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APPROVAL REPORT

Project No: PR469609

Class: 4451

Product Name: 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, 2.0DF-30 AC, 3.5DS-24, 3.5DS-24 AC, 3.5DF-24 and 3.5DF-24 AC

Name of Listing Company: Nucor Vulcraft Group

Address of Listing Company: 1601 W Omaha Ave
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Customer ID: 1000000591-1

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17 December 2024

Date of Approval

1 INTRODUCTION

1.1 Nucor Vulcraft Group requested Approval of their 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, 2.0DF-30 AC, 3.5DS-24, 3.5DS-24 AC, 3.5DF-24 and 3.5DF-24 AC roof decks to determine if they meet the Approval requirements of the standard listed in Section 1.3.

1.2 This report may be freely reproduced only in its entirety and without modification.

1.3 Standard

Title	Number	Issue Date
Examination Standard for Profiled Steel Panels for Use as Decking in Class 1 Insulated Roof Construction	4451	05/2024

1.4 Listing

The products and assemblies will be listed in RoofNav, an on-line resource of FM Approvals.

2 DESCRIPTION

2.1 The 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, 2.0DF-30 AC, 3.5DS-24, 3.5DS-24 AC, 3.5DF-24 and 3.5DF-24 AC are steel roof decks which feature a dovetail profile. Each deck is available in the following thicknesses: 20 ga. (0.0359 in. [0.91 mm]), 19 ga. (0.0418 in. [1.06 mm]), 18 ga. (0.0478 in. [1.21 mm]), 17 ga. (0.0538 in. [1.37 mm]), and 16 ga. (0.0598 in. [1.52 mm]). The 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, and 2.0DF-30 AC can also be fabricated in the following thicknesses: 22 ga. (0.0299 in. [0.76 mm]) and 21 ga. (0.0329 in. [0.84 mm]). The steel decks are rolled from coil meeting the requirements of ASTM A653 Structural Steel (SS) Grade 50 having a minimum yield strength of 50 ksi (345 MPa) and a minimum tensile strength of 65 ksi (448 MPa). The minimum delivered uncoated steel thickness of the deck shall never be less than 95% of the design thickness.

2.2 The 2.0DS-30 and 2.0DF-30 steel roof decks are 2 in. (50.8 mm) deep with a 6 in. (152.4 mm) module spacing. The cover width of the deck is 30 in. (762 mm) and is supplied in various lengths. The 2.0DS-30 features two stiffeners at the bottom flange. The 2.0DF-30 does not feature stiffeners along the bottom flange.

2.3 The 2.0DS-30 AC and 2.0DF-30 AC are acoustical steel roof decks with the same profile, thickness and strength characteristics as 2.0DS-30 and 2.0DF-30 respectively. The bottom flanges of the acoustical decks have a series of perforation bands that utilize a 60 degree pattern of 5/32 in. (4 mm) diameter holes spaced 3/8 in. (9.5 mm) on center.

2.4 The 3.5DS-24 and 3.5DF-24 steel roof decks are 3.5 in. (88.90 mm) deep with a 8 in. (203.2 mm) module spacing. The cover width of the deck is 24 in. (609.6 mm) and is supplied in various lengths. The 3.5DS-24 features two stiffeners at the bottom flange. The 3.5DF-24 does not feature stiffeners along the bottom flange.

2.5 The 3.5DS-24 AC and 3.5DF-24 AC are acoustical steel roof decks with the same profile, thickness and strength characteristics as 3.5DS-24 and 3.5DF-24 respectively. The bottom flanges of the acoustical decks have a series of perforation bands that utilize a 60 degree pattern of 5/32 in. (4 mm) diameter holes spaced 3/8 in. (9.5 mm) on center.

2.6 All other products are as described in RoofNav. Formulations, drawings and specifications are on file at FM Approvals.

3 EXAMINATIONS AND TESTS

3.1 All components, except those in Section 2, were produced under the FM Approvals Surveillance Audit program as indicated by FM Approvals labels. All samples were considered to be representative of standard production and were examined and tested as indicated below. Components incorporated into test samples were selected by FM Approvals personnel. Test samples were prepared by, or under the supervision of, FM Approvals personnel. All data is on file at FM Approvals along with other documents and correspondence applicable to this program.

3.2 Several performance requirements and tests required by the Standard have been waived due to previous successful testing. See Table 1 below for details.

Table 1

FM Standard 4451 Performance Requirement	FM Standard 4451 Section	Submissions Required / Waivers
Allowable Live Load Deflection	4.1	Calculations Included.
Combustibility from Below the Roof Deck	4.2	Waived per 3051337.
Combination Pull Out / Pull Over Resistance of Fasteners (Testing)	4.3.1.1	Waived ¹
Pull Over Resistance of Fasteners (Calculation)	4.3.1.2	Waived ¹
Combination Pull Out / Pull Over Resistance of Arc Spot Welds	4.3.1.3	Calculations Included.
Side Lap Fastener and Side Lap Crimping and Interlocking Resistance	4.3.1.4	Waived ¹
Fastener Pull Out Resistance for above Deck Components	4.3.1.5	Waived, deck does not contain a stiffening rib on the top flange.
Steel Deck Bending Stresses Under Service Wind Loads	4.3.1.6	Calculations Included.
Wind Uplift Ratings Greater Than Class 1-90 and All Assemblies that Utilize Steel Deck with a Design Thickness less than 0.0295 in. (0.75 mm)	4.3.2	Not Requested.
Foot Traffic Resistance of Insulation	4.4	Waived per 3051337.
Bearing Capacity of Insulation	4.5	Waived per 3051337.
Corrosion Resistance Test (Optional Test)	4.6	Not Requested.
Drivability Evaluation of Fasteners	4.7	Waived ¹

¹ All fasteners are Approved for the OEM, no new fasteners included.

4 MARKING

4.1 Marking on the product or, if not possible due to size, on its packaging or label accompanying the product, shall include the following information:

- name and address of the manufacturer or marking traceable to the manufacturer;
- date of manufacture or code traceable to date of manufacture or lot identification;
- model number, model type and/or product trade name as appropriate.

When hazard warnings are needed, the markings shall be universally recognizable.

4.2 The product trade name, model number or model type identification shall correspond with RoofNav, the manufacturer's catalog designation and shall uniquely identify the product as FM Approved. The manufacturer shall not place this trade name or model number identification on any other product unless covered by a separate agreement with FM Approvals.

4.3 The Approval Mark shall be displayed visibly and permanently on the product and/or packaging as appropriate. The manufacturer shall not use this Mark on any other product unless such product is covered by a separate FM Approvals Approval Report.

4.4 Markings denoting Approval by FM Approvals shall be applied by the manufacturer only within and on the premises of manufacturing locations that are under the FM Approvals Surveillance Audit program.

4.5 The manufacturer agrees that use of the FM Approvals name or Approval Mark is subject to the conditions and limitations of the Approval by FM Approvals. Such conditions and limitations must be included in all references to Approval by FM Approvals.

5 REMARKS

The roof cover must be installed using a roof perimeter flashing system Approved by FM Approvals. See RoofNav.

6 SURVEILLANCE AUDIT

The manufacturing facility at the following location shall be visited on a routine basis. The facility processes and quality control procedures in place have been determined to be satisfactory to manufacture products identical to that tested and Approved. An FM Approved Products/Specification Tested Revision Request Form shall be submitted to FM Approvals for requesting to manufacture products at any additional or alternate manufacturing facilities which are not listed below.

Audit Location(s)

Nucor Vulcraft Group,
7205 Gault Avenue North Ft. Payne, AL 35968

7 MANUFACTURER’S RESPONSIBILITIES

- 7.1** The manufacturer shall notify FM Approvals of any planned change in the Approved products, prior to general sale or distribution, using the FM Approved Products/Specification Tested Revision Request Form. No changes of any nature shall be made unless notice of the proposed change has been given and written authorization obtained from FM Approvals.
- 7.2** To ensure compliance with his procedures in the field, the manufacturer shall supply to the installer such necessary instruction or assistance required to produce the desired performance achieved in the tests.
- 7.3** In accordance with the Master Agreement, the manufacturer shall make full and immediate disclosure to FM Approvals of all information concerning any defect in, or potential hazard of, the product or service manufactured or provided by the Customer which is Approved by, or being examined by, FM Approvals. The manufacturer shall make all necessary arrangements for the investigation of complaints / anomalies applicable to this approval and shall keep records of all complaints / anomalies including actions taken.

8 DOCUMENTATION

The following document describes the 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, 2.0DF-30 AC, 3.5DS-24, 3.5DS-24 AC, 3.5DF-24 and 3.5DF-24 AC and is on file at FM Approvals.

Document Title	Issue Date
Surveillance Audit Manual	December 2024

9 CONCLUSIONS

- 9.1** Evaluation from this and prior projects indicates that the 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, 2.0DF-30 AC, 3.5DS-24, 3.5DS-24 AC, 3.5DF-24 and 3.5DF-24 AC steel roof decks meet the Approval requirements of FM Approval Standard 4451 for use as components in Class 1-60, Class 1-75, and Class 1-90 wind uplift rated insulated steel deck roof constructions as described below and when installed as described in RoofNav, an on-line resource of FM Approvals.
- 9.2** The Nucor Vulcraft Group steel roof decks included in this report are secured to building structural supports with FM Approved steel deck fasteners spaced at the maximum center to center span as determined by the lesser of the values shown in the tables below, the maximum span for the selected proprietary fastener used to secure the deck or the maximum span shown in a specified RoofNav assembly. The side laps of the decks may be secured using an FM Approved side lap fastener at the maximum spacing listed for the selected side lap fastener. An FM Approved fully or partially adhered roof covering or mechanically attached roof covering is applied per proprietary listings.
- 9.2.1** The following tables are to be used for steel deck span limits when FM Approved steel deck structural fasteners are used:

9.2.2 2.0DS-30

Nucor Vulcraft Group 2.0DS-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	109	2769	109	2769	109	2769
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	147	3734	147	3734	147	3734
16 (0.0598 [1.52])	155	3937	155	3937	155	3937
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648

9.2.3 2.0DS-30 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51 mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Nucor Vulcraft Group 2.0DS-30 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	106	2692	106	2692	106	2692
21 (0.0329 [0.84])	112	2845	112	2845	112	2845
20 (0.0359 [0.91])	117	2972	117	2972	117	2972
19 (0.0418 [1.06])	126	3200	126	3200	126	3200
18 (0.0478 [1.21])	135	3429	135	3429	135	3429
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	151	3835	151	3835	151	3835
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521

9.2.4 2.0DF-30

Nucor Vulcraft Group 2.0DF-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	148	3759	148	3759	148	3759
16 (0.0598 [1.52])	156	3962	156	3962	156	3962
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674

9.2.5 2.0DF-30 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51 mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Nucor Vulcraft Group 2.0DF-30 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	107	2718	107	2718	107	2718
21 (0.0329 [0.84])	112	2845	112	2845	112	2845
20 (0.0359 [0.91])	117	2972	117	2972	117	2972
19 (0.0418 [1.06])	127	3226	127	3226	127	3226
18 (0.0478 [1.21])	136	3454	136	3454	136	3454
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	152	3861	152	3861	152	3861
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547

9.2.6 3.5DS-24

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	273	6934	248	6299
17 (0.0538 [1.37])	333	8458	296	7518	268	6807
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	276	7010	252	6401	229	5817
19 (0.0418 [1.06])	298	7569	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	330	8382	300	7620
16 (0.0598 [1.52])	357	9068	354	8992	322	8179

9.2.7 3.5DS-24 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	348	8839	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	269	6833	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	348	8839	348	8839	322	8179

9.2.8 3.5DF-24

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	333	8458	296	7518	269	6833
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	277	7036	252	6401	229	5817
19 (0.0418 [1.06])	299	7595	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	331	8407	301	7645
16 (0.0598 [1.52])	358	9093	355	9017	322	8179

9.2.9 3.5DF-24 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	229	5817	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	296	7518	296	7518	296	7518
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	349	8865	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	270	6858	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	349	8865	349	8865	322	8179

9.3 In lieu of fasteners, the decks can be secured to the building structural supports with puddle welds of either 0.625 in. (15.87 mm), 0.750 in. (19.05 mm), or 0.875 in. (22.23 mm) diameter. Puddle welds using a minimum weld electrode of 60 ksi (414 MPa) shall be used. The 2.0DS-30, 2.0DS-30 AC, 2.0DF-30, and 2.0DF-30 AC utilize a 30/10 or 30/5 weld pattern, with 5 or 10 welds per 30 in (762 mm) wide panels that are spaced an average of 6 in (152.4 mm) on center. The 3.5DS-24, 3.5DS-24 AC, 3.5DF-24 and 3.5DF-24 AC utilize a 24/6 or 24/3 weld pattern, with 6 or 3 welds per 24 in (609.6 mm) wide panels that are spaced an average of 8 in. (203.2 mm) on center. The steel deck side laps are secured using fasteners FM Approved for securing steel deck side laps. Refer to RoofNav product listings for fastener details. The maximum allowable span is the lesser of the deck span shown in the tables below or the maximum span shown in the specified RoofNav assembly. An FM Approved fully or partially adhered roof covering or mechanically attached roof covering with fastener row spacing less

than or equal to one-half of the deck span is applied per proprietary listings. Additional requirements, if applicable, are as stated in the following sections. Refer to the use of steel roof decks and fasteners throughout listings for details and limitations. Meets maximum Class 1-90 or per proprietary listings.

9.3.1 2.0DS-30

Table A (2.0DS-30)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	30/5, 30/10
50000	345	0.625	15.87	6	152	60000	414	

Nucor Vulcraft Group 2.0DS-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	109	2769	109	2769	109	2769
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	147	3734	147	3734	147	3734
16 (0.0598 [1.52])	155	3937	155	3937	155	3937
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648

Table B (2.0DS-30)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.750	19.05	6	152	60000	414	

Nucor Vulcraft Group 2.0DS-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	109	2769	109	2769	109	2769
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	147	3734	147	3734	147	3734
16 (0.0598 [1.52])	155	3937	155	3937	155	3937
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648

Table C (2.0DS-30)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.875	22.23	6	152	60000	414	

Nucor Vulcraft Group 2.0DS-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	109	2769	109	2769	109	2769
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	147	3734	147	3734	147	3734
16 (0.0598 [1.52])	155	3937	155	3937	155	3937
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	135	3429	135	3429	135	3429
20 (0.0359 [0.91])	141	3581	141	3581	141	3581
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	183	4648	183	4648	183	4648

9.3.2 2.0DS-30 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Table A (2.0DS-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	30/5, 30/10
50000	345	0.625	15.87	6	152	60000	414	

Nucor Vulcraft Group 2.0DS-30 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	106	2692	106	2692	106	2692
21 (0.0329 [0.84])	112	2845	112	2845	112	2845
20 (0.0359 [0.91])	117	2972	117	2972	117	2972
19 (0.0418 [1.06])	126	3200	126	3200	126	3200
18 (0.0478 [1.21])	135	3429	135	3429	135	3429
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	151	3835	151	3835	151	3835
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521

Table B (2.0DS-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.750	19.05	6	152	60000	414	

Nucor Vulcraft Group 2.0DS-30 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	106	2692	106	2692	106	2692
21 (0.0329 [0.84])	112	2845	112	2845	112	2845
20 (0.0359 [0.91])	117	2972	117	2972	117	2972
19 (0.0418 [1.06])	126	3200	126	3200	126	3200
18 (0.0478 [1.21])	135	3429	135	3429	135	3429
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	151	3835	151	3835	151	3835
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521

Table C (2.0DS-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.875	22.23	6	152	60000	414	

Nucor Vulcraft Group 2.0DS-30 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	106	2692	106	2692	106	2692
21 (0.0329 [0.84])	112	2845	112	2845	112	2845
20 (0.0359 [0.91])	117	2972	117	2972	117	2972
19 (0.0418 [1.06])	126	3200	126	3200	126	3200
18 (0.0478 [1.21])	135	3429	135	3429	135	3429
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	151	3835	151	3835	151	3835
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	159	4039	159	4039	159	4039
17 (0.0538 [1.37])	169	4293	169	4293	169	4293
16 (0.0598 [1.52])	178	4521	178	4521	178	4521

9.3.3 2.0DF-30

Table A (2.0DF-30)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	30/5, 30/10
50000	345	0.625	15.87	6	152	60000	414	

Nucor Vulcraft Group 2.0DF-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	148	3759	148	3759	148	3759
16 (0.0598 [1.52])	156	3962	156	3962	156	3962
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674

Table B (2.0DF-30)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.750	19.05	6	152	60000	414	

Nucor Vulcraft Group 2.0DF-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	148	3759	148	3759	148	3759
16 (0.0598 [1.52])	156	3962	156	3962	156	3962
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674

Table C (2.0DF-30)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.875	22.23	6	152	60000	414	

Nucor Vulcraft Group 2.0DF-30 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	139	3531	139	3531	139	3531
17 (0.0538 [1.37])	148	3759	148	3759	148	3759
16 (0.0598 [1.52])	156	3962	156	3962	156	3962
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	164	4166	164	4166	164	4166
17 (0.0538 [1.37])	174	4420	174	4420	174	4420
16 (0.0598 [1.52])	184	4674	184	4674	184	4674

9.3.4 2.0DF-30 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Table A (2.0DF-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	30/5
50000	345	0.625	15.87	6	152	60000	414	

Nucor Vulcraft Group 2.0DF-30 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	107	2718	107	2718	107	2718
21 (0.0329 [0.84])	112	2845	112	2845	112	2845
20 (0.0359 [0.91])	117	2972	117	2972	117	2972
19 (0.0418 [1.06])	127	3226	127	3226	127	3226
18 (0.0478 [1.21])	136	3454	136	3454	136	3454
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	152	3861	152	3861	152	3861
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	126	3200	126	3200	126	3200
21 (0.0329 [0.84])	132	3353	132	3353	132	3353
20 (0.0359 [0.91])	138	3505	138	3505	138	3505
19 (0.0418 [1.06])	149	3785	149	3785	149	3785
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547

Table B (2.0DF-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	30/10
50000	345	0.625	15.87	6	152	60000	414	

Nucor Vulcraft 2.0DF-30 AC steel deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	136	3454	136	3454	136	3454
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	152	3861	152	3861	152	3861
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	in.	mm	in.	mm	in.	mm
MSG (in. [mm])						
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547

Table C (2.0DF-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.750	19.05	6	152	60000	414	

Nucor Vulcraft 2.0DF-30 AC steel deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	136	3454	136	3454	136	3454
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	152	3861	152	3861	152	3861
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547

Table D (2.0DF-30 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.875	22.22	6	152	60000	414	

Nucor Vulcraft 2.0DF-30 AC steel deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	110	2794	110	2794	110	2794
21 (0.0329 [0.84])	115	2921	115	2921	115	2921
20 (0.0359 [0.91])	120	3048	120	3048	120	3048
19 (0.0418 [1.06])	130	3302	130	3302	130	3302
18 (0.0478 [1.21])	136	3454	136	3454	136	3454
17 (0.0538 [1.37])	144	3658	144	3658	144	3658
16 (0.0598 [1.52])	152	3861	152	3861	152	3861
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
22 (0.0299 [0.76])	129	3277	129	3277	129	3277
21 (0.0329 [0.84])	136	3454	136	3454	136	3454
20 (0.0359 [0.91])	142	3607	142	3607	142	3607
19 (0.0418 [1.06])	153	3886	153	3886	153	3886
18 (0.0478 [1.21])	160	4064	160	4064	160	4064
17 (0.0538 [1.37])	170	4318	170	4318	170	4318
16 (0.0598 [1.52])	179	4547	179	4547	179	4547

9.3.5 3.5DS-24

Table A (3.5DS-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	191	4851	150	3810	124	3150
19 (0.0418 [1.06])	220	5588	173	4394	143	3632
18 (0.0478 [1.21])	249	6325	196	4978	162	4115
17 (0.0538 [1.37])	277	7036	219	5563	180	4572
16 (0.0598 [1.52])	305	7747	240	6096	198	5029
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	238	6045	188	4775	155	3937
19 (0.0418 [1.06])	275	6985	217	5512	179	4547
18 (0.0478 [1.21])	311	7899	245	6223	202	5131
17 (0.0538 [1.37])	339	8611	273	6934	226	5740
16 (0.0598 [1.52])	357	9068	301	7645	248	6299

Table B (3.5DS-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	273	6934	248	6299
17 (0.0538 [1.37])	333	8458	296	7518	268	6807
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	276	7010	252	6401	229	5817
19 (0.0418 [1.06])	298	7569	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	330	8382	300	7620
16 (0.0598 [1.52])	357	9068	354	8992	322	8179

Table C (3.5DS-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	231	5867	182	4623	150	3810
19 (0.0418 [1.06])	267	6782	211	5359	174	4420
18 (0.0478 [1.21])	303	7696	239	6071	197	5004
17 (0.0538 [1.37])	333	8458	267	6782	220	5588
16 (0.0598 [1.52])	357	9068	294	7468	242	6147
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	276	7010	228	5791	188	4775
19 (0.0418 [1.06])	298	7569	263	6680	217	5512
18 (0.0478 [1.21])	319	8103	299	7595	246	6248
17 (0.0538 [1.37])	339	8611	330	8382	275	6985
16 (0.0598 [1.52])	357	9068	354	8992	303	7696

Table D (3.5DS-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	273	6934	248	6299
17 (0.0538 [1.37])	333	8458	296	7518	268	6807
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	276	7010	252	6401	229	5817
19 (0.0418 [1.06])	298	7569	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	330	8382	300	7620
16 (0.0598 [1.52])	357	9068	354	8992	322	8179

Table E (3.5DS-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	214	5436	177	4496
19 (0.0418 [1.06])	283	7188	248	6299	204	5182
18 (0.0478 [1.21])	308	7823	273	6934	232	5893
17 (0.0538 [1.37])	333	8458	296	7518	260	6604
16 (0.0598 [1.52])	357	9068	317	8052	271	6883
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	276	7010	252	6401	221	5613
19 (0.0418 [1.06])	298	7569	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	330	8382	300	7620
16 (0.0598 [1.52])	357	9068	354	8992	322	8179

Table F (3.5DS-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	234	5944	232	5893	211	5359
19 (0.0418 [1.06])	253	6426	253	6426	233	5918
18 (0.0478 [1.21])	271	6883	271	6883	255	6477
17 (0.0538 [1.37])	287	7290	287	7290	276	7010
16 (0.0598 [1.52])	303	7696	303	7696	297	7544
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	273	6934	248	6299
17 (0.0538 [1.37])	333	8458	296	7518	268	6807
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	276	7010	252	6401	229	5817
19 (0.0418 [1.06])	298	7569	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	330	8382	300	7620
16 (0.0598 [1.52])	357	9068	354	8992	322	8179

9.3.6 3.5DS-24 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Table A (3.5DS-24AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	191	4851	150	3810	124	3150
19 (0.0418 [1.06])	220	5588	173	4394	143	3632
18 (0.0478 [1.21])	249	6325	196	4978	162	4115
17 (0.0538 [1.37])	277	7036	219	5563	180	4572
16 (0.0598 [1.52])	305	7747	240	6096	198	5029
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	238	6045	188	4775	155	3937
19 (0.0418 [1.06])	275	6985	217	5512	179	4547
18 (0.0478 [1.21])	311	7899	245	6223	202	5131
17 (0.0538 [1.37])	330	8382	273	6934	226	5740
16 (0.0598 [1.52])	348	8839	301	7645	248	6299

Table B (3.5DS-24AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	348	8839	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	269	6833	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	348	8839	348	8839	322	8179

Table C (3.5DS-24AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	231	5867	182	4623	150	3810
19 (0.0418 [1.06])	267	6782	211	5359	174	4420
18 (0.0478 [1.21])	303	7696	239	6071	197	5004
17 (0.0538 [1.37])	330	8382	267	6782	220	5588
16 (0.0598 [1.52])	348	8839	294	7468	242	6147
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	269	6833	228	5791	188	4775
19 (0.0418 [1.06])	291	7391	263	6680	217	5512
18 (0.0478 [1.21])	311	7899	299	7595	246	6248
17 (0.0538 [1.37])	330	8382	330	8382	275	6985
16 (0.0598 [1.52])	348	8839	348	8839	303	7696

Table D (3.5DS-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	348	8839	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	269	6833	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	348	8839	348	8839	322	8179

Table E (3.5DS-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	214	5436	177	4496
19 (0.0418 [1.06])	283	7188	248	6299	204	5182
18 (0.0478 [1.21])	308	7823	274	6960	232	5893
17 (0.0538 [1.37])	330	8382	296	7518	260	6604
16 (0.0598 [1.52])	348	8839	317	8052	271	6883
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	269	6833	252	6401	221	5613
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	348	8839	348	8839	322	8179

Table F (3.5DS-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DS-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	228	5791	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	295	7493	295	7493	295	7493
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	348	8839	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	269	6833	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	348	8839	348	8839	322	8179

9.3.7 3.5DF-24

Table A (3.5DF-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	191	4851	150	3810	124	3150
19 (0.0418 [1.06])	220	5588	173	4394	143	3632
18 (0.0478 [1.21])	249	6325	196	4978	162	4115
17 (0.0538 [1.37])	277	7036	219	5563	180	4572
16 (0.0598 [1.52])	305	7747	240	6096	198	5029
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	238	6045	188	4775	155	3937
19 (0.0418 [1.06])	275	6985	217	5512	179	4547
18 (0.0478 [1.21])	311	7899	245	6223	202	5131
17 (0.0538 [1.37])	339	8611	273	6934	226	5740
16 (0.0598 [1.52])	358	9093	301	7645	248	6299

Table B (3.5DF-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	333	8458	296	7518	269	6833
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	277	7036	252	6401	229	5817
19 (0.0418 [1.06])	299	7595	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	331	8407	301	7645
16 (0.0598 [1.52])	358	9093	355	9017	322	8179

Table C (3.5DF-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	231	5867	182	4623	150	3810
19 (0.0418 [1.06])	267	6782	211	5359	174	4420
18 (0.0478 [1.21])	303	7696	239	6071	197	5004
17 (0.0538 [1.37])	333	8458	267	6782	220	5588
16 (0.0598 [1.52])	357	9068	294	7468	242	6147
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	277	7036	228	5791	188	4775
19 (0.0418 [1.06])	299	7595	263	6680	217	5512
18 (0.0478 [1.21])	319	8103	299	7595	246	6248
17 (0.0538 [1.37])	339	8611	331	8407	275	6985
16 (0.0598 [1.52])	358	9093	355	9017	303	7696

Table D (3.5DF-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	333	8458	296	7518	269	6833
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	277	7036	252	6401	229	5817
19 (0.0418 [1.06])	299	7595	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	331	8407	301	7645
16 (0.0598 [1.52])	358	9093	355	9017	322	8179

Table E (3.5DF-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	214	5436	177	4496
19 (0.0418 [1.06])	283	7188	248	6299	204	5182
18 (0.0478 [1.21])	308	7823	274	6960	232	5893
17 (0.0538 [1.37])	333	8458	296	7518	260	6604
16 (0.0598 [1.52])	357	9068	317	8052	271	6883
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	277	7036	252	6401	221	5613
19 (0.0418 [1.06])	299	7595	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	331	8407	301	7645
16 (0.0598 [1.52])	358	9093	355	9017	322	8179

Table F (3.5DF-24)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	235	5969	211	5359	192	4877
19 (0.0418 [1.06])	253	6426	235	5969	213	5410
18 (0.0478 [1.21])	271	6883	258	6553	234	5944
17 (0.0538 [1.37])	288	7315	280	7112	255	6477
16 (0.0598 [1.52])	303	7696	303	7696	303	7696
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	333	8458	296	7518	269	6833
16 (0.0598 [1.52])	357	9068	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	277	7036	252	6401	229	5817
19 (0.0418 [1.06])	299	7595	281	7137	255	6477
18 (0.0478 [1.21])	319	8103	306	7772	278	7061
17 (0.0538 [1.37])	339	8611	331	8407	301	7645
16 (0.0598 [1.52])	358	9093	355	9017	322	8179

9.3.8 3.5DF-24 AC

Requirements for Above Deck Construction: Nominal 0.6 lb/ft³ (9.6 kg/m³) fiberglass insulation, minimum 2.0 in. (51mm) thick placed in the steel deck bottom ribs covering all perforations. When an asphaltic roof cover is used, minimum 0.5 in. (13 mm) Dens Deck thermal barrier is placed over the steel deck. Minimum 1.5 in. (38 mm) thick polyisocyanurate insulation boards are placed over the deck or thermal barrier when present and fastened per proprietary listings.

Table A (3.5DF-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	229	5817	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	296	7518	296	7518	296	7518
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	191	4851	150	3810	124	3150
19 (0.0418 [1.06])	220	5588	173	4394	143	3632
18 (0.0478 [1.21])	249	6325	196	4978	162	4115
17 (0.0538 [1.37])	277	7036	219	5563	180	4572
16 (0.0598 [1.52])	305	7747	240	6096	198	5029
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	238	6045	188	4775	155	3937
19 (0.0418 [1.06])	275	6985	217	5512	179	4547
18 (0.0478 [1.21])	311	7899	245	6223	202	5131
17 (0.0538 [1.37])	330	8382	273	6934	226	5740
16 (0.0598 [1.52])	349	8865	301	7645	248	6299

Table B (3.5DF-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	
50000	345	0.625	15.87	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	229	5817	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	296	7518	296	7518	296	7518
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	349	8865	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	270	6858	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	349	8865	349	8865	322	8179

Table C (3.5DF-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])		229 5817	211 5359	192 4877		
19 (0.0418 [1.06])		247 6274	235 5969	213 5410		
18 (0.0478 [1.21])		264 6706	258 6553	234 5944		
17 (0.0538 [1.37])		280 7112	280 7112	255 6477		
16 (0.0598 [1.52])		296 7518	296 7518	296 7518		
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])		231 5867	182 4623	150 3810		
19 (0.0418 [1.06])		267 6782	211 5359	174 4420		
18 (0.0478 [1.21])		303 7696	239 6071	197 5004		
17 (0.0538 [1.37])		330 8382	267 6782	220 5588		
16 (0.0598 [1.52])		349 8865	294 7468	242 6147		
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])		270 6858	228 5791	188 4775		
19 (0.0418 [1.06])		291 7391	263 6680	217 5512		
18 (0.0478 [1.21])		311 7899	299 7595	246 6248		
17 (0.0538 [1.37])		330 8382	330 8382	275 6985		
16 (0.0598 [1.52])		349 8865	349 8865	303 7696		

Table D(3.5DF-24AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.750	19.05	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	229	5817	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	296	7518	296	7518	296	7518
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	349	8865	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
	MSG (in. [mm])	in. mm	in. mm	in. mm	in. mm	in. mm
20 (0.0359 [0.91])	270	6858	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	349	8865	349	8865	322	8179

Table E (3.5DF-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/3
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	229	5817	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	296	7518	296	7518	296	7518
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	214	5436	177	4496
19 (0.0418 [1.06])	283	7188	248	6299	204	5182
18 (0.0478 [1.21])	308	7823	274	6960	232	5893
17 (0.0538 [1.37])	330	8382	296	7518	260	6604
16 (0.0598 [1.52])	349	8865	317	8052	271	6883
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	270	6858	252	6401	221	5613
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	349	8865	349	8865	322	8179

Table F (3.5DF-24 AC)								
Deck Yield		Weld Diameter		Weld Spacing		Weld Electrode		Weld Patterns
psi	MPa	in.	mm	in.	mm	psi	MPa	24/6
50000	345	0.875	22.23	8	203	60000	414	

Nucor Vulcraft Group 3.5DF-24 AC Steel Deck						
Deck Design Thickness	Wind Rating - One Span					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	229	5817	211	5359	192	4877
19 (0.0418 [1.06])	247	6274	235	5969	213	5410
18 (0.0478 [1.21])	264	6706	258	6553	234	5944
17 (0.0538 [1.37])	280	7112	280	7112	255	6477
16 (0.0598 [1.52])	296	7518	296	7518	296	7518
Deck Design Thickness	Wind Rating - Two Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	254	6452	225	5715	205	5207
19 (0.0418 [1.06])	283	7188	251	6375	228	5791
18 (0.0478 [1.21])	308	7823	274	6960	249	6325
17 (0.0538 [1.37])	330	8382	296	7518	269	6833
16 (0.0598 [1.52])	349	8865	317	8052	288	7315
Deck Design Thickness	Wind Rating - Three or More Spans					
	1-60		1-75		1-90	
MSG (in. [mm])	in.	mm	in.	mm	in.	mm
20 (0.0359 [0.91])	270	6858	252	6401	229	5817
19 (0.0418 [1.06])	291	7391	281	7137	255	6477
18 (0.0478 [1.21])	311	7899	306	7772	278	7061
17 (0.0538 [1.37])	330	8382	330	8382	301	7645
16 (0.0598 [1.52])	349	8865	349	8865	322	8179

- 9.4** Tests show that the tested roof constructions in and of themselves would not create a need for automatic sprinklers.
- 9.5** Since a duly signed Master Agreement is on file for this customer, Approval is effective as of the date of this report.
- 9.6** Continued Approval will depend upon satisfactory field experience and periodic Facilities and Procedures Audits.

PROJECT DATA RECORD: PR469609

ATTACHMENTS: Not Applicable
ORIGINAL TEST DATA See Table 1