



39030

**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:	<input checked="" type="checkbox"/>			
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void	<input checked="" type="checkbox"/>			
3	Condition space (Sq. Ft.) 1614	Total (Sq. Ft.) under roof 2328	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	Yes		<input type="checkbox"/>
5	Dimensions of all building set backs	Yes		<input type="checkbox"/>
6	Location of all other structures (include square footage of structures) on parcel, existing or proposed well and septic tank and all utility easements.	Yes		<input type="checkbox"/>
7	Provide a full legal description of property.	Yes		<input type="checkbox"/>

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	Yes		<input type="checkbox"/>
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)	Yes		<input type="checkbox"/>
11	Wind importance factor and nature of occupancy	Yes		<input type="checkbox"/>
12	The applicable internal pressure coefficient, Components and Cladding	Yes		<input type="checkbox"/>
13	The design wind pressure in terms of psf (kN/m ²), to be used for the design of exterior component, cladding materials not specifiially designed by the registered design professional.	Yes		<input type="checkbox"/>

Elevations Drawing including:

14	All side views of the structure	Yes		<input type="checkbox"/>
15	Roof pitch	Yes		<input type="checkbox"/>
16	Overhang dimensions and detail with attic ventilation	Yes		<input type="checkbox"/>
17	Location, size and height above roof of chimneys	Yes		<input type="checkbox"/>
18	Location and size of skylights with Florida Product Approval	Yes		<input type="checkbox"/>
19	Number of stories	Yes		<input type="checkbox"/>
20	Building height from the established grade to the roofs highest peak	Yes		<input type="checkbox"/>

Floor Plan Including:

21	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	Yes		<input type="checkbox"/>
22	Raised floor surfaces located more than 30 inches above the floor or grade	Yes		<input type="checkbox"/>
23	All exterior and interior shear walls indicated	Yes		<input type="checkbox"/>
24	Shear wall opening shown (Windows, Doors and Garage doors)	Yes		<input type="checkbox"/>
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.	Yes		<input type="checkbox"/>
26	Safety glazing of glass where needed	Yes		<input type="checkbox"/>
27	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 and chapter 24 of FBCR)	Yes		<input type="checkbox"/>
28	Show stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails	Yes		<input type="checkbox"/>
29	Identify accessibility of bathroom (see FBCR SECTION 320)	Yes		<input type="checkbox"/>

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	
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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.	Yes		<input type="checkbox"/>
31	All posts and/or column footing including size and reinforcing	Yes		<input type="checkbox"/>
32	Any special support required by soil analysis such as piling.	Yes		<input type="checkbox"/>
33	Assumed load-bearing value of soil 2000 Pound Per Square Foot	Yes		<input type="checkbox"/>
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	Yes		<input type="checkbox"/>

FBCR 506: CONCRETE SLAB ON GRADE

35	Show Vapor retarder (6mil. Polyethylene with joints taped 6 inches and sealed)	Yes		<input type="checkbox"/>
36	Show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and Supports	Yes		<input type="checkbox"/>

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	Yes		<input type="checkbox"/>
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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	Yes		<input type="checkbox"/>
39	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement	Yes		<input type="checkbox"/>

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	NA		<input type="checkbox"/>
41	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or piers	NA		<input type="checkbox"/>
42	Girder type, size and spacing to load bearing walls, stem wall and/or piers	-		<input type="checkbox"/>
43	Attachment of joist to girder	-		<input type="checkbox"/>
44	Wind load requirements where applicable	NA		<input type="checkbox"/>
45	Show required under-floor crawl space	NA		<input type="checkbox"/>
46	Show required amount of ventilation opening for under-floor spaces	NA		<input type="checkbox"/>
47	Show required covering of ventilation opening	NA		<input type="checkbox"/>
48	Show the required access opening to access to under-floor spaces	NA		<input type="checkbox"/>
49	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges & intermediate of the areas structural panel sheathing	-		<input type="checkbox"/>
50	Show Draftstopping, Fire caulking and Fire blocking	NA		<input type="checkbox"/>
51	Show fireproofing requirements for garages attached to living spaces, per FBCR section 302.6	NA		<input type="checkbox"/>
52	Provide live and dead load rating of floor framing systems (psf).	NA		<input type="checkbox"/>

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	Yes		<input type="checkbox"/>
54	Fastener schedule for structural members per table FBC-R602.3.2 are to be shown	Yes		<input type="checkbox"/>
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	Yes		<input type="checkbox"/>
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	Yes		<input type="checkbox"/>
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.	Yes		<input type="checkbox"/>
58	Indicate where pressure treated wood will be placed	Yes		<input type="checkbox"/>
59	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	Yes		<input type="checkbox"/>
60	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	Yes		<input type="checkbox"/>

FBCR :ROOF SYSTEMS:

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

FBCR 802:Conventional Roof Framing Layout

66	Rafter and ridge beams sizes, span, species and spacing	Yes		<input type="checkbox"/>
67	Connectors to wall assemblies' include assemblies' resistance to uplift rating	Yes		<input type="checkbox"/>
68	Valley framing and support details	Yes		<input type="checkbox"/>
69	Provide dead load rating of rafter system	Yes		<input type="checkbox"/>

FBCR 803 ROOF SHEATHING

70	Include all materials which will make up the roof decking, identification of structural panel sheathing, grade, thickness	Yes		<input type="checkbox"/>
71	Show fastener Size and schedule for structural panel sheathing on the edges & intermediate areas	Yes		<input type="checkbox"/>

ROOF ASSEMBLIES FRC Chapter 9

72	Include all materials which will make up the roof assemblies covering	Yes		<input type="checkbox"/>
73	Submit Florida Product Approval numbers for each component of the roof assemblies covering	Yes		<input type="checkbox"/>

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.**

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Select from Drop Down

74	Show the insulation R value for the following areas of the structure	Yes		<input type="checkbox"/>
75	Attic space	Yes		<input type="checkbox"/>
76	Exterior wall cavity	Yes		<input type="checkbox"/>
77	Crawl space	Yes		<input type="checkbox"/>

HVAC information

78	Submit two copies of a Manual J sizing equipment or equivalent computation study	Yes		<input type="checkbox"/>
79	Exhaust fans shown in bathrooms Mechanical exhaust capacity of 50 cfm intermittent or 20 cfm continuous required	Yes		<input type="checkbox"/>
80	Show clothes dryer route and total run of exhaust duct	Yes		<input type="checkbox"/>

Plumbing Fixture layout shown

81	All fixtures waste water lines shall be shown on the foundation plan	Yes		<input type="checkbox"/>
82	Show the location of water heater	Yes		<input type="checkbox"/>

Private Potable Water

83	Pump motor horse power	Yes		<input type="checkbox"/>
84	Reservoir pressure tank gallon capacity	Yes		<input type="checkbox"/>
85	Rating of cycle stop valve if used	Yes		<input type="checkbox"/>

Electrical layout shown including

86	Show Switches, receptacles outlets, lighting fixtures and Ceiling fans	Yes		<input type="checkbox"/>
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	Yes		<input type="checkbox"/>
88	Show the location of smoke detectors & Carbon monoxide detectors	Yes		<input type="checkbox"/>
89	Show service panel, sub-panel, location(s) and total ampere ratings	Yes		<input type="checkbox"/>
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	Yes		<input type="checkbox"/>
91	Appliances and HVAC equipment and disconnects	Yes		<input type="checkbox"/>
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.	Yes		<input type="checkbox"/>

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.

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

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72 please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. Statewide approved products are listed online @ www.floridabuilding.org

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
1. EXTERIOR DOORS			
A. SWINGING	Plastpro	Fiberglass Side-hinged Door	15180.1
B. SLIDING			
C. SECTIONAL/ROLL UP	C.H.I.	Garage Door	15012 R1
D. OTHER			
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	YKK	StyleView Single-Hung	8114.1
B. HORIZONTAL SLIDER			
C. CASEMENT			
D. FIXED			
E. MULLION			
F. SKYLIGHTS			
G. OTHER			
3. PANEL WALL			
A. SIDING	James Hardie	Cemplank Lab Siding	13192.1
B. SOFFITS	Kaycan LTD	Vinyl Soffit T-4	12198.3
C. STOREFRONTS			
D. GLASS BLOCK			
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	TAMKO	Dimensional Asphalt Shingle	1956.3
B. NON-STRUCTURAL METAL			
C. ROOFING TILES			
D. SINGLE PLY ROOF			
E. OTHER			
5. STRUCTURAL COMPONENTS			
A. WOOD CONNECTORS	Simpson Strong-Tie, Co	ABU44/ABU66, Hurricane Tie	1086.4/ 10446.8
B. WOOD ANCHORS	Simpson Strong-Tie, Co	Masonry Screws	2355.1
C. TRUSS PLATES			
D. INSULATION FORMS			
E. LINTELS			
F. OTHERS			
6. NEW EXTERIOR ENVELOPE PRODUCTS			

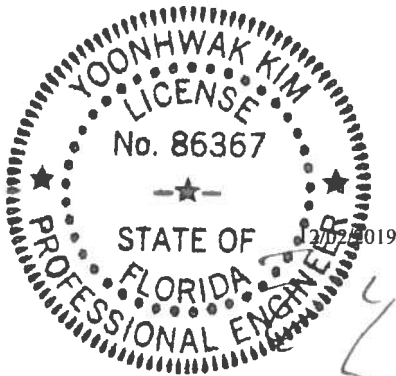
The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) performance characteristics which the product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

Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection

Contractor OR Agent Signature

Date

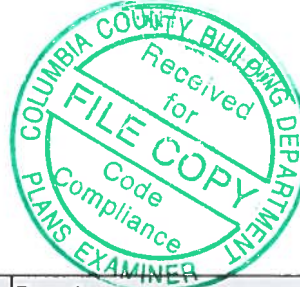
NOTES



This document has been electronically signed and sealed using a Digital Signature. Printed copies without an original signature must be verified using the original electronic version.



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6750 Forum Drive, Suite 305
Orlando, FL 32821
Phone: (800)755-6001
www.alpineitw.com



Site Information:	Page 1:
Customer: W. B. Howland Company, Inc.	Job Number: 19-3772
Job Description: /Whalen /BRADLEY FRANKS	
Address: LAKE CITY, FL	

Job Engineering Criteria:			
Design Code: FBC 2017 RES	IntelliVIEW Version: 18.02.01B	JRef #: 1WQM2150003	
Wind Standard: ASCE 7-10	Wind Speed (mph): 130	Roof Load (psf): 20.00-10.00- 0.00-10.00	
Building Type: Closed		Floor Load (psf): None	

This package contains general notes pages, 34 truss drawing(s) and 3 detail(s).

Item	Seal #	Truss
1	336.19.1000.39920	A01
3	336.19.1000.42947	A03
5	336.19.1000.54330	B02
7	336.19.1001.04450	B04
9	336.19.1001.07440	C01
11	336.19.1001.10023	C03
13	336.19.1001.12650	D02
15	336.19.1001.31250	D04
17	336.19.1001.35763	G02
19	336.19.1000.06147	H01
21	336.19.1000.15457	HJ2
23	336.19.1000.21933	J01
25	336.19.1000.24940	J03
27	336.19.1000.27317	J06
29	336.19.1000.29240	J08
31	336.19.1000.34147	K02
33	336.19.1000.37310	K04
35	A14015ENC10101 4	
37	BRCLBSUB0119	

Item	Seal #	Truss
2	336.19.1000.41540	A02
4	336.19.1000.44337	B01
6	336.19.1000.56013	B03
8	336.19.1001.06100	B05
10	336.19.1001.08703	C02
12	336.19.1001.11457	D01
14	336.19.1001.24123	D03
16	336.19.1001.32720	G01
18	336.19.1000.04560	G03
20	336.19.1000.08740	HJ1
22	336.19.1000.20493	HJ3
24	336.19.1000.23630	J02
26	336.19.1000.26337	J05
28	336.19.1000.28293	J07
30	336.19.1000.30843	K01
32	336.19.1000.36280	K03
34	336.19.1000.38513	L01
36	GBLLETIN0118	

General Notes

Truss Design Engineer Scope of Work, Design Assumptions and Design Responsibilities:

The design responsibilities assumed in the preparation of these design drawings are those specified in ANSI/TPI 1, Chapter 2; and the National Design Standard for Metal Plate Connected Wood Truss Construction, by the Truss Plate Institute. The truss component designs conform to the applicable provisions of ANSI/TPI 1 and NDS, the National Design Specification for Wood Construction by AF&PA. The truss component designs are based on the specified loading and dimension information furnished by others to the Truss Design Engineer. The Truss Design Engineer has no duty to independently verify the accuracy or completeness of the information provided by others and may rely on that information without liability. The responsibility for verification of that information remains with others neither employed nor controlled by the Truss Design Engineer. The Truss Design Engineer's seal and signature on the attached drawings, or cover page listing these drawings, indicates acceptance of professional engineering responsibility solely for the truss component designs and not for the technical information furnished by others which technical information and consequences thereof remain their sole responsibility.

The suitability and use of these drawings for any particular structure is the responsibility of the Building Designer in accordance with ANSI/TPI 1 Chapter 2. The Building Designer is responsible for determining that the dimensions and loads for each truss component match those required by the plans and by the actual use of the individual component, and for ascertaining that the loads shown on the drawings meet or exceed applicable building code requirements and any additional factors required in the particular application. Truss components using metal connector plates with integral teeth shall not be placed in environments that will cause the moisture content of the wood in which plates are embedded to exceed 19% and/or cause corrosion of connector plates and other metal fasteners.

The Truss Design Engineer shall not be responsible for items beyond the specific scope of the agreed contracted work set forth herein, including but not limited to: verifying the dimensions of the truss component, calculation of any of the truss component design loads, inspection of the truss components before or after installation, the design of temporary or permanent bracing and their attachment required in the roof and/or floor systems, the design of diaphragms or shear walls, the design of load transfer connections to and from diaphragms and shear walls, the design of load transfer to the foundation, the design of connections for truss components to their bearing supports, the design of the bearing supports, installation of the truss components, observation of the truss component installation process, review of truss assembly procedures, sequencing of the truss component installation, construction means and methods, site and/or worker safety in the installation of the truss components and/or its connections.

This document may be a high quality facsimile of the original engineering document which is a digitally signed electronic file with third party authentication. A wet or embossed seal copy of this engineering document is available upon request.

Temporary Lateral Restraint and Bracing:

Temporary lateral restraint and diagonal bracing shall be installed according to the provisions of BCSI chapters B1, B2, B7 and/or B10 (Building Component Safety Information, by TPI and SBCA), or as specified by the Building Designer or other Registered Design Professional. The required locations for lateral restraint and/or bracing depicted on these drawings are only for the permanent lateral support of the truss members to reduce buckling lengths, and do not apply to and may not be relied upon for the temporary stability of the truss components during their installation.

Permanent Lateral Restraint and Bracing:

The required locations for lateral restraint or bracing depicted on these drawings are for the permanent lateral support of the truss members to reduce buckling lengths. Permanent lateral support shall be installed according to the provisions of BCSI chapters B3, B7 and/or B10, or as specified by the Building Designer or other Registered Design Professional. These drawings do not depict or specify installation/erection bracing, wind bracing, portal bracing or similar building stability bracing which are parts of the overall building design to be specified, designed and detailed by the Building Designer.

Connector Plate Information:

Alpine connector plates are made of ASTM A653 or ASTM A1063 galvanized steel with the following designations, gauges and grades: W=Wave, 20ga, grade 40; H=High Strength, 20ga, grade 60; S=Super Strength, 18ga, grade 60. Information on model code compliance is contained in the ICC Evaluation Service report ESR-1118, available on-line at www.icc-es.org.

General Notes (continued)

Key to Terms:

Information provided on drawings reflects a summary of the pertinent information required for the truss design. Detailed information on load cases, reactions, member lengths, forces and members requiring permanent lateral support may be found in calculation sheets available upon written request.

BCDL = Bottom Chord standard design Dead Load in pounds per square foot.

BCLL = Bottom Chord standard design Live Load in pounds per square foot.

Des Ld = total of TCLL, TCDL, BCLL and BCDL Design Load in pounds per square foot.

HORZ(LL) = maximum Horizontal panel point deflection due to Live Load, in inches.

HORZ(TL) = maximum Horizontal panel point long term deflection in inches, due to Total Load, including creep adjustment.

HPL = additional Horizontal Load added to a truss Piece in pounds per linear foot or pounds.

L/# = user specified divisor for limiting span/deflection ratio for evaluation of actual L/defl value.

L/defl = ratio of Length between bearings, in inches, divided by the immediate vertical Deflection, in inches, at the referenced panel point. Reported as 999 if greater than or equal to 999.

Loc = Location, starting location of left end of bearing or panel point (joint) location of deflection.

Max BC CSI = Maximum bending and axial Combined Stress Index for Bottom Chords for of all load cases.

Max TC CSI = Maximum bending and axial Combined Stress Index for Top Chords for of all load cases.

Max Web CSI = Maximum bending and axial Combined Stress Index for Webs for of all load cases.

NCBCLL = Non-Concurrent Bottom Chord design Live Load in pounds per square foot.

PL = additional Load applied at a user specified angle on a truss Piece in pounds per linear foot or pounds.

PLB = additional vertical load added to a Bottom chord Piece of a truss in pounds per linear foot or pounds

PLT = additional vertical load added to a Top chord Piece of a truss in pounds per linear foot or pounds.

PP = Panel Point.

R = maximum downward design Reaction, in pounds, from all specified gravity load cases, at the indicated location (Loc).

-R = maximum upward design Reaction, in pounds, from all specified gravity load cases, at the identified location (Loc).

Rh = maximum horizontal design Reaction in either direction, in pounds, from all specified gravity load cases, at the indicated location (Loc).

RL = maximum horizontal design Reaction in either direction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).

Rw = maximum downward design Reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the identified location (Loc).

TCDL = Top Chord standard design Dead Load in pounds per square foot.

TCLL = Top Chord standard design Live Load in pounds per square foot.

U = maximum Upward design reaction, in pounds, from all specified non-gravity (wind or seismic) load cases, at the indicated location (Loc).

VERT(CL) = maximum Vertical panel point deflection in inches due to Live Load and Creep Component of Dead Load in inches.

VERT(LL) = maximum Vertical panel point deflection in inches due to Live Load.

VERT(TL) = maximum Vertical panel point long term deflection in inches due to Total load, including creep adjustment.

W = Width of non-hanger bearing, in inches.

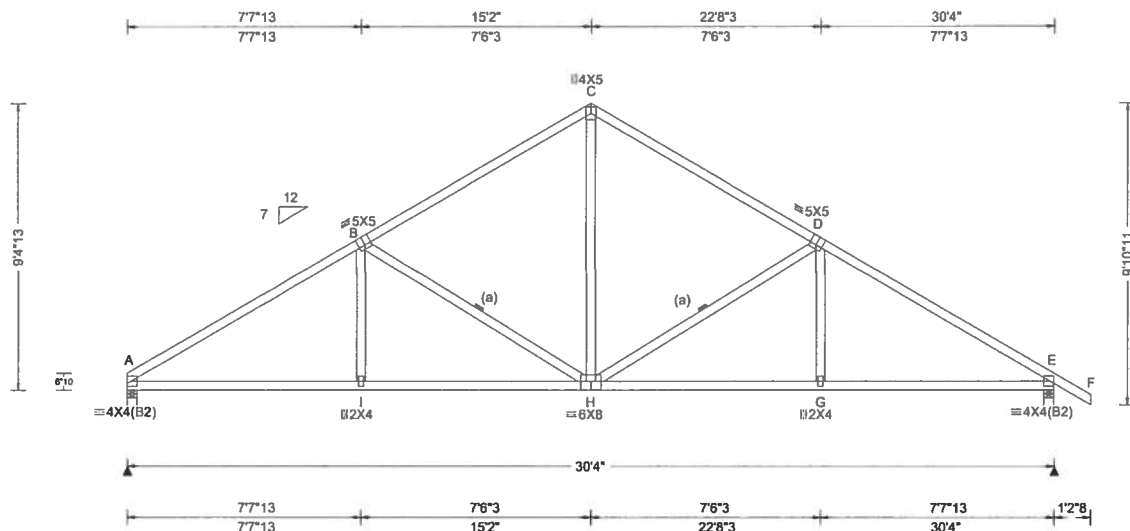
Refer to ASCE-7 for Wind and Seismic abbreviations.

Uppercase Acronyms not explained above are as defined in TPI 1.

References:

1. AF&PA: American Forest & Paper Association, 1111 19th Street, NW, Suite 800, Washington, DC 20036; www.afandpa.org.
2. ICC: International Code Council; www.iccsafe.org.
3. Alpine, a division of ITW Building Components Group Inc.: 13723 Riverport Drive, Suite 200, Maryland Heights, MO 63043; www.alpineitw.com.
4. TPI: Truss Plate Institute, 218 North Lee Street, Suite 312, Alexandria, VA 22314; www.tpinst.org.
5. SBCA: Wood Truss Council of America, 6300 Enterprise Lane, Madison, WI 53719; www.sbcindustry.co

SEQN: 303092 FROM: CDM	COMN Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: A01	Cust: R 215 JRef: 1WQM2150003 T22 DrwNo: 336.19.1000.39920 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Def/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.03 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.088 H 999 240 VERT(CL): 0.181 H 999 180 HORZ(LL): 0.044 G - - HORZ(TL): 0.091 G - - Creep Factor: 2.0 Max TC CSI: 0.667 Max BC CSI: 0.733 Max Web CSI: 0.308 VIEW Ver: 18.02.01B.0321.08	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL A 1259 /- /- /725 /15 /249 E 1345 /- /- /793 /20 /- Wind reactions based on MWFRS A Brg Width = 4.0 Min Req = 1.5 E Brg Width = 4.0 Min Req = 1.6 Bearings A & E are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. A - B 407 -1958 C - D 363 -1371 B - C 368 -1372 D - E 394 -1950

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Bracing

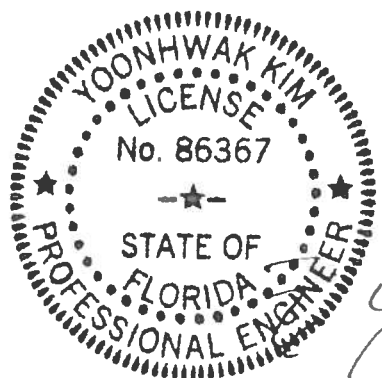
(a) Continuous lateral restraint equally spaced on member.

Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 9'-4-13".



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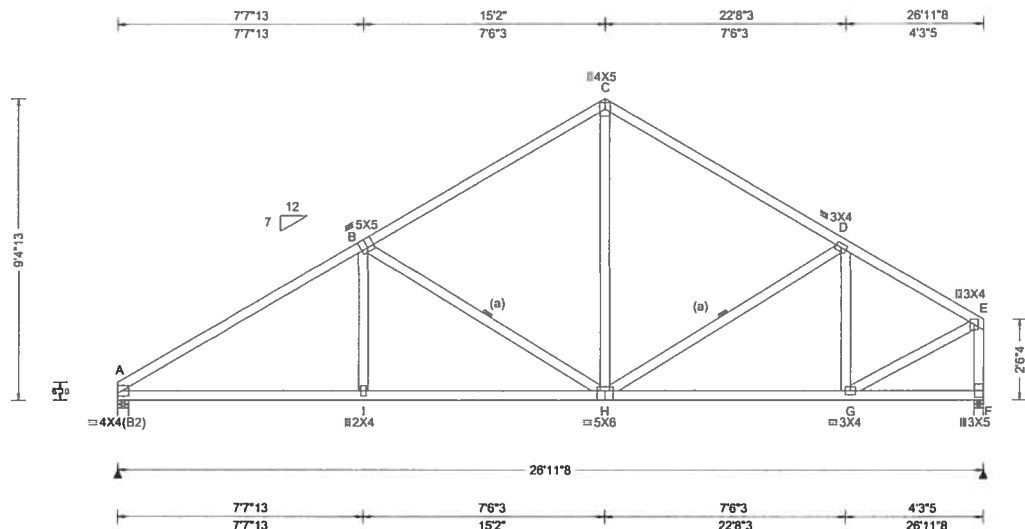
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

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For more information see this job's general notes page and these web sites: ALPINE: www.alpinetw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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SEQN: 303095 FROM: CDM	SPEC Ply: 1 Qty: 3	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: A02	Cust: R 215 JRef: 1WQM2150003 T30 DrwNo: 336.19.1000.41540 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Def/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl U/# VERT(LL): 0.053 I 999 240 VERT(CL): 0.111 I 999 180 HORZ(LL): 0.023 F - - HORZ(TL): 0.048 F - - Creep Factor: 2.0 Max TC CSI: 0.613 Max BC CSI: 0.723 Max Web CSI: 0.388 VIEW Ver: 18.02.01B.0321.08	Gravity Non-Gravity Loc R+ /R- /Rh /Rw /U /RL A 1124 /- /- /659 /12 /213 F 1118 /- /- /612 /15 /- Wind reactions based on MWFRS A Brg Width = 4.0 Min Req = 1.5 F Brg Width = 3.5 Min Req = 1.5 Bearings A & F are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. A - B 351 -1706 C - D 311 -1107 B - C 312 -1111 D - E 248 -1089

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

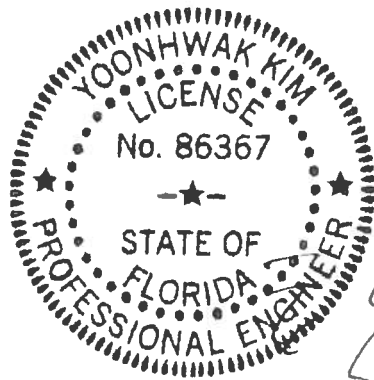
Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 9-4-13.



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Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
A - I	1371 -270	H - G	920 -174
I - H	1368 -270		

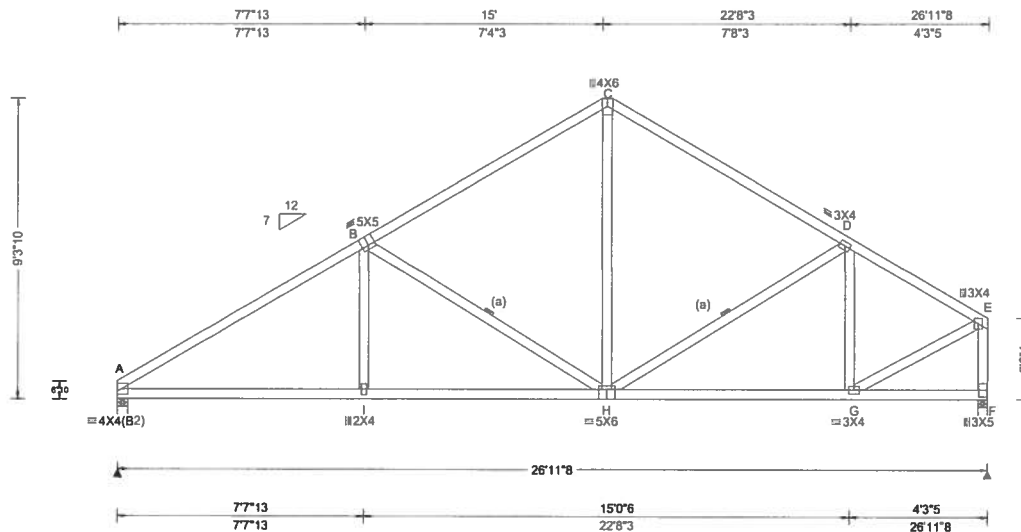
Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
B - H	205 -607	G - E	1020 -189
C - H	584 -133	E - F	242 -1092

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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

SEQN: 303103 FROM: CDM	SPEC Qty: 1	Ply: 1 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: A03	Cust: R 215 JRef: 1WQM2150003 T29 DrwNo: 336.19.1000.42947 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: No FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.053 I 999 240 VERT(CL): 0.111 I 999 180 HORZ(LL): 0.023 F - - HORZ(TL): 0.048 F - - Creep Factor: 2.0 Max TC CSI: 0.613 Max BC CSI: 0.723 Max Web CSI: 0.388 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh / Rw / U / RL A 1124 /- /- /656 /12 /211 F 1118 /- /- /608 /15 /- Non-Gravity Wind reactions based on MWFRS A Brg Width = 4.0 Min Req = 1.5 F Brg Width = 3.5 Min Req = 1.5 Bearings A & F are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. A - B 350 - 1706 C - D 309 - 1107 B - C 310 - 1111 D - E 248 - 1089

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Bracing

(a) Continuous lateral restraint equally spaced on member.

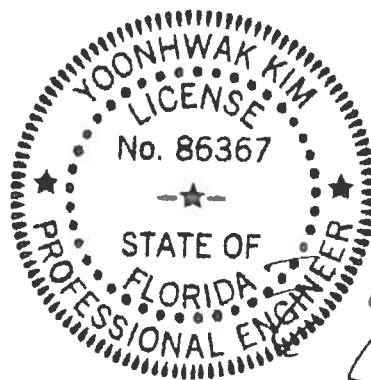
Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 9-3-10.



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Maximum Bot Chord Forces Per Ply (lbs)

Chords Tens.Comp. Chords Tens. Comp.

A - I 1371 - 270 H - G 920 - 174
I - H 1368 - 270

Maximum Web Forces Per Ply (lbs)

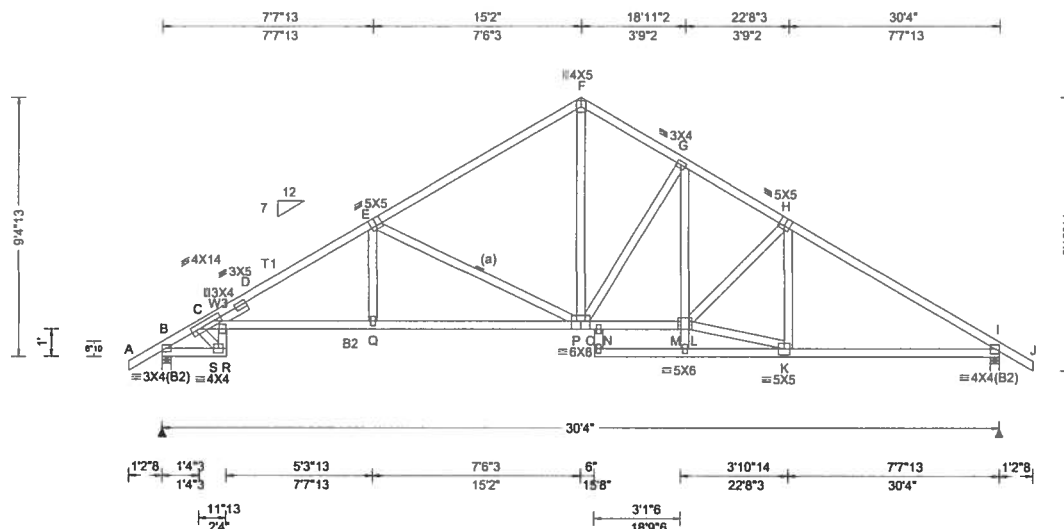
Webs Tens.Comp. Webs Tens. Comp.

B - H 205 - 607 G - E 1020 - 188
C - H 584 - 134 E - F 241 - 1092

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SEQN: 303111 FROM: CDM	COMN Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: B01	Cust: R 215 JRef: 1WQM2150003 T26 DrwNo: 336.19.1000.44337 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.03 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.300 R 999 240 VERT(CL): 0.616 R 588 180 HORZ(LL): 0.190 D - - HORZ(TL): 0.389 D - - Creep Factor: 2.0 Max TC CSI: 0.778 Max BC CSI: 0.955 Max Web CSI: 0.770 VIEW Ver: 18.02.01B.0321.08	Gravity Non-Gravity Loc R+ /R- /Rh /Rw /U /RL B 1342 -/- /- /793 /20 /263 I 1340 -/- /- /793 /20 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.6 I Brg Width = 4.0 Min Req = 1.6 Bearings B & I are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp.

Lumber
Top chord: 2x4 SP #2; T1 2x4 SP M-31;
Bot chord: 2x4 SP #2; B2 2x4 SP M-31;
Webs: 2x4 SP #3; W3 2x4 SP #2;

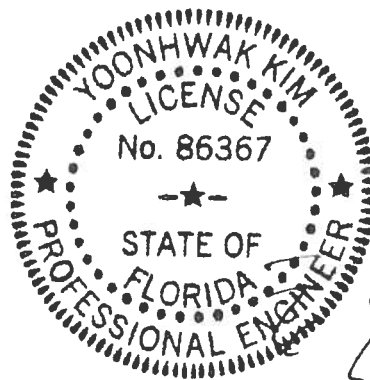
Bracing
(a) Continuous lateral restraint equally spaced on member.

Plating Notes
All plates are 2X4 except as noted.

Wind
Wind loads based on MWFRS with additional C&C member design.

Additional Notes
The overall height of this truss excluding overhang is 9'4"-13".

Laterally brace chord above/below filler at 24" OC (or as designed) including a lateral brace on chord directly above/ below both ends of filler (if no rigid diaphragm exists at that point)



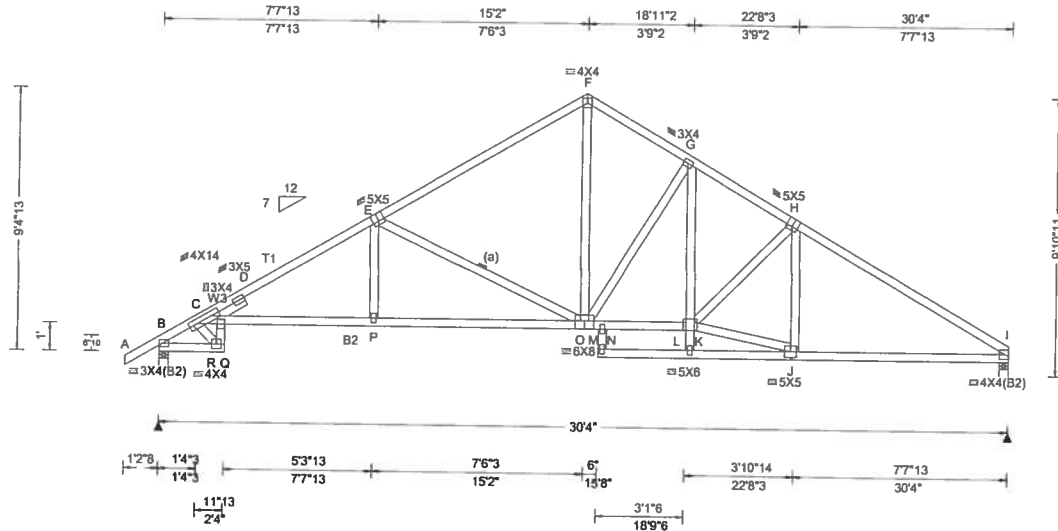
FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

Maximum Bot Chord Forces Per Ply (lbs)
Chords Tens.Comp. Chords Tens. Comp.
B - R 918 -179 P - N 1523 -153
C - S 2182 -310 N - L 1504 -149
S - Q 2092 -292 K - I 1549 -223
Q - P 2085 -292

Maximum Web Forces Per Ply (lbs)
Webs Tens.Comp. Webs Tens. Comp.
C - R 272 -1397 F - P 1014 -229
S - R 936 -172 P - G 172 -644
Q - E 471 -12 G - L 613 -133
E - P 264 -1009 L - K 1576 -225

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Maryland Heights, MO 63043



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.03 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.299 Q 999 240 VERT(CL): 0.616 Q 587 180 HORZ(LL): 0.189 D - - HORZ(TL): 0.390 D - - Creep Factor: 2.0 Max TC CSI: 0.778 Max BC CSI: 0.956 Max Web CSI: 0.771 VIEW Ver: 18.02.01B.0321.08	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 1344 - / - / 793 / 20 / 249 I 1256 - / - / 725 / 15 / - Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.6 I Brg Width = 4.0 Min Req = 1.5 Bearings B & I are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 302 - 1394 F - G 386 - 1409 C - D 1476 - 3459 G - H 444 - 1862 D - E 481 - 2404 H - I 405 - 1935 E - F 372 - 1508

Lumber

Top chord: 2x4 SP #2; T1 2x4 SP M-31;
Bot chord: 2x4 SP #2; B2 2x4 SP M-31;
Webs: 2x4 SP #3; W3 2x4 SP #2;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 2X4 except as noted.

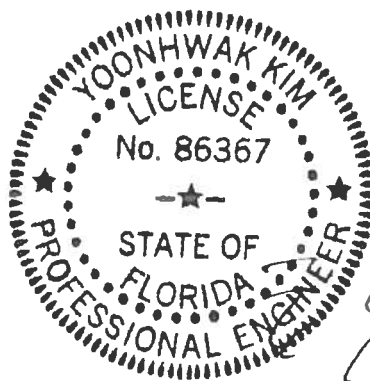
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 9'-4"-13'.

Laterally brace chord above/below filler at 24" OC (or as designed) including a lateral brace on chord directly above/ below both ends of filler (if no rigid diaphragm exists at that point)



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
B - Q	919 - 202	O - M	1529 - 180
C - R	2186 - 357	M - K	1508 - 175
R - P	2096 - 337	J - I	1562 - 254
P - O	2088 - 336		

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
C - Q	307 - 1399	F - O	1017 - 233
R - Q	937 - 197	O - G	176 - 648
P - E	471 - 18	G - K	622 - 149
E - O	274 - 1009	K - J	1589 - 257

WARNING READ AND FOLLOW ALL NOTES ON THIS DRAWING!

IMPORTANT FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

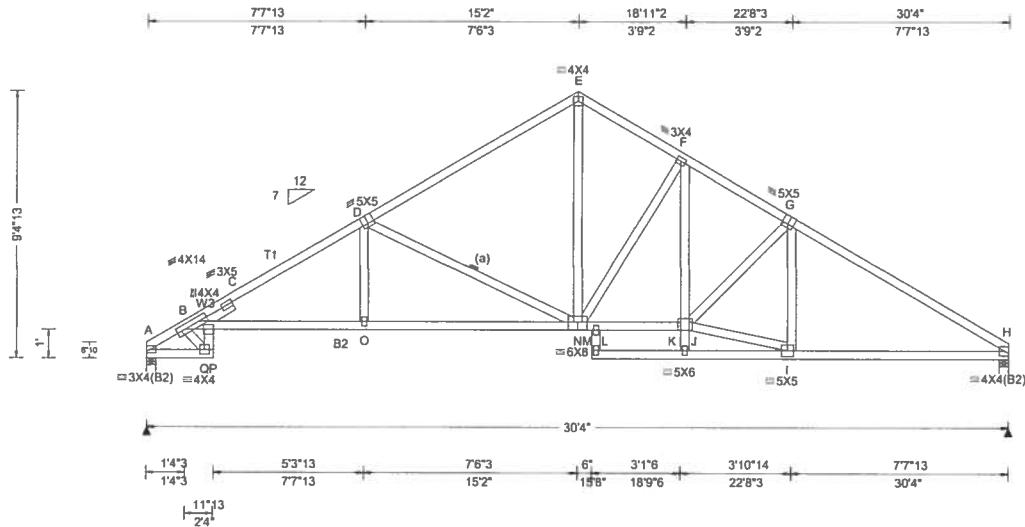
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303120 FROM: CDM	COMN Ply: 1 Qty: 3	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: B03	Cust: R 215 JRef: 1WQM2150003 T13 DrwNo: 336.19.1000.56013 SSB / YK 12/02/2019
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Loading Criteria (psf)		Wind Criteria		Snow Criteria (Pg, Pf in PSF)		Defl/CSI Criteria		Maximum Reactions (lbs)	
TCLL: 20.00		Wind Std: ASCE 7-10		Pg: NA Ct: NA CAT: NA		PP Deflection in loc L/defl L#		Gravity	Non-Gravity
TCCL: 10.00		Speed: 130 mph		Pf: NA Ce: NA		VERT(LL): 0.305 P 999 240		Loc R+ / R- / Rh	/ Rw / U / RL
BCCL: 0.00		Enclosure: Closed		Lu: NA Cs: NA		VERT(CL): 0.635 P 570 180		A 1260 /- /- /725 /15 /226	
BCDL: 10.00		Risk Category: II		Snow Duration: NA		HORZ(LL): 0.192 C - -		H 1258 /- /- /725 /15 /-	
Des Ld: 40.00		EXP: C Kzt: NA				HORZ(TL): 0.400 C - -		Wind reactions based on MWFRS	
NCBCLL: 10.00		Mean Height: 15.00 ft				Creep Factor: 2.0		A Brg Width = 4.0	Min Req = 1.5
Soffit: 2.00		TCDL: 5.0 psf				Max TC CSI: 0.784		H Brg Width = 4.0	Min Req = 1.5
Load Duration: 1.25		BCDL: 5.0 psf				Max BC CSI: 0.985		Bearings A & H are a rigid surface.	
Spacing: 24.0 "		MWFRS Parallel Dist: h to 2h				Max Web CSI: 0.790		Members not listed have forces less than 375#	
		C&C Dist a: 3.03 ft						Maximum Top Chord Forces Per Ply (lbs)	
		Loc. from endwall: not in 9.00 ft						Chords Tens.Comp.	Chords Tens. Comp.
		GCpi: 0.18						A - B 339 -1423	E - F 387 -1413
		Wind Duration: 1.60						B - C 1566 -3546	F - G 446 -1866
								C - D 499 -2418	G - H 406 -1938
								D - E 377 -1511	

Lumber

Top chord: 2x4 SP #2; T1 2x4 SP M-31;
Bot chord: 2x4 SP #2; B2 2x4 SP M-31;
Webs: 2x4 SP #3; W3 2x4 SP #2;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 2X4 except as noted.

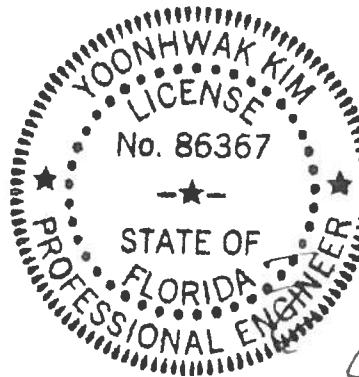
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 9'-4"-13".

Laterally brace chord above/below filler at 24" OC (or as designed) including a lateral brace on chord directly above/ below both ends of filler (if no rigid diaphragm exists at that point)



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
A - P	952 -235	N - L	1532 -185
B - Q	2203 -365	L - J	1512 -180
Q - O	2110 -341	I - H	1564 -255
O - N	2102 -341		

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
B - P	357 -1450	E - N	1021 -239
Q - P	974 -230	N - F	178 -649
O - D	474 -25	F - J	622 -149
D - N	279 -1021	J - I	1592 -258

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****IMPORTANT**** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

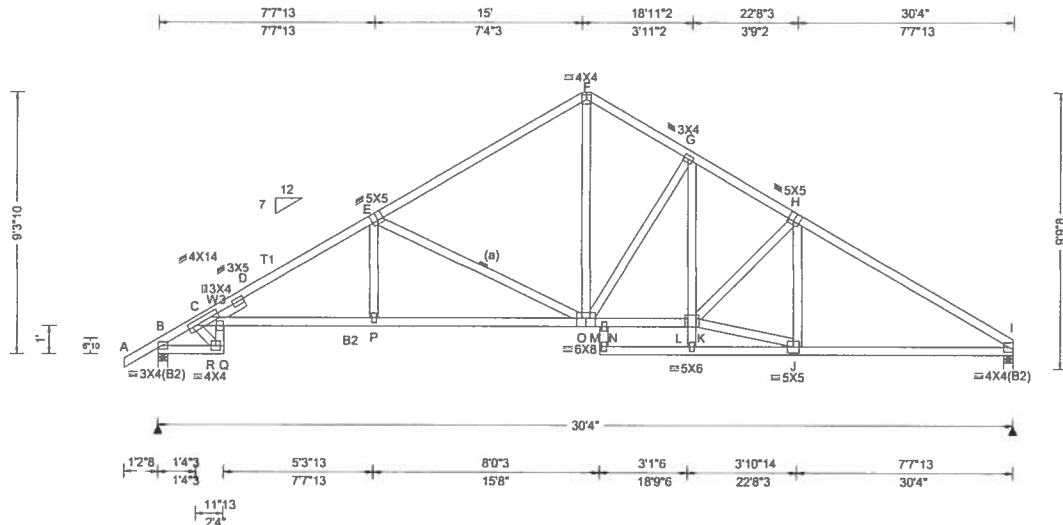
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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303126 FROM: CDM	COMN Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: B04	Cust: R 215 JRef: 1WQM2150003 T14 DrwNo: 336.19.1001.04450 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.03 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.299 Q 999 240 VERT(CL): 0.616 Q 587 180 HORZ(LL): 0.189 D - - HORZ(TL): 0.390 D - - Creep Factor: 2.0 Max TC CSI: 0.778 Max BC CSI: 0.956 Max Web CSI: 0.771 VIEW Ver: 18.02.01B.0321.08	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 1344 /- /- /790 /21 /248 I 1256 /- /- /722 /15 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.6 I Brg Width = 4.0 Min Req = 1.5 Bearings B & I are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 301 - 1394 F - G 383 - 1409 C - D 1475 - 3459 G - H 443 - 1862 D - E 480 - 2404 H - I 403 - 1935 E - F 369 - 1508

Lumber

Top chord: 2x4 SP #2; T1 2x4 SP M-31;
Bot chord: 2x4 SP #2; B2 2x4 SP M-31;
Webs: 2x4 SP #3; W3 2x4 SP #2;

Bracing

(a) Continuous lateral restraint equally spaced on member.

Plating Notes

All plates are 2X4 except as noted.

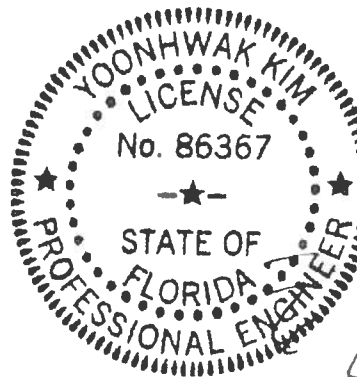
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 9-3-10.

Laterally brace chord above/below filler at 24" OC (or as designed) including a lateral brace on chord directly above/ below both ends of filler (if no rigid diaphragm exists at that point)



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
B - Q	919 - 201	O - M	1529 - 179
C - R	2186 - 356	M - K	1508 - 174
R - P	2096 - 336	J - I	1562 - 253
P - O	2088 - 336		

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
C - Q	307 - 1399	F - O	1017 - 234
R - Q	937 - 196	O - G	177 - 648
P - E	471 - 18	G - K	622 - 149
E - O	275 - 1009	K - J	1589 - 256

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!
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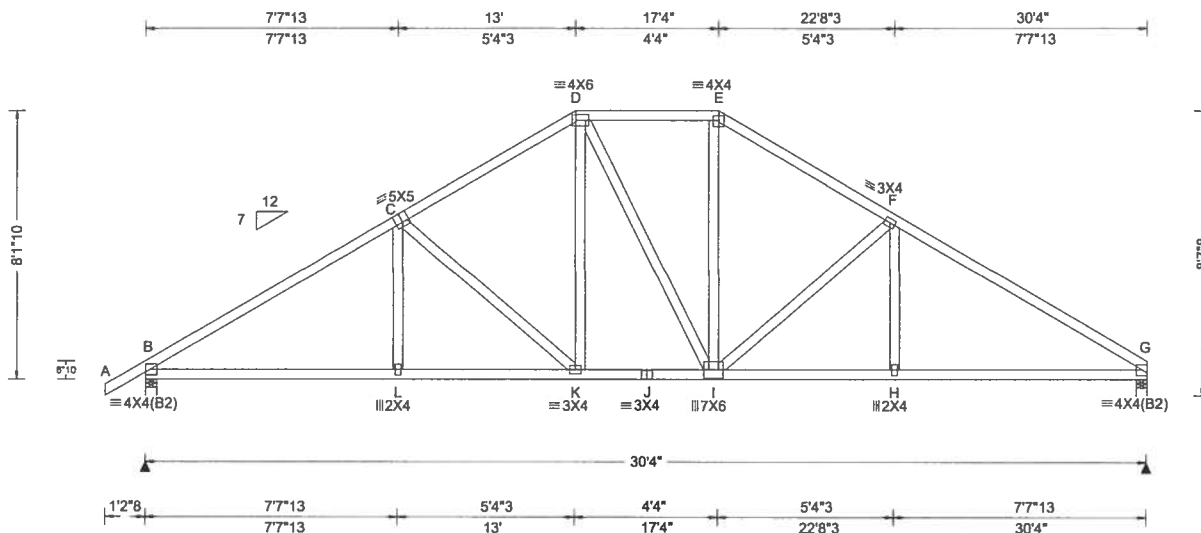
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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCEA: www.sbceindustry.com; ICC: www.iccsafe.org

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AN ITW COMPANY
13723 Riverport Drive
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Maryland Heights, MO 63043

SEQN: 303129 FROM: CDM	COMN Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: B05	Cust: R 215 JRef: 1WQM2150003 T12 DrwNo: 336.19.1001.06100 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)							
TCLL: 20.00	Wind Std: ASCE 7-10	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#	Gravity		Non-Gravity					
TCDL: 10.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): 0.082 K 999 240	Loc	R+	/R-	/Rh	/Rw	/U	/RL	
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): 0.169 K 999 180	B	1345	/-	/-	/795	/232	/217	
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): 0.039 H - -	G	1259	/-	/-	/726	/210	/-	
	EXP: C Kzt: NA		HORZ(TL): 0.081 H - -	Wind reactions based on MWFRS							
Des Ld: 40.00	Mean Height: 15.00 ft		Creep Factor: 2.0	B	Brg Width = 4.0		Min Req = 1.6				
NCBCLL: 10.00	TCDL: 5.0 psf		Max TC CSI: 0.687	G	Brg Width = 4.0		Min Req = 1.5				
Soffit: 2.00	BCDL: 5.0 psf		Max BC CSI: 0.729	Bearings B & G are a rigid surface.							
Load Duration: 1.25	MWFRS Parallel Dist: h/2 to h		Max Web CSI: 0.500	Members not listed have forces less than 375#							
Spacing: 24.0 "	C&C Dist a: 3.03 ft			Maximum Top Chord Forces Per Ply (lbs)							
	Loc. from endwall: not in 9.00 ft			Chords		Tens.Comp.		Chords		Tens. Comp.	
	GCpi: 0.18			B - C		433 - 1937		E - F		429 - 1480	
	Wind Duration: 1.60										
										</	

Lumber

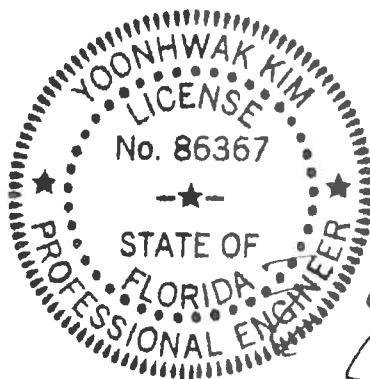
Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 8'-10".



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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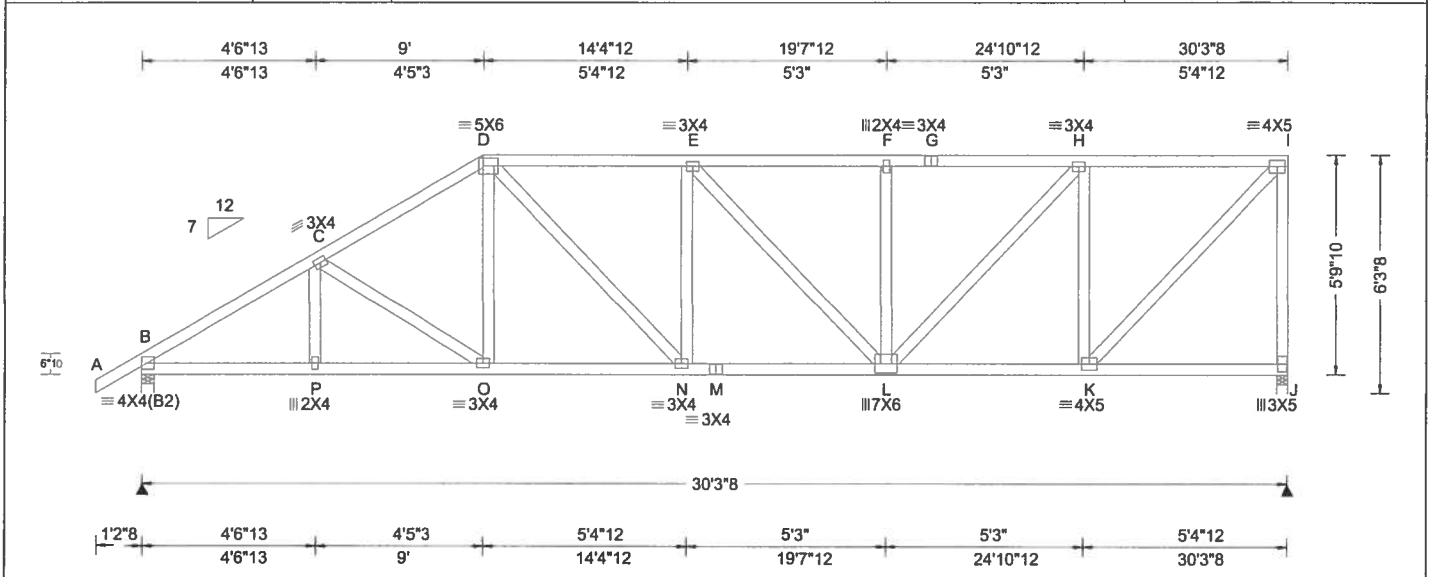
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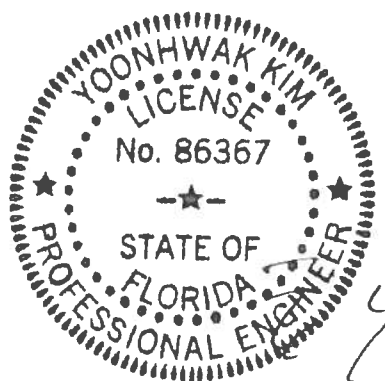
SEQN: 303135 FROM: CDM	HIPM Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: C02	Cust: R 215 JRef: 1WQM2150003 T20 DrwNo: 336.19.1001.08703 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.03 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.094 E 999 240 VERT(CL): 0.193 E 999 180 HORZ(LL): 0.033 K - - HORZ(TL): 0.068 K - - Creep Factor: 2.0 Max TC CSI: 0.575 Max BC CSI: 0.892 Max Web CSI: 0.724 VIEW Ver: 18.02.01B.0321.08	Maximum Reactions (lbs) Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 1346 /- /- /806 /227 /170 J 1255 /- /- /642 /244 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.6 J Brg Width = 3.5 Min Req = 1.5 Bearings B & J are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 437 -1990 F - G 424 -1597 C - D 444 -1755 G - H 424 -1597 D - E 472 -1739 H - I 270 -1021 E - F 424 -1597

Lumber Top chord: 2x4 SP #2; Bot chord: 2x4 SP #2; Webs: 2x4 SP #3;	Wind Wind loads based on MWFRS with additional C&C member design. Right end vertical not exposed to wind pressure.	Maximum Bot Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - P 1632 -492 N - M 1748 -476 P - O 1632 -492 M - L 1748 -476 O - N 1464 -420 L - K 1071 -286
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Additional Notes The overall height of this truss excluding overhang is 5-9-10.	Maximum Web Forces Per Ply (lbs) Webs Tens.Comp. Webs Tens. Comp. D - N 397 -84 K - I 1480 -392 L - H 773 -207 I - J 351 -1212 H - K 304 -954
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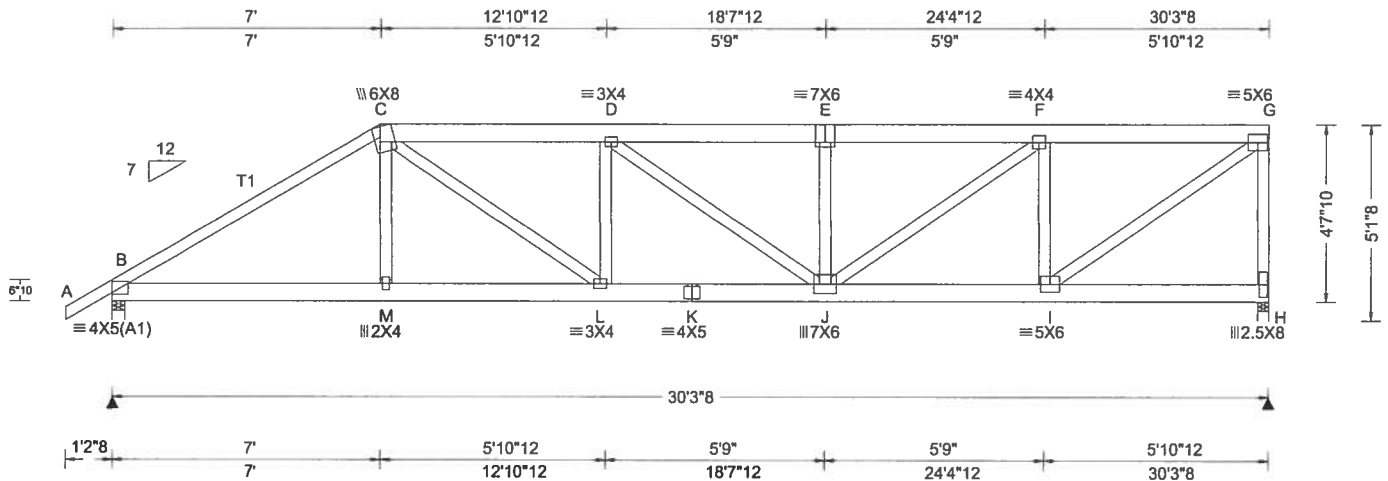
FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303138 FROM: CDM	HIPM Qty: 1	Ply: 2 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: C03	Cust: R 215 JRef: 1WQM2150003 T11 DrwNo: 336.19.1001.10023 SSB / YK 12/02/2019
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2 Complete Trusses Required



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 0.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.03 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.097 D 999 240 VERT(CL): 0.195 D 999 180 HORZ(LL): 0.021 C - - HORZ(TL): 0.042 C - - Creep Factor: 2.0 Max TC CSI: 0.450 Max BC CSI: 0.267 Max Web CSI: 0.865 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity Loc R+ / R- / Rh B 2955 /- /- /- /672 /- H 3475 /- /- /- /812 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 H Brg Width = 3.5 Min Req = 1.5 Bearings B & H are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 569 -2473 E - F 642 -2784 C - D 665 -2893 F - G 424 -1836 D - E 642 -2784

Lumber

Top chord: 2x6 SP 2400f-2.0E; T1 2x4 SP #2;
Bot chord: 2x6 SP 2400f-2.0E;
Webs: 2x4 SP #3;

Nailnote

Nail Schedule: 0.128"x3", min. nails
Top Chord: 1 Row @12.00" o.c.
Bot Chord: 1 Row @12.00" o.c.
Webs : 1 Row @ 4" o.c.
Use equal spacing between rows and stagger nails in each row to avoid splitting.

Special Loads

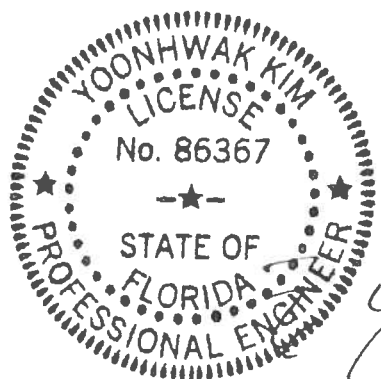
—(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 63 plf at -1.21 to 63 plf at 7.00
TC: From 32 plf at 7.00 to 32 plf at 30.29
BC: From 5 plf at -1.21 to 5 plf at 0.00
BC: From 20 plf at 0.00 to 20 plf at 7.03
BC: From 10 plf at 7.03 to 10 plf at 30.29
TC: 293 lb Conc. Load at 7.03
TC: 200 lb Conc. Load at 9.06,11.06,13.06,15.06
17.06,19.06,21.06,23.06,25.06,27.06,29.06,30.23
BC: 499 lb Conc. Load at 7.03
BC: 134 lb Conc. Load at 9.06,11.06,13.06,15.06
17.06,19.06,21.06,23.06,25.06,27.06,29.06,30.23

Wind

Wind loads and reactions based on MWFRS.
Right end vertical not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 4'-7"-10".



FL REG# 278, Yoonhwak Kim, FL PE #86367
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Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
B - M	2088 -473	K - J	2914 -675
M - L	2098 -472	J - I	1912 -447
L - K	2914 -675		

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
C - L	984 -238	I - G	2269 -524
J - F	1088 -243	G - H	412 -1585
F - I	329 -1088		

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!
****IMPORTANT**** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

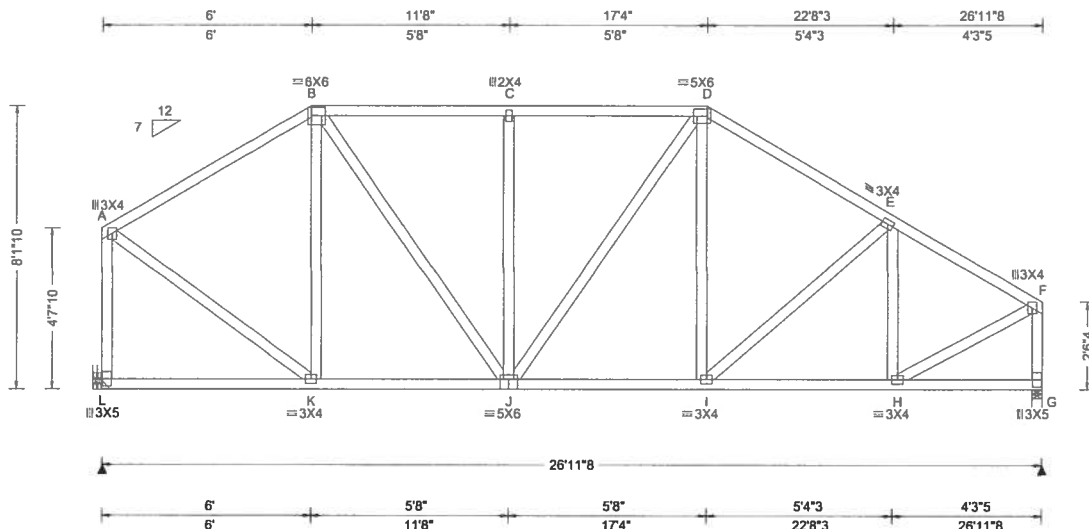
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

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For more information see this job's general notes page and these web sites: ALPINE: www.alpinetw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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SEQN: 303141 FROM: CDM	MONO Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: D01	Cust: R 215 JRef: 1WQM2150003 T31 DrwNo: 336.19.1001.11457 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Def/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCp: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.034 C 999 240 VERT(CL): 0.070 C 999 180 HORZ(LL): 0.011 G - - HORZ(TL): 0.023 G - - Creep Factor: 2.0 Max TC CSI: 0.563 Max BC CSI: 0.480 Max Web CSI: 0.443 VIEW Ver: 18.02.01B.0321.08	Maximum Reactions (lbs) Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity Loc R+ / R- / Rh / Rw / U / RL L 1121 - / - / - / 592 / 202 / 129 G 1121 - / - / - / 646 / 185 / - Wind reactions based on MWFRS L Brg Width = - Min Req = - G Brg Width = 3.5 Min Req = 1.5 Bearing G is a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. A - B 264 - 893 D - E 344 - 1139 B - C 345 - 972 E - F 268 - 1073 C - D 345 - 972

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Hangers / Ties

Simpson Construction Hardware is specified based on the most current information provided by Simpson Strong-Tie. Please refer to the most recent Simpson Strong-Tie catalog for additional information.

Recommended hanger connections are based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.

Hanger specified assumes connection to supporting chord is located a minimum of five times the depth of the supporting chord from any unsupported end, unless unsupported chord end has 85% plating coverage.

Bearing at location x=0' uses the following support conditions: 0'

Bearing L (0', 9') HUS26

Supporting Member: (2)2x6 SP 2400f-2.0E
(14) 0.148"x3" nails into supporting member,
(4) 0.148"x3" nails into supported member.

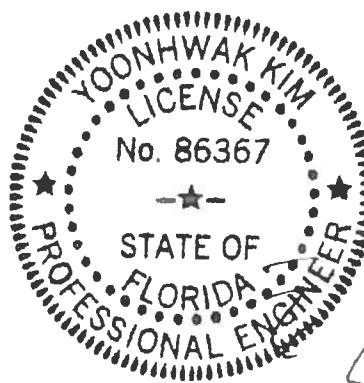
Wind

Wind loads based on MWFRS with additional C&C member design.

End verticals not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 8-10.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

Maximum Bot Chord Forces Per Ply (lbs)

Chords	Tens.Comp.	Chords	Tens. Comp.
K - J	702 - 97	I - H	897 - 188
J - I	910 - 153		

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
A - L	297 - 1073	H - F	988 - 205
A - K	865 - 197	F - G	264 - 1087
B - J	460 - 118		

WARNING READ AND FOLLOW ALL NOTES ON THIS DRAWING!

IMPORTANT FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

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[illegible]

Lumber	B - C	379 - 1218	E - F	345 - 1162
Top chord: 2x4 SP #2; T1 2x4 SP M-31;	C - D	379 - 1217		
Bot chord: 2x4 SP #2; B2 2x4 SP M-31;				
Webs: 2x4 SP #3; W3,W9 2x4 SP M-31;				
W8 2x4 SP #2;				
	Maximum Bot Chord Forces Per Ply (lbs)			
	Chords	Tens.Comp.	Chords	Tens. Comp.

A circular professional engineer seal for Yoonhwak Kim. The outer ring contains the text "Yoonhwak Kim" at the top and "Professional Engineer" at the bottom, separated by two stars. The inner circle contains the text "LICENSE" at the top, "No. 86367" in the center, and "STATE OF FLORIDA" at the bottom, also separated by two stars. The seal is surrounded by a decorative border of small dots.

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!
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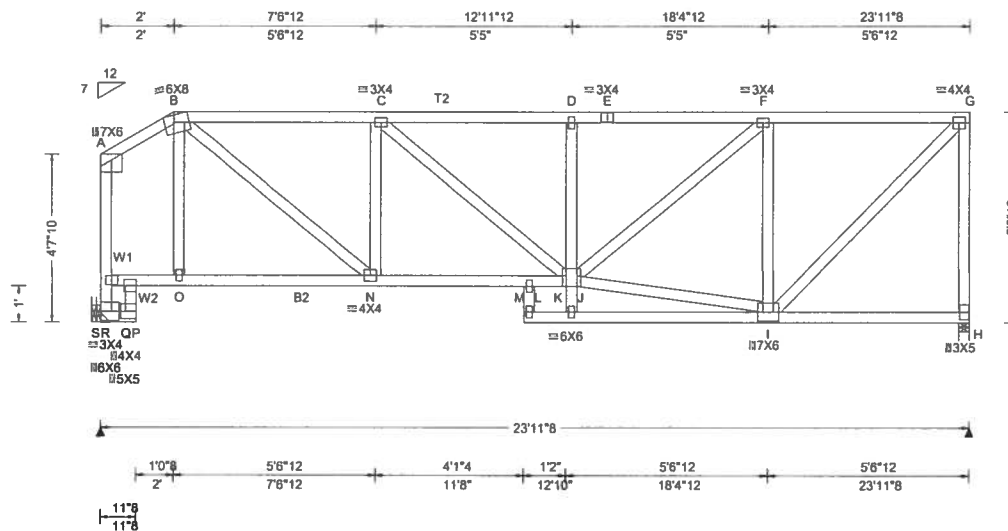
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SEQN: 303149 FROM: CDM	HIPM Qty: 1	Ply: 1 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: D03	Cust: R 215 JRef: 1WQM2150003 T27 DrwNo: 336.19.1001.24123 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.260 B 999 240 VERT(CL): 0.541 B 530 180 HORZ(LL): -0.205 A - - HORZ(TL): 0.425 A - - Creep Factor: 2.0 Max TC CSI: 0.749 Max BC CSI: 0.633 Max Web CSI: 0.570 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity / Rw / U / RL S 996 /- /- /519 /173 /32 H 996 /- /- /494 /191 /- Wind reactions based on MWFRS S Brg Width = - Min Req = - H Brg Width = 3.5 Min Req = 1.5 Bearing H is a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp.
				A - B 132 -417 D - E 363 -1356 B - C 344 -1219 E - F 363 -1356 C - D 364 -1362 F - G 215 -818

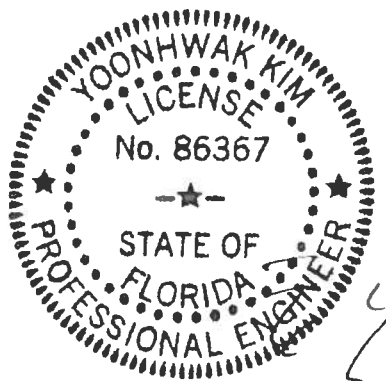
Lumber
Top chord: 2x4 SP #2; T2 2x4 SP M-31;
Bot chord: 2x4 SP #2; B2 2x4 SP M-31;
Webs: 2x4 SP #3; W1 2x4 SP M-31; W2 2x4 SP #2;

Plating Notes
All plates are 2X4 except as noted.

Hangers / Ties
(J) Hanger Support Required, by others

Wind
Wind loads based on MWFRS with additional C&C member design.
End verticals not exposed to wind pressure.

Additional Notes
The overall height of this truss excluding overhang is 5-9-10.
Laterally brace chord above/below filler at 24" OC (or as designed) including a lateral brace on chord directly above/ below both ends of filler (if no rigid diaphragm exists at that point)



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

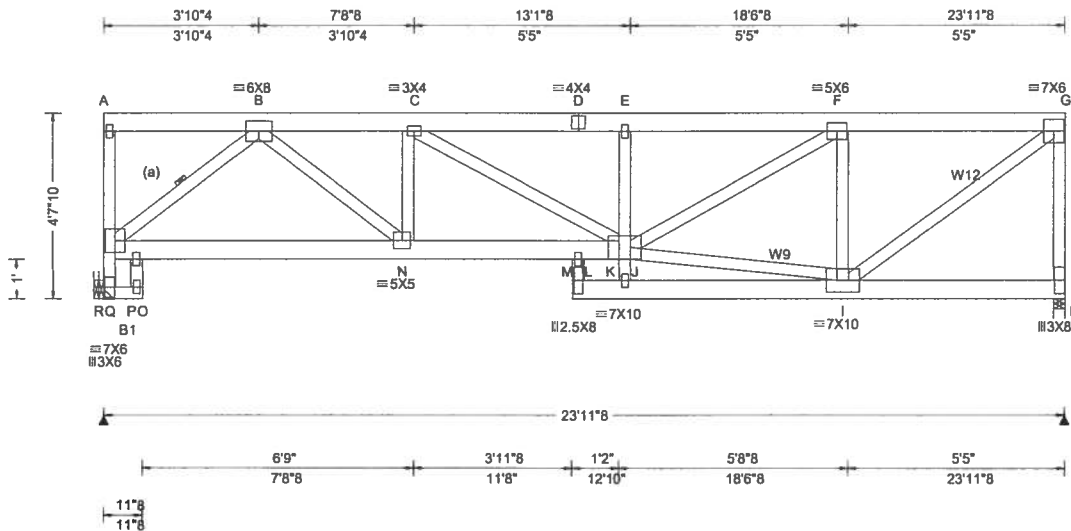
Maximum Bot Chord Forces Per Ply (lbs)			
Chords	Tens.Comp.	Chords	Tens. Comp.
R - Q	412 -149	L - J	1222 -345
N - L	1257 -356		

Maximum Web Forces Per Ply (lbs)			
Webs	Tens.Comp.	Webs	Tens. Comp.
A - R	141 -498	J - F	670 -185
S - R	194 -696	J - I	800 -211
B - O	169 -559	F - I	273 -833
B - N	1360 -324	I - G	1151 -303
N - C	187 -593	G - H	283 -954

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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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SEQN: 303201 FROM: CDM	SPEC Qty: 1	Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: D04	Cust: R 215 JRef: 1WQM2150003 T7 DrwNo: 336.19.1001.31250 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.137 E 999 240 VERT(CL): 0.275 E 999 180 HORZ(LL): 0.051 I - - HORZ(TL): 0.102 I - - Creep Factor: 2.0 Max TC CSI: 0.216 Max BC CSI: 0.300 Max Web CSI: 0.909 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity / Rw / U / RL R 2314 - / - / - / 554 - H 2596 - / - / - / 618 - Wind reactions based on MWFRS R Brg Width = - Min Req = - H Brg Width = 3.5 Min Req = 2.1 Bearing H is a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 932 -3978 E - F 1140 -4768 C - D 1148 -4802 F - G 622 -2630 D - E 1148 -4802

Lumber
Top chord: 2x6 SP 2400f-2.0E;
Bot chord: 2x6 SP 2400f-2.0E; B1 2x4 SP #2;
Webs: 2x4 SP #3; W9,W12 2x4 SP #2;

Bracing
(a) Continuous lateral restraint equally spaced on member.

Special Loads
—(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 30 plf at 0.00 to 30 plf at 23.96
BC: From 20 plf at 0.00 to 20 plf at 0.96
BC: From 10 plf at 0.96 to 10 plf at 23.96
TC: 197 lb Conc. Load at 1.75, 3.75, 5.75, 7.75
9.75
TC: 200 lb Conc. Load at 11.75,13.75,15.75,17.75
19.75,21.75,23.75
BC: 124 lb Conc. Load at 1.75, 3.75, 5.75, 7.75
9.75
BC: 134 lb Conc. Load at 11.75,13.75,15.75,17.75
19.75,21.75,23.75

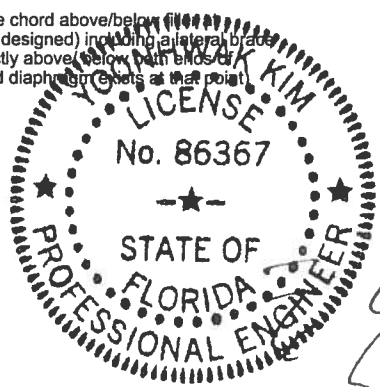
Plating Notes
All plates are 2X4 except as noted.

Hangers / Ties
(J) Hanger Support Required, by others

Wind
Wind loads and reactions based on MWFRS.
End verticals not exposed to wind pressure.

Additional Notes
Truss must be installed as shown with top chord up.
The overall height of this truss excluding overhang is 4'-7"-10".

Laterally brace chord above/below filler (if no rigid diaphragm exists at that point)
24" OC (or as designed) including a lateral brace on chord directly above/below with ends of filler (if no rigid diaphragm exists at that point)



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

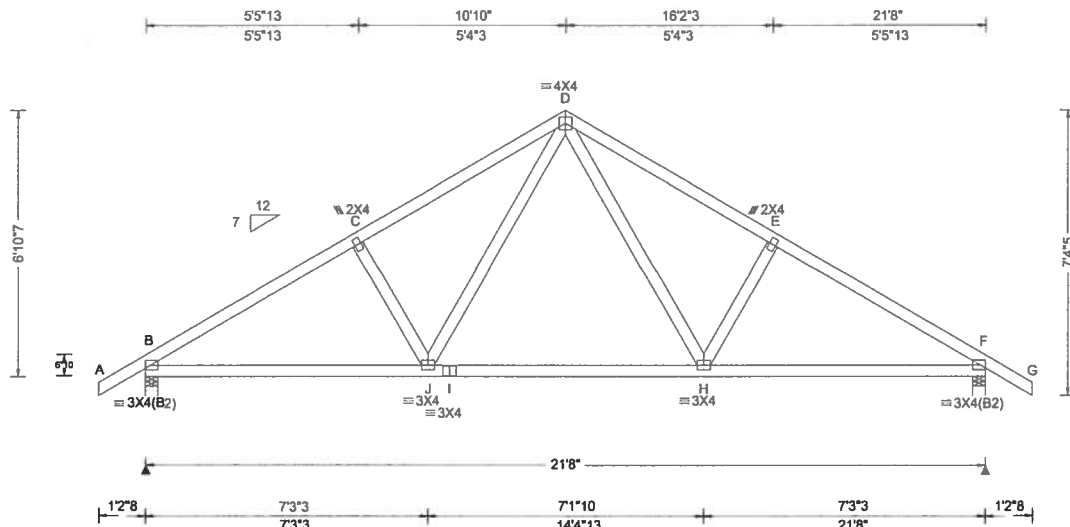
Chords	Tens.Comp.	Chords	Tens. Comp.
Q - P	2438 -601	N - L	4073 -964
P - N	2448 -622	L - J	4065 -961

Maximum Web Forces Per Ply (lbs)
Webs Tens.Comp. Webs Tens. Comp.
R - Q 561 -2301 J - I 2647 -630
Q - B 785 -3074 E - J 271 -636
B - N 2050 -415 F - I 627 -2000
N - C 359 -1039 I - G 3288 -778
C - J 841 -212 G - H 630 -2366
J - F 2386 -572

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SEQN: 303163 FROM: CDM	COMN Qty: 7	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: G01	Cust: R 215 JRef: 1WQM2150003 T2 DrwNo: 336.19.1001.32720 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 4.50 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.058 H 999 240 VERT(CL): 0.112 H 999 180 HORZ(LL): 0.029 H - - HORZ(TL): 0.056 H - - Creep Factor: 2.0 Max TC CSI: 0.473 Max BC CSI: 0.599 Max Web CSI: 0.187 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh B - 1038 - / - / 586 / 168 / 197 F - 1038 - / - / 586 / 168 - Non-Gravity Loc R+ / R- / Rh B - 1038 - / - / 586 / 168 / 197 F - 1038 - / - / 586 / 168 - Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 F Brg Width = 4.0 Min Req = 1.5 Bearings B & F are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 282 - 1452 D - E 318 - 1290 C - D 317 - 1289 E - F 283 - 1453

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Loading

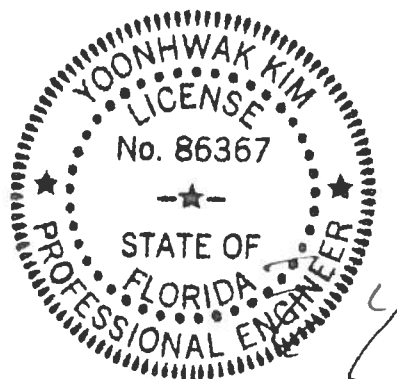
Truss passed check for 20 psf additional bottom chord live load in areas with 42"-high x 24"-wide clearance.

Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 6'-10"-7.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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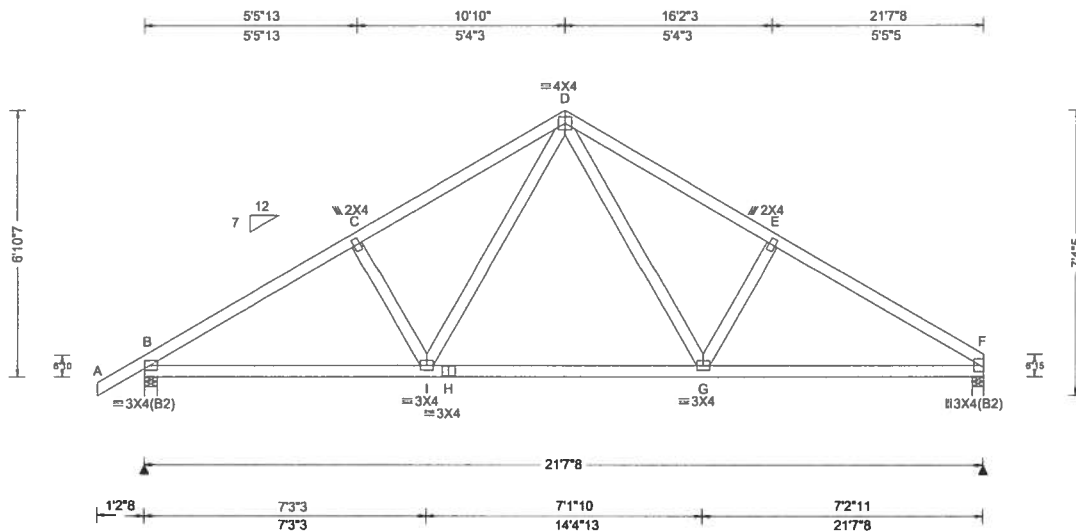
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303166 FROM: CDM	COMN Qty: 2	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: G02	Cust: R 215 JRef: 1WQM2150003 T4 DrwNo: 336.19.1001.35763 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.057 I 999 240 VERT(CL): 0.112 I 999 180 HORZ(LL): 0.028 G - - HORZ(TL): 0.055 G - - Creep Factor: 2.0 Max TC CSI: 0.473 Max BC CSI: 0.600 Max Web CSI: 0.190 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity / Rw / U / RL B 1039 /- /- /585 /16 /183 F 951 /- /- /515 /10 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 F Brg Width = 3.5 Min Req = 1.5 Bearings B & F are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 285 -1455 D - E 334 -1299 C - D 321 -1292 E - F 299 -1461

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Loading

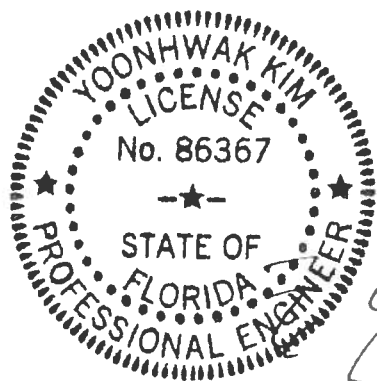
Truss passed check for 20 psf additional bottom chord live load in areas with 42"-high x 24"-wide clearance.

Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 6'-10"-7".



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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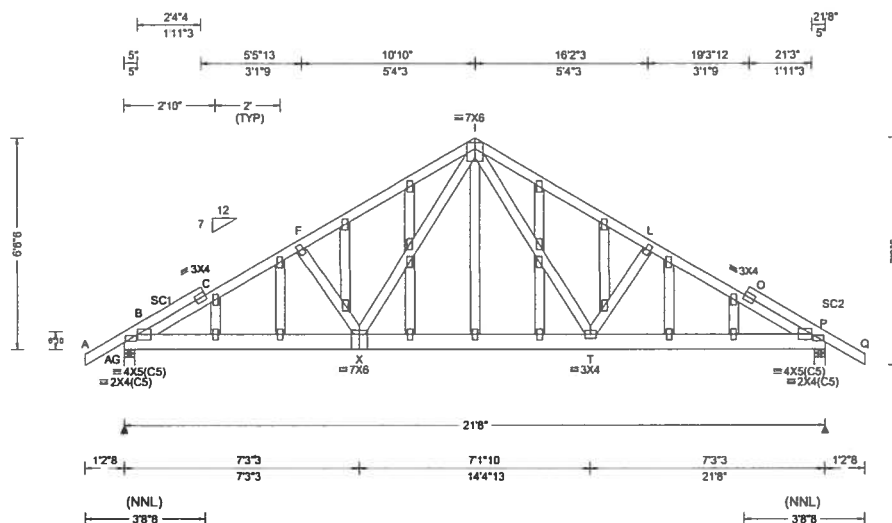
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303204 FROM: CDM	GABL Qty: 1	Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: G03	Cust: R 215 JRef: 1WQM2150003 T1 DrwNo: 336.19.1000.04560 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Def/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.058 H 999 240 VERT(CL): 0.114 H 999 180 HORZ(LL): 0.021 D - - HORZ(TL): 0.042 D - - Creep Factor: 2.0 Max TC CSI: 0.429 Max BC CSI: 0.296 Max Web CSI: 0.370 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ /R- /Rh AG 1638 - /- /- /382 - P 1638 - /- /- /382 - Non-Gravity Loc R+ /R- /Rh AG 1638 - /- /- /382 - P 1638 - /- /- /382 - Wind reactions based on MWFRS AG Brg Width = 4.0 Min Req = 1.5 P Brg Width = 4.0 Min Req = 1.5 Bearings AG & P are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp. B - C 509 -2266 I - L 450 -2042 C - F 509 -2280 L - O 509 -2280 F - I 450 -2041 O - P 509 -2266

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x6 SP 2400f-2.0E;
Webs: 2x4 SP #3;
Stack Chord: SC1 2x4 SP #2;
Stack Chord: SC2 2x4 SP #2;

Special Loads

(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 63 plf at -1.21 to 63 plf at 2.01
TC: From 32 plf at 2.01 to 32 plf at 19.66
TC: From 63 plf at 19.66 to 63 plf at 22.88
BC: From 5 plf at -1.21 to 5 plf at 0.00
BC: From 10 plf at 0.00 to 10 plf at 21.67
BC: From 5 plf at 21.67 to 5 plf at 22.88
BC: 131 lb Conc. Load at 2.01,19.66
BC: 52 lb Conc. Load at 4.06, 6.06, 8.06,10.06
11.60,13.60,15.60,17.60

Plating Notes

All plates are 2X4 except as noted.

Loading

Truss designed to support 1-4-0 top chord outlookers and cladding load not to exceed 2.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Wind

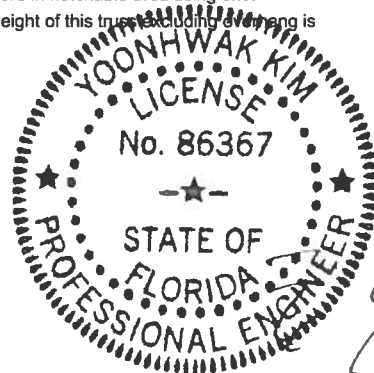
Wind loads and reactions based on MWFRS.

Additional Notes

See DWGS A14015ENC101014 & GBLLETIN0118 for gable wind bracing and other requirements.

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notched area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notched area using 3x6.

The overall height of this truss including overhang is 6-6-6.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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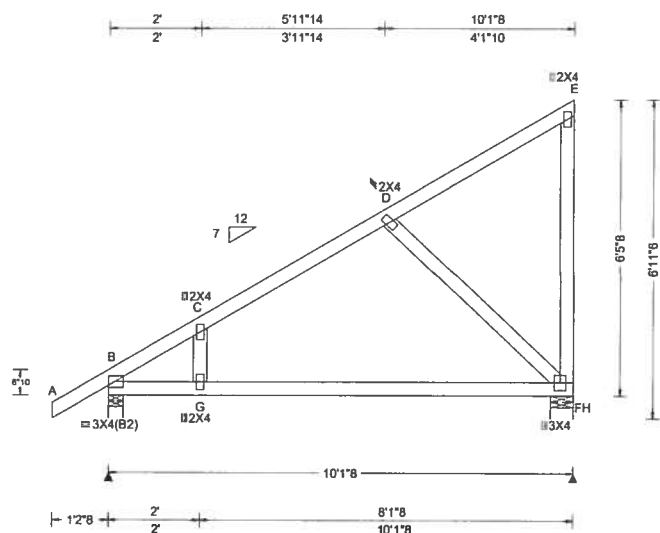
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303174 FROM: CDM	MONO Ply: 1 Qty: 2	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: H01	Cust: R 215 JRef: 1WQM2150003 T6 DwnNo: 336.19.1000.06147 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h to 2h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.072 G 999 240 VERT(CL): 0.191 G 631 180 HORZ(LL): 0.045 C - - HORZ(TL): 0.123 C - - Creep Factor: 2.0 Max TC CSI: 0.619 Max BC CSI: 0.307 Max Web CSI: 0.214 VIEW Ver: 18.02.01B.0321.08	Gravity Non-Gravity Loc R+ / R- / Rh / Rw / U / RL B 511 /- /- /347 /- /126 H 413 /- /- /291 /55 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 H Brg Width = 6.0 Min Req = 1.5 Bearings B & H are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. B - C 0 -421

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP M-31;
Webs: 2x4 SP #3;

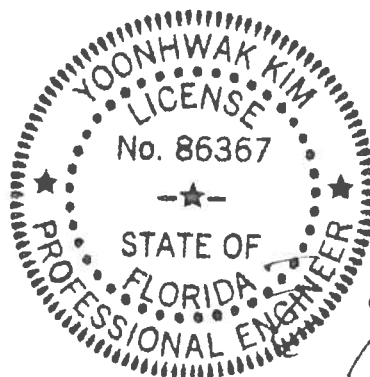
Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 6'-5-8.



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12/02/2019

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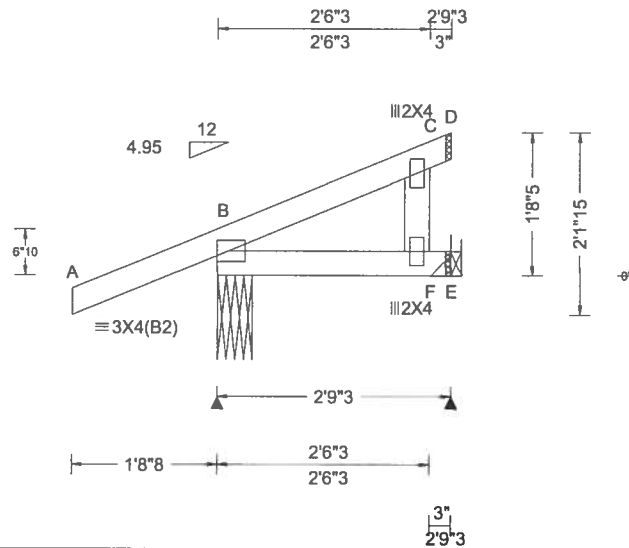
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043



SEQN: 303177 FROM: CDM	MONO Qty: 3	Ply: 1 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: HJ3	Cust: R 215 JRef: 1WQM2150003 T8 DrwNo: 336.19.1000.20493 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): NA VERT(CL): NA HORZ(LL): -0.001 D - - HORZ(TL): 0.002 D - - Creep Factor: 2.0 Max TC CSI: 0.406 Max BC CSI: 0.063 Max Web CSI: 0.048 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh / Rw / U / RL B 260 /- /- /184 /54 /52 E 79 /- /- /62 /19 /- Non-Gravity Wind reactions based on MWFRS B Brg Width = 4.9 Min Req = 1.5 E Brg Width = - Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Hangers / Ties

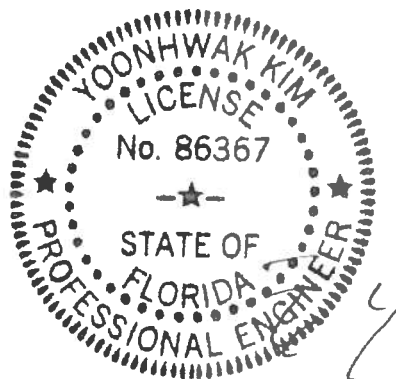
(J) Hanger Support Required, by others

Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 1-8-5.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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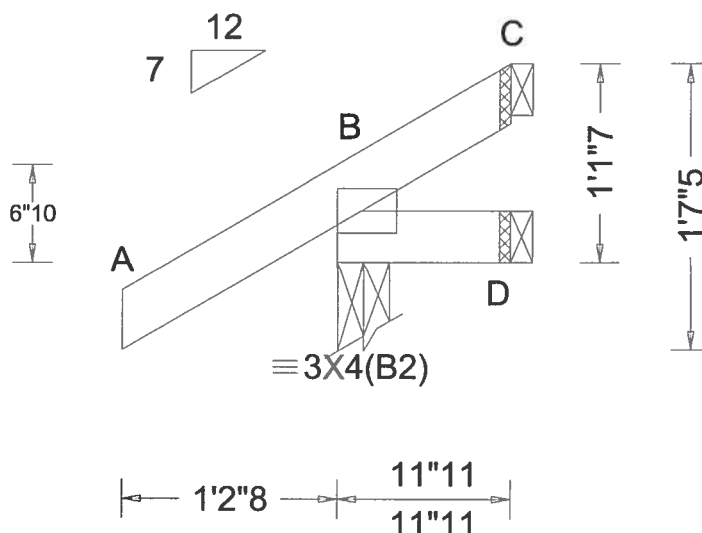
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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303037 FROM: CDM	JACK Qty: 6	Ply: 1 Qty: 6	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J01	Cust: R 215 JRef: 1WQM2150003 T17 DrwNo: 336.19.1000.21933 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)						
TCLL: 20.00	Wind Std: ASCE 7-10	Pg: NA Ct: NA CAT: NA	PP Deflection in loc L/defl L/#	Gravity Non-Gravity						
TCDL: 10.00	Speed: 130 mph	Pf: NA Ce: NA	VERT(LL): NA	Loc	R+	/ R-	/ Rh	/ Rw	/ U	/ RL
BCLL: 0.00	Enclosure: Closed	Lu: NA Cs: NA	VERT(CL): NA	B	186	/-	/-	/146	/38	/35
BCDL: 10.00	Risk Category: II	Snow Duration: NA	HORZ(LL): -0.001 C - -	D	14	/-1	/-	/13	/5	/-
	EXP: C Kzt: NA		HORZ(TL): 0.001 C - -	C	-	/-22	/-	/18	/29	/-
Des Ld: 40.00	Mean Height: 15.00 ft		Creep Factor: 2.0	Wind reactions based on MWFRS						
NCBCLL: 10.00	TCDL: 5.0 psf	Code / Misc Criteria	Max TC CSI: 0.116	B	Brg Width = 3.5			Min Req = 1.5		
Soffit: 2.00	BCDL: 5.0 psf	Bldg Code: FBC 2017 RES	Max BC CSI: 0.019	D	Brg Width = 1.5			Min Req = -		
Load Duration: 1.25	MWFRS Parallel Dist: 0 to h/2	TPI Std: 2014	Max Web CSI: 0.000	C	Brg Width = 1.5			Min Req = -		
Spacing: 24.0 "	C&C Dist a: 3.00 ft	Rep Fac: Yes		Bearing B is a rigid surface.						
	Loc. from endwall: Any	FT/RT: 20(0)/10(0)		Members not listed have forces less than 375#						
	GCpi: 0.18	Plate Type(s):								
	Wind Duration: 1.60	WAVE	VIEW Ver: 18.02.01B.0321.08							

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;

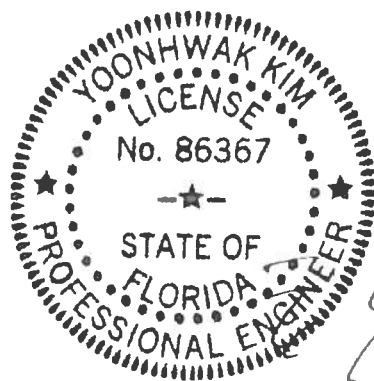
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 1-1-7.

Provide (2) 16d common 0.162"x3.5", toe-nails at TC.
Provide (2) 16d common 0.162"x3.5", toe-nails at BC.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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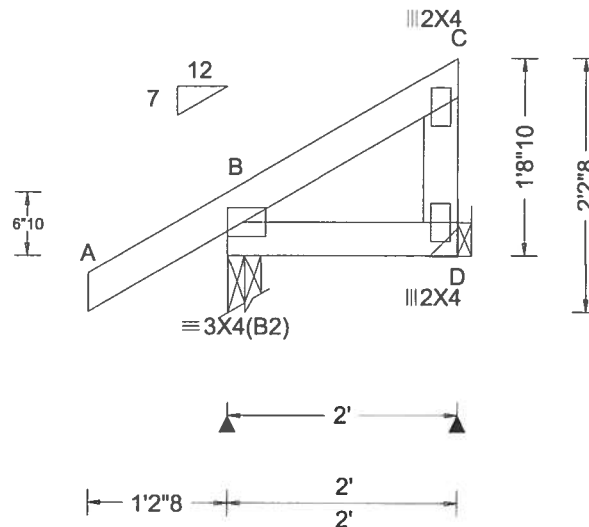
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303040 FROM: CDM	MONO Qty: 17	Ply: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J02	Cust: R 215 JRef: 1WQM2150003 T10 DrwNo: 336.19.1000.23630 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCp: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): NA VERT(CL): NA HORZ(LL): -0.000 C - - HORZ(TL): 0.001 C - - Creep Factor: 2.0 Max TC CSI: 0.116 Max BC CSI: 0.035 Max Web CSI: 0.013 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity Loc / Rw / U / RL B 196 /- /- /146 /29 /53 D 52 /- /- /44 /17 /- Wind reactions based on MWFRS B Brg Width = 3.5 Min Req = 1.5 D Brg Width = - Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Additional Notes

The overall height of this truss excluding overhang is
1-8-10.

Hangers / Ties

Simpson Construction Hardware is specified based on the most current information provided by Simpson Strong-Tie. Please refer to the most recent Simpson Strong-Tie catalog for additional information.

Recommended hanger connections are based on manufacturer tested capacities and calculations. Conditions may exist that require different connections than indicated. Refer to manufacturer publication for additional information.

Hanger specified assumes connection to supporting chord is located a minimum of five times the depth of the supporting chord from any unsupported end, unless unsupported chord end has 85% plating coverage.

(J) Hanger Support Required, by others

Bearing D (1'9", 9") HUS26

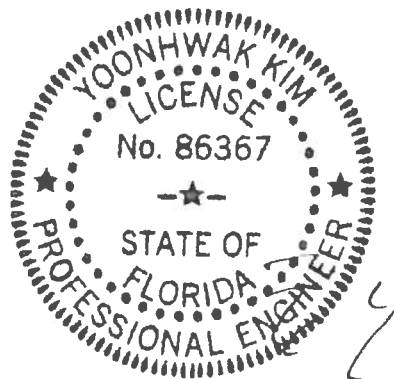
Supporting Member: (1)2x6 SP 2400F-2.0E

(14) 0.148"x3" nails into supporting member,

(4) 0.148"x3" nails into supported member.

Wind

Wind loads based on MWFRS with additional C&C member design.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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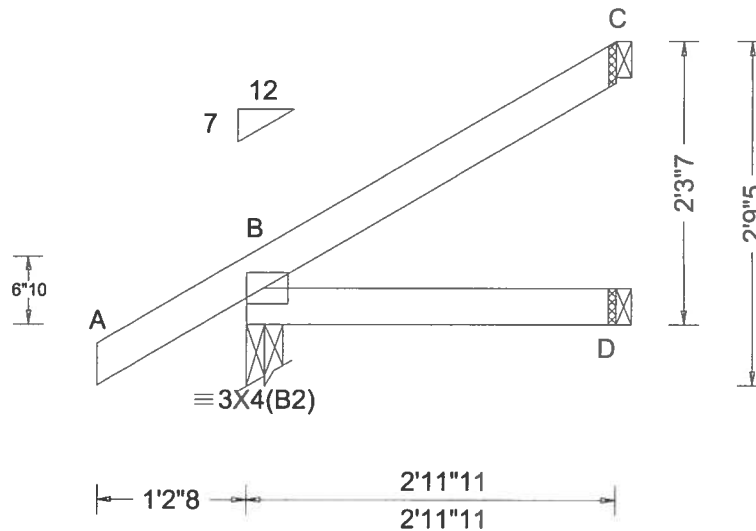
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303056 FROM: CDM	JACK Qty: 6	Ply: 1 Qty: 6	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J03	Cust: R 215 JRef: 1WQM2150003 T16 DrwNo: 336.19.1000.24940 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): NA VERT(CL): NA HORZ(LL): -0.001 C - - HORZ(TL): 0.001 D - - Creep Factor: 2.0 Max TC CSI: 0.116 Max BC CSI: 0.092 Max Web CSI: 0.000 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity B 227 /- /- /164 /28 /69 D 55 /- /- /39 /- /- C 74 /- /- /34 /34 /- Wind reactions based on MWFRS B Brg Width = 3.5 Min Req = 1.5 D Brg Width = 1.5 Min Req = - C Brg Width = 1.5 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;

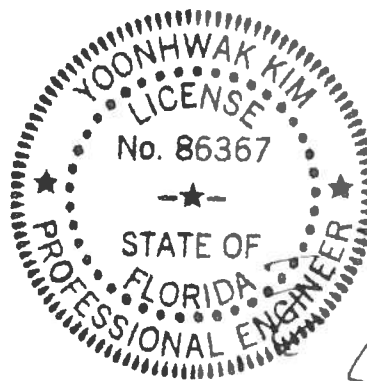
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 2-3-7.

Provide (2) 16d common 0.162"x3.5", toe-nails at TC.
Provide (2) 16d common 0.162"x3.5", toe-nails at BC.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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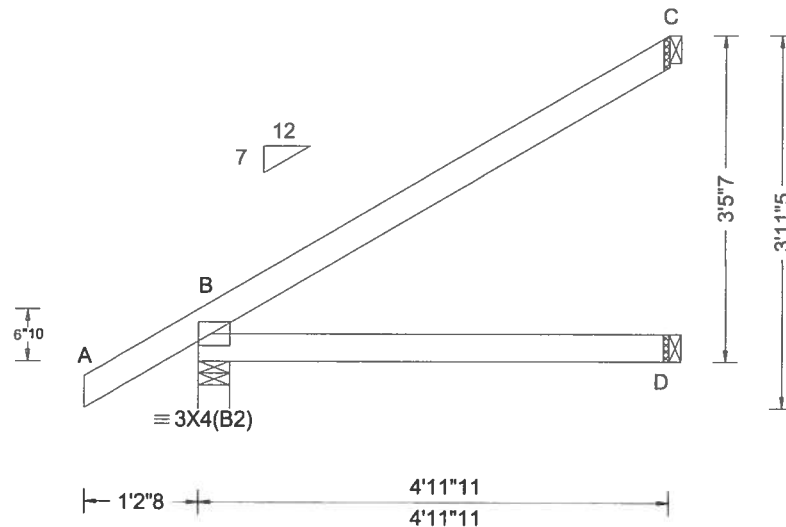
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303049 FROM: CDM	JACK Qty: 6	Ply: 1 Qty: 6	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J05	Cust: R 215 JRef: 1WQM2150003 T15 DrwNo: 336.19.1000.26337 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 4.50 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): NA VERT(CL): NA HORZ(LL): 0.004 D - - HORZ(TL): 0.007 D - - Creep Factor: 2.0 Max TC CSI: 0.370 Max BC CSI: 0.276 Max Web CSI: 0.000 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh / Rw / U / RL B 303 /- /- /212 /30 /102 D 94 /- /- /64 /- /- C 139 /- /- /71 /60 /- Non-Gravity Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 D Brg Width = 1.5 Min Req = - C Brg Width = 1.5 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;

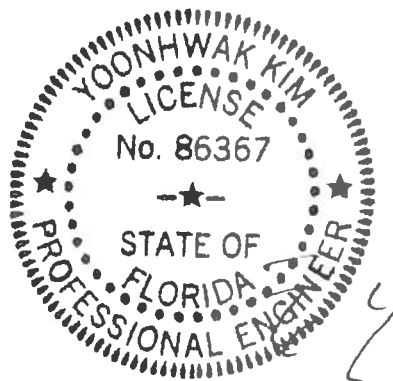
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 3-5-7.

Provide (2) 16d common 0.162"x3.5", toe-nails at TC.
Provide (2) 16d common 0.162"x3.5", toe-nails at BC.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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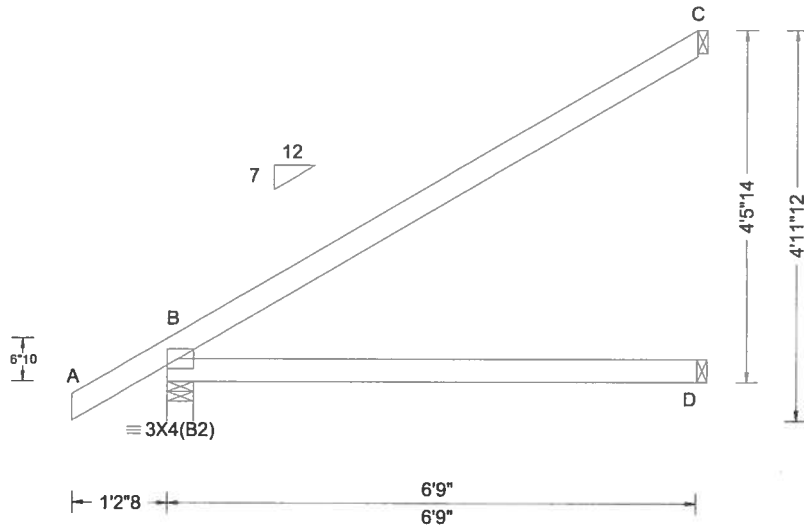
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303036 FROM: CDM	EJAC Qty: 9	Ply: 1 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J06	Cust: R 215 JRef: 1WQM2150003 T25 DrwNo: 336.19.1000.27317 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 4.50 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): NA VERT(CL): NA HORZ(LL): 0.011 D - - HORZ(TL): 0.021 D - - Creep Factor: 2.0 Max TC CSI: 0.751 Max BC CSI: 0.516 Max Web CSI: 0.000 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh / Rw / U / RL Non-Gravity B 374 /- /- /257 /33 /132 D 129 /- /- /90 /- /- C 192 /- /- /100 /81 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 D Brg Width = 1.5 Min Req = - C Brg Width = 1.5 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;

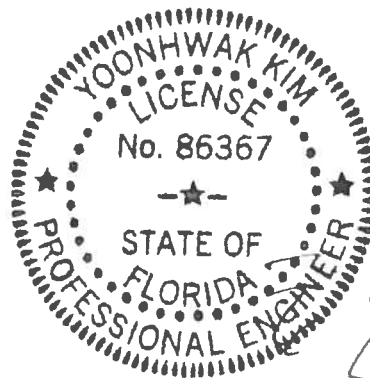
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 4'-5-14."

Provide (2) 16d common 0.162"x3.5", toe-nails at TC.
Provide (2) 16d common 0.162"x3.5", toe-nails at BC.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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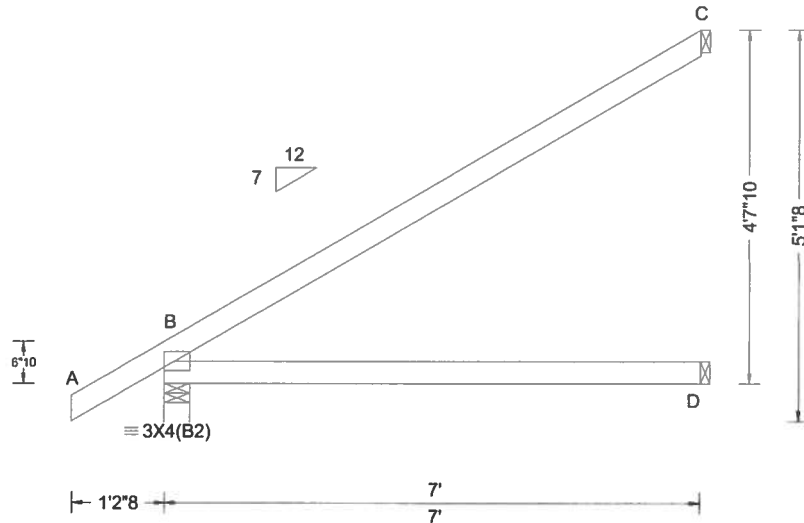
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ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303038 FROM: CDM	EJAC Qty: 20	Ply: 1 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J07	Cust: R 215 JRef: 1WQM2150003 T18 DrwNo: 336.19.1000.28293 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCCL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCCL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 4.50 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): NA VERT(CL): NA HORZ(LL): 0.012 D - - HORZ(TL): 0.024 D - - Creep Factor: 2.0 Max TC CSI: 0.815 Max BC CSI: 0.555 Max Web CSI: 0.000 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh / Rw / U / RL B 384 /- /- /264 /33 /136 D 134 /- /- /93 /- /- C 200 /- /- /104 /84 /- Non-Gravity Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 D Brg Width = 1.5 Min Req = - C Brg Width = 1.5 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;

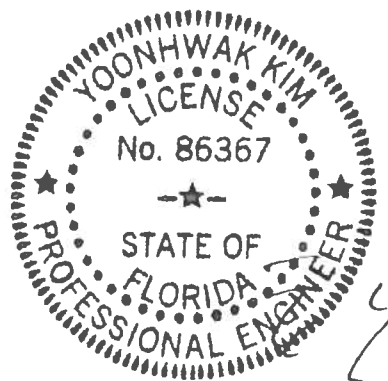
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 4'-7-10.

Provide (2) 16d common 0.162"x3.5", toe-nails at TC.
Provide (2) 16d common 0.162"x3.5", toe-nails at BC.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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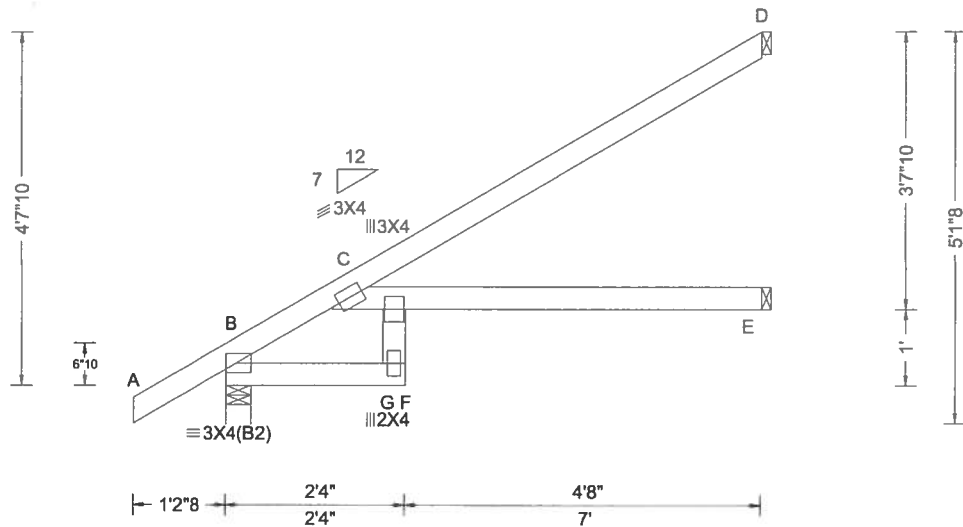
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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303180 FROM: CDM	JACK Qty: 5	Ply: 1 Qty: 5	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: J08	Cust: R 215 JRef: 1WQM2150003 T37 DrwNo: 336.19.1000.29240 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCCL: 20.00 TCDL: 10.00 BCCL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCCL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: h/2 to h C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.142 F 585 240 VERT(CL): 0.288 F 289 180 HORZ(LL): 0.080 G - - HORZ(TL): 0.163 G - - Creep Factor: 2.0 Max TC CSI: 0.805 Max BC CSI: 0.474 Max Web CSI: 0.207 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity / Rw / U / RL B 384 /- /- /264 /33 /136 E 124 /- /- /89 /3 /- D 197 /- /- /108 /79 /- Wind reactions based on MWFRS B Brg Width = 4.0 Min Req = 1.5 E Brg Width = 1.5 Min Req = - D Brg Width = 1.5 Min Req = - Bearing B is a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #2;

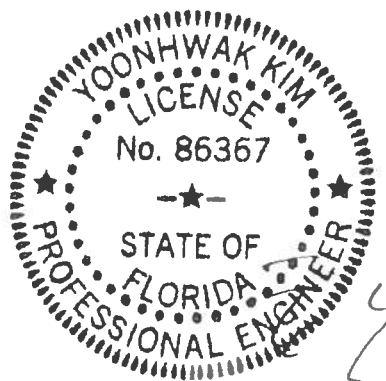
Wind

Wind loads based on MWFRS with additional C&C member design.

Additional Notes

The overall height of this truss excluding overhang is 4'-7-10.

Provide (2) 16d common 0.162"x3.5", toe-nails at TC.
Provide (2) 16d common 0.162"x3.5", toe-nails at BC.



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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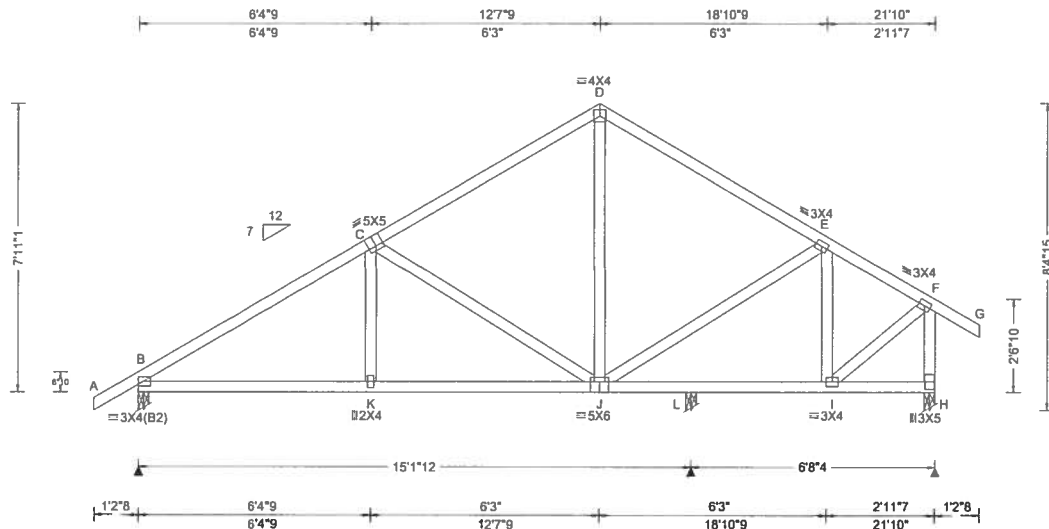
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

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For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinet.org; SBCA: www.sbcindustry.com; ICC: www.iccsafe.org

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AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

SEQN: 303183 FROM: CDM	COMN Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: K01	Cust: R 215 JRef: 1WQM2150003 T9 DrwNo: 336.19.1000.30843 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Def/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 4.50 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.036 K 999 240 VERT(CL): 0.073 K 999 180 HORZ(LL): 0.014 H - - HORZ(TL): 0.029 H - - Creep Factor: 2.0 Max TC CSI: 0.447 Max BC CSI: 0.513 Max Web CSI: 0.527 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ /R- /Rh B 955 - /- /- /571 /167 /211 L 154 - /- /- /107 /6 /- H 901 - /- /- /485 /167 /- Non-Gravity /Rw /U /RL Wind reactions based on MWFRS B Brg Width = 3.5 Min Req = 1.5 L Brg Width = 3.5 Min Req = 1.5 H Brg Width = 3.5 Min Req = 1.5 Bearings B, L, & H are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp.

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

Wind

Wind loads based on MWFRS with additional C&C member design.

Right end vertical not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 7-11-1.

B - C	267 -1272	D - E	247 - 777
C - D	243 - 780	E - F	186 - 634

Maximum Bot Chord Forces Per Ply (lbs)

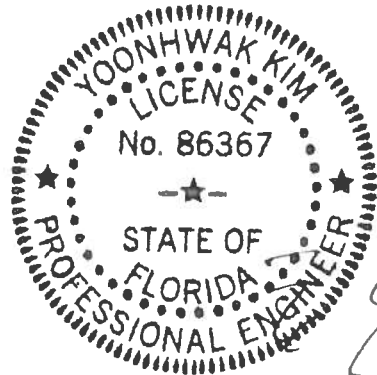
Chords	Tens.Comp.	Chords	Tens. Comp.
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B - K	1009 - 184	J - I	1085 - 206
K - J	1006 - 185		

Maximum Web Forces Per Ply (lbs)

Webs	Tens.Comp.	Webs	Tens. Comp.
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C - J	167 - 507	I - F	666 - 125
E - I	102 - 388	F - H	250 - 863



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

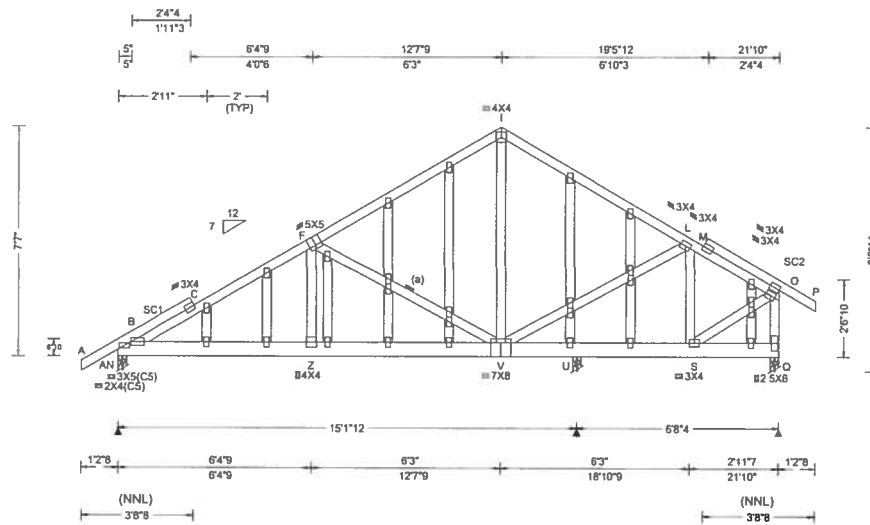
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Maryland Heights, MO 63043



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Varies by Ld Case FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.055 G 999 240 VERT(CL): 0.108 G 999 180 HORZ(LL): 0.018 D - - HORZ(TL): 0.036 D - - Creep Factor: 2.0 Max TC CSI: 0.332 Max BC CSI: 0.279 Max Web CSI: 0.916 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh AN 1412 /- /- /- /327 /- U 741 /- /0 /- /146 /0 Q 949 /- /- /- /204 /- Non-Gravity / Rw / U / RL Wind reactions based on MWFRS AN Brg Width = 3.5 Min Req = 1.5 U Brg Width = 3.5 Min Req = 1.5 Q Brg Width = 3.5 Min Req = 1.5 Bearings AN, U, & Q are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp.

Lumber
Top chord: 2x4 SP #2;
Bot chord: 2x6 SP 2400f-2.0E;
Webs: 2x4 SP #3;
Stack Chord: SC1 2x4 SP #2;
Stack Chord: SC2 2x4 SP #2;

Bracing
(a) Continuous lateral restraint equally spaced on member.

Special Loads
---(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 63 plf at -1.21 to 63 plf at 2.01
TC: From 32 plf at 2.01 to 32 plf at 14.06
TC: From 63 plf at 14.06 to 63 plf at 23.04
BC: From 5 plf at -1.21 to 5 plf at 0.00
BC: From 10 plf at 0.00 to 10 plf at 14.06
BC: From 20 plf at 14.06 to 20 plf at 21.83
BC: From 5 plf at 21.83 to 5 plf at 23.04
BC: 131 lb Conc. Load at 2.01
BC: 52 lb Conc. Load at 4.06, 6.06, 8.06, 10.06, 12.06, 14.06

Plating Notes
All plates are 2X4 except as noted.

Loading
Truss designed to support 1-4-0 top chord outlookers and cladding load not to exceed 2.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

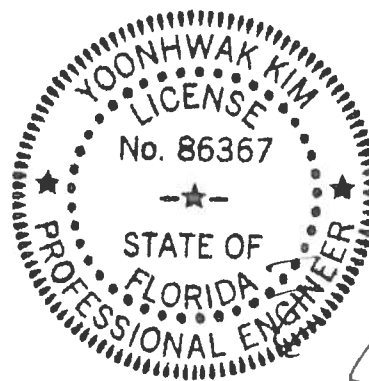
Purlins
In lieu of structural panels use purlins to brace TC @ 24" oc.

Wind
Wind loads and reactions based on MWFRS.
Right end vertical not exposed to wind pressure.

B - C	399	-1825	I - L	173	-841
C - F	393	-1816	L - M	100	-529
F - I	180	-865	M - O	113	-577

Maximum Bot Chord Forces Per Ply (lbs)							
Chords		Tens.Comp.		Chords		Tens. Comp.	
B - Z		1560 - 336		V - S		1011 - 199	
Z - V		1517 - 325					

Maximum Web Forces Per Ply (lbs)							
Webs		Tens.Comp.		Webs		Tens. Comp.	
Z - F		667	-142	L - S		97	-390
F - V		222	-998	S - O		580	-113
I - V		526	-104	O - Q		190	-857



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

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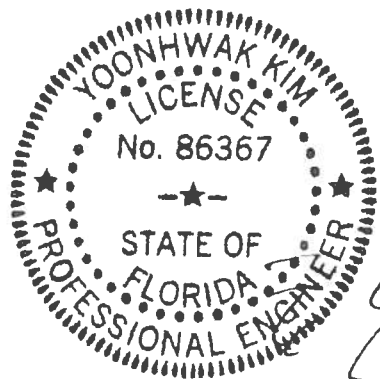
SEQN: 303189	GABL	Ply: 1	Job Number: 19-3772	Cust: R 215 JRef: 1WQM2150003 T5
FROM: CDM		Qty: 1	/Whalen /BRADLEY FRANKS	DrwNo: 336.19.1000.34147
Page 2 of 2			Truss Label: K02	SSB / YK 12/02/2019

Additional Notes

See DWGS A14015ENC101014 & GBLLETIN0118 for gable wind bracing and other requirements.

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in noticable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in noticable area using 3x6.

The overall height of this truss excluding overhang is 7-7-0.



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12/02/2019

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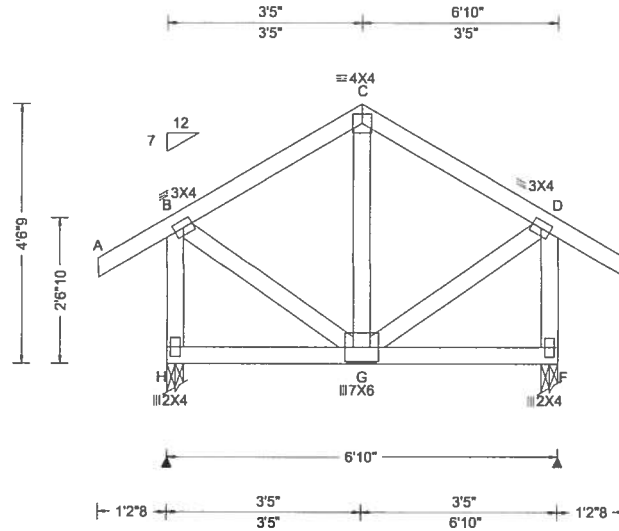
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Maryland Heights, MO 63043

SEQN: 303192 FROM: CDM	COMN Ply: 1 Qty: 1	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: K03	Cust R 215 JRef: 1WQM2150003 T40 DrwNo: 336.19.1000.36280 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg, Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: Yes FT/RT: 20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): 0.002 C 999 240 VERT(CL): 0.003 C 999 180 HORZ(LL): 0.001 B - - HORZ(TL): 0.001 B - - Creep Factor: 2.0 Max TC CSI: 0.116 Max BC CSI: 0.101 Max Web CSI: 0.054 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh H 366 /- /- F 366 /- /- Non-Gravity / Rw / U / RL /209 /66 /87 /209 /66 /- Wind reactions based on MWFRS H Brg Width = 3.5 Min Req = 1.5 F Brg Width = 3.5 Min Req = 1.5 Bearings H & F are a rigid surface. Members not listed have forces less than 375#

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;

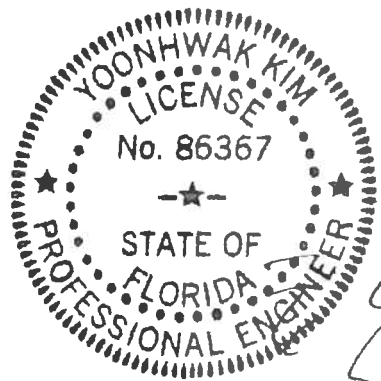
Wind

Wind loads based on MWFRS with additional C&C member design.

End verticals not exposed to wind pressure.

Additional Notes

The overall height of this truss excluding overhang is 4-6-9.



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12/02/2019

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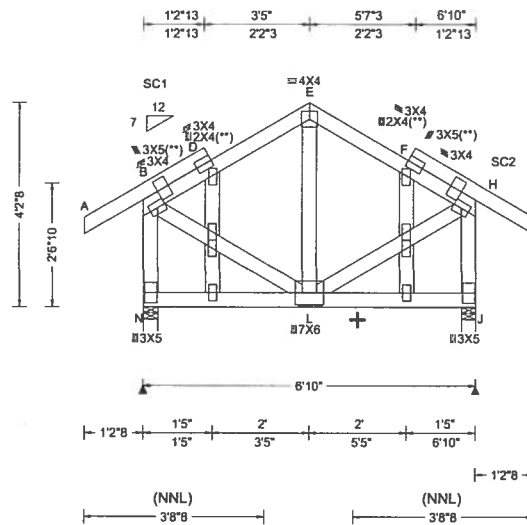
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Maryland Heights, MO 63043

SEQN: 303197 FROM: CDM	GABL Qty: 1	Ply: 1 Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: K04	Cust: R 215 JRef: 1WQM2150003 T39 DrwNo: 336.19.1000.37310 SSB / YK 12/02/2019
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Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Defl/CSI Criteria	▲ Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 10.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: Any GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/defl L/# VERT(LL): -0.007 D 999 240 VERT(CL): 0.010 F 999 180 HORZ(LL): -0.004 D - - HORZ(TL): 0.004 D - - Creep Factor: 2.0 Max TC CSI: 0.188 Max BC CSI: 0.093 Max Web CSI: 0.184 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh N 489 /- /- /257 /336 /117 J 489 /- /- /257 /336 /- Non-Gravity Loc R+ / R- / Rh N 489 /- /- /257 /336 /117 J 489 /- /- /257 /336 /- Wind reactions based on MWFRS N Brg Width = 3.5 Min Req = 1.5 J Brg Width = 3.5 Min Req = 1.5 Bearings N & J are a rigid surface. Members not listed have forces less than 375# Maximum Web Forces Per Ply (lbs) Webs Tens.Comp. Webs Tens. Comp. B - N 311 -453 H - J 311 -453

Lumber

Top chord: 2x4 SP #2;
Bot chord: 2x4 SP #2;
Webs: 2x4 SP #3;
Stack Chord: SC1 2x4 SP #2;
Stack Chord: SC2 2x4 SP #2;

Plating Notes

All plates are 2X4 except as noted.

(**) 4 plate(s) require special positioning. Refer to scaled plate plot details for special positioning requirements.

Loading

Truss designed to support 1-4-0 top chord outlookers and cladding load not to exceed 2.00 PSF one face and 24.0" span opposite face. Top chord must not be cut or notched, unless specified otherwise.

Purlins

In lieu of structural panels use purlins to brace TC @ 24" oc.

Wind

Wind loads based on MWFRS with additional C&C member design.

End verticals not exposed to wind pressure.

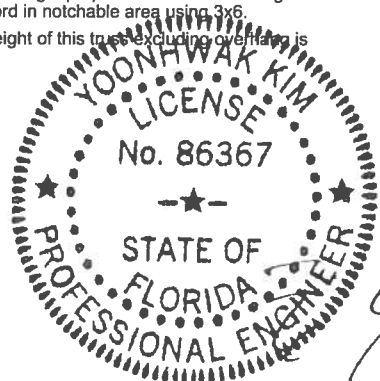
+ Member to be laterally braced for out of plane wind loads

Additional Notes

See DWGS A14015ENC101014 & GBLLETIN0118 for gable wind bracing and other requirements.

Stacked top chord must NOT be notched or cut in area (NNL). Dropped top chord braced at 24" oc intervals. Attach stacked top chord (SC) to dropped top chord in notchable area using 3x4 tie-plates 24" oc. Center plate on stacked/dropped chord interface, plate length perpendicular to chord length. Splice top chord in notchable area using 3x6.

The overall height of this truss excluding overhang is 4-2-8.



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12/02/2019

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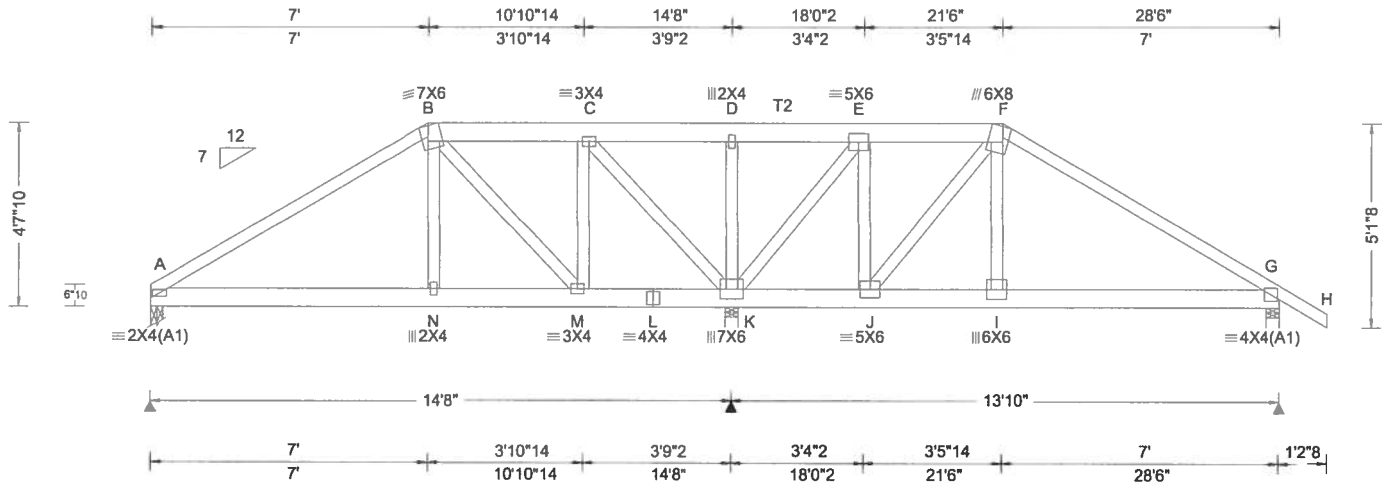
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Suite 200
Maryland Heights, MO 63043

SEQN: 303210 FROM: CDM	HIPS Qty: 1	Ply: 2	Job Number: 19-3772 /Whalen /BRADLEY FRANKS Truss Label: L01	Cust: R 215 JRef: 1WQM2150003 T32 DrwNo: 336.19.1000.38513 SSB / YK 12/02/2019
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2 Complete Trusses Required



Loading Criteria (psf)	Wind Criteria	Snow Criteria (Pg,Pf in PSF)	Def/CSI Criteria	Maximum Reactions (lbs)
TCLL: 20.00 TCDL: 10.00 BCLL: 0.00 BCDL: 10.00 Des Ld: 40.00 NCBCLL: 0.00 Soffit: 2.00 Load Duration: 1.25 Spacing: 24.0 "	Wind Std: ASCE 7-10 Speed: 130 mph Enclosure: Closed Risk Category: II EXP: C Kzt: NA Mean Height: 15.00 ft TCDL: 5.0 psf BCDL: 5.0 psf MWFRS Parallel Dist: 0 to h/2 C&C Dist a: 3.00 ft Loc. from endwall: not in 9.00 ft GCpi: 0.18 Wind Duration: 1.60	Pg: NA Ct: NA CAT: NA Pf: NA Ce: NA Lu: NA Cs: NA Snow Duration: NA Code / Misc Criteria Bldg Code: FBC 2017 RES TPI Std: 2014 Rep Fac: No FT/RT:20(0)/10(0) Plate Type(s): WAVE	PP Deflection in loc L/def L/# VERT(LL): 0.040 I 999 240 VERT(CL): 0.080 I 999 180 HORZ(LL): 0.010 I - - HORZ(TL): 0.021 I - - Creep Factor: 2.0 Max TC CSI: 0.384 Max BC CSI: 0.259 Max Web CSI: 0.964 VIEW Ver: 18.02.01B.0321.08	Gravity Loc R+ / R- / Rh Non-Gravity / Rw / U / RL A 729 - / - / - / 149 - / - K 8052 - / - / - / 1717 - / - G 2465 - / - / - / 539 - / - Wind reactions based on MWFRS A Brg Width = 3.5 Min Req = 1.5 K Brg Width = 4.0 Min Req = 3.0 G Brg Width = 4.0 Min Req = 1.5 Bearings A, K, & G are a rigid surface. Members not listed have forces less than 375# Maximum Top Chord Forces Per Ply (lbs) Chords Tens.Comp. Chords Tens. Comp.

Lumber
Top chord: 2x4 SP #2; T2 2x6 SP 2400f-2.0E;
Bot chord: 2x6 SP 2400f-2.0E;
Webs: 2x4 SP #3;

Nailnote
Nail Schedule: 0.128"x3", min. nails
Top Chord: 1 Row @ 12.00" o.c.
Bot Chord: 1 Row @ 5.50" o.c.
Webs : 1 Row @ 4" o.c.
Use equal spacing between rows and stagger nails in each row to avoid splitting.

Special Loads
—(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC: From 63 plf at 0.00 to 63 plf at 7.00
TC: From 32 plf at 7.00 to 32 plf at 21.50
TC: From 63 plf at 21.50 to 63 plf at 29.71
BC: From 20 plf at 0.00 to 20 plf at 6.78
BC: From 10 plf at 6.78 to 10 plf at 21.72
BC: From 20 plf at 21.72 to 20 plf at 28.50
BC: From 5 plf at 28.50 to 5 plf at 29.71
TC: 303 lb Conc. Load at 6.78,21.72
TC: 192 lb Conc. Load at 8.81,10.81,12.81,14.00
15.69,17.69,19.69
BC: 493 lb Conc. Load at 6.78,21.72
BC: 129 lb Conc. Load at 8.81,10.81,12.81,14.00
15.69,17.69,19.69
BC: 1121 lb Conc. Load at 15.44,17.44
BC: 996 lb Conc. Load at 19.44
BC: 2314 lb Conc. Load at 21.44

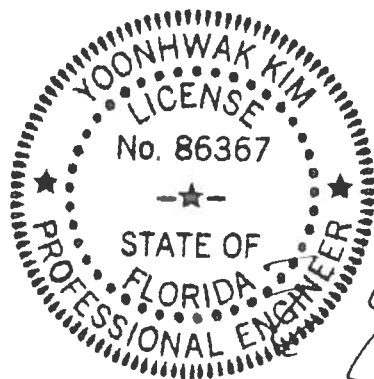
Wind
Wind loads and reactions based on MWFRS.

Additional Notes
The overall height of this truss excluding overhang is 4'-7"-10".

A - B	116	-483	E - F	201	-1002
C - D	735	-167	F - G	438	-1979
D - E	735	-167			

Maximum Bot Chord Forces Per Ply (lbs)			
Chords	Tens.Comp.	Chords	Tens. Comp.
N - M	385 -82	J - I	1714 -369
K - J	866 -174	I - G	1661 -359

Maximum Web Forces Per Ply (lbs)			
Webs	Tens.Comp.	Webs	Tens. Comp.
B - M	148 -695	E - J	1945 -376
M - C	519 -75	J - F	271 -1147
C - K	222 -948	I - F	1527 -285
K - E	562 -2631		



FL REG# 278, Yoonhwak Kim, FL PE #86367
12/02/2019

****WARNING**** READ AND FOLLOW ALL NOTES ON THIS DRAWING!

****IMPORTANT**** FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS

Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCEA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7, or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.

Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing or any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation and bracing of trusses. A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.

For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com; TPI: www.tpinst.org; SBCEA: www.sbcindustry.com; ICC: www.iccsafe.org

ALPINE
AN ITW COMPANY
13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

C, Kzt = 1,00

Bracing Group Species and Grades:

Group A:

Spruce-Pine-Fir		
#1	#2	Std
#3		

Hem-Fir	
#2	Std
#3	Standard

Douglas Fir-Larch

#3	
Std	
Standard	

Southern Pine

#3	
Std	
Standard	

Group B:

Hem-Fir	
#1	#2
#3	

Douglas Fir-Larch

#1	
#2	

Southern Pine

#1	
#2	

1x4 Braces shall be SRB (Stress-Rated Board),
 1x4 So. Pine use only Industrial 35 or
 Industrial 45 Stress-Rated Boards. Group B
 values may be used with these grades.

Load deflection criterion is L/240,

Cable and supports load from 4' 0" outlookers with 2' 0" overhang, or 12" plywood overhang.

Attach "L" braces with 10d (0.128"x3.0" min) nails.

In 18' end zones and 4' o.c. between zones

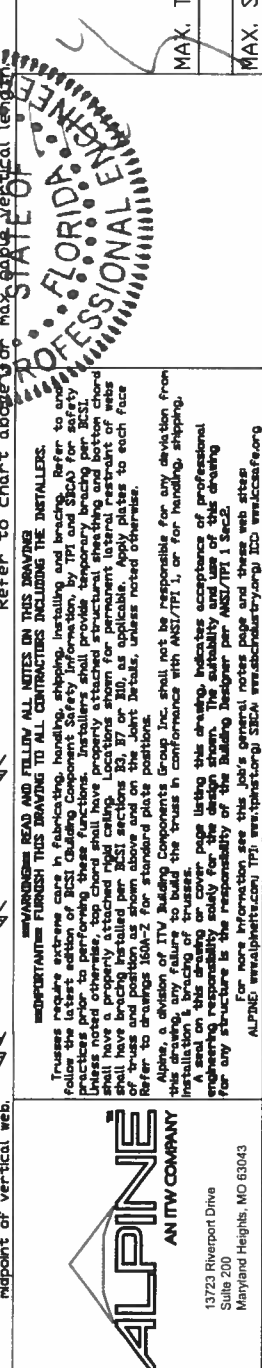
IN 18- AND 20- INCH ZONES AND 6" O.C. BETWEEN ZONES

bracing must be a minimum of 80% of web height

+ Refer to common truss design for peak, splice, and heel plates.

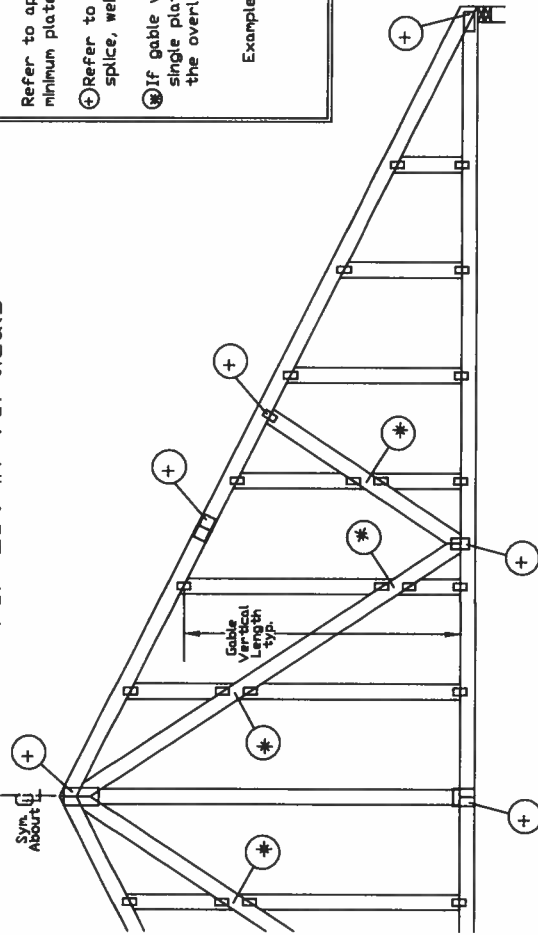
Refer to the Building Designer for conditions not addressed by this detail.

1000



12/02/2019
FL REG# 278, Yoonhwak Kim, FL PF #86367

Gable Detail For Let-In Verticals

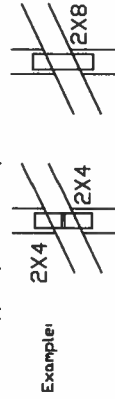


Gable Truss Plate Sizes

Refer to appropriate Alpine gable detail for minimum plate sizes for vertical studs.

⊕ Refer to Engineered truss design for peak, splice, web, and heel plates.

⊗ If gable vertical plates overlap, use a single plate that covers the total area of the overlapped plates to span the web.



'T' Reinforcement Attachment Detail



To convert from 'L' to 'T' reinforcing members, multiply 'T' increase by length (based on appropriate Alpine gable detail).

Maximum allowable 'T' reinforced gable vertical length is 14' from top to bottom chord.

'T' reinforcing member material must match size, species, and grade of the 'L' reinforcing member.

Web Length Increase w/ 'T' Brace

'T' Reinf. Mbr. Size	'T' Increase
2x4	30 %
2x6	20 %

Example:

ASCE 7-10 Wind Speed = 120 mph
Mean Roof Height = 30 ft, Kzt = 1.00
Gable Vertical = 24' o.c. SP #3
'T' Reinforcing Member Size = 2x4
'T' Brace Increase (From Above) = 30% = 1.30
(1) 2x4 'L' Brace Length = 8' 7"
Maximum 'T' Reinforced Gable Vertical Length 1.30 x 8' 7" = 11' 2"

Provide connections for uplift specified on the engineered truss design.

Attach each 'T' reinforcing member with

End Driven Nails:
10d Common (0.148"x3.3" min) Nails at 4' o.c. plus
(4) nails in the top and bottom chords.

Toenailed Nails:

10d Common (0.148"x3.3" min) Toenails at 4' o.c. plus
(4) toenails in the top and bottom chords.

This detail to be used with the appropriate Alpine gable detail for ASCE wind load.

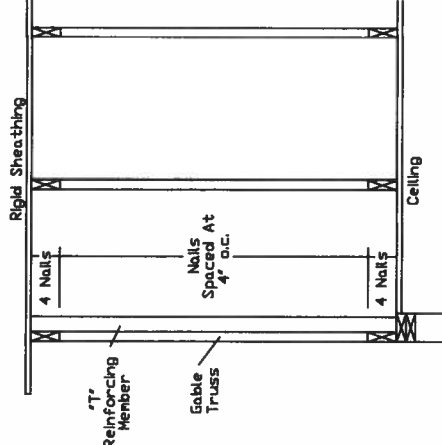
ASCE 7-05 Gable Detail Drawings

A13015051014, A1015051014, A1015051014, A14015051014, A13030051014, A12030051014, A10030051014, A14030051014

ASCE 7-10 & ASCE 7-16 Gable Detail Drawings

A11515ENC100118, A12015ENC100118, A14015ENC100118, A15015ENC100118, A16015ENC100118, A17015ENC100118, A18015ENC100118, A19015ENC100118, A20015ENC100118, A21015ENC100118, A22015ENC100118, A23015ENC100118, A24015ENC100118, A25015ENC100118, A26015ENC100118, A27015ENC100118, A28015ENC100118, A29015ENC100118, A30015ENC100118, A31015ENC100118, A32015ENC100118, A33015ENC100118, A34015ENC100118, A35015ENC100118, A36015ENC100118, A37015ENC100118, A38015ENC100118, A39015ENC100118, A40015ENC100118, A41015ENC100118, A42015ENC100118, A43015ENC100118, A44015ENC100118, A45015ENC100118, A46015ENC100118, A47015ENC100118, A48015ENC100118, A49015ENC100118, A50015ENC100118, A51015ENC100118, A52015ENC100118, A53015ENC100118, A54015ENC100118, A55015ENC100118, A56015ENC100118, A57015ENC100118, A58015ENC100118, A59015ENC100118, A60015ENC100118, A61015ENC100118, A62015ENC100118, A63015ENC100118, A64015ENC100118, A65015ENC100118, A66015ENC100118, A67015ENC100118, A68015ENC100118, A69015ENC100118, A70015ENC100118, A71015ENC100118, A72015ENC100118, A73015ENC100118, A74015ENC100118, A75015ENC100118, A76015ENC100118, A77015ENC100118, A78015ENC100118, A79015ENC100118, A80015ENC100118, A81015ENC100118, A82015ENC100118, A83015ENC100118, A84015ENC100118, A85015ENC100118, A86015ENC100118, A87015ENC100118, A88015ENC100118, A89015ENC100118, A90015ENC100118, A91015ENC100118, A92015ENC100118, A93015ENC100118, A94015ENC100118, A95015ENC100118, A96015ENC100118, A97015ENC100118, A98015ENC100118, A99015ENC100118, A100015ENC100118

See appropriate Alpine gable detail for maximum unreinforced gable vertical length



IMPORTANT: READ AND FOLLOW ALL NOTES ON THIS DRAWING

Trusses require extreme care in fabrication, shipping, handling, installing and bracing. Refer to and follow the latest edition of ECSI Guiding Component Safety Information, by TPI and SBCA for safety practices prior to performing these functions. Installers shall provide temporary bracing per ECSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs of truss and bottom chord are for reference only. Refer to drawings 150A-2 for standard plate positions. Refer to drawings 150A-2 for standard plate positions.

Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation & bracing of trusses.

A seal on this drawing or cover page listing this drawing, indicates acceptance of professional responsibility and seal of the drafter.

For more information see this job's general notes page and these web sites: www.alpine.com TPI: www.tpi.org SBCA: www.sbcas.org ECSI: www.ecsi.com

REF	LET-IN VERT
DATE	01/02/2018
DRWG	GBLLETIN0118

MAX. TOT. LD. 60 PSF
DUR. FAC. ANY
MAX. SPACING 24.0"



13723 Riverport Drive
Suite 200
Maryland Heights, MO 63043

Yoonhwak Kim, FL PE #86367

CLR Reinforcing

Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforcement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

Use scabs instead of L- or T- reinforcement on webs with intersecting truss joints, such as K-web joints, that may interfere with proper application along the narrow face of the web.

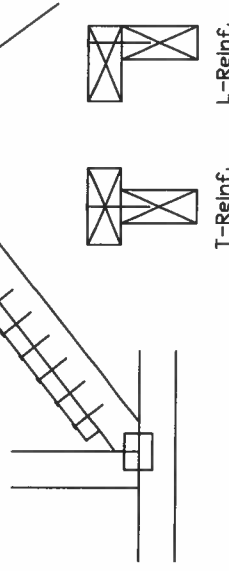
Web Member Size	Specified CLR Restraint	Alternative Reinforcement T- or L- Reinf.	Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4(Ø)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6(Ø)

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

Ø Center scab on wide face of web. Apply (1) scab to each face of web.

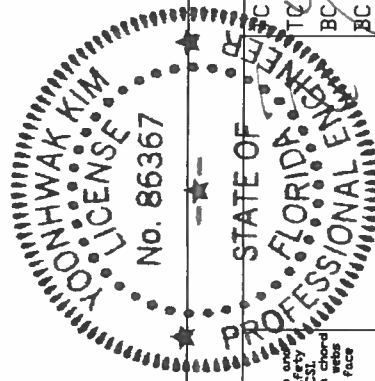
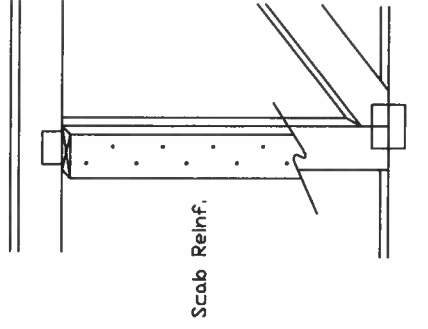
T-Reinforcement
or
L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0", min) nails at 6' o.c. Reinforcing member is a minimum 80% of web member length.



Scab Reinforcement:

Apply scab(s) to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0", min) nails at 6' o.c. Reinforcing member is a minimum 80% of web member length.



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Maryland Heights, MO 63043

IMPORTANT: READ AND FOLLOW ALL NOTES ON THIS DRAWING BEFORE PROCEEDING TO FABRICATE OR INSTALL. FOLLOW THE LATEST EDITION OF AISC BUILDING COMPONENTS SAFETY INFORMATION (BCSI) AND AISC 360 FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. INSTALLERS SHALL PROVIDE TEMPORARY BRACING PER BCSI, UNLESS NOTED OTHERWISE. TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL STEELING AND BOTTOM CHORD SHALL HAVE BRACING INSTALLED PER AISC SECTION 9.2.1. REFER TO DRAWING 160A-2 FOR STANDARD PLATE POSITIONS.

Alpine, a division of ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, or installation. A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the building designer per ANSI/TPI 1 Section 2.2.

For more information see this job's general notes page and these web sites:
ALPINE: www.alpineinc.com TPI: www.tpi.org SBCA: www.sbcainc.org IBC: www.iccsafe.org

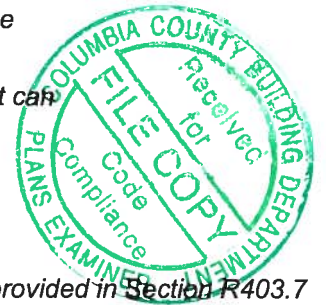
PSF	LL	PSF	CLR Subst.
PSF	DL	PSF	DATE 01/02/19
PSF	BC DL	PSF	DRWG BRCLBSUB0119
PSF	BC LL	PSF	
PSF	TOT. LD.	PSF	
	DJR. FAC.		
	SPACING		

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)


FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: 191304 Whalen Res Street: City, State, Zip: Lake City , FL , Owner: Chast & Amanda Whalen Design Location: FL, Gainesville	Builder Name: Permit Office: Permit Number: Jurisdiction: County: Columbia (Florida Climate Zone 2)
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<table style="width:100%;"> <tr> <td style="width:30%;">1. New construction or existing</td> <td style="width:70%;">New (From Plans)</td> </tr> <tr> <td>2. Single family or multiple family</td> <td>Single-family</td> </tr> <tr> <td>3. Number of units, if multiple family</td> <td>1</td> </tr> <tr> <td>4. Number of Bedrooms</td> <td>3</td> </tr> <tr> <td>5. Is this a worst case?</td> <td>Yes</td> </tr> <tr> <td>6. Conditioned floor area above grade (ft²)</td> <td>1614</td> </tr> <tr> <td>Conditioned floor area below grade (ft²)</td> <td>0</td> </tr> <tr> <td>7. Windows (207.7 sqft.)</td> <td> <table style="width:100%;"> <tr> <th style="width:30%;">Description</th> <th style="width:70%;">Area</th> </tr> <tr> <td>a. U-Factor: Dbl, U=0.30</td> <td>207.67 ft²</td> </tr> <tr> <td>SHGC: SHGC=0.20</td> <td></td> </tr> <tr> <td>b. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>c. 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Under Attic (Vented)</td> <td>R=38.0</td> <td>1706.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>c. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>11. Ducts</td> <td></td> <td>R ft²</td> </tr> <tr> <td>a. Sup: Attic, Ret: Attic, AH: Garage</td> <td></td> <td>6 322.8</td> </tr> <tr> <td>12. Cooling systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Central Unit</td> <td>29.0</td> <td>SEER:16.00</td> </tr> <tr> <td>13. Heating systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Electric Heat Pump</td> <td>29.0</td> <td>HSPF:8.90</td> </tr> <tr> <td>14. Hot water systems</td> <td></td> <td></td> </tr> <tr> <td>a. Electric</td> <td></td> <td>Cap: 50 gallons</td> </tr> <tr> <td></td> <td></td> <td>EF: 0.950</td> </tr> <tr> <td>b. Conservation features</td> <td></td> <td></td> </tr> <tr> <td>None</td> <td></td> <td></td> </tr> <tr> <td>15. Credits</td> <td></td> <td>Pstat</td> </tr> </table>	9. Wall Types (1623.0 sqft.)	Insulation	Area	a. Frame - Wood, Exterior	R=13.0	1374.00 ft²	b. Frame - Wood, Adjacent	R=13.0	249.00 ft²	c. N/A	R=	ft²	d. N/A	R=	ft²	10. Ceiling Types (1706.0 sqft.)	Insulation	Area	a. Under Attic (Vented)	R=38.0	1706.00 ft²	b. N/A	R=	ft²	c. N/A	R=	ft²	11. Ducts		R ft²	a. Sup: Attic, Ret: Attic, AH: Garage		6 322.8	12. Cooling systems	kBtu/hr	Efficiency	a. Central Unit	29.0	SEER:16.00	13. Heating systems	kBtu/hr	Efficiency	a. Electric Heat Pump	29.0	HSPF:8.90	14. Hot water systems			a. Electric		Cap: 50 gallons			EF: 0.950	b. Conservation features			None			15. Credits		Pstat
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6. Conditioned floor area above grade (ft²)	1614																																																																																																															
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7. Windows (207.7 sqft.)	<table style="width:100%;"> <tr> <th style="width:30%;">Description</th> <th style="width:70%;">Area</th> </tr> <tr> <td>a. U-Factor: Dbl, U=0.30</td> <td>207.67 ft²</td> </tr> <tr> <td>SHGC: SHGC=0.20</td> <td></td> </tr> <tr> <td>b. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>c. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>d. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>Area Weighted Average Overhang Depth:</td> <td>3.121 ft.</td> </tr> <tr> <td>Area Weighted Average SHGC:</td> <td>0.200</td> </tr> </table>	Description	Area	a. U-Factor: Dbl, U=0.30	207.67 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:	3.121 ft.	Area Weighted Average SHGC:	0.200																																																																																									
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9. Wall Types (1623.0 sqft.)	Insulation	Area																																																																																																														
a. Frame - Wood, Exterior	R=13.0	1374.00 ft²																																																																																																														
b. Frame - Wood, Adjacent	R=13.0	249.00 ft²																																																																																																														
c. N/A	R=	ft²																																																																																																														
d. N/A	R=	ft²																																																																																																														
10. Ceiling Types (1706.0 sqft.)	Insulation	Area																																																																																																														
a. Under Attic (Vented)	R=38.0	1706.00 ft²																																																																																																														
b. N/A	R=	ft²																																																																																																														
c. N/A	R=	ft²																																																																																																														
11. Ducts		R ft²																																																																																																														
a. Sup: Attic, Ret: Attic, AH: Garage		6 322.8																																																																																																														
12. Cooling systems	kBtu/hr	Efficiency																																																																																																														
a. Central Unit	29.0	SEER:16.00																																																																																																														
13. Heating systems	kBtu/hr	Efficiency																																																																																																														
a. Electric Heat Pump	29.0	HSPF:8.90																																																																																																														
14. Hot water systems																																																																																																																
a. Electric		Cap: 50 gallons																																																																																																														
		EF: 0.950																																																																																																														
b. Conservation features																																																																																																																
None																																																																																																																
15. Credits		Pstat																																																																																																														

Glass/Floor Area: 0.129	Total Proposed Modified Loads: 46.75	PASS
	Total Baseline Loads: 47.41	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY: <u>Evan Beamsley</u> DATE: <u>2019-11-26</u> 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. <div style="text-align: center;">  </div> 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).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	191304 Whalen Res	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1614	Lot #	
Owner Name:	Chast & Amanda Whalen	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	Yes	PlatBook:	
Builder Name:		Rotate Angle:	90	Street:	
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL ,
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	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	1614	14526

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1614	14526	Yes	6	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	181 ft	0	1614 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	Hip	Composition shingles	1869 ft²	0 ft²	Dark	N	0.92	No	0.9	No	0	30.3

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1614 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Blown	1706 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓	#	Omt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
✓	1	N=>E	Exterior	Frame - Wood	Main	13	24	8	9		222.0 ft²		0.23	0.75	0
✓	2	N=>E	Exterior	Frame - Wood	Main	13	14	6	9		130.5 ft²		0.23	0.75	0
✓	3	W=>N	Exterior	Frame - Wood	Main	13	7		9		63.0 ft²		0.23	0.75	0
✓	4	N=>E	Exterior	Frame - Wood	Main	13	14		9		126.0 ft²		0.23	0.75	0
✓	5	E=>S	Exterior	Frame - Wood	Main	13	30	8	9		276.0 ft²		0.23	0.75	0
✓	6	S=>W	Garage	Frame - Wood	Main	13	9	4	9		84.0 ft²		0.23	0.75	0
✓	7	E=>S	Garage	Frame - Wood	Main	13	3	4	9		30.0 ft²		0.23	0.75	0
✓	8	S=>W	Garage	Frame - Wood	Main	13	11	8	9		105.0 ft²		0.23	0.75	0
✓	9	E=>S	Garage	Frame - Wood	Main	13	3	4	9		30.0 ft²		0.23	0.75	0
✓	10	S=>W	Exterior	Frame - Wood	Main	13	9	8	9		87.0 ft²		0.23	0.75	0
✓	11	S=>W	Exterior	Frame - Wood	Main	13	6	10	9		61.5 ft²		0.23	0.75	0
✓	12	S=>W	Exterior	Frame - Wood	Main	13	15	0	9		135.0 ft²		0.23	0.75	0
✓	13	W=>N	Exterior	Frame - Wood	Main	13	30	4	9		273.0 ft²		0.23	0.75	0

DOORS

✓	#	Omt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
✓	1	N=>E	Insulated	Main	None	.4	2		6	8	13.3 ft²
✓	2	S=>W	Insulated	Main	None	.4	2	8	6	8	17.8 ft²
✓	3	S=>W	Insulated	Main	None	.4	3		6	8	20 ft²

WINDOWS

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

✓	#	Omt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
✓	1	N=>E	1	Metal	Low-E Double	Yes	0.3	0.2	N	15.0 ft²	1 ft 6 in	1 ft 6 in	None	None
✓	2	N=>E	1	Metal	Low-E Double	Yes	0.3	0.2	N	30.0 ft²	1 ft 6 in	1 ft 6 in	None	None
✓	3	N=>E	2	Metal	Low-E Double	Yes	0.3	0.2	N	26.7 ft²	8 ft 6 in	1 ft 6 in	None	None
✓	4	E=>S	5	Metal	Low-E Double	Yes	0.3	0.2	N	30.0 ft²	1 ft 6 in	1 ft 6 in	None	None
✓	5	S=>W	10	Metal	Low-E Double	Yes	0.3	0.2	N	36.0 ft²	1 ft 6 in	1 ft 6 in	None	None
✓	6	S=>W	11	Metal	Low-E Double	Yes	0.3	0.2	N	36.0 ft²	1 ft 6 in	1 ft 0 in	None	None
✓	7	S=>W	12	Metal	Low-E Double	Yes	0.3	0.2	N	30.0 ft²	6 ft 6 in	1 ft 6 in	None	None
✓	8	W=>N	13	Metal	Low-E Double	Yes	0.3	0.2	N	4.0 ft²	1 ft 6 in	1 ft 6 in	None	None

GARAGE

✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
✓	1	488.25 ft²	488.25 ft²	65 ft	9 ft	1

INPUT SUMMARY CHECKLIST REPORT

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.0004	1694.7	93.04	174.97	.1579	7

HEATING SYSTEM

<input checked="" type="checkbox"/>	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
<input type="checkbox"/>	1	Electric Heat Pump/	None	HSPF:8.9	29 kBtu/hr	1	sys#1

COOLING SYSTEM

<input checked="" type="checkbox"/>	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
<input type="checkbox"/>	1	Central Unit/	None	SEER: 16	29 kBtu/hr	870 cfm	0.75	1	sys#1

HOT WATER SYSTEM

<input checked="" type="checkbox"/>	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
<input type="checkbox"/>	1	Electric	None	Garage	0.95	50 gal	60 gal	120 deg	None

SOLAR HOT WATER SYSTEM

<input checked="" type="checkbox"/>	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
<input type="checkbox"/>	None	None			ft ²		

DUCTS

<input checked="" type="checkbox"/>	#	--- Supply ---			--- Return ---		Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC #	
<input type="checkbox"/>	1	Attic	6	322.8 ft	Attic	80.7 ft ²	Default Leakage	Garage	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

Cooling	<input type="checkbox"/>	Jan	<input type="checkbox"/>	Feb	<input type="checkbox"/>	Mar	<input type="checkbox"/>	Apr	<input type="checkbox"/>	May	<input checked="" type="checkbox"/>	Jun	<input checked="" type="checkbox"/>	Jul	<input checked="" type="checkbox"/>	Aug	<input checked="" type="checkbox"/>	Sep	<input type="checkbox"/>	Oct	<input type="checkbox"/>	Nov	<input type="checkbox"/>	Dec
Heating	<input checked="" type="checkbox"/>	Jan	<input checked="" type="checkbox"/>	Feb	<input checked="" type="checkbox"/>	Mar	<input type="checkbox"/>	Apr	<input type="checkbox"/>	May	<input type="checkbox"/>	Jun	<input type="checkbox"/>	Jul	<input type="checkbox"/>	Aug	<input type="checkbox"/>	Sep	<input type="checkbox"/>	Oct	<input checked="" type="checkbox"/>	Nov	<input checked="" type="checkbox"/>	Dec
Venting	<input type="checkbox"/>	Jan	<input type="checkbox"/>	Feb	<input checked="" type="checkbox"/>	Mar	<input checked="" type="checkbox"/>	Apr	<input type="checkbox"/>	May	<input type="checkbox"/>	Jun	<input type="checkbox"/>	Jul	<input type="checkbox"/>	Aug	<input type="checkbox"/>	Sep	<input checked="" type="checkbox"/>	Oct	<input checked="" type="checkbox"/>	Nov	<input type="checkbox"/>	Dec

INPUT SUMMARY CHECKLIST REPORT

Thermostat Schedule: HERS 2006 Reference		Hours											
Schedule Type		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	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
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* = 99

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

1. New home or, addition	1. <u>New (From Plans)</u>	12. Ducts, location & insulation level	
2. Single-family or multiple-family	2. <u>Single-family</u>	a) Supply ducts	R <u>6.0</u>
3. No. of units (if multiple-family)	3. <u>1</u>	b) Return ducts	R <u>6.0</u>
4. Number of bedrooms	4. <u>3</u>	c) AHU location	<u>Garage</u>
5. Is this a worst case? (yes/no)	5. <u>Yes</u>	13. Cooling system:	Capacity <u>29.0</u>
6. Conditioned floor area (sq. ft.)	6. <u>1614</u>	a) Split system	SEER <u> </u>
7. Windows, type and area		b) Single package	SEER <u> </u>
a) U-factor:(weighted average)	7a. <u>0.300</u>	c) Ground/water source	SEER/COP <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	7b. <u>0.200</u>	d) Room unit/PTAC	EER <u> </u>
c) Area	7c. <u>207.7</u>	e) Other	<u>16.0</u>
8. Skylights		14. Heating system:	Capacity <u>29.0</u>
a) U-factor:(weighted average)	8a. <u>NA</u>	a) Split system heat pump	HSPF <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	8b. <u>NA</u>	b) Single package heat pump	HSPF <u> </u>
9. Floor type, insulation level:		c) Electric resistance	COP <u> </u>
a) Slab-on-grade (R-value)	9a. <u>0.0</u>	d) Gas furnace, natural gas	AFUE <u> </u>
b) Wood, raised (R-value)	9b. <u> </u>	e) Gas furnace, LPG	AFUE <u> </u>
c) Concrete, raised (R-value)	9c. <u> </u>	f) Other	<u>8.90</u>
10. Wall type and insulation:		15. Water heating system	
A. Exterior:		a) Electric resistance	EF <u>0.95</u>
1. Wood frame (Insulation R-value)	10A1. <u>13.0</u>	b) Gas fired, natural gas	EF <u> </u>
2. Masonry (Insulation R-value)	10A2. <u> </u>	c) Gas fired, LPG	EF <u> </u>
B. Adjacent:		d) Solar system with tank	EF <u> </u>
1. Wood frame (Insulation R-value)	10B1. <u>13.0</u>	e) Dedicated heat pump with tank	EF <u> </u>
2. Masonry (Insulation R-value)	10B2. <u> </u>	f) Heat recovery unit	HeatRec% <u> </u>
11. Ceiling type and insulation level		g) Other	<u> </u>
a) Under attic	11a. <u>38.0</u>	16. HVAC credits claimed (Performance Method)	
b) Single assembly	11b. <u> </u>	a) Ceiling fans	<u> </u>
c) Knee walls/skylight walls	11c. <u> </u>	b) Cross ventilation	<u>No</u>
d) Radiant barrier installed	11d. <u>No</u>	c) Whole house fan	<u>No</u>
		d) Multizone cooling credit	<u> </u>
		e) Multizone heating credit	<u> </u>
		f) Programmable thermostat	<u>Yes</u>

*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: _____

City/FL Zip: Lake City, FL

Florida Building Code, Energy Conservation, 6th Edition (2017)

Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS:

Lake City , 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 main 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**

Project Name: 191304 Whalen Res Street: City, State, Zip: Lake City , FL , Owner: Chast & Amanda Whalen Design Location: FL, Gainesville			Builder Name: Permit Office: Permit Number: Jurisdiction:	CHECK
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:

City: Lake 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

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{14526}{\text{ACH}(50)} =$$

☐ **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 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*.

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

Chast & Amanda Whalen

Project Title:
191304 Whalen Res

Lake City, FL

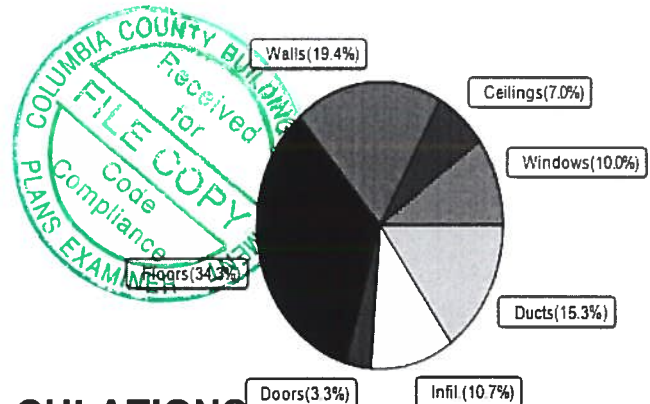
2019-11-26

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	24912	Btuh	Total cooling load calculation	24112	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	116.4	29000	Sensible (SHR = 0.75)	106.8	21750
Heat Pump + Auxiliary(0.0kW)	116.4	29000	Latent	193.5	7250
			Total (Electric Heat Pump)	120.3	29000

WINTER CALCULATIONS

Winter Heating Load (for 1614 sqft)

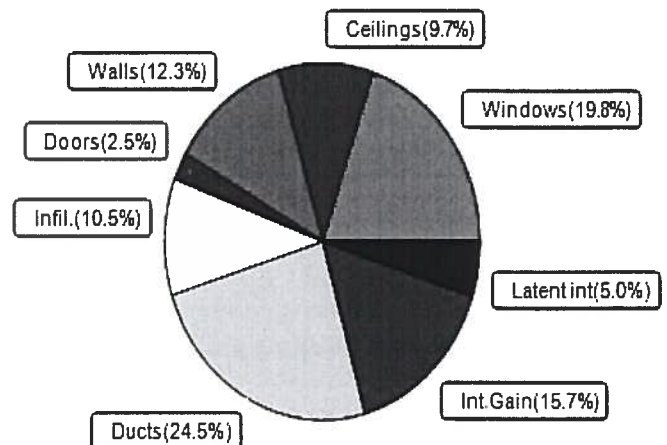
Load component			Load	
Window total	208	sqft	2492	Btuh
Wall total	1364	sqft	4843	Btuh
Door total	51	sqft	818	Btuh
Ceiling total	1706	sqft	1732	Btuh
Floor total	1614	sqft	8543	Btuh
Infiltration	61	cfm	2678	Btuh
Duct loss			3805	Btuh
Subtotal			24912	Btuh
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			24912	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1614 sqft)

Load component			Load	
Window total	208	sqft	4780	Btuh
Wall total	1364	sqft	2954	Btuh
Door total	51	sqft	613	Btuh
Ceiling total	1706	sqft	2338	Btuh
Floor total			0	Btuh
Infiltration	46	cfm	954	Btuh
Internal gain			3780	Btuh
Duct gain			4947	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			20366	Btuh
Latent gain(ducts)			963	Btuh
Latent gain(infiltration)			1583	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			3746	Btuh
TOTAL HEAT GAIN			24112	Btuh



8th Edition

EnergyGauge® System Sizing
PREPARED BY: Evan Beamsley
DATE: 2019-11-26

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Chast & Amanda Whalen

Project Title:
191304 Whalen Res
Building Type: User

Lake City, FL

2019-11-26

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)
This calculation is for Worst Case. The house has been rotated 90 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	E	15.0		12.0	180 Btuh
2	2, NFRC 0.20	Metal	0.30	E	30.0		12.0	360 Btuh
3	2, NFRC 0.20	Metal	0.30	E	26.7		12.0	320 Btuh
4	2, NFRC 0.20	Metal	0.30	S	30.0		12.0	360 Btuh
5	2, NFRC 0.20	Metal	0.30	W	36.0		12.0	432 Btuh
6	2, NFRC 0.20	Metal	0.30	W	36.0		12.0	432 Btuh
7	2, NFRC 0.20	Metal	0.30	W	30.0		12.0	360 Btuh
8	2, NFRC 0.20	Metal	0.30	N	4.0		12.0	48 Btuh
Window Total					207.7(sqft)			2492 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	177		3.55	628 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	91		3.55	321 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	63		3.55	224 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	126		3.55	447 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	246		3.55	873 Btuh
6	Frame - Wood	- Adj	(0.089)	13.0/0.0	84		3.55	298 Btuh
7	Frame - Wood	- Adj	(0.089)	13.0/0.0	30		3.55	107 Btuh
8	Frame - Wood	- Adj	(0.089)	13.0/0.0	87		3.55	310 Btuh
9	Frame - Wood	- Adj	(0.089)	13.0/0.0	30		3.55	107 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	51		3.55	181 Btuh
11	Frame - Wood	- Ext	(0.089)	13.0/0.0	6		3.55	20 Btuh
12	Frame - Wood	- Ext	(0.089)	13.0/0.0	105		3.55	373 Btuh
13	Frame - Wood	- Ext	(0.089)	13.0/0.0	269		3.55	955 Btuh
Wall Total					1364(sqft)			4843 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.400)		13		16.0	213 Btuh
2	Insulated - Garage, n		(0.400)		18		16.0	284 Btuh
3	Insulated - Exterior, n		(0.400)		20		16.0	320 Btuh
Door Total					51(sqft)			818Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Vented Attic/D/Shing		(0.025)	38.0/0.0	1706		1.0	1732 Btuh
Ceiling Total					1706(sqft)			1732Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	181.0 ft(perim.)		47.2	8543 Btuh
Floor Total					1614 sqft			8543 Btuh
Envelope Subtotal:								18428 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
Natural			0.25	14526	1.00	61.2		2678 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Chast & Amanda Whalen

Project Title:
191304 Whalen Res
Building Type: User

Lake City, FL

2019-11-26

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.180)	3805 Btuh
All Zones	Sensible Subtotal All Zones	24912 Btuh

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	24912 Btuh 0 Btuh 24912 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	29000 Btuh
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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

Chast & Amanda Whalen

Project Title:
191304 Whalen Res

Lake City, FL

2019-11-26

Reference City: Gainesville, FL Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.
This calculation is for Worst Case. The house has been rotated 90 degrees.

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load	
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2 NFRC	0.20, 0.30	No	No	E		1.5ft.	1.5ft.	15.0	0.0	15.0	10	25	375	Btuh
2	2 NFRC	0.20, 0.30	No	No	E		1.5ft.	1.5ft.	30.0	0.0	30.0	10	25	749	Btuh
3	2 NFRC	0.20, 0.30	No	No	E		8.5ft.	1.5ft.	26.7	22.2	4.4	10	25	331	Btuh
4	2 NFRC	0.20, 0.30	No	No	S		1.5ft.	1.5ft.	30.0	30.0	0.0	10	11	297	Btuh
5	2 NFRC	0.20, 0.30	No	No	W		1.5ft.	1.5ft.	36.0	0.0	36.0	10	25	899	Btuh
6	2 NFRC	0.20, 0.30	No	No	W		1.5ft.	1.0ft.	36.0	1.5	34.5	10	25	877	Btuh
7	2 NFRC	0.20, 0.30	No	No	W		6.5ft.	1.5ft.	30.0	23.4	6.6	10	25	397	Btuh
8	2 NFRC	0.20, 0.30	No	No	N		1.5ft.	1.5ft.	4.0	0.0	4.0	10	10	40	Btuh
	Excursion													814	Btuh
	Window Total								208 (sqft)					4780 Btuh	
Walls	Type						U-Value	R-Value	Area(sqft)		HTM		Load		
								Cav/Sheath							
1	Frame - Wood - Ext						0.09	13.0/0.0	177.0		2.3		401 Btuh		
2	Frame - Wood - Ext						0.09	13.0/0.0	90.5		2.3		205 Btuh		
3	Frame - Wood - Ext						0.09	13.0/0.0	63.0		2.3		143 Btuh		
4	Frame - Wood - Ext						0.09	13.0/0.0	126.0		2.3		285 Btuh		
5	Frame - Wood - Ext						0.09	13.0/0.0	246.0		2.3		557 Btuh		
6	Frame - Wood - Adj						0.09	13.0/0.0	84.0		1.7		142 Btuh		
7	Frame - Wood - Adj						0.09	13.0/0.0	30.0		1.7		51 Btuh		
8	Frame - Wood - Adj						0.09	13.0/0.0	87.2		1.7		147 Btuh		
9	Frame - Wood - Adj						0.09	13.0/0.0	30.0		1.7		51 Btuh		
10	Frame - Wood - Ext						0.09	13.0/0.0	51.0		2.3		115 Btuh		
11	Frame - Wood - Ext						0.09	13.0/0.0	5.5		2.3		12 Btuh		
12	Frame - Wood - Ext						0.09	13.0/0.0	105.0		2.3		238 Btuh		
13	Frame - Wood - Ext						0.09	13.0/0.0	269.0		2.3		609 Btuh		
	Wall Total									1364 (sqft)				2954 Btuh	
Doors	Type								Area (sqft)		HTM		Load		
1	Insulated - Exterior								13.3		12.0		160 Btuh		
2	Insulated - Garage								17.8		12.0		213 Btuh		
3	Insulated - Exterior								20.0		12.0		240 Btuh		
	Door Total									51 (sqft)				613 Btuh	
Ceilings	Type/Color/Surface						U-Value	R-Value	Area(sqft)		HTM		Load		
1	Vented Attic/DarkShingle						0.025	38.0/0.0	1706.0		1.37		2338 Btuh		
	Ceiling Total									1706 (sqft)				2338 Btuh	
Floors	Type							R-Value	Size		HTM		Load		
1	Slab On Grade							0.0	1614 (ft-perimeter)		0.0		0 Btuh		
	Floor Total									1614.0 (sqft)				0 Btuh	
	Envelope Subtotal:													10686 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

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Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
191304 Whalen Res

Lake City, FL

2019-11-26

Infiltration	Type Natural	Average ACH 0.19	Volume(cuft) 14526	Wall Ratio 1	CFM= 45.9	Load 954 Btuh
Internal gain		Occupants 6	Btuh/occupant X 230	Appliance +	2400	Load 3780 Btuh
					Sensible Envelope Load:	15420 Btuh
Duct load	Average sealed, Supply(R6.0-Attic), Return(R6.0-Attic)				(DGM of 0.321)	4947 Btuh
					Sensible Load All Zones	20366 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

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Project Title:
191304 Whalen Res

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL

2019-11-26

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	15420 Btuh
	Sensible Duct Load	4947 Btuh
	Total Sensible Zone Loads	20366 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	20366 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1583 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	963 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	3746 Btuh
	TOTAL GAIN	24112 Btuh

EQUIPMENT

1. Central Unit	#	29000 Btuh
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*Key: Window types (Panels - 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))

(Omt - compass orientation)



Version 8