

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY 2015 IBC AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (2018) AND THE AMERICANS WITH DISABILITIES ACT.

A: GENERAL NOTES

- ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR, ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
- NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
- CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
- NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
- DO NOT SCALE DRAWINGS, DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
- VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.
- DEFINITIONS:
 - FURNISH: SUPPLY, DELIVER TO AND UNLOAD AT PROJECT SITE READY FOR ASSEMBLY AND INCORPORATION INTO THE WORK.
 - INSTALL: AT THE PROJECT SITE, UNPACK/UNCRATE ASSEMBLY, PLACE, ANCHOR, FINISH, PROTECT, CLEAN, AND PERFORM ALL OTHER SIMILAR OPERATIONS REQUIRED TO FULLY AND PROPERLY INCORPORATE AN ITEM INTO THE WORK. LEGALLY DISPOSE OF OR RECYCLE PACKAGING AND EXTRA MATERIAL OFF-SITE.
 - PROJECT SITE: THE SPACE AVAILABLE TO THE CONTRACTOR FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. THE EXTENT OF THE PROJECT SITE IS THE AREAS TO BE REMODELED AS INDICATED ON THE DRAWINGS, AND EXTENDS TO SUCH AREAS AS CONTAIN TERMINATIONS FOR POWER, DATA AND OTHER SERVICES.
 - OFF-SITE: OUTSIDE THE PROPERTY IN WHICH THE PROJECT SITE IS LOCATED.
 - PROVIDE: FURNISH AND INSTALL, AS DEFINED ABOVE.

WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT HAS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASE BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.

THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.

ARCHITECT SHALL BE NAMED AS ADDITIONAL INSURED ON ALL REQUIRED INSURANCE POLICIES.

B: MISCELLANEOUS AND DEMOLITION NOTES

- DEFINITIONS:
 - DEMOLISH: DISCONNECT FROM SERVICES, UNFASTEN, REMOVE, DISASSEMBLE AND LEGALLY DISPOSE OF OR RECYCLE OFF-SITE.
 - SALVAGE: CAREFULLY, SO AS TO PRESERVE INTEGRITY AND USEFULNESS, DISCONNECT FROM SERVICES, UNFASTEN, REMOVE, DISASSEMBLE IF NECESSARY, AND STORE TEMPORARILY FOR REINCORPORATION INTO THE WORK OR FOR DELIVERY/TURN-OVER TO THE OWNER AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
 - SALVAGE IN PLACE: PROTECT, RE-USE, CLEAN, RE-CONDITION IF NECESSARY, REFINISH IF INDICATED IN THE DRAWINGS, EXISTING INSTALLED ITEM/COMPONENT WITHOUT DISCONNECTING, UNFASTENING OR REMOVING FROM THE WORK.
- BRING ANY UNFORESEEN OR CONFLICTING CONDITIONS TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
- REPAIR, PATCH, OR REPLACE FINISH MATERIALS OR VISIBLE ASSEMBLIES THAT ARE SOILED, CUT OR DAMAGED IN ANY FASHION DURING THE COURSE OF THE WORK. PERFORM PATCHING SUCH THAT EDGES BLEND INTO CONTIGUOUS SURFACES SMOOTHLY, MATCHING TEXTURE AND COLOR OF ADJACENT SURFACES.
- SEAL PENETRATIONS OF DUCTWORK, CONDUIT OR PIPES WITH UL APPROVED MATERIALS TO MAINTAIN THE FIRE RATING OF ASSEMBLIES.
- APPLY APPROPRIATE & COMPATIBLE SEALANT MATERIALS AS REQUIRED TO SEPARATE DISSIMILAR METALS, FILL GAPS IN EXISTING ASSEMBLIES OR WHERE NEW AND EXISTING ASSEMBLIES MEET OR WHERE OTHERWISE REQUIRED BY THE SPECIFICATIONS.
- UNTIL PERMANENT LIGHTING IS IN PLACE AND ENERGIZED, PROVIDE AND MAINTAIN TEMPORARY LIGHTING IN THE PROJECT AREAS, TO ACHIEVE A MINIMUM LIGHTING LEVEL OF 2 WATTS PER S.F..
- OWNER WILL CONTINUE TO OCCUPY AREAS ADJACENT TO THE PROJECT AREAS DURING THE CONSTRUCTION PERIOD. COORDINATE WITH OWNER TO MINIMIZE CONFLICT AND TO FACILITATE OWNER'S OPERATIONS. LIMIT CONDUCT OF ESPECIALLY NOISY OR DISRUPTIVE WORK TO ONLY THOSE TIMES MUTUALLY AGREED TO BY OWNER. REQUEST MUTUALLY AGREEABLE TIME FROM OWNER PRIOR TO CONDUCTING SUCH WORK, AND PROCEED WITH SUCH WORK ONLY AFTER RECEIVING OWNER'S EXPRESS PERMISSION TO DO SO.
- CONTRACTOR TO RESTORE ALL DISTURBED GRADE AND LANDSCAPING TO ORIGINAL CONDITION.

C: BIDDING NOTES

- REFER TO THE JJC FRONT-END DOCUMENTS FOR THE ALLOWANCE THAT THE GENERAL CONTRACTOR IS TO PROVIDE AS PART OF HIS/HER BID FOR UNFORESEEN/MISCELLANEOUS CONDITIONS. WHEN FIGURING THIS ALLOWANCE IN THE BID, CONTRACTOR IS TO INCLUDE ALL NECESSARY OVERHEAD AND PROFIT. THIS ALLOWANCE IS NOT FOR THE CONTRACTOR'S BENEFIT, AND IS ONLY AUTHORIZED TO CHARGE AGAINST THIS ALLOWANCE WHEN DIRECTED AND APPROVED BY JOLIET JUNIOR COLLEGE. THE CONTRACTOR WILL BE ALLOWED TO INVOICE FOR MATERIAL AND RAW LABOR COST ONLY.
- CONSTRUCTION SCHEDULE:

CONSTRUCTION START AND SUBSTANTIAL COMPLETION IN ACCORDANCE WITH JJC FRONT-END DOCUMENTS.
- ALL LOUD AND DISRUPTIVE WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 10:00 PM AND 6:00 AM.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED TEMPORARY HEAT TO THE AREAS OF THE BUILDING FOR THE OWNER'S FULL USE, IF THE NEW HEATING SYSTEM IS NOT OPERATIONAL BY OCTOBER 1, 2020.

STANDARD ABBREVIATIONS

Ⓐ	— AT	EXP	— EXPANSION	PL	— PLATE
A B	— ANCHOR BOLT	EXP CONST	— EXPOSED CONSTRUCTION	PL LAM	— PLASTIC LAMINATE
ABR	— ABRASIVE	FD	— FLOOR DRAIN	PL	— PLASTER
AT-(1)	— ACOUSTIC TILE CEILING (TYPE)	FDN	— FOUNDATION	PLB'G	— PLUMBING
AFF	— ABOVE FINISH FLOOR	FE	— FIRE EXTINGUISHER	PLB'G CONTR	— PLUMBING CONTRACTOR
AFG	— ABOVE FINISH GRADE	FEC	— FIRE EXTINGUISHER CABINET	PLYWD	— PLYWOOD
ACOUS	— ACOUSTIC	FHC	— FIRE HOSE CABINET	PNT	— PAINT
ADD'N	— ADDITION	FIN	— FINISH	PVC	— POLYVINYL CHLORIDE
ADD'L	— ADDITIONAL	FLR	— FLOOR	PL-(1)	— GYPSUM PLASTER (TYPE)
ADJ	— ADJACENT	FRT	— FIRE RETARDANT TREATED (RATED)	R OR RAD	— RADIUS
ADJT	— ADJUSTABLE	FUR CHN'L	— FURRING CHANNEL	R	— RISER
AL	— ALUMINUM	FTG	— FOOTING	RD	— ROOF DRAIN
ALT	— ALTERNATE	GA	— GAUGE	RO	— ROUGH OPENING
ANCH	— ANCHOR	CALV	— GALVANIZED	RF (1)	— RUBBER FLOORING (TYPE)
AP	— ACCESS PANEL	GEN CONTR	— GENERAL CONTRACTOR	RH	— RIGHT HAND
APPROX	— APPROXIMATE	GC	— GENERAL CONTRACTOR	REF	— REFERENCE
ASPH	— ASPHALT	GL	— GLASS	REINF	— REINFORCING
AUTO	— AUTOMATIC	GYP DB-(1)	— GYPSUM WALL BOARD (DRYWALL)(TYPE)	REQ'D	— REQUIRED
AVG	— AVERAGE	GYP PL-(1)	— GYPSUM PLASTER (TYPE)	RM	— ROOM
BSMT	— BASEMENT	H	— HIGH	SF	— SQUARE FOOT
BD	— BOARD	HD	— HEAVY DUTY	SI	— SQUARE INCH
BITUM	— BITUMINOUS/BITUMASTIC	HD	— HARD	SK	— SINK
BLDG	— BUILDING	HONR	— HARDENER	SS	— STAINLESS STEEL
BLK'G	— BLOCKING (WOOD)	HD WD-(1)	— HARD WOOD (TYPE)	SSK	— SERVICE SINK
BM	— BEAM	HDWRE	— HARDWARE	SS	— SQUARE
B.M.	— BENCH MARK	HGT	— HEIGHT	SCHED	— SCHEDULE
BT STL PL	— BENT STEEL PLATE	HM	— HOLLOW METAL	SEAL/HONR	— SEALER/HARDENER
BRG	— BEARING	HP	— HIGH POINT	SEC	— SECTION
BRKT	— BRACKET	HORIZ	— HORIZONTAL	SHT	— SHEET
BRK	— BRICK	HTG	— HEATING	SIM	— SIMILAR
BTM	— BOTTOM	HVAC	— HEATING/VENTILATING/AIR CONDITIONING	SOG	— SLAB ON GRADE
BTWN	— BETWEEN	IN	— INSIDE DIAMETER	SPEC	— SPECIFICATION(S)
CJ	— CONSTRUCTION/CONTRACTION JOINT	ID	— INSIDE DIAMETER	SPC'G	— SPACING
CAB	— CABINET	INCL	— INCLUDE (D)	SPK'R	— SPEAKER
CEM PL-(1)	— CEMENT PLASTER (TYPE)	INSUL	— INSULATION OR INSULATING	STN	— STANDARD
CT PAV-(1)	— CERAMIC PAVEMENT TILE (TYPE)	JO	— JOINT	STD	— STANDARD WEIGHT
CPC	— CAST-IN-PLACE CONCRETE	KT	— KNOCK DOWN	STL	— STEEL
CLC	— CEILING	L	— LONG	STRUCT	— STRUCTURAL OR STRUCTURE
CLR	— CLEAR	LAM	— LAMINATED	SUSP	— SUSPEND(ED)
CO	— CLEAN OUT	LAV	— LAVATORY	SYM	— SYMMETRICAL
CMU	— CONCRETE MASONRY UNIT	LH	— LEFT HAND	T	— TREAD
COL	— COLUMN	LP	— LOW POINT	T&G	— TONGUE AND GROOVE
COMB	— COMBINATION	LGT WGT	— LIGHTWEIGHT	T/B	— TOP OF BEAM
COMP	— COMPRESSIBLE	LL	— LIVE LOAD	T/C	— TOP OF CURB
COMPT'D	— COMPACTED	LLV	— LONG LEG VERTICAL	T/F	— TOP OF FOUNDATION
CONC	— CONCRETE	LVR	— LONG LEG VERTICAL	T/S	— TOP OF SLAB
CONC OPNG	— CONCRETE OPENING	MO	— MASONRY OPENING	T/STL	— TOP OF STEEL
COND	— CONDITION	MT	— METAL THRESHOLD	T/W	— TOP OF WINDOW
CONT	— CONTINUOUS	MAS'Y	— MASONRY	TB (4)	— TACKBOARD (LENGTH)
CONTR	— CONTRACT (OR)	MAT'L	— MATERIAL	TOM	— TOP OF MASONRY
CPT-(1)	— CARPET (TYPE)	MAX	— MAXIMUM	TYP	— TYPICAL
CT-(1)	— CERAMIC TILE (TYPE)	MB-(16)	— MARKERBOARD- (LENGTH)	UNO	— UNLESS NOTED OTHERWISE
CTR	— COUNTER	MECH	— MECHANICAL CONTRACTOR	VBC	— VINYL BASE COVER
CTR SK	— COUNTER SINK	MECH CONTR	— MECHANICAL CONTRACTOR	VCT	— VINYL COMPOSITION TILE
CTS	— CENTER(S)	MFR	— MANUFACTURER	VEN PL (1)	— VENEER PLASTER (TYPE)
CUH	— CABINET UNIT HEATER	MIN	— MINIMUM	VERT	— VERTICAL
CUV	— CABINET UNIT VENTILATOR	MISC	— MISCELLANEOUS	W	— WIDE OR WIDTH
DIA	— DIAMETER	MSB	— MOP SERVICE BASIN (SINK)	W/	— WITH
DIM	— DIMENSION	MT(D)	— MOUNT(ED)	W/O	— WITHOUT
DN	— DOWN	MTL	— METAL	WCG	— WALL CORNER GUARD
DR	— DOOR	NIC	— NOT IN CONTRACT	WD	— WOOD
DWG'S	— DRAWINGS	NOM	— NOMINAL	WDN	— WINDOW
DTL	— DETAIL	NTS	— NOT TO SCALE	WGT	— WEIGHT
DWL'S	— DOWELS	NO	— NUMBER	WP	— WATER PROOF
EA	— EACH	OA	— ON CENTER	WWF	— WELDED WIRE FABRIC
EJ	— EXPANSION JOINT	OC	— OUTSIDE DIAMETER	WSB	— WALL SERVICE BASIN
EL	— ELEVATION	OD	— OUTSIDE DIAMETER		
ELEC	— ELECTRIC/ELECTRICAL	OF	— OUTSIDE FACE		
ELEC CONTR	— ELECTRICAL CONTRACTOR	OPN'G	— OPENING		
ELEV	— ELEVATOR	OPP	— OPPOSITE		
EMBED	— EMBEDMENT	OPP HD	— OPPOSITE HAND		
EMER	— EMERGENCY	PSF	— POUNDS PER SQUARE FOOT		
EP PNT	— EPOXY PAINT	PSI	— POUNDS PER SQUARE INCH		
EQ	— EQUAL	PT	— PRESSURE TREATED		
EW	— EACH WAY	PTN	— PARTITION		
EWG	— ELECTRIC WATER COOLER	PAVT	— PAVEMENT		
EWL	— ELECTRIC WATER HEATER	PC	— PIECE		
EXHIBIT RAIL (LENGTH)	— EXHIBIT RAIL (LENGTH)	PFM	— PERMANENT FLOOR MAT		
EXIST	— EXISTING				

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT.

DRAFTING SYMBOLS AND MATERIALS LEGEND

DETAIL NUMBER	8
DRAWING NUMBER	A12.24
DETAIL NUMBER	23
DRAWING NUMBER	A7.19
DETAIL NUMBER	2
DRAWING NUMBER	A9.19 5
DETAIL NUMBER	1
DRAWING NUMBER	A6.05
COLUMN NUMBER	26
LOCATION ELEVATION	1/1ST FLR. 100'-0"
ROOM NUMBER	204
DOOR NO. NEW	203.2
DOOR NO. EXISTING	203.1X
NOMINAL THICKNESS	1/2"
CONSTRUCTION TYPE	1/2"
SPECIAL CONDITION	1/2"
KEYNOTE IDENTIFICATION	15.211
WINDOW TYPE IDENTIFICATION	1/2"
TOILET ACCESSORY IDENTIFICATION	1/2"
SPOT ELEVATION	1/1ST FLR. 100'-0"
CONCRETE	
BRICK MASONRY IN PLAN	
CONCRETE MASONRY IN PLAN (RUNNING BOND)	
CONCRETE MASONRY IN PLAN (STACK BOND)	
STONE MASONRY IN PLAN	
RAKED JOINT IN PLAN	
CTRL./EXP. JOINT IN PLAN	
BRICK MASONRY IN SECTION DETAIL	
CONCRETE MASONRY IN SECTION DETAIL	
STONE MASONRY IN SECTION DETAIL	
STEEL IN SECTION DETAIL	
DISCONTINUOUS WOOD BLOCKING IN SECTION	
CONTINUOUS WOOD BLOCKING IN SECTION	
FINISHED WOOD IN SECTION DETAIL	
RIGID BOARD INSULATION	
RIGID BOARD INSULATION (ROOFING)	
BATT INSULATION	
GYPSUM BOARD	
ACOUSTICAL CEILING PANEL	
BITUMINOUS CONCRETE (ASPHALT) PAVING IN SECTION	
AGGREGATE BALLAST, FILL OR BACKFILL IN SECTION	
UNDISTURBED EARTH	
EARTH BACKFILL	



PROJECT

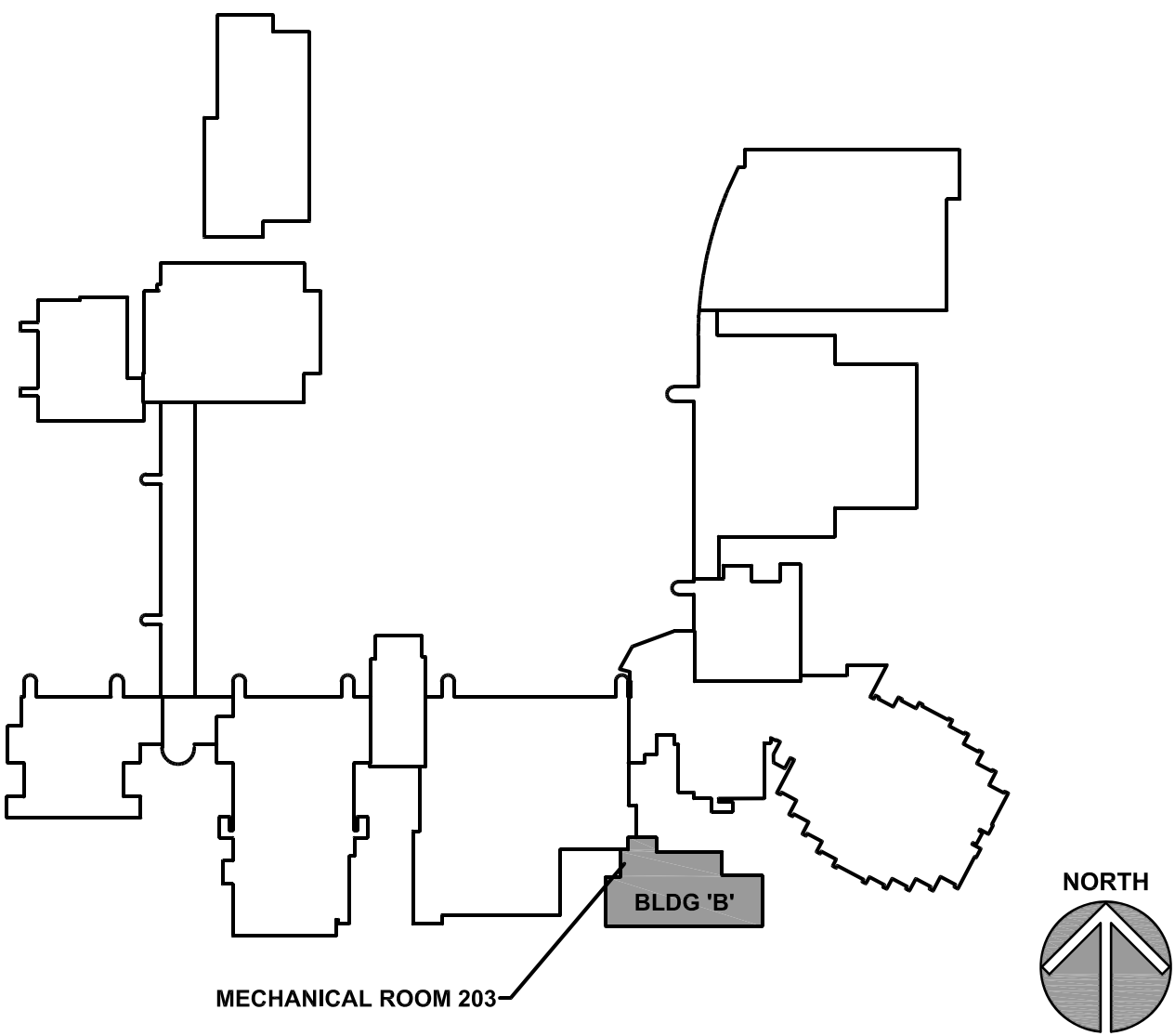
BUILDING B BOILER REPLACEMENT
JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, IL 60431

OWNER

JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, IL 60431

ARCHITECT/
ENGINEER

KLUBER ARCHITECTS + ENGINEERS
10 S. SHUMWAY AVE.
BATAVIA, ILLINOIS 60510
TEL 630-406-1213
FAX 630-406-9472
www.kluberinc.com



SEALS & CERTIFICATES

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2015 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.

KLUBER, INC. ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-001284

MECHANICAL ENGINEER'S SEAL

"G" SERIES
"M" SERIES

ELECTRICAL ENGINEER'S SEAL

"G" SERIES
"E" SERIES

ARCHITECT'S SEAL

"G" SERIES
"M" SERIES

INDEX OF DRAWINGS

G100	COVER SHEET, GENERAL NOTES, SYMBOLS, & DRAWING INDEX
M320	MEZZANINE MECHANICAL ROOM 203 PLANS
M410	MECHANICAL SCHEDULES AND DETAILS

BUILDING CODE DATA

2015 INTERNATIONAL BUILDING CODE
2014 ILLINOIS STATE PLUMBING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL FUEL AND GAS CODE
2018 INTERNATIONAL ENERGY CODE
2015 INTERNATIONAL FIRE PREVENTION CODE
2018 IL ACCESSIBILITY CODE
2014 NATIONAL ELECTRIC CODE
LOCAL AMENDMENTS TO THE ABOVE CODES

KLUBER
Architects + Engineers

Klubers, Inc.
Batavia, Illinois 60510
Tel. 630-406-1213
Gurnee, Illinois 60031
Tel. 847-238-3428
www.kluberinc.com

BUILDING B BOILER REPLACEMENT

JOLIET JUNIOR COLLEGE
1215 HOUBOLT ROAD
JOLIET, ILLINOIS 60431

ISSUED

180 DOCUMENTS

01/15/20

19-292-1279

DRAWN

CHECKED

APPROVED

19-292-1279

BDW

DDW

DDW

SHEET TITLE

COVER SHEET,

GENERAL NOTES,

SYMBOLS AND

DRAWING INDEX

SHEET NUMBER

G100

KEYNOTES

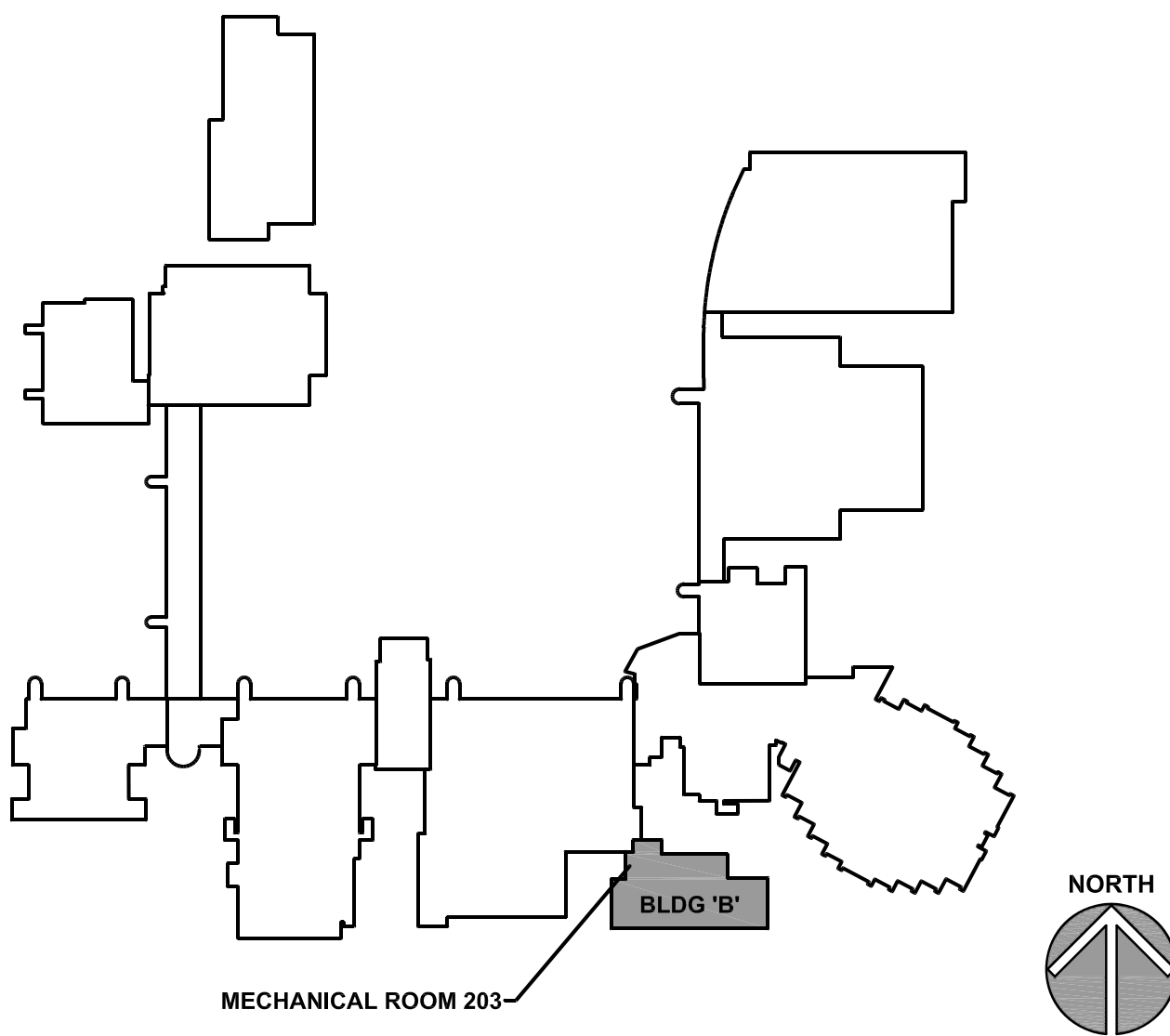
KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 2.442 DEMOLISH PORTION OF EXISTING EXTERIOR WALL CONSTRUCTION: EIFS/STUCCO-CLAD CONCRETE MASONRY; TO ENLARGE EXISTING LOUVER ROUGH OPENING TO APPROXIMATELY 40" IN WIDTH, MAINTAIN EXISTING OPENING HEIGHT.
- 2.753 ENLARGE EXISTING OPENING THROUGH ROOF DECK AND ROOFING SYSTEM TO ACCOMMODATE SIZE OF NEW BOILER FLUE, ALLOWING 1" CLEARANCE BETWEEN NEW FLUE AND EDGE OF OPENING.
- 2.754 DEMOLISH EXISTING ROOFING AND CORE HOLE THROUGH EXISTING ROOF DECK TO ACCOMMODATE NEW BOILER INTAKE PIPE.
- 2.489 DEMOLISH EXISTING WALL LOUVER.
- 4.201 MASONRY ASSEMBLY: PATCH EXISTING MASONRY AT SAWCUT END TO PROVIDE SMOOTH, EVEN SURFACE FOR ANCHORING JAMB OF LOUVER.
- 5.550 MISCELLANEOUS METAL FABRICATION: STEEL LINTEL; (2) 3.3X3X3/8X5/16; PRIMED; LENGTH SUFFICIENT TO PROVIDE 4" MIN. BEARING AT EACH END.
- 7.538 ROOFING ASSEMBLY: FLASH BOILER FLUE THROUGH EXISTING EPDM ROOFING SYSTEM IN ACCORDANCE WITH NRCA 2015 ROOFING MANUAL DETAIL EPDM-18.
- 7.539 ROOFING ASSEMBLY: FLASH BOILER INTAKE THROUGH EXISTING EPDM ROOFING SYSTEM IN ACCORDANCE WITH NRCA 2015 ROOFING MANUAL DETAILS EPDM-19 OR EPDM-19A.
- 7.925 JOINT SEALANT AND BACKER ROD: PROVIDE AT ENTIRE PERIMETER OF LOUVER; NON-SAG, NON-STAINING SILICONE; WHITE COLOR.
- 8.910 WALL LOUVER: SIZE TO FIT OPENING (APPROX. 40"X84"); WHITE COLOR TO MATCH EXISTING; PROVIDE COMPLETE WITH INSECT SCREEN AND SILL PAN FLASHING.
- 23.100 DEMOLISH BOILER, EXHAUST VENT AND ASSOCIATED PIPING. PROVIDE TEMPORARY CAP ON ROOF OPENING UNTIL NEW BOILER VENT IS INSTALLED.
- 23.101 DEMOLISH GAS PIPE AND SPECIALTIES BACK TO LOCATION SHOWN AND CAP.
- 23.102 DEMOLISH PUMPS AND SPECIALTIES.
- 23.103 DEMOLISH DAMPERS AND ASSOCIATED DUCTWORK.
- 23.200 PROVIDE NEW BOILER EXHAUST VENT UP THROUGH ROOF. MODIFY EXISTING OPENING AS REQUIRED FOR NEW EXHAUST VENT. TERMINATE MINIMUM 48 INCHES ABOVE ROOF WITH VELOCITY CONE. BOILER MANUFACTURER SHALL APPROVE VENT CONFIGURATION.
- 23.201 PROVIDE NEW BOILER DIRECT VENT COMBUSTION AIR PIPE UP THROUGH ROOF. TERMINATE WITH COOSENECK 24 INCHES ABOVE ROOF. BOILER MANUFACTURER SHALL APPROVE COMBUSTION AIR CONFIGURATION.
- 23.202 PROVIDE NEW DIRT/AIR SEPARATOR. RECONNECT TO EXISTING MAKE-UP WATER AND EXPANSION TANK.
- 23.203 PROVIDE NEW HOT WATER SUPPLY/RETURN PIPE CONNECTIONS TO EXISTING UNIT HEATER.
- 23.204 PROVIDE NEW SYSTEM PIPING CONNECTIONS TO EXISTING FILTER AND POT FEEDER.
- 23.205 PROVIDE GAS PRESSURE REGULATOR FOR NEW BOILER. VERIFY REGULATOR MANUFACTURER IS ACCEPTABLE TO BOILER MANUFACTURER. PROVIDE PRESSURE GAUGE TAP UPSTREAM AND DOWNSTREAM OF REGULATOR FOR TESTING.
- 23.208 PROVIDE 12 X 12 INCH DUCTWORK CONNECTION TO LOUVER AND CONTROL DAMPER. TERMINATE DUCTWORK WITH ELBOW UP.
- 23.209 PROVIDE INSULATED BLANK-OFF PANEL AND SEAL AIR TIGHT FOR UNUSED SECTION OF DAMPER.
- 23.301 DEMOLISH JCI DX9100 AND PROVIDE NEW DDC CONTROLLER MEETING CAMPUS STANDARD. PROVIDE ALL EXISTING POINTS TO REMAIN AND ADD NEW BOILER AND PUMP POINTS.
- 23.302 DEMOLISH PNEUMATIC ACTUATORS. DEMOLISH ALL ABANDONED PNEUMATIC TUBING BACK TO NEXT ACTIVE SECTION AND CAP.
- 23.303 PROVIDE NEW NETWORK CONTROL ENGINE (NAE) AND IOM MODULE AS REQUIRED FOR POINTS. TRANSFER POINTS FROM DX9100 REQUIRED TO NEW CONTROLLER (FIELD VERIFY POINTS). PROVIDE ALL SENSORS, COMPONENTS AND INTERFACE TO NEW BOILER, PUMPS, DAMPERS, ETC.
- 23.304 PROVIDE PUSH BUTTON EMERGENCY GAS SHUT OFF SWITCH TO SHUT DOWN BOILER AND WATER HEATER. PROVIDE RED SIGNAGE WITH DESCRIPTION OF SWITCH.
- 23.305 PROVIDE TWO POSITION DAMPER ACTUATOR. DAMPER SHALL OPEN WHEN WATER HEATER IS ENERGIZED. OTHERWISE DAMPER SHALL REMAIN CLOSED.
- 26.100 DISCONNECT AND PROTECT CIRCUIT TO BOILER INDICATED TO BE DEMOLISHED AND REPLACED (CKT P1-27). EXTEND BRANCH CIRCUIT TO NEW BOILER AND PROVIDE NEW EQUIPMENT CONNECTION.
- 26.110 DISCONNECT AND PROTECT CIRCUIT TO PUMPS INDICATED TO BE DEMOLISHED AND REPLACED (CKT MDP1-11). EXTEND BRANCH CIRCUIT TO NEW PUMPS AND PROVIDE NEW EQUIPMENT CONNECTION.
- 26.111 DEMOLISH COMBINATION STARTER FOR PUMPS. PROVIDE NEW NON-FUSED DISCONNECT (30 AMP/3 POLE, NEMA 1 ENCLOSURE). NOTE: NEW PUMPS WILL HAVE INTEGRAL DRIVES.
- 26.130 DISCONNECT, PROTECT AND REINSTALL LIGHT FIXTURE AFFECTED BY CONSTRUCTION ACTIVITIES. INCLUDE RELOCATION OF LIGHT FIXTURE TO WITHIN 5 FEET OF EXISTING LOCATION.

GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. ALL PIPING AND DUCTWORK IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
3. ALL EXISTING DUCTWORK IS INSULATED WITH A ONE INCH DUCT LINER. ALL DIMENSIONS SHOWN ARE NET INSIDE DIMENSIONS.
4. ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
5. THERMOSTATIC CONTROLS OF EQUIPMENT SHALL HAVE A 5' F DEADBAND.
6. GENERALLY, SMALL DIAMETER PIPE RUNS FROM DRIPS, CONDENSATE PANS AND OTHER SERVICES ARE NOT SHOWN BUT MUST BE PROVIDED.
7. SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
8. DO NOT CUT THROUGH STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUTS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
9. KEYNOTES 7.538 AND 7.539 ARE ASSOCIATED WITH RE-ROOFING WORK BY OWNER. COORDINATE WITH OWNER'S ROOFING CONTRACTOR REGARDING THE INSTALLATION SCHEDULE FOR THE NEW ROOFING SYSTEM. IF THE WORK OF THESE KEYNOTES OCCURS AFTER THE INSTALLATION OF THE NEW ROOFING SYSTEM, CONTRACT WITH THE INSTALLING CONTRACTOR TO PERFORM THIS WORK AND ENSURE THAT WORK IS PERFORMED IN SUCH A WAY THAT IT DOES NOT VOID THE NEW ROOFING SYSTEM WARRANTY.
10. KEYNOTES 23.301-23.305 ARE ASSOCIATED WITH WORK BY OWNER (TEMPERATURE CONTROLS). COORDINATE WITH OWNER'S CONTRACTOR FOR INSTALLATION OF CONTROL COMPONENTS AND CORRECT CONTROL INTERFACE ON EQUIPMENT.

KEY PLAN



ISSUED
01/15/20

JOB NO. 19-292-1279
DRAWN BWG
CHECKED DDW
APPROVED DDW

SHEET TITLE

MEZZANINE
MECHANICAL ROOM
203 PLANS

SHEET NUMBER

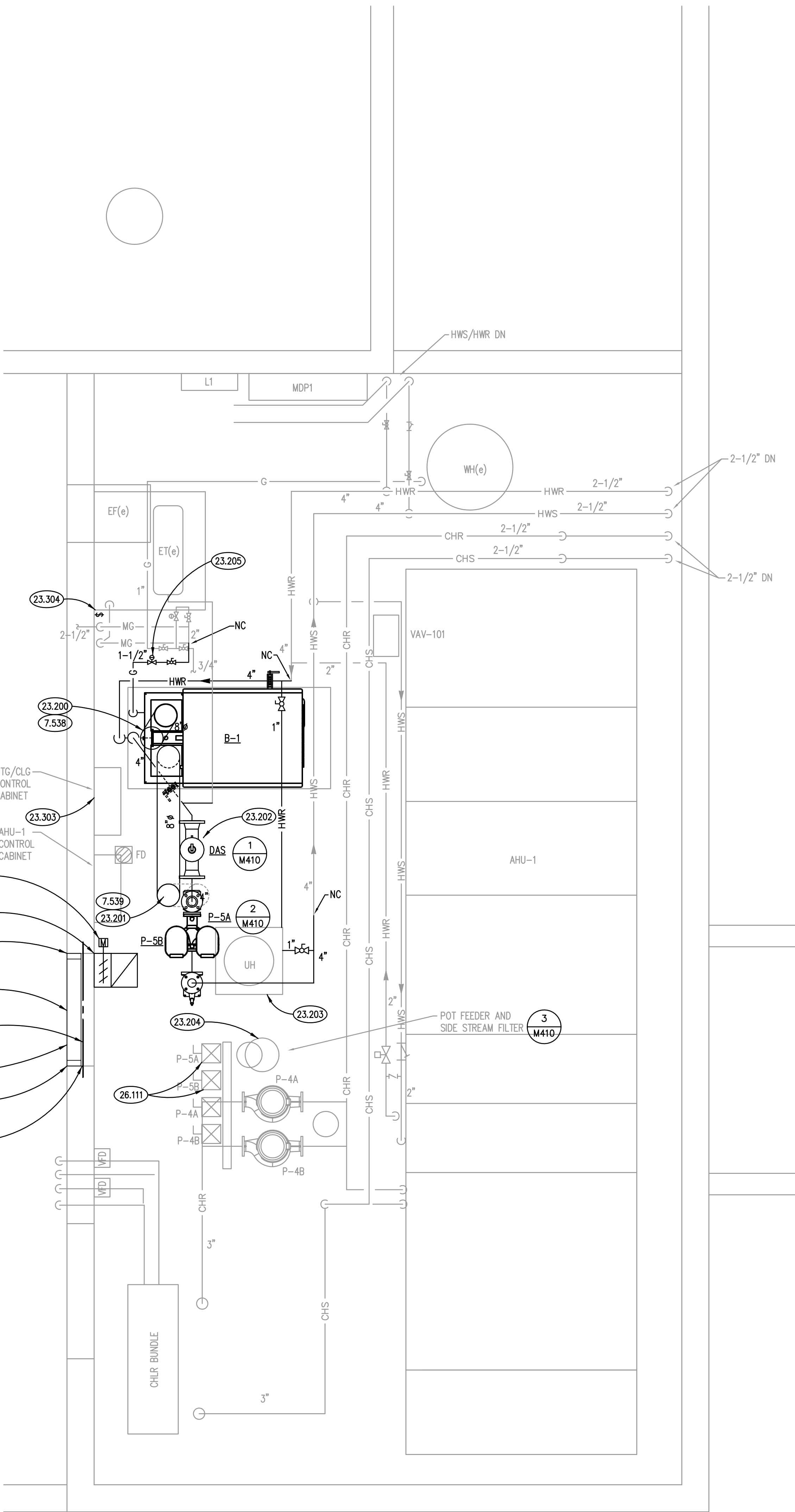
M320

Kluber, Inc.

Balwin, Illinois 60510
Tel 630-406.1213
Gurnee, Illinois 60031
Tel 847.336.3428
www.klubernc.com

BUILDING B BOILER REPLACEMENT

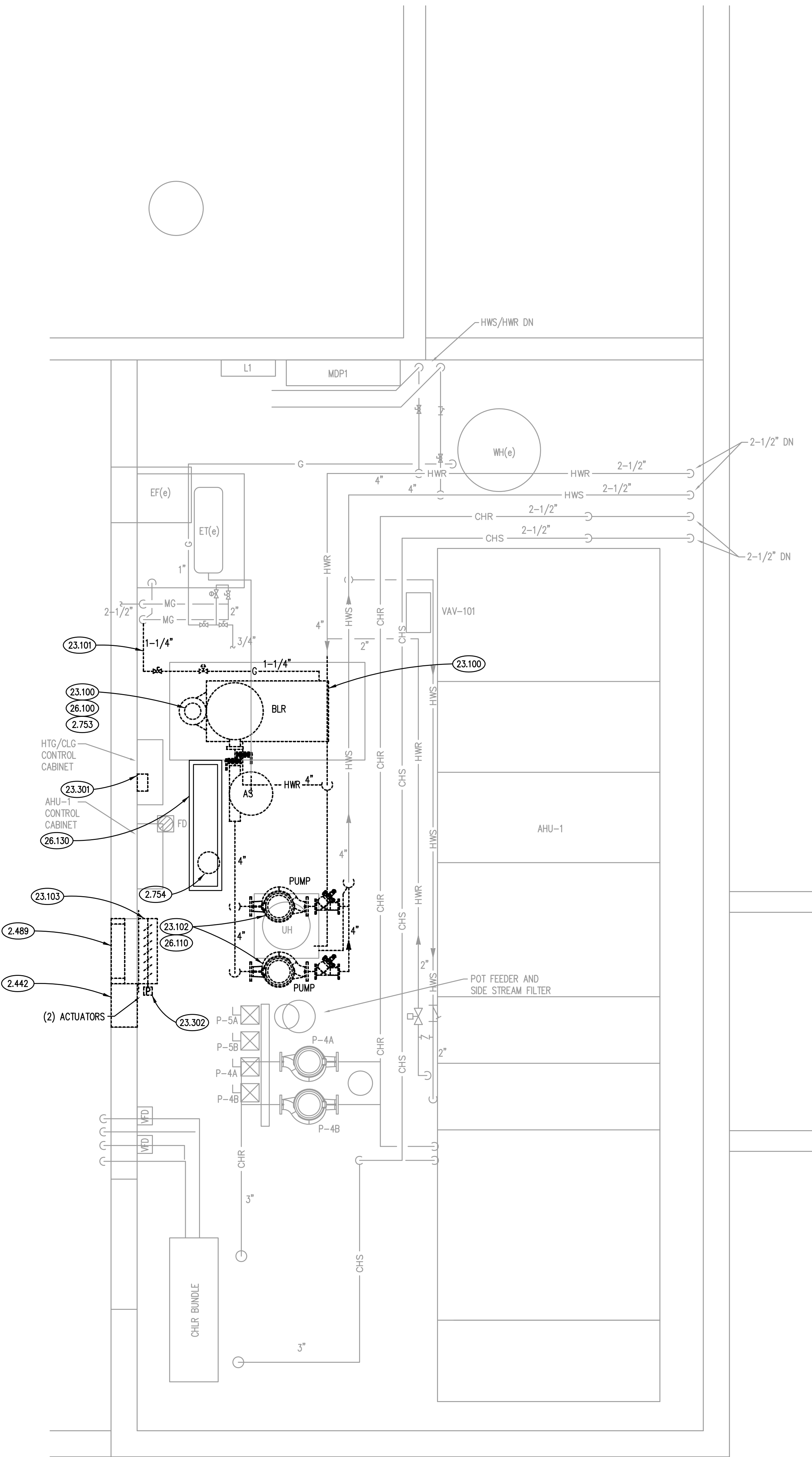
JOLIET JUNIOR COLLEGE
1215 HOOBOLT ROAD
JOLIET, ILLINOIS 60431



MEZZANINE MECHANICAL ROOM 203

SCALE: 1/2" = 1'-0"

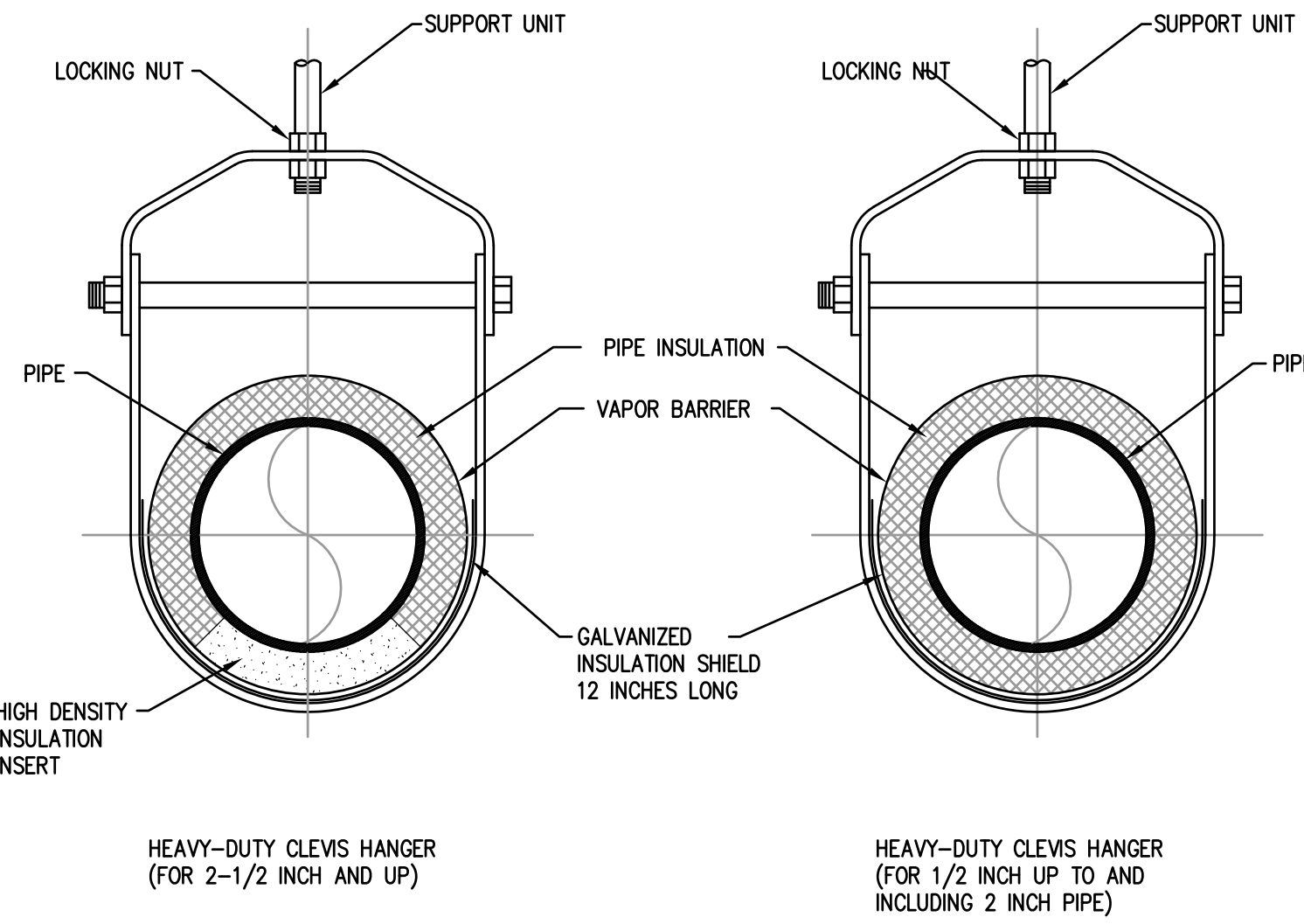
2



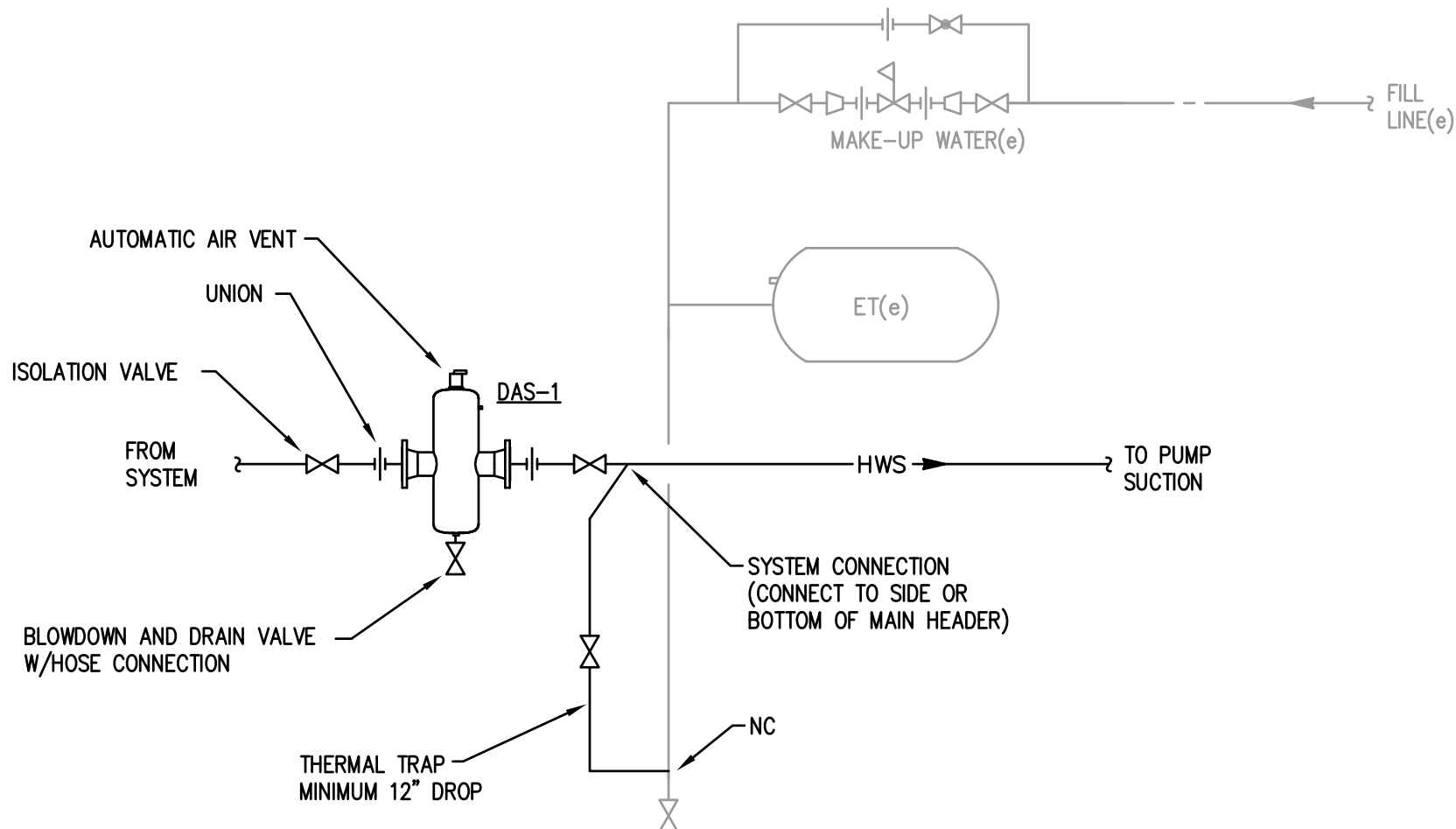
MEZZANINE MECHANICAL ROOM 203 DEMOLITON

SCALE: 1/2" = 1'-0"

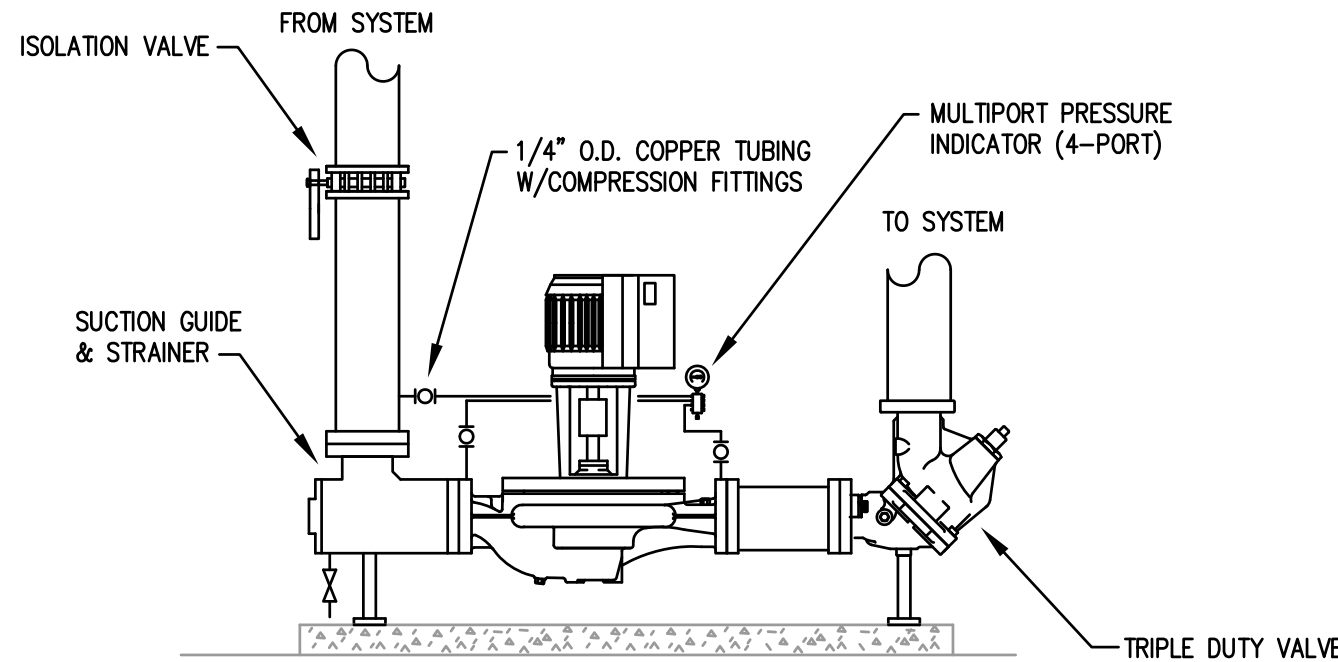
4



PIPE HANGER DETAILS
SCALE: NTS 0

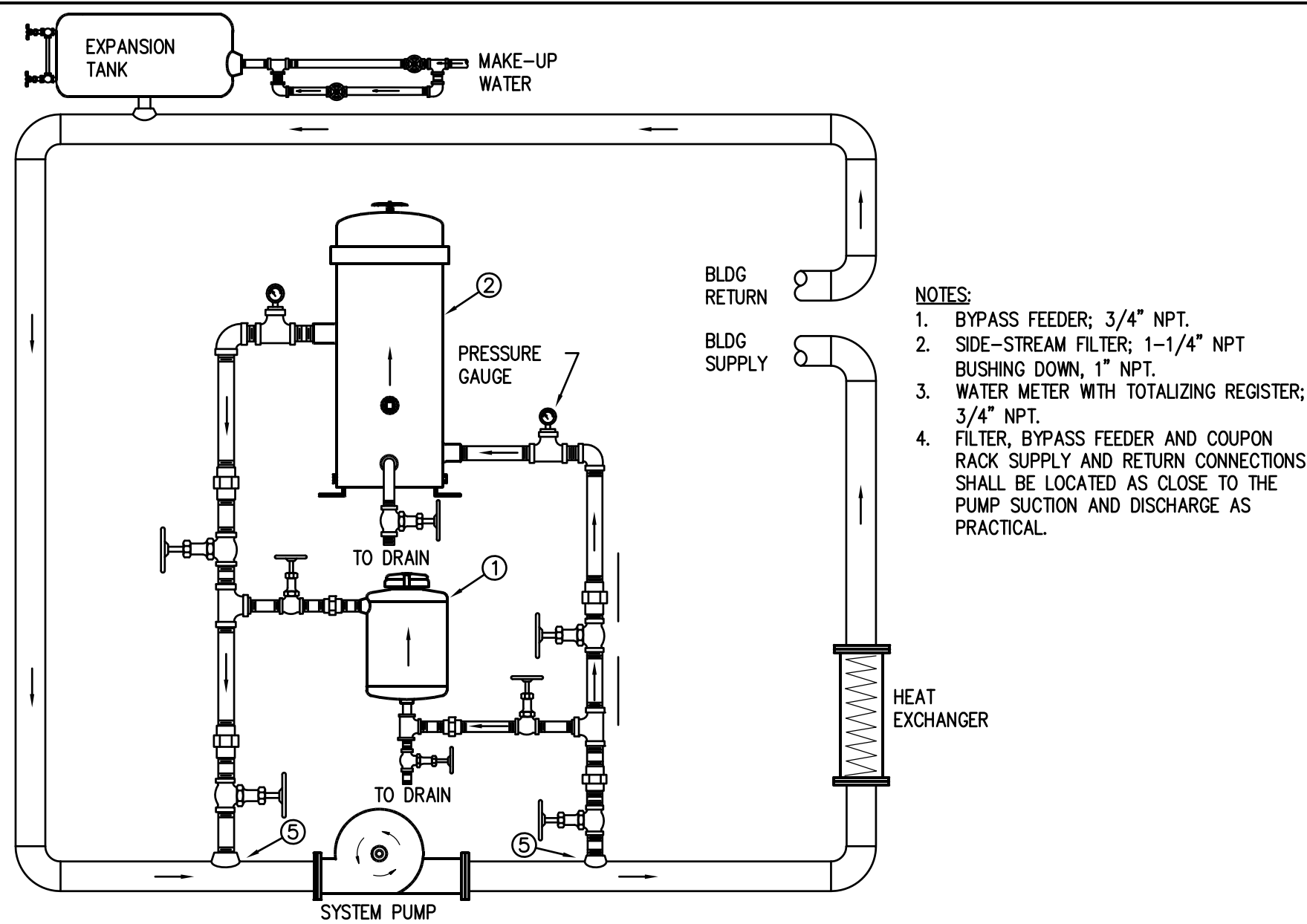


AIR SEPARATOR & EXPANSION TANK DETAIL
SCALE: NTS 1

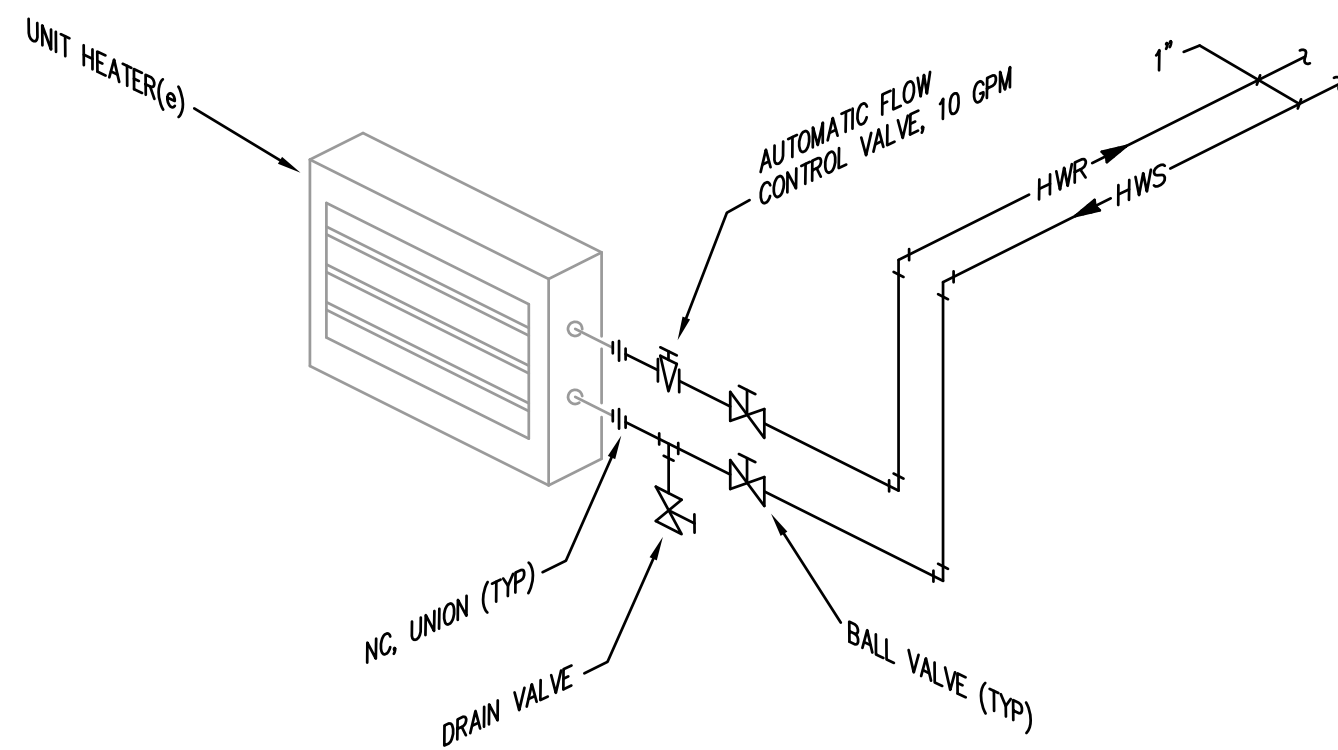


- NOTES:
1. SUPPORT PUMP IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

VERTICAL IN-LINE PUMP DETAIL
SCALE: NTS 2



CLOSED CHEMICAL TREATMENT DETAIL
SCALE: NTS 3



UNIT HEATER (UH-1a):
THE UNIT HEATER FAN SHALL BE ENERGIZED AS REQUIRED TO MAINTAIN ROOM TEMPERATURE.

UNIT HEATER PIPING DETAIL
SCALE: NTS 4

BOILER SCHEDULE

MARK	TYPE	WATER FLOW RATE (GPM)	MAX PRESS DROP (FT)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	EWI / LWT (\"/>
B-1	FIRE TUBE	165	2.0	1500	1320	180 / 164

NOTES

1. MODEL BASED ON CLEAVER BROOKS.

PUMP SCHEDULE

MARK	WATER FLOW RATE (GPM)	HEAD (FT)	TYPE	MOTOR POWER (HP)	ELECTRICAL (V/PH/Hz)	MOTOR SPEED (RPM)	SERVICE	MODEL	NOTES
P-5A	109	55	VERT INLINE	3	460/3/60	2847	HEATING	4372 0205H	1, 2, 3
P-5B	109	55	VERT INLINE	3	460/3/60	2847	HEATING	4372 0205H	1, 2, 3

NOTES

1. MODEL BASED ON ARMSTRONG DESIGN ENVELOPE TANGO PUMPS.
2. SENSORLESS VARIABLE SPEED CONTROL.
3. PUMPS SHALL HAVE ECM MOTORS AND OPERATE IN PARALLEL WITH A TOTAL SYSTEM FLOW OF 165 GPM @ 55 FT HD. MINIMUM EFFICIENCY AT DESIGN = 74%.

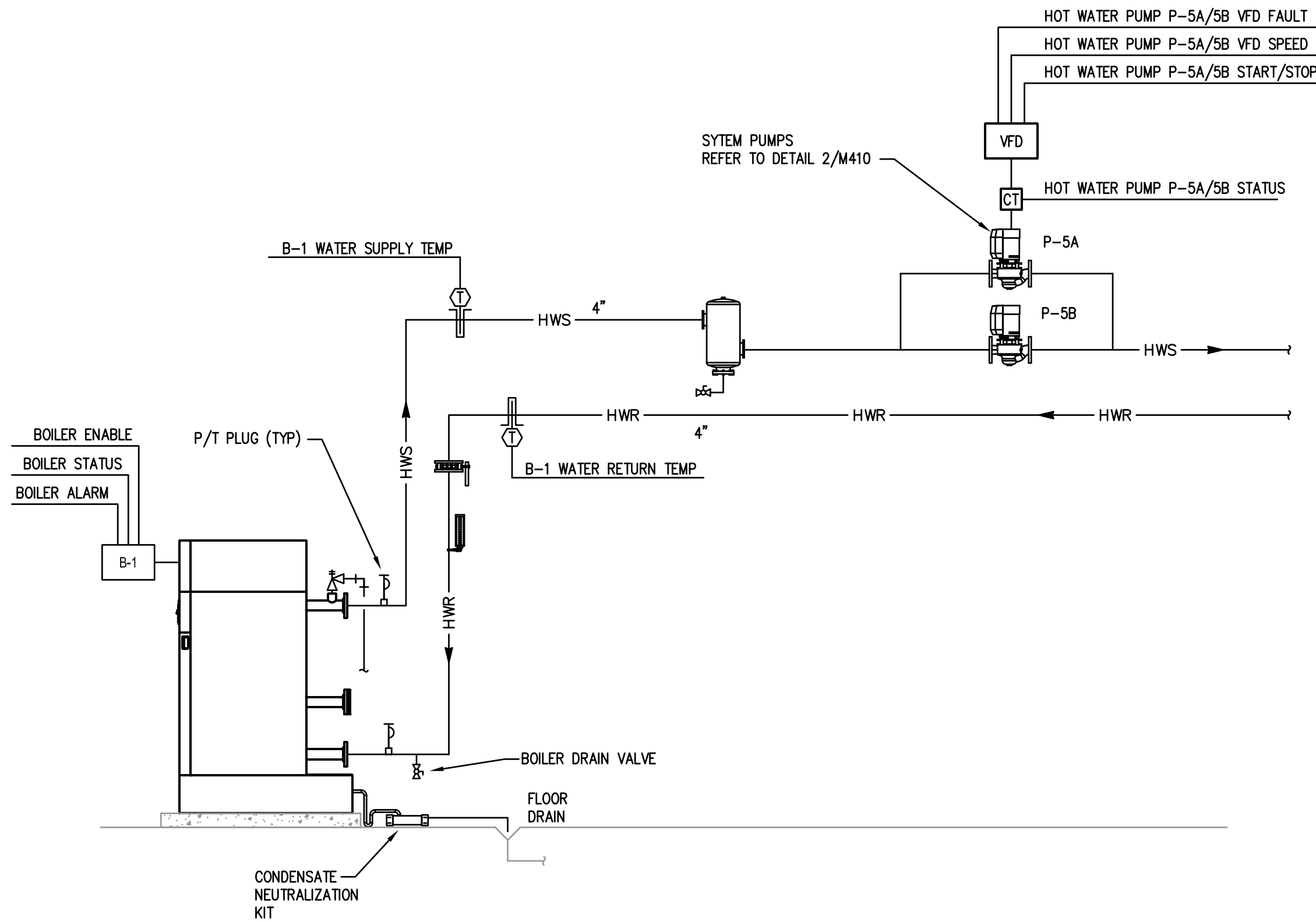
DIRT/AIR SEPARATOR SCHEDULE

MARK	WATER FLOW RATE (GPM)	MAX WPD (FT)	INLET / OUTLET SIZE (IN)	MAX WORKING PRESSURE (PSIG)	MODEL	NOTES
DAS-1	165	1.0	4	125	VD400	1

NOTES

1. MODEL BASED ON SPIROTHERM.

BOILER PIPING AND CONTROL SCHEMATIC (CONTROLS BY OWNER)



BOILER (B-1, B-2):

THE BOILER CONTROLLER SHALL CONTROL THE OPERATION OF THE BOILER. THE BOILER SHALL BE ENABLED WHEN THE OUTSIDE AIR TEMPERATURE FALLS BELOW 60 DEGREES F (ADJ.).

THE BOILER SHALL THEN MODULATE THEIR FIRING RATE TO MAINTAIN THE HEATING WATER TEMPERATURE SETPOINT.

THE HEATING WATER TEMPERATURE SHALL BE RESET BASED ON OUTDOOR AIR TEMPERATURE. THE WATER TEMPERATURE SHALL BE 180 DEGREES F WHEN THE OUTDOOR AIR TEMPERATURE IS 0 DEGREES F. THE WATER TEMPERATURE SHALL BE 140 DEGREES F WHEN THE OUTDOOR AIR TEMPERATURE IS 60 DEGREES F. TEMPERATURE RESET CURVES AND SETPOINTS SHALL BE ADJUSTABLE.

AN ALARM SHALL BE GENERATED IF THERE IS A BOILER ALARM OR A LOW WATER LEVEL ALARM.

PUMP (P-5A, P-5B):

THE HEATING WATER PUMPS SHALL OPERATE IN A PARALLEL SEQUENCE. IF ONE PUMP FAILS THE SECOND PUMP WILL CONTINUE TO OPERATE.

UPON A CALL FOR HEAT THE PUMPS SHALL BE ENERGIZED. THE PUMP SPEED SHALL MODULATE TO MEET SYSTEM DEMAND BASED ON SENSORLESS SYSTEM PRESSURE CONTROL.

AN ALARM SHALL BE GENERATED UPON A PUMP OR A VFD FAULT STATUS.

BOILER PLANT

	HARDWARE				SOFTWARE		
	AI	AO	BI	BO	SCHED	TREND	ALARM
BOILER ENABLE (B-1)					X	X	
BOILER STATUS (B-1)			X				X
BOILER ALARM (B-1)			X				X
HOT WATER PUMP START/STOP (P-5A, P-5B)				X			
HOT WATER PUMP STATUS (P-5A, P-5B)			X				X
HOT WATER PUMP VFD FAULT (P-5A, P-5B)		X					
HOT WATER PUMP VFD SPEED (P-5A, P-5B)		X					
BUILDING HOT WATER SETPOINT			X				
BOILER SUPPLY WATER TEMPERATURE (B-1)	X					X	
BOILER RETURN WATER TEMPERATURE (B-1)	X					X	
OUTSIDE AIR TEMPERATURE	X						
GAS KILL SWITCH STATUS		X					X
COMBUSTION AIR DAMPER STATUS		X					X

NOTE: ALL ADDITIONAL POINTS AVAILABLE FROM BOILER AND PUMP CONTROLLERS SHALL BE INTERFACED IN A TABLE FORMAT.