GENERATOR - SEPARATELY DERIVED GROUNDING 6 No Scale

SWITCHBOARD 1BOPSB

PANEL 1BOPL PANEL MLRM1 OL ONLINE CERTIFICATIONS DIRECTORY

System No. W-L-1001 XHEZ.W-L-1001 Through-penetration Firestop Systems

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Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL.
- Certified products, equipment, system, devices, and materials. Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product. manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate
- methods of construction. Only products which bear UL's Mark are considered Certified.

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. W-L-1001

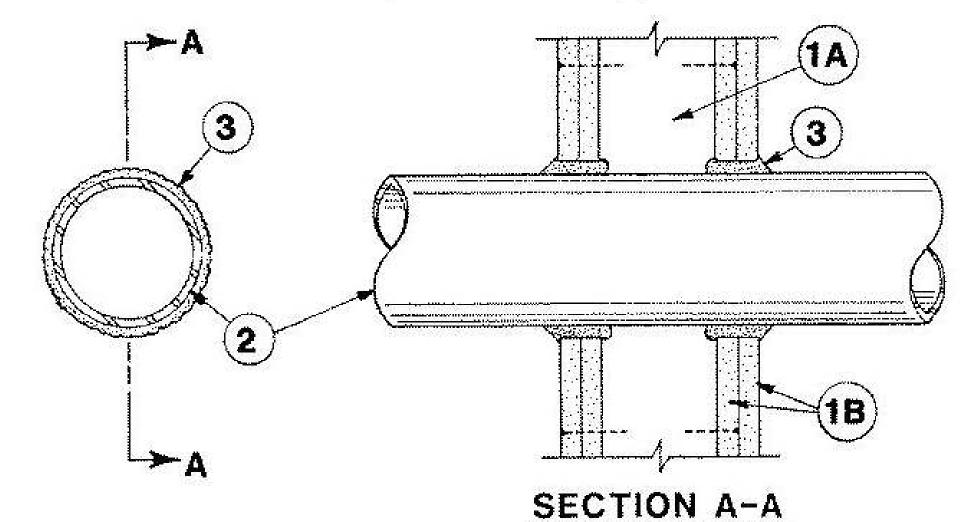
June 15, 2005

F Ratings -1, 2, 3 and 4 Hr (See Items 2 and 3)

T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)

L Rating At Ambient — less than 1 CFM/sq ft

L Rating At 400 F — less than 1 CFM/sq ft



1. Wall Assembly — The 1, 2, 3 or 4 hr 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 Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. **Gypsum Board*** — Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) 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 diam of opening is 26 in. (660 mm).

2. **Through-Penetrant** — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

> A. Steel Pipe — Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe. B. **Iron Pipe** — Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure

C. **Conduit** — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing

D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. **Through Penetrating Product*** — Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly. OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly. GASTITE, DIV OF TITEFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly. WARD MFG LLC

3. Fill, Void or Cavity Material* — Caulk or Sealant — Min 5/8., 1-1/4,1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h. **3M COMPANY** — CP 25WB+ or FB-3000 WT.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

<u>Last Updated</u> on 2005-06-15

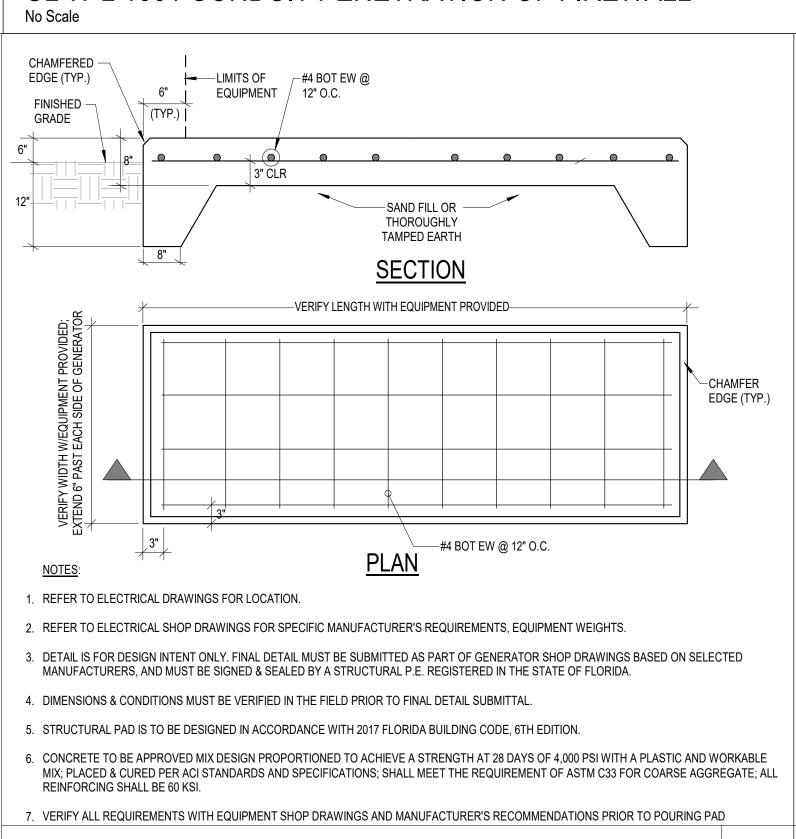
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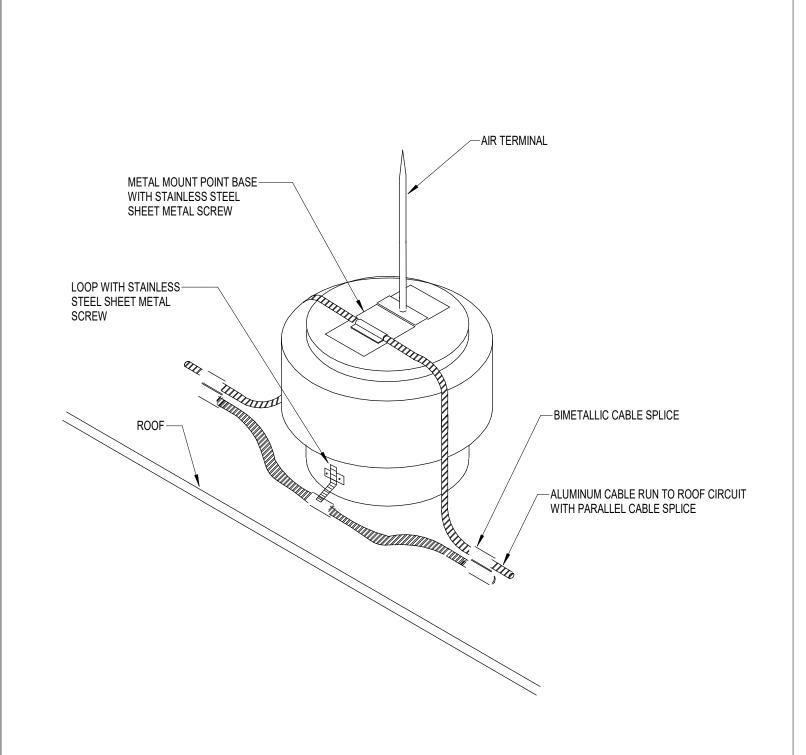
UL W-L 1001 CONDUIT PENETRATION OF FIREWALL



GENERATOR PAD DETAIL

FP&L CONCRETE TRANSFORMER (CONC./WOOD) -FINISHED GRADE 36" MIN. COVER —FP&L 5" SCH 40 FROM FINAL PVC CONDUIT MIN. GRADE TO TOP OF CONDUIT 36" RADIUS IF REQUIRED: BENDS AT RISER -12" MIN. SEPARATION FROM FP&L POLE TO BE ENCASED IN CONDUIT TO FOREIGN UTILITY WITH CONCRETE WITH 4-80LB. BAGS OF WELL-TAMPED EARTH SAKRETE. FORM CONCRETE ADJACENT TO POLE AND SURFACE FOREIGN UTILITY OR -OBSTRUCTION -12" MIN. SEPARATION OF WELL-TAMPED EARTH FPL CONDUIT FLEX PIPE TO PASS UNDER -OBSTRUCTION IF REQUIRED FPL CONDUIT CROSSING UNDER A FOREIGN UTILITY CALL SUNSHINE 1-800-432-4770 48 HOURS PRIOR TO DIGGING FOR UNDERGROUND NOTIFY FP&L REPRESENTATIVE FOR INSPECTION OF TRENCH DEPTH AND PVC HORIZONTAL INSTALLATION PRIOR TO BACKFILLING TRENCH. SEPARATION THE BACKFILL, WITHIN 4" OF THE CONDUIT, IS TO BE FREE OF MATERIAL THAT MAY DAMAGE CONDUIT (BOARDS, ROCKS LARGER THAN 1" IN DIAMETER, DEBRIS, ETC. FPL -4. IF COMPACTION OF TRENCH ROUTE IS REQUIRED FOR PAVING, ETC., BEGIN INSTALLATION OF FPL CONDUIT MACHINE COMPACTION 6" MINIMUM ABOVE THE CONDUIT. PARALLEL WITH OR IN A SHARED TRENCH WITH A FOREIGN UTILITY WHERE 36" OF COVER CANNOT BE MAINTAINED, 30" OF COVER WILL BE ALLOWED WITH 3" OF CONCRETE ENCASEMENT AROUND THE CONDUIT (N.E.S.C. RULE FOR PRIMARY VOLTAGES).

FPL CONDUIT INSTALLATION DETAIL



TYPICAL AIR TERMINAL ON EXHAUST EQUIPMENT

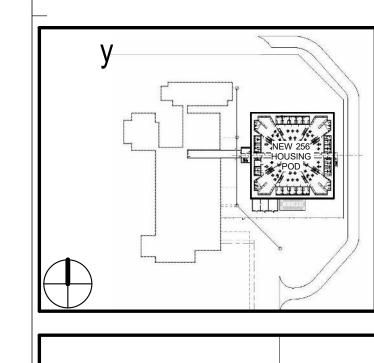
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Dewberry

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Wayne Edward Allred, P.E. State of Florida Professional Engineer License No. 45800 This item has been electronically signed and sealed by the individual named above, using a dated Digital Signature in the space below, per F.A.C. Rule 61G15-23.004. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



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SCALE 12" = 1'-0" ISSUED FOR PERMIT **REVISIONS** DRAWN BY O DORIA

APPROVED BY W ALLRED CHECKED BY L WOLFE DATE JULY 24, 2020 TITLE

ELECTRICAL DETAILS

PROJECT NO. 50101397

DESTROY AFTER USE