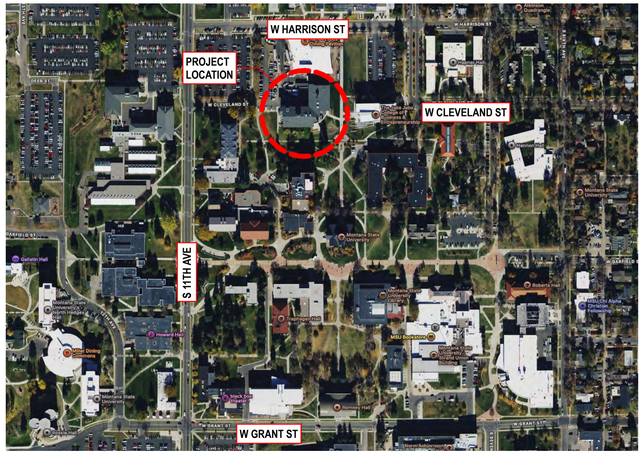
CHEMISTRY BUILDING ROOM 123 - AUTOCLAVE REPLACEMENT

PPA NO. 24-1115 MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA ISSUED FOR BID 07-02-2025

a118 architecture one eighteen

TD&H Engineering



NORTH

1 **CAMPUS VICINITY MAP - LOCATION OF CHEMISTRY BUILDING**
NOT TO SCALE

PROJECT SEQUENCING REQUIREMENTS

1. WORK NOT AFFECTING EXISTING AUTOCLAVE USE AND OPERATION CAN BE PERFORMED AT ANY TIME BETWEEN "NOTICE TO PROCEED" AND "SUBSTANTIAL COMPLETION" DATES INDICATED IN THE PROJECT MANUAL, WITHIN OTHER CONSTRAINTS INDICATED HEREIN.
2. EXISTING AUTOCLAVES TO BE LEFT IN PLACE AND FUNCTIONAL AS LONG AS POSSIBLE. DEMOLITION TO START NO EARLIER THAN MAY 15, 2026 AND NO EARLIER THAN ONE MONTH BEFORE NEW AUTOCLAVES WILL BE ON SITE.
3. NEW AUTOCLAVES MUST BE INSTALLED AND FUNCTIONAL BEFORE SEPTEMBER 4, 2026.
4. REMAINDER OF WORK (WALL MODIFICATIONS, FINISHES, ETC.) TO BE COMPLETED BY THE DATE INDICATED IN THE PROJECT MANUAL.
5. OUTAGE FOR NEW CONNECTION TO STEAM PIPING MAIN IN PENTHOUSE TO OCCUR DURING WARM WEATHER WHEN AIR HANDLING UNITS DO NOT REQUIRE HEATING (ABOVE 45˚F).
6. ELECTRICAL OUTAGES (FOR OTHER THAN AUTOCLAVE SYSTEMS) TO BE COORDINATED WITH OWNER. THIS MAY REQUIRE SCHEDULING DURING A BREAK WHEN CLASSES ARE NOT IN SESSION OR OTHER TIME TO MINIMIZE IMPACT ON OCCUPANTS.

GENERAL NOTES - PROJECT:

A. ALL CONSTRUCTION AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH APPLICABLE CODES, GOVERNMENTAL AGENCIES, AND LOCAL DESIGN CRITERIA, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   - **INTERNATIONAL EXISTING BUILDING CODE, 2021 EDITION**
   - **ICC A117.1 – ACCESSIBILITY, 2017 EDITION**
   - **INTERNATIONAL ENERGY CONSERVATION CODE, 2021 EDITION (PENDING COMCHECK)**
   - **INTERNATIONAL FIRE CODE, 2021 EDITION**
   - **INTERNATIONAL MECHANICAL CODE, 2021 EDITION**
   - **UNIFORM PLUMBING CODE, 2021 EDITION**
   - **INTERNATIONAL FUEL GAS CODE, 2021 EDITION**
   - **NATIONAL ELECTRICAL CODE, 2020 EDITION**

B. ANY AMBIGUITIES OR DISCREPANCIES DISCOVERED BY THE USE OF THESE DRAWINGS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY.

C. CHANGES OR DEVIATIONS FROM THE CONTRACT DOCUMENTS MADE WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT ARE UNAUTHORIZED. COORDINATE NECESSARY MODIFICATIONS WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

D. IN THIS ARCHITECTURAL PLAN SET, WALL DIMENSIONS ARE TYPICALLY TO THE FACE OF CONCRETE, FACE OF MASONRY, OR FACE OF FRAMING. COLUMN, PIER, AND DOOR AND WINDOW DIMENSIONS ARE TYPICALLY TO THE CENTERLINE OF THE ELEMENT OR UNIT. GENERAL CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.

E. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY AND SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO ENSURE THE HEALTH AND SAFETY OF THEIR EMPLOYEES, SUBCONTRACTORS, BUILDING OCCUPANTS, PEDESTRIANS NEAR THE CONSTRUCTION SITE AND ACCESS ROUTES, AND ALL OTHER PERSONS IN AREAS AFFECTED BY THE CONTRACTOR'S CONSTRUCTION ACTIVITIES. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

F. THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO SAFETY WHILE WORKING NEAR BUILDING ENTRANCES / EXITS. UNLESS DIRECTED OTHERWISE, ALL BUILDING ENTRANCES / EXITS ARE TO REMAIN OPEN AND ACCESSIBLE TO BUILDING OCCUPANTS DURING THE COURSE OF THE PROJECT. SPECIAL PROTECTION MEASURES MAY BE REQUIRED.

G. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SCHEDULING OF ALL REQUIRED INSPECTIONS DURING THE COURSE OF THE CONSTRUCTION PROJECT. PARTIES REQUIRED TO ATTEND SHOULD BE GIVEN A MINIMUM OF TWO WORKING DAYS NOTICE.

H. CONTRACTOR TO COORDINATE ALL MECHANICAL, ELECTRICAL, FIRE SUPPRESSION, FIRE ALARM, COMMUNICATIONS, AND OTHER UTILITY SHUT-DOWNS, AS WELL AS PUBLIC PATHWAY CLOSURES, WITH MSU PROJECT MANAGER AT LEAST 5 CALENDAR DAYS IN ADVANCE, PER MSU REQUIREMENTS.

GENERAL NOTES – CONSTRUCTION:

A. CONTRACTOR TO COMPLETE ALL CONSTRUCTION WORK IN A MANNER THAT MAINTAINS THE INTEGRITY OF ALL FIRE-RATED AND SMOKE-RATED ASSEMBLIES.

B. CONTRACTOR TO PROVIDE SOLID BLOCKING AS REQUIRED FOR THE ATTACHMENT OF ALL CASEWORK, MILLWORK, EQUIPMENT, TOILET PARTITIONS, AND SIMILAR INSTALLATIONS.

GENERAL NOTES - SITE / STAGING:

A. THE CONTRACTOR SHALL MINIMIZE INTERFERENCE WITH ADJOINING STREETS, SIDEWALKS, PARKING AREAS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT BLOCK STREETS, SIDEWALKS, OR ACCESS TO DUMPSTER LOCATIONS AT ANY TIME.

B. THE CONTRACTOR SHALL PROTECT EXISTING SITE IMPROVEMENTS AND LANDSCAPING FROM DAMAGE CAUSED BY CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL RESTORE EXISTING SITE IMPROVEMENTS AND LANDSCAPING DAMAGED BY CONSTRUCTION OPERATIONS AS DIRECTED BY THE ARCHITECT PRIOR TO SUBSTANTIAL COMPLETION.

C. THE CONTRACTOR SHALL PROTECT EXISTING BUILDINGS FROM DAMAGE, CONTAMINATION, AND SOILING CAUSED BY CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL KEEP BUILDING ENTRANCES, CORRIDORS, AND STAIRWELLS CLEAR OF CONSTRUCTION MATERIALS, TOOLS, AND EQUIPMENT AT ALL TIMES. THE CONTRACTOR SHALL RESTORE EXISTING BUILDINGS DAMAGED BY CONSTRUCTION OPERATIONS AS DIRECTED BY THE ARCHITECT PRIOR TO SUBSTANTIAL COMPLETION.

ABBREVIATIONS

THE FOLLOWING ARE GENERAL ABBREVIATIONS THAT MAY BE FOUND IN THE DRAWING SET. REFER TO VARIOUS SCHEDULES FOR ADDITIONAL ABBREVIATIONS THAT MAY BE FOUND IN THE SCHEDULES.

AB	= ANCHOR BOLT
ABV	= ABOVE
ADD	= ADDENDUM
ADJ	= ADJACENT
AFF	= ABOVE FINISHED FLOOR
ALT	= ALTERNATE
BLKG	= BLOCKING
BOB	= BOTTOM OF BEAM
BOD	= BASIS OF DESIGN
BRG	= BEARING
CAB	= CABINET
CJ	= CONTROL JOINT
CLR	= CLEAR
CMU	= CONCRETE MASONRY UNIT
COMP	= COMPOSITE
CONC	= CONCRETE
CONT	= CONTINUOUS
CPT	= CARPET
DEMO	= DEMOLITION
DF	= DRINKING FOUNTAIN
DIA	= DIAMETER
DF	= DRINKING FOUNTAIN
EIFS	= EXTERIOR INSULATION AND FINISH SYSTEM
EL	= ELEVATION
ELEC	= ELECTRICAL
EPS	= EXPANDED POLYSTYRENE
ETR	= EXISTING TO REMAIN
EW	= EACH WAY
FD	= FLOOR DRAIN
FDN	= FOUNDATION
FE	= FIRE EXTINGUISHER
FF	= FINISH FLOOR
FLR	= FLOOR
FS	= FLOOR SINK
FV	= FIELD VERIFY
GB	= GYPSUM BOARD
GC	= GENERAL CONTRACTOR
HC	= HANDICAPPED, ACCESSIBLE
HOR	= HORIZONTAL
HR	= HOUR
HVAC	= HEATING / VENTILATING / AIR CONDITIONING
ID	= INSIDE DIAMETER
INSUL	= INSULATION
JAN	= JANITOR
LAM	= LAMINATE
LAV	= LAVATORY
MAX	= MAXIMUM
MECH	= MECHANICAL
MFR	= MANUFACTURER
MIN	= MINIMUM
MISC	= MISCELLANEOUS
MS	= MANURACTURER'S STANDARD
NIC	= NOT IN CONTRACT
OC	= ON CENTER
OD	= OUTSIDE DIAMETER
OH	= OVERHEAD
OSB	= ORIENTED STRAND BOARD
PEMB	= PRE-ENGINEERED METAL BUILDING
PL	= PLATE
PVC	= POLYVINYLCHLORIDE
R	= RISER
RAD	= RADIUS
REQD	= REQUIRED
RO	= ROUGH OPENING
SCHED	= SCHEDULE
SF	= SQUARE FEET
SIM	= SIMILAR
SPECS	= SPECIFICATIONS
T	= TREAD
T&G	= TONGUE AND GROOVE
TOB	= TOP OF BEAM
TOC	= TOP OF CONCRETE
TOD	= TOP OF DECKING
TOF	= TOP OF FOOTING
TOPL	= TOP OF PLATE
TOPR	= TOP OF PIER
TOS	= TOP OF STEEL
TOSL	= TOP OF SLAB
TYP	= TYPICAL
UNO	= UNLESS NOTED OTHERWISE
VB	= VAPOR BARRIER
VERT	= VERTICAL
WC	= WATER CLOSET
WWF	= WELDED WIRE FABRIC
XPS	= EXTRUDED POLYSTYRENE

INDEX OF DRAWING SHEETS

SHEET	SHEET TITLE	DATE: ISSUED FOR BID - 02 JUL 25
CVR	COVER, PROJECT NOTES, INDEX OF DRAWING SHEETS	
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M1.1	MAIN FLOOR HVAC AND PIPING PLAN	
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M2.1	ENLARGED AUTOCLAVE PLANS	
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M4.0	MECHANICAL DETAILS	
M4.1	MECHANICAL DETAILS	
E0.1	ELECTRICAL LEGENDS AND SCHEDULES	
E1.1	ENLARGED ELECTRICAL PLAN	

BASIS OF DESIGN MFR'S / PRODUCTS:

GENERAL NOTES:

SUBSTITUTIONS WILL BE CONSIDERED, UNLESS NOTED OTHERWISE.

COLORS AND OTHER OPTIONS WILL BE SELECTED DURING THE SUBMITTAL PROCESS, UNLESS NOTED OTHERWISE.

ALL PRODUCTS AND PRODUCT SYSTEMS TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS OR RECOMMENDATIONS.

BOD = BASIS OF DESIGN

RTS = REFER TO STRUCTURAL

DIVISION 1: PROCUREMENT AND CONTRACTING REQUIREMENTS

NO REQUIREMENTS THIS DIVISION

DIVISION 2: EXISTING CONDITIONS

NO REQUIREMENTS THIS DIVISION

DIVISION 3: CONCRETE

NO REQUIREMENTS THIS DIVISION

DIVISION 4: MASONRY

NO REQUIREMENTS THIS DIVISION

DIVISION 5: METALS

NO REQUIREMENTS THIS DIVISION

DIVISION 6: WOOD, PLASTICS, AND COMPOSITES

NO REQUIREMENTS THIS DIVISION

DIVISION 7: THERMAL AND MOISTURE PROTECTION

NO REQUIREMENTS THIS DIVISION

DIVISION 8: OPENINGS

SECTION 083113 – ACCESS DOORS AND FRAMES

BOD MFR. / PRODUCT: KARP ASSOCIATES, INC., UNIVERSAL FIRE RATED ACCESS DOOR, MODEL KRP-150FR

DIVISION 9: FINISHES

SECTION 092216 – NON-STRUCTURAL METAL FRAMING

BOD MFR. / PRODUCT: SCAFCO STEEL STUD COMPANY, STUD SIZE AND GAUGE: REFER TO DRAWINGS

SECTION 092900 – GYPSUM BOARD

BOD MFR. / PRODUCT: GEORGIA-PACIFIC BUILDING PRODUCTS, DENSARMOR PLUS INTERIOR PANELS

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

THERMO-PLASTIC RUBBER BASE
BOD MFR. / PRODUCT: JOHNSONITE, STYLE B COVE, 4 INCH HIGH, 1/8 INCH THICKNESS, COLOR: TBD

SECTION 099123 – INTERIOR PAINTING

BOD MFR. / PRODUCT: SHERWIN-WILLIAMS, COLOR: TBD

DIVISION 10: SPECIALTIES

NO REQUIREMENTS THIS DIVISION

DIVISION 11: EQUIPMENT

NO REQUIREMENTS THIS DIVISION

DIVISION 12: FURNISHINGS

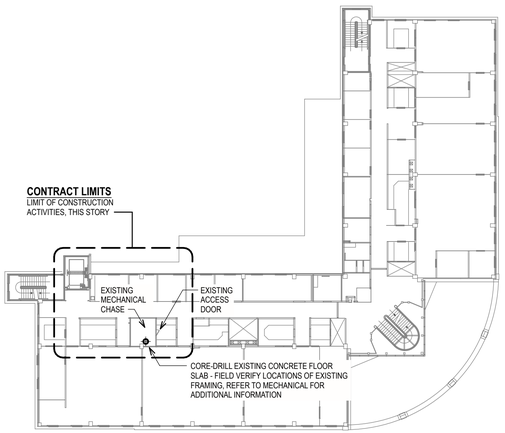
NO REQUIREMENTS THIS DIVISION

DIVISION 13: SPECIAL CONSTRUCTION

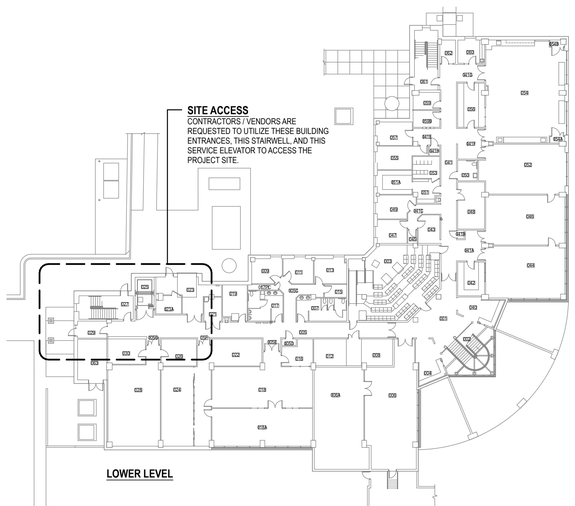
NO REQUIREMENTS THIS DIVISION

DIVISION 14: CONVEYING EQUIPMENT

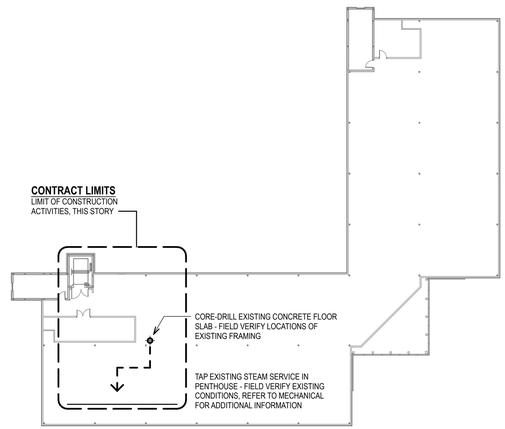
NO REQUIREMENTS THIS DIVISION



SECOND LEVEL



LOWER LEVEL

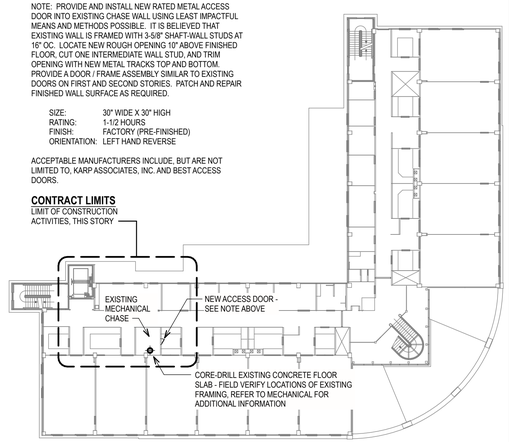


PENTHOUSE

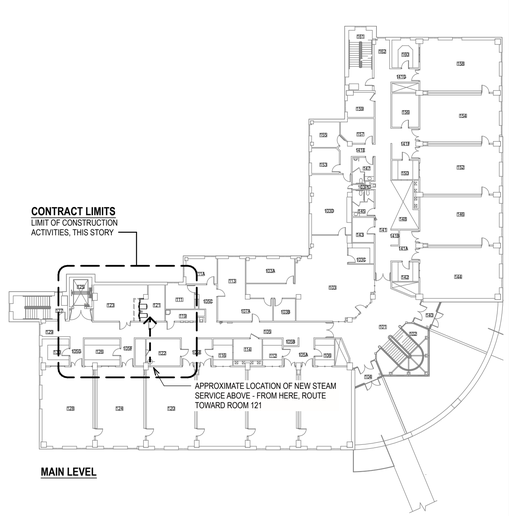
NOTE: PROVIDE AND INSTALL NEW RATED METAL ACCESS DOOR INTO EXISTING CHASE WALL USING LEAST IMPACTFUL MEANS AND METHODS POSSIBLE. IT IS BELIEVED THAT EXISTING WALL IS FRAMED WITH 3-5/8" SHAFT-WALL STUDS AT 16" OC. LOCATE NEW ROUGH OPENING 10" ABOVE FINISHED FLOOR, CUT ONE INTERMEDIATE WALL STUD, AND TRIM OPENING WITH NEW METAL TRACKS TOP AND BOTTOM. PROVIDE A DOOR / FRAME ASSEMBLY SIMILAR TO EXISTING DOORS ON FIRST AND SECOND STORIES. PATCH AND REPAIR FINISHED WALL SURFACE AS REQUIRED.

SIZE: 30" WIDE X 30" HIGH
RATING: 1-1/2 HOURS
FINISH: FACTORY (PRE-FINISHED)
ORIENTATION: LEFT HAND REVERSE

ACCEPTABLE MANUFACTURERS INCLUDE, BUT ARE NOT LIMITED TO, KARP ASSOCIATES, INC. AND BEST ACCESS DOORS.



THIRD LEVEL



MAIN LEVEL

NORTH

2 **BUILDING KEY PLANS - ALL LEVELS**
SCALE: 1" = 30'

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MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT
BOZEMAN, MONTANA

a118 architecture one eighteen

DRAWN BY: SS, AC, MV		
REVIEWED BY: SS, AC, MV		
REV.	DESCRIPTION	DATE

STATE OF MONTANA · BOZEMAN · SCOTT B. STROH # 1988 · JUNE 30, 2026 · LICENSED ARCHITECT

PPA # 24-1115

A/E # ....

A118 24-025

SHEET TITLE

SHEET
CVR

DATE
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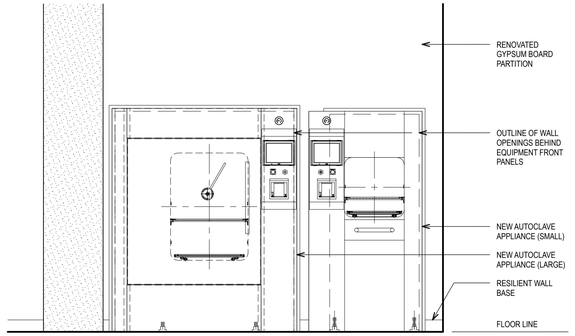
3 ACCESS DOOR
NOT TO SCALE

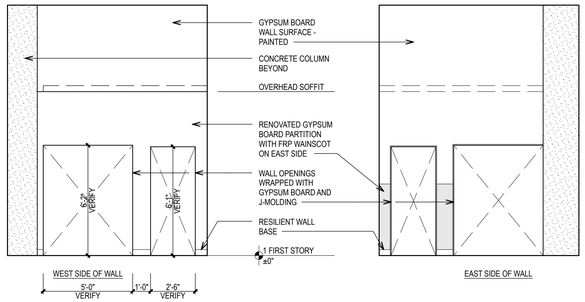
2A EXISTING AUTOCLAVES (FRONT)
NOT TO SCALE

2B EXISTING AUTOCLAVES (REAR)
SCALE: 1:10.50



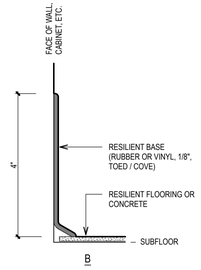
8 AUTOCLAVE ENLARGED ELEVATIONS
SCALE: 1/2" = 1'-0"

NOTE: THE AUTOCLAVES REPRESENTED IN THIS DETAIL ARE FROM PRIMUS (BASIS OF DESIGN).

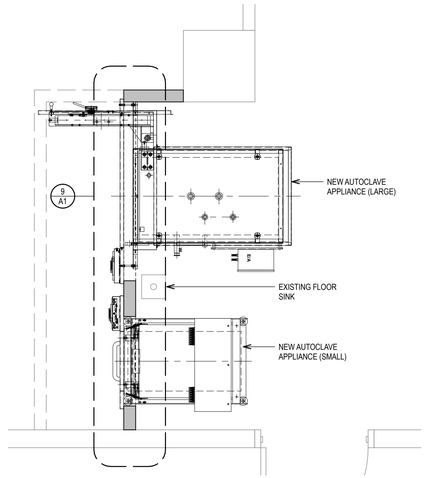


6 WALL BETWEEN ROOMS 121 AND 123
SCALE: 1/4" = 1'-0"

NOTE: THE CONDITIONS REPRESENTED IN THIS DETAIL ARE FROM PRIMUS EQUIP. (BASIS OF DESIGN)

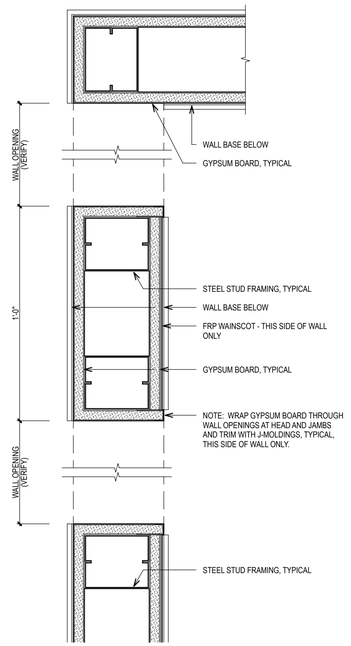


10 RESILIENT BASE
SCALE: 6" = 1'-0"



7 ENLARGED FLOOR PLAN
SCALE: 1/2" = 1'-0"

NOTE: THE AUTOCLAVES REPRESENTED IN THIS DETAIL ARE FROM PRIMUS (BASIS OF DESIGN).



9 WALL OPENINGS
SCALE: 3" = 1'-0"

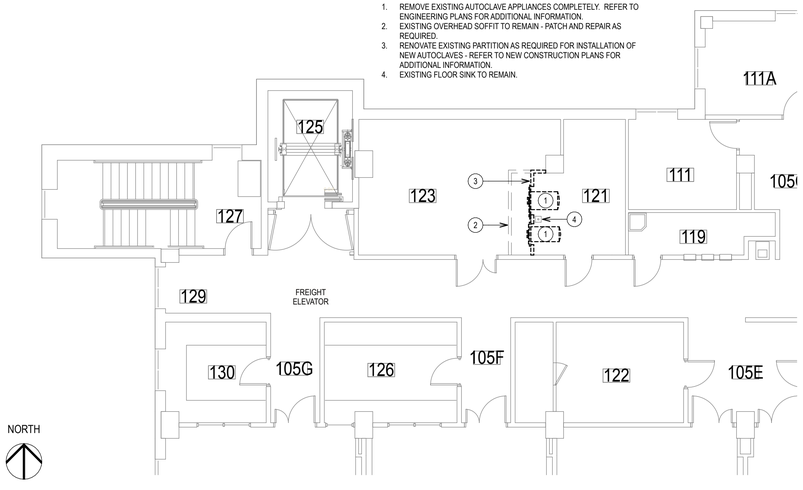
GENERAL NOTES - DEMOLITION

- PROTECT EXISTING CONSTRUCTION TO REMAIN. REFER TO DIVISION 2 SECTION SELECTIVE DEMOLITION FOR ADDITIONAL INFORMATION.
- THE FOLLOWING DEFINITIONS PERTAIN TO DEMOLITION WORK:

REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF OFF-SITE UNLESS INDICATED TO BE REMOVED AND SALVAGED OR REMOVED AND REINSTALLED.
REMOVE AND SALVAGE: DETACH ITEMS FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE, AND DELIVER TO OWNER AS INDICATED.
REMOVE AND REINSTALL: DETACH ITEMS FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE, PREPARE FOR REUSE; AND REINSTALL WHERE INDICATED.
EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE REMOVED.

KEY NOTES - DEMOLITION

1. REMOVE EXISTING AUTOCLAVE APPLIANCES COMPLETELY. REFER TO ENGINEERING PLANS FOR ADDITIONAL INFORMATION.
2. EXISTING OVERHEAD SOFFIT TO REMAIN - PATCH AND REPAIR AS REQUIRED.
3. RENOVATE EXISTING PARTITION AS REQUIRED FOR INSTALLATION OF NEW AUTOCLAVES - REFER TO NEW CONSTRUCTION PLANS FOR ADDITIONAL INFORMATION.
4. EXISTING FLOOR SINK TO REMAIN.



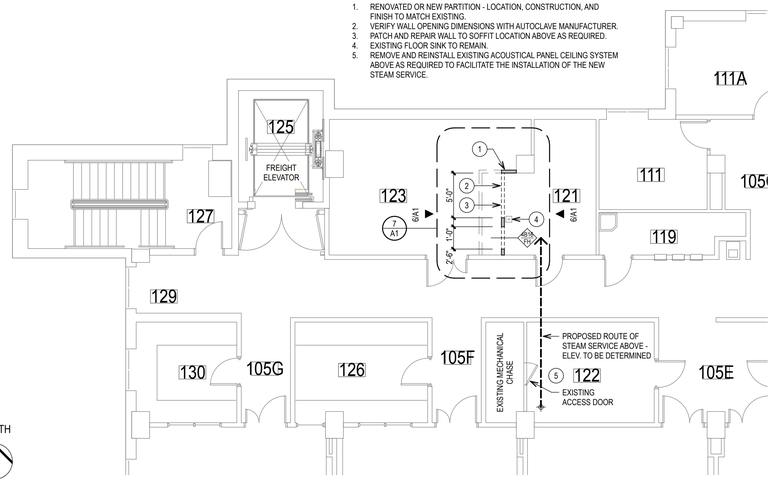
1 MAIN LEVEL FLOOR PLAN - DEMOLITION
SCALE: 1/8" = 1'-0"

GENERAL NOTES - NEW CONSTRUCTION

- PROTECT EXISTING CONSTRUCTION TO REMAIN. REFER TO DIVISION 2 SECTION SELECTIVE DEMOLITION FOR ADDITIONAL INFORMATION.
- REFER TO MECHANICAL FOR ADDITIONAL INFORMATION PERTAINING TO INSTALLATION OF NEW STEAM SERVICE COMING FROM PENTHOUSE ABOVE.

KEY NOTES - NEW CONSTRUCTION

1. RENOVATED OR NEW PARTITION - LOCATION, CONSTRUCTION, AND FINISH TO MATCH EXISTING.
2. VERIFY WALL OPENING DIMENSIONS WITH AUTOCLAVE MANUFACTURER.
3. PATCH AND REPAIR WALL TO SOFFIT LOCATION ABOVE AS REQUIRED.
4. EXISTING FLOOR SINK TO REMAIN.
5. REMOVE AND REINSTALL EXISTING ACOUSTICAL PANEL CEILING SYSTEM ABOVE AS REQUIRED TO FACILITATE THE INSTALLATION OF THE NEW STEAM SERVICE.



4 MAIN LEVEL FLOOR PLAN - NEW CONSTRUCTION
SCALE: 1/8" = 1'-0"

GENERAL NOTES - PARTITIONS

PLAN SYMBOL LEGEND

PARTITION TYPE
STUD DEPTH, NOMINAL — STUD SPACING, INCHES
4B24
FH,I
PARTITION HEIGHT — INSULATION

CH = FRAMED TO CEILING HEIGHT (REFER TO ROOM FINISH SCHEDULE OR REFLECTED CEILING PLANS)
+6 = FRAMED TO CEILING HEIGHT PLUS 6 INCHES (OR ANY OTHER SPECIFIED NUMBER)
FH = FRAMED FULL-HEIGHT (TO OVERHEAD STRUCTURE)
I = THERMAL or ACOUSTIC INSULATION

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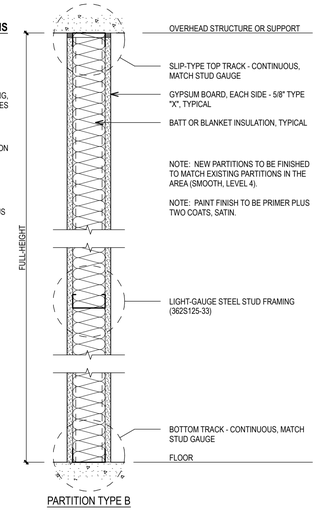
A: NOTE: PLAN SYMBOLS SPECIFY ALL THE INFORMATION LISTED ABOVE - REFER TO PLANS.



PARTITION TYPE B

5 INTERIOR PARTITION
SCALE: 1 1/2"= 1'-0"

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BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

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BOZEMAN, MONTANA

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DRAWN BY: SS, AC, MV		
REVIEWED BY: SS, AC, MV		
REV.	DESCRIPTION	DATE

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MECHANICAL LEGEND

PIPING SYMBOLS

CA	COMPRESSED AIR
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
D	SPECIALTY EQUIPMENT DRAIN
DHW	DOMESTIC HOT WATER
G	NATURAL GAS
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
ICW	INDUSTRIAL COLD WATER
IHW	INDUSTRIAL HOT WATER
MPS	MEDIUM PRESSURE STEAM
MTC	MEDIUM TEMPERATURE CONDENSATE
SV	STEAM VENT
TW	TEMPERED WATER

PIPE FITTINGS AND SPECIALTIES

- PIPE UP
- PIPE DOWN
- UNION
- CONCENTRIC REDUCER OR INCREASER
- ECCENTRIC REDUCER OR INCREASER
- VALVE IN VERTICAL PIPE
- BALL VALVE
- BUTTERFLY VALVE
- GATE VALVE
- MOTORIZED TWO-WAY VALVE
- MOTORIZED THREE-WAY VALVE
- CHECK VALVE
- BACKFLOW PREVENTOR
- FLOW BALANCE DEVICE
- PRESSURE REDUCING VALVE
- STRAINER
- FLOW SWITCH
- DIFFERENTIAL PRESSURE SENSOR
- MANUAL AIR VENT
- INSTRUMENT GAUGE TAP WELL (PETE'S PLUG)
- THERMOMETER/TEMPERATURE GAUGE
- HOSE BIBB
- THERMOSTAT / SENSOR
- RELIEF VALVE
- PRESSURE GAUGE

GENERAL MECHANICAL SYMBOLS

- NOTE DESIGNATION
- SECTION REFERENCE
- DETAIL REFERENCE
- FD-X — EQUIPMENT IDENTIFICATION MARK
- GRILLE OR DIFFUSER MARK / BALANCE CFM

DUCT WORK AND SPECIALTIES

- 12"x8" — SHEET METAL DUCT (FIRST FIGURE INDICATES FACING SIDE)
- RECTANGULAR DUCT TAKEOFF WITH VOLUME DAMPER
- CONICAL SPIN-IN WITH VOLUME DAMPER
- ACCESS DOOR
- TURNING VANES
- RADIUSED ELBOW
- MOTORIZED DAMPER

OTHER ABBREVIATIONS

AD	ACCESS DOOR
AFF	ABOVE FINISH FLOOR (ELEVATION)
ARCH	ARCHITECT OR ARCHITECTURAL PLANS
BD	BACKDRAFT DAMPER
C	CONDUIT
CO	CLEANOUT
D.I.P.	DUCTILE IRON PIPE
DN	DOWN
(E)	EXISTING
EXH	EXHAUST AIR
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FSD	FIRE/SMOKE DAMPER
IJS	IN JOIST SPACE
IWS	IN WALL SPACE
LPG	LIQUIFIED PETROLEUM GAS
OA	OUTSIDE (FRESH) AIR
MECH.	MECHANICAL (CONTRACTOR)
MFR	MANUFACTURER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
RA	RETURN AIR
SD	SMOKE DAMPER
SM	SHEET METAL
SS	STAINLESS STEEL
VD	VOLUME DAMPER
WCO	WALL CLEANOUT

MISCELLANEOUS EQUIPMENT SCHEDULE

AUTOCLAVE EQ1:
FLOOR MOUNTED, RECESSED STEAM STERILIZER WITH SINGLE VERTICAL SLIDING DOOR, STAINLESS STEEL, FULLY JACKETED 20"x20"x38" CHAMBER, CONFIGURABLE CONTROLS, AND DRAIN WATER COOLING SYSTEM. SEE SPECIFICATIONS SECTION 11 5319 FOR DETAILS.

AUTOCLAVE EQ2:
FLOOR MOUNTED, RECESSED STEAM STERILIZER WITH SINGLE HINGED DOOR, STAINLESS STEEL, FULLY JACKETED 26"x36"x48" CHAMBER, CONFIGURABLE CONTROLS, AND DRAIN WATER COOLING SYSTEM. SEE SPECIFICATIONS SECTION 115319 FOR DETAILS.

STEAM SEPARATOR, (SEP-1):
CARBON STEEL BAFFLE TYPE STEAM SEPARATOR. UNIT SHALL BE RATED FOR A MAXIMUM ALLOWABLE TEMPERATURE OF 797 DEGREE F AT 406 PSIG, AND SHALL PRODUCE A PRESSURE DROP OF NO MORE THAN 0.1 PSIG AT A STEAM FLOW RATE OF 265 LBS/HR AT 40 PSIG. PROVIDE IN 1 1/4" SIZE WITH FLANGED OR NPT CONNECTIONS. PROVIDE SPIRAX/SARCO MODEL SS STEAM SEPARATOR OR APPROVED EQUAL.

PRESSURE REDUCING VALVE, (PRV-1):
HIGH FLOW FILTER/REGULATOR COMBINATION FOR COMPRESSED AIR. UNIT SHALL FEATURE POLYCARBONATE BOWL WITH 1/2" NPT CONNECTIONS AND SHALL BE RATED FOR 172 SCFM FOR A 150 PSIG MAX INLET PRESSURE AND 0-140 PSIG OUTLET PRESSURE. FILTER EFFICIENCY SHALL BE 5 MICRONS. PROVIDE ARO MODEL P39344-600 OR APPROVED EQUAL.

CONDENSATE AFTERCOOLER (CAC-1):
304 STAINLESS STEEL UNVENTED HORIZONTAL CONDENSATE COOLING UNIT SUITABLE FOR USE WITH 45 PSIG STEAM CONDENSATE. UNIT SHALL FEATURE SEPARATE STEAM/CONDENSATE COIL AND COLD WATER SHELL TANK. THE UNIT SHALL BE FIT WITH 3/4" CONDENSATE INLET AND 3/4" COLD WATER INLET CONNECTIONS, AND A 3/4" TEMPERED CONDENSATE DRAIN OUTLET AND A 1/2" COLD WATER DRAIN OUTLET, THE UNIT SHALL FEATURE A TEMPERATURE-ACTUATED COLD WATER VALVE WITH TEMPERATURE SENSOR IN THE BOTTOM OF THE HORIZONTAL TANK. PROVIDE WITH THE OPTIONAL FACTORY FLOOR STAND ASSEMBLY. PROVIDE COLTON INDUSTRIES MODEL 'CC-VL2' OR APPROVED EQUAL.

SPRING SUPPORTS FOR STEAM RISERS:
PROVIDE SPRING HANGERS AND UNHOUSED SPRING SUPPORTS FOR THE STEAM PIPING TO ACCOMMODATE THERMAL GROWTH. THE REQUIRED HANGERS AND SUPPORTS ARE INDICATED IN THE PLAN DETAILS.

SUBMIT COMPLETE MANUFACTURER'S DATA FOR ALL MISCELLANEOUS EQUIPMENT SCHEDULED ON THIS SHEET AND COMPLY WITH ALL GENERAL SUBMITTAL REQUIREMENTS AS FOUND IN SECTION 23 0000 OF SPECIFICATIONS.

STEAM TRAP SCHEDULE

TRAP	UNIT SERVED	LOCATION	MFR	MODEL	TYPE	PIPE SIZE	ORIFICE SIZE	LBS./ HOUR	PRESS. DIFF.	NOTES
ST 1	SEP-1	–	SPIRAX/SARCO	FT-75	FLOAT & THERM.	¾"	0.166	970	30 PSID	(1) STEAM SEPARATOR

(1) FLOAT AND THERMOSTATIC TRAP WITH STAINLESS STEEL INTERNALS. MAXIMUM OPERATING PRESSURE RATING UP TO 75 PSIG. BODY RATED FOR 125 PSIG AND 450°F.

PRESSURE DIFFERENTIAL LISTED ABOVE IS THE MINIMUM PRESSURE DIFFERENTIAL THE TRAP IS EXPECTED TO SEE. POUNDS PER HOUR RATING IS AT THE LISTED PRESSURE DIFFERENTIAL.

LABORATORY EQUIPMENT CONNECTION SCHEDULE

MARK	DESCRIPTION	EXHAUST CONNECTIONS			STEAM CONNECTIONS			CONDENSATE	STEAM VENT	INDUSTRIAL COLD WATER	COMPRESSED AIR	EQUIPMENT DRAIN	REFERENCE DETAIL	NOTES
		QUANTITY	CONNECTION SIZE	AIRFLOW (CFM)	SIZE	LBS/H	PRESSURE RANGE (PSIG)							
EQ1	20x20x38 STEAM STERILIZER	–	–	–	3/4"	65	30-80	–	–	3/4"	1/4"	3/4"	2/M4.0	(1) SEE SPECIFICATION 11 5319
EQ2	26x36x48 STEAM STERILIZER	–	–	–	1"	200	30-80	–	–	3/4"	1/4"	1"	2/M4.0	(1) SEE SPECIFICATION 11 5319

GENERAL: REFER TO THE EQUIPMENT SUBMITTAL DRAWINGS FOR LOCATIONS AND DETAILS REGARDING CONNECTIONS TO EQUIPMENT SHOWN IN THIS SCHEDULE. FIELD VERIFY CONNECTION SIZES AND FURNISH NECESSARY ADAPTERS TO MATE TO EQUIPMENT. NOT ALL FIXTURES OR REQUIRED CONNECTIONS ARE INDICATED ON THIS SCHEDULE. SEE PLANS AND MANUFACTURER'S INSTRUCTIONS FOR LOCATIONS OF ALL EQUIPMENT, COMPONENTS AND CONNECTIONS. THE CONTRACTOR IS RESPONSIBLE TO PROCURE SPECIFIC INSTALLATION INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT AND TO INSTALL ALL EQUIPMENT IN COMPLETE ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH PLANS. THE CONTRACTOR IS RESPONSIBLE TO PROPERLY ACCOMMODATE ANY AND ALL DEVIATIONS FROM INDICATED INSTALLATION METHODS AND MATERIALS WHICH RESULT FROM SUBSTITUTION OF EQUIPMENT TO THE SATISFACTION OF BOTH THE OWNER AND THE EQUIPMENT MANUFACTURER. ALL WORK AND MATERIALS FOR INSTALLATION OF THE EQUIPMENT SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

(1) PROVIDE ISOLATION VALVES, UNIONS AND REDUCERS AT ALL WATER, AIR AND STEAM PIPING CONNECTIONS. PROVIDE A UNION AT THE DRAIN CONNECTION AND INCREASE DRAIN LINE SIZE BY TWO PIPE SIZES IMMEDIATELY DOWNSTREAM OF THE DRAIN CONNECTION TO THE UNIT. DRAIN PIPING SHALL BE 316 STAINLESS STEEL.

MONTANA STATE UNIVERSITY

MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT

BOZEMAN, MONTANA

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	TD&H
REVIEWED BY:	DJB

REV.	DESCRIPTION	DATE

MONTANA
DAVID J. BROCKETT
17395PE
REGISTERED PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE
MECHANICAL LEGEND AND SCHEDULES

SHEET
M0.1

DATE
IFB 07-02-2025

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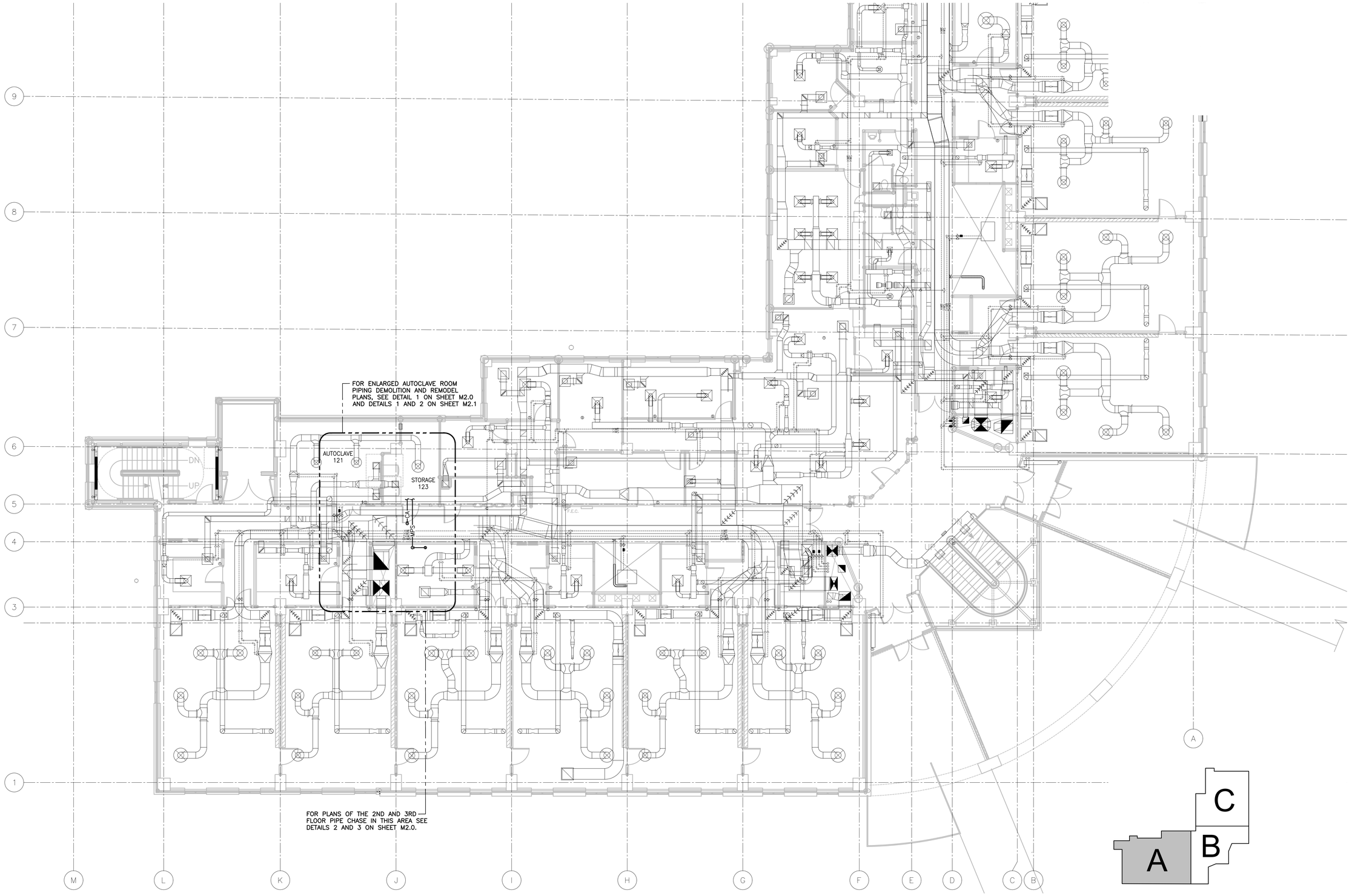

1 MAIN FLOOR HVAC & PIPING PLAN – WEST WING

0 2 4 6 8 10 12 14 16 20 24 28 32

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

KP KEY PLAN N

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MSU-CPDC

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT

BOZEMAN, MONTANA

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:		TD&H
REVIEWED BY:		DJB
REV.	DESCRIPTION	DATE

MONTANA
DAVID J. BROCKETT
7395PE
REGISTERED
PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE

MAIN FLOOR HVAC & PIPING PLAN

SHEET

M1.1

DATE

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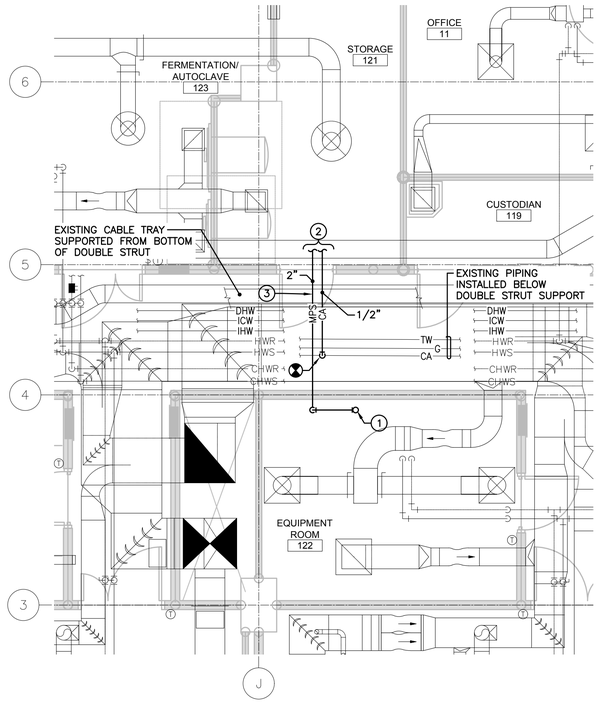
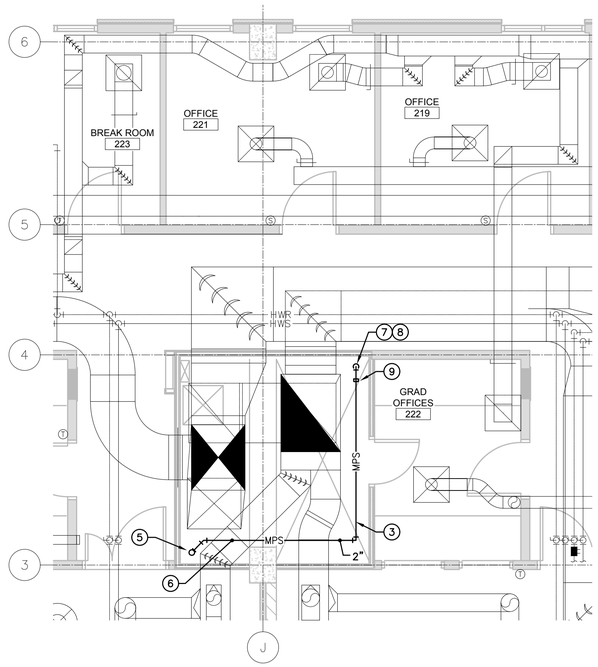


1 MAIN FLOOR ENLARGED PIPING PLAN

0 1 2 4 6 8 12 16

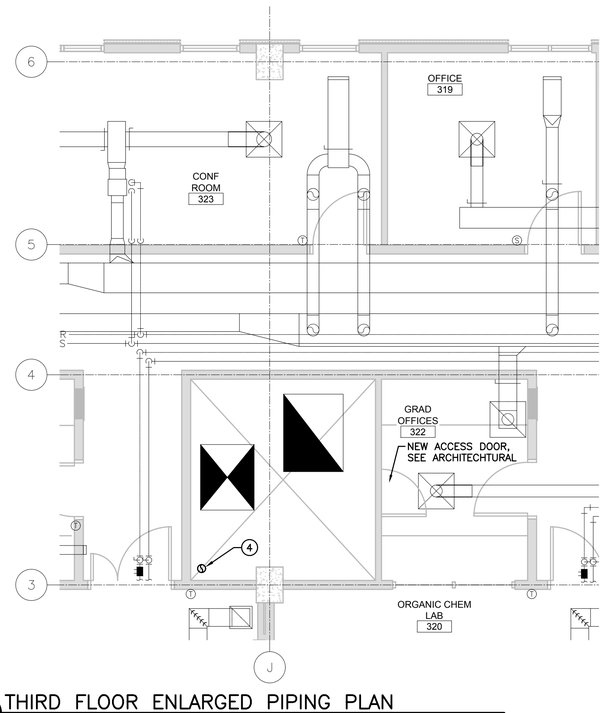
SCALE: 1/4"=1'-0"



2 SECOND FLOOR ENLARGED PIPING PLAN

0 1 2 4 6 8 12 16

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



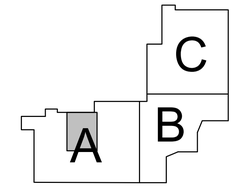
3 THIRD FLOOR ENLARGED PIPING PLAN

0 1 2 4 6 8 12 16

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

NOTES:

1. 2" MPS DOWN THROUGH THE BASE OF CHASE ABOVE, AND CONTINUE PIPING TO AUTOCLAVES.
2. FOR MEDIUM PRESSURE STEAM AND COMPRESSED AIR PIPING CONTINUATION, SEE ENLARGE PLAN 2, SHEET M2.1.
3. CONTINUOUSLY SLOPE PIPING IN DIRECTION OF FLOW.
4. 2" MPS DOWN FROM PENTHOUSE AND DOWN TO SECOND FLOOR THROUGH THE CHASE. FOR CONTINUATION SEE ENLARGED PLAN 2, THIS SHEET.
5. 2" MPS DOWN FROM THE 3RD FLOOR.
6. HOLD TOP OF PIPE INSULATION TIGHT TO UNDERSIDE OF DUCTWORK TO MAXIMIZE OVERHEAD CLEARANCE.
7. 2" MPS DOWN THROUGH THE FLOOR OF THE SECOND FLOOR CHASE INTO THE 1ST FLOOR CEILING CAVITY. CORE DRILL AND FIRESTOP CHASE PENETRATION. SEE ENLARGED PLAN 1 THIS SHEET FOR MPS PIPING CONTINUATION.
8. STEAM PIPE RIGID MOUNTED SUPPORT AT THE FLOOR PENETRATION, SEE DETAIL 4 ON SHEET M4.0.
9. SUPPORT STEAM PIPE FROM THE SECOND FLOOR CEILING WITH SPRING HANGER IMMEDIATELY ADJACENT TO PIPE DROP. SPRING HANGER RATED FOR 54 LBS AND 1.2" DEFLECTION. PROVIDE MASON INDUSTRIES MODEL '30-X-54', OR APPROVED EQUAL.



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MONTANA STATE UNIVERSITY

MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT

BOZEMAN, MONTANA

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:		TD&H
REVIEWED BY:		DJB
REV.	DESCRIPTION	DATE

MONTANA
DAVID J. BROCKUS
7395PE
REGISTERED
PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE
ENLARGED PIPING PLANS

SHEET
M2.0

DATE
IFB 07-02-2025

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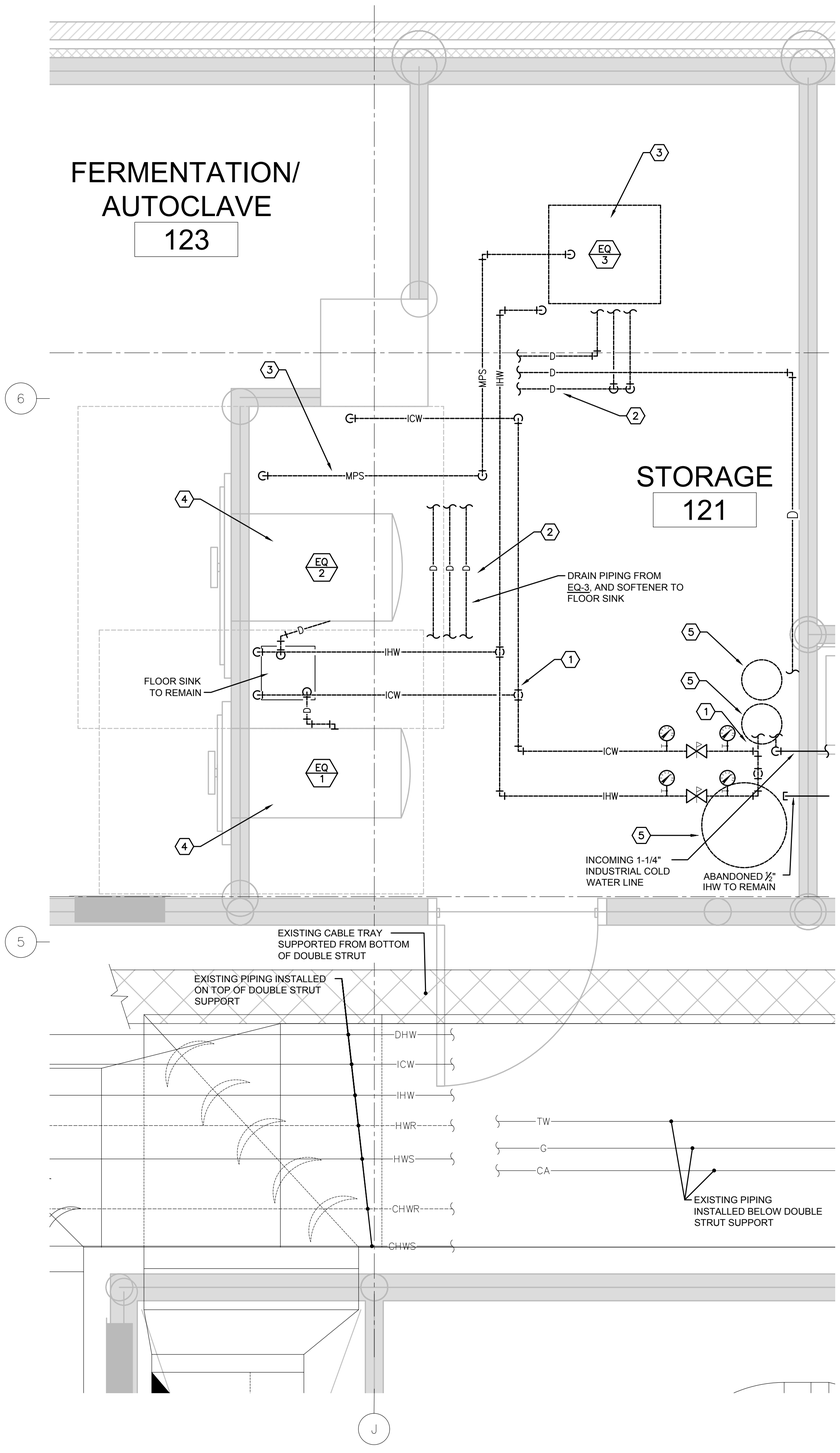
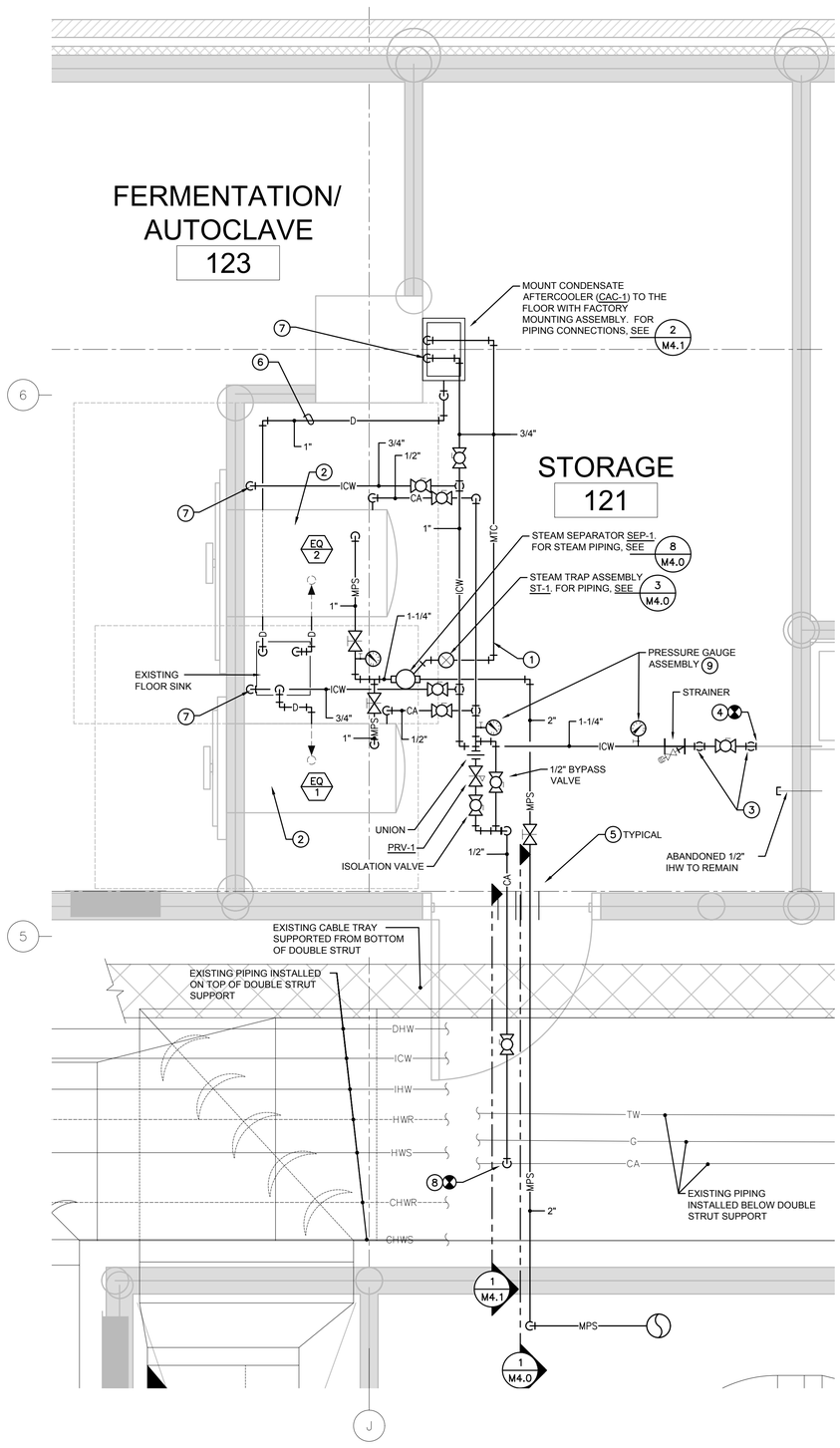


1 ENLARGED AUTOCLAVE DEMOLITION PLAN

SCALE: 3/4"=1'-0"



2 ENLARGED AUTOCLAVE ROOM PIPING PLAN

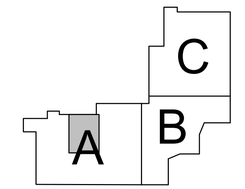
SCALE: 3/4"=1'-0"

DEMOLITION NOTES:

1. DEMOLISH ALL ICW AND IHW PIPING BACK TO TEE AT THE ROOM ENTRANCE, REMOVE ALL PIPE, VALVES, GAUGES, FITTINGS, ANCHORS, HANGERS, AND SUPPORTS COMPLETE.
2. REMOVE ALL DRAIN PIPING, FITTINGS, ANCHORS AND SUPPORTS COMPLETE. PATCH AND REPAIR FLOOR TO SURROUNDING CONDITION.
3. REMOVE EXISTING STEAM GENERATOR, AND ALL ASSOCIATED MPS PIPING, HANGERS AND SUPPORTS COMPLETE. REMOVE ANCHORS AND PATCH HOLES TO MATCH SURROUNDING CONDITION.
4. REMOVE AUTOCLAVES, STANDS, SUPPORTS, ANCHOR BOLTS AND ALL ASSOCIATED PIPING COMPLETE. PATCH AND REPAIR FLOOR TO MATCH SURROUNDING CONDITION.
5. REMOVE EXISTING WATER SOFTENER AND ASSOCIATED WATER AND DRAIN PIPING, COMPLETE. REMOVE ALL ASSOCIATED PIPING AND SUPPORTS.

REMODEL NOTES:

1. ROUTE 3/4" STEAM TRAP CONDENSATE TO CONDENSATE AFTERCOOL (CAC-1), SLOPE PIPING CONTINUOUSLY FROM TRAP TO AFTERCOOLER. FOR AFTERCOOL PIPING SEE DETAIL 2, SHEET M4.1.
2. FOR AUTOCLAVE PIPING, SEE DETAIL 2, SHEET M4.0.
3. 1-1/4" VALVED AND CAPPED BRANCH TEES DOWN ON INDUSTRIAL COLD WATER LINE FOR FUTURE WATER SOFTENER CONNECTIONS.
4. CONNECT TO EXISTING 1-1/4" ICW WHERE IT ENTERS THE ROOM.
5. PIPES IN AT CENTER LINE ELEVATION OF DOUBLE SUPPORT STRUTS. SLEEVE AND SEAL WALL PENETRATIONS. SEE DETAIL 5 ON SHEET M4.0.
6. 1" TYPE 'L' COPPER AFTERCOOLER DRAIN. ROUTE TO FLOOR SINK. SUPPORT ON HOT DIP GALVANIZED STRUT AT 4 FEET ON CENTER MAXIMUM SPACING AND IMMEDIATELY NEAR FLOOR SINK.
7. INDUSTRIAL COLD WATER DOWN ALONG WALL SUPPORTED ON HOT DIP GALVANIZED STRUT SUPPORTS.INSTALL A WATER HAMMER ARRESTOR AT THE TOP OF EACH DROP TO EACH STERILIZER AND TO CAC-1.
8. CONNECT TO EXISTING COMPRESSED AIR USING A PRESS FITTING TEE. PRE-ASSEMBLE THE TEE WITH A LENGTH OF PIPE AND ISOLATION VALVE IN ORDER TO MINIMIZE AIR SYSTEM OUTAGE. THE USE OF PRESS FITTINGS IS LIMITED TO THE TEE INSTALLED IN THE EXISTING LINE.
9. PRESSURE GAUGE ASSEMBLY WITH SNUBBER AND ISOLATION BALL VALVE.



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MONTANA STATE UNIVERSITY
MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT

BOZEMAN, MONTANA

TD&H Engineering
406.761.3010 - tdhengineering.com
1500 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	TD&H
REVIEWED BY:	DJB

REV.	DESCRIPTION	DATE

MONTANA DAVID J. BROCKUIT 17395PE REGISTERED PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE
ENLARGED AUTOCLAVE PLANS

SHEET
M2.1

DATE
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NOTES:

1. CORE DRILL INTO TOP OF CHASE. 2" MPS DOWN INTO CHASE. INSTALL A SPRING MOUNTED PIPE SUPPORT AT CHASE PENETRATION, SEE DETAIL 4/M4.0. FOR PIPING CONTINUATION, SEE 3/M2.0.
2. DROP 2" MPS UNDER SUPPLY AIR DUCT AND OFFSET DOWN INTO CHASE. INSTALL A CAPPED TEE AT THE HIGH POINT FOR A FUTURE VACUUM BREAKER AND THERMOSTATIC AIR VENT, SEE DETAIL 7, SHEET M4.0.
3. SLOPE PIPING UP PARALLEL TO ROOF STRUCTURE.
4. STEAM SWING JOINT.
5. CONNECT 2–1/2" MPS BRANCH TO TOP OF EXISTING 4" MPS WITH A 2–1/2" WELD–O–LET. FOR CONNECTION DETAIL, SEE DETAIL 6, SHEET M4.0.

1 PENTHOUSE HVAC & PIPING PLAN – WEST WING

SCALE: 1/4"=1'–0"

KP KEY PLAN

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MSU-CPDC

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT

BOZEMAN, MONTANA

TD&H Engineering
406.791.5610 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

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REVIEWED BY:	DJB

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MONTANA DAVID J. BROCKNEY 7395PE PROFESSIONAL ENGINEER

PPA#24-1115

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SHEET TITLE

PENTHOUSE HVAC & PIPING PLAN

SHEET

M3.0

DATE

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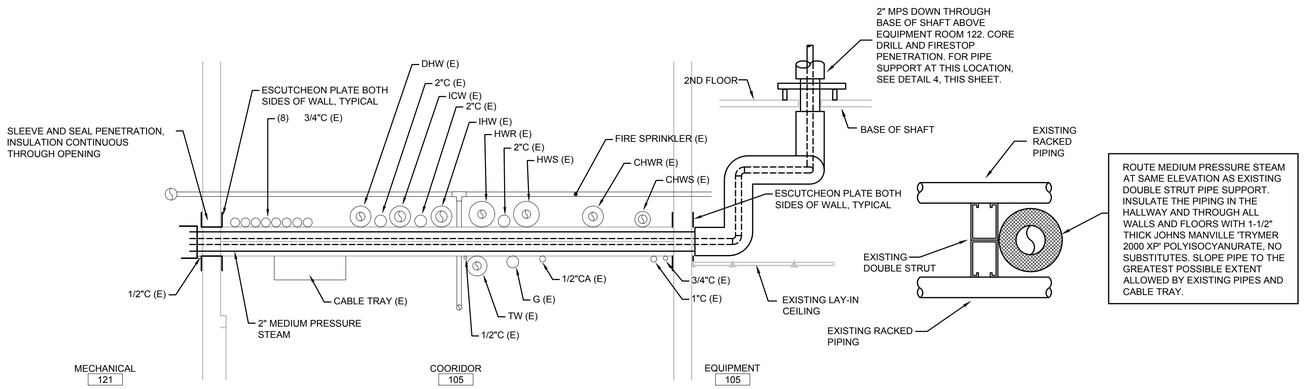
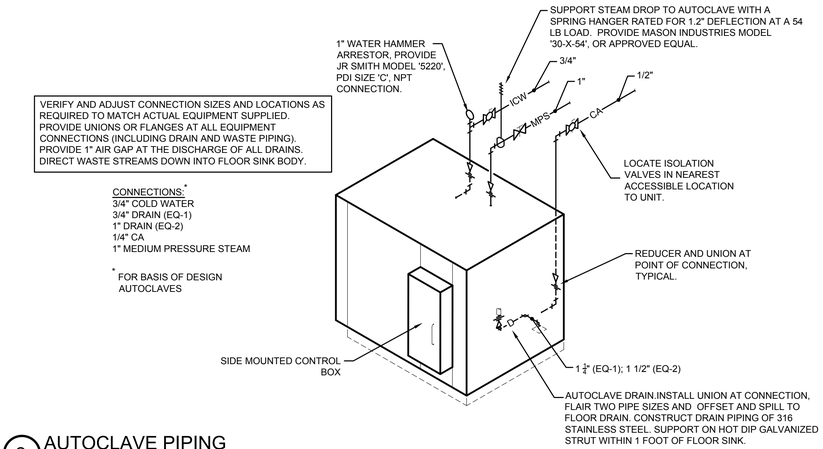
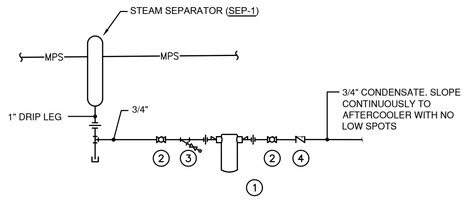


1 MEDIUM PRESSURE STEAM SUPPLY PIPING
SCALE: NONE

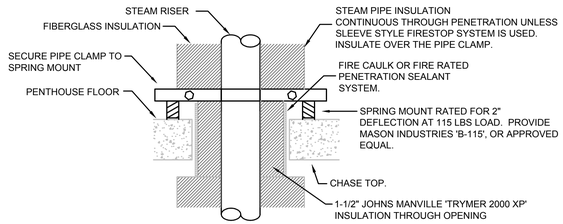


2 AUTOCLAVE PIPING
SCALE: NONE

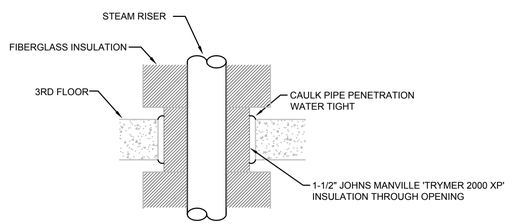


1. STEAM TRAP. SEE SCHEDULE FOR TYPE, SIZE AND CAPACITY
2. STEAM RATED ISOLATION BALL VALVE
3. 'Y' STRAINER W/ 20/20 S.S. SCREEN, BLOWDOWN VALVE & HOSE THREAD.
4. CHECK VALVE

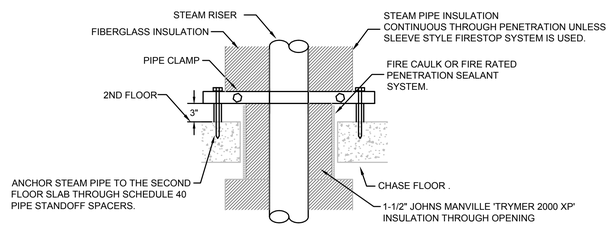
3 STEAM TRAP ASSEMBLY
SCALE: NONE



SPRING MOUNTED FLOOR PENETRATION - PENTHOUSE



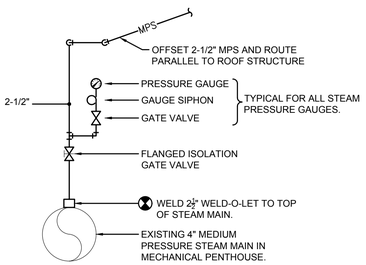
FLOOR PENETRATION - 3RD FLOOR



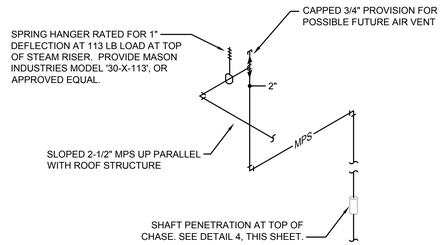
RIGID MOUNTED FLOOR PENETRATION - 2ND FLOOR

4 SHAFT PIPE PENETRATION
SCALE: NONE

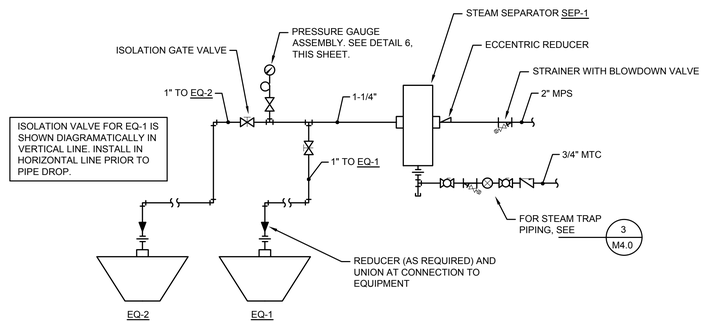
5 WALL PIPE PENETRATION - STEAM
SCALE: NONE (COMPRESSED AIR PIPING SIMILAR, WITH NO INSULATION)



6 PENTHOUSE STEAM CONNECTION
SCALE: NONE



7 PENHOUSE AIR VENT AND VACUUM BREAKER
SCALE: NONE



8 STEAM SEPARATOR PIPING
SCALE: NONE

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MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT
BOZEMAN, MONTANA

TD&H Engineering
406.761.3010 • tdhengineering.com
1500 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	TD&H
REVIEWED BY:	DJB

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DAVID J. BROCKNEY 7395PE PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE
MECHANICAL DETAILS

SHEET
M4.0

DATE
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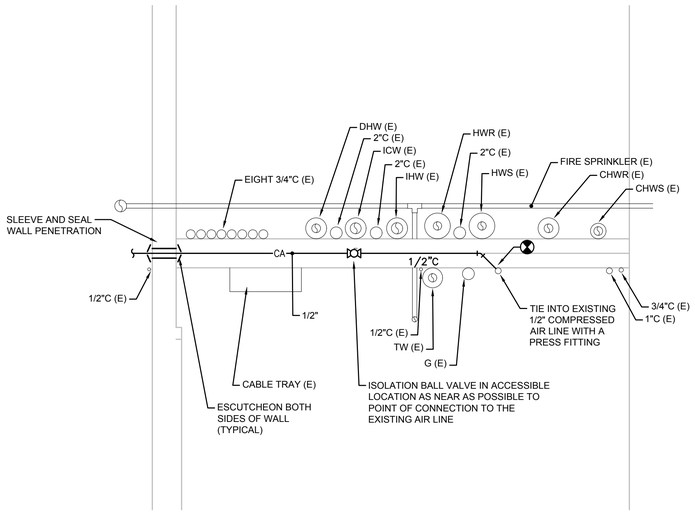
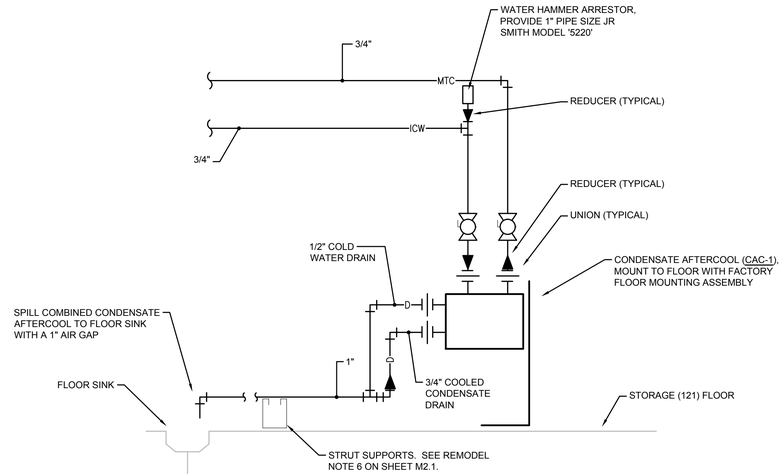


1 COMPRESSED AIR TIE–IN
SCALE: NONE



2 CONDENSATE AFTERCOOL PIPING DETAIL
SCALE: NONE

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MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

CHEMISTRY ROOM 123 AUTOCLAVE REPLACEMENT

BOZEMAN, MONTANA

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	TD&H
REVIEWED BY:	DJB

REV.	DESCRIPTION	DATE

MONTANA
DAVID J. BROCKETT
7395PE
REGISTERED
PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE
MECHANICAL DETAILS

SHEET
M4.1

DATE
IFB 07-02-2025

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LEGENDS NOTE

THIS IS A STANDARDIZED SYMBOLS LEGEND. ALL SYMBOLS SHOWN MAY OR MAY NOT APPEAR ON OR WITHIN THIS SET OF CONTRACT DOCUMENTS.

GUIDE TO LINE WEIGHTS

———	ITEMS SHOWN LIGHT ARE EXISTING AND TO REMAIN
———	ITEMS SHOWN BOLD AND SOLID ARE NEW
- - - - - -	ITEMS SHOWN BOLD AND DASHED ARE TO BE REMOVED

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
$	SWITCH
$	SWITCH – 2 POLE
$3	SWITCH – 3 WAY
$4	SWITCH – 4 WAY
$P	SWITCH – WITH PILOT LIGHT
$MC	SWITCH – MOMENTARY CONTACT
$D	SWITCH – DIMMER
$K	SWITCH – KEYED
$F	SWITCH – FAN
$OC	SWITCH – OCCUPANCY SENSOR (SUBSCRIPT INDICATES TYPE)
P	PUSH BUTTON
B	BUZZER
B	BELL
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL
F	FIRE ALARM MANUAL PULL STATION
F	FIRE ALARM SYNCHRONIZED STROBE
F	FIRE ALARM SYNCHRONIZED HORN
F	FIRE ALARM SYNCHRONIZED HORN/STROBE
H	HEAT DETECTOR
IR	INFRARED DETECTOR
S	SMOKE DETECTOR (SUBSCRIPT DENOTES TYPE)
DS	SMOKE DETECTOR – DUCT TYPE
M	MAGNETIC DOOR HOLDER
TS	FIRE ALARM SPRINKLER TAMPER SWITCH
FS	FIRE ALARM SPRINKLER FLOW SWITCH
SFD	FIRE ALARM SMOKE AND FIRE DAMPER
TV	VIDEO WIRING
PA	SOUND SYSTEM WIRING
LV	LOW VOLTAGE WIRING
VC	VOLUME CONTROL

ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AC	MOUNTED ABOVE COUNTER
AIC	AMPS INTERRUPTING CURRENT
ATS	AUTOMATIC TRANSFER SWITCH
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CLF	CURRENT LIMITING FUSE
EC	ELECTRICAL CONTRACTOR
EX	EXISTING
FACP	FIRE ALARM CONTROL PANEL
G.C.	GENERAL CONTRACTOR
GRD	GROUND
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT INTERRUPTER RECEPTACLE
HOA	HANDS–OFF–AUTOMATIC
HP	HORSE POWER
M.C.	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
NL	NEW LOCATION FOR RELOCATED DEVICE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PMR	PER MANUFACTURER'S RECOMMENDATIONS
REL	RELOCATE DEVICE TO NEW LOCATION
TEL	TELEPHONE
TFX,XFMR	TRANSFORMER
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHER PROOF
W\	WITH

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	POWER PANEL – 208Y/120 VOLT, 3ø 4 WIRE
	POWER PANEL – 480Y/277 VOLT, 3ø 4 WIRE
	MOTOR CONTROL CENTER
	TELEPHONE BOARD
	POWER TRANSFORMER
	DISCONNECT SWITCH
	STARTER – COMBINATION MAGNETIC
	STARTER – MAGNETIC
$M	FRACTIONAL HP, MOTOR SENTINEL
VFD	VARIABLE FREQUENCY DRIVE
	REMOTE MUSHROOM SWITCH
	BRANCH CIRCUIT CONCEALED IN WALL OR CEILING
	BRANCH CIRCUIT CONCEALED IN OR UNDER FLOOR
E	BRANCH CIRCUIT – RUN EXPOSED
	EMPTY CONDUIT – 3/4" UNLESS NOTED OTHERWISE
	CONDUIT STUB OUT
	CONDUIT RUN – NUMBER OF ARROWHEADS INDICATES THE NUMBER OF CIRCUITS REQUIRED.
W	SURFACE METAL RACEWAY – MINIMUM .30 SQ. INCH INTERNAL AREA
	METAL WIREWAY – SIZE AS NOTED
	BUS DUCT
	CABLE TRAY OR LADDER
	LIGHT FIXTURE (CEILING OR WALL MOUNT)
	LIGHT FIXTURE (CEILING OR WALL MOUNT)
	LIGHT FIXTURE (CEILING OR WALL MOUNT)
	LIGHT FIXTURE (WALL MOUNT)
	LIGHT FIXTURE (SURFACE)
	LIGHT FIXTURE (SUSPENDED)
	LIGHT FIXTURE (RECESSED)
	LIGHT FIXTURE (SUSPENDED INDIRECT)
	LIGHT FIXTURE (UNDER CABINET OR COUNTER)
	EMERGENCY POWERED LIGHT FIXTURE (NON–SWITCHED)
	EMERGENCY POWERED LIGHT FIXTURE (SWITCHED)
	EXIT LIGHT (CEILING OR WALL MOUNT)
	EXIT LIGHT (CEILING OR WALL MOUNT, SHADED QUARTER INDICATES LETTERED FACE)
	EMERGENCY LIGHT FIXTURE
	POST MOUNTED HID FIXTURE (ARM MOUNTED)
	POST TOP MOUNTED HID FIXTURE (YOKE MOUNTED)
	SIMPLEX CONVENIENCE RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE – MOUNTED HORIZONTALLY
	DOUBLE DUPLEX CONVENIENCE RECEPTACLE
	208 VOLT RECEPTACLE NEMA 6–30R UNLESS OTHERWISE NOTED
	CLOCK OUTLET
	THERMOSTAT
	TELEPHONE OUTLET
	DATA OUTLET
	COMBINATION DATA/TELEPHONE OUTLET
	INTERCOM OUTLET
	MULTIOUTLET ASSEMBLY – SIZE AS NOTED W/RECEPTACLE AS NOTED
	MOTOR (M – MOTOR, F – FAN, P – PUMP)
	SPECIAL EQUIPMENT CONNECTION OR OUTLET AS NOTED
J	JUNCTION BOX OR J–BOX
TP	TELE/POWER POLE
TV	TELEVISION OUTLET
VC	VIDEO CAMERA
OC	OCCUPANCY SENSOR (CEILING/WALL MOUNT) (SUBSCRIPT INDICATES TYPE)
PP	POWER PACK
TC	TIME CLOCK
S	SPEAKER (CEILING OR WALL MOUNT)

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REVIEWED BY:	BMK

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MONTANA
BRAD M. KAUFMAN
No. 14587 PE
LICENSED PROFESSIONAL ENGINEER

PPA#24-1115

TD&H# G25-001

SHEET TITLE
ELECTRICAL LEGEND AND SCHEDULES

SHEET
E0.1

DATE
IFB 07-02-2025

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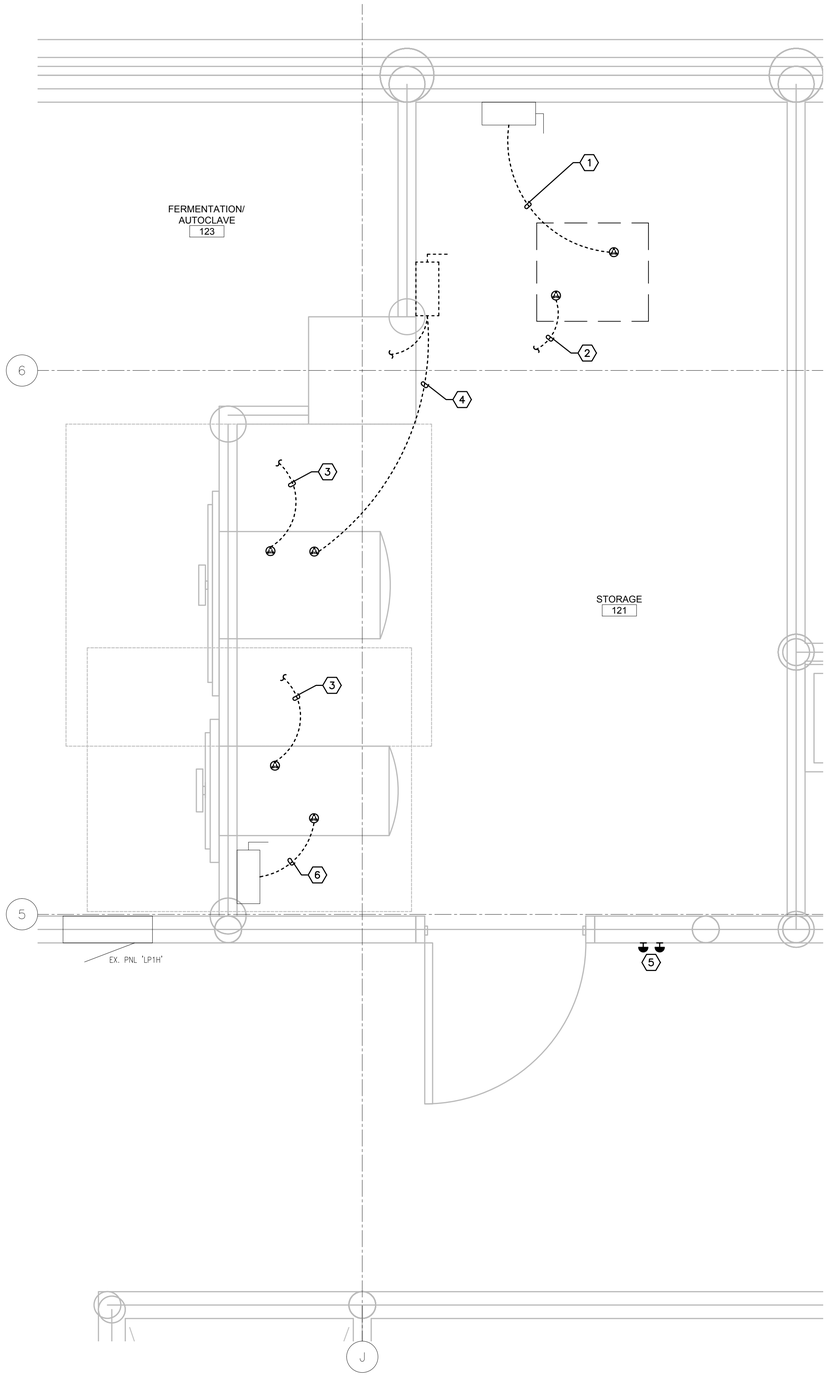
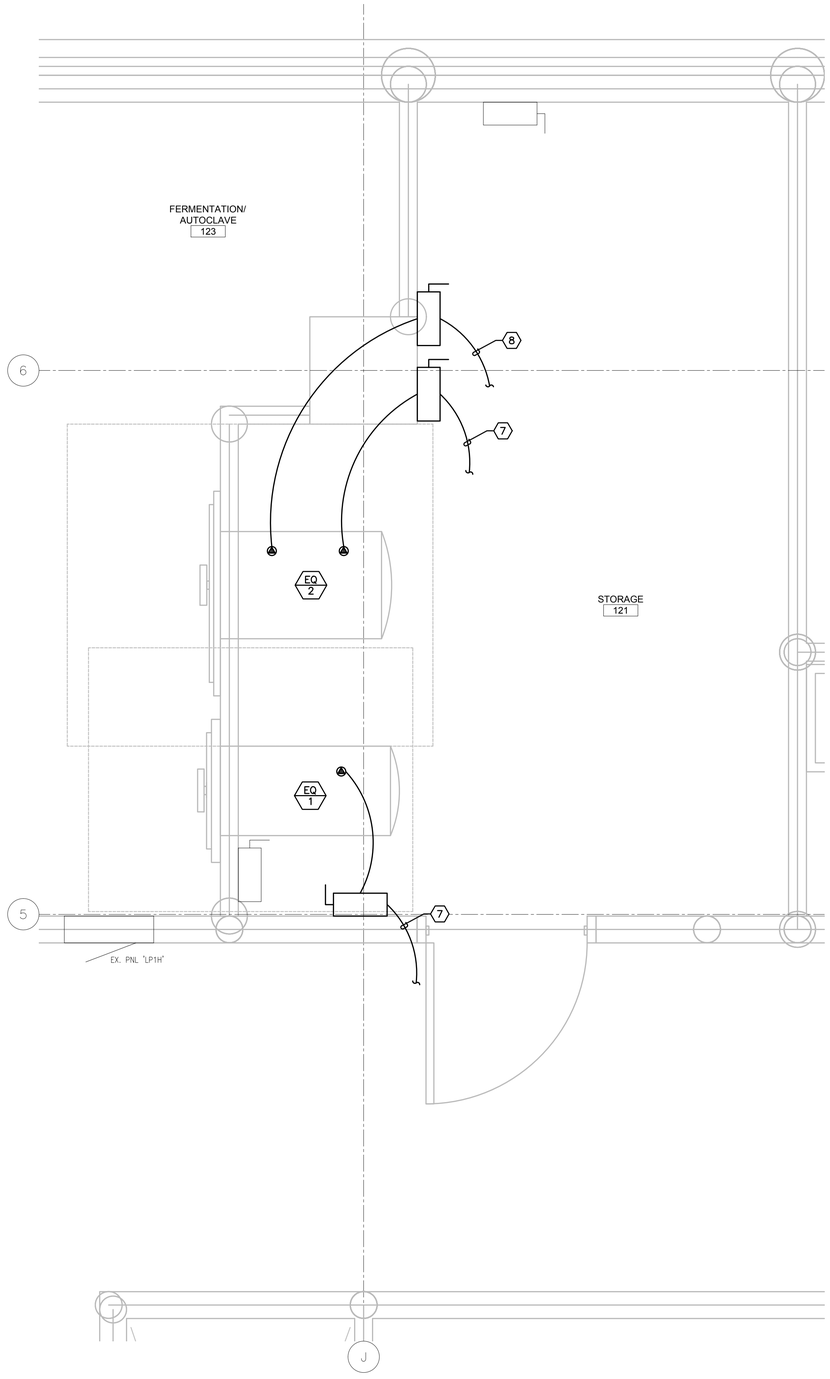


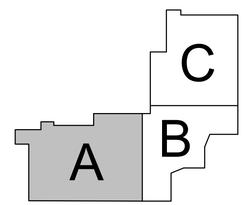
1 ENLARGED AUTOCLAVE ELECTRICAL DEMOLITION PLAN

SCALE: 3/4"=1'-0"



2 ENLARGED AUTOCLAVE ELECTRICAL REMODEL PLAN

SCALE: 3/4"=1'-0"



KP KEY PLAN N

SPECIFIC SHEET NOTES:

1. DISCONNECT 480V, 200 AMP, 3-PHASE CONNECTION FROM ELECTRIC STEAM BOILER. REMOVE FLEX CONDUIT AND WIRING. MAINTAIN DISCONNECT SWITCH MOUNTED ON WALL. TURN OFF BREAKER IN PANEL 'HEDP' (LOCATED IN ROOM 23 IN BASEMENT) AND LABEL BREAKER AS "SERVES OLD AUTOCLAVE STEAM BOILER DISCONNECT SWITCH IN ROOM 121 - DO NOT TURN ON".
2. DISCONNECT 120V CONTROL POWER FROM ELECTRIC STEAM BOILER AND REMOVE CONDUIT BACK TO NEAREST JUNCTION BOX. REMOVE WIRING BACK TO PANEL 'LP1H' AND LABEL BREAKER AS SPARE.
3. DISCONNECT 120V CONTROL POWER TO AUTOCLAVE, MAINTAIN CIRCUIT FOR REUSE.
4. DISCONNECT ADDITIONAL POWER CONNECTION FROM AUTOCLAVE AND REMOVE CONDUIT BACK TO NEAREST JUNCTION BOX. REMOVE WIRING BACK TO PANEL 'LP1H' AND LABEL BREAKER AS SPARE.
5. REMOVE EXISTING EMERGENCY PUSHBUTTON OFF SWITCHES (EPO'S) AND ALL ASSOCIATED WIRING. PROVIDE STAINLESS STEEL BLANK COVER PLATES IN THEIR PLACE.
6. DISCONNECT 208V, 125 AMP, 3-PHASE CONNECTION FROM INTEGRAL ELECTRIC STEAM BOILER. REMOVE FLEX CONDUIT AND WIRING. MAINTAIN DISCONNECT SWITCH MOUNTED ON WALL. TURN OFF BREAKER IN PANEL 'LD1W' (LOCATED ACROSS THE HALL) AND LABEL BREAKER AS "SERVES OLD AUTOCLAVE STEAM BOILER DISCONNECT SWITCH IN ROOM 121 - DO NOT TURN ON".
7. PROVIDE NEW 120V CONTROL POWER CONNECTION TO NEW AUTOCLAVE, USING EXISTING 120V CIRCUIT. PROVIDE 30A-2P NON-FUSED DISCONNECT SWITCH LOCATED NEAR AUTOCLAVE.
8. PROVIDE CONNECTION TO NEW AUTOCLAVE VACUUM PUMP. CONNECT TO PANEL 'LP1H' VIA 3#12 AND #12G IN 3/4" CONDUIT. PROVIDE NEW 20A-3P CIRCUIT BREAKER IN PANEL AND RE-ADJUST EXISTING CIRCUIT BREAKERS AS NECESSARY TO ALLOW SPACE FOR NEW 3-POLE BREAKER. PROVIDE 30A-3P NON-FUSED DISCONNECT SWITCH NEAR AUTOCLAVE.

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ENLARGED ELECTRICAL PLANS

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