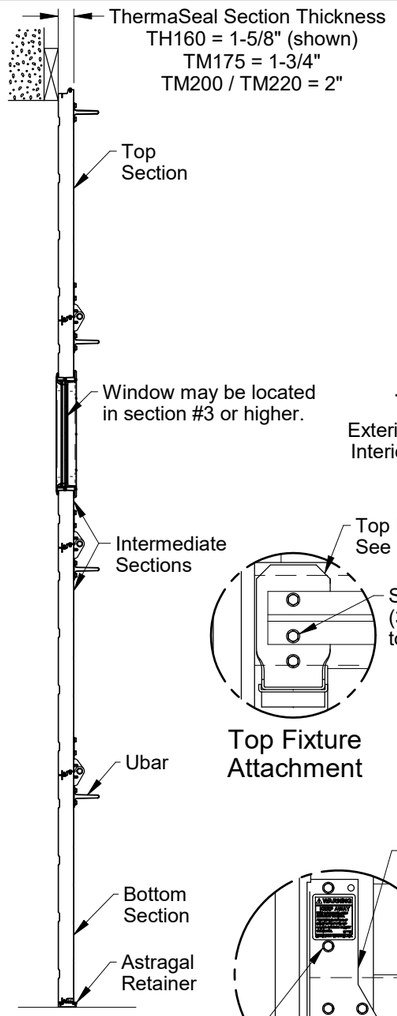
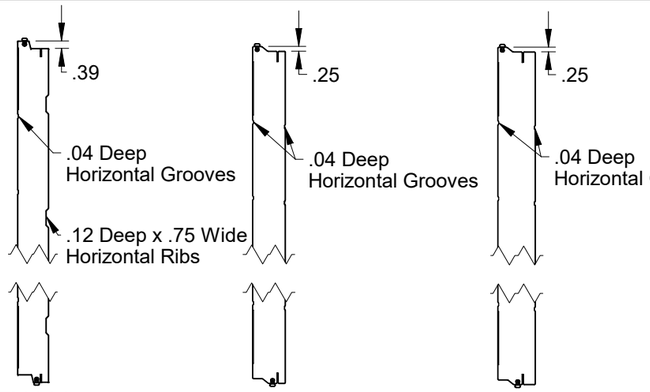


Section A-A

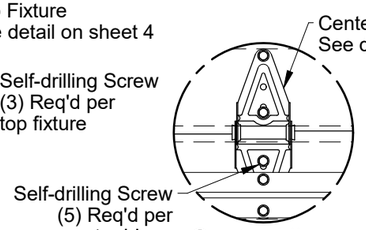


TH160
Exterior Skin = .013
Interior Skin = .013

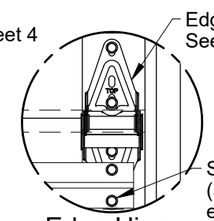
TM175
Exterior Skin = .017
Interior Skin = .013

TM200 / TM220
Exterior Skin - TM200 = .013
TM220 = .033
Interior Skin = .013

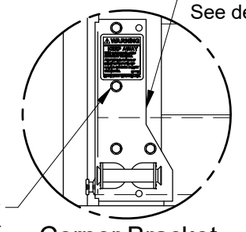
Top Fixture Attachment



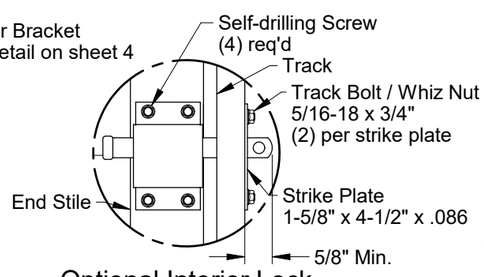
Center Hinge Attachment



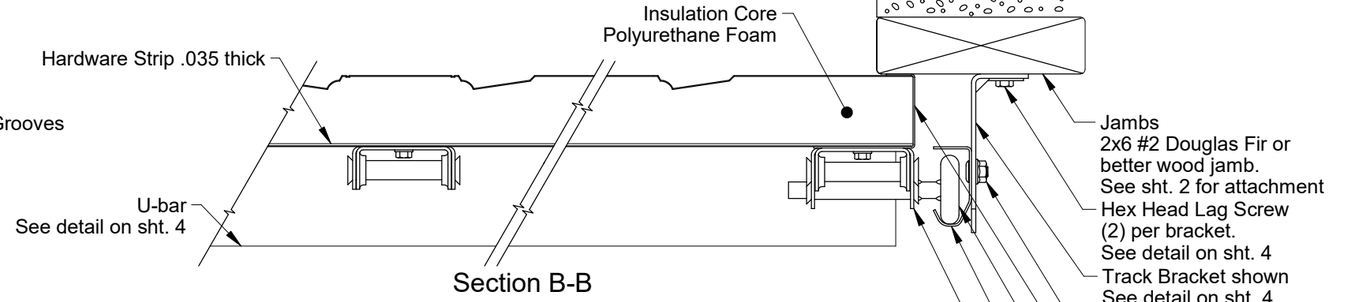
Edge Hinge Attachment



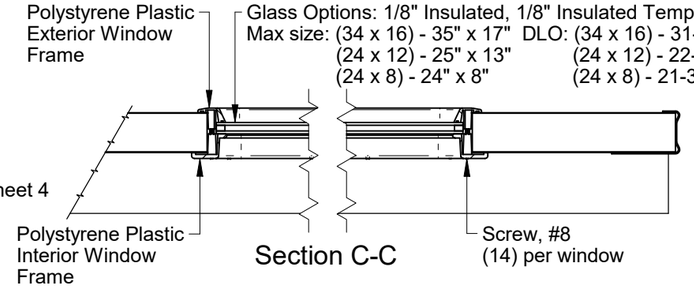
Corner Bracket Attachment



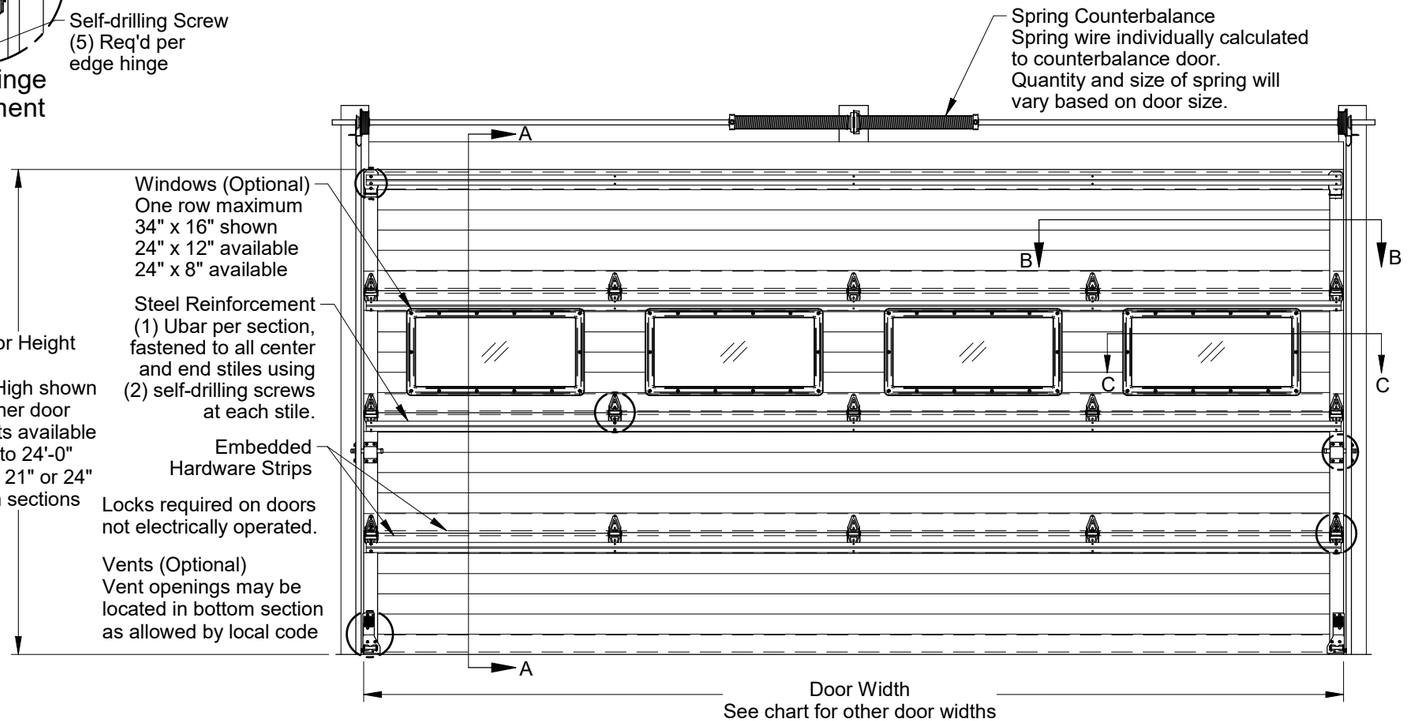
Optional Interior Lock Attachment



Section B-B



Section C-C



Interior Elevation

Doors tested per ANSI/DASMA 108 for static air pressure

TH160 / TM175 / TM200 / TM220			
Maximum Door Width	Center Hinges per Section	Design Load	
Up to 9' - 2"	1	+ 30.9	- 34.6
10' - 2"	2		
11' - 2"	2	+ 22.4	- 24.9
12' - 2"	2	+ 20.6	- 22.9
13' - 2"	3	+ 19.0	- 21.1
14' - 2"	3	+ 17.7	- 19.6
15' - 2"	3	+ 16.5	- 18.3
16' - 2"	3	+ 15.5	- 17.2

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, PE
Date: 2021-10-15 08:37:51

Rev.	Description	ECO	Date
E	Concrete and CMU lap requirement was 2.00 on clip angle.	8517.02	09/10/21
D	Added pre-assembled track, 34 x 16 windows, TM220 and updated format.	8517.01	02/18/21
C	1) Was Richard A Baumman, P.E., 2) Updated jamb attachments.	7803.01	09/29/17

Scale: None
Drawn by: G. Wedekind
Checked by: G. Wedekind
Date: 02/15/13
ECO: 6530.01

RAYNOR
1101 East River Road
Dixon, IL. 61021

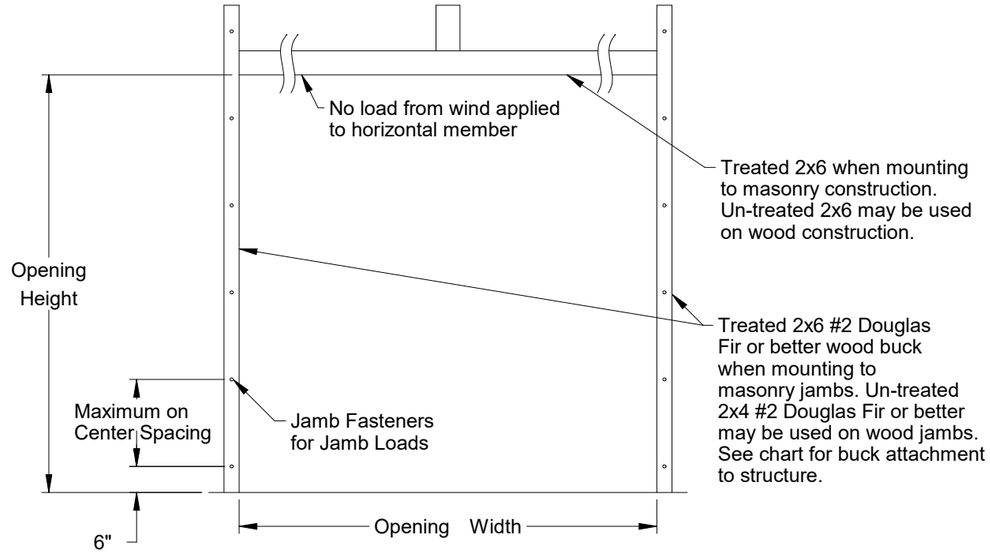
Title: Spec, Wind Load TH160, TM175, TM200, TM220

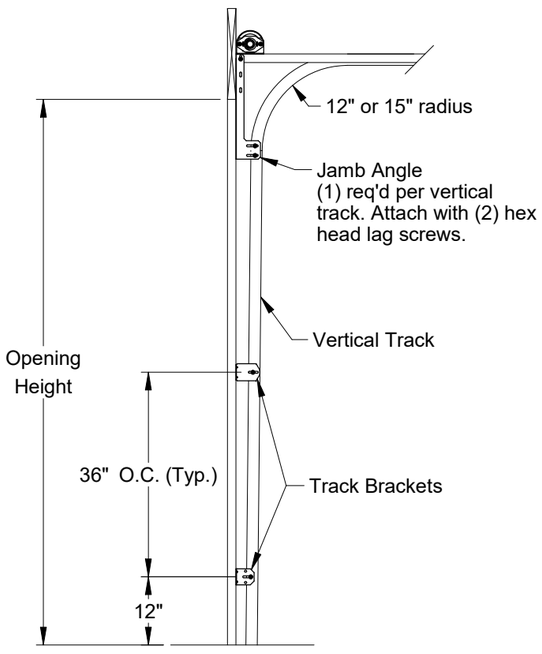
No. P-2422 | Sheet 1 of 4 | Rev E

Jamb Attachment Notes:
1. Maximum Positive Load per Jamb = (10'-2" x 30.9 PSF) / 2 = 158 lbs. per foot.
2. Maximum Negative Load per Jamb = (10'-2" x -34.6 PSF) / 2 = 177 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

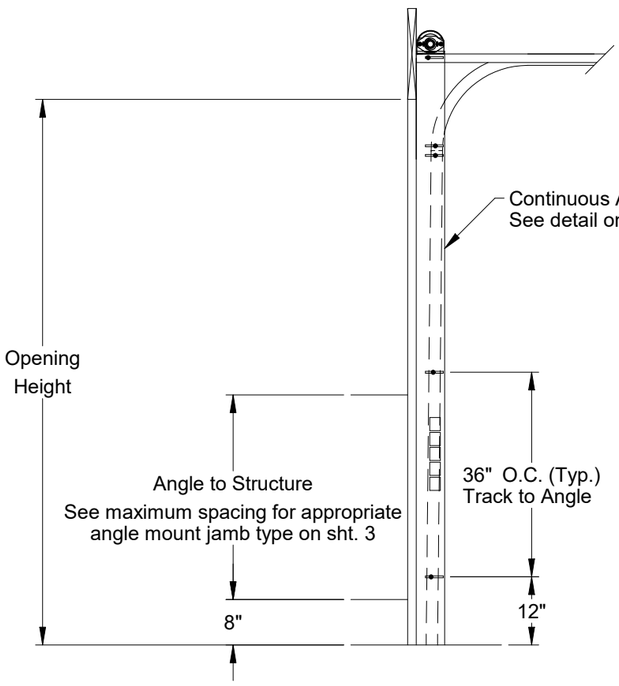
Structure Type	Fastener Type	Minimum Embedment	Minimum Edge Distance	Minimum on Center Spacing	Maximum on Center Spacing	Allowable Tension Load
2500 PSI Min. Concrete	1/4" Tapcon+ (Plus) with 1-1/8" OD Washer	2"	2.5	6"	24"	526
Southern Pine	3/8" x 3" Lag with 1-1/8" OD Washer	1.50"	1.50"	1.50"	24"	655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





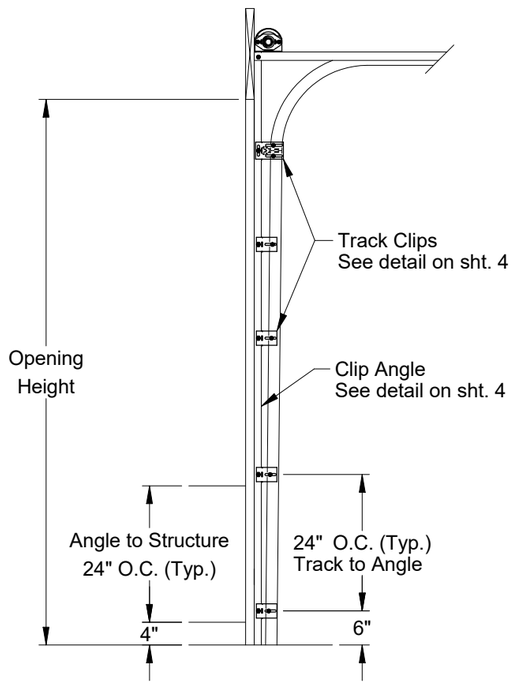
Typical Track Installation
Bracket Mount
Wood Jambs

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.

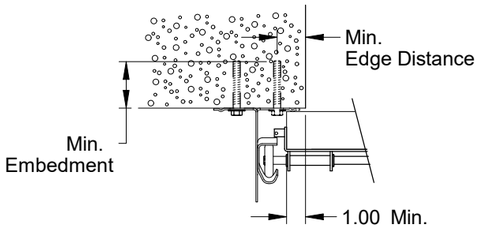
Scott A. Brown, P.E. Lic. No. 65940
Wendler Engineering Services, Inc.
698 Timber Creek Road, Dixon, IL 61021
FBPE CA Lic. No. 31544
Structural Adequacy for Wind Load

Digitally signed by Scott A Brown, PE
Date: 2021-10-15 08:38:16

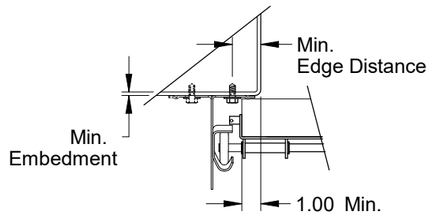
Scale: None	RAYNOR 1101 East River Road Dixon, IL. 61021	Title: Spec, Wind Load TH160, TM175, TM200, TM220
Drawn by: G. Wedekind		
Checked by: G. Wedekind		No. P-2422 | Sheet 2 | Rev E
Date: 02/15/13		
ECO: 6530.01		

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"	36"	687
	1/4" x 2-5/8" Screw-Bolt+ with 9/16" OD Washer	2-1/2"	1-1/2"	36"	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"	18"	352
Grout Filled CMU Block	3/8" Simpson Titen HD	2-3/4"	4"	36"	480

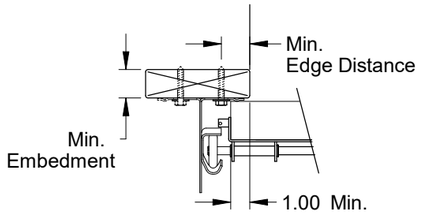
Alternate fasteners may be used if approved by a registered Professional Engineer.



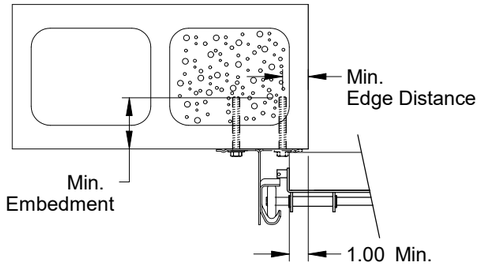
Track Assembly Attachment
to 2500 PSI Min. Concrete
2" Angle mount turned-out standard (solid)
2" Angle mount turned-in optional (dashed)
3" Angle mount available



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



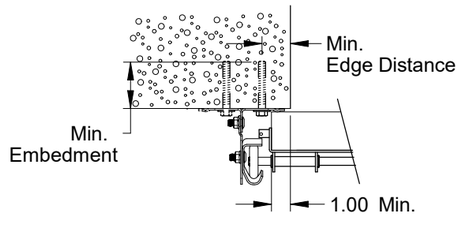
Track Assembly Attachment
to Grout Filled CMU Block
2" Angle mount turned-out standard (solid)
2" Angle mount turned-in optional (dashed)
3" Angle mount available

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

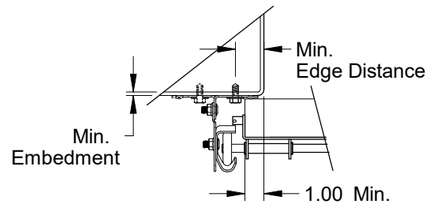
Digitally signed by Scott A Brown, PE
Date: 2021-10-15 08:38:38

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"	24"	352
Grout Filled CMU Block	3/8" Simpson Titen HD	2-3/4"	4"	24"	480

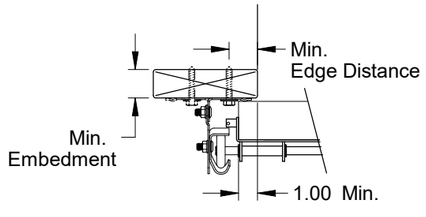
Alternate fasteners may be used if approved by a registered Professional Engineer.



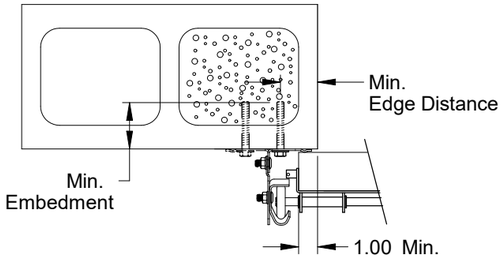
Pre-Assembled Track Assembly
Attachment to 2500 PSI Min. Concrete
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available



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

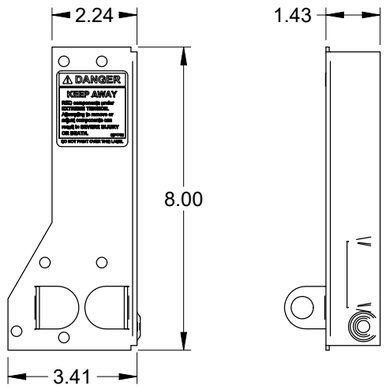


Pre-Assembled Track Assembly
Attachment to Wood Jamb
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available

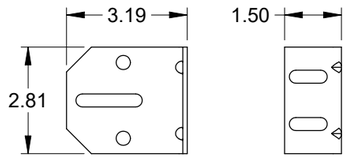


Pre-Assembled Track Assembly
to Grout Filled CMU Block
2" Clip angle turned-in standard (solid)
2" Clip angle turned-out optional (dashed)
3" Clip angle available

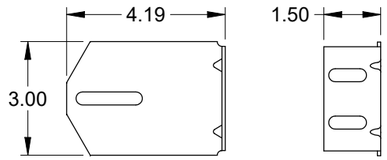
Scale: None	RAYNOR	Title: Spec, Wind Load TH160, TM175, TM200, TM220	
Drawn by: G. Wedekind			
Checked by: G. Wedekind	1101 East River Road Dixon, IL. 61021	No. P-2422	Sheet 3 / Rev E
Date: 02/15/13			
ECO: 6530.01			



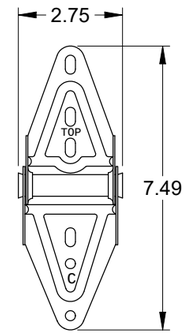
Corner Bracket
.086 Galv. Steel



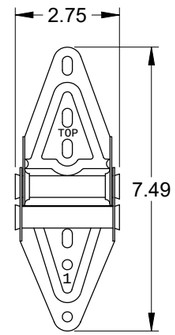
3" Track Bracket
.116 Galv. Steel



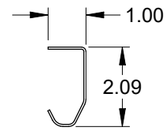
4" Track Bracket
.116 Galv. Steel



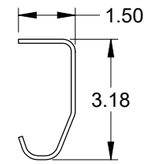
Center Hinge
.045 Galv. Steel



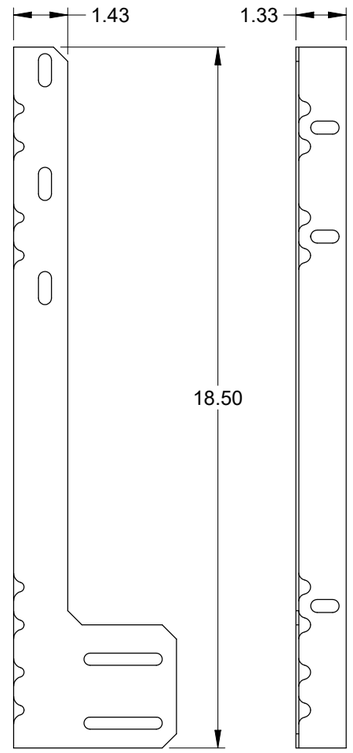
Edge Hinge
.086 Galv. Steel



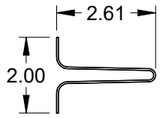
2" Track
.055 Galv. Steel



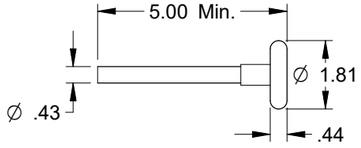
3" Track (Optional)
.105 Galv. Steel



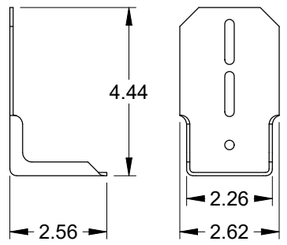
Jamb Angle
.078 Galv. Steel



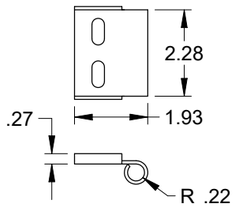
Steel U-bar
20 Ga. (.035 min.) Galvanized
High Tensile Steel
80 KSI Minimum Yield



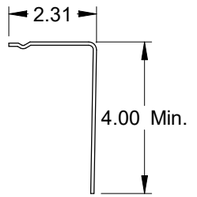
2" Roller
Nylon 11-ball (Std.)
Steel 10-ball (Opt.)



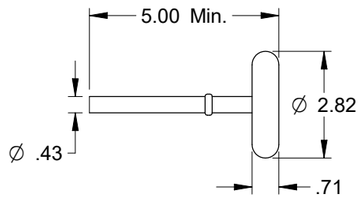
Top Fixture
.085 Galv. Steel



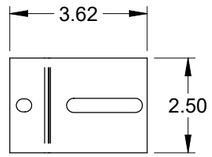
Roller Carrier
.085 Galv. Steel
Attached to Top Fixture
w/(2) Track Bolts and Whiz Nuts



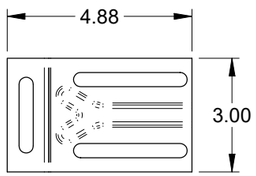
2" Angle Mount (Opt.)
.086 Galv. Steel



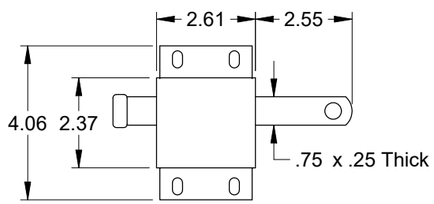
3" Roller
Steel 10-ball (Opt.)



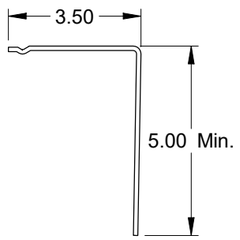
Track Clip (Opt.)
.09 Galv. Steel



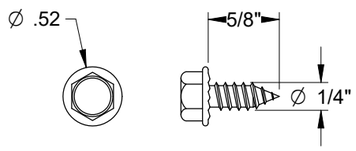
Track Splice Clip (Opt.)
.105 Galv. Steel



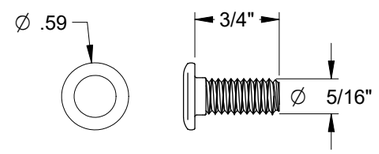
Slide Lock
Case .086 Galv. Steel



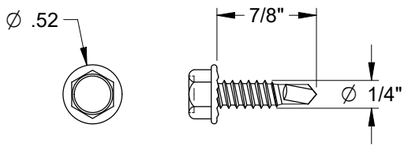
3" Angle Mount (Opt.)
.086 Min. Galv. Steel



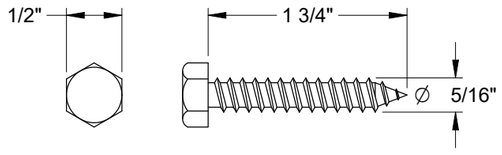
Sheet Metal Screw



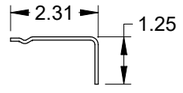
Track Bolt



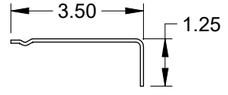
Self-Drilling Screw



Hex Head Lag Screw



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



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

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Structural Adequacy for Wind Load

Digitally signed by Scott A Brown, PE
Date: 2021-10-15 08:39:02

Scale: None	RAYNOR 1101 East River Road Dixon, IL. 61021	Title: Spec, Wind Load TH160, TM175, TM200, TM220	
Drawn by: G. Wedekind			
Checked by: G. Wedekind		No. P-2422	Sheet 4 / Rev E
Date: 02/15/13			
ECO: 6530.01			