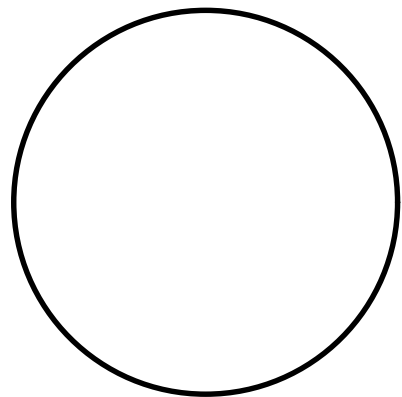


# COLUMBINE ON MAIN

## KITCHEN RENOVATION PROJECT

2299 WEST MAIN STREET  
LITTLETON, CO 80120

SHEET LIST	
TS0.0	TITLE SHEET
	STRUCTURAL
S1.0	STRUCTURAL PLAN
	MECHANICAL
MP0.0	MECHANICAL COVER SHEET, GENERAL NOTES, AND DRAWING INDEX
MP0.1	MECHANICAL LEGENDS
MD1.1	MAIN LEVEL HVAC DEMOLITION PLAN
M1.1	MAIN LEVEL AND ATTIC HVAC PLANS
M1.2	ROOF HVAC PLAN
M2.1	HVAC SCHEDULES AND DETAILS
M2.2	KITCHEN HOOD DRAWINGS
M2.3	KITCHEN HOOD FIRE PROTECTION DRAWINGS
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PD1.1	MAIN LEVEL PLUMBING DEMOLITION PLAN
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P1.2	ROOF LEVEL PLUMBING PLAN
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	ELECTRICAL
E1.0	ELECTRICAL ONE-LINE SCHEDULES
E2.0	ELECTRICAL POWER & SYSTEMS PLAN
E3.0	ELECTRICAL MECHANICAL & LIGHTING PLAN



**The Ballard Group, Inc.**  
Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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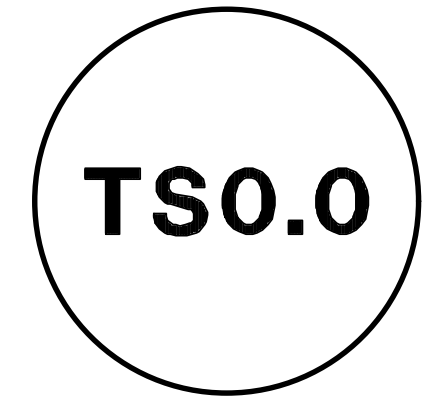

Job No. 15137

Date 01/20/2016

Drawn CAT/JJOP

Checked TVS/TRH

Contents  
TITLE SHEET







1. FIELD VERIFY EXACT LOCATION OF ALL CONNECTION POINTS PRIOR TO CONSTRUCTION.
2. ROUGH-IN AND FINAL CONNECT ALL FIXTURES, EQUIPMENT, ETC.
3. CONTRACTOR SHALL INSPECT SITE TO THOROUGHLY FAMILIARIZE HIMSELF WITH THE AREA OF WORK. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
4. ALL WORK SHALL BE PER LOCAL BUILDING AND HEALTH DEPARTMENT REQUIREMENTS.
5. PROVIDE BALL VALVES ON ALL BRANCH LINES FOR BUILDING ISOLATION WHETHER SHOWN OR NOT.
6. REFERENCE HVAC DRAWINGS FOR EXACT LOCATION OF ALL HVAC EQUIPMENT REQUIRING PLUMBING CONNECTIONS. COORDINATE WITH HVAC CONTRACTOR EXACT PLUMBING CONNECTION REQUIREMENTS PRIOR TO COMMENCING WORK.
7. ALL VENTS THROUGH THE ROOF (VTR) SHALL BE POSITIONED A MINIMUM OF 15'-0" FROM ANY OUTSIDE AIR INTAKE.
8. ALL PIPE PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE SEALED IN ACCORDANCE WITH THE BUILDING CODE.
9. OFFSET ALL PIPING AS REQUIRED TO AVOID STRUCTURAL MEMBERS, CANTS, FLASHING, MECHANICAL OR ELECTRICAL EQUIPMENT.
10. PROVIDE CHROME PLATED SET SCREW TYPE ESCUTCHEONS AT ALL EXPOSED PIPE PENETRATIONS THROUGH WALLS AND CASEWORK.
11. PROVIDE TRAP PRIMERS & TRAP SEALS TO ALL FLOOR DRAINS & FLOOR SINKS AS INDICATED.
12. PROTECT ALL EXISTING EQUIPMENT INDICATED AS REMAINING IN PLACE OR BEING RELOCATED. REPLACE DAMAGED EQUIPMENT IMMEDIATELY WITH EXACT DUPLICATE AT NO ADDITIONAL COST TO THE OWNER.
13. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY LOCATING AND PROTECTING ALL EXISTING PIPING AND UTILITIES FOR THE PROTECTION OF THE WORK. ANY DAMAGE CAUSED TO EXISTING PIPING OR UTILITIES SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER.
14. VERIFY AND COORDINATE EXACT SIZE, LOCATION, AND ELEVATION OF KITCHEN PLUMBING ROUGH-INS WITH KITCHEN EQUIPMENT CONTRACTOR PRIOR TO CONSTRUCTION.
15. PROVIDE ACCESSIBLE SHUT-OFF VALVES FOR ALL KITCHEN EQUIPMENT REQUIRING WATER SERVICE.
16. ALL EXPOSED PIPING IN THE KITCHEN AREA TO BE A CLEANABLE SURFACE PER LOCAL HEALTH DEPARTMENT.
17. PLUMBING CONTRACTORS SHALL PROVIDE ALL INDIRECT WASTE PIPING AND MAKE FINAL CONNECTIONS TO SINKS, KITCHEN EQUIPMENT, ETC. VERIFY SIZES AND LOCATIONS WITH KITCHEN EQUIPMENT CONTRACTOR'S SHOP DRAWINGS.
18. COMPLY WITH ALL BUILDING AND HEALTH DEPARTMENT REGULATIONS FOR PLUMBING INSTALLATION. VERIFY ALL REQUIREMENTS PRIOR TO SUBMITTING BID OR COMMENCING WORK.
19. FLUSH MOUNT ALL FLOOR SINKS IN KITCHEN AREA FOR FLOOR DRAINAGE USE.
20. ALL GAS PIPING, VALVES, PRV ETC. SHALL MEET THE REQUIREMENTS OF THE INTERNATIONAL FUEL GAS CODE.

1. COORDINATE DEMOLITION REQUIREMENTS WITH THE GENERAL CONTRACTOR.
2. COORDINATE EXTENT OF DEMOLITION WITH THE NEW CONSTRUCTION AS SHOWN IN THESE DOCUMENTS.
3. EXISTING PLUMBING PIPING, EQUIPMENT ETC IS SHOWN LIGHT.
4. ALL PLUMBING ITEMS INDICATED TO BE DEMOLISHED SHALL BE INSPECTED FOR SALVAGE BY THE OWNER. ALL NON-SALVAGEABLE ITEMS SHALL THEN BE IMMEDIATELY REMOVED FROM THE SITE BY THE PLUMBING CONTRACTOR.
5. ALL UNUSED HANGERS AND SUPPORTS SHALL BE REMOVED.
6. THE REMOVAL OR INSTALLATION OF FIXTURES, PIPES AND EQUIPMENT MAY REQUIRE THE REMOVAL OF EXISTING WALLS AND CEILINGS. THE PLUMBING CONTRACTOR AND GENERAL CONTRACTOR SHALL BE COORDINATE AND RESPONSIBLE FOR REPAIRING AND PAINTING THESE WALLS AND/OR CEILINGS SO THEY MATCH THE EXISTING WHERE NOT REPLACED UNDER THE ARCHITECTURAL DOCUMENTS. THE CONTRACTOR SHALL REVIEW THE PLUMBING DRAWINGS TO IDENTIFY THESE LOCATIONS PRIOR TO BID PRICING.
7. THE GENERAL CONTRACTOR SHALL PATCH AND SEAL UNUSED ROOF PENETRATIONS AT DEMOLISHED PLUMBING TO MATCH EXISTING CONDITIONS.
8. THE GENERAL CONTRACTOR SHALL MAKE REPAIRS TO ALL EXISTING BUILDING COMPONENTS THAT HAVE BEEN AFFECTED BY THE DEMOLITION OF PLUMBING SYSTEMS.

- A. WASTE AND VENT PIPING ABOVE FINISHED FLOOR SHALL BE SERVICE WEIGHT CAST-IRON WITH NO-HUB FITTINGS.
- B. WASTE AND VENT STORM PIPING BELOW FINISHED FLOOR/GRADE SHALL BE SCHEDULE 40 PVC "SOLID CORE" WITH SOLVENT WELDED FITTINGS.
- C. WATER PIPING SHALL BE TYPE "L" COPPER WITH NO LEAD SOLDER OR FLUX FITTINGS.
- D. GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL, 2" AND BELOW SHALL BE THREADED FITTINGS, WHILE 2-1/2" AND ABOVE SHALL BE WELDED.

A. BALL VALVES SHALL BE NSF 61 RATED AND EQUAL TO APPOLLO #77CL-100/77CL-200.

1. DUCTWORK DIMENSIONS LISTED ON THE DRAWINGS ARE CLEAR, INSIDE DIMENSIONS.
2. FLEXIBLE DUCTWORK SHALL BE INSULATED AND SHALL BE THE SAME SIZE AS THE NECK OF THE AIR DEVICE. FLEXIBLE DUCTWORK SHALL NOT EXCEED 8'-0" IN LENGTH, PROVIDE WRAPPED RIGID ROUND DUCTWORK FOR TAKEOFFS IN EXCESS OF 8'-0".
3. UNLESS SHOWN OTHERWISE, THE INLET DUCTWORK TO FAN TERMINAL UNITS AND VARIABLE AIR VOLUME TERMINALS SHALL BE THE FULL SIZE OF THE UNIT CONNECTION.
4. PROVIDE DUCT TRANSITIONS FROM EQUIPMENT CONNECTIONS TO DUCT SIZES AS SHOWN.
5. PROVIDE A FLEXIBLE CONNECTION TO THE INTAKE AND DISCHARGE OF ALL MECHANICAL EQUIPMENT HAVING ROTATING PARTS. FLEXIBLE CONNECTION SHALL COMPLY WITH ALL APPLICABLE CODES.
6. ALL DUCTWORK SHALL BE A MINIMUM 26 GAUGE SHEETMETAL, OR AS REQUIRED BY ALL APPLICABLE CODES. ALL DUCTWORK CROSSING RATED CORRIDORS SHALL BE A MINIMUM 24 GAUGE SHEETMETAL. MEET OR EXCEED SMACNA STANDARDS.
7. ALL SUPPLY, RETURN AND EXHAUST DUCTWORK SHALL BE SEALED AIRTIGHT WITH DUCT SEALANT (SMACNA SEAL CLASS "A") ALONG ALL SEAMS AND JOINTS.
8. ALL RECTANGULAR SUPPLY, RETURN AND TRANSFER DUCTWORK SHALL BE SHEETMETAL LINED WITH DUCT LINER.
9. ALL EXHAUST DUCTWORK SHALL BE UNLINED SHEETMETAL, UNLESS NOTED OTHERWISE.
10. ALL DUCTWORK SERVING CHEMICAL STORAGE ROOMS SHALL BE CONSTRUCTED OF SCHEDULE 40 PVC PIPE. PVC COATED STEEL DUCTWORK IS NOT ACCEPTABLE.
11. ALL EXPOSED SPIRAL ROUND DUCTWORK SHALL BE SHEETMETAL LINED WITH 1" DUCT LINER.
12. ALL CONCEALED SPIRAL ROUND DUCTWORK SHALL BE SHEETMETAL WRAPPED WITH 1-1/2" DUCT WRAP.
13. ALL UNLINED DUCTWORK THAT IS VISIBLE THROUGH THE AIR DEVICE SHALL BE PAINTED PALL BLACK.
14. MAINTAIN A MINIMUM 10'-0" SEPARATION FROM OUTSIDE AIR INTAKES TO EXHAUST TERMINATIONS AND FLUE OUTLETS.
15. MAINTAIN A MINIMUM OF 15'-0" FROM OUTSIDE AIR INTAKES TO PLUMBING VENTS.
16. MAINTAIN A MINIMUM 3'-0" SEPARATION FROM EXHAUST TERMINATIONS TO OPERABLE WINDOWS AND DOORS.
17. COORDINATE LOUVER, WALL CAP AND AIR DEVICE PLACEMENT WITH BRICK OR BLOCK COURSE WHERE APPLICABLE.
18. COORDINATE THE LOCATION AND ELEVATION OF ALL EXPOSED DUCTWORK WITH THE ARCHITECT AT THE JOB SITE.
19. ALL EXPOSED DUCTWORK SHALL BE FREE OF IMPERFECTIONS AND DAMAGE. SEAL EXPOSED DUCTWORK IN A NEAT WORKMANLIKE MANNER SUITABLE FOR PAINTING.
20. THE GENERAL CONTRACTOR SHALL PAINT ALL EXPOSED DUCTWORK, FITTINGS ETC. IN ACCORDANCE WITH THE ARCHITECTURAL SPECIFICATION.
21. ALL EXPOSED DUCTWORK SHALL BE PROVIDED WITH A GRIP-LOCK PRIMER TO PREPARE THE DUCT FOR FIELD PAINTING.
22. CUT ROOFTOP UNIT AND AIR-HANDLING UNIT DUCT OPENINGS THROUGH THE ROOF 3/4" LARGER THAN THE OUTSIDE DIMENSION OF THE SUPPLY AND RETURN DUCTS. SEAL THE OPENINGS AROUND THE DUCTS.
23. COMPLETELY FILL ALL ROOFTOP UNIT ROOF CURBS WITH UNFACED BATT INSULATION. LAYER INSULATION IN A NEAT WORKMANSHIP LIKE MANNER.
24. SPIN-IN FITTINGS SERVING GRILLES AND DIFFUSERS SHALL BE CONICAL WITH MANUAL VOLUME DAMPERS, UNLESS THE AIR TERMINAL IS PROVIDED WITH AN OBD.
25. SPIN-IN FITTINGS SERVING VAV TERMINALS SHALL BE CONICAL WITHOUT MANUAL VOLUME DAMPERS.
26. RECTANGULAR BRANCH DUCT TAKEOFFS SHALL HAVE 45° TAKEOFFS AND ROUND DUCT TAKEOFFS SHALL BE CONICAL.
27. ALL ELBOWS, BOTH HORIZONTAL AND VERTICAL, SHALL BE LONG RADIUS ELBOWS WHEREVER POSSIBLE, OR SHALL HAVE TURNING VANS WHERE SHOWN.
28. ALL EXTERIOR AND ROOF MOUNTED DUCTWORK SHALL BE PROVIDED WITH 1" DUCT LINER, 1-1/2" DUCT WRAP AND AN ALUMINUM ALL WEATHER JACKETING.
29. 12"x12" ACCESS DOORS SHALL BE PROVIDED FOR ALL MANUAL VOLUME DAMPERS LOCATED ABOVE ROOFS AND CEILINGS. ALL FINAL ACCESS DOOR LOCATIONS SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
30. 24"x24" ACCESS DOORS SHALL BE PROVIDED FOR ALL VAV SUPPLY AIR TERMINAL UNITS AND HEATING COILS LOCATED ABOVE GYPSUM BOARD CEILINGS. ALL FINAL ACCESS DOOR LOCATIONS SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION.
31. ALL JOB SITE DUCTWORK PRIOR TO INSTALLATION SHALL BE COVERED AND PROTECTED FROM DIRT, DUST AND DAMAGE PER SMACNA STANDARDS.
32. ALL NEW AND REPLACEMENT ROOF MOUNTED EQUIPMENT SHALL BE LOCATED AT LEAST 10'-0" FROM THE EDGE OF THE ROOF. THE GENERAL AND MECHANICAL CONTRACTOR SHALL VERIFY AND CONFIRM THE ACTUAL INSTALLED LOCATIONS OF ALL NEW AND REPLACEMENT ROOF MOUNTED EQUIPMENT. IF THE ACTUAL INSTALLED LOCATION IS 10'-0" OR MORE FROM THE ROOF EDGE, THE GENERAL CONTRACTOR SHALL INSTALL AN OSHA APPROVED GUARD RAIL.
33. KITCHEN EXHAUST DUCTWORK SHALL BE CONSTRUCTED OF MATERIALS AS SPECIFIED. THE JOINTS AND SEAMS SHALL BE CONTINUOUSLY WELDED OR BRAZED ON THE EXTERNAL SURFACE OF THE DUCTWORK. THE HORIZONTAL DUCTWORK WILL BE SLOPED AT 1/4" PER LINEAL FOOT TOWARD THE KITCHEN HOOD. CAP THE DUCT SYSTEM WITH A NON-IGNITABLE, NON-FLAMMABLE, NON-TOXIC, NON-CORROSIVE, NON-ACCESSIBLE CLEANOUT. PROVIDE ONE PHONE CONNECTION LOCATED IN THE DUCT SHALL BE PROVIDED WITH CODE APPROVED CLEANOUTS IN THE DUCT AND DUCT ENCLOSURE.
34. PROVIDE A BLANKET WRAP INSULATION ON GREASE DUCT IN ACCORDANCE WITH NFPA 96 AND LOCAL CODES.
35. FLUES FOR BOILERS, WATER HEATERS AND POOL HEATERS SHALL BE ENGINEERED BY THE FLUE MANUFACTURER, BASED ON ACTUAL EQUIPMENT, AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
36. DRYER EXHAUST DUCTS SHALL BE CONSTRUCTED OF GALVANIZED SHEETMETAL NOT LESS THAN .01915 INCHES. INSIDE OF DRYER DUCT SHALL BE SMOOTH WITH NO MECHANICAL FASTENERS PENETRATING THE DUCT. POP RIVETS ARE ACCEPTABLE VERTICAL RISERS SHALL HAVE AN ACCESSIBLE CLEANOUT. COMPLY WITH MANUFACTURER'S INSTALLATION REQUIREMENTS AND LOCAL CODES.
37. DIVISION 26 SHALL PROVIDE A 120 VOLT, 20 AMP CIRCUIT FOR THE DDC SYSTEM LOCATED IN THE ROOM HOUSING THE DDC COMPUTER. DIVISION 26 SHALL PROVIDE MULTIPLE 20 AMP CIRCUITS IN THE CEILING SPACE TO SERVE VAV TERMINAL CONTROL TRANSFORMERS. EXACT CIRCUIT LOCATIONS SHALL BE COORDINATED WITH THE TEMPERATURE CONTROLS CONTRACTOR. DIVISION 26 SHALL PROVIDE ONE PHONE CONNECTION LOCATED IN THE ROOM HOUSING THE DDC COMPUTER. COORDINATE EXACT ROOM WITH THE OWNER.
38. IN THE EVENT A VARIABLE FREQUENCY DRIVE IS ADDED TO AN EXISTING PIECE OF HVAC EQUIPMENT, THE M.C. SHALL BE RESPONSIBLE FOR MAKING SURE THE MAG STARTER HAS BEEN REMOVED. THE M.C. SHALL ALSO VERIFY THAT THE MOTOR IS COMPATIBLE FOR THE DRIVE WITH A VARIABLE FREQUENCY DRIVE. THERE IS A CONFLICT WITH THE MOTOR, REPORT THE MOTOR DEFICIENCY IMMEDIATELY TO THE GENERAL CONTRACTOR.

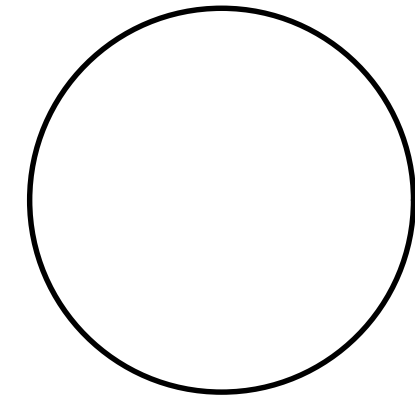
DRAWING NUMBER	MECHANICAL DRAWING DESCRIPTION	DRAWING SCALE
MP0.0	MECHANICAL COVER SHEET, GENERAL NOTES AND SHEET INDEX	NONE
MP0.1	MECHANICAL LEGENDS	NONE
MD1.1	MAIN LEVEL HVAC DEMOLITION PLAN	1/4"
M1.1	MAIN LEVEL AND ATTIC HVAC PLAN	1/4"
M1.2	ROOF HVAC PLAN	1/4"
M2.1	HVAC SCHEDULES AND DETAILS	NONE
M2.2	KITCHEN HOOD DRAWINGS	NONE
M2.3	KITCHEN HOOD FIRE PROTECTION DRAWINGS	NONE
M2.4	KITCHEN HOOD CONTROL DIAGRAMS	NONE
DRAWING NUMBER	PLUMBING/FIRE PROTECTION DRAWING DESCRIPTION	DRAWING SCALE
PD1.1	MAIN LEVEL PLUMBING DEMOLITION PLAN	1/4"
P1.1	MAIN LEVEL PLUMBING PLAN	1/4"
P1.2	ROOF LEVEL PLUMBING PLAN	1/4"
P2.1	PLUMBING SCHEDULES AND DETAILS	NONE

1. THE MECHANICAL CONTRACTOR SHALL INSPECT SITE TO BECOME FAMILIAR WITH THE SCOPE OF THE WORK. THESE DOCUMENTS DO NOT REFLECT AS-BUILT CONDITIONS. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THE ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
2. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL ABOVE CEILING EQUIPMENT, DUCTWORK AND CEILING MOUNTED AIR DEVICES WITH EXISTING ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND MECHANICAL CONDITIONS. APPROXIMATE LOCATIONS OF NEW WORK ARE SHOWN AND SHOULD BE FOLLOWED AS CLOSELY AS EXISTING CONDITIONS WILL ALLOW.
3. MECHANICAL WORK SHALL COMPLY WITH ALL APPLICABLE CODES. VERIFY ALL REQUIREMENTS PRIOR TO SUBMITTING BID OR COMMENCING WORK.
4. THE MECHANICAL SYSTEMS SHOWN SHALL BE RUN AS HIGH AS POSSIBLE. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING REQUIREMENTS WITH ALL TRADES PRIOR TO CONSTRUCTION.
5. WHERE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, COMPLY WITH ALL APPLICABLE CODES. ALL MATERIALS WITHIN THE CEILING PLENUM WILL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50.
6. WHERE THE CEILING SPACE IS TO BE USED AS A RETURN AIR PLENUM, THE GENERAL AND MECHANICAL CONTRACTORS SHALL VERIFY THAT THE RETURN AIR PATH BACK TO THE UNIT IS OPEN WITH A VELOCITY THROUGH ALL OPENINGS OF 400 FPM OR LESS.
7. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL CEILING AIR DEVICES AND ACCESS PANELS. OBTAIN CLARIFICATION FROM THE ARCHITECT, IF EXACT LOCATIONS ARE NOT SHOWN.
8. REFER TO THE ARCHITECTURAL DRAWINGS FOR ROOFING DETAILS SPECIFIC TO THIS PROJECT.
9. THE MECHANICAL CONTRACTOR SHALL COORDINATE THERMOSTAT, SENSOR AND SWITCH LOCATIONS WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION. ALL THERMOSTATS, SENSORS AND SWITCHES SHALL BE LOCATED 54" AFF UNLESS INDICATED OTHERWISE.
10. COORDINATE THERMOSTAT, SENSOR AND SWITCH LOCATIONS WITH EXISTING CONDITIONS AND THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION. WHERE POSSIBLE MATCH LOCATION OF PREVIOUS CONTROLS PROVIDE NEW CONTROLS TO CONCEAL EXPOSED CONTROL WIRING AND TUBING. COLOR TO BE SELECTED BY THE ARCHITECT.
11. BALANCE AIR AND WATER SYSTEMS TO THE QUANTITIES SHOWN AND SUBMIT BALANCE REPORT (S) TO THE ARCHITECT/ENGINEER FOR REVIEW.
12. PORTIONS OF THIS BUILDING WILL BE OCCUPIED DURING THIS CONSTRUCTION PROJECT. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE SCHEDULING OF THEIR WORK WITH THE GENERAL CONTRACTOR. CLEAN UP AT THE END OF EACH DAY.
13. ACCESS DOORS SHALL BE INSTALLED IN ORDER TO PROVIDE ACCESS TO MECHANICAL SYSTEMS LOCATED ABOVE INACCESSIBLE CEILINGS, WHETHER OR NOT SHOWN ON THE DRAWINGS. ACCESS DOORS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. ACCESS DOOR LOCATIONS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION. PROVIDE 12"x12" ACCESS DOORS FOR HAND ACCESS AND 24"x24" ACCESS FOR HEAD AND SHOULDER ACCESS.

1. COORDINATE DEMOLITION REQUIREMENTS WITH THE GENERAL CONTRACTOR.
2. COORDINATE EXTENSION OF DEMOLITION WITH THE NEW CONSTRUCTION AS SHOWN IN THESE DOCUMENTS.
3. EXISTING MECHANICAL WORK IS SHOWN LIGHT.
4. ALL MECHANICAL ITEMS INDICATED TO BE DEMOLISHED SHALL BE INSPECTED FOR SALVAGE BY THE OWNER. ALL NON-SALVAGEABLE ITEMS SHALL THEN BE IMMEDIATELY REMOVED FROM THE SITE BY THE MECHANICAL CONTRACTOR.
5. ALL UNUSED TEMPERATURE CONTROL WIRING, WIRE MOLD, PNEUMATIC TUBING AND CONTROL COMPONENTS SHALL BE REMOVED.
6. ALL UNUSED HANGERS AND SUPPORTS SHALL BE REMOVED.
7. THE REMOVAL OR INSTALLATION OF CONTROLS, PIPES, DUCTS AND EQUIPMENT MAY REQUIRE THE REMOVAL OF EXISTING WALLS AND CEILINGS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND PAINTING THESE WALLS AND/OR CEILINGS SO THEY MATCH THE EXISTING. WORK NOT REPAIRED UNDER THE ARCHITECTURAL DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW THE MECHANICAL DRAWINGS TO IDENTIFY THESE LOCATIONS PRIOR TO BID PRICING.
8. THE GENERAL CONTRACTOR SHALL PATCH AND PAINT WALLS TO MATCH EXISTING AT THE DEMOLISHED CONTROLS.
9. THE GENERAL CONTRACTOR SHALL PATCH AND SEAL UNUSED ROOF PENETRATIONS AT DEMOLISHED MECHANICAL TO MATCH EXISTING CONDITIONS.
10. THE GENERAL CONTRACTOR SHALL PATCH THE CEILING, ROOF AND WALLS TO MATCH EXISTING AT DEMOLISHED HANGERS AND SUPPORTS.
11. THE GENERAL CONTRACTOR SHALL MAKE REPAIRS TO ALL EXISTING BUILDING COMPONENTS THAT HAVE BEEN AFFECTED BY THE DEMOLITION OF MECHANICAL SYSTEMS.







**The Ballard Group, Inc.**

Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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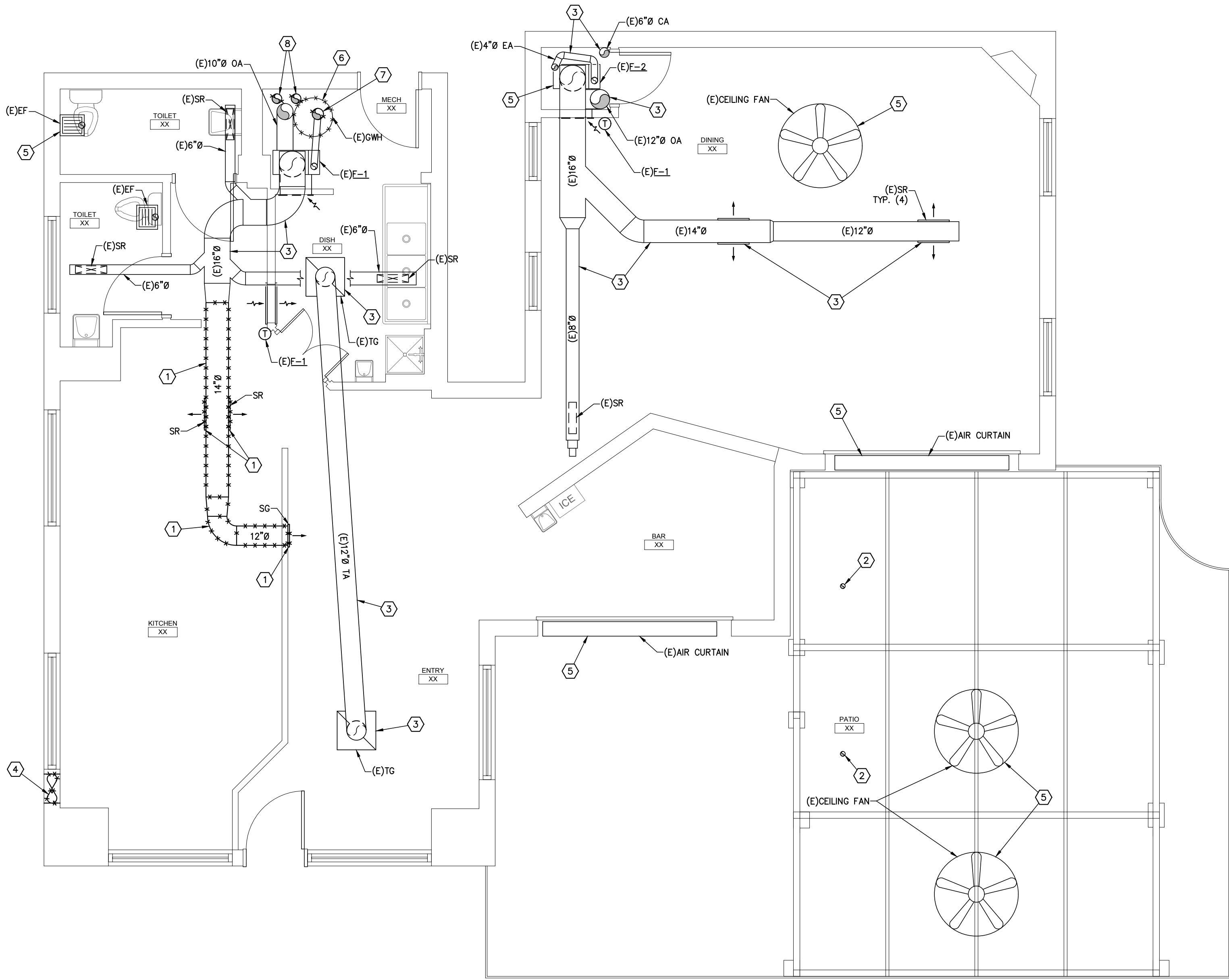
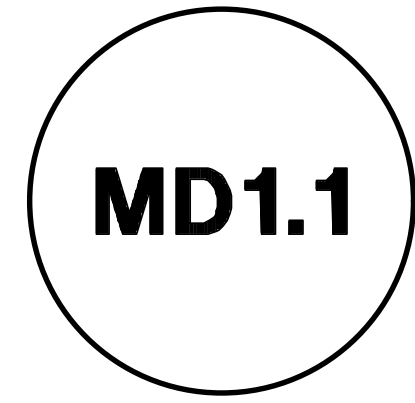
Date 01/20/2016

Drawn CAT

Checked TVS

Contents

MAIN LEVEL HVAC  
DEMOLITION PLAN

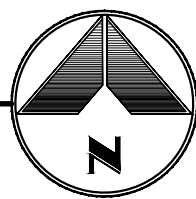


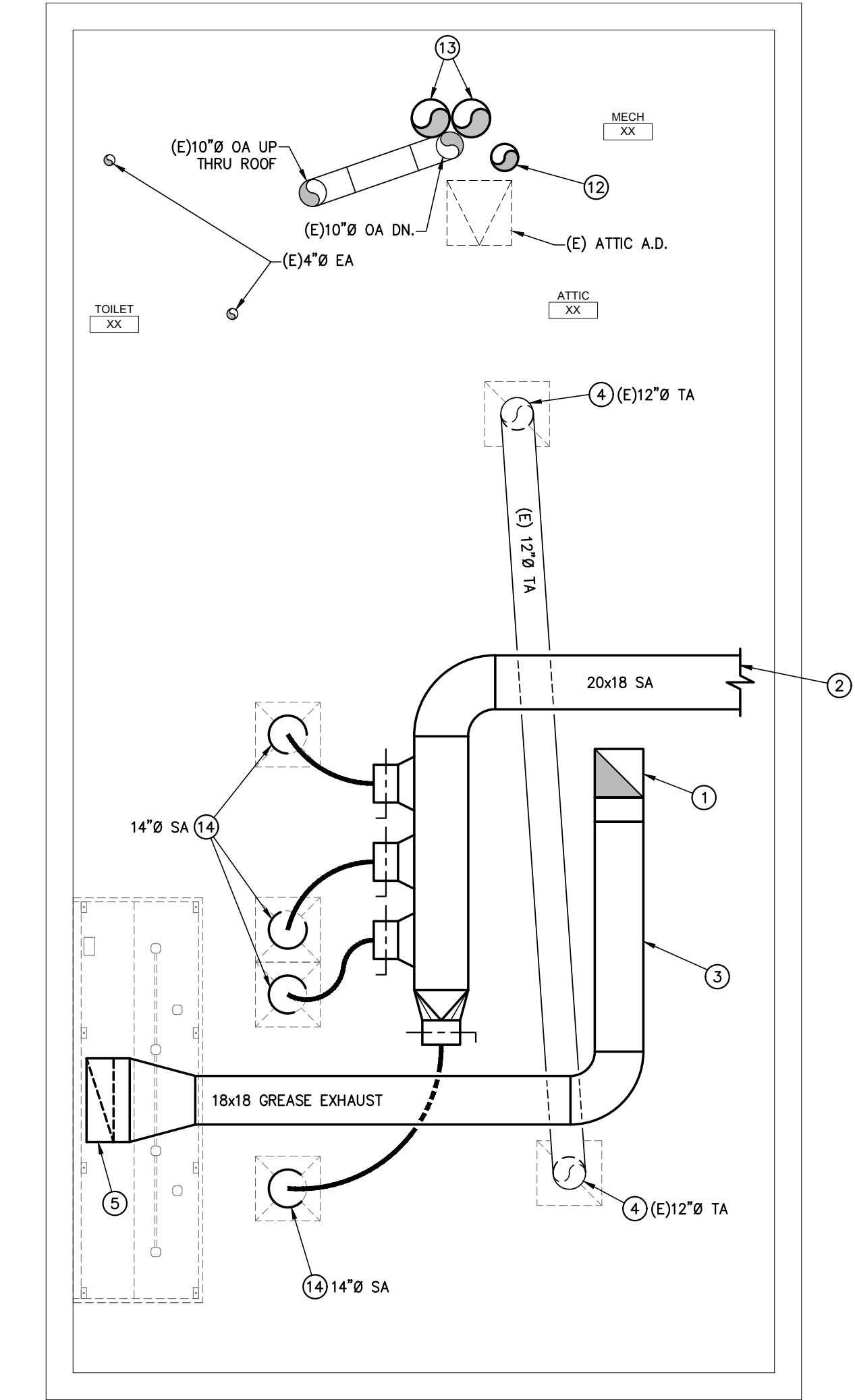
HVAC DEMOLITION KEYNOTES:

- 1 REMOVE EXISTING DUCTWORK OF SIZE INDICATED AND ALL ASSOCIATED HANGERS, FITTINGS, AIR DEVICES AND APPURTENANCES TO THE EXTENT INDICATED.
- 2 EXISTING 3"Ø B-VENT TO REMAIN.
- 3 EXISTING DUCTWORK OF SIZE AND TYPE INDICATED AND ALL ASSOCIATED HANGERS, FITTINGS, AIR DEVICES AND APPURTENANCES TO REMAIN, TYPICAL.
- 4 REMOVE EXISTING SIDE WALL EXHAUST FAN AND ALL ASSOCIATED SUPPORTS, CONTROLS, WIRING AND APPURTENANCES. G.C. TO PATCH OPENING IN WALL.
- 5 EXISTING MECHANICAL EQUIPMENT TO REMAIN, TYPICAL.
- 6 EXISTING WATER HEATER TO BE REMOVED. REFER TO PLUMBING DRAWINGS FOR REQUIREMENTS.
- 7 REMOVE EXISTING 7"Ø B-VENT AND ALL ASSOCIATED SUPPORTS, FITTINGS AND APPURTENANCES.
- 8 REMOVE EXISTING 6"Ø COMBUSTION AIR DUCTS AND ALL ASSOCIATED SUPPORTS, FITTINGS AND APPURTENANCES.

**MAIN LEVEL HVAC DEMOLITION PLAN**

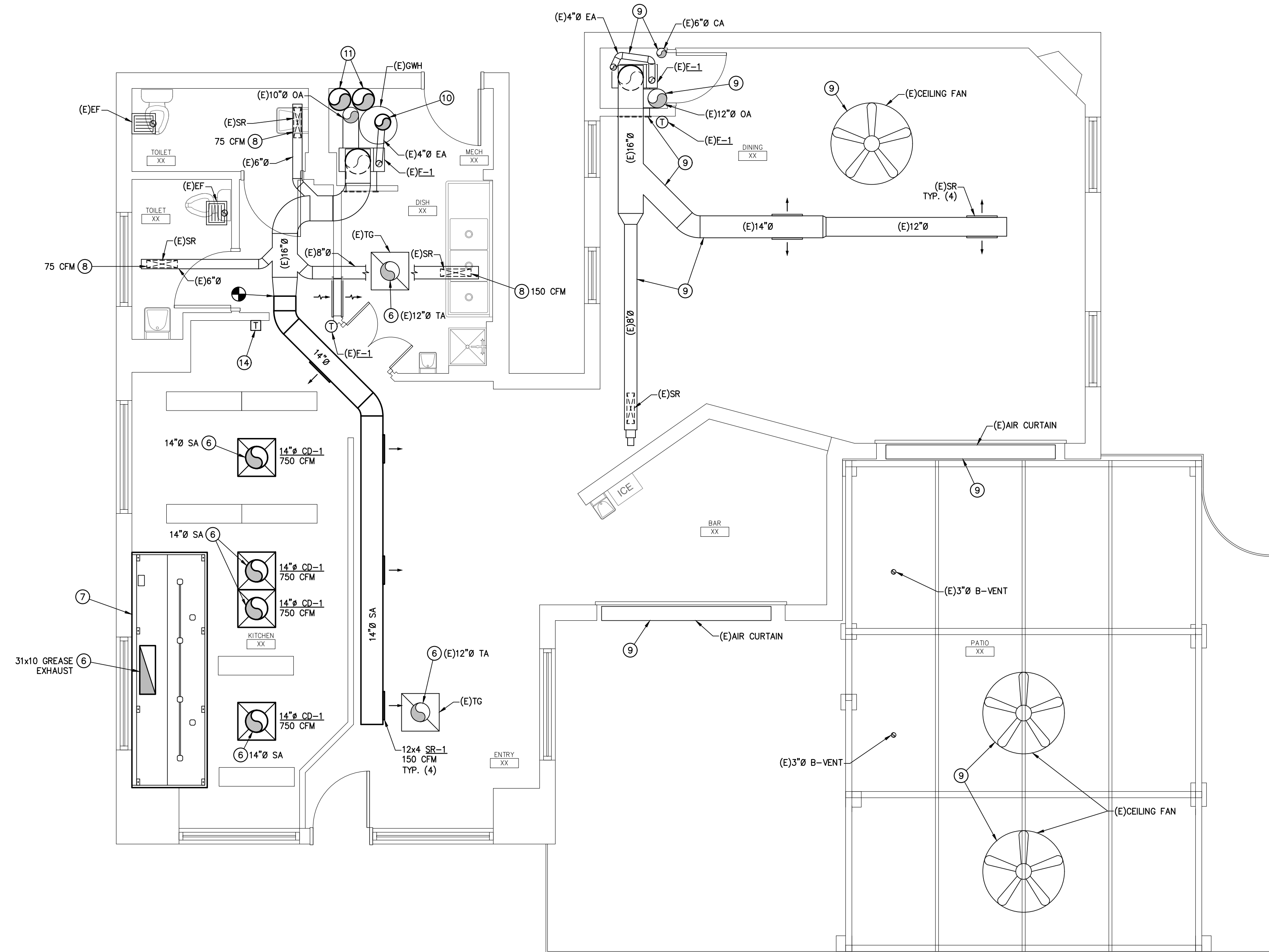
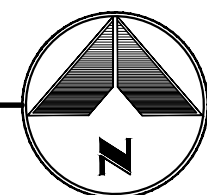
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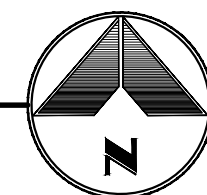
ATTIC HVAC PLAN

SCALE: 1/4"=1'-0"



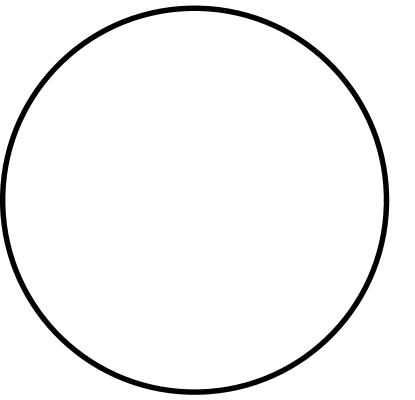
MAIN LEVEL HVAC PLAN

SCALE: 1/4"=1'-0"



HVAC KEYNOTES:

- 18"x18" GREASE EXHAUST DUCT UP THROUGH ROOF TO KEF-1. REFER TO ROOF HVAC PLAN, DRAWING M1.2 FOR CONTINUATION.
- 20"x18" SA DUCTWORK THROUGH DORMER IN ROOF (BY G.C.). REFER TO ROOF HVAC PLAN, DRAWING M1.2 FOR CONTINUATION.
- 16 GAGE WELDED GREASE DUCT PER LOCAL CODE REQUIREMENTS. INSULATE WITH UL LISTED 2-LAYER FIRE WRAP INSULATION. INSTALL PER MANUFACTURER'S REQUIREMENTS. SLOPE 1/4" PER FOOT BACK TOWARD KITCHEN HOOD.
- DUCTWORK OF SIZE AND TYPE AS INDICATED DOWN. REFER TO MAIN LEVEL HVAC PLAN.
- 31"x10" GREASE EXHAUST DUCTWORK DOWN TO CONNECTION AT HOOD. CONNECT TO HOOD IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
- DUCTWORK OF SIZE AND TYPE AS INDICATED UP TO ATTIC. REFER TO ATTIC HVAC PLAN FOR CONTINUATION.
- TYPE 1 KITCHEN HOOD KHL-1. REFER TO SCHEDULE FOR SIZE, CAPACITIES AND REQUIREMENTS. MOUNT HOOD AT ELEVATION PER DETAIL.
- BALANCE EXISTING AIR DEVICE TO INDICATED AIRFLOW.
- EXISTING EQUIPMENT SHOWN FOR REFERENCE ONLY.
- 10"Ø B-VENT UP TO ATTIC. CONNECT EXISTING 4"Ø FURNACE FLUE IN VERTICAL AS INDICATED. TRANSITION TO CONNECTION SIZE AT WATER HEATER. REFER TO ATTIC HVAC PLAN FOR CONTINUATION.
- 14"Ø COMBUSTION AIR DUCTS UP TO ATTIC. TERMINATE ONE DUCT 12" FROM CEILING AND THE OTHER 12" FROM FLOOR. REFER TO ATTIC HVAC PLAN FOR CONTINUATION.
- 10"Ø B-VENT DOWN AND UP THROUGH ROOF. REFER TO MAIN LEVEL HVAC PLAN AND ROOF HVAC PLAN, DRAWING M1.2 FOR CONTINUATION.
- 14"Ø COMBUSTION AIR DUCTS DOWN AND UP THROUGH ROOF. REFER TO MAIN LEVEL HVAC PLAN AND ROOF HVAC PLAN, DRAWING M1.2 FOR CONTINUATION.
- MAKE UP AIR UNIT MANUFACTURER SUPPLIED SPACE TEMPERATURE SENSOR. SENSOR TO BE MOUNTED AND WIRED BY M.C.



The Ballard Group, Inc.

Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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2299 WEST MAIN STREET  
LITTLETON, CO 80120

Issue Record

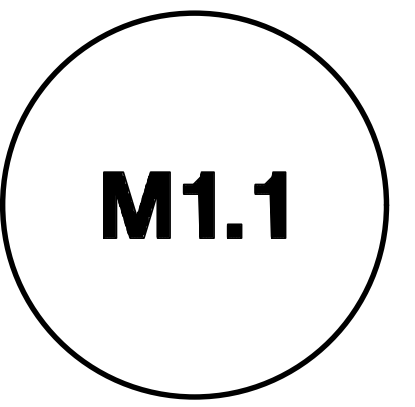

Job No. 15137

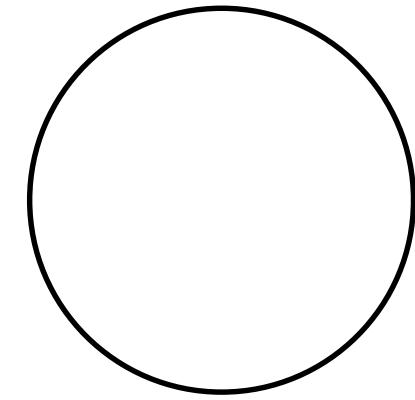
Date 01-20-2016

Drawn CAT

Checked TVS

Contents  
MAIN LEVEL AND ATTIC  
HVAC PLANS





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Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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Date 01/20/2016

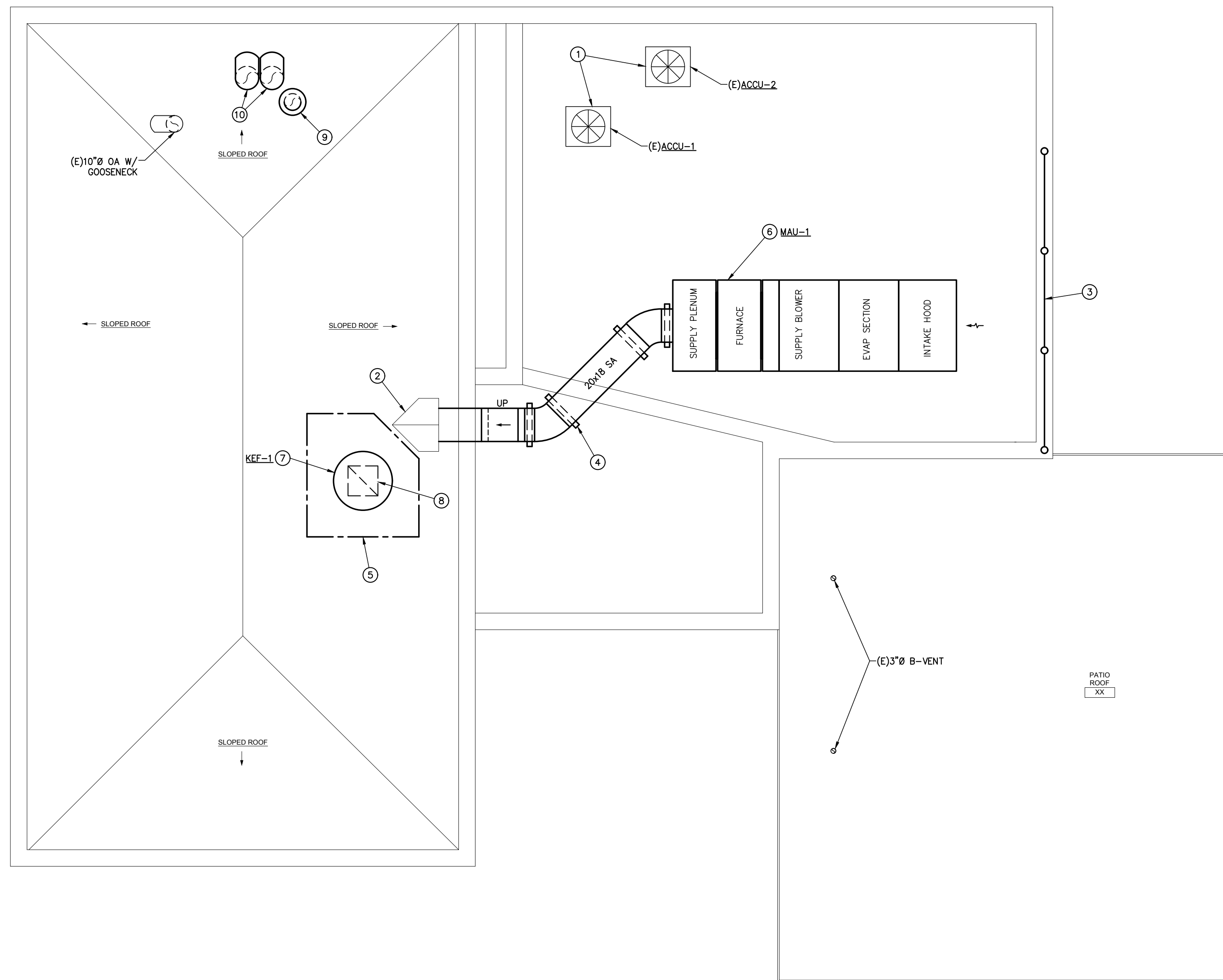
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Contents

ROOF HVAC PLAN

**M1.2**

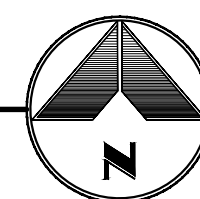


HVAC KEYNOTES:

- EXISTING MECHANICAL EQUIPMENT TO REMAIN.
- NEW ARCHITECTURAL DORMER BY G.C. PROVIDE WATER TIGHT SEAL AT DUCT PENETRATION. REFER TO ATTIC HVAC PLAN, DRAWING M1.1 FOR CONTINUATION.
- NEW OSHA APPROVED GUARD RAIL BY G.C.
- DUCT SUPPORT BY G.C., TYPICAL.
- G.C. TO PROVIDE OSHA APPROVED WORKING PLATFORM AROUND KEF-1.
- MAKE UP AIR UNIT AS INDICATED MOUNTED ON EXISTING ROOF WITH 14" MANUFACTURER SUPPLIED ROOF CURB. REFER TO SCHEDULE FOR CAPACITIES AND REQUIREMENTS. REFER TO STRUCTURAL PLANS FOR ROOF REINFORCEMENT REQUIREMENTS.
- KITCHEN EXHAUST FAN AS INDICATED MOUNTED ON MANUFACTURER SUPPLIED SLOPED ROOF CURB. REFER TO DETAIL 1/M2.1. REFER TO SCHEDULE FOR CAPACITIES AND REQUIREMENTS.
- 18"x18" GREASE EXHAUST DUCTWORK DOWN THROUGH ROOF. REFER TO ATTIC HVAC PLAN, DRAWING M1.1 FOR CONTINUATION.
- 10"Ø B-VENT DOWN THROUGH ROOF. TERMINATE WITH U.L. APPROVED ROOF CAP. REFER TO ATTIC HVAC PLAN, DRAWING M1.1 FOR CONTINUATION.
- 14"Ø COMBUSTION AIR DUCTS DOWN THROUGH ROOF. TERMINATE WITH GOOSENECK AND 1" BIRDSCREEN. REFER TO ATTIC HVAC PLAN, DRAWING M1.1 FOR CONTINUATION.

**ROOF HVAC PLAN**

SCALE: 1/4"=1'-0"

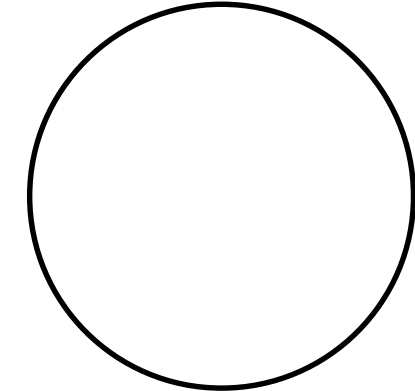
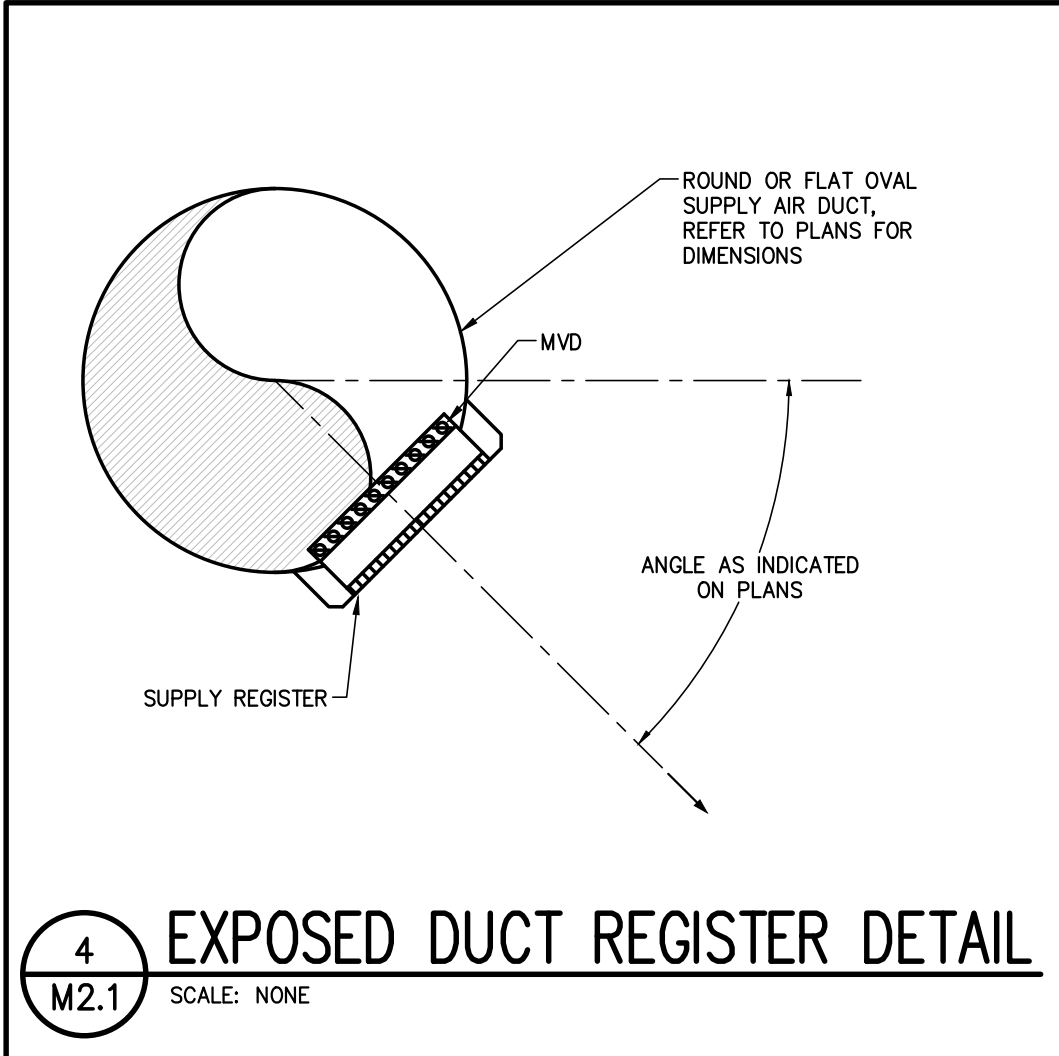
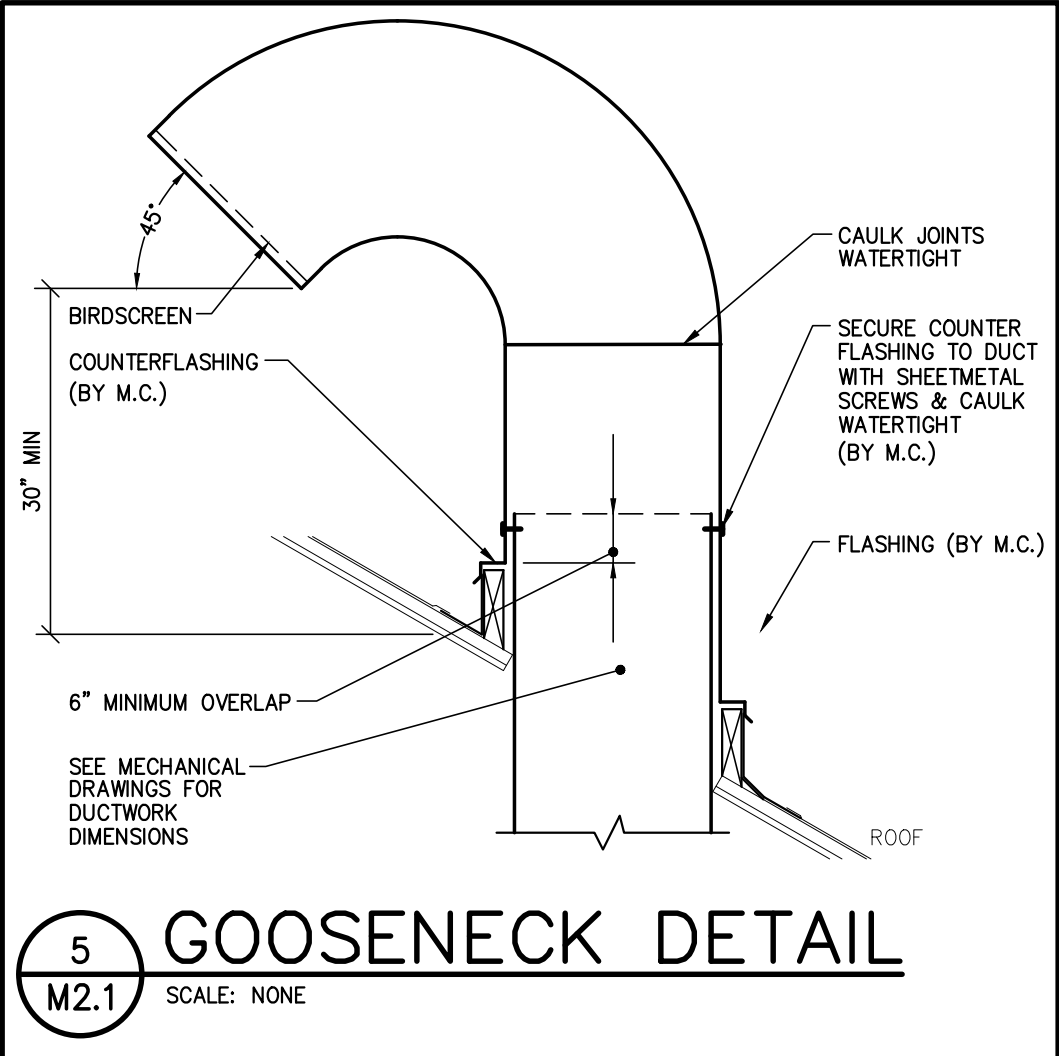
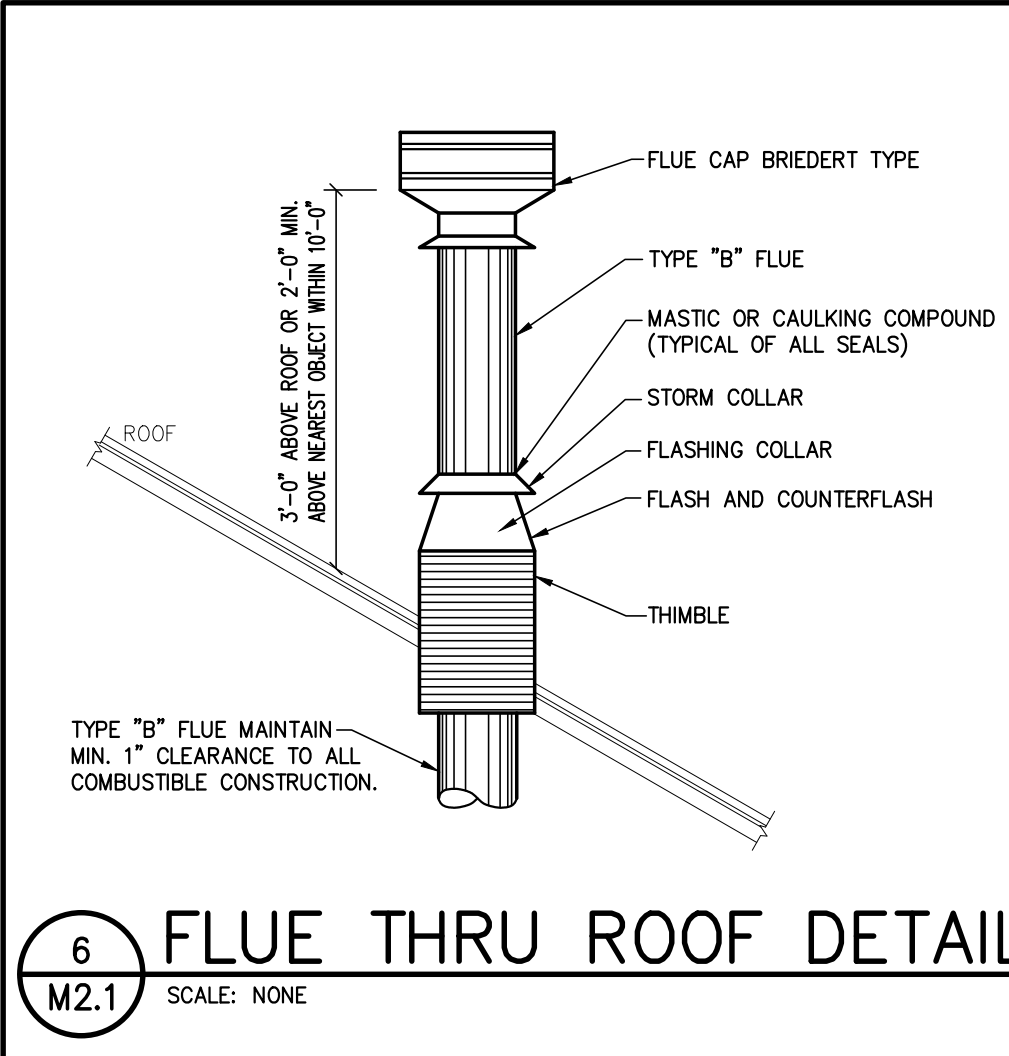
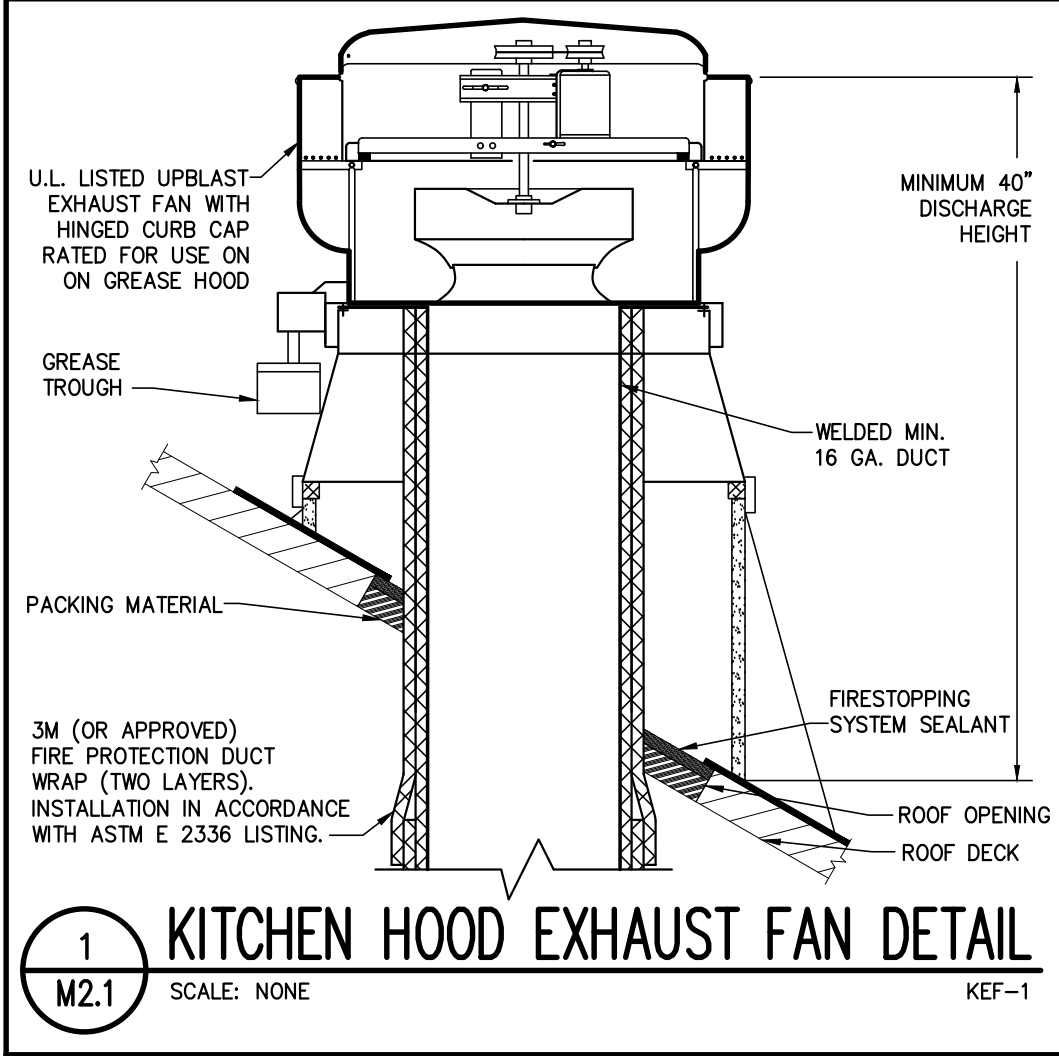
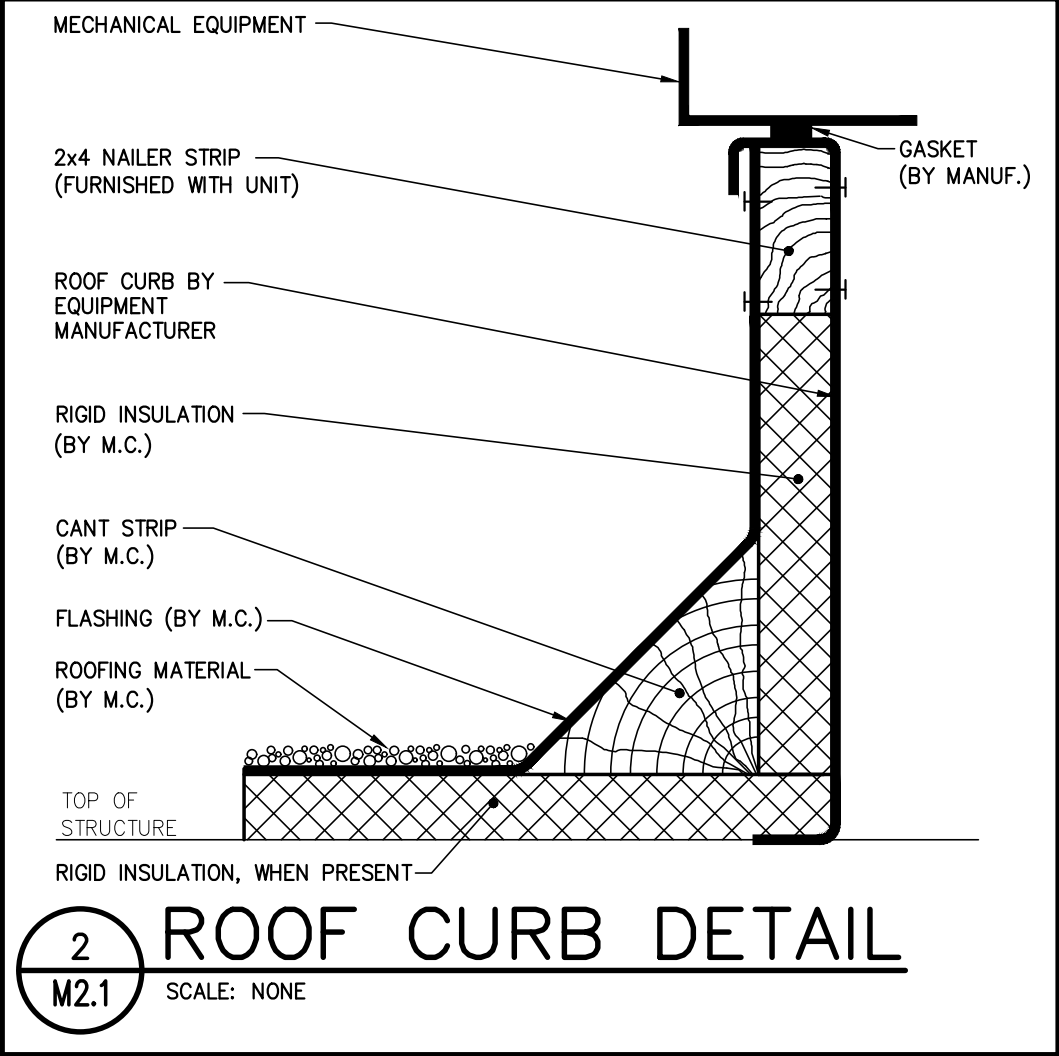
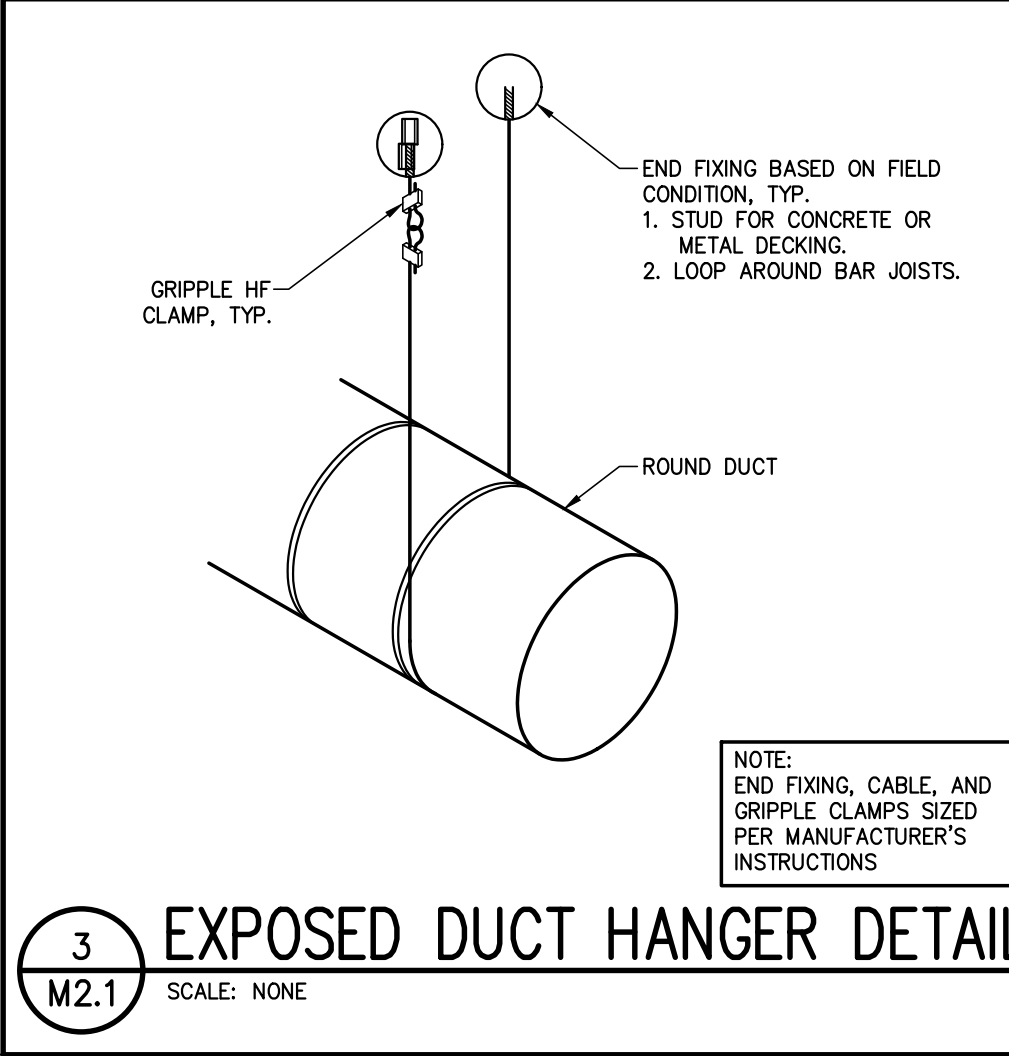




GRILLES, REGISTERS AND DIFFUSERS									
PLAN CODE	MANUFACTURER & MODEL NO.	TYPE & SERVICE	NECK SIZE	FACE SIZE	VOLUME DAMPER (OBD)	MATERIAL	MOUNTING TYPE	FINISH	REMARKS
SR-1	PRICE 720D	SUPPLY	AS NOTED	NECK+1.75"	YES	STEEL	DUCT	WHITE	NOTE:1
CD-1	PRICE SMD	SUPPLY	AS NOTED	24" x 24"	NO	ALUMINUM	SURFACE	WHITE	
NOTES: 1. PROVIDE WITH HARD LID TRIM KIT FOR DIFFUSERS IN GYPSUM CEILING.									

MAKE-UP-AIR UNIT SCHEDULE (INDIRECT GAS FIRED-EVAPORATIVE COOLED)																						
PLAN CODE	MANUF. & MODEL NO.	SUPPLY FAN						HEATING CAPACITY				AIR WASHER						DIMENSIONS				REMARKS
		CFM	ESP (S.L.)	RPM	HP	V/ø/ HZ	FLA	MBH INPUT @ S.L.	MBH OUTPUT @ 5,280'	EAT DB	LAT DB	EVAP EFFIC.	MEDIA DEPTH	AREA (S.F.)	HP (PUMP)	VOLTS/ø	FLA	H (IN)	L (IN)	W (IN)	WT (LBS)	
MAU-1	GREENHECK IGX-112-H22	3,000	1.25	1,107	2.0	230/1/60	12.0	350.0	224.0	-10.0	76.1	90%	12"	7.5	1/70	115/1	0.92	45"	116"	54"	1,400	NOTE: 1,2,3,4,5,6
NOTES: 1. UNIT SHALL CONSIST OF AN EVAPORATIVE COOLING SECTION, FILTER MIXING BOX, GAS FURNACE SECTION, SUPPLY FAN SECTION, AND SUPPLY PLENUM SECTION WITH HORIZONTAL DISCHARGE. 2. MOUNT UNIT ON 14" ROOF CURB. 3. PROVIDE ELECTRIC MODULATING GAS VALVE (20-100% TURNDOWN). INLET GAS PRESSURE IS 6" W.C. 4. PROVIDE UNIT WITH AUTO DRAIN AND FILL KIT FOR EVAPORATIVE SECTION. 5. MANUFACTURER SHALL PROVIDE ALL CONTROLS INCLUDING MODULATING GAS VALVE, GAS HEAT EXCHANGER SAFETIES, BELIMO DAMPER ACTUATORS, AND SPACE TEMPERATURE SENSOR. 6. MECHANICAL CONTRACTOR TO CONFIRM ELECTRICAL SERVICE IN THE FIELD PRIOR TO EQUIPMENT ORDER. ELECTRICAL SERVICE TO BE CIRCUIT TRACED, COORDINATE WITH THE ELECTRICAL CONTRACTOR.																						

FAN SCHEDULE																
PLAN CODE	MANUFACTURER & MODEL NO.	TYPE	SERVICE	SONES	CFM	T.S.P.	RPM	MOTOR		DIMENSIONS			WT (LBS)	VIB. ISOL.	DAMPER TYPE	REMARKS
						@ ALT	@ ALT	HP	V/ø/HZ	H	W	L				
KEF-1	GREENHECK CUBE-300HP-20	ROOF	KITCHEN TYPE 1 HOOD	18.4	3,600	2.00	1,725	2	208/1/60	36"	50"	DIA	300	NOTE: 1	NONE	NOTE: 3,4,6,7,8
NOTES: 1. PROVIDE MASON INDUSTRIES SUPER W WAFFLE PAD BETWEEN EXHAUST FAN AND CURB. REFER TO DETAIL. 2. UL 762 LISTED FOR GREASE APPLICATION. 3. FAN TO BE INTERLOCKED TO MAU-1 AND KITCHEN HOOD. 4. PROVIDE WITH INTEGRAL DISCONNECT. 5. PROVIDE SLOPED ROOF CURB WITH EXTENSION, HINGED BASE KIT, GREASE TROUGH, AND GREASE TERMINATOR. 6. MECHANICAL CONTRACTOR TO CONFIRM ELECTRICAL SERVICE IN THE FIELD PRIOR TO EQUIPMENT ORDER. ELECTRICAL SERVICE TO BE CIRCUIT TRACED, COORDINATE WITH THE ELECTRICAL CONTRACTOR.																



**The Ballard Group, Inc.**  
Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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Date 01/20/2016  
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Contents  
HVAC SCHEDULES AND DETAILS

M2.1





## FIRE SYSTEM INFORMATION

MARK	MODEL	LOCATION	FLOW POINTS		SUPPLY LINE	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
			HOODS	PCU			
FS-1	AMEREX KP WET CHEMICAL	REMOTE MOUNTED	14 UTILIZED 16 AVAILABLE		CONTINUOUS	FUSIBLE LINK	EH-1 SECTION 1

## FIRE SYSTEM OPTIONS AND ACCESSORIES

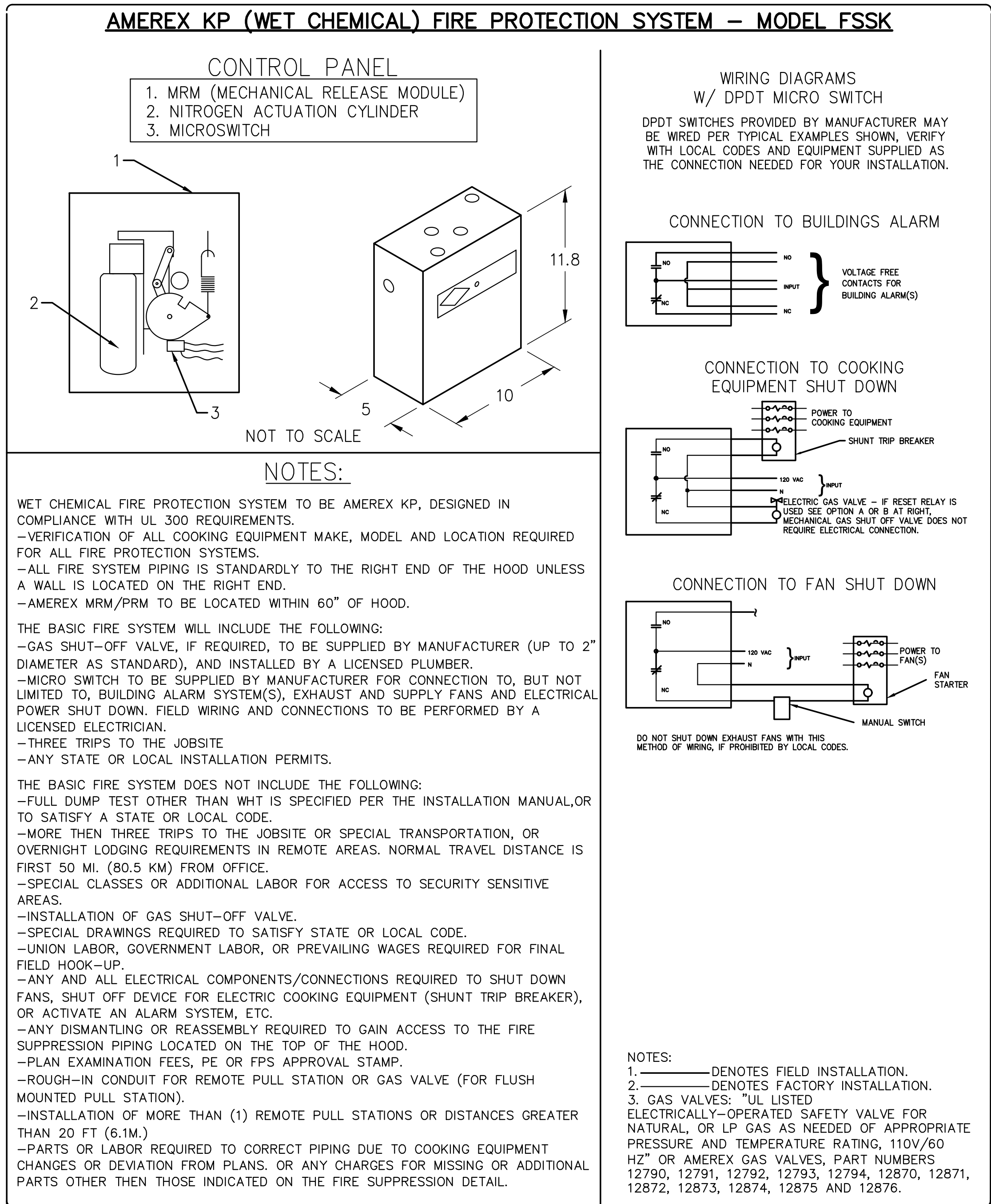
FULL INSTALLATION (INCLUDES PRE-PIPED HOOD(S) WITH DETECTION AND FACTORY COORDINATED INSTALL)

CHROME SLEEVES FOR FACTORY PROVIDED APPLIANCES DROPS – INCLUDED

GAS VALVE - INCLUDED - MECHANICAL SHUTOFF VALVE, 2.00" (AMEREX) - PART# 12794

HOOD SUPPRESSION AGENT - INCLUDED - 5.5 GAL. - [(2) 2.75 TANK(S)]

## REMOTE PULL STATION – STANDARD – INSTALLATION AT SINGLE POINT OF EGRESS




96 MALLIN HILL  
ESTUARIO MOLLUSCARISSIMO

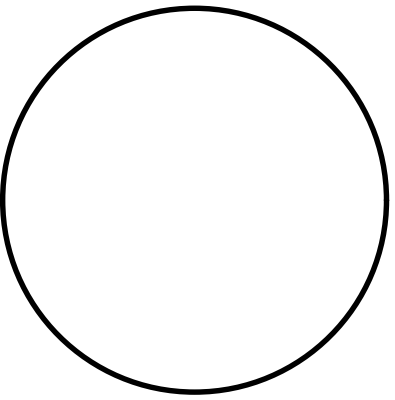
# COLUMBINE ON MAIN

FS-1

ACCUREX - CO, WY  
NOA STROOP  
NOA.STROOP@ACCUREX.COM  
(303)653-6057



ACCUREX



**The Ballard Group, Inc.**

Mechanical Consulting Engineers  
525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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## contents

## KITCHEN HOOD FIRE PROTECTION DRAWINGS

## M2.3

## KITCHEN HOOD FIRE PROTECTION DRAWINGS

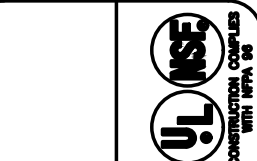
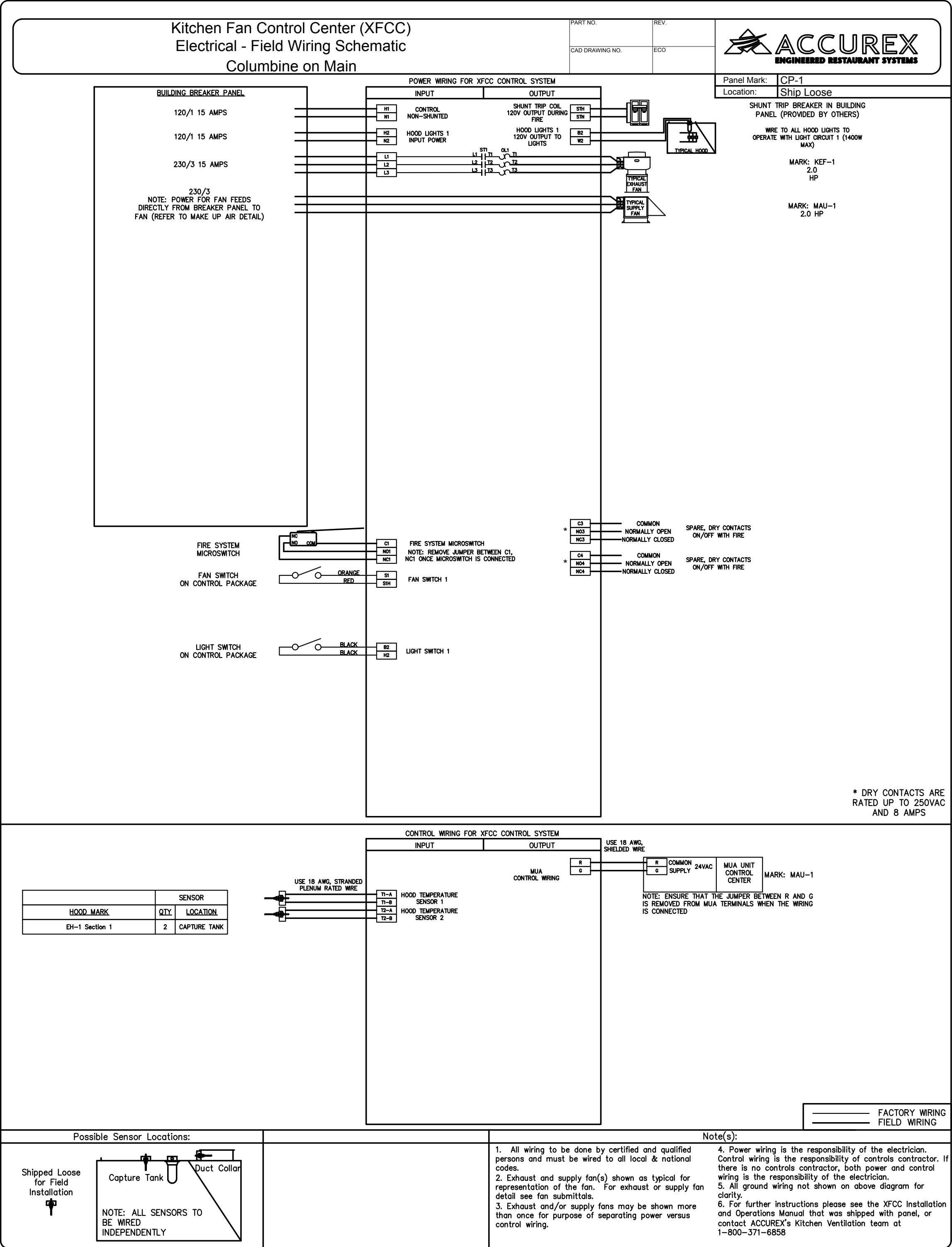
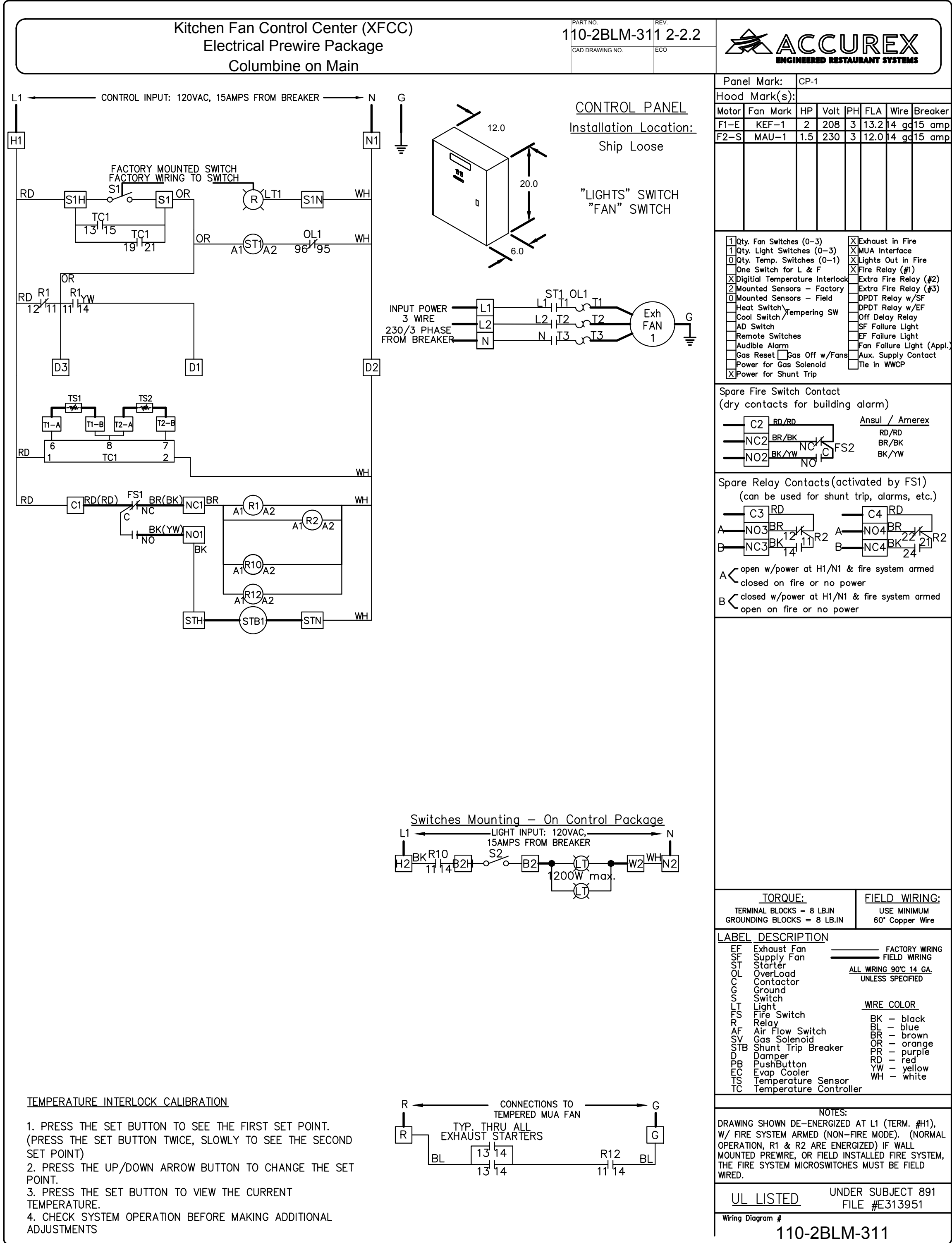
NOT TO SCALE

CONTROL INFORMATION

MARK	ELECTRICAL CONTROL PACKAGE		USER INTERFACE		FANS CONTROLLED				
	MODEL	LOCATION	TYPE	LOCATION	MARK	TYPE	VOLT	PHASE	HP
CP-1	XFCC	SHIP LOOSE	SWITCHES	ON CONTROL PACKAGE	KEF-1	EXHAUST	230	3	2.0
					MAU-1	SUPPLY	230	3	2.0

CONTROL FEATURES

CONTROL PANEL ENCLOSURE – 16 GA 300 SERIES STAINLESS STEEL ENCLOSURE (NEMA-1) – DIMENSIONS 12x20x6  
STARTERS PROVIDED IN CONTROL PANEL – QTY 1  
2 POSITION LIGHT SWITCH – QTY 1  
2 POSITION FAN SWITCH – QTY 1  
INTEGRATED EXHAUST TEMPERATURE INTERLOCK SYSTEM  
–FACTORY MOUNTED EXHAUST TEMPERATURE SENSORS – QTY 2  
–COMPLIES WITH INTERNATIONAL MECHANICAL CODE 2006 SECTION 507.2.1.1  
TURN ON EXHAUST IN FIRE  
LIGHTS OUT IN FIRE  
MUA INTERFACE  
POWER FOR SHUNT TRIP  
THERMAL OVERLOADS IN CABINET



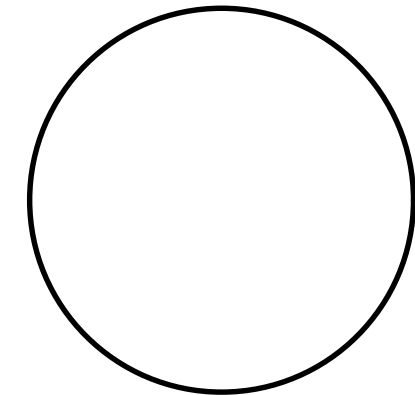
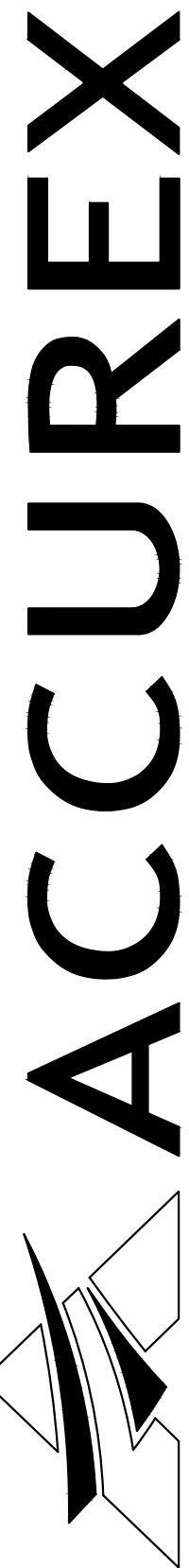
COLUMBINE ON MAIN

CP-1

PROJECT 1/13/2016

MARK

ACCUREX - CO. WY  
NOA STROOP  
NOA.STROOP@ACCUREX.COM  
(303)653-6057



**The Ballard Group, Inc.**  
Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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2299 WEST MAIN STREET  
LITTLETON, CO 80120

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Contents  
KITCHEN HOOD CONTROL DIAGRAMS

M2.4

KITCHEN HOOD CONTROL DIAGRAMS

NOT TO SCALE

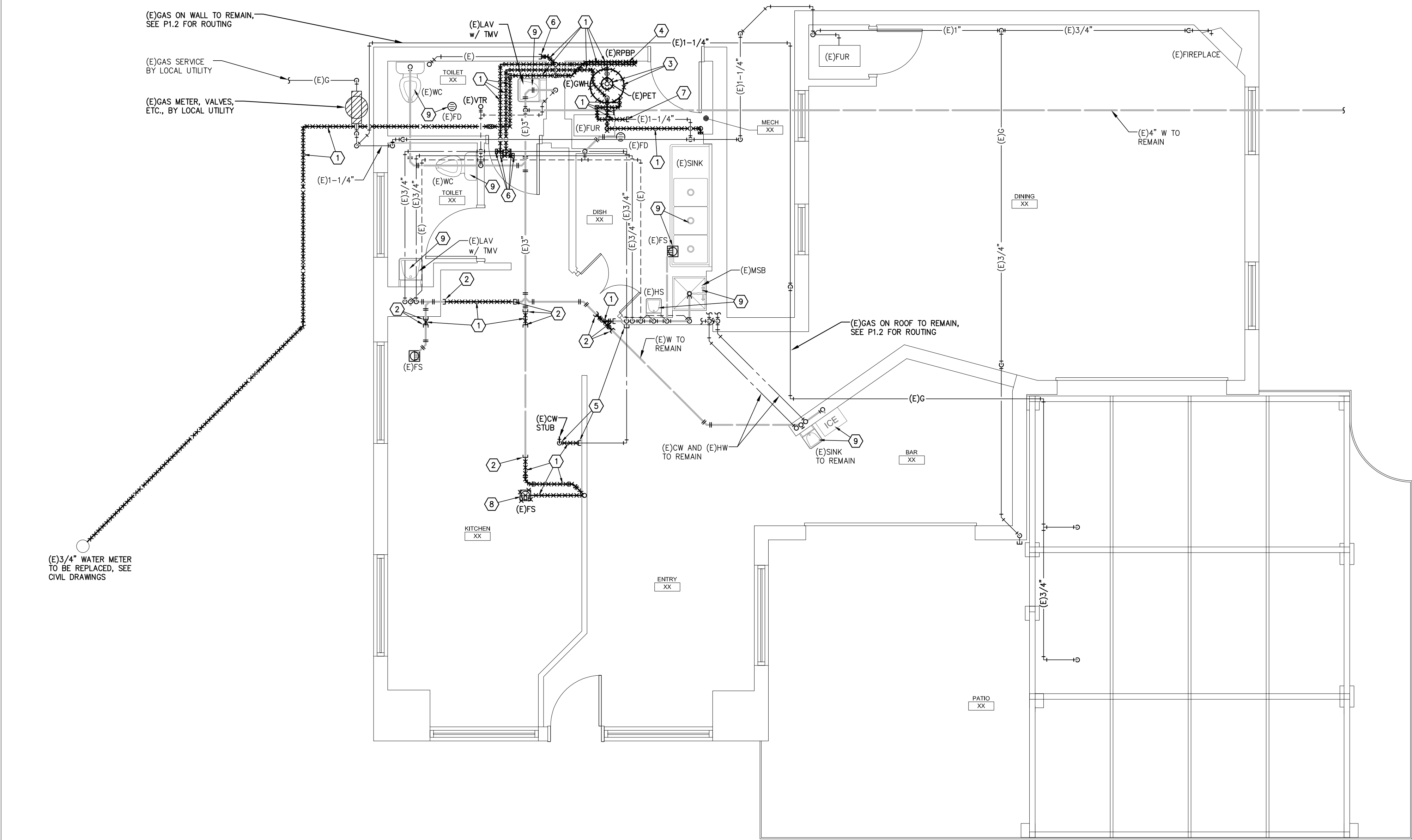


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Contents	
MAIN LEVEL PLUMBING DEMOLITION PLAN	

**PD1.1**



# MAIN LEVEL PLUMBING DEMOLITION PLAN



PLUMBING DEMOLITION KEYNOTES:

- 1 REMOVE (E)PLUMBING PIPING.
- 2 CAP WASTE PIPING BELOW FLOOR.
- 3 REMOVE (E)WATER HEATER AND (E)PET.
- 4 REMOVE (E)WATER ENTRY REDUCED PRESSURE BACKFLOW PREVENTER.
- 5 REMOVE (E)CW STUB AND CAP (E)CW AT WALL BELOW FLOOR. IF POSSIBLE DEMOLISH BACK TO DROP AND CAP.
- 6 CAP WATER PIPING ABOVE CEILING.
- 7 CAP GAS PIPING ON WALL.
- 8 REMOVE FS.
- 9 (E)PLUMBING TO REMAIN.





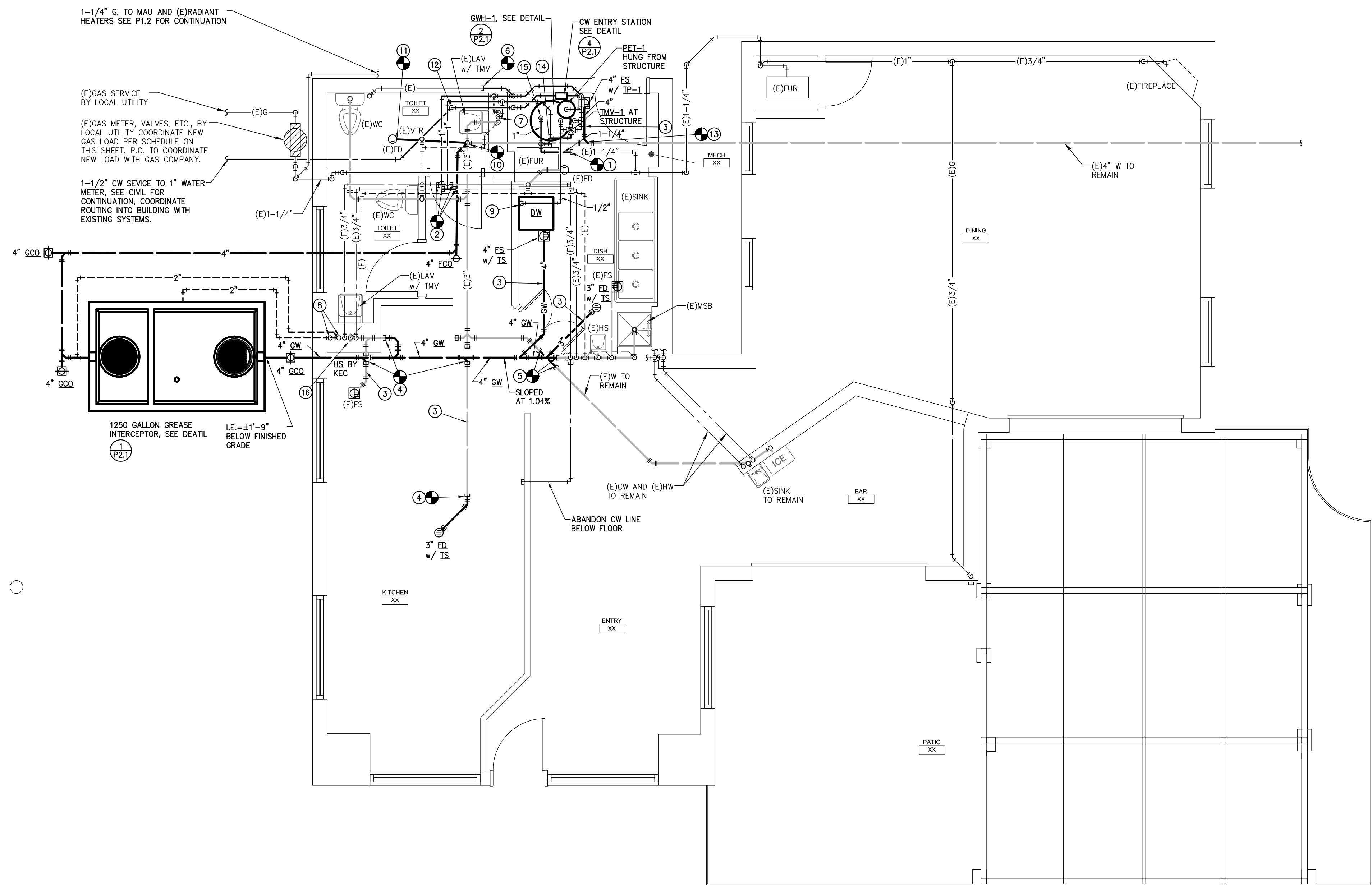
**The Ballard Group, Inc.**  
Mechanical Consulting Engineers  
225 S. Wadsworth Blvd.  
Broomfield, Colorado 80027  
303 988-4514  
FAX 303 988-4517

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2299 WEST MAIN STREET  
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MAIN LEVEL PLUMBING PLAN	

**P1.1**



## PLUMBING KEYNOTES:

- ① CONNECT 1-1/4" GAS TO (E)1-1/4" GAS.
- ② CONNECT 1" CW AND 1" HW TO (E)3/4" CW AND (E)3/4" HW.
- ③ COMBINATION WASTE AND VENT SYSTEM.
- ④ CONNECT (E)WASTE TO 4" GW BELOW FLOOR.
- ⑤ CONNECT 2" WASTE TO (E)WASTE BELOW FLOOR.
- ⑥ CONNECT 3/4" CW TO (E)3/4" CW IN CRAWL SPACE.
- ⑦ 1/2" CW AND 1/2" HW DOWN TO (E)LAV.
- ⑧ (2)2" VENT FROM GREASE INTERCEPTOR, RISE AND CONNECT IN WALL TO 2" VENT TO 3" VTR.
- ⑨ 1/2" HW(140F) AND 2" INDIRECT WASTE TO DISHWASHER TO AIRGAP PER CODE TO FS, SEE DETAIL.
- ⑩ CONNECT 3" WASTE FROM GREASE INTERCEPTOR AND 2" WASTE FROM FD TO (E)3" WASTE ON DROP IN CRAWL SPACE.
- ⑪ CONNECT 2" WASTE TO (E)FD.
- ⑫ 1-1/2" CW TO ENTER CRAWL SPACE.
- ⑬ CONNECT 4" WASTE TO (E)WASTE BELOW FLOOR.
- ⑭ CONNECT 3/4" GAS TO (E)FUR WITH GAS COCK AND 6" DIRT LEG.
- ⑮ CONNECT 1" GAS TO GWH WITH GAS COCK AND 6" DIRT LEG.
- ⑯ CONNECT 2" WASTE, 1/2" CW AND 1/2" HW TO EXISTING ROUGH INS.

### GAS LOAD SCHEDULE

EXISTING APPLIANCES:		LOAD:
EXISTING GWH		76.0 MBH
EXISTING FUR		75.0 MBH
EXISTING FUR		75.0 MBH
EXISTING PREPLACE		14.0 MBH
EXISTING RADIANT HEATER		50.0 MBH
EXISTING RADIANT HEATER		50.0 MBH
EXISTING BQ		50.0 MBH
TOTAL EXISTING GAS LOAD:		390.0 MBH INPUT @ S.L., 14" WC REQUIRED. M.C. TO COORDINATE GAS LOAD WITH LOCAL GAS COMPANY
NEW GAS LOAD:		LOAD:
GWH-1		199.9 MBH
MAU-1		350.0 MBH
EXISTING FUR		75.0 MBH
EXISTING FUR		75.0 MBH
EXISTING PREPLACE		14.0 MBH
EXISTING RADIANT HEATER		50.0 MBH
EXISTING RADIANT HEATER		50.0 MBH
EXISTING BQ		50.0 MBH
TOTAL NEW GAS LOAD:		863.9 MBH INPUT @ S.L., 14" WC REQUIRED. M.C. TO COORDINATE GAS LOAD WITH LOCAL GAS COMPANY

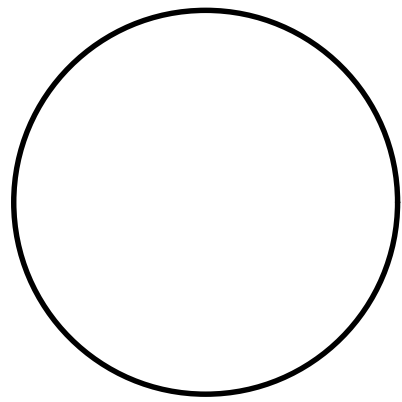
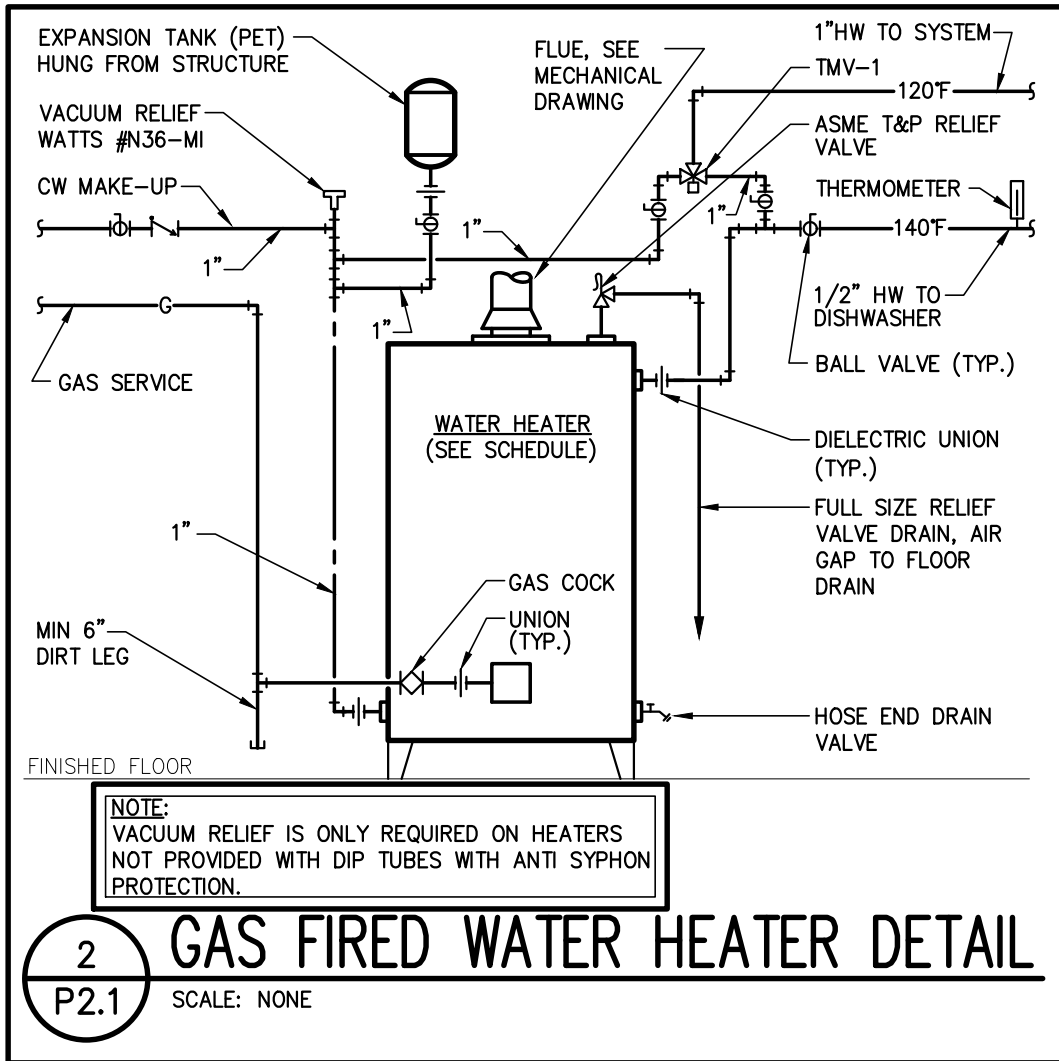
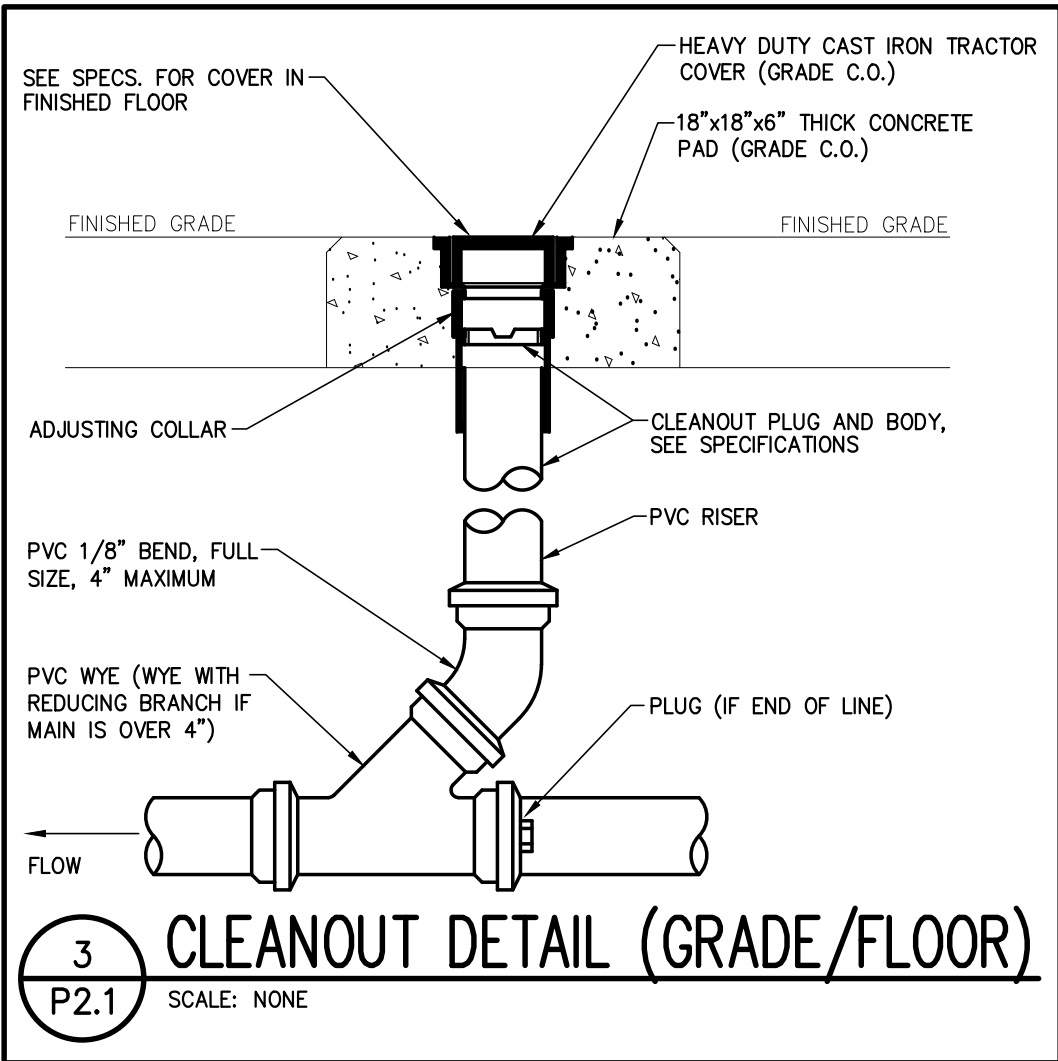
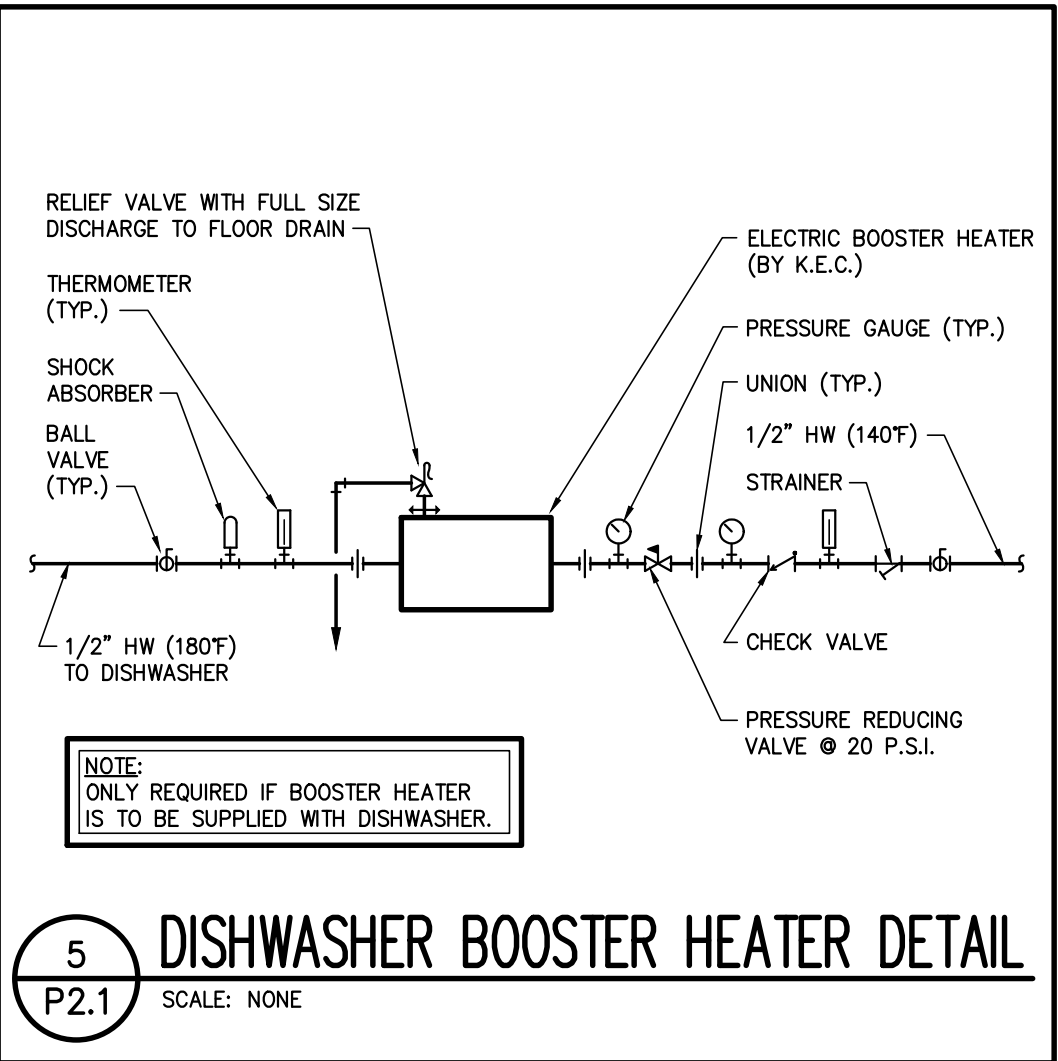
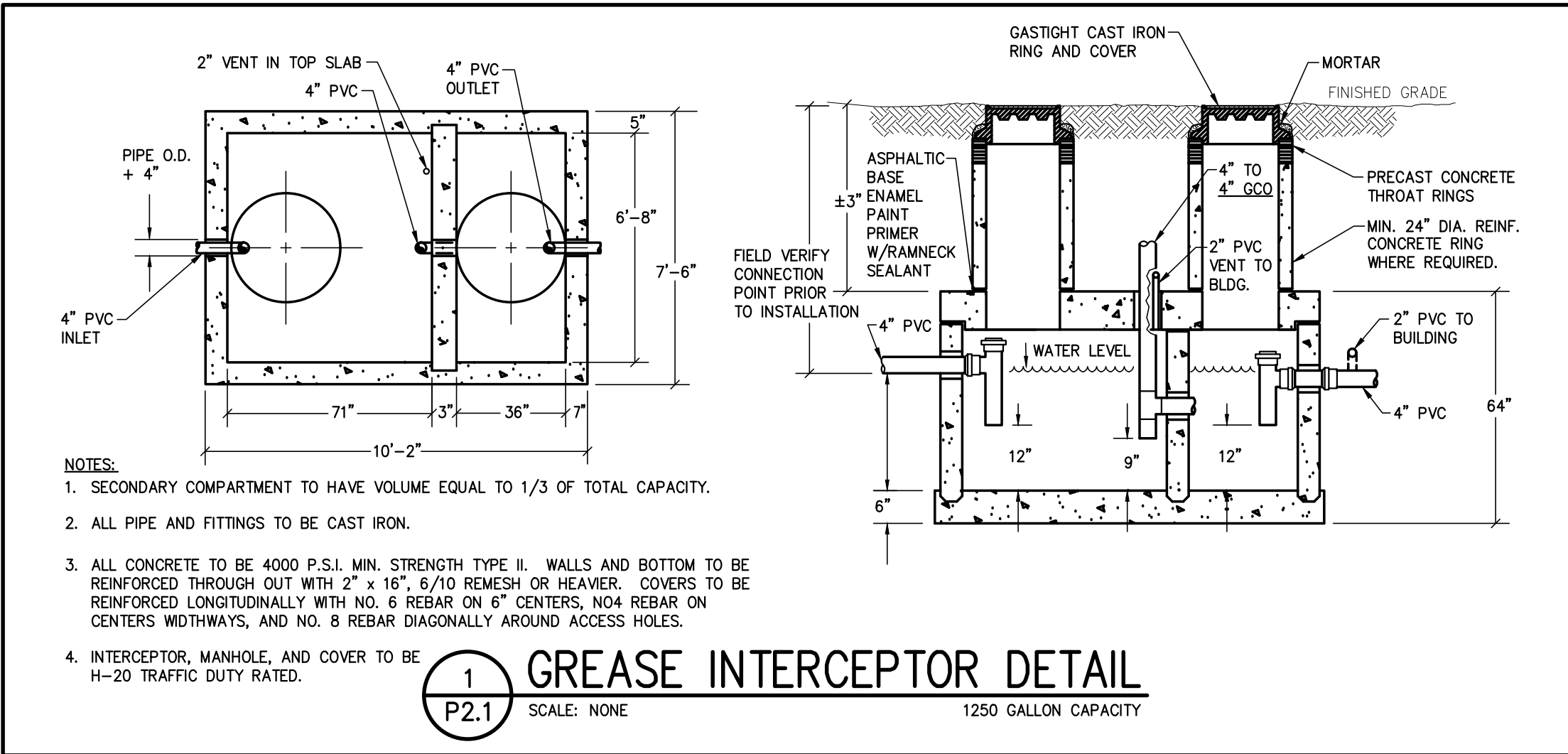
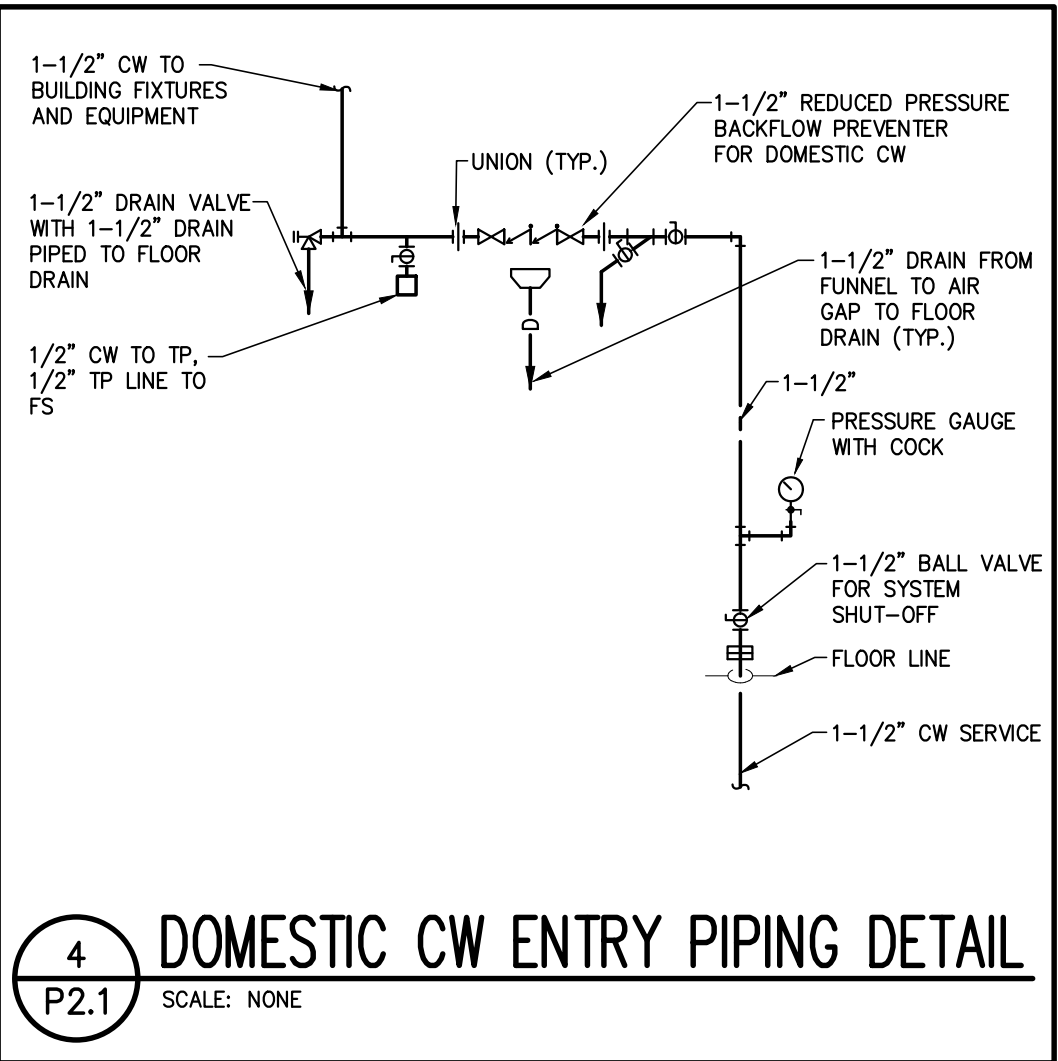
## MAIN LEVEL PLUMBING PLAN

SCALE: 1/4"=1'-0"





MISCELLANEOUS PLUMBING FIXTURE					
PLAN CODE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	REMARKS
PET-1	PLUMBING EXPANSION TANK	AMTROL	ST-12	STEEL	-
TMV-1	THERMOSTATIC MIXING VALVE	LEONARD	TM-20-LF-E	ROUGH BRASS	NOTES: 1,2,3
<b>NOTES:</b> 1. SET TO 120°F. 2. 11 GPM AT 20 PSI LOSS. 3. ASSE 1017 VALVE.					



**The Ballard Group, Inc.**  
Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

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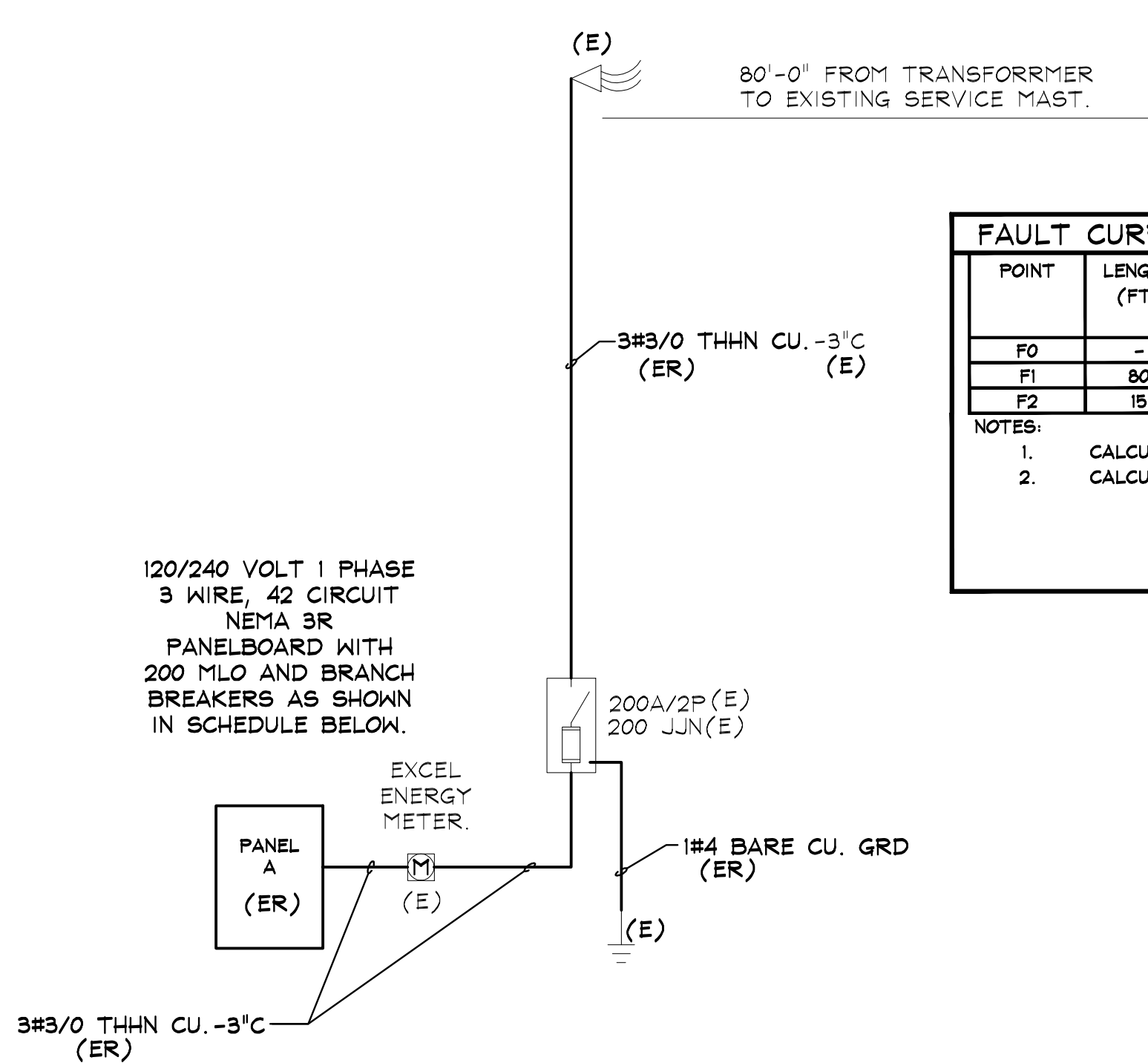
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## Contents

### PLUMBING SCHEDULES AND DETAILS

## P2.1





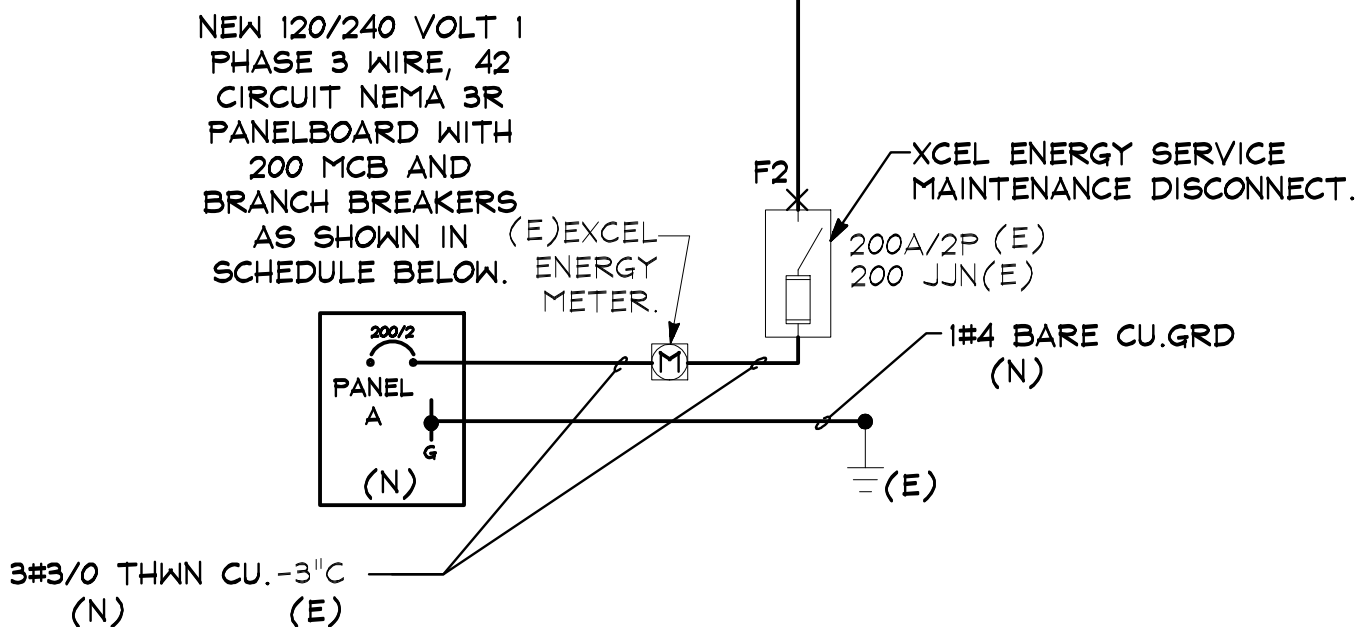
FAULT CURRENT CALCULATION TABLE							1/8/2016
POINT	LENGTH (FT)	ISC AVAILABLE UPSTREAM	ISC AT EQUIP (I <sub>90h</sub> ) OR (I <sub>L-L</sub> )	VOLTAGE AT START (V <sub>L-L</sub> )	VOLTAGE AT END (V <sub>L-L</sub> )	% V.D. OF FEEDER	TOTAL % V.D. AT BUS
F0	-	--	14,800	--	--	--	--
F1	80	14,800	8,030	130.2	128.7	1.14%	1.14%
F2	15	8,030	7,448	120.8	120.6	0.18%	1.32%

NOTES:

- CALCULATIONS WERE PERFORMED USING BUSSMANN 'POINT-TO-POINT' METHOD.
- CALCULATIONS WERE BASED ON ?.(FILL IN RELEVANT INFO)

**GENERAL NOTES**

1. EXISTING PEAK DEMAND PER XCEL ENERGY WAS 23.0 KW. OLD KITCHEN WAS AN ELECTRIC KITCHEN AND PROPOSED NEW KITCHEN IS A GAS KITCHEN. PER SCHEDULES BELOW, LOADS ARE REDUCED.



## 1 EXISTING ONE LINE DIAGRAM

E1.0 SCALE: NONE

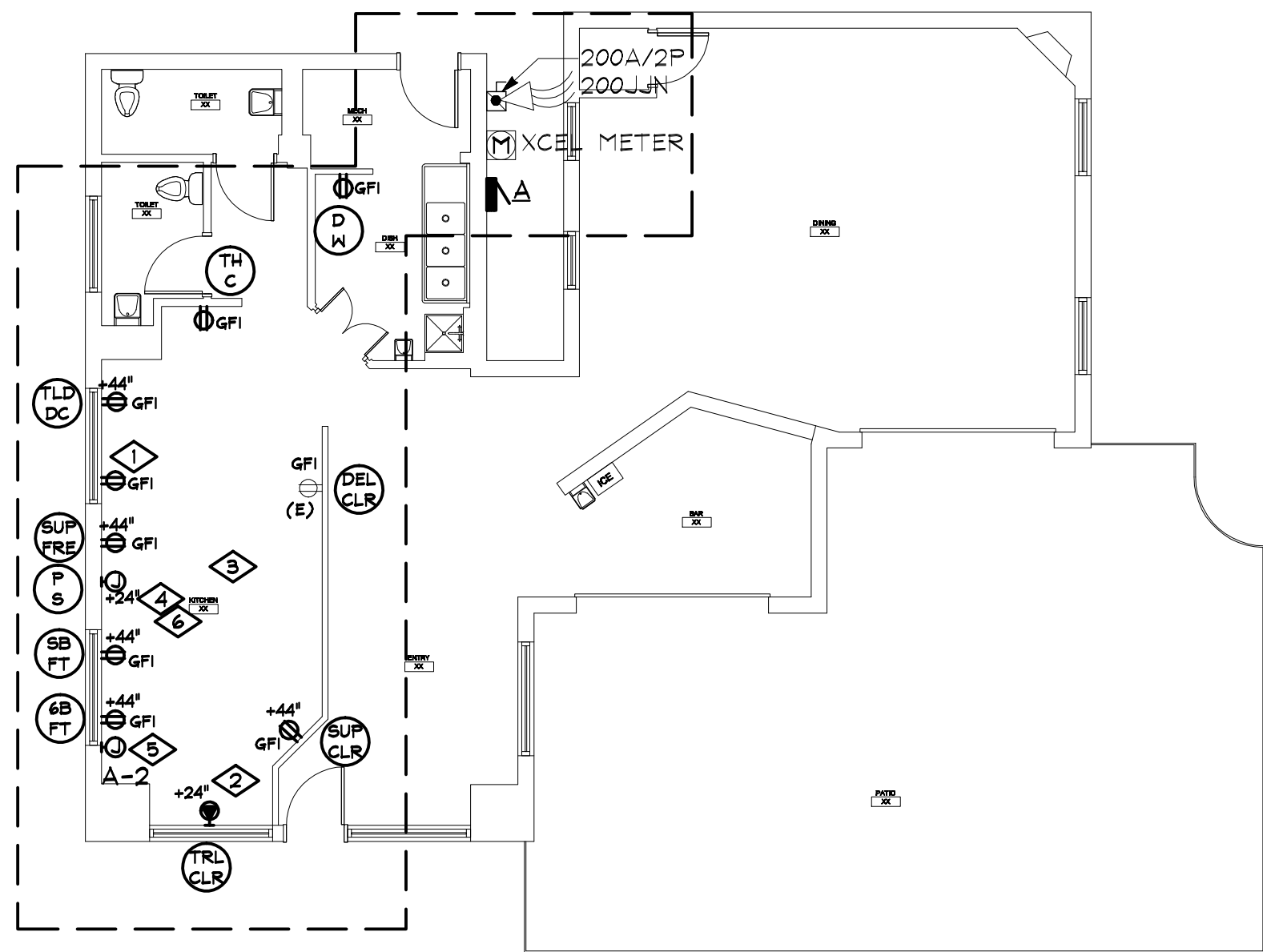
## 2 NEW ONE LINE DIAGRAM

E1.0 SCALE: NONE

PANEL ' A ' (EXISTING)												6-Jan-16		
PROJECT: LOCATION: FED FROM:					HALL TRANS					JOB NUMBER: COMMENTS: REPLACE WITH NEW MCB PANEL				
VOLTAGE L-L: 240 V VOLTAGE L-G: 120 V TYPE: 1PH/3W MOUNTING: SURFACE					BUS RATING: O.C. PROTECTION: S.C.R.M.S. RATING:					200 AMPS 200 M.L.O. 10,000 A.I.C. FULLY RATED				
CIR NO.	CIRCUIT	BREAKER	LOAD VA	LOAD TYPE	LOAD SERVED	BUS	LOAD SERVED	LOAD TYPE	LOAD VA	POLES	RATING	CIR NO.		
1	20		1800	L	EXISTING LIGHTS	A	MOBILE TRUCK	KE	4800	2	50	2		
3	20		1800	L	EXISTING LIGHTS	B	FOOD WAGON	KE	4800			4		
5	20	2	1500	KE	EXISTING REFRIG/	A	RECEPT	R	540	1	2-20	6		
7			1500	KE	FREEZER	B	KITCHEN RECEPT	R	1440	1	15	8		
9	20		1080	R	KITCHEN RECEPT	A	KITCHEN RECEPT	E	800	1	15	10		
11	20		1200	KE	COOLER	B	GALATO	KE	1600	2	20	12		
13	20		1440	M	FURNACE	A	SHOWCASE	KE	1600			14		
15	20		180	R	PHONE	B	UPPER TURBO	KE	2000	2	30	16		
17	20		1440	M	FURNACE	A	CHEF	KE	2000			18		
19	20	2	1622	M	CU-1	B	RECEPT	KE	1900	2	20	20		
21			1622	M		A		KE	1900			22		
23	20	2	1622	M	CU-2	B	POS	R	180	1	20	24		
25			1622	M		A	BATHROOM RECEPT	R	360	1	20	26		
27	50	2	3000	KE	DISH WASHER	B	RECEPT	R	900	1	20	28		
29			3000	KE		A	RECEPT	R	720	1	2-20	30		
31	2-20		1200	KE	PATIO HEATERS	B	CREPE TABLE	KE	1200	2	30	32		
33	20		1	R	RECEPTS	A		KE	1200			34		
35	20		1	R	RECEPTS	B	PANNI	KE	800	2	20	36		
37	20		1	R	RECEPTS	A	GRILLE	KE	800			38		
39	30	2	2000	KE	BOTTOM	B	CREPE MAKER	KE	1500	1	20	40		
41			2000	KE	TURBO	A	U.C. REFRIGERATOR	KE	1200	1	20	42		
LOAD TYPE DESCRIPTIONS														
L - LIGHTING, H - HEAT, R - RECEPTACLE, LM - LARGEST MOTOR, M - MOTOR, E - EQUIPMENT, KE - KITCHEN EQUIPMENT, S - SUBFEED														
TOTAL CONNECTED LOADS						PANEL (FEEDER) DEMAND LOAD CALCULATIONS								
PHASE A			PHASE B			PANEL			LOAD TYPE					
PANEL VA			33,224			26,544			59,768					
PANEL A			277			221			248					
PHASE BALANCING (BASED ON CONNECTED LOADS ABOVE)														
A - B			80%						FIRST 10,000 VA: 8,100 1.00 8,100 VA					
									ADDITIONAL VA: 0 0.50 0 VA					
									LARGEST MOTOR 0 1.25 0 VA					
									MOTOR 9,368 1.00 9,368 VA					
									EQUIPMENT 800 1.00 800 VA					
									KITCHEN EQUIPMENT 37,900 0.65 24,635 VA					
									PIECES OF EQUIPMENT: 13					
									SUBFEED 0 1.00 0 VA					
TOTAL DEMAND LOADS														
PHASE A			PHASE B			PANEL								
PANEL VA			26,674			20,729			47,403					
FEED THRU VA									198					
TOTAL VA			26,674			20,729								
			222			173								
NOTES:														
1														

PANEL A (NEW)													18-Jan-16
PROJECT: LOCATION: FED FROM: HALL 200A/2P DISC. SW.					JOB NUMBER: COMMENTS: NEMA 3R								
VOLTAGE L-L: 240 V VOLTAGE L-G: 120 V TYPE: 1PH/3W MOUNTING: SURFACE					BUS RATING: 200 AMPS O.C. PROTECTION: 200 A/2P M.C.B. S.C.R.M.S RATING: 10,000 A.I.C. FULLY RATED								
CIR NO.	CIRCUIT	BREAKER	LOAD VA	LOAD TYPE	LOAD SERVED	BUS	LOAD SERVED	LOAD TYPE	LOAD VA	POLES	RATING	CIR NO.	
1	20	I	1800	L	EXISTING LIGHTS	A	GAS SOLENOID VALVES	E	10	1	20	2	
3	20	I	1800	L	EXISTING LIGHTS	B	SHUNT TRIP					4	
5	20	I	708	KE	SOUTHBEND GRILLE	A	RECEPT	R	720	1	20	6	
7					SHUNT TRIP	B	KITCHEN RECEPT	R	1440	1	15	8	
9	20	I	180	R	KITCHEN RECEPT	A	SUPERA COOLER	KE	800	1	15	10	
11	20	I			SPARE	B	TRUE LOW COOLER	KE	348	2	20	12	
13	20	I	1440	M	FURNACE	A		KE	348			14	
15	20	I	170	R	PHONE	B	GFI					16	
17	20	I	1440	M	FURNACE	A	SPARE			1	20	18	
19	20	2	1622	M	CU-1	B	2 HP	M	1440	2	20	20	
21			1622	M		A	SUPPLY FAN	M	1440			22	
23	20	2	1622	M	CU-2	B	RECEPT	R	900	1	20	24	
25			1622	M		A	BATHROOM RECEPT	R	360	1	20	26	
27	20	I	1500	KE	DISHWASHER	B	RECEPT	R	900	1	20	28	
29	20	I	1440	M	WATER HEATER	A	RECEPT	R	720	1	20	30	
31	20	I	1176	KE	SUPERA FREEZER	B	3 HP	LM	2040	2	30	32	
33	20	I	900	R	RECEPTS	A	EXHAUST FAN	LM	2040			34	
35	20	I	900	R	RECEPTS	B	SOUTHBEND FLAT TOP	KE	1176	1	20	36	
37	20	I	900	R	RECEPTS	A	SHUNT TRIP					38	
39	20(1)	I	1800	KE	TRUE LOW DOUBLE	B	DELFIELD COOLER	KE	600	1	20	40	
41	20(1)	I	25	KE	FIRE SUPPRESSION PNL	A	TRUE HIGH COOLER	KE	1140	1	20	42	
LOAD TYPE DESCRIPTIONS													
L - LIGHTING, H - HEAT, R - RECEPTACLE, LM - LARGEST MOTOR, M - MOTOR, E - EQUIPMENT, KE - KITCHEN EQUIPMENT, S - SUBFEED													
TOTAL CONNECTED LOADS						PANEL (FEEDER) DEMAND LOAD CALCULATIONS							
PHASE A			PHASE B			LOAD TYPE			LOAD MULTIPLIER/DEMAND LOAD				
PANEL VA			19,655			19,654			39,089				
PANEL A			164			162			163				
PHASE BALANCING (BASED ON CONNECTED LOADS ABOVE)						FIRST 10,000 VA: 8,090 1.00 8,090 VA							
A - B			92%			ADDITIONAL VA: 0 0.50 0 VA							
TOTAL DEMAND LOADS						LARGEST MOTOR 4,080 1.25 5,100 VA							
PHASE A			PHASE B			MOTOR 13,688 1.00 13,688 VA							
PANEL VA			19,709			EQUIPMENT 10 1.00 10 VA							
FEED THRU VA			18,084			KITCHEN EQUIPMENT 9,621 0.65 6,254 VA							
TOTAL VA			19,709			PIECES OF EQUIPMENT: 10							
PANEL A			151			SUBFEED 0 1.00 0 VA							
NOTES:													
1 LOADS SHOWN LIGHT ARE EXISTING LOADS BEING RECONNECTED TO THE NEW PANEL. THE CONTRACTOR MAY, AT HIS DISCRETION, RE-USE BREAKERS BEING REMOVED FROM THE EXISTING PANEL AS LONG AS THEY MATCH THE NEW BREAKERS THAT ARE REQUIRED.													

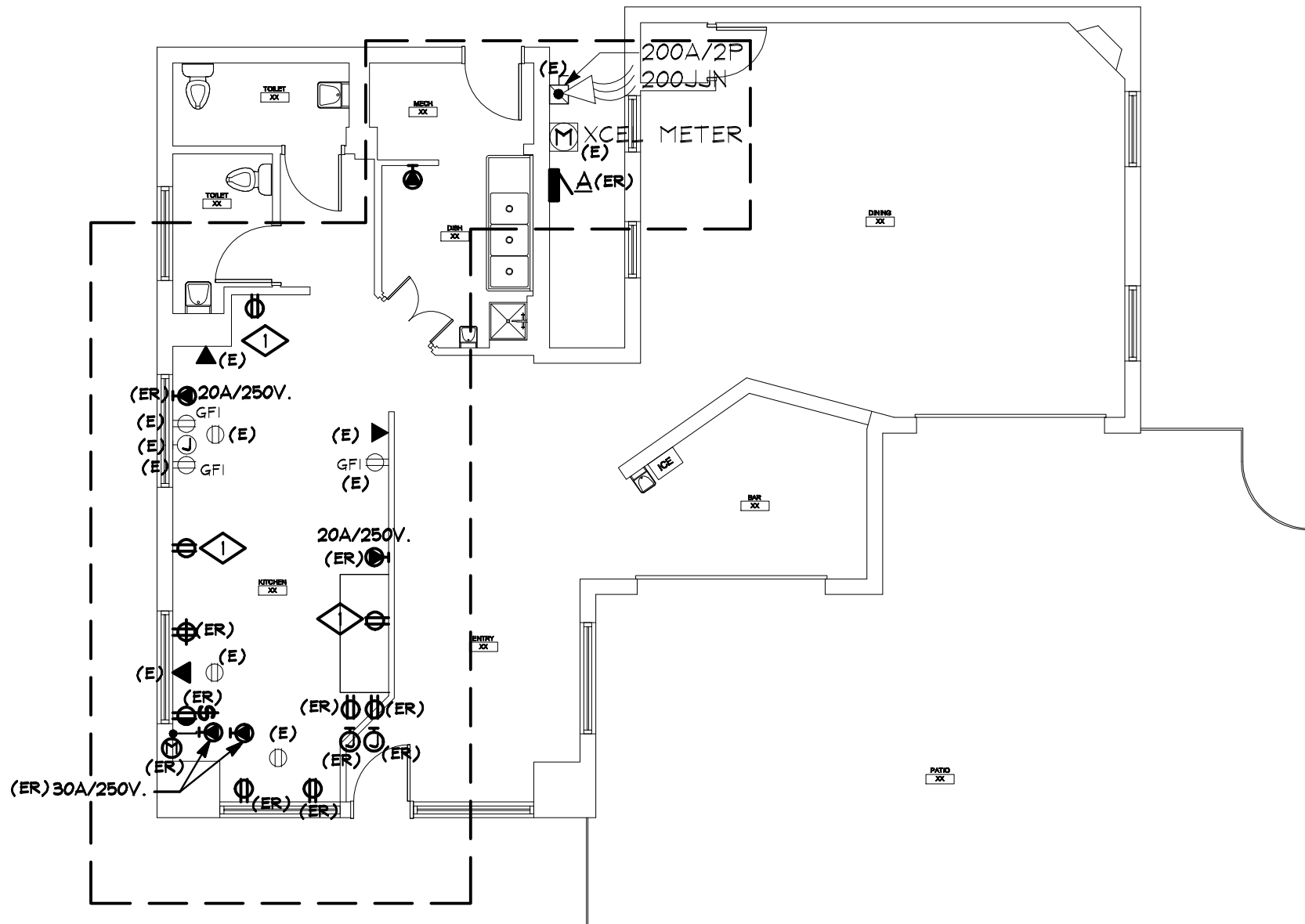




1  
E2.0

**PARTIAL POWER PLAN**

SCALE: 1/8"=1'-0"



2  
E2.0

**PARTIAL DEMOLITION POWER PLAN**

SCALE: 1/8"=1'-0"

**ELECTRICAL DEMOLITION NOTES**

1. THE BASIS OF THESE DRAWINGS WERE SITE OBSERVATIONS, ORIGINAL BUILDING DRAWINGS AND VARIOUS OTHER SOURCES. EVERY ATTEMPT HAS BEEN MADE TO DOCUMENT THE ACTUAL CONDITIONS. HOWEVER, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS, THE BUILDING'S EXISTING CONDITION AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
2. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
3. THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT. DISCARD ALL EQUIPMENT AS REQUIRED. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ELECTRICAL SERVICE TO DEVICES AND EQUIPMENT AND PROVIDING TEMPORARY POWER.
4. EXISTING DEVICES SHOWN ON THE DEMOLITION PLAN(S), AND NOT NOTED AS EXISTING TO REMAIN (E) OR EXISTING TO BE RELOCATED (R), SHALL BE REMOVED. FOR DEMOLITIONED DEVICES IN WALLS WHICH ARE TO REMAIN, THE ELECTRICAL CONTRACTOR SHALL INSTALL A BLANK FACE PLATE ON THE BACKBOX. FOR DEMOLITIONED DEVICES INSTALLED IN THE FLOOR, THE ELECTRICAL CONTRACTOR SHALL REMOVE BACKBOXES, CUT THE CONDUIT FLUSH WITH FLOOR, FILL THE CONDUIT AND MATCH EXISTING FLOOR COVERING OR MATERIAL; COORDINATE WITH THE GENERAL CONTRACTOR.
5. THE DEMOLITION OF SOME DEVICES MAY INTERRUPT POWER TO DEVICES DOWN STREAM. THE ELECTRICAL CONTRACTOR SHALL REMARK THESE CIRCUITS TO MAINTAIN POWER TO THE DOWN STREAM DEVICES WHICH WILL REMAIN.
6. ALL DE-ENERGIZED/DEMOLITIONED CIRCUITRY SHALL HAVE THE CONDUCTORS REMOVED FROM THE CONDUIT AND THE CONDUIT SHALL BE MARKED "EMPTY" WITH INDELIBLE MARKER.

**GENERAL NOTES**

1. THIS PE STAMPED DRAWING COVERS ONLY THAT PART OF THE BUILDING ENCLOSED WITHIN THE BOX. ALL OTHER AREAS WILL BE COVERED UNDER A SEPERATE PERMIT.

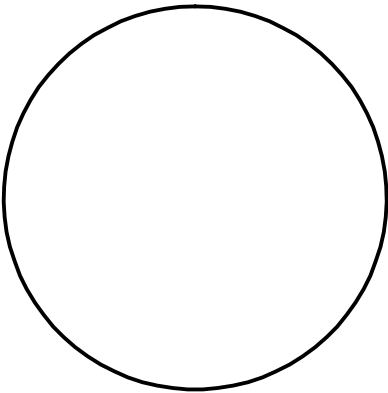
EQUIPMENT SCHEDULE											15-Jan-16
KEY	EQUIPMENT	LOAD (VA)	VOLTS	PH	BRANCH CIRCUIT CONDUCTORS	COND.	DISCONNECT		CIRCUIT BREAKER	CIRCUIT	NOTES
TH C	TRUE HIGH COOLER	1140	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-42	
TLD DC	TRUE LOW COOLER	1800	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-39	
SUP FRZ	SUPERA FREEZER	1176	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-31	
SB FT	SOUTHBEND FLAT TOP	1176	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP SHUNT TRIP	A-36	
SB 6B	SOUTHBEND 6 BURNER W/ SALAMANDER	708	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP SHUNT TRIP	A-31	
TRL CLR	TRUE LOW COOLER	696	240	1	2#12, 1#12G.	1/2"	RECEPT	NEMA L6-20R	20A2P	A-12,14	
SUP CLR	SUPERA COOLER	800	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-10	
DEL CLR	DELFIELD COOLER	600	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-40	
SP	SUPPRESSION PANEL	200	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-41	
DW	DISHWASHER	1500	120	1	2#12, 1#12G.	1/2"	RECEPT	NEMA 5-15R	20AIP	A-27	
GENERAL NOTES (FOR ALL SCHEDULED EQUIPMENT):											
A. FIELD VERIFY ALL EQUIPMENT LOADS, VOLTAGES, AND RECOMMENDED OCP SIZING PRIOR TO ENERGIZING CIRCUIT.											
B. PROVIDE 120V CONTROL WIRING AS REQUIRED BY THE MECHANICAL CONTRACT DOCUMENTS. COORDINATION BETWEEN THE ELECTRICAL CONTRACTOR AND MECHANICAL CONTROLS CONTRACTOR SHOULD BE COMPLETED PRIOR TO BIDDING. 120V CONTROL CIRCUITS SHALL BE INCLUDED IN BID.											
C. FURNISH DISCONNECT SWITCHES LOCATED EXTERIOR TO THE STRUCTURE WITH NEMA 3R ENCLOSURES UNLESS OTHERWISE SPECIFIED.											
D. PROVIDE 120V, WEATHER-PROOF, GFCI SERVICE RECEPTACLE WITHIN 25'-0" OF ALL HEATING, AIR-CONDITIONING, AND REFRIGERATION (HACR) EQUIPMENT. EXHAUST FANS ARE NOT CONSIDERED HACR EQUIPMENT BY THE NEC. CIRCUIT TO 20AIP SPARE BREAKER IN NEAREST PANELBOARD, OR AS INDICATED ON THE PLANS. (MAXIMUM OF 10 RECEPTACLES PER BRANCH CIRCUIT)											
E. PROVIDE DUCT DETECTION FOR ALL RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2000 CFM, AND FOR ALL RETURN AIR RISERS THAT SERVE TWO OR MORE STORIES AND SERVE ANY PORTION OF A RETURN AIR SYSTEM HAVING A DESIGN CAPACITY GREATER THAN 15,000 CFM, AND ADDITIONALLY AS REQUIRED BY LOCAL CODES AND AMENDMENTS.											
F. REFER TO MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND ASSOCIATED CONTROLS.											
NOTES SPECIFIC TO SCHEDULED EQUIPMENT (REFER TO NOTES COLUMN WITHIN SCHEDULE):											

**GENERAL NOTES**

1. THESE STAMPED DRAWINGS COVER AREAS COVERED INSIDE THE DASHED BOX. ALL OTHER AREAS WILL BE SUBMITTED UNDER A SEPERATE PERMIT.

**DETAIL NOTES**

- ◇ REPLACE EXISTING RECEPTACLE WITH A GFI 20 AMP DUPLEX. MAINTAIN CIRCUIT.
- ◇ WIRE TO A GFI BREAKER IN PANEL A.
- ◇ REMOVE ALL EXISTING RECEPTACLES, JUNCTION BOXES THAT WERE INSTALLED WITH FLEXABLE CONDUIT WITHIN THE KITCHEN AREA.
- ◇ 120 VOLT POWER TO HOOD FIRE SUPPRESSION PANEL. INCLUDE CONNECTION TO ALL GAS SOLENOIDS LOCATED UNDER THE HOOD AND SHUNT TRIP BREAKER.
- ◇ FIELD VERIFY W/ MECHANICAL CONTRACTOR MTG. HT. AND LOCATIONS OF GAS SOLENOID VALVES.
- ◇ E.C. TO MAKE ALL ELECTRICAL CONNECTIONS AS DESCRIBED ON THE KITCHEN HOOD DETAILS ON THE MECHANICAL PLANS.



**The Ballard Group, Inc.**

Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517



**COLUMBINE-ON-MAIN  
2299 WEST MAIN STREET  
LITTLETON, CO 80120**

**Issue Record**


Job No. 2015028

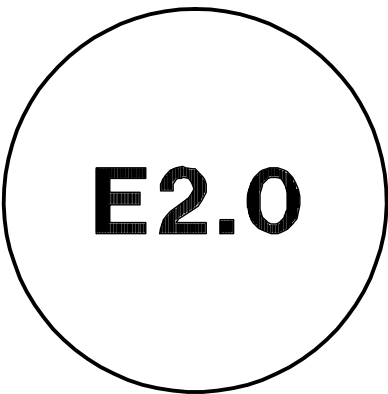
Date 01-15-16

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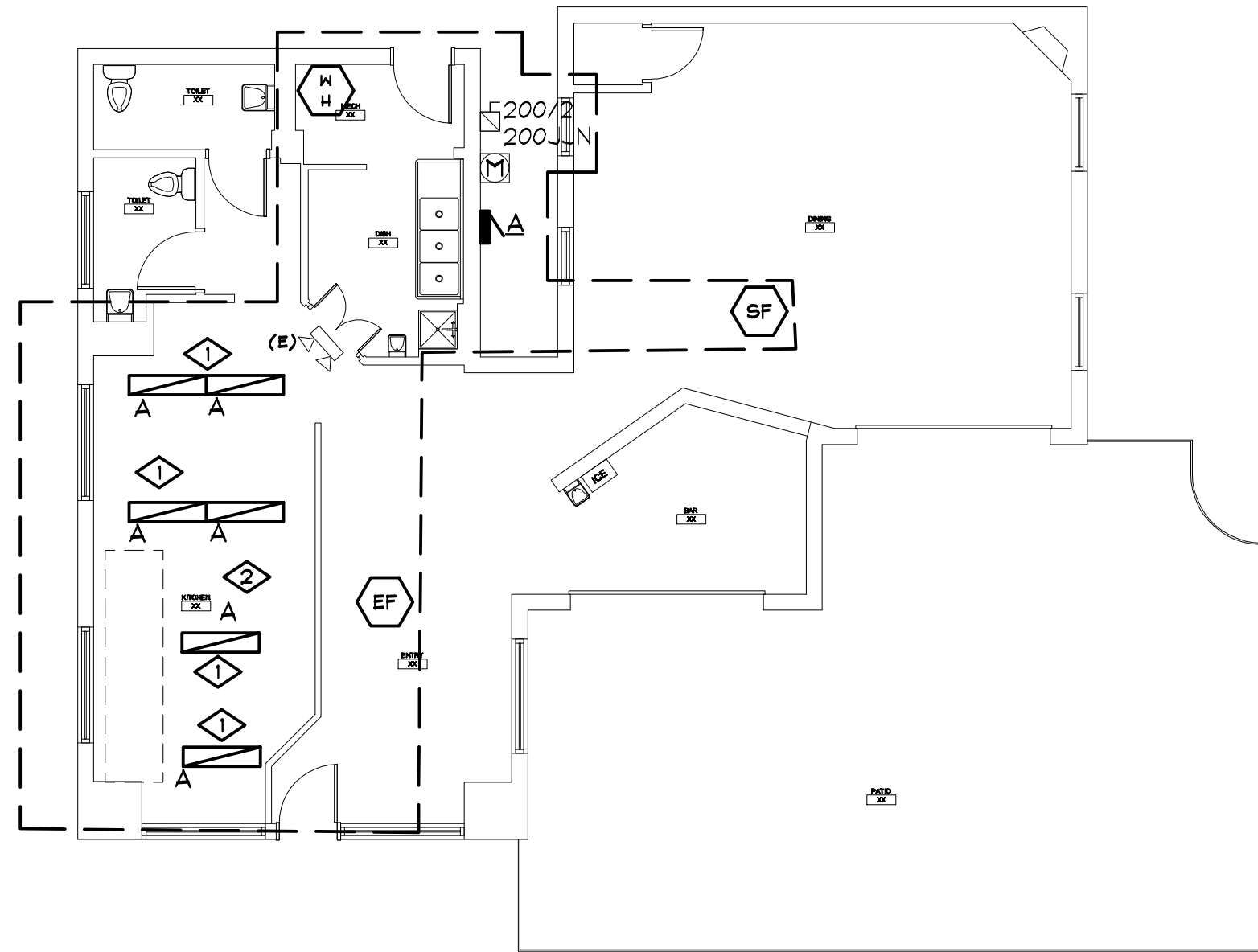
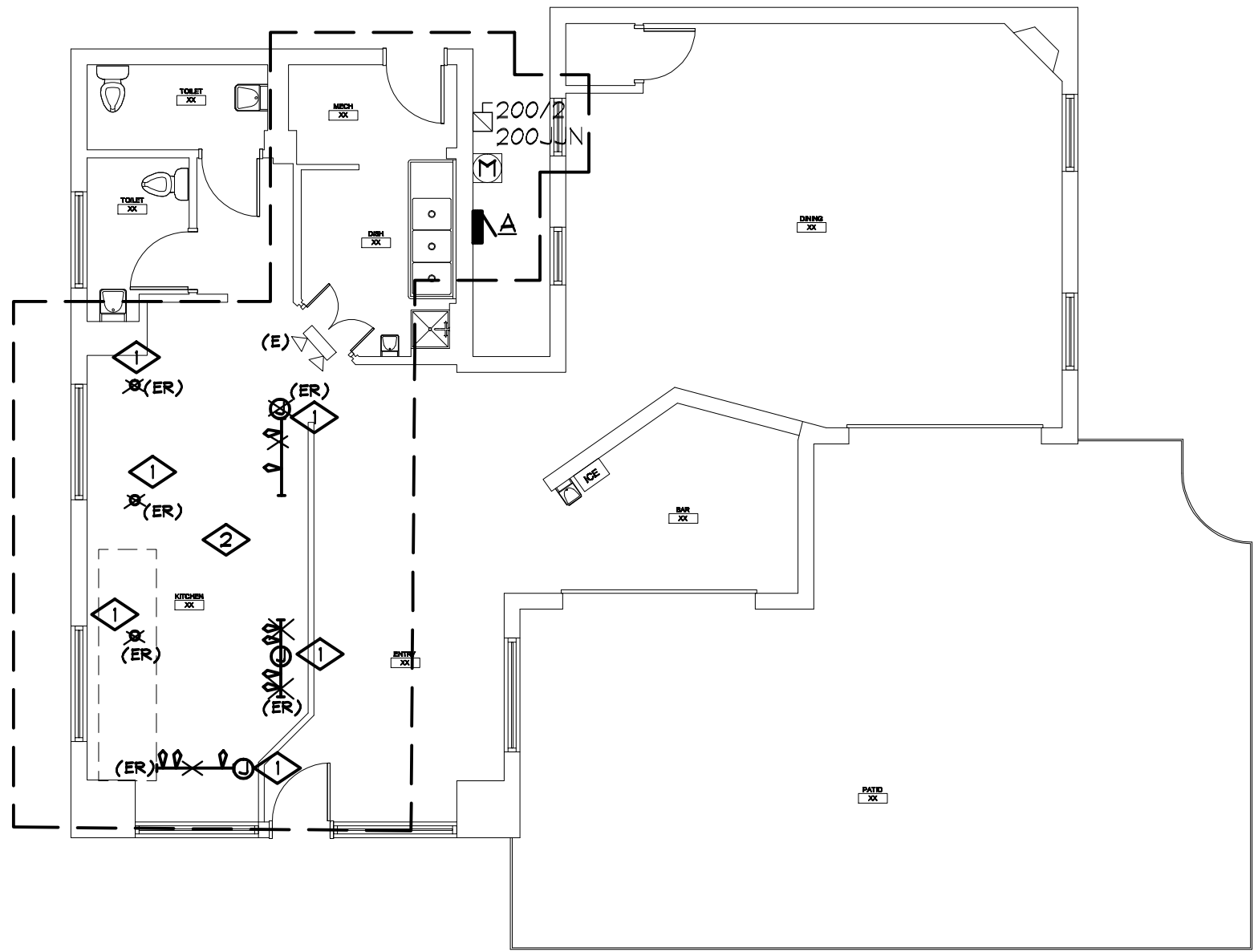
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Contents

**ELECTRICAL  
POWER&SYSTEMS  
PLAN**







1 PARTIAL DEMOLITION LIGHTING PLAN  
E3.0 SCALE:1/8"=1'-0"

2 PARTIAL MECH & LIGHTING PLAN  
E3.0 SCALE:1/8"=1'-0"

NEW ADDED MECHANICAL EQUIPMENT SCHEDULE											18-Jan-16
KEY	EQUIPMENT	LOAD (VA)	VOLTS	PH	BRANCH CIRCUIT CONDUCTORS	COND.	DISCONNECT		CIRCUIT BREAKER	CIRCUIT	NOTES
							SWITCH	FUSE			
SF	KITCHEN SUPPLY FAN 2 HP	2880	240	1	2#12, 1#12G	1/2"	30A/2P		20A/2P	A-20,22	
EF	KITCHEN HOOD EXHAUST FAN 3 HP	4080	240	1	2#10, 1#10G	1/2"	30A/2P		30A/2P	A-32,34	
WH	WATER HEATER	1440	120	1	2#12, 1#12G	1/2"	5to		20A/1P	A-29	
GENERAL NOTES (FOR ALL SCHEDULED EQUIPMENT):											
A. FIELD VERIFY ALL EQUIPMENT LOADS, VOLTAGES, AND RECOMMENDED OCP SIZING PRIOR TO ENERGIZING CIRCUIT.											
B. PROVIDE 120V CONTROL WIRING AS REQUIRED BY THE MECHANICAL CONTRACT DOCUMENTS. COORDINATION BETWEEN THE ELECTRICAL CONTRACTOR AND MECHANICAL CONTROLS CONTRACTOR SHOULD BE COMPLETED PRIOR TO BIDDING. 120V CONTROL CIRCUITS SHALL BE INCLUDED IN BID.											
C. FURNISH DISCONNECT SWITCHES LOCATED EXTERIOR TO THE STRUCTURE WITH NEMA 3R ENCLOSURES UNLESS OTHERWISE SPECIFIED.											
D. PROVIDE 120V, WEATHER-PROOF, GFCI SERVICE RECEPTACLE WITHIN 25'-0" OF ALL HEATING, AIR-CONDITIONING, AND REFRIGERATION (HACR) EQUIPMENT. EXHAUST FANS ARE NOT CONSIDERED HACR EQUIPMENT BY THE NEC. CIRCUIT TO 20AIP SPARE BREAKER IN NEAREST PANELBOARD, OR AS INDICATED ON THE PLANS. (MAXIMUM OF 10 RECEPTACLES PER BRANCH CIRCUIT)											
E. PROVIDE DUCT DETECTION FOR ALL RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2000 CFM, AND FOR ALL RETURN AIR RISERS THAT SERVE TWO OR MORE STORIES AND SERVE ANY PORTION OF A RETURN AIR SYSTEM HAVING A DESIGN CAPACITY GREATER THAN 15,000 CFM, AND ADDITIONALLY AS REQUIRED BY LOCAL CODES AND AMENDMENTS.											
F. REFER TO MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND ASSOCIATED CONTROLS.											
NOTES SPECIFIC TO SCHEDULED EQUIPMENT (REFER TO NOTES COLUMN WITHIN SCHEDULE):											

LUMINAIRES	
	LUMINAIRE TYPE, REFERENCING LUMINAIRE
	SURFACE-MOUNTED LUMINAIRE
	DOWNLIGHT
	SURFACE OR PENDANT LIGHTING TRACK
	EMERGENCY LIGHTING UNIT W/ BATTERY

POWER	
	DUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE
	JUNCTION BOX
	FUSED DISCONNECT SWITCH
	MOTOR CONNECTION

DISTRIBUTION AND RACEWAY	
	SURFACE-MOUNTED PANELBOARD TRANSFORMER
	BRANCH CIRCUIT HOMERUN
	RACEWAY (CONDUIT) CONCEALED IN FLOOR OR UNDERGROUND
	RACEWAY (CONDUIT) EXPOSED OR CONCEALED IN WALL OR CEILING
	CAPPED RACEWAY (CONDUIT)
	RACEWAY UP
	RACEWAY DOWN

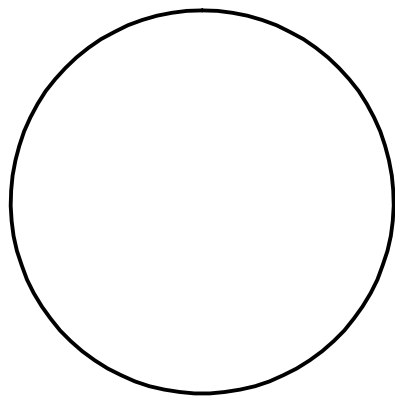
ABBREVIATIONS AND NOTATIONS	
AC	ABOVE COUNTER - VERIFY HEIGHT
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CAPACITY
CCT	CIRCUIT
CU	COPPER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EW	ELECTRIC WATER COOLER
FLA	FULL LOAD AMPS
G	GROUND
GFI	GROUND FAULT INTERRUPTER
HP	HORSEPOWER
MCA	MINIMUM CIRCUIT AMPACITY
MLO	MAIN LUGS ONLY
N	NEUTRAL
NTS	NOT TO SCALE
UC	UNDER COUNTER
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
XFMR	TRANSFORMER
(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE REMOVED
(RL)	EXISTING TO BE RELOCATED
(N)	NEW
	KITCHEN EQUIPMENT SCHEDULE NOTATION
	MECHANICAL EQUIPMENT SCHEDULE NOTATION
	DETAIL NOTE
	DELTA REVISION NOTE

SCHEMATIC WIRING SYMBOLS	
	GROUND
	CURRENT TRANSFORMER
	CIRCUIT BREAKER, MOLDED-CASE, THERMAL-MAGNETIC
	FUSED DISCONNECT SWITCH
	ENCLOSED FUSED DISCONNECT SWITCH
	MOTOR
	METER

FIXTURE SCHEDULE
TYPE A. 1'-0" x 4'-0" LED TROFFER LITHONIA # GTL-4-F-48L-EZI-LP835

GENERAL NOTES
1. THIS PE STAMPED DRAWING COVERS ONLY THAT PART OF THE BUILDING ENCLOSED WITHIN THE BOX. ALL OTHER AREAS WILL BE COVERED UNDER A SEPERATE PERMIT.

DETAIL NOTES	
①	REMOVE EXISTING LIGHTS, REMOVE WIRING FROM BOXES NOT BEING UTILIZED FOR NEW RECESSED TYPE A LIGHTS.
②	MAINTAIN EXISTING LIGHTING CONTROL.



**The Ballard Group, Inc.**  
Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

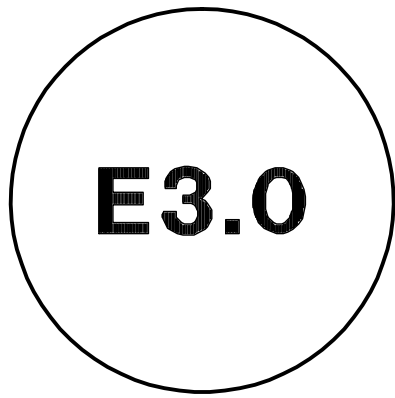


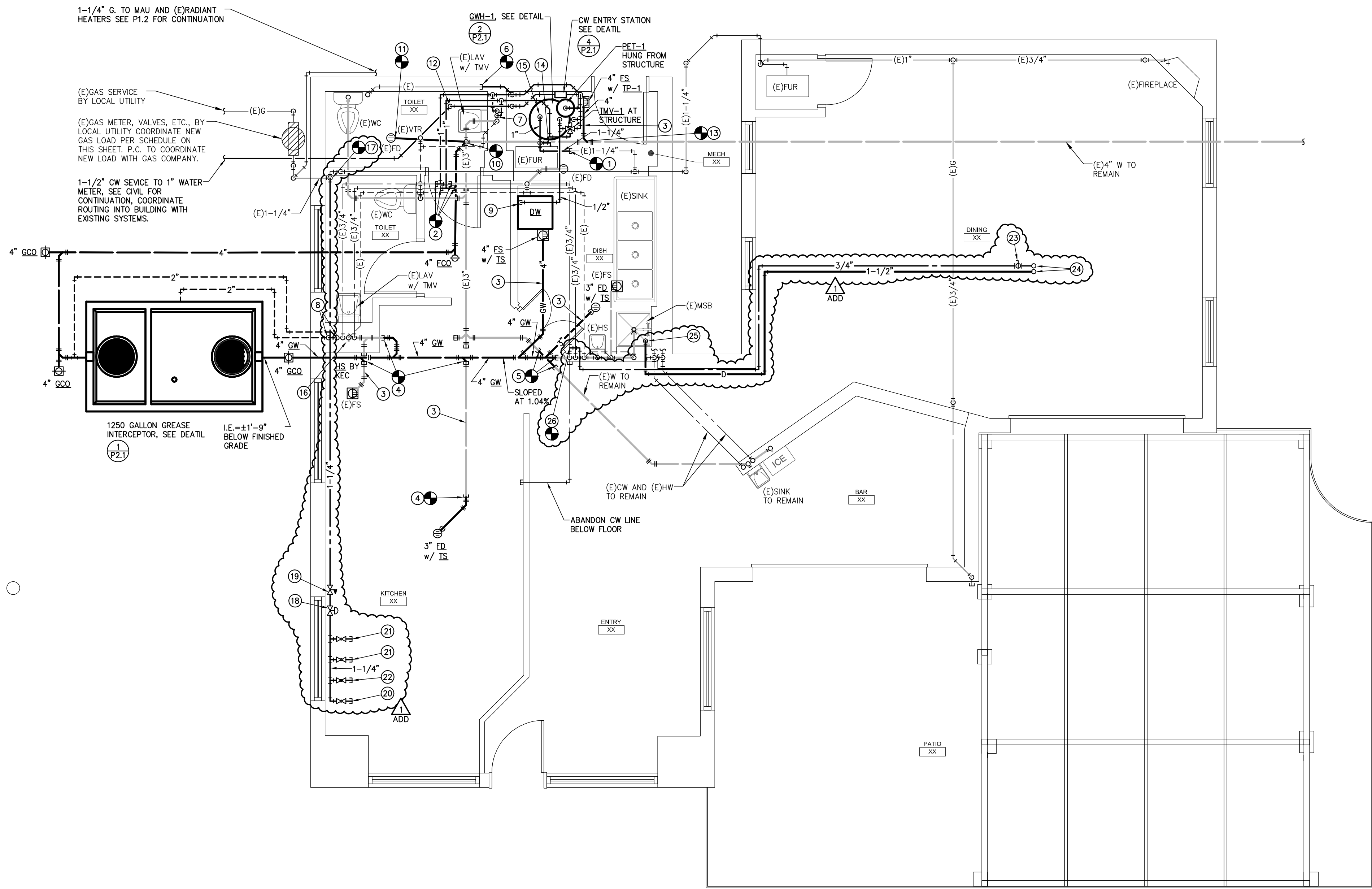
**COLUMBINE-ON-MAIN**  
**2299 WEST MAIN STREET**  
**LITTLETON, CO 80120**

Issue	Record

Job No.	2015028
Date	01-15-16
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Contents	ELECTRICAL MECHANICAL & LIGHTING PLAN
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PLUMBING KEYNOTES:

- CONNECT 1-1/4" GAS TO (E)1-1/4" GAS.
- CONNECT 1" CW AND 1" HW TO (E)3/4" CW AND (E)3/4" HW.
- COMBINATION WASTE AND VENT SYSTEM.
- CONNECT (E)WASTE TO 4" GW BELOW FLOOR.
- CONNECT 2" WASTE TO (E)WASTE BELOW FLOOR.
- CONNECT 3/4" CW TO (E)3/4" CW IN CRAWL SPACE.
- 1/2" CW AND 1/2" HW DOWN TO (E)LAV.
- (2)2" VENT FROM GREASE INTERCEPTOR, RISE AND CONNECT IN WALL TO 2" VENT TO 3" VIR.
- 1/2" HW(140F) AND 2" INDIRECT WASTE TO DISHWASHER TO AIRGAP PER CODE TO FS, SEE DETAIL.
- CONNECT 3" WASTE FROM GREASE INTERCEPTOR AND 2" WASTE FROM FD TO (E)3" WASTE ON DROP IN CRAWL SPACE.
- CONNECT 2" WASTE TO (E)FD.
- 1-1/2" CW TO ENTER CRAWL SPACE.
- CONNECT 4" WASTE TO (E)WASTE BELOW FLOOR.
- CONNECT 3/4" GAS TO (E)FUR WITH GAS COCK AND 6" DIRT LEG.
- CONNECT 1" GAS TO GWH WITH GAS COCK AND 6" DIRT LEG.
- CONNECT 2" WASTE, 1/2" CW AND 1/2" HW TO EXISTING ROUGH INS.
- CONNECT 1-1/4" GAS TO (E)1-1/4" GAS ABOVE CEILING.
- HOOD FIRE PROTECTION GAS SHUT-OFF VALVE, PROVIDED BY HOOD FIRE PROTECTION SUPPLIER AND INSTALL BY P.C.
- GAS PRESSURE REGULATING VALVE (PRV), 657.0 MBH INPUT AT SEA LEVEL, 14" WC TO 7" WC, ROUTE RELIEF THROUGH EXTERIOR WALL WITH 45° FITTING (DOWN).
- CONNECT 3/4" GAS TO FLAT TOP PER DETAIL 7/P2.1.
- CONNECT 1" GAS TO FRYER/GRILL PER DETAIL 7/P2.1.
- CONNECT 1-1/4" GAS TO RANGE/SALAMANDER PER DETAIL 7/P2.1.
- BALL VALVE, FULL SIZE WITH SERVICE ACCESS.
- 1-1/2" DRAIN DOWN AND 3/4" CW RISE TO MAU. SEE DETAIL 8/P2.1.
- 1-1/2" DRAIN DOWN ON WALL AND AIRGAP TO MSB WITH BALL VALVE.
- CONNECT 3/4" CW TO (E)CW ABOVE CEILING.

GAS LOAD SCHEDULE

EXISTING APPLIANCES:	LOAD:
EXISTING GWH	76.0 MBH
EXISTING FUR	75.0 MBH
EXISTING FUR	75.0 MBH
EXISTING FIREPLACE	14.0 MBH
EXISTING RADIANT HEATER	50.0 MBH
EXISTING RADIANT HEATER	50.0 MBH
EXISTING BBQ	50.0 MBH

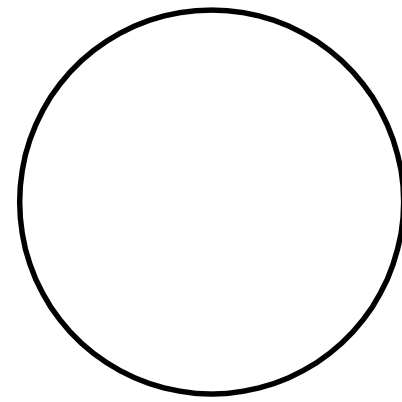
TOTAL EXISTING GAS LOAD: 390.0 MBH INPUT @ S.L., 14" WC REQUIRED. M.C. TO COORDINATE GAS LOAD WITH LOCAL GAS COMPANY

NEW GAS LOAD:	LOAD:
GWH-1	150.0 MBH
MAU-1	350.0 MBH
GRILL	160.0 MBH
RANGE AND SALAMANDER	283.0 MBH
FLAT TOP	64.0 MBH
FRYER	150.0 MBH
EXISTING FUR	75.0 MBH
EXISTING FUR	75.0 MBH
EXISTING FIREPLACE	14.0 MBH
EXISTING RADIANT HEATER	50.0 MBH
EXISTING RADIANT HEATER	50.0 MBH
EXISTING BBQ	50.0 MBH

TOTAL NEW GAS LOAD: 1471.0 MBH INPUT @ S.L., 14" WC REQUIRED. M.C. TO COORDINATE GAS LOAD WITH LOCAL GAS COMPANY

MAIN LEVEL PLUMBING PLAN

SCALE: 1/4"=1'-0"



The Ballard Group, Inc.

Mechanical Consulting Engineers  
2525 S. Wadsworth Blvd.  
Lakewood, Colorado 80227  
303 988-4514  
FAX 303 988-4517

COLUMBINE ON MAIN  
2299 WEST MAIN STREET  
LITTLETON, CO 80120

Issue Record

ADD #1

Job No. 15137

Date 01/20/2016

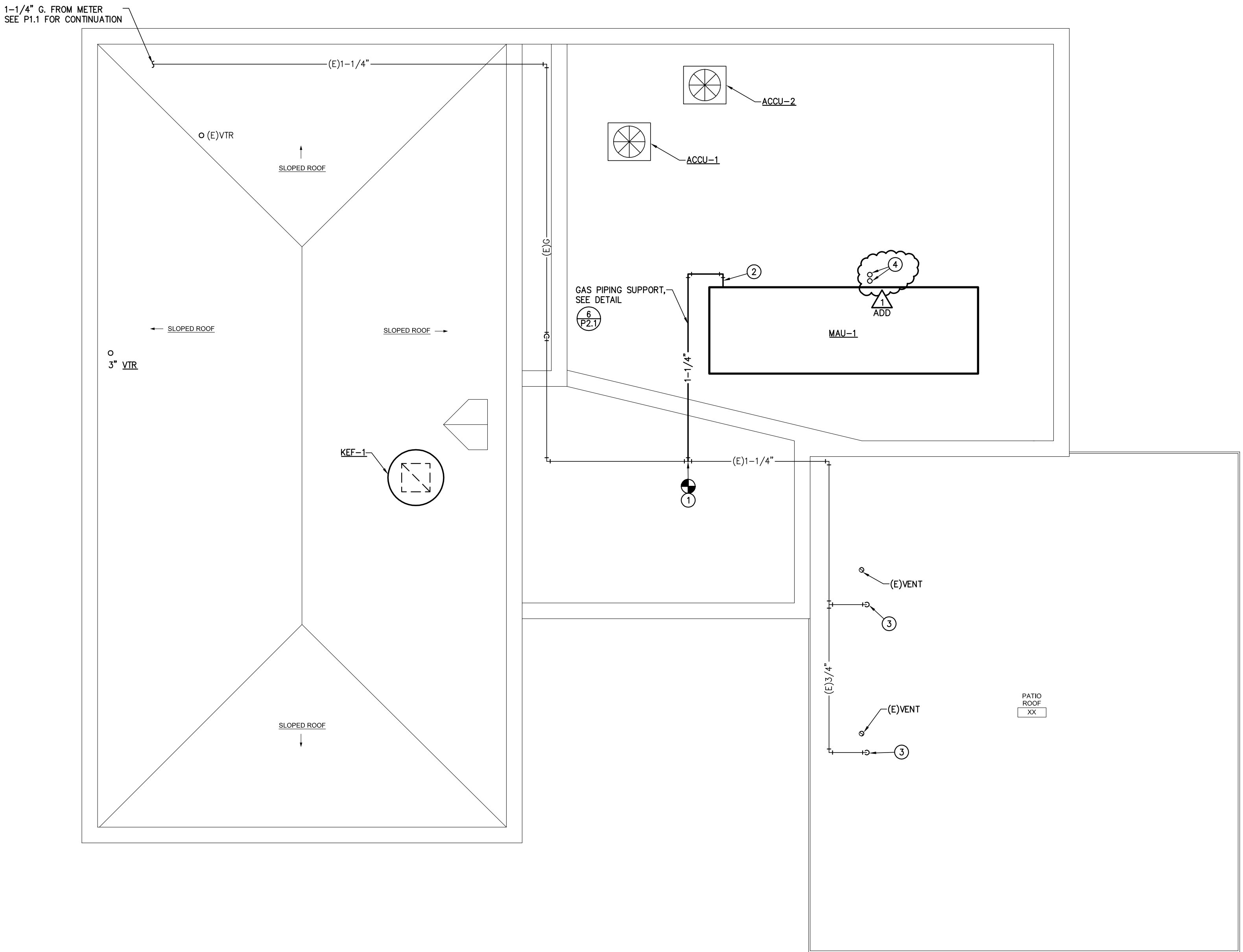
Drawn JJOP

Checked TRH

Contents

MAIN LEVEL PLUMBING PLAN

P1.1

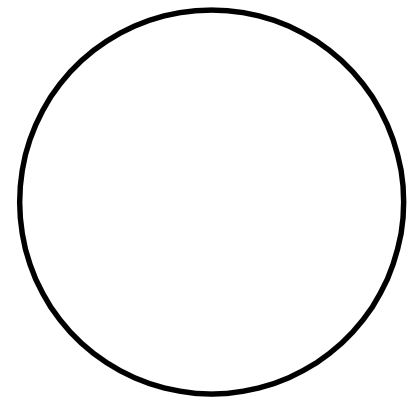


PLUMBING KEYNOTES:

- 1 CONNECT 1" GAS TO (E)1-1/4" GAS.
- 2 CONNECT 1-1/4" GAS TO MAU WITH GAS COCK AND 6" DIRT LEG.
- 3 (E)3/4" DOWN THROUGH ROOF TO (E)RADIANT HEATER.
- 4 1-1/2" DRAIN OUTLET DOWN AND 3/4" CW RISE TO MAU FROM BELOW.

ROOF LEVEL PLUMBING PLAN

SCALE: 1/4"=1'-0"



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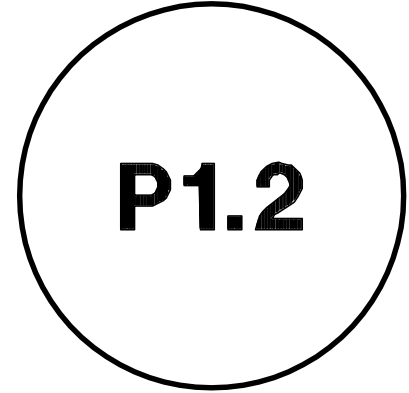
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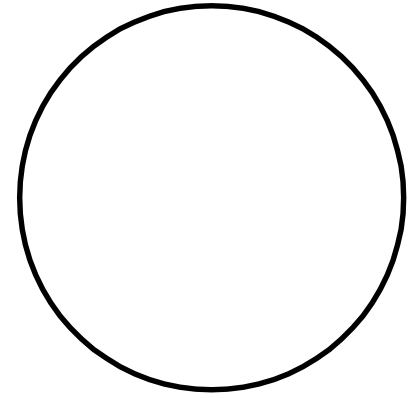
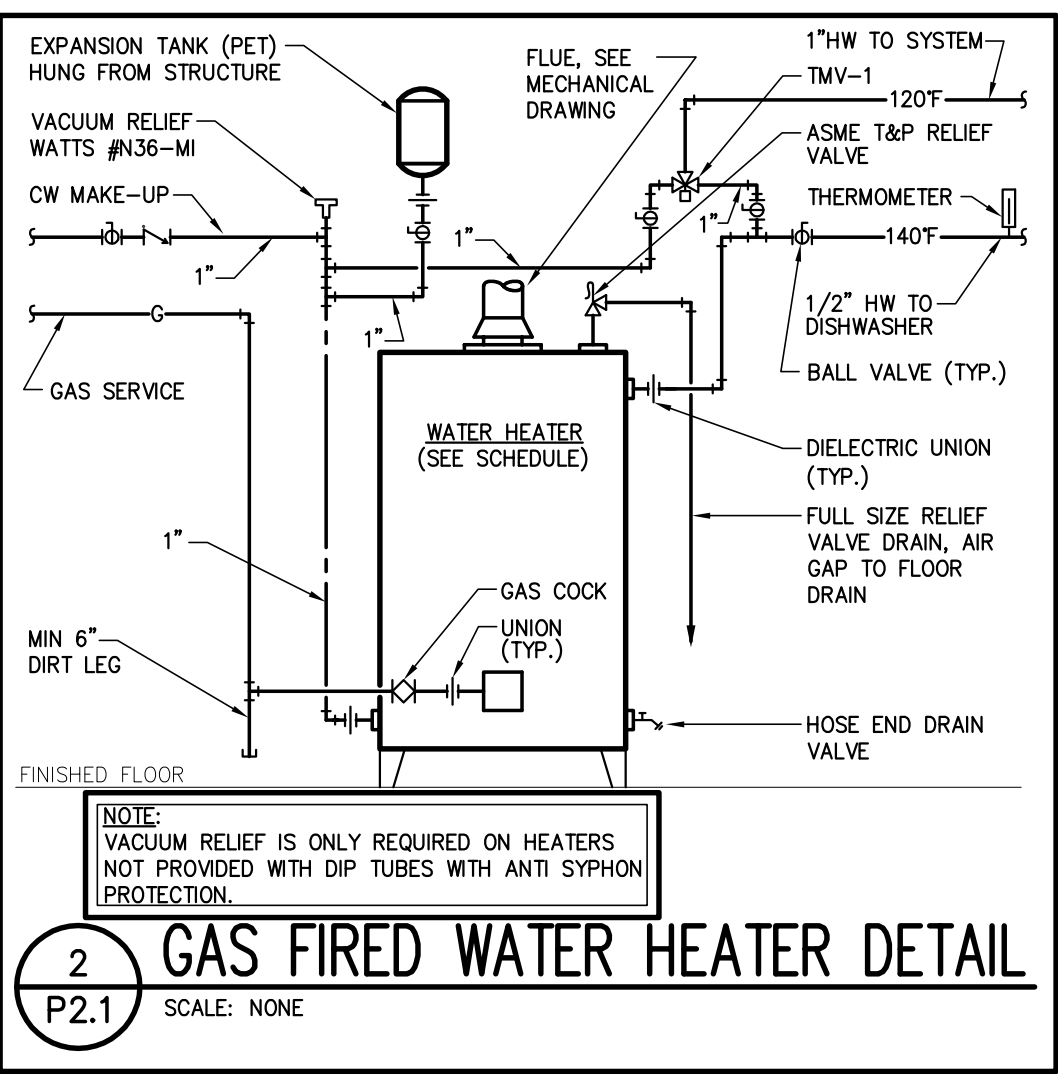
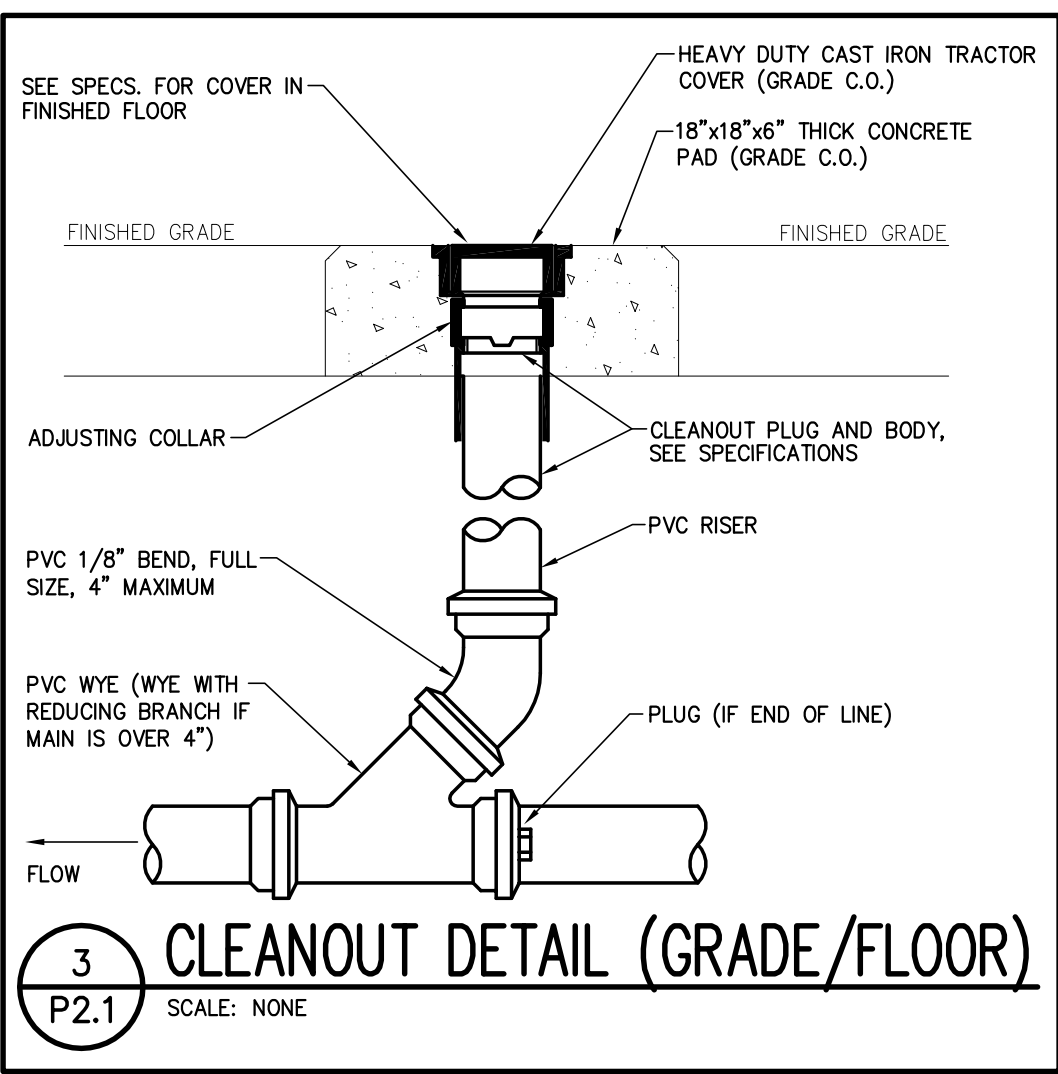
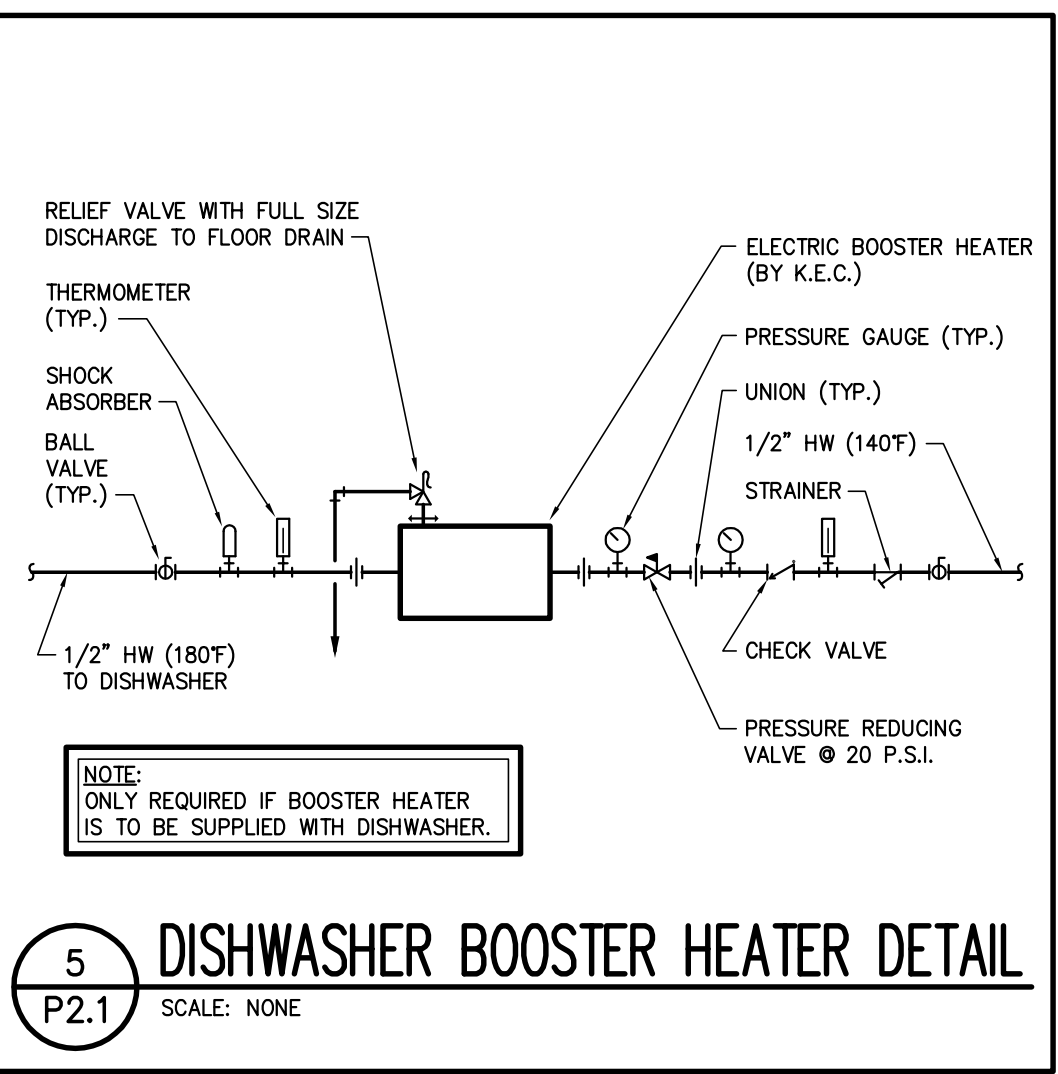
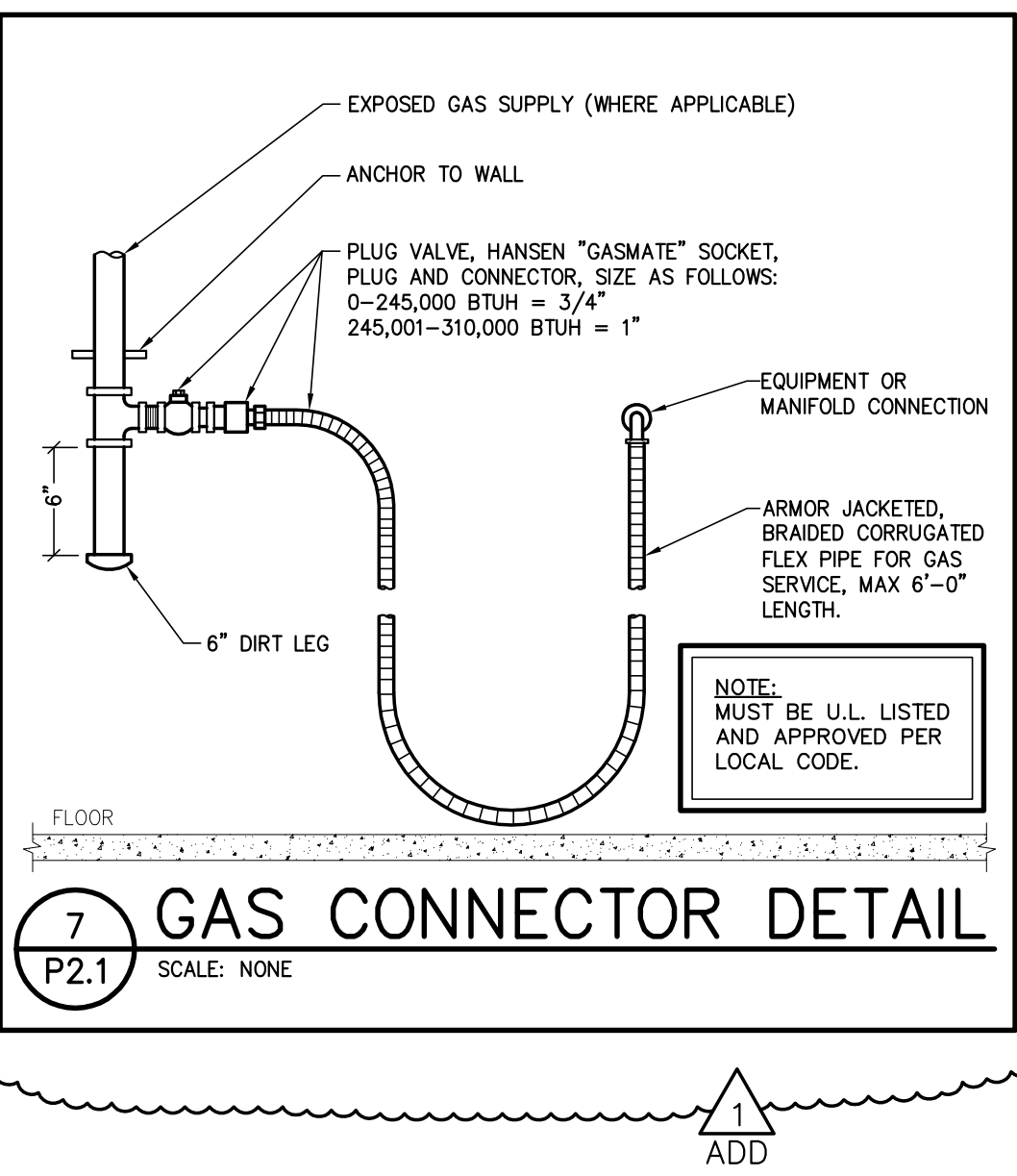
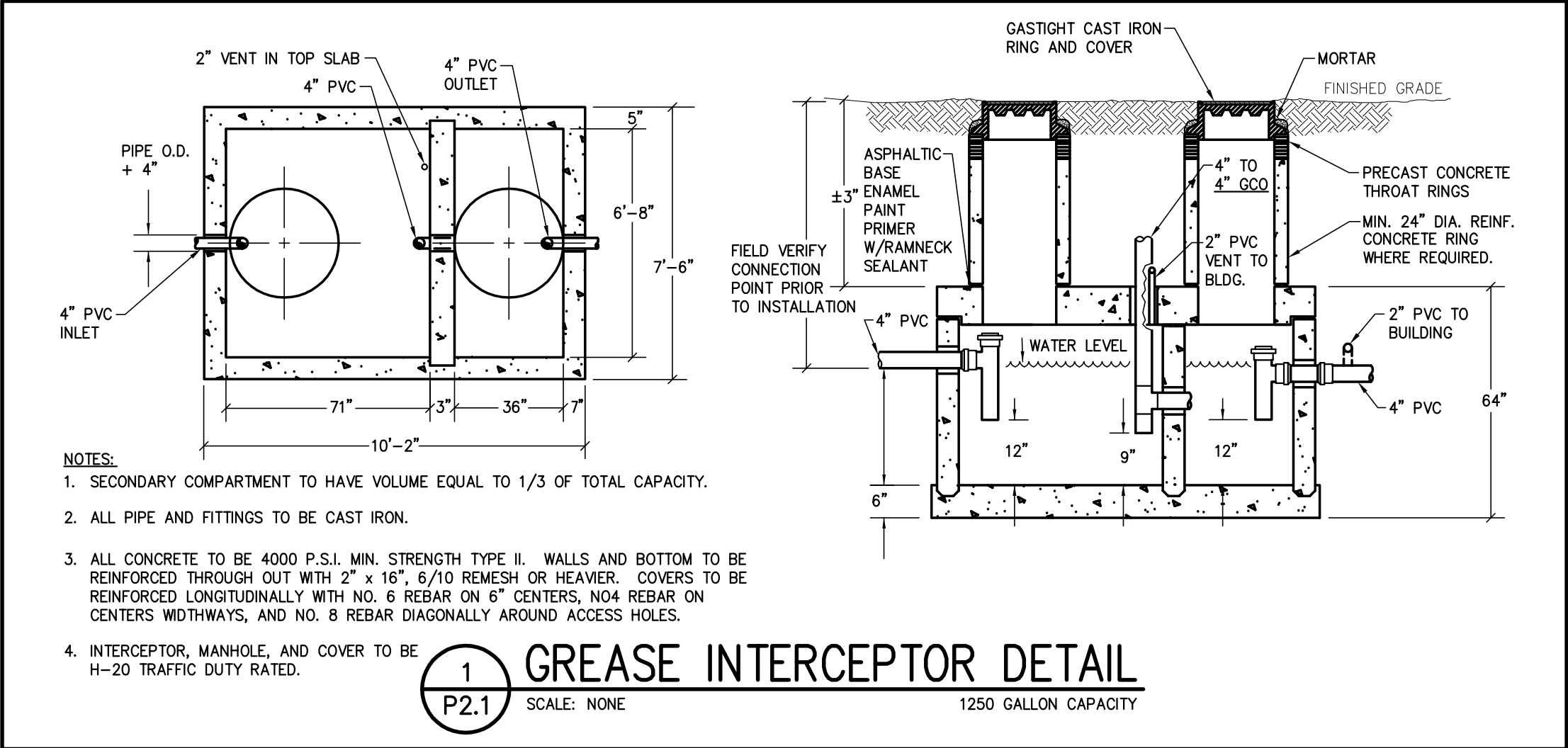
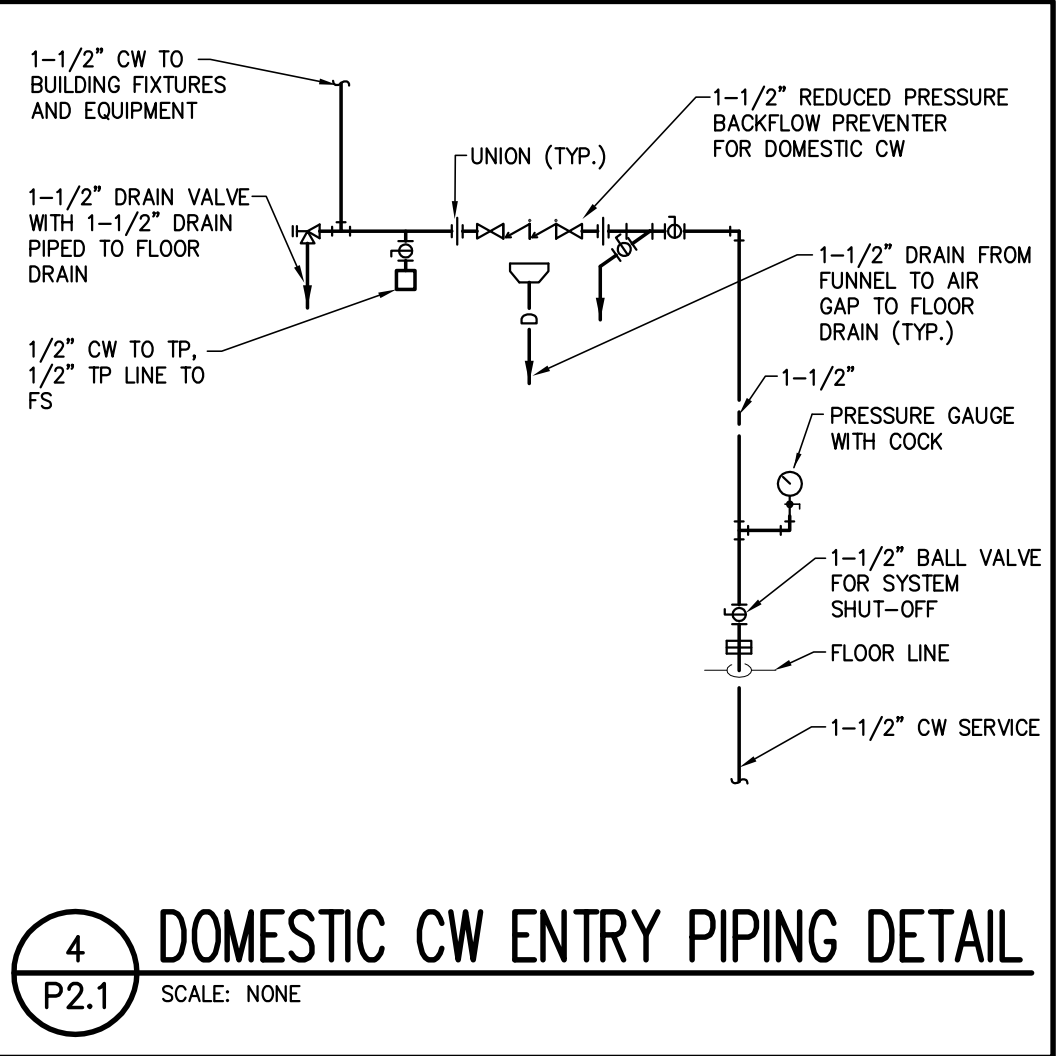
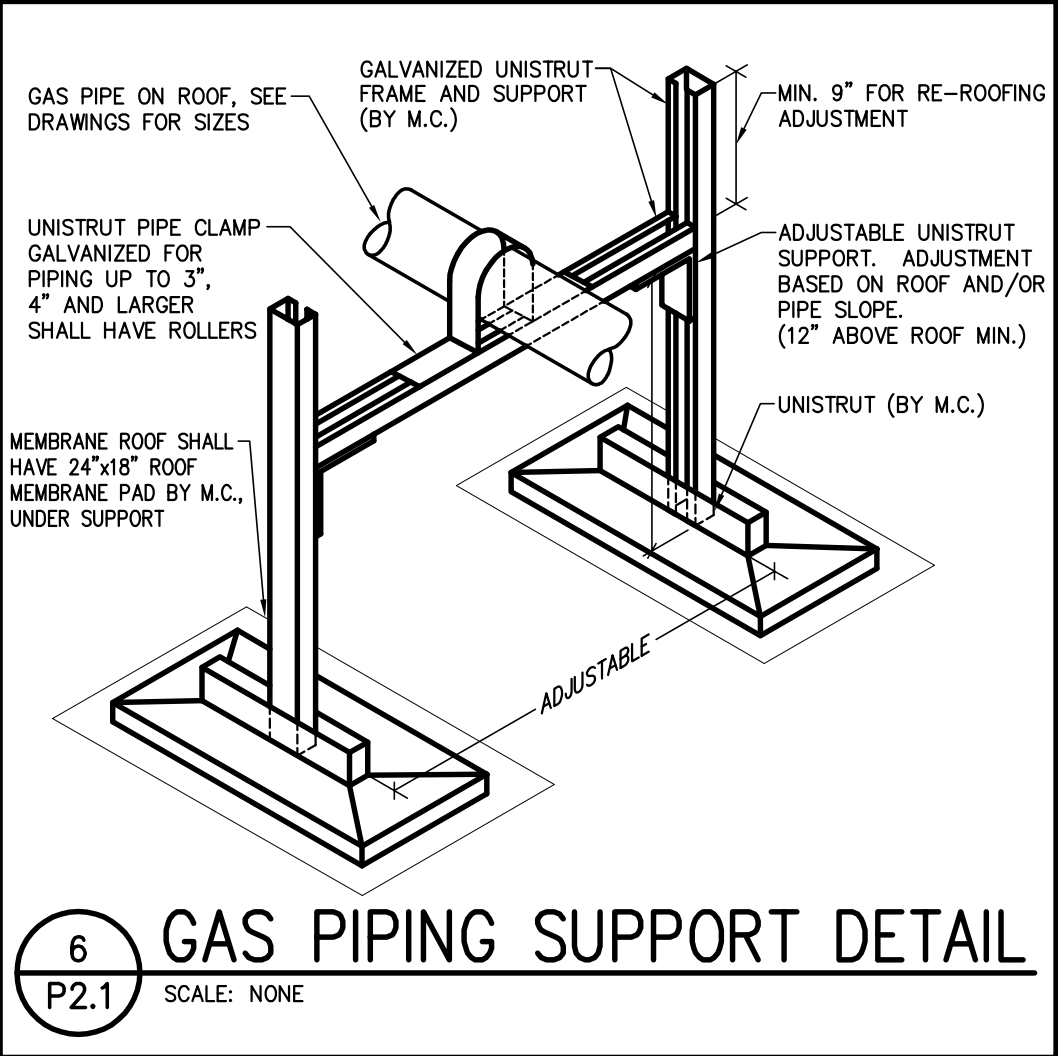
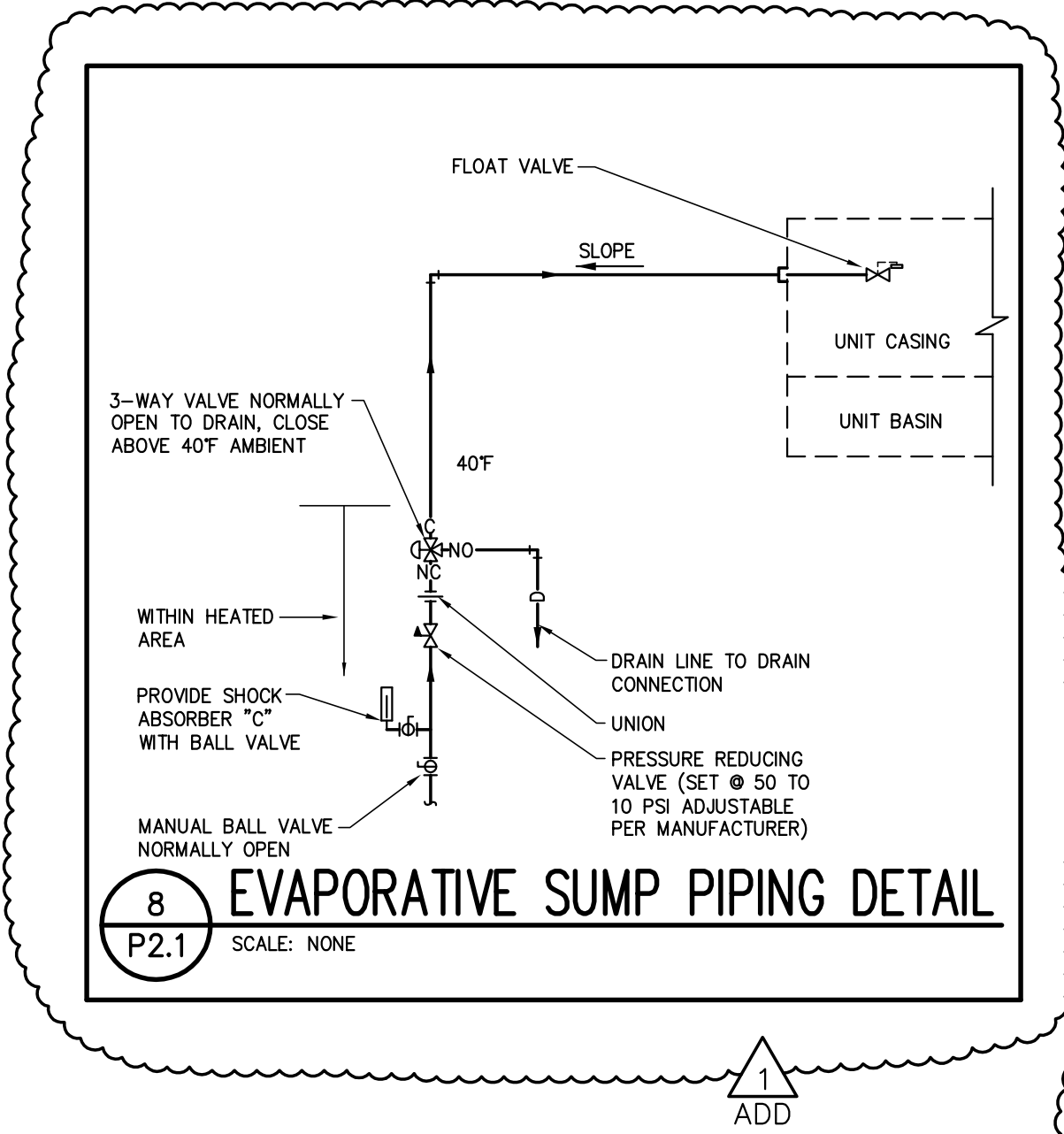
ROOF LEVEL PLUMBING  
PLAN





WATER HEATER SCHEDULE (GAS-FIRED)										
PLAN CODE	MANUFACTURER & MODEL NO.	STORAGE GALLONS	G.P.H. RECOVERY @ 100' RISE	BTUH INPUT @ SEA LEVEL	EFF. FACTOR	FLUE SIZE	TANK SIZE		OPER. WEIGHT	REMARKS
							DIA.	HT.		
GWH-1	STATE SUF100-150NE	100	178	150	98.0	SEE HVAC	28	76	1387 LBS	-
NOTES:										

MISCELLANEOUS PLUMBING FIXTURE					
PLAN CODE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	REMARKS
PET-1	PLUMBING EXPANSION TANK	AMTROL	ST-12	STEEL	-
TMV-1	THERMOSTATIC MIXING VALVE	LEONARD	TM-20-LF-E	ROUGH BRASS	NOTES: 1,2,3
NOTES: 1. SET TO 120°F. 2. 11 GPM AT 20 PSI LOSS. 3. ASSE 1017 VALVE.					



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Contents	PLUMBING SCHEDULES AND DETAILS

