Project Order Modification (P.O.M.) #5 for Project Order 91

PROJECT NAME:	U010C - MIA Airside Operation Break Room	PROJECT ORDER No:	91
CONTRACT TITLE:	Miscellaneous Construction Contracts, MCC-8-10	DATE:	04/26/2021
CONTRACTOR:	MCM Corporation	PAGES:	41

The contractor is hereby authorized to make the following changes to the current contract and perform the work subject to all contract stipulations and covenants. Except as otherwise specifically set forth herein, the terms and conditions for the Project Order remain unchanged.

RWP # - 25 **AMOUNT:**

Direct Cost		
On Air Mechanical	$	2,554.00
Paradise Construction	$	391.46
Subtotal	$	2,945.46
MCC Fee (7.96%)	$	234.46
	$	3,179.92

DESCRIPTION OF WORK: Provide the required new wall louver system model ECD-545-MD by On Air Mechanical Contractor and finish the restroom ceiling in two phases by Paradise Construction.

REASON FOR CHANGE: AHJ Requirement

JUSTIFICATION: The inspector requested a different louver than shown in plans to meet the current Building code.

METHOD OF PAYMENT: Lump Sum

SUMMARY OF PROJECT ORDER (P.O.) AMOUNT

REASON FOR CHANGE:		
Regulatory Change	ORIGINAL P.O. AMOUNT	$ 364,090.17
Other Agency Requested Change	COST OF CONSTRUCTION CHANGES PREVIOUSLY ORDERED	$ 117,762.13
Design Errors Change	ADJUSTED P.O. AMOUNT PRIOR TO THIS P.O.M.	$ 481,852.30
Design Omission Change	**COST OF CONSTRUCTION CHANGES THIS P.O.M.**	$ 3,179.92
County Requested Change	ADJUSTED P.O. AMOUNT INCLUDING THIS P. O. M.	$ 485,032.22
Unforeseeable Change		
Other	TOTAL PERCENT INCREASE TO DATE	33.22%

EXTENSION OF TIME ALLOWED BY THIS CHANGE _____ CALENDAR DAYS TO _____

A/E CERTIFYING STATEMENT: *I hereby certify that the supporting cost data included is, in my considered opinion, accurate; that the prices quoted are fair and reasonable and in proper ratio to the cost of the original work contracted for under benefit competitive bidding.*

By: _____ 4/26/21
ACCEPTED: GENERAL CONTRACTOR DATE
PRINT NAME: Juan Munilla (MCM)

By: _____ 4/28/21
APPROVED: PROJECT CONSULTANT DATE
PRINT NAME: Jacek Schindler (Schindler Architects)

By: _____ 4/28/21
APPROVED MDAD PROJECT MANAGER DATE
PRINT NAME: Sergio Negreira

By: Pedro Gordo Digitally signed by Pedro Gordo Date: 2021.05.04 09:20:01 -04'00'
APPROVED: CONSULTING ENGINEER DATE
PRINT NAME: Pedro Gordo (HNTB)

By: _____ 5-6-21
APPROVED: MDAD CHIEF OF CONSTRUCTION DATE
PRINT NAME: Enrique Perez

By: _____ 5-6-21
APPROVED: ASST. DIRECTOR OF FACILITIES DEV. DATE
PRINT NAME: Pedro F. Hernández, P.E.

By: Sergio San Miguel Digitally signed by Sergio San Miguel DN: cn=Sergio San Miguel, o=MDAD, ou=Finance, email=ssanmiguel@miami-airport.com, c=US Date: 2021.05.14 15:45:31 -04'00'
APPROVED: MDAD CHIEF FINANCIAL OFFICER DATE
PRINT NAME: Sergio San Miguel

Purchase Order

AVIATION DEPARTMENT

4200 NW 36TH Street
Miami FL 33102
United States

Supplier: 0000016621
MUNILLA CONSTRUCTION MANAGEMENT, LLC
MCM LOCK BOX ACCOUNT
P.O. BOX 829931
PHILADELPHIA PA 19182

CHANGE ORDER **Dispatch via Print**

Purchase Order	Date	Revision	Page
AVIAT-1000017644	08/09/2019	7 - 04/28/2021	1

Payment Terms	Freight Terms	Ship Via
N30	Destination	Common Carrier

Buyer	Phone	Currency
Maria Najera-Matos -MDAD		

Ship To: 1C30401C
Warehouse Bldg 3040
4331 NW 22nd Street
Miami FL 33122
United States

Attention: Not Specified

Bill To: Accounts Payable
P.O. Box 526624
MIAMI FL 33152-6624
United States

Tax Exempt? Y **Tax Exempt ID:** 59-6000573 **Replenishment Option:** Standard

Line-Sch	Item/Description	Mfg ID	Quantity	UOM	PO Price	Extended Amt	Due Date
1- 1	PO 91, POM 1-5, UO10C MIA AIRSIDE OPERATION BREAK ROOM PO 91 - $364,090.17; POM 1-5 = $120,942.05		1.00	EA	485,032.22	485,032.22	08/09/2019

Contract ID: MCC-8-10 Contract Line: 6 Category Line: 0 Release: 268

Item Total 485,032.22

Total PO Amount 485,032.22

Note: All Chemical and hazardous material orders must be delivered with a copy of the most recent available MSDS for the product. Failure to do so, may result in the refusal of acceptance of the material or product.

Authorized Signature

Vivian R. Gonzalez

Digitally signed by Vivian R. Gonzalez
DN: cn=Vivian R. Gonzalez, o=MDAD, ou=Program Controls, email=vgonzalez@miami-airport.com, c=US
Date: 2021.04.29 14:16:55 -04'00'

Martin, Belinda (TOP)

From: Negreira, Sergio (Aviation)
Sent: Thursday, April 22, 2021 10:20 AM
To: Martin, Belinda (TOP)
Cc: McCudden, Natalie A. (Aviation); Pereira, Felix (Aviation); Perez, Enrique (Aviation)
Subject: Re: MCC-8-10 - U010C - MIA - Airside Operation Break Room - RWP #25

I had already reviewed the documentation on this, and I agree with the cost.
Thank you

Sergio Negreira, CM3
Facilities Dev.
MIA

From: Martin, Belinda (TOP) <T-BMartin@miami-airport.com>
Sent: Thursday, April 22, 2021 10:17 AM
To: Negreira, Sergio (Aviation) <SNegreira@miami-airport.com>
Cc: McCudden, Natalie A. (Aviation) <T-NMcCudden@miami-airport.com>
Subject: RE: MCC-8-10 - U010C - MIA - Airside Operation Break Room - RWP #25

Thank you Sergio,
As mentioned below this RWP is less than $5,000 so it doesn't have to go to US Cost for cost review. Please let me know if you agree with MCM's proposed amount ?

Best regards,

Belinda Martin
Cost Engineer
(305) 869-3328
t-bmartin@miami-airport.com

Please consider the environment before printing this e-mail. Think Green.

From: Negreira, Sergio (Aviation) <SNegreira@miami-airport.com>
Sent: Thursday, April 22, 2021 9:30 AM
To: Martin, Belinda (TOP) <T-BMartin@miami-airport.com>
Cc: Luis Acevedo <LAcevedo@HNTB.com>; McCudden, Natalie A. (Aviation) <T-NMcCudden@miami-airport.com>; Pereira, Felix (Aviation) <FPereira@miami-airport.com>; Perez, Enrique (Aviation) <EPEREZ@miami-airport.com>
Subject: Re: MCC-8-10 - U010C - MIA - Airside Operation Break Room - RWP #25

Good morning Bel
The inspector requested a different louver than shown in plans to meet new code. This needs the contractor to work around it to gain time.
It is an inspector requirement
Doing the work in 2 phases is needed to finish the work on time.
I hope this answers your question.
Thank you

Sergio Negreira, CM3
Facilities Dev.
MIA

From: Martin, Belinda (TOP) <T-BMartin@miami-airport.com>
Sent: Wednesday, April 21, 2021 2:57 PM
To: Negreira, Sergio (Aviation) <SNegreira@miami-airport.com>
Cc: Luis Acevedo <LAcevedo@HNTB.com>; Lourdes Larrea <llarrea@hntb.com>; jws@schindlerarchitects.com <jws@schindlerarchitects.com>; Chardiet-Medina, Maite <maite.chardiet-medina@rib-uscost.com>; McCudden, Natalie A. (Aviation) <T-NMcCudden@miami-airport.com>; DocControl FacilitiesDevelopment <DocControlFacilitiesDev@miami-airport.com>
Subject: RE: MCC-8-10 - U010C - MIA - Airside Operation Break Room - RWP #25

Good Afternoon Sergio,
Please provide merit and justification for the attached ***RWP#25 Finish Drywall Ceiling at Restroom***. This RWP is less than $5,000 so it doesn't have to go to US Cost for cost review.
Please let me know of any negotiation in price and the final amount for the Work Order.

Best regards,

Belinda Martin
Cost Engineer
(305) 869-3328
t-bmartin@miami-airport.com

Please consider the environment before printing this e-mail. Think Green.

From: Leticia Green <lgreen@mcm-us.com>
Sent: Wednesday, April 21, 2021 11:03 AM
To: Negreira, Sergio (Aviation) <SNegreira@miami-airport.com>
Cc: Martin, Belinda (TOP) <T-BMartin@miami-airport.com>; McCudden, Natalie A. (Aviation) <T-NMcCudden@miami-airport.com>; Victor Camps <vcamps@mcm-us.com>; vmirabal@mcm-us.com
Subject: MCC-8-10 - U010C - MIA - Airside Operation Break Room - RWP #25

This is an EXTERNAL email. **Exercise Caution**. DO NOT open attachments or click links from unknown senders or unexpected emails. Please use your Report Spam button if this is a suspicious message.

This is an EXTERNAL email. **Exercise Caution**. DO NOT open attachments or click links from unknown senders or unexpected emails. Please use your Report Spam button if this is a suspicious message.

Hi Sergio,

Attached please find RWP #25 for your review/approval.
Regards,

MCM
A StrongCore Company

LETICIA GREEN
PH: 305-541-0000 Ext 235 | M: (786)267-4906 | lgreen@mcm-us.com
6201 SW 70 St., 1 Floor, Miami, FL 33143 | www.mcm-us.com

Transmittal #23

MCM
6201 SW 70th Street, Suite 100
Miami, Florida 33143
Phone: (305) 541-0000
Fax: (305) 541-9771

Project: 2019-759 EXTRA#7 - MIA Airside Op Breakroom
MIA - Airside
Miami, Florida 33122
Phone: 3055410000

RWP #25

TO: **Sergio Negreira (Miami Dade Aviation Department)**

FROM: **Leticia Green (MCM)**
6201 SW 70th Street, 2nd Floor
Miami, Florida 33143

CREATED DATE: 04/21/2021

COPIES TO:

TRANSMIT:	VIA:	FOR:	ACTION:
Attached	Attached	Approval	

Transmittal Items

DESCRIPTION	FORMAT	DATE	COPIES
RWP #25	Other	04/21/ 2021	1

Comments

Emailed 4/21/2021

BY **DATE** **COPIES TO**

ENGINEERS & GENERAL CONTRACTORS

April 16, 2021

Mr. Sergio Negreira
Project Manager
Miami Dade Aviation Department
P.O. Box 025504
Miami, Florida 33102-5504

RE: MIA – Airside Operation Break Room
MCC-U-010-C

REQUEST FOR WORK ORDER/PROJECT ORDER MODIFICATION #25

Dear Mr. Negreira:

Enclosed please find our cost breakdown for necessary work to be performed at the subject project. This proposal is for work and equipment that will be needed to provide the required new wall louver system model ECD-545-MD by OnAir Mechanical Contractor. Also included in this proposal, is the cost break down by Paradise Construction for finishing the restroom ceiling in two phases.

In the course of obtaining a permit inspection, it was brought to our attention by the inspector that the existing exhaust vent could not be reused as detailed on the approved drawing because it does not meet the current building code. The inspector explained to meet the current building code a wall louver system will need to be installed instead (inspection comments enclosed).

As this wall louver system is a custom item with components that will need to be installed from the interior of the restroom, the drywall ceiling cannot be finished. Without the ceiling in the restroom being finished the floor and wall tiles cannot be grouted, nor can the restroom fixtures and trim be installed. Due to our hard deadline of May 28th 2021 and a (2) week lead time for the required wall louver system, the restroom ceiling will be done in two phases to prevent any further delay. Please find attached the breakdown of these costs.

Subcontractor(s)	Scope of Work	Amount
On Air Mechanical	See Attached	$2,554.00
Paradise Construction		$391.46
	Subtotal:	$2,945.46
	MCC Fee (7.96%):	$234.46
	TOTAL:	**$3,179.92**

The attached subcontractor breakdown has been reviewed by Munilla Construction Management, LLC (MCM) and is found to be in accordance with current industry standards for the task on hand.

Once approval is finalized, please issue a Work Order/Project Order Modification reflecting the above. A change order to the above subcontractor(s) will follow from MCM.

Should you have any questions regarding this matter, please contact me as soon as possible.

Sincerely,

Juan Munilla 4/21/21
MIA - MCC-8-10
General Manager

Cc: File

OnAir
MECHANICAL CONTRACTOR

Project : MIA Air Side Break Room

PROPOSED CHANGE ORDER # 5

Date: 04/14/2021

BREAKDOWN

DESCRIPTION	UNIT	QTY.	MATERIAL	LABOR	SUBCONT.	TOTAL	O& PROFIT	TOT. INC. O & PROFIT
Demolition	Lot	1	$ -	$ 200.00	$ -	$ 200.00	$ 30.00	$ 230.00
New wall louver	Ea	1	$ 650.00	$ 480.00		$ 1,130.00	$ 169.50	$ 1,299.50
New sheet metal duct	Lot	1	$ 350.00	$ 480.00		$ 830.00	$ 124.50	$ 954.50
Note:				$ -		$ -	$ -	$ -
As per mechanical inspector comments				$ -		$ -	$ -	$ -
				$ -		$ -	$ -	$ -
SUB TOTAL			**$ 1,000.00**	**$ 1,160.00**	**$ -**	**$ 2,160.00**	**$ 324.00**	**$ 2,484.00**

Approved by:

Date:

Labor Burden	$ -
Insurance	$ -
Supervision	$ -
Material Tax	$ 70.00
SUB TOTAL	**$ 70.00**
TOTAL	**$ 2,554.00**

COMPANY: Paradise Construction
REFERENCE: MIA – Airside Operations Breakroom
Description: Finish Drywall Ceiling at Restroom

DATE: 4/14/2021
Change Order No. 13

LABOR									
CLASIFICATION	Days	HOURS	Reg. Rate	Burden %		Uniforms		RATE	TOTAL
Drywall Finisher-Hand Tools		8	$ 31.46	24.30%	$ 7.64	$ 0.10	$	42.55	$ 340.40
						TOTAL LABOR			$ 340.40

MATERIAL			
CLASIFICATION	HOURS / QTY	RATE	TOTAL
			$ -
		MATERIAL TOTAL	$ -
		TAX 7%	$ -
		TOTAL MATERIAL	$ -

	SUB TOTAL	$ 340.40

LABOR	$	340.40
MATERIAL	$	-
Equipment	$	-
SUBTOTAL	$	340.40
O&P 15 %	$	51.06
TOTAL	$	391.46

Miguel Jose Castro
Paradise Construction

THIS IS THE LOWEST PRICE THAT I CAN CHARGE TO HELP FINISH THIS JOB ASAP.!!!

NO CHARGE FOR MY TIME, ONLY LABORER TIME

+ 391.46

MIAMI-DADE COUNTY
§2-11.16 CODE OF MIAMI-DADE COUNTY
RESPONSIBLE WAGES AND BENEFITS SCHEDULE
2021

"BUILDING CONSTRUCTION"

TRADE/WORK LEVEL CLASSIFICATION	PER HOUR WAGE RATE	PER HOUR HEALTH BENEFIT (1)	PER HOUR PENSION BENEFIT	COMBINED DOLLAR VALUE
DRYWALL FINISHERS				
Drywall Finisher - Hand Tools	$ 20.71	$ 5.80	$ 4.95	$ 31.46
Drywall Finisher - Bazooka Box	$ 21.71	$ 5.80	$ 4.95	$ 32.46

$1.00 Charge person working up to 5 employees
$1.50 Charge person working 6 or more employees
$1.00 General Foreman above highest paid Charge person

Apprentices:

NOTE: Apprentices will be permitted to work at these rates when they are employed pursuant to and individually registered in a legitimate apprenticeship program registered with the U. S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a state apprenticeship agency recognized by the Bureau. In Florida this agency is the Florida Department of Education, Division of Career and Adult Education, Apprenticeship Section - http://www.fldoe.org/workforce/apprenticeship. Please see pages 7-8 of the Supplemental General Conditions for more information.

1st 6 months	$ 13.46	$ 5.80	$ 1.50	$ 20.76
2nd 6 months	$ 14.50	$ 5.80	$ 1.50	$ 21.80
3rd 6 months	$ 15.53	$ 5.80	$ 1.50	$ 22.83
4th 6 months	$ 16.57	$ 5.80	$ 1.50	$ 23.87
5th 6 months	$ 17.60	$ 5.80	$ 1.50	$ 24.90
6th 6 months	$ 18.64	$ 5.80	$ 1.50	$ 25.94
7th and 8th 6 months	$ 19.67	$ 5.80	$ 1.50	$ 26.97

APPRENTICE RATIO: One (1) Apprentice to every one (1) Drywall Finisher

(1) Per hour health benefit includes hospitalization, medical, life, vision and dental insurance.

Scope of work under this trade includes but is not be limited to: the preparation or leveling of any surface or substrate which is to receive a coating, finishing and/or wall covering; this will include, but not be limited to, all levels of finishing and/or spackling of all surfaces, including gypsum wallboard taping and finishing, fire taping and all fire stopping systems, glaze coatings, skim coating or any other finishing system, spotting of nails, finishing of corner beads/flex beads. Patching and sanding is within the system of preparing surface for finishes. All stucco and dryvit systems.

Victor Camps

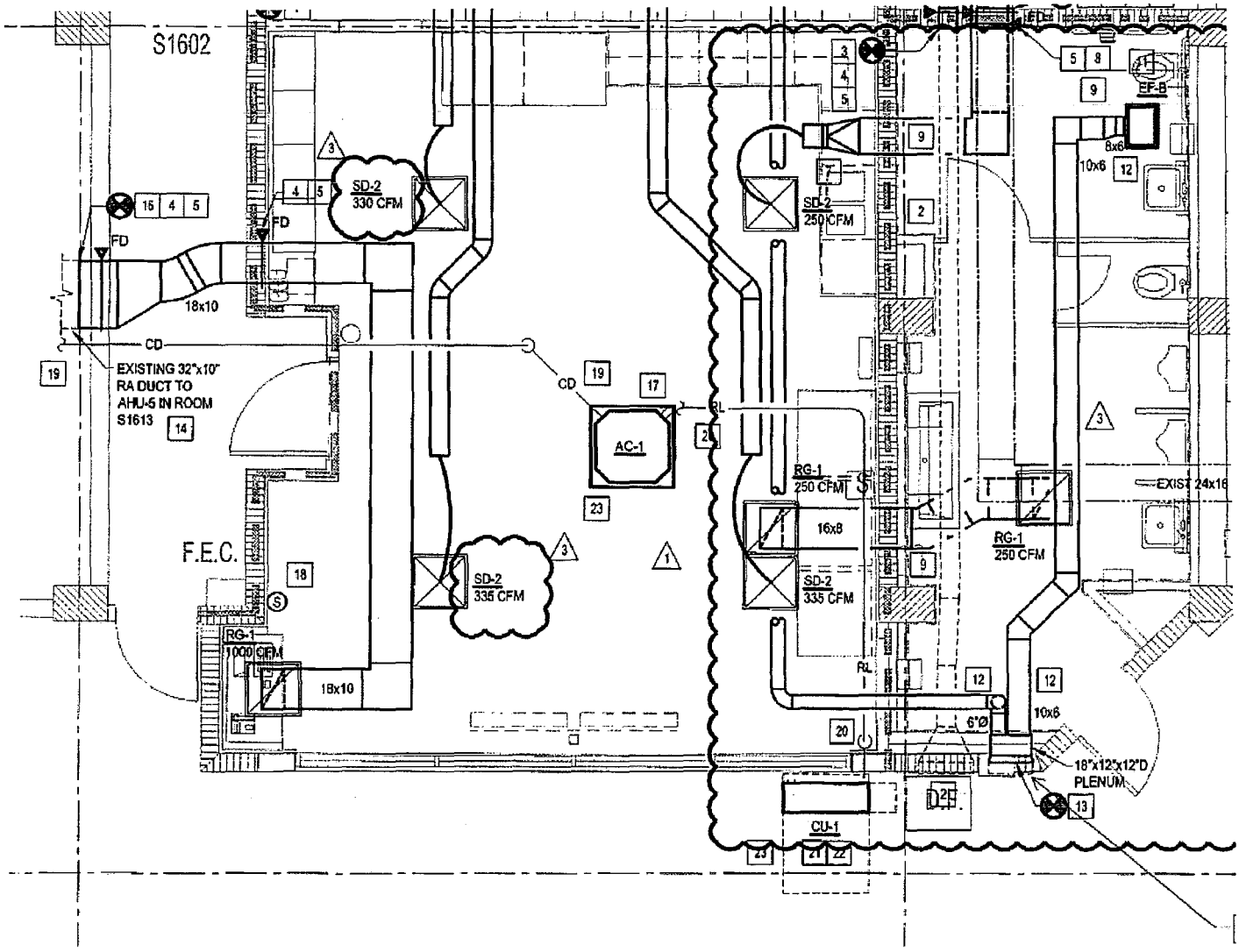
From: Alberto Garcia <Alberto@onairus.com>
Sent: Monday, April 12, 2021 2:24 PM
To: Victor Camps
Cc: Miguel A. Perez
Subject: MIA Airside RFI.

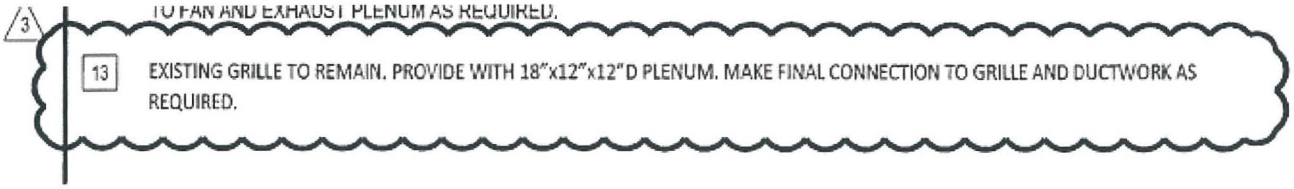
CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good afternoon Victor,

As per mechanical inspector comments today, the exhaust duct must be end on wall louver, please see attached below.

Please advise how to procced.





If you have any questions or concerns, please don't hesitate to call me.

Thank you,

Alberto Garcia

786 930 8749

877 7000 AIR

alberto@onairus.com

www.onairus.com

7337 NW 54th ST Miami, FL 33166

OnAir
MECHANICAL CONTRACTOR

e-Permitting

Search: Go

miamidade.gov

Permit Inspection History

Permit Number:	**2020039487**		
Inspector Name:	MUNOZ, MANUEL	**Request Date:**	04/12/2021
Inspection Type:	ROUGH	**Inspection Date:**	04/12/2021
Disposition:	PARTIAL APPROVAL COMPLEX STRUC	**Result Date:**	04/12/2021
Clerk Name:	MUNOZ, MANUEL	**Inspection Time:**	0
Comments:	M2.0,EXH FAN/DUCTWORK,NOTE:CHK POINT TERMINATION/LOUVER REQ		
Inspector Name:	MUNOZ, MANUEL	**Request Date:**	04/09/2021
Inspection Type:	ROUGH	**Inspection Date:**	04/09/2021
Disposition:	PARTIAL APPROVAL COMPLEX STRUC	**Result Date:**	04/09/2021
Clerk Name:	INTERNET REQUEST	**Inspection Time:**	0
Comments:	S/A,R/A,EXH DUCTWORK,PDG F/D MANUF.INSTALLATION.		
Inspector Name:	MUNOZ, MANUEL	**Request Date:**	04/08/2021
Inspection Type:	ROUGH	**Inspection Date:**	04/08/2021
Disposition:	PARTIAL APPROVAL COMPLEX STRUC	**Result Date:**	04/08/2021
Clerk Name:	INTERNET REQUEST	**Inspection Time:**	0
Comments:	CHK,F/D MANUF.INSTALLATION.		
Inspector Name:	MUNOZ, MANUEL	**Request Date:**	04/07/2020
Inspection Type:	ROUGH	**Inspection Date:**	04/07/2020
Disposition:	PARTIAL APPROVAL COMPLEX STRUC	**Result Date:**	04/07/2020
Clerk Name:	MUNOZ, MANUEL	**Inspection Time:**	0
Comments:	M2.0,S/A DUCTWORK 20X10/BRANCHES/OK TO INSULATE,PDG F/D.		

Outstanding Categories/Completion Holds Permit Status **Page: 1**

INSPECTION HISTORY INQUIRY SUCCESSFUL (NO MORE ENTRIES)

POTTORFF® SUBMITTAL

PROJECT: MIA AIRSIDE

SUBMITTED BY: eiturralde@adehvac.com
ADE Engineered Solutions of Fl
150 Albany Ave
Albany, NY 11520
PHONE: 516-568-6500
FAX: 1-516-256-3299
EMAIL: eiturralde@adehvac.com

DATE: 4/13/2021

ITEMS ENCLOSED:
Louvers
ECD-545-MD

Installation Instructions
ECD-545-MD sleeved installation

Attribute Attachments
Louvers (ECD-545-MD)

Submittal

Model ECD-545-MD

Extruded aluminum louver, 5" deep, 45 degree horizontal blade

General construction

Dimensions: Nominal (approximately 1/2" (12) undersized)
Material: Mill 6063-T5 extruded aluminum
Material thickness (in): 0.081
Frame and blade attachment: Mechanically fastened
Frame: 5" deep channel
Blade: 45° drainable style
Screen 1 configuration: Material: Aluminum; Type: Bird screen; Pattern: 1/2" x 0.063"

Options

Flange: Type: Flange frame, Width (in): 1.5
Sleeve: Sleeve, 16

Ratings

Free area: [48" x 48" (1219 x 1219) unit]: 6.7 ft² (0.62 m²) 41.9% (1 side)
Velocity @ 0.15 in.wg. Pressure Loss: 1057 fpm (5.37 m/s)
Std. Design Load: 150 psf

Listings

AMCA CRP Listing: 'Air, Water, Wind'
AMCA: 540 enhanced (impact resistant)

Performance at beginning point of water penetration

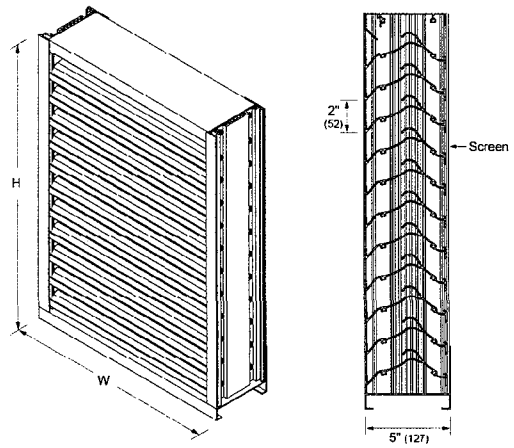
Free area velocity: 1250 fpm (6.35 m/s)
Air volume delivered: 9600 cfm (4.53 m³/s)
Pressure loss: 0.21 in.wg. (52 Pa)

Wind Driven Rain Performance – AMCA 500-L [29 mph, 3 in/hr]

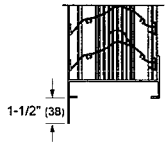
Airflow and core velocity:: 7361 CFM; 862 FPM
Effectivness Ratio (%): 99.4
Wind class: A (effectiveness, 1.000 to 0.99)
Discharge class: 2 (loss coefficient = 0.3 to 0.399)

Wind Driven Rain Performance – AMCA 500-L [50 mph, 8 in/hr]

Airflow and core velocity:: 6068 CFM; 975 FPM
Effectivness Ratio (%): 95.3
Wind class: B (effectiveness, 0.989 to 0.95)
Discharge class: 2 (loss coefficient = 0.3 to 0.399)



Model ECD-545-MD



ECD-545-MD with flange frame

Details

Line item	Tag	Qty	Louver size (in.xxxx)	Sections	Ratings			Free area		Approx. weight (lbs)
			W x H	Wide x High	CFM	FPM	PD (in.w.g.)	ft²	%	
1		1	18 x 12	1 x 1				0.31	22.1	11

This submittal sheet reflects only the construction and options selected and is not indicative of all constructions and options that are available for the product. For more information, please contact your local representative or visit us at www.pottorff.com.

Note that performance data in the details section of this submittal are calculated values, and are not AMCA certified.

Information is subject to change without notice or obligation.

Note: Dimensions in parentheses ( ) are millimeters.

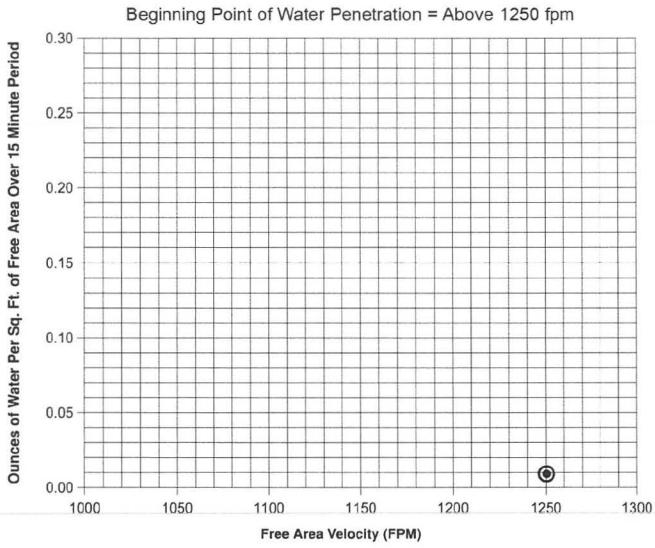
POTTORFF®

Submittal

Model ECD-545-MD
Performance

Certified Ratings:

Pottorff certifies that the model ECD-545-MD shown herein is licensed to bear the AMCA seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings seal applies to air performance and water penetration ratings.



Water penetration

AMCA defines the beginning point of water penetration as the free area velocity at the intersection of a simple linear regression of test data and the line of 0.01 ounces of water per square foot of free area and is measured through a 48" x 48" louver during a 15 minute period. The AMCA water penetration test provides a method for comparing louver models and designs as to their efficiency in resisting the penetration of rainfall under specific lab conditions. Pottorff recommends that intake louvers are selected with a reasonable margin of safety below the beginning point of water penetration in order to avoid unwanted penetration during severe storm conditions.

This submittal sheet reflects only the construction and options selected and is not indicative of all constructions and options that are available for the product. For more information, please contact your local representative or visit us at www.pottorff.com.

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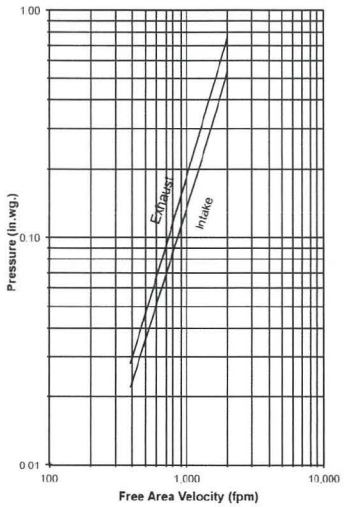
Note: Dimensions in parentheses ( ) are millimeters.



Pressure loss
Louver test size = 48" x 48" (1219 x 1219)

IMPACT RESISTANT
LOUVER
Enhanced Protection

LISTED

See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification

AMCA 540

This submittal sheet reflects only the construction and options selected and is not indicative of all constructions and options that are available for the product. For more information, please contact your local representative or visit us at www.pottorff.com.

Information is subject to change without notice or obligation.

Note: Dimensions in parentheses ( ) are millimeters.

MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

PCI Industries Inc d/b/a Pottorff
5101 Blue Mound Road
Fort Worth, TX 76106

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 ECD-545-MD Aluminum Louver w/ or w/o CD-51 Damper

APPROVAL DOCUMENT: Drawing No. **ECD-545-MD NOA**, titled "ECD-545-MD", sheets 1 through 17 of 17, dated 08/30/2018, prepared by the manufacturer, signed and sealed by Theodore Berman, P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

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, model/series, and following statement: "Miami-Dade County Product Control Approved", 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 **renews** and **revises NOA # 17-0227.07** and consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

MIAMI-DADE COUNTY APPROVED

12/27/2018

NOA No. 18-1120.06
Expiration Date: October 23, 2023
Approval Date: January 3, 2019

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. Evidence submitted under previous NOA's

A. DRAWINGS ***"Submitted under NOA # 17-0227.07"***

1. Drawing No. **ECD-545-MD NOA**, titled "ECD-545-MD", sheets 1 through 19 of 19, dated 05/08/2014, with revision 3 dated 01/26/2017, prepared by the manufacturer, signed and sealed by L. David Rice, P.E.

B. TESTS ***"Submitted under NOA # 14-0714.03"***

1. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with installation diagram of Model ECD-545-MD Aluminum Louvers, prepared by Architectural Testing, Inc, Test Report No. **C8133.01-801-18**, dated 04/10/2014, with revision 2 dated 01/27/2015, signed and sealed by Shawn G. Collins, P.E.
2. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with installation diagram of Model ECD-545-MD Aluminum Louvers, prepared by Architectural Testing, Inc, Test Report No. **C8133.01-801-18**, dated 04/10/2014, signed and sealed by Vinu J. Abraham, P.E.
3. Test report on High Velocity Wind Driven Rain Resistance per AMCA 550-09 of a Model ECD-545-MD Aluminum Louver, prepared by Architectural Testing, Inc, Test Report No. **C3811.01-801-18**, dated 12/18/2012, signed and sealed by Vinu J. Abraham, P.E.

"Submitted under NOA # 11-0429.04"

4. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with installation diagram of a Model ECD-545-MD Aluminum Louver, prepared by Architectural Testing, Inc, Test Report No. **A1620.01-801-18**, dated 10/18/2010, signed and sealed by Joseph A. Reed, P.E.

"Submitted under NOA # 09-1015.08"

5. Test report on Wind Driven Rain Resistance per FBC TAS 100(A)-95 (modified by Checklist # 0240) along with marked-up drawings and installation diagram of Model ECD-545-MD Fixed Aluminum Louver with a CD-55 Damper, prepared by Architectural Testing, Inc, Test Report No. **92027.01-109-18**, dated 09/09/2009, with Revision 1 dated 01/11/2010, signed and sealed by Michael D. Stremmel, P.E.

12/27/2018

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 18-1120.06
Expiration Date: October 23, 2023
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS (Cont.)

"Submitted under NOA # 08-0528.04"

6. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of Model ECD-545-MD Aluminum Louver, prepared by Hurricane Test Laboratory, LLC, Test Report No. **HTL-0399-0116-07**, dated 02/27/2008, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS *"Submitted under NOA # 14-0714.03"*

1. ECD-545-MD Louver calculations prepared by Rice Engineering, dated 01/21/2015, signed and sealed by L. David Rice, P.E.

"Submitted under NOA # 11-0429.04"

2. ECD-545-MD Louver calculations prepared by Rice Engineering, dated 04/21/2011, signed and sealed by L. David Rice, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS *"Submitted under NOA # 15-0428.02"*

1. Statement letter of code conformance to the 5th edition (2014) FBC issued by Rice Engineering, dated 04/17/2015, signed and sealed by L. David Rice, P.E.

"Submitted under NOA # 14-0714.03"

2. Statement letter of code conformance to 2010 FBC issued by Rice Engineering, dated 11/13/2013, signed and sealed by L. David Rice, P.E.

3. No financial interest letter issued by Rice Engineering, dated 03/30/2011, signed and sealed by L. David Rice, P.E.

12/27/2018

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 18-1120.06
Expiration Date: October 23, 2023
Approval Date: January 3, 2019

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. New evidence submitted

A. DRAWINGS

1. Drawing No. **ECD-545-MD NOA**, titled "ECD-545-MD", sheets 1 through 17 of 17, dated 08/30/2018, prepared by the manufacturer, signed and sealed by Theodore Berman, P.E.

B. TESTS

1. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94 (Missile Level 'E')
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with installation diagram of Model ECD-545-MD Aluminum Louvers, prepared by UL LLC, Test Report No. **SV30902-20180808**, dated 09/13/2018, signed and sealed by Alexis Spyrou, P.E.
2. Test report on Wind Driven Rain Resistance per FBC TAS 100(A)-95 on an ECD-545-MD Louver with a CD-51 Damper, prepared by Intertek, Test Report No. **I8042.01-801-44 R0**, dated 09/05/2018, signed and sealed by Tyler Westerling, P.E.
3. Test report on Wind Driven Rain Resistance per FBC AMCA 550-15 on an ECD-545-MD Louver with a CD-51 Damper, prepared by Intertek, Test Report No. **I8042.02-801-44 R0**, dated 09/07/2018, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS

1. ECD-545-MD louver structural calculations prepared by the manufacturer, dated 07/17/2018, signed and sealed by Theodore Berman, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

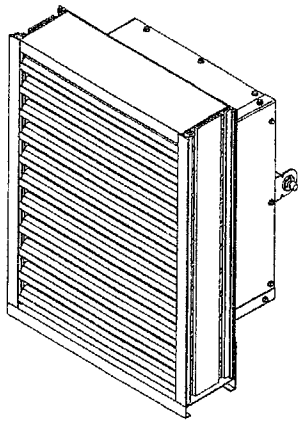
1. Statement letter of code conformance to the 6th edition (2017) FBC and of no financial interest, dated 12/19/2018, issued, signed and sealed by Theodore Berman, P.E.

12/27/2018

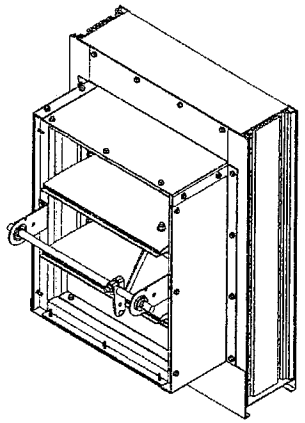
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 18-1120.06
Expiration Date: October 23, 2023
Approval Date: January 3, 2019

NOTES:

1. THIS NOA DRAWING INCLUDES INSTALLATION DETAILS TO ATTAIN MAXIMUM DESIGN PRESSURES OF 150 PSF AS TESTED IN ACCORDANCE WITH PROTOCOLS TAS 201 (LARGE MISSILE IMPACT), TAS 202 (STATIC WIND PRESSURE), AND TAS 203 (CYCLIC WIND PRESSURE) FOR USE WITHIN HIGH VELOCITY HURRICANE-AFFECTED ZONES DEFINED BY THE FLORIDA BUILDING CODE. THE INSTALLATION OF AN OPTIONAL CD-51 DAMPER YIELDS WATER INGRESS PROTECTION AS TESTED IN ACCORDANCE WITH AMCA 550 AND TAS 100(A).
2. ALL VARIATIONS ARE LARGE MISSILE IMPACT RESISTANT.
3. UNITS OF MEASURE ARE FRACTIONAL INCHES UNLESS OTHERWISE SPECIFIED.
4. IT IS ASSUMED THAT THE LOUVER SYSTEMS DO NOT SUPPORT ANY LOADS TRANSFERRED FROM THE BUILDING CONDITION.
5. IT IS ASSUMED THAT THE BUILDING CONDITIONS ARE ADEQUATELY DESIGNED TO SUPPORT LOADS IMPARTED BY THE LOUVER SYSTEM.
6. TO PREVENT GALVANIC CORROSION, ELECTROCHEMICALLY DISSIMILAR MATERIALS IN CONTACT WITH ONE ANOTHER SHALL BE PROTECTED BY PAINT, GASKETING, OR OTHER MEANS PER THE FLORIDA BUILDING CODE.
7. WATER PENETRATION:
   a. WHEN LOUVERS ARE INSTALLED WITHOUT THE OPTIONAL CD-51 DAMPER, THE ROOM BEHIND THE LOUVER MUST BE DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM MUST HOUSE WATER-RESISTANT/WATERPROOF EQUIPMENT, COMPONENTS, OR SUPPLIES.
   b. ADDITIONAL PROTECTION FROM WATER INGRESS IS NOT NECESSARY WHEN LOUVERS ARE INSTALLED WITH CD-51 DAMPERS AND THE DAMPERS ARE CLOSED.
8. OTHER BUILDING CONDITIONS THAN THOSE DENOTED MAY BE UTILIZED IF ANALYZED AND APPROVED BY A PROFESSIONAL ENGINEER.
9. MULTI-SECTION WIDE AND HIGH LOUVER SYSTEMS ARE ALLOWABLE PROVIDED THE INDIVIDUAL SECTIONS ARE SUPPORTED PER THE DETAILS ON THIS DRAWING AND A SUITABLE SUPPORT STRUCTURE IS ANALYZED AND APPROVED BY A PROFESSIONAL ENGINEER.



EXTERIOR VIEW
W/ OPTIONAL DAMPER



INTERIOR VIEW
W/ OPTIONAL DAMPER

TABLE 1		
SINGLE SECTION SIZE LIMITATIONS		
MAX DESIGN PRESSURE	MIN (W X H)	MAX (W X H)
150 PSF	6" X 6" STANDARD 10" X 14" W/ DAMPER	60" X 144"

TABLE 2	
MULTIPLE SECTION SIZE LIMITATIONS (MAX DESIGN PRESSURE: 150 PSF)	
SINGLE SECTION HIGH - UNLIMITED WIDTH	SEE SHEET #4
SINGLE SECTION WIDE - UNLIMITED HEIGHT	SEE SHEET #12

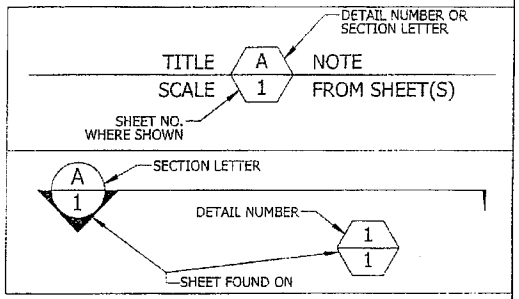


TABLE 3					
ANCHOR SCHEDULE					
SUBSTRATE	LOCATION	ANCHOR TYPE	MIN. EMBEDMENT	MIN. EDGE DISTANCE	SPACING
CONCRETE (f'c ≥ 4000 PSI)	JAMBS	3/8" X 3 1/2" HILTI KWIK HUS-EZ SCREW ANCHOR (F-7)	3 1/4"	1 5/8"	10"
	MULLIONS (WALL DEPTH < 12 3/8")	5/8" X 4" HILTI KWIK HUS-EZ SCREW ANCHOR (F-8)	3 1/4"	2 1/2"	7"
	MULLIONS (WALL DEPTH ≥ 12 3/8")	5/8" X 5 1/2" HILTI KWIK HUS-EZ SCREW ANCHOR (F-9)	5"	5 5/8"	9"
GROUT FILLED CMU (f'm ≥ 1500 PSI)	JAMBS	3/8" X 3 1/2" HILTI KWIK HUS-EZ SCREW ANCHOR (F-7)	3 1/4"	1 5/8"	8"
	MULLIONS	1/2" X 5" HILTI KWIK HUS-EZ SCREW ANCHOR (F-10)	4 1/4"	4"	7 3/8"
STRUCTURAL STEEL (MIN. 3/16" THICK, Fy ≥ 36 KSI)	JAMBS	1/4" X 1" SELF-DRILLING SCREW (F-11)	FULL	1/2"	8"
	MULLIONS	1/4" X 1" SELF-DRILLING SCREW (F-11); TWELVE (12) FASTENERS PER CONNECTION	FULL	1/2"	3/4"
STEEL STUD (MIN. 12 GA, Fy ≥ 50 KSI)	JAMBS	1/4" X 1" SELF-DRILLING SCREW (F-11)	FULL	1/2"	8"
	MULLIONS	1/4" X 1" SELF-DRILLING SCREW (F-11); TWELVE (12) FASTENERS PER CONNECTION	FULL	1/2"	3/4"
WOOD (S.G. ≥ 0.43)	JAMBS	1/2" X 3 1/2" LAG BOLT WITH FLAT WASHER (F-12)	3"	2"	10"
	MULLIONS	1/2" X 3 1/2" LAG BOLT WITH FLAT WASHER (F-12); TWELVE ANCHORS PER CONNECTION	3"	2"	2 1/2"

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN LICENSE No 09814 STATE OF FLORIDA PROFESSIONAL ENGINEER

10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.
TOLERANCE UNLESS NOTED:
X.X ±0.050
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

5101 Blue Mound Road
Fort Worth, Texas 76106
Phone: 817-509-2300
Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: COVER SHEET			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 1 of 17	SCALE: NONE		ECD-545-MD NOA

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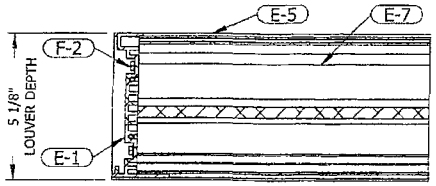
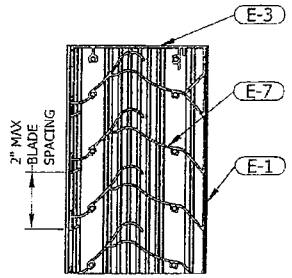
GENERAL LOUVER ASSEMBLY

SECTION VIEW (B/2) GENERAL ASSEMBLY
SCALE: 3/4" = 1'-0" 2



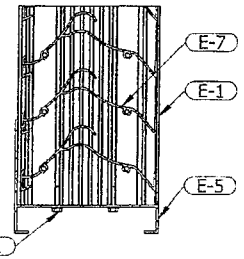
CONSTRUCTION (1/2) DETAIL
3"=1'-0" 2

IN FLANGED CONFIGURATIONS:
E-2 WILL BE USED IN PLACE OF E-1
E-6 WILL BE USED IN PLACE OF E-5



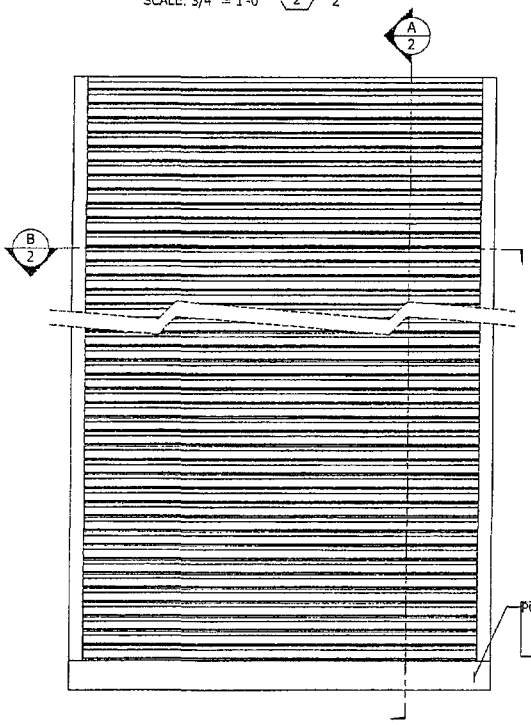
CONSTRUCTION (2/2) DETAIL
3"=1'-0" 2

IN FLANGED CONFIGURATIONS:
E-2 WILL BE USED IN PLACE OF E-1
E-4 WILL BE USED IN PLACE OF E-3



CONSTRUCTION (3/2) DETAIL
3"=1'-0" 2

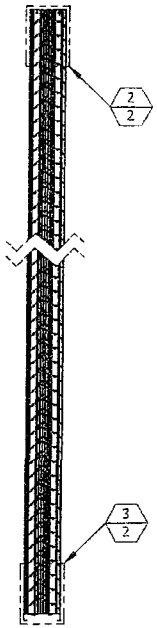
IN FLANGED CONFIGURATIONS:
E-2 WILL BE USED IN PLACE OF E-1
E-6 WILL BE USED IN PLACE OF E-5



INTERIOR ELEVATION

ENGRAVED LABEL DETAIL

PCI Industries Inc DBA	Miami Dade County
POTTORFF	Product Control
Ft Worth TX	Approved
SO #123456	



SECTION VIEW (A/2) GENERAL ASSEMBLY
3/4"=1'-0" 2

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN LICENSE No 09814 STATE OF FLORIDA PROFESSIONAL ENGINEER

16/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.
TOLERANCE UNLESS NOTED:
X.X ±0.060
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

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Fort Worth, Texas 76106
Phone: 817-509-2300
Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: GENERAL LOUVER ASSEMBLY			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 2 of 17	SCALE: 3/4"=1'-0"		ECD-545-MD NOA

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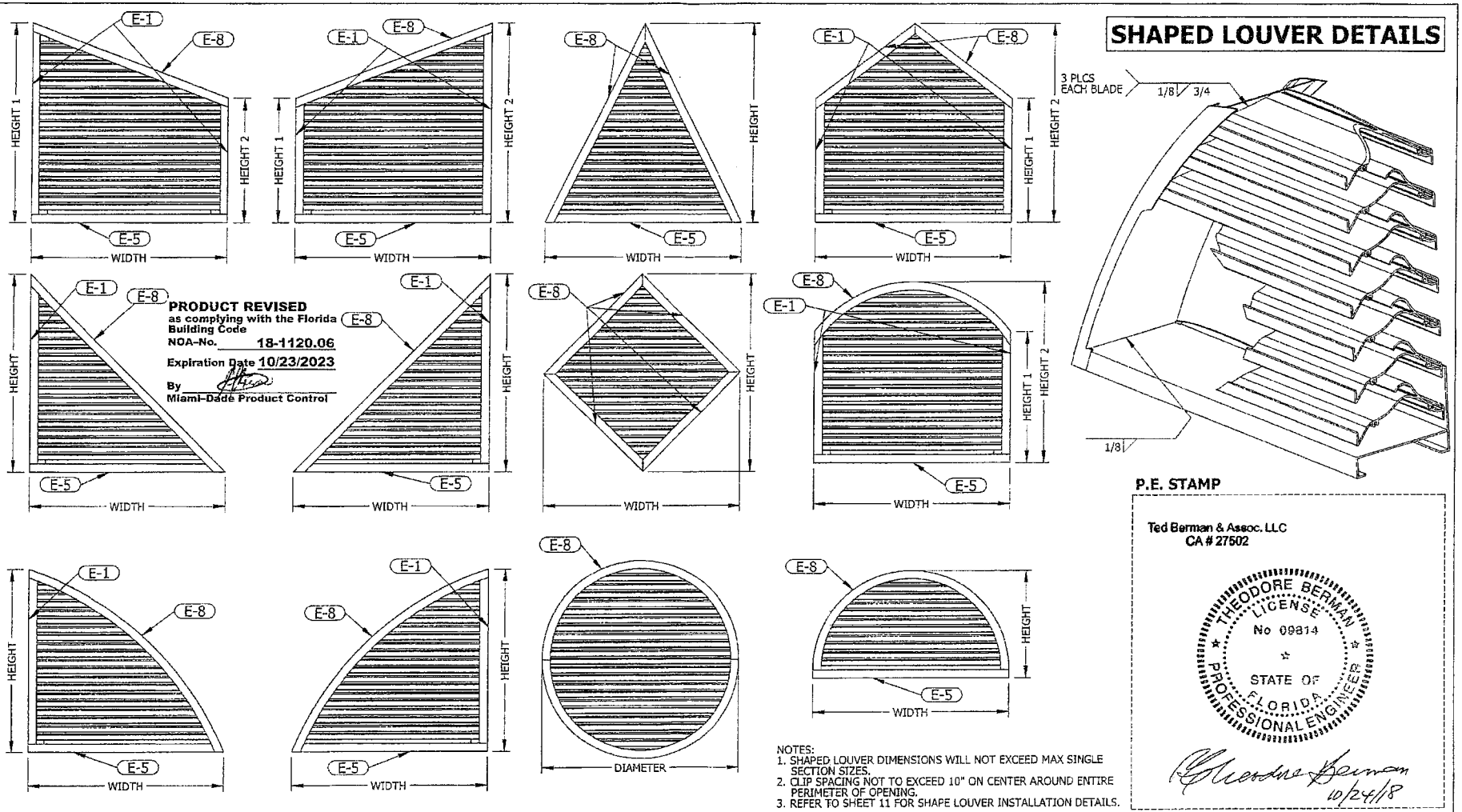
SHAPED LOUVER DETAILS



PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

NOTES:
1. SHAPED LOUVER DIMENSIONS WILL NOT EXCEED MAX SINGLE SECTION SIZES.
2. CLIP SPACING NOT TO EXCEED 10" ON CENTER AROUND ENTIRE PERIMETER OF OPENING.
3. REFER TO SHEET 11 FOR SHAPE LOUVER INSTALLATION DETAILS.

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN LICENSE No 09814 STATE OF FLORIDA PROFESSIONAL ENGINEER

10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.

TOLERANCE UNLESS NOTED:
X.X ±0.060
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16

MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

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Fort Worth, Texas 76106
Phone: 817-509-2300
Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS **POTTORFF**

DRAWING DESCR: SHAPED LOUVER DETAILS			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 3 of 17	SCALE: NONE		ECD-545-MD NOA

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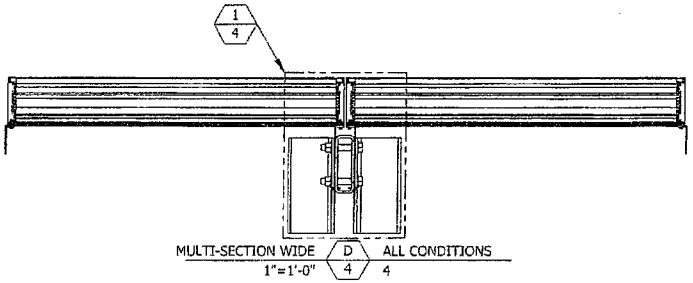
GENERAL MULLION DETAILS



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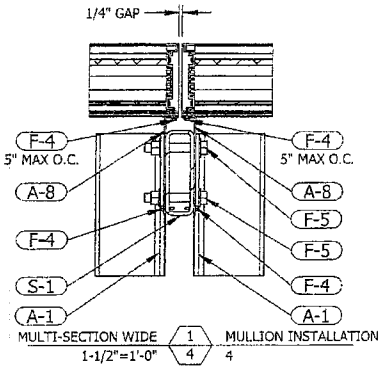
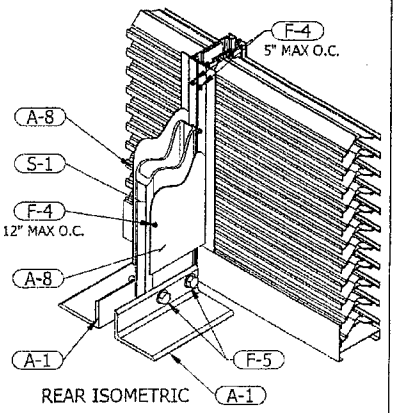
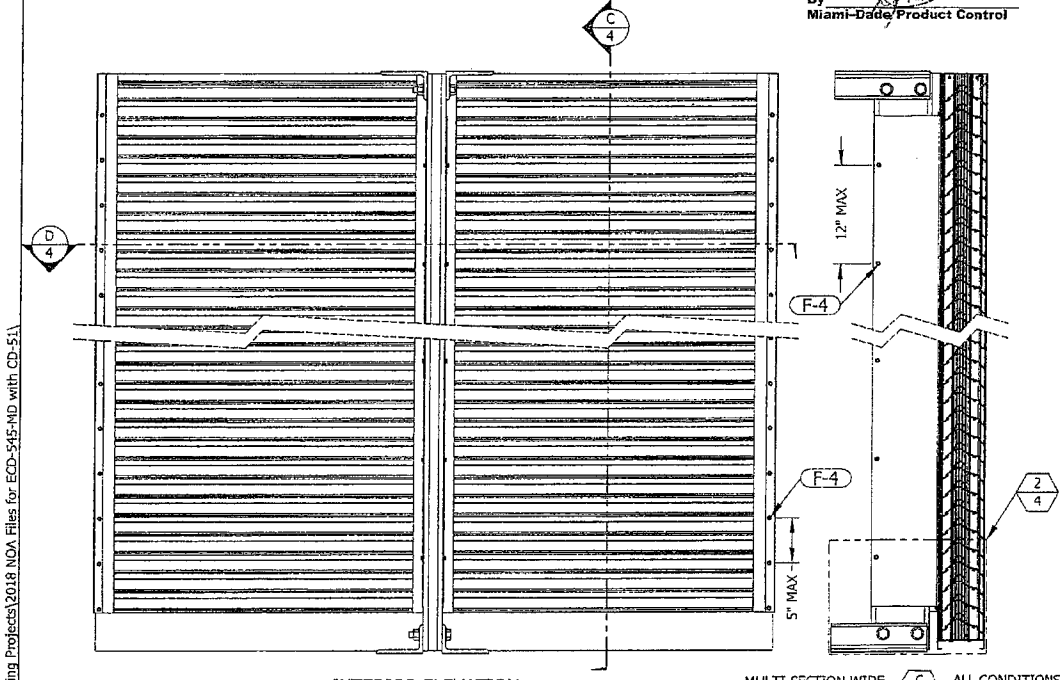


QUANTITY SECTIONS WIDE IS UNLIMITED

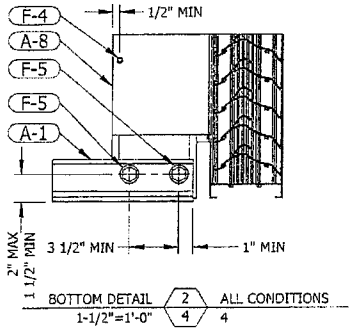


REAR ISOMETRIC



INTERIOR ELEVATION
QUANTITY SECTIONS WIDE IS UNLIMITED

MULTI-SECTION WIDE
1"=1'-0"
C
4
ALL CONDITIONS
4



BOTTOM DETAIL
1-1/2"=1'-0"
2
4
ALL CONDITIONS
4

TOP CONNECTION SIMILAR

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN
LICENSE
No 09814
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.
TOLERANCE UNLESS NOTED:
X.X ±0.060
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT:
15% OF MATERIAL THICKNESS

5101 Blue Mound Road
Fort Worth, Texas 76106
Phone: 817-509-2300
Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF®

DRAWING DESCR: GENERAL MULLION DETAILS			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 4 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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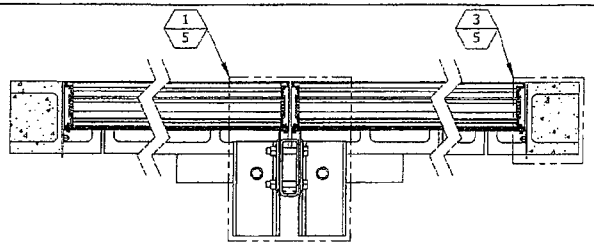
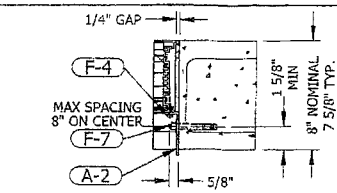
GROUT FILLED CMU CONDITION

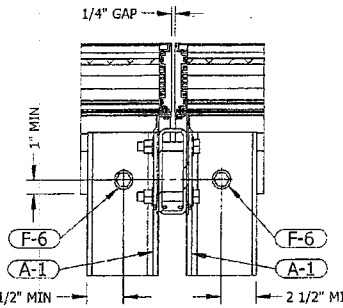


SECTION VIEW (F / 5) 1"=1'-0" — GROUT FILLED CMU 5



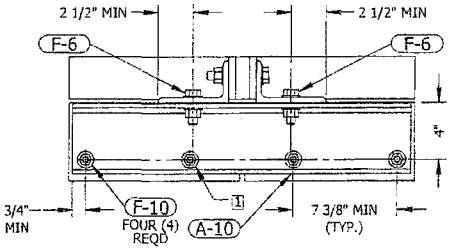
JAMB DETAIL (3 / 5) 1-1/2"=1'-0" — GROUT FILLED CMU 5

TYPICAL OPP. HAND



MULLION INSTALLATION (1 / 5) 1-1/2"=1'-0" — GROUT FILLED CMU 5

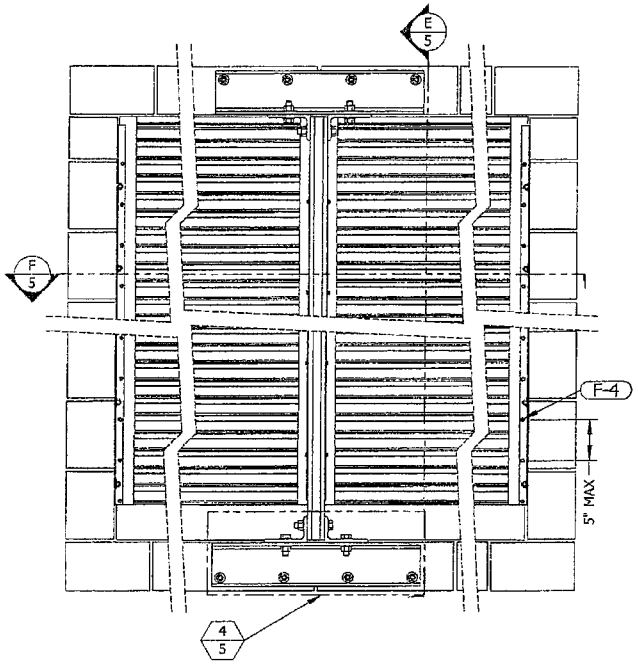
QUANTITY SECTIONS WIDE IS UNLIMITED



MULLION INSTALLATION (4 / 5) 1-1/2"=1'-0" — GROUT FILLED CMU 5

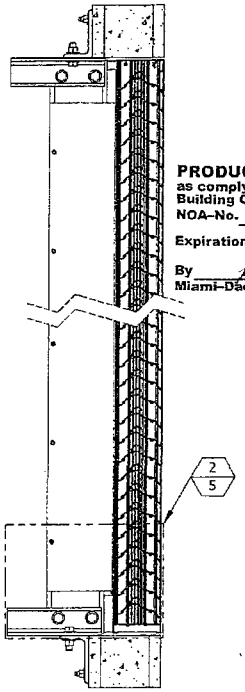
TOP CONNECTION SIMILAR

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

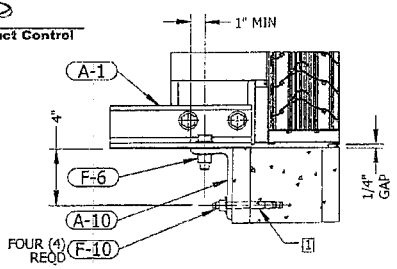


INTERIOR ELEVATION

QUANTITY SECTIONS WIDE IS UNLIMITED



SECTION VIEW (E / 5) 1"=1'-0" — GROUT FILLED CMU 5



BOTTOM DETAIL (2 / 5) 1-1/2"=1'-0" — GROUT FILLED CMU 5

TOP CONNECTION SIMILAR

NOTES:
1. NO ANCHOR MAY BE LOCATED CLOSER THAN 1-1/4" TO A VERTICAL JOINT BETWEEN CMU BLOCKS.

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN LICENSE No 09814 STATE OF FLORIDA PROFESSIONAL ENGINEER

10/24/18

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1	INITIAL RELEASE	8/30/2018	LGH

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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF®

DRAWING DESCR: GROUT FILLED CMU CONDITION			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 5 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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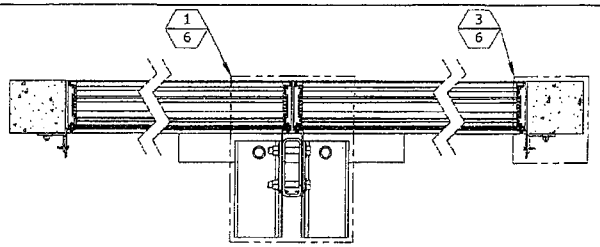
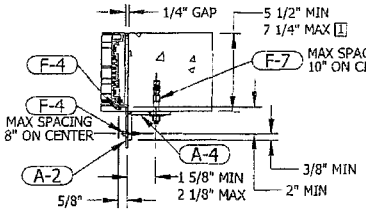
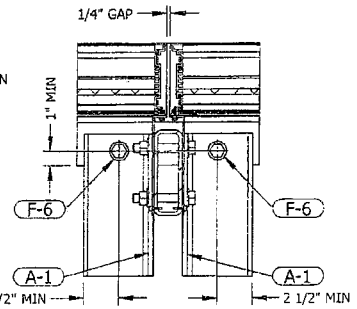
CONCRETE CONDITION TENSION CONNECTION



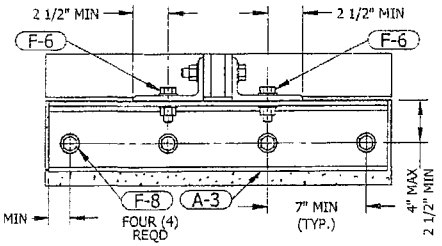
SECTION VIEW H 6 TENSION 6
1"=1'-0"



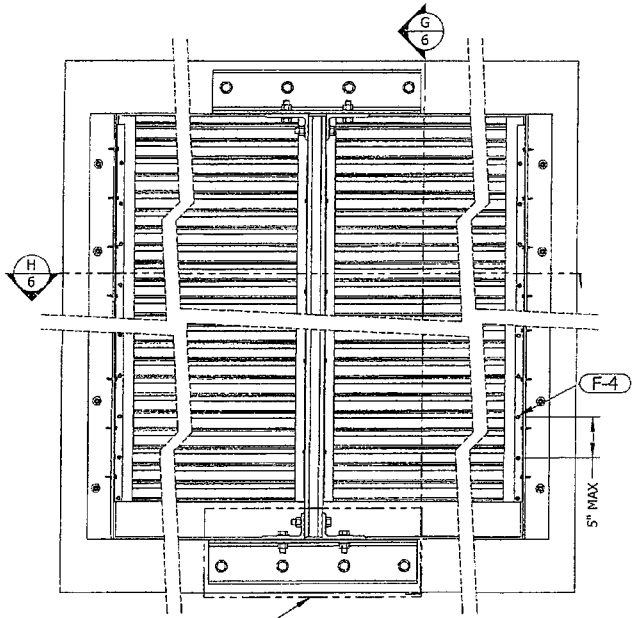
JAMB DETAIL 3 6 TENSION 6
1-1/2"=1'-0"
TYPICAL OPP. HAND



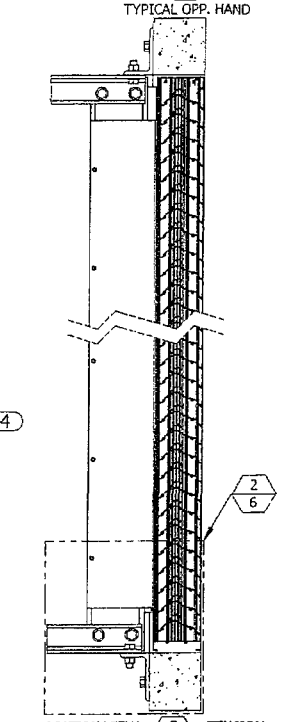
MULLION INSTALLATION 1 6 TENSION 6
1-1/2"=1'-0"
QUANTITY SECTIONS WIDE IS UNLIMITED



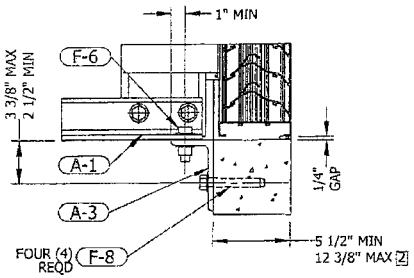
MULLION INSTALLATION 4 6 TENSION 6
1-1/2"=1'-0"
TOP CONNECTION SIMILAR



INTERIOR ELEVATION
QUANTITY SECTIONS WIDE IS UNLIMITED



SECTION VIEW G 6 TENSION 6
1"=1'-0"



BOTTOM DETAIL 2 6 TENSION 6
1-1/2"=1'-0"
TOP CONNECTION SIMILAR

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By Miami-Dade Product Control

P.E. STAMP

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CA # 27502

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10/24/18

NOTES:
1. SEE SHEET 7 FOR SHEAR CONNECTION DETAILS WHEN CONCRETE CONDITION AT JAMB > 7 1/4" THICK.
2. SEE SHEET 7 FOR SHEAR CONNECTION DETAILS WHEN CONCRETE CONDITION AT MULLION > 12 3/8" THICK.

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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: CONCRETE CONDITION TENSION CONNECTION			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 6 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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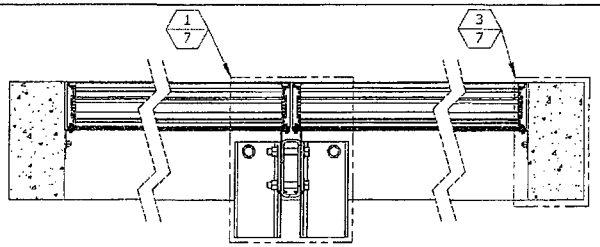
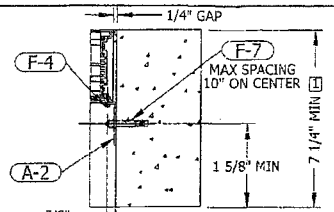
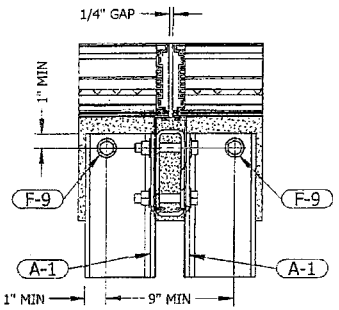
CONCRETE CONDITION SHEAR CONNECTION



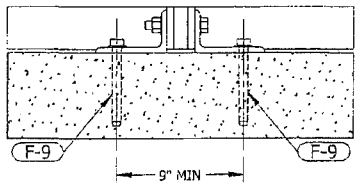
SECTION VIEW K 7 SHEAR
1"=1'-0" 7



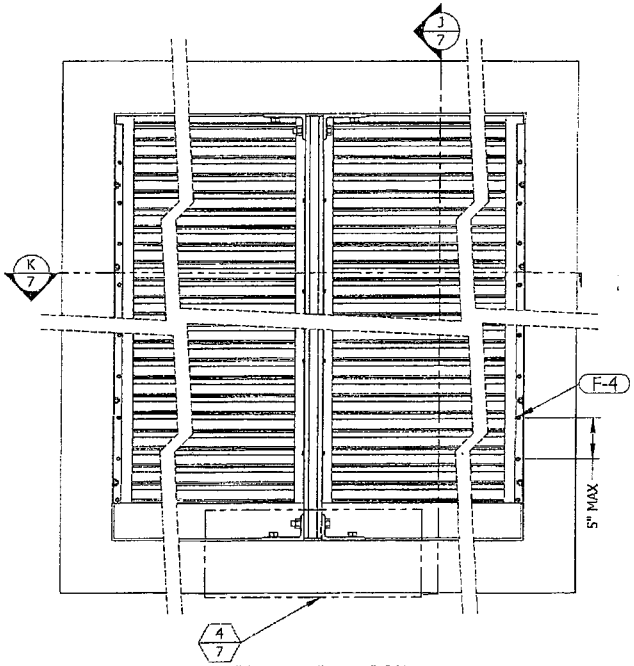
JAMB DETAIL 3 7 SHEAR
1-1/2"=1'-0" 7
TYPICAL OPP. HAND



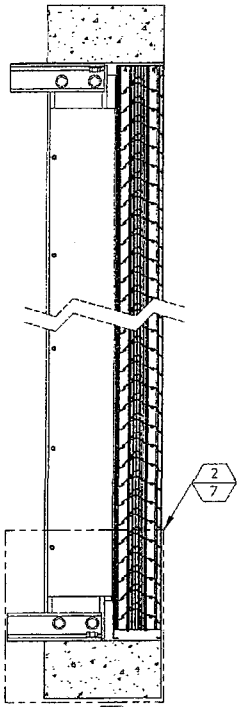
MULLION INSTALLATION 1 7 SHEAR
1-1/2"=1'-0" 7
QUANTITY SECTIONS WIDE IS UNLIMITED



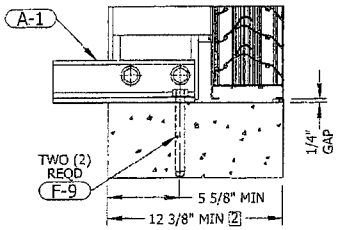
MULLION INSTALLATION 4 7 SHEAR
1-1/2"=1'-0" 7
TOP CONNECTION SIMILAR



INTERIOR ELEVATION
QUANTITY SECTIONS WIDE IS UNLIMITED



SECTION VIEW J 7 SHEAR
1"=1'-0" 7



BOTTOM DETAIL 2 7 SHEAR
1-1/2"=1'-0" 7
TOP CONNECTION SIMILAR

PRODUCT REVISED
as complying with the Florida Building Code
NOA No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

NOTES:
[1] SEE SHEET 6 FOR TENSION CONNECTION DETAILS WHEN CONCRETE CONDITION AT JAMB ≤ 7 1/4" THICK.
[2] SEE SHEET 6 FOR TENSION CONNECTION DETAILS WHEN CONCRETE CONDITION AT MULLION ≤ 12 3/8" THICK.

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1	INITIAL RELEASE	8/30/2018	LGH

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ANGLE ±1°
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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: CONCRETE CONDITION SHEAR CONNECTION			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 7 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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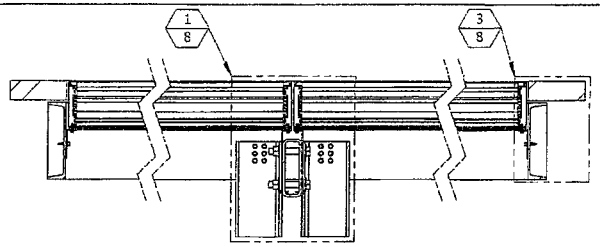
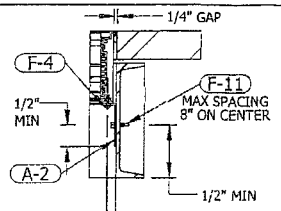
STEEL CONDITION

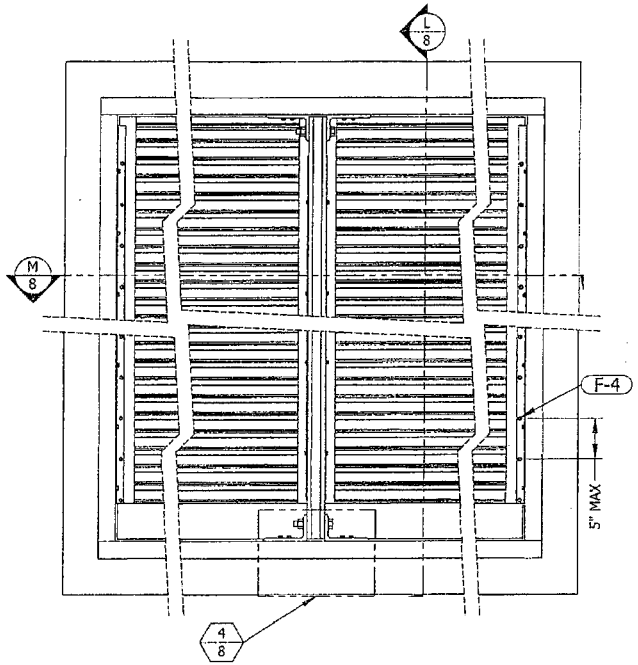
PRODUCT REVISED
as complying with the Florida Building Code
NOA No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control



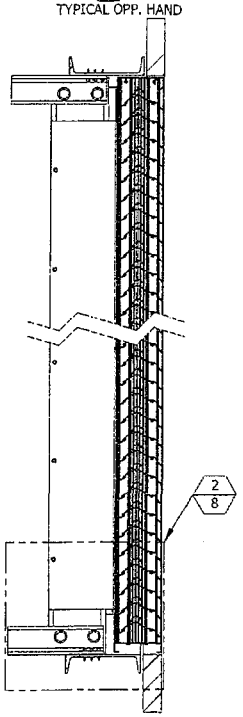
SECTION VIEW M/8 STEEL
1"=1'-0" 8/8



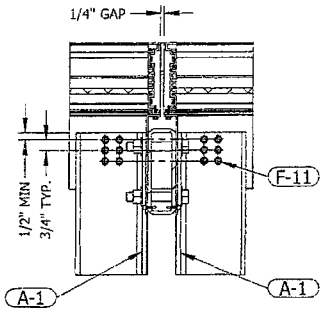
JAMB DETAIL 3/8 STEEL
1-1/2"=1'-0" 8/8
TYPICAL OPP. HAND



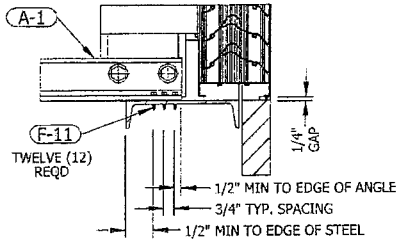
INTERIOR ELEVATION
QUANTITY SECTIONS WIDE IS UNLIMITED



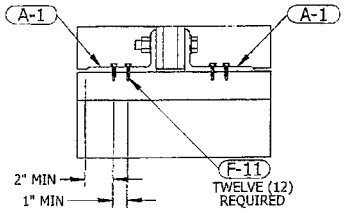
SECTION VIEW L/8 STEEL
1"=1'-0" 8/8



MULLION INSTALLATION 1/8 STEEL
1-1/2"=1'-0" 8/8
QUANTITY SECTIONS WIDE IS UNLIMITED



BOTTOM DETAIL 2/8 STEEL
1-1/2"=1'-0" 8/8
TOP CONNECTION SIMILAR



MULLION INSTALLATION 4/8 STEEL
1-1/2"=1'-0" 8/8
TOP CONNECTION SIMILAR

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THIRD ANGLE PROJECTION

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DRAWING DESCR: STEEL CONDITION			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 8 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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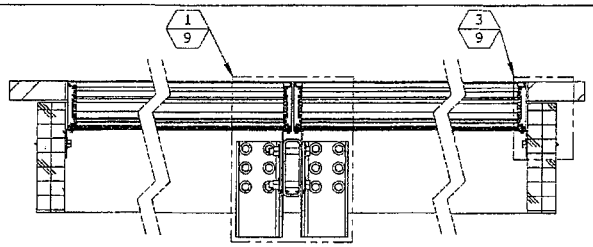
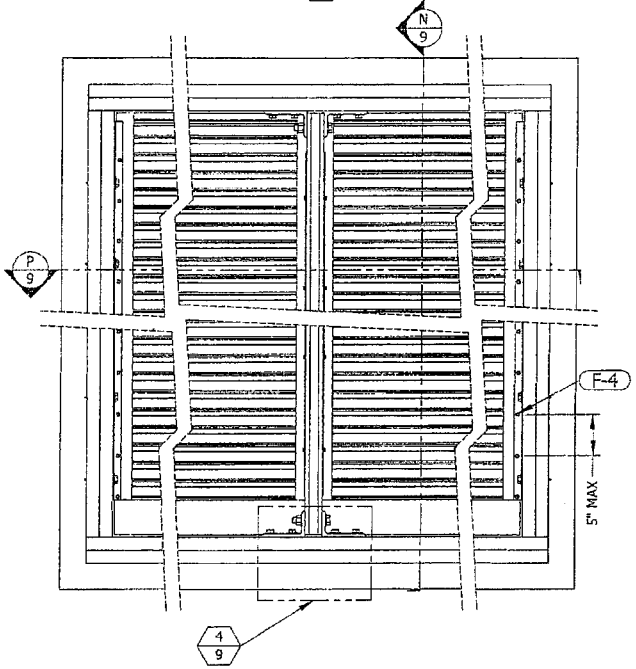
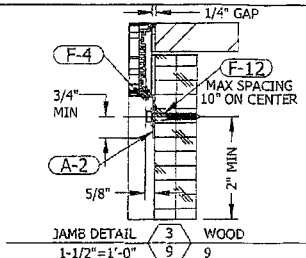
WOOD CONDITION



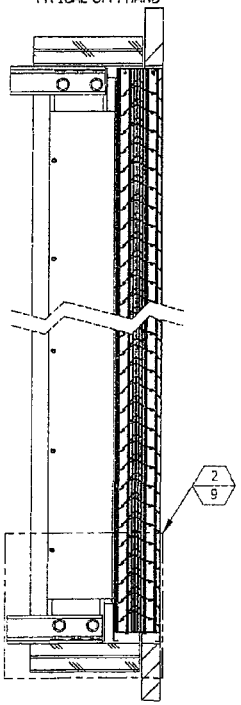
SECTION VIEW P 9 WOOD
1"=1'-0" 9



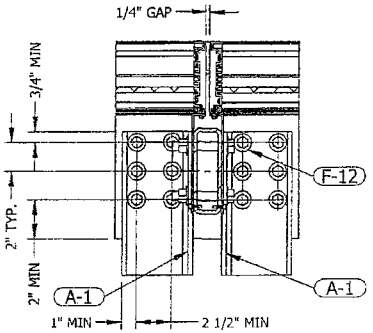
INTERIOR ELEVATION
QUANTITY SECTIONS WIDE IS UNLIMITED



JAMB DETAIL 3 9 WOOD
1-1/2"=1'-0" 9
TYPICAL OPP. HAND

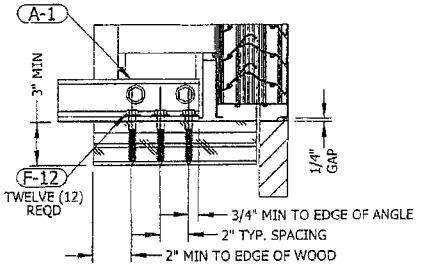


SECTION VIEW N 9 WOOD
1"=1'-0" 9



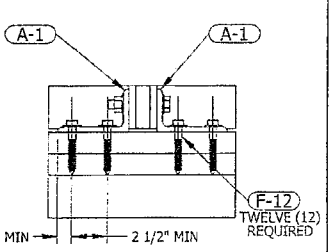
MULLION INSTALLATION 1 9 WOOD
1-1/2"=1'-0" 9

QUANTITY SECTIONS WIDE IS UNLIMITED



BOTTOM DETAIL 2 9 WOOD
1-1/2"=1'-0" 9

TOP CONNECTION SIMILAR



MULLION INSTALLATION 4 9 WOOD
1-1/2"=1'-0" 9

TOP CONNECTION SIMILAR

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By Miami-Dade Product Control

P.E. STAMP

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10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.
TOLERANCE UNLESS NOTED:
X.X ±0.060
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

5101 Blue Mound Road
Fort Worth, Texas 76106
Phone: 817-509-2300
Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: WOOD CONDITION			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 9 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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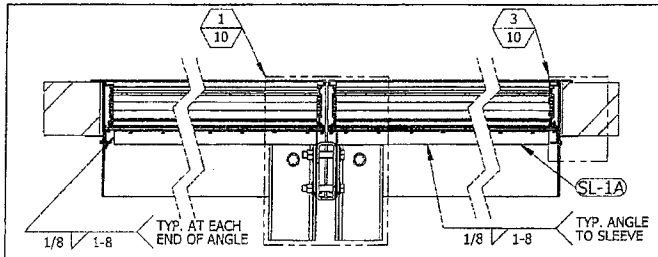
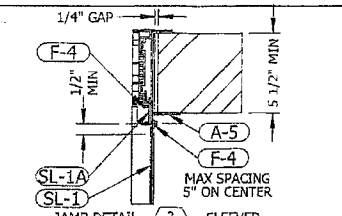
PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

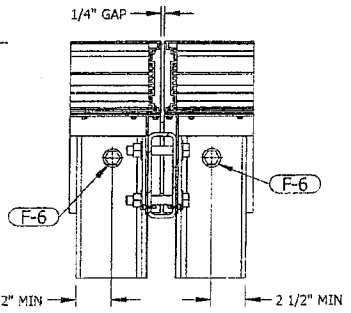
SLEEVED





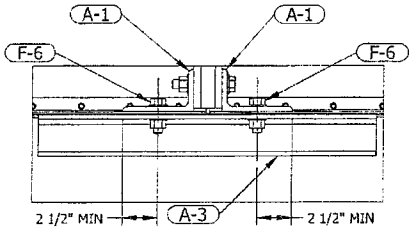
JAMB DETAIL 3/10 SLEEVED 10
1-1/2"=1'-0"

TYPICAL OPP. HAND



MULLION INSTALLATION 1/10 SLEEVED 10
1-1/2"=1'-0"

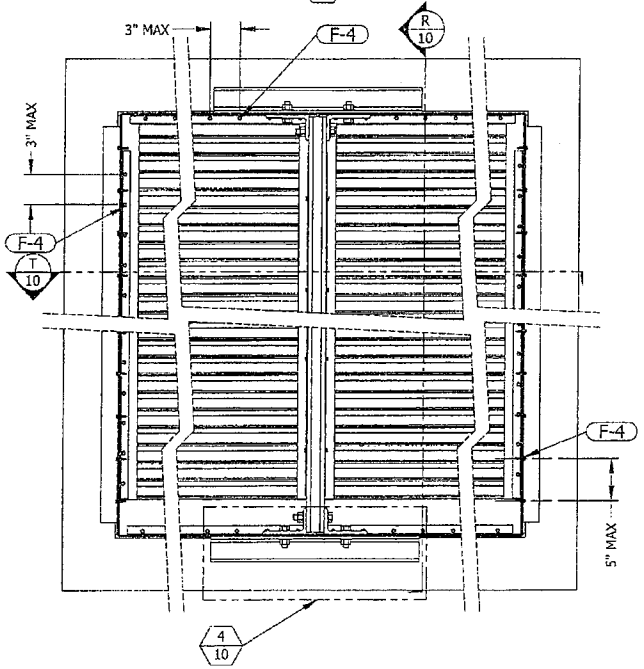
QUANTITY SECTIONS WIDE IS UNLIMITED



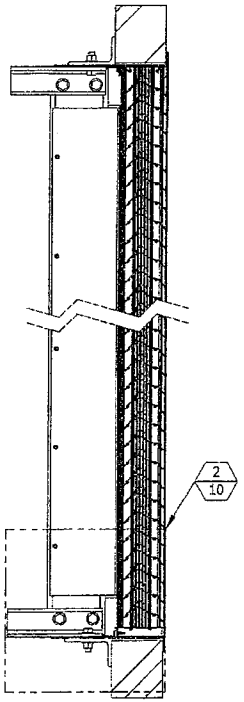
MULLION INSTALLATION 4/10 SLEEVED 10
1-1/2"=1'-0"

TOP CONNECTION SIMILAR

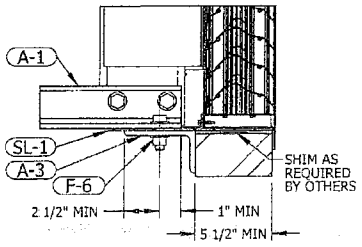
SECTION VIEW T/10 SLEEVED 10
1"=1'-0"



INTERIOR ELEVATION
QUANTITY SECTIONS WIDE IS UNLIMITED



SECTION VIEW R/10 SLEEVED 10
1"=1'-0"



BOTTOM DETAIL 2/10 SLEEVED 10
1-1/2"=1'-0"

TOP CONNECTION SIMILAR

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CA # 27502

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10/24/18

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X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

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Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: SLEEVED			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 10 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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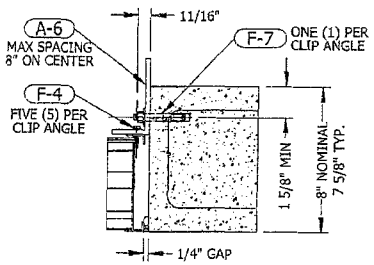
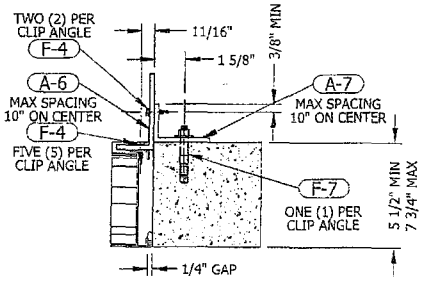
SPECIAL SHAPES INSTALLATION



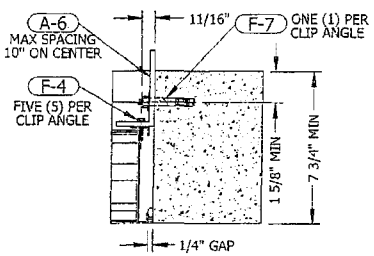
SPECIAL SHAPE 1 / 11 JAMB CONNECTION 11
SCALE 1-1/2"=1'-0"

GROUT FILLED CMU



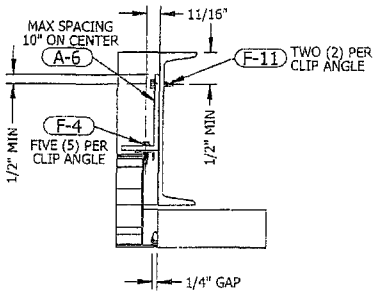
SPECIAL SHAPE 2 / 11 JAMB CONNECTION 11
SCALE 1-1/2"=1'-0"

CONCRETE ≤ 7 3/4" THICK



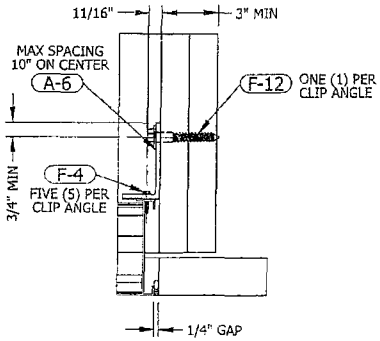
SPECIAL SHAPE 3 / 11 JAMB CONNECTION 11
SCALE 1-1/2"=1'-0"

CONCRETE ≥ 7 3/4" THICK



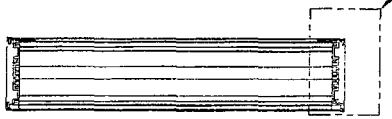
SPECIAL SHAPE 4 / 11 JAMB CONNECTION 11
SCALE 1-1/2"=1'-0"

STEEL

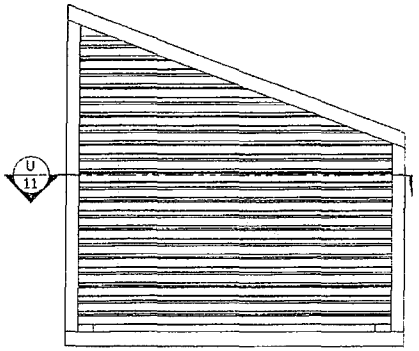


SPECIAL SHAPE 5 / 11 JAMB CONNECTION 11
SCALE 1-1/2"=1'-0"

WOOD



SECTION VIEW U / 11 SHAPES 11
1-1/2"=1'-0"



GENERIC SHAPE SHOWN
INSTALLATION FOR ALL SHAPES SIMILAR

PRODUCT REVISED
as complying with the Florida Building Code
NOA No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

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10/24/18

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X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: SPECIAL SHAPES INSTALLATION			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 11 of 17	SCALE: 1-1/2"=1'-0"		ECD-545-MD NOA

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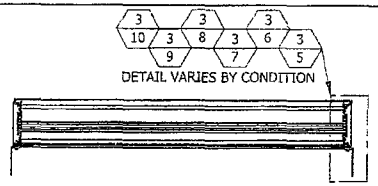
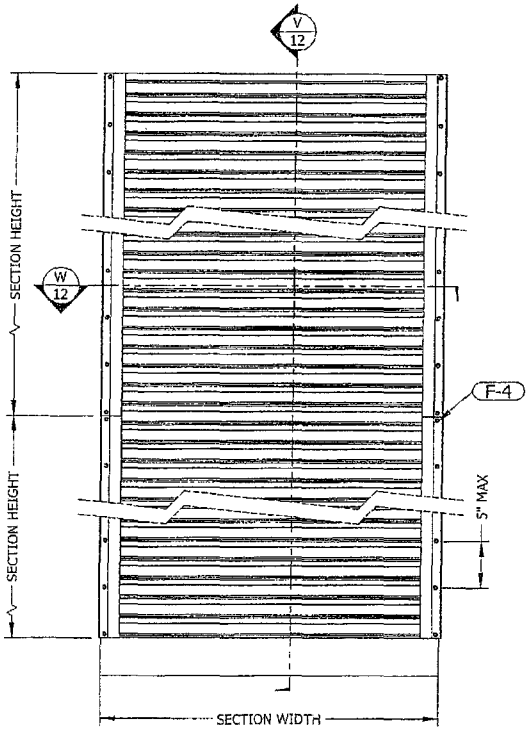
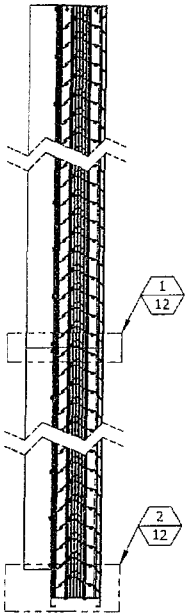
MULTI-SECTION HIGH



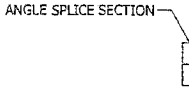
SECTION VIEW W 12 MULTI-SECTION HIGH 12
1"=1'-0"



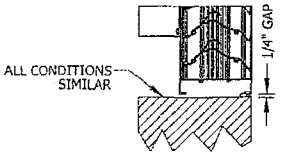
INTERIOR ELEVATION
QUANTITY SECTIONS HIGH IS UNLIMITED



SECTION VIEW V 12 MULTI-SECTION HIGH 12
1"=1'-0"



SPLICE SECTION 1 12 MULTI-SECTION HIGH 12
1-1/2"=1'-0"



BOTTOM DETAIL 2 12 MULTI-SECTION HIGH 12
1-1/2"=1'-0"
TOP CONNECTION SIMILAR

PRODUCT REVISED
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NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF®

DRAWING DESCR: MULTI-SECTION HIGH			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 12 of 17	SCALE: 1"=1'-0"		ECD-545-MD NOA

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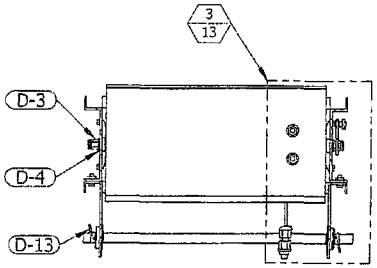
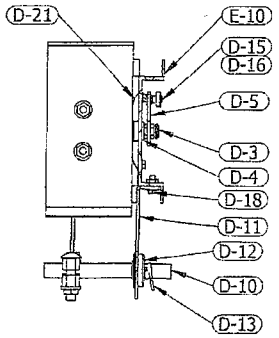
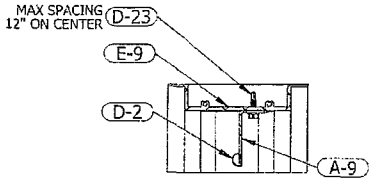
CD-51 DAMPER



SECTION VIEW AA 13 CD-51
6"=1'-0" 13

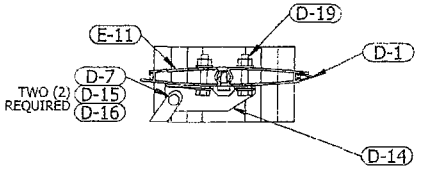


LINKAGE DETAIL 3 13 CD-51
3"=1'-0" 13

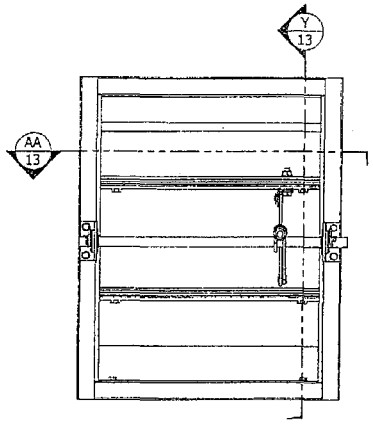


TOP DETAIL 1 13 CD-51
3"=1'-0" 13

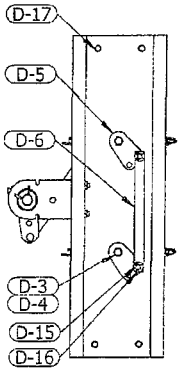
BOTTOM DETAIL SIMILAR



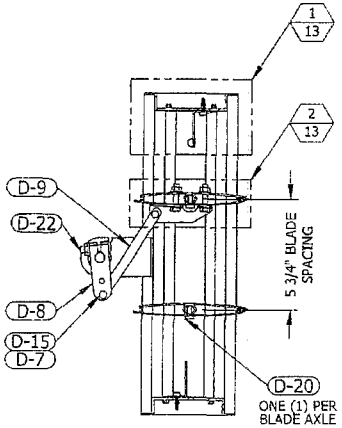
BLADE DETAIL 2 13 CD-51
3"=1'-0" 13



INTERIOR ELEVATION



SIDE VIEW



SECTION VIEW Y 13 CD-51
6"=1'-0" 13

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN
LICENSE
No 09814
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

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Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: CD-51 DAMPER			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:	DRAWN BY: LGH		
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER	P.O. NUMBER	DRAWING NUMBER
SHEET: 13 of 17	SCALE: 2"=1'-0"			ECD-545-MD NOA

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ECD-545-MD WITH CD-51 DAMPER

PRODUCT REVISED
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By
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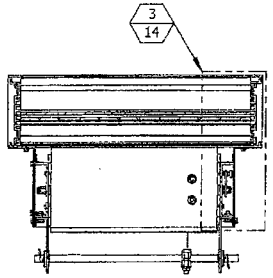
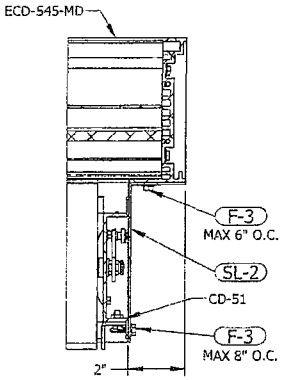
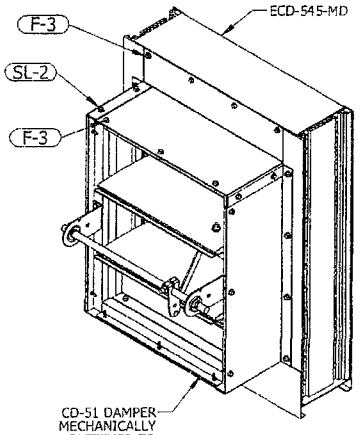
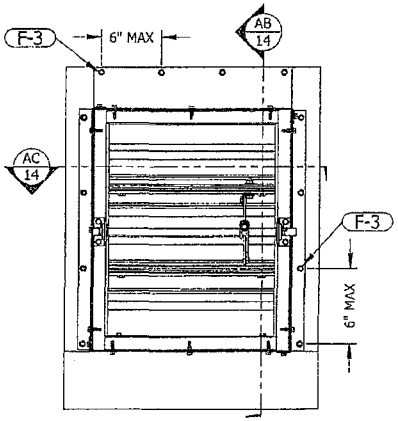


SECTION VIEW AC 14 ECD-545-MD WITH CD-51
1-1/2"=1'-0" 14

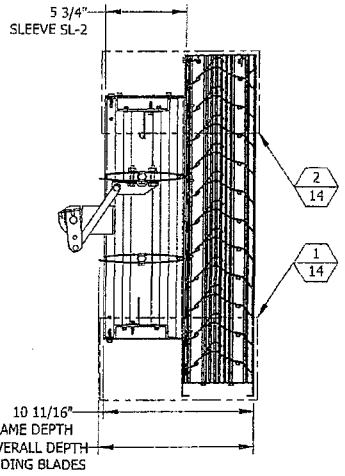


JAMB INTERFACE DETAIL 3 14 ECD-545-MD WITH CD-51
3"=1'-0" 14

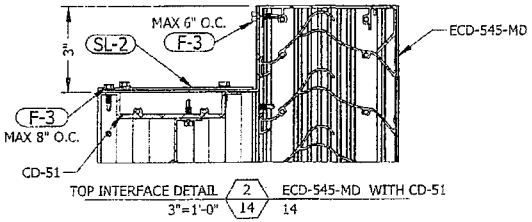




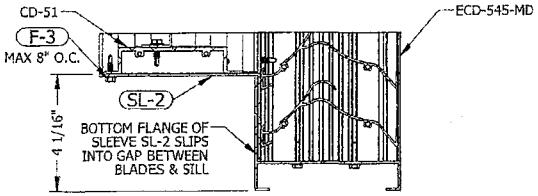
INTERIOR ELEVATION



SECTION VIEW AB 14 ECD-545-MD WITH CD-51
1-1/2"=1'-0" 14



TOP INTERFACE DETAIL 2 14 ECD-545-MD WITH CD-51
3"=1'-0" 14



BOTTOM INTERFACE DETAIL 1 14 ECD-545-MD WITH CD-51
3"=1'-0" 14

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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: ECD-545-MD WITH CD-51 DAMPER			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 14 of 17	SCALE: 1-1/2"=1'-0"		ECD-545-MD NOA

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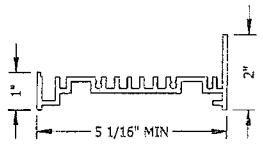
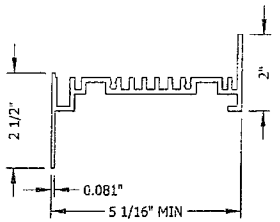
BILL OF MATERIALS

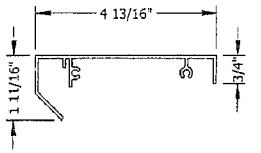
PART NO: E-1
PART NAME: LOUVER JAMB
MATERIAL: 0.125" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



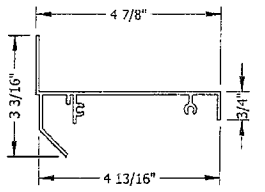
PART NO: E-2
PART NAME: LOUVER JAMB, FLANGED
MATERIAL: 0.125" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



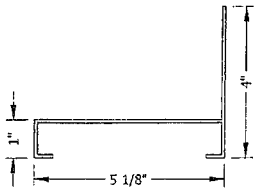
PART NO: E-3
PART NAME: LOUVER HEAD
MATERIAL: 0.081" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



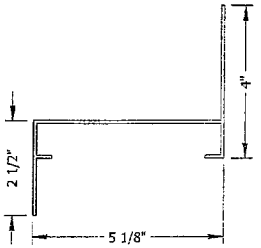
PART NO: E-4
PART NAME: LOUVER HEAD, FLANGED
MATERIAL: 0.081" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



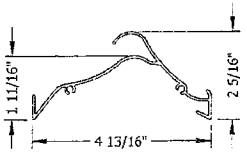
PART NO: E-5
PART NAME: LOUVER SILL
MATERIAL: 0.081" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



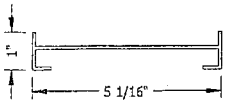
PART NO: E-6
PART NAME: LOUVER SILL, FLANGED
MATERIAL: 0.081" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



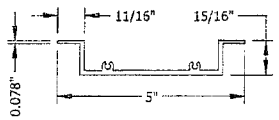
PART NO: E-7
PART NAME: LOUVER BLADE
MATERIAL: 0.063" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



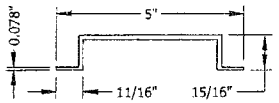
PART NO: E-8
PART NAME: ROLLFRAME EXTRUSION
MATERIAL: 0.081" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



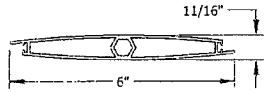
PART NO: E-9
PART NAME: DAMPER HEAD, SILL
MATERIAL: 0.125" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



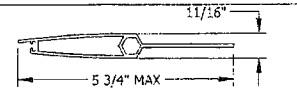
PART NO: E-10
PART NAME: DAMPER JAMB
MATERIAL: 0.125" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



PART NO: E-11
PART NAME: DAMPER BLADE, FULL
MATERIAL: 0.070" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



PART NO: E-12
PART NAME: DAMPER BLADE, HALF
MATERIAL: 0.070" THICK 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN LICENSE No 08814 STATE OF FLORIDA PROFESSIONAL ENGINEER

Theodore Berman
10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.
TOLERANCE UNLESS NOTED:
X.X ±0.060
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

5101 Blue Mound Road
Fort Worth, Texas 76106
Phone: 817-509-2300
Fax: 817-931-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF®

DRAWING DESCR: BILL OF MATERIALS			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:	DRAWN BY: LGH		
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 15 of 17	SCALE: AS NOTED		ECD-545-MD NOA

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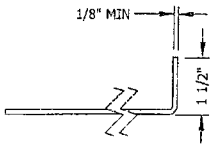
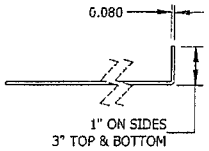
BILL OF MATERIALS

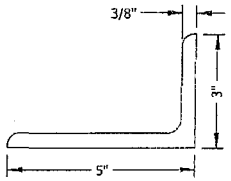
PART NO: SL-1
PART NAME: SLEEVE, LOUVER
MATERIAL: MIN 1/8" THICK 5052-H32 SHEET ALUMINUM
SCALE: 4"=1'-0"



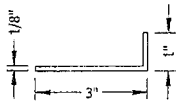
PART NO: SL-2
PART NAME: SLEEVE, DAMPER
MATERIAL: 0.080 THICK 5052-H32 SHEET ALUMINUM
SCALE: 4"=1'-0"



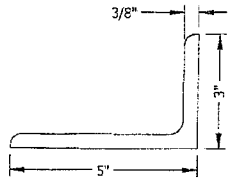
PART NO: A-1
PART NAME: CLIP ANGLE, MULLION
MATERIAL: 5" X 3" X 3/8" X 10" LONG 6061-T6 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



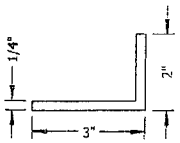
PART NO: A-2
PART NAME: CONTINUOUS ANGLE
MATERIAL: 3" X 1" X 1/8" 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



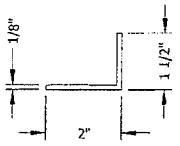
PART NO: A-3
PART NAME: SHELF ANGLE, MULLION
MATERIAL: 5" X 3" X 3/8" X 24" LONG 6061-T6 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



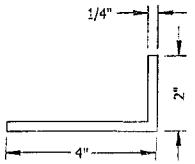
PART NO: A-4
PART NAME: CONTINUOUS SUPPORT ANGLE
MATERIAL: 3" X 2" X 1/4" 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



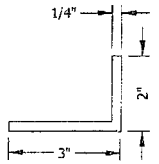
PART NO: A-5
PART NAME: RETAINING ANGLE
MATERIAL: 2" X 1-1/2" X 1/8" 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



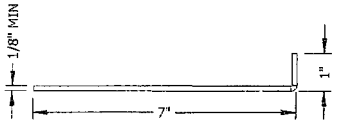
PART NO: A-6
PART NAME: CLIP ANGLE, SHAPES
MATERIAL: 4" X 2" X 1/4" X 4" LONG 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



PART NO: A-7
PART NAME: SUPPORT ANGLE, SHAPES
MATERIAL: 3" X 2" X 1/4" X 4" LONG 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



PART NO: A-8
PART NAME: MULLION ATTACHMENT ANGLE
MATERIAL: MIN. 1/8" THICK 5052-H32 SHEET ALUMINUM
SCALE: 4"=1'-0"



PRODUCT REVISED
as complying with the Florida Building Code
NOA No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

P.E. STAMP

Ted Berman & Assoc. LLC
CA # 27502

THEODORE BERMAN LICENSE No 68314 STATE OF FLORIDA PROFESSIONAL ENGINEER

10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
1	INITIAL RELEASE	8/30/2018	LGH

UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.
TOLERANCE UNLESS NOTED:
X.X ±0.060
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

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THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: BILL OF MATERIALS			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 16 of 17	SCALE: AS NOTED		ECD-545-MD NOA

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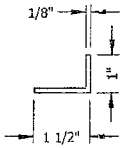
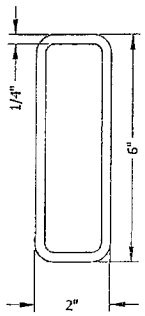
BILL OF MATERIALS

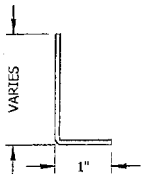
PART NO: SL-1A
PART NAME: SLEEVE ATTACHMENT ANGLE
MATERIAL: 1-1/2" X 1" X 1/8" 6063-T5 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



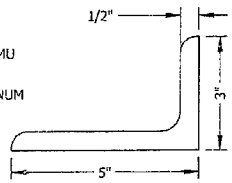
PART NO: S-1
PART NAME: TUBE, MULLION SUPPORT
MATERIAL: 6" X 2" X 1/4" HSS
SCALE: 4"=1'-0"



PART NO: A-9
PART NAME: DAMPER STOP
MATERIAL: 0.080" THICK 5052-H32 SHEET ALUMINUM
SCALE: 6"=1'-0"



PART NO: A-10
PART NAME: SHELF ANGLE, MULLION, CMU
MATERIAL: 5" X 3" X 1/2" X 24" LONG 6061-T6 EXTRUDED ALUMINUM
SCALE: 4"=1'-0"



MISCELLANEOUS FASTENERS	
PART NO.	DESCRIPTION
F-1	#10-24 X 3/4" LONG, HWH, 410 SST, 'F' POINT MACHINE SCREW
F-2	#10-16 X 2" LONG, HWH, 410 SST, TEK SELF-DRILLING SCREW
F-3	#12-14 X 3/4" LONG, HWH, 410 SST, TEK SELF-DRILLING SCREW
F-4	#12-14 X 1" LONG, HWH, 410 SST, TEK SELF-DRILLING SCREW
F-5	5/8-11 X 4" LONG, 18-8 SST, HEX BOLT, NUT, AND TWO (2) FLAT WASHERS
F-6	5/8-11 X 2" LONG, 18-8 SST, HEX BOLT, NUT, AND TWO (2) FLAT WASHERS
F-7	3/8" X 3-1/2" HILTI KWIK HUS-EZ SCREW ANCHOR
F-8	5/8" X 4" HILTI KWIK HUS-EZ SCREW ANCHOR
F-9	5/8" X 5-1/2" HILTI KWIK HUS-EZ SCREW ANCHOR
F-10	1/2" X 5" HILTI KWIK HUS-EZ SCREW ANCHOR
F-11	1/4-14 X 1" LONG, HWH, TEK SELF-DRILLING SCREW
F-12	1/2" X 3-1/2" LONG HEX LAG BOLT AND FLAT WASHER

MISCELLANEOUS DAMPER PARTS		
PART NO.	DESCRIPTION	MATERIAL
D-1	BLADE SEAL	PVC
D-2	STOP SEAL	PVC
D-3	HEX AXLE	ZINC-PLATED STEEL
D-4	HEX BUSHING	304 SST
D-5	PARALLEL CAM	ZINC-PLATED STEEL
D-6	LINK BAR, 1/2" WIDE X 1/8" THICK	GALV. STEEL
D-7	WASHER, 1/4" I.D., 1/2" O.D.	NYLON
D-8	SPRING ARM, 10-GA	GALV. STEEL
D-9	DRIVE ROD, 1/2" WIDE X 1/8" THICK	GALV. STEEL
D-10	JACKSHAFT, 1/2" DIA.	ZINC-PLATED STEEL
D-11	JACKSHAFT BRACKET, 12 GA.	GALV. STEEL
D-12	JACKSHAFT BEARING	STEEL
D-13	JACKSHAFT SPRING CLIP	SPRING STEEL
D-14	DRIVE BRACKET, 14 GA.	GALV. STEEL
D-15	LINKAGE PIN, 1/4"	304 SST
D-16	E-RING, 1/4"	ZINC-PLATED STEEL
D-17	#8-18 X 1" LONG, HWH, NEEDLE POINT SCREW	ZINC-PLATED STEEL
D-18	#10-32 X 1/2" LONG HEX BOLT WITH KEPS NUT	ZINC-PLATED STEEL
D-19	1/4-20 X 1-1/4" LONG HEX BOLT WITH KEPS NUT	ZINC-PLATED STEEL
D-20	1/4-20 X 1/2" LONG HEX BOLT	ZINC-PLATED STEEL
D-21	JAMB SEAL, 2-9/16" X 5/16" X 0.007" THICK	302 SST
D-22	5/16-18 X 1-1/2" LONG CARRIAGE BOLT WITH LOCKNUT	ZINC-PLATED STEEL
D-23	#10-16 X 3/4" LONG, HWH, TEK SELF-DRILLING SCREW	ZINC-PLATED STEEL

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as complying with the Florida Building Code
NOA-No. 18-1120.06
Expiration Date 10/23/2023
By
Miami-Dade Product Control

P.E. STAMP

Ted Berman & Assoc. LLC
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10/24/18

REV. NO.	DESCRIPTION	DATE	DRAWN BY
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TOLERANCE UNLESS NOTED:
X.X ±0.050
X.XX ±0.030
X.XXX ±0.010
ANGLE ±1°
FRACTION ±1/16
MAX HOLE BREAKOUT: 15% OF MATERIAL THICKNESS

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Fax: 817-831-3110

THIRD ANGLE PROJECTION

PCI INDUSTRIES DOING BUSINESS AS
POTTORFF

DRAWING DESCR: BILL OF MATERIALS			
PROJECT: ECD-545-MD			
LOCATION:			
CUSTOMER:			
PROJ. MGR.:		DRAWN BY: LGH	
DATE: 6/27/2018	CHK'D BY: NW	ORDER NUMBER / P.O. NUMBER	DRAWING NUMBER
SHEET: 17 of 17	SCALE: AS NOTED		ECD-545-MD NOA

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IMPORTANT: READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION

General

The following guidelines provide basic assembly and installation instructions for ECD-545-MD extruded aluminum louvers mounting to various building conditions using the sleeved installation method. The ECD-545-MD is designed to withstand severe weather effects typically associated with hurricanes, and has been tested for resistance to impacts, cyclic fatigue, and static pressures up to 150 psf.

1. For additional details, refer to the product drawing package posted at www.pottorff.com as well as any job-specific submittal drawings when provided.

2. Carefully lift louver sections by the frames using multiple lifting points as necessary to avoid distortion, racking, or other damage. Do not apply excessive force to a single blade, and NEVER LIFT UNITS BY LOUVER BLADES. Take necessary precautions to prevent marring the louver finish.

3. While installation is underway and before louver sections are permanently fastened in place, Pottorff recommends that the installer employ temporary straps or bracing (by others) to prevent units from shifting unexpectedly.

4. All gaskets and caulk are supplied by others.

Preparation

Louvers and Hardware:

1. Locate all crates, boxes, cartons, etc.

2. Remove louvers from packaging, inspect for damage, confirm quantities and sizes with packing list, and organize parts in order of installation. To verify installation hardware quantities, refer to Table 1. Installation hardware will typically be shipped in a separate box.

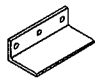
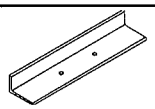
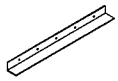
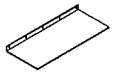
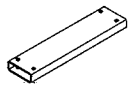
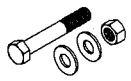
3. Notify your Pottorff representative immediately of any shortages or shipping damage.

Openings:

1. Inspect openings for damage, repair as needed, and remove any obstructions or debris.

2. Prior to installation, verify that openings are square and plumb and the louvers will fit properly.

Table 1: Installation Hardware, Sleeved

Part	Description		
A-1	Mullion Clip Angle (5" x 3" x 3/8" x 10" - Long)		Included for multi-wide assemblies only
A-3	Mullion Retaining Angle (5" x 3" x 3/8" x 24" Long)		Included for multi-wide assemblies only
A-5	Retaining Angle (1-1/2" x 2" x 1/8" Varying Length)		Included
A-8	Mullion Attachment Angle (7" x 1" x 1/8" x Varying Length)		Included for multi-wide assemblies only
S-1	Mullion Support Tube 6" x 2" x 1/4" x Varying Length)		Included for multi-wide assemblies only
F-4	#12-14 x 1" Hex Head Self Drilling Machine Screw		Included
F-5	5/8-11 x 4" Hex Bolt with Nut and two (2) Flat Washers		Included for multi-wide assemblies only
F-6	5/8-11 x 2" Hex Bolt with Nut and two (2) Flat Washers		Included for multi-wide assemblies only

Single Section Louver Installation

1. Lift the louver section (with attached sleeve) up and slide it into the wall opening as shown in Figure 1. The back of the sleeve should project through the wall into the building interior, while the front flange will rest directly against the outside face of the wall.

2. As necessary, shim around the perimeter to level the louver and to maintain an approximate 1/4" clearance between the louver frame and the edges of the opening (shims are by others).

3. Along the sides of the opening, place 2" x 1 1/2" retaining angles (A-5) against the rear face of the wall, and use #12-14 x 1" self-drilling screws (F-4) to fasten the angles to the sleeve.

    a. Each length of angle will arrive with one side pre-drilled with clearance holes for #12 fasteners. These holes are included to facilitate attachment to the sleeve. The angle leg without holes should sit against the wall.
    b. No direct anchorage to the building substrate is necessary. In effect, the wall is "sandwiched" between the sleeve flange in front and the continuous angles behind.

4. Install backer rod and caulk around the perimeter of the louver, as required.

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Multiple Section Louver Installation

1. First, determine how the individual louver sections will be located relative to each other. Every section is shipped with a factory-attached sleeve, but end sections will be sleeved on three sides, while center sections (if present) will have sleeve only on the top and bottom.

2. Lay out the louver sections face down in the approximate order in which they will be positioned within the opening. At mullion joints between adjacent sections, use #12-14 x 1" self-drilling screws (F-4) to install mullion attachment angles (A-8) to the back of the louver frame jambs. Use Figures 3 and 4 as a reference.

    a. Align the edge of the 1" angle leg with the edge of the frame jamb. The bottom end of the angle will sit directly against the top of the frame sill.
    b. Screws will run through the existing clearance holes in the mullion attachment angle into the louver frame.

3. Lift each louver section up and place it within the opening as shown in Figure 1. The back of the sleeve should project through the wall into the building interior, while the front flange will rest directly against the outside face of the wall.

    a. Shim as necessary to level the louver sections and to maintain an approximate 1/4" clearance between the louver frames and the edges of the opening, and approximately 1/4" between sections (shims by others).
    b. Secure with temporary straps or bracing as needed.

4. Locate the mullion clip angles (A-1) and drill an 11/16"-diameter hole in the 5" leg of each angle.

    a. Use Figure 2 as a guide for hole placement.
    b. Note that Dimension 'A' in Figure 2 is variable and depends on the overall thickness of the wall into which the louver will be installed. To find Dimension A, measure the wall thickness and subtract 4 1/8".
    c. For example, if the building wall is 8" thick, Dimension A should be 3 7/8".

5. Locate each mullion support tube (S-1), and fasten pairs of mullion clip angles (A-1) to the ends of the tube using 5/8" x 4" bolts, nuts, and flat washers (F-5) as shown in Figure 2. For an easier fit during installation, fully tighten only the bolts at the bottom end of the tube. Loosely connect the bolts at the top, but wait to tighten them until the mullion tube has been placed in its final location.

6. Lift each mullion tube (with attached clip angles) up and fasten it to the mullion attachment angles (A-8) using #12-14 x 1" self-drilling screws (F-4). Use Figures 2 and 4 for reference.

    a. Screws should be located no more than 12" on center, 6" from each end of the angle, and at least 1/2" from any edge.
    b. Drill pilot holes as necessary. To ensure proper thread engagement, pilot hole diameters must not exceed 3/16".

7. Seal the entire length of the joints in the sleeve between adjacent louver sections using caulk, gasket, or other means (by others).

8. Using the 11/16" clearance holes in the mullion clip angles (A-1) as a guide, match-drill 11/16" holes through the sleeve at each mullion connection.

9. Above and below each mullion joint, place a mullion retaining angle (A-3) against the rear face of the wall, and use 5/8"-11 x 2" bolts, nuts, and washers to fasten it to the mullion clip angles (A-1) as shown in Figure 1.

    a. Mullion retaining angles will arrive with one side pre-drilled with clearance holes for 5/8" bolts. The angle leg without holes should sit against the wall.
    b. Pre-drilled holes in the mullion retaining angles should align with field-drilled holes in the clip angles and sleeve.
    c. Once all mullion retaining angles have been installed, any temporary straps or bracing may be removed.

10. Finish by installing backer rod and caulk in the following locations:

    a. All vertical joints between sections
    b. Around the perimeter of the opening

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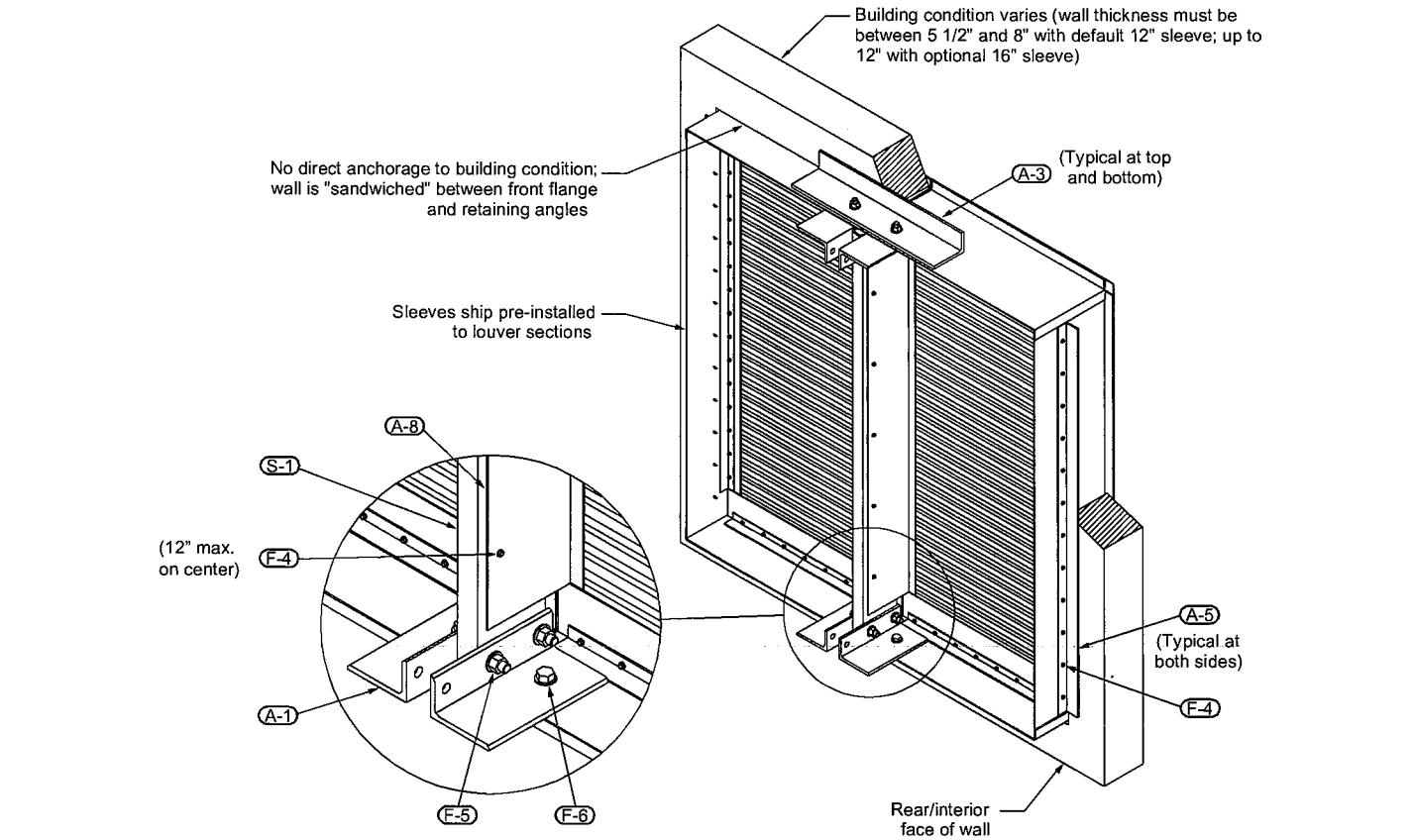
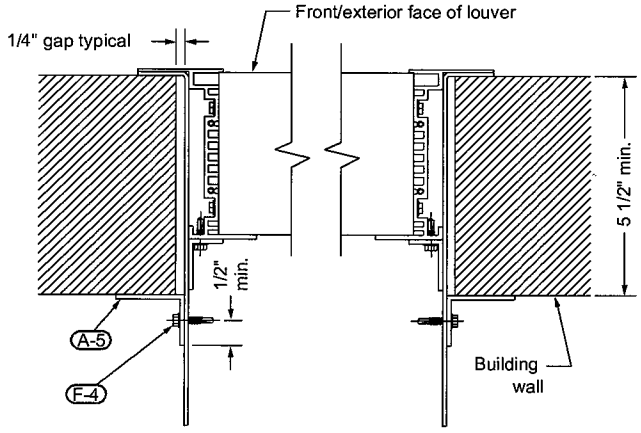
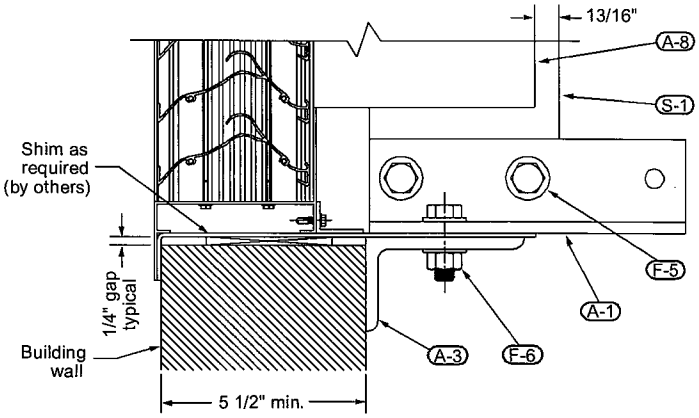
Figure 1: Sleeved Installation





Section Detail at Jamb Connections



Section Detail at Mullion Connections

Figure 2: Mullion Support Assembly

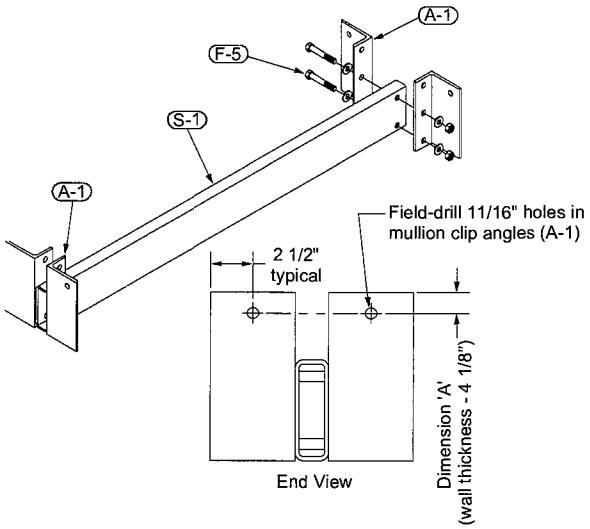


Figure 4: Mullion Section Detail

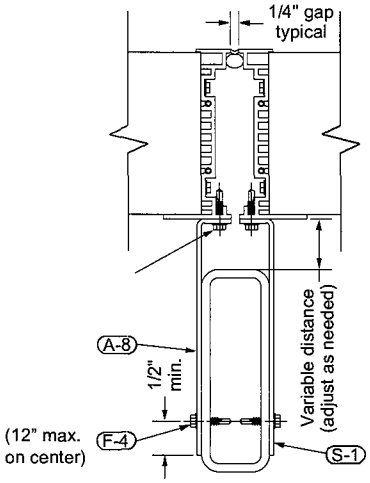
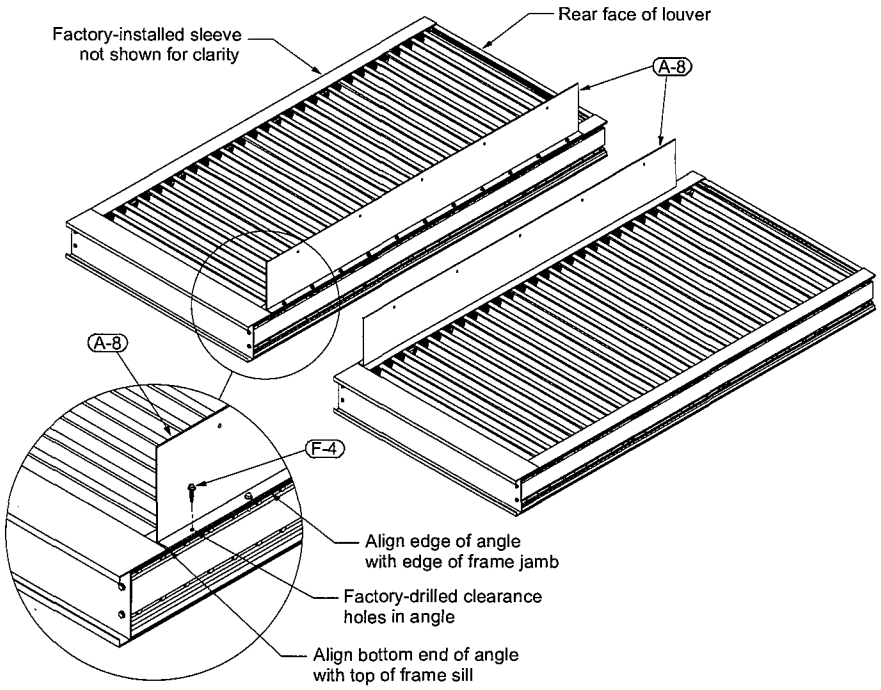


Figure 3: Installation Mullion Attachment Angles



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Transmittal

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