

# **ICC-ES Evaluation Report**



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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES Section: 06 17 53—Shop-Fabricated Wood Trusses

#### **REPORT HOLDER:**

**BARRETTE STRUCTURAL DISTRIBUTION, INC.** 

#### **EVALUATION SUBJECT:**

#### **OPEN JOIST 2000—ENGINEERED WOOD PRODUCT**

#### ADDITIONAL LISTEE:

#### ALLEGHENY STRUCTURAL COMPONENTS

#### **1.0 EVALUATION SCOPE**

#### 1.1 Compliance with the following codes:

- 2021, 2018, 2015, 2012 and 2009 International Building Code<sup>®</sup> (IBC)
- 2021, 2018, 2015, 2012 and 2009 *International Residential Code*<sup>®</sup> (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)<sup>†</sup>

 $^{\dagger}\text{The ADIBC}$  is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

#### Property evaluated:

Structural

1.2 Evaluation to the following green code(s) and/or standards:

- 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 National Green Building Standard<sup>™</sup> (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

#### Attributes verified:

See Section 3.1.

### 2.0 USES

The Open Joist 2000 parallel chord trusses are used as structural repetitive members in roof or floor assemblies.

#### 3.0 DESCRIPTION

#### 3.1 General:

The Open Joist 2000 is a parallel chord truss, consisting of solid-sawn lumber top and bottom chords and diagonal and vertical web members. Chord members are **ESR-1035** *Reissued April 2022 Revised March 2023 This report is subject to renewal April 2024.* 

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continuous and are fabricated with finger-joints located along the joist. The minimum distance between chord finger-joints is 24 inches (610 mm). Web members are continuous, with no finger-joints. Each end of the web member is finger-joined into the top and bottom chords and glued with a resorcinol adhesive. Chord and web dimensions and grade are dependent upon joist depth, span and design loads. Open Joist 2000 trusses are manufactured to depths of 9<sup>3</sup>/<sub>8</sub>, 11<sup>7</sup>/<sub>8</sub>, 13, 14 and 16 inches (238, 301, 330, 356 and 406 mm). See Figures 2 and 3 for configuration details.

Grade-stamped lumber used to fabricate the trusses is reinspected at the manufacturing plant prior to its use. The moisture content is verified and individual lumber pieces are machined to pattern and redried to a moisture content of less than 16 percent.

The attributes of the wood trusses have been verified as conforming to the provisions of (i) CALGreen Sections A4.404.3 for efficient framing techniques; (ii) ICC 700-2015 Section 608.1(b), 11.608.1(b) and 12.1.(A).606.1(b); ICC 700-2015 Section 608.1(b), 11.608.1(b) and 12.1.(A).606.1(b); ICC 700-2012 Section 608.1(2), 12(A).608.1 for resource-efficient 11.608.1(2) and materials; and (iii) ICC 700-2008 Section 607.1(2) for resource-efficient materials. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

#### 3.2 Materials:

**3.2.1 Chord Members:** Top and bottom chords are made of nominal 2-by-3 or 2-by-4, visually graded spruce-pine-fir (SPF), No. 2 or higher, or machine-stress-rated (MSR) SPF 2100f-1.8E or MSR SPF 2400f-2.0E.

**3.2.2 Diagonal Web Members:** Diagonal webs are made of nominally 2-by-2, 2-by-3 or 2-by-4 visually graded lumber in accordance with the approved quality control manual.

**3.2.3 Vertical Web Members:** Both ends of the truss are manufactured with solid vertical web members made of nominal 2-by-8 SPF, No. 2 or higher, or a laminated wood panel manufactured from SPF solid-sawn lumber meeting the requirements specified in the approved quality control manual for the fabrication of Open Joist 2000 trusses.

**3.2.4 Adhesive:** The adhesive used to fabricate the Open Joist 2000 trusses is two-component modified resorcinol

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#### 4.0 DESIGN AND INSTALLATION

#### 4.1 Design:

The Open Joist 2000 trusses must be designed to resist loading requirements as specified in the tables shown in this report. Details for rim joists, bridging and blocking at the joist ends, to prevent roll-over and to transfer lateral and vertical loads, must be provided in accordance with the design drawings and calculations submitted to the building official.

Tables 1, 2, 3, 4 and 5 of this report provide design live load tables for truss depths of  $9^{3}/_{8}$ ,  $11^{7}/_{8}$ , 13, 14 and 16 inches (238, 301, 330, 356 and 406 mm), respectively. The tables are applicable only to uniformly loaded, simple-span joists, installed as repetitive members in floor or roof assemblies, where minimum  $5/_{8}$ -inch-thick (15.9 mm) sheathing is attached to the top flanges in accordance with the applicable code. The repetitive member factor,  $C_{r}$ , equals 1.0 when the Open Joist 2000 trusses are installed in accordance with this report.

#### 4.2 Installation:

Open Joist 2000 trusses must be delivered to the jobsite with an assembly plan and a set of installation instructions published by the manufacturer.

Trusses must be installed in an assembly of repetitive trusses, spaced not more than 24 inches (610 mm), not less than three in number, and joined by minimum  $^{5}/_{8}$ -inchthick (15.9 mm) sheathing attached to the top flanges in accordance with the applicable code.

Required bearing length must be the longer of the bearing length calculated based on the bearing capacity of the supports, or 1.5 inches (38 mm). The ends of the joist member are permitted to be field-cut to the desired length to a maximum adjustment of  $5^{1}/_{2}$  inches (140 mm) (see Figure 1, Detail B) at each end.

Maximum bearing permitted is such that the inside face of the bearing does not extend beyond 11 inches (279 mm) into the span from the end of an uncut joist (see Figure 1, Detail A), or beyond  $5^{1}/_{2}$  inches (140 mm) into the span from the end of a joist that has its end cut to the maximum allowed (see Figure 1, Detail B).

Manufacturer's recommendations relating to rim joists, bridging, blocking, and other framing details, that are not within the scope of this report, must be verified by engineering analysis.

#### 5.0 CONDITIONS OF USE

The Open Joist 2000 trusses described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** The trusses are installed in accordance with this report and the manufacturer's published installation instructions. The provisions of this report must govern should there be any conflict with the manufacturer's published installation instructions. Manufacturer's recommendations relating to rim joists, bridging or blocking that are not within the scope of this report must be verified by engineering analysis.

- **5.2** Design calculations, drawings, and details for specific applications, demonstrating compliance with this report, must be submitted to the code official. The calculations, drawings and details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Design must be in accordance with Tables 1 through 5 of this report and the applicable code.
- 5.3 Damaged or defective joists must not be used.
- **5.4** Open Joist 2000 trusses must be used in covered, dry conditions. Dry conditions of use are those conditions of use represented by sawn lumber in which the moisture content is less than 19 percent.
- **5.5** Cutting or notching of any member of the joist is prohibited, except that up to  $5^{1}/_{2}$  inches (140 mm) is permitted to be removed from each end of the joist (closed end).
- **5.6** Fire-retardant-treated or preservative-treated wood must not be used in the manufacture of these products.
- **5.7** Evaluation of the use of Open Joist 2000 trusses as a component of fire-resistance-rated roof or floor assemblies is outside the scope of this report.
- **5.8** Joists are produced by Open Joist 2000 Inc. or the additional listee specified in this report, under a quality control program with inspections by ICC-ES.

#### 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Prefabricated Parallel Chord Wood Trusses (AC224), dated October 2018 (editorially revised January 2023).

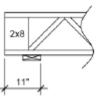
#### 7.0 IDENTIFICATION

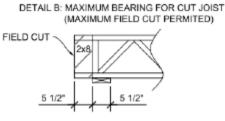
- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-1035) along with the name, registered trademark, or registered logo of the report holder or additional listee must be included in the product label.
- **7.2** In addition, the Open Joist 2000 must be identified with a stamp noting the plant location or identifier; the product name; and the production date.
- **7.3** The report holder's contact information is the following:

BARRETTE STRUCTURAL DISTRIBUTION, INC. 555 RANG SAINT-MALO TROIS-RIVIERES, QUEBEC G8V 0A8 CANADA (819) 374-6061 www.openjoist2000.com

**7.4** The Additional Listee's contact information is the following:

ALLEGHENY STRUCTURAL COMPONENTS 3778 ONEIDA VALLEY ROAD EMLENTON, PENNSYLVANIA 16373 (724) 867-1100 www.alleghenystructural.com DETAIL A: MAXIMUM BEARING FOR UNCUT JOIST







#### OPEN JOIST TABLE 1 - ALLOWABLE LIVE LOAD ( PSF ) FOR OPEN JOIST 2000<sup>(1) (4)</sup> $\Delta t = L / 240^{(3)}$ TABLE 1a $\Delta L = L / 360$ JOIST DEPTH : 9 3/8" DEAD LOAD = 15 DFAD + OAD = 20DEAD LOAD = 25 DEAD LOAD = 30 CHORDS MANUE SPACING o.c. SPACING n.c SPACING o.c. SPACING o.c. SPECIES / GRADE 19.2" SIZE LENGTH 12" 16" 19.2" 2.4 16" 16" 19.21 24' 16" 19.2" 3х SPF #2 - 97 110 82 3 x 2 SPE #2 11:0" 3 x 2 SPF #2 12'-0 1.47 ÉÉ 3 x 2 SPE #2 13'-0 3 x 2 SPF #2 14'-0' 3x2 SPF #2 15:0 3 x 2 SPF #2 16'-0 4 x 2 SPF #2 17-0 4 x 1 PF 21006-1.8 4 x 2 SPF 2100f-1.8E 19'-0' 4 x 2 SPE 2100f-1.8E 20'-0 Δ t = L / 240<sup>(3)</sup> **TABLE 1b** $\Delta L = L/480$ JOIST DEPTH : 9 3/8" DEAD LOAD = 15DEAD LOAD = 20 DEAD LOAD = 25 DEAD LOAD = 30 CHORDS MANUF SPACING o.c. SPACING o.c. SPACING o.c. SPACING o.c. 12' SIZE SPECIES / GRADE LENGTH 12" 16' 19.2" 16" 19.2" 16" 19.2" 24' 16' 19.2" 3 x 2 SPF #2 10'-0 3 x 2 SPE #2 11.0 3 x 2 SPF #2 12'-0 3 x 2 SPF #2 13'-0 3 x 2 SPF #2 14'-0 4 x 2 SPF #2 15'-0 4 x 2 SPF #2 16'-0 17'-0 4 x 2 SPF 2100f-1.8 18'-0 4 x 2 SPF 2100f-1.8E SPF 2100f-1.88 19'-0 4 x 2 30 25 40 30 4 x 2 SPF 2100f-1.8E 20'-0

(1) Table is based on the assumption multiple joists ( repetitive members ) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.

(2) 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 )

(3) Loads noted in the table are limited by live load deflection (  $\Delta$  L) and total load deflection (  $\Delta$  t )

(4) "Manufactured length" refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable "clear span" substract 11 inches from the tabulated manufactured length.

(5) SI conversions : 1 inch = 25,4 mm 1 foot = 304,8 mm 1 psf = 47,9 N / m<sup>2</sup>



# TABLE 2 - ALLOWABLE LIVE LOAD ( PSF ) FOR OPEN JOIST 2000 $^{(1)}\,^{(4)}$

# **TABLE 2a** $\Delta L = L / 360 \quad \Delta t = L / 240^{(3)}$

JOIST DE	PTH : 11 7 <i>1</i> 8"		[	DEAD L	0AD = '	15	ſ	DEAD L	0AD = 2	20	D	EAD L	0AD = 2	5	0	DEAD L	OAD = 3	10
	CHORDS	MANUF		SPACI	NG o.c.			SPAC	NG o.c.			SPACI	NG o.c.			SPAC	NG o.c.	
SZE	SPECIES / GRADE	LENGTH	12"	16"	19.2"	24"	12"	16 "	19.2"	24"	12"	16"	19.2"	24 "	12"	16"	19.2"	24"
3x2	SPF #2	10'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3x2	SPF #2	11'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84
3x2	SPF #2	12'-0"	188	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72
3x2	SPF #2	13'-0"	164	119	97	75	159	114	92	70	154	109	87	65	149	104	82	60
3x2	SPF #2	14'-0"	145	105	85	65	140	100	80	60	135	95	75	55	130	90	70	50
3x2	SPF #2	15'-0"	120	90	75	57	120	88	70	52	119	83	65	47	114	78	60	42
3x2	SPF #2	16'-0"	102	77	64	49	102	76	60	44	102	71	55	39	98	66	50	34
3x2	SPF #2	17'-0"	88	66	55	43	88	66	52	38	88	61	47	33	85	56	42	28
4 x 2	SPF #2	18'-0"	97	69	55	41	92	64	50	36	87	59	45	31	82	54	40	26
4 x 2	SPF #2	19'-0"	84	59	47	35	79	54	42	30	74	49	37	25	69	44	32	20
4×2	SPF 2100f-1.8E	20'-0"	93	70	58	43	93	68	53	38	92	63	48	33	87	58	43	28
4 x 2	SPF 2100f-1.8E	21'-0°	78	59	49	39	78	59	47	34	78	55	42	29	77	50	37	24
4 x 2	SPF 2100f-1.8E	22'-0"	67	50	42	34	67	50	42	30	67	49	37	25	67	44	32	20
4 x 2	SPF 2100f-1.8E	23'-0"	59	44	37	30	59	44	37	28	59	44	35	23	59	42	30	18

## **TABLE 2b** $\Delta L = L / 480$ $\Delta t = L / 240^{(3)}$

OIST DE	PTH : 11 7 <i>1</i> 8"		[	EAD L	OAD = 1	15	ſ	DEAD L	0AD = 2	20	D	EAD L	0AD = 2	25	0	DEAD L	0 <b>AD</b> = 3	10
	CHORDS	MANUF		SPAC	NG o.c.			SPAC	NG o.c.			SPACI	NG o.c.			SPACI	NG o.c.	
SIZE	SPECIES / GRADE	LENGTH	12"	16"	19.2"	24"	12"	16 "	19,2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3x2	SPF #2	10-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3×2	SPF #2	11'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84
3 x 2	SPF #2	12'-0"	179	134	112	87	179	132	107	82	178	127	102	77	173	122	97	72
3x2	SPF #2	13'-0"	141	106	88	70	141	106	88	70	141	106	87	65	141	104	82	60
3x2	SPF #2	14'-0"	115	86	72	58	115	86	72	58	115	86	72	55	115	86	70	50
3x2	SPF #2	15'-0"	90	67	56	45	90	67	56	45	90	67	56	45	90	67	56	42
3x2	SPF #2	16'-0"	77	58	48	38	77	58	48	38	77	58	48	38	77	58	48	34
3x2	SPF #2	17'-0"	66	49	41	33	66	49	41	33	66	49	41	33	66	49	41	28
4 x 2	SPF #2	18'-0"	78	59	49	39	78	59	49	36	78	59	45	31	78	54	40	26
4 x 2	SPF #2	19'-0"	67	50	42	34	67	50	42	30	67	49	37	25	67	44	32	20
4 x 2	SPF 2100f-1.8E	20'-0"	70	53	44	35	70	53	44	35	70	63	44	33	70	53	43	28
4 x 2	SPF 2100f-1.8E	21'-0"	59	44	37	30	59	44	37	30	59	44	37	29	59	44	37	24
4 x 2	SPF 2100f-1.8E	22'-0"	51	38	32	26	51	38	32	26	51	38	32	25	51	36	32	20
4 x 2	SPF 2100f-1.8E	23'-0"	45	34	28	22	45	34	28	22	45	34	28	22	45	34	28	18

(1) Table is based on the assumption multiple joists (repetitive members) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.

(2) 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)

(3) Loads noted in the table are limited by live load deflection (  $\Delta$  L ) and total load deflection (  $\Delta$  t )

(4) "Manufactured length" refers to overall length which includes the possibility of a 51/2-inch bearing on both ends. To compute the allowable "clear span" substract 11 inches from the tabulated manufactured length.

(5) SI conversions : 1 inch = 25,4 mm - 1 foot = 304  $\beta$  mm - 1 psf = 47  $\beta$  N / m^2 -



# TABLE 3 - ALLOWABLE LIVE LOAD ( PSF ) FOR OPEN JOIST 2000 $^{(1)\,(4)}$

## **TABLE 3a** $\Delta L = L / 360 \quad \Delta t = L / 240^{(3)}$

JOIST DE	PTH : 13"		C	EAD L	0AD = 1	15	[	DEAD L	0AD = 2	20	0	EAD L	0AD = 2	25	τ	EAD L	0AD = 3	10
	CHORDS	MANUF	<b> </b>	SPACI	NG o.c.			SPACI	NG o.c.			SPAC	NG o.c.			SPAC	NG o.c.	
SIZE	SPECIES / GRADE	LENGTH	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16 "	19.2"	24"	12"	16"	19.2"	24"
3 x 2	SPF #2	10'-0"	273	201	165	129	268	196	160	124	263	191	155	119	258	186	150	114
3 x 2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3 x 2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84
3x2	SPF #2	13'-0"	188	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72
3 x 2	SPF #2	14'-0"	169	123	100	77	164	118	95	72	159	113	90	67	154	108	85	62
3 x 2	SPF #2	15'-0"	150	109	88	67	145	104	83	62	140	99	78	57	135	94	73	52
3 x 2	SPF #2	16'-0"	128	93	75	57	124	88	70	52	119	83	65	47	114	78	60	42
3 x 2	SPF #2	17'-0"	106	79	65	49	106	76	60	44	103	71	55	39	98	66	50	34
3 x 2	SPF #2	18'-0"	91	68	57	43	91	66	52	38	90	61	47	33	85	56	42	28
4 x 2	SPF #2	19'-0"	102	73	58	43	97	68	53	38	92	63	48	33	87	58	43	28
4 x 2	SPF #2	20'-0"	91	64	51	38	86	59	46	33	81	54	41	28	76	49	36	23
4 x 2	SPF #2	21'-0"	80	59	47	35	79	54	42	30	74	49	37	25	69	44	32	20
4 x 2	SPF 2100f-1.8E	22'-0"	83	62	52	39	83	62	48	34	83	57	43	29	79	52	38	24
4 x 2	SPF 2100f-1.8E	23'-0"	74	55	46	36	74	55	44	31	74	52	39	26	72	47	34	21
4 x 2	SPF 2100f-1.8E	24'-0"	64	48	40	32	64	48	40	28	64	47	35	23	64	42	30	18
4 x 2	SPF 2100f-1.8E	25'-0"	58	43	36	29	58	43	36	26	58	43	32	21	58	38	27	16

## **TABLE 3b** $\Delta L = L / 480 \quad \Delta t = L / 240^{(3)}$

JOIST DE	PTH : 13"		τ	)EAD L	OAD =	15	ſ	)EAD L	0AD = 2	20	D	EAD L	OAD = 2	25	ſ	EAD L	OAD = 3	30
	CHORDS	MANUF		SPAC	NG o.c.			SPACI	NG o.c.		<b> </b>	SPAC	NG o.c.			SPAC	NG o.c.	
SIZE	SPECIES / GRADE	LENGTH	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
3×2	SPF #2	10'-0"	273	201	165	129	268	196	160	124	263	191	155	119	258	186	150	114
3 x 2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3 x 2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84
3 x 2	SPF #2	13'-0"	171	128	107	86	171	128	107	82	171	127	102	77	171	122	97	72
3 x 2	SPF #2	14'-0"	142	107	89	71	142	107	89	71	142	107	89	67	142	107	85	62
3 x 2	SPF #2	15'-0"	114	85	71	57	114	85	71	57	114	85	71	57	114	85	71	52
3 x 2	SPF #2	16'-0"	96	72	60	48	96	72	60	48	96	72	60	47	96	72	60	42
3x2	SPF #2	17'-0"	80	60	50	40	80	60	50	40	80	60	50	39	80	60	50	34
3×2	SPF #2	18'-0"	69	52	43	34	69	52	43	34	69	52	43	33	69	52	42	28
4 x 2	SPF #2	19'-0"	80	60	50	40	80	60	50	38	80	60	48	33	80	58	43	28
4 x 2	SPF #2	20'-0"	69	52	43	34	69	52	43	33	69	52	41	28	69	49	36	23
4 x 2	SPF 2100f-1.8E	21'-0"	72	54	45	36	72	54	45	36	72	54	45	33	72	54	43	28
4 x 2	SPF 2100f-1.8E	22'-0*	64	48	40	32	64	48	40	32	64	48	40	29	64	48	38	24
4 x 2	SPF 2100f-1.8E	23'-0"	56	42	35	28	56	42	35	28	56	42	35	26	56	42	34	21
4 x 2	SPF 2100f-1.8E	24'-0"	48	36	30	24	48	36	30	24	48	36	30	23	48	36	30	18
4 x 2	SPF 2100f-1.8E	25'-0"	43	32	27	22	43	32	27	22	43	32	27	21	43	32	27	16

(1) Table is based on the assumption multiple joists ( repetitive members ) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.

(2) 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 )

(3) Loads noted in the table are limited by live load deflection (  $\,\Delta\,L$  ) and total load deflection (  $\Delta\,t$  )

(4) "Manufactured length" refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable "clear span" substract 11 inches from the tabulated manufactured length.

(5) SI conversions : 1 in ch = 25,4 mm 1 foot = 304,8 mm 1 psf = 47,9 N / m<sup>2</sup>



# TABLE 4 - ALLOWABLE LIVE LOAD ( PSF ) FOR OPEN JOIST 2000 (1) (4)

OIST DE	PTH : 14"		1	DEAD L	0AD = 1	15	(	DEAD L	0AD = 2	20	C	EAD L	0AD = 2	25	0	DEAD L	0AD = 3	30
	CHORDS	MANUF		SPAC	NG o.c.			SPACI	NG o.c.			SPACI	NG o.c.			SPACI	NG o.c.	
SIZE	SPECIES / GRADE	LENGTH	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16 "	19.2"	24"	12"	16"	19,2"	ź
3x2	SPF #2	10'-0"	273	201	165	129	268	196	160	124	263	191	155	119	258	186	150	
3x2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	Г
3 x 2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	Г
3 x 2	SPF #2	13'-0"	188	137	112	87	183	132	107	82	178	127	102	77	173	122	97	Γ
3 x 2	SPF #2	14'-0"	169	123	100	77	164	118	95	72	159	113	90	67	154	108	85	Γ
3x2	SPF #2	15'-0"	150	109	88	67	145	104	83	62	140	99	78	57	135	94	73	Γ
3 x 2	SPF #2	16'-0"	128	93	75	57	124	88	70	52	119	83	65	47	114	78	60	
3 x 2	SPF #2	17'-0"	106	79	65	49	106	76	60	44	103	71	55	39	98	66	50	Γ
3 x 2	SPF #2	18'-0"	91	68	57	43	91	66	52	38	90	61	47	33	85	56	42	
4 x 2	SPF #2	19'-0"	102	73	58	43	97	68	53	38	92	63	48	33	87	58	43	
4 x 2	SPF #2	20'-0"	91	64	51	38	86	59	46	33	81	54	41	28	76	49	36	
4 x 2	SPF #2	21'-0"	80	59	47	35	79	54	42	30	74	49	37	25	69	44	32	
4 x 2	SPF 2100f-1.8E	22'-0"	83	62	52	39	83	62	48	34	83	57	43	29	79	52	38	
4 x 2	SPF 2100f-1.8E	23'-0"	74	55	46	36	74	55	44	31	74	52	39	26	72	47	34	
4 x 2	SPF 2100f-1.8E	24'-0"	64	48	40	32	64	48	40	28	64	47	35	23	64	42	30	Γ
4 x 2	SPF 2100f-1.8E	25'-0"	58	43	36	29	58	43	36	26	58	43	32	21	- 58	38	27	Γ

### **TABLE 4b** $\Delta L = L / 480$ $\Delta t = L / 240^{(3)}$

JOIST DE	PTH : 14"		C	EAD L	0AD = 1	15	C	DEAD L	0AD = 2	20	D	EAD L	0AD = 2	25	ſ	EAD L	0AD = 3	30
	CHORDS	MANUF		SPAC	NG ø.c.			SPACI	NG o.c.			SPACI	NG o.c.			SPACI	NG o.c.	
SIZE	SPECIES / GRADE	LENGTH	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16 "	19.2"	24"	12"	16"	19.2"	24"
3 x 2	SPF #2	10'-0"	273	201	165	129	268	196	160	124	263	191	155	119	258	186	150	114
3x2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3 x 2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84
3 x 2	SPF #2	13'-0"	171	128	107	86	171	128	107	82	171	127	102	77	171	122	97	72
3 x 2	SPF #2	14'-0"	142	107	89	71	142	107	89	71	142	107	89	67	142	107	85	62
3 x 2	SPF #2	15'-0"	114	85	71	57	114	85	71	57	114	85	71	57	114	85	71	52
3x2	SPF #2	16'-0"	96	72	60	48	96	72	60	48	96	72	60	47	96	72	60	42
3x2	SPF #2	17'-0"	80	60	50	40	80	60	50	40	80	60	50	39	80	60	50	34
3 x 2	SPF #2	18'-0"	69	52	43	34	69	52	43	34	69	52	43	33	69	52	42	28
4 x 2	SPF #2	19'-0"	80	60	50	40	80	60	50	38	80	60	48	33	80	58	43	28
4 x 2	SPF #2	20'-0"	69	52	43	34	69	52	43	33	69	52	41	28	69	49	36	23
4 x 2	SPF 2100f-1.8E	21'-0"	72	54	45	36	72	54	45	36	72	54	45	33	72	54	43	28
4 x 2	SPF 2100f-1.8E	22'-0"	64	48	40	32	64	48	40	32	64	48	40	29	64	48	38	24
4 x 2	SPF 2100f-1.8E	23'-0"	56	42	35	28	56	42	35	28	56	42	35	26	56	42	34	21
4 x 2	SPF 2100f-1.8E	24'-0"	48	36	30	24	48	36	30	24	48	36	30	23	48	36	30	18
4 x 2	SPF 2100f-1.8E	25'-0"	43	32	27	22	43	32	27	22	43	32	27	21	43	32	27	16

(1) Table is based on the assumption multiple joists ( repetitive members ) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges.

No increase in allowable load for repetitive member use or duration of load allowed.

(2) 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)

(3) Loads noted in the table are limited by live load deflection (  $\,\Delta\,L$  ) and total load deflection (  $\Delta\,t$  )

(4) "Manufactured length" refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable "clear span" substract 11 inches from the tabulated manufactured length.

(5) SI conversions : 1 in ch = 25,4 mm 1 foot = 304,8 mm 1 p sf = 47,9 N / m<sup>2</sup>



# TABLE 5 - ALLOWABLE LIVE LOAD ( PSF ) FOR OPEN JOIST 2000 $^{(1)\,(4)}$

DIST DE	PTH : 16"		1	DEAD L	OAD = '	15		DEADL	DAD = 2	20	1	DEADL	DAD = 2	25		EAD L	OAD =	30
	CHORDS	MANUF		SPAC	NG o.c.			SPACI	NG o.c.			SPACI	NG o.c.			SPACI	NG o.c	
SIZE	SPECIES / GRADE	LENGTH	12"	16"	19,2"	24"	12"	16"	19,2''	24"	12"	16"	19,2"	24"	12"	16"	19,2"	24
3 × 2	SPF #2	10'-0"	281	207	170	133	276	202	165	128	271	197	160	123	266	192	155	11
3 × 2	SPF #2	11'-0"	241	177	145	113	236	172	140	108	231	167	135	103	226	162	130	98
3 x 2	SPF #2	12'-0"	212	155	127	99	207	150	122	94	202	145	117	89	197	140	112	84
3 × 2	SPF #2	13'-0"	188	137	112	87	183	132	107	82	178	127	102	77	173	122	97	72
3 x 2	SPF #2	14'-0"	169	123	100	77	164	118	95	72	159	113	90	67	154	108	85	62
3 x 2	SPF #2	15'-0"	153	111	90	69	148	106	85	64	143	101	80	59	138	96	75	54
3 x 2	SPF #2	16'-0"	145	105	85	65	140	100	80	60	135	95	75	55	130	90	70	50
3 × 2	SPF #2	17'-0"	142	103	83	63	137	98	78	58	132	93	73	53	127	88	68	48
4 x 2	SPF #2	18'-0"	169	123	100	77	164	118	95	72	159	113	90	67	154	108	85	62
4 × 2	SPF #2	19'-0"	161	117	95	73	156	112	90	68	151	107	85	63	146	102	80	58
4 × 2	SPF #2	20'-0"	154	112	91	70	149	107	86	65	144	102	81	60	139	97	76	55
4 × 2	SPF #2	21'-0"	148	107	87	67	143	102	82	62	138	97	77	57	133	92	72	52
4 x 2	SPF #2	22'-0"	137	99	80	61	132	94	75	56	127	89	70	51	122	84	65	46
4 × 2	SPF 2100f-1.8E	23'-0"	127	91	74	56	122	86	69	51	117	81	64	46	112	76	59	4
4 x 2	SPF 2100f-1.8E	24'-0"	104	78	65	52	102	76	64	47	94	70	59	42	86	64	54	37
4 x 2	SPF 2100f-1.8E	25'-0" 26'-0"	96 83	72 62	60 52	47	92 81	69 61	58 51	42 37	84 73	63 55	53 46	37 32	76 65	57 49	48	3:
4 x 2 4 x 2	SPF 2100f-1.8E SPF 2400f-2.0E	26-0"	83	62	52	42	81	61	49	37	73	55	46	32	65	49	41 39	2
4 x 2	SPF 2400F2.0E	28'-0"	75	56	47	36	73	55	49	31	65	49	39	26	60	49	34	2
	3FT 2400F2.0L	20-0	15	50	47			55	44	51		40	55	20	00	45		_
	SPE 2400£2.0E	20'-0"	64	4.8	40	32	64	4.9	20	27	64	46	2.4	22	56	4.1	20	1
1 x 2	SPF 2400F.2.0E SPF 2400F.2.0E δb ΔL = L / 480	29'-0'' 30'-0'' $\Delta t = L$	64 56 / 240	48 42 (3)	40 35	32 28	64 56	48 42	39 35	27 24	64 56	46 41	34 30	22 19	56 48	41 36	29 25	_
	SPF 2400f-2.0E	30'-0"	56 / 240	42 (3)		28	56		35	24	56		30	19	48	36		17 14 30
4 x 2 ABLE (	SPF 2400F2.0E	30'-0"	56 / 240	42 (3) DEAD L	35	28 1 <b>5</b>	56	42 DEAD LO	35	24	56	41 DEAD L	30	19	48	36 DEAD L	25	14 30
4 x 2	SPF 24001-2.0E 5b ΔL = L / 480 SPTH : 16"	30'-0" ∆ t = L	56 / 240	42 (3) DEAD L	35 OAD = 1	28 1 <b>5</b>	56	42 DEAD LO	35 DAD = 2	24	56	41 DEAD L	30 DAD = 2	19	48	36 DEAD L	25 OAD = 3	1 <sup>2</sup> 30
4×2 ABLE (	SPF 2400F2.0E 5b Δ L = L / 480 SPTH : 16" CHORDS	30'-0'' $\Delta t = L$ MANUF	/ 240	42 (3) DEAD L SPAC	35 OAD = 1	28 15	56	42 DEAD LO SPACI	35 DAD = 2 NG o.c.	24	56	41 DEAD LO SPACI	30 DAD = 2 NG o.c.	19 2 <b>5</b>	48	36 DEAD L	25 OAD = : NG o.c.	14 30
4 x 2 BLE ( IST DE SIZE	SPF 2400F2.0E 5b ∆ L = L / 480 SPTH : 16" CHORDS SPECIES / GRADE SPF #2 SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0"	56 / 240 12" 281 241	42 (3) DEAD L SPAC 16'' 207 177	35 OAD = - NG o.c. 19,2" 170 145	28 15 24" 133 113	56 [ 12"	42 DEAD LO SPACI 16" 202 172	35 DAD = 2 NG o.c. 19,2''	24 20 24" 128 108	56 12" 271 231	41 DEAD LI SPACI 16" 197 167	30 DAD = 2 NG o.c. 19,2"	19 25 24"	48 12" 266 226	36 DEAD L SPACI 16'' 192 162	25 OAD = 3 NG o.c. 19,2"	30 24 98
4 x 2 BLE IST DE SIZE 3 x 2 3 x 2 3 x 2 3 x 2	SPF 2400F2.0E           5b         ∆ L = L / 480           SPTH : 16"           CHORDS           SPECIES / GRADE           SPF #2           SPF #2           SPF #2           SPF #2           SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0"	56 / 240 12" 281 241 212	42 (3) DEAD L SPACI 16" 207 177 155	35 OAD = 7 NG o.c. 19,2" 170 145 127	28 15 24" 133 113 99	56 12" 276	42 DEAD LC SPACII 16" 202 172 150	35 DAD = 2 NG o.c. 19,2'' 165 140 122	24 20 24" 128 108 94	56 12" 271 231 202	41 DEAD L SPACI 16" 197 167 145	30 DAD = 2 NG o.c. 19,2" 160 135 117	19 25 24" 123 103 89	48 <b>12''</b> 266 226 197	36 DEAD L SPACI 16" 192 162 140	25 OAD = : NG o.c. 19,2" 155 130 112	30 24 93 84
4 x 2 <b>BLE (</b> <b>SIZE</b> 3 x 2 3 x 2 3 x 2 3 x 2 3 x 2	SPF 2400F2.0E           5b         ∆ L = L / 480           SPTH : 16"           CHORDS           SPECIES / GRADE           SPF #2	$\frac{30^{-}0^{\circ}}{\Delta t} = L$ MANUF LENGTH 10^{-}0^{\circ} 11^{-}0^{\circ} 13^{-}0^{\circ}	56 / 240 12" 281 241 212 188	42 (3) DEAD L SPACI 16'' 207 177 155 137	35 OAD = 7 NG o.c. 19,2" 170 145 127 112	28 15 24" 133 113 99 87	56 12" 276 236 207 183	42 DEAD LC SPACII 16" 202 172 150 132	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107	24 20 24" 128 108 94 82	56 <b>12''</b> 271 231 202 178	41 <b>SPACI</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b> <b>10</b>	30 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2"</b> 160 135 117 102	19 25 24" 123 103 89 77	48 <b>12''</b> 266 226 197 173	36 DEAD L SPACI 16" 192 162 140 122	25 OAD = : NG o.c. 19,2" 155 130 112 97	30 24 98 84 71
4 x 2 ABLE { NST DE 3 x 2 3 x 2	SPF 2400F2.0E SPF 2400F2.0E SPF #2 SPF #2 SPF #2 SPF #2 SPF #2 SPF #2 SPF #2 SPF #2 SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0" 13'-0" 14'-0"	56 / 240 12" 281 241 212 188 169	42 (3) DEAD L 5PAC 16" 207 177 155 137 123	35 OAD = 7 NG o.c. 19,2" 170 145 127 112 100	28 15 133 113 99 87 77	56 12" 276 236 207 183 164	42 DEAD LO SPACI 16" 202 172 150 132 118	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107 95	24 24" 128 108 94 82 72	56 <b>12''</b> 271 231 202 178 159	41 <b>SPACI</b> <b>107</b> 167 145 127 113	30 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2"</b> 160 135 117 102 90	19 25 24" 123 103 89 77 67	48 <b>12''</b> 266 226 197 173 154	36 <b>SPACI</b> 192 162 140 122 108	25 OAD = : NG o.c. 19,2" 155 130 112 97 85	30
4 x 2 BLE IST DE 3 x 2 3 x	SPF 2400F2.0E           5b         ∆ L = L / 480           PTH : 16"           CHORDS           SPECES / GRADE           SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0" 13'-0" 14'-0" 15'-0"	56 / 240 12" 281 241 212 188 169 153	42 (3) DEAD L SPAC 16" 207 177 155 137 123 111	35 OAD = 7 NG o.c. 19,2" 170 145 127 112 100 90	28 15 133 113 99 87 77 69	56 12" 276 236 207 183 164 148	42 DEAD LO SPACI 16" 202 172 150 132 118 106	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107 95 85	24 24" 128 108 94 82 72 64	56 <b>12''</b> 271 231 202 178 159 143	41 <b>SPACI</b> <b>16</b> " 197 167 145 127 113 101	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80	19 25 24" 123 103 89 77 67 59	48 <b>12''</b> 266 226 197 173 154 138	36 DEAD L SPACI 16" 192 162 140 122 108 96	25 <b>NG o.c.</b> <b>19,2''</b> 155 130 112 97 85 75	30 30
4 x 2 BLE SIZE 3 x 2 3 x 2	SPF 2400F2.0E           5b         ∆ L = L / 480           SPTH : 16"           CHORDS           SPF #2	$\begin{array}{c} 30^{\circ}-0^{\circ}\\ \hline & \\ \Delta \ t = \ L\\ \hline \\ \hline \\ \hline \\ LENGTH \\ 10^{\circ}-0^{\circ}\\ 11^{\circ}-0^{\circ}\\ 12^{\circ}-0^{\circ}\\ 13^{\circ}-0^{\circ}\\ 14^{\circ}-0^{\circ}\\ 15^{\circ}-0^{\circ}\\ 16^{\circ}-0^{\circ} \end{array}$	56 / 240 12" 281 241 212 188 169 153 145	42 (3) <b>DEAD L</b> <b>SPAC</b> <b>16''</b> 207 177 155 137 123 111 105	35 OAD = 7 NG o.c. 19,2" 170 145 127 112 100 90 85	28 <b>15</b> <b>24''</b> 133 113 99 87 77 69 65	56 12" 276 236 207 183 164 148 140	42 <b>SPACI</b> <b>16</b> " 202 172 150 132 118 106 100	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107 95 85 80	24 20 24" 128 108 94 82 72 64 60	56 <b>12"</b> 271 231 202 178 159 143 135	41 <b>SPACI</b> <b>16</b> " 197 167 145 127 113 101 95	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75	19 25 123 103 89 77 67 59 55	48 <b>12''</b> 266 226 197 173 154 138 130	36 <b>SPACI</b> <b>16</b> " 192 162 140 122 108 96 90	25 <b>NG o.c.</b> <b>19,2''</b> 155 130 112 97 85 75 70	<b>30</b> <b>24</b> 111 9: 8: 7: 6: 5: 5:
4 x 2 <b>BLE</b> <b>SIZE</b> 3 x 2 3	SPF 2400F2.0E           5b         ∆ L = L / 480           SPTH : 16"           CHORDS           SPF #2	30'-0" △ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0" 13'-0" 14'-0" 15'-0" 16'-0" 17'-0"	56 / 240 12" 281 241 212 188 169 153 145 142	42 (3) <b>DEAD L</b> <b>SPAC</b> 16" 207 177 155 137 123 111 105 103	35 OAD = 7 NG o.c. 19,2" 170 145 127 112 100 90 85 83	28 <b>24''</b> 133 113 99 87 77 69 65 63	56 12" 276 236 207 183 164 148 140 137	42 <b>SPACI</b> <b>16''</b> 202 172 150 132 118 106 100 98	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107 95 85 80 78	24 24" 128 108 94 82 72 64 60 58	56 <b>12"</b> 271 231 202 178 159 143 135 132	41 <b>SPACI</b> <b>197</b> 167 145 127 113 101 95 93	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73	19 25 123 103 89 77 67 59 55 53	48 <b>12''</b> 266 226 197 173 154 138 130 127	36 <b>SPACI</b> <b>192</b> 162 140 122 108 96 90 88	25 <b>NG o.c.</b> <b>19,2''</b> 155 130 112 97 85 75 70 68	<b>30</b> <b>2</b> 4 111 9 8.8 7 6 5.5 5 4
4 x 2 <b>BLE</b> { <b>SIZE</b> 3 x 2 3 x 2 4 x 2 3 x 2 3 x 2 4 x 2 3 x 2 3 x 2 4 x 2 3 x 2	SPF 2400F2.0E           5b         ∆ L = L / 480           SPTH : 16"           CHORDS           SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0" 13'-0" 14'-0" 15'-0" 16'-0" 18'-0"	56 / 240 12" 281 241 212 188 169 153 145 142 169	42 (3) <b>DEAD L</b> <b>SPAC</b> 16" 207 177 155 137 123 111 105 103 123	35 OAD = - 19,2" 170 145 127 112 100 90 85 83 100	28 <b>24"</b> 133 113 99 87 77 69 65 63 77	56 <b>12"</b> 276 236 207 183 164 140 137 164	42 <b>SPACI</b> 16" 202 172 150 132 118 106 100 98 118	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107 95 85 80 78 95	24 24" 128 108 94 82 72 64 60 58 72	56 <b>12''</b> 271 231 202 178 159 143 135 132 159	41 <b>SPACI</b> <b>197</b> 167 145 127 113 101 95 93 113	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90	25 24" 123 103 89 77 67 59 55 53 67	48 <b>12''</b> 266 226 197 173 154 138 130 127 154	36 DEAD L SPACI 16" 192 162 140 122 108 96 90 88 108	25 <b>NG o.c.</b> <b>19,2"</b> 155 130 112 97 85 75 70 68 85	<b>30</b> <b>2</b> 4 111 9 8 8 7 7 6 5 5 5 4 4 6
4 x 2 <b>BLE</b> { <b>SIZE</b> 3 x 2 3 x 2 4 x 2 4 x 2	SPF 2400F2.0E           SPF 2400F2.0E           SPF           CHORDS           SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0" 13'-0" 14'-0" 15'-0" 16'-0" 16'-0" 18'-0" 19'-0"	56 / 240 12" 281 241 212 188 169 153 145 142 169 144	42 (3) <b>DEAD L</b> <b>SPAC</b> <b>16</b> " 207 177 155 137 123 111 105 103 123 108	35 OAD = 7 NG o.c. 19,2" 170 145 127 112 100 90 85 83 100 90	28 <b>24</b> " 133 113 99 87 77 69 65 63 77 73	56 <b>12"</b> 276 236 207 183 164 148 140 137 164 144	42 <b>SPACI</b> 16" 202 172 150 132 118 106 100 98 118 108	35 <b>DAD = 2</b> <b>NG o.c.</b> <b>19,2''</b> 165 140 122 107 95 85 80 78 95 90	24 24" 128 108 94 82 72 64 60 58 72 68	56 <b>12''</b> 271 231 202 178 159 143 135 132 159 139	41 <b>SPACI</b> <b>16</b> " 197 167 145 127 113 101 95 93 113 103	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90 85	24" 24" 123 103 89 77 67 59 55 53 67 63	48 <b>12"</b> 266 226 197 173 154 130 127 154 134	36 SPACI 16" 192 162 140 122 108 96 90 88 108 98	25 <b>OAD = :</b> <b>NG o.c.</b> <b>19,2"</b> 155 130 112 97 85 75 70 68 85 80	30 30 30 30 30 30 30 30 30 30 30 30 30 3
4 x 2 BLE ( SIZE 3 x 2 3 x 2 4 x 2 4 x 2 4 x 2	SPF 2400F2.0E           SPF 2400F2.0E           SP           CHORDS           SPF #2	$\Delta t = L$ MANUF LENGTH 10'-0" 12'-0" 13'-0" 14'-0" 15'-0" 16'-0" 17'-0" 18'-0" 19'-0" 20'-0"	56 / 240 12" 281 281 212 188 169 153 145 145 145 142 169 144 128	42 (3) <b>DEAD L</b> <b>SPAC</b> 16" 207 177 155 137 123 111 105 103 123 108 96	35 NG o.c. 19,2" 170 145 127 112 100 90 85 83 100 90 80	28 <b>24"</b> 133 113 99 87 77 69 65 63 77 73 64	56 <b>12"</b> 276 236 207 183 164 148 140 137 164 144 128	42 SPACI 16" 202 172 150 132 118 100 98 118 108 96	35 NG o.c. 19,2" 165 140 122 107 95 85 80 78 95 90 80	24 24" 128 108 94 82 72 64 60 58 72 68 64	56 <b>12''</b> 271 231 202 178 159 143 132 159 139 128	41 <b>SPACI</b> <b>16</b> " 197 167 145 127 113 101 95 93 113 103 96	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90 85 80	19 24" 123 103 89 77 67 59 55 55 55 67 63 60	48 <b>12''</b> 266 226 197 173 154 138 130 127 154 134 123	36 SPACI 16" 192 162 140 122 108 96 90 88 108 98 91	25 <b>NG o.c.</b> <b>19,2"</b> 155 130 112 97 85 75 70 68 85 80 75	30 30 30 30 30 30 30 30 30 30 55 55 4 4 6 55 55 4 4 6 55 55
4 x 2 BLE ( SIZE 3 x 2 3 x 2 4 x 2 4 x 2 4 x 2 4 x 2	SPF 2400F2.0E           SPF 2400F2.0E           SP           CHORDS           SPF #2	$\begin{array}{c} 30^{\circ}-0^{\circ}\\ \hline & \\ \Delta \ t = \ L\\ \hline \\ $	56 / 240 12" 281 241 212 188 169 153 145 142 169 153 145 142 169 144 128 112	42 (3) <b>EAD L</b> 207 177 155 137 123 111 105 103 123 108 96 84	35 <b>OAD = 7</b> <b>ING o.e.</b> <b>19,2"</b> 170 145 127 112 100 90 85 83 100 90 80 70	28 <b>24"</b> 133 113 133 113 99 87 77 69 65 63 77 73 64 56	56 <b>12"</b> 276 2367 2367 183 164 148 140 137 164 144 144 128 112	42 SPACI 16" 202 172 150 132 118 106 100 98 118 108 96 84	35 <b>NG o.e.</b> <b>19,2''</b> 165 140 122 107 95 85 80 78 95 90 80 70	24 24 24 24 24 24 24 24 24 24	56 <b>12"</b> 271 231 202 178 159 143 135 132 139 139 128 112	41 SPACI 197 167 145 127 113 101 95 93 113 103 96 84	30 DAD = 2 NG o.e. 19,2" 160 135 117 102 90 80 75 73 90 85 80 70	<b>24</b> " <b>24</b> " 123 103 89 77 67 59 55 53 67 63 60 56	48 <b>12"</b> 266 226 197 173 154 138 130 127 154 134 134 123 112	36 <b>SPACI</b> 192 162 140 122 108 96 90 88 108 98 91 84	25 NG o.c. 19,2" 155 130 112 97 85 75 70 68 85 80 75 70	<b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>30</b> <b>30</b>
4 x 2 <b>BLE</b> <b>SIZE</b> 3 x 2 3 x 2 4 x 2 4 x 2 4 x 2 4 x 2 4 x 2 4 x 2	SPF 2400F2.0E           SPF 2400F2.0E           SPF #2	$\begin{array}{c} 30^{\circ}-0^{\circ}\\ \hline & \\ \Delta \ t = L\\ \hline \\ $	56 / 240 12" 281 241 212 188 169 153 145 142 169 144 144 128 88	42 (3) <b>EAD L</b> <b>SPAC</b> 207 177 155 137 123 111 105 103 123 108 96 84 66	35 <b>OAD =</b> <b>19,2"</b> 170 145 127 112 100 90 85 83 100 90 80 70 55	28 <b>24''</b> 133 113 99 87 77 69 65 63 77 73 64 56 44	56 <b>12"</b> 276 236 207 183 164 148 140 137 164 144 128 88	42 SPACI 16" 202 172 150 132 118 106 100 98 118 108 98 84 66	35 NG o.c. 19,2" 165 140 122 107 95 85 80 78 95 90 80 70 55	24 24" 128 108 108 108 94 82 72 64 60 58 72 68 64 56 44	56 <b>12"</b> 271 231 202 178 159 143 135 132 159 132 159 128 112 88	41 SPACI 16" 197 167 145 127 113 101 95 93 113 103 96 84 66	30 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90 85 80 70 55	<b>24</b> " <b>24</b> " <b>1</b> 23 <b>1</b> 03 <b>89</b> <b>77</b> <b>67</b> <b>59</b> <b>55</b> <b>53</b> <b>67</b> <b>63</b> <b>60</b> <b>56</b> <b>44</b>	48 <b>12''</b> 266 226 197 173 154 138 130 127 154 134 127 154 134 127 154 134 127 154 134 130 127 154 138 130 127 154 138 130 127 154 138 130 127 154 138 130 127 154 138 138 138 138 138 138 138 138	36 SPACI 192 162 140 122 108 96 90 88 108 98 108 99 84 66	25 NG o.c. 19,2" 155 130 112 97 85 75 70 68 85 80 75 70 55	<b>30</b> <b>24</b> 111 99 8. 77 66 55 55 4 4 6 55 5 4 4
4 x 2 <b>BLE :</b> <b>SIZE</b> 3 x 2 3 x 2 4 x 2	SPF 2400F2.0E           SPF 2400F2.0E           SPF           CHORDS           SPF #2	30'-0" ∆ t = L MANUF LENGTH 10'-0" 11'-0" 12'-0" 13'-0" 14'-0" 15'-0" 14'-0" 15'-0" 16'-0" 16'-0" 17'-0" 18'-0" 19'-0" 20'-0" 21'-0" 22'-0" 23'-0"	56 / 240 12" 281 241 212 188 169 153 145 145 145 144 128 169 144 128 88 80	42 (3) <b>SPACI</b> 16" 207 177 155 137 123 111 105 103 123 108 984 86 60	35           NG o.c.           19,2"           170           145           127           112           100           90           85           83           100           90           80           70           55           50	28 24" 133 113 99 87 77 69 65 63 77 73 64 56 44 40	56 <b>12"</b> 276 236 207 183 164 148 140 137 164 144 144 128 112 88 80	42 SPACI 202 172 150 132 118 100 98 118 100 98 44 66 60	35 DAD = 2 NG o.c. 19,2" 165 140 122 107 95 85 80 78 95 90 80 70 55 50	24 20 24" 128 108 94 128 108 94 82 72 64 60 58 72 64 60 58 72 68 64 64 64 64 64 44 40	56 <b>12"</b> 271 231 202 178 159 135 132 159 139 128 139 128 88 80	41 SPACI 16" 197 167 145 127 113 101 95 93 113 103 96 84 86 60	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90 85 85 80 70 55 50	19 24" 123 103 89 55 55 55 55 55 55 67 63 67 63 60 56 44 40	48 <b>12''</b> 266 226 197 173 154 130 127 154 130 127 154 134 123 112 88 80	36 SPACI L 16" 192 162 140 122 108 90 88 108 99 88 108 99 88 108 98 84 66 60	25 NG 0.c 19.2" 155 130 112 97 85 75 70 68 85 80 75 70 55 50	<b>30</b> <b>24</b> 111 99 88 77 66 55 55 44 66 55 55 44 44
4 x 2 <b>BLE (</b> <b>SIZE</b> 3 x 2 3 x 2 4 x 2	SPF 2400F2.0E           SPF 2400F2.0E           SPF #2           SPF 2100F1.8E           SPF 2100F1.8E	$\begin{array}{c} 30^{\circ}-0^{\circ} \\ \hline & \\ & \\ & \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\$	56 / 240 12" 281 241 212 188 169 153 145 145 145 145 145 144 128 112 88 80 75	42 (3) <b>SPACL</b> 207 16" 177 123 111 105 103 123 108 96 84 66 60 56	35 NG o.c. 19,2" 1700 145 145 127 112 100 90 85 83 100 90 80 70 55 50 47	28 <b>24</b> <b>133</b> 113 99 87 77 69 65 63 77 73 64 56 44 40 38	56 <b>12"</b> 276 236 207 183 164 148 140 137 164 144 128 112 88 80 75	42 SPACL 10 SPACL 10 102 172 150 132 118 106 100 98 118 108 96 84 66 60 56	35 DAD = 2 19,2" 165 140 122 107 95 80 78 90 80 78 90 80 70 55 50 47	24 24 128 108 94 82 72 64 60 58 72 68 64 56 64 40 38	56 <b>12"</b> 271 231 202 178 135 132 132 132 132 132 132 132 132	41 SPACI LI SPACI 197 145 127 113 101 95 93 113 103 96 84 66 60 56	30 DAD = 2 19,2" 160 135 117 102 90 80 75 73 90 85 80 70 55 50 47	19 25 24" 123 103 89 77 67 55 55 55 55 55 53 67 63 60 56 44 40 38	48 <b>12"</b> 266 226 197 173 154 138 130 127 154 134 123 112 88 80 75	36 SPACD L 192 162 162 162 162 162 162 162 162 162 16	25 NG o.c. 19,2" 155 130 112 97 85 70 68 85 80 75 50 47	30 - 24 111 9 8 7 6 5 5 5 4 6 5 5 5 4 4 4 3 3
4 x 2 BLE { SIZE 3 x 2 3 x 2 4 x	SPF 2400F2.0E           SPF 2400F2.0E           SP           CHORDS           SPF #2	$\begin{array}{c} 30^{\circ}-0^{\circ} \\ \hline & \\ \Delta \ t = \ L \\ \hline \\$	56 / 240 12" 281 241 212 188 169 153 145 142 169 144 142 169 144 128 88 80 75 70	42 (3) <b>SPAC</b> 207 177 155 137 123 111 105 133 123 108 96 84 66 60 56 52	35           OAD =           Ing o.c.           19.2"           170           145           127           112           100           90           85           83           1000           90           80           70           55           50           47           44	28 24" 133 113 99 87 77 69 65 63 97 77 69 65 63 64 56 44 56 44 40 38 35	56 12" 276 236 207 183 164 140 137 164 144 148 112 88 80 75 70	42 SPACI 16" 202 172 150 132 118 106 100 98 118 108 96 84 86 60 55 52	35 <b>DAD = 2</b> <b>19,2''</b> 165 140 122 107 95 85 80 78 90 80 70 55 50 47 44	24 24" 128 108 94 128 108 94 128 108 94 64 60 58 64 64 56 64 56 64 40 38 33 35	56 12" 271 231 202 178 132 159 143 135 132 159 128 112 88 80 75 70	41 SPACI 197 145 127 113 101 95 93 113 103 96 84 66 60 56 52	30 DAD = 2 19,2" 160 135 117 102 90 80 75 73 90 85 80 70 55 50 47 44	19           25           24"           123           103           89           77           59           55           53           67           63           60           56           44           40           38           35	48 <b>12"</b> 2666 2266 197 173 130 127 154 133 112 88 80 75 70	36 SPACL 16" 192 140 122 108 96 90 122 108 88 8108 99 90 88 8108 99 91 84 66 60 55 52	25 NG o.c 19,2" 155 75 70 68 85 80 75 70 68 85 80 75 70 55 50 47 44	30 - 24 111 9 8 7 6 5 5 5 4 6 5 5 5 4 4 4 3 3 3
4 x 2 BLE { ist DE size 3 x 2 3 x 2 4 x 2 1 x 4 1	SPF 2400F2.0E           SPF 2400F2.0E           SP           CHORDS           SPF #2           SPF 2100F1.8E           SPF 2100F1.8E           SPF 2100F1.8E           SPF 2100F1.8E           SPF 2100F1.8E	$\begin{array}{c} 30^{\circ}-0^{\circ} \\ \hline & \\ \Delta \ t = L \\ \hline \\$	56 / 240 12" 281 241 241 241 241 241 241 241 24	42 (3) <b>PEAD LL</b> <b>SPACC</b> 16'' 207 177 155 137 123 103 103 103 103 96 84 66 60 05 84 84 84 84 84 84 84 84 84 84 84 84 84	35           NG o.c.           19,2"           170           145           127           112           100           90           85           83           100           90           85           83           100           90           55           50           47           44	28 24" 133 113 99 65 63 77 73 64 56 63 77 73 64 55 63 44 40 38 55 32	56 12" 276 207 183 164 148 144 137 164 144 144 144 142 88 80 75 70 64	42 <b>SPACI</b> 16" 202 172 132 132 138 108 98 118 108 98 118 108 98 44 66 60 56 52 48	35 DAD = 2 NG o.c. 19,2" 165 140 122 107 95 80 78 90 80 70 55 50 0 47 44 40	24 24 128 108 94 82 72 64 60 58 72 64 64 56 64 56 44 40 38 35 32	56 <b>12"</b> 271 231 178 159 132 132 139 139 138 80 75 70 64	41 SPACI 16" 197 167 145 127 113 101 93 113 103 96 84 66 84 66 84 66 84 66 84	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90 85 80 80 70 55 50 90 47 44	19 24" 123 103 89 77 67 55 55 55 55 55 67 63 60 56 44 40 38 35 32	48 12" 2666 2266 197 173 154 138 130 127 154 134 123 127 154 138 80 75 70 64	36 SPACI 192 162 140 122 108 96 90 88 108 99 90 88 90 88 91 84 66 60 56 52 48	25 NG o.c 19.2" 155 130 112 97 75 70 68 80 75 70 55 50 47 44 40	1 1 - 30 30 - 24 30 - 24 - 31 - 32 - 32
4 x 2 BLE { IST DE SIZE 3 x 2 3 x 2 4 x 2 1 1 1 1 1 1 1 1 1 1 1 1 1	SPF 2400F2.0E           SPF 2400F2.0E           SP           CHORDS           SPF #2           SPF 2100F1.8E           SPF 2100F1.8E </td <td><math display="block">\begin{array}{c} 30^{\circ}-0^{\circ} \\ \hline &amp; \Delta \ t = L \\ \hline \\</math></td> <td>56 / 240 12" 2811 241 241 241 241 241 142 153 145 144 128 144 128 144 142 144 142 144 142 145 145 145 145 145 145 145 145</td> <td>42 (3) <b>DEAD LL</b> <b>SPAC</b>( 16" 207 177 155 137 123 103 103 103 103 103 103 96 84 66 60 56 248 45</td> <td>35           OAD =           ING o.c.           19,2"           170           145           127           100           90           85           100           90           80           70           55           50           47           44           38</td> <td>28 24" 113 99 87 77 69 65 63 77 73 64 56 44 40 38 35 32 30</td> <td>56 12" 276 236 207 163 164 140 137 164 142 142 88 80 75 70 64 60</td> <td>42 SPACII 16" 202 172 150 132 118 106 100 98 118 108 98 118 108 98 118 108 98 44 66 60 56 48 45</td> <td>35 NG o.c. 19,2" 165 140 122 107 95 85 80 107 78 90 80 80 70 55 50 47 40 38</td> <td>24 24 128 108 94 128 72 64 60 58 72 68 64 56 58 72 68 64 44 40 38 35 32 30</td> <td>56 <b>12"</b> 271 231 202 178 135 135 132 139 139 132 139 139 139 138 88 80 75 70 64 60</td> <td>41 <b>SPACI</b> 16" 197 145 127 113 101 95 127 113 101 93 113 103 96 84 66 60 52 48 45</td> <td>30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 50 47 40 38</td> <td>19           24"           123           103           89           77           67           53           67           63           60           56           44           40           38           35           32           30</td> <td>48 12" 266 197 173 154 138 130 127 154 138 134 123 112 88 80 75 70 64 60</td> <td>36 SPACI 16" 192 162 140 96 90 90 90 90 90 98 88 108 98 91 84 66 66 60 52 248 45</td> <td>25 NG o.c 19,2" 155 130 112 97 85 75 70 68 85 80 75 50 47 44 40 38</td> <td><b>30</b> <b>24</b> 111 93 55 55 55 55 55 55 55 55 55 55 55 55 55</td>	$\begin{array}{c} 30^{\circ}-0^{\circ} \\ \hline & \Delta \ t = L \\ \hline \\$	56 / 240 12" 2811 241 241 241 241 241 142 153 145 144 128 144 128 144 142 144 142 144 142 145 145 145 145 145 145 145 145	42 (3) <b>DEAD LL</b> <b>SPAC</b> ( 16" 207 177 155 137 123 103 103 103 103 103 103 96 84 66 60 56 248 45	35           OAD =           ING o.c.           19,2"           170           145           127           100           90           85           100           90           80           70           55           50           47           44           38	28 24" 113 99 87 77 69 65 63 77 73 64 56 44 40 38 35 32 30	56 12" 276 236 207 163 164 140 137 164 142 142 88 80 75 70 64 60	42 SPACII 16" 202 172 150 132 118 106 100 98 118 108 98 118 108 98 118 108 98 44 66 60 56 48 45	35 NG o.c. 19,2" 165 140 122 107 95 85 80 107 78 90 80 80 70 55 50 47 40 38	24 24 128 108 94 128 72 64 60 58 72 68 64 56 58 72 68 64 44 40 38 35 32 30	56 <b>12"</b> 271 231 202 178 135 135 132 139 139 132 139 139 139 138 88 80 75 70 64 60	41 <b>SPACI</b> 16" 197 145 127 113 101 95 127 113 101 93 113 103 96 84 66 60 52 48 45	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 50 47 40 38	19           24"           123           103           89           77           67           53           67           63           60           56           44           40           38           35           32           30	48 12" 266 197 173 154 138 130 127 154 138 134 123 112 88 80 75 70 64 60	36 SPACI 16" 192 162 140 96 90 90 90 90 90 98 88 108 98 91 84 66 66 60 52 248 45	25 NG o.c 19,2" 155 130 112 97 85 75 70 68 85 80 75 50 47 44 40 38	<b>30</b> <b>24</b> 111 93 55 55 55 55 55 55 55 55 55 55 55 55 55
4 x 2 BLE { SIZE 3 x 2 3 x 2 4 x	SPF 2400F2.0E           SPF 2400F2.0E           SP           CHORDS           SPF #2           SPF 2100F1.8E           SPF 2100F1.8E           SPF 2100F1.8E           SPF 2100F1.8E           SPF 2100F1.8E	$\begin{array}{c} 30^{\circ}-0^{\circ} \\ \hline & \\ \Delta \ t = L \\ \hline \\$	56 / 240 12" 281 241 241 241 241 241 241 241 24	42 (3) <b>PEAD LL</b> <b>SPACC</b> 16'' 207 177 155 137 123 103 103 103 103 96 84 66 60 05 84 84 84 84 84 84 84 84 84 84 84 84 84	35           NG o.c.           19,2"           170           145           127           112           100           90           85           83           100           90           85           83           100           90           55           50           47           44	28 24" 133 113 99 65 63 77 73 64 56 63 77 73 64 55 63 44 40 38 55 32	56 12" 276 207 183 164 148 144 137 164 144 144 144 142 88 80 75 70 64	42 <b>SPACI</b> 16" 202 172 132 132 138 108 98 118 108 98 118 108 98 44 66 60 56 52 48	35 DAD = 2 NG o.c. 19,2" 165 140 122 107 95 80 78 90 80 70 55 50 0 47 44 40	24 24 128 108 94 82 72 64 60 58 72 64 64 56 64 56 44 40 38 35 32	56 12" 271 231 178 159 132 132 139 139 138 80 75 70 64	41 SPACI 16" 197 167 145 127 113 101 93 113 103 96 84 66 84 66 84 66 84 66 84	30 DAD = 2 NG o.c. 19,2" 160 135 117 102 90 80 75 73 90 85 80 80 70 55 50 90 47 44	19 25 24" 123 103 89 77 67 55 55 55 55 55 67 63 60 56 44 40 38 35 32	48 12" 2666 2266 197 173 154 138 130 127 154 134 123 127 154 138 80 75 70 64	36 SPACI 192 162 140 122 108 96 90 88 108 99 90 88 90 88 91 84 66 60 56 52 48	25 NG o.c 19.2" 155 130 112 97 75 70 68 80 75 70 55 50 47 44 40	1 1 - 30 30 - 24 30 - 24 - 31 - 32 - 32

(1) Table is based on the assumption multiple joists (repetitive members) are installed in a floor or roof system with minimum 5/8-inch sheathing attached to the top flanges. No increase in allowable load for repetitive member use or duration of load allowed.

(2) Allowable load values in the table must be reduced if repetitive member conditions are not met (20 percent for 3x2 and 13 percent for 4x2)

(3) Loads noted in the table are limited by live load deflection (  $\Delta L$  ) and total load deflection (  $\Delta t$  )

(4) "Manufactured length" refers to overall length which includes the possibility of a 5 1/2-inch bearing on both ends. To compute the allowable "clear span" substract 11 inches from the tabulated manufactured length.

(5) SI conversions : 1 inch = 25,4 mm  $\,$  1 foot = 304,8 mm  $\,$  1 psf = 47,9 N / m^2

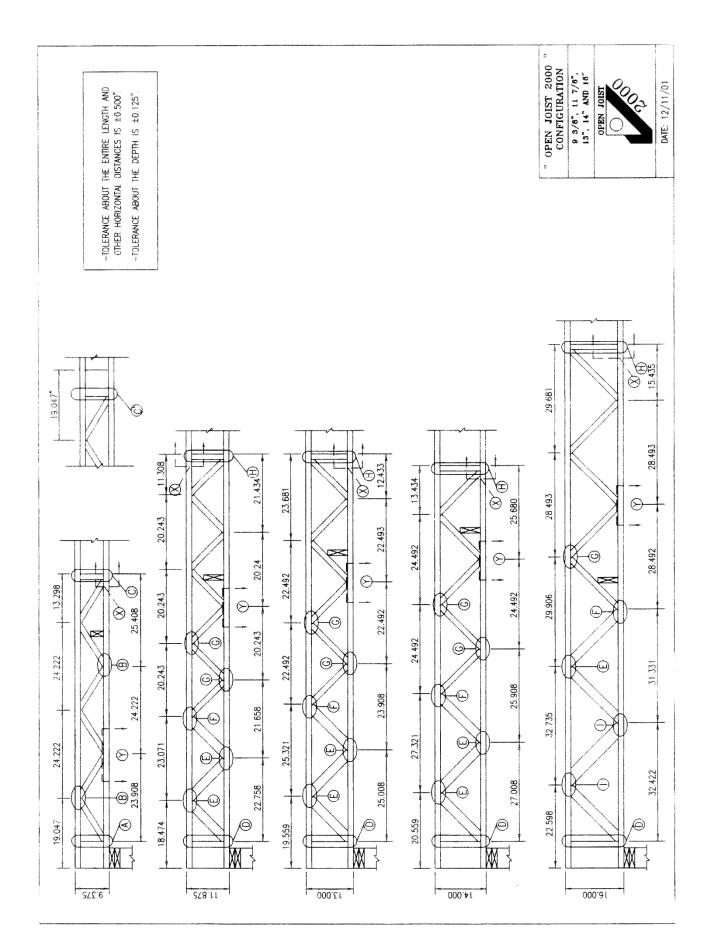
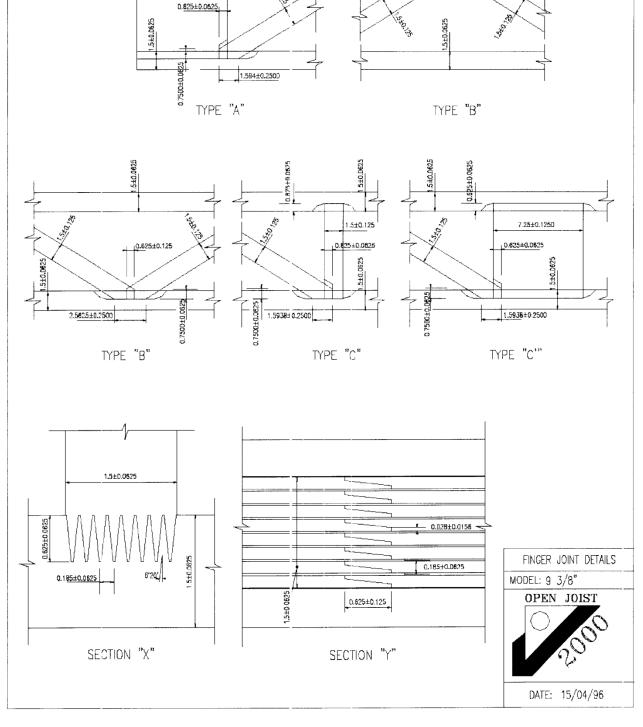


FIGURE 2—TYPICAL TRUSSES



5±0.0625

### FIGURE 3—TYPICAL TRUSS DETAILS

.5±0.0625

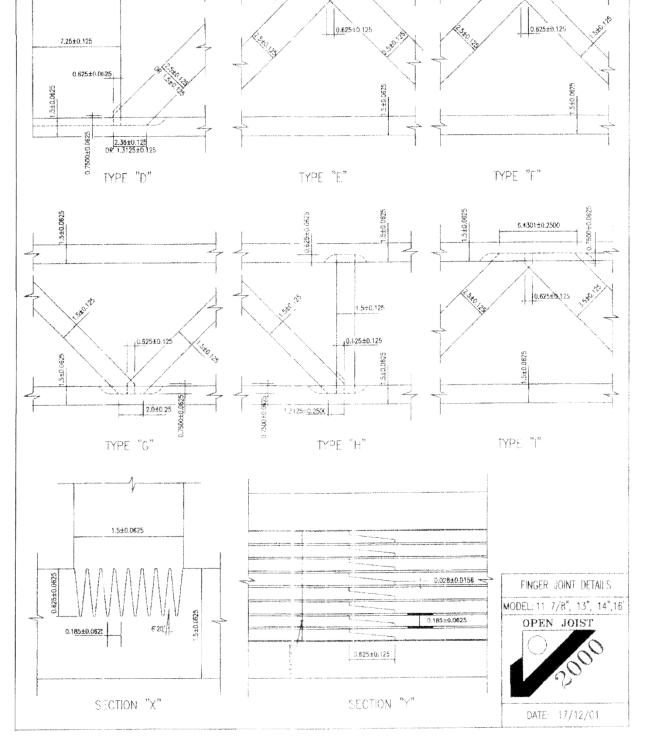
S25±0.0625

7.25±0.125

-1-54C-12

0.7501±0.0625

2,562±0.2500



0±0.3825

#### FIGURE 3—TYPICAL TRUSS DETAILS (Continued)

1.5±0.0625

0.625±0.0525

1540.0625

7500±0.0625

3.4053±0.250

.5±0.0625

4.8125±0.250