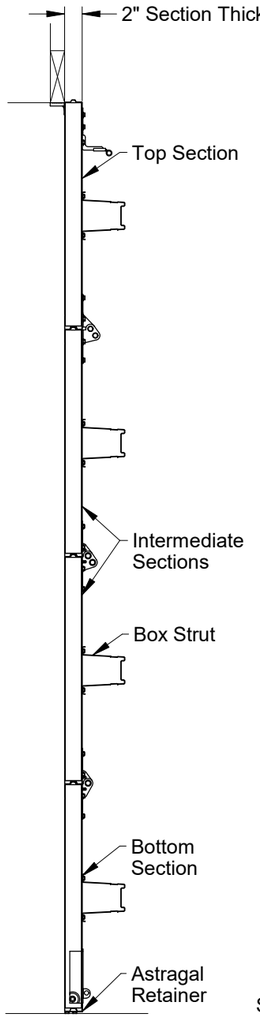
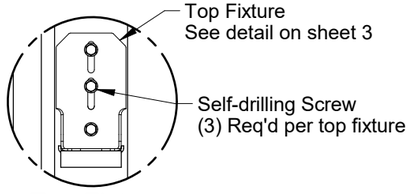
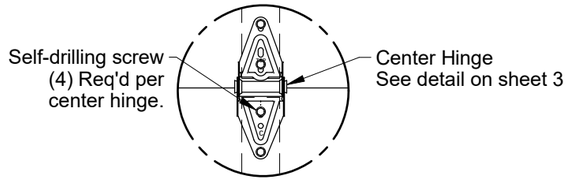
P-3405



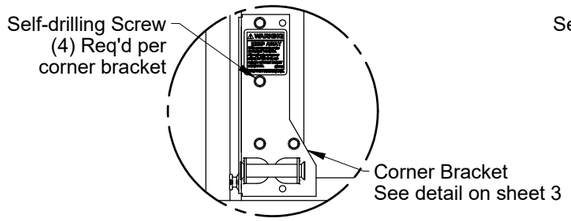
Section A-A



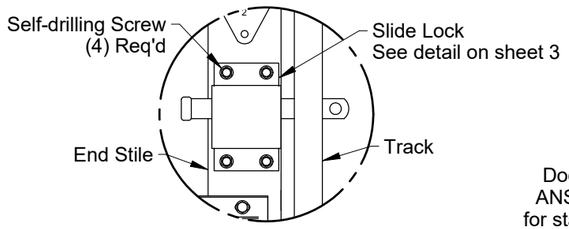
Top Fixture Attachment



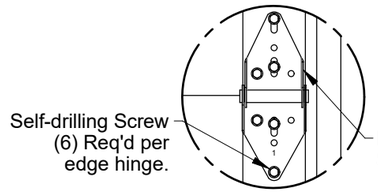
Center Hinge Attachment



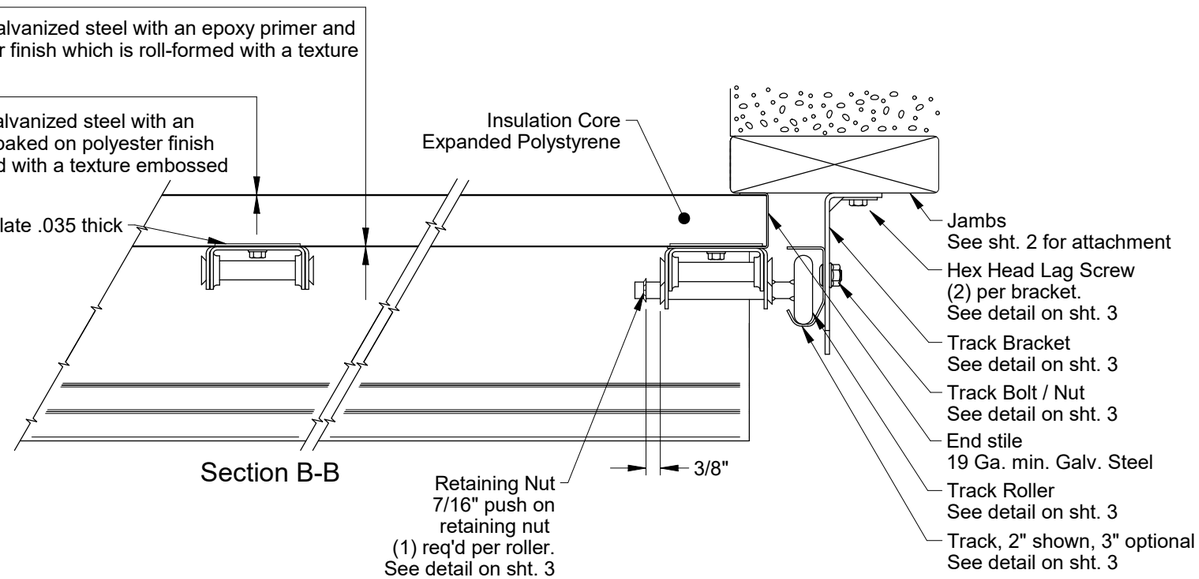
Corner Bracket Attachment



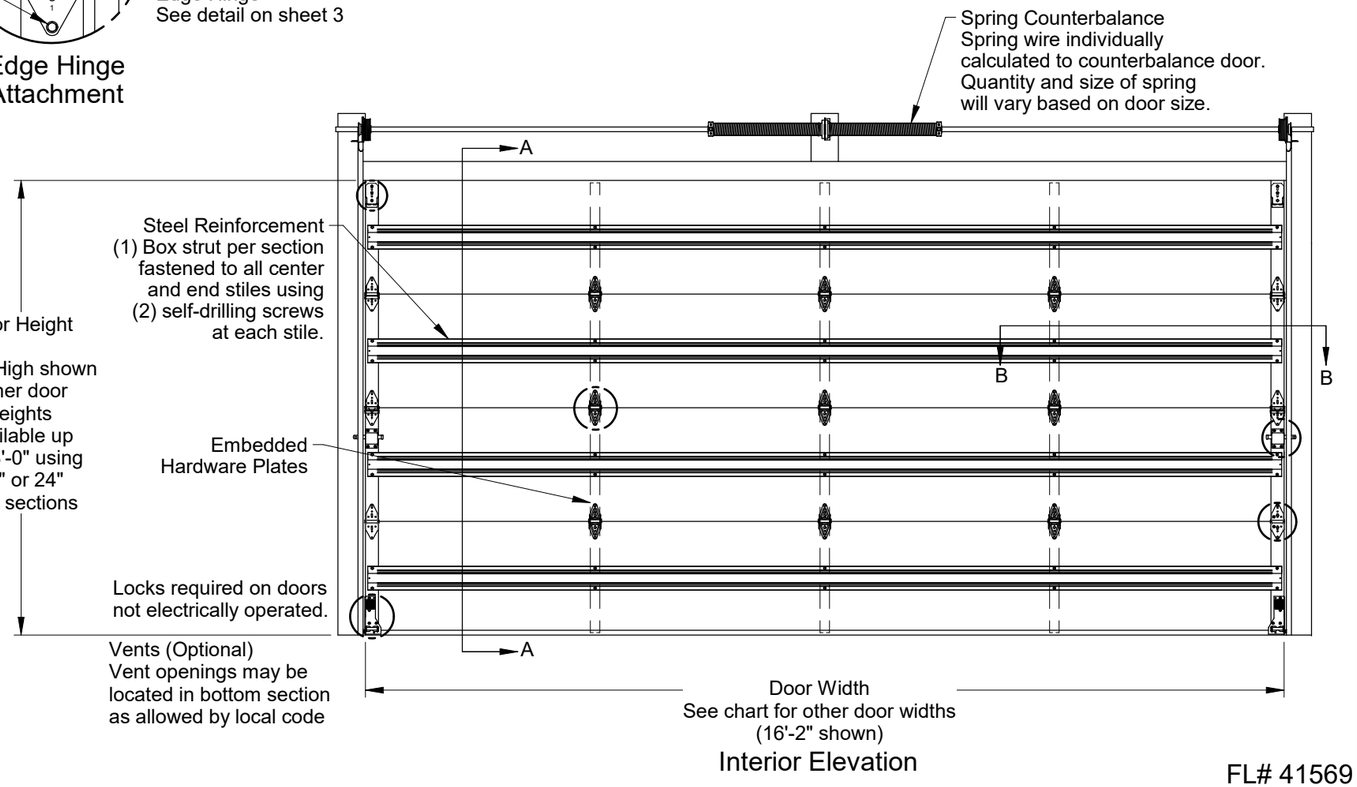
Optional Interior Lock Attachment



Edge Hinge Attachment



Section B-B



Interior Elevation

Doors tested per ANSI/DASMA 108 for static air pressure and ANSI/DASMA 115 for large missile impact and cyclic wind pressure

EC224 / EC200			
Maximum Door Width	Ctr. Hngs. per Sect.	Design Loads	
Up to 8'-2"	1	52.5	-61.8
9'-2"			
10'-2"	2	41.1	-46.4
12'-2"			
14'-2"	3	27.8	-33.1
16'-2"			
18'-2"	4	19.3	-21.5
20'-2"			

Scott A. Brown, P.E. Lic. No. 65940
Wendler Engineering Services, Inc.
698 Timber Creek Road, Dixon, IL 61021
FBPE CA Lic. No. 31544
Structural Adequacy for Wind Load

Digitally signed by Scott A Brown
Date: 2022.10.11 11:35:33 -05'00'

Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

Rev.	Description	ECO	Date
A	New release for production.	8593.03	10/04/22

Scale: None
Drawn by: R. Frey
Checked by: G. Wedekind
Date: 10/04/22
ECO: 8593.03

RAYNOR
1101 East River Road
Dixon, IL. 61021

Title: Spec, Wind Load EnergyCore

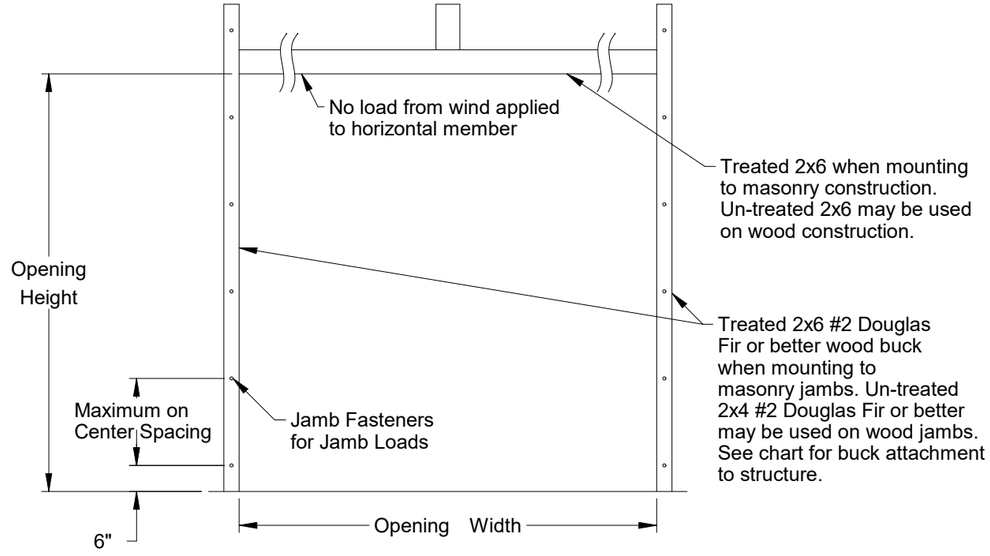
No. P-3405 | Sheet 1 of 4 | Rev A

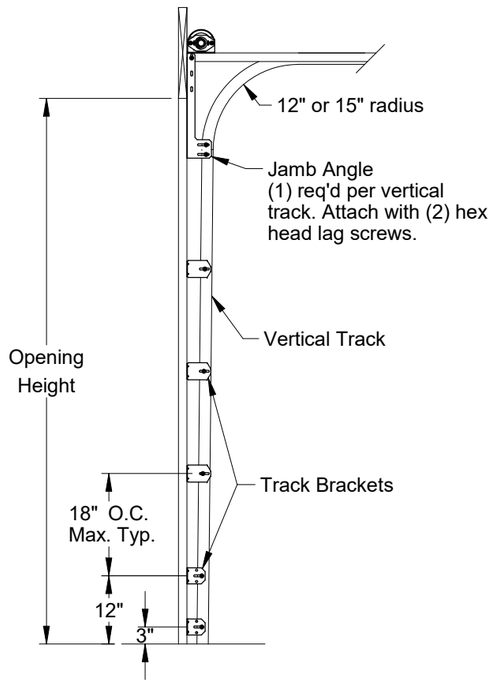
FL# 41569

Jamb Attachment Notes:
1. Maximum Positive Load per Jamb = (12'-2" x 41.1 PSF) / 2 = 251 lbs. per foot.
2. Maximum Negative Load per Jamb = (9'-2" x -61.8 PSF) / 2 = 284 lbs. per foot.
3. Design of the supporting structure shall be the sole responsibility of the building designer and shall be designed for the jamb loads listed in notes 1 and 2.
4. Alternate jamb attachments may be used if approved by a registered Professional Engineer.
5. DASMA Technical Data Sheet TDS-161 may be used for alternate jamb attachments.
6. 3/8" diameter lag screws required 1/4" pilot hole and 1-1/2" minimum required distance.
7. Masonry fasteners by others.

2x6 Attachment to Structure

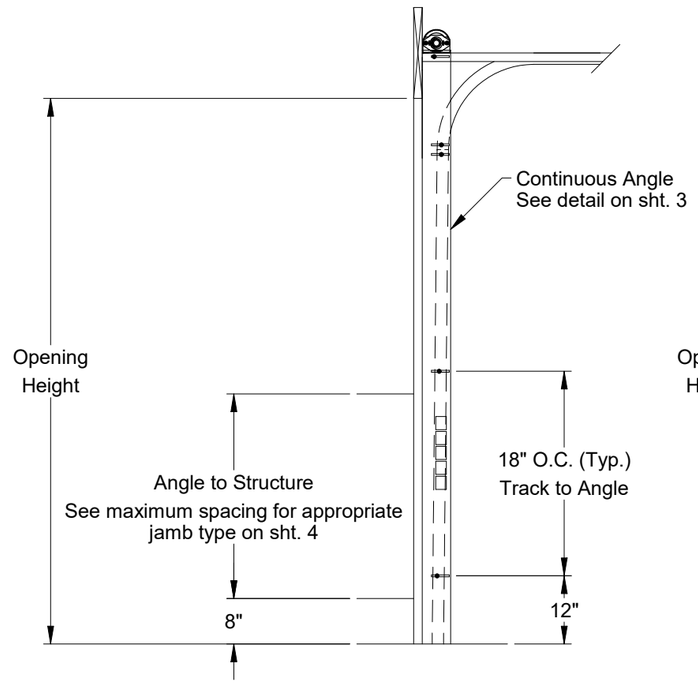
Structure Type	Fastener Type	Minimum Embedment	Minimum Edge Distance	Minimum on Center Spacing	Maximum on Center Spacing	Allowable Tension Load
2500 PSI Min. Concrete	1/4" Tapcon+ (Plus) with 1-1/8" OD Washer	2"	2.5	6"	24"	526
Southern Pine	3/8" x 3" Lag with 1-1/8" OD Washer	1.50"	1.50"	1.50"	24"	655
Spruce Pine Fir	3/8" x 3" LAG with 1-1/8" OD Washer	1.50"	1.50"	1.50"	23"	482





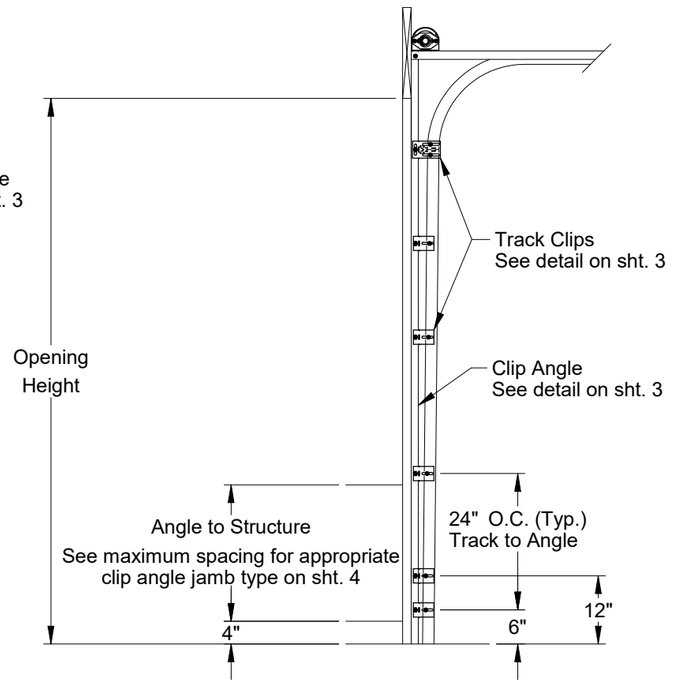
Typical Track Installation
Bracket Mount
Wood Jambs

Normal headroom track shown, low headroom, lift clearance and verical lift track available.



Typical Track Installation
Angle Mount
Wood, Steel or Concrete Jambs

Normal headroom track shown, low headroom, lift clearance and verical lift track available.



Typical Track Installation
Pre-Assembled Clip Angle
Wood, Steel or Concrete Jambs

Normal headroom track shown, lift clearance and verical lift track available.

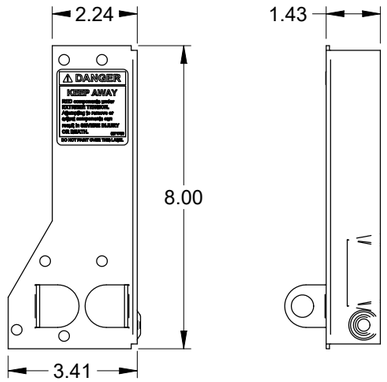
SCOTT A. BROWN LICENSE No. 0065940 STATE OF FLORIDA PROFESSIONAL ENGINEER

Scott A. Brown, P.E. Lic. No. 65940
Wendler Engineering Services, Inc.
698 Timber Creek Road, Dixon, IL 61021
FBPE CA Lic. No. 31544
Structural Adequacy for Wind Load

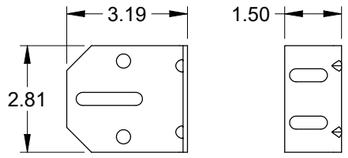
Digitally signed by Scott A Brown
Date: 2022.10.11 11:35:57 -05'00'

Scale: None	RAYNOR 1101 East River Road Dixon, IL. 61021	Title: Spec, Wind Load EnergyCore	
Drawn by: R. Frey			
Checked by: G. Wedekind			
Date: 10/04/22		No. P-3405	Sheet 2 / Rev A
ECO: 8593.03			

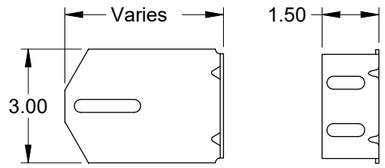
P-3405



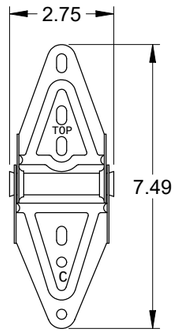
Corner Bracket
.086 Galv. Steel



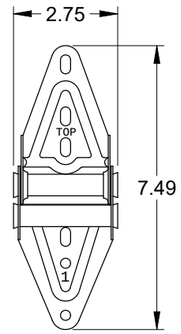
3" Track Bracket
.116 Galv. Steel



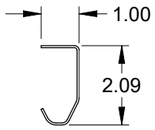
Track Bracket
.116 Galv. Steel



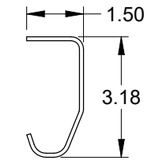
Center Hinge
.045 Galv. Steel



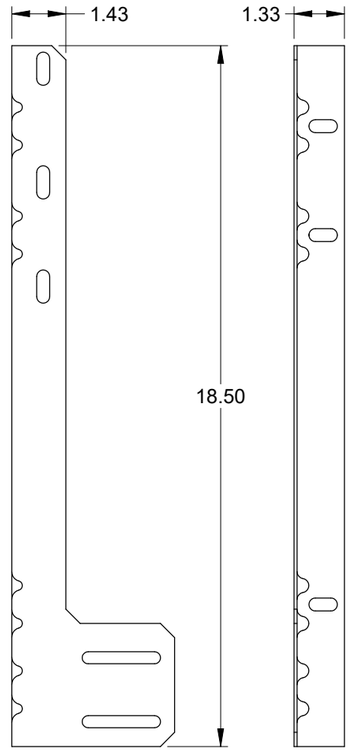
Edge Hinge
.086 Galv. Steel



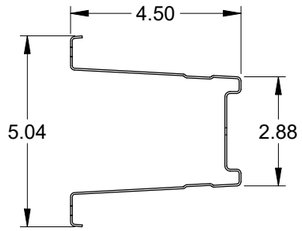
2" Track
.086 Galv. Steel



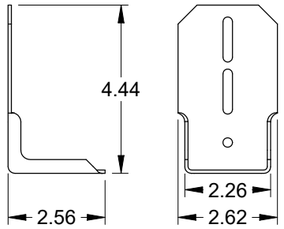
3" Track (Optional)
.105 Galv. Steel



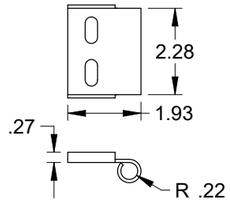
Jamb Angle
.078 min. Galv. Steel



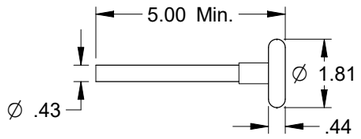
Steel Box Strut
20 Ga. (.035 min.) Galvanized
High Tensile Steel
80 KSI Minimum Yield



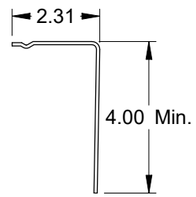
Top Fixture
.085 Galv. Steel



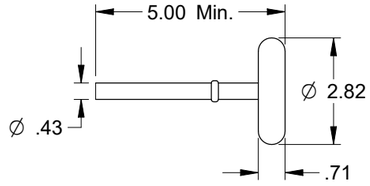
Roller Carrier
.114 Galv. Steel
Attached to Top Fixture
w/(2) Track Bolts and Whiz Nuts



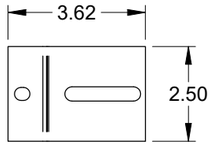
2" Roller
Nylon 11-ball (Std.)
Steel 10-ball (Opt.)



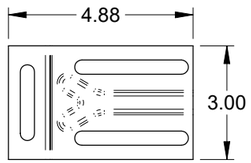
2" Angle Mount (Opt.)
.086 Galv. Steel



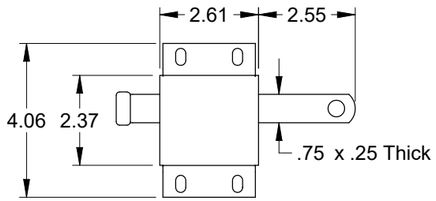
3" Roller
Steel 10-ball (Opt.)



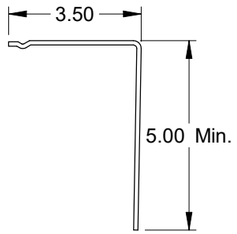
Track Clip (Opt.)
.09 Galv. Steel



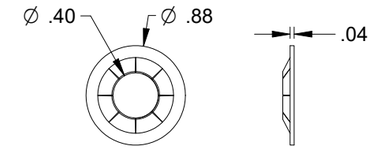
Track Splice Clip (Opt.)
.105 Galv. Steel



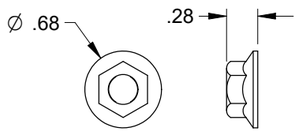
Slide Lock



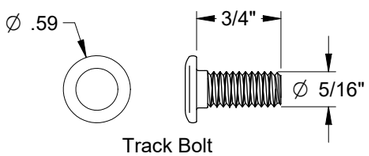
3" Angle Mount (Opt.)
.086 Min. Galv. Steel



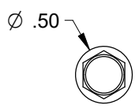
Retaining Nut

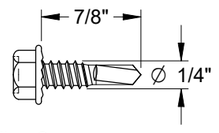


Serrated Hex Flange Nut

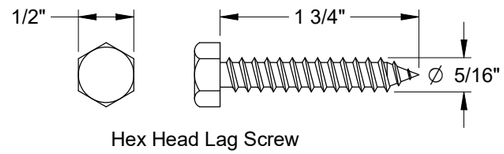


Track Bolt

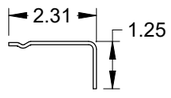




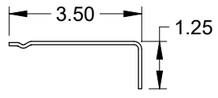
Self-Drilling Screw



Hex Head Lag Screw



2" Clip Angle (Opt.)
.086 Galv. Steel



3" Clip Angle (Opt.)
.086 Galv. Steel

Scott A. Brown, P.E. Lic. No. 65940
Wendler Engineering Services, Inc.
698 Timber Creek Road, Dixon, IL 61021
FBPE CA Lic. No. 31544
Structural Adequacy for Wind Load

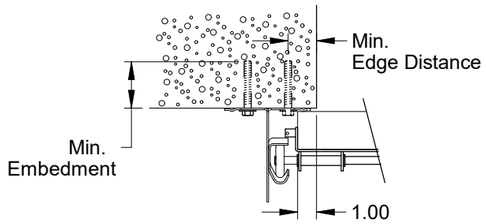
Digitally signed by Scott A Brown
Date: 2022.10.11 11:36:19 -05'00'

All parts shown are for illustration purposes only. The actual product may include equivalent parts due to availability.

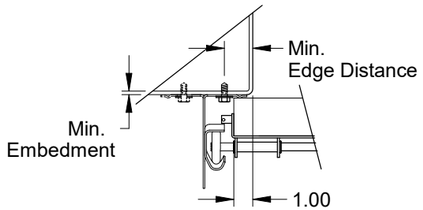
Scale: None	RAYNOR 1101 East River Road Dixon, IL. 61021	Title: Spec, Wind Load EnergyCore	
Drawn by: R. Frey			
Checked by: G. Wedekind		No. P-3405	Sheet 3 / Rev A
Date: 10/04/22			
ECO: 8593.03			

Angle Mount					
Jamb Type	**Fastener Type**	**Minimum Embedment (in.)**	**Minimum Edge Distance (in.)**	**Maximum on Center Spacing (in.)**	**Allowable Tension Load (lbs.)**
2500 PSI Min. Concrete	3/8" ITW Trubolt	2-1/2"	2-1/2"	36"	893
	1/4" Tapcon+ (Plus) with 1-1/8" OD Washer	2"	1-5/8"	18"	687
	1/4" x 2-5/8" Screw-Bolt+ with 9/16" OD Washer	2-1/2"	1-1/2"	18"	651
Steel	5/16" x 1" SAE J78, Min. AISI 1022 with 5/16" Washer	3/16"	1-1/2"	36"	971
Wood	5/16" x 1-3/4" Lag with 5/16" Washer	1-1/2"	1-1/2"	12"	352
Grout Filled CMU Block	3/8" Simpson Titen HD	2-3/4"	4"	18"	480

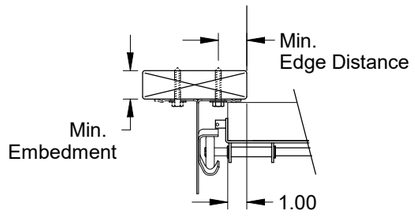
Alternate fasteners may be used if approved by a registered Professional Engineer.



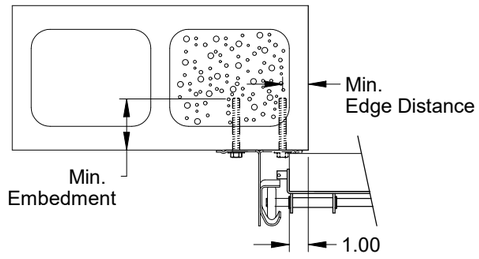
Track Assembly Attachment
to 2500 PSI Min. Concrete
2" Angle mount turned-out standard (solid)
2" Angle mount turned-in optional (dashed)
3" Angle mount available



Track Assembly Attachment
to 3/16" Min. Steel Jamb
2" Angle mount turned-out standard (solid)
2" Angle mount turned-in optional (dashed)
3" Angle mount available



Track Assembly Attachment
to Wood Jamb
2" Angle mount turned-out standard (solid)
2" Angle mount turned-in optional (dashed)
3" Angle mount available



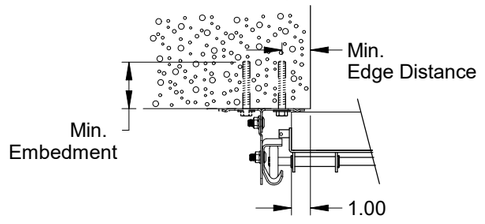
Track Assembly Attachment
to Grout Filled CMU Block
2" Angle mount turned-out standard (solid)
2" Angle mount turned-in optional (dashed)
3" Angle mount available

Scott A. Brown, P.E. Lic. No. 65940
Wendler Engineering Services, Inc.
698 Timber Creek Road, Dixon, IL 61021
FBPE CA Lic. No. 31544
Structural Adequacy for Wind Load

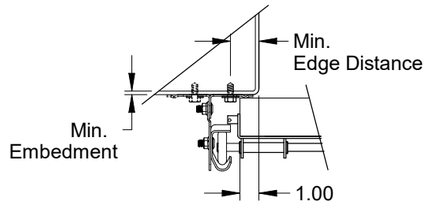
Digitally signed by Scott A Brown
Date: 2022.10.11 11:36:45 -05'00'

Pre-Assembled Clip Angle					
Jamb Type	**Fastener Type**	**Minimum Embedment (in.)**	**Minimum Edge Distance (in.)**	**Maximum on Center Spacing (in.)**	**Allowable Tension Load (Lbs.)**
2500 PSI Min. Concrete	3/8" ITW Trubolt	2-1/2"	2-1/2"	24"	893
	1/4" Tapcon+ (Plus) with 1-1/8" OD Washer	2"	1-5/8"	24"	687
	1/4" x 2-5/8" Screw-Bolt+ with 9/16" OD Washer	2-1/2"	1-1/2"	24"	651
Steel	5/16" x 1" SAE J78, Min. AISI 1022 with 5/16" Washer	3/16"	1-1/2"	24"	971
Wood	5/16" x 1-3/4" Lag with 5/16" Washer	1-1/2"	1-1/2"	*12"	352
Grout Filled CMU Block	3/8" Simpson Titen HD	2-3/4"	4"	*12"	480

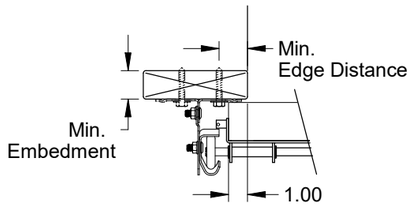
* Field drilling req'd.
Alternate fasteners may be used if approved by a registered Professional Engineer.



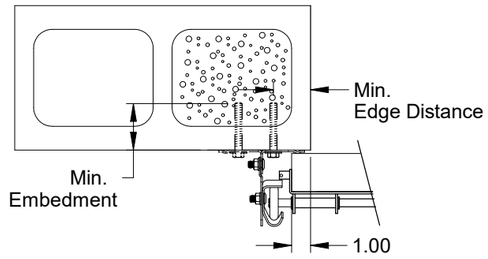
Pre-Assembled Track Assembly
Attachment to 2500 PSI Min. Concrete
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available



Pre-Assembled Track Assembly
Attachment to 3/16" Min. Steel Jamb
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available



Pre-Assembled Track Assembly
Attachment to Wood Jamb
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available



Pre-Assembled Track Assembly
to Grout Filled CMU Block
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available

Scale: None	RAYNOR	Title: Spec, Wind Load EnergyCore	
Drawn by: R. Frey	1101 East River Road Dixon, IL. 61021		
Checked by: G. Wedekind		No. P-3405	Sheet 4 / Rev A
Date: 10/04/22			
ECO: 8593.03			