
 - COORDINATE INSTALLATION OF QUAD ON FACE OF FIN TUBE ENCLOSURE BELOW COUNTER WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
 - COORDINATE INSTALLATION OF RECEPTACLE ABOVE FIN TUBE ENCLOSURE AT THIS LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
 - PROVIDE SINGLE CHANNEL RACEWAY WIREMOLD AL3000 OR SIMILAR. MOUNT TO FIXED LAB CASEWORK UPRIGHTS AT -9'-0" AFF TO THE CENTER. ROUTE CONDUIT UP TO CEILING ALONG UPRIGHT ADJACENT TO HOOD COORDINATE INSTALLATION WITH ALL TRADES.
 - DUAL CHANNEL RACEWAY WIREMOLD AL4000 OR SIMILAR. RACEWAY SHALL BE MOUNTED AT -3'-8" AFF TO CENTER OF RACEWAY UNLESS NOTED OTHERWISE.
 - PROVIDE DEDICATED 120V, 20A, 1P CIRCUIT FOR VACUUM PUMP. INSTALL OUTLET IN BACK OF CABINET AND INSTALL SWITCH CONTROLLING OUTLET ON FACE OF CABINET. REFER TO LF DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ROUGH-INS WITH LAB FURNISHINGS CONTRACTOR.
 - ALL RECEPTACLES LABELED "TL" SHALL BE LABELED TO INDICATE THAT THEY ARE CONTROLLED. CONNECT COMPLETE TO 120V, 20A 1PH CIRCUIT RP-1V29 THROUGH POWER PACKS CONTROLLED BY OCCUPANCY SENSORS WITHIN THE ROOM.
 - TASK LIGHT RECEPTACLES AT FIXED BENCHES SHALL BE MOUNTED AT -4'-0" ON THE SHELF UPRIGHT SUPPORT. COORDINATE INSTALLATION WITH LAB FURNISHINGS CONTRACTOR.
 - NATURAL GAS EPO AND SOLENOID. COORDINATE EXACT LOCATION IN THE FIELD WITH PLUMBING CONTRACTOR. CONNECT COMPLETE TO 120V, 1PH, 20A CIRCUIT SHOWN FROM PANEL. INDICATED.
 - NEW LOCATION OF EXISTING WAP. COORDINATE REINSTALLATION OF WAP WITH UITS.
 - DATA JACK SHALL BE INSTALLED INSIDE FSR BOX AT THIS LOCATION. REFER TO AV ROUGH-IN DETAIL ON SHEET E001 FOR ADDITIONAL INFORMATION.
 - PROVIDE HDMI INPUT TO TV AT THIS LOCATION. EC SHALL PROVIDE PATHWAY, HDMI CABLE. TERMINATE HDMI INPUT AT WALL AND LEAVE LOOSE HDMI CONNECTOR INSIDE FSR BOX FOR CONNECTION TO OWNER PROVIDED TV.
 - FSR PWS 320 AV BACKBOX. REFER TO DETAIL ON E001 FOR ADDITIONAL INFORMATION.
 - PROVIDE PATHWAY TO ABOVE CEILING WITH PULL STRING AND BACK BOX AT ALL LOCATIONS SHOWN WITH DATA "P" FOR FUTURE CONNECTIONS. PROVIDE BLANK COVER PLATE.
 - CEILING SERVICE PANEL. PROVIDE DATA OUTLETS AS SHOWN. REFER TO LF DRAWINGS, POWER DRAWINGS, AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.
 - NEW WIRELESS ACCESS POINT. EC SHALL PROVIDE DATA CABLING AND TERMINATE JACKS. UITS SHALL PROVIDE AND INSTALL WAP COORDINATE WITH UITS FOR ADDITIONAL REQUIREMENTS.



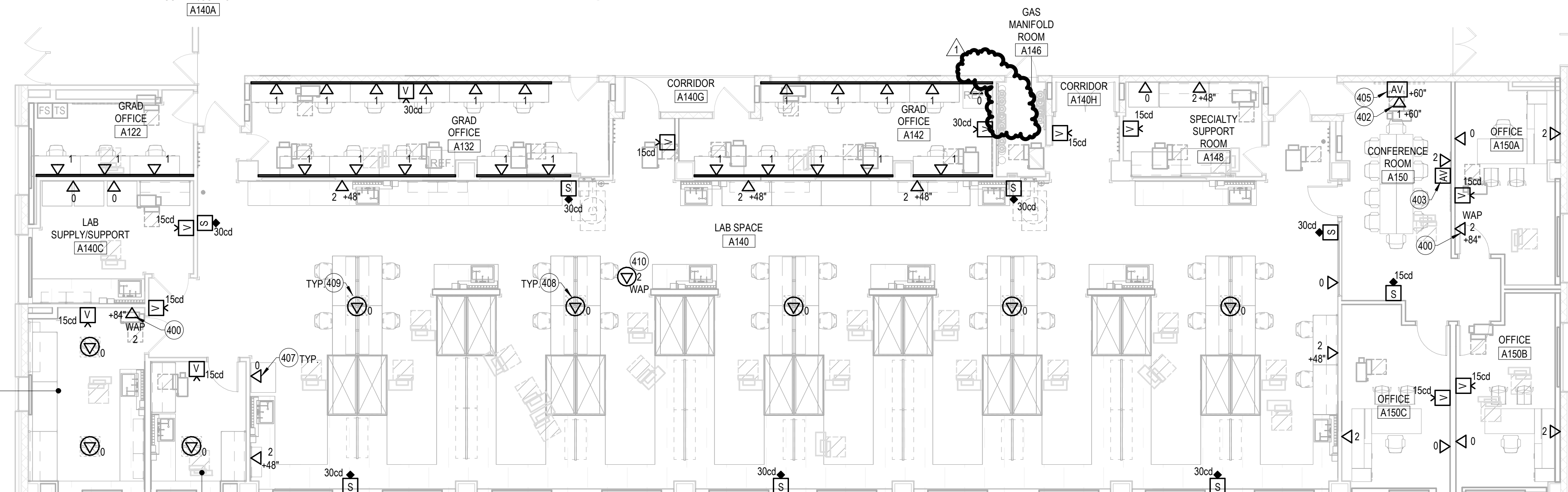
1 ELECTRICAL DEMOLITION PLAN - A140 LABS



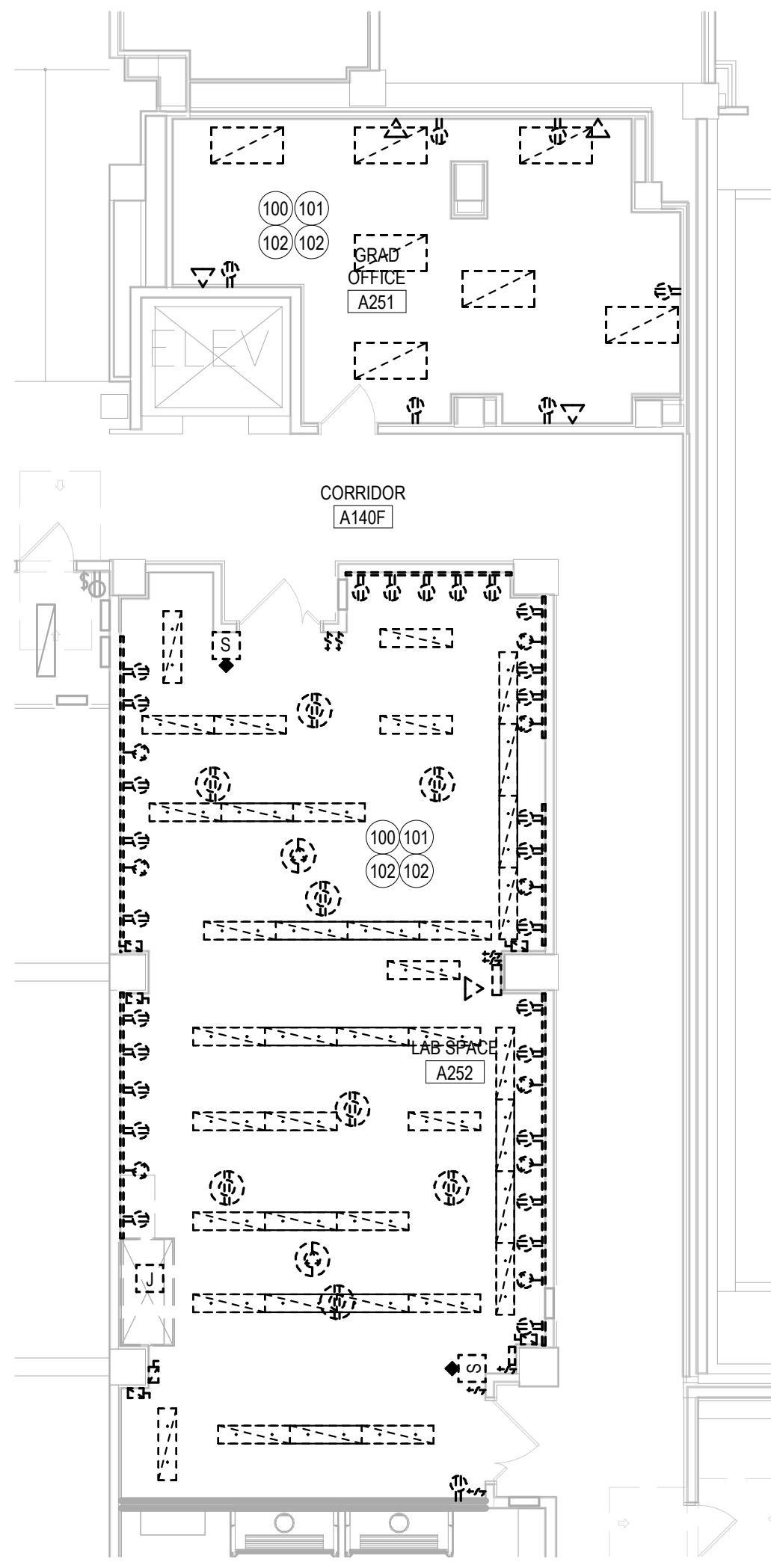
2 LIGHTING PLAN - A140 LABS



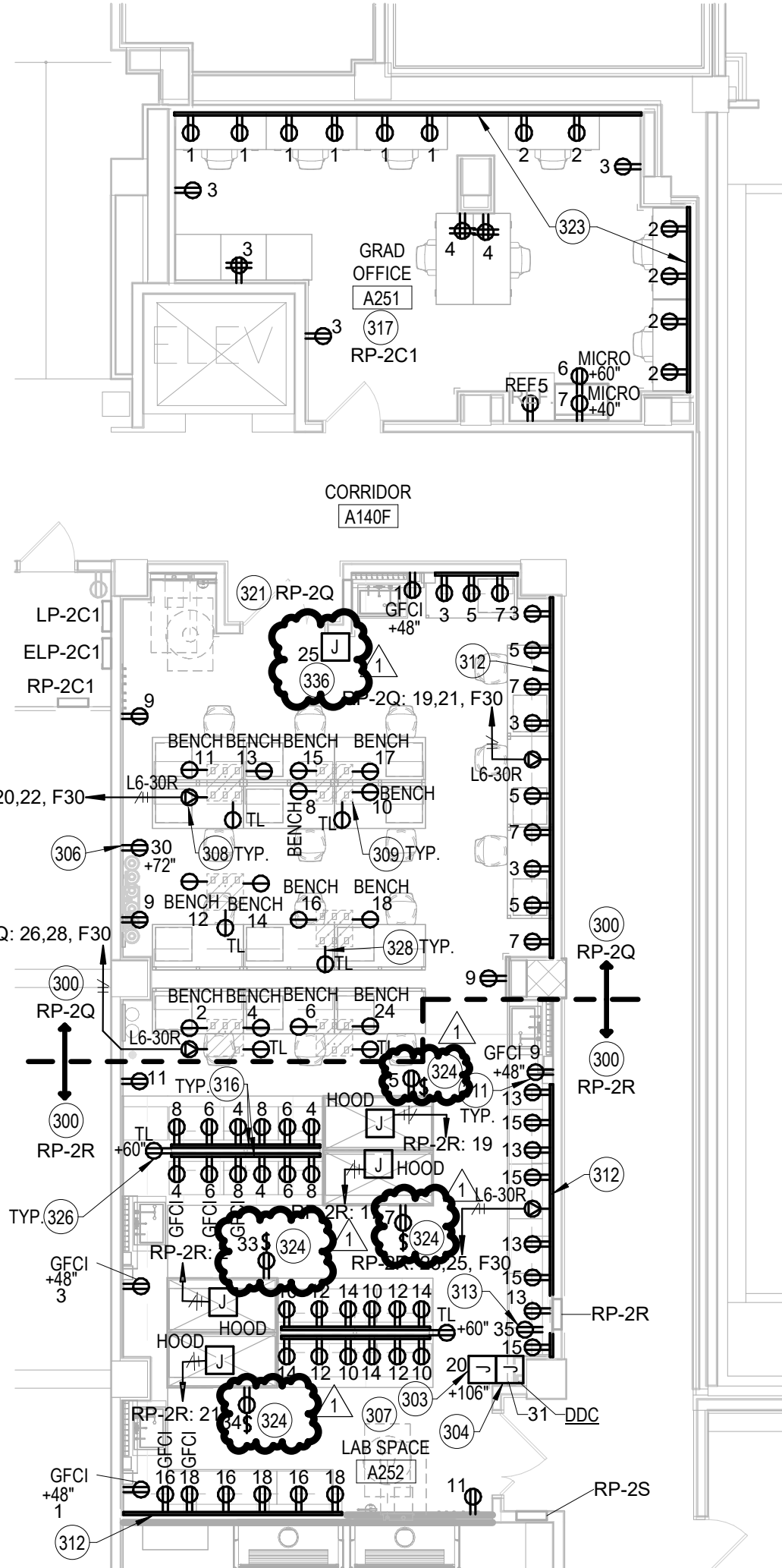
3 POWER PLAN - A140 LABS



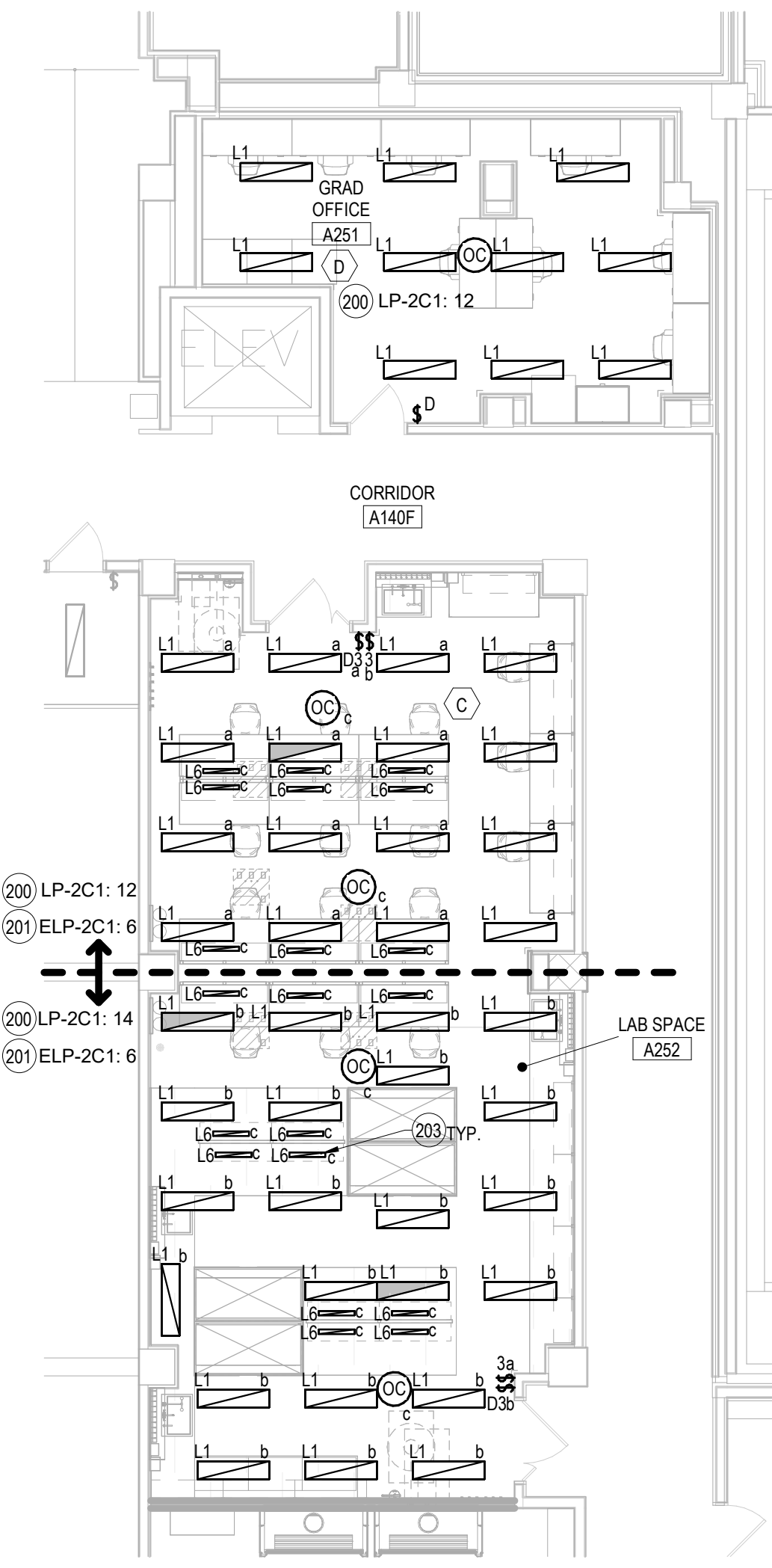
4 SYSTEMS PLAN - A140 LABS



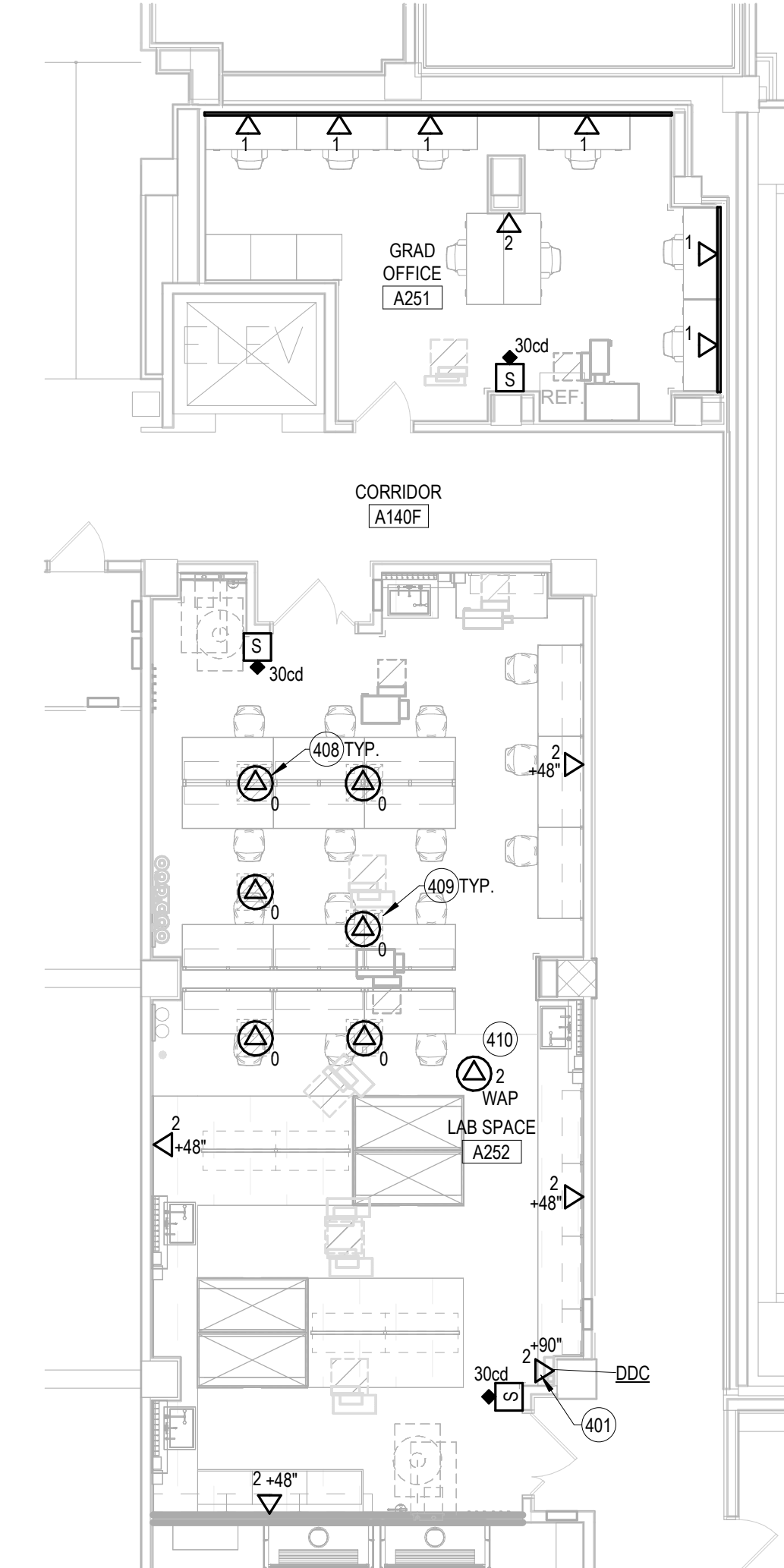
1 ELECTRICAL DEMOLITION PLAN - LAB A252, OFFICE A251
1/8" = 1'-0"



3 POWER PLAN - LAB A252, OFFICE A251
1/8" = 1'-0"



2 LIGHTING PLAN - LAB A252, OFFICE A251
1/8" = 1'-0"



4 SYSTEMS PLAN - LAB A252, OFFICE A251
1/8" = 1'-0"

PLAN NOTES	
X00	
100	DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS WITHIN THIS ROOM UNLESS NOTED OTHERWISE. REMOVE CONDUIT/WIRING BACK TO ACCESSIBLE LOCATION WITHIN THE ROOM AND PREP FOR RECONNECTION IN NEW WORK. IN LOCATIONS WHERE NEW LED LIGHTING REQUIRE LESS CIRCUITS THAN EXISTING REMOVE UNUSED CIRCUITS BACK TO SOURCE AND LABEL BREAKER "SPARE".
101	DISCONNECT AND REMOVE ALL RECEPTACLES AND POWER CONNECTIONS WITHIN THIS SPACE INCLUDING CONDUIT AND WIRING BACK TO SOURCE UNLESS NOTED OTHERWISE.
102	DISCONNECT AND REMOVE ALL DATA JACKS WITHIN THIS SPACE INCLUDING WIRING BACK TO SOURCE AND PATHWAY BACK TO CORRIDOR CABLE TRAY UNLESS NOTED OTHERWISE.
200	CONNECT ALL NORMAL LIGHT FIXTURES WITHIN THIS SPACE TO EXISTING 277V, 1PH, 20A CIRCUIT SHOWN FROM PANEL INDICATED MADE AVAILABLE DURING DEMOLITION.
201	EGRESS FIXTURES IN THIS ROOM SHALL BE CONTROLLED WITH OTHER FIXTURES WITHIN THE ROOM AS SHOWN UNDER NORMAL OPERATION. PROVIDE UL24 LISTED TRANSFER DEVICE FOR EGRESS FIXTURES WITHIN THIS ROOM. UPON LOSS OF POWER, THE UL24 TRANSFER DEVICE SHALL TRANSFER POWER TO UNWITCHED EGRESS CIRCUIT SHOWN FROM PANEL INDICATED. PROVIDE NORMAL POWER, EMERGENCY POWER, AND SENSING CIRCUIT AS REQUIRED.
203	TASK LIGHTS SHALL BE CORD AND PLUG CONNECTED TO CONTROLLED RECEPTACLES WITHIN THE SPACE. REFER TO POWER PLAN FOR CONTROLLED RECEPTACLE LOCATIONS.
300	CONNECT ALL NEW RECEPTACLES IN THIS AREA TO 120V, 20A, 1PH, NORMAL CIRCUIT SHOWN FROM PANEL INDICATED UNLESS SPECIFICALLY NOTED OTHERWISE.
303	WAC CONTROLS TRANSFORMER. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION ABOVE CEILING WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
304	DGC PANEL. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
306	GAS TANK MANIFOLD POWER SUPPLY. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE LOCATION OF RECEPTACLES WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
307	THERE ARE WALLS IN THIS ROOM THAT ARE CMU OR CONCRETE. ALL CONDUIT DROPS TO OUTLETS, DUAL CHANNEL RACEWAYS, ETC. SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS TO ENSURE CONDUITS DO NOT IMPIDE OTHER WALL MOUNTED ITEMS. ALL CONDUIT SURFACE MOUNTED TO WALLS SHALL BE ROUTED NEATLY. PLUMB, SQUARE TO BUILDING LINES AND PAINTED TO MATCH WALL COLOR.
308	CEILING SERVICE PANEL RECEPTACLES LABELED WITH 16-20" OR 16-30" SHALL BE PROVIDED WITH AN SO CORD ASSEMBLY CONSISTING OF: (1) NEMA TWIST LOCKING PLUG MATCHING LABEL, 8'-0" OF (#10 WIRE SO CORD), (1) NEMA TWIST LOCKING CONNECTOR BODY MATCHING LABEL, AND STRAIN RELIEF DEVICES. REFER TO SO CORD DETAIL ON SHEET E001 UNLESS NOTED OTHERWISE.
309	LAB CEILING SERVICE PANEL. PROVIDE 15-20R RECEPTACLES FOR ALL RECEPTACLES TAGGED "BENCH". QUANTITY AS SHOWN ON THE DRAWINGS. REFER TO ARCHITECTURAL "LFD" SERIES DRAWINGS FOR ADDITIONAL INFORMATION. EC SHALL PROVIDE WIRING DEVICE, STAINLESS STEEL FACEPLATE, WIRING AND CONNECTION. CSP AND BACK BOX SHALL BE BY LAB FURNISHINGS CONTRACTOR. EC SHALL PROVIDE BLANK STAINLESS STEEL PLATES ON ALL UNUSED ELECTRICAL DATA OPENINGS IN PANELS.
311	PROVIDE DEDICATED CIRCUIT FOR FUTURE DI WATER TREATMENT SYSTEM. COORDINATE PLACEMENT OF POWER WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN. TYPICAL OF ALL LAB SINKS WITH RECEPTACLE ABOVE.
312	SINGLE CHANNEL RACEWAY WIREMOLD AL3300 OR SIMILAR. RACEWAY SHALL BE MOUNTED AT +3'-6" AFF TO CENTER OF RACEWAY UNLESS NOTED OTHERWISE.
313	PROVIDE DEDICATED RECEPTACLE FOR VACUUM PUMP LOCATED IN BACK OF CABINET. CONNECT COMPLETE TO CIRCUIT SHOWN FROM PANEL INDICATED. COORDINATE EXACT LOCATION OF ROUGH-IN WITH PLUMBING CONTRACTOR AND LAB FURNISHINGS CONTRACTOR PRIOR TO ROUGH-IN.
316	PROVIDE SINGLE CHANNEL RACEWAY WIREMOLD AL3300 OR SIMILAR. MOUNT TO FIXED LAB CASEWORK UPRIGHTS AT +3'-0" AFF TO THE CENTER. ROUTE CONDUIT UP TO CEILING ALONG UPRIGHT ADJACENT TO HOOD COORDINATE INSTALLATION WITH ALL TRADES.
317	CONNECT NEW RECEPTACLES WITHIN THIS ROOM TO SPARE 120V, 20A, 1PH CIRCUITS SHOWN FROM PANEL INDICATED. CONFIRM QUANTITY (7) SPARE 120V, 20A, 1PH BREAKERS AVAILABLE IN PANEL. AFTER DEMOLITION, PROVIDE SPARE BREAKERS IN PANEL AS REQUIRED TO SERVE LOADS SHOWN. NEW BREAKERS SHALL MATCH AIC RATINGS OF EXISTING BREAKERS.
321	REMOVE AND REPLACE ALL BRANCH BREAKERS IN THIS PANEL WITH TYPE Q08-1PH. REFER TO PANEL SCHEDULES FOR EXACT BREAKER TYPES AND SIZES REQUIRED TO SERVE NEW SPACE.
323	DUAL CHANNEL RACEWAY WIREMOLD AL5400 OR SIMILAR. RACEWAY SHALL BE MOUNTED AT +3'-6" AFF TO CENTER OF RACEWAY UNLESS NOTED OTHERWISE.
324	PROVIDE DEDICATED 120V, 20A, 1P CIRCUIT FOR VACUUM PUMP. INSTALL OUTLET IN BACK OF CABINET AND INSTALL SWITCH CONTROLLING OUTLET ON FACE OF CABINET. REFER TO LF DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE ROUGH-INS WITH LAB FURNISHINGS CONTRACTOR.
326	TASK LIGHT RECEPTACLES AT FIXED BENCHES SHALL BE MOUNTED AT +60" ON THE SHELF UPRIGHT SUPPORT. COORDINATE INSTALLATION WITH LAB FURNISHINGS CONTRACTOR.
328	ALL RECEPTACLES LABELED "TL" SHALL BE LABELED TO INDICATE THAT THEY ARE CONTROLLED. CONNECT COMPLETE TO 120V, 20A 1PH CIRCUIT RP-20-23 THROUGH POWER PACKS CONTROLLED BY OCCUPANCY SENSORS WITHIN THE ROOM.
336	NATURAL GAS EPO AND SOLENOID. COORDINATE EXACT LOCATION IN THE FIELD WITH PLUMBING CONTRACTOR. CONNECT COMPLETE TO 120V, 1PH, 20A CIRCUIT SHOWN FROM PANEL INDICATED.
401	DGC PANEL DATA JACK COORDINATE INSTALLATION WITH CONTROLS CONTRACTOR PRIOR TO ROUGH-IN.
408	PROVIDE PATHWAY TO CORRIDOR AT ALL CEILING SERVICE PANEL LOCATIONS SHOWN WITH DATA "D" FOR FUTURE CONNECTIONS. PROVIDE BLANK STAINLESS STEEL COVER PLATE.
409	CEILING SERVICE PANEL. PROVIDE DATA OUTLETS AS SHOWN. REFER TO LF DRAWINGS, POWER DRAWINGS, AND DETAIL SHEETS FOR ADDITIONAL INFORMATION.
410	NEW WIRELESS ACCESS POINT. EC SHALL PROVIDE DATA CABLE AND TERMINATE JACKS. UITS SHALL PROVIDE AND INSTALL WAP COORDINATE WITH UITS FOR ADDITIONAL REQUIREMENTS.

DEMOLITION GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	ELECTRICAL CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL.
C.	ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTING, RELOCATING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND FINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.
D.	REMOVE ALL LIGHT FIXTURES, RECEPTACLES, SWITCHES, ETC. AND ASSOCIATED WIRING AS INDICATED.
E.	REMOVE ALL CONDUIT AND BOXES NOT TO BE USED FOR NEW WORK.
F.	IN REMODELED/ALTERED AREA ANY FEEDERS, CONDUITS, BRANCH CIRCUITS, SIGNAL AND TELEPHONE CIRCUITS, ETC. PASSING THROUGHOUT THE REMODELED AREAS TO SERVE OR BE SERVED FROM EXISTING ADJACENT, REMOTE, OR SURROUNDING THAT ARE TO REMAIN) SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.
G.	WHERE DEVICES ARE OMITTED FROM PRESENT BRANCH CIRCUITS, THE REMAINING DEVICES SHALL BE REWIRED, IF NEEDED AND AS REQUIRED, TO MAINTAIN ON THEIR RESPECTIVE CIRCUITS AND IN OPERATING CONDITION.
H.	THE OWNER SHALL HAVE THE FIRST CHOICE TO ACCEPT EXISTING DEVICES BEING REMOVED.
I.	IT IS MANDATORY THE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDING POWER, LIGHTING, TELEPHONE, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION SHALL HAVE WRITTEN APPROVAL AND BE ARRANGED WITH THE OWNER THROUGH THE GENERAL CONTRACTOR A MINIMUM OF TWO (2) WEEKS IN ADVANCE.
J.	EXISTING CONDUIT AND BOXES IN BLOCK WALLS NOTED TO BE REMOVED. SHALL HAVE THE BOX REMOVED AND CONDUIT PULLED OUT OF THE WALL WHERE POSSIBLE. IF REMOVAL IS NOT POSSIBLE, THEY SHALL BE ABANDONED IN PLACE. BLOCK WALLS SHOULD NOT BE DEMOLISHED TO REMOVE THESE ITEMS. EXISTING CONDUIT AND BOXES IN STUD WALLS NOTED TO BE REMOVED SHALL BE REMOVED COMPLETE, CUT & PATCH DRYWALL. REFER TO ARCHITECTURAL PLANS FOR WALL TYPES. REFER TO DIVISION 26 "COMMON WORK RESULTS FOR ELECTRICAL."

LIGHTING GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO SPECIFICATION SECTION 260519 FOR MINIMUM CONDUCTOR SIZE REQUIRED BASED ON TOTAL CIRCUIT DISTANCE. ALL LIGHTING SHALL BE CONNECTED TO EXISTING CIRCUITS SERVING THE SPACE PRIOR TO DEMOLITION. LIGHTING CIRCUIT CONNECTED LOAD SHALL NOT EXCEED 3600VA FOR 277V, 1PH, 20A CIRCUITS VERIFY LOAD IN FIELD.
C.	CONNECT ALL EXIT AND EGRESS LIGHTING WITH A MINIMUM OF #10 AWG UNLESS NOTED OTHERWISE.
D.	PROVIDE ALL OCCUPANCY / VACANCY SENSOR, POWER PACKS, AND ADDITIONAL RELAYS, ETC. AS REQUIRED FOR FULL COVERAGE OF ROOMS/AREAS INDICATED TO HAVE SUCH CONTROL.
E.	BOTTOM OF ALL SUSPENDED MOUNT LIGHT FIXTURES SHALL BE AT +9'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
F.	WALL MOUNTED EXIT LIGHTS SHALL BE MOUNTED AT LEAST 1'-0" ABOVE EXIT OPENING UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY HEIGHT OF EXIT OPENING PRIOR TO ROUGH-IN.
G.	ALL OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC) UNLESS NOTED OTHERWISE.
H.	ALL OCCUPANCY SENSORS SHALL BE PROVIDED WITH AN AUXILIARY SET OF CONTACTS FOR WAC CONTROLS.
I.	OCCUPANCY SENSORS IN LOCATIONS WITHOUT A FINISHED CEILING SHALL BE MOUNTED TO A JUNCTION BOX AT +9'-0" AFF. RIGIDLY SUPPORT J-BOX FROM THE DECK.
J.	SCHEDULE A MEETING WITH THE OWNER PRIOR TO PROGRAMMING OF LIGHTING CONTROL DEVICES TO DETERMINE DESIRED CONTROL, TIME DELAY SETTINGS, OCCUPANCY, ETC.
K.	ALL TASK LIGHTS SHALL BE PROVIDED WITH CORD AND PLUG. TASK LIGHT RECEPTACLES SHALL BE LABELED TO INDICATE THEY ARE CONTROLLED WITH ROOM OCCUPANCY SENSORS. PROVIDE POWER PACKS AS REQUIRED TO CONTROL OUTLETS VIA ROOM OCCUPANCY SENSORS.

POWER GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	REFER TO MFC SERIES DRAWINGS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
C.	REFER TO ARCHITECTURAL SCHEDULES, DETAILS AND ELEVATIONS FOR ADDITIONAL INFORMATION ON DEVICE LOCATIONS PRIOR TO ROUGH-IN.
D.	ALL 120V/1PH RECEPTACLES WITHIN 5'6" FEET OF A SINK SHALL BE GFCI TYPE. THE DEVICES MAY OR MAY NOT BE IDENTIFIED AS GFCI ON THE PLANS BUT SHALL BE PROVIDED ACCORDING TO THE REQUIREMENT. COORDINATE WITH ARCHITECTURAL, LAB FURNISHINGS, AND PLUMBING DRAWINGS.
E.	THE ELECTRICAL CONTRACTOR SHALL VERIFY CORD AND PLUG CONNECTED EQUIPMENT CORD CONFIGURATION AND PROVIDE MATCHING RECEPTACLE AS REQUIRED.
F.	ELECTRICAL SERVICES SHALL NOT ROUTE THROUGH ANY IDF ROOM UNLESS DIRECTLY SERVING THAT ROOM.
G.	REFER TO DIVISION 26 SECTION "LOW VOLTAGE ELECTRICAL. POWER CONDUCTORS AND CABLES" FOR MINIMUM CONDUCTOR SIZE REQUIREMENTS BASED ON TOTAL CIRCUIT DISTANCE.
H.	REFER TO DIVISION 26 SECTION "GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS" FOR ADDITIONAL GROUNDING REQUIREMENTS FOR FLAMMABLE STORAGE CABINETS, SOLVENT CABINETS, ETC.
I.	LAB CASEWORK SUPPLIER SHALL PROVIDE THE LAB CEILING SERVICE PANEL(S) AND BACK BOXES. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING DEVICES, COVERPLATES, AND CONNECTION OF DEVICES. EC SHALL PROVIDE BLANK STAINLESS STEEL COVER PLATES FOR UNUSED CSP BOXES.
J.	PROVIDE CONTROL WIRING FROM VARIABLE FREQUENCY CONTROLLER THROUGH AUXILIARY CONTACT AT ASSOCIATED DISCONNECT SWITCH FOR OPENING OF CONTROL CIRCUIT PRIOR TO OPENING OF DISCONNECT. ROUTE CONTROL WIRING IN A DEDICATED CONDUIT SEPARATE FROM THE POWER WIRING.
K.	TASK LIGHT RECEPTACLES ARE LABELED "TL" THESE RECEPTACLES SHALL BE CONTROLLED BY THE OCCUPANCY SENSORS IN THE ROOM THEY SERVE.

SYSTEMS GENERAL NOTES	
A.	REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.
B.	PROVIDE CONDUIT SLEEVES TO SERVE ALL LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELECOMMUNICATIONS STRUCTURED CABLING, ACCESS CONTROL, VIDEO SURVEILLANCE, POE CLOCKS, AND AUDIO VISUAL SYSTEMS. COORDINATE WITH ARCHITECTURAL LIFE SAFETY PLAN FOR FIRE AND SMOKE WALL/FLOOR LOCATIONS AND FIRE RATINGS. PROVIDE RATED CONDUIT PENETRATION SYSTEMS AS REQUIRED. REFER TO DIVISION 7 SPECIFICATIONS FOR ADDITIONAL INFORMATION. MINIMUM CONDUIT SLEEVE SIZE SHALL BE 2" WITH PLASTIC BUSHINGS ON BOTH ENDS.
C.	J-HOOKS SERVING LOW VOLTAGE SYSTEMS BY CONTRACTOR.
D.	MDF AND IDF'S ARE EXISTING TO REMAIN.
E.	PROVIDE PULL STRINGS IN ROUGH-INS.
F.	PROVIDE BLANK COVER PLATES FOR UNUSED OUTLET BOXES.
G.	IN FINISHED ROOMS AND AREAS, EXPOSED CONDUITS, J-BOXES, SUPPORTS, ETC. SHALL BE PAINTED. COORDINATE PAINTING OF EXPOSED EQUIPMENT WITH DIVISION 9 CONTRACTOR. DO NOT PAINT LOW VOLTAGE SYSTEMS CABLING. DO NOT PAINT FIRE ALARM CONDUIT.
H.	PROVIDE EXPANSION OF EXISTING FIRE ALARM SYSTEM AS INDICATED ON DRAWINGS AND SPECIFICATIONS. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO EXPAND EXISTING FIRE ALARM SYSTEM COMPLETE.
I.	MODIFICATIONS TO, OR EXPANSION OF, THE EXISTING FIRE ALARM PANEL SHALL REQUIRE THAT THE FIRE ALARM SYSTEM BE RECERTIFIED PRIOR TO PROJECT COMPLETION. ALL KNOWN TROUBLE CONDITIONS SHALL BE DOCUMENTED TO THE PROJECT TEAM AND OWNER PRIOR TO ANY CHANGES. EXISTING TROUBLE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE OWNER TO BE RESOLVED PRIOR TO RECERTIFICATION OF THE SYSTEM.
J.	ALL MODIFIED INITIATING LOOPS SHALL BE RETESTED COMPLETE, PRIOR TO PROJECT CERTIFICATION TO ENSURE THAT THE ENTIRE ADDRESSABLE LOOP IS STILL OPERATIONAL.
K.	ALL MODIFIED NOTIFICATION CIRCUITS SHALL HAVE ALL DEVICES RETESTED ON LOOPS THAT HAVE BEEN MODIFIED. END OF LINE DEVICES SHALL BE LABELED AT THE DEVICE WHERE THE EOL IS PLACED. EOL LOCATIONS SHALL BE NOTED ON THE PROJECT DOCUMENTS. REVISED VOLTAGE DROP AND BATTERY CALCULATIONS TO BE RESUBMITTED FOR MODIFIED CIRCUITS.
L.	ALL REQUIRED CERTIFICATION DOCUMENTATION TO BE SUBMITTED PER NFPA REQUIREMENTS.
M.	THE FIRE ALARM PLANS ARE INTENDED TO DEPICT THE GENERAL PERFORMANCE OF THE SYSTEM. THE FIRE ALARM VENDOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN PER EQUIPMENT LIMITATIONS. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, WIRING, ETC AS REQUIRED FOR A COMPLETE AND CODE COMPLIANT FIRE ALARM SYSTEM.
N.	DO NOT LOCATE ANY DETECTION DEVICE WITHIN 3'-FEET OF AN AIR DIFFUSER.
O.	SYNCHRONIZE ALL VISUAL DEVICES.
P.	A VISUAL INDICATOR SHALL BE PROVIDED FOR ALL INITIATING DEVICES LOCATED OUTSIDE OF NORMAL VIEWING.
Q.	ALL FIRE ALARM WIRING SHALL BE INSTALLED IN FIRE ALARM EMT CONDUIT WITH A BRIGHT RED TOPCOAT.

LIGHTING CONTROL MATRIX SCHEDULE									
CONTROL TYPE		TASK LIGHTING ON SENSOR		IR PARTITION SENSING		LINE VOLTAGE SWITCHING		SWITCHED RECEPTACLE	
A	B	A	B	A	B	A	B	A	B
A	X	X	X						
B	X	X	X						
C	X	X	X	X					
D	X	X	X	X					
CONTROL REMARKS									
SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACES FOR OCCUPANT SAFETY.									
SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS. NO AUTO OFF FOR GENERAL LIGHTS IN LAB SPACE FOR OCCUPANT SAFETY.									
SWITCHLESS SHALL BE INDIVIDUALLY DIMMABLE AS SHOWN ON PLANS.									

BSA

BSA LifeStructures
9365 Counselors Row, Suite 300
Indianapolis, IN 46240-1478
ph 317.819.7878 fx 317.819.7288

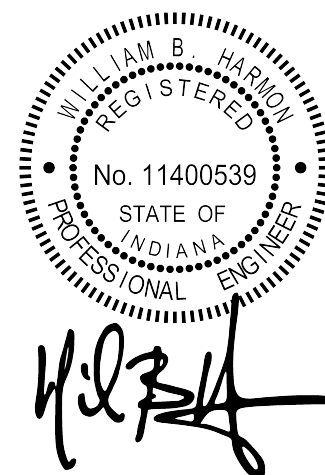
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
300 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
12 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
1	1/27/25	ADDENDUM #2



CHEMISTRY SECOND
FLOOR ELECTRICAL PLANS
- A252 LAB, A251 OFFICE

DATE
BSALS PROJECT NO.

JANUARY 9, 2025
00360477

E320

LIGHT FIXTURE SCHEDULE															
NOTE: SEE SPECIFICATION SECTION 260923, 260933, 260936, 265100, 265561, 265600, 265668 FOR ADDITIONAL INFORMATION REGARDING LIGHTING FIXTURES AND INSTALLATION REQUIREMENTS. PROVIDE OPTIONS AND ACCESSORIES BY THE REFERENCED COLUMN TITLED "REMARKS". MANUFACTURERS LISTED SHALL MEET ALL REQUIREMENTS AND FEATURES INDICATED.															
FIXTURE TYPE	FIXTURE DIMENSIONS				DESCRIPTION	VOLTAGE	LAMP DATA			MANUFACTURER CATALOG SERIES			ACCESSORIES/OPTIONS	REMARKS	
	WIDTH	LENGTH	HEIGHT	DIA			WATTAGE	TYPE	COLOR TEMPERATURE	DELIVERED LUMENS	MANUFACTURER 1	MANUFACTURER 2			MANUFACTURER 3
L1	12"	48"	4"	0'-0"	1X4 - FLAT PANEL - MEDIUM OUTPUT	277 V	30 W	LED	3500 K	3400	WILLIAMS - BP FIELD SELECTABLE COLUMBIA - CBT	LITHONIA - CPX1X4	METALUX - CGTS	MIN 80 CRI, 0-10V DIMMING	
L1A	12"	48"	4"	0'-0"	1X4 - FLAT PANEL - LOW OUTPUT	277 V	26 W	LED	3500 K	3000	WILLIAMS - BP FIELD SELECTABLE COLUMBIA - CBT	LITHONIA - CPX1X4	METALUX - CGTS	MIN 80 CRI, 0-10V DIMMING	
L2	4"	48"	4.34"	0'-0"	OPEN CEILING UP DOWN FIXTURE	277 V	52 W	LED	3500 K	5000	FINELITE HP4	PINNACLE - EDGE 4	FOCAL POINT - SEEM 4	MINIMUM 82 CRI, FROSTED LENS, AIRCRAFT CABLE HUNG, ALUMINUM CONSTRUCTION, 0-10V DIMMING, FINISH SHALL BE WHITE, TOP AND BOTTOM LENSES	PROVIDE 375 LUMENS UP AND 875 LUMENS DOWN LIGHTING
L3	12"	48"	6"	0'-0"	1X4 ARCHITECTURAL TROFFER	277 V	32 W	LED	3500 K	3500	CURRENT - RYVL 55L	MARK - WHISPER	FOCAL POINT - FEQ2	MIN 82 CRI, 0-10V DIMMING	
L4	24"	24"	6"	0'-0"	2X2 FLAT PANEL	277 V	38 W	LED	3500 K	4000	METALUX - MMS	LITHONIA - CPX	CURRENT LIGHTING - CBT LCLS	MIN 82 CRI, 0-10V DIMMING	
L5	4"	48"	2 1/8"	0'-0"	INDUSTRIAL PENDANT	277 V	50 W	LED	3500 K	5000	LITHONIA ZL1D	COLUMBIA MPS	METALUX SNALED	MIN 82 CRI, FROSTED LENS, CHAIN HUNG	
L6	4"	24"	1 1/2"	0'-0"	TASK LIGHT	120 V	17 W	LED	3500 K	700	LITHONIA - UCGL 24IN	BRUCK LIGHTING - 138544WH	HALO - HU10	LED UNDERCABINET LIGHT, CORD AND PLUG CONNECTION, INTEGRAL ROCKER SWITCH, WHITE FINISH, WHITE POWER FEED, DIMMING NOT REQUIRED, CRI OF 80 OR BETTER, PROVIDE MAGNETS FOR MOUNTING, CORDS, QUICK CONNECT DEVICES, AND OTHER HARDWARE AS REQUIRED FOR PROPER INSTALLATION.	
LX	9 1/2"	12 1/4"	1 3/8"	0'-0"	EXIT SIGN	277 V	4 W	LED		NA	DUAL LIGHT SE	LITHONIA LE	SURE-LITES CX	DIRECTIONAL ARROWS, RED LETTERS, UNIVERSAL MOUNT, STENCIL FACE, UL LISTED, MEETS UL924, NFPA101, NED, AND OSHA ILLUMINATION STANDARDS; 5 YEAR WARRANTY	

2

VARIABLE FREQUENCY CONTROLLER SCHEDULE												
DESIGNATION	LOAD SERVED	EQUIPMENT DATA					CIRCUIT BREAKER		BYPASS CONTROLLER		NEMA	COMMENTS
		LOCATION	HP	FLA	VOLTAGE	PHASE	FRAME SIZE	TRIP SIZE	TYPE	NEMA SIZE	ENCLOSURE	
VFC-RF-S21	RF-S21	MECHANICAL S19	1.5	2.6	480	3	100	15	FVNR	3	NEMA 1	
VFC-SF-S21	SF-S21	MECHANICAL S19	5	7.6	480	3	100	15	FVNR	3	NEMA 1	

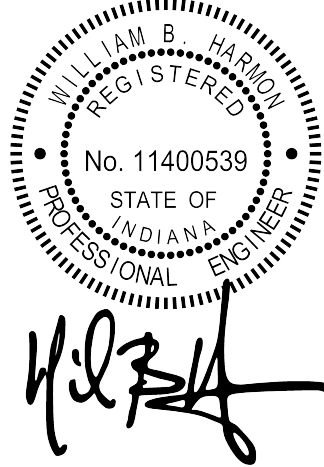
IUB
RESEARCH
LAB
RENOVATIONS

BL072 CHEMISTRY
300 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
12 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET
JANUARY 9, 2025

MARK	DATE	DESCRIPTION
2	1/27/25	ADDENDUM #2
1	1/17/25	ADDENDUM #1



ELECTRICAL SCHEDULES

Branch Panel: RP-1HH

Location: CORRIDOR A140E
Supplied From: PP-1N
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 225 A

General Panel Comments:
A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
1	SPARE	50 A	3	0.0	1.2			1	20 A RM 103A - HOOD	2	
3	--	--	--		0.0	1.2		1	20 A RM 103A - HOOD	4	
5	--	--	--			0.0	0.2	1	20 A RM 103A - WATER POLISHER	6	
7	RM 103A - S RACEWAY RECEPS	20 A	1	0.5	0.4			1	20 A RM 103A - S RACEWAY RECEPS	8	
9	RM 103A -RECEPS, SHVVR ALARM	20 A	1		0.4	0.9		1	20 A RMS 103, 103A, 103B TASK LIGHTS	10	
11	RM 103A - N RACEWAY RECEPS	20 A	1				0.5	0.8	1	20 A RM 103A - CSP BENCH RECEP	12
13	RM 103A - HVAC CNTRL XFRMR	20 A	1	0.5	0.8			1	20 A RM 103A - CSP BENCH RECEP	14	
15	SPARE	20 A	1		0.0	0.0		1	20 A SPARE	16	
17	SPARE	20 A	1				0.0	0.0	1	20 A SPARE	18
19	SPARE	30 A	2	0.0	0.1			2	30 A RM 103A - S RACEWAY L6-30R	20	
21	--	--	--		0.0	0.1		--	--	--	22
23	SPARE	30 A	2			0.0	0.0	2	20 A SPARE	24	
25	--	--	--	0.0	0.0			--	--	--	26
27	SPARE	30 A	2			0.0	0.0	2	30 A SPARE	28	
29	SPARE	--	--				0.0	0.0	--	--	30
31	SPARE	30 A	2	0.0	0.4			1	20 A RM 103A - N RECEP	32	
33	--	--	--		0.0	0.2		1	20 A RM 103A - W VAC PUMP	34	
35	RM 103A - E VAC PUMP	20 A	1			0.2	0.8	1	20 A RM 103A - CSP BENCH RECEP	36	
37	RM 103A - CSP BENCH - REMARK #1	20 A	1	0.8	0.2			1	20 A RM 103A - REF - REMARK #1	38	
39	RM 103A - CSP BENCH - REMARK #1	20 A	1		0.8	0.2		1	20 A RM 103A - REF - REMARK #1	40	
41	RM 103A - CSP BENCH - REMARK #1	20 A	1			0.8	0.0	1	20 A SPARE - REMARK #1	42	
Total Load:				4.9 kVA	3.8 kVA	3.3 kVA					

Total Connected Load (kVA): 12.0 kVA
Total Connected Load (Amps): 33.2 A

Remarks:
1.PROVIDE NEW 120V, 20A, 1P BREAKER IN EXISTING SPACE. NEW BREAKERS SHALL MATCH AIC RATING OF EXISTING BREAKERS.

Branch Panel: RP-1RR

Location: FREEZER FRIDGE ROOM A151
Supplied From: PP-1N
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 225 A

General Panel Comments:
A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
1	SPARE	30 A	2	0.0	0.0			2	30 A	SPARE	2
3	--	--	--		0.0	0.0		--	--	--	4
5	RM A151, A153 - CONV. RECEPS	20 A	1			0.8	1.2	1	20 A	RM A151 - REF	6
7	RM A151 - REF	20 A	1	1.2	1.2			1	20 A	RM A151 - REF	8
9	RM A151 - HVAC CNTRL XFRMR	20 A	1		0.5	0.7		1	20 A	RM A153 - N RACEWAY RECEPS	10
11	RM A151 - REF	20 A	1			1.2	0.5	1	20 A	RM A153 - E RACEWAY RECEPS	12
13	RM A153 - E RACEWAY RECEPS	20 A	1	0.5							14
15	--	20 A	1		0.0			2	20 A	SPARE	16
17	SPARE	20 A	1			0.0	0.0	--	--	--	18
19	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	20
21	SPARE	20 A	1		0.0	0.0		1	20 A	SPARE	22
23	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	24
25	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	26
27	SPARE	20 A	1		0.0	0.0		1	20 A	SPARE	28
29	SPARE	--	--			0.0	--	1	--	SPACE	30
31	SPACE	--	1	--	--			1	--	SPACE	32
33	SPACE	--	1		--	--		1	--	SPACE	34
35	SPACE	--	1			--	--	1	--	SPACE	36
37	SPACE	--	1	--	--			1	--	SPACE	38
39	SPACE	--	1		--	--		1	--	SPACE	40
41	SPACE	--	1			--	--	1	--	SPACE	42
Total Load:				2.9 kVA	1.2 kVA	3.7 kVA					

Total Connected Load (kVA): 7.9 kVA
Total Connected Load (Amps): 21.9 A

Remarks:

Branch Panel: RP-1JJ

Location: CORRIDOR A140E
Supplied From: PP-1N
Mounting: Surface
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 225 A

General Panel Comments:
A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
3	RM 103B - CSP L6-20R - REMARK #2	20 A	2	0.1	0.1			2	15 A	RM 103B - L6-15 - REMARK #1	2
		--	--		0.1	0.1		--	--		4
5	RMS 103B, 103C, 103D - CONV. RECEPS	20 A	1			1.2	0.7	1	20 A	RM 103C - RACEWAY RECEPS	6
7	RM 103C - RACEWAY RECEPS	20 A	1	0.7	0.7			1	20 A	RM 103D - RACEWAY RECEPS	8
9	RM 103D - RACEWAY RECEPS	20 A	1		0.7	0.4		1	20 A	RM 103B - RACEWAY AGILENT 6500	10
11	RM 103B - RACEWAY RECEPS - UHPLC	20 A	1			0.4	0.0	1	20 A	SPARE	12
13	SPARE	20 A	1	0.0	0.0			3	30 A	SPARE	14
15	RM 103B - CSP L6-20R - REMARK #2	20 A	2		0.1	0.0		--	--		16
17	--	--	--			0.1	0.0	--	--		18
19	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	20
21	SPARE	20 A	1	0.0	0.0			1	20 A	SPARE	22
23	RM 103B - E RACEWAY RECEPS	20 A	1			0.9	0.7	1	20 A	RM 103B - E RACEWAY RECEPS	24
25	RM 103B - S RACEWAY RECEPS	20 A	1	0.7	0.7			1	20 A	RM 103B - S RACEWAY RECEPS	26
27	RM 103B - CSP EQUIP RECEP	20 A	1		1.0	0.1		2	15 A	RM 103B - L6-15R - AGILENT 6500	28
29	RM 103B - CSP EQUIP RECEP	20 A	1			1.0	0.1	--	--		30
31	SPARE	20 A	1	0.0	0.0			2	30 A	SPARE	32
33	SPARE	20 A	1		0.0	0.0		--	--		34
35	RM 103B - E RACEWAY L6-30R	30 A	2			0.1	0.0	2	30 A	SPARE	36
37	--	--	--	0.1	0.0			--	--		38
39	RM 103B - S RACEWAY L6-30R	30 A	2		0.1	0.0		2	30 A	SPARE	40
41	--	--	--			0.1	0.0	--	--		42
Total Load:				3.2 kVA	2.5 kVA	5.3 kVA					

Total Connected Load (kVA): 10.9 kVA
Total Connected Load (Amps): 30.4 A

Remarks:
1. REMOVE EXISTING 2P 30A BREAKER, PROVIDE NEW 2P, 15A BREAKER. NEW BREAKERS SHALL MATCH AIC RATING OF EXISTING BREAKERS.
2. REMOVE EXISTING 2P 30A BREAKER, PROVIDE NEW 2P, 20A BREAKER. NEW BREAKERS SHALL MATCH AIC RATING OF EXISTING BREAKERS.

Branch Panel: RP-1LL

Location: CORRIDOR A140E
Supplied From: PP-1N
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 225 A

General Panel Comments:
A.EXISTING PANEL, ALL BREAKERS IN THIS PANEL SHALL BE REPLACED AS PART OF THE PROJECT NEW BREAKERS SHALL BE TYPE QOB-VH FOR AIC COMPLIANCE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
1	RMS 102, 102A, 104, 151A, 153 TASK...	20 A	1	0.5	0.9			1	20 A	RM 102A - RACEWAY RECEPS	2
3	RM 102A - RACEWAY RECEPS	20 A	1		0.7	0.4		1	20 A	RM 102 - N WORKSTATION RECEP	4
5	RMS 102, 102A - CONV. RECEPS	20 A	1			0.8	0.4	1	20 A	RM 102 - N WORKSTATION RECEP	6
7	RM 102 - N WATER POLISHER	20 A	1	0.2	0.5			1	20 A	RM 102 - E RACEWAY RECEPS	8
9	RM 102 - E RACEWAY RECEPS	20 A	1		0.5	0.4		1	20 A	RM 102 - C WORKSTATION RECEP	10
11	RM 102 - S WATER POLISHER	20 A	1			0.2	0.4	1	20 A	RM 102 - C WORKSTATION RECEP	12
13	RM 102 - HVAC CNTRL XFRMR	20 A	1	0.5	0.0			1	20 A	SPARE	14
15	SPARE	20 A	1		0.0	0.6		2	15 A	RM 102A - L6-15R - ROUGH PUMP	16
17	SPARE	20 A	1			0.0	0.6	--	--	--	18
19	SPARE	20 A	1	0.0	0.6			2	15 A	RM 102A - L6-15R - SCIEEX 6500	20
21	RM 102A - L6-15R - SCIEEX 6500	15 A	2		0.6	0.6		--	--	--	22
23	--	--	--			0.6	0.6	2	15 A	RM 102A - L6-15R - ROUGH PUMP	24
25	RM 102A - L6-15R - ROUGH PUMP	15 A	2	0.6	0.6			--	--	--	26
27	--	--	--		0.6	0.6		2	15 A	RM 102A - L6-15R - ROUGH PUMP	28
29	RM 102 - N CRYOFRIDGE DISCONNECT	30 A	2			2.0	0.6	--	--	--	30
31	--	--	--	2.0	0.0			1	20 A	SPARE	32
33	RM 102 - N HX DISCONNECT	30 A	2		2.2	0.0		2	30 A	SPARE	34
35	--	--	--			2.2	0.0	--	--	--	36
37	RM 102 - N SOLARIX PWR CNDTIONER	60 A	3	3.9	--			3	--	SPACE	38
39	--	--	--		3.9	--		--	--	--	40
41	--	--	--			3.9	--	--	--	--	42
Total Load:				10.3 kVA	11.1 kVA	12.2 kVA					

Total Connected Load (kVA): 33.6 kVA
Total Connected Load (Amps): 93.3 A

Remarks:

Branch Panel: RP-1KK

Location: CORRIDOR A140E
Supplied From: PP-1N
Mounting: Surface
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 225 A

General Panel Comments:
A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
1	SPARE	20 A	2	0.0	0.1			2	20 A	RM 103 - CSP L6-30R	2
3	--	--	--		0.0	0.1		--	--	--	4
5	RM 103 - N HOOD	20 A	1			1.2	1.2	1	20 A	RM 103 - S HOOD	6
7	RM 103 - NW WATER POLISHER	20 A	1	0.2	0.2			1	20 A	RM 103 - NE WATER POLISHER	8
9	RM 103 - S WATER POLISHER	20 A	1		0.2	1.2		1	20 A	RM 103 - CONV. RECEPS	10
11	RM 103 - NW RACEWAY RECEPS	20 A	1			0.9	0.7	1	20 A	RM 103 - NW RACEWAY RECEPS	12
13	RM 103 - NE RACEWAY RECEPS	20 A	1	0.9	0.7			1	20 A	RM 103 - NE RACEWAY RECEPS	14
15	RM 103 - S RECEP	20 A	1		0.4	0.2		1	20 A	RM 103 - S VAC PUMP	16
17	RM 103 - N VAC PUMP	20 A	1			0.2	0.8	1	20 A	RM 103 - CSP BENCH RECEP	18
19	RM 103 - CSP BENCH RECEP	20 A	1	0.8	0.8			1	20 A	RM 103 - CSP BENCH RECEP	20
21	RM 103 - CSP BENCH RECEP	20 A	1		0.8	0.8		1	20 A	RM 103 - CSP BENCH RECEP	22
23	RM 103 - CSP BENCH RECEP	20 A	1			0.8	0.2	1	20 A	RM 103 - HOUSE VAC PUMP	24
25	RMS 103, 105 - HVAC CNTRL XFMR	20 A	1	1.0	0.5			1	20 A	Miscellaneous	26
27	SPARE	30 A	2		0.0	0.0		1	20 A	SPARE	28
29	--	--	--			0.0	0.0	1	20 A	SPARE	30
31	SPARE	30 A	2	0.0	0.0			2	30 A	SPARE	32
33	--	--	--		0.0	0.0		--	--	--	34
35	SPARE	20 A	1			0.0	0.0	1	20 A	SPARE	36
37	SPARE	30 A	2	0.0	0.0			1	20 A	SPARE	38
39	--	--	--		0.0	0.0		1	20 A	SPARE	40
41	SPACE	--	1					--	1	SPACE	42
		Total Load:		5.2 kVA	3.7 kVA	6.0 kVA					

Branch Panel: RP-1V

Location: CORRIDOR A199A
Supplied From: PP-1S
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 150 A

General Panel Comments:

A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number
1	RMS A122, A140C, A140B - CONV....	20 A	1	1.4	0.2			1	20 A RM A140C - REF	2
3	RM A140C - REF	20 A	1		0.2	0.2		1	20 A RM A140C - REF	4
5	RM A122 - RECEPS	20 A	1			1.1	0.2	1	20 A RM A140C - WATER POLISHER	6
7	RM A140C - RACEWAY RECEPS	20 A	1	0.7	0.5			1	20 A RM A140C - RACEWAY RECEPS	8
9	RM A140B - RACEWAY RECEPS	20 A	1		0.5	0.7		1	20 A RM A140B - RACEWAY RECEPS	10
11	RM A140B - RACEWAY RECEPS	20 A	1			0.7	0.2	1	20 A RM A140B - WATER POLISHER	12
13	SPARE	30 A	3	0.0	1.0			1	20 A RM A140B - CSP EQUIP RECEP	14
15	--	--	--		0.0	1.0		1	20 A RM A140B - CSP EQUIP RECEP	16
17	--	--	--			0.0	0.1	2	20 A RM A140B - W RACEWAY L6-30R	18
19	SPARE	15 A	3	0.0	0.1			--	--	20
21	--	--	--		0.0	0.0		2	15 A SPARE	22
23	--	--	--			0.0	0.0	--	--	24
25	RM A140B - CSP L6-30R	30 A	2	0.1	0.5			1	20 A RM A140 - HVAC CNTRL XFRMR	26
27	--	--	--		0.1	0.0		3	30 A SPARE	28
29	RM A140 - TASK LIGHTING RECEPS	20 A	1			0.9	0.0	--	--	30
31	SPARE	30 A	3	0.0	0.0			--	--	32
33	--	--	--		0.0	0.0		3	30 A SPARE	34
35	--	--	--			0.0	0.0	--	--	36
37	SPARE	30 A	3	0.0	0.0			3	30 A SPARE	38
39	--	--	--		0	0.5		1	20 A RM A140 - NAT GAS SHUTOFF	40
41	--	--	--					--	--	42
Total Load:				4.5 kVA	3.2 kVA	3.1 kVA				

Total Connected Load (kVA): 10.8 kVA
Total Connected Load (Amps): 30.1 A

Remarks:

Branch Panel: RP-1R

Location: CORRIDOR A140G
Supplied From: PP-1S
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 150 A

General Panel Comments:

A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number		
1	RMS A140, A142 RECEPS	20 A	1	1.3	0.7		1	20 A	RM A142 - N RACEWAY RECEPS	2		
3	RM A142 - S WALL RECEPS	20 A	1		1.1	0.9		1	20 A	RM A140 - RACEWAY RECEPS	4	
5	RM A140 - CW WATER POLISHER	20 A	1			0.2	0.7	1	20 A	RM A140 - RACEWAY RECEPS	6	
7	RM A140 - CE WATER POLISHER	20 A	1	0.2	0.2			1	20 A	RM A142 - N RACEWAY REF	8	
9	RM A140 - U/C QUAD	20 A	1		0.4	1.2		1	20 A	RM A140 - HOOD	10	
11	RM A140 - RACEWAY RECEPS	20 A	1				0.9	0.4	1	20 A	RM A140 - U/C QUAD	12
13	RM A140 - HOOD - REMARK #1	20 A	1	1.2	0.7			1	20 A	RM A140 - RACEWAY RECEPS	14	
15	RM A140 - WATER POLISHER - REMARK #1	20 A	1		0.2	0.7		1	20 A	RM A140 - RACEWAY RECEPS	16	
17	RM A140 - VACUUM PUMP - REMARK #1	20 A	1			1.2	1.2	1	20 A	RM A140 - HOOD	18	
19	RM A140 - VACUUM PUMP - REMARK #1	20 A	1	1.2	1.2			1	20 A	RM A140 - HOOD	20	
21	RM A140 - VACUUM PUMP - REMARK #1	20 A	1		1.2	0.8		1	20 A	RM A140 - CSP BENCH RECEP	22	
23	RM A140 - VACUUM PUMP - REMARK #1	20 A	1			1.2	0.8	1	20 A	RM A140 - CSP BENCH RECEP	24	
25	W HOUSE VAC PUMP - REMARK #1	20 A	1	1.2	0.8			1	20 A	RM A140 - CSP BENCH RECEP	26	
27	SPARE - REMARK #1	20 A	1		0.0	0.8			1	20 A	RM A140 - CSP BENCH RECEP	28
29	SPARE - REMARK #1	20 A	1			0.0	0.7	1	20 A	RM A140 - NC RACEWAY RECEPS	30	
31	RM A140 - NC RACEWAY RECEPS	20 A	1	0.7	0.0			3	30 A	SPARE	32	
33	RM A140 - NC RACEWAY RECEPS	20 A	1		0.7	0.0		--	--	--	34	
35	RM A142 - N RACEWAY RECEPS	20 A	1			0.7	0.0	--	--	--	36	
37	SPARE	30 A	3	0.0	0.0			3	30 A	SPARE	38	
39	--	--	--		0.0	0.0		--	--	--	40	
41	--	--	--			0.0	0.0	--	--	--	42	
Total Load:				9.4 kVA	8.0 kVA	8.1 kVA						

Total Connected Load (kVA): 25.5 kVA
Total Connected Load (Amps): 70.9 A

Remarks:

1. REMOVE 3 POLE BREAKER IN THIS LOCATION, PROVIDE NEW 120V, 20A, 1PH BREAKERS TO SERVE NEW LOADS. ALL NEW BREAKERS SHALL MATCH AIC RATING OF EXISTING BREAKERS.

Branch Panel: RP-1N

Location: CONFERENCE ROOM A150
Supplied From: PP-1S
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 150 A

General Panel Comments:

A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles							Poles	Trip	Circuit Description	Circuit Number
1	RM A150A - RECEPS	20 A	1	1.2	1.2					1	20 A	RM A150B - RECEPS	2
3	RM A150C - RECEPS	20 A	1			1.2	0.8			1	20 A	RM A150 - S RECEPS	4
5	RM A150 - N RECEPS	20 A	1					1.0	0.0	1	20 A	SPARE	6
7	SPARE	20 A	1	0.0	0.0					1	20 A	SPARE	8
9	SPARE	20 A	1			0.0	0.0			1	20 A	SPARE	10
11	SPARE	20 A	1					0.0	0.0	1	20 A	SPARE	12
13	SPARE	20 A	1	0.0	0.0					1	20 A	SPARE	14
15	SPARE	20 A	1			0.0	0.0			1	20 A	SPARE	16
17	SPARE	20 A	1					0.0	0.0	1	20 A	SPARE	18
19	SPARE	20 A	1	0.0	0.0					1	20 A	SPARE	20
21	SPARE	20 A	1			0.0	--			1	--	SPACE	22
23	SPACE	--	1					--	--	1	--	SPACE	24
25	SPACE	--	1	--	--					1	--	SPACE	26
27	SPACE	--	1			--	--			1	--	SPACE	28
29	SPACE	--	1					--	--	1	--	SPACE	30
31	SPACE	--	1	--	--					1	--	SPACE	32
33	SPACE	--	1			--	--			1	--	SPACE	34
35	SPACE	--	1					--	--	1	--	SPACE	36
37	SPACE	--	1	--	--					1	--	SPACE	38
39	SPACE	--	1			--	--			1	--	SPACE	40
41	SPACE	--	1							1	--	SPACE	42
Total Load:				2.4 kVA		2.0 kVA		1.0 kVA					

Total Connected Load (kVA): 5.4 kVA
Total Connected Load (Amps): 15.0 A

Remarks:

Branch Panel: PP-1W

Location: CORRIDOR A140H
Supplied From: XA
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 480/277 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 14,000
Main Type: MCB
Main Rating: 400 A

General Panel Comments:

A.EXISTING PANEL, BREAKERS SHOWN ARE EXISTING TO REMAIN, NO NEW LOADS FROM THIS PANEL. CAP CONDUITS STUBBED ABOVE CEILING FOR FUTURE USE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A			B		C		Poles	Trip	Circuit Description	Circuit Number
1	SPARE	60 A	3	0.0	0.0						3	60 A	SPARE	2
3	--	--	--			0.0	0.0				--	--	--	4
5	--	--	--						0.0	0.0	--	--	--	6
7	SPARE	60 A	3	0.0	0.0						3	60 A	SPARE	8
9	--	--	--				0.0	0.0			--	--	--	10
11	--	--	--						0.0	0.0	--	--	--	12
13	SPACE	--	1	--	0.0						1	20 A	SPARE	14
15	SPACE	--	1			--	0.0				1	20 A	SPARE	16
17	SPACE	--	1					--	0.0		1	20 A	SPARE	18
19	SPACE	--	1	--	0.0						1	20 A	SPARE	20
21	SPACE	--	1			--	0.0				1	20 A	SPARE	22
23	SPACE	--	1					--	0.0		1	20 A	SPARE	24
25	SPACE	--	1	--	0.0						1	20 A	SPARE	26
27	SPACE	--	1			--	0.0				1	20 A	SPARE	28
29	SPACE	--	1					--	0.0		1	20 A	SPARE	30
31	SPACE	--	1	--	0.0						1	20 A	SPARE	32
33	SPACE	--	1			--	0.0				1	20 A	SPARE	34
35	SPACE	--	1					--	0.0		1	20 A	SPARE	36
37	SPACE	--	1	--	0.0						1	20 A	SPARE	38
39	SPACE	--	1				--	0.0			1	20 A	SPARE	40
41	SPACE	--	1					--	0.0		1	20 A	SPARE	42
Total Load:				0.0 kVA	0.0 kVA	0.0 kVA								

Total Connected Load (kVA): 0.0 kVA
Total Connected Load (Amps): 0.0 A

Remarks:

Branch Panel: RP-1S

Location: CORRIDOR A140G
Supplied From: PP-1S
Mounting: Recessed
Enclosure Type: Type 1

Voltage: 120/208 Wye
Phase: 3
Wire: 4
Ground: YES

Branch: NORMAL
A.I.C. Rating: 10,000
Main Type: MCB
Main Rating: 150 A

General Panel Comments:

A.EXISTING PANEL, ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.
B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.
C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number	
1	RM A140 - VACUUM PUMP	20 A	1	1.2	0.5			1	20 A RM A140 - HVAC CNTRL XFRMR	2	
3	RM A140 - HOOD	20 A	1		1.2	1.2		1	20 A RM A140 - HOOD	4	
5	RM A140 - RACEWAY RECEPS	20 A	1				0.9	0.9	1	20 A RM A140 - RACEWAY RECEPS	6
7	RM A140 - RACEWAY RECEPS	20 A	1	0.7	0.4				1	20 A RM A140 - U/C QUAD	8
9	RM A140 - CSP BENCH RECEP	20 A	1		0.8	0.8			1	20 A RM A140 - CSP BENCH RECEP	10
11	RM A140 - CSP BENCH RECEP	20 A	1			0.8	0.8	1	20 A RM A140 - CSP BENCH RECEP	12	
13	SPARE	30 A	3	0.0	1.2			1	20 A RM A140 - HOOD	14	
15	--	--	--		0.0	0.2		1	20 A RM A140 - WATER POLISHER - REMARK #1	16	
17	--	--	--			0.0	1.2	1	20 A RM A140 - VACUUM PUMP - REMARK #1	18	
19	Receplace	20 A	2	0.1	1.2			1	20 A RM A140 - HOOD	20	
21	--	--	--		0.1	0.7		1	20 A RM A140 - RACEWAY RECEPS	22	
23	RM A140 - VACUUM PUMP - REMARK #1	20 A	1			1.2	0.7	1	20 A RM A140 - RACEWAY RECEPS	24	
25	RM A140 - VACUUM PUMP - REMARK #1	20 A	1	1.2	0.0			2	20 A SPARE	26	
27	SPARE	30 A	3		0.0	0.0		--	--	28	
29	--	--	--				0.0	0.4	1	20 A RM A140 - U/C QUAD	30
31	--	--	--	0.0	0.0			1	20 A SPARE	32	
33	SPARE	20 A	1		0.0	0.0		1	20 A SPARE	34	
35	SPARE	20 A	3			0.0	0.0	3	20 A SPARE	36	
37	--	--	--	0.0	0.0			--	--	38	
39	--	--	--		0.0	0.0		--	--	40	
41	SPACE	--	1			--	--	1	SPACE	42	
Total Load:				6.5 kVA	5.0 kVA	6.9 kVA					

Total Connected Load (kVA): 18.4 kVA
Total Connected Load (Amps): 51.2 A

Remarks:

1. REMOVE 3 POLE BREAKER IN THIS LOCATION, PROVIDE NEW 120V, 20A, 1PH BREAKERS IN SPACES MADE AVAILABLE. NEW BREAKERS SHALL MATCH AIC R



BSA LifeStructures
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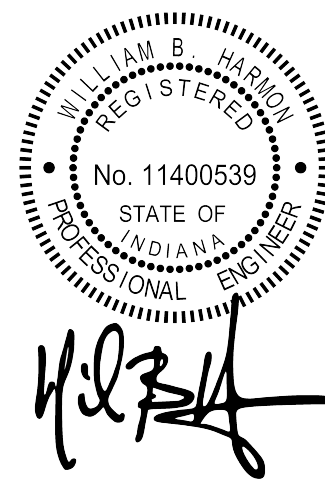
IUB RESEARCH LAB RENOVATIONS

BL072 CHEMISTRY
300 E KIRKWOOD AVE, BLOOMINGTON, IN 47405
BL027 SWAIN WEST
729 E 3RD ST, BLOOMINGTON, IN 47405
BL070 SIMON HALL
12 S HAWTHORNE DR, BLOOMINGTON, IN 47405

CLIENT PROJECT NO. - 20240397

BIDDING SET JANUARY 9, 2025

MARK	DATE	DESCRIPTION
1	1/27/25	ADDENDUM #2



CHEMISTRY PANEL SCHEDULES - SECOND FLOOR

DATE: JANUARY 9, 2025
BSALS PROJECT NO. 00360477

E604

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Branch Panel: RP-2Q

Location: PP-2N

Supplied From: PP-2N

Mounting: Recessed

Enclosure Type: Type 1

Voltage: 120/208 Wye

Phase: 3

Wire: 4

Ground: YES

Branch: NORMAL

A.I.C. Rating: 10,000

Main Type: MCB

Main Rating: 225 A

General Panel Comments:

A.EXISTING PANEL. ALL BREAKERS IN THIS PANEL SHALL BE REPLACED AS PART OF THE PROJECT. NEW BREAKERS SHALL BE TYPE QOB-VH FOR AIC COMPLIANCE.

B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number				
1	RM A252 - N WATER POLISHER	20 A	1	0.2	0.8				RM A252 - CSP BENCH RECEP	2				
3	RM A252 - RACEWAY RECEPS	20 A	1		0.7	0.8			RM A252 - CSP BENCH RECEP	4				
5	RM A252 - RACEWAY RECEPS	20 A	1			0.7	0.8		RM A252 - CSP BENCH RECEP	6				
7	RM A252 - RACEWAY RECEPS	20 A	1	0.7	0.8				RM A252 - CSP BENCH RECEP	8				
9	RM A252 - CONV. RECEPS	20 A	1		0.6	0.8			RM A252 - CSP BENCH RECEP	10				
11	RM A252 - CSP BENCH RECEP	20 A	1			0.8	0.8		RM A252 - CSP BENCH RECEP	12				
13	RM A252 - CSP BENCH RECEP	20 A	1	0.8	0.8				RM A252 - CSP BENCH RECEP	14				
15	RM A252 - CSP BENCH RECEP	20 A	1		0.8	0.8			RM A252 - CSP BENCH RECEP	16				
17	RM A252 - CSP BENCH RECEP	20 A	1			0.8	0.8		RM A252 - CSP BENCH RECEP	18				
19	RM A252 - RACEWAY L6-30R	30 A	2	0.1	0.1				RM A252 - CSP L6-30R	20				
21	--	--	--	--	0.1	0.1			--	22				
23	RM A252 - WATER POLISHER	20 A	1	0.0	0.1		0.3	0.8	RM A252 - CSP BENCH RECEP	24				
25	RM A252 - WATER SHUT OFF VALVE	20 A	1						RM A252 - CSP L6-30R	26				
27	--	--	--	--	0.0	0.1		--	--	28				
29	SPARE	20 A	1				0.0	0.2	RM A252 - GAS MANIFOLD POWER	30				
31	SPARE	20 A	1	0.0	0.0				SPARE	32				
33	SPARE	20 A	1		0.0	0.0			SPARE	34				
35	SPACE	--	1				--	--	SPACE	36				
37	SPACE	--	1	--	--				SPACE	38				
39	SPACE	--	1		--	--			SPACE	40				
41	SPACE	--	1			--	--	1	SPACE	42				
Total Load:				4.4 kVA	4.8 kVA	6.0 kVA								
Total Connected Load (kVA):				15.2 kVA										
Total Connected Load (Amps):				42.3 A										
Remarks:														

Branch Panel: RP-2R

Location: PP-2N

Supplied From: PP-2N

Mounting: Recessed

Enclosure Type: Type 1

Voltage: 120/208 Wye

Phase: 3

Wire: 4

Ground: YES

Branch: NORMAL

A.I.C. Rating: 10,000

Main Type: MCB

Main Rating: 225 A

General Panel Comments:

A.EXISTING PANEL. ALL BREAKERS SHOWN ARE EXISTING TO REMAIN AND SHALL BE RE-USED AS INDICATED UNLESS NOTED OTHERWISE.

B.NOTIFY EOR OF ANY LOADS SERVED BY THIS PANEL OUTSIDE THE SCOPE OF WORK.

C.TURN OFF AND RELABEL ALL BREAKERS NOT RE-USED AS SPARE.

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number				
1	RM A252 - WATER POLISHER	20 A	1	0.2	0.0				RM A252 - HOOD	2				
3	RM A252 - WATER POLISHER	20 A	1			0.2	0.7		RM A252 - RACEWAY RECEPS	4				
5	RM A252 - VACUUM PUMP	20 A	1			1.2	0.7		RM A252 - RACEWAY RECEPS	6				
7	RM A252 - VACUUM PUMP	20 A	1	1.2	0.7				RM A252 - RACEWAY RECEPS	8				
9	RM A252 - S WATER POLISHER	20 A	1		0.2	0.7			RM A252 - RACEWAY RECEPS	10				
11	RM A252 - CONV. RECEPS, SHWR.	20 A	1			0.4	0.7		RM A252 - RACEWAY RECEPS	12				
13	RM A252 - E RACEWAY RECEPS	20 A	1	0.7	0.7				RM A252 - RACEWAY RECEPS	14				
15	RM A252 - E RACEWAY RECEPS	20 A	1		0.7	0.5			RM A252 - S RACEWAY RECEPS	16				
17	RM A252 - HOOD	20 A	1			0.0	0.5		RM A252 - S RACEWAY RECEPS	18				
19	RM A252 - HOOD	20 A	1	0.0	0.0				RM A252 - HVAC CNTRL XFRMR	20				
21	RM A252 - HOOD	20 A	1		0.0	0.0			SPARE	22				
23	RM A252 - RACEWAY L6-30R	20 A	2				0.1	0.0	--	24				
25	--	--	--	0.1	0.0				30 A SPARE	26				
27	SPARE	30 A	2	--	--	0.0	0.0		--	28				
29	--	--	--	--	--	0.0	0.0	2	30 A SPARE	30				
31	RM A252 - DDC PANEL	20 A	1	0.0	0.0			--	--	32				
33	RM A252 - VACUUM PUMP	20 A	1		1.2	1.2			RM A252 - VACUUM PUMP	34				
35	Receptacle	20 A	1			1.2	0.0	1	20 A SPARE	36				
37	SPACE	--	1	--	--				SPACE	38				
39	SPACE	--	1		--	--		1	SPACE	40				
41	SPACE	--	1			--	--	1	SPACE	42				
Total Load:				3.7 kVA	5.5 kVA	4.9 kVA								
Total Connected Load (kVA):				14.0 kVA										
Total Connected Load (Amps):				38.9 A										
Remarks:														

Branch Panel: RP-2C1

Location: ELEC A205

Supplied From:

Mounting: Surface

Enclosure Type: Type 1

Voltage: 120/208 Wye

Phase: 3

Wire: 4

Ground: YES

Branch:

A.I.C. Rating:

Main Type: MCB

Main Rating: 100 A

General Panel Comments:

Circuit Number	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	Circuit Number				
1	RM A251 - RECEPS	20 A	1	1.1	1.1		1	20 A	RM A251 - RECEPS	2				
3	RM A251 - CONV. RECEPS	20 A	1		1.0	0.8		1	20 A RM A251 - RECEPS	4				
5	RM A251 - REFRIGERATOR	20 A	1			1.2	1.0	1	20 A RM A251 - MICROWAVE	6				
7	RM A251 - MICROWAVE	20 A	1	1.0						8				
9										10				
11										12				
13										14				
15										16				
17										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:				3.2 kVA	1.8 kVA	2.2 kVA								
Total Connected Load (kVA):				7.2 kVA										
Total Connected Load (Amps):				19.9 A										
Remarks:														