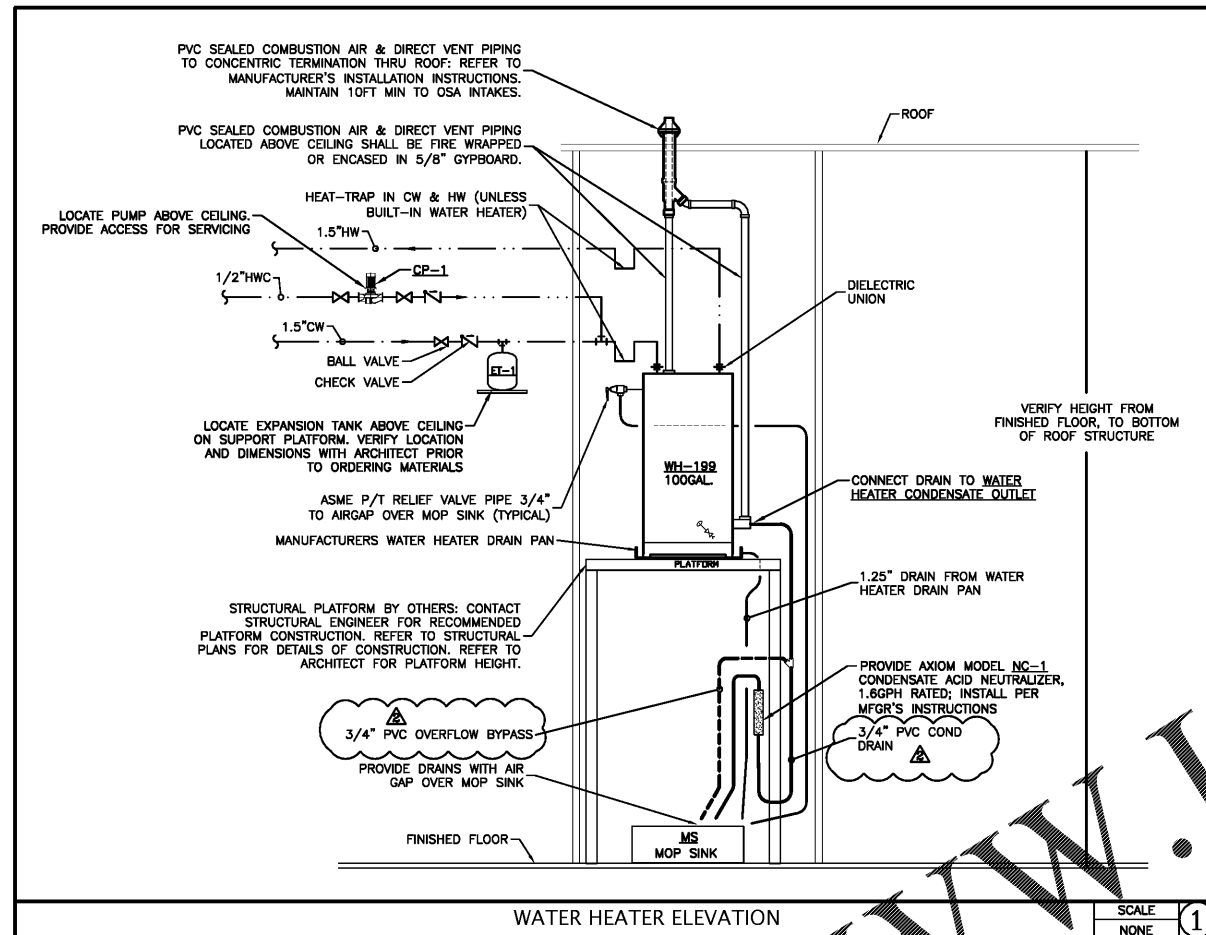


PLBG SPECIFICATIONS - DIV 15

- SOIL, WASTE and VENT PIPING** shall be cast iron CISPI-301 schedule 40 with No-Hub connections listed for installed location. PVC Schedule-40 dual cement ASTM-D2685 may be used if Code approved. PVC pipe located above slab on grade shall be fire wrapped or encased in 5/8" gypboard. NOTE - PVC pipe shall not be used when piping is located less than 18" to a Type-1 grease exhaust hood; metallic pipe shall be used in this circumstance. Provide cleanouts 100ft min OC of appropriate type inside buildings and at the base of each stack with listed flex bellows.
- WATER PIPING** shall be 15% silver SiI-Phos brazed joint type-K copper ASTM-B88 if buried or within 6" of grade. Use no-lead soldered joint type-L copper above grade.
- GAS PIPING** Schedule 40 black iron with malleable screwed fittings inside building and from meter to building where not buried. Buried piping shall be welded with forged steel fittings and mill wrapped with unbroken layer of coal tar Kraft Protecto-Wrap including fittings. Verify gas line routing with Architect and Building Department prior to installation. Costs involved in gas service shall be included in bid. Provide line size valve just prior to entering building. Provide equipment regulators to suit pressure supplied. Gas piping on roof shall run on 12" high pitch pocket supports per Code. Prior to each piece of equipment, provide gas valve, union, drip leg, all accessible per Code.
- INSULATION - WATER PIPING:** Insulate all HW (hot water) and HWC (hot water circ) piping (1" thick up to 1.25" dia; 1.5" thick on 1.5" dia and larger) and 1/2" thick on CW (cold water) piping with Certainteed preformed fiberglass with UL-181 Class-1 plenum rated cover. Route circulated hot water within 2ft of Public Lav. FREEZE PROTECTION: Do not locate water piping in exterior walls or attic. Route piping inboard of building insulation to avoid freezing. Electric heat trace all piping located in unheated areas with Chromalox 7.0 watts/ft MI cable and 1" thick fiberglass piping insulation with cover.
- SHOCK ABSORBER:** Provide Josam 75000-S 1/2" copper piston-type at CW and HW connections where a quick-closing valve is present - urinals, dish machines, clothes washers, etc.
- VALVES:** Isolate each piece of equipment and each rough-in including waste and vent. WATER Apollo ball valve line-size rated for 400 PSIG WOG. GAS: CGA listed line-size rated for gas involved.
- FLOOR DRAIN TRAP PRIMER:** Provide Prime-Perfect with 1/2" CW and valve to each Floor Drain in equipment rooms and where required by Code.
- PRESSURE TEST** all piping per Code but to at least 150% max WP.

- GENERAL:**
- LOCAL and STATE CODES/ORDINANCES and CONDITIONS of CONTRACT** shall be followed. SUBMIT plans to Building Department for Plan Review. Follow correction requirements. Pay all Fees and obtain all Permits.
  - ADOPTED ENERGY CODE** shall be followed. All equipment, insulation, and controls shall conform.
  - VISIT SITE** daily to ascertain existing conditions prior to ordering equipment or fabricating duct and piping.
  - PLUMBING DRAWINGS** are schematic and not to be scaled. Refer to Architectural/Certified drawings and site measurements for dimensions.
  - AS-BUILT** scale drawings shall be provided by Contractor and submitted to Owner at completion showing all piping and equipment changes.
  - EQUIPMENT SHOWN ON DRAWINGS and SPECIFICATIONS:** Contractor shall order, purchase, receive, uncrate, assemble, and install all items in conformance to Manufacturer's recommendations. Additionally Contractor shall install and final connect Owner furnished equipment. Contractor shall insure all equipment for full replacement value.
  - SHOP DRAWINGS:** Contractor shall check Shop Drawings for 100% compliance with Contract Documents. Submit complete electronic PDF file - to include all fixtures on fixture schedule as well as accessories such as back flow preventers, shut-off valves, hoses, condensate neutralizers, lav drains and p-traps, etc. - to Owner for review prior to ordering.
  - BASE BID on specified equipment as shown on plans and in specifications.**
  - SUBSTITUTIONS** will be processed as change-orders after Bidding with all electrical, building alterations, and dollar amounts are included and approved in writing by owner prior to ordering equipment or fabrication.
  - EXTRA COSTS or CHANGES** allowed only if approved in writing by Engineer with dollar amount prior to ordering.
  - ELECTRICAL COORDINATION:** Confirm voltage, phase, and ampacity with Electrical Contractor prior to ordering equipment. All 24v controls including interlock wiring for Plumbing equipment by Division 15 Contractor. Provide magnetic starters for all 3-phase motors with protection on all three leads. Equipment to automatically restart after power failure. All wire in conduit per NEC latest edition.
  - CURBS, SUPPORTS, and ANCHORS** shall be provided for PLUMBING work. No chain, tape, wire.
  - SLEEVES and COLLARS** shall be provided for all pipes thru walls, floors, and ceilings. Provide chrome plated escutcheons for exposed piping penetrations thru ceilings, floors, and walls in finished areas. All soil, waste, vent and trim including fittings to be chrome plated where exposed.
  - CONCEAL** all work in finished areas.
  - CUT and PATCH** to match adjacent areas. structural member shall be cut or notched.
  - EXCAVATE** for all PLUMBING work. Compact 95% AASHO or Proctor density in 6" maximum layers at optimum moisture content. Rework if any settlement within first years Guarantee.
  - OPERATING MANUAL** shall be provided Owner and Engineer for all systems and equipment including manufacturer's maintenance manuals. Include lubrication, filter types and sizes, starting and stopping procedures. List Plumbing Contractor's telephone numbers.
  - ONLY CONTRACTORS WITH EXPERIENCE** on at least 3 projects of this type may bid.
  - RFI (Request For Information)** from Contractor shall include at least one proposed solution which complies with the intent of Contract Documents.
  - GUARANTEE** all labor and new equipment for one year from the date of acceptance by Owner.



**PLUMBING LEGEND**

SYMBOL	ABBRV.	DESCRIPTION	VALVES, FITTINGS, ETC
---	CW	COLD WATER	
---	HW	HOT WATER	
---	HWC	HOT WATER CIRCULATING	
---	V	SANITARY VENT	
---	FW	FILTERED WATER	
---	W	SANITARY WASTE BURIED	
---	SW	SAN WASTE ABOVE GRADE	
---	KW	KITCHEN GREASE WASTE	
---	G	NATURAL GAS LINE	
---	EW	EXISTING SANITARY WASTE	
---	CD	CONDENSATE DRAIN	
⊙	POC	POINT OF CONNECTION	
⊕	COG	CLEANOUT TO GRADE	
⊖	VTR	VENT THRU ROOF	
⊖	WCO	WALL CLEANOUT	
⊕	FD	FLOOR DRAIN	
⊖	FS	FLOOR SINK	

**PLUMBING FIXTURE SCHEDULE - NO SUBSTITUTIONS**

<b>WH-199</b>	<b>GAS-FIRED WATER HEATER:</b> Standard model SUF100/199NE; 100gal capacity, 199 MBH gas input, 97% recovery efficiency, 235 GPH recovery capacity at S.L.; sealed combustion air/direct vent provide concentric vent kit 67-7-01-022800 for venting thru sidewall or roof, refer to manufacturer's installation instructions; 76.5" x 27.7" verify ~1,400lbs total weight w/full tank. Provide Axiom model NC-1 condensate neutralizer; see WATER HEATER ELEVATION, this sheet for detail.
<b>CP-1</b>	<b>HW CIRC PUMP:</b> Taco model 899-B4-PMP, bronze, rated for domestic water; 5gpm @5ft head, 1/40th HP, 120V. Locate pump above ceiling near HW heater. Provide access for servicing.
<b>ET-1</b>	<b>TEMPERATURE VALVE:</b> Amtrol model ST-12-C; ASME, 6.4gal tank, 3.2gal max recommended accepted capacity, 150 PSIG, 240F rated, NSF/ANSI 1 bladder, 5-year Limited Warranty.
<b>IV-1</b>	<b>TEMPERING VALVE:</b> CashAcme model HG-160 thermostatic mixing valve; ASSE-1070 approved for point-of-use application; 0.35 GPM min flowrate; 1/2" at individual fixtures. Provide check-valves on both hot and cold water inlets, set discharge to 110F.
<b>JCS</b>	<b>J COMPARTMENT SINK:</b> 2" Indirect Waste air gap over floor sink; 1/2" CW; 1/2" HW; faucet and sprayer attachment; furnished by Owner, installed by Plumber.
<b>S</b>	<b>FAUCET + SPRAYER:</b> 1/2" CW, 1/2" HW; model furnished by Owner, installed by Plumber.
<b>PS</b>	<b>PREP SINK:</b> 2" Indirect Waste air gap over floor sink; 1/2" CW; 1/2" HW; furnished by Owner, installed by Plumber.
<b>DS</b>	<b>DUMP SINK:</b> 2" Indirect Waste air gap over floor sink; 1/2" CW; 1/2" HW; furnished by Owner, installed by Plumber.
<b>HS</b>	<b>HAND SINK:</b> 1.5" Waste; 1.25" Vent; 1/2" CW; 1/2" HW; furnished by Owner, installed by Plumber; provide 3/8" angle supplies, 17 gage brass p-trap with clean-out, aerator, and open grid drain. Provide IV-1 tempering valve at HW connection to individual fixture.
<b>WC</b>	<b>WATER CLOSET:</b> 3"Waste; 2"Vent; 1/2" CW; AMERICAN STANDARD model 211AA.104 Champion Pro "Right Height" elongated toilet; 1.28 gal/flush tank type, 3195A.101 elongated bowl, 4225A.104 tank; 2-3/8" fully glazed trapway, vac breaker, bolt caps; provide 3/8" angle supply, solid plastic open seat with seat-less cover.
<b>U</b>	<b>URINAL:</b> 2"Waste, 1.5"Vent, 3/4" CW; AMERICAN STANDARD "Washbrook" model# 6590.525; 3/4" top spud "Selectronic" 0.125GPF flush valve with vac breaker, 3/4" angle stop & mechanical override; elongated 14" rim, wall hangers, strainer; verify integral P-trap prior to ordering. Mount at 17" to lip of urinal, refer to elevation details on A000 and A240.
<b>L</b>	<b>LAVATORY (WALL MOUNTED):</b> 1.5"Waste; 1.25"Vent; 1/2" CW; 1/2" HW; Furnished by Owner, installed by Plumber. Provide IV-1 tempering valve at HW connection to individual fixture. Route circulating hot water within 2ft of lav faucet.
<b>MS</b>	<b>MOP SINK:</b> 3"Waste, 2"Vent, 1/2" CW, 1/2" HW; ZURN 1996-36 mop sink basin - 36"x24"x10"hi, model MSG-3624 wall guard set, faucet furnished by Owner, installed by GC, hose threaded spout, vac breaker, integral stops, 1453-BB strainer, 3 P-trap.
<b>ES</b>	<b>FLOOR SINK:</b> 3" Waste; 1.5"Vent; ZURN FD-2376, chrome plated grate as required. 4" deep seal trap. Provide Drain-Net Technology Guardian Dome-D-Lox/3" strainer, and Franklin Machine Products Model 102-111, 8.5" square plastic sink basket.
<b>FD</b>	<b>FLOOR DRAIN:</b> 2"Waste (unless otherwise noted); 1.5"Vent; Josam 300005A with chrome "B" strainer, p-trap. Provide "Prime-Perfect" trap primer.
<b>ID</b>	<b>TRENCH DRAIN:</b> 3"Waste; 1.5"Vent; Zurn Z890; stainless steel channel and grate; provide no-hub bottom outlet and dome strainer, p-trap, "Prime-Perfect" trap primer. Refer to Mfg's installation instructions. Specify 4ft channel and grate length when ordering.
<b>RPZ</b>	<b>REDUCED PRESSURE BACKFLOW PREVENTER:</b> ZURN WILKINS model 975XL2; full port ball valves; provide lead-free strainer.

**NOTE:**

- All lavatories installed in public areas shall have 1/2 GPM flow limiters. Min 2ft between lav and HWC line.
- Provide all anchor, supports, traps, and trim for a complete installation.
- Provide 1/4 turn stop valves on hot water and cold water connections to each fixture.

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**BAD DADDY'S BURGER BAR**  
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 06.07.2019 FOR PLAN REVIEW

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 DRAWN BY: F Long

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Project No.  
 PROJECT#: 2019-041

Consultant:  
 PLUMBING:  
 LEGEND, SPECIFICATIONS, FIXTURE  
 SCHEDULE, DETAILS

**P-1**  
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