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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  
PO Box 59  
Norfolk NE 68702-0729  
United States  
**Customer ID:** 1000000591-1

**Prepared by**



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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**

| <b>FM Standard 4451 Performance Requirement</b>   | <b>FM Standard 4451 Section</b> | <b>Submissions Required / Waivers</b>                             |
|---|---------------------------------|---|
| 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 <sup>1</sup>   |
| Pull Over Resistance of Fasteners (Calculation)   | 4.3.1.2                         | Waived <sup>1</sup>   |
| 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 <sup>1</sup>   |
| 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 <sup>1</sup>   |

<sup>1</sup> 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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 |               |
| 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 | 30/5,<br>30/10 |

| 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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,<br>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 |      |
| 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 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 | 30/5,<br>30/10 |

| 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 |               |
| 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 | 30/5, 30/10   |

| 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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 |               |
| 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 |      |
| 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 |

| Table B (2.0DF-30 AC) |     |               |       |              |     |                |     |               |
|-----------------------|-----|---------------|-------|--------------|-----|----------------|-----|---------------|
| Deck Yield            |     | Weld Diameter |       | Weld Spacing |     | Weld Electrode |     | Weld Patterns |
| psi                   | MPa | in.           | mm    | in.          | mm  | psi            | MPa |               |
| 50000                 | 345 | 0.625         | 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 |      |
| 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 C (2.0DF-30AC) |     |               |       |              |     |                |     |                |
|----------------------|-----|---------------|-------|--------------|-----|----------------|-----|----------------|
| 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 | 30/5,<br>30/10 |

| 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-30AC) |     |               |       |              |     |                |     |                |
|----------------------|-----|---------------|-------|--------------|-----|----------------|-----|----------------|
| 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 | 30/5,<br>30/10 |

| 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 |               |
| 50000              | 345 | 0.625         | 15.87 | 8            | 203 | 60000          | 414 | 24/3          |

| 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 |               |
| 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])                       | 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 |

| Table C (3.5DS-24) |     |               |       |              |     |                |     |               |
|--------------------|-----|---------------|-------|--------------|-----|----------------|-----|---------------|
| 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 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])                       | 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])                       | 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 |               |
| 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   |
| 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 |

| Table E (3.5DS-24) |     |               |       |              |     |                |     |               |
|--------------------|-----|---------------|-------|--------------|-----|----------------|-----|---------------|
| Deck Yield         |     | Weld Diameter |       | Weld Spacing |     | Weld Electrode |     | Weld Patterns |
| psi                | MPa | in.           | mm    | in.          | mm  | psi            | MPa |               |
| 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 |               |
| 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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-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 3.5DS-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-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])                          | 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 |               |
| 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 |               |
| 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 |               |
| 50000              | 345 | 0.625         | 15.87 | 8            | 203 | 60000          | 414 | 24/3          |

| 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 |               |
| 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 |               |
| 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 |               |
| 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])                       | 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 E (3.5DF-24) |     |               |       |              |     |                |     |               |
|--------------------|-----|---------------|-------|--------------|-----|----------------|-----|---------------|
| Deck Yield         |     | Weld Diameter |       | Weld Spacing |     | Weld Electrode |     | Weld Patterns |
| psi                | MPa | in.           | mm    | in.          | mm  | psi            | MPa |               |
| 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 |               |
| 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/ft<sup>3</sup> (9.6 kg/m<sup>3</sup>) 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 |               |
| 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 |               |
| 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   |
| 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])                          | 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   |
| 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-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 3.5DF-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 E (3.5DF-24 AC) |     |               |       |              |     |                |     |               |
|-----------------------|-----|---------------|-------|--------------|-----|----------------|-----|---------------|
| Deck Yield            |     | Weld Diameter |       | Weld Spacing |     | Weld Electrode |     | Weld Patterns |
| psi                   | MPa | in.           | mm    | in.          | mm  | psi            | MPa |               |
| 50000                 | 345 | 0.875         | 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 |               |
| 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