

# **Installation, Operation and Maintenance Manual**

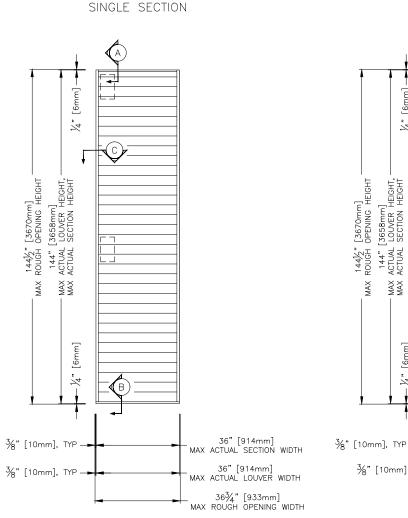
Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with these instructions will result in voiding of the product warranty and may result in personal injury and/or property damage.

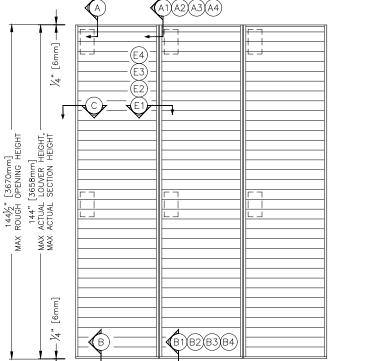
Wind Load Table				
Design Pressure Rating	Maximum Single Section Size			
+/- 150 PSF (7.2 kPa)	43 in. W x 144 in. H (1092 mm W x 3658 mm H)			
+/- 130 (6.2 kPa)	49.5 in. W x 144 in. H (1257 mm W x 3658 mm H)			
+/- 105 (5.0 kPa)	61.5 in. W x 144 in. H (1562 mm W x 3658 mm H)			
+/- 90 (4.3 kPa)	72 in. W x 144 in. H (1829mm W x 3658 mm H)			

Channel Installation with VCD-40 Damper

#### **Maximum Size and Installation Information**

Model K6746MD is a Miami-Dade Qualified and Florida Product Approved louver and must be installed in accordance wit the installation instructions shown herin. Model K6746MD is qualified for installation within concrete/masonary, steel stud, and structural steel framed building conditions. Model K6746MD is structurally calculated to withstand positive and negative wind-loads up to 150 PSF. The maximum single section rough opening width is 36.75 in. The maximum single section rough opening height is 144.50 in. While the maximum rough opening height is limited to 144.50 in., the rough opening width is limited to 1,000 in. as multiple sections may be installed side by side in accordance with installation instructions.





MULTIPLE SECTIONS

# Minimum Rough Opening Size

12 in. W x 15.25 in. H

# Maximum Single Section Rough Opening Size

36.75 in. W x 144.50 in. H

### **Building Condition/Substrate Limitations**

- All structural steel and steel stub substrate shall be min. 0.125 in. thick FY = 36 KSI
- All concrete substrate shall be min. 3000 PSI
- Concrete masonary shall be ASTM C90, Type II, 2000 PSI, grout-filled

3/8" [10mm]

 $\frac{1}{4}$ " [6mm], TYP AT MULLION

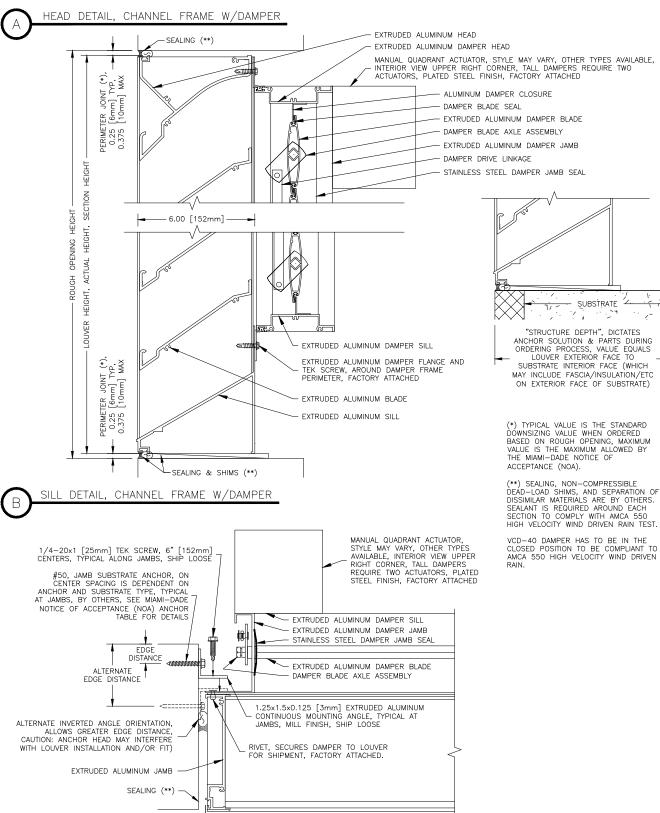
36" [914mm], TYP

MAX ACTUAL SECTION WIDTH

UNLIMITED, MAX ACTUAL LOUVER WIDTH

UNLIMITED, ROUGH OPENING WIDTH

### Channel Installation with VCD-40 Damper



LOUVER WIDTH, ACTUAL WIDTH, SECTION WIDTH-

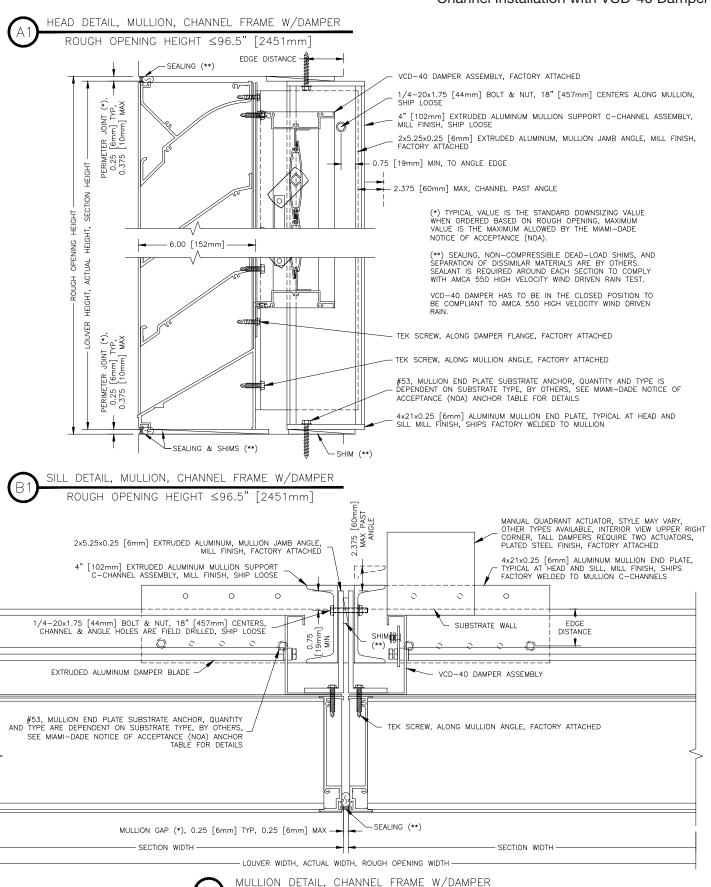
- ROUGH OPENING WIDTH -

JAMB DETAIL, CHANNEL FRAME W/DAMPER

LOUVER PERIMETER JOINT (\*),

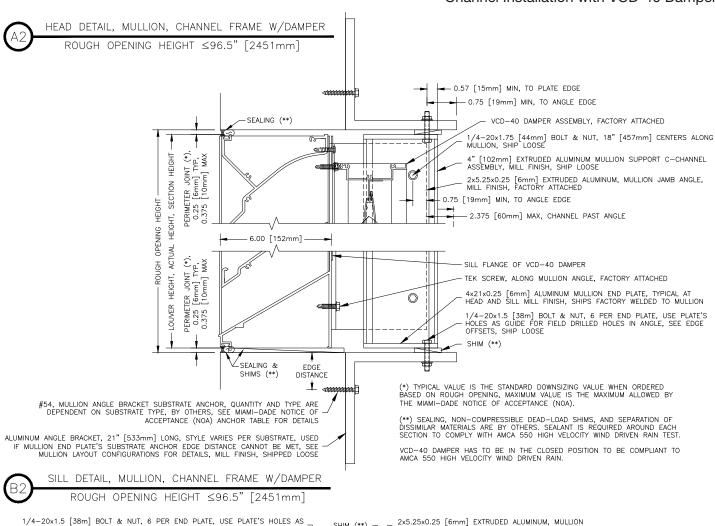
0.375 [10mm] TYP & MAX

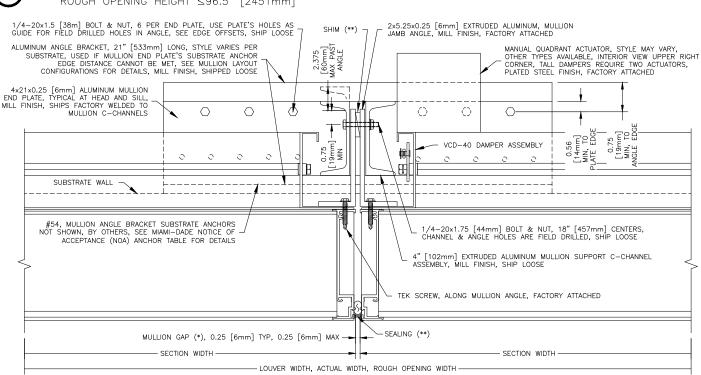
#### Channel Installation with VCD-40 Damper



ROUGH OPENING HEIGHT ≤96.5"

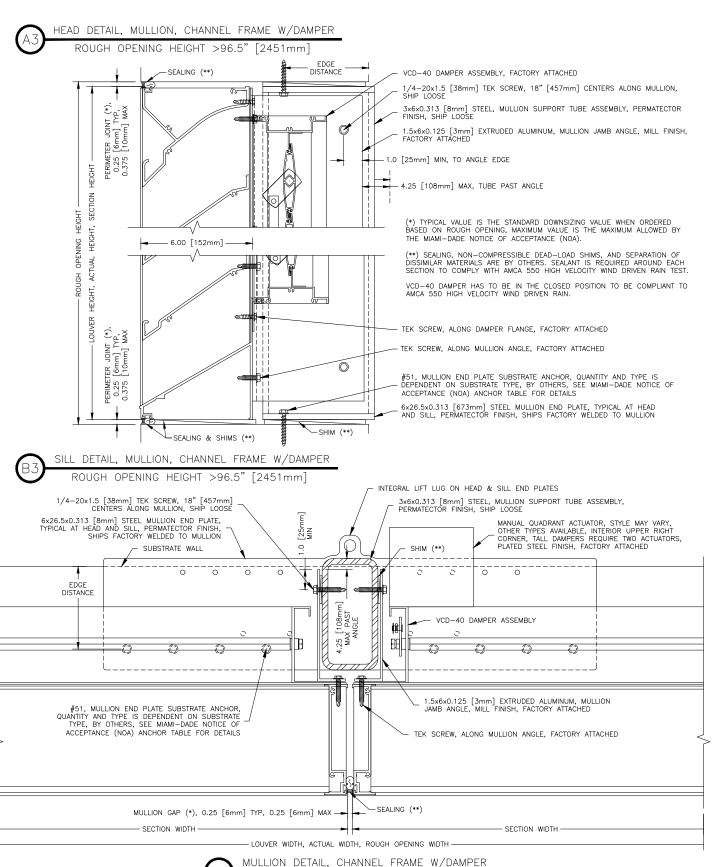
#### Channel Installation with VCD-40 Damper





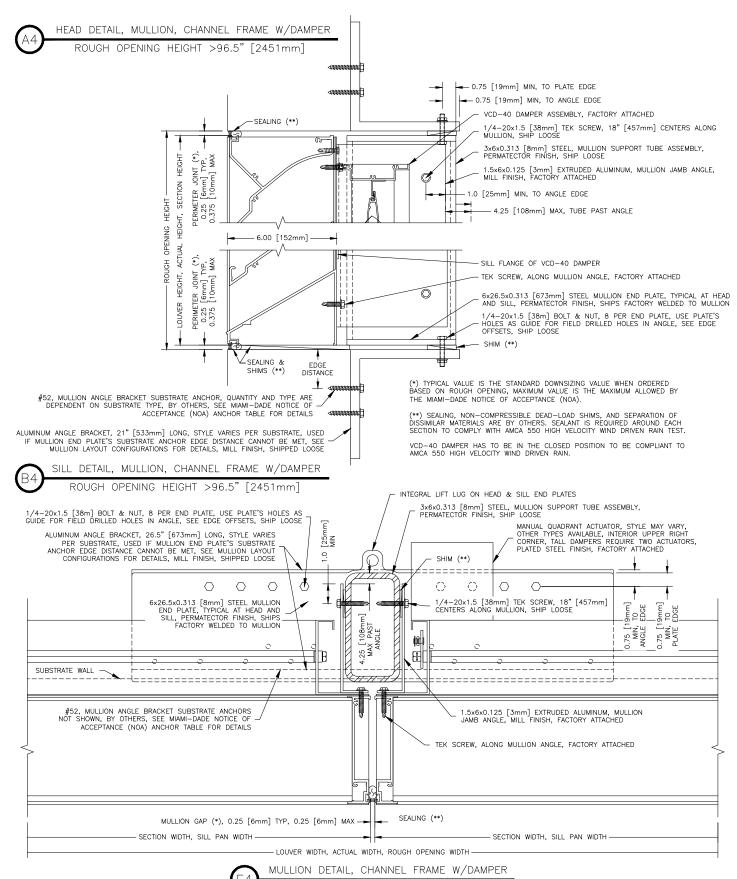
MULLION DETAIL, CHANNEL FRAME W/DAMPER
ROUGH OPENING HEIGHT ≤96.5" [2451mm]

#### Channel Installation with VCD-40 Damper



ROUGH OPENING HEIGHT >96.5" [2451mm]

#### Channel Installation with VCD-40 Damper



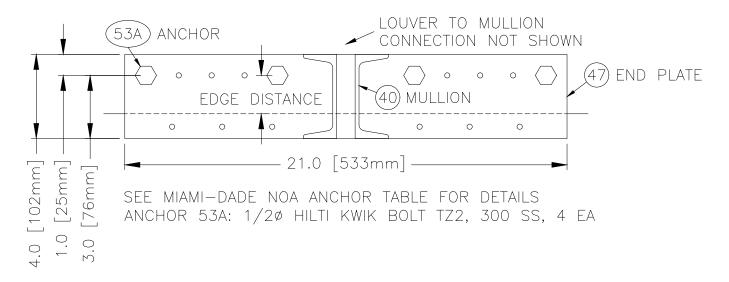
ROUGH OPENING HEIGHT >96.5" [2451mm]

### Channel Installation with VCD-40 Damper

MOUNTING: CHANNEL FRAME, AT MULLION END PLATE

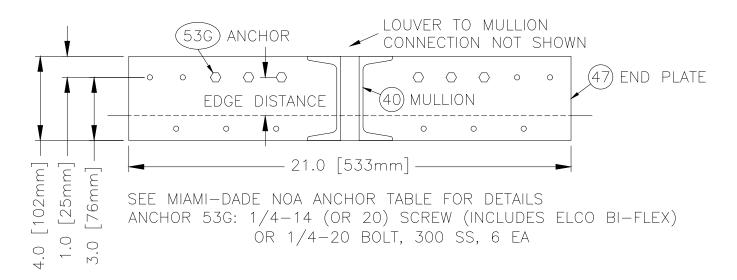
ROUGH OPENING HEIGHT: ≤ 96.5" [2451mm]

SUBSTRATE: CRACKED CONCRETE, MIN 5" [127mm] THICK



MOUNTING: CHANNEL FRAME, AT MULLION END PLATE

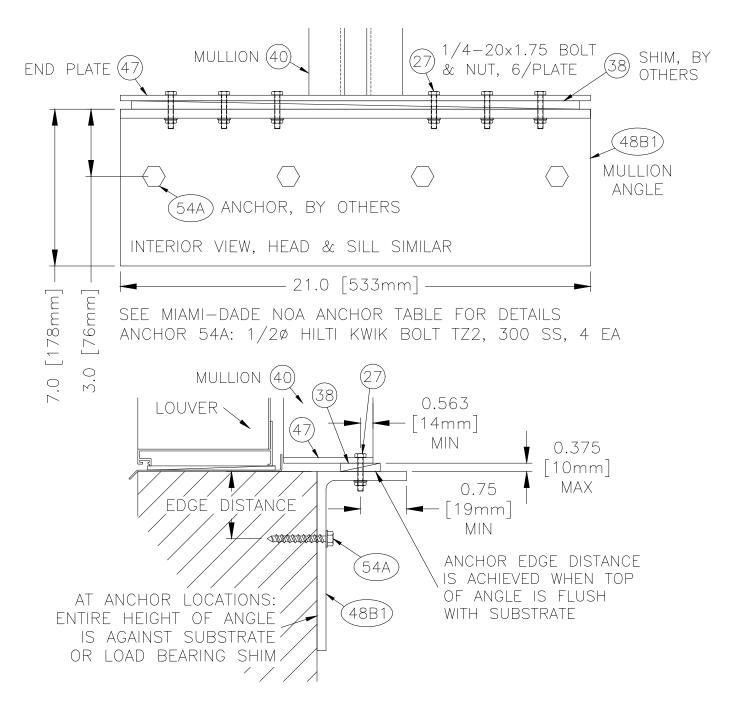
ROUGH OPENING HEIGHT: < 96.5" [2451mm] SUBSTRATE: STEEL, MIN 0.125" [3.2mm] THICK



Channel Installation with VCD-40 Damper

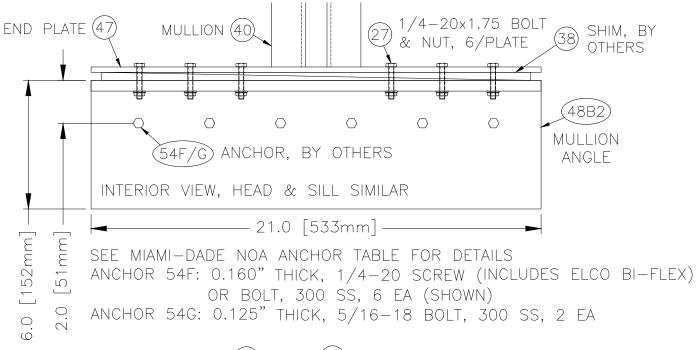
MOUNTING: CHANNEL FRAME, AT MULLION MOUNTING ANGLE ROUGH OPENING HEIGHT:  $\leq$  96.5" [2451mm]

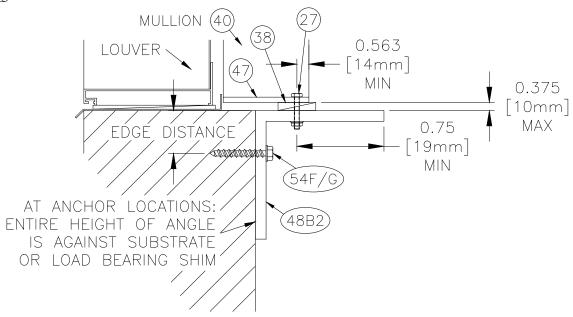
SUBSTRATE: CRACKED CONCRETE, MIN 5" [127mm] THICK



MOUNTING: CHANNEL FRAME, AT MULLION MOUNTING ANGLE

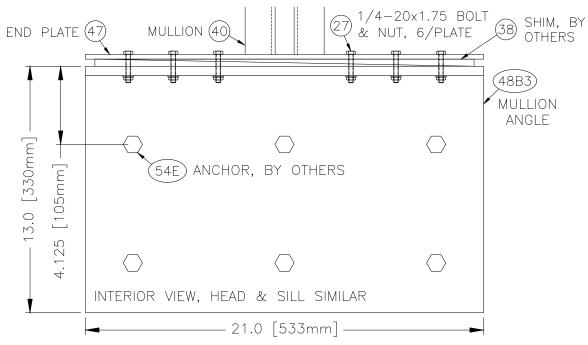
ROUGH OPENING HEIGHT:  $\leq$  96.5" [2451mm] SUBSTRATE: STEEL, MIN 0.125" [3.2mm] THICK



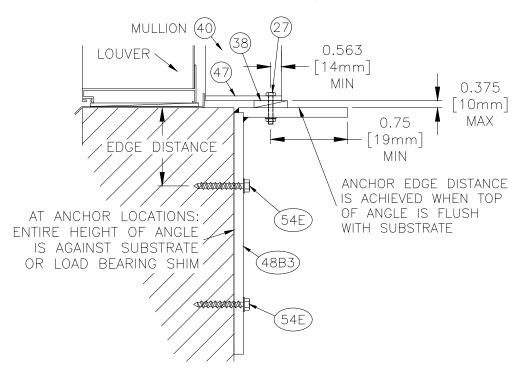


### Channel Installation with VCD-40 Damper

MOUNTING: CHANNEL FRAME, AT MULLION MOUNTING ANGLE ROUGH OPENING HEIGHT:  $\leq$  96.5" [2451mm] SUBSTRATE: GROUT FILLED CMU, 8" [203mm] NOMINAL



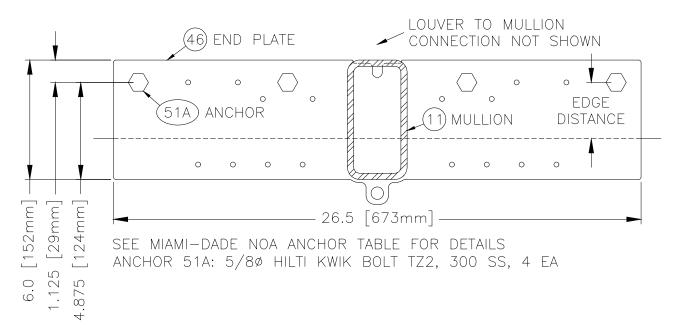
SEE MIAMI-DADE NOA ANCHOR TABLE FOR DETAILS ANCHOR 54E: W/ HILTI HY-100 EPDXY & 5/80 THREAD RDD, 300 SS, 6 EA



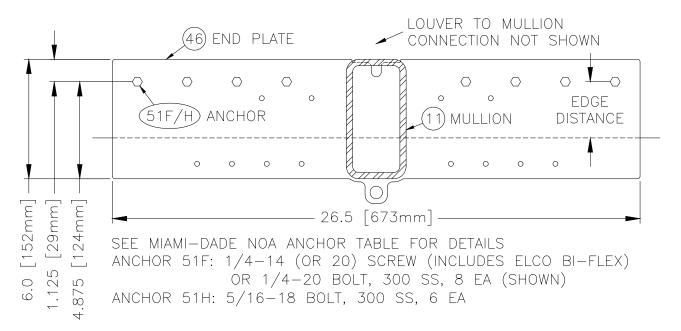
### Channel Installation with VCD-40 Damper

MOUNTING: CHANNEL FRAME, AT MULLION END PLATE ROUGH OPENING HEIGHT: > 96.5" [2451mm]

SUBSTRATE: CRACKED CONCRETE, MIN 6" [152mm] THICK



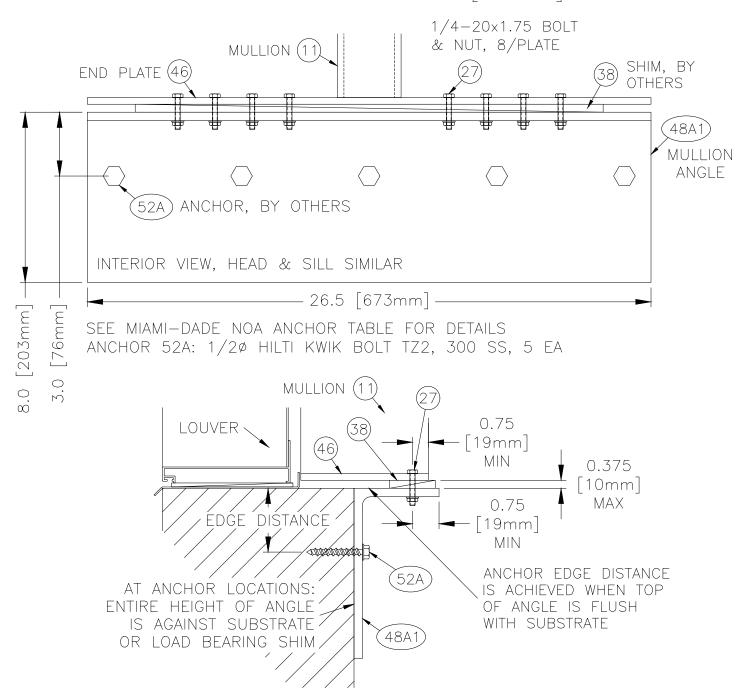
MOUNTING: CHANNEL FRAME, AT MULLION END PLATE ROUGH OPENING HEIGHT: > 96.5" [2451mm] SUBSTRATE: STEEL, MIN 0.125" [3.2mm] THICK



### Channel Installation with VCD-40 Damper

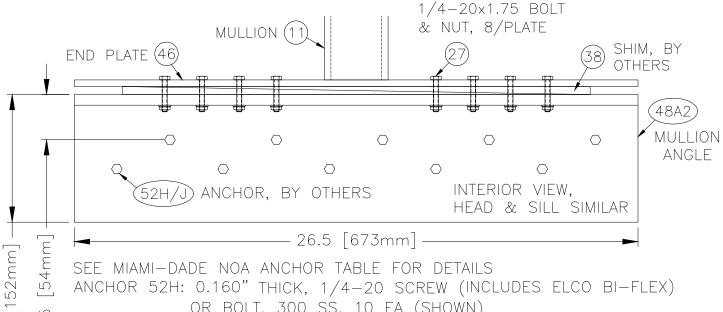
MOUNTING: CHANNEL FRAME, AT MULLION MOUNTING ANGLE ROUGH OPENING HEIGHT: > 96.5" [2451mm]

SUBSTRATE: CRACKED CONCRETE, MIN 6" [152mm] THICK



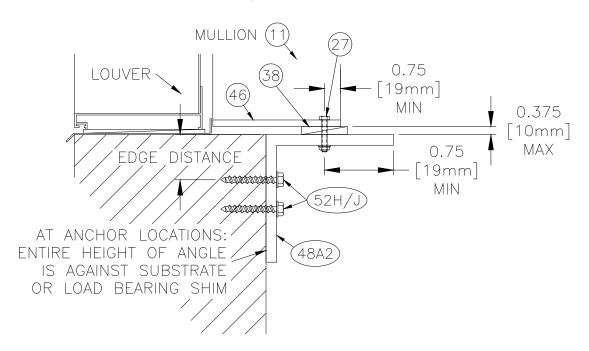
### Channel Installation with VCD-40 Damper

MOUNTING: CHANNEL FRAME, AT MULLION MOUNTING ANGLE ROUGH OPENING HEIGHT: > 96.5" [2451mm] SUBSTRATE: STEEL, MIN 0.144" [3.7mm] THICK



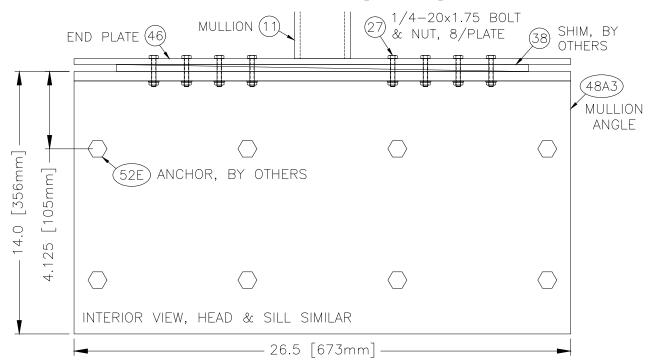
OR BOLT, 300 SS, 10 EA (SHOWN)

ANCHOR 52J: 0.144" THICK, 5/16-18 BOLT & NUT, 300 SS, 3 EA

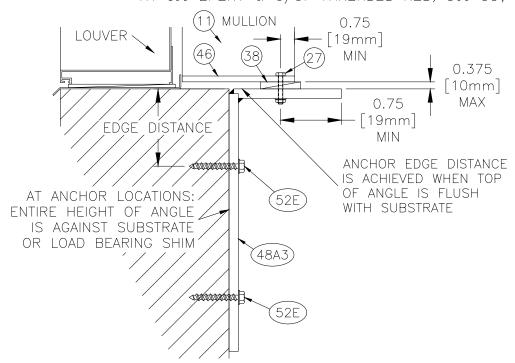


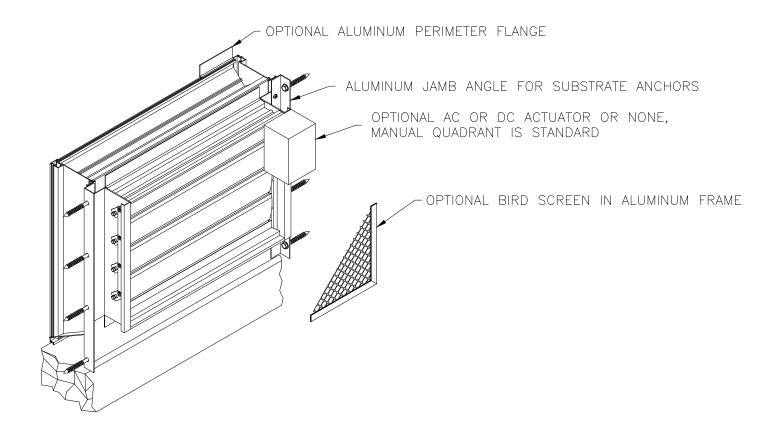
### Channel Installation with VCD-40 Damper

MOUNTING: CHANNEL FRAME, AT MULLION MOUNTING ANGLE ROUGH OPENING HEIGHT: > 96.5" [2451mm] SUBSTRATE: GROUT FILLED CMU, 8" [203mm] NOMINAL



SEE MIAMI-DADE NOA ANCHOR TABLE FOR DETAILS ANCHOR 52E: HILTI HY-100 EPDXY & 5/80 THREADED RDD, 300 SS, 8 EA





# **Structure Depth**

### CMU/Concrete Substrate

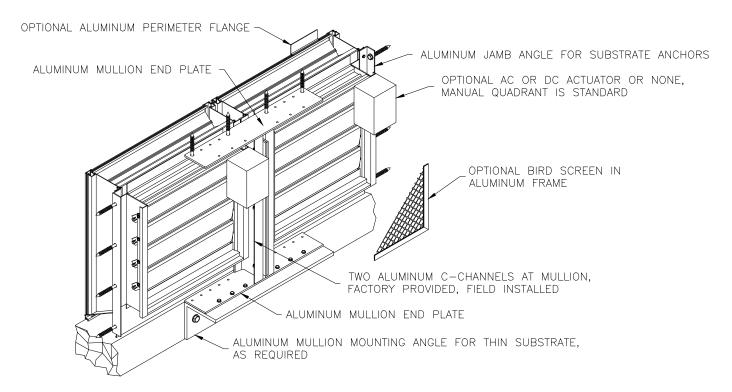
- Min. structure depth 8.75 in.
- Max. structure depth infinite

### Steel Stud/Structural Steel Substrate

- Min. structure depth 7.5 in.
- Max. structure depth infinite

#### MULLION END PLATE MOUNT (SHOWN AT HEAD):

FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE  $\underline{CAN}$  BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. SHOWN CONFIGURATION IS FOR ROUGH OPENING HEIGHTS  $\leq 96.5$ " [2451mm].



### MULLION MOUNTING ANGLE (SHOWN AT SILL):

FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE <u>CANNOT</u> BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. SHOWN CONFIGURATION IS FOR ROUGH OPENING HEIGHTS  $\leq$  96.5" [2451mm].

### **Structure Depth**

#### **CMU Substrate**

- Min. structure depth 8.75 in.
- Max. structure depth infinite in.

#### Concrete Substrate

- Min. structure depth 8.25 in.
- Max. structure depth infinite

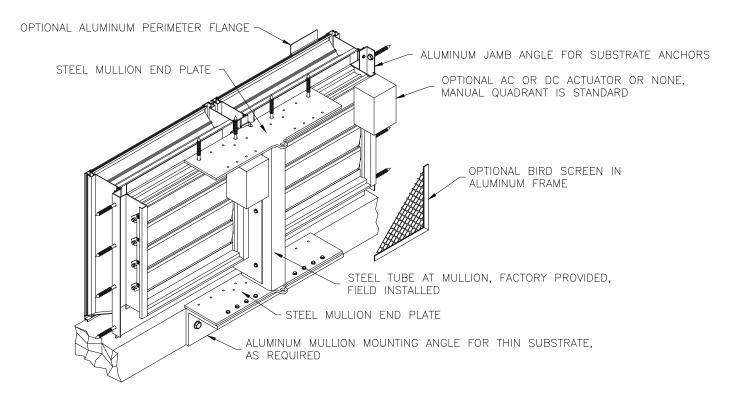
#### Steel Stud/Structural Steel Substrate

- Min. structure depth 7.5 in.
- Max. structure depth infinite

Channel Installation with VCD-40 Damper

### MULLION END PLATE MOUNT (SHOWN AT HEAD):

FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE  $\underline{CAN}$  BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. SHOWN CONFIGURATION IS FOR ROUGH OPENING HEIGHTS > 96.5" [2451mm].



#### MULLION MOUNTING ANGLE (SHOWN AT SILL):

FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE  $\underline{CANNOT}$  BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. SHOWN CONFIGURATION IS FOR ROUGH OPENING HEIGHTS > 96.5" [2451mm].

### **Structure Depth**

#### **CMU Substrate**

- Min. structure depth 8.75 in.
- Max. structure depth 14.25 in.

#### Concrete Substrate

- Min. structure depth 8.25 in.
- Max. structure depth infinite

#### Steel Stud/Structural Steel Substrate

- Min. structure depth 7.5 in.
- Max. structure depth infinite

Channel Installation with VCD-40 Damper

MIAMI-DADE NOTICE OF ACCEPTANCE (NOA) ANCHOR TABLE (FIELD INSTALLED - BY OTHERS)												
ITEM	CRACKED CONCRETE	GROUT FILLED CMU	STEEL	MIN VALUE	MIN THICK- NESS	ANCHOR TYPE	ALL FASTENERS ARE STAINLES STEEL					
ITEM 52: JAMB PERIMETER ANGLE ANCHOR, ALL HEIGHTS					DIAMETER	# REQ'D	CENTERS	MIN EMBED.	SUBSTRATE MIN EDGE (3)			
52A	Х			3 KSI	4" (1)	HILTI KWIK HUS EZ (KH-EZ), 300 SS	3/8"	VARIES	6" MIN/MAX	2.5" NOM.	1.5"	
52E		Х		1.5 KSI	3" (1)	DEWALT AGGRE-GATOR, 300 SS	1/4"	VARIES	3" MIN 6" MAX	2" NOM.	2"	
52F			х	A36	1/8" (1)	BOLT OR SCREW, 300 SS, INCLUDES ELCO BI-FLEX	1/4-20	VARIES	6" MAX	1/8"	3/4"	
52H			Х	A36	1/8" (1)	BOLT, 300 SS	5/16-18	VARIES	6" MAX	1/8"	3/4"	
ITEM 53: MULLION END PLATE ANCHOR, ROUGH OPENING HEIGHT > 96.5"						DIAMETER	# REQ'D	MIN CENTERS	MIN EMBED.	SUBSTRATE MIN EDGE (3)		
53A	Х			3 KSI	6" (1)	HILTI KWIK BOLT TZ2, 300 SS	5/8"	4/PLATE	7.5" & 9" MIN	3.25" NOM.	4"	
53F			х	A36	1/8" (1)	BOLT OR SCREW, 300 SS, INCLUDES ELCO BI-FLEX	1/4-14 1/4-20	8/PLATE	1" MIN	1/8"	1/2"	
53H			Х	A36	1/8" (1)	BOLT, 300 SS	5/16-18	6/PLATE	1.5" MIN	1/8"	1/2"	
ľ	ITEM 54: MULLION ANGLE MOUNT ANCHOR, ROUGH OPENING HEIGHT > 96.5"						DIAMETER	# REQ'D	MIN CENTERS	MIN EMBED.	SUBSTRATE MIN EDGE (3)	
54A	х			3 KSI	6" (1)(2)	HILTI KWIK BOLT TZ2 (KB-TZ2), 300 SS	1/2"	5/ANGLE	6" MIN	3" NOM.	3" EDGE 1 4" EDGE 2	
54E		х		2 KSI GROUT	8" NOM. (1)(2)	HILTI HIT-HY 100 EPOXY & THREADED ROD, 300 SS	5/8"	8/ANGLE	8" HOR. MIN 7" VER. MIN	5.625" ACT.	4.125"	
54H			Х	A36	3/16" (1) (2)	BOLT OR SCREW, 300 SS, INCLUDES ELCO BI-FLEX	1/4-20	10/ANGLE	1" MIN	3/16"	1/2"	
54J			Х	A36	0.144" (1)(2)	BOLT, 300 SS	5/16-18	3/ANGLE	1" MIN	0.144"	3/4"	
ITEM 55: MULLION END PLATE ANCHOR, ROUGH OPENING HEIGHT <= 96.5"						DIAMETER	# REQ'D	MIN CENTERS	MIN EMBED.	SUBSTRATE MIN EDGE (3)		
55A	Х			3 KSI	5" (1)	HILTI KWIK BOLT TZ2, 300 SS	1/2"	4/PLATE	6.25" & 6.5" MIN	3" NOM.	2.5" EDGE 1 3.25" EDGE 2	
55G			х	A36	1/8"(1)	BOLT OR SCREW, 300 SS, INCLUDES ELCO BI-FLEX	1/4-14 1/4-20	6/PLATE	1" MIN	1/8"	1/2"	
ITEM 56: MULLION ANGLE MOUNT ANCHOR, ROUGH OPENING HEIGHT <= 96.5"					DIAMETER	# REQ'D	MIN CENTERS	MIN EMBED.	SUBSTRATE MIN EDGE (3)			
56A	Х			3 KSI	5" (1)(2)	HILTI KWIK BOLT TZ2, 300 SS	1/2"	4/ANG.	6" MIN	2.5" NOM.	3" EDGE 1 4" EDGE 2	
56E		х		2 KSI GROUT	8" NOM. (1)(2)	HILTI HIT-HY 100 EPOXY & THREADED ROD, 300 SS	5/8"	6/ANG.	8" HOR. MIN 6.25" VER. MIN	5.625" ACT.	4.125"	
56F			Х	A36	0.160" (1)(2)	BOLT OR SCREW, 300 SS, INCLUDES ELCO BI-FLEX	1/4-20	6/ANG.	1" MIN	0.160"	1/2"	
56G			Х	A36	1/8" (1)(2)	BOLT, 300 SS	5/16-18	6/ANG.	1" MIN	1/8"	3/4"	

NOTES: (1) IN DIRECTION OF ANCHOR PENETRATION. (2) SUBSTRATE THICKNESS IS ONE PORTION OF OVERALL WALL DEPTH.
(3) EDGE 1 IS CLOSEST TO ANCHOR, AND EDGE 2 IS OPPOSITE EDGE 1. IF EDGE # NOT SPECIFIED, THEN MIN VALUE IS SAME TO BOTH EDGES.



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