

DATE10/18/2005

Columbia County Building Permit

PERMIT000023724

This Permit Expires One Year From the Date of Issue

APPLICANTMARCUS PROM

PHONE904-858-3326

ADDRESS115SWAN LAKE RDMELROSEFL32666

OWNERED HOWARD

PHONE904-645-3988

ADDRESS1052SW OLD LAKE CITY TERRHIGH SPRINGSFL32643

CONTRACTORMARCUS PROM/BUILD NOW CORP.

PHONE904-858-3326

LOCATION OF PROPERTY441 S, R 18, L OLD LAKE CITY TERR, THEN 1 MILE ON THE RIGHT

WOOD FENCE LOCK COMBINATION 8700

TYPE DEVELOPMENTSFD,UTILITY

ESTIMATED COST OF CONSTRUCTION102000.00

HEATED FLOOR AREAS2040.00

TOTAL AREAS2060.00

HEIGHT21.00

STORIES1

FOUNDATIONCONCRETE

WALLSFRAMED

ROOF PITCH6/12

FLOORSLAB

LAND USE & ZONINGAGRICULTURE-3

MAX. HEIGHT35

Minimum Set Back Requirments:

STREET-FRONT30.00

REAR25.00

SIDE25.00

NO. EX.D.U.0

FLOOD ZONEX

DEVELOPMENT PERMIT NO.

PARCEL ID33-6S-17-09834-118

SUBDIVISIONRUMPH FARMS UNRECORDED

LOT18

BLOCK

PHASE

UNIT

TOTAL ACRES13.00

CGC017065

Marcus P

Culvert Permit No.

Culvert Waiver

Contractor's License Number

Applicant/Owner/Contractor

EXISTNG

00-0524-N

BK

JH

Y

Driveway Connection

Septic Tank Number

LU & Zoning checked by

Approved for Issuance

New Resident

COMMENTS: FLOOR 1 FOOT ABOVE THE ROAD

NOC ON FILE

Check # or Cash149

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power

Foundation

Monolithic

date/app. by

date/app. by

date/app. by

Under slab rough-in plumbing

Slab

Sheathing/Nailing

date/app. by

date/app. by

date/app. by

Framing

Rough-in plumbing above slab and below wood floor

date/app. by

date/app. by

Electrical rough-in

Heat & Air Duct

Peri. beam (Lintel)

date/app. by

date/app. by

date/app. by

Permanent power

C.O. Final

Culvert

date/app. by

date/app. by

date/app. by

M/H tie downs, blocking, electricity and plumbing

Pool

date/app. by

date/app. by

Reconnection

Pump pole

Utility Pole

date/app. by

date/app. by

date/app. by

M/H Pole

Travel Trailer

Re-roof

date/app. by

date/app. by

date/app. by

BUILDING PERMIT FEE \$510.00

CERTIFICATION FEE \$10.30

SURCHARGE FEE \$10.30

MISC. FEES \$.00

ZONING CERT. FEE \$50.00

FIRE FEE \$.00

WASTE FEE \$

FLOOD DEVELOPMENT FEE \$

FLOOD ZONE FEE \$25.00

CULVERT FEE \$

TOTAL FEE605.60

INSPECTORS OFFICE

CLERKS OFFICE

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.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR 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."

This Permit Must Be Prominently Posted on Premises During Construction

PLEASE NOTIFY THE COLUMBIA COUNTY BUILDING DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF EACH INSPECTION, IN ORDER THAT IT MAY BE MADE WITHOUT DELAY OR INCONVIENCE, PHONE 758-1008. THIS PERMIT IS NOT VALID UNLESS THE WORK AUTHORIZED BY IT IS COMMENCED WITHIN 6 MONTHS AFTER ISSUANCE.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

Columbia County Building Permit Application

10/14/05 / EFT MESSAGE

Revised 9-23-04

For Office Use Only Application # 0509-67 Date Received 9/22/05 By GT Permit # 23724
 Application Approved by - Zoning Official BLK Date 13.10.05 Plans Examiner OK Date 10-12-05
 Flood Zone X Development Permit N/A Zoning A-3 Land Use Plan Map Category A-3
 Comments _____

Applicants Name MARCUS PLOM BUILD NOW CORP. Phone (904) 858-3326
 Address 115 SWAN LAKE RD, MELROSE, FLA. 32666
 Owners Name ED HOWARD Phone (904) 645-3988
 911 Address 1052 SW OLD LAKE CITY TRL, HILTI SPRINGS, FL 32643
 Contractors Name BUILD NOW CORP / MARCUS PLOM Phone (904) 858-3326
 Address 115 SWAN LAKE ROAD, MELROSE, FLA 32666
 Fee Simple Owner Name & Address ED HOWARD, 8722 BELLE RIVE BLVD, JAX, FLA. 32211
 Bonding Co. Name & Address _____
 Architect/Engineer Name & Address SPUTO + ASSOCIATES - 10 SW 1ST AVE, GAINESVILLE, FLA 32601
 Mortgage Lenders Name & Address _____ (852) 378-0448
 Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. - Progressive Energy
 Property ID Number 33-65-17E-09834-118 Estimated Cost of Construction 160,000
 Subdivision Name Rumph farms (Unrec) Lot 18 Block _____ Unit _____ Phase _____
 Driving Directions S ON 441 - WEST ON OLD BELLAMY, N ON OLD LAKE CITY. 441S, TR CR 18, TL Old Lake City Terr, 1 mile on right Wood fence, LOCK Comb. 8700
 Type of Construction TYPE II SFD Number of Existing Dwellings on Property 1 - BARN
 Total Acreage 13 Lot Size 253x144 Do you need a Culvert Permit or Culvert Waiver or Have an Existing Drive
 Actual Distance of Structure from Property Lines - Front 1120 Side 95 Side 285 Rear 240
 Total Building Height 21 Number of Stories 1 Heated Floor Area 2040 Roof Pitch 6/12
2060 Rr PLOM 9/12

Application is hereby made to obtain a permit to do 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 be performed to meet the standards of all laws regulating construction in this jurisdiction.

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

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 ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Marcus PLOM
 Owner Builder or Agent (Including Contractor)

STATE OF FLORIDA
 COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me

this 19th day of Sept 2005

Personally known _____ or Produced Identification DL

Marcus PLOM
 Contractor Signature

Contractors License Number C6C 017065

Competency Card Number _____



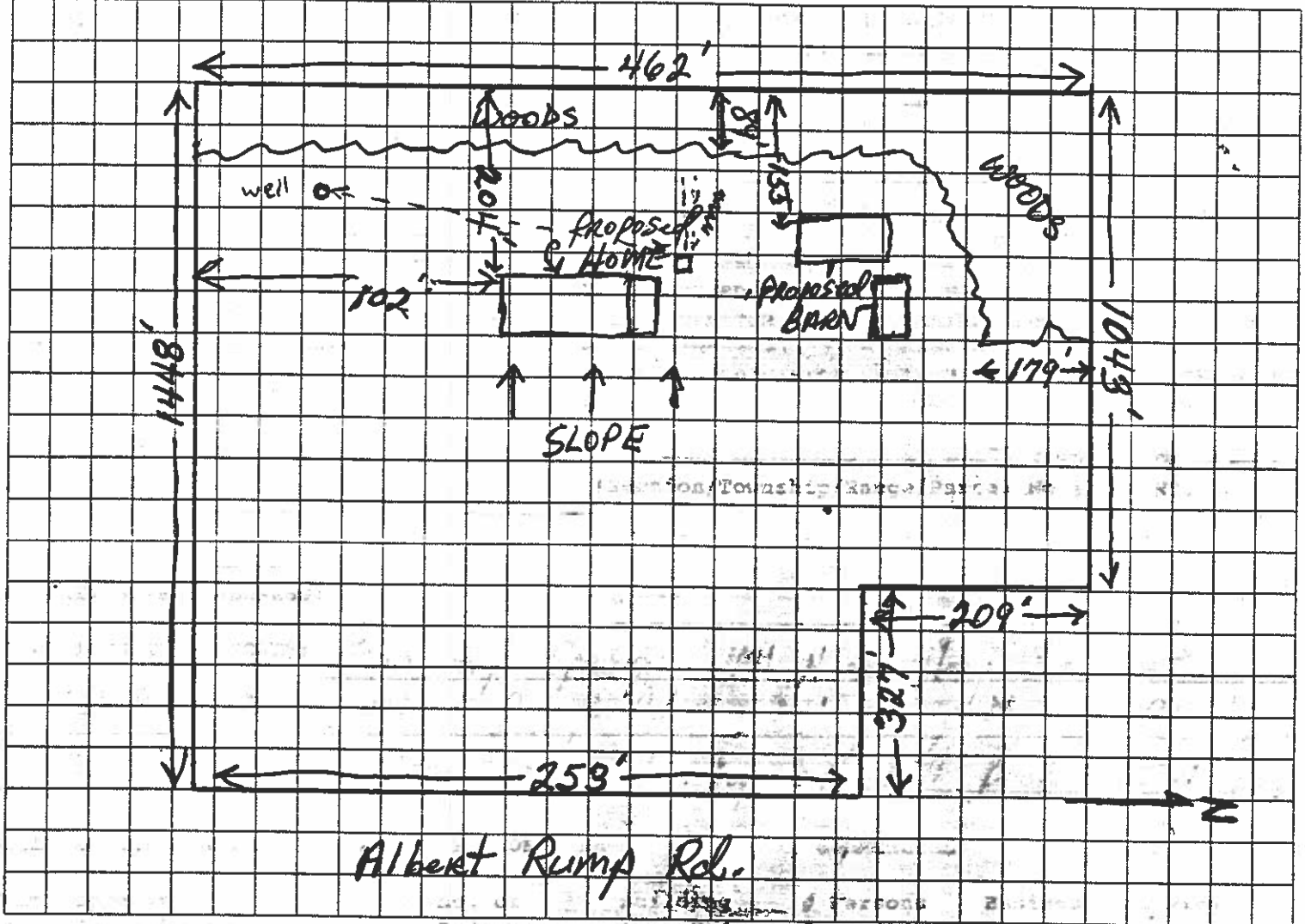
Notary Signature





----- PART II - SITEPLAN -----

Scale: Each block represents 10 feet and 1 inch = 40 feet.



Notes: drainfield runs straight back from house - parallel to driveway at back of property.

Site Plan submitted by Edward J. Howard 9/27/00 owner
Plan Approved X Not Approved _____ Date 6/29/00
By J. Aweeney Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

Return to: (enclose self-addressed stamped envelope)

Name:

Address:

This Instrument Prepared by:

Name:

Address:

Property Appraisers Parcel Identification

Inst: 2005022903 Date: 09/16/2005 Time: 16:49

DC, P. DeWitt Cason, Columbia County B: 1058 P: 1849

SPACE ABOVE THIS LINE FOR PROCESSING DATA

SPACE ABOVE THIS LINE FOR RECORDING DATA

NOTICE OF COMMENCEMENT

Permit No. _____

Tax Folio No. _____

State of Florida _____
County of COLUMBIA }

The undersigned hereby gives notice that improvements will be made to certain real property, and in accordance with chapter 713 of the Florida Statutes, the following information is provided in this NOTICE OF COMMENCEMENT.

Legal description of property (include Street Address, if available) 1052 SW OLD LAKE CITY TERR
HIGH SPAIN, FL. 32669

General description of improvements SINGLE STORY SINGLE FAMILY RES.

Owner's Name EDWARD J. HOWARD

Address 8722 BELLE RIVE BLVD, JAX, FL 32256

Owner's Interest in site of the improvement FEE SIMPLE

Fee Simple Title holder (if other than owner) _____

Address SAME

Phone: 904 645-3888 Fax: _____

Contractor BUILD NOW CORP.

MT. AIRY, FL. 32666

Address 115 SWAN LAKE RD

Phone: (904) 858-3326 Fax: _____

Surety _____

Phone: _____ Fax: _____

Address _____

Amount of bond \$ _____

Lender's Name _____

Address: _____

Phone: _____

Fax: _____

Persons within the State of Florida designated by owner upon whom notices or other documents may be served as provided by Section 713.13(1)(a)7, Florida Statutes.

Name EDWARD HOWARD

Address _____

Phone: _____

Fax: _____

In addition to himself, owner designates _____

Of _____

Phone: _____

Fax: _____

to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes.

Expiration date of Notice of Commencement (the expiration date is 1 year from the date of recording unless a different date is specified)

Edward J. Howard
Signature of Owner

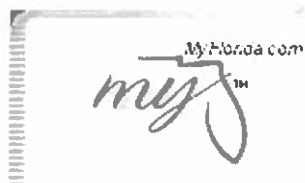
Edward J. Howard
Printed Name of Owner

NOTARY PUBLIC STATE OF FLORIDA
Sharon L. Key
Commission # BD413414
Expires: MAY 14, 2009
Bonded Thru Atlantic Bonding Co., Inc.

I have relied upon the following identification of the Affiant Ed Howard

Sworn to and subscribed before me this 30 day of August

Notary Signature
Sharon L. Key
Printed Name

[Log On](#)[DBPR Home](#) | [Online Services Home](#) | [Help](#) | [Site Map](#)

9:30:52 AM

Public Services

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[Apply to Retake Exam](#)
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User Services

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[Change License Status](#)
[Maintain Account](#)
[Change My Address](#)
[View Messages](#)
[Change My PIN](#)
[View Continuing Ed](#)

[Term Glossary](#) [Online Help](#)**Licensee Details****Licensee Information**

Name: **PROM, MARCUS JOSHUA (Primary Name)**
Main Address: **BUILD NOW CORP (DBA Name)**
2451 ANNISTON ROAD
JACKSONVILLE Florida 32216
County: **DUVAL**

License Mailing:

LicenseLocation: **115 SWAN LAKE ROAD**
JACKSONVILLE FL 32666
County: **DUVAL**

License Information

License Type: **Certified General Contractor**
Rank: **Cert General**
License Number: **CGC017065**
Status: **Current,Active**
Licensure Date: **07/02/1980**
Expires: **08/31/2006**

Special Qualifications **Qualification Effective**
Bldg Code Core
Course Credit
Qualified Business License Required **05/10/2005**

[View Related License Information](#)[View License Complaint](#)[Terms of Use](#) | [Privacy Statement](#)

MR JOE HALTIWANGER
PLAN EXAMINER
COLUMBIA COUNTY BUILDING DEPARTMENT

REGARDING PERMIT APPLICATION 0509-67

OWNER ED & LAQUAY HOWARD
CONTRACTOR-BUILD NOW CORP, CGC 017065
#1.MARCUS PROM, PRESIDENT, QUALIFYING AGENT

#2.DIRECTIONS TO SITE- SOUTH ON HWY #441, WEST (RIGHT) ON CR#18,
SOUTH (LEFT) ON OLD LAKE CITY TERRACE, ONE MILE ON RIGHT (1052) 4
BOARD WOOD FENCE, LOCK COMBINATION- LINE UP THE NUMBERS -
8700.

#3.& #8. WINDOWS ABOVE GARDEN TUB, 2- 3030 ARE TEMPERED AND
WILL HAVE THE TEMPERED TAG ON THE WINDOWS.

EXTERIOR DOOR AND WINDOW STATE OF FLORIDA SEALED PRODUCT
APPROVAL LETTERS WILL BE SUBMITTED, AND PRODUCT APPROVAL
TAGS AND LETTERS WILL BE IN THE DOCUMENT BOX, AND RESPECTIVE
TAGS AND SEALS WILL BE LEFT ON WINDOWS AND DOORS UNTIL
INSPECTED.

FLORIDA PRODUCT APPROVAL DOCS FOR BETTER BILT 740 ALUMINUM
SERIES INCLUDED, AND JELD WEN HURRICANE DOOR SYSTEMS INCLUDED
IN THIS PACKAGE.

#4. THE HOME HAS 2,060 SQUARE FEET OF HEATED & COOLED SPACE.

#5. HEIGHT OF THE CHIMNEY IS APPROX 20'.

#6. HEIGHT OF CHIMNEY IS 22'.

#7. FIREPLACE IS AN INSERT (METAL BOX) WOOD FIREPLACE, METAL
CHIMNEY, METAL CAP. METAL & WOOD FIRESTOP AT TOP PLATE HEIGHT.

#8. POTABLE WATER WELL DOES EXIST.

THANKYOU FOR YOUR HELP.

MARCUS PROM, PRESIDENT OF BUILD NOW CORP, COPIES OF LICENSE FOR
MARCUS PROM, AND LICENSE FOR BUILD NOW, PREVIOUSLY SUBMITTED,
IS THE ONLY PERSON AUTHORIZED TO PICK UP PERMIT. NO ONE ELSE
AUTHORIZED TO PICK UP PERMIT.

MARCUS PROM (904) 858 3326 FAX (904) 725 1228



THIS INSTRUMENT PREPARED BY:

Gary I. Christian
Rumph, Stoddard & Christian
3100 University Boulevard, Suite 101
Jacksonville, Florida 32216

RECORD AND RETURN TO:

Rumph, Stoddard & Christian
3100 University Boulevard, Suite 101
Jacksonville, Florida 32216

RE PARCEL ID #: R09834-000
BUYER'S TIN: 308-54-6718

BK 0901 PG 0457

OFFICIAL RECORDS

WARRANTY DEED

THIS WARRANTY DEED made this 14th day of April, 2000 by J. Quinton Rumph and Ann S. Rumph, his wife, hereinafter called Grantor, and whose address is 2970 St. Johns Avenue, Condo 10-C, Jacksonville, Florida 32205 to Edward J. Howard and LaQuae O. Howard, his wife, hereinafter called Grantee and whose address is 8722 Belle Rive Boulevard, Jacksonville, Florida 32256.

(Wherever used herein the term "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations.)

WITNESSETH:

THAT the Grantor, for and in consideration of the sum of Ten and NO/100 Dollars and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the Grantee, all that certain land situate, lying and being in Columbia County, Florida, viz:

See Exhibit "A" attached hereto and by this reference made a part hereof.

FILED AND RECORDED IN PUBLIC
RECORDS OF COLUMBIA COUNTY, FL.

00-06986

'00 APR 26 AM 10:13

RECORD VERIFIED

McK

Documentary Stamp \$ 277.20
Intangible Tax e
P. DeWitt Cason
Clerk of Court
By *McK* D.C.

Signed, sealed and delivered in our presence:

Donna T. Morris
Witness Signature

Donna T. Morris
Witness Printed Signature

Haley Morris
Witness Signature

Haley Morris
Witness Printed Signature

OFFICIAL RECORDS
J. Quinton Rumph
J. Quinton Rumph
Ann S. Rumph
Ann S. Rumph

STATE OF FLORIDA
COUNTY OF DUVAL

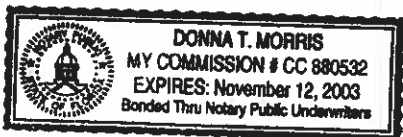
The foregoing instrument was acknowledged before me this 14th day of April, 2000 by J. Quinton Rumph and Ann S. Rumph, his wife. They are personally known to me or have produced Florida driver's licenses as identification.

Notary Public, State and County Aforesaid
Donna T. Morris
Notary Signature

Notary Printed Signature

(Title or Rank)

(Serial No., if any)



COVENANTS AND RESTRICTIONSBK 0901 PG 04
4
OFFICIAL RECORD

1. No dwelling shall be constructed upon or installed upon the land having an area of less than 700 square feet of heated space exclusive of all garages and unenclosed porches.

2. No swine (goats or hogs) shall be raised, bred or kept on the land.

3. Any mobile home, trailer or modular home must be completely skirted with an architecturally suitable material between the ground level and the beginning of the side walls on the date of installation on the land, and such skirting must be kept in a good state of repair for so long as the mobile home, trailer or modular home remains on the land.

4. No noxious or offensive activity shall be carried on upon the land, nor shall anything be done on the land that may be or may become an annoyance or a nuisance to neighboring lands.

5. No portion of the land shall be kept or maintained to store junk or inoperative motor vehicles, and no portion of the land shall be used or maintained as a dumping ground for rubbish, trash, garbage or waste of any kind.

6. Livestock, other than swine, goats or hogs, may be raised, bred or kept on the land only if substantial pens and fencing are built on the land sufficient to restrain the livestock from other lands, and such pens and fencing must at all times be kept in a good state of repair.

7. Setback lines for all buildings shall be 100 feet from any front lot line, and 50 feet from each side lot line, and 100 feet from the rear lot line.

These Covenants are to run with the land and shall be binding on all parties and persons claiming under them for a period of 25 years from the date these Covenants are recorded after which time they shall be extended automatically for successive periods of 10 years, unless an instrument signed by a majority of the owners of the 25 Rumph Farms lots has been recorded agreeing to change the Covenants in whole or in part.

OFFICIAL RECORDS

FILE: 1RE00020

EXHIBIT "A"

That certain piece, parcel or tract of land situate, lying and being in the county of Columbia and State of Florida, being Lot 18, in Section 33, Township 6 South, Range 17 East, described as:

A part of the N 1/2 of the S 1/2 of Section 33, Township 6 South, Range 17 East more particularly described as follows: Commence at the Southeast corner of the NE 1/4 of the SW 1/4 and run N. 01 degrees 15 minutes 51 seconds W. along the East line thereof, 551.95 feet to the point of beginning. Thence S. 88 degrees 20 minutes 34 seconds W., 327.52; thence N. 00 degrees 44 minutes 47 seconds W., 208.75 feet; thence S. 88 degrees 20 minutes 34 seconds W., 1043.75 feet; thence S. 00 degrees 44 minutes 47 seconds E., 462.14 feet; thence N. 88 degrees 20 minutes 34 seconds E., 1448.75 feet to the West right of way of a County maintained road; thence N. 20 degrees 02 minutes 58 seconds W. along said right of way, 108.04 feet to the point of curve of a curve to the right, having a radius of 956.98 feet and an included angle of 09 degrees 18 minutes 40 seconds; thence Northerly along the arc of said curve for an arc distance of 155.52 feet; thence S. 88 degrees 20 minutes 34 seconds W., 1.65 feet to the point of beginning, Columbia County, Florida.

SUBJECT TO Covenants and Restrictions attached hereto as Exhibit "B".

SUBJECT TO: Easements granted to Clay Electric Cooperative, Inc. by instruments recorded in O.R. Book 846, page 1085 and O.R. Book 846, page 1083.

SUBJECT TO: Mineral Reservations recorded in Deed Book 44, page 541, as transferred in Deed Book 45, page 415, Deed Book 45, page 504, O.R. Book 108, page 205, Deed Book 45, page 295, Deed Book 45, page 482, Deed Book 46, page 221, all of the public records of Columbia County, Florida.

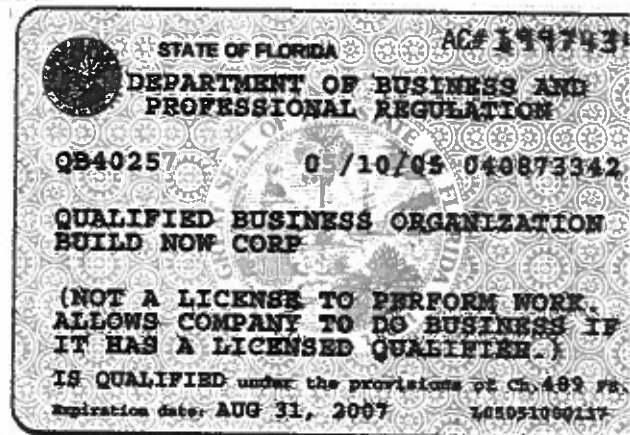


DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783

(850) 487-1395

BUILD NOW CORP
PO BOX 16122
JACKSONVILLE

FL 32246



DETACH HERE

AG# 1997434

STATE OF FLORIDA

DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD

SEQ#105051000117

DATE	BATCH NUMBER	LICENSE NBR
05/10/2005	040873342	QB40257

The BUSINESS ORGANIZATION
Named below IS QUALIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2007
(THIS IS NOT A LICENSE TO PERFORM WORK. THIS ALLOWS
COMPANY TO DO BUSINESS ONLY IF IT HAS A QUALIFIER.)

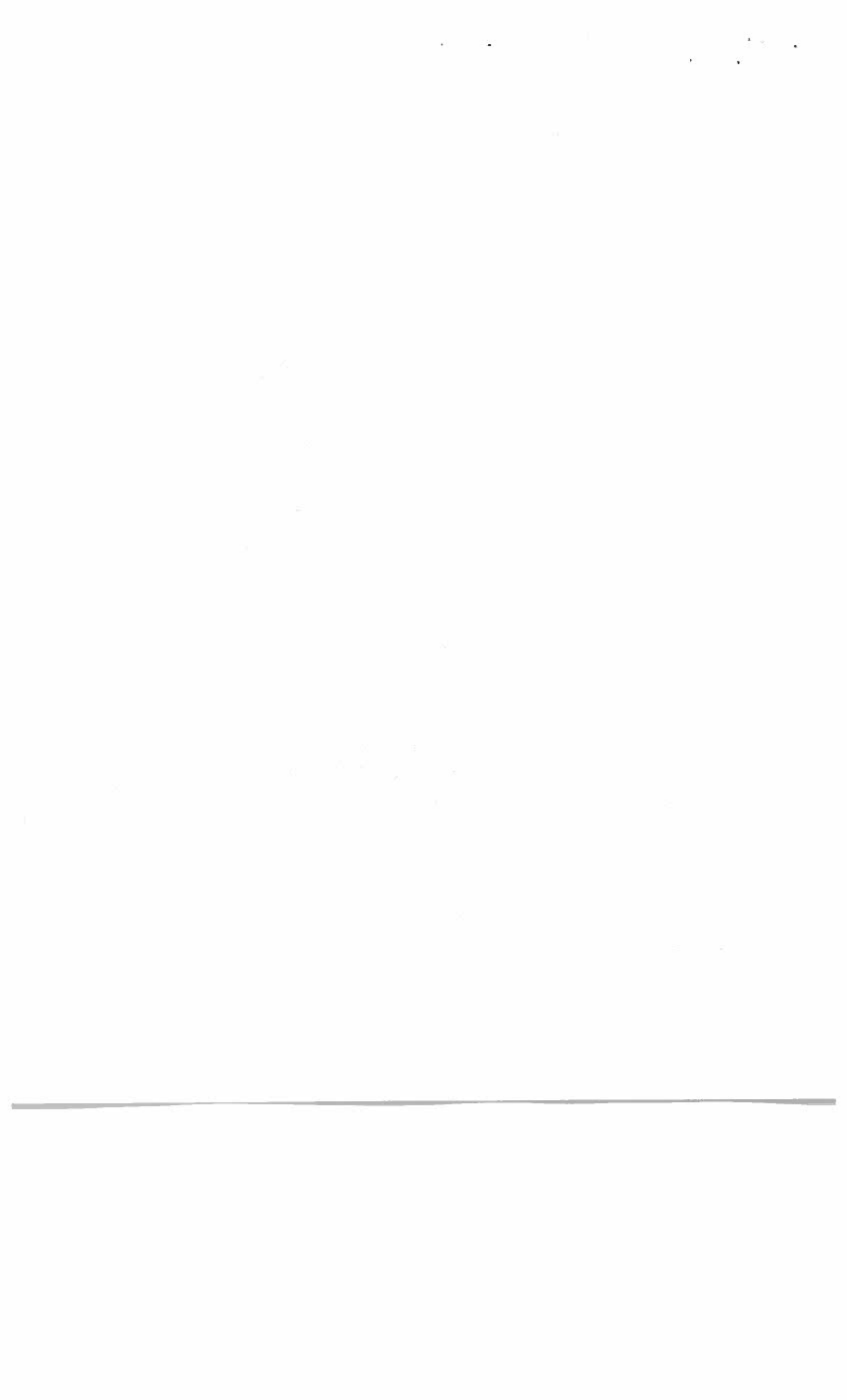
BUILD NOW CORP
115 SWAN LAKE ROAD
MELROSE

FL 32666

JEB BUSH
GOVERNOR

DISPLAY AS REQUIRED BY LAW

DIANE CARR
SECRETARY





STATE OF FLORIDA

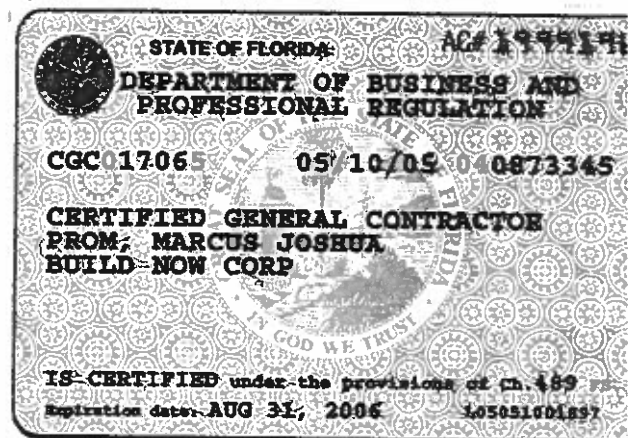
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783

(850) 487-1395

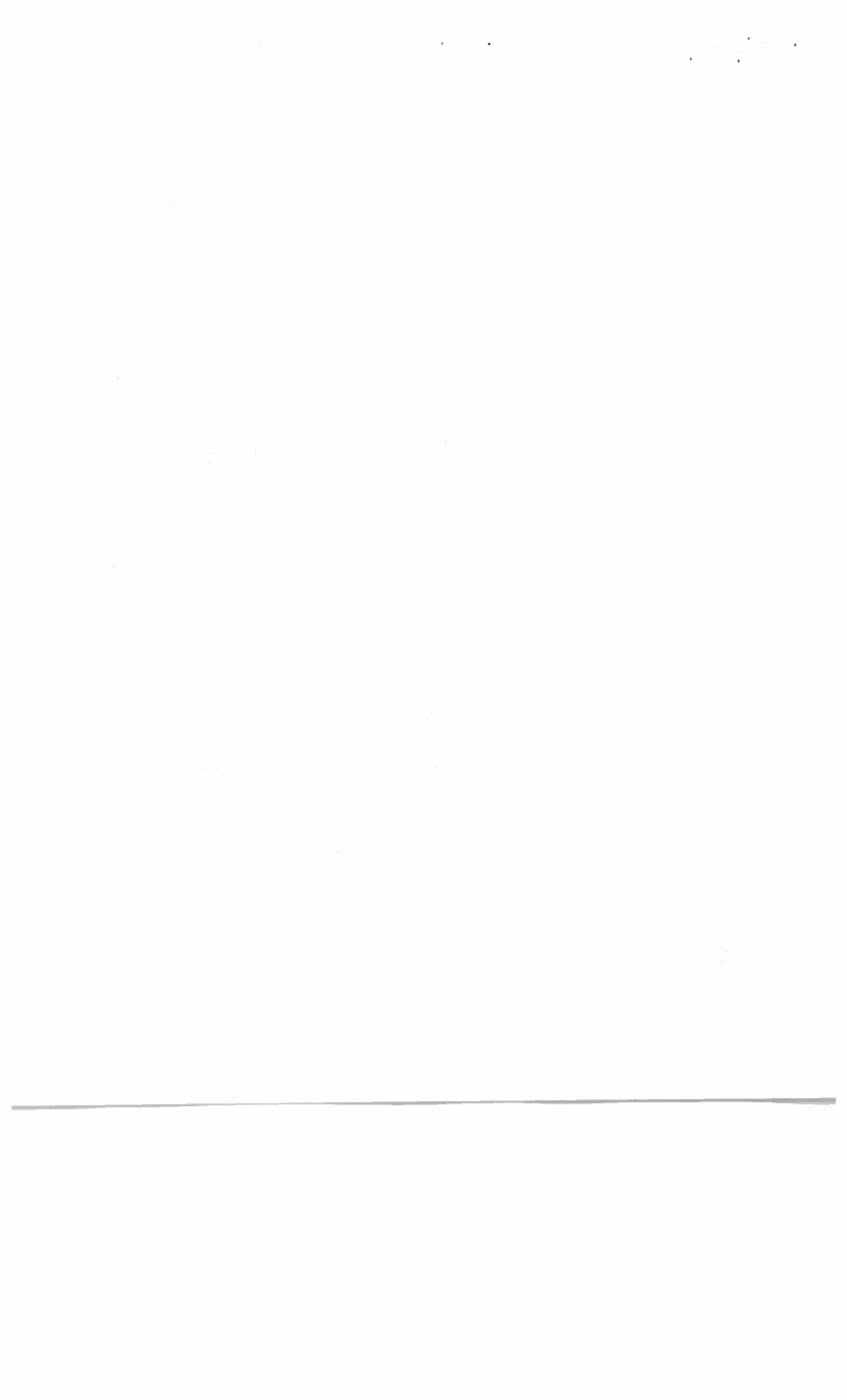
PROM, MARCUS JOSHUA
BUILD NOW CORP
2451 ANNISTON ROAD
JACKSONVILLE

FL 32216



DETACH HERE

STATE OF FLORIDA		
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION		
CONSTRUCTION INDUSTRY LICENSING BOARD		
SEQ# L05051001897		
DATE	BATCH NUMBER	LICENSE NBR
05/10/2005	040873345	CGC017065
The GENERAL CONTRACTOR Named below IS CERTIFIED Under the provisions of Chapter 489 F.S. Expiration date: AUG 31, 2006		
PROM, MARCUS JOSHUA BUILD NOW CORP 115 SWAN LAKE ROAD JACKSONVILLE FL 32666		
JEB BUSH GOVERNOR		DIANE CARR SECRETARY
DISPLAY AS REQUIRED BY LAW		





Hull & Company, Inc.

8381 Dix Ellis Trail Suite 100

Jacksonville, FL 32256

(904)538-0909 (888)809-4855 Fax (904)538-9838

Requested Quotation

New

4/5/2005

Regarding: BUILD NOW CORP

Producer: INSURAMERICA OF FLORIDA, INC.

4348 Southpoint Blvd Ste 200

Jacksonville, FL 32216

Risk Location:

115 SWAN LAKE ROAD

MELROSE, FL 32666

Attn: SHERI KELLY

Effective Date: 4/5/2005

Renewal Date:

Policy No.:

Form of Coverage: Commercial General Liability

This Quotation is being offered on the basis indicated. It does not necessarily provide the terms and/or coverage requested in your submission. Your client must be advised.

Limits:

\$1,000,000.00 Each Occurrence
\$2,000,000.00 General Aggregate
\$1,000,000.00 Products Aggregate.
\$1,000,000.00 Pers. Inj. & Adv. Inj.
\$50,000.00 Fire Damage
\$1,000.00 Medical Payment

Premium \$7,500.00
Policy Fee \$35.00
Inspection Fee \$185.00
TRIA Premium \$150.00
Surplus Lines Tax 5% \$393.50
FSLSO - Service Fee 0.25% \$19.68

Total: (incl. TRIA opt.) \$8,283.18

Total: (less TRIA opt.) \$8,125.30

Terms & Conditions:

Exclusions: Pollution, Asbestos, Subsidence, Professional liability, Lead Contamination, Silica, Assault & Battery, Mold, Animal (Canine), EIFS, Sprinkler leakage, Fire legal, Mold, Breach of Contract, Cross Suits, Subsidence, Intellectual property hazard exclusion, Employees, leased workers or volunteers

Subject To: 35% deposit, 25% Minimum earned premium, Completed signed application within 10 days of binding & DILIGENT EFFORT PRIOR TO BINDING, Supplemental application, No flat cancellation, \$2500 Bodily injury/property (continued on attachment)

Company: Evanston

Remarks:

PLEASE CALL OR FAX TO BIND COVERAGES

SEE COMPANY QUOTE FOR TERMS & CONDITIONS

These terms are valid for 30 days or renewal date shown

Sent by: Marian Wilcox

Department: Commercial Lines



COMMERCIAL INSURANCE APPLICATION

APPLICANT INFORMATION SECTION

CSR DC

DATE (MM/DD/YYYY)

06/13/2005

UNDERWRITER OFF

AGENCY

INSURAMERICA OF FLORIDA, INC.
4348 SOUTHPPOINT BLVD STE 200
JACKSONVILLE FL 32216
Sheri D. Kelly, CIC

PHONE (A/C, No, Ext): 904-332-8585

FAX (A/C, No): 904-296-1888

E-MAIL ADDRESS:

CODE:

SUB CODE:

AGENCY CUSTOMER ID: BUILD-2

CARRIER

NAIC CODE:

UNDERWRITER

Hull & Company

POLICIES OR PROGRAM REQUESTED

POLICY NUMBER

GENERAL LIABILITY

INDICATE SECTIONS ATTACHED

PROPERTY

GLASS AND SIGN

ACCOUNTS RECEIVABLE/
VALUABLE PAPERS

CRIME/MISCELLANEOUS CRIME

TRANSPORTATION/
MOTOR TRUCK CARGO

EQUIPMENT FLOATER

INSTALLATION/BUILDERS RISK

ELECTRONIC DATA PROC

☒ COMMERCIAL
GENERAL LIABILITY

BUSINESS AUTO

TRUCKERS/MOTOR CARRIER

GARAGE AND DEALERS

VEHICLE SCHEDULE

BOILER & MACHINERY

WORKERS COMPENSATION

UMBRELLA

STATUS OF TRANSACTION

☒ QUOTE ☐ ISSUE POLICY ☐ RENEW

BOUND (Give Date and/or Attach Copy):

CHANGE DATE TIME

CANCEL 12:00 ☒ AM ☐ PM

PACKAGE POLICY INFORMATION

ENTER THIS INFORMATION WHEN COMMON DATES AND TERMS APPLY TO SEVERAL LINES, OR FOR MONOLINE POLICIES.

PROPOSED EFF DATE

PROPOSED EXP DATE

BILLING PLAN

PAYMENT PLAN

AUDIT

06/13/05

06/13/06

DIRECT BILL

AGENCY BILL

APPLICANT INFORMATION

NAME (First Named Insured & Other Named Insureds)

Build Now Corp

FEIN OR SOC SEC #
(of First Named Insured):PHONE
(A/C, No, Ext):

MAILING ADDRESS INCL ZIP+4 (of First Named Insured)

115 Swan Lake Road
Melrose FL 32666

E-MAIL ADDRESS(ES): sagotk@hotmail.com

WEBSITE
ADDRESS(ES):

INDIVIDUAL

☒ CORPORATIONSUBCHAPTER 'S'
CORPORATION

LLC

CR BUREAU
NAME

ID NUMBER

DATE BUS
STARTED

INSPECTION CONTACT

Marcus Prom

ACCOUNTING RECORDS CONTACT

PHONE

A/C, No, Ext:

E-MAIL
ADDRESS:

PHONE

A/C, No, Ext:

E-MAIL
ADDRESS:

REMISES INFORMATION

LOC #	BLD #	STREET, CITY, COUNTY, STATE, ZIP+4	CITY LIMITS	INTEREST	YR BUILT	# EMPLOYEES	ANNUAL REVENUES	PART OCCUPIED
001	001	115 Swan Lake Road Melrose FL 32666	☒ INSIDE ☐ OUTSIDE	☒ OWNER ☐ TENANT		0		
			☐ INSIDE ☐ OUTSIDE	☐ OWNER ☐ TENANT				

NATURE OF BUSINESS/DESCRIPTION OF OPERATIONS BY PREMISE(S)

001 001 Residential General Contractor

GENERAL INFORMATION

PLAIN ALL "YES" RESPONSES

	YES	NO	EXPLAIN ALL "YES" RESPONSES	YES	NO
IS THE APPLICANT A SUBSIDIARY OF ANOTHER ENTITY?		☒	7. ANY PAST LOSSES OR CLAIMS RELATING TO SEXUAL ABUSE OR MOLESTATION ALLEGATIONS, DISCRIMINATION OR NEGLIGENT HIRING?		☒
DOES THE APPLICANT HAVE ANY SUBSIDIARIES?		☒	8. DURING THE LAST FIVE YEARS (TEN IN RI), HAS ANY APPLICANT BEEN CONVICTED OF ANY DEGREE OF THE CRIME OF ARSON? (In RI, this question must be answered by any applicant for property insurance. Failure to disclose the existence of an arson conviction is a misdemeanor punishable by a sentence of up to one year of imprisonment).		☒
IS A FORMAL SAFETY PROGRAM IN OPERATION?		☒	9. ANY UNCORRECTED FIRE CODE VIOLATIONS?		☒
ANY EXPOSURE TO FLAMMABLES, EXPLOSIVES, CHEMICALS?		☒	10. ANY BANKRUPTCIES, TAX OR CREDIT LIENS AGAINST THE APPLICANT IN THE PAST 5 YEARS?		☒
ANY CATASTROPHE EXPOSURE?		☒	11. HAS BUSINESS BEEN PLACED IN A TRUST? IF YES, NAME OF TRUST:		☒
ANY OTHER INSURANCE WITH THIS COMPANY OR BEING SUBMITTED?		☒			
ANY POLICY OR COVERAGE DECLINED, CANCELLED OR NON-RENEWED DURING THE PRIOR 3 YEARS? (Not applicable in MO)		☒			

MARKS/PROCESSING INSTRUCTIONS (Attach additional sheets if more space is required)

PERSON WHO KNOWINGLY AND WITH INTENT TO DEFRAUD ANY INSURANCE COMPANY OR ANOTHER PERSON FILES AN APPLICATION FOR INSURANCE STATEMENT OF CLAIM CONTAINING ANY MATERIALLY FALSE INFORMATION, OR CONCEALS FOR THE PURPOSE OF MISLEADING, INFORMATION CONCERNING ANY FACT MATERIAL THERETO, COMMITS A FRAUDULENT INSURANCE ACT, WHICH IS A CRIME AND SUBJECTS THE PERSON TO CRIMINAL AND SUBSTANTIAL CIVIL PENALTIES. (Not applicable in CO, HI, NE, OH, OK, OR, or VT; in DC, LA, ME, TN and VA, insurance benefits may also be denied)

UNDERSIGNED IS AN AUTHORIZED REPRESENTATIVE OF THE APPLICANT AND CERTIFIES THAT REASONABLE ENQUIRY HAS BEEN MADE TO OBTAIN THE ANSWERS TO QUESTIONS ON THIS APPLICATION. HE/SHE CERTIFIES THAT THE ANSWERS ARE TRUE, CORRECT AND COMPLETE TO THE BEST OF HIS/HER KNOWLEDGE.

APPLICANT'S SIGNATURE

DATE

PRODUCER'S SIGNATURE

Sheri D. Kelly, CIC

NATIONAL PRODUCER NUMBER

ACORD 125 (2004/03)

PLEASE COMPLETE REVERSE SIDE

© ACORD CORPORATION 10002

ALL "YES" RESPONSES (For past or present operations)		YES	NO	EXPLAIN ALL "YES" RESPONSES (For past or present operations)		YES	NO
1. DOES APPLICANT DRAW PLANS, DESIGNS, OR SPECIFICATIONS FOR OTHERS?			☒	4. DO YOUR SUBCONTRACTORS CARRY COVERAGES OR LIMITS LESS THAN YOURS?			☒
2. DO ANY OPERATIONS INCLUDE BLASTING OR UTILIZE OR STORE EXPLOSIVE MATERIAL?			☒	5. ARE SUBCONTRACTORS ALLOWED TO WORK WITHOUT PROVIDING YOU WITH A CERTIFICATE OF INSURANCE?			☒
3. DO ANY OPERATIONS INCLUDE EXCAVATION, TUNNELING, UNDERGROUND WORK OR EARTH MOVING?			☒	6. DOES APPLICANT LEASE EQUIPMENT TO OTHERS WITH OR WITHOUT OPERATORS?			☒
REMARKS/DESCRIBE THE TYPE OF WORK SUBCONTRACTED		\$ PAID TO SUB-CONTRACTORS: 200000		% OF WORK SUBCONTRACTED: 100		# FULL-TIME STAFF: 1	
Plumbing, electrical, roofing, framing, roofing, flooring, etc...						# PART-TIME STAFF: 0	

PRODUCTS/COMPLETED OPERATIONS

PRODUCTS	ANNUAL GROSS SALES	# OF UNITS	TIME IN MARKET	EXPECTED LIFE	INTENDED USE	PRINCIPAL COMPONENTS

EXPLAIN ALL "YES" RESPONSES (For any past or present product or operation)		YES	NO	EXPLAIN ALL "YES" RESPONSES (For any past or present product or operation)		YES	NO
1. DOES APPLICANT INSTALL, SERVICE OR DEMONSTRATE PRODUCTS?			☒	6. PRODUCTS RECALLED, DISCONTINUED, CHANGED?			☒
2. FOREIGN PRODUCTS SOLD, DISTRIBUTED, USED AS COMPONENTS?			☒	7. PRODUCTS OF OTHERS SOLD OR RE-PACKAGED UNDER APPLICANT LABEL?			☒
3. RESEARCH AND DEVELOPMENT CONDUCTED OR NEW PRODUCTS PLANNED?			☒	8. PRODUCTS UNDER LABEL OF OTHERS?			☒
4. GUARANTEES, WARRANTIES, HOLD HARMLESS AGREEMENTS?			☒	9. VENDORS COVERAGE REQUIRED?			☒
5. PRODUCTS RELATED TO AIRCRAFT/SPACE INDUSTRY?			☒	10. DOES ANY NAMED INSURED SELL TO OTHER NAMED INSUREDS?			☒
PLEASE ATTACH LITERATURE, BROCHURES, LABELS, WARNINGS, ETC							

ADDITIONAL INTEREST/CERTIFICATE RECIPIENT

ACORD 45 attached for additional names

INTEREST	RANK:	NAME AND ADDRESS	REFERENCE #:	CERTIFICATE REQUIRED	INTEREST IN ITEM NUMBER	
☐ ADDITIONAL INSURED					LOCATION:	BUILDING:
☐ LOSS PAYEE					VEHICLE:	BOAT:
☐ MORTGAGEE					SCHEDULED ITEM NUMBER:	
☐ LIENHOLDER					OTHER	
☐ EMPLOYEE AS LESSOR						
ITEM DESCRIPTION:						

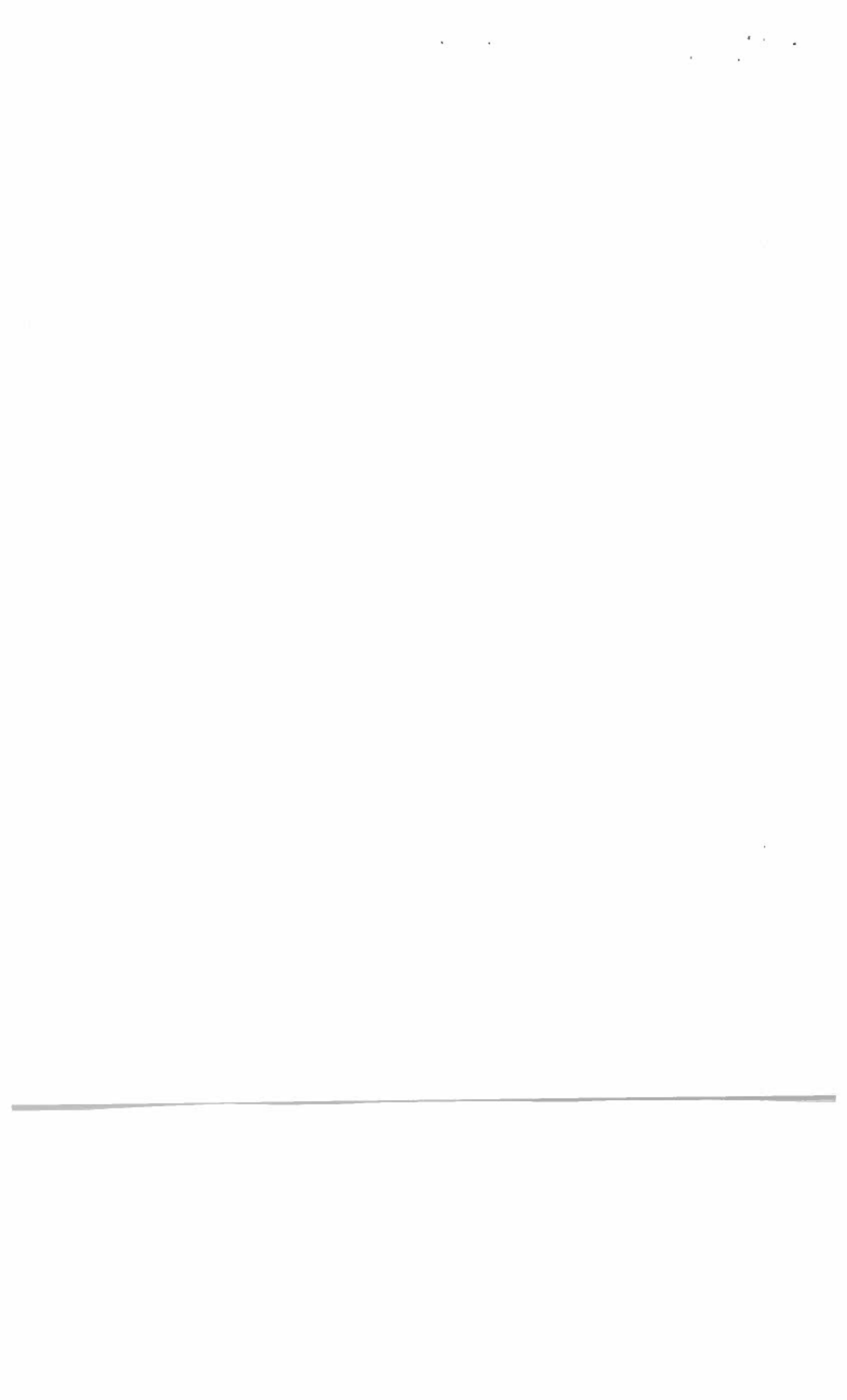
GENERAL INFORMATION

EXPLAIN ALL "YES" RESPONSES (For all past or present operations)		YES	NO	EXPLAIN ALL "YES" RESPONSES (For all past or present operations)		YES	NO
1. ANY MEDICAL FACILITIES PROVIDED OR MEDICAL PROFESSIONALS EMPLOYED OR CONTRACTED?			☒	12. ANY STRUCTURAL ALTERATIONS CONTEMPLATED?			☒
2. ANY EXPOSURE TO RADIOACTIVE/NUCLEAR MATERIALS?			☒	13. ANY DEMOLITION EXPOSURE CONTEMPLATED?			☒
3. DO/HAVE PAST, PRESENT OR DISCONTINUED OPERATIONS INVOLVE(D) STORING, TREATING, DISCHARGING, APPLYING, DISPOSING, OR TRANSPORTING OF HAZARDOUS MATERIAL? (e.g. landfills, wastes, fuel tanks, etc)			☒	14. HAS APPLICANT BEEN ACTIVE IN OR IS CURRENTLY ACTIVE IN JOINT VENTURES?			☒
4. ANY OPERATIONS SOLD, ACQUIRED, OR DISCONTINUED IN LAST 5 YEARS?			☒	15. DO YOU LEASE EMPLOYEES TO OR FROM OTHER EMPLOYERS?			☒
5. MACHINERY OR EQUIPMENT LOANED OR RENTED TO OTHERS?			☒	16. IS THERE A LABOR INTERCHANGE WITH ANY OTHER BUSINESS OR SUBSIDIARIES?			☒
6. ANY WATERCRAFT, DOCKS, FLOATS OWNED, HIRED OR LEASED?			☒	17. ARE DAY CARE FACILITIES OPERATED OR CONTROLLED?			☒
7. ANY PARKING FACILITIES OWNED/RENTED?			☒	18. HAVE ANY CRIMES OCCURRED OR BEEN ATTEMPTED ON YOUR PREMISES WITHIN THE LAST THREE YEARS?			☒
8. IS A FEE CHARGED FOR PARKING?			☒	19. IS THERE A FORMAL, WRITTEN SAFETY AND SECURITY POLICY IN EFFECT?			☒
9. RECREATION FACILITIES PROVIDED?			☒	20. DOES THE BUSINESSES' PROMOTIONAL LITERATURE MAKE ANY REPRESENTATIONS ABOUT THE SAFETY OR SECURITY OF THE PREMISES?			☒
10. IS THERE A SWIMMING POOL ON THE PREMISES?			☒				
11. SPORTING OR SOCIAL EVENTS SPONSORED?			☒				
REMARKS							

ANY PERSON WHO KNOWINGLY AND WITH INTENT TO DEFRAUD ANY INSURANCE COMPANY OR ANOTHER PERSON FILES AN APPLICATION FOR INSURANCE OR STATEMENT OF CLAIM CONTAINING ANY MATERIALLY FALSE INFORMATION, OR CONCEALS FOR THE PURPOSE OF MISLEADING INFORMATION CONCERNING ANY FACT MATERIAL THERETO, COMMITS A FRAUDULENT INSURANCE ACT, WHICH IS A CRIME AND SUBJECTS THE PERSON TO CRIMINAL AND (NY-SUBSTANTIAL) CIVIL PENALTIES. (Not applicable in CO, HI, NE, OH, OK, OR or VT; in DC, LA, ME, TN and VA, insurance benefits may also be denied).

ACORD 126 (2004/03)

ATTACH TO APPLICANT INFORMATION SECTION



NOTE: A PENALTY IS IMPOSED FOR FAILURE TO
KEEP THIS LICENSE EXHIBITED CONSPICUOUSLY AT
YOUR ESTABLISHMENT OR PLACE OF BUSINESS:

2004

STATE CERT. NO.

C6C017065

COUNTY CERT. NO.

KEN MAHAFFEY, C.F.C., PUTNAM COUNTY TAX COLLECTOR
PUTNAM COUNTY, PALATKA, FLORIDA
PUTNAM COUNTY OCCUPATIONAL LICENSE

2005

Dec 30 20 04

OL No.

20043222

PAID 46587 12/30/04 13.50

115 SWAN LAKE RD

IS HEREBY LICENSED TO ENGAGE IN THE BUSINESS, PROFESSION
OR OCCUPATION OF
GENERAL CONTRACTOR

AT THE ABOVE ADDRESS FOR THE PERIOD BEGINNING ON THE
30 DAY OF 12 20 04 AND ENDING

ON THE LAST DAY OF SEPTEMBER, A.D. 2005

This notice becomes a receipt when validated by tax collector.

BUILD NEW CORP

FROM MARCUS

P O BOX 16122

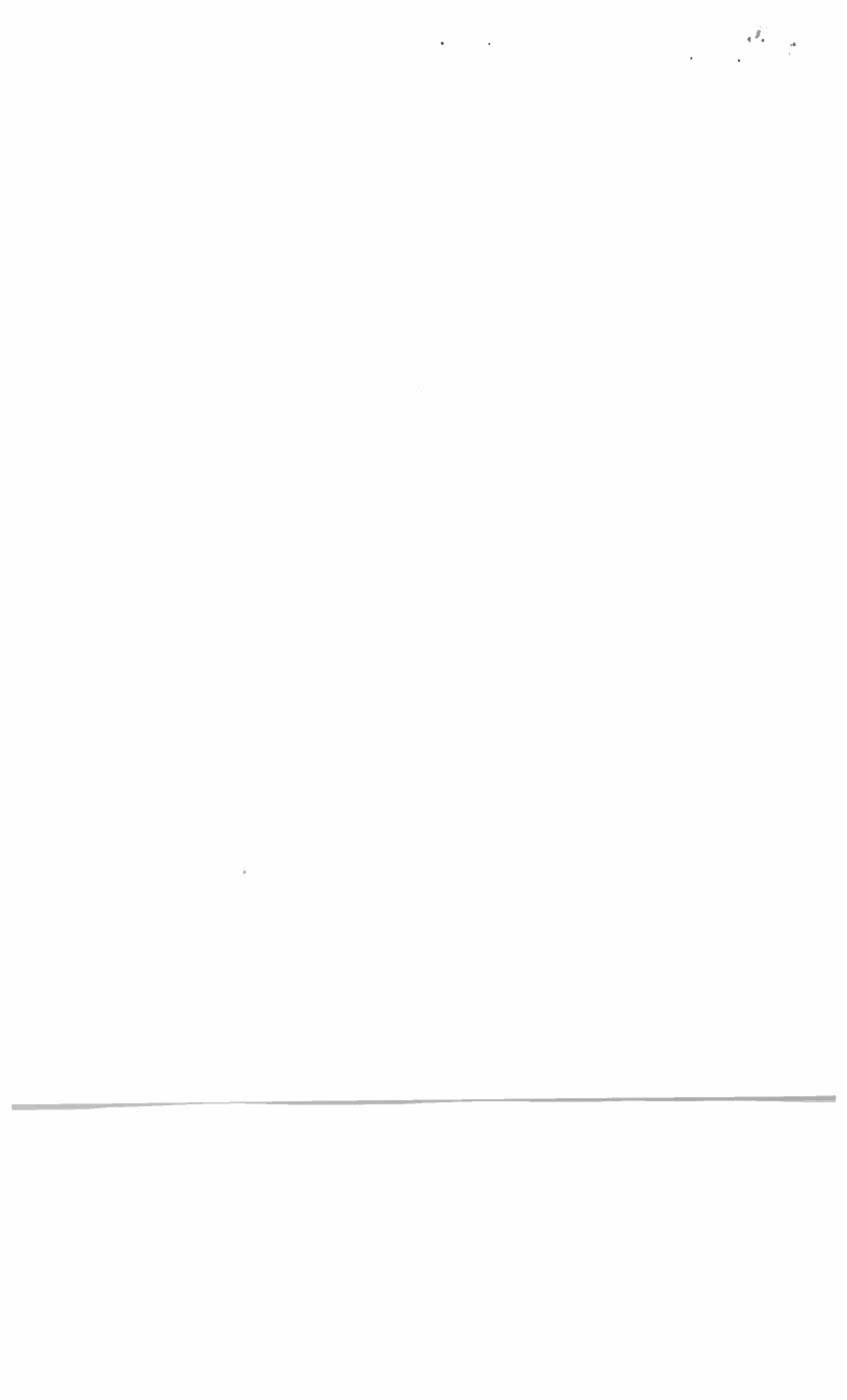
JACKSONVILLE

FL 32216

PAYMENT RECEIVED AS CERTIFIED ABOVE

THIS LICENSE IS FURNISHED IN PURSUANCE OF COUNTY ORDINANCE 98-15

PUTNAM COUNTY OCCUPATIONAL LICENSE REPRESENTS PROOF OF
PAYMENT FOR THE LICENSE AND IS NOT TO BE USED TO REPRESENT ANY
LEVEL OF QUALIFICATION, CERTIFICATION, TRADE OR PROFESSIONAL
EXPERTISE TO THE PUBLIC



0509-67

28

ZONE X

33

ZONE A

T 6 S

T 7 S

BELLAMY

4

ZONE A

ZONE X

41

441

25

ZONE A

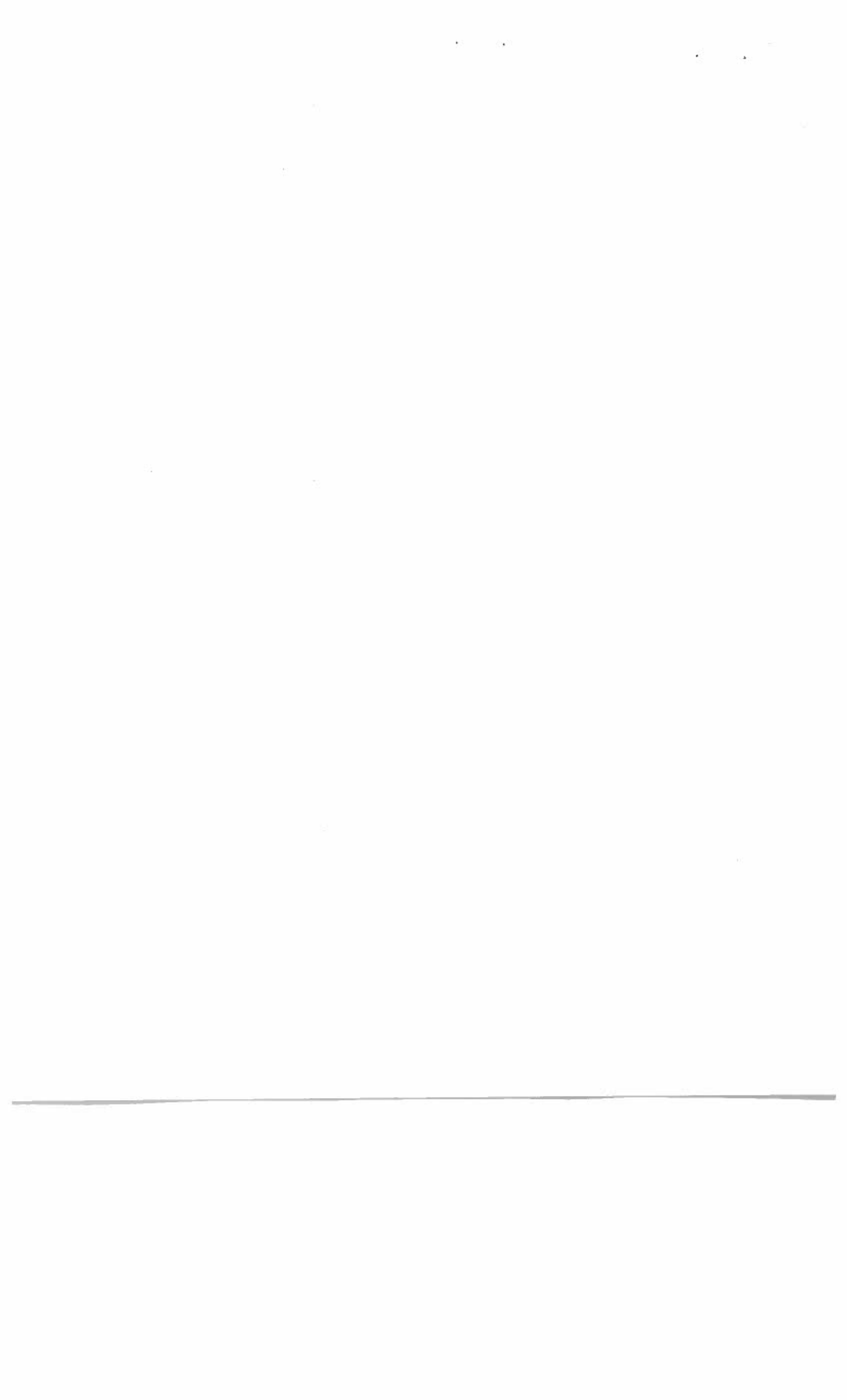
ZONE A

ZONE

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ZONE A

3



FLORIDA ENERGY EFFICIENCY CODE
FOR BUILDING CONSTRUCTION

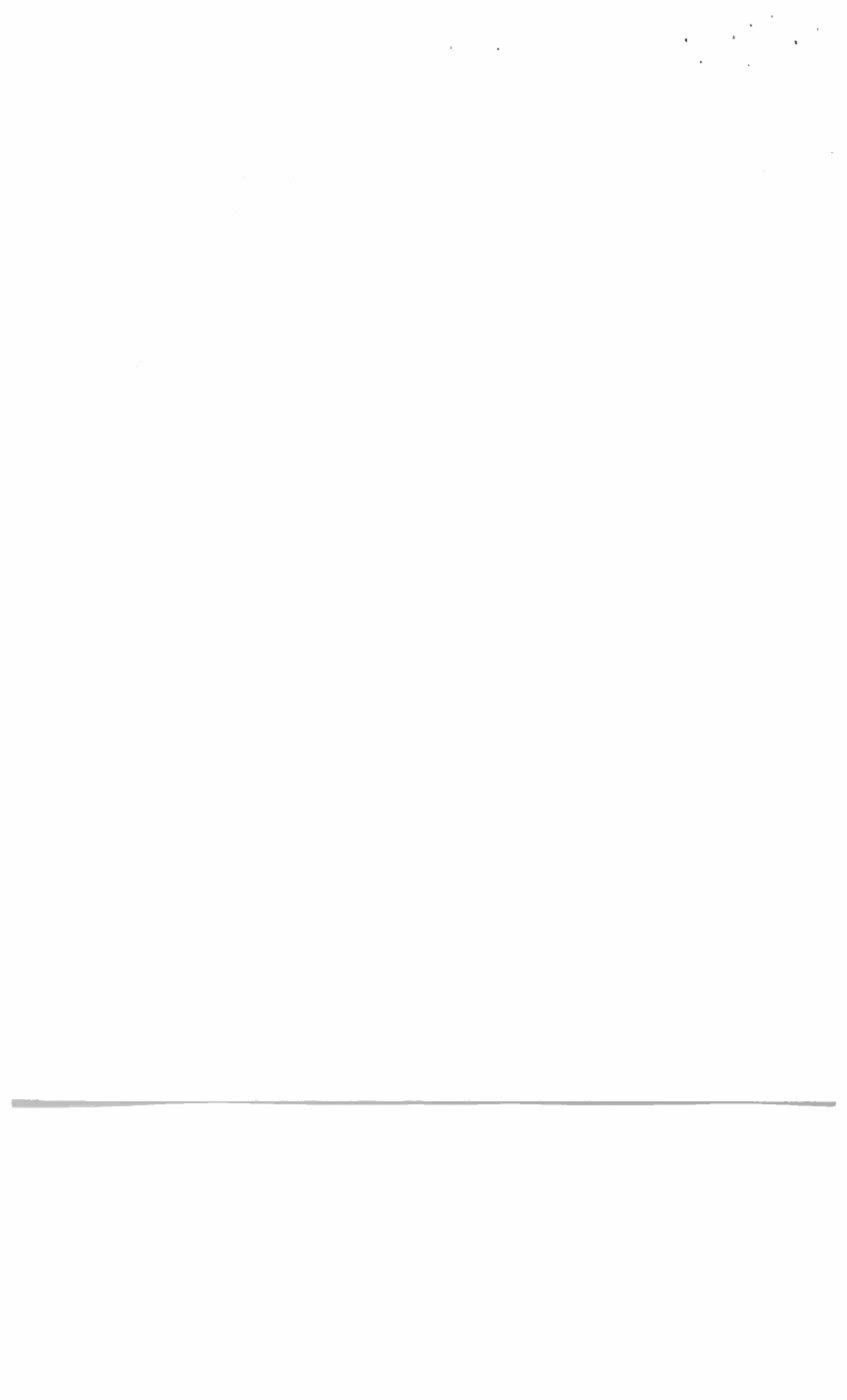
Florida Department of Community Affairs
Residential Whole Building Performance Method A

Project Name: HOWARD RES.
Address:
City, State:
Owner:
Climate Zone: North
Builder: Marcus PROM
Permitting Office: Columbia
Permit Number: 23724
Jurisdiction Number: 221000

1. New construction or existing New
2. Single family or multi-family Single family
3. Number of units, if multi-family 1
4. Number of Bedrooms 3
5. Is this a worst case? Yes
6. Conditioned floor area (ft²) 2060 ft²
7. Glass area & type Single Pane Double Pane
a. Clear glass, default U-factor 0.0 ft² 0.0 ft²
b. Default tint 0.0 ft² 0.0 ft²
c. Labeled U or SHGC 0.0 ft² 261.0 ft²
8. Floor types
a. Slab-On-Grade Edge Insulation R=0.0, 196.0(p) ft
b. N/A
c. N/A
9. Wall types
a. Frame, Wood, Exterior R=11.0, 1367.0 ft²
b. Frame, Wood, Adjacent R=11.0, 169.0 ft²
c. N/A
d. N/A
e. N/A
10. Ceiling types
a. Under Attic R=30.0, 2476.0 ft²
b. N/A
c. N/A
11. Ducts
a. Sup: Unc. Ret: Unc. AH(Sealed):Interior Sup. R=6.0, 200.0 ft
b. N/A
12. Cooling systems
a. Central Unit Cap: 47.0 kBtu/hr SEER: 12.03
b. N/A
c. N/A
13. Heating systems
a. Electric Heat Pump Cap: 46.0 kBtu/hr HSPF: 7.03
b. N/A
c. N/A
14. Hot water systems
a. Electric Resistance Cap: 50.0 gallons EF: 0.86
b. N/A
c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)
15. HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)

Glass/Floor Area: 0.13 Total as-built points: 27137 PASS
Total base points: 29739

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.
PREPARED BY: AIR SYSTEMS J.HAGA
DATE: 9/15/05
I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.
OWNER/AGENT:
DATE:
Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.
BUILDING OFFICIAL:
DATE:
GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST



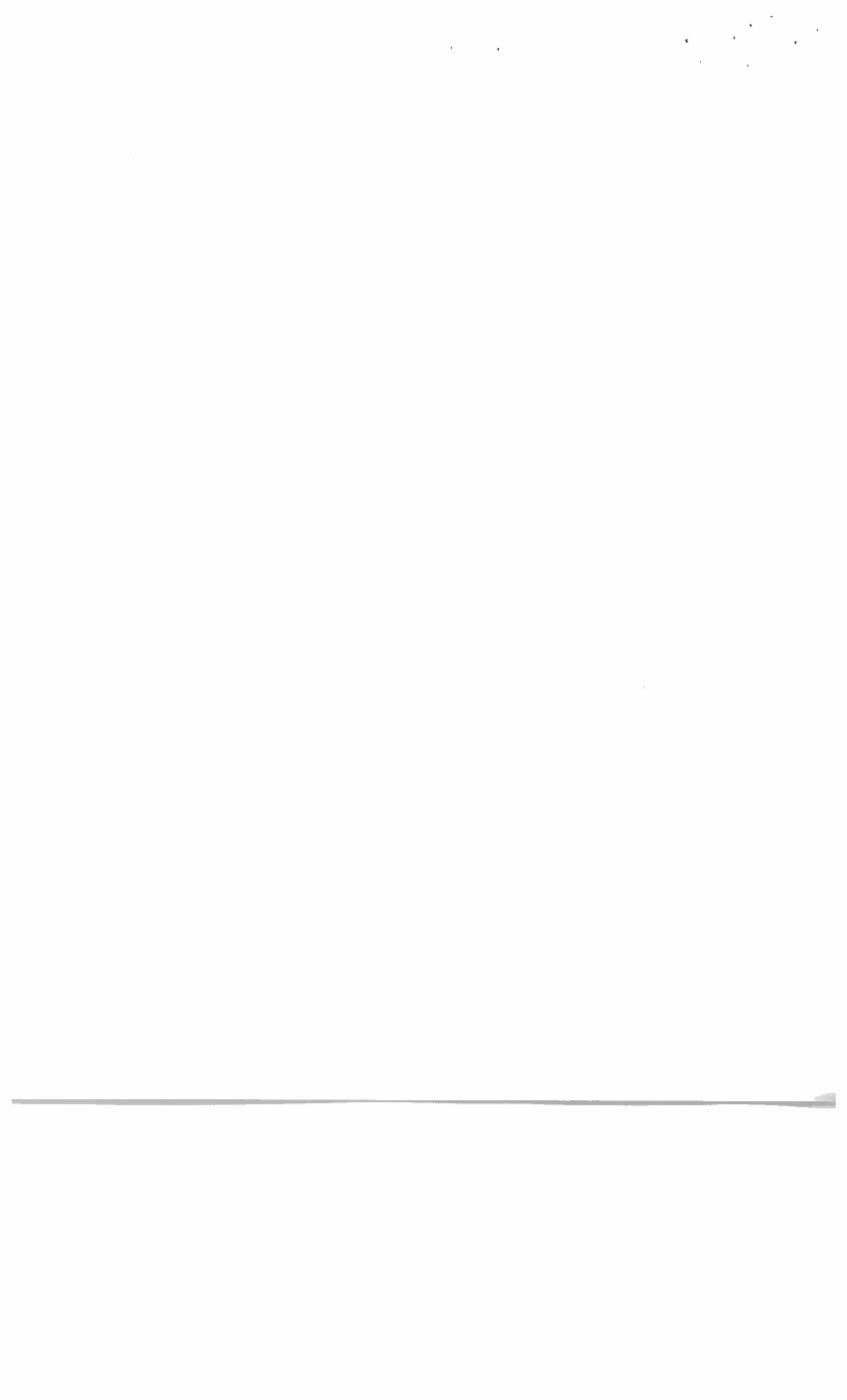
SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned X BSPM = Points Floor Area				Overhang Type/SC Ornt Len Hgt Area X SPM X SOF = Points							
.18	2060.0	20.04	7430.8	Double,U=0.87,SHGC=0.66	NE	1.3	7.0	30.0	29.56	0.96	850.9
				Double,U=0.87,SHGC=0.66	NE	1.3	5.0	12.0	29.56	0.91	322.6
				Double,U=0.87,SHGC=0.66	NE	1.3	5.0	9.0	29.56	0.91	242.0
				Double,U=0.87,SHGC=0.66	SE	1.3	5.0	9.0	42.75	0.87	333.6
				Double,U=0.87,SHGC=0.66	SE	12.0	9.0	42.0	42.75	0.45	802.5
				Double,U=0.87,SHGC=0.66	SE	1.3	7.0	15.0	42.75	0.94	604.2
				Double,U=0.87,SHGC=0.66	SE	1.3	4.0	12.0	42.75	0.80	411.7
				Double,U=0.87,SHGC=0.66	NW	6.0	7.0	30.0	25.97	0.66	517.3
				Double,U=0.87,SHGC=0.66	NW	0.0	0.0	60.0	25.97	1.00	1558.4
				Double,U=0.87,SHGC=0.66	NW	8.0	9.0	42.0	25.97	0.66	718.0
				As-Built Total: 261.0 6361.1							
WALL TYPES Area X BSPM = Points				Type R-Value Area X SPM = Points							
Adjacent	169.0	0.70	118.3	Frame, Wood, Exterior			11.0	1367.0	1.70		2323.9
Exterior	1367.0	1.70	2323.9	Frame, Wood, Adjacent			11.0	169.0	0.70		118.3
Base Total: 1536.0 2442.2				As-Built Total: 1536.0 2442.2							
DOOR TYPES Area X BSPM = Points				Type Area X SPM = Points							
Adjacent	21.0	2.40	50.4	Exterior Insulated				21.0	4.10		86.1
Exterior	21.0	6.10	128.1	Adjacent Insulated				21.0	1.60		33.6
Base Total: 42.0 178.5				As-Built Total: 42.0 119.7							
CEILING TYPES Area X BSPM = Points				Type R-Value Area X SPM X SCM = Points							
Under Attic	2060.0	1.73	3563.8	Under Attic			30.0	2476.0	1.73 X 1.00		4283.5
Base Total: 2060.0 3563.8				As-Built Total: 2476.0 4283.5							
FLOOR TYPES Area X BSPM = Points				Type R-Value Area X SPM = Points							
Slab	196.0(p)	-37.0	-7252.0	Slab-On-Grade Edge Insulation			0.0	196.0(p)	-41.20		-8075.2
Raised	0.0	0.00	0.0								
Base Total: -7252.0				As-Built Total: 196.0 -8075.2							
INFILTRATION Area X BSPM = Points				Area X SPM = Points							
	2060.0	10.21	21032.6					2060.0	10.21		21032.6



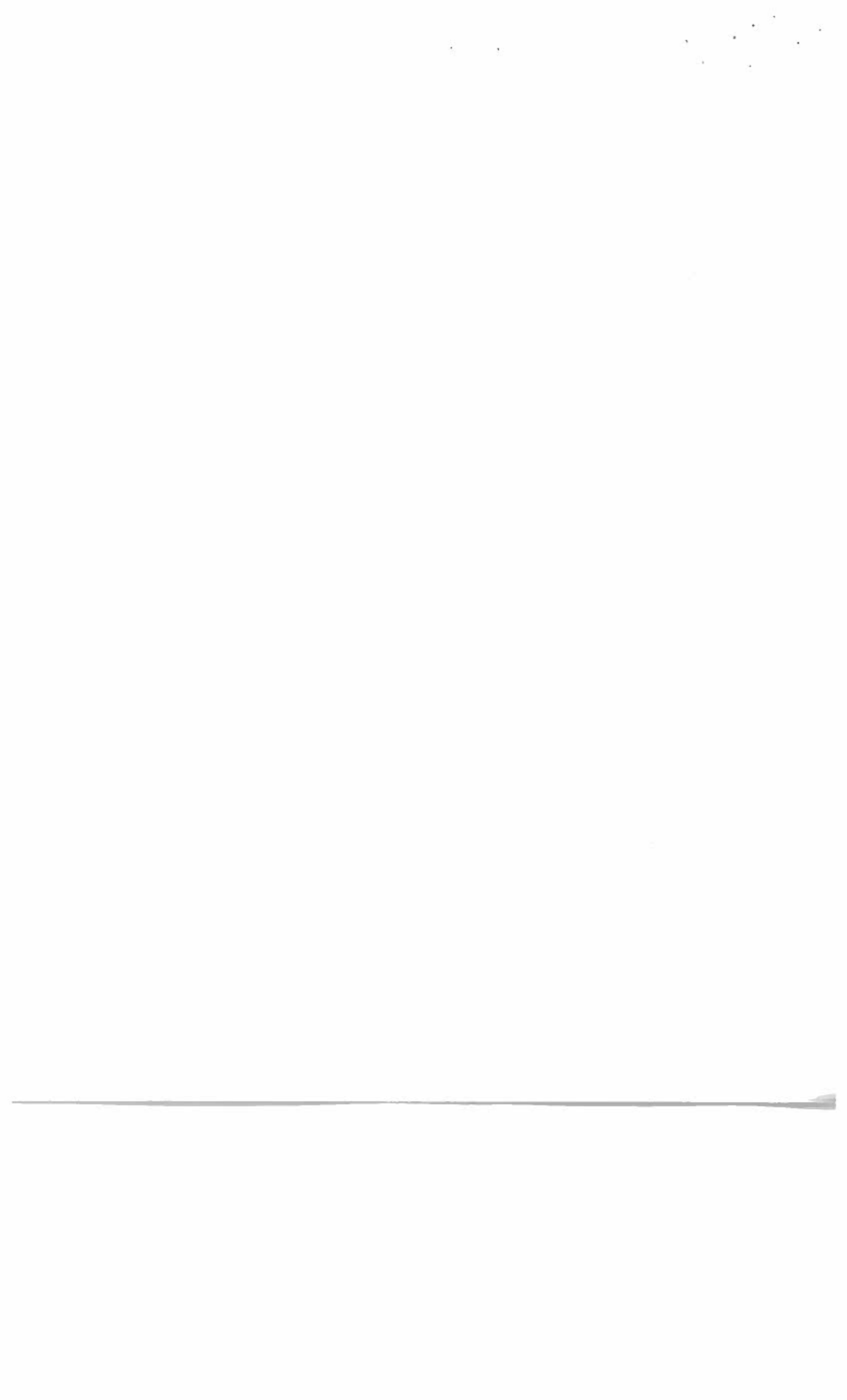
SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT											
Summer Base Points: 27395.9				Summer As-Built Points: 26163.9											
Total Summer Points	X	System Multiplier	=	Cooling Points	Total Component	X	Cap Ratio	X	Duct Multiplier	X	System Multiplier	X	Credit Multiplier	=	Cooling Points
(DM x DSM x AHU)															
27395.9		0.4266		11687.1	26163.9		1.000		(1.090 x 1.147 x 0.86)		0.284		1.000		8022.8
					26163.9		1.00		1.081		0.284		1.000		8022.8



WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned X BWPM = Points Floor Area				Type/SC Overhang Ornt Len Hgt Area X WPM X WOF = Points							
.18	2060.0	12.74	4724.0	Double,U=0.87,SHGC=0.66	NE	1.3	7.0	30.0	23.57	1.00	708.6
				Double,U=0.87,SHGC=0.66	NE	1.3	5.0	12.0	23.57	1.01	285.0
				Double,U=0.87,SHGC=0.66	NE	1.3	5.0	9.0	23.57	1.01	213.7
				Double,U=0.87,SHGC=0.66	SE	1.3	5.0	9.0	14.71	1.11	146.8
				Double,U=0.87,SHGC=0.66	SE	12.0	9.0	42.0	14.71	2.19	1353.9
				Double,U=0.87,SHGC=0.66	SE	1.3	7.0	15.0	14.71	1.05	231.9
				Double,U=0.87,SHGC=0.66	SE	1.3	4.0	12.0	14.71	1.18	207.4
				Double,U=0.87,SHGC=0.66	NW	6.0	7.0	30.0	24.30	1.02	745.3
				Double,U=0.87,SHGC=0.66	NW	0.0	0.0	60.0	24.30	1.00	1457.8
				Double,U=0.87,SHGC=0.66	NW	8.0	9.0	42.0	24.30	1.02	1044.0
				As-Built Total:				261.0		6394.3	
WALL TYPES Area X BWPM = Points				Type		R-Value		Area X WPM = Points			
Adjacent	169.0	3.60	608.4	Frame, Wood, Exterior		11.0		1367.0	3.70		5057.9
Exterior	1367.0	3.70	5057.9	Frame, Wood, Adjacent		11.0		169.0	3.60		608.4
Base Total:				1536.0				5666.3			
				As-Built Total:				1536.0		5666.3	
DOOR TYPES Area X BWPM = Points				Type				Area X WPM = Points			
Adjacent	21.0	11.50	241.5	Exterior Insulated				21.0	8.40		176.4
Exterior	21.0	12.30	258.3	Adjacent Insulated				21.0	8.00		168.0
Base Total:				42.0				499.8			
				As-Built Total:				42.0		344.4	
CEILING TYPES Area X BWPM = Points				Type		R-Value		Area X WPM X WCM = Points			
Under Attic	2060.0	2.05	4223.0	Under Attic		30.0		2476.0	2.05 X 1.00		5075.8
Base Total:				2060.0				4223.0			
				As-Built Total:				2476.0		5075.8	
FLOOR TYPES Area X BWPM = Points				Type		R-Value		Area X WPM = Points			
Slab	196.0(p)	8.9	1744.4	Slab-On-Grade Edge Insulation		0.0		196.0(p)	18.80		3684.8
Raised	0.0	0.00	0.0								
Base Total:				1744.4				As-Built Total:		196.0 3684.8	
INFILTRATION Area X BWPM =Points				Area X WPM = Points							
2060.0 -0.59 -1215.4				2060.0 -0.59 -1215.4							

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

BASE				AS-BUILT							
Winter Base Points: 15642.1				Winter As-Built Points: 19950.2							
Total Winter Points	X	System Multiplier	= Heating Points	Total Component	X	Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points	
15642.1		0.6274	9813.8	19950.2		1.000	(1.069 x 1.169 x 0.88)	0.485	1.000	10684.3	
				19950.2		1.00	1.104	0.485	1.000	10684.3	

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

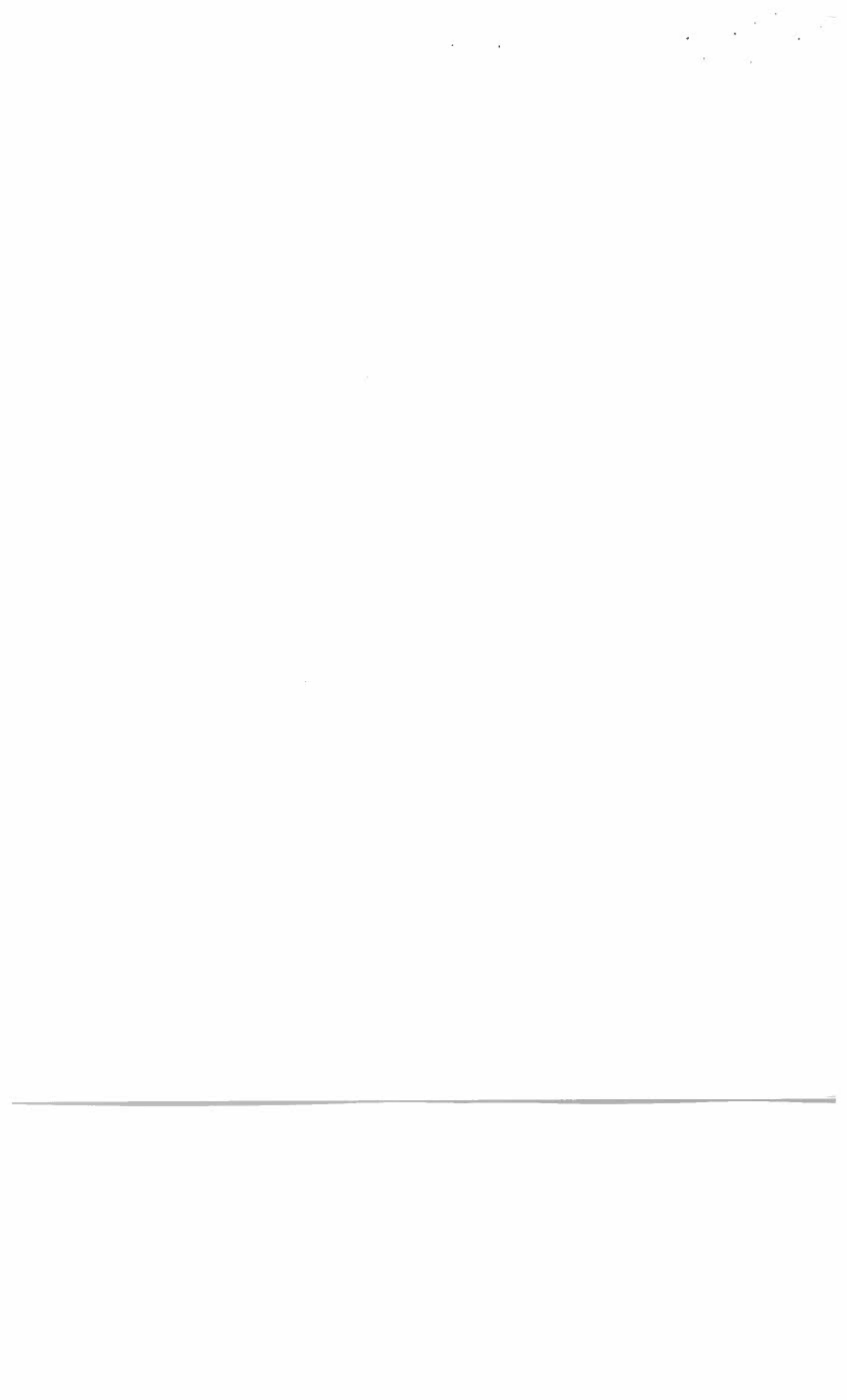
PERMIT #:

BASE					AS-BUILT					
WATER HEATING										
Number of Bedrooms	X	Multiplier	=	Total	Tank Volume	EF	Number of Bedrooms	X	Tank X Ratio	Credit X Multiplier = Total
3		2746.00		8238.0	50.0	0.86	3		1.00	2809.86
					As-Built Total:					8429.6

CODE COMPLIANCE STATUS									
BASE					AS-BUILT				
Cooling Points	+	Heating Points	+	Hot Water Points	=	Total Points	Cooling Points	+	Heating Points
11687		9814		8238		29739	8023		10684
							8430		27137

PASS





Code Compliance Checklist
Residential Whole Building Performance Method A - Details

ADDRESS: , , ,

PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 6-12. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL)
DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 85.0
The higher the score, the more efficient the home.

1. New construction or existing New
2. Single family or multi-family Single family
3. Number of units, if multi-family 1
4. Number of Bedrooms 3
5. Is this a worst case? Yes
6. Conditioned floor area (ft²) 2060 ft²
7. Glass area & type Single Pane Double Pane
a. Clear - single pane 0.0 ft² 0.0 ft²
b. Clear - double pane 0.0 ft² 0.0 ft²
c. Tint/other SHGC - single pane 0.0 ft² 261.0 ft²
d. Tint/other SHGC - double pane
8. Floor types
a. Slab-On-Grade Edge Insulation R=0.0, 196.0(p) ft
b. N/A
c. N/A
9. Wall types
a. Frame, Wood, Exterior R=11.0, 1367.0 ft²
b. Frame, Wood, Adjacent R=11.0, 169.0 ft²
c. N/A
d. N/A
e. N/A
10. Ceiling types
a. Under Attic R=30.0, 2476.0 ft²
b. N/A
c. N/A
11. Ducts
a. Sup: Unc. Ret: Unc. AH(Sealed):Interior Sup. R=6.0, 200.0 ft
b. N/A
12. Cooling systems
a. Central Unit Cap: 47.0 kBtu/hr SEER: 12.03
b. N/A
c. N/A
13. Heating systems
a. Electric Heat Pump Cap: 46.0 kBtu/hr HSPF: 7.03
b. N/A
c. N/A
14. Hot water systems
a. Electric Resistance Cap: 50.0 gallons EF: 0.86
b. N/A
c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)
15. HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)

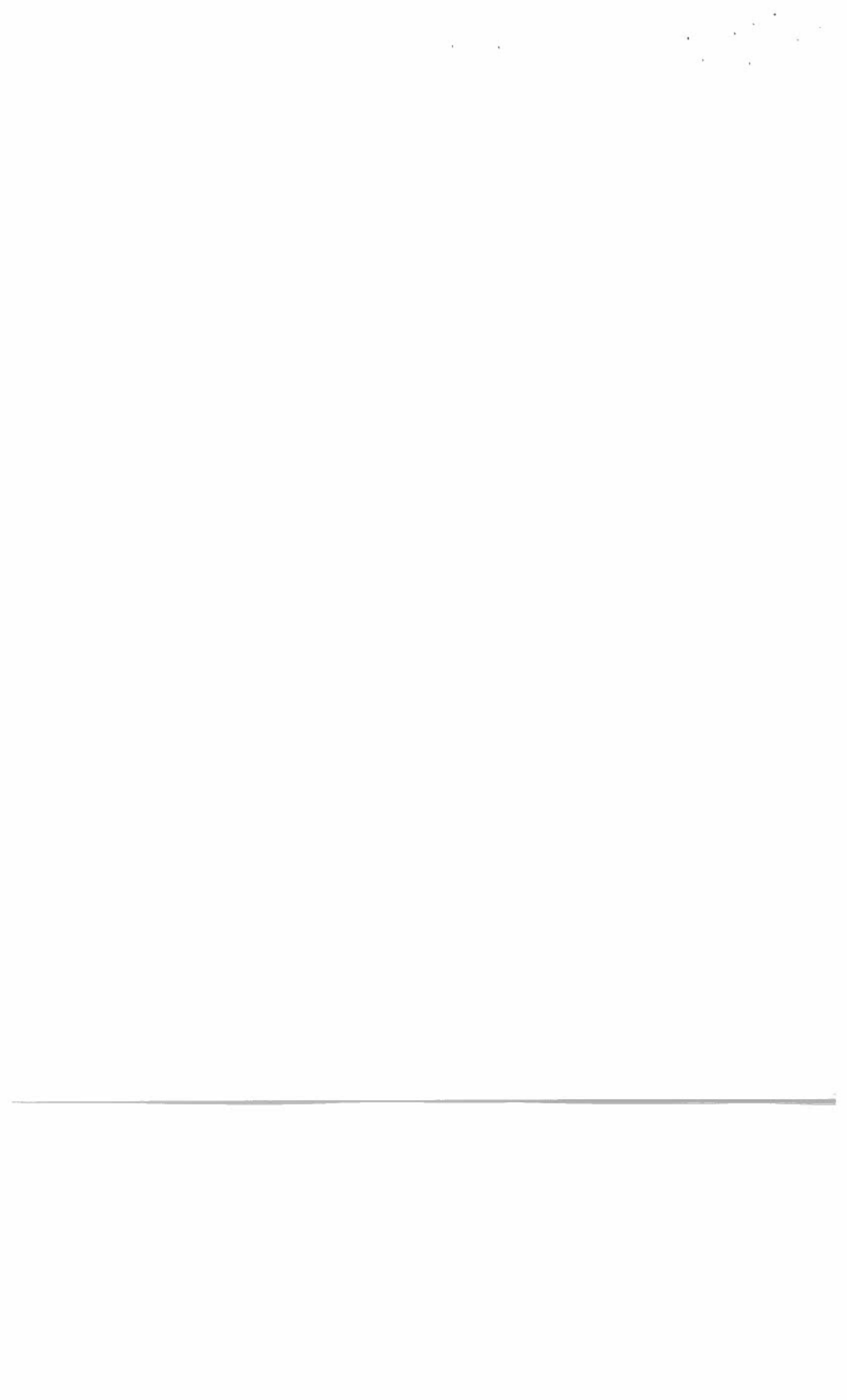
I certify that this home has complied with the Florida Energy Efficiency Code For Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant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

Builder Signature: Date:

Address of New Home: City/FL Zip:



*NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs Energy Gauge Office. Version: FLRCPB v3.30)



Residential System Sizing Calculation

Summary

Project Title:
HOWARD RES.

Code Only
Professional Version
Climate: North

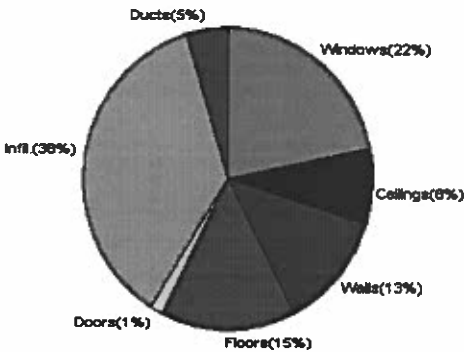
9/15/2005

Location for weather data: Jacksonville - Defaults: Latitude(30) Temp Range(M)			
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(49gr.)			
Winter design temperature	32 F	Summer design temperature	94 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	38 F	Summer temperature difference	19 F
Total heating load calculation		Total cooling load calculation	
39408 Btuh		42165 Btuh	
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	116.7 46000	Sensible (SHR = 0.73)	114.0 34310
Heat Pump + Auxiliary(10.0kW)	203.3 80130	Latent	105.3 12690
		Total (Electric Heat Pump)	111.5 47000

WINTER CALCULATIONS

Winter Heating Load (for 2060 sqft)

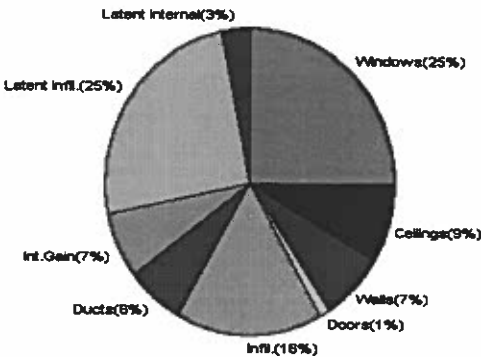
Load component		Load	
Window total	261 sqft	8639	Btuh
Wall total	1536 sqft	4952	Btuh
Door total	42 sqft	572	Btuh
Ceiling total	2476 sqft	3219	Btuh
Floor total	196 ft	6037	Btuh
Infiltration	338 cfm	14112	Btuh
Subtotal		37531	Btuh
Duct loss		1877	Btuh
TOTAL HEAT LOSS		39408	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2060 sqft)

Load component		Load	
Window total	261 sqft	10647	Btuh
Wall total	1536 sqft	2968	Btuh
Door total	42 sqft	446	Btuh
Ceiling total	2476 sqft	3615	Btuh
Floor total		0	Btuh
Infiltration	320 cfm	6697	Btuh
Internal gain		3000	Btuh
Subtotal(sensible)		27372	Btuh
Duct gain		2737	Btuh
Total sensible gain		30109	Btuh
Latent gain(infiltration)		10676	Btuh
Latent gain(internal)		1380	Btuh
Total latent gain		12056	Btuh
TOTAL HEAT GAIN		42165	Btuh



EnergyGauge® System Sizing based on ACCA Manual J.

PREPARED BY:

DATE:

J. Hagan
9/15/05



System Sizing Calculations - Winter

Residential Load - Component Details

Project Title:
HOWARD RES.

Code Only
Professional Version
Climate: North

Reference City: Jacksonville (Defaults) Winter Temperature Difference: 38.0 F

9/15/2005

Window	Panes/SHGC/Frame/U	Orientation	Area X	HTM=	Load
1	2, SHGC=0.66, Metal, 0.87	W	30.0	33.1	993 Btuh
2	2, SHGC=0.66, Metal, 0.87	W	12.0	33.1	397 Btuh
3	2, SHGC=0.66, Metal, 0.87	W	9.0	33.1	298 Btuh
4	2, SHGC=0.66, Metal, 0.87	N	9.0	33.1	298 Btuh
5	2, SHGC=0.66, Metal, 0.87	N	42.0	33.1	1390 Btuh
6	2, SHGC=0.66, Metal, 0.87	N	15.0	33.1	496 Btuh
7	2, SHGC=0.66, Metal, 0.87	N	12.0	33.1	397 Btuh
8	2, SHGC=0.66, Metal, 0.87	S	30.0	33.1	993 Btuh
9	2, SHGC=0.66, Metal, 0.87	S	60.0	33.1	1986 Btuh
10	2, SHGC=0.66, Metal, 0.87	S	42.0	33.1	1390 Btuh
Window Total			261		8639 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Exterior	11.0	1367	3.4	4648 Btuh
2	Frame - Adjacent	11.0	169	1.8	304 Btuh
Wall Total			1536		4952 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exter		21	17.9	375 Btuh
2	Insulated - Adjac		21	9.4	197 Btuh
Door Total			42		572Btuh
Ceilings	Type	R-Value	Area X	HTM=	Load
1	Under Attic	30.0	2476	1.3	3219 Btuh
Ceiling Total			2476		3219Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab-On-Grade Edge Insul	0	196.0 ft(p)	30.8	6037 Btuh
Floor Total			196		6037 Btuh
Infiltration	Type	ACH X	Building Volume	CFM=	Load
	Natural	0.40	20600(sqft)	138	5752 Btuh
	Mechanical			200	8360 Btuh
Infiltration Total				338	14112 Btuh

Totals for Heating	Subtotal	37531 Btuh
	Duct Loss(using duct multiplier of 0.05)	1877 Btuh
	Total Btuh Loss	39408 Btuh

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

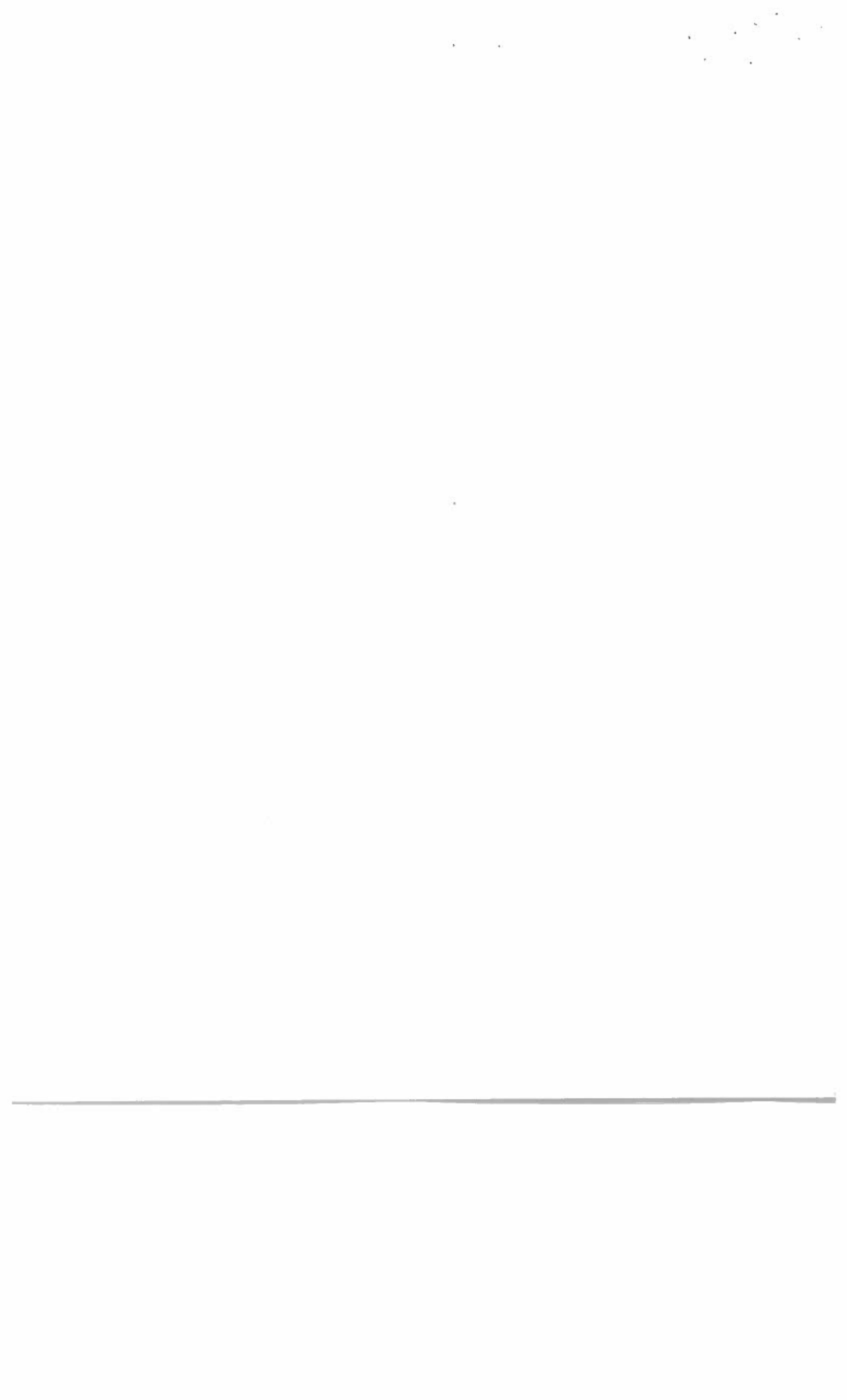
(Frame types - metal, wood or insulated metal)

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

(HTM - ManualJ Heat Transfer Multiplier)

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

EnergyGauge® FLRCPB v3.30



System Sizing Calculations - Summer

Residential Load - Component Details

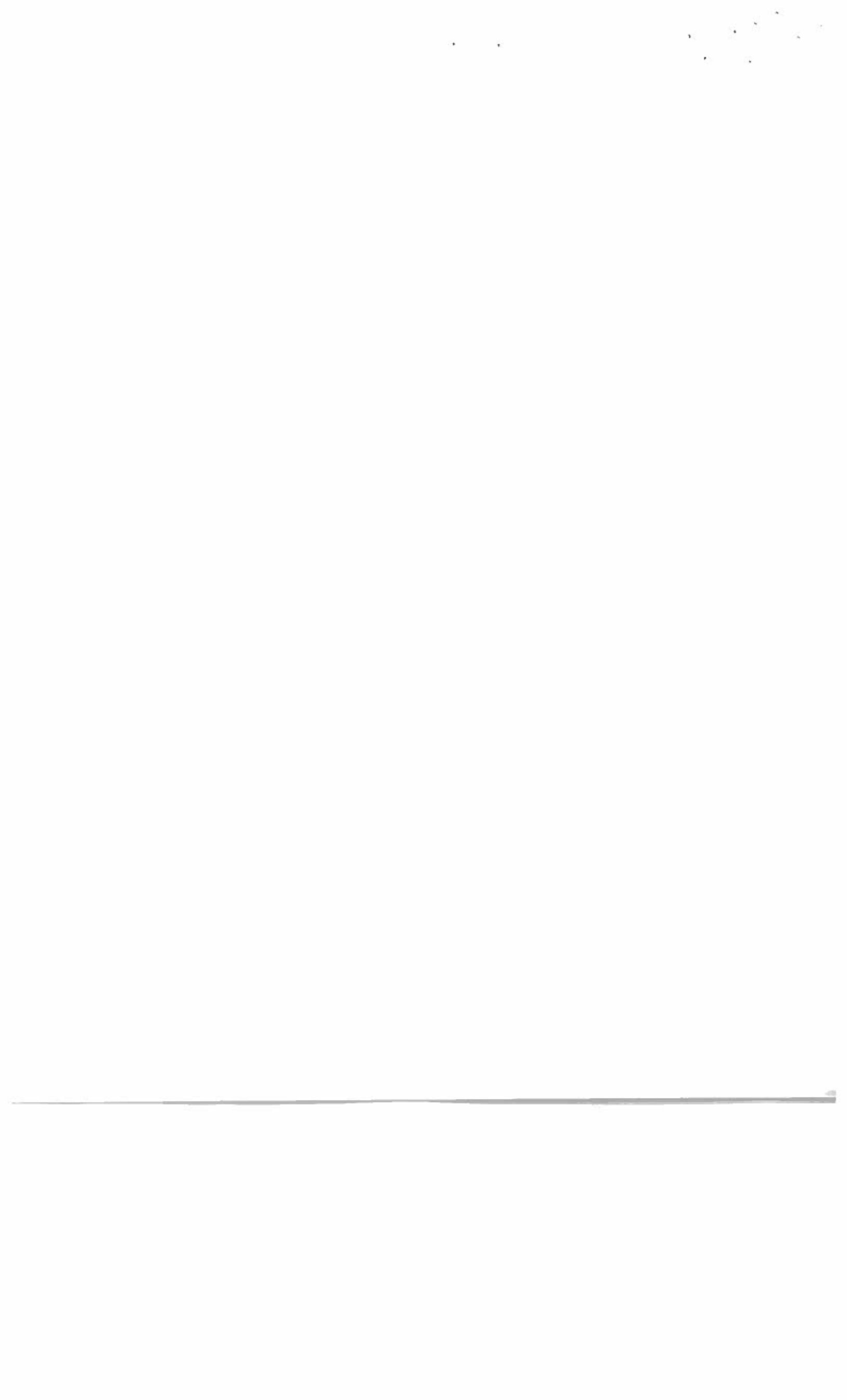
Project Title:
HOWARD RES.

Code Only
Professional Version
Climate: North

Reference City: Jacksonville (Defaults) Summer Temperature Difference: 19.0 F

9/15/2005

Window	Type	Overhang		Window Area(sqft)			HTM		Load	
	Panes/SHGC/U/InSh/ExSh Omt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2, SHGC=0.66, 0.87, N, N W	1.33	7	30.0	0.0	30.0	28	77	2310	Btuh
2	2, SHGC=0.66, 0.87, N, N W	1.33	5	12.0	0.0	12.0	28	77	924	Btuh
3	2, SHGC=0.66, 0.87, N, N W	1.33	5	9.0	0.0	9.0	28	77	693	Btuh
4	2, SHGC=0.66, 0.87, N, N N	1.33	5	9.0	0.0	9.0	28	28	252	Btuh
5	2, SHGC=0.66, 0.87, N, N N	12	9	42.0	0.0	42.0	28	28	1176	Btuh
6	2, SHGC=0.66, 0.87, N, N N	1.33	7	15.0	0.0	15.0	28	28	420	Btuh
7	2, SHGC=0.66, 0.87, N, N N	1.33	4	12.0	0.0	12.0	28	28	336	Btuh
8	2, SHGC=0.66, 0.87, N, N S	6	7	30.0	30.0	0.0	28	42	840	Btuh
9	2, SHGC=0.66, 0.87, N, N S	0	0	60.0	0.0	60.0	28	42	2520	Btuh
10	2, SHGC=0.66, 0.87, N, N S	8	9	42.0	42.0	0.0	28	42	1176	Btuh
Window Total				261					10647 Btuh	
Walls	Type	R-Value			Area		HTM		Load	
1	Frame - Exterior	11.0			1367.0		2.0		2761 Btuh	
2	Frame - Adjacent	11.0			169.0		1.2		206 Btuh	
Wall Total					1536.0				2968 Btuh	
Doors	Type				Area		HTM		Load	
1	Insulated - Exter				21.0		10.6		223 Btuh	
2	Insulated - Adjac				21.0		10.6		223 Btuh	
Door Total					42.0				446 Btuh	
Ceilings	Type/Color	R-Value			Area		HTM		Load	
1	Under Attic/Dark	30.0			2476.0		1.5		3615 Btuh	
Ceiling Total					2476.0				3615 Btuh	
Floors	Type	R-Value			Size		HTM		Load	
1	Slab-On-Grade Edge Insulation	0.0			196.0 ft(p)		0.0		0 Btuh	
Floor Total					196.0				0 Btuh	
Infiltration	Type	ACH			Volume		CFM=		Load	
	Natural	0.35			20600		120.4		2517 Btuh	
	Mechanical						200		4180 Btuh	
Infiltration Total							320		6697 Btuh	
Internal gain	Occupants			Btuh/occupant			Appliance		Load	
	6			X 300 +			1200		3000 Btuh	



Manual J Summer Calculations

Residential Load - Component Details (continued)

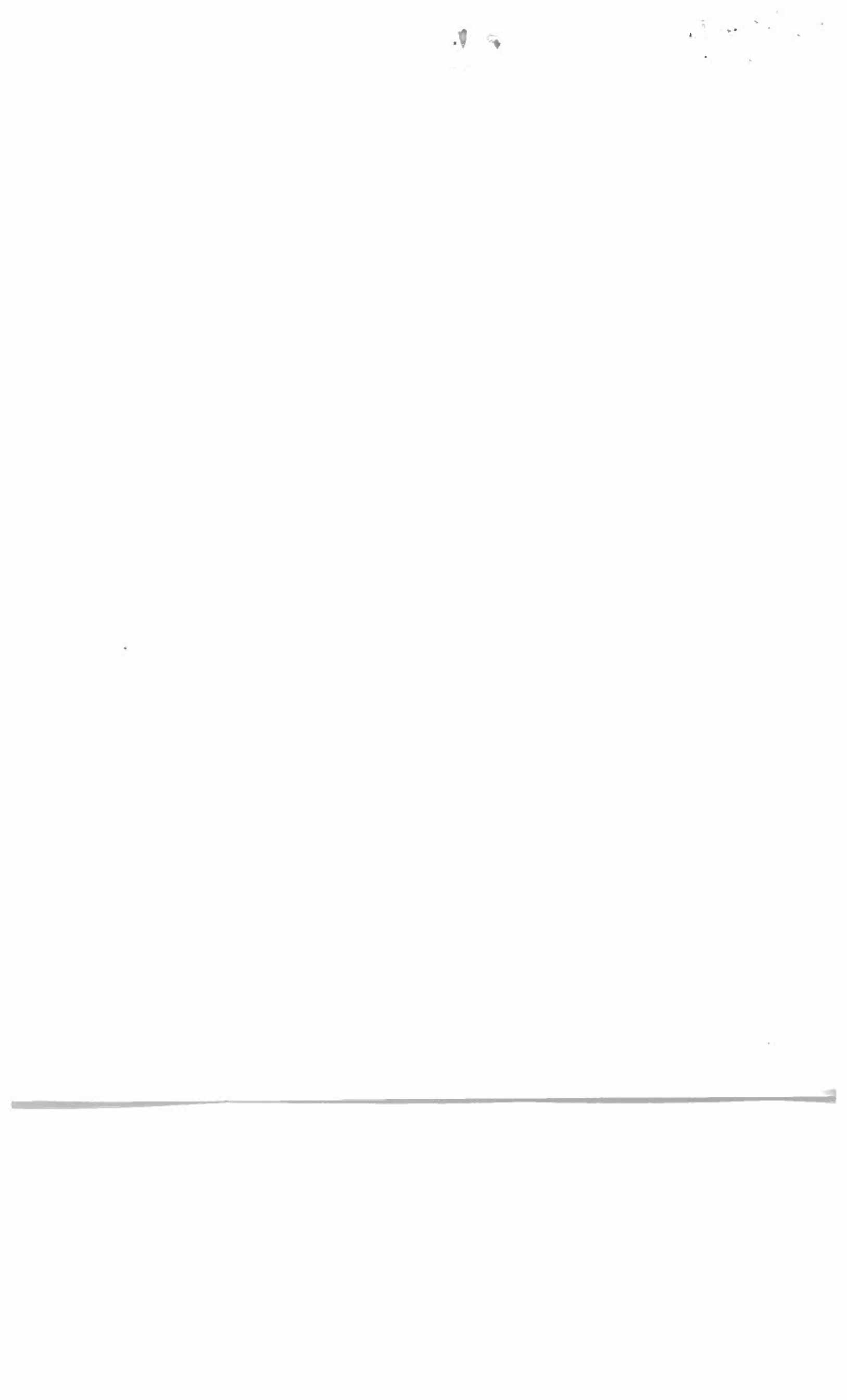
Project Title:
HOWARD RES.

Code Only
Professional Version
Climate: North

9/15/2005

Totals for Cooling	Subtotal	27372 Btuh
	Duct gain(using duct multiplier of 0.10)	2737 Btuh
	Total sensible gain	30109 Btuh
	Latent infiltration gain (for 49 gr. humidity difference)	10676 Btuh
	Latent occupant gain (6 people @ 230 Btuh per person)	1380 Btuh
	Latent other gain	0 Btuh
	TOTAL GAIN	42165 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(U - Window U-Factor or 'DEF' for default)
(InSh - Interior shading device: none(N), Blinds/Daperies(B) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(Ornt - compass orientation)



**COLUMBIA COUNTY BUILDING DEPARTMENT
CHECKLIST FOR PERMITTING**

Application # _____

Notarized completed Building Permit Application ✓

Notes: _____

If an Owner Builder, signed Disclosure Statement

Notes: _____

Recorded Deed or a Notarized Affidavit (form from the Building Dept.) ✓

Notes: _____

Approved and Signed Site Plan from Environmental Health on the septic ✓

Notes: _____

Site plan with actual distances of the structure to each property line ✓

Notes: _____

911 Address form, Contact 386.752.8787 for an appointment

Notes: _____

Residential or Commercial Checklist completed ✓

Notes: _____

Driving directions including all road names ✓

Notes: _____

Well information (on plans or letter from the well driller) ✓

Notes: _____

Before the 1st inspection Recorded Notice of Commencement signed by owner ✓

Notes: _____

2 sets of plans (blueprints) ✓

Notes: _____

2 sets of sealed truss engineering ✓

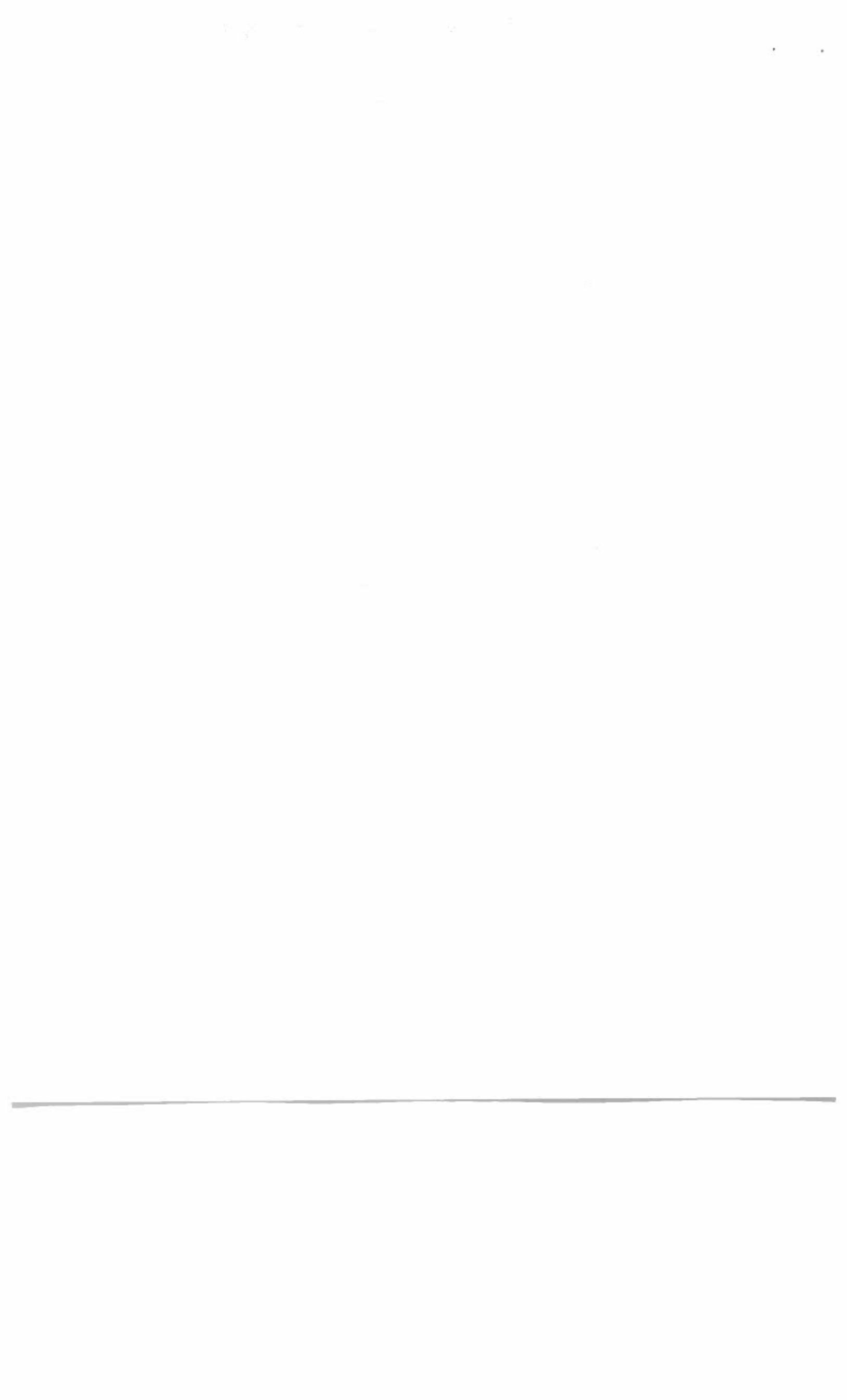
Notes: _____

2 sets of energy code & manual J ✓

Notes: _____

2 sets of engineering packets including specs on windows, doors, roof and etc.

Notes: _____



Floor Plan including:

- ☐ a) Rooms labeled and dimensioned
- ☐ b) Shear walls
- ☐ c) Windows and doors (including garage doors) showing size, mfg., approval listing and attachment specs. (FBC 1707) and safety glazing where needed (egress windows in bedrooms to be shown)
- ☐ d) Fireplaces (gas appliance) (vented or non-vented) or wood burning with hearth
- ☒ e) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails
- ☐ f) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

- ☒ a) Location of all load-bearing wall with required footings indicated as standard Or monolithic and dimensions and reinforcing
- ☒ b) All posts and/or column footing including size and reinforcing
- ☒ c) Any special support required by soil analysis such as piling
- ☒ d) Location of any vertical steel

Roof System:

- ☒ a) Truss package including:
 - 1. Truss layout and truss details signed and sealed by FI. Pro. Eng.
 - 2. Roof assembly (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
- ☐ b) Conventional Framing Layout including:
 - 1. Rafter size, species and spacing
 - 2. Attachment to wall and uplift
 - 3. Ridge beam sized and valley framing and support details
 - 4. Roof assembly (FBC 104.2.1 Roofing systems, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

Wall Sections including:

- ☐ a) Masonry wall
 - 1. All materials making up wall
 - 2. Block size and mortar type with size and spacing of reinforcement
 - 3. Lintel, tie-beam sizes and reinforcement
 - 4. Gable ends with rake beams showing reinforcement or gable truss and wall bracing details
 - 5. All required connectors with uplift rating and required number and size of fasteners for continuous tie from roof to foundation
 - 6. Roof assembly shown here or on roof system detail (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with resistance rating)
 - 7. Fire resistant construction (if required)
 - 8. Fireproofing requirements
 - 9. Shoe type of termite treatment (termicide or alternative method)
 - 10. Slab on grade
 - a. Vapor retardant (6mil. Polyethylene with joints lapped 6 inches and sealed)
 - b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
 - 11. Indicate where pressure treated wood will be placed
 - 12. Provide insulation R value for the following:
 - a. Attic space
 - b. Exterior wall cavity
 - c. Crawl space (if applicable)

☐ ☒ **b) Wood frame wall**

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers)
7. Roof assembly shown here or on roof system detail (FBC104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termicide or alternative method)
11. Slab on grade
 - a. Vapor retardant (6Mil. Polyethylene with joints lapped 6 inches and sealed)
 - b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
 - a. Attic space
 - b. Exterior wall cavity
 - c. Crawl space (if applicable)

☐ ☐ **c) Metal frame wall and roof** (designed, signed and sealed by Florida Prof. Engineer or Architect)

☐ ☐ **Floor Framing System:**

- a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer
- b) Floor joist size and spacing
- c) Girder size and spacing
- d) Attachment of joist to girder
- e) Wind load requirements where applicable

☐ ☒ **Plumbing Fixture layout**

☐ ☒ **Electrical layout including:**

- a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified
- b) Ceiling fans
- c) Smoke detectors
- d) Service panel and sub-panel size and location(s)
- e) Meter location with type of service entrance (overhead or underground)
- f) Appliances and HVAC equipment
- g) Arc Fault Circuits (AFCI) in bedrooms

☐ ☒ **HVAC information**

- a) Manual J sizing equipment or equivalent computation
- b) Exhaust fans in bathroom

☐ ☒ **Energy Calculations** (dimensions shall match plans)

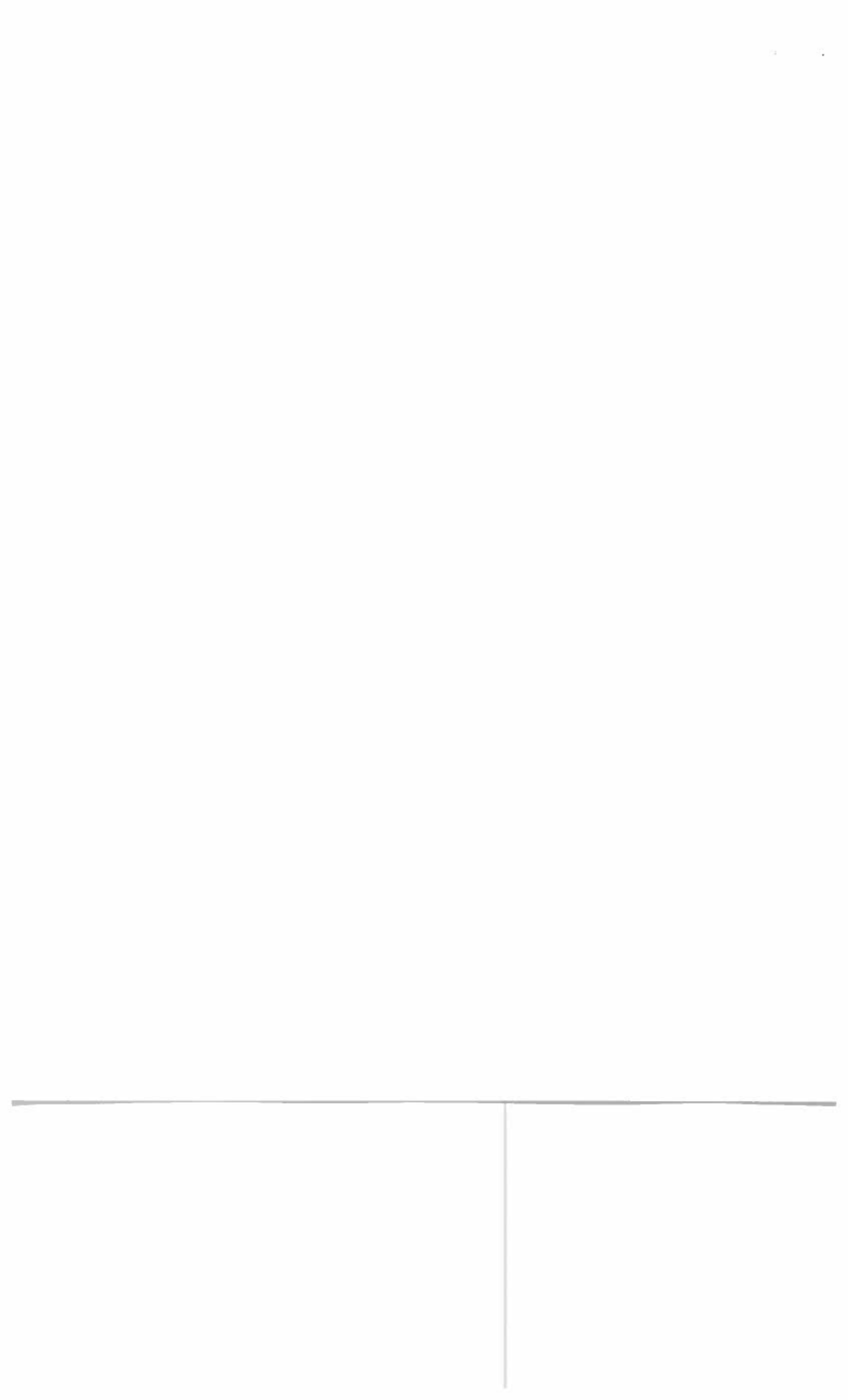
☐ ☒ **Gas System** Type (LP or Natural) Location and BTU demand of equipment

☐ ☒ **Disclosure Statement for Owner Builders**

☐ ☒ *****Notice Of Commencement Required Before Any Inspections Will Be Done**

☐ ☒ **Private Potable Water**

- a) Size of pump motor
- b) Size of pressure tank
- c) Cycle stop valve if used



THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

1. **Building Permit Application:** A current Building Permit Application form is to be completed and submitted for all residential projects.
2. **Parcel Number:** The parcel number (Tax ID number) from the Property Appraiser (386) 758-1084 is required. A copy of property deed is also requested.
3. **Environmental Health Permit or Sewer Tap Approval:** A copy of the Environmental Health permit, existing septic approval or sewer tap approval is required before a building permit can be issued.
(386) 758-1058 (Toilett facilities shall be provided for construction workers)
4. **City Approval:** If the project is to be located within the city limits of the Town of Fort White, prior approval is required. The Town of Fort White approval letter is required to be submitted by the owner or contractor to this office when applying for a Building Permit. (386) 497-2321
5. **Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.8 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.7 of the Columbia County Land Development Regulations. **CERTIFIED FINISHED FLOOR ELEVATIONS WILL BE REQUIRED ON ANY PROJECT WHERE THE BASE FLOOD ELEVATION (100 YEAR FLOOD) HAS BEEN ESTABLISHED.**
A development permit will also be required. Development permit cost is \$50.00
6. **Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit (\$25.00) must be made. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver (\$50.00). All culvert waivers are sent to the Columbia County Public Works Department for approval or denial.
7. **911 Address:** If the project is located in an area where the 911 address has been issued, then the proper paperwork from the 911 Addressing Department must be submitted. (386) 752-8787

ALL REQUIRED INFORMATION IS TO BE SUBMITTED FOR REVIEW. YOU WILL BE NOTIFIED WHEN YOUR APPLICATION AND PLANS ARE APPROVED AND READY TO PERMIT. PLEASE DO NOT EXPECT OR REQUEST THAT PERMIT APPLICATIONS BE REVIEWED OR APPROVED WHILE YOU ARE HERE – TIME WILL NOT ALLOW THIS –PLEASE DO NOT ASK

NOTICE:

ADDRESSES BY APPOINTMENT ONLY!

TO OBTAIN A 9-1-1 ADDRESS THE REQUESTER MUST CONTACT THE COLUMBIA COUNTY 9-1-1 ADDRESSING DEPARTMENT AT (386) 752-8787 FOR AN APPOINTMENT TIME AND DATE:

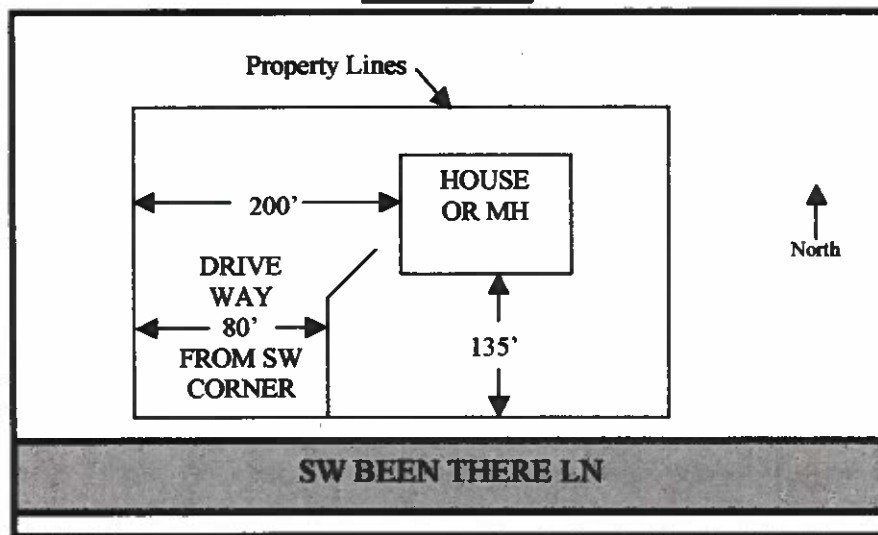
YOU CAN NOT OBTAIN A NEW ADDRESS OVER THE TELEPHONE. MUST MAKE AN APPOINTMENT!

THE ADDRESSING DEPARTMENT IS LOCATED AT 263 NW LAKE CITY AVENUE (OFF OF WEST U.S. HIGHWAY 90 WEST OF INTERSTATE 75 AT THE COLUMBIA COUNTY EMERGENCY OPERATIONS CENTER).

THE REQUESTER WILL NEED THE FOLLOWING:

1. THE PARCEL OR TAX ID NUMBER (SAMPLE: "25-4S-17-12345-123" OR "R12345-123") FOR THE PROPERTY.
2. A PLAT, PLAN, SITE PLAN, OR DRAWING SHOWING THE PROPERTY LINES OF THE PARCEL.
 - a. LOCATION OF PLANNED RESIDENT OR BUSINESS STRUCTURE ON THE PROPERTY WITH DISTANCES FROM TWO OF THE PROPERTY LINES TO THE STRUCTURE (SEE SAMPLE BELOW).
 - b. LOCATION OF THE ACCESS POINT (DRIVEWAY, ETC.) ON THE ROADWAY FROM WHICH LOCATION IS TO BE ADDRESSED WITH A DISTANCE FROM A PARALLEL PROPERTY LINE AND OR PROPERTY CORNER (SEE SAMPLE BELOW).
 - c. TRAVEL OF THE DRIVEWAY FROM THE ACCESS POINT TO THE STRUCTURE (SEE SAMPLE BELOW).

SAMPLE:



NOTE: 5 TO 7 WORKING DAYS MAY BE REQUIRED IF ADDRESSING DEPARTMENT NEEDS TO CONDUCT AN ON SITE SURVEY.

WIND RESISTANCE ENGINEERING CALCULATIONS FOR HOWARD RESIDENCE FT. WHITE, FLORIDA

**DESIGNED IN ACCORDANCE WITH
REQUIREMENTS OF 2004 FLORIDA BUILDING CODE,
SECTION 1609 FOR 110 MPH WIND SPEED**

A handwritten signature in black ink, appearing to read "T. Sputo", with a large, stylized loop at the beginning.

**THOMAS SPUTO, PH.D., P.E.
PE 39142**

**SPUTO ENGINEERING
STRUCTURAL ENGINEERS
10 SOUTHWEST 1st AVENUE
GAINESVILLE FLORIDA 32601
EB 6855**

SPUTO ENGINEERING
STRUCTURAL ENGINEERS

10 SW 1st AVENUE
GAINESVILLE, FLORIDA 32601
PHONE 352-378-0448
FAX 352-373-1331

STRUCTURAL ENGINEERING
FOUNDATION ENGINEERING
BUILDING INSPECTION
FAILURE ANALYSIS

Wind resistance of the referenced building has been designed using a wind speed of 110 mph as required by Section 1609, 2004 Florida Building Code.

ROOF SHEATHING: 1/2" Plywood or 7/16" OSB, installed without blocking. Use 8d common or 10-1/4 gage x 2" minimum length power nails at 6" o.c. at sheet edges and 12" o.c. in the sheet field. The roof acts as a structural diaphragm.

WALL SHEATHING: 1/2" Plywood or 7/16" OSB, installed with blocking at all horizontal sheet edges. Sheathing is installed from bottom to top plate to provide a continuous load path. Use 8d common or 10-1/4 gage x 2" minimum length power nails at 4" o.c. at vertical sheet edges, 4" o.c. at horizontal sheet edges, and 12" o.c. in the sheet field.

SHEARWALLS: See plan sheet for locations.

WALL STUDS: #2 Spruce or better 2x4 at 16" o.c. See notes for gable ends.

ANCHOR BOLTS: 1/2" with 3" square washer at maximum spacing of 48" o.c. Install one bolt within 6" of all corners, and within 6" of the ends of all windows and doors. (Anchor bolt alternate - 5/8" wedge anchor with 4" embed into concrete.) **USE 3" SQUARE WASHERS AT EACH END OF ALL SHEARWALLS.**

HURRICANE CLIPS: Sized as follows based on submitted truss engineering calculations.

One Ply Truss, except as noted:	Simpson H10 (Truss engineering uplift of 850# max)
Two Ply Truss, except as noted:	Simpson H10-2 (Truss engineering uplift max of 655#)
Truss to Truss:	Specified by truss manufacturer, IAW Wood Truss Council of America Standard WTCA 1-1995.

EXCEPTIONS:

Truss A01	Bearing 2, 10	Simpson H14
Truss A01A	Bearing 12	Simpson H14
Truss A01B	Bearing 2,12	Simpson H14
Truss A01C	Bearing 2,12	Simpson H14
Truss A02	Bearing 19	(2) Simpson H7Z
	Bearing 2, 12, 14	Simpson H7Z
Truss A03A	Bearing 2,12	Simpson H14
Truss CO1	Bearing 1,15	(2) Simpson H7Z
Truss FT01	Bearing 9, 13, 15	(2) Simpson H7Z
	Bearing 12	Per attached "Hold Down Detail A", using (2) Simpson LSTA24 and (1) HTT22.

GABLE END WALL BRACING: Balloon frame all gable end walls. Studs shall be as follows:

Studs $\leq$ 12'-06" long #2 Spruce 2x4 at 16" on center.

Studs $>$ 12'-06" long Double #2 Spruce 2x4 at 16" on center.

CONCRETE: All concrete shall have a 28 day compressive strength of 3000 psi.

REINFORCING STEEL: Grade 40 - #5 bars. All lap splices to be a minimum of 25 inches.

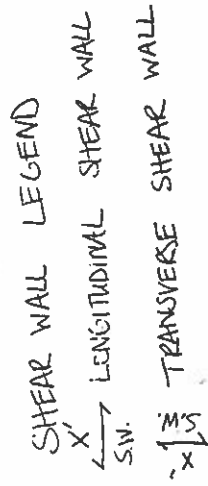
POSTS: Shall be 6x6 PT #2 Southern Pine. Post base shall be Simpson CBSQ66-SDS2. Post cap shall be Simpson CCQ46SDS2.5 for interior conditions and Simpson ECCQ46SDS2.5 for end conditions.

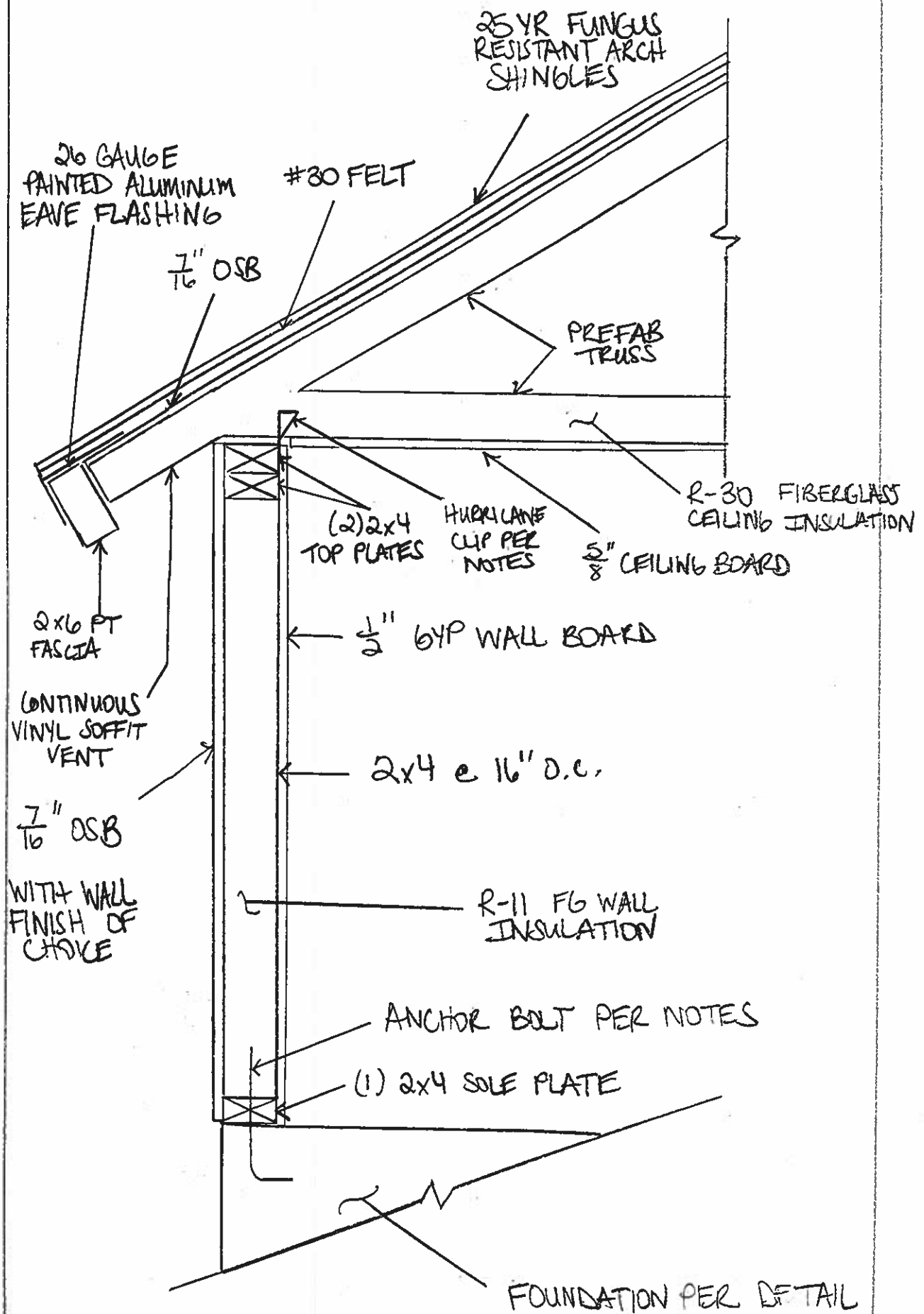
NOTE: 10-1/4 GAGE NAILS HAVE A DIAMETER OF 0.131 INCHES

2004 Florida Building Code Section 1603.1.4 Information

Basic Wind Speed	=	110 mph
Importance Factor	=	1.00
Building Category	=	II
Wind Exposure	=	B
Internal Pressure Coefficient	=	+ - 0.18
C & C Pressures	=	Zone 4 = 22.6 psf Zone 5 = 27.2 psf

HEATED &	2060
COOLED	470
PORCHES	400
CARPOT	2930
TOTAL	





CONNECTOR SELECTION

SPAN	1'	2'	ANCHOR BOLTS
9'-0" AND UNDER	(1) LSTA24	(1) SP4 •	(1) EACH END
OVER 9'-0"	(2) LSTA24	(2) SP4 •	(1) EACH END

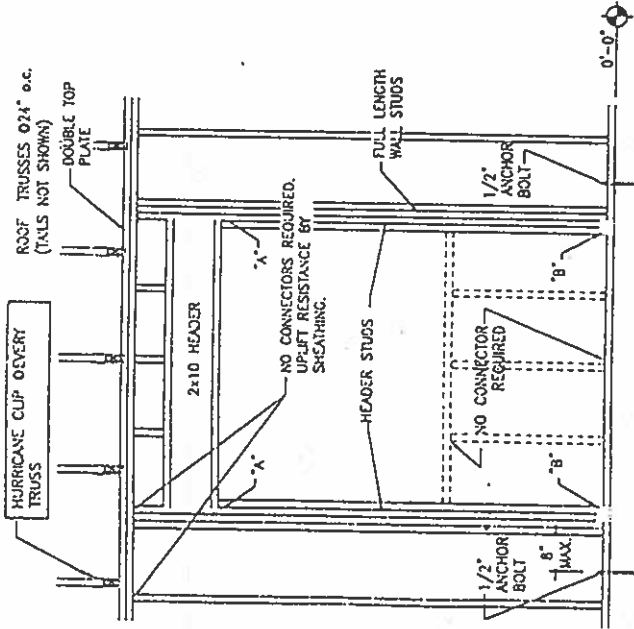
• USE SP6 ON 2X6 WALLS

NOTES:

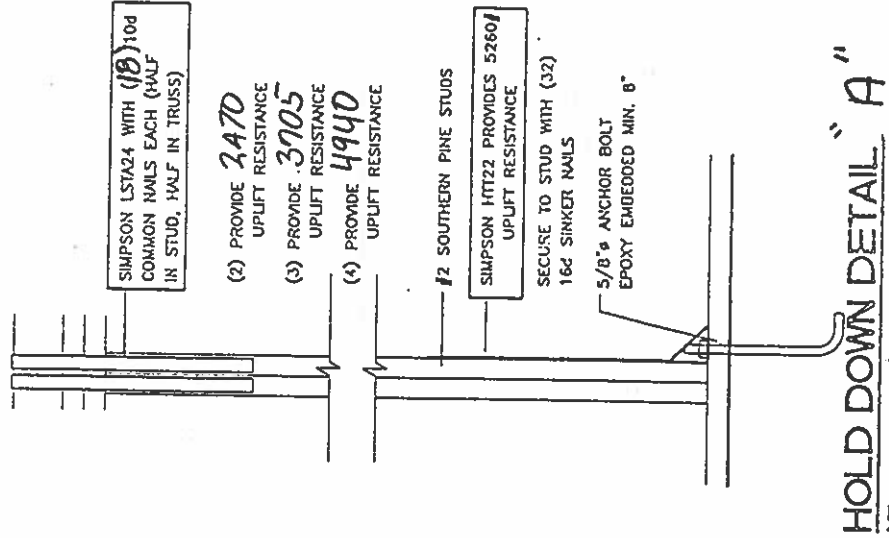
1. CONNECTORS INDICATED ARE BY SIMPSON STRONG TIE CO., INC. PRE-APPROVED EQUAL MAY BE USED.
2. STANDARD WALL HEIGHT SHOWN. WALL HEIGHT MAY VARY. ADJUST HEAD AND SILL HEIGHT WITH CRIPPLES AS REQUIRED.
3. REFER TO HEADER HOLD DOWN CHART FOR NUMBER OF FULL-LENGTH AND HEADER STUDS REQUIRED FOR DIFFERENT OPENING WIDTHS.
4. SHEAR AND UPLIFT RESISTANCE PROVIDED BY SHEATHING. REFER TO STRUCTURAL ENGINEER'S NOTES ON THIS SHEET.

HEADER HOLD DOWNS

MAXIMUM HEADER SPAN (L)					
3	6	9	12	15	18
NUMBER OF HEADER STUDS SUPPORTING END OF HEADER					
1	1	2	2	2	2
NUMBER OF FULL-LENGTH STUDS AT EACH END OF HEADER					
UNSUPPORTED WALL HEIGHT	STUD SPACING	12 in.	16 in.	24 in.	
10'-0" OR LESS		2	2	2	3
		2	2	2	3
		1	2	2	2
GREATER THAN 10'-0"		2	2	3	4
		2	2	3	4
		1	2	2	3



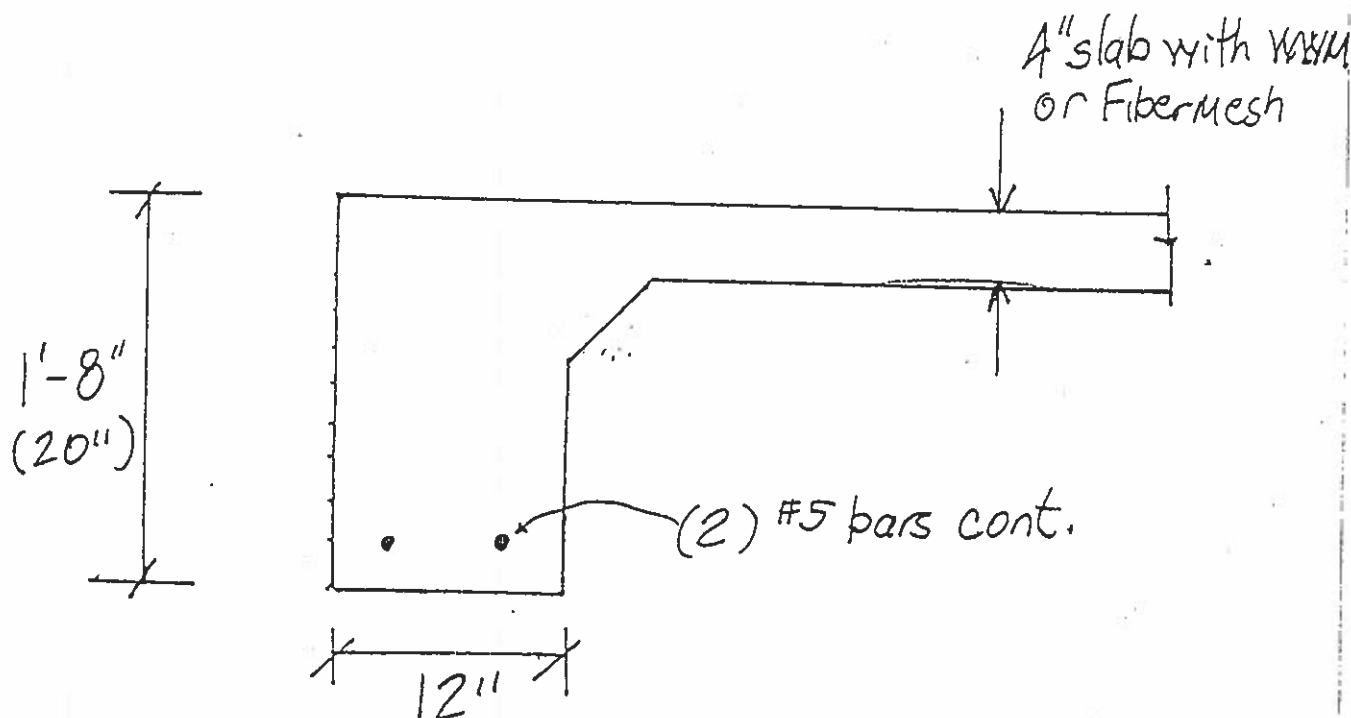
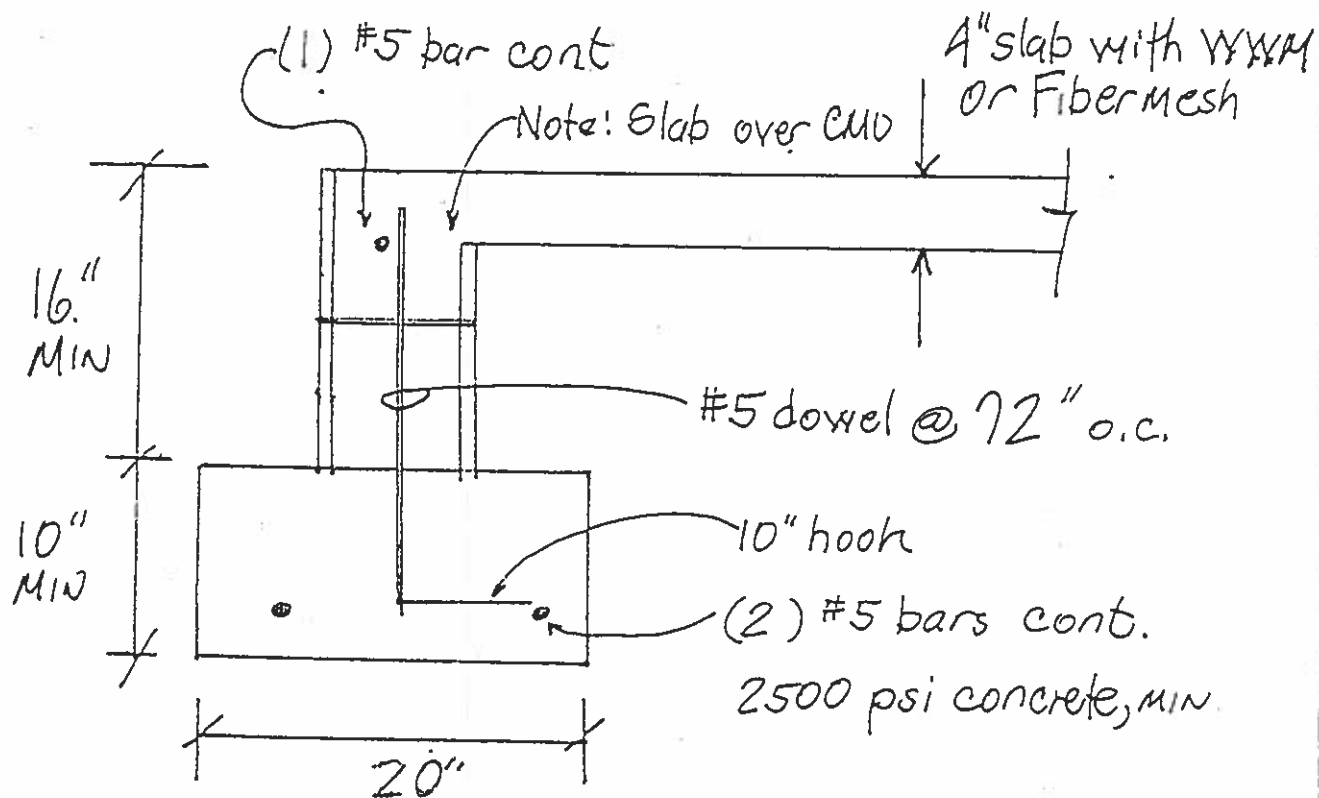
OPENING FRAMING DETAIL



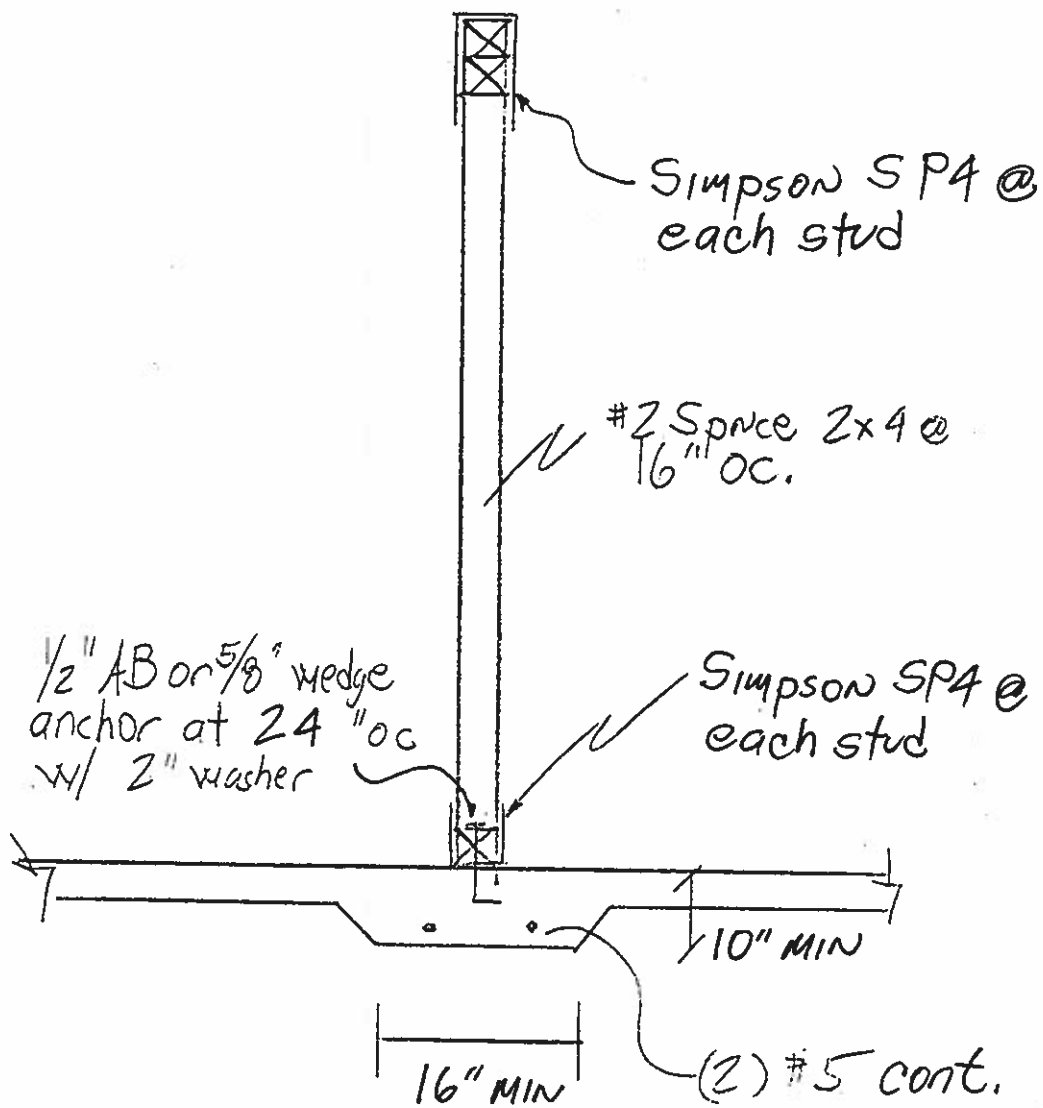
HOLD DOWN DETAIL "A"

Foundation Alternatives

All rebar - Grade 40
All concrete - 2500 psi min



Developed for use by Spoto Engineering only. Use by others is prohibited



Interior Bearing Wall

The H14 is the high uplift hurricane tie. It can be installed with rafter piling flanges facing inwards or outwards.

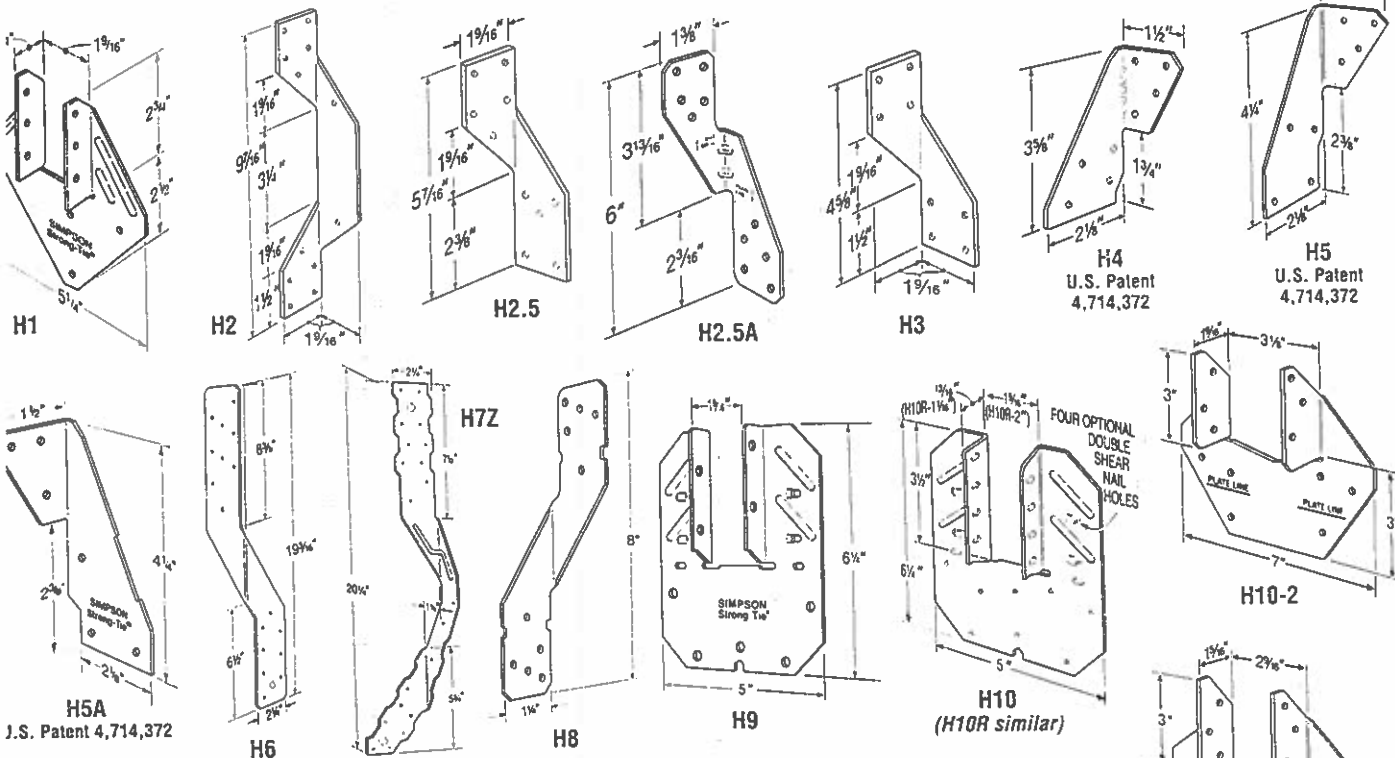
The H2.5A is designed for easy installation, with higher uplift loads to meet new code requirements. H5A has installed cost benefit, it only requires nails, to meet lower uplift requirements.

MATERIAL: See table **FINISH:** Galvanized, H7Z and H11Z-Z-MAX. Some models available in stainless steel or Z-MAX; see Corrosion-Resistance, page 5.

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

- H1 can be installed with flanges facing inwards (reverse of H1 drawing number 1).
- H2.5, H3, H4, H5, H5A and H6 ties are only shipped in equal quantities of rights and lefts.
- Hurricane Ties do not replace solid blocking.

CODES: See page 10 for Code Listing Key Chart.

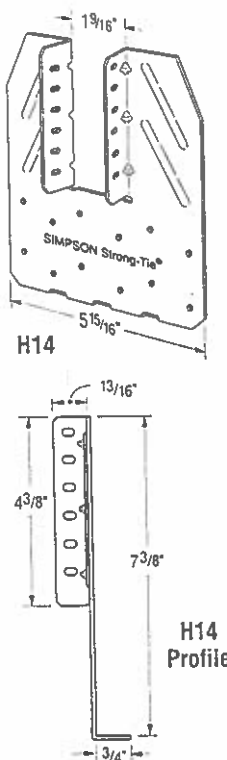


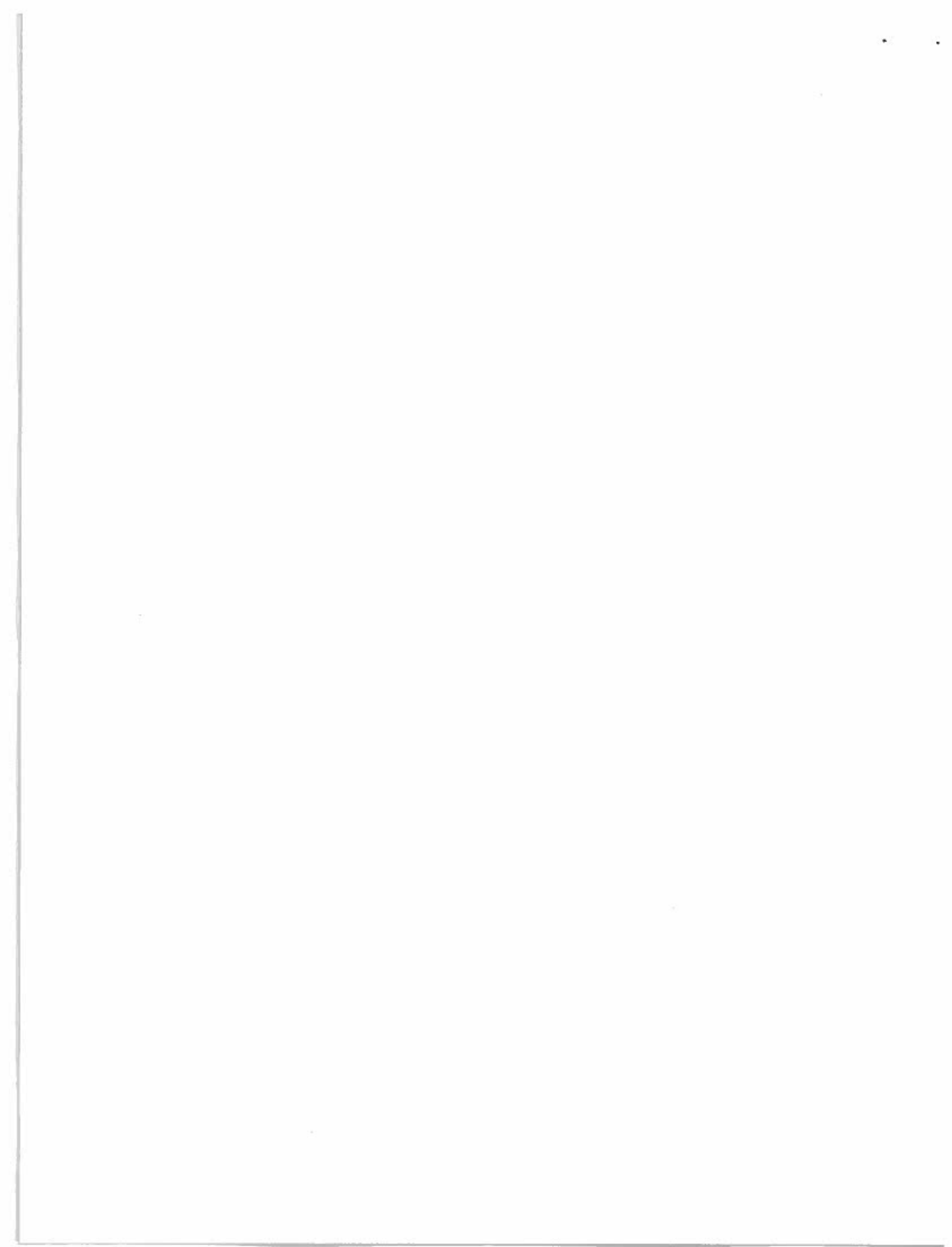
Available with additional corrosion protection. Check with factory.

Model No.	Ga	Fasteners			Uplift Avg Ult	DF/SP Allowable Loads					Uplift Load with 8dx1 1/2" Nails (133 & 160)	SPF/HF Allowable Loads				Uplift Load with 8dx1 1/2" Nails (133 & 160)	Code Ref.
		To Rafters/ Truss	To Plates	To Studs		Uplift		Lateral (133/160)		Uplift		Lateral (133/160)					
						(133)	(160)	F ₁	F ₂	(133)		(160)	F ₁	F ₂			
H1	18	6-8dx1½	4-8d	—	1958	490	585	485	165	455	400	400	415	140	370	2, 40,	
H2	18	5-8d	—	5-8d	1040	335	335	—	—	335	230	230	—	—	230	82, 140	
H2.5	18	5-8d	5-8d	—	1300	415	415	150	150	415	365	365	130	130	365	172	
H2.5A	18	5-8d	5-8d	—	1793	600	600	110	110	480	520	535	110	110	480	172	
H3	18	4-8d	4-8d	—	1433	455	455	125	160	415	320	320	105	140	290	2, 40,	
H4	20	4-8d	4-8d	—	1144	360	360	165	160	360	235	235	140	135	235	82, 140	
H5	18	4-8d	4-8d	—	1485	455	465	115	200	455	265	265	100	170	265	172	
H5A	18	3-8d	3-8d	—	1500	350	420	115	180	290	245	245	100	120	170	172	
H6	16	—	8-8d	8-8d	3983	915	950	650	—	—	785	820	560	—	—	5, 41,	
H7Z	16	4-8d	2-8d	8-8d	2991	930	985	400	—	—	800	845	345	—	—	121, 140	
H8	18	5-10dx1½	5-10dx1½	—	2422	620	745	—	—	—	530	565	—	—	—	172	
H9KT	18	4-SDS ¼x1½	5-SDS ¼x1½	—	2812	875	875	680	125	—	755	755	680	125	—	170	
H10	18	8-8dx1½	8-8dx1½	—	3135	905	990	585	525	—	780	850	505	450	—	9, 172	
H10R	18	8-8dx1½	8-8dx1½	—	3135	905	990	585	525	—	780	850	505	450	—	9, 172	
H10-2	18	6-10d	6-10d	—	2447	760	760	455	395	—	655	655	390	340	—	6, 172	
H11Z	18	6-16dx2½	6-16dx2½	—	5097	830	830	525	760	—	715	715	450	655	—	170	
H14	18	1 12-8dx1½	13-8d	—	4197	1350	1350	515	265	—	1050	1050	480	245	—	12, 172	
		2 12-8dx1½	15-8d	—	4380	1350	1350	515	265	—	1050	1050	480	245	—	12, 172	

1. Loads have been increased 33% and 60% for earthquake or wind loading with; no further increase allowed; reduce where other loads govern.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2 1/2" must be used when framing anchors are installed on each side of the joist and on the same side of the plate.
3. Allowable uplift load for stud to bottom plate installation is 400 lbs (H2.5); 390 lbs (H2.5A); 360 lbs (H4) and 310 lbs (H8).

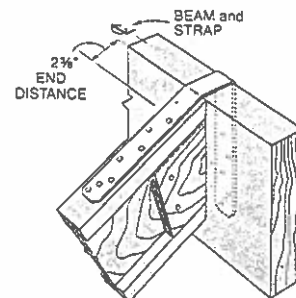
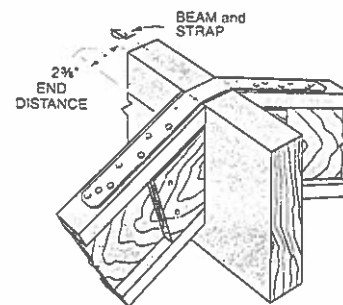
4. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
5. Hurricane Ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a Continuous Load Path, connections must be on same side of the wall.
6. Southern Pine allowable loads for H14: 1465 lbs (133/160), 560 lbs (F₁ Lateral 133/160) and 285 lbs (F₂ Lateral 133/160).





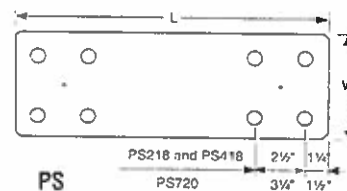
Available with additional corrosion protection. Check with factory.

Model No.	Ga	Dimensions		Fasteners (Total)	Allowable Tension Loads (DF/SP)		Allowable Tension Loads (SPF/HF)		Code Ref.
		W	L		(133)	(160)	(133)	(160)	
LSTA9	20	1 1/4	9	8-10d	645	775	555	665	7, 62, 90, 120
LSTA12		1 1/4	12	10-10d	805	970	695	830	
LSTA15		1 1/4	15	12-10d	970	1160	830	1000	
LSTA18		1 1/4	18	14-10d	1130	1235	970	1165	
LSTA21		1 1/4	21	16-10d	1235	1235	1110	1235	
LSTA24		1 1/4	24	18-10d	1235	1235	1235	1235	
ST292	18	2 1/8	9 1/8	12-16d	1120	1265	970	1160	3, 39, 88, 104, 121, 123
ST2122		2 1/8	12 1/8	16-16d	1505	1535	1290	1535	
ST2115		3/4	16 1/8	8-16d	665	665	665	665	
ST2215		2 1/8	16 1/8	20-16d	1880	1880	1625	1880	
LSTA30		1 1/4	30	22-10d	1640	1640	1555	1640	
LSTA36		1 1/4	36	24-10d	1640	1640	1640	1640	
LSTI49	16	3 3/4	49	32-10dx1 1/2	2580	3100	2220	2660	7, 62, 90, 120
LSTI73		3 3/4	73	48-10dx1 1/2	3870	4215	3330	3995	
MSTA9		1 1/4	9	8-10d	650	780	565	680	
MSTA12		1 1/4	12	10-10d	815	975	705	850	
MSTA15		1 1/4	15	12-10d	975	1170	850	1020	
MSTA18		1 1/4	18	14-10d	1140	1365	990	1185	
MSTA21	14	1 1/4	21	16-10d	1300	1560	1130	1355	7, 62, 90, 120
MSTA24		1 1/4	24	18-10d	1465	1640	1270	1525	
MSTA30		1 1/4	30	22-10d	1835	2050	1585	1900	
MSTA36		1 1/4	36	26-10d	2050	2050	1870	2050	
ST6215		2 1/8	16 1/8	20-16d	1895	2095	1640	1970	
ST6224		2 1/8	23 1/8	28-16d	2540	2540	2315	2540	
ST9	12	1 1/4	9	8-16d	755	910	655	785	3, 39, 88, 104, 121, 128
ST12		1 1/4	11 1/8	10-16d	945	1135	820	985	
ST18		1 1/4	17 1/4	14-16d	1325	1420	1150	1380	
ST22		1 1/4	21 1/8	18-16d	1420	1420	1420	1420	
MSTC28		3	28 1/4	36-16d sinkers	3000	3600	2590	3110	
MSTC40		3	40 1/4	52-16d sinkers	4335	4585	3745	4495	
MSTC52	10	3	52 1/4	62-16d sinkers	4585	4585	4465	4585	9, 23, 128
MSTC66		3	65 3/4	76-16d sinkers	5660	5660	5660	5660	
MSTC78		3	77 3/4	76-16d sinkers	5660	5660	5660	5660	
ST6236		2 1/8	33 1/8	40-16d	3845	3845	3465	3845	
HRS6		1 3/8	6	6-10d	525	630	455	545	
HRS8		1 3/8	8	10-10d	875	1050	760	910	
HRS12	8	1 3/8	12	14-10d	1225	1465	1065	1275	3, 39, 88, 121, 128
FHA6		1 7/8	6 3/8	8-16d	810	975	705	845	
FHA9		1 7/8	9	8-16d	810	975	705	845	
FHA12		1 7/8	11 3/8	8-16d	810	975	705	845	
FHA18		1 7/8	17 3/4	8-16d	810	975	705	845	
FHA24		1 7/8	23 3/8	8-16d	810	975	705	845	
FHA30	6	1 7/8	30	8-16d	810	975	705	845	3, 39, 88, 121, 128
MSTI26		2 1/8	26	26-10dx1 1/2	2355	2830	2045	2455	
MSTI36		2 1/8	36	36-10dx1 1/2	3265	3915	2830	3400	
MSTI48		2 1/8	48	48-10dx1 1/2	4350	5080	3775	4530	
MSTI60		2 1/8	60	60-10dx1 1/2	5080	5080	4720	5080	
MSTI72		2 1/8	72	64-10dx1 1/2	5080	5080	5080	5080	

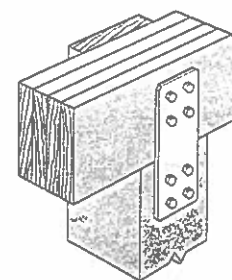
Typical LSTA Installation
(hanger not shown)Typical LSTA Installation
(hanger not shown)

CODES:
See page 10 for
Code Listing
Key Chart.

Model No.	Ga	Dimensions		Bolts		Code Ref.
		W	L	Qty	Dia	
PS218 ^c	7	2	18	4	3/8	180
PS418 ^s		4	18	4	3/8	
PS720 ^s		6 3/4	20	8	1/2	



PS

Typical
PS720
Installation

1. Loads include a 33% or 60% load duration increase on the fasteners for earthquake or wind loading, but DO NOT include a 33% stress increase on the steel capacity. Refer to page 12 for further explanation.
2. 10dx1 1/2" nails may be substituted where 16d sinkers are specified at 0.77 of the table loads.
3. 10d commons may be substituted where 16d sinkers are specified at 100% of table loads.
4. 16d sinkers (9 gauge x 3 1/4") or 10d commons may be substituted where 16d commons are specified at 0.85 of the table loads.
5. Use half of the nails in each member being connected to achieve the listed loads.
6. PS strap design loads must be determined by the building designer for each installation. Bolts are installed both perpendicular and parallel-to-grain. Hole diameter in the part may be oversized to accommodate the HDG. Designer must determine if the oversize creates an unacceptable installation.
7. For overlap splice details, refer to T-CMST.

The HTT22 is a single-piece formed tension tie—no rivets, and a 4-ply formed seat which won't unfold during loading. No washers required. The LTT19 Light Tension Tie is designed for 2x joists or purlins and the LTT20B is for nail- or bolt-on applications. The 3" nail spacing makes the LTT20B suitable for wood I-joists if 10d x 1½" nails are substituted for the specified 16d's.

The LTT31 is designed for wood chord open web truss attachments to concrete or masonry walls.

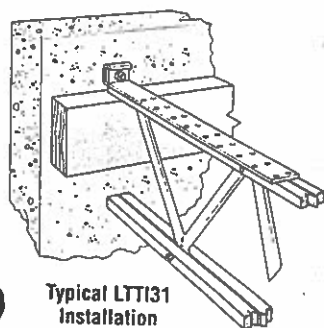
MATERIAL: See table

FINISH: Galvanized. May be ordered HDG; check factory.

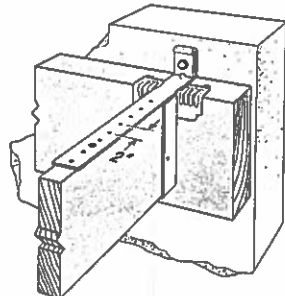
INSTALLATION: • Use all specified fasteners. See General Notes.

- Use the specified number and type of nails to attach the strap portion to the top or side of purlin or beam (minimum 4x width (2-2x4 or 4x4), except LTT19). Bolt the base to the wall or foundation with a suitable anchor; see table for the required bolt diameter.
- Do not install LTT and MTT tension ties raised.
- The HTT22 can be substituted for the MTT28B.
- See Epoxy-Tie Adhesive System, pages 22 for tested, load-rated epoxies for anchor bolt options.
- To tie double 2x members together, the designer must determine the fasteners required to bind members to act as one unit without splitting the wood.
- See Simpson Anchor Systems for tested, load-rated anchors and request T-Anchorspec for more information.

CODES: See page 10 for Code Listing Key Chart.



Typical LTT131 Installation



Typical LTT19 Installation (LTT20B similar)

For holdowns, per ASTM test standards, anchor bolt nuts should be finger-tight plus ¼ to ½ turn with a wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut.

Available with additional corrosion protection. Check with factory.

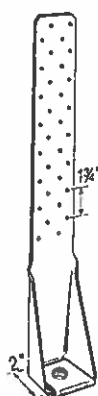
Model No.	Material (Ga)		Dimensions			Seat Thickness	Fasteners				Avg Ull Tension	Allowable Tension Loads DF/SP				Allowable Tension Loads - SPF/HF		Deflection at Highest Allowable Design Load	Code Ref.
	Strap	Plate	W	L	C		Anchor Bolts	Nails	Bolts			(133)		(160)		(133)	(160)		
									Qty	Dia		Nails	Bolts	Nails	Bolts	Nails	Nails		
LTT19	16	3	1½	19½	1½	¾	¾	8-16d Sinkers	—	—	4250	1205	—	1350	—	1085	1305	2, 40, 82, 121	
LTT20B ⁶	12	3	2	19½	1½	¾	½, ¾ or ¾	10-16d	2	¾	8733	1750	1220	1750	1460	1675	1750		
LTT131	18	3	3½	31	1½	¼	¾	18-10dx1½	—	—	7770	2185	—	2310	—	1985	2310		
HTT16	11	—	2½	16	1½	¾	¾	18-16d	—	—	13150	3480	—	4175	—	3080	3695		
HTT22	11	—	2½	22	1½	¾	¾	32-16d Sinkers	—	—	13150	5250	—	5260	—	4670	5250		
MTT28B	12	7	2½	27	1½	¾	¾ or ¾	24-16d	4	¾	—	4455	2150	4455	2725	4140	4455	40, 97, 99, 122	

1. Allowable loads for HTT are based on the lower of the two: 4000 lbs or 4000 lbs.

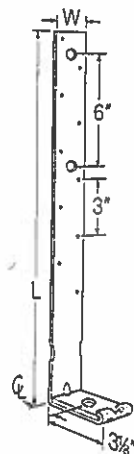
40

1. Allowable loads for HTT are based on the lower of the 2001 NDS fastener values or the ultimate load on a steel test jig divided by 2.5.
2. 16d sinkers (9 ga x 3¼") or 10d commons may be substituted for the specified 16d commons at 0.85 of the table loads.
3. The designer must specify anchor bolt type, length and embedment.
4. Allowable loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed; reduce where other loads govern.

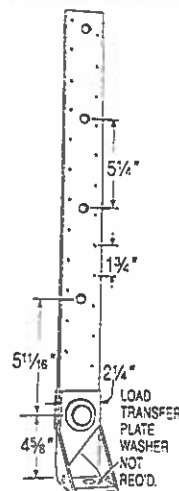
5. Bolt values are based on a minimum lumber thickness of 1½".
6. If a ½" or ¾" anchor bolt is used for the LTT20B, add a standard cut washer to the seat. No additional washer is required for a ¾" anchor bolt. See table for appropriate anchor bolt sizes.
7. HTT22 holdown installed raised off the plate has a reduced load of 5190 lbs. HTT16 installed raised off the plate will achieve the table loads.



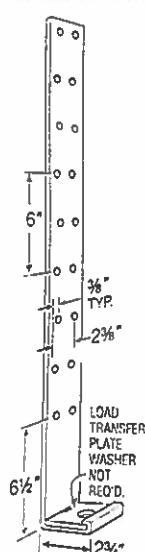
HTT22 (HTT16 similar)
U.S. Patent 5,467,570



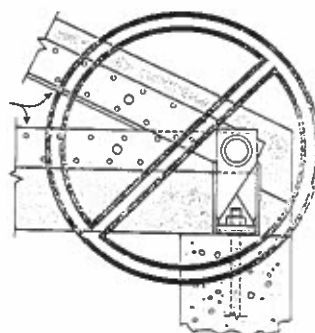
LTT20B



MTT28B
U.S. Patent 4,744,192



LTT131

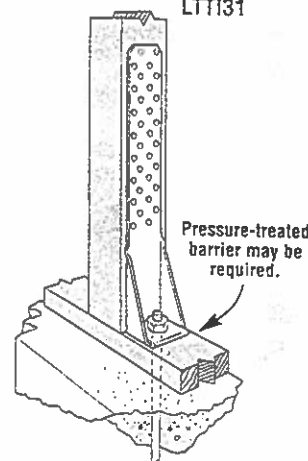


DO NOT MODIFY THE MTT28B.

Do not rotate the MTT28B's strap around the rivet.

The strap must be in line vertically with the body of the holdown to achieve table loads.

See Girder Tiedown Connectors on page 130 for installation solutions.



Typical HTT22 Installation as a Holdown

RP6 RETRO PLATE

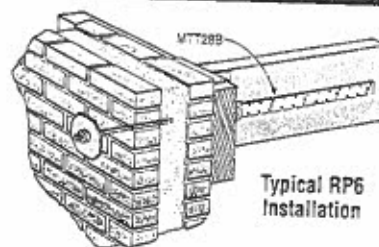
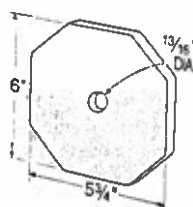
The RP6 heavy steel plate fits on the outside of masonry buildings, helps tie the walls to the roof or floor structure with a ¾" diameter rod.

FINISH: Simpson gray paint. Optional hot-dip galvanized finish; see Corrosion-Resistance, page 5, and specify HDG.

MATERIAL: ¾" steel. Available with additional corrosion protection. Check with factory.

INSTALLATION: Use a ¾" diameter rod.

RP6





The DSP and SSP are preferable to similar connectors because of a) easier installation, b) higher loads, c) lower installed cost, or a combination of these features.

DSP and SSP provide flexibility in the field - can be used as a plate to stud connection AND top plate to stud connection.

The RSP4 is a reversible stud plate tie with locating tabs, which aid placement on double top plates or a single bottom plate.

MATERIAL: DSP/SSP/SPH-18 gauge, all others-20 gauge
FINISH: Galvanized. Some products available in Z-MAX;

see Corrosion-Resistance, page 5.

INSTALLATION: • Use all specified fasteners; see General Notes.

- DSP/SSP-sill plate installation-fill all round holes.
- DSP/SSP-top plate installation-fill all round and triangle holes
- SP-one of the 10d common stud nails is driven at a 45° angle through the stud into the plate.

CODES: See page 10 for Code Listing Key Chart.

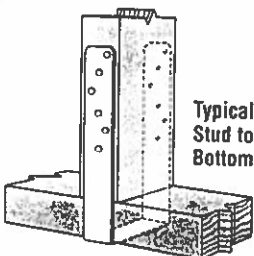
Available with additional corrosion protection. Check with factory.

Model No.	Dimensions		Fasteners			Avg Uplift DF/SP	Allowable Uplift Loads (133/160)			Code Ref.
	W	L	Studs	Double Top Plate	Single Sill Plate		Double Top Plate DF/SP/SPF	Single Sill Plate DF/SP	SPF/HF	
SSP	1 1/2"	6 1/16"	4-10dx1 1/2"	3-10dx1 1/2"	—	1107	350	—	—	125
			—	—	1-10dx1 1/2"	1360	—	420	325	
			4-10d	3-10d	—	1310	435	—	—	
DSP	2 1/2"	6 1/16"	—	—	1-10d	1397	—	455	420	
			8-10dx1 1/2"	6-10dx1 1/2"	—	2417	775	—	—	
			—	—	2-10dx1 1/2"	2160	—	660	545	
			8-10d	6-10d	—	2538	825	—	—	
			—	—	2-10d	2474	—	825	600	

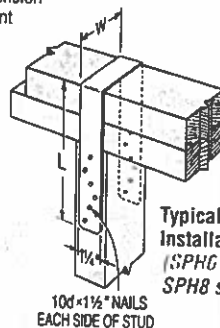
1. Allowable loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed.
2. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.

Model No.	Dimensions		Stud	Plate Width	Fasteners		Avg Upl	Allowable Uplift Loads				Code Ref.
	W	L			Stud ¹	Plate		DF/SP		SPF		
								(133) ²	(160) ²	(133)	(160)	
SP1	3½	5⅛	2x	—	6-10d	4-10d	1950	585	585	535	535	6, 121
SP2	3½	6¾	2x	—	6-10d	6-10d	3300	890	1065	605	605	
SP3	4½	6¾	3x	—	6-10d	6-10d	3467	890	1065	605	605	
SP4	3⅝	7¼	2x	4x	6-10dx1½	—	2917	735	885	630	760	7, 121
SP5	4½	5⅛	3x	—	6-10d	4-10d	1950	585	585	535	535	160
SP6	5⅛	7¾	2x	6x	6-10dx1½	—	2917	735	885	630	760	7, 121
SP8	7⅛	8⅛	2x	8x	6-10dx1½	—	2917	735	885	630	760	
SPH4	3⅝	8¾	2x	4x	10-10dx1½	—	3993	1240	1240	1065	1065	62, 121
SPH6	5⅛	9¼	2x	6x	12-10dx1½	—	4470	1360	1360	1170	1170	
					10-10dx1½	—	3993	1240	1240	1065	1065	
					12-10dx1½	—	4470	1360	1360	1170	1170	
SPH8	7⅛	8¾	2x	8x	10-10dx1½	—	3993	1240	1240	1065	1065	6, 30, 99, 121
					12-10dx1½	—	4470	1360	1360	1170	1170	
RSP4(1)	2½	4½	2x	—	4-8dx1½	4-8dx1½	1032	315	315	285	285	6, 30, 99, 121
RSP4(2)	2½	4½	2x	—	4-8dx1½	4-8dx1½	1445	450	450	370	370	

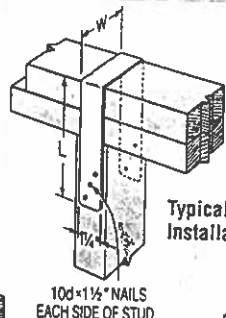
1. SP1, 2, 3 and SP5: drive one stud nail at an angle through the stud into the plate to achieve the table load (see illustration).
2. Allowable loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed. Reduce where other loads govern.
3. RSP4—see Installation details (1) and (2) for reference.
4. RSP4 F2 is 280 lbs (installation 1) and 305 lbs (installation 2). F1 load is 210 lbs for both installations.
5. Maximum load for SPH in Southern Yellow Pine is 1490 lbs.
6. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
7. For retrofit application see T-STRAP.



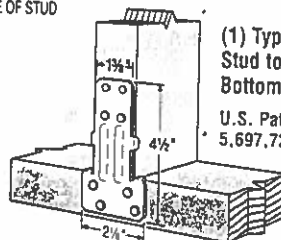
Typical SPH4 Stud to Single Bottom Plate



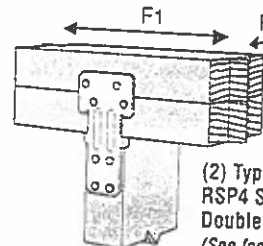
Typical SPH4 Installation (SPH6 and SPH8 similar)



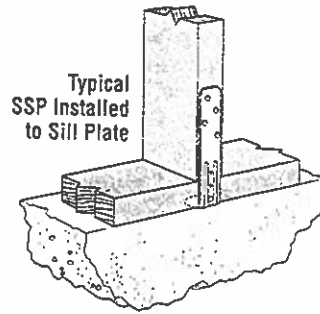
Typical SP4 Installation



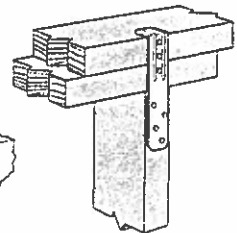
(1) Typical RSP4 Stud to Single Bottom Plate
U.S. Patent 5,697,725



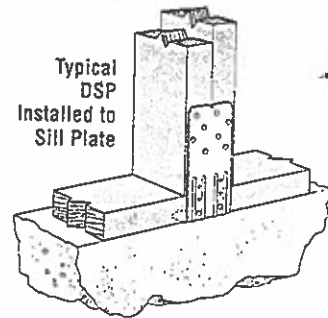
(2) Typical RSP4 Stud to Double Top Plate (See footnote 4)



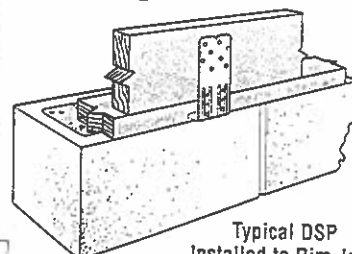
Typical SSP Installed to Sill Plate



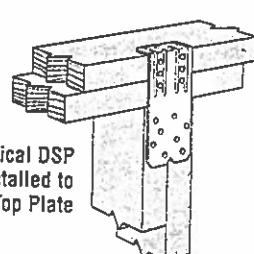
Typical SSP Installed to Top Plate



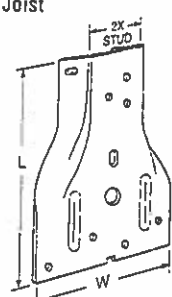
Typical DSP Installed to Sill Plate



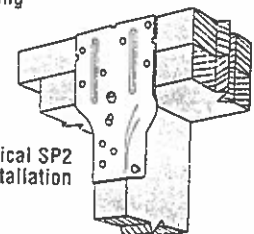
Typical DSP Installed to Rim Joist



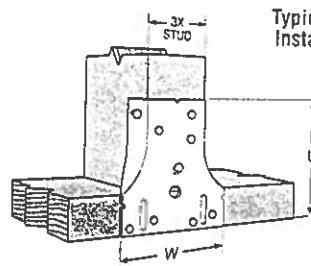
Typical DSP Installed to Top Plate



SP1 Nailing Profile



Typical SP2 Installation



Typical SP5 Installed (SP3 similar installed at double top plate)

Straps & Ties

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 CBSQ uses Simpson's SDS screws, which allow for fast installation, reduced reveal and high capacity, while maintaining the net section of the column.

MATERIAL: See table. **FINISH:** Galvanized, available in HDG with HDG screws.

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

• Install Simpson's code-recognized SDS $\frac{1}{4}$ " x 2" wood screws, which are provided with the column base. (Lag screws will not achieve the same load.)

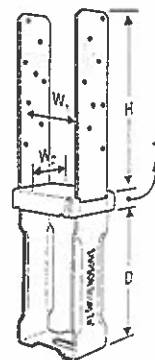
• Post bases do not provide adequate resistance to prevent members from rotating about the base and therefore are not recommended for non top-supported installations (such as fences or unbraced carports).

CODES: See page 10 for Code Listing Key Chart.

Available with additional corrosion protection. Check with factory.

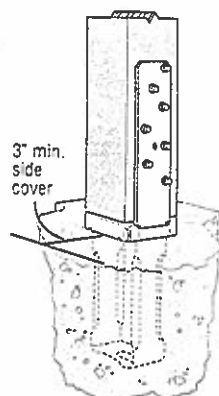
Model No.	Nominal Column Size	Material		Dimensions				Number of Simpson SDS $\frac{1}{4}$ " x 2" Screws	Uplift Avg Ult	Allowable Loads			Code Ref.
		Base (Ga)	Strap (Ga x Width)	W ₁	W ₂	D	H			Uplift (133)	Uplift (160)	Down (100)	
CBSQ44-SDS2	4x4	12	10ga x 2 $\frac{1}{4}$	3 $\frac{1}{16}$	3 $\frac{1}{2}$	7 $\frac{1}{16}$	8 $\frac{3}{4}$	14	16667	5335	5335	10975	46.
CBSQ46-SDS2	4x6	12	10ga x 3	3 $\frac{1}{16}$	5 $\frac{1}{8}$	7 $\frac{1}{4}$	8 $\frac{1}{16}$	14	16667	5335	5335	14420	107.
CBSQ66-SDS2	6x6	12	10ga x 3	5 $\frac{1}{8}$	5 $\frac{1}{2}$	6 $\frac{1}{4}$	8 $\frac{3}{4}$	14	24000	5710	6855	14420	124

- For higher downloads, solidly pack grout under 1" standoff plate before installing CBSQ into concrete. Base download on column or concrete, according to the code.
- When using structural composite lumber columns, screws must be applied to the wide face of the column.



CBSQ-SDS2

U.S. Patent
4,924,648



Typical CBSQ-SDS2 Installation

Caps & Bases

CBQ and CBSQ

To order with screws, specify CBQ-SDS2 or CBSQ-SDS2.

To order without screws, specify CBQ or CBSQ.

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 CBQ uses Simpson's SDS screws, which allows for fast installation, reduced reveal and high capacity, while maintaining the net section of the column.

MATERIAL: See table. **FINISH:** Galvanized, available in HDG with HDG screws.

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

• Install Simpson's code-recognized SDS $\frac{1}{4}$ " x 2" wood screws, which are provided with the column base. (Lag screws will not achieve the same load.)

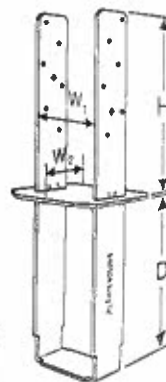
• Post bases do not provide adequate resistance to prevent members from rotating about the base and therefore are not recommended for non top-supported installations (such as fences or unbraced carports).

CODES: See page 10 for Code Listing Key Chart.

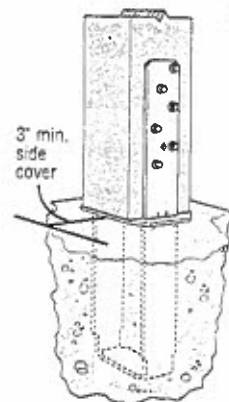
Available with additional corrosion protection. Check with factory.

Model No.	Nominal Column Size	Material		Dimensions				Number of Simpson SDS $\frac{1}{4}$ " x 2" Screws	Uplift Avg Ult	Allowable Loads		Code Ref.
		Base (Ga)	Strap (Ga x Width)	W ₁	W ₂	D	H			Uplift (133)	Uplift (160)	
CBQ44-SDS2	4x4	7	7ga x 2	3 $\frac{1}{16}$	3 $\frac{1}{16}$	8	8 $\frac{1}{16}$	12	14350	4200	4200	46.
CBQ46-SDS2	4x6	7	7ga x 2	3 $\frac{1}{16}$	5 $\frac{1}{2}$	8	8 $\frac{1}{16}$	12	14350	4200	4200	107.
CBQ66-SDS2	6x6	7	7ga x 3	5 $\frac{1}{8}$	5 $\frac{1}{2}$	8	8 $\frac{1}{16}$	12	14350	4200	4200	124

- When using structural composite lumber columns, screws must be applied to the wide face of the column.



CBQ-SDS2



Typical CBQ-SDS2 Installation

EPB ELEVATED POST BASES

MATERIAL: EPB44A—14 ga.; others—12 ga. base plate, 1 $\frac{1}{16}$ " OD x 8" pipe

FINISH: EPB44A—Galvanized; all others—Simpson gray paint; see Corrosion-Resistance, page 5.

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

• Allows 1" to 2 $\frac{1}{2}$ " clearance above concrete. 2" for EPB44A.

• Post bases do not provide adequate resistance to prevent members from rotating about the base and therefore are not recommended for non top-supported installations (such as fences or unbraced carports).

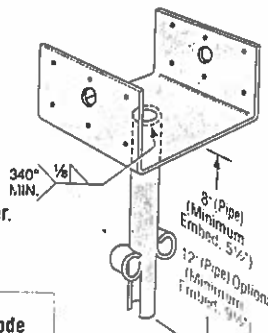
OPTIONS: 12" pipe available for EPB44, 46, 66; specify "12" after model number.

CODES: See page 10 for Code Listing Key Chart.

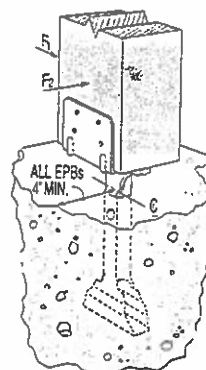
Available with additional corrosion protection. Check with factory.

Model No.	W	L	H	Nails	Uplift Avg Ult	Allowable Loads			Code Ref.
						(133) and (160)	Uplift	F ₁	
EPB44A	3 $\frac{1}{8}$	3	2 $\frac{1}{2}$	8-16d	3600	1100	815	935	2670
EPB44	3 $\frac{1}{8}$	3 $\frac{1}{4}$	2 $\frac{1}{8}$	8-16d	3600	800	985	1135	3465
EPB46	5 $\frac{1}{2}$	3 $\frac{1}{8}$	3	8-16d	3600	800	985	1135	3465
EPB66	5 $\frac{1}{2}$	5 $\frac{1}{2}$	3	12-16d	—	1500	985	1135	3465

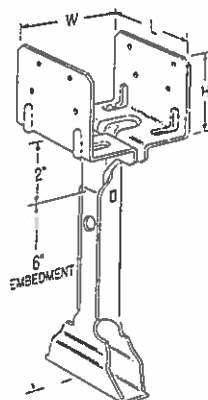
- Loads may not be increased for short-term loading.
- EPB44 and EPB46 have extra nail holes; only eight must be filled to achieve table loads.
- Specifier to design concrete for shear capacity.



EPB66
(EPB44 and EPB46 similar)



Typical EPB44A Installation



EPB44A

U.S. Patent 4,995,206,
Canada Patent
2,031,552

✓ 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.

This design uses SDS screws to provide faster installation and maintain the wood cross section. The SDS screws provide for a lower profile compared to standard through bolts.

MATERIAL: CCQ3, ECCQ3, CCQ4, ECCQ4, CCQ6, ECCQ6—7 gauge; all others—3 gauge.

FINISH: Simpson gray paint, available in HDG with HDG screws.

INSTALLATION: Fasteners provided. See General Notes.

• Install Simpson's code-recognized SDS $\frac{1}{4}$ "x2 $\frac{1}{2}$ " wood screws, which are provided with the column cap. (Lag screws will not achieve the same load.)

OPTIONS: Straps may be rotated 90° where $W_1 \geq W_2$. For end conditions, specify ECCQ. Loads do not apply to CCQ and ECCQ.

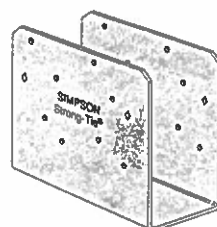
CODES: See page 10 for Code Listing Key Chart.

Available with additional corrosion protection. Check with factory.

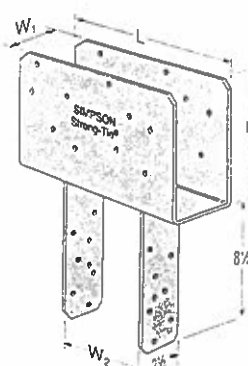
Model No.	Dimensions				No. of ^a SDS $\frac{1}{4}$ "x2 $\frac{1}{2}$ " Screws		CCQ Uplift Avg Ult	Allowable Loads				Code Ref.		
	W ₁	W ₂	L					H	CCQ		ECCQ			
			CCQ	ECCQ					Uplift	Down	Uplift		Down	
									(133)	(160)	(100)		(133/160)	(100)
CCQ3-4SDS2.5	3 $\frac{1}{4}$	3 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	19250	3695	6125	46, 107, 124
CCQ3-6SDS2.5	3 $\frac{1}{4}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	19250	3695	9625	
CCQ44SDS2.5	3 $\frac{3}{4}$	3 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	24065	4040	7655	
CCQ46SDS2.5	3 $\frac{3}{4}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	5955	7145	24065	4040	12030	
CCQ48SDS2.5	3 $\frac{3}{4}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	5955	7145	24065	4040	16405	
CCQ5-4SDS2.5	5 $\frac{1}{4}$	3 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	31570	4040	10045	
CCQ5-6SDS2.5	5 $\frac{1}{4}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	31570	5535	15785	
CCQ5-8SDS2.5	5 $\frac{1}{4}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	31570	5535	21525	
CCQ64SDS2.5	5 $\frac{1}{2}$	3 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	37815	4040	12030	
CCQ66SDS2.5	5 $\frac{1}{2}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	5955	7145	37815	4040	18905	
CCQ68SDS2.5	5 $\frac{1}{2}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	5955	7145	37815	4040	25780	160
CCQ6-7.13SDS2.5	5 $\frac{1}{2}$	7 $\frac{1}{4}$	11	8 $\frac{1}{2}$	7	16	14	23837	5955	7145	37815	4040	24490	
CCQ74SDS2.5	6 $\frac{3}{4}$	3 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	41580	4040	13230	
CCQ76SDS2.5	6 $\frac{3}{4}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	41580	5535	20790	
CCQ77SDS2.5	6 $\frac{3}{4}$	6 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	41580	5535	25515	
CCQ78SDS2.5	6 $\frac{3}{4}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	41580	5535	28350	
CCQ7.1-4SDS2.5	7 $\frac{1}{4}$	3 $\frac{3}{4}$	11	8 $\frac{1}{2}$	7	16	14	18513	5680	5680	57750	4040	19030	
CCQ7.1-6SDS2.5	7 $\frac{1}{4}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	57750	5535	28875	
CCQ7.1-7.1SDS2.5	7 $\frac{1}{4}$	7 $\frac{1}{4}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	57750	5535	37405	
CCQ7.1-8SDS2.5	7 $\frac{1}{4}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	57750	5535	39375	
CCQ86SDS2.5	7 $\frac{1}{2}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	51565	5535	25780	160
CCQ88SDS2.5	7 $\frac{1}{2}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	51565	5535	35155	
CCQ96SDS2.5	8 $\frac{3}{4}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	53900	5535	26950	
CCQ98SDS2.5	8 $\frac{3}{4}$	7 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	53900	5535	36750	
CCQ106SDS2.5	9 $\frac{1}{2}$	5 $\frac{1}{2}$	11	8 $\frac{1}{2}$	7	16	14	23837	6270	7245	65315	5535	32655	

- Downloads are determined using F_c equal to: 560 psi for glulam sizes and 625 psi for all others; reduce where end bearing value of post, L/R of post, or other criteria are limiting.
- Spliced conditions must be detailed by the specifier to transfer tension loads between spliced members by means other than the column cap.
- Uplift loads do not apply to splice conditions.
- Post sides are assumed to lie in the same vertical plane as the beam sides.
- Loads may not be increased for short-term loading.
- Uplift loads have been increased 33% and 60% for earthquake or wind loading; reduce for other loading conditions in accordance with the code.

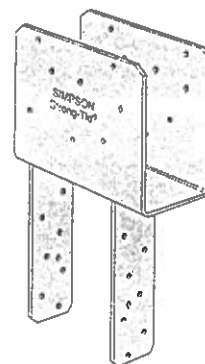
- ECCQ downloads assume a post of W_1 x W_2 .
- When using structural composite lumber columns, screws must be applied to the wide face of the column.
- ECCQ uses 14-SDS screws into the beam and 14-SDS screws into the post.
- Beam depth must be greater than 7".



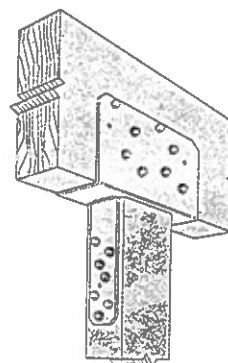
CCQ4-SDS2.5



CCQ46SDS2.5



ECCQ46SDS2.5



Typical CCQ46SDS2.5 Installation

IS INSULATION SUPPORTS

Mitered edges ensure a tight fit when installed between joists.

INSTALLATION: • Install between joists. IS16 for 16" o.c. spacing; IS24 for 24" o.c. spacing. Follow insulation manufacturer's installation instructions.

• Wear safety glasses, gloves and other appropriate safety equipment.

Model	Gauge	Length
IS16	14 ga	15 $\frac{1}{2}$ "
IS24	14 ga	23 $\frac{1}{2}$ "



Typical IS Installation

WIND LOAD DESIGN PER 2004 FBC (1609.6)

SINGLE STORY BUILDING

BUILDING DIMENSIONS:

L = 80 FEET
W = 52.08 FEET
EAVE = 9 FEET
PITCH = 6 /12 = 26.6 DEG.
O'HANG = 2 FEET
RIDGE = 22.02 FEET
MEAN RF = 15.51 FEET

WIND EXPOSURE:

VELOCITY = 110 MPH
I = 1.00 (IMPORTANCE FACTOR)
EXPOSURE = B
ADJUSTMENT 1.00 (PER TABLE 1609.6D)

MWFRS PRESSURE PER TABLE 1609.6A (BASE PRESSURE W/O ADJUSTMENT)
(PRESSURES IN PSF)

TRANSVERSE WIND DIRECTION

	END ZONE		INTERIOR ZONE	
HORIZONTAL LOADS	WALL	ROOF	WALL	ROOF
	26.6	-7.0	17.7	-3.9
VERTICAL LOADS				
	WINDWD	LEEWD	WINDWD	LEEWD
	-23.1	16.0	-16.0	-12.2
O'HANG	-32.3		-25.3	

LONGITUDINAL WIND DIRECTION

	END ZONE		INTERIOR ZONE	
HORIZONTAL LOADS	WALL	ROOF	WALL	ROOF
	19.2	-10.0	12.7	-5.9
VERTICAL LOADS				
	WINDWD	LEEWD	WINDWD	LEEWD
	-23.1	-13.1	-16.0	-10.1
O'HANG	-32.3		-25.3	

CALCULATE EDGE STRIPS:

5.208 FEET	(10% OF LEAST DIM)	
3.6 FEET	(40% OF EAVE)	
		Least = 3.6 FEET
2.0832 FEET	(4% OF LEAST DIM)	
3 FEET	(3 FEET)	
		Max = 3 FEET

A = 3.6 FEET
2A = 7.2 FEET

HORIZONTAL TRANSVERSE LOAD
ROOF -4643 LBS.

WALL 13897 LBS.

LONGITUDINAL TRANSVERSE LOAD

ROOF 4474 LBS.
WALL 6795 LBS.

ROOF DIAPHRAM

TRANSVERSE

TOTAL DRAGSTRUT LENGTH = 80 FEET

LOAD RESISTED =
-4643 ROOF
6949 WALL
2305 TOTAL
28.8 PLF

7/16" OSB

8d COMMON OR 0.131" DIA. P-NAIL

6"/12"	4"/12"	3"/12"	
357	476	707	PINE
OK	OK	OK	

LONGITUDINAL

TOTAL DRAGSTRUT LENGTH = 160 FEET

LOAD RESISTED =
4474 ROOF
3398 WALL
7872 TOTAL
49.2 PLF

6"/12"	4"/12"	3"/12"	
357	476	707	PINE
OK	OK	OK	

SHEARWALLS

TRANSVERSE

TOTAL SHEARWALL LENGTH = 36 FEET

LOAD RESISTED =
-4643 ROOF
6949 WALL
2305 TOTAL
64.0 PLF

7/16" OSB

8d COMMON OR 0.131" DIA. P-NAIL

6"/12"	4"/12"	3"/12"	
364	532	686	PINE
OK	OK	OK	
298	436	563	SPRUCE
OK	OK	OK	

LONGITUDINAL

TOTAL SHEARWALL LENGTH = 30 FEET

LOAD RESISTED =
4474 ROOF
3398 WALL
7872 TOTAL
262.4 PLF

6"/12"	4"/12"	3"/12"	
364	532	686	PINE
OK	OK	OK	
298	436	563	SPRUCE
OK	OK	OK	

HURRICANE CLIPS

(Truss at 24" on center)
(Includes 6 psf dead load)

COMMON TRUSS

	SPAN	O'HANG	END ZONE UPLIFT	INT. ZONE UPLIFT
T1	38	2	-779	-481
T2	16.33	2	-408	-265
T3	20	2	-471	-301
T4	12	2	-334	-221

JACK TRUSS

	SPAN	O'HANG	UPLIFT
J1	0	0	0
J2	0	0	0

#1 HIP TRUSS

	SPAN	O'HANG	SETBACK	UPLIFT
H1	0	0	7	0
H2	0	0	9	0
H3	0	0	11	0

WALL TENSION TIE USING SHEATHING

WALL TO WALL	O'HANG	UPLIFT LOAD	3/8" MINIMUM SHEATHING 8d COMMON NAIL SPACING
38	2	241 PLF	SPRUCE 4.7 PINE 5.9 INCHES

ANCHOR BOLT SPACING

WALL TO WALL	UPLIFT LOAD	1634 2" ROUND WASHER	3173 3" SQ WASHER
38	241	81.5 IN. MAX	158.3 IN. MAX

SHEARWALL ANCHORAGE TRANSVERSE

CHORD FORCE =	576	LBS
ANCHOR BOLT =	48	INCHES O.C.
REQUIRED FORCE =	1058	LBS

1634 2" ROUND WASHER	3173 3" SQ WASHER
OK	OK

LONGITUDINAL

CHORD FORCE =	2362	LBS
REQUIRED FORCE =	2362	LBS

NO GOOD	OK
---------	----

WALL STUD DESIGN

DESIGN PRESSURES:	22.6	PSF	INTERIOR ZONE
	27.2	PSF	END ZONE

INTERIOR ZONE STUDS

STUD LENGTH FEET	SPACING INCHES	INTERIOR MOMENT IN-#	Sx Fb allow	#2 SPF 2X4 3.06 2415	#2 PINE 2X4 3.06 2760	#2 SPF 2X6 7.56 2093	#2 PINE 2X6 7.56 2300	#2 PINE 3X4 5.11 2760
9	16	3661		1196 OK	1196 OK	484 OK	484 OK	716 OK
12.5	16	7063		2308 OK	2308 OK	934 OK	934 OK	1382 OK
13	8	3819		1248 OK	1248 OK	505 OK	505 OK	747 OK
18	8	7322		2393 OK	2393 OK	969 OK	969 OK	1433 OK

END ZONE MOMENT IN-#

END ZONE STUDS

WITHIN	3.6	FEET OF CORNERS						
9	16		4406	1440 OK	1440 OK	583 OK	583 OK	862 OK
11	16		6582	2151 OK	2151 OK	871 OK	871 OK	1288 OK
0	0		0	0 OK	0 OK	0 OK	0 OK	0 OK
0	0		0	0 OK	0 OK	0 OK	0 OK	0 OK

SHEARWALL CAPACITIES PER 2004 FBC

NAIL = 8d COMMON OR 0.131" POWER NAIL
SHEATHING = 7/16" OSB

6"/12"	4"/12"	3"/12"
260	380	490
0.82	0.82	0.82
1.4	1.4	1.4
298	436	563

Per Table 2306.4.1, using 15/32" sheathing
as allowed by para 2306.4.1

1.00 = Pine, 0.82 = SPF

Increase per para 2306.4.1

SHEARWALL CAPACITIES PER 2001 SBC

NAIL = 8d COMMON OR 0.131" POWER NAIL
SHEATHING = 7/16" OSB

6"/12"	4"/12"	3"/12"
260	380	490
1	1	1
1.4	1.4	1.4
364	532	686

Per Table 2306.4.1, using 15/32" sheathing
as allowed by para 2306.4.1

1.00 = Pine, 0.82 = SPF

Increase per para 2306.4.1

Post Uplift Design

Post Uplift Design			
Truss Uplift	1076	Pounds per truss at 24" on center	
Post Spacing	6	Feet	
Uplift per post	3228	Pounds	
Post Base	Allowable	Select ?	Fasteners
Simpson ABE44	520	No Good	1/2" anchor bolt and (6) 10d common nails
Simpson ABU44	2200	No Good	5/8" anchor bolt and (12) 16d common nails
Simpson ABE66	900	No Good	5/8" anchor bolt and (8) 16d common nails
Simpson ABU66	2300	No Good	5/8" anchor bolt and (12) 16d common nails
Simpson CBSQ44-SDS2	5335	OK	Imbeded into concrete and (14) Simpson SDS 1/4x2" screws
Simpson CBSQ66-SDS2	6855	OK	Imbeded into concrete and (14) Simpson SDS 1/4x2" screws
Post Cap	Allowable	Select ?	Fasteners
Simpson BC4 (4x4 post, 4" beam)	980	No Good	(6) 16d common nails
Simpson BC6 (6x6 post, 6" beam)	1050	No Good	(12) 16d common nails
Simpson CCQ44SDS2.5 (4x4 post, 4" beam)	5680	OK	Simpson SDS 1/4x2" screws - (16) to beam - (14) to post
Simpson ECCQ44SDS2.5 END CONDITION (4x4 post, 4" beam)	4040	OK	Simpson SDS 1/4x2" screws - (16) to beam - (14) to post
Simpson CCQ66SDS2.5 (6x6 post, 6" beam)	7145	OK	Simpson SDS 1/4x2" screws - (16) to beam - (14) to post
Simpson ECCQ66SDS2.5 END CONDITION (6x6 post, 6" beam)	4040	OK	Simpson SDS 1/4x2" screws - (16) to beam - (14) to post
Simpson CCQ46SDS2.5 (6x6 post, 4" beam)	7145	OK	Simpson SDS 1/4x2" screws - (16) to beam - (14) to post
Simpson ECCQ46SDS2.5 END CONDITION (6x6 post, 4" beam)	4040	OK	Simpson SDS 1/4x2" screws - (16) to beam - (14) to post

Use 2 ply 2x10 Beam



RE: 9463 - Howard Residence

MiTek Industries, Inc.

14515 North Outer Forty Drive
Suite 300
Chesterfield, MO 63017-5746
Telephone 314/434-1200
Fax 314/434-5343

Site Information:

Project Customer: Marcus Prom Project Name: Howard Residence
Lot/Block: Subdivision:
Address:
City: State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.

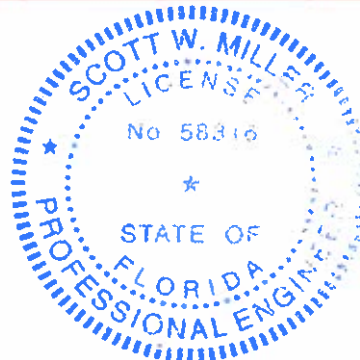
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: FBC2001/ANSI9 Design Program: MiTek 20/20 6.2
Wind Code: ASCE 7-98 Wind Speed: 120 mph Design Method: MWFRS/C-C hybrid Wind ASCE 7-98
Roof Load: 42.0 psf Floor Load: N/A psf

This package includes 23 individual, dated Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

No.	Seal#	Job ID#	Truss Name	Date	No.	Seal#	Job ID#	Truss Name	Date
1	18990596	9463	A01	9/8/05	18	18990613	9463	D03	9/8/05
2	18990597	9463	A01A	9/8/05	19	18990614	9463	D04	9/8/05
3	18990598	9463	A01B	9/8/05	20	18990615	9463	D05	9/8/05
4	18990599	9463	A01C	9/8/05	21	18990616	9463	D06	9/8/05
5	18990600	9463	A02	9/8/05	22	18990617	9463	D07	9/8/05
6	18990601	9463	A03	9/8/05	23	18990618	9463	FT01	9/8/05
7	18990602	9463	A03A	9/8/05					
8	18990603	9463	A04	9/8/05					
9	18990604	9463	A04A	9/8/05					
10	18990605	9463	B01	9/8/05					
11	18990606	9463	B02	9/8/05					
12	18990607	9463	C01	9/8/05					
13	18990608	9463	C02	9/8/05					
14	18990609	9463	C03	9/8/05					
15	18990610	9463	D01	9/8/05					
16	18990611	9463	D01G	9/8/05					
17	18990612	9463	D02	9/8/05					



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

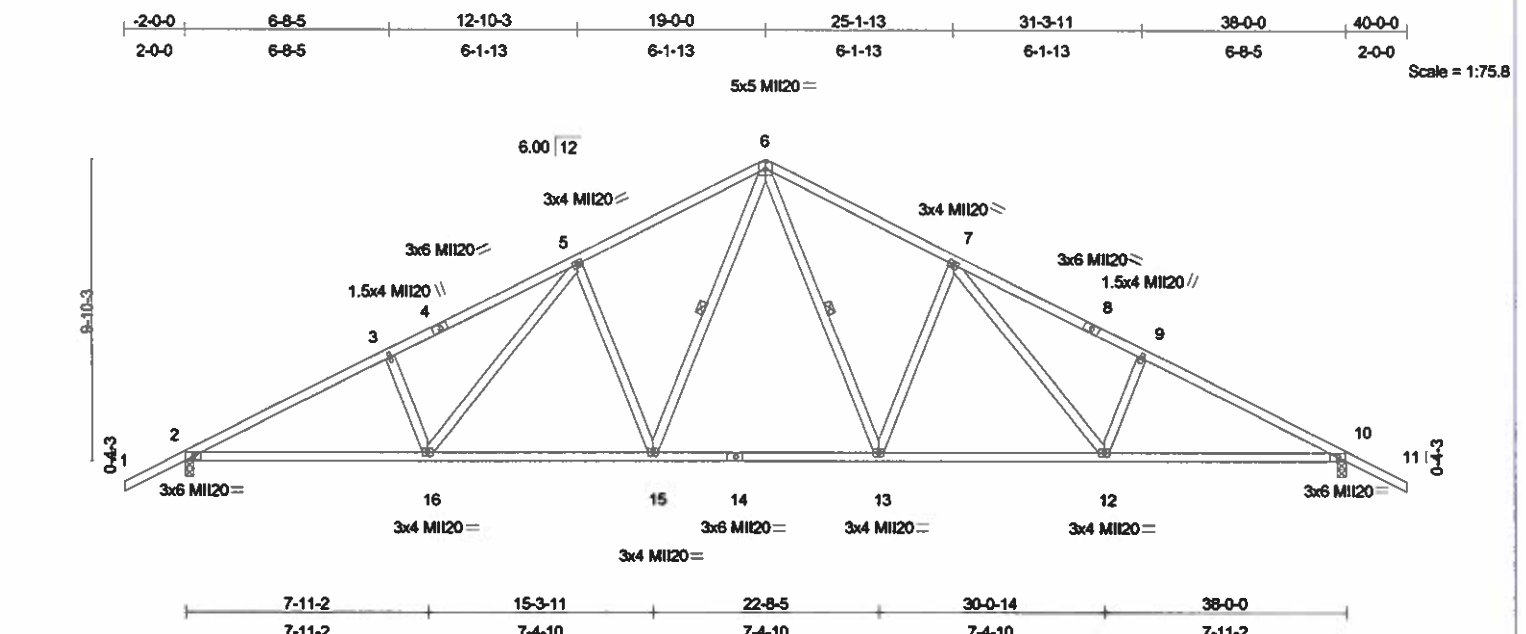
Truss Design Engineer's Name: Miller, Scott

My license renewal date for the state of Florida is February 28, 2007.

NOTE: The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-2003 Chapter 2.

Scott W. Miller, FL Lic #58316
MiTek Industries, Inc.
14515 North Outer Forty Drive
Suite 300
Chesterfield, MO, 63017
FL Cert.#6634

September 8, 2005



LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.92	Vert(LL)	-0.28 13-15	>999	360	MI20	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.85	Vert(TL)	-0.40 13-15	>999	240		
BCLL 10.0	Rep Stress Incr	YES	WB 0.87	Horz(TL)	0.11 10	n/a	n/a		
BCDL 5.0	Code	FBC2001/ANSI95	(Simplified)						
								Weight: 209 lb	

LUMBER TOP CHORD 2 X 4 SYP No.2D BOT CHORD 2 X 4 SYP No.2 WEBS 2 X 4 SYP No.3	BRACING TOP CHORD Sheathed or 3-5-15 oc purlins. BOT CHORD Rigid ceiling directly applied or 4-5-1 oc bracing. WEBS 1 Row at midpt 6-15, 6-13
---	---

REACTIONS (lb/size) 2=1700/0-3-8, 10=1700/0-3-8
 Max Horz 2=278(load case 5)
 Max Uplift 2=-1076(load case 5), 10=-1076(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/24, 2-3=-2812/2428, 3-4=-2685/2508, 4-5=-2685/2508, 5-6=-2051/2102, 6-7=-2051/2102, 7-8=-2685/2508, 8-9=-2685/2508, 9-10=-2812/2428, 10-11=0/24
 BOT CHORD 2-16=-1920/2498, 15-16=-1386/2036, 14-15=-830/1544, 13-14=-830/1544, 12-13=-1386/2036, 10-12=-1920/2498
 WEBS 3-16=-275/532, 5-16=-567/609, 5-15=-570/799, 6-15=-753/808, 6-13=-753/808, 7-13=-570/799, 7-12=-567/609, 9-12=-275/532

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially, MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1076 lb uplift at joint 2 and 1076 lb uplift at joint 10.

LOAD CASE(S) Standard

Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D Onofrio Drive, Madison, WI 53719.

14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017



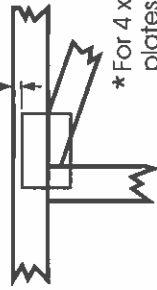
Symbols

PLATE LOCATION AND ORIENTATION

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



0 - 1/16"



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



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

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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING



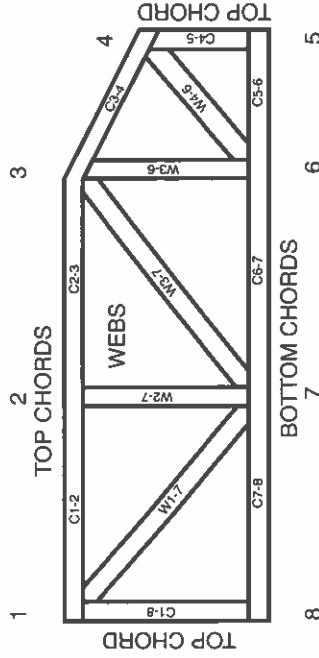
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths



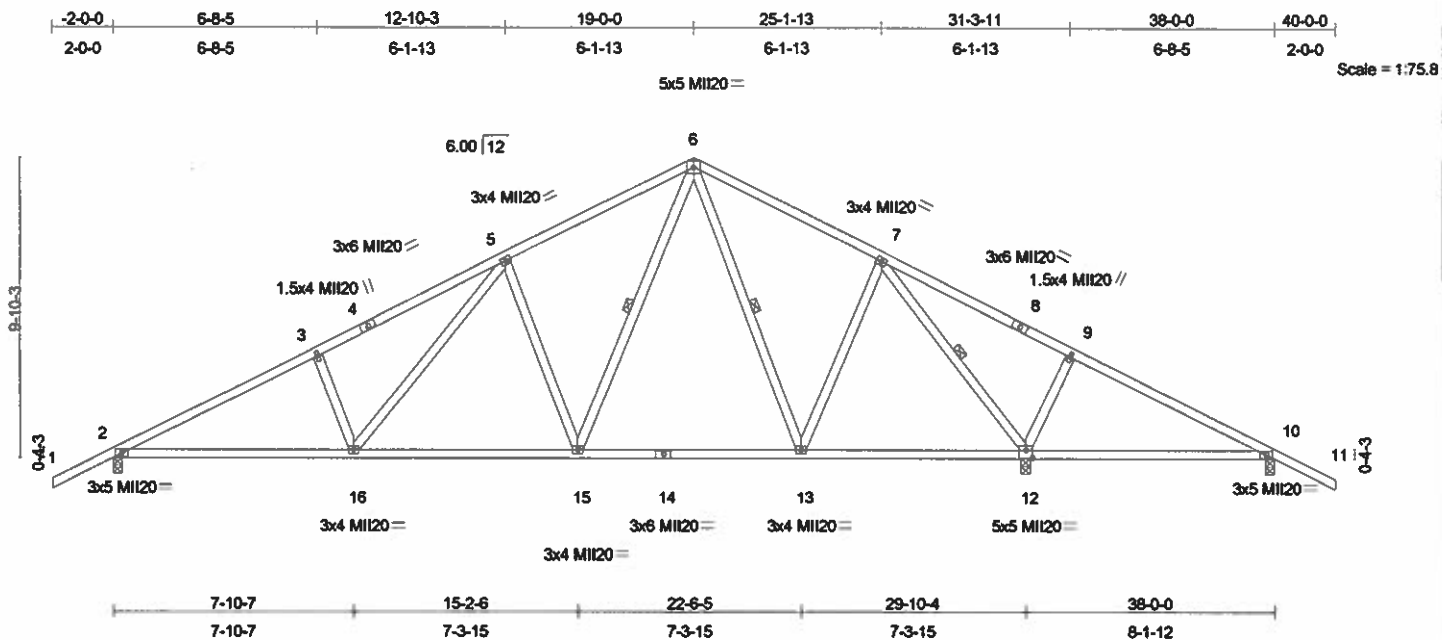


Plate Offsets (X,Y): [12:0-2-8,0-3-0]									
LOADING (psf)		SPACING 2-0-0		CSI		DEFL in (loc) I/defl L/d		PLATES GRIP	
TCLL	20.0	Plates Increase	1.25	TC	0.89	Vert(LL)	-0.17 15-16 >999	360	MII20 249/190
TCDL	7.0	Lumber Increase	1.25	BC	0.70	Vert(TL)	-0.25 15-16 >999	240	
BCLL	10.0	Rep Stress Incr	YES	WB	0.78	Horz(TL)	0.05 12 n/a	n/a	
BCDL	5.0	Code FBC2001/ANSI95		(Simplified)					Weight: 209 lb

LUMBER		BRACING	
TOP CHORD	2 X 4 SYP No.2	TOP CHORD	Sheathed or 4-0-12 oc purlins.
BOT CHORD	2 X 4 SYP No.2	BOT CHORD	Rigid ceiling directly applied or 5-5-15 oc bracing.
WEBS	2 X 4 SYP No.3	WEBS	1 Row at midpt 6-15, 6-13, 7-12

REACTIONS (lb/size) 2=1311/0-3-8, 12=1832/0-3-8, 10=256/0-3-8
 Max Horz 2=278(load case 5)
 Max Uplift 2=870(load case 5), 12=1019(load case 6), 10=273(load case 6)
 Max Grav 2=1311(load case 1), 12=1832(load case 1), 10=328(load case 8)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/24, 2-3=-1968/1702, 3-4=-1848/1791, 4-5=-1846/1791, 5-6=-1205/1379, 6-7=-785/1011, 7-8=-215/479, 8-9=-215/479, 9-10=-288/359, 10-11=0/24
 BOT CHORD 2-16=-1275/1748, 15-16=-731/1273, 14-15=-240/776, 13-14=-240/776, 12-13=-119/531, 10-12=-319/472
 WEBS 3-16=-284/543, 5-16=-588/622, 5-15=-573/806, 6-15=-768/816, 8-13=-244/192, 7-13=-147/484, 7-12=-1631/1362, 9-12=-312/566

NOTES
 1) Unbalanced roof live loads have been considered for this design.
 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 870 lb uplift at joint 2, 1019 lb uplift at joint 12 and 273 lb uplift at joint 10.

LOAD CASE(S) Standard

Scott W. Miller
 Scott W. Miller, FL Lic #58316
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 14515 North Outer Forty Drive
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September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

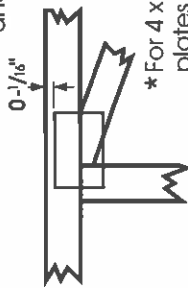
14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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



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

PLATE SIZE

4 x 4

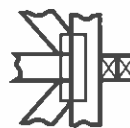
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING



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

BEARING

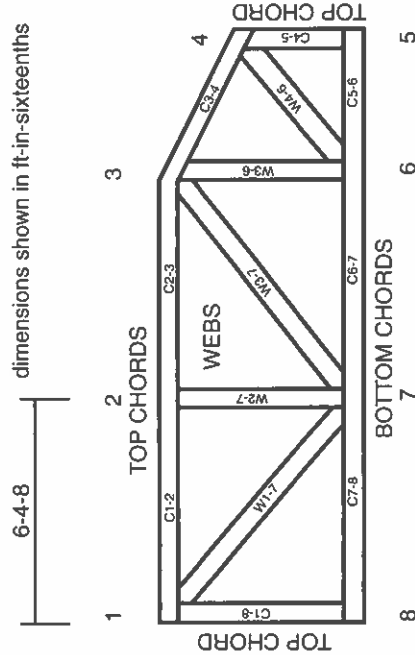


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

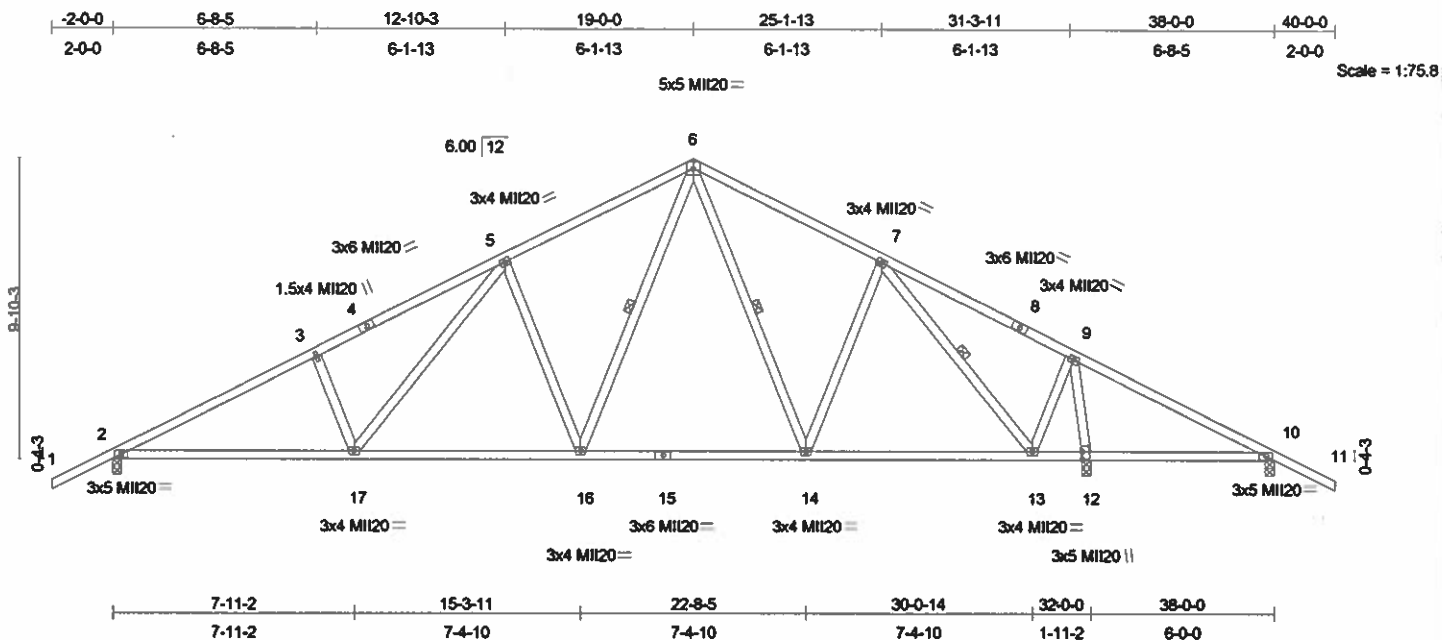
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.



LOADING (psf)		SPACING		CSI		DEFL		PLATES		GRIP	
TCLL	20.0	Plates Increase	1.25	TC	0.92	Vert(LL)	-0.19 16-17 >999 360	M120		249/190	
TCDL	7.0	Lumber Increase	1.25	BC	0.74	Vert(TL)	-0.27 16-17 >999 240				
BCLL	10.0	Rep Stress Incr	YES	WB	0.68	Horz(TL)	0.06 12 n/a n/a				
BCDL	5.0	Code FBC2001/ANSI95		(Simplified)							
										Weight: 214 lb	

LUMBER		BRACING	
TOP CHORD	2 X 4 SYP No.2	TOP CHORD	Sheathed or 3-10-3 oc purlins.
BOT CHORD	2 X 4 SYP No.2	BOT CHORD	Rigid ceiling directly applied or 5-1-15 oc bracing.
WEBS	2 X 4 SYP No.3	WEBS	1 Row at midpt 6-16, 6-14, 7-13

REACTIONS (lb/size) 2=1405/0-3-8, 12=1880/0-3-8, 10=134/0-3-8
 Max Horz 2=278(load case 5)
 Max Uplift 2=923(load case 5), 12=1028(load case 6), 10=211(load case 6)
 Max Grav 2=1405(load case 1), 12=1880(load case 1), 10=214(load case 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-2170/1884, 3-4=-2044/1965, 4-5=-2044/1965, 5-6=-1401/1551, 6-7=-1084/1283, 7-8=-231/419, 8-9=-231/419, 9-10=-468/537, 10-11=0/24
BOT CHORD 2-17=-1437/1927, 16-17=-895/1456, 15-16=-346/961, 14-15=-346/961, 13-14=-420/894, 12-13=-229/409, 10-12=-477/653
WEBS 3-17=-282/539, 5-17=-576/617, 5-16=-573/803, 6-16=-757/812, 6-14=-173/162, 7-14=-5/312, 7-13=-1156/921, 9-13=-755/1132, 9-12=-1764/1617

NOTES
 1) Unbalanced roof live loads have been considered for this design.
 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 923 lb uplift at joint 2, 1028 lb uplift at joint 12 and 211 lb uplift at joint 10.

LOAD CASE(S) Standard

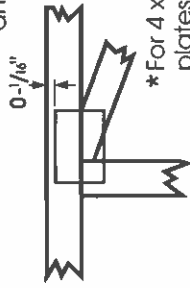
Scott W. Miller
 Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

September 8, 2005

Symbols

PLATE LOCATION AND ORIENTATION

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



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

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



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING



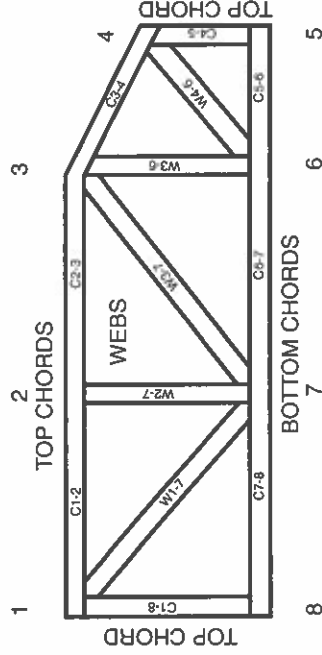
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

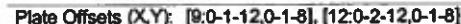
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP11.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP11.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.





LUMBER		BRACING	
TOP CHORD	2 X 4 SYP No.2	TOP CHORD	Sheathed or 3-11-0 oc purlins.
BOT CHORD	2 X 4 SYP No.2	BOT CHORD	Rigid ceiling directly applied or 5-3-3 oc bracing.
WEBS	2 X 4 SYP No.3	WEBS	1 Row at midpt 6-16, 6-14, 7-13

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-2102/1822, 3-4=-1976/1903, 4-5=-1976/1903, 5-6=-1333/1488, 6-7=-983/1189, 7-8=-23/181, 8-9=-23/181, 9-10=-268/316, 10-11=0/24
BOT CHORD 2-17=-1382/1868, 16-17=-839/1395, 15-16=-310/899, 14-15=-310/899, 13-14=-309/775, 12-13=-493/676, 10-12=-281/475
WEBS 3-17=-282/540, 5-17=-577/617, 5-16=-573/803, 6-16=-757/812, 6-14=-133/100, 7-14=-53/370, 7-13=-1340/1092, 9-13=-904/1274, 9-12=-1671/1551

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-98; 120mph (3-second gust); $h=30$ ft; $TCDL=4.2$ psf; $BCDL=3.0$ psf; Category II; Exp B; partially, MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
- 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 905 lb uplift at joint 2, 988 lb uplift at joint 12 and 269 lb uplift at joint 10.


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September 8, 2005

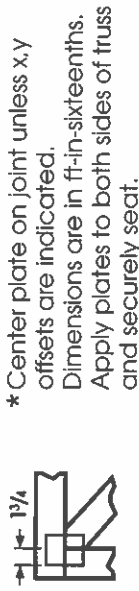
Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI-1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017

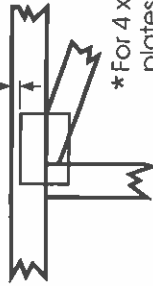


Symbols

PLATE LOCATION AND ORIENTATION



0 - 1/16"



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

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

PLATE SIZE

4 X 4

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

LATERAL BRACING



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

BEARING



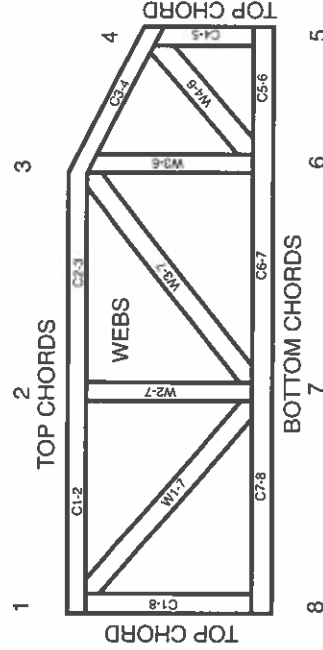
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

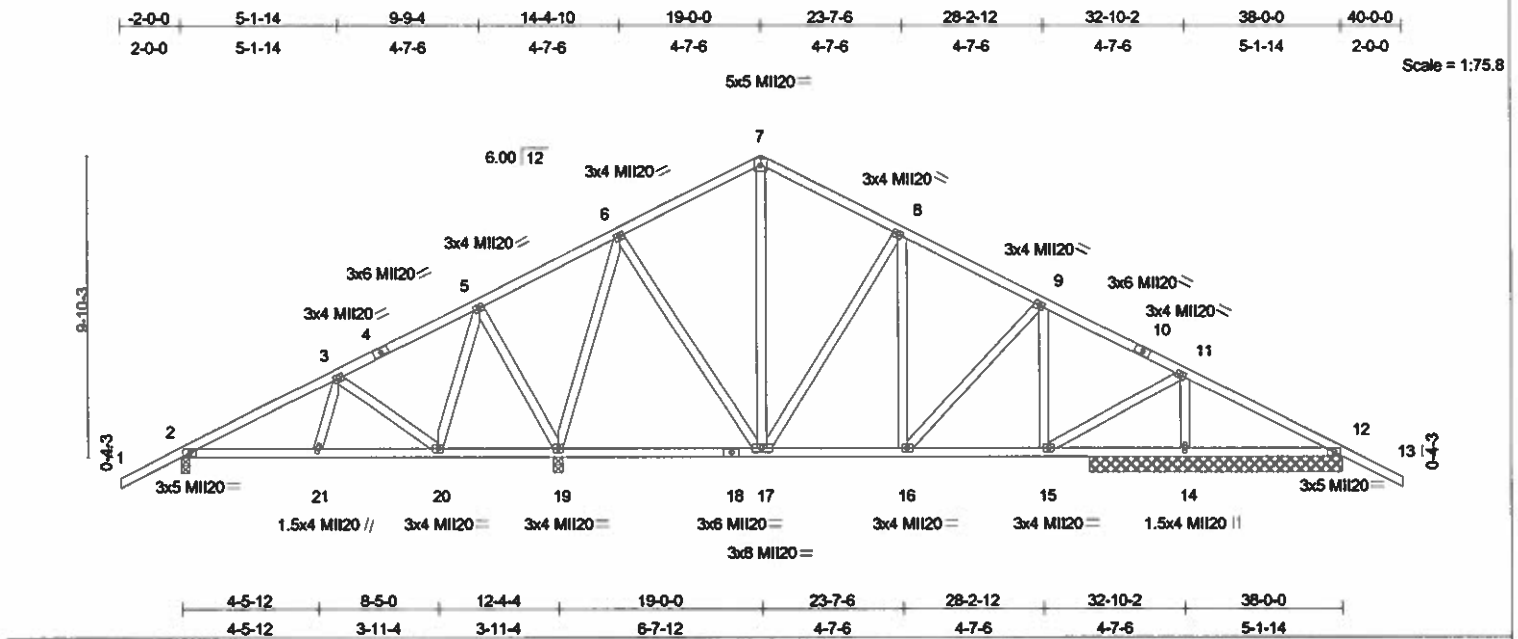
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See 8CS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.



LOADING (psf)	SPACING	CSI	DEFL	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.13	Vert(LL)	-0.02 17-19	>999	360	M120	249/190
TCDL 7.0	Plates Increase 1.25	BC 0.12	Vert(TL)	-0.03 17-19	>999	240		
BCLL 10.0	Lumber Increase 1.25	WB 0.08	Horz(TL)	0.00 14	n/a	n/a		
BCDL 5.0	Rep Stress Incr NO	(Simplified)						
	Code FBC2001/ANSI95							

Weight: 714 lb

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=498/0-3-8, 19=1814/0-3-8, 14=1059/8-3-8, 12=278/8-3-8
 Max Horz 2=-278(load case 5)
 Max Uplift 2=-352(load case 4), 19=-1245(load case 4), 14=-650(load case 5), 12=-278(load case 5)
 Max Grav 2=513(load case 6), 19=1814(load case 1), 14=1059(load case 1), 12=283(load case 7)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-428/231, 3-4=-78/178, 4-5=-78/178, 5-6=-112/313, 6-7=-317/487, 7-8=-317/458, 8-9=-543/529, 9-10=-573/483, 10-11=-573/483, 11-12=-29/106, 12-13=0/23
BOT CHORD 2-21=-227/379, 20-21=-234/345, 19-20=-74/350, 18-19=-32/351, 17-18=-32/351, 16-17=-31/485, 15-16=-90/513, 14-15=-95/177, 12-14=-95/177
WEBS 3-21=0/129, 3-20=-354/380, 5-20=-209/353, 5-19=-485/488, 6-19=-1019/609, 6-17=-165/535, 7-17=-187/101, 8-17=-384/427, 8-16=-103/177, 9-16=-53/179, 9-15=-206/179, 11-15=-307/699, 11-14=-913/679

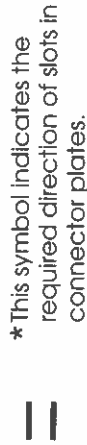
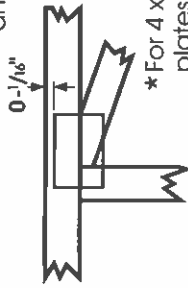
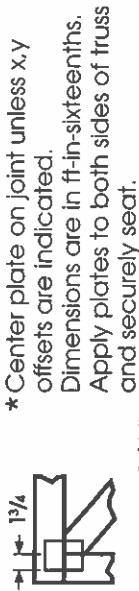
- NOTES**
- 3-ply truss to be connected together with 10d Common(.148"x3") Nails as follows:
 Top chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
 Webs connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
 - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
 - Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 352 lb uplift at joint 2, 1245 lb uplift at joint 19, 650 lb uplift at joint 14 and 278 lb uplift at joint 12.
 - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 244 lb down and 259 lb up at 12-4-8 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
 1) Regular: Lumber Increase=1.25, Plate Increase=1.25
 Uniform Loads (plf)
 Vert: 1-7=-54, 7-13=-54, 2-12=-30

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 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



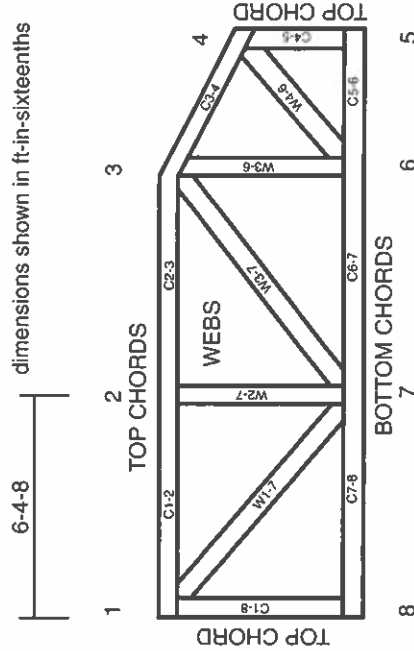
BEARING



Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

ob	Truss	Truss Type	Qty	Pty	Howard Residence	18990600
463	A02	ROOF TRUSS	1	3	Job Reference (optional)	

Builders Truss Mfg., Woodbine, GA 31569

6.200 s Jul 13 2005 MiTek Industries, Inc. Wed Sep 07 09:03:07 2005 Page 2

LOAD CASE(S) Standard
Concentrated Loads (lb)
Vert: 19=-244(F)

⚠ WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

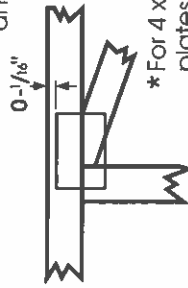
14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

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

PLATE SIZE

4 x 4

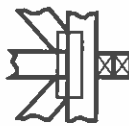
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING



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

BEARING



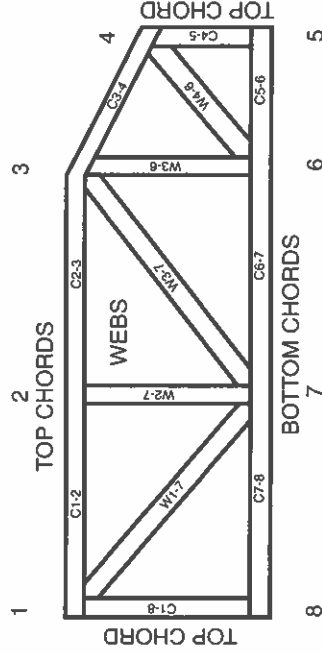
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing shown on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.

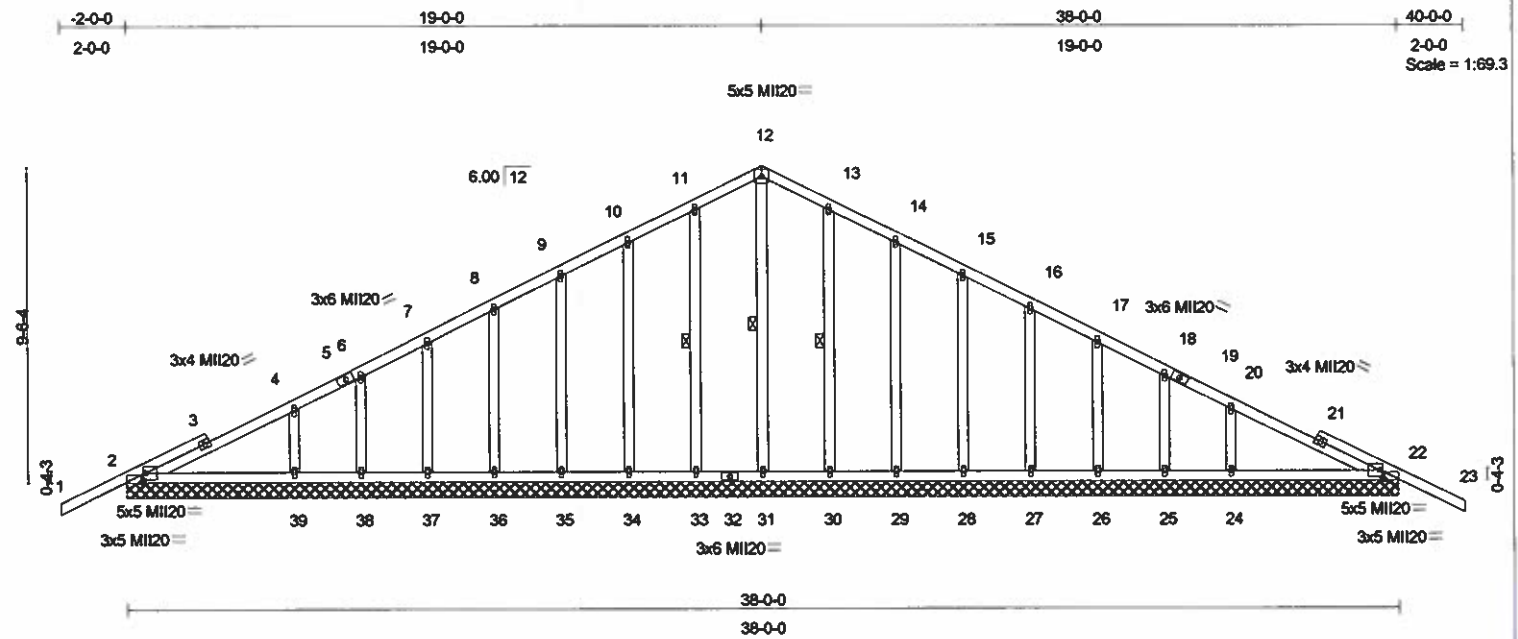


Plate Offsets (X,Y): [2-0-0-12,0-2-8], [2-0-1-8,Edge], [22-0-0-12,0-2-8], [22-0-1-8,Edge]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.44	Vert(LL)	-0.00	23	n/r	120	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.14	Vert(TL)	-0.00	23	n/r	80	
BCLL 10.0	Rep Stress Incr	NO	WB 0.16	Horz(TL)	0.02	22	n/a	n/a	
BCDL 5.0	Code FBC2001/ANSI95		(Matrix)						
								Weight: 250 lb	

LUMBER	BRACING
TOP CHORD 2 X 4 SYP No.2	TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD 2 X 4 SYP No.2	BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
OTHERS 2 X 4 SYP No.3	WEBS 1 Row at midpt 12-31, 11-33, 13-30

REACTIONS (lb/size) 2=298/38-0-0, 31=192/38-0-0, 33=170/38-0-0, 34=187/38-0-0, 35=189/38-0-0, 36=163/38-0-0, 37=190/38-0-0, 38=77/38-0-0, 39=373/38-0-0, 30=170/38-0-0, 29=187/38-0-0, 28=189/38-0-0, 27=163/38-0-0, 26=190/38-0-0, 25=77/38-0-0, 24=373/38-0-0, 22=298/38-0-0

Max Horz 2=-270(load case 6)

Max Uplift 2=-173(load case 5), 33=-131(load case 5), 34=-156(load case 5), 35=-148(load case 5), 36=-147(load case 5), 37=-159(load case 5), 38=-106(load case 5), 39=-256(load case 5), 30=-123(load case 6), 29=-159(load case 6), 28=-148(load case 6), 27=-147(load case 6), 26=-180(load case 6), 25=-101(load case 6), 24=-268(load case 6), 22=-217(load case 6)

Max Grav 2=302(load case 7), 31=241(load case 6), 33=174(load case 7), 34=167(load case 1), 35=189(load case 1), 36=163(load case 1), 37=190(load case 1), 38=77(load case 7), 39=373(load case 7), 30=174(load case 8), 29=187(load case 1), 28=189(load case 1), 27=163(load case 1), 26=190(load case 8), 25=77(load case 1), 24=373(load case 8), 22=302(load case 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/47, 2-3=-314/30, 3-4=-302/92, 4-5=-172/116, 5-6=-165/123, 6-7=-113/156, 7-8=-29/213, 8-9=-1/265, 9-10=-1/342, 10-11=-1/444, 11-12=-3/523, 12-13=-3/523, 13-14=-1/444, 14-15=-1/342, 15-16=-1/247, 16-17=-2/152, 17-18=-12/59, 18-19=-49/36, 19-20=-56/11, 20-21=-190/92, 21-22=-202/30, 22-23=0/47

BOT CHORD 2-39=-28/364, 38-39=-28/364, 37-38=-28/364, 36-37=-28/364, 35-36=-28/364, 34-35=-28/364, 33-34=-28/364, 32-33=-28/364, 31-32=-28/364, 30-31=-28/364, 29-30=-28/364, 28-29=-28/364, 27-28=-28/364, 26-27=-28/364, 25-26=-28/364, 24-25=-28/364, 22-24=-28/364

WEBS 12-31=-289/0, 11-33=-114/160, 10-34=-107/210, 9-35=-109/195, 8-36=-106/195, 7-37=-120/211, 6-38=-57/136, 4-39=-232/350, 13-30=-114/160, 14-29=-107/210, 15-28=-109/195, 16-27=-106/195, 17-26=-120/211, 18-25=-57/136, 20-24=-232/350

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see MiTek "Standard Gable End Detail"
 - 4) All plates are 1.5x4 MII20 unless otherwise indicated.
 - 5) Gable requires continuous bottom chord bearing.

Scott W. Miller, FL Lic #58316
MiTek Industries, Inc.
14515 North Outer Forty Drive
Suite 300
Chesterfield, MO, 63017
FL Cert.#6634

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

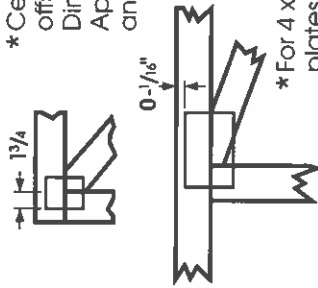
14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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



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

PLATE SIZE

4 X 4

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

LATERAL BRACING



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

BEARING



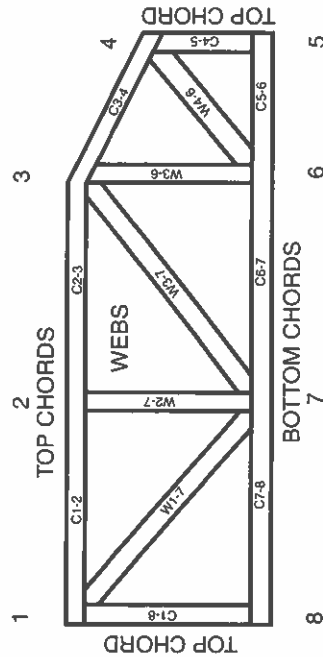
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Job	Truss	Truss Type	Qty	Pty	Howard Residence	18990601
463	A03	DROP TC GABLE	1	1	Job Reference (optional)	

Builders Truss Mfg., Woodbine, GA 31569

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NOTES

6) Gable studs spaced at 2'-0" oc.

7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 173 lb uplift at joint 2, 131 lb uplift at joint 33, 156 lb uplift at joint 34, 148 lb uplift at joint 35, 147 lb uplift at joint 36, 159 lb uplift at joint 37, 106 lb uplift at joint 38, 256 lb uplift at joint 39, 123 lb uplift at joint 30, 159 lb uplift at joint 29, 148 lb uplift at joint 28, 147 lb uplift at joint 27, 160 lb uplift at joint 26, 101 lb uplift at joint 25, 268 lb uplift at joint 24 and 217 lb uplift at joint 22.

LOAD CASE(S) Standard

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

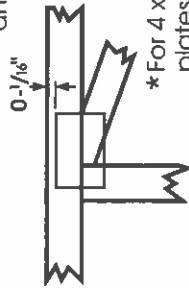
14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

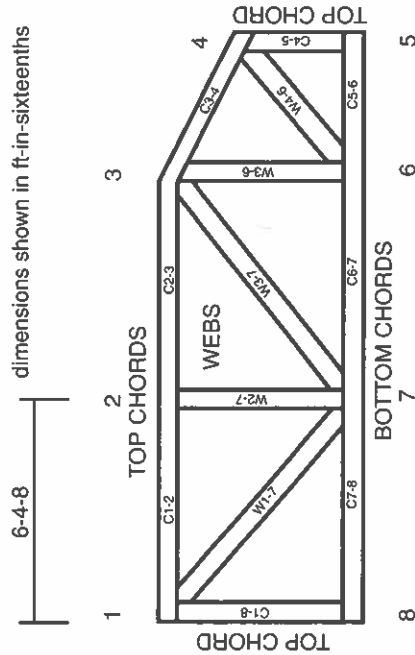


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Builders Truss Mfg., Woodbine, GA 31569

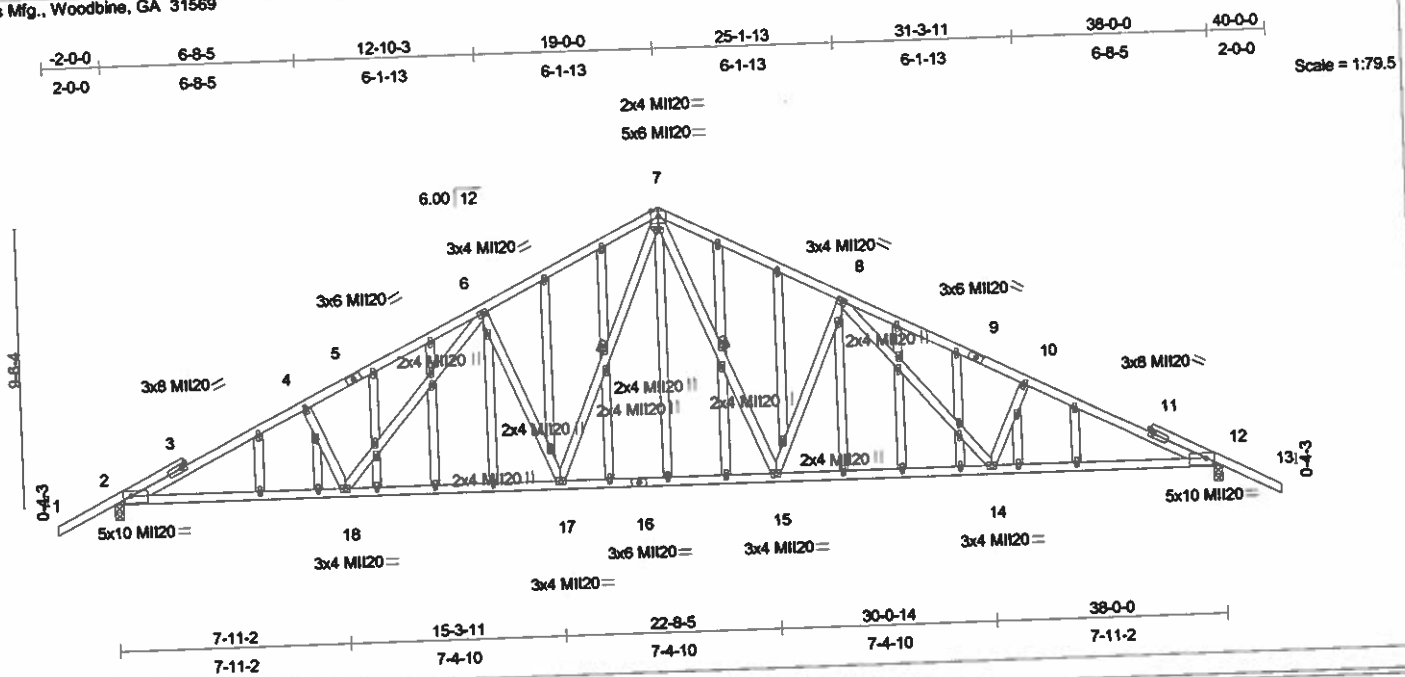


Plate Offsets (X,Y): [2.0-3.4,0-2.12], [7.0-2.0,0-0.0], [12.0-3.4,0-2.12]

LOADING (psf)	SPACING	2.0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 1.00	Vert(LL)	0.38 15-17	>999	360	MI120	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.90	Vert(TL)	-0.43 15-17	>999	240		
BCLL 10.0	Rep Stress Incr	NO	WB 0.80	Horz(TL)	0.13 12	n/a	n/a		
BCDL 5.0	Code FBC2001/ANSI95		(Matrix)					Weight: 321 lb	

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3
 OTHERS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed.
 BOT CHORD Rigid ceiling directly applied or 3-9-11 oc bracing.
 WEBS 1 Row at midpt 7-17, 7-15

REACTIONS (lb/size) 2=1700/0-3-8, 12=1700/0-3-8
 Max Horz 2=-270(load case 6)
 Max Uplift 2=-1082(load case 5), 12=-1082(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/47, 2-3=-3210/2650, 3-4=-3165/2674, 4-5=-3092/2715, 5-6=-3007/2736, 6-7=-2236/2173, 7-8=-2236/2173, 8-9=-3007/2736, 9-10=-3092/2715, 10-11=-3165/2674, 11-12=-3210/2650, 12-13=0/47
 BOT CHORD 2-18=-2184/2857, 17-18=-1495/2168, 16-17=-897/1620, 15-16=-897/1620, 14-15=-1495/2168, 12-14=-2184/2857
 WEBS 4-18=-427/634, 6-18=-720/834, 6-17=-629/829, 7-17=-779/862, 7-15=-779/862, 8-15=-629/829, 8-14=-720/834, 10-14=-427/634

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCCL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), consult project engineer / architect.
 - 4) All plates are 1.5x4 MI120 unless otherwise indicated.
 - 5) Gable studs spaced at 2-0-0 oc.
 - 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1082 lb uplift at joint 2 and 1082 lb uplift at joint 12.

LOAD CASE(S) Standard

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 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

September 8, 2005

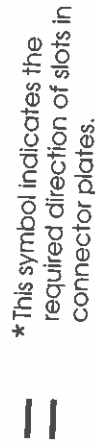
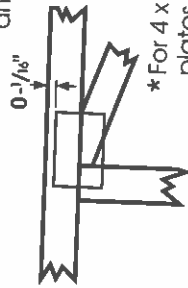
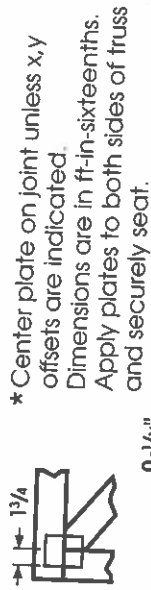
WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017

MiTek

Symbols

PLATE LOCATION AND ORIENTATION

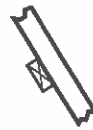


* Plate location details available in Mitek 20/20 software or upon request.

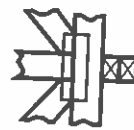
PLATE SIZE

4 x 4
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING



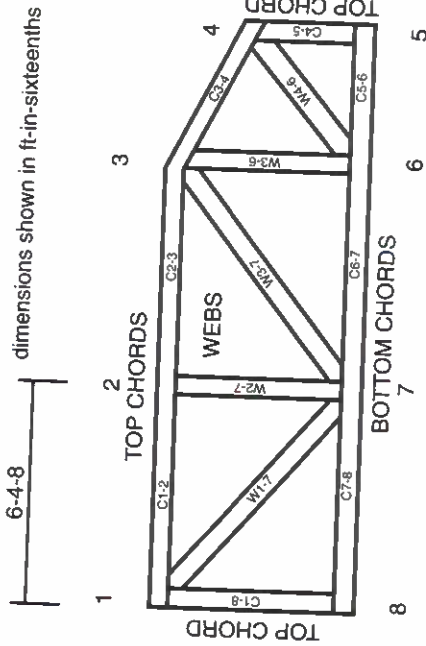
BEARING



Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

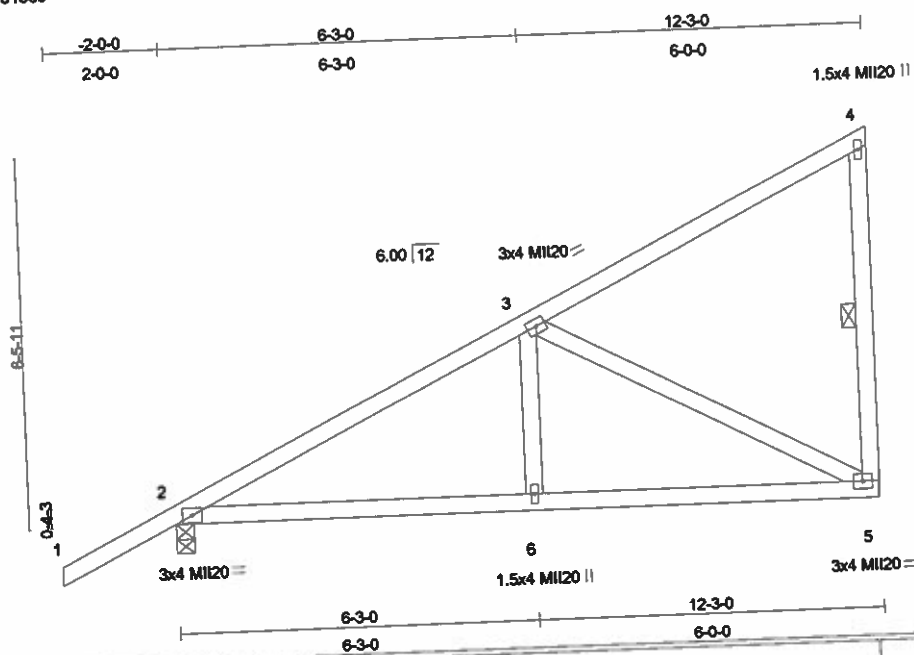
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.



LOADING (psf)	SPACING 2-0-0	CSI	DEFL in (loc)	L/d	PLATES MIL20	GRIP 249/190
TCLL 20.0	Plates Increase 1.25	TC 0.91	Vert(LL) -0.04	360		
TCDL 7.0	Lumber Increase 1.25	BC 0.33	Vert(TL) -0.06	240		
BCLL 10.0	Rep Stress Incr YES	WB 0.42	Horz(TL) 0.01	n/a		
BCDL 5.0	Code FBC2001/ANSI95	(Simplified)				Weight: 65 lb

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
 WEBS 1 Row at midpt 4-5

REACTIONS (lb/size) 5=502/Mechanical, 2=618/0-3-8
 Max Horz 2=366(load case 4)
 Max Uplift 5=379(load case 5), 2=446(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/24, 2-3=-534/418, 3-4=-102/101, 4-5=-158/220
 BOT CHORD 2-6=-391/475, 5-6=-391/475
 WEBS 3-6=0/179, 3-5=-539/676

NOTES
 1) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf, BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 2) Refer to girder(s) for truss to truss connections.
 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 379 lb uplift at joint 5 and 446 lb uplift at joint 2.

LOAD CASE(S) Standard

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 MiTek Industries, Inc.
 14515 North Outer Forty Drive
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 Chesterfield, MO, 63017
 FL Cert #6634
 September 8, 2005

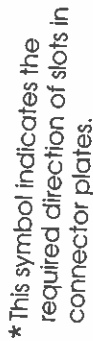
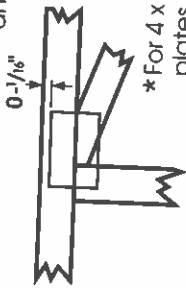
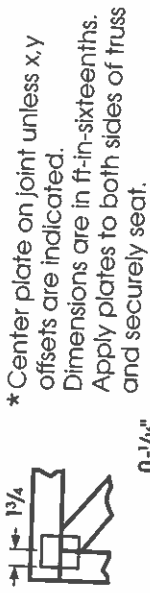
WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
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14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017

MiTek

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

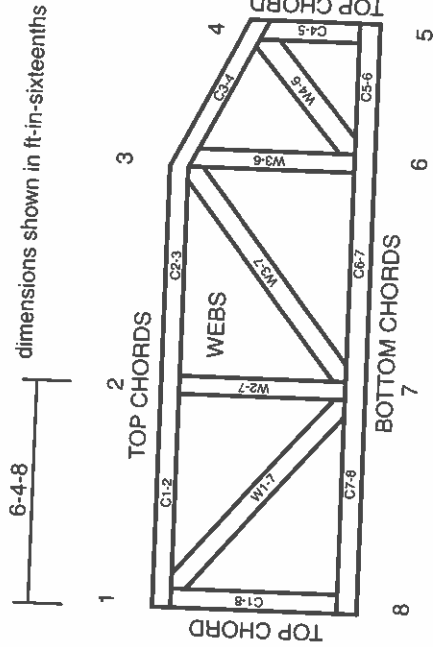


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

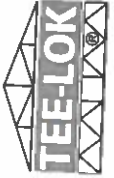


JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing shown on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.

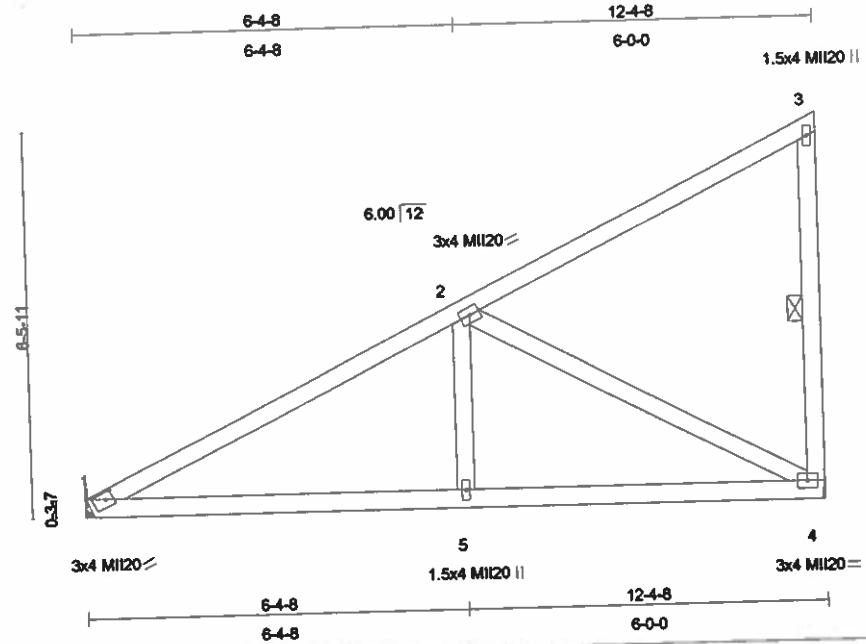


Plate Offsets (X,Y): [1:0-1-8,0-1-8]									
LOADING (psf)	SPACING	2-0-0	CSI		DEFL	in	(loc)	l/def	L/d
TCLL 20.0	Plates Increase	1.25	TC 0.91		Vert(LL)	-0.04	4-5	>999	360
TCDL 7.0	Lumber Increase	1.25	BC 0.34		Vert(TL)	-0.06	4-5	>999	240
BCLL 10.0	Rep Stress Incr	YES	WB 0.43		Horz(TL)	0.01	4	n/a	n/a
BCDL 5.0	Code	FBC2001/ANSI95	(Simplified)						
									PLATES MII20
									GRIP 249/190
									Weight 61 lb

LUMBER	BRACING
TOP CHORD 2 X 4 SYP No.2	TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD 2 X 4 SYP No.2	BOT CHORD Rigid ceiling directly applied or 9-10-8 oc bracing.
WEBS 2 X 4 SYP No.3	WEBS 1 Row at midpt 3-4

REACTIONS (lb/size) 1=510/Mechanical, 4=510/Mechanical
 Max Horz 1=341(load case 4)
 Max Uplift 1=-305(load case 5), 4=-384(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-547/429, 2-3=-102/101, 3-4=-158/220
 BOT CHORD 1-5=-402/489, 4-5=-402/489
 WEBS 2-5=0/182, 2-4=-556/688

NOTES
 1) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 2) Refer to girder(s) for truss to truss connections.
 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 305 lb uplift at joint 1 and 384 lb uplift at joint 4.

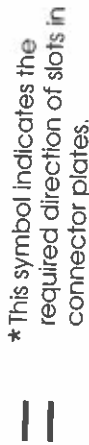
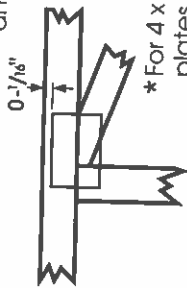
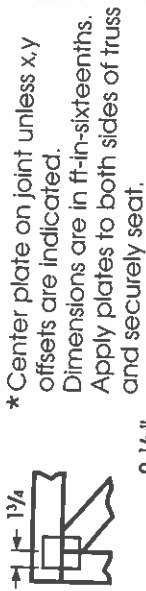
LOAD CASE(S) Standard

Scott W. Miller
 Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert. #6634

September 8, 2005

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

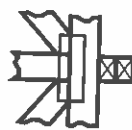
4 X 4

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

LATERAL BRACING



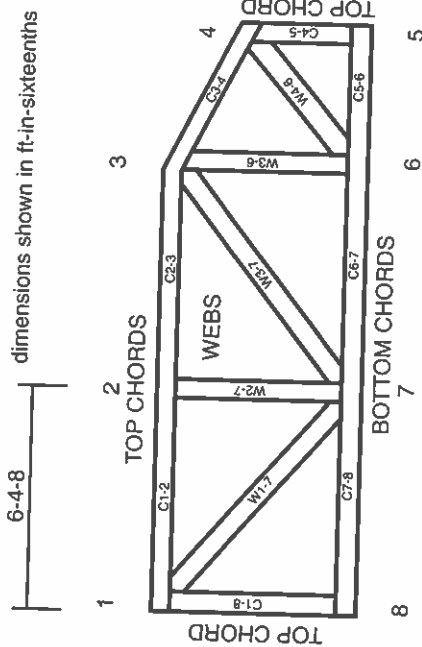
BEARING



Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

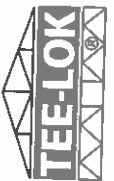


JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

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

CONNECTOR PLATE CODE APPROVALS

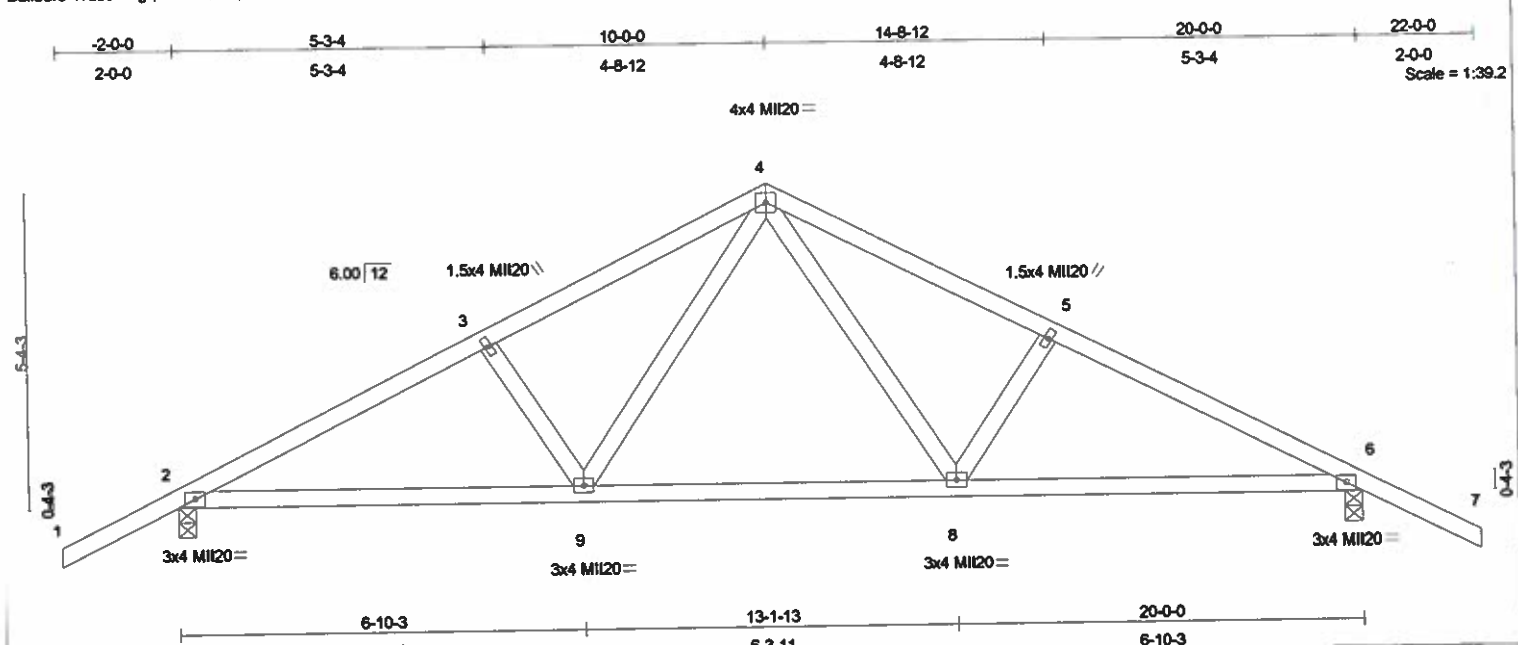
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.



LOADING (psf)	SPACING	CSI	DEFL	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	2-0-0	TC 0.58	Vert(LL)	-0.09	8-9	>999	MII20	249/190
TCDL 7.0	Plates Increase 1.25	BC 0.49	Vert(TL)	-0.13	8-9	>999		
BCLL 10.0	Lumber Increase 1.25	WB 0.24	Horz(TL)	0.03	6	n/a		
BCDL 5.0	Rep Stress Incr YES	(Simplified)						
	Code FBC2001/ANSI95							
							Weight: 95 lb	

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 5-4-7 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6-11-15 oc bracing.

REACTIONS (lb/size) 2=944/0-3-8, 6=944/0-3-8
 Max Horz 2=-171(load case 6)
 Max Uplift 2=632(load case 5), 6=632(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/24, 2-3=-1277/1139, 3-4=-1137/1121, 4-5=-1137/1121, 5-6=-1277/1139, 6-7=0/24
 BOT CHORD 2-9=-804/1132, 8-9=-384/780, 6-8=-804/1132
 WEBS 3-9=-220/419, 4-9=-372/450, 4-8=-372/450, 5-8=-220/419

NOTES
 1) Unbalanced roof live loads have been considered for this design.
 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCCL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 632 lb uplift at joint 2 and 632 lb uplift at joint 6.

LOAD CASE(S) Standard

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 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

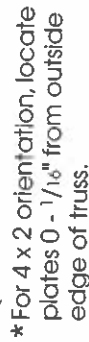
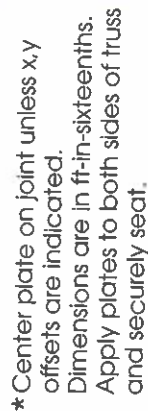
September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017

MiTek

PLATE LOCATION AND ORIENTATION



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

4x4

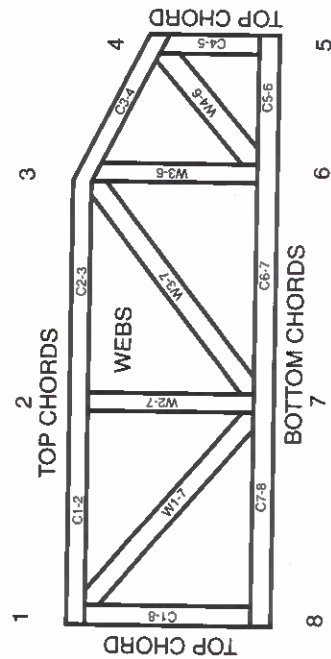
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

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

Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

6-4-8
dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A

!General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Builders Truss Mfg., Woodbine, GA 31569

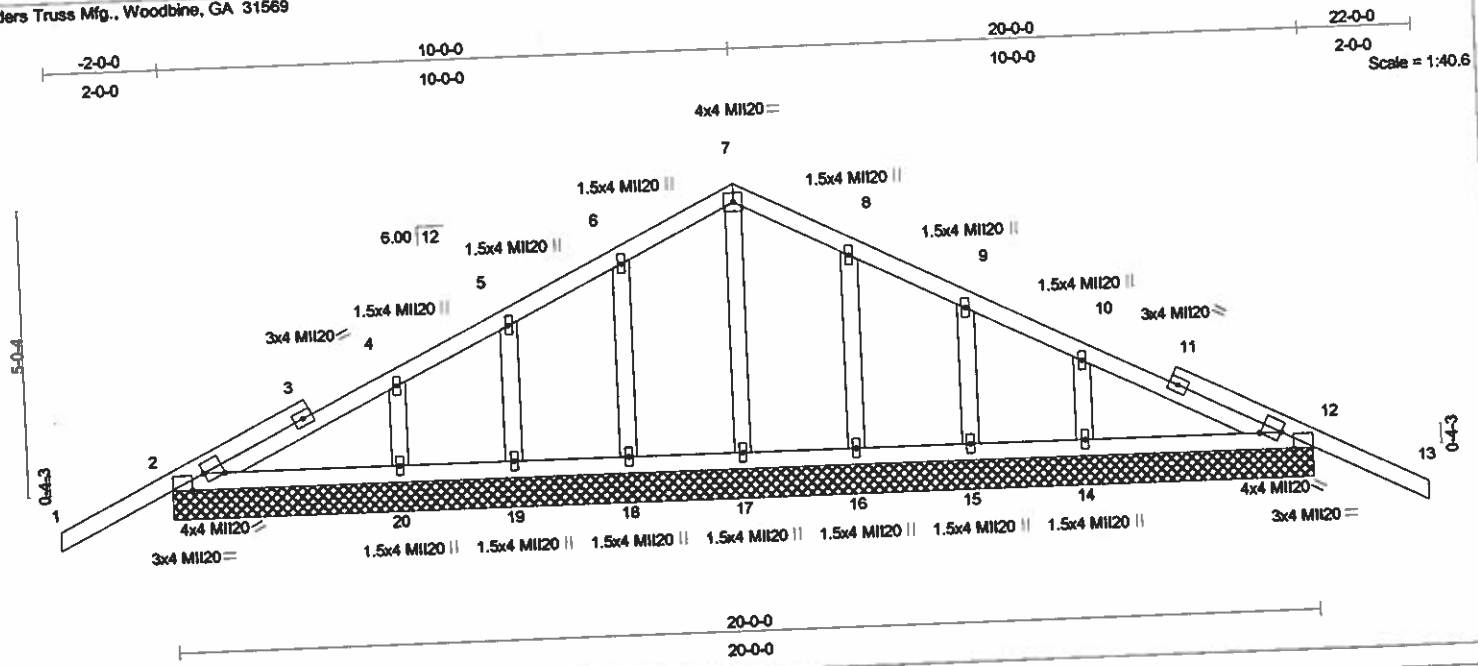


Plate Offsets (X,Y): [2:0-4:0,Edge], [2:0-2:8,Edge], [12:0-4:0,Edge], [12:0-2:8,Edge]

LOADING (psf)	SPACING	2:0-0	CSI	DEFL	in (loc)	V/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.44	Vert(LL)	-0.01	13	n/r	MI120	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.07	Vert(TL)	-0.02	13	n/r		
BCLL 10.0	Rep Stress Incr	NO	WB 0.08	Horz(TL)	0.01	12	n/a		
BCDL 5.0	Code FBC2001/ANSI95		(Matrix)					Weight: 105 lb	

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 OTHERS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 6'-0" oc purlins.
 BOT CHORD Rigid ceiling directly applied or 6'-0" oc bracing.

REACTIONS (lb/size) 2=281/20'-0", 12=281/20'-0", 17=170/20'-0", 18=179/20'-0", 19=131/20'-0", 20=273/20'-0", 16=179/20'-0", 15=131/20'-0", 14=273/20'-0"
 Max Horz 2=-183(load case 6)
 Max Uplift 2=-238(load case 5), 12=-263(load case 6), 18=-148(load case 5), 19=-143(load case 5), 20=-183(load case 5), 16=-145(load case 6), 15=-142(load case 6), 14=-189(load case 6)
 Max Grav 2=281(load case 7), 12=281(load case 8), 17=170(load case 1), 18=183(load case 7), 19=131(load case 1), 20=273(load case 7), 16=183(load case 8), 15=131(load case 1), 14=273(load case 8)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/47, 2-3=-123/46, 3-4=-116/54, 4-5=-23/130, 5-6=-15/189, 6-7=-19/282, 7-8=-19/282, 8-9=-15/189, 9-10=-23/100, 10-11=-51/54, 11-12=-57/9, 12-13=0/47
 BOT CHORD 2-20=-8/202, 19-20=-8/202, 18-19=-8/202, 17-18=-8/202, 16-17=-8/202, 15-16=-8/202, 14-15=-8/202, 12-14=-8/202
 WEBS 7-17=-113/0, 6-18=-118/190, 5-19=-89/183, 4-20=-170/261, 8-16=-118/190, 9-15=-89/183, 10-14=-170/261

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf, BCDL=3.0psf, Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face); see MiTek "Standard Gable End Detail"
 - Gable requires continuous bottom chord bearing.
 - Gable studs spaced at 2'-0" oc.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 238 lb uplift at joint 2, 263 lb uplift at joint 12, 148 lb uplift at joint 18, 143 lb uplift at joint 19, 183 lb uplift at joint 20, 145 lb uplift at joint 16, 142 lb uplift at joint 15 and 189 lb uplift at joint 14.

LOAD CASE(S) Standard

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 Scott W. Miller, FL Lic #58316
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 Chesterfield, MO, 63017
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 September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCSI1 Building Component Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

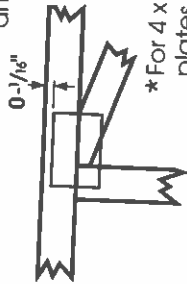
14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017

MiTek

Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

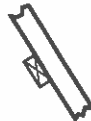
- * Plate location details available in Mitek 20/20 software or upon request.

PLATE SIZE

4 X 4

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

LATERAL BRACING



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

BEARING



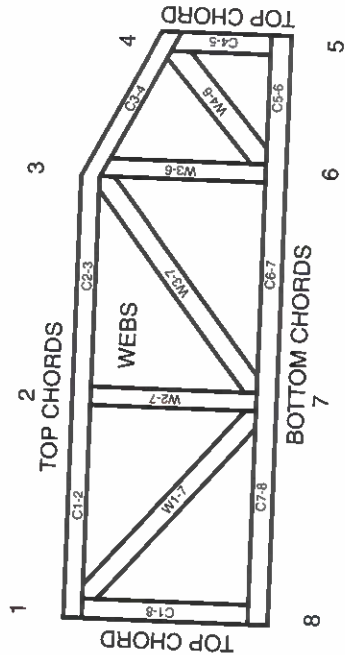
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

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- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths



Builders Truss Mfg., Woodbine, GA 31569

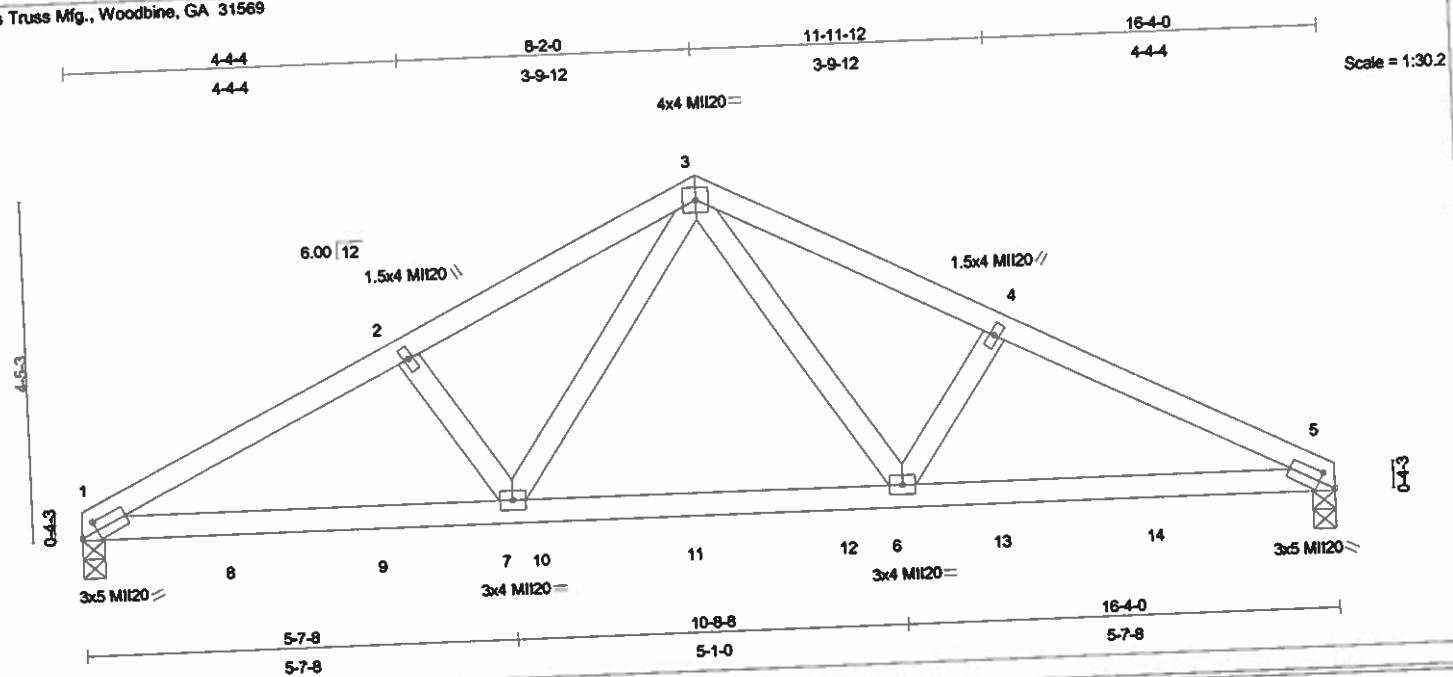


Plate Offsets (X,Y): [1:0-2-10,0-1-8], [5:0-2-10,0-1-8]						PLATES MI120		GRIP 249/190	
LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	I/defl	L/d		
TCLL 20.0	Plates Increase	1.25	TC 0.42	Vert(LL)	0.14	1-7	>999	360	
TCDL 7.0	Lumber Increase	1.25	BC 0.83	Vert(TL)	-0.18	1-7	>999	240	
BCLL 10.0	Rep Stress Incr	NO	WB 0.32	Horz(TL)	0.04	5	n/a	n/a	
BCDL 5.0	Code	FBC2001/ANSI95	(Matrix)						
									Weight: 145 lb

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 6-0-0 oc purlins.
 BOT CHORD Rigid ceiling directly applied or 8-8-4 oc bracing.

REACTIONS (lb/size) 1=2385/0-3-8, 5=2804/0-3-8
 Max Horz 1=-98(load case 5)
 Max Uplift 1=-1503(load case 4), 5=-1774(load case 5)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=-4071/2556, 2-3=-3955/2545, 3-4=-3938/2535, 4-5=-4049/2544
 BOT CHORD 1-8=-2301/3602, 8-9=-2301/3602, 7-9=-2301/3602, 7-10=-1484/2465, 10-11=-1484/2465, 11-12=-1484/2465,
 6-12=-1484/2465, 6-13=-2191/3582, 13-14=-2191/3582, 5-14=-2191/3582
 WEBS 2-7=-225/311, 3-7=-1283/1967, 3-8=-1265/1939, 4-8=-216/305

NOTES

- 1) 2-ply truss to be connected together with 10d Common(.148"x3") Nails as follows:
 Top chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
 Bottom chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
 Webs connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
- 2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- 3) Unbalanced roof live loads have been considered for this design.
- 4) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1503 lb uplift at joint 1 and 1774 lb uplift at joint 5.
- 6) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 480 lb down and 311 lb up at 2-0-4, 480 lb down and 311 lb up at 4-0-4, 480 lb down and 311 lb up at 6-0-4, 480 lb down and 311 lb up at 8-0-4, 480 lb down and 311 lb up at 10-0-4, 480 lb down and 311 lb up at 12-0-4, and 480 lb down and 311 lb up at 14-0-4, and 480 lb down and 311 lb up at 16-2-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
 1) Regular: Lumber Increase=1.25, Plate Increase=1.25
 Uniform Loads (plf)
 Vert: 1-3=-54, 3-5=-54, 1-5=-30

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 Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert. #6634

September 8, 2005

Continued on page 2

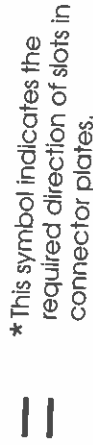
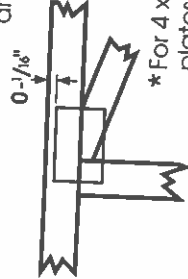
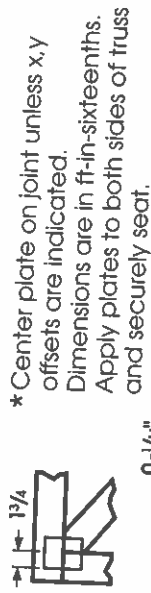
WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017

MiTek

Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

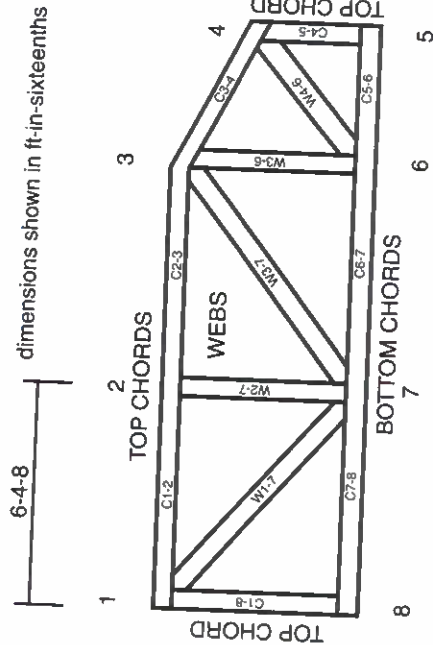


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Job	Truss	Truss Type	Qty	Pty	Howard Residence	18990807
3463	C01	ROOF TRUSS	1	2	Job Reference (optional)	

Builders Truss Mfg., Woodbine, GA 31569

LOAD CASE(S) Standard
 Concentrated Loads (lb)
 Vert: 5=-480(F) 8=-480(F) 9=-480(F) 10=-480(F) 11=-480(F) 12=-480(F) 13=-480(F) 14=-480(F)

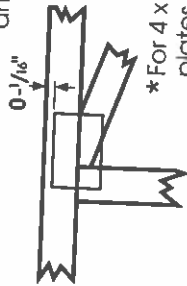
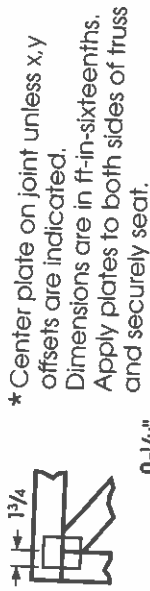
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14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION



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

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

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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

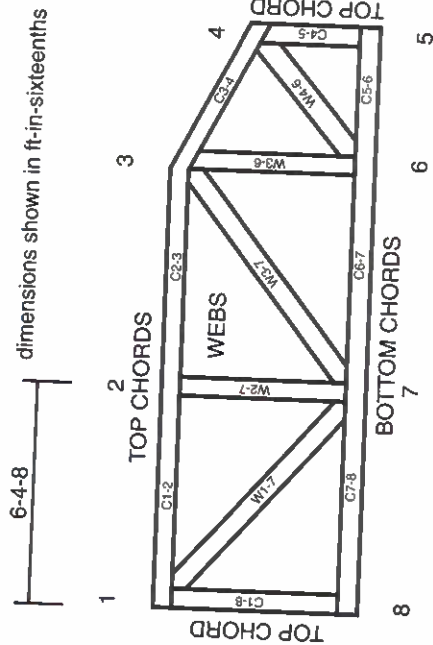


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

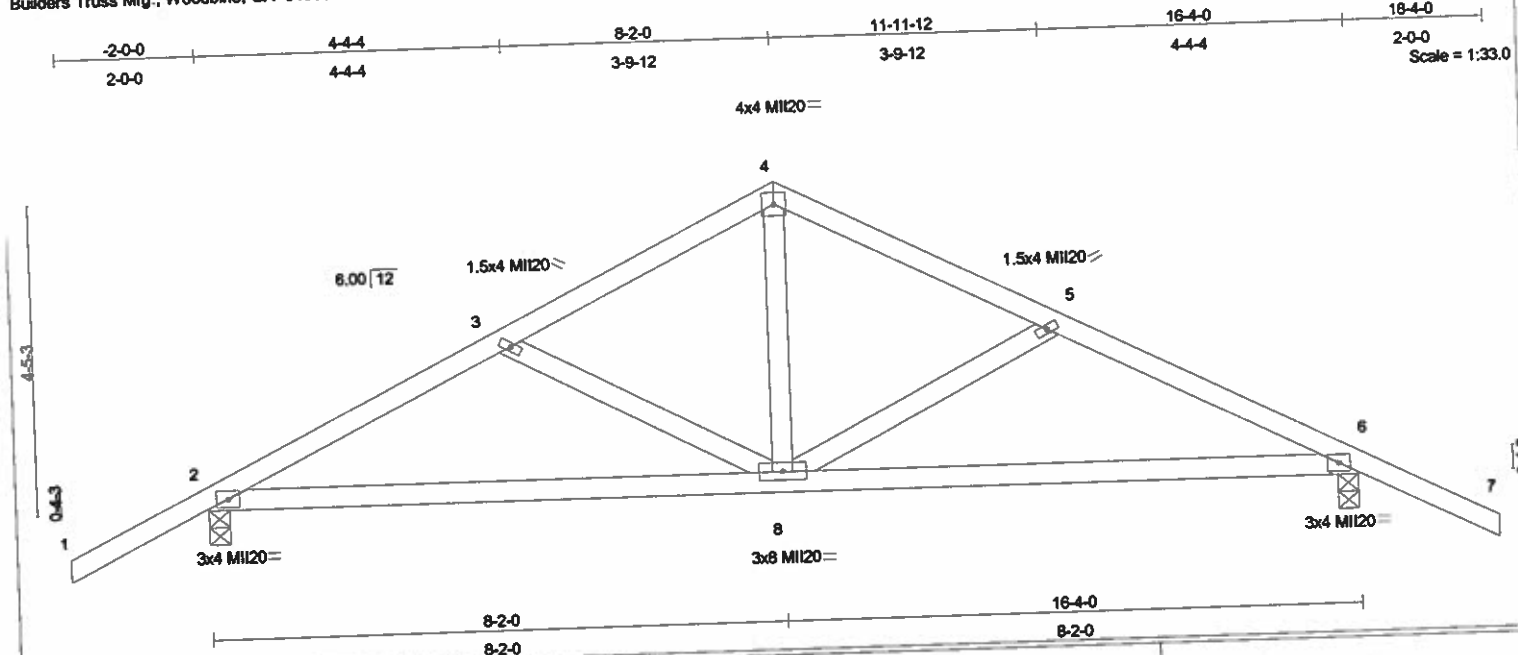
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.





LOADING (psf)	SPACING 2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase 1.25	TC 0.42	Vert(LL) -0.10	2-8	>999	360	MI120	249/190
BCDL 7.0	Lumber Increase 1.25	BC 0.58	Vert(TL) -0.16	2-8	>999	240		
BCLL 10.0	Rep Stress Incr YES	WB 0.14	Horz(TL) 0.02	6	n/a	n/a		
BCDL 5.0	Code FBC2001/ANSI95	(Simplified)					Weight 77 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-7-3 oc bracing.

REACTIONS (lb/size) 2=790/0-3-8, 6=790/0-3-8
Max Horz 2=-149(load case 6)
Max Uplift 2=-542(load case 5), 6=-542(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/24, 2-3=-952/961, 3-4=-733/739, 4-5=-733/739, 5-6=-952/961, 6-7=0/24
BOT CHORD 2-8=-664/842, 6-8=-664/842
WEBS 3-8=-216/419, 4-8=-348/441, 5-8=-216/419

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCCL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
3) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 542 lb uplift at joint 2 and 542 lb uplift at joint 6.

LOAD CASE(S) Standard

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September 8, 2005

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14515 N. Outer Forty,
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Chesterfield, MO 63017

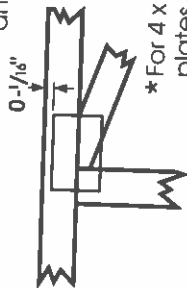
MiTek®

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 x 4

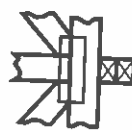
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING



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

BEARING



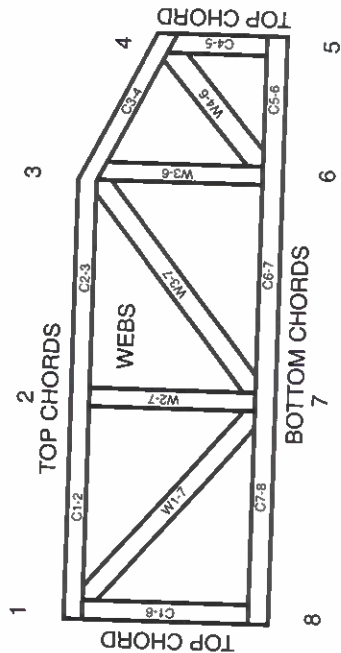
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS1: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8
dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS1.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Job	Truss	Truss Type	Qty	Ply	Howard Residence	18990609
M463	C03	DROP TC GABLE	1	1	Job Reference (optional)	
Builders Truss Mfg., Woodbine, GA 31569			6.200 s Jul 13 2005 MiTek Industries, Inc. Wed Sep 07 09:03:10 2005 Page 1			

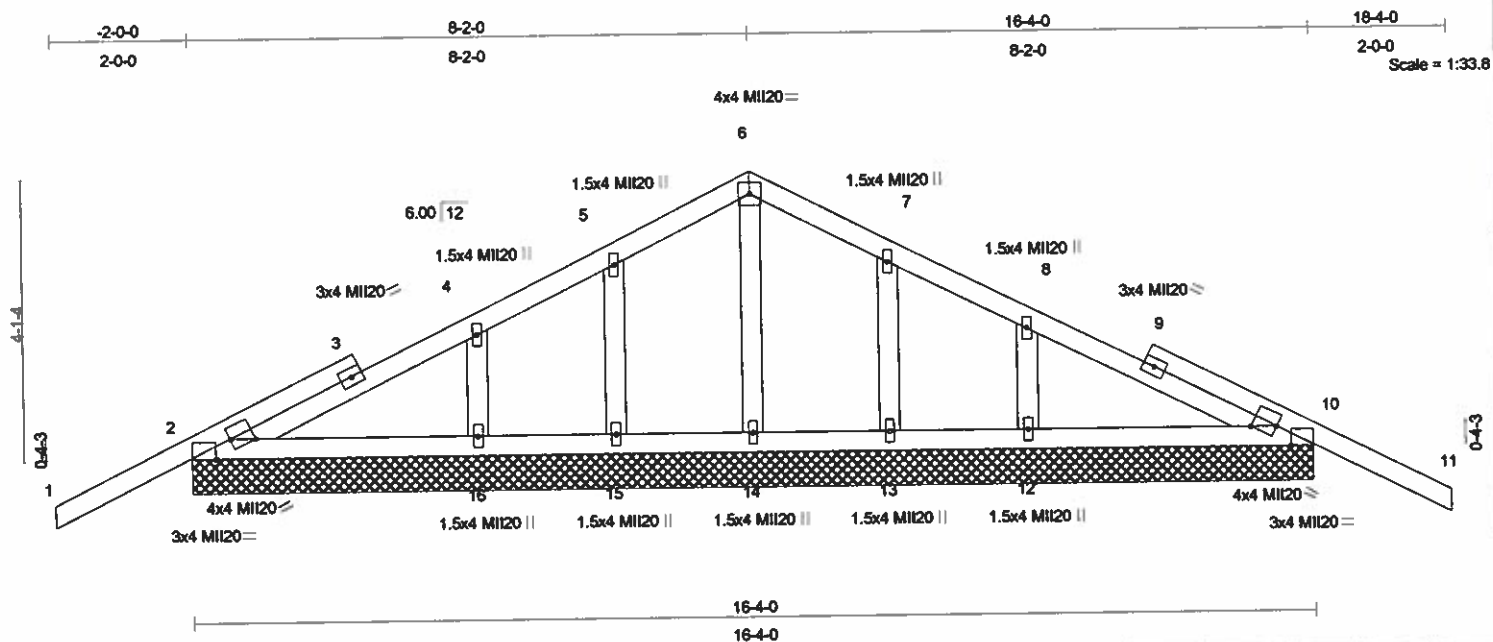


Plate Offsets (X,Y): [2-0-4-0,Edge], [2-0-2-8,Edge], [10-0-4-0,Edge], [10-0-2-8,Edge]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	Vdefl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.44	Vert(LL)	-0.01	11	n/r	120	MI20	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.08	Vert(TL)	-0.02	11	n/r	80		
BCLL 10.0	Rep Stress Incr	NO	WB 0.09	Horz(TL)	0.00	10	n/a	n/a		
BCDL 5.0	Code FBC2001/ANSI95		(Matrix)							Weight: 82 lb

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
OTHERS 2 X 4 SYP No.3

BRACING
TOP CHORD Sheathed or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=280/16-4-0, 10=280/16-4-0, 14=207/16-4-0, 15=122/16-4-0, 16=288/16-4-0, 13=122/16-4-0, 12=288/16-4-0
Max Horz 2=-142(load case 6)
Max Uplift 2=-249(load case 5), 10=-273(load case 6), 14=-12(load case 5), 15=-133(load case 5), 16=-201(load case 5), 13=-128(load case 6), 12=-208(load case 6)
Max Grav 2=282(load case 7), 10=282(load case 8), 14=207(load case 1), 15=127(load case 7), 16=288(load case 1), 13=127(load case 8), 12=288(load case 1)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-95/41, 3-4=-87/69, 4-5=-16/132, 5-6=-8/212, 6-7=-8/212, 7-8=-16/131, 8-9=-36/69, 9-10=-43/20, 10-11=0/47
BOT CHORD 2-16=-19/189, 15-16=-19/189, 14-15=-19/189, 13-14=-19/189, 12-13=-19/189, 10-12=-19/189
WEBS 6-14=-138/25, 5-15=-90/165, 4-16=-178/289, 7-13=-90/165, 8-12=-178/289

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see MiTek "Standard Gable End Detail"
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 249 lb uplift at joint 2, 273 lb uplift at joint 10, 12 lb uplift at joint 14, 133 lb uplift at joint 15, 201 lb uplift at joint 16, 128 lb uplift at joint 13 and 208 lb uplift at joint 12.

LOAD CASE(S) Standard

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September 8, 2005

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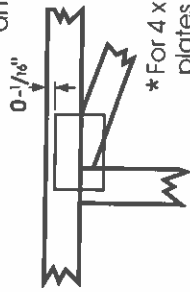


Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

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

LATERAL BRACING



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

BEARING

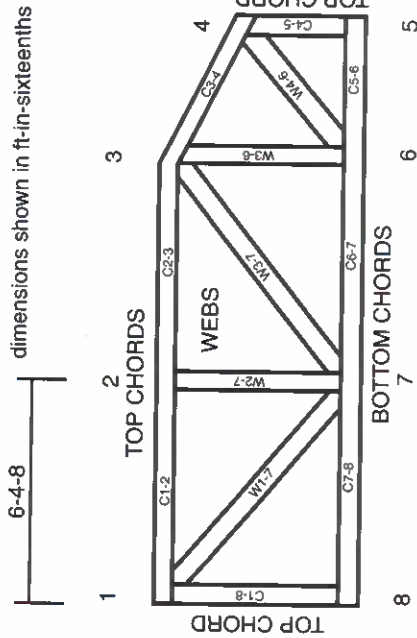


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

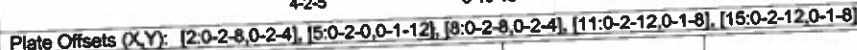
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.



LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3 *Except*
 5-13 2 X 6 SYP No.2

BRACING	
TOP CHORD	Sheathed or 3-1-4 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 4-6-7 oc bracing.

REACTIONS (lb/size) 16=741/0-3-8, 10=741/Mechanical
Max Horz 16=-132(load case 6)
Max Uplift 16=-481(load case 5), 10=-481(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-16=-701/685, 1-2=0/17, 2-3=-2161/1657, 3-4=-3402/2291, 4-5=-3815/2009, 5-6=-3815/2009, 6-7=-3402/2291, 7-8=-2161/1657, 8-9=0/17, 8-10=-701/685
BOT CHORD 15-16=-128/167, 14-15=-1482/2161, 13-14=-1968/3402, 12-13=-1968/3402, 11-12=-1462/2161, 10-11=-3/27
WEBS 2-15=-1362/1977, 3-15=-471/395, 3-14=-482/1133, 4-14=-250/149, 4-13=0/471, 5-13=-1596/3272, 6-13=-18/530, 6-12=-250/149, 7-12=-482/1133, 7-11=-471/395, 8-11=-1362/1977

NOTES

- NOTES**
- 1) Unbalanced roof live loads have been considered for this design.
 - 2) Wind: ASCE 7-98; 120mph (3-second gust); $h=30$ ft; $TCDL=4.2$ psf; $BCDL=3.0$ psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - 3) Refer to girder(s) for truss to truss connections.
 - 4) Bearing at joint(s) 16 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 481 lb uplift at joint 16 and 481 lb uplift at joint 10.

LOAD CASE(S) Standard

Scott W. Miller, FL Lic #58316
MiTek Industries, Inc.
14515 North Outer Forty Drive
Suite 300
Chesterfield, MO, 63017
FL Cert. #6634

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
Design valid for use only with Mitek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

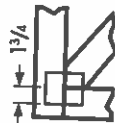
14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



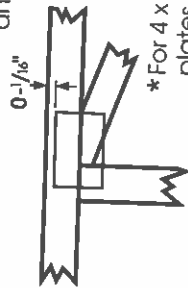
MiTek

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 x 4

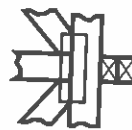
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING



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

BEARING

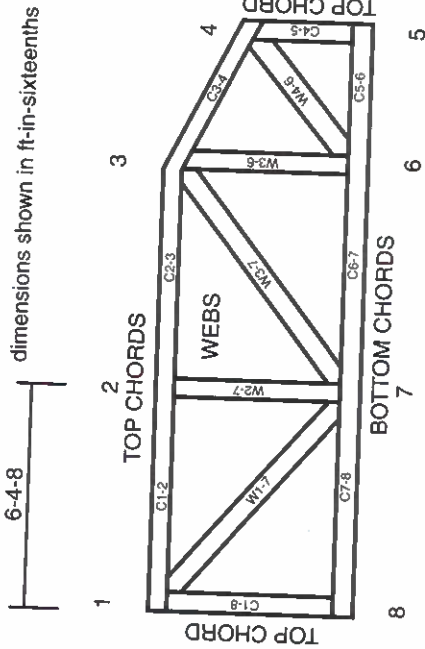


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP11.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP11.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing shown on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.

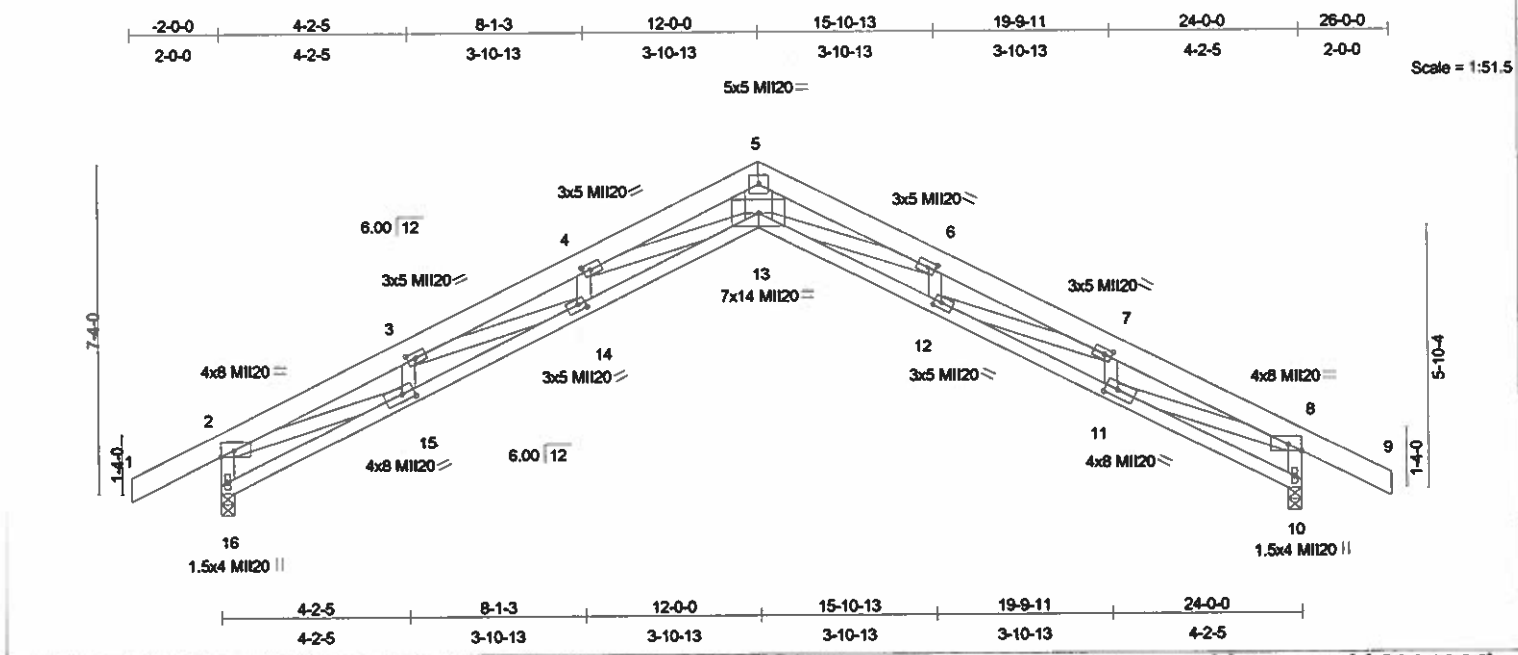


Plate Offsets (X,Y): [2-0-3-8,Edge], [3-0-2-0-0-1-8], [4-0-2-0-0-1-8], [6-0-2-0-0-1-8], [7-0-2-0-0-1-8], [8-0-3-8,Edge], [11-0-3-4-0-2-0], [12-0-2-0-0-1-8], [14-0-2-0-0-1-8], [15-0-3-4-0-2-0]									
LOADING (psf)		SPACING		CSI		DEFL		PLATES	
TCLL 20.0		Plates Increase 1-4-0		TC 0.39		in (loc) 13		MI120	
TCCL 7.0		Lumber Increase 1.25		BC 0.75		Vert(LL) 0.56		GRIP	
BCLL 10.0		Rep Stress Incr YES		WB 0.69		Vert(TL) -0.74		249/190	
BCDL 5.0		Code FBC2001/ANSI95		(Simplified)		Horz(TL) 0.83		Weight: 158 lb	

LUMBER		BRACING	
TOP CHORD 2 X 6 SYP No.2		TOP CHORD Sheathed or 3-10-4 oc purlins, except end verticals.	
BOT CHORD 2 X 4 SYP No.2		BOT CHORD Rigid ceiling directly applied or 4-3-14 oc bracing.	
WEBS 2 X 4 SYP No.3 *Except*			
5-13 2 X 8 SYP No.2			

REACTIONS (lb/size) 16=741/0-3-8, 10=741/0-3-8
 Max Horz 16=-132(load case 6)
 Max Uplift 16=-482(load case 5), 10=-482(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 2-16=-701/686, 1-2=0/17, 2-3=-2351/1794, 3-4=-3701/2480, 4-5=-4151/2171, 5-6=-4151/2171, 6-7=-3701/2480, 7-8=-2351/1794, 8-9=0/17, 8-10=-701/686
 BOT CHORD 15-16=-130/165, 14-15=-1603/2351, 13-14=-2162/3701, 12-13=-2162/3701, 11-12=-1603/2351, 10-11=-2/25
 WEBS 2-15=-1497/2162, 3-15=-471/397, 3-14=-513/1238, 4-14=-250/151, 4-13=0/515, 5-13=-1741/3572, 6-13=-18/572, 6-12=-250/151, 7-12=-513/1238, 7-11=-471/397, 8-11=-1497/2162

- NOTES
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; and vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - Bearing at joint(s) 16, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 482 lb uplift at joint 16 and 482 lb uplift at joint 10.

LOAD CASE(S) Standard


 Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

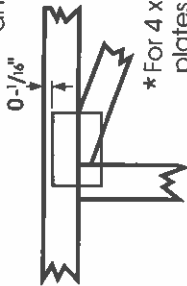
14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

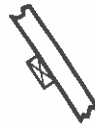
* Plate location details available in Mitek 20/20 software or upon request.

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

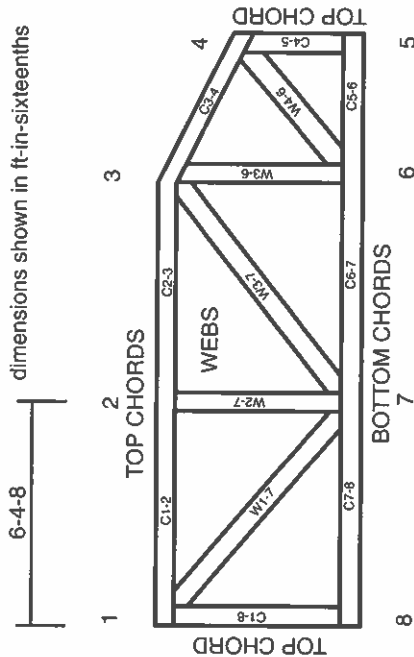


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Job Reference (optional)
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Weight: 163 lb

Sheathed or 2-6-2 oc purlins, except end verticals.
Rigid ceiling directly applied or 5-8-5 oc bracing.
1 Row at midpt 1-15, 8-9

NOTES

- 1) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf, Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
- 2) Provide adequate drainage to prevent water ponding.
- 3) Refer to girder(s) for truss to truss connections.
- 4) Bearing at joint(s) 15 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 672 lb uplift at joint 15 and 672 lb uplift at joint 8.


Scott W. Miller, FL Lic #58316
MiTek Industries, Inc.
14515 North Outer Forty Drive
Suite 300
Chesterfield, MO, 63017
FL Cert.#6634

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
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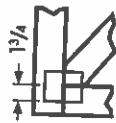
14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



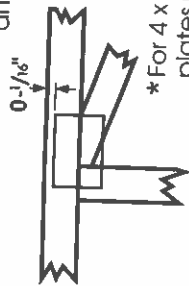
MiTek

Symbols

PLATE LOCATION AND ORIENTATION



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



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



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

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

PLATE SIZE

4 X 4

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

LATERAL BRACING



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

BEARING



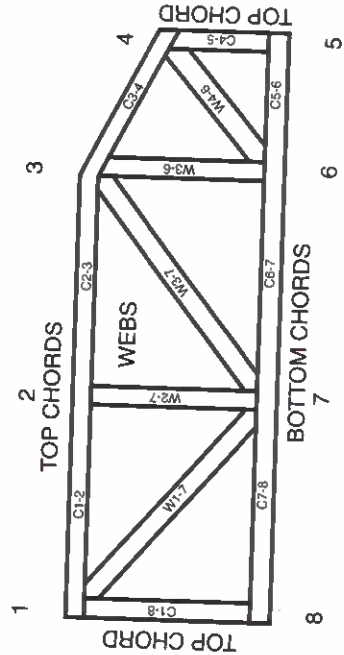
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8
dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Builders Truss Mfg., Woodbine, GA 31569

6.200 s Jul 13 2005 MiTek Industries, Inc. Wed Sep 07 09:03:11 2005 Page 1

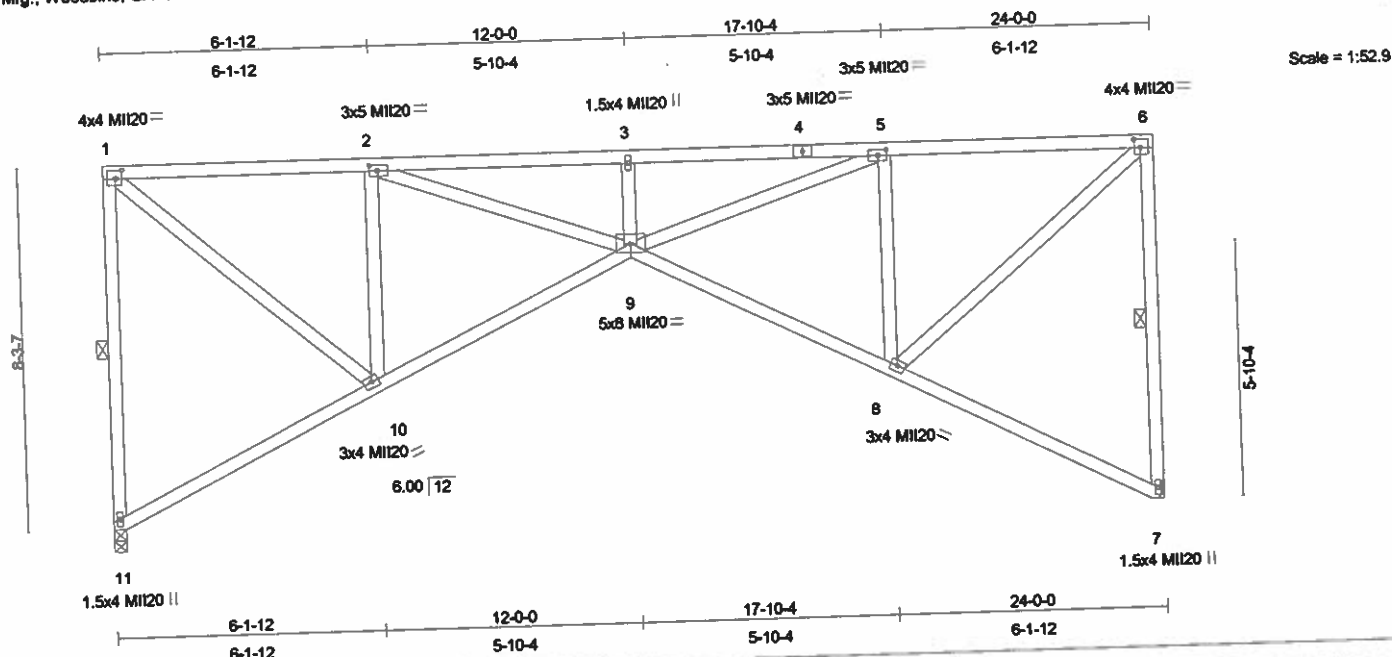


Plate Offsets (X,Y): [1:0-1-12,0-2-4], [2:0-2-4,0-1-8], [5:0-2-4,0-1-8], [6:0-1-12,0-2-4]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.68	Vert(LL)	0.28	9	>999	360	MII20	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.42	Vert(TL)	-0.30	9	>963	240		
BCLL 10.0	Rep Stress Incr	YES	WB 0.94	Horz(TL)	0.32	7	n/a	n/a		
BCDL 5.0	Code	FBC2001/ANSI95	(Simplified)						Weight: 156 lb	

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 3-2-8 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 7-7-3 oc bracing.
 WEBS 1 Row at midpt 1-11, 6-7

REACTIONS (lb/size) 11=996/0-3-8, 7=996/Mechanical
 Max Uplift 11=672(load case 3), 7=672(load case 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-11=-906/706, 1-2=-884/611, 2-3=-2782/1922, 3-4=-2782/1922, 4-5=-2782/1922, 5-6=-884/611, 6-7=-906/706
 BOT CHORD 10-11=0/0, 9-10=-683/988, 8-9=-683/988, 7-8=0/0
 WEBS 1-10=-798/1155, 2-10=-1008/855, 2-9=-1395/2019, 3-9=-316/375, 5-9=-1395/2019, 5-8=-1008/855, 6-8=-798/1155

- NOTES**
- 1) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - 2) Provide adequate drainage to prevent water ponding.
 - 3) Refer to girder(s) for truss to truss connections.
 - 4) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 672 lb uplift at joint 11 and 672 lb uplift at joint 7.

LOAD CASE(S) Standard

Scott W. Miller
 Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

September 8, 2005

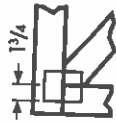
WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.
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14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017

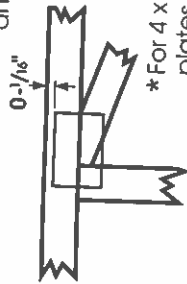


Symbols

PLATE LOCATION AND ORIENTATION



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



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

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

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

PLATE SIZE

4 X 4

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

LATERAL BRACING



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

BEARING



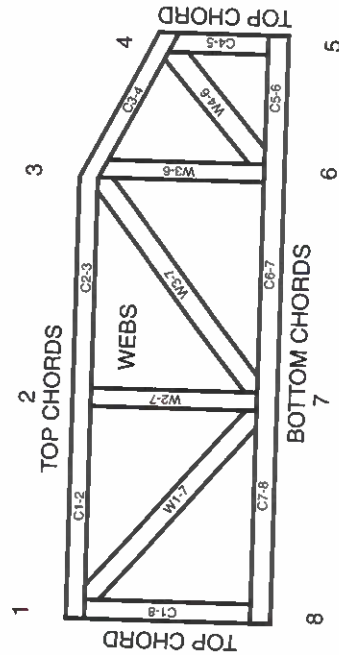
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8
dimensions shown in ft-in-sixteenths



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
3. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
4. Cut members to bear tightly against each other.
5. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
6. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
7. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
8. Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
9. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
10. Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
11. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
12. Top chords must be sheathed or purlins provided at spacing shown on design.
13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Job	Truss	Truss Type	Qty	Ply	Howard Residence	18990614
9463	D04	ROOF TRUSS	1	1	Job Reference (optional)	

Builders Truss Mfg., Woodbine, GA 31569

6.200 s Jul 13 2005 MiTek Industries, Inc. Wed Sep 07 09:03:11 2005 Page 1

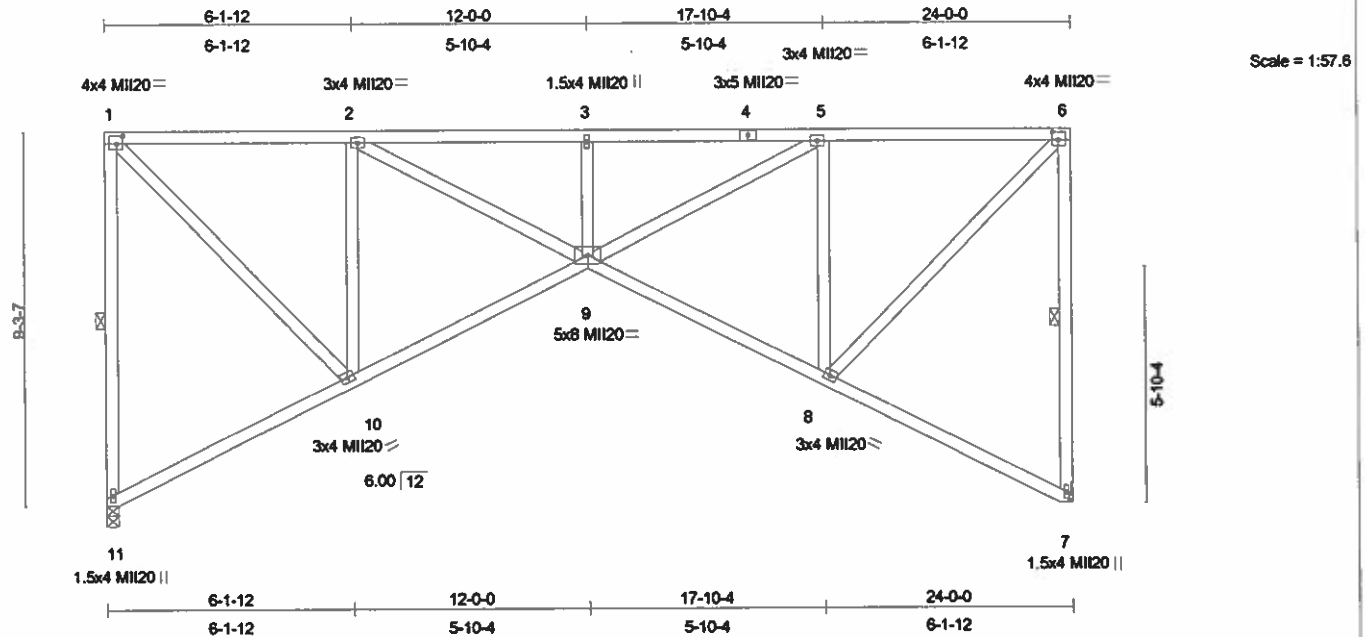


Plate Offsets (X,Y): [1:0-1-12,0-2-4], [6:0-1-12,0-2-4]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	l/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.57	Vert(LL)	0.15	9	>999	360	M1120
TCDL 7.0	Lumber Increase	1.25	BC 0.39	Vert(TL)	-0.18	9-10	>999	240	249/190
BCLL 10.0	Rep Stress Incr	YES	WB 0.92	Horz(TL)	0.18	7	n/a	n/a	
BCDL 5.0	Code FBC2001/ANSI95		(Simplified)						Weight: 166 lb

LUMBER
 TOP CHORD 2 X 4 SYP No.2
 BOT CHORD 2 X 4 SYP No.2
 WEBS 2 X 4 SYP No.3

BRACING
 TOP CHORD Sheathed or 4-0-10 oc purlins, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 8-3-12 oc bracing.
 WEBS 1 Row at midpt 1-11, 6-7

REACTIONS (lb/size) 11=996/0-3-8, 7=996/Mechanical
 Max Uplift 11=672(load case 3), 7=672(load case 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-11=906/706, 1-2=-738/510, 2-3=-1891/1307, 3-4=-1891/1307, 4-5=-1891/1307, 5-6=-738/510, 6-7=-906/706
 BOT CHORD 10-11=0/0, 9-10=-570/825, 8-9=-570/825, 7-8=0/0
 WEBS 1-10=-724/1048, 2-10=-935/804, 2-9=-903/1307, 3-9=-316/375, 5-9=-903/1307, 5-8=-935/804, 6-8=-724/1048

NOTES
 1) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 2) Provide adequate drainage to prevent water ponding.
 3) Refer to girder(s) for truss to truss connections.
 4) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 872 lb uplift at joint 11 and 672 lb uplift at joint 7.

LOAD CASE(S) Standard

Scott W. Miller
 Scott W. Miller, FL Lic #58316
 MiTek Industries, Inc.
 14515 North Outer Forty Drive
 Suite 300
 Chesterfield, MO, 63017
 FL Cert.#6634

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

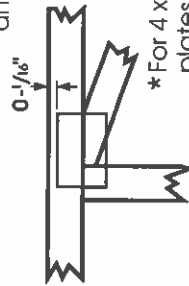
14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017



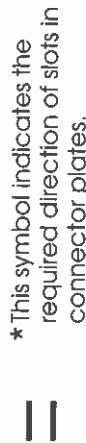
Symbols

PLATE LOCATION AND ORIENTATION

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



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



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

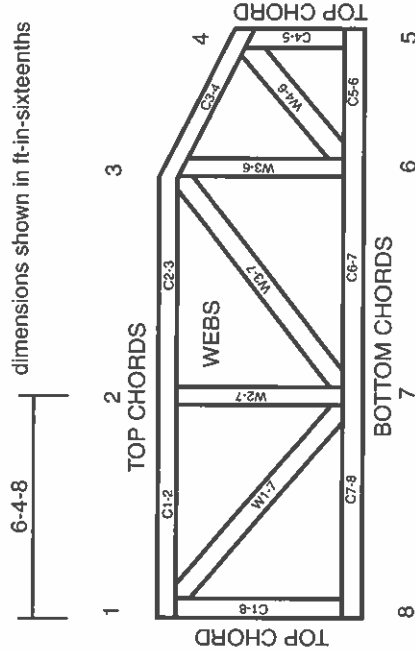


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing shown on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.

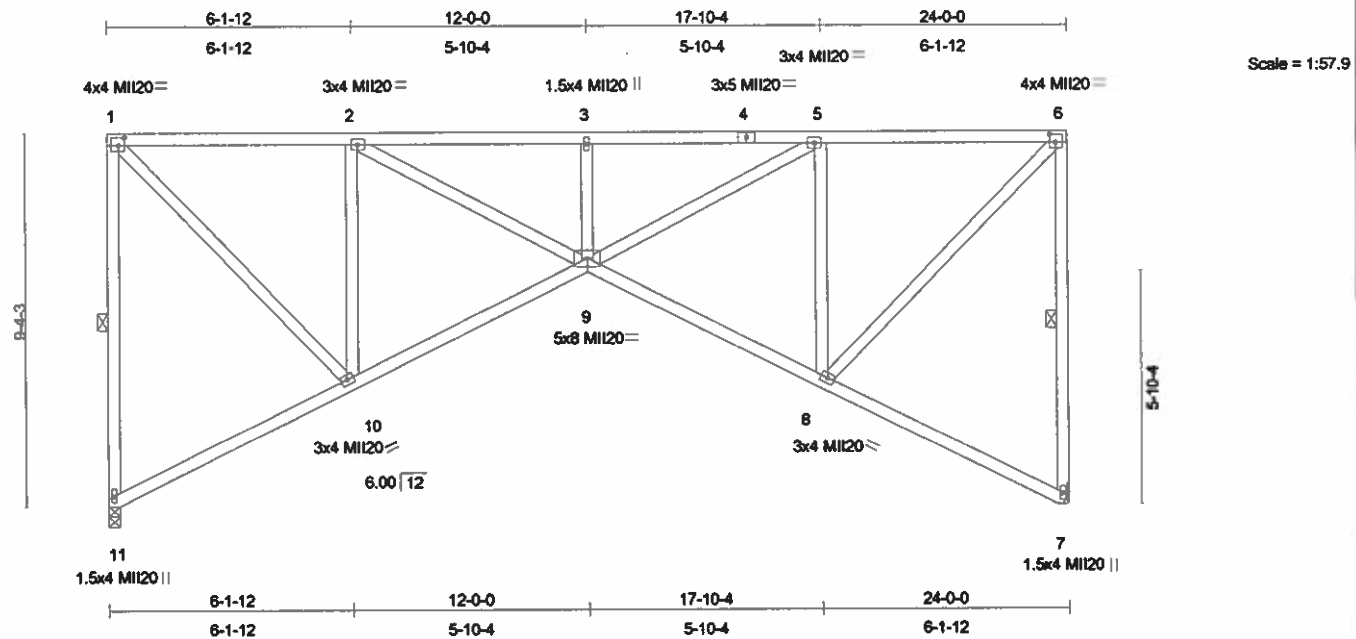


Plate Offsets (X,Y): [1:0-1-12,0-2-4], [8:0-1-12,0-2-4]

LOADING (psf)	SPACING	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase 1.25	TC 0.58	Vert(LL) 0.14	9	>999	360		MI120	249/190
TCDL 7.0	Lumber Increase 1.25	BC 0.39	Vert(TL) -0.18	9-10	>999	240			
BCLL 10.0	Rep Stress Incr YES	WB 0.92	Horz(TL) 0.18	7	n/a	n/a			
BCDL 5.0	Code FBC2001/ANSI95	(Simplified)							
								Weight: 167 lb	

LUMBER TOP CHORD 2 X 4 SYP No.2 BOT CHORD 2 X 4 SYP No.2 WEBS 2 X 4 SYP No.3	BRACING TOP CHORD Sheathed or 4-1-3 oc purlins, except end verticals. BOT CHORD Rigid ceiling directly applied or 8-4-5 oc bracing. WEBS 1 Row at midpt 1-11, 6-7
--	---

REACTIONS (lb/size) 11=996/0-3-8, 7=996/Mechanical
 Max Uplift 11=-672(load case 3), 7=-672(load case 3)

FORCES (lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-11=-906/706, 1-2=-730/505, 2-3=-1854/1281, 3-4=-1854/1281, 4-5=-1854/1281, 5-6=-730/505, 6-7=-906/706
 BOT CHORD 10-11=0/0, 9-10=-564/816, 8-9=-564/816, 7-8=0/0
 WEBS 1-10=-720/1042, 2-10=-931/802, 2-9=-884/1279, 3-9=-316/375, 5-9=-884/1279, 5-8=-931/802, 6-8=-720/1042

- NOTES**
- 1) Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially, MWFRS gable end zone and C-C Exterior(2) zone; cantilever left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33. This truss is designed for C-C for members and forces, and for MWFRS for reactions specified.
 - 2) Provide adequate drainage to prevent water ponding.
 - 3) Refer to girder(s) for truss to truss connections.
 - 4) Bearing at joint(s) 11 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 672 lb uplift at joint 11 and 672 lb uplift at joint 7.

LOAD CASE(S) Standard

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 MiTek Industries, Inc.
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September 8, 2005

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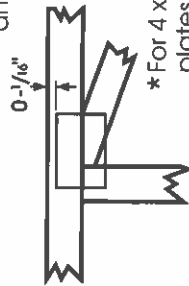
14515 N. Outer Forty,
 Suite #300
 Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

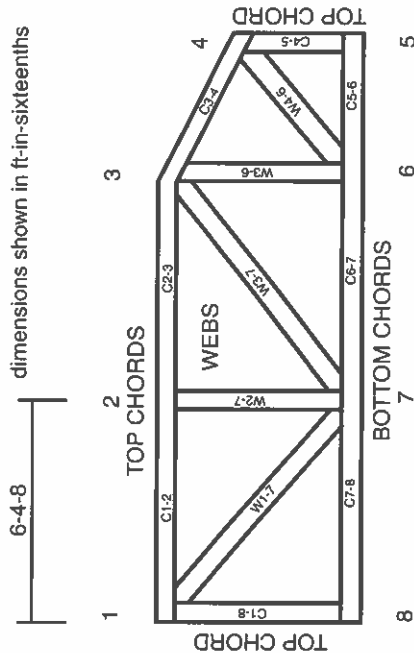


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DS8-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System





LUMBER		BRACING	
TOP CHORD	2 X 4 SYP No.2	TOP CHORD	Sheathed or 3-8-5 oc purlins, except end verticals.
BOT CHORD	2 X 4 SYP No.2	BOT CHORD	Rigid ceiling directly applied or 6-4-14 oc bracing.
WEBS	2 X 4 SYP No.3	WEBS	1 Row at midpt 1-15, 8-9

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-15=-935/700, 1-2=-549/380, 2-3=-1273/879, 3-4=-2703/1867, 4-5=-2703/1867, 5-6=-1273/879, 6-7=-1273/879,
7-8=-549/380, 8-9=-935/700
BOT CHORD 14-15=0/0, 13-14=-424/614, 12-13=-983/1423, 11-12=-983/1423, 10-11=-424/614, 9-10=0/0
WEBS 1-14=-685/992, 2-14=-981/784, 2-13=-728/1054, 3-13=-1011/803, 3-12=-1132/1639, 5-12=-1132/1639,
5-11=-1011/803, 7-11=-728/1054, 7-10=-981/784, 8-10=-685/992

LOAD CASE(S) Standard


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FL Cert.#6634
September 8 2005

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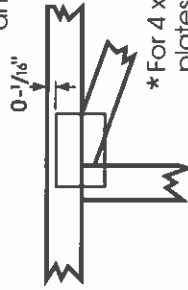
14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION

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



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

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

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

PLATE SIZE

4 x 4

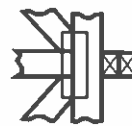
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LATERAL BRACING



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BEARING

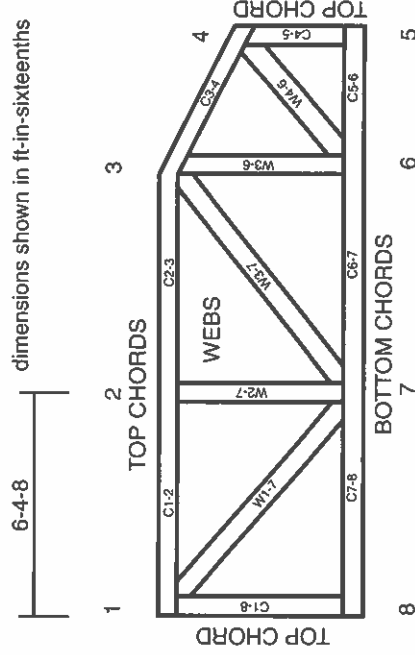


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

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- DSB-89: Design Standard for Bracing.
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Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

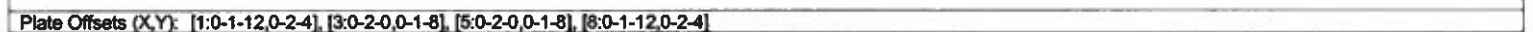
BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
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- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
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- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.

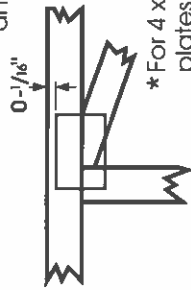
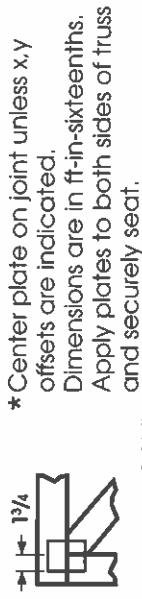




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Symbols

PLATE LOCATION AND ORIENTATION



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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

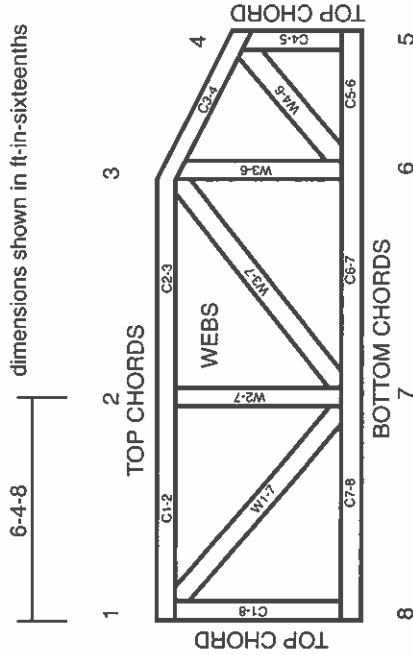


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

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ANSI/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
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CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



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13. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
14. Connections not shown are the responsibility of others.
15. Do not cut or alter truss member or plate without prior approval of a professional engineer.
16. Install and load vertically unless indicated otherwise.

Job	Truss	Truss Type	Qty	Ply	Howard Residence	18990618
9463	FT01	ROOF TRUSS	1	2	Job Reference (optional)	

Builders Truss Mfg., Woodbine, GA 31569

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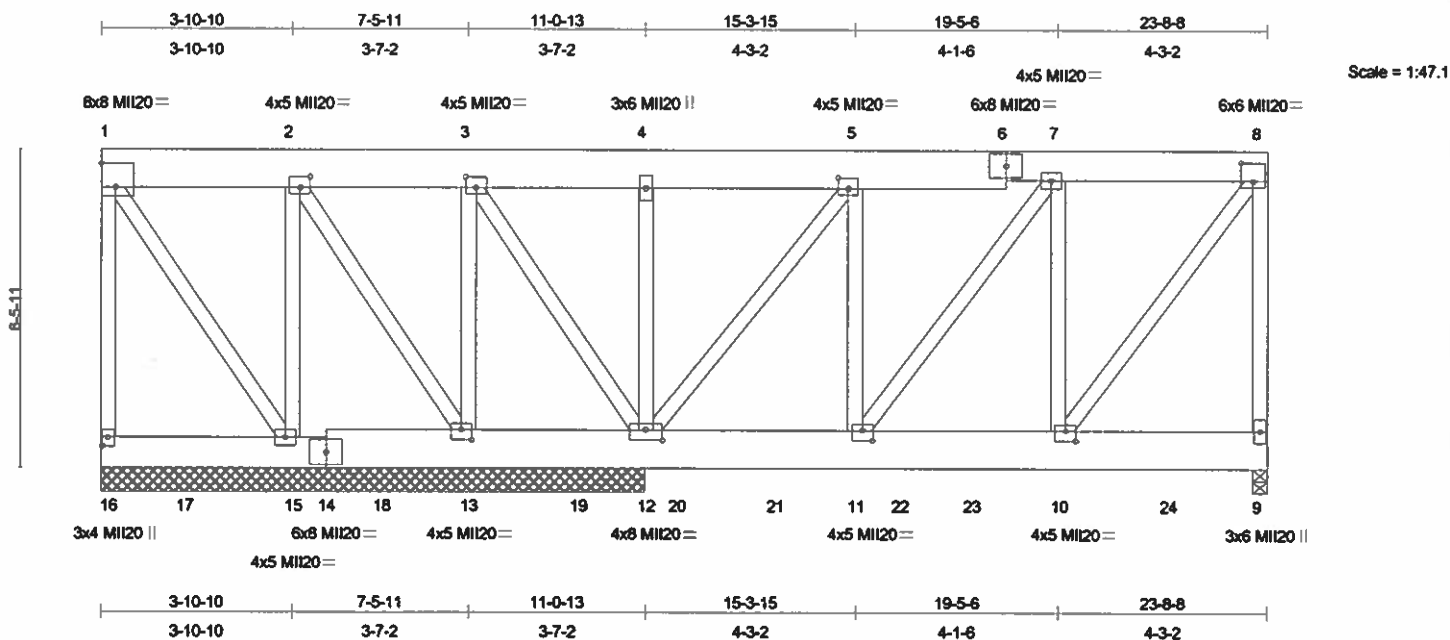


Plate Offsets (X,Y): [1:Edge,0-5-12], [2:0-2-8,0-2-8], [3:0-2-8,0-2-8], [5:0-2-8,0-2-8], [8:0-3-0,0-4-8], [10:0-2-8,0-2-8], [11:0-2-8,0-2-8], [12:0-4-0,0-2-8], [13:0-2-8,0-2-8], [16:0-2-4,0-1-8]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in (loc)	V/def	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.36	Vert(LL)	0.02 10-11	>999	360	MI20	249/190
TCDL 7.0	Lumber Increase	1.25	BC 0.20	Vert(TL)	0.02 10-11	>999	240		
BCLL 10.0	Rep Stress Incr	NO	WB 0.29	Horz(TL)	-0.00 9	n/a	n/a		
BCDL 5.0	Code FBC2001/ANSI95		(Matrix)						Weight: 571 lb

LUMBER

TOP CHORD 2 X 10 SYP No.2 *Except*
6-8 2 X 8 SYP No.2
BOT CHORD 2 X 10 SYP No.2 *Except*
14-16 2 X 8 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING

TOP CHORD Sheathed or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 16=274/Mechanical, 9=1846/0-3-8, 15=1317/Mechanical, 13=903/Mechanical, 12=3084/Mechanical
Max Horz 16=303(load case 3)
Max Uplift 16=253(load case 2), 9=1283(load case 3), 15=1052(load case 3), 13=701(load case 2), 12=2457(load case 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-16=-18/83, 1-2=-21/81, 2-3=-78/117, 3-4=-140/182, 4-5=-140/182, 5-6=-788/707, 6-7=-783/709, 7-8=-871/791,
8-9=-1341/1091
BOT CHORD 16-17=-176/269, 15-17=-176/269, 14-15=-90/277, 14-18=-83/283, 13-18=-94/273, 13-19=-117/333, 12-19=-117/333,
12-20=-642/783, 20-21=-842/783, 11-21=-842/783, 11-22=-704/871, 22-23=-704/871, 10-23=-704/871, 10-24=-32/119,
9-24=-32/119
WEBS 1-15=-82/159, 2-15=-94/168, 2-13=-146/180, 3-13=-28/97, 3-12=-121/174, 4-12=-331/335, 5-12=-1611/1322,
5-11=-801/1092, 7-11=-153/175, 7-10=-38/138, 8-10=-1159/1474

NOTES

- 2-ply truss to be connected together with 10d Common(.148"x3") Nails as follows:
Top chords connected as follows: 2 X 4 - 1 row at 0-9-0 oc, 2 X 10 - 2 rows at 0-9-0 oc, 2 X 8 - 2 rows at 0-9-0 oc.
Bottom chords connected as follows: 2 X 8 - 2 rows at 0-9-0 oc, 2 X 10 - 2 rows at 0-9-0 oc.
Webs connected as follows: 2 X 4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Wind: ASCE 7-98; 120mph (3-second gust); h=30ft; TCDL=4.2psf; BCDL=3.0psf; Category II; Exp B; partially; MWFRS gable end zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33.
- Provide adequate drainage to prevent water ponding.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 253 lb uplift at joint 16, 1283 lb uplift at joint 9, 1052 lb uplift at joint 15, 701 lb uplift at joint 13 and 2457 lb uplift at joint 12.

Scott W. Miller, FL Lic #58316
MiTek Industries, Inc.
14515 North Outer Forty Drive
Suite 300
Chesterfield, MO, 63017
FL Cert.#6634

Continued on page 2

September 8, 2005

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

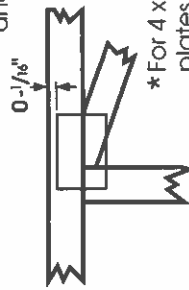
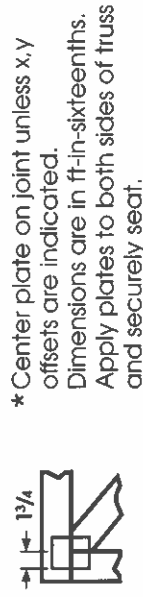
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCSI1 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

14515 N. Outer Forty,
Suite #300
Chesterfield, MO 63017



Symbols

PLATE LOCATION AND ORIENTATION



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

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

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

PLATE SIZE

4 x 4

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

LATERAL BRACING



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

BEARING

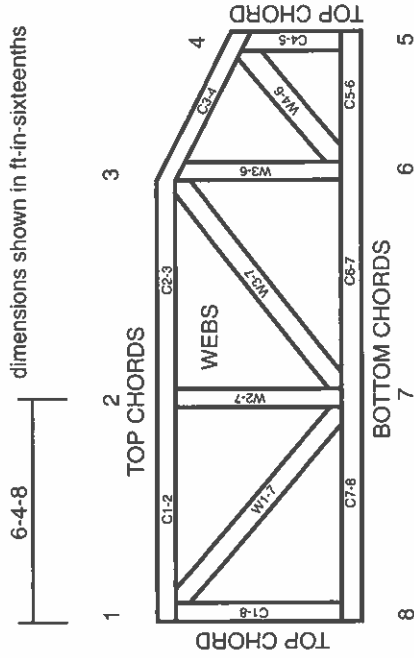


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

Industry Standards:

- ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-89: Design Standard for Bracing.
- BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



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

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

CONNECTOR PLATE CODE APPROVALS

BOCA	96-31, 95-43, 96-20-1, 96-67, 84-32
ICBO	4922, 5243, 5363, 3907
SBCCI	9667, 9730, 9604B, 9511, 9432A



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

- Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
- Never exceed the design loading shown and never stack materials on inadequately braced trusses.
- Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
- Cut members to bear tightly against each other.
- Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI1.
- Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI1.
- Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
- Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing shown on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.

Job	Truss	Truss Type	Qty	Ply	Howard Residence	18990618
9463	FT01	ROOF TRUSS	1	2	Job Reference (optional)	

Builders Truss Mfg., Woodbine, GA 31569

6.200 s Jul 13 2005 MITek Industries, Inc. Wed Sep 07 09:03:13 2005 Page 2

NOTES

7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 472 lb down and 385 lb up at 1-8-4, 472 lb down and 385 lb up at 3-8-4, 472 lb down and 385 lb up at 5-8-4, 480 lb down and 390 lb up at 7-8-4, 480 lb down and 390 lb up at 9-8-4, 480 lb down and 390 lb up at 11-8-4, 480 lb down and 390 lb up at 13-8-4, 480 lb down and 390 lb up at 15-8-4, 480 lb down and 390 lb up at 17-8-4, and 480 lb down and 390 lb up at 19-8-4, and 480 lb down and 390 lb up at 21-8-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-8=-54, 9-16=-30

Concentrated Loads (lb)

Vert: 15=-472(F) 13=-480(F) 10=-480(F) 17=-472(F) 18=-472(F) 19=-480(F) 20=-480(F) 21=-480(F) 22=-480(F) 23=-480(F) 24=-480(F)

WARNING - Verify design parameters and READ NOTES ON THIS AND REVERSE SIDE BEFORE USE.

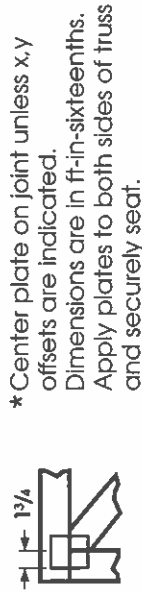
Design valid for use only with MITek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

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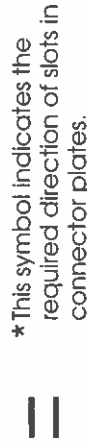


Symbols

PLATE LOCATION AND ORIENTATION



0 - 1/16"



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

PLATE SIZE

4 X 4

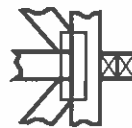
The first dimension is the width perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING



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BEARING

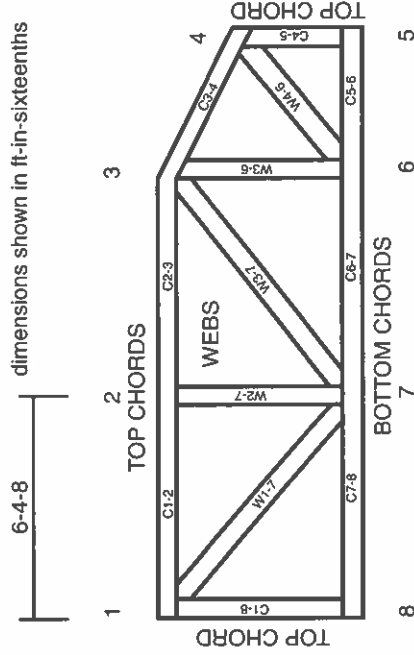


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

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- Unless expressly noted, this design is not applicable for use with fire retardant or preservative treated lumber.
- Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
- Plate type, size, orientation and location dimensions shown indicate minimum plating requirements.
- Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
- Top chords must be sheathed or purlins provided at spacing shown on design.
- Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
- Connections not shown are the responsibility of others.
- Do not cut or alter truss member or plate without prior approval of a professional engineer.
- Install and load vertically unless indicated otherwise.



SPUTO AND LAMMERT ENGINEERING, LLC #23724
STRUCTURAL ENGINEERS
10 SW 1ST AVENUE, GAINESVILLE, FL 32601
PHONE: 352-378-0448 FAX: 352-373-1331
E-MAIL: sputoandlammert@mindspring.com

**HURRICANE CLIP SUBSTITUTION
AFTER REVIEW OF TRUSS ENGINEERING**

PROJECT: Howard Residence

TRUSS SUPPLIER: Builders Truss

DATE ON SUBMITTAL: 7/29/05

HURRICANE CLIPS FOR THE FOLLOWING TRUSSES ARE CHANGED AFTER REVIEW OF THE TRUSS ENGINEERING PROVIDED BY THE TRUSS MANUFACTURER. ANY TRUSS NOT LISTED HERE SHALL COMPLY WITH THE PREVIOUSLY SUBMITTED WIND ENGINEERING.

TRUSS	BEARING	HARDWARE
A02	2	(1) Simpson LGT3-SDS2.5 + (1) Simpson H7Z with Simpson HTT22 hold down to slab
	17	(1) Simpson HD10A bolted to truss web. Install 7/8" threaded rod down to slab. Epoxy rod into slab 8".
	14	(1) Simpson H2.5 & (1) Simpson H7Z
	Provide 3 studs underneath bearing points 2, 17	
D03	FRAME	Hold down detail A with (3) studs and (3) Simpson LSTA 24
C01	1, 9	(2) Simpson H7Z

Trusses A01, A01A, A01B, and A01C are acceptable with (1) Simpson H10 to rear porch wall

Truss A03A is acceptable to slide inboard of wall

SPUTO AND LAMMERT ENGINEERING, LLC


Thomas Sputo, Ph.D., P.E.
Florida PE 39142


Kimberly Lammert, E.I.



LGT3-SDS2.5/LGT2/MGT/HGT Heavy Girder Tiedowns

NEW! LGT3-SDS2.5 is a heavy girder truss tiedown for 3-ply Girder Trusses. Featuring SDS screws into the truss for higher load capacity. Low profile connection to studs ensures easy installation of drywall. Simple to install and can be installed on the inside or outside of wall. It provides additional bearing enhancement for heavy download applications.

This series provides high uplift resistance for wood frame and concrete block construction. The HGT series can be installed on trusses and beam with top chord slopes from 3:12 to 8:12. Available in 2-ply, 3-ply and 4-ply widths.

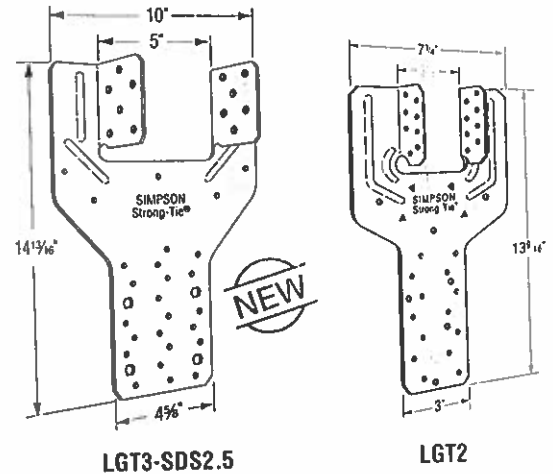
MATERIAL: HGT—7 gauge, LGT2—14 gauge, MGT, LGT3-SDS2.5—12 gauge.

FINISH: HGT—Simpson gray paint; LGT, MGT—Galvanized

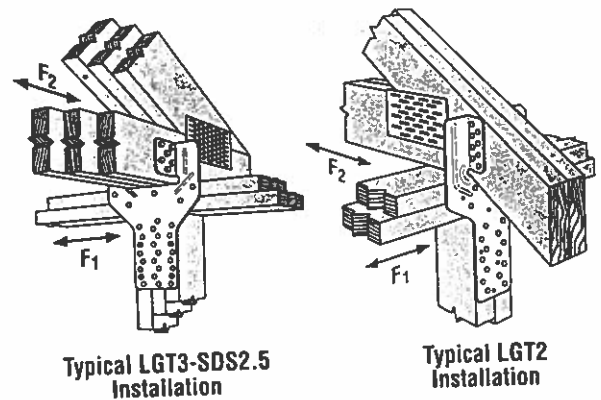
INSTALLATION: • When the HGT-3 is used with a 2-ply girder or beam, shimming is required. Fasten to act as one unit.

- Before installing fasteners, ensure LGT3-SDS2.5 makes complete contact with bottom of truss.
- LGT3-SDS2.5—The four large hexagon holes are intended for CMU and concrete applications.
- See page 153 for masonry applications.

CODES: See page 12 for Code Listing Key Chart.

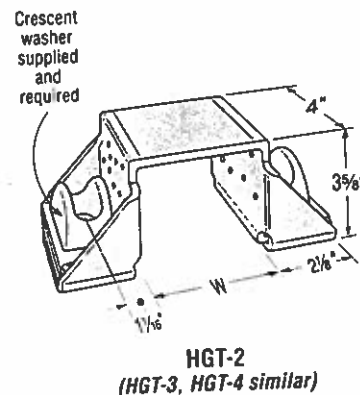
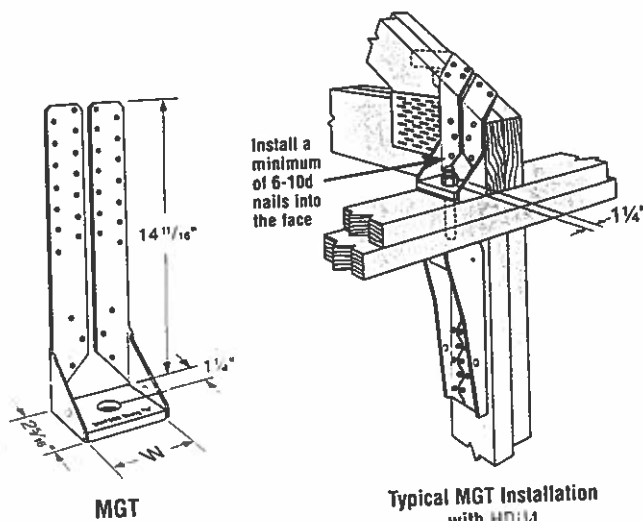


Model No.	W	O.C. Dim. Between Anchors	Fasteners		Doug-Fir-Larch/So. Pine Allowable Uplift Loads (133/160)	Spruce-Pine-Fir Allowable Uplift Loads (133/160)	Code Ref.
			Nails to Studs or Anchor Diameter	Girder			
LGT2	3 3/4	—	14-16d Sinkers	16-16d Sinkers	2050	1785	125
LGT3-SDS2.5	5	—	21-16d Sinkers	12-SDS 1/2 x 2 1/2	3685	3170	160
MGT	3 3/4	—	1-5/8	22-10d	3965	3330	125
HGT-2	3 3/4	5 3/4	2-5/8	16-10d	10980	6485	6, 62, 121
HGT-3	4 1/4	7 3/4	2-5/8	16-10d	10530	9035	
HGT-4	6 1/4	9	2-5/8	16-10d	9250	9250	

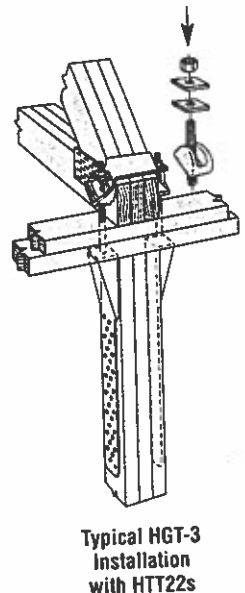


1. Attached members must be designed to resist applied loads.
2. HGT additional anchorage products to be designed by others.
3. Allowable loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed; reduce where other loads govern.
4. LGT2: F_1 load = 700, F_2 load = 170.
5. LGT3-SDS2.5: F_1 load = 795, F_2 load = 410 (DF, SP)
6. MGT can be installed with straps vertical for full table load provided all specified nails are installed to either a solid header or minimum double 2x6 web.
7. Refer to T-HIEBEARING for LGT allowable bearing enhancement loads.
8. NAILS 16d Sinker = 0.143" dia. x 3 1/4" long. 10d = 0.143" dia. x 3" long.

See page 16-17 for other model sizes and information



Install two LBP 5/8" washers on top of each crescent washer (total four 5/8" washers) for wood installation. All washers and crescent washers are required. Crescent washers are supplied.



Available with additional corrosion protection. Check with factory.

Available with additional corrosion protection. Check with factory.

Model No.	Ga	Fasteners			DF/SP Allowable Loads				Uplift Load with 8dx1½" Nails (133 & 160)	SPF/HF Allowable Loads				Uplift Load with 8dx1½" Nails (133 & 160)	Code Ref.
		To Rafters/Truss	To Plates	To Studs	Uplift		Lateral (133/160)			Uplift		Lateral (133/160)			
					(133)	(160)	F ₁	F ₂		(133)	(160)	F ₁	F ₂		
H1	18	6-8dx1½	4-8d	—	490	585	485	165	455	400	400	415	140	370	2, 40, 82, 121, 140
H2	18	5-8d	—	5-8d	335	335	—	—	335	230	230	—	—	230	
H2.5	18	5-8d	5-8d	—	415	415	150	150	415	365	365	130	130	365	122
H2.5A	18	5-8d	5-8d	—	600	600	110	110	480	520	535	110	110	480	
H2.5T	18	5-8d	5-8d	—	545	545	135	145	425	545	545	135	145	425	2, 40, 82, 121, 140
H3	18	4-8d	4-8d	—	455	455	125	160	415	320	320	105	140	290	
H4	20	4-8d	4-8d	—	360	360	165	160	360	235	235	140	135	235	2, 40, 82, 121, 140
H5	18	4-8d	4-8d	—	455	465	115	200	455	265	265	100	170	265	
H5A	18	3-8d	3-8d	—	350	420	115	180	290	245	245	100	120	170	10
H6	16	—	8-8d	8-8d	915	950	650	—	—	785	820	560	—	—	
H7Z	16	4-8d	2-8d	8-8d	930	985	400	—	—	800	845	345	—	—	5, 41, 121, 140
H8	18	5-10dx1½	5-10dx1½	—	620	745	75	—	—	530	565	75	—	—	
H9KT	18	4-SDS½x1½	5-SDS½x1½	—	875	875	680	125	—	755	755	680	125	—	170
H10	18	8-8dx1½	8-8dx1½	—	905	990	585	525	—	780	850	505	450	—	
H10R	18	8-8dx1½	8-8dx1½	—	905	990	585	525	—	780	850	505	450	—	9, 121
H10-2	18	6-10d	6-10d	—	760	760	455	395	—	655	655	390	340	—	
H11Z	18	6-16dx2½	6-16dx2½	—	830	830	525	760	—	715	715	450	655	—	170
H14	18	1 12-8dx1½ 2 12-8dx1½	13-8d 15-8d	—	1350 1350	1350	515 515	265 265	— —	1050 1050	1050	480 480	245 245	— —	

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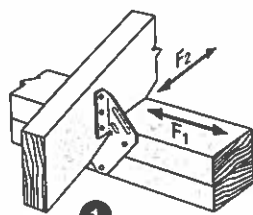
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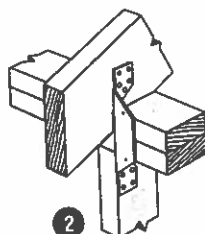
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1. Loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed; reduce where other loads govern.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on each side of the joist and on the same side of the plate (exception: H2.5A).
3. Allowable uplift load for stud to bottom plate installation is 400 lbs (H2.5); 390 lbs (H2.5A); 360 lbs (H4) and 310 lbs (H8).
4. Allowable loads in the F₁ direction are not intended to replace diaphragm boundary members or prevent cross grain bending of the truss or rafter members. Additional shear transfer elements

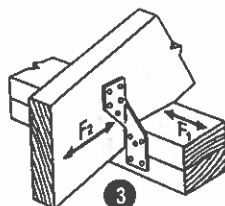
5. Hurricane Ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For uplift Continuous Load Path, connections in the same area (i.e. truss to plate and plate to stud) must be on same side of the wall.
6. Southern Pine allowable loads for H14: 1465 lbs (133/160), 560 lbs (F₁ Lateral 133/160) and 285 lbs (F₂ Lateral 133/160).
7. Refer to T-HITIEBEARING for selected hurricane ties allowable bearing enhancement loads.
8. NAILS: 16dx2" = 0.162" dia. x 2" long. 10d = 0.148" dia. x 3" long. 10dx1½" = 0.148" dia. x 1½" long. 6d = 0.131" dia. x 2½" long. 8dx1" = 0.131" dia. x 1" long. See page 16-17 for other nail sizes and information.



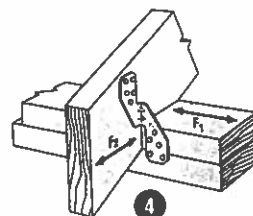
1 H1 Installation



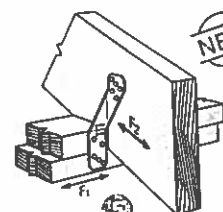
2 H2 Installation



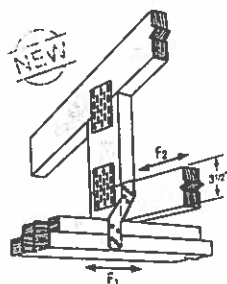
3 H2.5 Installation
(Nails into both top plates)



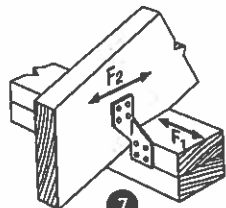
4 H2.5A Installation
(Nails into both top plates)



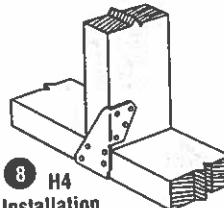
5 H2.5T Installation
(Nails into both top plates)



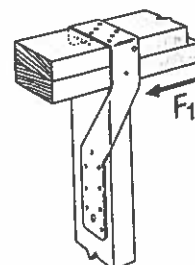
6 H2.5T Installation



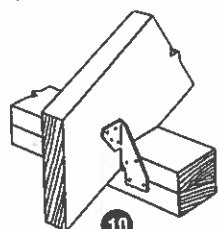
7 H3 Installation
(Nails into upper top plate)



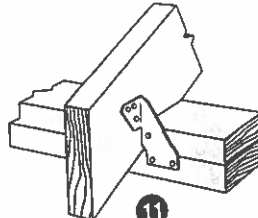
8 H4 Installation
(H2.5 similar)
(see footnote 3, page 142)



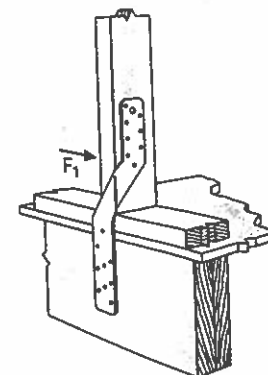
9 H4 Installation
(Nails into upper top plate)



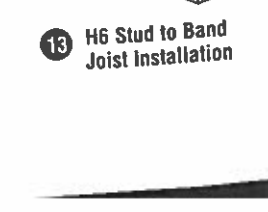
10 H5 Installation
(Nails into both top plates)



11 H5A Installation
(Nails into both top plates)



12 H6 Stud to Top Plate Installation



13 H6 Stud to Band Joist Installation

LTT/MTT/HTT Tension Ties

The HTT22 is a single-piece formed tension tie—no rivets, and a 4-ply formed seat which won't unfold during loading. No washers required. The LTT19 Light Tension Tie is designed for 2x joists or purlins and the LTT20B is for nail- or bolt-on applications. The 3" nail spacing makes the LTT20B suitable for wood I-joists if 10dx1½" nails are substituted for the specified 16d's.

The LTT131 is designed for wood chord open web truss attachments to concrete or masonry walls.

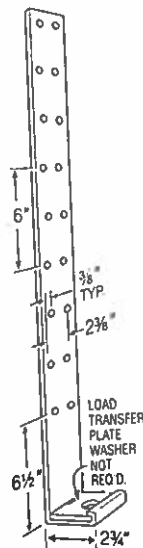
MATERIAL: See table

FINISH: Galvanized. May be ordered HDG; check factory.

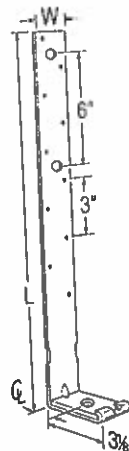
INSTALLATION: • Use all specified fasteners. See General Notes.

- Use the specified number and type of nails to attach the strap portion to the top or side of purlin or beam (minimum 4x width (2-2x4 or 4x4), except LTT19). Bolt the base to the wall or foundation with a suitable anchor; see table for the required bolt diameter.
- Do not install LTT and MTT tension ties raised.
- The HTT22 can be substituted for the MTT28B.
- See Epoxy-Tie Adhesive System, pages 29 for tested, load-rated epoxies for anchor bolt options.
- To tie double 2x members together, the designer must determine the fasteners required to bind members to act as one unit without splitting the wood.
- See Simpson Anchor Systems for tested, load-rated anchors and request T-ANCHORSPEC for more information.

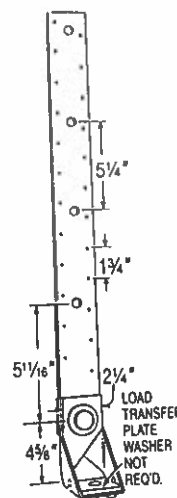
CODES: See page 12 for Code Listing Key Chart.



LTT131

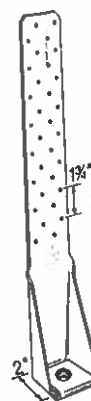


LTT20B



MTT28B

U.S. Patent
4,744,192



HTT22
(HTT16 similar)

U.S. Patent 5,467,570

Available with additional corrosion protection. Check with factory.

Available with additional corrosion protection. Check with factory.

Model No.	Material (Ga)		Dimensions			Seal Thickness	Fasteners				Allowable Tension Loads DF/SP				Allowable Tension Loads - SPF/HF		Deflection at Highest Allowable Design Load	Code Ref.
	Strap	Plate	W	L	C		Anchor Bolts	Nails	Bolts		(133)		(160)		(133)	(160)		
									Qty	Dia	Nails	Bolts	Nails	Bolts	Nails	Nails		
LTT19	16	3	1 3/4	19 1/8	1 1/8	3/16	3/4	8-16d Sinkers	—	—	1205	—	1350	—	1085	1305	0.107	2, 40, 82, 121
LTT20B ⁶	12	3	2	19 3/4	1 1/2	3/16	1/2, 3/8 or 3/4	10-16d	2	1/2	1750	1220	1750	1460	1675	1750	0.164	
LTT131	18	3	3 3/4	31	1 3/8	1/4	3/8	18-10dx1 1/2	—	—	2185	—	2310	—	1985	2310	0.125	6, 40, 82
HTT16	11	—	2 1/2	16	1 3/8	7/16	3/8	18-16d	—	—	3480	—	4175	—	3080	3695	0.037	30, 99, 122
HTT22	11	—	2 1/2	22	1 3/8	7/16	3/8	32-16d Sinkers	—	—	5250	—	5260	—	4670	5250	0.087	40, 97, 99, 122
MTT28B	12	7	2 1/8	27	1 1/2	3/8	3/8 or 3/4	24-16d	4	1/2	4455	2150	4455	2725	4140	4455	0.125	40, 122

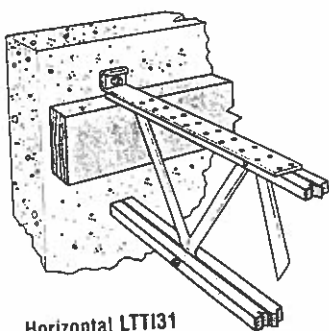
6. If a 1/2" or 3/4" anchor bolt is used for the LTT20B, add a standard cut washer to the seat. No

7. If a 1/2" or 3/4" anchor bolt is used for the LTT20B, add a standard cut washer to the seat. No

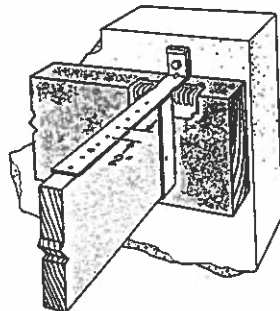
1. Allowable loads for HTT are based on the lower of the 2001 NDS fastener values or the ultimate load on a steel test jig divided by 2.5.
2. 16d sinkers (0.148" dia. x 3 3/4" long) or 10d commons may be substituted for the specified 16d commons at 0.85 of the table loads.
3. The Designer must specify anchor bolt type, length and embedment.
4. Allowable loads have been increased for earthquake or wind load durations with no further increase allowed; reduce where other load durations govern.
5. Bolt values are based on a minimum lumber thickness of 1 1/2".

6. If a 1/2" or 3/8" anchor bolt is used for the LTT20B, add a standard cut washer to the seat. No additional washer is required for a 3/4" anchor bolt. See table for appropriate anchor bolt sizes.
7. HTT22 holdown installed raised off the plate has a load of 5190 lbs. HTT16 installed raised off the plate will achieve the table loads.
8. Post design shall be by Designer.
9. NAILS 16d = 0.162" dia. x 3 1/2" long. 10dx1 1/2" = 0.148" dia. x 1 1/2" long. 16d sinker = 0.148" dia. x 3 3/4" long. See page 16-17 for other nail sizes and information.

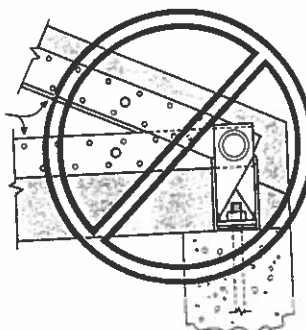
For holdowns, per ASTM test standards, anchor bolt nut should be finger-tight plus 1/8 to 1/2 turn with a hand wrench, with consideration given to possible future wood shrinkage. Care should be taken to not over-torque the nut. Impact wrenches should not be used.



Horizontal LTT131 Installation



Horizontal LTT19 Installation
(LTT20B similar)

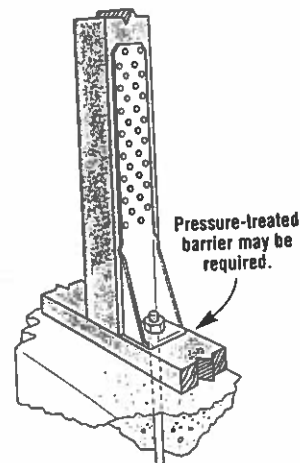


DO NOT MODIFY THE MTT28B.

Do not rotate the MTT28B's strap around the rivet.

The strap must be in line vertically with the body of the holddown to achieve table loads.

See Girder Tiedown Connectors on page 153 & 167 for installation solutions.



Vertical HTT22 Installation



Available with additional corrosion protection. Check with factory.

Model No.	Material		Dimensions							Fasteners		
	Base Ga	Body Ga	HB ⁴	SB	W	H	B	SO	CL	Anchor Dia ⁵	Stud Machine Bolts	
											Qty	Dia
HD2A	7	12	4 ⁹ / ₁₆	2 ¹ / ₂	2 ³ / ₄	8	2 ¹ / ₂	3 ¹ / ₂	1 ¹ / ₂	5/8	2	5/8
HD5A	3	10	5 ¹ / ₄	3	3 ¹ / ₂	9 ⁷ / ₁₆	3 ¹ / ₂	1 ¹ / ₂	2 ³ / ₁₆	5/8	2	3/4
HD6A	3/8	7	6 ³ / ₁₆	3 ¹ / ₂	3 ¹ / ₄	11 ¹ / ₁₆	3 ¹ / ₂	1 ¹ / ₂	2 ¹ / ₁₆	7/8	2	7/8
HD8A	3/8	7	6 ³ / ₁₆	3 ¹ / ₂	3 ¹ / ₄	14 ⁹ / ₁₆	3 ¹ / ₂	1 ¹ / ₂	2 ¹ / ₁₆	7/8	3	7/8
HD10A	3/8	7	6 ³ / ₁₆	3 ¹ / ₂	3 ¹ / ₄	18 ¹ / ₁₆	3 ¹ / ₂	1 ¹ / ₂	2 ¹ / ₁₆	7/8	4	7/8
HD14A	3/8	3	7	4	3 ¹ / ₂	20 ⁹ / ₁₆	3 ¹ / ₂	1 ¹ / ₂	2 ³ / ₁₆	1	4	1
HD15	3/8	3	7	4	3 ¹ / ₂	24 ¹ / ₂	4 ⁷ / ₁₆	3 ¹ / ₂	2 ¹ / ₂	1 ¹ / ₄	5	1

See notes below.

See notes below.

Model No.	Allowable Tension Loads DF/SP (133/160)						Allowable Tension Loads SPF/HF (133/160)						Holdown ⁹ Deflection at Highest Allowable Design Load	Holdown ⁹ Deflection at Highest Allowable Design Load Raised	Code Ref.
	Wood Member Thickness						Wood Member Thickness								
	1½	2	2½	3	3½	5½	1½	2	2½	3	3½	5½			
HD2A	1555	2055	2565	2775	2775	2760	1320	1740	2165	2570	2565	2550	0.058	0.077	40, 105, 122
HD5A	1870	2485	3095	3705	4010	3980	1585	2110	2625	3130	3645	3680	0.067	0.117	
HD6A	2275	2980	3685	4405	5105	5510	1870	2470	3065	3680	4280	5020	0.041	0.125	
HD8A	3220	4350	5415	6465	7460	7910	2710	3655	4530	5480	6350	7330	0.111	0.121	
HD10A	3945	5540	6935	8310	9540	9900	3275	4600	5745	7045	8160	9195	0.269	0.269	
HD14A	—	—	—	—	11080	13380	—	—	—	—	9495	12485	0.215	0.282	
HD15	—	—	—	—	—	15305	—	—	—	—	—	13810	0.082	0.082	

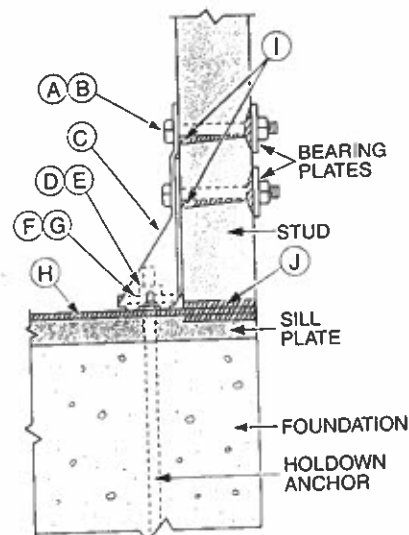
9 See notes below and other important information

1. Allowable loads have been increased for earthquake or wind load durations with no further increase allowed; reduce where other load durations govern.
2. HD15 requires a minimum 4x8 (in a 3¹/₂" wide shearwall) or a 6x6 nominal post to ensure the tension load carrying capacity of the critical net section meets the holdown capacity.
3. Use a minimum 4x6 nominal post for the HD14A. Minimum post size is required to ensure the tension load carrying capacity of the critical net section meets the holdown capacity.
4. HB is the required minimum distance from the end of the stud to the center of the first stud bolt hole. End distance may be increased as necessary for installation.
5. The designer must specify anchor bolt type, length and embedment.
See SSTB Anchor Bolts (page 33-34) and Additional Anchor Designs (page 34).
6. See page 21 and 29 for anchor bolt retrofit.
7. Lag bolts will not develop the listed loads.

8. See page 13-15 for testing and other important information.
9. Deflection at Highest Allowable Design Load:
The deflection of a holdown measured between the anchor bolt and the strap portion of the holdown when loaded to the highest allowable load listed in the catalog table. This movement is strictly due to the holdown deformation under a static load test conducted on a steel jig. All other sources of deflection shall be in addition.
10. When using structural composite lumber columns, bolts must be applied to the wide face of the column.
11. The Designer shall reduce the allowable loads shown per NDS requirements when bolt threads are in the shear plane.
12. HDA and HD allowable loads are based on the lower of the 2001 NDS fastener values or the ultimate load on a steel test jig divided by 2.5.
13. Post design shall be by Designer.

SOURCES OF DEFLECTION AT SHEARWALL HOLDOWN CONNECTIONS

- A. Bolt slip can occur at holdown stud bolts.
- B. Increased bolt slip can occur if oversized holes are drilled through the stud for holdown stud bolts (oversized holes are when the hole diameter is greater than the bolt diameter plus 1/16" per 2001 NDS 11.1.2).
- C. When a holdown is installed on only one side of the stud, an eccentricity exists during loading which can cause more movement in the shearwall system.
- D. Unrestrained anchor bolt nuts can spin loose during cyclic loading; using steel nylon locking nuts or thread adhesive may prevent nut spin.
- E. Movement can occur when nuts are not tightened enough. Retightening bolts before covering wall may prevent this.
- F. Deflection can occur in the holdown under load caused by stresses due to earthquake or high wind.
- G. Lateral displacement at the top of the wall rotates the stud around its base causing the holdown base plate to displace vertically.
- H. Wood shrinkage can occur due to drying of the sill plate, rim joist, and/or top plate; nuts may require retightening.
- I. Uplift forces on the bolts can cause localized wood crushing at bolt bearing locations. Using larger bearing plates may prevent this.
- J. Wood at the end of the studs (sill plates, rim joists, etc.) may crush under normal dead and live loading; additional compressive forces due to overturning during earthquake and high wind loads add to the deflection.



BP's are required by the City of Los Angeles. Check with your local building code on usage. (NDS Section 11.1.2.3 requires a metal plate, metal strap, or minimum of a standard cut washer.)

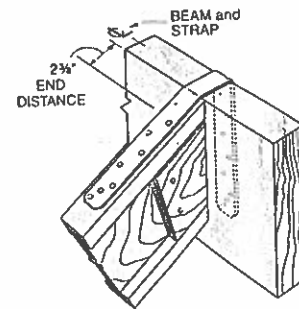
(A) (B) and (F) do not apply to the PHD and HDQ.

CODES: See page 12 for Code Listing Key Chart.

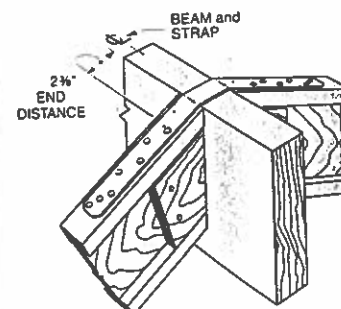
Available with additional corrosion protection. Check with factory.

Model No.	Ga	Dimensions		Fasteners (Total)	Allowable Tension Loads (DF/SP)		Allowable Tension Loads (SPF/HF)		Code Ref.
		W	L		(133)	(160)	(133)	(160)	
LSTA9	20	1 1/4	9	8-10d	645	775	555	665	7, 62, 90, 128
LSTA12		1 1/4	12	10-10d	805	970	695	830	
LSTA15		1 1/4	15	12-10d	970	1160	830	1000	
LSTA18		1 1/4	18	14-10d	1130	1235	970	1165	
LSTA21		1 1/4	21	16-10d	1235	1235	1110	1235	
LSTA24	20	1 1/4	24	18-10d	1235	1235	1235	1235	3, 39, 88, 104, 121, 128
ST292		2 1/16	9 5/16	12-16d	1120	1265	970	1160	
ST2122		2 1/16	12 13/16	16-16d	1505	1535	1290	1535	
ST2115		3/4	16 5/16	8-16d	665	665	665	665	
ST2215		2 1/16	16 5/16	20-16d	1880	1880	1625	1880	
LSTA30	18	1 1/4	30	22-10d	1640	1640	1555	1640	7, 62, 90, 128
LSTA36		1 1/4	36	24-10d	1640	1640	1640	1640	
LSTI49		3 3/4	49	32-10dx1 1/2	2580	3100	2220	2660	
LSTI73		3 3/4	73	48-10dx1 1/2	3870	4215	3330	3995	
MSTA9		1 1/4	9	8-10d	650	780	565	680	
MSTA12	18	1 1/4	12	10-10d	815	975	705	850	7, 62, 90, 123, 128
MSTA15		1 1/4	15	12-10d	975	1170	850	1020	
MSTA18		1 1/4	18	14-10d	1140	1365	990	1185	
MSTA21		1 1/4	21	16-10d	1300	1560	1130	1355	
MSTA24		1 1/4	24	18-10d	1465	1640	1270	1525	
MSTA30	18	1 1/4	30	22-10d	1835	2050	1585	1900	7, 62, 90, 128
MSTA36		1 1/4	36	26-10d	2050	2050	1870	2050	
ST6215		2 1/16	16 5/16	20-16d	1895	2095	1640	1970	
ST6224		2 1/16	23 5/16	28-16d	2540	2540	2315	2540	
ST9		1 1/4	9	8-16d	755	910	655	785	
ST12	16	1 1/4	11 5/8	10-16d	945	1135	820	985	3, 39, 88, 121, 128
ST18		1 1/4	17 3/4	14-16d	1325	1420	1150	1380	
ST22		1 1/4	21 5/8	18-16d	1420	1420	1420	1420	
MSTC28		3	28 1/4	36-16d sinkers	3000	3600	2590	3110	
MSTC40		3	40 1/4	52-16d sinkers	4335	4585	3745	4495	
MSTC52	14	3	52 1/4	62-16d sinkers	4585	4585	4465	4585	9, 23, 128
MSTC66		3	65 3/4	76-16d sinkers	5660	5660	5660	5660	
MSTC78		3	77 3/4	76-16d sinkers	5660	5660	5660	5660	
ST6236		2 1/16	33 13/16	40-16d	3845	3845	3465	3845	
HRS6		1 3/8	6	6-10d	525	630	455	545	
HRS8	12	1 3/8	8	10-10d	875	1050	760	910	128
HRS12		1 3/8	12	14-10d	1225	1465	1065	1275	
FHA6		1 1/16	6 3/8	8-16d	810	975	705	845	
FHA9		1 1/16	9	8-16d	810	975	705	845	
FHA12		1 1/16	11 5/8	8-16d	810	975	705	845	
FHA18	12	1 1/16	17 3/4	8-16d	810	975	705	845	3, 39, 88, 121, 128
FHA24		1 1/16	23 3/8	8-16d	810	975	705	845	
FHA30		1 1/16	30	8-16d	810	975	705	845	
MSTI26		2 1/16	26	26-10dx1 1/2	2355	2830	2045	2455	
MSTI36		2 1/16	36	36-10dx1 1/2	3265	3915	2830	3400	
MSTI48	12	2 1/16	48	48-10dx1 1/2	4350	5080	3775	4530	3, 39, 88, 121, 128
MSTI60		2 1/16	60	60-10dx1 1/2	5080	5080	4720	5080	
MSTI72		2 1/16	72	64-10dx1 1/2	5080	5080	5080	5080	

1. Loads include a 33% or 60% load duration increase on the fasteners for earthquake or wind loading, but DO NOT include a 33% stress increase on the steel capacity. Refer to page 13 for further explanation.
2. 10dx1 1/2" nails may be substituted where 16d sinkers are specified at of the table loads.
3. 10d commons may be substituted where 16d sinkers are specified at 100% of table loads.
4. 16d sinkers or 10d commons may be substituted where 16d commons are specified at 0.85 of the table loads.
5. Use half of the nails in each member being connected to achieve the listed loads.
6. PS strap design loads must be determined by the for each installation. Bolts are installed both perpendicular and parallel-to-grain. Hole diameter in the part may be oversized to accommodate the HDG. Designer must determine if the oversize creates an unacceptable installation.
7. For overlap splice details, refer to T-CMST.

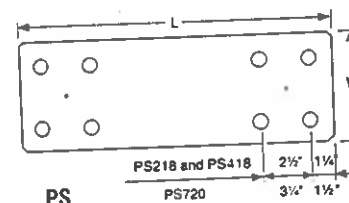


Typical LSTA Installation
(hanger not shown)

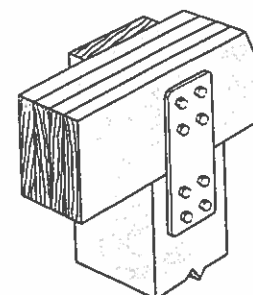


Typical LSTA Installation
(hanger not shown)

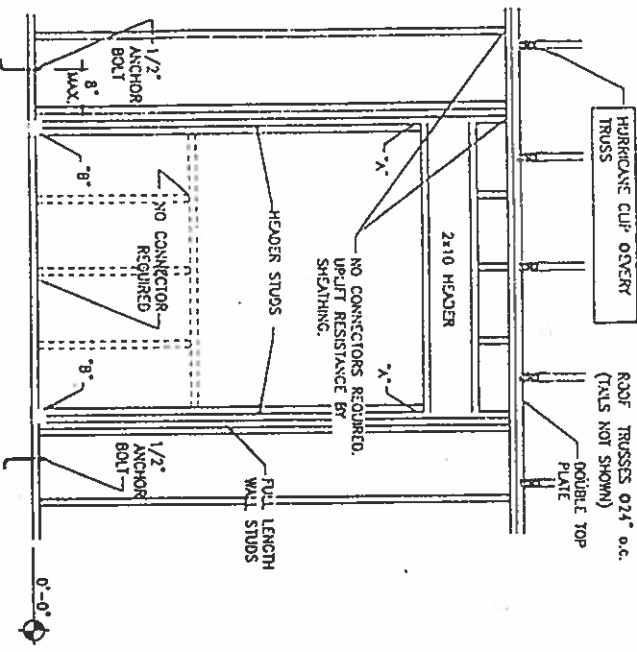
Model No.	Material Thickness mil (ga)	Dim.		Bolts Qty Dia	Code Ref.
		W	L		
PS218 [®]	171 mil (7 ga)	2	18	4	180
PS418 [®]		4	18	4	
PS720 [®]		6 3/4	20	8 1/2	



PS



Typical PS720 Installation



OPENING FRAMING DETAIL

CONNECTOR SELECTION

SPAN	12'	12'	ANCHOR BOLTS
9'-0" AND UNDER	(1) LSTA24	(1) SP4	(1) EACH END
OVER 9'-0"	(2) LSTA24	(2) SP4	(1) EACH END

• USE SP6 ON 2X6 WALLS

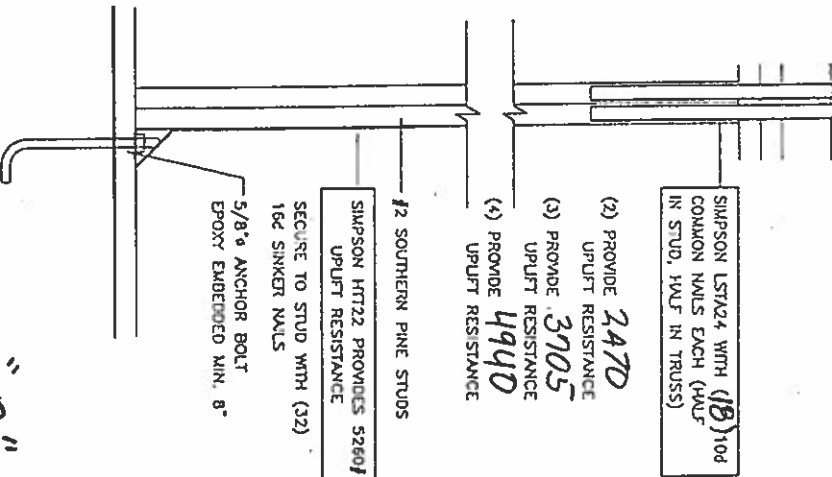
NOTES:

- CONNECTORS INDICATED ARE BY SIMPSON STRONG TIE CO., INC. PRE-APPROVED EQUAL MAY BE USED.
- STANDARD WALL HEIGHT SHOWN. WALL HEIGHT MAY VARY. ADJUST HEAD AND SILL HEIGHT WITH CRIPPLES AS REQUIRED.
- REFER TO HEADER HOLD DOWN CHART FOR NUMBER OF FULL-LENGTH AND HEADER STUDS REQUIRED FOR DIFFERENT OPENING WIDTHS.
- SHEAR AND UPLIFT RESISTANCE PROVIDED BY SHEATHING. REFER TO STRUCTURAL ENGINEER'S NOTES ON THIS SHEET.

HEADER HOLD DOWNS

UNSUPPORTED WALL HEIGHT	STUD SPACING	MAXIMUM HEADER SPAN (ft.)							
		3	6	9	12	15	18	NUMBER OF FULL-LENGTH STUDS SUPPORTING END OF HEADER	
10'-0" OR LESS	12 in.	2	2	2	3	3	3	3	3
	16 in.	2	2	2	3	3	3	2	2
	24 in.	1	2	2	2	2	2	2	2
GREATER THAN 10'-0"	12 in.	2	2	2	3	4	5	5	5
	16 in.	2	2	2	3	3	4	4	4
	24 in.	1	2	2	2	2	3	3	3

HOLD DOWN DETAIL "A"





COLUMBIA COUNTY FLORIDA DEPARTMENT OF BUILDING AND ZONING OCCUPANCY

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

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

Parcel Number 33-6S-17-09834-118

Building permit No. 000023724

Use Classification SFD, UTILITY

Fire: 16.52

Permit Holder MARCUS PROM/BUILD NOW CORP.

Waste: 24.50

Owner of Building ED HOWARD

Total: 41.02

Location: 1052 SW OLD LAKE CITY TERR(RUMPH FARMS, LOT 18)

Date: 08/03/2006

Building Inspector



POST IN A CONSPICUOUS PLACE
(Business Places Only)

FAP TO

GAIL TEDDER
COLUMBIA COUNTY BUILDING & ZONING

(386) 758-2160

REGARDING NEWLY COMPLETED SINGLE FAMILY RESIDENCE 1052 OLD
LAKE CITY TERRACE.

HEREBY REQUEST THAT COLUMBIA COUNTY RELEASE CERTIFICATE OF
OCCUPANCY TO ED & LAQUAE HOWARD, OWNERS.

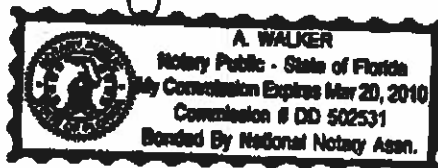
SINCERELY,

MARCUS PROM, PRES , BUILD NOW CORP, CGC 017065
(904) 858 3326

Marcus J. Prom

Personally Known ☒
Type of Identification Producer

[Signature]



State of Florida
County of Duval
Date - 08 04 - 2006

#23724

PRE-TREATMENT JOB WORK ORDER

Permit # 23724

JOB NAME

LOT 1052 BLOCK Old Lake City Terrace SUBDIVISION High Springs

JOB ADDRESS / CITY, STATE

Marcus Prom

BUILDER NAME

2951 Anniston Rd Jek. FL 32246

BUILDER ADDRESS / CITY, STATE

904-858-3326

TERMITICIDE USED:

Prevail Ft

2900

CIRCLE ONE:

COMMERCIAL

RESIDENTIAL

TYPE OF SLAB:

DIRT FILL

MONOLITHIC

SQUARE FOOTAGE:

2930

LINEAR FOOTAGE:

CONCENTRATION:

0.57

VOLUME:

TOTAL GALLONS OF SOLUTIONS APPLIED:

147

APPLICATION TYPE:

Pressure spray

TYPE OF TREATMENT:

Pre-treat

JOB SITE PHONE#

Marcus 237-6101

DIRECTIONS

Lake City S on 441 to I-75 - then
S of 75 to Hwy 18 go (R) S go (L) to
Old Lake City Term.

Comb # 8700

Total Amount Due for Above Work Order

\$ 293.00

Turner Pest Control, Inc.

Representative

Date

11/17/05

Time

7:15
7:00

I hereby acknowledge the
Order of the above described work

Owner / Agent

Date

11/18/05

FORM#MO6307

DATE

TIME

LOCATION

WIND DIRECTION

WIND SPEED

TEMPERATURE

RELATIVE HUMIDITY

SEA STATE

WAVE PERIOD

WAVE DIRECTION

WAVE HEIGHT

WAVE LENGTH

WAVE PERIOD

WAVE DIRECTION

WAVE HEIGHT

WAVE LENGTH

WAVE PERIOD

WAVE DIRECTION

WAVE HEIGHT

WAVE LENGTH

WAVE PERIOD

WAVE DIRECTION