

DATE:	7/30/2026			COMPANY:	Wanskus Architecture, P.C.		
STRUCALC BUILD:	StruCalc Pro			DESIGNED BY:	JOHN P. WANSKUS, RA, AIA, NCARB		
CUSTOMER:	DANIEL FORNES			REVIEWED BY:	JOHN P. WANSKUS, RA, AIA, NCARB		
PROJ. ADDRESS:	7870 NW 163rd STREET MIAMI LAKES, FL 33016			PROJECT NAME:	FORNES		
LEVEL:	NOT YET ASSIGNED			LOADING:	ASD		
MEMBER NAME:	ROOF RAFTERS			CODE:	8th Ed. (2023) Florida Building Code		
MEMBER TYPE:	ROOF RAFTER			NDS:	2018 NDS		
MATERIAL:	Solid Sawn						
Southern Pine	No. 2	4" Dia.	65 (in) O.C.	DRY			

BEAM PROPERTIES

Start (ft): 0	End (ft): 6	Member Slope (in): 8/12	Actual Length (ft): 7.21	Roof Pitch (in): 8/12	O.C. Spacing (in): 65		
Area	I _x	I _y	BSW	Lams	G	K _{cr}	
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor	
12.57	12.57	12.57	3.5	1	0.55	1	

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _c ⊥ (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	1100	675	175	1450	565	1400	510
Adjusted Values	1265	675	175	1450	565	1400	510
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1.15

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	6	0	6	4	1.00	1.00	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (95.3%)	13.1	280.0	6	D+0.6W(+)	1.6
Bending Stress Y (psi)	PASS (81.7%)	371.2	2024.0	3	D+0.6W(+)	1.6
Deflection Y (in)	PASS (90.4%)	0.046	0.481 (=L/180)	3	0.42W(+)	
Compressive Stress (psi)	PASS (99.3%)	6.5	882.3	0	D+0.6W(+)	1.6
Tensile Stress (psi)	PASS (99.4%)	6.5	1080.0	6	D+0.6W(+)	1.6
Bearing Stress (psi)	PASS (98.5%)	8.5	565.0	0	D+0.6W(+)	1.6
Bending-Compression (Unit)	PASS (81.7%)	0.18	1.00	3	D+0.6W(+)	1.6
Bending-Tension (Unit)	PASS (81.7%)	0.18	1.00	3.06	D+0.6W(+)	1.6

REACTIONS Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	WIND +	WIND -	TOTAL
A	49	166	-166	49
B	49	166	-166	49

Reaction Location



LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)		10	10	0	6	Dead	Y
Uniform (lbf/ft)	Uniform	45.95	45.95	0	6	WindPlus	Y
Uniform (lbf/ft)	Uniform	-45.95	-45.95	0	6	WindMinus	Y
Self Weight (lbf/ft)	-	3.5	3.5	0	6	Dead	Y