

# Manual J Winter Calculations

## Residential Load - Component Details (continued)

Palmatier, Richard & Doris

Project Title:

Class 3 Rating

Registration No. 0

Climate: North

Lake City, FL

905081ErkingerBuildersPalmatierResMANJ

5/15/2009

### WHOLE HOUSE TOTALS

|  |                      |            |
|--|----------------------|------------|
|  | Subtotal Sensible    | 27225 Btuh |
|  | Ventilation Sensible | 0 Btuh     |
|  | Total Btuh Loss      | 27225 Btuh |

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)

(Frame types - metal, wood or insulated metal)

(U - Window U-Factor or 'DEF' for default)

(HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types )



For Florida residences only

# System Sizing Calculations - Winter

## Residential Load - Room by Room Component Details

Palmatier, Richard & Doris

Project Title:

Class 3 Rating

905081ErkingerBuildersPalmatierResMANJ

Registration No. 0

Lake City, FL

Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F

5/15/2009

This calculation is for Worst Case. The house has been rotated 315 degrees.

### Component Loads for Zone #1: Main

| Window                  | Panes/SHGC/Frame/U                                                   | Orientation | Area(sqft) X | HTM=  | Load       |
|-------------------------|----------------------------------------------------------------------|-------------|--------------|-------|------------|
| 1                       | 2, Clear, Metal, 0.87                                                | NW          | 6.0          | 32.2  | 193 Btuh   |
| 2                       | 2, Clear, Metal, 0.87                                                | NW          | 20.0         | 32.2  | 644 Btuh   |
| 3                       | 2, Clear, Metal, 0.87                                                | NE          | 20.0         | 32.2  | 644 Btuh   |
| 4                       | 2, Clear, Metal, 0.87                                                | NW          | 20.0         | 32.2  | 644 Btuh   |
| 5                       | 2, Clear, Metal, 0.87                                                | NE          | 20.0         | 32.2  | 644 Btuh   |
| 6                       | 2, Clear, Metal, 0.87                                                | NE          | 15.0         | 32.2  | 483 Btuh   |
| 7                       | 2, Clear, Metal, 0.87                                                | SE          | 30.0         | 32.2  | 966 Btuh   |
| 8                       | 2, Clear, Metal, 0.87                                                | SE          | 6.0          | 32.2  | 193 Btuh   |
| 9                       | 2, Clear, Metal, 0.87                                                | SW          | 15.0         | 32.2  | 483 Btuh   |
| 10                      | 2, Clear, Metal, 0.87                                                | SE          | 12.5         | 32.2  | 402 Btuh   |
| 11                      | 2, Clear, Metal, 0.87                                                | S           | 12.5         | 32.2  | 402 Btuh   |
| 12                      | 2, Clear, Metal, 0.87                                                | SW          | 12.5         | 32.2  | 402 Btuh   |
| Window Total            |                                                                      |             | 190(sqft)    |       | 6100 Btuh  |
| Walls                   | Type                                                                 | R-Value     | Area X       | HTM=  | Load       |
| 1                       | Face Brick - Wood - Ext(0.09)                                        | 13.0        | 883          | 3.3   | 2901 Btuh  |
| 2                       | Frame - Wood - Adj(0.09)                                             | 13.0        | 198          | 3.3   | 650 Btuh   |
| Wall Total              |                                                                      |             | 1081         |       | 3551 Btuh  |
| Doors                   | Type                                                                 |             | Area X       | HTM=  | Load       |
| 1                       | Insulated - Adjacent                                                 |             | 20           | 12.9  | 259 Btuh   |
| 2                       | Insulated - Exterior                                                 |             | 20           | 12.9  | 259 Btuh   |
| 3                       | Insulated - Exterior                                                 |             | 31           | 12.9  | 404 Btuh   |
| Door Total              |                                                                      |             | 71           |       | 922Btuh    |
| Ceilings                | Type/Color/Surface                                                   | R-Value     | Area X       | HTM=  | Load       |
| 1                       | Vented Attic/D/Shin)                                                 | 30.0        | 1568         | 1.2   | 1848 Btuh  |
| Ceiling Total           |                                                                      |             | 1568         |       | 1848Btuh   |
| Floors                  | Type                                                                 | R-Value     | Size X       | HTM=  | Load       |
| 1                       | Slab On Grade                                                        | 0           | 170.0 ft(p)  | 43.7  | 7422 Btuh  |
| Floor Total             |                                                                      |             | 170          |       | 7422 Btuh  |
| Zone Envelope Subtotal: |                                                                      |             |              |       | 19843 Btuh |
| Infiltration            | Type                                                                 | ACH X       | Zone Volume  | CFM=  | Load       |
|                         | Natural                                                              | 0.94        | 11632        | 182.2 | 7382 Btuh  |
| Ductload                | Partially sealed, R6.0, Supply(Attic), Return(NoDucts) (DLM of 0.00) |             |              |       | 0 Btuh     |
| Zone #1                 | Sensible Zone Subtotal                                               |             |              |       | 27225 Btuh |

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## Residential Load - Component Details (continued)

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905081ErkingerBuildersPalmatierResMANJ

Registration No. 0

Lake City, FL

Climate: North

5/15/2009

### WHOLE HOUSE TOTALS

|  |                      |            |
|--|----------------------|------------|
|  | Subtotal Sensible    | 27225 Btuh |
|  | Ventilation Sensible | 0 Btuh     |
|  | Total Btuh Loss      | 27225 Btuh |

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)

(Frame types - metal, wood or insulated metal)

(U - Window U-Factor or 'DEF' for default)

(HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types )



For Florida residences only

# System Sizing Calculations - Summer

## Residential Load - Whole House Component Details

Palmatier, Richard & Doris

Project Title:

Class 3 Rating

905081ErkingerBuildersPalmatierResMANJ

Registration No. 0

Lake City, FL

Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F

5/15/2009

This calculation is for Worst Case. The house has been rotated 315 degrees.

### Component Loads for Whole House

| Window                  | Type*                                                  |                 | Overhang      |              | Window Area(sqft) |           |          | HTM        |           | Load       |      |
|-------------------------|--------------------------------------------------------|-----------------|---------------|--------------|-------------------|-----------|----------|------------|-----------|------------|------|
|                         | Pn/SHGC/U/InSh/ExSh/IS                                 | Ornt            | Len           | Hgt          | Gross             | Shaded    | Unshaded | Shaded     | Unshaded  |            |      |
| 1                       | 2, Clear, 0.87, None,N,N                               | NW              | 1.5ft         | 4ft.         | 6.0               | 0.0       | 6.0      | 29         | 60        | 360        | Btuh |
| 2                       | 2, Clear, 0.87, None,N,N                               | NW              | 1.5ft         | 6ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 3                       | 2, Clear, 0.87, None,N,N                               | NE              | 11.6          | 7ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 4                       | 2, Clear, 0.87, None,N,N                               | NW              | 16.3          | 7ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 5                       | 2, Clear, 0.87, None,N,N                               | NE              | 1.5ft         | 6ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 6                       | 2, Clear, 0.87, None,N,N                               | NE              | 1.5ft         | 6ft.         | 15.0              | 0.0       | 15.0     | 29         | 60        | 901        | Btuh |
| 7                       | 2, Clear, 0.87, None,N,N                               | SE              | 1.5ft         | 6ft.         | 30.0              | 9.1       | 20.9     | 29         | 63        | 1569       | Btuh |
| 8                       | 2, Clear, 0.87, None,N,N                               | SE              | 1.5ft         | 2ft.         | 6.0               | 6.0       | 0.0      | 29         | 63        | 174        | Btuh |
| 9                       | 2, Clear, 0.87, None,N,N                               | SW              | 1.5ft         | 6ft.         | 15.0              | 4.6       | 10.4     | 29         | 63        | 785        | Btuh |
| 10                      | 2, Clear, 0.87, None,N,N                               | SE              | 6.5ft         | 6ft.         | 12.5              | 12.5      | 0.0      | 29         | 63        | 362        | Btuh |
| 11                      | 2, Clear, 0.87, None,N,N                               | S               | 8ft.          | 6ft.         | 12.5              | 12.5      | 0.0      | 29         | 34        | 362        | Btuh |
| 12                      | 2, Clear, 0.87, None,N,N                               | SW              | 23.8          | 6ft.         | 12.5              | 12.5      | 0.0      | 29         | 63        | 362        | Btuh |
| Window Total            |                                                        |                 |               |              | 190 (sqft)        |           |          |            |           | 9677 Btuh  |      |
| Walls                   | Type                                                   | R-Value/U-Value |               | Area(sqft)   |                   |           | HTM      |            | Load      |            |      |
| 1                       | Face Brick - Wood - Ext                                | 13.0/0.09       |               | 883.3        |                   |           | 1.2      |            | 1098 Btuh |            |      |
| 2                       | Frame - Wood - Adj                                     | 13.0/0.09       |               | 198.0        |                   |           | 1.5      |            | 299 Btuh  |            |      |
| Wall Total              |                                                        |                 |               | 1081 (sqft)  |                   |           |          |            | 1396 Btuh |            |      |
| Doors                   | Type                                                   |                 |               |              | Area (sqft)       |           | HTM      |            | Load      |            |      |
| 1                       | Insulated - Adjacent                                   |                 |               |              | 20.0              |           | 9.8      |            | 196 Btuh  |            |      |
| 2                       | Insulated - Exterior                                   |                 |               |              | 20.0              |           | 9.8      |            | 196 Btuh  |            |      |
| 3                       | Insulated - Exterior                                   |                 |               |              | 31.2              |           | 9.8      |            | 306 Btuh  |            |      |
| Door Total              |                                                        |                 |               | 71 (sqft)    |                   |           |          |            | 698 Btuh  |            |      |
| Ceilings                | Type/Color/Surface                                     | R-Value         |               | Area(sqft)   |                   |           | HTM      |            | Load      |            |      |
| 1                       | Vented Attic/DarkShingle                               | 30.0            |               | 1568.0       |                   |           | 1.7      |            | 2597 Btuh |            |      |
| Ceiling Total           |                                                        |                 |               | 1568 (sqft)  |                   |           |          |            | 2597 Btuh |            |      |
| Floors                  | Type                                                   | R-Value         |               | Size         |                   |           | HTM      |            | Load      |            |      |
| 1                       | Slab On Grade                                          | 0.0             |               | 170 (ft(p))  |                   |           | 0.0      |            | 0 Btuh    |            |      |
| Floor Total             |                                                        |                 |               | 170.0 (sqft) |                   |           |          |            | 0 Btuh    |            |      |
| Zone Envelope Subtotal: |                                                        |                 |               |              |                   |           |          |            |           | 14368 Btuh |      |
| Infiltration            | Type                                                   | ACH             |               | Volume(cuft) |                   |           | CFM=     |            | Load      |            |      |
|                         | SensibleNatural                                        | 0.49            |               | 11632        |                   |           | 95.0     |            | 1768 Btuh |            |      |
| Internal gain           | Occupants                                              |                 | Btuh/occupant |              |                   | Appliance |          | Load       |           |            |      |
|                         | 6                                                      |                 | X 230 +       |              |                   | 2400      |          | 3780 Btuh  |           |            |      |
| Duct load               | Partially sealed, R6.0, Supply(Attic), Return(NoDucts) |                 |               |              |                   |           |          | DGM = 0.00 |           | 0.0 Btuh   |      |
| Sensible Zone Load      |                                                        |                 |               |              |                   |           |          |            |           | 19916 Btuh |      |

# Manual J Summer Calculations

## Residential Load - Component Details (continued)

Palmatier, Richard & Doris

Project Title:

Class 3 Rating

905081ErkingerBuildersPalmatierResMANJ

Registration No. 0

Lake City, FL

Climate: North

5/15/2009

### WHOLE HOUSE TOTALS

|                                           |                                                           |                   |
|-------------------------------------------|-----------------------------------------------------------|-------------------|
| <b>Whole House<br/>Totals for Cooling</b> | <b>Sensible Envelope Load All Zones</b>                   | <b>19916 Btuh</b> |
|                                           | Sensible Duct Load                                        | 0 Btuh            |
|                                           | <b>Total Sensible Zone Loads</b>                          | <b>19916 Btuh</b> |
|                                           | Sensible ventilation                                      | 0 Btuh            |
|                                           | Blower                                                    | 0 Btuh            |
|                                           | <b>Total sensible gain</b>                                | <b>19916 Btuh</b> |
|                                           | Latent infiltration gain (for 54 gr. humidity difference) | 3472 Btuh         |
|                                           | Latent ventilation gain                                   | 0 Btuh            |
|                                           | Latent duct gain                                          | 0 Btuh            |
|                                           | Latent occupant gain (6 people @ 200 Btuh per person)     | 1200 Btuh         |
|                                           | Latent other gain                                         | 0 Btuh            |
|                                           | <b>Latent total gain</b>                                  | <b>4672 Btuh</b>  |
|                                           | <b>TOTAL GAIN</b>                                         | <b>24588 Btuh</b> |

\*Key: Window types (Pn - Number of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)

(U - Window U-Factor or 'DEF' for default)

(InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R))

(ExSh - Exterior shading device: none(N) or numerical value)

(BS - Insect screen: none(N), Full(F) or Half(H))

(Ornt - compass orientation)



For Florida residences only

# System Sizing Calculations - Summer

## Residential Load - Room by Room Component Details

Palmatier, Richard & Doris

Project Title:

Class 3 Rating

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Registration No. 0

Lake City, FL

Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F

5/15/2009

This calculation is for Worst Case. The house has been rotated 315 degrees.

### Component Loads for Zone #1: Main

| Window                  | Type*                                                  |                 | Overhang      |              | Window Area(sqft) |           |          | HTM        |           | Load       |      |
|-------------------------|--------------------------------------------------------|-----------------|---------------|--------------|-------------------|-----------|----------|------------|-----------|------------|------|
|                         | Pn/SHGC/U/InSh/ExSh/IS                                 | Ornt            | Len           | Hgt          | Gross             | Shaded    | Unshaded | Shaded     | Unshaded  |            |      |
| 1                       | 2, Clear, 0.87, None,N,N                               | NW              | 1.5ft         | 4ft.         | 6.0               | 0.0       | 6.0      | 29         | 60        | 360        | Btuh |
| 2                       | 2, Clear, 0.87, None,N,N                               | NW              | 1.5ft         | 6ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 3                       | 2, Clear, 0.87, None,N,N                               | NE              | 11.6          | 7ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 4                       | 2, Clear, 0.87, None,N,N                               | NW              | 16.3          | 7ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 5                       | 2, Clear, 0.87, None,N,N                               | NE              | 1.5ft         | 6ft.         | 20.0              | 0.0       | 20.0     | 29         | 60        | 1201       | Btuh |
| 6                       | 2, Clear, 0.87, None,N,N                               | NE              | 1.5ft         | 6ft.         | 15.0              | 0.0       | 15.0     | 29         | 60        | 901        | Btuh |
| 7                       | 2, Clear, 0.87, None,N,N                               | SE              | 1.5ft         | 6ft.         | 30.0              | 9.1       | 20.9     | 29         | 63        | 1569       | Btuh |
| 8                       | 2, Clear, 0.87, None,N,N                               | SE              | 1.5ft         | 2ft.         | 6.0               | 6.0       | 0.0      | 29         | 63        | 174        | Btuh |
| 9                       | 2, Clear, 0.87, None,N,N                               | SW              | 1.5ft         | 6ft.         | 15.0              | 4.6       | 10.4     | 29         | 63        | 785        | Btuh |
| 10                      | 2, Clear, 0.87, None,N,N                               | SE              | 6.5ft         | 6ft.         | 12.5              | 12.5      | 0.0      | 29         | 63        | 362        | Btuh |
| 11                      | 2, Clear, 0.87, None,N,N                               | S               | 8ft.          | 6ft.         | 12.5              | 12.5      | 0.0      | 29         | 34        | 362        | Btuh |
| 12                      | 2, Clear, 0.87, None,N,N                               | SW              | 23.8          | 6ft.         | 12.5              | 12.5      | 0.0      | 29         | 63        | 362        | Btuh |
| Window Total            |                                                        |                 |               |              | 190 (sqft)        |           |          |            |           | 9677 Btuh  |      |
| Walls                   | Type                                                   | R-Value/U-Value |               | Area(sqft)   |                   |           | HTM      |            | Load      |            |      |
| 1                       | Face Brick - Wood - Ext                                | 13.0/0.09       |               | 883.3        |                   |           | 1.2      |            | 1098 Btuh |            |      |
| 2                       | Frame - Wood - Adj                                     | 13.0/0.09       |               | 198.0        |                   |           | 1.5      |            | 299 Btuh  |            |      |
| Wall Total              |                                                        |                 |               | 1081 (sqft)  |                   |           |          |            | 1396 Btuh |            |      |
| Doors                   | Type                                                   |                 |               |              | Area (sqft)       |           | HTM      |            | Load      |            |      |
| 1                       | Insulated - Adjacent                                   |                 |               |              | 20.0              |           | 9.8      |            | 196 Btuh  |            |      |
| 2                       | Insulated - Exterior                                   |                 |               |              | 20.0              |           | 9.8      |            | 196 Btuh  |            |      |
| 3                       | Insulated - Exterior                                   |                 |               |              | 31.2              |           | 9.8      |            | 306 Btuh  |            |      |
| Door Total              |                                                        |                 |               | 71 (sqft)    |                   |           |          |            | 698 Btuh  |            |      |
| Ceilings                | Type/Color/Surface                                     | R-Value         |               | Area(sqft)   |                   |           | HTM      |            | Load      |            |      |
| 1                       | Vented Attic/DarkShingle                               | 30.0            |               | 1568.0       |                   |           | 1.7      |            | 2597 Btuh |            |      |
| Ceiling Total           |                                                        |                 |               | 1568 (sqft)  |                   |           |          |            | 2597 Btuh |            |      |
| Floors                  | Type                                                   | R-Value         |               | Size         |                   |           | HTM      |            | Load      |            |      |
| 1                       | Slab On Grade                                          | 0.0             |               | 170 (ft(p))  |                   |           | 0.0      |            | 0 Btuh    |            |      |
| Floor Total             |                                                        |                 |               | 170.0 (sqft) |                   |           |          |            | 0 Btuh    |            |      |
| Zone Envelope Subtotal: |                                                        |                 |               |              |                   |           |          |            |           | 14368 Btuh |      |
| Infiltration            | Type                                                   | ACH             |               | Volume(cuft) |                   |           | CFM=     |            | Load      |            |      |
|                         | SensibleNatural                                        | 0.49            |               | 11632        |                   |           | 95.0     |            | 1768 Btuh |            |      |
| Internal gain           | Occupants                                              |                 | Btuh/occupant |              |                   | Appliance |          | Load       |           |            |      |
|                         | 6                                                      |                 | X 230 +       |              |                   | 2400      |          | 3780 Btuh  |           |            |      |
| Duct load               | Partially sealed, R6.0, Supply(Attic), Return(NoDucts) |                 |               |              |                   |           |          | DGM = 0.00 |           | 0.0 Btuh   |      |
| Sensible Zone Load      |                                                        |                 |               |              |                   |           |          |            |           | 19916 Btuh |      |

# Manual J Summer Calculations

## Residential Load - Component Details (continued)

Palmatier, Richard & Doris

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Class 3 Rating

905081ErkingerBuildersPalmatierResMANJ

Registration No. 0

Lake City, FL

Climate: North

5/15/2009

### WHOLE HOUSE TOTALS

|                                           |                                                           |                   |
|-------------------------------------------|-----------------------------------------------------------|-------------------|
| <b>Whole House<br/>Totals for Cooling</b> | <b>Sensible Envelope Load All Zones</b>                   | <b>19916 Btuh</b> |
|                                           | Sensible Duct Load                                        | 0 Btuh            |
|                                           | <b>Total Sensible Zone Loads</b>                          | <b>19916 Btuh</b> |
|                                           | Sensible ventilation                                      | 0 Btuh            |
|                                           | Blower                                                    | 0 Btuh            |
|                                           | <b>Total sensible gain</b>                                | <b>19916 Btuh</b> |
|                                           | Latent infiltration gain (for 54 gr. humidity difference) | 3472 Btuh         |
|                                           | Latent ventilation gain                                   | 0 Btuh            |
|                                           | Latent duct gain                                          | 0 Btuh            |
|                                           | Latent occupant gain (6 people @ 200 Btuh per person)     | 1200 Btuh         |
|                                           | Latent other gain                                         | 0 Btuh            |
|                                           | <b>Latent total gain</b>                                  | <b>4672 Btuh</b>  |
|                                           | <b>TOTAL GAIN</b>                                         | <b>24588 Btuh</b> |

\*Key: Window types (Pn - Number of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)

(U - Window U-Factor or 'DEF' for default)

(InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R))

(ExSh - Exterior shading device: none(N) or numerical value)

(BS - Insect screen: none(N), Full(F) or Half(H))

(Ornt - compass orientation)



For Florida residences only

# Residential Window Diversity

## MidSummer

Palmatier, Richard & Doris

Project Title:

Class 3 Rating

Registration No. 0

Climate: North

Lake City, FL

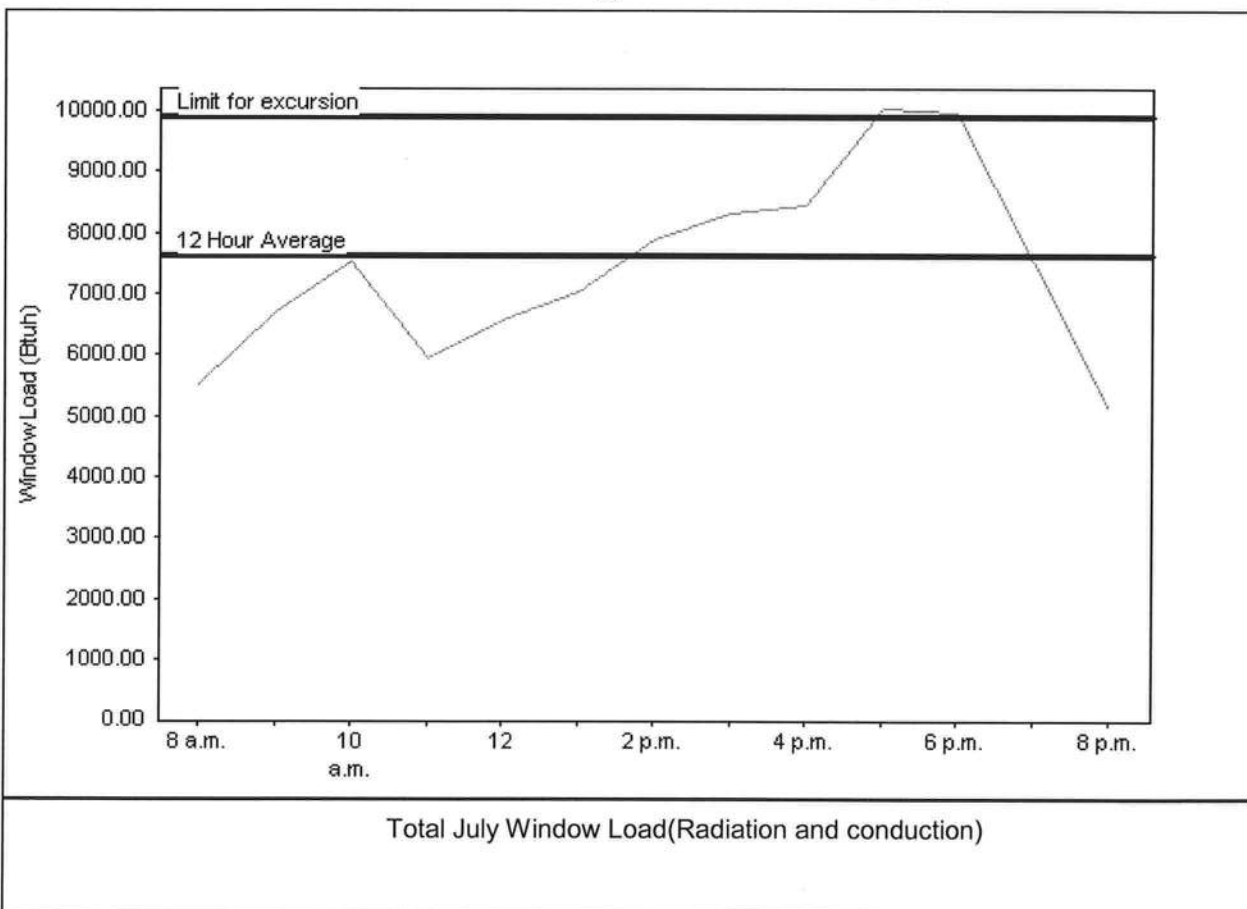
905081ErkingerBuildersPalmatierResMANJ

5/15/2009

Weather data for: Gainesville - Defaults

|                               |          |                               |           |
|-------------------------------|----------|-------------------------------|-----------|
| Summer design temperature     | 92 F     | Average window load for July  | 7628 Btuh |
| Summer setpoint               | 75 F     | Peak window load for July     | 10047 Btu |
| Summer temperature difference | 17 F     | Excursion limit(130% of Ave.) | 9916 Btuh |
| Latitude                      | 29 North | Window excursion (July)       | 131 Btuh  |

## WINDOW Average and Peak Loads



Warning: This application has glass areas that produce relatively large heat gains for part of the day. Variable air volume devices may be required to overcome spikes in solar gain for one or more rooms. A zoned system may be required or some rooms may require zone control.

EnergyGauge® System Sizing for Florida residences only

PREPARED BY:

DATE:

5/15/09



EnergyGauge® FLR2PB v4.1

#27837

# TALL STEM WALL TABLE

The table assumes 60 ksi reinforcing bars with 6" hook in the footing and bent 24" into the reinforced slab at the top. The vertical steel is to be placed toward the tension side of the CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall is over 8' high, add Durowall ladder reinforcement at 16"OC vertically or a horizontal bond beam with 1#5 continuous at mid height. For higher parts of the wall 12" CMU may be used with reinforcement as shown in the table below.

| STEM WALL HEIGHT (FEET) | UNBALANCED BACKFILL HEIGHT | VERTICAL REINFORCEMENT FOR 8" CMU STEM WALL (INCHES O.C.) |    |    | VERTICAL REINFORCEMENT FOR 12" CMU STEM WALL (INCHES O.C.) |    |    |
|-------------------------|----------------------------|-----------------------------------------------------------|----|----|------------------------------------------------------------|----|----|
|                         |                            | #5                                                        | #7 | #8 | #5                                                         | #7 | #8 |
| 3.3                     | 3.0                        | 96                                                        | 96 | 96 | 96                                                         | 96 | 96 |
| 4.0                     | 3.7                        | 96                                                        | 96 | 96 | 96                                                         | 96 | 96 |
| 4.7                     | 4.3                        | 88                                                        | 96 | 96 | 96                                                         | 96 | 96 |
| 5.3                     | 5.0                        | 56                                                        | 96 | 96 | 96                                                         | 96 | 96 |
| 6.0                     | 5.7                        | 40                                                        | 80 | 96 | 80                                                         | 96 | 96 |
| 6.7                     | 6.3                        | 32                                                        | 56 | 80 | 56                                                         | 96 | 96 |
| 7.3                     | 7.0                        | 24                                                        | 40 | 56 | 40                                                         | 80 | 96 |
| 8.0                     | 7.7                        | 16                                                        | 32 | 48 | 32                                                         | 64 | 80 |
| 8.7                     | 8.3                        | 8                                                         | 24 | 32 | 24                                                         | 48 | 64 |
| 9.3                     | 9.0                        | 8                                                         | 16 | 24 | 16                                                         | 40 | 48 |

**WINDLOAD ENGINEER:**  
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 No. 53915, POB 868, Lake City, FL 32056,  
 386-754-5419

**DIMENSIONS:**  
 Stated dimensions supercede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not proceed without clarification.

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**CERTIFICATION:** I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with section R301.2.1, Florida building code residential 2007, to the best of my knowledge.

**LIMITATION:** This design is valid for one building, at specified location.

MARK DISOSWAY  
 P.E. 53915

*[Signature]*  
 SEAL

Erkinger Builders  
Richard & Doris  
Palmatier Residence

**ADDRESS:**  
 751 SW Duckett Court  
 Lake City, FL 32024  
 06-4S-16-02787-008HX  
 Columbia County, Florida

Mark Disosway P.E.  
 P.O. Box 868  
 Lake City, Florida 32056  
 Phone: (386) 754 - 5419  
 Fax: (386) 269 - 4871

**PRINTED DATE:**  
 June 08, 2009

**DRAWN BY:** Evan Beamsley  
**STRUCTURAL BY:** Evan Beamsley

**FINALS DATE:**  
 May 14, 2009

**JOB NUMBER:**  
 905081

**DRAWING NUMBER**

**S-2**

OF 2 SHEETS

# COLUMBIA COUNTY OFFICIAL CERTIFICATE

## OCCUPANCY

COLUMBIA COUNTY, FLORIDA

### Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 06-4S-16-02787-008

Building permit No. 000027837

Use Classification SFD, UTILITY

Fire: 0.00

Permit Holder BRANDI HEBB

Waste: 0.00

Owner of Building RICHARD & DORIS PALMATIER

Total: 0.00

Location: 751 SW DUCKETT CT., LAKE CITY, FL

Date: 11/10/2009

*Wayne A. Ruess*

Building Inspector



POST IN A CONSPICUOUS PLACE  
(Business Places Only)

Permit:  
27837



CORPORATE HEADQUARTERS:

P.O. BOX 5369  
116 N.W. 16TH AVENUE  
GAINESVILLE, FL 32602-5369

(352) 376-2661  
FAX (352) 376-2791

FOUNDED 1949

SCIENTIFIC PEST CONTROL DIRECTED BY GRADUATE ENTOMOLOGISTS

Complete Pest Control Service  
Member Florida & National Pest Control Associations

Erkinger Home Builders  
248 SE Nassau St  
Lake City, FL  
32025

Reply to: 536 SE Baya Dr  
Lake City, FL 32025  
Phone (386) 752-1703 Fax (386) 752-0171

# TERMITE TREATMENT CERTIFICATION

|                                                                                  |                                      |
|----------------------------------------------------------------------------------|--------------------------------------|
| Owner:<br>Mr Richard Palmatier                                                   | Permit Number:<br>27837              |
| Lot:                                                                             | Block:                               |
| Subdivision:                                                                     | Street Address:<br>751 SW Duckett Ct |
| City:<br>Lake City                                                               | County:<br>Columbia                  |
| General Contractor:<br>Erkinger Home Builders                                    | Area Treated:<br>167 Linear Ft       |
| Date:<br>11/12/09                                                                | Time:<br>11:38am                     |
| Name of applicator:<br>James D. Parker                                           | Applicator ID Number:<br>JE55238     |
| Product Used: Active Ingredient: % Concentration<br>Premise: Imidacloprid: 0.10% | Number of gallons used:<br>40        |
| Method of termite prevention treatment: Soil treatment                           |                                      |

The building has received a complete treatment for the prevention of subterranean termites. Treatment is in accordance with rules and laws established by the Florida Department of Agriculture and Consumer Services.

This form is proof of complete treatment for Certificate of Occupancy or Closing.

## THIS IS PROOF OF WARRANTY

Warranty and Treatment Certifications Have Been Issued.

|                           |                   |
|---------------------------|-------------------|
| Authorized Signature:<br> | Date:<br>11-13-09 |
|---------------------------|-------------------|

### BRANCHES:

• Crystal River • Daytona Beach • Ft. Walton Beach • Jacksonville South • Jacksonville West • Lake City • Milton • Ocala • Orlando • Palatka • Panama City • Pensacola • Starke • St. Augustine • Tallahassee • Winter Haven • Leesburg • Kissimmee •

Erkinger Builders

Richard & Doris  
Palmatier Residence

ADDRESS:

751 SW Duckett Court  
Lake City, FL 32024  
06-4S-16-02787-008HX  
Columbia County, Florida

Mark Disosway P.E.

P.O. Box 866

Lake City, Florida 32056

Phone: (386) 754 - 5419

Fax: (386) 269 - 4871

PRINTED DATE:

June 08, 2009

DRAWN BY:

Evan Beamsley

STRUCTURAL BY:

Evan Beamsley

FINALS DATE:

May 14, 2009

JOB NUMBER:

905081

DRAWING NUMBER

**S-2**

OF 2 SHEETS

WINDLOAD ENGINEER:

Mark Disosway, P.E.  
No 53915, POB 866, Lake City, FL 32056,  
386-754-5419

DIMENSIONS:

Stated dimensions supercede scaled  
dimensions. Refer all questions to  
Mark Disosway, P.E. for resolution.  
Do not proceed without clarification.

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reserves its common law copyrights and  
property right in these instruments of service.  
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or copied in any form or manner without first  
the express written permission and consent  
of Mark Disosway.

CERTIFICATION: I hereby certify that I have  
examined this plan, and that the applicable  
portions of the plan, relating to  
wind engineering comply with section  
R301.2.1, Florida building code  
residential 2007,  
to the best of my knowledge.

LIMITATION: This design is valid for one  
building, at specified location.

MARK DISOSWAY

P.E. 53915

SEAL

TALL STEM WALL TABLE

The table assumes 60 ksi reinforcing bars with 6" hook in the footing and bent 24" into the  
reinforced slab at the top. The vertical steel is to be placed toward the tension side of the  
CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall  
is over 8' high, add Durowall ladder reinforcement at 16"OC vertically or a horizontal bond  
beam with 1#5 continuous at mid height. For higher parts of the wall 12" CMU may be used  
with reinforcement as shown in the table below.

| STEM WALL<br>HEIGHT<br>(FEET) | UNBALANCED<br>BACKFILL<br>HEIGHT | VERTICAL REINFORCEMENT<br>FOR 8" CMU STEM WALL<br>(INCHES O.C.) |    |    | VERTICAL REINFORCEMENT<br>FOR 12" CMU STEM WALL<br>(INCHES O.C.) |    |    |
|-------------------------------|----------------------------------|-----------------------------------------------------------------|----|----|------------------------------------------------------------------|----|----|
|                               |                                  | #5                                                              | #7 | #8 | #5                                                               | #7 | #8 |
| 3.3                           | 3.0                              | 96                                                              | 96 | 96 | 96                                                               | 96 | 96 |
| 4.0                           | 3.7                              | 96                                                              | 96 | 96 | 96                                                               | 96 | 96 |
| 4.7                           | 4.3                              | 88                                                              | 96 | 96 | 96                                                               | 96 | 96 |
| 5.3                           | 5.0                              | 56                                                              | 96 | 96 | 96                                                               | 96 | 96 |
| 6.0                           | 5.7                              | 40                                                              | 80 | 96 | 80                                                               | 96 | 96 |
| 6.7                           | 6.3                              | 32                                                              | 56 | 80 | 56                                                               | 96 | 96 |
| 7.3                           | 7.0                              | 24                                                              | 40 | 56 | 40                                                               | 80 | 96 |
| 8.0                           | 7.7                              | 16                                                              | 32 | 48 | 32                                                               | 64 | 80 |
| 8.7                           | 8.3                              | 8                                                               | 24 | 32 | 24                                                               | 48 | 64 |
| 9.3                           | 9.0                              | 8                                                               | 16 | 24 | 16                                                               | 40 | 48 |

Permit #: 27837

**Erkinger Home Builders, Inc.***Contracting ♦ Construction Management ♦ Consulting*

www.erkingerhomes.com

FL Lic #CBC1257313  
248 SE Nassau Street  
Lake City, FL 32025

FL Lic #RR0067135  
Phone (386) 754-5555  
Fax (386) 719-9899

◆  
**COVER SHEET**  
◆Date: 11/9/09To: Building Dept

Attention: \_\_\_\_\_

Fax Number: 758-2160No. of Pages (Including Cover): 2

RE: Insulation Certification

Attached is the Certification for Permit 27837.

If you have any questions, please feel free to call me. Thank you so much!

Thank you,

*Brandi N. Hehl*

Vice President  
info@erkingerhomes.com



11/06/2009 07:06

9043625562

TOUCHTON INSUL/WINDO

PAGE 02

Permit # 27837

Your home has been professionally insulated with

**FiberTEK® Fiber Glass Insulation**

(Job Site Address)

Name Richard & Doris PalmatickAddress 751 SW Duckett RdCity Lake CityState FLZip 32024**FiberTEK® BIG BATT™ Insulation**

Batts and/or blankets will provide the stated R-value when installed in conformance with the manufacturers recommendations below.

| To obtain an insulation R-value of: | Installed thickness should be: |
|-------------------------------------|--------------------------------|
| R-11                                | 3.6"                           |
| R-13                                | 3.8"                           |
| R-15                                | 4.2"                           |
| R-19                                | 5.5"                           |
| R-21                                | 6.0"                           |
| R-23                                | 6.5"                           |
| R-25                                | 6.9"                           |
| R-30C                               | 8.0"                           |
| R-38                                | 10"                            |
| R-38C                               | 10.25"                         |
| R-49                                | 12"                            |

\*R-15 in 2.5" cavity.

The higher the R-value, the greater the insulating power. Loose fill insulation varies in thermal performance due to factors such as aging, moist temperature, settlement, condensation, moisture absorption and installation methods. Air movement across loosefill insulation installed in open attics can reduce its thermal performance in extremely cold weather conditions.

**FiberTEK InsulTEK1® Unbonded Loosefill Insulation**

APPLICATION COVERAGE CHART FOR OPEN BLOW ATTIC: To get the desired R-Value it is important that this product be installed in accordance with the manufacturers instructions using the correct pneumatic equipment and the required number of bags at or above the labeled minimum thickness. Failure to install the required number of bags and/or at least the minimum installed thickness will result in a lower insulation R-value.

| To obtain a thermal resistance (R) of: | Bags per 1,000 sq. ft. of total area: | Contents of bag should not cover more than (sq. ft.): | Weight per bag, lb. of installed insulation should not be less than (lb.): | Installed insulation should not be less than (inches): | Installed insulation should not be less than (bags): |
|----------------------------------------|---------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|
| 60                                     | 36.6                                  | 27                                                    | 0.990                                                                      | 22.00                                                  | 22.00                                                |
| 49                                     | 28.8                                  | 34                                                    | 0.808                                                                      | 18.00                                                  | 18.50                                                |
| 44                                     | 26.6                                  | 38                                                    | 0.720                                                                      | 16.75                                                  | 16.75                                                |
| 38                                     | 22.8                                  | 44                                                    | 0.620                                                                      | 14.75                                                  | 14.75                                                |
| 30                                     | 18.0                                  | 55                                                    | 0.488                                                                      | 12.00                                                  | 12.00                                                |
| 28                                     | 16.8                                  | 60                                                    | 0.420                                                                      | 10.50                                                  | 10.50                                                |
| 22                                     | 13.1                                  | 78                                                    | 0.350                                                                      | 9.00                                                   | 9.00                                                 |
| 19                                     | 11.1                                  | 88                                                    | 0.301                                                                      | 7.75                                                   | 7.75                                                 |
| 13                                     | 7.8                                   | 128                                                   | 0.210                                                                      | 5.50                                                   | 5.50                                                 |
| 11                                     | 6.6                                   | 150                                                   | 0.180                                                                      | 4.75                                                   | 4.75                                                 |

MINIMUM NET BAG WEIGHT - 27 LBS.

**BUILDER'S INSULATION INSTALLATION STATEMENT**

INSULATION FOR OPEN BLOW ATTIC:

New Construction ☒Retrofit ☐

Existing Type(s) of Insulation in Attic

Estimated R-value of Existing Insulation R-

Depth of Existing Insulation \_\_\_\_\_ inches

Number of Bags Used 35 bagsArea of Coverage 2060 sq. ft.Thickness of Insulation 12 inches

BIG BATT™ AREA / HEIGHT R-VALUE THICKNESS

Attic \_\_\_\_\_ R- \_\_\_\_\_ at \_\_\_\_\_ inches

Ceilings (sloped) \_\_\_\_\_ R- \_\_\_\_\_ at \_\_\_\_\_ inches

Floors (over unheated crawlspace) \_\_\_\_\_ R- \_\_\_\_\_ at \_\_\_\_\_ inches

Walls \_\_\_\_\_ R- 13 at 3.5 inches

Basement \_\_\_\_\_ R- \_\_\_\_\_ at \_\_\_\_\_ inches

Crawlspace Perimeter \_\_\_\_\_ R- \_\_\_\_\_ at \_\_\_\_\_ inches

Crawlspace \_\_\_\_\_ R- \_\_\_\_\_ at \_\_\_\_\_ inches

Installation Date: 11-05-09InsulTEK1® has been installed in conformance with manufacturers recommendations to provide an R-value of R-30using 35 bags of insulation to cover 2060 square feet of area at a minimum thickness of 12 inches.Installation Contractor (signature) [Signature]Company Name TI&W Inc.Date 11-05-09Home Builder (signature) [Signature]Company Name Ekkingker Home BuildersDate 11-5-09

## Notice of Treatment

Applicator: Florida Pest Control & Chemical Co. (www.flapest.com)

Address: 5365E BADA DR

City: LAKE CITY

Phone: 752-1703

Site Location: Subdivision \_\_\_\_\_

Lot # \_\_\_\_\_ Block# \_\_\_\_\_

Permit # 000027837

Address 751 SW Duckett Ct, LAKE CITY

### Product used

### Active Ingredient

### % Concentration

☐ Premise

Imidacloprid

0.1%

☒ Termidor

Fipronil

0.12%

☐ Bora-Care

Disodium Octaborate Tetrahydrate

23.0%

Type treatment:

☒ Soil

☐ Wood

Area Treated

Square feet

Linear feet

Gallons Applied

Main Boogie  
Porches

2470

161

200

As per Florida Building Code 104.2.6 – If soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

If this notice is for the final exterior treatment, initial this line \_\_\_\_\_.

6/29/09

Date

8:13

Time

Nal Southern

Print Technician's Name

Remarks: \_\_\_\_\_

Applicator - White

Permit File - Canary

Permit Holder - Pink

10/05

©

## Notice of Treatment

Applicator: Florida Pest Control & Chemical Co. (www.flapest.com)

Address: 536 SE Baya Ave

City Lake City Phone 252 1703

Site Location: Subdivision N/A

Lot # \_\_\_\_\_ Block# \_\_\_\_\_ Permit # 27837

Address 751 SW Duckett Rd

### Product used

### Active Ingredient

### % Concentration

☐ Premise Imidacloprid 0.1%

☒ Termidor Fipronil 0.12%

☐ Bora-Care Disodium Octaborate Tetrahydrate 23.0%

### Type treatment:

☒ Soil

☐ Wood

### Area Treated

### Square feet

### Linear feet

### Gallons Applied

|                      |          |          |             |
|----------------------|----------|----------|-------------|
| <u>Plumbing Trap</u> | <u>1</u> | <u>3</u> | <u>2501</u> |
| _____                | _____    | _____    | _____       |
| _____                | _____    | _____    | _____       |
| _____                | _____    | _____    | _____       |

As per Florida Building Code 104.2.6 – If soil chemical barrier method for termite prevention is used, final exterior treatment shall be completed prior to final building approval.

If this notice is for the final exterior treatment, initial this line \_\_\_\_\_.

7/27/09  
Date

1520  
Time

James Parker  
Print Technician's Name

Remarks: \_\_\_\_\_

Applicator - White

Permit File - Canary

Permit Holder - Pink

Columbia County Building Permit Application

OK# 16923

For Office Use Only Application # 0905-25 Date Received 5/18/09 By CS Permit # 27837 -

Zoning Official BK Date 2005.09 Flood Zone X Land Use A-3 Zoning A-5

FEMA Map # MA Elevation MA MFE 154.0 River MA Plans Examiner NO Date 5-19-09

Comments Existing MA to be removed within 45 days after CO is issued.

☒ NOC ☒ EH ☐ Deed or PA ☐ Site Plan ☐ State Road Info ☐ Parent Parcel # \_\_\_\_\_

☐ Dev Permit # \_\_\_\_\_ ☐ In Floodway ☒ Letter of Auth. from Contractor ☐ F W Comp. letter \_\_\_\_\_

IMPACT FEES: EMS \_\_\_\_\_ Fire \_\_\_\_\_ Corr \_\_\_\_\_ Road/Code \_\_\_\_\_

School \_\_\_\_\_ = TOTAL Suspended