

GENERAL NOTES:

- THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL HVAC WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF HIS WORK.
- ACCESS PANELS SHALL BE PROVIDED IN CEILINGS, WALLS, FLOORS, ETC., AS REQUIRED TO MAINTAIN ACCESSIBILITY TO VALVES, DAMPERS, TRAPS, COILS, ETC.
- PROVIDE DUCT ACCESS DOORS AT ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND SMOKE DAMPERS.
- ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
- ALL DUCTWORK PASSING THROUGH A FIRE RATED PARTITION SHALL BE PROVIDED WITH A FIRE DAMPER TO MAINTAIN THE FIRE RATING OF THE PARTITION.
- LOCATIONS OF DIFFUSERS AND GRILLES ARE APPROXIMATE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS.
- ALL BRANCHES AND TAKE-OFFS SHALL BE EQUIPPED WITH VOLUME CONTROL DAMPERS. DAMPERS TO BE OPPOSED BLADE TYPE, 4" MAX. BLADE HEIGHT. VOLUME DAMPERS TO BE LOCATED AS NEAR TO THE POINT OF TAKE-OFF AS PRACTICAL.
- FLEXIBLE DUCT CONNECTIONS SHALL BE LIMITED TO A MAXIMUM LENGTH OF FIVE (5) FEET AND SUPPORTED AT MID-POINT.
- ALL SUPPLY & RETURN AIR DUCTWORK SHALL BE INSULATED.
- PROVIDE SHUT-OFF VALVES AT ALL PIPING BRANCH TAKE-OFFS AND AT ALL CONNECTIONS TO EQUIPMENT.
- PROVIDE DRAINS WITH HOSE ADAPTERS AND CAPS ON PIPING AT ALL LOW POINTS. PROVIDE MANUAL VENTS ON PIPING AT ALL HIGH POINTS.
- COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR.
- ALL MOTOR STARTERS SHALL BE FURNISHED BY THE HVAC CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- ALL REQUIRED CONTROL EQUIPMENT AND WIRING SHALL BE FURNISHED & INSTALLED BY THE HVAC CONTRACTOR.
- THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
- CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT, DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
- IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT. CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

HVAC LINE TYPES

	EXISTING EQUIPMENT/DUCT TO BE REMOVED
	EXISTING EQUIPMENT/DUCT TO REMAIN
	NEW EQUIPMENT / DUCT
	ATMOSPHERIC VENT
	BOILER BLOWDOWN
	BRINE RETURN
	BRINE SUPPLY
	CHILLED WATER RETURN
	CHILLED WATER SUPPLY
	COMPRESSED AIR
	CONDENSATE DRAIN
	CONDENSER WATER RETURN
	CONDENSER WATER SUPPLY
	DUAL TEMP. WATER RETURN
	DUAL TEMP. WATER SUPPLY
	FILL LINE
	FUEL OIL DISCHARGE
	FUEL OIL RETURN
	FUEL OIL SUPPLY
	FUEL OIL TANK VENT
	HEAT PUMP WATER RETURN
	HEAT PUMP WATER SUPPLY
	HIGH PRESSURE CONDENSATE
	HIGH PRESSURE STEAM
	HIGH TEMP HOT WATER RETURN
	HIGH TEMP HOT WATER SUPPLY
	HUMIDIFICATION LINE
	LP GAS SUPPLY
	LOW PRESSURE CONDENSATE RETURN
	LOW PRESSURE STEAM SUPPLY
	LOW TEMPERATURE HOT WATER RETURN
	LOW TEMPERATURE HOT WATER SUPPLY
	MAKEUP WATER
	MEDIUM PRESSURE CONDENSATE
	MEDIUM PRESSURE STEAM
	MEDIUM TEMP HOT WATER RETURN
	MEDIUM TEMP HOT WATER SUPPLY
	NATURAL GAS LINE
	PUMPED CONDENSATE
	REFRIGERANT DISCHARGE
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	VACUUM LINE
	VACUUM PUMP DISCHARGE

GAS PIPING NOTES:

- COORDINATE INSTALLATION AND FINAL CONNECTION OF GAS LINES WITH KITCHEN CONTRACTOR & G.C.
- ALL GAS PIPING SHALL BE IN ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES, AS WELL AS NFPA-54.
- GAS PIPING UNDER SLABS, AND CROSSING CORRIDORS SHALL HAVE GAS TIGHT VENTED SLEEVES. (VENTED DIRECTLY AND INDEPENDENTLY TO THE OUTDOORS).
- RELIEF VALVES AND NORMALLY OPEN VENT VALVES SHALL BE VENTED DIRECTLY AND INDEPENDENTLY TO THE OUTDOORS.
- ALL GAS PIPING 3"Ø & LARGER SHALL HAVE WELDED FITTINGS & CONNECTIONS. ALL GAS PIPING 2"Ø & SMALLER SHALL HAVE GAS-TIGHT THREADED CONNECTIONS w/ THREAD SEALANT APPROVED FOR NATURAL GAS SERVICE.
- CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR THE INSTALLATION OF THE NEW NATURAL GAS SERVICE TO BLDG. w/ LOCAL UTILITIES APPROXIMATELY THREE (3) WEEKS PRIOR TO START OF WORK. ALL GAS PIPING FROM MAIN UNDER STREET UP TO AND INCLUDING METER AT BLDG. SHALL BE BY UTILITY COMPANY. ALL TRENCHING, BEDDING & BACKFILL SHALL BE BY PLUMBING CONTRACTOR AS PER O&R REQUIREMENTS. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GAS PIPING FROM CONNECTION OF METER OUTLET TO THROUGHOUT BLDG. AS PER PLANS, SPECIFICATIONS, NYS FUEL GAS CODE, NFPA-54, LOCAL CODES, AS WELL AS UTILITY COMPANY REQUIREMENTS. PLUMBING CONTRACTOR SHALL COORDINATE SCHEDULING REQUIREMENTS w/ SITE CONTRACTOR AS WELL. PLUMBING CONTRACTOR SHALL APPLY & OBTAIN ALL PERMITS REQUIRED & PAY ALL FEES.
- ALL GAS PIPING PASSING THROUGH MASONRY WALLS SHALL BE SLEEVED w/ SCH. 80 PVC.
- COORDINATE INSTALLATION OF GAS PIPING w/ALL OTHER TRADES PRIOR TO INSTALLATION.

DUCTWORK SYMBOLS

	DUCTWORK DOUBLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH.
	DUCTWORK SINGLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH.
	SUPPLY AIR DUCT UP
	SUPPLY AIR DUCT DOWN
	RETURN AIR DUCT UP
	RETURN AIR DUCT DOWN
	EXHAUST AIR DUCT UP
	EXHAUST AIR DUCT DOWN
	FLEXIBLE DUCTWORK
	SUPPLY AIR FLOW
	RETURN/EXHAUST AIR FLOW
	VOLUME DAMPER
	MOTORIZED DAMPER w/ ACCESS DOOR
	FIRE DAMPER W/ ACCESS DOOR
	SUPPLY AIR TERMINAL
	RETURN/EXHAUST AIR TERMINAL
	EXHAUST AIR TERMINAL
	DROP DUCT
	RISE DUCT

PIPING SYMBOLS

	DIRECTION OF FLOW
	ANCHOR
	PIPE GUIDE
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	TOP CONNECTION, 45° OR 90°
	BOTTOM CONNECTION, 45° OR 90°
	SIDE CONNECTION
	CAPPED OUTLET
	PIPE DOWN TURN
	PIPE RISE
	UNION
	DIRECTION OF PIPE PITCH (DOWN)

VALVE SYMBOLS

	GATE VALVE - THREADED/FLANGED
	GATE VALVE WITH 3/4" HOSE ADAPTER
	GLOBE VALVE - THREADED/FLANGED
	CHECK VALVE
	STRAINER
	WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)
	STRAINER WITH VALVED DRAIN AND QUICK-COUPLE HOSE CONNECTOR
	FLEXIBLE CONNECTION
	ANGLE GLOBE VALVE
	BUTTERFLY VALVE
	BALL VALVE
	CONTROL VALVE (CV) - FLOAT-OPERATED
	MODULATING CONTROL VALVE
	MODULATING CONTROL VALVE BUTTERFLY VALVE
	TWO POSITION CONTROL VALVE
	THREE-WAY MODULATING CONTROL VALVE
	THREE-WAY TWO POSITION CONTROL VALVE
	PRESSURE REGULATING VALVE
	PRESSURE REDUCING VALVE (PRV)
	TEMPERATURE & PRESSURE RELIEF VALVE
	SAFETY OR PRESSURE RELIEF VALVE
	AUTOMATIC BALANCING CONTROL VALVE
	WATER BALANCE DEVICE
	WATER FLOW MEASURING DEVICE
	CIRCUIT SETTER VALVE
	GATE VALVE WITH GLOBE-VALVED BYPASS
	TRIPLE DUTY VALVE
	WATER LEVEL CONTROLLER
	FLOW METER
	COMBINATION BALANCING AND SHUT-OFF VALVE
	MANUAL AIR VENT
	TEST PLUG (PRESSURE/TEMPERATURE)
	PLUG VALVE
	LUBRICATED PLUG VALVE

GENERAL SYMBOLS

	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	POINT OF DISCONNECT
	INDICATES SECTION LETTER
	INDICATES DRAWING NUMBER WHERE LOCATED
	INDICATES TYPE OF AIR OUTLET
	INDICATES AIR FLOW REQUIREMENTS
	ADJUSTABLE ANGLE THERMOMETER
	DIAL THERMOMETER
	PRESSURE GAUGE WITH NEEDLE VALVE
	WALL MOUNT THERMOSTAT
	'A' DESIGNATES COMPONENT SERVED
	TEMPERATURE SENSOR
	PUMP
	DUCT SMOKE DETECTOR
	FAN SWITCH WITH PILOT LIGHT
	DOOR UNDERCUT (BY G.C.)
	LOUVERED DOOR (BY G.C.)

ABBREVIATIONS

AC	AIR CONDITIONING UNIT	GPM	GALLONS PER MINUTE
ACT	ACOUSTIC CEILING TILE	H.C.	HVAC CONTRACTOR
ACCU	AIR COOLED CONDENSING UNIT	HF	HEPA FILTER
AD	ACCESS DOOR	HP	HORSEPOWER
AF	AFTER FILTER	HRP	HYDRONIC RADIANT CEILING PANEL
AFF	ABOVE FINISHED FLOOR	HV	HEATING AND VENTILATING UNIT
AFM	AIR FLOW MEASURING DEVICE	IV	INLET VANES
AHU	AIR HANDLING UNIT	LCD	LINEAR CEILING DIFFUSER
A.L.D.	AUTOMATIC LOUVER DAMPER (PNEUMATIC)	LFD	LAMINAR FLOW DIFFUSER
AP	ACCESS PANEL	LF	LINEAR FEET
BDD	BACK DRAFT DAMPER	LPG	LP GAS PIPING
BG	BOTTOM GRILLE (WALL TYPE)	LPR	LOW PRESSURE STEAM CONDENSATE
BR	BOTTOM REGISTER (WALL TYPE)	LPS	LOW PRESSURE STEAM
BTUH	BRITISH THERMAL UNITS/HOUR	LBS/HR	POUNDS PER HOUR
CC	COOLING COIL	MB	MIXING BOX
CD	CEILING DIFFUSER	MD	MOTORIZED DAMPER
CFM	CUBIC FEET PER MINUTE	MER	MECHANICAL EQUIPMENT ROOM
CG	CEILING GRILLE	MAX.	MAXIMUM
CLG	CEILING	MBH	ONE THOUSAND BTUH
CO	CLEAN OUT	MIN.	MINIMUM
CP	CONDENSATE PUMP	NOM.	NOMINAL
CR	CEILING REGISTER	OA	OUTSIDE AIR
CUH	CABINET UNIT HEATER	P	PUMP
CW	COLD WATER	P.C.	PLUMBING CONTRACTOR
D	DRAIN	PD	PRESSURE DROP (FEET OF WATER)
Dp	DRY BULB TEMPERATURE, °F	PF	PRE-FILTER
dB	DECIBELS	PGW	PROPYLENE GLYCOL-WATER SOLUTION
DN	DOWN	PH	PREHEAT
DP	DIFFERENTIAL PRESSURE	PRV	PRESSURE REDUCING VALVE
Dp	DEW POINT TEMPERATURE, °F	PSI	POUNDS PER SQUARE IN.
DS	DUCT SMOKE DETECTOR	RA	RETURN AIR
DX	DIRECT EXPANSION	RF	RETURN FAN
EA	EXHAUST AIR	RHC	REHEAT COIL
EAT	ENTERING AIR TEMP	Rh	RELATIVE HUMIDITY
E.C.	ELECTRICAL CONTRACTOR	RPZ	REDUCED PRESSURE ZONE
ECC	ENGINEERING CONTROL CENTER	SA	SUPPLY AIR
EER	ENERGY EFFICIENCY RATIO	SD	SMOKE DAMPER
EF	EXHAUST FAN	Sp. Gr.	SPECIFIC GRAVITY
EGW	ETHYLENE GLYCOL-WATER SOLUTION	SH	STEAM HUMIDIFIER
EMD	END OF MAIN DRIP (STEAM)	SP	STATIC PRESSURE
ERC	ENERGY RECOVERY COIL	SPD	SPLITTER DAMPER
ERP	ELECTRIC RADIANT CEILING PANEL	SPS	STATIC PRESSURE SENSOR
ET	EXPANSION TANK	S.S.	STAINLESS STEEL
EUH	ELECTRIC UNIT HEATER	TG	TOP GRILLE (WALL TYPE)
EXIST	EXISTING	TR	TOP REGISTER (WALL TYPE)
F.A.I.	FRESH AIR INTAKE	TWU	THRU WALL UNIT
FC	FLEXIBLE CONNECTION	UH	UNIT HEATER
FCU	FAN COIL UNIT	U.N.O.	UNLESS NOTED OTHERWISE
FD	FIRE DAMPER	UV	UNIT VENTILATOR
FLR	FLOOR	V	VALVE
F.O.R.	FUEL OIL RETURN	VD	VOLUME DAMPER
F.O.S.	FUEL OIL SUPPLY	VE	VOLUME EXTRACTOR
FPC	FIRE PROTECTION CONTRACTOR	VI	VIBRATION ISOLATOR
F/SD	COMBINATION FIRE/SMOKE DAMPER	WB	WET BULB TEMPERATURE, °F
FTR	FIN TUBE RADIATION	WFM	WATER FLOW MEASURING DEVICE
G	NATURAL GAS PIPE	WMS	WIRE MESH SCREEN
G.C.	GENERAL CONTRACTOR		
GH	GRAVITY HOOD		

ENERGY CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

UNIFORM CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

DATE: Feb 22, 2022

PROJECT NO:

SHEET NO:

MO.1

PLAN

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MECHANICAL: NOTES,
SYMBOLS, &
ABBREVIATIONS

SCALE: AS SHOWN

DRAWN BY:

AH

CHECKED BY:

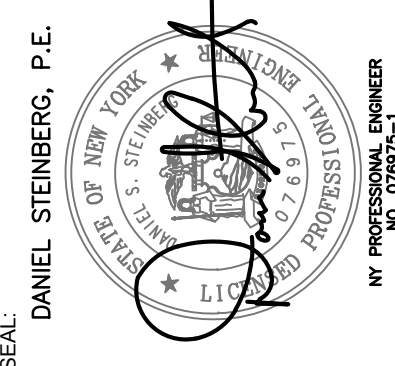
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DRAWING TITLE:

PROJECT NAME:

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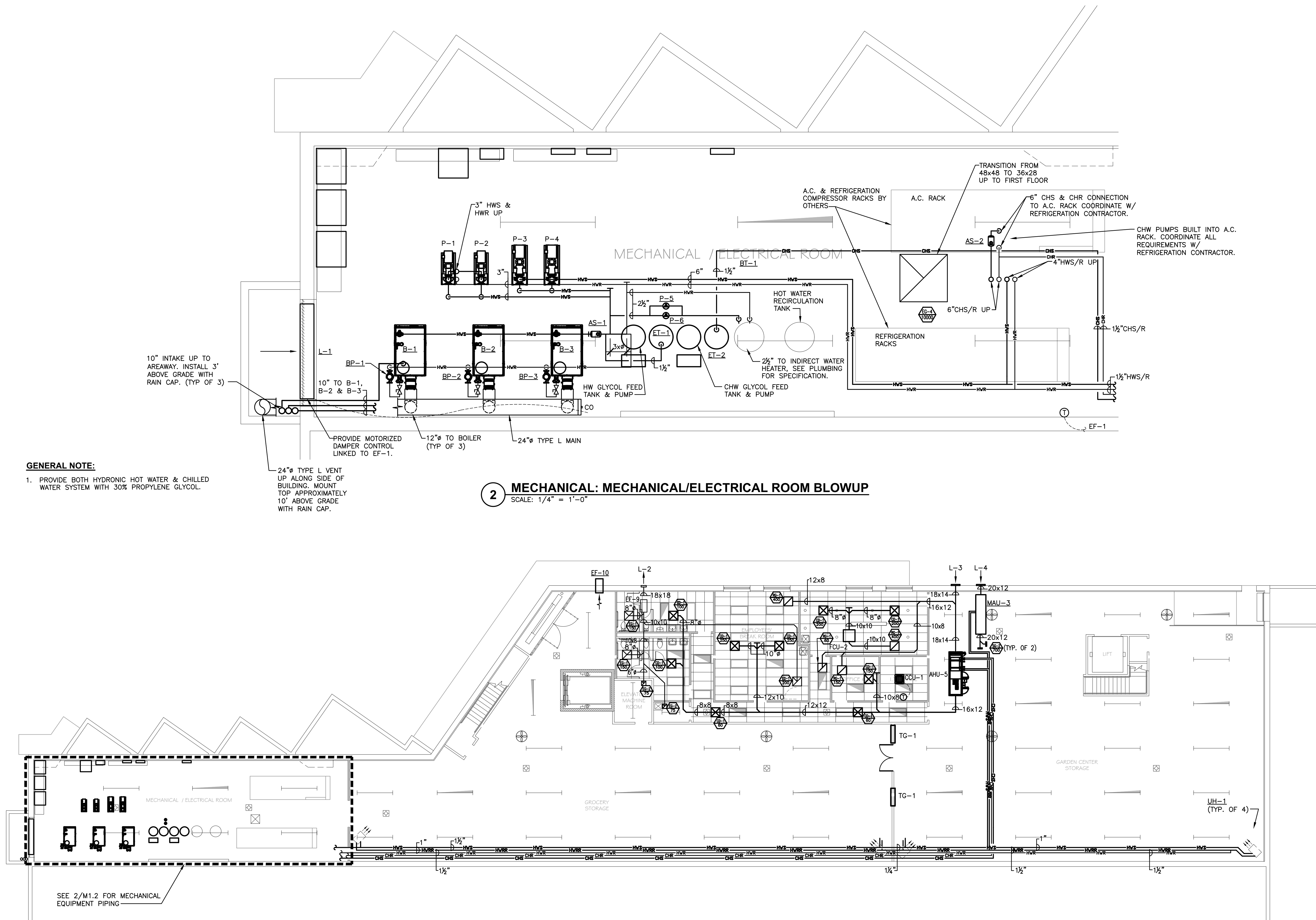
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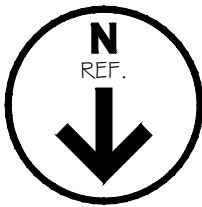
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REVISIONS:





1 MECHANICAL: ROOF PLAN
SCALE: 3/32" = 1'-0"



DATE: Feb 22, 2022		PROJECT NO.		SHEET NO.		M1.3	
PLAN B Retail Design & Project Management, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cboneley@planbretail.com				PROJECT TITLE: MECHANICAL: ROOF PLAN			
DRAWING TITLE:		PROJECT NAME:		CHECKED BY:		MDF	
SCALE:		AS SHOWN		DRAWN BY:		AH	
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Sheet Title: Sample Title 25 Jan 2022, 8:27am

BUILDING MANAGEMENT SYSTEM

PART 1 - GENERAL

1.1 SEQUENCE OF OPERATION

A. MIXED AIR UNIT (AHU-1-8)

- The air handling units consist of a mixed air section with outside air, exhaustion, and return air dampers, pre filter, final filter, hot water heating coil, chilled water cooling coil, hot water heating coil, supply fans, and return fans. The units are DDC controlled using electric actuation for the outside air damper, return air damper, exhaust air damper, fans, heating coil and cooling coil. The dampers are controlled by a single modulating signal to all three damper actuators.
- Unit is controlled by Ethernet based DDC "building" controller with peer to peer communication capabilities and with 64 MB RAM minimum provided by the DDC contractor. All control input/output devices are provided by the DDC contractor.
- The air handling unit operates in Occupied, and Unoccupied modes as follows (All suggested set points and settings are adjustable).
 - Occupied
 - The air handling unit shall be started based upon a start time optimization program, time of day schedule, or manual command and run continuously. The supply and return fans start.
 - The outside air, exhaust air and return air dampers shall modulate to minimum outside air position.
 - The heating coil valve modulates to maintain the preheat coil discharge air temperature set point of 110 degrees F. The supply temperature shall reset the pre-heat coil discharge temperature.
 - Unoccupied
 - The supply and return fans stop. The dampers are positioned for the outside and exhaust air dampers to be fully closed and the return air damper to be fully open. The cooling coil valve is fully closed. The heating coil valve modulates to maintain the discharge air temperature set point of 80 degrees F. The supply temperature shall reset the pre-heat coil discharge temperature.
- Humidity Control
 - During months where dehumidification is needed, the chilled water coil and the reheat coil valve shall modulate to maintain the required space temperature and humidity set points. The room humidity set point shall be set at 60% RH (adjustable).
- Filter Monitoring
 - The BMS monitors pre-filter and final-filter with individual differential pressure switches. Upon indication of filter pressure drop above set point (adjustable), the BMS will generate and alarm.
- Safeties And Monitoring
 - The BMS uses current switches to confirm that the supply fans are in the desired state. The BMS will alarm at the workstation if the fan fails to prove status 30 seconds after a command to start.
 - A low temperature detector located in the discharge of the heating coil, de-energizes the supply fans and indicates a low temperature alarm if the temperature drops below 38 degrees F.
 - Supply fan suction low static pressure cutout or smoke detectors in the supply air duct de-energizes (hard wired interlock) the supply fans and indicates an alarm if any are activated. The dampers are positioned for outside air and exhaust air dampers to be fully closed and the return air damper to be fully open.
 - BMS shall generate an alarm if the mixed air temperature drops below 40 degree F (adjustable).

7. Point List

- Supply Fan Status
- Supply Fan Start/Stop
- Supply Fan Speed Control
- Supply Fan VFD Integration
- Supply Fan Discharge Air Temperature
- Supply Fan Discharge Air Temperature Set Point
- Return Fan Status
- Return Fan Start/stop
- Return Fan Speed Control
- Return Fan VFD Integration
- Return Fan Discharge Air Temperature
- Return Fan Discharge Air Temperature Set Point
- Low Temperature Alarm
- Return Air Temperature
- Return Air Humidity
- Return Air Enthalpy
- Mixed Air Temperature
- Heating Coil Discharge Air Temperature
- Heating Coil Discharge Air Temperature Set Point
- Cooling Coil Discharge Air Temperature
- Cooling Coil Discharge Air Temperature Set Point
- Reheat Coil Discharge Air Temperature
- Reheat Coil Discharge Air Temperature Set Point
- Outside Air Temperature
- Outside Air Humidity
- Outside Air Enthalpy
- Cooling Coil Control
- Heating Coil Control
- Reheat Coil Control
- Outside Air Damper Control
- Exhaust Air Damper Control
- Pre-filter Status
- Final-filter Status
- Supply Fan Suction Low Static Pressure Alarm
- Return Fan Suction Low Static Pressure Alarm
- Return Smoke Detector Status
- Supply Smoke Detector Status

AHU-1-8 POINTS LIST

POINT NAME	POINT TYPE	ALARM ALERT DEFINITION	ALARM CRITICAL DEFINITION	ALARM DIAL-OUT	TREND INTERVAL	TREND CHANGE OF VALUE	TOTALIZE	GRAPHIC DISPLAY
SUPPLY FAN START/STOP	DO	-	-	-	-	-	HOURS	YES
SUPPLY FAN STATUS	DI	-	FAILURE	YES	-	-	-	YES
SUPPLY FAN SPEED OUTPUT	AO	-	-	-	-	-	-	YES
SUPPLY FAN ALARM	DI	-	ALARM	YES	-	-	-	YES
SUPPLY FAN SPEED FEEDBACK	AI	-	-	-	15	-	-	YES
SUPPLY FAN POWER (KW)	AI	-	-	-	15	-	-	YES
SUPPLY FAN COMM INTERFACE PTS	MULT	-	-	-	-	-	-	YES
RETURN FAN START/STOP	DO	-	-	-	-	-	HOURS	YES
RETURN FAN STATUS	DI	-	FAILURE	YES	-	-	-	YES
RETURN FAN SPEED OUTPUT	AO	-	-	-	-	-	-	YES
RETURN FAN ALARM	DI	-	ALARM	YES	-	-	-	YES
RETURN FAN SPEED FEEDBACK	AI	-	-	-	15	-	-	YES
RETURN FAN POWER (KW)	AI	-	-	-	15	-	-	YES
RETURN FAN COMM INTERFACE PTS	MULT	-	-	-	-	-	-	YES
PRE FILTER STATUS	DI	DIRTY	-	YES	-	-	-	YES
FINAL FILTER STATUS	DI	DIRTY	-	YES	-	-	-	YES
HEATING VALVE	AO	-	-	-	-	-	-	YES
LOW TEMPERATURE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
HEAT TEMPERATURE	AI	42	40	-	15	-	-	YES
COOLING COIL VALVE	AO	-	-	-	15	-	-	YES
LOW STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
HIGH STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
SUPPLY SMOKE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
DISCHARGE TEMPERATURE	AI	-	-	-	15	-	-	YES
DISCHARGE HUMIDITY	AI	-	-	-	15	-	-	YES
SUPPLY F/SD END SWITCH	DI	-	-	-	-	-	-	YES
SUPPLY STATIC PRESSURE	AI	-	-	-	-	-	-	YES
MIXED AIR TEMPERATURE	AI	-	-	-	-	-	-	YES
RETURN TEMPERATURE	AI	-	-	-	15	-	-	YES
RETURN SMOKE DETECTOR	DI	-	-	-	-	-	-	YES
RETURN HUMIDITY	AI	-	-	-	-	-	-	YES
LOW RETURN STATIC PRESSURE	DI	-	ALARM	-	-	-	-	YES
OUTDOOR AIR TEMPERATURE	AI	-	-	-	-	-	-	YES
OUTDOOR AIR HUMIDITY	AI	-	-	-	-	-	-	YES
OUTDOOR AIR ENTHALPY	AI	-	-	-	15	-	-	YES
RETURN AIR ENTHALPY	AI	-	-	-	15	-	-	YES
OUTDOOR AIR DAMPER	AO	-	-	-	15	-	-	YES
RETURN AIR DAMPER	AO	-	-	-	15	-	-	YES
EXHAUST AIR DAMPER	AO	-	-	-	15	-	-	YES

BUILDING MANAGEMENT SYSTEM

PART 1 - GENERAL

1.1 SEQUENCE OF OPERATION

A. 100% OUTSIDE AIR UNIT MAU-1,2

- THE SINGLE PATH MAKEUP AIR UNIT CONSISTS OF AN OUTDOOR AIR DAMPER, FILTERS, GLYCOL HOT WATER HEATING COIL, CHILLED WATER COOLING COIL AND SUPPLY FAN. THE UNIT IS DDC CONTROLLED USING ELECTRIC ACTUATION FOR THE OUTDOOR AIR DAMPER, FAN, HEATING COIL, AND COOLING COIL.
- UNIT IS CONTROLLED BY ETHERNET BASED DDC "BUILDING" CONTROLLER WITH PEER TO PEER COMMUNICATION CAPABILITIES AND WITH 64 MB RAM MINIMUM PROVIDED BY THE DDC CONTRACTOR. ALL CONTROL INPUT/OUTPUT DEVICES ARE PROVIDED BY THE DDC CONTRACTOR.
- THE UNIT SHALL BE ENABLED MANUALLY WITHIN RESPECTIVE SPACE, INTERLOCKED WITH RESPECTIVE EXHAUST FAN.
- OCCUPIED
 - UPON UNIT START, THE ASSOCIATED EXHAUST FANS (AS APPLICABLE) START AND THE OUTSIDE AIR DAMPER IS OPENED. AFTER THE DAMPER END SWITCH MAKES, THE SUPPLY FAN STARTS.
 - THE PREHEAT COIL VALVE MODULATES TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SET POINT OF 70 DEGREES F. WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 36 DEGREES F, THE PREHEAT COIL VALVE IS FULLY OPEN. THE SUPPLY TEMPERATURE SHALL RESET THE PRE-HEAT COIL DISCHARGE TEMPERATURE.
 - THE PRE-HEAT COIL AND COOLING COIL VALVES MODULATE IN SEQUENCE WITHOUT OVERLAP TO MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT.
- FILTER MONITORING
 - THE BMS MONITORS PRE-FILTER AND FINAL-FILTER WITH INDIVIDUAL DIFFERENTIAL PRESSURE SWITCHES. UPON INDICATION OF FILTER PRESSURE DROP ABOVE SET POINT (ADJUSTABLE), THE BMS WILL GENERATE AND ALARM.
- SAFETIES AND MONITORING
 - THE BMS USES CURRENT SWITCHES TO CONFIRM THAT THE SUPPLY FAN AND EXHAUST FAN (AS APPLICABLE) ARE IN THE DESIRED STATE. THE BMS WILL ALARM AT THE WORKSTATION IF THE PUMP FAILS TO PROVE STATUS 30 SECONDS AFTER A COMMAND TO START.
 - A LOW TEMPERATURE DETECTOR LOCATED IN THE DISCHARGE OF THE HEATING COIL, DE-ENERGIZES (HARD WIRED INTERLOCK) THE SUPPLY AND RETURN FANS AND INDICATES A LOW TEMPERATURE ALARM IF THE TEMPERATURE DROPS BELOW 38 DEGREES F (ADJUSTABLE THRU BMS FRONT END P.C.).
 - A SUPPLY FAN SUCTION LOW STATIC PRESSURE CUTOOUT OR SMOKE DETECTORS IN THE SUPPLY AIR DUCT DE-ENERGIZES (HARD WIRED INTERLOCK) THE SUPPLY FAN AND INDICATES AN ALARM IF ANY ARE ACTIVATED.
 - BMS SHALL GENERATE AN ALARM IF THE MIXED AIR TEMPERATURE DROPS BELOW 40 DEGREE F (ADJUSTABLE).
- PROVIDE THE FOLLOWING POINTS:
 - SUPPLY FAN STATUS
 - SUPPLY FAN START/STOP
 - SUPPLY FAN SPEED CONTROL
 - SUPPLY FAN VFD INTEGRATION
 - EXHAUST FAN STATUS (AS APPLICABLE)
 - EXHAUST FAN START/STOP (AS APPLICABLE)
 - PRE-HEAT COIL DISCHARGE AIR TEMPERATURE
 - PRE-HEAT COIL DISCHARGE AIR TEMPERATURE SET POINT
 - SUPPLY FAN DISCHARGE AIR TEMPERATURE
 - SUPPLY FAN DISCHARGE AIR TEMPERATURE SET POINT

MAU-1,2 POINTS LIST

POINT NAME	POINT TYPE	ALARM ALERT DEFINITION	ALARM CRITICAL DEFINITION	ALARM DIAL-OUT	TREND INTERVAL	TREND CHANGE OF VALUE	TOTALIZE	GRAPHIC DISPLAY
SUPPLY FAN START/STOP	DO	-	-	-	-	-	HOURS	YES
SUPPLY FAN STATUS	DI	-	FAILURE	YES	-	-	-	YES
SUPPLY FAN SPEED OUTPUT	AO	-	-	-	-	-	-	YES
SUPPLY FAN ALARM	DI	-	ALARM	YES	-	-	-	YES
SUPPLY FAN SPEED FEEDBACK	AI	-	-	-	15	-	-	YES
SUPPLY FAN POWER (KW)	AI	-	-	-	15	-	-	YES
SUPPLY FAN COMM INTERFACE PTS	MULT	-	-	-	-	-	-	YES
FILTER STATUS	DI	DIRTY	-	YES	-	-	-	YES
HEATING VALVE	AO	-	-	-	-	-	-	YES
LOW TEMPERATURE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
HEATING TEMPERATURE	AI	42	40	-	15	-	-	YES
COOLING COIL VALVE	AO	-	-	-	15	-	-	YES
LOW STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
HIGH STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
SUPPLY SMOKE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
DISCHARGE TEMPERATURE	AI	-	-	-	15	-	-	YES
SUPPLY F/SD END SWITCH	DI	-	-	-	-	-	-	YES
SUPPLY STATIC PRESSURE	AI	-	-	-	-	-	-	YES
OUTDOOR AIR DAMPER	DO	-	-	-	-	-	-	YES
OUTDOOR AIR DAMPER END SWITCH	DI	-	FAILURE	YES	-	-	-	YES
OUTDOOR AIR TEMPERATURE	AI	-	-	-	-	-	-	YES
OUTDOOR AIR HUMIDITY	AI	-	-	-	-	-	-	YES
OUTDOOR AIR ENTHALPY	AI	-	-	-	15	-	-	YES

PUMP POINTS LIST

POINT NAME	POINT TYPE	ALARM ALERT DEFINITION	ALARM CRITICAL DEFINITION	ALARM DIAL-OUT	TREND INTERVAL	TREND CHANGE OF VALUE	TOTALIZE	GRAPHIC DISPLAY
MOTOR - VFD	AO	-	-	-	-	-	-	YES
SYSTEM PRESSURE - VFD	DI	-	ALARM	YES	-	-	-	YES
SYSTEM TEMPERATURE	AO	-	ALARM	YES	-	-	-	YES

EXHAUST FAN POINTS LIST

POINT NAME	POINT TYPE	ALARM ALERT DEFINITION	ALARM CRITICAL DEFINITION	ALARM DIAL-OUT	TREND INTERVAL	TREND CHANGE OF VALUE	TOTALIZE	GRAPHIC DISPLAY
EXHAUST FAN START/STOP	DO	-	-	-	-	-	HOURS	YES
EXHAUST FAN STATUS	DI	-	FAILURE	YES	-	-	-	YES
EXHAUST FAN SPEED OUTPUT	AO	-	-	-	-	-	-	YES
EXHAUST FAN ALARM	DI	-	ALARM	YES	-	-	-	YES
EXHAUST FAN SPEED FEEDBACK	AI	-	-	-	15	-	-	YES
EXHAUST FAN POWER (KW)	AI	-	-	-	15	-	-	YES
EXHAUST FAN COMM INTERFACE PTS	MULT	-	-	-	-	-	-	YES
FILTER STATUS	DI	DIRTY	-	YES	-	-	-	YES
LOW STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
HIGH STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES

- COOLING COIL VALVE CONTROL
- HEATING COIL 1/3RD VALVE CONTROL
- HEATING COIL 2/3RD VALVE CONTROL
- OUTSIDE AIR DAMPER
- OUTSIDE AIR TEMPERATURE
- SUPPLY AIR HUMIDITY
- FILTER STATUS
- LOW TEMPERATURE ALARM
- SUPPLY FAN SUCTION LOW STATIC PRESSURE ALARM
- OUTSIDE AIR DAMPER STATUS
- SUPPLY SMOKE DETECTOR STATUS
- SUPPLY STATIC PRESSURE
- SUPPLY AIR FLOW

B. EXHAUST FANS

- THE BUILDING MANAGEMENT SYSTEM SHALL SCHEDULE THE EXHAUST FANS TO OPERATE ON A TIME OF DAY BASIS FOR OCCUPIED AND UNOCCUPIED MODES.
- OCCUPIED
 - EXHAUST FANS SHALL START WITH AHU.
- UNOCCUPIED
 - ALL EXHAUST FANS SHALL TURN OFF WITH ASSOCIATED AHU-1. WHENEVER AHU-1 SIGNALS TO TURN ON ASSOCIATED EXHAUST FANS SHALL START FIRST.
- FILTER MONITORING
 - EACH RESPECTIVE MAU SHALL BE TIED INTO OPERATIONS WITH ITS RESPECTIVE EXHAUST FAN(S). MAU-1 SHALL OPERATE WHEN EF-2 IS ENABLED. MAU-2 SHALL OPERATE WHEN EF-5,6 & 7 ARE ENABLED.
 - THE EXHAUST FANS SHALL BE ACTIVATED BY THE CONTROL PANEL MOUNTED DIRECTLY ON EACH EXHAUST HOOD.

C. 100% OUTSIDE AIR UNIT MAU-3,4

- THE SINGLE PATH MAKEUP AIR UNIT CONSISTS OF AN OUTDOOR AIR DAMPER, FILTERS, GLYCOL HOT WATER HEATING COIL AND SUPPLY FAN. THE UNIT IS DDC CONTROLLED USING ELECTRIC ACTUATION FOR THE OUTDOOR AIR DAMPER, FAN, HEATING COIL.
- UNIT IS CONTROLLED BY ETHERNET BASED DDC "BUILDING" CONTROLLER WITH PEER TO PEER COMMUNICATION CAPABILITIES AND WITH 64 MB RAM MINIMUM PROVIDED BY THE DDC CONTRACTOR. ALL CONTROL INPUT/OUTPUT DEVICES ARE PROVIDED BY THE DDC CONTRACTOR.
- THE UNIT SHALL BE ENABLED MANUALLY WITHIN RESPECTIVE SPACE, INTERLOCKED WITH RESPECTIVE EXHAUST FAN.
- OCCUPIED
 - UPON UNIT START, THE ASSOCIATED EXHAUST FANS (AS APPLICABLE) START AND THE OUTSIDE AIR DAMPER IS OPENED. AFTER THE DAMPER END SWITCH MAKES, THE SUPPLY FAN STARTS.
 - THE PREHEAT COIL VALVE MODULATES TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SET POINT OF 70 DEGREES F. WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 36 DEGREES F, THE PREHEAT COIL VALVE IS FULLY OPEN. THE SUPPLY TEMPERATURE SHALL RESET THE PRE-HEAT COIL DISCHARGE TEMPERATURE.
- FILTER MONITORING
 - THE BMS MONITORS PRE-FILTER AND FINAL-FILTER WITH INDIVIDUAL

MAU-3,4 POINTS LIST

POINT NAME	POINT TYPE	ALARM ALERT DEFINITION	ALARM CRITICAL DEFINITION	ALARM DIAL-OUT	TREND INTERVAL	TREND CHANGE OF VALUE	TOTALIZE	GRAPHIC DISPLAY
SUPPLY FAN START/STOP	DO	-	-	-	-	-	HOURS	YES
SUPPLY FAN STATUS	DI	-	FAILURE	YES	-	-	-	YES
SUPPLY FAN SPEED OUTPUT	AO	-	-	-	-	-	-	YES
SUPPLY FAN ALARM	DI	-	ALARM	YES	-	-	-	YES
SUPPLY FAN SPEED FEEDBACK	AI	-	-	-	15	-	-	YES
SUPPLY FAN POWER (KW)	AI	-	-	-	15	-	-	YES
SUPPLY FAN COMM INTERFACE PTS	MULT	-	-	-	-	-	-	YES
FILTER STATUS	DI	DIRTY	-	YES	-	-	-	YES
HEATING VALVE	AO	-	-	-	-	-	-	YES
LOW TEMPERATURE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
HEATING TEMPERATURE	AI	42	40	-	15	-	-	YES
LOW STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
HIGH STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
SUPPLY SMOKE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
DISCHARGE TEMPERATURE	AI	-	-	-	15	-	-	YES
SUPPLY F/SD END SWITCH	DI	-	-	-	-	-	-	YES
SUPPLY STATIC PRESSURE	AI	-	-	-	-	-	-	YES
OUTDOOR AIR DAMPER	DO	-	-	-	-	-	-	YES
OUTDOOR AIR DAMPER END SWITCH	DI	-	FAILURE	YES	-	-	-	YES
OUTDOOR AIR TEMPERATURE	AI	-	-	-	-	-	-	YES
OUTDOOR AIR HUMIDITY	AI	-	-	-	-	-	-	YES
OUTDOOR AIR ENTHALPY	AI	-	-	-	15	-	-	YES

FCU-1,2 POINTS LIST

POINT NAME	POINT TYPE	ALARM ALERT DEFINITION	ALARM CRITICAL DEFINITION	ALARM DIAL-OUT	TREND INTERVAL	TREND CHANGE OF VALUE	TOTALIZE	GRAPHIC DISPLAY
SUPPLY FAN START/STOP	DO	-	-	-	-	-	HOURS	YES
SUPPLY FAN STATUS	DI	-	FAILURE	YES	-	-	-	YES
SUPPLY FAN SPEED OUTPUT	AO	-	-	-	-	-	-	YES
SUPPLY FAN ALARM	DI	-	ALARM	YES	-	-	-	YES
SUPPLY FAN SPEED FEEDBACK	AI	-	-	-	15	-	-	YES
SUPPLY FAN POWER (KW)	AI	-	-	-	15	-	-	YES
SUPPLY FAN COMM INTERFACE PTS	MULT	-	-	-	-	-	-	YES
FILTER STATUS	DI	DIRTY	-	YES	-	-	-	YES
HEATING VALVE	AO	-	-	-	-	-	-	YES
LOW TEMPERATURE DETECTOR	DI	-	ALARM	YES	-	-	-	YES
HEATING TEMPERATURE	AI	42	40	-	15	-	-	YES
LOW STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
HIGH STATIC PRESSURE	DI	-	ALARM	YES	-	-	-	YES
DISCHARGE TEMPERATURE	AI	-	-	-	15	-	-	YES
SUPPLY F/SD END SWITCH	DI	-	-	-	-	-	-	YES
SUPPLY STATIC PRESSURE	AI	-	-	-	-	-	-	YES
RETURN AIR DAMPER	DO	-	-	-	-	-	-	YES
RETURN AIR DAMPER END SWITCH	DI	-	FAILURE	YES	-	-	-	YES
RETURN AIR TEMPERATURE	AI	-	-	-	-	-	-	YES
RETURN AIR HUMIDITY	AI	-	-	-	-	-	-	YES
RETURN AIR ENTHALPY	AI	-	-	-	15	-	-	YES

- DIFFERENTIAL PRESSURE SWITCHES. UPON INDICATION OF FILTER PRESSURE DROP ABOVE SET POINT (ADJUSTABLE), THE BMS WILL GENERATE AND ALARM.
- SAFETIES AND MONITORING
 - THE BMS USES CURRENT SWITCHES TO CONFIRM THAT THE SUPPLY FAN AND EXHAUST FAN (AS APPLICABLE) ARE IN THE DESIRED STATE. THE BMS WILL ALARM AT THE WORKSTATION IF THE PUMP FAILS TO PROVE STATUS 30 SECONDS AFTER A COMMAND TO START.
 - A LOW TEMPERATURE DETECTOR LOCATED IN THE DISCHARGE OF THE HEATING COIL, DE-ENERGIZES (HARD WIRED INTERLOCK) THE SUPPLY AND RETURN FANS AND INDICATES A LOW TEMPERATURE ALARM IF THE TEMPERATURE DROPS BELOW 38 DEGREES F (ADJUSTABLE THRU BMS FRONT END P.C.).
 - A SUPPLY FAN SUCTION LOW STATIC PRESSURE CUTOOUT OR SMOKE DETECTORS IN THE SUPPLY AIR DUCT DE-ENERGIZES (HARD WIRED INTERLOCK) THE SUPPLY FAN AND INDICATES AN ALARM IF ANY ARE ACTIVATED.
 - BMS SHALL GENERATE AN ALARM IF THE MIXED AIR TEMPERATURE DROPS BELOW 40 DEGREE F (ADJUSTABLE).
 - PROVIDE THE FOLLOWING POINTS:
 - SUPPLY FAN STATUS
 - SUPPLY FAN START/STOP
 - SUPPLY FAN SPEED CONTROL
 - SUPPLY FAN VFD INTEGRATION
 - EXHAUST FAN STATUS (AS APPLICABLE)
 - EXHAUST FAN START/STOP (AS APPLICABLE)
 - PRE-HEAT COIL DISCHARGE AIR TEMPERATURE
 - PRE-HEAT COIL DISCHARGE AIR TEMPERATURE SET POINT
 - SUPPLY FAN DISCHARGE AIR TEMPERATURE
 - SUPPLY FAN DISCHARGE AIR TEMPERATURE SET POINT
 - HEATING COIL 1/3RD VALVE CONTROL
 - HEATING COIL 2/3RD VALVE CONTROL
 - OUTSIDE AIR DAMPER
 - OUTSIDE AIR TEMPERATURE
 - SUPPLY AIR HUMIDITY
 - FILTER STATUS
 - LOW TEMPERATURE ALARM
 - SUPPLY FAN SUCTION LOW STATIC PRESSURE ALARM
 - OUTSIDE AIR DAMPER STATUS
 - SUPPLY SMOKE DETECTOR STATUS
 - SUPPLY STATIC PRESSURE
 - SUPPLY AIR FLOW

FL2020-00-394 ADAMS FAIRACRE FARMS/FAIRACRE FARMS - 4/27/2022 - 4:27pm by ah

DATE: Feb 22, 2022

PROJECT NO:

SHEET NO:

M5.1

PLAN B Retail Design & Project Management, LLC
12 Goose Lane, Tolland, CT 06084
Tel: 860.870.5380 Fax: 860.870.5382
e-mail: cbomely@planbretail.com

DATE: Feb 22, 2022

PROJECT NO:

SHEET NO:

M5.1

PROJECT NAME: MECHANICAL: DETAILS

SCALE: AS SHOWN

DRAWN BY: WPB

CHECKED BY: MDE

PROJECT NAME: MECHANICAL: DETAILS

SCALE: AS SHOWN

DRAWN BY: WPB

CHECKED BY: MDE

PROJECT NAME: MECHANICAL: DETAILS

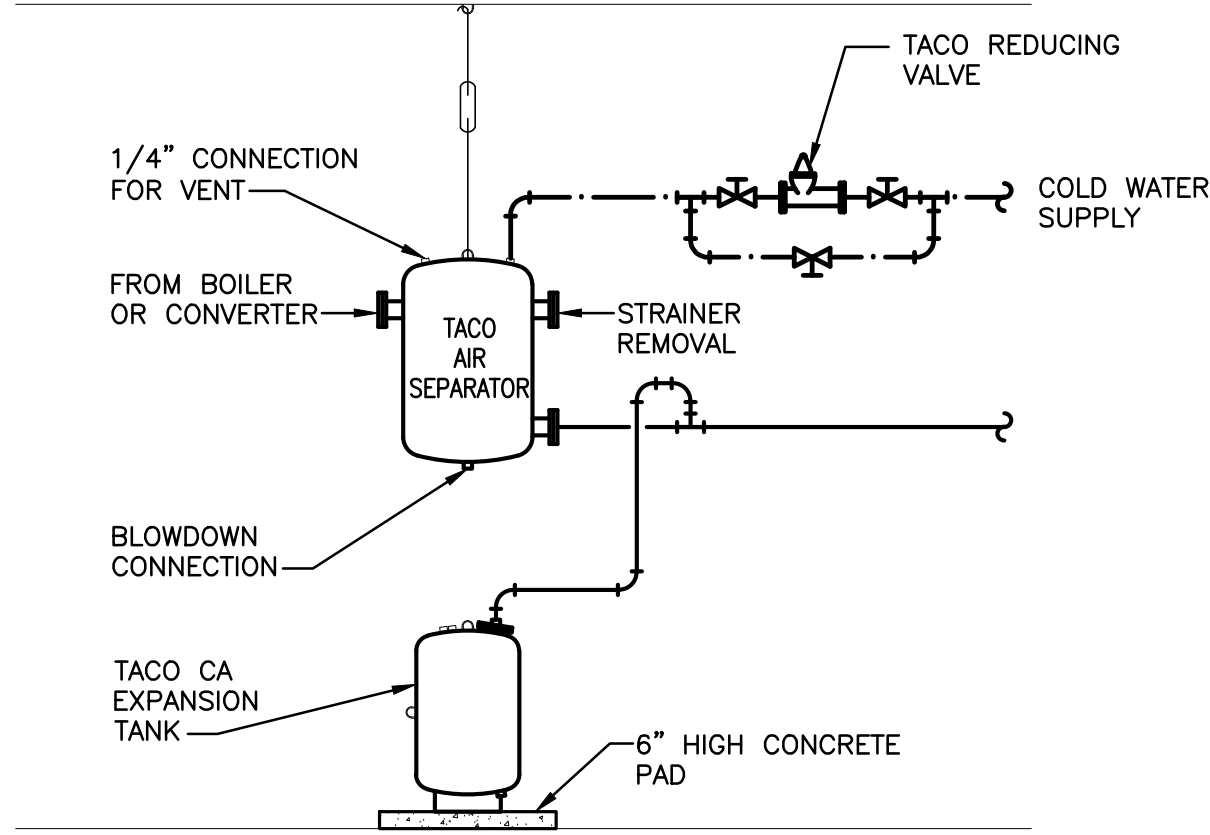
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DRAWN BY: WPB

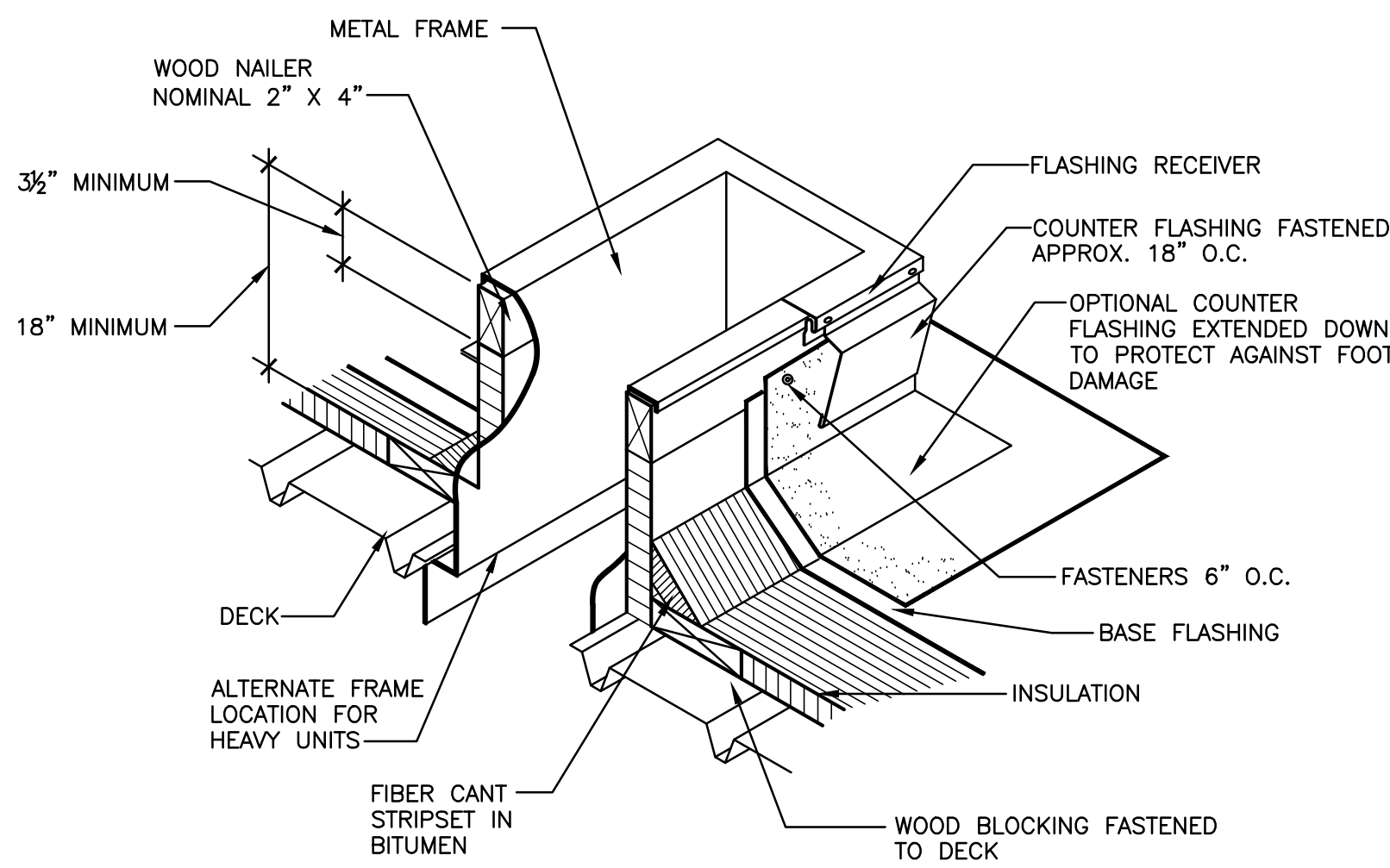
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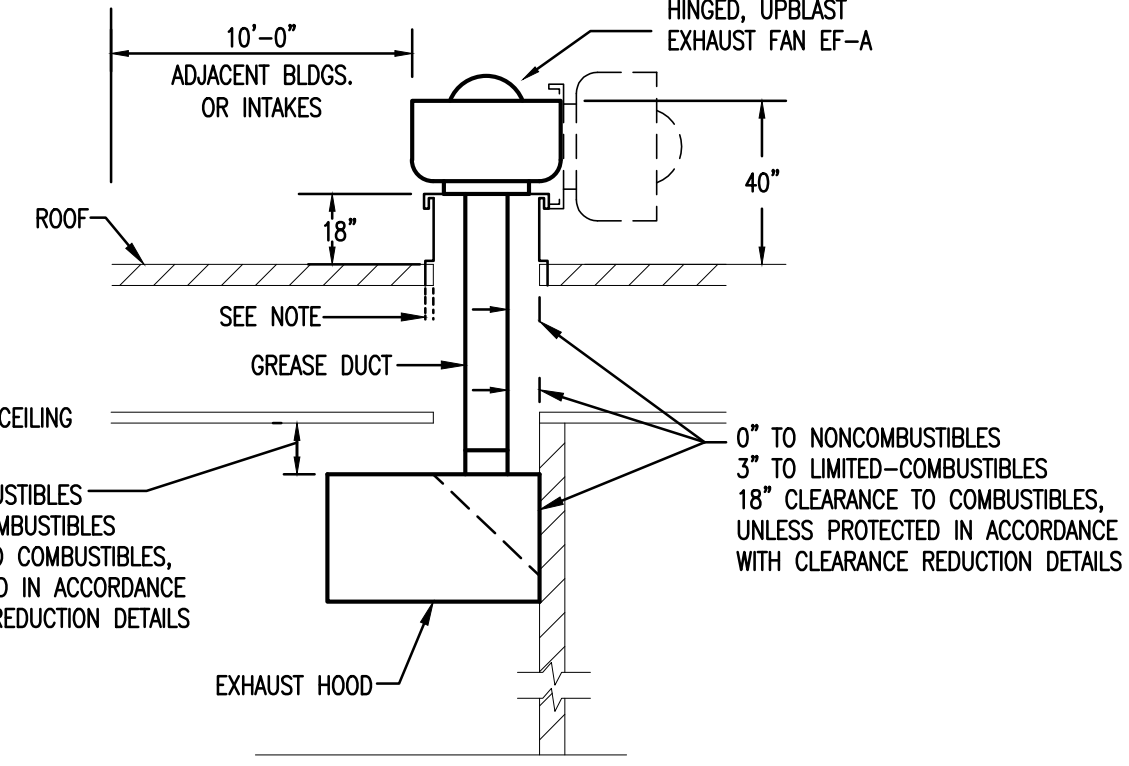
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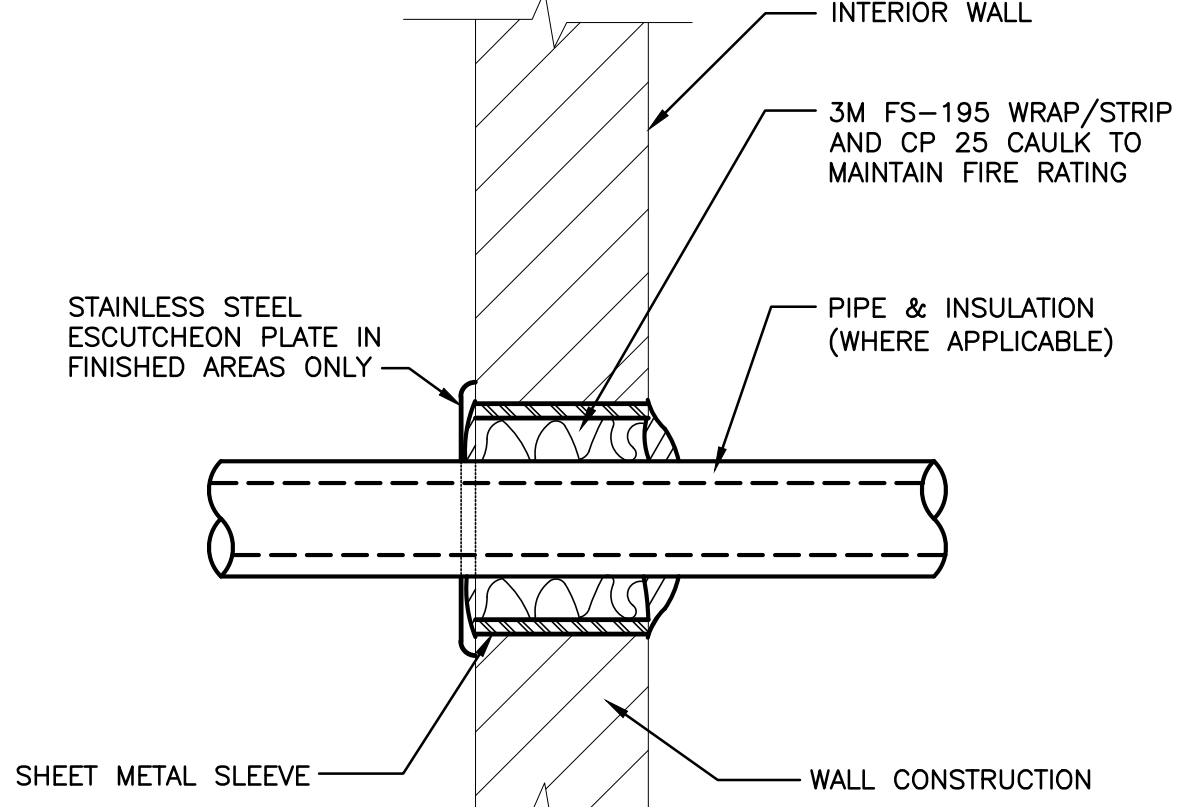
1 AIR SEPARATOR/EXPANSION TANK PIPING DETAIL
N.T.S.



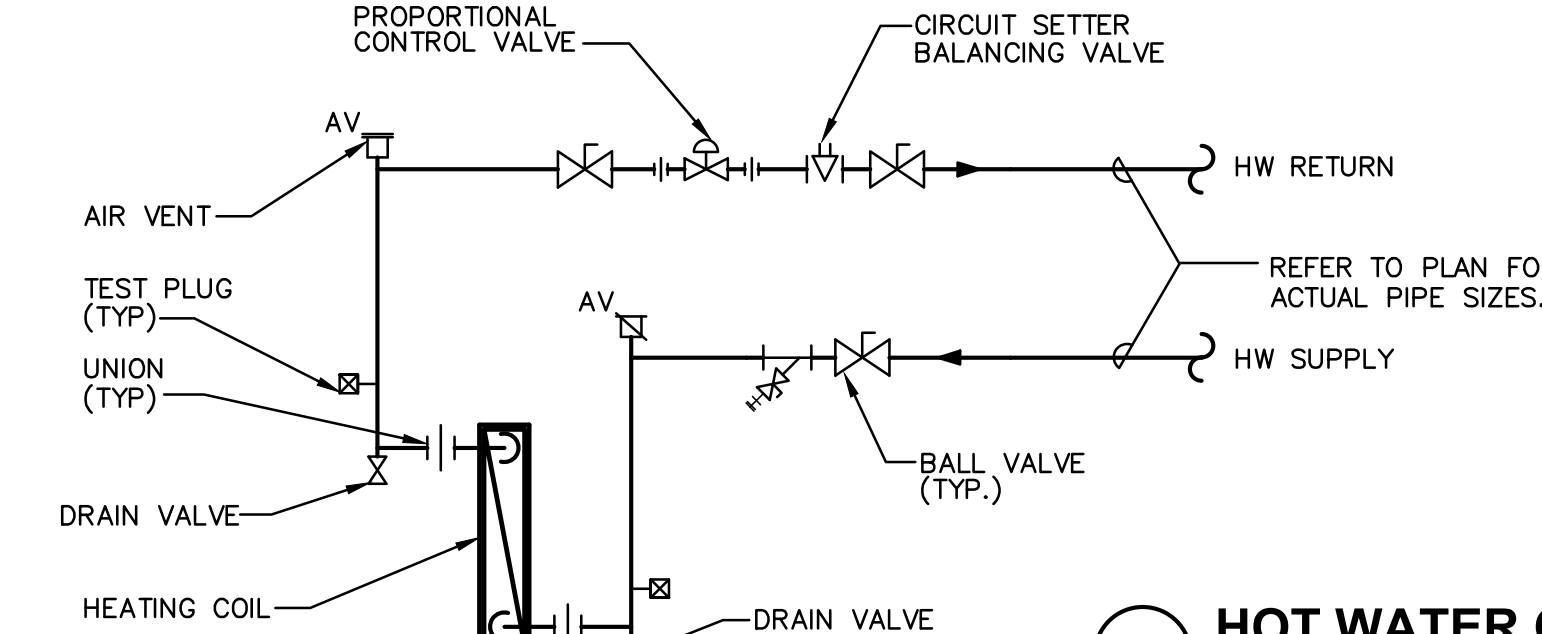
2 ROOFTOP CURB DETAIL
N.T.S.



3 TYPICAL SECTION VIEW
N.T.S.

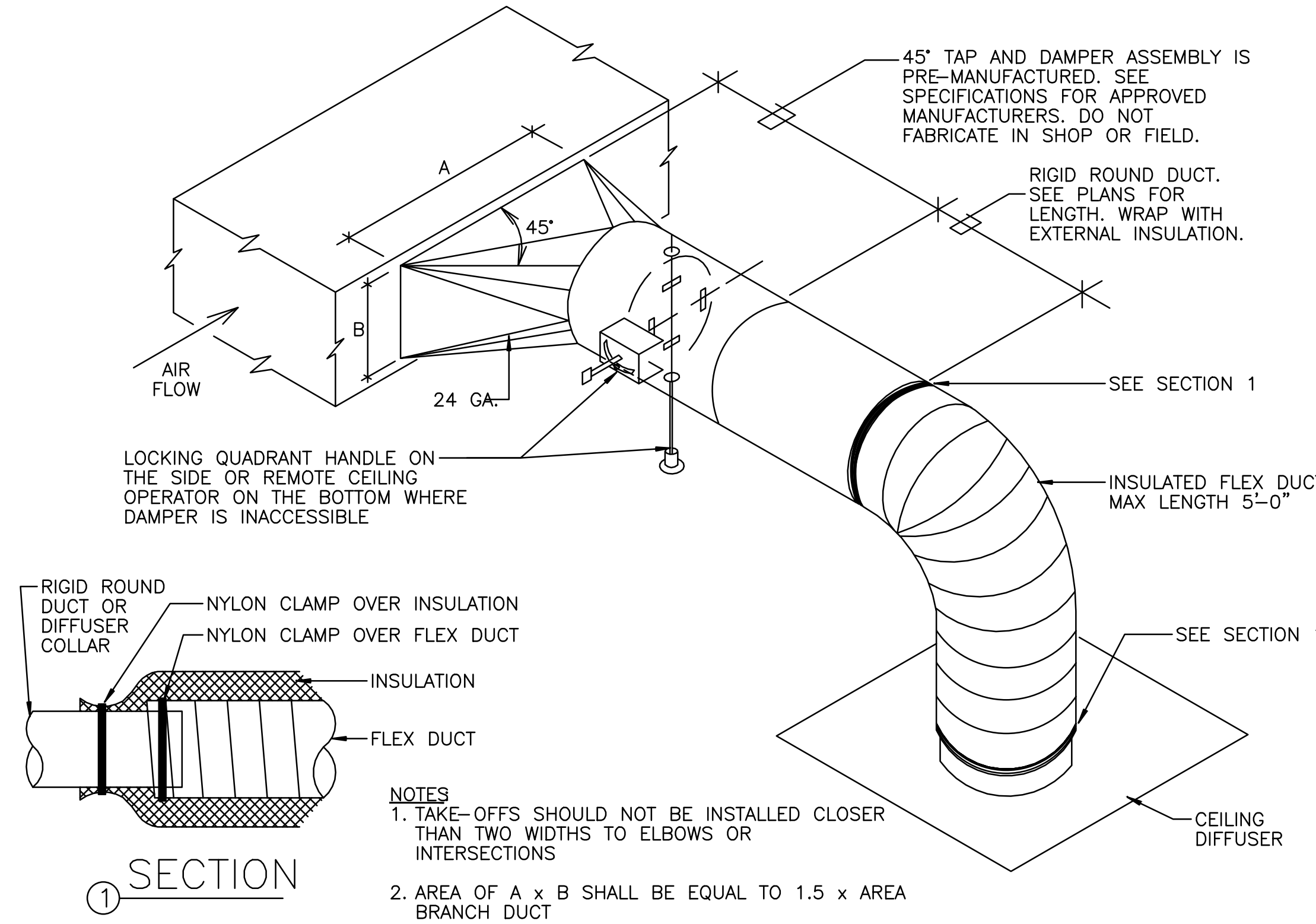


4 RATED WALL PENETRATION DETAIL
N.T.S.

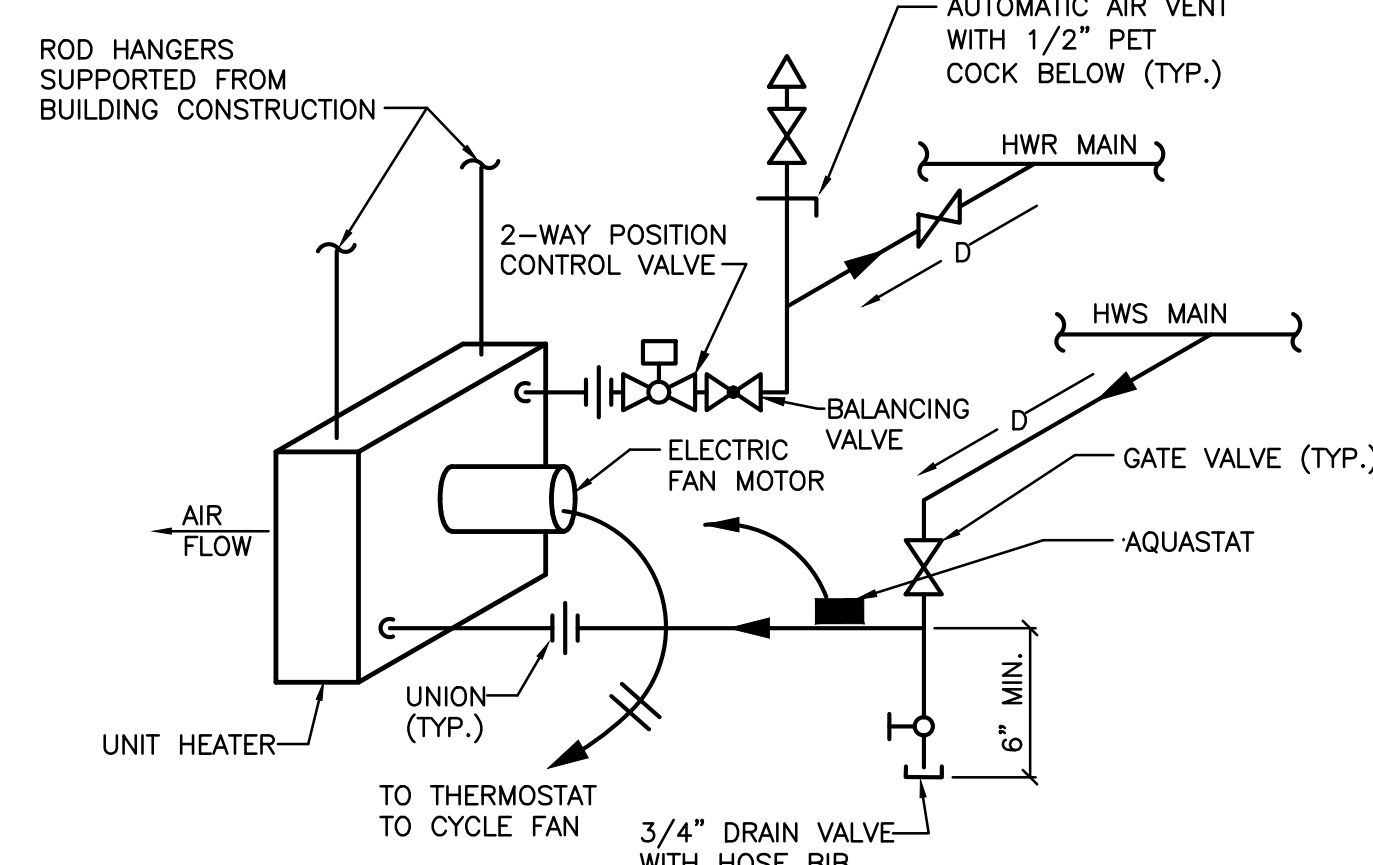


5 HOT WATER COIL PIPING SCHEMATIC
N.T.S.

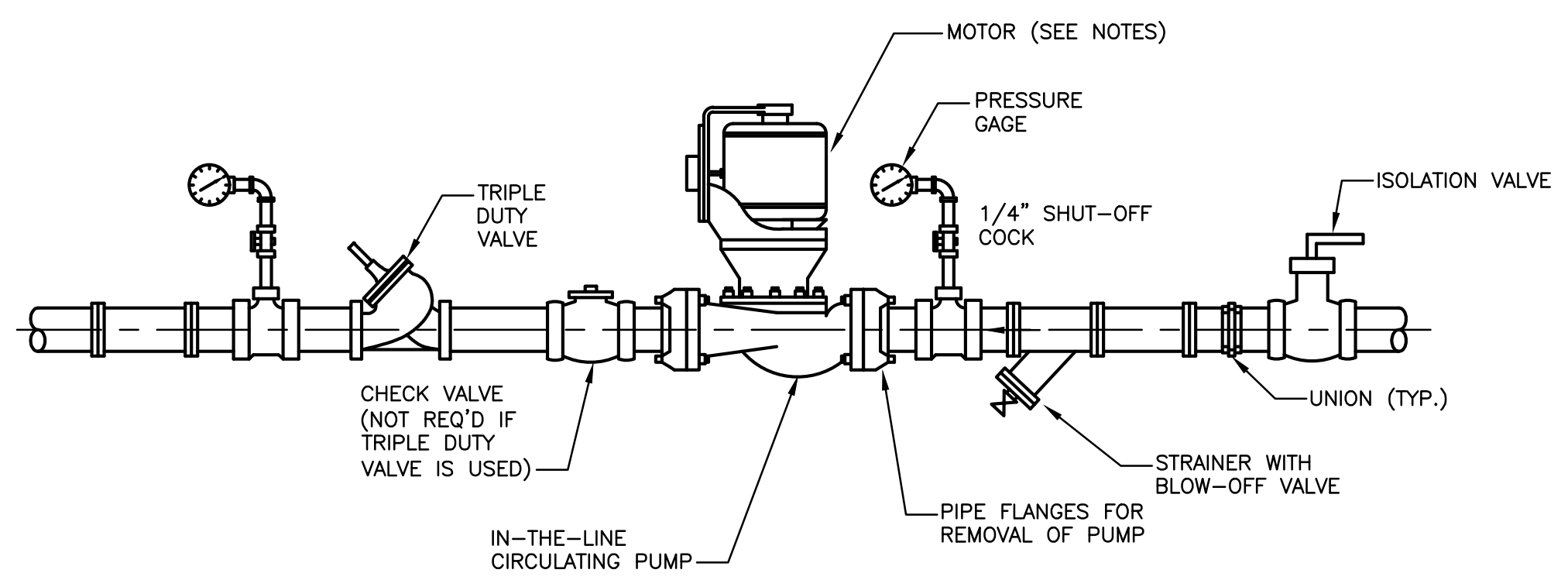
- NOTES:**
1. CONTROL VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT OR DISCHARGE AIR SETPOINT.
 2. HOT WATER SYSTEM IS VARIABLE VOLUME.
 3. CONTROL VALVES SHALL BE NORMALLY OPEN.



6 SQUARE TO ROUND TAKE-OFF DETAIL
N.T.S.

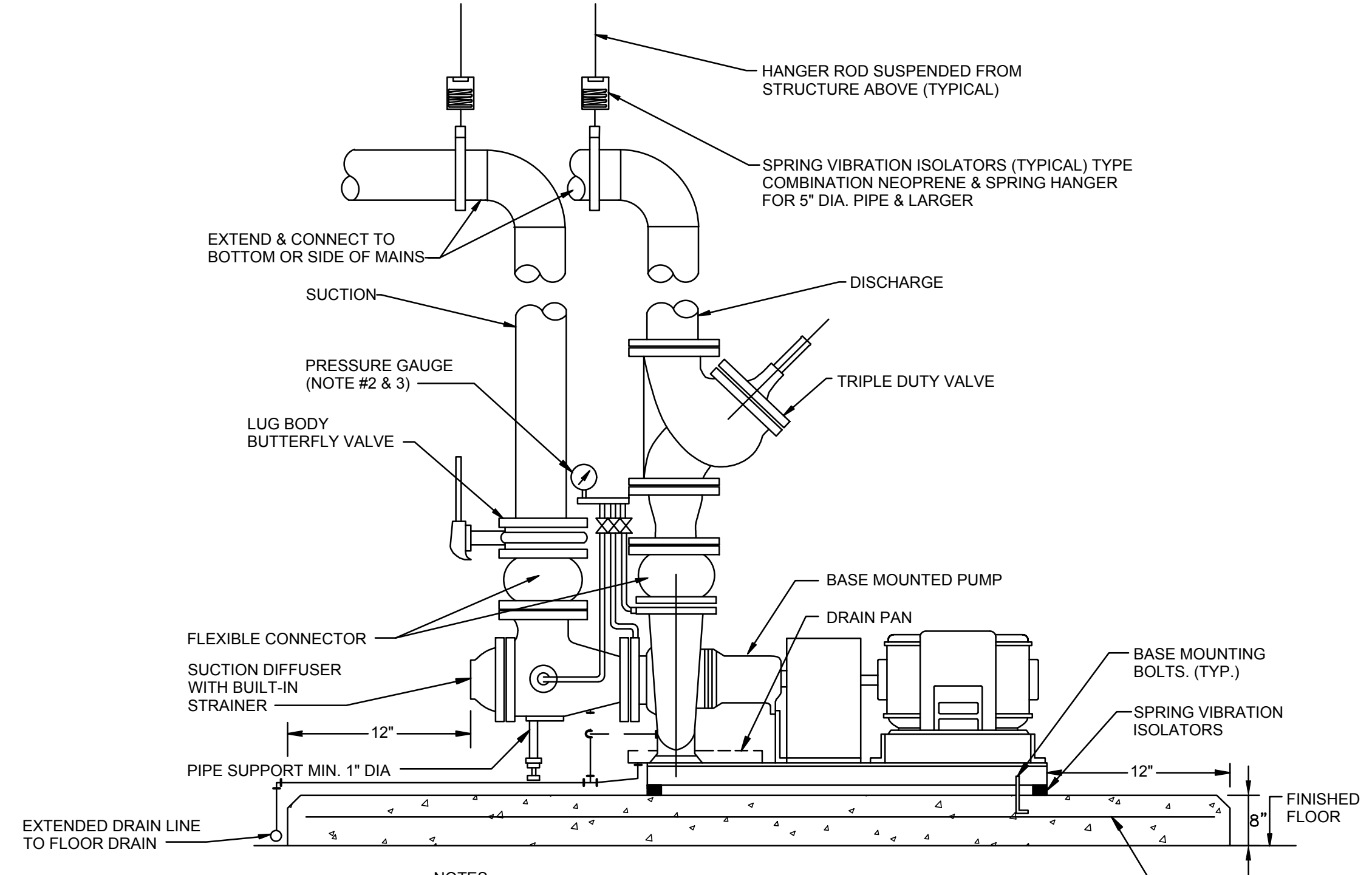


7 HOT WATER UNIT HEATER DETAIL
N.T.S.



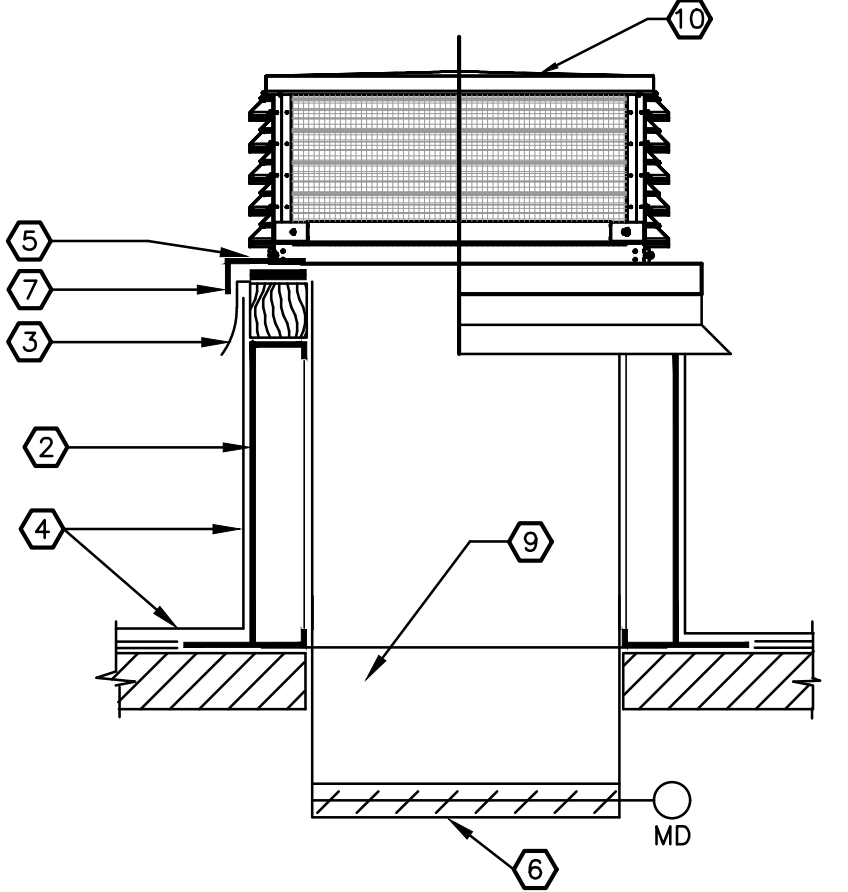
8 PUMP DETAIL IN-LINE CIRCULATOR
N.T.S.

- NOTES**
1. SHUT-OFF COCK GAGE TO BE LEFT SHUT OFF EXCEPT WHEN ACTUALLY CHECKING SYSTEM PRESSURE.
 2. PROVIDE REDUCER/INCREASER AT PUMP AS REQUIRED.
 3. MOTOR TO BE IN THE HORIZONTAL POSITION WITH THE APPROPRIATE BEARINGS.

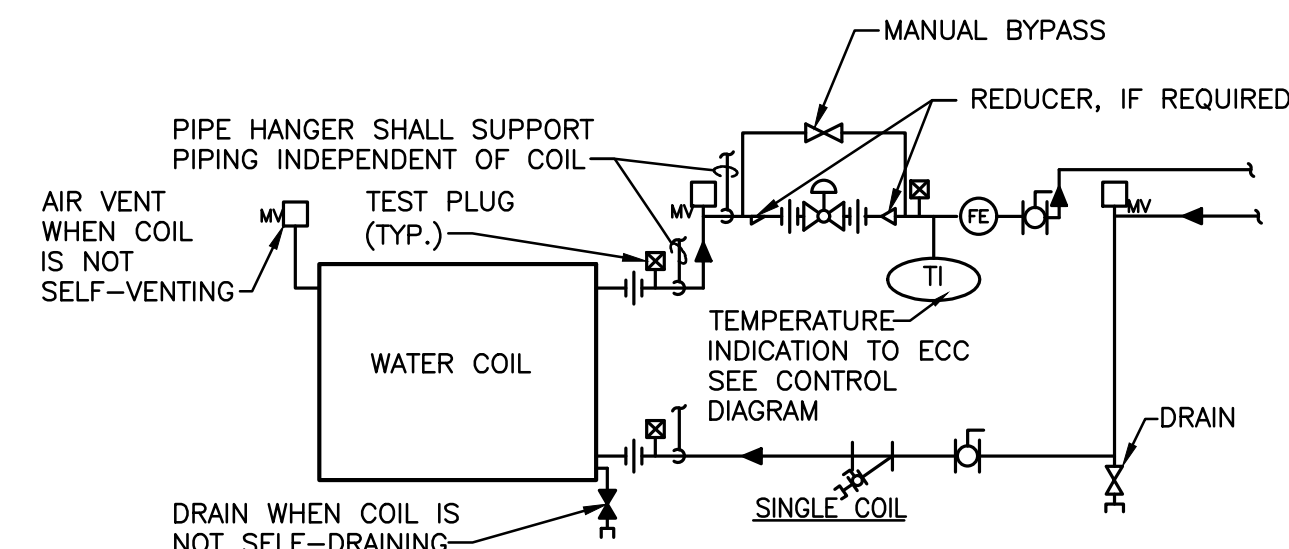


9 END SUCTION PUMP DETAIL
N.T.S.

1. IH-#/EH-#
2. PREFABRICATED CURB
3. FLASHING
4. ROOFING - REFER TO ARCH. DRAWINGS
5. GASKET
6. MOTORIZED DAMPER
7. FASTEN AS PER MANUFACTURER WRITTEN RECOMMENDATIONS
8. BIRD SCREEN
9. DUCT COLLAR SAME SIZE AS ROOF OPENING
10. REMOVABLE HOOD PANEL



10 GRAVITY ROOF VENT DETAIL
N.T.S.



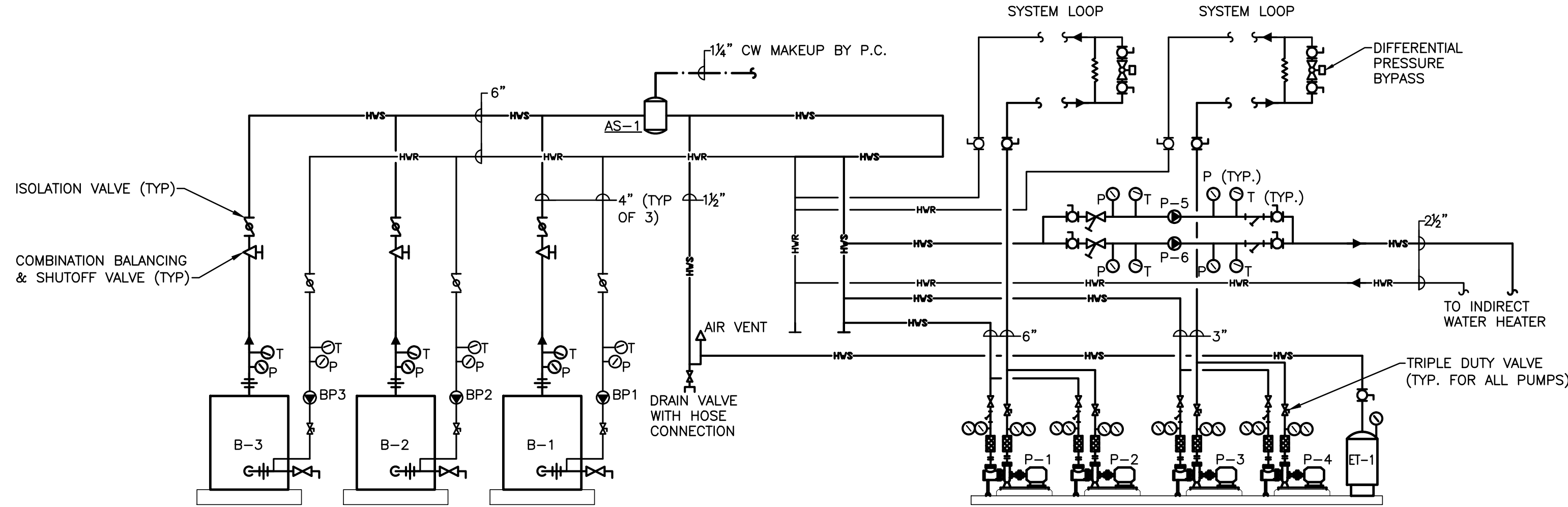
11 CHILLED WATER COILS - PIPING CONNECTIONS
N.T.S.

- NOTE:**
1. WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATORS THE FIRST 2 HANGERS FOR EACH PIPE SHALL BE SPRING & NEOPRENE TYPE, TYPE "H" FOR 4" [100mm] PIPE & SMALLER, TYPE "H-P" FOR 5" [125mm] PIPE & LARGER.
 2. PIPING SHALL BE INSTALLED IN SUCH MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS; NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALVES, OR EQUIPMENT.
 3. THE FLOW ELEMENT MAY BE INSTALLED IN THE SUPPLY PIPING IF THE REQUIRED MINIMUM UPSTREAM AND DOWNSTREAM DIMENSIONS CANNOT BE OBTAINED IN THE RETURN PIPING.

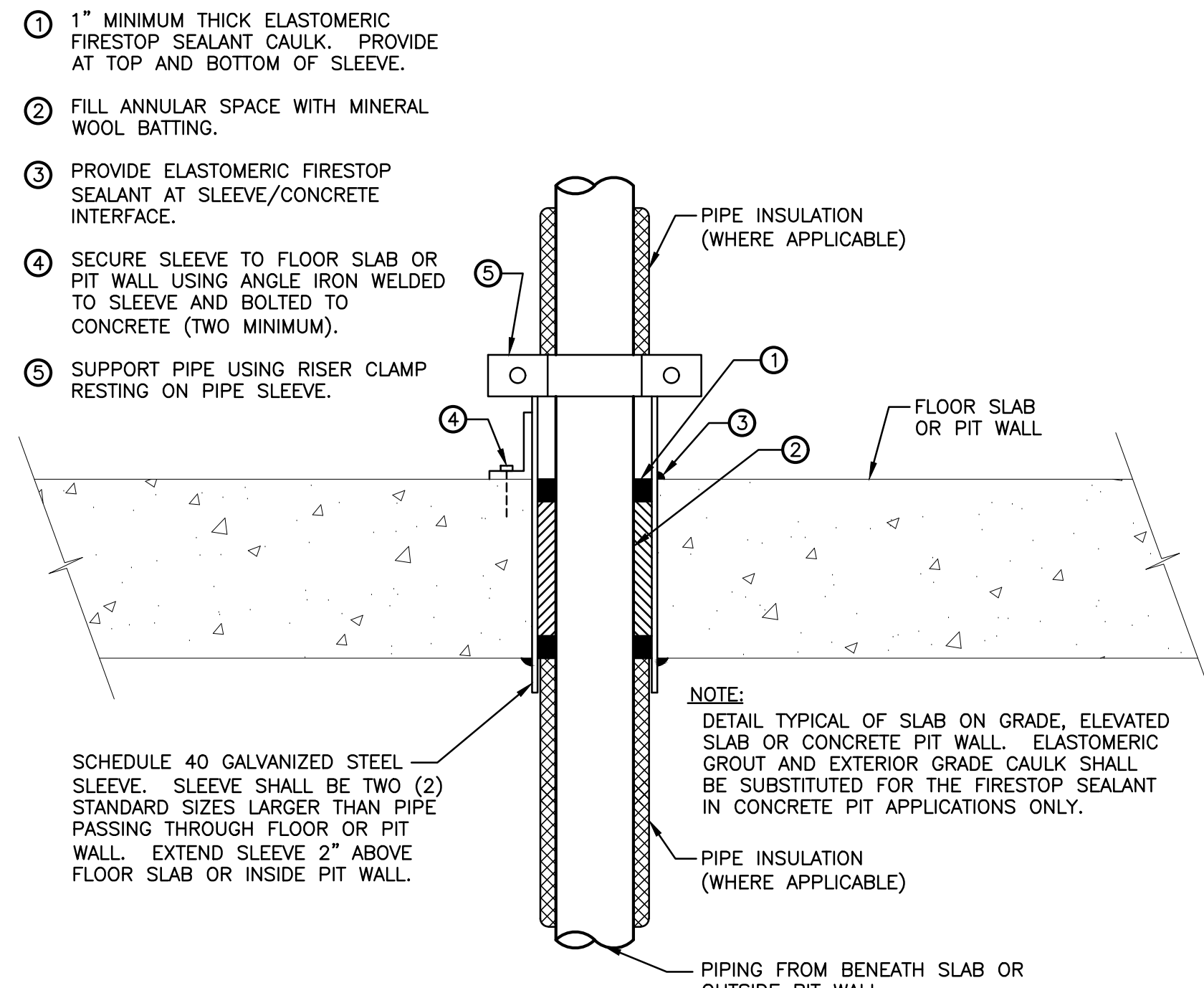
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PROJECT NAME: ADAMS FAIRACRE FARMS		DATE: Feb 22, 2022 PROJECT NO: SHEET NO: M7.1						
MECHANICAL: DETAILS		DATE: Feb 22, 2022 PROJECT NO: SHEET NO: M7.1						

Sheet Title: Space Detail 25 Jan 2022, 8:25am

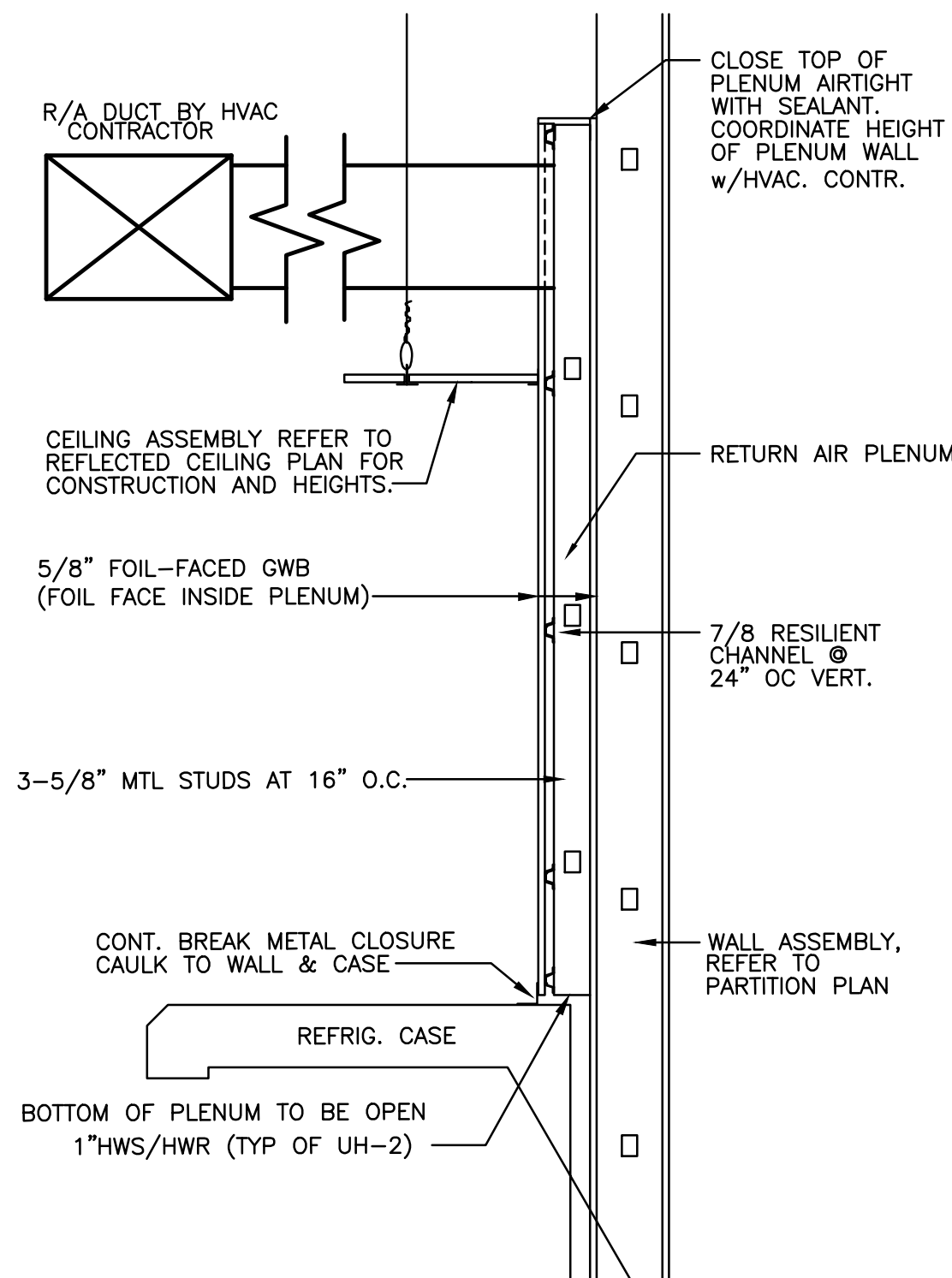
FL202020-394 ADAMS FAIRACRE FARMS/HVAC/M7.2.dwg Plotted on: Feb 22, 2022 - 4:28pm by ah



1 HOT WATER HEATING SYSTEM SCHEMATIC
N.T.S.

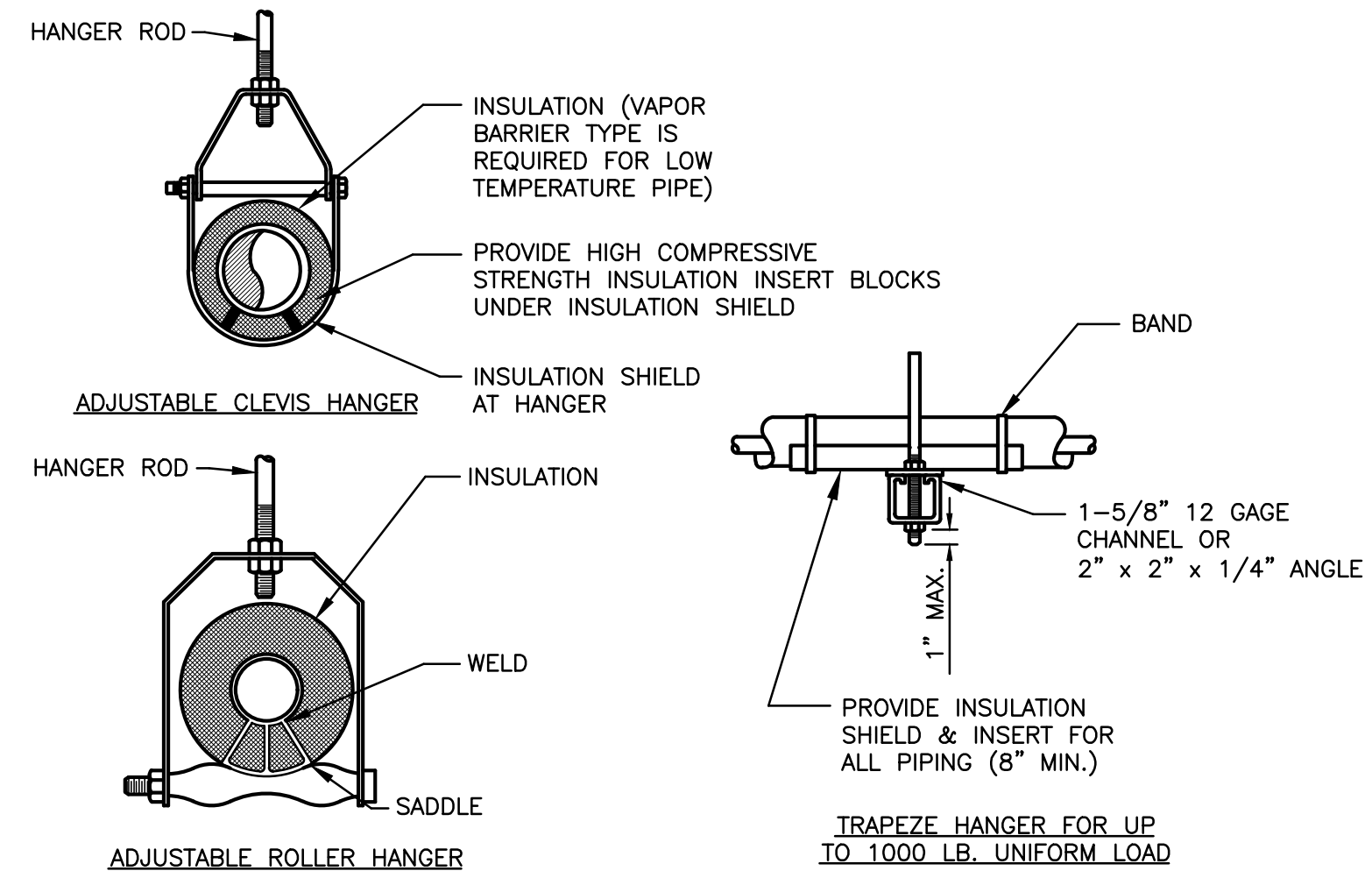


4 TYPICAL PIPING CONCRETE PENETRATION DETAIL
N.T.S.



NOTE:
1. PROVIDE CLOSURES AT ENDS OF CASE LINE-UP. FINISH TO BE CO-ORDINATED WITH OWNERS REP.

5 TYPICAL DETAIL OF LOW AIR RETURN AT REFRIG. CASE
SCALE: N.T.S.



INDIVIDUAL PIPE HANGER ROD & SPACING SCHEDULE										
NOMINAL PIPE DIAMETER (IN.)	3/4	1	1 1/2	2	2 1/2	3	4	5	6	-
HANGER ROD SIZE (IN.)	3/8	3/8	3/8	3/8	1/2	1/2	5/8	5/8	7/8	-
MAXIMUM SUPPORT SPACING (FT.)										
STEEL PIPE	6	7	9	10	11	12	14	16	17	-
COPPER TUBE	6	6	8	9	10	10	12	14	14	-

NOTE: TRAPEZE HANGER SPACING SHALL BE BASED ON SPACING OF SMALLEST PIPE ON TRAPEZE. TRAPEZE SHALL BE DESIGNED WITH A FACTOR OF SAFETY OF 5 FOR CENTER OF SPAN CONCENTRATED LOAD

2 TYPICAL PIPE HANGERS
N.T.S.

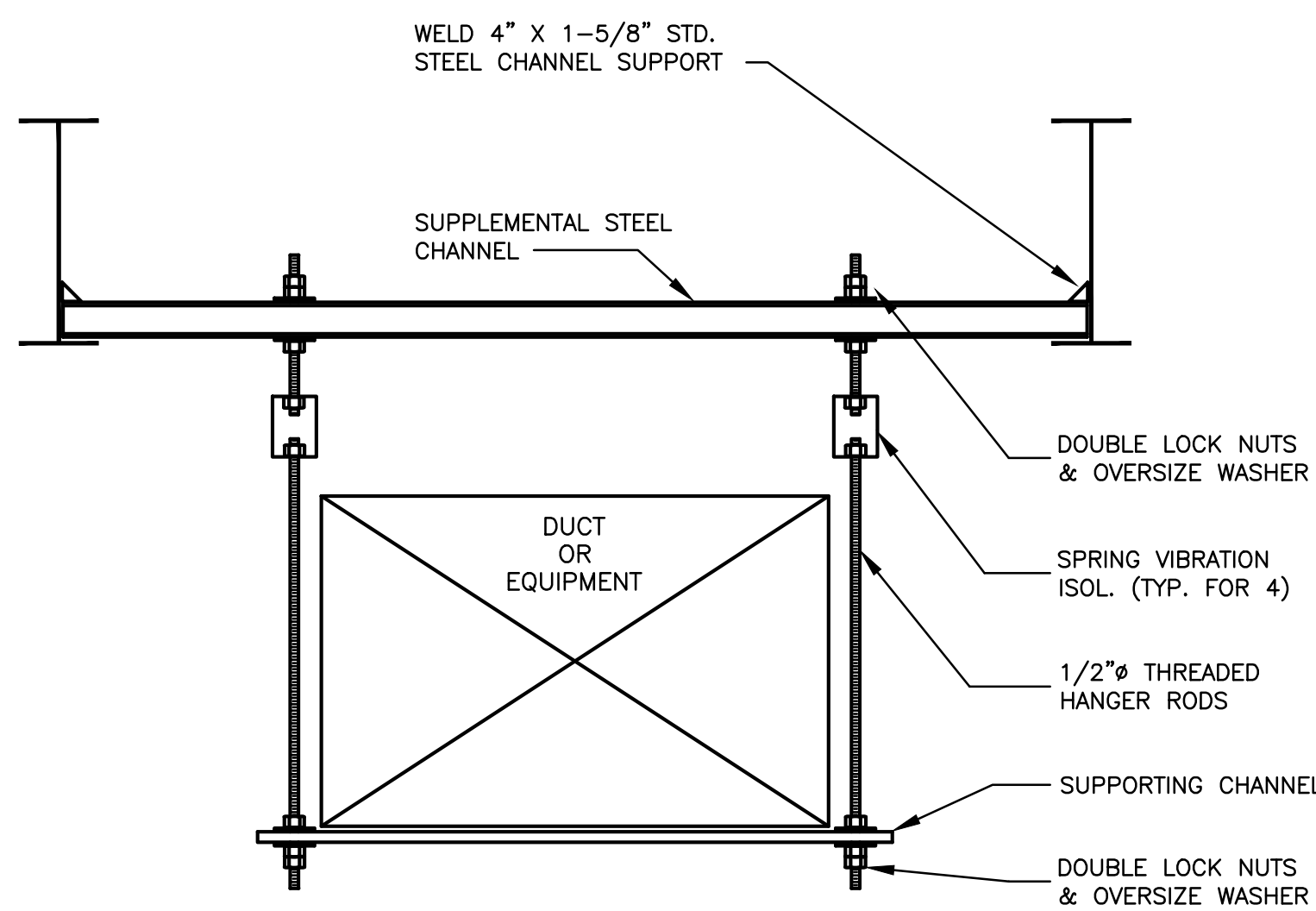
MINIMUM PIPE INSULATION - COMMERCIAL (THICKNESS IN INCHES) (a,b)						
FLUID OPERATING TEMPERATURE RANGE AND USAGE, °F	NOMINAL PIPE OR TUBE SIZES					
	< 1"	1" to <1 1/2"	1 1/2" to <4"	4" to <8"	8" and larger	
ABOVE 350	4 1/2	5	5	5	5	
251-350	3	4	4 1/2	4 1/2	4 1/2	
201-250	2 1/2	2 1/2	2 1/2	3	3	
141-200	1 1/2	1 1/2	2	2	2	
105-140	1	1	1 1/2	1 1/2	1 1/2	
40-60	1/2	1/2	1	1	1	
BELOW 40	1/2	1	1	1	1 1/2	

- a. FOR PIPING SMALLER THAN 1 1/2" AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH SHALL BE PERMITTED BUT NOT TO A THICKNESS LESS THAN 1".
- b. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1/2" SHALL BE PERMITTED BUT NOT TO THICKNESSES LESS THAN 1".

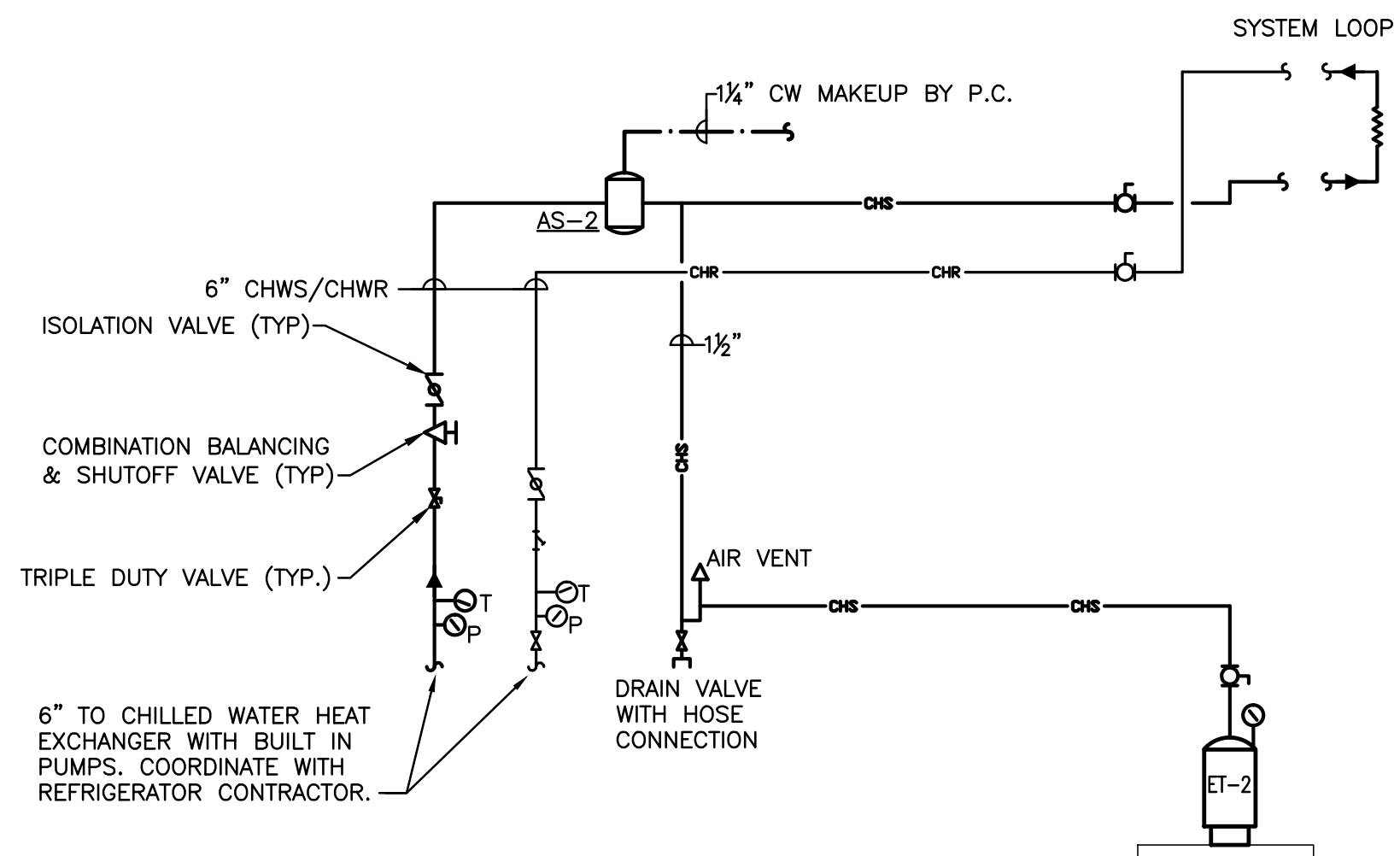
COMMERCIAL DUCT INSULATION SCHEDULE			
	FACING	R VALUE INSIDE BUILDING ENVELOPE	R VALUE OUTSIDE BUILDING ENVELOPE
SUPPLY AIR	FSK*	R-6	R-8
RETURN AIR	FSK*	R-6	R-8

* - FOIL-SCRIM KRAFT

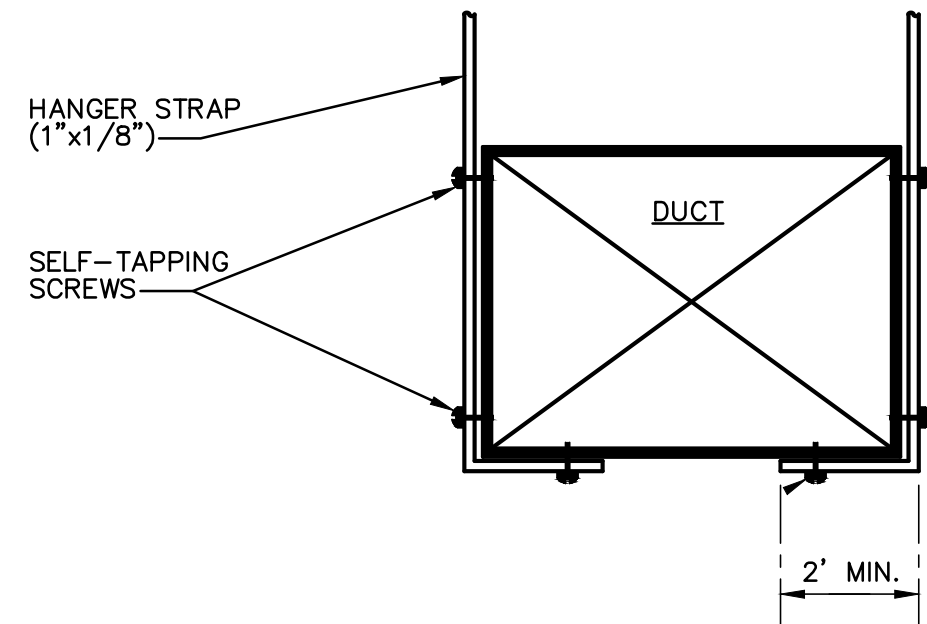
LOW PRESSURE DUCT GAUGE SCHEDULE 2000 FPM			
FLAT OVAL DUCT DIM. OF MAJOR AXIS	ROUND DUCT	RECTANGULAR DUCT GREATEST DIMENSION	GAUGE GALVANIZED STEEL
3" TO 8"	UP TO 12"		26
UP TO 24"	9" TO 14"	13" TO 30"	24
25" TO 48"	15" TO 36"	31" TO 54"	22
49" TO 70"		55" TO 84"	20



6 EQUIPMENT HANGING DETAIL
N.T.S.



7 CHILLED WATER COOLING SYSTEM SCHEMATIC
N.T.S.



- NOTES:
- PROVIDE BRACING TO LIMIT THE AMPLITUDE OF WALL VIBRATION AND WALL DEFLECTION TO SPECIFIED MAXIMUMS.
 - MINIMUM DUCT SUPPORT REQUIREMENTS:
- | DUCT SIZE (SQ. FT.) | HANGER SIZE (IN.xGA.) | MAX. SPACING (FT.) |
|---------------------|-----------------------|--------------------|
| <2 | 1"x20 GA. | 8 |
| 2<x<4 | 1"x20 GA. | 8 |
| 4<x<10 | 1"x20 GA. | 6 |
| 10<x | 1"x18 GA. | 4 |
- INSULATION: ALL SUPPLY AIR DUCTWORK SHALL BE INSULATED WITH 1 1/2" FIBERGLASS INSULATION OF 1 LB./C.F. DENSITY AND INTEGRAL VAPOR BARRIER JACKET. ALL EDGES, SEAMS, ETC. SHALL BE TAPED TO MAINTAIN VAPOR BARRIER.
 - ALL EXTERIOR STAINLESS STEEL DUCT SHALL BE SUPPORTED FROM THE BLDG. WALL PER SMACNA STANDARDS.

3 DUCT HANGERS/REINFORCEMENT
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Sheet Title: Supply Schedule 10 Feb 2022, 12:25pm

AIR HANDLING UNIT SCHEDULE																									
UNIT	AREA SERVED	SUPPLY FAN DATA				RETURN FAN DATA			COOLING COIL															HEATING COIL	
		TOTAL SYSTEM (CFM)	MINIMUM O.A. (CFM)	E.S.P. (IN WC)	MOTOR HP	TOTAL SYSTEM (CFM)	E.S.P. (IN WC)	MOTOR HP	ENT. AIR °F		LVG. AIR °F		GPM	W.P.D. (FT)	EWT °F	LWT °F	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	TOTAL CAPACITY (MBH)	ENT. AIR °F	LVG. AIR °F				
									DB	WB	DB	WB													
AHU-1	BAKERY	2,550	250	0.75	1.5	2,550	0.75	1.5	74	65.6	54.9	54.8	17.5	9.8	45	55	53	83	138	61	110.5				
AHU-2	PRODUCE	11,850	1850	1	15	11,850	1	10	76.3	64.7	53.8	53.5	81.6	11.8	45	55	288	387	765	57	115.6				
AHU-3	MARKET	10,100	1700	1	25	10,100	1	7.5	76.9	64.3	52.3	52.3	136	7.2	45	50.4	267	349	629	57	113.6				
AHU-4	KITCHEN	5,600	500	0.75	7.5	8,000	0.75	5	77.9	63.5	53.3	53	32	11.6	45	55	139	159	290	64	111.6				
AHU-5	BASMENT	1,120	230	0.75	1	---	---	---	76.9	65.7	54.1	54.1	8.2	0.9	45	54.9	28	39	72	53.7	111.8				
AHU-6	GARDEN CENETR	4,500	815	0.75	5	4,500	0.75	5	76.7	65.5	55	54.9	30	10.2	45	55	102	138	278	54.9	110.8				
AHU-7	GIFT SHOP	770	260	0.75	1	---	---	---	79.4	67.4	55.8	55.7	6	10.1	45	55	20.3	28.3	57.3	45.1	113.9				
AHU-8	CAFÉ	3,300	1180	0.75	5	3,300	0.75	5	79.9	68.1	54.3	54.2	29.6	13.4	45	54.9	91	140	249	44	110.9				
AHU-9	FLORAL SALES	1,800	305	0.75	2	1,800	0.75	2	76.1	64.6	55.8	55.7	10.1	1.7	45	55	40	48	109	56.3	111.2				

- NOTES:
1. PROVIDE SINGLE POINT POWER CONNECTION AND UNIT DISCONNECT.
 2. PROVIDE VFD'S ON ALL MOTORS.
 3. PROVIDE WITH MERV 8 PREFILTERS AND 4" MERV 14 PRIMARY FILTERS.
 4. PROVIDE WITH BUILT IN 120V GFI W/ TRANSFORMER.
 5. PROVIDE ACCESS DOORS FOR ACCESS TO COILS, FILTERS, AND MOTORS EXCEPT FOR AHU-5.
 6. PROVIDE AHU-1 THROUGH 4 WITH RETURN AIR DUCT SMOKE DETECTORS, INSTALLED BY MC AND WIRED BY EC.

MAKE-UP AIR UNIT																		"CAPTIVEAIRE" AS STANDARD OR APPROVED EQUAL		
UNIT NO.	SUPPLY FAN DATA				COOLING DATA					HEATING DATA				ELECTRICAL DATA				MODEL	WEIGHT	REMARKS
	TOTAL SYSTEM CFM	O.A CFM	E.S.P.	MOTOR HP	ENT. AIR °F (DB/WB)	LVG. AIR °F (DB/WB)	GPM	EWT/LWT (°F)	TOTAL CAPACITY MBH	TOTAL OUTPUT MBH	ENT. AIR (°F)	LVG. AIR (°F)	GPM	EWT/LWT (°F)	VOLTS/PHASE	MCA	MOCP			
MAU-1	1700	1700	0.5	1.5	92/75	82.0/72	5	45/55	24	117.7	2	70	12	180/160	208/3Ø	5.5	15	A1-15D	1000	SEE NOTES
MAU-2	6450	6450	0.5	10	92/75	82/72	20	45/55	90	501.4	2	74	52	180/160	208/3Ø	27	40	A3-24D	1600	SEE NOTES
MAU-3	1400	1400	0.3	1.5	---	---	---	---	---	102.8	2	70	11	180/60	208/3Ø	5.5	15	A1-15D	900	SEE NOTES
MAU-4	600	600	0.35	1	---	---	---	---	---	44.1	2	70	5	180/160	208/3Ø	4	15	A1-15D	800	SEE NOTES

- NOTES:
1. PROVIDE SIDE DISCHARGE.
 2. PROVIDE V-BANK EZ FILTERS.
 3. PROVIDE ALL UNITS WITH GFI CONVENIENCE OUTLET.
 4. PROVIDE ALL UNITS WITH COMMERCIAL SMOKE DETECTOR/ ALARM INTERLOCK.

HYDRONIC CEILING CASSETTES SCHEDULE															
UNIT NO.	LOCATION	TYPE	MANUFACTURER	MODEL NO.	COOLING DATA			HEATING DATA			MOUNTING LOCATION	FAN CFM	VOLT/PHASE	MCA	MOCP
					CAPACITY (BTU/HR)	EWI/LWT	GPM	CAPACITY (BTU/HR)	EWI/LWT	GPM					
HCCU-1	VESTIBULE #1	CEILING CASSETTE	CARRIER	42WKN08AAEBA	5,100	45/55	1.2	17,100	180/160	1.7	CEILING	300	120/1Ø	0.88	15
HCCU-2	VESTIBULE #2	CEILING CASSETTE	CARRIER	42WKN18AAEBA	12,500	45/55	2.8	27,300	180/160	2.7	CEILING	490	120/1Ø	1.1	15
HCCU-3	VESTIBULE #3	CEILING CASSETTE	CARRIER	42WKN20AAEBA	12,800	45/55	3.6	27,900	180/160	2.8	CEILING	540	120/1Ø	1.1	15

- NOTES:
1. PROVIDE A SPARE CLEANABLE WIRE MESH FILTER.
 2. PROVIDE ALL CASSETTES WITH CHILLED WATER/HOT WARTER CONTROL VALVES.
 3. PROVIDE ALL CASSETTES WITH FACTORY INSTALLED DISCONNECT SWITCH.
 4. PROVIDE CASSETTES WITH INTEGRAL CONDENSATE PUMPS. ROUTE TO NEAREST SANITARY WITH INDIRECT WASTE CONNECTION.

GRAVITY VENTILATOR SCHEDULE									
TAG	LOCATION	SERVICE	CFM	P.D. (IN. WC)	THROAT SIZE (IN.)	ROOF CURB (IN.)	MATERIAL	MODEL	REMARKS
IH-1	ROOF	OA (MAU-1)	1,700	0.07	18 X 22	26 X 30	ALUMINUM	WIH-18X22	SEE NOTES
IH-2	ROOF	OA (AHU-1 & 2)	14,440	0.09	54 X 54	62 X 62	ALUMINUM	WIH-54X54	SEE NOTES
IH-3	ROOF	OA (AHU-3)	10,110	0.09	46 X 46	54 X 54	ALUMINUM	WIH-46X46	SEE NOTES
IH-4	ROOF	OA (AHU-4)	8,000	0.08	36 X 48	44 X 56	ALUMINUM	WIH-36X48	SEE NOTES
IH-5	ROOF	OA (MAU-2)	6,450	0.09	36 X 36	44 X 44	ALUMINUM	WIH-36X36	SEE NOTES
IH-6	ROOF	OA (AHU-6 & AHU-7)	4,760	0.08	32 X 32	40 X 40	ALUMINUM	WIH-32X32	SEE NOTES
IH-7	ROOF	OA (AHU-8 & FCU-1)	3,360	0.09	28 X 28	34 X 34	ALUMINUM	WIH-28X28	SEE NOTES
IH-8	ROOF	OA (AHU-9)	1,800	0.08	20 X 20	28 X 28	ALUMINUM	WIH-20X20	SEE NOTES
EH-1	ROOF	EA (AHU-1 & 2)	16,150	0.10	54 x 54	62 x 62	ALUMINUM	WRH-54X54	SEE NOTES
EH-2	ROOF	EA (AHU-3)	18,360	0.10	54 X 60	62 X 68	ALUMINUM	WRH-54X60	SEE NOTES
EH-3	ROOF	EA (AHU-4)	8,000	0.10	36 X 40	44 X 48	ALUMINUM	WRH-36X40	SEE NOTES
EH-4	ROOF	EA (AHU-6 & 7)	4,760	0.09	30 x 30	38 x 38	ALUMINUM	WRH-30X30	SEE NOTES
EH-5	ROOF	EA (AHU-8)	3,300	0.08	26 X 26	34 X 34	ALUMINUM	WRH-26X26	SEE NOTES
EH-6	ROOF	EA (AHU-9)	1,800	0.10	18 X 18	26 X 26	ALUMINUM	WRH-18X18	SEE NOTES

- NOTES:
1. PROVIDE WITH INTEGRAL INSECT SCREEN

EXPANSION TANK SCHEDULE												
TAG	SERVICE	LOCATION	MANUFACTURER	MODEL NO.	OPERATING WEIGHT (LBS)	DIMENSIONS, INCHES (DIAM X H)	SYSTEM VOLUME, GALLONS	TANK SIZING, GALLONS (70%)	TANK VOLUME, GALLONS	TANK ACCEPTANCE VOLUME, GALLONS	PRE-CHARGE FILL PRESSURE, PSI	REMARKS
ET-1	BOILER/HOT WATER SYSTEM	MECHANICAL ROOM	TACO	CA300-125	1000	24 X 59	1550	1100	79	79	12	SEE NOTES
ET-2	CHILLED WATER SYSTEM	MECHANICAL ROOM	TACO	CA90-125	312	20 X 32	1250	870	23	23	12	SEE NOTES

- NOTES:
1. TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF THE ASME BOILER AND VESSEL CODE AND STAMPED FOR 125 PSIG WORKING PRESSURE.
 2. RELIEF VALVE SHALL BE SET AT 75 PSIG.
 3. MOUNT EXPANSION TANKS ON 6" HIGH CONCRETE PADS.

EXHAUST FAN SCHEDULE													
UNIT NO.	SERVICE	LOCATION	CFM	E.S.P.(IN.)	DRIVE	FAN RPM	FAN BHP	MOTOR HP	VOLT/PH	MCA	MOCP	MODEL	REMARKS
EF-1	MECHANICAL ROOM	ROOF MOUNTED	10000	0.3	BELT	429	1.32	2	460/3Ø	5.1	15	CUBE-360	GREENHECK
EF-2	BAKERY	ROOF	2090	0.9	DIRECT	1,446	0.54	3/4	208/1Ø	7.8	15	DU8SHFA	CAPTIVEAIRE
EF-3	SEAFOOD	ROOF	1275	0.6	DIRECT	1,441	0.3	1/2	208/1Ø	5.7	15	DU50HFA	CAPTIVEAIRE
EF-4	DISH	ROOF	750	0.2	DIRECT	1,118	0.09	1/3	208/1Ø	3.75	15	DU33HFA	CAPTIVEAIRE
EF-5	KITCHEN	ROOF	2470	0.8	DIRECT	1,544	0.65	1	208/1Ø	10.4	15	DU8SHFA	CAPTIVEAIRE
EF-6	KITCHEN	ROOF	2409	0.9	DIRECT	1,553	0.7	1	208/1Ø	10.4	15	DU8SHFA	CAPTIVEAIRE
EF-7	KITCHEN	ROOF	2676	0.9	DIRECT	1,094	0.92	1	208/1Ø	9.9	15	DU180HFA	CAPTIVEAIRE
EF-8	BATHROOM	ROOF	300	0.5	DIRECT	1,389	0.06	1/10	208/1Ø	---	15	CUE-90-VG	GREENHECK
EF-9	BASEMENT OFFICES	BASEMENT CEILING	650	0.35	DIRECT	860	0.07	1/8	208/1Ø	---	15	SQ-130-C	GREENHECK
EF-10	BASEMENT STORAGE	BASEMENT EXTERIOR WALL	1400	0.25	DIRECT	1,570	0.28	1/2	208/1Ø	5	15	SE1-14-436-VG	GREENHECK
EF-11	RECEIVING CORRIDOR	ROOF	600	0.35	DIRECT	1,161	0.08	1/4	208/1Ø	2.6	15	CUE-99-VG	GREENHECK
EF-12	BATHROOM	ROOF	150	0.5	DIRECT	1,449	0.04	1/10	120/1Ø	3	15	CUE-080-VG	GREENHECK
EF-13	PIZZA	ROOF	600	0.9	DIRECT	1,449	0.3	1/2	208/1Ø	5.7	15	DU50HFA	CAPTIVEAIRE

- NOTES:
1. PROVIDE ALL FANS WITH THERMAL OVERLOAD PROTECTION.
 2. PROVIDE ALL FANS WITH VFD'S IF NOT SPECIFIED WITH A VARIABLE SPEED ECM MOTOR.
 3. PROVIDE ALL ROOF MOUNTED FANS WITH 20" ROOF CURB.
 4. PROVIDE ALL FANS WITH ISOLATION BACKDRAFT DAMPERS.
 5. PROVIDE EF-10 & 11 WITH WALL HOUSING AND 45" WEATHERHOOD.

BOILER SCHEDULE													
UNIT NO.	LOCATION	TYPE	SIZE (HP)	GAS TYPE	INPUT (MBH)	OUTPUT (MBH)	GAS PRESSURE RQD. (IN WC)	ELECTRICAL DATA		WEIGHT (LBS)	MODEL NO.	MANUFACTURER	REMARKS
								VOLTS/PHASE	MOCPP				
B-1, 2, 3	MECHANICAL ROOM	HOT WATER	70	NATURAL GAS	2,500	2,360	3 - 14	120/1Ø	20	1550	P-K MACH C2500	PATTERSON KELLEY	SEE NOTES

NOTES:

1. PROVIDE KH-1, 2, AND 4-7 WITH RECESSED LIGHTS.
2. PROVIDE KH-1, 2, AND 4-7 WITH 85% EFFICIENCY 7 MICRON FILTERS.
3. PROVIDE ALL HOODS WITH FACTORY BACKSPALSHES.
4. PROVIDE ALL HOOD WITH FACTORY PERFORATED SUPPLY PLENUMS.
5. PROVIDE ALL COOKING HOODS WITH ANSUL FIRE SUPPRESSION SYSTEM AND ALL RESPECTIVE TANKS AND CONTROL BOXES

NOTES:

1. ALL AIR OUTLETS SHALL BE HEAVY DUTY CONSTRUCTION.
2. ALL CEILING DIFFUSERS ARE FOUR WAY DIRECTIONAL THROW UNLESS OTHERWISE NOTED.
3. ALL DIFFUSERS/GRILLES SHALL BE INSTALLED AND SUPPORTED AS PER MANUFACTURER'S INSTRUCTIONS.
4. PROVIDE LINEAR DIFFUSERS WITH ADJUSTABLE AIRFLOW CONTROLLERS.

NOTES:

1. COLOR AS PER ARCHITECT OR MATCH EXTERIOR.
2. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.

NOTES:

1. PROVIDE ALL PUMPS WITH COMBINATION STARTERS/VFD.
2. INSTALL PUMPS ON NEW CONCRETE PADS, SEE DETAILS.
3. PROVIDE END SUCTION PUMPS WITH WITH END SUCTION STRAINER DIFFUSERS.
4. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS.
5. PUMP OPERATION BASED ON 30% PROPYLENE GLYCOL.

NOTES:

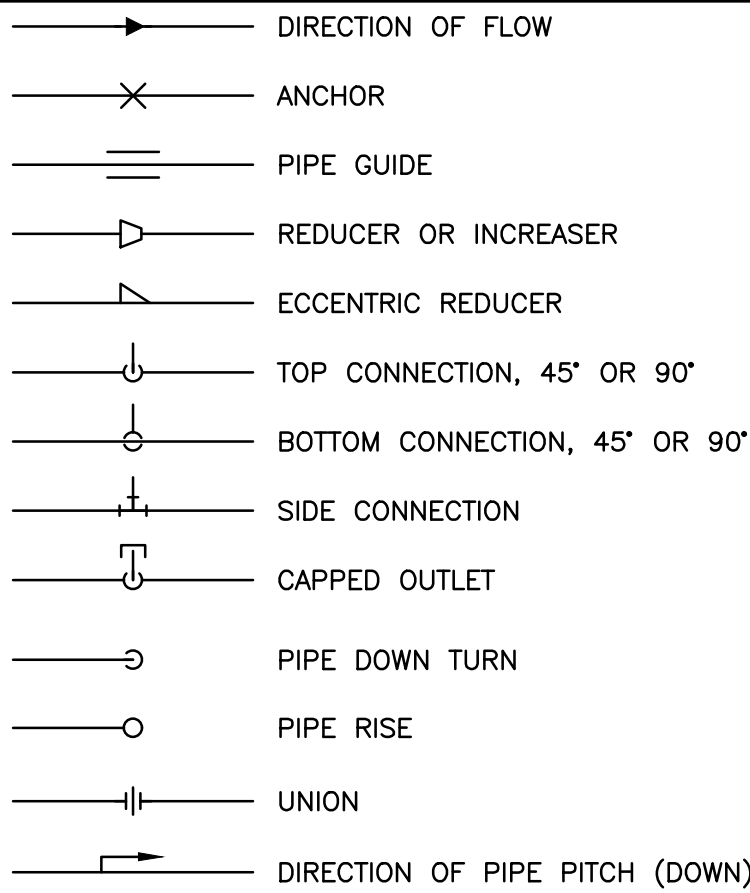
1. PROVIDE CONDENSATION PUMPS FOR ALL INDOOR EQUIPMENT PIPE TO NEAREST SANITARY CONNECTION WITH FUNNEL DRAIN.
2. INSTALL HP-1 WITH ACCESSORY BASE PAN HEATER.
3. SIZE REFRIGERANT PIPING AS RECOMMENDED BY MANUFACTURER.
4. PROVIDE WITH WIND BAFFLES.
5. EC SHALL PROVIDE POWER TO INDOOR UNITS THROUGH OUTDOOR UNIT.

NOTES:

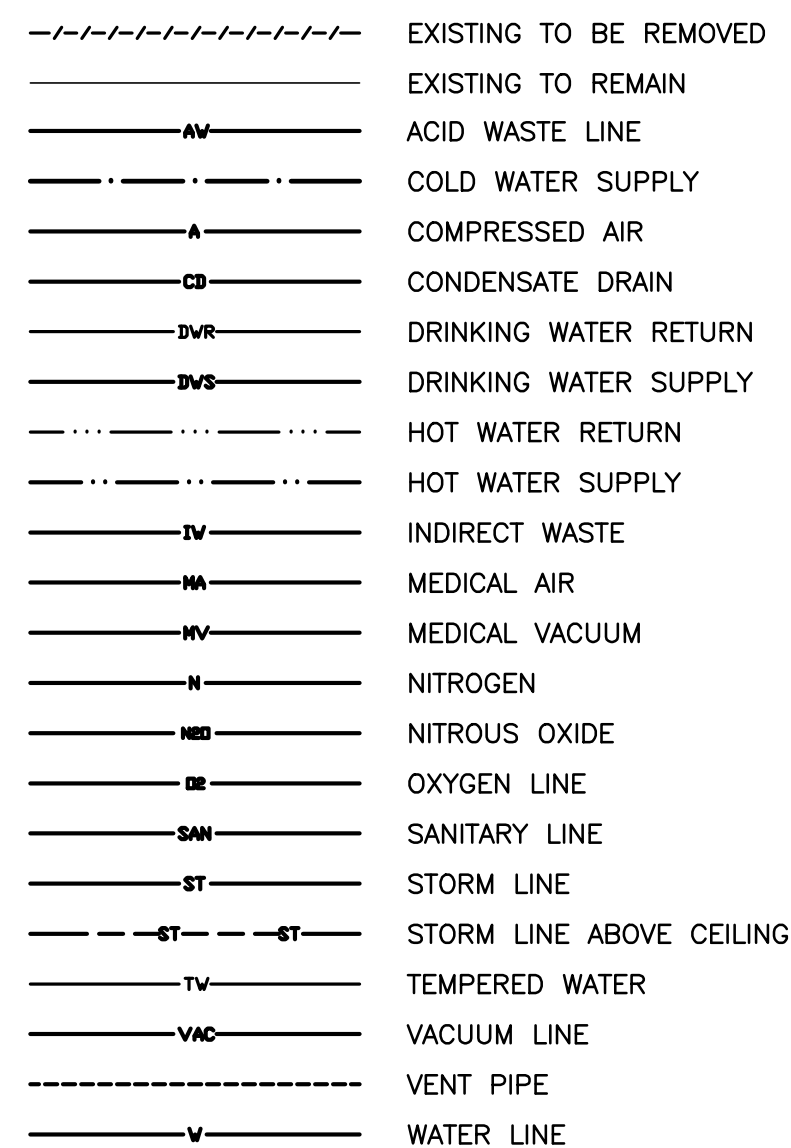
1. PROVIDE UNIT WITH DISCONNECT.
2. PROVIDE UNIT WITH HANGING BRACKETS.
3. PROVIDE UNIT ELECTRIC MOTOR TOTALLY ENCLOSED & THERMALLY PROTECTED.
4. PERFORMANCE BASED ON 30% PROPYLENE GLYCOL OPERATION.
5. PROVIDE UNIT WITH SPACE T-STAT, ISOLATION CONTROL VALVE AND AQUASTAT.

GENERAL PLUMBING NOTES:

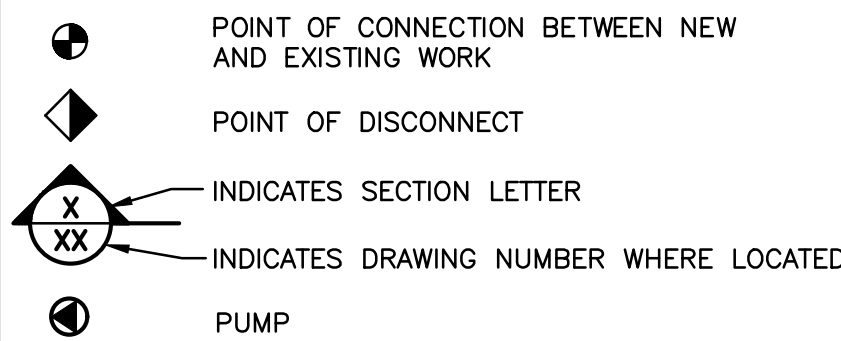
PIPING SYMBOLS



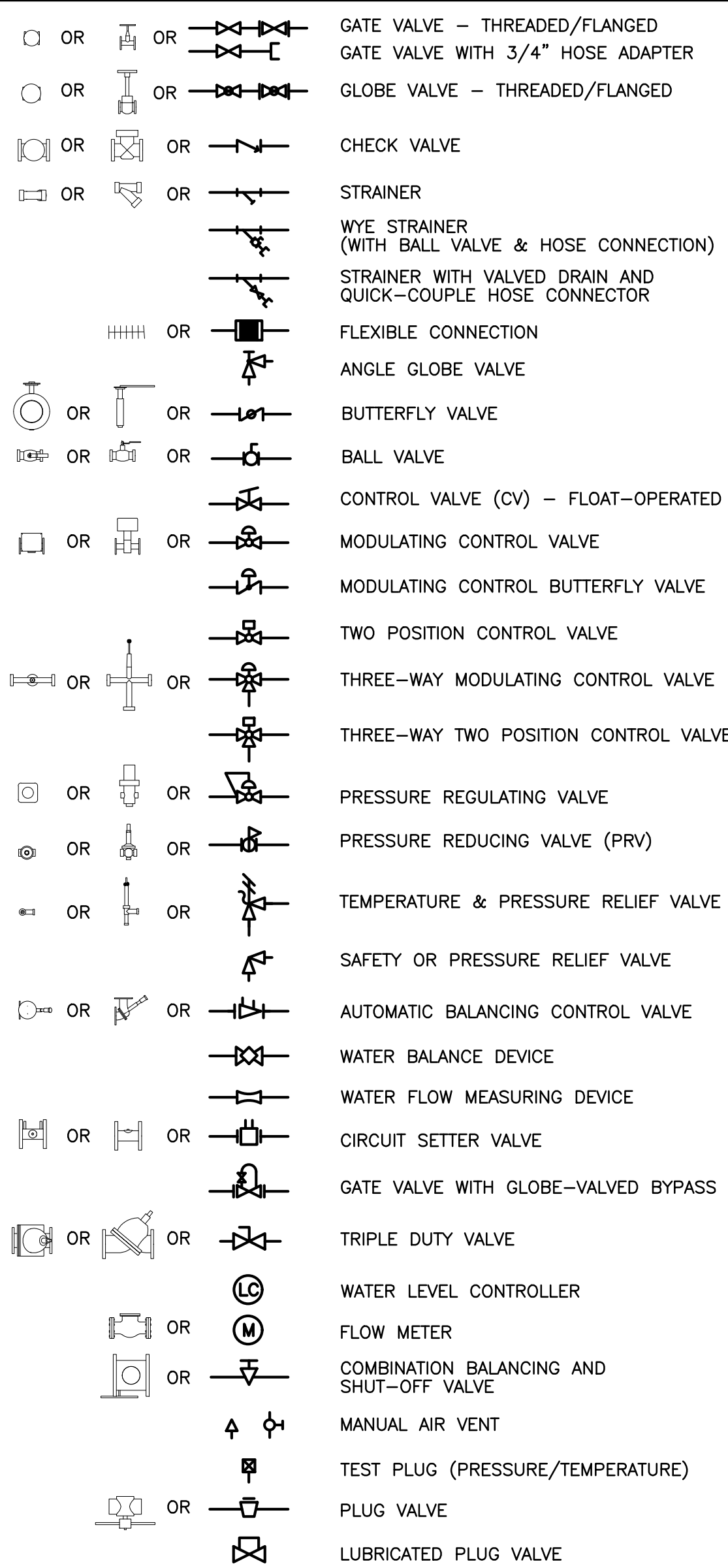
PLUMBING LINE TYPES



GENERAL SYMBOLS



VALVE SYMBOLS



ABBREVIATIONS

ACT	MEDICAL AIR
AD	ACOUSTIC CEILING TILE
AF	ACCESS DOOR
AF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
AW	ACID WASTE PIPE
BTUH	BRITISH THERMAL UNITS/HOUR
CLG	CEILING
CO	CLEAN OUT
CP	CONDENSATE PUMP
CW	DOMESTIC COLD WATER
DIA	DIAMETER
D	DRAIN
DN	DOWN
DP	DIFFERENTIAL PRESSURE
ECC	ELECTRICAL CONTRACTOR
E.C.	ENGINEERING CONTROL CENTER
EMD	END OF MAIN DRIP (STEAM)
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EXIST	EXISTING
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FLR.	FLOOR
FRC	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
G.SAN	"GREASE LADEN" SANITARY DRAINAGE PIPE
H.C.	HVAC CONTRACTOR
HP	HORSE POWER
HTWR	HIGH TEMP. HOT WATER RETURN PIPE (140°F)
HTWS	HIGH TEMP. HOT WATER PIPE (140°F)
HW	DOMESTIC HOT WATER PIPE (120°F)
HW	DOMESTIC HOT WATER RETURN PIPE (120°F)
LBS/HR	POUNDS PER HOUR
LF	LINEAR FEET
MB	MAXIMUM
MBH	ONE THOUSAND BTUH
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MV	MEDICAL VACUUM
NOM.	NOMINAL
O	OXYGEN
P	PUMP
P.C.	PLUMBING CONTRACTOR
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE IN.
SAN	SANITARY DRAINAGE PIPE
S.S.	STAINLESS STEEL
ST	STORM DRAINAGE PIPE
UH	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
V	VENT PIPE
VI	VERIFICATION ISOLATOR
VIF	VERIFY IN FIELD
VTO	VENT THROUGH ROOF
WCR	WALL CLEAN OUT
WF	WATER FILTER
WFM	WATER FLOW MEASURING DEVICE
WH	WATER HEATER

LEGEND AND SCHEDULE OF PLUMBING EQUIPMENT

LEGEND AND SCHEDULE OF PLUMBING EQUIPMENT			
SYMBOL	MANUFACTURER	CATALOG #	DESCRIPTION
WC-1	TOTO	CT7086G	WALL HUNG WATER CLOSET WITH DIRECT FEED SIPPON JET FLUSHING ACTION, ELONGATED BOWL, 1 1/2" TOP INLET SPUD, BOWL MADE OF VITREOUS CHINA WITH "CaféTone" CERAMIC GLAZING, 1.28 GALLONS PER FLUSH, 801 COTTON CLOUT. PROVIDE WITH TOTO MODEL NO. TETJ1N32KWC EXPOSED, BATTERY POWERED, SENSOR ACTIVATED, HIGH EFFICIENCY FLUSHOMETER, ADJUSTABLE WALL CARRIER, TOTO MODEL NO. SC534 SEAT, AND ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ANSI A117.1-2009 AND 2010 ADA REQUIREMENTS TO FACILITATE ACCESS FOR THE PHYSICALLY HANDICAPPED.
WC-2	KOHLER	K-25077	KINGSTON FLOOR MOUNTED WATER CLOSET, ELONGATED BOWL, BOWL MADE OF VITREOUS CHINA, 1.28 GALLONS PER FLUSH, WHITE. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION. ALL FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH ANSI A117.1-2009 AND 2010 ADA REQUIREMENTS TO FACILITATE ACCESS FOR THE PHYSICALLY HANDICAPPED.
U-1	AMERICAN STANDARD	6590-001	WASHBROOK FLOWWISE VITREOUS CHINA, 3/4 INLET SPUD, 0.125 TO 1 GALLONS PER FLUSH, OUTLET CONNECTION "THREADED 2" INSIDE, FLUSHING RIM, AND EXTENDED SIDES. PROVIDE WITH "ULTIMA" 6145051.002 FLUSH VALVE (0.5 GPF). PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
LV-1	KOHLER	K-1728	"CHESAPEAKE" WALL MOUNTED SINK ADA COMPLIANT, 4" CENTER FAUCET HOLES, VITREOUS CHINA, PROVIDE WITH "TRITON BOWL" K-40072 1.0 GPM 4" CENTERSET FAUCET, AERATED FLOW, WHIRLBADE HANDLES, AND THERMOSTATIC MIXING VALVE. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
S-1	JUST MANUFACTURING	SL-ADA1617-A-GR	16" X 17" STAINLESS STEEL DROP-IN LAVATORY, 2 HOLES ON 4" CENTERS. PROVIDE WITH AMERICAN STANDARD "7500.170", 5" SPOUT SPREAD, 1.5 GPM GOOSENECK FACUET WITH WHIST BLADES. PROVIDE ALL OTHER HARDWARE FOR A COMPLETE INSTALLATION.
MS-1	FIAT	TSB100	24"x24" PRE-CAST TERRAZZO MOP BASIN WITH 12" HIGH WALLS. PROVIDE WITH MOP SERVICE BASIN FITTING, HOSE AND HOSE BRACKET, 2.5 STAINLESS STEEL WALL GUARDS, AND ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
DF-1	ELKAY	LZW5-LRP6M2BK	ELKAY EZH2O BOTTLE FILLING STATION WITH B1 LEVEL AD COOLER, FILTERED 8 GPH STAINLESS, 50°F DRINKING WATER, BASED ON 80°F INLET AND 90°F AMBIENT, 115V/60HZ. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
RD-1	ZURN	Z164	COMBINATION PRIMARY AND OVERFLOW ROOF DRAIN ASSEMBLY, LOW SILHOUETTE DOMES WITH TOP DECK PLATE, DURA-COATED CAST IRON BODIES. PROVIDE CAST IRON DOME CONSTRUCTION. COORDINATE PIPE SIZES WITH DRAWINGS. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
FD-1	ZURN	Z415BZ-AR	CAST IRON FLOOR DRAIN WITH ACID RESISTANT EPOXY COATING, LEVELING STRAINER, AND NICKEL BRONZE STRAINER. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
FD-2	ZURN	Z415BZ-AR-Y	CAST IRON FLOOR DRAIN WITH ACID RESISTANT EPOXY COATING, LEVELING STRAINER, NICKEL BRONZE STRAINER, AND SEDIMENT BUCKET PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
FD-3	ZURN	Z415B-P	CAST IRON FLOOR DRAIN WITH FLASHING COLLAR WITH WEEPS, TRAP PRIMER CONNECTION, AND ADJUSTABLE NICKEL BRONZE STRAINER. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
FD-4	ZURN	Z415B-P-Y	CAST IRON FLOOR DRAIN WITH FLASHING COLLAR WITH WEEPS, SEDIMENT BUCKET, TRAP PRIMER CONNECTION, AND ADJUSTABLE NICKEL BRONZE STRAINER. PROVIDE WITH ALL OTHER HARDWARE REQUIRED FOR COMPLETE INSTALLATION.
TD-1	WATTS	---	PRE-SLOPED POLYPROPYLENE TRENCH DRAIN SYSTEM WITH DUCTILE IRON FRAME AND REINFORCED STAINLESS STEEL GRATE.
FS-1	JOSAM	---	FLOOR SINK WITH ACID RESISTANT BODY, BOTTOM OUTLET, ALUMINUM INTERNAL DOME STRAINER. PROVIDE WITH CAST IRON, NON TRAFFIC, ACID RESISTANT, 9" SQ. ANTI-TILTING GRATE.
FS-2	JOSAM	---	FLOOR SINK WITH ACID RESISTANT BODY, BOTTOM OUTLET, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, ALUMINUM INTERNAL DOME STRAINER. PROVIDE WITH CAST IRON, NON TRAFFIC, ACID RESISTANT, 9" SQ. ANTI-TILTING GRATE.
ST-1	JOSAM	---	FLOOR SINK WITH ACID RESISTANT BODY, BOTTOM OUTLET, DOUBLE DRAINAGE FLANGE WITH WEEPHOLES, ALUMINUM INTERNAL DOME STRAINER. PROVIDE WITH CAST IRON, NON TRAFFIC, ACID RESISTANT, 9" SQ. ANTI-TILTING GRATE.
ET-1	TACO	CA90-125P	100 GALLON DOMESTIC WATER EXPANSION TANK. 150 PSIG WORKING PRESSURE, STEEL SHELL, NSF CERTIFIED. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
ST-1	RAYPAK	951119	115 GALLON DOMESTIC HOT WATER INSULATED STORAGE TANK. HIGH TEMPERATURE GLASS LINING WITH (2) MAGNESIUM ANODE RODS. 160 PSIG WORKING PRESSURE. PROVIDE ALL OTHER HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.
WH-1	QUICKDRAW	1300-L-500A-QWD	500 GALLON PACKAGED INDIRECT WATER HEATER, 620 GALLON PER HOUR RECOVERY AT 100°F RISE, AND 53 GPM OF BOILER WATER AT 180°F AT A 20 DEGREE ΔT.
CP-1	TACO	008-IO5F6-1FC	STAINLESS STEEL CASING, 0-15 GPM FLOW RANGE, 0-15 FEET OF HEAD RANGE. 115V, 60 HERTZ, 10, 3250 RPM, 1/25 HP.
CP-2	TACO	007-SF5-7-1FC	STAINLESS STEEL CASING, 0-17 GPM FLOW RANGE, 0-8.5 FEET OF HEAD RANGE. 115V, 60 HERTZ, 10, 3250 RPM, 1/25 HP.

ENERGY CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S
KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE
PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH
THE 2020 ENERGY CODE.

UNIFORM CODE STATEMENT:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S
KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE
PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH
THE 2020 UNIFORM CODE.

2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NYS
TABLE C403.11.3

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (NCHES)				
	CONDUCTIVITY (BTU/IN·HR·°F) ^a	MEAN RATING TEMPERATURE °F	<1"	1 to <1½"	½ to <4"	4" to <8"	8"
> 350	0.32–0.34	250	4.5	5.0	5.0	5.0	5.0
251–350	0.29–0.32	200	3.0	4.0	4.5	4.5	4.5
201–250	0.27–0.30	150	2.5	2.5	2.5	3.0	3.0
141–200	0.25–0.29	125	1.5	1.5	2.0	2.0	2.0
105–140	0.21–0.28	100	1.0	1.0	1.5	1.5	1.5
40–60	0.21–0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20–0.26	50	0.5	1.0	1.0	1.0	1.5

FOR SL: 1" = 25.4mm, °C = (°F-32)/1.8

a. for PIPING SMALLER THAN 1½" AND LOCATED IN PARTITIONS WITHIN CONTAINED SPACES, REDUCTION OF THESE THICKNESSES BY 1" SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B) BUT NOT TO A THICKNESS LESS THAN 1".

b. for INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:

$$T = r \{ (1 + R/R')^{1/2} - 1 \}$$

WHERE:

T = MINIMUM INSULATION THICKNESS

r = ACTUAL OUTSIDE RADIUS OF PIPE

R = INSULATION THICKNESS LISTED IN THE TABLE APPLICABLE FLUID TEMPERATURE AND PIPE SIZE

K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE AND PIPE SIZE

R' = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE

c. for DIRECT-BURNED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1½" (38mm) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE B BUT NOT TO THICKNESSES LESS THAN 1".

SUMP PUMP SCHEDULE											"GOULD PUMPS" AS STANDARD OR APPROVED EQUAL		
UNIT NO.	LOCATION	PUMP DATA							MIN. SUMP DIMENSIONS		MODEL	REMARKS	
		NO.	GPM	T.D.H. (F.T.)	SOLIDS (IN.)	DISCHARGE (IN.)	H.P.	VOLT./PH	AMPS	DIAMETER (IN.)			DEPTH (IN.)
SP-1	ELEVATOR PIT	1	3	18	3/8	1-1/2	1/3	115/1	2.9	18	24	LPSP311AF	20 FT. CORD

"GOULD PUMPS" AS
OR APPROVED EQUIVALENT

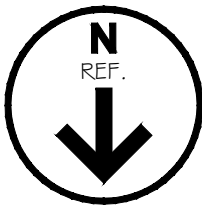
PLUMBING: NOTES, SYMBOLS, & ABBREVIATIONS

**PLAN B RETAIL DESIGN
& PROJECT MANAGEMENT, LLC**
192 Goose Lane, Tolland, CT 06084
Tel: 860.870.5380 Fax: 860.870.5389
e-mail: cbornely@planbretail.com

2022, 2021

SHEET NO.:

P0.1

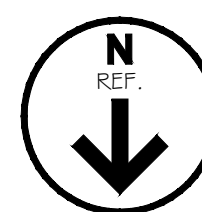


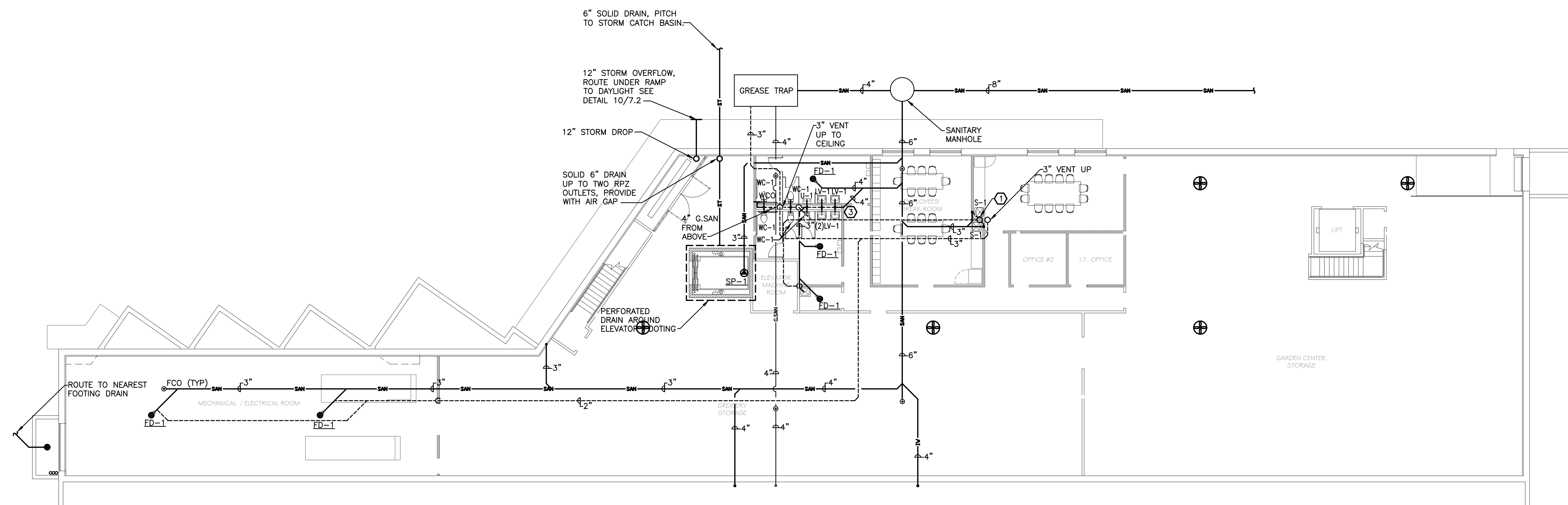


- ① 1½" V UP TO CEILING. 3" VTR.
- ② 2" V UP TO CEILING. 3" VTR.
- ③ 2½" V UP TO CEILING. 3" VTR.
- ④ PROVIDE "BIG DIPPER" AUTOMATIC GREASE INTERCEPTOR MODEL NUMBER W-250-IS. ALL GREASE INTERCEPTORS SHALL BE UNDER POT SINK SIDEBOARDS.

1 PLUMBING: SANITARY PIPING FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

SCALE: 3/32" = 1'-0"

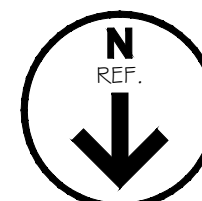




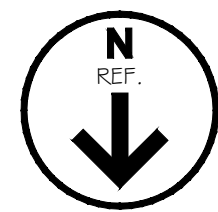
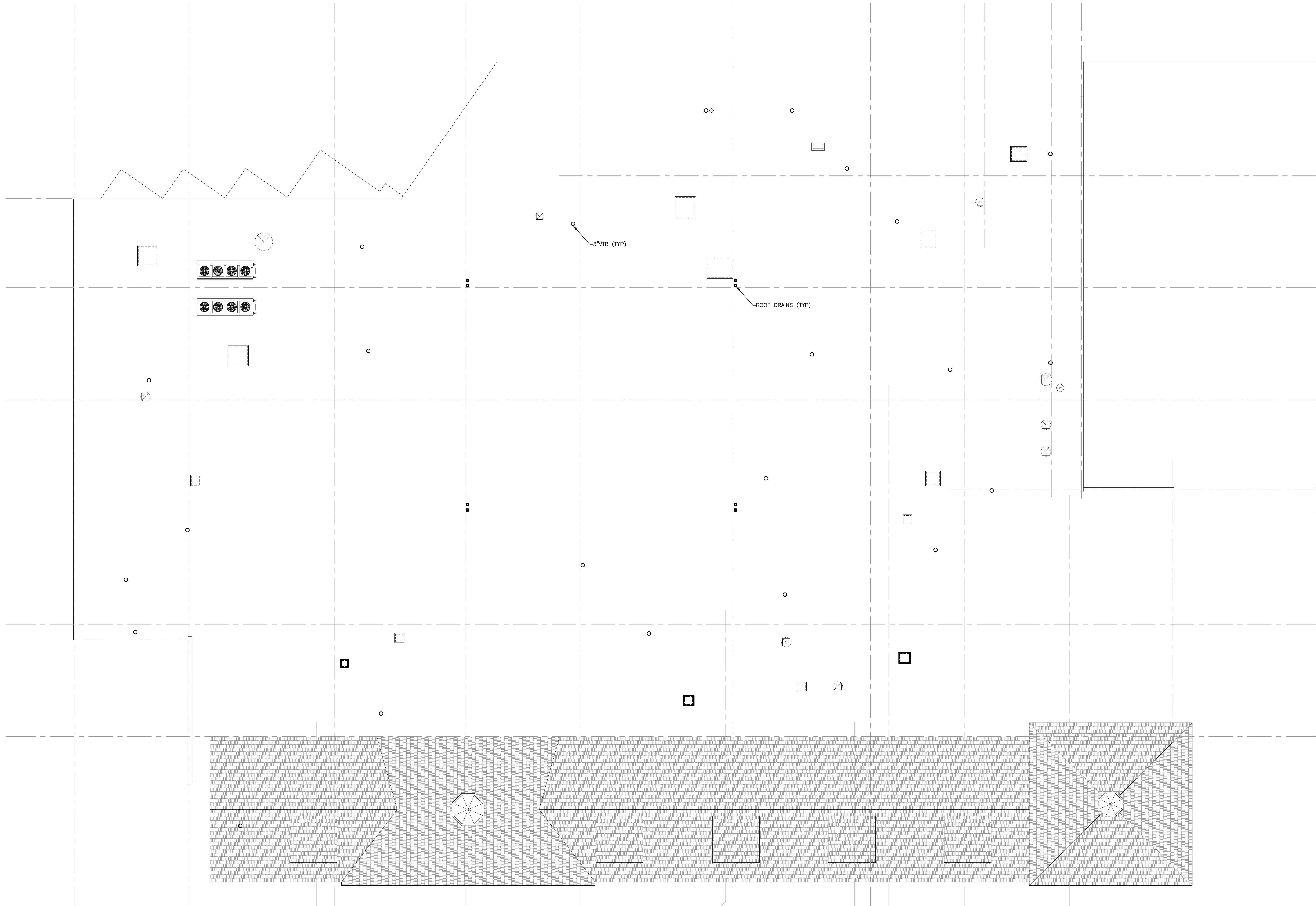
1 PLUMBING: SANITARY PIPING BASEMENT PLAN
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- ① 2"V UP
- ② 2½"V UP
- ③ ROUTE ALL DROPS AND RISES WITHIN CHASE IN STUD SPACING

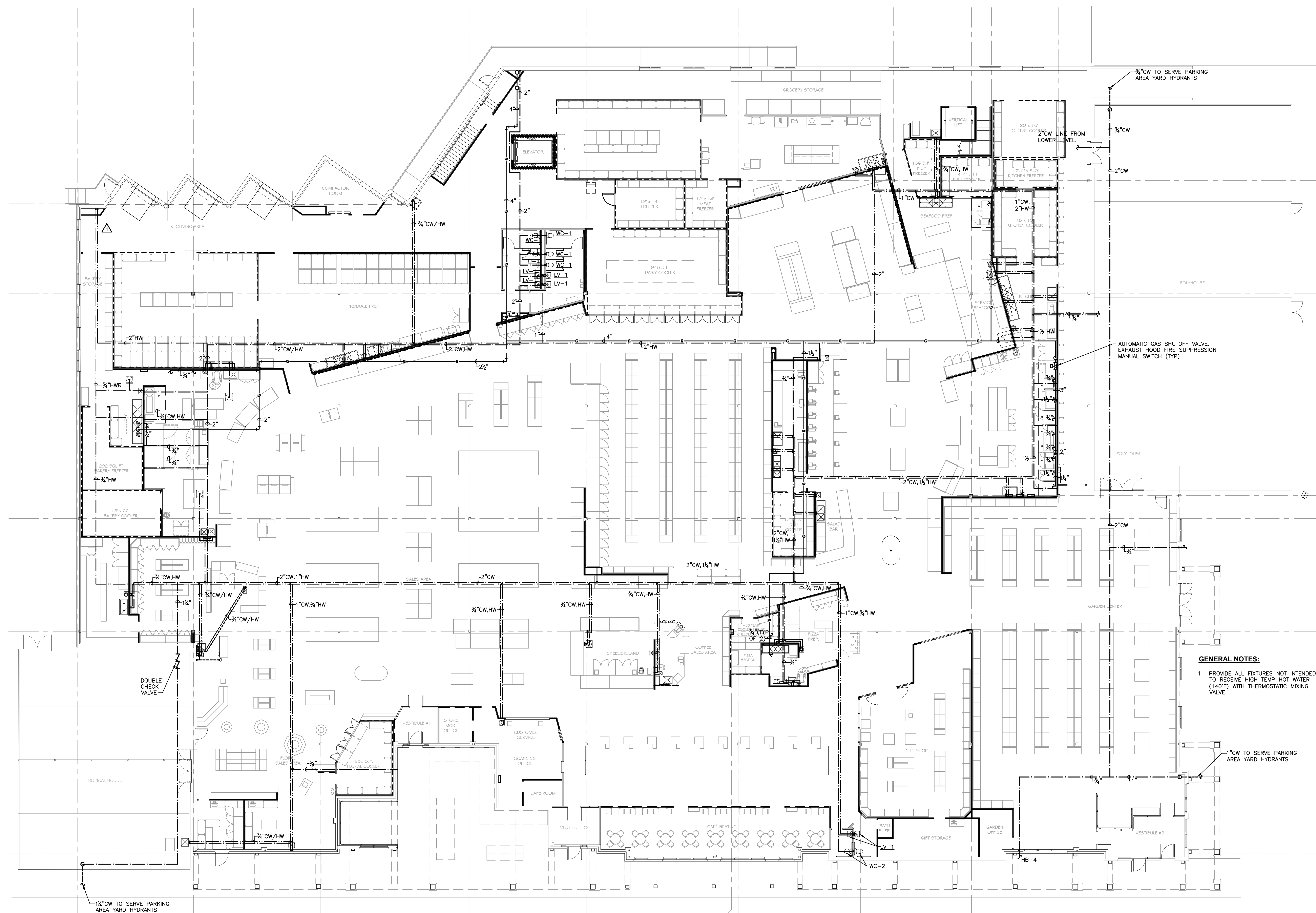


 PLAN REF	DATE: Feb. 22, 2022	PROJECT NO:		SHEET NO:		P1.2
PLAN B Retail Design & Project Management, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5388 e-mail: cbomek@planbretail.com						
DRAWING TITLE: PLUMBING: SANITARY PIPING FLOOR PLAN						
PROJECT NAME:  ADAMS FAIRACRE FARMS						
SEAL: DANIEL STERNBERG, P.E. 						
FELLENZNER III ENGINEERING LLP www.fellenzner.com 111 Church St., Suite 100, 22 Malvern St., 8th Fl., 2A, Newburyport, MA 01950 1-800-445-4296 / 978-662-4296 P/E # 30,364 111 Church St., Suite 100, Newburyport, MA 01950 1-800-445-4296 / 978-662-4296						
REVISIONS:						

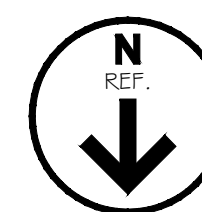


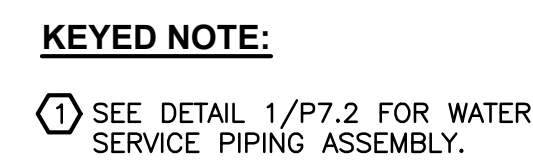
1 PLUMBING: ROOF PLAN

DATE: Feb. 22, 2022	PLAN RETAIL		PLAN B Retail Design & Project Management, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5388 e-mail: cbomeli@planbretail.com		DRAWING TITLE:	PROJECT NAME:  ADAMS FAIRACRE FARMS		SEAL: DANIEL STENBERG, P.E. 	FELLEENZER III ENGINEERING LLP www.felle.com 187 Clinton St., Suite 100, New York, NY 10038 1845-343-4596 1845-343-4481 Fax # 212-394 1845-343-4481 1845-343-4486		REVISIONS:
PROJECT NO:	SHEET NO:		P1.3		SCALE:	AS SHOWN	DRAWN BY: SRB	CHECKED BY: MDF			



1 PLUMBING: DOMESTIC PIPING FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

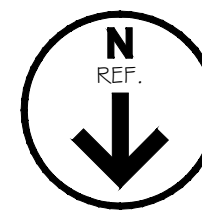
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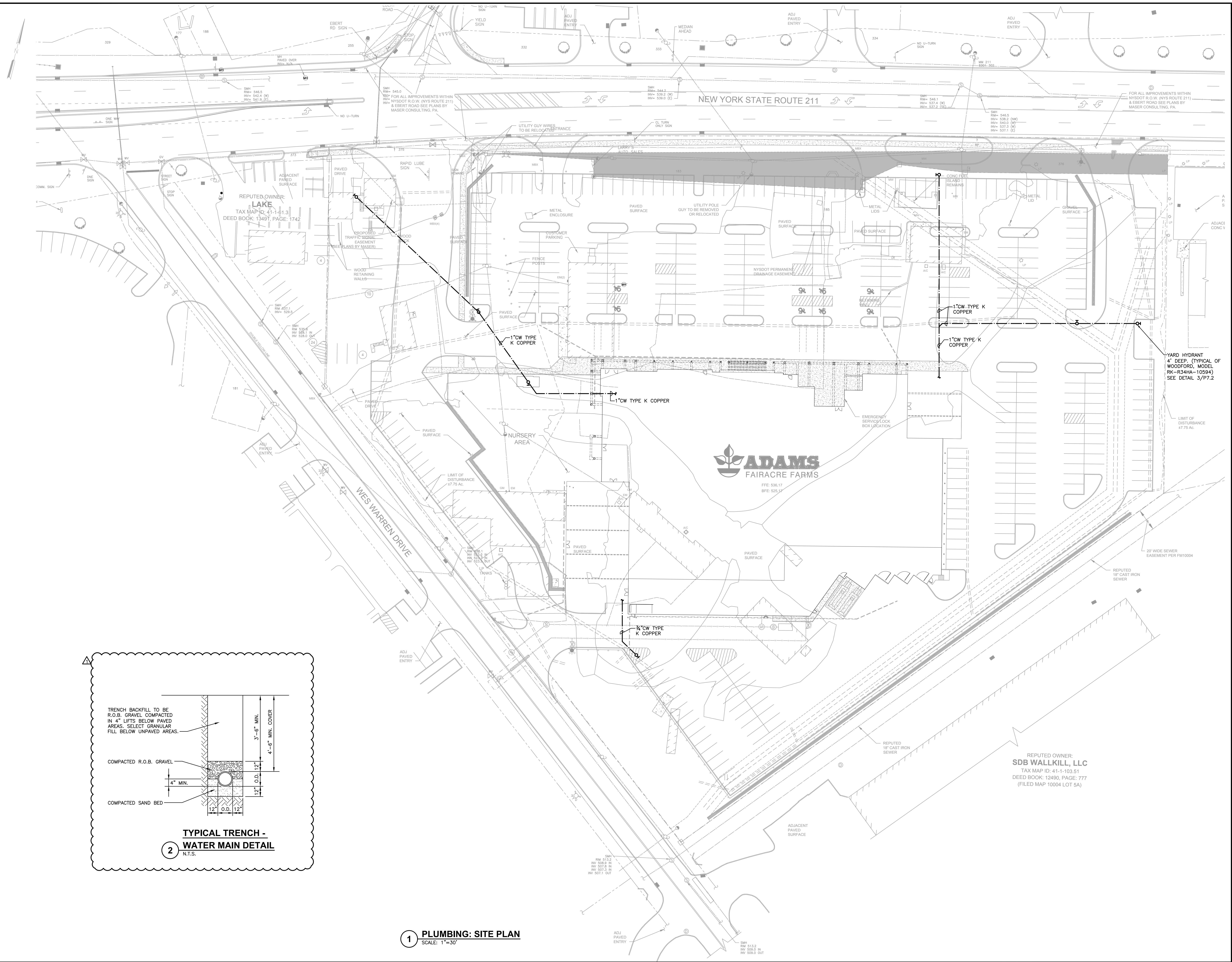
SCALE: 3/32" = 1'-0"

GENERAL NOTE:

1. PROVIDE ALL FIXTURES NOT RECEIVING HIGH TEMP HOT WATER (140°F) WITH THERMOSTATIC MIXING VALVE.



DATE: Feb-22, 2022		PROJECT NO.		SHEET NO.		P2.2	
PLAN B Retail Design & PROJECT MANAGEMENT, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomelli@planbretil.com		DRAWING TITLE		PROJECT NAME		PLUMBING: DOMESTIC PIPING FLOOR PLAN	
SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
PLAN B Retail Design & PROJECT MANAGEMENT, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomelli@planbretil.com		DRAWING TITLE		PROJECT NAME		PLUMBING: DOMESTIC PIPING FLOOR PLAN	
SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
PLAN B Retail Design & PROJECT MANAGEMENT, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomelli@planbretil.com		DRAWING TITLE		PROJECT NAME		PLUMBING: DOMESTIC PIPING FLOOR PLAN	
SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
PLAN B Retail Design & PROJECT MANAGEMENT, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomelli@planbretil.com		DRAWING TITLE		PROJECT NAME		PLUMBING: DOMESTIC PIPING FLOOR PLAN	
SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
PLAN B Retail Design & PROJECT MANAGEMENT, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomelli@planbretil.com		DRAWING TITLE		PROJECT NAME		PLUMBING: DOMESTIC PIPING FLOOR PLAN	
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SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
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SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
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SCALE:		AS SHOWN		DRAWN BY: AH		CHECKED BY: MDF	
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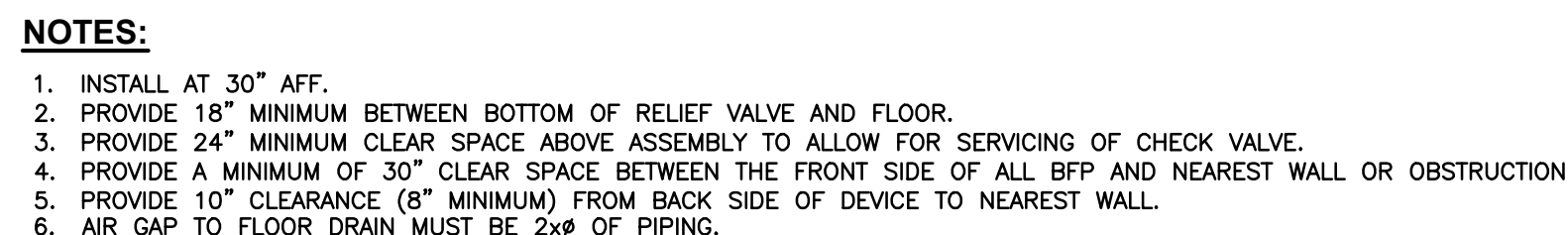


DATE: Feb 22, 2022		PROJECT NO.		SHEET NO.	
P2.3		PLAN B Retail Design & Project Management, LLC 12 Goose Lane, Tolland CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomeli@planetbretail.com			
DRAWING TITLE:		PLUMBING: SITE PLAN		SCALE:	AS SHOWN
DRAWING NO.		PROJECT NO.		CHECKED BY:	SRB
PROJECT NO.		PROJECT NO.		CHECKED BY:	MDF



HANGER RODS AND VIB. ISOLATORS SCHEDULE		MASON INDUSTRIES AS STANDARD	
PIPE SIZE	ROD SIZE	VIBRATION WATER	ISOLATOR SIZE
3/4" THRU 1 1/4" DIA.	3/8"	HS-A-45	
1 1/2" through 2 1/2" DIA.	3/8"	HS-A-75	
2 1/2" DIA.	1/2"	HS-A-125	
3" DIA.	1/2"	HS-A-200	
4" DIA.	5/8"	HS-A-200	





A schematic diagram of a vertical pipe station assembly. At the top, a circular cap with a central opening is labeled 'PIPING'. Below the cap is a 'PIPE STATION SUPPORT SADDLE WITH U-BAR'. A vertical pipe, labeled 'PIPE STATION', extends downwards from the saddle. At the base of the pipe, there is a 'THREADING FLANGE' and a 'TYPICAL EQUIPMENT SUPPORT PAD'. The entire assembly is mounted on a 'CONCRETE FLOOR/PAD'. A label 'MOUNTING BOLTS PER MANUFACTURER'S RECOMMENDATIONS.' points to the base of the pipe where it meets the support pad.

[illegible]

WALLCOVER

MAY EXTEND AS A WASTE OR A VENT LINE.

WALL

9 INCHES

PLUGGED TEE WITH CLEANOUT.

FLOOR LINE

CAST-IRON PIPE.

TO MAIN

ROUND: ZURN Z-1446
(T. PLUG & ROUND COVER)

SQUARE: ZURN Z-1447
(T. PLUG & SQUARE ACCESS PANEL)

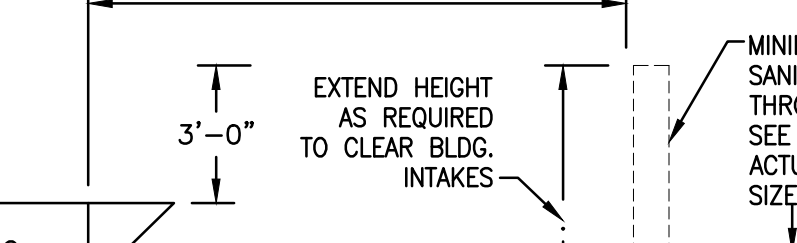


Diagram illustrating the Sanitary Vent Through Roof Detail. The vent pipe extends through the roof structure, with a minimum height of 10'-0" (SEE NOTE 1) above the roof level. The vent pipe is labeled "SANITARY VENT" and includes an "INCREASER FITTING WHERE REQUIRED". The roof structure shows "HVAC ROOF TOP EQUIPMENT" on the left, "F.A.I. HOODS OR LOUVERS" in the center, and "WATERTIGHT FLASHING AND COUNTER-FLASHING" at the base of the vent. The vent pipe is labeled "MINIMUM 3\"/>

Diagram illustrating the fire-rated penetration of a pipe through a wall, showing the required components and materials:

- INTERIOR WALL
- 3M FS-195 WRAP AND CP 25 CAULK MAINTAIN FIRE RATING
- PIPE & INSULATION (WHERE APPLICABLE)
- STAINLESS STEEL ESCUTCHEON PLATE IN FINISHED AREAS ONLY
- SHEET METAL SLEEVE
- WALL CONSTRUCTION

Diagram illustrating the connection of a Remote Alarm System for a building alarm system, showing the connection between the Remote Alarm unit, the Control Panel, the Pump, and the Discharge Line.

The diagram shows the following components and connections:

- REMOTE ALARM:** A unit with a single terminal and three indicator lights, connected to the Control Panel via a **TWO WIRE CABLE**.
- CONTROL PANEL:** A unit with four terminals, connected to the Remote Alarm and the Pump.
- PUMP:** A unit with a **CHECK VALVE** and a **DISCHARGE LINE**, connected to the Control Panel and the Remote Alarm.
- 120V RECEPTACLE:** Two receptacles are shown, one connected to the Pump and the other to the Remote Alarm.
- ELEVATOR PIT:** The area where the pump and discharge line are located.
- Oil Level Indicators:** Three horizontal dashed lines indicate the **PUMP "ON" LEVEL**, **PUMP "OFF" LEVEL**, and **OIL "FILM" DETECTION LEVEL**.

Diagram illustrating a 4" sanitary main in a floor. The main is shown with a cleanout connection. A pump discharge from an elevator sump pump is connected to the main at a 45° angle, sloping upwards. The connection is labeled "LOCATE AT TOP 90° OF PIPE". The main is labeled "4\" sanitary main in floor" and "TO CLEANOUT". The pump discharge is labeled "PUMPED DISCHARGE FROM ELEVATOR SUMP PUMP" and "SLOPE".

A cross-sectional diagram of a pipe repair. A horizontal pipe is shown with a break in the middle. A sleeve is placed over the break, secured by a band. The sleeve is filled with cement grout. The pipe is surrounded by a wall, which is also shown with a break in the middle. Labels include: PIPE SLEEVE (3" MIN.), PIPE, CEMENT GROUT, and WALL. A centerline symbol is also present.

Diagram illustrating the installation of a drain trap seal through a concrete slab, showing the following components and steps:

- CEMENT BED**
- NICKEL BRONZE ADJUSTABLE STRAINER**
- WATER-PROOF MEMBRANE**
- CONCRETE FILL**
- FLASHING CLAMP**
- NO-HUB CONNECTION**
- STRUCTURAL SLAB**
- TYPICAL OF "SURE SEAL" OR "SURE SEAL PLUS" DRAIN TRAP SEALS. INSTALL PER MANUFACTURER'S INSTRUCTIONS.**

NOTES:

1. PROVIDE ADDITIONAL PIPING AND FITTINGS AS REQUIRED
2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

Diagram illustrating the installation of a low-temperature coil, showing the evaporator coil, union, tee, and drain pipe. The diagram includes the following annotations:

- FREEZER OR COOLER WALL
- SEAL ALL PENETRATIONS AT COOLERS OR FREEZERS w/EXP. FOAM
- UNION BEYOND COIL
- TEE
- CLEAN OUT
- SEE ELEV. BELOW FOR CONTINUATION
- P.C. TO PROVIDE CONDENSATE DRAIN P. (7/8" COPPER PITCH AT 1/4" PER' FOR MED/HT-TEMP. COIL, PITCH 1/2" FOR LOW-TEMP. COIL. WRAP CONDENSATE PIPE WITH HEAT TRAC IN LOW-TEMP. AREAS. SECURE TIGHT TO WALL E.C. TO INST. HEAT TRACING. 8" C. TO INSULATE CONDENSATE PIPE.

TURNING TRAP SUPPLIED LOOSE BY CASE MANUFACTURER. INSTALLED BY PLUMB. CONTR. P.C. TO FURNISH ANY ADDITIONAL PIPES.

1" MINIMUM AIR GAP ABOVE DRAIN

TOP OF CONC. SLAB OR FINISHED FLOOR

1/2" UP

3" MIN. WASTE

SEAL TO MAKE RODENT-PROOF

NOTE:
FOR CASE DRAIN LOCATION REFER TO PLUMBING PLAN. PLUMBING CONTRACTOR TO PROVIDE 9" DIA. INCREASER, WHERE TWO OR MORE DRIP PIPES DROP TO ONE HUB DRAIN.

1" MINIMUM AIR GAP ABOVE DRAIN

5" HUB DRAIN-TOP OF PIPE TO BE 1/2" ABOVE SLAB OR FIN. FLOOR

INCREASER

3" MIN. WASTE

Diagram illustrating the installation of a refrigeration coil drain. The diagram shows a cross-section of a wall and floor assembly. Key components and dimensions include:

- POLISHED STAINLESS STEEL ESCUTCHEON PLATE (2) SIDES**: Located at the top of the drain pipe.
- CLEANOUT 4 TEE OUTSIDE OF COOLER**: A vertical pipe section on the exterior.
- TRAP OUTSIDE OF COOLER**: A U-shaped trap on the exterior.
- 45°**: The angle of the trap and cleanout section.
- AS REQUIRED**: Dimension for the vertical section of the drain pipe.
- 1" MIN. AIR GAP**: The minimum air gap between the trap and the floor level.
- 3" STAND PIPE (STP)**: The vertical pipe section inside the room.
- TOP OF CONC. SLAB OR FINISHED FLOOR**: The reference level for the floor.
- 2'-4" MINIMUM**: The minimum height of the stand pipe above the floor level.
- 3" INDIRECT WASTE BY PLUMB CONTRACTOR**: The horizontal pipe section connected to the stand pipe.

NOTE:
WASTE & WATER LINES SHALL NOT BE RUN BENEATH COOLER OR FREEZER SLAB

REFRIGERATION COIL DRAIN

[illegible]

A schematic diagram of an in-the-line circulating pump installation. The diagram shows a horizontal pipe with a pump unit installed in the middle. The pump unit consists of a motor (labeled 'MOTOR (SEE NOTES)') mounted on top of a pump housing. The pump housing is connected to the pipe via 'PIPE FLANGES FOR REMOVAL OF PUMP'. To the left of the pump, there is a 'TRIPLE DUTY VALVE' and a 'PRESSURE GAGE'. To the right of the pump, there is a '1/4" SHUT-OFF COCK', another 'PRESSURE GAGE', a 'TEMPERATURE GAGE', and an 'ISOLATION VALVE'. A 'UNION (TYP.)' is shown on the far right. A 'STRAINER WITH BLOW-OFF VALVE' is located on the bottom of the pipe between the pump and the isolation valve. The entire assembly is labeled 'IN-THE-LINE CIRCULATING PUMP'.

NOTE:
ALL CASE DRAIN PIPING TO BE INSTALLED BY PLUMBING CONTRACTOR

NOTE:
WASTE & WATER LINES SHALL NOT BE RUN BENEATH COOLER OR FREEZER SLABS

Sheet Title: Sprinkler Detail 14 Feb 2022 4:29pm

FP02020-0394 ADAMS FAIRACRE FARMS FIRE PROTECTION CONTROL.dwg - Plotted on: Feb 22, 2022 - 4:29pm by jht

SPRINKLER DEMOLITION NOTES:

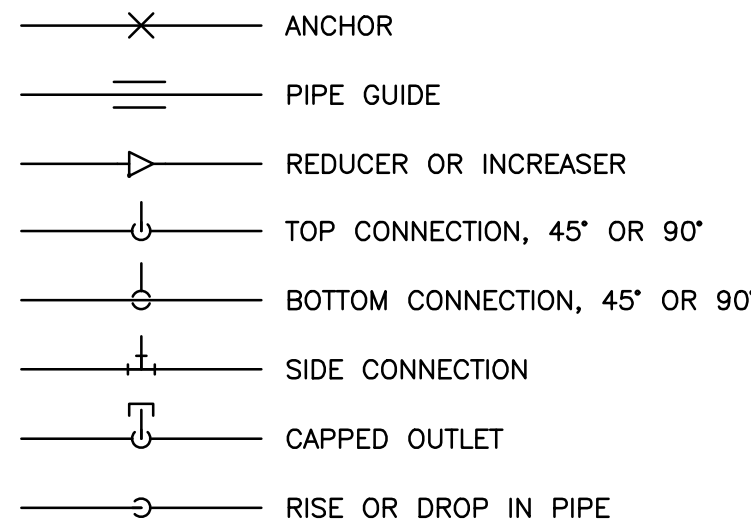
- COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT AREAS TO BE DEMOLISHED.
- REMOVE ALL EQUIPMENT AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL FITTINGS, SUPPORTS AND HANGERS.
- ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES MANAGER.
- DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT OR PIPING FOR CONNECTION TO NEW WORK. COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.
- ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF-SITE, UNLESS OTHERWISE NOTED.
- ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
- IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
- THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

FIRE PROTECTION SYSTEM NOTES:

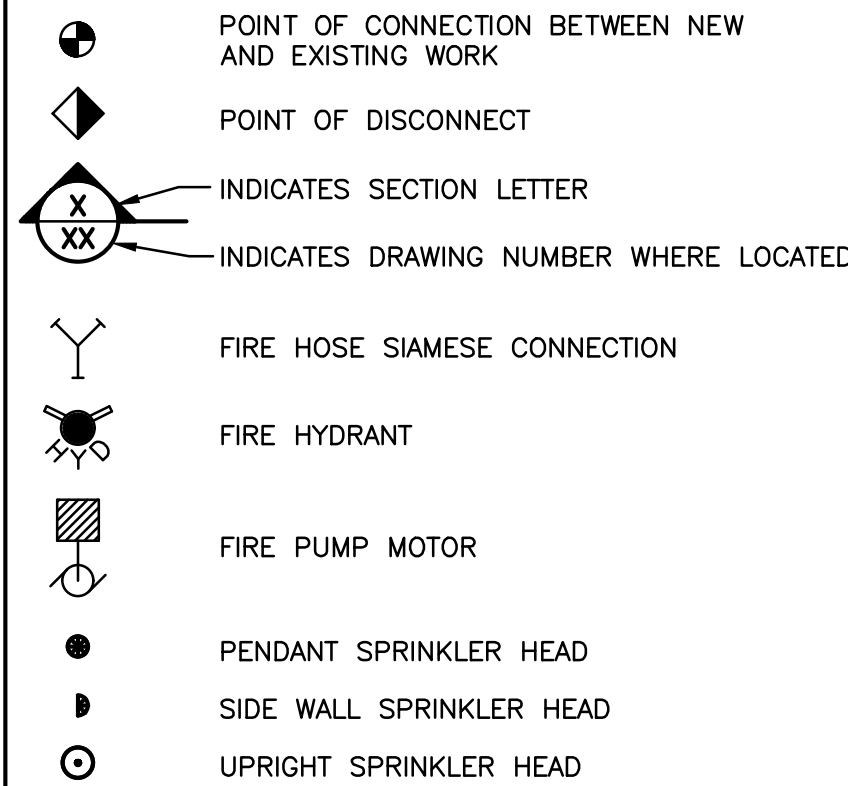
- THE INTENT OF THESE DRAWINGS IS TO PROVIDE A COMPLETE & OPERATIVE SPRINKLER SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES AS REQUIRED. THIS CONTRACTOR SHALL MEET THE INTENT OF THE PLANS & SPECIFICATIONS AS WELL AS THE ACCOMPANYING DOCUMENTS. THIS CONTRACTOR SHALL PROVIDE ANY ADDITIONAL MATERIAL & LABOR NOT SPECIFICALLY LISTED OR DIRECTED WHICH MAY BE REQUIRED TO MEET THE INTENT OF THE PLANS & SPECIFICATIONS FOR A COMPLETE AND OPERABLE SYSTEM.
- IT IS THIS CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE ALL CUTTING, PATCHING, BOXING, PRIME AND FINISH WORK REQUIRED TO COMPLETE THE INSTALLATION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
 - WATER FLOW & PRESSURE TESTING OF AVAILABLE WATER SUPPLY SYSTEM.
 - PIPE SIZING VIA THE HYDRAULIC PIPE SIZE METHOD PER NFPA-13.
 - THE INSTALLATION OF ALL PIPING AND COORDINATION OF WORK WITH OTHER SUB-CONTRACTORS.
 - INSPECTION & TESTING OF ALL PIPING & DEVICES, OBTAINING APPROVALS & PAYING OF ALL FEES AS REQUIRED FOR THE SYSTEM INSTALLATION & APPROVALS.
 - ONE YEAR GUARANTEE ON MATERIAL & WORKMANSHIP. COMPLETE OPERATING INSTRUCTIONS INCLUDING MAINTENANCE & TESTING INSTRUCTIONS (POSTED IN SPRINKLER CONTROL AREA).
- DO NOT PIERCE ANY STRUCTURAL MEMBER.
- CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PIPING WITH THE BUILDING STRUCTURE, AS WELL AS WITH OTHER TRADES DURING CONSTRUCTION. SEE PLANS FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL OBTAIN APPROVAL & COORDINATE WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
- THE SPRINKLER SYSTEM SUB-CONTRACTOR AND THE FIRE ALARM SYSTEM SUB-CONTRACTOR SHALL COORDINATE THE SYSTEM WITH THE FIRE DEPARTMENT AND OBTAIN ALL APPROVALS AND PAY ALL FEES.

- SUPERVISORY SWITCHES AND FLOW SWITCHES TO BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. CONNECTIONS TO BUILDING FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR.
- SPRINKLER CONTRACTOR SHALL PROVIDE ENGINEER WITH SIGNED & SEALED HYDRAULIC CALCULATIONS AND PIPE LAYOUT FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL SEAL ALL PIPE PENETRATIONS THROUGH RATED WALLS AND CEILINGS WITH INTUMESCENT TYPE FIRE SEALANT CAULK. PROVIDE ESCUTCHEONS AT ALL PENETRATIONS IN FINISHED AREAS.
- IN GENERAL, SPRINKLERS SHALL BE ARRANGED FOR A MAXIMUM COVERAGE AS SHOWN ON PLANS WHILE AVOIDING LIGHTS, DIFFUSERS, ETC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS PIPING AND SPRINKLERS FOR PROPER COVERAGE IN EACH AREA. ADD SPRINKLERS AS REQUIRED FOR PROPER COVERAGE AS DICTATED BY ACTUAL FIELD CONDITIONS.
- ALL FIRE PROTECTION SYSTEMS PROVIDED SHALL BE U.L. LISTED AND F.M. APPROVED AS APPLICABLE.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
- CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
- IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT. CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

PIPING SYMBOLS



GENERAL SYMBOLS



ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
AFF	ABOVE FINISHED FLOOR
DIA	DIAMETER
DN	DOWN
EC	ELECTRICAL CONTRACTOR
ETR	EXISTING TO REMAIN
EXIST.	EXISTING
FD	FLOOR DRAIN
FLR	FLOOR
FPC	FIRE PROTECTION CONTRACTOR
GC	GENERAL CONTRACTOR
HC	HVAC CONTRACTOR
MAX.	MAXIMUM
MER	MECHANICAL EQUIPMENT ROOM
MIN.	MINIMUM
N	NEW
NOM.	NOMINAL
PC	PLUMBING CONTRACTOR
RR	REMOVE & RELOCATE
U.N.O.	UNLESS NOTED OTHERWISE
VP	VERIFY IN FIELD

FIRE PROTECTION LINE TYPES

-----	EXISTING SPRINKLER PIPE TO BE REMOVED
-----	EXISTING SPRINKLER PIPE TO REMAIN
-----	NEW SPRINKLER PIPE

SPRINKLER LEGEND

●	EXISTING SPRINKLER TO BE REMOVED
ETR ⊙	EXISTING SPRINKLER TO REMAIN
RR ⊙	EXISTING SPRINKLER TO BE REMOVED & RELOCATED (NEW LOCATION AS SHOWN)
●	NEW SPRINKLER

LEGEND AND SCHEDULE OF SPRINKLER EQUIPMENT

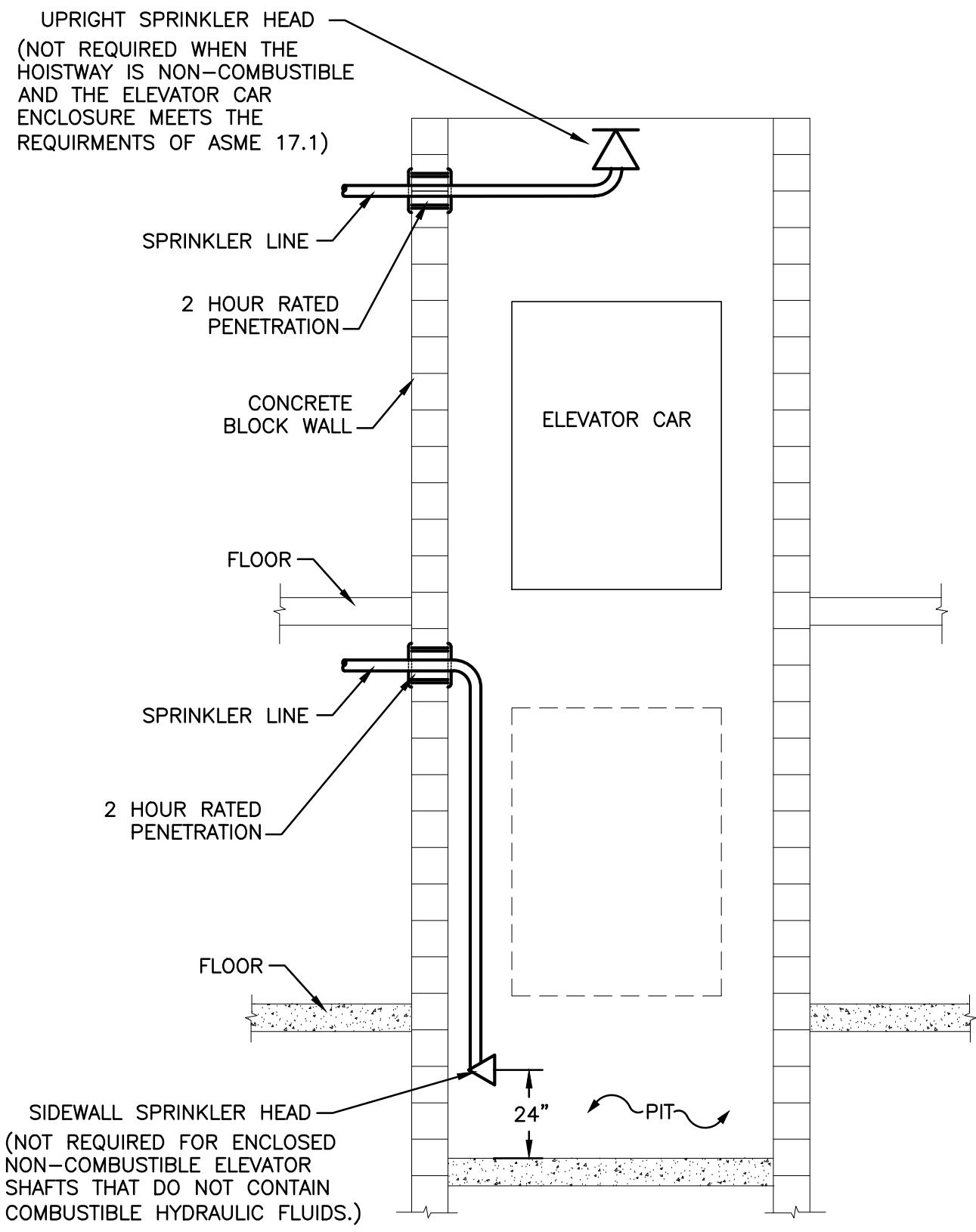
SYMBOL	MFTR.	CATALOG #	DESCRIPTION
●	VIKING	VK-404	"HORIZON MIRAGE" QUICK RESPONSE CONCEALED PENDANT SPRINKLER ORDINARY TEMPERATURE CLASSIFICATION, 175PSI MAX. WORKING PRESSURE, BRASS BODY, 1/2" NPT THREAD SIZE, K=5.6, WHITE FINISH, FUSIBLE LINK.
⊙	VIKING	VK-301	UPRIGHT SPRINKLER, QUICK RESPONSE, FUSIBLE ELEMENT, BRASS BODY, 1/2" NPT THREAD SIZE, K=5.6, ORDINARY TEMPERATURE CLASSIFICATION.
⊙	VIKING	VK-176	QUICK RESPONSE DRY PENDANT SPRINKLERS, 175 PSI MAX. WORKING PRESSURE, BRASS BODY, 1" NPT THREAD SIZE, K=5.6, WHITE FINISH, ORDINARY TEMPERATURE CLASSIFICATION, FUSIBLE LINK. FIRE PROTECTION CONTRACTOR TO DETERMINE THE DISTANCE FROM THE FACE OF THE TEE TO THE FINISH CEILING WITH HYDRAULIC CALCULATIONS.

ENERGY CODE STATEMENT:

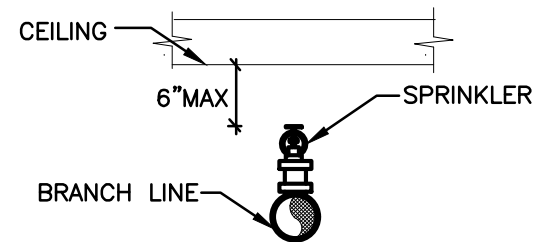
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

UNIFORM CODE STATEMENT:

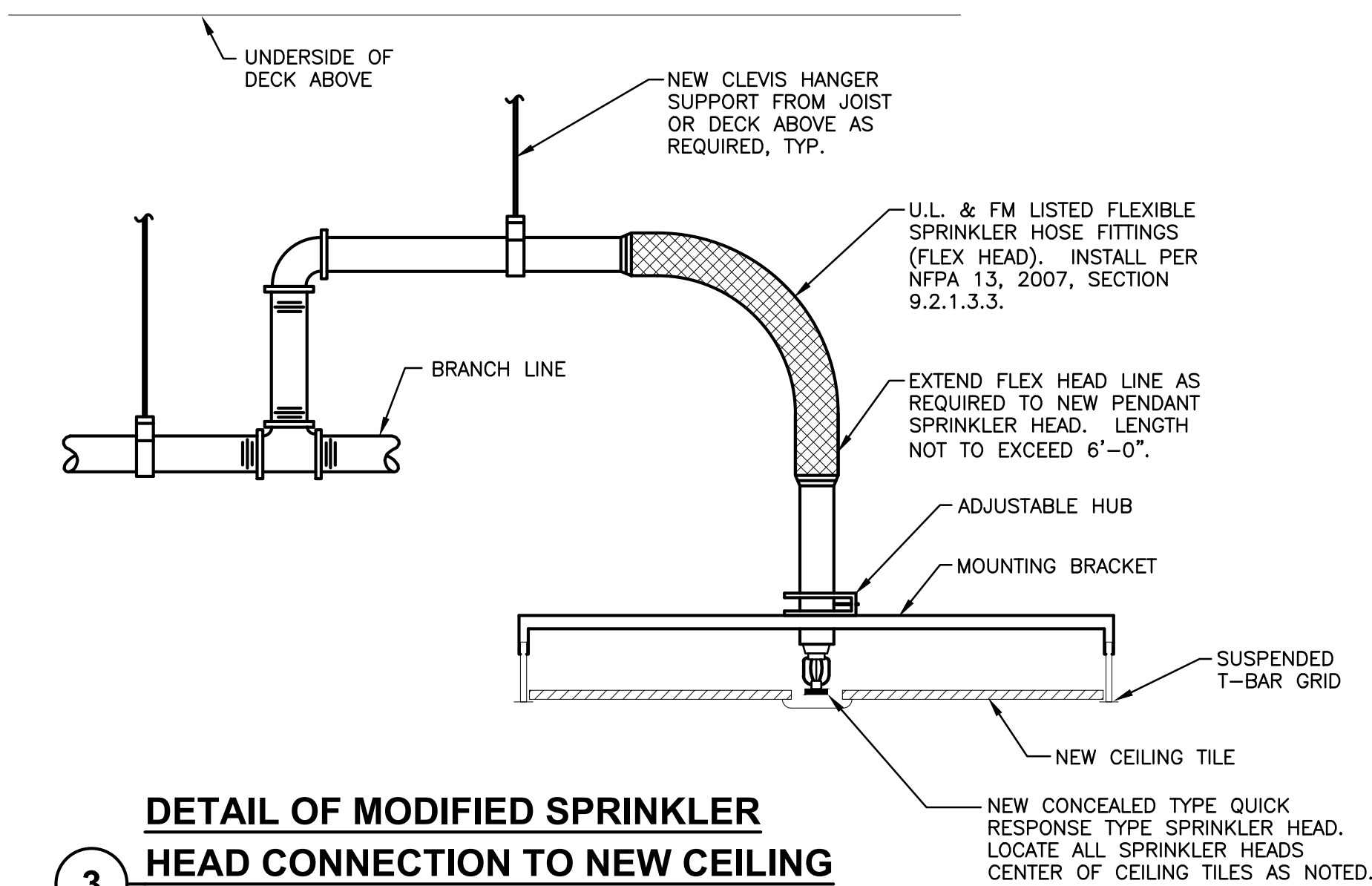
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.



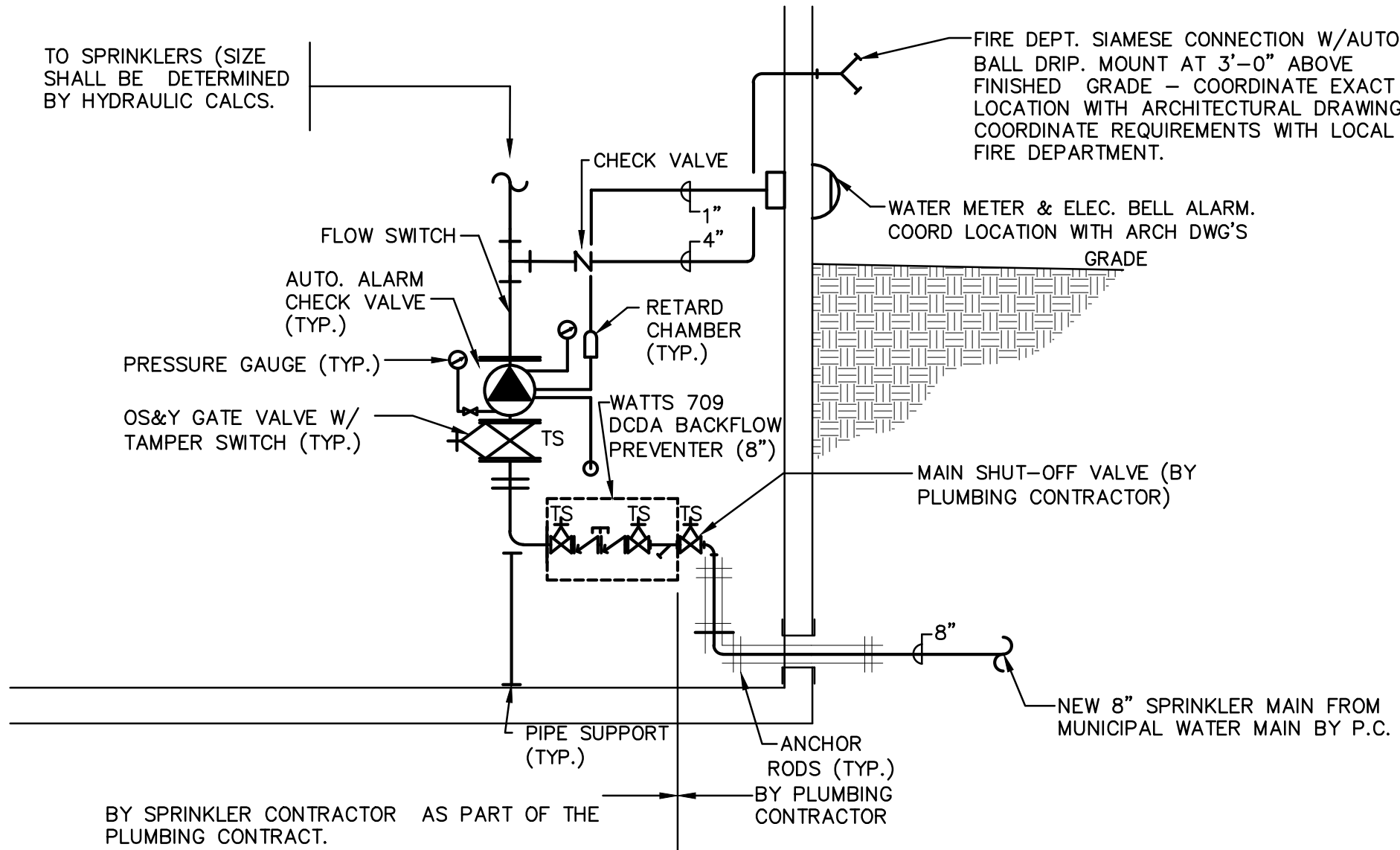
1 ELEVATOR HOISTWAY SPRINKLER DETAIL
N.T.S.



2 UPRIGHT SPRINKLER DETAIL
N.T.S.

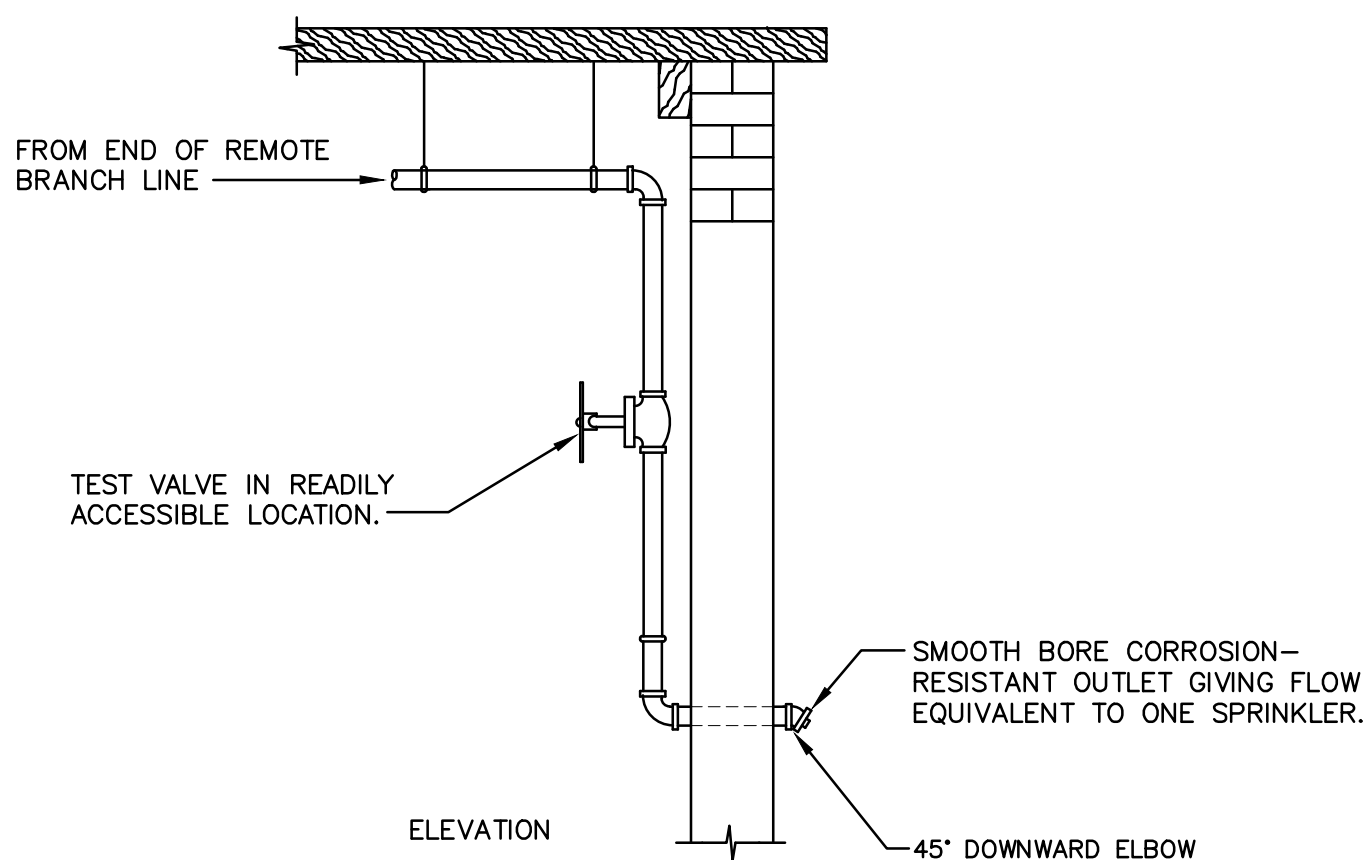


3 DETAIL OF MODIFIED SPRINKLER HEAD CONNECTION TO NEW CEILING
N.T.S.



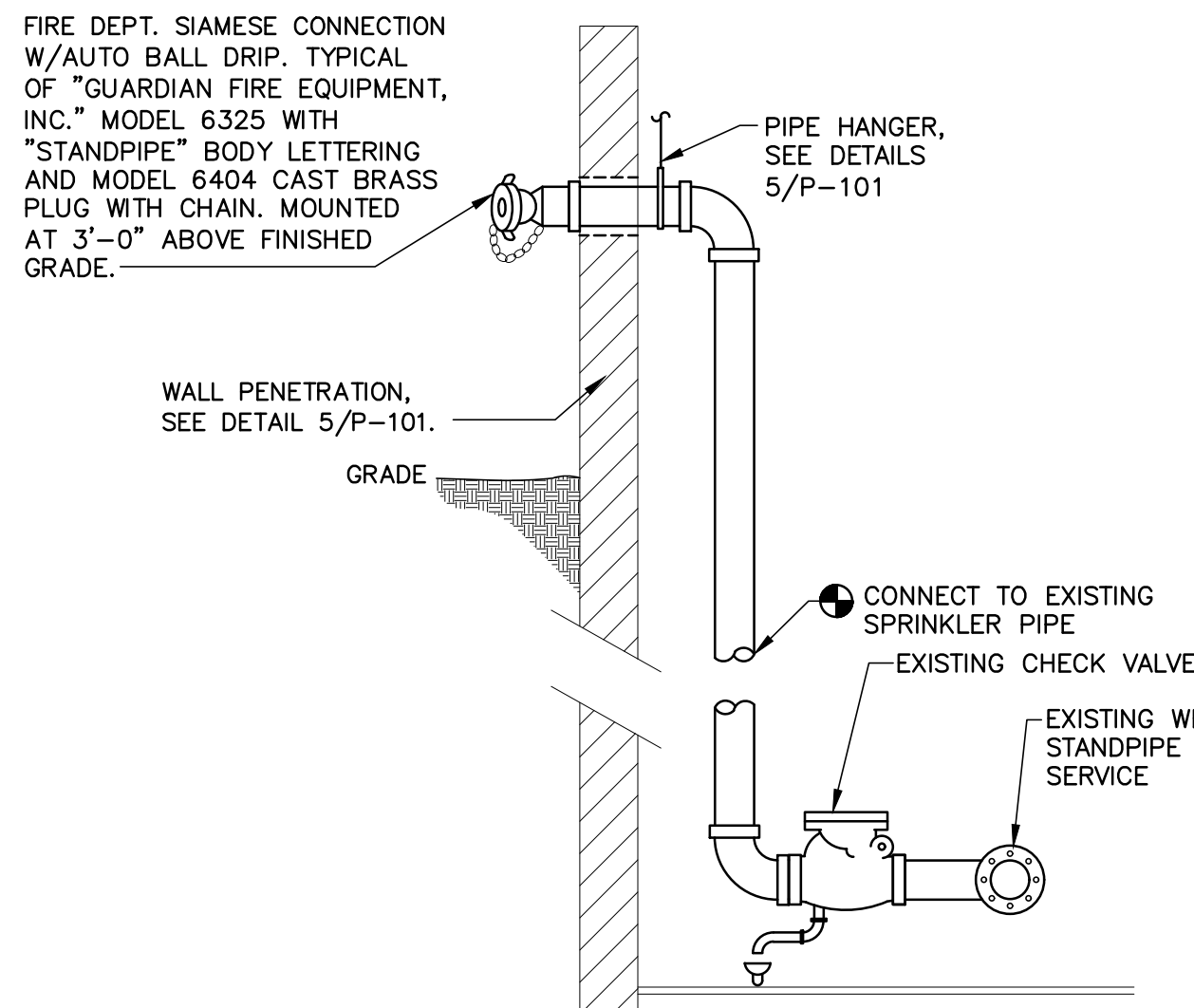
- NOTES:**
- ALL BACKFLOW PREVENTERS (709, 909 ETC) SHALL MEET THE REQUIREMENTS OF, AND BE APPROVED BY DEPARTMENT OF PUBLIC WORKS.
 - PIPE BACKFLOW PREVENTER BLOW - OFF TO NEAREST FLOOR DRAIN. PROVIDE INDIRECT DRAIN CONNECTION.

4 WET SPRINKLER ENTRANCE - TYPICAL
N.T.S.

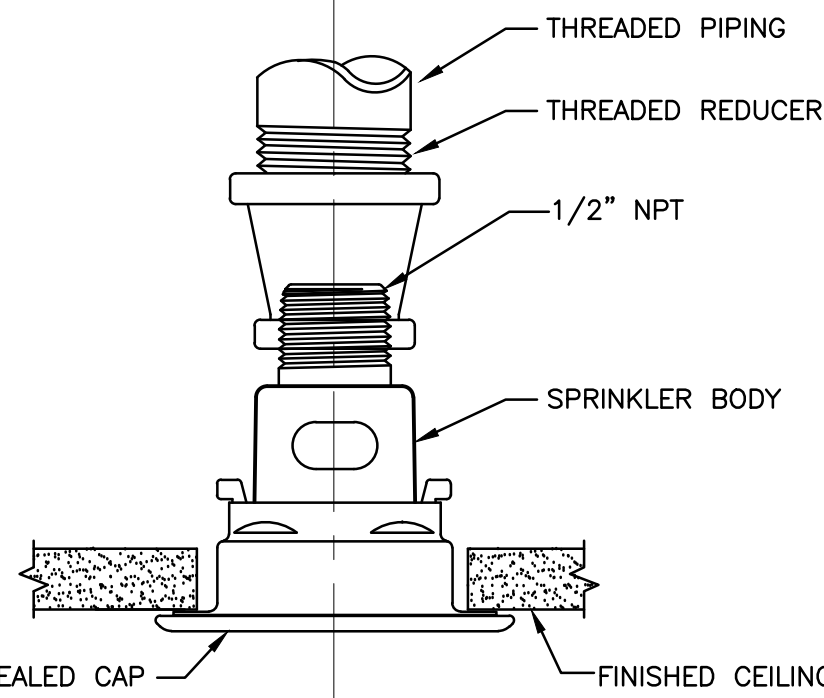


- NOTES:**
- NOT LESS THAN 4 FT (1.2M) OF EXPOSED TEST PIPE IN WARM ROOM BEYOND VALVE WHERE PIPE EXTENDS THROUGH WALL TO OUTSIDE.
 - COORDINATE LOCATION WITH OWNER.

5 INSPECTOR'S TEST CONNECTION DETAIL
N.T.S.



6 STANDPIPE FIRE DEPARTMENT CONNECTION DETAIL-TYPICAL
N.T.S.



- NOTE:**
- UPON SPRINKLER ACTIVATION, THE DEFLECTOR SHALL DESCEND TO APPROXIMATELY 13/16" BELOW THE SPRINKLER BODY.

7 CONCEALED PENDANT SPRINKLER DETAIL
N.T.S.

REVISIONS

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SEAL DANIEL STERNBERG, P.E.

NY PROFESSIONAL ENGINEER
No. 10853-1

PROJECT NAME:

ADAMS FAIRACRE FARMS

DRAWING TITLE:

FIRE PROTECTION: NOTES, SYMBOLS, & ABBREVIATIONS

SCALE:

AS SHOWN

CHECKED BY:

NDF

DRAWN BY:

AH

DATE:

Feb 22, 2022

PROJECT NO:

SHEET NO:

FP0.1

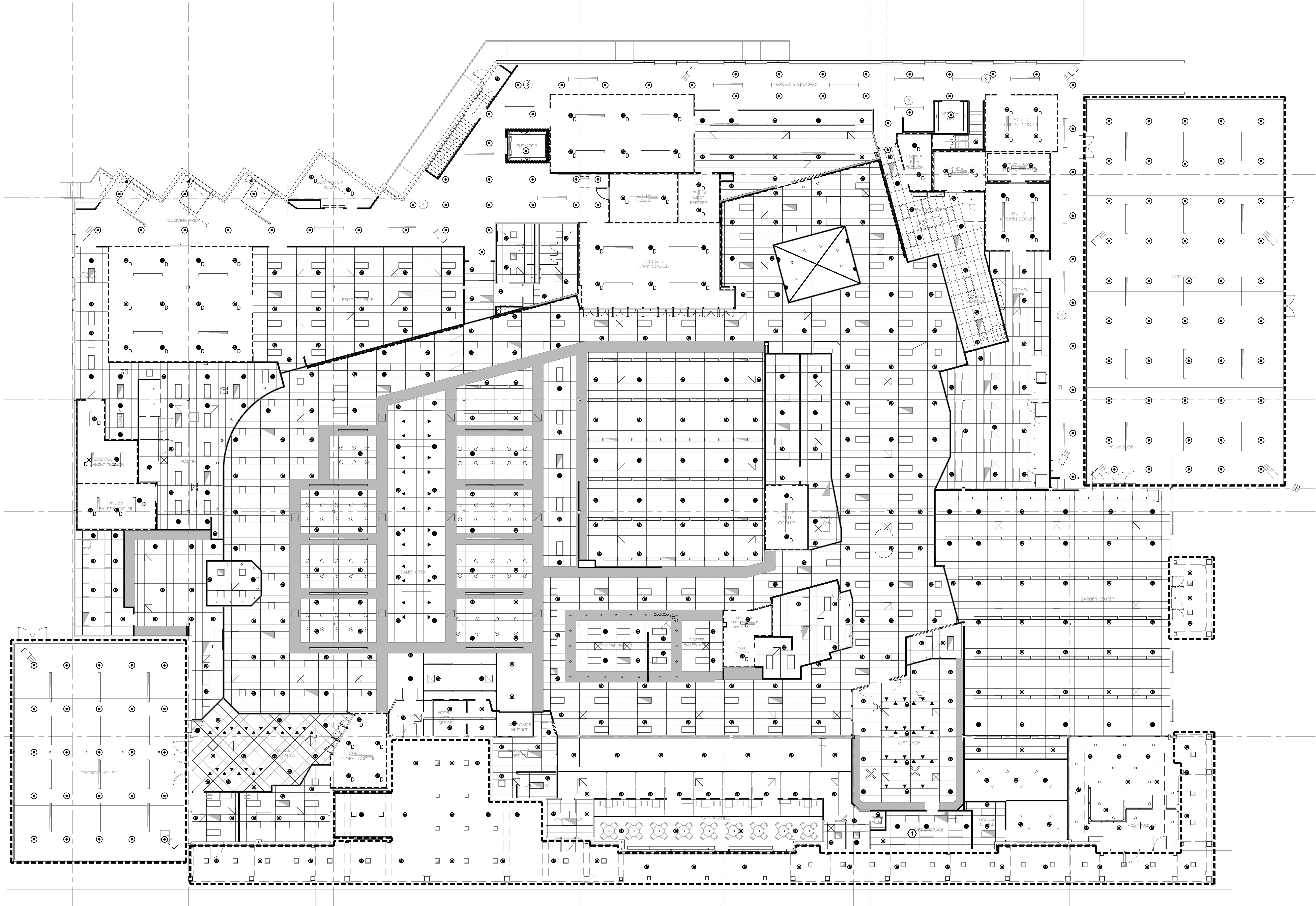
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Feb 22, 2022

PROJECT NO:

SHEET NO:

FP0.1



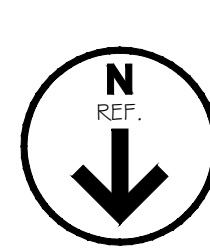
1 FIRE PROTECTION: FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

NEW CONSTRUCTION KEYED NOTES:

1. PROVIDE AIR COMPRESSOR FOR DRY SYSTEM. COORDINATE WITH ARCHITECT FOR FINAL LOCATION. COMPRESSOR SHALL BE SIZED BASED ON HYDRAULIC CALCULATIONS. REFERENCE E2.1 FOR ELECTRICAL REQUIREMENTS.

GENERAL NOTES:

1. AREA ENCLOSED WITH A DASHED LINE SHALL BE INCORPORATED IN THE DRY SPRINKLER SYSTEM.



DATE: Feb 22, 2022

PROJECT NO:

SHEET NO:

FP1.1

PLAN B RETAIL DESIGN
& PROJECT MANAGEMENT, LLC
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Tel: 860.870.5380 Fax: 860.870.5382
e-mail: cbonely@planetbretail.com

DRAWING TITLE:

FIRE PROTECTION: FLOOR
PLAN

SCALE: AS SHOWN

DRAWN BY: SA

CHECKED BY: MDF

PROJECT NAME:

ADAMS
FAIRACRE FARMS

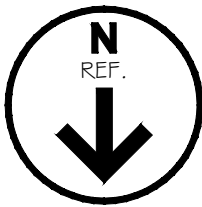
SEAL: DANIEL STERNBERG, P.E.

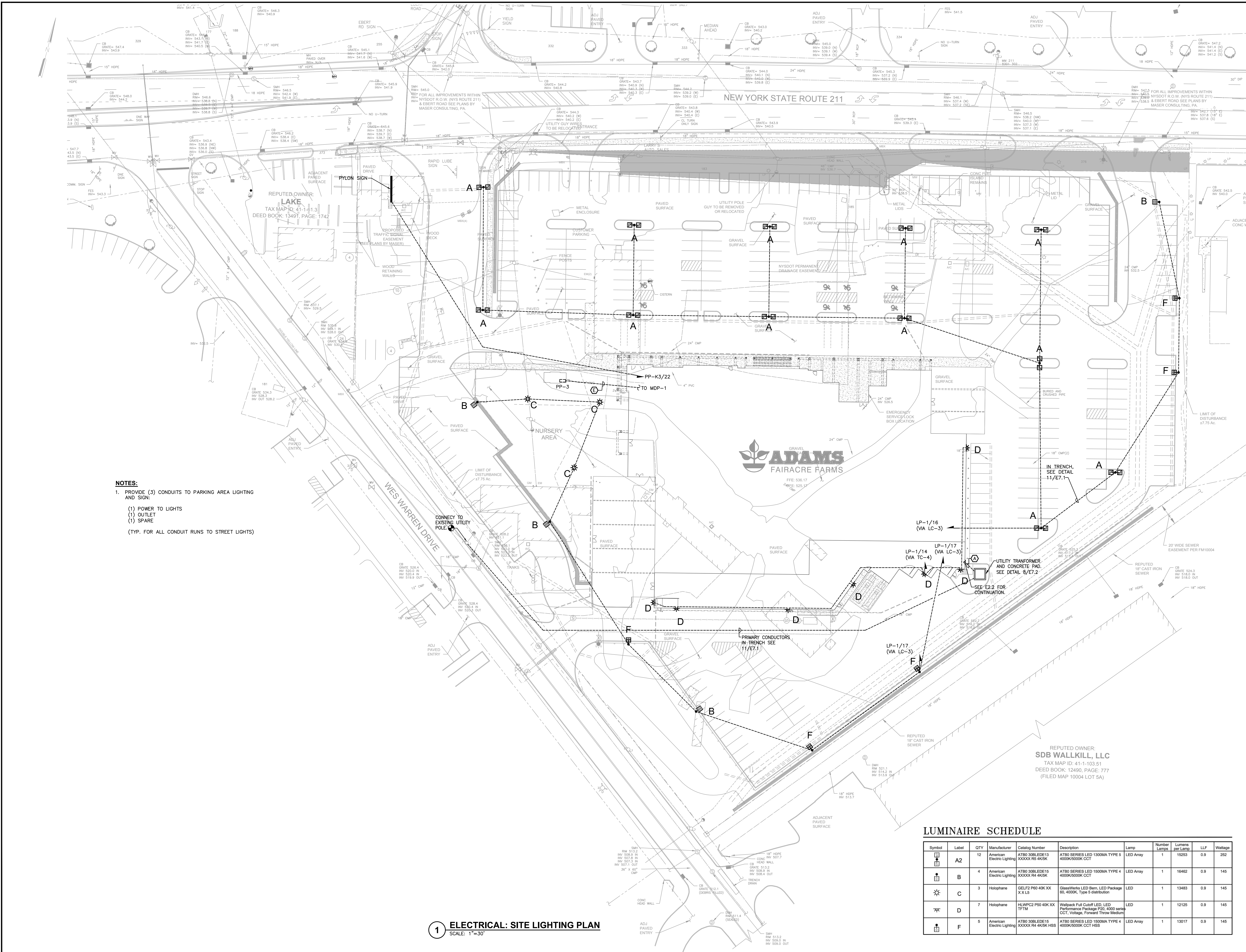


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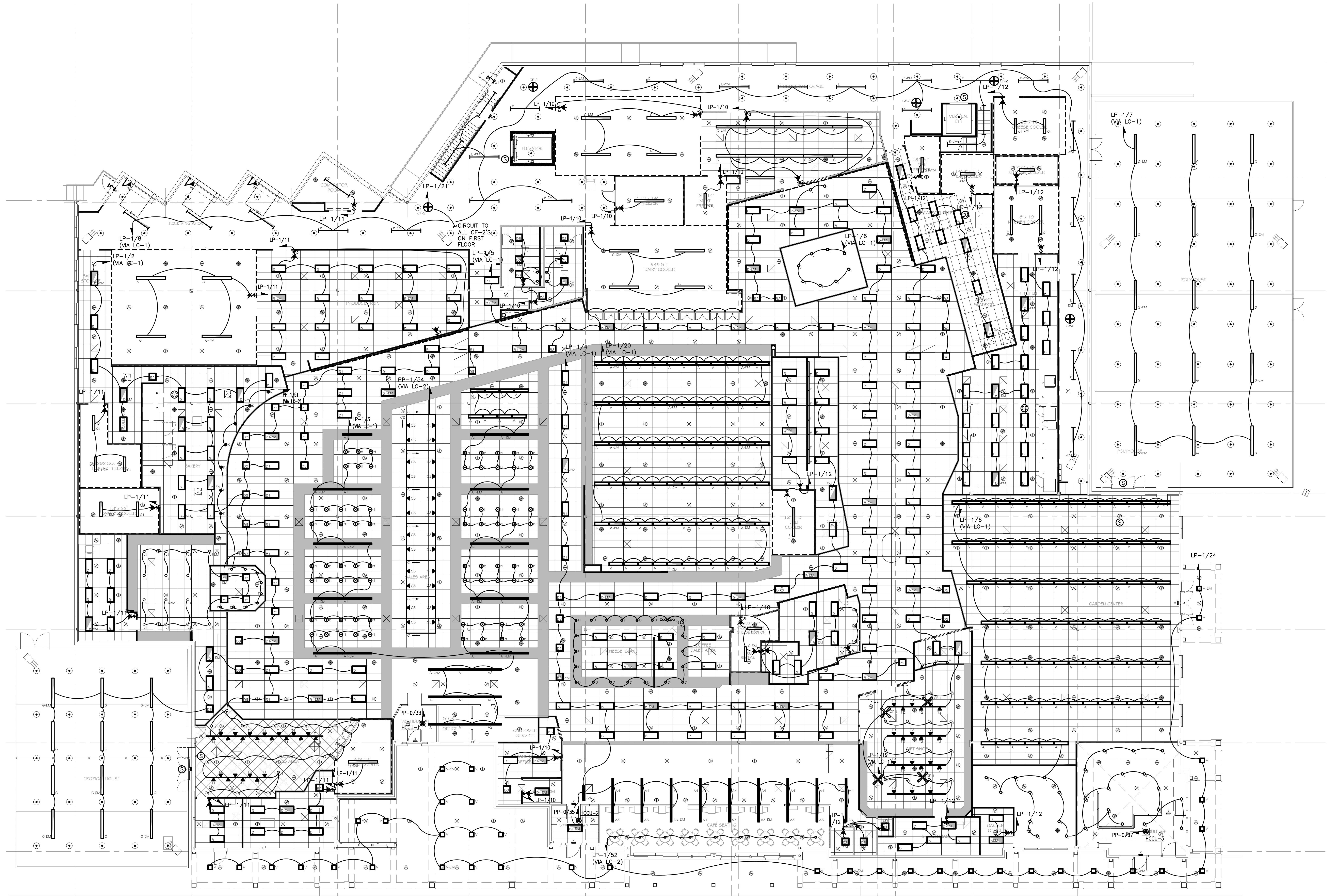
[illegible]



LUMINAIRE SCHEDULE									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps Lumens per Lamp	LLF	Wattage
	A2	12	American Electric Lighting	AT80 30BLEDE13 XXXXXX RS 4K5K	AT80 SERIES LED 1300MA TYPE 5 4000K/5000K CCT	LED Array	1 15253	0.9	252
	B	4	American Electric Lighting	AT80 30BLEDE15 XXXXXX RS 4K5K	AT80 SERIES LED 1500MA TYPE 4 4000K/5000K CCT	LED Array	1 16482	0.9	145
	C	3	Holophane	GLBZF P60 4K XX X X L5	GlassWares LED Barn, LED Package 80, 400K, Type F distributor	LED	1 13483	0.9	145
	D	7	Holophane	HLWPCC P50 4K XX TFTM	Wallpack Full Cutoff LED, LED Performance Package P50, 4000 series CCT, Voltage, Forward Throw Medium	LED	1 12125	0.9	145
	F	5	American Electric Lighting	AT80 30BLEDE16 XXXXXX RS 4K5K HSS	AT80 SERIES LED 1500MA TYPE 4 4000K/5000K CCT HSS	LED Array	1 13017	0.9	145

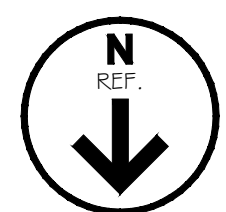
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F:\2020\20-394 ADAMS FAIRACRE FAIRACRE ELECTRICAL\1.dwg - Plotted on: Feb 22, 2022 - 4:30pm by ah

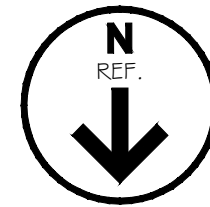


1 ELECTRICAL: LIGHTING FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

NOTE:
1. CIRCUIT ALL EMERGENCY/EXIT FIXTURES TO LOCAL UNSWITCHED LIGHTING LEG.



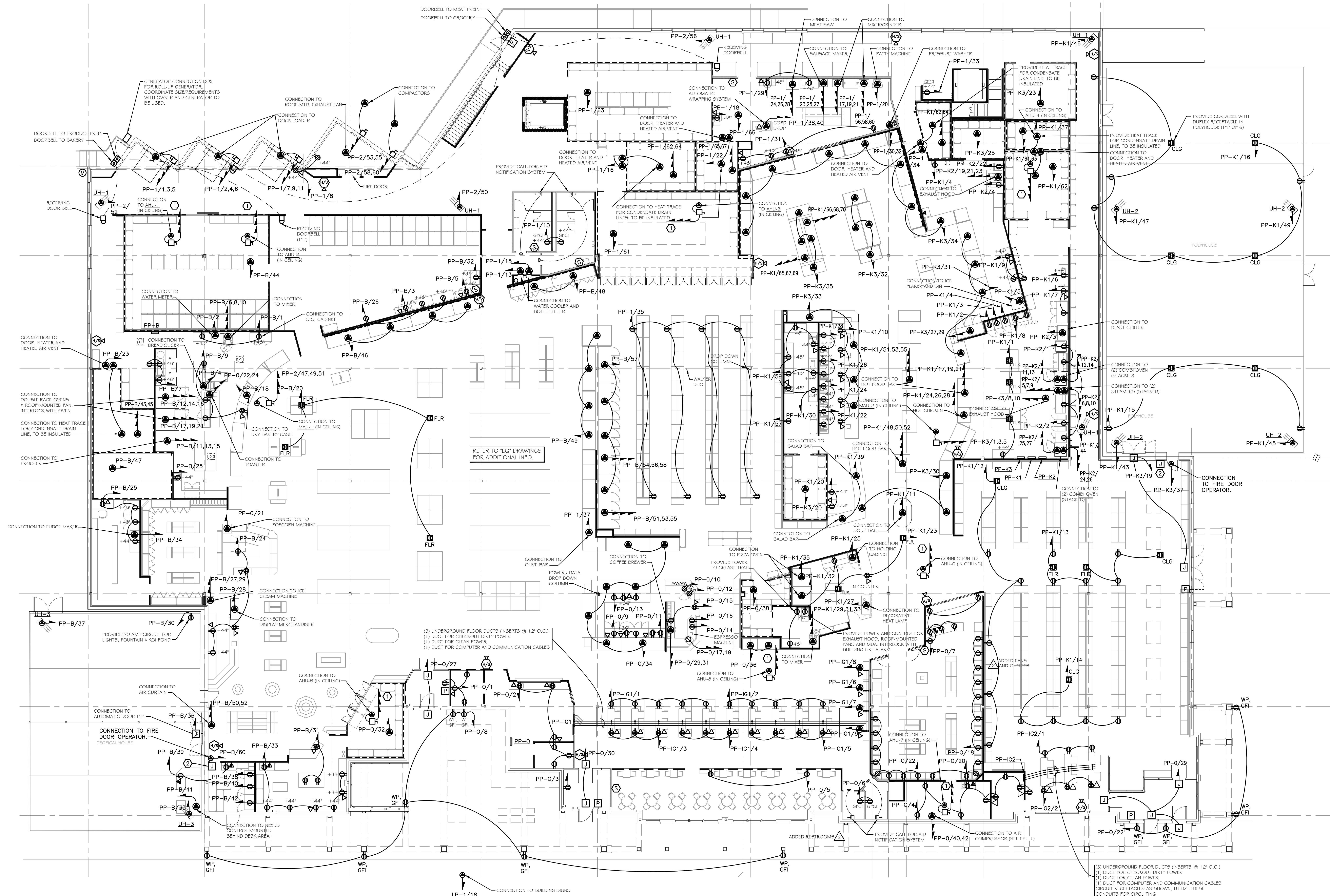
DATE: Feb 22, 2022		PROJECT NO:		SHEET NO:		E1.1	
PROJECT NAME: PLAN B RETAIL DESIGN & PROJECT MANAGEMENT, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomely@planetbetail.com		DRAWING TITLE: ELECTRICAL: LIGHTING FLOOR PLAN		PROJECT NAME: ADAMS FAIRACRE FARMS		FELLENER ENGINEERING LLP www.fel.com 1000 Main Street Fairport, NY 11731 1-800-343-4881 FAX: 516-343-4886 FE # 20-394 Professional Engineer State of New York	
DRAWN BY: ZR		CHECKED BY: MDF		SCALE: AS SHOWN		REVISIONS:	



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& PROJECT MANAGEMENT, LLC**
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e-mail: cbomely@planbretail.com

PROJECT NAME: **ADAMS FAIRACRE FARMS**

REVISIONS:	



1 ELECTRICAL: POWER FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

KEYED NOTES:

- ① CIRCUIT TO SWBD-1. SEE DETAIL 7/E7.2
- ② PROVIDE JUNCTION BOX FOR INSTALLATION OF CONTACTS FROM SMOKE ALARM TO SMOKE BARRIER DOOR RELEASE SERVICE

(3) UNDERGROUND FLOOR DUCTS (INSERTS @ 12" O.C.)
(1) DUCT FOR CHECKOUT DIRTY POWER
(1) DUCT FOR CLEAN POWER
(1) DUCT FOR COMPUTER AND COMMUNICATION CABLES
CIRCUIT RECEPTACLES AS SHOWN, UTILIZE THESE
CONDUITS FOR CIRCUITING

DATE: _____

PROJECT NO:

100

E2.1

**PLAN B RETAIL DESIGN
& PROJECT MANAGEMENT, LLC**
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e-mail: chomeli@planbretail.com

G TITLE: **ELECTRICAL: POWER
FLOOR PLAN**

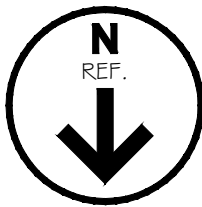
NAME:  **ADAMS**
FAIRACRE FARMS

SEAL:

FELLENZER ENGINEERING U.S.A.

FE # 20-394
22 Mulberry St., Suite 2A,
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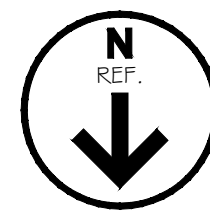
FE # 20-394
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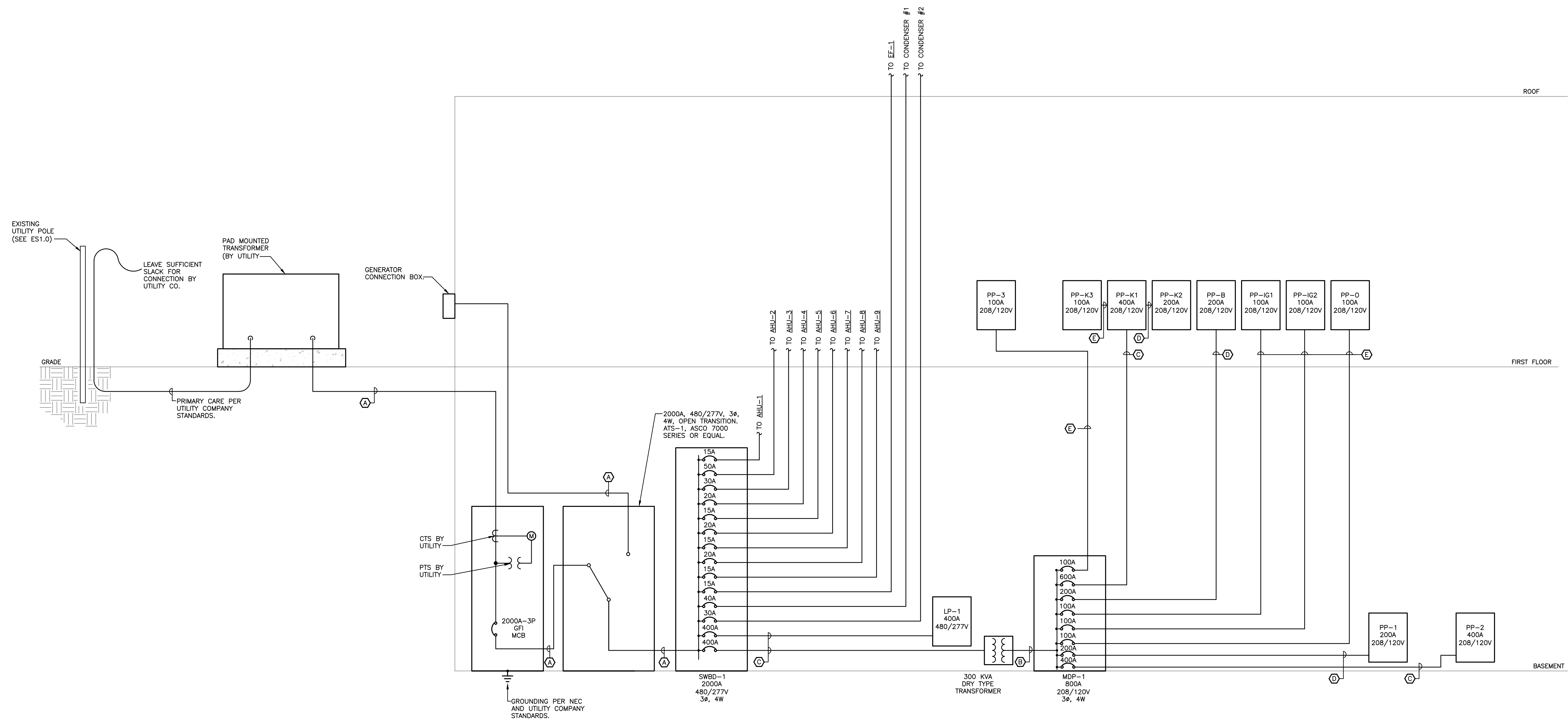
DATE Feb 22, 2022		PROJECT NO.		SHEET NO. E2.2	
 PLAN B Retail Design & Project Management, LLC 19 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomelli@planbretail.com					
DRAWING TITLE ELECTRICAL: POWER FLOOR PLANS		SCALE:	AS SHOWN	DRAWN BY: AH	CHECKED BY: MDF
PROJECT NAME:  ADAMS FAIRACRE FARMS		SEAL DANIEL STENBERG, P.E. 			
PROJECT NO. SHEET NO.		REVISIONS:			
www.feljenzer.com 181 Crandall St., Suite 200, 22 Madison St., Suite 2A, 1945-58-5-540 5146-143-4486		FELLENZER III ENGINEERING LLP			



① CIRCUIT TO SWBD-1. SEE DETAIL 7/E7.2

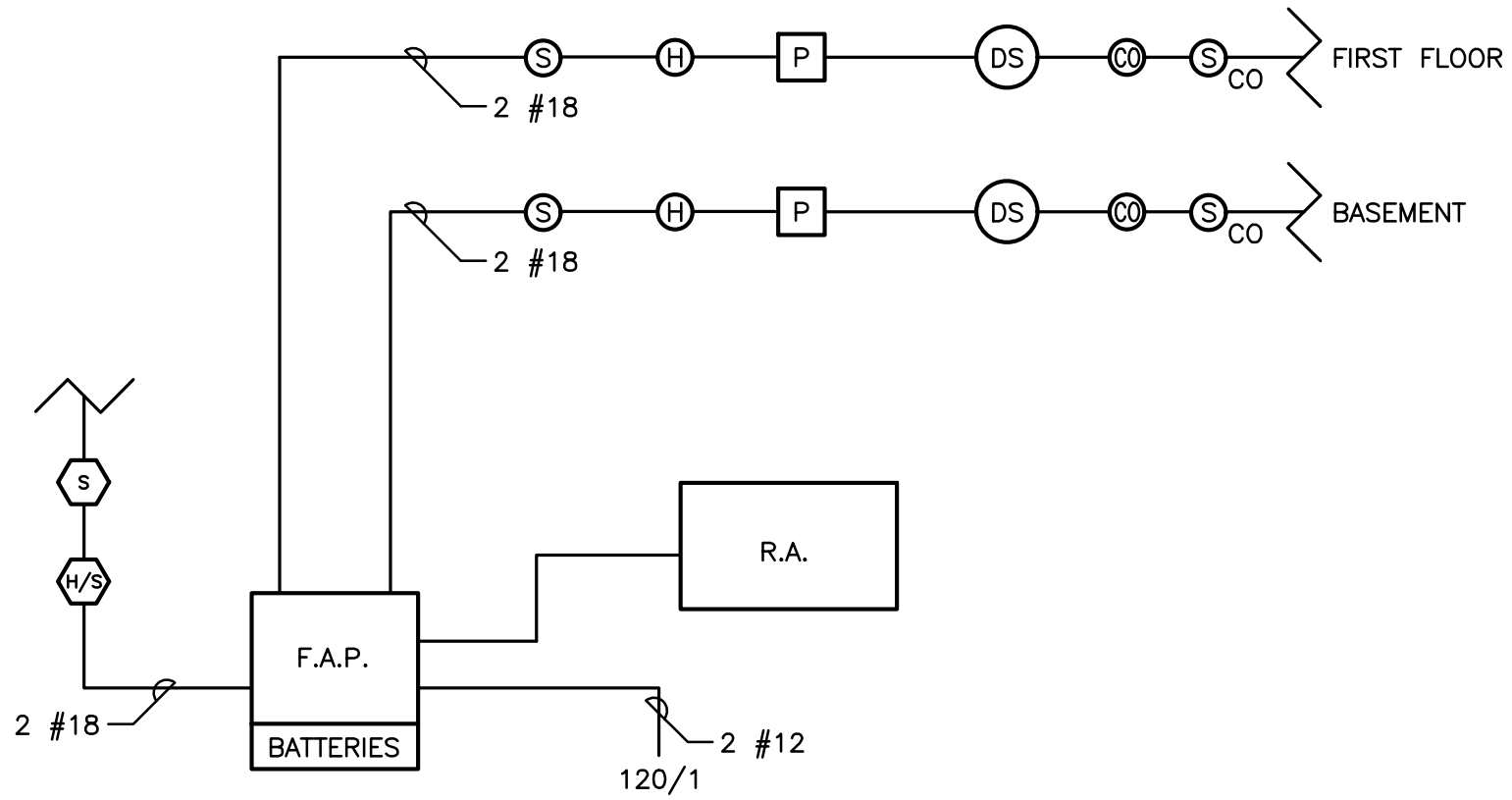


	DATE: Feb-22, 2022		PROJECT NO:		SHEET NO:		E2.3
PLAN B Retail Design & Project Management, LLC 12 Goose Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomeli@planbretail.com				DRAWING TITLE:			
ELECTRICAL: ROOF POWER PLAN				SCALE:	AS SHOWN	DRAWN BY:	AH
				CHECKED BY:		MDF	
PROJECT NAME:							
SSAN: DANIEL STEINBERG, P.E.							
PERSONS:							
www.fellezenier.com 161 Church St., Suite 100, New Haven, CT 06510 1-844-464-7054 or 203-532-2720				P/E: P. J. De Jela 22 Madison St., Suite 2A, New Haven, CT 06510 1-844-563-5441 or 203-532-4886			

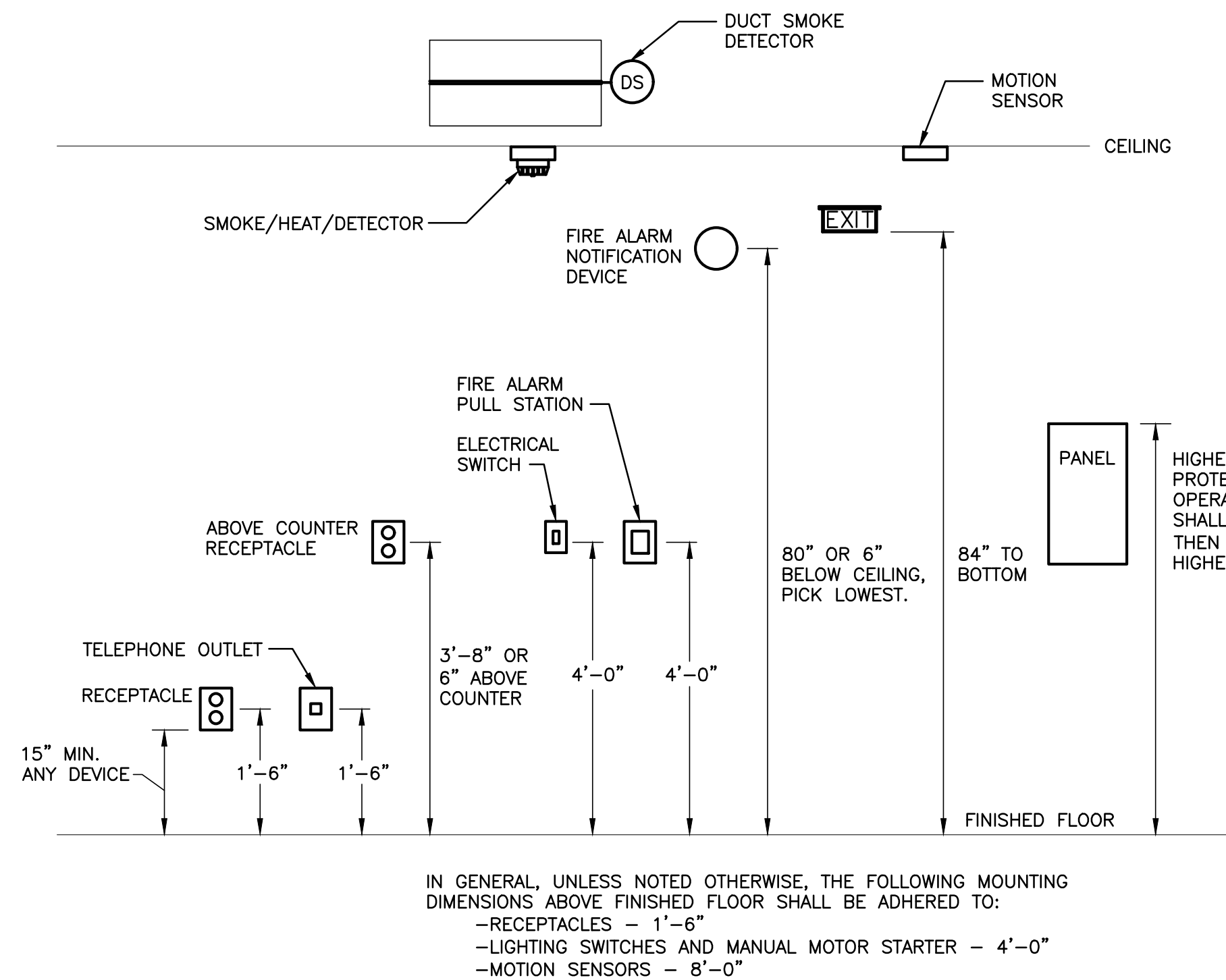


1 ELECTRICAL: ONE-LINE DIAGRAM
N.T.S.

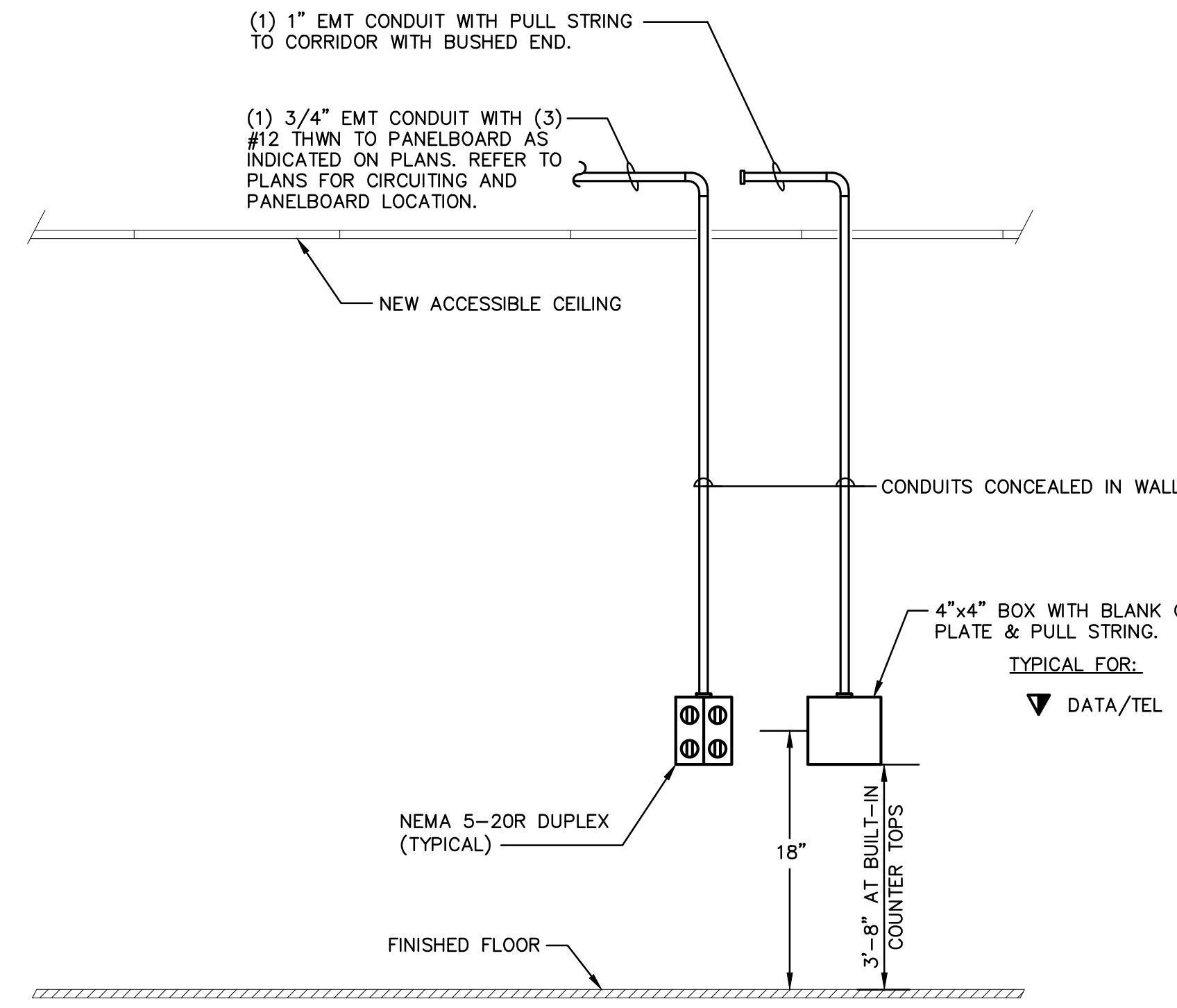
DATE: Fri, 22, 2022 PROJECT NO:	SHEET NO: E6.1
PLAN B Retail Design & Project Management, LLC 19 Coopers Lane, Tolland, CT 06084 Tel: 860.870.5380 Fax: 860.870.5382 e-mail: cbomely@planbretil.com	
DRAWING TITLE:	SCALE: AS SHOWN DRAWN BY: AH CHECKED BY: MDF
PROJECT NAME:	PROJECT NO.
ADAMS FAIRACRE FARMS	SEAL:
	DANIEL STEINBERG, P.E. www.fellenzerllc.com 191 Church St., Suite 2A, Farmington, Connecticut 06030-1195 Tel: 860-464-3004 or 860-300-3233
FELLENZER III ENGINEERING LLP	REVISIONS:



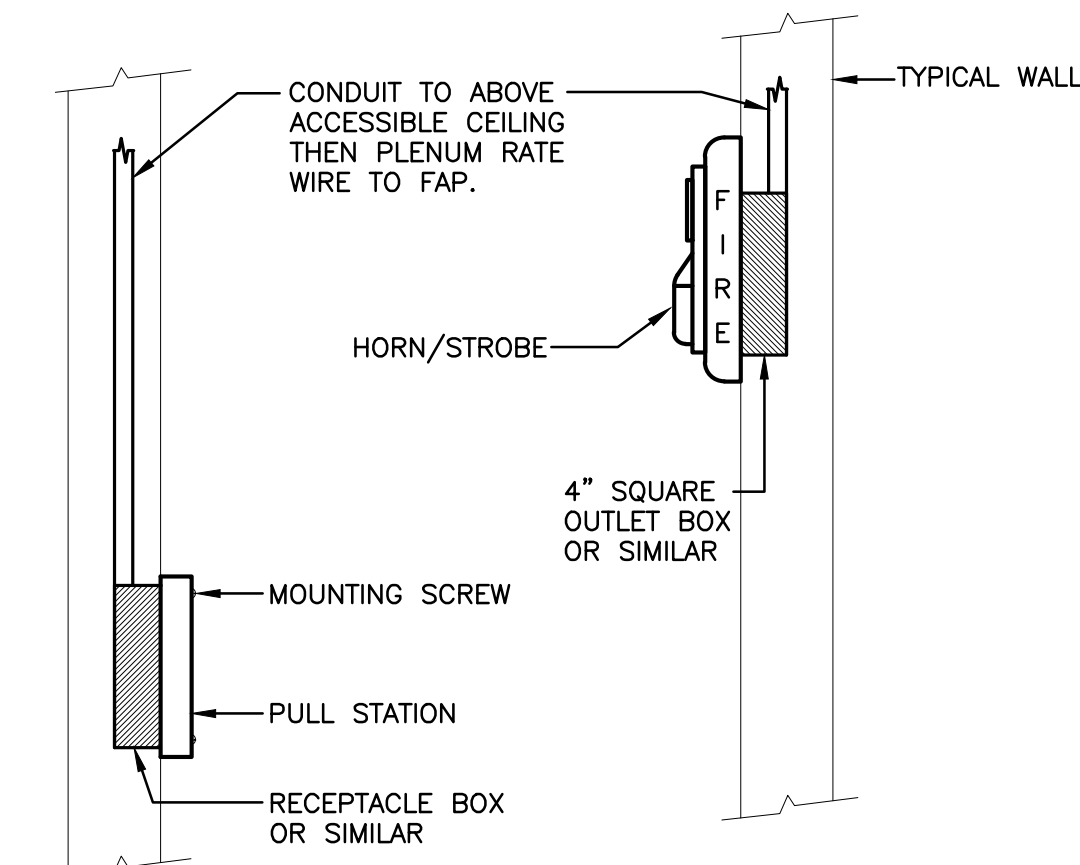
1 FIRE ALARM / DETECTION SYSTEM SCHEMATIC
N.T.S.



2 MOUNTING HEIGHTS OF ELECTRICAL DEVICES
N.T.S.

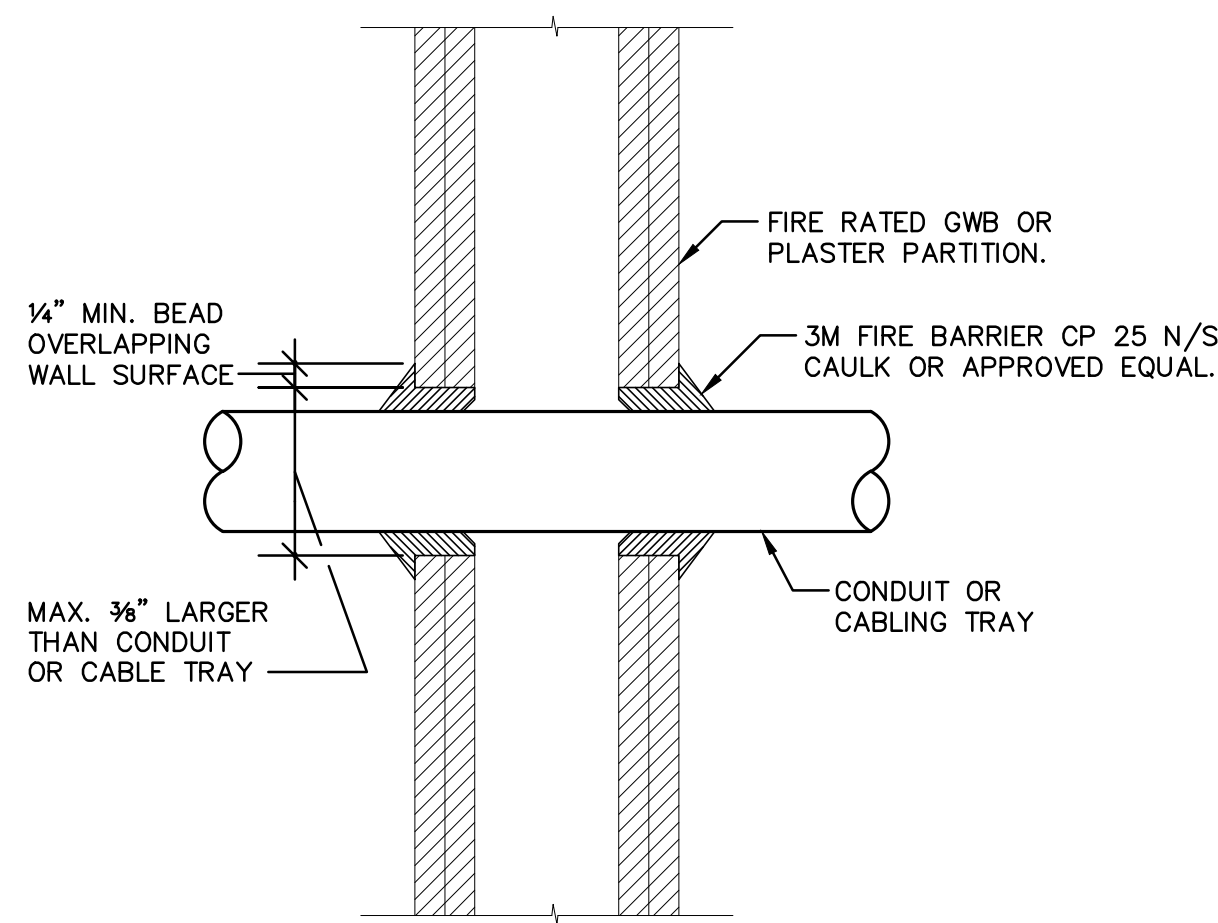


3 DATA DROP
N.T.S.

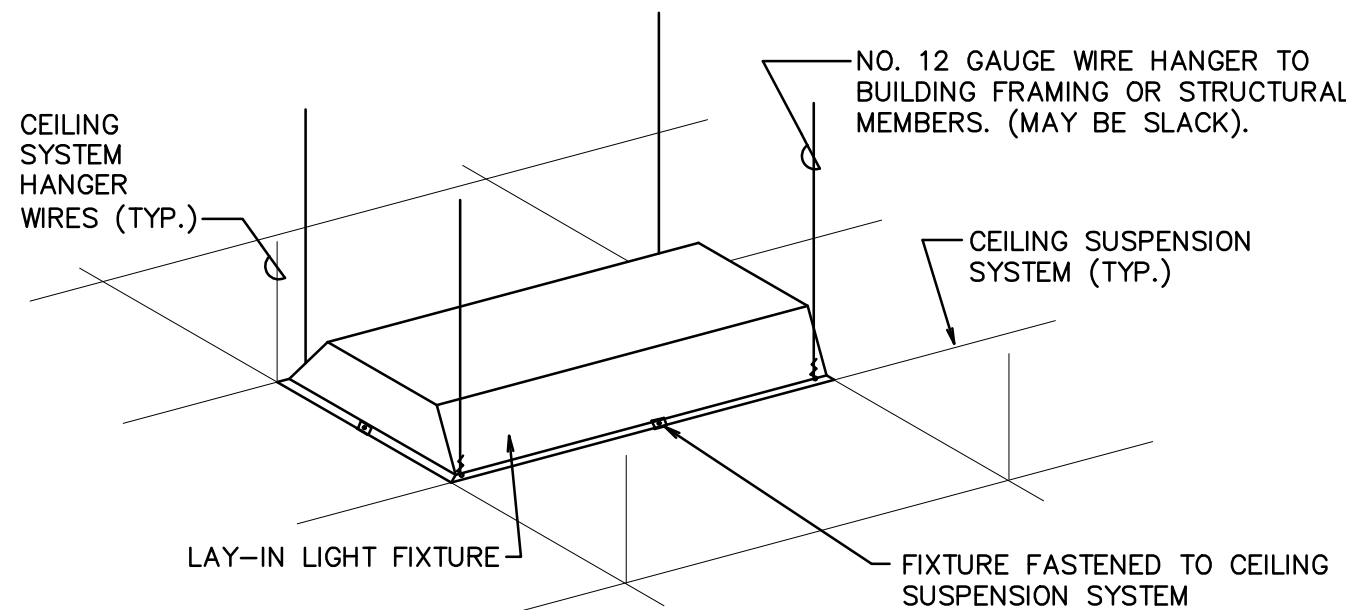


NOTES:
1. FOR SURFACE MOUNT INSTALLATIONS, INSTALL WIREMOLD & WIREMOLD RECEPTACLE BOX ONLY AT THE DISCRETION OF THE OWNER.
2. THIS DETAIL PERTAINS TO NEW CONSTRUCTION ONLY. WHEN NEW DEVICES ARE BEING INSTALLED WHERE JUNCTION BOXES EXIST ALREADY, UTILIZE THE JUNCTION BOX.

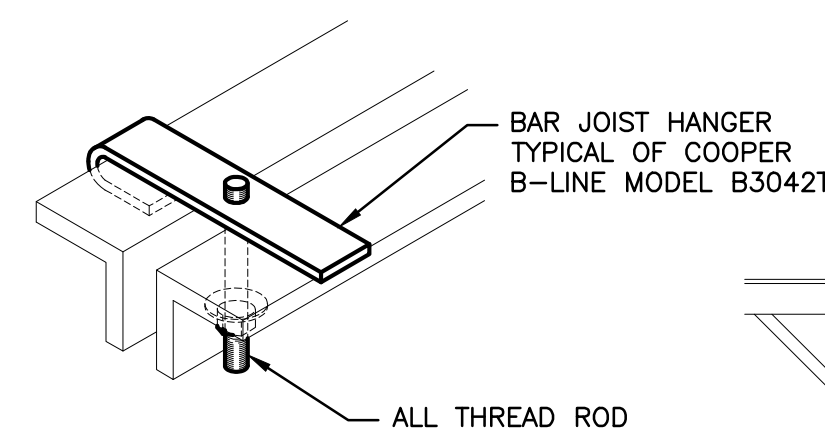
4 TYPICAL PULL STATION & HORN STROBE DETAIL
N.T.S.



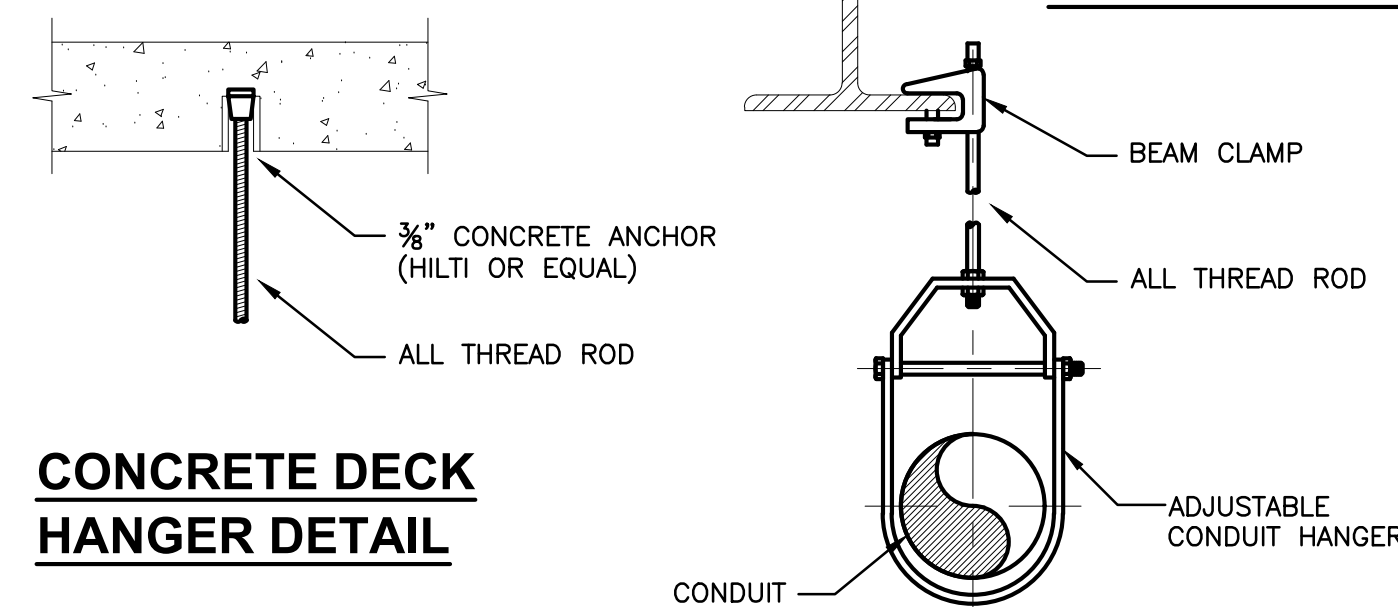
5 CONDUIT PENETRATION IN FIRE RATED GWB OR PLASTER PARTITION
N.T.S.



6 LAY-IN LIGHT FIXTURE SUPPORT DETAIL
N.T.S.



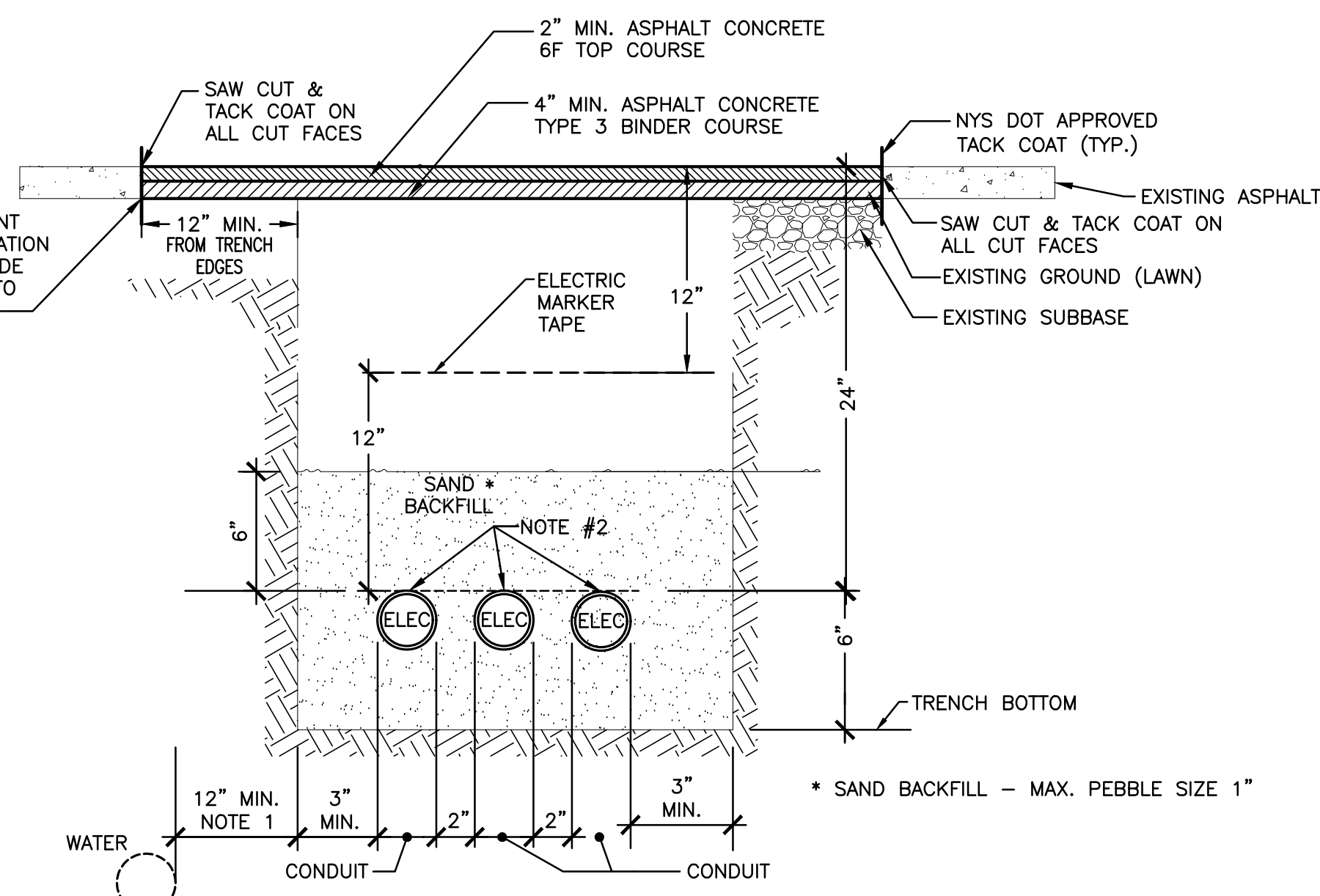
BAR JOIST HANGER DETAIL



BEAM CLAMP HANGER DETAIL

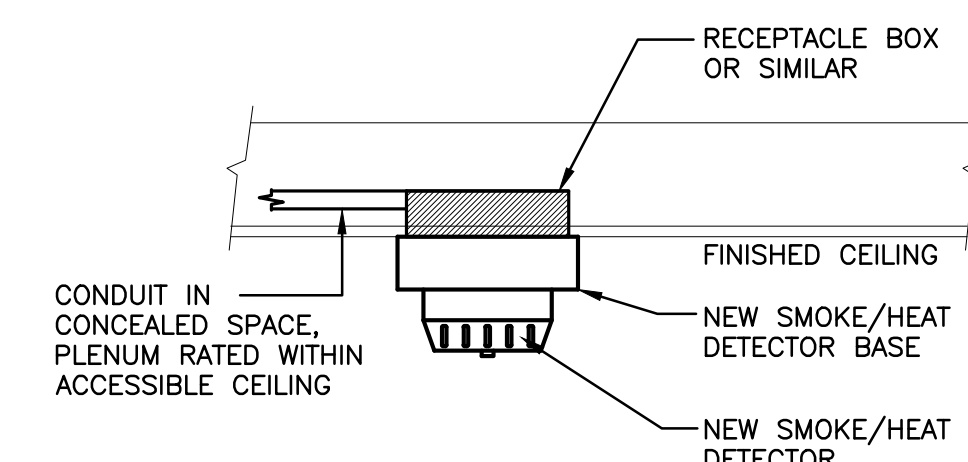
CONCRETE DECK HANGER DETAIL

7 TYPICAL CONDUIT HANGER DETAIL
N.T.S.

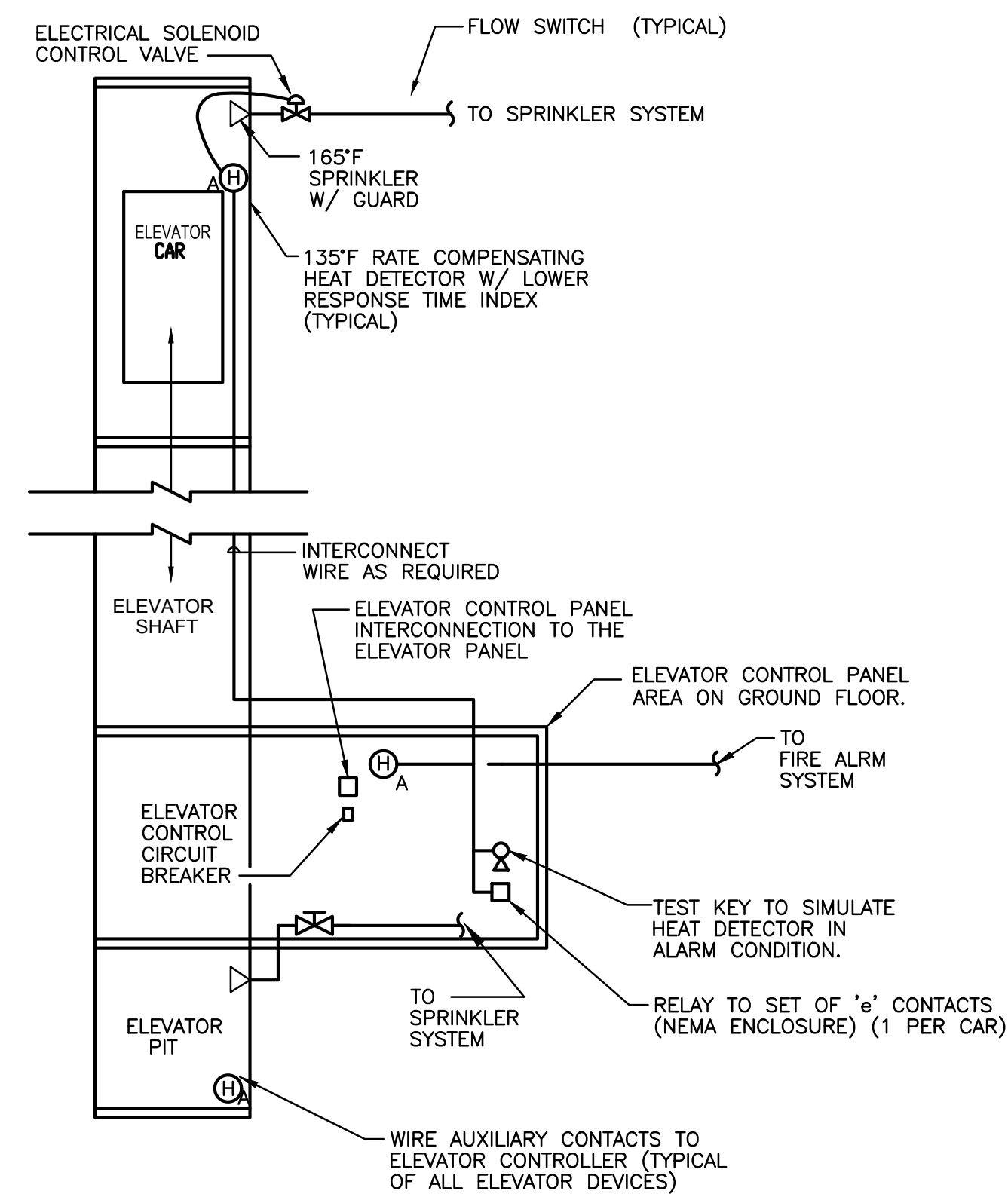


NOTES:
1. MINIMUM CLEARANCE TO OTHER UTILITIES SUCH AS WATER & SEWER. CONSULT OTHER UTILITY FOR CLEARANCES OR LOCAL ORDINANCES.
2. VERTICAL CONFIGURATION ACCEPTABLE - MAINTAIN SAME SPACING AND MINIMUM BURIAL DEPTH.
3. IN AREAS WHERE PAVEMENT IS REMOVED FOR TRENCHING, CONTRACTOR SHALL NEATLY SAW-CUT PAVEMENT THROUGH ASPHALTIC LAYERS PRIOR TO REMOVAL, AS NOTED ABOVE.
4. EXISTING PAVEMENT THAT IS SAW-CUT SHALL BE COATED AND SEALED ALONG ALL CUTS PRIOR TO INSTALLATION OF MATERIALS NEXT TO THE PAVEMENT REMAINING.
5. ALL UNDERGROUND CABLES SHALL BE INSTALLED IN PVC CONDUIT LISTED FOR DIRECT BURIAL WITHOUT ENCASMENT.

11 TYPICAL TRENCH CONFIGURATION FOR GRASS/ASPHALT AREA
N.T.S.



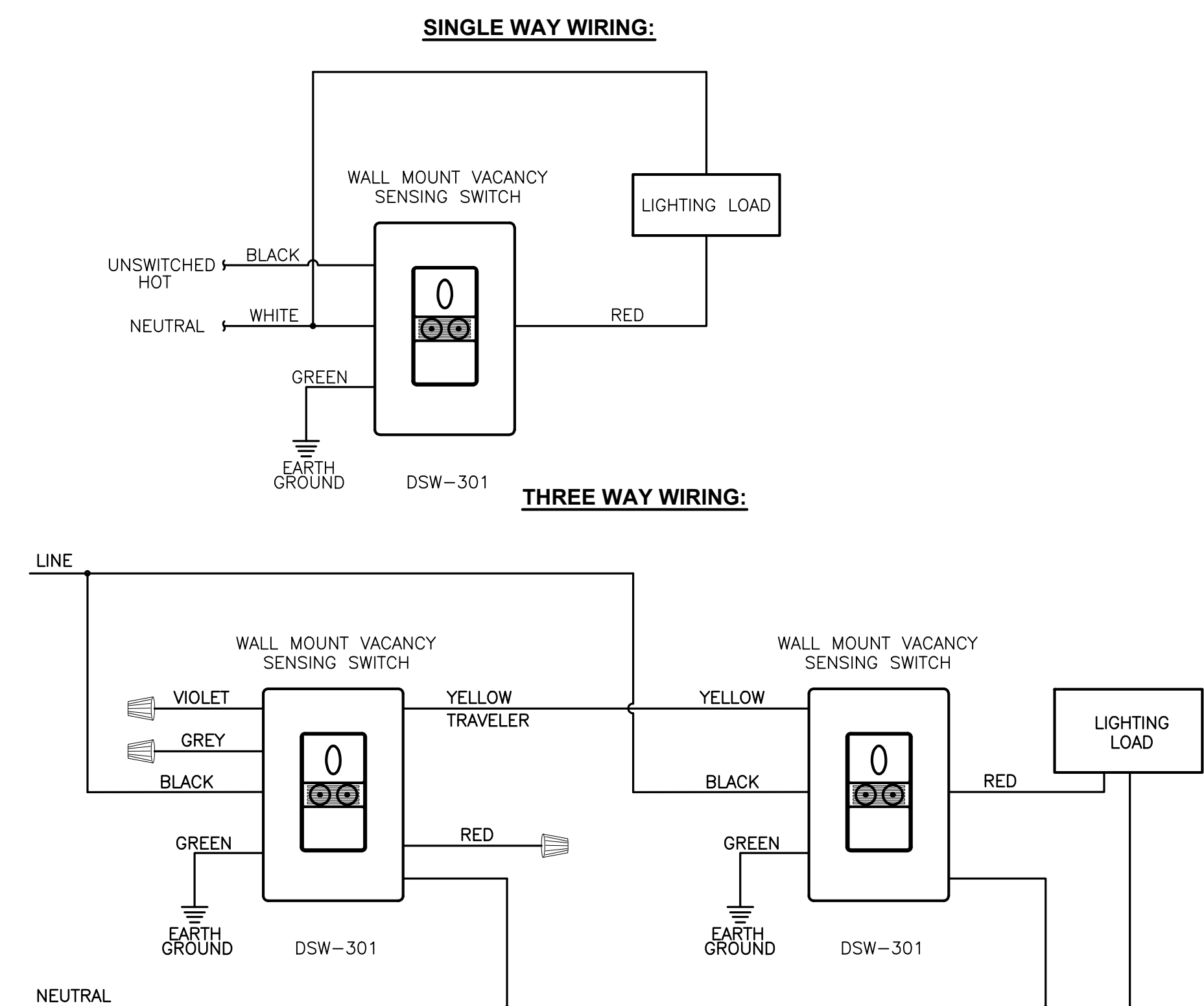
8 TYPICAL SMOKE / HEAT DETECTOR DETAIL
N.T.S.



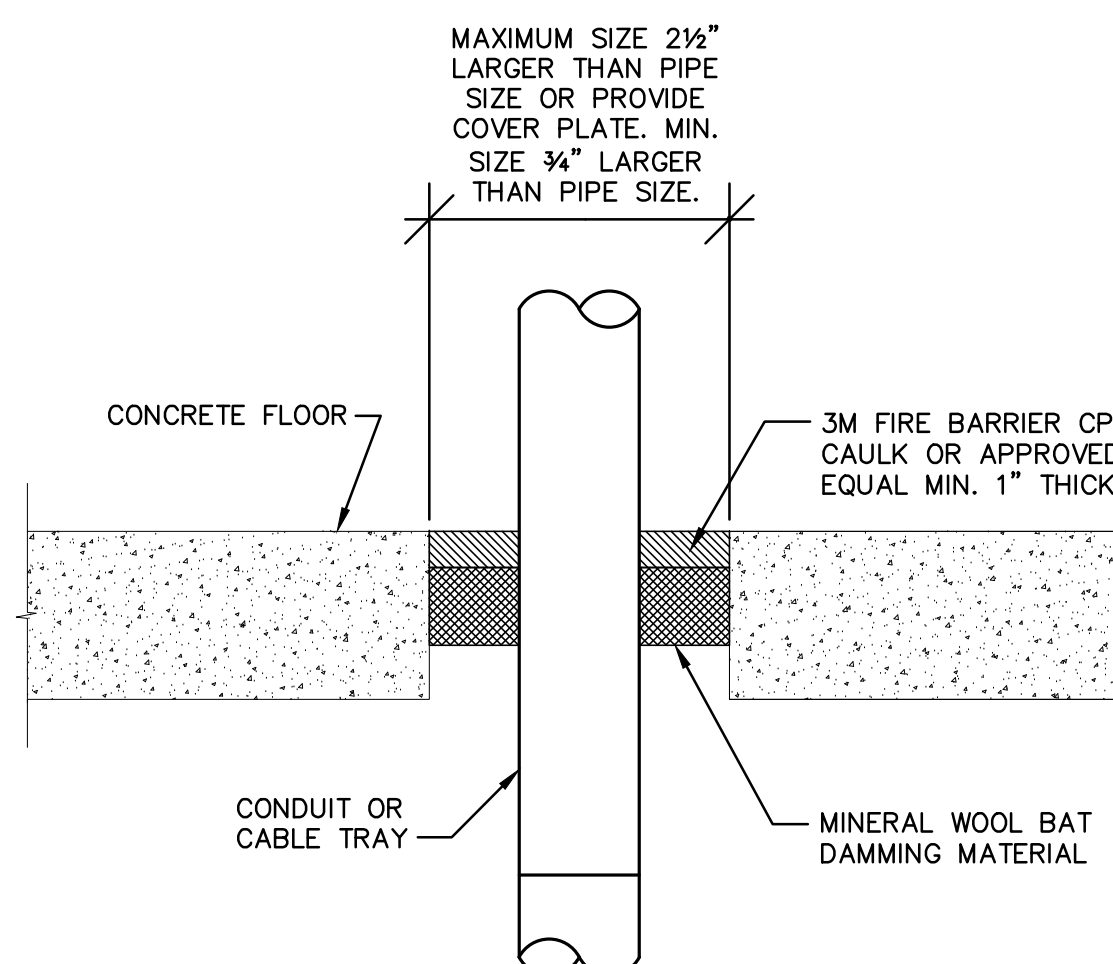
NOTES:
1. POWER TO THE ELEVATOR SHALL BE SHUNTED OUT VIA THE SHUNT TRIP CIRCUIT BREAKER ONLY WHEN BOTH THE FOLLOWING CONDITIONS ARE MET:
a. IT HAS BEEN ESTABLISHED THAT THE RESPECTIVE ELEVATOR HAS STOPPED AT A FLOOR AND THE CAR AND HOISTWAY DOORS ARE OPEN VIA THE ELEVATOR CONTROLLER. COORDINATE WITH F/A SYSTEM.
b. THE TEMPERATURE EXCEEDS THE HEAT DETECTOR RATING.
2. HEAT DETECTORS IN ELEVATOR SHAFT SHALL BE WITHIN 2 FT. FROM SPRINKLER HEAD ACCORDANCE WITH NFPA 72.

OPERATION
UPON ACTIVATION OF HEAT DETECTOR OR TEST KEY THE ELEVATOR CONTROLLER SHALL DIRECT THE ELEVATOR TO THE NEAREST FLOOR IN THE DIRECTION OF THE EXISTING ELEVATOR MOTION AND OPEN DOORS AT THE NEAREST FLOOR AND STOP. THE ELEVATOR SHALL THEN STOP AND THE SHUNT TRIP BREAKER SHALL OPEN (SIGNALLED BY THE ELEVATOR CONTROLLER) AND DISCONNECT POWER TO THE ELEVATOR.

12 TYPICAL ELEVATOR SPRINKLER CONTROL SCHEMATIC
SCALE: 12" = 1'-0"

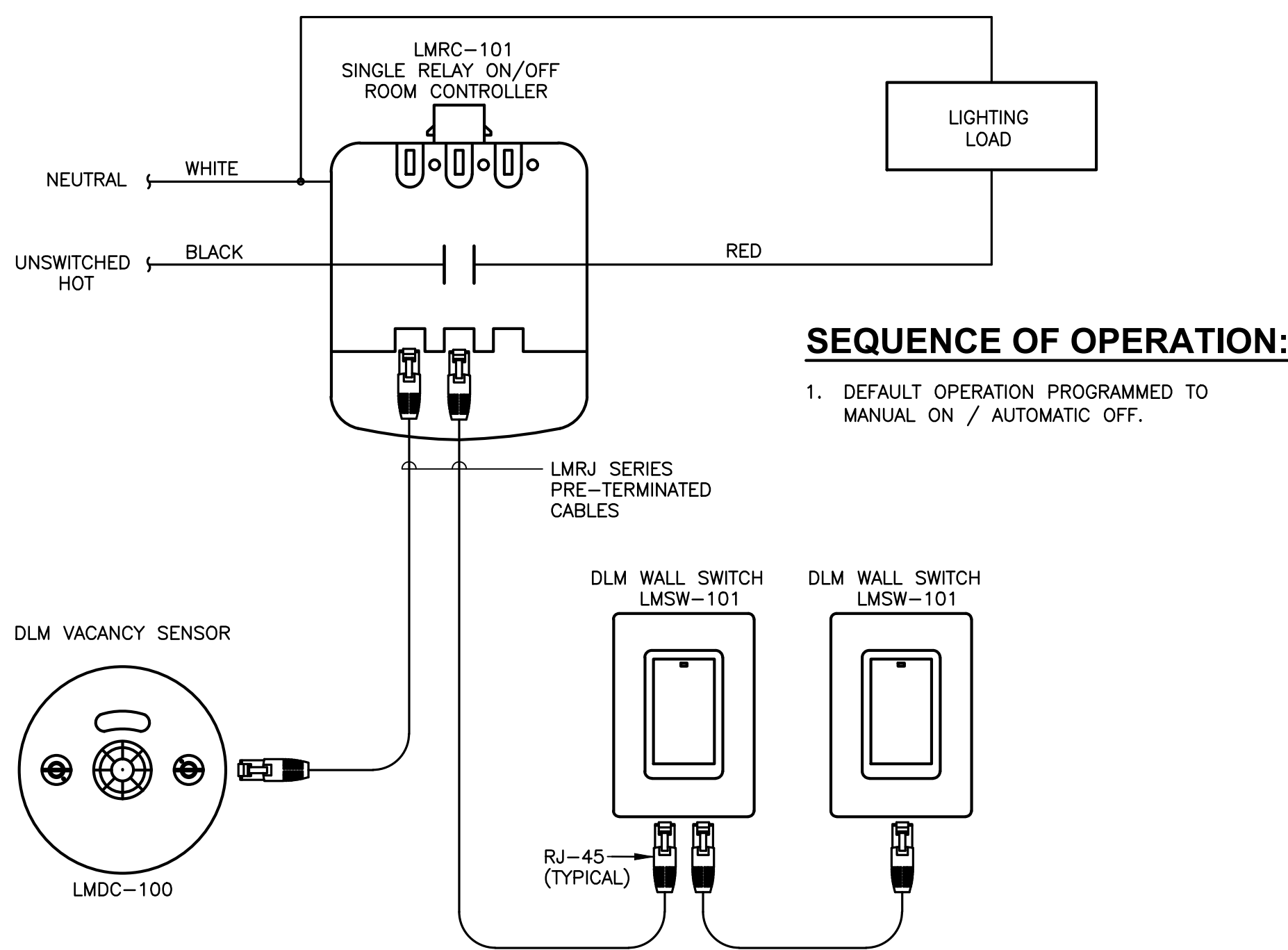


9 TYPICAL WALL MOUNT VACANCY SENSOR SWITCH DETAIL
N.T.S.

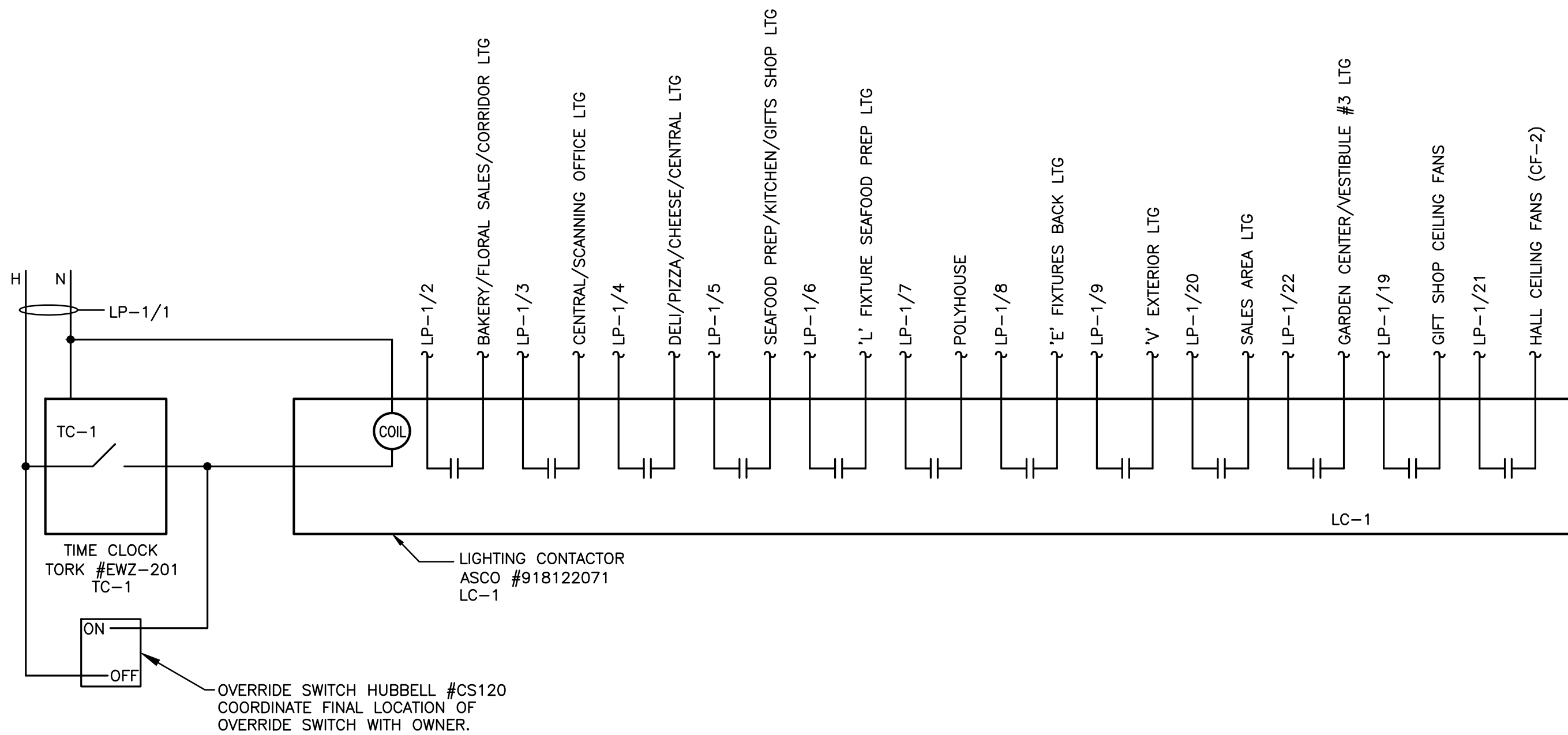


10 CONDUIT PENETRATION IN FIRE RATED CONCRETE FLOOR
N.T.S.

Sheet Title: Single Zone Switching Room Controller

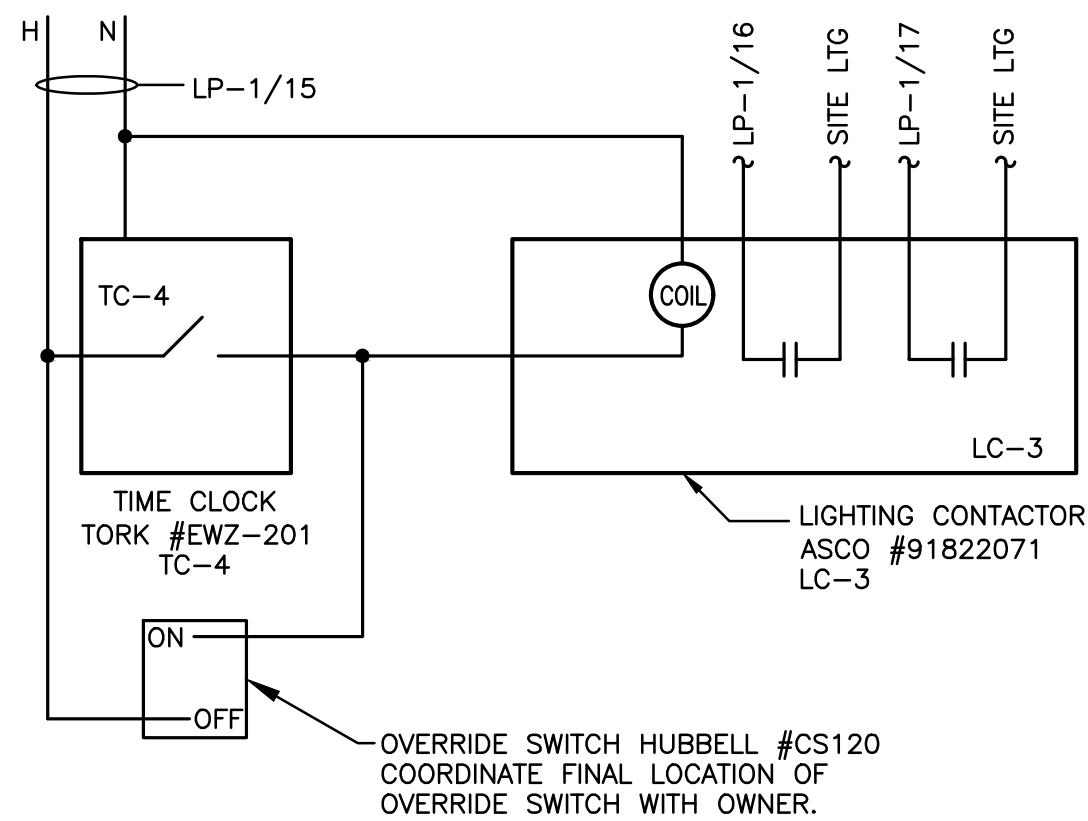


6 TYPICAL SINGLE ZONE SWITCHING ROOM CONTROLLER
N.T.S.



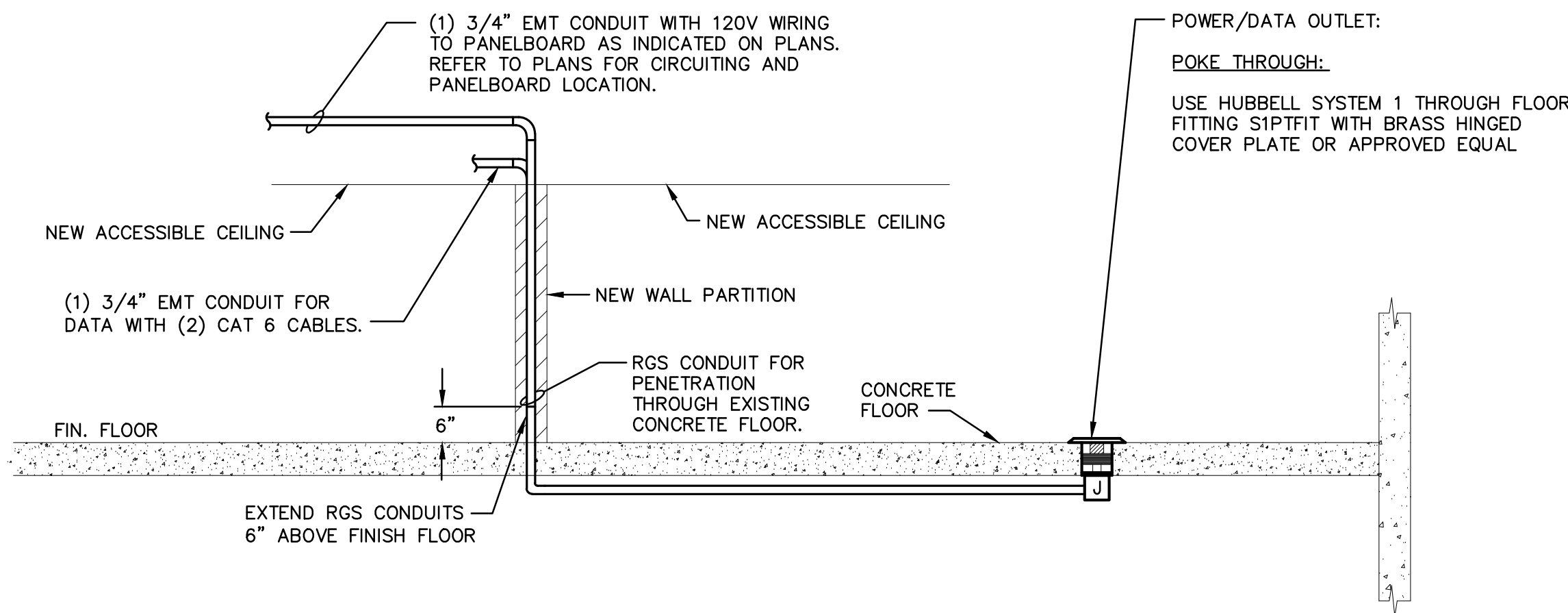
NOTE:
1. COORDINATE WITH OWNER FOR HOURS OF OPERATION AND DEMONSTRATE TO THEM ALL TIME CLOCK FUNCTIONS.

4 FIRST FLOOR LIGHTING TIMECLOCK & CONTACTOR DETAIL
N.T.S.

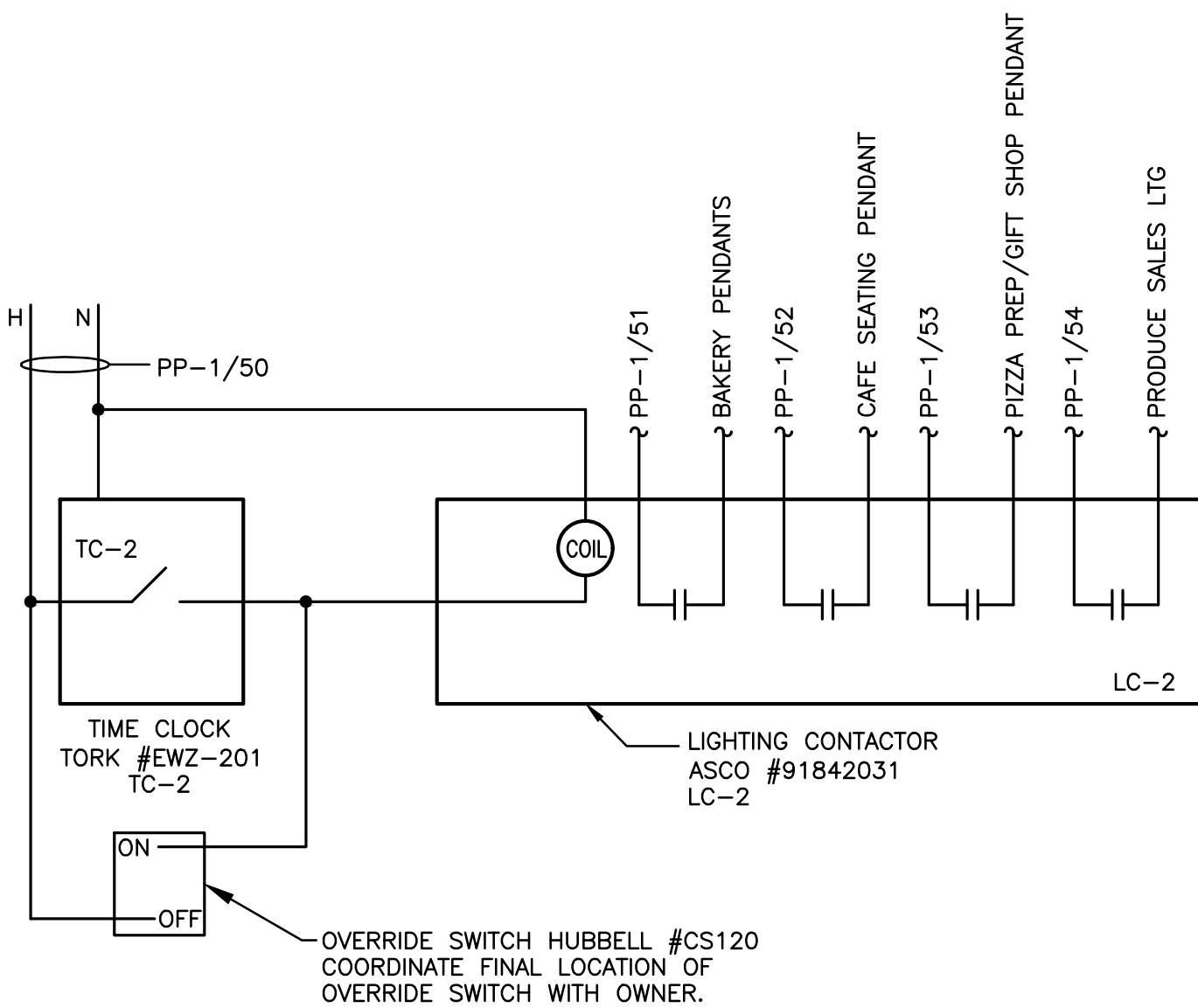


NOTE:
1. COORDINATE WITH OWNER FOR HOURS OF OPERATION AND DEMONSTRATE TO THEM ALL TIME CLOCK FUNCTIONS.

6 SITE LIGHTING TIMECLOCK & CONTACTOR DETAIL
N.T.S.



3 FLOOR POWER/ DATA OUTLETS
N.T.S.

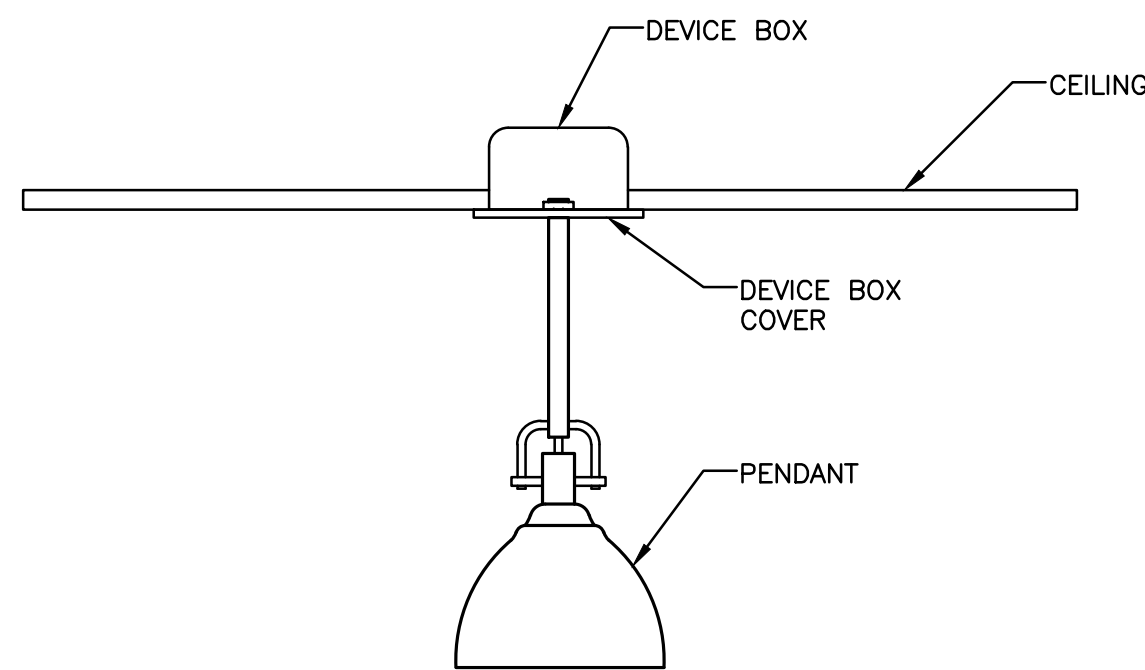


NOTE:
1. COORDINATE WITH OWNER FOR HOURS OF OPERATION AND DEMONSTRATE TO THEM ALL TIME CLOCK FUNCTIONS.

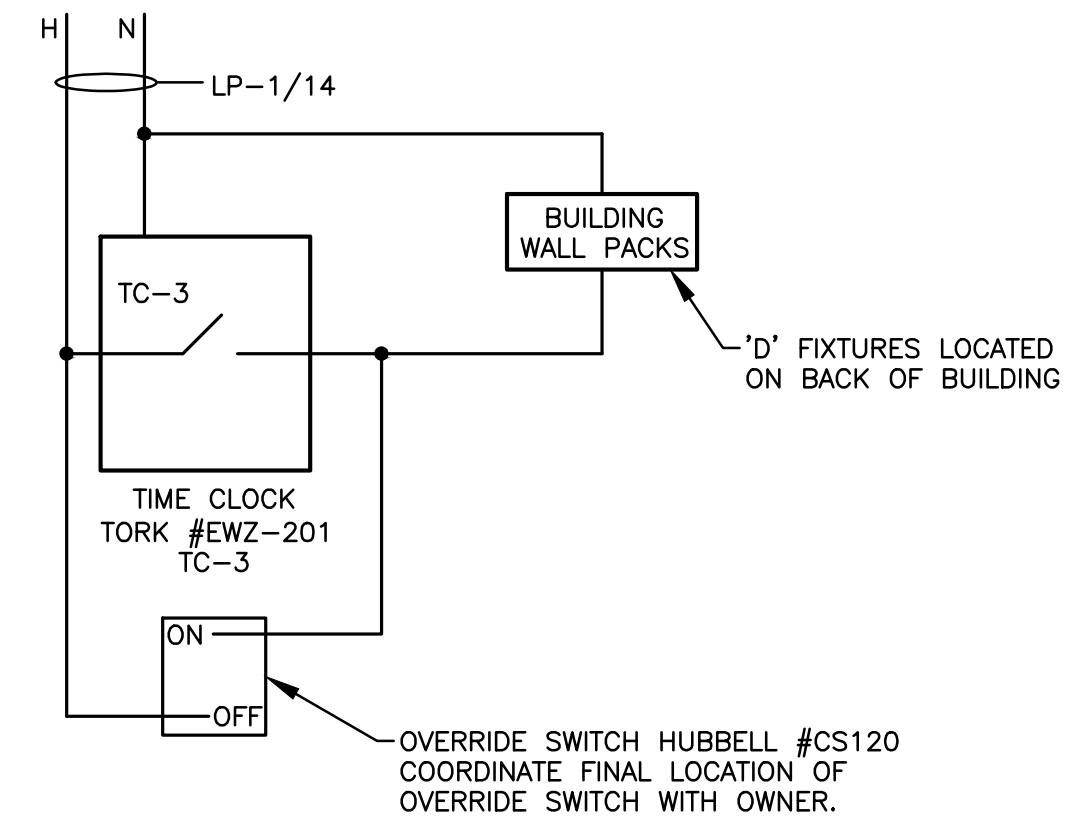
5 FIRST FLOOR PENDANT TIMECLOCK & CONTACTOR DETAIL
N.T.S.

AHU-1 15A	AHU-2 50A
AHU-3 30A	AHU-4 20A
AHU-5 15A	AHU-6 20A
AHU-7 15A	AHU-8 15A
AHU-9 15A	EF-1 15A
CONDENSOR #1 40A	CONDENSOR #2 30A
REFRIGERATION RACK 350A	A/C RACK 450A
SPARE	SPARE
LP-1 400A	
MDP-1 400A	
MAIN LUGS	

7 SWBD-1 ELEVATION VIEW
N.T.S.

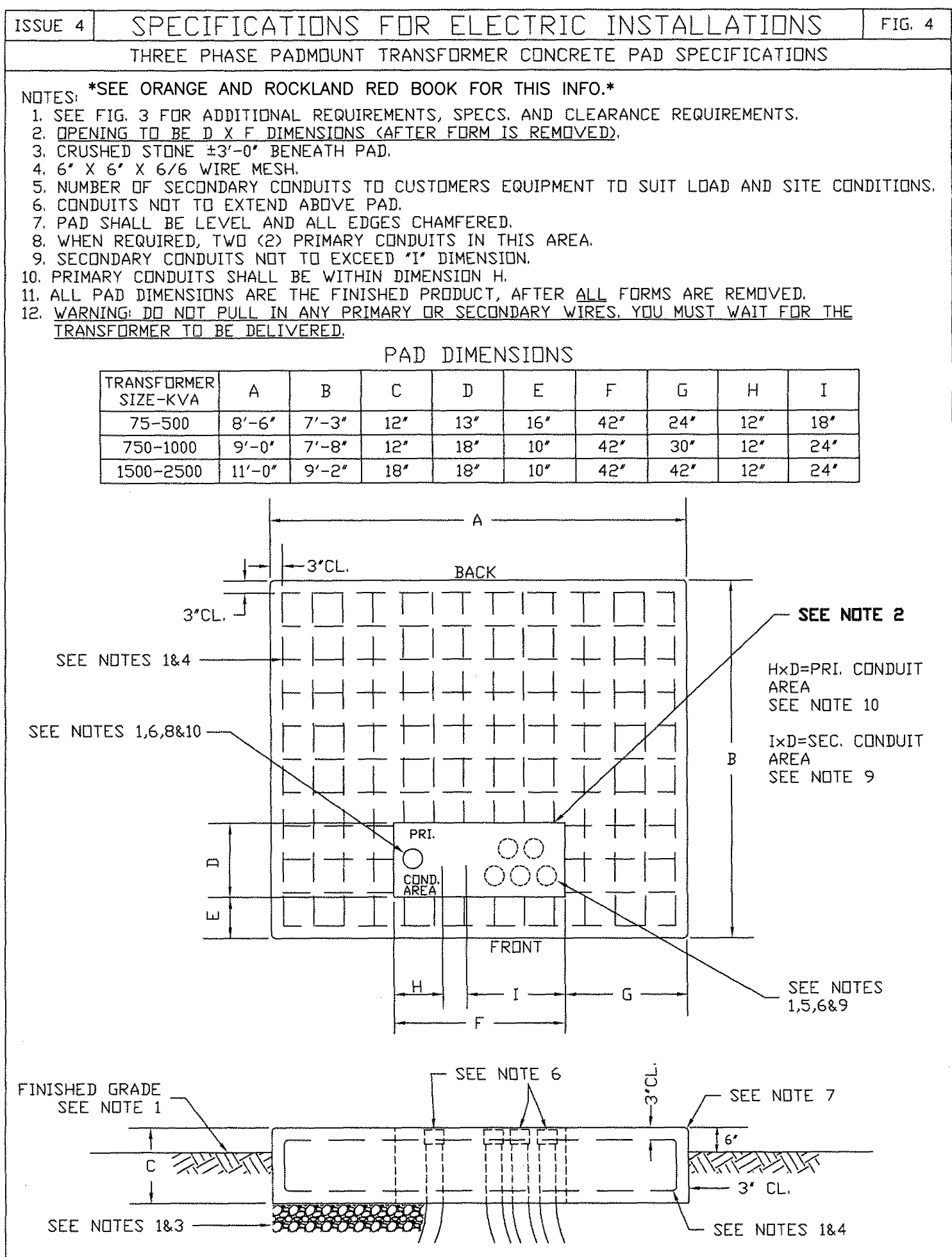


1 PENDANT FIXTURE MOUNTING DETAIL
N.T.S.



NOTE:
1. COORDINATE WITH OWNER FOR HOURS OF OPERATION AND DEMONSTRATE TO THEM ALL TIME CLOCK FUNCTIONS.

6 EXTERIOR EGRESS LIGHTING TIMECLOCK DETAIL
N.T.S.



8 UTILITY TRANSFORMER CONCRETE PAD DETAIL
N.T.S.

FILED:2020-03-04 ADAMS FAIRACRE FARMS/ELECTRICAL/E7.2.dwg - Plotted on: Feb 22, 2022 - 4:31 pm by ah

REVISIONS

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ENGINEERING LLP

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SEAL DANIEL STERNBERG, P.E.

NY PROFESSIONAL ENGINEER
No. 13456-1

PROJECT NAME:

ADAMS
FAIRACRE FARMS

ELECTRICAL: DETAILS

CHECKED BY: MDF
DRAWN BY: WPB
SCALE: AS SHOWN

PLAN B Retail Design & Project Management, LLC
12 Goose Lane, Tolland, CT 06084
Tel: 860.870.5380 Fax: 860.870.5382
e-mail: cbomely@planetbetail.com

DATE: Feb 22, 2022

PROJECT NO:

SHEET NO:

E7.2

Sheet Title: Schedule 22 Feb 2022, 3:57 PM

FILED:2020-03-04 ADAMS FAIRACRE FARMS ELECTRICAL.dwg Plotted on: Feb 22, 2022 - 4:31 pm by ah

LIGHTING SCHEDULE									
QTY	TAG	DESCRIPTION	MOUNTING	MANUFACTURER	MODEL NO.	VOLT	LAMPS		LOCATION / REMARKS
							NO.	CODE	
	A	1' x 4' LED FLAT PANEL	RECESSED	LITHONIA LIGHTING	CPANL 1X4 24/LM	120/277		35K	
	A-EM	1' x 4' LED FLAT PANEL	RECESSED	LITHONIA LIGHTING	CPANL 1X4 24/LM-ILB CP10A	120/277		35K	WITH INTEGRAL EMERGENCY BATTERY
	A1	3" x 96" LED RECESSED DIRECT	RECESSED	COOPER LIGHTING SOLUTIONS	NEORAY DEFINE-3 QS-123-DR-7750-30-GYP-0096-U-DD	120/277		30K	RECESSED IN GWB CEILING
	A2	3" x 48" LED RECESSED DIRECT	RECESSED	COOPER LIGHTING SOLUTIONS	NEORAY DEFINE-3 QS-123-DR-10000-30-GYP-0048-U-DD	120/277		30K	RECESSED IN GWB CEILING
	A3	3" x 96" LED RECESSED DIRECT	RECESSED	COOPER LIGHTING SOLUTIONS	NEORAY DEFINE-3 QS-123-DR-7750-35-GYP-0096-U-DD	120/277		35K	RECESSED IN GWB CEILING
	A4	3" x 48" LED RECESSED DIRECT	RECESSED	COOPER LIGHTING SOLUTIONS	NEORAY DEFINE-3 QS-123-DR-10000-35-GYP-0048-U-DD	120/277		35K	RECESSED IN GWB CEILING
	B	2' x 4' LED FLAT PANEL	RECESSED	LITHONIA LIGHTING	CPANL 2X4 40/LM	120/277		35K	
	B-EM	2' x 4' LED FLAT PANEL	RECESSED	LITHONIA LIGHTING	CPANL 2X4 40/LM-ILB CP10A	120/277		35K	WITH INTEGRAL EMERGENCY BATTERY
	B1	2' x 4' LED FLAT PANEL	RECESSED	LITHONIA LIGHTING	CPANL 2X4 40/LM	120/277		30K	PROVIDE SURFACE MOUNTING KIT AT GYPBOARD APPLICATIONS
	B1-EM	2' x 4' LED FLAT PANEL	RECESSED	LITHONIA LIGHTING	CPANL 2X4 40/LM-ILB CP10A	120/277		30K	PROVIDE SURFACE MOUNTING KIT AT GYPBOARD APPLICATIONS AND WITH INTEGRAL EMERGENCY BATTERY
	B2	2' x 2' FLAT PANEL LED	SURFACE	LITHONIA LIGHTING	CPANL 2X2 33/LM	120/277		35K	
	B2-EM	2' x 2' FLAT PANEL LED	SURFACE	LITHONIA LIGHTING	CPANL 2X2 33/LM-ILB CP10A	120/277		35K	WITH INTEGRAL EMERGENCY BATTERY
	B3	2' x 2' FLAT PANEL LED	SURFACE	LITHONIA LIGHTING	CPANL 2X2 33/LM	120/277		30K	
	B3-EM	2' x 2' FLAT PANEL LED	SURFACE	LITHONIA LIGHTING	CPANL 2X2 33/LM-ILB CP10A	120/277		30K	WITH INTEGRAL EMERGENCY BATTERY
	C1	LED LINEAR	AIRCRAFT CABLE	NORDEON	BALDUR			30K	SEE SUBMITTED FIXTURE LIST FROM MANUFACTURER
	C2	TRACK ASSEMBLY	AIRCRAFT CABLE	NORDEON	BALDUR			30K	
	C3	SPOT MODULE	TRACK	NORDEON	BALDUR			30K	
	C4	8' LED LINEAR PENDANT	SUSPENDED	ALCON LIGHTING	12125-8-120-30K-8-SL-AC 8'(CONFRM)HLD-LE			30K	DIRECT / INDIRECT 40% DOWN - 60% UP
	D	6" ROUND LED DOWNLIGHT	RECESSED	LITHONIA LIGHTING	LDN6-AL01-SWW1-L06WR-LD-MVOLT	120/277		30K	
	E	8' LED LINEAR	SUSPENDED	LITHONIA LIGHTING	CLX L96 10000LM	120/277		40 K	
	E-EM	8' LED LINEAR	SUSPENDED	LITHONIA LIGHTING	CLX L96 10000LM-PS1050	120/277		40 K	WITH INTEGRAL EMERGENCY BATTERY
	E1	4' LED LINEAR	SUSPENDED	LITHONIA LIGHTING	CLX L48 3000LM	120/277		40 K	
	E1-EM	4' LED LINEAR	SUSPENDED	LITHONIA LIGHTING	CLX L48 3000LM-PS1050	120/277		40 K	WITH INTEGRAL EMERGENCY BATTERY
	F	4" x 48" OPEN RECESSED LED WALL WASH	RECESSED	PEERLESS	OPRW-G-LOP-28FT-90CRI-35K 500LMF-MINI-ZT-277-CO41	277		35 K	
	G	8" VAPOR-TIGHT LED	SURFACE	LITHONIA LIGHTING	FEM-L48-4000LM-LPAFL-WD-MVOLT-40K	120/277		40 K	
	G-EM	8" VAPOR-TIGHT LED	SURFACE	LITHONIA LIGHTING	FEM-L48-4000LM-LPAFL-WD-MVOLT-40K-E10WMC	120/277		40 K	WITH INTEGRAL EMERGENCY BATTERY
	G1	4" VAPOR-TIGHT LED	SURFACE	LITHONIA LIGHTING	FEM-L48-3000LM-LPAFL-WD-MVOLT-40K	120/277		40 K	
	G1-EM	4" VAPOR-TIGHT LED	SURFACE	LITHONIA LIGHTING	FEM-L48-3000LM-LPAFL-WD-MVOLT-40K-E10WMC	120/277		40 K	WITH INTEGRAL EMERGENCY BATTERY
	H	DECORATIVE PENDANT	SUSPENDED	HI-LITE MFG.	WAREHOUSE SHADE H-15112/CB8HNC	120		30K	MEDIUM BASE, PROVIDE LED BULB, 30K
	J	8" ROUND LED DOWNLIGHT	RECESSED	INDY	L8-17LM-35K-MVOLT-G4	120/277		35K	
	J1	8" ROUND LED DOWNLIGHT	RECESSED	INDY	L8-23LM-30K-MVOLT-G4	120/277		30K	
	K	DECORATIVE PENDANT	SUSPENDED			120		30K	
	L	4" x 8' LED LUMINOUS CEILING PANELS		PHILIPS	LP710P ONESPACE PREFAB L2860W1733 4000K	120/277			DIMMER
	M	DECORATIVE PENDANT	SUSPENDED			120			
	N	DECORATIVE PENDANT	SUSPENDED			120			
	P	DECORATIVE PENDANT	SUSPENDED			120			
	R	DECORATIVE PENDANT	SUSPENDED			120		30K	
	S	SCONCE	WALL-MTD.			120			
	T1	TRACK LIGHTING	SURFACE	AMELUX	C2TV-G2-34-LED-E-WT-TN1-277-FL-3000	277		30K	
	T2	TRACK LIGHTING	SURFACE	AMELUX	C2TV-G2-34-LED-E-WT-TN1-277-FL-3500	277		35K	
	V		RECESSED						
	V-EM		RECESSED						
	W	LED DOCK LIGHT	SURFACE	FOSTORIA	DKL-60VA-LED	120	1	LED	

LIGHTING CONTROL EQUIPMENT SCHEDULE			
SYMBOL	MANUFACTURER	MODEL #	DESCRIPTION
⌘	WATTSTOPPER	LMSW-101	DLM PUSH-BUTTON WALL SWITCH. COVER BY ARCHITECT.
⌘		DSW-301	LINE VOLTAGE PUSH-BUTTON WALL SWITCH WITH INTEGRAL DUAL-TECHNOLOGY VACANCY SENSOR. COLOR BY ARCHITECT.
⌘		LMDC-100	DLM DUAL-TECHNOLOGY CEILING SENSOR, SET TO MANUAL-ON OPERATION.
RC1		LMRC-101	DLM ON/OFF SINGLE RELAY ROOM CONTROLLER. MOUNT ABOVE FINISHED CEILING ABOVE LOCAL LIGHT SWITCH. FOR ROOMS WITHOUT FINISHED CEILING, MOUNT INCONSPICUOUSLY AT/NEAR CEILING.
TC-#	TORK	EWZ-201	INDOOR/OUTDOOR ASTRONOMIC TIMECLOCK WITH 2 SETS OF 40A SINGLE POLE SINGLE THROW CONTACTS. NEMA 3R RATED.
LC-1	ASCO	918102071	ENCLOSED LIGHTING CONTACTOR WITH 10 SETS OF 30A RATED CONTACTS. 277V COIL VOLTAGE. PROVIDE WITH NEMA 1 ENCLOSURE.
LC-2		91842031	ENCLOSED LIGHTING CONTACTOR WITH 4 SETS OF 30A RATED CONTACTS. 120V COIL VOLTAGE. PROVIDE WITH NEMA 1 ENCLOSURE.
LC-3		91822071	ENCLOSED LIGHTING CONTACTOR WITH 2 SETS OF 30A RATED CONTACTS. 277V COIL VOLTAGE. PROVIDE WITH NEMA 1 ENCLOSURE.

LOAD	CONDUCTORS	C.B.	CONDUCTORS	LOAD
PP-K1	2 SETS OF (4)350 KCMIL, (1)#1 GND, 4°C.	600		BREAKER OCCUPIES WIDTH OF PANEL
PP-2	(4)500 MCM, (1)#2 GND, 4°C.	400		BREAKER OCCUPIES WIDTH OF PANEL
PP-1	(4)3/0, (1)#6 GND, 2°C.	200	(4)3/0, (1)#6 GND, 2°C.	PP-B
PP-IG1	(4)#3, (1)#8 GND, 1½°C.	100	(4)#3, (1)#8 GND, 1½°C.	PP-IG2
PP-O	(4)#3, (1)#8 GND, 1½°C.	100	(4)#3, (1)#8 GND, 1½°C.	PP-3

TYPE: EATON PRL-4
RATING: 800A, 208/120V, 3ø, 4W
MAINS: MLO
BRACING: 22 KAIC
ENCLOSURE: NEMA 1, SURFACE
AVAILABLE SPACE: 26X

NOTES:
1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.

MAIN DISTRIBUTION PANEL - (MDP-1)

LOAD	CONDUCTORS	C.B.	C.B.	CONDUCTORS	LOAD
VESTIBULE/SCANNING OFFICES RECEIPT	(2)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	SCANNING OFFICE RECEIPT
VESTIBULE #2 RECEIPT					
CAFE SEATING RECEIPT					
GIFT SHOP RECEIPT					EXTERIOR RECEIPT
CHEESE WORKTOP FRIDGE					CHEESE WORKTOP FRIDGE
CHEESE ISLAND RECEIPT					COFFEE GRINDER RECEIPT
COFFEE SALES RECEIPT					
ESPRESSO MACHINE	(3)#12, (1)#12 GND, 3/4°C.	20			GIFT SHOP RECEIPT
POPCORN MACHINE	(2)#12, (1)#12 GND, 3/4°C.	15		(3)#12, (1)#12 GND, 3/4°C.	TOASTER RECEIPT
HP-1	(3)#10, (1)#10 GND, 3/4°C.	30		(3)#10, (1)#10 GND, 3/4°C.	HP-1
VESTIBULE #1 AUTO DOOR	(2)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	VESTIBULE #2 AUTO DOOR
COFFEE BREWER RECEIPT	(3)#12, (1)#12 GND, 3/4°C.	20			FLORAL COOLER
HCCU-1	(2)#12, (1)#12 GND, 3/4°C.	15			CHEESE COOLERS
HCCU-2					PIZZA FRIDGE
HCCU-3					PIZZA COOLER
SPARE	-- --	20		(3)#12, (1)#12 GND, 3/4°C	AIR COMPRESSOR

POWER PANEL - (PP-O)

TYPE: EATON PRL-1A
RATING: 100A, 208/120V, 3ø, 4W
MAINS: MLO
BRACING: 22 KAIC
ENCLOSURE: NEMA 1, SURFACE
POLES: 42

NOTES:
1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.
2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.

LOAD	CONDUCTORS	C.B.	C.B.	CONDUCTORS	LOAD
DOCK LEVELER	(4)#12, (1)#12 GND, 3/4°C.	20		(4)#12, (1)#12 GND, 3/4°C.	DOCK LEVELER
DOCK LEVELER	(4)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	COMPACTOR ROOM/RECEIVING AREA RECEIPT
					BATHROOM RECEIPT
WATER COOLER	(2)#12, (1)#12 GND, 3/4°C.	15		(3)#12, (1)#12 GND, 3/4°C.	REFRIGERATION RACK
BOTTLE FILLER					
MIXER GRINDER	(4)#8, (1)#10 GND, 3/4°C.	35			HAND WRAP MEAT PREP
					PATTY MACHINE
MEAT SAW	(4)#12, (1)#12 GND, 3/4°C.	20		(4)#12, (1)#12 GND, 3/4°C.	MEAT PREP. FREEZER DOOR HEATER/VENT
					MEAT SAW
MEAT PREP RECEIPT	(2)#12, (1)#12 GND, 3/4°C.	20		(3)#12, (1)#12 GND, 3/4°C.	MEAT PREP. PRESSURE WASHER
RECEIPT NEAR VERTICAL LIFT				(2)#12, (1)#12 GND, 3/4°C.	FISH FREEZER DOOR HEATER/VENT
SALES AREA RECEIPT					FAP
SALAD BAR RECEIPT				(3)#12, (1)#12 GND, 3/4°C.	AUTOMATIC WRAPPING SYSTEM
EMPLOYEES BREAK ROOM/CONFERENCE RECEIPT					
BASEMENT BATHROOM RECEIPT	(2)#12, (1)#12 GND, 3/4°C.	15		(3)#12, (1)#12 GND, 3/4°C.	A/C RACK
I.T. OFFICE RECEIPT					
BREAK ROOM FRIDGE				(2)#12, (1)#12 GND, 3/4°C.	CONFERENCE ROOM FRIDGE
BASEMENT RECEIPT					ELEVATOR PIT RECEIPT/LIGHT
BAKERY PENDANTS					TC-2
PIZZA PREP/GIFT SHOP PENDANT					CAFE SEATING PENDANTS
ELEVATOR	PER MANUFACTURER			(4)#8, (1)#10 GND, 3/4°C.	PRODUCE SALES LTG
					MIXER GRINDER
MEAT COOLER	(2)#12, (1)#12 GND, 3/4°C.	20		(3)#8, (1)#10 GND, 3/4°C.	FREEZER
DAIRY COOLER					
MEAT FREEZER	(3)#8, (1)#10 GND, 3/4°C.	40		(2)#10, (1)#10 GND, 3/4°C.	MEAT PREP CASE
SPARE	-- --	20		-- --	SPARE

POWER PANEL - (PP-1)

TYPE: EATON PRL
RATING: 200A, 208/120V, 3ø, 4W
MAINS: MLO
BRACING: 22 KAIC
ENCLOSURE: NEMA 1, SURFACE
POLES: 72

NOTES:
1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.
2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.
* COORDINATE SIZE OF BREAKER WITH ELEVATOR MANUFACTURER

LOAD	CONDUCTORS	C.B.	C.B.	CONDUCTORS	LOAD
BP-1	(4)#10, (1)#10 GND, 3/4°C.	35		(4)#10, (1)#10 GND, 3/4°C.	BP-3
BP-3	(4)#10, (1)#10 GND, 3/4°C.	35		(2)#12, (1)#12 GND, 3/4°C.	B-1
					B-2
P-5	(4)#12, (1)#12 GND, 3/4°C.	15		(4)#12, (1)#12 GND, 3/4°C.	B-3
					P-6
P-1	(4)#12, (1)#12 GND, 3/4°C.	20		(4)#12, (1)#12 GND, 3/4°C.	P-2
P-3	(4)#3, (1)#8 GND, 1 1/4°C.	90		(4)#3, (1)#8 GND, 1 1/4°C.	P-4
P-5	(4)#12, (1)#12 GND, 3/4°C.	15		(4)#12, (1)#12 GND, 3/4°C.	P-6
MAU-3	(4)#12, (1)#12 GND, 3/4°C.	15		(3)#12, (1)#12 GND, 3/4°C.	EF-9
EF-10	(3)#12, (1)#12 GND, 3/4°C.	15		(2)#12, (1)#12 GND, 3/4°C.	UH-1 BASEMENT
MAU-3	(4)#12, (1)#12 GND, 3/4°C.	15			UH-1 FIRST FLOOR
TRASH COMPACTOR	(3)#6, (1)#10 GND, 1°C.	60			EXTERIOR RECEIPT BY DOCKS
HYDRAULIC LIFT	(2)#12, (1)#12 GND, 3/4°C.	20		(3)#6, (1)#10 GND, 1°C.	TRASH COMPACTOR
CP-1					
CP-2				(2)#12, (1)#12 GND, 3/4°C.	WH-1
SPARE	-- --			-- --	SPARE

POWER PANEL - (PP-2)

TYPE: EATON
RATING: 400A, 208/120V, 3ø, 4W
MAINS: MLO
BRACING: 22 KAIC
ENCLOSURE: NEMA 1, SURFACE
POLES: 72

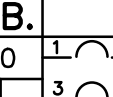
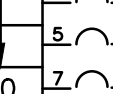
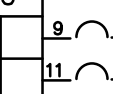
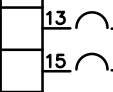
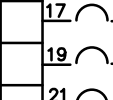
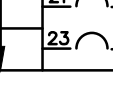
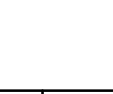
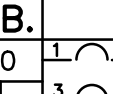
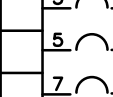
NOTES:
1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.
2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.

LOAD	CONDUCTORS	C.B.	C.B.	CONDUCTORS	LOAD
RECEIPT UNDER HOOD	(2)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	BAKERY WATER METER
PRODUCE PREP RECEIPT					TABLE TOP SLICER RECEIPT
PRODUCE PREP HAND WRAP					80 QUART MIXER
BAKERY RECEIPT					
PROOFER	(4)#12, (1)#12 GND, 3/4°C.	20		(4)#12, (1)#12 GND, 3/4°C.	DOUBLE RACK OVEN
DOUBLE RACK OVEN	(4)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	SERVICE REFRIGERATOR
					PRODUCE SALES RECEIPT
					MIXER RECEIPT
BAKERY FREEZER DOOR HEATER (VENT)	(2)#12, (1)#12 GND, 3/4°C.	20			CANDY SALES RECEIPT
GIFT & CANDY STORE RECEIPT					PRODUCE PREP HANDWRAP RECEIPT
ICE CREAM MACHINE	(3)#10, (1)#10 GND, 3/4°C.	30			DIPPING DISPLAY RECEIPT
					FOUNTAIN/KOI RECEIPT
FLORAL PREP RECEIPT	(2)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	PRODUCE PREP FRIDGE
					FUDGE MAKER
TROPICAL HOUSE UH-3				(2)#12, (1)#12 GND, 3/4°C.	TROPICAL HOUSE AUTO DOOR
TROPICAL HOUSE UH-3					E-COM FREEZER
E-COM/TROP HOUSE RECEIPT					E-COM FRIDGE
NEXUS CONTROL					PRODUCE COOLER
BAKERY FREEZER	(3)#6, (1)#10 GND, 1°C.	60		(2)#10, (1)#10 GND, 3/4°C.	PRODUCE COOLER
					PRODUCE WET BAR
BAKERY COOLER	(2)#12, (1)#12 GND, 3/4°C.	20		(2)#12, (1)#12 GND, 3/4°C.	DAIRY COOLER
PROD./CIDER/EGGS					AIR CURTAIN
FROZEN FOODS	(3)#8, (1)#10 GND, 3/4°C.	45		(3)#8, (1)#10 GND, 3/4°C.	FROZEN FOODS
BAKERY COOLER	(2)#12, (1)#12 GND, 3/4°C.	30		(2)#12, (1)#12 GND, 3/4°C.	FIRE DOOR OPERATOR
SPARE	-- --	20		-- --	SPARE

POWER PANEL - (PP-B)

TYPE: EATON PRL-1A
RATING: 200A, 208/120V, 3ø, 4W
MAINS: MLO
BRACING: 22 KAIC
ENCLOSURE: NEMA 1, SURFACE
POLES: 72

NOTES:
1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.
2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.

LOAD	CONDUCTORS	C.B.	C.B.	CONDUCTORS	LOAD	
REGISTER RECEIPT	(2)#12, (1)#12 GND, 3/4°C.	20		20	(2)#12, (1)#12 GND, 3/4°C.	REGISTER RECEIPT
SELF CHECKOUT KIOSK	(2)#12, (1)#12 GND, 3/4°C.	20		20	(2)#12, (1)#12 GND, 3/4°C.	SELF CHECKOUT KIOSK
SELF CHECKOUT KIOSK						SELF CHECKOUT KIOSK
SPARE	-- --				-- --	SPARE
						
						
						
						
						
						
						
						

* PROVIDE SHUNT TRIP BREAKER (REQUIRES 1 ADDITIONAL POLE)	<u>POWER PANEL - (PP-K1)</u>	NOTES: 1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. 2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.
TYPE:	EATON PRL-1A	
RATING:	600A, 208/120V, 3ø, 4W	
MAINS:	MLO	
BRACING:	22 KAIC	
ENCLOSURE:	NEMA1, SURFACE	
POLES:	72	

<u>POWER PANEL - (PP-K2)</u>		NOTES:
TYPE:	EATON PRL-1A	1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.
RATING:	200A, 208/120V, 3ø, 4W	2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.
MAINS:	MLO	
BRACING:	22 KAIC	
ENCLOSURE:	NEMA1, SURFACE	
POLES:	30	

<u>POWER PANEL - (PP-K3)</u>		<u>NOTES:</u>
TYPE:	EATON PRL-1A	1. ALL WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED.
RATING:	100A, 208/120V, 3ø, 4W	2. ALL CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED.
MAINS:	MLO	
BRACING:	22 KAIC	
ENCLOSURE:	NEMA1, SURFACE	* COORDINATE SIZE OF BREAKER WITH EXHAUST FAN MANUFACTURER
POLES:	42	