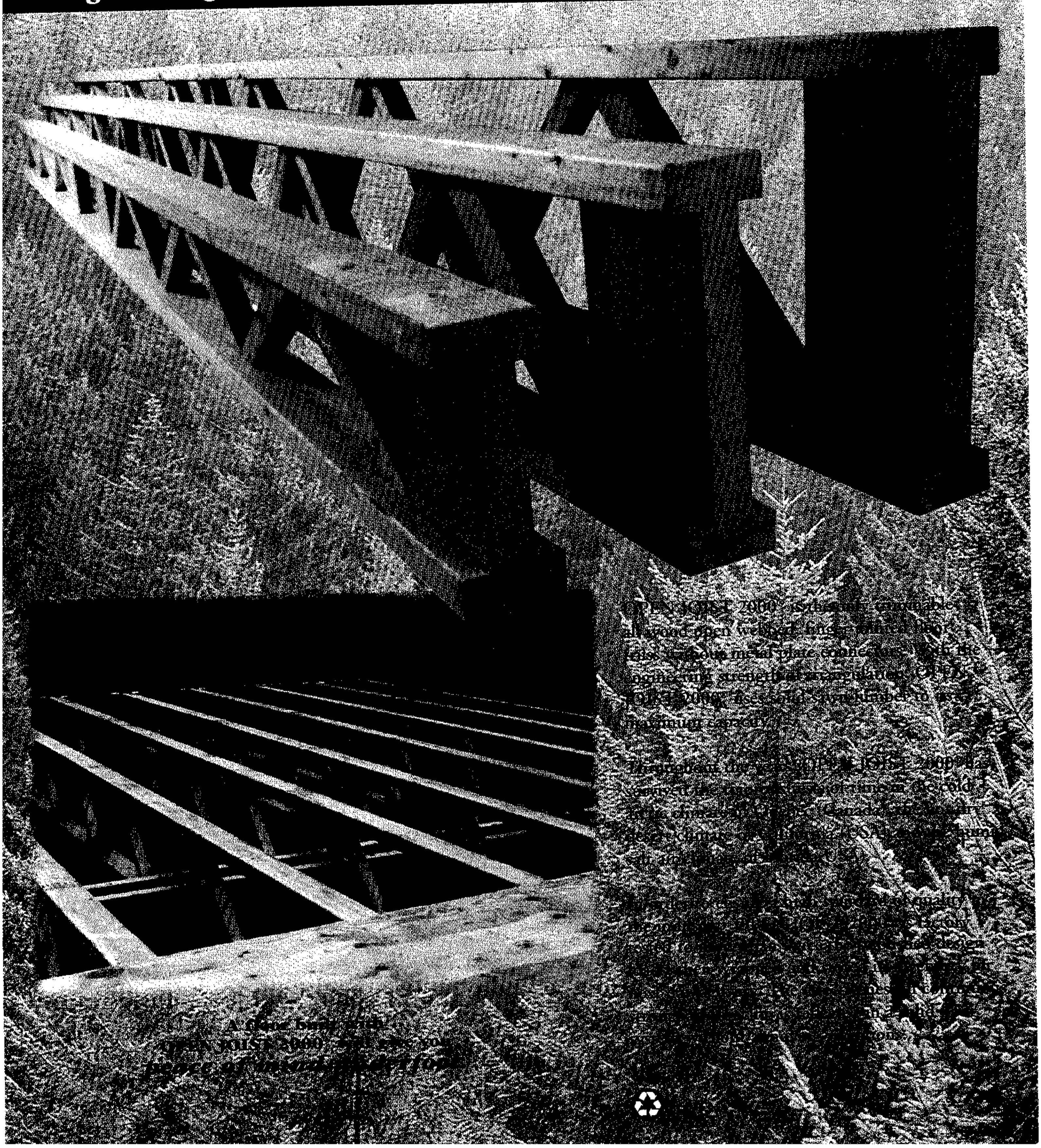
2000

Reengineering Wood Components



OPEN JOIST 2000 is the only [illegible] all-wood open webbed, finger-jointed floor [illegible] without metal plate connectors. With the engineering strength of triangulation, OPEN JOIST 2000 uses solid spruce lumber to [illegible] maximum capacity.

Throughout the years OPEN JOIST 2000 has [illegible] the [illegible] of time in the cold [illegible] climate of [illegible] Canada [illegible] climate [illegible] USA [illegible]

[illegible]

A [illegible] with OPEN JOIST 2000 [illegible] *peace of mind [illegible]*

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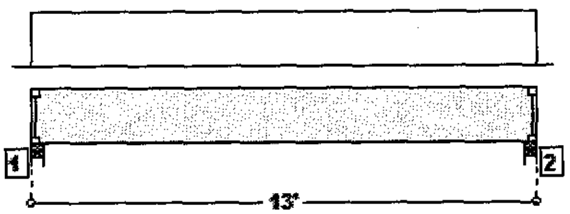
5 1/4" x 9 1/2" 2.0E Parallam® PSL

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED



Product Diagram is Conceptual.

LOADS:

Analysis is for a Drop Beam Member. Tributary Load Width: 13'
Primary Load Group - Residential - Living Areas (psf): 40.0 Live at 100 % duration, 12.0 Dead

SUPPORTS:

		Input Width	Bearing Length	Vertical Reactions (lbs) Live/Dead/Uplift/Total	Detail	Other
1	Stud wall	3.50"	2.01"	3380 / 1115 / 0 / 4495	L1: Blocking	1 Ply 1 1/4" x 9 1/2" 1.3E TimberStrand® LSL
2	Stud wall	3.50"	2.01"	3380 / 1115 / 0 / 4495	L1: Blocking	1 Ply 1 1/4" x 9 1/2" 1.3E TimberStrand® LSL

-See iLevel® Specifier's/Builder's Guide for detail(s): L1: Blocking

DESIGN CONTROLS:

	Maximum	Design	Control	Result	Location
Shear (lbs)	4380	-3746	9643	Passed (39%)	Rt. end Span 1 under Floor loading
Moment (Ft-Lbs)	13870	13870	19585	Passed (71%)	MID Span 1 under Floor loading
Live Load Defl (in)		0.426	0.422	Passed (L/357)	MID Span 1 under Floor loading
Total Load Defl (in)		0.566	0.633	Passed (L/269)	MID Span 1 under Floor loading

-Deflection Criteria: STANDARD(LL:L/360,TL:L/240).
-Bracing(Lu): All compression edges (top and bottom) must be braced at 13' o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

ADDITIONAL NOTES:

-IMPORTANT! The analysis presented is output from software developed by iLevel®. iLevel® warrants the sizing of its products by this software will be accomplished in accordance with iLevel® product design criteria and code accepted design values. The specific product application, input design loads, and stated dimensions have been provided by the software user. This output has not been reviewed by an iLevel® Associate.
-Not all products are readily available. Check with your supplier or iLevel® technical representative for product availability.
-THIS ANALYSIS FOR iLevel® PRODUCTS ONLY! PRODUCT SUBSTITUTION VOIDS THIS ANALYSIS.
-Allowable Stress Design methodology was used for Building Code UBC analyzing the iLevel® Distribution product listed above.

PROJECT INFORMATION:

OPERATOR INFORMATION:

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5 1/4" x 9 1/2" 2.0E Parallam® PSL

THIS PRODUCT MEETS OR EXCEEDS THE SET DESIGN CONTROLS FOR THE APPLICATION AND LOADS LISTED

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                       Load Group: Primary Load Group
                                        _________________
                                         ^  12' 8.00"  ^
Max. Vertical Reaction Total (lbs) 4495            4495
Max. Vertical Reaction Live (lbs)  3380            3380
Required Bearing Length in       2.01(W)           2.01(W)
Max. Unbraced Length (in)                156

    Loading on all spans, LDF = 0.90 , 1.0 Dead
Shear at Support (lbs)                929     -929
Max Shear at Support (lbs)            1087   -1087
Member Reaction (lbs)              1087            1087
Support Reaction (lbs)             1115            1115
Moment (Ft-Lbs)                          3441

Loading on all spans, LDF = 1.00 , 1.0 Dead + 1.0 Floor
Shear at Support (lbs)                3746   -3746
Max Shear at Support (lbs)            4380   -4380
Member Reaction (lbs)              4380            4380
Support Reaction (lbs)             4495            4495
Moment (Ft-Lbs)                          13870
Live Deflection (in)                     0.426
Total Deflection (in)                    0.566
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OPEN JOIST 2000®

ALLOWABLE LIVE LOAD CHARTS IN PSF

Live load deflection to L/360

Rev. 20/03/02

JOIST OEPTH 9 3/8"			DEAD LOAD 15				DEAD LOAD 20				DEAD LOAD 25				DEAD LOAD 30			
CHORDS		LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		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	13'-0"	115	86	72	58	115	86	72	58	115	86	72	55	115	86	70	50
3 X 2	SPF # 2	14'-0"	94	71	59	47	94	71	59	47	94	71	59	45	94	71	58	40
3 X 2	SPF # 2	15'-0"	77	58	48	38	77	58	48	38	77	58	48	37	77	58	48	32
3 X 2	SPF # 2	16'-0"	64	48	40	32	64	48	40	32	64	48	40	31	64	48	40	26
4 X 2	SPF # 2	17'-0"	70	53	44	35	70	53	44	35	70	53	44	31	70	53	40	26
4 X 2	SPF 2100f-1.8E	18'-0"	72	54	45	36	72	54	45	36	72	54	45	31	72	54	40	26
4 X 2	SPF 2100f-1.8E	19'-0"	61	46	38	30	61	46	38	30	61	46	37	25	61	44	32	20
4 X 2	SPF 2100f-1.8E	20'-0"	53	40	33	26	53	40	33	26	53	40	33	23	53	40	30	18

JOIST OEPTH 13"			DEAD LOAD 15				DEAD LOAD 20				DEAD LDAD 25				DEAD LOAD 30			
CHORDS		LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		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	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

JOIST DEPTH 16"			DEAD LOAD 15				DEAD LOAD 20				DEAD LOAD 25				DEAD LOAD 30			
CHORDS		LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		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	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 X 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 X 2	SPF # 2	19'-0"	161	117	95	73	156	112	90	68	151	107	85	63	146	102	80	58
4 X 2	SPF # 2	20'-0"	154	112	91	70	149	107	86	65	144	102	81	60	139	97	76	55
4 X 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 X 2	SPF 2100f-1.8E	23'-0"	127	91	74	56	122	86	69	51	117	81	64	46	112	76	59	41
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"	96	72	60	47	92	69	58	42	84	63	53	37	76	57	48	32
4 X 2	SPF 2100f-1.8E	26'-0"	83	62	52	42	81	61	51	37	73	55	46	32	65	49	41	27
4 X 2	SPF 2400f-2.0E	27'-0"	83	62	52	42	81	61	51	37	73	55	46	32	65	49	41	27
4 X 2	SPF 2400f-2.0E	28'-0"	75	56	47	38	73	55	46	34	65	49	41	29	60	45	38	24
4 X 2	SPF 2400f-2.0E	29'-0"	64	48	40	32	64	48	40	32	64	48	40	27	56	42	35	22
4 X 2	SPF 2400f-2.0E	30'-0"	56	42	35	28	56	42	35	28	56	42	35	23	48	36	30	18

JOIST OEPTH 9 3/8" - P			DEAD LOAD 15				DEAD LOAD 20				DEAD LOAD 25				DEAD LOAD 30			
CHORDS		LENGTH	SPACING o.c.				SPACING o.c.				SPACING o.c.				SPACING o.c.			
SIZE	SPECIES / GRADE		12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"		24"
3 X 2	SPF # 2	13'-0"	95	68	54	40	90	63	49	35	85	58	44	30	80	53	39	25
3 X 2	SPF # 2	14'-0"	94	68	54	40	90	63	49	35	85	58	44	30	80	53	39	25
3 X 2	SPF # 2	15'-0"	77	57	45	33	76	52	40	28	71	47	35	23	66	42	30	18
3 X 2	SPF # 2	16'-0"	64	48	40	29	64	46	35	24	63	41	30	19	58	36	25	14
4 X 2	SPF # 2	17'-0"	70	51	40	29	68	46	35	24	63	41	30	19	58	36	25	14
4 X 2	SPF 2100f-1.8E	18'-0"	72	51	40	29	68	46	35	24	63	41	30	19	58	36	25	14
4 X 2	SPF 2100f-1.8E	19'-0"	61	45	35	25	60	40	30	20	55	35	25	15	50	30	20	10
4 X 2	SPF 2100f-1.8E	20'-0"	53	40	31	22	53	35	26	17	48	30	21	12	43	25	16	7

These load tables are based on the assumption that sheathing is attached to the top flange of joist Open Joist 2000® and that 5 1/2 inch bearings were considered as supports. Live loads may vary according to different bearing widths used. The performance of a floor system is a matter of personal opinion. A variety of framing suggestions are recommended by an approved Open Joist 2000® supplier.