

**Steel Sheet Piling Plan View**  
(Cover Plates Not Shown For Clarity)

### Sheet Pile Backwall and Wing Wall Quantities

Number of Sheet Piles	Per Wing Backwall	*N = W / 1.5'	Total = 2 x N + 26
		26	
Sheet Pile Area		(D1 + D2 + L) x W + 26 x 1.5' x (L - 2')	
Number of Tie Rods		*T = W / 5 + 1	

#### Notes:

All units are in feet.

Wing length "W" is to be calculated by the Engineer based on height from grade to top of berm "H" and wing slope.

\* Number of wing wall sheet piles and tie rods shall be calculated as shown and rounded up to a whole number.

See Sheet J24S-24-25 for "D1" + "D2" values required (minimum embedment depths).

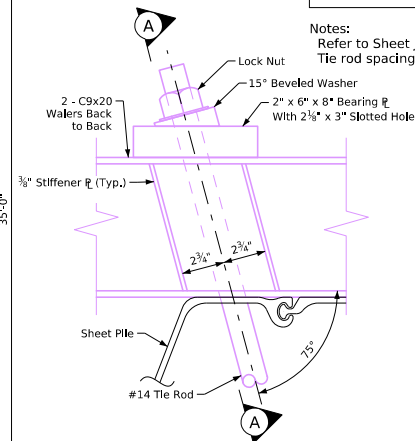
### Table of Required Tie Rod Spacing

Abutment Height "H"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"
Maximum Tie Rod Spacing "S"	9'-2"	8'-4"	7'-0"	5'-9"	4'-9"

#### Notes:

Refer to Sheet J24S-24-25 for sheet pile height ("H") details.

Tie rod spacing ("S") shall be selected to avoid conflicts with the guardrail posts.



**Detail A**

#### Notes:

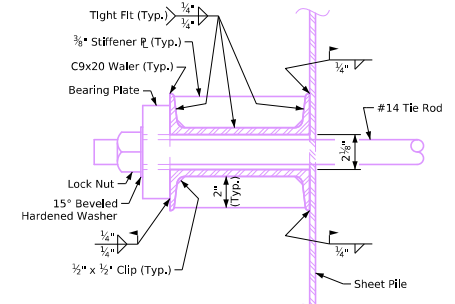
- Top of sheet piling at wings to match top of abutment elevation.

For sheet pile cover plate details, see Sheets J24S-24-25 and J24S-25-25.

- ▲ The guardrail post #15 (open concrete rails only) may require adjustment to ensure adequate clearance from the backwall sheeting and backwall cover plate.

See Sheet J24S-25-25 and roadway sheets for post locations.

The Bridge Contractor shall verify clearances for guardrail post installation, and make any necessary adjustments. Post #15 blockout lengths may be field adjusted to facilitate guardrail installation.



**Section A-A**

Latest Revision Date

Approved By Bridge Engineer

**IOWA DOT**

Standard Design - 24'-0" Roadway, Single Span Bridge

**Single Span Concrete Slab Bridges**

July, 2025

Steel Sheet Piling Details  
15° Skew

**J24S-23-25**