

FLOODPROOFING CERTIFICATE FOR NON-RESIDENTIAL STRUCTURES

OMB No. 1660-0008
 Expiration Date: July 31, 2015

The floodproofing of non-residential buildings may be permitted as an alternative to elevating to or above the Base Flood Elevation; however, a floodproofing design certification is required. This form is to be used for that certification. Floodproofing of a residential building does not alter a community's floodplain management elevation requirements or affect the insurance rating unless the community has been issued an exception by FEMA to allow floodproofed residential basements. The permitting of a floodproofed residential basement requires a separate certification specifying that the design complies with the local floodplain management ordinance.

BUILDING OWNER'S NAME <u>Sunset Ventures, LLC</u> STREET ADDRESS (Including Apt., Unit, Suite, and/or Bldg. Number) OR P.O. ROUTE AND BOX NUMBER <u>528 Front Street</u> OTHER DESCRIPTION (Lot and Block Numbers, etc.)	FOR INSURANCE COMPANY USE <hr/> POLICY NUMBER <hr/> COMPANY NAIC NUMBER	
CITY <u>Key West</u>	STATE <u>Florida</u>	ZIP CODE <u>33040</u>

SECTION I – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

Provide the following from the proper FIRM:

COMMUNITY NUMBER	PANEL NUMBER	SUFFIX	DATE OF FIRM INDEX	FIRM ZONE	BASE FLOOD ELEVATION (In AO Zones, Use Depth)
120168	1516	K	February 18, 2005	AE	EL 7

Indicate elevation datum used for Base Flood Elevation shown above: NGVD 1929 NAVD 1988 Other/Source: _____

SECTION II – FLOODPROOFING INFORMATION (By a Registered Professional Engineer or Architect)

Elevations are based on: Construction Drawings Building Under Construction Finished Construction

Floodproofing Design Elevation Information:

Building is floodproofed to an elevation of 7 5 feet (In Puerto Rico only: _____ meters). NGVD 1929 NAVD 1988 Other/Source: _____
 (Elevation datum used must be the same as that used for the Base Flood Elevation.)

Height of floodproofing on the building above the lowest adjacent grade is FOUR feet (In Puerto Rico only: _____ meters).

For Unnumbered A Zones Only:

Highest adjacent (finished) grade next to the building (HAG) _____ feet (In Puerto Rico only: _____ meters)

NGVD 1929 NAVD 1988 Other/Source: _____

(NOTE: For insurance rating purposes, the building's floodproofed design elevation must be at least 1 foot above the Base Flood Elevation to receive rating credit. If the building is floodproofed only to the Base Flood Elevation, then the building's insurance rating will result in a higher premium.)

SECTION III – CERTIFICATION (By a Registered Professional Engineer or Architect)

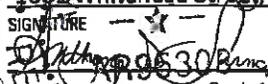
Non-Residential Floodproofed Construction Certification:

I certify that, based upon development and/or review of structural design, specifications, and plans for construction, the design and methods of construction are in accordance with accepted standards of practice for meeting the following provisions:

The structure, together with attendant utilities and sanitary facilities, is watertight to the floodproofed design elevation indicated above, with walls that are substantially impermeable to the passage of water.

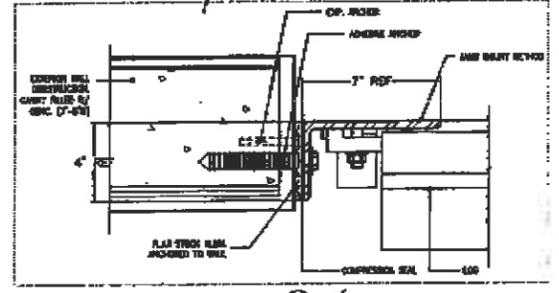
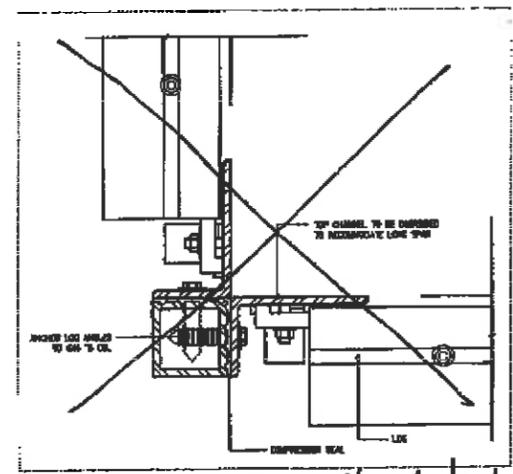
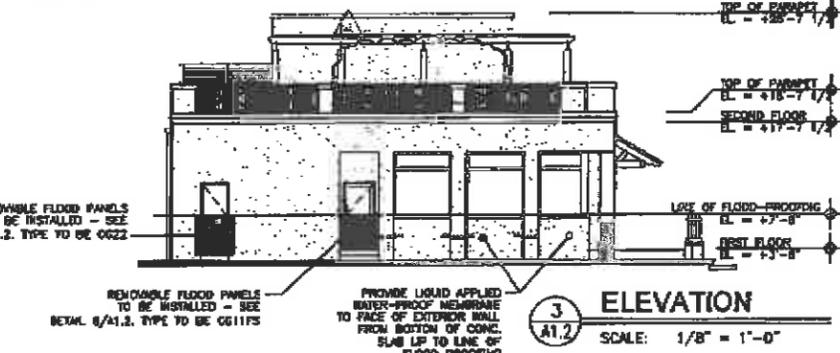
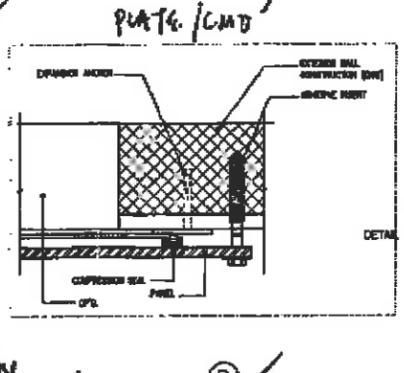
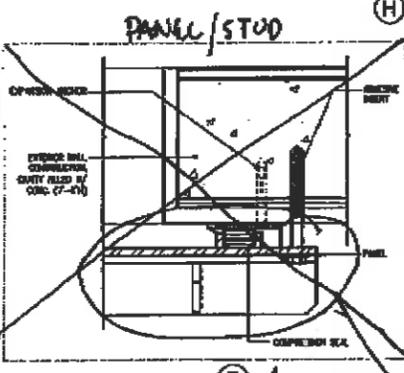
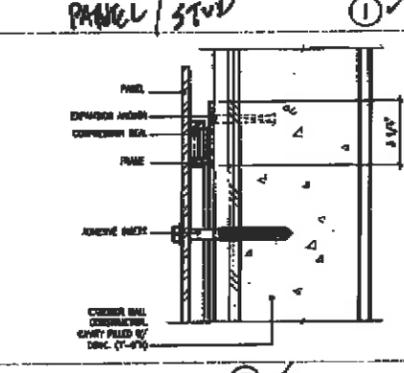
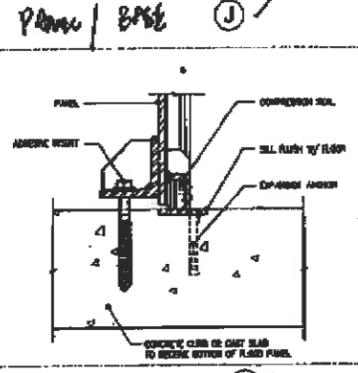
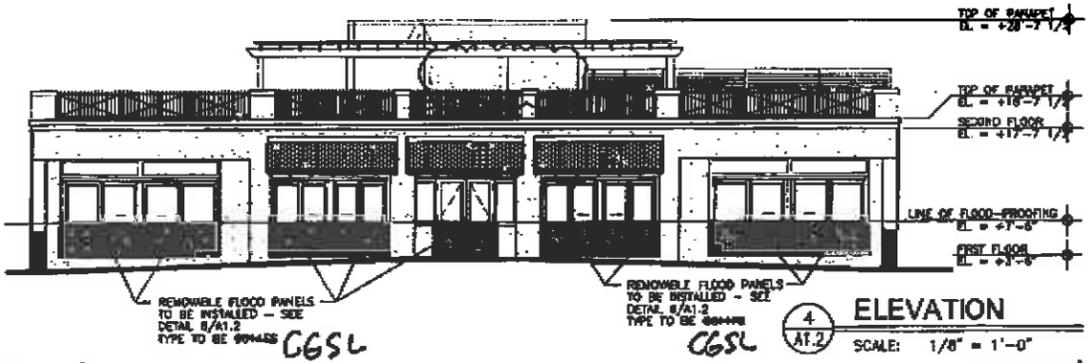
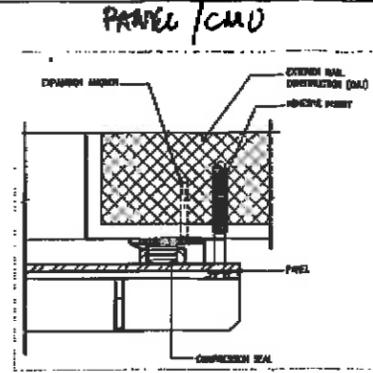
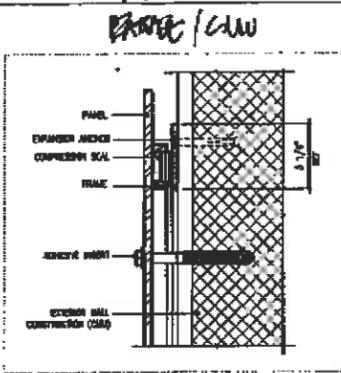
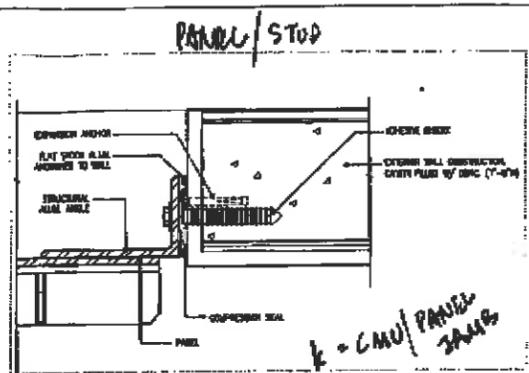
All structural components are capable of resisting hydrostatic and hydrodynamic flood forces, including the effects of buoyancy, and anticipated debris impact forces.

I certify that the information on this certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

CERTIFIER'S NAME <u>Anthony D. Sarno</u>	LICENSE NUMBER (or Affix Seal) <u>State of Florida - AR95308</u>		
TITLE <u>Architect</u>	COMPANY NAME <u>mbi k2m Architecture, Inc.</u>		
ADDRESS <u>1001 Whitehead Street, Suite 101</u>	CITY <u>Key West</u>	STATE <u>Florida</u>	ZIP CODE <u>33040</u>
SIGNATURE 	DATE <u>October 30, 2013</u>	PHONE <u>305.292.7722</u>	

Copies should be made of this Certificate for: 1) community official, 2) insurance agent/company, and 3) building owner.

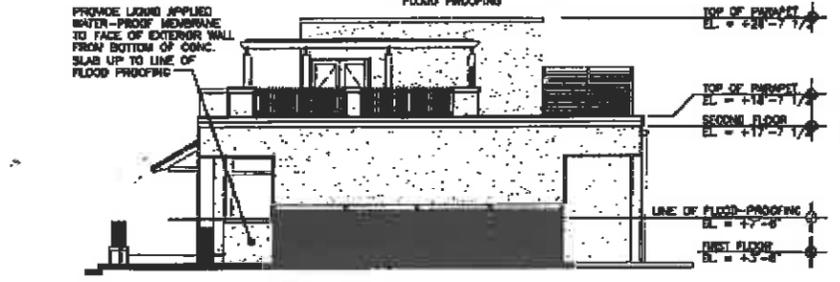
S:\Cleveland\0606\2004\K24-04013 Rum Barrel Restaurant\Current-090803\jardval.2.dwg, 6/17/2006 11:40:24 AM, 10059



Change to a log

NOTE: 07160 - Liquid Polyurethane Sealant - Flexible Kowal One-Part elastomeric liquid sealant. Single-component, cold applied, liquid polyurethane sealant/sealant for use on vertical surfaces, as manufactured and supplied by Sika Corporation 1016 S.E. 59th St. Fort Lauderdale, FL 33316 (800) 558-4338 or approved equal. Contractor to provide a complete installation following all of the manufacturer's recommendations, for vertical installations. Dry film thickness 100 mil, 40 mil first coat and 60 mil second coat with 100 mils at any existing failure cracks. Provide installed flexible poly-urea reinforcement between coats at all corners, edges, upturns, and cracks. Materials shall accept stucco finish of exterior walls.

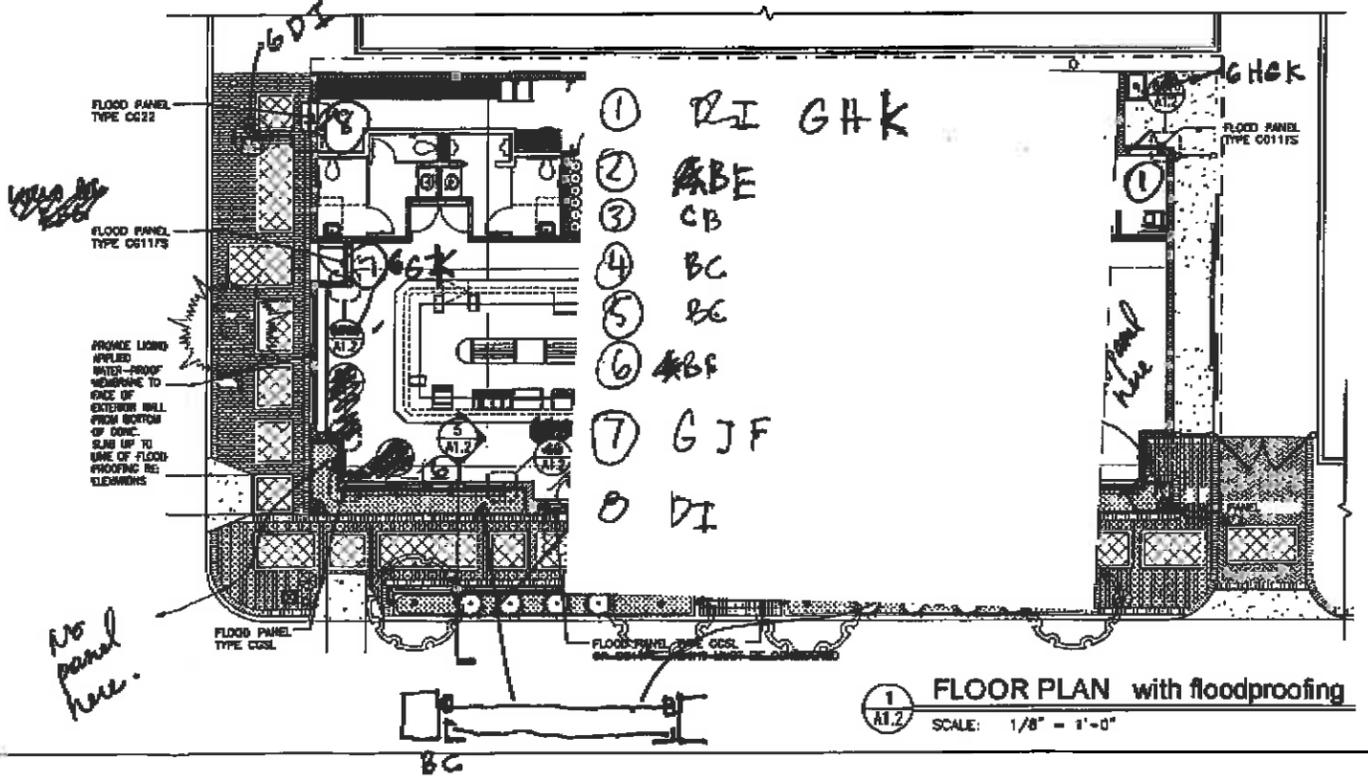
5 SPECIFICATION SCALE: 1/2\"/>



REMOVED channel to base (like 6)

Part 1 - General
1.01 Section
A. Work includes Flexible Flood Barrier(s) factory assembled with frame(s) and hardware in accordance with the contract documents.
1.02 Materials
A. Flexible Flood Barrier(s) shall be as specified.
B. All materials shall be approved by the Architect.
1.03 Installation
A. Manufacturer shall submit installation and maintenance instructions for flood barrier(s) and hardware, including details for flood barrier(s) including structural plans and drawings, cutouts, connections and joints, etc.
B. Installation shall be in accordance with the manufacturer's instructions, in order to provide a complete installation following all of the manufacturer's recommendations, for vertical installations.
1.04 Qualifications
A. Contractor shall provide the manufacturer of the flood barrier(s) shall provide evidence of training in the design and installation of both the flood barrier and flood barrier out of the type specified.
Part 2 - Products
2.01 Flood Barrier shall be made of 6911FS, CGSL, and CG22 as recommended by Primary Contractor.
2.02 Installation
A. Flood Barrier - 75 aluminum plate (flat, anodized clear optional).
B. Expansion joints shall be installed at intervals not exceeding 10 feet.
C. Expansion joints shall be installed at intervals not exceeding 10 feet.
D. Expansion joints shall be installed at intervals not exceeding 10 feet.
E. Expansion joints shall be installed at intervals not exceeding 10 feet.
2.03 Detail
A. Flood barrier(s) shall be designed with a minimum 24\"/>

6 FLOOD PANEL DETAILS SCALE: 3\"/>



No panel here.

ARCHITECT
Michael E. Hagen Architect
104 Westwood Dr.
Key West, FL 33040
Tel: 305-282-7722
Fax: 305-282-7883
E-mail: mhagen@hagenarchitect.com
Miami Registration No. 0008

mbi | k2m
ARCHITECTURE

CIVIL ENGINEER
James J. Jones, Inc.
Professional Engineer
& Surveyor, No. 126
126 NE 1st St., Suite 200
Key West, FL 33041

STRUCTURAL ENGINEER
NIELSEN
Structural Engineers
Professional Engineer
No. 126 NE 1st St., Suite 200
Key West, FL 33041

MECHANICAL/ELECTRICAL ENGINEER
Camargo Engineering Company
6405 Broadway Road
Cleveland, Ohio 44134

ARTIST DESIGNER
CROSSMAN
CREATIVE
410 West 23rd Street
Suite 55
New York, NY 10011

KITCHEN CONSULTANT
Professional
Restaurant
Consultants
Contractors
& Engineers
2700 S. Tamiami Trail Suite 88
Sight 83 Sarasota, FL 34230

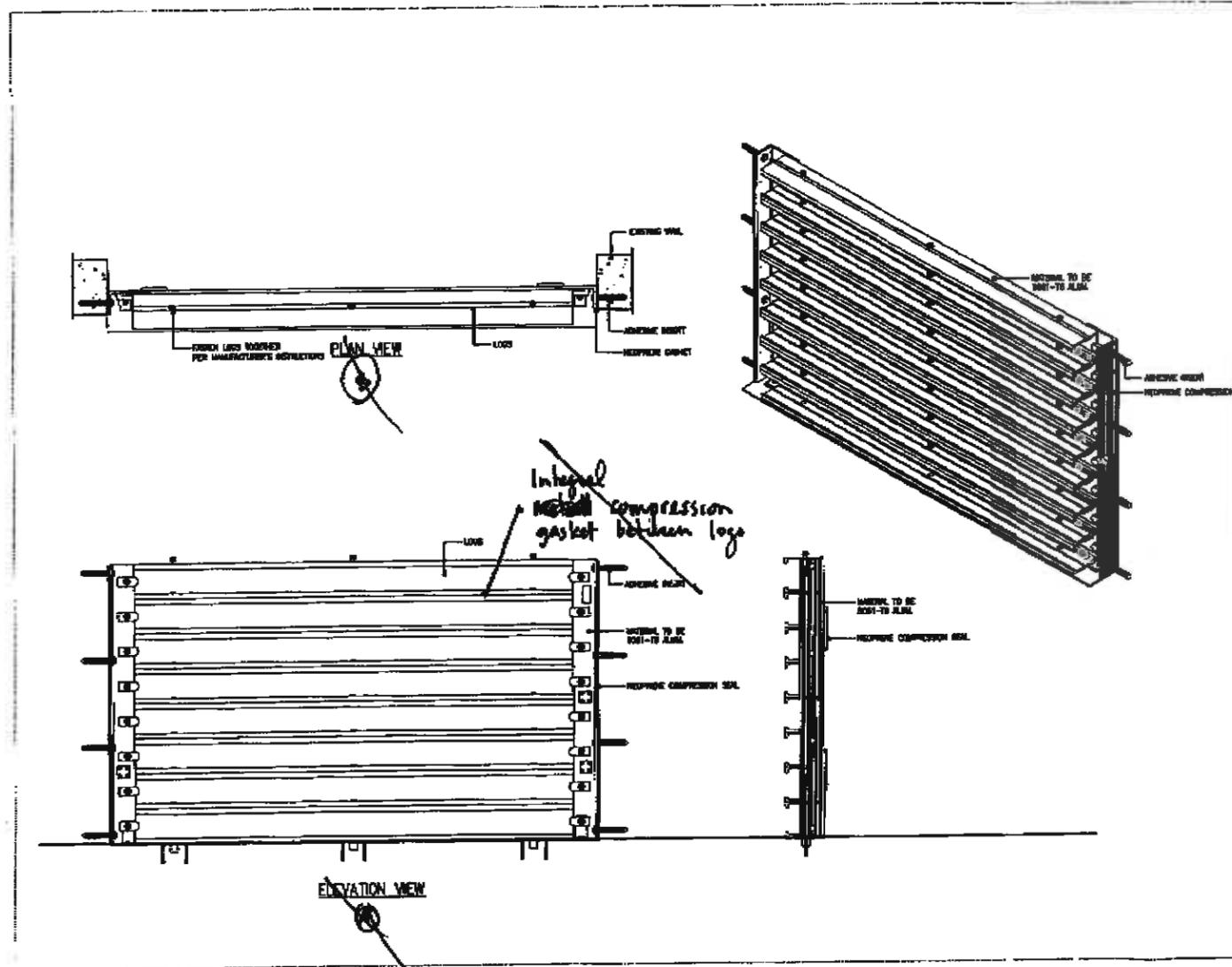
RUM BARREL
RESTAURANT
529 FRONT STREET, KEY WEST, FLORIDA 33040

Drawn By: acm
Checked By: acm
Project No. 10084012
Scale: As NOTED

REVISIONS:
1. Revised Plans
2. Document Issues - 8 Aug 06
3. Corrections - 15 Aug 06
4. Corrections - 24 Aug 06
5. Corrections - 15 Oct 06
6. Plan Corrections and Specifications - 17 Oct 06
7. Plan Corrections 18 Oct 06
8. Annotations 2006
9. STAR ADDITION
10. PLAN REVISIONS
11. FLOODING 1, 2006
12. FLOODING CHANGES
RESUBMITTED DESIGN

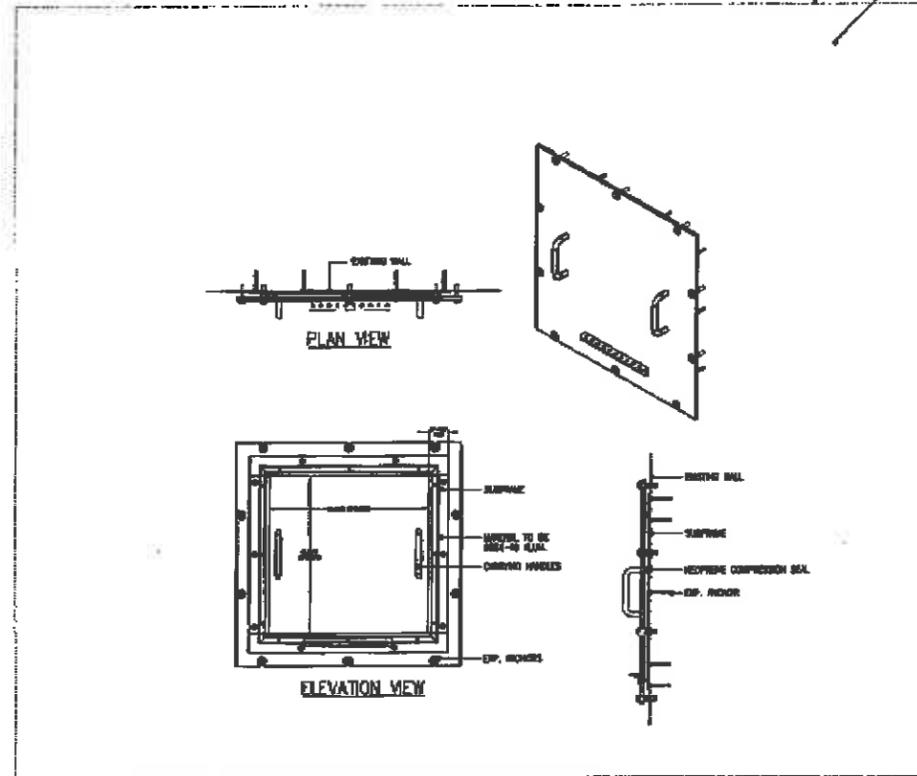
Rev:
FLOOD
PROOFING
Sheet Number:
A1.2
Date August 3, 2004

S:\Cleveland\0001\0204\04013 Rum Barrel Restaurant\Current\090805\arch\A1.2a.dwg, 6/1/2006 11:41:00 AM, 0403a

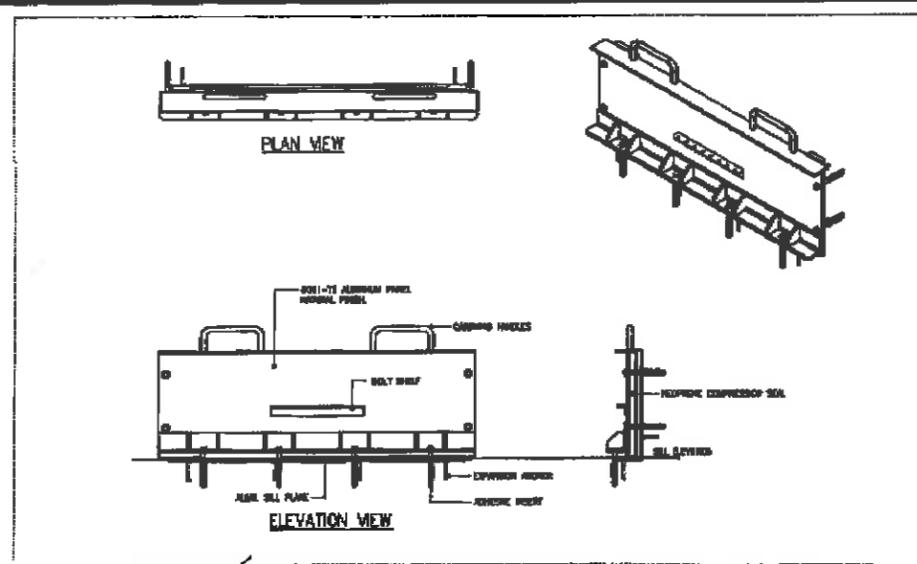


Note: Pounds per linear foot = $\frac{\text{Log weight per log}}{\text{foot}}$

3 FLOOD PANEL TYPE CGSL
A1.2A SCALE: 1" = 1'-0"



2 FLOOD PANEL TYPE CG22
A1.2A SCALE: 1" = 1'-0"



1 FLOOD PANEL TYPE CG11FS
A1.2A SCALE: 1" = 1'-0"

ARCHITECT
Michael E. Jagan Architects
 804 Woodland St.
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 Tel: 302-297-7711
 Fax: 302-297-3182
 E-mail: m.jagan@meja.com
 Florida Registration No. 1258

mbi | k2m
 ARCHITECTURE

CIVIL ENGINEER
P E S S, Inc.
 7700 E. 12th Street
 Suite 100
 Jacksonville, FL 32218
 Tel: 904-751-1111
 Fax: 904-751-1112

STRUCTURAL ENGINEER
NIELSEN
 Structural Engineers
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 Jacksonville, FL 32218
 Tel: 904-751-1111
 Fax: 904-751-1112

MECHANICAL/PLUMBING/ELECTRICAL ENGINEER
Campbell Engineering Company
 5405 Broadview Road
 Cleveland, Ohio 44134

RETAIL DESIGNER
CROSSMAN CREATIVE
 410 West 23rd Street
 Suite 50
 New York, NY 10011

KITCHEN CONSULTANT
DESIGN
 2700 N. Tamiami Trail Suite 50
 Ft. Lee, FL 32909
 Tel: 888-888-8888
 Fax: 888-888-8888

RUM BARREL RESTAURANT
 520 FRONT STREET, KEY WEST, FLORIDA 33040

Drawn By: JCS
 Checked By: JCS
 Project No: 090805-04013
 Scale: AS NOTED

Revisions:
 A Flood Panel
 B Approved - 8/1/06
 C Clarification - 8/1/06
 D Clarification - 24 Jan 07
 E Clarification - 16 Feb 2008
 F The Designers and
 G The Client have agreed
 H The Client has agreed
 I THE DESIGNERS AND
 J THE CLIENT HAVE
 K THE CLIENT HAVE
 L THE CLIENT HAVE
 M THE CLIENT HAVE
 N THE CLIENT HAVE
 O THE CLIENT HAVE
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 Q THE CLIENT HAVE
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 U THE CLIENT HAVE
 V THE CLIENT HAVE
 W THE CLIENT HAVE
 X THE CLIENT HAVE
 Y THE CLIENT HAVE
 Z THE CLIENT HAVE

Title:
FLOOD PROOFING

Sheet Number:
A1.2A

Date: August 3, 2006

mbi | k2m

ARCHITECTURE

March 3, 2005

DL Porter
6574 Palmer Park Circle
Sarasota, FL 34238
Attn: Ed Leopold, Estimator – sent via fax (941) 929-9500

Re: Rum Barrel Restaurant

Dear Mr. Leopold,

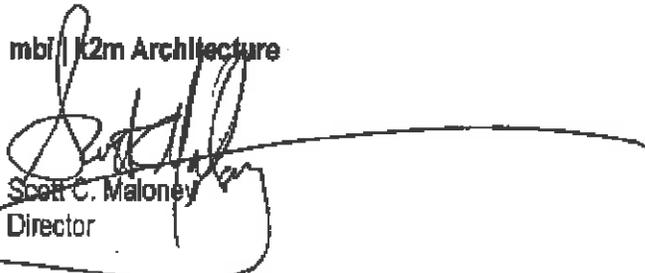
Per our recent conversation regarding the aforementioned project we wanted to inform you of the schedule to complete revised permit documents for this project. Our office anticipates final permit documents for signing and sealing on Thursday, March 10, 2005 in our Key West office. At that time you may elect to pick up the drawings and deliver them personally to the City for approval.

We will also upload unsealed drawings to your printer's website the day before for your use and replication.

Should you have any questions please do not hesitate to contact me directly.

Sincerely,

mbi | k2m Architecture



Scott C. Maloney
Director

Cc: file
Michael Ingram, MB Ingram Architect – sent via fax



Nielsen Structural Engineers

5416 Glenridge Drive Suite 102 Atlanta, Georgia 30342 • (404) 459-6600 • Fax (404) 459-6595

Job Title

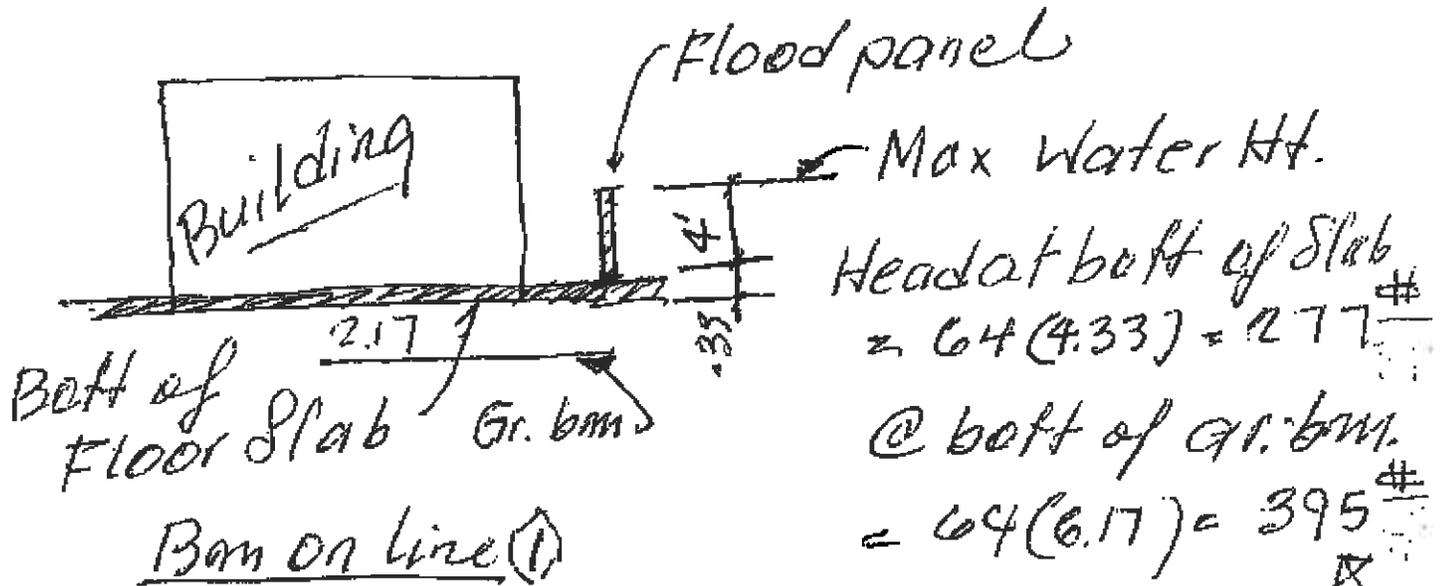
Rum Barrel Restaurant
Buoyancy Calcs.

Sheet No. 1

Date _____

By JN

Job No. _____



Buoyancy acting @ bott. of Grade Pm)

DL b.m. = (150 - 64) 1.33 (2.17) = 240 #/Ft b

Buoyancy = 395 (1.33) = 525 # ↑

DL wall = 476 # ↓

Buoyancy on Slab = 277(11) = 3047 # ↓

2850 #

End Span

+M = $\frac{1}{11} (2.85) 9.67^2 = 24.2 \text{ k}'$ Mu = 34 k'

-M = $\frac{1}{10} (2.85) 9.67^2 = 26.6 \text{ k}'$ " = 37.3

b = 16" As = 3.35"² - As = 3.38"² / 2 #5 top & bottom
d = 22" Ok



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Job Title

Rum Barrel Restaurant
Buoyancy Calcs

Sheet No. 12

Date _____

By HN

Job No. _____

Beam on line (1) Cont.

Int. Span:

$$+M = \frac{1}{10} (2.85) 9.8^2 = 17.4 \text{ k} \quad M_u = 24 \text{ k'}$$

$$-M = \frac{1}{10} (\quad) \quad = 27.4 \quad \quad = 38.3$$

$$+A_s = .24 \text{ in}^2 \quad -A_s = .39 \text{ in}^2 \quad 2 \#5 + \#6$$

OK

$$V_u = 1.4 \left[2.85 \left(\frac{9.67}{2} \right) + \frac{26.4}{9.67} \right] = 23 \text{ k}$$

d dist. out

$$V_c = 62 (10) (22) 85 = 18.5 \text{ k}$$

$$\frac{A_s V_u}{f_y V_c} = \frac{.24 (23)}{60 (18.5)} = 0.22$$

$$V_u @ \text{"d" distance} = 23 - 2.85 (1.83) 1.4$$

$$= 15.7 < 18.5$$

Stirr. not reqd.

Note: Beam on line (1) is adequate to resist ~~the~~ Buoyancy



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Sheet No. 3
Date 4-2-05
By HN
Job No. _____

Job Title

Rum Barrel Restaurant
Buoyancy Calc.

Bm. on line 8.1

Bm. on line 8.1 is more or less the same as on line 1 and is therefore adequate to resist the ~~pressure~~ Buoyancy.

Bm on Line D

$$DL \text{ bm} = .38(1.33)(2.17) = +.110 \text{ #/ft} \downarrow$$

$$\text{" Slab} = 144(8.66) = +1247$$

$$\text{Head on bm} = 64(6.17)(1.3) = -513 \text{ "}$$

$$\text{" Slab} = 64(4.33)(8.66) = +2400 \text{ "}$$

$$DL \text{ Wall} = 20(10.3) = +206 \text{ "}$$

$$= 2600 \text{ "}$$

Cont. on p. 4



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Job Title

Rum Barrel Restaurant
Buogancy calcs.

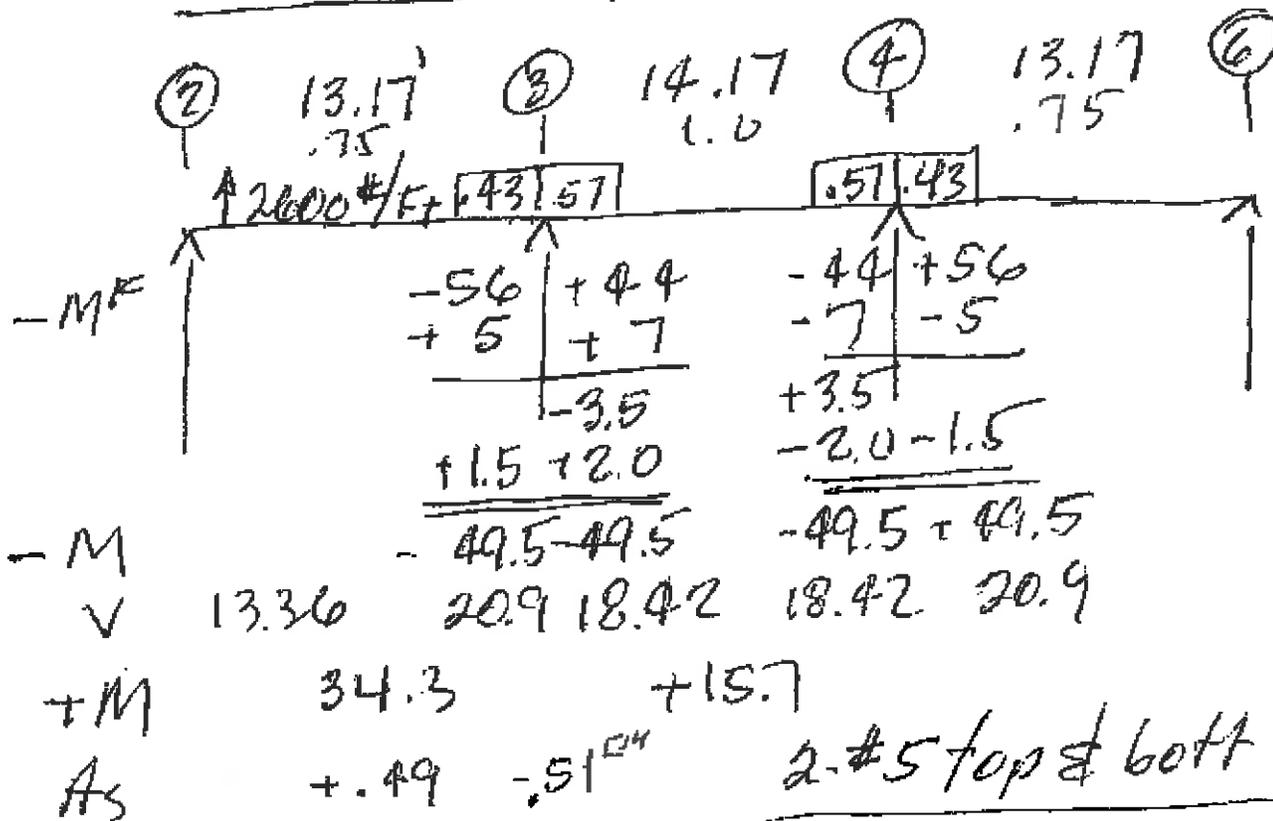
Sheet No. 4

Date _____

By HN

Job No. _____

Bm on Line (D)



$$V_u = [20.9 - 1.83(2.6)] 1.4 = 22.6^k$$

$$A_{s'} = \#3 @ 11 \quad V_c = .85(62)16(22) = 18.6^k$$

$$\frac{22.6 - 18.6}{1.4(2.6)} = 1.08 + 1.83 = 2.92$$

4@11 ea. end / Revise Bm to reflect required stirrup spa.



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Sheet No. 5

Date _____

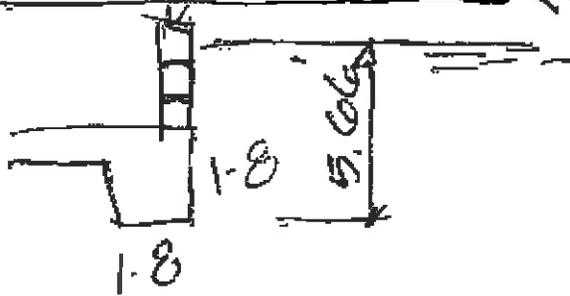
Job Title

Rum Barrel Restaurant
Buoyancy Cals.

By HJ

Job No. _____

Bm on Line (A)



Buoyancy acting at bott. of bm = $64(5.66) = 362\#$

Buoyancy	=	$362(1.67)$	=	- 605 #/FT	
" on slab	=	$277(8)$	=	- 2220 "	2825
DL bm	=	$150(1.66)^2$	=	+ 413 "	
" wall	=	$65(11.6)$	=	+ 754 "	
" spreader bm	=	$150(.68)$	=	+ 102 "	1519
" 2nd. Fl. Sl	=	$50(5)$	=	+ 250 "	
				<u>1300 "</u>	

End Span

$$+M = \frac{1}{11}(1.3)10.75^2 = 13.7k'$$

$$-M = \frac{1}{10}(1.3)'' = 15.0k'$$

Note: By inspection the bm. is a equal to resist hydrostatic uplift.



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Job Title

Rum Barrel Restaurant
Buoyancy Calc

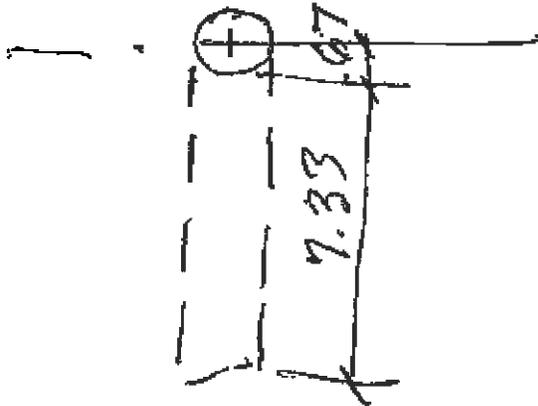
Sheet No. 6

Date _____

By HN

Job No. _____

Pbm. perpendicular to Line A



$$\begin{aligned}
 \text{Buoyancy on bm} &= 362 (1.67) = 605 \uparrow \\
 \text{" " Slab} &= 277 (9.1) = 2520 \uparrow \\
 &= + 413 \downarrow \\
 \text{DL bm} &= 150 (1.67)^2 = \\
 \text{" Slab} &= 50 (9.1) = \\
 &= + 455 \downarrow \\
 &= \underline{- 2260}
 \end{aligned}$$

$$M = \frac{1}{2} (2260) 7.33^2 = 60 \quad M_u = 85 \text{ k'}$$

$$\begin{aligned}
 b &= 22'' \\
 d &= 17'' \quad A_s = 1.14 \text{ in}^2 \quad \begin{array}{l} 3 \text{ -} \#6 \text{ } \uparrow \text{ } \phi b \\ \hline \text{Change 2-}\#4 \text{ to 3-}\#6\text{'s} \end{array}
 \end{aligned}$$

$$V_u = 2.26 (5.9) 1.4 = 18.7 \text{ k}$$

$$V_c = .85 (20) (17) (0.62) = 17.9 \text{ k}$$

$$\frac{18.7 - 17.9}{1.4 (2.26)} = .25' \text{ Stirrup mat req'd}$$



THE CITY OF KEY WEST

Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3700

MEMORANDUM

To: File

From: Scott Fraser, CFM, FEMA Coordinator/Floodplain Administrator

Date: 31 Oct. 2013

Re: Floodproofing Certificate 528 Front St.

The accompanying Floodproofing Certificate dated 30 Oct. 2013 is a recreated certificate to replace a deficient certificate originally dated 18 March 2005.

The recreated 2013 certificate isn't for new floodproofing. This certificate is only to provide adequate documentation for the floodproofing installed during 2005.

At the time, the floodproofing was installed (2005) the local ordinance standard for the height of floodproofing was to Base Flood Elevation. The installed height of this floodproofing was 7.5', one-half foot higher than required at the time.

Therefore, this 2013 certificate is an adequate representation of the floodproofing installed during 2005.