



BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.miamidade.gov/buldingcode

NOTICE OF ACCEPTANCE (NOA)

Carnes Company, Inc.
448 South Main Street
Verona, WI 53593

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami Dade County Product Control Division (in Miami-Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade county Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model FHLB/FGLB Aluminum Louver.

APPROVAL DOCUMENT: Drawing No. **07-268**, titled "Carnes Model FHLB", sheets 1 through 6 of 6, dated 10/17/07, with no revision, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E., bearing the Miami-Dade County Product Control approval stamp with the NOA number and approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved or MDCPCA", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1, evidence page E-1, as well as approval document mentioned above. The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



Signature
10/23/07

NOA No: 07-0524.01
Expiration Date: January 17, 2011
Approval Date: November 15, 2007
Page 1

Carnes Company, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No.07-268, titled "Carnes Model FHLB", sheets 1 through 6 of 6, dated 10/17/07, with no revision, prepared by Tilteco, Inc., signed and sealed by W. A. Tillit Jr. P.E.

B. TESTS

1. Test report on Large Missile Impact Test per PA 201, Cyclic Wind Pressure Test per PA 203 and Uniform Static Air Pressure Test per PA 202 of "Aluminum Louver Panel System model FL-D-4", prepared by American Test Lab of South Florida, report #0604.01-01, dated 06/21/01, signed and sealed by W. R. Mehner, P.E. & H. Hattem, P.E.
2. Test Report on Large Missile Impact Test per PA 201, Cyclic Wind Pressure Test per PA 203 of "Aluminum Louver Panel System FL-D-4", prepared by American Test Lab of South Florida, report # 1212.01-01, dated 12/13/01, signed and sealed by W. R. Mehner, P.E.

C. CALCULATIONS

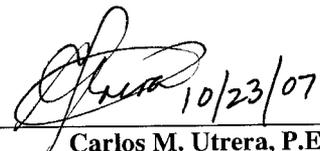
1. Approval Aluminum Louver System Model FL-D-6 prepared by Tilteco, Inc., sheets 1 through 9 of 9, signed and sealed by W. A. Tillit, P.E on 06/29/01.
2. Revision to Approval Louver System Model FL-D-6 prepared by Tilteco, Inc., sheets 1 through 31, signed and sealed by W.A. Tillit Jr. P.E on 06/21/05.

D. MATERIAL CERTIFICATIONS

1. Test report on Tensile Test per ASTM E8 of 3 samples ATL 0604.01-01B, C, & D1, No. 1GM-1037, signed and sealed by F. Grate, P.E.

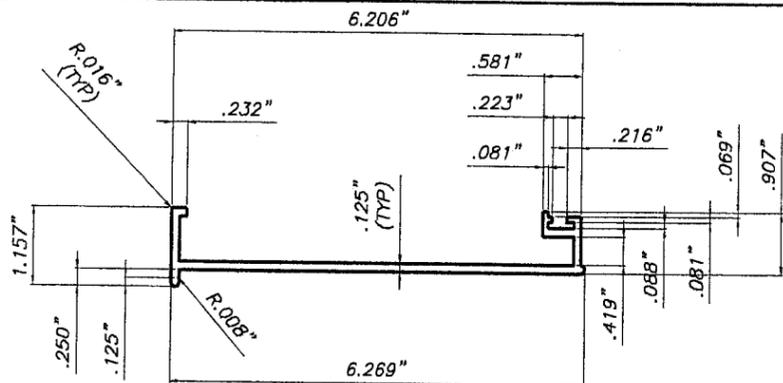
E. STATEMENTS

1. No financial interest letter issued by Tilteco, Inc., dated 08/28/01, signed and sealed by W. A. Tillit Jr., P.E.
2. Code compliance letter issued by Tilteco, Inc. on 08/28/01, signed and sealed by W. A. Tillit Jr., P.E.
3. Test compliance letter issued by American Test Lab of South Florida on 06/21/01, signed and sealed by W. H. Mehner, P.E. & H. Hattem, P.E.
4. Changes to drawing only letter issued by Tilteco, Inc. on 12/04/02, signed and sealed by W. A. Tillit Jr., P.E.
5. No change letter issued by United Enertech on 09/28/05 and signed by Bill Tate.


10/23/07

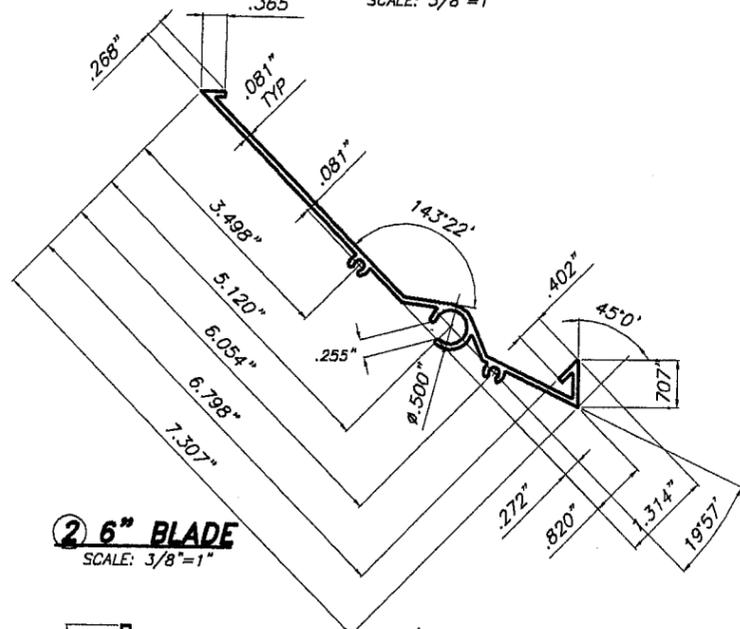
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No 07-0524.01

Expiration Date: January 17, 2011
Approval: Date: November 15, 2007



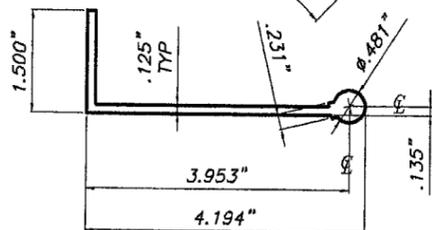
1 6" TOP BLADE

SCALE: 3/8"=1"



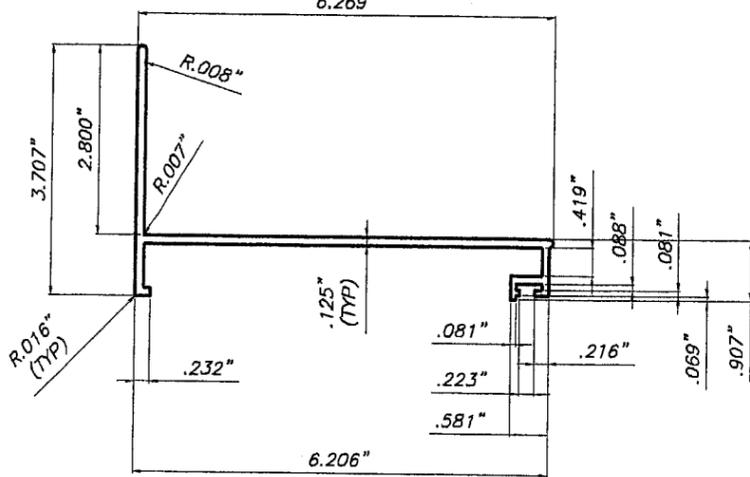
2 6" BLADE

SCALE: 3/8"=1"



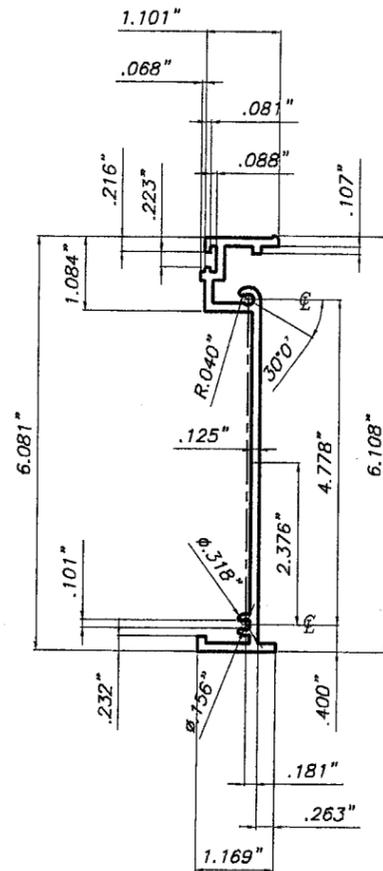
3 6" BLADE SUPPORT

SCALE: 3/8"=1"



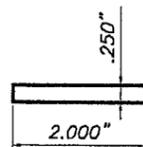
4 6" BOTTOM BLADE

SCALE: 3/8"=1"



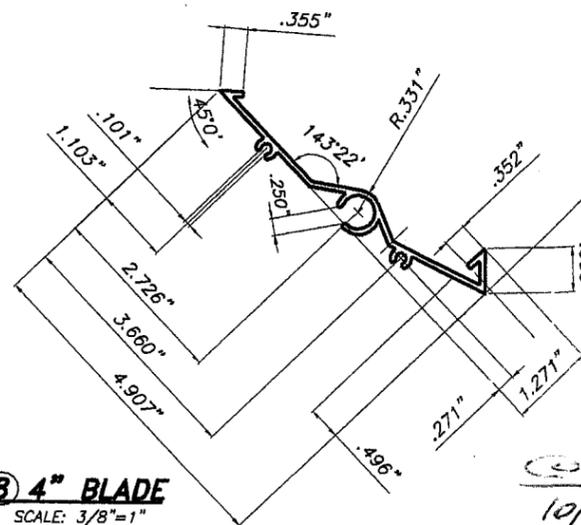
5 6" SIDE JAMB

SCALE: 3/8"=1"



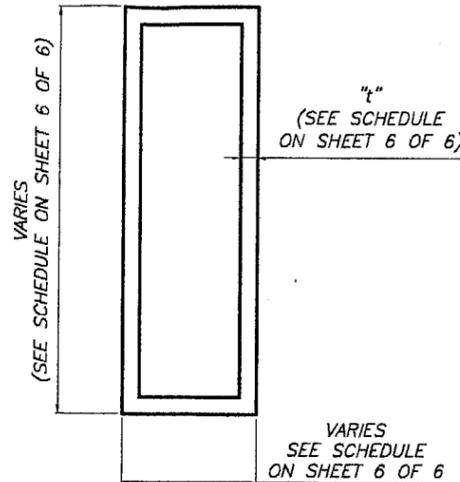
6 LOUVER IMPACT STRAP

SCALE: 3/8"=1"



8 4" BLADE

SCALE: 3/8"=1"



7 MULLION

6063-T6 ALLOY

SCALE: 3/8"=1"

COMPONENTS

SCALE: 3/8"=1"

GENERAL NOTES:

1. ALUMINUM LOUVER SYSTEM SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2004 EDITION OF THE FLORIDA BUILDING CODE. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1820 OF THE ABOVE MENTIONED CODE. ALUMINUM LOUVER SYSTEM'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1809.1.4 OF THE ABOVE MENTIONED CODE AS PER AMERICAN TESTING LAB REPORT # 0604.01-01 AS PER TAS-201, TAS-202 & TAS-203 PROTOCOLS.

2. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY (UNLESS OTHERWISE NOTED).

3. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018. THRU BOLTS AT MULLION TO BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL.

4. ALL ALUMINUM COMPONENTS FRAMING SHALL BE WELDED IN ACCORDANCE WITH AWS D1.2 PER THE AMERICAN WELDING SOCIETY LATEST EDITION REGULATIONS USE CERTIFIED WELDERS. USE ER-5356 ELECTRODES.

5. ANCHORS TO CONCRETE/ MASONRY SHALL BE AS FOLLOWS, EDGE DISTANCE IS BEYOND ANY WALL FINISH:

NAME	DIAMETER	MIN. PENETRATION	MIN. EDGE DISTANCE (ED)	MANUFACTURER
TAPCONS	1/4"	1 3/4"	3"	ITW/BUILDEX OR ELCO TEXTRON
POWER BOLTS	SEE SPECIFICATIONS ON SHEET 6 OF 6			POWER FASTENERS, INC.

(A) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

6. THIS LOUVER SHALL BE ONLY INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.

7. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE LOUVER SYSTEM IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.

8. (A) THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(B) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, INCLUDING LIFE SAFETY, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT APPROVAL PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(C) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE PROFESSIONAL OF RECORD (P.O.R) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D.

(E) THIS P.A.D. SHALL COMPLY WITH SECTION 2: 61G15 OF THE FLORIDA ADMINISTRATIVE CODE.

9. PRIVATE LABELER'S LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF LOUVER BLADE (COMPONENT 2). ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:
CARNES COMPANY,
VERONA, WI
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

**MAXIMUM DESIGN PRESSURE RATING
+150.0, -150.0 psf.
LARGE MISSILE IMPACT RESISTANCE.**

Approved to comply with the Florida Building Code
Date: 11/15/2007
No: 07-0524.01
Walter A. Tillit Jr. P.E.
10/18/07

F.B.C. (HIGH VELOCITY HURRICANE ZONE)

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305)871-1530 Fax: (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

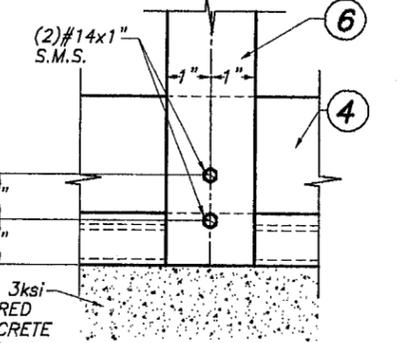
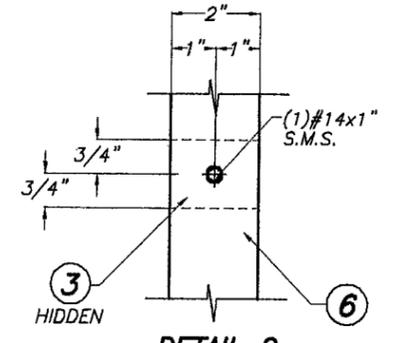
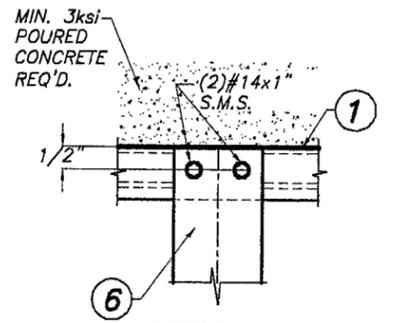
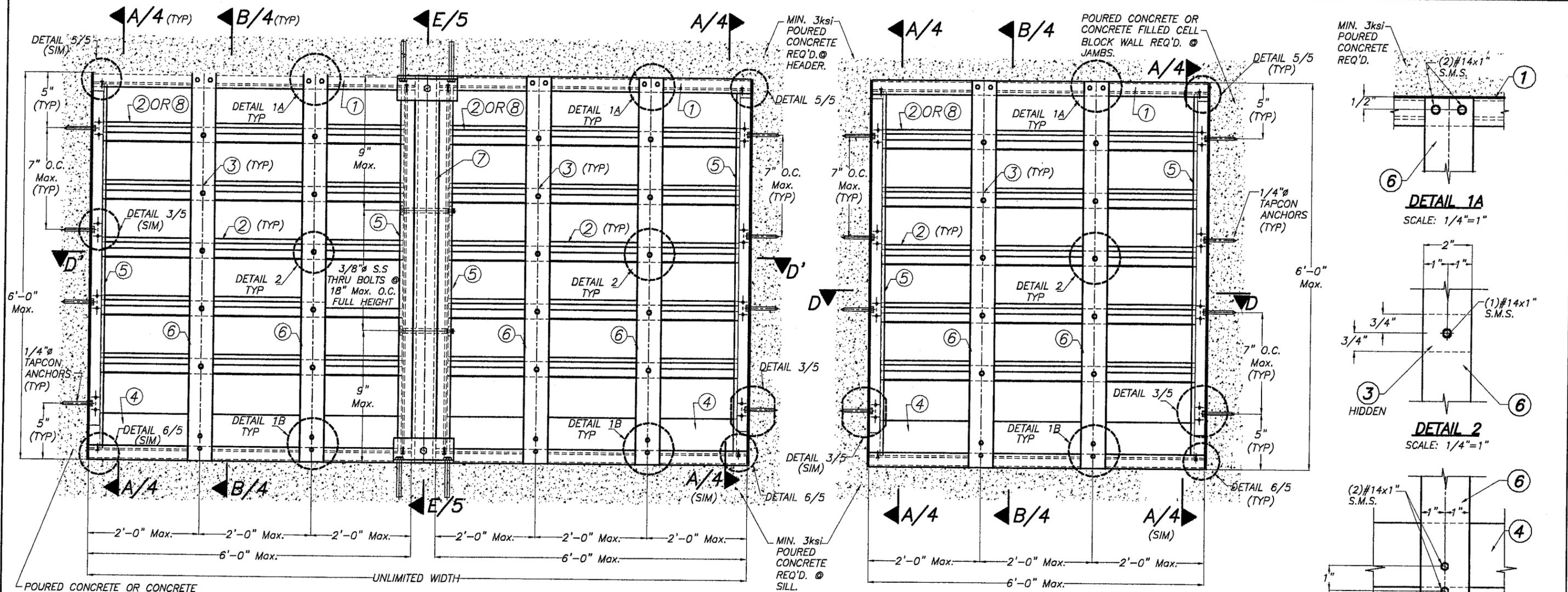
CARNES MODEL FHLB.					
UNITED ENERTECH, INC. DCFL-D-6 ALUMINUM LOUVER W/ OR W/O CD-151 DAMPER ASSEMBLY					
CARNES COMPANY					
448 S. MAIN STREET VERONA, WI 53593 PH: (608) 845-8411 FAX: (608) 845-8470					
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-

DRAWN BY:
I.A

10/17/07
DATE

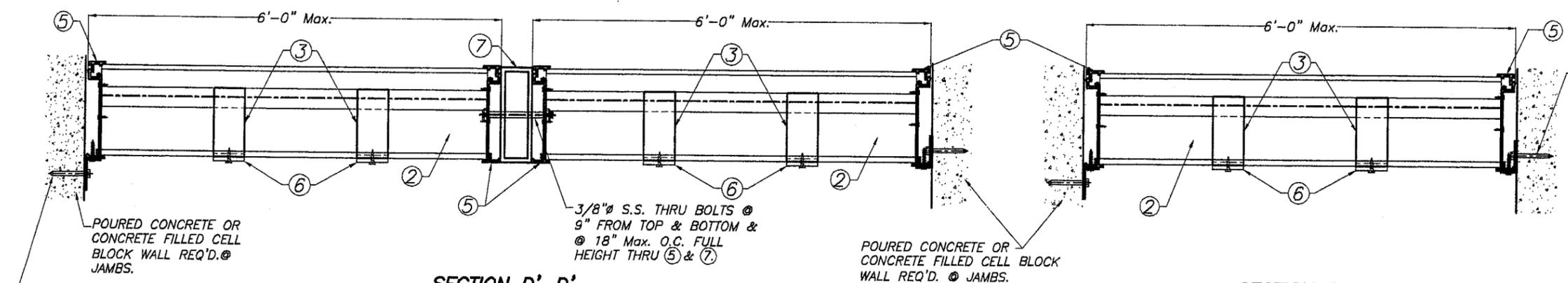
07-268
DRAWING No

SHEET 1 OF 6



MULTIPLE UNITS HORIZONTALLY EXPANDED (INSIDE ELEVATION)
SCALE: 1/8"=1"

SINGLE UNIT (INSIDE ELEVATION)
SCALE: 1/8"=1"



SECTION D-D
SCALE: 1/8"=1"

SECTION D-D
SCALE: 1/8"=1"

F.B.C. (HIGH VELOCITY HURRICANE ZONE)

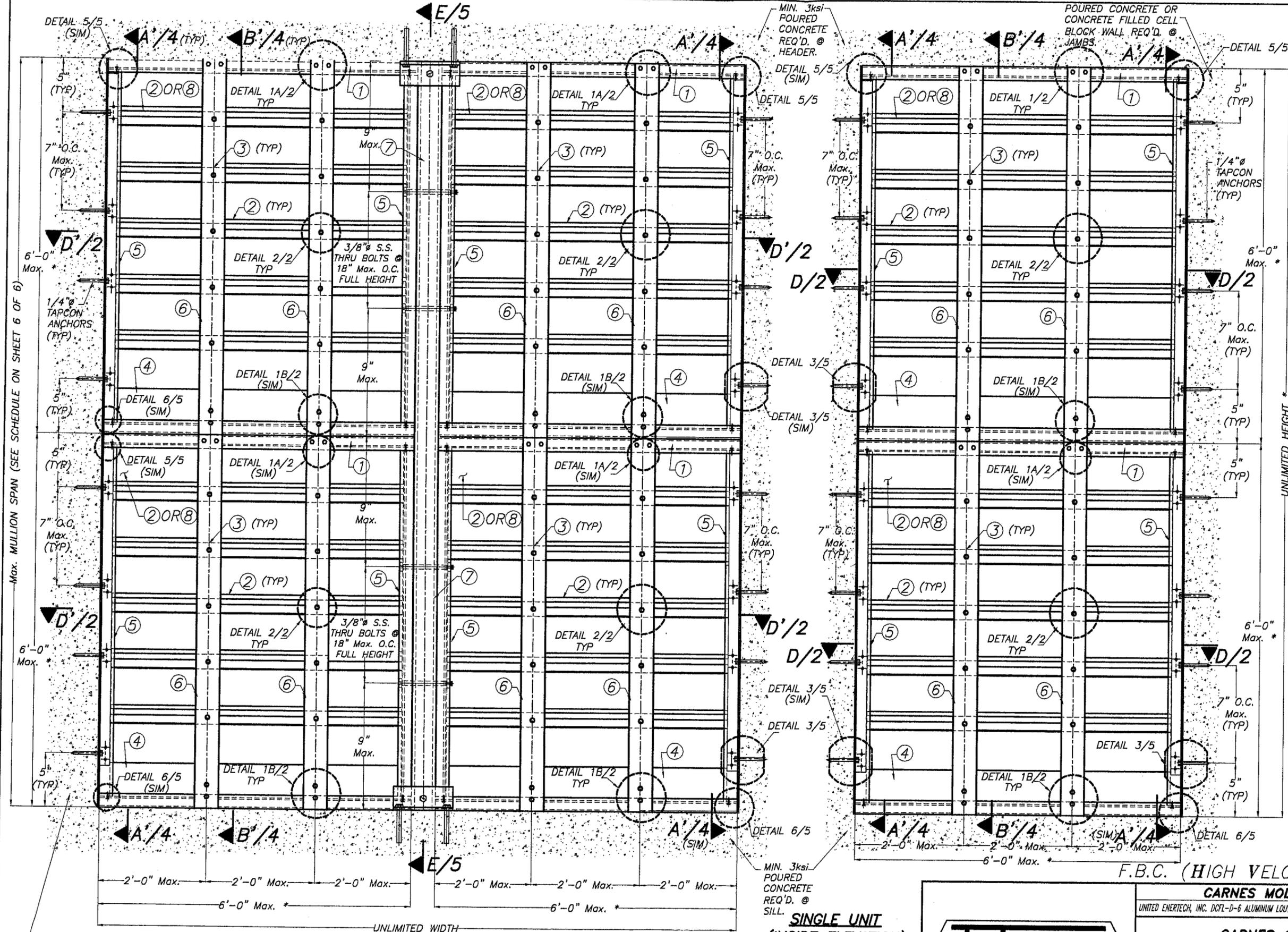
Approved or notifying with the
11/15/2007
07-0524.01
[Signature]

TILECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305)871-1530 Fax: (305)871-1531
EB-0006719
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167

CARNES MODEL FHLB.					
UNITED ENERTECH, INC. DCTL-D-6 ALUMINUM LOUVER W/ OR W/O CD-151 DAMPER ASSEMBLY					
CARNES COMPANY					
448 S. MAIN STREET VERONA, WI 53593 PH: (808) 845-6411 FAX: (808) 845-6470					
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

DRAWN BY: I.A.
DATE: 10/17/07
DRAWING No: 07-268
SHEET 2 OF 6

[Signature]
10/18/07



* NUMBER OF LOUVER PANEL UNITS NEEDED TO ACHIEVE THE OPENING HEIGHT AND WIDTH MAY VARY HOWEVER MAXIMUM UNIT HEIGHT AND WIDTH SHALL NO EXCEED 6'-0".

POURED CONCRETE OR CONCRETE FILLED CELL BLOCK WALL REQ'D. @ JAMBS.

MULTIPLE UNITS HORIZONTALLY & VERTICALLY EXPANDED (INSIDE ELEVATION)

SCALE: 1/8"=1"

10/18/07

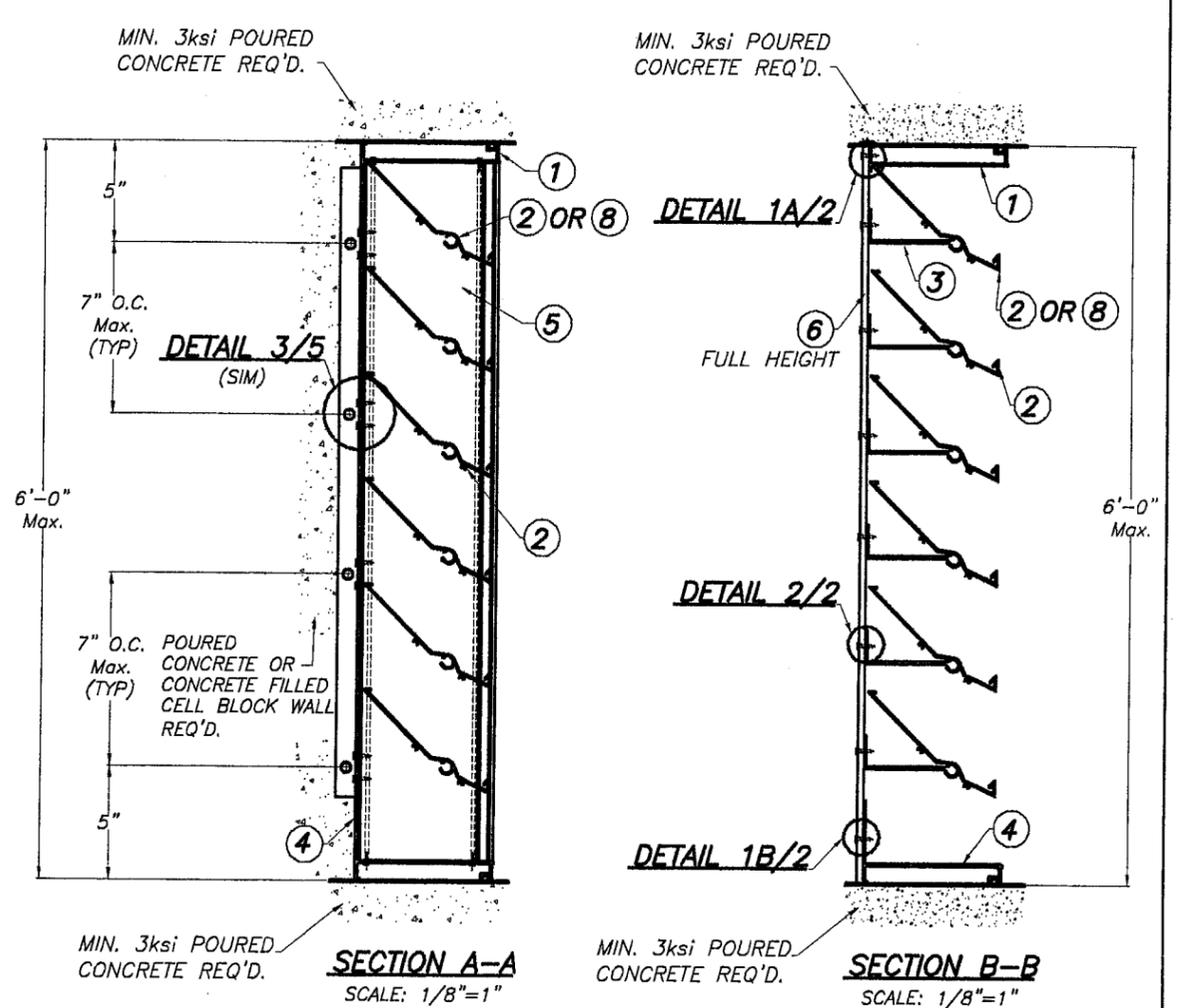
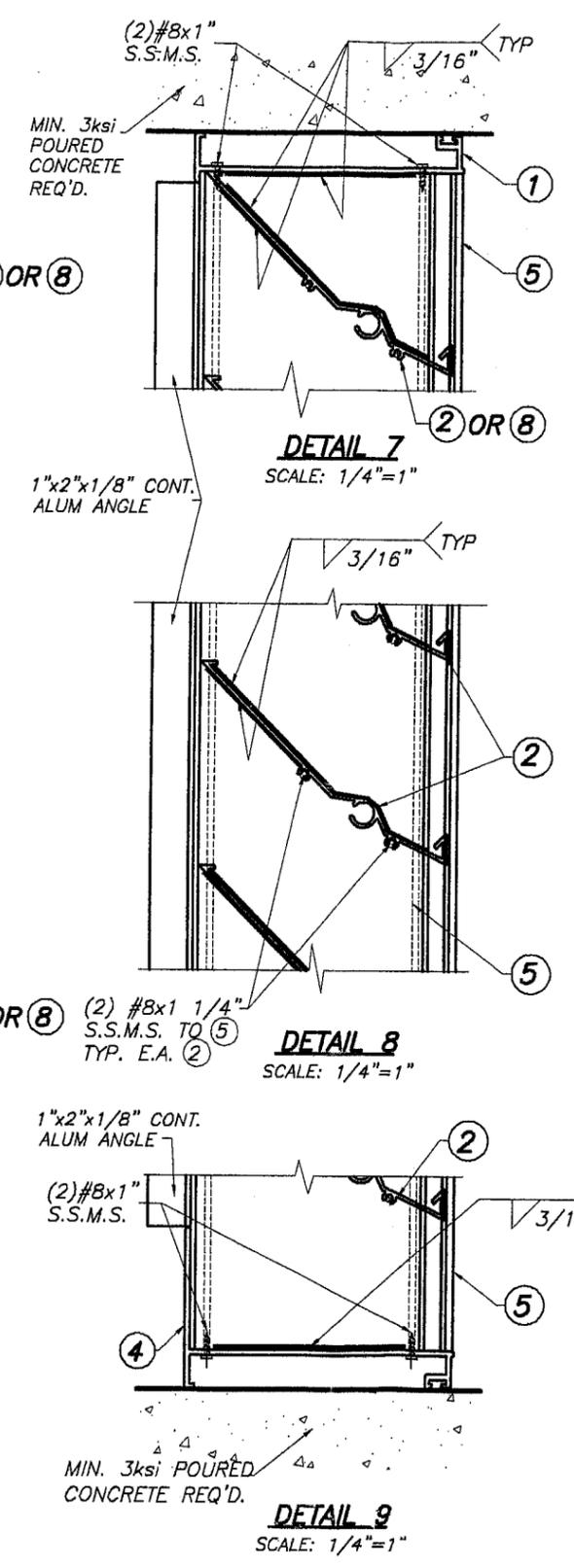
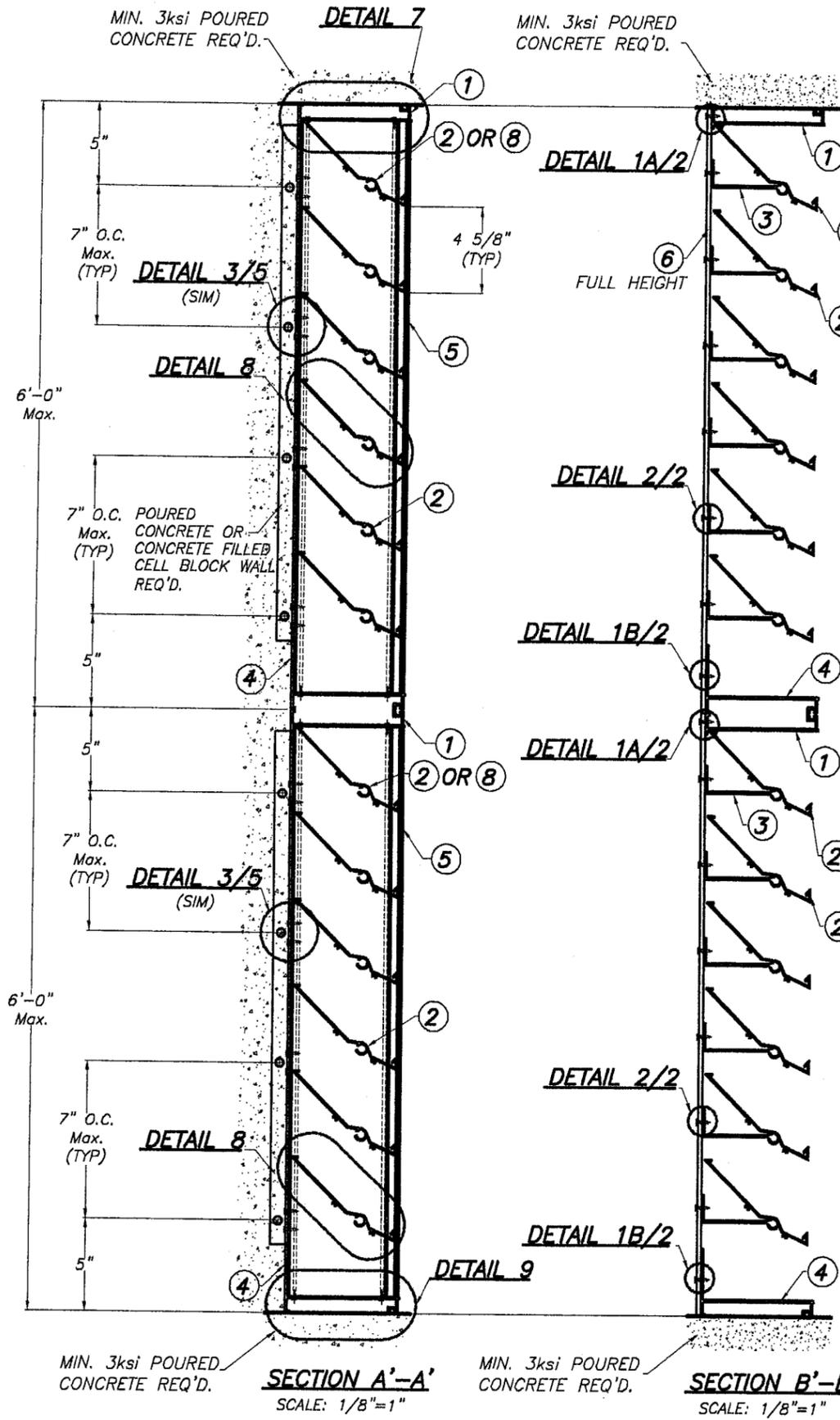
SINGLE UNIT (INSIDE ELEVATION)
SCALE: 1/8"=1"

TILTECO inc.
TILLIT TESTING & ENGINEERING COMPANY
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WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

F.B.C. (HIGH VELOCITY HURRICANE ZONE)

CARNES MODEL FHLB.			DRAWN BY: I.A		
UNITED ENERTECH, INC. DCF7-D-6 ALUMINUM LOUVER W/ OR W/O CD-151 DAMPER ASSEMBLY			DATE: 10/17/07		
CARNES COMPANY			DRAWING No: 07-268		
448 S. MAIN STREET VERONA, WI 53593 PH: (808) 845-8411 FAX: (808) 845-8470			SHEET 3 OF 6		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

11/15/2007
07-0524.01
[Signature]



Approved as complying with the
 11/15/2007
 07-0524.01
[Signature]

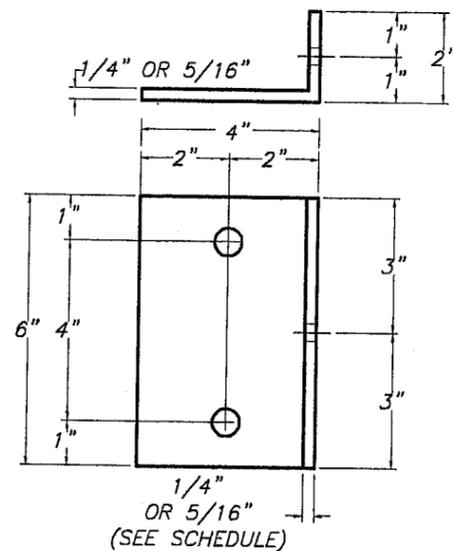
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 TILECO Inc. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr. P. E. FLORIDA Lic. # 44167		CARNES MODEL FHLB. UNITED ENERTECH, INC. DCFI-D-6 ALUMINUM LOUVER W/ OR W/O CD-151 DAMPER ASSEMBLY		DRAWN BY: I.A.
		CARNES COMPANY 448 S. MAIN STREET VERONA, WI 53593 PH: (808) 845-8411 FAX: (808) 845-8470		10/17/07 DATE
07-268 DRAWING No		1 2		SHEET 4 OF 6

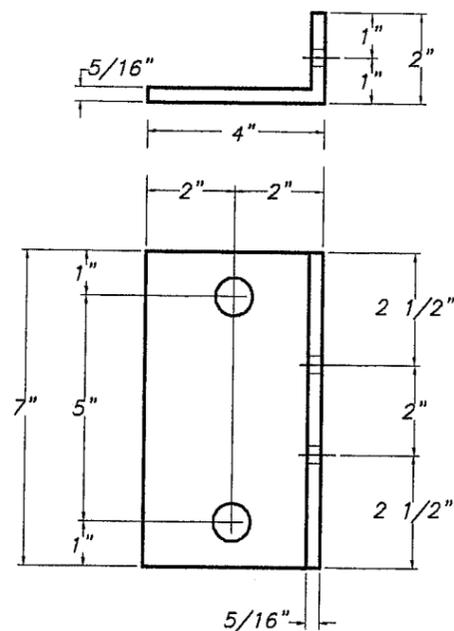
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 10/18/07

MAXIMUM MULLION HEIGHT (FT) AND CORRESPONDING MULLION SIZE W/
CONNECTION SCHEDULE.

Max. MULLION HEIGHT ● DESIGN LOAD (psf) & 6'-0" Max. CLEAR SPACING BETWEEN MULLIONS	Min. MULLION SIZE REQ'D.	REQUIREMENTS INSTALLATION FOR MULLION CONNECTION					MAX. DESIGN WIND LOAD (psf)
		ANGLE	TRAPPED			THRU BOLT	
			ANCHORS SIZE	MIN. EMBEDMENT (IN)	MIN. EGDE DISTANCE (E.D.)		
6'-0"	2"x6"x1/4"	2"x4"x1/4"x0'-6"	(2) 1/2" POWER BOLTS	3 1/2"	3"	(1) 1/2"Ø	UP TO 90
	2"x6"x1/4"	2"x4"x1/4"x0'-6"	(2) 1/2" POWER BOLTS	3 1/2"	4"	(1) 1/2"Ø	> 90 UP TO 110
	2"x6"x1/4"	2"x4"x1/4"x0'-6"	(2) 1/2" POWER BOLTS	5"	5"	(1) 1/2"Ø	> 110 UP TO 150
7'-5"	2"x6"x1/4"	2"x4"x5/16"x0'-6"	(2) 1/2" POWER BOLTS	3 1/2"	3"	(1) 1/2"Ø	UP TO 75
	2"x6"x1/4"	2"x4"x5/16"x0'-6"	(2) 1/2" POWER BOLTS	3 1/2"	6"	(1) 1/2"Ø	> 75 UP TO 115
	2"x6"x1/4"	2"x4"x5/16"x0'-7"	(2) 1/2" POWER BOLTS	5"	6"	(1) 1/2"Ø	> 115 UP TO 150
9'-2"	4"x6"x1/4"	2"x4"x5/16"x0'-7"	(2) 5/8" POWER BOLTS	4"	4"	(2) 1/2"Ø	UP TO 75
	OR	2"x4"x5/16"x0'-7"	(2) 5/8" POWER BOLTS	4"	7 1/2"	(2) 1/2"Ø	> 75 UP TO 120
	(2) 2"x6"x1/4"	2"x4"x5/16"x0'-7"	(2) 5/8" POWER BOLTS	6"	7 1/2"	(2) 1/2"Ø	> 120 UP TO 150
11'-10"	4"x8"x1/4"	2"x4"x5/16"x0'-7"	(2) 5/8" POWER BOLTS	6"	7 1/2"	(2) 1/2"Ø	UP TO 120
	4"x8"x1/4"	2"x4"x5/16"x0'-7"	(2) 3/4" POWER BOLTS	5"	8 1/4"	(2) 1/2"Ø	> 120 UP TO 150



2"x4"x1/4"x0'-6" OR
2"x4"x5/16"x0'-6"
ALUM. ANGLE



2"x4"x5/16"x0'-7"
ALUM. ANGLE

[Handwritten signature]
10/18/07

Approved in accordance with the
specifications
11/15/2007
07-0524.01
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	CARNES COMPANY 448 S. MAIN STREET VERONA, WI 53593 PH: (808) 845-8411 FAX: (808) 845-6470	10/17/07 DATE																		
<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-</td> <td>-</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	-	-	3	-	-	2	-	-	4	-	-	07-268 DRAWING No	SHEET 6 OF 6
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
1	-	-	3	-	-															
2	-	-	4	-	-															