COLUMBIA COUNTY BUILDING DEPARTMENT
RESIDENTIAL CHECK LIST

MINIMUM PLAN REQUIREMENTS: FLORIDA BUILDING CODE RESIDENTIAL 2017 EFFECTIVE 1 JANUARY 2018 AND THE NATIONAL ELECTRICAL 2014 EFFECTIVE 1 JANUARY 2018

ALL REQUIREMENTS ARE SUBJECT TO CHANGE

ALL BUILDING PLANS MUST INDICATE COMPLIANCE WITH THE CURRENT FLORIDA BUILDING CODES RESIDENTIAL AND THE NATIONAL ELECTRICAL CODE. ALL PLANS OR DRAWINGS SHALL PROVIDE CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS, FBC 1609.3.1 THRU 1609.3.3.

FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEEDS ARE PER FLORIDA BUILDING CODE FIGURE 1609-A THROUGH 1609-C ULTIMATE DESIGN WIND SPEEDS FOR RISK CATEGORY AND BUILDINGS AND OTHER STRUCTURES
Revised 7/1/18

Website: http://www.columbiacountyfla.com/BuildingandZoning.asp

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		Select From Drop down		
1	Two (2) complete sets of plans containing the following:	✓		
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void	✓		
3	**Condition space (Sq. Ft.)** 1250 **Total (Sq. Ft.) under roof** 1680	Yes	No	NA

Designers name and signature shall be on all documents and a licensed architect or engineer, signature and official embossed seal shall be affixed to the plans and documents as per the FLORIDA BUILDING CODES RESIDENTIAL 107.1.

Site Plan information including:

4	Dimensions of lot or parcel of land	- ✓		
5	Dimensions of all building set backs	- ✓		
6	Location of all other structures (include square footage of structures) on parcel, existing or proposed well and septic tank and all utility easements.	- ✓		
7	Provide a full legal description of property.	- ✓		

Wind-load Engineering Summary, calculations and any details are required.

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
8	**Plans or specifications must show compliance with FBCR Chapter 3**	Yes	No	NA
		Select From Drop down		
9	Basic wind speed (3-second gust), miles per hour	- ✓		
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)	- ✓		
11	Wind importance factor and nature of occupancy	- ✓		
12	The applicable internal pressure coefficient, Components and Cladding	- ✓		
13	The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component, cladding materials not specifally designed by the registered design professional.	- ✓		

Elevations Drawing including:

14	All side views of the structure	- ✓		
15	Roof pitch	- ✓		
16	Overhang dimensions and detail with attic ventilation	- ✓		
17	Location, size and height above roof of chimneys	- ✓		
18	Location and size of skylights with Florida Product Approval	- ✓		
19	Number of stories	- ✓		
20	Building height from the established grade to the roofs highest peak	- ✓		

Floor Plan Including:

21	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	- ✓		
22	Raised floor surfaces located more than 30 inches above the floor or grade	- —		✓
23	All exterior and interior shear walls indicated	- ✓		
24	Shear wall opening shown (Windows, Doors and Garage doors)	- ✓		
25	Show compliance with Section FBCR 310 Emergency escape and rescue opening shown in each bedroom (net clear opening shown) and Show compliance with Section FBC 1405.13.2 where the opening of an operable window is located more than 72 inches above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Glazing between the floor and 24 inches shall be fixed or have openings through which a 4-inch-diameter sphere cannot pass.	✓ -		
26	Safety glazing of glass where needed	- ✓		
27	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 and chapter 24 of FBCR)	- ✓		
28	Show stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails	- ✓		
29	Identify accessibility of bathroom (see FBCR SECTION 320)	- ✓		

All materials placed within opening or onto/into exterior walls, soffits or roofs shall have Florida product approval number and mfg. installation information submitted with the plans
(see Florida product approval form)

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

FBCR 403: Foundation Plans

Select From Drop down

30	Location of all load-bearing walls footings indicated as standard, monolithic, dimensions, size and type of reinforcing.	- ✓		
31	All posts and/or column footing including size and reinforcing	- ✓		
32	Any special support required by soil analysis such as piling.	-		✓
33	Assumed load-bearing valve of soil Pound Per Square Foot	- ✓		
34	Location of horizontal and vertical steel, for foundation or walls (include # size and type) For structures with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an grounding electrode system. Per the National Electrical Code article 250.52.3	✓ -		

FBCR 506: CONCRETE SLAB ON GRADE

35	Show Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)	- ✓		
36	Show control joints, synthetic fiber reinforcement or welded fire fabric reinforcement and Supports	- ✓		

FBCR 318: PROTECTION AGAINST TERMITES

37	Indicate on the foundation plan if soil treatment is used for subterranean termite prevention or Submit other approved termite protection methods. **Protection shall be provided by registered termiticides**	- ✓		

FBCR 606: Masonry Walls and Stem walls (load bearing & shear Walls)

38	Show all materials making up walls, wall height, and Block size, mortar type	- ✓		
39	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement	- ✓		

Metal frame shear wall and roof systems shall be designed, signed and sealed by Florida Prof. Engineer or Architect

Floor Framing System: First and/or second story

40	Floor truss package shall including layout and details, signed and sealed by Florida Registered Professional Engineer	- ✓		
41	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or priers	-		✓
42	Girder type, size and spacing to load bearing walls, stem wall and/or priers	-		✓
43	Attachment of joist to girder	-		✓
44	Wind load requirements where applicable	-		✓
45	Show required under-floor crawl space	-		✓
46	Show required amount of ventilation opening for under-floor spaces	-		✓
47	Show required covering of ventilation opening	-		✓
48	Show the required access opening to access to under-floor spaces	-		✓
49	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges & intermediate of the areas structural panel sheathing	-		✓
50	Show Draftstopping, Fire caulking and Fire blocking	-		✓
51	Show fireproofing requirements for garages attached to living spaces, per FBCR section 302.6	-		✓
52	Provide live and dead load rating of floor framing systems (psf).	-		✓

FBCR CHAPTER 6 WOOD WALL FRAMING CONSTRUCTION

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		Select from Drop down		
53	Stud type, grade, size, wall height and oc spacing for all load bearing or shear walls	- ✓		
54	Fastener schedule for structural members per table FBC-R602.3.2 are to be shown	- ✓		
55	Show Wood structural panel's sheathing attachment to studs, joist, trusses, rafters and structural members, showing fastener schedule attachment on the edges & intermediate of the areas structural panel sheathing	- ✓		
56	Show all required connectors with a max uplift rating and required number of connectors and oc spacing for continuous connection of structural walls to foundation and roof trusses or rafter systems	- ✓		
57	Show sizes, type, span lengths and required number of support jack studs, king studs for shear wall opening and girder or header per FBC-R602.7.	- ✓		
58	Indicate where pressure treated wood will be placed	- ✓		
59	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	- ✓		
60	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	- ✓		

FBCR :ROOF SYSTEMS:

61	Truss design drawing shall meet section FBC-R 802.10. 1 Wood trusses	- ✓		
62	Include a layout and truss details, signed and sealed by Florida Professional Engineer	- ✓		
63	Show types of connector's assemblies' and resistance uplift rating for all trusses and rafters	- ✓		
64	Show gable ends with rake beams showing reinforcement or gable truss and wall bracing details	- ✓		
65	Provide dead load rating of trusses	- ✓		

FBCR 802:Conventional Roof Framing Layout

66	Rafter and ridge beams sizes, span, species and spacing	-		✓
67	Connectors to wall assemblies' include assemblies' resistance to uplift rating	-		✓
68	Valley framing and support details	-		✓
69	Provide dead load rating of rafter system	-		✓

FBCR 803 ROOF SHEATHING

70	Include all materials which will make up the roof decking, identification of structural panel sheathing, grade, thickness	- ✓		
71	Show fastener Size and schedule for structural panel sheathing on the edges & intermediate areas	- ✓		

ROOF ASSEMBLIES FRC Chapter 9

72	Include all materials which will make up the roof assembles covering	- ✓			
73	Submit Florida Product Approval numbers for each component of the roof assembles covering	- ✓			

FBCR Chapter 11 Energy Efficiency Code for Residential Building

Residential construction shall comply with this code by using the following compliance methods in the FBCR Chapter 11 Residential buildings compliance methods. **Two of the required forms are to be submitted,** *N1100.1.1.1 As an alternative to the computerized Compliance Method A, the Alternate Residential Point System Method hand calculation, Alternate Form 600A, may be used. All requirements specific to this calculation are located in Sub appendix C to Appendix G. Buildings complying by this alternative shall meet all mandatory requirements of this chapter. Computerized versions of the Alternate Residential Point System Method shall not be acceptable for code compliance.*

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
		Select from Drop Down		
74	Show the insulation R value for the following areas of the structure	- ✓		
75	Attic space	- ✓		
76	Exterior wall cavity	- ✓		
77	Crawl space	-		✓

HVAC information

78	Submit two copies of a Manual J sizing equipment or equivalent computation study	- ✓		
79	Exhaust fans shown in bathrooms **Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous required**	- ✓		
80	Show clothes dryer route and total run of exhaust duct	- ✓		

Plumbing Fixture layout shown

81	All fixtures waste water lines shall be shown on the foundation plan	- ✓		
82	Show the location of water heater	- ✓		

Private Potable Water

83	Pump motor horse power	-		✓
84	Reservoir pressure tank gallon capacity	-		✓
85	Rating of cycle stop valve if used	-		✓

Electrical layout shown including

86	Show Switches, receptacles outlets, lighting fixtures and Ceiling fans	- ✓		
87	Show all 120-volt, single phase, 15- and 20-ampere branch circuits outlets required to be protected by **Ground-Fault Circuit Interrupter (GFCI) Article 210.8 A**	- ✓		
88	Show the location of smoke detectors & Carbon monoxide detectors	- ✓		
89	Show service panel, sub-panel, location(s) and total ampere ratings	- ✓		
90	On the electrical plans identify the electrical service overcurrent protection device for the main electrical service. This device shall be installed on the exterior of structures to serve as a disconnecting means for the utility company electrical service. Conductors used from the exterior disconnecting means to a panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground. Indicate if the utility company service entrance cable will be of the overhead or underground type. **For structures** with foundation which establish new electrical utility companies service connection a Concrete Encased Electrode will be required within the foundation to serve as an Grounding electrode system. Per the National Electrical Code article 250.52.3	✓ - ✓		
91	Appliances and HVAC equipment and disconnects	- ✓		
92	Show all 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed **Combination arc-fault circuit interrupter,** Protection device.	- ✓		

Notice Of Commencement:

A notice of commencement form RECORDED in the Columbia County Clerk Office is required to be filed with the Building Department BEFORE ANY INSPECTIONS can be performed.

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****ITEMS 95, 96, & 98 Are Required After APPROVAL from the ZONING DEPT.****

Select from Drop down

93	**Building Permit Application** A current Building Permit Application is to be completed, by following the Checklist all supporting documents must be submitted. There is a **$15.00** application fee. The completed application with attached documents and application fee can be mailed.	- ✓		
94	**Parcel Number** The parcel number (Tax ID number) from the Property Appraisers Office (386) 758-1083 is required. A copy of property deed is also required. www.columbiacountyfla.com	- ✓		
95	**Environmental Health Permit or Sewer Tap Approval** A copy of a approved Columbia County Environmental Health (386) 758-1058	- ✓		
96	**City of Lake City** A City Water and/or Sewer letter. Call 386-752-2031	-		✓
97	**Toilet facilities shall be provided for all construction sites**	- ✓		
98	**Town of Fort White** (386) 497-2321 If the parcel in the application for building permit is within the Corporate city limits of Fort White, an approval land use development letter issued by the Town of Fort is required to be submitted with the application for a building permit.	-		✓
99	**Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting a application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.5.2 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.5.3 of the Columbia County Land Development Regulations (Municode.com)	-		✓
100	**CERTIFIED FINISHED FLOOR ELEVATIONS** will be required on any project where the approved FIRM Flood Maps show the property is in a AE, Floodway, and AH flood zones. Additionally One Foot Rise letters are required for AE and AH zones. In the Floodway Flood zones a Zero Rise letter is required.	-		✓
101	A Flood development permit is also required for AE, Floodway & AH. Development permit cost is **$50.00**	-		
102	**Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit (**$25.00**) must be made. County Public Works Dept. determines the size and length of every culvert before instillation and completes a final inspection before permanent power is granted. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver (**$50.00**) Separate Check when issued. If the project is to be located on an F.D.O.T. maintained road, then an F.D.O.T. access permit is required.	-		✓
103	**911 Address:** An application for a 911address must be applied for and received through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125.	- ✓		

Ordinance Sec. 90-75. - Construction debris. (e) It shall be unlawful for any person to dispose of or discard solid waste, including construction or demolition debris at any place within the county other than on an authorized disposal site or at the county's solid waste facilities. The temporary storage, not to exceed seven days of solid waste (excluding construction and demolition debris) on the premises where generated or vegetative trash pending disposition as authorized by law or ordinance, shall not be deemed a violation of this section. The temporary storage of construction and demolition debris on the premises where generated or vegetative trash pending disposition as authorized by law or ordinance shall not be deemed in violation of this section; provided, however, such construction and demolition debris must be disposed of in accordance with this article prior to the county's issuance of a certificate of occupancy for the premises. The burning of lumber from a construction or demolition project or vegetative trash when done so with legal and proper permits from the authorized agencies and in accordance with such agencies' rules and regulations, shall not be deemed a violation of this section. No person shall bury, throw, place, or deposit, or cause to be buried, thrown, placed, or deposited, any solid waste, special waste, or debris of any kind into or on any of the public streets, road right-of-way, highways, bridges, alleys, lanes, thoroughfares, waters, canals, or vacant lots or lands within the county. No person shall bury any vegetative trash on any of the public streets, road right-of-way, highways, bridges, lanes, thoroughfares, waters, canals, or lots less than ten acres in size within the county.

Disclosure Statement for Owner Builders:

If you as the Applicant will be acting as your own contractor or owner/builder under section 489.103(7) Florida Statutes, you must submit the required notarized Owner Builder Disclosure Statement form.

****This form can be printed from the Columbia County Website on the Building and Zoning page under Documents. Web address is - http://www.columbiacountyfla.com/BuildingandZoning.asp**

Section 105 of the Florida Building Code defines the:

Time limitation of application.

An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

Single-family residential dwelling.

Section 105.3.4 A building permit for a single-family residential dwelling must be issued within 30 working days of application therefor unless unusual circumstances require a longer time for processing the application or unless the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances.

Permit intent.

Section 105.4.1: A permit issued shall be constructed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code. Every permit issued shall become invalid unless the work authorized by such permit is commenced within six months after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of six months after the time the work is commenced.

If work has commenced.

Section 105.4.1.1: If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

New Permit.

Section 105.4.1.2: If a new permit is not obtained within 180 days from the date the initial permit became null and void, the building official is authorized to require that any work which has been commenced or completed be removed from the building site. Alternately, a new permit may be issued on application, providing the work in place and required to complete the structure meets all applicable regulations in effect at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date if issuance of the new permit.

Work Shall Be:

Section 105.4.1.3: Work shall be considered to be in active progress when the permit has received an approved inspection within 180 days. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order or similar process.

The Fee:

Section 105.4.1.4: The fee for renewal reissuance and extension of a permit shall be set forth by the administrative authority.

Notification:

When the application is approved for permitting the applicant will be notified by phone as to the status by the Columbia County Building & Zoning Department.

PRODUCT APPROVAL SPECIFICATION SHEET

Location: **Project Name:**

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction project fo which you are applying for a building permit on or after April 1, 2004. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s
A. EXTERIOR DOORS			
1. Swinging	Masonite	Exterior Doors	FL 5508.1
2. Sliding	PGT	Sliding Glass Doors	FL 251-R2
3. Sectional			
4. Roll up			
5. Automatic			
6. Other			
B. WINDOWS			
1. Single hung	Anderson	Windows	FL 15906.1
2. Horizontal Slider	Anderson	"	FL. 15907
3. Casement	Anderson	"	FL. 15908
4. Double Hung	Rilla	Windows -	FL.
5. Fixed	Andersen		FL 15910
6. Awning			
7. Pass -through			
8. Projected			
9. Mullion			
10. Wind Breaker			
11 Dual Action			
12. Other			
C. PANEL WALL			
1. Siding	James Hardie	Fibercement Siding	FL 13223-R1
2. Soffits	James Hardie	Kickout soffit	FL - 8245.1
3. EIFS			FL -
4. Storefronts			
5. Curtain walls			
6. Wall louver			
7. Glass block			
8. Membrane			
9. Greenhouse			
10. Other			
D. ROOFING PRODUCTS			
1. Asphalt Shingles	GAF	Shingles	FL 10134.1
2. Underlayments	GAF	Underlayment	FL 10626.1
3. Roofing Fasteners			FL 4595.2R1
4. Non-structural Metal Rf	29 26 GA	Metal Roofing AKzonobels Coil Coat	FL 4595.1R1
5. Built-Up Roofing			
6. Modified Bitumen			
7. Single Ply Roofing Sys			
8. Roofing Tiles			
9. Roofing Insulation			
10. Waterproofing			
11. Wood shingles /shakes			
12. Roofing Slate			

Received Time Nov. 3. 12:12PM

egory/Subcategory (cont.)	Manufacturer	Product Description	Approval Number
13. Liquid Applied Roof Sys			
14. Cements-Adhesives – Coatings	GAF	Roofing Cement	FL. 670-R7
15. Roof Tile Adhesive			
16. Spray Applied Polyurethane Roof			
17. Other			
E. SHUTTERS			
1. Accordion			
2. Bahama			
3. Storm Panels			
4. Colonial			
5. Roll-up			
6. Equipment			
7. Others			
F. SKYLIGHTS			
1. Skylight	Solatube	Skylights	FL 11488 - R6
2. Other			
G. STRUCTURAL COMPONENTS			
1. Wood connector/anchor	Simpson	Strapping & clips	FL 9589-R3
2. Truss plates			
3. Engineered lumber	Weyerhaeuser	Engineered Wood	FL 1630-R7
4. Railing			
5. Coolers-freezers			
6. Concrete Admixtures			
7. Material			
8. Insulation Forms			
9. Plastics			
10. Deck-Roof			
11. Wall			
12. Sheds			
13. Other			
H. NEW EXTERIOR ENVELOPE PRODUCTS			
1.			
2.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) the performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

I understand these products may have to be removed if approval cannot be demonstrated during inspec

Sam L Keen

Contractor or Contractor's Authorized Agent Signature

Sam L Keen 5/23/16

Print Name Date

Received Time-Nov. 3-12:12PM

Permit # (FOR STAFF USE ONLY)

Florida Product Approvals			
Category	**Manufacturer**	**Product Description**	**Approval Number**
Ext Swinging door	Masonite/Dyke	Inswing and Outswing Fiberglass	FL4334-R6
	Masonite/Dyke	Inswing and Outswing Steel	FL4904-R5
	Plastpro/Tucker	8'0" Inswing and Outswing Fiberglass	FL15209
	Plastpro/Tucker	Inswing and Outswing Steel	FL15962-R1
	Plastpro/Tucker	6'8" Inswing and Outswing Fiberglass	FL15215-R2
Windows	MI	Aluminum 185 Single Hung	FL15447-R2
		Aluminum 185 Picture Window	FL15349-R3
		Vinyl 3540 Single Hung	FL12250-R10
		Vinyl 3500HP Picture Window	FL11548-R6
	Magnolia	Vinyl 300 Single Hung	FL12716-R1
		Vinyl 300 Picture Window	
Soffit	Kaycan	Vinyl/PVC and Aluminum Soffit	FL16503
Underlayment	Woodland	30# Roofing Felt	FL1814-R6
Roofing	Certainteed	Asphalt Shingles	FL5444
	GAF	Asphalt Shingles	FL10124-R11
Siding	Certainteed	Weatherboard Fibercement Siding	FL3148-R4

256-1653

Lumber design values are in accordance with ANSI/TPI 1 section 6.3
These truss designs rely on lumber values established by others.

RE: ~~Scionti - Scionti~~ Paul Marino

MiTek USA, Inc.
6904 Parke East Blvd.
Tampa, FL 33610-4115

Site Information:

Customer Info: SLK Project Name: . Model: .
Lot/Block: . Subdivision: .
Address: ., .
City: Columbia County State: FL

Name Address and License # of Structural Engineer of Record, If there is

Name: License #:
Address:
City: State

General Truss Engineering Criteria & Design Loads (Indi
Loading Conditions):

Design Code: FBC2017/TPI2014 Design Pr
Wind Code: ASCE 7-10 Wind Spee
Roof Load: 40.0 psf Floor Load:

Paul Marino
Wilson Springs Rd. 70 acres

This package includes 6 individual, Truss Design Drawings and 0
With my seal affixed to this sheet, I hereby certify that I am the Tru
conforms to 61G15-31.003, section 5 of the Florida Board of Profe

No.	Seal#	Truss Name	Date
1	T18857748	A1GE	12/10/19
2	T18857749	A2	12/10/19
3	T18857750	A3	12/10/19
4	T18857751	A4GE	12/10/19
5	T18857752	B1GE	12/10/19
6	T18857753	B2	12/10/19

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for
FILE COPY
Code Compliance
PLANS EXAMINER

The truss drawing(s) referenced above have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Mayo Truss Company, Inc..

Truss Design Engineer's Name: Albani, Thomas

My license renewal date for the state of Florida is February 28, 2021.

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

THOMAS A. ALBANI
LICENSE
No 39380
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Thomas A. Albani PE No.39380
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

December 10,2019

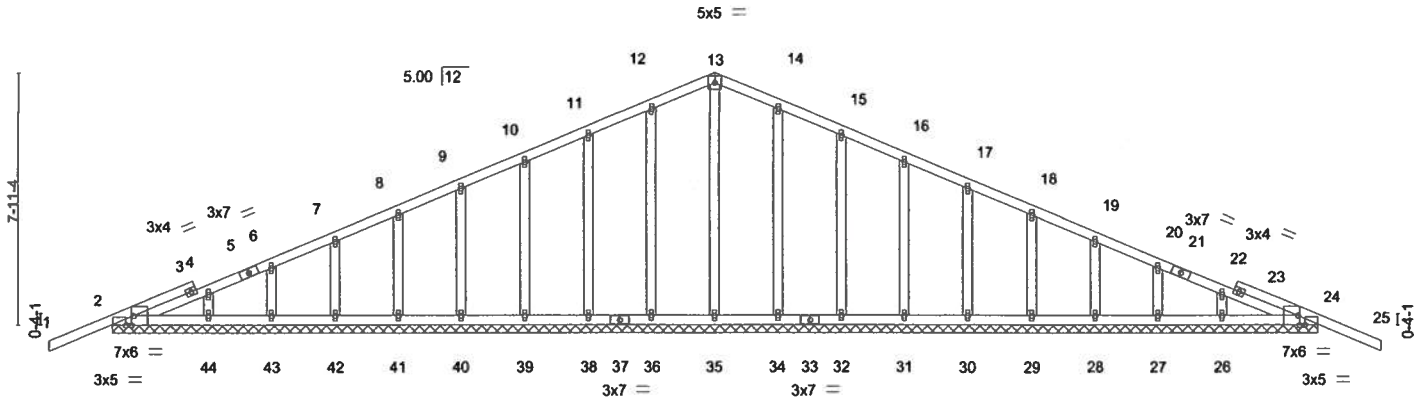
Albani, Thomas

Job	Truss	Truss Type	Qty	Ply	Scionti
Scionti	A1GE	Common Supported Gable	1	1	T18857748
					Job Reference (optional)

Mayo Truss Company, Inc., Mayo, FL - 32066, 8.240 s Jul 14 2019 MiTek Industries, Inc. Tue Dec 10 07:27:50 2019 Page 1
ID:6KnCnn7bPJ5MwCxMdv5reByCPNK-h86zGTrMIOY_Und6cvd3mO3Kcz5lStWNgSqwsmyARKd

-2-0-0 2-0-0 | 19-0-0 19-0-0 | 38-0-0 19-0-0 | 40-0-0 2-0-0

Scale = 1:70.8



38-0-0
38-0-0

Plate Offsets (X,Y)— [2:0-0-11,Edge], [2:0-2-13,Edge], [24:0-0-11,Edge], [24:0-2-13,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.26	Vert(LL)	-0.02	25	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	-0.03	25	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.13	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-S							Weight: 228 lb	FT = 0%

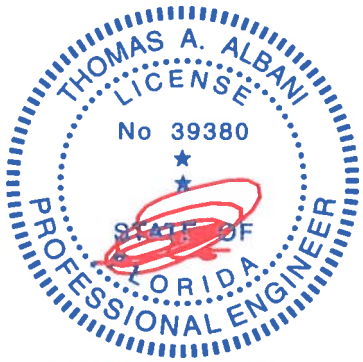
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 38-0-0.
(lb) - Max Horz 2=139(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 36, 38, 39, 40, 41, 42, 43, 34, 32, 31, 30, 29, 28, 27, 24
Max Grav All reactions 250 lb or less at joint(s) 35, 36, 38, 39, 40, 41, 42, 43, 44, 34, 32, 31, 30, 29, 28, 27, 26 except 2=273(LC 1), 24=273(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 12-13=-93/255, 13-14=-93/255

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; B=45ft; L=38ft; eave=2ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 36, 38, 39, 40, 41, 42, 43, 34, 32, 31, 30, 29, 28, 27, 24.



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Date:

December 10,2019

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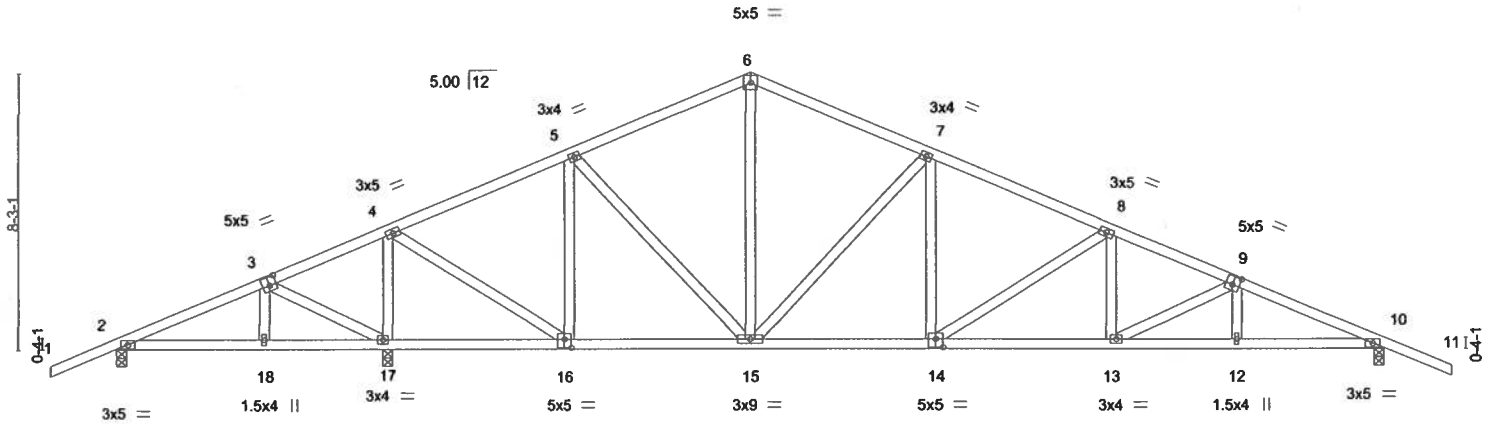
6904 Parke East Blvd.
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	Scionti	T18857749
Scionti	A2	Common	12	1	Job Reference (optional)	

Mayo Truss Company, Inc., Mayo, FL - 32066, 8.240 s Jul 14 2019 MiTek Industries, Inc. Tue Dec 10 07:27:52 2019 Page 1
ID:6KnCnn7bPJ5MwCxMdv5reByCPNK-eXEjh9scq?oik4nUkKfXrp9fJngWwcCg8mJ1xfyARKb

-2-0-0	4-4-12	8-1-12	13-6-14	19-0-0	24-5-2	29-10-4	33-7-4	38-0-0	40-0-0
2-0-0	4-4-12	3-9-0	5-5-2	5-5-2	5-5-2	5-5-2	3-9-0	4-4-12	2-0-0

Scale = 1:67.3



4-4-12	8-1-12	13-6-14	19-0-0	24-5-2	29-10-4	33-7-4	38-0-0
4-4-12	3-9-0	5-5-2	5-5-2	5-5-2	5-5-2	3-9-0	4-4-12

Plate Offsets (X,Y)-- [3:0-2-8,0-3-0], [9:0-2-8,0-3-0], [14:0-2-8,0-3-0], [16:0-2-8,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.37	Vert(LL)	-0.09	13-14	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.48	Vert(CT)	-0.20	13-14	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.05	10	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-AS							Weight: 218 lb	FT = 0%

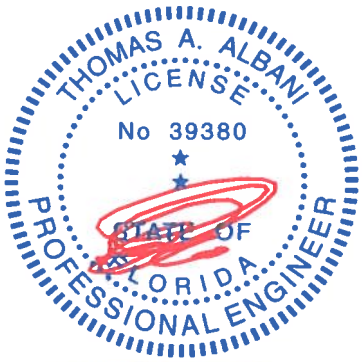
LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (lb/size) 2=122/0-3-8, 17=1933/0-3-8, 10=1226/0-3-8
Max Horz 2=-145(LC 10)
Max Uplift 2=-126(LC 12), 17=-61(LC 12), 10=-51(LC 12)
Max Grav 2=229(LC 21), 17=1933(LC 1), 10=1226(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=0/517, 3-4=-187/863, 4-5=-652/215, 5-6=-966/345, 6-7=-967/345, 7-8=-1540/425, 8-9=-2046/504, 9-10=-2354/531
BOT CHORD 2-18=-492/53, 17-18=-493/57, 16-17=-754/318, 15-16=0/565, 14-15=-158/1357, 13-14=-318/1857, 12-13=-406/2126, 10-12=-404/2129
WEBS 6-15=-101/412, 7-15=-770/253, 7-14=-36/463, 8-14=-583/190, 8-13=0/300, 9-13=-309/99, 5-15=-24/434, 5-16=-740/246, 4-16=-316/1550, 4-17=-1662/459, 3-17=-374/309

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; B=45ft; L=38ft; eave=5ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 17, 10 except (jt=lb) 2=126.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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December 10,2019

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Job	Truss	Truss Type	Qty	Ply	Scionti
Scionti	A3	Roof Special	8	1	T18857750

Job Reference (optional)

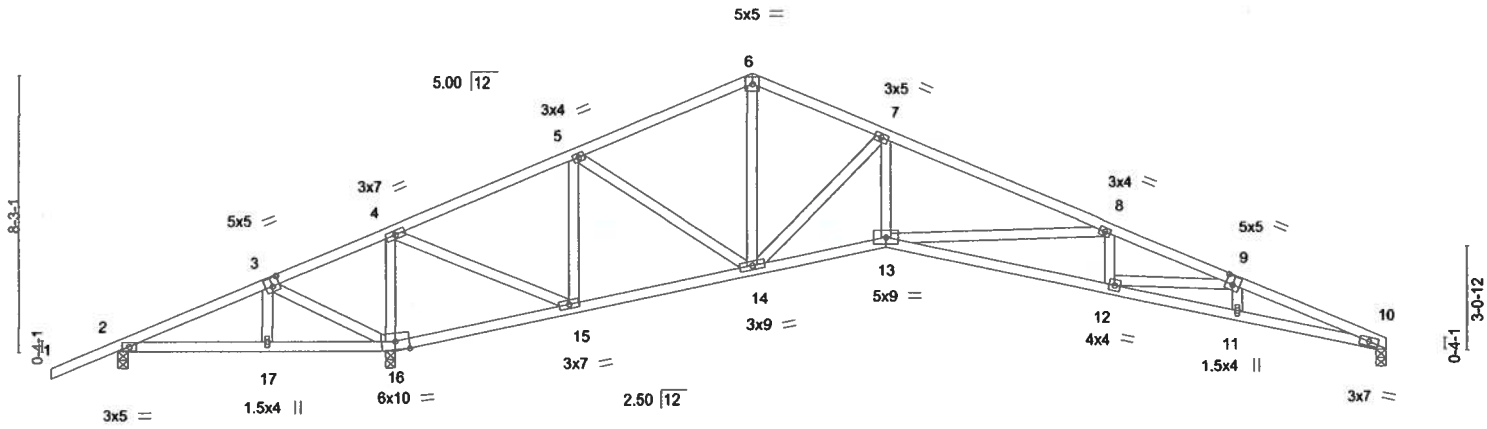
Mayo Truss Company, Inc., Mayo, FL - 32066,

8.240 s Jul 14 2019 MiTek Industries, Inc. Tue Dec 10 07:27:53 2019 Page 1

ID:6KnCnn7bPJ5MwCxMdv5reByCPNK-6jo5uUtEbJwZLELhH1AmO0hlnAxof0?pNP2aT5yARKa

-2-0-0	4-5-10	8-3-8	13-7-12	19-0-0	23-0-0	29-8-8	33-6-6	38-0-0
2-0-0	4-5-10	3-9-14	5-4-4	5-4-4	4-0-0	6-8-8	3-9-14	4-5-10

Scale = 1:67.3



4-5-10	8-1-12	8-3-8	13-7-12	19-0-0	23-0-0	29-8-8	33-6-6	38-0-0
4-5-10	3-8-2	0-1-12	5-4-4	5-4-4	4-0-0	6-8-8	3-9-14	4-5-10

Plate Offsets (X,Y)— [3:0-2-8,0-3-0], [9:0-2-8,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.65	Vert(LL)	-0.25	12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.80	Vert(CT)	-0.54	12-13	>664	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.98	Horz(CT)	0.21	10	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-AS							Weight: 198 lb	FT = 0%

LUMBER-

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING-

TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (lb/size) 2=-432/0-3-8, 16=2655/0-3-8, 10=938/0-3-8
Max Horz 2=142(LC 11)
Max Uplift 2=-573(LC 22), 16=-60(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

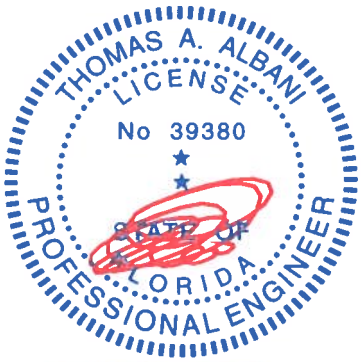
TOP CHORD 2-3=-266/1897, 3-4=-486/2299, 4-5=-126/330, 5-6=-728/232, 6-7=-715/244, 7-8=-1852/387, 8-9=-3117/705, 9-10=-3493/801

BOT CHORD 2-17=-1701/282, 16-17=-1706/287, 15-16=-2222/594, 14-15=-303/192, 13-14=-144/1682, 12-13=-558/2947, 11-12=-703/3259, 10-11=-701/3246

WEBS 3-16=-425/321, 4-16=-1925/490, 4-15=-424/2189, 5-15=-1158/321, 5-14=-105/900, 6-14=-58/295, 7-14=-1467/325, 7-13=-103/1122, 8-13=-1237/402, 8-12=0/319, 9-12=-334/147

NOTES-

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; B=45ft; L=38ft; eave=5ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; porch left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 16 except (jt=lb) 2=573.
7) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.



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December 10,2019

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Tampa, FL 36610

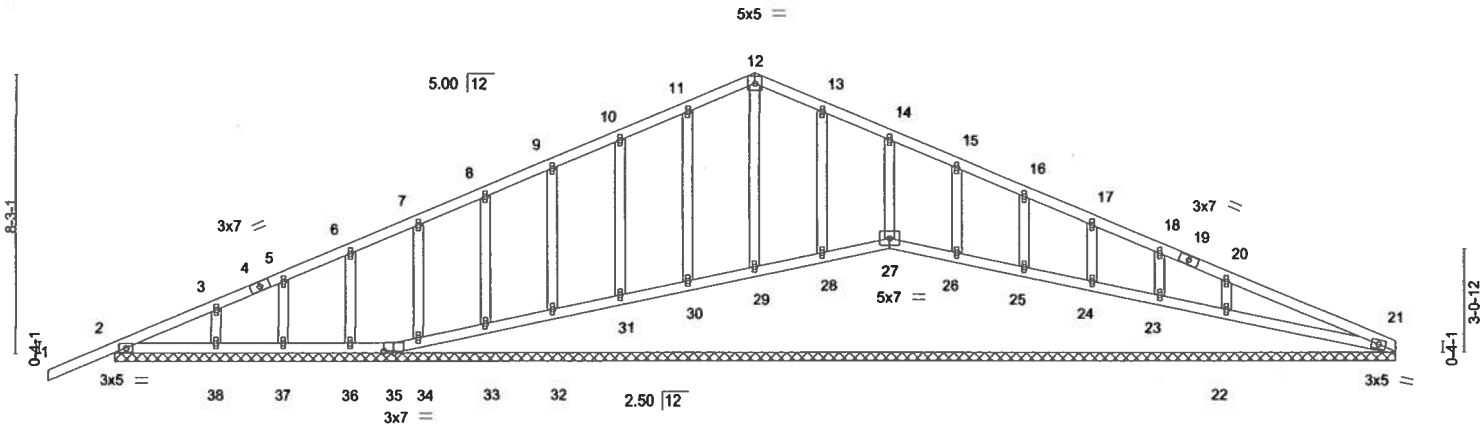
Job	Truss	Truss Type	Qty	Ply	Scionti
Scionti	A4GE	Roof Special Supported Gable	1	1	T18857751

Job Reference (optional)

Mayo Truss Company, Inc., Mayo, FL - 32066, 8.240 s Jul 14 2019 MiTek Industries, Inc. Tue Dec 10 07:27:54 2019 Page 1
ID:6KnCnn7bPJ5MwCxMdv5reByCPNK-avMT6qutLc2QzOwtrlh?wEE06aPPOhRzb3o7?XyARKZ

-2-0-0 2-0-0 | 19-0-0 19-0-0 | 38-0-0 19-0-0

Scale = 1:66.8



8-3-8 8-3-8 | 23-0-0 14-8-8 | 38-0-0 15-0-0

Plate Offsets (X,Y)-- [35:0-3-8,0-0-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.29	Vert(LL)	-0.00	1	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.20	Vert(CT)	-0.01	1	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.00	21	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-S							Weight: 194 lb	FT = 0%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 22-23.

REACTIONS. All bearings 38-0-0.
(lb) - Max Horz 2=142(LC 11)
Max Uplift All uplift 100 lb or less at joint(s) 2, 35, 30, 31, 32, 33, 34, 36, 37, 28, 26, 25, 24, 23, 22
Max Grav All reactions 250 lb or less at joint(s) 35, 27, 21, 29, 30, 31, 32, 33, 34, 36, 37, 38, 28, 26, 25, 24, 23 except 2=273(LC 1), 22=422(LC 22)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
WEBS 20-22=-303/188

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; B=45ft; L=38ft; eave=2ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 35, 30, 31, 32, 33, 34, 36, 37, 28, 26, 25, 24, 23, 22.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 27, 29, 30, 31, 32, 33, 34, 28, 26, 25, 24, 23, 22.

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December 10,2019

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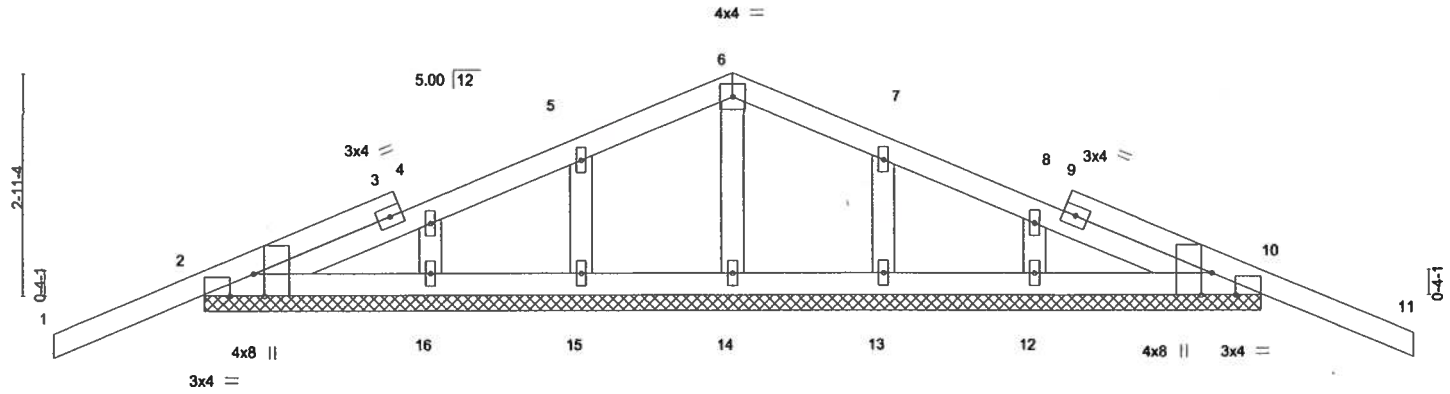
Tampa, FL 36610

Job	Truss	Truss Type	Qty	Ply	Scionti
Scionti	B1GE	Common Supported Gable	1	1	T18857752
					Job Reference (optional)

Mayo Truss Company, Inc., Mayo, FL - 32066, 8.240 s Jul 14 2019 MiTek Industries, Inc. Tue Dec 10 07:27:56 2019 Page 1
ID:6KnCnn7bPJ5MwCxMdv5reByCPNK-WIUEXWv7tEI8Ci4Gz9kT?fJM5O88scmG3NHE4QyARKX

-2-0-0 2-0-0 | 7-0-0 7-0-0 | 14-0-0 7-0-0 | 16-0-0 2-0-0

Scale = 1:29.8



14-0-0
14-0-0

Plate Offsets (X,Y)— [2:0-3-8,Edge], [2:0-3-13,Edge], [10:0-3-8,Edge], [10:0-3-13,Edge]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.26	Vert(LL)	-0.02	11	n/r	120	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.06	Vert(CT)	-0.03	11	n/r	120		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	10	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-S							Weight: 66 lb	FT = 0%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS. All bearings 14-0-0.
(lb) - Max Horz 2=-49(LC 10)
Max Uplift All uplift 100 lb or less at joint(s) 2, 10, 15, 13
Max Grav All reactions 250 lb or less at joint(s) 14, 15, 16, 13, 12 except 2=273(LC 1), 10=273(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; B=45ft; L=24ft; eave=2ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) All plates are 1.5x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 2, 10, 15, 13.
10) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 2, 10.

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Job	Truss	Truss Type	Qty	Ply	Scionti
Scionti	B2	Common	2	1	T18857753

Job Reference (optional)

Mayo Truss Company, Inc., Mayo, FL - 32066, 8.240 s Jul 14 2019 MiTek Industries, Inc. Tue Dec 10 07:27:57 2019 Page 1

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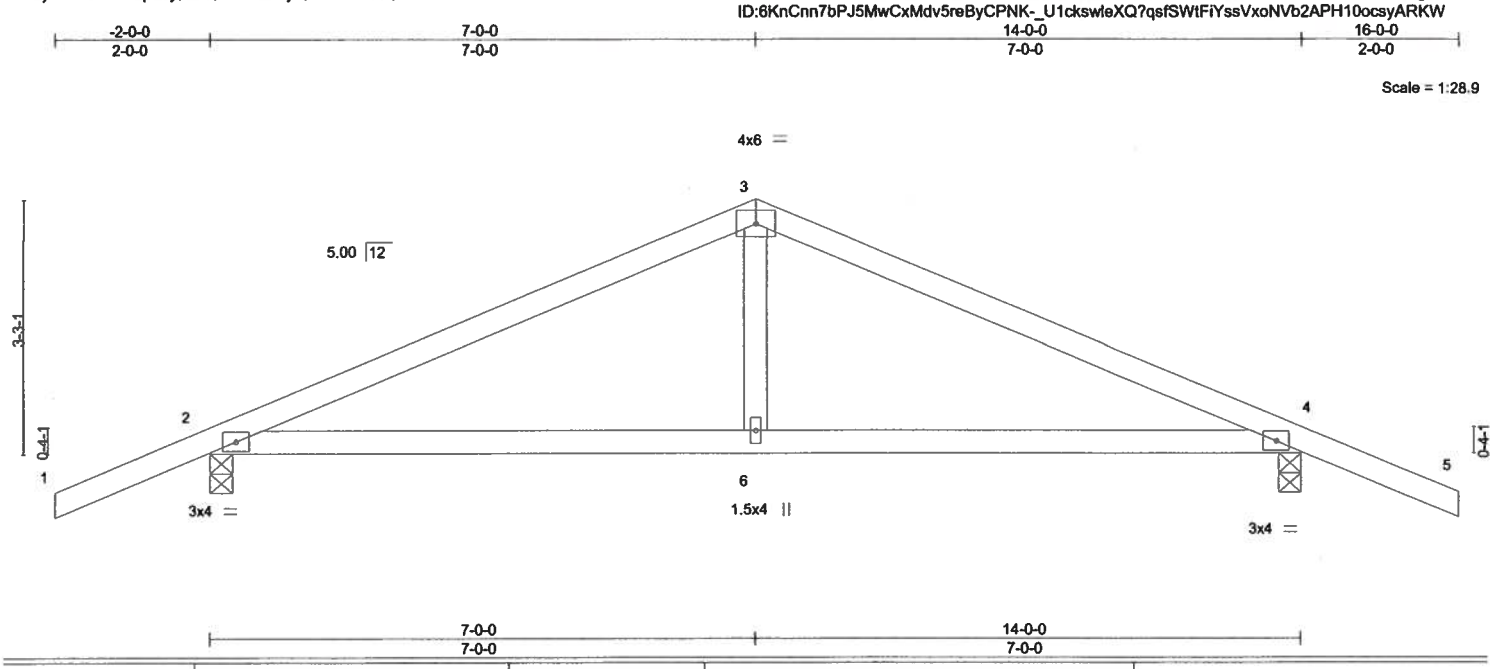


LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.25	TC	0.44	Vert(LL)	0.12	6-12	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.25	BC	0.50	Vert(CT)	-0.12	6-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code FBC2017/TPI2014		Matrix-AS							Weight: 54 lb	FT = 0%

LUMBER-
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied.
BOT CHORD Rigid ceiling directly applied.

REACTIONS. (lb/size) 2=680/0-3-8, 4=680/0-3-8
Max Horz 2=53(LC 11)
Max Uplift 2=-170(LC 12), 4=-170(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-862/751, 3-4=-862/752
BOT CHORD 2-6=-582/734, 4-6=-582/734
WEBS 3-6=-310/311

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=101mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Encl., GCpi=0.18; MWFRS (directional) and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=170, 4=170.
6) This truss design requires that a minimum of 7/16" structural wood sheathing be applied directly to the top chord and 1/2" gypsum sheetrock be applied directly to the bottom chord.

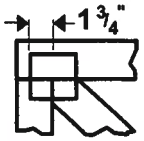
Thomas A. Albani PE No.39380
MiTek USA, Inc. FL Cert 6634
6904 Parke East Blvd. Tampa FL 33610
Date:

December 10,2019

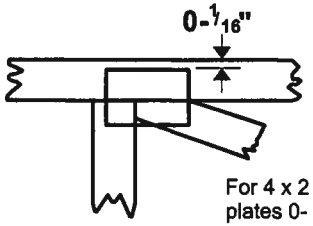
MiTek
6904 Parke East Blvd.
Tampa, FL 33610

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

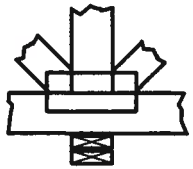
4 x 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION

Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

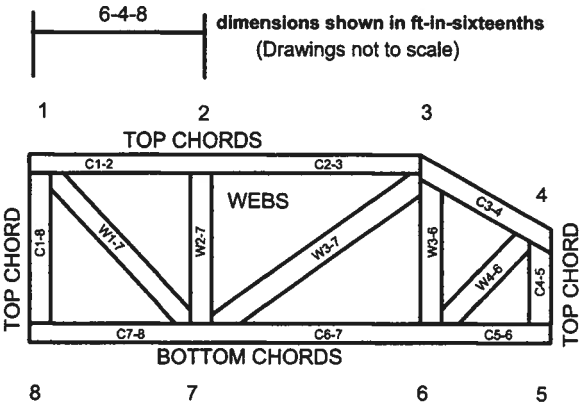


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek Engineering Reference Sheet: MII-7473 rev. 10/03/2015

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

FORM R405-2017

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

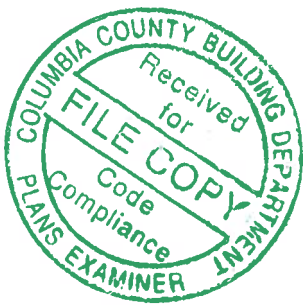
Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method

Applications for compliance with the 2017 Florida Building Code, Energy Conservation via the residential Simulated Performance Method shall include:

- ☐ *This checklist*
- ☐ *A Form R405 report that documents that the Proposed Design complies with Section R405.3 of the Florida Energy Code. This form shall include a summary page indicating home address, e-ratio and the pass or fail status along with summary areas and types of components, whether the home was simulated as a worst-case orientation, name and version of the compliance software tool, name of individual completing the compliance report (one page) and an input summary checklist that can be used for field verification (usually four pages/may be greater).*
- ☐ *Energy Performance Level (EPL) Display Card (one page)*
- ☐ *HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7*
- ☐ *Mandatory Requirements (five pages)*

Required prior to CO for the Performance Method:

- ☐ *Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1 - one page)*
- ☐ *A completed Envelope Leakage Test Report (usually one page)*
- ☐ *If Form R405 duct leakage type indicates anything other than "default leakage", then a completed Form R405 Duct Leakage Test Report (usually one page)*



FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	1801418 Scionti	Builder Name:	
Street:	Wilson Springs Road	Permit Office:	
City, State, Zip:	, FL ,	Permit Number:	
Owner:	Tony Scionti	Jurisdiction:	
Design Location:	FL, Gainesville	County:	Columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Single-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	2
5. Is this a worst case?	Yes
6. Conditioned floor area above grade (ft²)	1260
Conditioned floor area below grade (ft²)	0

7. Windows(112.8 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.30	112.83 ft²
SHGC:	SHGC=0.20	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		4.738 ft.
Area Weighted Average SHGC:		0.200

8. Floor Types (1260.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1260.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1192.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1192.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1306.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	1306.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	6	252

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	21.0	SEER:15.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	21.0	HSPF:8.50

14. Hot water systems		
a. Propane	Tankless	Cap: 1 gallons
		EF: 0.950
b. Conservation features		
None		

15. Credits Pstat

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

Glass/Floor Area: 0.090

Total Proposed Modified Loads: 31.48

Total Baseline Loads: 35.69

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: Evan Beamsley
DATE: 2019-08-06

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____
DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST

BUILDING OFFICIAL: _____
DATE: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.

- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	1801418 Scionti	Bedrooms:	2	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1260	Lot #	
Owner Name:	Tony Scionti	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	Yes	PlatBook:	
Builder Name:		Rotate Angle:	135	Street:	Wilson Springs Road
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	, FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1260	10080

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1260	10080	Yes	4	2	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	144 ft	0	1260 ft²	----	0.3	0.3	0.4

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Composition shingles	1365 ft²	262 ft²	Dark	N	0.92	No	0.9	No	0	22.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1260 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Blown	1306 ft²	0	Wood

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	N=>SE	Exterior	Frame - Wood	Main	13	42		8		336.0 ft²		0.23	0.75	0
____	2	E=>SW	Exterior	Frame - Wood	Main	13	30	0	9	4	280.0 ft²		0.23	0.75	0
____	3	S=>NW	Exterior	Frame - Wood	Main	13	14		8		112.0 ft²		0.23	0.75	0
____	4	S=>NW	Exterior	Frame - Wood	Main	13	28		8		224.0 ft²		0.23	0.75	0
____	5	W=>NE	Exterior	Frame - Wood	Main	13	30		8		240.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	N=>SE	Insulated	Main	None	.4	2		6	8	13.3 ft²
_____	2	S=>NW	Insulated	Main	None	.4	2		6	8	13.3 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	N=>SE	1	Metal	Low-E Double	Yes	0.3	0.2	N	6.7 ft²	9 ft 6 in	0 ft 6 in	None	None
_____	2	N=>SE	1	Metal	Low-E Double	Yes	0.3	0.2	N	15.0 ft²	9 ft 6 in	0 ft 6 in	None	None
_____	3	N=>SE	1	Metal	Low-E Double	Yes	0.3	0.2	N	9.0 ft²	9 ft 6 in	0 ft 6 in	None	None
_____	4	E=>SW	2	Metal	Low-E Double	Yes	0.3	0.2	N	15.0 ft²	1 ft 6 in	10 ft 0 in	None	None
_____	5	S=>NW	3	Metal	Low-E Double	Yes	0.3	0.2	N	6.7 ft²	6 ft 0 in	0 ft 6 in	None	None
_____	6	S=>NW	3	Metal	Low-E Double	Yes	0.3	0.2	N	20.0 ft²	6 ft 0 in	0 ft 6 in	None	None
_____	7	S=>NW	4	Metal	Low-E Double	Yes	0.3	0.2	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	8	S=>NW	4	Metal	Low-E Double	Yes	0.3	0.2	N	4.5 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	9	W=>NE	5	Metal	Low-E Double	Yes	0.3	0.2	N	6.0 ft²	1 ft 6 in	4 ft 0 in	None	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000356	1176	64.56	121.42	.1339	7

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	HSPF:8.5	21 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	SEER: 15	21 kBtu/hr	630 cfm	0.75	1	sys#1

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Propane	Tankless	Exterior	0.949999	1 gal	50 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
_____	None	None			ft²		

DUCTS

√	#	---- Supply ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
_____	1	Attic	6	252 ft²	Attic	63 ft²	Default Leakage	Main	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Heating (WD)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	Main

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 88

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. New (From Plans)
2. Single-family or multiple-family	2. Single-family
3. No. of units (if multiple-family)	3. 1
4. Number of bedrooms	4. 2
5. Is this a worst case? (yes/no)	5. Yes
6. Conditioned floor area (sq. ft.)	6. 1260
7. Windows, type and area	
a) U-factor:(weighted average)	7a. 0.300
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.200
c) Area	7c. 112.8
8. Skylights	
a) U-factor:(weighted average)	8a. NA
b) Solar Heat Gain Coefficient (SHGC)	8b. NA
9. Floor type, insulation level:	
a) Slab-on-grade (R-value)	9a. 0.0
b) Wood, raised (R-value)	9b.
c) Concrete, raised (R-value)	9c.
10. Wall type and insulation:	
A. Exterior:	
1. Wood frame (Insulation R-value)	10A1. 13.0
2. Masonry (Insulation R-value)	10A2.
B. Adjacent:	
1. Wood frame (Insulation R-value)	10B1.
2. Masonry (Insulation R-value)	10B2.
11. Ceiling type and insulation level	
a) Under attic	11a. 38.0
b) Single assembly	11b.
c) Knee walls/skylight walls	11c.
d) Radiant barrier installed	11d. No

12. Ducts, location & insulation level	
a) Supply ducts	R 6.0
b) Return ducts	R 6.0
c) AHU location	Main
13. Cooling system:	Capacity 21.0
a) Split system	SEER
b) Single package	SEER
c) Ground/water source	SEER/COP
d) Room unit/PTAC	EER
e) Other	15.0
14. Heating system:	Capacity 21.0
a) Split system heat pump	HSPF
b) Single package heat pump	HSPF
c) Electric resistance	COP
d) Gas furnace, natural gas	AFUE
e) Gas furnace, LPG	AFUE
f) Other	8.50
15. Water heating system	
a) Electric resistance	EF
b) Gas fired, natural gas	EF
c) Gas fired, LPG	EF 0.95
d) Solar system with tank	EF
e) Dedicated heat pump with tank	EF
f) Heat recovery unit	HeatRec%
g) Other	
16. HVAC credits claimed (Performance Method)	
a) Ceiling fans	
b) Cross ventilation	No
c) Whole house fan	No
d) Multizone cooling credit	
e) Multizone heating credit	
f) Programmable thermostat	Yes

*Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

I certify that this home has complied with the Florida Building Code, Energy Conservation, through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL display card will be completed based on installed code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: Wilson Springs Road City/FL Zip: __, FL

Florida Building Code, Energy Conservation, 6th Edition (2017)
Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS:	Wilson Springs Road , FL ,	Permit Number:

MANDATORY REQUIREMENTS See individual code sections for full details.

√

SECTION R401 GENERAL

☐ **R401.3 Energy Performance Level (EPL) display card (Mandatory).** The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct before final approval of the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each sales contract for both presold and nonpresold residential buildings. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit. The building official shall verify that the EPL display card completed and signed by the builder accurately reflects the plans and specifications submitted to demonstrate code compliance for the building. A copy of the EPL display card can be found in Appendix RD.

☐ **R402.4 Air leakage (Mandatory).** The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.

Exception: Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.

☐ **R402.4.1 Building thermal envelope.** The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.

☐ **R402.4.1.1 Installation.** The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

☐ **R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

Exception: Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

☐ **R402.4.2 Fireplaces.** New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.

☐ **R402.4.3 Fenestration air leakage.** Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m2), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m2), when tested according to NFRC 400 or AAMA/ WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.

Exception: Site-built windows, skylights and doors.

MANDATORY REQUIREMENTS - (Continued)

☐ **R402.4.4 Rooms containing fuel-burning appliances.** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

☐ **R402.4.5 Recessed lighting.** Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

SECTION R403 SYSTEMS

R403.1 Controls.

☐ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system.

☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

☐ **R403.3.2 Sealing (Mandatory)** All ducts, air handlers, filter boxes and building cavities that form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design airflow rate when tested in accordance with ASHRAE 193.

☐ **R403.3.3 Duct testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufa air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

☐ **R403.3.5 Building cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums.

☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory)** Heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

MANDATORY REQUIREMENTS - (Continued)

☐ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 ½ inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.

R403.5.6 Water heater efficiencies (Mandatory).

☐ **R403.5.6.1.1 Automatic controls.** Service water-heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).

☐ **R403.5.6.1.2 Shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water-heating systems to be turned off.

☐ **R403.5.6.2 Water-heating equipment.** Water-heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water-heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.

☐ **R403.5.6.2.1 Solar water-heating systems.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:

1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
2. Be installed at an orientation within 45 degrees of true south.

☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential, or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.

Exception: Where whole-house mechanical ventilation fans are integral to tested and listed HVAC equipment, they shall be powered by an electronically commutated motor.

☐ **R403.6.2 Ventilation air.** Residential buildings designed to be operated at a positive indoor pressure or for mechanical ventilation shall meet the following criteria:

1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.
2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
3. If ventilation air is drawn from enclosed space(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.

R403.7 Heating and cooling equipment (Mandatory).

☐ **R403.7.1 Equipment sizing.** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies, based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This Code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

TABLE R403.6.1
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIRFLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY [a] (CFM/WATT)	AIRFLOW RATE MAXIMUM (CFM)
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	<90
Bathroom, utility room	90	2.8 cfm/watt	Any

For SI: 1 cfm = 28.3 L/min. a. When tested in accordance with HVI Standard 916

MANDATORY REQUIREMENTS - (Continued)

☐ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section 403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.

The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

R403.7.1.2 Heating equipment capacity.

☐ **R403.7.1.2.1 Heat pumps.** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.

☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.

☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.

☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:

1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
2. A variable capacity system sized for optimum performance during base load periods is utilized.

☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC—Commercial Provisions in lieu of Section R403.

☐ **R403.9 Snow melt and ice system controls (Mandatory)** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).

☐ **R403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.

☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems.
3. Where pumps are powered exclusively from on-site renewable generation.

☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent spas shall be equipped with a vapor-retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.

☐ **R403.11 Portable spas (Mandatory).** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14.

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

☐ **R404.1 Lighting equipment (Mandatory).** Not less than 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

Exception: Low-voltage lighting.

R404.1.1 Lighting equipment (Mandatory). Fuel gas lighting systems shall not have continuously burning pilot lights.

2017 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

TABLE 402.4.1.1
AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

				CHECK
Project Name:	1801418 Scionti	Builder Name:		
Street:	Wilson Springs Road	Permit Office:		
City, State, Zip:	, FL ,	Permit Number:		
Owner:	Tony Scionti	Jurisdiction:		
Design Location:	FL, Gainesville			

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.	
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.	
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace	
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.		
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.	
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.		
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.		
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.		

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance
2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:	Permit #:

Job Information

Builder:	Community:	Lot: NA
Address: Wilson Springs Road		
City:	State: FL	Zip:

Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

○ **PRESCRIPTIVE METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

○ **PERFORMANCE or ERI METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 7.000

_____ x 60 ÷ 10080 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:
- ○ Retrieved from architectural plans
- ● Code software calculated
- ○ Field measured and calculated

R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), *Florida Statues.*or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the*code official.* Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope.*

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2017 6th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____

Residential System Sizing Calculation

Summary

Tony Scionti
Wilson Springs Road
, FL

Project Title:
1801418 Scionti

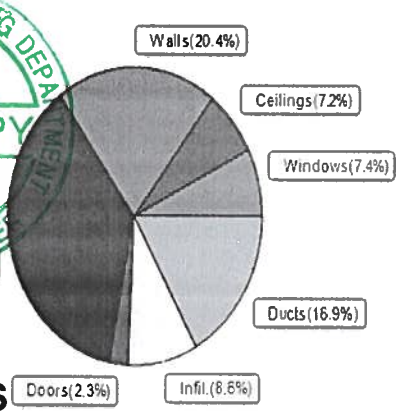
2019-08-06

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature(TMY3 99%)	30	F	Summer design temperature(TMY3 99%)	94	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	40	F	Summer temperature difference	19	F
Total heating load calculation	**18318**	**Btuh**	**Total cooling load calculation**	**16585**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	114.6	21000	Sensible (SHR = 0.75)	111.6	15750
Heat Pump + Auxiliary(0.0kW)	114.6	21000	Latent	212.9	5250
			Total (Electric Heat Pump)	126.6	21000

WINTER CALCULATIONS

Winter Heating Load (for 1260 sqft)

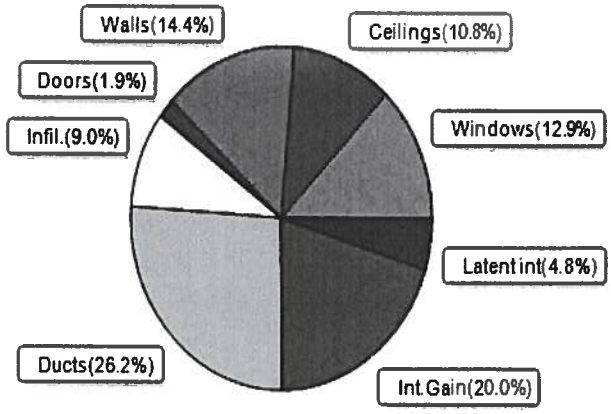
Load component			Load	
Window total	113	sqft	1354	Btuh
Wall total	1053	sqft	3737	Btuh
Door total	27	sqft	427	Btuh
Ceiling total	1306	sqft	1326	Btuh
Floor total	1260	sqft	6797	Btuh
Infiltration	36	cfm	1576	Btuh
Duct loss			3102	Btuh
Subtotal			**18318**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**18318**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1260 sqft)

Load component			Load	
Window total	113	sqft	2136	Btuh
Wall total	1053	sqft	2382	Btuh
Door total	27	sqft	320	Btuh
Ceiling total	1306	sqft	1790	Btuh
Floor total			0	Btuh
Infiltration	27	cfm	561	Btuh
Internal gain			3320	Btuh
Duct gain			3609	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**14119**	**Btuh**
Latent gain(ducts)			735	Btuh
Latent gain(infiltration)			932	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			800	Btuh
Total latent gain			**2466**	**Btuh**
TOTAL HEAT GAIN			**16585**	**Btuh**



Powered by ACCA MANUAL J 8th Edition

EnergyGauge® System Sizing
PREPARED BY: Evan Beamsley
DATE: 2019-08-06

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Tony Scionti
Wilson Springs Road
, FL

Project Title:
1801418 Scionti
Building Type: User

2019-08-06

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)
This calculation is for Worst Case. The house has been rotated 135 degrees.

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft) X	HTM=	Load
1	2, NFRC 0.20	Metal	0.30	SE	6.7	12.0	80 Btuh
2	2, NFRC 0.20	Metal	0.30	SE	15.0	12.0	180 Btuh
3	2, NFRC 0.20	Metal	0.30	SE	9.0	12.0	108 Btuh
4	2, NFRC 0.20	Metal	0.30	SW	15.0	12.0	180 Btuh
5	2, NFRC 0.20	Metal	0.30	NW	6.7	12.0	80 Btuh
6	2, NFRC 0.20	Metal	0.30	NW	20.0	12.0	240 Btuh
7	2, NFRC 0.20	Metal	0.30	NW	30.0	12.0	360 Btuh
8	2, NFRC 0.20	Metal	0.30	NW	4.5	12.0	54 Btuh
9	2, NFRC 0.20	Metal	0.30	NE	6.0	12.0	72 Btuh
	Window Total				112.8(sqft)		1354 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	292	3.55	1037 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	265	3.55	941 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	72	3.55	256 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	190	3.55	673 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	234	3.55	831 Btuh
	Wall Total				1053(sqft)		3737 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)	13	16.0	213 Btuh
2	Insulated - Exterior,	n	(0.400)	13	16.0	213 Btuh
	Door Total			27(sqft)		427Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shing	(0.025)	38.0/0.0	1306	1.0	1326 Btuh
	Ceiling Total			1306(sqft)		1326Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	144.0 ft(perim.)	47.2	6797 Btuh
	Floor Total			1260 sqft		6797 Btuh

	Envelope Subtotal:	13640 Btuh

Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural	0.21	10080	1.00	36.0	1576 Btuh

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.204)	3102 Btuh
All Zones	**Sensible Subtotal All Zones**	**18318 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Tony Scionti
Wilson Springs Road
, FL

Project Title:
1801418 Scionti
Building Type: User

2019-08-06

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	18318 Btuh 0 Btuh 18318 Btuh

EQUIPMENT

1. Electric Heat Pump	#	21000 Btuh

Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)

Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Tony Scionti
Wilson Springs Road
, FL

Project Title:
1801418 Scionti

2019-08-06

Reference City: Gainesville, FL Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.
This calculation is for Worst Case. The house has been rotated 135 degrees.

Component Loads for Whole House

	Type*					Overhang		Window Area(sqft)			HTM		Load
Window	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded	
1	2 NFRC	0.20, 0.30		No	No	SE	9.5ft.	0.5ft.	6.7	6.7	0.0	10	20	66 Btuh
2	2 NFRC	0.20, 0.30		No	No	SE	9.5ft.	0.5ft.	15.0	15.0	0.0	10	20	149 Btuh
3	2 NFRC	0.20, 0.30		No	No	SE	9.5ft.	0.5ft.	9.0	9.0	0.0	10	20	89 Btuh
4	2 NFRC	0.20, 0.30		No	No	SW	1.5ft.	10.0f	15.0	0.0	15.0	10	20	300 Btuh
5	2 NFRC	0.20, 0.30		No	No	NW	6.0ft.	0.5ft.	6.7	0.0	6.7	10	19	128 Btuh
6	2 NFRC	0.20, 0.30		No	No	NW	6.0ft.	0.5ft.	20.0	0.0	20.0	10	19	383 Btuh
7	2 NFRC	0.20, 0.30		No	No	NW	1.5ft.	1.0ft.	30.0	0.0	30.0	10	19	574 Btuh
8	2 NFRC	0.20, 0.30		No	No	NW	1.5ft.	1.0ft.	4.5	0.0	4.5	10	19	86 Btuh
9	2 NFRC	0.20, 0.30		No	No	NE	1.5ft.	4.0ft.	6.0	0.0	6.0	10	19	115 Btuh
	Excursion													247 Btuh
	Window Total								113 (sqft)					2136 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	292.0	2.3	661 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	265.0	2.3	600 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	72.0	2.3	163 Btuh
4	Frame - Wood - Ext	0.09	13.0/0.0	189.5	2.3	429 Btuh
5	Frame - Wood - Ext	0.09	13.0/0.0	234.0	2.3	530 Btuh
	Wall Total			1053 (sqft)		2382 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	13.3	12.0	160 Btuh
2	Insulated - Exterior	13.3	12.0	160 Btuh
	Door Total	27 (sqft)		320 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	0.025	38.0/0.0	1306.0	1.37	1790 Btuh
	Ceiling Total			1306 (sqft)		1790 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	1260 (ft-perimeter)	0.0	0 Btuh
	Floor Total		1260.0 (sqft)		0 Btuh
			Envelope Subtotal:		6628 Btuh

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.16	10080	1	27.0	561 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		4	X 230	+	2400	3320 Btuh
				Sensible Envelope Load:		10510 Btuh
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)			(DGM of 0.343)		3609 Btuh
				Sensible Load All Zones		**14119 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Tony Scionti
Wilson Springs Road
, FL

Project Title: 1801418 Scionti

Climate:FL_GAINESVILLE_REGIONAL_A

2019-08-06

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**10510 Btuh**
	Sensible Duct Load	3609 Btuh
	Total Sensible Zone Loads	**14119 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**14119 Btuh**
	Latent infiltration gain (for 51 gr. humidity difference)	932 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	735 Btuh
	Latent occupant gain (4.0 people @ 200 Btuh per person)	800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**2466 Btuh**
	TOTAL GAIN	**16585 Btuh**

EQUIPMENT

1. Central Unit	#	21000 Btuh

*Key: Window types (Panes - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)

Version 8