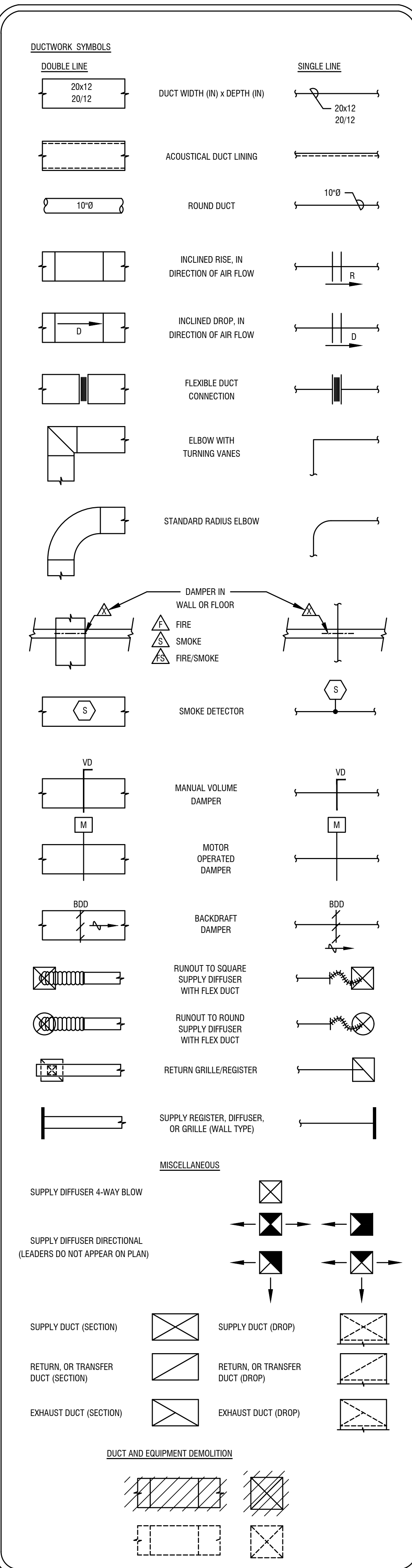
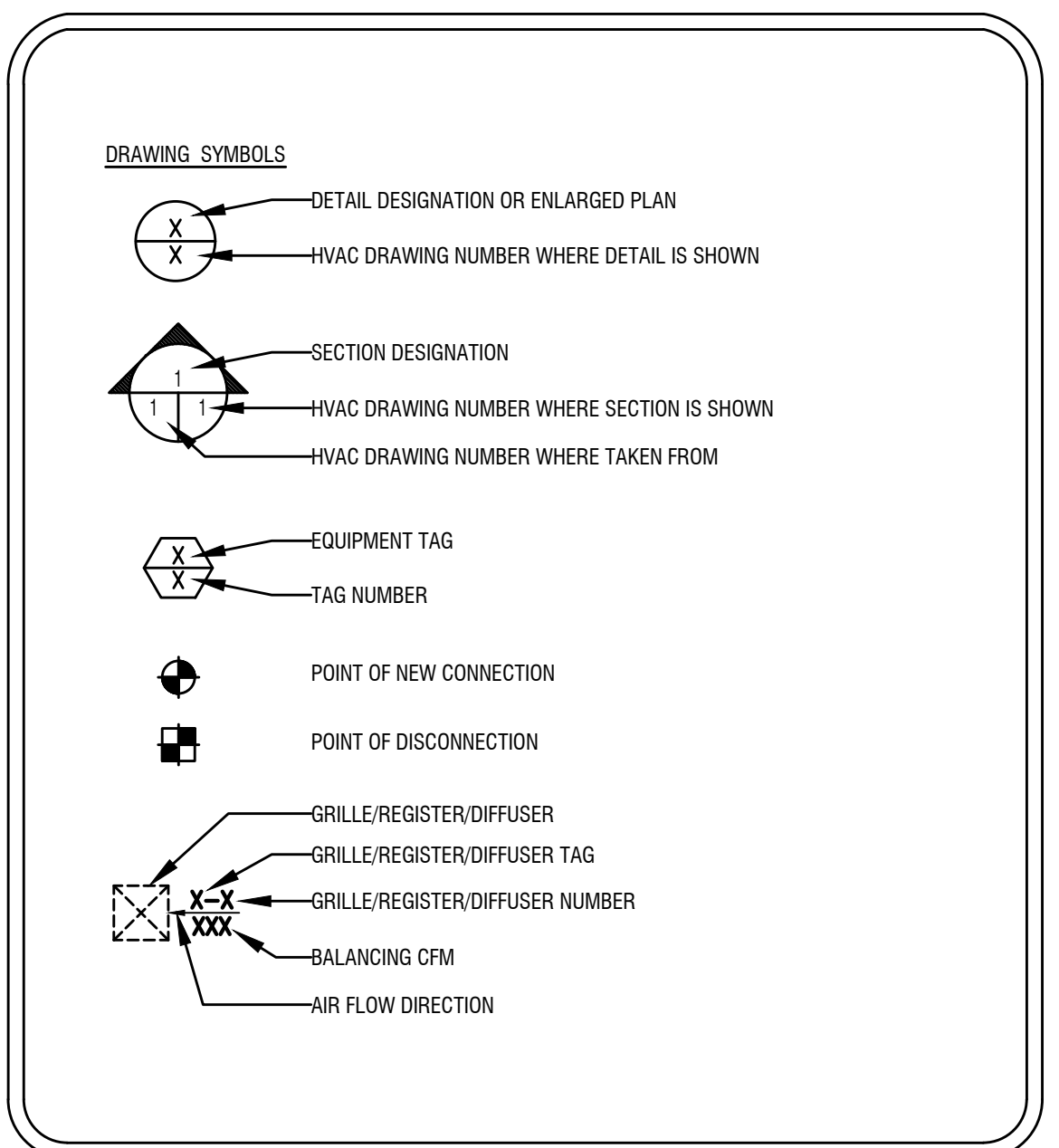


MECHANICAL ABBREVIATIONS			
AC	ALTERNATING CURRENT	KW	KILOWATTS
ACC	AIR COOLED CONDENSER	KWH	KILOWATT HOUR
ACU	AIR CONDITIONING UNIT		
AD	ACCESS DOOR		
ADJ	ADJUSTABLE	LAT	LEAVING AIR TEMPERATURE (°F)
AF	AIR FLOW	LBS#	POUNDS
AF	ABOVE FINISHED FLOOR	LD	LINEAR DIFFUSER
AHU	AIR HANDLING UNIT	LF	LINEAR FEET
AP	ACCESS PANEL	LWT	LEAVING WATER TEMPERATURE (°F)
ARCH	ARCHITECTURE		
ATC	AUTOMATIC TEMPERATURE CONTROL		
ATM	ATMOSPHERE		
AUX	AUXILIARY	MOD	MOTOR OPERATED DAMPER
AVG	AVERAGE	MAU	MAKEUP AIR UNIT
AWG	AMERICAN WIRE GAUGE	MAX	MAXIMUM
		MB	MINORS BOX
		MBH	1000 BTUH
B	BOILER	MC	MECHANICAL CONTRACTOR
BDD	BACKDRAFT DAMPER	MCC	MOTOR CONTROL CENTER
BHP	BRAKE HORSEPOWER	MFR	MANUFACTURER
BOD	BOTTOM OF DUCT	MIN	MINIMUM
BOS	BOTTOM OF STEEL	MISC	MISCELLANEOUS
BTU	BRITISH THERMAL UNIT	MMBH	1,000,000 BTUH
BTUH	BTU PER HOUR		
		NA	NOT APPLICABLE
CAV	CONSTANT AIR VOLUME	NC	NOISE CRITERIA, dB RE 20 µPa
CC	COOLING COIL	NC	NORMALLY CLOSED
CFM	CUBIC FEET PER MINUTE	NO	NOT IN CONTRACT
CH	CHILLER	NO	NORMALLY OPEN
CAI	CONTROLS & INSTRUMENTATION	NTS	NOT TO SCALE
CEILING	CEILING		
CMU	CONCRETE MASONRY UNIT	OA	OUTSIDE AIR
CO	CARBON MONOXIDE	OAT	OUTSIDE AIR TEMPERATURE
CO2	CARBON DIOXIDE	OAD	OUTSIDE AIR DAMPER
COND	CONDENSATE	OSD	OPPOSED BLADE DAMPER
CONN	CONNECTION	OZ	OUNCE
CONT.	CONTINUATION		
CORR	CORRIDOR	P	PUMP
CT	COOLING TOWER	PC	PLUMBING CONTRACTOR
CU	CONDENSING UNIT	PD	PRESSURE DROP
CUH	CABINET UNIT HEATER	PH	PHASE
CV	CONTROL VALVE	PHC	PREHEAT COIL
CU FT	CUBIC FEET	PROP	PROPPELLER
CVS	CONTROL VALVE STATION	PSI	POUNDS PER SQUARE INCH
		PSIG	PSI GAUGE
D	DIFFUSER OR REGISTER	P+F	PITCH AND FLOW
dB	DECIBEL, RE 10 WATT	QTY	QUANTITY
DBT	DRY BULB TEMPERATURE (°F)		
DDC	DIRECT DIGITAL CONTROL		
DEG	DEGREE FAHRENHEIT (°F)		
DA	DIAMETER		
DIM	DIMENSION	RA	REGISTER
DN	DOWN	RA	RETURN AIR
DP	DEW POINT TEMPERATURE (°F)	RC	ROOM CRITERIA, dB RE 20 µPa
DX	DIRECT EXPANSION	RF	RETURN/RELIEF AIR FAN
DWG	DRAWING	RH	RELATIVE HUMIDITY
		RHC	REHEAT COIL
		RM	REVOLUTIONS PER MINUTE
E	EXHAUST		
EA	EXHAUST AIR	S	SMOKE DETECTOR
EAT	ENTERING AIR TEMPERATURE (°F)	SA	SUPPLY AIR
EC	ELECTRICAL CONTRACTOR	SEER	SEASONAL ENERGY EFFICIENCY RATIO
EER	ENERGY EFFICIENCY RATIO	SENS	SENSIBLE
EF	EXHAUST FAN	SF	SQUARE FEET
EFF	EFFICIENCY	SP	STATIC PRESSURE (IN. WG.)
ELEV	ELEVATION	SPEC	SPECIFICATION
ESP	EXTERNAL STATIC PRESSURE	SQ	SQUARE
ET	EXPANSION TANK	SS	STAINLESS STEEL
EW7	ENTERING WATER TEMPERATURE (°F)	SV	SOLENOID VALVE
F	FILTER	T	THERMOSTAT
FA	FACE AREA	TEMP	TEMPERATURE (°F)
FC	FORWARD CURVED	TOO	TOP OF DUCT
FCU	FAN COIL UNIT	TOP	TOP OF PIPE
FD	FLOOR DRAIN	TOS	TOP OF STEEL
FLN	FLOOR	TSP	TOTAL STATIC PRESSURE
FP	FIRE PROTECTION	TSTAT	THERMOSTAT
FPM	FEET PER MINUTE	TxD	TRANSFER DUCT
FR	FRIED RADIATION	TYP	TYPICAL
FT	FEET		
FVEL	FACE VELOCITY	UC	UNDERCUT
F&T	FLOAT AND THERMOSTATIC	UH	UNIT HEATER
		UL	UNDERWRITERS LABORATORY
GA	GAUGE OR GAGE	UV	UNIT VENTILATOR
GAL	GALLON	UVL	ULTRA VIOLET LIGHT
GALV	GALVANIZED		
GC	GENERAL CONTRACTOR	V	VALVE, VOLT
GH	GRAVITY HOOD	VA	VOLT-AMPERE
GPM	GALLONS PER MINUTE	VD	VOLUME DAMPER
		VEL	VELOCITY
HC	HEATING COIL	VFD	VARIABLE FREQUENCY DRIVE
HDA	HAND-OFF-AUTOMATIC	VV	VAV, WITH FAN
HP	HORSEPOWER	VL	VOLUME
HR	HOUR		
HVU	HEATING & VENTILATING UNIT	WB	WATT
HWST	HOT WATER SUPPLY TEMPERATURE	WB	WET BULB TEMPERATURE (°F)
HX	HEAT EXCHANGER	WC	WATER COLUMN
		WG	WATER GAUGE
IB	INVERTED BUCKET TRAP	WMS	WIRE MESH SCREEN
IFB	INTEGRAL FACE & BYPASS		
IN	INCH		
IPS	IRON PIPE SIZE		

- ALL INSTALLATIONS AND MATERIALS SHALL MEET THE FOLLOWING:
1. NEW YORK STATE BUILDING CODE, 2020
  2. NEW YORK STATE FIRE CODE, 2020
  3. INTERNATIONAL ENERGY CONSERVATION CODE, 2020 WITH NEW YORK STATE SUPPLEMENTS
  4. NEW YORK STATE MECHANICAL CODE, 2020
  5. NEW YORK STATE FUEL GAS CODE, 2020
  6. ALL FEDERAL, STATE AND LOCAL ORDINANCES



- GENERAL PIPING NOTES:**
1. INSTALL PIPING TO ALLOW ACCESS VALVES, AIR VENTS, EQUIPMENT REQUIRING ACCESS, AND TO PROVIDE MAXIMUM HEADROOM.
  2. PROVIDE OFFSETS TO MAINTAIN CEILING HEIGHT AND TO COORDINATE WITH OTHER TRADES.
  3. INSTALL VALVES IN HORIZONTAL PIPING WITH VALVE STEMS AT OR ABOVE THE PIPE CENTERLINE.
  4. ARRANGE PIPING FOR VENTING OF AIR AND DRAINAGE OF ENTIRE SYSTEM.
  5. INSTALL CONDENSATE DRAIN PIPING PITCHED AT 1/8" PER FOOT IN DIRECTION OF FLOW.
- GENERAL DUCTWORK NOTES:**
1. CHANGES IN SHAPE OR DIMENSION SHALL BE MADE WITH MAXIMUM TRANSITION OF 1 TO 7.
  2. SEPARATE GALVANIZED SHEET METAL FROM ALUMINUM OR COPPER WITH LEAD OR FELT GASKETS.
  3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
  4. INSTALL DUCT FROM SHOWER EXHAUST GRILLES GRADING DOWN TO EXHAUST GRILLE, WITHOUT DIPS OR TRAPS.
  5. PROVIDE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER WORK.
  6. PROVIDE DUCTWORK AND TRANSITIONS TO CONNECT DUCTWORK TO EQUIPMENT AND COILS.
  7. INSTALL FLEXIBLE DUCTWORK IN A FULLY EXTENDED CONDITION WITHOUT SAGS AND KINKS.
  8. INSTALL DUCT MOUNTED SMOKE DETECTORS IN ACCESSIBLE LOCATIONS.
  9. UNLESS NOTED OTHERWISE, PROVIDE 1" THICK DUCT LINING FOR A MINIMUM OF 10 FEET OF DUCTWORK FROM THE SUPPLY AIR DISCHARGE AND RETURN AIR INLET OF AIR HANDLING UNITS, ENERGY RECOVERY UNITS, AND BLOWER COILS. FOR ALL LINED DUCTWORK, DIMENSIONS INDICATED ON DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS MEASURED FROM FACE-OF-LINER TO FACE-OF-LINER. LINING IS NOT REQUIRED FOR TOILET EXHAUST FANS. ROOF MOUNTED DUCTS ARE TO BE LINED AS DESCRIBED ABOVE AND ARE TO BE INSULATED WITH 2" THICK RIGID INSULATION AND WRAPPED WITH EPDM MATERIAL, SAME COLOR AS ROOF.
  10. INSTALL DUCTS CONVEYING GREASE LADEN AIR AT A PITCH OF 1/4" PER FOOT OPPOSITE THE DIRECTION OF FLOW.



- GENERAL AUTOMATIC TEMPERATURE CONTROLS NOTES:**
1. TRANSFORMERS OR FILTERS FOR OPERATION OF AUTOMATIC TEMPERATURE CONTROLS FROM BUILDING POWER CIRCUITS SHALL BE PROVIDED UNDER DIVISION 23.
  2. WIRING LOWER THAN 110 VOLTS FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE PROVIDED AND INSTALLED UNDER DIVISION 23. WIRING 110 VOLTS AND HIGHER FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE PROVIDED AND INSTALLED UNDER DIVISION 26.
  3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
  4. BRANCH CIRCUIT WIRING AND CONDUIT FINISHED FOR CONTROL EQUIPMENT POWER SHALL BE SEPARATE FROM OTHER POWER WIRING. EACH CIRCUIT SHALL EXTEND TO A 100% BRANCH CIRCUIT PANEL, AND BE INTERED 120V, 20 AMPERE, SINGLE POLE BRANCH CIRCUIT BREAKER FURNISHED IN THE PANEL TO SERVE THE CIRCUIT. NO MORE THAN 2 DDC CONTROLLER INSTALLATIONS SHALL OPERATE FROM A SINGLE 120V BRANCH CIRCUIT, UNLESS INDICATED OTHERWISE.
  5. WHERE SYSTEMS ARE SERVED BY EMERGENCY POWER, CONTROLS FOR OPERATION OF THOSE SYSTEMS SHALL ALSO BE SERVED BY EMERGENCY POWER.
  6. WHERE DAMPERS PREVENT AIRFLOW THROUGH AN AIR HANDLING UNIT OR FAN, THOSE DAMPERS SHALL BE PROVEN OPEN PRIOR TO STARTING THE UNIT OR FAN. PROOF SHALL BE BY MECHANICAL SAFETY UNIT SWITCH ACTIVATED BY THE DAMPER BLADE. FOR SERVICE WITH VARIABLE FREQUENCY DRIVES THE SWITCH SHALL BE WIRED IN THE AUTOMATIC AND HAND/TEST POSITIONS AND IN THE BYPASS POSITION FOR VARIABLE FREQUENCY DRIVES WITH BYPASS.
  7. ALL LOW VOLTAGE WIRING AND AIR PIPING OR TUBING SHALL BE PLENUM RATED. MECHANICAL CONTRACTOR SHALL FURNISH ALL LOW VOLTAGE WIRING, AIR PIPING, AND TUBING REQUIRED FOR AUTOMATIC TEMPERATURE CONTROLS SYSTEMS. LOW VOLTAGE WIRING IS ALL WIRE OPERATING AT A VOLTAGE LOWER THAN 110 VOLTS.
  8. ALL TEMPERATURE CONTROL SHALL HAVE A 5 DEGREE DEAD-BAND WITH OVERLAP RESTRICTIONS. EQUIPMENT SHALL BE PROVIDED WITH AT LEAST ONE MEANS OF EMERGENCY SHUT DOWN. SET BACK CONTROL SHALL ALLOW FOR AUTOMATIC RESTART AS WELL AS TEMPORARY OPERATION AS REQUIRED BY MAINTENANCE.
  9. OFF-HOUR CONTROLS: UNITS SHALL HAVE PROVISIONS FOR AUTOMATIC SHUTDOWN VIA PROGRAMMABLE TIME SCHEDULES. CONTROLS SHALL BE SET TO REDUCE HEATING SET POINT BY TEN DEGREES AND INCREASE COOLING SET POINT BY FIVE DEGREES WHEN SCHEDULED TO UNOCCUPIED MODE. HEATING AND COOLING SYSTEMS WITH SETBACK CONTROLS SHALL HAVE OPTIMUM START CONTROLS AND FUNCTION BASED ON SPACE TEMPERATURE, OCCUPIED SET POINT, OUTSIDE AIR TEMPERATURE, AND AMOUNT PRIOR TO SCHEDULED OCCUPANCY.

- GENERAL MECHANICAL NOTES:**
1. CODES AND STANDARDS LISTED IN SPECIFICATIONS AND DRAWINGS ARE MINIMUM STANDARDS. WHERE REQUIREMENTS ON THE DRAWINGS OR SPECIFICATIONS EXCEED THE MINIMUM CODE REQUIREMENTS, THE DRAWINGS OR SPECIFICATIONS SHALL GOVERN.
  2. THE POWER RATING OF MOTORS AND OTHER MECHANICAL EQUIPMENT AND THE ELECTRICAL CHARACTERISTICS OF ELECTRICAL SYSTEMS SERVING THEM HAVE BEEN ESTABLISHED AS MINIMUMS WHICH ALLOW THAT EQUIPMENT TO FUNCTION PROPERLY TO PRODUCE THE REQUIRED CAPACITIES. POWER RATINGS INCLUDE REASONABLE SAFETY FACTORS TO ACCOMMODATE COMMON DIFFERENCES BETWEEN DESIGN PARAMETERS AND FIELD CONSTRUCTION PRACTICES. EQUIPMENT WITH POWER RATINGS LESS THAN THOSE INDICATED ON THE DRAWINGS SHALL NOT BE PERMITTED.
  3. REASONABLE EFFORTS HAVE BEEN MADE TO COORDINATE ELECTRICAL REQUIREMENTS OF MECHANICAL EQUIPMENT WITH THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. DIFFERENCES AMONG MANUFACTURERS OF MECHANICAL EQUIPMENT MAKE IT IMPOSSIBLE TO PROVIDE A SINGLE ELECTRICAL DESIGN WHICH WILL SATISFY THE VARYING ELECTRICAL REQUIREMENTS OF THOSE MANUFACTURERS. CONSEQUENTLY, THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL REQUIREMENTS OF THE MECHANICAL EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT WITH THE EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT AND PROVIDE ELECTRICAL SYSTEMS REQUIRED BY THAT EQUIPMENT. THIS COORDINATION EFFORT SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF EITHER THE MECHANICAL EQUIPMENT OR THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. ELECTRICAL SYSTEM REVISIONS REQUIRED TO COORDINATE WITH THE MECHANICAL EQUIPMENT ACTUALLY FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
  4. DRAWINGS INDICATE GENERAL LOCATIONS OF FIXTURES, APPARATUS, EQUIPMENT, PIPING, AND DUCTWORK. CHANGES ON LOCATION SHALL BE MADE TO ACCOMMODATE EXISTING OR NEW BUILDING CONDITIONS AND COORDINATION WITH OTHER TRADES, INCLUDING HVAC, PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL. SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
  5. THOROUGHLY CLEAN/FLUSH EXISTING AND NEW HYDRONIC PIPING SYSTEMS WITH CLEAN WATER, AFTERWARDS, REMOVE AND CLEAN OR REPLACE STRAINER SCREENS.
  6. ALL HVAC SYSTEMS SHALL BE TESTED AND BALANCED ACCORDING TO NEBB AND SMACNA STANDARDS. PROVIDE REPORT UPON COMPLETION.
  7. PROVIDE ACCESS TO EQUIPMENT AND PORTIONS OF BUILDING SYSTEMS REQUIRING SERVICE.
  8. DO NOT INSTALL DUCTWORK, PIPING, OR EQUIPMENT IN ELECTRICAL ROOMS, ELEVATOR ROOMS, OR ELEVATOR SHAFTS, UNLESS EXPLICITLY INDICATED ON THE DRAWINGS. PIPING, DUCTWORK, AND EQUIPMENT (SWITCHGEAR, SWITCHBOARDS, PANELS, MOTOR CONTROL CENTERS, VARIABLE FREQUENCY DRIVES, TRANSFORMERS, OR STARTERS) SHALL NOT BE INSTALLED DIRECTLY ABOVE OR 42" IN FRONT OF ELECTRICAL EQUIPMENT FROM THE FLOOR TO THE STRUCTURE ABOVE.
  9. PROVIDE START UP AND COMMISSIONING OF ALL EQUIPMENT PROVIDED IN COMPLIANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS. PROVIDE START UP AND WARRANTY PAPERWORK AT THE COMPLETION OF WORK. WORK SHALL BE COMPLETED BY THE MANUFACTURER OR A MANUFACTURERS CERTIFIED FIRM OR TECHNICIAN, CONFIRM CALIBRATION OF ALL SENSORS AND ADJUST AS REQUIRED.
  10. UNLESS INDICATED OTHERWISE, EQUIPMENT AND MATERIALS SHALL BE NEW AND OF THE CUSTOMARY STANDARD AND QUALITY FURNISHED BY THE DESIGNATED MANUFACTURER FOR THAT CATALOG NUMBER.
  11. AIR SYSTEMS SHALL OPERATE WITHOUT AERODYNAMIC NOISE GENERATED FROM FAULTY INSTALLATION OF DUCTWORK, DIFFUSERS, OR ANY PORTION OF THE AIR DISTRIBUTION SYSTEM.
  12. SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT. HANGER RODS SHALL BE SUSPENDED FROM THE STRUCTURE. DO NOT SUSPEND FROM OTHER PIPING, CONDUIT, EQUIPMENT, OR DUCTWORK.
  13. ALL WORK REFERENCED UNDER DIVISION 23 SHALL BE DONE BY THE MECHANICAL CONTRACTOR.
  14. DRAWINGS INDICATE DESIGN INTENT. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INSTALLATIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES TO ASSURE THE PROPER INSTALLATION OF ALL EQUIPMENT.
  15. ALL PIPING, DUCTWORK, INSULATION, CONDUITS, SUPPORTS AND HVAC EQUIPMENT EXPOSED TO VIEW SHALL BE PAINTED. COLOR SHALL BE SELECTED BY ARCHITECT.
  16. WHERE DUCTWORK IS EXPOSED DUCT SEAMS SHALL BE MINIMIZED AND SHALL BE OF HIGH QUALITY WORKMANSHIP. ALL DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH SMACNA STANDARDS.
  17. ALL MATERIALS EXPOSED WITHIN THE PLENUM SHALL BE NON COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E-84.

- ADDITIONAL MECHANICAL REQUIREMENTS:**
1. DRAWINGS ARE SCHEMATIC IN NATURE INTENDED TO EXEMPLIFY CODE COMPLIANCE FOR THE PURPOSE OF OBTAINING A CONSTRUCTION PERMIT. THE CONTRACTOR SHALL ASSURE THE PROPER INSTALLATION AND OPERATION OF ALL ASSOCIATED SYSTEMS.
  2. THE INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.
  3. PROVIDE R-5 (INSTALLED VALUE) DUCTWORK INSULATION WITH VAPOR BARRIER IN INTERIOR SPACES. INSTALL PER THE MANUFACTURERS WRITTEN INSTRUCTIONS. INSULATION SHALL BE PROVIDED ON RETURN AIR SYSTEMS WHERE THE DUCTWORK IS NOT LOCATED WITHIN CONDITIONED SPACES. WHERE DUCTWORK IS INSTALLED OUTSIDE, PROVIDE R-6 BOARD WITH WEATHER PROOF JACKET. MATERIALS SHALL BE COMPLIANCE WITH ALL APPLICABLE ASTM TESTS AS WELL AS NFPA 90A AND 90B.
  4. DUCTWORK SHALL BE GALVANIZED SHEET STEEL IN THE GAUGE AS REQUIRED PER THE LATEST VERSION OF SMACNA GUIDELINES.
  5. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
  6. PROVIDE ALL DUCTWORK FITTINGS INCLUDING BUT NOT LIMITED TO TEES, TAPS, ELBOWS, VOLUME DAMPERS ETC IN ACCORDANCE WITH THE LATEST VERSION OF SMACNA GUIDELINES.
  7. COORDINATE ELECTRICAL POWER REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
  8. THE CONTRACTOR SHALL ADJUST DUCTWORK AND EQUIPMENT LAYOUT IN FIELD AS REQUIRED TO FACILITATE A NEAT AND HIGH QUALITY INSTALLATION.
  9. PROVIDE CONTROL WIRING AND DEVICES IN COMPLIANCE WITH THE CURRENTLY ADOPTED VERSION OF THE NATIONAL ELECTRIC CODE.
  10. DO NOT INSTALL SERVICEABLE EQUIPMENT WITHIN 10' OF ROOF EDGES
  11. DO NOT INSTALL AIR INTAKES WITHIN 10' OF EXHAUST TERMINALS OR PLUMBING VENTS
  12. FURNISH IOM MANUALS AND AS-BUILT DRAWINGS WITH 90 DAYS OF COMPLETION OF WORK
  13. ALL EXPOSED DUCTWORK SHALL BE DOUBLE WALLED OR INTERNALLY LINED TO PREVENT THE FORMATION OF CONDENSATION.
  14. ALL REFRIGERATION PIPING SHALL BE ACR TYPE COPPER TUBE WITH BRAZED FITTINGS. SIZED IN ACCORDANCE WITH ASSOCIATED EQUIPMENT MANUFACTURERS WRITTEN INSTRUCTIONS. INSULATE ALL REFRIGERANT PIPING WITH 1" FLEXIBLE ELASTOMERIC LINER. PROVIDE INSULATION MANUFACTURERS WEATHER-PROOF MASTIC FOR ALL OUTDOOR INSTALLATIONS.

DATE: JULY, 27 2022

CHECKED BY: B.W. RENISON

DESIGNED BY: JAT

NO. DATE

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PROJECT # 22046 GARDEN EXT./ GARDEN INT.

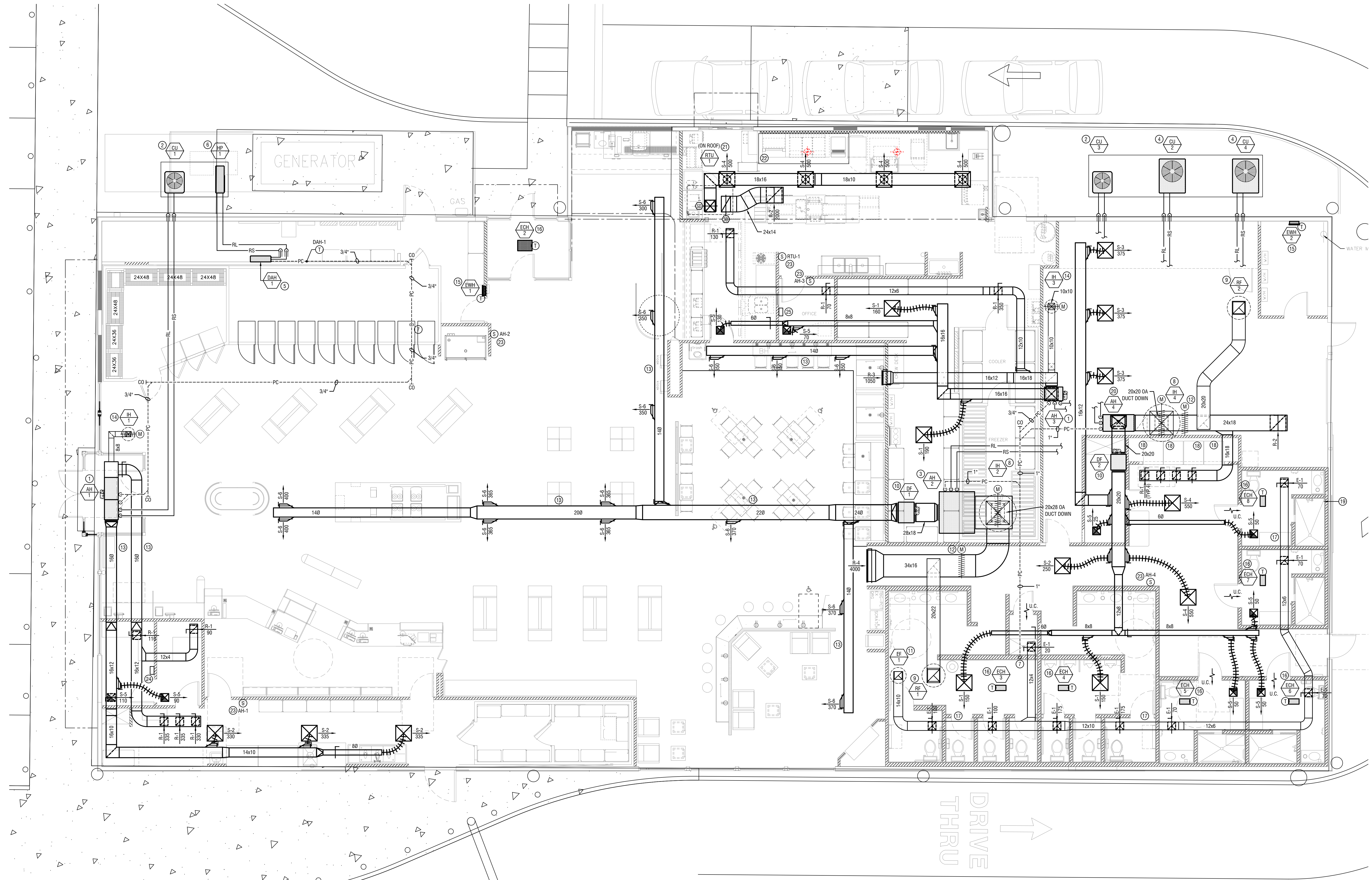
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MECHANICAL COVER SHEET

M-1



2 MECHANICAL VESTIBULE PLAN  
SCALE: 3/16" = 1'-0"



1 MECHANICAL DUCTWORK AND EQUIPMENT PLAN  
SCALE: 3/16" = 1'-0"

**MECHANICAL GENERAL NOTES:**

- DUCT RUN OUTS TO DIFFUSERS SHALL MATCH THE EQUIPMENT CONNECTION SIZE UNLESS OTHERWISE NOTED ON THE PLAN.
- PROVIDE FIRE DAMPERS AT WALL FIRE-RATED WALL DUCT PENETRATIONS. PROVIDE FIRE CAULKING AT ALL FIRE-RATED WALL PIPE PENETRATIONS.
- COORDINATION DRAWINGS SHALL IDENTIFY AND LOCATE THE PLACEMENT OF ACCESS DOORS AND HATCHES WITHIN WALLS AND HARD CEILING AREAS AS NECESSARY TO GAIN ACCESS TO VALVES, CONTROLS, DAMPERS, FIRE DAMPERS, SMOKE DAMPERS, SWITCHES, VAV TERMINAL UNITS, AND OTHER DEVICES AND EQUIPMENT WHICH OTHERWISE REQUIRE ACCESS FOR SERVICING AND REPLACEMENT. ACCESS DOORS REQUIRED SHALL BE PROVIDED BY EACH CONTRACTOR FOR HIS WORK. WHERE ACCESS DOORS ARE REQUIRED WITHIN FIRE-RATED CONSTRUCTION, THE ACCESS DOOR PROVIDED SHALL BEAR A UL RATING FOR THE APPLICATION.
- ROOF PENETRATIONS AND WALL PENETRATIONS SHALL BE PROVIDED AND SEALED WATER-TIGHT BY THE GENERAL CONTRACTOR. ROOFTOP PIPING SUPPORTS, COMPATIBLE WITH THE ROOFING SYSTEM TYPE, SHALL BE PROVIDED BY EACH CONTRACTOR.
- ALL THERMOSTATS IN PUBLIC AREAS TO BE PROVIDED WITH LOCKABLE COVERS.
- ALL THERMOSTATS LOCATED ON EXTERIOR WALLS TO BE MOUNTED ON INSULATED BACKING.
- SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM R-8 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES.
- ALL DUCTS TO BE ROUTED UP INSIDE TRUSSES. M.C. TO VISIT SITE AND FIELD VERIFY PROPOSED LAYOUT EARLY IN PROJECT AND REPORT TO OWNER/ARCHITECT ANY POTENTIAL ISSUES. SPECIAL FIELD COORDINATION IS NEEDED TO INSTALL DUCTS DUE TO EXISTING TRUSS SPACING OF 24 INCHES.

**MECHANICAL SPECIFIC NOTES:**

- GAS-FIRED FURNACE WITH COOLING COIL. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES FOLLOWING ALL SERVICE CLEARANCE REQUIREMENTS. PROVIDE UNIT WITH REMOTE THERMOSTAT AND CONDENSATE DRAIN PAN. ROUTE AND SIZE COMBUSTION AIR AND VENT PIPING THRU CONCENTRIC ROOF VENT IN ROOF FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS AT LEAST 10'-0" FROM ANY MECHANICAL AIR INTAKES. PROVIDE MIXING BOX AT RETURN AND TIE IN VENTILATION DUCT FROM INTAKE HOOD. PROVIDE VOLUME DAMPER AND BALANCE TO VENTILATION AIRFLOW INDICATED IN SCHEDULE. PROVIDE SMACNA COMPLIANT DUCT TRANSITIONS AND CONNECTIONS TO SUPPLY DUCTWORK AS REQUIRED. ROUTE AND SIZE REFRIGERANT PIPING TO OUTDOOR UNIT. PROVIDE CONDENSATE PUMP AND ROUTE 3/4" CONDENSATE FROM COOLING COIL TO EXISTING CONDENSATE LINE FROM REMOVED COOLING COIL. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- LOCATE OUTDOOR CONDENSING UNIT ON CONCRETE PAD IN LOCATION SHOWN. ROUTE REFRIGERANT PIPING TO CORRESPONDING INDOOR UNIT AS SHOWN. ROUTE AND SIZE REFRIGERANT PIPING TO INDOOR UNIT FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. PROVIDE DECORATIVE PIPE COVERS OVER VERTICAL PIPING RUNS UP EXTERIOR WALLS AND PIPE SLEEVES AT EXTERIOR WALL PENETRATIONS. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- MOUNT AIR HANDLING UNIT IN LOCATION SHOWN WITH VIBRATION ISOLATORS. PROVIDE FLEXIBLE CONNECTIONS AND DUCT TRANSITIONS AT SUPPLY AND RETURN OF UNIT AS REQUIRED. CONSTRUCT FIELD-FABRICATED MIXING BOX AT RETURN OF UNIT AS SHOWN. PROVIDE UNIT WITH RAWAL VALVE FOR DEHUMIDIFICATION CONTROL. CONNECT DRAIN LINE TO CONDENSATE PUMP AND DISCHARGE TO PLUMBING FIXTURE TAILPIECE AS SHOWN. INSULATE CONDENSATE PIPING IN UNCONDITIONED SPACE WITH ARMAFLEX INSULATION. PROVIDE UNIT WITH PROGRAMMABLE REMOTE THERMOSTAT. INTERLOCK WITH ASSOCIATED DUCT FURNACE, RELIEF FAN, AND MOTORIZED DAMPERS FOR ECONOMIZER OPERATION. SEE SCHEMATIC DRAWING ON THIS SHEET AND CONTROLS DRAWING FOR MORE INFORMATION. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF UNIT.
- OUTDOOR CONDENSING UNIT TO SERVE INDOOR AIR HANDLER. MOUNT UNIT ON 8" INCH CONCRETE PAD FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. ROUTE AND SIZE REFRIGERANT PIPING TO INDOOR UNIT FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. PROVIDE DECORATIVE PIPE COVERS OVER VERTICAL PIPING RUNS UP EXTERIOR WALLS AND PIPE SLEEVES AT EXTERIOR WALL PENETRATIONS. DUAL CIRCUIT UNIT SCHEDULED. PROVIDE TWO INDEPENDENT REFRIGERANT PIPING CIRCUITS PER MANUFACTURER'S RECOMMENDATIONS.
- DUCTLESS WALL HUNG AIR HANDLER TO BE MOUNTED IN LOCATION SHOWN. PROVIDE WITH CONDENSATE PUMP AND REMOTE THERMOSTAT. ROUTE CONDENSATE PIPING TO PLUMBING FIXTURE TAILPIECE AS SHOWN. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- OUTDOOR HEAT PUMP TO BE MOUNTED ON CONCRETE PAD. ROUTE AND SIZE REFRIGERANT PIPING TO INDOOR UNIT FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. PROVIDE DECORATIVE PIPE COVERS OVER VERTICAL PIPING RUNS UP EXTERIOR WALLS AND PIPE SLEEVES AT EXTERIOR WALL PENETRATIONS.
- CONDENSATE LINE DOWN TO CONNECT TO PLUMBING FIXTURE TAILPIECE. SEE DETAIL ON DRAWING M-4 FOR MORE INFORMATION.

- INTAKE HOOD ON ROOF ABOVE. TRANSITION DUCTWORK FROM CONNECTION SIZE OF HOOD TO SIZE INDICATED ON PLANS AND ROUTE TO MIXING BOX OF AIR HANDLING UNIT. PROVIDE WITH MOTORIZED DAMPER. LOCATE HOOD A MINIMUM OF 10'-0" FROM EXHAUST FANS, SANITARY VENTS, AND DUCT FURNACE VENTS. PROVIDE WITH 12" INCH SLOPED ROOF CURB. COORDINATE DISCHARGE LOCATION WITH ARCHITECT AND ALL OTHER TRADES.
- RELIEF EXHAUST FAN ON ROOF ABOVE. SIZE DUCTWORK BASED ON CONNECTION SIZE OF FAN AND ROUTE TO RETURN DUCT AS SHOWN. PROVIDE WITH 12" INCH SLOPED ROOF CURB. COORDINATE FINAL LOCATION WITH OWNER, ARCHITECT, AND ALL OTHER TRADES.
- PROVIDE NEW GAS-FIRED DUCT FURNACE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOLLOWING ALL SERVICE CLEARANCE AND INTAKE AND DISCHARGE DUCT LENGTH REQUIREMENTS. FURNACE TO BE POWER VENTED THRU ROOF. SEAL ALL EXTERIOR PENETRATIONS WEATHER-TIGHT. PROVIDE UNIT WITH DUCT TRANSITIONS AND FLEXIBLE CONNECTIONS AT INLET AND DISCHARGE AS REQUIRED. COORDINATE GAS REQUIREMENTS WITH PLUMBING CONTRACTOR.
- EXHAUST FAN ON ROOF ABOVE. PROVIDE TRANSITIONS AND FLEXIBLE CONNECTIONS AT INLET OF FAN AS REQUIRED. PROVIDE WITH BACKDRAFT DAMPER AND 12" INCH ROOF CURB COORDINATED WITH ROOF SLOPE. FAN TO RUN CONTINUOUSLY WHILE BUILDING IS OCCUPIED. COORDINATE FINAL LOCATION WITH OWNER, ARCHITECT, AND ALL OTHER TRADES.
- DUCT MOUNTED MOTORIZED DAMPER LOCATED BETWEEN RELIEF FAN AND OUTSIDE AIR INTAKE FOR ECONOMIZER CONTROL.
- EXPOSED DUCTWORK TO BE DOUBLE WALL SPIRAL CONSTRUCTION. EXPOSED DUCTWORK TO BE PAINTED. COORDINATE WITH ARCHITECT.
- INTAKE HOOD ON ROOF ABOVE. TRANSITION DUCTWORK FROM CONNECTION SIZE OF HOOD TO SIZE INDICATED ON PLANS AND ROUTE TO MIXING BOX OF AIR HANDLING UNIT. PROVIDE WITH MOTORIZED DAMPER. LOCATE HOOD A MINIMUM OF 10'-0" FROM EXHAUST FANS, SANITARY VENTS, AND DUCT FURNACE VENTS. PROVIDE WITH 12" INCH SLOPED ROOF CURB. COORDINATE LOCATION WITH ARCHITECT AND ALL OTHER TRADES.
- ELECTRIC WALL HEATER WITH INTEGRAL THERMOSTAT. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- ELECTRIC CEILING HEATER WITH INTEGRAL THERMOSTAT. COORDINATE INSTALLATION WITH ALL OTHER TRADES.
- ELECTRIC SERVING SHOWER ROOMS AND HIGH HUMIDITY AREAS TO BE ALUMINUM CONSTRUCTION.
- SIZE AND ROUTE DRYER EXHAUST PER MANUFACTURER'S RECOMMENDATIONS. EXHAUST TO DISCHARGE AT LEAST 10'-0" FROM EXHAUST FANS, SANITARY VENTS, AND DUCT FURNACE VENTS.
- ACCESS TO INSTALL AIR HANDLERS INSIDE TRUSSES WILL BE PROVIDED THRU EXTERIOR WALL. COORDINATE WITH ARCHITECTURAL PLANS AND G.C.

- MOUNT AIR HANDLING UNIT IN LOCATION SHOWN WITH VIBRATION ISOLATORS. PROVIDE FLEXIBLE CONNECTIONS AND DUCT TRANSITIONS AT SUPPLY AND RETURN OF UNIT AS REQUIRED. CONSTRUCT FIELD FABRICATED MIXING BOX AT RETURN OF UNIT AS SHOWN. PROVIDE UNIT WITH RAWAL VALVE FOR DEHUMIDIFICATION CONTROL. CONNECT DRAIN LINE TO CONDENSATE PUMP AND DISCHARGE TO PLUMBING FIXTURE TAILPIECE AS SHOWN. INSULATE CONDENSATE PIPING IN UNCONDITIONED SPACE WITH ARMAFLEX INSULATION. PROVIDE UNIT WITH PROGRAMMABLE REMOTE THERMOSTAT. INTERLOCK WITH ASSOCIATED DUCT FURNACE, RELIEF FAN, AND MOTORIZED DAMPERS FOR ECONOMIZER OPERATION. SEE SCHEMATIC DRAWING ON THIS SHEET AND CONTROLS DRAWING FOR MORE INFORMATION. PROVIDE DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN DUCTS OF UNIT. PROVIDE SUPPORT FRAME TO MOUNT UNIT VERTICALLY ON SLAB AND LOCATE MIXING BOX UNDER UNIT. ROUTE DUCTWORK UP INTO TRUSS AREA. COORDINATE FINAL DUCT ROUTING WITH TRUSSES IN FIELD.
- ROOFTOP HVAC UNIT LOCATED ON ROOF ABOVE. PROVIDE SMACNA COMPLIANT DUCT TRANSITIONS FROM DISCHARGE AND RETURN CONNECTIONS AT UNIT TO DUCT SIZES SHOWN ON PLANS. SMOKE DETECTORS IN DUCT DROPS BY E.C. INSTALLED BY M.C. E.C. TO COMPLETE WIRING FOR SHUTDOWN.
- OUTLINE OF KITCHEN HOOD OVER FRYERS AND BROILERS BY OTHERS. COORDINATE DUCTWORK AND DIFFUSER LAYOUT WITH KITCHEN EQUIPMENT PLANS. EXHAUST DISCHARGE TO BE A MINIMUM OF 10'-0" FROM MECHANICAL VENTILATION AIR INTAKES.
- PROVIDE TEMPERATURE SENSOR IN LOCATION SHOWN. INTERLOCK SENSOR WITH ASSOCIATED PROGRAMMABLE THERMOSTAT.
- STACKED PROGRAMMABLE THERMOSTATS FOR SYSTEMS AH-1, AH-2, AND AH-4. COORDINATE FINAL LOCATION WITH OWNER.
- STACKED PROGRAMMABLE THERMOSTATS FOR SYSTEMS AH-3 AND RTU-1. COORDINATE FINAL LOCATION WITH OWNER.

DATE: JULY 27 2022  
CHECKED BY: RW  
REVISION

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PROJECT # 22046  
GARDEN EXT. / GARDEN INT.

ONVO TRAVEL PLAZA  
BURGER KING  
128 Riverside Dr. Fultonville, NY 12072

M-2



INTAKE HOOD SCHEDULE										
TAG	BASIS OF DESIGN		AREA/UNIT SERVED	TYPE	CFM	STATIC PRESSURE (IN WG)	THROAT VELOCITY (FT/MIN)	ROOF OPENING (IN)	OVERALL DIMS. W x L (DIA) x H (IN)	NOTES
	MANUFACTURER	MODEL								
IH-1	GREENHECK	GRSI-8	AH-1	INTAKE	120	0.018	324	10.5 x 10.5	20.50 x 9	1,2,3
IH-2	GREENHECK	GRSI-36	AH-2	INTAKE	4,000	0.075	549	38.5 x 38.5	56.750 x 23	1,2,3
IH-3	GREENHECK	GRSI-10	AH-3	INTAKE	240	0.03	421	12.5 x 12.5	20.50 x 9.5	1,2,3
IH-4	GREENHECK	GRSI-36	AH-4	INTAKE	3,000	0.042	412	38.5 x 38.5	56.750 x 23	1,2,3

NOTES:  
1. SCHEDULED CFM IS BASED ON RELIEF S.P. 0.10"; INTAKE S.P. AT 0.10".  
2. INSTALL ON 12" HIGH ROOF CURB COORDINATED WITH ROOF SLOPE. PROVIDE 24V MOTORIZED DAMPER IN DUCT BELOW CURB. INTERLOCK WITH ASSOCIATED AH. OPEN WHEN IN OCCUPIED MODE. PROVIDE BIRDSCREEN. SEE DETAIL.  
3. PROVIDE UNIT STANDARD COLOR AS SELECTED BY ARCHITECT.

INDOOR GAS FURNACE SCHEDULE (DX COOLING)																													
TAG	BASIS OF DESIGN		AREA SERVED	TYPE S/P	STAGES	TOTAL CFM	MINIMUM OA	SUPPLY										DX COOLING											
	MANUFACTURER	MODEL						ESP	TSP	HP	RPM	MBH INPUT	MBH OUTPUT	AFUE (%)	GAS CONN. SIZE (IN)	MANUFACTURER	MODEL	EAT DB/WB	LAT DB/WB	TOTAL MBH	SENS. MBH	SUCTION LINE (IN)	LIQUID LINE (IN)	SEER	VOLTS/PH/Hz	MCA	MOCP	WEIGHT (LBS)	NOTES
AH-1	TRANE	S9V29060	SEE PLANS	NAT. GAS	2	1,200	120	0.5	-	0.5	VARIABLE	60.0	57.8	97.0	1-5/8	TRANE	4PK4BL36	73.7/61.6	52.5/51.2	33.9	27.1	3/4	3/8	13.5	115/1/60	7.9	15	127	1,2,3
AH-3	TRANE	S9X1C080	SEE PLANS	NAT. GAS	1	1,800	240	0.5	-	1.0	1075	80.0	77.6	97.0	1-5/8	TRANE	4PKC	74.6/62.1	53.1/51.6	46.8	36.8	7/8	3/8	13.5	115/1/60	14.1	15	139	1,2,3

NOTES:  
1. PROVIDE UNIT WITH THE FOLLOWING OPTIONS AND ACCESSORIES  
PROVIDE TRANSFORMER & 24V CONTROL FOR EACH UNIT.  
PROVIDE OPTIONAL AIR INLET WITH DUCT FLANGE  
PROVIDE COMBUSTION AIR AND VENT PIPING WITH COOSENECK AT DISCHARGE. PROVIDE MATERIAL AND ROUTE PER MANUFACTURER'S WRITTEN INSTRUCTIONS.  
2. PROVIDE DISCONNECT SWITCH, 7 DAY PROGRAMMABLE THERMOSTAT, FILTERS.  
3. PROVIDE LITTLE GIANT VCMX-200LS-C 115V CONDENSATE PUMP WITH OVERFLOW DETECTION AND CHECK VALVE, FURNACE CONDENSATE NEUTRALIZATION TRAP, DRAIN PAN, AND MIXING BOX. PROVIDE ISOLATORS AND ALL REQUIRED MOUNTING HARDWARE FOR HORIZONTAL INSTALLATION.

CONDENSING UNIT SCHEDULE																	
TAG	BASIS OF DESIGN		CAPACITY (MBH) TOTAL	OA TEMP.	REFRIGERANT	MINIMUM SEER	COMPRESSOR			CONDENSER FAN MOTORS				MCA	MOCP	VOLTAGE	NOTES
	MANUFACTURER	MODEL					NO.	RLA	LRA	NO.	HP	RPM	FLA				
CU-1	TRANE	4TR3036	36.0	89.0°F	R-410A	14.0	1	14.1	75.0	1	0.125	-	0.7	20.0	30	208-230/1/60	1,2
CU-3	TRANE	4TR3048	48.0	88.9°F	R-410A	13.5	1	21.8	117.0	1	0.2	-	0.93	28.0	45	208-230/1/60	1,2

NOTES:  
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COORDINATE WITH ALL TRADES.  
2. PROVIDE UNIT STAND-OFF KIT BY MFR, DISCONNECT SWITCH AND ALL NECESSARY CONTROLS AND STARTER FOR PROPER OPERATIONS. MOUNT UNIT ON 4 INCH CONCRETE PAD.

CONDENSING UNIT SCHEDULE																
TAG	BASIS OF DESIGN		CAPACITY (MBH) TOTAL	OA TEMP. DB/WB (°F)	REFRIGERANT	COMPRESSOR			CONDENSER FAN MOTORS				MCA	MOCP	VOLTAGE	NOTES
	MANUFACTURER	MODEL				NO.	RLA (EACH)	LRA (EACH)	NO.	HP	RPM	FLA				
CU-2	TRANE	TTA12043	116.0	89.0/73.0	R-410A	2	16.2	110.0	1	1.0	1,100	4.8	41.0	50	208/3/60	1-8
CU-4	TRANE	TTA09043	91.0	89.0/73.0	R-410A	2	13.1	83.0	1	0.5	1,100	2.2	32.0	40	208/3/60	1-8

NOTES:  
1. PROVIDE MOUNTED DISCONNECT SWITCH.  
2. PROVIDE HAIL GUARD.  
3. PROVIDE ANTI SHORT CYCLE TIMER.  
4. PROVIDE INTERLOCKS AND WIRING TO THE ASSOCIATED AIR HANDLING UNIT.  
5. PROVIDE TYPE ACR COPPER REFRIGERANT LINE SETS WITH 1" FLEXIBLE ELASTOMERIC INSULATION AND WEATHER PROOF MASTIC. SIZE LINE SETS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.  
6. PROVIDE SPRING VIBRATION ISOLATORS.  
7. PROVIDE 6 INCH CONCRETE PAD.  
8. PROVIDE HOT GAS BYPASS FOR CAPACITY MODULATION.

AIR HANDLING UNIT SCHEDULE																							
TAG	BASIS OF DESIGN		AREA SERVED	SYSTEM TYPE	DESIGN AIRFLOWS			SUPPLY FAN				DX COOLING COIL					UNIT ELECTRICAL					WEIGHT (LBS)	NOTES
	MANUFACTURER	MODEL			COOLING CFM	HEATING CFM	OA CFM	TOTAL CFM	BHP	HP	ESP IN. WC	RPM	MBH TOTAL/SENS	EAT DB/WB (°F)	LAT DB/WB (°F)	REF	CU TAG	VOLTAGE	FLA	MCA	MOCP		
AH-2	TRANE	TWE12043	SEE PLANS	SPLIT	4,000	4,000	1,200	4,000	2.16	3.0	1.0	906	117.1/95.1	76.4/63.8	55.9/54.3	R-410A	CU-2	208/3/60	9.4	12.0	20	429	1-15
AH-4	TRANE	TWE99043	SEE PLANS	SPLIT	3,000	3,000	900	3,000	1.57	3.0	1.0	873	93.4/76.4	76.8/64.1	54.7/54.0	R-410A	CU-4	208/3/60	9.4	12.0	20	360	1-15

NOTES:  
1. PROVIDE SINGLE POINT POWER CONNECTION WITH UNIT MOUNTED DISCONNECT SWITCH.  
2. SMOKE DETECTORS INSTALLED AND WIRED FOR UNIT SHUT DOWN BY THE MECHANICAL CONTRACTOR, FURNISHED AND WIRED FOR POWER AND FIRE ALARM BY THE ELECTRICAL CONTRACTOR.  
3. PROVIDE 6" BASE RAILS AND SET ON ELASTOMERIC PADS. FANS SHALL BE INTERNALLY ISOLATED FROM FACTORY.  
4. PROVIDE HINGED ACCESS DOORS AT FAN SECTIONS, COILS AND MIXING BOX.  
5. PROVIDE ANGLED FILTER RACKS IN MIXING SECTION WITH MERV 8 PLEATED FILTERED.  
6. MAKE CONNECTIONS TO DUCTWORK WITH FLEXIBLE CONNECTORS.  
7. PROVIDE FAN FAILURE, DIRTY FILTER, CONDENSATE PUMP, AND CONDENSATE OVERFLOW (WITH UNIT LOCKOUT) SWITCHES AND PROVIDE ALARM NOTIFICATION VIA STAND-ALONE USER INTERFACE PANEL OR DEVICE.  
8. PROVIDE ENTHALPY BASED ECONOMIZATION LOGIC WITH ALL REQUIRED WIRING AND SENSORS AND MIXED AIR CONTROL WHEN OUTSIDE AIR ENTHALPY IS LESS THAN 23 BTU/LB ADJ.  
9. PROVIDE ALL REQUIRED INTERLOCKS AND WIRING TO THE ASSOCIATED CONDENSING UNIT.  
10. PROVIDE FACTORY CONTROLLER WITH COMPLETE WITH WIRING, SENSORS AND PROGRAMMING FOR STAND-ALONE CONSTANT VOLUME (SPACE TEMPERATURE CONTROL) OPERATION.  
11. PROVIDE RAWAL VALVE FOR DEHUMIDIFICATION.  
12. PROVIDE ALL REQUIRED INTERLOCKS AND WIRING TO THE ASSOCIATED DUCT FURNACE (MODULATING HEATING CAPACITY).  
13. PROVIDE INDICATING AND ADJUSTABLE ZONE TEMPERATURE AND HUMIDITY SENSOR.  
14. INTERLOCK WITH ASSOCIATED INTAKE HOOD FOR ECONOMIZER OPERATION.  
15. PROVIDE WITH TRANE SYMBIO PROGRAMMABLE CONTROLLER. INTERLOCK ALL ASSOCIATED EQUIPMENT (AIR HANDLING UNIT, DUCT FURNACE, RELIEF FAN, INTAKE HOOD, AND DAMPERS). COORDINATE FINAL LOCATION OF CONTROLLER AND DISPLAY WITH OWNER.

DUCTLESS SPLIT AIR CONDITIONING SCHEDULE																	
TAG	MANUFACTURER	AREA SERVED	INDOOR UNIT							OUTDOOR SECTION						NOTES	
			MODEL	CFM	COOLING		ELECTRICAL			TAG NO.	MODEL	ELECTRICAL					
					MIN/MAX (MBH)	SEER	W	MCA	FLA			VOLTS/PH/Hz	MCA	MOCP	FLA		VOLTS/PH/Hz
DAH-1	MITSUBISHI	ELECTRICAL ROOM	MS2-FS12NA	320/370/425	13.6 / 2.5	26.1	40	1	0.65	208-230/1/60	HP-1	MUZ-FS12NAH	10	15	0.50	208-230/1/60	1,2,3,4,5,6

NOTES:  
1. MOUNT OUTDOOR UNIT ON EQUIPMENT RAILS. PROVIDE ALL REQUIRED WALL SUPPORTS FOR INDOOR UNITS.  
2. PROVIDE WITH LOW AMBIENT OPERATING KIT DOWN TO 0°F.  
3. PROVIDE REMOTE THERMOSTAT.  
4. PROVIDE INDOOR SECTION WITH A LITTLE GIANT VCMX-200LS-C 115V CONDENSATE PUMP WITH OVERFLOW DETECTION AND CHECK VALVE. PROVIDE ALL WIRING AND 1" CONDENSATE TO SUITABLE DRAIN IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.  
5. PROVIDE GRADE MOUNTED OUTDOOR UNITS WITH REINFORCED CONCRETE PADS OR MANUFACTURED PADS AS SPECIFIED, PIPE, AND CONDUIT SLEEVES.  
6. E.C. TO PROVIDE AND INSTALL DISCONNECT.

GAS-FIRED DUCT FURNACE SCHEDULE																			
TAG	BASIS OF DESIGN		UNIT SERVED	CFM	INPUT MBH	MAX OUTPUT MBH	MIN OUTPUT MBH	STAGES	TEMP. RISE (°F)	THERMAL EFF. (%)	GAS CONN. SIZE (IN)	VENT SIZE (IN)	TYPE	S.P. (IN WC)	VOLTAGE	DUCT SIZE		WEIGHT (LBS)	NOTES
	MANUFACTURER	MODEL														WIDTH (IN)	HEIGHT (IN)		
DF-1	TRANE	GLND017A	AH-2	4000	250	200	100	MODULATING	46.3	80	3/4	5	POWER VENTED	0.4	115/1/60	29-1/4	19	263	1,2,3,4,5,6
DF-2	TRANE	GLND025A	AH-4	3000	175	140	70	MODULATING	43.2	80	1/2	4	POWER VENTED	0.4	115/1/60	21	19	216	1,2,3,4,5,6

NOTES:  
1. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.  
2. PROVIDE FIELD ERRECTED MOUNTING BASE AS ALIGHT WITH ASSOCIATED AIR HANDLER DISCHARGE AS REQUIRED TO MEET THE MANUFACTURERS DUCT TRANSITION REQUIREMENTS.  
3. PROVIDE MODULATING GAS HEAT CONTROL AND REGULATOR DOWN TO MANUFACTURER'S RECOMMENDED GAS INLET PRESSURE AS REQUIRED.  
4. PROVIDE STAINLESS STEEL HEAT EXCHANGERS  
5. PROVIDE INTERLOCK WIRING TO THE ASSOCIATED AIR HANDLING UNIT CONTROLLER.  
6. PROVIDE 4" SINGLE WALL 26 GA. GALVANIZED VENT PIPING (OR AS OTHERWISE NOTED IN THE MANUFACTURER'S WRITTEN INSTRUCTIONS) WITH REDUCER, DRIP LEG, CLEAN OUT AND TEE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. ALL VENTING SHALL BE SEALED AIR TIGHT (CATEGORY 3). PROVIDE 3" FIRE WRAP ON ALL VENT PIPING AND TERMINATE WITH BIREADRT TYPE L OR EQUIVALENT VENT CAP.

DIFFUSER, GRILLE, AND REGISTER SCHEDULE										
MARK	CFM	BASE OF DESIGN		TYPE	THROW (1/8"-150" FT)	NECK SIZE (IN)	MODULE SIZE (IN)	MAX. NO. LEVEL	MAX. SP. LEVEL	NOTES
		MANUFACTURER	MODEL							
S-1	0-195	PRICE	SCD	CEILING SUPPLY DIFFUSER	3-4.7	6"Ø	24 SQ.	25	0.10	1,2,3,4
S-2	200-350	PRICE	SCD	CEILING SUPPLY DIFFUSER	4-6-10	8"Ø	24 SQ.	25	0.10	1,2,3,4
S-3	355-490	PRICE	SCD	CEILING SUPPLY DIFFUSER	5-7-12	10"Ø	24 SQ.	25	0.10	1,2,3
S-4	495-630	PRICE	SCD	CEILING SUPPLY DIFFUSER	5-8-13	12"Ø	24 SQ.	24	0.10	1,2,3
S-5	0-130	PRICE	SMD	CEILING SUPPLY DIRECTIONAL DIFFUSER	9-14-20	6"Ø	12 SQ.	17	0.10	1,2,3,4,5
S-6	0-420	PRICE	520D	DOUBLE DEFLECTION 22.5° LOUVERED SUPPLY	15-22-30	12x8	13.75 x 9.75	21	0.09	1,2,3
R-1	0-450	PRICE	80	1/2"x1/2"x1/2" EGG GRATE	N/A	10x10	12x12	-	0.07	1,2,3,4
R-2	455-2150	PRICE	80	1/2"x1/2"x1/2" EGG GRATE	N/A	22x22	24x24	20	0.07	1,2,3,4
R-3	0-1100	PRICE	530	LOUVERED RETURN GRILLE	N/A	20x16	21.75 x 17.75	26	0.07	1,2,3,4
R-4	0-4000	PRICE	530	LOUVERED RETURN GRILLE	N/A	48x28	49.75 x 29.75	28	0.07	1,2,3,4
E-1	0-450	PRICE	80	1/2"x1/2"x1/2" EGG GRATE	N/A	10x10	12x12	-	0.07	1,2,3,4

NOTES:  
1. INSTALL IN ACCORDANCE WITH MANUFACTURER WRITTEN INSTRUCTIONS. COORDINATE WITH ALL TRADES.  
2. PROVIDE WITH FACTORY INSTALLED OPPOSED BLADE DAMPER.  
3. COORDINATE MOUNTING HARDWARE WITH ARCHITECTURAL CEILING AND WALL FINISHES  
4. DUCT RUNNOUT SIZES SHALL MATCH DIFFUSER OR GRILLE CONNECTION DIMENSIONS UNLESS OTHERWISE NOTED.  
5. COORDINATE THROW PATTERN WITH MECHANICAL FLOORPLANS.

ELECTRIC WALL HEATER SCHEDULE											
TAG	BASIS OF DESIGN		AREA SERVED	TYPE	MOUNTING	KW	VOLTS/PH/Hz	AMPS	THERMOSTAT	DIMENSIONS WxHxD (IN)	NOTES
	MANUFACTURER	MODEL									
EWH-1	INDECO	WCI-932U0200C	SEE PLANS	WALL	SURFACE	2.0	208/1/60	10.0	INTEGRAL	16-1/8 x 22-1/16 x 5-7/16	1,2
EWH-2	INDECO	WCI-932U0200C	SEE PLANS	WALL	SURFACE	2.0	208/1/60	10.0	INTEGRAL	16-1/8 x 22-1/16 x 5-7/16	1,2

NOTES:  
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COORDINATE INSTALLATION WITH ALL OTHER TRADES.  
2. PROVIDE COMPLETE WITH INTEGRAL TAMPERPROOF THERMOSTAT WITH OFF POSITION, THERMAL CUTOFF, AND LOCKABLE TOGGLE SWITCH.

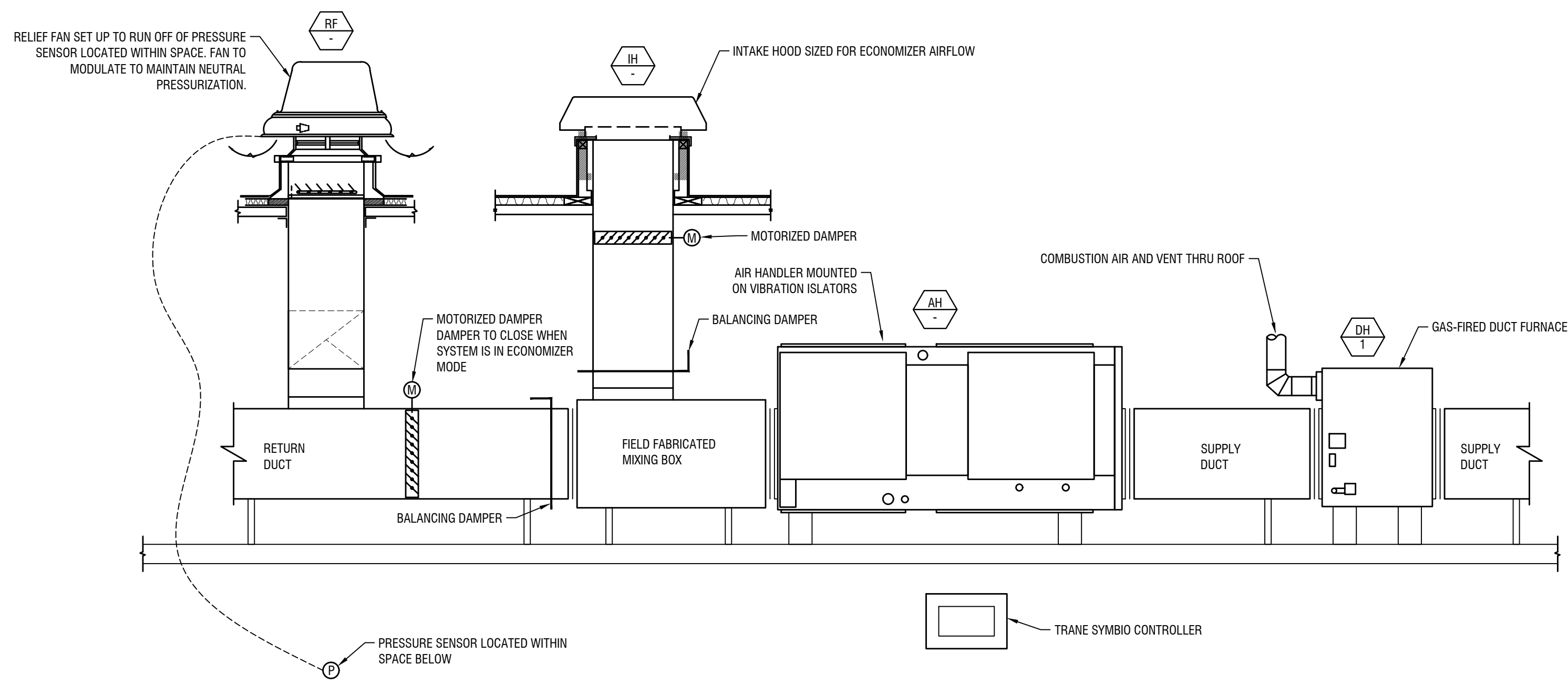
ELECTRIC CEILING HEATER SCHEDULE											
TAG	BASIS OF DESIGN		AREA SERVED	TYPE	MOUNTING	KW	VOLTS/PH/Hz	AMPS	THERMOSTAT	DIMENSIONS WxHxD (IN)	NOTES
	MANUFACTURER	MODEL									
ECH-1	INDECO	CCI-931U01500B	SEE PLANS	CEILING	SURFACE	1.5	120/1/60	12.9	INTEGRAL	16-1/8 x 22-1/16 x 4-1/8	1,2
ECH-2	INDECO	CCI-931U01500B	SEE PLANS	CEILING	SURFACE	1.5	120/1/60	12.9	INTEGRAL	16-1/8 x 22-1/16 x 4-1/8	1,2
ECH-3	INDECO	CLI-941U01000B	SEE PLANS	CEILING	RECESSED	1.0	120/1/60	8.7	INTEGRAL	8-3/32 x 16 x 3	1,2
ECH-4	INDECO	CLI-941U01000B	SEE PLANS	CEILING	RECESSED	1.0	120/1/60	8.7	INTEGRAL	8-3/32 x 16 x 3	1,2
ECH-5	INDECO	CLI-941U00500B	SEE PLANS	CEILING	RECESSED	0.5	120/1/60	4.6	INTEGRAL	8-3/32 x 16 x 3	1,2
ECH-6	INDECO	CLI-941U00500B	SEE PLANS	CEILING	RECESSED	0.5	120/1/60	4.6	INTEGRAL	8-3/32 x 16 x 3	1,2
ECH-7	INDECO	CLI-941U00500B	SEE PLANS	CEILING	RECESSED	0.5	120/1/60	4.6	INTEGRAL	8-3/32 x 16 x 3	1,2
ECH-8	INDECO	CLI-941U00500B	SEE PLANS	CEILING	RECESSED	0.5	120/1/60	4.6	INTEGRAL	8-3/32 x 16 x 3	1,2

NOTES:  
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. COORDINATE INSTALLATION WITH ALL OTHER TRADES.  
2. PROVIDE COMPLETE WITH INTEGRAL TAMPERPROOF THERMOSTAT WITH OFF POSITION, THERMAL CUTOFF, AND LOCKABLE TOGGLE SWITCH.

EXHAUST FAN SCHEDULE														
TAG	AREA SERVED	BASE OF DESIGN		FAN TYPE	DRIVE	CFM	ESP	RPM	MOTOR HP	VOLTAGE	SONES	ROOF OPENING IN.	WEIGHT	NOTES
		MANUFACTURER	MODEL											
EF-1	SEE PLANS	GREENHECK	G-120-VG	ROOF	DIRECT	850	0.50	1,076	1/4	115V/1Ø	7.2	14.5 x 14.5	69	1,2

NOTES:  
1. INSTALL IN ACCORDANCE WITH MANUFACTURER WRITTEN INSTRUCTIONS. COORDINATE INSTALLATION WITH ALL TRADES.  
2. PROVIDE COMPLETE WITH DISCONNECT SWITCH, GRAVITY DAMPER, 12 INCH HIGH INSULATED ROOF CURB COORDINATED WITH ROOF SLOPE, DUCT TRANSITIONS TO CONNECTION SIZE, AND PRESSURE TRANSDUCER. FAN TO RUN CONTINUOUSLY WHEN BUILDING IS OCCUPIED.

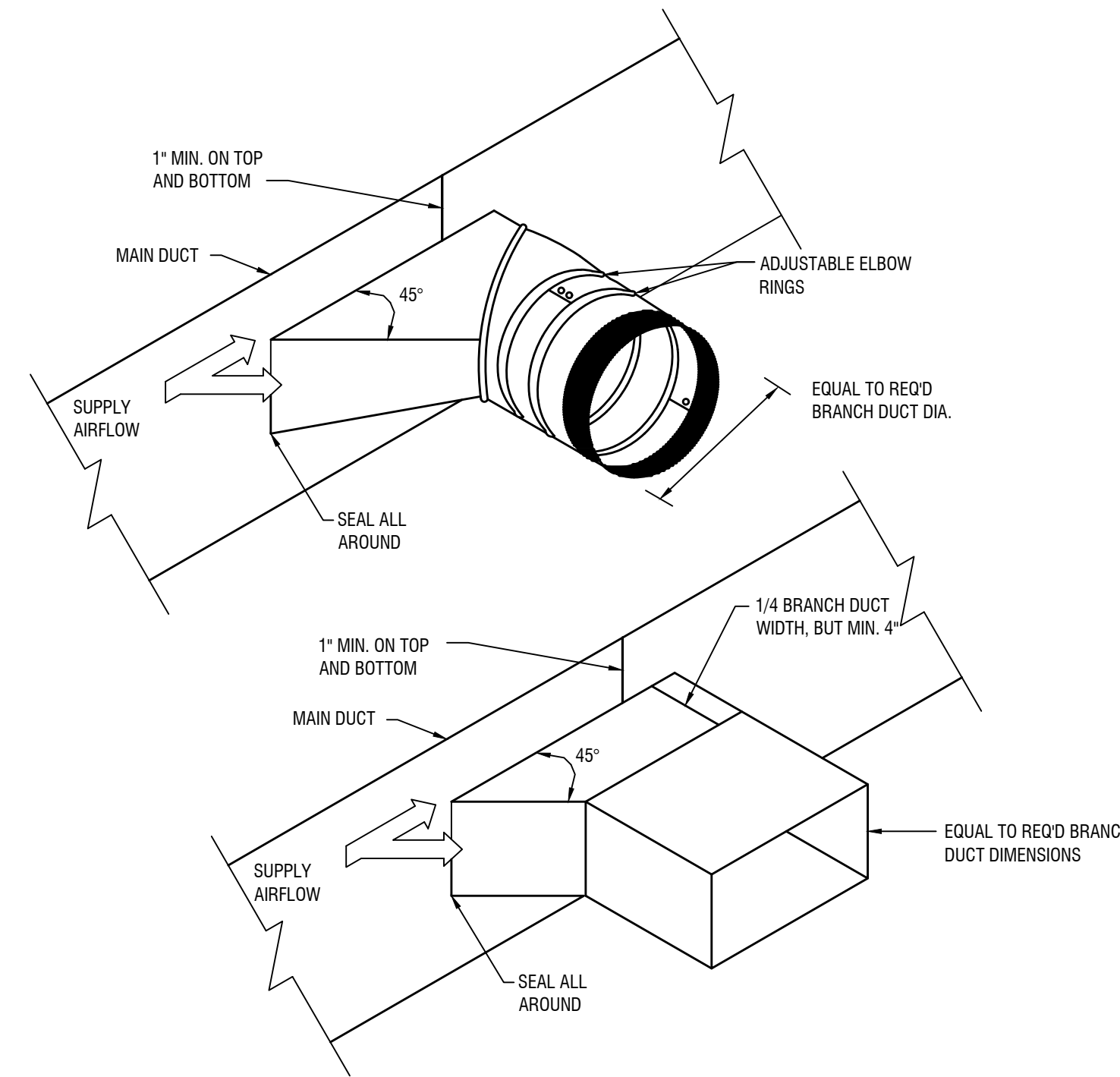
RELIEF FAN SCHEDULE														
TAG	AREA SERVED	BASE OF DESIGN		FAN TYPE	DRIVE	CFM	ESP	RPM	MOTOR HP OR WATTS	VOLTAGE	SONES	ROOF OPENING IN.	WEIGHT	NOTES
		MANUFACTURER	MODEL											
RF-1	AH-2 RELIEF	GREENHECK	G-200-VG	ROOF	DIRECT	4,000	0.30	900	1.0	208V/1Ø	12.2	20.5 x 20.5	191	1,2
RF-3	AH-4 RELIEF	GREENHECK	G-200-VG	ROOF	DIRECT	3,000	0.30	677	1.0	208V/1Ø	8.7			



1 AIR HANDLING SYSTEM SCHEMATIC

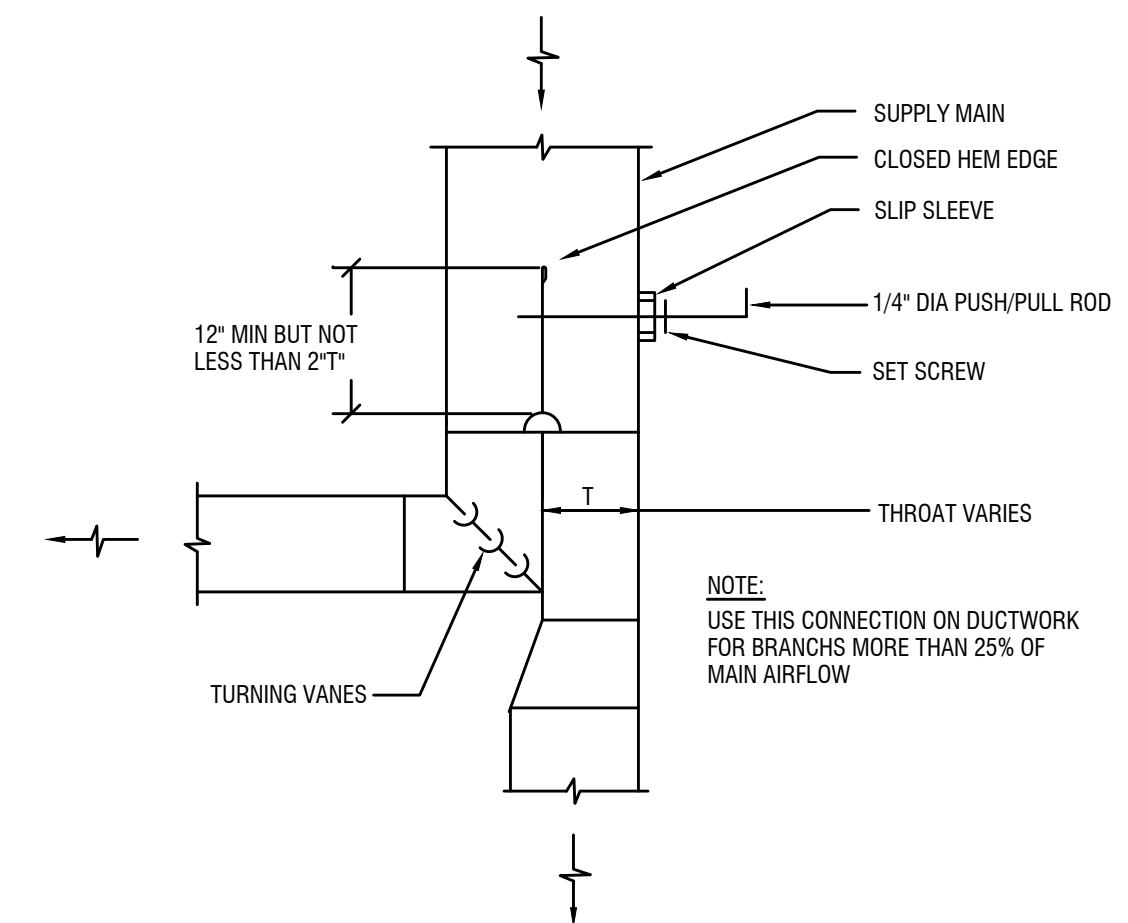
M-4 SCALE: NTS

- NOTES:
1. INTAKE HOOD TO BE LOCATED A MINIMUM OF 10'-0" FROM DISCHARGE OF ANY EXHAUST FANS, PLUMBING VENTS, COMBUSTION VENTS, OR LAUNDRY EXHAUST
  2. PROVIDE 3 POSITION MOTORIZED DAMPERS, 3 POSITIONS OF DAMPERS TO BE CLOSED, MINIMUM AND WIDE OPEN OUTSIDE AIR AND RETURN DAMPERS TO BE SET UP FOR INVERSE OPERATION OF EACH OTHER.
  3. DETAIL SHOWS AIR HANDLER IN HORIZONTAL CONFIGURATION. PROVIDE PROPER SUPPORTS, ISOLATORS, AND MIXING BOX BELOW UNIT FOR VERTICAL AIR HANDLERS.
  4. PROVIDE MANUFACTURER'S REQUIRED STRAIGHT DUCT LENGTH AT INLET AND DISCHARGE OF DUCT FURNACE.



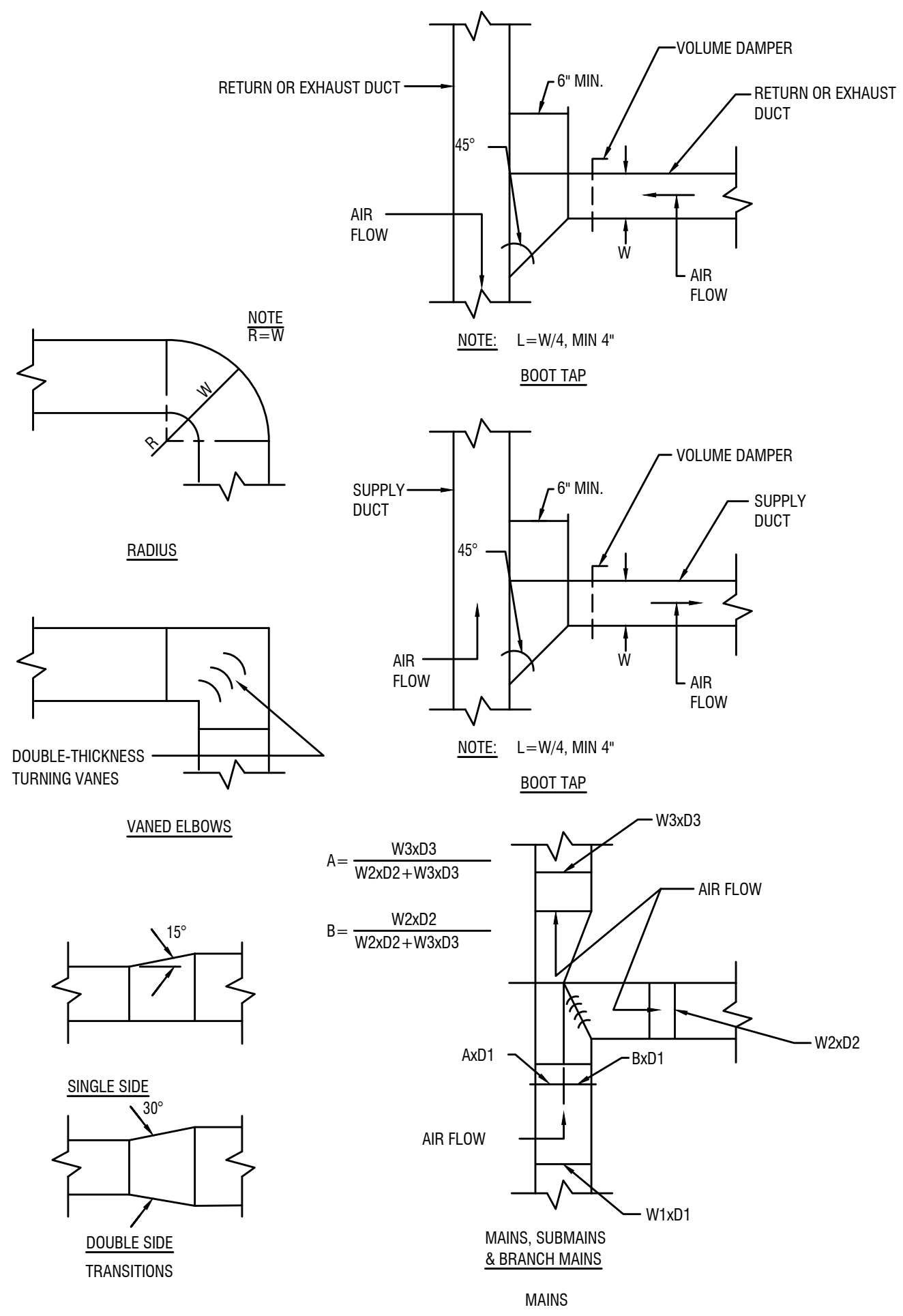
2 TYPICAL BRANCH TAKE-OFF FITTING DETAILS

M-4 SCALE: NTS



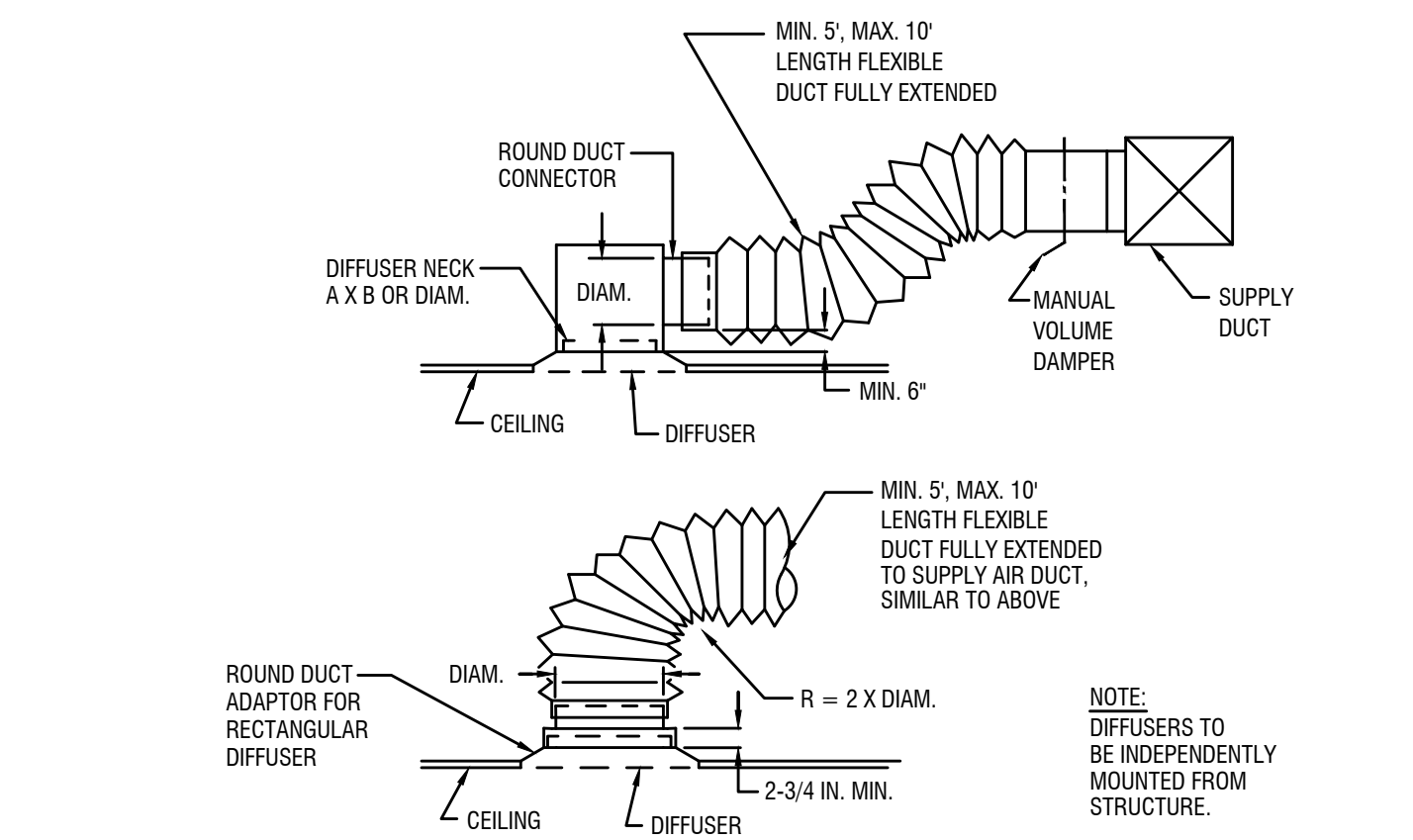
3 DUCT DIVISION DETAIL

M-4 SCALE: NTS



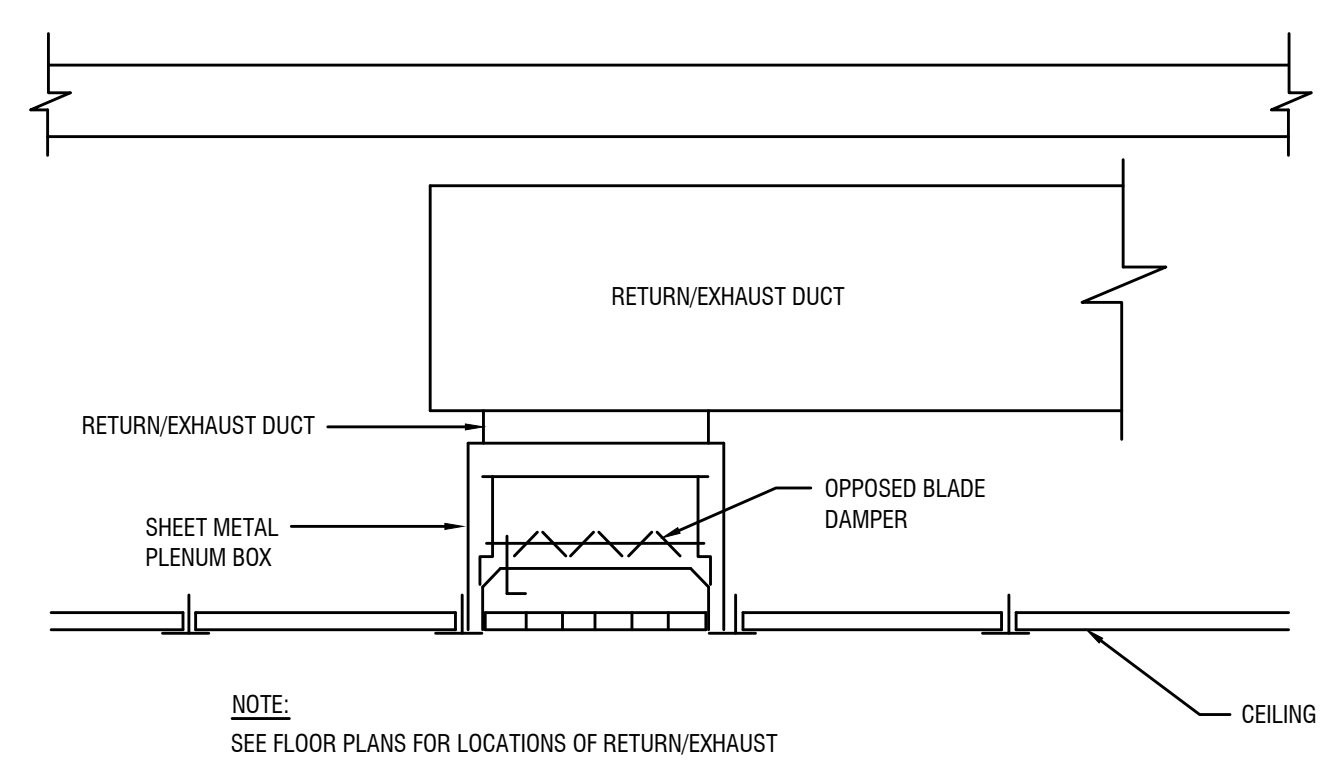
4 DUCTWORK CONNECTION DETAILS

M-4 SCALE: NTS



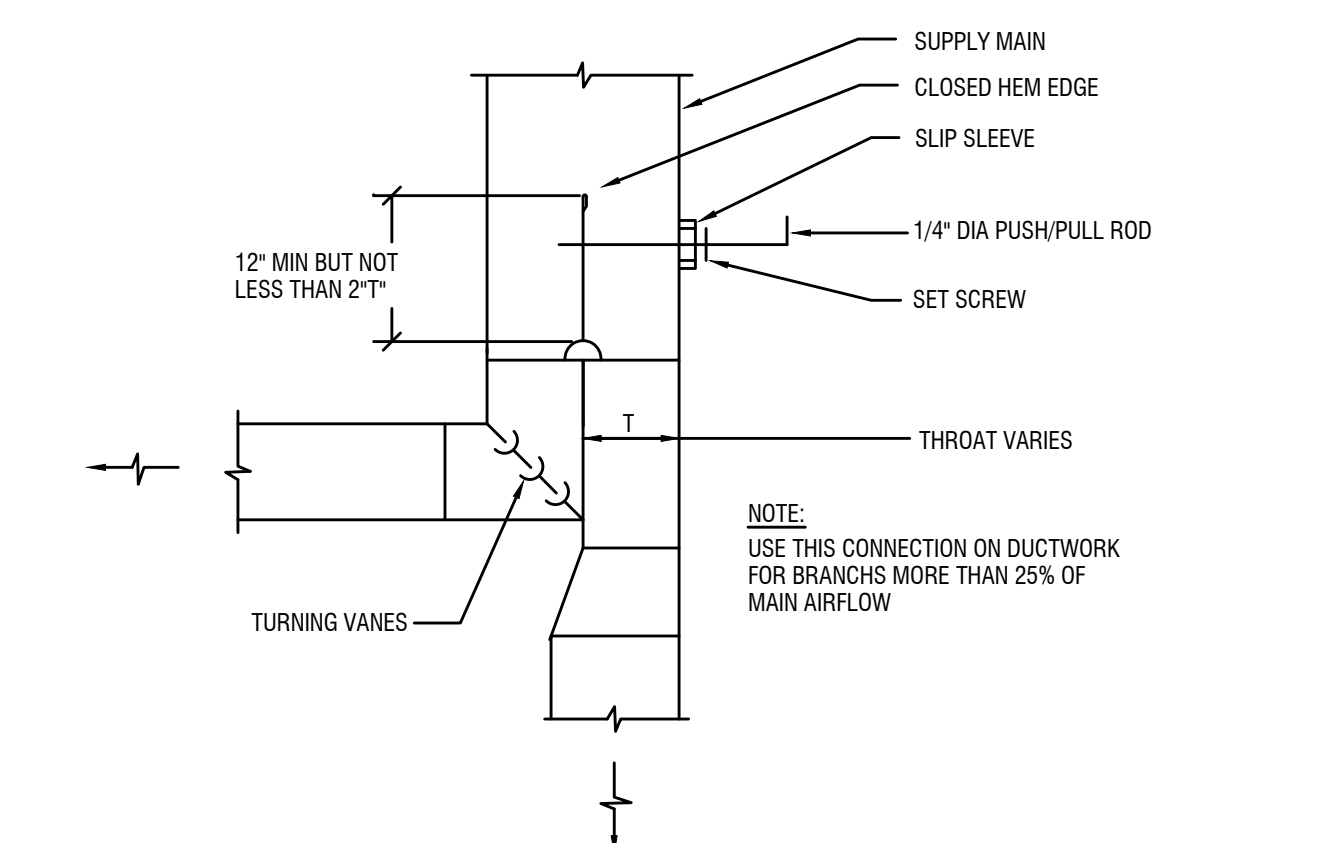
5 DIFFUSER CONNECTION DETAILS

M8.01 SCALE: NTS



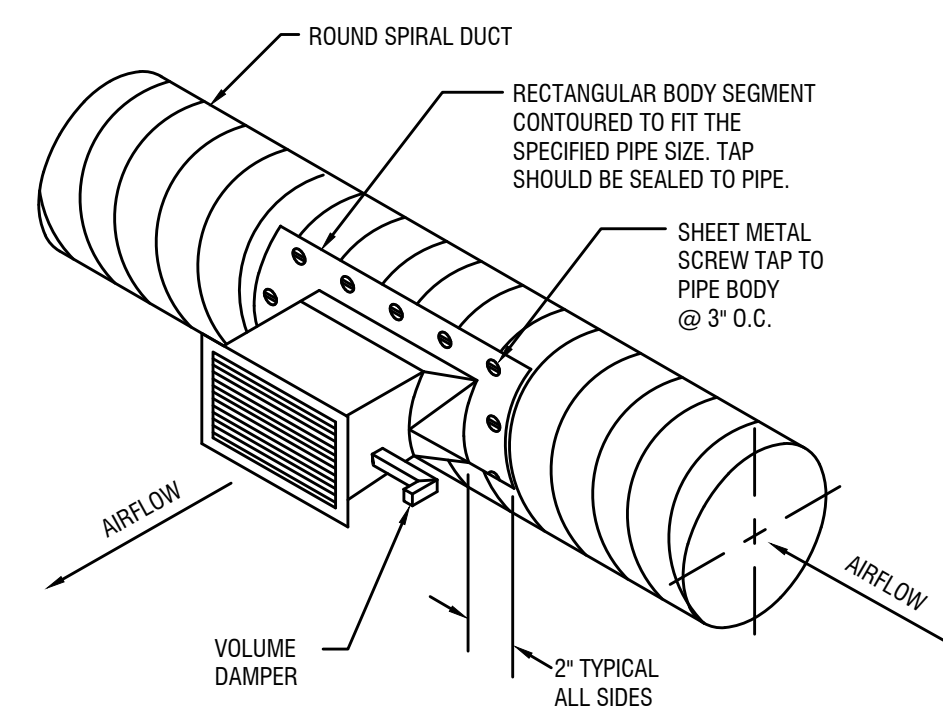
6 RETURN/EXHAUST AIR GRILLE DUCT DETAIL

M-4 SCALE: NTS



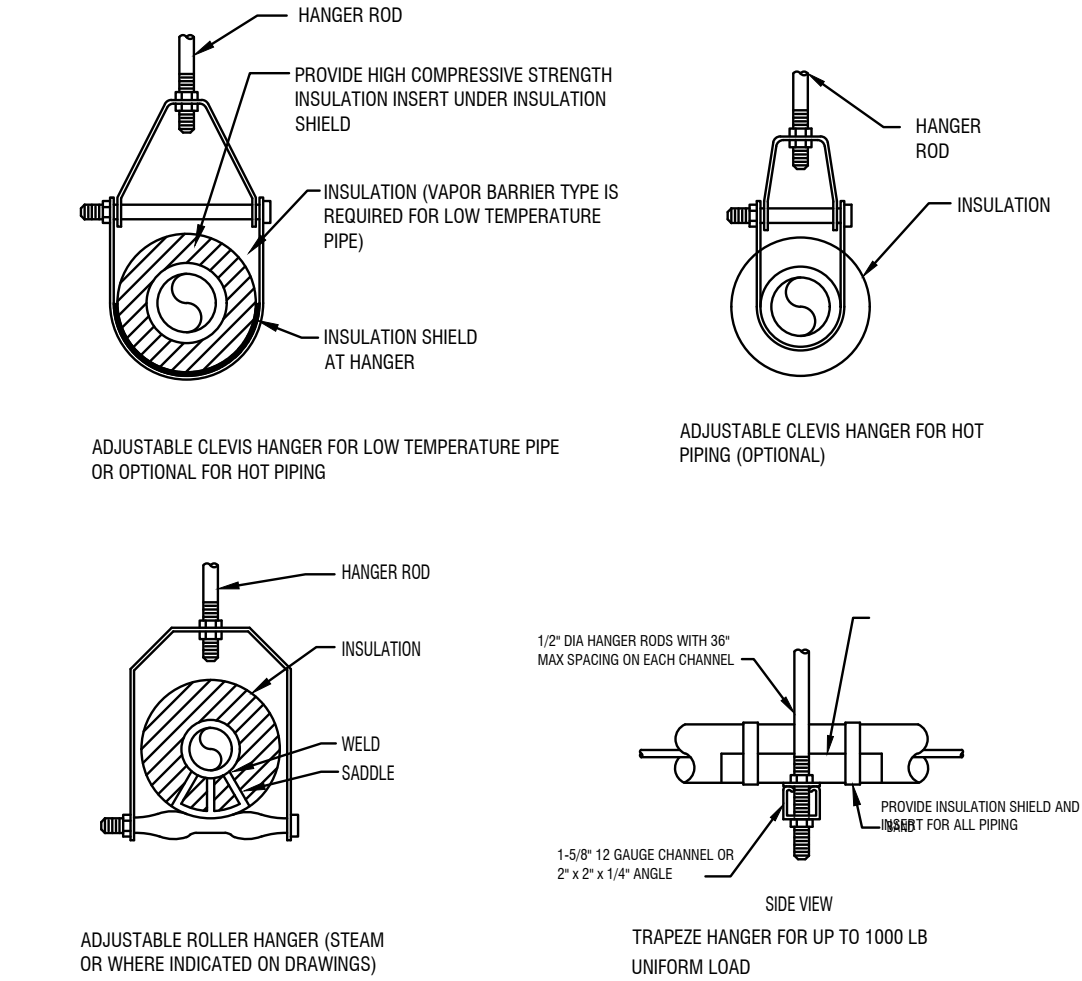
9 DUCT DIVISION DETAIL

M-4 SCALE: NTS



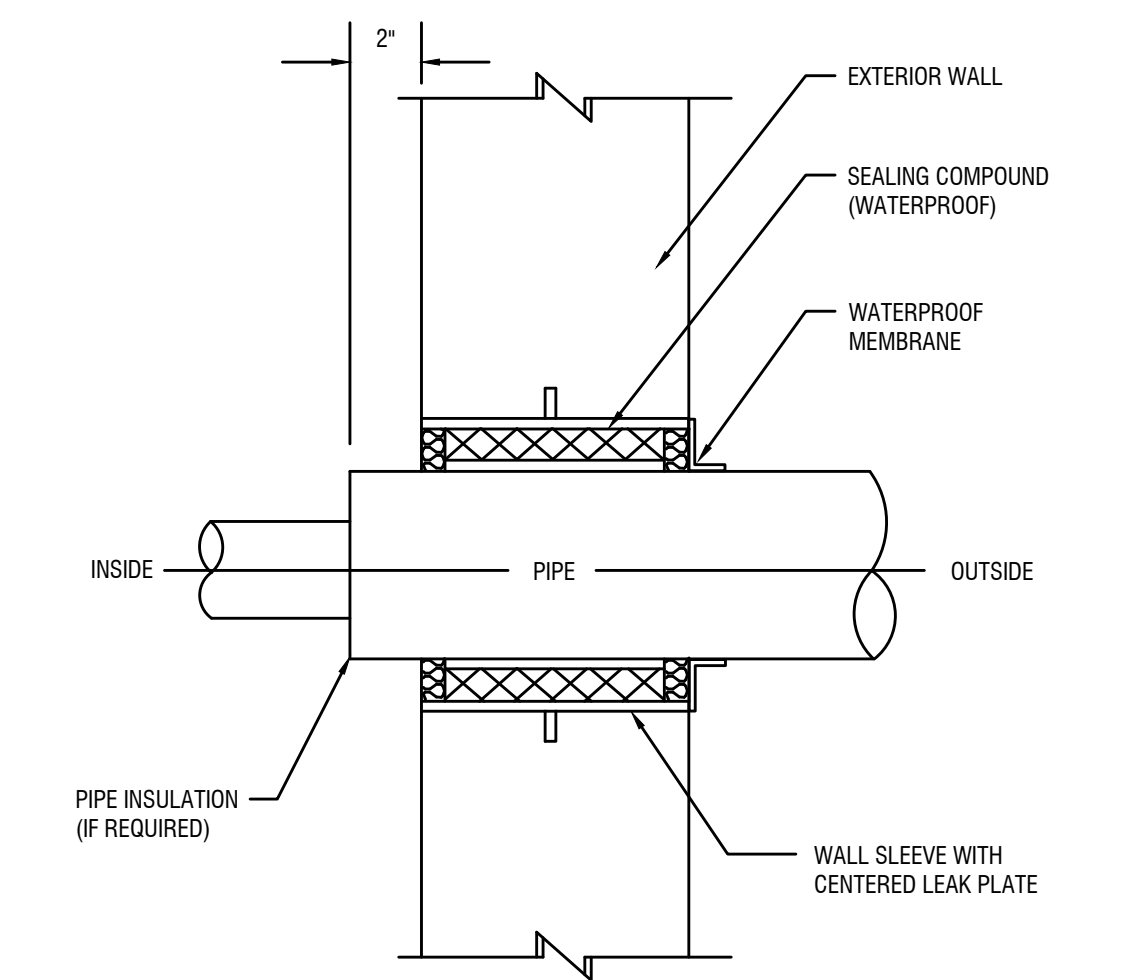
10 ROUND SPIRAL DUCTWORK SADDLE TAP DETAIL

M-4 SCALE: NTS



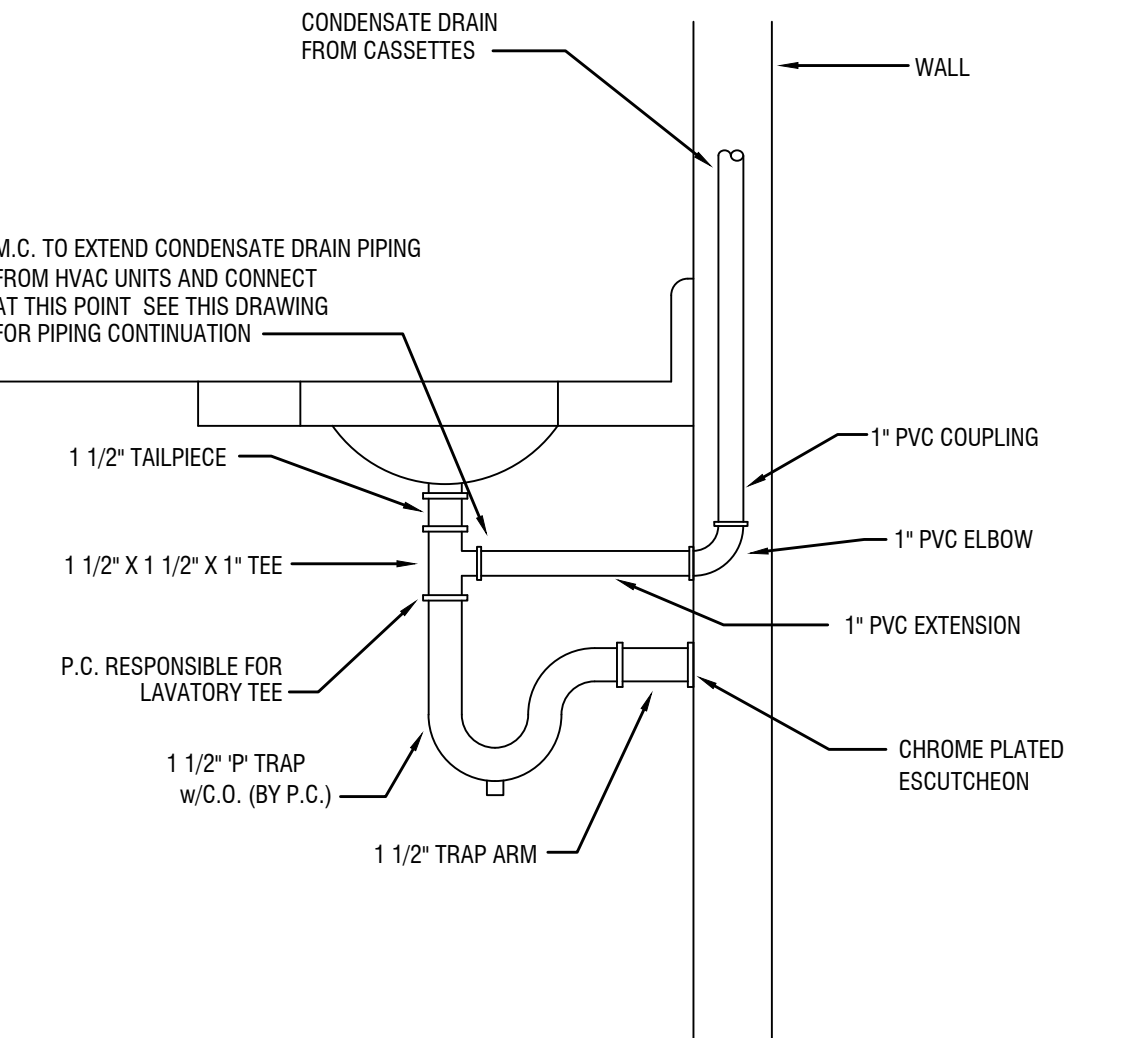
11 TYPICAL PIPE HANGER DETAIL

M-4 SCALE: NTS



8 PIPE PENETRATION DETAIL (EXTERIOR WALL)

M-4 SCALE: NTS



12 TYPICAL CONDENSATE DRAIN TAILPIECE DETAIL

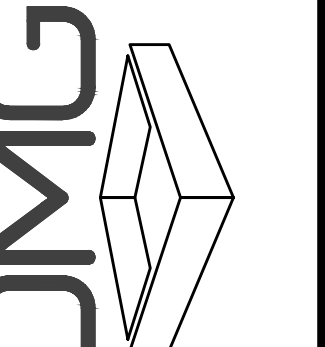
M-4 SCALE: NTS

OWNER: ONVO  
 CHECKED BY: RHW  
 REVISION: 1  
 DATE: JULY 27, 2022



ARCH: ONVO  
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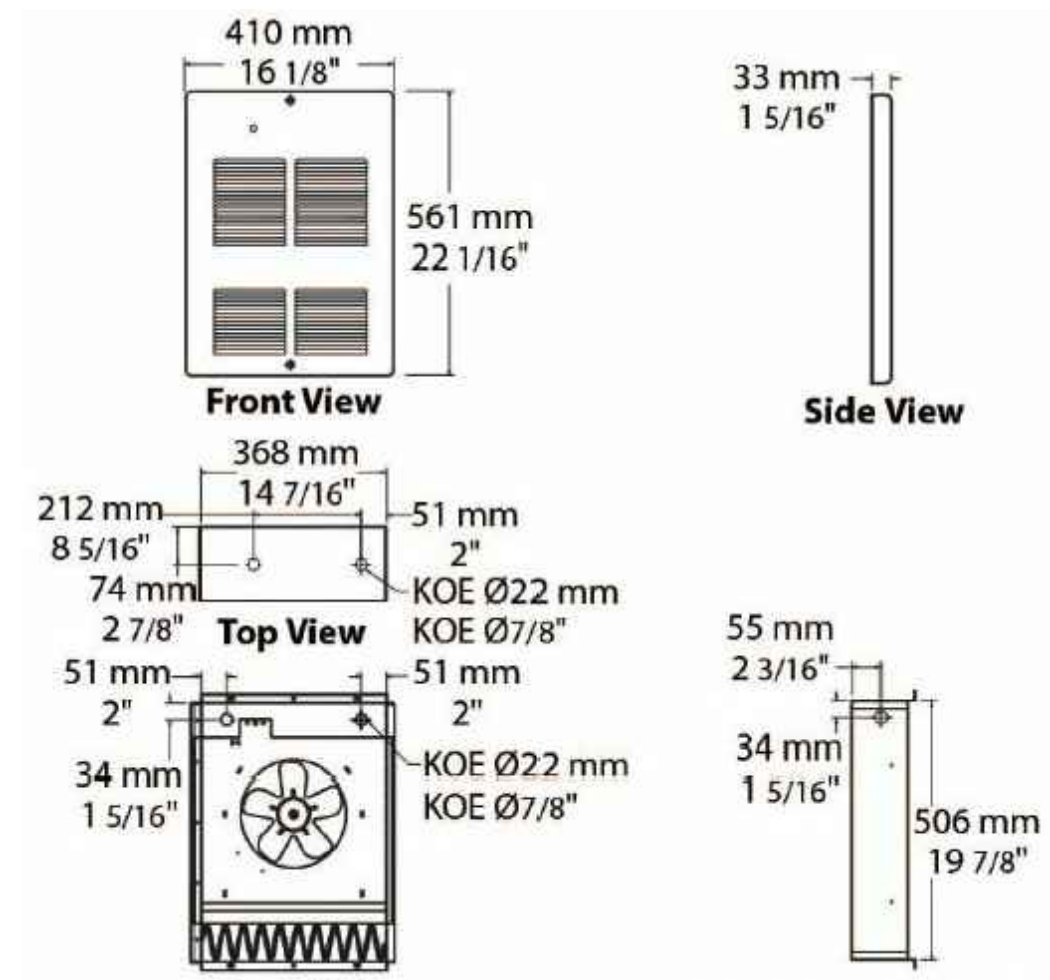


SEAL: RYAN J. WANG, PE  
 NY PROFESSIONAL ENGINEER  
 LIC. NO. 028789-1

PROJECT #: 22046  
 GARDEN EXT. / GARDEN INT.  
 ONVO TRAVEL PLAZA  
 BURGER KING  
 128 Riverside Dr. Fultonville, NY 12072

MECHANICAL DETAILS  
 M-4

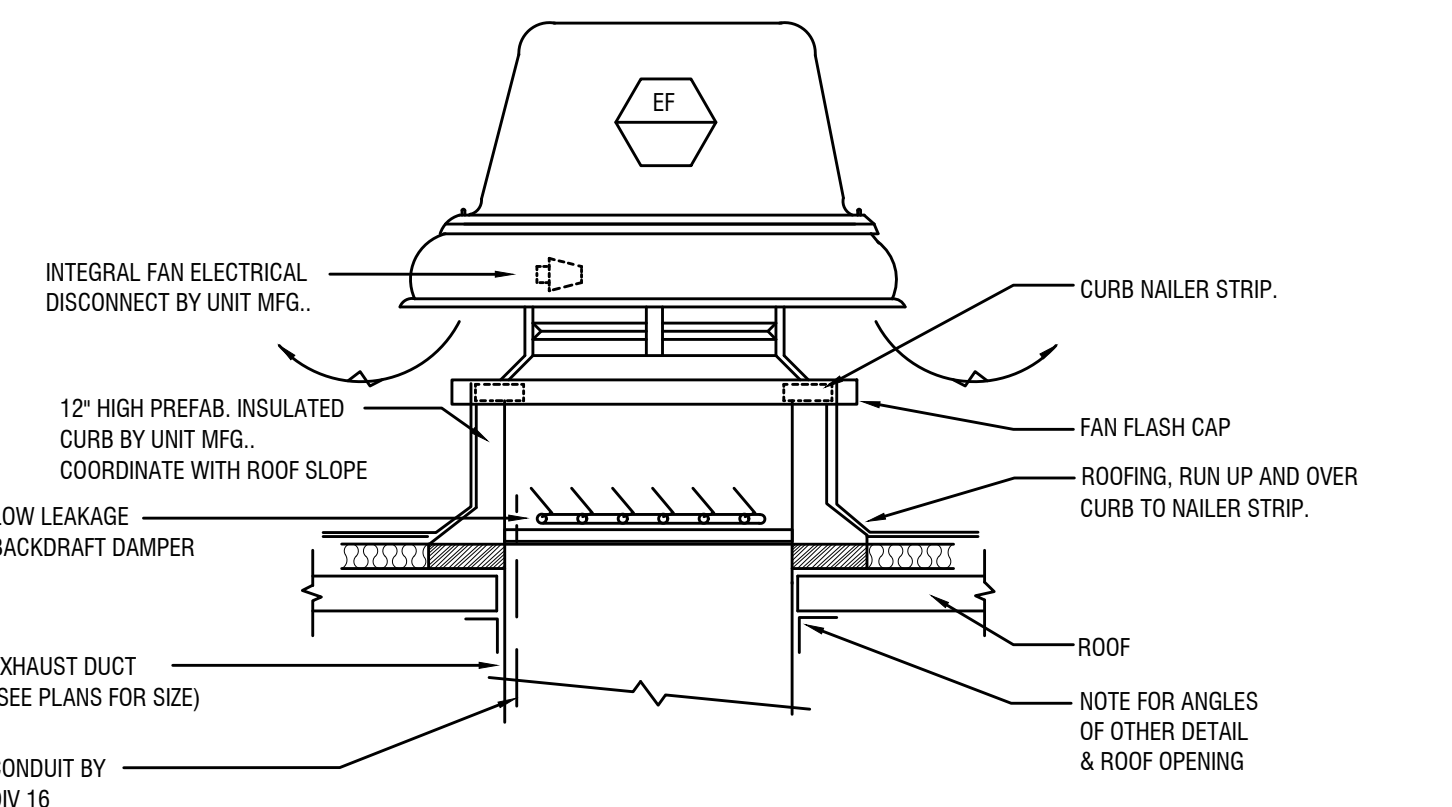




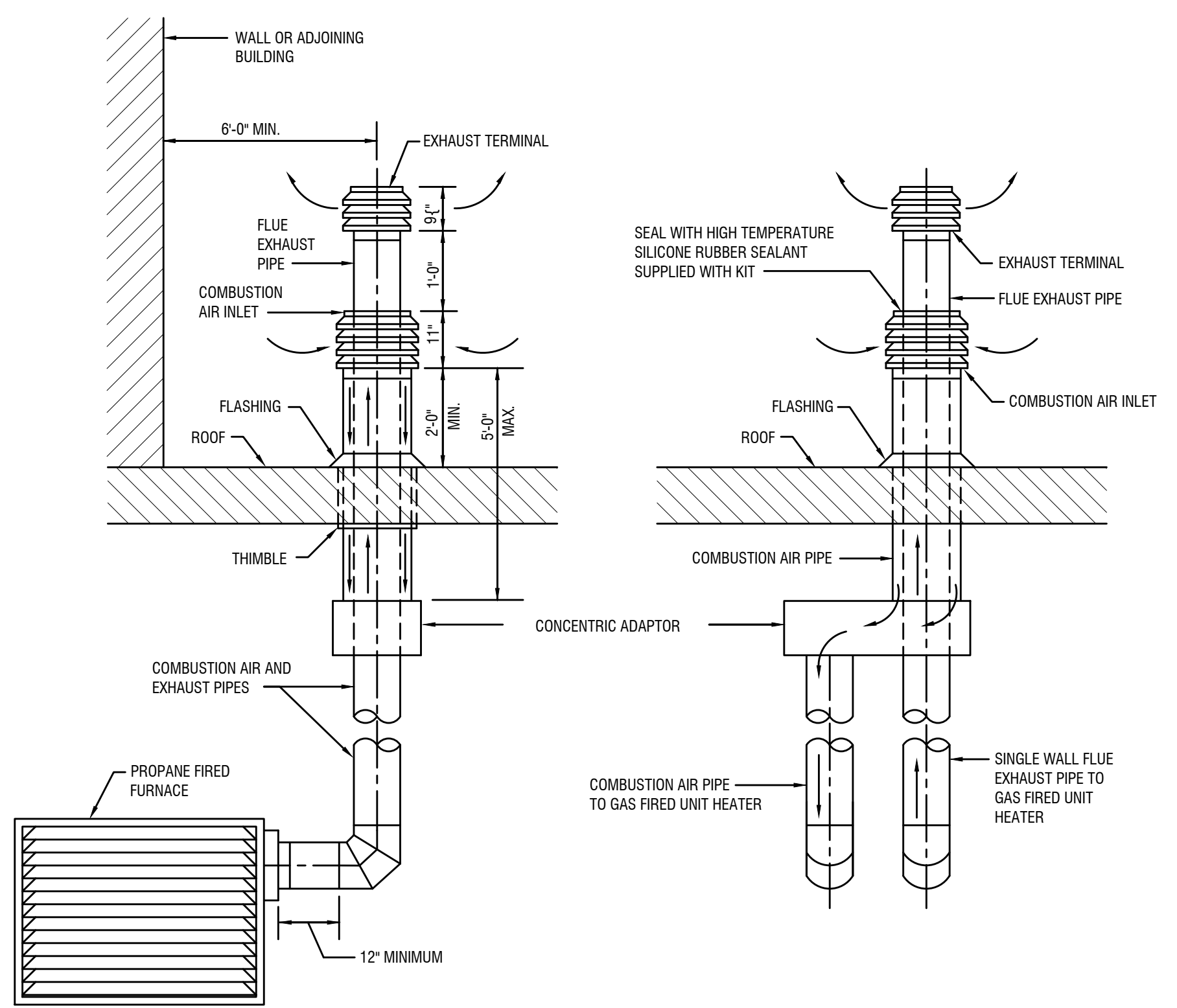
1 ELECTRIC WALL HEATER DETAIL  
 M-5 SCALE: NTS

**ROOFING NOTES (FOR ALL ROOF PENETRATIONS):**

1. FINAL APPROVAL TO BE OBTAINED FROM ROOFING MANUFACTURER WHO WILL ULTIMATELY WARRANTY THE INSTALLATION.
2. ALL MATERIALS IN CONTACT WITH THE PIPING INSULATION JACKET SHALL BE SUITABLE FOR 400° F TEMPERATURES.
3. FLASHING SHALL BE A MINIMUM OF 6" HIGH WHENEVER POSSIBLE AND MUST BE ABOVE ROOF FLOOD LEVEL.
4. FIELD MEMBRANE AND INSULATION (WHEN APPLICABLE) MUST BE CUT TIGHTLY AROUND THE PROJECTION.



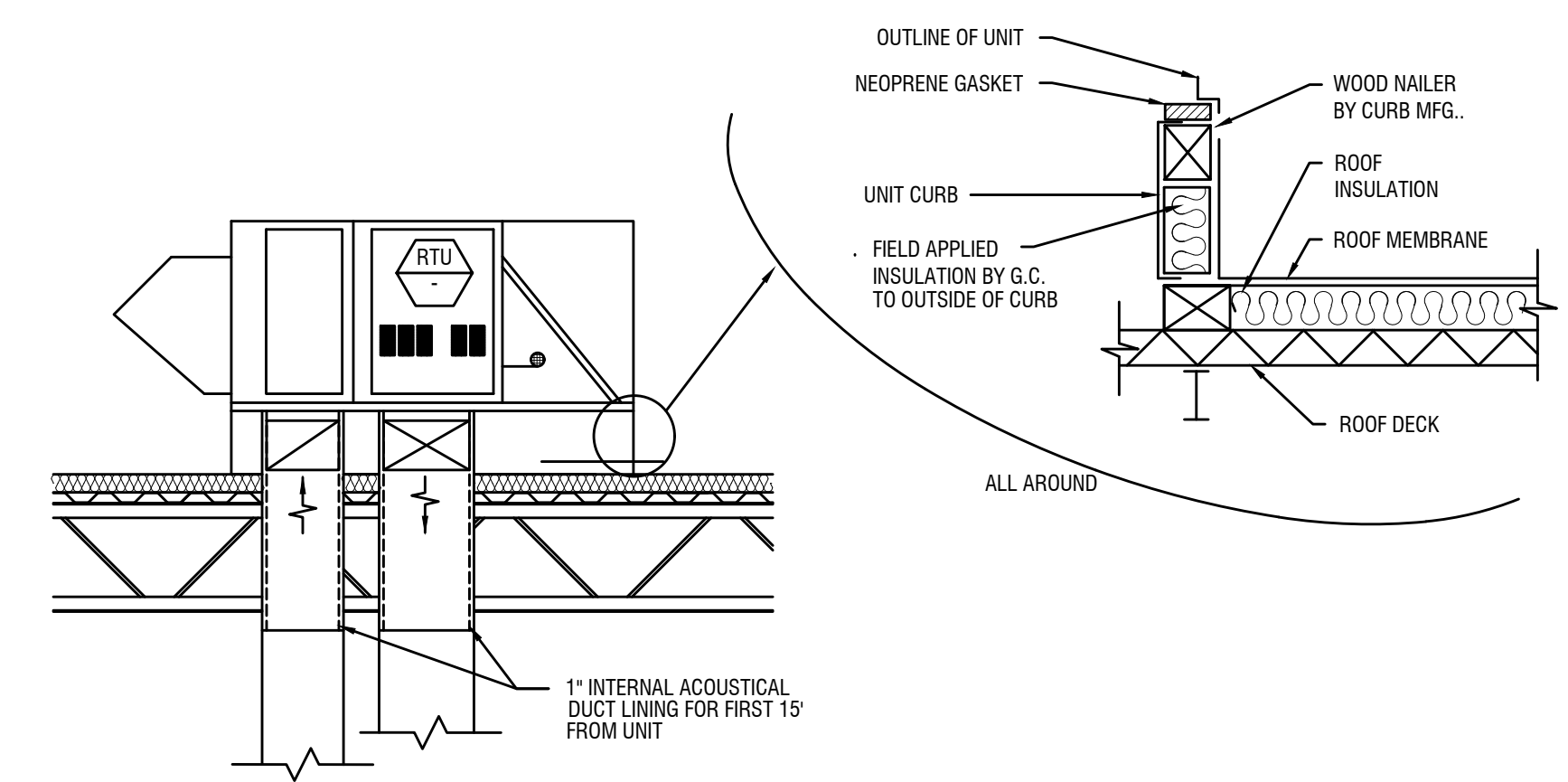
2 ROOF EXHAUST FAN DETAIL  
 M-5 SCALE: NTS



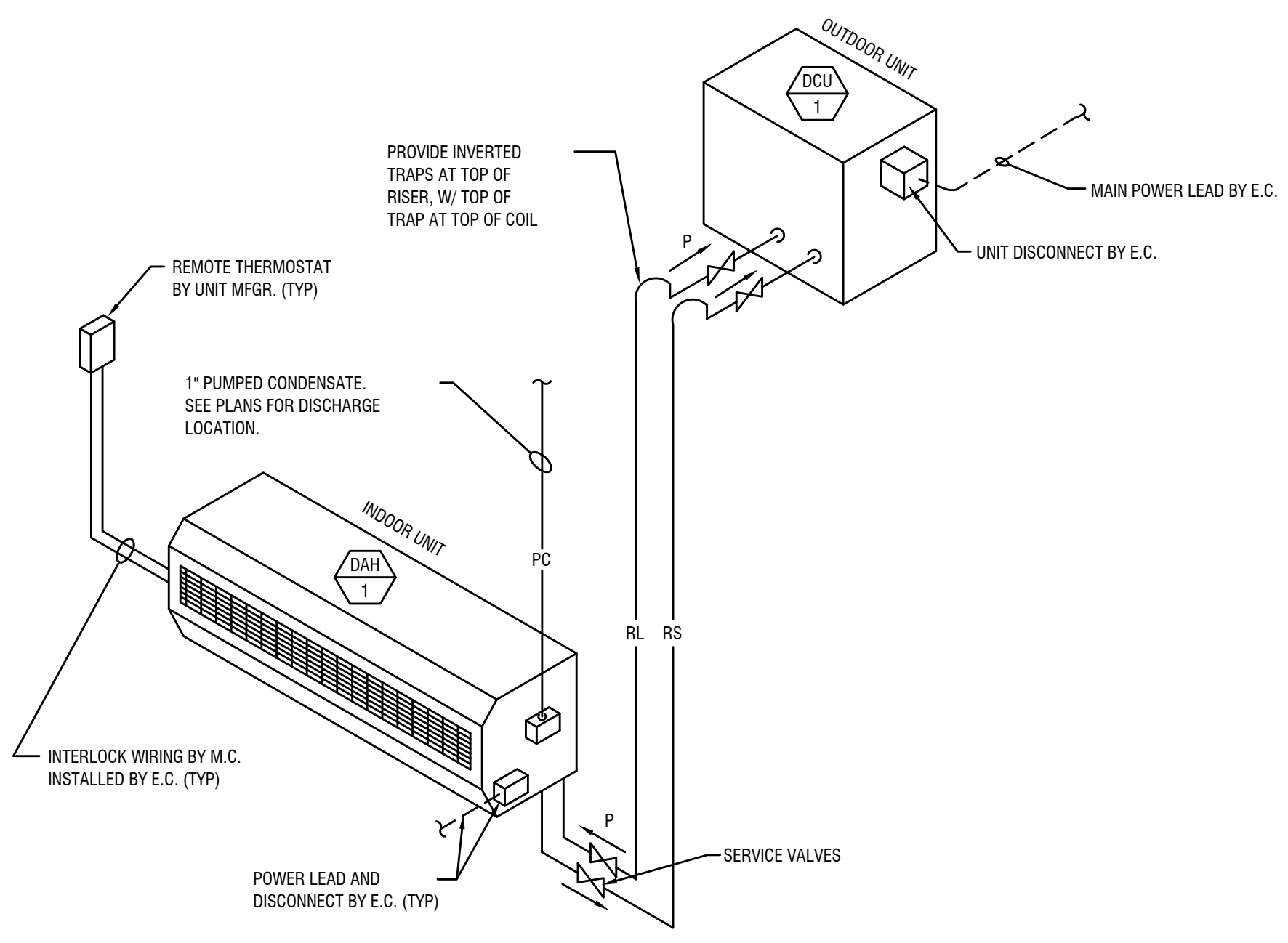
3 FURNACE W/ VERTICAL VENT TERMINALS  
 M-5 SCALE: NTS

**ROOFING NOTES (FOR ALL ROOF PENETRATIONS):**

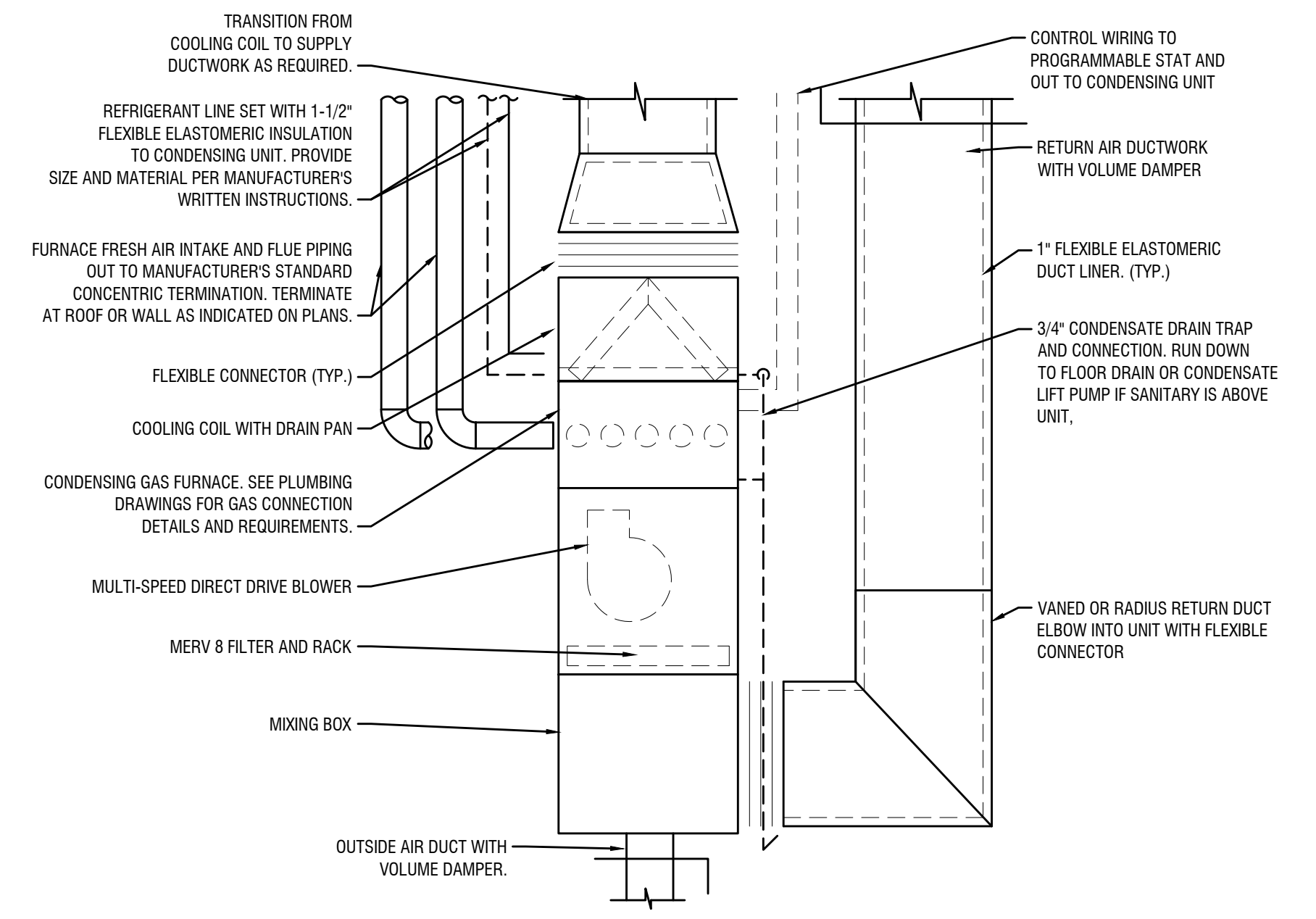
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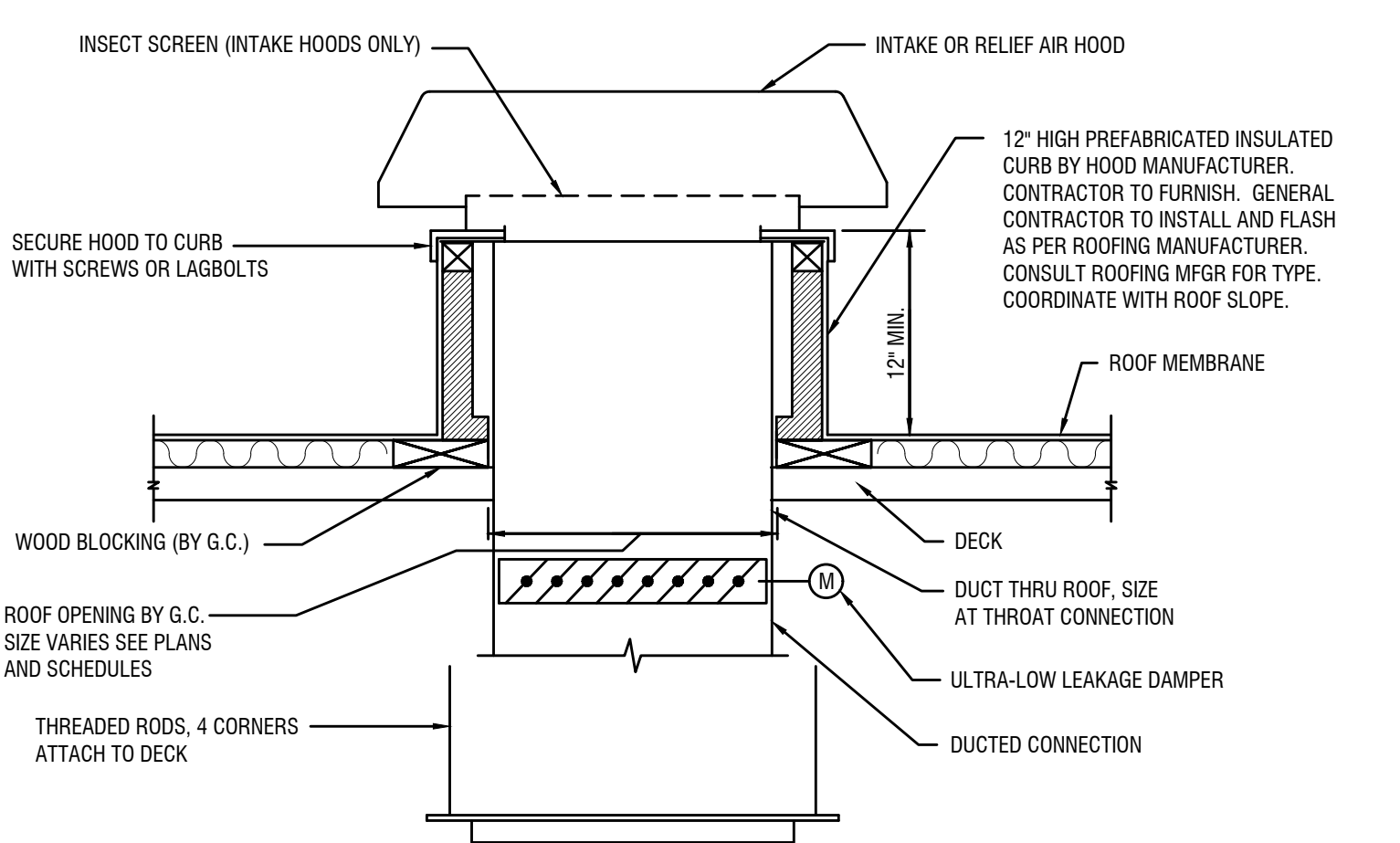
4 ROOFTOP AIR CONDITIONING UNIT  
 M-5 SCALE: NTS



5 DUCTLESS SPLIT SYSTEM REFRIGERANT PIPING DETAIL  
 M-5 SCALE: NTS



6 HORIZONTAL SPLIT SYSTEM GAS FURNACE DETAIL  
 M-5 SCALE: NTS



7 GRAVITY HOOD DETAIL  
 M-5 SCALE: NTS

DATE: JULY 27 2022  
 CHECKED BY: RW  
 REVISION  
 DRAWN BY: JAR  
 NO. DATE  
 BURGER KING  
 OWNER: ONVO Travel Plaza  
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RYAN J. WANKO, PE  
 NY PROFESSIONAL ENGINEER  
 LIC. NO. 092789-1

PROJECT # 220046  
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 ONVO TRAVEL PLAZA  
 BURGER KING  
 128 Riverside Dr. Fultonville, NY 12072  
 MECHANICAL DETAILS

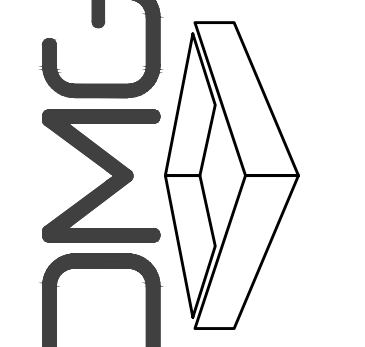
M-5





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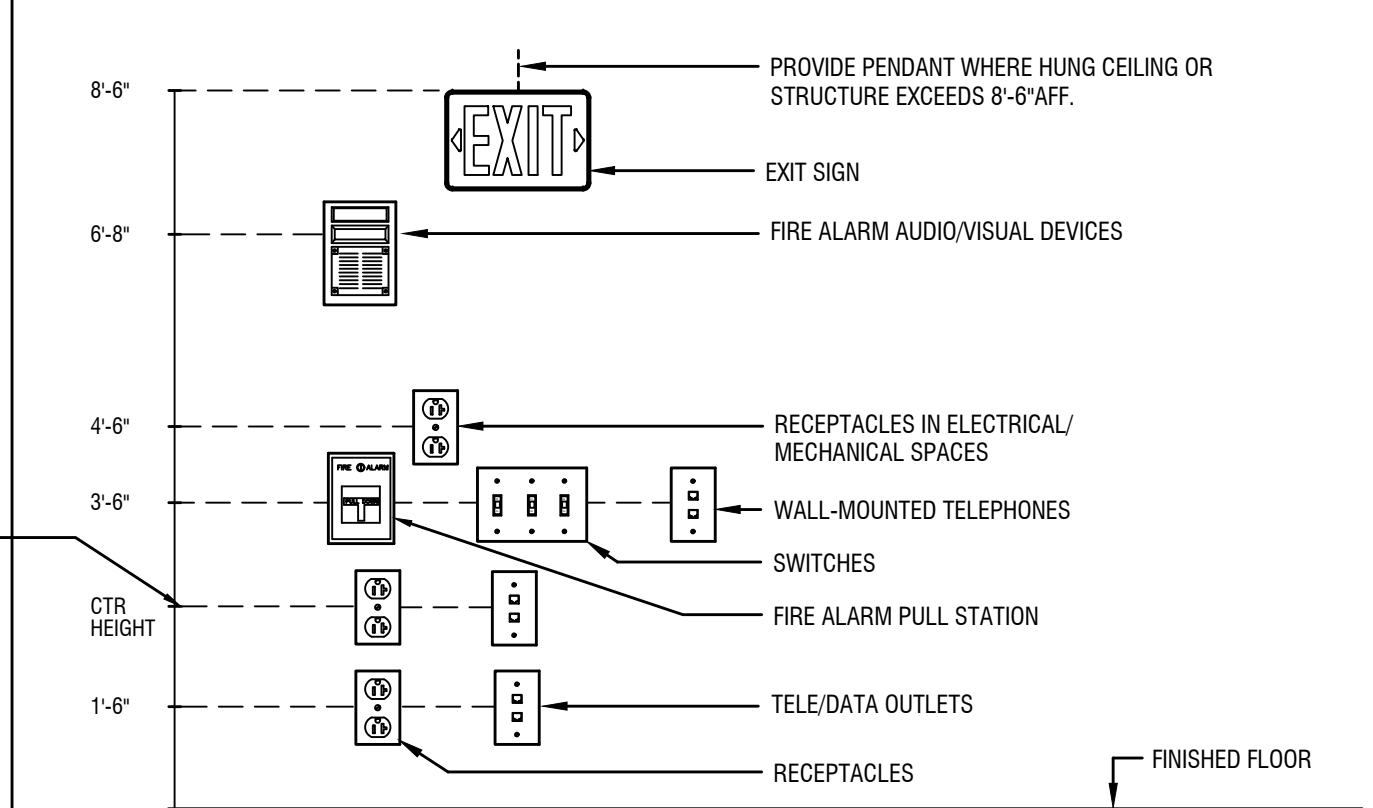
PROJECT # 220046  
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 ONVO TRAVEL PLAZA  
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 128 Riverside Dr. Fultonville, NY 12072  
 ELECTRICAL COVER SHEET

GENERAL ABBREVIATIONS

[E]..... EXISTING	GEN..... GENERATOR
[E]R]..... EXISTING TO REMAIN	GRD..... GROUND FAULT INTERRUPTER
[F]..... FUTURE	GRD_G..... GROUND
[N]..... NEW	GRMC..... GALVANIZED RIGID METAL CONDUIT
Δ..... DELTA	GRS..... GALVANIZED RIGID STEEL
Y..... WYE	GSR..... GROUND SENSING RELAY
0..... PHASE	HGT..... HEIGHT
1/C..... SINGLE CONDUCTOR	HID..... HIGH INTENSITY DISCHARGE
3/C..... THREE CONDUCTOR	HOA..... HAND OFF AUTO
A AMP..... AMPERE	HP..... HORSEPOWER
AC..... ALTERNATING CURRENT	HPS..... HIGH PRESSURE SODIUM
AC..... AIR CONDITIONER	HERZ..... HERTZ
ADA..... AMERICANS WITH DISABILITIES ACT	IEEE..... INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
ADTL..... ADDITIONAL	IMC..... INTERMEDIATE METAL CONDUIT
AF..... AMP FRAME/AMP FUSE	INCAND..... INCANDESCENT
AFB..... ABOVE FINISHED FLOOR	INSL..... INSULATION
AFG..... ABOVE FINISHED GRADE	INT..... INTERIOR/INTERLOCK
AHJ..... AUTHORITY HAVING JURISDICTION	JOB..... JUNCTION BOX
AHU..... AIR HANDLING UNIT	KCMIL..... THOUSAND CIRCULAR MILLS
AIC..... INTERRUPTING CAPACITY (AMPERES)	KV..... KILOWATT
AL..... ALUMINUM	KWH..... KILOWATT HOUR
ANSI..... AMERICAN NATIONAL STANDARDS	KV..... KILOVOLT
APPROX..... APPROXIMATELY	KVA..... KILOVOLT AMPERE
ARCH..... ARCHITECTURAL	LA..... LIGHTNING ARRESTER
AS..... AMP SWITCH	LAB..... LABORATORY
ASY..... ASYMMETRICAL	LF..... LINEAR FEET
ATC..... AUTOMATIC TEMPERATURE CONTROL	LPMC..... LIQUIDTIGHT FLEXIBLE METAL CONDUIT
ATS..... AUTOMATIC TRANSFER SWITCH	LT..... LIGHT
AUX..... AUXILIARY	LIG..... LIGHTING
AT..... AMP TRIP	MCM/C..... METAL CLAD/MECHANICAL CONTRACTOR
AWG..... AMERICAN WIRE GAUGE	MCB..... MAIN CIRCUIT BREAKER
BATT..... BATTERY	MCC..... MOTOR CONTROL CENTER
BFC..... BELOW FINISHED CEILING	MDP..... MAIN DISTRIBUTION PANEL
BFG..... BELOW FINISHED GRADE	MH..... METAL HALIDE
BMSH..... BASCHMENT	MIN..... MINIMUM
BLDG..... BUILDING	MISC..... MISCELLANEOUS
BRKR..... BREAKER	MLO..... MAIN LUGS ONLY
BMS..... BALANCED MAGNETIC SWITCH	MTD..... MOUNTED
BRN..... BRANCH	N..... NEUTRAL
BRF..... BELOW RAISED FLOOR	NC..... NORMALLY CLOSED
C COND..... CONDUIT	NEC..... NATIONAL ELECTRIC CODE
CB..... CIRCUIT BREAKER	NEMA..... NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CCTV..... CLOSED CIRCUIT TELEVISION	NESC..... NATIONAL ELECTRICAL SAFETY CODE
CD..... CENTIGRADE DEGREE	NFPA..... NATIONAL FIRE PROTECTION ASSOCIATION
C.E..... CONCRETE ENCASED	NO..... NOT IN CONTRACT
CKT..... CIRCUIT	NO..... NORMALLY OPEN
CKTD..... CIRCUITED	NTS..... NOT TO SCALE
CLG..... CEILING	O.C..... ON CENTER
COAX..... COAXIAL	P..... POLE
CONC..... CONCRETE	PA..... PUBLIC ADDRESS
CONTR..... CONTRACTOR	PB..... PULL BOX/PUSH BUTTON
CLF..... CURRENT LIMITING FUSES	PC..... PLUMBING CONTRACTOR
BATT..... BATTERY	PCU..... POWER CONDITIONING UNIT
CU..... COPPER	PH..... PHASE
DB..... DUCTBANK	PH..... PANEL
DC..... DIRECT CURRENT	PH..... PRIMARY
DISC..... DISCONNECT	PSI..... POUNDS PER SQUARE INCH
DIST..... DISTRIBUTION	PT..... POTENTIAL TRANSFORMER
DIV..... DIVISION	PT..... POLY VINYL CHLORIDE
DWG..... DRAWING	RECEPT..... RECEPTACLE
EA..... EACH	RECD..... REQUIRED
EB..... ELECTRONIC BALLAST	RGS..... RIGID GALVANIZED STEEL
E.C..... ELECTRICAL CONTRACTOR	RM..... ROOM
EF..... EXHAUST FAN	RMC..... RIGID METALLIC CONDUIT
EGC..... EQUIPMENT GROUNDING CONDUCTOR	RNC..... RIGID NONMETALLIC CONDUIT
EL..... ELEVATION	SEC..... SECONDARY
ELEC..... ELECTRIC	SECT..... SECTION
EMER..... EMERGENCY	SF..... SQUARE FEET
EMT..... ELECTRICAL METALLIC TUBING	SN..... SOLID NEUTRAL
ENC..... ENCLOSURE	SPE..... SPECIFICATIONS
EPO..... EMERGENCY POWER OFF	SPECS..... SPECIFICATIONS
EPR..... ETHYLENE PROPYLENE RUBBER	SUSP..... SUSPENDED
EQUIP..... EQUIPMENT	SW..... SWITCH
EW..... ELECTRIC WATER COOLER	SWBD..... SWITCHBOARD
EWV..... ELECTRIC WATER HEATER	SYM..... SYMMETRICAL
EX..... EXAMPLE	TEL..... TELEPHONE
EXST..... EXISTING	THRU..... THROUGH
EXT..... EXTERIOR/EXTERIOR	TR..... TRIP
F..... FUSE/FRAME	TS..... TAMPER SWITCH
FA..... FIRE ALARM	TRN..... UNDERGROUND
FEEDER..... FEEDER	UL..... UNDERWRITERS LABORATORY
FIN..... FINISHED	U.O.N..... UNLESS OTHERWISE NOTED
FXIT..... FIXTURE	UPS..... UNINTERRUPTIBLE POWER SUPPLY
FL..... FLOOR	V..... VOLT/VOLTAGE
FLA..... FULL LOAD AMPS	VO..... VOLTAGE DROP
FLEX..... FLEXIBLE	VCR..... VACUUM CIRCUIT RECLOSER
FLOR..... FLUORESCENT	W..... WATT
FMC..... FLEXIBLE METAL CONDUIT	WIP..... WITH WEATHERPROOF
FS..... FLOOR SWITCH	XMR..... TRANSFORMER
FT..... FEET/FOOT	
FU..... FUSE	
G..... GENERAL CONTRACTOR	
SEC..... GROUNDING ELECTRODE CONDUCTOR	

ADDITION ABBREVIATIONS MAY BE DEFINED IN THE SPECIFICATIONS.

TYPICAL DEVICE MOUNTING HEIGHTS



- NOTES:
- DEVICES SHALL BE INSTALLED ON A COMMON VERTICAL CENTERLINE WHEREVER POSSIBLE
  - ELECTRICAL RECEPTACLES SHALL BE MOUNTED A MINIMUM OF 15 INCHES TO THE BOTTOM OF THE RECEPTACLE.
  - ELECTRICAL SWITCHES SHALL BE MOUNTED A MAXIMUM OF 48 INCHES TO THE TOP OF THE SWITCH.
  - COUNTERTOP ELECTRICAL RECEPTACLES SHALL BE MOUNTED A MAXIMUM OF 44 INCHES TO THE TOP OF THE RECEPTACLE.
  - CIRCUIT BREAKERS, DISCONNECT SWITCHES, ETC. SHALL BE INSTALLED SO THAT THE CENTER OF THE GRIP OF THE OPERATING HANDLE IS IN ITS HIGHEST POSITION IS NOT MORE THAN 6'-7" A.F.F.
  - MOUNT VISIBLE FIRE ALARM DEVICES WITH THE LENS OF THE STROBE NOT LESS THAN 80 IN AND NOT GREATER THAN 96 IN A.F.F. WALL MOUNTED VISIBLE FIRE ALARM DEVICES SHALL NOT BE WITHIN 6 IN OF THE CEILING.
  - MOUNT EXIT SIGNS ABOVE DOORS WITH 2" BETWEEN BOTTOM OF EXIT SIGN AND TOP OF DOOR.
  - THE MOUNTING HEIGHTS SHOWN ARE GENERALLY DIMENSIONED TO THE MID-LINE OF A GIVEN DEVICE. EXACT DEVICE MOUNTING HEIGHTS SHALL BE WITHIN THE SPECIFIC REACH LIMITS SPECIFIED IN THE LATEST REVISION OF THE ADA GUIDELINES AND THE LATEST REVISION OF ICC-ANSI A117.1, SPECIALLY FIRE ALARM DEVICES, CONTROLS, OPERATING MECHANISMS AND HARDWARE, INCLUDING RECEPTACLES AND SWITCHES THAT CONTROL LIGHTING, VENTILATION, ETC.
  - THIS DETAIL IS MEANT AS A GENERAL GUIDE. ALL FINAL MOUNTING HEIGHTS SHALL BE INSTALLED PER ARCHITECTURAL DRAWINGS AND ADOPTED CODES. (N.T.S.)

ELECTRICAL GENERAL NOTES

- THE ENTIRE INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE ENFORCED REVISIONS OF THE BUILDING OR UNIFORM CODE, NFPA 70, NEMA, UL LISTINGS, MANUFACTURERS' RECOMMENDATIONS, THE NATIONAL BOARD OF UNDERWRITERS, STATE CODES, LOCAL CODES, AND ALL AUTHORITIES HAVING JURISDICTION.
- GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1, GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION, PUBLISHED BY THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE. CARE SHALL BE EXERCISED TO MINIMIZE ANY INCONVENIENCE OR DISTURBANCE TO SPACES OUTSIDE THE AREA OF WORK.
- ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE APPLICATION BY UNDERWRITERS LABORATORIES AND INSTALLED ACCORDING TO ITS LISTING.
- ALL DEVICES SHOWN ON DRAWINGS ARE DIAGRAMMATIC IN LOCATION AND SHOWN TO INDICATE THE EXTENT, GENERAL CHARACTER, AND GENERAL WIRING REQUIREMENTS ONLY.
- THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "WORK" SHALL MEAN ALL LABOR, MATERIAL, EQUIPMENT, SCAFFOLDING, RIGGING, TOOLS, SUPERVISION, SERVICES, SETUP, PROGRAMMING, AND OTHER INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE ALL WORK REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION OF THE ELECTRICAL SYSTEMS AS INDICATED OR IMPLIED BY THE DESIGN DOCUMENTS.
- THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS (DRAWINGS, SPECIFICATIONS, EQUIPMENT CUT SHEETS, ETC.) FOR ALL TRADES AND PROVIDE ALL ELECTRICAL WORK REQUIRED FOR COMPLETE AND OPERABLE INSTALLATION.
- THE CONTRACTOR SHALL COORDINATE ALL WORK, ELECTRICAL REQUIREMENTS, AND THE ACTUAL LOCATIONS OF ALL EQUIPMENT, CASEWORK, DEVICES, FIXTURES, SWITCHES, SENSORS, ETC., WITH ALL CONTRACTORS PRIOR TO PROVIDING PRICING AND PERFORMING ANY ROUGH-IN WORK.
- THE CONTRACTOR IS HEREBY CAUTIONED THAT THE ELECTRICAL POWER CHARACTERISTICS (VOLTAGE, PHASE, HORSEPOWER, AMPERAGE, ETC.) OF EQUIPMENT ARE BASED ON INFORMATION AVAILABLE AT THE TIME OF PROJECT DESIGN. CONTRACTOR SHALL VERIFY ACTUAL CHARACTERISTICS FOR EACH PIECE OF EQUIPMENT TO BE INSTALLED PRIOR TO ORDERING EQUIPMENT OR PERFORMING ANY ROUGH-IN WORK.
- DEVICES INDICATED TO BE INSTALLED IN THE SAME LOCATIONS WITH DIFFERENT ELEVATIONS SHALL BE ALIGNED VERTICALLY AND HORIZONTALLY. FOR ALL MOUNTING HEIGHTS AND LOCATIONS SWITCHES, OUTLETS, FIRE ALARM AUDIBLE AND VISUAL DEVICES, FIRE ALARM PULL STATIONS, SECURITY DEVICES, CARD READERS, SENSORS, ETC., REFER TO THE ARCHITECTURAL DRAWINGS.
- ADJUSTMENTS TO WIRING DEVICES TO AVOID STRUCTURAL OR OTHER INTERFERENCES AS WELL AS WORK INDICATED WITH MINOR DETAILS OMITTED SHALL BE PROVIDED WITHOUT EXTRA COST.
- ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND/OR OWNERS REPRESENTATIVE PRIOR TO CONSTRUCTION.
- REMOVE ALL TRASH, DEBRIS, AND DEMOLITION MATERIAL FROM THE PREMISES AT THE END OF EACH WORK DAY. JOB SITE SHALL BE KEPT IN "800M CLEAN" CONDITION.
- ELECTRICAL PANELS AND DISCONNECTS SHALL BE LABELED WITH ENGRAVED PLASTIC TAGS MOUNTED ON THE OUTSIDE OF THE EQUIPMENT AND BEARING THE VOLTAGE AND DESIGNATION OF THE EQUIPMENT.
- PROVIDE ALL PANELBOARD SCHEDULES IN AN EDITABLE ELECTRONIC FORMAT (MS WORD OR EXCEL). LABELS SHALL BE SPECIFIC TO THE AREA. USE BUILDING COLUMNS, ROOM NAMES, ETC. FOR A MORE ACCURATE LOCATION.
- IN THE EVENT THAT LOCAL EQUIPMENT DISCONNECTS CANNOT BE LOCATED SUCH THAT WORKING CLEARANCES ARE MAINTAINED, THE NEXT UPSTREAM OVERCURRENT DEVICE SHALL BE INDIVIDUALLY CAPABLE OF BEING LOCKED IN THE OPEN POSITION IN ACCORDANCE WITH NEC 440.14 AND 430.102.
- ALL FIRE/SMOKE RATINGS SHALL BE MAINTAINED. APPLY FIRESTOPPING AND SEALANT AS REQUIRED.
- FLASH ALL ROOF PENETRATIONS IN ACCORDANCE WITH THE ROOFING SYSTEM MANUFACTURER AND THE CONTRACT DOCUMENTS.
- PROVIDE ALL WORK REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION OF THE FIRE ALARM, SECURITY, AND ANY OTHER SPECIAL SYSTEMS. COORDINATE EXACT REQUIREMENTS WITH OWNERS VENDORS.
- WHERE NO CIRCUIT IS DESIGNATED FOR A DEVICE (INCLUDING EQUIPMENT NOT SHOWN ON DRAWINGS), THE E.C. SHALL CIRCUIT TO THE NEAREST AVAILABLE PANEL WITH CONDUCTOR, RACEWAY, AND BREAKER SIZED PER THE LATEST ADOPTED REVISION OF THE NEC.
- ALL WIRE AND CONDUIT SHALL BE CONCEALED IN WALLS, CEILING PLENUMS, BULKHEADS AND IN ROOF STRUCTURAL AREAS, U.O.N. THE E.C. SHALL COORDINATE FULLY WITH ALL OTHER TRADES TO INSTALL ALL CONDUIT AND WIRING IN THESE ASSOCIATED STRUCTURES. ANY OTHER MEANS OF PATHWAY SUGGESTED MUST FIRST BE APPROVED FROM THE ELECTRICAL ENGINEER BEFORE INSTALLATION CAN PROCEED.
- NOTHING IN THESE DRAWINGS AND SPECIFICATIONS SHALL BE CONSTRUCTED TO CONSTRUCT WORK NOT CONFORMING TO GOVERNING CODES. THIS SHALL NOT BE CONSTRUED AS TO RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY REQUIREMENTS OF THE PLANS OR SPECIFICATIONS WHICH MAY BE IN EXCESS OF REQUIREMENTS HEREIN BEFORE MENTIONED GOVERNING CODES AND RULES AND NOT CONTRARY TO THE SAME.
- THE ELECTRICAL DESIGN IS BASED UPON TYPICAL COMMERCIAL MANUFACTURED ITEM(S) AND/OR COMPONENT(S). THE CONTRACTOR SHALL COORDINATE THE FINAL EQUIPMENT INSTALLATION WITH ACTUAL EQUIPMENT FURNISHED.
- PRIOR TO SUBMITTING PRICING, THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PERTAINING TO THIS WORK. THE CONTRACTOR SHALL INVESTIGATE ALL RELOCATIONS AND NEW WORK AND MAKE ALLOWANCES IN HIS BID FOR ALL CHANGES TO THE ELECTRICAL SYSTEM WHICH ARE NECESSARY. FAILURE TO COMPLY WITH THIS SHALL NOT CONSTITUTE A REASON FOR PAYMENT OF EXTRA MONIES DURING THE CONSTRUCTION PHASE.
- MAKE ALL NECESSARY ARRANGEMENTS WITH THE OWNER FOR THE INSTALLATION OF TEMPORARY LIGHTING AND POWER SERVICES TAILORED FOR THIS PROJECT. SET TEMPORARY METERS IN ACCORDANCE WITH THE UTILITY PROVIDER'S REQUIREMENTS. INSTALL AND MAINTAIN ALL TEMPORARY LIGHT AND POWER WIRING, INCLUDING, BUT NOT LIMITED TO CONDUITS, WIRE SWITCHES, FUSE BOXES, RECEPTACLES, DISTRIBUTION PANELBOARDS, FUSED DISCONNECT SWITCHES, GROUND FAULT INTERRUPTER EQUIPMENT, FIXTURES, LAMPS, FUSES AND ANY OTHER MATERIAL, AND/OR EQUIPMENT REQUIRED TO PROVIDE SUFFICIENT ILLUMINATION AND POWER, AS REQUIRED BY THE STATE LABOR BOARD, O.S.H.A., OR ALL OTHER AUTHORITIES HAVING JURISDICTION FOR ALL AREAS OF THE SITE WHERE WORK WILL BE PERFORMED BY ANY CONTRACTOR. PROVIDE TEMPORARY POWER CIRCUITS, OUTLETS, ETC. IN ACCORDANCE WITH THE POWER REQUIREMENTS OF THE VARIOUS VOLTAGE/AMPERAGE/HORSEPOWER RATINGS OF THE EQUIPMENT AND TOOLS TO BE USED BY THE CONTRACTORS IN CONSTRUCTION WORK. ONCE THE PERMANENT LIGHTING AND POWER SYSTEMS ARE INSTALLED AND OPERATIONAL, MAKE THE CUT-OVER. REMOVE ALL TEMPORARY ELECTRICAL DISTRIBUTION COMPONENTS AND SYSTEM AFTER CUT-OVER.

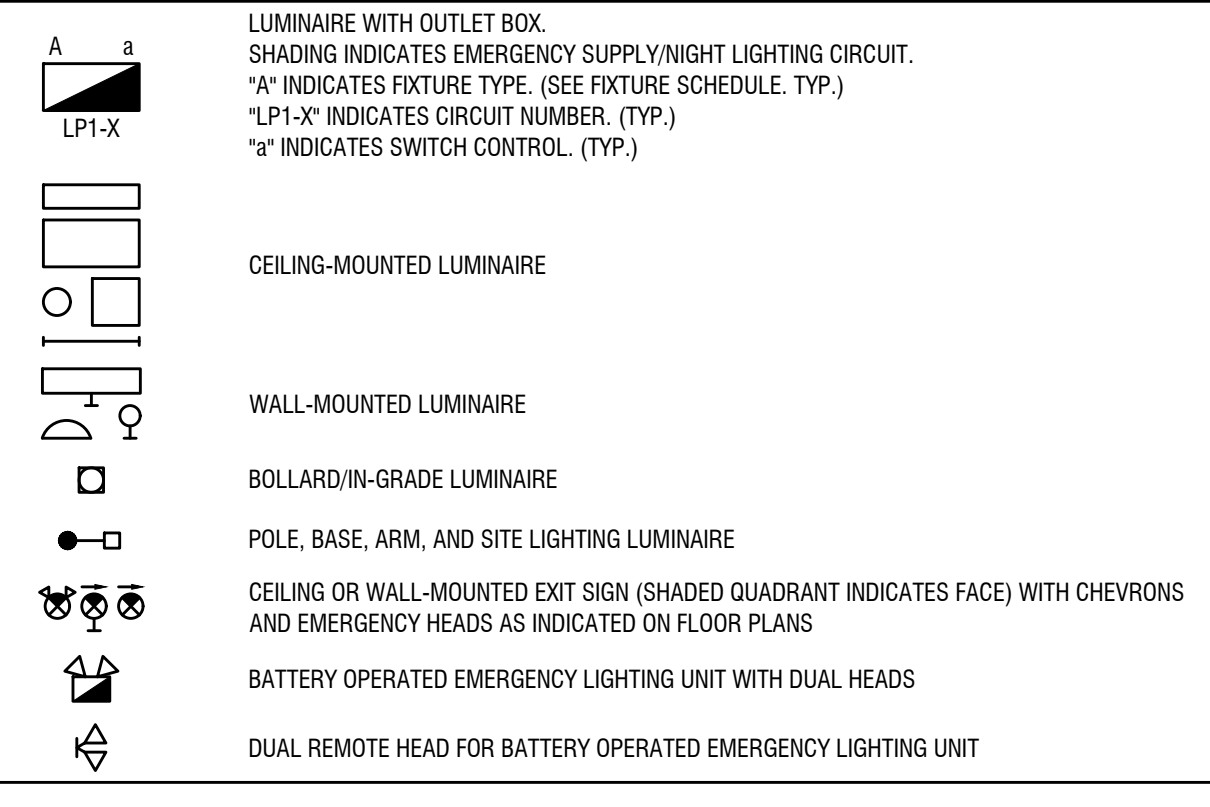
COORDINATION NOTE

THE HVAC, PLUMBING, AND ELECTRICAL CONTRACTORS SHALL BE AWARE THAT THE CEILING HEIGHTS, SOFFITS AND SPACE CONDITIONS ON THIS PROJECT ARE CRITICAL AND SPACE ALLOCATION MUST BE COORDINATED BETWEEN ALL TRADES AND MAINTAINED. EACH CONTRACTOR OR TRADE SHALL REFER TO THE STRUCTURAL AND ARCHITECTURAL DRAWINGS IN ADDITION TO THE HVAC, PLUMBING, AND ELECTRICAL DRAWINGS TO DETERMINE ACCEPTABLE LAYERING OF ALL EQUIPMENT.

GRAPHIC CONVENTIONS

- EQUIPMENT TAG, TOP INDICATES EQUIPMENT DESIGNATION, BOTTOM INDICATES EQUIPMENT NUMBER, SEE MFP DRAWINGS FOR FURTHER INFORMATION
- PLAN CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
- ELEVATION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
- SECTION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
- REVISION AREA
- REVISION TAG
- CONSTRUCTION KEYED NOTE TAG
- DEMOLITION KEYED NOTE TAG
- POINT OF CONNECTION BETWEEN NEW AND EXISTING
- LIMIT OF DEMOLITION BETWEEN EXISTING TO REMAIN AND TO BE REMOVED

LIGHTING



SWITCHES

- WALL OUTLET BOX AND SINGLE POLE SWITCH (20 AMP)
  - WALL OUTLET BOX AND THREE-WAY SWITCH (20 AMP)
  - WALL OUTLET BOX AND FOUR-WAY SWITCH (20 AMP)
  - WALL OUTLET BOX AND SINGLE-POLE SWITCH (20 AMP, NON-LOCK, WITH WEATHERPROOF COVER)
  - WALL OUTLET BOX SINGLE POLE KEY SWITCH (20 AMP)
  - WALL OUTLET BOX AND THREE-WAY KEY SWITCH (20 AMP)
  - WALL OUTLET BOX AND FOUR-WAY KEY SWITCH (20 AMP)
  - WALL OUTLET BOX AND DIMMER SWITCH
  - LOW VOLTAGE LIGHTING SWITCH
  - TIME SWITCH
  - WALL-MOUNTED OCCUPANCY SENSOR
  - CEILING-MOUNTED OCCUPANCY SENSOR
  - ROOM CONTROLLER
- SWITCHING NOTES:
- MOUNT SWITCHES AT 42" U.O.N.
  - SWITCHES SHALL BE RATED FOR LOAD CONTROLLED.
  - DIMMERS SHALL BE COMPATIBLE FOR LIGHTING FIXTURE LAMP SOURCE AND BALLAST/DRIVER BEING CONTROLLED.
  - WHERE MULTIPLE SWITCHES ARE SHOWN, PROVIDE GANG SWITCH IN SINGLE ENCLOSURE WITH SINGLE FACEPLATE.
  - LOWERCASE LETTER DENOTES SWITCH CONTROL.

WIRING DEVICES

- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE
- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER BACKSPASH, MAX. 44" TO TOP OF RECEPTACLE
- WALL OUTLET BOX AND 20 AMP DUPLEX RECEPTACLE, TOP HALF SWITCHED
- TWO GANG WALL OUTLET BOX AND TWO 20 AMP DUPLEX RECEPTACLES
- TWO GANG WALL OUTLET BOX AND TWO 20 AMP DUPLEX RECEPTACLES, MOUNTED ABOVE COUNTER BACKSPASH, MAX. 44" TO TOP OF RECEPTACLE
- WALL OUTLET BOX AND 20 AMP SINGLE RECEPTACLE
- WALL OUTLET BOX AND SPECIAL PURPOSE RECEPTACLE
- FLUSH FLOOR BOX AND 20 AMP DUPLEX RATED PENETRATION, COVER, AND 20 AMP RECEPTACLE(S)/DATA OUTLET(S) CONFIGURATION AS INDICATED, PROVIDE MINIMUM 3/4" CONDUIT UP TO NEAREST WALL AND UP TO ACCESSIBLE FINISHED CEILING U.O.N.
- CEILING OUTLET BOX AND 20 AMP RECEPTACLE CONFIGURATION AS INDICATED
- FLUSH MOUNTED WALL OUTLET BOX, FOR HARDWARE FEED TO PARTITION, "P" INDICATES POWER FEED, "T" INDICATED TELE/DATA. PROVIDE MINIMUM 3/4" CONDUIT UP TO ACCESSIBLE FINISHED CEILING U.O.N.
- POWER POLE WITH DIVIDER, COMPATIBLE WITH PARTITION MANUFACTURER REQUIREMENTS
- PLUG/MOLD WITH DIVIDER. PROVIDE RECEPTACLES AND TELE/DATA OUTLETS AS INDICATED.
- FLUSH WALL JUNCTION BOX OR JUNCTION BOX ABOVE CEILING.

- WIRING DEVICES NOTATIONS
- DIMENSIONED HEIGHT A.F.F.
  - LOWERCASE LETTER DENOTES SWITCH CONTROL
  - ELECTRIC WATER COOLER (COORDINATE WITH EMC INSTALLER FOR MOUNTING)
  - GROUND FAULT CIRCUIT INTERRUPTER PERSONAL PROTECTION
  - GROUND FAULT PROTECTION OF EQUIPMENT
  - ISOLATED GROUND (RECEPTACLES INCLUDE SEPARATE GREEN GROUND CONDUCTOR TO ISOLATED GROUND BUS IN PANEL)
  - WALL-MOUNTED DEVICE AT 48" AFF U.O.N.
  - WEATHERPROOF

TELECOMMUNICATIONS

- TELEPHONE WALL OUTLET BOX AND BLANK PLATE WITH MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) MOUNTED AT 18" A.F.F. U.O.N.
- DATA WALL OUTLET BOX AND BLANK PLATE WITH MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) MOUNTED AT 18" A.F.F. U.O.N.
- COMBINATION TELE/DATA WALL OUTLET BOX AND BLANK PLATE WITH MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) MOUNTED AT 18" A.F.F. U.O.N.
- TELEPHONE WALL OUTLET BOX AND BLANK PLATE WITH MINIMUM 1" CONDUIT TO ABOVE ACCESSIBLE FINISHED CEILING (PROVIDE PULL CORD AND END BUSHING) MOUNTED AT 48" A.F.F. U.O.N.
- FLUSH FLOOR BOX FOR ONE TELEPHONE JACK WITH COVER. PROVIDE MINIMUM 1" CONDUIT TO NEAREST WALL AND UP TO ABOVE ACCESSIBLE CEILING (PROVIDE PULL CORD AND END BUSHING) U.O.N.
- FLUSH FLOOR BOX FOR ONE DATA JACK WITH COVER. PROVIDE MINIMUM 1" CONDUIT TO NEAREST WALL AND UP TO ABOVE ACCESSIBLE CEILING (PROVIDE PULL CORD AND END BUSHING) U.O.N.
- FLUSH-MOUNTED TELEVISION CABLE LOCATION WITH NETSELECT PTV (OR APPROVED EQUAL) RECESSED FLAT PANEL MOUNTING ENCLOSURE EQUIPPED WITH RECEPTACLE, DATA OUTLET, AND CABLE TV COAX CONNECTION (COORDINATE LOCATION AND MOUNTING HEIGHT WITH ARCHITECT.)

EQUIPMENT

- 208/120V PANELBOARD
- 480/277V BRANCH CIRCUIT PANELBOARD
- UNFUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- COMBINATION DISCONNECT SWITCH AND MAGNETIC MOTOR CONTROLLER
- MAGNETIC MOTOR STARTER OR CONTACTOR
- MOTOR CONNECTION
- MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOADS
- TRANSFORMER
- MOTORIZED DAMPER LOCATION (FURNISHED UNDER DIVISION 23)
- TIME CLOCK
- EMERGENCY POWER OFF SWITCH
- ENCAPSULATED RELAY/SHUTDOWN RELAY
- SURGE PROTECTION DEVICE
- VARIABLE FREQUENCY DRIVE

ONE-LINE

- CIRCUIT BREAKER
- FUSE
- DISCONNECT SWITCH
- FUSED SWITCH
- TRANSFORMER
- POTENTIAL TRANSFORMER
- CURRENT TRANSFORMER
- METER
- SYSTEM OR EQUIPMENT GROUND
- LIGHTNING ARRESTOR AND GROUNDING
- DRAWOUT TYPE CIRCUIT BREAKER
- DRAWOUT TYPE CIRCUIT BREAKER SPACE
- KIRK KEY INTERLOCK SYSTEM
- GROUP OPERATED AIR BREAK SWITCH
- 15KV SWITCH
- 15KV SWITCH, OPEN POSITION
- 15KV FUSED SWITCH
- MEDIUM VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
- STRESS RELIEF TERMINATION
- 5/15KV SEPARABLE CONNECTOR TERMINATION
- 5/15KV SPLICE
- MOTOR STARTER
- RELAY CONTACT (NORMALLY OPEN)
- RELAY CONTACT (NORMALLY CLOSED)
- RELAY COIL
- TIME OVERCURRENT RELAY (PHASE)
- GENERATOR
- TERMINAL
- UTILITY POLE
- AUTOMATIC TRANSFER SWITCH

RACEWAYS

- HOMERUN TO PANEL
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT WITH CAP
- CONDUIT WITH GAP
- LADDER TYPE CABLE TRAY (NUMBER INDICATES WIDTH)
- OVERHEAD CONDUCTORS
- UNDERGROUND DUCTBANK SYSTEM
- DUCTBANK SYSTEM SECTION CALLOUT, "X-X" INDICATES CORRESPONDING SECTION

SYMBOLS LEGEND NOTE

NOT ALL SYMBOLS AND ABBREVIATIONS INDICATED ARE APPLICABLE TO THIS PROJECT. INDIVIDUAL DRAWINGS MAY DEFINE UNIQUE SYMBOLS FOR CONVENIENCE.

FIRE ALARM

- WALL-MOUNTED FLUSH MANUAL PULL STATION
- WALL-MOUNTED AUDIO AND VISUAL ALARM WITH CANDELA RATING AS NOTED
- WALL-MOUNTED VISUAL ALARM WITH CANDELA RATING AS NOTED
- CEILING-MOUNTED AUDIO AND VISUAL ALARM WITH CANDELA RATING AS NOTED
- CEILING-MOUNTED VISUAL ALARM WITH CANDELA RATING AS NOTED
- WALL-MOUNTED EMERGENCY VOICE/ALARM NOTIFICATION SPEAKER WITH VISUAL NOTIFICATION, CANDELA RATING AS NOTED
- WALL-MOUNTED EMERGENCY VOICE/ALARM NOTIFICATION SPEAKER
- CEILING-MOUNTED EMERGENCY VOICE/ALARM NOTIFICATION SPEAKER, "V" DENOTES THAT THE DEVICE SHALL INCLUDE VISUAL NOTIFICATION; CANDELA RATING AS INDICATED
- CEILING-MOUNTED SMOKE DETECTOR, "CO" DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- CEILING-MOUNTED HEAT DETECTOR, "CO" DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- DUCT-MOUNTED SMOKE DETECTOR, "CO" DENOTES COMBINATION CARBON MONOXIDE/SMOKE DETECTOR
- WALL OR CEILING-MOUNTED STAND ALONE HAZARDOUS GAS DETECTOR WITH SUPERVISORY CONNECTION, "NO" DENOTES CARBON MONOXIDE DETECTOR, "MS" DENOTES NATURAL GAS
- SPRINKLER SYSTEM FLOW SWITCH CONNECTION
- SPRINKLER SYSTEM PRESSURE SWITCH CONNECTION
- SPRINKLER SYSTEM TAMPER SWITCH CONNECTION
- FIRE ALARM SYSTEM REMOTE INDICATOR
- FIRE ADDRESSABLE INTERFACE MODULE
- 24V MAGNETIC DOOR HOLD OPEN DEVICE (ELECTRO-MAGNETIC RELEASE) WITH CONTROLLING SMOKE DETECTORS WITHIN 3'
- REMOTE TEST STATION WITH LED INDICATOR AND KEY SWITCH
- RESCUE ASSISTANCE STATION WITH LIT SIGNAGE
- RESCUE ASSISTANCE PANEL MASTER STATION
- FIREMAN COMMAND CENTER
- FIREMAN'S PHONE JACK (MOUNTED 54" AFF)
- FIRE ALARM SYSTEM CONTROL MODULE
- FIRE ALARM SYSTEM MONITOR MODULE
- FIRE ALARM SYSTEM CONTROL PANEL
- FIRE ALARM SYSTEM ANNUNCIATOR PANEL

NY 811 DETAIL



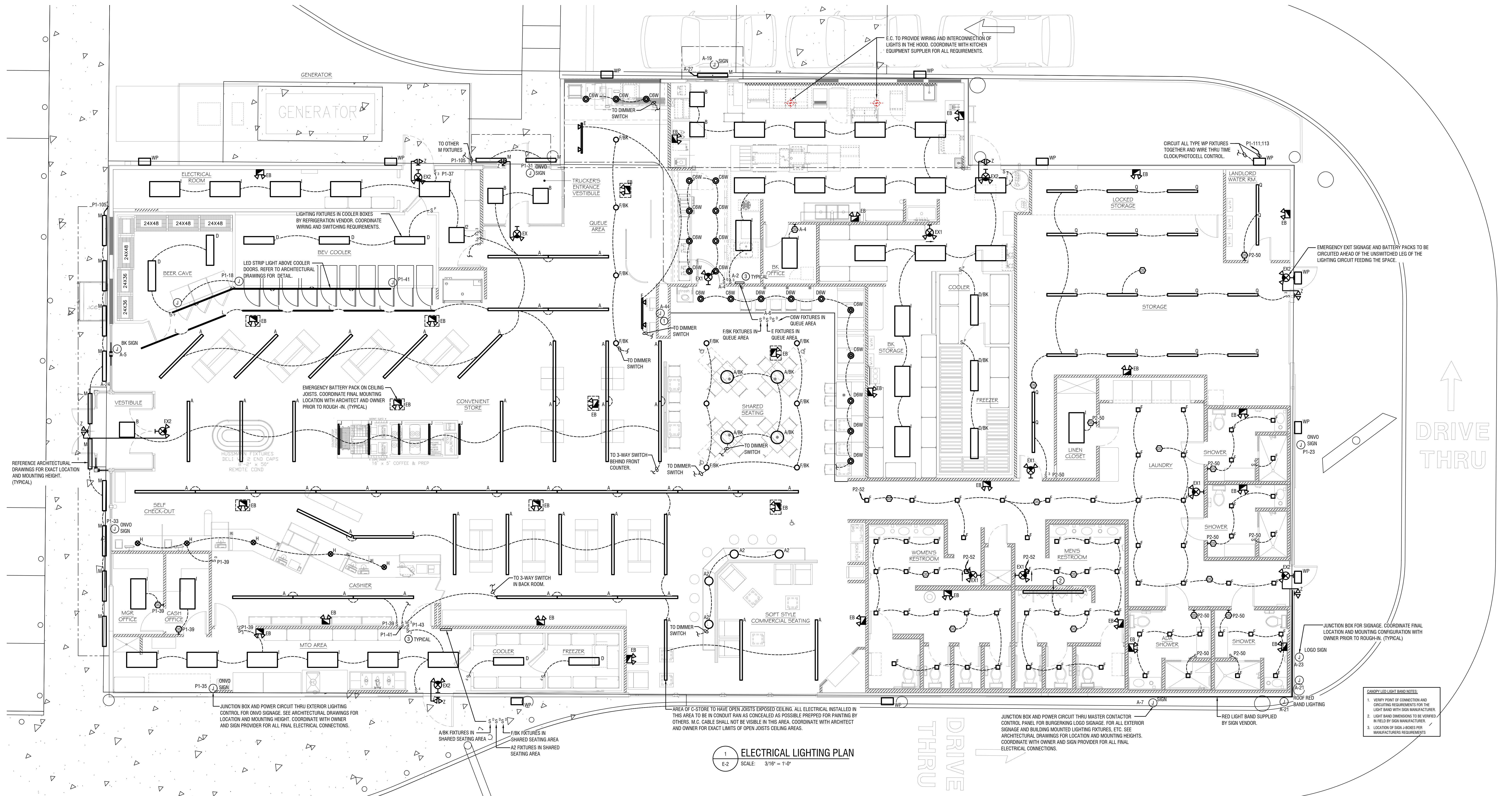
- PLACING A LOCATION REQUEST
- WHETHER YOU CALL OR USE OUR ONLINE LOCATION REQUEST PROGRAMS, DIG SAFELY NEW YORK NEEDS THE FOLLOWING INFORMATION TO CREATE A LOCATION REQUEST.
- EXCAVATOR COMPANY NAME AND TELEPHONE NUMBER
  - CONTACTS NAME
  - CLIENT NAME
  - CONTACT NAME, TELEPHONE NUMBER, AND E-MAIL ADDRESS FOR QUESTIONS AND LOCATION RESULTS
  - COUNTY AND PLACE OF EXCAVATION ACCORDING TO LEGALLY INCORPORATED MUNICIPAL BOUNDARIES (NOTE: THIS IS NOT THE CITY OF LOCATION POSTAL ADDRESS)
  - STREET ADDRESS OF EXCAVATION LOCATION
  - NAME OF NEAREST INTERSECTING STREET ON EITHER SIDE OF EXCAVATION LOCATION
  - DATE AND THE EXCAVATION IS SCHEDULED TO BEGIN
  - EXPECTED DURATION OF EXCAVATION
  - DESCRIPTION OF WHERE ON PROPERTY EXCAVATION WILL TAKE PLACE, INCLUDING DISTANCE FROM ROAD
  - TYPE OF WORK TO BE PERFORMED (E.G. BLASTING, GRILLING, DIRECTIONAL BORING)
  - TYPE OF EQUIPMENT TO BE USED TO PERFORM WORK
  - APPROXIMATE SIZE OF EXCAVATION AREA (LENGTH, WIDTH, DEPTH)
  - ANY SPECIAL INSTRUCTIONS

- ONCE THE INFORMATION IS GATHERED, YOU WILL BE PROVIDED WITH:
- SERIALIZED REFERENCE NUMBER THAT YOU AND MEMBER UTILITIES CAN USE TO REFER TO THIS REQUEST
  - A LIST OF MEMBER UTILITIES THAT WILL RECEIVE THE STAKE-OUT REQUEST
  - KEEP THIS INFORMATION FOR YOUR RECORDS, SO YOU CAN CONFIRM YOUR REQUEST AND THAT YOU HAVE RECEIVED A RESPONSE FROM ALL NOTIFIED MEMBER UTILITIES PRIOR TO STARTING YOUR WORK. YOU WILL IMMEDIATELY RECEIVE AN E-MAIL CONTAINING ALL THE REQUEST INFORMATION, BUT THE CONVERSATION BETWEEN YOU AND THE DIG SAFELY NEW YORK CSR IS RECORDED AND ARCHIVED FOR YOUR PROTECTION, SHOULD ANY QUESTIONS ARISE.

- SURVEY AND DESIGN REQUESTS
- IF AN EXCAVATION WILL REQUIRE CROSSING OR PLACING A FACILITY, SURVEY AND DESIGN REQUESTS ARE NEEDED. THE FACILITY OWNER MAY HAVE PLANS TO ADD OR CHANGE BURIED FACILITIES, OR MAY HAVE REQUIREMENTS REGARDING THE FOLLOWING:
- LOCATION OF CABLE OR PIPES
  - DEPT/ORG FACILITIES
  - PLACING FACILITIES NEAR ANOTHER FACILITY
  - DIG SAFELY NEW YORK CURRENTLY ALLOWS EXCAVATORS TO SUBMIT SURVEY AND DESIGN REQUESTS VIA I-NOTICE OR BY CALLING THE OPERATIONS CENTER AT 1-800-962-7962.

- CALLERS MUST STILL CONTACT THE AFFECTED COMPANIES DIRECTLY; HOWEVER, DIG SAFELY NEW YORK WILL IDENTIFY THOSE AFFECTED COMPANIES AND INFORM THEM OF THE DESIGN REQUEST, AND PROVIDE THE CALLER WITH A CONTACT NUMBER FOR THOSE AFFECTED COMPANIES. THESE CONTACTS ARE OFTEN ENGINEERING DEPARTMENTS THAT MAY BE ABLE TO SUPPLY "AS-BUILT" MAPS AND CHARTS, WHICH ARE MORE ACCURATE.
- OTHER INFORMATION
- DIG SAFELY NEW YORK TREATS TOWNS, VILLAGES, CITIES, AND HAMLETS AS IF THEY ARE COMPLETELY SEPARATE.
  - THE PERSON PLACING THE LOCATION REQUEST IS CONSIDERED THE FINAL AUTHORITY REGARDING ANY INFORMATION GIVEN. OUR CSRS DO NOT CHECK CORRECT PLACE NAMES, STREET NAMES, ETC. IF THIS SUBSER SOMETHING IS INACCURATE, IT WILL BE COMMUNICATED TO THE PERSON PLACING THE LOCATION REQUEST, BUT IT IS NOT THEIR JOB TO KNOW.
  - WHEN A LOCATION REQUEST IS PLACED 2 FULL WORKING DAYS IN ADVANCE OF EXCAVATION, IT DOES NOT INCLUDE THE DAY THE REQUEST IS MADE.
  - A LOCATION REQUEST SHOULD NOT BE PLACED MORE THAN 10 WORKING DAYS BEFORE THE PROPOSED START DATE.
  - DIG SAFELY NEW YORK CAN ONLY CONTACT THE UTILITIES THAT BELONG TO IT AS MEMBER.
  - WE DO NOT HAVE THE ABILITY TO SHUT OFF GAS, ELECTRIC, OR WATER SERVICES AT A SITE. CONTACT UTILITIES DIRECTLY TO HAVE SUCH SERVICES TERMINATED.
  - WHEN WORKING ON PRIVATE PROPERTY, BE AWARE THAT SOME BURIED FACILITIES MAY BE OWNED BY THE PROPERTY OWNER AND MAY BE UNMARKED. WHEN SURVEY AND DESIGN REQUESTS ARE NEEDED, THE LOCATION OF THE CABLE OR PIPES MAY ONLY BE PART OF THE STORY IF CROSSING OR PLACING A FACILITY. THE FACILITY OWNER MAY HAVE REQUIREMENTS ON EXPOSING, PLACING OTHER FACILITIES NEAR, ETC. OR MAY BE PLANNING TO ADD OR CHANGE THEIR BURIED FACILITIES IN THE FUTURE. PLANNING A JOB WITHOUT ALL OF THIS INFORMATION MAY CAUSE INSUFFICIENT PLACING REQUIREMENTS, AND CAUSE DELAYS AND INCREASED EXPENSE AT THE TIME OF THE JOB.





1 ELECTRICAL LIGHTING PLAN  
SCALE: 3/16" = 1'-0"

- KEYED CONSTRUCTION NOTES**
1. JUNCTION BOX AND WIRING FOR BK HAVE IT YOUR WAY SIGNAGE. COORDINATE WIRING AND SPECIFICATIONS WITH BK REPRESENTATIVE AND OWNER PRIOR TO ROUGH-IN.
  2. SURFACE MOUNTED CENTER OF URINALS. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
  3. CONFIRM ALL SWITCHING LOCATIONS WITH BK AND ONVO REPRESENTATIVES PRIOR TO ROUGH-IN.

**BUILDING LIGHTING FIXTURE SCHEDULE**

TYPE	CATALOG No.	DESCRIPTION	LAMP	VOLTS	REMARKS	TYPE	CATALOG No.	DESCRIPTION	LAMP	VOLTS	REMARKS
A	FLUXREY LIGHTING OR EQUAL P188040X-XX-SF2M	8' LINEAR FIXTURE	49W LED	UNV	SEE DRAWING FOR LENGTH OF FIXTURES CONTINUOUS ROWS.	A/BK	NAUTICAL LIGHTING CAT. No. BK304 & SP095-18-600-927-03	LED PENDANT MOUNTED FIXTURE	10W LED		
B	CREE LIGHTING OR EQUAL C-TR-C-PP24-S58L-SCCT-UL-WH	2'x2' FLAT PANEL LED FIXTURE	30W LED	UNV	PROVIDE WITH SURFACE MOUNT KIT IN AREAS WITH GYPSUM CEILINGS.	A2	NAUTICAL LIGHTING CAT. No. BK-11-11	LED PENDANT MOUNTED FIXTURE	14W LED	UNV	
D	PROVIDED BY COOLER MANUFACTURER	LED STRIP LIGHT		UNV	COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.	CBW	LSI CAT. No. LCD613LED0948UETRRRLH2WH	6" RECESSED DOWNLIGHT	14W LED	UNV	COORDINATE EXACT LOCATION, MOUNTING HEIGHT, AND FINISH WITH OWNER PRIOR TO ORDERING
EB	DUAL LITE OR EQUAL EV2	EMERGENCY BATTERY PACK WITH HEADS	(2) 1W LED	UNV		D6W	LSI CAT. No. PDL6KADULE09L1200HSGNC	6" RECESSED DOWNLIGHT & WALL WASHER	12W LED	UNV	
EX	DUAL LITE OR EQUAL EVCURV-0	EMERGENCY EXIT SIGN	2W LED	UNV		E	JUNO CAT. No. R600L3K1B2	TRACK LIGHT	10W LED	UNV	
EX1	DUAL LITE OR EQUAL EVCURW	EMERGENCY EXIT SIGN WITH HEADS	(2) 1W LED	UNV		F/BK	ENERGYWISE EVLBC88LK	LED PENDANT MOUNTED FIXTURE	10W LED	UNV	
EX2	DUAL LITE OR EQUAL EVCURWD4	EMERGENCY EXIT SIGN WITH HEADS AND REMOTE CAPACITY	(2) 1W LED	UNV		D/BK	CREE CAT. No. WS4C-60L-LFA-50K-8-UL	VAPORTIGHT COOLER/FREEZER LIGHT	55W LED	UNV	
F	LSI CAT. No. LAD45Q-LED-22L-UNV-DIM1-40-FL	4" LED RECESSED SQUARE DOWN LIGHT	21W LED	UNV	COORDINATE EXACT LOCATION, MOUNTING HEIGHT, AND FINISH WITH OWNER PRIOR TO ORDERING	WP	LSI CAT. No. XPWS3-WT-LED-48-450-NW-UE-X	EXTERIOR WALL PACK	72W LED	UNV	
H	MODLEY CAT. No. 46483/1	LED MINI PENDANT FIXTURE	12W LED	UNV	COORDINATE EXACT LOCATION, MOUNTING HEIGHT, AND FINISH WITH OWNER PRIOR TO ORDERING						
I	CREE LIGHTING OR EQUAL C-TR-C-PP24-S58L-SCCT-UL-WH	2'x4' FLAT PANEL LED FIXTURE	40W LED	UNV	PROVIDE WITH SURFACE MOUNT KIT IN AREAS WITH GYPSUM CEILINGS.						
J	NEO-RAY CAT. No. S1220P-C675D840-C4XX4F0-1-U-XX	4' LED LINEAR PENDANT FIXTURE	6.7W/FT LED	UNV	COORDINATE EXACT LOCATION, MOUNTING HEIGHT, AND FINISH WITH OWNER PRIOR TO ORDERING						
M	LSI CAT. No. LXW2-48-LED-NW-24-8XS	LED LINEAR HIGH OUTPUT WALL WASHER	7W/FT LED	UNV	COORDINATE EXACT LOCATION, MOUNTING HEIGHT, AND FINISH WITH OWNER PRIOR TO ORDERING						
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1. COORDINATE FINAL FIXTURE SELECTIONS, COLOR TEMPERATURE, AND FINISHES WITH ARCHITECT, OWNER, AND TENANT. OBTAIN ARCHITECT'S APPROVAL PRIOR TO SUBMITTING TO ENGINEER.</li> <li>2. PROVIDE ALL REQUIRED PROVISIONS FOR DIMMING AND MULTI-LEVEL SWITCHING.</li> <li>3. PROVIDE ALL REQUIRED POWER PACKS AND MOUNTING DEVICES FOR OCCUPANCY SENSORS. INCLUDE ALL MOUNTING, DRIVERS, FILTERS, AND OTHER SUPPORTING PARTS FOR A COMPLETE AND WORKING SYSTEM.</li> <li>4. TO PREVENT FALSE ACTIVATION, MOUNT ULTRASONIC CEILING-MOUNT SENSORS AT LEAST SIX FEET AWAY FROM DIFFUSERS.</li> </ol>											
						<p><b>OCCUPANCY SENSOR BASIS OF DESIGN NOTE:</b> OCCUPANCY SENSOR MODEL NUMBERS AND LAYOUTS ARE SHOWN TO INDICATE COVERAGES. WIRE ALL OCCUPANCY SENSORS PER MANUFACTURER'S WRITTEN INSTRUCTIONS. SEE THE MANUFACTURER'S WIRING DIAGRAM FOR DETAILS. LINE VOLTAGE DEVICES ARE INDICATED BELOW. WHERE LOAD DICTATES, PROVIDE SENSORS WITH EQUIVALENT COVERAGE PATTERNS BUT WHICH UTILIZE POWER PACKS IN LIEU OF LINE VOLTAGE DEVICES.</p>					

DATE: JULY 27 2022  
CHECKED BY: RW  
REVISION

OWNER: ONVO  
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2227 Scranton Carbondale Hwy  
Scranton, PA 18508

design management group  
consulting engineers  
570 299 7520 dmeng.com

ENG: WRA  
Miller Rosentel Associates, Inc.  
188 S. Union St. Wilkes Barre, PA 18701. 570-822-4141. www.mra-arc.com

PROJECT # 220046  
GARDEN EXT. / GARDEN INT.

ONVO TRAVEL PLAZA  
ONVO BURGER KING  
128 Riverside Dr. Fultonville, NY 12072

ELECTRICAL LIGHTING PLAN

E-2



**C-STORE COORDINATION NOTE:**

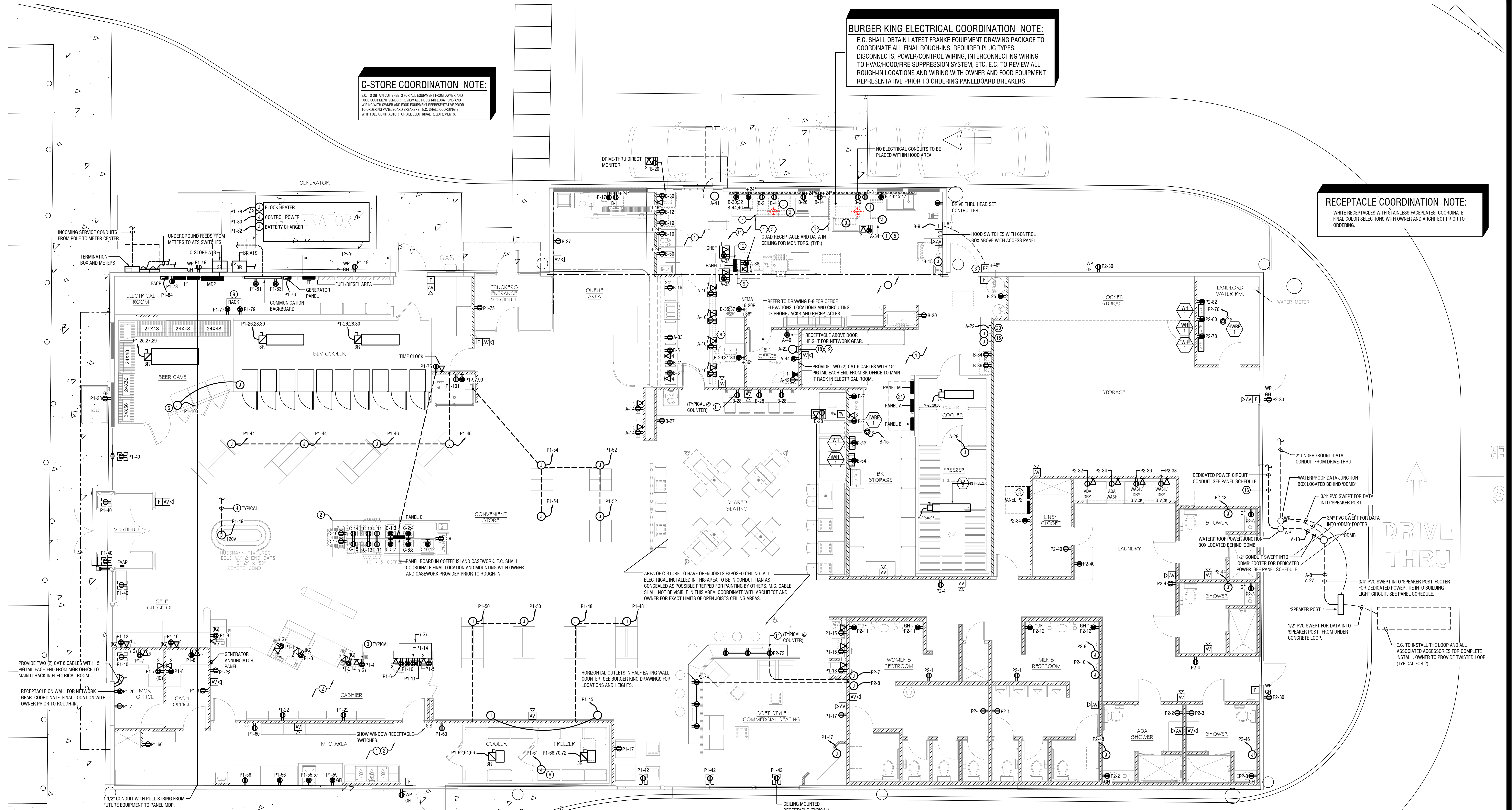
E.C. TO OBTAIN OUT SHEETS FOR ALL EQUIPMENT FROM OWNER AND FOOD EQUIPMENT VENDOR. REVIEW ALL ROUGH-IN LOCATIONS AND WIRING WITH OWNER AND FOOD EQUIPMENT REPRESENTATIVE PRIOR TO ORDERING PANELBOARD BREAKERS. E.C. SHALL COORDINATE WITH ELEC. CONTRACTOR FOR ALL ELECTRICAL REQUIREMENTS.

**BURGER KING ELECTRICAL COORDINATION NOTE:**

E.C. SHALL OBTAIN LATEST FRANKIE EQUIPMENT DRAWING PACKAGE TO COORDINATE ALL FINAL ROUGH-INS, REQUIRED PLUG TYPES, DISCONNECTS, POWER/CONTROL WIRING, INTERCONNECTING WIRING TO HVAC/HOOD/FIRE SUPPRESSION SYSTEM, ETC. E.C. TO REVIEW ALL ROUGH-IN LOCATIONS AND WIRING WITH OWNER AND FOOD EQUIPMENT REPRESENTATIVE PRIOR TO ORDERING PANELBOARD BREAKERS.

**RECEPTACLE COORDINATION NOTE:**

WHITE RECEPTACLES WITH STAINLESS FACEPLATES. COORDINATE FINAL COLOR SELECTIONS WITH OWNER AND ARCHITECT PRIOR TO ORDERING.



**ELECTRICAL POWER PLAN**  
SCALE: 3/16" = 1'-0"

**KEYED PLAN NOTES:**

- 1 FRYER HOOD: PRE-WIRED (WITH RECEPTACLES BY HOOD MANUFACTURER). ELECTRICAL CONTRACTOR TO MAKE CONNECTION AT JUNCTION BOX AT THE TOP OF THE HOOD.
- 2 BROTHER HOOD: PRE-WIRED (WITH DUPLEX RECEPTACLES) BY HOOD MANUFACTURER. ELECTRICAL CONTRACTOR TO MAKE CONNECTION AT JUNCTION BOX AT THE TOP OF THE HOOD. ELECTRICAL CONTRACTOR TO PROVIDE RECEPTACLE AND COVER PLATE FOR THE OVEN AND BROTILER BASED ON EQUIPMENT SELECTED.
- 3 ELECTRICAL CONTRACTOR TO RUN CONDUITS AND WIRE THROUGH THE EQUIPMENT CHASE AND CONNECT TO CIRCUITS PROVIDED IN THE JUNCTION BOX BY EQUIPMENT MANUFACTURER.
- 4 REAR DOOR ALARM: "MONITOR 4000" BY SECURITY PRODUCTS, INC. OR APPROVED EQUAL. MOUNT SIMPLEX RECEPTACLE FOR POWER SUPPLY 6" ABOVE CEILING.
- 5 PERMANENTLY CONNECTED KITCHEN EQUIPMENT NOT SUPPLIED WITH ON/OFF UNIT SWITCH (WHICH IS PART OF THE APPLIANCE) TO SERVE AS A DISCONNECTING MEANS. UNIT SHALL BE SUPPLIED WITH A DISCONNECT AS PER N.E.C., FURNISHED BY THE ELECTRICAL CONTRACTOR.
- 6 E.C. TO VERIFY ELECTRICAL REQUIREMENTS FOR FIRE SUPPRESSION SYSTEM AND AUTO-SELEND GAS SHUT-OFF VALVE.
- 7 RUN 2" CONDUIT TO MANAGERS OFFICE FOR CABLE TV. COORDINATE FINAL TV LOCATION WITH BK DECOR DRAWINGS.
- 8 HEAT TAPE IS PROVIDED BY THE WALK-IN BOX MANUFACTURER AND INSTALLED BY THE ELECTRICAL CONTRACTOR. CONTRACTOR SHALL COORDINATE INSTALLATION AND SUPPLY 120V CIRCUIT AND RECEPTACLE AS DIRECTED BY BOX MANUFACTURER.
- 9 DIGITAL MENU BOARDS (VERIFY 3 OR 4 BOARD INSTALLATION); PROVIDE (1) DUPLEX RECEPTACLE FOR 120V CIRCUIT AND (1) P-RING FOR DATA CABLE AT EACH MENU BOARD SCREEN. REFER TO DETAIL, SHEET E-4.
- 10 STAINLESS STEEL SERVICE CHASE TO CEILING FURNISHED BY THE EQUIPMENT MANUFACTURER.
- 11 CONTRACTOR SHALL OBTAIN WIRING DIAGRAM FROM THE WALK-IN BOX MANUFACTURER AND INSTALL AS DIRECTED.
- 12 CONTRACTOR SHALL COORDINATED EQUIPMENT INSTALLATION WITH THE EQUIPMENT MANUFACTURER'S INSTALLATION PERSONNEL.
- 13 PRE-WIRED BRANCH CIRCUITS DISCONNECTED FOR SHIPMENT TO BE RE-CONECTED BY GC PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.
- 14 ELECTRICAL CONTRACTOR TO PROVIDE CORD AND PLUG AND WIRE TO BROTILER BASED ON EQUIPMENT SELECTED.
- 15 CONTRACTOR SHALL COORDINATE CONDUIT RUN BETWEEN FREEZER/COOLER EVAPORATORS AND ROOF-TOP REFRIGERATION UNIT WITH THE MANUFACTURER'S FURNISHED WIRING HARNESS.
- 16 ELECTRICAL CONTRACTOR TO PROVIDE JUNCTION BOXES INSIDE WALL @ 48" A.F.F. WITH STUB-UPS TO CEILING FOR AMEREX PULL STATION AS REQUIRED BY EQUIPMENT SUPPLIER.
- 17 (3) 1"Ø CONDUIT TO BASE OF DRIVE-THROUGH ORDER STATION FOR DRIVE-THROUGH COMMUNICATIONS SYSTEM. SOUND, DATA AND POWER. COORDINATE FINAL CONDUIT ROUTING LOCATIONS WITH EQUIPMENT DRAWINGS AND REPRESENTATIVE PRIOR TO ROUGH-IN.
- 18 6" BELOW CEILING FOR CONDENSATE DRAIN LINE TAPE HEATER.
- 19 TO MASTER RELAY PANEL. REFER TO SHEET E802.
- 20 MANUAL ON-OFF CONTROL PANEL. REFER TO SHEET E802.
- 21 MASTER CONTACTOR PANEL. REFER TO SHEET E802 AND NOTES 21 & 22.
- 22 SWITCH GEAR. RECESS ELECTRICAL CONTRACTOR PANEL & PANELS 'A', 'B' & 'M' IN FURRED OUT WALL ADJACENT TO EXTERIOR FRAMING. G.C. TO VERIFY PANEL SIZES PRIOR TO FURR-OUT TO INSURE ADEQUATE SPACE.

**KEYED CONSTRUCTION NOTES**

- 1 ALL RECEPTACLES IN COMMERCIAL KITCHEN SHALL BE GFCI PROTECTED PER NEC 210.8.
- 2 E.C. SHALL COORDINATE ALL FINAL LOCATIONS, PLUG/CONNECTION TYPE & MOUNTING HEIGHTS PRIOR TO ROUGH-IN. E.C. SHALL OBTAIN ALL WIRING DIAGRAMS, ETC FROM OWNER TO CONFIRM ALL NECESSARY WIRING OF EQUIPMENT PRIOR TO BREAKER ORDERING AND ROUGH-IN.
- 3 COORDINATE FINAL POS RECEPTACLE AND DATA OUTLET PLACEMENT WITH OWNER PRIOR TO ROUGH-IN. ALL RECEPTACLES FOR POS SYSTEMS AND COMPUTERS SHALL BE SUPPLIED WITH AN ISOLATED GROUND (IG).
- 4 PROVIDE UNDERGROUND POWER FEED TO DELI COOLER AND SHELVING TO NEAREST WALL AND UP TO ACCESSIBLE CEILING.
- 5 HVAC MAINTENANCE/SERVICE RECEPTACLE SHALL BE WITHIN 25' OF EQUIPMENT PER NEC ARTICLE 210.63, (TYPICAL)
- 6 COORDINATE LOCATION OF JUNCTION BOX WITH EQUIPMENT VENDOR FOR COOLER/FREEZER LIGHTS AND DOOR HEAT, ETC PRIOR TO ROUGH-IN.
- 7 PROVIDE SHUNT TRIP BREAKERS TO EQUIPMENT UNDER EXHAUST HOOD.
- 8 COORDINATE FINAL PANEL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- 9 ALL INTERNET, SECURITY, CAMERA, ETC. WIRING TO TERMINATE IN IT CABINET. E.C./DATA VENDOR SHALL OBTAIN A COPY OF "ONVO IT SPEC SHEET" FOR MORE DETAIL.
- 10 DENOTES NUMBER OF CAT 6 CABLES FROM DEVICE TO ASSOCIATED HEADED EQUIPMENT.
- 11 USB RECEPTACLES

DATE: JULY 27 2022
CHECKED BY: RW
REVISION
NO. DATE

OWNER: ONVO  
Travel Plaza  
2227 Scranton Carondeale Hwy  
Scranton, PA 18508

design management group  
consulting engineers  
570 299 7520 dmeng.com

DMG

Miller Rosentel Associates, Inc.  
138 S. Union St. Wilkes Barre, PA 18701 570-824-1411

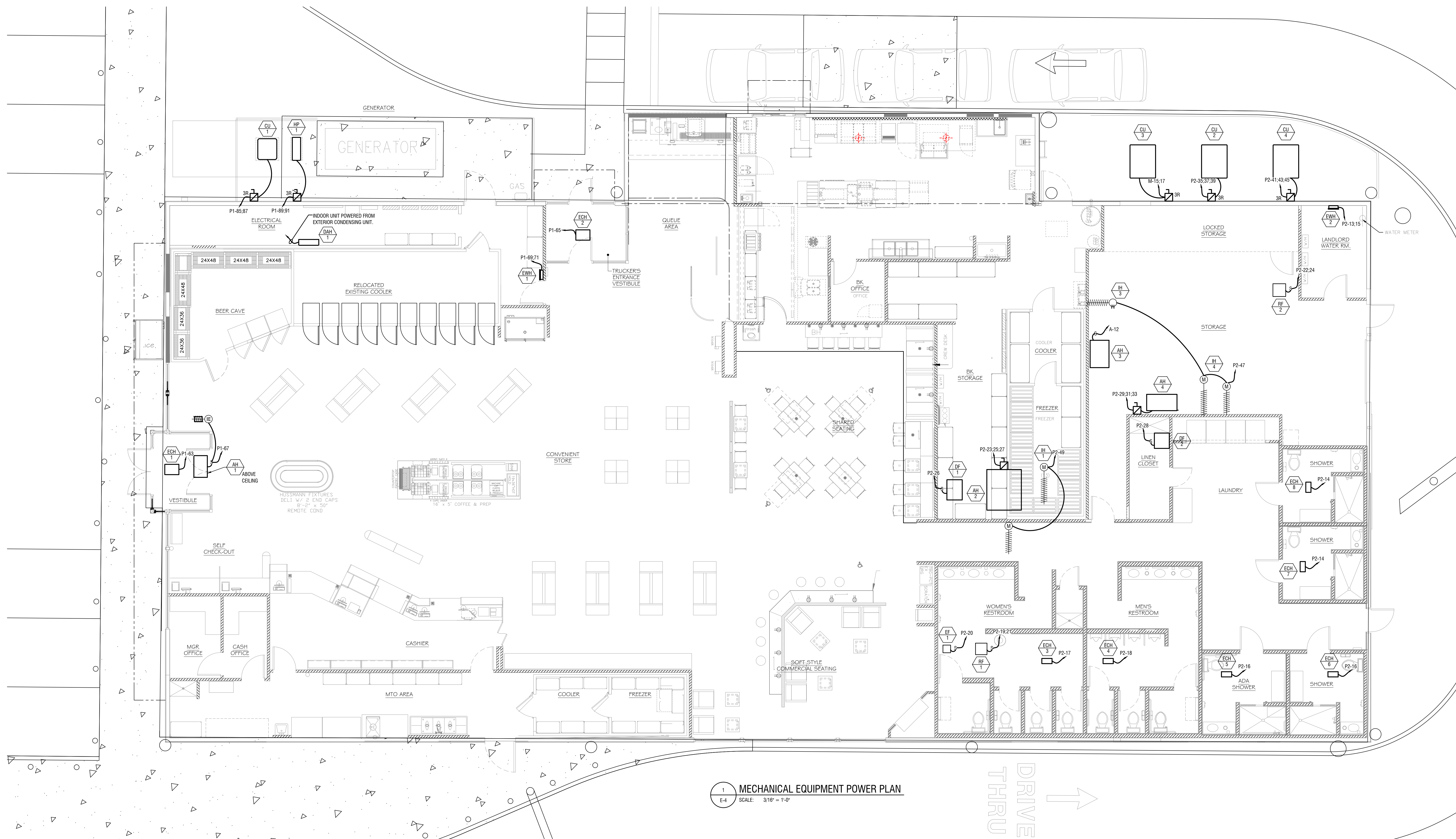
STATE OF NEW YORK  
JULY 27 2022  
REGISTERED PROFESSIONAL ENGINEER

PROJECT # 22046  
GARDEN EXT./ GARDEN INT.

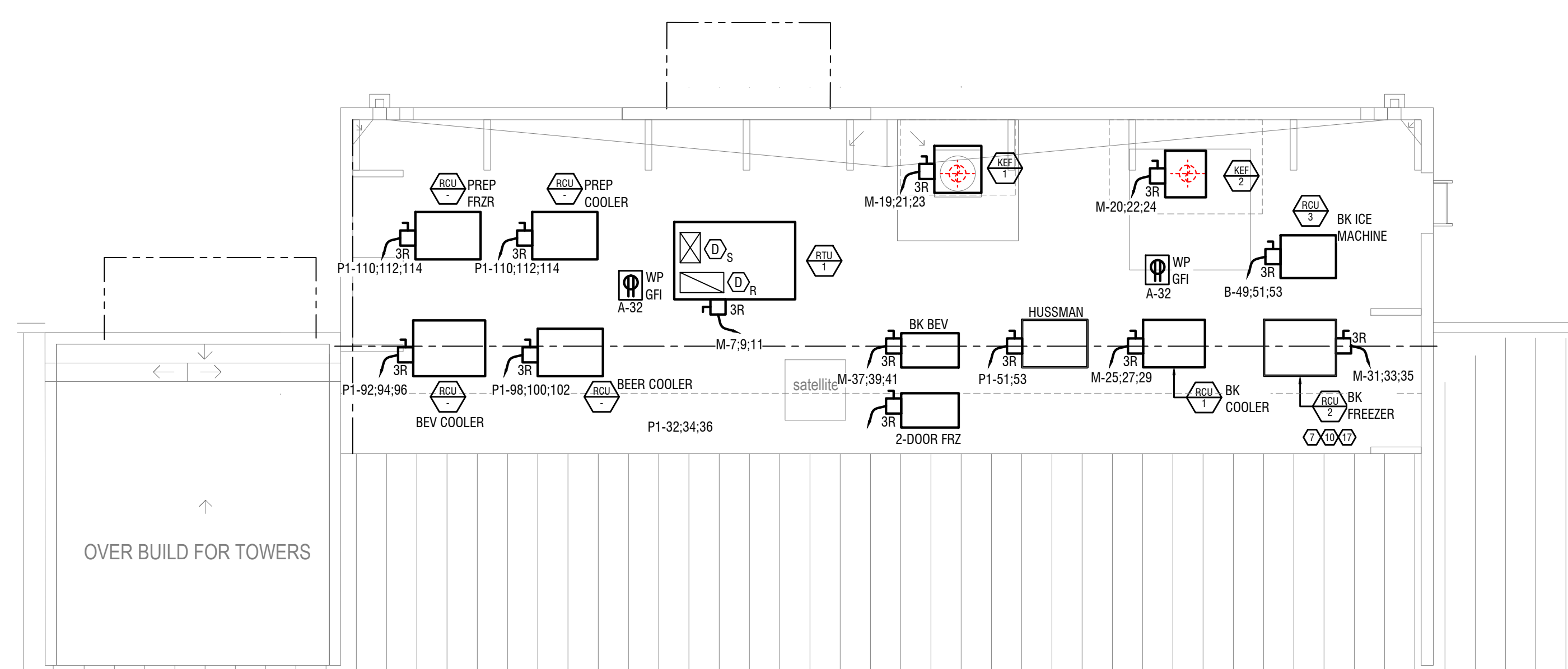
ONVO TRAVEL PLAZA  
BURGER KING  
128 Riverside Dr. Fultonville, NY 12072

ELECTRICAL POWER PLAN  
E-3





1 MECHANICAL EQUIPMENT POWER PLAN  
E-4 SCALE: 3/16" = 1'-0"



2 ROOF POWER PLAN  
E-4 SCALE: 3/16" = 1'-0"

NO.	DATE	BY	CHKD BY	REVISION
1	JULY 27 2022	RAJAN B. SHARMA	RAJAN B. SHARMA	REVISION

OWNER:  
ONVO  
Travel Plazas  
2227 Scranton Carbondale Hwy  
Scranton, PA 18508

design management group  
consulting engineers  
570 299 7520 dmeng.com

ARCH: **DMG**  
ENR: **DMG**  
**WRA**  
Miller Rosentel Associates, Inc.  
188 S. Union St. Wilkes Barre, PA 18701, 570-822-4141, www.mra-arch.com



SEAL  
RAJAN B. SHARMA, PE  
NY PROFESSIONAL ENGINEER  
LIC. NO. 092789-1

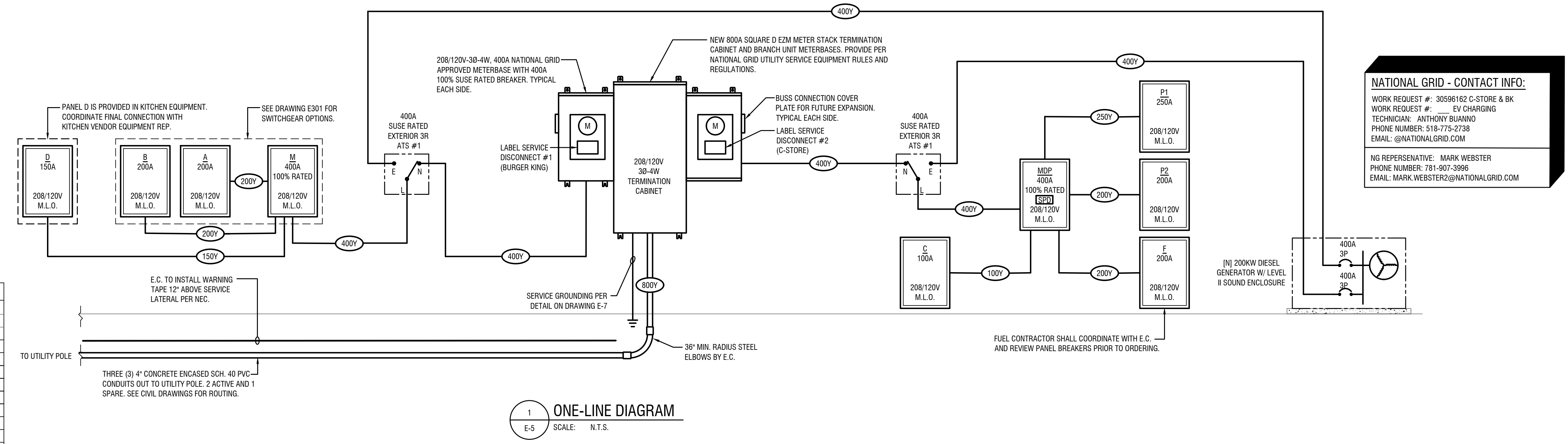
PROJECT # 220046  
GARDEN EXT. / GARDEN INT.  
**ONVO TRAVEL PLAZA**  
**ONVO / BURGER KING**  
128 Riverside Dr. Fultonville, NY 12072  
MECHANICAL EQ. POWER PLANS

E-4



FEEDER SCHEDULE						
TAG	RUNS	CONDUCTOR	INSULATION	GROUND	CONDUIT	REMARKS
800Y	2 SETS	(4) 600 KCMIL	COPPER THHN/THWN-2		4"	
400Y	1 SET	(4) 500 KCMIL	COPPER THHN/THWN-2	#3 AWG	3"	
250Y	1 SET	(4) 4/0 AWG	COPPER THHN/THWN-2	#4 AWG	2-1/2"	
200Y	1 SET	(4) 3/0 AWG	COPPER THHN/THWN-2	#6 AWG	2"	
150Y	1 SET	(4) 1/0 AWG	COPPER THHN/THWN-2	#6 AWG	2"	

NOTES:  
 1. PROVIDE CONCRETE ENCASED CONDUITS FROM POLE TO METER PAK. COORDINATE ALL FINAL SECONDARY REQUIREMENTS (CABLING, GROUNDING, ETC.) WITH UTILITY PROVIDER. OBTAIN UTILITY PROVIDER'S WRITTEN APPROVAL PRIOR TO INSTALLATION. SEE DUCTBANK DETAIL FOR FURTHER INFORMATION.  
 2. PROVIDE XHHW-2 TYPE INSULATION FOR FEEDERS UNDERGROUND, BELOW GRADE, AND OUTSIDE THE BUILDING.  
 3. VERIFY POWER REQUIREMENTS WITH APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.  
 4. VERIFY WHETHER NEUTRAL IS REQUIRED WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.



PANELBOARD SCHEDULE																		
DESIGNATION:		MAINS: 400A			VOLTAGE: 208/120V-3Ø-4W			LOCATION: SEE FLOOR PLAN			SINGLE: X		DOUBLE:		TRIPLE:			
MDP		TYPE: I			MIN. AIC RATING: 42,000			SUPPLY: UTILITY/GEN SET VIA ATS #1			MOUNTING: SURFACE		LOAD		TRIP:			
CKT	POLE	TRIP	WIRE	GND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GND	WIRE	TRIP	POLE	CKT			
1	/	/	/	/	/	PANEL P1									2			
3	3	200	*	*	*	PANEL P2				*	*	*	200	3	4			
5	/	/	/	/	/										6			
7	/	/	/	/	/										8			
9	3	100	*	*	*	PANEL C				*	*	*	200	3	10			
11	/	/	/	/	/										12			
13	/	/	/	/	/										14			
15	3	100				SPARE								200	3	16		
17	/	/	/	/	/										18			
19						SPACE									20			
21						SPACE									22			
23						SPACE									24			
25						SPACE									26			
27						SPACE									28			
29						SPACE									30			
TOTAL/PHASE							64.06	61.55	57.39									
CONNECTED LOAD							183.00	(kVA)										
DEMAND LOAD @ 0.75							137.25	(kVA)										
DEMAND							380.97	(A)										

\*SEE ONE-LINE DIAGRAM

PANELBOARD SCHEDULE																		
DESIGNATION:		MAINS: 200A			VOLTAGE: 208/120V-3Ø-4W			LOCATION: SEE FLOOR PLAN			SINGLE: X		DOUBLE:		TRIPLE:			
P2		TYPE: I			MIN. AIC RATING: 42,000			SUPPLY: PANEL MDP			MOUNTING: SURFACE		LOAD		TRIP:			
CKT	POLE	TRIP	WIRE	GND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GND	WIRE	TRIP	POLE	CKT			
1	1	20	12	12	***	RECEPTACLES	0.72	0.36							1	2		
3	1	20	12	12	***	SHOWER GFI RECEPT									4			
5	1	20	12	12	***	SHOWER RM GFI									6			
7	1	20	12	12	***	HAND DRYER	1.46	1.46	0.54	0.54					8			
9	1	20	12	12	***	HAND DRYER									10			
11	1	20	12	12	***	WOMEN'S RESTROOM GFI									12			
13	2	20	12	12	***	EW-H-2	1.00	1.00							14			
15	/	/	/	/	/										16			
17	1	20	12	12	***	ECH-3									18			
19	2	20	12	12	***	RF-1	0.90	0.60							20			
21	/	/	/	/	/										22			
23	/	/	/	/	/										24			
25	3	20	12	12	***	AH-2	1.44	0.50							26			
27	/	/	/	/	/										28			
29	/	/	/	/	/										30			
31	3	20	12	12	***	AH-4	1.44	0.50							32			
33	/	/	/	/	/										34			
35	/	/	/	/	/										36			
37	3	50	8	10	3/4"	CU-2	4.90	1.00							38			
39	/	/	/	/	/										40			
41	/	/	/	/	/										42			
43	3	40	8	10	3/4"	CU-4	3.84	1.46							44			
45	/	/	/	/	/										46			
47	1	15	12	12	***	MOTORIZED DAMPERS									48			
49	1	15	12	12	***	MOTORIZED DAMPERS	0.20		0.30	1.46					50			
51	/	/	/	/	/										52			
53	3	20				SPARE									54			
55	/	/	/	/	/										56			
57	/	/	/	/	/										58			
59	3	30				SPARE									60			
61	/	/	/	/	/										62			
63	2	20				SPARE									64			
65	/	/	/	/	/										66			
67	2	20				SPARE									68			
69	/	/	/	/	/										70			
71						SPACE									72			
73						SPACE									74			
75						SPACE									76			
77						SPACE									78			
79						SPACE									80			
81						SPACE									82			
83						SPACE									84			
TOTAL/PHASE							23.57	23.26	22.05									
CONNECTED LOAD							68.88	(kVA)										
DEMAND LOAD @ 0.75							51.66	(kVA)										
DEMAND							143.39	(A)										

\*SEE ONE-LINE DIAGRAM  
 \*\* DENOTES BREAKER TO BE LOCKED  
 \*\*\* CONDUCTORS SHALL BE IN EMT CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE. METAL CLAD (MC) CAN BE USED IN CONCEALED PLACES AND NOT SUBJECT TO PHYSICAL DAMAGE.

PANELBOARD SCHEDULE																	
DESIGNATION:		MAINS: 200A			VOLTAGE: 208/120V-3Ø-4W			LOCATION: SEE FLOOR PLAN			SINGLE: X		DOUBLE:		TRIPLE:		
F		TYPE: I			MIN. AIC RATING: 42,000			SUPPLY: PANEL MDP			MOUNTING: SURFACE		LOAD		TRIP:		
CKT	POLE	TRIP	WIRE	GND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GND	WIRE	TRIP	POLE	CKT		
1	1	20				SPARE									20	1	2
3	1	20				SPARE									20	1	4
5	1	20				SPARE									20	1	6
7	1	20				SPARE									20	1	8
9	1	20				SPARE									20	1	10
11	1	20				SPARE									20	1	12
13	1	20				SPARE									20	1	14
15	1	20				SPARE									20	1	16
17	1	20				SPARE									20	1	18
19	1	20				SPARE									20	1	20
21	1	20				SPARE									20	1	22
23	1	20				SPARE									20	1	24
25	1	20				SPARE									20	1	26
27	2	20				SPARE									20	2	28
29	/	/	/	/	/										/	/	30
31	2	20				SPARE									20	2	32
33	/	/	/	/	/										/	/	34
35	3	20				SPARE									20	2	36
37	/	/	/	/	/										/	/	38
39	2	20				SPARE									20	2	40
41	/	/	/	/	/										/	/	42
43	2	20				SPARE									20	2	44
45	/	/	/	/	/										/	/	46
47	2	30				SPARE									30	2	48
49	/	/	/	/	/										/	/	50
51	2	30				SPARE									30	2	52
53	/	/	/	/	/										/	/	54
TOTAL/PHASE							0.00	0.00	0.00								
CONNECTED LOAD							0.00	(kVA)									
DEMAND LOAD @ 0.75							0.00	(kVA)									
DEMAND							0.0										



NEW PANELBOARD SCHEDULE														
DESIGNATION:		MAINS:		VOLTAGE:		LOCATION:		SINGLE:		DOUBLE:		X		
M		400A		208/120V-3Ø-4W		SEE FLOOR PLAN								
		TYPE: NEMA 3R		MIN. AIC RATING: 42,000		SUPPLY: UTILITY/GEN SET VIA AITS #2		MOUNTING: SURFACE		TRIPLE:				
CKT	POLE	TRIP	WIRE	GRND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GRND	TRIP	POLE	CKT
1	/												/	2
3	3	200	*	*	*	PANEL A	6.60	20.30						4
5	/						5.24	17.90						6
7	/						3.50	8.00						8
9	3	40	8	10	3/4"	RIU-1		3.50	8.76					10
11	/							3.50	6.76					12
13	/													14
15	2	45	8	10	3/4"	CU-3		3.00					30	3
17	/							3.00						18
19	/						0.75	0.75						20
21	3	20	12	12	3/4"	KEF-1		0.75	0.75				12	12
23	/							0.75	0.75					24
25	/						1.44	0.75						26
27	3	20	12	12	3/4"	WALK-IN BOX CLR COND (RCU-1)	1.44	0.75					12	12
29	/						2.20	1.00						30
31	/						2.20	1.00						32
33	3	30	10	10	3/4"	WALK-IN BOX FRZ COND (RCU-2)	2.20	1.00					12	12
35	/							2.20	1.00					34
37	/						1.00	1.70						38
39	3	20	12	12	3/4"	BEV COND. UNIT		1.00						40
41	/								1.00					42
43	/													44
45	3	20				SPARE								46
47	/													48
49	/													50
51	/													52
53	/													54
** SEE ONE-LINE DIAGRAM						TOTAL/PHASE	47.99	46.29	47.42					
** DENOTES BREAKER TO BE LOCKED						CONNECTED LOAD	141.70		(kVA)					
*** CONDUCTORS SHALL BE IN EMT						DEMAND LOAD @ 0.75	106.28		(kVA)					
CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE. METAL CLAD (MC) CAN BE USED IN CONCEALED PLACES AND NOT SUBJECT TO PHYSICAL DAMAGE.						DEMAND	294.99		(A)					

PANELBOARD SCHEDULE														
DESIGNATION:		MAINS:		VOLTAGE:		LOCATION:		SINGLE:		DOUBLE:		X		
B		200A		208/120V-3Ø-4W		SEE FLOOR PLAN								
		TYPE: I		MIN. AIC RATING: 42,000		SUPPLY: PANEL M		MOUNTING: SURFACE		TRIPLE:				
CKT	POLE	TRIP	WIRE	GRND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GRND	TRIP	POLE	CKT
1	1	20	12	12	***	ICE/SODA DISPENSER	0.40	0.25					12	20
3	1	20	12	12	***	POS RECEPTACLES GFCL		1.32	0.73				12	20
5	1	20	12	12	***	POS RECEPTACLES GFCL		1.32	0.50				12	20
7	1	20	12	12	***	CREW DESK RECEPTS	0.36	0.90					12	20
9	1	20	12	12	***	REAR DOOR BUZZER		0.72	0.40				12	20
11	1	20				SPARE			0.20				12	20
13	1	20	12	12	***	OFFICE RECEPT	0.36	1.00					12	20
15	1	20	12	12	***	HWRF		0.50	0.40				12	20
17	1	15	12	12	***	ICE MACHINE FOR SELF-SERV			0.13	0.13			12	15
19	1	15	12	12	***	ICE MACHINE FOR DRIVE THRU	0.13						30	20
21	2	20				SPARE								22
23	/								1.30					24
25	1	20	12	12	***	SHORTENING STORAGE UNIT	1.00	1.32					12	15
27	1	20				RECEPTACLES		0.36	0.90				12	20
29	/							4.20	0.90					30
31	3	45	8	10	***	SHAKE/SUNDAE MACHINE	4.20	0.90						32
33	/							4.20	0.75					34
35	2	30	10	10	***	FROZEN BEVERAGE DISPENSER		2.00	0.75					36
37	/						2.00							38
39	1	20	12	12	***	POS RECEPTACLES GFCL		1.32						40
41	1	20	12	12	***	POS RECEPTACLES GFCL		1.32						42
43	/						2.40	1.60						44
45	3	30	10	10	***	COMBI OVEN-STEAMER		2.40	1.60					46
47	/							2.40						48
49	/						1.80	1.68						50
51	3	20	10	10	***	ICE MACHINE COND UNIT		1.80	0.50					52
53	/							1.80	0.50					54
** SEE ONE-LINE DIAGRAM						TOTAL/PHASE	20.30	17.90	17.45					
** DENOTES BREAKER TO BE LOCKED						CONNECTED LOAD	55.65		(kVA)					
*** CONDUCTORS SHALL BE IN EMT						DEMAND LOAD @ 0.75	41.74		(kVA)					
CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE. METAL CLAD (MC) CAN BE USED IN CONCEALED PLACES AND NOT SUBJECT TO PHYSICAL DAMAGE.						DEMAND	115.85		(A)					

PANELBOARD SCHEDULE														
DESIGNATION:		MAINS:		VOLTAGE:		LOCATION:		SINGLE:		DOUBLE:		X		
A		200A		208/120V-3Ø-4W		SEE FLOOR PLAN								
		TYPE: I		MIN. AIC RATING: 42,000		SUPPLY: PANEL M		MOUNTING: SURFACE		TRIPLE:				
CKT	POLE	TRIP	WIRE	GRND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GRND	TRIP	POLE	CKT
1	2	20				SPARE	0.80						12	20
3	/							0.20						4
5	1	20	12	12	***	EXTERIOR SIGN			1.00	0.50			12	20
7	1	20	12	12	***	FLAMING GRILL SIGN	1.00	0.72					12	20
9	1	20				SPARE			1.00				12	20
11	1	20				SPARE			1.70				12	20
13	1	20	12	12	UG	DRIVE THRU MENU SIGNS	1.50	0.90					12	20
15	2	20				SPARE							20	1
17	/													18
19	1	20	12	12	***	LOGO SIGNAGE	0.60						20	1
21	1	20	12	12	***	ROOF RED LIGHT BAND		0.50	0.72				12	20
23	1	20	12	12	***	CHANNEL LETTERS/LOGO		1.20	1.50				12	20
25	1	20				SPARE	0.18							26
27	1	20	12	12	***	EXTERIOR LIGHTING		1.20	0.54				12	20
29	1	20	12	12	***	COOLER/FRZ LIGHTS AND HEATER		0.18	0.50	0.36			12	20
31	1	20				SPARE							12	20
33	1	20	12	12	***	SERVICE COUNTER		0.36	0.36				12	20
35	1	20	12	12	***	D/T SPEED/SERVICE			0.54	0.72			12	20
37	1	20				SPARE	0.36							38
39	1	20				SPARE		0.36						40
41	1	20	12	12	***	DI WINDOW POWER			0.50	0.30			12	20
43	2	20				SPARE	0.36							44
45	/													46
47	2	20				SPARE								48
49	/					SPARE								50
51	2	30				SPARE								52
53	/													54
** SEE ONE-LINE DIAGRAM						TOTAL/PHASE	6.60	5.24	8.82					
** DENOTES BREAKER TO BE LOCKED						CONNECTED LOAD	20.66		(kVA)					
*** CONDUCTORS SHALL BE IN EMT						DEMAND LOAD @ 0.75	15.50		(kVA)					
CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE. METAL CLAD (MC) CAN BE USED IN CONCEALED PLACES AND NOT SUBJECT TO PHYSICAL DAMAGE.						DEMAND	43.01		(A)					

PANELBOARD SCHEDULE (FURNISHED BY K.E.S.)														
DESIGNATION:		MAINS:		VOLTAGE:		LOCATION:		SINGLE:		DOUBLE:		X		
D		150A		208/120V-3Ø-4W		SEE FLOOR PLAN								
		TYPE: I		MIN. AIC RATING: 42,000		SUPPLY: PANEL M		MOUNTING: SURFACE		TRIPLE:				
CKT	POLE	TRIP	WIRE	GRND	C	LOAD	KVA Ø A	KVA Ø B	KVA Ø C	C	GRND	TRIP	POLE	CKT
1	2	20	PW	PW	PW	PHU/MICROWAVE	1.50	1.50					12	20
3	/							1.50	1.50					4
5	2	20	PW	PW	PW	PHU/MICROWAVE			1.50	1.50			12	20
7	/													8
9	2	20	PW	PW	PW	DUAL FEED CONT FEED TOASTER	1.50	1.50					12	20
11	/							0.88	0.88					12
13	2	30	PW	PW	PW	VERTICAL TOASTER	1.00						20	1
15	/							1.00	1.00					14
17	1	20	PW	PW	PW	HEATED SURFACES			1.00	1.00			12	20
19	/					SPARE		1.00						20
21	1	20	PW	PW	PW	UTILITY			1.00	1.00			12	20
23	/					SPARE								24
** SEE ONE-LINE DIAGRAM						TOTAL/PHASE	8.00	8.76	6.76					
** DENOTES BREAKER TO BE LOCKED						CONNECTED LOAD	23.52		(kVA)					
*** CONDUCTORS SHALL BE IN EMT						DEMAND LOAD @ 0.75	17.64		(kVA)					
CONDUIT WHERE SUBJECT TO PHYSICAL DAMAGE. METAL CLAD (MC) CAN BE USED IN CONCEALED PLACES AND NOT SUBJECT TO PHYSICAL DAMAGE.						DEMAND	48.96		(A)					

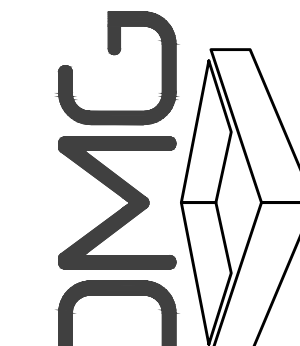
DATE: JULY 27 2022

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OWNER:  
ONVO  
Travel Plaza  
2227 Scranton Carbondale Hwy  
Scranton, PA 18508

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ARCH: **WRA**  
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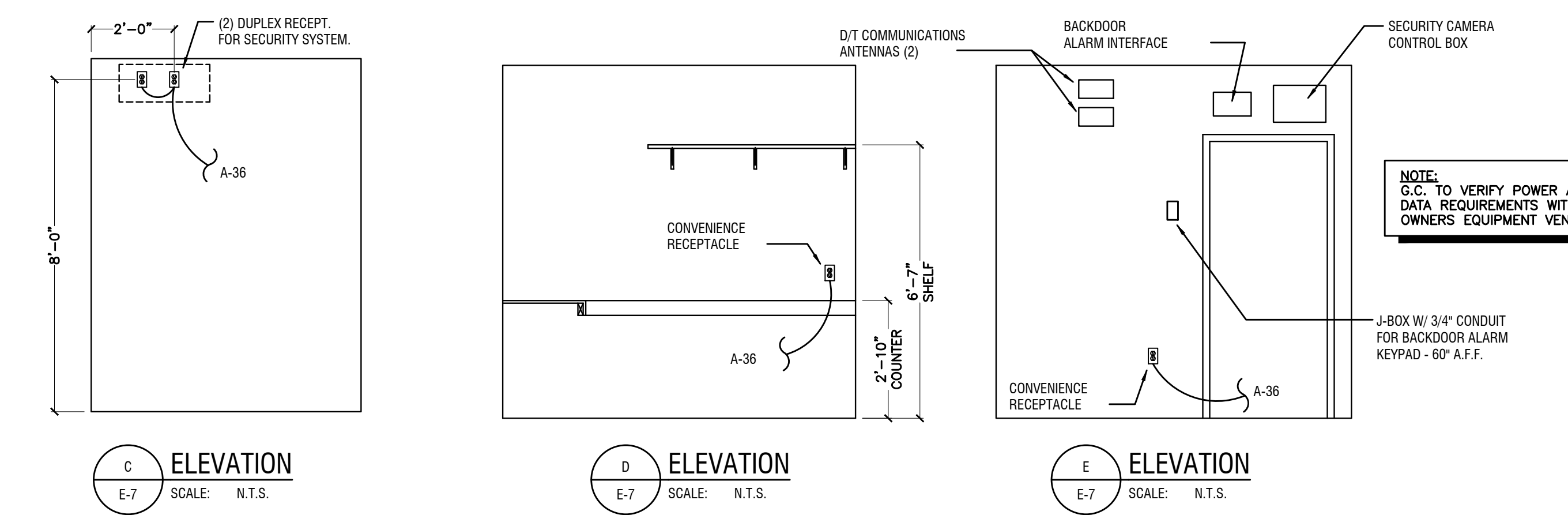
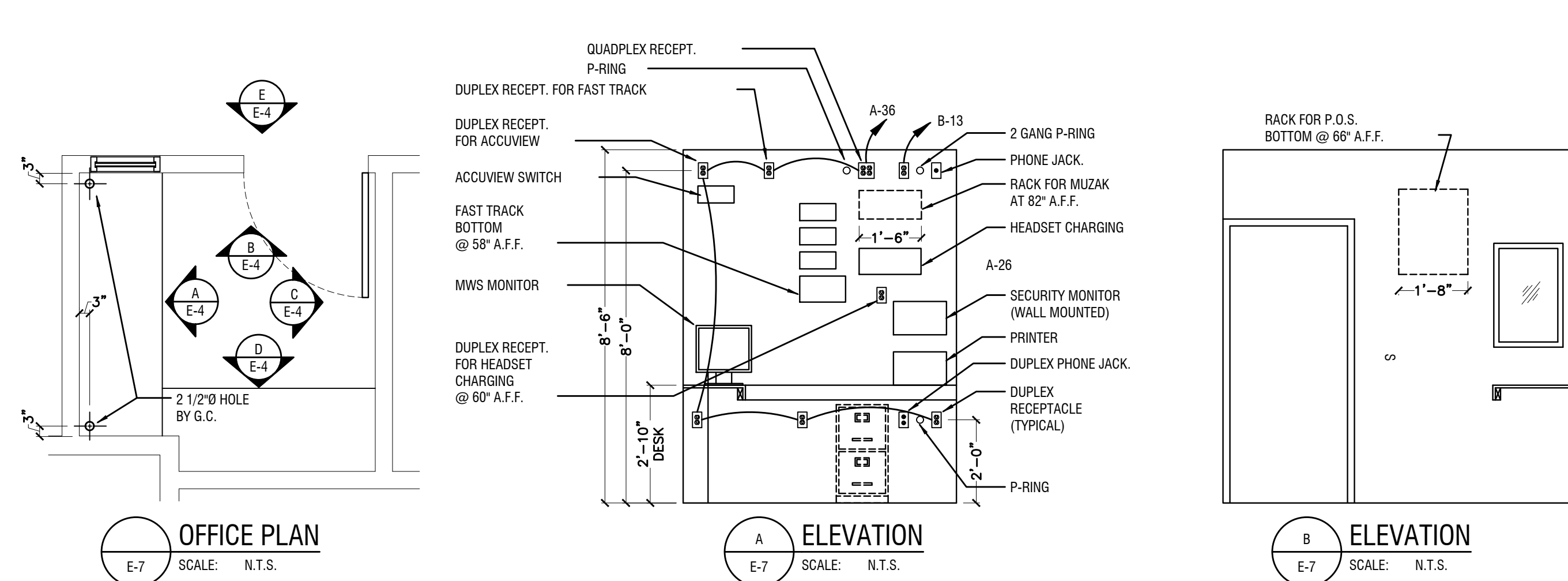


RYAN J. MANNO, PE  
NY PROFESSIONAL ENGINEER  
LIC. NO. 092789-1

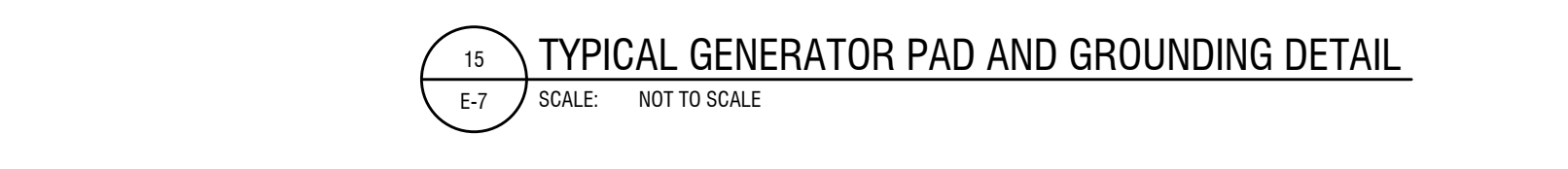
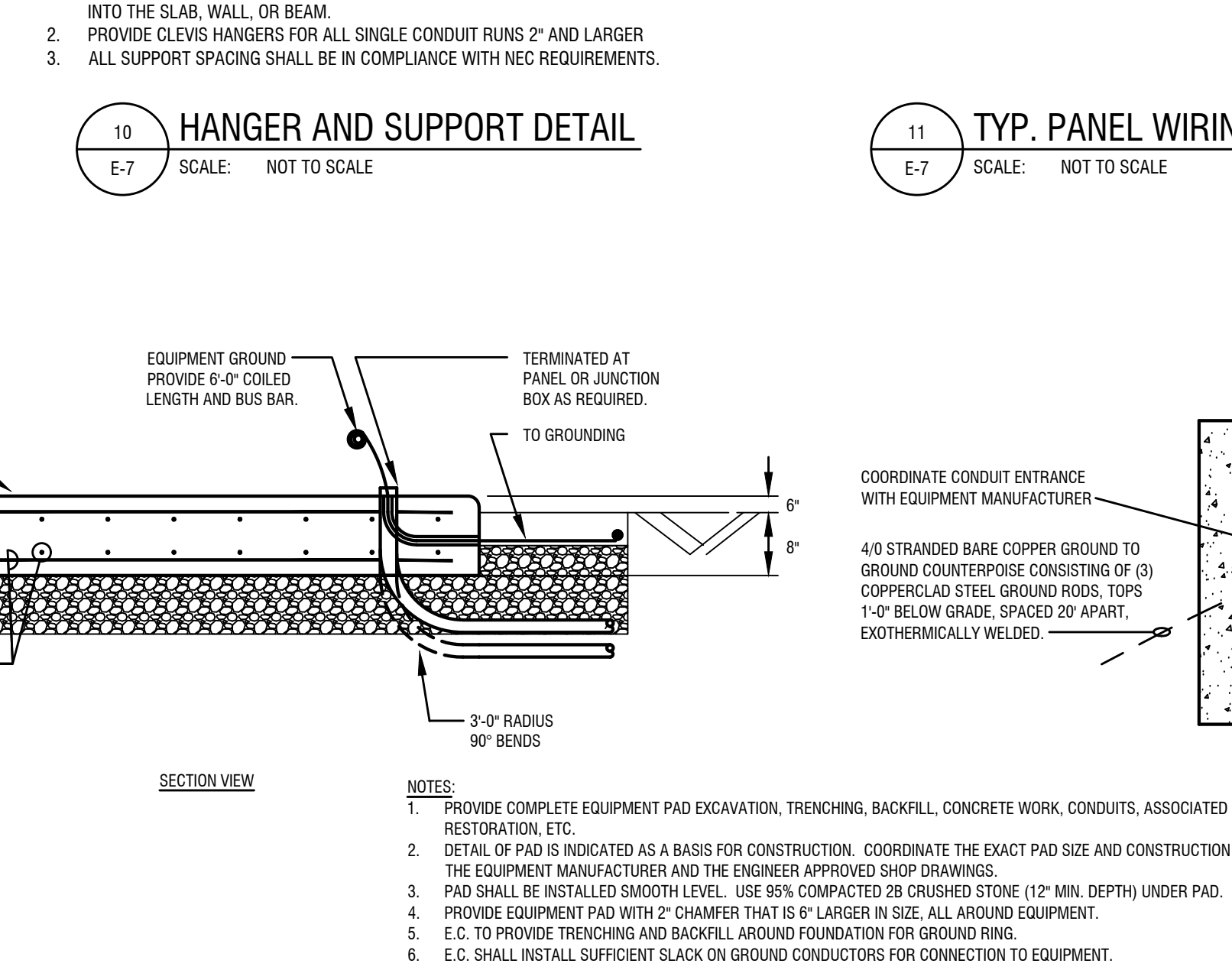
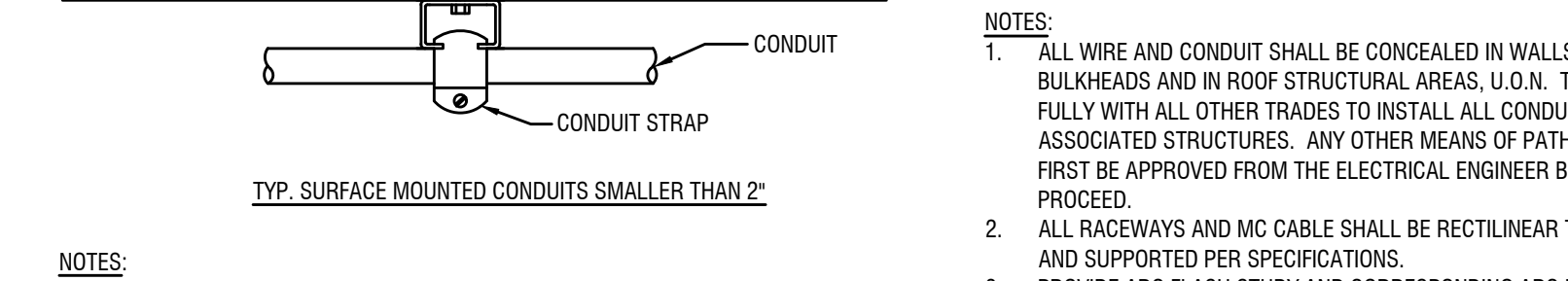
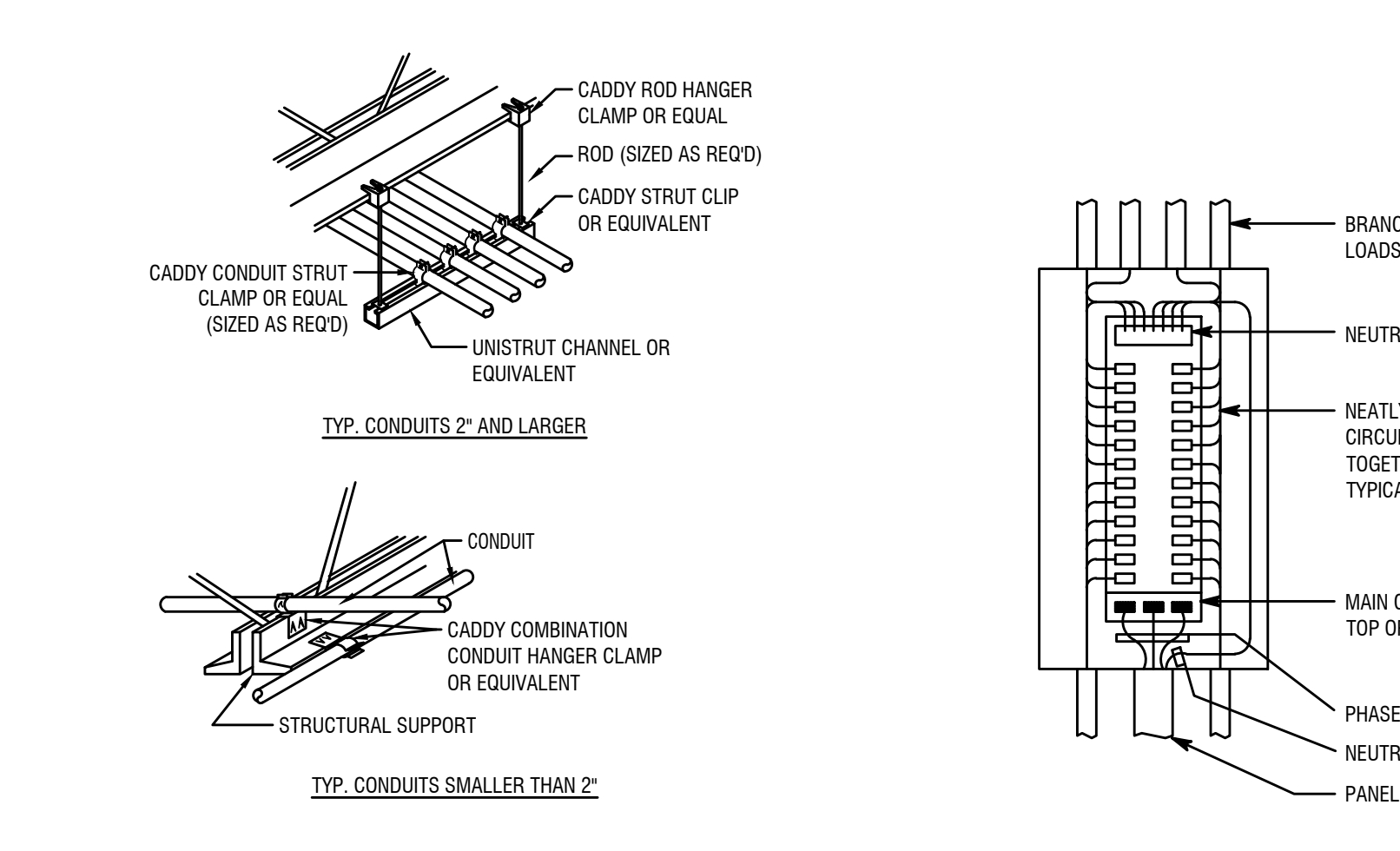
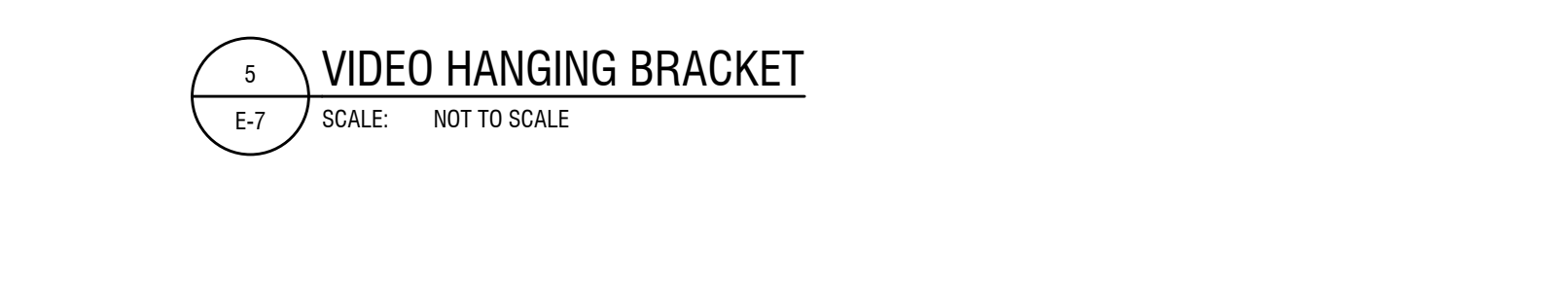
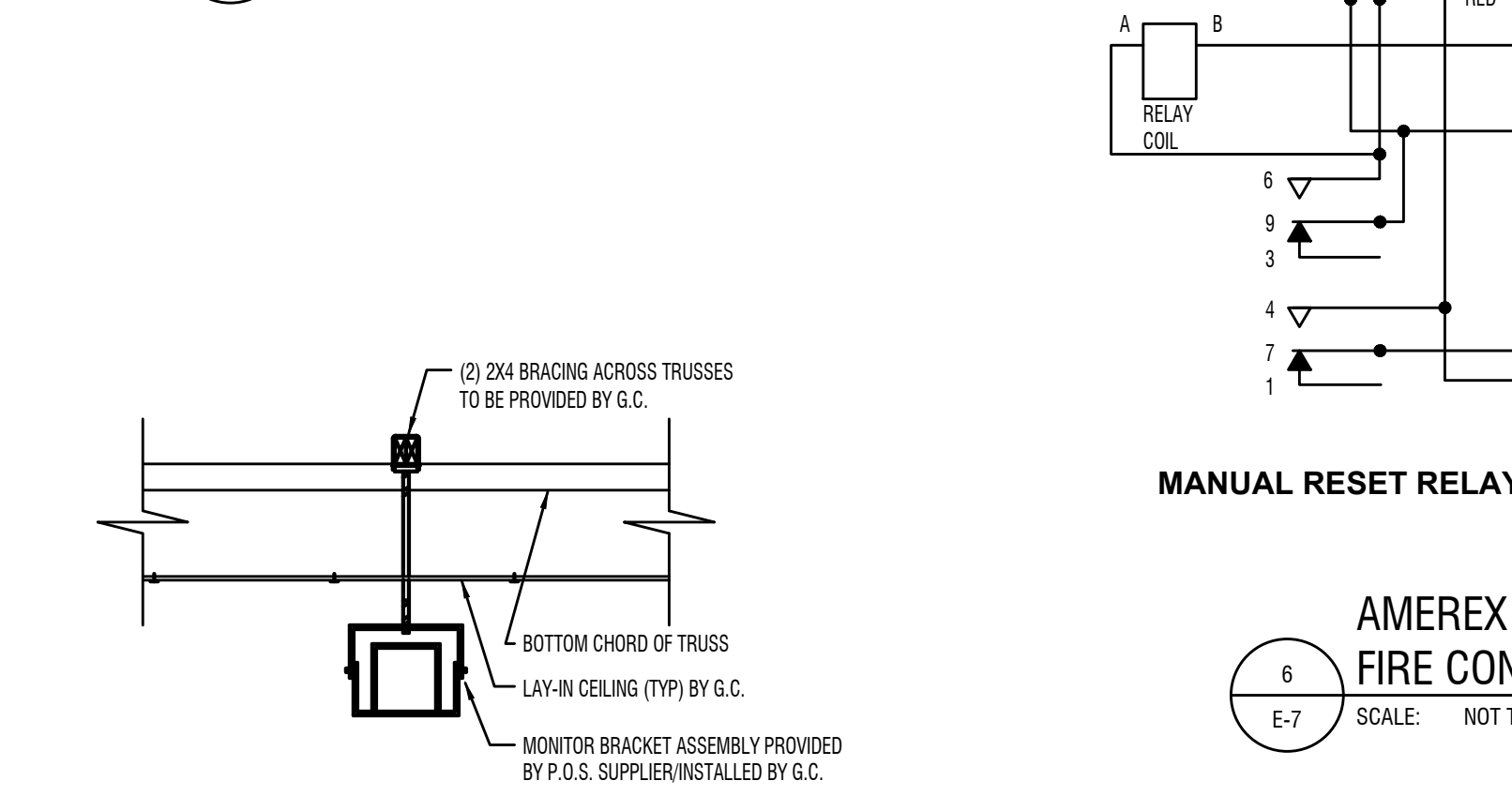
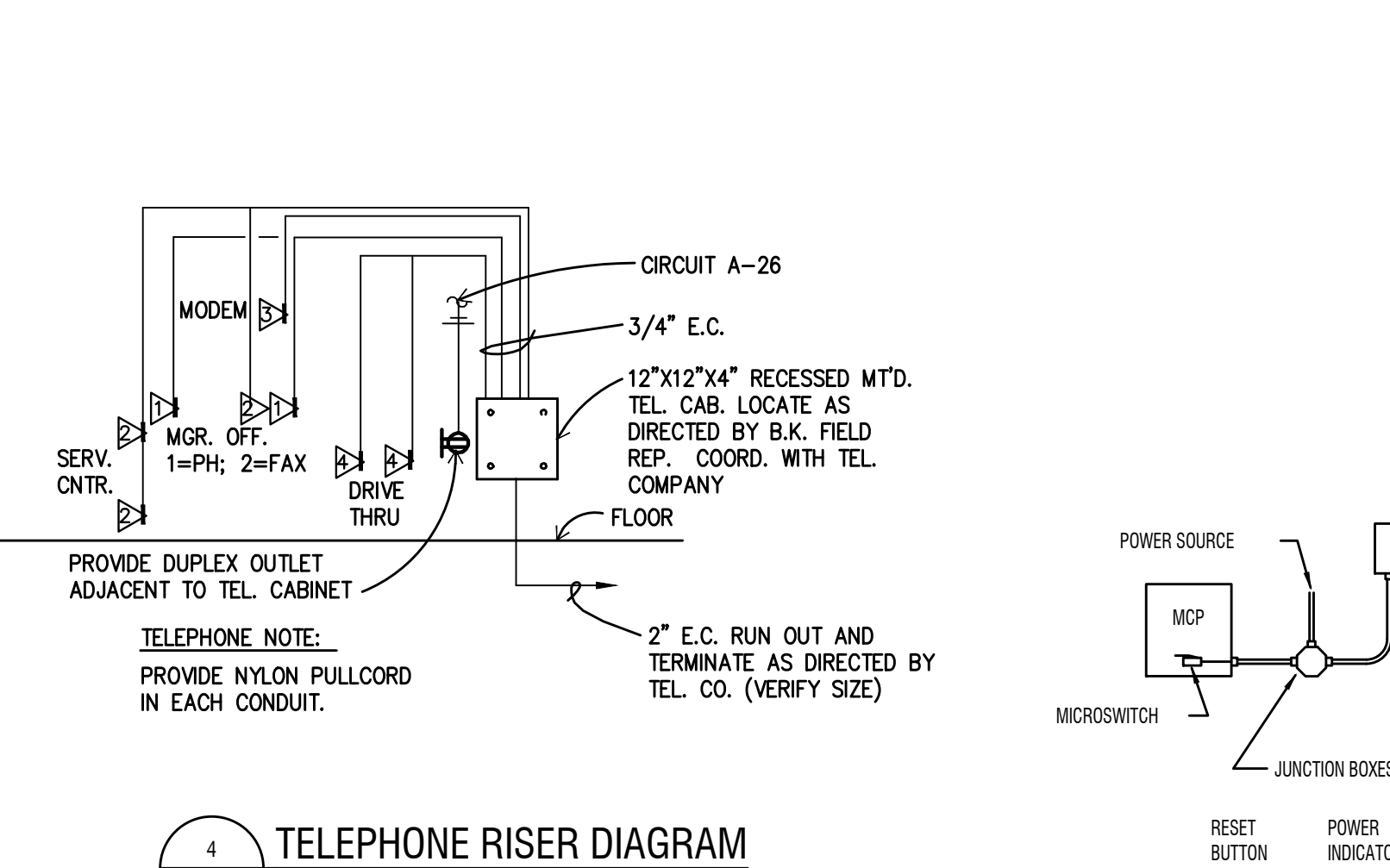
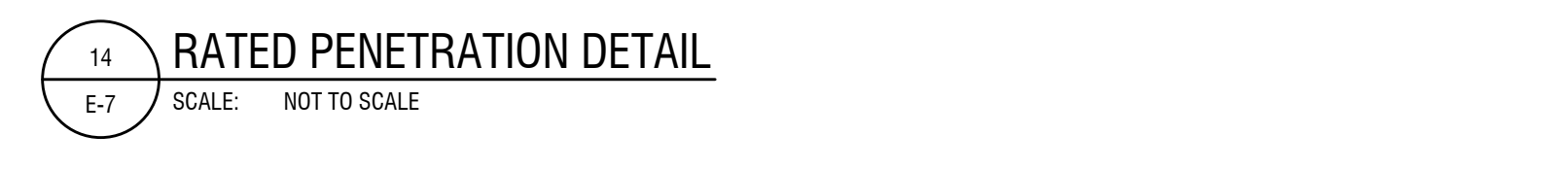
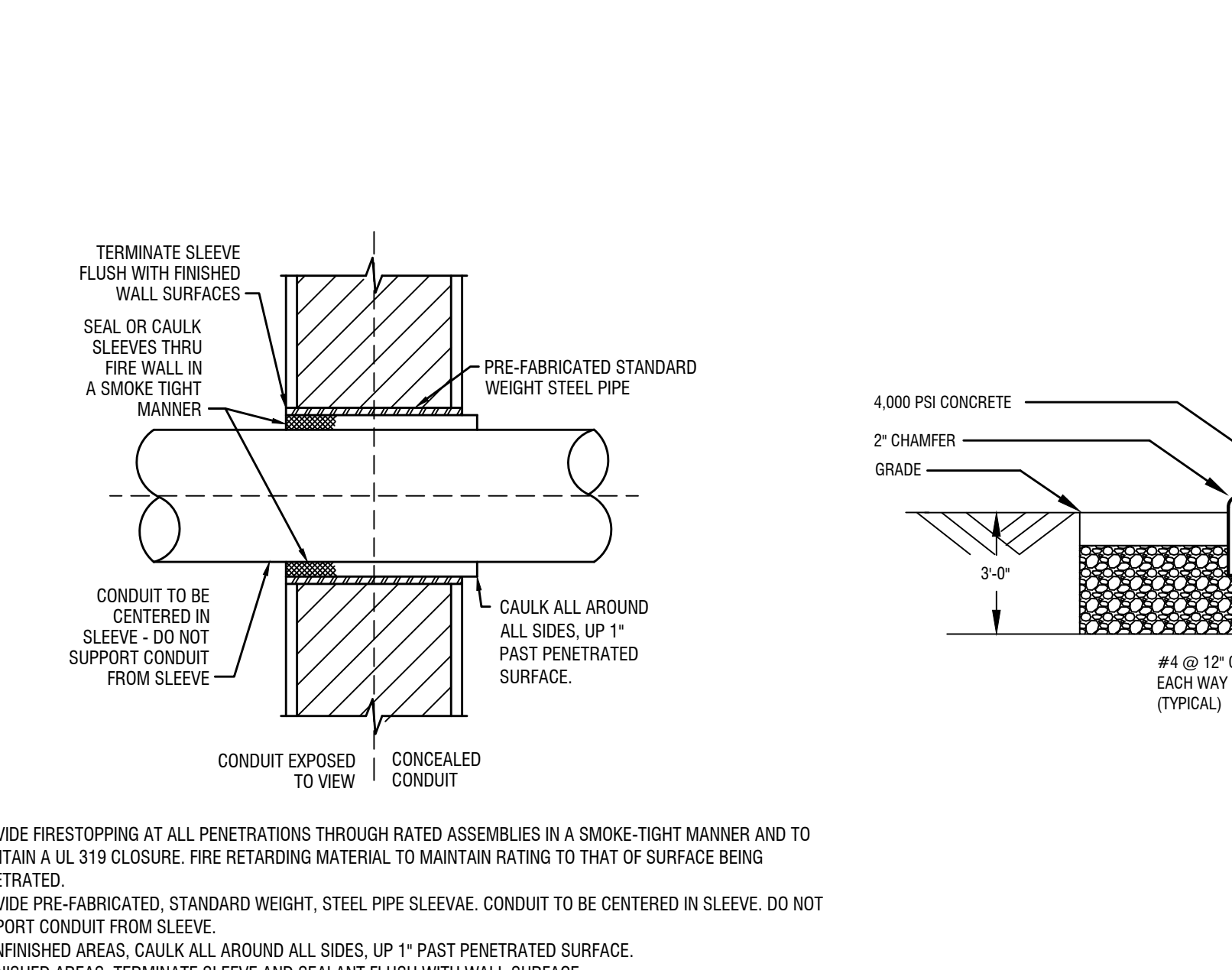
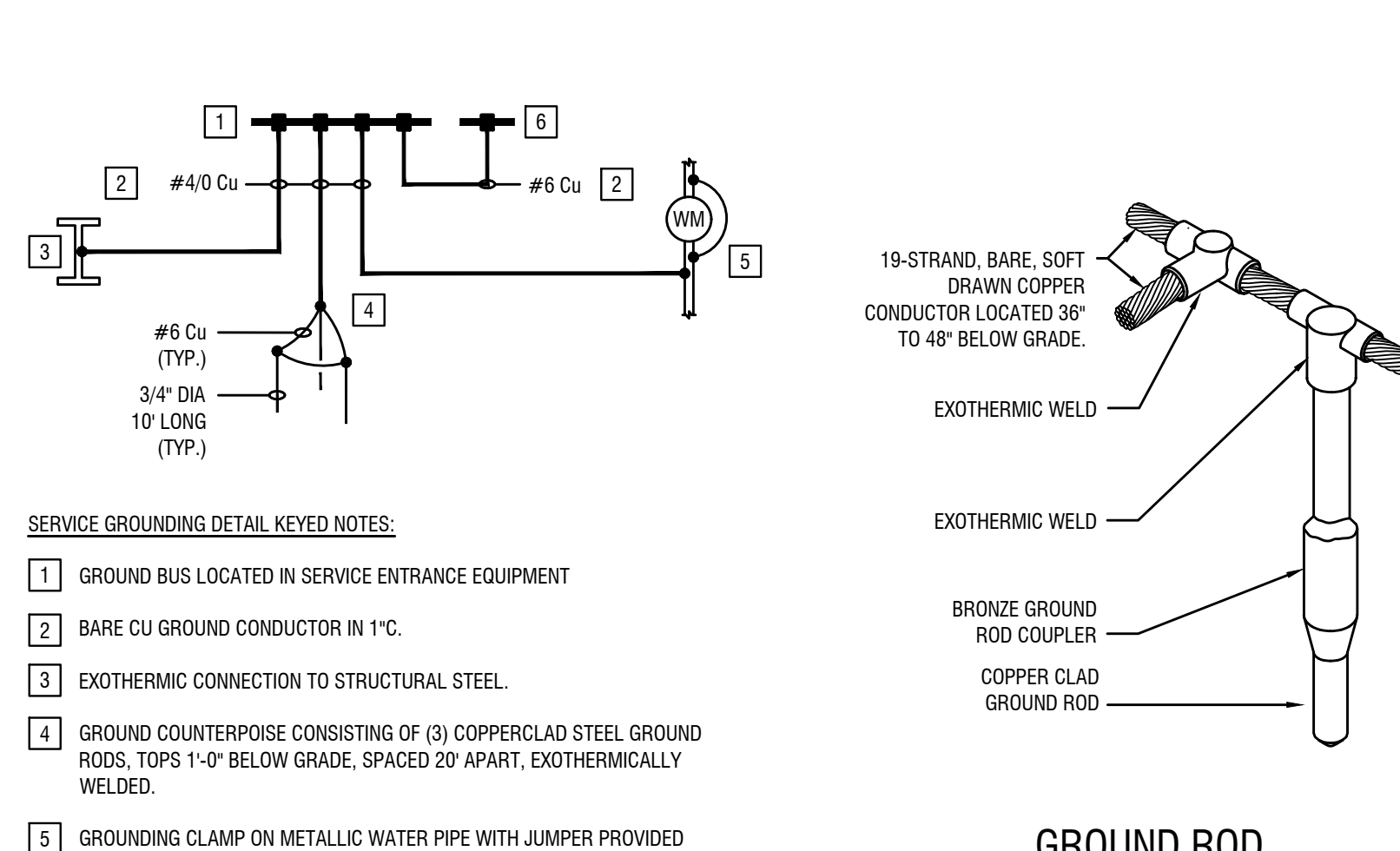
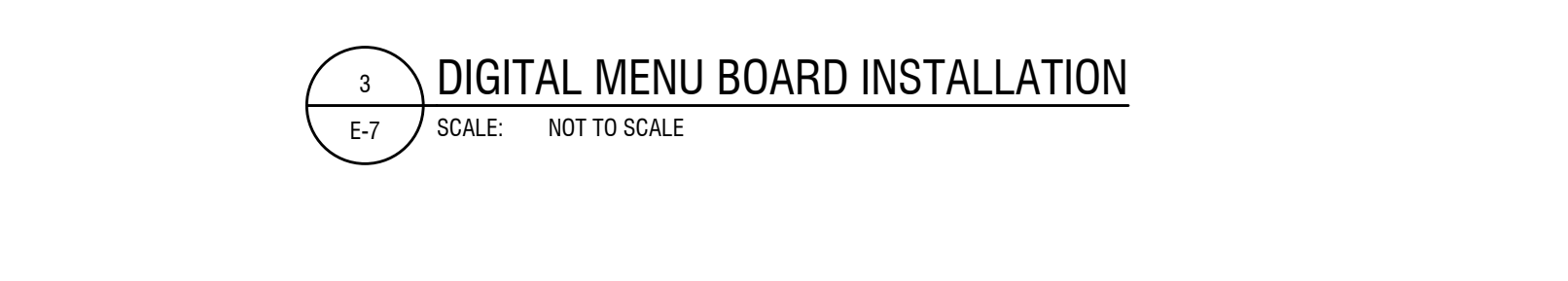
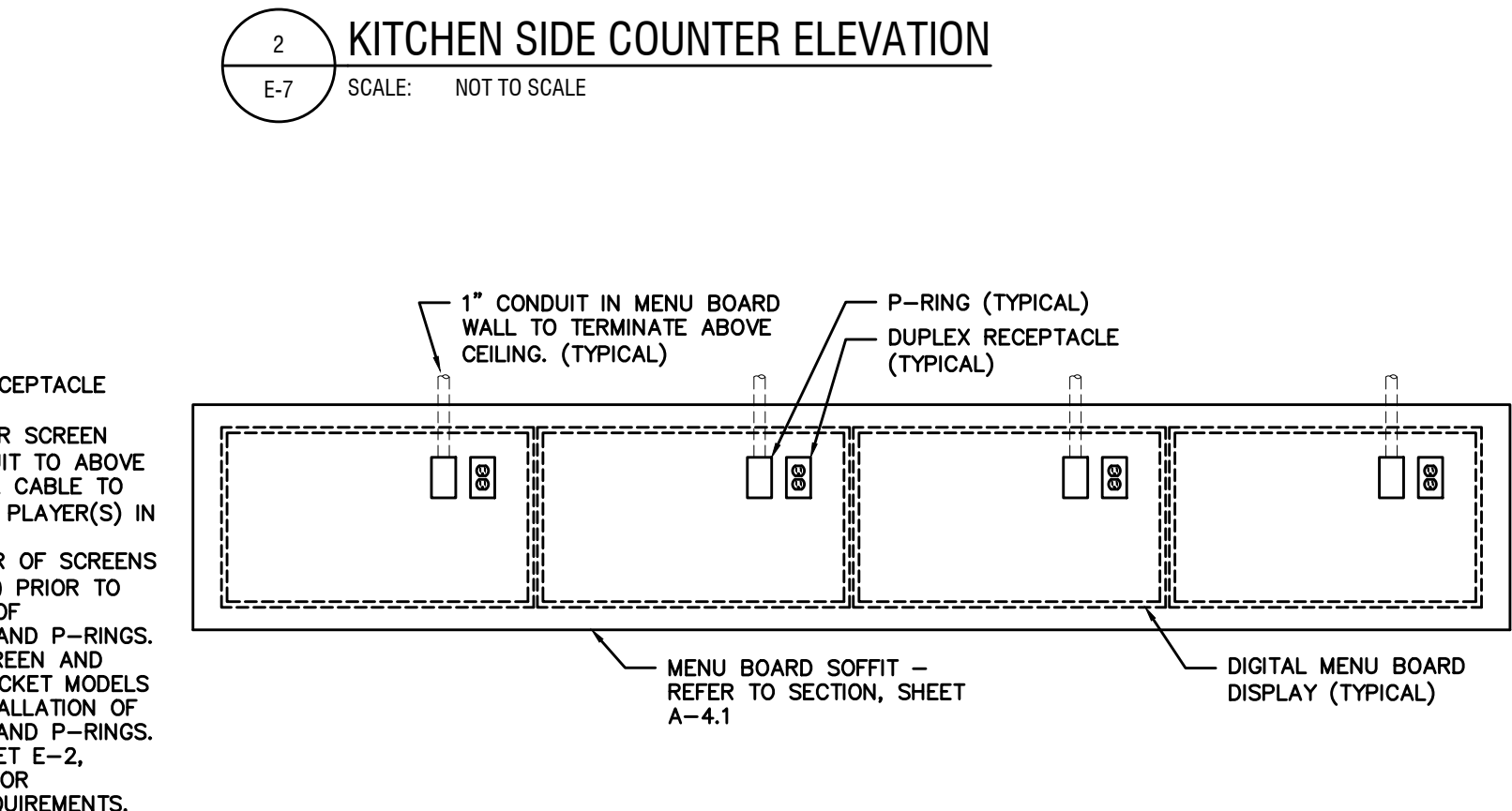
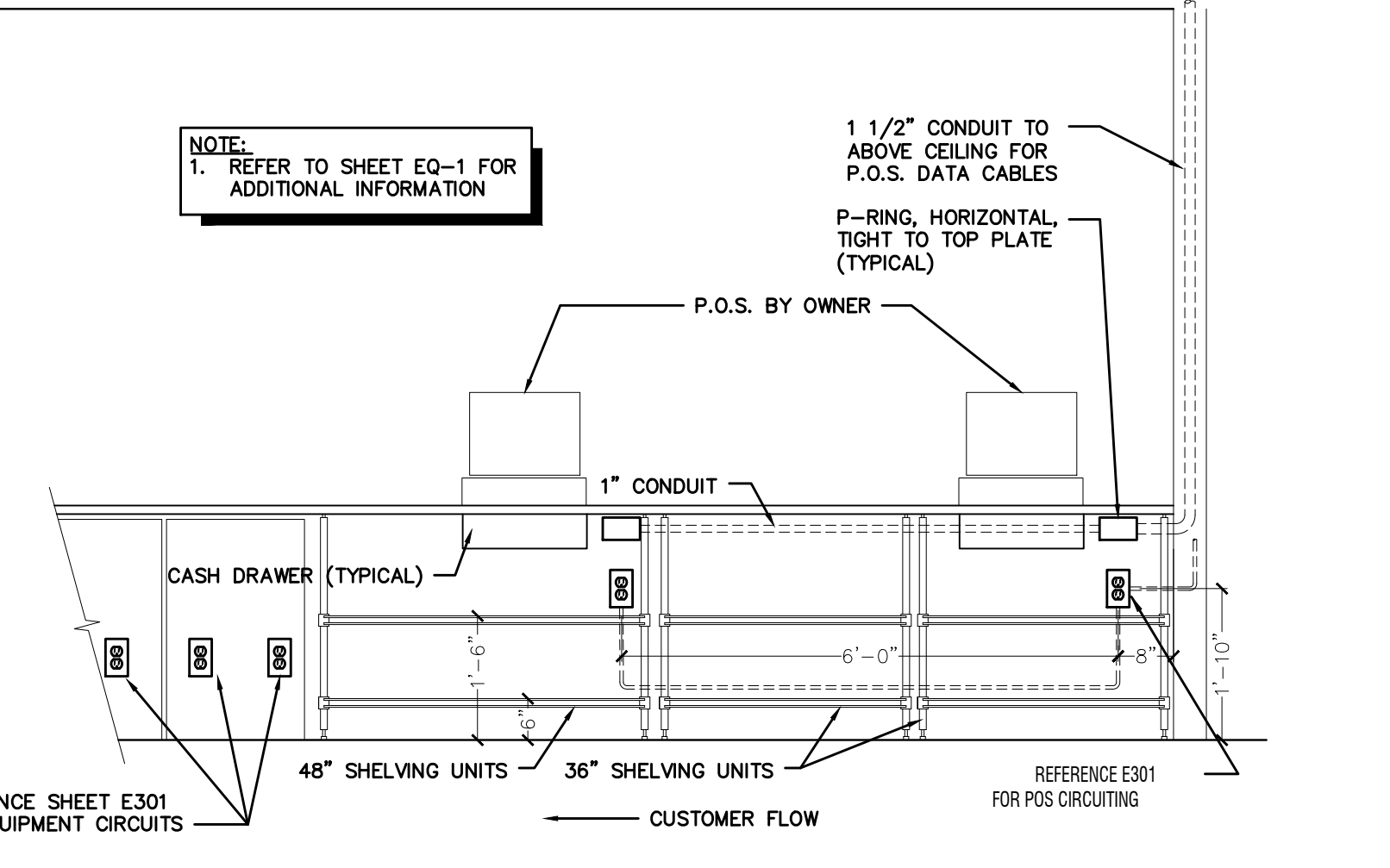
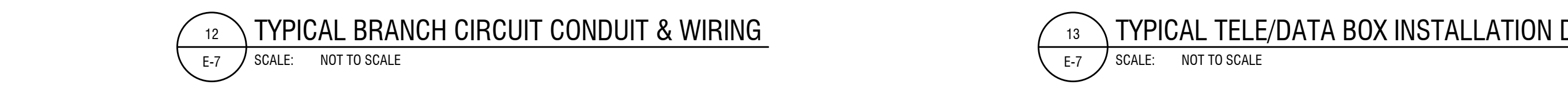
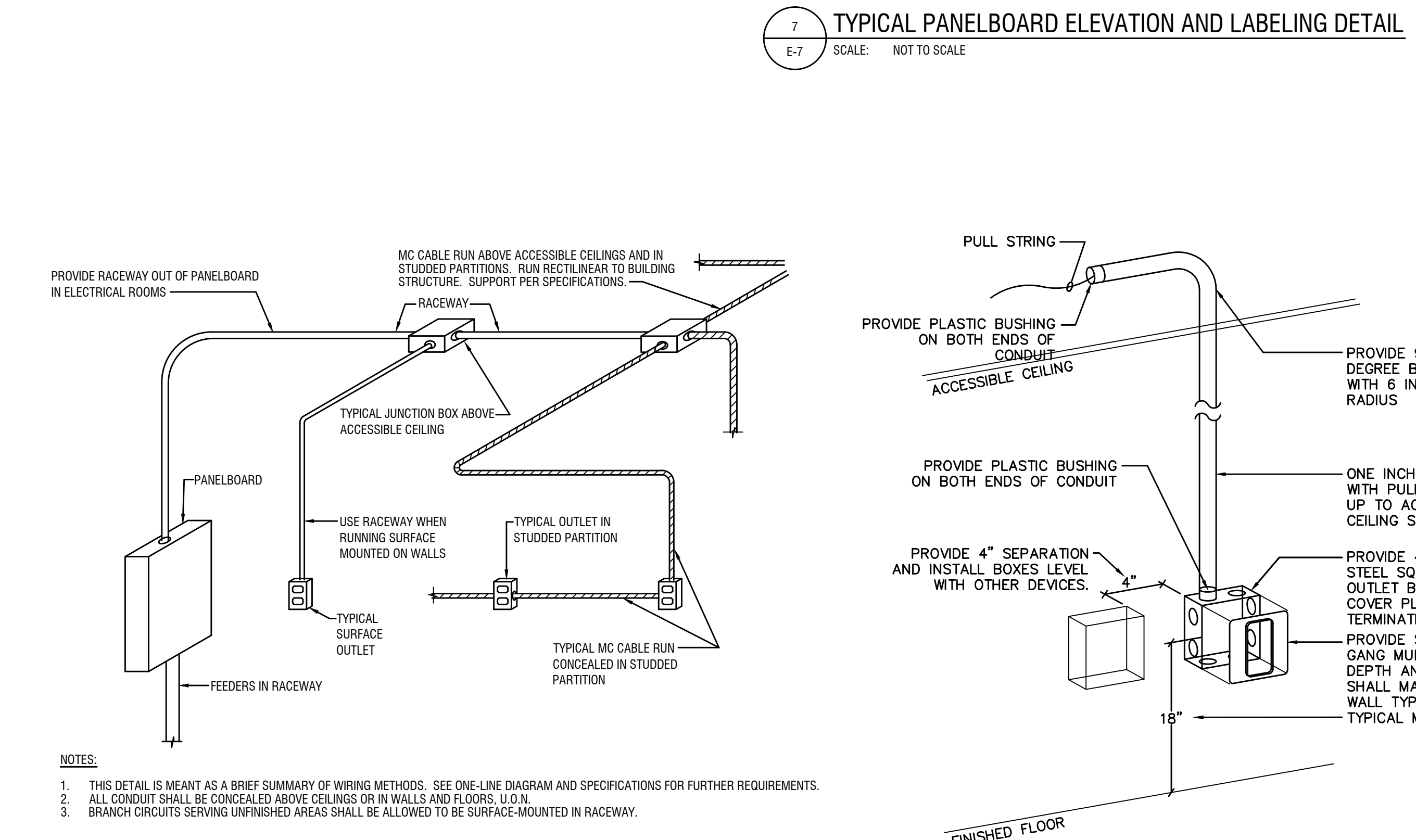
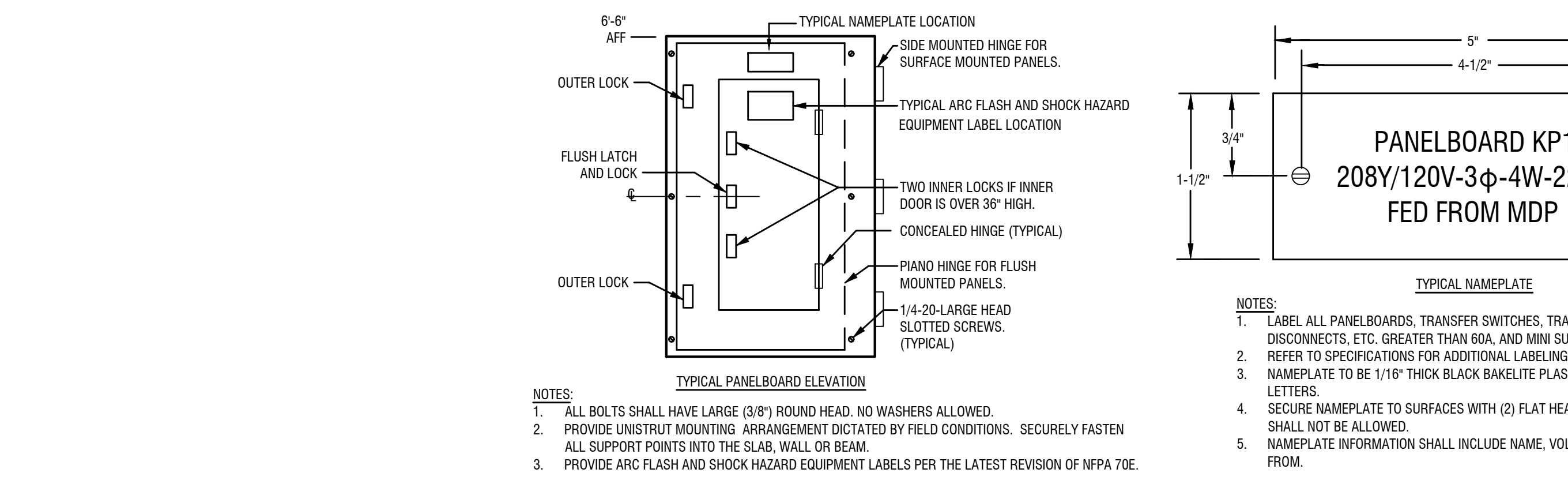
PROJECT # 220046  
GARDEN EXT. / GARDEN INT.  
**ONVO TRAVEL PLAZA**  
**ONVO BURGER KING**  
128 Riverside Dr. Fultonville, NY 12072

BK PANELBOARD SCHEDULES





**OFFICE ELEVATION NOTE:**  
E.C. SHALL COORDINATE ALL EQUIPMENT, RECEPTABLES, TELEPHONE DATA OUTLETS, ETC WITH NEW PROPOSED OFFICE LAYOUT. OWNER AND BURGER KING REPRESENTATIVE PRIOR TO ROUGH-IN. DETAILS SHOWN ARE FROM PROTOTYPE AND CAN DIFFER FROM NEW LAYOUT.



DATE: JULY, 27 2022  
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NO. DATE  
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ARCH: STATE OF NEW YORK  
REGISTERED PROFESSIONAL ENGINEER  
RYAN J. MANN, P.E.  
NY PROFESSIONAL ENGINEER  
LIC. NO. 092789-1  
PROJECT # 22046  
GARDEN EXT / GARDEN INT.  
ONVO TRAVEL PLAZA  
ONVO / BURGER KING  
128 Riverside Dr. Fultonville, NY 12072  
ELECTRICAL DETAILS  
E-7







**PLUMBING ABBREVIATIONS**

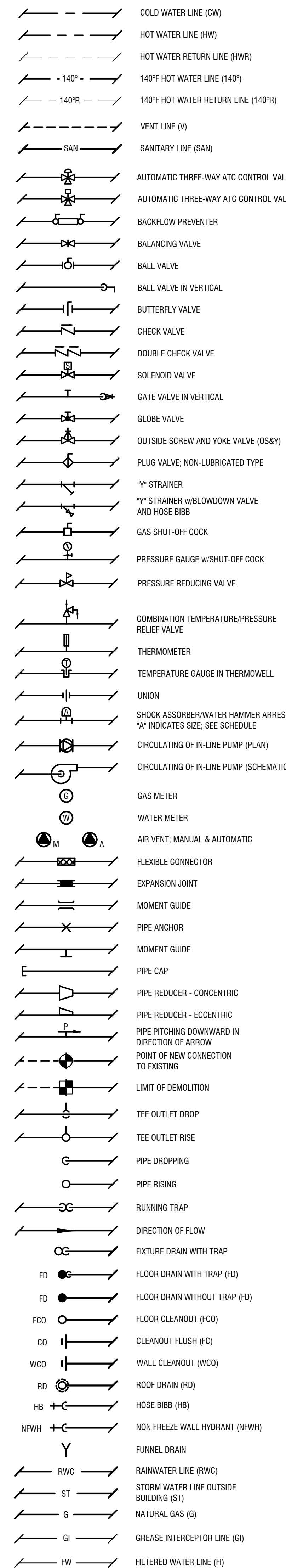
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
ABV CLG	ABOVE CEILING
AD	AREA DRAIN
AFB	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
BLW	BELOW
BFB	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BACKFLOW PREVENTER
BJJ	BOTTOM OF JOIST
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BTUB	BATHTUB
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACKWATER VALVE
CB	CATCH BASIN
CD	CONDENSATE DRAIN
CFH	CUBIC FEET PER HOUR
CFP	CAST IRON PIPE
CLG	CEILING
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECT
CONT	CONTINUATION
CS	COUNTERTOP SINK
CW	DOMESTIC COLD WATER
C	CENTER LINE
DEPT	DEPARTMENT
DIP	DUCTILE IRON PIPE
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DN	DOWN
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
EWV	ELECTRICAL WATER COOLER
EX	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATIONS
FHC	FIRE HOSE CABINET
FL	FLOOR
GC	GENERAL CONTRACTOR
GH	GROUND HYDRANT
GPM	GALLON PER MINUTE
GW	GRAY WATER
GW-IR	GRAY WATER-IRRIGATION
H	HANDICAPPED
HB	HOSE BIBB
HE	HOSE END
HC	HEATING CONTRACTOR
HP	HORSEPOWER
HW	DOMESTIC HOT WATER
HWH	HOT WATER HEATER

**HWR DOMESTIC HOT WATER RETURN**

ID	INSIDE DIAMETER
INV	INVERT
IW	INDIRECT WASTE
KW	KILOWATT
LAV	LAVATORY
LM	LAUNDRY MACHINE
MAX	MAXIMUM
MB	MOP BASIN
MBH	THOUSAND BTUS PER HOUR
MC	MECHANICAL CONTRACTOR
MH	MANHOLE
MIN	MINIMUM
N/C	NORMALLY CLOSED
NFBH	NON-FREEZE HOSE BIBB
NIC	NOT IN CONTRACT
N/O	NORMALLY OPEN
OD	OVERFLOW DRAIN
OSD	OPEN SITE DRAIN
OSKY	OUTSIDE STEM AND YOKE
PC	PLUMBING CONTRACTOR
PD	PUMPED DISCHARGE LINE
PRV	PRESSURE REDUCING VALVE
PSI	PER SQUARE INCH
PVC	POLY VINYL CHLORIDE
R	RISER
RD	ROOF DRAIN
RL	RAINWATER LEADER
RPM	REVOLUTION PER MINUTE
RWC	RAINWATER CONDUCTOR
S	SOIL LINE/STACK
SAN	SANITARY
SD	SHOWER DRAIN
SH	SHOWER
SOV	SHUT-OFF VALVE
SP	SPRINKLER
SS	SERVICE SINK
SW	STORM WATER
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TYP	TYPICAL
UR	URINAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE
w/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WALL HYDRANT

**PLUMBING LEGEND**

NOT ALL SYMBOLS ARE USED ON DRAWINGS



**GRAPHIC CONVENTIONS**

	EQUIPMENT TAG, TOP INDICATES EQUIPMENT DESIGNATION, BOTTOM INDICATES EQUIPMENT NUMBER
	PLAN CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
	ELEVATION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
	SECTION CALLOUT, TOP INDICATES CALLOUT REFERENCE NUMBER, BOTTOM INDICATES SHEET NUMBER
	REVISION AREA
	REVISION TAG
	CONSTRUCTION KEYED NOTE TAG
	DEMOLITION KEYED NOTE TAG
	POINT OF CONNECTION BETWEEN NEW AND EXISTING
	LIMIT OF DEMOLITION BETWEEN EXISTING TO REMAIN AND TO BE REMOVED

**COORDINATION NOTE**

THE HVAC, PLUMBING, AND ELECTRICAL CONTRACTORS SHALL BE AWARE THAT THE CEILING HEIGHTS, SOFFITS AND SPACE CONDITIONS ON THIS PROJECT ARE CRITICAL AND SPACE ALLOCATION MUST BE COORDINATED BETWEEN ALL TRADES AND MAINTAINED. EACH CONTRACTOR OR TRADE SHALL REFER TO THE STRUCTURAL AND ARCHITECTURAL DRAWINGS IN ADDITION TO THE HVAC, PLUMBING, AND ELECTRICAL DRAWINGS TO DETERMINE ACCEPTABLE LAYERING OF ALL EQUIPMENT.

**PLUMBING GENERAL NOTES**

- GENERAL PLUMBING NOTES:
- PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEM AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
  - THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF WORK TO BE PERFORMED. THE DRAWINGS ARE NOT INTENDED TO SHOW EXACT PIPE FITTING, VALVE OR APPURTENANCE REQUIRED FOR A COMPLETE INSTALLATION. DO NOT SCALE LOCATION DIMENSIONS FROM THESE DRAWINGS. DRAWINGS ARE NOT TO BE SCALED FOR THE ACCURATE CUTTING OF PIPE OR ITS EXACT LOCATION. BEFORE ANY PIPING IS INSTALLED, COORDINATE WITH ALL OTHER CONTRACTORS IN ORDER TO ESTABLISH THE LOCATION OF THEIR PIPING, CONDUIT, DUCTWORK, GRILLES, FOUNDATIONS, STRUCTURAL STEEL, LIGHTING FIXTURES AND OTHER EQUIPMENT SO AS TO AVOID INTERFERENCE. FAILURE TO COORDINATE SHALL NOT RESULT IN ANY ADDITIONAL EXPENSES TO THE OWNER AND ENGINEER.
  - THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AND VERIFYING ALL CONDITIONS AND DIMENSIONS AND FOR COORDINATION OF THEIR WORK WITH THAT OF ALL OTHER TRADES. PERFORM WORK IN A NEAT, ORDERLY MANNER AND WITH THE LEAST POSSIBLE INTERFERENCES.
  - WORK SHALL CONFORM TO OR MEET THE REQUIREMENTS OF THE MOST CURRENT ADOPTED NEW YORK EDITION OF:
    - A. PLUMBING CODE OF NEW YORK STATE, 2020 NYSFC
    - B. ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, 2020 NYSECC
    - C. FUEL GAS CODE OF NEW YORK STATE, 2020 NYSGC
    - D. BUILDING CODE OF NEW YORK STATE, 2020 NYSBC
    - E. NATIONAL ELECTRIC CODE (NFPA 70); 2017 NFPA 70
    - F. ALL FEDERAL, STATE AND LOCAL CODES AND ORDINANCES
  - CONTRACTOR SHALL CONFORM TO NSF 61 (605.4, 606.5, 702.1, 702.2, 703.3) FOR THE WATER DISTRIBUTION PIPING AND SANITARY DRAINAGE.
  - VALVES AND FITTINGS SHALL HAVE A MAXIMUM LEAD CONTENT OF 8% LEAD. LEAD FREE SOLDER THAT CONFORMS ASTM B32 AND FLUX THAT CONFORMS TO ASTM B 828. LEAD FREE SHALL MEAN A CHEMICAL COMPOSITION EQUAL TO OR LESS THAN 0.2% LEAD.
  - CONTRACTOR SHALL PROTECT THE PIPING FROM STRESS AND STRAIN. CONTRACTOR SHALL PROTECT THE IN-SLAB PIPING FROM CORROSION AND STRESS/STRAIN TO CONFORM TO THE PLUMBING CODE. REFER TO PIPING SUPPORT SPACING SCHEDULE OF THE CODE.
  - ALL MATERIALS, EQUIPMENT AND DEVICES SHALL, AS A MINIMUM, MEET THE REQUIREMENTS OF UL WHERE UL REQUIREMENTS ARE ESTABLISHED FOR THOSE ITEMS. ALL ITEMS SHALL BE CLASSIFIED BY UL AS SUITABLE FOR THE PURPOSE OF THE CODE.
  - ALL HOT WATER HEATERS TO CONFORM TO REQUIREMENTS OF ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE - NYSECC (SECTION C404).
  - WHERE PIPES PENETRATE FIRE RATED OR SMOKE RATED BARRIERS (WALLS, FLOORS AND CEILINGS), SEAL PENETRATIONS IN ACCORDANCE WITH NFPA 90A WITH UL LISTED FIRE STOPPING SYSTEM.
  - REFER TO SCHEMATIC DIAGRAMS FOR ALL PIPE SIZES AND PIPING LOCATIONS NOT SHOWN ON THE PLANS UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL WASTE PIPING BELOW GRADE SHALL BE A MINIMUM OF 2" IN SIZE.
  - INSTALL CLEANOUTS (TEST TEES) AT THE BASE OF ALL SOIL STACKS AND RAINWATER CONDUCTORS.
  - COORDINATE LOCATION OF PIPING ABOVE CEILING WITH ELECTRICAL PANELS BY ELECTRICAL CONTRACTOR. DO NOT INSTALL PIPING IN DEDICATED SPACE FOR ELECTRIC PANEL.
  - ANY REFERENCE TO "GC" OR "GENERAL CONTRACTOR" SHALL MEAN THE APPROPRIATE GENERAL TRADES CONTRACTOR, AS DEFINED IN DIVISION 1. THIS REFERENCE IS NOT TO OUTLINE WORK AMONG GENERAL TRADES CONTRACTOR, BUT TO NOTE WHAT WORK IS NOT A PART OF THE PLUMBING CONTRACT.
  - ALL EQUIPMENT AND MATERIALS INCORPORATED IN THIS WORK SHALL BE NEW UNLESS NOTED OTHERWISE AND SHALL BE CURRENT PRODUCTS BY MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS.
  - ALL FACTORY APPLIED COATINGS AND FINISHES SHALL BE PROVIDED WITHOUT RUST, SCRATCHES OR DENTS.
  - CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, APPROVALS AND INSPECTIONS AS REQUIRED TO COMPLETE INSTALLATIONS INDICATED ON THESE DRAWINGS.
  - PROVIDE OWNER WITH CERTIFICATES OF FINAL INSPECTION AND ACCEPTANCE FROM THE AUTHORITY HAVING JURISDICTION.
  - PROVIDE OWNER WITH TWO (2) SETS OF O&M (OPERATING AND MAINTENANCE) MANUALS WHICH SHALL INCLUDE:
    - A. ALL PRODUCT, EQUIPMENT AND FIXTURE DESCRIPTIONS AND SUBMITTAL DATA INCLUDING PARTS ORDERING INFORMATION.
    - B. INSTALLATION INSTRUCTIONS.
    - C. OPERATING AND MAINTENANCE INSTRUCTIONS.
    - D. WARRANTIES AND GUARANTEES.
    - E. PROVIDE ALL DATA IN A BOUND 8-1/2"x11" 3-RING BINDER FOR TEST AND BALANCE REPORTS.

- COORDINATION REQUIREMENTS
- COORDINATE LOCATIONS AND INSTALLATION OF PLUMBING WORK WITH OTHER TRADES TO AVOID CONFLICTS AND INTERFERENCES. MODIFICATIONS DUE TO FIELD CONDITIONS SHALL BE COMPLETELY RESOLVED BY CONTRACTOR IN ACCORDANCE WITH RECOMMENDATIONS OF THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR.
  - COORDINATE FINAL LOCATIONS OF PLUMBING EQUIPMENT WITH ARCHITECTURAL PLANS.
  - PROVIDE TO THE CONSTRUCTION MANAGER, GENERAL CONTRACTOR AND ALL OTHER TRADES DIMENSIONED LOCATIONS AND SIZES OF ALL REQUIRED FLOOR, WALL AND ROOF OPENINGS. PROVIDE FOR INSTALLATION OF SLEEVES AND FRAMING AS REQUIRED.
- PLUMBING INSTALLATION REQUIREMENTS:
- INSTALL ALL EQUIPMENT AND MATERIAL IN ACCORDANCE WITH MANUFACTURER PRINTED INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN CLEARANCES FOR CLEARANCE ACCESS TO MAINTAIN SERVICE EQUIPMENT, VALVES AND CONTROLS.
  - ALL INSTALLATION AND WORK SHALL BE PERFORMED IN A NEAT, WORKMANLIKE MANNER SO AS NOT TO DAMAGE ANY SURFACES, EQUIPMENT OR MATERIALS.
  - ALL EQUIPMENT AND PIPING SHALL BE SUPPORTED IN AN APPROVED MANNER FROM THE BUILDING STRUCTURE AND INCLUDE HANGERS AND RESTRAINTS IN ACCORDANCE WITH ALL APPLICABLE CODES AND SEISMIC RESTRAINT REQUIREMENTS. PLUMBING CONTRACTOR SHALL PROVIDE ALL ROOF OPENINGS, FLASHING, AUXILIARY STEEL, THREADED RODS, ETC., TO SUPPORT EQUIPMENT ON OR FROM THE STRUCTURE.
  - PROVIDE PIPE ESCUTCHEONS AT ALL EXPOSED PENETRATIONS OF FLOORS, WALLS AND CEILINGS.
  - PROVIDE LINK-SEALS OR EQUAL WHEN PIPING PENETRATES AN EXTERIOR WALL OR FLOOR SLAB. INSTALL SLEEVES OR CORE DRILL AT PROPER DIAMETER TO ASSURE WEATHERPROOF/MOISTURE PROOF INSTALLATION.
  - THE MANUFACTURERS AND MODEL NUMBERS LISTED ON THE SCHEDULES AND DETAILS ARE THE BASIS OF DESIGN FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR REFERENCE PURPOSE ONLY AND IS NOT INTENDED TO PRECLUDE SUBMITTAL OF OTHER MANUFACTURERS OF EQUAL QUALITY SUBJECT TO APPROVAL BY THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR.
  - PIPE SIZES ARE IN INCHES UNLESS NOTED OTHERWISE.
  - SLOPE SANITARY SEWER PIPING A MINIMUM OF 1/4" PER FOOT FOR PIPE 2" AND SMALLER AND 1/8" PER FOOT FOR PIPE LARGER THAN 2".
  - RUNOUTS TO EQUIPMENT SHALL BE SIZED AS INDICATED AND INCREASED OR REDUCED AT POINT OF FINAL CONNECTION TO EQUIPMENT.
  - ALL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION IN ACCORDANCE WITH APPLICABLE CODE OR REGULATION.
  - PLUMBING CONTRACTOR SHALL SEAL ALL PIPE PENETRATIONS THROUGH WALLS, FLOORS AND ROOF WATERTIGHT. SEAL ALL PIPE PENETRATIONS THROUGH FIRE-RATED PARTITIONS WITH UL RATED FIRE RETARDANT CAULKING COMPOUND.
  - ALL CHANGES IN PIPE DIRECTION MUST COMPLY WITH THE FITTING INDICATED IN TABLE 700.3, PLUMBING CODE OF NEW YORK STATE.

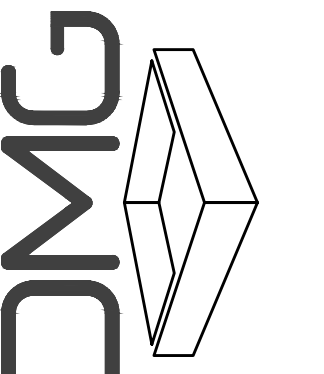
- PIPING MATERIALS:
- REFER TO NYSFC 2020 FOR ALL APPLICABLE ASTM NUMBER REQUIREMENTS AS WELL AS PIPING SUPPORT REQUIREMENTS. FOR ALL SYSTEMS AND MATERIALS.
  - ABOVE GROUND DOMESTIC WATER MAY BE TYPE K COPPER WITH SOLDERED JOINTS AND FITTINGS. SCHEDULE 40 CPVC WITH CHEMICAL WELD JOINTS AND FITTINGS OR PEX WITH ASSOCIATED COMPRESSION JOINTS AND FITTINGS. PEX SYSTEMS SHALL BE SUPPORTED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND PLUMBING CODE OF NEW YORK STATE (NYSFC). DO NOT INSTALL PLASTIC PIPING SYSTEMS IN RETURN AIR PLENUMS. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
  - UNDERGROUND DOMESTIC WATER SHALL BE DUCTILE IRON, TYPE K COPPER WITH SOLDERED JOINTS AND FITTINGS OR HOPE WITH FUSION WELDED JOINTS AND FITTINGS. SERVICE PIPING MUST MEET THE UTILITY PROVIDERS REQUIREMENTS.
  - ABOVE GROUND GAS PIPING SHALL BE SCHEDULE 40 STEEL THREADED AND COUPLED, WELDED OR FLANGED LISTED FLEXIBLE GAS PIPING IS ALLOWABLE FOR FINAL CONNECTIONS TO EQUIPMENT AND APPLIANCES UNLESS OTHERWISE NOTED. DO NOT INSTALL THREADED OR FLANGED FITTINGS IN WALLS, BELOW GROUND OR ANY OTHER NON ACCESSIBLE SPACES.
  - UNDERGROUND GAS PIPING SHALL BE SCHEDULE 40 WELDED, OR HOPE FUSION WELDED. FLEXIBLE GAS PIPING IS ALLOWABLE IN USED IN PVC CONDUIT.
  - ABOVE OR BELOW GROUND SANITARY AND VENT PIPING MAY BE SCHEDULE 40 SOLID CORE PVC OR STANDARD WEIGHT CAST IRON SOIL PIPE. JOINTS AND FITTINGS MAY BE HUBLESS, HUB AND SPOUT OR CHEMICAL WELDED. DO NOT INSTALL PLASTIC PIPING IN RETURN AIR PLENUMS. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
  - PRESSURIZED OR PUMPED SANITARY LINES SHALL BE CPVC OR TYPE L COPPER WITH SOLDERED JOINTS AND FITTINGS WHEN PLASTIC IS NOT PERMITTED.

DATE: JULY, 27, 2022
CHECKED BY: RW
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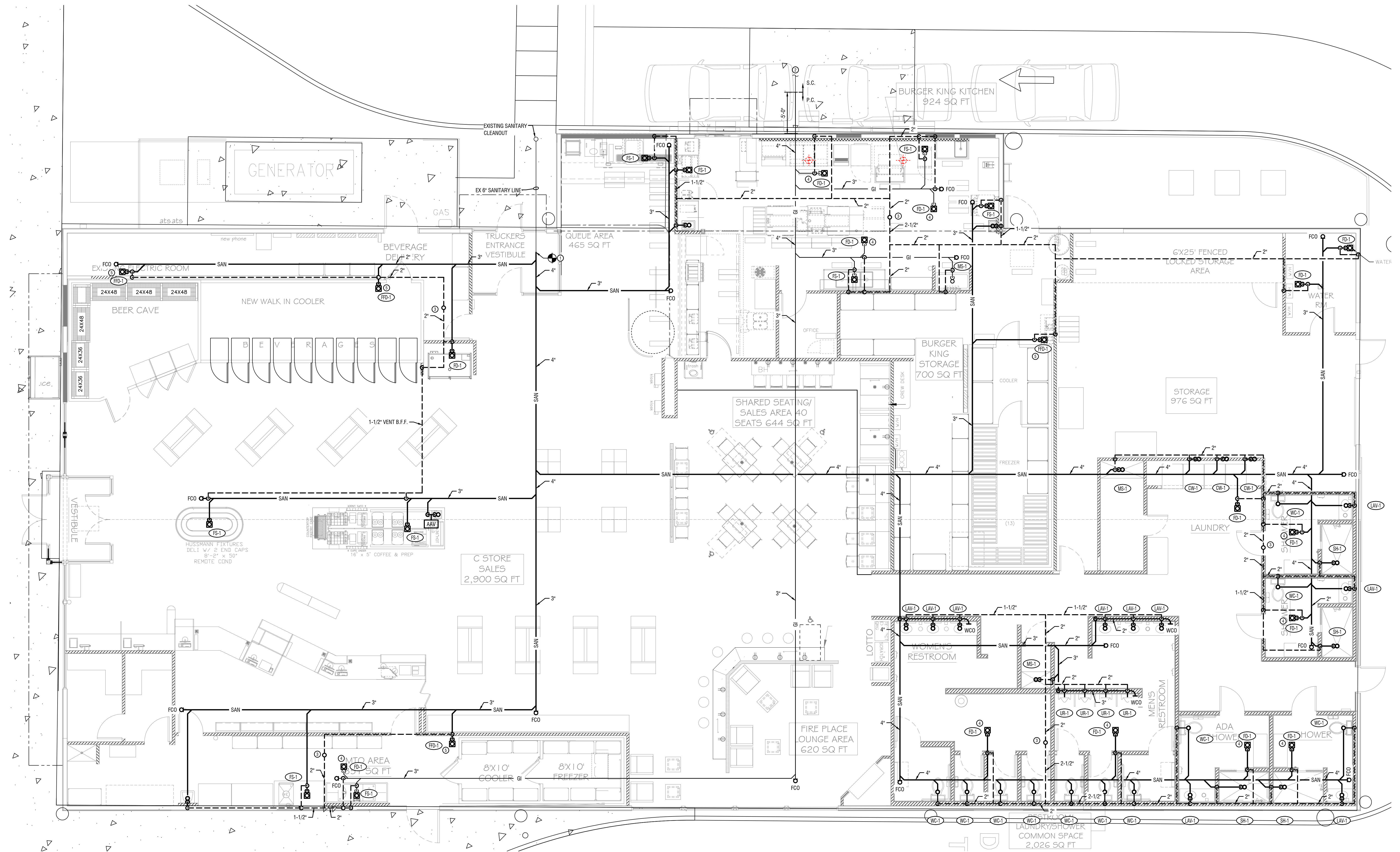
ARCH: **WRA**  
Miller Rosentel Associates, Inc.  
188 S. Union St. Wilkes Barre, PA 18701, 570-822-4411, www.mra-arch.com



PROJECT # 22046  
GARDEN EXT. / GARDEN INT.

**ONVO TRAVEL PLAZA**  
**BURGER KING**  
128 Riverside Dr. Fultonville, NY 12072





1 PLUMBING SANITARY & VENT PLAN  
 P-2 SCALE: 3/16" = 1'-0"

**KEYED CONSTRUCTION NOTES**

1. CONNECT NEW SANITARY MAIN TO EXISTING LINE BELOW SLAB. FIELD VERIFY EXISTING LOCATION, SIZE, CONDITION, INVERT, ETC. PRIOR TO CONSTRUCTION. EXISTING SANITARY LINE TO BE SCOPED TO DETERMINE THAT LINE IS DEEP ENOUGH TO ACCEPT NEW SANITARY MAIN AND IN ADEQUATE CONDITION TO HANDLE NEW LOAD. DESCALE AND REPAIR/REPLACE ANY PIPING AS REQUIRED.
2. GREASE LINE OUT TO SITE. P.C. SHALL PROVIDE PIPING TO 5' OUTSIDE BUILDING FOUNDATION. SITE CONTRACTOR SHALL CONNECT TO SITE GREASE INTERCEPTOR (PROVIDED BY OTHERS) AT EXTERIOR OF BUILDING. COORDINATE OUTLET LOCATION AND INVERT WITH SITE/CIVIL PLANS. PROVIDE ADEQUATE COVER OVER INVERT OF PIPING BELOW LOCAL FROST LINE TO PREVENT FROM FREEZING. VERIFY GREASE INTERCEPTOR IS ADEQUATELY SIZED TO ACCOMMODATE NEW DRAINAGE CONNECTIONS IN ACCORDANCE WITH 2015 IPC SECTION 1003.3.
3. 3" VENT STACK UP. 4" VENT THRU ROOF. COORDINATE ROOF PENETRATION LOCATION TO MAINTAIN 10' CLEARANCE AWAY FROM ANY INTAKES OF MECHANICAL ROOF TOP MOUNTED EQUIPMENT ABOVE.
4. GENERAL AREA FLOOR DRAIN FOR WASH DOWN CLEANING PURPOSES. COORDINATE FINAL LOCATION/QUANTITIES WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
5. FUNNEL FLOOR DRAIN TO RECEIVE CONDENSATE DRAINAGE FROM FREEZER/COOLERS. COORDINATE FINAL CONDENSATE DISCHARGE LOCATIONS WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION. PROVIDE HEAT TRACED INDIRECT PIPING FROM COOLER/FREEZER EVAPORATORS AS REQUIRED.

**GENERAL CONSTRUCTION NOTES:**

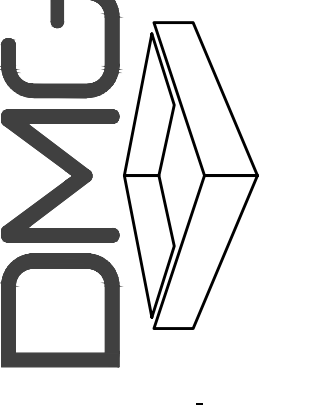
1. ALL DRAINAGE PIPING 2-1/2" DIAMETER AND SMALLER TO BE PITCHED AT MINIMUM OF 1/4" PER FOOT. 3" TO 6" DIAMETER AT 1/8" PER FOOT, AND 8" AND LARGER AT 1/16" PER FOOT.
2. ALL SANITARY LINES SHOWN ON THIS FLOOR PLAN TO BE INSTALLED BELOW FLOOR LEVEL AND VENT PIPING ABOVE CEILING LEVEL, UNLESS OTHERWISE NOTED.
3. SANITARY & VENT PIPE RISE/DROPS SHALL BE CONCEALED, UNLESS OTHERWISE DIRECTED BY THE OWNER/ARCHITECT. COORDINATE WALL DIMENSIONS, ANY REQUIRED NEW WALL FURBITS, PIPE CHASES, ETC. WITH OWNER, ARCHITECT, AND GC PRIOR TO CONSTRUCTION.
4. COORDINATE ALL FOOD SERVICE PLUMBING REQUIREMENTS WITH KITCHEN VENDOR/ARCHITECT DRAWINGS AND EQUIPMENT OUTLET LOCATIONS PRIOR TO CONSTRUCTION. INSTALL ADDITIONAL FLOOR DRAIN/SINKS AS REQUIRED TO PROVIDE A FULLY OPERATIONAL KITCHEN AREA WITH PROPER DRAINAGE.
5. COORDINATE ALL INDIRECT WASTE CONNECTIONS AND PIPING LOCATIONS WITH KITCHEN VENDOR/ARCHITECT PRIOR TO CONSTRUCTION. INSTALL ALL INDIRECT PIPING FROM EQUIPMENT TO FLOOR DRAIN/SINKS AS REQUIRED.
6. CONTRACTOR SHALL VERIFY ADEQUATE WALL/CHASE SPACE IS BEING PROVIDED BEHIND ALL WALL HUNG PLUMBING FIXTURES FOR PROPER INSTALLATION OF FIXTURE CARRIERS PRIOR TO CONSTRUCTION.

DATE: JULY 27 2022
CHECKED BY: RW
REVISION
NO. DATE



OWNER:  
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 2227 Scranton Carbondale Hwy  
 Scranton, PA 18508

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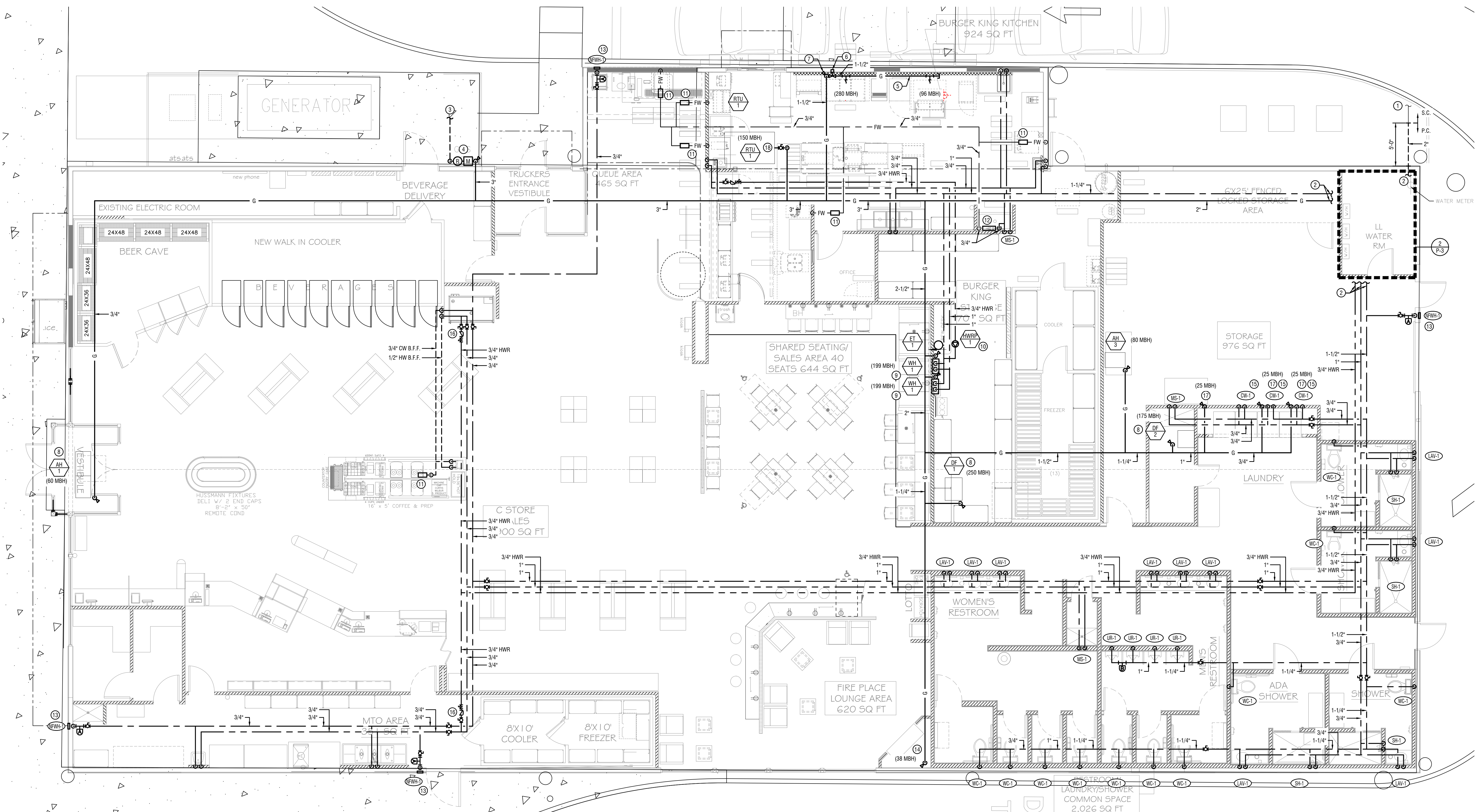
ARCH: **WRA**  
 ENG: **Miller Rosentel Associates, Inc.**  
 188 S. Union St. Wilkes Barre, PA 18701, 570-822-1411, www.mra-arch.com



PROJECT # 220046

GARDEN EXT. / GARDEN INT.  
**ONVO TRAVEL PLAZA**  
**ONVO BURGER KING**  
 128 Riverside Dr. Fultonville, NY 12072





**KEYED CONSTRUCTION NOTES**

- DOMESTIC WATER LINE IN FROM SITE PUBLIC WATER SUPPLY, P.C. SHALL PROVIDE PIPING TO 5' OUTSIDE BUILDING FOUNDATION. SITE CONTRACTOR SHALL CONNECT TO UTILITY. COORDINATE LOCATION, SIZE, AND INVERT WITH SITE/CIVIL PLANS. PROVIDE ADEQUATE COVER OVER INVERT OF PIPE TO PREVENT FROM FREEZING.
- SEE ENLARGED PLANS FOR CONTINUATION OF PLUMBING LINES.
- NATURAL GAS LINE IN FROM SITE. P.C. SHALL COORDINATE ALL NEW STREET CONNECTION DETAILS AND INSTALLATION REQUIREMENTS WITH OWNER, GC, AND LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.
- GAS METER AND REGULATOR SET (1 SET @ UNDER 2 PSI DISCHARGE) FURNISHED BY UTILITY COMPANY AND INSTALLED BY P.C. SEE DETAIL FOR MORE INFORMATION. COORDINATE NATURAL GAS METER LOCATION AND INCOMING SERVICE PRESSURE WITH OWNER, ARCHITECT, AND LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION. RISE UP FROM OUTLET OF METER TO ABOVE FIRST FLOOR CEILING HEIGHT.
- GAS HEADER BEHIND COOKING BATTERY. CONNECT TO KITCHEN EQUIPMENT WITH BREAKAWAY FLEX CONNECTORS.
- INSTALL EMERGENCY GAS SHUT OFF VALVE (FURNISHED BY FIRE SUPPRESSION CONTRACTOR) SERVING HOODED COOKING EQUIPMENT.
- PROVIDE SHUT OFF VALVE UP STREAM OF EMERGENCY GAS VALVE ON DROP TO HEADER.
- APPROXIMATE LOCATION OF NATURAL GAS FIRED MECHANICAL UNITS ABOVE CEILING LEVEL. PROVIDE ISOLATION VALVE PRIOR TO FINAL GAS CONNECTION. COORDINATE FINAL LOCATION AND GAS REQUIREMENTS WITH MC PRIOR TO CONSTRUCTION.
- CONNECT CW INLET, HW OUTLET, AND NATURAL GAS INLET TO WH-1. PROVIDE EXPANSION TANK ON CW INLET. PROVIDE FLUE AND INTAKE PIPING FROM WH UP THRU ROOF. TERMINATE WITH CONCENTRIC FITTING AND MAINTAIN A MINIMUM OF 36" FROM ROOF LINE TO POINT OF FLUE DISCHARGE. PROVIDE MATERIALS AND SIZE LINES AS INDICATED WITHIN THE MANUFACTURERS WRITTEN INSTRUCTIONS. SEE DETAIL FOR MORE INFORMATION.
- PROVIDE HOT WATER RECIRCULATION PUMP ON HW LINE. SUPPORT PUMP FROM STRUCTURE ABOVE OR ALONG WALL. INSTALL IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS. SEE DETAIL FOR MORE INFORMATION.
- PROVIDE POINT OF USE BACKFLOW PREVENTERS ON KITCHEN EQUIPMENT, COFFEE BREWERS, ICE MACHINE, ETC. WATER CONNECTIONS (TYPICAL).
- CONNECT CW INLET AND FW OUTLET TO WATER FILTER SYSTEM (PROVIDED BY OTHERS). COORDINATE LOCATION AND CONNECTION REQUIREMENTS WITH OWNER AND KITCHEN EQUIPMENT VENDOR PRIOR TO CONSTRUCTION.
- NON-FREEZE WALL HYDRANT. COORDINATE WITH ACTUAL WALL DIMENSIONS PRIOR TO ORDERING. PLACE HYDRANTS AS REQUIRED TO ALLOW CLEARANCE FOR COLD WATER CONNECTIONS AT REAR OF ASSEMBLY. PROVIDE SHOCK ABSORBER AND BALL VALVE. PROVIDE 12" X 12" CAM LOCK ACCESS PANEL BY GLOBAL INDUSTRIAL OR EQUAL AT INTERIOR OF BUILDING. PAINT TO MATCH WALL. COORDINATE FINAL LOCATIONS/QUANTITIES WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION.
- P.C. TO COORDINATE NATURAL GAS REQUIREMENTS FOR FIREPLACE WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION AND OBTAIN CUTSHEET OF EQUIPMENT BEING INSTALLED. ORTAL - FRONT 130 MODEL USED AS BASIS OF DESIGN.
- PROVIDE COLD AND HOT WATER CONNECTIONS FROM CLOTHES WASHER BOXES TO CLOTHES WASHERS INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS. P.C. TO COORDINATE CLOTHES WASHER DOMESTIC WATER REQUIREMENTS IN RELATION TO WATER HEATER QUANTITIES/SIZES PRIOR TO CONSTRUCTION AND OBTAIN CUTSHEET OF EQUIPMENT BEING INSTALLED.
- SHUTOFF, BALANCING, CHECK VALVES ON HW LINE.
- PROVIDE NATURAL GAS CONNECTION INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS TO OTHER DRIVERS. COORDINATE FINAL LOCATIONS, SIZE, NATURAL GAS CAPACITY, ETC. WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION. PROVIDE ISOLATION VALVE PRIOR TO FINAL CONNECTION.
- APPROXIMATE LOCATION OF NATURAL GAS FIRED MECHANICAL UNIT ON ROOF LEVEL ABOVE. PROVIDE ISOLATION VALVE PRIOR TO FINAL GAS CONNECTION AND FITCH POCKET FOR ROOF PENETRATION. COORDINATE FINAL LOCATION AND GAS REQUIREMENTS WITH MC PRIOR TO CONSTRUCTION.

**GENERAL CONSTRUCTION NOTES:**

- COORDINATE ALL FOOD SERVICE PLUMBING REQUIREMENTS WITH KITCHEN VENDOR/ARCHITECT DRAWINGS PRIOR TO CONSTRUCTION. INSTALL ADDITIONAL C/W/H/W CONNECTIONS, WATER FILTERS, BACKFLOW PREVENTERS, ETC. AS REQUIRED TO PROVIDE A FULLY OPERATIONAL AND CODE COMPLIANT KITCHEN AREA WITH PROPER WATER SUPPLY.
- ALL DOMESTIC WATER LINES SHOWN ON THIS FLOOR PLAN TO BE INSTALLED WITHIN HEATED AREAS ABOVE CEILING LEVEL, UNLESS OTHERWISE NOTED.
- ALL DOMESTIC WATER RISE/DROPS SHALL BE CONCEALED, UNLESS OTHERWISE DIRECTED BY THE OWNER/ARCHITECT. COORDINATE WALL DIMENSIONS, ANY REQUIRED NEW WALL FURDITS, PIPE CHASES, ETC. WITH OWNER, ARCHITECT, AND GC PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ADEQUATE WALL/CHASE SPACE IS BEING PROVIDED BEHIND ALL WALL HUNG PLUMBING FIXTURES FOR PROPER INSTALLATION OF FIXTURE CARRIES PRIOR TO CONSTRUCTION.

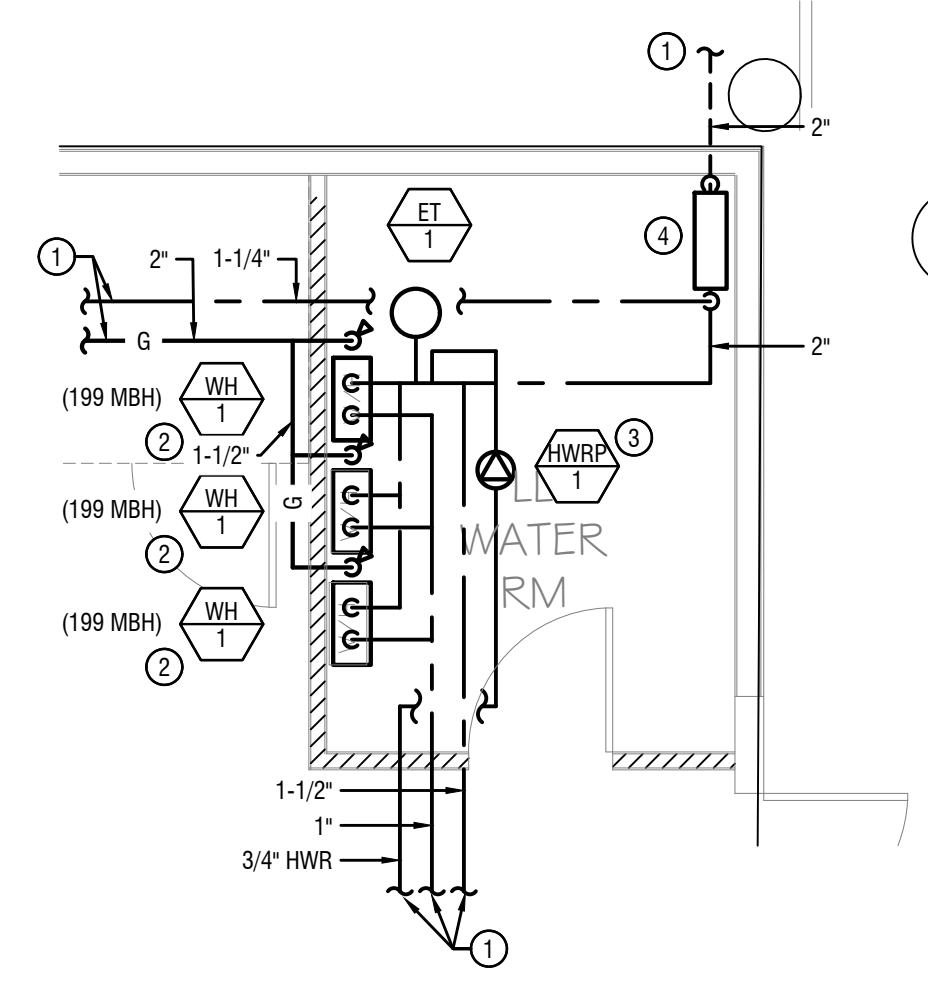
**1 PLUMBING DOMESTIC WATER & GAS PLAN**  
SCALE: 3/16" = 1'-0"

**KEYED CONSTRUCTION NOTES - WATER ROOM**

- SEE OVERALL PLAN FOR CONTINUATION OF PLUMBING LINES.
- CONNECT CW INLET, HW OUTLET, AND NATURAL GAS INLET TO WH-1. PROVIDE EXPANSION TANK ON CW INLET. PROVIDE FLUE AND INTAKE PIPING FROM WH UP THRU ROOF. TERMINATE WITH CONCENTRIC FITTING AND MAINTAIN A MINIMUM OF 36" FROM ROOF LINE TO POINT OF FLUE DISCHARGE. PROVIDE MATERIALS AND SIZE LINES AS INDICATED WITHIN THE MANUFACTURERS WRITTEN INSTRUCTIONS. SEE DETAIL FOR MORE INFORMATION.
- PROVIDE HOT WATER RECIRCULATION PUMP ON HW LINE. SUPPORT PUMP FROM STRUCTURE ABOVE OR ALONG WALL. INSTALL IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS. SEE DETAIL FOR MORE INFORMATION.
- DOMESTIC WATER METER BACKFLOW ASSEMBLY MOUNTED LOW NEAR FLOOR LEVEL. COORDINATE FINAL LOCATION OF EQUIPMENT (INTERIOR WITHIN MECHANICAL ROOM OR EXTERIOR WITHIN METER PIT/VAULT) WITH LOCAL WATER COMPANY AND SITE/CIVIL CONTRACTOR PRIOR TO CONSTRUCTION.

**GENERAL CONSTRUCTION NOTES:**

- COORDINATE ALL FOOD SERVICE PLUMBING REQUIREMENTS WITH KITCHEN VENDOR/ARCHITECT DRAWINGS PRIOR TO CONSTRUCTION. INSTALL ADDITIONAL C/W/H/W CONNECTIONS, WATER FILTERS, BACKFLOW PREVENTERS, ETC. AS REQUIRED TO PROVIDE A FULLY OPERATIONAL AND CODE COMPLIANT KITCHEN AREA WITH PROPER WATER SUPPLY.
- ALL DOMESTIC WATER LINES SHOWN ON THIS FLOOR PLAN TO BE INSTALLED WITHIN HEATED AREAS ABOVE CEILING LEVEL, UNLESS OTHERWISE NOTED.
- ALL DOMESTIC WATER RISE/DROPS SHALL BE CONCEALED, UNLESS OTHERWISE DIRECTED BY THE OWNER/ARCHITECT. COORDINATE WALL DIMENSIONS, ANY REQUIRED NEW WALL FURDITS, PIPE CHASES, ETC. WITH OWNER, ARCHITECT, AND GC PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ADEQUATE WALL/CHASE SPACE IS BEING PROVIDED BEHIND ALL WALL HUNG PLUMBING FIXTURES FOR PROPER INSTALLATION OF FIXTURE CARRIES PRIOR TO CONSTRUCTION.



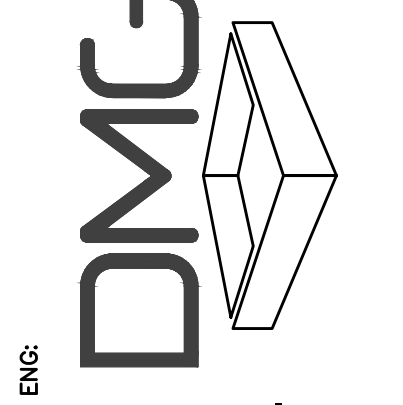
**2 ENLARGED WATER ROOM PLAN**  
SCALE: 1/4" = 1'-0"

DATE: JULY 27 2022  
CHECKED BY: RW  
REVISION

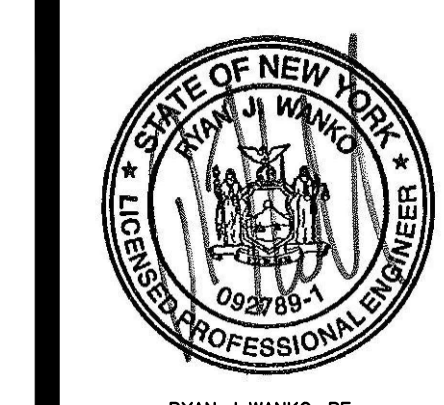


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RYAN J. WANG, PE  
NY PROFESSIONAL ENGINEER  
LIC. NO. 092789-1

PROJECT # 22046  
GARDEN EXT. / GARDEN INT.  
**ONVO TRAVEL PLAZA  
BURGER KING**  
128 Riverside Dr. Fultonville, NY 12072



MAXIMUM HANGER SPACING PER NYSPEC			
ITEM	MAXIMUM HORIZONTAL SPACING (FT.)	MAXIMUM VERTICAL SPACING (FT.)	
ABS PIPE	4	10	
ALUMINUM TUBING	10	15	
BRASS PIPE	10	10	
CAST IRON	5	15	
COPPER OR COPPER-ALLOY PIPE	12	10	
COPPER OR COPPER-ALLOY TUBING 1 1/4" DIAMETER OR SMALLER	6	10	
COPPER OR COPPER-ALLOY TUBING 1 1/2" DIAMETER OR LARGER	10	10	
CROSS-LINKED POLYETHYLENE (PEX) PIPE 1 INCH AND SMALLER	2.67 (32 INCHES)	10	
CROSS-LINKED POLYETHYLENE (PEX) PIPE 1 1/4 INCH AND LARGER	4	10	
CROSS-LINKED POLYETHYLENE/ALUMINUM/CROSS-LINKED POLYETHYLENE (PEX-AL-PEX) PIPE	2.67 (32 INCHES)	4	
CPVC PIPE OR TUBING, 1" OR SMALLER	3	10	
CPVC PIPE OR TUBING, 1 1/4" OR LARGER	4	10	
STEEL PIPE	12	15	
PB PIPE OR TUBING	2.67	4	
POLYETHYLENE/ALUMINUM/POLYETHYLENE (PE-AL-PE) PIPE	2.67	4	
POLYPROPYLENE (PP) PIPE OR TUBING 1" OR SMALLER	2.67	10	
POLYPROPYLENE (PP) PIPE OR TUBING 1 1/4" OR LARGER	4	10	
PVC PIPE	4	10	
STAINLESS STEEL DRAINAGE SYSTEMS	10	10	

NOTES:  
1. PIPE HANGERS SHALL ENCRICLE PIPE INSULATION.  
2. PROVIDE MAXIMUM HANGER SPACING AS PER THE SCHEDULE ABOVE OF PER SPECIFICATIONS WHICH EVER IS MORE STRINGENT.

PLUMBING FIXTURE INSULATION SCHEDULE				
PIPING	INSULATION TYPE	INSULATION THICKNESS		NOTES
		LESS THAN 1 1/2" DIA.	2" DIA. AND LARGER	
DOMESTIC COLD WATER	FIBERGLASS	1/2"	1"	1, 2, 3, 4, & 5
DOMESTIC HOT WATER	FIBERGLASS	1"	1 1/2"	1, 2, 3, 4, & 5
DOMESTIC HOT WATER RETURN	FIBERGLASS	1"	1 1/2"	1, 2, 3, 4, & 5

NOTES:  
1. INSULATE PIPING PER SECTION OF THE ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (NYSECC), CONDUCTIVITY NOT TO EXCEED 0.2 BTU PER IN\*FT\*2°F.  
2. INSULATION SHALL BE APPLIED BY AN EXPERIENCED PERSONNEL IN ACCORDANCE WITH BEST TRADE PRACTICE GUIDED BY MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS/DIRECTIONS.  
3. INSULATION SHALL BE MANVILLE MICRO-LOK FIBERGLASS PIPE INSULATION TYPE AP-T OR APPROVED EQUAL.  
4. ALL INSULATION JACKETS, FACING AND ADHESIVES USED TO ADHERE JACKET OR FACING TO THE INSULATION, INCLUDING FITTING AND BUTT STRIPS SHALL HAVE NON-COMBUSTIBLE FIRE AND SMOKE HAZARD RATING AND LABEL AS TESTED BY ASTM-84-91A, NFPA 255 AND UL 723 NOT EXCEEDING FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50.  
5. FITTING AND VALVES SHALL BE INSULATED WITH MANVILLE FACTORY PERCUT H-L0 TEMP FIBERGLASS INSULATION AND ZESTON 25/50 RATED OVC INSULATION FITTING COVERS, EPOLUX 670 WHITE VAPOR BARRIER COATING, OR APPROVED EQUAL. SHALL BE APPLIED AROUND THE EDGES OF THE ADJOINING PIPE INSULATION AND ON THE FITTING COVER THROUGH OVERLAP SEAM. THE FITTING COVER SHALL BE SECURED WITH PRESSURE SENSITIVE PEARL GRAY Z-TAPE ALONG THE CIRCUMFERENTIAL EDGES. THE TAPE SHALL EXTEND ALL OVER THE ADJACENT PIPE INSULATION WITH AN OVERLAP ON ITSELF OF 2". ALL INSULATION MATERIAL SHALL COMPLY WITH THE NEW YORK BUILDING CODE REQUIREMENTS.

SHOCK ABSORBER/WATER HAMMER ARRESTER SCHEDULE					
SYMBOL	FIXTURE UNITS	JAY R. SMITH MODEL NUMBER	SYMBOL	FIXTURE UNITS	JAY R. SMITH MODEL NUMBER
A	1-11	5005	D	61-113	5030
B	12-32	5010	E	114-154	5040
C	33-60	5020	F	155-330	5050

NOTES:  
1. JAY R. SMITH SHOCK ABSORBER/WATER HAMMER ARRESTERS USED AS A BASIS OF DESIGN OR APPROVED EQUAL BY ENGINEER.  
2. INSTALL WATER HAMMER ARRESTER ON BRANCH LINE IN AN UPRIGHT POSITION AS CLOSE AS POSSIBLE TO VALVE OR VALVES BEING SERVED.  
3. PROVIDE WATER HAMMER ARRESTERS AT ALL SOLENOIDS, REMOTE OPERATED OR QUICK CLOSING VALVES AND AT EACH PLUMBING FIXTURE OR BATTERY OF PLUMBING FIXTURES.

NATURAL GAS CALCULATIONS					
LONGEST RUN	UNIT/EQUIPMENT	QTY	MBH (EACH)	TOTAL MBH	BRANCH PIPE SIZE (IN)
HOUSE METER 1 (M1)					
	WH-1	5	199	995	1-1/4"
	BROILER BK FLAMING HEART	1	96	96	1"
	3-BANK FRYER	1	280	280	1-1/4"
	AH-1	1	60	60	3/4"
	AH-3	1	80	80	1"
APPX 150 FT	RTU-1	1	150	150	1"
	DF-1	1	250	250	1-1/4"
	DF-2	1	175	175	1-1/4"
	FIREPLACE	1	38	38	3/4"
	DRYER	3	25	75	3/4"
	TOTAL			2199.00	3"

NOTES:  
1. ALL GAS PIPING IS BASED ON SCHEDULE 40 METALLIC PIPE AT AN INLET PRESSURE OF LESS THAN 2 PSI. PRESSURE DROP OF 0.5 IN W.C. AND SPECIFIC GRAVITY OF 0.60. VERIFY INLET PRESSURE AND NEW CONNECTED GAS LOAD WITH GAS UTILITY PROVIDER PRIOR TO ANY NEW WORK.  
2. VERIFY GAS INPUT REQUIREMENTS WITH FINAL EQUIPMENT SELECTED. GAS PIPE SIZE IS BASED ON THE GAS INPUT RATE OF SCHEDULED EQUIPMENT SHOWN. GAS PIPE SIZE MAY VARY WITH THE SELECTION OF ALTERNATE APPROVED BURGER KING, MECHANICAL, PLUMBING, OR REFRIGERATION EQUIPMENT, AS WELL AS VARIATIONS IN THE LENGTH OF PIPE FROM POINT OF DELIVERY TO THE MOST REMOTE OUTLET. RESIZE PIPING BASED ON ACTUAL FIELD CONDITIONS PER CODE REQUIREMENTS.

PLUMBING FIXTURE SCHEDULE													
TAG NO.	FIXTURE	FIXTURE		C.W.	H.W.	W.	TRAP	V.	TRIM	TRIM		SPECIFICATION	
		MODEL	MODEL							MANUFACTURER	MODEL		
WC-1	WATER CLOSET (FLUSH TANK)	KOHLER	K-3493-T-0	1/2"	-	4"	-	2"	SEAT	BEMIS	195CST	TWO-PIECE, ELONGATED CHAIR HEIGHT TOILET WITH TANK LOCKS. VITREOUS CHINA, POLISHED CHROME TRIP LEVER, TANK COVER LOCKS INCLUDED, PRESSURE ASSISTED, 1.6 GPF, 2 1/4" FULLY GLAZED TRAPWAY, 12" X 14" WATER AREA, STANDARD 12" ROUGH IN. ADA COMPLIANT WHEN INSTALLED TO THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS. PRODUCT COMES IN KOHLER K-434 BOWL AND K-464-1 TANK. COMMERCIAL, HEAVY-DUTY PLASTIC TOILET SEAT WITH OPEN FRONT LESS COVER.	
UR-1	URINAL	KOHLER	K-4991-ET-0	3/4"	-	2"	-	2"	FLUSH VALVE	SLOAN	8186-1	HIGH EFFICIENCY, VITREOUS CHINA, WASHOUT URINAL, 3/4" TOP SPUD, 0.125 - 1.0 GPF, 14" EXTENDED RIM. PROVIDE MATCHING WALL HANGER SUPPORT. BATTERY POWERED ELECTRONIC SENSOR FLUSHMETER, 1.0 GPF, DUAL FLOATED FLOATED BYPASS DISPENSER. POLISHED CHROME FINISH. FIXED CONNECTION TOP SPUD. SMALL FLUSH. COUPLED. INSTALL IN ACCORDANCE WITH ADA HEIGHT AND REGULATIONS WHERE REQUIRED. REFER TO ARCHITECTURAL PLANS FOR REQUIRED LOCATIONS.	
LAV-1	LAVATORY (SOLID SURFACE SINK)	-	-	1/2"	1/2"	1 1/2"	1 1/2"	1 1/2"	FAUCET	SLOAN	EAF-350	SOLID SURFACE SINK PROVIDED BY MILL WORK VENDOR AND INSTALLED BY P.C. COORDINATE ALL REQUIREMENTS AND RESPONSIBILITIES WITH VENDOR, OWNER, AND ARCHITECT PRIOR TO CONSTRUCTION. BATTERY POWERED, DISC MOUNTED, MILD BODY SENSOR FAUCET, 1.5 GPM FLOW RATE, POLISHED CHROME FINISH, INTEGRATED SIDE MIXER, COMMERCIAL GRADE, ADA COMPLIANT.	
MS-1	JANITOR'S SINK/MOP BASIN	-	-	1/2"	1/2"	2"	2"	2"	1 1/2"	FAUCET	AMERICAN STD.	8344 012	MOP SINK TO BE CAST IN PLACE. COORDINATE ANY WORK REQUIRED BY P.C. WITH OWNER/ARCHITECT PRIOR TO CONSTRUCTION. EXPOSED VIBE WALL MOUNT UTILITY FAUCET SHALL FEATURE A CAST BRASS BODY WITH INTEGRAL SUPPLY STOPS. CAST BRASS SPOUT WITH HOOK-TYPE TOP BRACE, AND VIBRATION-RESISTANT METAL LEVER HANDLES. SHALL FEATURE VACUUM BREAKER TO PREVENT BACK FLOW. SHALL ALSO FEATURE 1/4" TURN WASHERLESS CERAMIC DISC VALVE CARTRIDGES.
CW-1	CLOTHES WASHER	-	-	1/2"	1/2"	2"	2"	2"	1 1/2"	OUTLET BOX	SIoux CHIEF	696	COORDINATE PURCHASE OF FIXTURE WITH OWNER AND ARCHITECT. PLUMBING SUPPLIES TO BE INSTALLED BY P.C. PROVIDE WASHING MACHINE BOX MOUNTED WITH WALL BRACKETS. UNIT SHALL ALLOW FOR MOUNTING WITH SUPPLY LINES FROM TOP OR BOTTOM, ON-STUD OR BEHIND STUDS. SUPPLY AND DRAIN BONES CAN BE CONNECTED USING PROVIDED BALANCED U-CLIP OR REPAIRED AS DESIRED. SUPPLY BOX CAN BE INVERTED. ARRESTER VARIATIONS CAN BE INSTALLED WITH ARRESTERS AT ANY ANGLE. UNIT SHALL BE AVAILABLE WITH 1/2" TURN VALVES. METAL SUPPORT BRACKET SHALL INSTALL INTO TOP/BOTTOM TRACKS OF BOX. PROVIDE LIMIT INTERCEPTOR (FILTER/LIMIT FILTER OR APPROVED EQUAL) MOUNTED ON WALL THAT IS PROVIDED WITH A WIRE BASKET OR SIMILAR DEVICE. REMOVABLE FOR CLEANING. THAT PREVENTS PASSAGE INTO THE DRAINAGE SYSTEM OF SOLIDS 1/2" OR LARGER IN SIZE. STRINGS, RAGS, BUTTONS OR OTHER MATERIALS DETRIMENTAL TO THE PUBLIC SEWAGE SYSTEM.
SH-1	SHOWER ACCESSORIES	DELTA	RP22568	1/2"	1/2"	2"	2"	2"	1 1/2"	DIVERTER/SHOWER HAND	DELTA	TT1800/51308	SHOWER ENCLOSURE TO BE TILE BY OTHERS. COORDINATE SHOWER CONSTRUCTION AND ANY REQUIRED WORK WITH OWNER/ARCHITECT. THIS INSTALLED BY P.C. SINGLE SETTING CARTRIDGE SHOWERHEAD 2.2 LPM MAX AT 80 PSI. THREE FUNCTION DIVERTER TRIM HAND CROWN WITH 0.75" WALL BONE, WALL MOUNT, OR SHOWER ARM MOUNT. MAXIMUM 1/2" GPM @ 80 PSI. INSTALL SHOWER HEAD TRIM KIT, VALVE BODY, AND FD-1. SHOWER VALVE SHALL BE PRESSURE BALANCED, THERMOSTATIC OR COMBINATION BALANCE PRESSURE/TEMPERATURE VALVES THAT CONFORM TO THE REQUIREMENTS OF ASSE 101.4 AND ASSE 101.2. (10/CSA B125 OR ASME A112.18.1/CSA B125) AND SHALL BE INSTALLED AT THE POINT OF USE. SHOWER VALVES SHALL BE EQUIPPED TO LIMIT THE MAXIMUM SETTING OF THE VALVE TO 120°F, WHICH SHALL BE FIELD ADJUSTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. VERIFY ALL ADA REQUIREMENTS ARE MET # INSTALLED IN ADA COMPLIANT RESTROOM.
NFWH-1	NON-FREEZE WALL HYDRANT	JAY R. SMITH	5519	3/4"	-	-	-	-	-	-	-	-	BRONZE QUARTER TURN NON-FREEZE AUTOMATIC DRAINING HYDRANT WITH STAINLESS STEEL FACE, HOSE CONNECTION, INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 1" HANDLE KEY, WHEEL, HANDLE AND STAINLESS STEEL BOX WITH FULL 180° COVER. OPENING, RECOMMENDED WALL OPENING 3 3/8" (85) x 4 1/2" (115). PROVIDES POSITIVE NON-FREEZE PROTECTION WHERE WATER IS REQUIRED AT THE OUTSIDE OF THE BUILDING AND FEATURES AN INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE. THE STAINLESS STEEL RECESSED BOX CONCEALS THE NOZZLE AND OPERATING MECHANISM. THE LOCKING COVER PREVENTS UNAUTHORIZED USE.
FD-1	FLOOR DRAIN (GENERAL USE, SHOWER)	JAY R. SMITH	2005	-	-	2"	2"	1 1/2"	-	-	-	-	GENERAL SERVICE FLOOR DRAIN FOR USE IN SHOWERS, TOILETS, KITCHENS AND OTHER FINISHED AREAS WHERE FOOT TRAFFIC IS EXPECTED. THE ROUND TOP STRAINER HEAD IS USED FOR ALL TYPES OF FINISHED FLOORS. THE SQUARE TOP IS PARTICULARLY ADAPTABLE TO FLOORS THAT ARE FINISHED IN MATERIAL OF SQUARE OR STRAIGHT LINE PATTERN. REVERSIBLE FLOUSHING COLLAR PERMITS ADJUSTMENT OF THE STRAINER TO MEET FINISHED FLOOR LEVEL.
FS-1	FLOOR SINK	JAY R. SMITH	305	-	-	3"	3"	1 1/2"	-	-	-	-	RECOMMENDED FOR USE IN APPLICATIONS REQUIRING AN INDIRECT WASTE RECEIVER SUCH AS RESTAURANTS, CAFETERIAS, SUPERMARKETS, FOOD PROCESSING PLANTS AND BARBERS. CONSTRUCTED OF HIGH QUALITY PVC. THIS FLOOR SINK IS ENGINEERED TO CONFORM TO THE STRICT CODES AND TO PROVIDE MAXIMUM SANITARY CONDITIONS. THIS PVC FLOOR SINK HAS EXCELLENT RESISTANCE TO CHEMICALS SUCH AS THE ACIDS CONTAINED IN URIC ACID, URIC ACID AND FATTY SUBSTANCES. THE SMOOTH, UNIFORM INTERIOR SURFACE IS EASY TO CLEAN AND THE DRAIN WILL NOT CORRODE, RUST OR CORRODE. SEE DETAIL P80 FOR MULTI-BOWL SINKS.
FFD-1	FUNNEL FLOOR DRAIN	JAY R. SMITH	2005	-	-	2"	2"	1 1/2"	FUNNEL	JAY R. SMITH	3580	-	SAME FIXTURE AS FD-1 WITH ROUND FUNNEL ATTACHMENT.
WCO	WALL CLEAN OUT	JAY R. SMITH	4710	-	-	VARIABLES	VARIABLES	-	-	-	-	-	USED TO CONCEAL CLEANOUT CLOSURES IN WALLS. THE ROUND ACCESS COVER IS MOUNTED ON THE SURFACE OF THE FINISHED WALL AND IS DIRECTLY SECURED BY THE SCREW TO A TAPPING WHICH MUST BE PROVIDED IN THE CLEANOUT PLUG. SHALLOW PLATES ARE PROVIDED FOR ALL INSTALLATIONS WHERE THE CLEANOUT PLUG PROTRUS BEYOND THE FINISHED WALL SURFACE. IN WHICH CASE THE DEEP TYPE COVER MUST BE USED. STAINLESS STEEL SHALLOW COVER OR CHROME PLATED BRONZE DEEP COVER WITH CENTER SCREW AS INDICATED BY FIGURE NUMBER SELECTED.
FCO	FLOOR CLEANOUT	JAY R. SMITH	4020	-	-	VARIABLES	VARIABLES	-	-	-	-	-	FOR USE IN FINISHED FLOORS BEARING FOOT AND WHEEL LOADS. WHEELS TRAFFIC. ALLOWS FOR EASY FLOOR LEVEL ADJUSTMENT. DUCT CAST IRON CLEANOUT WITH ROUND ADJUSTABLE SOCRATED SECURED NICKEL BRONZE TOP. CLEANOUT PLUG TYPE AS INDICATED BY FIGURE NUMBER SELECTED.

NOTES:  
1. ALL FIXTURES SHALL BE PROVIDED WITH SUPPLIES AND STOPS. PROVIDE DRAINS, STRAINERS, TRAPS AND TAIL PIECES AS REQUIRED. WHERE ADA ACCESSIBILITY IS INDICATED, PROVIDE OFFSET TAIL PIECES. ALL EXPOSED TRAP AND DRAIN PIPING SHALL BE INSULATED OR PROVIDED WITH AN INSULATED SHROUDDING SYSTEM AS MANUFACTURED BY TRUBERO OR EQUAL.  
2. WATER CLOSETS SHALL BE PROVIDED WITH MATCHING SEATS WITH SELF-SUSTAINING CHECK HINGES AND ANTI-MICROBIAL COATINGS.  
3. FLOOR DRAINS SHALL BE PROVIDED WITH TRAPS AND TRAP SEALS UNLESS A PRIMING SYSTEM IS EXPLICITLY INDICATED ON THE DRAWINGS. TRAP SEALS SHALL BE PROVIDED IN ACCORDANCE WITH 2020 NY STATE PLUMBING CODE SECTION 1002.4.1.4. SEALS SHALL CONFORM TO ASSE 1072. THE DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.  
4. ALL WALL HUNG FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE CARRYING DEVICE AS MANUFACTURED BY JAY R. SMITH OR EQUAL.  
5. PROVIDE ACDORN S170 ASSE ANTI-SCALD VALVES (TEMPERED WATER/ MAX 110 °F) ON ALL HOT WATER FIXTURES EXCEPT FOR KITCHEN EQUIPMENT, MOP AND SERVICE SINKS, SPECIAL CLEANING DEVICES (HOT WATER HOSE BIBS OR HYDRANTS), OR LAUNDRY EQUIPMENT.  
6. COORDINATE FINAL SELECTIONS AND FINISHES OF ALL PLUMBING FIXTURES WITH OWNER AND ARCHITECT PRIOR TO PURCHASE.

GAS WATER HEATER SCHEDULE													
TAG NO.	BASIS OF DESIGN		TYPE	FUEL TYPE	INPUT BTU/HR	THERMAL EFFICIENCY	RECOVERY GPM @ TEMP RISE °F	CONNECTIONS		VOLTS/PH/Hz	AMPS	FLUE/INTAKE SIZES	NOTES
	MANUFACTURER	MODEL						INLET	OUTLET				
WH-1	RINNAI	CU199N	CONDENSING, TANKLESS	NATURAL GAS	199,000	96%	3.8 @ 100	3/4"	3/4"	120/1/60	4	4"	1, 2, 3, 4, 5, 6, 7

NOTES:  
1. FURNISHED WITH ALL STANDARD EQUIPMENT INCLUDING TEMPERATURE AND PRESSURE (T&P) RELIEF VALVE.  
2. THE HEATER WILL BE FACTORY ASSEMBLED AND TESTED REQUIRING ONLY CONNECTIONS TO THE ELECTRIC AND PLUMBING SYSTEM.  
3. PROVIDE WALL MOUNTING BRACKET KIT.  
4. PROVIDE DIGITAL CONTROL SYSTEM. PERFORM MANUFACTURER'S START-UP PROCEDURES AND TRAIN END USER ON UNIT OPERATION.  
5. PROVIDE ACDORN IV SERIES ASSE MASTER MIXING VALVE ROUGH BRONZE WITH ALL STANDARD EQUIPMENT INCLUDING PARAFFIN COPPER ACTUATOR, HEAVY DUTY COMBINATION STRAINER, CHECKSTOPS AND TAMPER RESISTANT TEMPERATURE ADJUSTABLE CONTROL. SET TEMPERED WATER TO 120 DEGREE F.  
6. VERIFY TEMPERATURE SETTING WITH OWNER (SET TO DELIVER 140°F WATER TEMPERATURE).  
7. PROVIDE COMBINATION CONCENTRIC VENT AND COMBUSTION TERMINATION KIT - 4" TERMINATION FITTING.  
8. MAXITROL GAS PRESSURE REGULATING VALVE - PRESSURE TO UNITS 7" W.C. (PROVIDE INCOMING PRESSURE IS BETWEEN 1/2" AND 2 PSI). MODULAR BLOWER WITH 110/120 VOLT ELECTRIC SYSTEM (RATING 4 AMPS OR LESS), WATER HEATERS SHALL HAVE A (3) YEAR WARRANTY.

THERMAL EXPANSION TANK SCHEDULE							
TAG NO.	BASIS OF DESIGN		SERVICE ZONE	ACCEPTABLE VOLUME	CONNECTION SIZE	SIZE DIA." x H"	NOTES
	MANUFACTURER	MODEL					
ET-1	AMTROL	ST-12C	WH-1	3.2	3/4"	12x18	1, 2, 3, 4

NOTES:  
1. CONSTRUCTION SHALL BE FACTORY FABRICATED STEEL, WELDED TO TANK BEFORE TESTING AND LABELING, INCLUDING ASME B1.20.1, PIPE THREAD.  
2. COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS.  
3. FACTORY INSTALLED AIR CHARGING VALVE.  
4. WORKING PRESSURE RATING 150 PSIG, AIR PRECHARGE PRESSURE: 55 PSIG

PUMP SCHEDULE									
TAG NO.	BASIS OF DESIGN		SERVICE ZONE	HEAD (FT)	POWER (WATTS)	CONNECTIONS		VOLTS/PH/Hz	NOTES
	MANUFACTURER	MODEL				INPUT	OUTPUT		
HWRP-1	BELL & GOSSETT	ECOCIRC 19-16	HOT WATER RETURN	19	60	3/4"	3/4"	115/60/1	1, 2, 3, 4

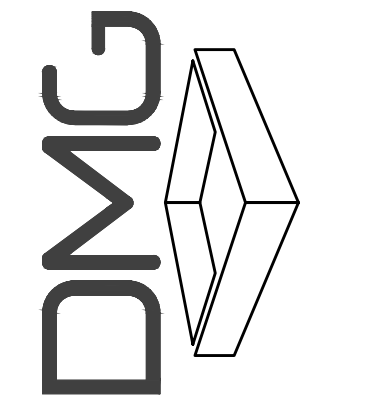
NOTES:  
1. HOT WATER RE-CIRC PUMP SHALL BE CLOSED COUPLED IN-LINE, PERMANENTLY LUBRICATED STAINLESS STEEL CONSTRUCTION FOR DOMESTIC HOT WATER USE.  
2. IN THE HOT WATER LINE TO HOT WATER HEATER, PROVIDE AN AUTOMATIC TIMER KIT AND IMMERSION-TYPE ADJUSTABLE COMBINATION SET TO START PUMP WHEN TIMER IS "ON" AND THE WATER TEMPERATURE IN THE LINE DROPS TO 100°F AND STOP THE PUMP WHEN THE TEMPERATURE REACHES 120°F. ELECTRICAL CONTRACTOR TO WIRE THROUGH AUTOMATIC TIMER KIT TO RE-CIRC PUMP.  
3. COORDINATE PUMP SHUT-OFF SETTING WITH THE MIXING VALVE SETTING.  
4. RE-CIRC PUMP SHALL HAVE A THREE (3) YEAR WARRANTY.

DATE: JULY, 27, 2022
CHECKED BY: RW
REVISION
NO. DATE



OWNER:  
ONVO  
Travel Plazas  
2227 Scranston Carbondale Hwy  
Scranton, PA 18508

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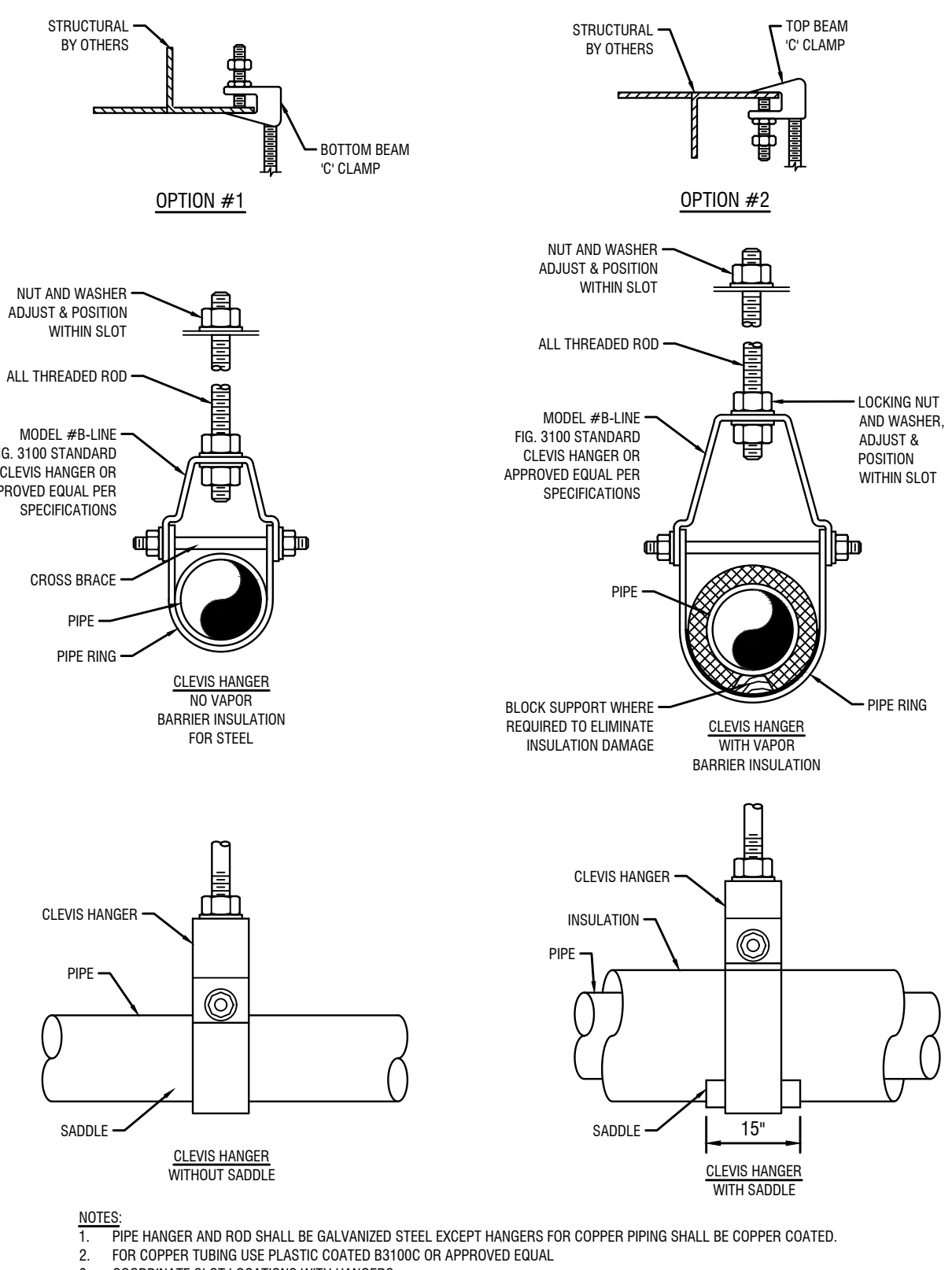
ENG:  
MRA  
Miller Rosentel Associates, Inc.  
138 S. Union St. Wilkes Barre, PA 18701, 570-822-1411, www.mra.com



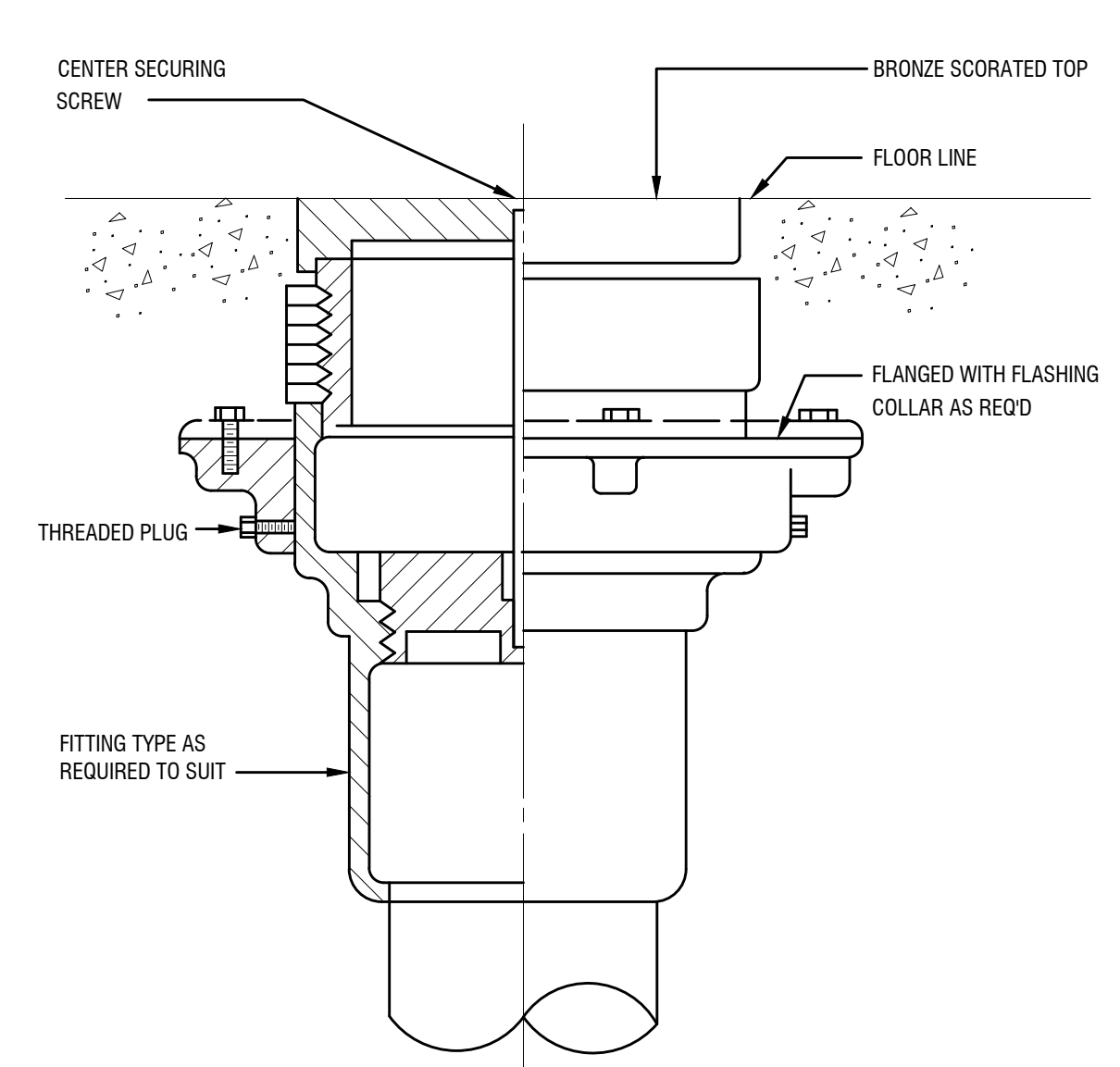
RYAN J. WANG, PE  
NY PROFESSIONAL ENGINEER  
LIC. NO. 092789-1

PROJECT # 22046  
GARDEN EXT. / GARDEN INT.  
ONVO TRAVEL PLAZA  
BURGER KING  
128 Riverside Dr. Fultonville, NY 12072  
PLUMBING - SCHEDULES

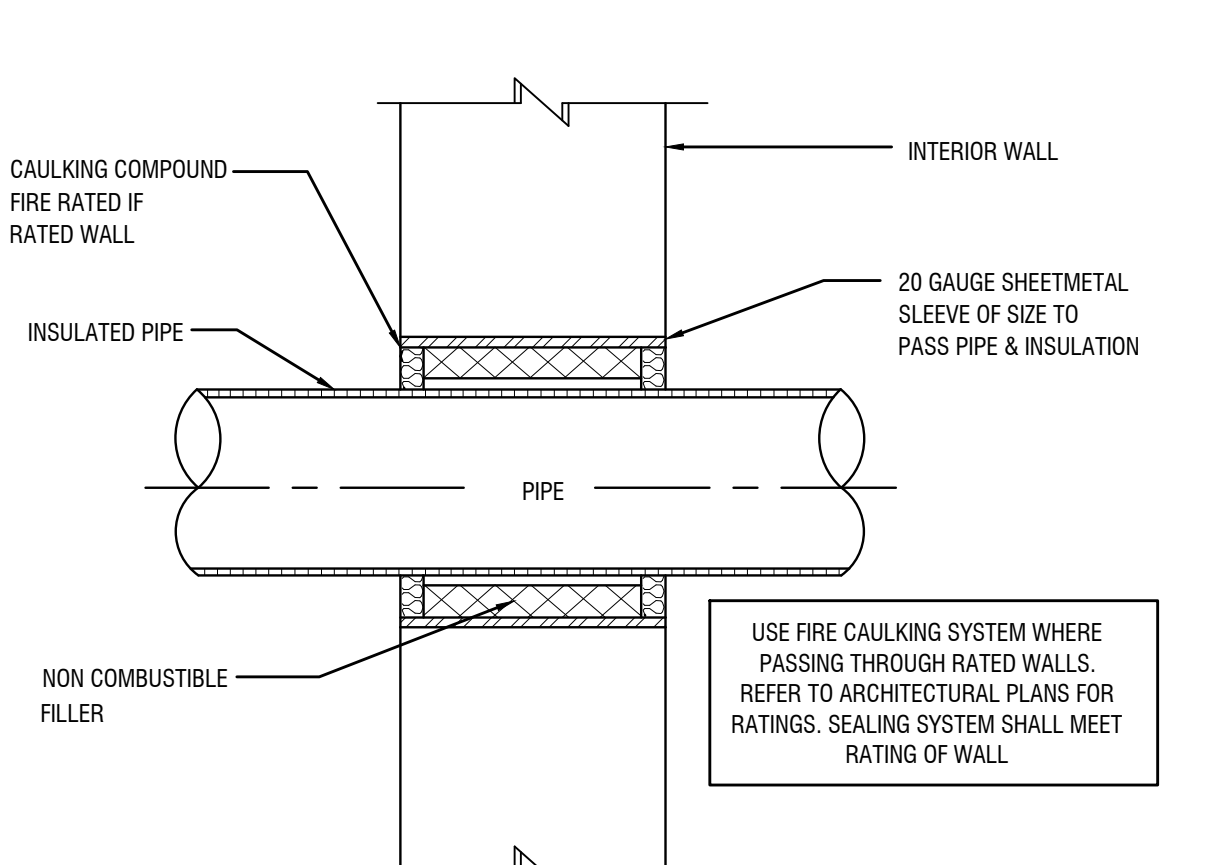




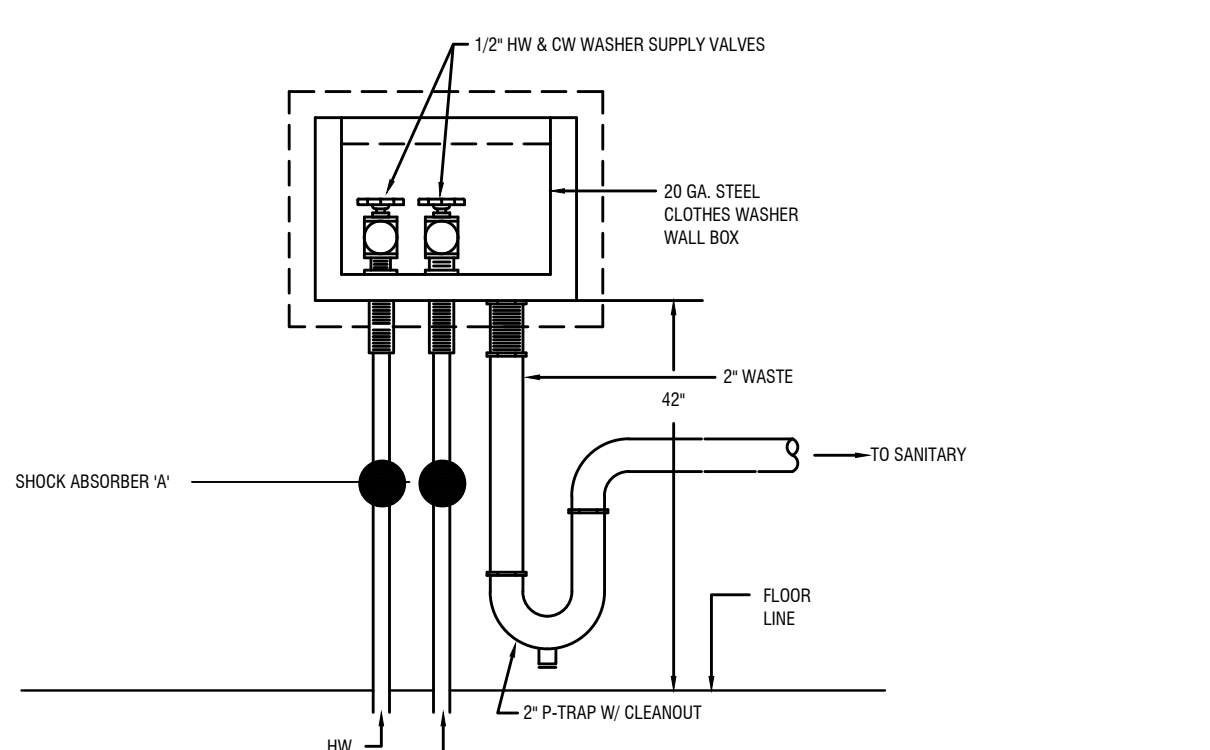
1 TYPICAL PIPE HANGER DETAIL (JOIST/BEAM)  
P-5 SCALE: NOT TO SCALE



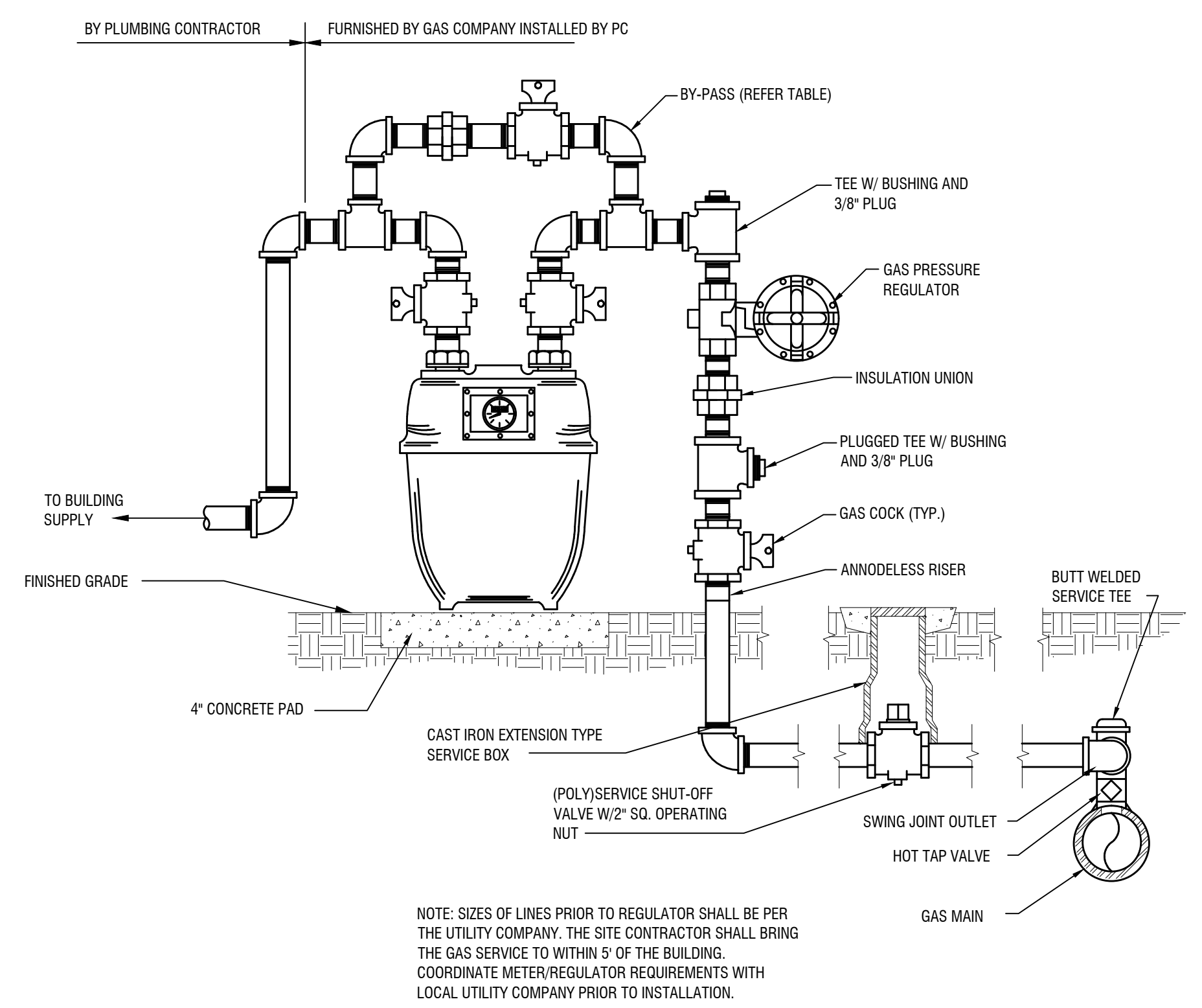
6 FINISHED FLOOR CLEANOUT DETAIL  
P-5 SCALE: NOT TO SCALE



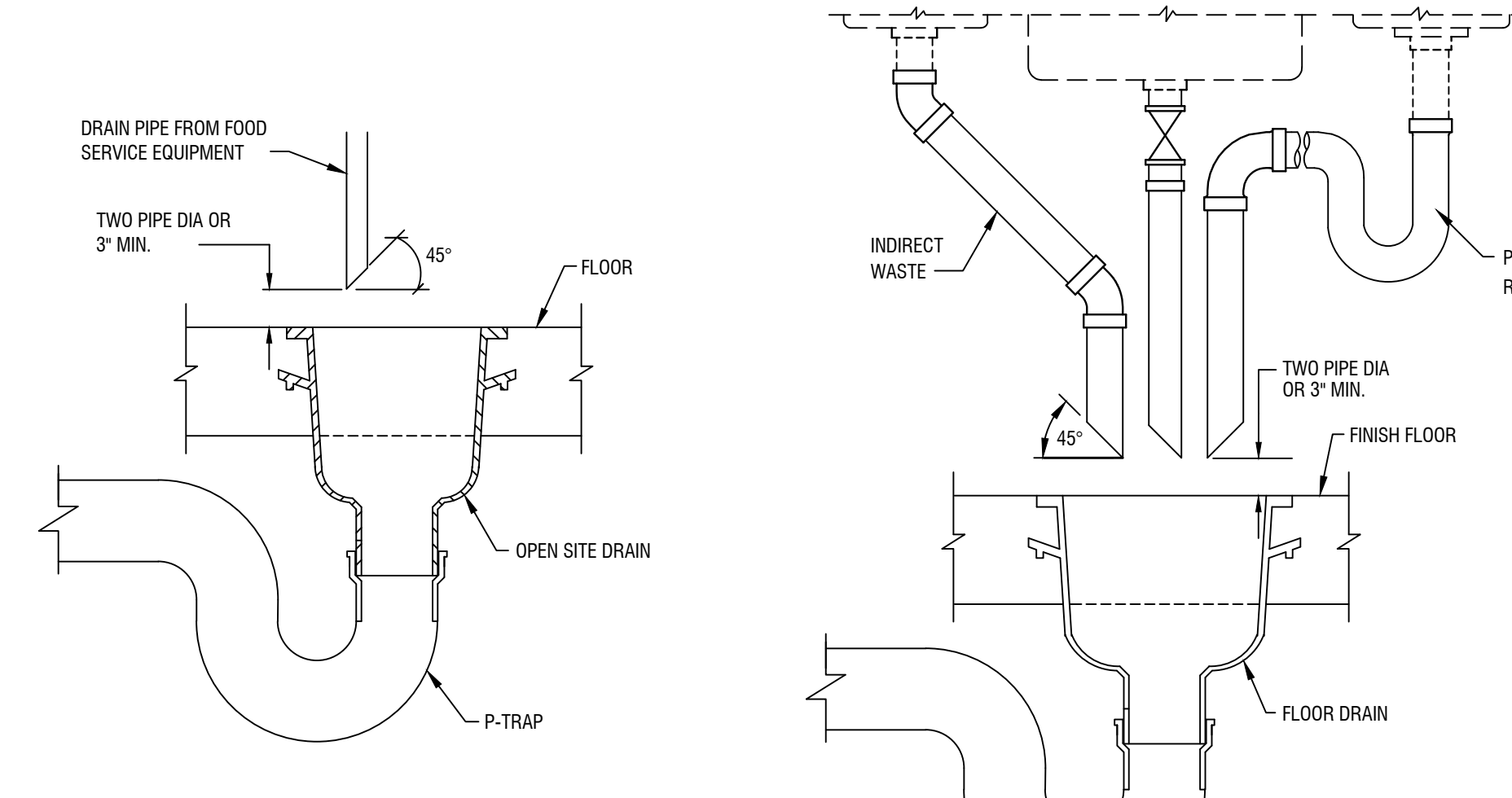
11 PIPING THROUGH INTERIOR WALL DETAIL  
P-5 SCALE: NOT TO SCALE



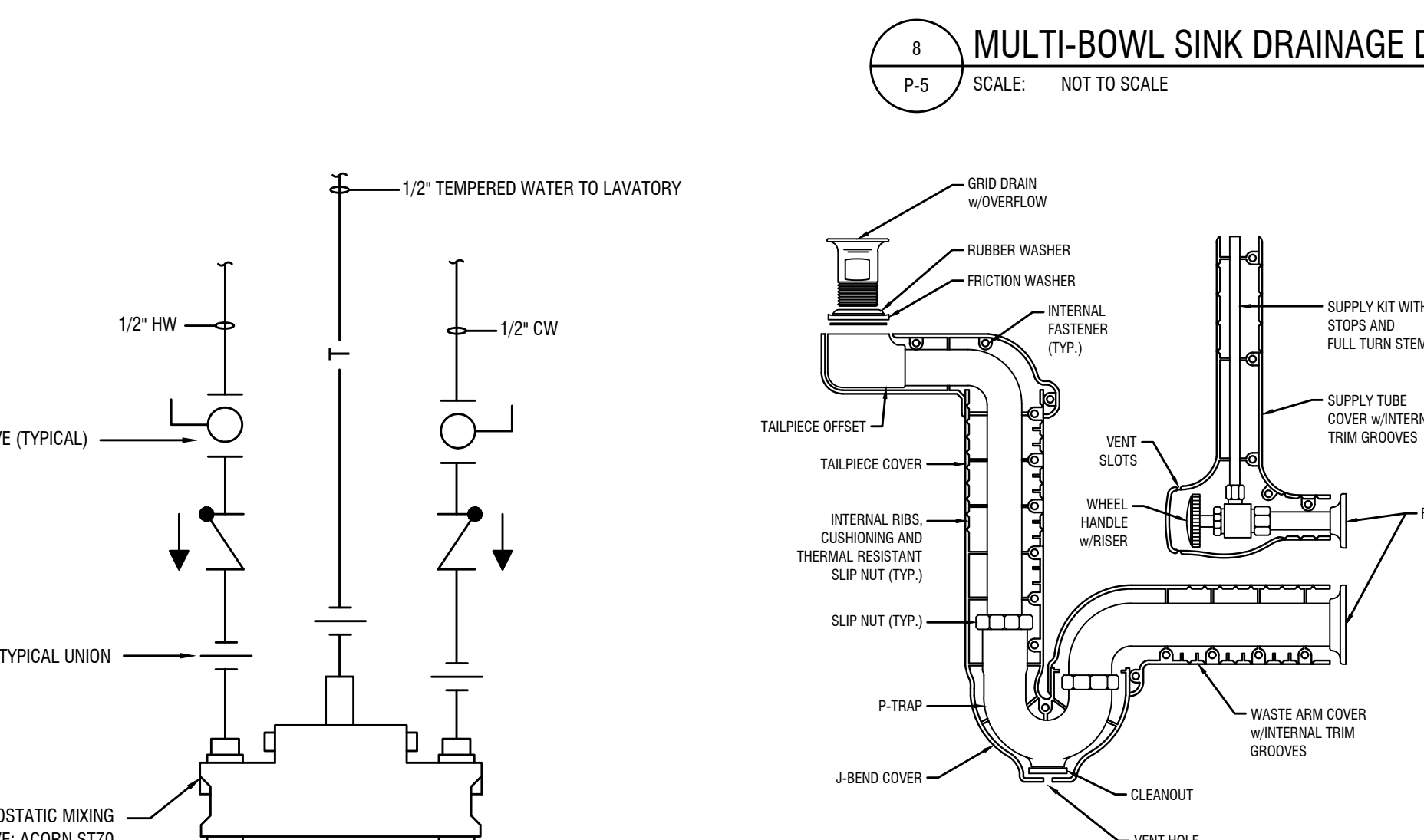
16 UTILITY BOX FOR CLOTHES WASHER  
P-5 SCALE: NOT TO SCALE



2 GAS METER WITH BYPASS DETAIL  
P-5 SCALE: NOT TO SCALE



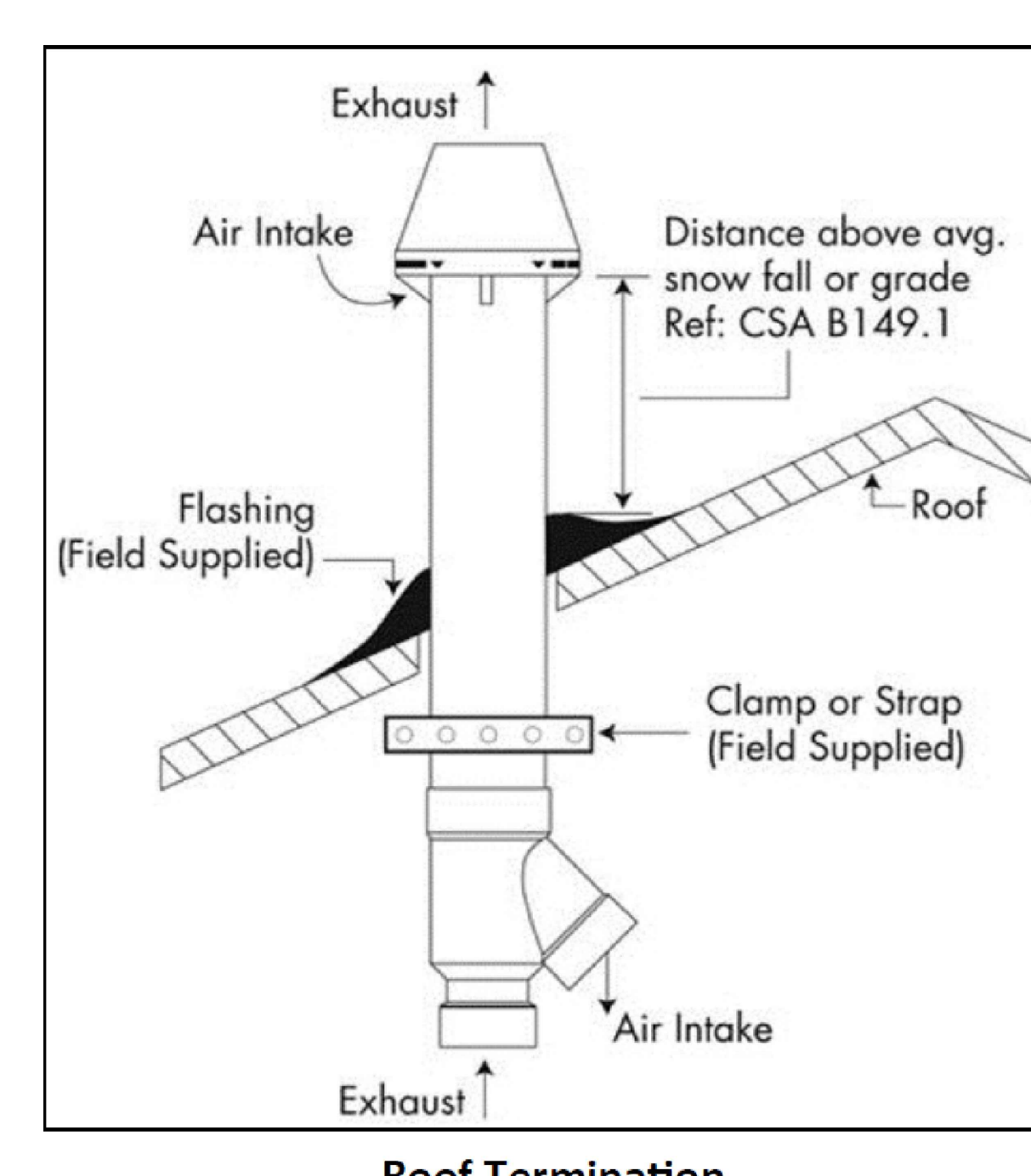
7 FLOOR SINK DETAIL  
P-5 SCALE: NOT TO SCALE



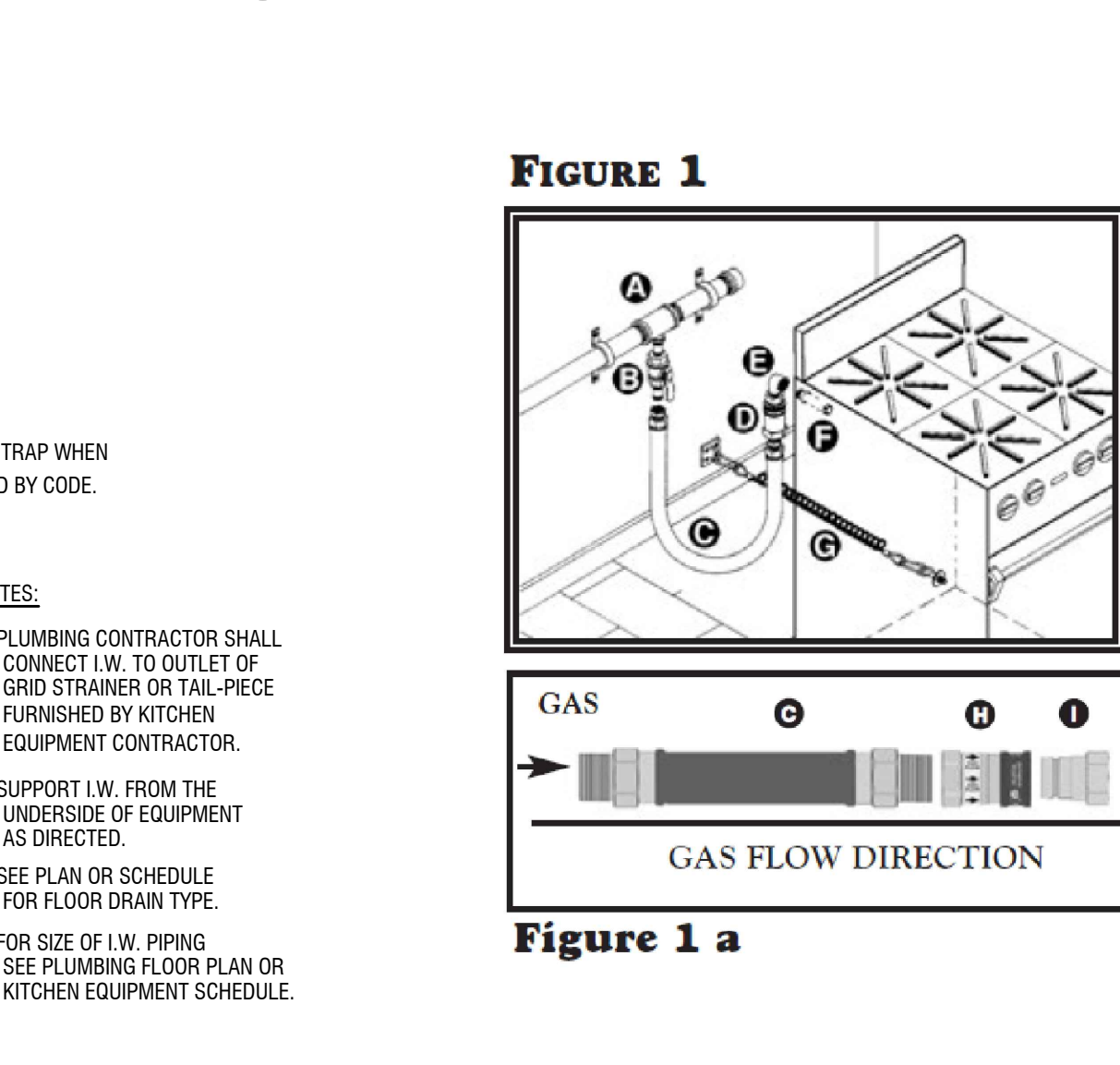
8 MULTI-BOWL SINK DRAINAGE DETAIL  
P-5 SCALE: NOT TO SCALE



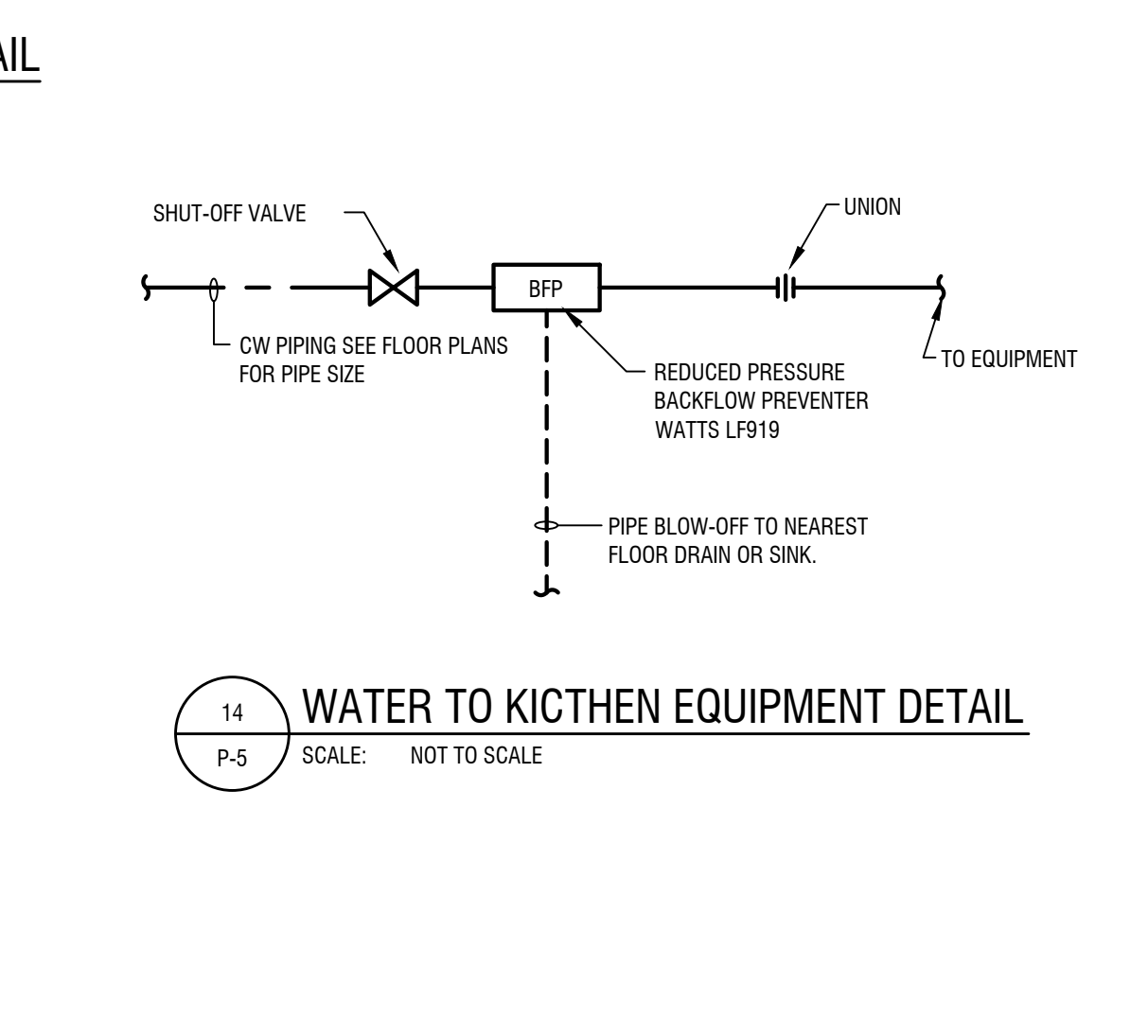
13 TYPICAL SINK GUARD ADA DETAIL  
P-5 SCALE: NOT TO SCALE



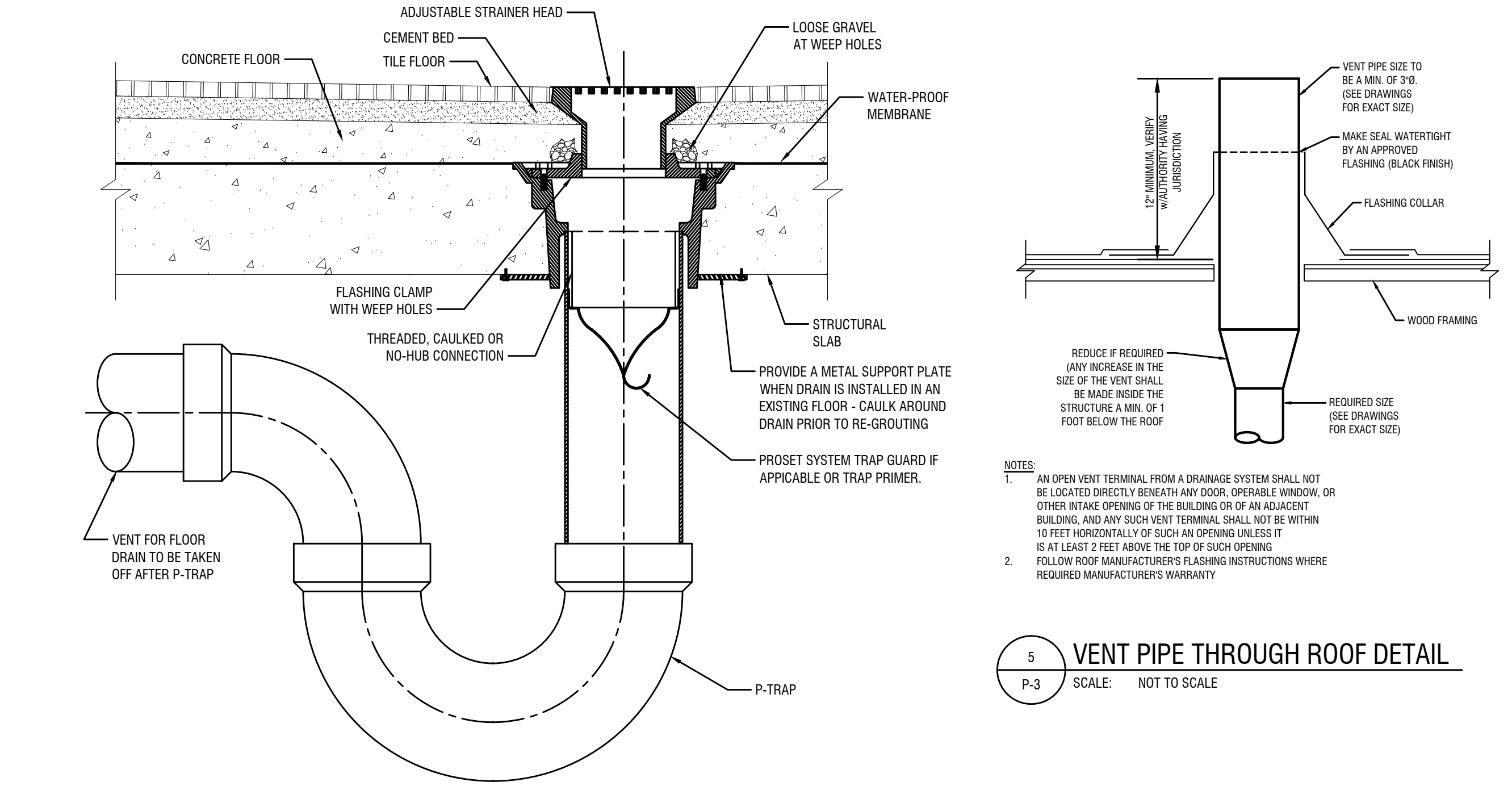
3 WATER HEATER VENTING DETAILS  
P-5 SCALE: NOT TO SCALE



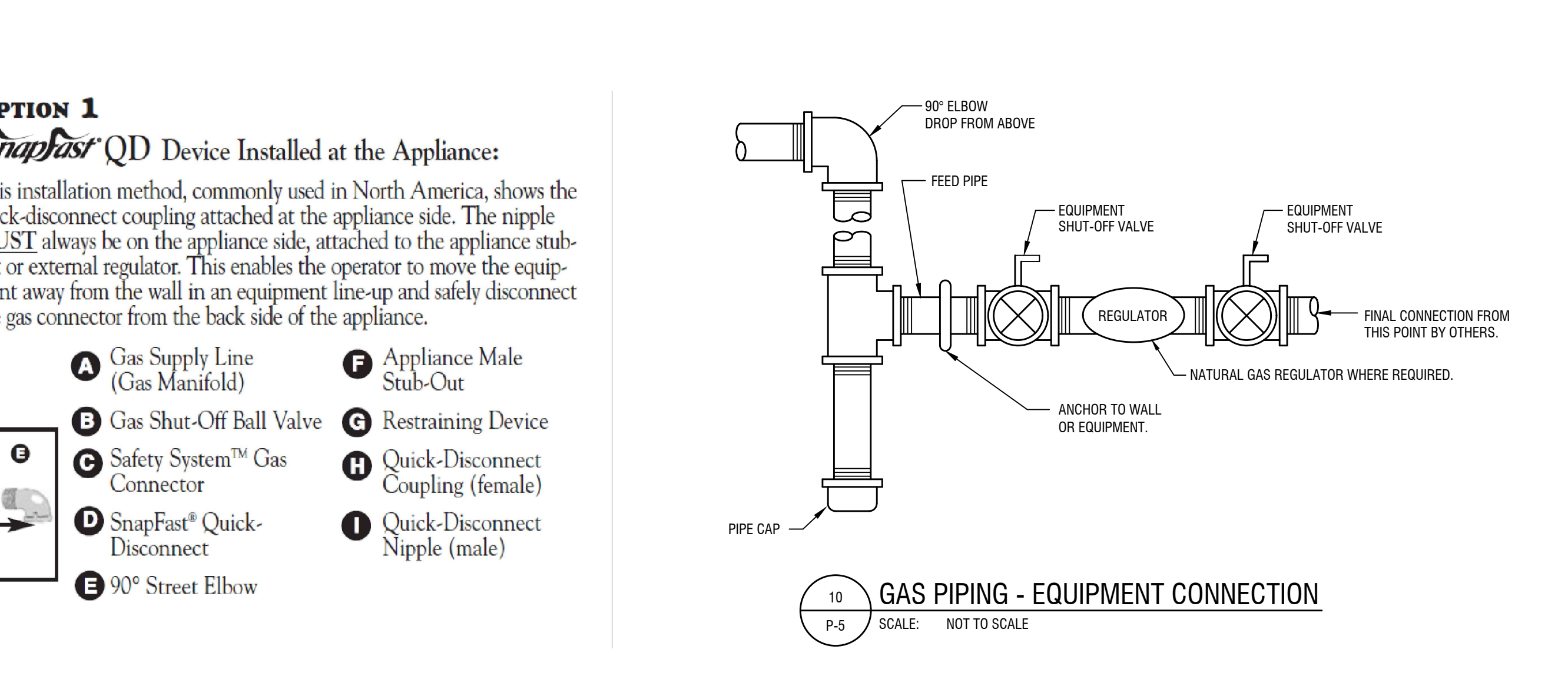
14 WATER TO KITCHEN EQUIPMENT DETAIL  
P-5 SCALE: NOT TO SCALE



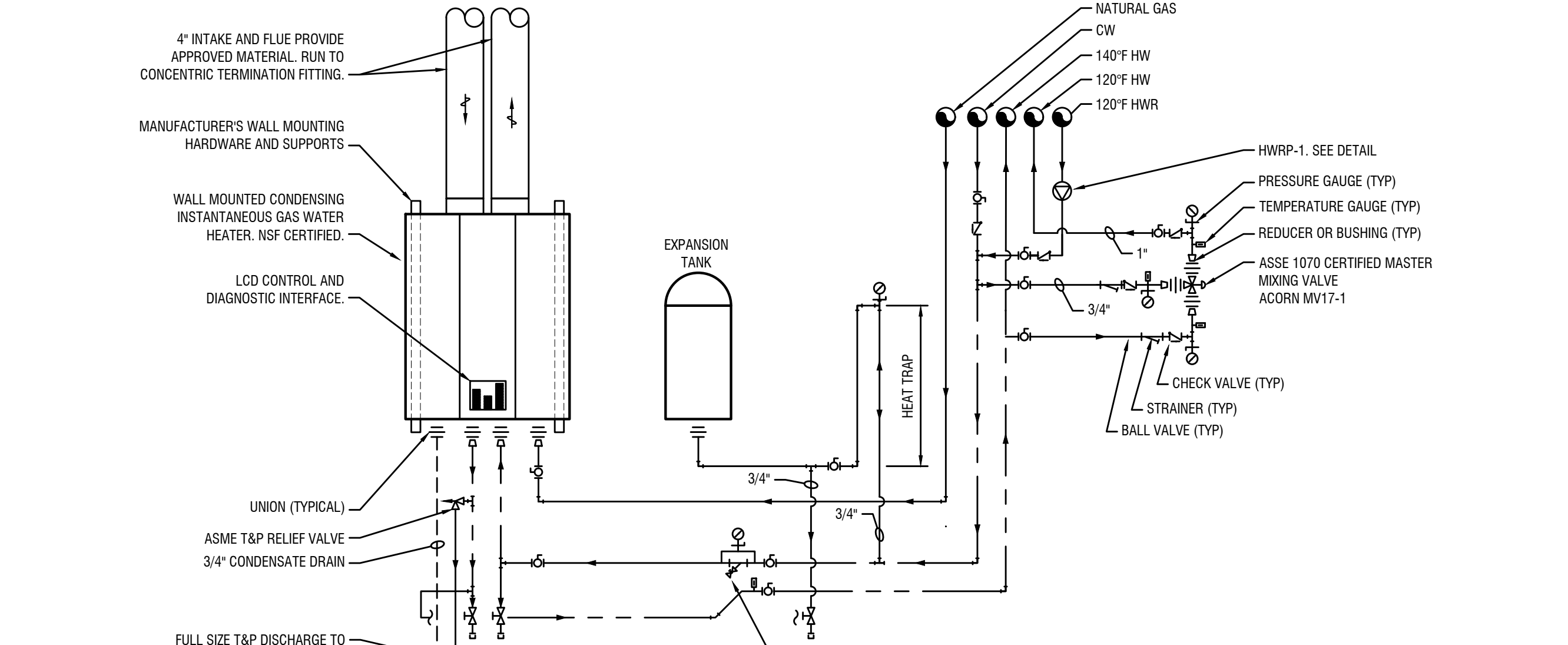
13 TYPICAL SINK GUARD ADA DETAIL  
P-5 SCALE: NOT TO SCALE



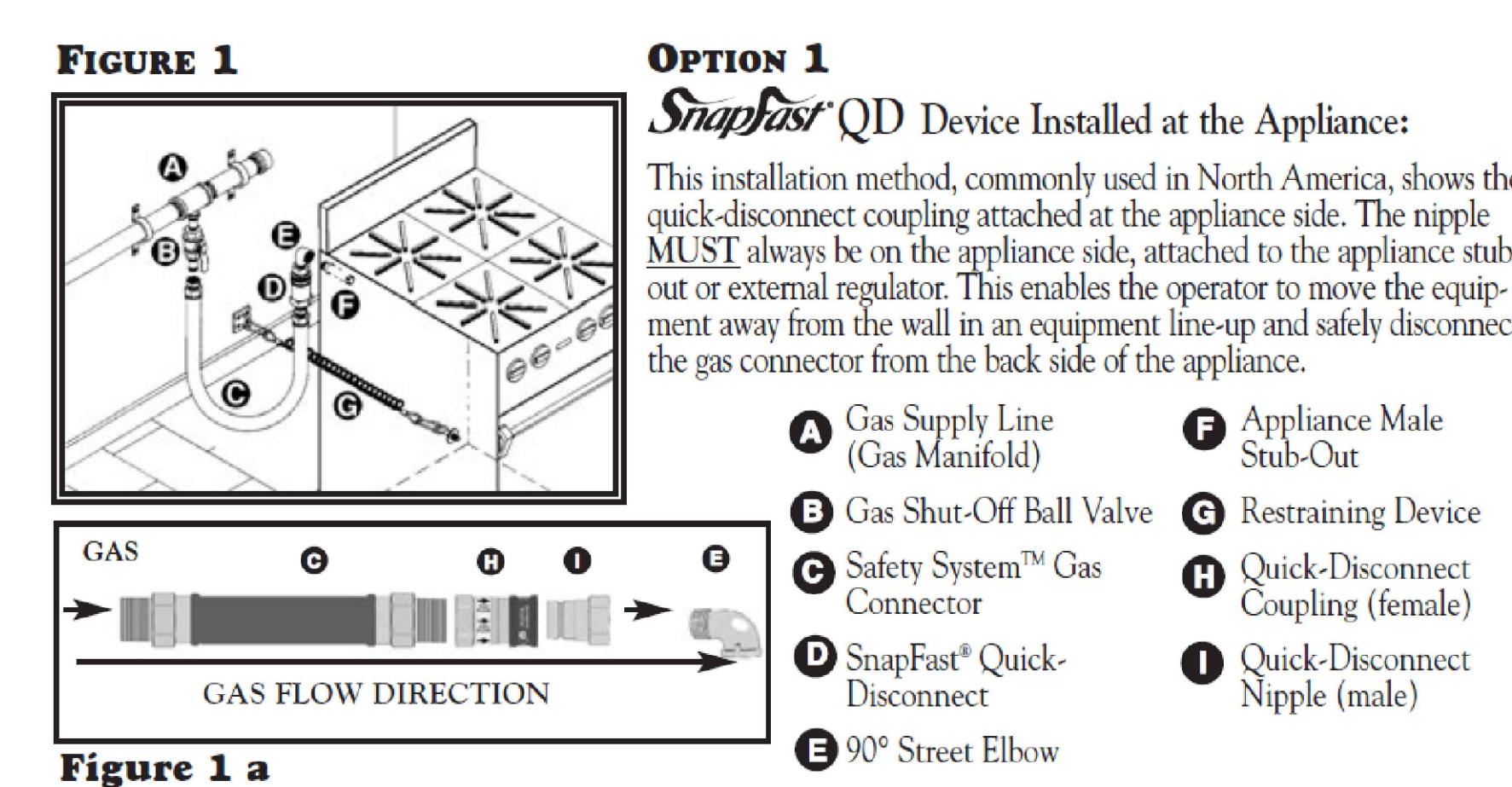
4 TYPICAL FLOOR DRAIN DETAIL  
P-5 SCALE: NOT TO SCALE



10 GAS PIPING - EQUIPMENT CONNECTION  
P-5 SCALE: NOT TO SCALE



15 INSTANTANEOUS NATURAL GAS FIRED WATER HEATER DETAIL  
P-5 SCALE: NOT TO SCALE



9 GAS CONNECTION TO KITCHEN EQUIPMENT  
P801 SCALE: NOT TO SCALE

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P-5