

NAAMM/ HMMA Joint Test #10

800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630) 942-6591
www.naamm.org

Testing and Reporting by:
Architectural Testing, Inc.
849 Western Avenue North
St. Paul, MN 55117

Underwriters Laboratories, Inc. Project #09CA54471
333 Pfingsten Road
Northbrook, IL 60062-2096
(847) 272-8800

Intertek Testing Services NA, Inc. Project #3195708
8431 Murphy Dr
Middleton, WI 53562
(608) 836-4400

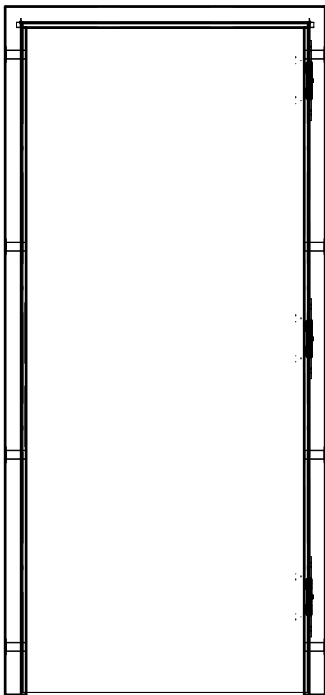
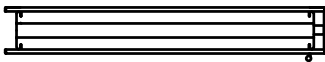
Testing for Compliance with: (Design Pressure $\pm$ 70psf):
*ANSI A 250.13-2008 Testing and Rating of Severe Windstorm Resistant Components
for Swinging Door Assemblies*

*ASTM E 330-14 Standard Test Method for Structural Performance of Exterior Windows,
Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

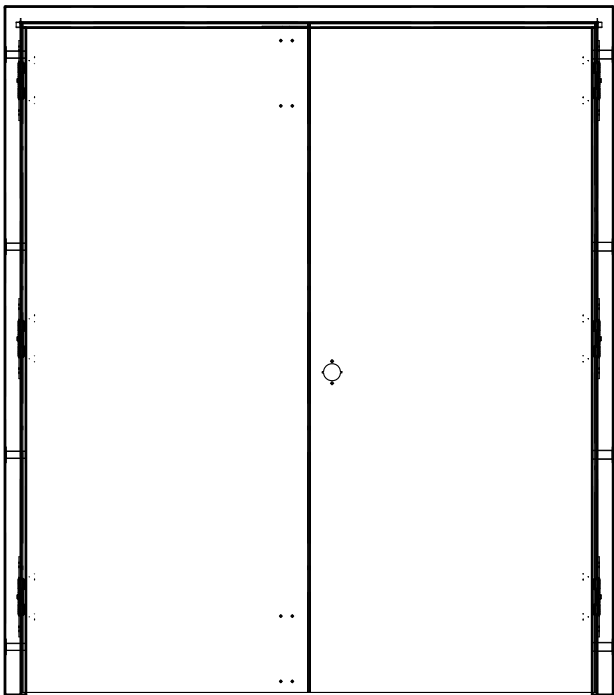
*ASTM E 1886-13a Standard Test Method for Performance of Exterior Windows,
Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed
to Cyclic Pressure Differentials*

*ASTM E 1996-14a Standard Specification for Performance of Exterior Windows,
Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in
Hurricanes*

TAS 201-94 Testing Application Standard - Impact Test Procedures
*TAS 202-94 Testing Application Standard - Criteria for Testing Impact & Nonimpact
Resistant Building Envelope Components Using Uniform Static Air Pressure*
*TAS 203-94 Testing Application Standard - Criteria for Testing Products Subject to
Cyclic Wind Pressure Loading*



Three Single Door Opening Configurations:
Identification # SC1, SC2, and SC3



Five Pair Door Opening Configurations:
Identification # PC1, PC2, PC3, PC4, and PC5

Test Samples Manufactured in Accordance with:
ANSI/NAAMM HMMA 861-14 *Guide Specifications for Commercial Hollow Metal Doors and Frames*

Drawn by: JSIII	Checked by: JAS
Date: 3-1-21	Page:
Scale: REVISION LEVEL 0	

Habersham Metal Products Company, Inc.



264 Stapleton Road
Cornelia, GA 30531
(706)778-2212
e-mail: www.habershammetal.com

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

NAAMM/ HMMA Joint Test #10

800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630) 942-6591
www.naamm.org

Testing and Reporting by:
Architectural Testing, Inc.
849 Western Avenue North
St. Paul, MN 55117

Underwriters Laboratories, Inc.
333 Pfingsten Road
Northbrook, IL 60062-2096
(847) 272-8800

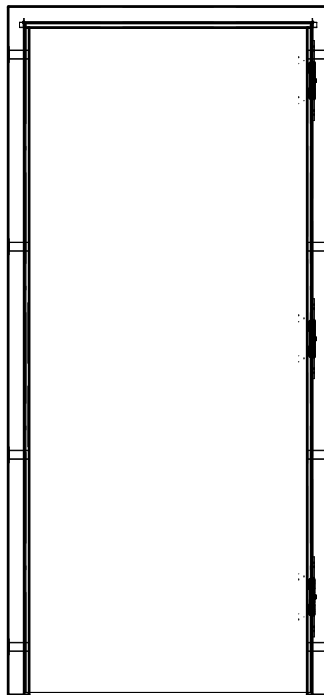
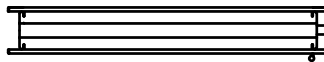
Intertek Testing Services NA, Inc.
8431 Murphy Dr
Middleton, WI 53562
(608) 836-4400

Testing for Compliance with: (Design Pressure $\pm$ 70psf):
ANSI A 250.13-2008 Testing and Rating of Severe Windstorm Resistant Components for Swinging Door Assemblies

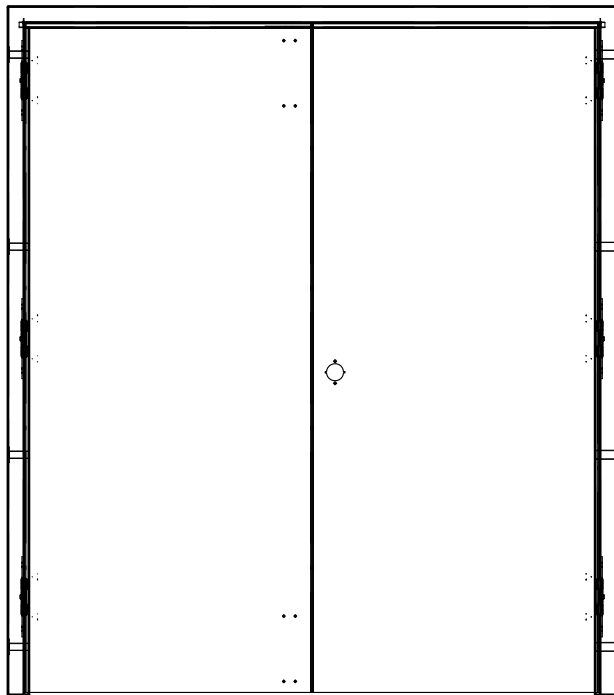
ASTM E 330-14 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

ASTM E 1886-13a Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials

ASTM E 1996-14a Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes



Three Single Door Opening Configurations:
Identification # SC1, SC2, and SC3



Five Pair Door Opening Configurations:
Identification # PC1, PC2, PC3, PC4, and PC5

Test Samples Manufactured in Accordance with:
ANSI/NAAMM HMMA 861-14 *Guide Specifications for Commercial Hollow Metal Doors and Frames*

Drawn by: JSIII	Checked by: JAS
Date: 2-22-21	Page:
Scale: REVISION LEVEL 1	

National Association of Architectural Metal Manufacturers



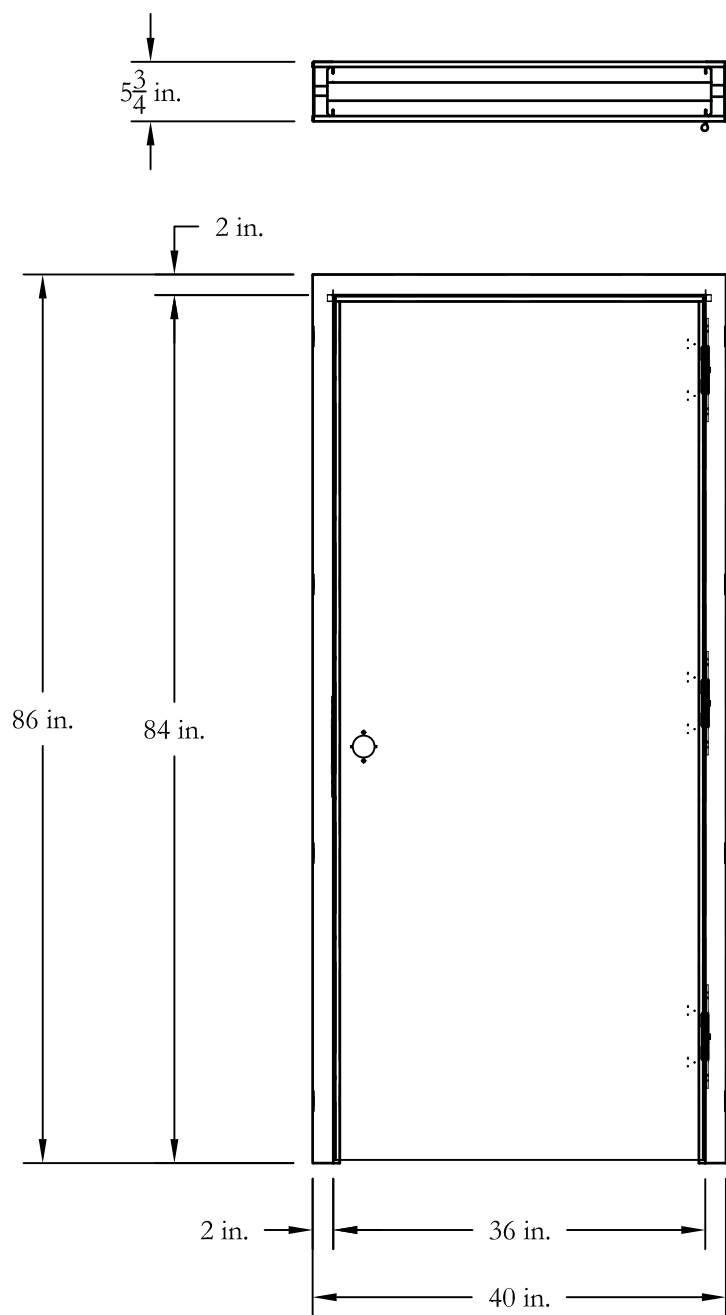
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

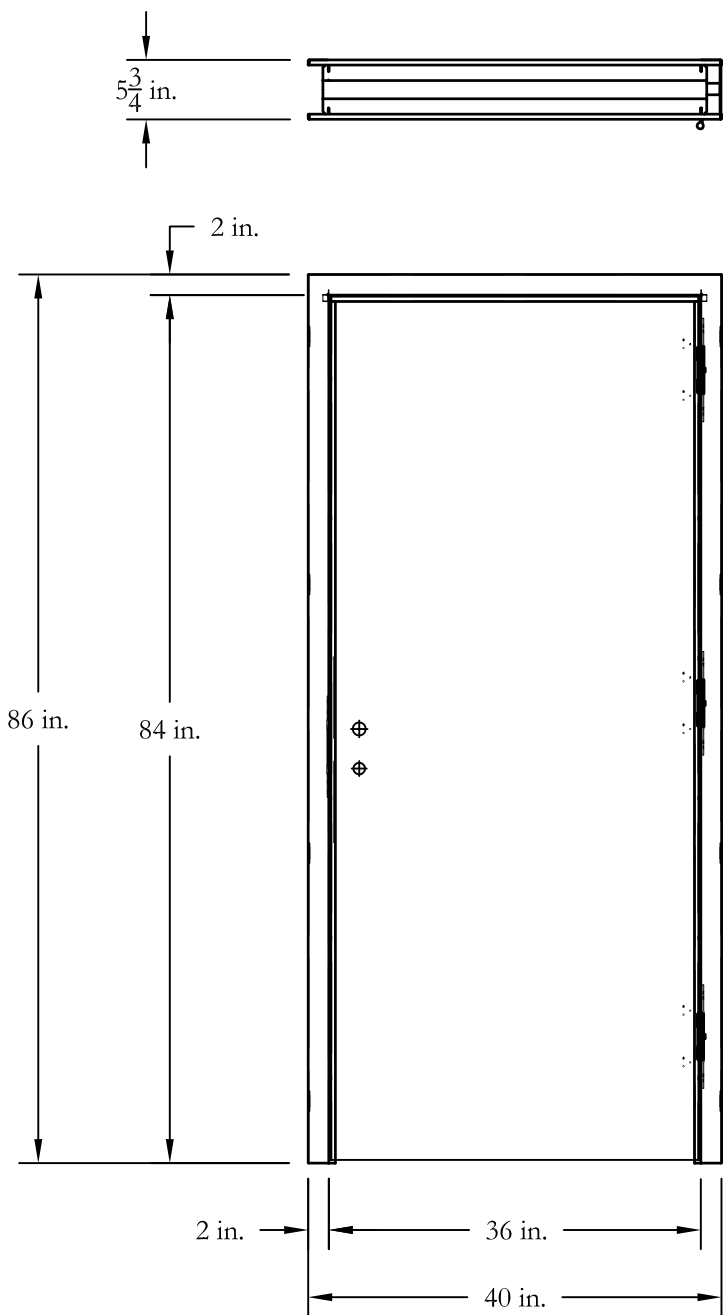
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

WINDSTORM SAMPLES "SC1 & SC2"



Hardware Set SC1:
Lock- Corbin Russwin CL3300 Series Cylindrical Lockset
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws



Hardware Set SC2:
Lock- Sargent 8200 Series Mortise Lock
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 2 of 42
Scale: REVISION LEVEL 0	

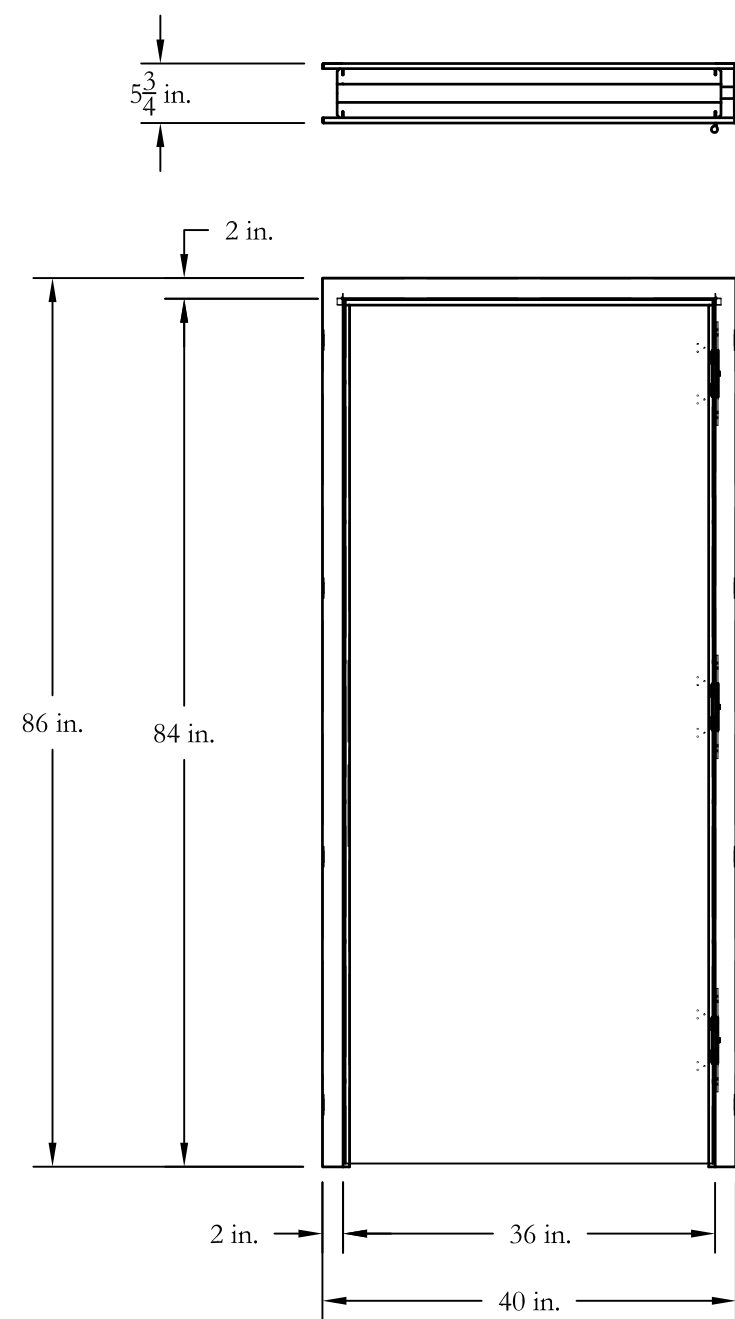
National Association of Architectural Metal Manufacturers



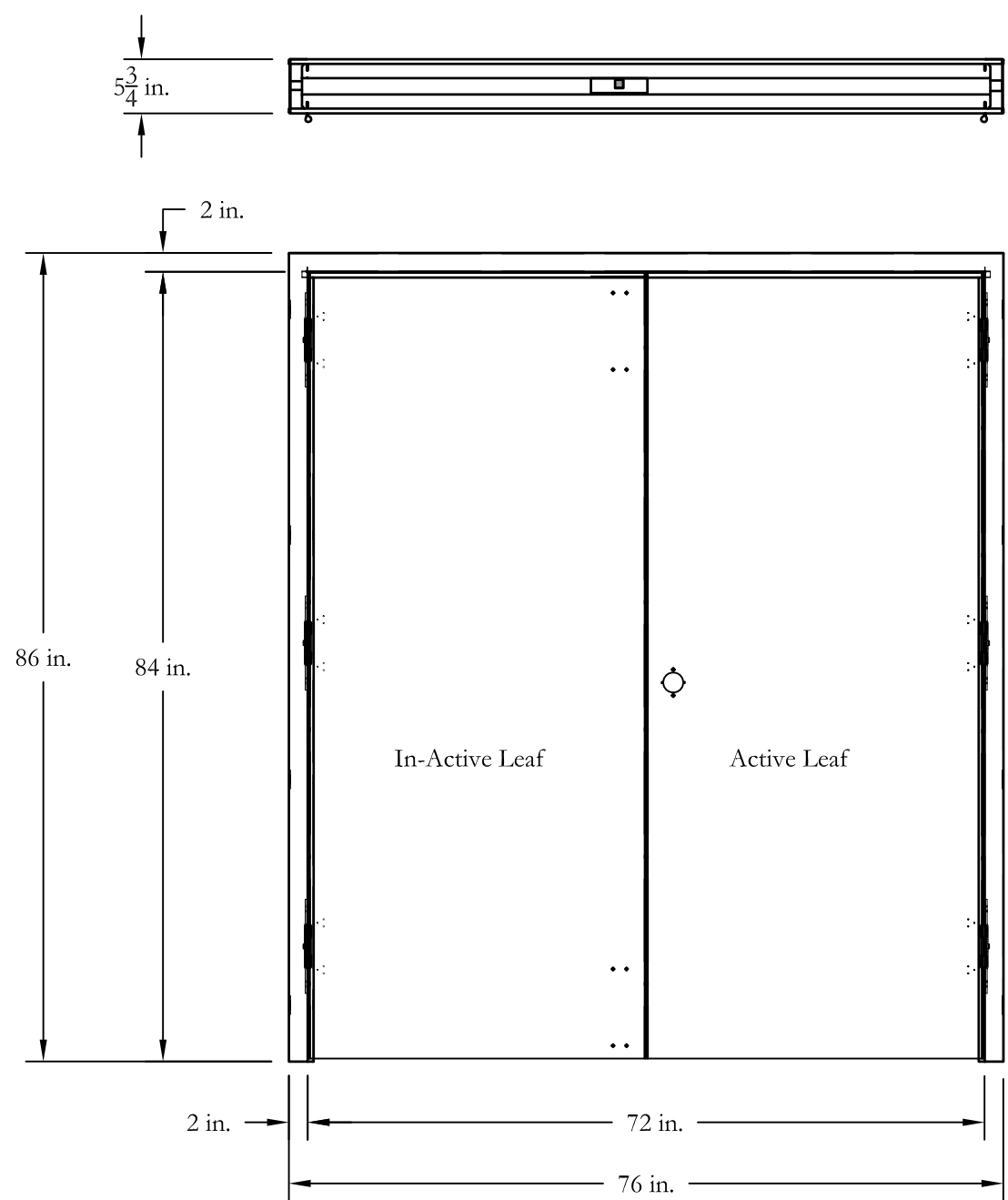
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

WINDSTORM SAMPLES "SC3 & PC1"



Hardware Set SC3:
Exit Device- Yale 7150 FWS with Windstorm Interlocking Bracket
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws



Hardware Set PC1:
Lock- Corbin Russwin CL3300 Series Cylindrical Lockset (Active Leaf)
Manual Surface Bolt- Yale 988Y Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 3 of 42
Scale: REVISION LEVEL 0	

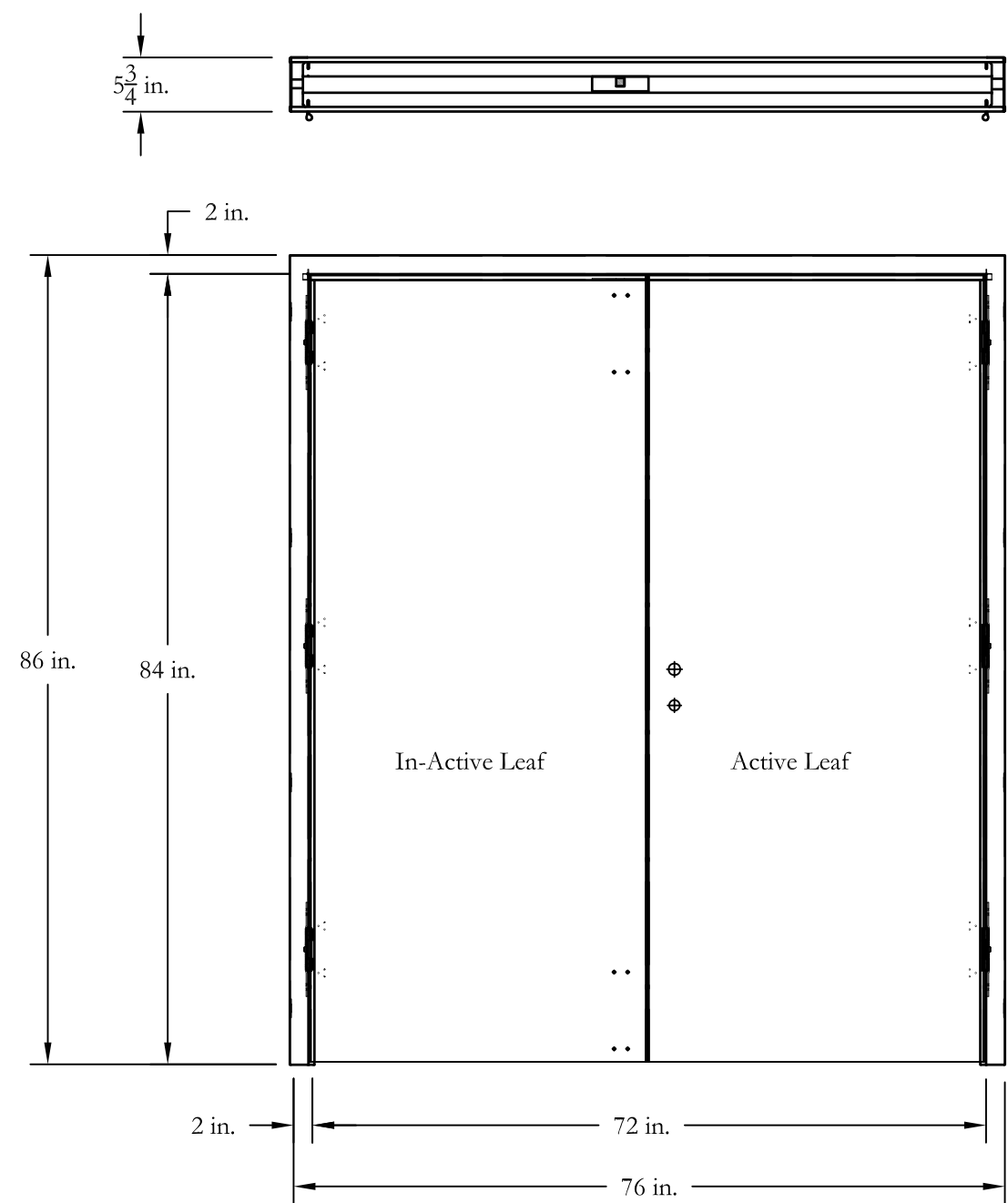
National Association of Architectural Metal Manufacturers



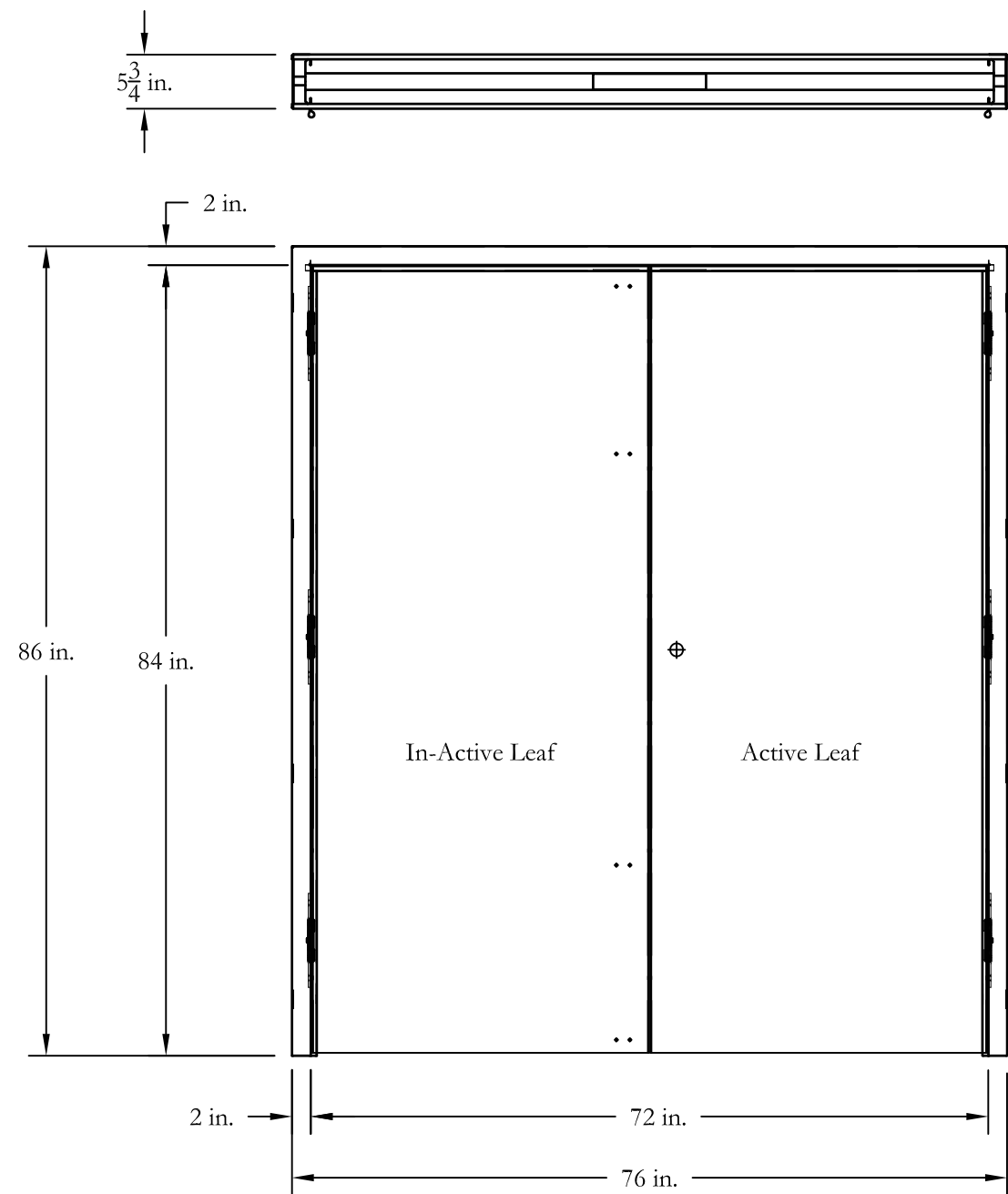
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

WINDSTORM SAMPLES "PC2 & PC3"



Hardware Set PC2:
Lock- Sargent 8200 Series Mortise Lock (Active Leaf)
Manual Surface Bolt- Sargent 988 Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws



Hardware Set PC3:
Exit Device- Sargent WS8900 (Active Leaf)
Surface Vertical Rod Exit Device- Yale 7170WS (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 4 of 42
Scale: REVISION LEVEL 0	

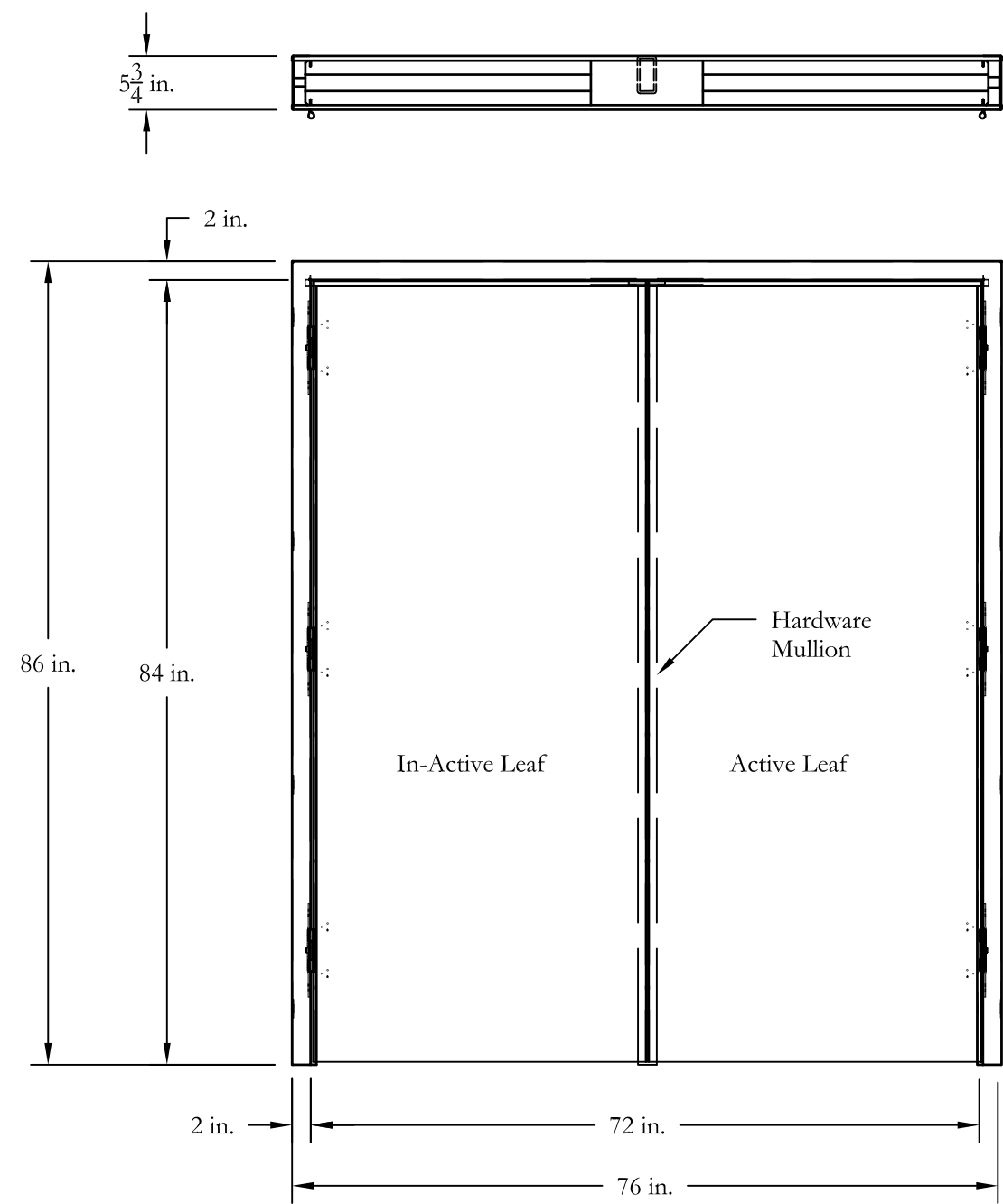
National Association of Architectural Metal Manufacturers



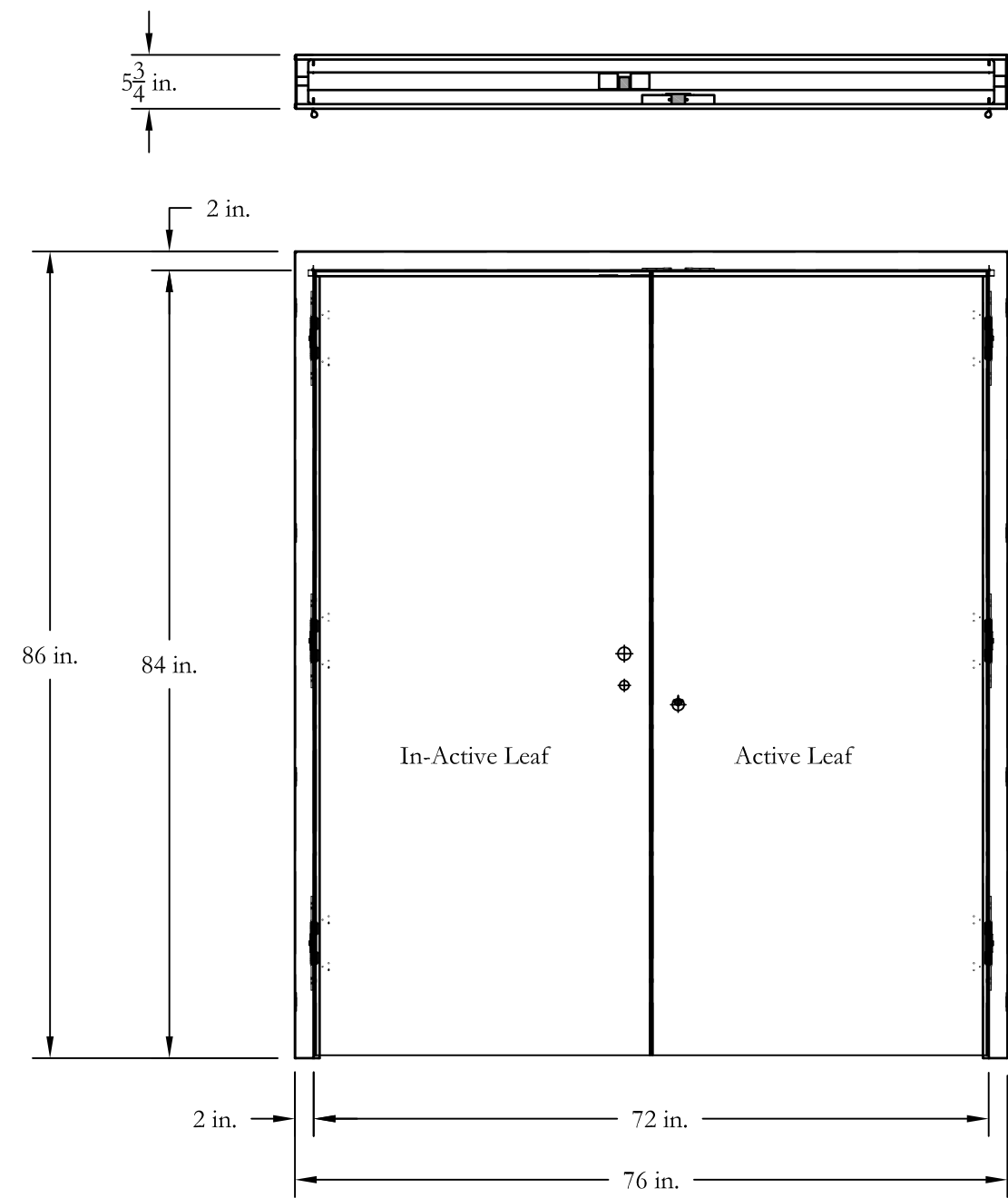
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

WINDSTORM SAMPLES "PC4 & PC5"



Hardware Set PC4:
Exit Device- Yale 7150 with Windstorm Interlocking Bracket (Each Leaf)
Removable Mullion- Yale M200FWS
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws



Hardware Set PC5:
Concealed Vertical Rod Exit Device- Sargent 8600 CVR Exit Device (Active Leaf)
Surface Vertical Rod Exit Device- Sargent HC8700 SVR Exit Device (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 5 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



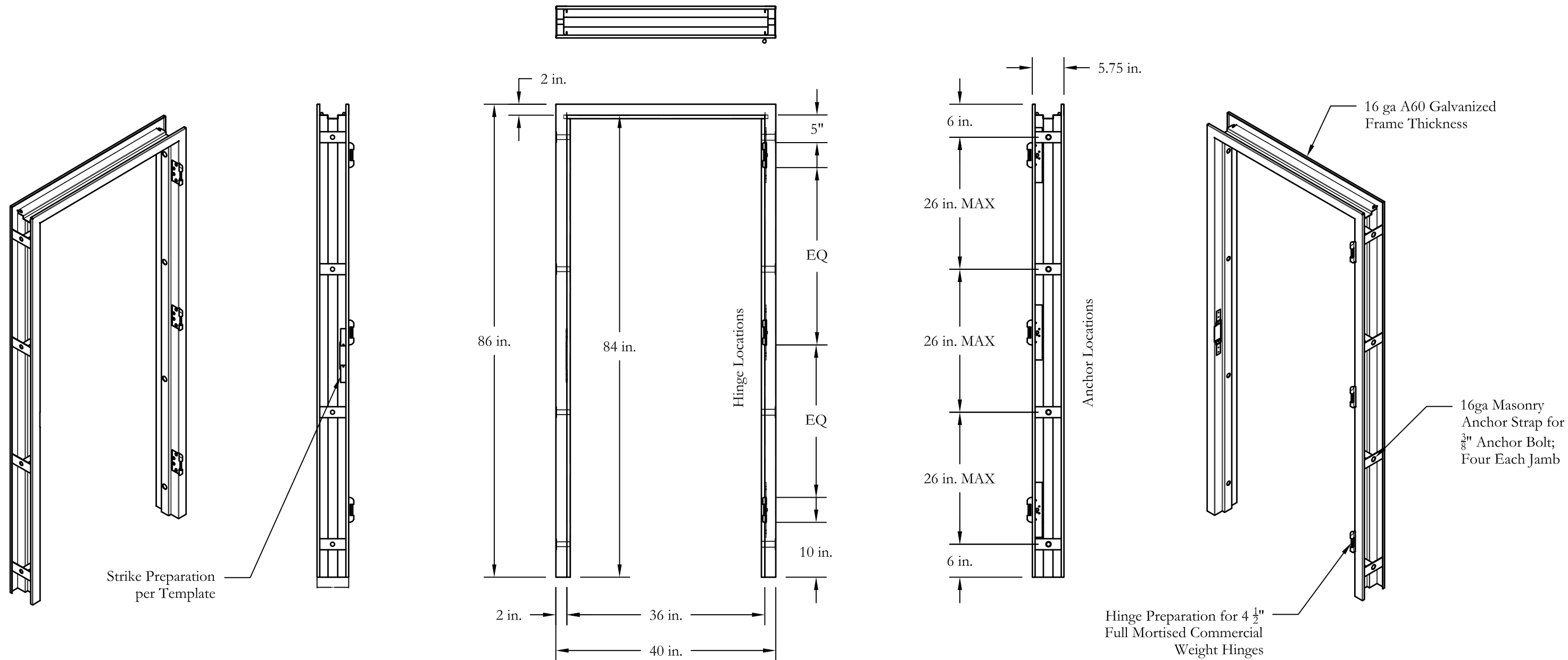
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

FRAMES "SC1 & SC2"



Hardware Set SC1:

Lock- Corbin Russwin CL3300 Series Cylindrical Lockset
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Hardware Set SC2:

Lock- Sargent 8200 Series Mortise Lock
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 6 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



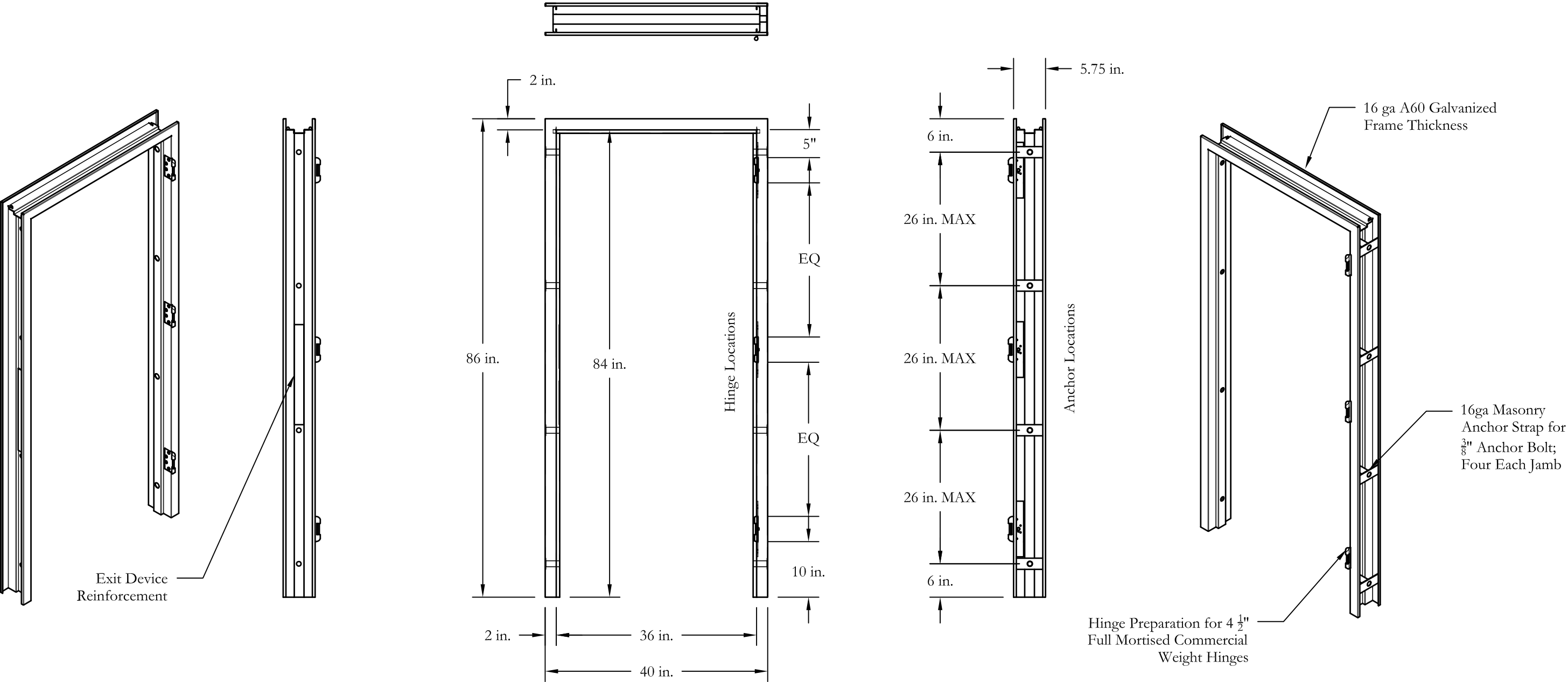
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

FRAME "SC3"



Hardware Set SC3:
Exit Device- Yale 7150 FWS
Hinges- McKinney #TA2714, 1- $\frac{1}{2}$ Pair 4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 7 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



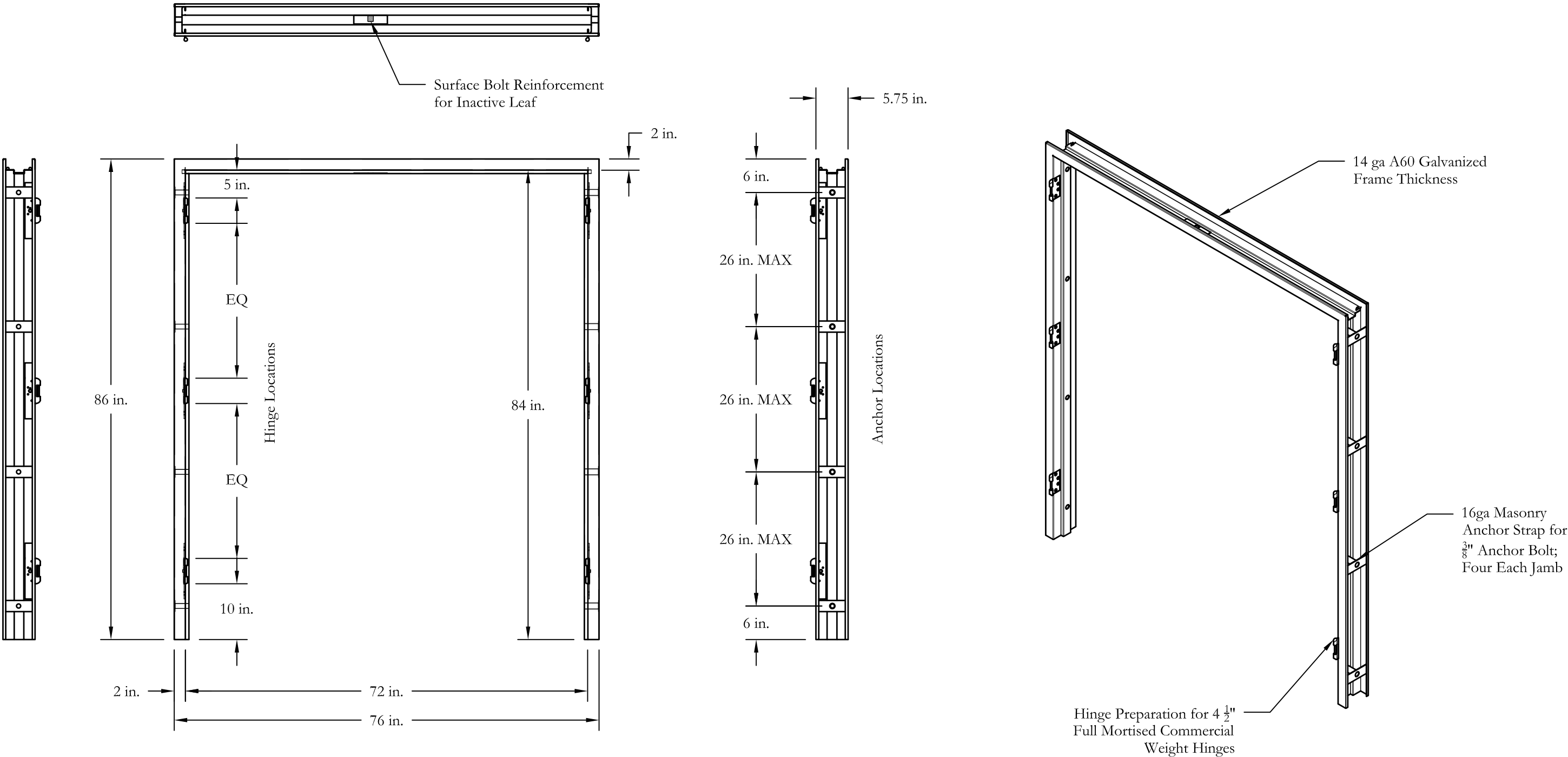
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

FRAME "PC1 and PC2"

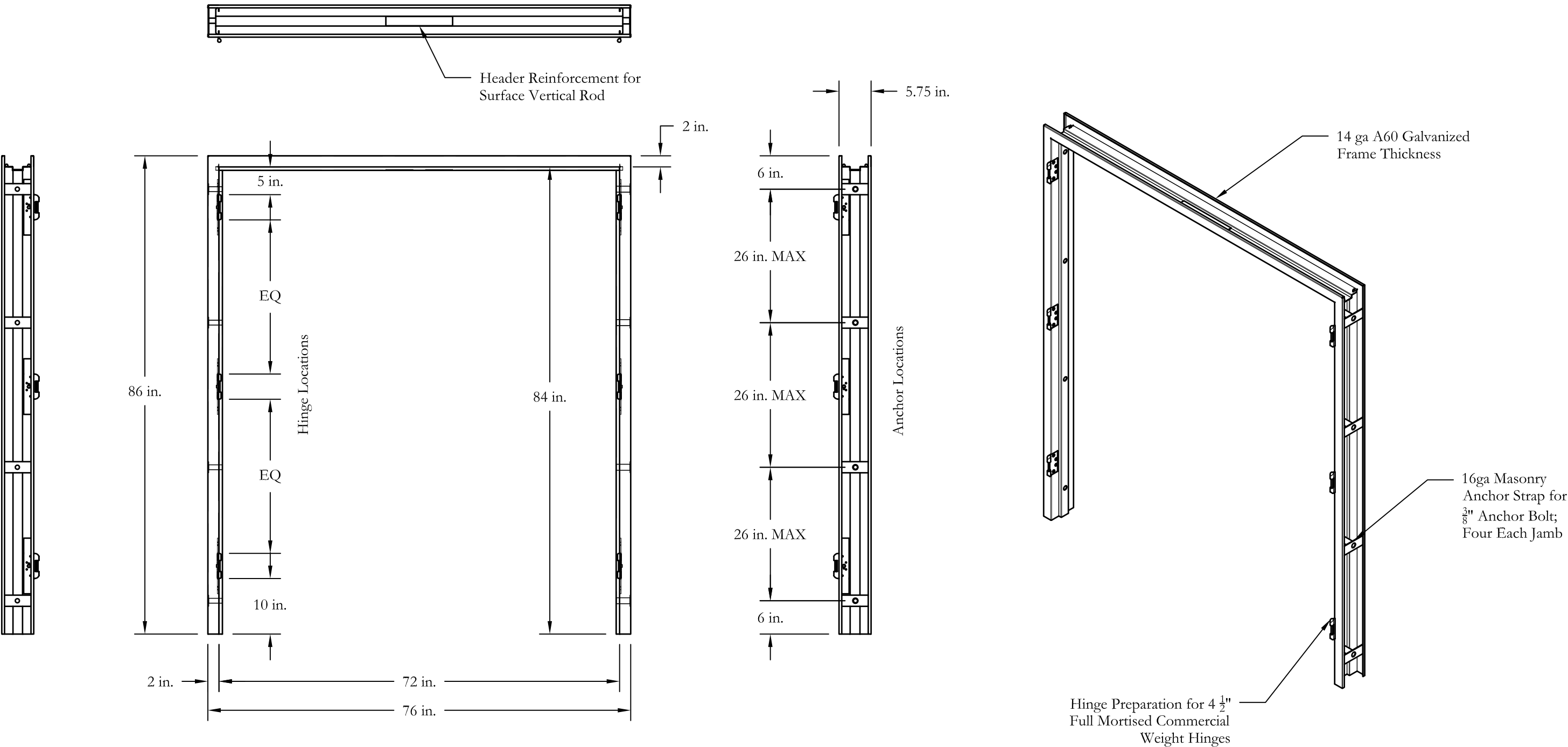


Hardware Set PC1:
Lock- Corbin Russwin CL3300 Series Cylindrical Lockset (Active Leaf)
Manual Surface Bolt- Yale 988Y Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1-½ Pair 4 ½ x 4 ½ Regular Weight with 12-24 Machine Screws

Hardware Set PC2:
Lock- Sargent 8200 Series Mortise Lock (Active Leaf)
Manual Surface Bolt- Sargent 988 Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1-½ Pair 4 ½ x 4 ½ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB	National Association of Architectural Metal Manufacturers  Hollow Metal Manufacturers Association 800 Roosevelt Road; Bldg C, Suite 312 Glen Ellyn, IL 60137 (630)942-6591 FX: (630)790-3095 e-mail: www.naamm.org	Project Name: HMMA Joint Test #10 Windstorm Test Sample Drawings
Date: 3-24-10	Page: 8 of 42		Job Number:
Scale: REVISION LEVEL 0			

FRAME "PC3"



Hardware Set PC3:
Exit Device- Sargent WS8900 (Active Leaf)
Surface Vertical Rod Exit Device- Yale 7170WS (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 9 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



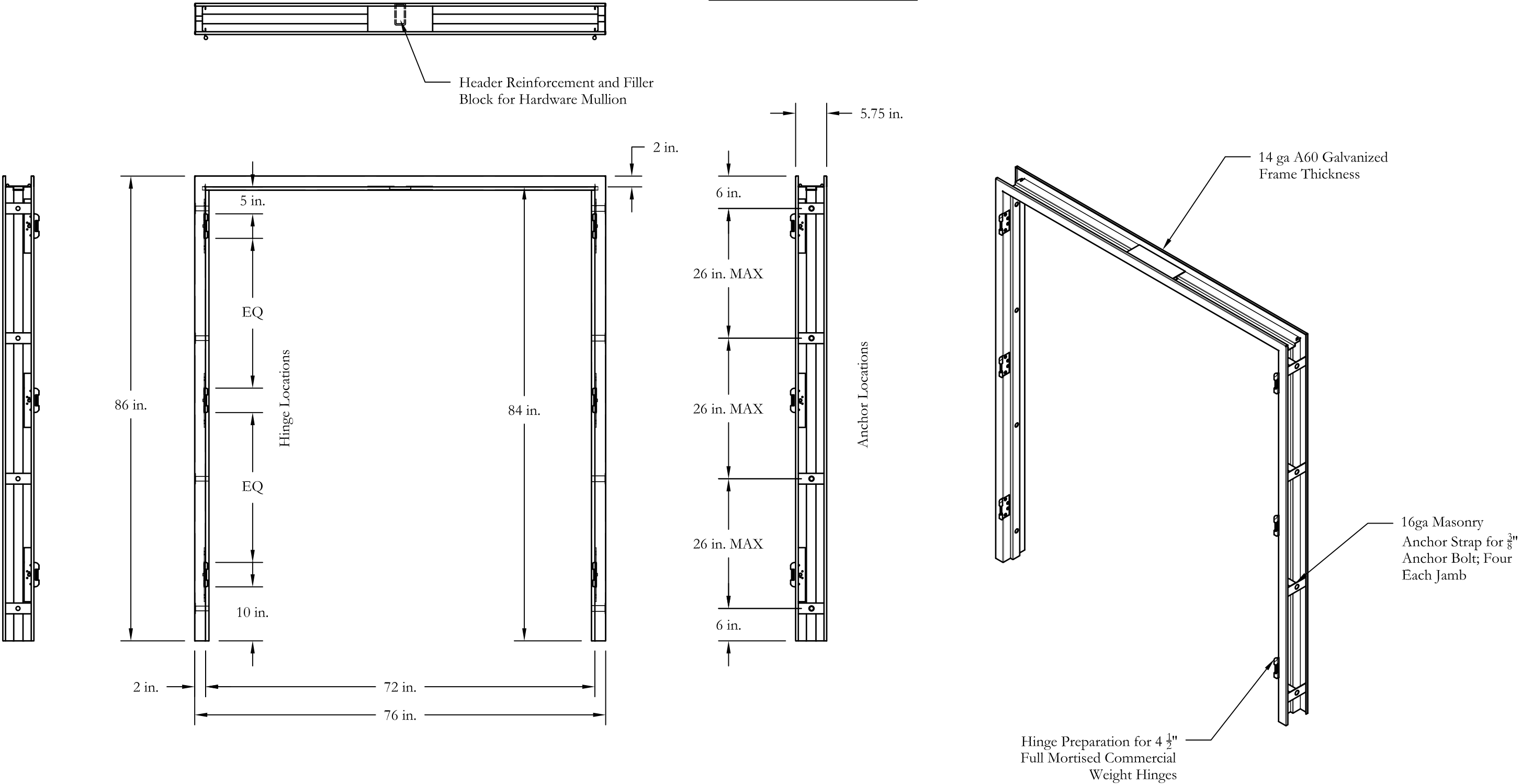
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

FRAME "PC4"



Hardware Set PC4:
Exit Device- Yale 7150 (Each Leaf)
Removable Mullion- Yale M200FWS
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 10 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



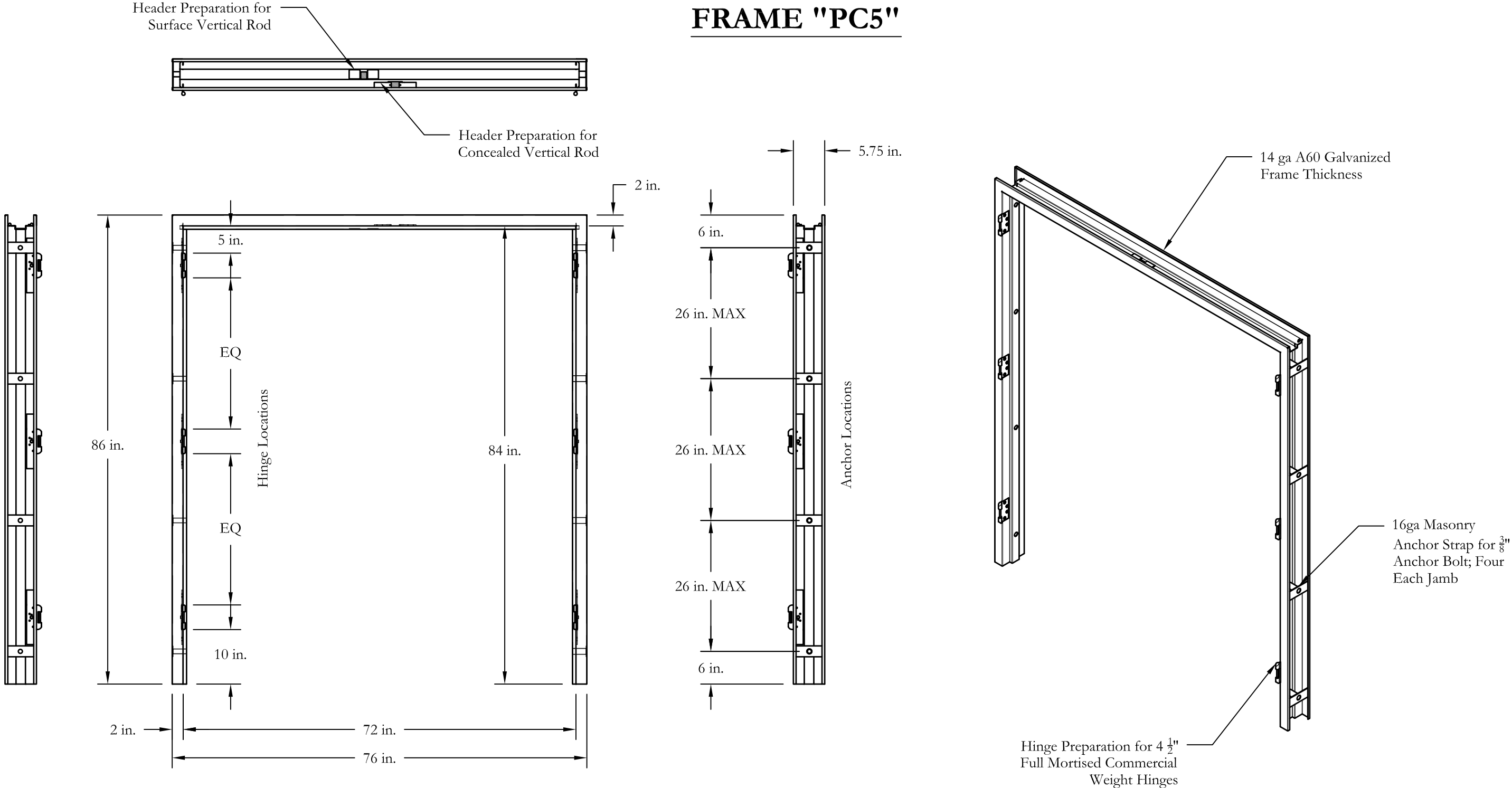
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

FRAME "PC5"

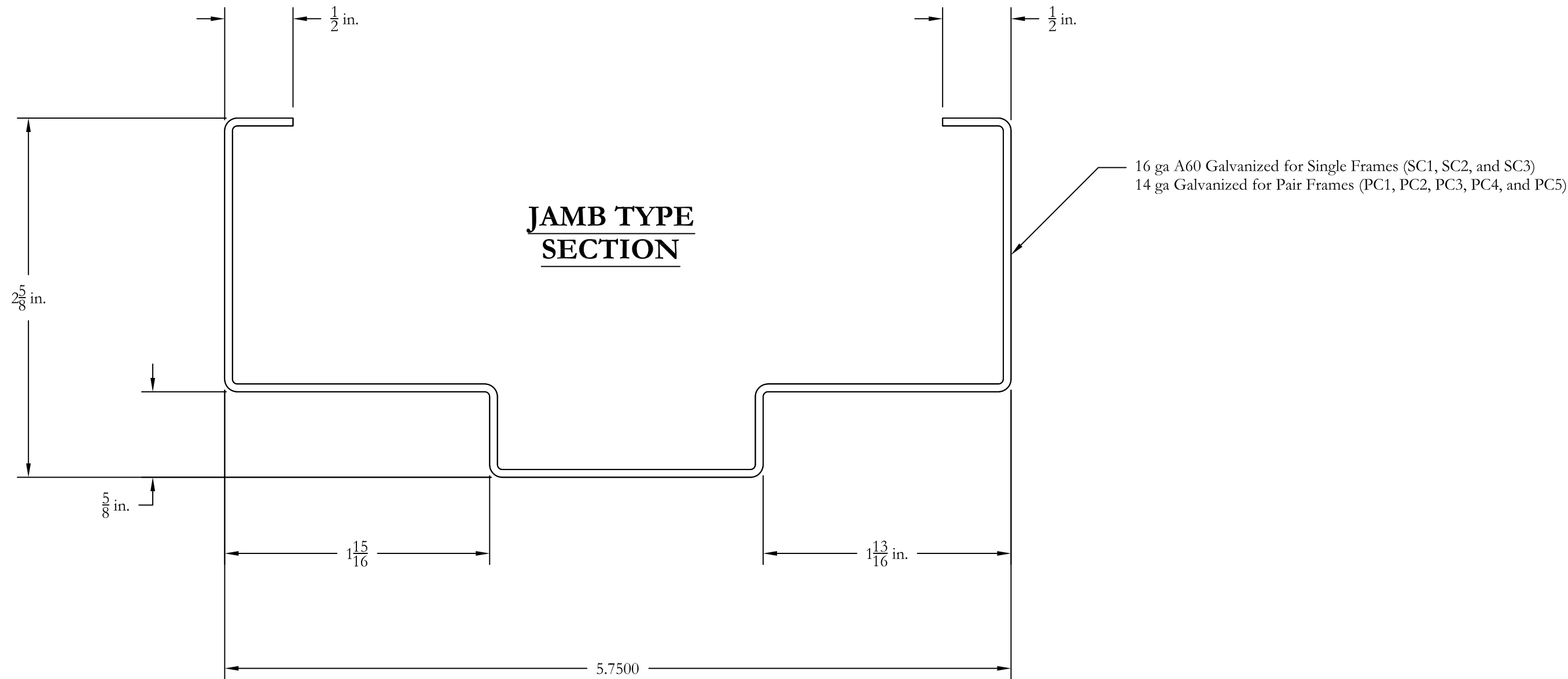


Hardware Set PC5:

Concealed Vertical Rod Exit Device- Sargent 8600 CVR Exit Device (Active Leaf)
Surface Vertical Rod Exit Device- Sargent HC8700 SVR Exit Device (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB	National Association of Architectural Metal Manufacturers  Hollow Metal Manufacturers Association 800 Roosevelt Road; Bldg C, Suite 312 Glen Ellyn, IL 60137 (630)942-6591 FX: (630)790-3095 e-mail: www.naamm.org	Project Name: HMMA Joint Test #10 Windstorm Test Sample Drawings
Date: 3-24-10	Page: 11 of 42		Job Number:
Scale: REVISION LEVEL 0			

TYPICAL JAMB TYPE DETAIL
FOR FRAMES "SC1, SC2, SC3, PC1, PC2, PC3, PC4, AND PC5"



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 12 of 42
Scale: REVISION LEVEL 0	

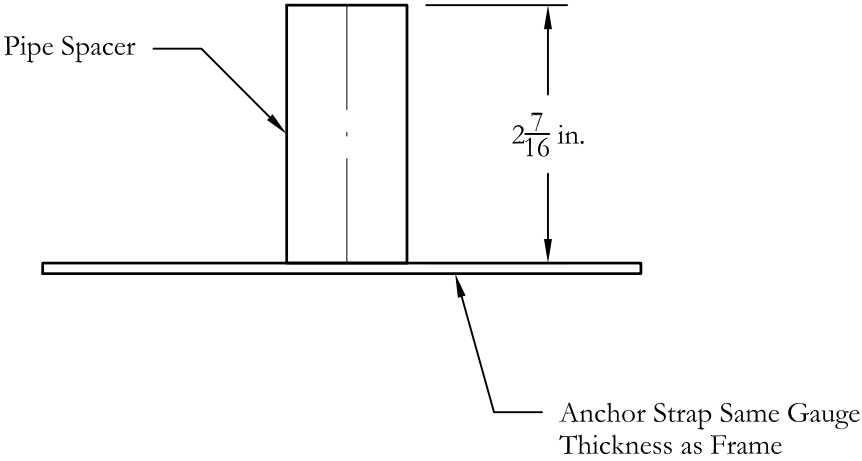
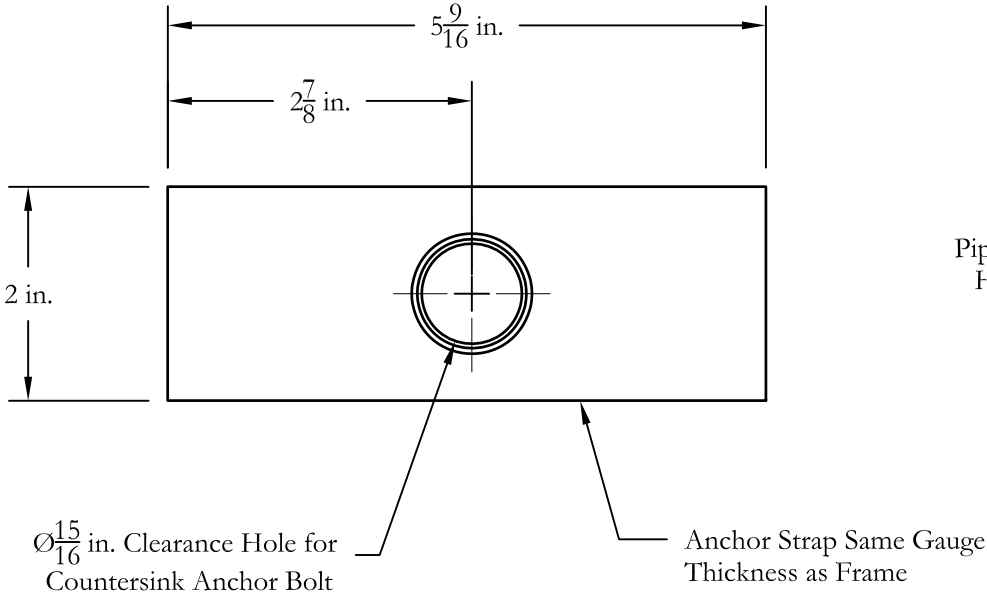
National Association of Architectural Metal Manufacturers

MEMBER

Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

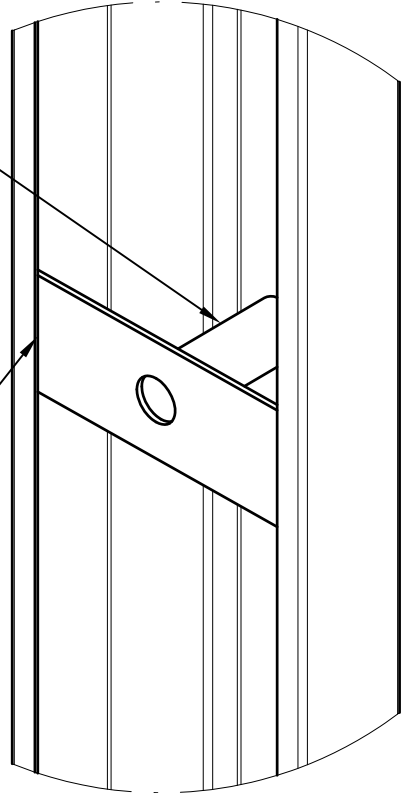
Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

TYPICAL ANCHOR STRAP DETAIL
FOR FRAMES "SC1, SC2, SC3, PC1, PC2, PC3, PC4, AND PC5"

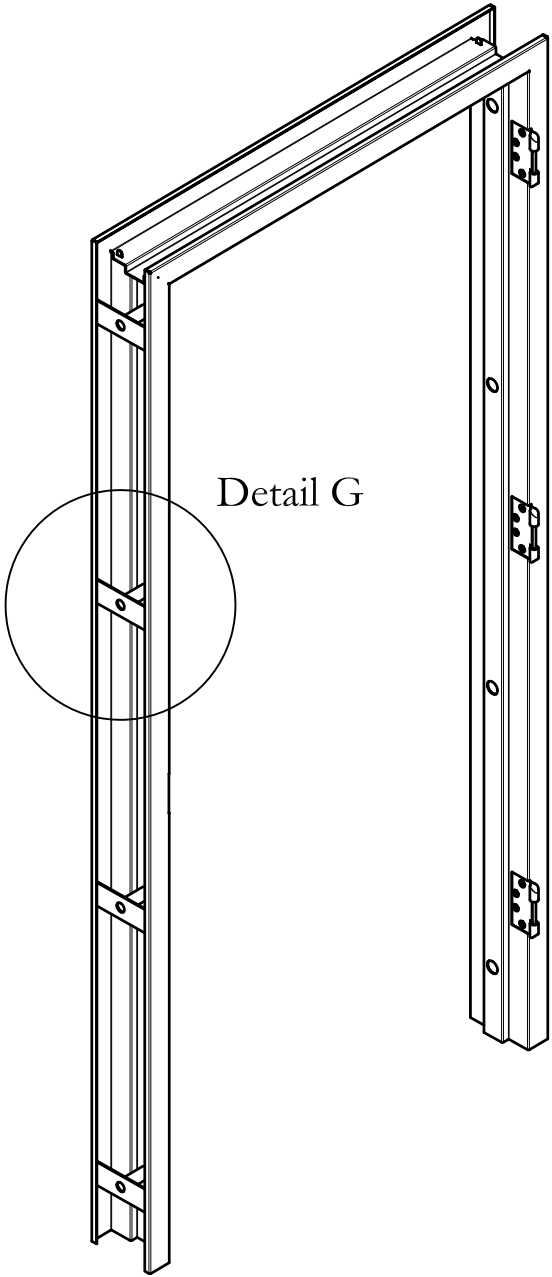


Pipe Spacer Arc Welded to
Hollow Metal Frame and
Anchor Strap

Anchor Strap Arc
Welded to Hollow Metal
Frame at Each Return



Detail G
Anchor Strap Preparation



Detail G

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 13 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



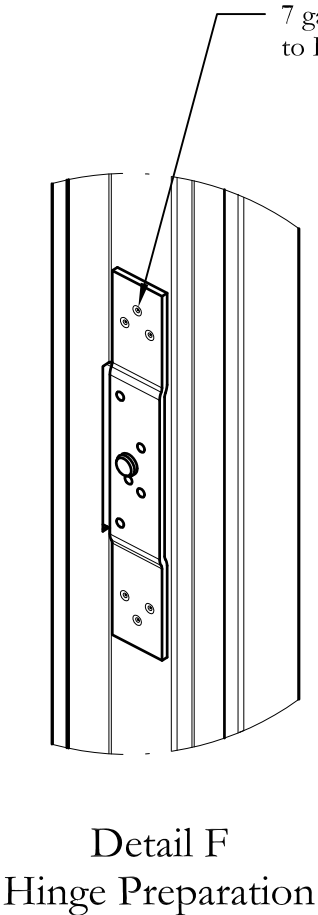
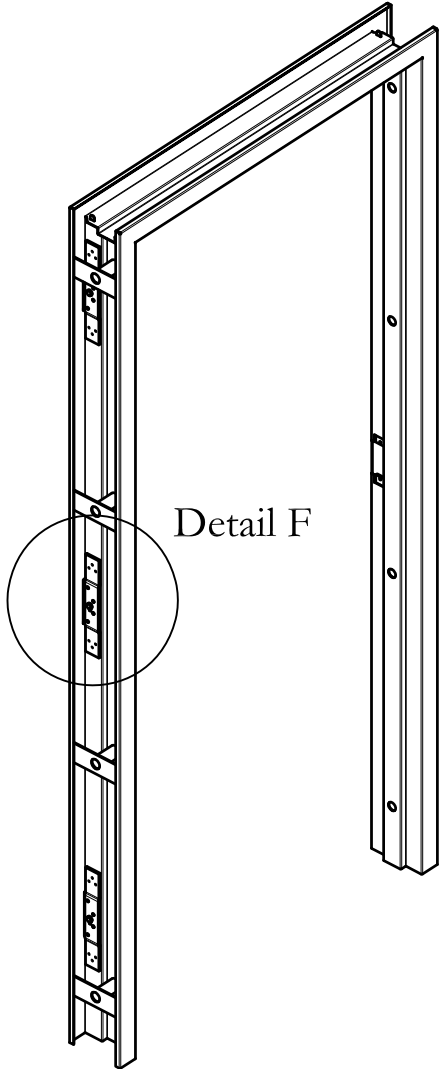
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

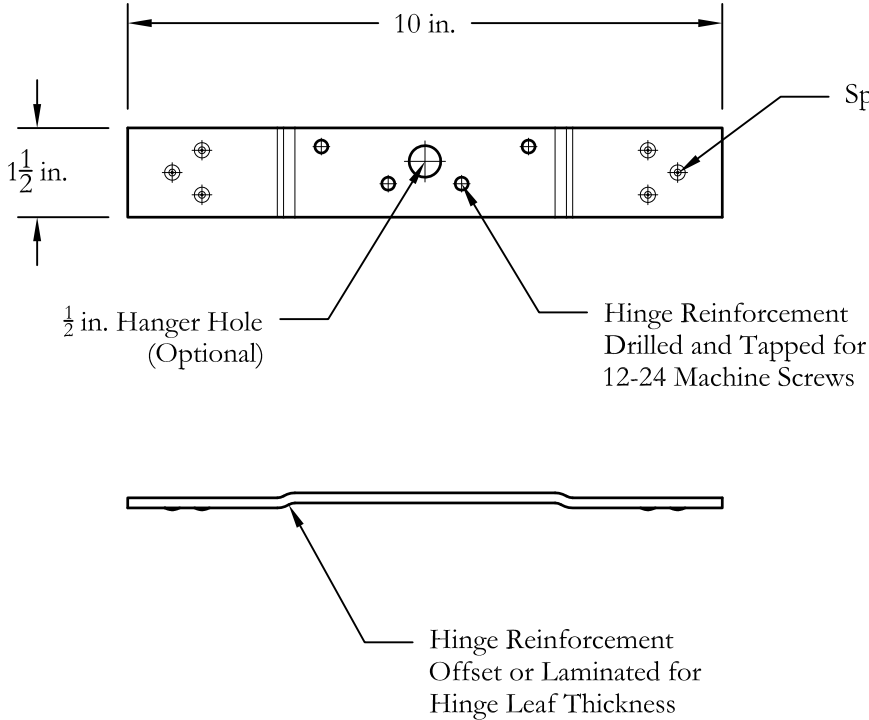
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

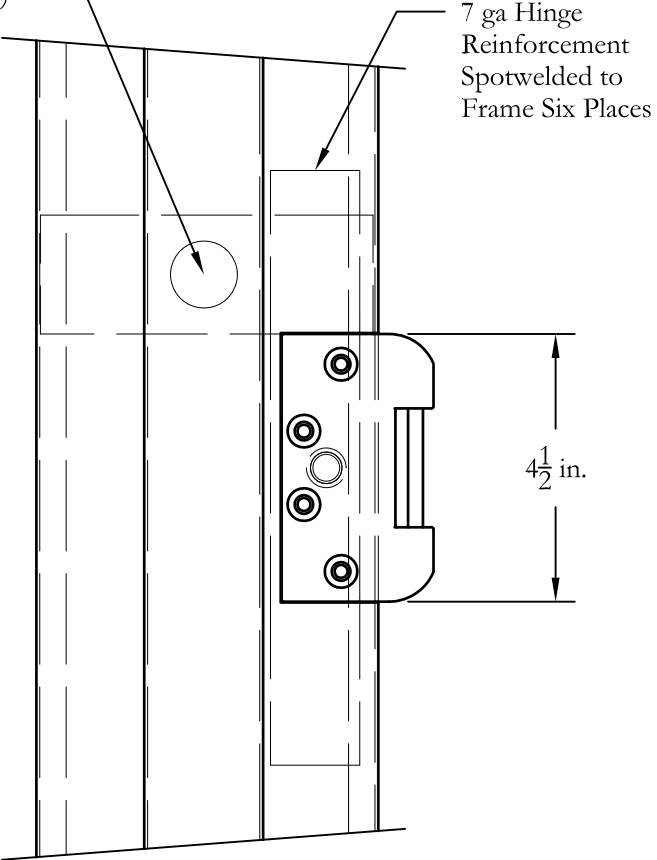
**TYPICAL HINGE REINFORCEMENT DETAIL
FOR FRAMES "SC1, SC2, SC3, PC1, PC2, PC3, PC4, AND PC5"**



7 ga Hinge Reinforcement Spotwelded to Hollow Metal Frame Six Places



Anchor Preparation
(See Details)



Hinge Section View from
Door Opening

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 14 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



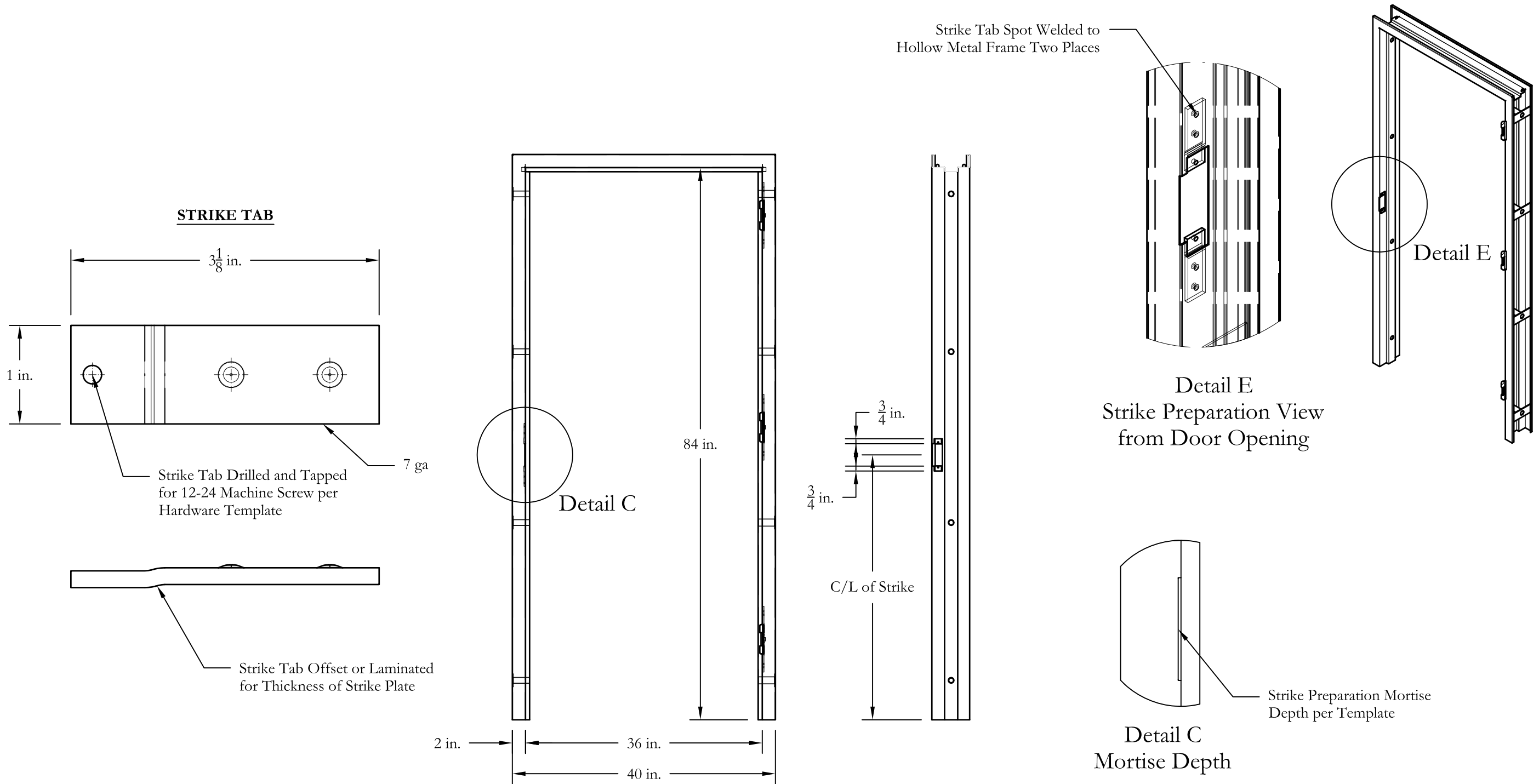
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

STRIKE REINFORCEMENT DETAIL FOR FRAMES "SC1 AND SC2"



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 15 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



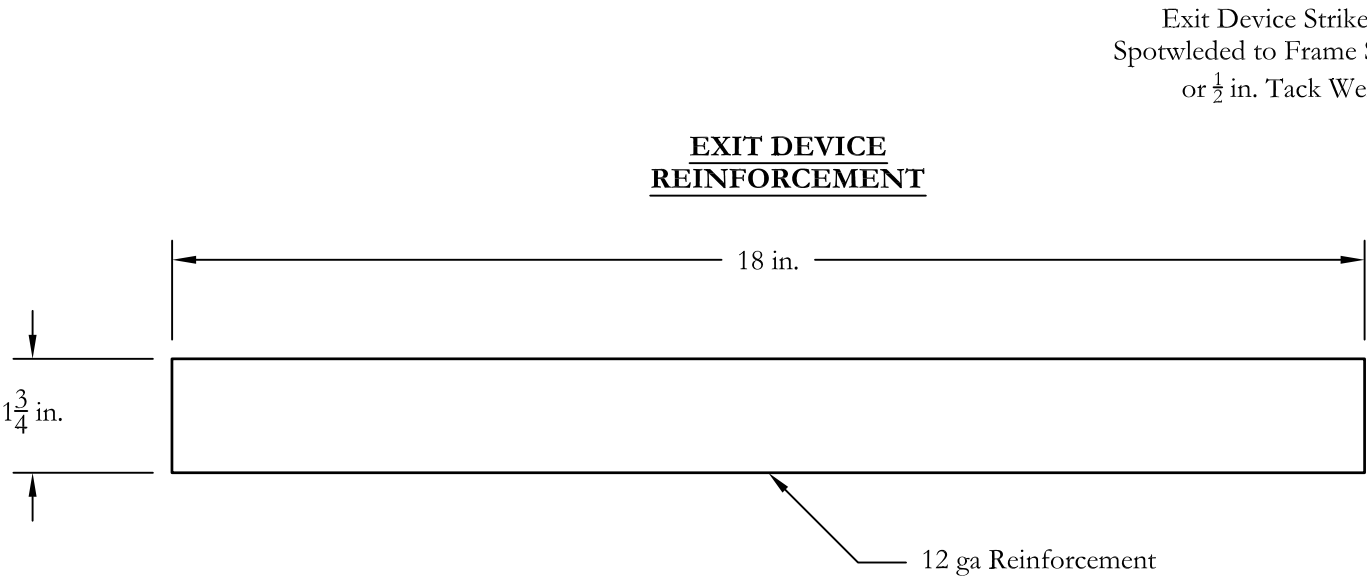
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

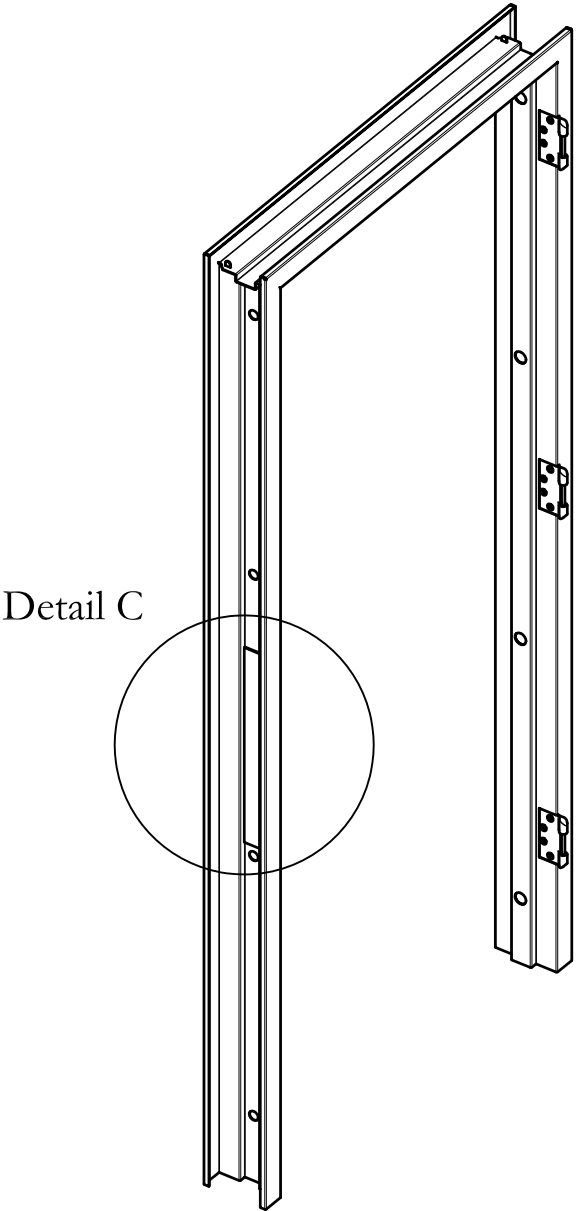
EXIT DEVICE REINFORCEMENT DETAIL
FOR FRAME "SC3"



Exit Device Strike Reinforcement
Spotwelded to Frame Soffit Six Places
or 1/2 in. Tack Welds Eight Places

Anchor Preparation for 3/8 in.
Anchor Bolt

Detail C
Exit Device
Reinforcement Detail



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 16 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



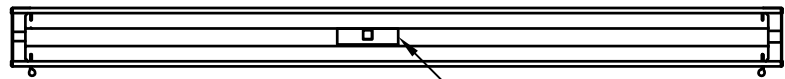
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

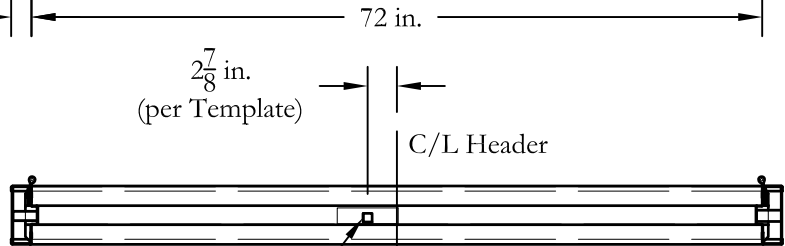
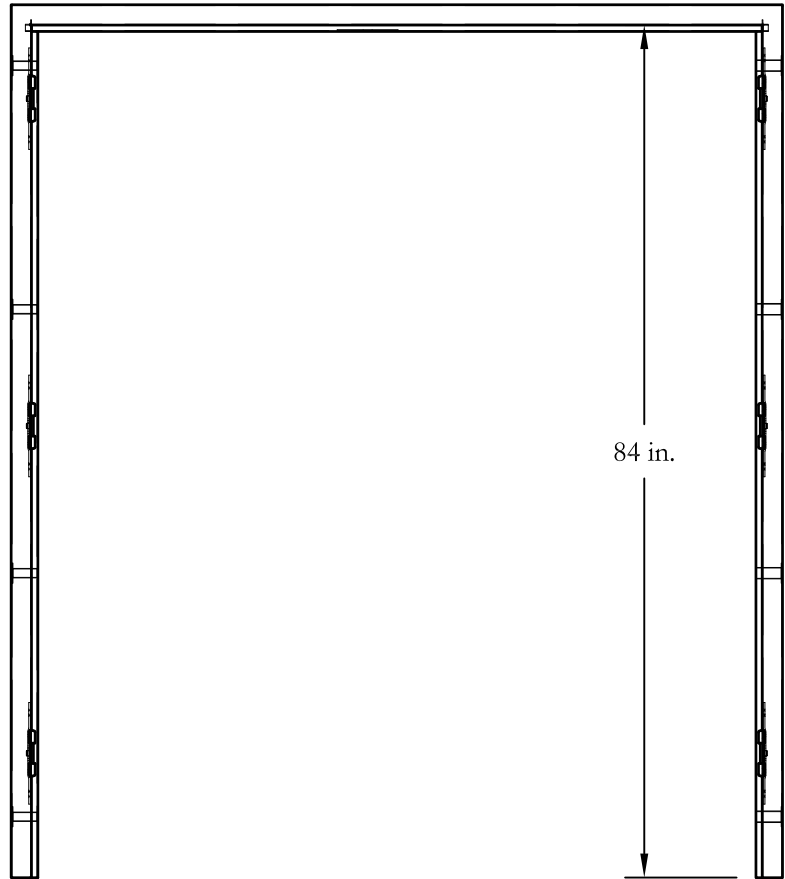
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

SURFACE BOLT REINFORCEMENT DETAIL
INACTIVE DOOR LEAF
FOR FRAMES "PC1 AND PC2"

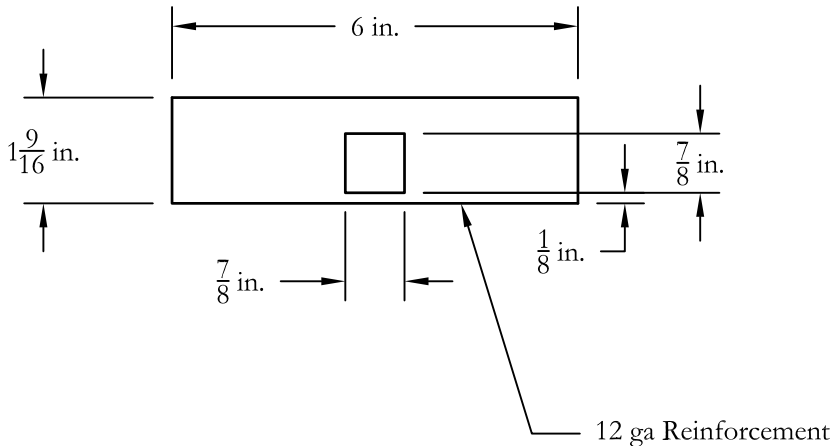


Surface Bolt Reinforcement

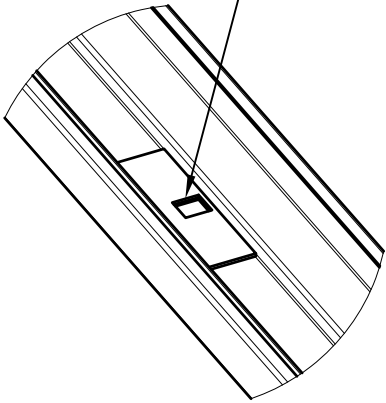


Surface Bolt Reinforcement

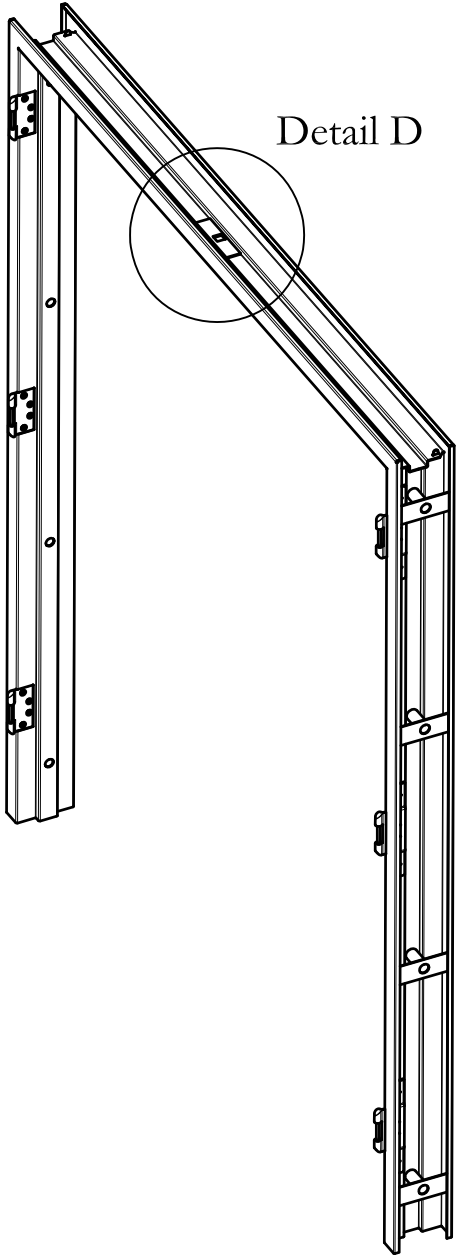
SURFACE BOLT REINFORCEMENT



Surface Bolt Reinforcement
Spotwelded to Hollow Metal
Frame Four Places



Detail D
Surface Bolt Preparation
View from Frame
Header Throat



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 17 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



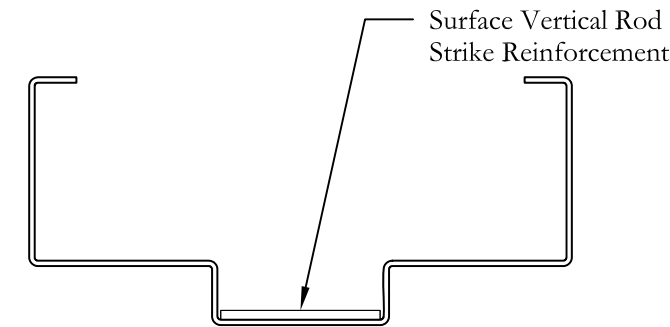
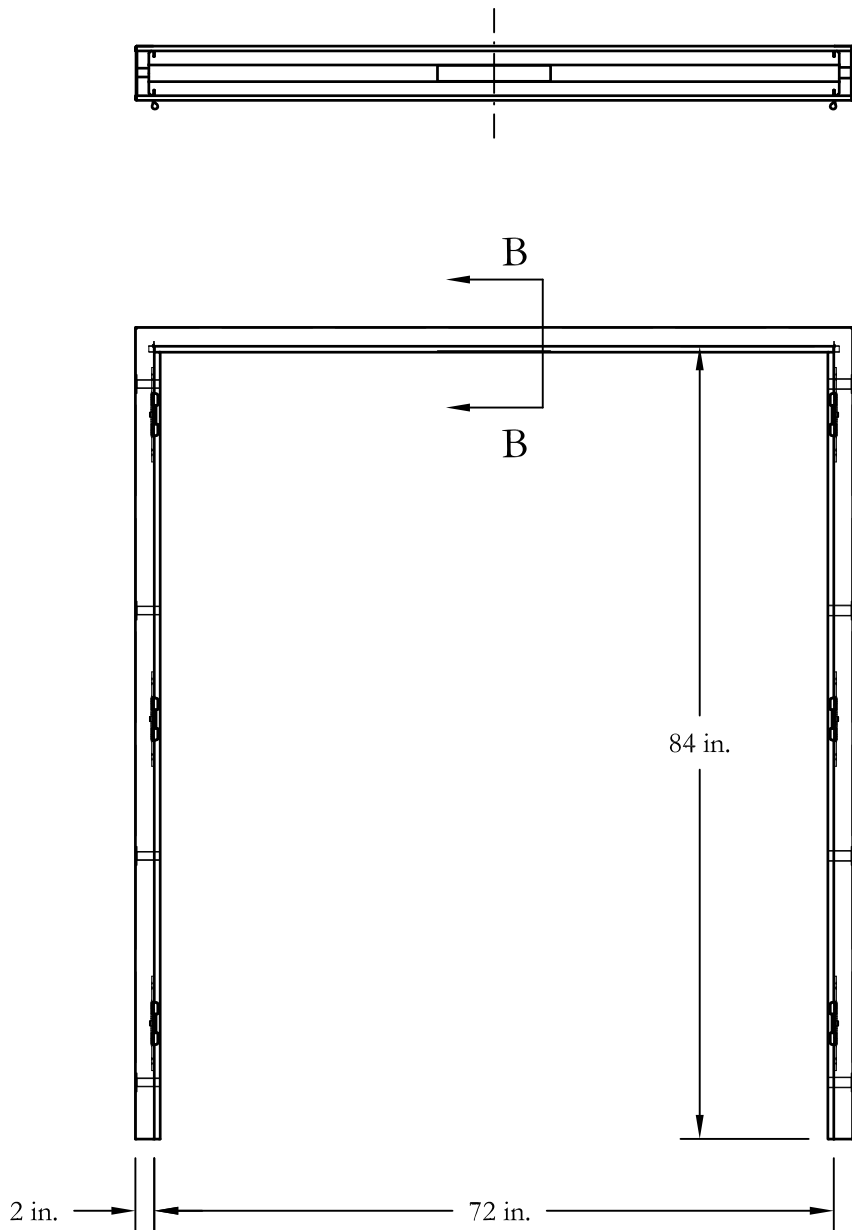
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

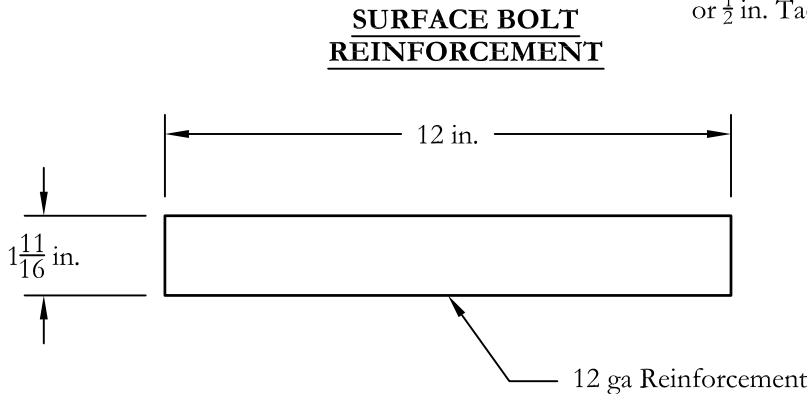
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

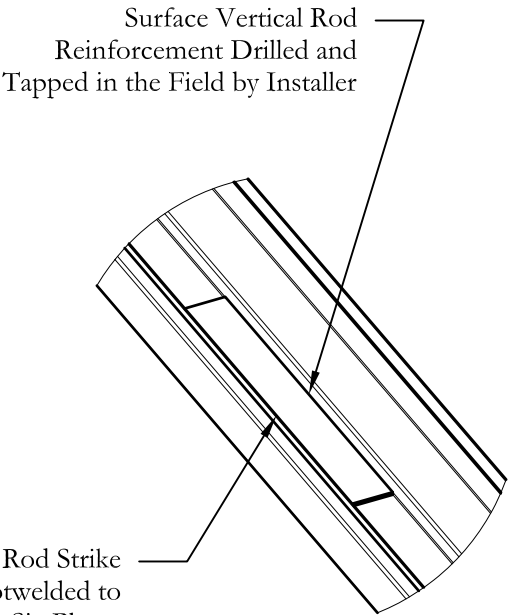
EXIT DEVICE SURFACE VERTICAL ROD
REINFORCEMENT DETAIL
FOR FRAME "PC3"



Section B-B
Surface Vertical Rod Reinforcement

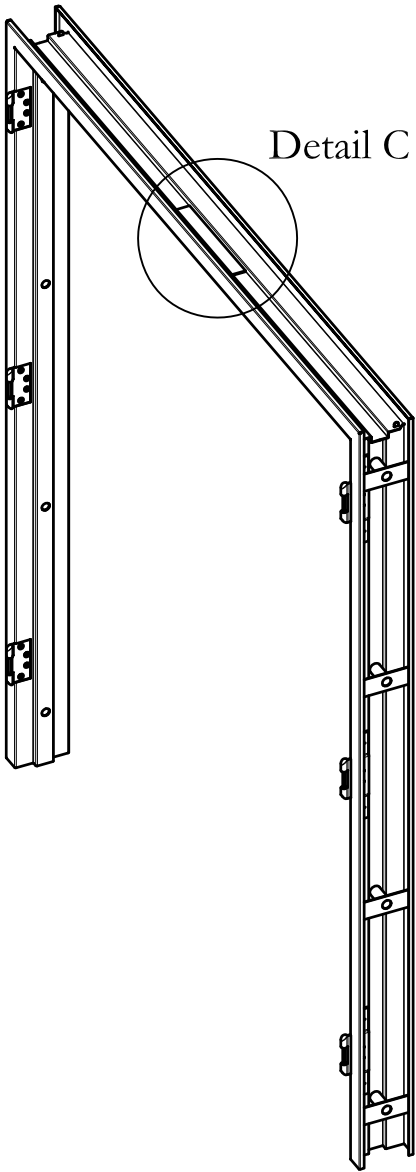


SURFACE BOLT
REINFORCEMENT



Surface Vertical Rod Strike Reinforcement Spotwelded to Hollow Metal Frame Six Places or 1/2 in. Tack Welds Eight Places

Detail C
Surface Vertical Rod Reinforcement



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 18 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



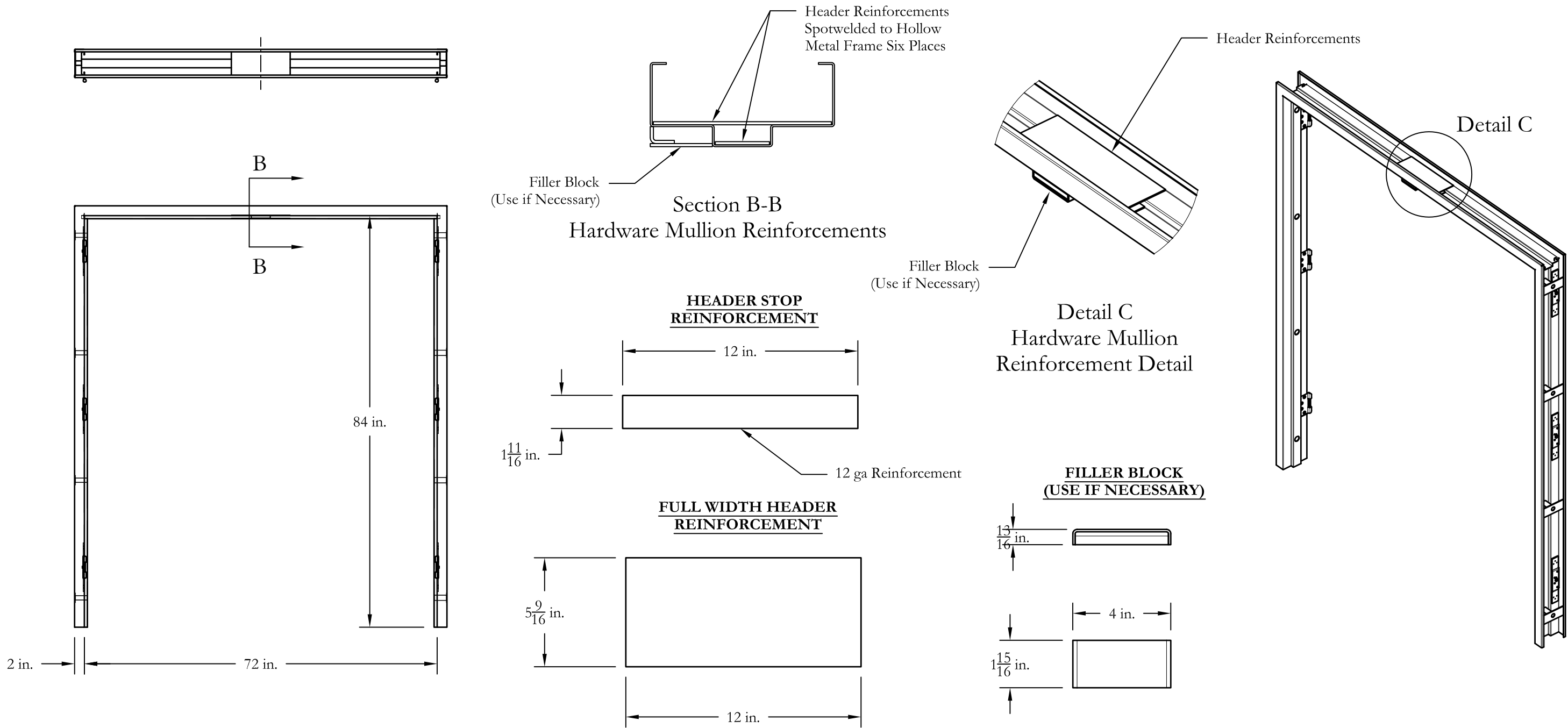
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

**HARDWARE MULLION REINFORCEMENT AND
FILLER BLOCK DETAIL
FOR FRAME "PC4"**



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 19 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



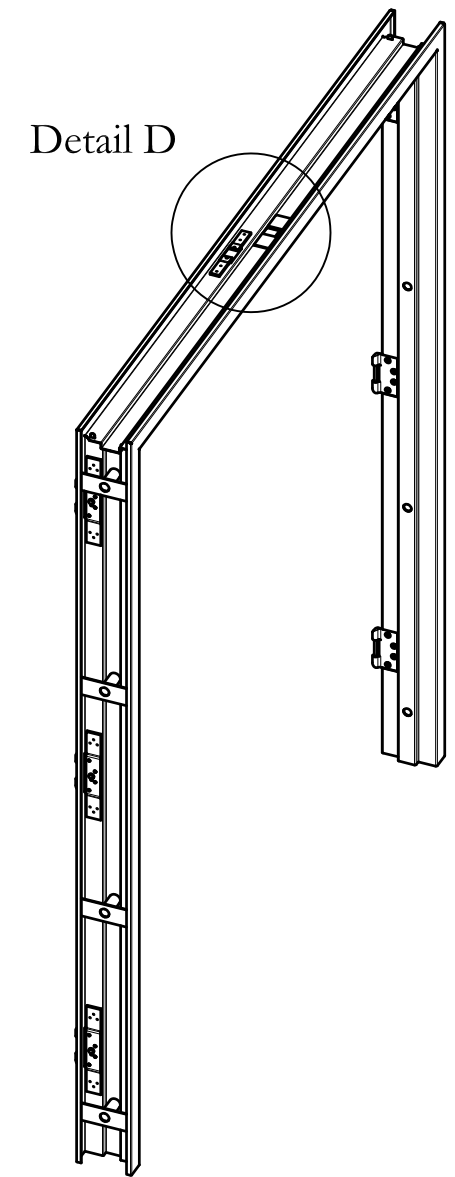
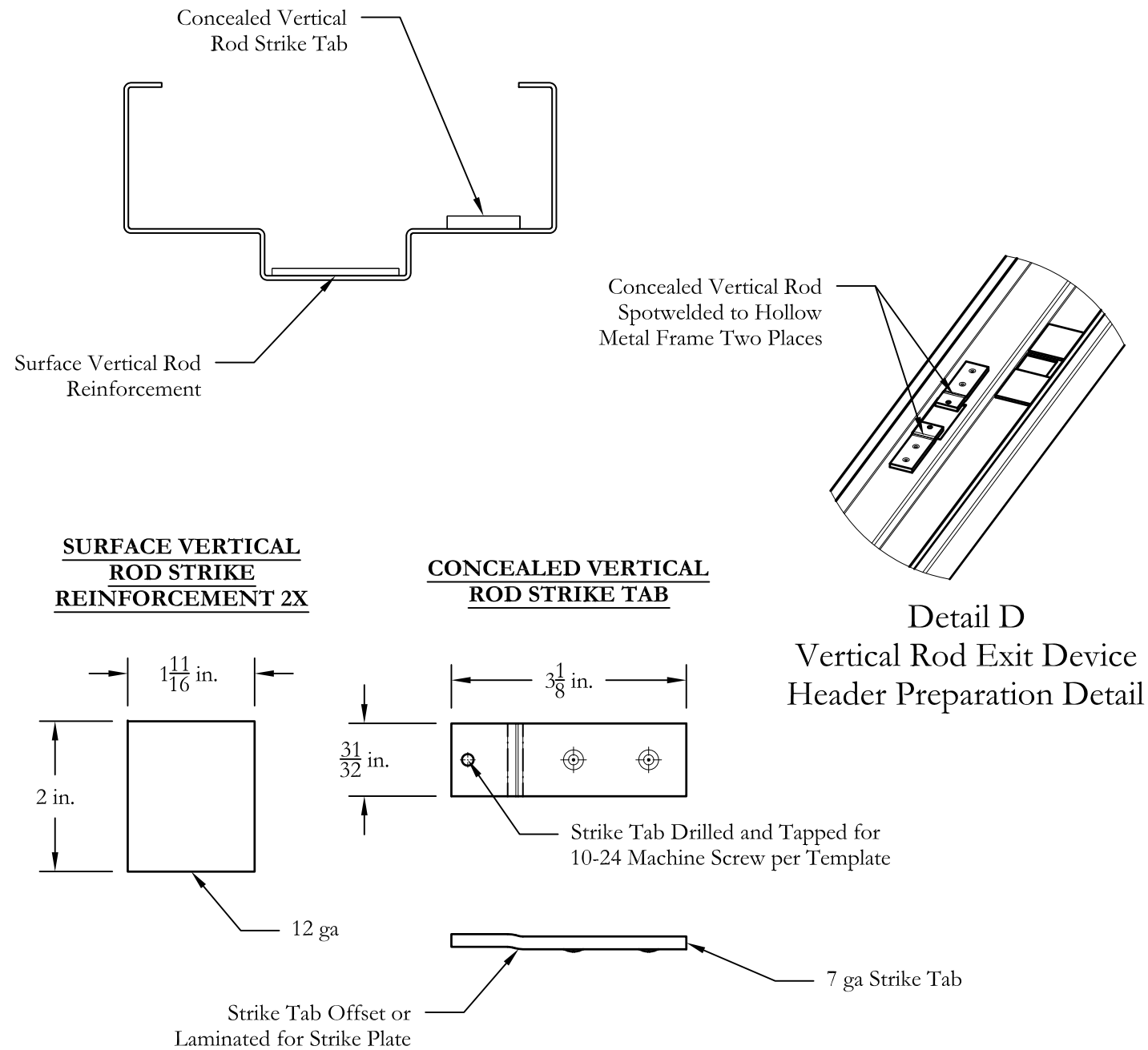
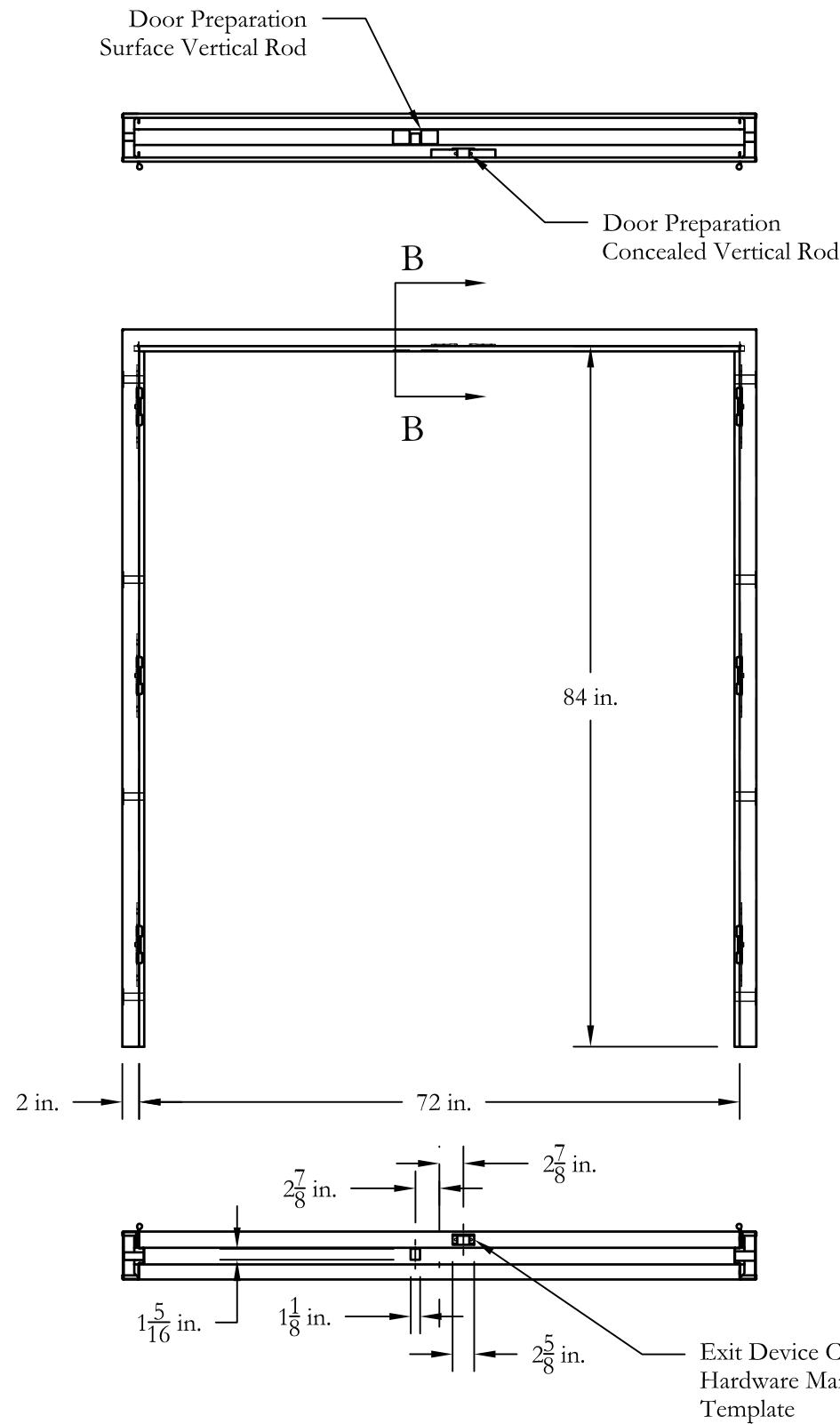
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

**EXIT DEVICE CONCEALED VERTICAL ROD SURFACE
VERTICAL ROD HEADER REINFORCEMENTS
FOR FRAME "PC5"**



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 20 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



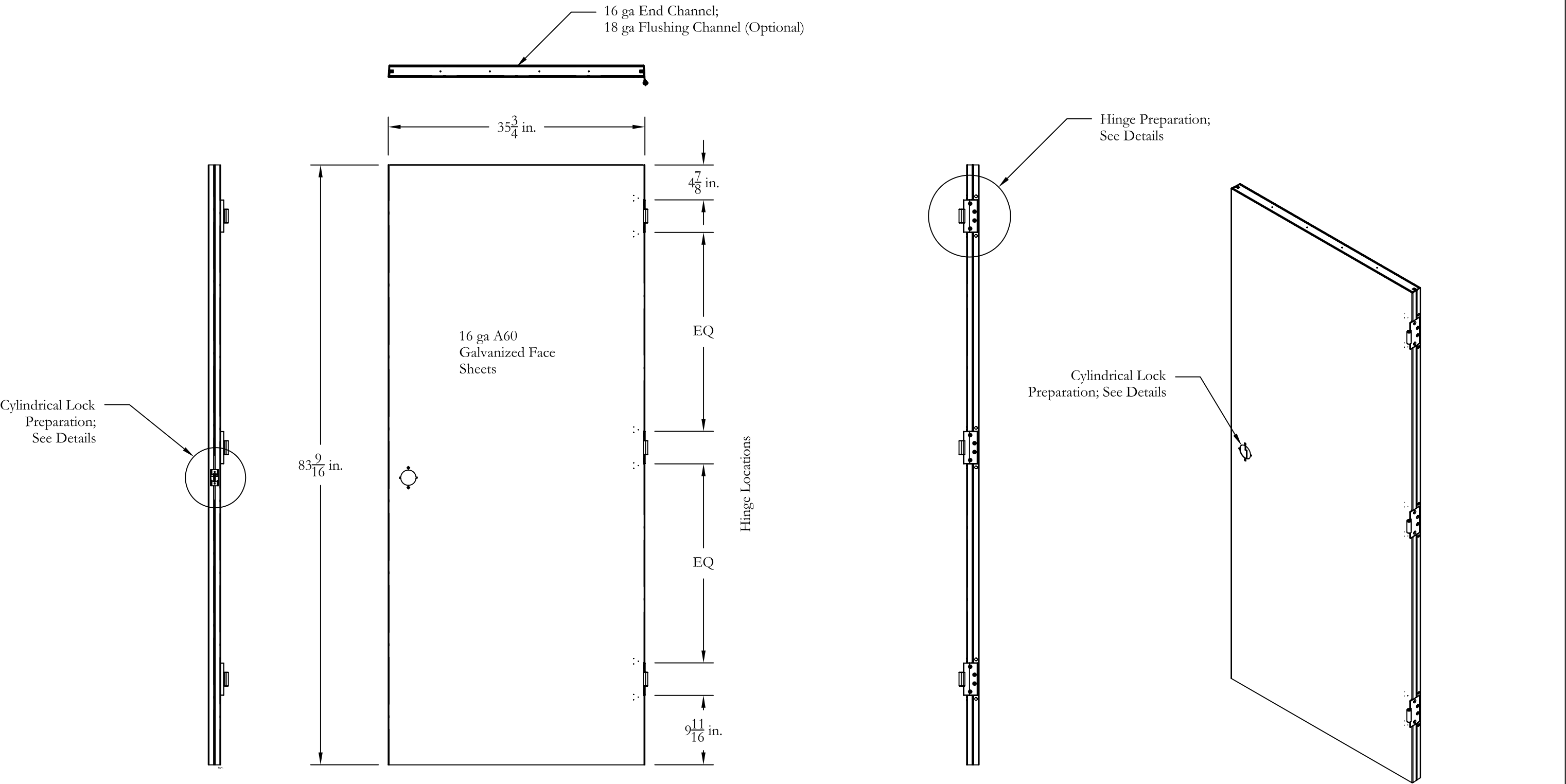
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

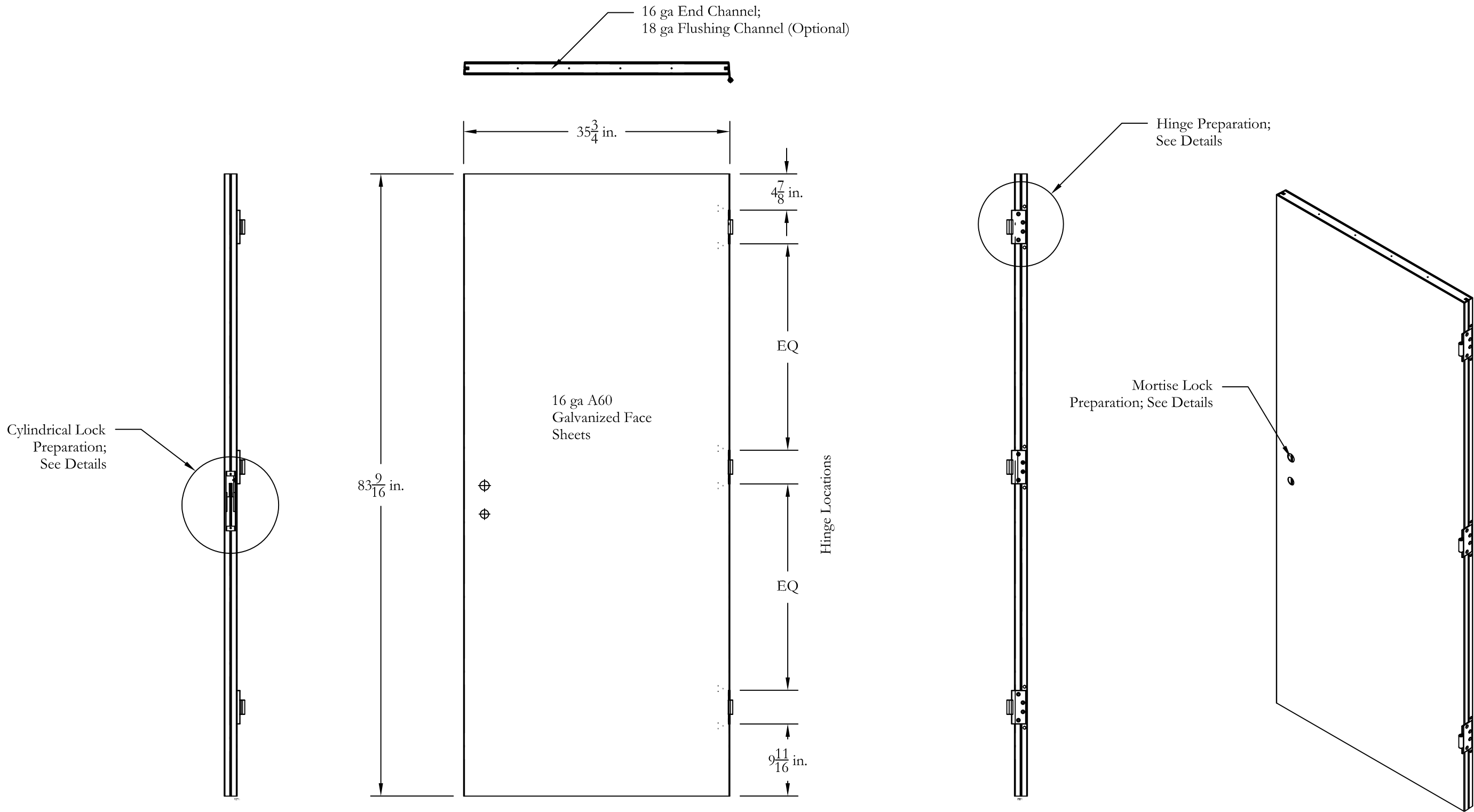
DOOR "SC1"



Hardware Set SC1:
Lock- Corbin Russwin CL3300 Series Cylindrical Lockset
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB	National Association of Architectural Metal Manufacturers  Hollow Metal Manufacturers Association 800 Roosevelt Road; Bldg C, Suite 312 Glen Ellyn, IL 60137 (630)942-6591 FX: (630)790-3095 e-mail: www.naamm.org	Project Name: HMMA Joint Test #10 Windstorm Test Sample Drawings Job Number:
Date: 3-24-10	Page: 21 of 42		
Scale: REVISION LEVEL 0			

DOOR "SC2"



Hardware Set SC2:
Lock- Sargent 8200 Series Mortise Lock
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 22 of 42
Scale: REVISION LEVEL 0	

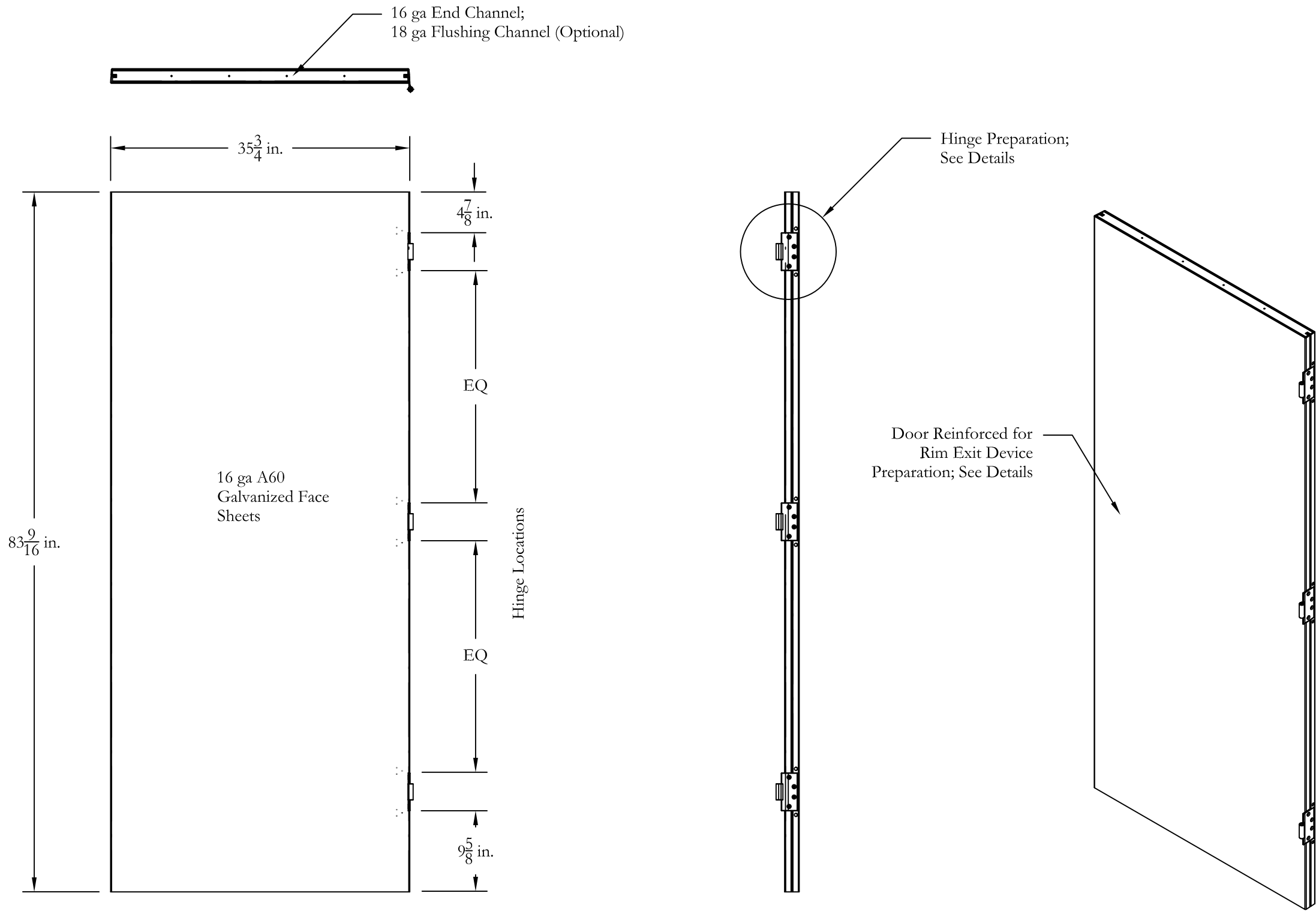
National Association of Architectural Metal Manufacturers



Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

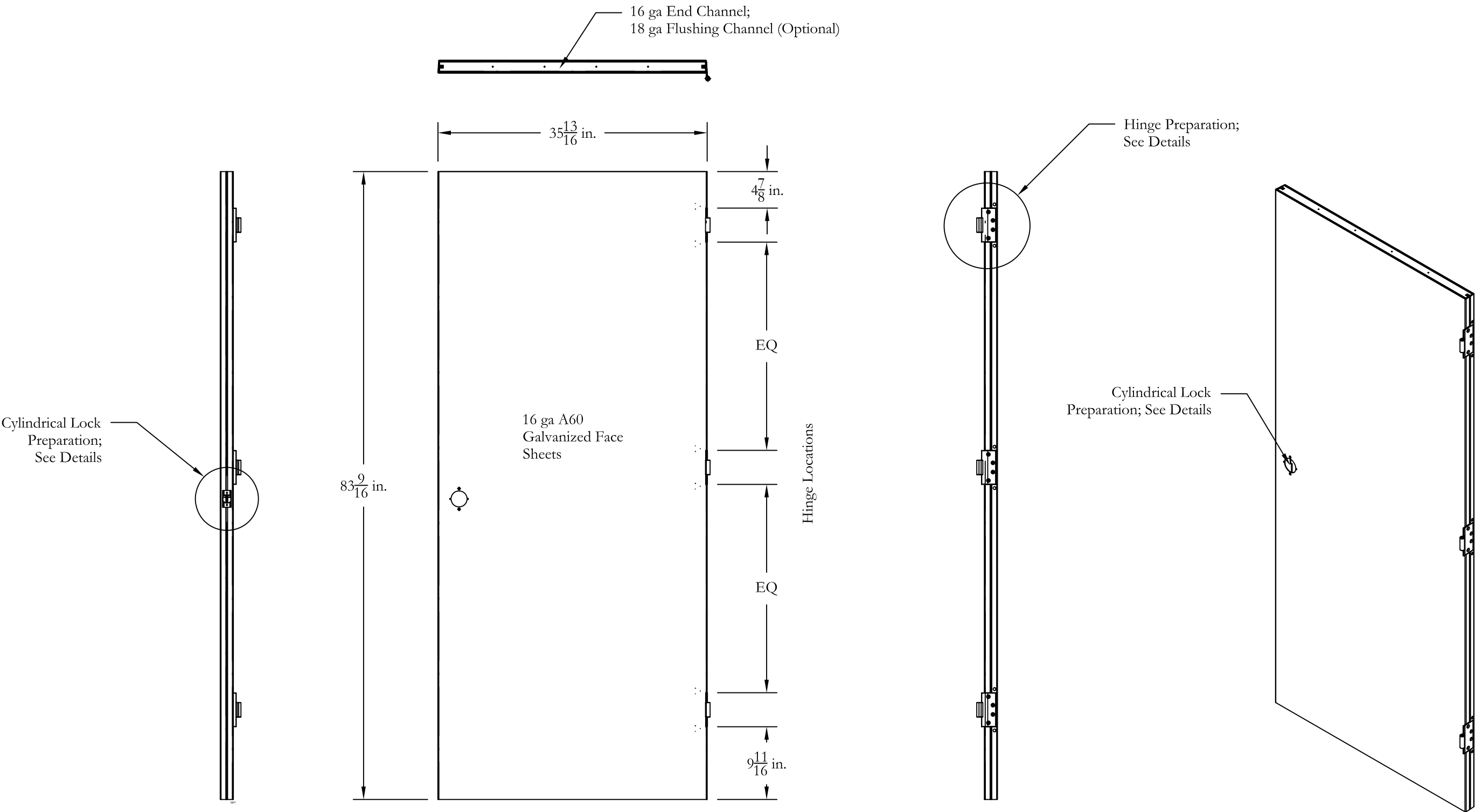
DOOR "SC3"



Hardware Set SC3:
Exit Device- Yale 7150 FWS
Hinges- McKinney #TA2714, 1-¹/₂ Pair 4 ¹/₂ x 4 ¹/₂ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB	National Association of Architectural Metal Manufacturers  Hollow Metal Manufacturers Association 800 Roosevelt Road; Bldg C, Suite 312 Glen Ellyn, IL 60137 (630)942-6591 FX: (630)790-3095 e-mail: www.naamm.org	Project Name: HMMA Joint Test #10 Windstorm Test Sample Drawings
Date: 3-24-10	Page: 23 of 42		Job Number:
Scale: REVISION LEVEL 0			

DOOR "PC1 (ACTIVE)"



Hardware Set PC1:
Lock- Corbin Russwin CL3300 Series Cylindrical Lockset (Active Leaf)
Manual Surface Bolt- Yale 988Y Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1- $\frac{1}{2}$ Pair 4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 24 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers

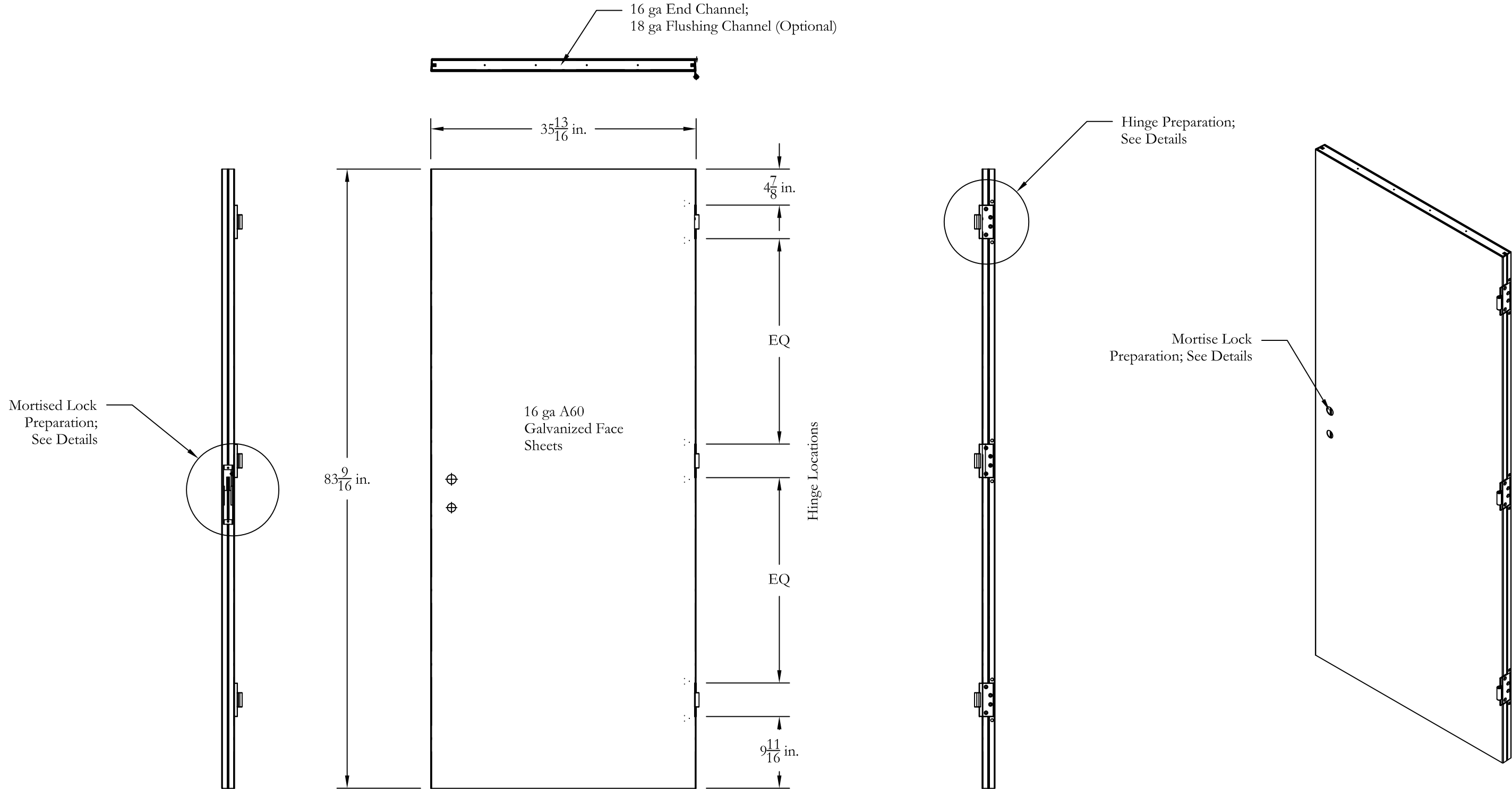


Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

DOOR "PC2 (ACTIVE)"

16 ga End Channel;
18 ga Flushing Channel (Optional)



Hardware Set PC1:

Lock- Corbin Russwin CL3300 Series Cylindrical Lockset (Active Leaf)
Manual Surface Bolt- Yale 988Y Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1- $\frac{1}{2}$ Pair 4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 25 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



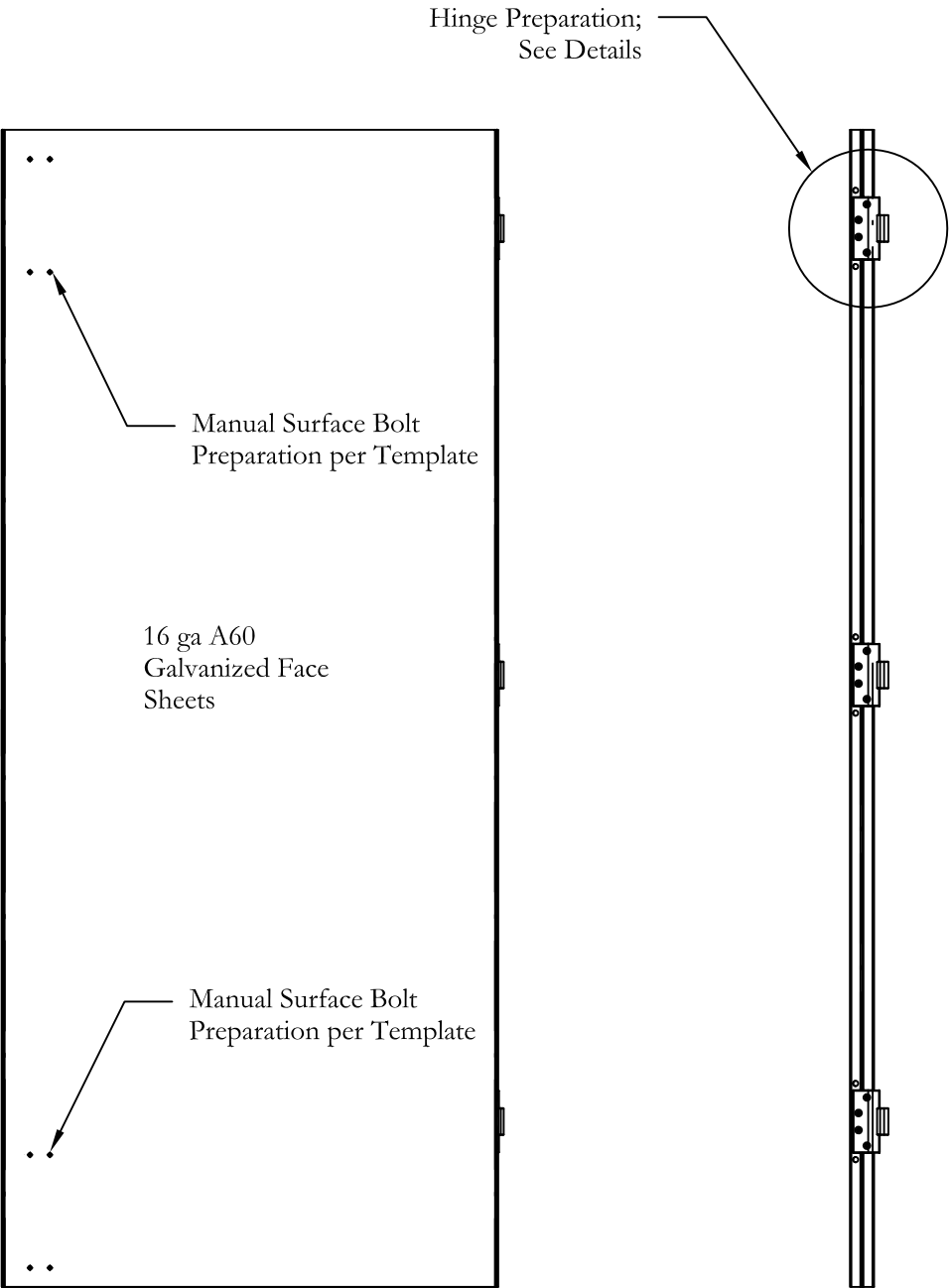
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

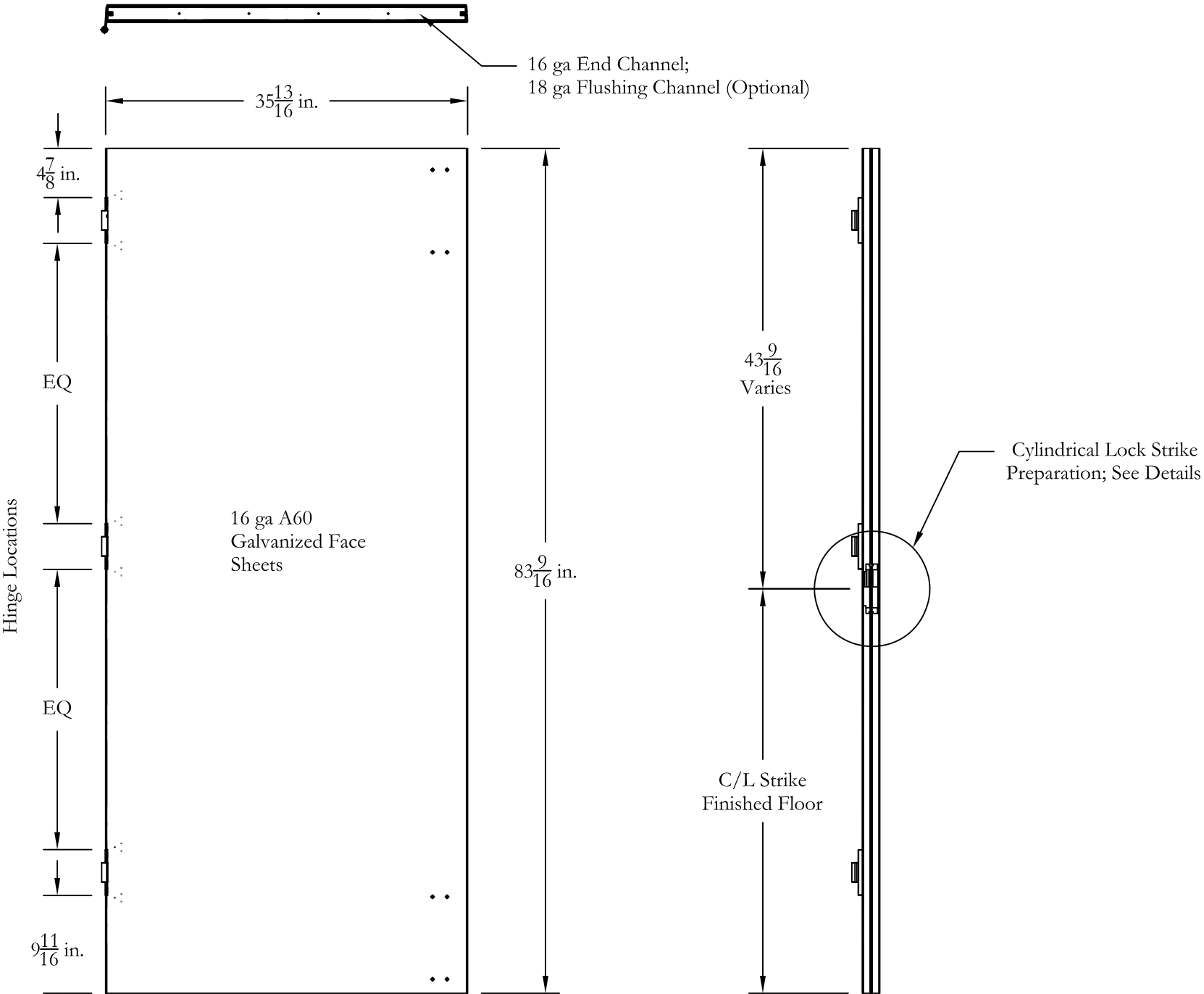
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

DOOR "PC1 AND PC2 (INACTIVE)"



Interior Side View



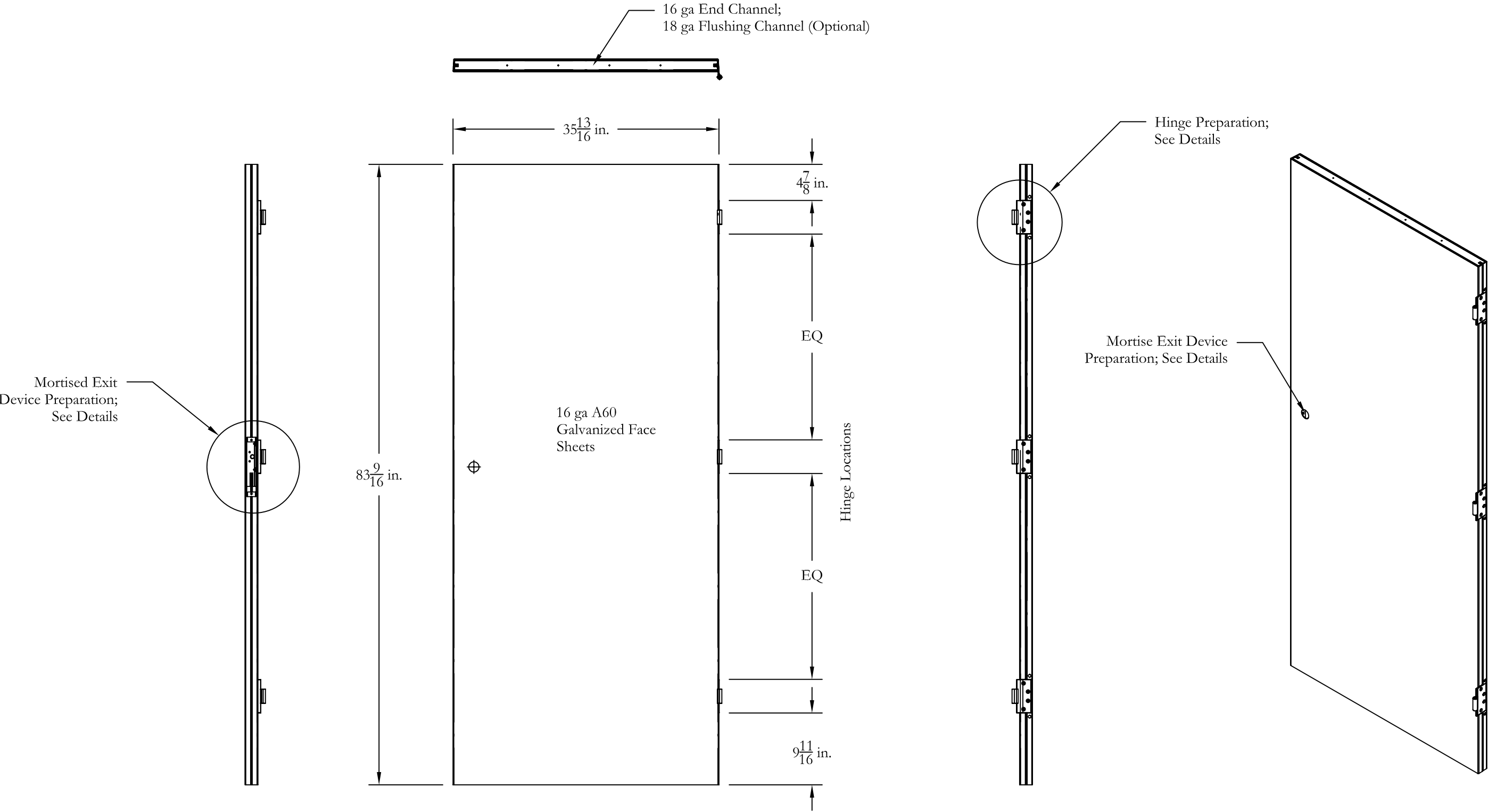
Exterior Side View

Hardware Set PC1:
Lock- Corbin Russwin CL3300 Series Cylindrical Lockset (Active Leaf)
Manual Surface Bolt- Yale 988Y Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Hardware Set PC2:
Lock- Sargent 8200 Series Mortise Lock (Active Leaf)
Manual Surface Bolt- Sargent 988 Surface bolt (Inactive Leaf)
Hinges- McKinney #TA2714, 1-1/2 Pair 4 1/2 x 4 1/2 Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII		Checked by: JAS/ BB		National Association of Architectural Metal Manufacturers  Hollow Metal Manufacturers Association 800 Roosevelt Road; Bldg C, Suite 312 Glen Ellyn, IL 60137 (630)942-6591 FX: (630)790-3095 e-mail: www.naamm.org	Project Name: HMMA Joint Test #10 Windstorm Test Sample Drawings Job Number:
Date: 3-24-10	Page: 26 of 42				
Scale: REVISION LEVEL 0					

DOOR "PC3 (ACTIVE)"



Hardware Set PC3:

Exit Device- Sargent WS8900 (Active Leaf)
Surface Vertical Rod Exit Device- Yale 7170WS (Inactive Leaf)
Hinges- McKinney #TA2714, 1- $\frac{1}{2}$ Pair 4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 27 of 42
Scale: REVISION LEVEL 0	

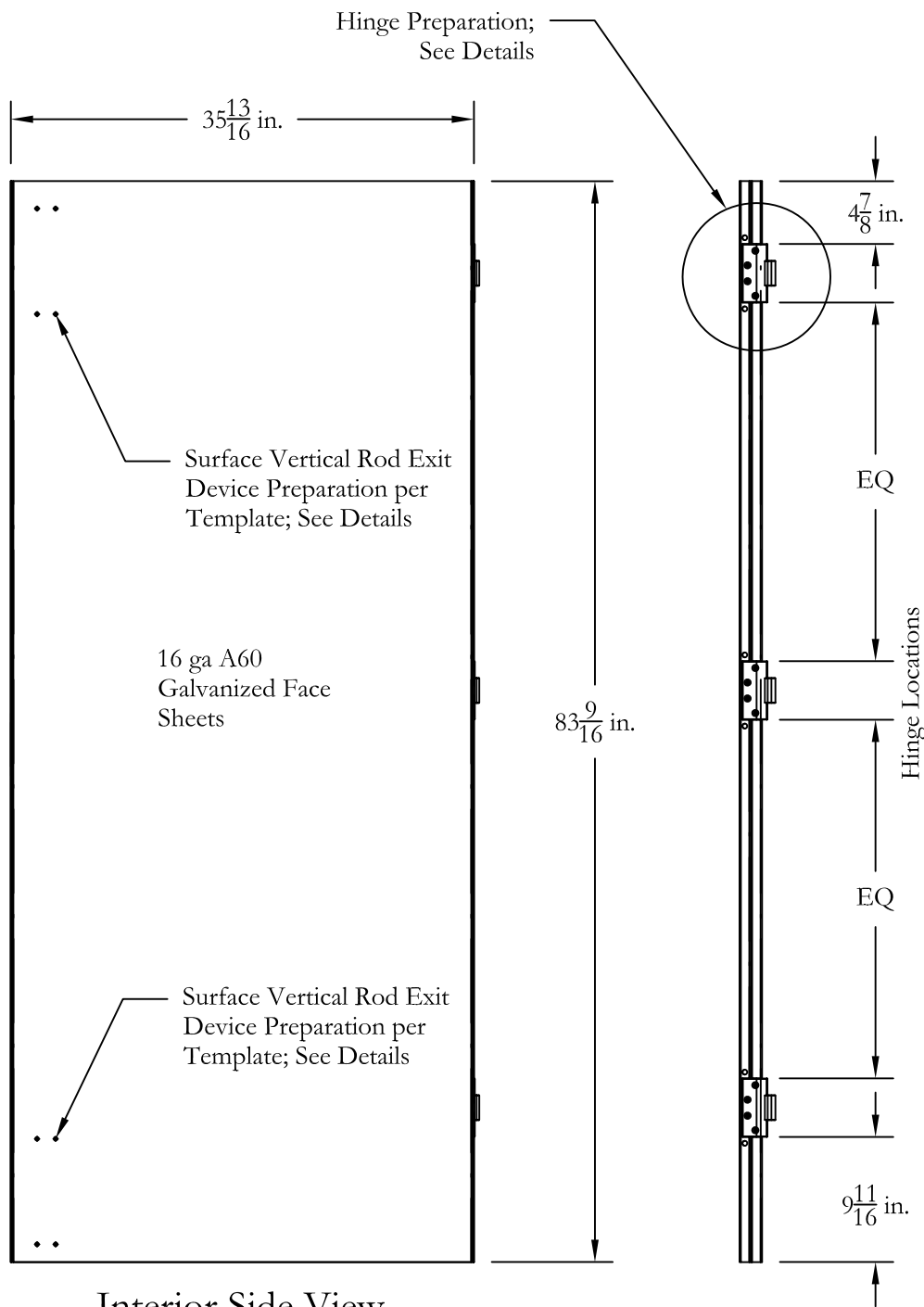
National Association of Architectural Metal Manufacturers



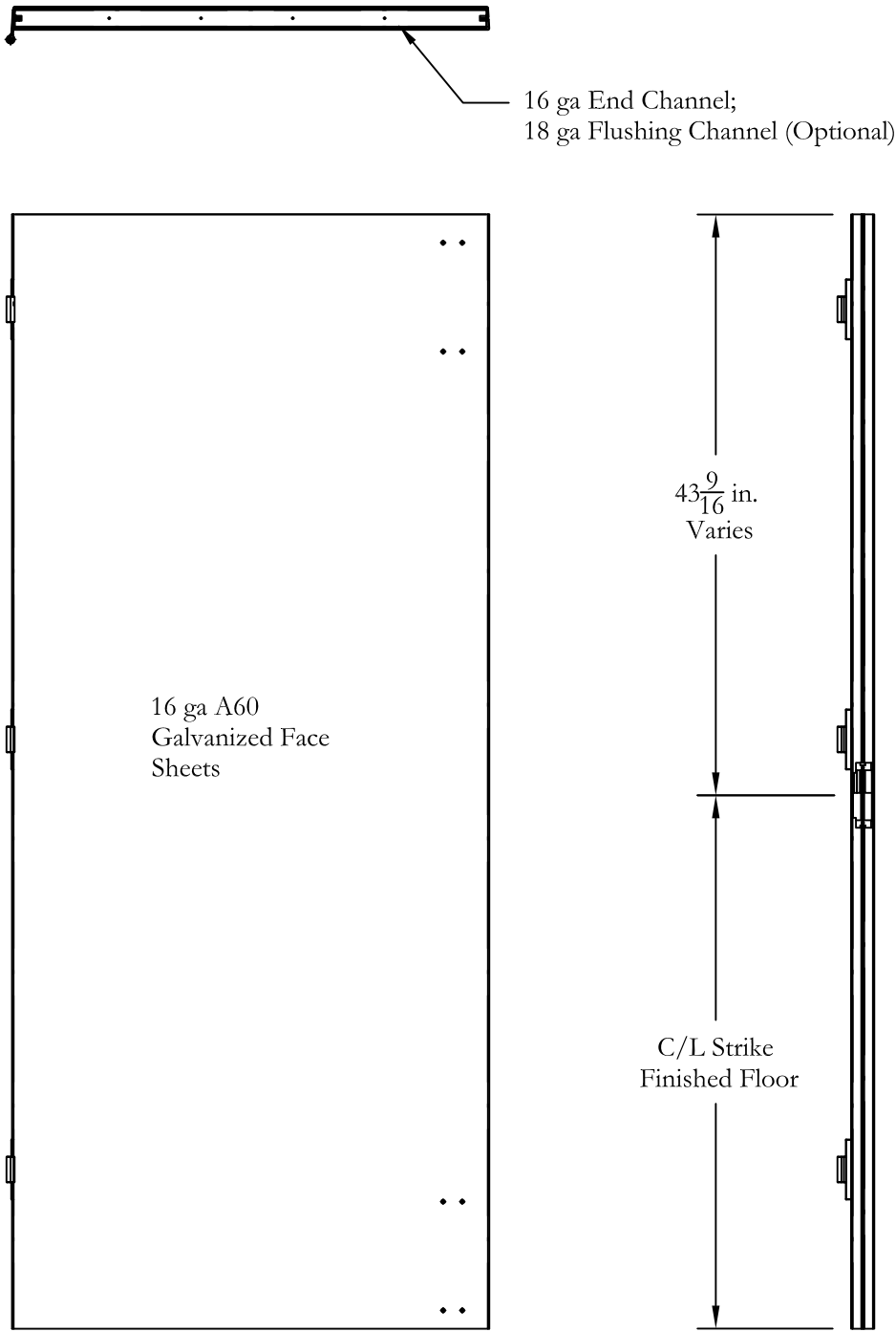
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

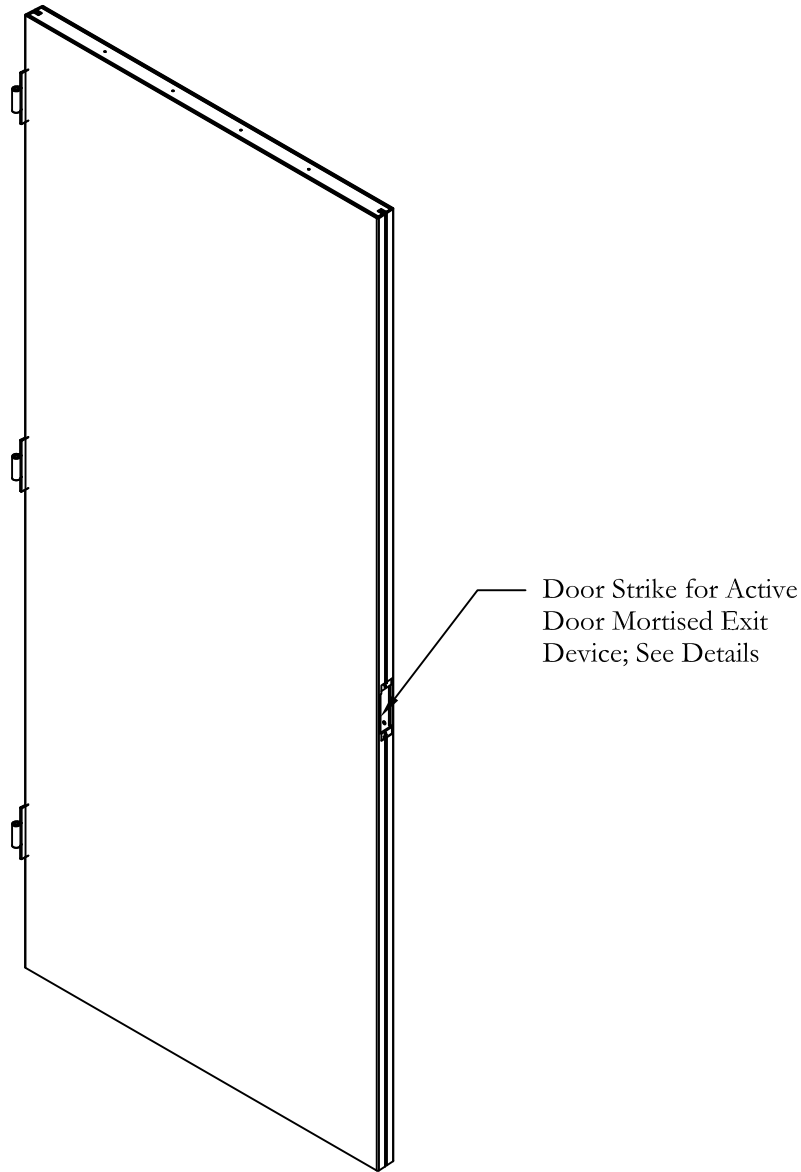
DOOR "PC3 (INACTIVE)"



Interior Side View



Exterior Side View



Hardware Set PC3:
Exit Device- Sargent WS8900 (Active Leaf)
Surface Vertical Rod Exit Device- Yale 7170WS (Inactive Leaf)
Hinges- McKinney #TA2714, 1- $\frac{1}{2}$ Pair 4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 28 of 42
Scale: REVISION LEVEL 0	

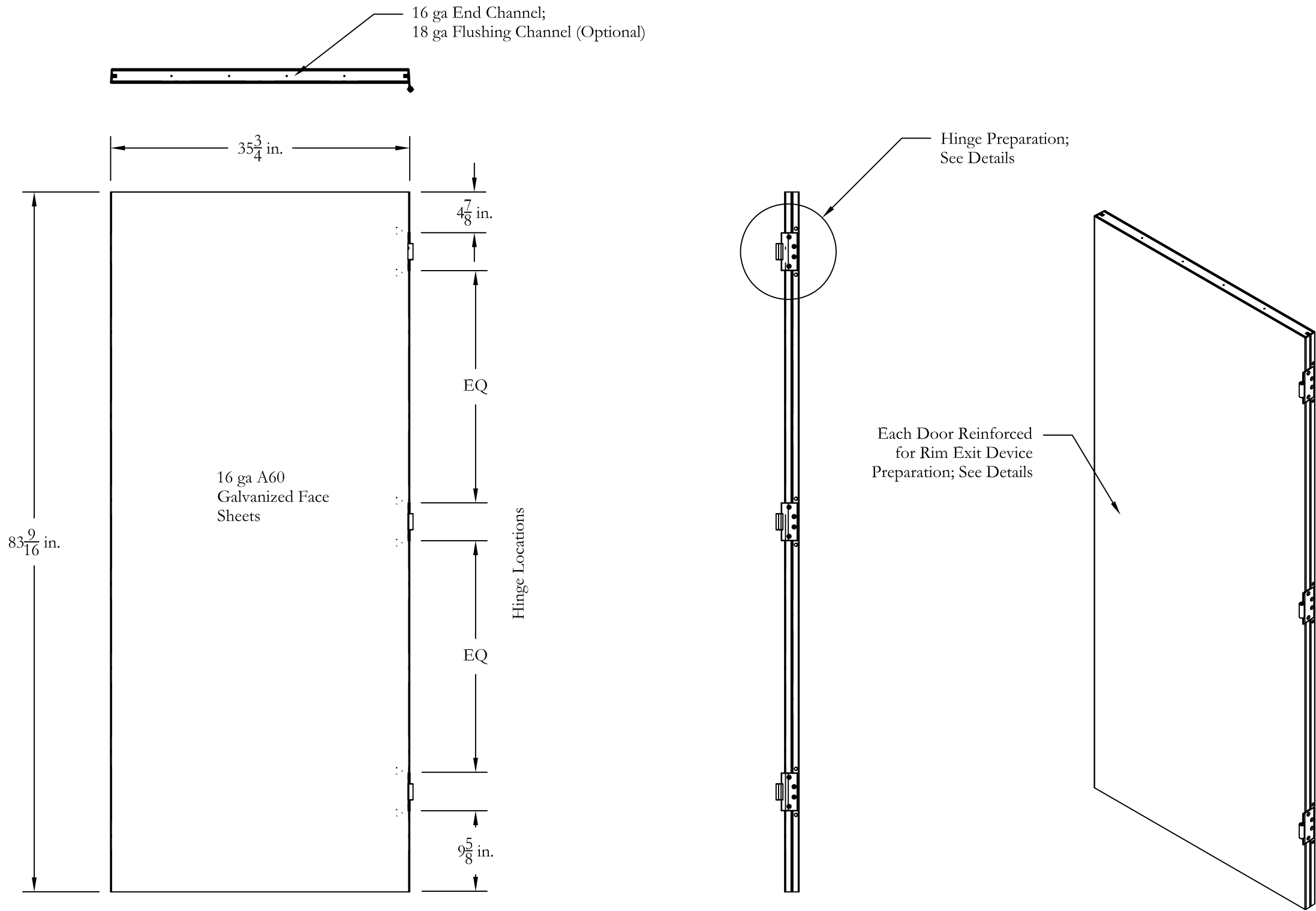
National Association of Architectural Metal Manufacturers



Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

DOOR "PC4"



Hardware Set PC4:
Exit Device- Yale 7150 (Each Leaf)
Removable Hardware Mullion- Yale M200FWS
Hinges- McKinney #TA2714, 1-¹/₂ Pair 4 ¹/₂ x 4 ¹/₂ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 29 of 42
Scale: REVISION LEVEL 0	

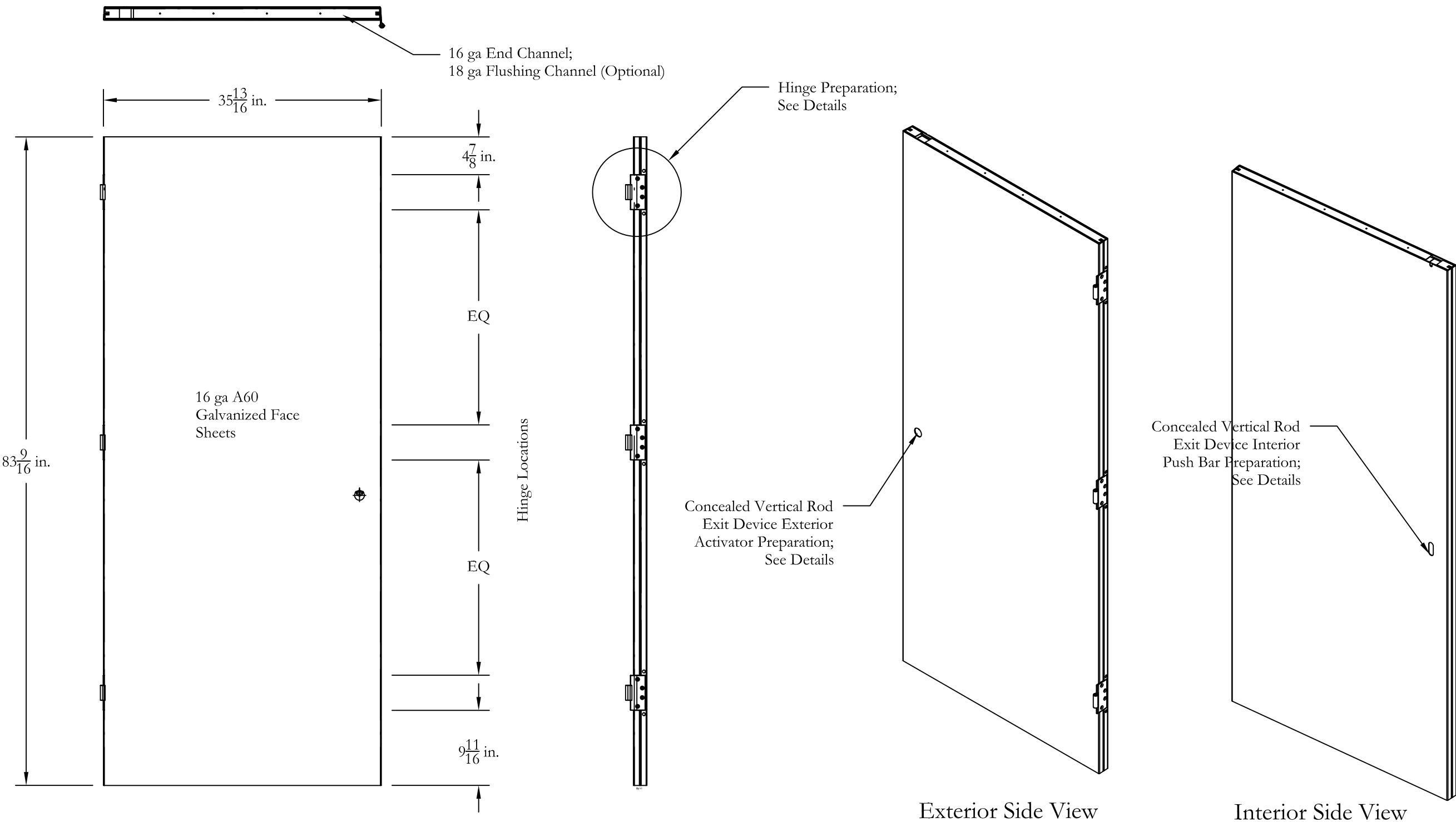
National Association of Architectural Metal Manufacturers



Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

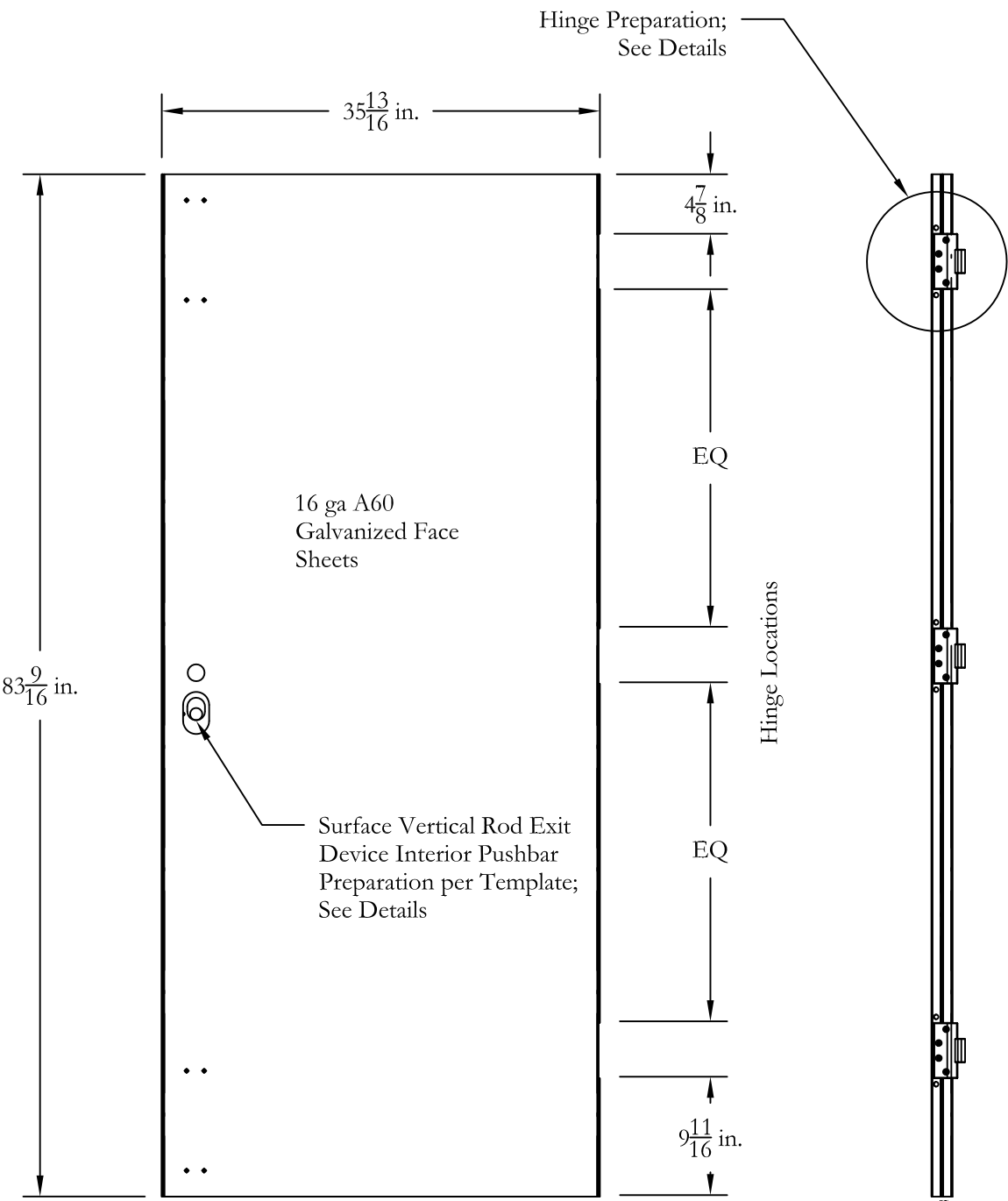
DOOR "PC5 (ACTIVE)"



Hardware Set PC5:
Concealed Vertical Rod Exit Device- Sargent 8600 CVR Exit Device (Active Leaf)
Surface Vertical Rod Exit Device- Sargent HC8700 SVR Exit Device (Inactive Leaf)
Hinges- McKinney #TA2714, 1-½ Pair 4 ½ x 4 ½ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB	National Association of Architectural Metal Manufacturers  Hollow Metal Manufacturers Association 800 Roosevelt Road; Bldg C, Suite 312 Glen Ellyn, IL 60137 (630)942-6591 FX: (630)790-3095 e-mail: www.naamm.org	Project Name: HMMA Joint Test #10 Windstorm Test Sample Drawings Job Number:
Date: 3-24-10	Page: 30 of 42		
Scale: REVISION LEVEL 0			

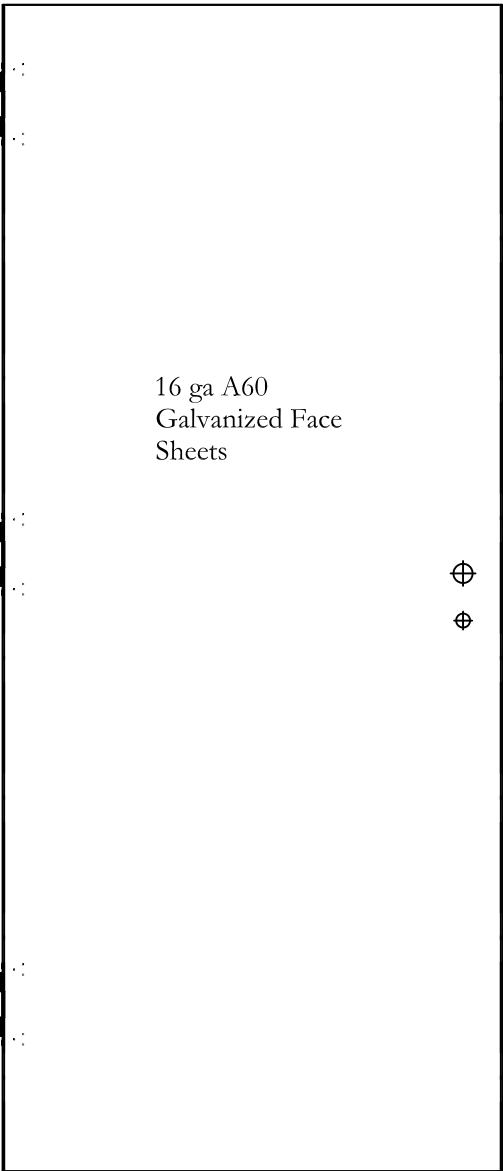
DOOR "PC5 (INACTIVE)"



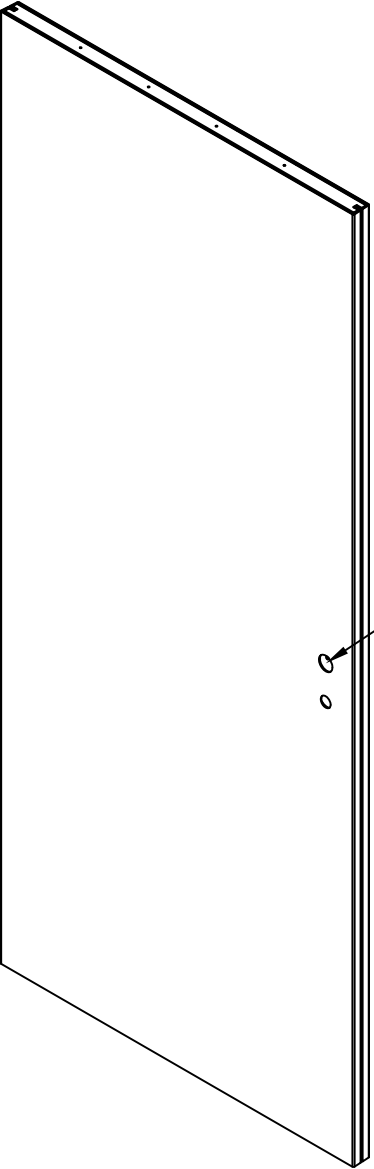
Interior Stop Side View



16 ga End Channel;
18 ga Flushing Channel (Optional)



Exterior Hinge Side View



Surface Vertical Rod Exit
Device Exterior Activator
Preparation per Template;
See Details

Hardware Set PC5:
Concealed Vertical Rod Exit Device- Sargent 8600 CVR Exit Device (Active Leaf)
Surface Vertical Rod Exit Device- Sargent HC8700 SVR Exit Device (Inactive Leaf)
Hinges- McKinney #TA2714, 1- $\frac{1}{2}$ Pair 4 $\frac{1}{2}$ x 4 $\frac{1}{2}$ Regular Weight with 12-24 Machine Screws

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 31 of 42
Scale: REVISION LEVEL 0	

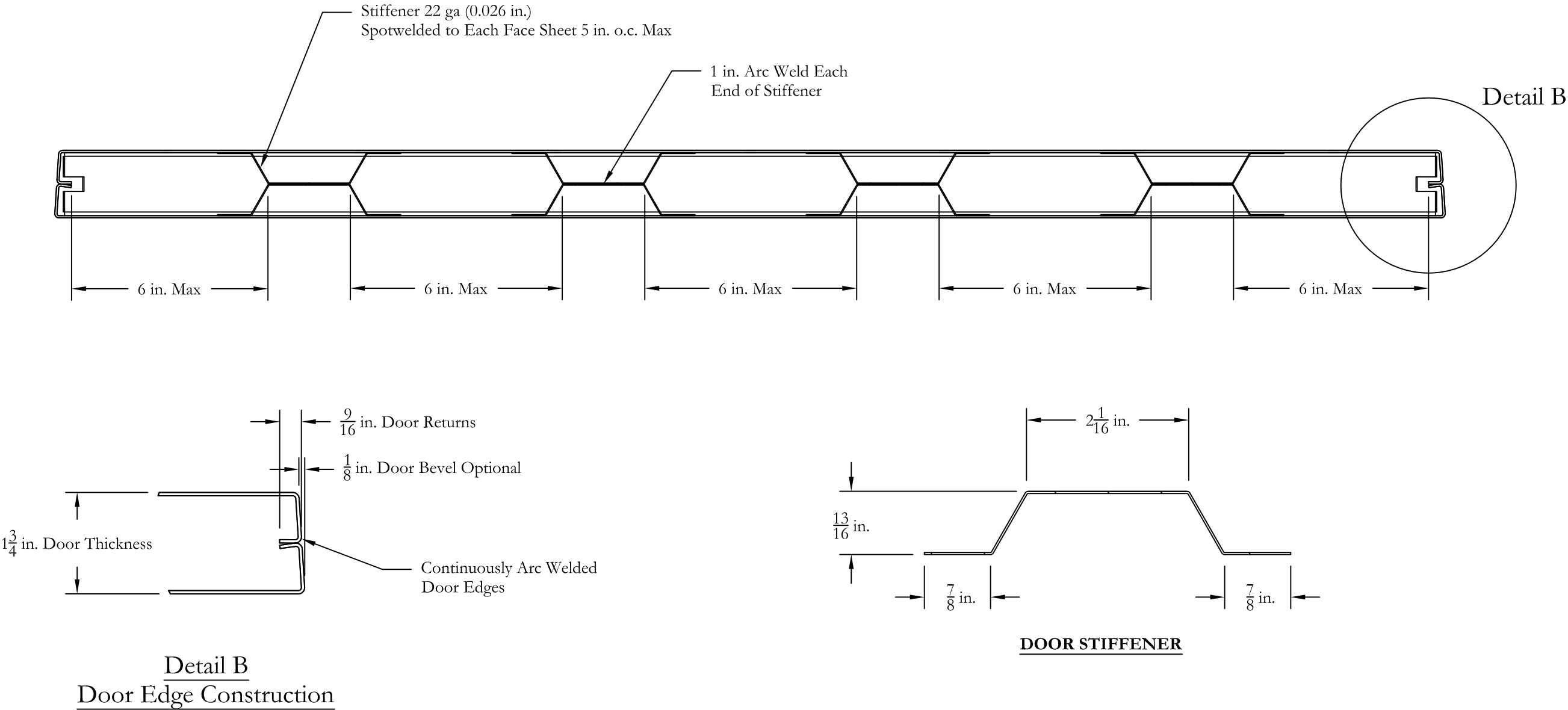
National Association of Architectural Metal Manufacturers



Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:
HMMA Joint Test #10
Windstorm Test Sample Drawings
Job Number:

TYPICAL DOOR SECTION STIFFENER DETAIL
FOR DOORS "SC1, SC2, SC3, PC1, PC2, PC3, PC4, AND PC5"



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 32 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

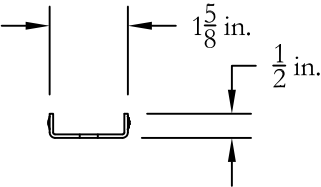
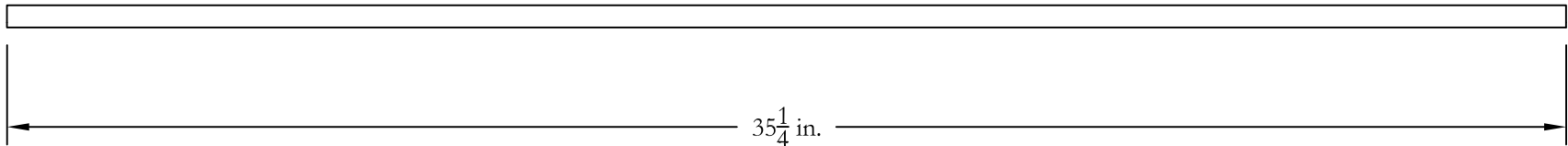
Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

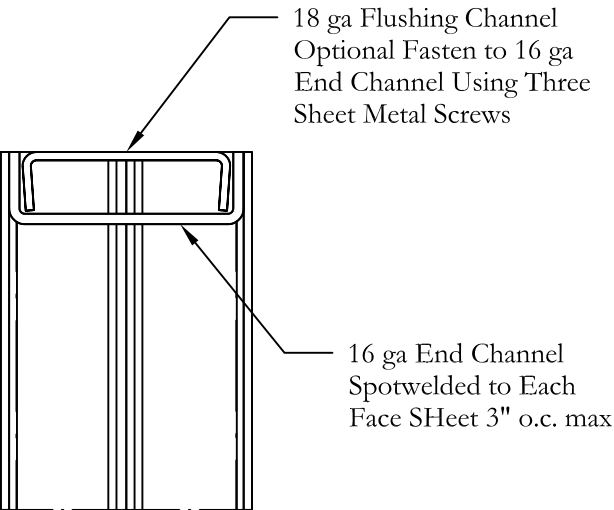
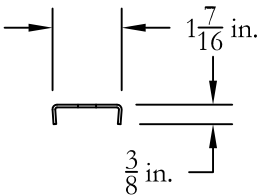
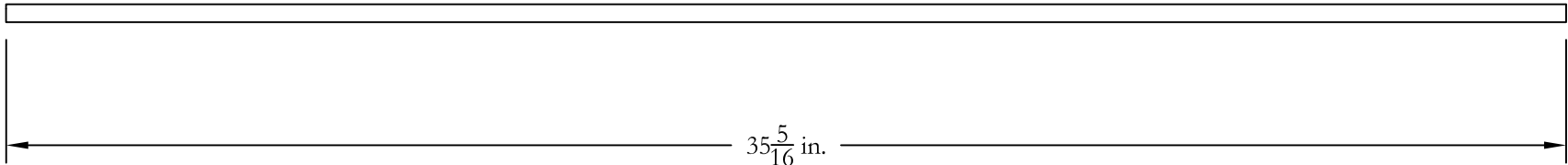
Job Number:

TYPICAL END CHANNEL DETAIL FOR DOORS
"SC1, SC2, SC3, PC1, PC2, PC3, PC4, AND PC5"

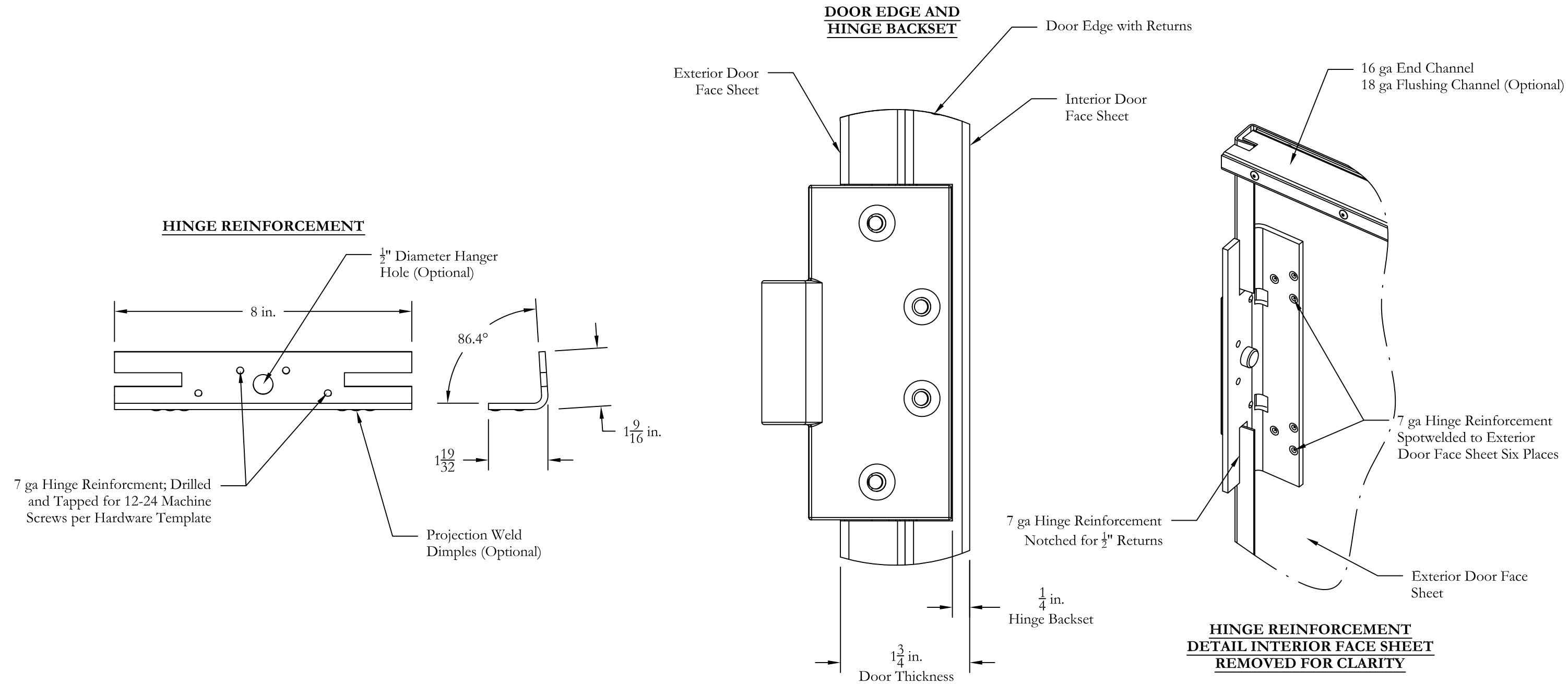
END CHANNEL 16 GA



FLUSHING CHANNEL 18 GA (OPTIONAL)



TYPICAL HINGE REINFORCEMENT DETAIL FOR DOORS "SC1, SC2, SC3, PC1, PC2, PC3, PC4, AND PC5"



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 34 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



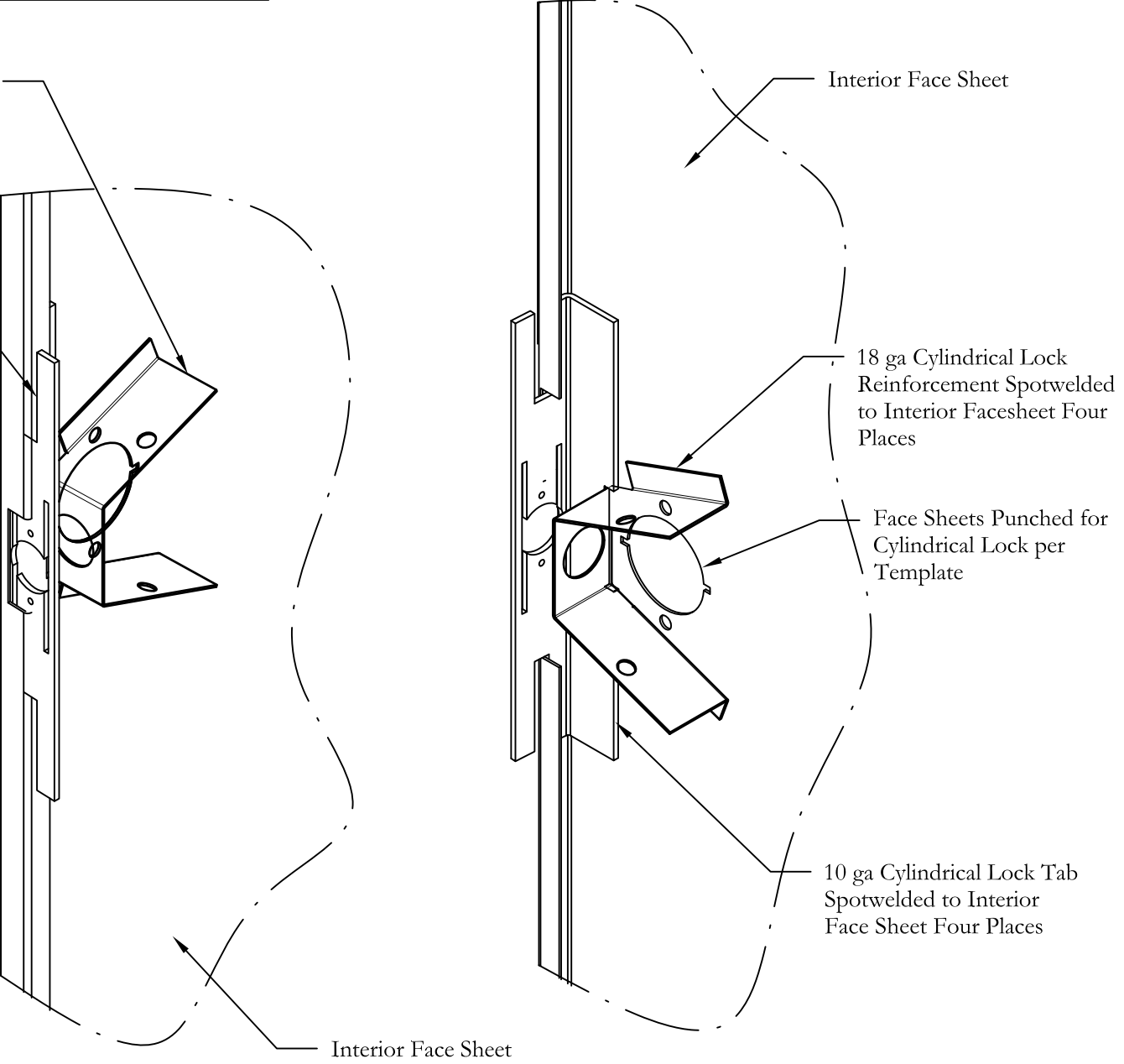
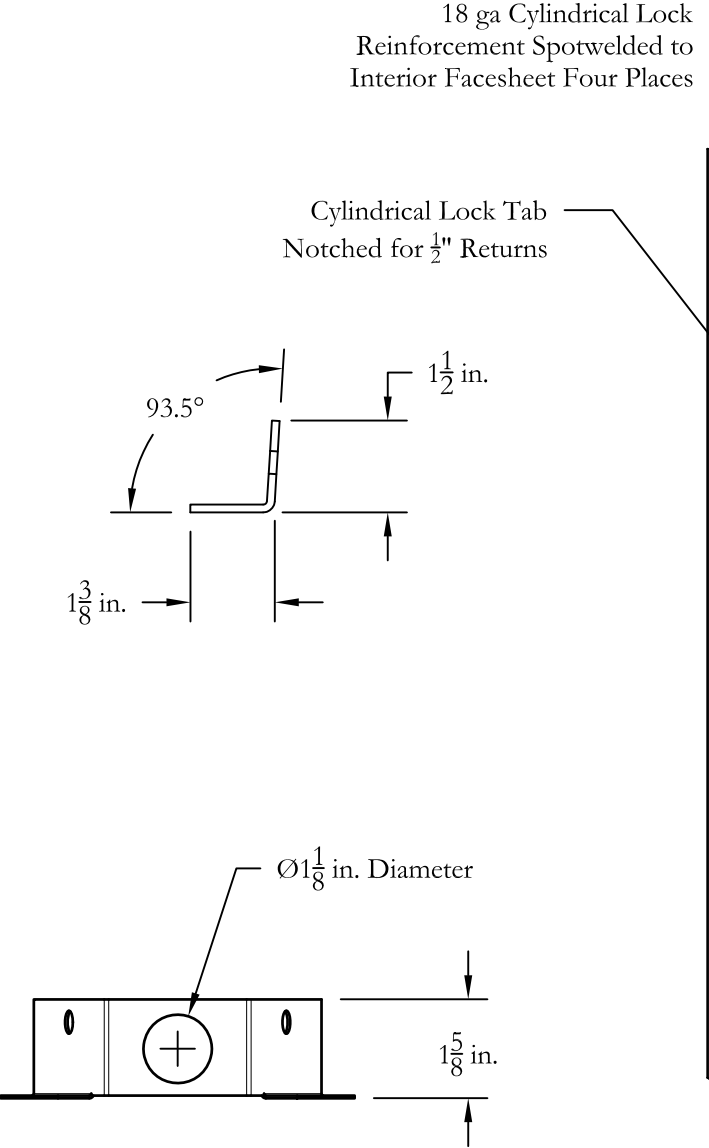
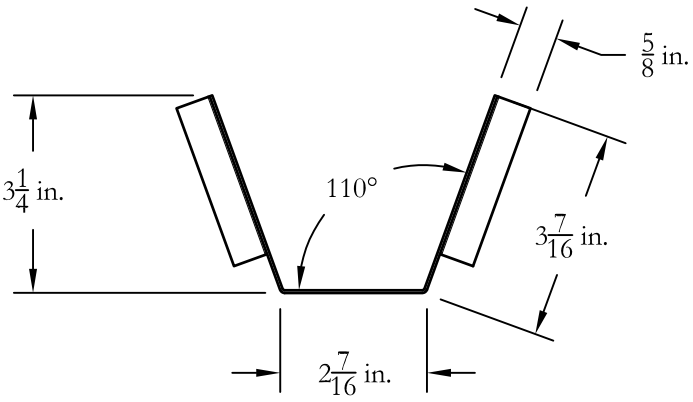
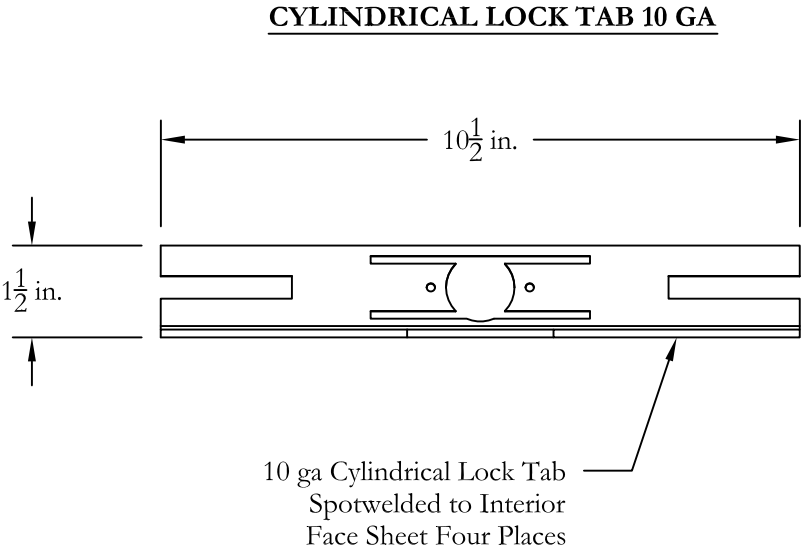
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

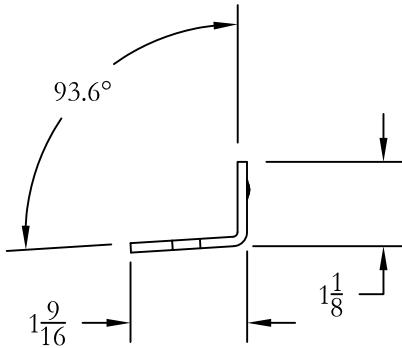
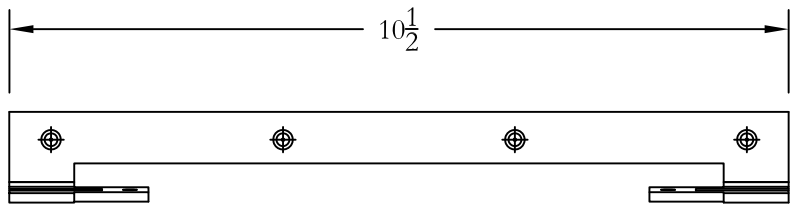
TYPICAL LOCK TAB REINFORCEMENT DETAIL FOR DOOR "SC1 and PC1 (ACTIVE)"



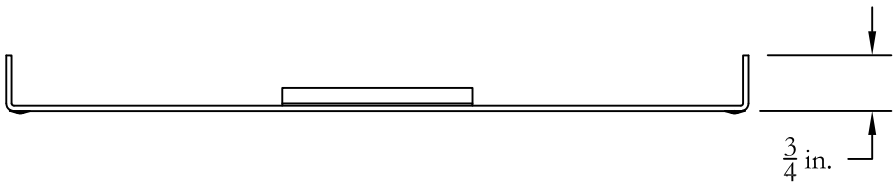
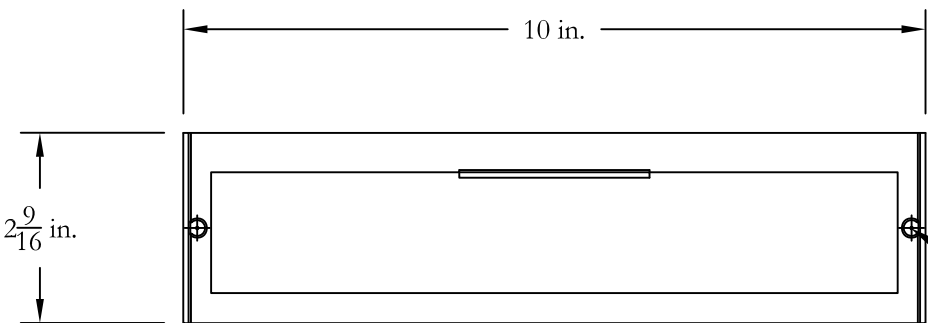
**CYLINDRICAL LOCK TAB REINFORCEMENT DETAIL
(EXTERIOR FACE SHEET NOT SHOWN FOR CLARITY)**

**TYPICAL MORTISED LOCK DETAIL
FOR DOOR "SC2 AND PC2 (ACTIVE)"**

MORTISED LOCK TAB 10 GA



MORTISED LOCK REINFORCEMENT 14 GA (2X)



One Piece Mortised Lock Reinforcement Spotwelded to Each Face Sheet Two Places

Mortised Lock Tab Spot Welded to Interior Face Sheet Four Places

Mortised Lock Tab Drilled and Tapped for #12-24 Machine Screw per Template

Mortised Lock Tab Notched for 1/2 in. Returns

One Piece Mortised Lock Reinforcement Spot Welded to Each Face Sheet Two Places

Interior Face Sheet

Face Sheet Punched for Mortise Lock per Template

**MORTISED LOCK TAB REINFORCEMENT DETAIL
(EXTERIOR FACE SHEET NOT SHOWN FOR CLARITY)**

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 36 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



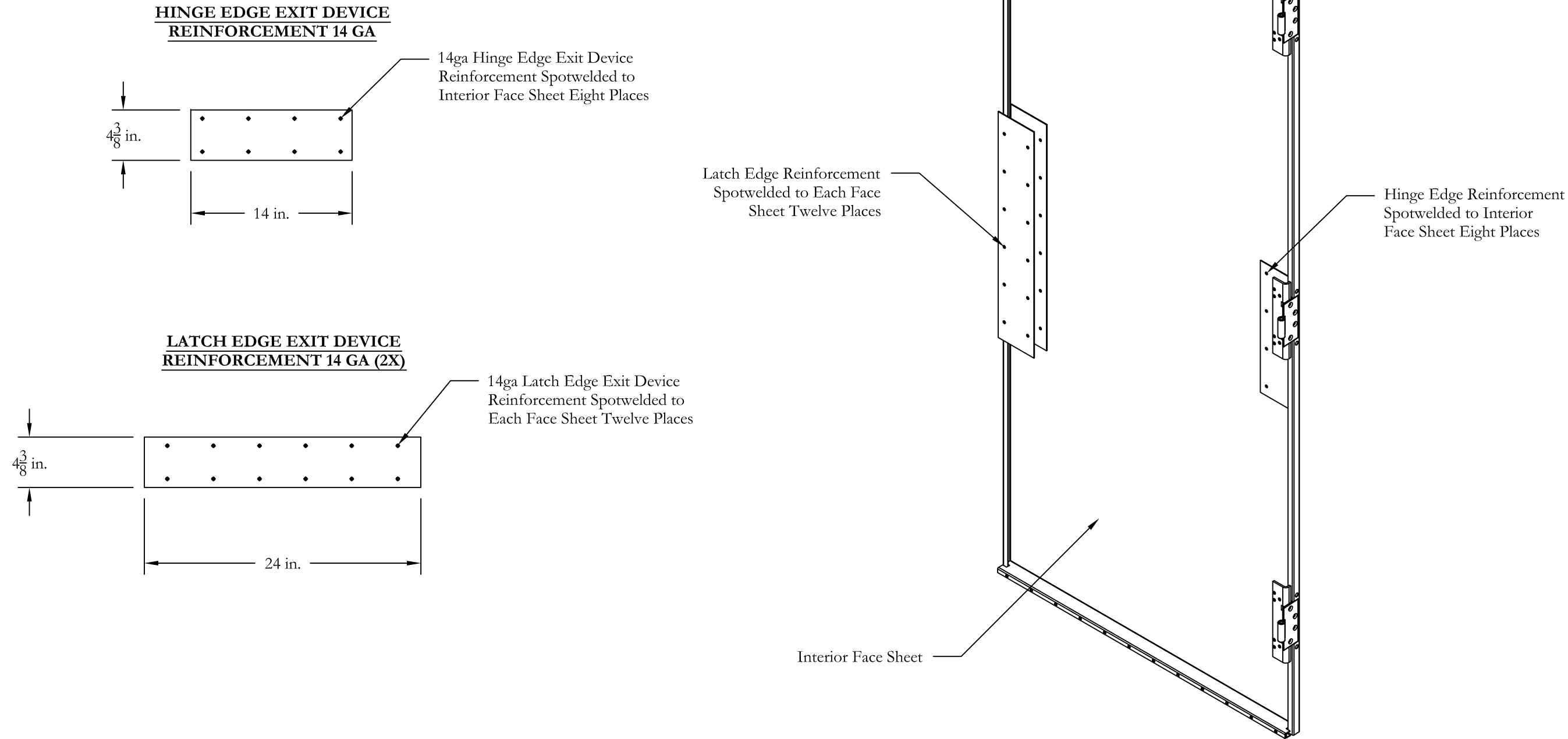
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

**TYPICAL EXIT DEVICE
REINFORCEMENT DETAIL FOR
DOORS "SC3 AND PC4"**



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 37 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



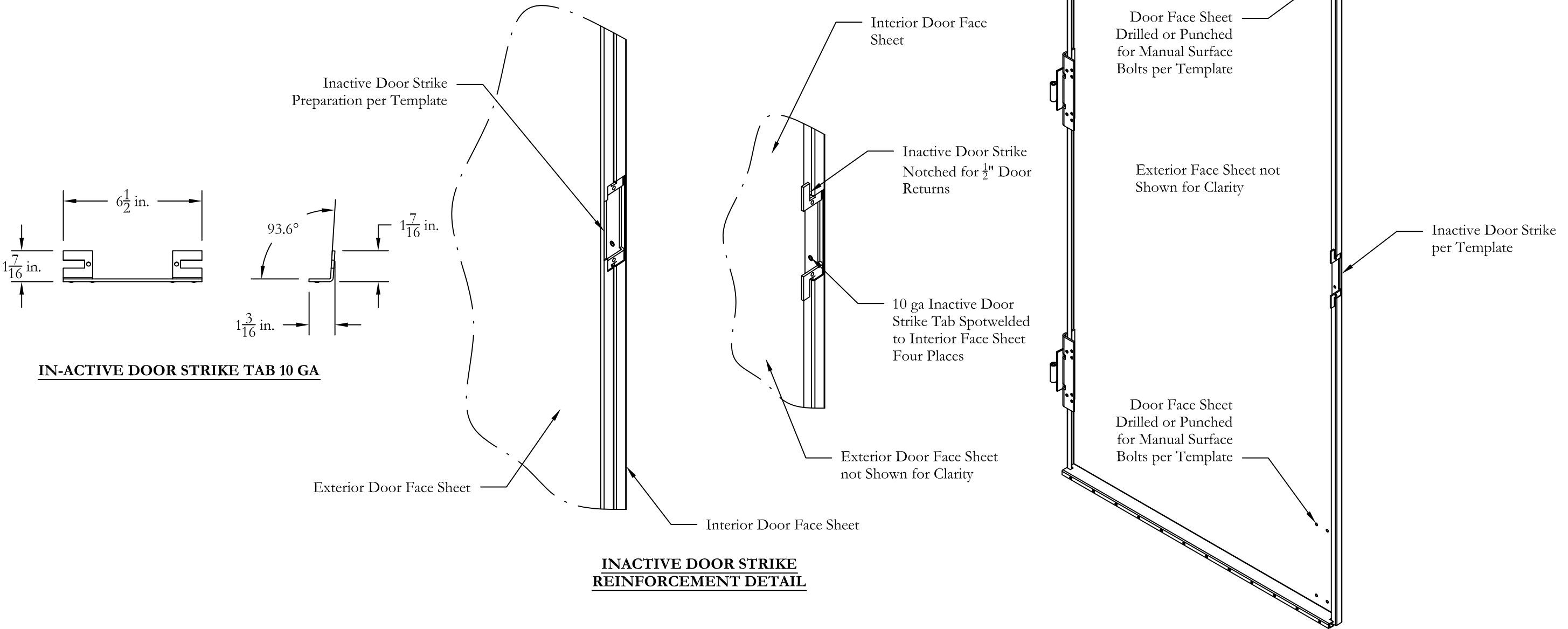
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

TYPICAL INACTIVE DOOR STRIKE REINFORCEMENT DETAIL FOR DOORS "PC1, PC2, AND PC3" (INACTIVE)



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 38 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



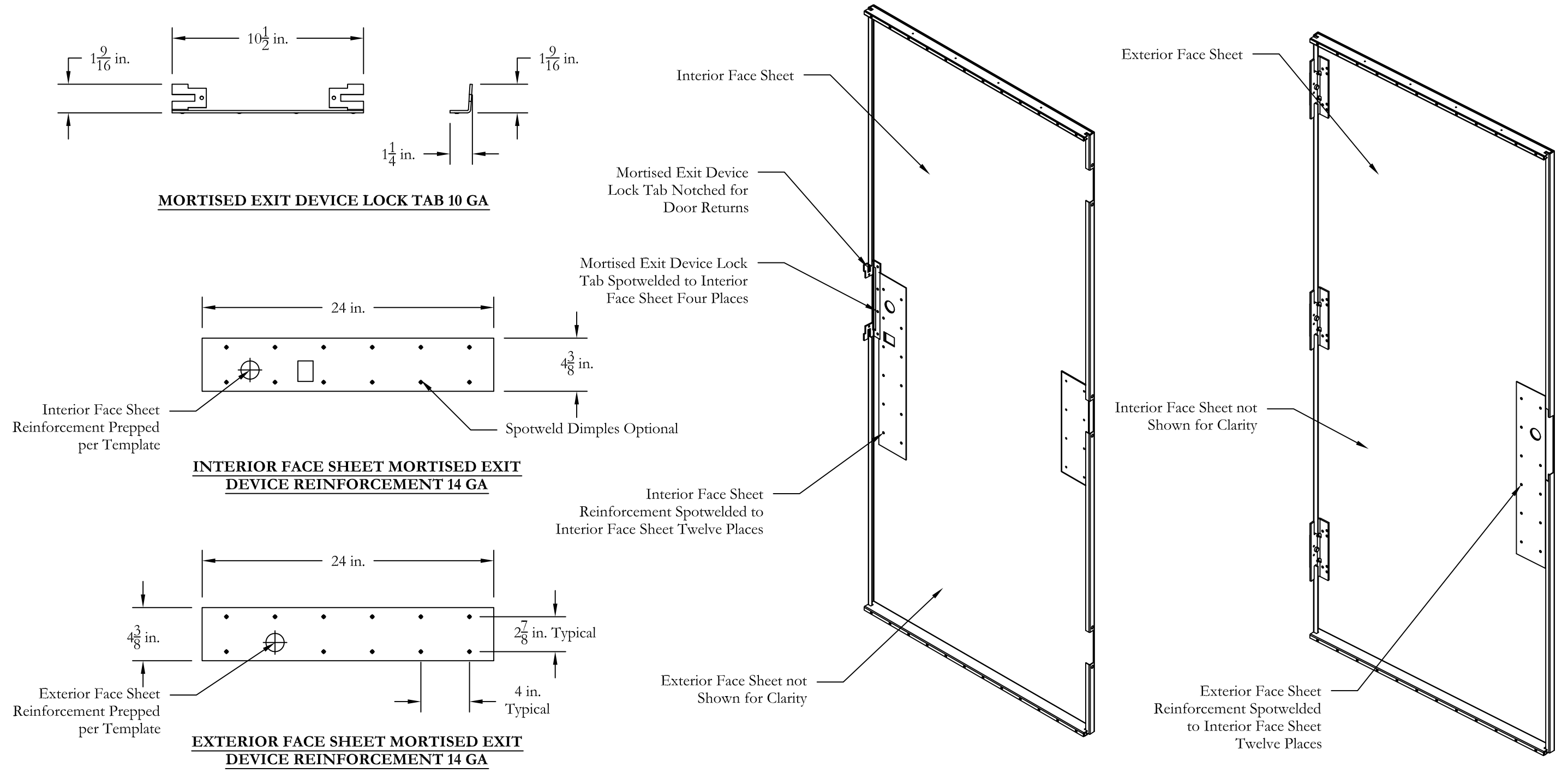
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

**ACTIVE DOOR MORTISED EXIT DEVICE
REINFORCEMENT DETAIL FOR DOOR "PC3" (ACTIVE)**



Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 39 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



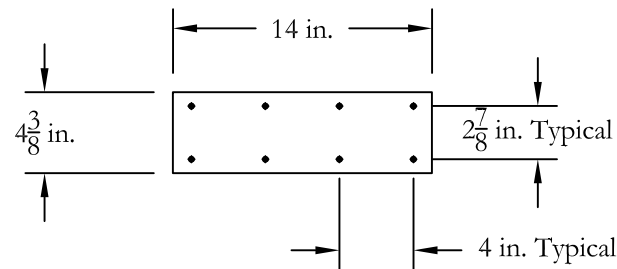
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

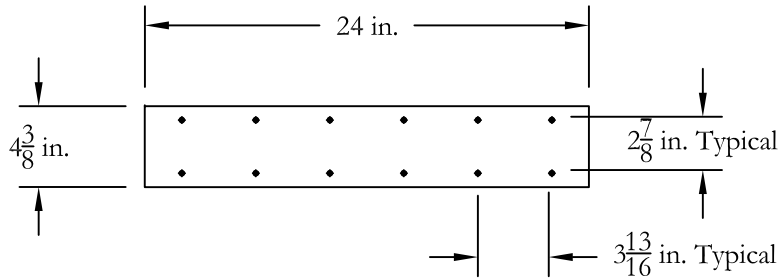
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

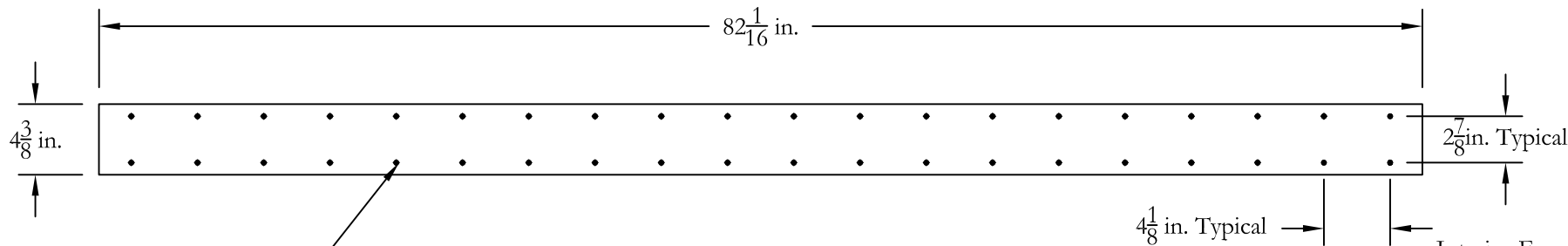
TYPICAL EXIT DEVICE REINFORCEMENT DETAIL FOR DOOR "PC3 INACTIVE"



**SURFACE VERTICAL ROD EXIT DEVICE
HINGE EDGE REINFORCEMENT 14 GA**



**SURFACE VERTICAL ROD EXIT DEVICE
REINFORCEMENT 14 GA**



Spotweld Dimples
Optional

**SURFACE VERTICAL ROD EXIT DEVICE
REINFORCEMENT 14 GA**

Hinge Edge Exit Device
Reinforcement Spotwelded to Interior
Door Face Sheet Eight Places

Exterior Door Face Sheet
not Shown for Clairty

Interior Face Sheet

Latch Edge Surface Vertical Rod Exit
Device Reinforcement Spotwelded to
Interior Door Face Sheet Forty Places

Latch Edge Exit Device Reinforcement
Spotwelded to Interior Door Face
Sheet Twelve Places

Door Strike
Preparation;
See Details

Exterior Face Sheet

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 40 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



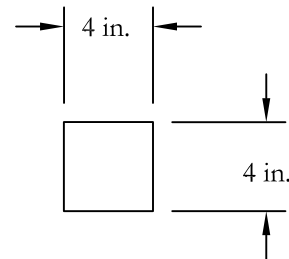
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

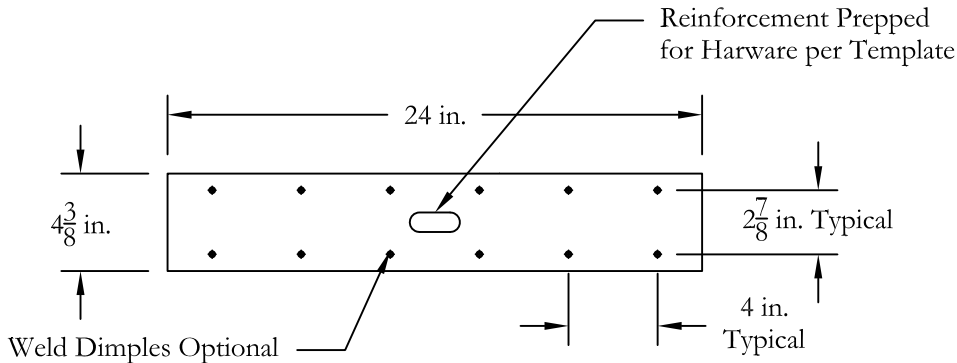
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

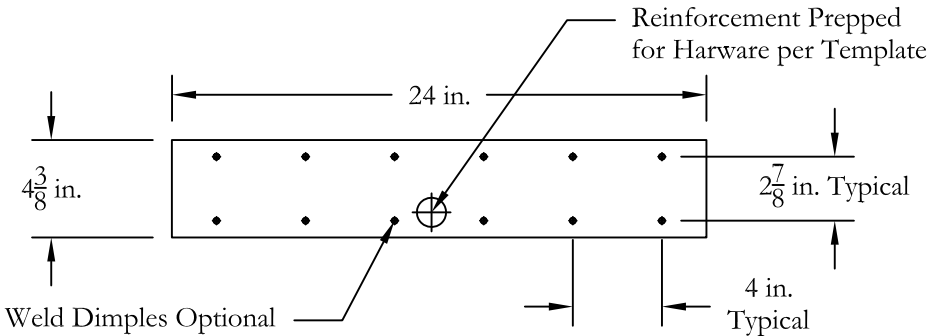
ACTIVE DOOR CONCEALED VERTICAL ROD EXIT DEVICE REINFORCEMENT DETAIL FOR DOOR "PC5" (ACTIVE)



**INTERIOR FACE SHEET MORTISED EXIT
DEVICE REINFORCEMENT 14 GA**



**INTERIOR FACE SHEET CONCEALED
VERTICAL ROD EXIT DEVICE
REINFORCEMENT 14 GA**



**EXTERIOR FACE SHEET CONCEALED
VERTICAL ROD EXIT DEVICE
REINFORCEMENT 14 GA**

16 ga End Channel
18 ga Flushing Channel (Optional)
Notched for Concealed Vertical
Rod per Template

Concealed Vertical Rod
Latch Reinforcement
Spotwelded to Interior
Face Sheet Four Places

Detail A

Concealed Vertical Rod Exit
Device Reinforcement
Spotwelded to Interior Face
Sheet Twelve Places

Concealed Vertical Rod
Latch Reinforcement
Spotwelded to Interior
Face Sheet Four Places

Detail B

16 ga End Channel
18 ga Flushing Channel (Optional)
Notched for Concealed Vertical
Rod per Template

Detail A

16 ga End Channel
18 ga Flushing Channel (optional)

Interior Face Sheet not
Shown for Clarity

Interior Face
Sheet

Exterior Face
Sheet

Detail B

Exterior Face Sheet not
Shown for Clarity

Concealed Vertical Rod Exit
Device Reinforcement
Spotwelded to Interior Face
Sheet Twelve Places

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 41 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



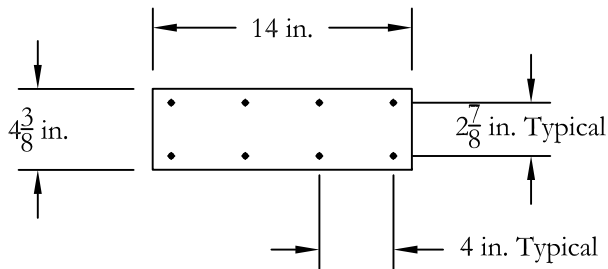
Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

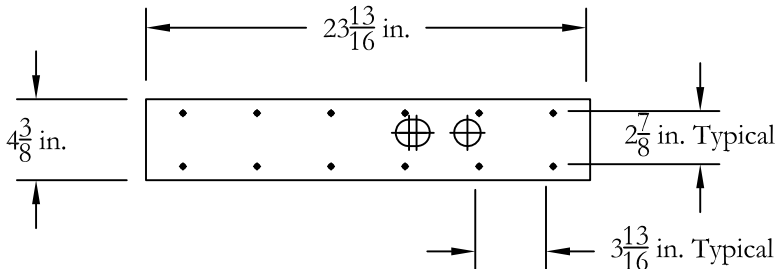
HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number:

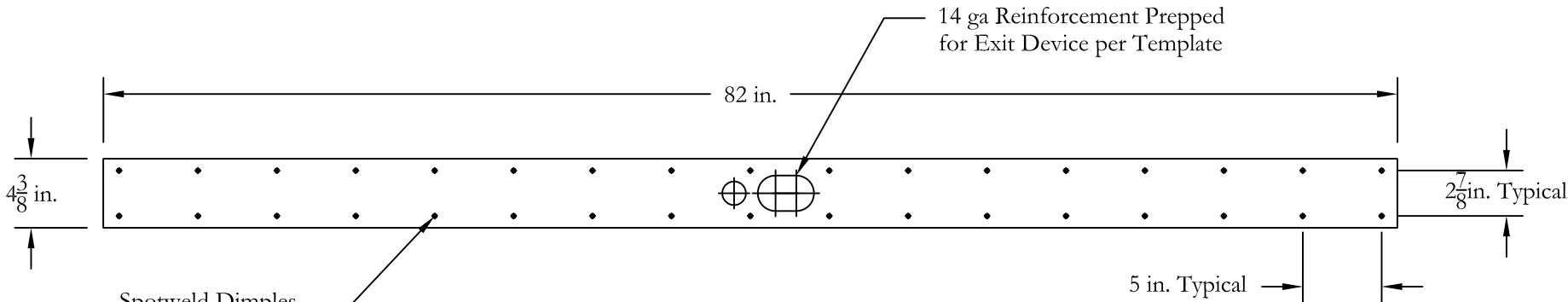
INACTIVE DOOR SURFACE VERTICAL ROD EXIT DEVICE
REINFORCEMENT DETAIL FOR DOOR "PC5" (INACTIVE)



SURFACE VERTICAL ROD EXIT DEVICE
HINGE EDGE REINFORCEMENT 14 GA



SURFACE VERTICAL ROD EXIT DEVICE
REINFORCEMENT 14 GA



SURFACE VERTICAL ROD EXIT DEVICE
REINFORCEMENT 14 GA

Exterior Door Face Sheet
not Shown for Clairty

Hinge Edge Exit Device
Reinforcement Spotwelded to Interior
Door Face Sheet Eight Places

Interior Door Face Sheet
not Shown for Clairty

Interior Face Sheet

Exterior Face Sheet

Latch Edge Surface Vertical Rod Exit
Device Reinforcement Spotwelded to
Interior Door Face Sheet Forty Places

Drawn by: RA/ JSIII	Checked by: JAS/ BB
Date: 3-24-10	Page: 42 of 42
Scale: REVISION LEVEL 0	

National Association of Architectural Metal Manufacturers



Hollow Metal Manufacturers Association
800 Roosevelt Road; Bldg C, Suite 312
Glen Ellyn, IL 60137
(630)942-6591 FX: (630)790-3095
e-mail: www.naamm.org

Project Name:

HMMA Joint Test #10
Windstorm Test Sample Drawings

Job Number: