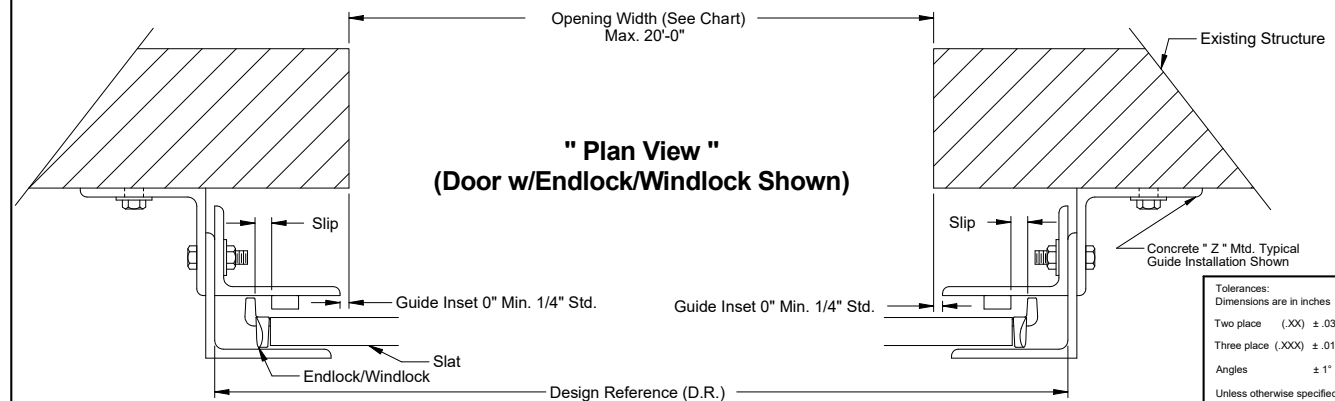
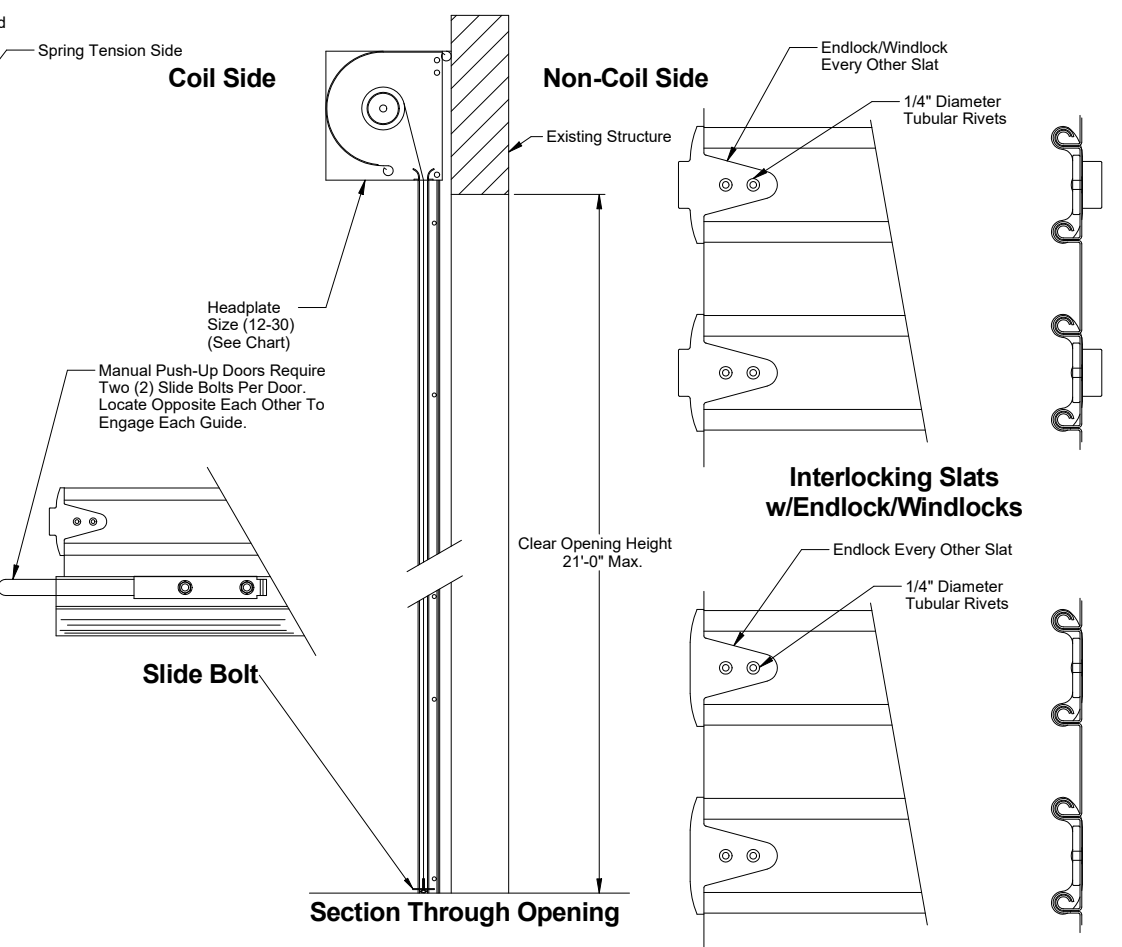


" Elevation View "



John E. Scates  
 2560 King Arthur Blvd, Ste 124-54  
 Lewisville, TX 75056  
 FL PE #51737  
 TX PE #56308-42203

Professional Engineer's seal provided only for verification of wind load construction details.

Tolerances: Dimensions are in inches Two place (.XX) ± .03 Three place (.XXX) ± .015 Angles ± 1° Unless otherwise specified	Material:	Scale: None
		Drawn by: M. Reutzel
		Checked by: J. Bonnell
		Date: 07/21/16
		ECO: 7415.01

Doors Tested Per ANSI/DASMA 108-05  
 ANSI/DASMA 108-12

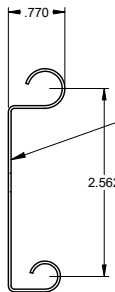
For Static Air Pressure Tested Per ANSI/DASMA 115-05  
 For Large Missile Impact and Cyclic Wind Pressure

Complies with the Wind Load requirements of the IBC/IRC 2018

B	Added 2018 IBC/IRC note. G111 detail was G110 in error on sht. 4.	8534.01	03/26/21
A	Release for Production.	7415.01	07/21/16
Rev.	Description	ECO	Date

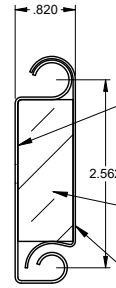


Title: Specifications, Wind Load Doors for Texas Approvals		
No. P-2261	Sheet 1 of 5	Rev B



**Flat Slat  
"FF"**

Steel:  
22 Ga. (.026 Min Bare), 20 Ga. (.032 Min. Bare), 18 Ga. (.044 Min. Bare) - ASTM A653,  
Comm. Stl Type B, Hot Dipped Galv. - G-90  
Stainless Steel:  
22 Ga (.026 Min Bare), 20 Ga. (.032 Min. Bare) - ASTM 240, Type 304, #4 Finish



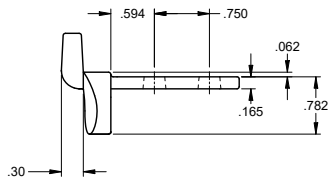
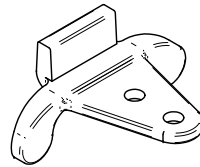
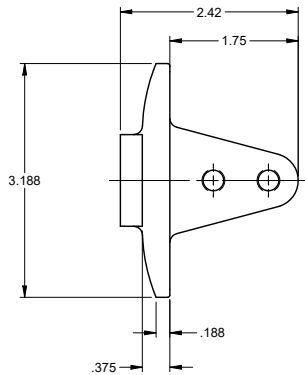
**Insulated  
Flat Slat  
"IF"**

Steel:  
24 Ga. (.021 Min Bare), 22 Ga. (.026 Min Bare), 20 Ga. (.032 Min. Bare),  
18 Ga. (.044 Min. Bare) - ASTM A653, Comm. Stl Type B, Hot Dipped Galv. - G-90  
Stainless Steel:  
22 Ga (.026 Min Bare), 20 Ga. (.032 Min. Bare) - ASTM 240, Type 304, #4 Finish

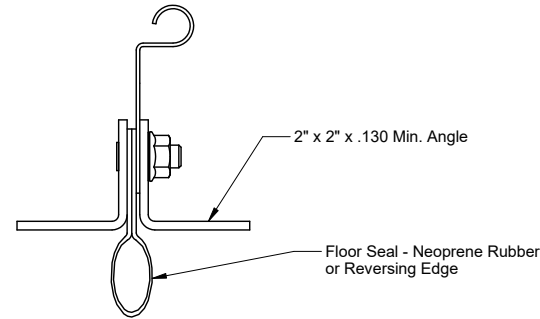
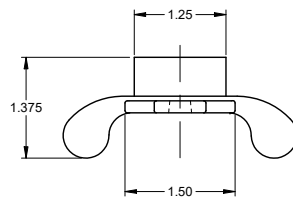
Polyiso Foamboard Core 3/4" Thick  
The Length of Each Slat

Steel:  
24 Ga. (.021 Min. Bare) - ASTM A653, Comm. Stl Type B, Hot Dipped Galv. - G-60.  
Stainless Steel:  
24 Ga (.021 Min Bare) - ASTM 240, Type 304, #4 Finish

**Flat Slat and Insulated Flat Slat Profiles**



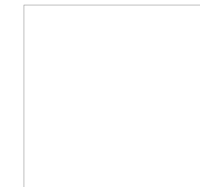
**Malleable Cast Iron Endlock/Windlock**



**Bottom Bar Standard Assembly**

**General Specifications**

- 1) DOORS shall be rolling steel model DuraCoil (Standard Service Door) as manufactured by Raynor Garage Doors.
- 2) GUIDES - Structural steel angles, in accordance to ASTM A36 Steel, Min. 5/16" thick and rolled angles in accordance to ASTM A1011 HSLA-F, grade 50 steel, min. .180 thick. Top of guide angles flared and provided with 4 removable curtain stops.
- 3) BRACKETS - Steel plates, in accordance to ASTM A36 Steel, Min. 3/16" thick, bolted to guides for mounting curtain and barrel assembly. Drive side bracket shall be fitted with a sealed ball bearing for long life.
- 4) BARREL - Structural steel pipe, Minimum 4 1/2" O.D. x .120" wall thickness and designed to limit maximum deflection, under load, to .03" per foot of span.
- 5) SPRING COUNTERBALANCE - The curtain shall be counterbalanced by means of oil tempered, helical torsion springs, grease-packed and mounted on a single continuous steel torsion shaft. Springs shall be compression spring design to facilitate any counterbalance maintenance. Cast iron spring anchors shall transfer full spring loading to the barrel.
- 6) HOOD - Shall be 24 ga. Commercial quality hot-dipped galvanized steel. Hood to have rolled edges to provide rigidity.
- 7) GUIDE HARDWARE - All bolts and washers shall be galvanized steel or stainless steel with a minimum bolt tensile strength of 60 K.S.I.
- 8) ENDLOCK/WINDLOCKS and ENDLOCKS - Shall be cast malleable iron, in accordance to ASTM A47 - GRADE 32510 with electroplating in accordance to ASTM B633, clear chromate, Min. .0007 zinc coating thickness.
- 9) CURTAIN FLAT SLAT - Interlocking slats rollformed from commercial quality hot dipped galvanized (G-90) steel per ASTM A653, Type 'B' (min. 30,000 psi) or stainless steel per ASTM 240, Type 304 (min. 30,000 psi). Malleable endlock/windlocks fastened to alternate slats with 2 rivets per lock, eliminates lateral movement and prevent slats from wearing at surfaces coming in contact with guides. Bottom of curtain shall be reinforced with 2 steel angles, Min. 2" x 2" x .130" or 2" x 2" x 3/16" stainless steel.
- 10) CURTAIN INSULATED SLAT - Interlocking slats rollformed from commercial quality hot dipped galvanized (G-90) steel per ASTM A653, Type 'B' (min. 30,000 psi) or stainless steel per ASTM 240, Type 304 (min. 30,000 psi). Each slat shall have a 3/4" thick polyiso foamboard core placed within the full length of the slat. Backing cover rollformed from 24 ga. commercial quality hot dipped galvanized (G-60) steel per ASTM A653 or stainless steel per ASTM 240. Malleable endlock/windlocks fastened to alternate slats with 2 rivets per lock, eliminates lateral movement and prevent slats from wearing at surfaces coming in contact with guides. Bottom of curtain shall be reinforced with 2 steel angles, Min. 2" x 2" x .130" or 2" x 2" x 3/16" stainless steel.



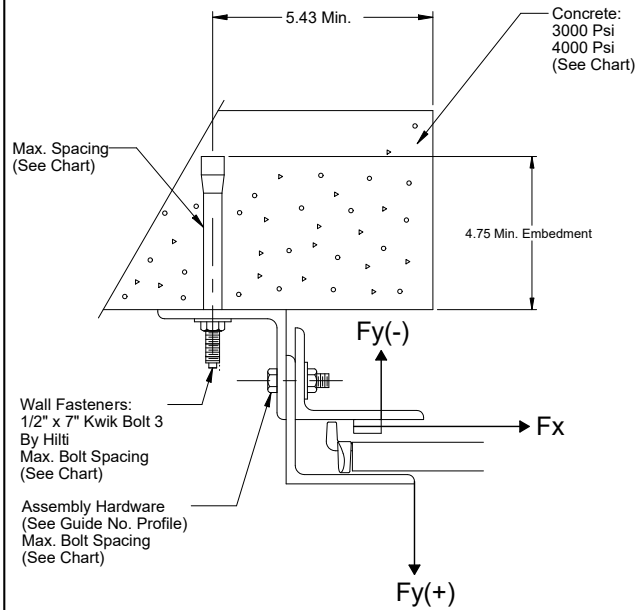
John E. Scates  
2560 King Arthur Blvd, Ste 124-54  
Lewisville, TX 75056  
FL PE #51737  
TX PE #56308-I2203

Professional Engineer's seal provided only for verification of wind load construction details.

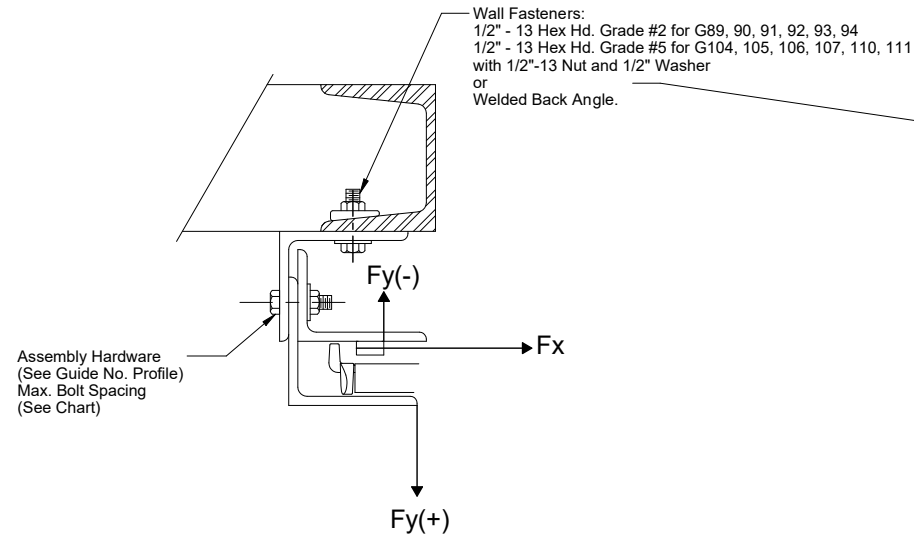
Scale: None	 1101 East River Road Dixon, IL 61021	Title: Specifications, Wind Load Doors for Texas Approvals	
Drawn by: M. Reutzel		No. P-2261	Sheet 2
Checked by: J. Bonnell			Rev B
Date: 07/21/16			
ECO: 7415.01			

**Notes:**

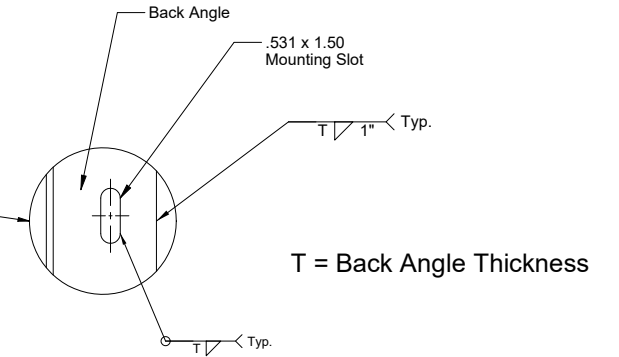
1. Building Designer Note: Structure must be designed to support the forces of "Fx" and "Fy" shown in chart
2. Fx and Fy are horizontal and vertical components of the reaction, resulting from windloads on the rolling steel door. The existing structure shall be capable of resisting Fx and Fy forces shown.



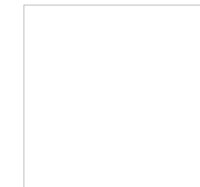
**Concrete Jamb - " Z " Mtd. (Shown)  
or  
Steel Jamb - "Z" Mtd.**



**Steel Jamb - " E " Mtd.**



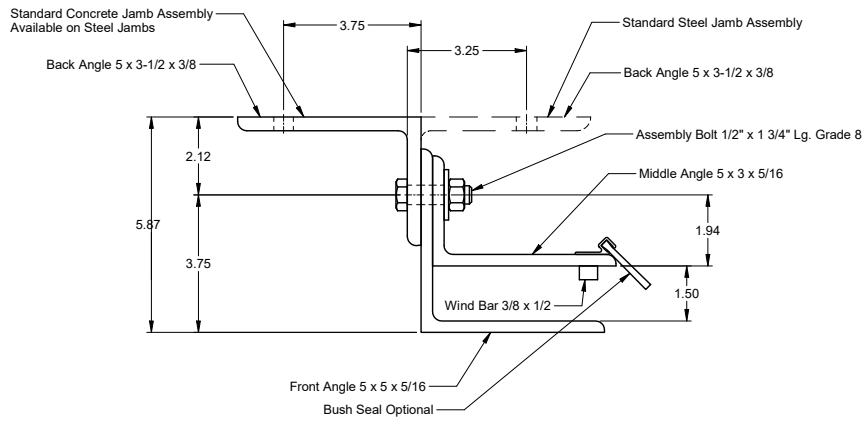
**" Welding Detail "**  
(Weld may be used in lieu of  
bolting at same bolt spacing)



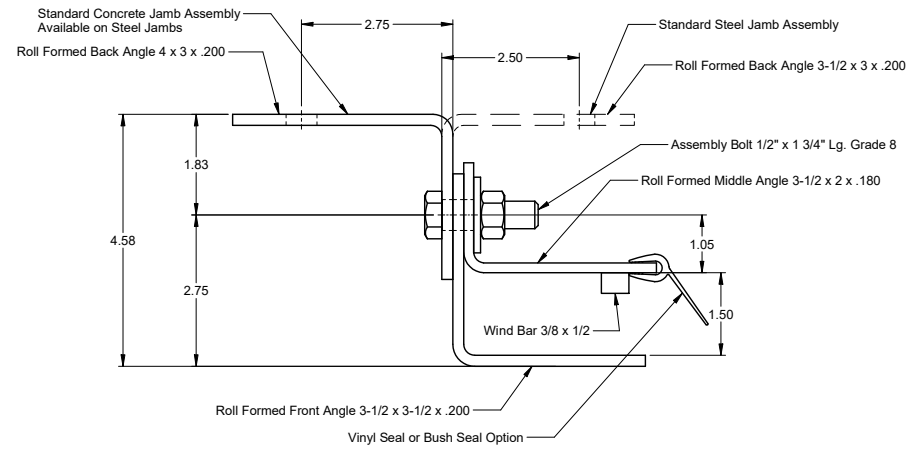
John E. Scates  
2560 King Arthur Blvd, Ste 124-54  
Lewisville, TX 75056  
FL PE #51737  
TX PE #56308-f2203

Professional Engineer's seal provided only for verification of  
wind load construction details.

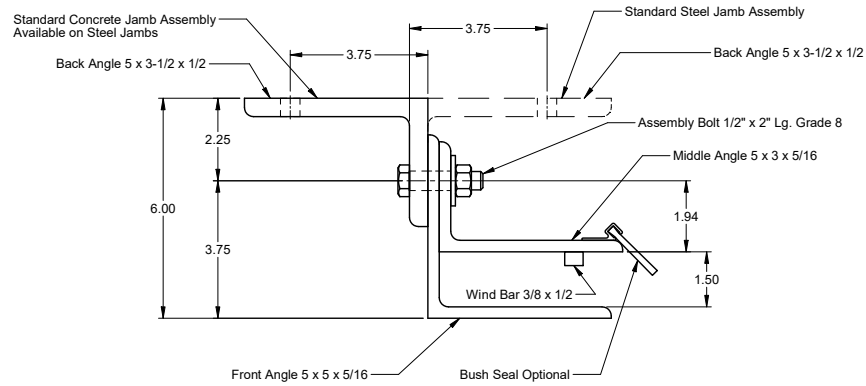
Scale: None	 1101 East River Road Dixon, IL 61021	Title: Specifications, Wind Load Doors for Texas Approvals	
Drawn by: M. Reutzel		No. P-2261	Sheet 3
Checked by: J. Bonnell			Rev B
Date: 07/21/16			
ECO: 7415.01			



**Guide Ass'y #104**



**Guide Ass'y #111**



**Guide Ass'y #106**



John E. Scates  
 2560 King Arthur Blvd, Ste 124-54  
 Lewisville, TX 75056  
 FL PE #51737  
 TX PE #56308-f2203

Professional Engineer's seal provided only for verification of wind load construction details.

Scale: None	 1101 East River Road Dixon, IL 61021	Title: Specifications, Wind Load Doors for Texas Approvals	
Drawn by: M. Reutzel		No. P-2261	Sheet 4
Checked by: J. Bonnell			Rev B
Date: 07/21/16			
ECO: 7415.01			

## DuraCoil - Insulated Flat Slat 24 Ga./22 Ga./18 Ga.

45 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	20'	Wind Bar	104	D.R. - 4.25	2nd	2.062	3.812	17"	N/A	11"	892	450

60 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	16'	Wind Bar	104	D.R. - 4.25	2nd	1.218	2.968	16"	N/A	11"	944	480

## DuraCoil - Insulated Flat Slat 22 Ga./20 Ga./18 Ga.

55 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	20'	Wind Bar	106	D.R. - 4.25	2nd	1.937	3.687	13"	N/A	N/A	1180	550

## DuraCoil - Flat Slat 22 Ga./20 Ga./18 Ga.

45 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	20'	Wind Bar	106	D.R. - 4.25	2nd	1.937	3.687	14"	N/A	N/A	1126	450

50 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	16'	Wind Bar	106	D.R. - 4.25	2nd	1.125	2.875	15"	N/A	N/A	1088	400

## DuraCoil - Flat Slat 20 Ga./18 Ga.

30 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
16 - 30	16'	Wind Bar	111	D.R. - 3.00	2nd	1.000	2.125	24"	19"	21"	460	240

55 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	20'	Wind Bar	106	D.R. - 4.25	2nd	1.937	3.687	12"	N/A	N/A	1447	550

60 PSF DESIGN LOAD												
Headplate Size	Max Door Opening Width Including	Std./Wind Bar	Guide Ass'y No.	Slat Length	Windlock Frequency	Slip	Wind Bar Location	Bolt Spacing Steel Jamb	Bolt Spacing Concrete Jamb 3000 PSI	Bolt Spacing Concrete Jamb 4000 PSI	Guide Load FX Lbs./Ft.	Guide Load FY Lbs./Ft.
18 - 30	16'	Wind Bar	106	D.R. - 4.25	2nd	1.437	3.187	12"	N/A	N/A	1101	480



John E. Scates  
2560 King Arthur Blvd, Ste 124-54  
Lewisville, TX 75056  
FL PE #51737  
TX PE #56308-12203

Professional Engineer's seal provided only for verification of wind load construction details.

Scale: None	 1101 East River Road Dixon, IL 61021	Title: Specifications, Wind Load Doors for Texas Approvals	
Drawn by: M. Reutzel		No. P-2261	Sheet 5
Checked by: J. Bonnell			Rev B
Date: 07/21/16		ECO: 7415.01	