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## ORIGINATION FORM

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### Proposed Revisions to a Standard Plans Index (Please provide all information — Incomplete forms will be returned)

**Contact Information:**

Date: June 15, 2020

Originator: Cheryl Hudson

Phone: (850) 414-4355

Email: cheryl.hudson@dot.state.fl.us

**Standard Plans:**

Index Number: 700-030

Sheet Number (s): 1 of 1

Index Title: Wind and Hanger Beams for Overhead Signs

**Summary of the changes:**

Change Note 6.A.b reference to ASTM B308 to ASTM B221 throughout Standard Plans as an administrative change.  
Corrected Title block of Hanger Table.

**Commentary / Background:**

ASTM withdrew B308 so need to change it to ASTM B221 in all applications.

I-beam size label was incomplete as previously shown. Should be I 6x4x4.69 and Z 5/3.25 x 4.01

**Other Affected Offices / Documents:** (Provide name of person contacted)

- | Yes                      | No                                  |                             |
|--------------------------|-------------------------------------|-----------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other Standard Plans –      |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | FDOT Design Manual –        |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Basis of Estimates Manual – |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Standard Specifications –   |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Approved Product List –     |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction –              |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Maintenance –               |

**Origination Package Includes:**

(Email or hand deliver package to Rick Jenkins)

- | Yes                                 | N/A                      |  |
|-------------------------------------|--------------------------|--|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups                         |
| <input type="checkbox"/>            | <input type="checkbox"/> | Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/>            | <input type="checkbox"/> | Revised SPI                              |
| <input type="checkbox"/>            | <input type="checkbox"/> | Other Support Documents                  |

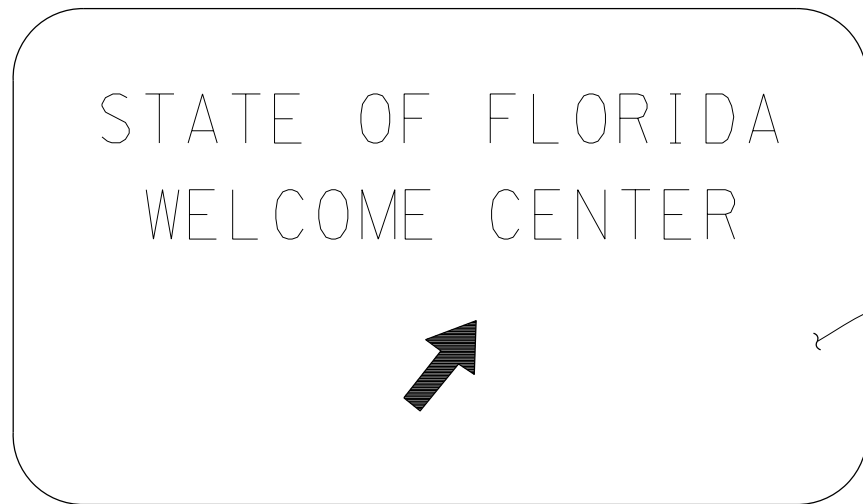
**Implementation:**

- |                                     |                                  |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/>            | Design Bulletin (Interim)        |
| <input type="checkbox"/>            | DCE Memo                         |
| <input type="checkbox"/>            | Program Mgmt. Bulletin           |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

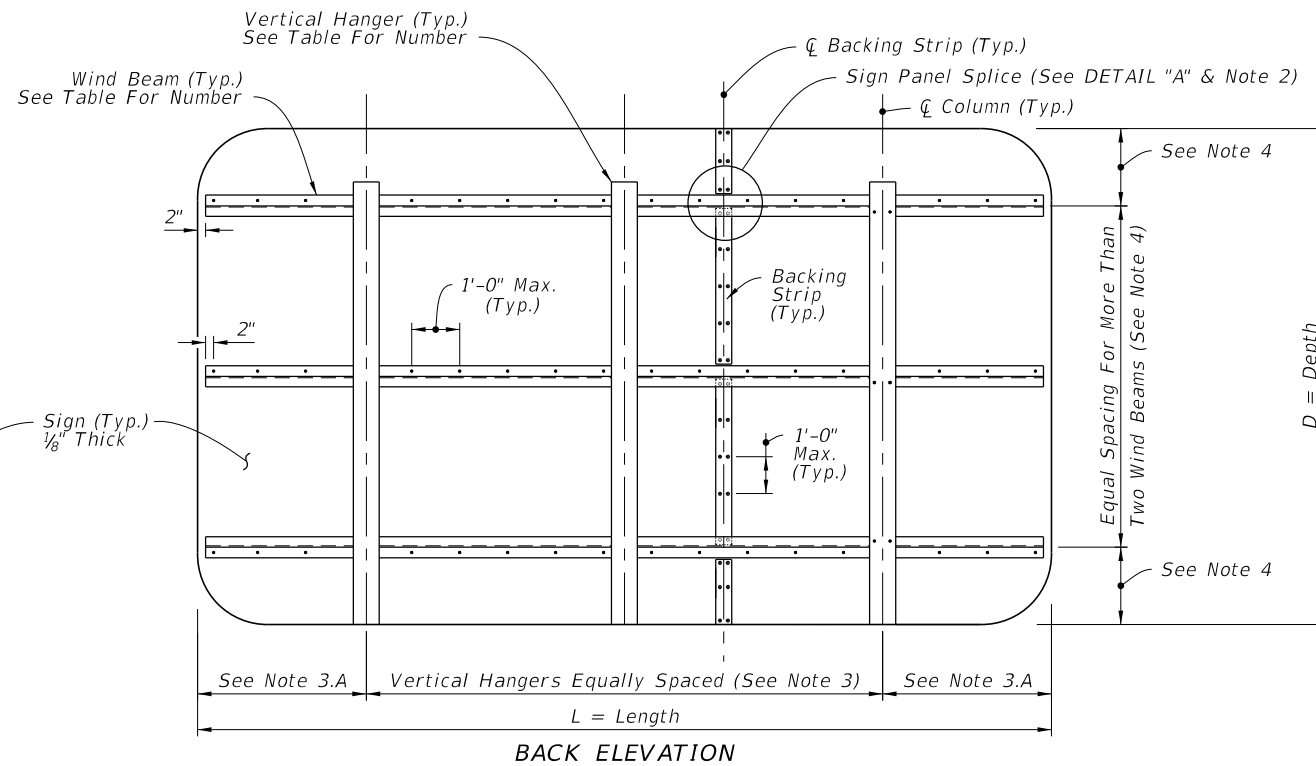
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Contact the Roadway Design Office for assistance in completing this form

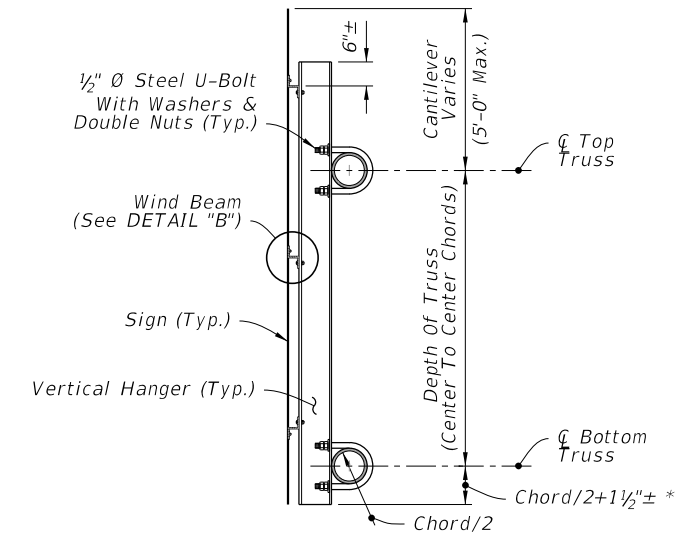
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FRONT ELEVATION

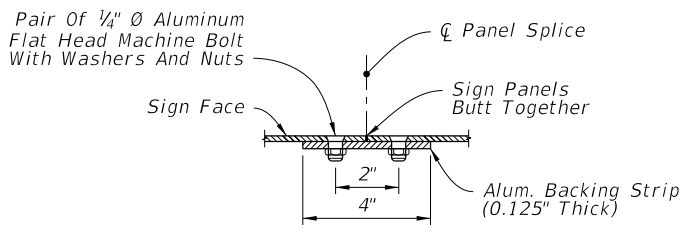


BACK ELEVATION

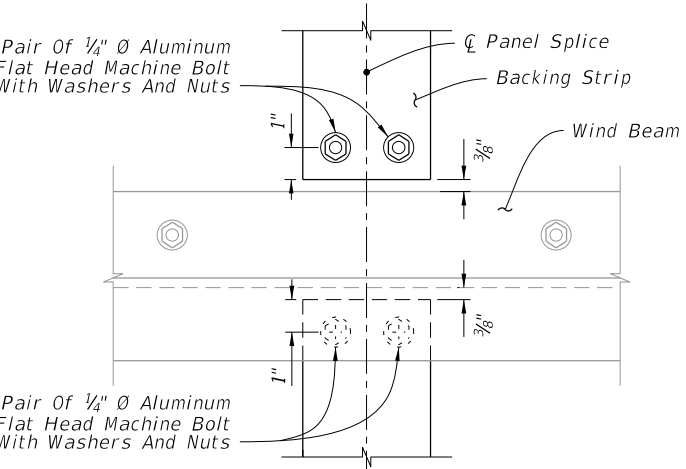


SIDE ELEVATION

TYPICAL SIGN FOR OVERHEAD TRUSS



PLAN VIEW



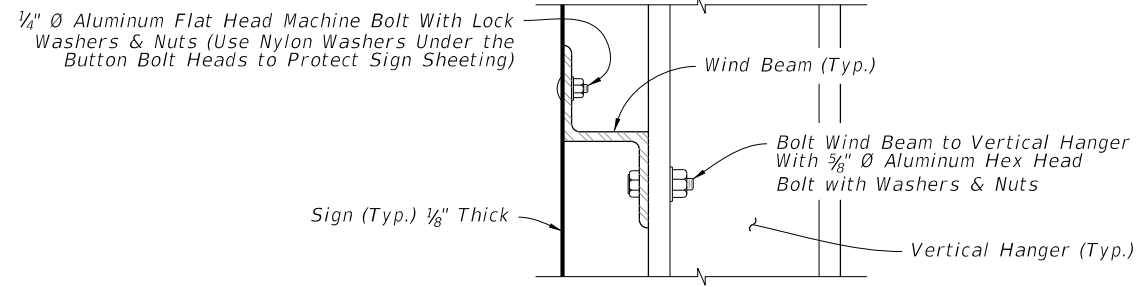
ELEVATION  
SIGN PANEL SPLICE

DETAIL "A"

WIND BEAM TABLE (Z 3 x 2 1/16 x 2.33)					
Number of Horizontal Wind Beams Based on Sign Depth (D)					
2 Beams	3 Beams	4 Beams	5 Beams	6 Beams	
D ≤ 5'	5' < D ≤ 9'	9' < D ≤ 12'	12' < D ≤ 15'	15' < D ≤ 18'	

HANGER TABLE (I 6 x 4.69 or Z 5 x 3 1/4 x 6.19)						
Number of Vertical Hanger Beams Based on Wind Speed and Sign Length (L)						
	2 Hangers	3 Hangers	4 Hangers	5 Hangers	6 Hangers	
130 mph	L ≤ 20'	20' < L ≤ 30'	30' < L ≤ 40'	40' < L ≤ 50'	--	
150 mph	L ≤ 18'	18' < L ≤ 27'	27' < L ≤ 35'	35' < L ≤ 45'	45' < L ≤ 50'	
170 mph	L ≤ 15'	15' < L ≤ 20'	20' < L ≤ 28'	28' < L ≤ 35'	35' < L ≤ 43'	

NOTE: For Monroe County designs, use 170 mph values but with Z 5 x 3-1/4 x 6.19 vertical hanger beams only.



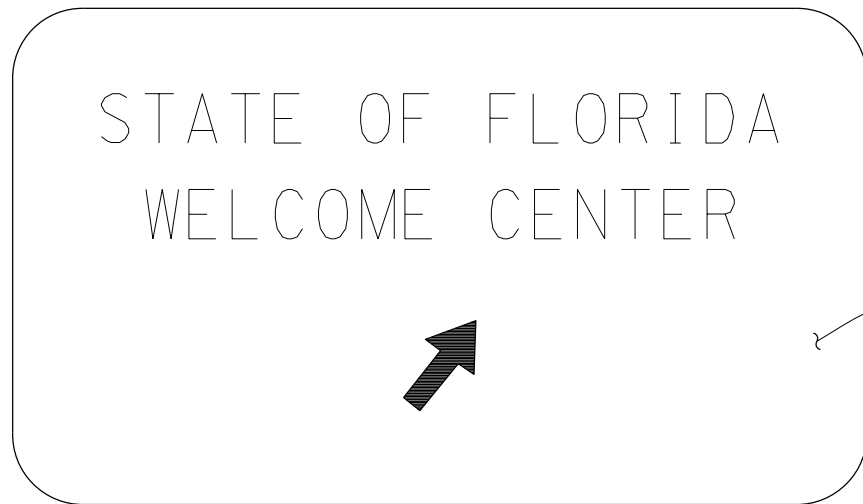
DETAIL "B"

GENERAL NOTES

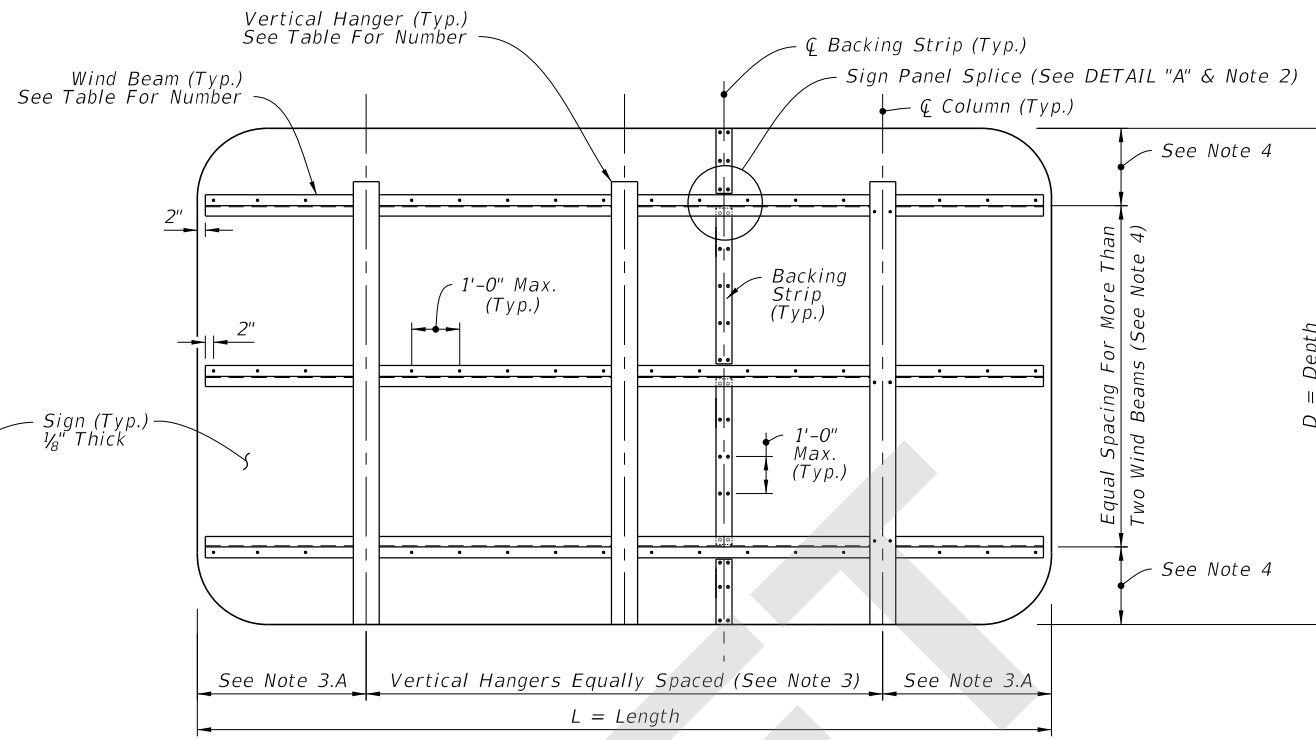
- Work this Index with Index 700-040 and 700-041.
- The number and location of the Panel Splices are determined by the Sign Face supplier.
- Spacing of Vertical Hangers:
  - Two Vertical Hanger = 21.0% L  
Three Vertical Hanger = 15.0% L  
Four Vertical Hanger = 11.0% L  
Five Vertical Hanger = 9.0% L  
Six Vertical Hanger = 7.0% L
  - Spacing of vertical hangers may be varied slightly as necessary to clear the truss struts and diagonals at panel points
- Spacing of Wind Beams:
  - Two Wind Beams = 21.0% D  
Three Wind Beams = 15.0% D  
Four Wind Beams = 11.0% D  
Five Wind Beams = 9.0% D  
Six Wind Beams = 7.0% D
- Shop Drawings:
  - Required for Sign Panels deeper than 10'-0" with a horizontal panel splice.
  - Splice must be located in between interior Zee Supports and only allowed on signs greater than 10'-0".
- Materials:
  - Aluminum:
    - Bars, and Extruded Shapes: ASTM B 221, Alloy 6061-T6 or Alloy 6351-T5
    - Structural Shapes: ASTM B308, Alloy 6061-T6
    - Flat Head and Hex Head Machine Bolts: ASTM F468, Alloy 2024-T4
    - Hex Nuts: ASTM F467, Alloy 6061-T6 or Alloy 6262-T9
    - Washers: ASTM B221, Alclad 2024-T4
  - Steel:
    - U-Bolts: ASTM A449 or ASTM A193 B7
    - Nuts: ASTM A563, 2 per leg
    - Washers: ASTM F436, (Flat Washers)
- Coatings:
  - Aluminum Bolts, Nuts and Washers: Anodic (0.0002 inches min) and chromate sealed.
  - Galvanized Steel Bolts, Nuts and Washers: ASTM F2329
- Wind Speed by county: see Index 715-010.

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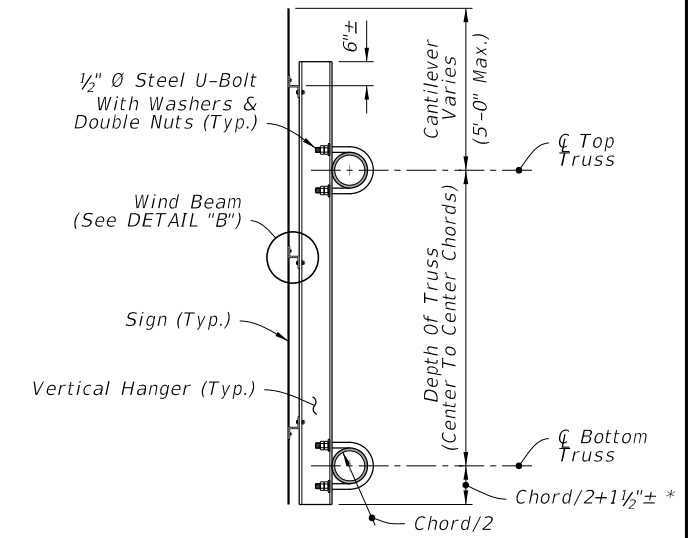
LAST REVISION	DESCRIPTION:
11/01/18	11/01/20



FRONT ELEVATION

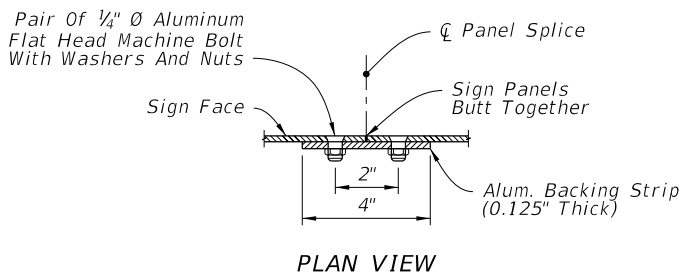


BACK ELEVATION

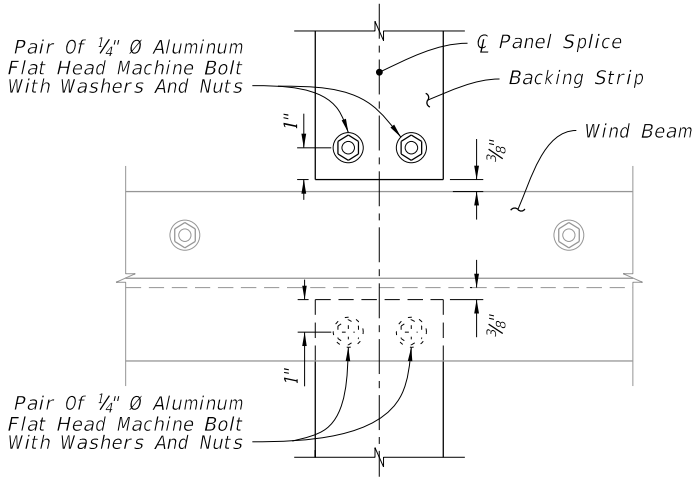


SIDE ELEVATION

TYPICAL SIGN FOR OVERHEAD TRUSS



PLAN VIEW



ELEVATION  
SIGN PANEL SPLICE

DETAIL "A"

**WIND BEAM TABLE (Z 3 x 2 1/16 x 2.33)**

Number of Horizontal Wind Beams Based on Sign Depth (D)

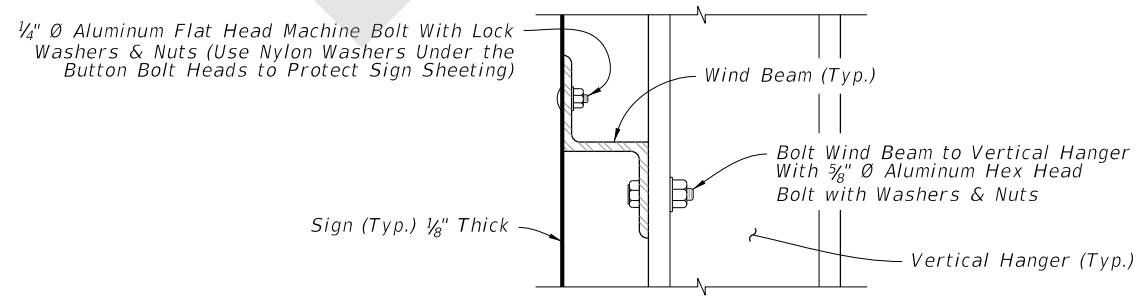
2 Beams	3 Beams	4 Beams	5 Beams	6 Beams
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NOTE: For Monroe County designs, use 170 mph values but with Z 5 x 3-1/4 x 6.19 vertical hanger beams only.



DETAIL "B"

GENERAL NOTES

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  - A. Two Vertical Hanger = 21.0% L
  - Three Vertical Hanger = 15.0% L
  - Four Vertical Hanger = 11.0% L
  - Five Vertical Hanger = 9.0% L
  - Six Vertical Hanger = 7.0% L
  - B. Spacing of vertical hangers may be varied slightly as necessary to clear the truss struts and diagonals at panel points
- Spacing of Wind Beams:
  - Two Wind Beams = 21.0% D
  - Three Wind Beams = 15.0% D
  - Four Wind Beams = 11.0% D
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    - e. Washers: ASTM B221, Alclad 2024-T4
  - B. Steel:
    - a. U-Bolts: ASTM A449 or ASTM A193 B7
    - b. Nuts: ASTM A563, 2 per leg
    - c. Washers: ASTM F436, (Flat Washers)
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  - B. Galvanized Steel Bolts, Nuts and Washers: ASTM F2329
- Wind Speed by county: see Index 715-010.

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