City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "**NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.**" The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD. PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

Scope of Work: BUILDING: New SFR 2,101 sq ft

Comments: None

Project Information
Address: 7902 Daetwyler Drive, Belle Isle, FL 32812
Parcel ID: 29-27-30-1882-00-011
Property Owner: Higgins, Richard
Phone Number: 407 468 1423

****

Company Name: Hastings Homes Inc
Contractor Name: Hastings, Keith
License Number: CRC057105
Address: 3603 Bancroft Blvd, Orlando, FL 32833
Phone Number: 407 468 8294

Permit Number: 2016-12-033

Date of Application: 12/19/2015
Date Permit Issued: 03/21/2016

WARNING TO OWNER: "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.

BUILDING FEATURES

IMPACT FEES

School	$6,525
Traffic	$1,430

ZONING FEES

Zoning Fee	$165.00

UNIVERSAL ENG - BUILDING FEES

Demo	$
Building	$1,717.50
Fence	$
Driveway	$
Shed	$
Window(s)	$
Door(s)	$
PrePower	$
Electrical	$
Temp Pole	$
Plumbing	$
Mechanical	$
Gas	$
Roofing	$
Boat Dock	$
Screen Encl	$
Swimming Pool	$

SURCHARGE FEES

Surcharge Fee	$25.76
Surcharge Fee	$25.76

TOTAL FEES $9,889.02

Date Paid 4-12-16

BUILDING INSPECTOR USE ONLY

IF APPLICABLE:

Have Zoning Approval Conditions Been Met? YES NO **Have Stormwater Approval Conditions Been Met?** YES NO **Silt fencing in place?** YES NO **Turbidity Barrier in place?** YES NO

☐ **BUILDING**

1st _____ (Footing/Foundation)
Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____

2nd _____ (Slab)

3rd _____ (Lintel)(Wall Reinforcing on Masonry Building)

4th _____ (Exterior Framing)(Roof/Wall Sheathing)

5th _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed)

6th _____ (Insulation to be Made After Roof Installed)

7th _____ (Drywall)

8th _____ (Sidewalk/Driveway)

9th _____ (Other)

10th _____ (Final – After MEP and Other Applicable Finals)

☐ **ROOFING**

1ST ROOFING Deck Nailing/Dry-in/Flashing _____

2nd ROOFING Covering In-Progress _____

3rd ROOFING Covering Final _____

☐ **PLUMBING** (Pool Piping, Solar, Irrigation, Water Treatment Equip, Etc.)

PROJECT NUMBER 0115.140010.0000

TASK NUMBER

06, 07, 08, 09
SFR Mech Ele Plumbing

CITY OF BELLE ISLE
Permit Application Review Sheet

Permit Number	2016-12-033, 034, 035, 036
Property Owner	Higgins Rick
Address	7902 Doctoyler Dr.
Nature of Improvement	New SFR + MEP's
Received Application	12-18-15
Sent for Stormwater Review	
Stormwater Approved	
Sent for Zoning Review	2-9-16
Zoning Approved	2-10-16
Applied for Variance	
Variance Approved	
Sent to BO for Review	2-12-16
Building Official Approved	

Comments	
1. Susan 12-22-15	COBI states ok'd zoning approval
2. void-	Rick must submit NEW survey
3. for	zoning review/approval - sent email to Rick
4. Susan 2-9-16	Rec'd new survey - emailed to COBI for zoning
5. Recd 3/3/16	~~NEED~~ NOC & some other items sent email ~~approval~~
6.	need PA's for Rec
7. Susan 2-15-16	emailed Dale's bldg review comments
8. ★	OVERSIZED Plans w/ physical packet ★
9.	
10.	
11.	
12.	

PROJECT NUMBER 0115.140010.0000

TASK NUMBER 10

CITY OF BELLE ISLE
Permit Application Review Sheet

Permit Number	2016-02-013
Property Owner	Higgins, Rick
Address	7902 Daetwyler Dr.
Nature of Improvement	New SFR - ROOF
Received Application	~~2-9-16~~ Resent 3-3-16
Sent for Stormwater Review	
Stormwater Approved	✓
Sent for Zoning Review	
Zoning Approved	✓
Applied for Variance	
Variance Approved	
Sent to BO for Review	
Building Official Approved	

Comments	
1. Susan 2-11-16	Sent email - need PA ~~form~~ & ~~underlayment~~
2. 3-3-16 → info -	also need GL - other credentials on file
3. ~~Sent email~~	
4. Susan 3-4-16	WO 64611 review WC exempt ✓ GL ✓
5.	
6.	~~need contractor LIC & LIR~~ ✓
7. Susan 3-15-16	Floor & truss info delivered today WO 65354
8.	
9.	
10.	
11.	
12.	

CITY OF BELLE ISLE
Permit Application Review Sheet

Permit Number	
Property Owner	Rick Higgins
Address	7902 Dietwiler
Nature of Improvement	
Received Application	
Sent for Stormwater Review	
Stormwater Approved	
Sent for Zoning Review	
Zoning Approved	
Applied for Variance	
Variance Approved	
Sent to BO for Review	
Building Official Approved	

Comments	
1.	Susan 3-4-16 WO 64573 Does this satisfy
2.	the Item #1 deficiency?
3.	& #6
4.	Thank you
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	

City of Belle Isle

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Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

RECEIVED DEC 19 2015 BY:

Building Permit (Land Use) Application

DATE: 12-9-15

PERMIT # 2016-12-033

PROJECT ADDRESS 7902 Christopher Rd Belle Isle FL 32812, Belle Isle, FL ☐ 32809 ☒ 32812

PROPERTY OWNER Richard Higgins PHONE 407 463 1423 VALUE OF WORK (labor &material) $ 281,000.00

PLEASE LIST THE NATURE OF YOUR PROPOSED IMPROVEMENTS

New Home 34' x 61' 8"

Please provide information, if applicable.

- **Survey specific foundation plan required to show compliance with zoning setbacks**
- **BOAT DOCK: DEP Clearance Required with Application (Call 407-897-4100); please provide a copy of their report**
- **SEPTIC SYSTEM (RESIDENTIAL): – Provide verification of OC Health Dept approval for on-site septic tank system, per FAC Chap. 64E-6**
- **Homeowners will be required to have a contractor on record for homes that are rented and/or not homestead**

Please Complete for the City of Belle Isle Zoning Review: **Parcel Id Number:** 29 23 30 1832 00 011

To obtain this information, please visit http://www.ocpafl.org/Searches/ParcelSearch.aspx

ZONING APPROVED Date: 2/9/16 By: City of Belle Isle

SPECIAL CONDITIONS: STRUCTURES MAY NOT ENCROACH INTO ANY EASEMENT OR REQUIRED SETBACK. Note, this Zoning Approval MAY or MAY NOT be in conflict with your Deed Restrictions. For New Single Family Residence, a Traffic Impact Fee and School Impact will be assessed.

Attached Survey _____SETS and Construction Plans 3 SETS

PLANNING & ZONING APPROVAL: _____ **DATE**

Wind Exposure Category: B☐ C☐ D☐

PLEASE COMPLETE for Building Review

CONSTRUCTION TYPE New

OCCUPANCY GROUP ☐ Comm ☐ Res: ☐ Single Fam ☐ Multi Fam

#BLDG. _____ #UNITS _ #STORIES _____ **TOTAL SQ.FT.** 1900 Living

MAX. FLOOR LOAD _____ MAX. OCCUPANCY 2300 Total

MIN. FLOOD ELEV. _____ LOW FLOOR ELEV _____

WATER SERVICE Copy WELL _____ SEPTIC ✓

BUILDING REVIEWER _____ DATE 3-17-16

VERIFIED CONTRACTOR'S LICENSE & INSURANCE ARE ON FILE SW DATE 3-8-16

SPRINKLERS REQ'D	Y ☐	N ☐	
If Required – SUBMIT COPY OF PLANS FOR FIRE REVIEW	**Date:** Sent _____	RCD _____	
ZONING	(Y)	N	$ 165.-
CERT OF OCC	Y	N	$
TRAFFIC	(Y)	N	$ 1430.-
SCHOOL	(Y)	N	$ 6520.-
FIRE	Y	N	$
SWIMMING POOL	Y	N	$
SCREEN ENCLOSURE	Y	N	$
ROOFING	Y	N	$
BOAT DOCK	Y	N	$
BUILDING	Y	N	$ 1717.50
WINDOW(S)	Y	N	$
DOOR(S)	Y	N	$
FENCE	y	N	$
SHED	Y	N	$
DRIVEWAY	Y	N	$
OTHER _____	Y	N	$
3% FL SURCHARGE			51.52
TOTAL			9889.02

By Owner Form	Y	NA
Notice of Commencement	Y	NA
Power of Attorney	Y	NA
Contractor Packet Incuded?	Y	N

OTHER PERMITS REQUIRED:

ELECTRICAL	Y	NA
PREPOWER	Y	NA
MECHANICAL	Y	NA
PLUMBING	Y	NA
ROOFING	Y	NA
GAS	Y	NA

Per FSS 105.3.3:
An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies."

Republic Services is by legal contract the sole authorized provider of garbage, recycling, yard waste, and commercial garbage and construction debris collection and disposal services with the city limits of the City. Contractors, homeowners and commercial businesses may contact Republic Services at 407-293-8000 to setup accounts for Commercial, Construction Roll Off, or other services needed. Rates are fixed by contract and are available at City Hall or from Republic Services. The City enforces the contract through its code enforcement office. Failure to comply will result in a stop work order.

SEPARATE PERMITS ARE REQUIRED FOR ROOFING, ELECTRICAL, PLUMBING, GAS, MECHANICAL, SIGNS, POOLS, ENCLOSURES, ETC.

need all credentials

City of Belle Isle
Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

Building Permit (Land Use) Application
To be completed as required by State Statute Section 713 and other applicable sections.

PERMIT # 2016-12-033

Owner's Name Richard Higgins

Owner's Address 5238 Dall Island Rd Orlando FL 32809

Contractor Name Keith Hastings	**Company Name** Hastings Homes Inc
License # CBC 1259735 / CRC057105	**Company Address** 3613 Bancroft Blvd
Contact Phone/Cell 407 468 8294	**City, State, ZIP** Orlando FL 32833
Contact Email hastingshinc@gmail.com	**Contact Fax** 407-568 3638

WARNING TO OWNER: Your failure to record a Notice of Commencement may result in your paying twice for improvements to your property. A notice of commencement must be recorded if job is $2500(+) or if A/C Replacement $7500(+) and posted on the job site before the first inspection. If you intend to obtain financing, consult with your lender or an attorney before recording your Notice of Commencement.

I hereby make Application for Permit as outlined above, and if same is granted I agree to conform to all Division of Building Safety Regulations (www.floridabuilding.org) and City Ordinances (www.municode.com) regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable City and/or State of Florida codes and /or ordinances. Application is hereby made to obtain a permit to do the work and installations as indicated I certify that no work or installation has commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in this jurisdiction. I understand that a **separate** permit must be secured for all other construction including ROOFING, ELECTRICAL, MECHANICAL, PLUMBING, GAS, SIGNS, POOLS, SCREEN ENCLOSURES, ETC.

OWNER'S AFFIDAVIT: *I certify that all the foregoing information is accurate and that all work will be done in compliance with all applicable laws regulating construction and zoning.*

Owner Signature _____

The foregoing instrument was acknowledged before me this 12/15/15

by Richard Higgins who is personally known to me

and who produced _____ as identification and who did not take an oath.

Notary as to Owner _____
State of Florida
County of Orange

Notary Public State of Florida
Tiffany Johnson
My Commission FF 938019
Expires 11/19/2019

Contractor Signature _____

COMPANY NAME Hastings Homes Inc

The foregoing instrument was acknowledged before me this 12/15/15

by Keith Hastings who is personally known to me

and who produced Fl. Drivers License as identification and who did not take an oath.

Notary as to Owner _____
State of Florida
County of Orange

Notary Public State of Florida
Tiffany Johnson
My Commission FF 938019
Expires 11/19/2019

Impervious Surface Ratio Worksheet
Development Zoned A-1. A-2, R-1-AAA, R-1-AA, R-1-A, R-1 per City Code, Section 50-74: Impervious Surface Ratio

1. Total Lot Area (sqft) X 0.35 = Allowable Impervious Area (BASE).
   Total Lot Area 7450 X 0.35=
   Allowable Impervious Area (BASE) _____
2. Calculate the "proposed" impervious area on the lot. This includes the sum of all areas that do not allow direct percolation of rainwater. *Examples include house, pool, deck, driveway, accessory building, etc*
   - **House** 2450
   - **Driveway** PAVERS
   - **Walkway** NONE
   - **Accessory Buildings** NONE
   - **Pool & Spa** NONE
   - **Deck & Patio** NONE
   - **Other** _____

   Actual Impervious Area (AIA) 5000 SQFT
3. If AIA is less than BASE, subtract AIA from BASE to determine the amount of impervious area that may be added without providing onsite retention.
4. If AIA is greater than BASE, then onsite retention **must be provided.**

Assuming 7.5 inches of rainfall based on a 24hr 10 year Rain Event (TP40), the formula is: **(7.5 inches rainfall/12 inches p/foot) X (result from line 4) = cubic feet of storage volume needed**

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/08/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Winchester Insurance, Inc.
1425 W. Broadway (S.R. 426)
P.O. Box 620969
Oviedo FL 32762-0969

CONTACT NAME: Maureen Wentworth
PHONE (A/C, No, Ext): (407) 365-5656
FAX (A/C, No): (407) 366-0031
E-MAIL ADDRESS: maureen@winchesterinsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : SOUTHERN-OWNERS	10190
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Hastings Homes Inc.
3613 Bancroft Avenue

Orange
Orlando FL 32833-

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY			114682 72741408	04/22/2015	04/22/2016	EACH OCCURRENCE	$ 500,000
	[X] COMMERCIAL GENERAL LIABILITY				/ /	/ /	DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
	[ ] CLAIMS-MADE [X] OCCUR				/ /	/ /	MED EXP (Any one person)	$ 10,000
					/ /	/ /	PERSONAL & ADV INJURY	$ 500,000
					/ /	/ /	GENERAL AGGREGATE	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:				/ /	/ /	PRODUCTS - COMP/OP AGG	$ 1,000,000
	[X] POLICY [ ] PRO-JECT [ ] LOC				/ /	/ /		$
A	AUTOMOBILE LIABILITY			114682 72741408	04/22/2015	04/22/2016	COMBINED SINGLE LIMIT (Ea accident)	$ 500,000
	[ ] ANY AUTO				/ /	/ /	BODILY INJURY (Per person)	$
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS				/ /	/ /	BODILY INJURY (Per accident)	$
	[X] HIRED AUTOS [X] NON-OWNED AUTOS				/ /	/ /	PROPERTY DAMAGE (Per accident)	$
					/ /	/ /		$
	[ ] UMBRELLA LIAB [ ] OCCUR				/ /	/ /	EACH OCCURRENCE	$
	[ ] EXCESS LIAB [ ] CLAIMS-MADE				/ /	/ /	AGGREGATE	$
	[ ] DED [ ] RETENTION $				/ /	/ /		$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N				/ /	/ /	[ ] WC STATU-TORY LIMITS [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH)	N / A			/ /	/ /	E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below				/ /	/ /	E.L. DISEASE - EA EMPLOYEE	$
					/ /	/ /	E.L. DISEASE - POLICY LIMIT	$
A	INMRC			114682 72741408	04/22/2015	04/22/2016		5,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER
( ) - ( ) -

City of Belle Isle
1600 Nela Ave

Belle Isle FL 32809-

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Maureen L. Wentworth

JEFF ATWATER
CHIEF FINANCIAL OFFICER

STATE OF FLORIDA
DEPARTMENT OF FINANCIAL SERVICES
DIVISION OF WORKERS' COMPENSATION

*** * CERTIFICATE OF ELECTION TO BE EXEMPT FROM FLORIDA WORKERS' COMPENSATION LAW * ***

CONSTRUCTION INDUSTRY EXEMPTION

This certifies that the individual listed below has elected to be exempt from Florida Workers' Compensation law.

EFFECTIVE DATE: 5/5/2015 **EXPIRATION DATE:** 5/4/2017

PERSON: HASTINGS KEITH E

FEIN: 562403337

BUSINESS NAME AND ADDRESS:

HASTINGS HOMES INC

3613 BANCROFT BLVD

ORLANDO FL 32833

SCOPES OF BUSINESS OR TRADE:

LICENSED GENERAL CONTRACTOR

LICENSED RESIDENTIAL CONTRACTR

ISSUED: 05/29/2014 DISPLAY AS REQUIRED BY LAW SEQ # L1405290001358

HASTINGS, KEITH ERNEST
HASTINGS HOMES INC
3613 BANCROFT BLVD
ORLANDO FL 32833

LICENSE NUMBER | CRC057105

The RESIDENTIAL CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2016

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

LICENSE NUMBER	
CBC1259735	

The BUILDING CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2016

HASTINGS, KEITH ERNEST
HASTINGS HOMES, INC.
3613 BANCROFT BLVD
ORLANDO FL 32833

ISSUED: 05/29/2014 DISPLAY AS REQUIRED BY LAW SEQ # L1405290001358

ott Randolph, Tax Collector — Local Business Tax Receipt — Orange County, Flori

cal business tax receipt is in addition to and not in lieu of any other tax required by law or municipal ordinance. Businesses are subject to regulation of zoning, health an authorities. This receipt is valid from October 1 through September 30 of receipt year. **Delinquent penalty is added October 1.**

2015 **EXPIRES 9/30/2016** 1801-0962126

1801 CERTIFIED RES CONTRA $30.00 1 EMPLOYEE

SCOTT RANDOLPH, TAX COLLECTOR
ORANGE COUNTY, FLORIDA

TOTAL TAX	$30.00
PREVIOUSLY PAID	$30.00
TOTAL DUE	$0.00

HASTINGS KEITH E QUALIFIER

HASTINGS HOMES INC
HASTINGS KEITH E QUALIFIER
3613 BANCROFT BLVD
ORLANDO FL 32833-4227

806 RIVER COVE AV (MOBILE)
U - ORLANDO, 32825

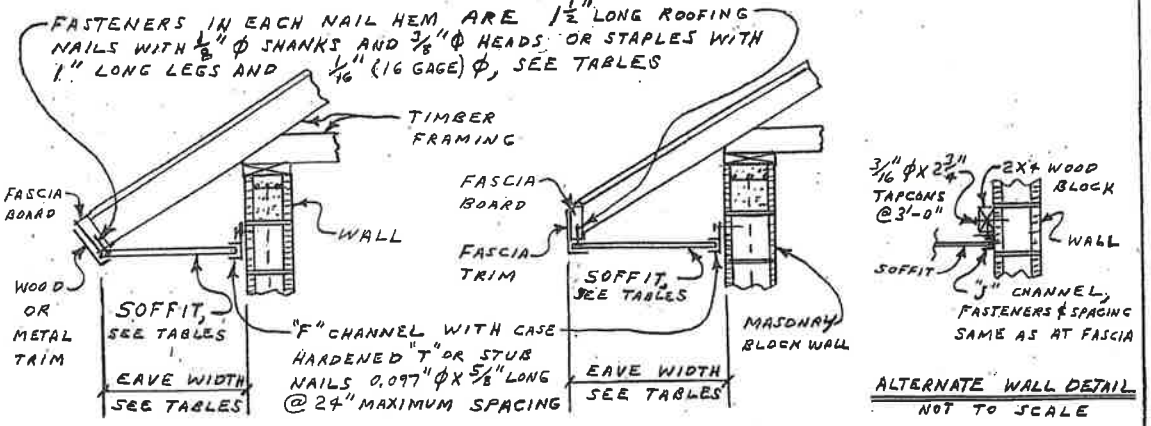
PAID: $30.00 0099-00668629 7/7/2015

This receipt is official when validated by the Tax Collector.

ALLOWABLE DESIGN WIND PRESSURES IN PSF
SHORT SPAN TABLE

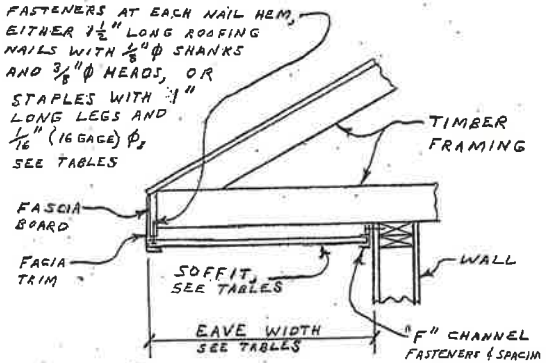
VARIFORM SOFFIT TYPE	EAVE WIDTH IN INCHES 10"	12"	16"
Double 6 (Aluminum) 12", Nails Solid – 36780 Vented – 36781	+169.1 -169.1	+135.3 -135.3	+96.6 -96.6
Double 6 (Aluminum) 12", Staples Solid – 36780 Vented – 36781	+169.1 -177.0	+135.3 -141.6	+96.6 -101.1
Triple 4 (Aluminum) 12", Nails Solid- 36694 Center Vent – 36695 Full Vent - 36696	+169.1 -169.1	+135.3 -135.3	+96.6 -96.6
Triple 4 (Aluminum) 12", Staples Solid -36694 Center Vent – 36695 Full Vent - 36696	+169.1 -177.0	+135.3 -141.6	+96.6 -101.1
Quad 4 (Aluminum) 16", Nails Solid – 36797 Vented – 36798	+126.8 -126.8	+101.5 -101.5	+72.5 -72.5
Quad 4 (Aluminum) 16", Staples Solid – 36797 Vented – 36798	+126.8 -132.8	+101.5 -106.2	+72.5 -75.9
Durabuilt Double 6 (Aluminum) 12", Nails Solid – 36782 Vented – 36783	+133.5 -133.5	+106.8 -106.8	+76.3 -76.3
Durabuilt Double 6 (Aluminum) 12", Staples Solid – 36782 Vented – 36783	+133.5 -177.0	+106.8 -141.6	+76.3 -101.1
Durabuilt Triple 4 (Aluminum) 12", Nails Solid – 36687 Center Vent – 36688 Full Vent - 36689	+133.5 -133.5	+106.8 -106.8	+76.3 -76.3
Durabuilt Triple 4 (Aluminum) 12", Staples Solid – 36687 Center Vent – 36688 Full Vent - 36689	+133.5 -177.0	+106.8 -141.6	+76.3 -101.1
.013 T4 (Aluminum) 12", Nails Solid –36768 Center Vent-36769 Vented – 36770	+115.7 -115.7	+92.6 -92.6	+66.1 -66.1
.013 T4 (Aluminum) 12", Staples Solid –36768 Center Vent-36769 Vented – 36770	+115.7 -177.0	+92.6 -141.6	+66.1 -101.1
Beaded (Vinyl) 7", Nails Solid – 157 Vented –158	+206.6 -104.0	+165.3 -83.2	+118.1 -59.4
Beaded (Vinyl) 7", Staples Solid – 157 Vented – 158	+206.6 -123.9	+165.3 -99.2	+118.1 -70.8
Double 5 Standard (Vinyl) 10", Nails Solid – 144 Vented – 145	+206.6 -72.8	+165.3 -58.3	+118.1 -41.6
Double 5 Standard (Vinyl) 10", Staples Solid – 144 Vented – 145	+206.6 -86.8	+165.3 -69.4	+118.1 -49.6
Double 5 Premium (Vinyl) 10", Nails Solid – 140 Vented – 141	+227.3 -80.1	+181.8 -64.1	+129.9 -45.8
Double 5 Premium (Vinyl) 10", Staples Solid – 140 Vented – 141	+227.3 -95.4	+181.8 -76.3	+129.9 -54.5
Triple 4 (Vinyl) 12", Nails Solid – 230 Center Vent –231 Full Vent - 232	+196.3 -57.7	+157.0 -46.1	+112.2 -32.9
Triple 4 (Vinyl) 12", Staples Solid – 230 Center Vent – 231 Full Vent - 232	+196.3 -68.7	+157.0 -54.9	+112.2 -39.2
Trivent Triple 3 1/3, (Vinyl) 10", Nails Solid 133 Hidden Vent-134	+227.3 -80.1	+181.8 -64.1	+129.9 -45.8
Trivent Triple 3 1/3, (Vinyl) 10", Staples Solid-133 Hidden Vent-134	+227.3 -95.4	+181.8 -76.3	+129.9 -54.5

Details that go with this table appear on Sheet 1 of 2

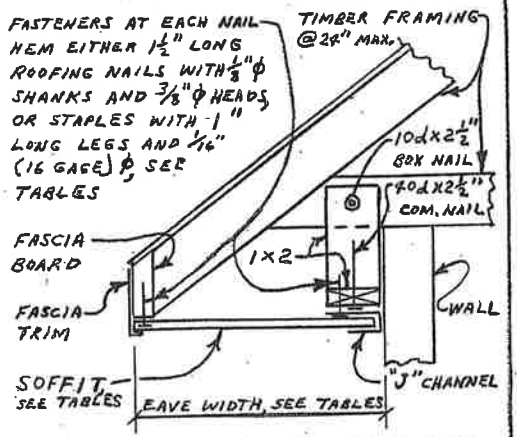


SOFFITS WITH MASONRY BLOCK WALLS
NOT TO SCALE

ALTERNATE WALL DETAIL
NOT TO SCALE



WOOD FRAMED WALL
SCALE



SOFFIT INTO ROOF FRAMING
NOT TO SCALE

DESIGN PRESSURES LISTED IN TABLES ARE BASED ON COMPARATIVE AND RATIONAL ANALYSES DONE IN HR PROJECT 15030002 AND ARE IN CONFORMANCE WITH THE 2014 FLORIDA BUILDING CODE AND THE 2014 FLORIDA RESIDENTIAL CODE.

THE 2014 FLORIDA BUILDING CODE IN SECTION 1609.1 AND THE 2014 FLORIDA RESIDENTIAL CODE IN SECTION R703.1 DIRECTLY MANDATE THAT THE DESIGN WIND PRESSURES ON SOFFITS ARE TO BE THE SAME AS THE ADJOINING WALLS.

WHERE SHORT SPAN AND LONG SPAN TABLES OVERLAP, THE LOWER VALUES GOVERN AND SHOULD BE USED IN INSTALLATION DESIGNS.

Allen N. Reeves
23 APRIL 2015

ALLEN N. REEVES LICENSE No. 19354 STATE OF FLORIDA PROFESSIONAL ENGINEER

Allen N. Reeves, P.E. Structural Engineer Florida License #19354

HR Engineering, Inc.	REV. 23 APRIL 2015 DATE: 30 AUGUST 2012	15030002 PROJECT NO. 11100017-6 SHEET 1 OF 2
CLIENT: VARIFORM	BY: A. REEVES	PROJECT NAME: VARIFORM SOFFITS-FLORIDA

ALLOWABLE DESIGN WIND PRESSURES IN PSF LONG SPAN TABLE					
VARIFORM SOFFIT TYPE	EAVE WIDTH IN INCHES				
	12"	15"	18"	21"	24"
Double 6 (Aluminum) 12", Nails Solid –36780 Vented – 36781	+288 -275.3	+170.4 -162.9	+112.5 -107.6	+79.8 -76.3	+59.5 -56.9
Double 6 (Aluminum) 12", Staples Solid – 36780 Vented – 36781	+288 -275.3	+170.4 -162.9	+112.5 -107.6	+79.8 -76.3	+59.5 -56.9
Triple 4 (Aluminum) 12", Nails Solid- 36694 Center Vent – 36695 Full Vent - 36696	+288 -275.3	+170.4 -162.9	+112.5 -107.6	+79.8 -76.3	+59.5 -56.9
Triple 4 (Aluminum) 12", Staples Solid - 36694 Center Vent – 36695 Full Vent - 36696	+288 -275.3	+170.4 -162.9	+112.5 -107.6	+79.8 -76.3	+59.5 -56.9
Quad 4 (Aluminum) 16", Nails Solid –36797 Vented – 36798	+216.0 -206.5	+127.8 -122.2	+84.4 -80.7	+59.8 -57.2	+44.6 -42.7
Quad 4 (Aluminum) 16", Staples Solid – 36797 Vented – 36798	+216.0 -206.5	+127.8 -122.2	+84.4 -80.7	+59.8 -57.2	+44.6 -42.7
Durabuilt Double 6 (Aluminum) 12", Nails Solid – 36782 Vented – 36783	+227.3 -217.4	+134.5 -128.6	+88.8 -84.9	+63.0 -60.2	+47.0 -44.9
Durabuilt Double 6 (Aluminum) 12", Staples Solid – 36782 Vented – 36783	+227.3 -217.4	+134.5 -128.6	+88.8 -84.9	+63.0 -60.2	+47.0 -44.9
Durabuilt Triple 4 (Aluminum) 12", Nails Solid – 36687 Center Vent – 36688 Full Vent - 36689	+227.3 -217.4	+134.5 -128.6	+88.8 -84.9	+63.0 -60.2	+47.0 -44.9
Durabuilt Triple 4 (Aluminum) 12", Staples Solid – 36687 Center Vent – 36688 Full Vent - 36689	+227.3 -217.4	+134.5 -128.6	+88.8 -84.9	+63.0 -60.2	+47.0 -44.9
.013 T4 (Aluminum) 12", Nails Solid –36768 Center Vent-36769 Vented – 36770	+197.1 -188.4	+116.6 -111.5	+77.0 -73.6	+54.6 -52.2	+40.7 -38.2
.013 T4 (Aluminum) 12", Staples Solid-36768 Center Vent-36769 Vented – 36770	+197.1 -188.4	+116.6 -111.5	+77.0 -73.6	+54.6 -52.2	+40.7 -38.2
Beaded (Vinyl) 7", Nails Solid – 157 Vented –158	+427.6 -95.9	+253.0 -73.7	+167.0 -59.9	+118.4 -50.5	+88.3 -43.6
Beaded (Vinyl) 7", Staples Solid – 157 Vented – 158	+427.6 -99.2	+253.0 -76.3	+167.0 -62.0	+118.4 -52.2	+88.3 -45.1
Double 5 Standard (Vinyl) 10", Nails Solid – 144 Vented – 145	+299.3 -67.1	+177.1 -51.6	+116.9 -41.9	+82.9 -35.3	+61.8 -30.5
Double 5 Standard (Vinyl) 10", Staples Solid – 144 Vented – 145	+299.3 -69.4	+177.1 -53.4	+116.9 -43.4	+82.9 -36.5	+61.8 -31.5
Double 5 Premium (Vinyl) 10", Nails Solid – 140 Vented – 141	329.2 -73.8	+194.8 -56.8	+128.6 -46.1	+91.2 -38.8	+68.0 -33.6
Double 5 Premium (Vinyl) 10", Staples Solid – 140 Vented – 141	329.2 -76.3	+194.8 -58.7	+128.6 -47.7	+91.2 -40.2	+68.0 -34.7
Triple 4 (Vinyl) 12", Nails Solid – 230 Center Vent –231 Full Vent - 232	+236.9 -53.1	+140.2 -40.9	+92.6 -33.2	+65.6 -28.0	+49.0 -24.1
Triple 4 (Vinyl) 12", Staples Solid – 230 Center Vent – 231 Full Vent - 232	+236.9 -54.9	+140.2 -42.3	+92.6 -34.3	+65.6 -28.9	+49.0 -25.0
Trivent Triple 3 1/3, (Vinyl) 10", Nails Solid 133 Hidden Vent-134	329.2 -73.8	+194.8 -56.8	+128.6 -46.1	+91.2 -38.8	+68.0 -33.6
Trivent Triple 3 1/3, (Vinyl) 10", Staples Solid-133 Hidden Vent-134	329.2 -76.3	+194.8 -58.7	+128.6 -47.7	+91.2 -40.2	+68.0 -34.7
Details that go with this table are found on Sheet 1 of 2					

LEGEND

Double 6 has "V" grooves every 6" across width, and each panel is 12" wide.

Triple 4 or T4 has "V" grooves every 4" across width, and each panel is 12" wide.

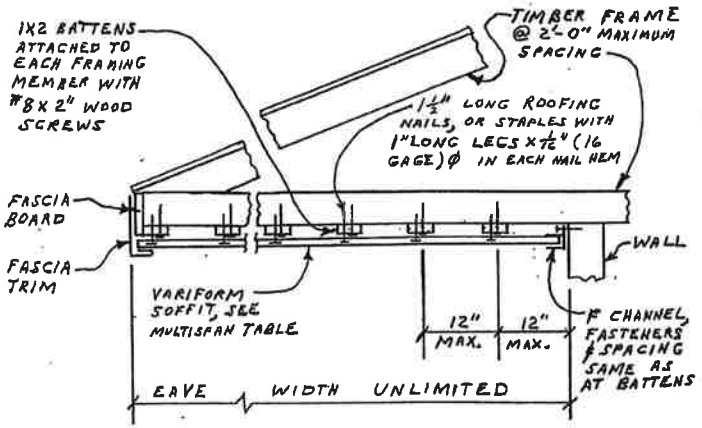
Quad 4 has "V" grooves every 4" across width, . and each panel is 16" wide.

Beaded 7" has "V" grooves every 7" across width, and each panel is 7" wide.

Double 5 has "V" grooves every 5" across width, and each panel is 10" wide.

Triple 3 1/3 has "V" grooves every 3-1/3" across width, and each panel is 10" wide.

ALLOWABLE DESIGN WIND PRESSURES IN PSF MULTI SPAN TABLE (EXTERIOR CEILINGS)	
VARIFORM SOFFIT TYPE	
Beaded (Vinyl) 7", Nails Solid – 157 Vented –158	+/-62.9
Beaded (Vinyl) 7", Staples Solid – 157 Vented – 158	+/-62.9
Double 5 Standard (Vinyl) 10", Nails Solid – 144 Vented – 145	+/-44.0
Double 5 Standard (Vinyl) 10", Staples Solid – 144 Vented – 145	+/-44.0
Double 5 Premium (Vinyl) 10", Nails Solid – 140 Vented – 141	+/-48.4
Double 5 Premium (Vinyl) 10", Staples Solid – 140 Vented – 141	+/-48.4
Trivent Triple 3 1/3, (Vinyl) 10", Nails Solid 133 Hidden Vent-134	+/-48.4
Trivent Triple 3 1/3, (Vinyl) 10", Staples Solid-133 Hidden Vent-134	+/-48.4
Triple 4 (Vinyl) 12", Nails Solid – 230 Center Vent –231 Full Vent - 232	+/-34.9
Triple 4 (Vinyl) 12", Staples Solid – 230 Center Vent – 231 Full Vent - 232	+/-34.9
The detail for this table appears on Sheet 2 of 2	



SOFFIT FOR WIDE EAVES AND EXTERIOR CEILINGS
NOT TO SCALE

ALLEN N. REEVES LICENSE No. 19354 STATE OF FLORIDA PROFESSIONAL ENGINEER

Allen N. Reeves
23 APRIL 2015

Allen N. Reeves, P.E.	Structural Engineer	Florida License #19354
HR Engineering, Inc.	REV. 20 APRIL 2015 DATE: 30 AUGUST 2012	15030002 PROJECT NO. 11100017-6 SHEET 2 OF 2
CLIENT: VARIFORM	BY: A. REEVES	PROJECT NAME: VARIFORM SOFFITS- FLORIDA

City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

RECEIVED DEC 19 2015 BY:

Product Approval Form

DATE: 12-9-15 PERMIT # 2016-12-033

PROJECT ADDRESS 7902 Dactwyler Rd Belle Isle, FL, Belle Isle, FL ☐ 32809 ☒ 32812

As required by Florida Statue 553.842 and Florida Administrative Code 9B-72m, please provide the information and approval numbers of the building components listed below if they will be utilized on the building or structure. FL Approved products are listed online at www.floridabuilding.org or can be obtained from the local product supplier. The following information must be turned in with permit application and available onsite for inspections:

1. **This Product Approval Cover Sheet**
2. **Internet screen from FloridaBuilding.org showing PA#, approval and code edition stamped**
3. **Manufacturer's *installation* details from FloridaBuilding.org and requirements for each product stamped**

	Product Type	Manufacturer	Model/Series	FL Product Approval #	Product Type	Manufacturer	Model/Series	FL Product Approval #
	EXTERIOR DOORS				**WALL PANELS**			
✓	Swinging	~~[illegible]~~/Jeldwen		10963-R4	Sliding			
✓	Sliding	Jeldwen/MI		15332-R2	Soffits			
✓	Sectional/Rollup	Clopay	✓	15279-R4	Storefront			
	Other				Glass Block			
					Other			
	WINDOWS				**ROOFING PRODUCTS**			
✓	Single/Dbl Hung	MI	1650 HP	15217-R4	Asphalt Shingles	IKO		~~4006-R9~~
✓	Horizontal Slider	MI		13349-R4	Non Struct Metal		MUST GO ON	
	Casement				Roofing Tiles		ROOF APP	
	Fixed				Single Ply Roof			
	Mullion				Other	E. need Underlayment		
	Skylights							
	Other							
	STRUCTURAL COMPONENTS				**OTHER**			
	Wood Connectors	Simpson		9584-R4 → NO RECORD				
✓	Wood Anchors	Simpson		2355-R5				
	Truss Plates	Simpson		9584-R4 → NO RECORD				
	Insulation Forms							
✓	Lintels	Lott's	✓	FL 17867				
	Other							

Reviewed for Code Compliance Universal Engineering Sciences

It is the applicant's responsibility to verify that specific products have been installed in accordance with their limitations and with the minimum required design pressures for the structure. Specific compliance will be verified during field inspections.

Applicant Signature _____ **Date** 12-9-15

COBI Permit Fee Calculation Form

Admin
~~Reviewer~~ Signature: _____ Date: 2-11-16

Permit Type: New SFR Job Cost: $ 281,000.-

Permit Fee: $ 1145.- > 177.50

Plans Review Fee: $ 572.50 (50% of permit fee – excluding ReRoofs)

1.5% State Fee: $ 25.76 > 51.52

1.5% State Fee: $ 25.76 → $ 165.-

(1769.02)

TOTAL BUILDING FEE: $ 1934.02 ← (does not include Zoning fees or Deposits)

Note: Total gets doubled for SWO/AFT permits

1st 1K 25.00
280 x $4 1120.-
1145.- ÷ 2 =
572.50
1717.50

traffic 1430.-
school 6525.-
1934.02
9889.02

WO 64573

UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

RECEIVED
MAR 03 2016
BY:

PLAN REVIEW REPORT

PERMIT # 2016-12-033

7902 DAETWYLER DR.

REVISED 3/1/16
BY HAL @ BARWICK STUDIO DESIGN LLC

1. ~~Conflict noted: Energy~~ calculation state conditioned area is 1970 sq. ft. Drawings show area is 1414 sq. ft. — OK REVISED
2. ~~Cover sheet index does not list sheet 6A.~~ — INCLUDED NOW
3. Sheet 6A references 2010 Edition of Florida Building Code. 2014 is applicable. — N/A — NOT NOTED
4. 6- 6A Unable to locate notes relating to markings #2 or #3 — ? COULDN'T FIND
5. Lintel sheet indicates L-1 Through L-6 designations. There is no lintel schedule of those markings. — REVISED
6. Sheet 11A- Plumbing vents ~~are not shown. Show through the~~ roof vents. — REVISED
7. Both floor and roof Truss Engineering to be provided. — OWNER to provide — Hold
8. Provide product approval on vented vinyl soffits. — INCLUDED
9. ~~Electrical Outlet need in wall sections wider than 2' in~~ Bd #2 & Bd #3 — REVISED 3-7-16

If you have any further questions, please do not hesitate to contact me.

Thank you,

Sent email 3-7-16

Dale Baker
Plans Reviewer
Fl License # PX1830
407-509-8795

3-17-16

Reviewed for Code Compliance
Universal Engineering Sciences

All deficiencies satisfied per Dale

ENGINEERING PACKAGE

Builder: RICK HIGGINS

Project: XA1

Model/Building: HRES

Lot: Blk: Unit: 140C

Address:

JOB # N316173

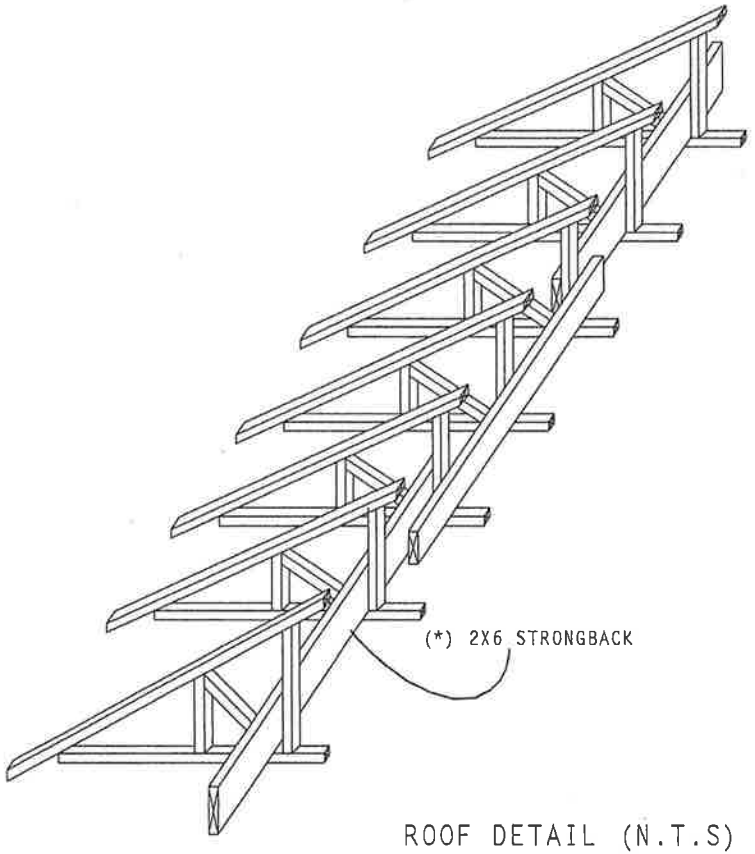
Revision Date New Load # R/01

CARPENTER CONTRACTORS OF AMERICA, INC
3900 AVENUE G. N.W.
WINTER HAVEN, FLORIDA 33880
PH (800) 959-8806 FAX (941) 294-7934

(AR36)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

STRONGBACK BRIDGING GUIDELINES FOR ROOF TRUSSES



ROOF DETAIL (N.T.S)

(N.T.S -Not To Scale)

Strongback Bridging Guidelines for Roof Trusses

Strongback bridging for roof trusses is not a requirement of ANSI-TPI 1-2002 but it is a strongly recommended guideline by Carpenter Contractors of America. It serves the following two functions:

1) Bridging aligns the bottom chords after they are set so they are uniform along the ceiling line. This, in turn helps minimize "wavy ceilings" after the installation of drywall.

2) Bridging helps 'planing-out' the transitional or relative deflection of adjacent trusses due to an offset in spans.

   In either case, strongback bridging should not be attached to adjacent trusses that need to be jacked into place more than ¼ inch.

Strongback bridging in roof trusses does not serve as temporary or permanent bracing and is not intended to help distribute or share design loads between trusses. Consequently, no design loads have been accounted for with this detail and continuous strongback bridging should not be attached between common and girder trusses that have more than ¼ inch differential deflection.

STRONGBACKS SHOULD BE ATTACHED TO WALLS AT THEIR OUTER ENDS OR RESTRAINED BY OTHER MEANS.

STRONGBACKS SHALL BE A MININMUM OF 2X6, AND SHALL BE ATTACHED WITH A MINIMUM OF THREE 16d COMMON OR (3) 0.131 X 3" GUN NAILS TO A 2X4 VERTICAL WEB MEMBER

The graphic shown on this detail is for generic illustrative purposes only. The exact location of strongback bridging will be specified by Carpenter Contractors of America.

The use of strongback bridging shall in no way interfere with any other design considerations specified by the Engineer of Record or Building Designer.

The nailing requirements shown are consistent with ANSI/TPI 1-2002 for strongback bridging.

(StrongbackDetails Det55618--55688REPAIR)REPAIR)

Design Crit: TPI-2002(STD)/FBC

PLT TYP. Wave Cq/RT=1.00(1.25)/10(0) 7.31.11 2.18 QTY:1 FL/-/1/-/E/-/-

ALPINE
ITW Building Components Group Inc.
Haines City, FL 33844
FL COA #0 278

WARNING TRUSSES REQUIRE EXTREME CARE IN FABRICATION, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI (BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 218 NORTH LEE STREET, SUITE 312, ALEXANDRIA, VA. 22314) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LANE, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

IMPORTANT FURNISH A COPY OF THIS DESIGN TO THE INSTALLATION CONTRACTOR. ITW BCG, INC. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN; ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI; OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPEC, BY AF&PA) AND TPI. ITW BCG CONNECTOR PLATES ARE MADE OF 20/18/16GA (W,H/35/K) ASTM A653 GRADE 40/60 (W, K/H,S5) GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND, UNLESS OTHERWISE LOCATED ON THIS DESIGN, POSITION PER DRAWINGS 160A-Z. ANY INSPECTION OF PLATES FOLLOWED BY (1) SHALL BE PER ANNEX A3 OF TPI1-2002 SEC.3. A SEAL ON THIS DRAWING INDICATES ACCEPTANCE OF PROFESSIONAL ENGINEERING RESPONSIBILITY SOLELY FOR THE TRUSS COMPONENT DESIGN SHOWN. THE SUITABILITY AND USE OF THIS COMPONENT FOR ANY BUILDING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER PER ANSI/TPI 1 SEC. 2.

JAMES F. COLLINS JR. LICENSE No. 52212 STATE OF FLORIDA PROFESSIONAL ENGINEER

Jul

TC LL	PSF	REF	R081- 48357
TC DL	PSF	DATE	07/28/09
BC DL	PSF	DRW	HCUSR081 09209398
BC LL	PSF		HC-ENG DR/DR
TOT.LD.	PSF		AR36
DUR.FAC.			FROM
SPACING			JREF- 1TTQ081_Z18

Keep

HU/HUC/HSUR/L Hangers

SIMPSON Strong-Tie

HU and HUC products are heavy duty face mount joist hangers made from 14 gauge galvanized steel.

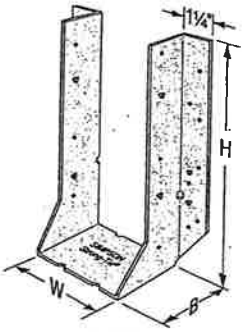
- The HUC is a concealed flange version of the HU. Concealed flange hangers have the header flanges turned in.
- HU is available with header flanges concealed, provided the W dimension is 2⁵⁄₁₆" or greater, at 100% of the table load. Specify HUC.
- HU is available with one header flange concealed when the W dimension is less than 2⁵⁄₁₆" at 100% of the table load.
- For allowable loads on HU products not listed in the table request technical bulletin T-HUHUCTTN *(see page 231 for details)*.

MATERIAL: 14 gauge

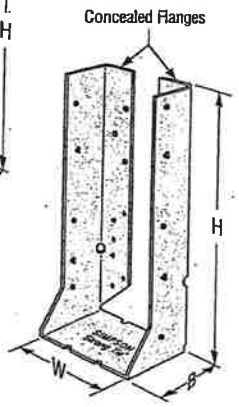
FINISH: Galvanized, ZMAX® and stainless steel available

INSTALLATION:
- These hangers are attached to grouted CMU walls using ¼"x2¾" hex head Simpson Strong-Tie® Titen® screws or for concrete walls using ¼"x1¾" hex head Titen screws. Titen screws are not provided.
- Drill the ⅜" diameter hole to the specified embedment depth plus ½".
- Alternatively, drill the ⅜" diameter hole to the specified embedment depth and blow it clean using compressed air.
- Caution: Oversized holes in the base material will reduce or eliminate the mechanical interlock of the threads with the base material and will reduce the anchor's load capacity.
- The hangers should be installed such that a minimum end and edge distance of 1½" is maintained.
- Provide moisture barrier between beam and wall per jurisdictional requirements.

CODES: See page 13 for Code Reference Key Chart.



HU410

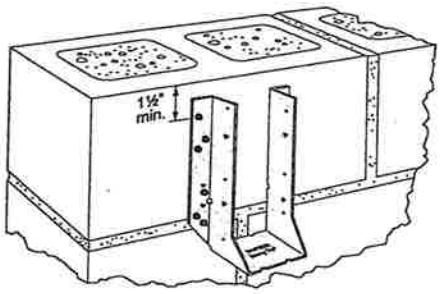


HUC410

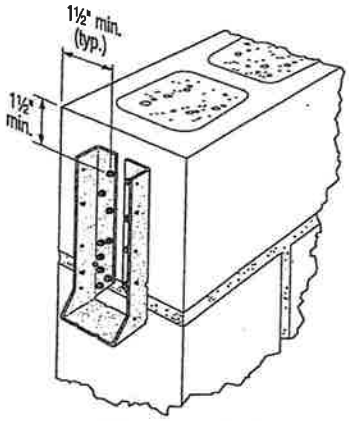
These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

Model No.	Dimensions			Fasteners			Allowable Loads (DF/SP)		Code Ref.
	W	H	B	CMU	Concrete	Joist	Uplift (160)	Down (100/115/125)	
HU26	1⁹⁄₁₆	3¹⁄₁₆	2¼	4-¼x2¾ Titen	4-¼x1¾ Titen	2-10dx1½	290	1545	170
HU28[3]	1⁹⁄₁₆	5¼	2¼	6-¼x2¾ Titen	6-¼x1¾ Titen	4-10dx1½	575	2400	
HU210	1⁹⁄₁₆	7⅛	2¼	8-¼x2¾ Titen	8-¼x1¾ Titen	4-10dx1½	575	2400	
HU46	3⁹⁄₁₆	5⁹⁄₁₆	2½	12-¼x2¾ Titen	12-¼x1¾ Titen	6-10d	1085	3950	
HU26-2	3⅛	5⅜	2½	12-¼x2¾ Titen	12-¼x1¾ Titen	6-10d	1085	3950	
HU48	3⁹⁄₁₆	6¹³⁄₁₆	2½	14-¼x2¾ Titen	14-¼x1¾ Titen	6-10d	1085	4350	
HU28-2	3⅛	7	2½	14-¼x2¾ Titen	14-¼x1¾ Titen	6-10d	1085	4350	
HU410	3⁹⁄₁₆	8⅝	2½	18-¼x2¾ Titen	18-¼x1¾ Titen	10-10d	1810	5085	
HU210-2	3⅛	8¹³⁄₁₆	2½	18-¼x2¾ Titen	18-¼x1¾ Titen	10-10d	1810	5085	
HSUR/L26-2	3⅛	4¹⁵⁄₁₆	2⁷⁄₁₆	12-¼x2¾ Titen	12-¼x1¾ Titen	4-16dx2½	815	2625[5]	

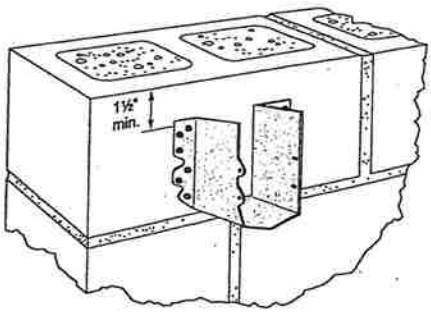
1. Uplift loads have been increased for wind or earthquake loading with no further increase is allowed. Reduce where other loads govern.
2. Minimum concrete strength f'_c shall be 2500 psi. CMU shall have a minimum grout strength of 2500 psi with standard ASTM C90 units and type N or S mortar.
3. The HU28 can be ordered skewed 45° and achieve the same loads.
4. See page 159 for Titen screw information. Use stainless-steel Titen® screws and products in exposed applications. Tabulated loads apply to stainless-steel applications.
5. Noted loads for the HSUR/L shall be 0.8 the table loads for concrete applications.
6. Table allowable loads were determined using tested lowest ultimate/3 or fastener calculation values.
7. **NAILS:** 16dx2½ = 0.162" dia. x 2½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long. See page 22-23 for other nail sizes and information.



HU410 Installed on Masonry Block Sidewall



HUC410 Installed on Masonry Block End Wall



HSUR/L26-2 Installed on Masonry Block Sidewall

HTU *Face Mount Truss Hangers*

SIMPSON Strong-Tie

Alternate Allowable Loads (½" Maximum Hanger Gap)

Model No.	Min. Heel Height	Dimensions W	H	B	Fasteners Carrying Member	Carried Member	DF/SP Allowable Loads Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SPF/HF Allowable Loads Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	Code Ref.
SINGLE 2x SIZES																	
HTU26[8]	3½	1⅜	5⁷⁄₁₆	3½	20-16d	11-10dx1½	670	2735	2735	2735	2735	575	1725	1725	1725	1725	I7, L17, F22
HTU26 (Min)	3⅞	1⅜	5⁷⁄₁₆	3½	20-16d	14-10dx1½	1175	2940	3100	3100	3100	1010	1955	1955	1955	1955	
HTU26 (Max)	5½	1⅜	5⁷⁄₁₆	3½	20-16d	20-10dx1½	1215	2940	3340	3600	3760	1045	2370	2370	2370	2370	
HTU28 (Min)	3⅞	1⅜	7⁷⁄₁₆	3½	26-16d	14-10dx1½	1125	3770	3770	3770	3770	970	2825	2825	2825	2825	
HTU28 (Max)	7¼	1⅜	7⁷⁄₁₆	3½	26-16d	26-10dx1½	1920	3820	4340	4680	5015	1695	3285	3730	3765	3765	
HTU210 (Min)	3⅞	1⅜	9⅛	3½	32-16d	14-10dx1½	1250	3600	3600	3600	3600	1075	2700	2700	2700	2700	
HTU210 (Max)	9¼	1⅜	9⅛	3½	32-16d	32-10dx1½	3255	4705	5020	5020	5020	2800	3765	3765	3765	3765	
DOUBLE 2x SIZES																	
HTU26-2 (Min)	3⅞	3⅛	5⁷⁄₁₆	3½	20-16d	14-10d	1515	2940	3340	3500	3500	1305	2205	2205	2205	2205	I7, L17, F22
HTU26-2 (Max)	5½	3⅛	5⁷⁄₁₆	3½	20-16d	20-10d	1910	2940	3340	3500	3500	1645	2205	2205	2205	2205	
HTU28-2 (Min)	3⅞	3⅛	7⁷⁄₁₆	3½	26-16d	14-10d	1490	3820	3980	3980	3980	1280	2985	2985	2985	2985	
HTU28-2 (Max)	7¼	3⅛	7⁷⁄₁₆	3½	26-16d	26-10d	3035	3820	4340	4680	5555	2610	3285	3730	4025	4165	
HTU210-2 (Min)	3⅞	3⅛	9⅛	3½	32-16d	14-10d	1755	4255	4255	4255	4255	1510	3190	3190	3190	3190	
HTU210-2 (Max)	9¼	3⅛	9⅛	3½	32-16d	32-10d	3855	4705	5345	5760	6470	3315	4045	4595	4855	4855	

See table footnotes on page 136.

HGUQ *Multi-Ply Girder Truss Hangers*

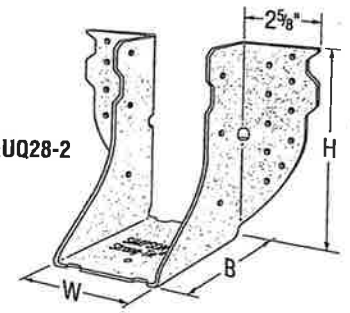
HGUQ hangers provide similar capacities as HGUS double shear hangers, but they use Simpson Strong-Tie® Strong-Drive® SDS screws instead of nails for faster and easier installation. In addition, the SDS screws help transfer the load between the plies of the supporting girder when they penetrate all plies.

MATERIAL: 12 gauge **FINISH:** Galvanized

INSTALLATION:
- Use all specified fasteners. See General Notes.
- Simpson Strong-Tie Strong-Drive SDS screws supplied.
- Not designed for welded or nailer applications.
- The thickness of the supporting girder must be equal to or greater than the screw length. For applications where the length of the supplied screws exceeds the thickness of the supporting girder, 3" or 4½" screws may be substituted for the longer length screws with no load reduction, or a shim block may used as approved by the Designer.

OPTIONS: These hangers cannot be modified.

CODES: See page 13 for Code Reference Key Chart.



Model No.	Ga	Dimensions W	H	B	SDS Fasteners Carrying Member	Carried Member	DF/SP Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SPF/HF Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	Code Ref.
DOUBLE 2x SIZES																	
HGUQ26-2-SDS3	12	3⅛	5⁷⁄₁₆	4	(12) ¼"x3"	(4) ¼"x3"	1635	5040	5565	5565	5565	1175	3630	4005	4005	4005	F22
HGUQ28-2-SDS3	12	3⅛	7⅜	4	(20) ¼"x3"	(6) ¼"x3"	2565	7330	7330	7330	7330	1845	5280	5280	5280	5280	
HGUQ210-2-SDS3	12	3⅛	9⅜	4	(28) ¼"x3"	(8) ¼"x3"	3440	7415	7415	7415	7415	2475	5340	5340	5340	5340	
TRIPLE 2x SIZES																	
HGUQ26-3-SDS4.5	12	4⁵⁄₁₆	5½	4	(12) ¼"x4½"	(4) ¼"x4½"	1635	5040	5165	5165	5165	1175	3630	3720	3720	3720	F22
HGUQ28-3-SDS4.5	12	4⁵⁄₁₆	7¼	4	(20) ¼"x4½"	(6) ¼"x4½"	2565	8400	9175	9175	9175	1845	6050	6605	6605	6605	
HGUQ210-3-SDS4.5	12	4⁵⁄₁₆	9¼	4	(28) ¼"x4½"	(8) ¼"x4½"	3440	9745	9745	9745	9745	2475	7015	7015	7015	7015	
QUADRUPLE 2x SIZES																	
HGUQ26-4-SDS6	12	6⅜	5⁷⁄₁₆	4	(12) ¼"x6"	(4) ¼"x6"	2375	5040	5165	5165	5165	1710	3630	3720	3720	3720	F22
HGUQ28-4-SDS6	12	6⅜	7⅜	4	(20) ¼"x6"	(6) ¼"x6"	4020	8400	8860	8860	8860	2890	6050	6380	6380	6380	
HGUQ210-4-SDS6	12	6⅜	9⅜	4	(28) ¼"x6"	(8) ¼"x6"	4170	10260	10260	10260	10260	3000	7385	7385	7385	7385	
4x SIZES																	
HGUQ46-SDS3	12	3⅜	4⅞	4	(12) ¼"x3"	(4) ¼"x3"	1635	5040	5165	5165	5165	1175	3630	3720	3720	3720	F22
HGUQ48-SDS3	12	3⅜	6⅞	4	(20) ¼"x3"	(6) ¼"x3"	2565	7330	7330	7330	7330	1845	5280	5280	5280	5280	
HGUQ410-SDS3	12	3⅜	8⅞	4	(28) ¼"x3"	(8) ¼"x3"	3440	7415	7415	7415	7415	2475	5340	5340	5340	5340	

1. Uplift loads have been increased for wind or earthquake loading with no further increase allowed. Reduce where other loads govern.
2. Wind (160) is a download rating.
3. Truss chord cross-grain tension may limit allowable loads in accordance with ANSI/TPI 1-2007. Simpson Strong-Tie® Connector Selector™ Software includes the evaluation of cross-grain tension in its hanger allowable loads. For additional information, contact Simpson Strong-Tie.
4. Simpson Strong-Tie Strong-Drive screws are permitted to be installed through metal truss plates as approved by the Truss Designer, provided the requirements of ANSI/TPI 1-2007 Sections 7.5.3.4 and 8.9.2 are met *(pre-drilling required through the plate using a maximum of ⁹⁄₃₂" bit).*
5. SDS screws that penetrate all plies of the supporting girder *(screws must penetrate a minimum of 1" into the last truss ply)* may also be used to transfer the load through all the plies of the supporting girder. When SDS screws do not penetrate all plies of the supporting girder truss, supplemental SDS screws at the hanger locations may be required to transfer the load to the truss plies not penetrated by the face fasteners, as determined by the Designer.
6. The supporting girder truss must have adequate thickness to accommodate the screw length, so that the screw does not protrude out the back of the girder. 3" or 4½" long SDS screws may be substituted for the longer SDS screws with no load reduction.
7. For installations to LSL, use the DF/SP table loads.

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HTU *Face Mount Truss Hangers*

SIMPSON Strong-Tie®

The HTU face mount truss hangers have nail patterns designed specifically for shallow heel heights, so that full allowable loads *(with minimum nailing)* apply to heel heights as low as 3⅞". Minimum and maximum nailing options provide solutions for varying heel heights and end conditions.

Alternate allowable loads are provided for gaps between the end of the truss and the carrying member up to ½" max. to allow for greater construction tolerances *(maximum gap for standard allowable loads is ⅛" per ASTM D1761 and D7147).*

MATERIAL: 16 gauge

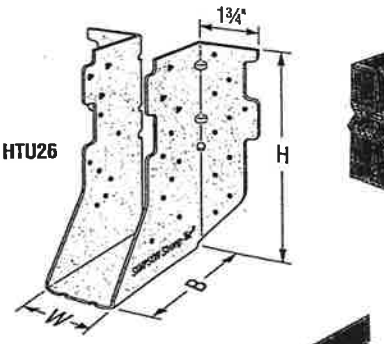
FINISH: Galvanized

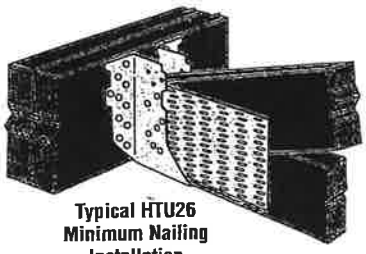
INSTALLATION:

- Use all specified fasteners. See General Notes.
- Can be installed filling round holes only, or filling round and triangle holes for maximum values.
- See alternate installation for applications using the HTU26 on a 2x4 carrying member or HTU28 or HTU210 on a 2x6 carrying member for additional uplift capacity.

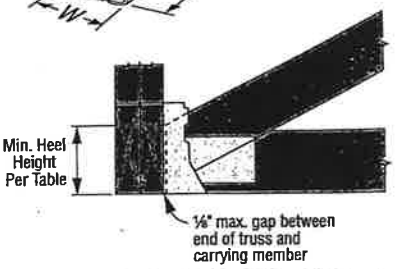
OPTIONS: • See Hanger Options on pages 216-217 for skew options.

CODES: See page 13 for Code Reference Key Chart.

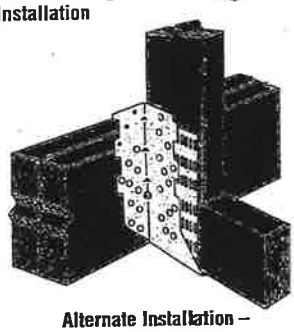




Typical HTU26 Minimum Nailing Installation



HTU Installation for Standard Allowable Loads
(For ½" maximum gap, use Alternate Allowable Loads.)



Alternate Installation – HTU28 installed on 2x6 carrying member
(HTU210 similar)

Standard Allowable Loads (⅛" Maximum Hanger Gap)

Model No.	Min. Heel Height	Dimensions W	H	B	Fasteners Carrying Member	Carried Member	DF/SP Allowable Loads Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SPF/HF Allowable Loads Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	Code Ref.
SINGLE 2x SIZES																	
HTU26	3½	1⅜	5⅞	3½	20-16d	11-10dx1½	730	2940	3045	3045	3045	630	1920	1920	1920	1920	I7, L17, F22
HTU26 (Min)	3⅞	1⅜	5⅞	3½	20-16d	14-10dx1½	1250	2940	3200	3200	3200	1075	2015	2015	2015	2015	
HTU26 (Max)	5½	1⅜	5⅞	3½	20-16d	20-10dx1½	1555	2940	3340	3600	4010	1335	2530	2870	3095	3450	
HTU28 (Min)	3⅞	1⅜	7⅛	3½	26-16d	14-10dx1½	1235	3820	3895	3895	3895	1060	2920	2920	2920	2920	
HTU28 (Max)	7¼	1⅜	7⅛	3½	26-16d	26-10dx1½	2140	3820	4340	4680	5435	1840	3285	3730	4025	4675	
HTU210 (Min)	3⅞	1⅜	9⅛	3½	32-16d	14-10dx1½	1330	4355	4355	4355	4355	1145	3265	3265	3265	3265	
HTU210 (Max)	9¼	1⅜	9⅛	3½	32-16d	32-10dx1½	3315	4705	5345	5760	5995	2850	4045	4595	4955	5155	
DOUBLE 2x SIZES																	
HTU26-2 (Min)	3⅞	3⅛	5⅞	3½	20-16d	14-10d	1515	2940	3340	3600	3910	1305	2465	2465	2465	2465	I7, L17, F22
HTU26-2 (Max)	5½	3⅛	5⅞	3½	20-16d	20-10d	2175	2940	3340	3600	4485	1870	2530	2870	3095	3855	
HTU28-2 (Min)	3⅞	3⅛	7⅛	3½	26-16d	14-10d	1530	3820	4310	4310	4310	1315	3235	3235	3235	3235	
HTU28-2 (Max)	7¼	3⅛	7⅛	3½	26-16d	26-10d	3485	3820	4340	4680	5850	2995	3285	3730	4025	5030	
HTU210-2 (Min)	3⅞	3⅛	9⅛	3½	32-16d	14-10d	1755	4705	4815	4815	4815	1510	3610	3610	3610	3610	
HTU210-2 (Max)	9¼	3⅛	9⅛	3½	32-16d	32-10d	4110	4705	5345	5760	7200	3535	4045	4595	4955	6190	

1. The maximum hanger gap is measured between the joist *(or truss)* end and the carrying member.
2. Minimum heel heights required for full table loads are based on a minimum 2/12 pitch.
3. Uplift has been increased for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
4. Wind (160) is a download rating.
5. For hanger gaps between ⅛" and ½" use the Alternate Allowable Loads.
6. Truss chord cross-grain tension may limit allowable loads in accordance with ANSI/TPI 1-2007. Simpson Strong-Tie® Connector Selector™ Software includes the evaluation of cross-grain tension in its hanger allowable loads. For additional information, contact Simpson Strong-Tie.
7. Loads shown are based on a minimum 2-ply 2x carrying member. For single 2x carrying members, use N10 (10dx1½") nails into the header and reduce the allowable download to 0.70 of the table value. The allowable uplift is 100% of the table load.
8. **NAILS:** 16d = 0.162" dia. x 3½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long. See page 22-23 for other nail sizes and information.

Alternate Installation Table for 2x4 and 2x6 Carrying Member

Model No.	Min. Heel Height (in.)	Minimum Carrying Member	Fasteners Carrying Member	Carried Member	DF/SP Allowable Loads Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SPF/HF Allowable Loads Uplift (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	Code Ref.
HTU26 (Min)	3⅞	2-2x4	10-16d	14-10dx1½	925	1470	1670	1800	2040	795	1265	1435	1550	1755	I7, L17, F22
HTU26 (Max)	5½	2-2x4	10-16d	20-10dx1½	1310	1470	1670	1800	2250	1125	1265	1435	1550	1935	
HTU28 (Max)	7¼	2-2x6	20-16d	26-10dx1½	1970	2940	3340	3600	3905	1695	2530	2870	3095	3360	
HTU210 (Max)	9¼	2-2x6	20-16d	32-10dx1½	2760	2940	3340	3600	3905	2375	2530	2870	3095	3360	

1. See table above for dimensions and additional footnotes.
2. Maximum hanger gap for the alternate installation is ½".
3. Wind (160) is a download rating.
4. **NAILS:** 16d = 0.162" dia. x 3½" long, 10dx1½ = 0.148" dia. x 1½" long. See page 22-23 for other nail sizes and information.

FACE MOUNT HANGERS

SIMPSON Strong-Tie

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

These products are approved for installation with the Strong-Drive SD Structural-Connector screw. See page 27 for more information.

Model No.	Min. Heel Height	Ga	Dimensions W	H	B	Fasteners Carrying Member	Carried Member	DF/SP Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SPF/HF Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	Code Ref.
DOUBLE 2x SIZES																		
LUS24-2	2¼	18	3⅛	3⅛	2	4-16d	2-16d	440	800	910	985	1250	380	680	780	845	1070	I7, F6, L17
LUS26-2	4⁹⁄₁₆	18	3⅛	4⅞	2	4-16d	4-16d	1165	1030	1180	1280	1625	1000	880	1010	1090	1385	
HHUS26-2	4⁹⁄₁₆	14	3⁵⁄₁₆	5⅜	3	14-16d	6-16d	1550	2785	3155	3405	4265	1335	2390	2710	2925	3665	I7, L17, F23
HGUS26-2	4⁹⁄₁₆	12	3⁵⁄₁₆	5⁷⁄₁₆	4	20-16d	8-16d	2155	4355	4875	5230	5575	1855	3750	4200	4500	4795	
LUS28-2	4⁹⁄₁₆	18	3⅛	7	2	6-16d	4-16d	1165	1315	1500	1625	2060	1000	1125	1285	1390	1765	I7, F6, L17
HHUS28-2	6⁹⁄₁₆	14	3⁵⁄₁₆	7¼	3	22-16d	8-16d	2000	4210	4770	5140	6440	1720	3615	4095	4415	5375	
HGUS28-2	6⁹⁄₁₆	12	3⁵⁄₁₆	7⁹⁄₁₆	4	36-16d	12-16d	3235	7460	7460	7460	7460	2785	6415	6415	6415	6415	I7, L17, F23
LUS210-2	6⁷⁄₁₆	18	3⅛	9	2	8-16d	6-16d	1745	1830	2090	2265	2870	1500	1565	1785	1935	2455	I7, F6, L17
HHUS210-2	8⅜	14	3⁵⁄₁₆	8⅞	3	30-16d	10-16d	4000	5635	6380	6880	7165	3525	4835	5270	5380	5765	I7, L17, F23
HGUS210-2	8⁹⁄₁₆	12	3⁵⁄₁₆	9⁹⁄₁₆	4	46-16d	16-16d	4095	9100	9100	9100	9100	3525	7465	7730	7825	7825	
TRIPLE 2x SIZES																		
HGUS26-3	4¹³⁄₁₆	12	4¹⁵⁄₁₆	5½	4	20-16d	8-16d	2155	4355	4875	5230	5575	1855	3750	4200	4500	4795	I7, L17, F23
HGUS28-3	6¹³⁄₁₆	12	4¹⁵⁄₁₆	7¼	4	36-16d	12-16d	3235	7460	7460	7460	7460	2785	6415	6415	6415	6415	
HGUS210-3	8¹³⁄₁₆	12	4¹⁵⁄₁₆	9¼	4	46-16d	16-16d	4095	9100	9100	9100	9100	3525	7825	7825	7825	7825	
HGUS212-3	10⅝	12	4¹⁵⁄₁₆	10¾	4	56-16d	20-16d	5045	9600	9600	9600	9600	4335	8255	8255	8255	8255	
HGUS214-3	12⅝	12	4¹⁵⁄₁₆	12¾	4	66-16d	22-16d	5515	10100	10100	10100	10100	4745	8685	8685	8685	8685	
QUADRUPLE 2x SIZES																		
HGUS26-4	5½	12	6⁹⁄₁₆	5⁷⁄₁₆	4	20-16d	8-16d	2155	4355	4875	5230	5575	1855	3750	4200	4500	4795	I7, L17, F23
HGUS28-4	7¼	12	6⁹⁄₁₆	7⁹⁄₁₆	4	36-16d	12-16d	3235	7460	7460	7460	7460	2785	6415	6415	6415	6415	
HGUS210-4	9¼	12	6⁹⁄₁₆	9⁹⁄₁₆	4	46-16d	16-16d	4095	9100	9100	9100	9100	3525	7825	7825	7825	7825	
HGUS212-4	10⅝	12	6⁹⁄₁₆	10⅝	4	56-16d	20-16d	5045	9600	9600	9600	9600	4335	8255	8255	8255	8255	
HGUS214-4	12⅝	12	6⁹⁄₁₆	12⅝	4	66-16d	22-16d	5515	10100	10100	10100	10100	4745	8685	8685	8685	8685	
4x SIZES																		
LUS46	4⅜	18	3⁹⁄₁₆	4¾	2	4-16d	4-16d	1165	1030	1180	1280	1625	1000	880	1010	1090	1385	I7, F6, L17
HGUS46	4⅞	12	3⅝	4⁷⁄₁₆	4	20-16d	8-16d	2155	4355	4875	5230	5575	1855	3750	4200	4500	4795	
HHUS46	4⁵⁄₁₆	14	3⅝	5⁹⁄₁₆	3	14-16d	6-16d	1550	2790	3160	3410	4265	1335	2390	2710	2925	3665	I7, L17, F23
LUS48	4⅜	18	3⁹⁄₁₆	6¾	2	6-16d	4-16d	1165	1315	1500	1625	2060	1000	1125	1285	1390	1765	I7, F6, L17
HUS48	6⅛	14	3⁹⁄₁₆	7	2	6-16d	6-16d	1550	1595	1815	1960	2470	1550	1365	1555	1680	2115	
HHUS48	6½	14	3⅝	7⅛	3	22-16d	8-16d	2000	4215	4770	5150	6440	1720	3615	4095	4415	5535	I7, L17, F23
HGUS48	6⁷⁄₁₆	12	3⅝	7⁷⁄₁₆	4	36-16d	12-16d	3235	7460	7460	7460	7460	2785	6415	6415	6415	6415	
LUS410	6¼	18	3⁹⁄₁₆	8¾	2	8-16d	6-16d	1745	1830	2090	2265	2870	1500	1565	1785	1935	2455	I7, F6, L17
HHUS410	8⅜	14	3⅝	9	3	30-16d	10-16d	3745	5640	6385	6890	7165	3440	4835	5480	5910	6165	
HGUS410	8⁷⁄₁₆	12	3⅝	9⅛	4	46-16d	16-16d	4095	9100	9100	9100	9100	3525	7825	7825	7825	7825	I7, L17, F23
HGUS412	10⁷⁄₁₆	12	3⅝	10⁷⁄₁₆	4	56-16d	20-16d	5045	9600	9600	9600	9600	4335	8255	8255	8255	8255	
HGUS414	11⁷⁄₁₆	12	3⅝	12⅛	4	66-16d	22-16d	5515	10100	10100	10100	10100	4745	8685	8685	8685	8685	I7, L17

1. Uplift loads have been increased 60% for wind or earthquake loading with no further increase allowed. For normal loading applications such as cantilever construction - refer to Simpson Strong-Tie® Connector Selector™ software or conservatively divide the uplift load by 1.6.
2. Wind (160) is a download rating.
3. Minimum heel height shown is required to achieve full table loads. For less than minimum heel height, see technical bulletin T-REDHEEL *(see page 232 for details)*.
4. Truss chord cross-grain tension may limit allowable loads in accordance with ANSI/TPI 1-2007. Simpson Strong-Tie® Connector Selector™ Software includes the evaluation of cross-grain tension in its hanger allowable loads. For additional information, contact Simpson Strong-Tie.
5. Loads shown are based on minimum of 2-ply 2x carrying member. With 3x carrying members, use 16dx2½" nails into the header and 16d commons into the joist with no load reduction. With single 2x carrying members, use 10dx1½" nails into the header and 10d commons into the joist, and reduce the load to 0.64 of the table value.
6. **NAILS:** 16d = 0.162" dia. x 3½" long. See page 22-23 for other nail sizes and information.

LUS/MUS/HUS/HHUS/HGUS/HUSC *Double Shear Joist Hangers*

SIMPSON Strong-Tie

VALUE ENGINEERED

This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

All hangers in this series have double shear nailing – an innovation that distributes the load through two points on each joist nail for greater strength. This allows for fewer nails, faster installation, and the use of all common nails for the same connection.

Double shear hangers range from the light capacity LUS hangers to the highest capacity HGUS hangers. For medium load truss applications, the MUS offers a lower cost alternative and easier installation than the HUS or THA hangers, while providing greater load capacity and bearing than the LUS.

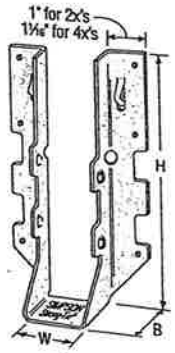
MATERIAL: See tables below and on page 135.

FINISH: Galvanized. Some products available in stainless steel or ZMAX® coating; see Corrosion Information, page 14-15.

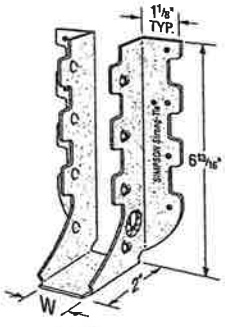
INSTALLATION • Use all specified fasteners. See General Notes.
- Nails must be driven at an angle through the joist or truss into the header to achieve the table loads.
- Not designed for welded or nailer applications.

OPTIONS: • LUS and MUS hangers cannot be modified.
- HUS hangers available with the header flanges turned in for 2-2x (3⅛") and 4x only, with no load reduction. See HUSC Concealed Flange illustration.
- Concealed flanges are not available for HGUS and HHUS.
- See Hanger Options, page 216, for sloped and/or skewed HHUS models.
- Other sizes available; consult your Simpson Strong-Tie representative.

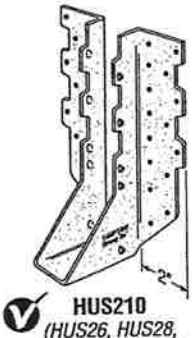
CODES: See page 13 for Code Reference Key Chart.



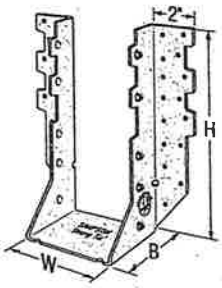
LUS28



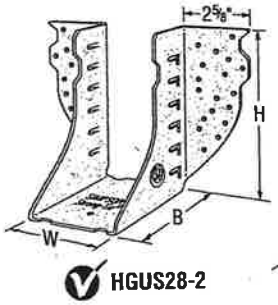
MUS28



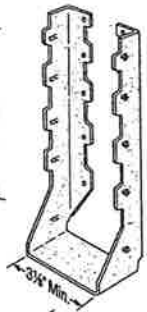
HUS210 *(HUS26, HUS28, and HHUS similar)*



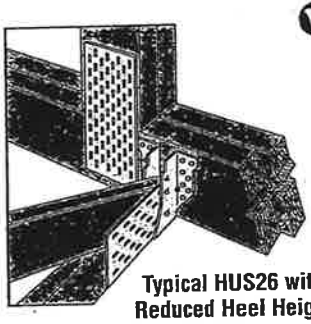
HHUS210-2



HGUS28-2



HUSC Concealed Flanges *(not available for HHUS, HGUS and HUS2x)*


(Truss Designer to provide fastener quantity for connecting multiple members together)

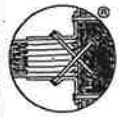
Typical HUS26 with Reduced Heel Height

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

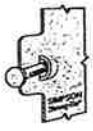
These products are approved for installation with the Strong-Drive SD Structural-Connector screw. See page 27 for more information.

Model No.	Min. Heel Height	Ga	Dimensions W	Dimensions H	Dimensions B	Fasteners Carrying Member	Fasteners Carried Member
SINGLE 2x SIZES							
LUS24	2⅝	18	1⅜16	3⅛	1¾	4-10d	2-10d
LUS26	4¼	18	1⅜16	4¾	1¾	4-10d	4-10d
MUS26	4¹⁵⁄16	18	1⅜16	5⅜16	2	6-10d	6-10d
HUS26	4⅝16	16	1⅝	5⅜	3	14-16d	6-16d
HGUS26	4⅝16	12	1⅝	5⅜	5	20-16d	8-16d
LUS28	4⅝16	18	1⅜16	6⅝	1¾	6-10d	4-10d
MUS28	6⅝16	18	1⅜16	6¹³⁄16	2	8-10d	8-10d
HUS28	6½	16	1⅝	7	3	22-16d	8-16d
HGUS28	6⅝16	12	1⅝	7⅛	5	36-16d	12-16d
LUS210	4¼	18	1⅜16	7¹³⁄16	1¾	8-10d	4-10d
HUS210	8⅜	16	1⅝	9	3	30-16d	10-16d

1. See table on page 135 for allowable loads.


Double Shear Nailing Top View


Double Shear Nailing Side View Do not bend tab


Dome Double Shear Nailing Side View *(available on some models)*

U.S. Patent 5,603,580

Model No.	DF Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SP Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	SPF/HF Allowable Loads Uplift[1] (160)	Floor (100)	Snow (115)	Roof (125)	Wind (160)	Code Ref.
SINGLE 2x SIZES																
LUS24	490	670	765	825	1045	490	725	830	895	1135	420	575	655	705	895	
LUS26	1165	865	990	1070	1355	1165	940	1075	1165	1475	1005	740	845	915	1160	I7, F6, L17
MUS26	1090	1295	1480	1605	1825	1090	1410	1610	1745	1825	940	1110	1265	1370	1570	
HUS26	1550	2720	3095	3335	3335	1550	2950	3335	3335	3335	1335	2330	2650	2820	2865	
HGUS26	1765	4360	4885	5230	5390	1765	4725	5290	5390	5390	1520	3750	4200	4500	4635	L17
LUS28	1165	1100	1255	1360	1725	1165	1200	1365	1480	1835	1005	940	1075	1165	1475	
MUS28	1555	1730	1975	2140	2645	1555	1880	2150	2330	2645	1335	1475	1690	1830	2275	I7, F6, L17
HUS28	2000	3965	4120	4220	4335	2000	3790	3960	4070	4335	1720	2905	3035	3125	3435	
HGUS28	3015	6745	6970	7125	7275	3015	6460	6705	6870	7275	2595	4960	5160	5290	5745	L17
LUS210	1165	1340	1525	1650	2090	1165	1445	1660	1795	2270	1005	1145	1305	1415	1745	
HUS210	3000	4255	4445	4575	5020	3000	4105	4310	4450	4930	2580	3150	3315	3425	3815	I7, F6, L17

Note: For dimensions and fastener information, see table above. See table footnotes on page 135.

FACE MOUNT HANGERS – STRUCTURAL COMPOSITE LUMBER

SIMPSON Strong-Tie

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

CODES: See page 13 for Code Reference Key Chart.

Actual Joist Size	Model No.	Ga	Dimensions W	H	B	Min/ Max	Fasteners Face	Joist	Allowable Loads DF/SP Species Header Uplift (160)	Floor (100)	Snow (115)	Roof (125)	SPF/HF Species Header Floor (100)	Snow (115)	Roof (125)	Code Ref.
1¾ x 5½	HU1.81/5	14	1 3/16	5 3/8	2½	Min	12-16d	4-10dx1½	610	1785	2015	2165	1540	1735	1865	I9, L12, F8
			1 3/16	5 3/8	2½	Max	16-16d	6-10dx1½	915	2380	2685	2890	2050	2315	2490	
1¾ x 7¼	HU7	14	1 3/16	6 11/16	2½	Min	12-16d	4-10dx1½	610	1785	2015	2165	1540	1735	1865	I9, F8, L12
			1 3/16	6 11/16	2½	Max	16-16d	8-10dx1½	1515	2380	2685	2890	2050	2315	2490	
1¾ x 9½	HUS1.81/10	16	1 3/16	8 7/8	3	—	30-16d	10-16d	3000	5135	5295	5400	4705	5105	5195	I9, F23
	HU9	14	1 3/16	9 5/16	2½	Min	18-16d	6-10dx1½	915	2680	3020	3250	2305	2605	2800	I9, F8, L12
			1 3/16	9 5/16	2½	Max	24-16d	10-10dx1½	1895	3570	4030	4335	3075	3470	3735	
	HUCQ1.81/9-SDS		1 3/16	9	3	—	8-SDS ¼"x1¾"	4-SDS ¼"x1¾"	1505	2000	2300	2500	1440	1655	1800	I9, F23
1¾ x 11¼ - 11⅞	HUS1.81/10	16	1 3/16	8 7/8	3	—	30-16d	10-16d	3000	5135	5295	5400	4705	5105	5195	I9, F23
	HU11	14	1 3/16	11 1/16	2½	Min	22-16d	6-10dx1½	915	3275	3695	3970	2820	3180	3425	I9, L12, F8
			1 3/16	11 1/16	2½	Max	30-16d	10-10dx1½	1895	4465	4705	4810	3845	4340	4600	
	HUCQ1.81/11-SDS		1 3/16	11	3	—	10-SDS ¼"x1¾"	4-SDS ¼"x1¾"	1505	2500	2875	3125	1800	2070	2250	I9, F23
1¾ x 14	HUS1.81/10	16	1 3/16	8 7/8	3	—	30-16d	10-16d	3000	5135	5295	5400	4705	5105	5195	I9, F23
	U14		1 3/16	10¼	2	—	14-16d	6-10dx1½	1110	2015	2285	2465	1735	1965	2120	I9, F8, L12
	HU14	14	1 3/16	13 11/16	2½	Min	28-16d	8-10dx1½	1515	4165	4420	4505	3590	4050	4335	
			1 3/16	13 11/16	2½	Max	36-16d	14-10dx1½	2015	5055	5275	5420	4615	5000	5130	
	HUCQ1.81/11-SDS		1 3/16	11	3	—	10-SDS ¼"x1¾"	4-SDS ¼"x1¾"	1505	2500	2875	3125	1800	2070	2250	I9, F23
3½ x 7¼	HU48/HUC48	14	3 3/16	6 13/16	2½	Min	10-16d	4-10d	760	1490	1680	1805	1280	1445	1555	I9, L17, F6
			3 3/16	6 13/16	2½	Max	14-16d	6-10d	1135	2085	2350	2530	1795	2025	2180	
	HUS48		3 3/16	6 15/16	2	—	6-16d	6-16d	1550	1595	1815	1960	1365	1555	1680	I9, F8, L12
	HGUS46	12	3 5/8	4 7/16	4	—	20-16d	8-16d	2155	4360	4885	5230	3750	4200	4500	I9, F23
	HHUS48	14	3 5/8	7⅛	3	—	22-16d	8-16d	2000	4210	4770	5140	3615	4095	4415	I9, F8, L12
	HGUS48	12	3 5/8	7 1/16	4	—	36-16d	12-16d	3235	7460	7460	7460	6415	6415	6415	I9, F23
3½ x 9¼ - 9½	U410	16	3 3/16	8⅜	2	—	14-16d	6-10d	1110	2015	2285	2465	1735	1965	2120	I9, F8, L12
	HUS410	14	3 3/16	8 15/16	2	—	8-16d	8-16d	2990	2125	2420	2615	1820	2070	2240	
	HU410/HUC410		3 3/16	8⅝	2½	Min	14-16d	6-10d	1135	2085	2350	2530	1795	2025	2180	
			3 3/16	8⅝	2½	Max	18-16d	10-10d	1895	2680	3020	3250	2305	2605	2800	
	HHUS410		3 5/8	9	3	—	30-16d	10-16d	3735	5635	6380	6880	4835	5480	5910	
	HUCQ410-SDS		3 3/16	9	3	—	12-SDS ¼"x2½"	6-SDS ¼"x2½"	2510	4680	4955	4955	3370	3570	3570	I9, F23
	HGUS48	12	3 5/8	7 1/16	4	—	36-16d	12-16d	3235	7460	7460	7460	6415	6415	6415	
	HGUS410		3 5/8	9 1/16	4	—	46-16d	16-16d	4095	9100	9100	9100	7825	7825	7825	
3½ x 11¼ - 11⅞	U410	16	3 3/16	8⅜	2	—	14-16d	6-10d	1110	2015	2285	2465	1735	1965	2120	I9, F8, L12
	HUS412	14	3 3/16	10½	2	—	10-16d	10-16d	3635	2660	3025	3265	2275	2590	2795	
	HU412/HUC412		3 3/16	10 5/16	2½	Min	16-16d	6-10d	1135	2380	2685	2890	2050	2315	2490	
			3 3/16	10 5/16	2½	Max	22-16d	10-10d	1895	3275	3695	3970	2820	3180	3425	
	HHUS410		3 5/8	9	3	—	30-16d	10-16d	3735	5635	6380	6880	4835	5480	5910	
	HUCQ412-SDS		3 3/16	11	3	—	14-SDS ¼"x2½"	6-SDS ¼"x2½"	2510	5460	5560	5560	3930	4000	4000	I9, F23
	HGUS48	12	3 5/8	7 1/16	4	—	36-16d	12-16d	3235	7460	7460	7460	6415	6415	6415	
	HGUS410		3 5/8	9 1/16	4	—	46-16d	16-16d	4095	9100	9100	9100	7825	7825	7825	
	HGUS412		3 5/8	10 7/16	4	—	56-16d	20-16d	5045	9600	9600	9600	8255	8255	8255	
3½ x 14	U414	16	3 3/16	10	2	—	16-16d	6-10d	1110	2305	2615	2820	1980	2245	2425	I9, F8, L12
	HU416/HUC416	14	3 3/16	13⅜	2½	Min	20-16d	8-10d	1515	2975	3360	3610	2565	2895	3110	
			3 3/16	13⅜	2½	Max	26-16d	12-10d	2015	3870	4365	4695	3330	3760	4045	
	HHUS410		3 5/8	9 1/16	3	—	30-16d	10-16d	3735	5635	6380	6880	4835	5480	5910	
	HGUS410	12	3 5/8	9	4	—	46-16d	16-16d	4095	9100	9100	9100	7825	7825	7825	I9, F23
	HGUS414		3 5/8	12 7/16	4	—	66-16d	22-16d	5515	10100	10100	10100	8685	8685	8685	
	HUCQ412-SDS	14	3 3/16	11	3	—	14-SDS ¼"x2½"	6-SDS ¼"x2½"	2510	5460	5560	5560	3930	4000	4000	
3½ x 16	HU416/HUC416	14	3 3/16	13⅜	2½	Min	20-16d	8-10d	1515	2975	3360	3610	2565	2895	3110	I9, F8, L12
			3 3/16	13⅜	2½	Max	26-16d	12-10d	2015	3870	4365	4695	3330	3760	4045	
	HGUS410	12	3 5/8	9 1/16	4	—	46-16d	16-16d	4095	9100	9100	9100	7825	7825	7825	I9, F23
	HGUS412		3 5/8	10 7/16	4	—	56-16d	20-16d	5045	9600	9600	9600	8255	8255	8255	
	HGUS414		3 5/8	12 7/16	4	—	66-16d	22-16d	5515	10100	10100	10100	8685	8685	8685	
	HUCQ412-SDS	14	3 3/16	11	3	—	14-SDS ¼"x2½"	6-SDS ¼"x2½"	2510	5460	5560	5560	3930	4000	4000	

1. Uplift loads based on DF/SP lumber and have been increased for wind or earthquake loading with no further increase allowed. Reduce where other loads govern. For SPF/HF, use 0.86 x DF/SP Uplift Load for products requiring nails and 0.72 x DF/SP Uplift Load for products requiring screws.
2. 10d commons or 16d sinkers may be used instead of the specified 16d at 0.84 of the table load value.
3. 16d sinkers may be used instead of the specified 10d commons with no load reduction.
4. MIN nailing quantity and load values—fill all round holes; MAX nailing quantity and load values—fill all round and triangle holes.
5. Hangers sorted in order of recommended selection for best overall performance and installation value.
6. Allowable downloads are based on a joist bearing capacity of 750 psi.
7. **NAILS:** 16d = 0.162" dia. x 3½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long. See page 22-23 for other nail sizes and information.

THA/THAC/THAR/L *Adjustable Truss Hangers*

SIMPSON Strong-Tie

VALUE ENGINEERED

This product is preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

The THA series' extra long straps allow full code nailing and can be field-formed to give top flange hanger convenience.

Designed for 4x2 floor trusses and 4x beams, the THAR/L422 has a standard skew of 45°. Straps must be bent for top flange hanger installation. PAN nailing helps eliminate splitting of 4x2 truss bottom chords.

MATERIAL: See table **FINISH:** Galvanized. Some products available in ZMAX® coating; see Corrosion Information, page 14-15.

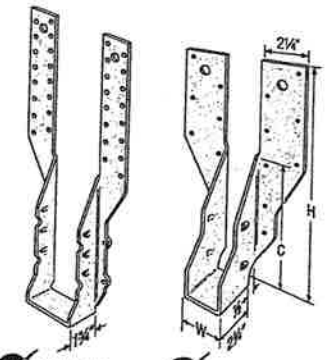
INSTALLATION: • Use all specified fasteners. See General Notes.

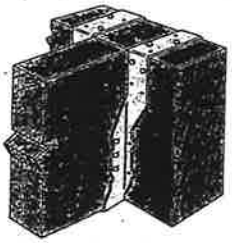
The following installation methods may be used:

- **Top Flange Installation**—The straps must be field formed over the header – see table for minimum top flange requirements. Install top and face nails according to the table. Top nails shall not be within ¼" from the edge of the top flange members.
  For the THA29, nails used for joist attachment must be driven at an angle so that they penetrate through the corner of the joist and into the header. For all other top flange installations, straighten the double shear nailing tabs and install the nails straight into the joist.
- **Face Mount Installation**—Install all face nails according to the table. Not all nail holes will be filled on all models. On models where there are more nail holes than required, the lowest 4 face holes must be filled. Nails used for the joist attachment must be driven at an angle so that they penetrate through the corner of the joist into the header.
- **Alternate Installation**—The THA 4x hangers may be installed in a top flange configuration using the tabulated fasteners for face mount installation and achieve the face mount installation loads. Install the tabulated face nails into the face and top of the carrying member. Nails used for the joist attachment must be driven at an angle so that they penetrate through the corner of the joist into the header.
- Uplift—Lowest face nails must be filled to achieve uplift loads.

OPTIONS: • THA hangers available with the header flanges turned in for 3⅝" *(except THA413)* and larger, with no load reduction – order THAC hanger.

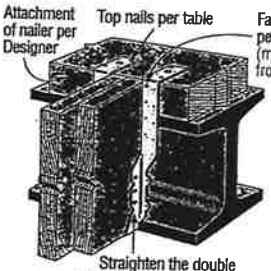
CODES: See page 13 for Code Reference Key Chart.



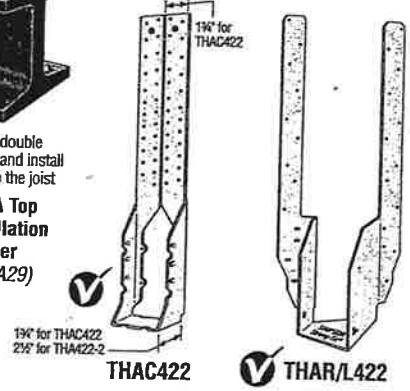


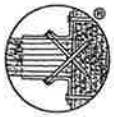
Typical THA Top Flange Installation

Typical THA29 Face Mount Installation

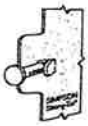


Typical THA Top Flange Installation on a Nailer *(except THA29)*

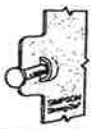




Double Shear Nailing Top View



Double Shear Nailing Side View
Do not bend tab unless otherwise noted



Dome Double Shear Nailing Side View *(available on some models)*
U.S. Patent 5,603,580

These products are available with additional corrosion protection. Additional products on this page may also be available with this option, check with Simpson Strong-Tie for details.

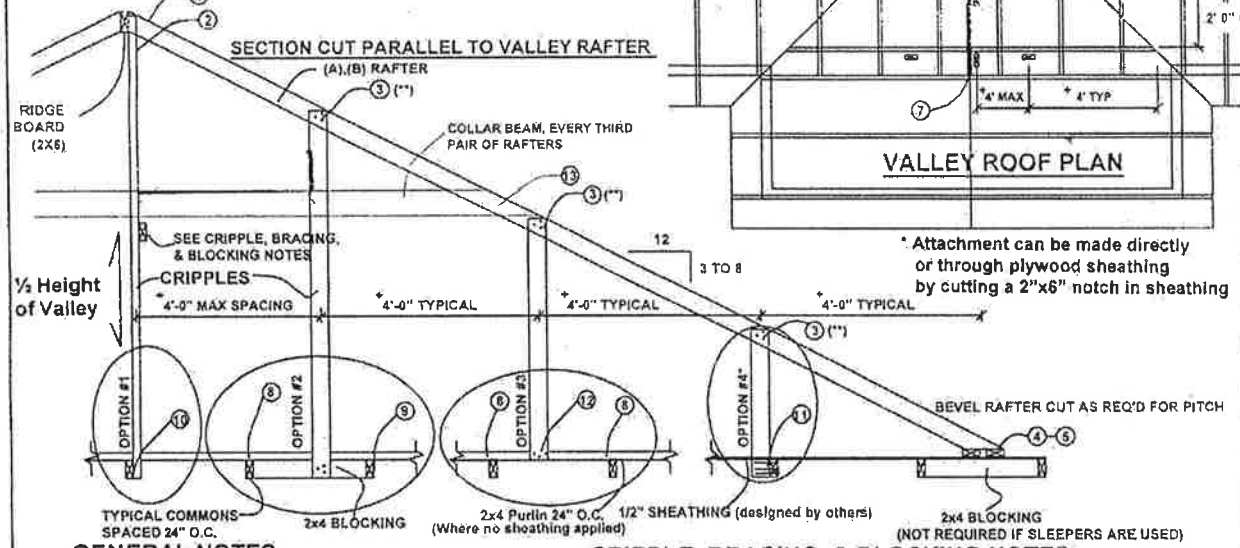
Minimum Carried Member	Model No.	Ga	Dimensions W	H	C	Min.[7] Top Flange	Min. Header Depth	Fasteners[1] Carrying Member Top	Carrying Member Face	Carried Member Straight	Carried Member Slant	DF/SP Allowable Loads Uplift[2] (160)	DF/SP Floor (100)	DF/SP Snow (115)	DF/SP Roof (125)	SPF/HF Allowable Loads Uplift[2] (160)	SPF/HF Floor (100)	SPF/HF Snow (115)	SPF/HF Roof (125)	Code Ref.
TOP FLANGE INSTALLATION																				
2x4	THA29	18	1⅜	9¹¹⁄₁₆	5⅛	2⁷⁄₁₆	—	4-10d	4-10d	—	4-10d	560	2260	2310	2350	480	1740	1785	1815	
2x6	THA213	18	1⅜	13⁵⁄₁₆	5½	1½	—	4-10d	2-10d	4-10dx1½	—	—	1615	1615	1615	—	1280	1280	1280	
2x6	THA218	18	1⅜	17⅜	5½	2	—	4-10d	2-10d	4-10dx1½	—	—	1615	1615	1615	—	1280	1280	1280	
(2) 2x10	THA218-2	16	3⅛	17¹¹⁄₁₆	8	2	—	4-16d	2-16d	6-10d	—	—	2245	2245	2245	—	1935	1935	1935	I8, F7, L15
(2) 2x10	THA222-2	16	3⅛	22⅜	8	2	—	4-16d	2-16d	6-10d	—	—	2245	2245	2245	—	1935	1935	1935	
4x6	THA413	18	3⅝	13⁵⁄₁₆	4½	1½	—	4-10d	2-10d	4-10d	—	—	1615	1615	1615	—	1280	1280	1280	
4x10	THA418	16	3⅝	17½	7⅛	2	—	4-16d	2-16d	6-10d	—	—	2245	2245	2245	—	1935	1935	1935	
4x10	THA422	16	3⅝	22	7⅛	2	—	4-16d	2-16d	6-10d	—	—	2245	2245	2245	—	1935	1935	1935	
4x10	THA426	14	3⅝	26	7⅛	2	—	4-16d	4-16d	6-16d	—	—	2435	2435	2435	—	2095	2095	2095	F23
4x10	THAR/L422	16	3⅝	22⅝	8	2½	—	4-10d	2-10d	1-10d	2-10dx1½	—	1090[4]	1090[4]	1090[4]	—	915[4]	915[4]	915[4]	I8, F7, L15
4x10	THAR/L422	16	3⅝	22⅝	8	2½	—	4-10d	8-10d	1-10d	2-10dx1½	310	1675	1675	1675	260	1405	1405	1405	
(2) 4x10	THA422-2	14	7¼	22¹¹⁄₁₆	9¾	2	—	4-16d	4-16d	6-16d	—	—	3330	3330	3330	—	2865	2865	2865	170
(2) 4x10	THA426-2	14	7¼	26⅛	9¾	2	—	4-16d	4-16d	6-16d	—	—	3330	3330	3330	—	2865	2865	2865	
FACE MOUNT INSTALLATION																				
2x4	THA29	18	1⅜	9¹¹⁄₁₆	5⅛	—	9¹¹⁄₁₆	—	16-10d	—	4-10d	560	2125	2310	2350	480	1740	1785	1815	
2x6	THA213	18	1⅜	13⁵⁄₁₆	5½	—	13⁵⁄₁₆	—	14-10d	—	4-10d	1170	1795	1840	1870	780	1385	1425	1450	
2x6	THA218	18	1⅜	17⅜	5½	—	17⅜	—	18-10d	—	4-10d	1170	1795	1840	1870	780	1385	1425	1450	
(2) 2x10	THA218-2	16	3⅛	17¹¹⁄₁₆	8	—	14⅛	—	22-16d	—	6-16d	1855	3695	3695	3695	1595	3185	3185	3185	I8, F7, L15
(2) 2x10	THA222-2	16	3⅛	22⅜	8	—	14⅛	—	22-16d	—	6-16d	1855	3695	3695	3695	1595	3185	3185	3185	
4x6	THA413	18	3⅝	13⁵⁄₁₆	4½	—	13⅜	—	14-10d	—	4-10d	1170	1940	2235	2400	780	1660	1910	2075	
4x10	THA418	16	3⅝	17½	7⅛	—	14⅛	—	22-16d	—	6-16d	1855	3695	3695	3695	1595	3185	3185	3185	
4x10	THA422	16	3⅝	22	7⅛	—	14⅛	—	22-16d	—	6-16d	1855	3695	3695	3695	1595	3185	3185	3185	
4x10	THA426	14	3⅝	26	7⅛	—	16⅛	—	30-16d	—	6-16d	1855	4550	4550	4550	1595	3915	3915	3915	F23
(2) 4x10	THA422-2	14	7¼	22¹¹⁄₁₆	9¾	—	16⅜	—	30-16d	—	6-16d	1855	5160	5520	5520	1595	4440	4745	4745	
(2) 4x10	THA426-2	14	7¼	26⅛	9¾	—	18	—	38-16d	—	6-16d	1855	5520	5520	5520	1595	4440	4745	4745	170

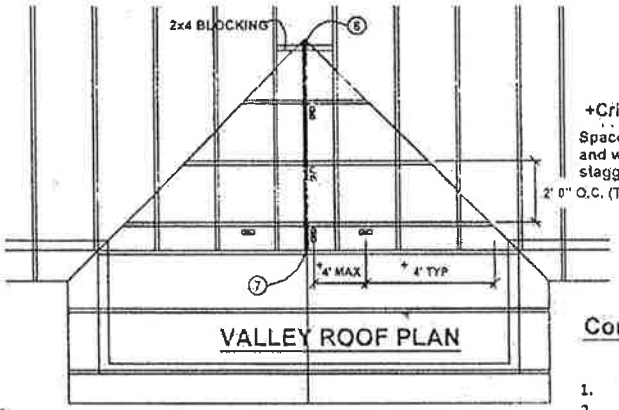
1. 16d sinkers may be used to replace 16d commons at 0.85 of table load.
2. Uplift has been increased for wind or earthquake loading with no further increase allowed; reduce where other loads govern.
3. Roof loads are 125% of floor loads unless limited by other criteria.
4. THAR/L422 with 4-10d top nails and 2-10d face nails: When the hanger height is between 9" to 12", the allowable download is 1440 lbs. for DFL and 1210 lbs. for SPF. No further increase allowed.
5. For top flange installation on a nailer *(see detail above)*, install joist nails straight by bending the double shear tabs.
6. For single 2x and 3x nailers, the following THA hangers can be installed using 10dx1½" top nails and 2-16d face nails with reduced allowable loads as noted: THA418/THA422: 1415 lbs. for DFL, 1215 lbs. for SPF; THA426: 2245 lbs. for DFL, 1930 lbs. for SPF.
7. Min. Top Flange refers to the minimum length of strap that must be field-formed over the header.
8. **NAILS:** 16d = 0.162" dia. x 3½" long, 16dx2½ = 0.162" dia. x 2½" long, 10d = 0.148" dia. x 3" long, 10dx1½ = 0.148" dia. x 1½" long. See page 22-23 for other nail sizes and information.

VALLEY FRAMING & BRACING DETAIL

Lumber Size and Grade Minumum Requirements

Ridge board... 2x6 (min) #2 Southern Pine or better,
Rafter spans 20'-0" or less... (A) 2x6 SP #2, SPF #1/#2, DF #2 or better
(B) 2x6 SP #2, SPF #1/#2, DF #2 or better
Purlins/Lateral bracing... 2x6 SPF#2, HF #2, DF #2 or better
Sleepers... 2x(width of rafter seat cut) SPF #3 or better
2 parallel 2x6 SPF #3
Cripples and blocking... 2x6 SPF #3 or better
Truss Below... See design – Southern Pine Material





* Attachment can be made directly or through plywood sheathing by cutting a 2"x6" notch in sheathing

TRUSS
TRUSS UNDER VALLEY FRAMING
VALLEY RAFTER OR RIDGE
+CRIPPLE

+Cripples 4'-0" for 30 psf (TL) and 20 psf (TD) Max.
Space the cripples for each row starting from the valleys or sleepers and working inward to the ridge board so that cripple locations are staggered between rows.

Connection Requirement Notes

1.	2x6 rafters to ridge	4 16d toe-nails
2.	Cripple to ridge	4 16d toe-nails
3.	Cripple to rafter	4 16d toe-nails
		(**) 8 16d face-nails
4.	Rafter to sleeper or blocking	5 16d toe-nails
	Rafter to two 2x6 sleepers	4 16d toe-nails
5.	Sleeper to truss	4 16d toe-nails
	Two 2x6 sleepers to truss	3 16d toe-nails each sleeper & truss
6.	Ridge board to roof block	4 16d toe-nails
7.	Ridge board to truss	4 16d toe-nails
8.	Purlin to (Typ)	3 16d toe-nails
9.	Truss to blocking	4 16d toe-nails
10.	Truss to cripple	4 16d toe-nails
11.	Truss to cripple	4 16d toe-nails
12.	Cripple to purlin	3 16d toe-nails
13.	Collar beam to rafter	4 16d toe-nails

NOTE: 16d (0.162"x3.5") COMMON NAILS

GENERAL NOTES

Purlins required 2'-0" O.C. in absence of plywood sheathing. Trusses without sheathing applied must be evaluated accordingly.
Purlins should overlap sheathing one truss spacing minimum. In cases that this is impractical, overlap sheathing a minimum of 6", and nail upwards through sheathing into purlin with a minimum of 8-8d (0.131"x2.5") common wire nails.
Effects of not providing sheathing below a valley set must be evaluated by the building designer.

This drawing applies to valleys with the following conditions:
-Spans (distance between heels) 40'-0" or less
-Maximum valley height: 14'-0"
-Maximum mean roof height: 30 feet
-ASCE 7-05, 140 mph, Enclosed, Cat II, Exp B, I=1.0, Kzt=1.0
-Or A Maximum of ASCE 7-10, 180 mph, Enclosed, Exp D, Kzt=1.0

CRIPPLE, BRACING, & BLOCKING NOTES

-2x4 continuous lateral restraint (CLR) min. is required for cripples 5'-0" to 10'-0" long nailed w/ 2 -10d (0.148"x3") nails. Or 2x4 "T" or scab reinforcement nailed to flat edge of cripple with 10d (0.128"x3.0") nails at 6" o.c. "T" or scab must be 80% of cripple length. Cripples over 10'-0" long requre two CLR's or both faces w/ "T" or scab. Use stress graded lumber & box or common nails.
-Narrow edge of cripple can face ridge or rafter, as long as the proper number of nails are installed into ridge board
-Install blocking under rafter if sleepers are not used.
-Install blocking under cripples if cripples fall between lower truss top chords and lateral bracing is not used.
-Apply all nailing in accordance to current NDS requirements. Nails are common wire nails unless noted otherwise.

WILLIAM H. KRICK LICENSE No. 70861 STATE OF FLORIDA PROFESSIONAL ENGINEER

8/26/15

ALPINE AN ITW COMPANY
12389 Lakefront Drive
Earth City, MO 63045

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

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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 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.

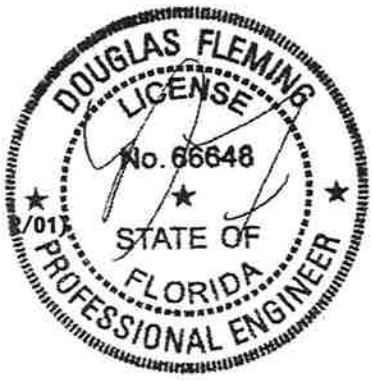
For more information see this job's general notes page and these web sites: ALPINE: www.alpineitw.com/ TPI: www.tpinst.org/ SBCA: www.sbcindustry.org/ ICC: www.iccsafe.org

	(A)	(B)	(**)	
TC LL	20	30	40	54
TC DL	10	20	7	7
BC DL	0	0	0	0
BC LL	0	0	0	0
TOT. LD.	30	50	47	61
DUR. FAC.		1.25/1.15		
SPACING		SEE ABOVE		

REF VALLEY FRAMING
DATE 10/01/14
DRWG VACNV1801015

Alpine, an ITW Company

2400 Lake Orange Drive Suite 150 Orlando FL 32837
Florida Engineering Certificate of Authorization Number: 0 278
Florida Certificate of Product Approval # FL1999
 Document ID:1VLH8975Z1209092932



11/09/2015

Douglas Fleming
-Truss Design Engineer-

2400 Lake Orange Dr, Suite 150
Orlando FL, 32837

Truss Fabricator:	Carpenter Contractors of America
Job Identification:	N316173-XA1 / HRES ( ) / R/01 (N316173-XA1 / HRES ( ) / R/01)
Truss Count:	29
Model Code:	Florida Building Code 5th Edition (2014)
Truss Criteria:	TPI-2007(STD)
Engineering Software:	Alpine Software,Version 13.01.
Structural Engineer of Record:	The identity of the structural EOR did not exist as of
Address:	the seal date per section 61G15-31.003(5a) of the FAC
Minimum Design Loads:	Roof - 37.0 PSF @ 1.25 Duration
	Floor - 55.0 PSF @ 1.00 Duration
	Wind - 140 MPH ASCE 7-10 -Closed

Notes:

1. Determination as to the suitability of these truss components for the structure is the responsibility of the building designer/engineer of record, as defined in ANSI/TPI 1
2. The drawing date shown on this index sheet must match the date shown on the individual truss component drawing.
3. As shown on attached drawings; the drawing number is preceded by: HCUSR8975

Details: BRCLBANC-REPCHRD-BRCLBSUB-REPPLTNL-

#	Ref Description	Drawing#	Date
1	44267--A1	15313646	11/09/15
2	44268--A2	15313645	11/09/15
3	44269--A2A	15313665	11/09/15
4	44270--A3	15313644	11/09/15
5	44271--A3A	15313650	11/09/15
6	44272--A4	15313643	11/09/15
7	44273--A4A	15313649	11/09/15
8	44274--A5	15313641	11/09/15
9	44275--A5A	15313648	11/09/15
10	44276--A6G	15313647	11/09/15
11	44277--A7G	15313652	11/09/15
12	44278--B1	15313639	11/09/15
13	44279--B2GE	15313642	11/09/15
14	44280--HJ7A	15313662	11/09/15
15	44281--HJ7B	15313663	11/09/15
16	44282--EJ7A	15313656	11/09/15
17	44283--EJ7B	15313660	11/09/15
18	44284--CJ5A	15313653	11/09/15
19	44285--CJ5B	15313657	11/09/15
20	44286--CJ3A	15313654	11/09/15
21	44287--CJ3B	15313658	11/09/15
22	44288--CJ1A	15313655	11/09/15
23	44289--CJ1B	15313659	11/09/15
24	44290--FT1	15313638	11/09/15
25	44291--FT3G	15313664	11/09/15
26	44292--FT4	15313640	11/09/15
27	44293--FT5G	15313661	11/09/15
28	44294--FT6	15313651	11/09/15
29	44295--FT7G	15313666	11/09/15

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - A1)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

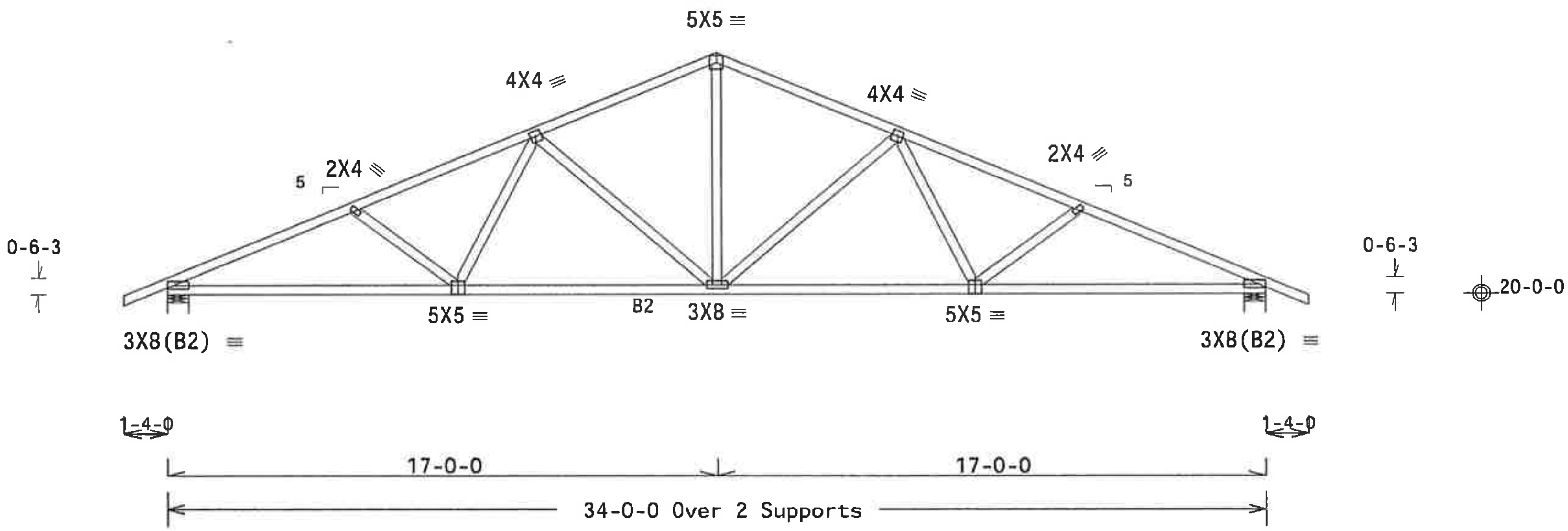
Bottom chord checked for 10.00 psf non-concurrent live load.

MWFRS loads based on trusses located at least 11.89 ft. from roof edge.

140 mph wind, 23.78 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R=1351 U=419 W=8" (8" min.)
RL=213/-213

R=1351 U=419 W=8" (8" min.)

PLT TYP. Wave

Design Crit: FBC2014Res/TPI-2007(STD)
FT/RT=20%(0%)/10(0)   13.01.02.0828.06

QTY:10 FL/-/3/-/E/-/-   Scale =.1875"/Ft.

ALPINE
AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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

DOUGLAS FLEMING
LICENSE
No. 66648
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

11/09/2015

TC LL	20.0 PSF	REF	R8975- 44267
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313646
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181164
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - A2)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B :W2, W5 2x4 SP_#2_N_13B:

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

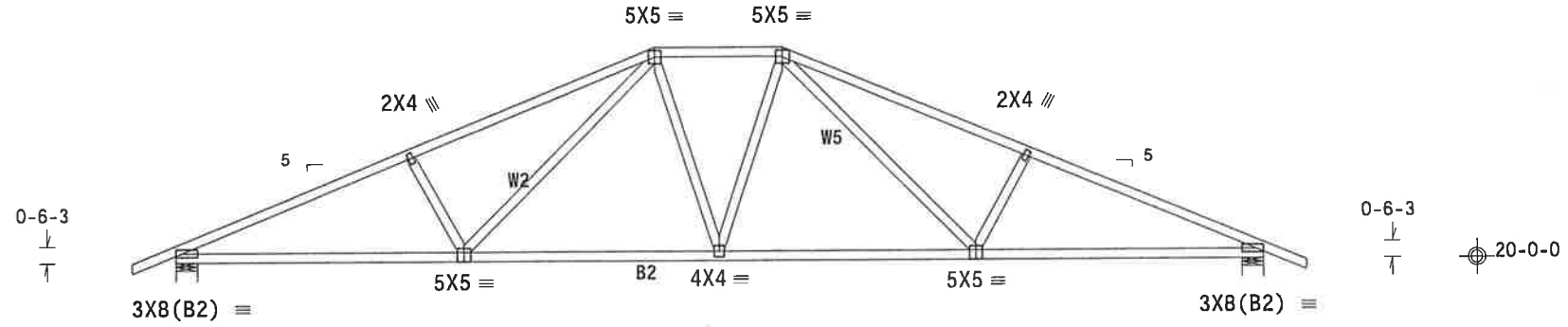
Bottom chord checked for 10.00 psf non-concurrent live load.

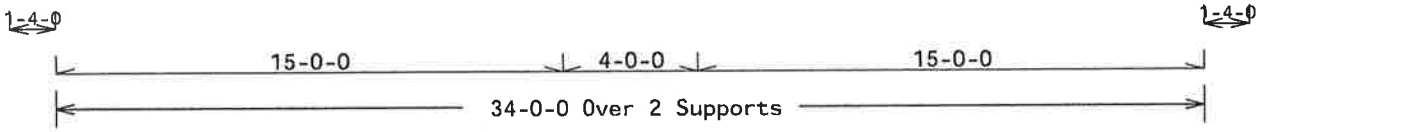
MWFRS loads based on trusses located at least 11.68 ft. from roof edge.

140 mph wind, 23.36 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.





R=1351 U=422 W=8" (8" min.)
RL=193/-193

R=1351 U=422 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)
FT/RT=20%(0%)/10(0)

13.01.00.11.49.00

PLT TYP. Wave

QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

ALPINE AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0278

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

DOUGLAS A. FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44268
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313645
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181170
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

11/09/2015

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - A2A)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B :W2, W5 2x4 SP_#2_N_13B:

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

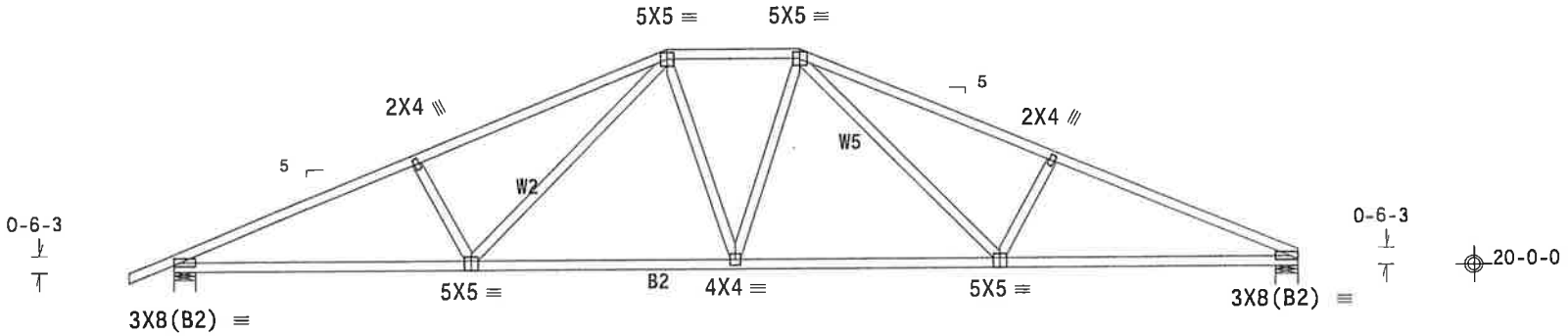
Bottom chord checked for 10.00 psf non-concurrent live load.

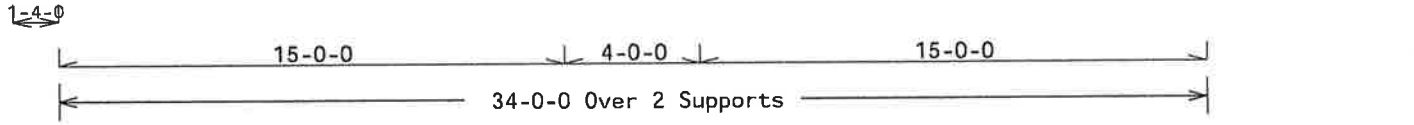
MWFRS loads based on trusses located at least 11.68 ft. from roof edge.

140 mph wind, 23.36 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.





R=1353 U=422 W=8" (8" min.)
RL=174/-179

R=1276 U=388 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)
FT/RT=20%(0%)/10(0)

13.01.05.10.48.00

PLT TYP. Wave

QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

ALPINE AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44269
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313665
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181178
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - A3)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

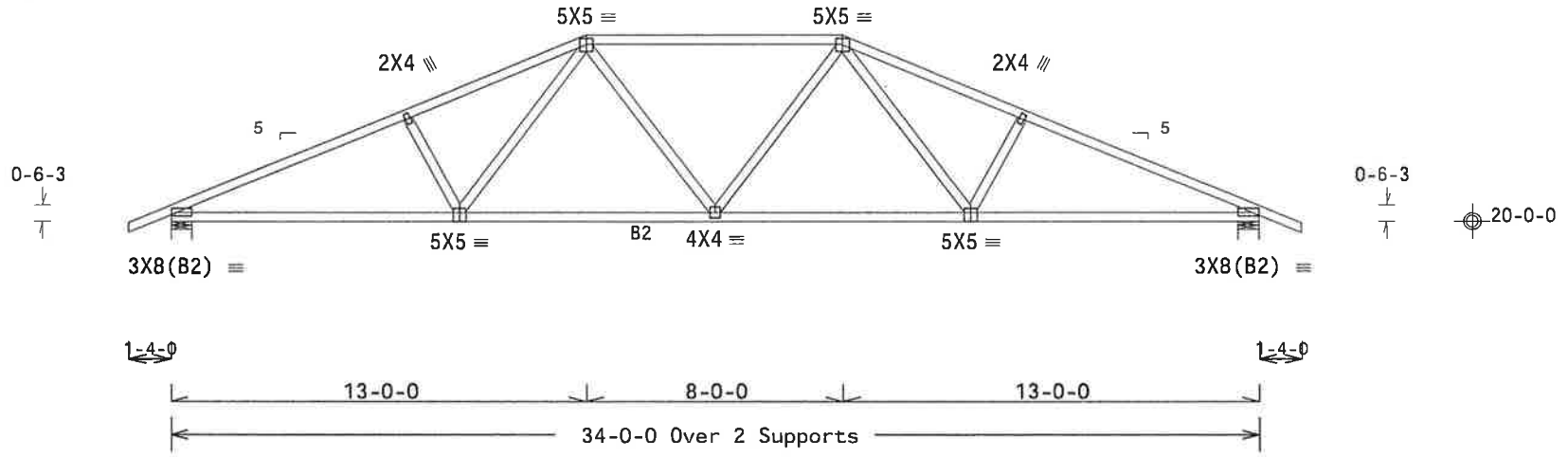
Bottom chord checked for 10.00 psf non-concurrent live load.

MWFRS loads based on trusses located at least 11.47 ft. from roof edge.

140 mph wind, 22.95 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R=1351 U=424 W=8" (8" min.)
RL=172/-172

R=1351 U=424 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05.0725.00 QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

ALPINE AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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

DOUGLAS FLEMING LICENSE No.66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44270
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313644
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181152
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - A3A)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

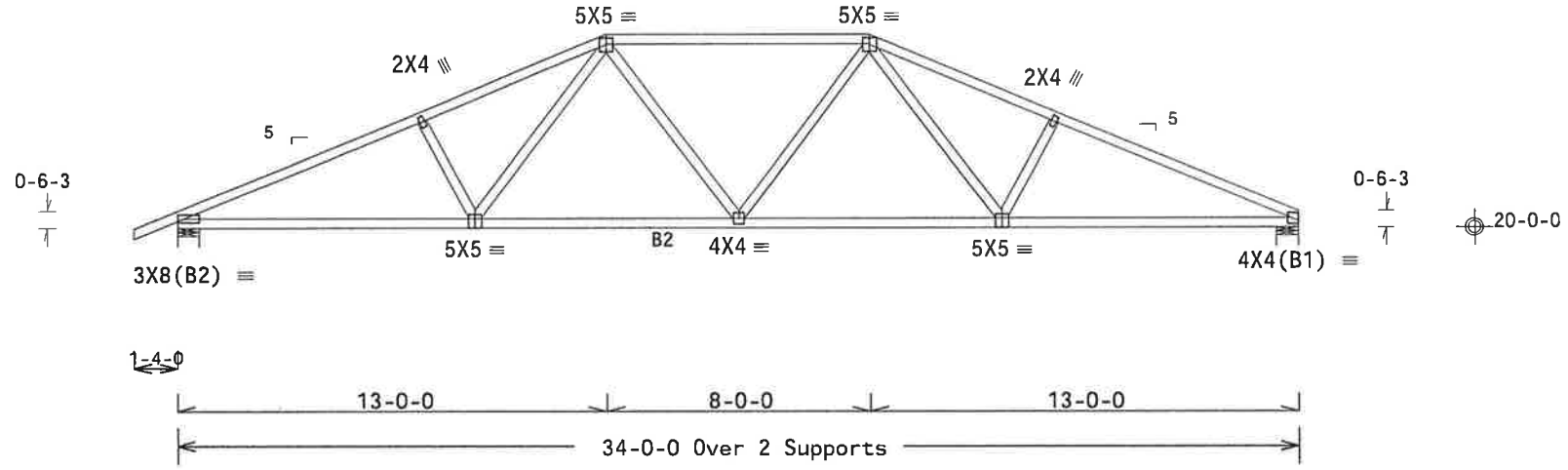
Bottom chord checked for 10.00 psf non-concurrent live load.

MWFRS loads based on trusses located at least 11.47 ft. from roof edge.

140 mph wind, 22.95 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R=1353 U=424 W=8" (8" min.)
RL=153/-158

R=1276 U=390 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05.0725.00 QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

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2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0278

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

DOUGLAS FLEMING LICENSE No. 66848 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44271
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313650
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181156
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - A4)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

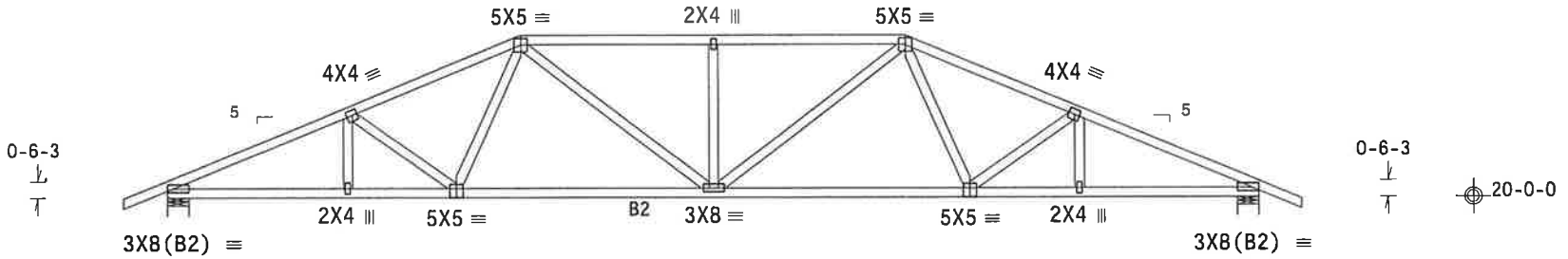
Bottom chord checked for 10.00 psf non-concurrent live load.

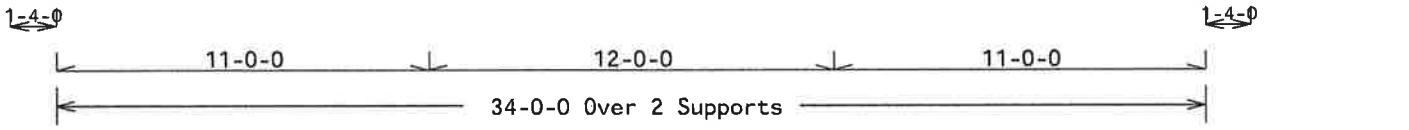
MWFRS loads based on trusses located at least 11.27 ft. from roof edge.

140 mph wind, 22.53 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.





R=1351 U=426 W=8" (8" min.)
RL=151/-151

R=1351 U=426 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05 CTC=24.00 QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

ALPINE
AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44272
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313643
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181185
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - A4A)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

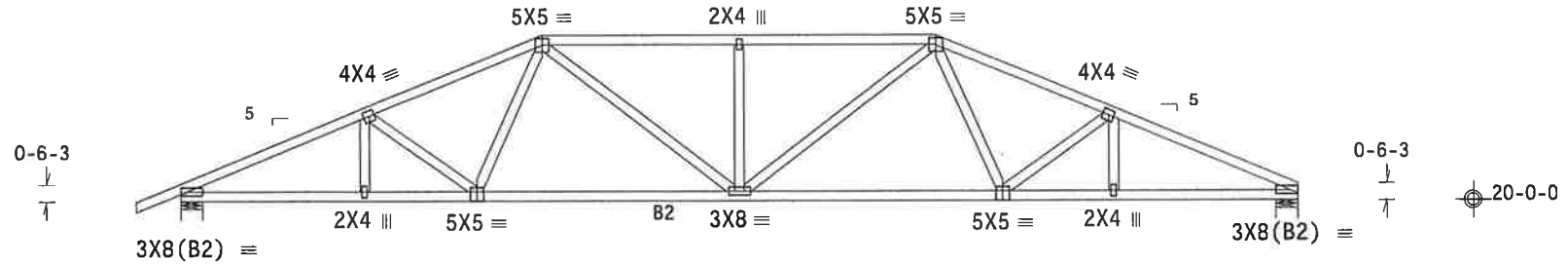
Bottom chord checked for 10.00 psf non-concurrent live load.

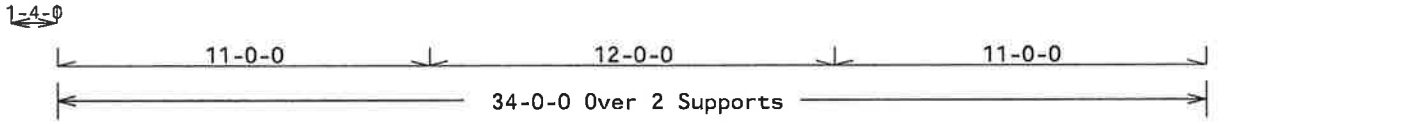
MWFRS loads based on trusses located at least 11.27 ft. from roof edge.

140 mph wind, 22.53 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.





R=1353 U=427 W=8" (8" min.)
RL=132/-137

R=1276 U=392 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05 172.00 QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

ALPINE AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44273
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSRB975 15313649
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181189
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - A5)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 2x4 SP_#1_13B :T2 2x4 SP_#2_N_13B:
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B :W3, W5 2x4 SP_#2_N_13B:

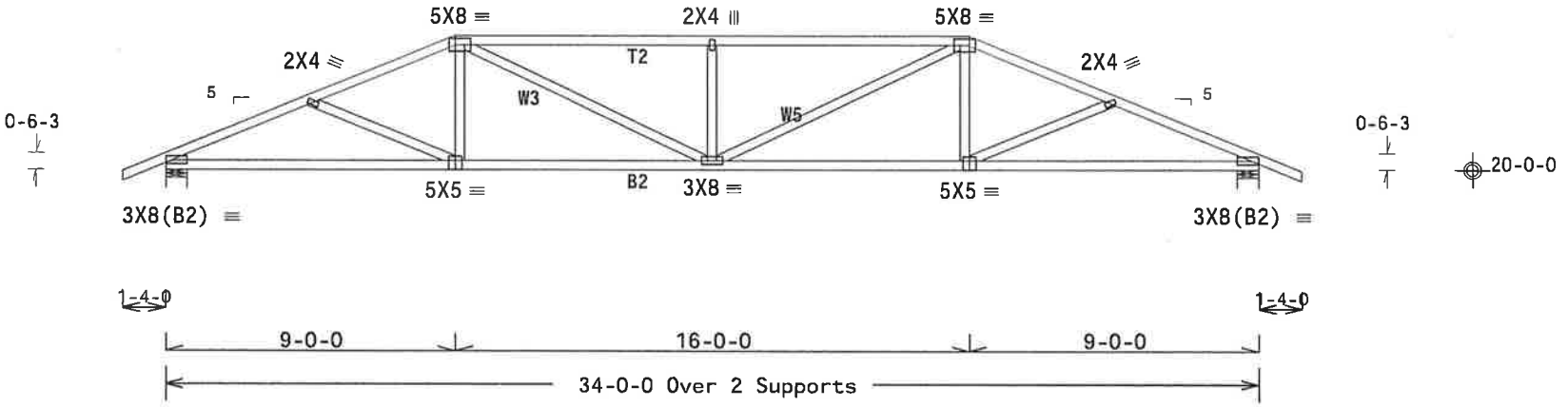
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Bottom chord checked for 10.00 psf non-concurrent live load.

140 mph wind, 22.11 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R=1351 U=560 W=8" (8" min.)
RL=129/-129

R=1351 U=560 W=8" (8" min.)

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.03.24.00 QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

ALPINE AN ITW COMPANY

2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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DOUGLAS A. FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

11/09/2015

TC LL	20.0 PSF	REF	R8975- 44274
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313641
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181197
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - A5A)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 2x4 SP_#1_13B :T2 2x4 SP_#2_N_13B:
Bot chord 2x4 SP_#1_13B :B2 2x4 SP_#2_N_13B:
Webs 2x4 SP_#3_13B :W3, W5 2x4 SP_#2_N_13B:

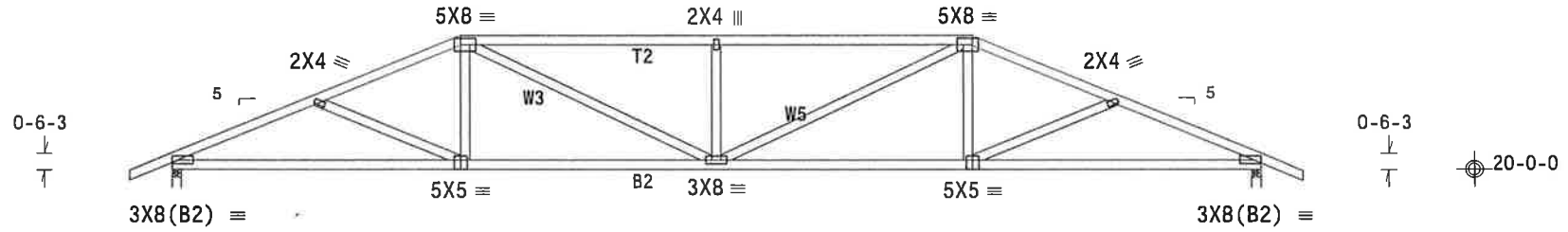
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Bottom chord checked for 10.00 psf non-concurrent live load.

140 mph wind, 22.11 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R=1351 U=560 W=3.5" (3.5" min.)
RL=129/-129

R=1351 U=560 W=3.5" (3.5" min.)

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.00 12E 00 QTY:1 FL/-/3/-/E/-/- Scale =.1875"/Ft.

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2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0278

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DOUGLAS E. LEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF R8975- 44275
TC DL	7.0 PSF	DATE 11/09/15
BC DL	10.0 PSF	DRW HCUSR8975 15313648
BC LL	0.0 PSF	HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN- 181201
DUR.FAC.	1.25	FROM JRH
SPACING	24.0"	JREF- 1VLH8975Z12

11/09/2015

(N316173-XA1 / HRES ( ) / R/01 - A6G)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 2x4 SP_#1_Dense_13B :T2, T3 2x6 SP_#2_N_13B:
Bot chord 2x6 SP_SS_13B
Webs 2x4 SP_#3_13B :W3, W9 2x4 SP_#2_N_13B:

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

140 mph wind, 21.70 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

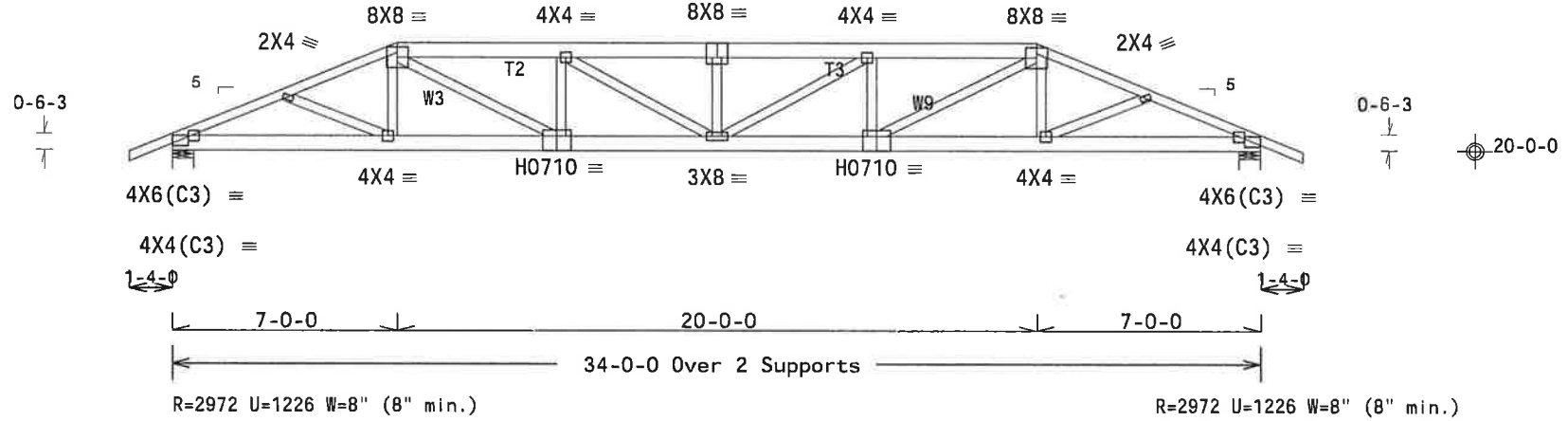
Wind loads and reactions based on MWFRS.

Bottom chord checked for 10.00 psf non-concurrent live load.

Calculated vertical deflection is 0.54" due to live load and 0.68" due to dead load at X = 17-0-0.

Special loads
------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC- From 55 plf at -1.33 to 55 plf at 7.00
TC- From 28 plf at 7.00 to 28 plf at 27.00
TC- From 55 plf at 27.00 to 55 plf at 35.33
BC- From 20 plf at 0.00 to 20 plf at 7.03
BC- From 10 plf at 7.03 to 10 plf at 26.97
BC- From 20 plf at 26.97 to 20 plf at 34.00
TC- 172.96 lb Conc. Load at 7.06, 9.06,11.06,13.06 15.06,17.00,18.94,20.94,22.94,24.94,26.94
BC- 460.41 lb Conc. Load at 7.03,26.97
BC- 129.77 lb Conc. Load at 9.06,11.06,13.06,15.06 17.00,18.94,20.94,22.94,24.94

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. 20 Gauge HS,Wave | FT/RT=20%(0%)/10(0) | 13.01.00 | QTY:1 | FL/-/3/-/E/-/- | Scale =.1875"/Ft.

ALPINE AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44276
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313647
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181235
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

11/09/2015

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - A7G)

Top chord 2x4 SP_#1_Dense_13B :T2, T3 2x6 SP_#2_N_13B:
Bot chord 2x6 SP_SS_13B
Webs 2x4 SP_#3_13B :W3, W9 2x4 SP_#2_N_13B:

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

140 mph wind, 21.70 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 9.00 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

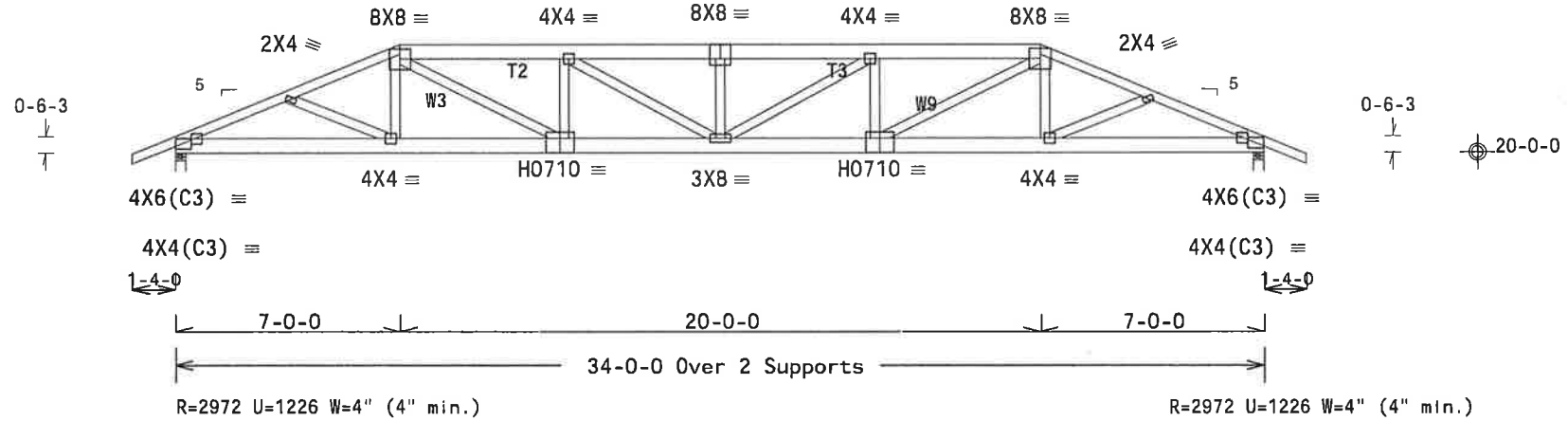
Wind loads and reactions based on MWFRS.

Bottom chord checked for 10.00 psf non-concurrent live load.

Calculated vertical deflection is 0.54" due to live load and 0.68" due to dead load at X = 17-0-0.

Special loads
------(Lumber Dur.Fac.=1.25 / Plate Dur.Fac.=1.25)
TC- From 55 plf at -1.33 to 55 plf at 7.00
TC- From 28 plf at 7.00 to 28 plf at 27.00
TC- From 55 plf at 27.00 to 55 plf at 35.33
BC- From 20 plf at 0.00 to 20 plf at 7.03
BC- From 10 plf at 7.03 to 10 plf at 26.97
BC- From 20 plf at 26.97 to 20 plf at 34.00
TC- 172.96 lb Conc. Load at 7.06, 9.06,11.06,13.06 15.06,17.00,18.94,20.94,22.94,24.94,26.94
BC- 460.41 lb Conc. Load at 7.03,26.97
BC- 129.77 lb Conc. Load at 9.06,11.06,13.06,15.06 17.00,18.94,20.94,22.94,24.94

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. 20 Gauge HS,Wave | FT/RT=20%(0%)/10(0) | 13.01.06 10:49:00 | QTY:1 | FL/-/3/-/E/-/- | Scale =.1875"/Ft.

ALPINE AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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DOUGLAS FLEMING LICENSE No.66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44277
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313652
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181240
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - B1)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B
Webs 2x4 SP_#3_13B

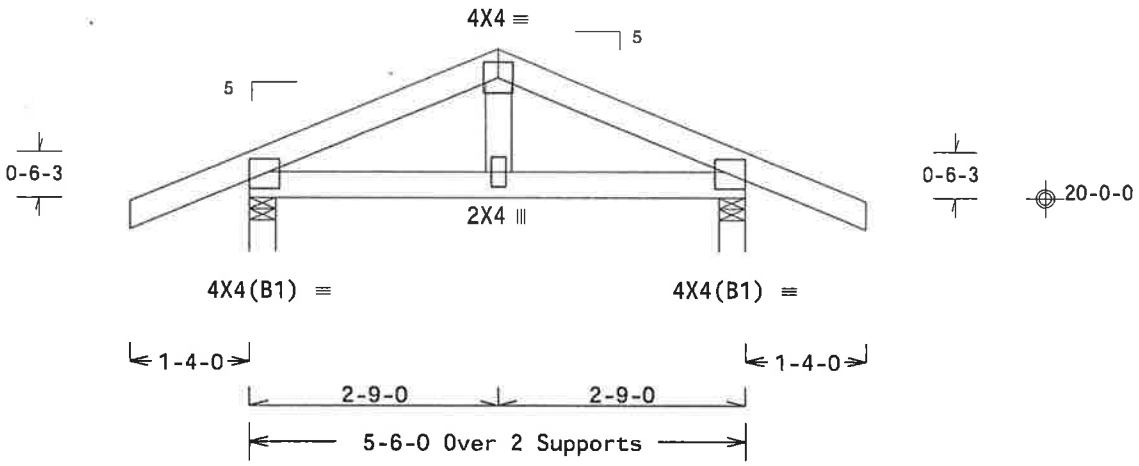
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Bottom chord checked for 10.00 psf non-concurrent live load.

140 mph wind, 20.81 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.06.13.48.00 QTY:1 FL/-/3/-/E/-/- Scale =.5"/Ft.

ALPINE AN ITW COMPANY

2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44278
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313639
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181243
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

11/09/2015

(N316173-XA1 / HRES ( ) / R/01 - B2GE)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B
Webs 2x4 SP_#3_13B

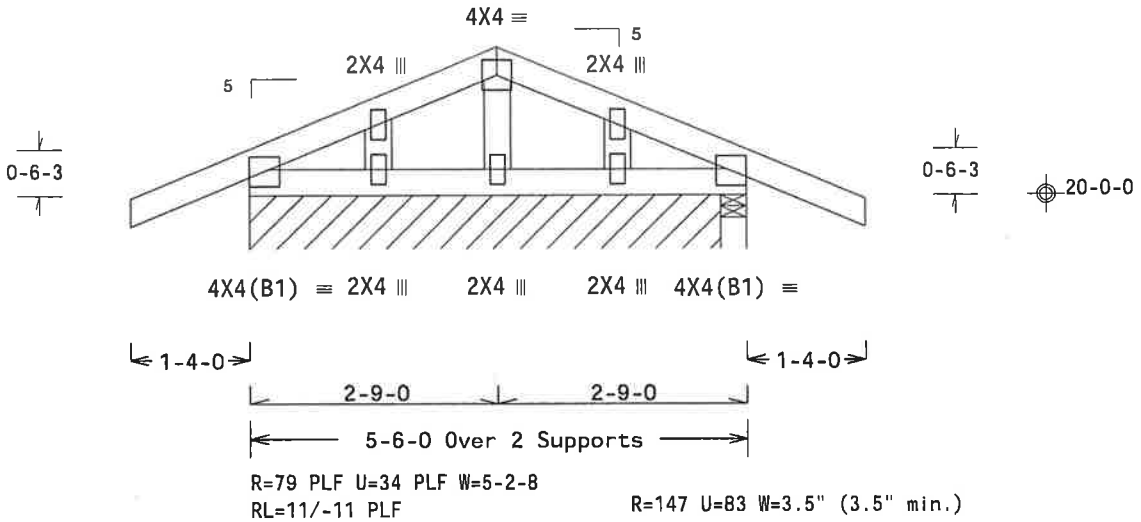
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Bottom chord checked for 10.00 psf non-concurrent live load.

140 mph wind, 20.81 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



R=79 PLF U=34 PLF W=5-2-8
RL=11/-11 PLF

R=147 U=83 W=3.5" (3.5" min.)

Design Crit: FBC2014Res/TPI-2007(STD)
FT/RT=20%(0%)/10(0)

PLT TYP. Wave

13.01.05 ... 00 QTY:1 FL/-/3/-/E/-/- Scale =.5"/Ft.

ALPINE
AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44279
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313642
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181249
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - HJ7A)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

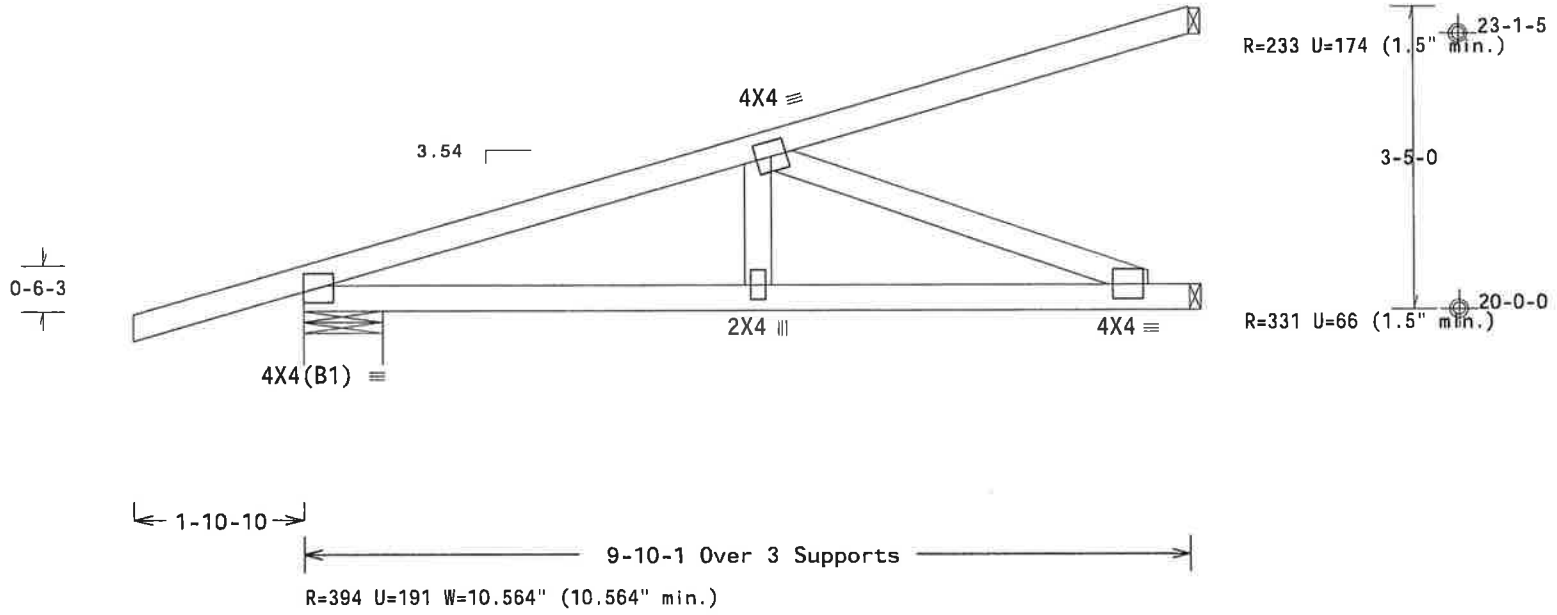
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

140 mph wind, 21.69 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

Wind loads and reactions based on MWFRS.

Hipjack supports 6-11-8 setback jacks with no webs.

Provide (3) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (3) 0.162"x3.5" nails, toe nailed at Bot chord



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=20%(0%)/10(0) | 13.01.05 17:25:00 | QTY:2 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

ALPINE
AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44280
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313662
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181054
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - HJ7B)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B
Webs 2x4 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

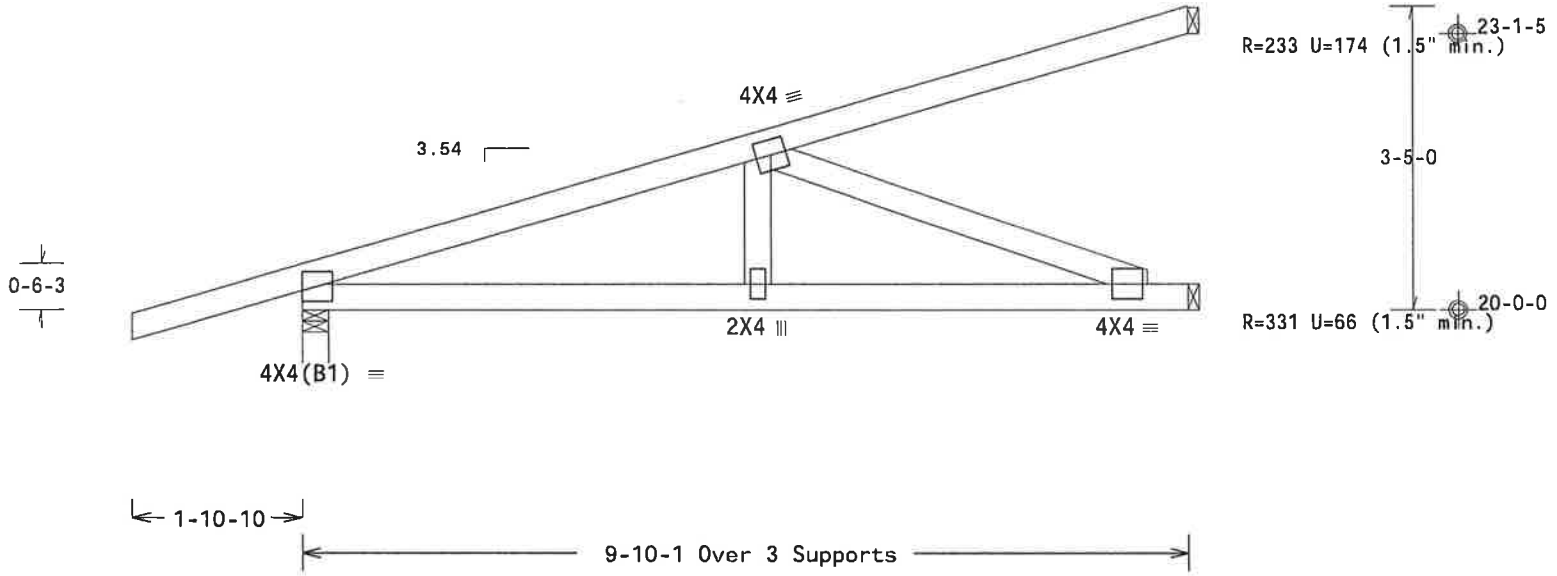
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

140 mph wind, 21.69 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

Wind loads and reactions based on MWFRS.

Hipjack supports 6-11-8 setback jacks with no webs.

Provide (3) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (3) 0.162"x3.5" nails, toe nailed at Bot chord



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05-0005.00 QTY:2 FL/-/3/-/E/-/- Scale =.5"/Ft.

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2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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TC LL	20.0 PSF	REF	R8975- 44281
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313663
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181074
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

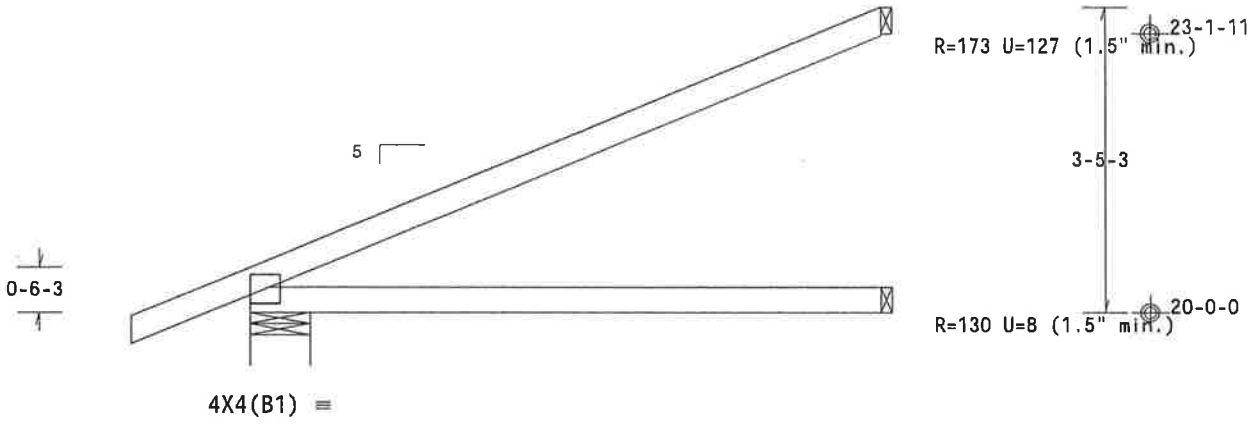
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

140 mph wind, 21.70 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 4.50 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05 QTY:11 FL/-/3/-/E/-/- Scale =.5"/Ft.

ALPINE AN ITW COMPANY

2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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TC LL	20.0 PSF	REF	R8975- 44282
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313656
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181042
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - EJ7B)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

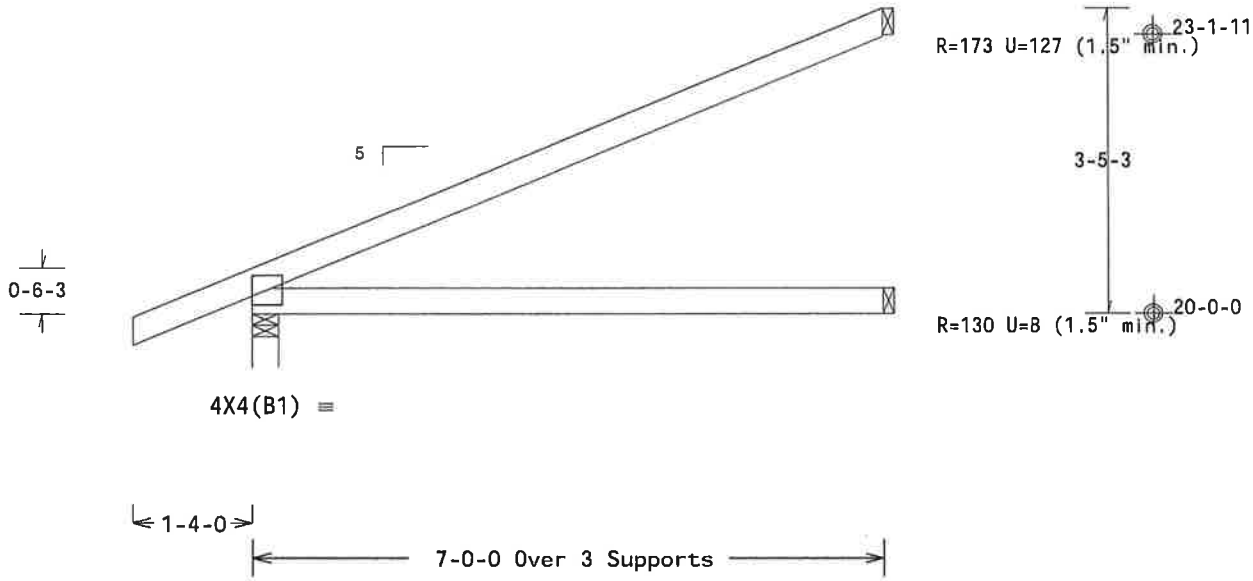
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

140 mph wind, 21.70 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 4.50 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05.0726.00 QTY:11 FL/-/3/-/E/-/- Scale =.5"/Ft.

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2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44283
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313660
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181058
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

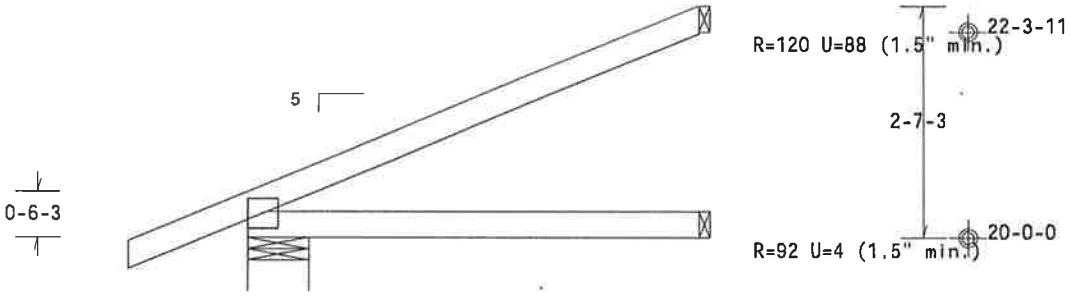
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

140 mph wind, 21.2B ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 4.50 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05.0705.00 QTY:4 FL/-/3/-/E/-/- Scale =.5"/Ft.

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Orlando, FL 32837
FL COA #0 278

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TC LL	20.0 PSF	REF	R8975- 44284
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313653
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181044
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

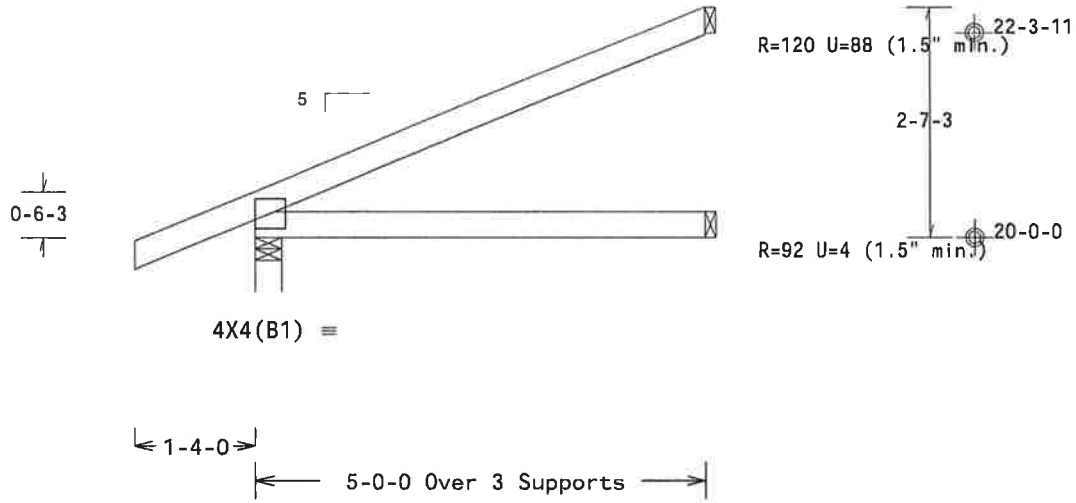
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

140 mph wind, 21.28 ft mean hgt, ASCE 7-10, CLOSED bldg, not located within 4.50 ft from roof edge, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=20%(0%)/10(0) | 13.01.05.0705.00 | QTY:4 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

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Orlando, FL 32837
FL COA #0 278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44285
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313657
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181060
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - CJ3A)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

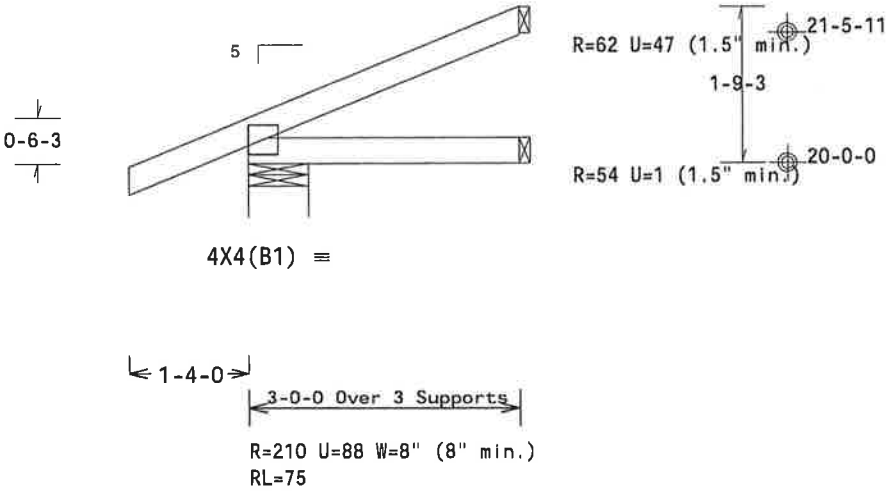
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

140 mph wind, 20.86 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=20%(0%)/10(0) | 13.01.05.0725.00 | QTY:4 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

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Orlando, FL 32837
FL COA #0 278

DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44286
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313654
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181046
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - CJ3B)

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Bottom chord checked for 10.00 psf non-concurrent live load.

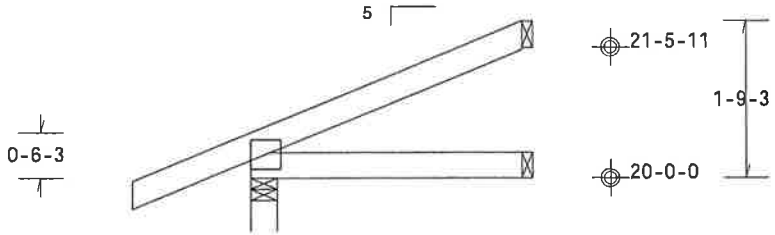
Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

140 mph wind, 20.86 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

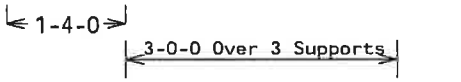
Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

R=62 U=47 (1.5" min.)



4X4(B1)

R=54 U=1 (1.5" min.)



R=210 U=88 W=3.5" (3.5" min.)
RL=75

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05.0725.00 QTY:4 FL/-/3/-/E/-/- Scale =.5"/Ft.

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Orlando, FL 32837
FL COA #0278

DOUGLAS FLEMING LICENSE No. 66848 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44287
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313658
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181064
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

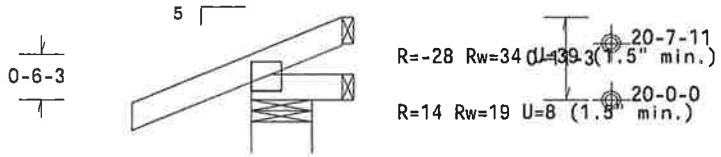
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

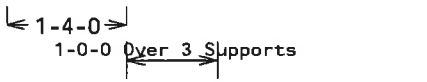
140 mph wind, 20.45 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf, GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



4X4(B1) ≡



R=180 U=100 W=8" (8" min.)
RL=39

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=20%(0%)/10(0) | 13.01.05.0735.00 | QTY:4 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

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DOUGLAS FLEMING LICENSE No.66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	20.0 PSF	REF	R8975- 44288
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313655
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	37.0 PSF	SEQN-	181048
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

Top chord 2x4 SP_#2_N_13B
Bot chord 2x4 SP_#2_N_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

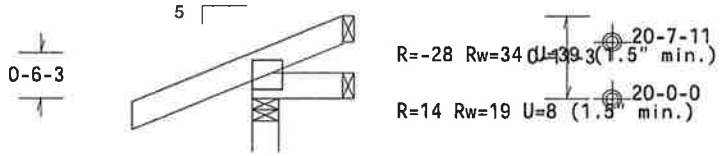
Bottom chord checked for 10.00 psf non-concurrent live load.

Provide (2) 0.131"x3" gun nails, toe nailed at Top chord.
Provide (2) 0.131"x3" gun nails, toe nailed at Bot chord.

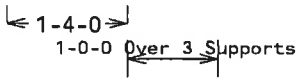
140 mph wind, 20.45 ft mean hgt, ASCE 7-10, CLOSED bldg, Located anywhere in roof, RISK CAT II, EXP C, wind TC DL=4.2 psf, wind BC DL=5.0 psf. GCpi(+/-)=0.18

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

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



4X4(B1) ≡



R=180 U=100 W=3.5" (3.5" min.)
RL=39

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 13.01.05 17:17:00 QTY:4 FL/-/3/-/E/-/- Scale =.5"/Ft.

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Orlando, FL 32837
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TC LL	20.0 PSF	REF	R8975- 44289
TC DL	7.0 PSF	DATE	11/09/15
BC DL	10.0 PSF	DRW	HCUSR8975 15313659
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	37.0 PSF	SEQN-	181066
DUR.FAC.	1.25	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - FT1)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

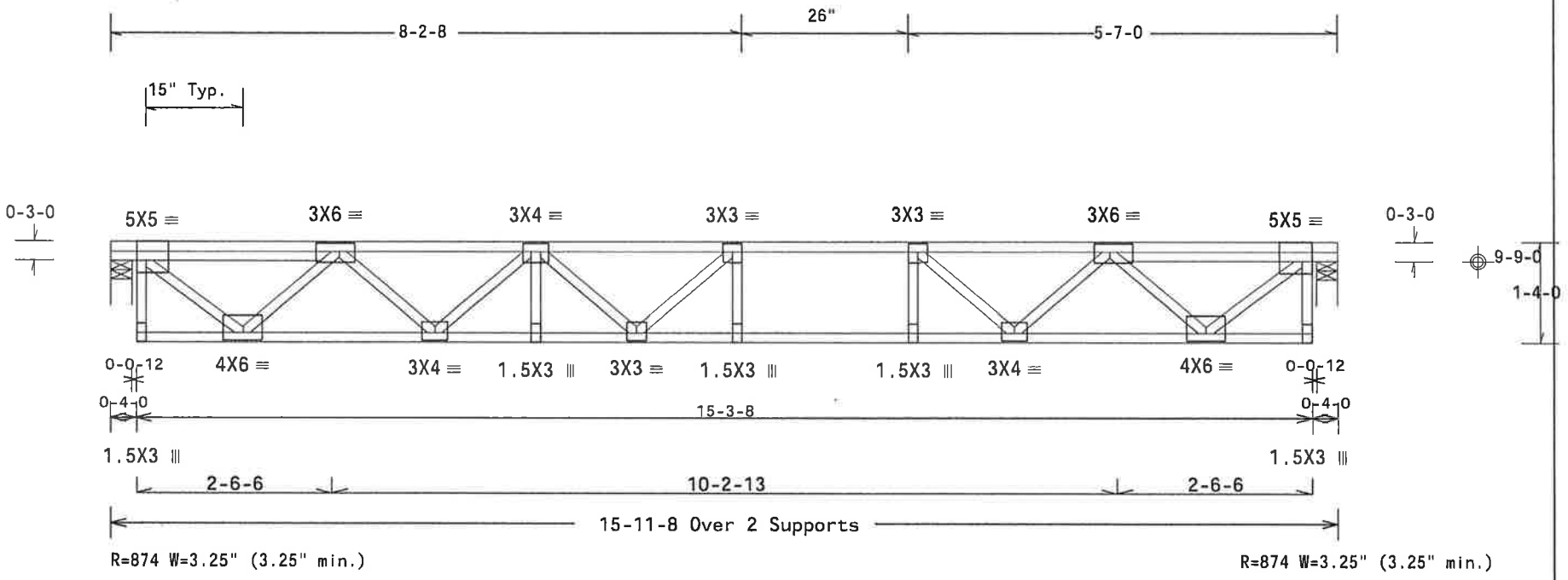
Top chord 4x2 SP_#2_N_13B
Bot chord 4x2 SP 2400f-2.0E
Webs 4x2 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

See ANSI/TPI 1 Sect 7 for additional bracing requirements.
Bracing material to be supplied by erection contractor.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

Truss must be installed as shown with top chord up.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=12%(0%)/10(0) 13.01.05 00 QTY:35 FL/-/3/-/E/-/- Scale =.5"/Ft.

ALPINE AN ITW COMPANY

2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	40.0 PSF	REF	R8975- 44290
TC DL	10.0 PSF	DATE	11/09/15
BC DL	5.0 PSF	DRW	HCUSR8975 15313638
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	55.0 PSF	SEQN-	181256
DUR.FAC.	1.00	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - FT3G)

Top chord 4x2 SP_#1_13B :T1 4x2 SP_#1_Dense_13B:
Bot chord 4x2 SP 2400f-2.0E
Webs 4x2 SP_#3_13B

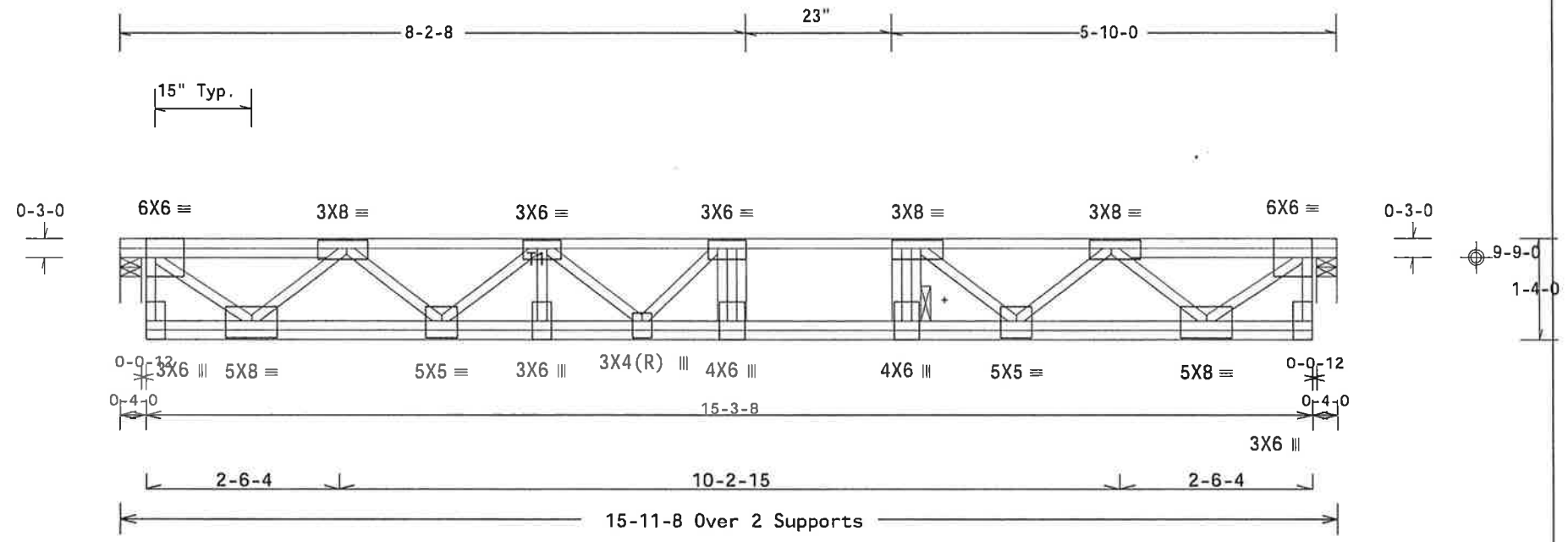
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Special loads
------(Lumber Dur.Fac.=1.00 / Plate Dur.Fac.=1.00)
TC- From 100 plf at 0.00 to 100 plf at 15.96
BC- From 10 plf at 0.33 to 10 plf at 15.63
TC- 313.00 lb Conc. Load at 7.83

+ 2x6 #3 HEM-FIR or better continuous strongback. Attach to each truss where shown with 3-10d Box or Gun nails (0.128"x3",min.). Strongback material to be supplied by erection contractor.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

Truss must be installed as shown with top chord up.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=12%(0%)/10(0) | 13.01.05.0705.00 | QTY:1 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

ALPINE
AN ITW COMPANY
2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0 278

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DOUGLAS FLEMING LICENSE No. 66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	40.0 PSF	REF	R8975- 44291
TC DL	10.0 PSF	DATE	11/09/15
BC DL	5.0 PSF	DRW	HCUSR8975 15313664
BC LL	0.0 PSF	HC-ENG	GA/DF
TOT.LD.	55.0 PSF	SEQN-	181361
DUR.FAC.	1.00	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - FT4)

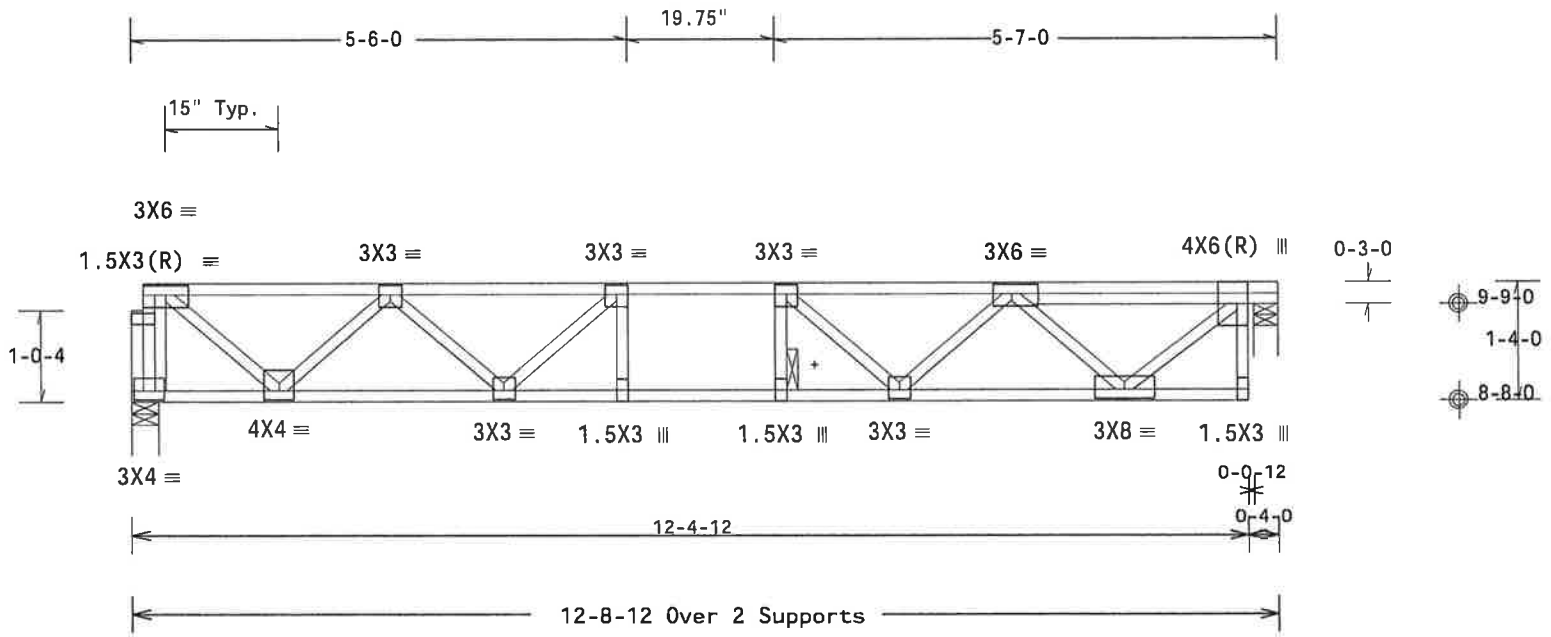
Top chord 4x2 SP_#2_N_13B
Bot chord 4x2 SP_#2_N_13B
Webs 4x2 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Truss must be installed as shown with top chord up.

+ 2x6 #3 HEM-FIR or better continuous strongback. Attach to each truss where shown with 3-10d Box or Gun nails (0.128"x3",min.). Strongback material to be supplied by erection contractor.

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=12%(0%)/10(0) | 13.01.05.0705.00 | QTY:2 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

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2400 Lake Orange Dr., Suite 150
Orlando, FL 32837
FL COA #0278

WARNING! READ AND FOLLOW ALL NOTES ON THIS DRAWING!
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For more information see this job's general notes page and these web sites:
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DOUGLAS FLEMING LICENSE No.66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

TC LL	40.0 PSF	REF	R8975- 44292
TC DL	10.0 PSF	DATE	11/09/15
BC DL	5.0 PSF	DRW	HCUSR8975 15313640
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	55.0 PSF	SEQN-	181257
DUR.FAC.	1.00	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - FT5G)

Top chord 4x2 SP 2400f-2.0E :T2 4x2 SP_#2_N_13B:
Bot chord 4x2 SP_#1_Dense_13B
Webs 4x2 SP_#3_13B

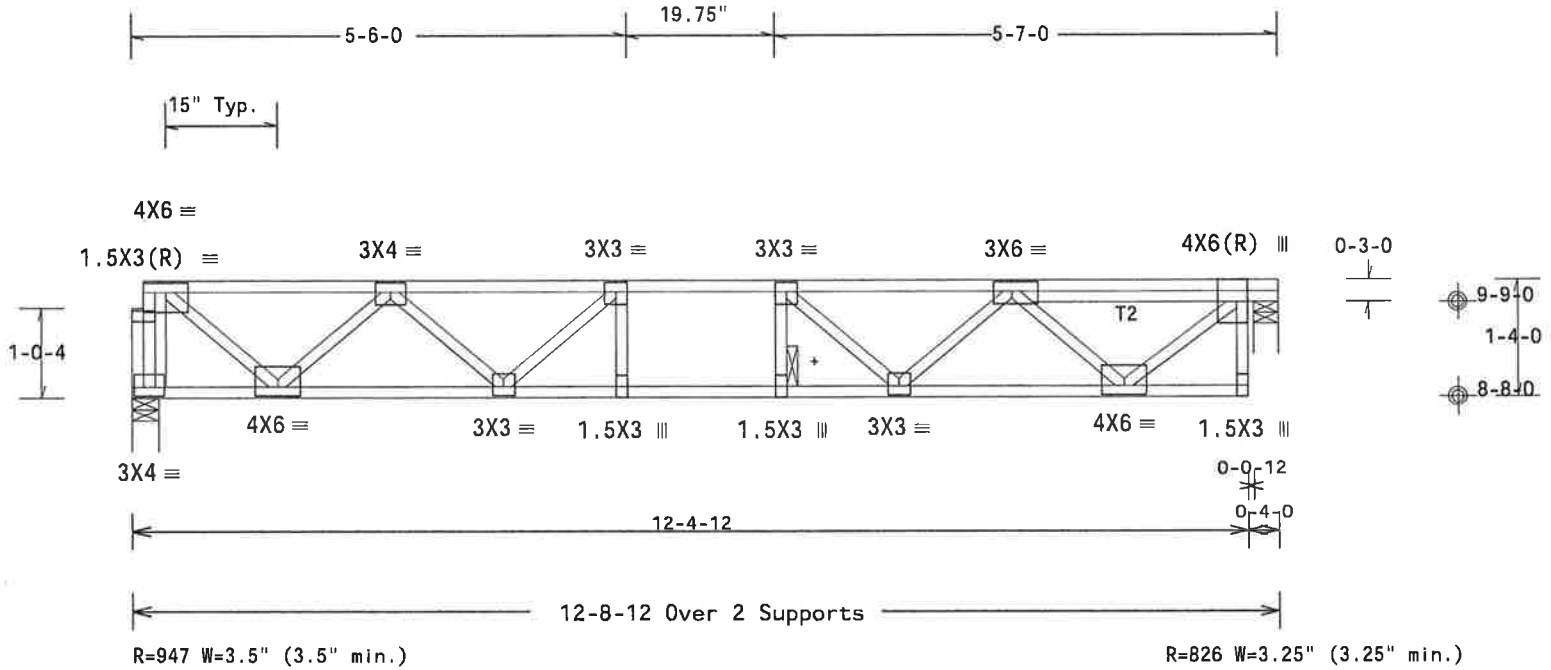
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

Truss must be installed as shown with top chord up.

+ 2x6 #3 HEM-FIR or better continuous strongback. Attach to each truss where shown with 3-10d Box or Gun nails (0.128"x3",min.). Strongback material to be supplied by erection contractor.

Special loads
------(Lumber Dur.Fac.=1.00 / Plate Dur.Fac.=1.00)
TC- From 100 plf at 0.13 to 100 plf at 12.73
BC- From 10 plf at 0.00 to 10 plf at 12.40
TC- 388.74 lb Conc. Load at 4.65



Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave | FT/RT=12%(0%)/10(0) | 13.01.00 | QTY:1 | FL/-/3/-/E/-/- | Scale =.5"/Ft.

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Orlando, FL 32837
FL COA #0278

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TC LL	40.0 PSF	REF	R8975- 44293
TC DL	10.0 PSF	DATE	11/09/15
BC DL	5.0 PSF	DRW	HCUSR8975 15313661
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	55.0 PSF	SEQN-	181261
DUR.FAC.	1.00	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

(N316173-XA1 / HRES ( ) / R/01 - FT6)

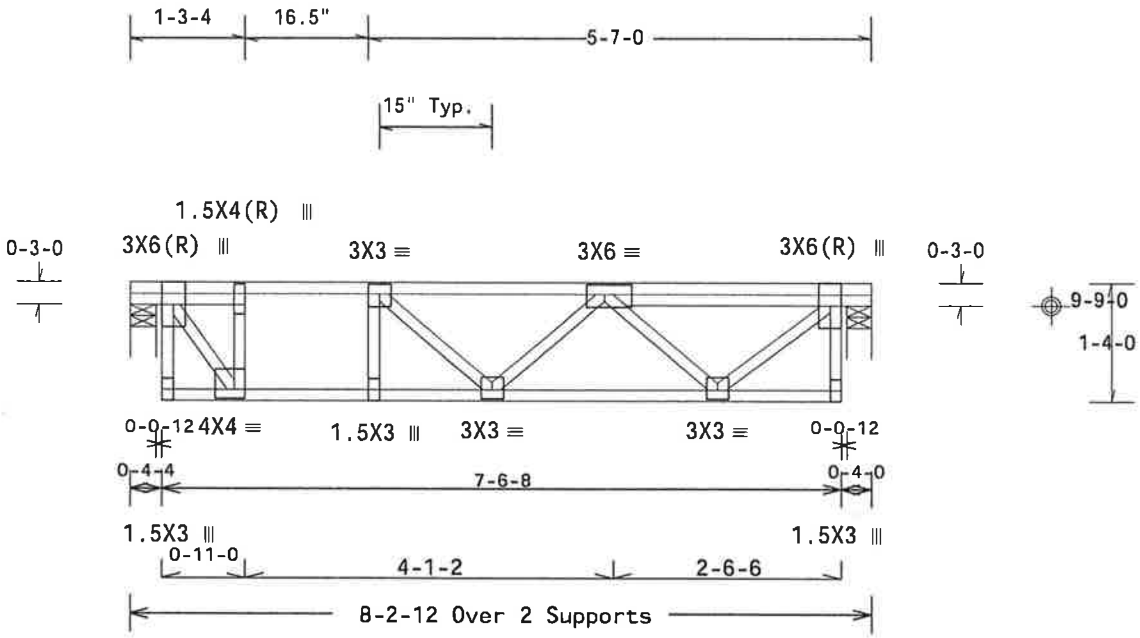
THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

Top chord 4x2 SP_#2_N_13B
Bot chord 4x2 SP_#2_N_13B
Webs 4x2 SP_#3_13B

Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.

Truss must be installed as shown with top chord up.



R=450 W=3.5" (3.5" min.)   R=448 W=3.25" (3.25" min.)

PLT TYP. Wave

Design Crit: FBC2014Res/TPI-2007(STD)
FT/RT=12%(0%)/10(0)   13.01.00.0722.00   QTY:1   FL/-/3/-/E/-/-   Scale =.5"/Ft.

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TC LL	40.0 PSF	REF R8975- 44294
TC DL	10.0 PSF	DATE 11/09/15
BC DL	5.0 PSF	DRW HCUSR8975 15313651
BC LL	0.0 PSF	HC-ENG GA/DF
TOT.LD.	55.0 PSF	SEQN- 181258
DUR.FAC.	1.00	FROM JRH
SPACING	24.0"	JREF- 1VLH8975Z12

11/09/2015

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

(N316173-XA1 / HRES ( ) / R/01 - FT7G)

Top chord 4x2 SP 2400f-2.0E
Bot chord 4x2 SP_#1_13B
Webs 4x2 SP_#3_13B

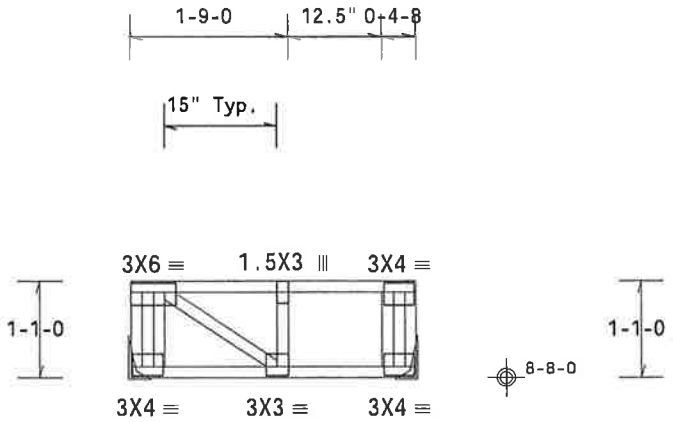
Lumber grades designated with "13B" use design values approved 1/30/2013 by ALSC

(J) Hanger Support Required, by others
(J) Hanger Support Required, by others

Truss must be installed as shown with top chord up.

Special loads
------(Lumber Dur.Fac.=1.00 / Plate Dur.Fac.=1.00)
TC- From 100 plf at 0.00 to 100 plf at 3.17
BC- From 10 plf at 0.00 to 10 plf at 3.17
TC- 450.25 lb Conc. Load at 1.52

Deflection meets L/360 live and L/240 total load. Creep increase factor for dead load is 1.50.



<3-2-0 Over 2 Supports>

R=410 R=389
H=H1 H=H2

Design Crit: FBC2014Res/TPI-2007(STD)

PLT TYP. Wave FT/RT=12%(0%)/10(0) 13.01.00 0725 QTY:1 FL/-/3/-/E/-/- Scale =.5"/Ft.

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DOUGLAS FLEMING LICENSE No.66648 STATE OF FLORIDA PROFESSIONAL ENGINEER

11/09/2015

TC LL	40.0 PSF	REF	R8975- 44295
TC DL	10.0 PSF	DATE	11/09/15
BC DL	5.0 PSF	DRW	HCUSR8975 15313666
BC LL	0.0 PSF		HC-ENG GA/DF
TOT.LD.	55.0 PSF	SEQN-	181259
DUR.FAC.	1.00	FROM	JRH
SPACING	24.0"	JREF-	1VLH8975Z12

Diagonal Bracing of Continuous Lateral Restraint

ALWAYS DIAGONALLY BRACE THE CONTINUOUS LATERAL RESTRAINT!

Attach the Continuous Lateral Restraint (CLR) at the location shown on the Truss Design Drawing.

Install the diagonal bracing at an angle of less-than-or-equal-to 45° to the CLR and position so that it crosses the web in close proximity to the CLR. Attach the diagonal brace as close to the top and bottom chords as possible and to each web it crosses.

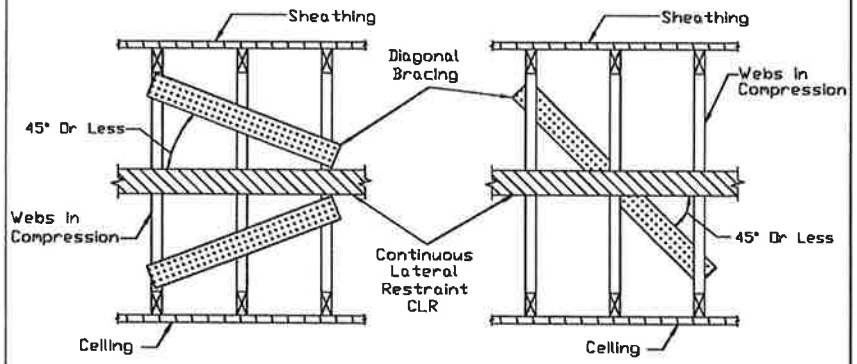
Unless otherwise specified, lumber for lateral restraint and diagonal bracing shall be at least 2x4 stress-graded lumber. Fasten to each truss with at least (2)-10d (0.128"x3.0",min) nails or as specified in the Construction Documents.

Diagonal bracing is required to restrain the CLRs and to transfer the cumulative force from the CLR(s) into a lateral force resisting system such as the roof or ceiling diaphragm. Repeat diagonal bracing every 20 feet or as specified. Closer spacing may be required by the Building Designer.

The information on this detail is recommended minimum permanent bracing applicable only for trusses spaced at a maximum of 24" on center. Additional bracing or other bracing methods as specified by the Building Designer may be required.

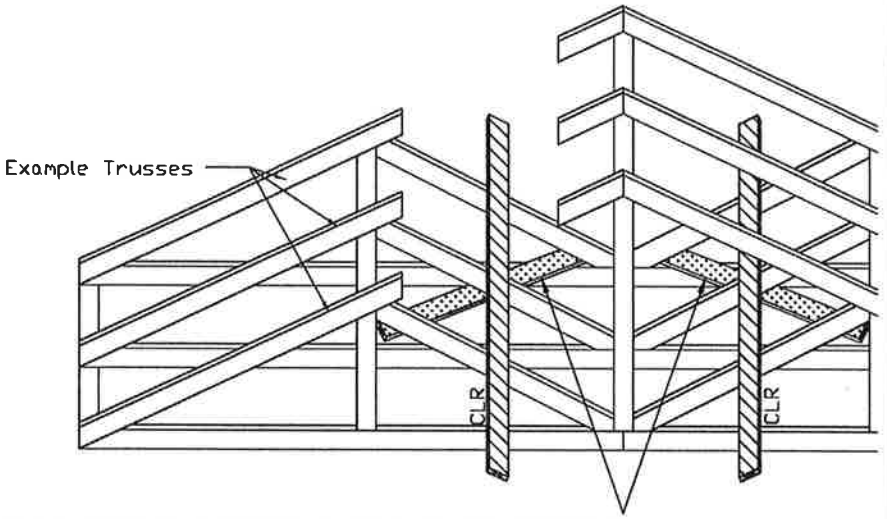
Refer to BCSI-B3 for additional information on permanent restraint and bracing of web members.

Examples of Diagonal Bracing with Continuous Lateral Restraint



Diagonal bracing installed to same side of web as CLR.

Diagonal bracing installed to side of web opposite CLR.



2x4 diagonal bracing nailed to opposite face of web and repeated at approximately 20 foot intervals to resist lateral movement. Attach to webs with (2)-10d (0.128"x3.0",min) nails. Diagonal bracing may traverse more than two trusses, depending on truss height.

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PROFESSIONAL ENGINEER
11/09/15

REF	CLR Bracing
DATE	10/01/14
DRWG	BRCLBANC1014

Cracked or Broken Member Repair Detail

This drawing specifies repairs for a truss with broken chord or web member.

This design is valid only for single ply trusses with 2x4 or 2x6 broken members. No more than one break per chord panel and no more than two breaks per truss are allowed. Contact the truss manufacturer for any repairs that do not comply with this detail.

(B) = Damaged area, 12" max length of damaged section

(L) = Minimum nailing distance on each side of damaged area (B)

(S) = Two 2x4 or two 2x6 side members, same size, grade, and species as damaged member. Apply one scab per face. Minimum side member length(s) = (2)(L) + (B)

Scab member length (S) must be within the broken panel.

Nail into 2x4 members using two (2) rows at 4" o.c., rows staggered.
Nail into 2x6 members using three (3) rows at 4" o.c., rows staggered.

Nail using 10d box or gun nails (0.128"x3", min) into each side member.

The maximum permitted lumber grade for use with this detail is limited to Visual grade #1 and MSR grade 1650f.

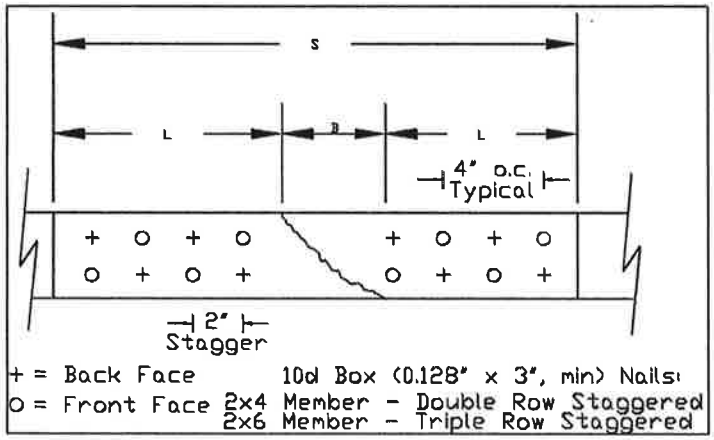
This repair detail may be used for broken connector plate at mid-panel splices.

This repair detail may not be used for damaged chord or web sections occurring within the connector plate area.

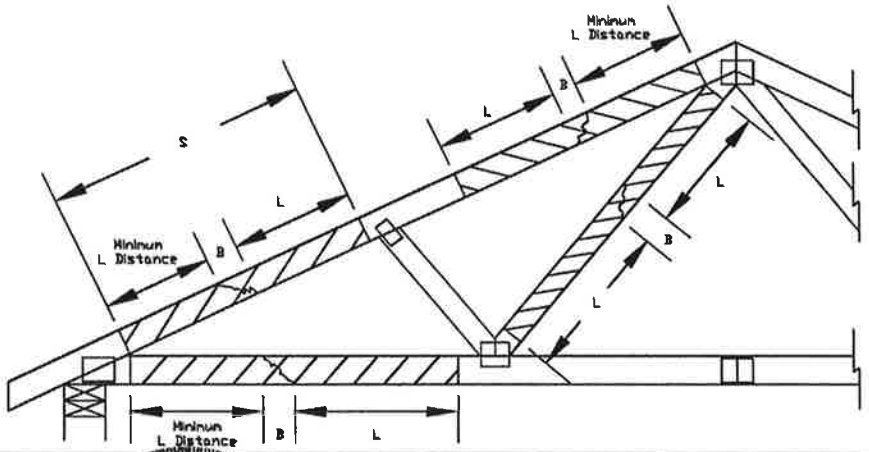
Broken chord may not support any tie-in loads.

Load Duration = 0%
Member forces may be increased for Duration of Load

Member	Size	L	Maximum Member Axial Force SPF-C	HF	DF-L	SYP
Web Only	2x4	12"	620#	635#	730#	800#
Web Only	2x4	18"	975#	1055#	1295#	1415#
Web or Chord	2x4	24"	975#	1055#	1495#	1745#
Web or Chord	2x6		1465#	1585#	2245#	2620#
Web or Chord	2x4	30"	1910#	1960#	2315#	2555#
Web or Chord	2x6		2230#	2365#	3125#	3575#
Web or Chord	2x4	36"	2470#	2530#	2930#	3210#
Web or Chord	2x6		3535#	3635#	4295#	4745#
Web or Chord	2x4	42"	2975#	3045#	3505#	3835#
Web or Chord	2x6		4395#	4500#	5225#	5725#
Web or Chord	2x4	48"	3460#	3540#	4070#	4445#
Web or Chord	2x6		5165#	5280#	6095#	6660#



Nail Spacing Detail



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STATE OF
FLORIDA
PROFESSIONAL ENGINEER
11/09 '15

SPACING 24.0" MAX

REF	MEMBER REPAIR
DATE	10/01/14
DRWG	REPCHRD1014

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-reinforecement or scab reinforcement.

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

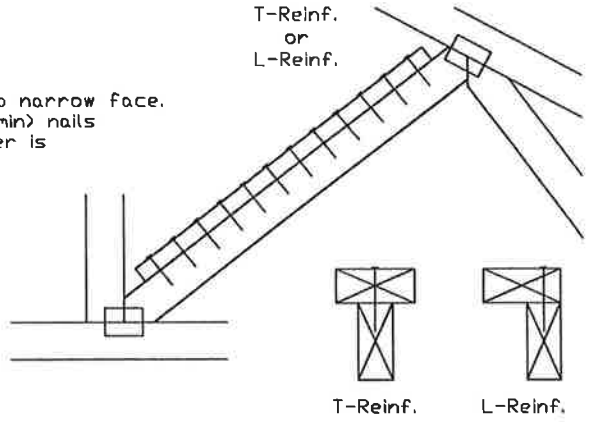
Web Member Size	Specified CLR Restraint	Alternative Reinforecement T- or L- Reinf.	Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4(*)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6(*)

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.

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

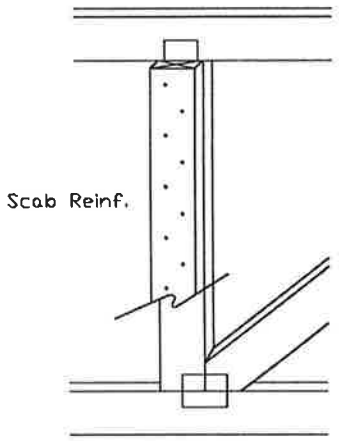
T-Reinforcement or L-Reinforcement:

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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NOV 09 '15

TC LL	PSF	REF CLR Subst.
TC DL	PSF	DATE 10/01/14
BC DL	PSF	DRWG BRCLBSUB1014
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		

NAIL REINFORCEMENT FOR PLATE DETAIL

This detail may be used when the required number of connector teeth in a truss member exceeds the actual number of teeth in the given member. Nails may be driven through the connector plate(s) in truss members using the nail type specified below to increase the lateral resistance of the connector plate(s) having a shortage of required effective teeth.

Nail Type
Duo-Fast CS157 1.5" x 0.105" Smooth Shank Coil Nail

Material	Connector Plates	Substitution
SP, DF-L, HF, SPF (SG >= 0.42)	Alpine 20-gage Wave	1 Nail replaces 2 teeth
	Alpine 20-gage H	1 Nail replaces 2 teeth
	Alpine 18-gage S	1 Nail replaces 2 teeth

Nail Type
0.131" x 1.5" Box or Gun Nail

Material	Connector Plates	Substitution
SP, DF-L, HF, SPF (SG >= 0.42)	Alpine 20-gage Wave	1 Nail replaces 3 teeth
	Alpine 20-gage H	1 Nail replaces 3 teeth
	Alpine 18-gage S	1 Nail replaces 3 teeth

Nails shall be driven through solid steel at a distance no closer that 1 inch to the joint line. Nails may also be driven through the tooth slots, but shall be located at the end of the slot farthest from the joint line.

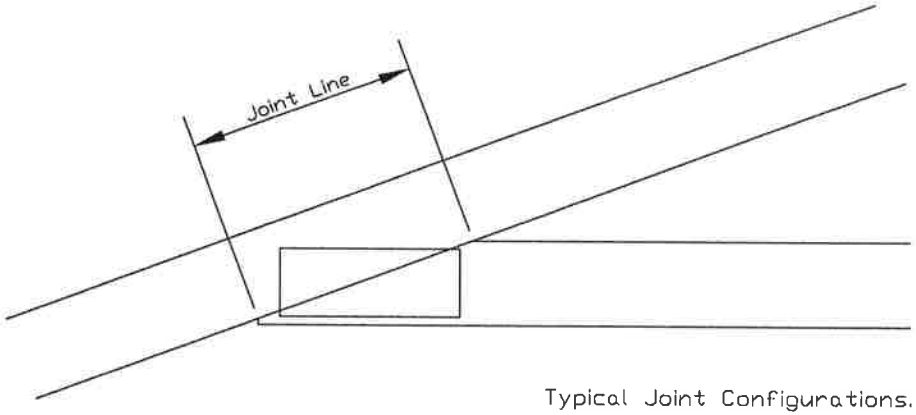
Use a maximum of 2 nails per square inch of plate area.

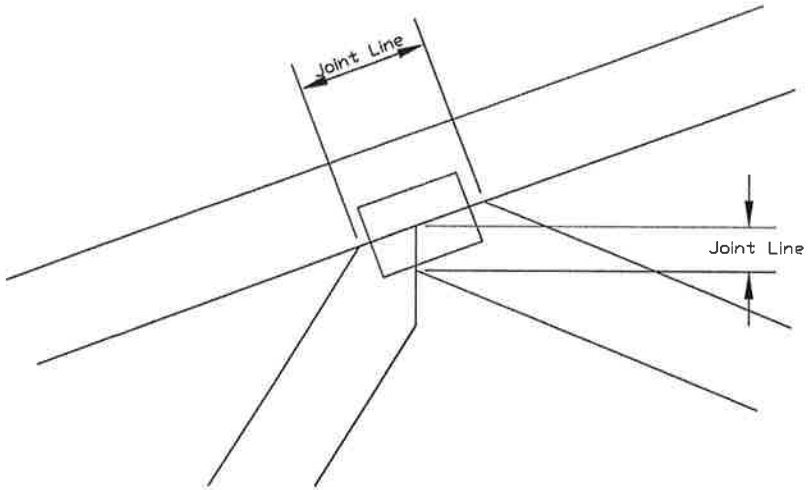
Nails shall be driven through connector plate having shortage of required effective teeth. Nails may be driven through connector plate on each face of joint if each plate has a shortage of required effective teeth.

Nails shall be fully embedded into wood areas free of defects.

This detail is applicable only on joints where the connector plate has been offset no more than 1/2" from the design position shown on the truss design drawing.

This detail is applicable for trusses with lumber oriented vertically (2x_) and trusses with lumber oriented horizontally (3x2 and 4x2).





Typical Joint Configurations. This Detail Applies To Any Joint Configuration.

This Detail Is Applicable Only On Joints Where The Connector Plate Has Been Offset No More Than 1/2" From The Design Position Shown On The Truss Design Drawing.

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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.

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 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; SBCA: www.sbcindustry.org; ICC: www.iccsafe.org

DOUGLAS FLEMING
LICENSE
No. 66648
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
NOV 09 '15

REF	NAIL REINFORCEMENT
DATE	10/01/14
DRWG	REPPLTNL1014

REScheck Software Version 4.6.2

Compliance Certificate

Project Higgins Residence

Energy Code:	**2014 Florida Building Code, Energy**
Location:	**Belle Isle, Florida**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 90 deg. from North**
Conditioned Floor Area:	**1,970 ft2**
Glazing Area	**11%**
Climate Zone:	**2 (686 HDD)**
Permit Date:	
Permit Number:	

Reviewed for Code Compliance Universal Engineering Sciences

Construction Site:
Daetwyler Drive
Belle Isle, FL 32827

Owner/Agent:
Rick Higgins
Belle Isle, FL 32827

Designer/Contractor:
Jason Tiner
Apple Air Conditioning and Heating
149 South Woodland Street
Winter Garden, FL 34787
407-654-3777

Compliance: Envelope passes UA trade-off. Additional mandatory requirements apply. Complete the REScheck inspection

Compliance: **29.2% Better Than Code** Maximum UA: **804** Your UA: **569** Maximum SHGC: **0.25** Your SHGC: **0.25**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Office/Entertainment: Flat Ceiling or Scissor Truss	660	0.0	20.0	0.046	30
2nd flr bedrooms: Flat Ceiling or Scissor Truss	1,310	0.0	20.0	0.046	60
West Wall: Solid Concrete or Masonry:Interior Insulation Orientation: Front	650	11.0	0.0	0.092	41
Window 1: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Front	50			0.270	14
Window 2: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Front	5			0.270	1
Window 3: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Front	35			0.270	9
Window 5: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Front	35			0.270	9
Window 6: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Front	80			0.270	22
South Wall: Solid Concrete or Masonry:Interior Insulation Orientation: Right side	805	11.0	0.0	0.092	70

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Window 7: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	20			0.270	5
Window 8: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Right side	5			0.270	1
Door 2: Solid Orientation: Right side	21			0.530	11
North Wall: Solid Concrete or Masonry:Interior Insulation Orientation: Left side	805	11.0	0.0	0.092	67
Window 4: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Left side	12			0.270	3
Window 9: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Left side	17			0.270	5
Window 10: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Left side	17			0.270	5
Window 11: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Left side	5			0.270	1
Door 1: Solid Orientation: Left side	21			0.530	11
East Wall: Solid Concrete or Masonry:Interior Insulation Orientation: Back	650	11.0	0.0	0.092	56
Window 12: Metal Frame with Thermal Break:Double Pane with Low-E SHGC: 0.25 Orientation: Back	17			0.270	5
Window 13: Wood Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	17			0.270	5
Window 14: Wood Frame:Double Pane with Low-E SHGC: 0.25 Orientation: Back	5			0.270	1
Floor 1: Slab-On-Grade:Unheated Insulation depth: 4.0'	65		10.0	0.684	44
Floor 2: All-Wood Joist/Truss:Over Unconditioned Space	1,310	0.0	10.0	0.071	93

Mechanical Equipment

Description	Fuel type	Efficiency
Electric Central Air	Electric	13 SEER
Electric Central Air	Electric	13 SEER

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2014 Florida Building Code, Energy Conservation requirements in RES*check* Version 4.6.2 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Jason Tiner
Name - Title

Signature

Date

RES*check* Software Version 4.6.2

Inspection Checklist

Energy Code: 2014 Florida Building Code, Energy Conservation

Requirements: 60.0% were addressed directly in the RES*check* software

Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.1, 103.2 [PR1][1]	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
103.1, 103.2, 403.7 [PR3][1]	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the FBC, Energy Conservation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
302.1, 403.6 [PR2][2]	Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official. Refer to R403.6.1 for full details.	Heating: Btu/hr____ Cooling: Btu/hr____	Heating: Btu/hr____ Cooling: Btu/hr____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1][1]	Slab edge insulation R-value.	R-____ ☐ Unheated ☐ Heated	R-____ ☐ Unheated ☐ Heated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2, 402.2.9 [FO2][1]	Slab edge insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1 [FO3][1]	Slab edge insulation depth/length.	____ ft	____ ft	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2.1.3 [FO11][2]	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.8 [FO12][2]	Snow- and ice-melting system controls installed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1][1]	Door U-factor.	U-____	U-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
402.1.1, 402.3.1, 402.3.3, 402.3.6 [FR2][1]	Glazing U-factor (area-weighted average).	U-____	U-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
402.1.1, 402.3.2, 402.3.3 [FR3][1]	Glazing SHGC value (area-weighted average).	SHGC:____	SHGC:____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.1.3 [FR4][1]	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.4.1.1 [FR23][1]	Air barrier and thermal barrier installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
402.4.3 [FR20][1]	Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.4.4 [FR16][2]	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.2.1 [FR12][1]	Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.2.3 [FR15][3]	Building cavities are not used as ducts or plenums.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.3 [FR17][2]	HVAC piping conveying fluids above 105 ºF or chilled fluids below 55 ºF are insulated to ≥R-3.	R-____	R-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.3.1 [FR24][1]	Protection of insulation on HVAC piping.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.4.3 [FR26][2]	Storage water heaters not equipped with integral heat traps and having vertical pipe risers have heat traps installed on both the inlets and outlets. External heat traps installed per code guildlines.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.4.4.1.1 [FR27][2]	Service water heating systems are equipped with automatic temperature controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
403.4.4.1.2 [FR28][2]	A separate switch permits the power supplied to electric service water systems to be turned off. A separate valve permits the energy supplied to the main burner(s) of combustion types of service water heating systems to be turned off.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
403.4.4.2 [FR29][2]	Water heating equipment meets minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions. Equipment used to provide heating functions as part of a combination system satisfies all stated requirements for the appropriate water heating category.	Table 404.2 (required Ef):____	Table 404.2 (required Ef):____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
403.4.4.2.1 [FR30][2]	Solar systems for domestic hot water production satisfy energy factor requirements determined from the Florida Solar Energy Center Directory of Certified Solar Systems.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
403.5.2 [FR31][2]	Buildings designed to operate at positive indoor pressure or have mechanical ventilation meet the following criteria: 1) Maximum air-change-hour equal minimums from ASHRAE 62, Ventilation for Acceptable Indoor Air Quality, 2) No ventilation or air-conditioning system make-up air provided from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas, and 3) Air drawn from enclosed space(s) have walls insulated >= R-11 and ceiling >= R-19, space permitting, or R-10 otherwise.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.5 [FR19][2]	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13][2]	All installed insulation is labeled or the installed R-values provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.2.13 [IN14][2]	Walls, ceilings or floors common to separate conditioned tenancies are insulated to >= R-11, space permitting. Mass common walls are insulated to >= R-6.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1, 402.2.6 [IN1][1]	Floor insulation R-value.	R-____ ☐ Wood ☐ Steel	R-____ ☐ Wood ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2, 402.2.7 [IN2][1]	Floor insulation installed per manufacturer's instructions, and in substantial contact with the underside of the subfloor.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.1.1, 402.2.5, 402.2.6 [IN3][1]	Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies (FR10).	R-____ ☐ Wood ☐ Mass ☐ Steel	R-____ ☐ Wood ☐ Mass ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2 [IN4][1]	Wall insulation is installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1][1]	Ceiling insulation R-value.	R-____ ☐ Wood ☐ Steel	R-____ ☐ Wood ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.1.1.2, 1, 303.2 [FI2][1]	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft².			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.2.3 [FI22][2]	Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.2.4 [FI3][1]	Attic access hatch and door insulation ≥R-value of the adjacent assembly.	R-____	R-____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
402.4.1.2 [FI17][1]	Blower door test @ 50 Pa. <=5 ach in Climate Zones 1-2, and <=3 ach in Climate Zones >2.	ACH 50 =____	ACH 50 =____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
403.2.2 [FI4][1]	Duct tightness test result of <=4 cfm/100 ft2 across the system or <=3 cfm/100 ft2 without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection. Primary air containment passageways are constructed and sealed per Section C403.2.7.3 of the Florida Building Code, Energy Conservation.	____ cfm/100 ft²	____ cfm/100 ft²	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.2.2.1 [FI24][1]	Air handler leakage designated by manufacturer at <=2% of design air flow.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.1.1 [FI9][2]	Each separate heating/cooling system has a thermostat			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.1.2 [FI9][2]	Programmable thermostats installed on forced air furnaces.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
403.1.3 [FI10][2]	Heat pump thermostat installed on heat pumps.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
403.4.1 [FI11][2]	Circulating service hot water systems have automatic or accessible manual controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.5.1 [FI25][2]	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
404.1 [FI6][1]	75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** All lighting is provided by low-voltage systems.
404.1.1 [FI23][3]	Fuel gas lighting systems have no continuous pilot light.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.
401.3 [FI7][2]	An energy performance level (EPL) display card must be completed and certified by the builder 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. A copy of the EPL card form can be found in Appendix C of the "FBC, Energy Conservation".			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
303.3 [FI18][3]	Manufacturer manuals for mechanical and water heating systems have been provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.2.4 [FI30][2]	Air handling units are not installed in attic.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Record Notarized Document at OC Comptroller's Office - 109 E. Church Street, Suite 300, Orlando

Permit Number: ____
Folio/Parcel Identification Number: ____
Prepared by: ____

Return to: ____

DOC# 20160111008
03/03/2016 01:30:15 PM Page 1 of 1
Rec Fee: $10.00
Martha O. Haynie, Comptroller
Orange County, FL
MB - Ret To: RICHARD HIGGINS

NOTICE OF COMMENCEMENT

State of Florida, County of Orange

The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. **Description of property** (legal description of the property, and street address if available) Parcel ID 29-23-30-1882-00-011 7902 Daetwyler
2. **General description of improvement** New Construction Single Family Home
3. **Owner information or Lessee information if the Lessee contracted for the improvement**
   Name Richard Higgins
   Address ~~5238 Oak Island Rd Belle Isle, FL 32809~~ 7902 Daetwyler Rd
   Interest in Property ~~Own~~ Owner to Build
   Name and address of fee simple titleholder (if different from Owner listed above)
   Name ~~RD Bank~~
   Address 5238 Oak Island Rd
4. **Contractor**
   Name Hastings Homes Inc Telephone Number 407 468-8294
   Address 3613 Bancroft Blvd Orlando, FL 32833
5. **Surety** (if applicable, a copy of the payment bond is attached)
   Name ____ Telephone Number ____
   Address ____ Amount of Bond $ ____
6. **Lender**
   Name TD Bank Telephone Number 1800 328-2119
   Address P.O Box 1377 Lewiston ME 04243-1377
7. **Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by §713.13(1)(a)7, Florida Statutes.**
   Name ____ Telephone Number ____
   Address ____
8. **In addition to himself or herself, Owner designates the following to receive a copy of the Lienor's Notice as provided in §713.13(1)(b), Florida Statutes.**
   Name ____ Telephone Number ____
   Address ____
9. **Expiration date of notice of commencement** (the expiration date may not be before the completion of construction and final payment to the contractor, but will be 1 year from the date of recording unless a different date is specified) ____

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

Under penalty of perjury, I declare that I have read the foregoing notice of commencement and that the facts stated in it are true to the best of my knowledge and belief.

[signature] Owner
Signature of Owner or Lessee, or Owner's or Lessee's Authorized Officer/Director/Partner/Manager — Signatory's Title/Office

The foregoing instrument was acknowledged before me this 3 day of March 2016 (month/year) by Richard Higgins (name of person)

as Self (Type of authority, e.g., officer, trustee, attorney in fact) for ____ (Name of party on behalf of whom instrument was executed)

[signature] Christiane Feliciano
Signature of Notary Public - State of Florida — Print, type, or stamp commissioned name of Notary Public

Personally Known ____ OR Produced ID ✓
Type of ID Produced FL DL

CHRISTIANE FELICIANO
Notary Public - State of Florida
Commission # FF 907470
My Comm. Expires Aug 6, 2019
Bonded through National Notary Assn.

FF 907470

Form Revised: September 26, 2011

THE STATE OF FLORIDA, COUNTY OF ORANGE — I hereby certify that the foregoing is a true copy of the document on file in the Office of the Comptroller. MARTHA O. HAYNIE, COUNTY COMPTROLLER. By: L. McKenzie Dated: 3/3/16

Boundary Survey

ADDRESS
Dashwyler Drive
Orlando, FL 32812

WINDWARD ON LAKE CONWAY CONDOMINIUM
OR BOOK 10233, PAGE 8301

PART OF LOT 1
VACANT

PART OF LOT 1
NOT INCLUDED

PLAT LIMITS

DASHWYLER DRIVE
RIGHT OF WAY WIDTH NOT VERIFIED
(STATE ROAD NO. S-528-A PER PLAT)

LAKE CONWAY

ORANGE COUNTY PROPERTY PER PLAT

ZONING APPROVED 2/10/14

LEGEND

OR Book – Official Record Book
CC – Covered Concrete
ID – Identification
LB – Licensed Business
PID – Found Iron Pipe
PIR – Found Iron Rod
C/S – Concrete Slab
Δ – Central Angle
L – Arc Length
R – Radius
SECC – Screen Enclosed Covered Concrete
(M) – Plat Dimension
(C) – Calculated Dimension
(D) – Deed Dimension
(F) – Field Dimension
FCM – Found Concrete Monument
– Electric Box
– Water Meter
– BOLLARD
– Telephone
– Irrigation Riser
– Pool Equipment
– Cable TV Riser
Pg – Page
FN&D – Found Nail & Disk
D&E – Drainage & Utility Easement
– Power Pole
– Metal Sign Pole
– Airflow Station

JOB #:
CLIENT:
FIELD DATE:
DRAFTER:
APPROVED:
SCALE:

COPYRIGHT 2013

CERTIFIED TO: (AS FURNISHED)
Lucille & Jennifer Tribou

FLOOD ZONE
SUBJECT PROPERTY SHOWN HEREON APPEARS TO BE LOCATED IN FLOOD ZONE "XE & X", AREAS DETERMINED TO BE OUTSIDE AND WIDE FIVE HUNDRED YEAR FLOODPLAIN, PER FLUR & PANEL NUMBER 12095C0035F, LAST REVISION DATE 9-25-09. THIS SURVEYOR MAKES NO GUARANTEES AS TO THE ACCURACY OF THE ABOVE INFORMATION. SEE LOCAL F.E.M.A. AGENT SHOULD BE CONTACTED FOR VERIFICATION.

LIST OF POSSIBLE ENCROACHMENTS:
NONE OBSERVED AT TIME OF SURVEY
CHAIN LINK FENCES AND WALL HAS NOT BEEN DETERMINED

BASIS OF BEARING:
BEARINGS ARE BASED ON THE NORTH BOUNDARY OF SUBJECT PROPERTY WHICH HAS A BEARING OF S 89°22'10" E PER PLAT.

Legal Description
(as furnished)

Lot 1, LESS the East 110 Feet Thereof, Dashwyler Shores, 2nd Addition, according to the plat thereof as recorded in Plat Book Y, Page 23, of the Public Records of Orange County, Florida, and Together with that 30 Foot wide easement for ingress and egress as reserved in Warranty Deed filed February 27, 1996 as recorded in O.R. Book 5209, Page 4961, Public Records of Orange County, Florida.

NOTES
1. Underground utility and footings, unobserved improvements, hazardous and/or other underground structures were not searched for this survey.
2. The purpose of this survey is for use in obtaining title insurance and should not be used for construction purposes.
3. Additions or deletions to this survey by other than the signing party or parties is prohibited without the written consent of the signing party or parties.
4. This property shown hereon is subject to all easements, restrictions and reservations which may be shown or noted on the recorded plat and which the public records of the county may reflect. This survey only depicts survey related information such as easements and encroachments and is not a record title or abstract of the property and is limited to the specific lines and dimensions for improvements, as such must be used for record title from deed.

THIS SURVEY IS PREPARED FOR THE EXCLUSIVE USE AND BENEFIT OF THE PARTIES LISTED HEREON. LIABILITY TO THIRD PARTIES MAY NOT BE TRANSFERRED OR ASSIGNED.

Vision Land Service, LLC
941 S. Pennsylvania Avenue
Winter Park, FL 32789
Phone (000) 000-0474
LB 7788

SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT THIS SURVEY IS A TRUE AND ACCURATE REPRESENTATION OF A SURVEY PREPARED UNDER MY DIRECTION.

Joseph E. Williamson, PLS
PROFESSIONAL LAND SURVEYOR
FLORIDA REGISTRATION #6873
NOT VALID WITHOUT THE ELECTRONIC SIGNATURE AND ORIGINAL RAISED SEAL OF THE FLORIDA LICENSED SURVEYOR AND MAPPER

DATED: 7/10/13

DATE	REVISION
1/16/14	Add Well & R.H.W.L.
7/10/13	ADD EASEMENT
7/10/13	ADD R.H.W.L.
10/29/13	ADD MAT'L AND ADDITIONAL COMMENTS