HVAC/ELECTRICAL COORDINATION SCHEDULE

NOTES:

1. DEVICES TO BE FURNISHED BY THE ELECTRICAL CONTRACTOR (MARKED "E"), HVAC CONTRACTOR (MARKED "HV"), BAS CONTRACTOR (MARKED "B"), PLUMBING CONTRACTOR (MARKED "P"), FIRE PROTECTION CONTRACTOR (MARKED "FP"), OR MANUFACTURER (MARKED "MANUF").
2. ALL CONDUIT AND WIRING FOR TEMPERATURE CONTROL AND EQUIPMENT INTERLOCK SHALL BE BY BAS CONTRACTOR. OTHER CONTROLS AND CONTROL CONDUIT/WIRING BY TRADE FURNISHING RESPECTIVE EQUIPMENT.
3. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE AND REVIEW THE ELECTRICAL CHARACTERISTICS, AMPACITY AND OTHER REQUIREMENTS OF COMPONENTS BEFORE INSTALLATION OF WORK. ALL OTHER CONTRACTORS SHALL ADVISE ELECTRICAL CONTRACTOR OF ANY MOTOR/DEVICE CHANGES.
4. ALL LOOSE STARTERS SHALL INCLUDE HOA SWITCH, CONTROL TRANSFORMER, AND ONE N.O. AND ONE N.C. AUXILIARY CONTACTS. ALL SINGLE PHASE EXHAUST FAN CONTROL SWITCHES SHALL HAVE IDENTIFICATION NAMEPLATE AND PILOT LIGHT.
5. SEE SPECIFICATIONS AND DRAWINGS FOR TYPES AND LOCATIONS OF DEVICES SCHEDULED BELOW.
6. FOR STARTER INFORMATION, REFER TO EQUIPMENT SCHEDULE AND SEQUENCE OF OPERATIONS

EQUIPMENT TAG	EQUIPMENT DESCRIPTION	UNIT MOUNTED DEVICES				REMOTE OR LOOSE DEVICES			REMARKS
		STARTER	DISCONNECT	OVERCURRENT PROTECTION	SINGLE POINT CONNECTION	STARTER	DISCONNECT	OVERCURRENT PROTECTION	
(BCP)	BOILER CIRC. PUMP					E	E	E	1,2,3,4,5
(HWB)	HOT WATER BOILER	MANUF			MANUF		E	E	1,2,3,4,5
(RTU)	ROOFTOP UNIT	MANUF	MANUF		MANUF			E	1,2,3,4,5

MECHANICAL SYMBOLS AND ABBREVIATIONS

BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	COMMON
CFM	CUBIC FEET PER MINUTE
D	DRAIN
DB	DRY BULB
DN.	DOWN
EAT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
F	FAHRENHEIT
FD	FLOOR DRAIN
FPF	FINS PER FOOT
FPM	FEET PER MINUTE
FV	FACE VELOCITY
G	GAS PIPING
GPM	GALLONS PER MINUTE
HE	DOMESTIC HOT WATER HEAT EXCHANGER
HP	HORSEPOWER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MCA	MINIMUM CIRCUIT AMPS
MOCP	MAXIMUM OVERCURRENT PROTECTION
MOD	MOTOR OPERATED DAMPER
NC	NEW CONNECTION
NK	NECK
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
PD	PRESSURE DROP
PH	PHASE
PSI	POUNDS PER SQUARE INCH
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SP	STATIC PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
VD	VOLUME DAMPER
WB	WET BULB
W.C.	WATER COLUMN
WG	WATER GAUGE

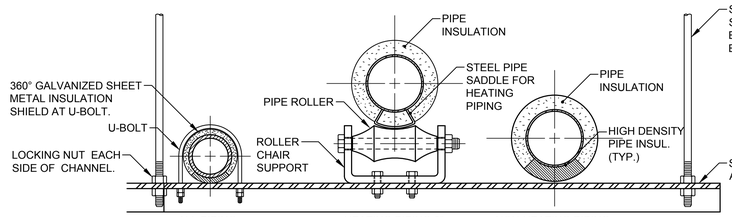
HWS	LOW TEMPERATURE (HEATING) HOT WATER SUPPLY (UP TO 250°F)
HWR	LOW TEMPERATURE (HEATING) HOT WATER RETURN (UP TO 250°F)
D	CONDENSATE DRAIN LINE
	GATE VALVE
	CHECK VALVE
	BALL VALVE (2" & SMALLER) BUTTERFLY VALVE (2 1/2" & LARGER)
	3 WAY CONTROL VALVE
	2 WAY CONTROL VALVE
	SQUARE HEAD COCK
	MULTI-TURN CIRCUIT BALANCING VALVE W/BALANCING PORTS (4" AND UNDER) CIRCUIT FLOW INDICATOR W/BALANCING PORTS AND MEMORY STOP BUTTERFLY VALVE FOR BALANCING (5" AND ABOVE)
	PRESSURE RELIEF VALVE (PIPE TO FLOOR DRAIN)
HD	DRAIN VALVE WITH HOSE THREADED OUTLET
PS	PRESSURE SWITCH (WITH THREAD OR WELD-O-LET)
	PRESSURE GAUGE AND NEEDLE VALVE
FS	FLOW SWITCH (WITH THREAD OR WELD-O-LET)
	THERMOMETER (WITH PIPE WELL)
	THERMOMETER WELL
	TEMPERATURE WELL WITH DDC SENSOR
	PRESSURE WELL WITH DDC SENSOR
	PRESSURE/TEMPERATURE PLUG WITH CAP
	STRAINER
	STRAINER WITH BLOWDOWN VALVE
	DIRECTION OF FLOW
PITCH	PITCH OF PIPE (DOWN)
	PIPE ELBOW (TURNED UP)
	PIPE ELBOW (TURNED DOWN)
	PIPE TEE DOWN (DROP)
	PIPE TEE UP
	PIPE TEE UP OR ANGLE
	PIPE TEE DOWN OR ANGLE
NC	NEW CONNECTION
XXX-1	EQUIPMENT TAG
T	WALL THERMOSTAT OR TEMPERATURE SENSOR
T_G	WALL THERMOSTAT OR TEMPERATURE SENSOR WITH GUARD
Ø	ROUND
	DUCT UP TO ROOF MOUNTED EXHAUST FAN OR VENTILATOR
	PIPING, DUCTWORK, OR EQUIPMENT TO BE REMOVED

	FLEXIBLE DUCT CONNECTION
	MANUAL SINGLE BLADE OR OPPOSED BLADE DAMPER
	MOTOR OPERATED DAMPER
FID	VERTICAL FIRE DAMPER WITH ACCESS DOOR
	AIR FLOW
12x24	DUCT SIZE FREE AREA (1ST FIGURE, SIDE OF DUCT SHOWN)
	CROSS-SECTION OF SUPPLY OR OUTSIDE AIR INTAKE DUCT
	CROSS-SECTION OF RETURN OR EXHAUST DUCT
R D	INCLINED RISE (R) OR DROP (D)
	90° ELBOW WITH TURNING VANES
	90° BRANCH TAKE-OFF W/45 DEGREE ENTRY
	ROUND FLEXIBLE DUCT
	SQUARE OR RECTANGLE DUCT TRANSITION
	SQUARE OR RECTANGLE TO ROUND DUCT TRANSITION

GENERAL REMODELING NOTES - ALL CONTRACTORS

1. ALL WORK SHOWN ON DRAWINGS SHALL BE CONSIDERED NEW AND IN CONTRACT UNLESS SPECIFICALLY INDICATED OTHERWISE.
2. DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING, DUCTWORK, CONDUITS, RACEWAYS, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
3. IT IS INTENDED THAT EQUIPMENT SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS OF THE BUILDING, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLEARNESS OF PRESENTATION.
4. CONTRACTOR SHALL CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, CONTRACTOR SHALL NOTIFY OWNER/ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.
5. CONTRACTOR SHALL FURNISH OTHER TRADES ADVANCE INFORMATION AND/OR SHOP DRAWINGS ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, CONDUIT, RACEWAYS, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS, ETC. NEEDED FOR THEIR WORK TO PERMIT OTHER TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
6. WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. CONTRACTORS SHALL VERIFY EXACT LOCATIONS OF ALL DEVICES AND EQUIPMENT WITH FIELD CONDITIONS, SHOP DRAWINGS, AND WORK OF OTHER TRADES PRIOR TO ROUGH-IN. EACH CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.
7. THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER AND OWNERS STIPULATION AS DIRECTED.
8. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS (BEFORE SUBMITTING THEIR BIDS) TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE GENERAL CONTRACTOR'S WORK, CEILING HEIGHTS AND CLEARANCE FOR INSTALLING THEIR WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING AND REMOVAL/REPLACEMENT OF NEW OR EXISTING BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK OR REMOVAL OF EXISTING WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT. (NOTE: CONTRACTOR SHALL VERIFY EXISTING BUILDING'S ROOF WARRANTY AND EMPLOY OTHER SUBCONTRACTOR(S) AS REQUIRED BY ROOF MANUFACTURER'S REPRESENTATIVE SO AS NOT TO VOID OWNER'S ROOF WARRANTY.)
10. CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN CLEAN-UP DURING CONSTRUCTION. IF CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE ARCHITECT/ENGINEER.
11. CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR PIPING, DUCTWORK, CONDUIT, TANKS, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUSPENDED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY.
12. IT IS MANDATORY THAT THE COMPLETE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF SAID EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT IN CONTINUOUS OPERATION INCLUDING POWER, SIGNAL SYSTEMS, LIGHTING, TELEPHONE, HEATING, COOLING, VENTILATING, TEMPERATURE CONTROL, SEWERS AND HOT AND COLD WATER. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH CONTRACT WORK SHALL BE ARRANGED WITH THE OWNER A MINIMUM OF TEN (10) WORKING DAYS IN ADVANCE. SUCH INTERRUPTIONS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AS FAR AS TIME INTERVAL IS INVOLVED AND TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED BY THE CONTRACTOR ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.
13. UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, CONTAMINATED SOILS, ETC.) ARE PRESENT WITHIN THE EXISTING BUILDING OR ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE ARCHITECT/ENGINEER IMMEDIATELY.
14. CONTRACTOR SHALL STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON 6 X 6 PLANKS AND/OR WOOD PALLETS. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TARPS OR VISQUIN. ALL PIPING AND DUCTWORK WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED OUTSIDE THE BUILDING ON THE SITE UNLESS IT IS SUPPORTED OFF THE GROUND AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.
15. THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT FROM A SPECIFIED ACCEPTABLE MANUFACTURER, BUT NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. WHEN EQUIPMENT SUBMITTED FOR REVIEW DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL PAY FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND FUNCTION AS INTENDED.
16. CONTRACTOR AND/OR MANUFACTURER SHALL VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT HE SUBMITS FOR REVIEW MEET THE CAPACITY AND DUTY SPECIFIED. WHEN EQUIPMENT SUBMITTED FOR REVIEW REQUIRES MODIFICATIONS TO THE WORK OF OTHER CONTRACTORS, SUBMITTING CONTRACTOR SHALL PAY FOR ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT FUNCTION SAFELY AND PROPERLY.
17. CONTRACTOR SHALL FIELD VERIFY THE SIZE OF EXISTING OPENINGS, WINDOWS, DOORS, CORRIDORS, ROOMS, ETC. FOR ACCESS OF THE NEW EQUIPMENT INTO OR REMOVAL OF EXISTING EQUIPMENT FROM THE BUILDING. IF OPENINGS ARE TOO SMALL FOR ACCESS THEN CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE NEW OR ENLARGED OPENINGS AND RESTORE SAME TO ORIGINAL SIZE AND CONDITION. CONTRACTOR MAY ELECT TO ORDER THE EQUIPMENT DISASSEMBLED AND/OR WITH SPLIT HOUSING FOR ENTRANCE INTO THE EXISTING SPACE OR BUILDING. CONTRACTOR SHALL REASSEMBLE EQUIPMENT AFTER IT IS IN THE SPACE AT HIS OWN EXPENSE.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND THEIR ASSOCIATED FEES.

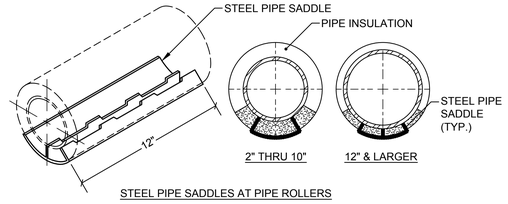
NOTE: 1. CONFER WITH ARCHITECT AND REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON ACCEPTABLE METHODS AND LOCATIONS FOR HANGER SUPPORTS.



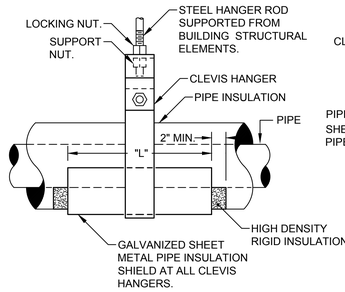
CLEVIS HANGER

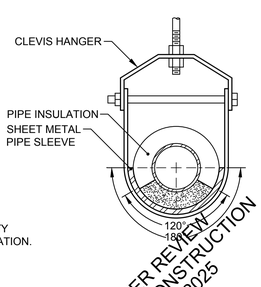
PIPE INSULATION SHIELD SCHEDULE		
PIPE SIZE	LENGTH	GAUGE
UP TO 3/4"	8"	20 GA.
1" - 2"	12"	18 GA.
2 1/2" - 4"	12"	16 GA.
5" & 6"	18"	16 GA.
8" & UP	24"	14 GA.

TRAPEZE HANGER



STEEL PIPE SADDLES AT PIPE ROLLERS





TYPICAL PIPE HANGER DETAILS

NO SCALE

OWNER REVIEW
NOT FOR CONSTRUCTION
09-18-2025

Revisions:
ISSUED FOR BID --

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MECHANICAL/ELECTRICAL NOTES, COORDINATION SCHEDULE, SYMBOLS AND ABBREVIATIONS

2025 HVAC UPGRADES
Murphy Elementary School, 220 Greenwood Dr, Round Lake Park, IL 60073
Round Lake Middle School, 2000 N Lotus Dr, Round Lake Heights, IL 60073
ROUND LAKE CUSD 116
510 N. CEDAR LAKE ROAD
ROUND LAKE, IL 60073

Issue Date: 18 SEP 2025
Drawn By: CS2
Job Number: 886-S-1

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