



Originally Issued: 03/31/2017

Revised: 04/25/2023

Valid Through: 04/30/2024

### ALLEGHENY STRUCTURAL COMPONENTS, INC.

3778 Oneida Valley Road  
Emlenton, Pennsylvania 16373

(724) 867-1100

[AlleghenyStructural.com](http://AlleghenyStructural.com)

## OPEN JOIST 2000® WOOD TRUSSES

### CSI Sections:

06 11 00 Wood Framing

06 11 13 Engineered Wood Products

06 17 00 Shop Fabricated Structural Wood

06 17 53 Shop-Fabricated Wood Trusses

## 1.0 RECOGNITION

Allegheny Structural Components, Inc., Open Joist 2000® Wood Trusses have been evaluated for use as joists in floor and roof assemblies. The trusses have been evaluated for structural performance. The Open Joist 2000® trusses described in this report are recognized as alternatives to the framing prescribed in the following codes and regulations:

- 2021, 2018, 2015, and 2012 International Building Code® (IBC)
- 2021, 2018, 2015, and 2012 International Residential Code® (IRC)

Open Joist 2000® Wood Trusses complies with the requirements for wood trusses in IBC Section 2303.4 and IRC Sections R502.11 and R802.10.

## 2.0 LIMITATIONS

Use of Open Joist 2000® Wood Trusses recognized in this report is subject to the following limitations:

**2.1** Use of the Open Joist 2000® Wood Trusses shall comply with the provisions of the applicable codes, the manufacturer's published installation instructions, and this report. Where conflicts occur in these provisions, the most restrictive shall govern.

**2.2** Designs and details for building assemblies incorporating Open Joist 2000® Wood Trusses shall be submitted to the building official for approval.

**2.3** Open Joist 2000® Wood Trusses shall not be cut, notched, spliced or otherwise altered except as specifically allowed by this report, the manufacturer's published installation instructions, or as approved by the registered design professional. Broken or damaged trusses shall not be used.

**2.4** Open Joist 2000® Wood Trusses and connections shall not be exposed to wet service conditions in use.

**2.5** Open Joist 2000® Wood Trusses have not been evaluated for use with fire-retardant treated wood or in fire-resistance rated assemblies under the scope of this report.

**2.6** Use of the trusses as part of the lateral load resisting system has not been evaluated.

**2.7** The trusses recognized in this report are produced by Allegheny Structural Components, Inc in Emlenton, PA.

## 3.0 PRODUCT USE

**3.1 Design:** The appropriate trusses for the project shall be chosen using the allowable uniform live load tables in this report corresponding to the design dead load, maximum deflection criteria, joist span, joist depth, and joist spacing. The tables are for use with joists in a simple-span support configuration. A joist depth and on-center spacing shall be chosen from the tables, that corresponds to the design live load to provide adequate support capacity for the design loading. The design tables provide maximum allowable uniform live loads for three or more members installed parallel, with top chord sheathing installed.

The trusses shall be designed to meet or exceed minimum ASD loading requirements specified in the applicable building code. Selection of the floor trusses for structural loading and its supporting structure shall be designed by an approved design professional. The registered design professional shall prepare calculations and drawings when required by the statutes of the jurisdiction in which the project is to be constructed.

## 3.2 Installation:

Open Joist 2000® Wood Trusses shall be installed in accordance with the manufacturer's published installation instructions and design drawings required by Section 2303.4.1.1 of the IBC, or Sections R502.11.4 or R802.10.1 of the IRC, as applicable. The trusses shall be fastened to the sill or wall plates and anchorage shall be provided as required by the IBC or IRC. When fastening Open Joist 2000® Wood Trusses, care shall be taken to avoid splitting wooden truss members. Strong backs, gussets, and bearing blocks shall be provided for bracing, cantilever, and point load bearing as required by the truss design. Any required strong back bridging shall be installed prior to floor sheathing. When using joist hangers, the hanger manufacturers' nailing instructions shall be followed.

The trusses shall be covered with minimum 5/8-inch-thick (15.9 mm) sheathing installed according to IBC or IRC using fasteners and adhesive. Minimum bearing length shall be 1 1/2 inches (38.1 mm) unless noted otherwise in the truss designs or manufacturer's instructions. Draft stopping, and fire blocking shall be installed in accordance with the IBC or IRC.

*The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.*

Copyright © 2023 by International Association of Plumbing and Mechanical Officials. All rights reserved. Printed in the United States. Ph: 1-877-4IESRPT • Fax: 909.472.4171  
web: [www.uniform-es.org](http://www.uniform-es.org) • 4755 East Philadelphia Street, Ontario, California 91761-2816 – USA





### 4.0 PRODUCT DESCRIPTION

Open Joist 2000® Wood Trusses are engineered wood joists with dimension lumber flanges, diagonal and vertical web members, and trimmable ends. The members are joined using glued finger-jointed connections. The lumber used to manufacture the trusses is kiln-dried to a moisture content of 19 percent or less before processing.

The trusses are non-destructively machine-load-tested in accordance with the Open Joist 2000® quality control procedures to verify their ability to support the allowable loads indicated in this report.

Open Joist 2000® Wood Trusses are available in lengths up to 32 feet (9.8 m). and in nominal joist depths of 9<sup>3</sup>/<sub>8</sub>, 11<sup>1</sup>/<sub>4</sub>, 11<sup>7</sup>/<sub>8</sub>, 13, 14, 16, 18, and 20 inches (238, 286, 302, 330, 356, 406, 457, and 508 mm, respectively). See tables for lengths for each model.

**4.1 Chords:** The top and bottom flange members of the trusses are nominally 2-by-3 or 2-by-4 lumber oriented flatwise and grooved to receive the web members. The finger-jointed chords are grade-marked No.2 SPF, MSR 2100, or MSR 2400 lumber depending on the joist depth and model.

**4.2 Webs:** The diagonal web members are nominally 2-by solid lumber optimally sized to handle the panel design loads, and oriented upright to fit into the grooves in the flanges. Vertical webs are installed at each end and at the edges of mechanical chases. The webs are joined to the chords and to each other with glued finger-joinery.

**4.3 Trimmable-Ends:** The vertical webs at the ends of each truss are solid sawn lumber designed to be trimmed to the proper joist length where necessary as shown in Figure 1 of this report.

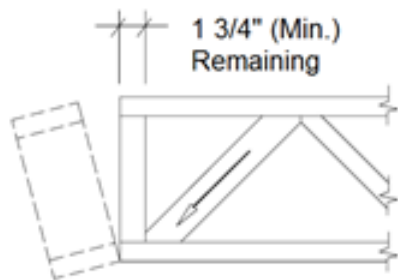
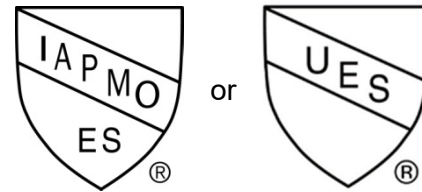


FIGURE 1 - ALLOWABLE TRUSS END TRIM

**4.4 Adhesive:** The adhesive used to glue the chord end joints and the finger-jointed node connections is water-proof resorcinol resin meeting ASTM D2559, and ASTM D7247 for performance at elevated temperatures.

### 5.0 IDENTIFICATION

Open Joist 2000® Wood Trusses are identified by the manufacturer’s name (Allegheny Structural Components) and phone number, the Open Joist 2000® trademark, the product model number, the date of manufacture, and evaluation report number (ER-501). Either IAPMO Uniform Evaluation Service Mark of Conformity may also be used as follows:



IAPMO UES ER-501

### 6.0 SUBSTANTIATING DATA

**6.1** Data in accordance with the ICC-ES Acceptance Criteria for Prefabricated Parallel Chord Wood Trusses (AC224).

**6.2** Manufacturer’s descriptive literature and installation instructions.

**6.3** Test reports are from laboratories in compliance with ISO/IEC 17025.

### 7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Open Joist 2000® Wood Trusses to assess their conformance to the codes shown in Section 1.0 of this report and documents the product’s certification. The wood trusses are produced at locations noted in Section 2.7 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit [www.uniform-es.org](http://www.uniform-es.org) or email at [info@uniform-es.org](mailto:info@uniform-es.org)



**TABLE 1A (15DL-L/360) - ALLOWABLE UNIFORM FLOOR LIVE LOADS (psf)**

| Joist Clear Span | 15 LB. DEAD LOAD - L/360 LIVE LOAD DEFLECTION                           |     |       |     |                                        |     |       |     |                                        |     |       |     |                 |     |       |     |
|------------------|-------------------------------------------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|-----------------|-----|-------|-----|
|                  | 9 <sup>1</sup> / <sub>4</sub> " & 9 <sup>3</sup> / <sub>8</sub> " Depth |     |       |     | 11 <sup>1</sup> / <sub>4</sub> " Depth |     |       |     | 11 <sup>7</sup> / <sub>8</sub> " Depth |     |       |     | 13" & 14" Depth |     |       |     |
|                  | O.C. Spacing                                                            |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing    |     |       |     |
|                  | 12"                                                                     | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"             | 16" | 19.2" | 24" |
| 10'-1"           | 183                                                                     | 134 | 109   | 84  | 187                                    | 136 | 112   | 87  | 212                                    | 155 | 127   | 99  | 241             | 177 | 145   | 113 |
| 11'-1"           | 147                                                                     | 110 | 92    | 73  | 165                                    | 121 | 99    | 77  | 188                                    | 137 | 112   | 87  | 212             | 155 | 127   | 99  |
| 12'-1"           | 115                                                                     | 86  | 72    | 58  | 144                                    | 105 | 85    | 66  | 164                                    | 119 | 97    | 75  | 188             | 137 | 112   | 87  |
| 13'-1"           | 94                                                                      | 71  | 59    | 47  | 128                                    | 92  | 75    | 57  | 145                                    | 105 | 85    | 65  | 169             | 123 | 100   | 77  |
| 14'-1"           | 77                                                                      | 58  | 48    | 38  | 106                                    | 79  | 66    | 50  | 120                                    | 90  | 75    | 57  | 137             | 99  | 80    | 61  |
| 15'-1"           | 64                                                                      | 48  | 40    | 32  | 90                                     | 68  | 56    | 43  | 102                                    | 77  | 64    | 49  | 128             | 93  | 75    | 57  |
| 16'-1"           | 86                                                                      | 65  | 54    | 43  | 77                                     | 58  | 48    | 38  | 88                                     | 66  | 55    | 43  | 105             | 75  | 60    | 45  |
| 17'-1"           | 72                                                                      | 54  | 45    | 36  | 85                                     | 61  | 48    | 36  | 91                                     | 65  | 51    | 38  | 90              | 64  | 51    | 38  |
| 18'-1"           | 61                                                                      | 46  | 38    | 30  | 74                                     | 52  | 41    | 31  | 84                                     | 59  | 47    | 35  | 99              | 71  | 56    | 42  |
| 19'-1"           | 53                                                                      | 40  | 33    | 26  | 82                                     | 62  | 51    | 38  | 92                                     | 65  | 52    | 39  | 88              | 62  | 49    | 37  |
| 20'-1"           |                                                                         |     |       |     | 69                                     | 52  | 43    | 34  | 78                                     | 59  | 49    | 38  | 80              | 56  | 44    | 33  |
| 21'-1"           |                                                                         |     |       |     | 59                                     | 44  | 37    | 30  | 67                                     | 50  | 42    | 34  | 83              | 62  | 51    | 38  |
| 22'-1"           |                                                                         |     |       |     |                                        |     |       |     | 59                                     | 44  | 37    | 30  | 74              | 56  | 44    | 33  |
| 23'-1"           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 64              | 48  | 40    | 29  |
| 24'-1"           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 58              | 43  | 36    | 29  |

| Joist Clear Span | 15 LB. DEAD LOAD - L/360 LIVE LOAD DEFLECTION |     |       |     |              |     |       |     |              |     |       |     |
|------------------|-----------------------------------------------|-----|-------|-----|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                  | 16" Depth                                     |     |       |     | 18" Depth    |     |       |     | 20" Depth    |     |       |     |
|                  | O.C. Spacing                                  |     |       |     | O.C. Spacing |     |       |     | O.C. Spacing |     |       |     |
|                  | 12"                                           | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" |
| 10'-1"           | 241                                           | 177 | 145   | 113 | 347          | 259 | 215   | 171 | 341          | 256 | 213   | 171 |
| 11'-1"           | 212                                           | 155 | 127   | 99  | 318          | 237 | 196   | 156 | 313          | 235 | 196   | 156 |
| 12'-1"           | 188                                           | 137 | 112   | 87  | 293          | 218 | 181   | 144 | 289          | 217 | 180   | 144 |
| 13'-1"           | 169                                           | 123 | 100   | 77  | 271          | 202 | 167   | 133 | 268          | 201 | 168   | 134 |
| 14'-1"           | 153                                           | 111 | 90    | 69  | 253          | 188 | 156   | 124 | 250          | 188 | 156   | 125 |
| 15'-1"           | 145                                           | 105 | 85    | 65  | 237          | 176 | 146   | 116 | 235          | 176 | 147   | 117 |
| 16'-1"           | 142                                           | 103 | 83    | 63  | 222          | 165 | 137   | 108 | 221          | 166 | 138   | 110 |
| 17'-1"           | 169                                           | 123 | 100   | 77  | 210          | 156 | 129   | 102 | 209          | 156 | 130   | 104 |
| 18'-1"           | 161                                           | 117 | 95    | 73  | 198          | 147 | 122   | 96  | 198          | 148 | 123   | 99  |
| 19'-1"           | 128                                           | 92  | 74    | 57  | 188          | 140 | 116   | 91  | 188          | 141 | 117   | 94  |
| 20'-1"           | 148                                           | 107 | 87    | 67  | 179          | 133 | 110   | 87  | 179          | 134 | 112   | 89  |
| 21'-1"           | 121                                           | 87  | 70    | 53  | 171          | 127 | 105   | 82  | 171          | 128 | 107   | 85  |
| 22'-1"           | 127                                           | 91  | 74    | 56  | 137          | 103 | 85    | 68  | 142          | 105 | 87    | 68  |
| 23'-1"           | 104                                           | 78  | 65    | 52  | 131          | 98  | 82    | 65  | 136          | 101 | 83    | 65  |
| 24'-1"           | 96                                            | 72  | 60    | 47  | 126          | 94  | 79    | 62  | 130          | 96  | 79    | 62  |
| 25'-1"           | 83                                            | 62  | 52    | 42  | 121          | 91  | 76    | 60  | 125          | 92  | 76    | 60  |
| 26'-1"           | 83                                            | 62  | 52    | 42  | 109          | 81  | 66    | 52  | 111          | 82  | 67    | 53  |
| 27'-1"           | 75                                            | 56  | 47    | 38  | 105          | 78  | 64    | 50  | 107          | 78  | 64    | 50  |
| 28'-1"           | 64                                            | 48  | 40    | 32  | 101          | 75  | 61    | 48  | 103          | 76  | 62    | 49  |
| 29'-1"           | 56                                            | 42  | 35    | 28  | 77           | 58  | 48    | 38  | 99           | 73  | 60    | 47  |
| 30'-1"           |                                               |     |       |     | 75           | 56  | 47    | 37  | 72           | 53  | 43    | 33  |
| 31'-1"           |                                               |     |       |     |              |     |       |     | 70           | 51  | 41    | 32  |

For S.I.: 1 inch = 25.4 mm; 1 lbf = 4.4 N; 1 psf = 47.9 Pa

- 1) Table is based on repetitive member use installed in a floor or roof system with minimum 5/8-inch-thick sheathing attached to the top flanges.
- 2) No increase for repetitive member use or duration of load allowed.
- 3) Allowable load values in the table shall be reduced if repetitive member conditions are not achieved (20 percent for 3x2 and 13 percent for 4x2).
- 4) Loads noted in the table are limited by live load deflection and total load deflection as noted in the table.
- 5) Manufactured length refers to overall length that includes the possibility of a 5 1/2-inch bearing on both ends. To calculate the allowable "clear span" subtract 11 inches from the tabulated manufactured length.



**TABLE 1B (25DL-L/360) - ALLOWABLE UNIFORM FLOOR LIVE LOADS (psf)**

| Joist Clear Span | 25 LB. DEAD LOAD - L/360 LIVE LOAD DEFLECTION                           |     |       |     |                                        |     |       |     |                                        |     |       |     |                 |     |       |     |
|------------------|-------------------------------------------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|-----------------|-----|-------|-----|
|                  | 9 <sup>1</sup> / <sub>4</sub> " & 9 <sup>3</sup> / <sub>8</sub> " Depth |     |       |     | 11 <sup>1</sup> / <sub>4</sub> " Depth |     |       |     | 11 <sup>7</sup> / <sub>8</sub> " Depth |     |       |     | 13" & 14" Depth |     |       |     |
|                  | O.C. Spacing                                                            |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing    |     |       |     |
|                  | 12"                                                                     | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"             | 16" | 19.2" | 24" |
| 10'-1"           | 173                                                                     | 124 | 99    | 74  | 178                                    | 128 | 103   | 78  | 202                                    | 145 | 117   | 89  | 231             | 167 | 135   | 103 |
| 11'-1"           | 147                                                                     | 107 | 85    | 63  | 157                                    | 112 | 90    | 68  | 178                                    | 127 | 102   | 77  | 202             | 145 | 117   | 89  |
| 12'-1"           | 115                                                                     | 86  | 72    | 55  | 136                                    | 96  | 77    | 57  | 154                                    | 109 | 87    | 65  | 178             | 127 | 102   | 77  |
| 13'-1"           | 94                                                                      | 71  | 59    | 45  | 119                                    | 84  | 66    | 48  | 135                                    | 95  | 75    | 55  | 159             | 113 | 90    | 67  |
| 14'-1"           | 77                                                                      | 58  | 48    | 37  | 105                                    | 73  | 57    | 41  | 119                                    | 83  | 65    | 47  | 127             | 89  | 70    | 51  |
| 15'-1"           | 64                                                                      | 48  | 40    | 31  | 90                                     | 62  | 48    | 34  | 102                                    | 71  | 55    | 39  | 119             | 83  | 65    | 47  |
| 16'-1"           | 86                                                                      | 65  | 50    | 35  | 77                                     | 54  | 41    | 29  | 88                                     | 61  | 47    | 33  | 95              | 65  | 50    | 35  |
| 17'-1"           | 72                                                                      | 54  | 45    | 36  | 77                                     | 52  | 40    | 27  | 81                                     | 55  | 41    | 28  | 80              | 54  | 41    | 28  |
| 18'-1"           | 61                                                                      | 46  | 37    | 25  | 65                                     | 43  | 33    | 22  | 74                                     | 49  | 37    | 25  | 89              | 61  | 46    | 32  |
| 19'-1"           | 53                                                                      | 40  | 33    | 23  | 81                                     | 55  | 42    | 29  | 82                                     | 55  | 42    | 29  | 78              | 52  | 39    | 27  |
| 20'-1"           |                                                                         |     |       |     | 69                                     | 48  | 37    | 26  | 78                                     | 55  | 41    | 28  | 70              | 46  | 34    | 23  |
| 21'-1"           |                                                                         |     |       |     | 59                                     | 43  | 33    | 22  | 67                                     | 49  | 37    | 25  | 80              | 54  | 41    | 28  |
| 22'-1"           |                                                                         |     |       |     |                                        |     |       |     | 59                                     | 43  | 31    | 20  | 70              | 46  | 34    | 23  |
| 23'-1"           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 63              | 41  | 30    | 19  |
| 24'-1"           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 58              | 43  | 32    | 21  |

**25 LB. DEAD LOAD - L/360 LIVE LOAD DEFLECTION**

| Joist Clear Span | 25 LB. DEAD LOAD - L/360 LIVE LOAD DEFLECTION |     |       |     |              |     |       |     |              |     |       |     |
|------------------|-----------------------------------------------|-----|-------|-----|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                  | 16" Depth                                     |     |       |     | 18" Depth    |     |       |     | 20" Depth    |     |       |     |
|                  | O.C. Spacing                                  |     |       |     | O.C. Spacing |     |       |     | O.C. Spacing |     |       |     |
|                  | 12"                                           | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" |
| 10'-1"           | 231                                           | 167 | 135   | 103 | 343          | 255 | 211   | 167 | 341          | 256 | 213   | 171 |
| 11'-1"           | 202                                           | 145 | 117   | 89  | 314          | 233 | 193   | 152 | 313          | 235 | 196   | 156 |
| 12'-1"           | 178                                           | 127 | 102   | 77  | 289          | 214 | 177   | 140 | 89           | 217 | 180   | 144 |
| 13'-1"           | 159                                           | 113 | 90    | 67  | 268          | 198 | 164   | 129 | 268          | 201 | 168   | 134 |
| 14'-1"           | 143                                           | 101 | 80    | 59  | 249          | 184 | 152   | 120 | 250          | 188 | 156   | 125 |
| 15'-1"           | 135                                           | 95  | 75    | 55  | 233          | 172 | 142   | 112 | 235          | 176 | 147   | 116 |
| 16'-1"           | 132                                           | 93  | 73    | 53  | 219          | 162 | 133   | 105 | 221          | 166 | 138   | 109 |
| 17'-1"           | 159                                           | 113 | 90    | 67  | 206          | 152 | 125   | 98  | 209          | 156 | 130   | 102 |
| 18'-1"           | 151                                           | 107 | 85    | 63  | 195          | 144 | 118   | 93  | 198          | 148 | 123   | 97  |
| 19'-1"           | 118                                           | 82  | 64    | 47  | 184          | 136 | 112   | 88  | 188          | 141 | 116   | 91  |
| 20'-1"           | 138                                           | 97  | 77    | 57  | 175          | 129 | 106   | 83  | 179          | 134 | 110   | 86  |
| 21'-1"           | 111                                           | 77  | 60    | 43  | 167          | 123 | 101   | 79  | 171          | 128 | 105   | 82  |
| 22'-1"           | 117                                           | 81  | 64    | 46  | 137          | 101 | 83    | 64  | 138          | 101 | 83    | 64  |
| 23'-1"           | 94                                            | 70  | 59    | 42  | 131          | 97  | 79    | 61  | 132          | 97  | 79    | 61  |
| 24'-1"           | 84                                            | 63  | 53    | 37  | 126          | 93  | 76    | 59  | 127          | 93  | 76    | 59  |
| 25'-1"           | 73                                            | 55  | 46    | 32  | 121          | 89  | 72    | 56  | 121          | 89  | 72    | 56  |
| 26'-1"           | 73                                            | 55  | 46    | 32  | 106          | 77  | 63    | 48  | 107          | 78  | 63    | 49  |
| 27'-1"           | 65                                            | 49  | 41    | 29  | 102          | 74  | 60    | 46  | 103          | 75  | 61    | 47  |
| 28'-1"           | 64                                            | 48  | 40    | 27  | 98           | 71  | 58    | 44  | 99           | 72  | 58    | 45  |
| 29'-1"           | 56                                            | 42  | 35    | 23  | 77           | 57  | 46    | 35  | 95           | 69  | 56    | 43  |
| 30'-1"           |                                               |     |       |     | 75           | 54  | 44    | 33  | 68           | 49  | 39    | 29  |
| 31'-1"           |                                               |     |       |     |              |     |       |     | 66           | 47  | 38    | 28  |

For S.I.: 1 inch = 25.4 mm; 1 lbf = 4.4 N; 1 psf = 47.9 Pa

- 1) Table is based on repetitive member use installed in a floor or roof system with minimum 5/8-inchthick sheathing attached to the top flanges.
- 2) No increase for repetitive member use or duration of load allowed.
- 3) Allowable load values in the table shall be reduced if repetitive member conditions are not achieved (20 percent for 3x2 and 13 percent for 4x2).
- 4) Loads noted in the table are limited by live load deflection and total load deflection as noted in the table.
- 5) Manufactured length refers to overall length that includes the possibility of a 5 1/2-inch bearing on both ends. To calculate the allowable "clear span" subtract 11 inches from the tabulated manufactured length.



| TABLE 1C (15DL-L/480) - ALLOWABLE UNIFORM FLOOR LIVE LOADS (psf) |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     |                 |     |       |     |
|------------------------------------------------------------------|-------------------------------------------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|-----------------|-----|-------|-----|
| Joist Clear Span                                                 | 15 LB. DEAD LOAD - L/480 LIVE LOAD DEFLECTION                           |     |       |     |                                        |     |       |     |                                        |     |       |     |                 |     |       |     |
|                                                                  | 9 <sup>1</sup> / <sub>4</sub> " & 9 <sup>3</sup> / <sub>8</sub> " Depth |     |       |     | 11 <sup>1</sup> / <sub>4</sub> " Depth |     |       |     | 11 <sup>7</sup> / <sub>8</sub> " Depth |     |       |     | 13" & 14" Depth |     |       |     |
|                                                                  | O.C. Spacing                                                            |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing    |     |       |     |
|                                                                  | 12"                                                                     | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"             | 16" | 19.2" | 24" |
| 10'-1"                                                           | 139                                                                     | 104 | 87    | 70  | 187                                    | 136 | 112   | 87  | 212                                    | 155 | 127   | 99  | 241             | 177 | 145   | 113 |
| 11'-1"                                                           | 110                                                                     | 83  | 69    | 55  | 158                                    | 118 | 99    | 77  | 179                                    | 134 | 112   | 87  | 212             | 155 | 127   | 99  |
| 12'-1"                                                           | 86                                                                      | 65  | 54    | 43  | 124                                    | 93  | 77    | 62  | 141                                    | 106 | 88    | 70  | 171             | 128 | 107   | 86  |
| 13'-1"                                                           | 70                                                                      | 53  | 44    | 35  | 101                                    | 76  | 63    | 51  | 115                                    | 86  | 72    | 58  | 142             | 107 | 89    | 71  |
| 14'-1"                                                           | 58                                                                      | 43  | 36    | 29  | 79                                     | 59  | 49    | 40  | 90                                     | 67  | 56    | 45  | 114             | 86  | 71    | 57  |
| 15'-1"                                                           | 48                                                                      | 36  | 30    | 24  | 68                                     | 51  | 42    | 33  | 77                                     | 58  | 48    | 38  | 96              | 72  | 60    | 48  |
| 16'-1"                                                           | 66                                                                      | 49  | 41    | 33  | 58                                     | 43  | 36    | 29  | 66                                     | 49  | 41    | 33  | 80              | 60  | 50    | 40  |
| 17'-1"                                                           | 54                                                                      | 41  | 34    | 27  | 69                                     | 52  | 43    | 34  | 78                                     | 59  | 49    | 38  | 66              | 51  | 43    | 34  |
| 18'-1"                                                           | 46                                                                      | 35  | 29    | 23  | 59                                     | 44  | 37    | 30  | 67                                     | 50  | 42    | 34  | 80              | 60  | 50    | 40  |
| 19'-1"                                                           | 40                                                                      | 30  | 25    | 20  | 62                                     | 47  | 39    | 31  | 70                                     | 53  | 44    | 35  | 69              | 52  | 43    | 35  |
| 20'-1"                                                           |                                                                         |     |       |     | 52                                     | 39  | 33    | 26  | 59                                     | 44  | 37    | 30  | 60              | 45  | 38    | 30  |
| 21'-1"                                                           |                                                                         |     |       |     | 45                                     | 33  | 28    | 23  | 51                                     | 38  | 32    | 26  | 62              | 47  | 39    | 31  |
| 22'-1"                                                           |                                                                         |     |       |     |                                        |     |       |     | 45                                     | 34  | 28    | 23  | 56              | 42  | 35    | 28  |
| 23'-1"                                                           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 48              | 36  | 30    | 24  |
| 24'-1"                                                           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 43              | 32  | 27    | 22  |

| Joist Clear Span | 15 LB. DEAD LOAD - L/480 LIVE LOAD DEFLECTION |     |       |     |              |     |       |     |              |     |       |     |
|------------------|-----------------------------------------------|-----|-------|-----|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                  | 16" Depth                                     |     |       |     | 18" Depth    |     |       |     | 20" Depth    |     |       |     |
|                  | O.C. Spacing                                  |     |       |     | O.C. Spacing |     |       |     | O.C. Spacing |     |       |     |
|                  | 12"                                           | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" |
| 10'-1"           | 241                                           | 177 | 145   | 113 | 273          | 205 | 171   | 137 | 249          | 186 | 155   | 124 |
| 11'-1"           | 212                                           | 155 | 127   | 99  | 251          | 188 | 157   | 125 | 228          | 171 | 142   | 114 |
| 12'-1"           | 188                                           | 137 | 112   | 87  | 231          | 174 | 145   | 116 | 210          | 158 | 131   | 105 |
| 13'-1"           | 169                                           | 123 | 100   | 77  | 215          | 161 | 134   | 107 | 195          | 146 | 122   | 98  |
| 14'-1"           | 153                                           | 111 | 90    | 69  | 201          | 150 | 125   | 100 | 182          | 137 | 114   | 91  |
| 15'-1"           | 145                                           | 105 | 85    | 65  | 188          | 141 | 118   | 94  | 171          | 128 | 107   | 85  |
| 16'-1"           | 142                                           | 103 | 83    | 63  | 177          | 133 | 111   | 88  | 161          | 121 | 101   | 80  |
| 17'-1"           | 169                                           | 123 | 100   | 77  | 167          | 125 | 104   | 84  | 152          | 114 | 95    | 76  |
| 18'-1"           | 144                                           | 108 | 90    | 73  | 158          | 119 | 99    | 79  | 144          | 108 | 90    | 72  |
| 19'-1"           | 128                                           | 92  | 74    | 57  | 150          | 113 | 94    | 75  | 137          | 103 | 85    | 68  |
| 20'-1"           | 112                                           | 84  | 70    | 56  | 143          | 107 | 90    | 72  | 130          | 98  | 81    | 65  |
| 21'-1"           | 88                                            | 66  | 55    | 44  | 137          | 103 | 85    | 68  | 124          | 93  | 78    | 62  |
| 22'-1"           | 80                                            | 60  | 50    | 40  | 98           | 74  | 61    | 49  | 110          | 82  | 69    | 55  |
| 23'-1"           | 75                                            | 56  | 47    | 38  | 94           | 71  | 59    | 47  | 105          | 79  | 66    | 53  |
| 24'-1"           | 70                                            | 52  | 44    | 35  | 90           | 68  | 57    | 45  | 101          | 76  | 63    | 51  |
| 25'-1"           | 64                                            | 48  | 40    | 32  | 87           | 65  | 54    | 44  | 97           | 73  | 61    | 49  |
| 26'-1"           | 60                                            | 45  | 38    | 30  | 79           | 59  | 49    | 39  | 85           | 64  | 53    | 43  |
| 27'-1"           | 54                                            | 40  | 34    | 27  | 76           | 57  | 47    | 38  | 82           | 62  | 51    | 41  |
| 28'-1"           | 48                                            | 36  | 30    | 24  | 73           | 55  | 46    | 37  | 79           | 60  | 50    | 40  |
| 29'-1"           | 41                                            | 31  | 26    | 21  | 58           | 44  | 36    | 29  | 77           | 58  | 48    | 38  |
| 30'-1"           |                                               |     |       |     | 57           | 42  | 35    | 28  | 62           | 46  | 39    | 31  |
| 31'-1"           |                                               |     |       |     |              |     |       |     | 60           | 45  | 37    | 30  |

For S.I.: 1 inch = 25.4 mm; 1 lbf = 4.4 N; 1 psf = 47.9 Pa

- 1) Table is based on repetitive member use installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges.
- 2) No increase for repetitive member use or duration of load allowed.
- 3) Allowable load values in the table shall be reduced if repetitive member conditions are not met (20 percent for 3x2 and 13 percent for 4x2).
- 4) Loads noted in the table are limited by live load deflection and total load deflection noted.
- 5) Manufactured length refers to overall length that includes the possibility of a 5<sup>1</sup>/<sub>2</sub>-inch bearing on both ends. To calculate the allowable "clear span" subtract 11 inches from the tabulated manufactured length.



**TABLE 1D (25DL-L/480) - ALLOWABLE UNIFORM FLOOR LIVE LOADS (psf)**

| Joist Clear Span | 25 LB. DEAD LOAD - L/480 LIVE LOAD DEFLECTION                           |     |       |     |                                        |     |       |     |                                        |     |       |     |                 |     |       |     |
|------------------|-------------------------------------------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|----------------------------------------|-----|-------|-----|-----------------|-----|-------|-----|
|                  | 9 <sup>1</sup> / <sub>4</sub> " & 9 <sup>3</sup> / <sub>8</sub> " Depth |     |       |     | 11 <sup>1</sup> / <sub>4</sub> " Depth |     |       |     | 11 <sup>7</sup> / <sub>8</sub> " Depth |     |       |     | 13" & 14" Depth |     |       |     |
|                  | O.C. Spacing                                                            |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing                           |     |       |     | O.C. Spacing    |     |       |     |
|                  | 12"                                                                     | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"                                    | 16" | 19.2" | 24" | 12"             | 16" | 19.2" | 24" |
| 10'-1"           | 139                                                                     | 104 | 87    | 70  | 178                                    | 128 | 103   | 78  | 202                                    | 145 | 117   | 89  | 231             | 167 | 135   | 103 |
| 11'-1"           | 110                                                                     | 83  | 69    | 55  | 157                                    | 112 | 90    | 68  | 178                                    | 127 | 102   | 77  | 202             | 145 | 117   | 89  |
| 12'-1"           | 86                                                                      | 65  | 54    | 43  | 124                                    | 93  | 77    | 57  | 141                                    | 106 | 87    | 65  | 171             | 127 | 102   | 77  |
| 13'-1"           | 70                                                                      | 53  | 44    | 35  | 101                                    | 76  | 63    | 48  | 115                                    | 86  | 72    | 55  | 142             | 107 | 89    | 67  |
| 14'-1"           | 58                                                                      | 43  | 36    | 29  | 79                                     | 59  | 49    | 40  | 90                                     | 67  | 56    | 45  | 114             | 86  | 70    | 51  |
| 15'-1"           | 48                                                                      | 36  | 30    | 24  | 68                                     | 51  | 42    | 33  | 77                                     | 58  | 48    | 38  | 96              | 72  | 60    | 47  |
| 16'-1"           | 66                                                                      | 49  | 41    | 33  | 58                                     | 43  | 36    | 29  | 66                                     | 49  | 41    | 33  | 80              | 60  | 50    | 35  |
| 17'-1"           | 54                                                                      | 41  | 34    | 27  | 69                                     | 52  | 40    | 27  | 78                                     | 55  | 41    | 28  | 68              | 51  | 41    | 28  |
| 18'-1"           | 46                                                                      | 35  | 29    | 23  | 59                                     | 43  | 33    | 22  | 67                                     | 49  | 37    | 25  | 80              | 60  | 46    | 32  |
| 19'-1"           | 40                                                                      | 30  | 25    | 20  | 62                                     | 47  | 39    | 29  | 70                                     | 53  | 42    | 29  | 69              | 52  | 39    | 27  |
| 20'-1"           |                                                                         |     |       |     | 52                                     | 39  | 33    | 26  | 59                                     | 44  | 37    | 28  | 60              | 45  | 34    | 23  |
| 21'-1"           |                                                                         |     |       |     | 45                                     | 33  | 28    | 22  | 51                                     | 38  | 32    | 25  | 62              | 47  | 39    | 28  |
| 22'-1"           |                                                                         |     |       |     |                                        |     |       |     | 45                                     | 34  | 28    | 20  | 56              | 42  | 34    | 23  |
| 23'-1"           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 48              | 36  | 30    | 19  |
| 24'-1"           |                                                                         |     |       |     |                                        |     |       |     |                                        |     |       |     | 43              | 32  | 27    | 21  |

| Joist Clear Span | 25 LB. DEAD LOAD - L/480 LIVE LOAD DEFLECTION |     |       |     |              |     |       |     |              |     |       |     |
|------------------|-----------------------------------------------|-----|-------|-----|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                  | 16" Depth                                     |     |       |     | 18" Depth    |     |       |     | 20" Depth    |     |       |     |
|                  | O.C. Spacing                                  |     |       |     | O.C. Spacing |     |       |     | O.C. Spacing |     |       |     |
|                  | 12"                                           | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" | 12"          | 16" | 19.2" | 24" |
| 10'-1"           | 231                                           | 167 | 135   | 103 | 273          | 205 | 171   | 137 | 249          | 186 | 155   | 124 |
| 11'-1"           | 202                                           | 145 | 117   | 89  | 251          | 188 | 157   | 125 | 228          | 171 | 142   | 114 |
| 12'-1"           | 178                                           | 127 | 102   | 77  | 231          | 174 | 145   | 116 | 210          | 158 | 131   | 105 |
| 13'-1"           | 159                                           | 113 | 90    | 67  | 215          | 161 | 134   | 107 | 195          | 146 | 122   | 98  |
| 14'-1"           | 143                                           | 101 | 80    | 59  | 201          | 150 | 125   | 100 | 182          | 137 | 114   | 91  |
| 15'-1"           | 135                                           | 95  | 75    | 55  | 188          | 141 | 118   | 94  | 171          | 128 | 107   | 85  |
| 16'-1"           | 132                                           | 93  | 73    | 53  | 177          | 133 | 111   | 88  | 161          | 121 | 101   | 80  |
| 17'-1"           | 159                                           | 113 | 90    | 67  | 167          | 125 | 104   | 84  | 152          | 114 | 95    | 76  |
| 18'-1"           | 139                                           | 103 | 85    | 63  | 158          | 119 | 99    | 79  | 144          | 108 | 90    | 72  |
| 19'-1"           | 118                                           | 82  | 64    | 47  | 150          | 113 | 94    | 75  | 137          | 103 | 85    | 68  |
| 20'-1"           | 112                                           | 84  | 70    | 56  | 143          | 107 | 90    | 72  | 130          | 98  | 81    | 65  |
| 21'-1"           | 88                                            | 66  | 55    | 43  | 137          | 103 | 85    | 68  | 124          | 93  | 78    | 62  |
| 22'-1"           | 80                                            | 60  | 50    | 40  | 98           | 74  | 61    | 49  | 110          | 82  | 69    | 55  |
| 23'-1"           | 75                                            | 56  | 47    | 38  | 94           | 71  | 59    | 47  | 105          | 79  | 66    | 53  |
| 24'-1"           | 70                                            | 52  | 44    | 35  | 90           | 68  | 57    | 45  | 101          | 76  | 63    | 51  |
| 25'-1"           | 64                                            | 48  | 40    | 32  | 87           | 65  | 54    | 44  | 97           | 73  | 61    | 49  |
| 26'-1"           | 60                                            | 45  | 38    | 30  | 79           | 59  | 49    | 39  | 85           | 64  | 53    | 43  |
| 27'-1"           | 54                                            | 40  | 34    | 27  | 76           | 57  | 47    | 38  | 82           | 62  | 51    | 41  |
| 28'-1"           | 48                                            | 36  | 30    | 24  | 73           | 55  | 46    | 37  | 79           | 60  | 50    | 40  |
| 29'-1"           | 41                                            | 31  | 26    | 21  | 58           | 44  | 36    | 29  | 77           | 58  | 48    | 38  |
| 30'-1"           |                                               |     |       |     | 57           | 42  | 35    | 28  | 62           | 46  | 39    | 29  |
| 31'-1"           |                                               |     |       |     |              |     |       |     | 60           | 45  | 37    | 28  |

For S.I.: 1 inch = 25.4 mm; 1 lbf = 4.4 N; 1 psf = 47.9 Pa

- 1) Table is based on repetitive member use installed in a floor or roof system with minimum 5/8-inch-thick sheathing attached to the top flanges.
- 2) No increase for repetitive member use or duration of load allowed.
- 3) Allowable load values in the table shall be reduced if repetitive member conditions are not achieved (20 percent for 3x2 and 13 percent for 4x2).
- 4) Loads noted in the table are limited by live load deflection and total load deflection as noted in the table.
- 5) Manufactured length refers to overall length that includes the possibility of a 5 1/2-inch bearing on both ends. To calculate the allowable "clear span" subtract 11 inches from the tabulated manufactured length.

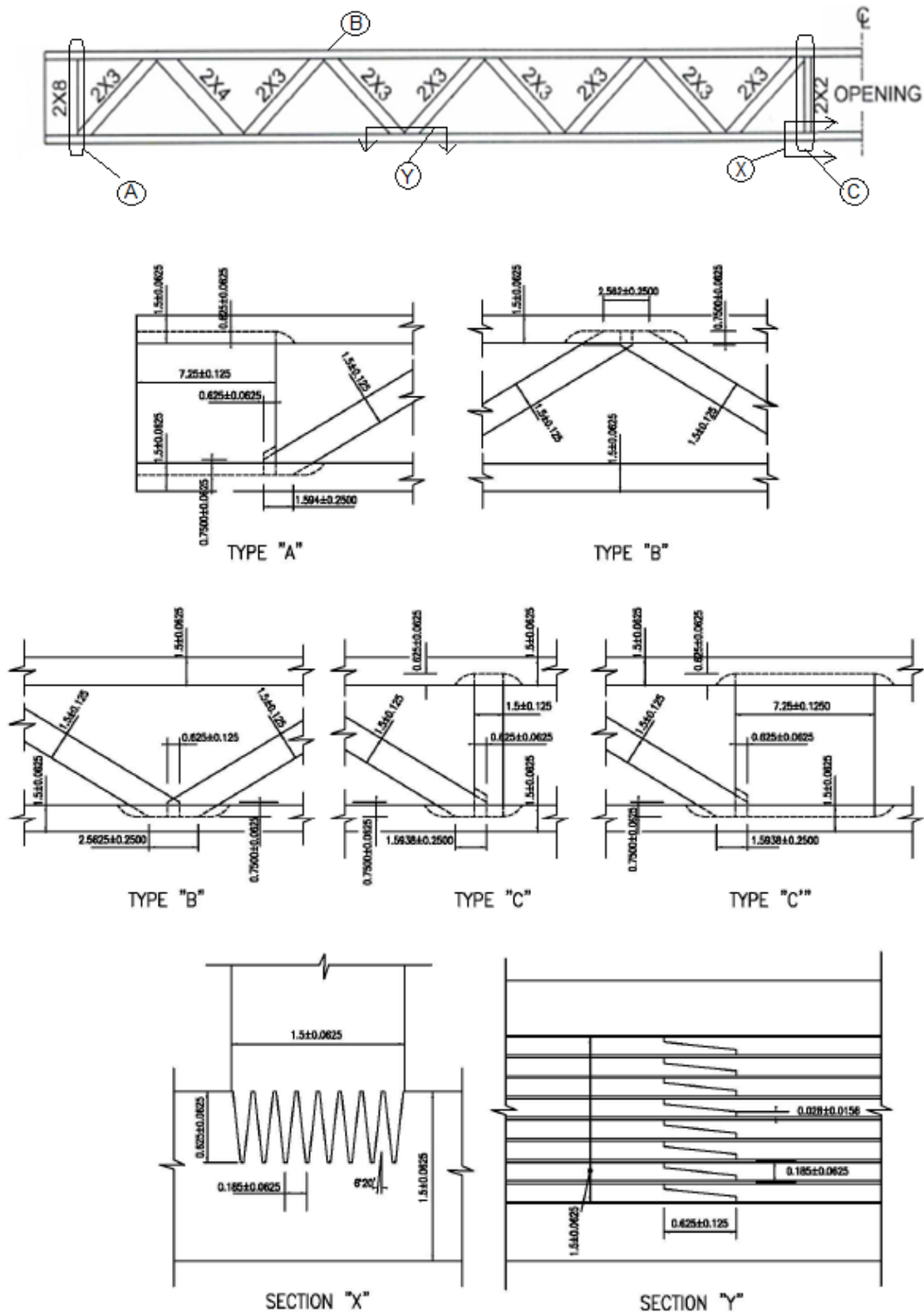
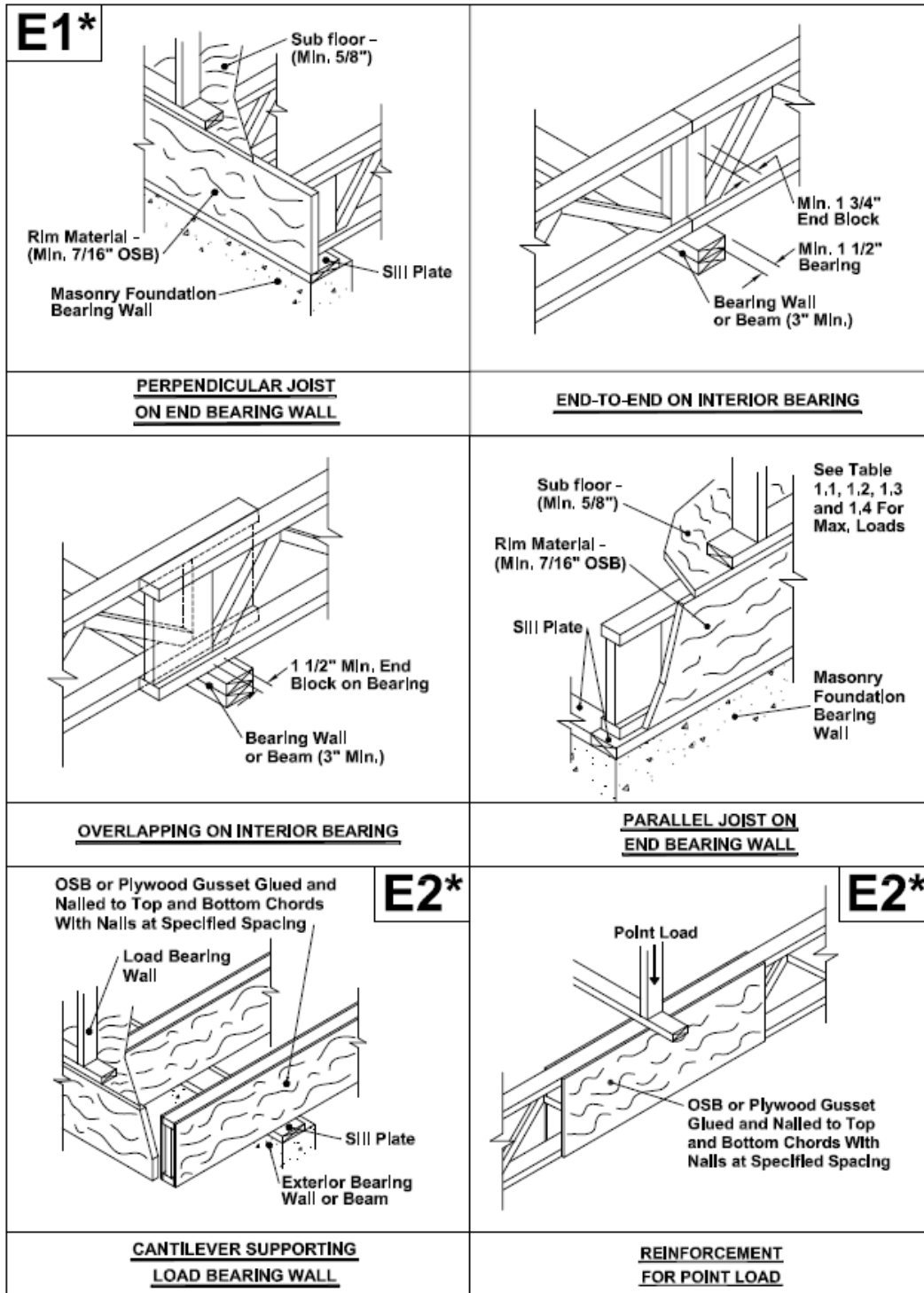


FIGURE 2 – TYPICAL OPEN JOIST 2000 WOOD TRUSS AND DETAILS  
(MEMBER SIZES VARY)



**E1\* = Engineering required to determine the thickness of rim material.**  
**E2\* = Engineering required to determine the length and thickness of gusset material.**

**FIGURE 3 – MOST COMMONLY USED DETAILS**  
 (See OJ 2000 Installation Instructions for more details)