

Addendum #1 to
SDI Roof Deck Construction Handbook (November 2000 edition)
May 2010

Since the publication of this handbook, several changes have been made to design standards applicable to steel roof deck. While the basic design concepts contained within the handbook are still applicable, this Addendum is being provided to alert designers to changes to the underlying criteria. An updated edition of the handbook is currently being prepared, and these changes will be fully implemented within the updated handbook.

Page 4. The *SDI Diaphragm Design Manual* has been updated to the Third Edition.

Page 5. Within Figure 3, the note pertaining to a 1/3rd stress increase is no longer permitted by most building codes. The current version of the AISI Standard is the 2007 Edition. The table of weld tension strengths is corrected as follows, with nominal loads in pounds (N). Resistance and Safety Factors remain unchanged.

	Gage	Inches				Millimeters			
		0.5	0.625	0.75	1	12.7	15.875	19.05	25.4
1	22	867	1098	1328	1789	3859	4884	5909	7959
	20	1039	1318	1598	2157	4620	5864	7108	9597
	18	1341	1711	2081	2822	5964	7612	9259	12553
	16	1645	2112	2580	3514	7318	9397	11475	15631
2	22	1626	2087	2548	3470	7234	9284	11334	15435
	20	1917	2476	3036	3750	8528	11016	13504	16675
	18	2035	3141	3750	3750	10679	13974	16675	16675
	16	1372	3139	3750	3750	12648	16675	16675	16675
3	22	607	769	930	1253	2701	3419	4136	5572
	20	727	923	1119	1510	3234	4105	4976	6718
	18	939	1198	1457	1975	4175	5328	6481	8787
	16	1152	1479	1806	2460	5123	6578	8032	10942

Deck Material Properties: $F_y = 40$ ksi (279 MPa); $F_u = 50$ ksi (345 MPa) for ASTM A653 Grade 40 HLSAS. This steel grade yields lower weld strengths than Grade 33 SS.
Welding Electrode: E60XX (E410XX)

Gage	In.	mm
22	0.0295	0.75
20	0.0358	0.91
18	0.0474	1.20
16	0.0598	1.52

Page 6. Within Figure 4, the note pertaining to a 1/3rd stress increase is no longer permitted by most building codes.

Page 7. The *SDI Diaphragm Design Manual* has been updated to the Third Edition.

Page 16. Within Example 1, the 1/3rd stress increase is no longer permitted by most building codes.

Page 18. Within Example 2, the 1/3rd stress increase is no longer permitted by most building codes. Therefore, the allowable screw pullout is 78 pounds per screw rather than 104 pounds per screw. The transverse screw spacing is 6.5" < 18".

Page 20. Within Example 2, the 1/3rd stress increase is no longer permitted by most building codes. Therefore, use weld strengths that have not been increased.