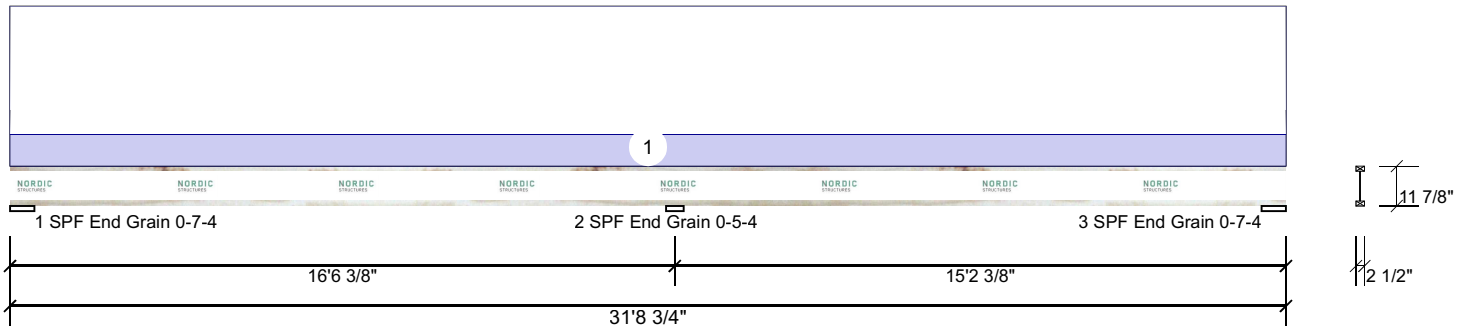
Client:	Great South Builders	Date:	8/28/2023
Project:	2L-2937/ 2 Story	Input by:	
Address:		Job Name:	J0423-1835 Beams
		Project #:	J0423-1835 Beams

1FJ1 NI-40x 11.875" - PASSED

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	19.2" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	3/4 APA Rated Sturd-I-FloorPlywood Nailed and Glued
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	434	109	0	0	0
2	Vertical	1215	304	0	0	0
3	Vertical	381	95	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	7.250"	Vert	40%	108 / 483	591	L_	D+L
2 - SPF End Grain	5.250"	Vert	44%	304 / 1218	1522	LL	D+L
3 - SPF End Grain	7.250"	Vert	37%	95 / 450	545	_L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2265 ft-lb	16'6 3/8"	3760 ft-lb	0.602 (60%)	D+L	LL
Unbraced	-2265 ft-lb	16'6 3/8"	2289 ft-lb	0.989 (99%)	D+L	LL
Pos Moment	1872 ft-lb	7'4 9/16"	3760 ft-lb	0.498 (50%)	D+L	L_
Shear	781 lb	16'6 3/8"	1480 lb	0.528 (53%)	D+L	LL
LL Defl inch	0.174 (L/1100)	8'2"	0.400 (L/480)	0.436 (44%)	L	L_
TL Defl inch	0.207 (L/928)	8'1 1/16"	0.799 (L/240)	0.259 (26%)	D+L	L_

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Bottom flange must be laterally braced at a maximum of 4'8" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-7-3	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Repair for Max 2" wide x 1" deep notch in edge of bottom chord to joist web at any bearing.

No Repair Necessary.

NORTH CAROLINA PROFESSIONAL SEAL 20809 ENGINEER PHILLIP EDWARD ROBBINS

08/31/2023

Notes

It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application and to verify the dimensions and loads.

Engineered Wood Products

1. Dry service conditions, unless noted otherwise
2. No treatment with fire-retardant or other strength-reducing chemicals.

Handling & Installation

1. Engineered wood products must not be cut or drilled. Damaged products shall not be used.
2. Refer to the latest version of the installation guide for construction details, hole specifications, multiple-member connections, and handling guidelines.
3. Provide lateral support at bearing points to prevent lateral displacement and rotation.
4. For flat roof, provide proper drainage to prevent ponding.
5. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Job# 2308-146
Phillip E. Robbins
Victoria IL

This design is valid until 4/28/2026

Manufacturer Info

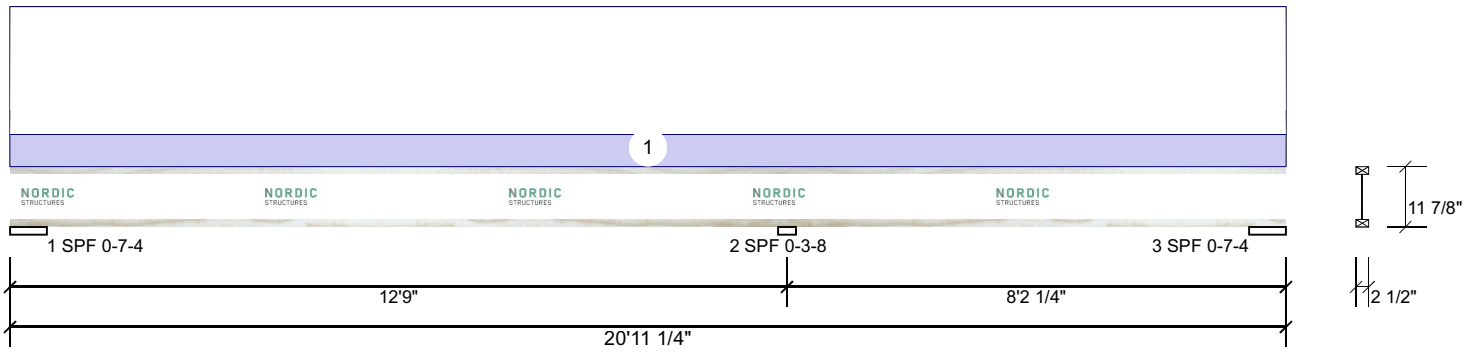
Nordic Structures
1100 Avenue des Canadiens-de-Montréal, Suite 100
Montreal, Québec, Canada H3B 2S2
(866) 871-3418
www.nordic.ca
APA PR-L274C

Comtech
Reilly Road Industrial Park P.O. Box 40408, NC
USA
28309
910-864-8787

Client:	Great South Builders	Date:	8/28/2023
Project:	2L-2937/ 2 Story	Input by:	
Address:		Job Name:	J0423-1835 Beams
		Project #:	J0423-1835 Beams

1FJ3 NI-40x 11.875" - PASSED

Level: Level



Member Information

Type:	Joist	Application:	Floor
Spacing:	19.2" o.c.	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	358	89	0	0	0
2	Vertical	811	203	0	0	0
3	Vertical	171	43	0	0	0

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	7.250"	Vert	31%	89 / 372	461	L_	D+L
2 - SPF	3.500"	Vert	34%	203 / 810	1013	LL	D+L
3 - SPF	7.250"	Vert	20%	43 / 258	301 (-9)	_L	D+L(D+L)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1031 ft-lb	12'9"	3760 ft-lb	0.274 (27%)	D+L	LL
Unbraced	-1031 ft-lb	12'9"	1036 ft-lb	0.995 (99%)	D+L	LL
Pos Moment	1088 ft-lb	5'9 1/16"	3760 ft-lb	0.289 (29%)	D+L	L_
Unbraced	1088 ft-lb	5'9 1/16"	1089 ft-lb	0.999 (100%)	D+L	L_
Shear	573 lb	12'9"	1480 lb	0.387 (39%)	D+L	LL
LL Defl inch	0.076 (L/1921)	6'4"	0.305 (L/480)	0.250 (25%)	L	L_
TL Defl inch	0.094 (L/1565)	6'3 3/4"	0.610 (L/240)	0.153 (15%)	D+L	L_

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Tie-down connection required at bearing 3 for uplift 9 lb (Combination D+L, Load Case L_).
3 Top flange must be laterally braced at a maximum of 7'5" o.c.
4 Bottom flange must be laterally braced at a maximum of 7'7" o.c.

ID	Load Type	Location	Trib Width	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform		1-7-3	10 PSF	40 PSF	0 PSF	0 PSF	0 PSF	

Repair for Max 2" wide x 1" deep notch in edge of bottom chord to joist web at any bearing.

No Repair Necessary.

NORTH CAROLINA PROFESSIONAL SEAL 20809 ENGINEER PHILLIP EDWARD ROBBINS

08/31/2023

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