

DOCUMENT 00 90 00
ADDENDUM

ADDENDUM No.: 1

DATE: March 26, 2025

RE: WESTERN TECHNICAL COLLEGE
LUNDA CENTER RTU COOLING UPGRADE
333 7TH STREET NORTH
LA CROSSE, WISCONSIN 54601

PROJECT No.: 24072

FROM: HSR Associates, Inc
100 Milwaukee Street
La Crosse, WI 54603
(608) 784-1830

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 2025. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of: 2 pages, 1 document, 0 sections, and 5 drawings.

PRE-BID MEETING SIGN IN SHEET:

1. March 20, 2025.

CHANGES TO DRAWINGS

2. Sheet M000 HVAC COVER SHEET 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised sheet index to add Sheet M102.
3. Sheet M001 HVAC GENERAL INFO SHEET 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Revised sheet index to add Sheet M102.
4. Sheet M102 COLEMAN CENTER BASEMENT PLAN – BOILER ROOM 30"x42"
 - a. See the new sheet included in this addendum.
 - b. Added domestic heat exchanger along with pump, piping, and accessories tied into existing boiler piping.
5. Sheet M600 HVAC SCHEDULES 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Added Domestic Water Heat Exchanger Schedule.
 - c. Added DWHXP-1 to Circulating Pump Schedule.

6. Sheet E100 ELECTRICAL PLAN 30"x42"
 - a. See the revised sheet included in this addendum. Disregard the previous version.
 - b. Added domestic heat exchanger pump wiring and circuit to floor plan.
 - c. Added DWHXP-1 to Motor Equipment Schedule.

END OF DOCUMENT 00 90 00

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WESTERN TECHNICAL COLLEGE LUNDA CENTER RTU COOLING UPGRADES LA CROSSE, WISCONSIN



ARCHITECTURE
ENGINEERING
INTERIOR DESIGN



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HSR #24072

MARCH 2025

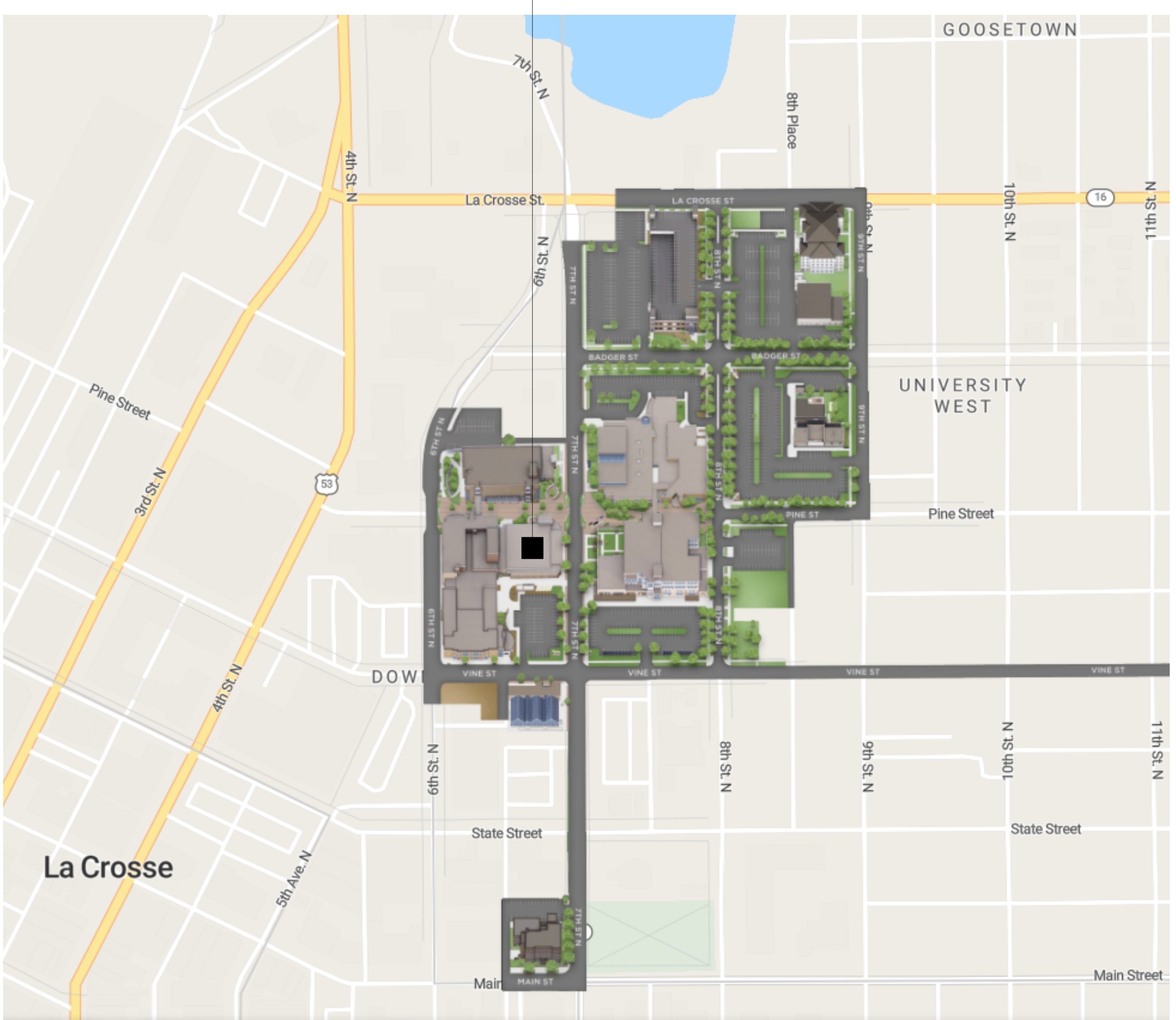
BID DOCUMENTS

INDEX OF DRAWINGS	MONTH YEAR	PROJECT STATUS
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MECHANICAL	
M000	HVAC COVER SHEET
M001	HVAC GENERAL INFO SHEET
M100	COLEMAN CENTER BASEMENT PLAN
M101	LUNDA CENTER FIRST FLOOR PLAN
M102	COLEMAN CENTER BASEMENT PLAN - BOILER ROOM
M500	HVAC DETAILS
M600	HVAC SCHEDULES

ELECTRICAL	
E100	ELECTRICAL PLAN

PROJECT LOCATION
LUNDA CENTER
333 7TH STREET NORTH
LA CROSSE, WISCONSIN



CITY MAP

PROJECT TEAM	
PROJECT MANAGER:	HSR ASSOCIATES, INC. JAKE BERAN JBERAN@HSRASSOCIATES.COM 608-784-1830
SPECIFICATIONS:	HSR ASSOCIATES, INC. TOBIN FAUCHEUX TFAUCHEUX@HSRASSOCIATES.COM 608-784-1830
MECHANICAL DESIGN:	HSR ASSOCIATES, INC. JAKE BERAN JBERAN@HSRASSOCIATES.COM 608-784-1830
ELECTRICAL DESIGN:	HSR ASSOCIATES, INC. JEFF HANKEY JHANKEY@HSRASSOCIATES.COM 608-784-1830



LOCATION MAP

Project Title: **WESTERN TECHNICAL COLLEGE
LUNDA CENTER RTU COOLING UPGRADES**
Project Location: **333 7TH STREET NORTH
LA CROSSE, WISCONSIN**
Sheet Title: **HVAC COVER SHEET**

HSR Project Number:	24072	
Project Date:	MARCH 2025	
Drawn By:	JB	
Key Plan:		
Revisions:		
No.	Description	Date
A1	ADDENDUM #01	03/26/2025
Graphic Scale: VARIES		
Last Update: 3/26/2025 9:18:17 AM		

M000



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Consultant:

WESTERN TECHNICAL COLLEGE
LUNDA CENTER RTU COOLING UPGRADES
 333 7TH STREET NORTH
 LA CROSSE, WISCONSIN
HVAC GENERAL INFO SHEET

Project Title:
Project Number:
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Key Plan:

24072
MARCH 2025
JB

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Revisions:

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A1	ADDENDUM #01	03/26/2025

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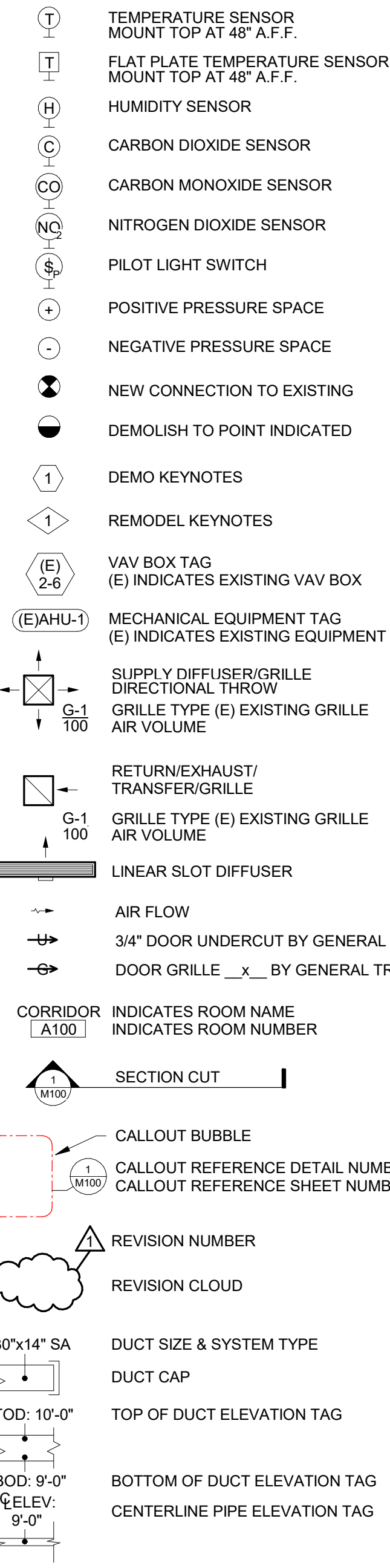
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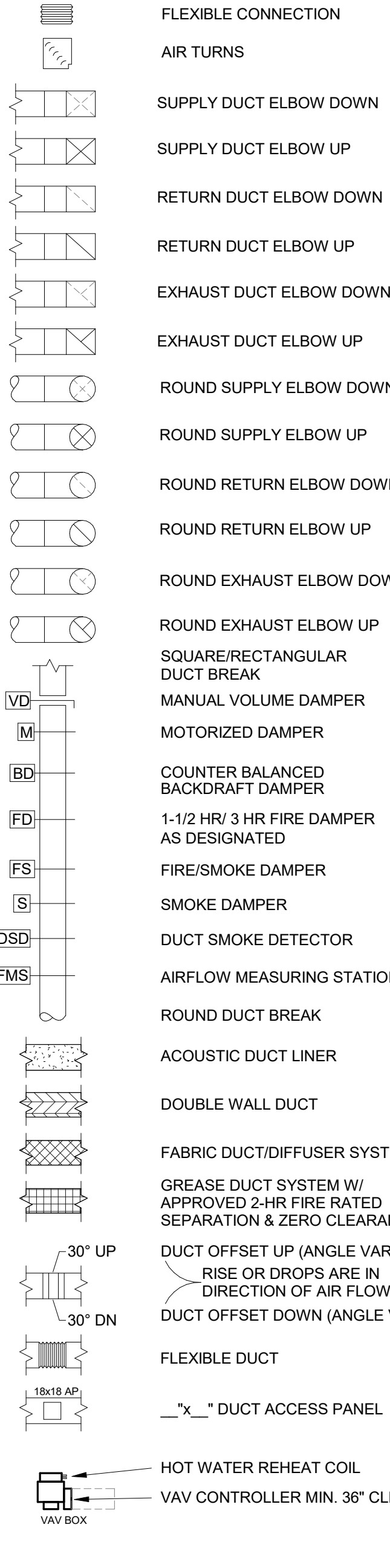
MECHANICAL SHEET INDEX	
SHEET #	SHEET NAME
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M101	LUNDA CENTER FIRST FLOOR PLAN
M102	COLEMAN CENTER BASEMENT PLAN - BOILER ROOM
M500	HVAC DETAILS
M600	HVAC SCHEDULES

HVAC SYMBOLS

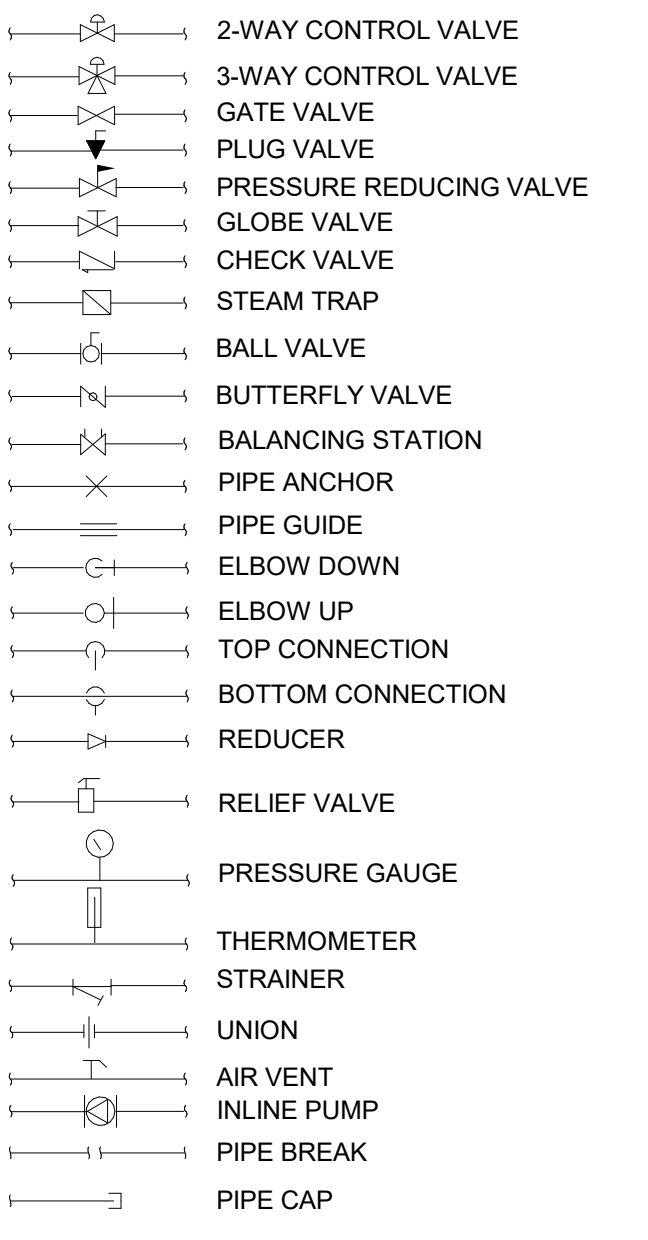
HVAC GENERAL SYMBOLS



HVAC DUCTWORK SYMBOLS



HVAC PIPING SYMBOLS



HVAC PIPING SYSTEM ABBREVIATIONS

ABBREVIATION	SYSTEM TYPE
HWS	HOT WATER HEATING SUPPLY
HWR	HOT WATER HEATING RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
GTS	GEOTHERMAL WATER SUPPLY
GTR	GEOTHERMAL WATER RETURN
CD	CONDENSATE DRAIN
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
RD	REFRIGERANT DISCHARGE
HPS	STEAM HIGH PRESSURE SUPPLY
HPR	STEAM HIGH PRESSURE RETURN
LPS	STEAM LOW PRESSURE SUPPLY
LPR	STEAM LOW PRESSURE RETURN
PD	PUMP DISCHARGE
LP GAS	LP GAS
NGAS	NATURAL GAS
HWS	EXISTING HOT WATER HEATING SUPPLY
HWR	EXISTING HOT WATER HEATING RETURN
CWS	EXISTING CHILLED WATER SUPPLY
CWR	EXISTING CHILLED WATER RETURN
GTS	EXISTING GEOTHERMAL WATER SUPPLY
GTR	EXISTING GEOTHERMAL WATER RETURN
CD	EXISTING CONDENSATE DRAIN
RS	EXISTING REFRIGERANT SUCTION
RL	EXISTING REFRIGERANT LIQUID
RD	EXISTING REFRIGERANT DISCHARGE
HPS	EXISTING STEAM HIGH PRESSURE SUPPLY
HPR	EXISTING STEAM HIGH PRESSURE RETURN
LPS	EXISTING STEAM LOW PRESSURE SUPPLY
LPR	EXISTING STEAM LOW PRESSURE RETURN
PD	EXISTING PUMP DISCHARGE
LP GAS	EXISTING LP GAS
NGAS	EXISTING NATURAL GAS

HVAC EQUIPMENT ABBREVIATIONS

ABBREVIATION	SYSTEM TYPE
ACC-1	AIR COOLED CHILLER
AC-1	AIR CURTAIN
AFMS-1	AIRFLOW MEASURING STATION
AHU-1	AIR HANDLING UNIT
AS-1	AIRDIRT SEPARATOR
AV-1	AIR VALVE
B-1	BOILER
BCU-1	BLOWER COIL UNIT
BCP-1	BOILER CIRCULATING PUMP
C-1	CONVECTOR
CC-1	COOLING COIL
CF-1	CEILING FAN
CP-1	CONDENSATE PUMP
CT-1	COOLING TOWER
CUH-1	CONDENSING UNIT
CUH-1	CABINET UNIT HEATER
CWP-1	CHILLED WATER PUMP
CA-1	CEILING EXHAUSTER
DC-1	DUCT COIL
DF-1	DESTRATIFICATION FAN
DH-1	DUCT HEATER
DOAS-1	DEDICATED OUTDOOR AIR SYSTEM
EF-1	EXHAUST FAN
ERC-1	ENERGY RECOVERY COIL
ERCP-1	ENERGY RECOVERY COIL PUMP
ERV-1	ENERGY RECOVERY VENTILATOR
ET-1	EXPANSION TANK
F-1	FURNACE
FCU-1	FAN COIL UNIT
FHU-1	FAN FILTER UNIT
FM-1	FLOW METER
G-1	GRILLES, REGISTERS, AND DIFFUSERS
GH-1	GAS FRIED UNIT HEATER
GX-1	GRAVITY EXHAUSTER
H-1	HUMIDIFIER
HC-1	HEATING COIL
HCP-1	HEATING COIL PUMP
HP-1	HEAT PUMP
HWH-1	HEAT WHEEL
HWP-1	HEATING WATER PUMP
HX-1	HEAT EXCHANGER
IHR-1	INFRA-RED HEATER
KX-1	KITCHEN EXHAUST HOOD
L-1	LOUVER
MAU-1	MAKE-UP AIR UNIT
MS-1	MINI-SPLIT UNIT
P-1	PUMP
PF-1	PROPELLER FAN
PRV-1	PRESSURE REDUCING VALVE
PTAC-1	PACKAGED TERMINAL AIR CONDITIONING UNIT
RF-1	RETURN/RELIEF FAN
RFP-1	RADIANT FLOOR PUMP
RH-1	ROOF HOOD
RHG-1	REHEAT COIL
RP-1	RADIANT PANEL
RTU-1	ROOFTOP UNIT
RK-1	REFRIGERANT KIT
SA-1	SOUND ATTENUATOR
SC-1	SELF CONTAINED UNIT
SUF-1	SURFACE FAN UNIT
SFU-1	SYSTEM FEEDER UNIT
ST-1	SOUND TRAP
TOP-1	TEMPERATURE CONTROL PANEL
UB-1	UTILITY BLOWER
UH-1	UNIT HEATER
UV-1	UNIT VENTILATOR
VAV-1	VARIABLE AIR VOLUME BOX
VFD-1	VARIABLE FREQUENCY DRIVE
WC-1	WATER CHILLER
WF-1	WALL FIN
WFU-1	WATER FILTER UNIT
WX-1	WALL EXHAUSTER
WV-1	WALL VENT

HVAC DUCTWORK SYSTEM ABBREVIATIONS

ABBREVIATION	SYSTEM TYPE
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
TA	TRANSFER AIR
(E) SA	EXISTING SUPPLY AIR
(E) RA	EXISTING RETURN AIR
(E) EA	EXISTING EXHAUST AIR
(E) OA	EXISTING OUTSIDE AIR
(E) TA	EXISTING TRANSFER AIR

GENERAL ABBREVIATIONS

ABBREVIATION	SYSTEM TYPE
A	AMPERE
ACC	ALTERNATING CURRENT
AC	AIR CONDITIONING
KC	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
DB	LEAVING DRY BULB TEMPERATURE
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTUs PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MFR	MANUFACTURER
MOCP	MAXIMUM OVER CURRENT PROTECTION
MTO	MOUNTED
NC	NORMALLY CLOSED
NOT IN CONTRACT	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM.	NOMINAL
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFPI	OWNER FURNISHED, OWNER INSTALLED
PREL	PRESSURE DROP
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIG	PSI GAUGE
PVC	POLYVINYL CHLORIDE
R	ROUND DIAMETER
RAT	RETURN AIR TEMPERATURE
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
SAT	SUPPLY AIR TEMPERATURE
SF	SQUARE FEET
SHT	SHEET
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SPD	SPEED
SS	STAINLESS STEEL
STD	STANDARD
SW	SWITCH
TA	THROW AWAY
TEMP	TEMPERATURE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TOD	TOP OF DUCT
TOT	TOP OF BEAM
TOP	TOP OF PIPE
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TYP.	TYPICAL
UC	UNDERCUT DOOR
UNO	UNLESS NOTED OTHERWISE
UTR	UP THRU ROOF
V	VOLTS
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
WITH	WITH

HVAC GRILLES, REGISTERS & DIFFUSERS ABBREVIATIONS

ABBREVIATION	SYSTEM TYPE
E-1	EXHAUST GRILLE
R-1	RETURN GRILLE
S-1	SUPPLY GRILLE
T-1	TRANSFER GRILLE
(E)	EXISTING GRILLE

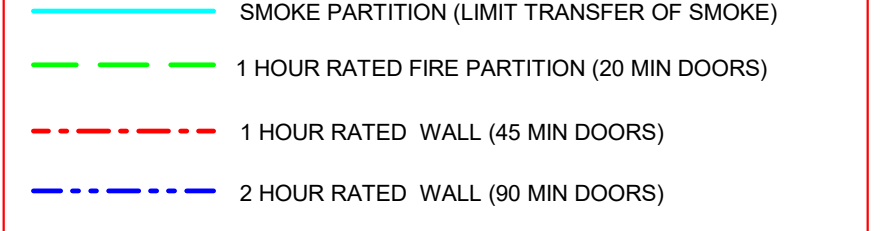
HVAC GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH NATIONAL, STATE, & CODES; AS WELL AS, THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- ON MECHANICAL "M1" SERIES DRAWINGS, ITEMS THAT ARE DARK LINES SHALL BE NEW WORK & ITEMS THAT ARE LIGHT LINES SHALL BE EXISTING TO REMAIN.
- ON MECHANICAL "M2" SERIES DRAWINGS, ITEMS THAT ARE DARK DASHED LINES SHALL BE REMOVED & ITEMS THAT ARE LIGHT LINES SHALL BE EXISTING TO REMAIN.
- ALL EQUIPMENT, DUCTWORK, & PIPING SHALL BE KEPT CLEAN FROM DIRT & DEBRIS. DO NOT ALLOW THE INSIDE OF DUCT & LINER TO GET DIRTY.
- ALL DUCTWORK SHALL BE CONSTRUCTED TO SMACNA STANDARDS IN ACCORDANCE WITH THE APPROPRIATE PRESSURE CLASSIFICATION.
- DUCTWORK SIZE LISTED ON PLANS ARE INTERNAL FREE AREA DIMENSIONS. THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- PIPING SIZE LISTED ON PLANS ARE 1D DIMENSIONS.
- COORDINATE GRILLES, DIFFUSERS & ACCESS PANEL LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- COORDINATE THE LOCATIONS OF GRILLES/DIFFUSERS WITH ELECTRICAL LIGHT FIXTURES, LIGHT FIXTURE SUPPORT RODS AND FIRE SPRINKLER HEADS FOR FREE INTERFERENCE.
- ARROWS SHOWN ON THE HOT WATER AND CHILLED WATER PIPING INDICATE THE DIRECTION OF FLOW. ARROWS ON THE STEAM, CONDENSATE, & DRAIN PIPING INDICATE DOWNWARD PITCH OF THE PIPING.
- AIR VENTS SHALL BE INSTALLED AT ALL HIGH POINTS & DRAINS AT ALL LOW POINTS OF WATER PIPING SYSTEMS.
- PIPING CONNECTIONS WITH UNIONS OR FLANGES SHALL BE MADE TO COILS OR TUBE BUNDLES TO FACILITATE REMOVAL OF THAT ITEM WITHOUT DISTURBING THE BRANCH VALVES AND/OR PIPING.
- WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- COOLING COILS STACKED ONE ABOVE ANOTHER SHALL INCORPORATE DRIP TROUGHS ON THE DOWNSTREAM SIDE OF EACH OF THE UPPER COILS TO ELIMINATE DRIP INTO THE AIR STREAM OF THE BOTTOM COIL. DRIP TROUGHS SHALL BE SLOPED TO ALLOW FOR PROPER DRAINAGE.
- ALL ROOF CURBS SHALL BE 18" TALL UNLESS OTHERWISE NOTED ON PLANS.
- MANUAL VOLUME DAMPERS SHALL BE INSTALLED AT EACH BRANCH TAKE-OFF FROM MAIN SUPPLY, RETURN, & EXHAUST DUCTS. DAMPERS SHALL BE LOCATED AS CLOSE TO THE BRANCH TAKE-OFF AS POSSIBLE & INSTALLED TO ALLOW FOR EASY ACCESS. ABOVE HARD CEILINGS, VOLUME DAMPER SHALL BE INSTALLED BEHIND THE GRILLE/DIFFUSER.
- VOLUME DAMPERS INSTALLED IN EXTERNALLY INSULATED DUCTWORK SHALL BE PROVIDED WITH EXTENDED OPERATOR HANDLE TO OUTSIDE OF INSULATION.
- SHUT-OFF VALVES INSTALLED IN INSULATED PIPING SHALL BE PROVIDED WITH EXTENDED OPERATOR HANDLE TO OUTSIDE OF INSULATION.
- DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES SHALL BE SAME SIZE AS NECK SIZE UNLESS NOTED OR DETAILED OTHERWISE.
- INLET DUCT SIZE TO SUPPLY AIR TERMINAL UNITS SHALL BE SAME AS INLET UNLESS OTHERWISE NOTED.
- OUTLET DUCT SIZE FROM EXHAUST AIR TERMINALS SHALL BE THE SAME AS OUTLET UNLESS OTHERWISE NOTED.
- SUPPLY DUCTWORK DOWNSTREAM OF VAV'S SHALL BE INTERNALLY ACOUSTICALLY LINED FOR A MINIMUM OF 6'-0" FOR SOUND ATTENUATION. MAINTAIN INTERNAL FREE AREA.
- ALL MITERED RECTANGULAR/SQUARE ELBOWS SHALL HAVE AIR TURNING VANES.
- CONTRACTOR SHALL FIELD VERIFY LAYOUT AND MANUFACTURER'S INSTALLATION REQUIREMENTS FOR ACTUAL EQUIPMENT PROVIDED.
- CONTRACTOR SHALL COORDINATE LOCATIONS OF HVAC MAINS, BRANCHES PIPING, ETC WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
- PIPING TO TERMINAL HEATING AND COOLING DEVICES SHALL BE 3/4" UNLESS OTHERWISE NOTED.
- NO PIPING SHALL BE INSTALLED ABOVE ELECTRICAL EQUIPMENT UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL EQUIPMENT LOCATIONS. COORDINATE WITH ELECTRICAL TRADE FOR EXACT LOCATIONS.
- PROVIDE FLEXIBLE DUCT CONNECTIONS AT ALL DUCTWORK CONNECTIONS TO AIR HANDLING UNITS, RETURN FANS AND EXHAUST FANS.
- PROVIDE MOTOR COVERS FOR ALL BELT-DRIVEN MOTORS & MOTOR SHAFTS.
- MAINTAIN ACCESS TO AIR TERMINAL BOX CONTROLLER AND REHEAT COIL PIPING CONNECTIONS. INSTALL AIR TERMINAL BOXES AT A HEIGHT THAT IS EASILY ACCESSED.
- AIR TERMINAL UNIT ACTUATOR AND CONTROLLER TO BE MOUNTED ON THE SAME SIDE AS REHEAT COIL PIPING. CONTRACTORS SHALL KEEP ALL WORK CLEAR FROM CLEARANCE IN FRONT OF CONTROLLER & ALLOW ACCESS TO ACTUATOR & SERVICEABLE PIPING ACCESSORIES.
- ALL SIDEWALL GRILLES SHALL BE ALIGNED VERTICALLY AND HORIZONTALLY WHEREVER POSSIBLE. FOR DISCREPANCIES, CONTACT THE ARCHITECT/ENGINEER.
- FRESH AIR INTAKE SHALL BE A MINIMUM DISTANCE OF 10'-0" FROM ANY EXHAUST/RELIEF OUTLET, FLUE, GAS OR PLUMBING VENT. COORDINATE WITH RESPECTIVE TRADES.
- ELEVATION OF PIPING & DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORSSEEN INTERFERENCES.
- WHERE WORK INTERFERES WITH OWNER'S USE OF PREMISES, SCHEDULE WORK THROUGH OWNER TO MINIMIZE INCONVENIENCE TO OWNER. OWNER MUST APPROVE SCHEDULE IN WRITING BEFORE CONTRACTOR BEGINS ANY SUCH WORK.
- RECORD (AS-BUILT) DRAWING SHALL BE MAINTAINED ON THE JOB SITE AND SHALL BE SUBMITTED PRIOR TO JOB COMPLETION.

HVAC PIPE SIZING CHART

REQUIRED PIPE SIZE	COPPER PIPE GPM	IRON PIPE GPM
1/2"	0 - 1.1	
3/4"	1.2 - 3.0	
1"	3.1 - 6.6	
1-1/4"	6.7 - 11.3	6.8 - 14.0
1-1/2"	11.4 - 18.0	14.1 - 21.0
2"	18.1 - 36.0	21.1 - 41.0
2-1/2"	36.1 - 69.0	41.1 - 66.0
3"	69.1 - 109.0	66.1 - 119.0
4"	119.1 - 242.0	119.1 - 242.0
5"	242.1 - 440.0	
6"	440.1 - 710.0	

FIRESTOP LEGEND:



M001

KEYNOTES - DEMO	
Keynote Number	Keynote Description
#	ALL REMOVED ITEMS THAT THE OWNER WANTS SHALL BE REMOVED AND TURNED OVER TO THE OWNER AT DESIGNATED STORAGE SPACE ON SITE. ALL REMAINING ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN



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WESTERN TECHNICAL COLLEGE
LUNDA CENTER RTU COOLING UPGRADES
333 7TH STREET NORTH
LA CROSSE, WISCONSIN
COLEMAN CENTER BASEMENT PLAN - BOILER ROOM

Project Title:
Project Location:

HSR Project Number:
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Project Date:
MARCH 2025

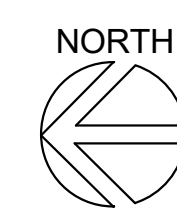
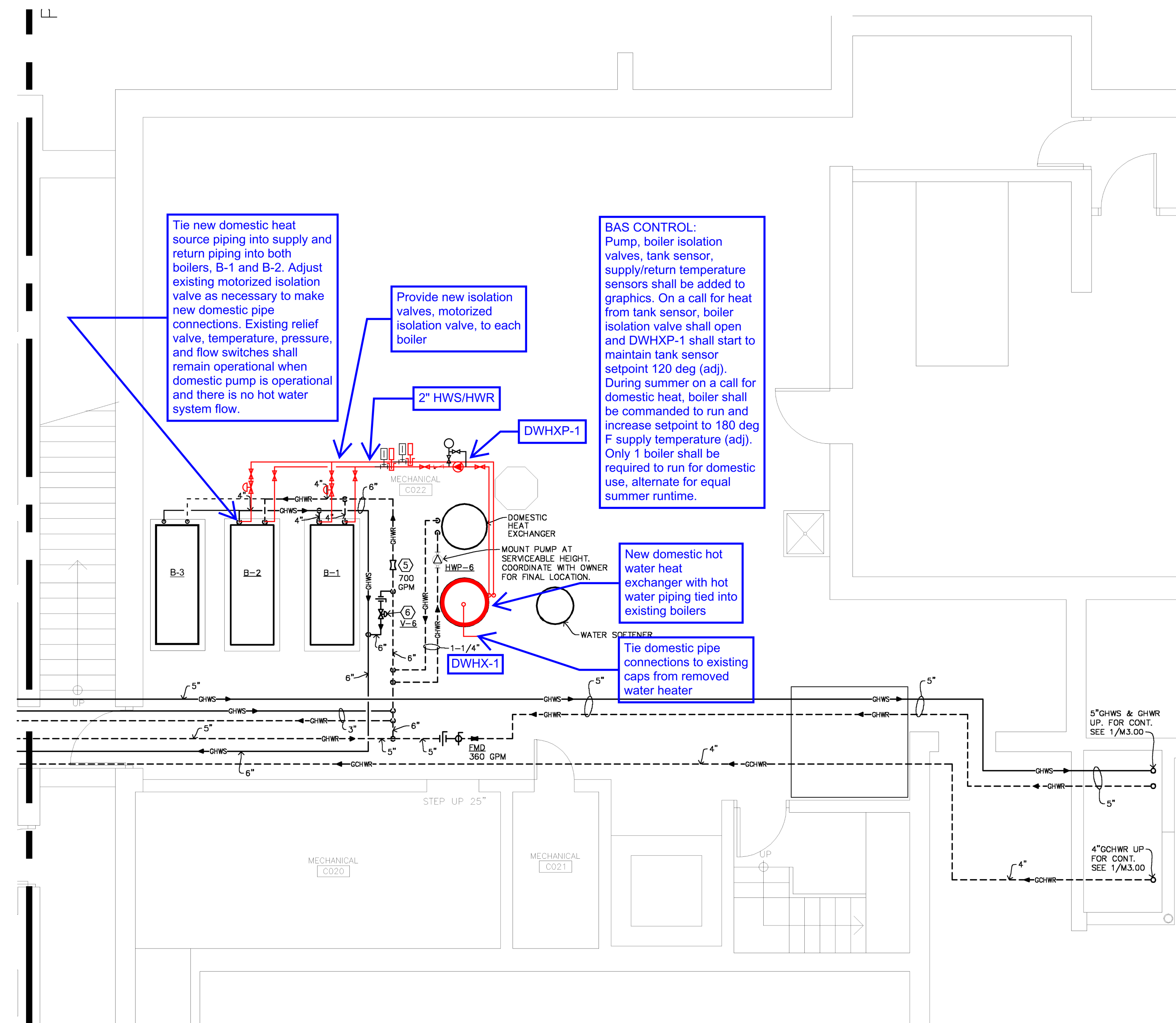
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Key Plan:

No.	Description	Date
A1	ADDENDUM #01	03/26/2025

Graphic Scale:
VARIES

Last Update:
3/26/2025 9:18:18 AM



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COLEMAN BASEMENT PLAN - BOILER ROOM

1/4" = 1'-0"

A1
M102

WATER COOLED MODULAR CHILLER SCHEDULE

UNIT NO.	MANUFACTURER	MODEL NO.	SOURCE: EVAPORATOR WATER										SOURCE: CONDENSER WATER										COMPRESSOR		ELECTRICAL				REMARKS	
			CAPACITY	MAX FLOW	MIN FLOW	EWT	LWT	PD	GLYCOL TYPE	GLYCOL	FOULING FACTOR	CAPACITY	MAX FLOW	MIN FLOW	EWT	LWT	PD	GLYCOL TYPE	GLYCOL	FOULING FACTOR	TYPE	QUANTITY PER MODULE	REFRIGERANT TYPE / CHARGE (LBS PER CIRCUIT)	COOLING MODE EFFICIENCY 100% LOAD (KW/TON)	UNIT WEIGHT	MCA	MOP	VOLTAGE		PHASE
CH-6	MULTISTACK	MSS3070YCA	65.03 ton	107.3 GPM	107.3 GPM	56 °F	40 °F	3.7 psi	PROPYLENE	35%	0.0001	908,500 Btu/h	60.8 GPM	60.8 GPM	55 °F	85 °F	0.5 psi	WATER	0%	0.00025	SCROLL	2	R454B / 23 LBS.	0.59	2130 lbf	203 A	300 A	208 V	3	PROVIDE SLEEVE TO JOIN BASE RAILS, REFRIGERANT MONITOR, CONTROLS UPGRADE TO INCORPORATE ALL MODULES
Grand total: 1																														

EQUIPMENT WITHIN DASHED LINES HAS BEEN PRE-PURCHASED BY OWNER. SITE UNLOADING, STAGING, COMPLETE INSTALLATION, BALANCING, START-UP, & COMMISSIONING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR BIDDING THESE CONSTRUCTION DOCUMENTS

CIRCULATING PUMP SCHEDULE

UNIT NO.	MANUFACTURER	MODEL NO.	SYSTEM	PUMP				MOTOR				FLUID PROPERTIES				ELECTRICAL		REFERENCE	REMARKS
				FLOW	TYPE	HEAD	EFFICIENCY	IMPELLER DIA.	QTY	POWER	RPM	BHP	TYPE	GLYCOL	UNIT WEIGHT	VOLTAGE	PHASE		
CHWP-1	Taco	K56013D	CHILLED WATER	680.0 GPM	Vertical Split Coupled In-Line	150 ftH2O	76.0%	12.5"	1	50.00 hp	1760	35.45	PROPYLENE	35	1322 lbf	208 V	3	1M500	PROVIDE NEW CONCRETE CURB, PUMP STAND, NEW PUMP ACCESSORIES
CHWP-2	Taco	K56013D	CHILLED WATER	680.0 GPM	Vertical Split Coupled In-Line	150 ftH2O	76.0%	12.5"	1	50.00 hp	1760	35.45	PROPYLENE	35	1322 lbf	208 V	3	1M500	PROVIDE NEW CONCRETE CURB, PUMP STAND, NEW PUMP ACCESSORIES
DWHXP-1	Grundfos	MAGNA3 50-180	DOMESTIC WATER HEAT EXCHANGER	30.0 GPM	Inline Wet Roto-ECM	40 ftH2O	37.0%		1	1.30 hp	4134	0.83	PROPYLENE	30	0 lbf	120 V	1		PROVIDE GAS INTEGRATION
Grand total: 3																			

EXPANSION TANK SCHEDULE

UNIT NO.	TYPE	MANUFACTURER	MODEL NO.	SYSTEM	TANK VOLUME	ACCEPTANCE VOLUME	INITIAL TANK FILL PRESSURE	PRESSURE RELIEF	DIMENSIONS		PIPE CONNECTION	UNIT WEIGHT	REFERENCE		REMARKS
									DIAMETER	HEIGHT			DETAIL NO.	SYSTEM	
ET-1	BLADDER	Taco	CA215-125	CHILLED WATER	57.0 gal	57.0 gal	16.0 psi	50.0 psi	1" - 8"	4" - 11"	1"	290 lbf	3M500	1700 GAL. 35% PROPYLENE GLYCOL	PROVIDE BULLS EYE SIGHT GLASS, PRE-CHARGE TANK TO 16 PSI
Grand total: 1															

VARIABLE FREQUENCY DRIVE SCHEDULE

UNIT NO.	EQUIPMENT SERVED	MANUFACTURER	DISCONNECT	INTEGRAL BYPASS	MOTOR BHP	MOTOR HP	ELECTRICAL		REMARKS
							VOLTAGE	PHASE	
VFD-C HWP-1	CHWP-1	ABB, Inc.	YES	NO	35.45 hp	50.00 hp	208 V	3	
VFD-C HWP-2	CHWP-2	ABB, Inc.	YES	NO	35.45 hp	50.00 hp	208 V	3	

CHILLED WATER HYDRONIC COIL SCHEDULE

UNIT NO.	SERVES	MANUFACTURER	MODEL NO.	TYPE	CHILLED WATER COOLING COIL														DIMENSIONS			REFERENCE		REMARKS: FIELD VERIFY EXISTING RTU DIMENSIONS FOR NEW COIL INSTALLATION PRIOR TO ORDER.			
					AIRSIDE				CHILLED WATER				PRESSURE						DEPTH	WIDTH	HEIGHT	UNIT WEIGHT	DETAIL NO.		CONTROL VALVE		
					TOTAL CLG. CAP.	SENSIBLE CLG. CAP.	COOLING AIRFLOW	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY	FACE VELOCITY								FACE VELOCITY	FACE VELOCITY
CC-1	(E)RTU-1	TRANE	W	CHILLED WATER	457,550 Btu/h	357,330 Btu/h	13000 CFM	77 °F	64 °F	52 °F	52 °F	413 FPM	0.53 in-wg	8	84.0 GPM	45 °F	57 °F	15.41 ftH2O	PROPYLENE	35%	15 1/2"	84"	54"	1213 lbf	4M500	2-WAY	PROVIDE TURBULATORS
CC-2	(E)RTU-2	TRANE	W	CHILLED WATER	457,550 Btu/h	357,330 Btu/h	13000 CFM	77 °F	64 °F	52 °F	52 °F	413 FPM	0.53 in-wg	8	84.0 GPM	45 °F	57 °F	15.41 ftH2O	PROPYLENE	35%	15 1/2"	84"	54"	1213 lbf	4M500	2-WAY	PROVIDE TURBULATORS
CC-3	(E)RTU-3	TRANE	W	CHILLED WATER	317,320 Btu/h	232,880 Btu/h	7555 CFM	80 °F	66 °F	52 °F	52 °F	240 FPM	0.20 in-wg	6	58.0 GPM	45 °F	57 °F	5.99 ftH2O	PROPYLENE	35%	12 1/2"	84"	54"	965 lbf	4M500	2-WAY	PROVIDE TURBULATORS
Grand total: 3																											

DOMESTIC WATER HEAT EXCHANGER SCHEDULE

UNIT NO.	MANUFACTURER	MODEL NO.	TYPE	INPUT CAPACITY	FLOW	ENTERING WATER TEMP.	LEAVING WATER TEMP.	PRESS. DROP	GLYCOL TYPE		CONTINUOUS RECOVERY CAPACITY	WATER TEMPERATURE RISE	STORAGE CAPACITY	FIRST HOUR RATING	DIMENSIONS		UNIT WEIGHT	REMARKS
									GLYCOL	GLYCOL					DIAMETER	HEIGHT		
DWHX-1	Lochinvar	SIT1190W	INDIRECT DOUBLE WALL	300,000 Btu/h	30.0 GPM	180 °F	160 °F	22.00 ftH2O	PROPYLENE	30%	174 gal/h	70 °F	113.0 gal	280.0 GPM	28"	5' - 8"	1250 lbf	PROVIDE T&P RELIEF VALVE, TEMPERATURE SENSOR WELL FOR BAS
Grand total: 1																		



Consultant:

WESTERN TECHNICAL COLLEGE
LUNDA CENTER RTU COOLING UPGRADES

333 7TH STREET NORTH
LA CROSSE, WISCONSIN
HVAC SCHEDULES

HSR Project Number: 24072
Project Date: MARCH 2025
Drawn By: JB

Key Plan:

No.	Description	Date
A1	ADDENDUM #01	03/26/2025

Graphic Scale: VARIES

Last Update: 3/26/2025 9:18:18 AM

M600



Consultant:

Project Title: **WESTERN TECHNICAL COLLEGE
LUNDA CENTER RTU COOLING UPGRADES**
Project Location: 333 7TH STREET NORTH
LA CROSSE, WISCONSIN
Sheet Title: **ELECTRICAL PLAN**

HSR Project Number: **24072**

Project Date: **MARCH 2025**

Drawn By: **JB**

Key Plan:

No.	Description	Date
A1	ADDENDUM #01	03/26/2025

Graphic Scale: **VARIES**

Last Update: **3/26/2025 9:18:17 AM**

E100

MOTOR EQUIPMENT SCHEDULE

Equip. No.	Equipment Description	Location	Motor Rating			Disconnect By			Starter By			Control Wiring By		Wiring Size Conductors GRD.	Remark Number
			Power/AMP	Volt	PH.	MECH.	ELEC.	TYPE	MECH.	ELEC.	TYPE	MECH.	ELEC.		
CH-6	CHILLER MODULE	MECHANICAL C001	203 MCA/300MOP	208	3		X	X	F	X		INCL.	X	(3) 4/0 #2	1,2,6
CHWP-1	CHILLED WATER PUMP	MECHANICAL C001	50 HP	208	3	X			VFD	X		VFD	X	(3) 3/0 #2	3,4,5,6
CHWP-2	CHILLED WATER PUMP	MECHANICAL C001	50 HP	208	3	X			VFD	X		VFD	X	(3) 3/0 #2	3,4,5,6
DWHXP-1	DOMESTIC WATER HX PUMP	MECHANICAL C022	1.3 HP	120	1				TG	X		INCL.	X	(2) #12 #12	

SEE REMARKS
(CB) CIRCUIT BREAKER; (CS) COMBINATION STARTER/DISCONNECT; (F) FUSED SAFETY SWITCH; (NF) NOT FUSED SAFETY SWITCH; (TS) TOGGLE SWITCH; (FVNR) FULL VOLTAGE NON-REVERSING MAGNETIC STARTER; (FVR) FULL VOLTAGE REVERSING MAGNETIC STARTER; (MS) MANUAL STARTER WITH OVERLOAD PROTECTION; (MSW) MANUAL SWITCH WITHOUT OVERLOAD PROTECTION; (MCC) MOTOR CONTROL CENTER; (PB) PUSH BUTTON STARTER; (VFD) VARIABLE FREQUENCY DRIVE

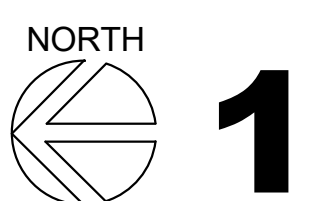
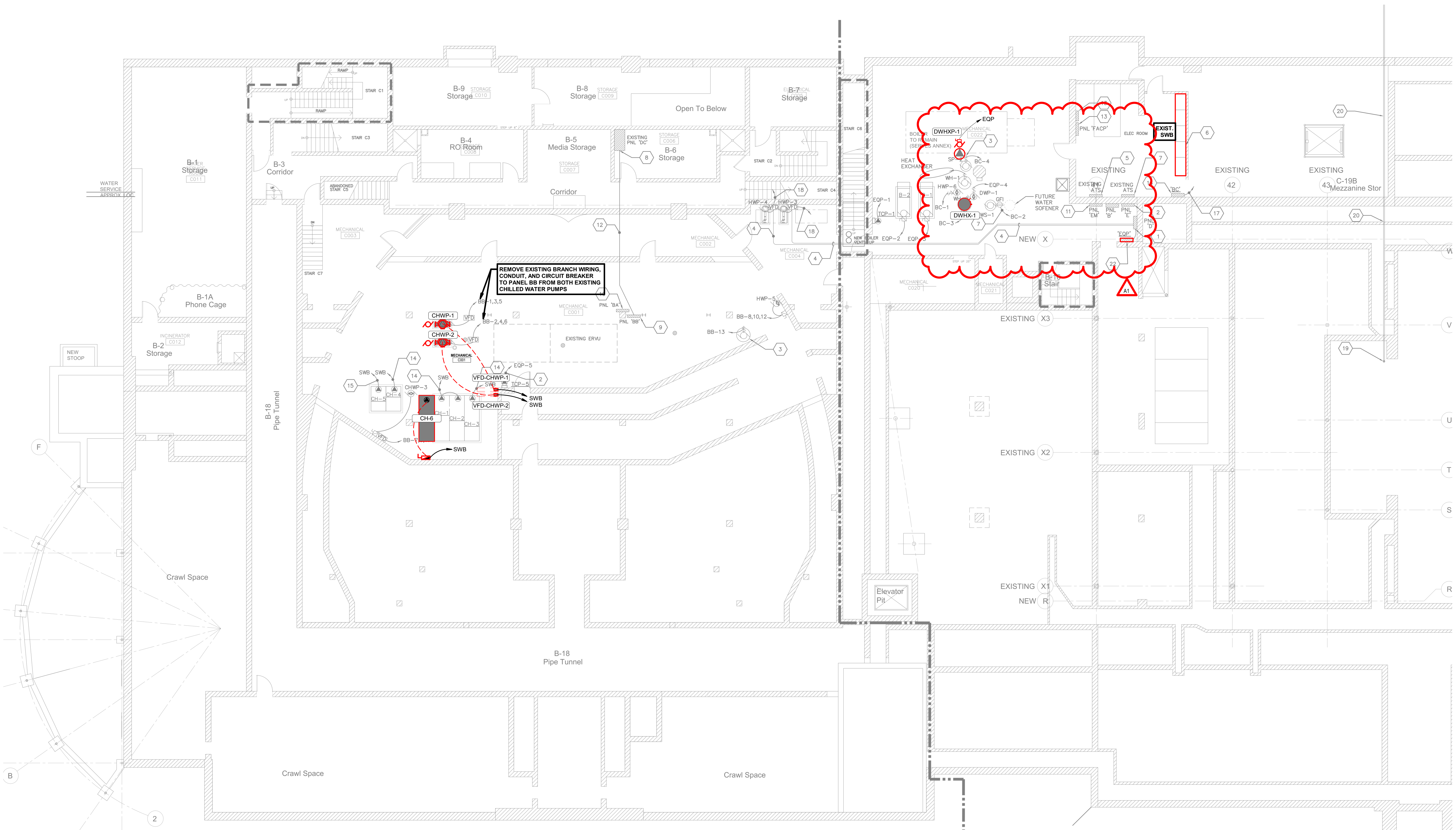
- MOTOR SCHEDULE REMARKS:**
- PROVIDE NEW 300 AMP, 208V/3PH FEEDER TO SWITCHBOARD IN FOR CHILLER (2" CONDUIT). ELECTRICAL CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY CONDUIT ROUTE PRIOR TO SUBMITTING BID.
 - PROVIDE NEW 300 AMP, 208V/3PH CIRCUIT BREAKER IN EXISTING 'OED' SQUARE 'D' SWITCHBOARD FOR CHILLER.
 - PROVIDE NEW 200 AMP, 208V/3PH FEEDER TO SWITCHBOARD FOR CHILLED WATER PUMPS (2" CONDUIT). ELECTRICAL CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY CONDUIT ROUTE PRIOR TO SUBMITTING BID.
 - PROVIDE NEW 200 AMP, 208V/3PH CIRCUIT BREAKER IN EXISTING 'OED' SQUARE 'D' SWITCHBOARD FOR CHILLED WATER PUMPS.
 - VARIABLE FREQUENCY DRIVE UNIT IS FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
 - PROVIDE FEEDER SUB-METERING FOR NEW EQUIPMENT CIRCUITS AT SWITCHBOARD, MATCH EXISTING.

GENERAL NOTES : REMOVAL

- REMOVE ALL ELECTRICAL DEVICES AND ABANDON WIRING/CONDUIT BACK TO ELECTRICAL PANEL, CABINET, RACK OR TERMINATION BOARD.
- MAINTAIN OPERATION OF ALL EXISTING RECEPTACLES AND DEVICES TO REMAIN. PROVIDE NEW HOMERUNS OF CONDUIT/WIRING WHERE REQUIRED.
- PROVIDE COVERPLATES AT ALL OPEN DEVICE AND JUNCTION BOXES.
- REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EQUIPMENT TO BE DISCONNECTED FOR REMOVAL.
- EXTEND CONDUIT AND WIRING FOR ALL RELOCATED DEVICES.
- DASHED LINES INDICATE ITEMS FOR REMOVAL.

GENERAL NOTES : REMODEL

- ALL ELECTRICAL DEVICES SHOWN TO BE NEW UNLESS INDICATED OTHERWISE.
- MAINTAIN OPERATION OF ALL EXISTING ELECTRICAL DEVICES. EXTEND WIRING/CONDUIT AS REQUIRED.
- PROVIDE GROUND CONDUCTOR IN ALL RACEWAYS
- PROVIDE SEPARATE NEUTRAL CONDUCTORS FOR EACH BRANCH CIRCUIT.
- PROVIDE FIRE STOPPING AND SMOKE DRAFT STOPPING AT ALL CONDUIT PENETRATIONS. REFER TO SPECIFICATIONS SECTION 07840 FOR FIRE RESISTIVE AND NON-FIRE RESISTIVE ASSEMBLIES.



1 COLEMAN BASEMENT PLAN - ELECTRICAL
1/8" = 1'-0"