



May 21st, 2007

VIA OVERNIGHT DELIVERY

Harold D. Register Jr., P.E.
Florida Department of Environmental Protection
Hazardous Waste Regulation Section
2600 Blairstone Road MS 4560
Tallahassee, FL 32399-2400

RE: Completion of Construction of Storage Unit

Dear Mr. Register:

In accordance with the provisions of Permit Number 17680-009-HC, Part VIII (Construction Requirements), Perma-Fix of Florida hereby notifies the Department that it has completed construction of the storage area in the LSV Processing and Waste Storage Warehouse. The construction was performed in accordance with design plans and specifications in the permit application dated December 8th, 2004 and subsequent revisions.

Perma-Fix of Florida will also provide a certification from an independent licensed professional engineer including as-built drawings and a report describing the construction.

If you have any questions regarding the above, please feel free to call me at (352) 395-1356.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kurt Fogleman".

Kurt Fogleman
Environmental, Health and Safety Manager
Perma-Fix of Florida, Inc.

cc: Chris Boden, FDEP/Northeast District



**CERTIFICATION OF FIREWALL AND CONTAINMENT
CONSTRUCTION IN THE LSV PROCESSING
AND WASTE STORAGE WAREHOUSE**

**PERMA-FIX OF FLORIDA, INC.
1940 NW 67TH STREET
GAINESVILLE, FLORIDA 32653**

In accordance with permit requirements issued by the Florida Department of Environmental Protection (FDEP), Perma-Fix of Florida, Inc., constructed a four-hour rated firewall and containment barriers in the Treatment and Operations Building (TOB). The firewall was installed to separate hazardous waste storage in the LSV Processing and Waste Storage Warehouse area from the non-storage area (office) in the building.

The attached architectural drawing identifies the location and dimensions of the firewall and the containment curbing installed in response to permit requirements. The completed wall was inspected at Perma-Fix by Lewis Engineering and found to be in compliance with the information shown on the as-built drawing. Information annotated in the drawing identifies the gypsum board construction as a four-hour rated wall on the basis of Gypsum Association design WP 2995 and fire testing of the design performed and listed by Underwriters Laboratories.

The wall construction is shown in cross-section in the architectural drawing and in the attached UL Fire Resistance Ratings document published as UL design U490 for a four-hour nonbearing wall. All roof framing structure and piping penetrations through the firewall are fire stopped. Two standard 3070 entry doors in the firewall are Steelcraft 3-hour rated fire doors with affixed with UL Issue No.A-1018. Both a lower level and upper level 8' x 8' metal roll-up door are identified by permanent tags as 3-hour rated doors with automatic closing hardware triggered by thermal links.

The containment dimensions were verified and the containment volume calculated based upon those dimensions. The containment curb height is based upon the width of standard 2 x 6 lumber (5½ inches) which was utilized in forming the concrete curb, except at the entrance/exit ramps. The calculated containment volume is based upon the minimum height location in the curb which is the cross-over ramp on the north side into the shop area. That height is 2.75 inches.

The hazardous waste storage area was determined to be 4,207 square feet within the perimeter of the containment curb. Within that designated storage space, the maximum allowable volume of stored liquids per the permit application is 54,340 gallons (equivalent to

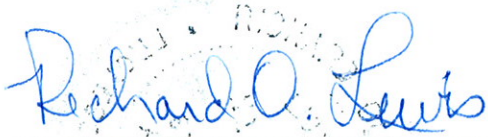
988, 55 gallon drums). The containment volume per the permit must be greater than ten percent of that amount, or a minimum of 5,434 gallons.

Based upon the minimum curb height of 2.75 inches and the surface area of the storage area, the containment volume calculated is 7,211 gallons. From that volume, allowance for pallet displacement (12.48 gallons x 111 pallets) reduces the containment volume to a net of 5,826 gallons which exceeds the minimum required volume by 392 gallons.

Based upon the site inspection, Lewis Engineering has verified that the hazardous waste storage area 4-hour rated firewall constructed to separate the LSV Processing and Waste Storage area from the TOB non-storage (office) space has been constructed as shown on the as-built architectural drawing. Calculation of the containment volume in the storage area, based upon the containment curb dimensions shown in the drawing, confirms that the containment volume exceeds the required minimum of 10 percent of the maximum allowable volume of stored liquids.

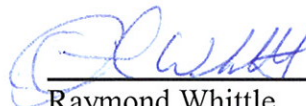
In accordance with CFR 270.11(d)(1):

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Richard O. Lewis, P.E.
Lewis Engineering and Consulting, Inc.

MAY 21, 2007



Raymond Whittle
Perma-Fix of Florida, Inc.

Attachments: Architectural drawing and UL U490



BXUV.U490 Fire Resistance Ratings - ANSI/UL 263

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Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

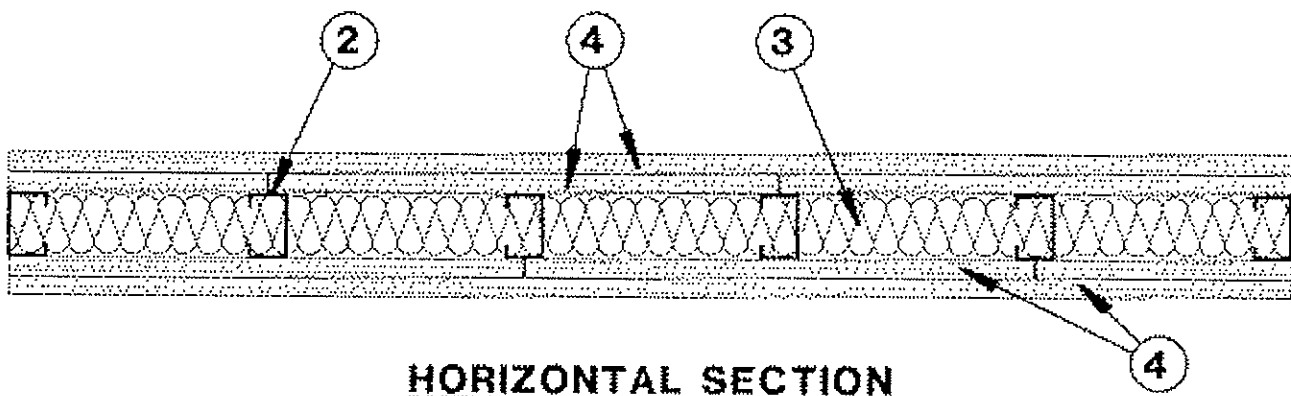
Design No. U490

October 03, 2005

Bearing Wall Rating — 3 or 4 HR. (See Items 1, 2, 3, 3A and 4)

Nonbearing Wall Rating — 4 HR. (See Items 1, 2, 3 and 4)

Load Restricted for Canadian Applications — See Guide BXUV7



HORIZONTAL SECTION

1. **Floor and Ceiling Runner** — (Not Shown) — Channel shaped, attached to floor and ceiling with steel fasteners spaced max 24 in. OC. For nonbearing walls, fabricated from min No. 25 MSG galv steel, 1-1/2 in. deep and min 2-1/2 in. wide. For bearing walls, fabricated from min 0.0329 in. thick (20 MSG) galv steel, 1-1/4 in. deep and 3-1/2 in. wide.

2. **Steel Studs** — Channel shaped, spaced a max 24 in. OC. For nonbearing walls, fabricated from min 25 MSG galv steel, min 2-1/2 in. wide by 1-1/4 in. deep with 1/4 in. folded back return flange legs. Studs to be cut 3/4 in. less the assembly height. Steel studs friction-fitted into floor and ceiling runners (Item 1). For bearing walls, min 0.0329 in. thick (20 MSG) galv steel studs, min 3-1/2 in. wide by 1-5/8 in. deep with 1/2 in. folded back return flange legs, cold formed, designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. Studs attached to floor and ceiling runners with 1/2 in. long Type S-12 pan-head, self-drilling, self-tapping steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications. Where required for lateral support of studs, support shall be provided by means of steel straps, channels or other similar means as specified in the design of a particular steel stud wall system.

3. **Batts and blankets*** — Nom 2 in. thick (Nonbearing Wall) or nom 3 in. thick (3 Hr. Bearing Wall) mineral wool batts, friction fit between the studs and floor and ceiling runners. For 4 Hr. bearing wall rating see Item 3 A.

THERMAFIBER INC — Type SAFB.

3A. **Batts and Blankets** — For use when Bearing Wall Rating is 4 Hr. — Mineral wool batts nom 3 in. thick, min 4 pcf, friction

fit between the studs and floor and ceiling runners.

4. Gypsum Board* — 3/4 in. thick, 4 ft wide. For nonbearing walls, two layers of wallboard applied to each side of the steel studs. Inner layer applied vertically with joints centered over studs and staggered on opposite sides of studs. Outer layer applied horizontally with vertical butt joints staggered from inner layer joints or vertically with joints centered over studs and staggered on opposite side of studs. Inner layer secured with 1-1/4 in. long Type S steel screws spaced 24 in. OC along the perimeter and in the field. Outer layer, when applied horizontally, secured with 2-1/4 in. long Type S steel screws spaced 12 in. OC along the perimeter and in the field. Along the horizontal joints of the outer layer, 1-1/2 in. long Type G steel screws to be applied midway between the studs (24 in. OC) and 1 in. from the longitudinal joint. Outer layer, when applied vertically, joints staggered, secured with 2-1/4 in. long Type S steel screws spaced 12 in. OC along the perimeter and in the field.

For bearing walls, the wallboard is secured in the same manner except Type S-12 steel screws are used instead of Type S.

CANADIAN GYPSUM COMPANY — Type IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Type IP-X3 or ULTRACODE

USG MEXICO S A DE C V — Type IP-X3 or ULTRACODE

5. Joint Tape and Compound — (Not Shown) — Outer layer joints covered with joint compound and paper or mesh tape. Screw heads covered with joint compound.

*Bearing the UL Classification Mark

Last Updated on 2005-10-03

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[Notice of Disclaimer](#)

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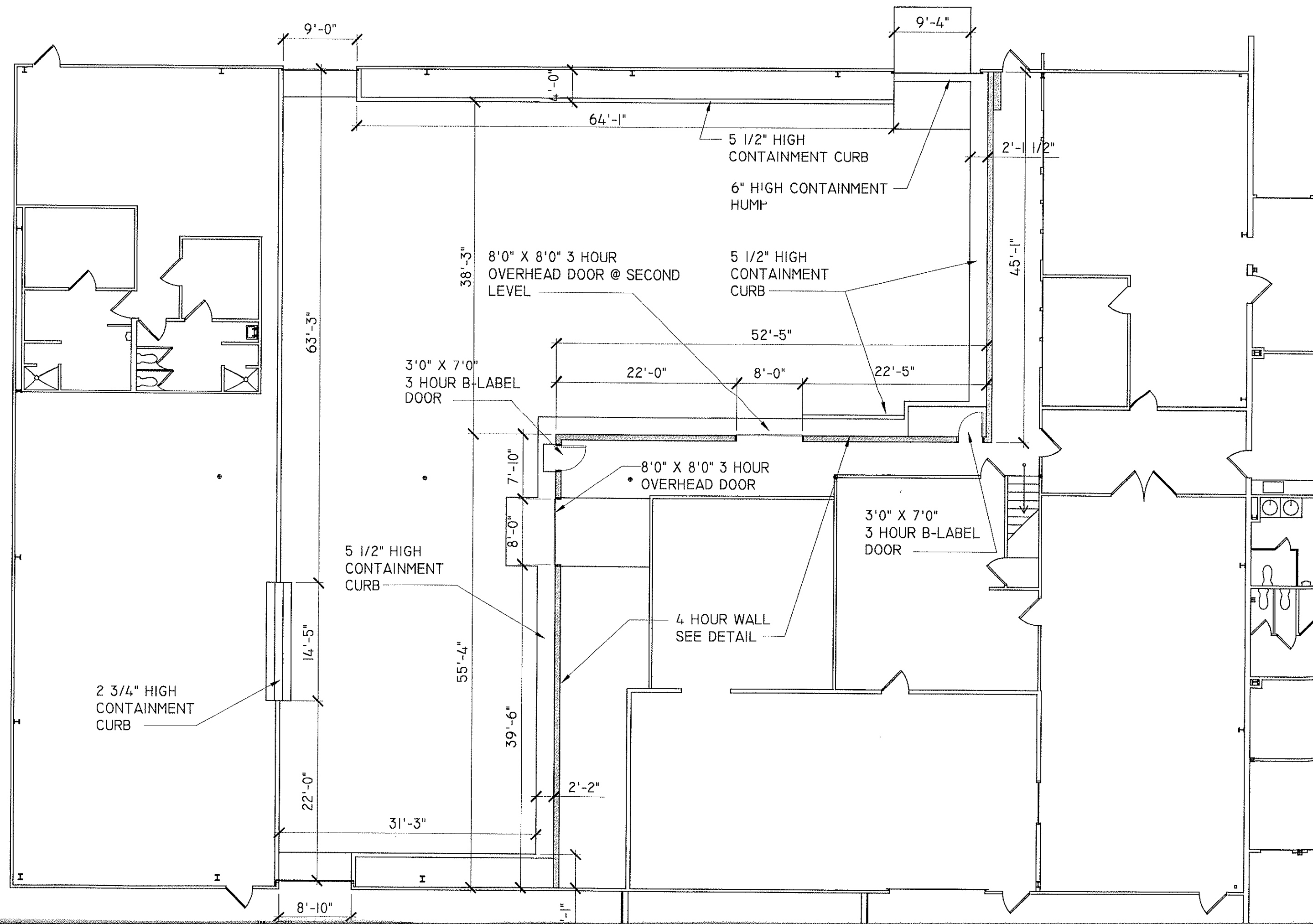
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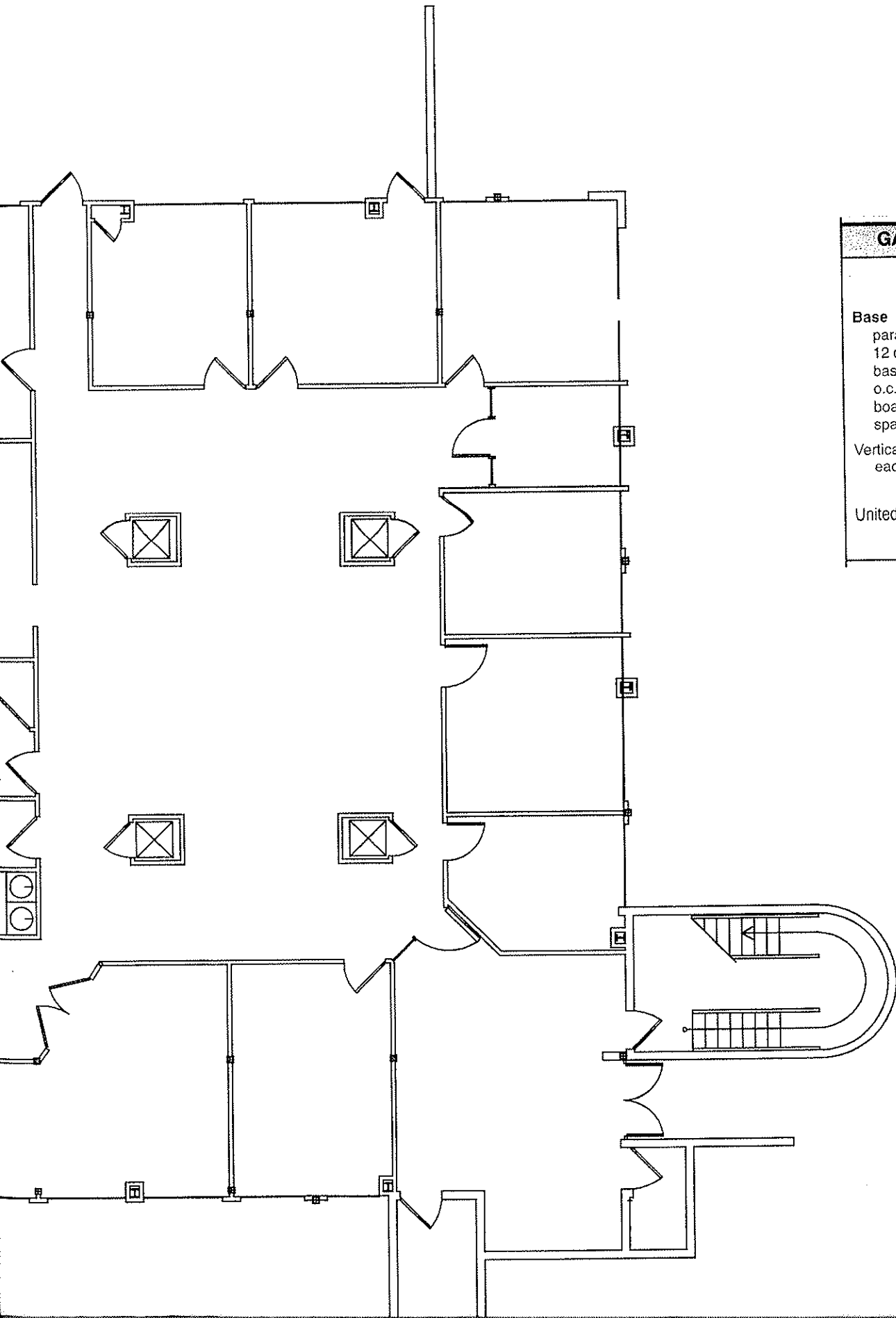
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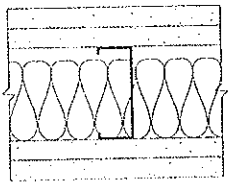
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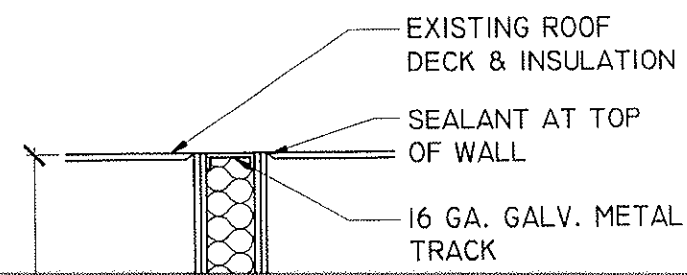
An independent organization working for a safer world with integrity, precision and knowledge.







GA FILE NO. WP 2995	PROPRIETARY	4 HOUR FIRE
GYPSUM WALLBOARD, STEEL STUDS, MINERAL FIBER INSULATION		
<p>Base layer 3/4" proprietary type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to 3 1/2" 20 gage steel studs 16" or 24" o.c. with 1 1/4" Type S-12 drywall screws 24" o.c. Face layer 3/4" proprietary type X gypsum wallboard or veneer base applied parallel or at right angles to studs with 2 1/4" Type S-12 drywall screws 12" o.c. and 1 1/2" Type G drywall screws located midway between studs and 1" from gypsum board edges at horizontal joints. 3" mineral fiber insulation, 3.0 pcf, friction fit in stud space.</p> <p>Vertical joints staggered one stud cavity each layer and side, horizontal joints staggered 12" each layer and side. (LOAD-BEARING)</p>		
<div><div><p>PROPRIETARY GYPSUM BOARD United States Gypsum Company</p></div><div><p>3/4" SHEETROCK® Brand Gypsum Panels, ULTRACODE® Core</p></div></div>		
		
		<p>Thickness: 6 1/2" Limiting Height: Refer to Section IV Approx. Weight: 14 psf Fire Test: UL R1319, 98NK36210, 2-24-99, UL Design U490</p>



j u r i s t u z i n s
a r c h i t e c t

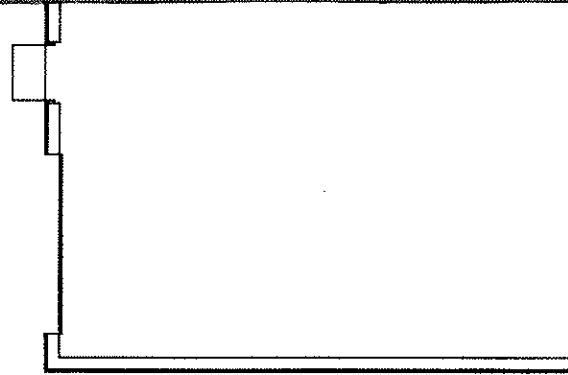
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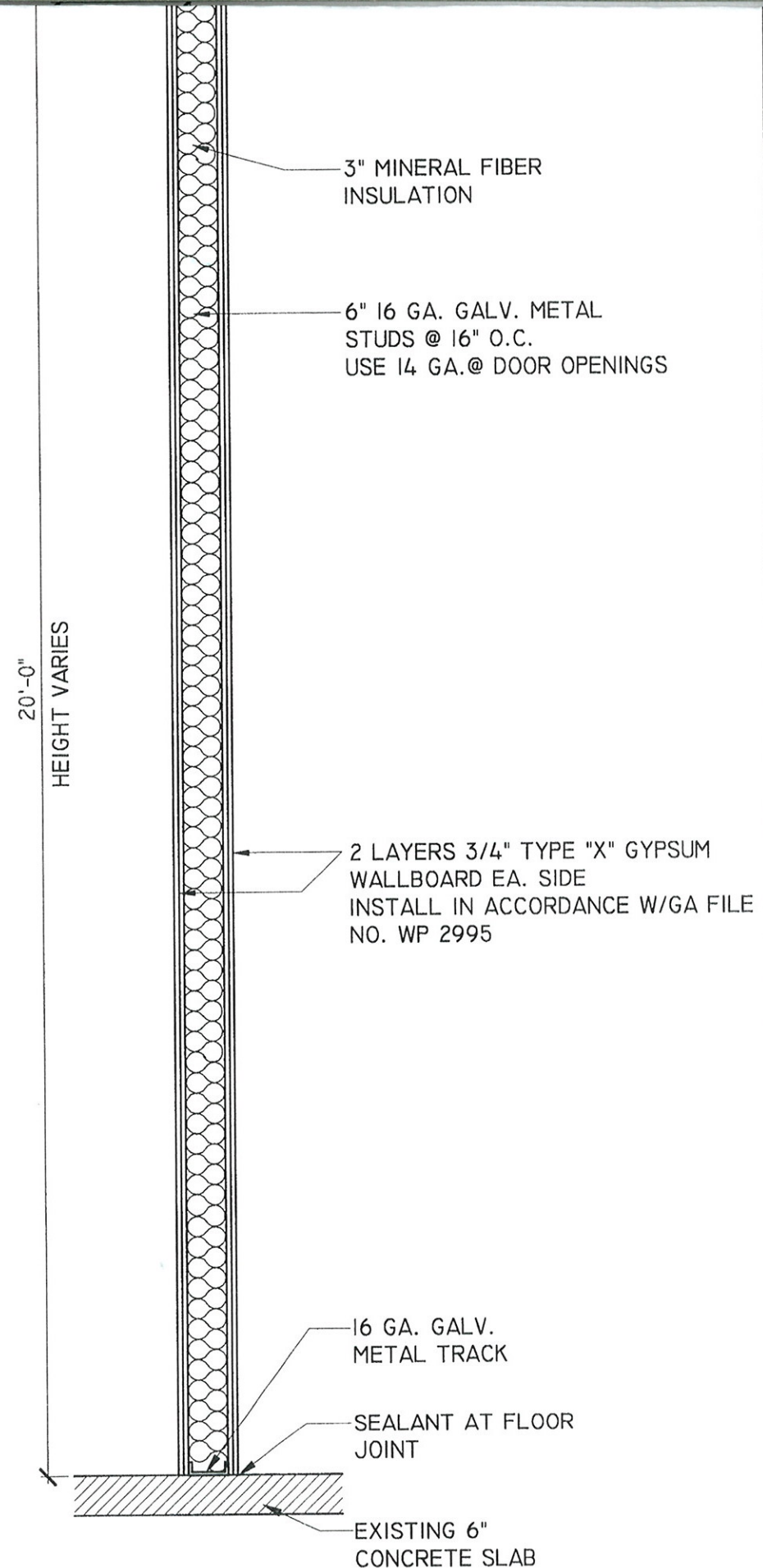
BLDGA
INC.

NOTE: ALL CONTAINMENT CURBS ARE 5 1/2" HIGH EXCEPT
AS NOTED AT ENTRANCE/EXIT HUMPS



FLOOR PLAN

3/32" = 1' - 0"



WALL SECTION

1/2" = 1' - 0" 4 HOUR RATED WALL

AS BUILT

file n
0707

date
19 MAR
revis
30 MAR
17 MAY

shee
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fla. reg.