

# WANSKUS ARCHITECTURE

ARCHITECT ♦ BROKER ♦ CONTRACTOR ♦ DEVELOPER  
HOUSING & COMMUNITY DEVELOPMENT ♦ HOTEL-CASINOS ♦ SOLAR ENERGY

## LICENSES

SEMINOLE, CATAWBA NATION & CHEROKEE INDIANS PROFESSIONAL SERVICES PROVIDER  
CONNECTICUT AR10013326 ♦ FLORIDA AR93250 ♦ ILLINOIS 001-014842 ♦ MASS 32317  
NEW JERSEY 21A101169200 ♦ NEW YORK 034472 SIA 004862 ♦ NORTH CAROLINA 014537  
SOUTH CAROLINA 9931 ♦ TEXAS 21153 ♦ WASH-DC NCARB 67566 ♦ WYOMING C-3265

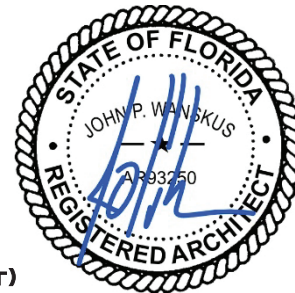
XIX IX

JOHN P. WANSKUS, RA, NCARB, CGC, CCC, BK

MCMXCI

02 SEPTEMBER 2026

MR. MISAEL RODRIGUEZ  
STRUCTURAL PLANS EXAMINER  
TOWN OF MIAMI LAKES  
BUILDING & CODE COMPLIANCE  
6601 MAIN STREET  
MIAMI LAKES, FL 33014



RE: PERMIT # BLR2026-1167 (TIKI HUT - AS-BUILT)

PROPERTY OWNER: DANIEL FORNES  
7870 NW 163<sup>RD</sup> STREET  
MIAMI LAKES, FL 33016

TO: MR. RODRIGUEZ

THIS STRUCTURAL CERTIFICATION REPORT HAS BEEN PREPARED BASED UPON MY REVIEW OF THE EXISTING 12'-0" X 14'-0" ONE-STORY OPEN-STRUCTURE AS-BUILT TIKI HUT. THE SYSTEM INSTALLATION DETAILS WERE ANALYZED FOR COMPLIANCE WITH ASCE 7-22 (WIND REQUIREMENTS) AND THE STRUCTURAL REQUIREMENTS OF THE 2023 FLORIDA BUILDING CODE, EIGHTH (8<sup>TH</sup>) EDITION & SUPPLEMENTS. AFTER EVALUATION, I CONFIRM THAT THE EXISTING TIKI HUT IS ACCEPTABLE AND IS IN COMPLIANCE WITH THE STRUCTURAL PERFORMANCE AND REQUIREMENTS OF THE 2023 FLORIDA BUILDING CODE (SEE ATTACHED CALCULATIONS).

A SET OF ARCHITECTURAL/STRUCTURAL DRAWINGS WERE PREPARED BY THIS OFFICE AND SIGNED/SEALED ON 7/13/2026; PROJECT NUMBER 26-1307.126. THE DRAWINGS INCLUDED THE FOLLOWING SHEETS:

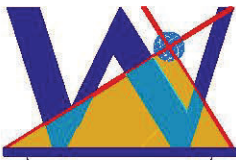
|           |                                     |
|-----------|-------------------------------------|
| T-1 -     | TITLE SHEET                         |
| C-1 -     | SITE PLAN ~ KEY MAP ~ DRAWING INDEX |
| A-1 -     | BUILDING CODE DATA ~ GENERAL NOTES  |
| A-2 -     | FLOOR PLAN                          |
| A-3 -     | BUILDING SECTION                    |
| S-1 - S-3 | FRAMING DETAILS                     |
| S-4 -     | PALM FROND DETAILS                  |
| S-5 -     | PALM FROND RATIONAL ANALYSIS        |
| S-6 -     | STRUCTURE WIND CALCULATIONS         |
| S-7 -     | STRUCTURE WIND CALCUALTIONS         |

THE EXISTING ROOF CONSISTS OF NATURAL SABLE PALMETTO PALM FROND THATCHING. THE FRAMING CONSISTS OF 3" DIAMETER (P.T.) SOUTHERN YELLOW PINE PURLINS @ 1'-6" O/C SUPPORTED BY 4" DIAMETER (P.T.) SOUTHERN YELLOW PINE RAFTERS @ 5'-5" O/C SUPPORTED BY 8" DIAMETER (P.T.) SOUTHERN YELLOW PINE GIRDER SUPPORTED BY 8" DIAMETER (P.T.) SOUTHERN YELLOW PINE COLUMNS EMBEDDED 4'-0" INTO UNDISTURBED SANDY SOIL.

STABILITY

INTEGRITY

OFFICE 888 266 7555 ♦ FAX 941 564 6995 ♦ E MAIL WANSKUS@AOL.COM  
4755 HANSARD AVENUE ♦ NORTH PORT ♦ FLORIDA ♦ 34286



MR. MISAEL RODRIGUEZ, STRUCTURAL PLANS EXAMINER  
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## STRUCTURAL CALCULATIONS - DEAD & WIND

### ROOF PURLINS - EXISTING 3" DIAMETER P.T. SYP

#### DESIGN CRITERIA:

SPAN - 5'-0"  
SPACING - 18" O/C  
ROOF PITCH - 8/12 ~ 33°  
WIND LOAD - 170 MPH ~ EXPOSURE D

#### COMPARISONS WITH REQUIRED SECTIONS: PROVIDED

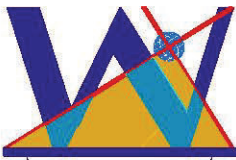
BENDING STRESS (PSI) IS ADEQUATE BY: + 13.6 %  
LOAD COMBO: D+0.6W(+)

SHEAR STRESS Y (PSI) IS ADEQUATE BY: + 92.8 %  
LOAD COMBO: D+0.6W(+)

DEFLECTION Y (IN) IS ADEQUATE BY: + 85.4 %  
LOAD COMBO: 0.42W(+)  
LOAD: DEAD - 10.00 PSF  
WIND - 45.95 PSF (UPLIFT)  
WIND + 45.95 PSF (DOWNFORCE)

BEARING STRESS (PSI) IS ADEQUATE BY: + 97.9 %  
LOAD COMBO: D+0.6W(+)

THEREFORE, THE EXISTING 3" DIAMETER ROOF PURLINS HAVE: **PASSED**



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## STRUCTURAL CALCULATIONS - DEAD & WIND

### ROOF RAFTERS - EXISTING 4" DIAMETER P.T. SYP

#### DESIGN CRITERIA:

SPAN - 6'-0"  
SPACING - 5'-5" O/C  
ROOF PITCH - 8/12 ~ 33°  
WIND LOAD - 170 MPH ~ EXPOSURE D

#### COMPARISONS WITH REQUIRED SECTIONS: PROVIDED

BENDING STRESS Y (PSI) IS ADEQUATE BY: + 81.7 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

SHEAR STRESS Y (PSI) IS ADEQUATE BY: + 95.3 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

DEFLECTION (IN) IS ADEQUATE BY: + 90.4 %  
LOAD COMBO: 0.42W(+)  
LOAD: DEAD - 10.00 PSF  
WIND - 45.95 PSF (UPLIFT)  
WIND + 45.95 PSF (DOWNFORCE)

COMPRESSIVE STRESS (PSI) IS ADEQUATE BY: + 99.3 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

TENSILE STRESS (PSI) IS ADEQUATE BY: + 99.4 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

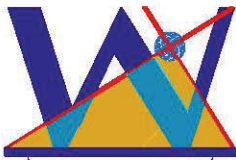
BEARING STRESS (PSI) IS ADEQUATE BY: + 98.5 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

BENDING-COMPRESSION (UNIT) IS ADEQUATE BY: + 81.7 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

BENDING-TENSION (UNIT) IS ADEQUATE BY: + 81.7 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

THEREFORE, THE EXISTING 4" DIAMETER ROOF RAFTERS HAVE:

**PASSED**



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## STRUCTURAL CALCULATIONS - DEAD & WIND

### GIRDER - EXISTING 8" DIAMETER P.T. SYP

#### DESIGN CRITERIA:

SPAN - 14'-0"

WIND LOAD - 170 MPH ~ EXPOSURE D

#### COMPARISONS WITH REQUIRED SECTIONS: PROVIDED

BENDING STRESS Y (PSI) IS ADEQUATE BY: + 44.2 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

SHEAR STRESS Y (PSI) IS ADEQUATE BY: + 90.5 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

DEFLECTION (IN) IS ADEQUATE BY: + 73.0 %  
LOAD COMBO: 0.42W(+)  
LOAD: DEAD - 20.00 PSF  
WIND - 45.95 PSF (UPLIFT)  
WIND + 45.95 PSF (DOWNFORCE)

COMPRESSIVE STRESS (PSI) IS ADEQUATE BY: + 98.6 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

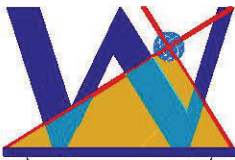
TENSILE STRESS (PSI) IS ADEQUATE BY: + 98.9 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

BEARING STRESS (PSI) IS ADEQUATE BY: + 93.1 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

BENDING-COMPRESSION (UNIT) IS ADEQUATE BY: + 44.2 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

BENDING-TENSION (UNIT) IS ADEQUATE BY: + 44.2 %  
LOAD COMBO: 1.2D+1.6S+0.5W(-)

THEREFORE, THE EXISTING 4" DIAMETER ROOF RAFTERS HAVE: **PASSED**



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## STRUCTURAL CALCULATIONS - DEAD & WIND

### COLUMN - EXISTING 8" DIAMETER P.T. SYP

#### DESIGN CRITERIA:

LENGTH - 11'-7" (7'-7" EXPOSED + 4'-0" EMBEDDED)  
WIND LOAD - 170 MPH ~ EXPOSURE D

#### COMPARISONS WITH REQUIRED SECTIONS: PROVIDED

BENDING STRESS Y (PSI) IS ADEQUATE BY: + 97.3 %  
LOAD COMBO: D+0.6W(+)

SHEAR STRESS Y (PSI) IS ADEQUATE BY: + 98.3 %  
LOAD COMBO: D+0.6W(+)

DEFLECTION (IN) IS ADEQUATE BY: + 96.3 %  
LOAD COMBO: 0.42W(+)  
LOAD: DEAD - 10.00 PSF  
WIND - 45.95 PSF (UPLIFT)  
WIND + 45.95 PSF (DOWNFORCE)

COMPRESSIVE STRESS (PSI) IS ADEQUATE BY: + 95.7 %  
LOAD COMBO: D

BEARING STRESS (PSI) IS ADEQUATE BY: + 97.6 %  
LOAD COMBO: D

BENDING-COMPRESSION (UNIT) IS ADEQUATE BY: + 97.1 %  
LOAD COMBO: D+0.6W(+)

THEREFORE, THE EXISTING 8" DIAMETER COLUMNS HAVE: **PASSED**



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## STRUCTURAL CALCULATIONS - PURLIN/RAFTER ATTACHMENT

### EXISTING 6" FASTENMASTER SCREW

Using the NDS withdrawal formula for wood screws in side grain:

$$W = 2850 \cdot G^2 \cdot D \cdot L$$

- Specific gravity of SYP:  $G \approx 0.55$
- Approx. shank diameter for a 6" FastenMaster screw:  $D \approx 0.22$  in
- Thread penetration:  $L = 2$  in

$$W \approx 2850 \cdot (0.55)^2 \cdot 0.22 \cdot 2$$

$$(0.55)^2 = 0.3025$$

$$2850 \cdot 0.3025 \approx 861$$

$$861 \cdot 0.22 \approx 189 \text{ lb/in}$$

$$189 \cdot 2 \approx 378 \text{ lb}$$

So, the **allowable withdrawal strength** is 378 lb for that screw and embedment in SYP.

### 6" FastenMaster Timber Screws Withdrawal – Southern Yellow Pine

378 lbs (withdrawal capacity)

378 lbs > 39 lbs

### Attachment Design Acceptable

THEREFORE, THE EXISTING 6" FASTENMASTER SCREWS HAVE:

**PASSED**



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## STRUCTURAL CALCULATIONS - RAFTER/GIRDER ATTACHMENT

### EXISTING 10" FASTENMASTER SCREW

Using the same NDS withdrawal formula and assumptions as before (SYP  $G \approx 0.55$ , screw shank  $D \approx 0.22$  in):

$$W_{\text{per in}} \approx 2850 \cdot (0.55)^2 \cdot 0.22 \approx 189 \text{ lb/in}$$

For  $L = 4$  in. of thread penetration:

$$W \approx 189 \cdot 4 \approx 756 \text{ lb}$$

So, the **allowable withdrawal strength is 756 lb** for that 10" FastenMaster screw with 4" embedment in SYP.

### 10" FastenMaster Timber Screws Withdrawal – Southern Yellow Pine

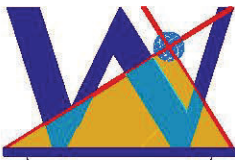
756 lbs (withdrawal capacity)

756 lbs > 49 lbs

### Attachment Design Acceptable

THEREFORE, THE EXISTING 10" FASTENMASTER SCREWS HAVE:

**PASSED**



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## STRUCTURAL CALCULATIONS - GIRDER/COLUMN ATTACHMENT

### EXISTING 14" HEAVY DUTY BLACK LOG TIMBER SCREW

Using the NDS wood-screw withdrawal design equation:

$$W = 2850 \cdot G^2 \cdot D \cdot L$$

- Pressure Treated SYP specific gravity:  $G \approx 0.55$
- Heavy duty log screw shank diameter (assumed):  $D \approx 0.25$  in
- Thread penetration:  $L = 4$  in

Dry reference design value:

$$W_{\text{dry}} \approx 2850 \cdot (0.55)^2 \cdot 0.25 \cdot 4 \approx 860 \text{ lb}$$

So, a typical allowable withdrawal strength is 860 lb for that screw and embedment in pressure treated SYP, assuming side grain and a ~0.25 in shank.

### 14" Heavy Duty Black Log Timber Screws Withdrawal – Southern Yellow Pine

860 lbs (withdrawal capacity)

860 lbs > 602 lbs

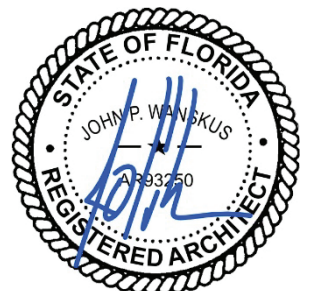
### Attachment Design Acceptable

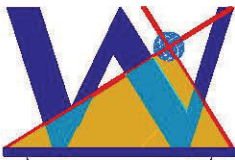
THEREFORE, THE EXISTING 14" HEAVY DUTY LOG TIMBER SCREWS HAVE:

**PASSED**

RESPECTFULLY SUBMITTED BY

JOHN P. WANSKUS, RA, AIA, NCARB





# WANSKUS

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**PASS**

|                 |                                               |         |              |               |                                      |
|-----------------|-----------------------------------------------|---------|--------------|---------------|--------------------------------------|
| 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<br>MIAMI LAKES, FL 33016 |         |              | PROJECT NAME: | FORNES                               |
| LEVEL:          | NOT YET ASSIGNED                              |         |              | LOADING:      | ASD                                  |
| MEMBER NAME:    | PURLINS                                       |         |              | CODE:         | 8th Ed. (2023) Florida Building Code |
| MEMBER TYPE:    | FLOOR JOIST                                   |         |              | NDS:          | 2018 NDS                             |
| MATERIAL:       | Solid Sawn                                    |         |              |               |                                      |
| Southern Pine   | No. 2                                         | 3" Dia. | 18 (in) O.C. | DRY           |                                      |

## BEAM PROPERTIES

Start (ft): 0 End (ft): 5 Member Slope (in): 0/12 Actual Length (ft): 5 O.C. Spacing (in): 18

| Area<br>(in <sup>2</sup> ) | I <sub>x</sub><br>(in <sup>4</sup> ) | I <sub>y</sub><br>(in <sup>4</sup> ) | BSW<br>(lb/ft) | Lams | G    | Kcr<br>Creep Factor |
|----------------------------|--------------------------------------|--------------------------------------|----------------|------|------|---------------------|
| 7.07                       | 3.98                                 | 3.98                                 | 5.43           | 1    | 0.55 | 1                   |

## STRENGTH PROPERTIES

|                 | F <sub>b</sub> (psi) | F <sub>t</sub> (psi) | F <sub>v</sub> (psi) | F <sub>c</sub> (psi) | F <sub>c</sub> ⊥ (psi) | E (psi) x10 <sup>3</sup> | E <sub>min</sub> (psi) x10 <sup>3</sup> |
|-----------------|----------------------|----------------------|----------------------|----------------------|------------------------|--------------------------|-----------------------------------------|
| Base Values     | 925                  | 550                  | 175                  | 1350                 | 565                    | 1400                     | 510                                     |
| Adjusted Values | 1064                 | 550                  | 175                  | 1350                 | 565                    | 1400                     | 510                                     |
| C <sub>M</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |
| C <sub>T</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |
| C <sub>i</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |
| C <sub>F</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |

Bending Adjustment Factors C<sub>fu</sub> = 1 C<sub>r</sub> = 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    | 5           | 0                    | 5      | 0               | 1.00    | 0.99       | 0.99     | 0.99      |

## PASS-FAIL

|                        | PASS/FAIL           | MAGNITUDE | STRENGTH       | LOCATION (ft) | LOAD COMBO | DURATION FACTOR CD |
|------------------------|---------------------|-----------|----------------|---------------|------------|--------------------|
| Shear Stress Y (psi)   | <b>PASS (92.8%)</b> | 20.3      | 280.0          | 0             | D+0.6W(+)  | 1.6                |
| Bending Stress Y (psi) | <b>PASS (13.6%)</b> | 1470.2    | 1702.0         | 2.5           | D+0.6W(+)  | 1.6                |
| Deflection Y (in)      | <b>PASS (85.4%)</b> | 0.049     | 0.333 (=L/180) | 2.5           | 0.42W(+)   |                    |
| Bearing Stress (psi)   | <b>PASS (97.9%)</b> | 11.9      | 565.0          | 0             | D+0.6W(+)  | 1.6                |

## REACTIONS

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

| Y axis | DEAD | WIND + | WIND - | TOTAL |
|--------|------|--------|--------|-------|
| A      | 39   | 115    | -115   | 39    |
| B      | 39   | 115    | -115   | 39    |

Reaction Location

A

B

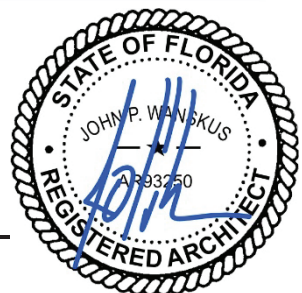
## LOAD LIST

| Type                 | Name   | Left Magnitude | Right Magnitude | Load Start (ft) | Load End (ft) | Load Type | Direction |
|----------------------|--------|----------------|-----------------|-----------------|---------------|-----------|-----------|
| Uniform (lbf/ft)     |        | 10             | 10              | 0               | 5             | Dead      | Y         |
| Uniform (lbf/ft)     | Purlin | 45.95          | 45.95           | 0               | 5             | WindPlus  | Y         |
| Uniform (lbf/ft)     | Purlin | -45.95         | -45.95          | 0               | 5             | WindMinus | Y         |
| Self Weight (lbf/ft) | -      | 5.43           | 5.43            | 0               | 5             | Dead      | Y         |

PROJECT: FORNES

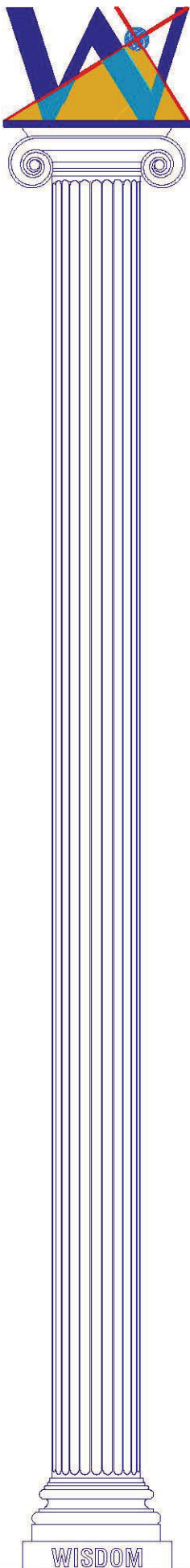
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WISDOM

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### PASS

|                 |                                               |         |              |               |                                      |  |  |
|-----------------|-----------------------------------------------|---------|--------------|---------------|--------------------------------------|--|--|
| 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<br>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<br>(in <sup>2</sup> ) | I <sub>x</sub><br>(in <sup>4</sup> ) | I <sub>y</sub><br>(in <sup>4</sup> ) | BSW<br>(lb/ft) | Lams | G    | K <sub>cr</sub><br>Creep Factor |
|----------------------------|--------------------------------------|--------------------------------------|----------------|------|------|---------------------------------|
| 12.57                      | 12.57                                | 12.57                                | 3.5            | 1    | 0.55 | 1                               |

### STRENGTH PROPERTIES

|                 | F <sub>b</sub> (psi) | F <sub>t</sub> (psi) | F <sub>v</sub> (psi) | F <sub>c</sub> (psi) | F <sub>c</sub> ⊥ (psi) | E (psi) x10 <sup>3</sup> | E <sub>min</sub> (psi) x10 <sup>3</sup> |
|-----------------|----------------------|----------------------|----------------------|----------------------|------------------------|--------------------------|-----------------------------------------|
| Base Values     | 1100                 | 675                  | 175                  | 1450                 | 565                    | 1400                     | 510                                     |
| Adjusted Values | 1265                 | 675                  | 175                  | 1450                 | 565                    | 1400                     | 510                                     |
| C <sub>M</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |
| C <sub>T</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |
| C <sub>i</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |
| C <sub>F</sub>  | 1                    | 1                    | 1                    | 1                    | 1                      | 1                        | 1                                       |

Bending Adjustment Factors C<sub>fu</sub> = 1 C<sub>r</sub> = 1.15

### BEAM DATA

| Span | Length (ft) | Unbraced Length (ft) |        | Beam End        |         |            |          |           |
|------|-------------|----------------------|--------|-----------------|---------|------------|----------|-----------|
|      |             | 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

| 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

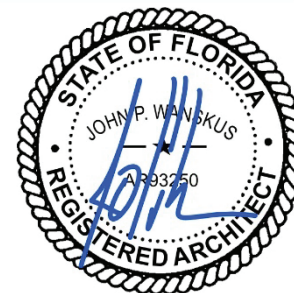
|   |   |
|---|---|
| A | B |
|---|---|

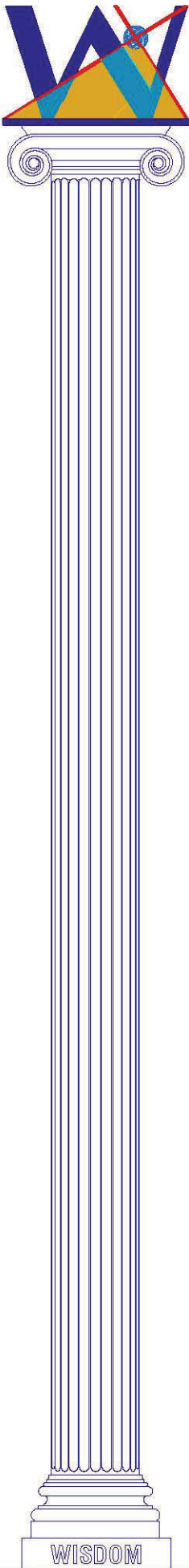
### LOAD LIST

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

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### PASS

|                 |                                               |               |                                      |
|-----------------|-----------------------------------------------|---------------|--------------------------------------|
| 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<br>MIAMI LAKES, FL 33016 | PROJECT NAME: | FORNES                               |
| LEVEL:          | NOT YET ASSIGNED                              | LOADING:      | ASD                                  |
| MEMBER NAME:    | GIRDER                                        | CODE:         | 8th Ed. (2023) Florida Building Code |
| MEMBER TYPE:    | ROOF BEAM                                     | NDS:          | 2018 NDS                             |
| MATERIAL:       | Solid Sawn                                    |               |                                      |
| Southern Pine   | No. 2                                         | 8" Dia.       | DRY                                  |

### BEAM PROPERTIES

Start (ft): 0 End (ft): 12.67 Member Slope (in): 8/12 Actual Length (ft): 15.23

| Area               | Ix                 | Iy                 | BSW     | Lams | G    | Kcr          |
|--------------------|--------------------|--------------------|---------|------|------|--------------|
| (in <sup>2</sup> ) | (in <sup>4</sup> ) | (in <sup>4</sup> ) | (lb/ft) |      |      | Creep Factor |
| 50.27              | 201.06             | 201.06             | 14.99   | 1    | 0.55 | 1            |

### STRENGTH PROPERTIES

|                 | Fb (psi) | Ft (psi) | Fv (psi) | Fc (psi) | Fc <sub>⊥</sub> (psi) | E (psi) x10 <sup>3</sup> | Emin (psi) x10 <sup>3</sup> |
|-----------------|----------|----------|----------|----------|-----------------------|--------------------------|-----------------------------|
| Base Values     | 850      | 550      | 165      | 525      | 375                   | 1200                     | 440                         |
| Adjusted Values | 850      | 550      | 165      | 525      | 375                   | 1200                     | 440                         |
| C <sub>M</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |
| C <sub>T</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |
| C <sub>i</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |
| C <sub>E</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |

Bending Adjustment Factors C<sub>fu</sub> = 1 C<sub>r</sub> = 1

### BEAM DATA

| Span | Length (ft) | Unbraced Length (ft) |        | Beam End<br>Elev. Diff (ft) | CL(Top) | CL(Bottom) | CL(Left) | CL(Right) |
|------|-------------|----------------------|--------|-----------------------------|---------|------------|----------|-----------|
|      |             | Top                  | Bottom |                             |         |            |          |           |
| 1    | 12.67       | 0                    | 12.67  | 6.699999                    | 1.00    | 1.00       | 1.00     | 1.00      |

### PASS-FAIL

|                            | PASS/FAIL    | MAGNITUDE | STRENGTH       | LOCATION (ft) | LOAD COMBO | DURATION FACTOR CD |
|----------------------------|--------------|-----------|----------------|---------------|------------|--------------------|
| Shear Stress Y (psi)       | PASS (90.5%) | 14.1      | 148.5          | 12.67         | D          | 0.9                |
| Bending Stress Y (psi)     | PASS (44.2%) | 426.7     | 765.0          | 6.335         | D          | 0.9                |
| Deflection Y (in)          | PASS (73.0%) | 0.258     | 0.956 (=L/180) | 6.335         | D+L        |                    |
| Compressive Stress (psi)   | PASS (98.6%) | 5.6       | 404.0          | 0             | D          | 0.9                |
| Tensile Stress (psi)       | PASS (98.9%) | 5.6       | 495.0          | 12.67         | D          | 0.9                |
| Bearing Stress (psi)       | PASS (93.1%) | 26.0      | 375.0          | 0             | D-0.6W(-)  | 1.6                |
| Bending-Compression (Unit) | PASS (44.2%) | 0.56      | 1.00           | 6.208         | D          | 0.9                |
| Bending-Tension (Unit)     | PASS (44.2%) | 0.56      | 1.00           | 6.462         | D          | 0.9                |

### REACTIONS

| Y axis | DEAD | WIND + | WIND - | TOTAL |
|--------|------|--------|--------|-------|
| A      | 602  | 329    | -329   | 602   |
| B      | 602  | 329    | -329   | 602   |

Reaction Location

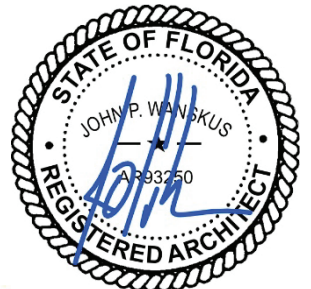
|   |   |
|---|---|
| A | B |
|---|---|

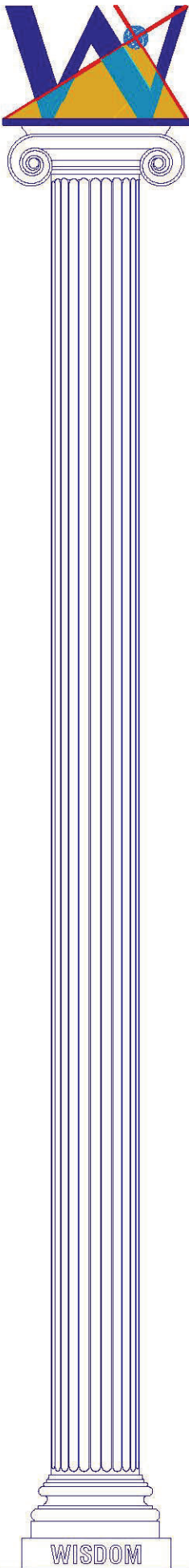
### LOAD LIST

| Type                | Name    | Left Magnitude | Right Magnitude | Load Start (ft) | Load End (ft) | Load Type | Direction |
|---------------------|---------|----------------|-----------------|-----------------|---------------|-----------|-----------|
| Uniform (lb/ft)     |         | 20             | 20              | 0               | 12.67         | Dead      | Y         |
| Uniform (lb/ft)     | Uniform | 45.95          | 45.95           | 0               | 12.67         | WindPlus  | Y         |
| Uniform (lb/ft)     | Uniform | -45.96         | -45.96          | 0               | 12.67         | WindMinus | Y         |
| Uniform (lb/ft)     | RAFTERS | 49             | 49              | 0               | 12.67         | Dead      | Y         |
| Self Weight (lb/ft) | -       | 14.99          | 14.99           | 0               | 12.67         | Dead      | Y         |

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## PASS

|                 |                                               |         |     |               |                                      |  |  |
|-----------------|-----------------------------------------------|---------|-----|---------------|--------------------------------------|--|--|
| 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<br>MIAMI LAKES, FL 33016 |         |     | PROJECT NAME: | FORNES                               |  |  |
| LEVEL:          | NOT YET ASSIGNED                              |         |     | LOADING:      | ASD                                  |  |  |
| MEMBER NAME:    | COLUMN                                        |         |     | CODE:         | 8th Ed. (2023) Florida Building Code |  |  |
| MEMBER TYPE:    | COLUMN                                        |         |     | NDS:          | 2018 NDS                             |  |  |
| MATERIAL:       | Solid Sawn                                    |         |     |               |                                      |  |  |
| Southern Pine   | No. 2                                         | 8" Dia. | DRY |               | INCISED                              |  |  |

## COLUMN PROPERTIES

Start (ft): 0 End (ft): 11.56

| Area               | Ix                 | Iy                 | BSW     | Lams | G    | Kcr          |
|--------------------|--------------------|--------------------|---------|------|------|--------------|
| (in <sup>2</sup> ) | (in <sup>4</sup> ) | (in <sup>4</sup> ) | (lb/ft) |      |      | Creep Factor |
| 50.27              | 201.06             | 201.06             | 6.99    | 1    | 0.55 | 1            |

## STRENGTH PROPERTIES

|                 | Fb (psi) | Ft (psi) | Fv (psi) | Fc (psi) | Fc <sub>⊥</sub> (psi) | E (psi) x10 <sup>3</sup> | Emin (psi) x10 <sup>3</sup> |
|-----------------|----------|----------|----------|----------|-----------------------|--------------------------|-----------------------------|
| Base Values     | 1100     | 675      | 175      | 1450     | 565                   | 1400                     | 510                         |
| Adjusted Values | 880      | 540      | 140      | 1160     | 565                   | 1330                     | 484                         |
| C <sub>M</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |
| C <sub>T</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |
| C <sub>F</sub>  | 0.8      | 0.8      | 0.8      | 0.8      | 1                     | 0.95                     | 0.95                        |
| C <sub>E</sub>  | 1        | 1        | 1        | 1        | 1                     | 1                        | 1                           |

Bending Adjustment Factors C<sub>Fu</sub> = 1 C<sub>r</sub> = 1

## COLUMN DATA

| Span | Length (ft) | Unbraced Length (ft) |      | Column End Offset | CP   | K <sub>e</sub> (X Axis) | K <sub>e</sub> (Y Axis) | K <sub>e</sub> /d (X Axis) | K <sub>e</sub> /d (Y Axis) |
|------|-------------|----------------------|------|-------------------|------|-------------------------|-------------------------|----------------------------|----------------------------|
|      |             | X                    | Y    |                   |      |                         |                         |                            |                            |
| 1    | 11.56       | 7.56                 | 7.56 | 0                 | 0.48 | 1.00                    | 1.00                    | 25.92                      | 11.34                      |

## PASS-FAIL

|                            | PASS/FAIL    | MAGNITUDE | STRENGTH       | LOCATION (ft) | LOAD COMBO | DURATION FACTOR CD |
|----------------------------|--------------|-----------|----------------|---------------|------------|--------------------|
| Shear Stress Y (psi)       | PASS (98.3%) | 3.7       | 224.0          | 11.56         | D+0.6W(+)  | 1.6                |
| Bending Stress Y (psi)     | PASS (97.3%) | 37.3      | 1406.4         | 6.474         | D+0.6W(+)  | 1.6                |
| Deflection Y (in)          | PASS (96.3%) | 0.021     | 0.578 (=L/240) | 6.011         | 0.42W(+)   |                    |
| Compressive Stress (psi)   | PASS (95.7%) | 21.5      | 500.6          | 0             | D          | 0.9                |
| Bearing Stress (psi)       | PASS (97.6%) | 25.1      | 1044.0         | 11.56         | D          | 0.9                |
| Bending-Compression (Unit) | PASS (97.1%) | 0.03      | 1.00           | 6.474         | D+0.6W(+)  | 1.6                |

## REACTIONS

| REACTIONS |      | Units for V: lbf | Units for M: lbf-ft |       |
|-----------|------|------------------|---------------------|-------|
| Z axis    | DEAD | WIND +           | WIND -              | TOTAL |
| A         | 1081 | 0                | 0                   | 1081  |
| B         | 0    | 0                | 0                   | 0     |
| Y axis    |      |                  |                     |       |
| A         | 0    | 114              | -114                | 0     |
| B         | 602  | 234              | -234                | 602   |

Reaction Location

A

B

## LOAD LIST

| Type                 | Name    | Left Magnitude | Right Magnitude | Load Start (ft) | Load End (ft) | Load Type | Direction |
|----------------------|---------|----------------|-----------------|-----------------|---------------|-----------|-----------|
| Axial (lbf)          |         | -1000          | -1000           | 11.56           | 11.56         | Dead      | Z         |
| Uniform (lbf/ft)     | Uniform | 45.95          | 45.95           | 4               | 11.56         | WindPlus  | Y         |
| Uniform (lbf/ft)     | Uniform | -45.95         | -45.95          | 4               | 11.56         | WindMinus | Y         |
| Point (lbf)          | Point   | 602            | -               | 11.56           | -             | Dead      | Y         |
| Self Weight (lbf/ft) | -       | 6.99           | 6.99            | 0               | 11.56         | Dead      | Z         |

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