



NEW BUILDING FACILITY: CBC OFFICE BUILL Hillsborough, North Carolina

DRAWING NAME

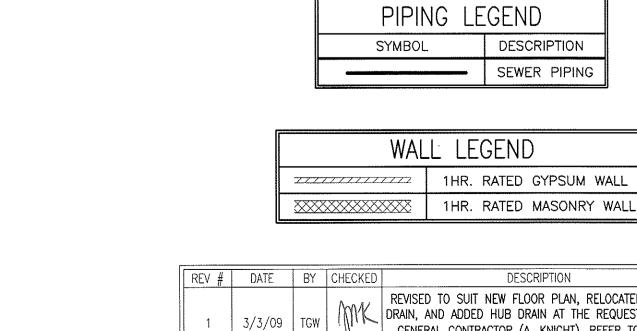
1st FLOOR PLUMBING PLAN

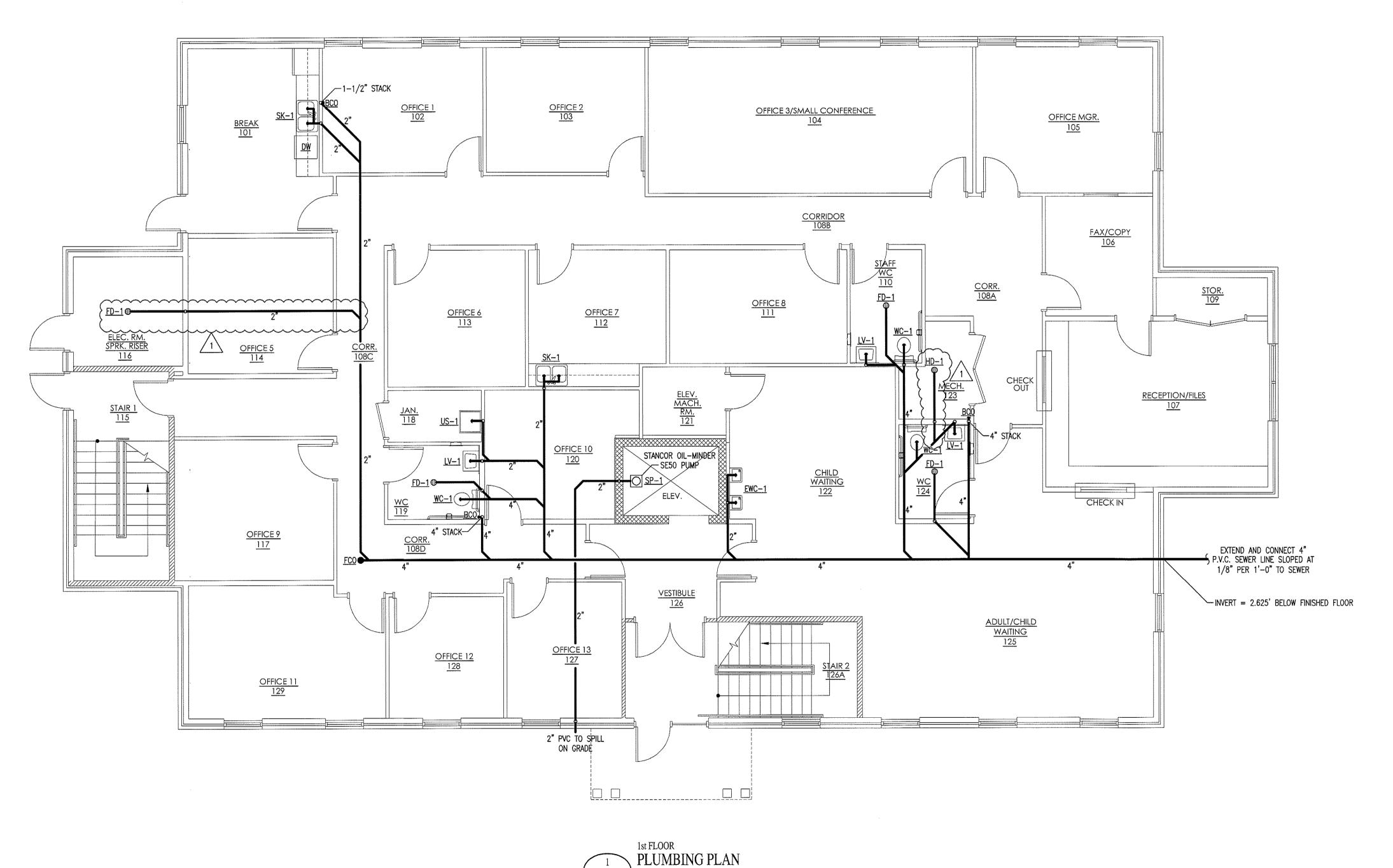
SEAL 25043 TGW CHECKED JNK

DATE 1/8/09 SCALE AS NOTED

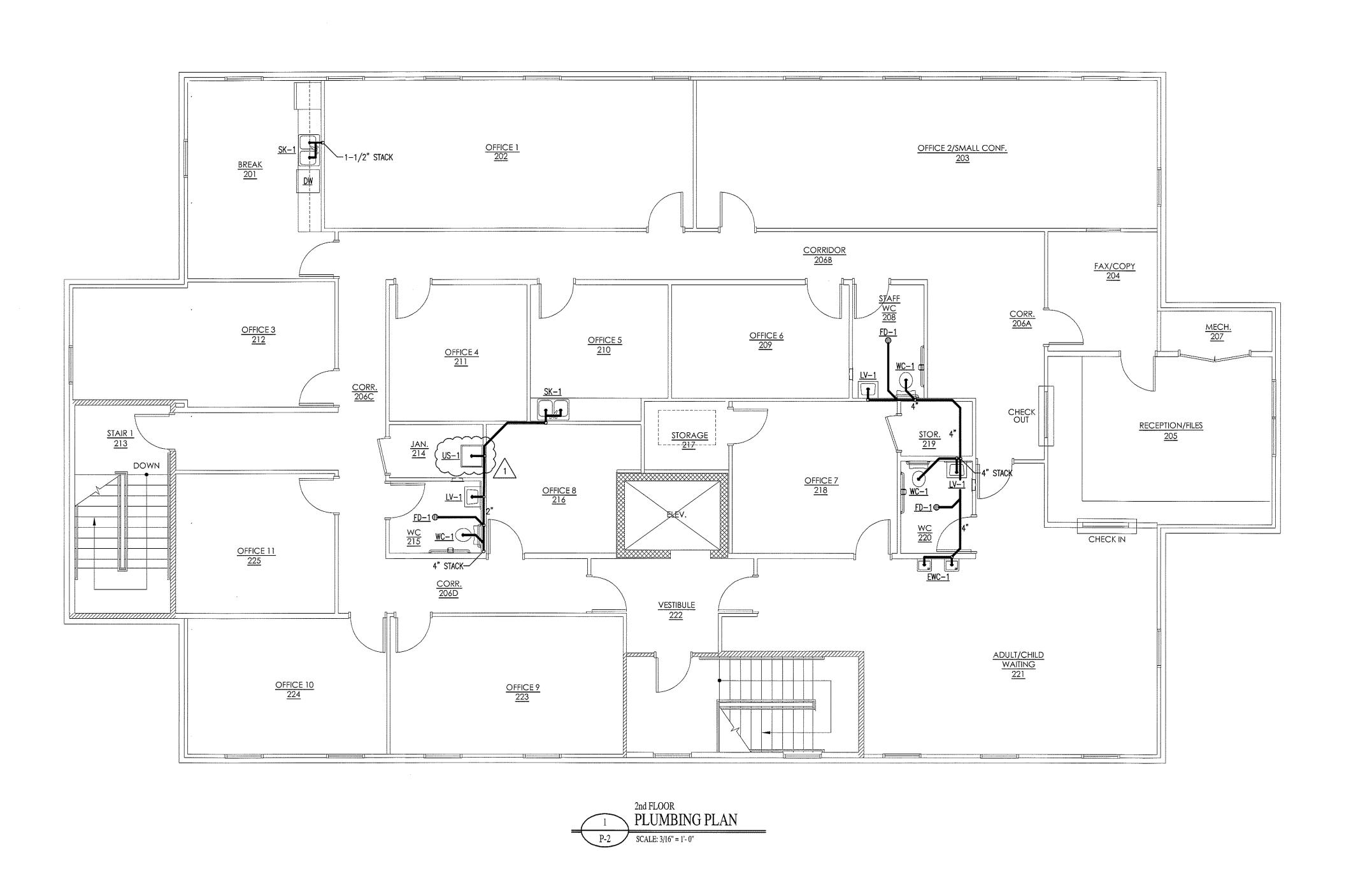
JOB NO. 8123

DESCRIPTION REVISED TO SUIT NEW FLOOR PLAN, RELOCATED FLOOR DRAIN, AND ADDED HUB DRAIN AT THE REQUEST OF THE GENERAL CONTRACTOR (A. KNIGHT). REFER TO EMAIL FROM ARCHITECT (D. RIPPERTON) DATED 2-20-09.

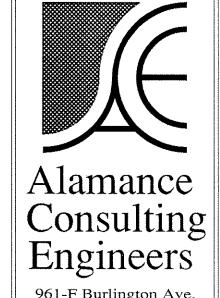




P-1 SCALE: 3/16" = 1'-0"



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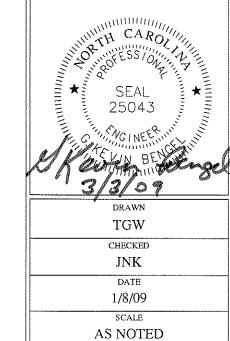
HOUSEWRIGHT BUILDING CO.

P.O. BOX 786 CARRBORO, NC 27.

NEW BUILDING FACILITY: CBC OFFICE BUILDING

DRAWING NAME

2nd FLOOR
PLUMBING PLAN



REV # DATE BY CHECKED DESCRIPTION

1 3/3/09 TGW REVISED TO SUIT NEW FLOOR PLAN AND ADDED UTILITY SINK AT THE REQUEST OF THE GENERAL CONTRACTOR (A. KNIGHT). REFER TO EMAIL FROM ARCHITECT (D. RIPPERTON) DATED 2-20-09.

PIPING LEGEND

WALL LEGEND

SYMBOL

DESCRIPTION

1HR. RATED GYPSUM WALL

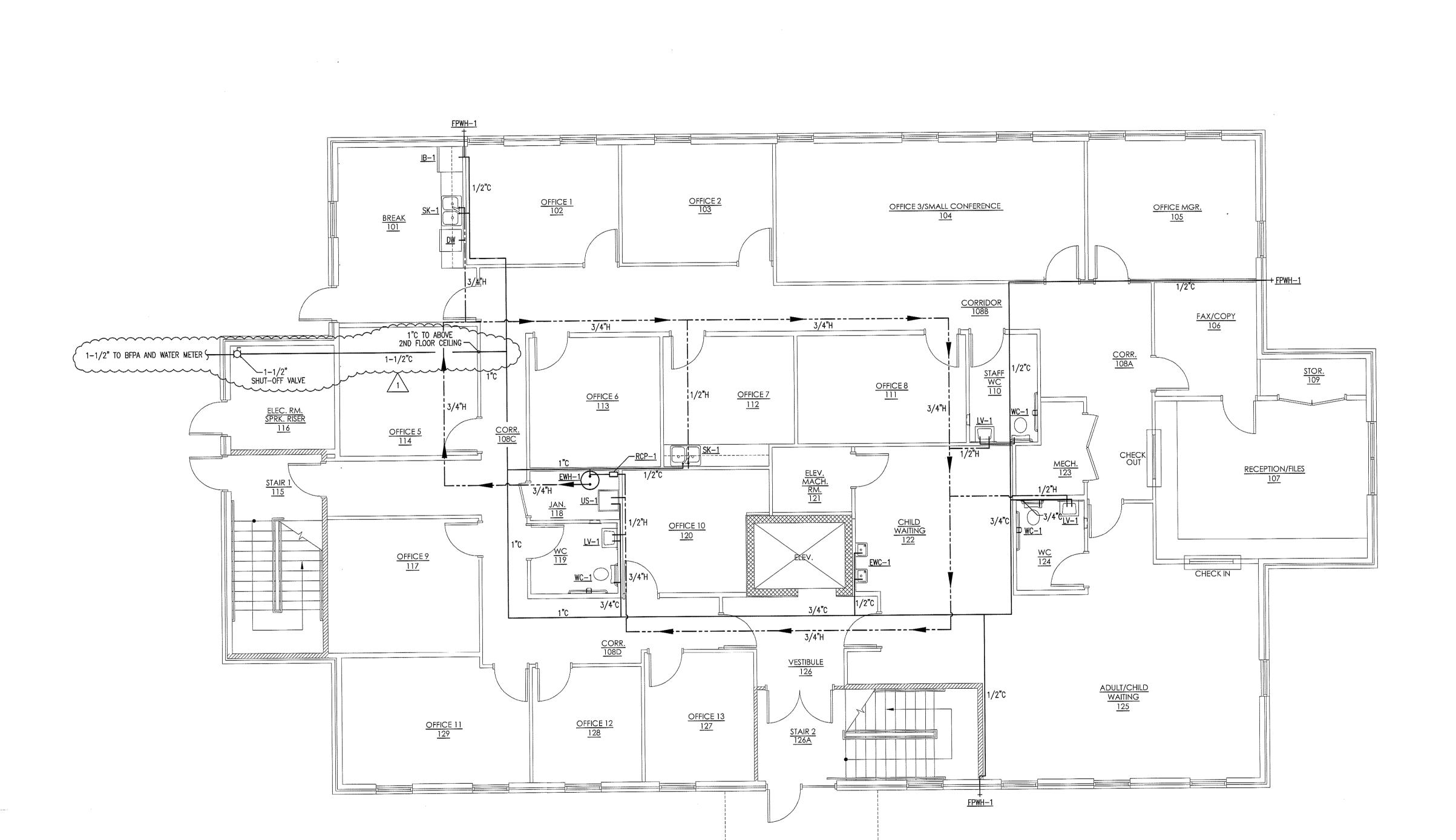
1HR. RATED MASONRY WALL

SEWER PIPING

P-2

JOB NO.

8123



1st FLOOR WATER PIPING PLAN

SCALE: 3/16" = 1'-0"

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HOUSEWRIGHT BUILDING CO.

NEW BUILDING FACILITY: CBC OFFICE BUIL Hillsborough, North Carolina

DRAWING NAME 1st FLOOR WATER PIPING PLAN

SEAL 25043 DRAWN TGW

CHECKED JNK DATE 1/8/09 SCALE AS NOTED јов NO. 8123

REV # DATE BY CHECKED DESCRIPTION 1 3/3/09 TGW MM

PIPING LEGEND

WALL LEGEND

1HR. RATED GYPSUM WALL

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1HR. RATED MASONRY WALL

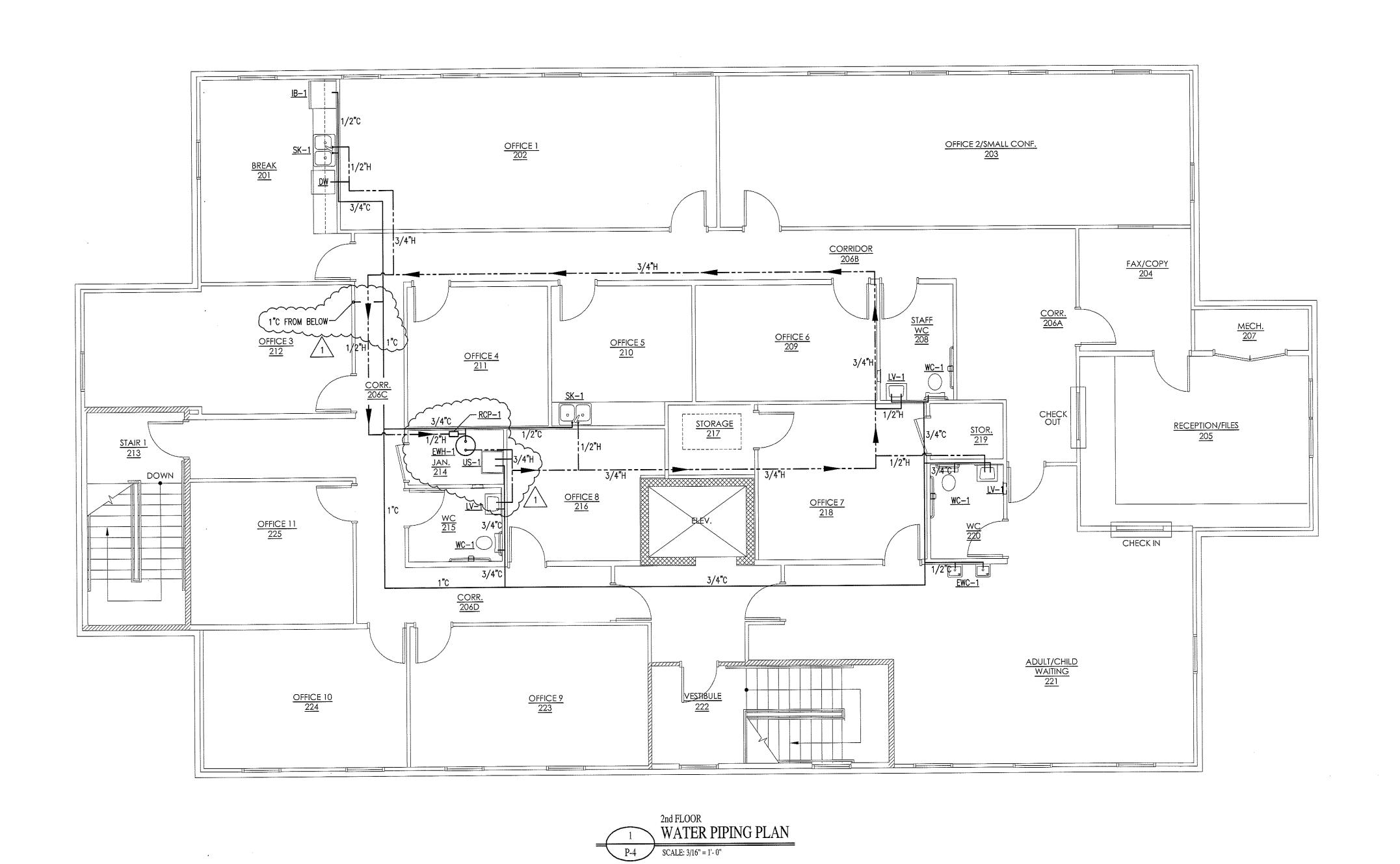
SYMBOL

REVISED TO SUIT NEW FLOOR PLAN AND RELOCATED WATER ENTRY LOCATION AT THE REQUEST OF THE GENERAL CONTRACTOR (A. KNIGHT). REFER TO EMAIL FROM ARCHITECT (D. RIPPERTON) DATED 2-20-09.

DESCRIPTION

HOT WATER

COLD WATER



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NEW BUILDING FACILITY: CBC OFFICE BUILDING Hillsborough, North Carolina

DRAWING NAME 2nd FLOOR WATER PIPING PLAN

₹★ SEAL 25043

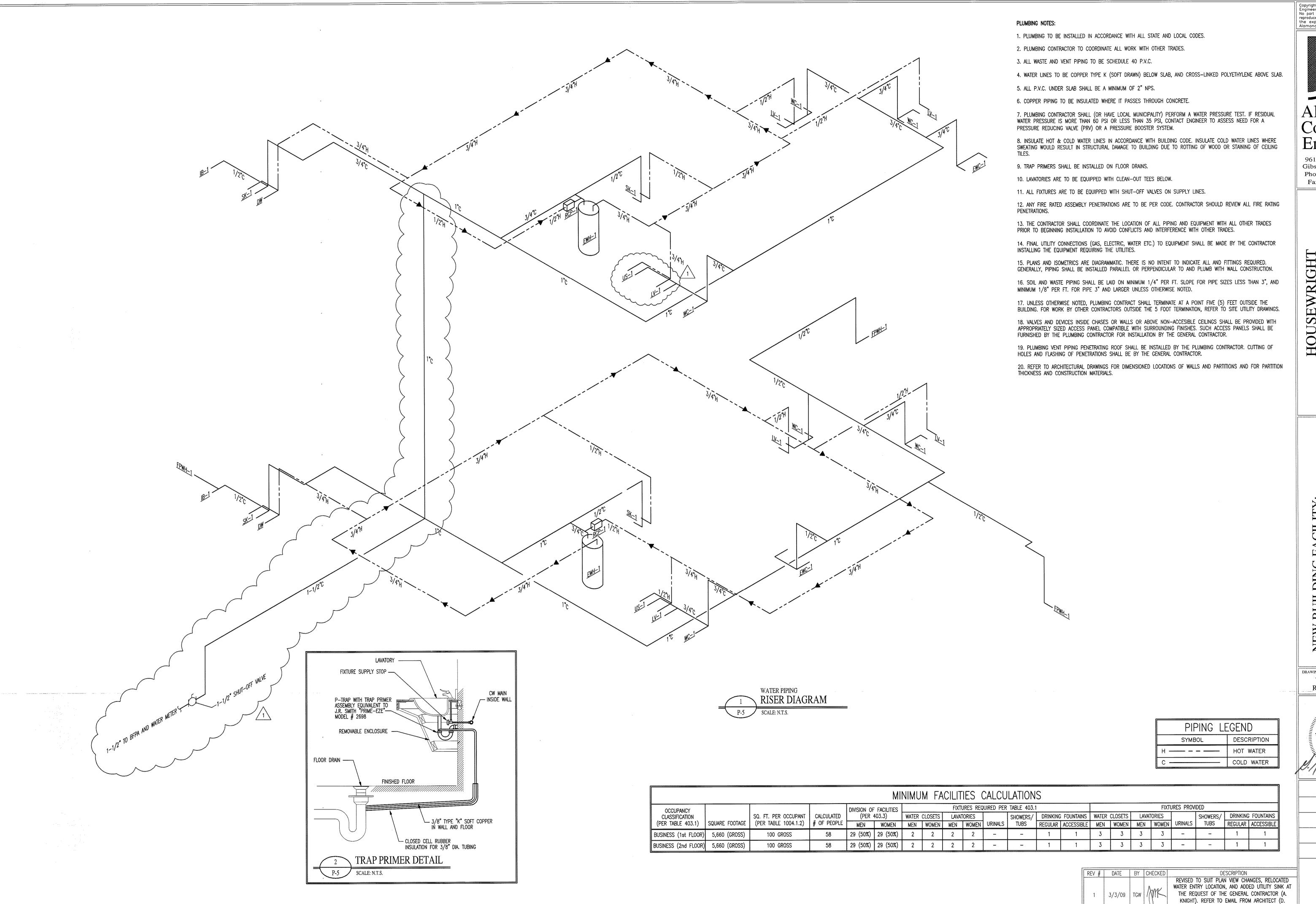
	COLD WATER	DRAWN
	- COLD WATER	TGW
		CHECKED JNK
WAL	L LEGEND	DATE 1/8/09
	1HR. RATED GYPSUM WALL	SCALE AS NOTE
	1HR. RATED MASONRY WALL	JOB NO.
		8123

REV # DATE BY CHECKED DESCRIPTION REVISED TO SUIT NEW FLOOR PLAN, RELOCATED WATER ENTRY LOCATION, AND ADDED UTILITY SINK AT THE REQUEST OF THE GENERAL CONTRACTOR (A. KNIGHT). REFER TO EMAIL FROM ARCHITECT (D. RIPPERTON) DATED 2-20-09. 1 3/3/09 TGW

PIPING LEGEND

HOT WATER

DESCRIPTION



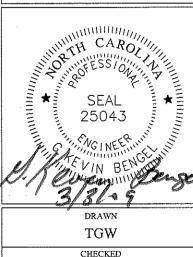
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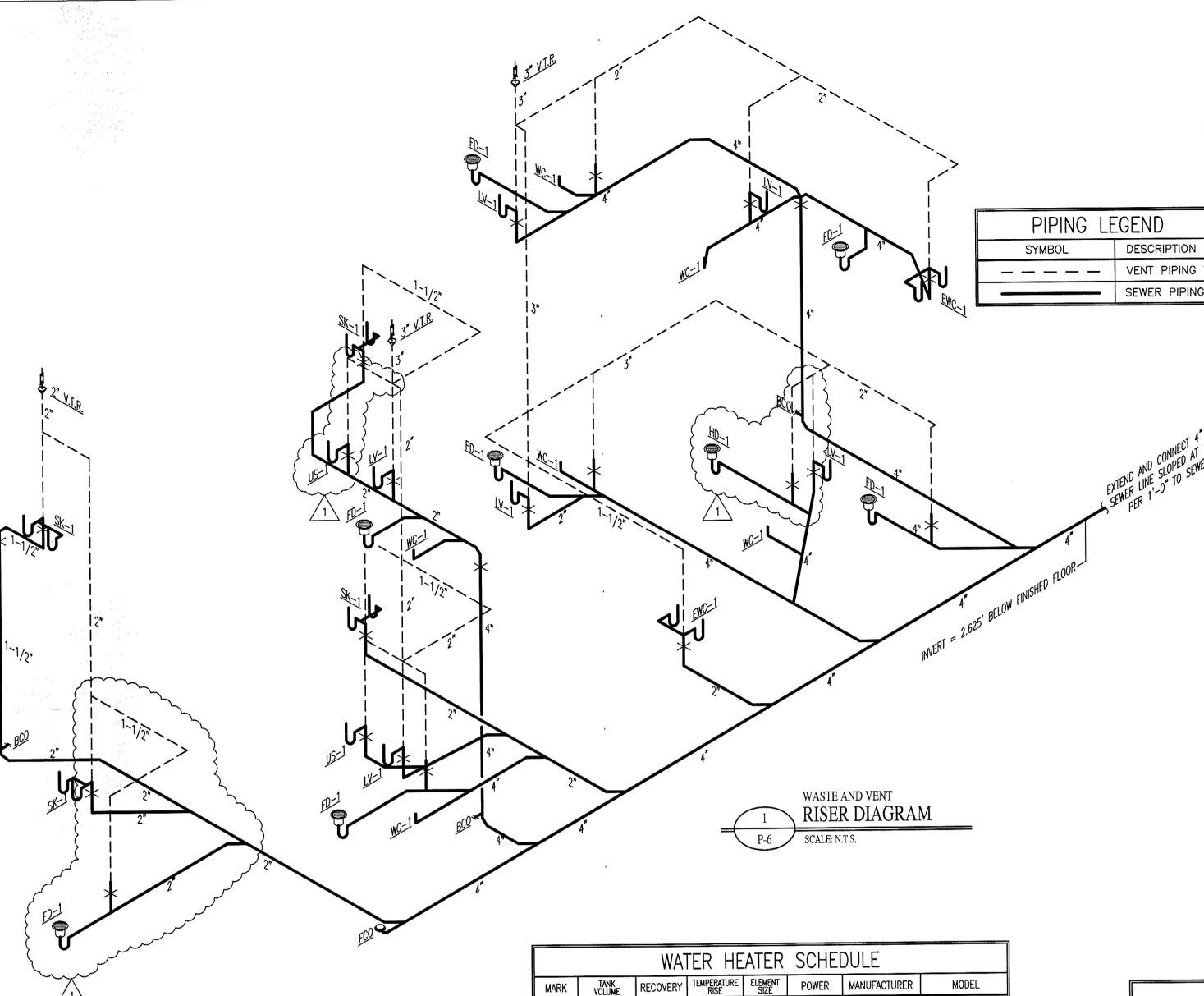
DRAWING NAME WATER PIPING RISER DIAGRAM



JNK DATE 1/8/09 SCALE

AS NOTED JOB NO. 8123 SHEET

RIPPERTON) DATED 2-20-09.



21 GPH 90° 4.5 KW 208/1ø

GPM = 29.1

82V40-2

WASTE AND WATER CALCULATIONS									
FIXTURE TYPE	QUANTITY	WASTE FIXTURE UNITS		HOT WATER FIXTURE UNITS		COLD WATER FIXTURE UNITS		TOTAL WATER FIXTURE UNITS	
		PER UNIT	TOTAL	PER UNIT	TOTAL	PER UNIT	TOTAL	PER UNIT	TOTAL
WATER CLOSET	6	4	24	0	0	5	30	5	30
LAVATORY	6	1	6	1.5	9	1.5	9	2	12
DRINKING FOUNTAIN	2	0.5	1	0	0	0.25	0.5	0.25	0.5
DISHWASHER	2	2	4	1.4	2.8	0	0	1.4	2.8
KITCHEN SINK	4	2	8	1	4	1	4	1.4	5.6
ICE MAKER BOX	2	0	0	0	0	0.25	0.5	0.25	0.5
HOSE BIBB	3	0	0	0	0	0.5	1.5	0.5	1.5
FLOOR/HUB DRAIN	8	2	16	0	0	0	0	0	0 }
UTILITY SINK	2	2	4	1	2	1	2	1.4	2.8
TOTAL			63		17.8		47.5		50.1

1. 4" WASTE LINE SLOPED AT 1/8" PER 1'-0" IS ADEQUATE FOR 180 FIXTURE UNITS 2. 2" WATER LINE IS ADEQUATE FOR 80 GPM.

\* FIXTURE MODEL NUMBERS LISTED ARE FOR DESCRIPTION ONLY.

	PLUMBING FIXTURE SCHEDULE							
		HAN STARTURED	T 1100E1 110		CONNECTION SIZES			REMARKS
ITEM NO. FIXTURE DESCRIPTION	MANUFACTURER	* MODEL NO.	C.W.	H.W.	WASTE	VENT	REMARKS	
<u>EWC-1</u>	ELECTRIC WATER COOLER - BI-LEVEL	SUNROC	ADAD8BL	1/2"		1-1/2"	1-1/2"	BI-LEVEL WATER COOLER
<u>WC-1</u>	WATER CLOSET — TANK TYPE	AMER. STD.	2998.012	1/2"		4"	2"	FLOOR MTD. 1.6 GAL/FLUSH, H.C. HEIGHT
<u>LV-1</u>	WALL HUNG LAVATORY	AMER. STD.	0355.012	1/2"	1/2"	1-1/2*	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS
<u>SK-1</u>	DOUBLE COMPARTMENT SINK	STERLING	PR033226	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER FAUCET, TRUEBRO PIPING COVERS (WHERE PIPING IS EXPOSED)
<u>UŞ-1</u>	UTILITY SINK	FIAT	FL-1	1/2"	1/2"	2"	1-1/2"	MTD. ON LEGS
<u>IB-1</u>	ICE MAKER BOX	PPP	MM-500-MIMB	1/2"				MIP VALVE WITH SHOCK ARRESTOR
FPWH-1	FROST PROOF WALL HYDRANT	WOODFORD	65	1/2"			_	MOUNT 24" ABOVE GRADE LEVEL
<u>FD-1</u>	FLOOR DRAIN	ZURN	Z-415-B			2*	1-1/2"	BODY ASSEMBLY WITH "TYPE B" STRAINER AND TRAP PRIMER
BCO	BASE CLEAN OUT	ZURN	Z-1441					SIZE DETERMINED UPON WASTE PIPE
FCO	FLOOR CLEAN OUT	ZURN	Z-1400					SIZE DETERMINED UPON WASTE PIPE
HD-1	HUB DRAIN	CHARLOTTE PLASTICS	4" x 2"			3"		BODY ASSEMBLY WITH "TYPE B" STRAINER AND TRAP PRIMER)

System No. WL2038 (Formerly System No. 614) F Rating-1 Hr and 2 Hr (See Item 1) T Rating-1 Hr and 2 Hr (See Item 1) SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 series wall and partition designs in the UL Fire Resistance Directory and

shall include the following construction features:

A. Studs — wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. oc. steel studs to be min

2-1/2 in. wide and spaced max 24 in. oc. B. Wallboard, Gypsum \*- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series design in the UL Fire Resistance Directory. Max diameter of opening is 4-3/8 in. The hourly F and T ratings of the firestop system are equal to the hourly fire rating

of the wall assembly in which it is installed. 2. Through Penetrants — One nonmetallic pipe, conduit or tubing to be centered within the firestop system. The max. diam of the through penetrant and annular space within the firestop system is dependent upon the type of fill material (Item 3). Pipe, conduit or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes, conduits or

A. Polyvinyl Chloride (PVC) Pipe - Nom 2 in. diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) piping systems. B Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 2 in. diam (or smaller) SDR17 CPVC pipe

for use in closed (process or supply) piping systems. C. Rigid Nonmetallic Conduit+ - Nom 2 in. diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electric Code (NFPA No. 70).

3. Fill, Void or Cavity Material \*- Sealant- In 2 hr fire rated assemblies, min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. In 1 hr fire rated assemblies, min 5/8 in. thickness of fill material applied within the annulus, on both surfaces of wall. Additional fill material to be installed such that a min 5/8 in. thick crown is formed around the penetrating item and lapping a min 1 in. beyond the periphery of the opening.

The max diam of the through penetrant and annular space within the firestop system is

dependent upon the type of fill material as tabulated below: Max Diam Of Through Penetrant In.

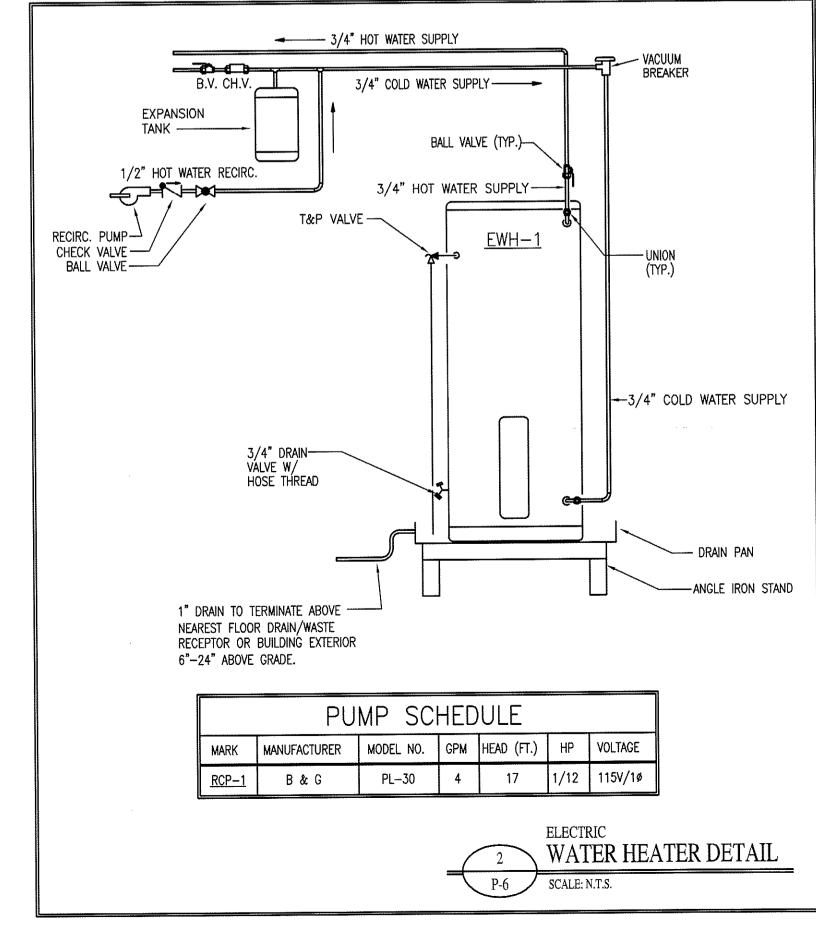
Nom Annular Space In. 1/2

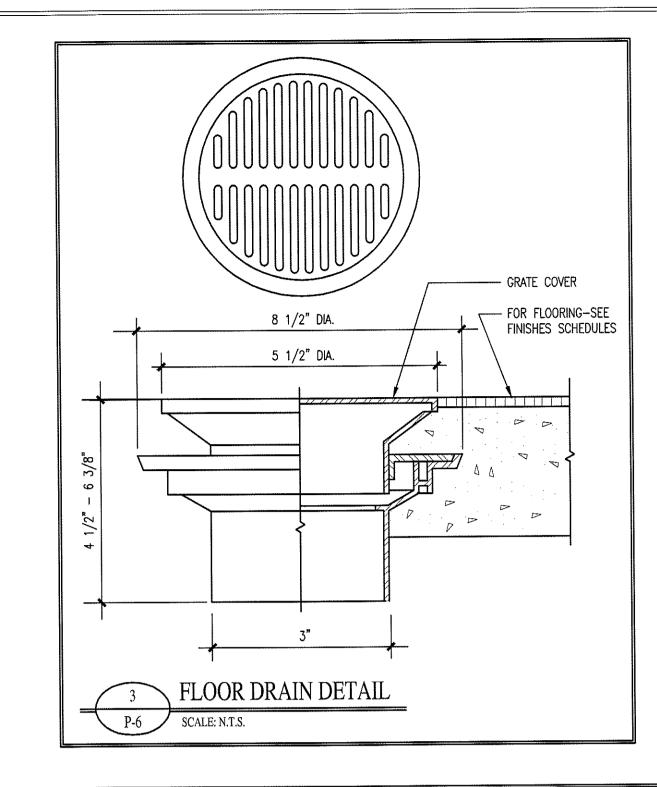
Fill Material Type FSP 1100 Putty FS 1900 Sealant

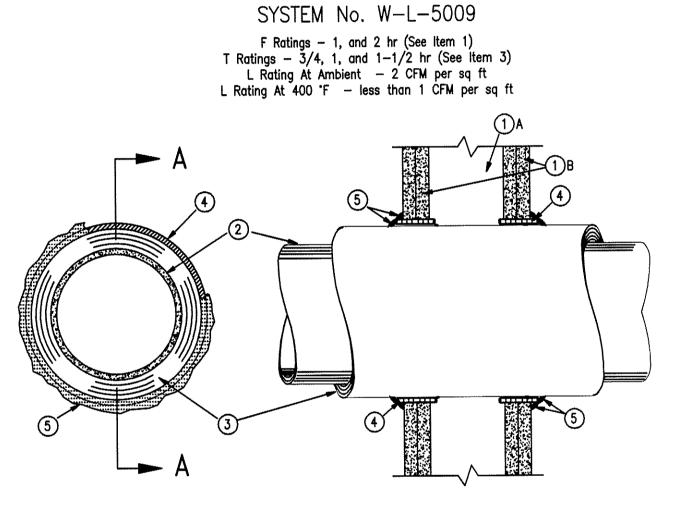
International Protective Coatings Corp. - FSP 1100 Putty or FS 1900 Sealant.

+Bearing the UL Listing Mark
\*Bearing the UL Classification Marking

FIRE PENETRATION DETAIL







## SECTION A-A

- Wall Assembly The fire—rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
- A. Studs Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. O.C. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
- B. Wallboard, Gypsum\* Two layers of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Diam of opening cut in gypsum wallboard layers on each side of the wall assembly (concentric with pipe, Item 2) to be 1/2 to 3/4 in. larger than outside diamater of pipe insulation (Item 3) such that, when installed, a 1/4 to 3/8 in. annular space will be present between the pipe insualtion and the gypsum wallboard around the entire circumference of the opening. Max. diam of opening is 4 in.
- 2. Copper Pipe Nom 2 in. diam (or smaller) Type L (or heavier) copper pipe. A max of one pipe is permitted in the firestop system. Pipe to be installed near center of stud cavity width and is to be rigidly supported on both sides of the wall assembly.
- 3. Pipe Insulation Plastic\* Nom 5/8 in. thick acrylonitrile butadiene/polyvinyl cloride (AB/PVC) flexible foam supplied in the form of tubes with skin. Pipe insulation to be sized to outside diam of copper pipe.
- See Plastics (QMFZ2) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component pipe insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.
- Fill, Void, or Cavity Materials Wrap Strip Nom. 1/4 in. thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. wide strips. Nom. 2 in. wide strip tightly wrapped around pipe insulation (foil side out) with seam butted. Wrap strip layers securely bound with steel wire or aluminum foil tape and slid into annular space approx 1-1/4 in. such that the approx 3/4 in. of the wrap strip width protrudes from the wall surface. Wrap strip installed symmetrically on both sides of wall.

## Minnesota Mining & Mfg. Co. — FS-195+

5. Fill, Void or Cavity Materials — Caulk — Min. 1/4 in. diam. continuous bead applied to leading edge of wrap strip layer (Item 4) prior to insertion of wrap strip layer into annular space. After insertion of wrap strip in annular space, a nom 1/4 in. diam continuous bead is to be applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layer approx 3/4 in. from the wall surface.

Minnesota Mining & Mfg. Co. - CP 25WB+.

#Bearing the UL Recognized Component Marking
\*Bearing the UL Classification Marking



REV # DATE BY CHECKED REVISED TO SUIT PLAN VIEW CHANGES AT THE REQUEST 1 3/3/09 TGW REVISED TO SUIT PLAN VIEW CHANGES AT THE REQUEST OF THE GENERAL CONTRACTOR (A. KNIGHT). REFER TO EMAIL FROM ARCHITECT (D. RIPPERTON) DATED 2-20-09.

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Consulting Engineers

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Phone: (336) 449-4558 Fax: (336) 449-5732

ILITY BU BUILDING

DRAWING NAME

PLUMBING DETAILS SEAL 25043 DRAWN TGW

CHECKED JNK DATE 1/8/09 SCALE AS NOTED JOB NO. 8123