DATE 02/25/2009

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT
000027659

APPLICANT JACK KNAPP PHONE 941.751.6981

ADDRESS 517 65TH AVENUE FL 34203

OWNER JACK KNAPP & SUZANNE EMOND PHONE 941.751.6981

ADDRESS 17834 N US HWY 441 WHITE SPRINGS FL 32096

CONTRACTOR JACK KNAPP PHONE 941.751.6981

LOCATION OF PROPERTY 441-N TO 12 TO 14 MILES N OF I-10 TO 1ST. DRIVEWAY ON OPPOSITE SIDE OF FRANK JAMES ROAD.

TYPE DEVELOPMENT SFD/UTILITY ESTIMATED COST OF CONSTRUCTION 152800.00

HEATED FLOOR AREA 1680.00 TOTAL AREA 3056.00 HEIGHT 18.00 STORIES 1

FOUNDATION CONC WALLS LOG/FRAMED ROOF PITCH 7'12 FLOOR CONC

LAND USE & ZONING A-1 MAX. HEIGHT 35

Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00

NO. EX.D.U. 0 FLOOD ZONE X DEVELOPMENT PERMIT NO.

PARCEL ID 31-1N-17-04460-102 SUBDIVISION

LOT BLOCK PHASE UNIT TOTAL ACRES 20.50

Culvert Permit No.	Culvert Waiver	Contractor's License Number	Applicant/Owner/Contractor
			Jack Knapp

Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident
FDOT-APPROVED	08-0535	BLK	RTJ	Y

COMMENTS: NOC ON FILE. FINISH FLOOR ELEVATION LETTER SUBMITTED. ELEVATION CONFIRMATION LETTER REQUIRED @ SLAB. MFE @ 102.0'

3681608

Check # or Cash CASHIERS CHECK

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power _____ date/app. by

Foundation _____ date/app. by

Monolithic _____ date/app. by

Under slab rough-in plumbing _____ date/app. by

Slab _____ date/app. by

Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by

Rough-in plumbing above slab and below wood floor _____ date/app. by

Electrical rough-in _____ date/app. by

Heat & Air Duct _____ date/app. by

Peri. beam (Lintel) _____ date/app. by

Permanent power _____ date/app. by

C.O. Final _____ date/app. by

Culvert _____ date/app. by

M/H tie downs, blocking, electricity and plumbing _____ date/app. by

Pool _____ date/app. by

Reconnection _____ date/app. by

Pump pole _____ date/app. by

Utility Pole _____ date/app. by

M/H Pole _____ date/app. by

Travel Trailer _____ date/app. by

Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 765.00 CERTIFICATION FEE $ 15.28 SURCHARGE FEE $ 15.28

MISC. FEES $ 0.00 ZONING CERT. FEE $ 50.00 FIRE FEE $ 0.00 WASTE FEE $

FLOOD DEVELOPMENT FEE $ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 870.56

INSPECTORS OFFICE _____ CLERKS OFFICE CH

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."

EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS THE WORK AUTHORIZED BY SUCH PERMIT IS COMMENCED WITHIN 180 DAYS AFTER ITS ISSUANCE, OR IF THE WORK AUTHORIZED BY SUCH PERMIT IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AFTER THE TIME THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED NOT SUSPENDED, ABANDONED OR INVALID WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS OT THE PREVIOUS INSPECTION.

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

Columbia County Building Permit Application

For Office Use Only Application # 0902-07 Date Received 2/5 By JW Permit # 27659

Zoning Official BLK Date 09.02.09 Flood Zone X Land Use A-1 Zoning A-1

FEMA Map # N/A Elevation N/A MFE, ★ 102' River N/A Plans Examiner ## Date 2/25/09

Comments ★ Finish Floor Elevation Letter submitted, Elevation confirmation Letter Required at slab

NOC ☑ EH ☑ Deed or PA ☐ Site Plan ☑ State Road Info on file ☐ Parent Parcel #

☐ Dev Permit # ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter verbal from Dale Cuny 2-10-09

IMPACT FEES: EMS $29.88 Fire $78.63 Corr $409.16 Road/Code $1,046.00 /210

School $1,500.00 = TOTAL 3,063.67 - CASHIER CHECK

Septic Permit No. 08-0535 Fax 941-751-6981

Name Authorized Person Signing Permit JACK KNAPP Phone 941-751-6981

Address 517 65th AVE EAST BRADENTON FLA 34203

Owners Name JACK KNAPP & SUSANNE EMOND Phone 941-751-6981

911 Address 17834 N US HIGHWAY 441 WHITE SPRINGS FL 32096

Contractors Name JACK KNAPP Phone 941-751-6981

Address 517 65th AVE EAST BRADENTON FL 34203

Fee Simple Owner Name & Address 941-704-1727

Bonding Co. Name & Address NONE

Architect/Engineer Name & Address GARY J. GILL, AE 51942 P.O. Box 187, 130 WEST HOLLAND ST. LIVE OAK FL 32064

Mortgage Lenders Name & Address NONE

Circle the correct power company – FL Power & Light – Clay Elec. – (Suwannee Valley Elec.) – Progress Energy

Property ID Number 04/60-102 31-1N-17 Estimated Cost of Construction $100,000.00

Subdivision Name NONE Lot — Block — Unit — Phase —

Driving Directions US 441 NORTH, 12-14 MILES NORTH OF I-10, FIRST DRIVEWAY OPPOSITE OF FRANK JAMES ROAD

Number of Existing Dwellings on Property NONE

Construction of LOG HOME Total Acreage 20.5 Lot Size —

Do you need a - Culvert Permit or Culvert Waiver or (Have an Existing Drive) Total Building Height 18'

Actual Distance of Structure from Property Lines - Front 323' Side 353' Side 600' Rear 700'

Number of Stories 1 Heated Floor Area 1680 sq FT Total Floor Area 1680 sq FT (3056) Roof Pitch 12-7

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.

Columbia County Building Permit Application

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

FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment

According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:

YOU ARE HEREBY NOTIFIED as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

OWNERS CERTIFICATION: 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. I further understand the above written responsibilities in Columbia County for obtaining this Building Permit.

Jack Knapp

Owners Signature

CONTRACTORS AFFIDAVIT: By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit.

Contractor's Signature (Permitee)

Contractor's License Number_____
Columbia County
Competency Card Number_____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this ____ day of _____ 20___.

Personally known_____ or Produced Identification_____

SEAL:

State of Florida Notary Signature (For the Contractor)

COLUMBIA COUNTY 9-1-1 ADDRESSING

P. O. Box 1787, Lake City, FL 32056-1787
PHONE: (386) 758-1125 * FAX: (386) 758-1365 * Email: ron_croft@columbiacountyfla.com

Addressing Maintenance

To maintain the Countywide Addressing Policy you must make application for a 9-1-1 Address at the time you apply for a building permit. The established standards for assigning and posting numbers to all principal buildings, dwellings, businesses and industries are contained in Columbia County Ordinance 2001-9. The addressing system is to enable Emergency Service Agencies to locate you in an emergency, and to assist the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Columbia County.

DATE REQUESTED: 6/1/2008 **DATE ISSUED:** 6/4/2008

ENHANCED 9-1-1 ADDRESS:

17834 N US HIGHWAY 441

WHITE SPRINGS FL 32096

PROPERTY APPRAISER PARCEL NUMBER:

31-1N-17-04460-102

Remarks:

AKA PARCEL "B", PAUL BRYAN UNR S/D

Address Issued By: _____

Columbia County 9-1-1 Addressing / GIS Department

NOTICE: THIS ADDRESS WAS ISSUED BASED ON LOCATION INFORMATION RECEIVED FROM THE REQUESTER. SHOULD, AT A LATER DATE, THE LOCATION INFORMATION BE FOUND TO BE IN ERROR, THIS ADDRESS IS SUBJECT TO CHANGE.

1212

BOARD OF COUNTY COMMISSIONERS
OFFICE OF

BUILDING & ZONING

COLUMBIA COUNTY, FLORIDA

BUILDING PERMIT RECEIPT

RECEIPT NUMBER / PERMIT NUMBER 000028452 DATE 03/26/2010

APPLICANT JACK KNAPP

OWNER JACK KNAPP & SUZANNE EMOND

CONTRACTOR JACK KNAPP

PARCEL ID NUMBER 31-1N-17-04460-102 NUMBER OF EXISTING DWELLINGS 0

TYPE OF DEVELOPMENT RE-NEWALL OF 27659

COMMENTS: FINISH FLOOR ELEVATION LETTER SUBMITTED, ELEVATION CONFIRMATION LETTER RECEIVED @ SLAB. MIN FLOOR ELEVATION @ 102.0', COMPACTION TEST REC'D, RENEWALL OF (180 DAY) EXPIRED PERMIT #28452 27659

FEES:

BUILDING PERMIT	0.00	CERTIFICATION FEE	0.00
ZONING FEE		SURCHARGE FEE	0.00
FLOOD ZONE FEE		FLOOD DEVELOPMENT PERMIT	
MOBILE HOME PERMIT		RELOCATION PERMIT	
TRAVEL TRAILER PERMIT		RE-NEWALL PERMIT	573.75
UTILITY POLE PERMIT		WASTE ASSESSMENT FEE	
FIRE FEE (5 ACRES OR LESS)		CULVERT PERMIT	
FIRE FEE (MORE THAN 5 ACRES)			

CHECK NUMBER 3825608 **TOTAL FEES CHARGES 573.75**

MAKE CHECKS PAYABLE TO: BCC (Board of County Commissioners)

NOTE: A SEPARATE CHECK IS REQUIRED FOR THE CULVERT WAIVER PERMITS

135 NE HERNANDO AVE.
SUITE B-21
LAKE CITY, FL 32055
Phone: 386-758-1008
Fax: 386-758-2160

NOTICE OF COMMENCEMENT

Inst:200812019863 Date:10/31/2008 Time:10:59 AM
DC,P.DeWitt Cason,Columbia County Page 1 of 1 B:1161 P:967

Tax Parcel Identification Number 31-1N-17-04460-102

THE UNDERSIGNED hereby gives notice that improvements will be made to certain real property, and in accordance with Section 713.13 of the Florida Statutes, the following information is provided in this NOTICE OF COMMENCEMENT.

1. Description of property *(legal description)*: SECTION 31 TOWNSHIP 1 NORTH, RANGE 17 EAST AND WESTERLY
   a) Street *(job)* Address: RIGHT-OF-WAY LINE OF US 441
2. General description of improvements: LOG HOME
3. Owner Information
   a) Name and address: JACK KNAPP 517 65th AVE, EAST BRADENTON FLA 34203
   b) Name and address of fee simple titleholder (if other than owner)
   c) Interest in property OWNER
4. Contractor Information
   a) Name and address: JACK KNAPP 517 65th AVE EAST BRADENTON FLA 34203
   b) Telephone No.: 941-751-6981 (941-704-1727) Fax No. (Opt.) 941-751-6981
5. Surety Information
   a) Name and address:
   b) Amount of Bond:
   c) Telephone No.: Fax No. (Opt.)
6. Lender
   a) Name and address:
   b) Phone No.
7. Identity of person within the State of Florida designated by owner upon whom notices or other documents may be served:
   a) Name and address: SUSANNE KNOND 517 65th AVE EAST BRADENTON FLA 34203
   b) Telephone No.: 941-751-6981 (941-704-1729) Fax No. (Opt.) 941-751-6981
8. In addition to himself, owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b) Florida Statutes:
   a) Name and address: SUSANNE KNOND 517 65th AVE EAST BRADENTON FLA 34203
   b) Telephone No.: 941-751-6981 = 941-704-1773 Fax No. (Opt.) 941-751-6981
9. Expiration date of Notice of Commencement (the expiration date is one year from the date of recording unless a different date is specified):

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

STATE OF FLORIDA
COUNTY OF COLUMBIA

10. Jack Knapp
Signature of Owner or Owner's Authorized Office/Director/Partner/Manager

JACK KNAPP
Print Name

The foregoing instrument was acknowledged before me, a Florida Notary, this 18 day of October, 2008, by:

as (type of authority, e.g. officer, trustee, attorney fact) for Jack Knapp (name of party on behalf of whom instrument was executed).

Personally Known ___ OR Produced Identification ✓ Type FL DL

Notary Signature Cassie Green

Notary Stamp or Seal:

CASSIE GREEN
Notary Public, State of Florida
Commission# DD422303
My comm. expires April 25, 2009

—AND—

11. Verification pursuant to Section 92.525, Florida Statutes. Under penalties of perjury, I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

Signature of Natural Person Signing (in line #10 above.)

27659

Land Surveyors
and Mappers

BRITT SURVEYING & ASSOCIATES

830 West Duval Street • Lake City, FL 32055
Phone (386) 752-7163 • Fax (386) 752-5573

03/23/09

L-19809

To Whom It May Concern:

C/o: Jack Knapp

Re: 31-1N-17-04460-102

The elevation of the proposed building site is 105.30 feet. The design finished floor elevation according to the building permit is 102.00 feet NGVD 29. The Conversion to the NAVD 88 datum is –0.77 feet; therefore the NAVD 88 finished floor elevation is 101.23 feet. The benchmarks utilized for this project are based on the Florida Department of Transportations NGVD 29 datum for reference mark 2997B09 and 2997B011. A benchmark was set near the proposed home site in a 4" pine tree at an elevation of 106.23 feet NAVD 88. See the attached sheet for the conversion data from NGVD to NAVD.

L. Scott Britt
PLS #5757

Britt Surveying Associates, Inc.

L-19809

24 March 2009

INPUT	OUTPUT
Geographic, NAD83 Vertical - NGVD29 (Vertcon94), U.S. Feet	Geographic, NAD83 Vertical - NAVD88, U.S. Feet

Latitude: 30 09.567	**Latitude:** 30 09 34.02000
Longitude: 82 46.417	**Longitude:** 82 46 25.02000
Elevation/Z: 111.15	**Elevation/Z:** 110.376

Remark: Conversion of FDOT BM 2997B09

COLUMBIA COUNTY BUILDING DEPARTMENT
135 NE Hernando Ave., Suite B-21
Lake City, FL 32055
Office: 386-758-1008 Fax: 386-758-2160

NOTARIZED DISCLOSURE STATEMENT
FOR OWNER/BUILDER WHEN ACTING AS THER OWN CONTRACTOR AND CLAIMING EXEMPTION OF CONTRACTOR LICENSING REQUIREMENTS IN ACCORDANCE WITH FLORIDA STATUTES, ss. 489.103(7).

State law requires construction to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own contractor with certain restrictions even though you do not have a license. You must provide direct, onsite supervision of the construction yourself. You may build or improve a one-family or two-family residence or a farm outbuilding. You may also build or improve a commercial building, provided your costs do not exceed $75,000. The building or residence must be for your own use or occupancy. It may not be built or substantially improved for sale or lease. If you sell or lease a building you have built or substantially improved for yourself within 1 year after the construction is complete, the law will presume that you built or substantially improved it for sale or lease, which is a violation of this exemption. You may not hire an unlicensed person to act as your contractor or to supervise people working on your building. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. You may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on your building who is not licensed must work under your direct supervision and must be employed by you, which means that you must deduct F .I.C.A. and withholding tax and provide workers' compensation for that employee, all as prescribed by law. Your construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.

I understand that if I am not physically doing the work or physically supervising free labor from friends or relatives, that I must hire licensed contractors, i.e. electrician, plumber, mechanical (heating & air conditioning), etc. I further understand that the violation of not physically doing the work, and the use of unlicensed contractors at the construction site, will cause the project to be shut down by the inspection staff of the Columbia County Building Department. Additionally, state statutes allows for additional penalties. I also understand that if this violation does occur, that in order for the job to proceed, I will have a licensed contractor come in and obtain a new permit as taking the job over. I understand that if I hire subcontractors under a contract price, that they must be licensed to work in Columbia County, i.e. masonry, drywall, carpentry. Contractors licensed by the Columbia County Contractor Licensing Section or the State of Florida are required to have worker's compensation and liability coverage.

TYPE OF CONSTRUCTION

(✓) Single Family Dwelling ( ) Two-Family Residence ( ) Farm Outbuilding
( ) Other_____ ( ) Addition, Alteration, Modification or other Improvement

I JACK KNAPP, have been advised of the above disclosure statement for exemption from contractor licensing as an owner/builder. I agree to comply with all requirements provided for in Florida Statutes ss.489.103(7) allowing this exception for the construction permitted by Columbia County Building Permit Number _____

Jack Knapp
Owner Builder Signature Date

FLORIDA NOTARY
LAURIE HODSON
MY COMMISSION # DD 805657
EXPIRES: July 14, 2012
Bonded Thru Notary Public Underwriters

The above signer is personally known to me or produced identification DL K510-421-63-188-0

Notary Signature Laurie Hodson Date 2-5-09

FOR BUILDING DEPARTMENT USE ONLY
I hereby certify that the above listed owner/builder has been notified of the disclosure statement in Florida Statutes ss 489.103(7). Date 2.5.09 Building Official/Representative

Columbia County Property Appraiser

DB Last Updated: 1/12/2009

2008 Tax Year

Tax Record | Property Card | Interactive GIS Map | Print

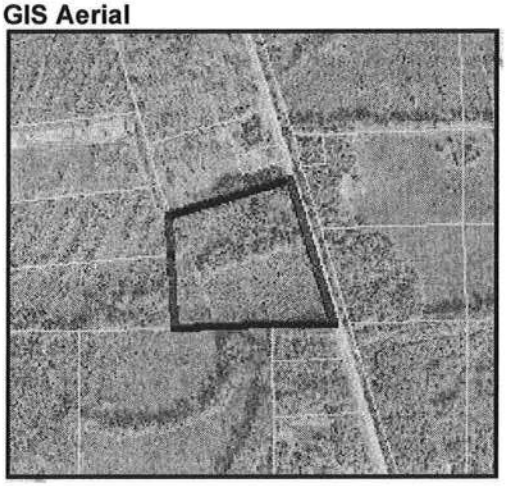
Parcel: 31-1N-17-04460-102

Search Result: 1 of 1

Owner & Property Info

Owner's Name	KNAPP JACK A & SUSANNE EMOND		
Site Address			
Mailing Address	(JTWRS) 517 65TH AVE EAST BRADENTON, FL 34203		
Use Desc. (code)	TIMBERLAND (005500)		
Neighborhood	3117.01	**Tax District**	3
UD Codes	MKTA03	**Market Area**	03
Total Land Area	20.010 ACRES		
Description	COMM AT INTERS OF N LINE OF S1/2 OF N1/2 WITH W R/W OF U S HWY 441, RUN SE 1123.23 FT, SW 871.22 FT, SE 1999.33 FT TO POB, NE 871.01 FT TO W R/W OF U S HWY 441, SE ALONG R/W 1036.14 FT, W 1092.89 FT, N 769.54 FT TO POB AKA PARCEL "B", PAUL BRYAN UNR S/D ORB 1041-1854 & ORB 1041-1856		

GIS Aerial



Property & Assessment Values

Mkt Land Value	cnt: (1)	$12,850.00
Ag Land Value	cnt: (1)	$3,570.00
Building Value	cnt: (0)	$0.00
XFOB Value	cnt: (0)	$0.00
Total Appraised Value		$16,420.00

Just Value	$51,325.00
Class Value	$16,420.00
Assessed Value	$16,420.00
Exempt Value	$0.00
Total Taxable Value	$16,420.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale VImp	Sale Qual	Sale RCode	Sale Price
3/18/2005	1041/1856	WD	V	Q		$62,000.00
3/18/2005	1041/1854	WD	V	U	08	$34,000.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
NONE						

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
NONE						

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
005500	TIMBER 2 (AG)	15.000 AC	1.00/1.00/1.00/1.00	$238.00	$3,570.00
009910	MKT.VAL.AG (MKT)	15.000 AC	1.00/1.00/1.00/1.00	$0.00	$38,475.00

Inst:2005007033 Date:03/28/2005 Time:12:59
Doc Stamp-Mort : 162.75
Intang. Tax : 93.00
DC,P.DeWitt Cason,Columbia County B:1041 P:1865

05Y-03039KW

Exhibit A

PARCEL B
A PARCEL OF LAND LYING, BEING AND SITUATE IN SECTION 31, TOWNSHIP 1 NORTH, RANGE 17 EAST, COLUMBIA COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCE AT THE INTERSECTION OF THE NORTH LINE OF THE SOUTH ½ OF NORTH ½ OF SAID SECTION 31, WITH THE WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441, AND RUN SOUTH 17°09'50" EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441, A DISTANCE OF 1122.23 FEET TO A FOUND CONCRETE MONUMENT; THENCE RUN SOUTH 72°50'02" WEST A DISTANCE OF 871.22 FEET TO A FOUND CONCRETE MONUMENT; THENCE RUN SOUTH 17°10'12" EAST A DISTANCE OF 1999.33 FEET TO A FOUND CONCRETE MONUMENT AND THE POINT OF BEGINNING OF THE HEREINAFTER DESCRIBED PARCEL OF LAND; THENCE RUN NORTH 72°50'22" EAST A DISTANCE OF 871.01 FEET TO A FOUND CONCRETE MONUMENT AT THE INTERSECTION WITH SAID WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441; THENCE RUN SOUTH 17°09'50" EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441, A DISTANCE OF 1036.14 FEET TO THE INTERSECTION WITH THE SOUTH LINE OF SAID SECTION 31; THENCE RUN SOUTH 88°09'20" WEST, ALONG SAID SOUTH LINE OF SECTION 31, A DISTANCE OF 1092.89 FEET; THENCE RUN NORTH 03°24'10" WEST A DISTANCE OF 769.54 FEET TO THE POINT OF BEGINNING.

SUBJECT TO A 20 FOOT WIDE FLORIDA DEPARTMENT OF TRANSPORTATION LATERAL DITCH EASEMENT SITUATE WITHIN THE EASTERLY HALF THEREOF.

Parcel ID # 04460-000 102

LYNCH WELL DRILLING, INC.

173 SW Tustenuggee Ave
Lake City, FL. 32025
Phone 386-752-6677
Fax 386-752-1477

Building Permit #_____ Owner's Name: Jack Knapp

Well Depth 180 Ft. Casing Depth 150 Ft. Water Level 50 Ft.

Casing Size 4 inch Steel Pump Installation: Deep Well Submersible

Pump Make Scgaffer Pump Model 1TL418x10-S2 HP 1

System Pressure (PSI) On 30 Off 50 Average Pressure 50

Pumping System GPM at average pressure and pumping level 20(GPM)

Tank Installation: Bladder Make Challenger

Model PC 244 Size 81 gallon

Tank Draw-down per cycle at system pressure 25.1 gallons
Well drilled 5-09-07

I HEREBY VERTIFY THAT THIS WATER WELL SYSTEM HAS BEEN INSTALLED AS PER THE ABOVE INFORMATION.

Linda Newcomb
Signature

Linda Newcomb
Print Name

2609
License Number

10-13-08
Date

Freeman Design Group inc

Engineers · Planners

128 SW Nassau St
Lake City, FL 32025
Phone 386-758-4209
Fax 386-758-4290

February 10, 2009

Columbia County Building and Zoning
135 NE Hernando Avenue, Suite B-21
Lake City, Fl 32055

RE: Knapp Residence
Parcel 31-1N-177-04460-102
Application Number – 09-02-07

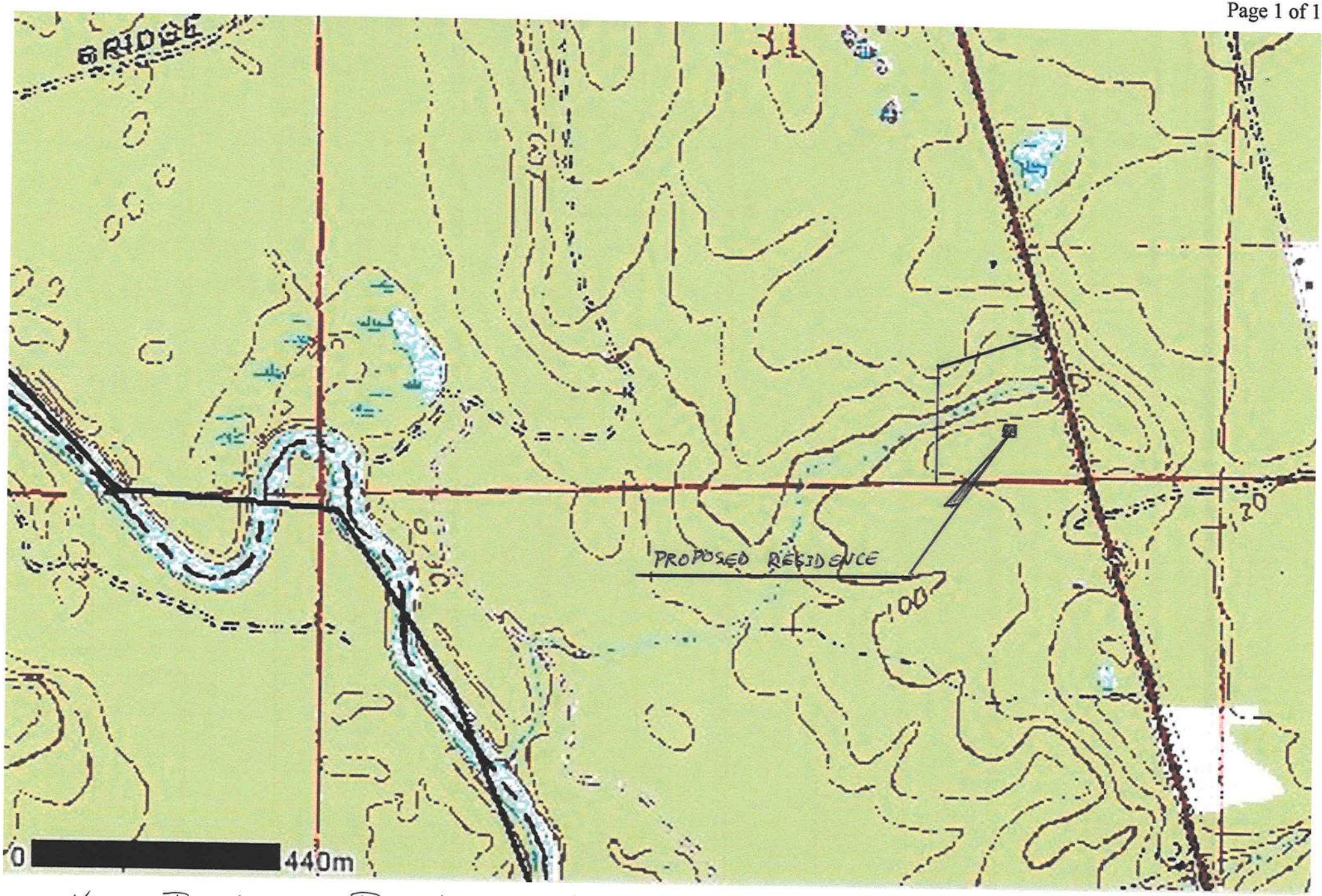
To whom it may concern:

I have reviewed the Flood Insurance Rate Map and have determined the property partially in flood zone A with a base flood elevation of 98.00' NAVD88. The new residential structure shall be located completely outside of zone A in a zone X. I have performed a site evaluation of the existing area. I certify that placing the finished floor elevation no lower than 102.00' NAVD is adequate to prevent flood and water damage. Grade the perimeter so that all runoff drains away from the building.

Sincerely,

William H. Freeman

William H. Freeman, P.E.
President
Cert. Of Authorization 00008701



Knapp Residence Parcel ID 31-IN-177-04460-102 Application No. 09-02-07

Freeman Design Group inc

Engineers · Planners

128 SW Nassau St
Lake City, FL 32025
Phone 386-758-4209
Fax 386-758-4290

February 9, 2009

Columbia County Building and Zoning

RE: Knapp Residence
Parcel 31-1N-177-04460-102
Application Number – 09-02-07

To whom it may concern:

I have reviewed the Flood Insurance Rate Map and have determined the property partially in flood zone A with a base flood elevation of 98.00' NAVD88. The new residential structure shall be located completely outside of zone A in a zone X. I have performed a site evaluation of the existing area. I certify that placing the finished floor elevation at least 2'-0" above existing grade is adequate to prevent flood and water damage. Grade the perimeter so that all runoff drains away from the building.

Sincerely,

William H. Freeman

William H. Freeman, P.E.
President
Cert. Of Authorization 00008701

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Suwanne River Water Management District
Flood Information Report

Zone Descriptions:

A
Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

PROFILE

Date: 9/16/2008
Parcel: 31-1N-17-04460-102
County: Columbia
STR: S031 T01N R17E, S006 T01S R17E
Status: Preliminary

FLOOD INFORMATION

FIRM Panel: 12023C0084C
SFHA: Yes
Zone: A
BFE: Not Available
Floodway: No
10YR Elev: Not Available
2YR Elev: Not Available
OFW: None

Note: Elevations are based on NAVD88

****

The Federal Emergency Management Agency (FEMA) maintains information about map features, such as street locations and names, in or near designated flood hazard areas. The information herein represents the best available data as of the effective date shown. To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM panel. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or copies of this map.

Requests to revise flood information in or near designated flood hazard areas may be provided to FEMA during the community review period.

LINKS

FEMA:
http://www.fema.gov

SRWMD:
http://www.srwmd.state.fl.us

CONTACT

SRWMD
9225 County Road 49
Live Oak, FL 32060

(386) 362-1001

Toll Free:
(800) 226-1066

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Flood Information Report

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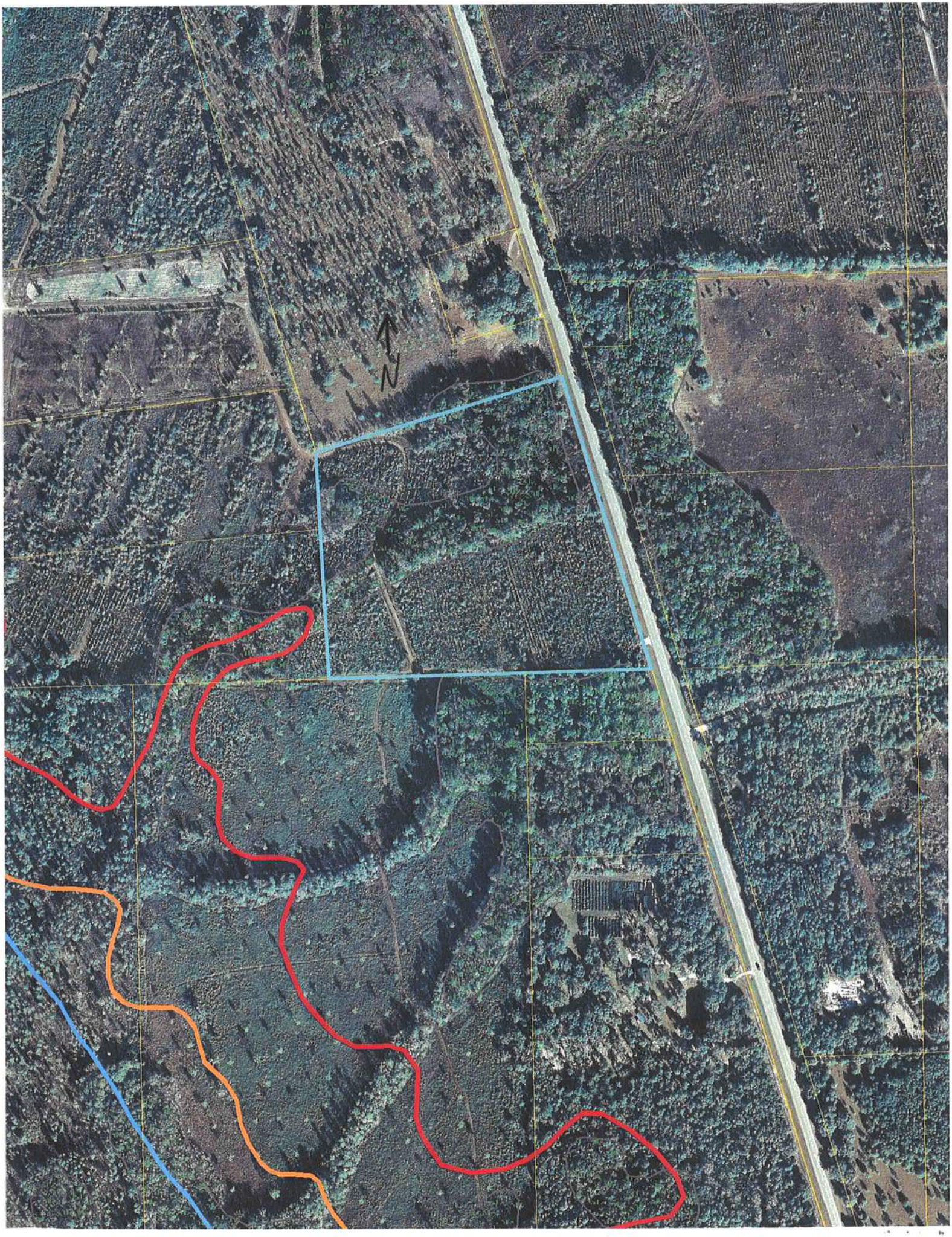

N

0902-07

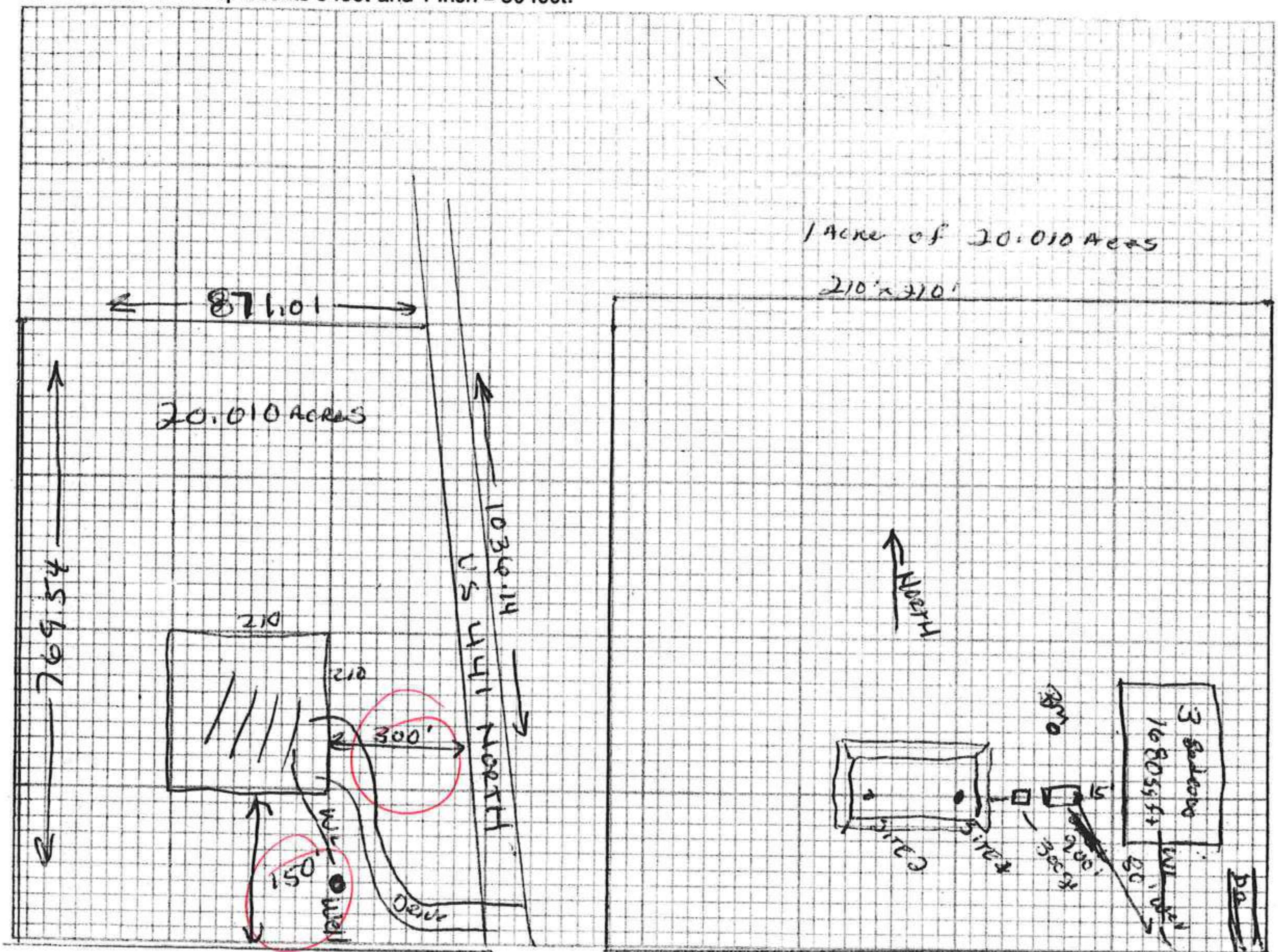
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 08-0535

PART II - SITE PLAN

Scale: Each block represents 5 feet and 1 inch = 50 feet.



Notes: ← 1092.89 →

JACK KNAPP

31-N1-17-04460-102

Site Plan submitted by: Robert W. Ford [signature] Signature Agent Title

Plan Approved ✓ Not Approved ______ Date 8-4-08

By [signature] Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

DH 4015, 10/96 (Replaces HRS-H Form 4015 which may be used)
(Stock Number: 5744-002-4015-6)

08-0535

STATE OF FLORIDA
DEPARTMENT OF HEALTH
ON-SITE SEWAGE DISPOSAL SYSTEM
APPLICATION FOR CONSTRUCTION PERMIT

LC

PERMIT NO. 890228
DATE PAID: 7/28/08
FEE PAID: 310.00
RECEIPT #: 1030099

APPLICATION FOR:
[✓] New System [ ] Existing System [ ] Holding Tank [ ] Innovative
[ ] Repair [ ] Abandonment [ ] Temporary [ ] ______

APPLICANT: JACK & SUSANNE KNAPP

AGENT: Robert Ford HFST INC TELEPHONE: 386-755-637_

MAILING ADDRESS: 580 HW GUERDON Rd LC F/A 32055

= =

TO BE COMPLETED BY APPLICANT OR APPLICANT'S AUTHORIZED AGENT. SYSTEMS MUST BE CONSTRUCTED BY A PERSON LICENSED PURSUANT TO 489.105(3)(m) OR 489.552, FLORIDA STATUTES.

= =

PROPERTY INFORMATION

LOT: — BLOCK: — SUBDIVISION: Meets & Bounds PLATTED: N/A

PROPERTY ID #: 31-1N-17-04460-102 ZONING: TL I/M OR EQUIVALENT: (Y / (N))

PROPERTY SIZE: 20.010 ACRES WATER SUPPLY: [X] PRIVATE PUBLIC [ ]<=2000GPD [ ]>2000GPD

IS SEWER AVAILABLE AS PER 381.0065, FS? [Y / (N)] DISTANCE TO SEWER: NA FT

PROPERTY ADDRESS: US 441 NORTH

DIRECTIONS TO PROPERTY: Hwy 441 NORTH 8 mile on left Past (Deep Creek milton STORE) 1st metal Gate on left Past NE Frank James Glen

BUILDING INFORMATION [✓] RESIDENTIAL [ ] COMMERCIAL

Unit No	Type of Establishment	No. of Bedrooms	Building Area Sq Ft	Commercial/Institutional System Design Table 1, Chapter 64E-6, FAC
1	S/F	3	1680	
2				
3				
4				

[ ] Floor/Equipment Drains [ ] Other (Specify) ______

SIGNATURE: Robert W Ford Jr DATE: 7/28/08

FAX MEMORANDUM

MEMORANDUM

FLORIDA DEPARTMENT OF TRANSPORTATION

To: Mr. John Kerce, Dept. Director Columbia Co. Building & Zoning Dept. **Fax No: 386-758-2160**	**From:** Dale L. Cray, FDOT Permits Insp. **Date: 2-11-2009** Fax **No. 386-961-7183** **Attention: Col Co. Building Zoning Dept.**

( ) Sign and return. ( ) For your files. ( ) Please call me. **(XX)** FYI ( ) For Review

REF: New Res. Joint Use D/W / Inspected On:8-16-2005
PROJECT: Mr. Jack Knapp & Susanne M. Emond
PARCEL ID No: 31-1n-17-04460-102 Permit No : 05-A-292-0018 Sec No : 29070
MILE POST: 20.777+-

Mr. Kerce:

Please accept this as our legal notice of final passing inspection for (Mr. J. Knapp & Ms. S M. Emond) for a New Res. Joint Use Driveway. The project is located, State Hwy 47 (N).

The existing Access has been inspected and (Approved) and, meets FDOT Standard Requirements.

If further information is required on this project please do not hesitate to contact this office for additional access permitting information details. My office number is 961-7193 or 961-7146.

Sincerely,

Dale L. Cray
Access Permits Inspector

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

DRIVEWAY CONNECTION PERMIT FOR ALL CATEGORIES

850-040-18
SYSTEMS PLANNING
04/03

PART 1: PERMIT INFORMATION

APPLICATION NUMBER: 05-A-292-0018

Permit Category: A Access Classification: 4

Project: Proposed 16 ft. wide residential access connection w/ double 30 radii

Permittee: JACK A. KNAPP & SUSANNE M. EMOND

Section/Mile Post: 29070 State Road: 47 (N)

Section/Mile Post: 20.777 +- State Road: N/A

PART 2: PERMITTEE INFORMATION

Permittee Name: JACK A. KNAPP & SUSANNE M. EMOND

Permittee Mailing Address: 517 65TH AVENUE, EAST

City, State, Zip: BRADENTON, FLORIDA 34203

Telephone: 941-751-6981

Engineer/Consultant/or Project Manager: NONE, RESIDENTIAL CONNECTION ONLY

Engineer responsible for construction inspection: N/A
NAME P.E. #

Mailing Address: N/A

City, State, Zip:

Telephone: FAX, Mobile Phone, etc.

PART 3: PERMIT APPROVAL

The above application has been reviewed and is hereby approved subject to all Provisions as attached.

Permit Number: 05-A-292-0018
Department of Transportation

Signature: Neil E. Miles Title: ACCESS PERMITS COORDINATOR

Department Representative's Printed Name NEIL E. MILES

Temporary Permit ○ YES ● NO (If temporary, this permit is only valid for 6 months)

Special provisions attached ● YES ○ NO

Date of Issuance: APR 21 2005

If this is a normal (non-temporary) permit it authorizes construction for one year from the date of issuance. This can only be extended by the Department as specified in 14-96.007(6).

See following pages for General and Special Provisions

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

DRIVEWAY/CONNECTION APPLICATION
CATEGORY A

(INDIVIDUAL HOMES, DUPLEXES OR OTHER USES LESS THAN 20 TRIPS/DAY TOTAL)

850-040-14
SYSTEMS PLANNING
09/02

OFFICE USE ONLY

Application Number: 05-A-292-0018

Category: A

Section Road Number & Mile Post: 29070 mp 20.777

Accepted By: NEIL E. MILES
FDOT STAFF (TYPE OR PRINT)

Date: 4/15/2005

APPLICANT COMPLETE REMAINDER OF FORM

PART I: APPLICANT INFORMATION (Please type or print)

APPLICANT: SUSANNE M. EMOND

Mailing Address: 517 65TH AVENUE EAST

City, State, Zip: BRADENTON, FL. 34203

Telephone: (941) 751-6981

Physical Address of Site (if different):

Attach Map & Drawing If Necessary

PROPERTY OWNER: (if different from above) SUSANNE M EMOND AND JACK A. KNAPP

Mailing Address: SAME AS ABOVE

City, State, Zip:

Telephone:

PART 2: NOTICE TO APPLICANT

Proposed traffic control features and devices in the right of way, such as median openings and other traffic control devices, are not part of the connection(s) to be authorized by a connection permit. The Department reserves the right to change these features in the future in order to promote safety in the right of way or efficient traffic operations on the highway. Expenditure by the applicant of monies for installation or maintenance of such features shall not create any interest in the features or their maintenance.

PART 3: CERTIFICATION AND SIGNATURE

I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief such information is true, complete and accurate. I will not begin work on the connection until I receive my Permit and I understand all the conditions of the Permit. When I begin work on the connection I am accepting all conditions listed in my Permit.

Signed Susanne M. Emond
(Applicant)

Date: 4/15/2005

Printed Name: SUSANNE M. EMOND

THIS WARRANTY DEED *Made the 18th day of March, A.D. 2005, by* ***CHARLES CALVIN THOMAS,***

, hereinafter called the grantor, to ***JACK A. KNAPP,*** *and* ***SUSANNE EMOND,*** *,* ***JOINT TENANTS WITH RIGHTS OF SURVIVORSHIP*** *whose post office address is*

hereinafter called the grantees:

(Wherever used herein the terms "grantor" and "grantees" include all the parties to this instrument, singular and plural, the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations, wherever the context so admits or requires.)

Witnesseth: *That the grantor, for and in consideration of the sum of $10.00 and other valuable consideration, receipt whereof is hereby acknowledged, does hereby grant, bargain, sell, alien, remise, release, convey and confirm unto the grantees all that certain land situate in* ***Columbia County, State of FLORIDA****, viz:*

PARCEL B
A PARCEL OF LAND LYING, BEING AND SITUATE IN SECTION 31, TOWNSHIP 1 NORTH, RANGE 17 EAST, COLUMBIA COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCE AT THE INTERSECTION OF THE NORTH LINE OF THE SOUTH ½ OF NORTH ½ OF SAID SECTION 31, WITH THE WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441, AND RUN SOUTH 17°09'50" EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441, A DISTANCE OF 1122.23 FEET TO A FOUND CONCRETE MONUMENT; THENCE RUN SOUTH 72°50'02" WEST A DISTANCE OF 871.22 FEET TO A FOUND CONCRETE MONUMENT; THENCE RUN SOUTH 17°10'12" EAST A DISTANCE OF 1999.33 FEET TO A FOUND CONCRETE MONUMENT AND THE POINT OF BEGINNING OF THE HEREINAFTER DESCRIBED PARCEL OF LAND; THENCE RUN NORTH 72°50'22" EAST A DISTANCE OF 871.01 FEET TO A FOUND CONCRETE MONUMENT AT THE INTERSECTION WITH SAID WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441; THENCE RUN SOUTH 17°09'50" EAST, ALONG SAID WESTERLY RIGHT-OF-WAY LINE OF UNITED STATES HIGHWAY NUMBER 441, A DISTANCE OF 1036.14 FEET TO THE INTERSECTION WITH THE SOUTH LINE OF SAID SECTION 31; THENCE RUN SOUTH 88°09'20" WEST, ALONG SAID SOUTH LINE OF SECTION 31, A DISTANCE OF 1092.89 FEET; THENCE RUN NORTH 03°24'10" WEST A DISTANCE OF 769.54 FEET TO THE POINT OF BEGINNING.

SUBJECT TO A 20 FOOT WIDE FLORIDA DEPARTMENT OF TRANSPORTATION LATERAL DITCH EASEMENT SITUATE WITHIN THE EASTERLY HALF THEREOF.

Together *with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.*

To Have and to Hold *the same in fee simple forever.*

And *the grantor hereby covenants with said grantees that he is lawfully seized of said land in fee simple; that he has good right and lawful authority to sell and convey said land, and hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever, and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2004.*

In Witness Whereof, *the said grantor has signed and sealed these presents, the day and year first above written.*

Signed, sealed and delivered in the presence of:

_____ L.S.
CHARLES CALVIN THOMAS

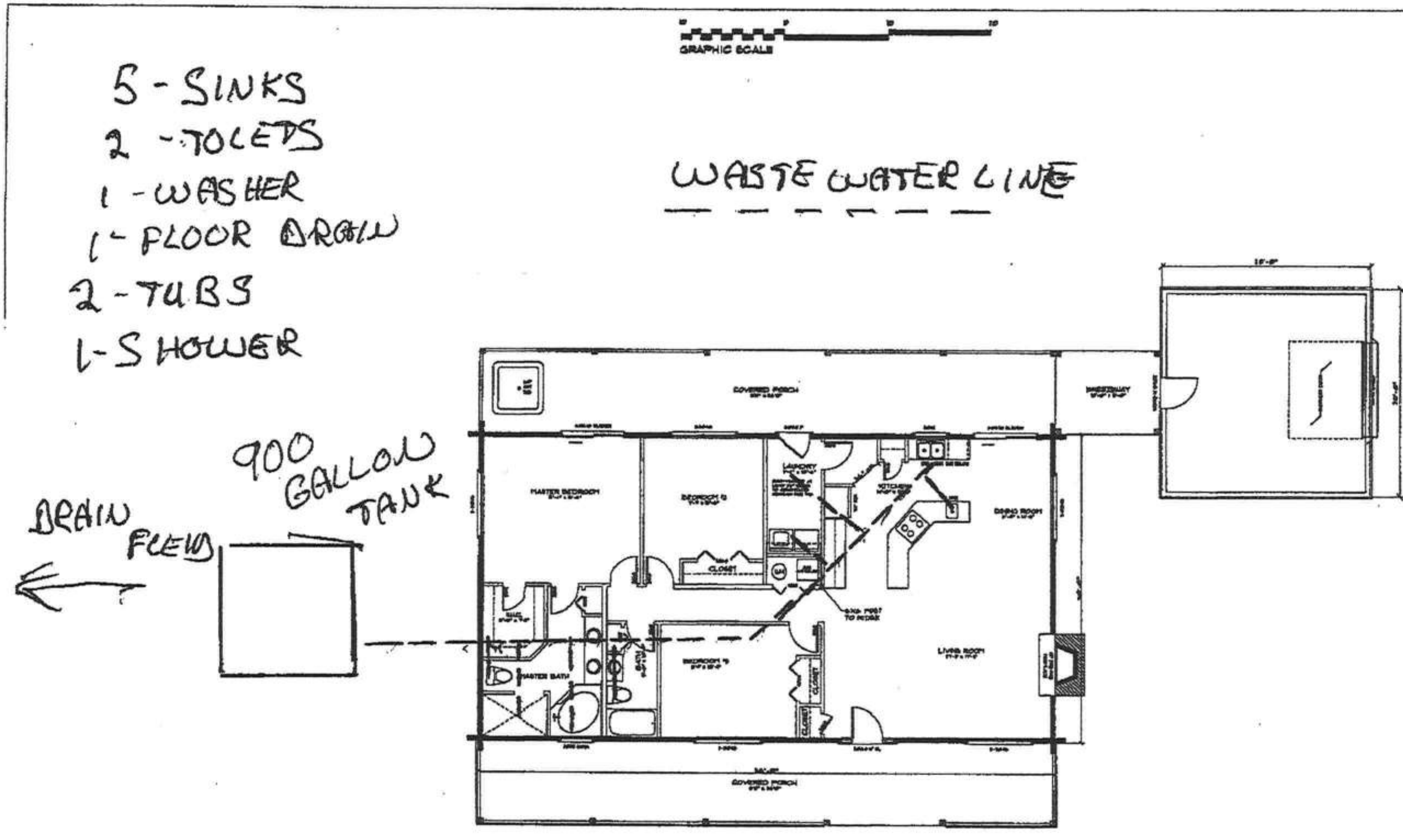
Witness Signature

Address:

_____
Printed Name

_____
Witness Signature

_____



OPTION 2

Floor PLAN

SCALE: N.T.S.

AREA CALCULATION

GROSS LIVING AREA	
COVERED PORCH AREA	
GARAGE	
TOTAL AREA	

A Custom Log Home For:

JACK KNAPP

A2

FORM 600A-2004R EnergyGauge® 4.5.2

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**Emond and Knapp Residence**	Builder:	
Address:		Permitting Office:	Columbia
City, State:	,	Permit Number:	
Owner:	**Emond and Knapp**	Jurisdiction Number:	221000
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 36.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 13.00
4. Number of Bedrooms	3	b. N/A	
5. Is this a worst case?	Yes		
6. Conditioned floor area (ft²)	1680 ft²	c. N/A	
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)			
a. U-factor:	Description Area	13. Heating systems	
(or Single or Double DEFAULT)	7a (Sngle Default) 157.0 ft²	a. Electric Heat Pump	Cap: 36.0 kBtu/hr
b. SHGC:			HSPF: 7.70
(or Clear or Tint DEFAULT)	7b. (Clear) 157.0 ft²	b. N/A	
8. Floor types			
a. Slab-On-Grade Edge Insulation	R=0.0, 171.0(p) ft	c. N/A	
b. N/A			
c. N/A		14. Hot water systems	
9. Wall types		a. Electric Resistance	Cap: 40.0 gallons
a. Log, 6 inch, Exterior	R=0.0, 1235.0 ft²		EF: 0.92
b. N/A		b. N/A	
c. N/A			
d. N/A		c. Conservation credits	
e. N/A		(HR-Heat recovery, Solar DHP-Dedicated heat pump)	
10. Ceiling types		15. HVAC credits	PT, MZ-H
a. Under Attic	R=30.0, 1680.0 ft²	(CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
b. N/A			
c. N/A			
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 125.0 ft		
b. N/A			

Glass/Floor Area: 0.09 Total as-built points: 21913 Total base points: 23342 **PASS**

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

PREPARED BY: _____

DATE: 6/22/02

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: _____

1 Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4.

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	1680.0	18.59	5622.0	1.Single, Clear	N	2.0	5.8	27.0	21.73	0.90	525.0	
				2.Single, Clear	N	2.0	4.5	9.5	21.73	0.85	175.0	
				3.Single, Clear	E	0.0	0.0	28.0	47.92	1.00	1341.0	
				4.Single, Clear	S	6.0	5.3	56.0	40.81	0.50	1148.0	
				5.Single, Clear	S	6.0	5.3	9.5	40.81	0.50	194.0	
				6.Single, Clear	W	2.0	5.3	27.0	43.84	0.82	967.0	
				As-Built Total:				**157.0**			**4350.0**	
WALL TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Adjacent	0.0	0.00	0.0	1. Log, 6 inch, Exterior			0.0	1235.0	1.50		1852.5	
Exterior	1235.0	1.70	2099.5									
Base Total:	**1235.0**		**2099.5**	**As-Built Total:**				**1235.0**			**1852.5**	
DOOR TYPES	Area X	BSPM =	Points	Type				Area X	SPM =		Points	
Adjacent	0.0	0.00	0.0	1.Exterior Wood				40.0	6.10		244.0	
Exterior	40.0	6.10	244.0									
Base Total:	**40.0**		**244.0**	**As-Built Total:**				**40.0**			**244.0**	
CEILING TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM X SCM =		Points	
Under Attic	1680.0	1.73	2906.4	1. Under Attic			30.0	1680.0	1.73 X 1.00		2906.4	
Base Total:	**1680.0**		**2906.4**	**As-Built Total:**				**1680.0**			**2906.4**	
FLOOR TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points	
Slab	171.0(p)	-37.0	-6327.0	1. Slab-On-Grade Edge Insulation			0.0	171.0(p	-41.20		-7045.2	
Raised	0.0	0.00	0.0									
Base Total:			**-6327.0**	**As-Built Total:**				**171.0**			**-7045.2**	
INFILTRATION	Area X	BSPM =	Points					Area X	SPM =		Points	
	1680.0	10.21	17152.8					1680.0	10.21		17152.8	

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 21697.7			**Summer As-Built Points:**					**19460.5**
Total Summer Points	X System Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points
			(sys 1: Central Unit 36000btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)					
			19461	1.00	(1.09 x 1.147 x 0.91)	0.260	0.950	5468.7
21697.7	**0.3250**	**7051.8**	**19460.5**	**1.00**	**1.138**	**0.260**	**0.950**	**5468.7**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points	
.18	1680.0	20.17	6099.0	1.Single, Clear	N	2.0	5.8	27.0	33.22	1.00	901.0	
				2.Single, Clear	N	2.0	4.5	9.5	33.22	1.01	318.0	
				3.Single, Clear	E	0.0	0.0	28.0	26.41	1.00	739.0	
				4.Single, Clear	S	6.0	5.3	56.0	20.24	2.94	3326.0	
				5.Single, Clear	S	6.0	5.3	9.5	20.24	2.94	564.0	
				6.Single, Clear	W	2.0	5.3	27.0	28.84	1.05	819.0	
				As-Built Total:				**157.0**			**6667.0**	
WALL TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =		Points	
Adjacent	0.0	0.00	0.0	1. Log, 6 inch, Exterior			0.0	1235.0	4.50		5557.5	
Exterior	1235.0	3.70	4569.5									
Base Total:	**1235.0**		**4569.5**	**As-Built Total:**				**1235.0**			**5557.5**	
DOOR TYPES	Area X	BWPM =	Points	Type				Area X	WPM =		Points	
Adjacent	0.0	0.00	0.0	1.Exterior Wood				40.0	12.30		492.0	
Exterior	40.0	12.30	492.0									
Base Total:	**40.0**		**492.0**	**As-Built Total:**				**40.0**			**492.0**	
CEILING TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM X	WCM =	Points	
Under Attic	1680.0	2.05	3444.0	1. Under Attic			30.0	1680.0	2.05 X	1.00	3444.0	
Base Total:	**1680.0**		**3444.0**	**As-Built Total:**				**1680.0**			**3444.0**	
FLOOR TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =		Points	
Slab	171.0(p)	8.9	1521.9	1. Slab-On-Grade Edge Insulation			0.0	171.0(p	18.80		3214.8	
Raised	0.0	0.00	0.0									
Base Total:			**1521.9**	**As-Built Total:**				**171.0**			**3214.8**	
INFILTRATION	Area X	BWPM =	Points					Area X	WPM =		Points	
	1680.0	-0.59	-991.2					1680.0	-0.59		-991.2	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**15135.2**	**Winter As-Built Points:**					**18384.1**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 36000 btuh ,EFF(7.7) Ducts:Unc(S),Unc(R),Int(AH),R6.0					
15135.2	**0.5540**	**8384.9**	18384.1 **18384.1**	1.000 **1.00**	(1.069 x 1.169 x 0.93) **1.162**	0.443 **0.443**	0.902 **0.902**	8539.4 **8539.4**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , , PERMIT #:

BASE			AS-BUILT						
WATER HEATING									
Number of Bedrooms	Multiplier	Total	Tank Volume	EF	Number of Bedrooms	Tank Ratio	Multiplier	Credit Multiplier	Total
3	2635.00	7905.0	40.0	0.92	3	1.00	2635.00	1.00	7905.0
			As-Built Total:						**7905.0**

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	Heating Points	Hot Water Points	Total Points	Cooling Points	Heating Points	Hot Water Points	Total Points
7052	**8385**	**7905**	**23342**	**5469**	**8539**	**7905**	**21913**

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 612.1.ABC.3.2. Switch or clearly marked circ 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.	

SUWANNEE RIVER
LOG HOMES, INC.

To: Columbia County Building Department

From: Suwannee River Log Homes

CC: Jack Knapp and Susanne Emond

Date: 1/12/2009

Re: Foundation Modification

Designed in the construction plans for the Jack Knapp and Susanne Emond project is a monolithic slab foundation. It has come to our attention that the client requires the slab elevation to be raised off grade. The attached footing design shall be used in lieu of the monolithic slab footing. All specifications and requirements dictated in the plans shall remain except where superceded by this attached detail.

Any backfill required by the plans shall be well compacted. Stemwall shall be constructed according to height as follows:

Up to 48"

- 8x16 CMU
- Vertical #5 rebar at 48" o/c
- Vertical #5 rebar within 8" of all corners, each direction
- Fill all cells containing rebar with concrete

48" – 72"

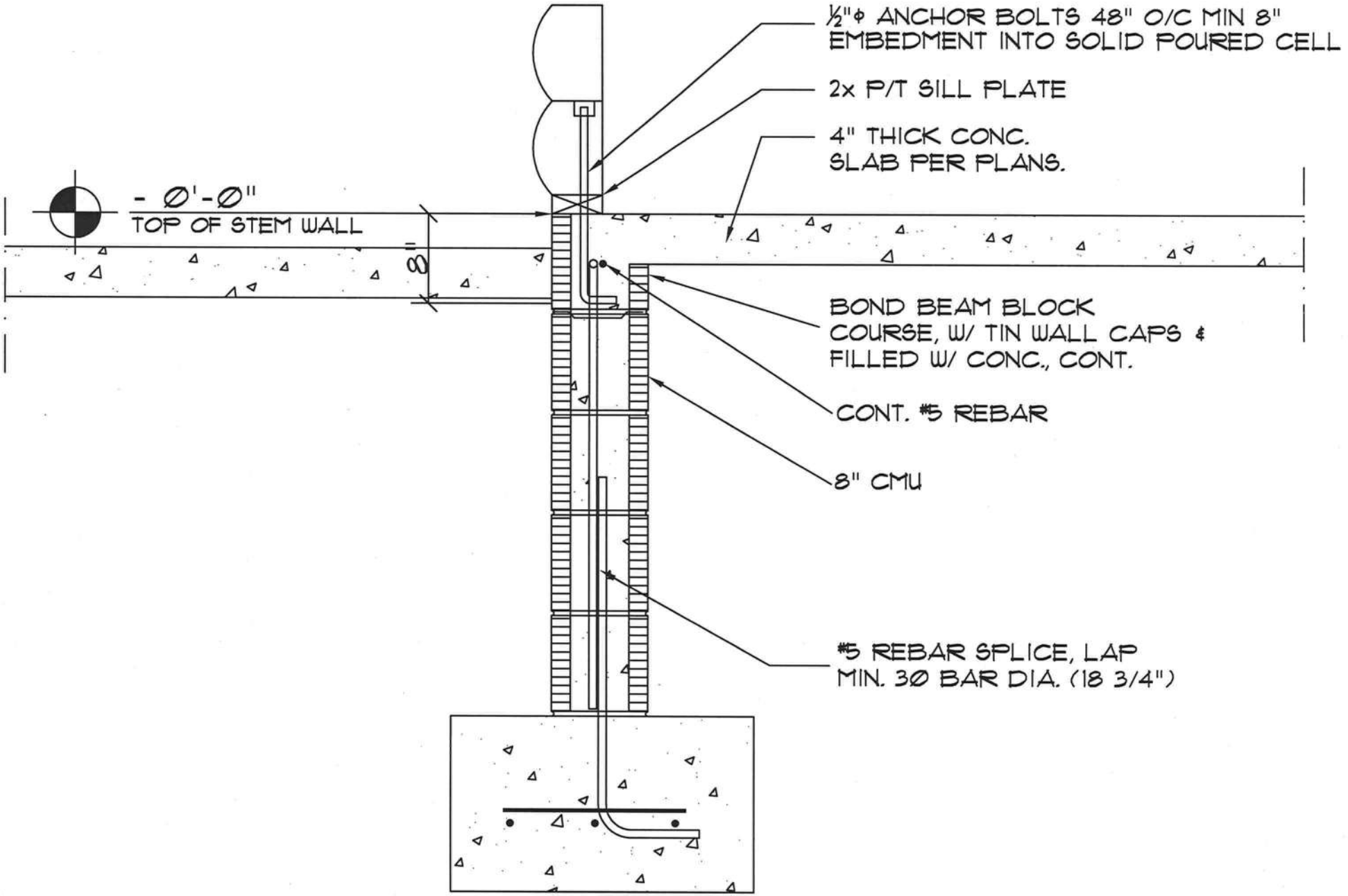
- 8x16 CMU
- Vertical #5 rebar at 32" o/c
- Vertical #5 rebar within 8" of all corners, each direction
- Fill all cells with concrete

Should you have any further questions please feel free to call us at 386-963-5647.

Thank You,

1/13/09

Gary J Gill
PE 51942
Auth# 9461



Stem Wall Detail

SCALE: N.T.S.

GTC DESIGN GROUP

STRUCTURAL AND WIND LOAD CALCULATIONS

For

Suwannee River Log Homes

Susanne Emond & Jack Knapp

8/12/08

Gary Gill, P.E. 51942
P.O. Box 187
130 West Howard Street
Live Oak, FL 32064
Ph. (386) 362-3678
Fax (386) 362-6133
AUTH # 9461

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Analysis by: Gary Gill **Company Name:** GTC Design Group
Description: Emond & Knapp-SRLH

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	110	mph
Struc Category (I, II, III, or IV)	II	
Exposure (B, C, or D)	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof	7.0	:12
Slope of Roof (Theta)	30.3	Deg
Type of Roof	Gabled	
Kd (Directonality Factor)	0.85	
Eave Height (Eht)	8.50	ft
Ridge Height (RHt)	18.00	ft
Mean Roof Height (Ht)	13.50	ft
Width Perp. To Wind Dir (B)	56.00	ft
Width Paral. To Wind Dir (L)	30.00	ft

Calculated Parameters		
Importance Factor	1	
Hurricane Prone Region (V>100 mph)		
Table 6-2 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Calculated Parameters	
Type of Structure	
Height/Least Horizontal Dim	0.45
Flexible Structure	No

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
Izm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	0.8960	
Gust2	0.925*((1+1.7*Izm*3.4*Q)/(1+1.7*3.4*Izm))	0.8636	
Gust Factor Summary			
G	Since this is not a flexible structure the lessor of Gust1 or Gust2 are used	0.85	

Fig 6-5 Internal Pressure Coefficients for Buildings, Gcpi

Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

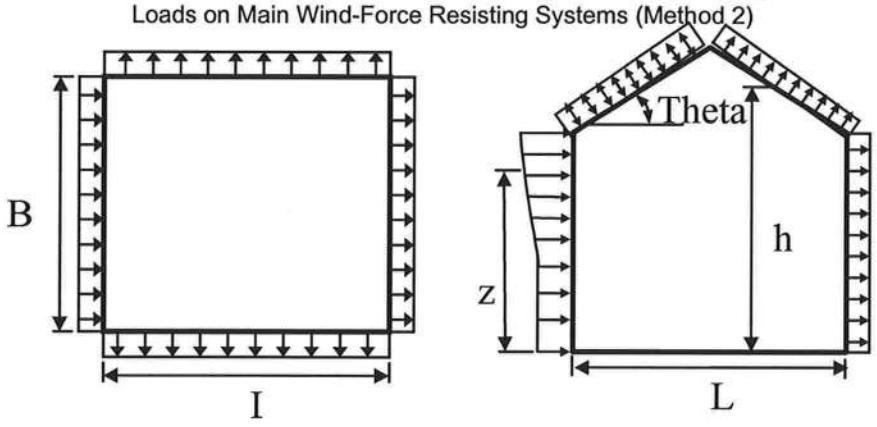
6.5.12.2.1 Design Wind Pressure - Buildings of All Heights

Elev	Kz	Kzt	qz	Pressure (lb/ft^2)						
				Windward Wall*		Leeward Wall		Total	Shear	Moment
ft			lb/ft^2	+GCpi	-GCpi	+GCpi	-GCpi	+/-Gcpi	(Kip)	(Kip-ft)
18	0.61	1.00	15.94	8.12	13.56	-9.15	-3.71	17.27	2.90	4.35
15	0.57	1.00	15.13	7.57	13.01	-9.15	-3.71	16.72	16.95	157.57

Note: 1) Positive forces act toward the face and Negative forces act away from the face.

Figure 6-6 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems (Method 2)



Variable	Formula	Value	Units
Kh	2.01*(15/zg)^(2/Alpha)	0.57	
Kht	Topographic factor (Fig 6-4)	1.00	
Qh	.00256*(V)^2*I*Kh*Kht*Kd	15.13	psf
Khcc	Comp & Clad: Table 6-3 Case 1	0.70	
Qhcc	.00256*V^2*I*Khcc*Kht*Kd	18.45	psf

Wall Pressure Coefficients, Cp	
Surface	**Cp**
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.8

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	-
Reduction Factor	1.00

Calculations for Wind Normal to 56 ft Face *Additional Runs may be req'd for other wind directions*	Cp	Pressure (psf) +GCpi	 -GCpi
Leeward Walls (Wind Dir Normal to 56 ft wall)	-0.50	-9.15	-3.71
Leeward Walls (Wind Dir Normal to 30 ft wall)	-0.33	-6.93	-1.48
Side Walls	-0.70	-11.73	-6.28
Roof - Wind Normal to Ridge (Theta>=10) - for Wind Normal to 56 ft face			
Windward - Min Cp	-0.20	-5.27	0.18
Windward - Max Cp	0.23	0.18	5.63
Leeward Normal to Ridge	-0.60	-10.44	-4.99
Overhang Top (Windward)	-0.20	-2.54	-2.54
Overhang Top (Leeward)	-0.60	-7.72	-7.72

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

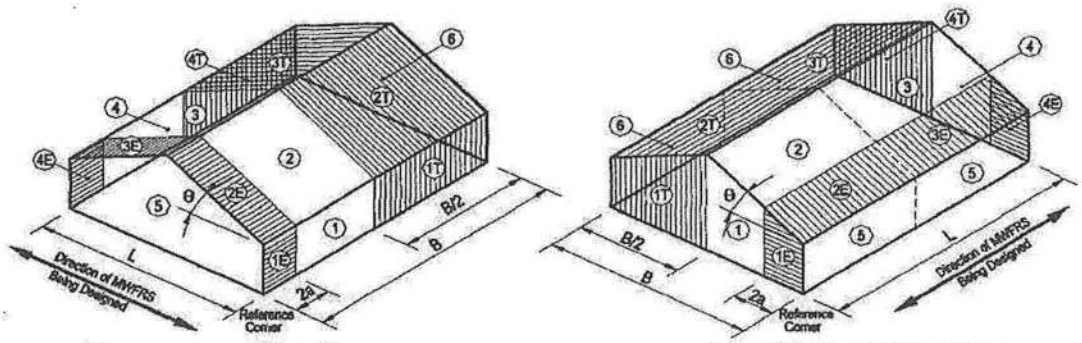
Overhang Bottom (Applicable on Windward only)	0.80	10.29	10.29
Roof - Wind Parallel to Ridge (All Theta) - for Wind Normal to 30 ft face			
Dist from Windward Edge: 0 ft to 27 ft - Max Cp	-0.18	-5.04	0.41
Dist from Windward Edge: 0 ft to 6.75 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 6.75 ft to 13.5 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 13.5 ft to 27 ft - Min Cp	-0.50	-9.15	-3.71
Dist from Windward Edge: > 27 ft	-0.30	-6.58	-1.13

* Horizontal distance from windward edge

Figure 6-10 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(15/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	18.45
Theta =	Angle of Roof	=	30.3 Deg



Torsional Load Cases

Wind Pressures on Main Wind Force Resisting System						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	0.56	0.18	-0.18	18.45	7.01	13.65
2	0.21	0.18	-0.18	18.45	0.55	7.19
3	-0.43	0.18	-0.18	18.45	-11.25	-4.61
4	-0.37	0.18	-0.18	18.45	-10.15	-3.50
5	-0.45	0.18	-0.18	18.45	-11.62	-4.98
6	-0.45	0.18	-0.18	18.45	-11.62	-4.98
1E	0.69	0.18	-0.18	18.45	9.41	16.05
2E	0.27	0.18	-0.18	18.45	1.66	8.30
3E	-0.53	0.18	-0.18	18.45	-13.10	-6.46
4E	-0.48	0.18	-0.18	18.45	-12.17	-5.53

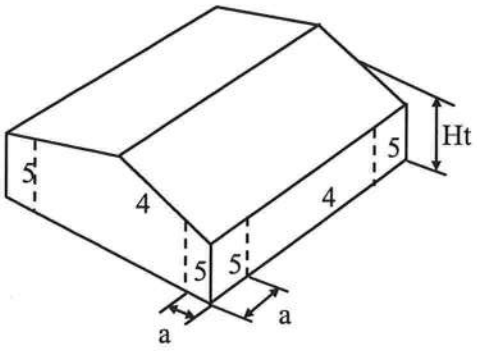
* p = qh * (GCpf - GCpi)

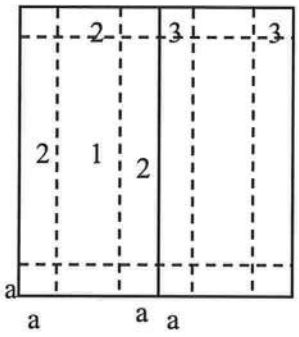
WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Figure 6-11 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft





Gabled Roof

7 < Theta <= 45

a = 3 ==> 3.00 ft

Double Click on any data entry line to receive a help Screen

Component	Width (ft)	Span (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2	
					Max	Min	Max	Min
Wall	10	1	10.00	4	1.00	-1.10	21.77	-23.61
Wall Exterior	10	1	10.00	5	1.00	-1.40	21.77	-29.15
Roof	10	1	10.00	1	0.90	-1.00	19.92	-21.77
Roof Exterior	10	1	10.00	2	0.90	-1.20	19.92	-25.46
Roof Corner	10	1	10.00	3	0.90	-1.20	19.92	-25.46
			0.00					
			0.00					
			0.00					
			0.00					
			0.00					

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Analysis by: Gary Gill **Company Name:** GTC Design Group
Description: Emond & Knapp-SRLH - 2

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	110	mph
Struc Category (I, II, III, or IV)	II	
Exposure (B, C, or D)	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof	7.0	:12
Slope of Roof (Theta)	30.3	Deg
Type of Roof	Gabled	
Kd (Directonality Factor)	0.85	
Eave Height (Eht)	8.50	ft
Ridge Height (RHt)	18.00	ft
Mean Roof Height (Ht)	13.50	ft
Width Perp. To Wind Dir (B)	30.00	ft
Width Paral. To Wind Dir (L)	56.00	ft

Calculated Parameters	
Type of Structure	
Height/Least Horizontal Dim	0.45
Flexible Structure	No

Calculated Parameters		
Importance Factor	1	
Hurricane Prone Region (V>100 mph)		
Table 6-2 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
Izm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	0.9195	
Gust2	0.925*((1+1.7*Izm*3.4*Q)/(1+1.7*3.4*Izm))	0.8775	
Gust Factor Summary			
G	Since this is not a flexible structure the lessor of Gust1 or Gust2 are used	0.85	

Fig 6-5 Internal Pressure Coefficients for Buildings, Gcpi

Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

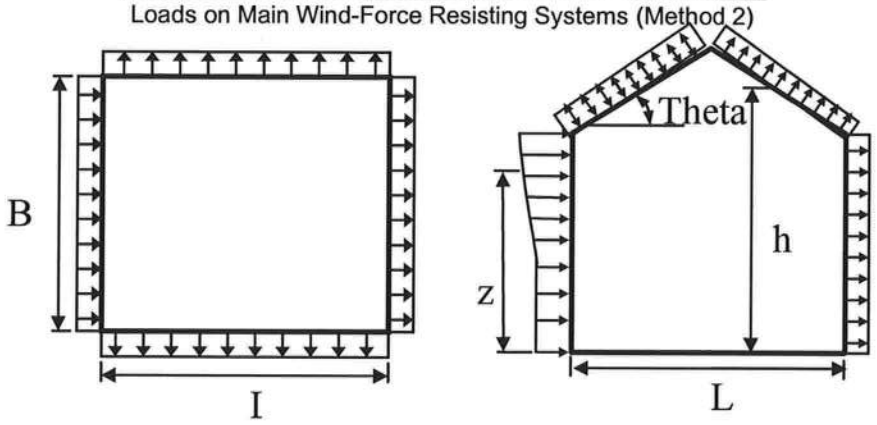
6.5.12.2.1 Design Wind Pressure - Buildings of All Heights

Elev	Kz	Kzt	qz	Pressure (lb/ft^2)						
				Windward Wall*		Leeward Wall		Total	Shear	Moment
ft			lb/ft^2	+GCpi	-GCpi	+GCpi	-GCpi	+/-Gcpi	(Kip)	(Kip-ft)
18	0.61	1.00	15.94	8.12	13.56	-6.93	-1.48	15.04	1.35	2.03
15	0.57	1.00	15.13	7.57	13.01	-6.93	-1.48	14.49	7.87	73.28

Note: 1) Positive forces act toward the face and Negative forces act away from the face.

Figure 6-6 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems (Method 2)



Variable	Formula	Value	Units
Kh	2.01*(15/zg)^(2/Alpha)	0.57	
Kht	Topographic factor (Fig 6-4)	1.00	
Qh	.00256*(V)^2*I*Kh*Kht*Kd	15.13	psf
Khcc	Comp & Clad: Table 6-3 Case 1	0.70	
Qhcc	.00256*V^2*I*Khcc*Kht*Kd	18.45	psf

Wall Pressure Coefficients, Cp	
Surface	**Cp**
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.8

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	-
Reduction Factor	1.00

Calculations for Wind Normal to 30 ft Face *Additional Runs may be req'd for other wind directions*	Cp	Pressure (psf) +GCpi	 -GCpi
Leeward Walls (Wind Dir Normal to 30 ft wall)	-0.33	-6.93	-1.48
Leeward Walls (Wind Dir Normal to 56 ft wall)	-0.50	-9.15	-3.71
Side Walls	-0.70	-11.73	-6.28
Roof - Wind Normal to Ridge (Theta>=10) - for Wind Normal to 30 ft face			
Windward - Min Cp	-0.19	-5.14	0.31
Windward - Max Cp	0.31	1.21	6.66
Leeward Normal to Ridge	-0.60	-10.44	-4.99
Overhang Top (Windward)	-0.19	-2.42	-2.42
Overhang Top (Leeward)	-0.60	-7.72	-7.72

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

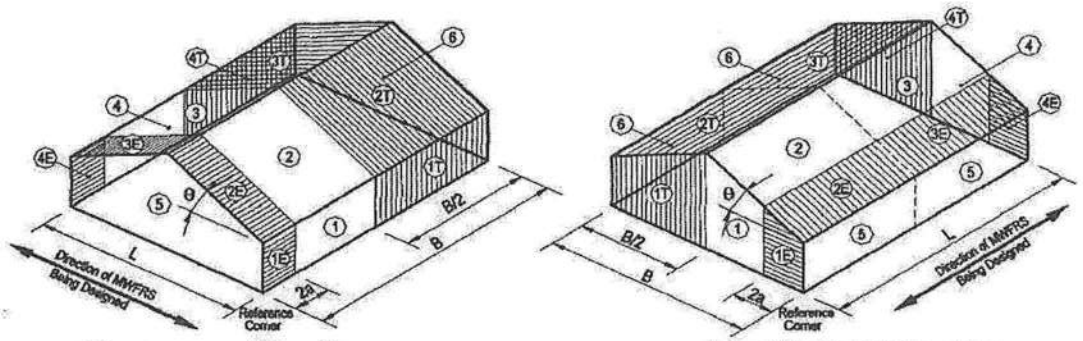
Overhang Bottom (Applicable on Windward only)	0.80	10.29	10.29
Roof - Wind Parallel to Ridge (All Theta) - for Wind Normal to 56 ft face			
Dist from Windward Edge: 0 ft to 27 ft - Max Cp	-0.18	-5.04	0.41
Dist from Windward Edge: 0 ft to 6.75 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 6.75 ft to 13.5 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 13.5 ft to 27 ft - Min Cp	-0.50	-9.15	-3.71
Dist from Windward Edge: > 27 ft	-0.30	-6.58	-1.13

* Horizontal distance from windward edge

Figure 6-10 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(15/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	18.45
Theta =	Angle of Roof	=	30.3 Deg



Transverse Direction

Longitudinal Direction

Torsional Load Cases

Wind Pressures on Main Wind Force Resisting System						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	0.56	0.18	-0.18	18.45	7.01	13.65
2	0.21	0.18	-0.18	18.45	0.55	7.19
3	-0.43	0.18	-0.18	18.45	-11.25	-4.61
4	-0.37	0.18	-0.18	18.45	-10.15	-3.50
5	-0.45	0.18	-0.18	18.45	-11.62	-4.98
6	-0.45	0.18	-0.18	18.45	-11.62	-4.98
1E	0.69	0.18	-0.18	18.45	9.41	16.05
2E	0.27	0.18	-0.18	18.45	1.66	8.30
3E	-0.53	0.18	-0.18	18.45	-13.10	-6.46
4E	-0.48	0.18	-0.18	18.45	-12.17	-5.53

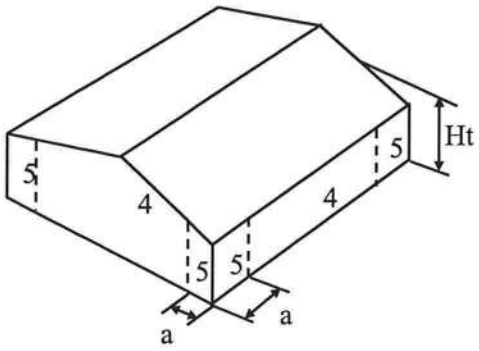
* p = qh * (GCpf - GCpi)

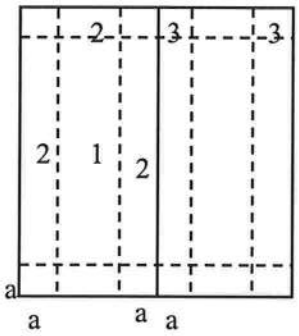
WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Figure 6-11 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft





Gabled Roof

7 < Theta <= 45

a = 3 ==> 3.00 ft

Double Click on any data entry line to receive a help Screen

Component	Width (ft)	Span (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2	
					Max	Min	Max	Min
Wall	10	1	10.00	4	1.00	-1.10	21.77	-23.61
Wall Exterior	10	1	10.00	5	1.00	-1.40	21.77	-29.15
Roof	10	1	10.00	1	0.90	-1.00	19.92	-21.77
Roof Exterior	10	1	10.00	2	0.90	-1.20	19.92	-25.46
Roof Corner	10	1	10.00	3	0.90	-1.20	19.92	-25.46
			0.00					
			0.00					
			0.00					
			0.00					
			0.00					

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

Analysis by: Gary Gill **Company Name:** GTC Design Group
Description: Emond & Knapp-SRLH - garage

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	110	mph
Struc Category (I, II, III, or IV)	II	
Exposure (B, C, or D)	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof	8.0	:12
Slope of Roof (Theta)	33.7	Deg
Type of Roof	Gabled	
Kd (Directonality Factor)	0.85	
Eave Height (Eht)	8.50	ft
Ridge Height (RHt)	12.00	ft
Mean Roof Height (Ht)	10.00	ft
Width Perp. To Wind Dir (B)	20.00	ft
Width Paral. To Wind Dir (L)	20.00	ft

Calculated Parameters		
Type of Structure		
Height/Least Horizontal Dim	0.50	
Flexible Structure	No	

Calculated Parameters		
Importance Factor	1	
Hurricane Prone Region (V>100 mph)		
Table 6-2 Values		
Alpha =	7.000	
zg =	1200.000	
At =	0.143	
Bt =	0.840	
Bm =	0.450	
Cc =	0.300	
l =	320.00	ft
Epsilon =	0.333	
Zmin =	30.00	ft

Gust Factor Category I: Rigid Structures - Simplified Method			
Gust1	For rigid structures (Nat Freq > 1 Hz) use 0.85	0.85	
Gust Factor Category II: Rigid Structures - Complete Analysis			
Zm	Zmin	30.00	ft
Izm	Cc * (33/z)^0.167	0.3048	
Lzm	l*(zm/33)^Epsilon	309.99	ft
Q	(1/(1+0.63*((B+Ht)/Lzm)^0.63))^0.5	0.9347	
Gust2	0.925*((1+1.7*Izm*3.4*Q)/(1+1.7*3.4*Izm))	0.8865	
Gust Factor Summary			
G	Since this is not a flexible structure the lessor of Gust1 or Gust2 are used	0.85	

Fig 6-5 Internal Pressure Coefficients for Buildings, Gcpi

Condition	Gcpi	
	Max +	Max -
Open Buildings	0.00	0.00
Partially Enclosed Buildings	0.55	-0.55
Enclosed Buildings	0.18	-0.18
Enclosed Buildings	**0.18**	**-0.18**

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

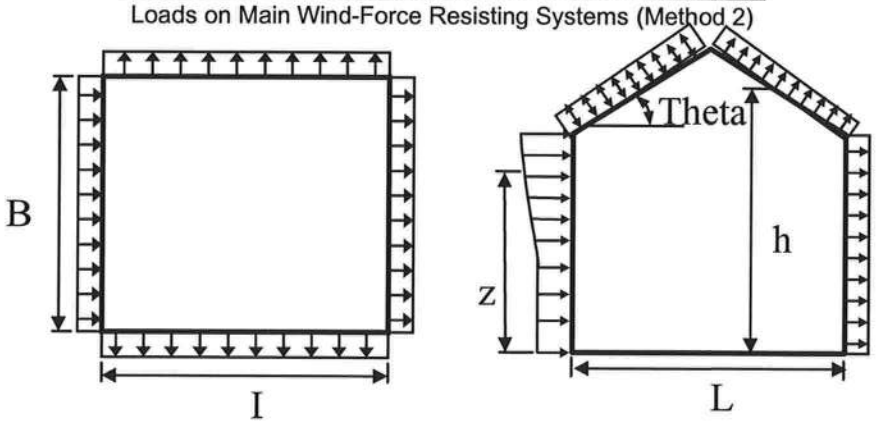
6.5.12.2.1 Design Wind Pressure - Buildings of All Heights

Elev	Kz	Kzt	qz	Pressure (lb/ft^2)						
				Windward Wall*		Leeward Wall		Total	Shear	Moment
ft			lb/ft^2	+GCpi	-GCpi	+GCpi	-GCpi	+/-Gcpi	(Kip)	(Kip-ft)
15	0.57	1.00	15.13	7.57	13.01	-9.15	-3.71	16.72	5.02	37.62

Note: 1) Positive forces act toward the face and Negative forces act away from the face.

Figure 6-6 - External Pressure Coefficients, Cp

Loads on Main Wind-Force Resisting Systems (Method 2)



Variable	Formula	Value	Units
Kh	2.01*(15/zg)^(2/Alpha)	0.57	
Kht	Topographic factor (Fig 6-4)	1.00	
Qh	.00256*(V)^2*I*Kh*Kht*Kd	15.13	psf
Khcc	Comp & Clad: Table 6-3 Case 1	0.70	
Qhcc	.00256*V^2*I*Khcc*Kht*Kd	18.45	psf

Wall Pressure Coefficients, Cp	
Surface	**Cp**
Windward Wall (See Figure 6.5.12.2.1 for Pressures)	0.8

Roof Pressure Coefficients, Cp	
Roof Area (sq. ft.)	-
Reduction Factor	1.00

Calculations for Wind Normal to 20 ft Face *Additional Runs may be req'd for other wind directions*	Cp	Pressure (psf) +GCpi	 -GCpi
Leeward Walls (Wind Dir Normal to 20 ft wall)	-0.50	-9.15	-3.71
Leeward Walls (Wind Dir Normal to 20 ft wall)	-0.50	-9.15	-3.71
Side Walls	-0.70	-11.73	-6.28
Roof - Wind Normal to Ridge (Theta>=10) - for Wind Normal to 20 ft face			
Windward - Min Cp	-0.20	-5.30	0.15
Windward - Max Cp	0.27	0.80	6.25
Leeward Normal to Ridge	-0.60	-10.44	-4.99
Overhang Top (Windward)	-0.20	-2.57	-2.57
Overhang Top (Leeward)	-0.60	-7.72	-7.72
Overhang Bottom (Applicable on Windward only)	0.80	10.29	10.29

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02

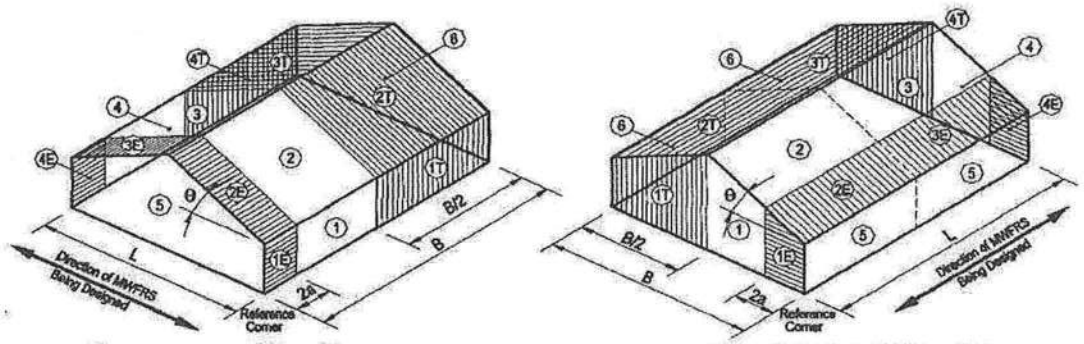
Roof - Wind Parallel to Ridge (All Theta) - for Wind Normal to 20 ft face			
Dist from Windward Edge: 0 ft to 20 ft - Max Cp	-0.18	-5.04	0.41
Dist from Windward Edge: 0 ft to 5 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 5 ft to 10 ft - Min Cp	-0.90	-14.30	-8.85
Dist from Windward Edge: 10 ft to 20 ft - Min Cp	-0.50	-9.15	-3.71

* Horizontal distance from windward edge

Figure 6-10 - External Pressure Coefficients, GCpf

Loads on Main Wind-Force Resisting Systems w/ Ht <= 60 ft

Kh =	2.01*(15/zg)^(2/Alpha)	=	0.70
Kht =	Topographic factor (Fig 6-2)	=	1.00
Qh =	0.00256*(V)^2*ImpFac*Kh*Kht*Kd	=	18.45
Theta =	Angle of Roof	=	33.7 Deg



Torsional Load Cases

Wind Pressures on Main Wind Force Resisting System						
Surface	GCpf	+GCpi	-GCpi	qh (psf)	Min P (psf)	Max P (psf)
1	0.56	0.18	-0.18	18.45	7.01	13.65
2	0.21	0.18	-0.18	18.45	0.55	7.19
3	-0.43	0.18	-0.18	18.45	-11.25	-4.61
4	-0.37	0.18	-0.18	18.45	-10.15	-3.50
5	-0.45	0.18	-0.18	18.45	-11.62	-4.98
6	-0.45	0.18	-0.18	18.45	-11.62	-4.98
1E	0.69	0.18	-0.18	18.45	9.41	16.05
2E	0.27	0.18	-0.18	18.45	1.66	8.30
3E	-0.53	0.18	-0.18	18.45	-13.10	-6.46
4E	-0.48	0.18	-0.18	18.45	-12.17	-5.53

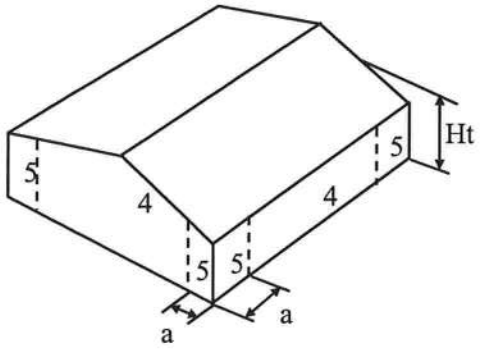
* p = qh * (GCpf - GCpi)

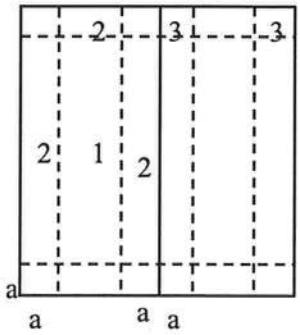
Figure 6-11 - External Pressure Coefficients, GCp

Loads on Components and Cladding for Buildings w/ Ht <= 60 ft

WIND02 v2-21

Detailed Wind Load Design (Method 2) per ASCE 7-02





Gabled Roof

7 < Theta <= 45

a = 2 ==> 3.00 ft

Double Click on any data entry line to receive a help Screen

Component	Width (ft)	Span (ft)	Area (ft^2)	Zone	GCp		Wind Press (lb/ft^2	
					Max	Min	Max	Min
Wall	10	1	10.00	4	1.00	-1.10	21.77	-23.61
Wall Exterior	10	1	10.00	5	1.00	-1.40	21.77	-29.15
Roof	10	1	10.00	1	0.90	-1.00	19.92	-21.77
Roof Exterior	10	1	10.00	2	0.90	-1.20	19.92	-25.46
Roof Corner	10	1	10.00	3	0.90	-1.20	19.92	-25.46
			0.00					
			0.00					
			0.00					
			0.00					
			0.00					

Note: * Enter Zone 1 through 5, or 1H through 3H for overhangs.

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area (Me...	Surface (...
1	Dead load	DL							2	
2	Roof Live Load	RLL							2	
3	BLC 1 Transient Area..	None						140		
4	BLC 2 Transient Area..	None						140		

Wood Design Parameters

	Label	Shape	Length[...	le2[ft]	le1[ft]	le-bend top[ft]	le-bend b...	Kyy	Kzz	CV	Cr	y sway	z sway
1	M1	Post	17										
2	M2	Post	17										
3	M3	Ridgebeam	22										
4	M4	Rafters	17.066	2									
5	M5	Rafters	17.066	2									
6	M6	Rafters	17.066	2									
7	M7	Rafters	17.066	2									
8	M8	Rafters	17.066	2									
9	M9	Rafters	17.066	2									
10	M10	Rafters	17.066	2									
11	M11	Rafters	17.066	2									
12	M12	Rafters	17.066	2									
13	M13	Rafters	17.066	2									
14	M14	Rafters	17.066	2									
15	M15	Rafters	17.066	2									
16	M16	Rafters	17.066	2									
17	M17	Rafters	17.066	2									

Load Combination Design

	Description	ASIF	CD	ABIF	Service	Hot Rolled	Cold Formed	Wood	Concrete	Footings
1	IBC 16-8		.9		Yes	Yes	Yes	Yes	Yes	Yes
2	IBC 16-9				Yes	Yes	Yes	Yes	Yes	Yes
3	(DL+RLL)IBC 16-10 (a)		1.25		Yes	Yes	Yes	Yes	Yes	Yes
4	IBC 16-10 (b)		1.15		Yes	Yes	Yes	Yes	Yes	Yes
5	IBC 16-10 (c)		1.15		Yes	Yes	Yes	Yes	Yes	Yes
6	IBC 16-11 (a)		1.25		Yes	Yes	Yes	Yes	Yes	Yes
7	IBC 16-11 (b)		1.15		Yes	Yes	Yes	Yes	Yes	Yes
8	IBC 16-11 (c)		1.15		Yes	Yes	Yes	Yes	Yes	Yes
9	IBC 16-12 (a)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
10	IBC 16-12 (b)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
11	IBC 16-13 (a)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
12	IBC 16-13 (b)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
13	IBC 16-13 (c)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
14	IBC 16-13 (d)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
15	IBC 16-13 (e)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
16	IBC 16-13 (f)		1.6		Yes	Yes	Yes	Yes	Yes	Yes
17	IBC 16-14		1.6		Yes	Yes	Yes	Yes	Yes	Yes
18	IBC 16-15		1.6		Yes	Yes	Yes	Yes	Yes	Yes

Member Area Loads (BLC 1 : Dead load)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N7	N8	N4	N2	Y	A-B	-10
2	N8A	N9	N4	N2	Y	A-B	-10

Member Area Loads (BLC 2 : Roof Live Load)

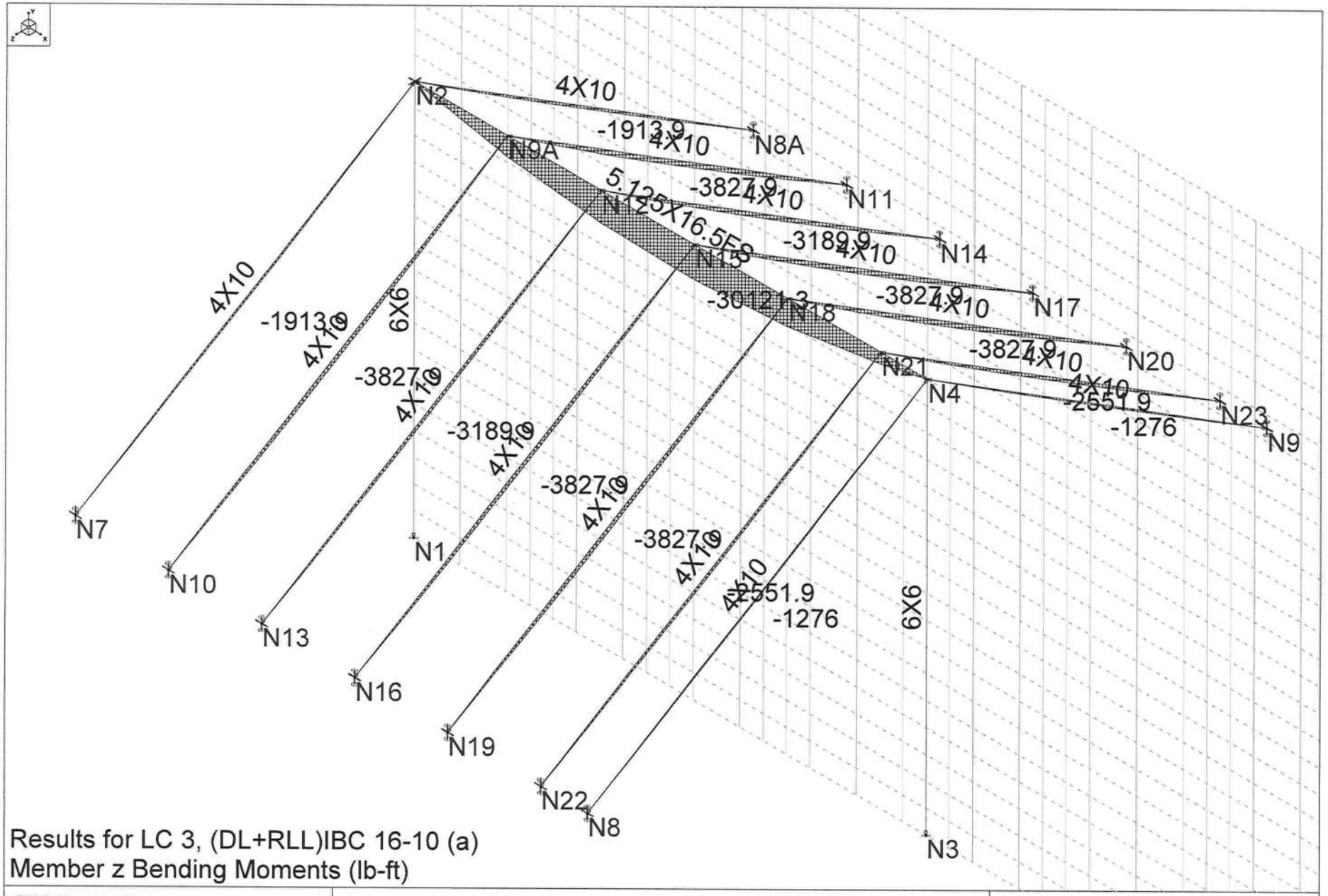
	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N7	N8	N4	N2	Y	A-B	-20
2	N4	N2	N8A	N9	Y	A-B	-20

Wood Material Properties

	Label	Species	Grade	Cm	Emod	Nu	Therm (\1E...	Dens[k/ft^3]
1	DF Larch	Douglas Fir-Larch	No.1		1	.3	.3	.035
2	So Pine	Southern Pine	No.2		1	.3	.3	.035
3	S0 Pine SS	Southern Pine	Select Structural		1	.3	.3	.035
4	So Pine 2D	Southern Pine	No.2 Dense		1	.3	.3	.035
5	Glu-lam	24F-V3 SP/SP	na		1	.3	.3	.035
6	Cypress	BaldCypress	No.2		1	.3	.3	.035
7	LVL	Microlam LVL	na		1	.3	.3	.035

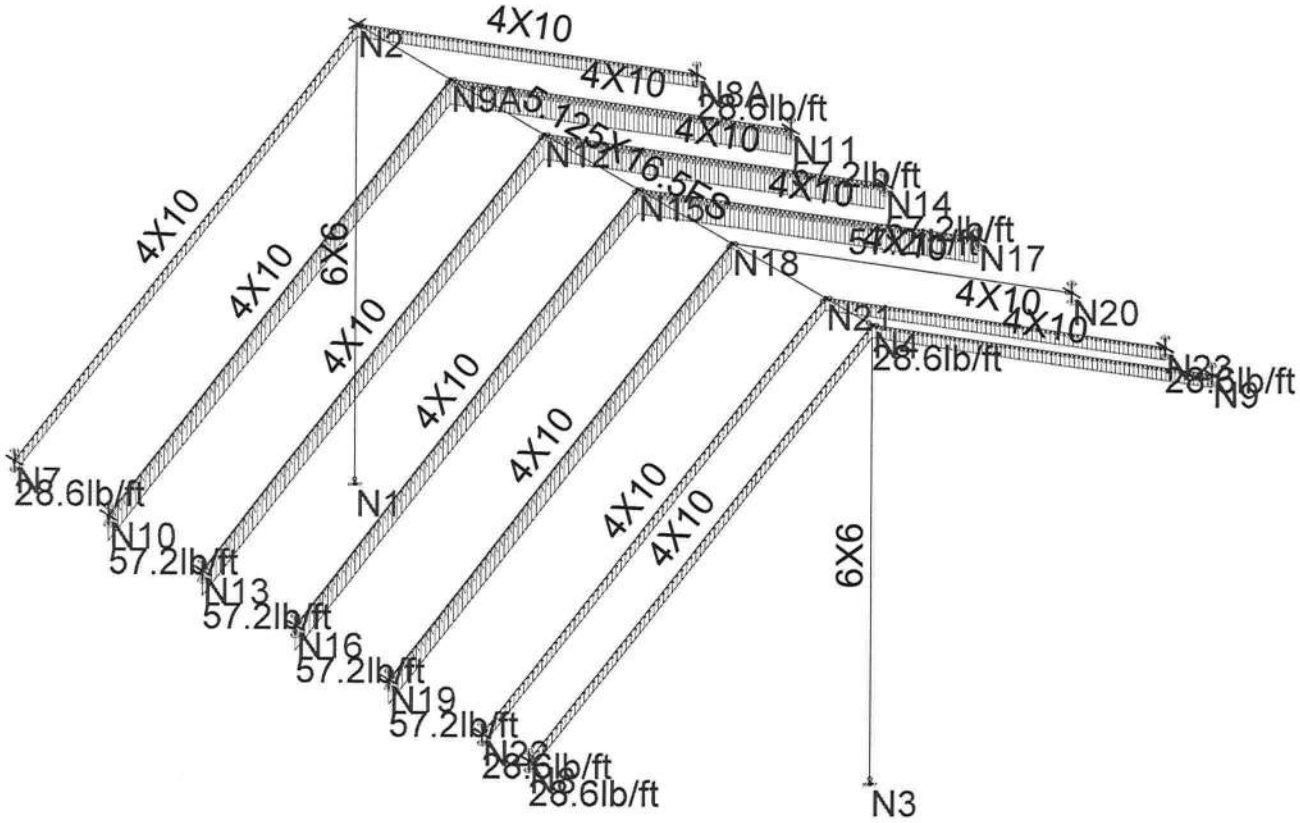
Member Wood Code Checks

	LC	Member	Shape	UC Max	Loc[ft]	Shear ...	Loc[ft]	Dir	Fc'[psi]	Ft'[psi]	Fb1'[psi]	Fb2'[psi]	Fv'[psi]	RB	CL	CP	Eqn
1	3	M1	6X6	.782	0	.000	0	z	235.549	687.5	1062.5	1062.5	206.25	6.09	1	.359	3.6.3
2	3	M2	6X6	.799	0	.000	0	z	235.549	687.5	1062.5	1062.5	206.25	6.09	1	.359	3.6.3
3	3	M3	5.125X1...	.541	11.917	.272	20.167	y	258.242	1437.5	2872....	2362....	325	12.878	.958	.125	3.9-3
4	3	M4	4X10	.307	8.533	.093	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
5	3	M5	4X10	.307	8.533	.093	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
6	3	M6	4X10	.614	8.711	.185	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
7	3	M7	4X10	.614	8.711	.185	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
8	3	M8	4X10	.511	8.711	.155	0	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
9	3	M9	4X10	.511	8.711	.155	0	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
10	3	M10	4X10	.614	8.711	.185	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
11	3	M11	4X10	.614	8.711	.185	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
12	3	M12	4X10	.614	8.711	.185	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
13	3	M13	4X10	.614	8.711	.185	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
14	3	M14	4X10	.409	8.711	.123	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
15	3	M15	4X10	.409	8.711	.123	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
16	3	M16	4X10	.205	8.711	.062	17.066	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1
17	3	M17	4X10	.205	8.355	.062	0	y	883.824	928.125	1500	1650	225	4.257	1	.471	3.9-1



Results for LC 3, (DL+RLL)IBC 16-10 (a)
Member z Bending Moments (lb-ft)

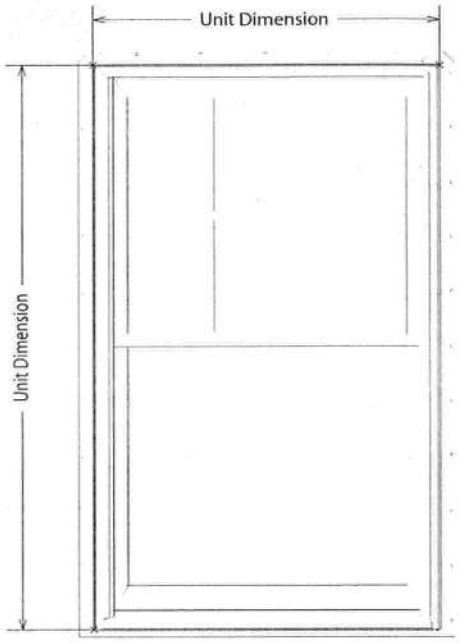
GTC Design Group		
Gary Gill		Aug 21, 2008 at 11:46 AM
		emond -knapp.r3d



Loads: WL - Wind Load
Results for LC 17, (DL+WL)IBC 16-14

GTC Design Group		
Gary Gill		Aug 21, 2008 at 1:45 PM
	Wind LOad	emond -knapp.r3d

Double Hung – Actual Unit Dimensions



To calculate unit dimension on multiple units, add 1" per mull together with actual unit dimension.

Operating Units, WIDTH

CALL SIZE (WIDTH)	1-8	2-0	2-4	2-8	3-0	3-4	3-8
SINGLE	21 3/8	25 3/8	29 3/8	33 3/8	37 3/8	41 3/8	45 3/8
TWIN	43 3/4	51 3/4	59 3/4	67 3/4	75 3/4	83 3/4	91 3/4
TRIPLE	66 1/8	78 1/8	90 1/8	102 1/8	114 1/8	N/A	N/A
FOUR WIDE	88 1/2	104 1/2	120 1/2	N/A	N/A	N/A	N/A

Stationary Units, WIDTH

CALL SIZE (WIDTH)	3-0	3-4	4-0	5-0	6-0
SINGLE	37 3/8	41 3/8	49 3/8	61 3/8	73 3/8
TWIN	75 3/4	83 3/4	99 3/4	N/A	N/A
TRIPLE	114 1/8	N/A	N/A	N/A	N/A

Transom Units, WIDTH

CALL SIZE (WIDTH)	1-0	1-2	1-4	1-8	2-0	2-4	2-8
SINGLE	13 3/8	15 3/8	17 3/8	21 3/8	25 3/8	29 3/8	33 3/8
TWIN	27 3/4	31 3/4	35 3/4	43 3/4	51 3/4	59 3/4	67 3/4
TRIPLE	43 1/8	49 1/8	55 1/8	67 1/8	79 1/8	91 1/8	103 1/8

Operating & Stationary Units, HEIGHT

CALL SIZE (HEIGHT)	HEIGHT IN INCHES
2-10	36 9/16
3-2	41 9/16
3-10	49 9/16
4-2	53 9/16
4-6	57 9/16
4-10	60 9/16
5-2	65 9/16
5-6C	69 9/16
5-6E	69 9/16
5-10	72 9/16
6-2	77 9/16
6-6	80 9/16
70	86 9/16

Transom Units, HEIGHT

CALL SIZE (HEIGHT)	HEIGHT IN INCHES
0-10	11 3/8
1-0	13 3/8
1-2	15 3/8
1-6	17 3/8
2-0	25 5/8
2-4	29 5/8

Operating Units

Call Size	Clear Opening Width	Clear Opening Height	Clear Opening S.F.	Daylight Opening S.F.
MRADH18210	17.672	14.500	1.78	2.8
32	17.672	16.500	2.02	3.2
36	17.672	18.500	2.27	3.6
310	17.672	20.500	2.52	4.1
42	17.672	22.500	2.76	4.5
46	17.672	24.500	3.01	4.9
410	17.672	26.500	3.25	5.3
52	17.672	28.500	3.50	5.7
56E	17.672	30.500	3.74	6.1
56C	17.672	24.500	3.01	6.1
510	17.672	32.500	3.99	6.5
62	17.672	34.500	4.23	7.0
66	17.672	36.500	4.48	7.4
70	17.672	39.500	4.85	8.0
MRADH20210	21.672	14.500	2.18	3.6
32	21.672	16.500	2.48	4.1
36	21.672	18.500	2.78	4.6
310	21.672	20.500	3.09	5.1
42	21.672	22.500	3.39	5.7
46	21.672	24.500	3.69	6.2
410	21.672	26.500	3.99	6.7
52	21.672	28.500	4.29	7.2
56E	21.672	30.500	4.59	7.8
56C	21.672	24.500	3.69	7.8
510	21.672	32.500	4.89	8.3
62	21.672	34.500	5.19	8.8
66	21.672	36.500	5.49	9.3
70	21.672	39.500	5.94	10.1
MRADH24210	25.672	14.500	2.59	4.3
32	25.672	16.500	2.94	5.0
36	25.672	18.500	3.30	5.6
310	25.672	20.500	3.65	6.2
42	25.672	22.500	4.01	6.9
46	25.672	24.500	4.37	7.5
410	25.672	26.500	4.72	8.1
52	25.672	28.500	5.08	8.8
56E	25.672	30.500	5.44	9.4
56C	25.672	24.500	4.37	9.4
510	25.672	32.500	5.79	10.0
62	25.672	34.500	6.15	10.7
66	25.672	36.500	6.51	11.3
70	25.672	39.500	7.04	12.3
MRADH28210	29.672	14.500	2.99	5.1
32	29.672	16.500	3.40	5.8
36	29.672	18.500	3.81	6.6
310	29.672	20.500	4.22	7.3
42	29.672	22.500	4.64	8.1
46	29.672	24.500	5.05	8.8
410	29.672	26.500	5.46	9.6
52	29.672	28.500	5.87	10.3
56E	29.672	30.500	6.28	11.1
56C	29.672	24.500	5.05	11.1
510	29.672	32.500	6.70	11.8
62	29.672	34.500	7.11	12.5
66	29.672	36.500	7.52	13.3
70	29.672	39.500	8.14	14.4

Call Size	Clear Opening Width	Clear Opening Height	Clear Opening S.F.	Daylight Opening S.F.
MRADH30210	33.672	14.500	3.39	5.8
32	33.672	16.500	3.86	6.7
36	33.672	18.500	4.33	7.5
310	33.672	20.500	4.79	8.4
42	33.672	22.500	5.26	9.3
46	33.672	24.500	5.73	10.1
410	33.672	26.500	6.20	11.0
52	33.672	28.500	6.66	11.8
56E	33.672	30.500	7.13	12.7
56C	33.672	24.500	5.73	12.7
510	33.672	32.500	7.60	13.6
62	33.672	34.500	8.07	14.4
66	33.672	36.500	8.53	15.3
70	33.672	39.500	9.24	16.6
MRADH34210	37.672	14.500	3.79	6.6
32	37.672	16.500	4.32	7.5
36	37.672	18.500	4.84	8.5
310	37.672	20.500	5.36	9.5
42	37.672	22.500	5.89	10.5
46	37.672	24.500	6.41	11.4
410	37.672	26.500	6.93	12.4
52	37.672	28.500	7.46	13.4
56E	37.672	30.500	7.98	14.3
56C	37.672	24.500	6.41	14.3
510	37.672	32.500	8.50	15.3
62	37.672	34.500	9.03	16.3
66	37.672	36.500	9.55	17.2
70	37.672	39.500	10.33	18.7
MRADH38210	41.672	14.500	4.20	7.3
32	41.672	16.500	4.77	8.4
36	41.672	18.500	5.35	9.5
310	41.672	20.500	5.93	10.6
42	41.672	22.500	6.51	11.6
46	41.672	24.500	7.09	12.7
410	41.672	26.500	7.67	13.8
52	41.672	28.500	8.25	14.9
56E	41.672	30.500	8.83	16.0
56C	41.672	24.500	7.09	16.0
510	41.672	32.500	9.41	17.1
62	41.672	34.500	9.98	18.1
66	41.672	36.500	10.56	19.2
70	41.672	39.500	11.43	20.8

NOTE: Units listed in red satisfy ICC egress requirements. Check with your your local code official to confirm egress requirements in your area.

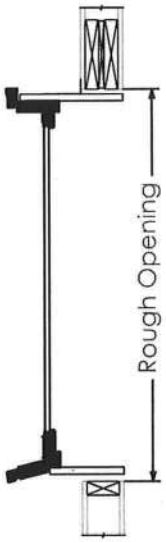
Stationary Units

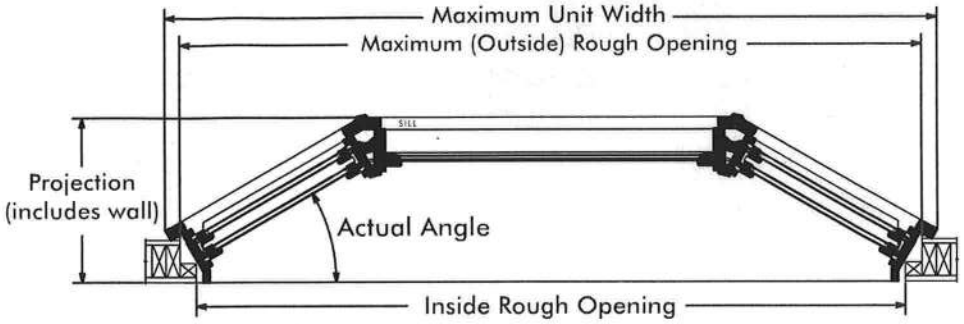
Call Size	Daylight Opening S.F.
MRADH10210P	1.4
32	1.6
36	1.8
310	2.0
42	2.2
46	2.4
410	2.5
52	2.7
56	2.9
510	3.1
62	3.3
66	3.5
70	3.8
MRADH18210P	3.0
32	3.4
36	3.8
310	4.2
42	4.6
46	5.1
410	5.5
52	5.9
56	6.3
510	6.7
62	7.1
66	7.6
70	8.2
MRADH20210P	3.8
32	4.3
36	4.8
310	5.4
42	5.9
46	6.4
410	6.9
52	7.5
56	8.0
510	8.5
62	9.0
66	9.6
70	10.4
MRADH24210P	4.6
32	5.2
36	5.9
310	6.5
42	7.1
46	7.8
410	8.4
52	9.0
56	9.7
510	10.3
62	11.0
66	11.6
70	12.6

Call Size	Daylight Opening S.F.
MRADH28210P	5.4
32	6.1
36	6.9
310	7.6
42	8.4
46	9.1
410	9.9
52	10.6
56	11.4
510	12.1
62	12.9
66	13.6
70	14.7
MRADH30210P	6.2
32	7.1
36	7.9
310	8.8
42	9.6
46	10.5
410	11.3
52	12.2
56	13.1
510	13.9
62	14.8
66	15.6
70	16.9
MRADH34210P	7.0
32	8.0
36	8.9
310	9.9
42	10.9
46	11.8
410	12.8
52	13.8
56	14.8
510	15.7
62	16.7
66	17.7
70	19.1
MRADH38210P	7.8
32	8.9
36	10.0
310	11.0
42	12.1
46	13.2
410	14.3
52	15.4
56	16.4
510	17.5
62	18.6
66	19.7
70	21.3

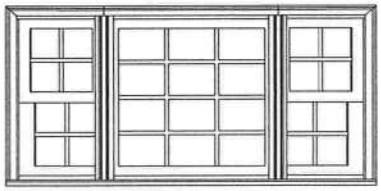
Call Size	Daylight Opening S.F.
MRADH40210P	8.6
32	9.8
36	11.0
310	12.2
42	13.4
46	14.6
410	15.7
52	16.9
56	18.1
510	19.3
62	20.5
66	21.7
70	23.5
MRADH50210P	11.0
32	12.5
36	14.0
310	15.6
42	17.1
46	18.6
410	20.2
52	21.7
56	23.2
510	24.7
62	26.3
66	27.8
70	30.1
MRADH60210P	13.4
32	15.3
36	17.1
310	19.0
42	20.8
46	22.7
410	24.6
52	26.4
56	28.3
510	30.1
62	32.0
66	33.8
70	36.6

Double Hung – Bay Window Details

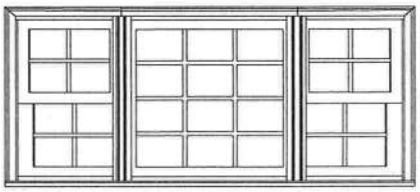




30° Angle Bay with 1-8 Flankers



30° Angle Bay with 2-0 Flankers

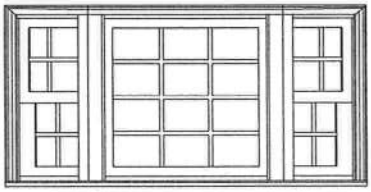


HEIGHTS			
Call Size	Bay Unit	Inside Dimension	Rough Opening
2/10	37–5/16	35–7/16	37–13/16
3/2	41–5/16	39–7/16	41–13/16
3/10	49–5/16	47–7/16	49–13/16
4/2	53–5/16	51–7/16	53–13/16
4/6	57–5/16	55–7/16	57–13/16
5/2	65–5/16	63–7/16	65–13/16
5/6	69–5/16	67–7/16	69–13/16
6/2	77–5/16	75–7/16	77–13/16

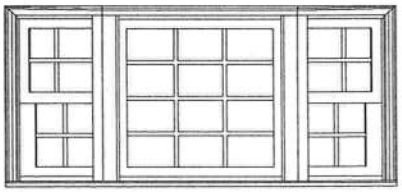
Note: Projections include 4–9/16" wall.

WIDTHS					
Call Size	Max. Unit	Max. Ext. Rough Opening	Inside Rough Opening	Projection	Actual Angle
MRADH1830xx-30	80–13/16	80–3/16	75–9/16	17–7/8	30°
MRADH1834xx-30	84–13/16	84–3/16	79–9/16	17–7/8	30°
MRADH1838xx-30	88–13/16	88–3/16	83–9/16	17–7/8	30°
MRADH1840xx-30	92–13/16	92–3/16	87–9/16	17–7/8	30°
MRADH1850xx-30	104–13/16	104–3/16	99–9/16	17–7/8	30°
MRADH1860xx-30	116–13/16	116–3/16	111–9/16	17–7/8	30°
MRADH2030xx-30	87–3/4	87–1/8	82–1/2	19–7/8	30°
MRADH2034xx-30	91–3/4	91–1/8	86–1/2	19–7/8	30°
MRADH2038xx-30	95–3/4	95–1/8	90–1/2	19–7/8	30°
MRADH2040xx-30	99–3/4	99–1/8	94–1/2	19–7/8	30°
MRADH2050xx-30	111–3/4	111–1/8	106–1/2	19–7/8	30°
MRADH2050xx-30	123–3/4	123–1/8	118–1/2	19–7/8	30°

45° Angle Bay with 1-8 Flankers



45° Angle Bay with 2-0 Flankers



WIDTHS					
Call Size	Max. Unit	Max. Ext. Rough Opening	Inside Rough Opening	Projection	Actual Angle
MRADH1830xx-45	79–7/8	75–7/8	69–7/8	23–5/16	45°
MRADH1834xx-45	82–7/8	79–7/8	73–7/8	23–5/16	45°
MRADH1838xx-45	83–7/8	80–7/8	77–7/8	23–5/16	45°
MRADH1840xx-45	90–7/8	87–7/8	81–7/8	23–5/16	45°
MRADH1850xx-45	102–7/8	99–7/8	93–7/8	23–5/16	45°
MRADH1860xx-45	114–7/8	111–7/8	105–7/8	23–5/16	45°
MRADH2030xx-45	84–1/2	81–1/2	75–1/2	26–1/8	45°
MRADH2034xx-45	88–1/2	85–1/2	79–1/2	26–1/8	45°
MRADH2038xx-45	92–1/2	89–1/2	83–1/2	26–1/8	45°
MRADH2040xx-45	96–1/2	93–1/2	87–1/2	26–1/8	45°
MRADH2050xx-45	108–1/2	105–1/2	99–1/2	26–1/8	45°
MRADH2060xx-45	120–1/2	117–1/2	111–1/2	26–1/8	45°

MW WINDOWS & DOORS

MIRA DOUBLE HUNG WINDOW

INSTALLATION NOTES:

1. ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN, UNLESS OTHERWISE STATED.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
3. *INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF ±1/2 INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.*
4. INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
5. FOR INSTALLATION THROUGH 2X BUCK USE #8 WOOD SCREWS OF SUFFICIENT LENGTH TO ACHIEVE 1 1/2 INCH MINIMUM EMBEDMENT INTO WOOD SUBSTRATE.

OR

6. FOR INSTALLATION THROUGH 2X BUCK USE 5d ROOFING NAIL OF SUFFICIENT LENGTH TO ACHIEVE 2 INCH MINIMUM EMBEDMENT INTO WOOD SUBSTRATE. RECOMMENDED NAIL HEAD DIAMETER TO BE AT LEAST 0.375".
7. FOR INSTALLATION THROUGH STEEL STUD USE #8 SELF-TAPPING SCREWS OF SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM ENGAGEMENT INTO STEEL FRAME SUBSTRATE.
8. ALTERNATE CONCRETE/MASONRY INSTALLATION ANCHORS OF EQUIVALENT PERFORMANCE CHARACTERISTICS CAN BE USED TO ANCHOR 2X WOOD FRAME INTO ROUGH OPENING UPON APPROVAL OF THE ARCHITECT OR ENGINEER OF RECORD FOR THE PROJECT OF INSTALLATION.
9. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
10. FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.
11. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
12. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
    A. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.
    B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 2700 PSI.
    C. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
    D. STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM WALL THICKNESS OF 33 MILS.

GENERAL NOTES:

1. THIS PRODUCT SHOWN HEREON IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE 2007 FLORIDA BUILDING CODE (FBC) EXCLUDING HVHZ AND HAS BEEN EVALUATED IN ACCORDANCE WITH THE FOLLOWING: AAMA/WDMA/CSA 101/I.S.2/A440-05
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY, 2X AND STEEL STUD FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
4. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
5. APPROVED IMPACT PROTECTIVE SYSTEM IS REQUIRED TO PROTECT THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE.
6. WINDOW FRAME MATERIAL: RADIATA.
7. GLASS MEETS THE REQUIREMENTS OF ASTM E1300 GLASS CHARTS. SEE SHEET 4 FOR GLAZING DETAILS.
8. *DESIGNATIONS "X" AND "O" STAND FOR THE FOLLOWING:*
   X: OPERABLE PANEL
   O: FIXED PANEL

TABLE OF CONTENTS

SHEET	REVISION	SHEET DESCRIPTION
1	-	INSTALLATION & GENERAL NOTES
2	-	ELEVATION & ANCHOR LAYOUT
3	-	VERTICAL SECTIONS
4	-	HORIZONTAL SECTIONS & GLAZING DETAIL
5	-	COMPONENTS & BILL OF MATERIALS

DESIGN PRESSURE RATING

GLAZE TYPE	WINDOW SIZE	DESIGN PRESSURE
1	41" X 77"	+50.0/-75.0 PSF
	37" X 81"	+50.0/-75.0 PSF
	45" X 81"	+40.0/-45.0 PSF

MW Manufacturers, Inc

TITLE: MIRA DH WINDOW INSTALLATION & GENERAL NOTES

PREPARED FOR:

MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 866.599.8400 FX: 540.484.6683

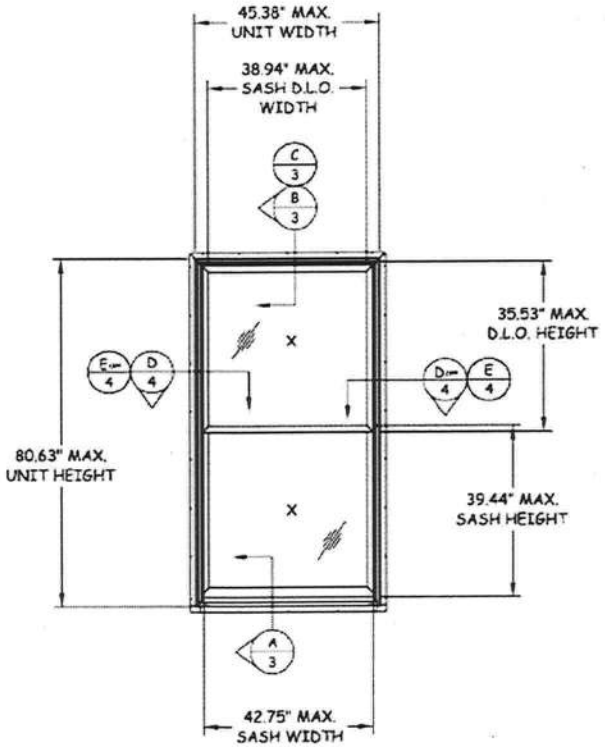
REVISIONS

NO.	DESCRIPTION	BY	DATE

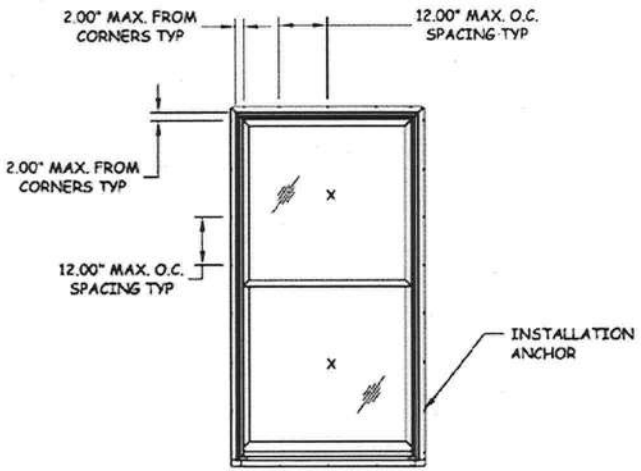
DATE: 05.08.08
DWN BY: DL
CHK BY: CC
SCALE: NTS

DWG #: MWM008

SHEET: 1 OF 5



ELEVATION



ANCHOR LAYOUT
FIN

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA DH WINDOW
ELEVATION & ANCHOR LAYOUT

PREPARED FOR:

MW MANUFACTURERS, INC.
438 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8490 FX: 540.484.0483

REVISIONS

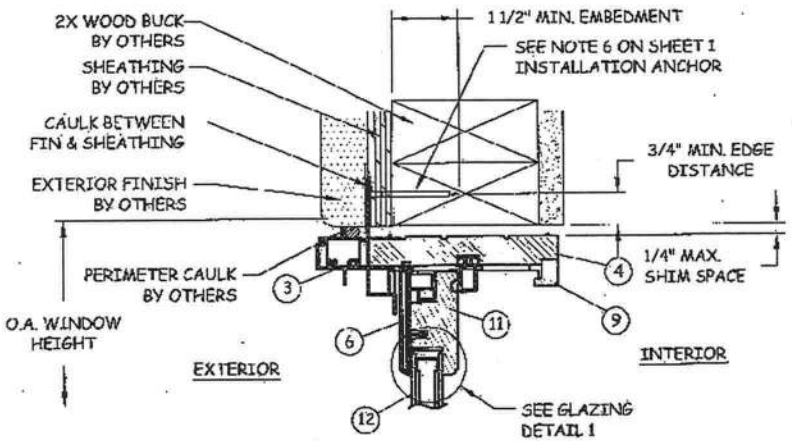
NO.	DESCRIPTION	BY	DATE

5-27-08

DATE: 05.08.08
DWN BY: DL
CHK BY: CC
SCALE: NTS

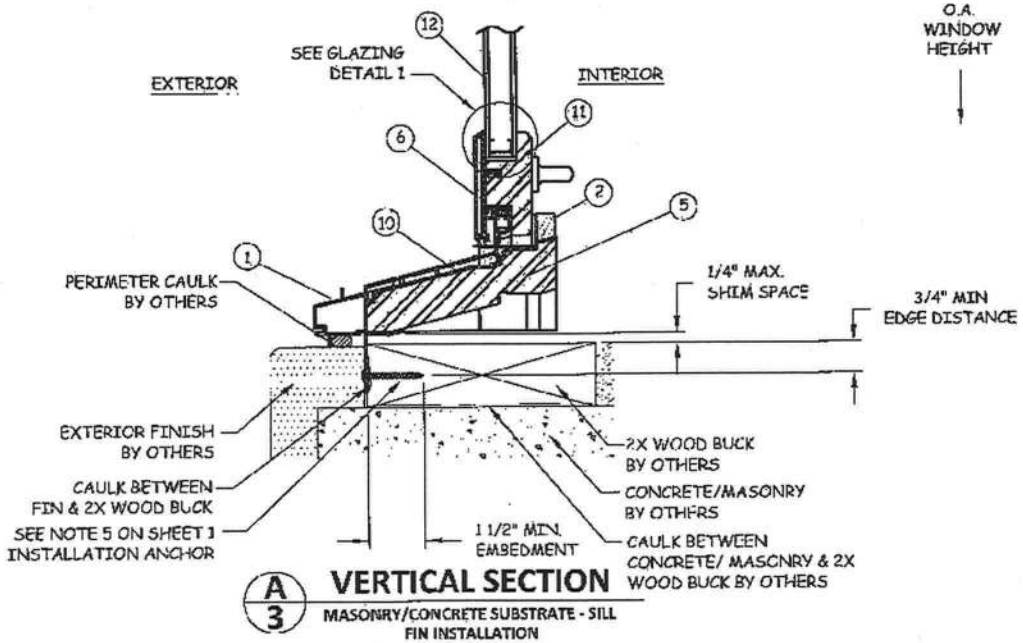
DWG #: MWM008

SHEET: 2 OF 5



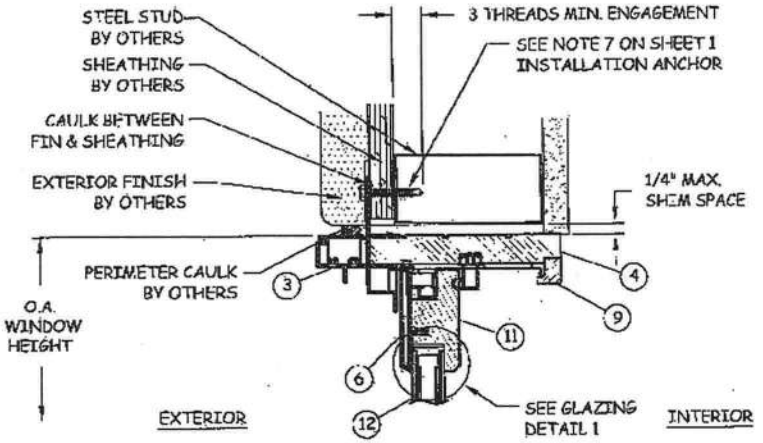
B/3 **VERTICAL SECTION**

2X WOOD STUD SUBSTRATE - HEAD FIN INSTALLATION



A/3 **VERTICAL SECTION**

MASONRY/CONCRETE SUBSTRATE - SILL FIN INSTALLATION



C/3 **VERTICAL SECTION**

STEEL STUD SUBSTRATE - HEAD FIN INSTALLATION

MW WINDOWS & DOORS

MW Manufacturers, Inc

TITLE: MIRA DH WINDOW VERTICAL SECTIONS

PREPARED FOR:

MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.395.6400 FX: 540.483.6688

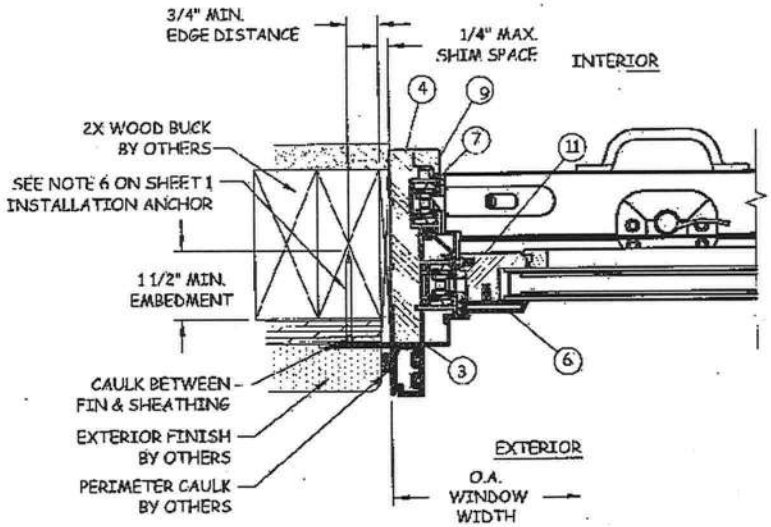
REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 05.08.08
DWN BY: DL
CHK BY: CC
SCALE: NTS

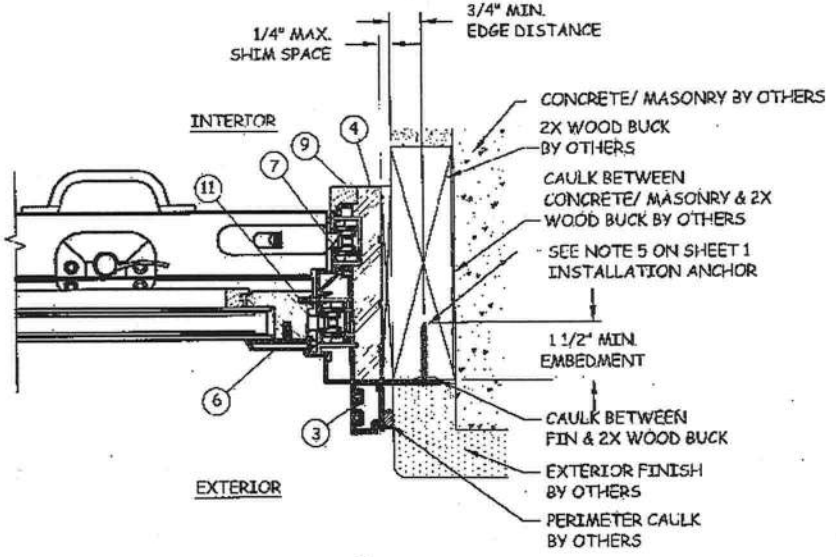
DWG #: MWM008

SHEET: 3 OF 5



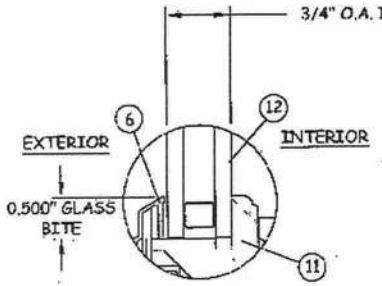
D/4 HORIZONTAL SECTION

MASONRY/CONCRETE SUBSTRATE - JAMB
FIN INSTALLATION



E/4 HORIZONTAL SECTION

2X WOOD STUD SUBSTRATE - JAMB
FIN INSTALLATION



GLAZING DETAIL 1

NOTE:
GLASS THICKNESS AND TYPE
MAY VARY PER ASTM E 1300
REQUIREMENT GLASS CHARTS.

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA DH WINDOW
HORIZONTAL SECTIONS
& GLAZING DETAIL

PREPARED FOR:

MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8460 FX: 540.484.6563

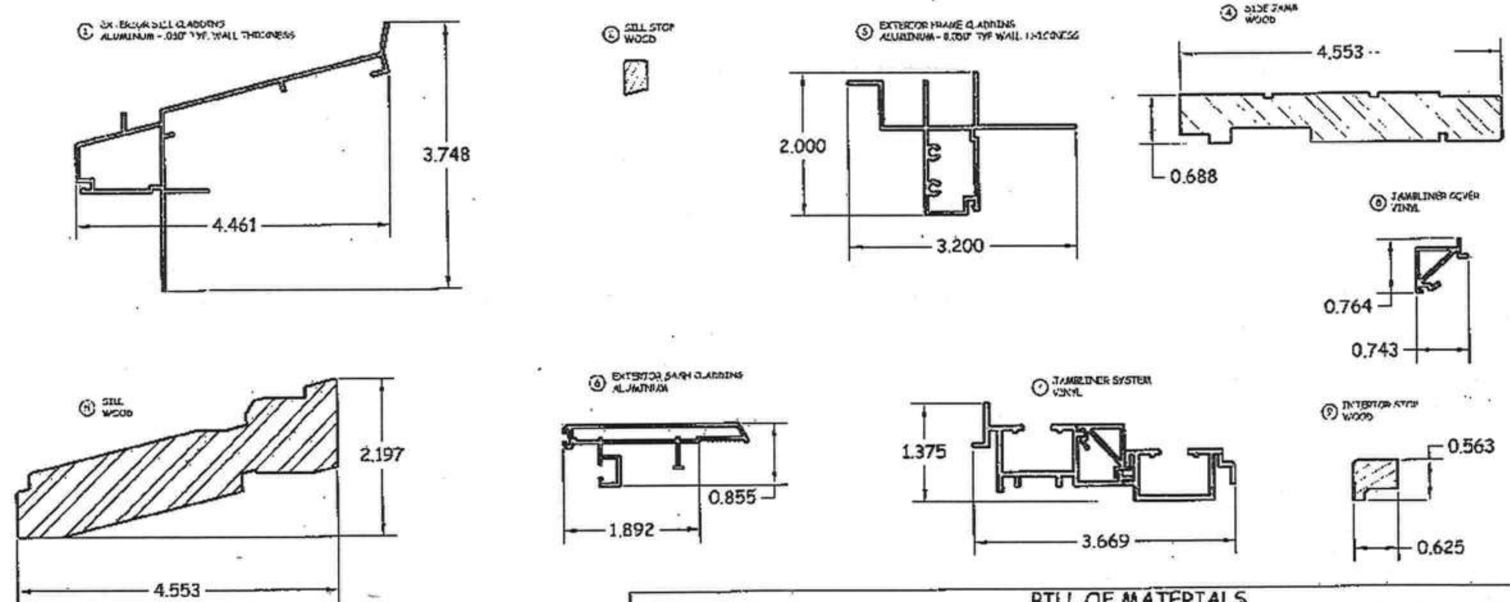
REVISIONS

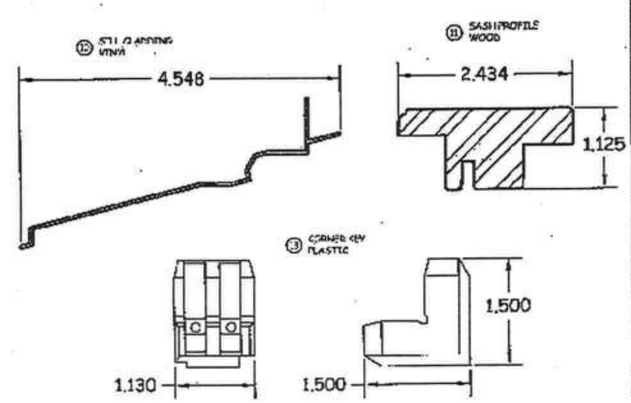
NO.	DESCRIPTION	BY	DATE

DATE: 05.08.08
DWN BY: DL
CHK BY: CC
SCALE: NTS

DWG #: MWM008

SHEET: 4 OF 5





BILL OF MATERIALS

NO	PART NUMBER	DESCRIPTION	MATERIAL	MANUFACTURER
1		SILL CLADDING	ALUMINUM	ALENCO
2		SILL STOP	WOOD	MW MANUFACTURERS
3		EXTERIOR FRAME CLADDING	ALUMINUM	ALENCO
4		SIDE JAMB / HEAD JAMB	WOOD	MW MANUFACTURERS
5		SILL	WOOD	MW MANUFACTURERS
6		EXTERIOR SASH CLADDING	ALUMINUM	ALENCO
7		JAMBLINER SYSTEM	VINYL	LINEAL TECH.
8		JAMBLINER COVER	VINYL	LINEAL TECH.
9		INTERIOR STOP	WOOD	MW MANUFACTURERS
10		SILL CLADDING	VINYL	LINEAL TECH.
11		SASH PROFILE	WOOD	MW MANUFACTURERS
12		3/4" O.A. INSULATED GLASS		AFG
13		#6 x 1 1/2" FLAT HEAD SCREW	STAINLESS STEEL	MERCHANTS

NOTE: ALL WOOD TO BE RADIATA OR EQUAL

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA DH WINDOW COMPONENTS & BILL OF MATERIALS

PREPARED FOR: MW MANUFACTURERS, INC. 433 NORTH MAIN ST. ROCKY MOUNT, VA 24151 PH. 500.999.6400 FX. 540.484.6363

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 05.08.08
DWN BY: DL
CHK BY: CC
SCALE: NTS
DWG #: MWM008
SHEET: 5 OF 5

MW WINDOWS & DOORS

MIRA EXTERIOR OUTSWING FRENCH DOORS

INSTALLATION NOTES:

1. *ONE (1)* INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN, UNLESS OTHERWISE STATED.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
3. *INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF ±1/2 INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.*
4. INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
5. FOR INSTALLATION THROUGH 2X BUCK USE *#8* WOOD SCREWS OF SUFFICIENT LENGTH TO ACHIEVE *1 1/2* INCH MINIMUM EMBEDMENT INTO WOOD SUBSTRATE.
6. FOR INSTALLATION THROUGH 2X BUCK USE *NAIL* OF SUFFICIENT LENGTH TO ACHIEVE *2* INCH MINIMUM EMBEDMENT INTO WOOD SUBSTRATE. NAIL HEAD DIAMETER TO BE AT LEAST 0.375".
7. FOR INSTALLATION THROUGH STEEL STUD USE *#8* SELF-TAPPING SCREWS OF SUFFICIENT LENGTH TO ACHIEVE *3 THREADS* MINIMUM ENGAGEMENT INTO STEEL FRAME SUBSTRATE.
8. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM(S). MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER.
9. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
10. FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.
11. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
12. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
    A. WOOD - MINIMUM SPECIFIC GRAVITY OF *0.55*.
    B. CONCRETE -MINIMUM COMPRESSIVE STRENGTH OF *2700 PSI*.
    C. MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).
    D. STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM WALL THICKNESS OF 33 MILS.

GENERAL NOTES:

1. THIS PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE 2007 FLORIDA BUILDING CODE (FBC); EXCLUDING HVHZ AND HAS BEEN EVALUATED IN ACCORDANCE WITH THE FOLLOWING:
    - AAMA/WDMA/CSA 101/I.S2/A440-05.
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY AND 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
4. 2X WOOD STUDS SHALL BE ATTACHED TO FULL LENGTH OF FRAME WHEN USED INSIDE METAL FRAMING AS STIFFENERS. WOOD STIFFENERS SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. STIFFENER DESIGN AND INSTALLATION IS THE RESPONSABILITY OF TH ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
5. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
6. APPROVED IMPACT PROTECTIVE SYSTEM **IS REQUIRED** TO PROTECT THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE.
7. DOOR FRAME MATERIAL: PONDEROSA WOOD
   CLADDING FRAME MATERIAL: ALUMINUM 6063-T6
8. GLASS MEETS THE REQUIREMENTS OF ASTM E1300 GLASS CHARTS. SEE SHEET 8 FOR GLAZING DETAIL..
9. *DESIGNATIONS "X" AND "O" STAND FOR THE FOLLOWING:*
   X: OPERABLE PANEL
   O: FIXED PANEL

TABLE OF CONTENTS

	DESIGN PRESSURE RATING	
UNIT HEIGHT	GLAZE TYPE	DESIGN PRESSURE
8'-0"	1	+/- 35.0 PSF
6'-10"	1	+/- 45.0 PSF

MW Manufacturers, Inc

TITLE: MIRA OS FRENCH DOORS GENERAL & INSTALLATION NOTES

PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

REVISIONS

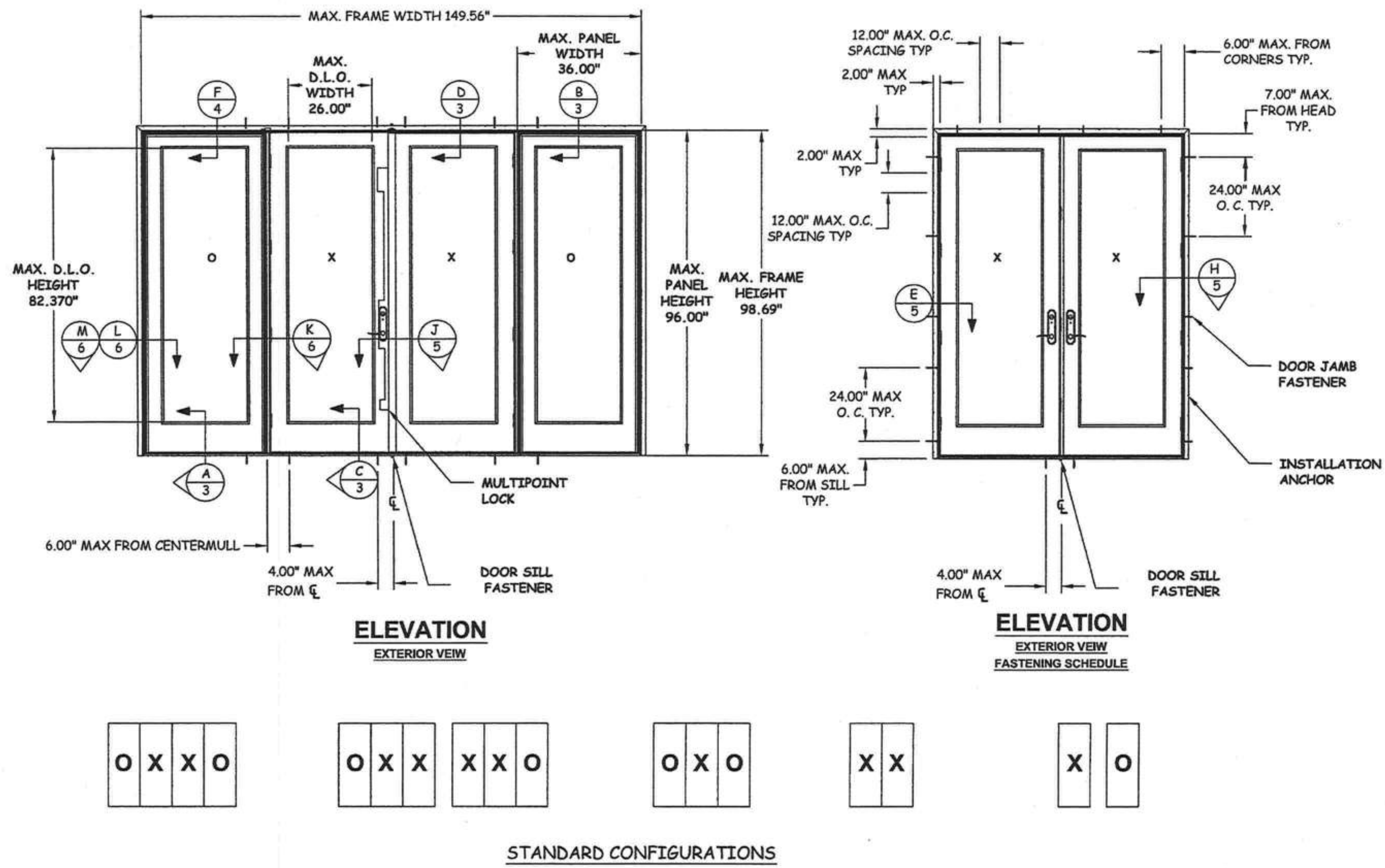
NO.	DESCRIPTION	BY	DATE

9-25-08

DATE: 06.25.08 | DWN BY: HR | CHK BY: CC | SCALE: NTS

DWG #: MWM011

SHEET: 1 OF 8



MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE:
MIRA OS FRENCH DOORS
ELEVATIONS & ANCHOR LAYOUTS

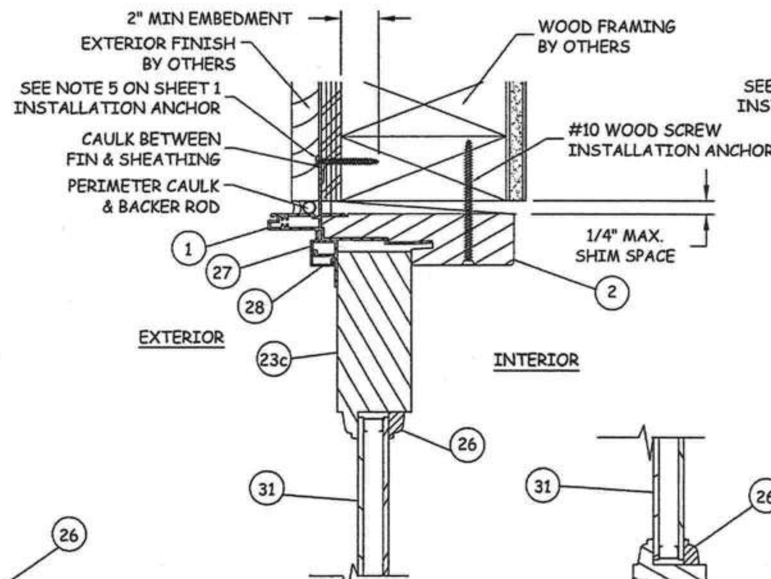
PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

REVISIONS

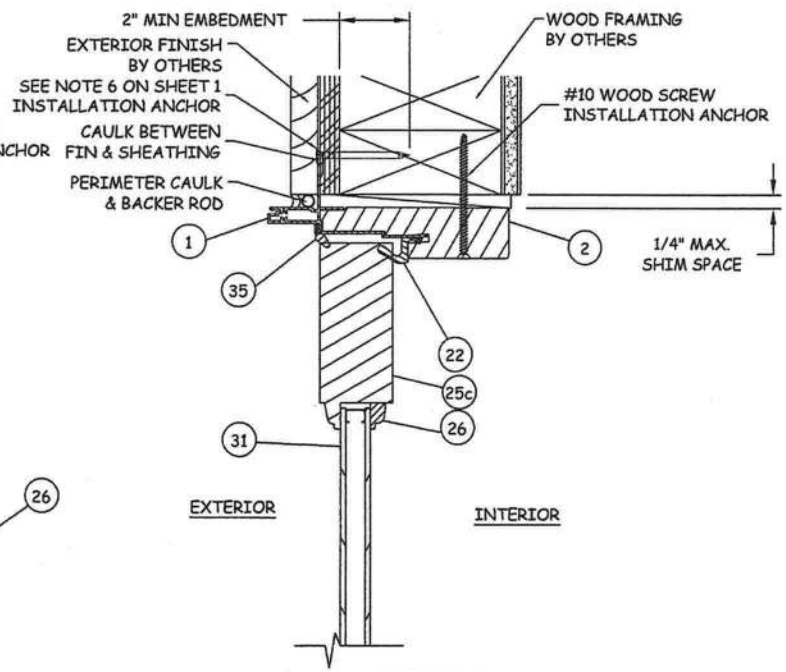
NO.	DESCRIPTION	BY	DATE

DATE: 06.25.08
DWN BY: HR
CHK BY: CC
SCALE: NTS

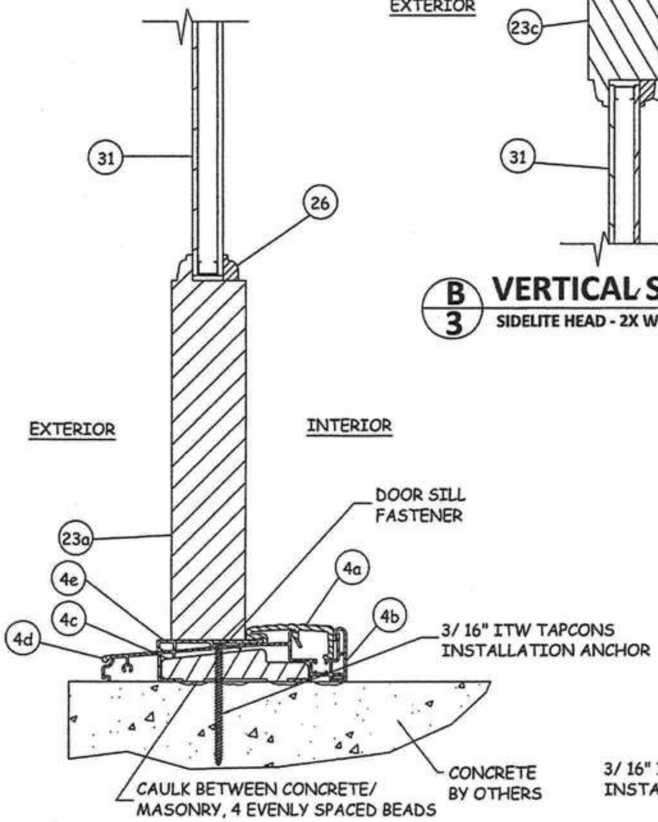
DWG #: MWM011
SHEET: 2 OF 8



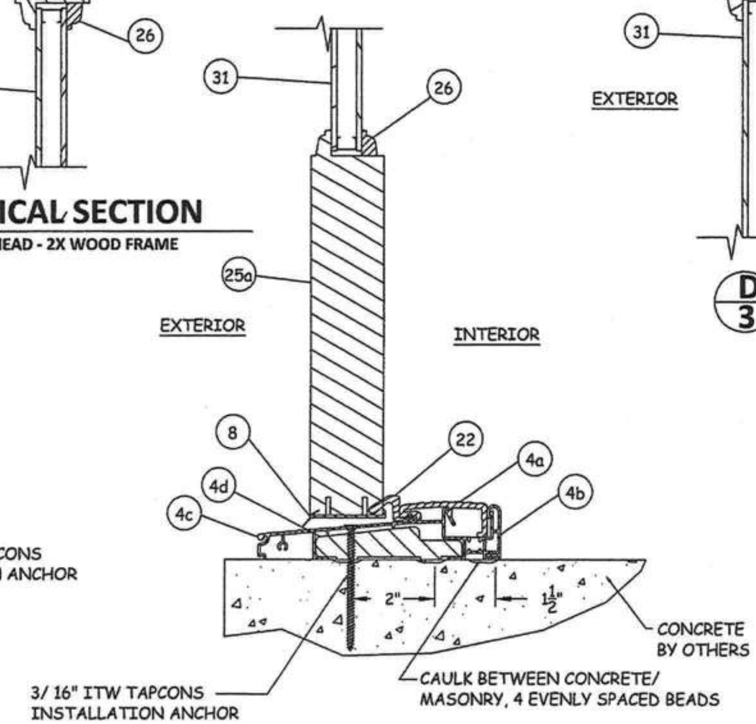
B/3 VERTICAL SECTION
SIDELITE HEAD - 2X WOOD FRAME



D/3 VERTICAL SECTION
DOOR HEAD - 2X WOOD FRAME



A/3 VERTICAL SECTION
SIDELITE SILL - CONCRETE/MASONRY



C/3 VERTICAL SECTION
DOOR SILL - CONCRETE/MASONRY

MW WINDOWS & DOORS
MW Manufacturers, Inc

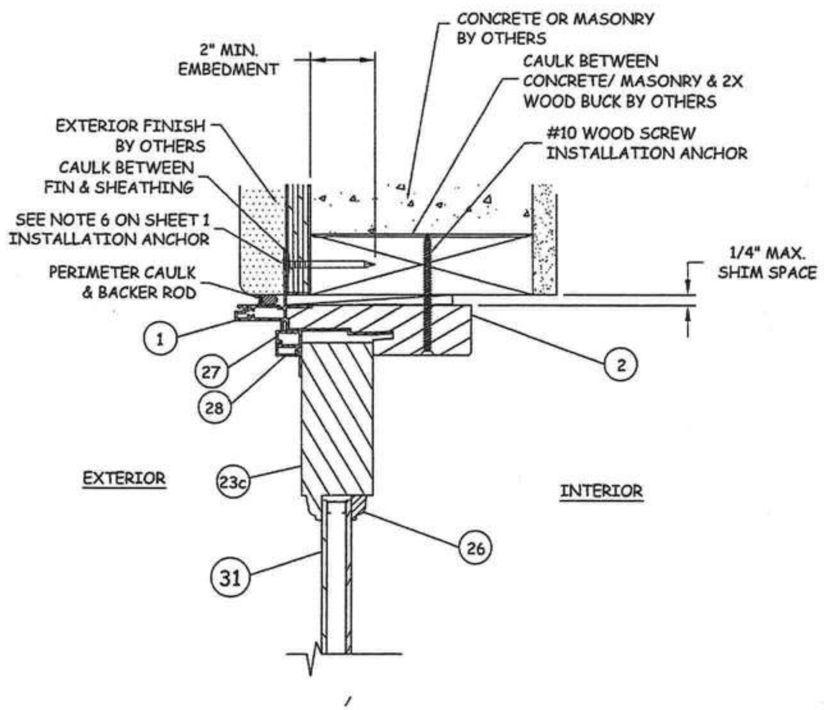
TITLE: MIRA OS FRENCH DOORS
VERTICAL SECTIONS

PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

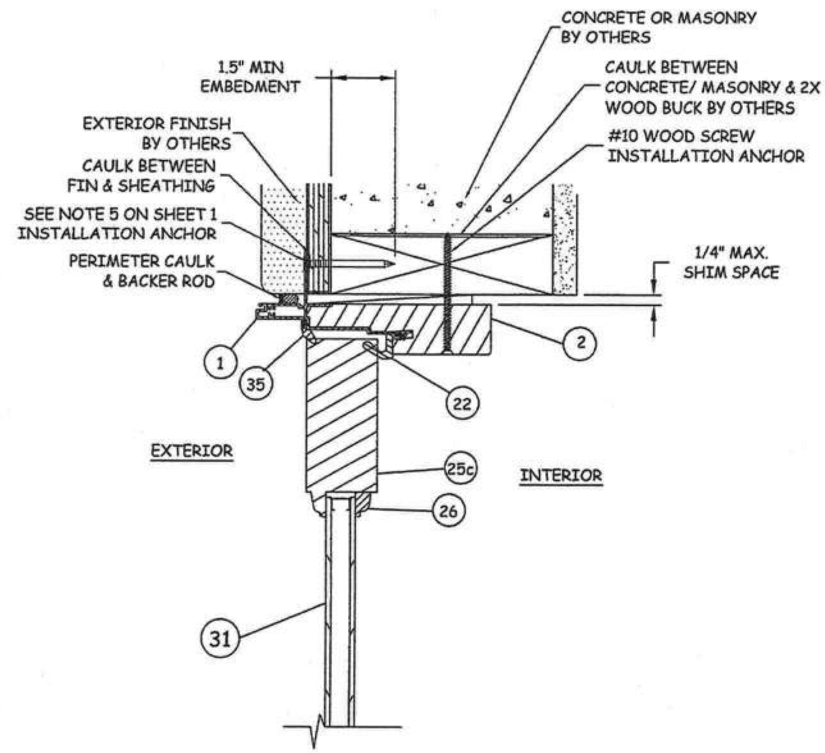
REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 06.25.08
DWN BY: HR
CHK BY: CC
SCALE: NTS
DWG #: MWM011
SHEET: 3 OF 8



F/4 VERTICAL SECTION
SIDELITE HEAD - CONCRETE/MASONRY



G/4 VERTICAL SECTION
DOOR HEAD - CONCRETE/MASONRY

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA OS FRENCH DOORS
VERTICAL SECTIONS

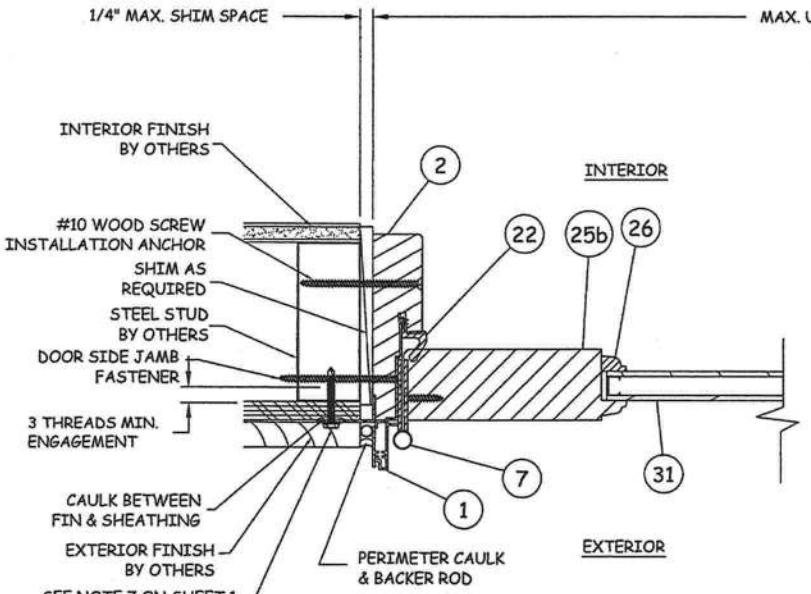
PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

REVISIONS

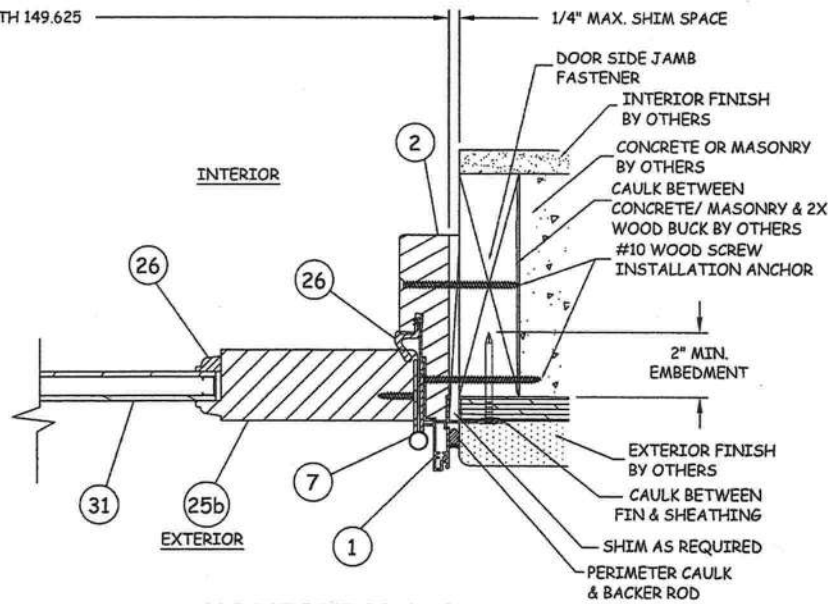
NO.	DESCRIPTION	BY	DATE

JOSEPH R. HAYES
FLORIDA P.E. NO 4382
1323 SUNSET DRIVE
WINTER PARK, FL 22789
9-25-08

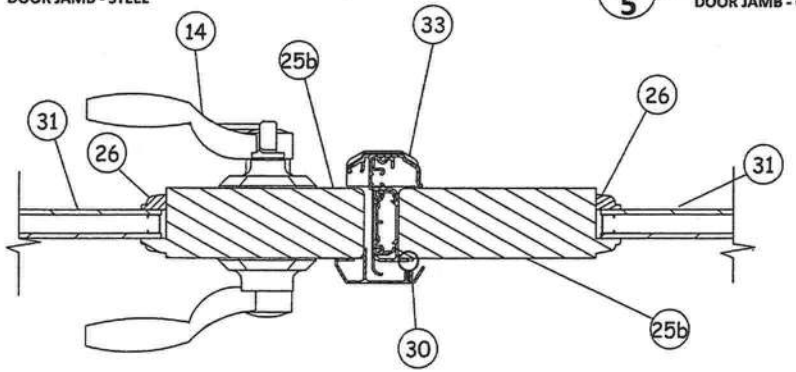
DATE: 06.25.08
DWN BY: HR
CHK BY: CC
SCALE: NTS
DWG #: MWM011
SHEET: 4 OF 8



E/5 **HORIZONTAL SECTION**
DOOR JAMB - STEEL



H/5 **HORIZONTAL SECTION**
DOOR JAMB - CONCRETE/MASONRY



J/5 **HORIZONTAL SECTION**
ASTRAGAL

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA OS FRENCH DOORS
HORIZONTAL SECTIONS

PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 06.25.08
DWN BY: HR
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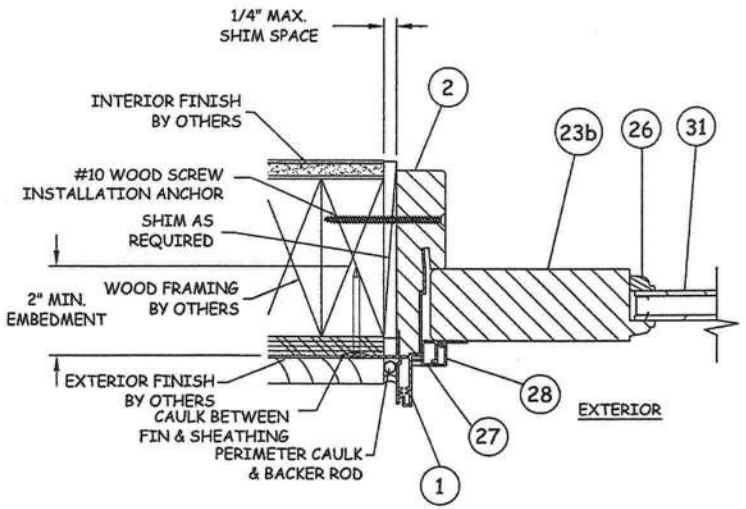
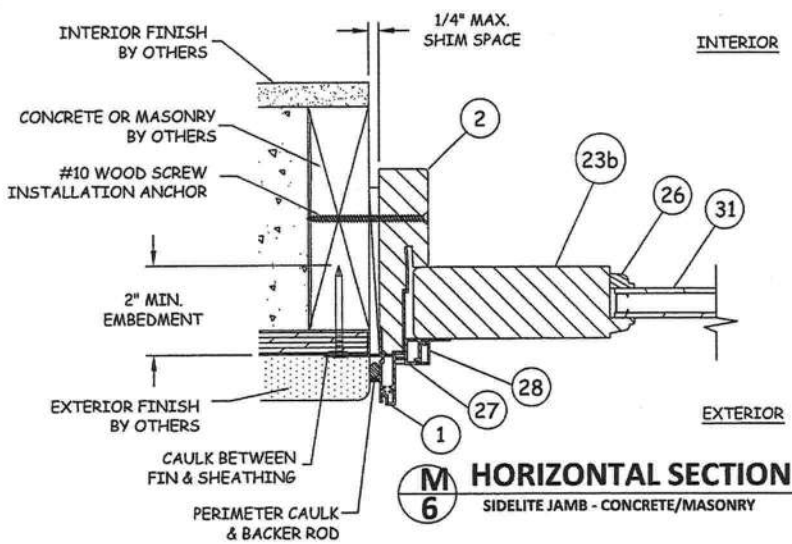
SCALE: NTS

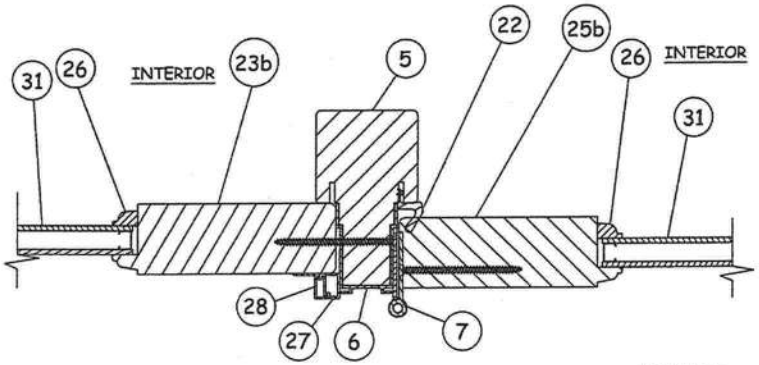
DWG #: MWM011
SHEET: 5 OF 8



L/6 HORIZONTAL SECTION
SIDELITE JAMB - 2X WOOD FRAME



M/6 HORIZONTAL SECTION
SIDELITE JAMB - CONCRETE/MASONRY



K/6 HORIZONTAL SECTION
MULLION

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA OS FRENCH DOORS
HORIZONTAL SECTIONS

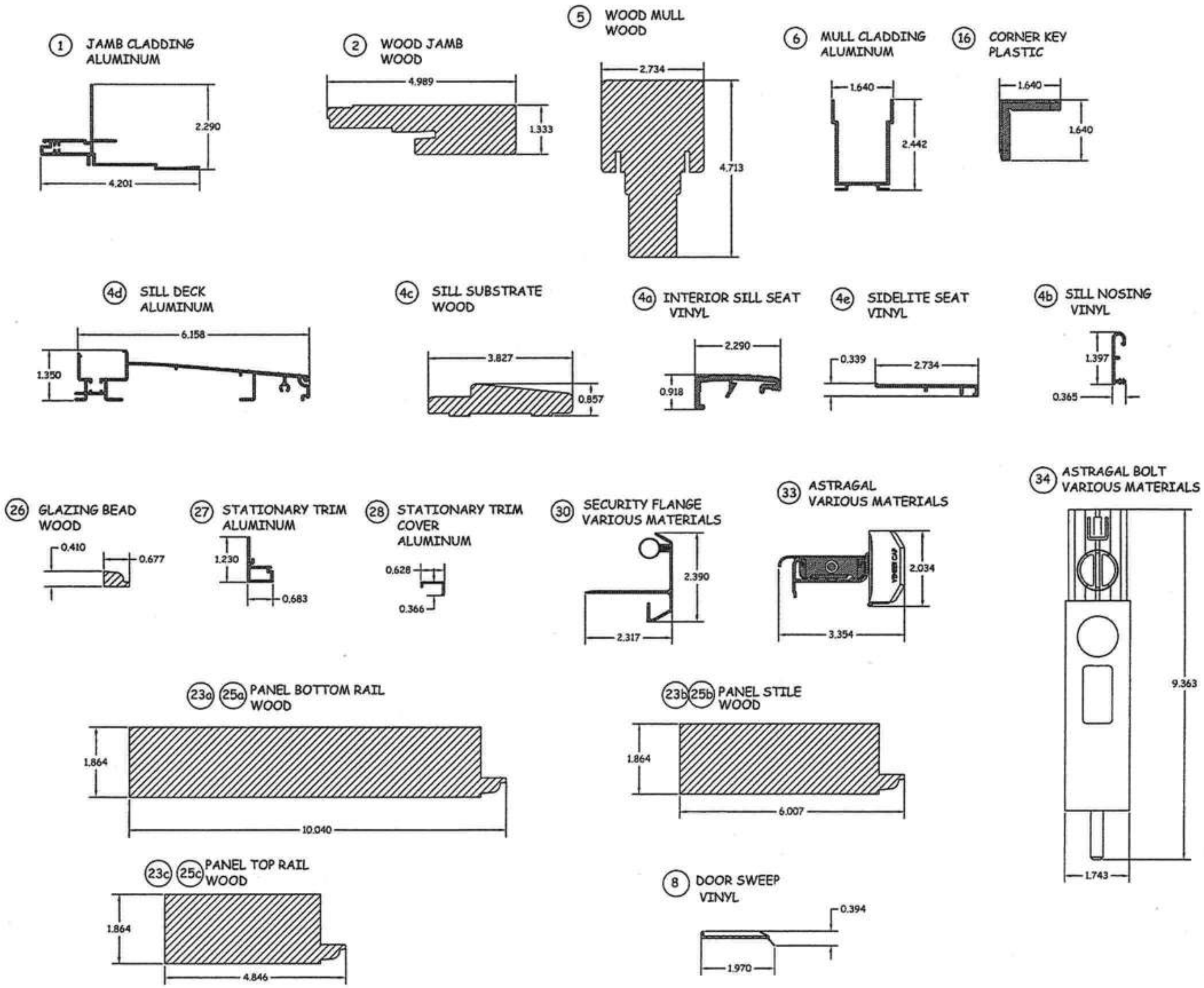
PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6583

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 06.25.08
DWN BY: HR
CHK BY: CC
SCALE: NTS

DWG #: MWM011
SHEET: 6 OF 8



MW WINDOWS & DOORS

MW Manufacturers, Inc

TITLE: MIRA OS FRENCH DOORS

COMPONENTS

PREPARED FOR:

MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 06.25.08

DWN BY: HR

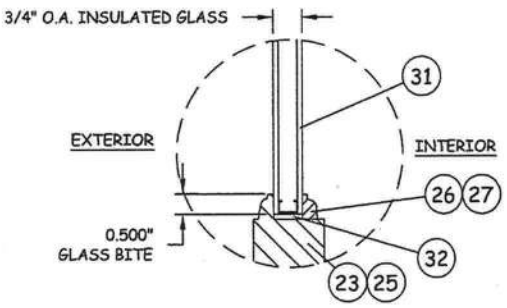
CHK BY: CC

SCALE: NTS

DWG #: MWM011

SHEET: 7 OF 8

BILL OF MATERIALS				
ITEM		DESCRIPTION	MATERIAL	VENDOR
1		JAMB CLADDING	Aluminum-6063-T6	Alenco
2		4 9/16" JAMB	Ponderosa Pine	MW
3		#8 X 3/4" CrownWasher Screw	Coated Steel	N/A
4		SILL	Various Materials	Endura
5		4 3/8 WOOD MULL	Ponderosa Pine	MW
6		4 3/8 MULL CLADDING	Aluminum-6063-T6	Alenco
7		BALL BEARING HINGE	Steel	Penrod
8		DOOR SWEEP	Rubber	Endura
9		#9 X 3/4 SCREW	Steel, Mild	Penrod
10		#9 X 1 SCREW	Steel, Mild	Penrod
11		#9 X 2.25 SCREW	Steel, Mild	Penrod
12		#8 X 2 COARSE DRYWALL SCREW	Steel, Mild	N/A
13		MULTIPOINT LOCK	Various Materials	W&F
14		MULTIPOINT HANDLE SET	Various Materials	W&F
15		#10 X 1 1/2 SCREW	Steel, Mild	W&F
16		CORNER KEY	Molded Vinyl	Hughes
17		#6 X 1-1/2" FLAT HEAD PHILLIPS SCREW	Steel, Mild	N/A
18		STRIKE REINENFORCEMENT	Steel, Mild	W&F
19		STRIKE PLATE	Stainless Steel	W&F
20		#8 x 3/4 SCREW	Steel, Mild	W&F
21		#8 X 2 1/2 SCREW	Steel, Mild	W&F
22		WEATHERSTRIP	Rubber	Shlegel
23		30 X 80 STATIONARY PANEL	Fir / Pine	Simpson
24		#8X 3 DRYWALL SCREW	Steel, Mild	N/A
25		ACTIVE/ INACTIVE DOOR PANEL	Fir / Pine	Simpson
26		DOOR PANEL GLAZING BEAD	Fir	Simpson
27		STATIONARY TRIM	Aluminum-6063-T6	Alenco
28		STATIONARY TRIM COVER	Aluminum-6063-T6	Alenco
29		HEAD SCREEN TRACK	Aluminum-6063-T6	RiteScreen
30		SECURTITY FLANGE	Aluminum-6063-T6	Alenco
31		3/4" O.A. INSULATED GLASS	Various Materials	AFG
32		SETTING BLOCK	Rubber	LAMETEK
33		ASTRAGAL	Various Materials	Endura
34		ASTRAGAL BOLT	Various Materials	Endura
35		EXTERIOR WEATHERSTRIP	Rubber	Shlegel
36				
37				
38				
39				
40				
41				



GLAZING DETAIL 1

NOTE:
GLASS THICKNESS AND TYPE
MAY VARY PER ASTM E 1300
REQUIREMENT GLASS CHARTS.

MW WINDOWS & DOORS
MW Manufacturers, Inc

TITLE: MIRA OS FRENCH DOORS
BILL OF MATERIALS
& GLAZING DETAIL

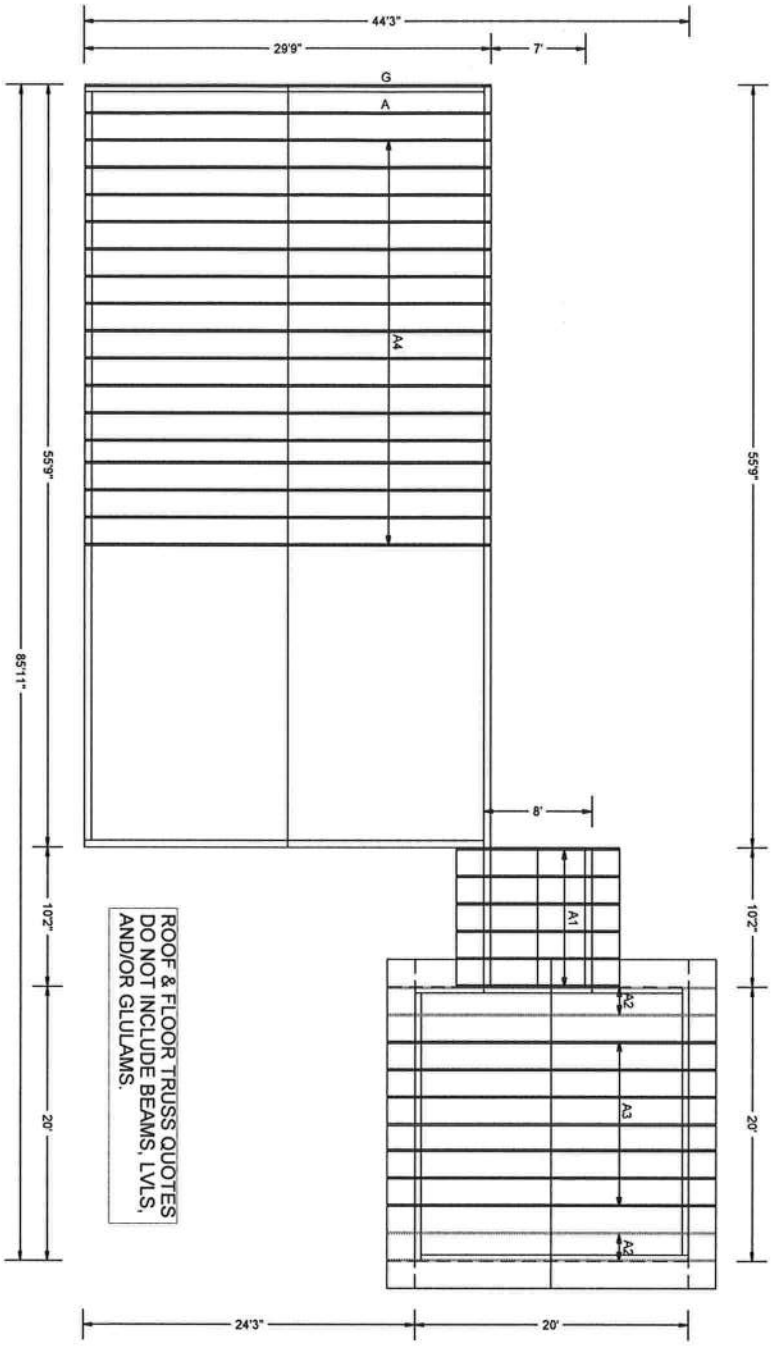
PREPARED FOR:
MW MANUFACTURERS, INC.
433 NORTH MAIN ST.
ROCKY MOUNT, VA 24151
PH: 800.999.8400 FX: 540.484.6683

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE: 06.25.08
DWN BY: HR
CHK BY: CC
SCALE: NTS

DWG #: MWM011
SHEET: 8 OF 8



ROOF & FLOOR TRUSS QUOTES
DO NOT INCLUDE BEAMS, LVLS,
AND/OR GLULAMS.

DATE:2/10/09
ROOF PITCH:3/12
7/12 - 8/12
CLG. PITCH:FLAT
OVERHANG:2'
LOADING:40#s PSF
WIND LOAD:110 MPH
EXT. WALLS:6" LOGS

W.B. Howland Truss Co.
P.O. Box 700
Live Oak, FL 32064
(386) 362-1235
(386) 362-7124 (fax)

PAGE NO: 1 OF 1	JOB NO: 5996	Job Name: Knapp Customer: SUWANNEE RIVER LOG HOMES Designer: Lynn Bell	

ITW Building Components Group, Inc.

1950 Marley Drive Haines City, FL 33844
Florida Engineering Certificate of Authorization Number: 0 278
Florida Certificate of Product Approval # FL1999
 Document ID:1TP3215-Z0211113251

Truss Fabricator:	W.B. Howland
Job Identification:	5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , **
Truss Count:	6
Model Code:	Florida Building Code 2004 and 2006 Supplement
Truss Criteria:	FBC CODE/TPI-2002(STD)
Engineering Software:	Alpine Software,Version 7.38.
Structural Engineer of Record:	The identity of the structural EOR did not exist as of
Address:	the seal date per section 61G15-31.003(5a) of the FAC
Minimum Design Loads:	Roof - 40.0 PSF @ 1.25 Duration
	Floor - N/A
	Wind - 110 MPH ASCE 7-02 -Closed

Seal Date: 02/11/2009

-Truss Design Engineer-
James F. Collins Jr.
Florida License Number: 52212
1950 Marley Drive
Haines City, FL 33844

Notes:

1. Determination as to the suitability of these truss components for the structure is the responsibility of the building designer/engineer of record, as defined in ANSI/TPI 1
2. The drawing date shown on this index sheet must match the date shown on the individual truss component drawing.
3. As shown on attached drawings; the drawing number is preceded by: HCUSR215

Details: BRCLBSUB-A1101502-GBLLETIN-

#	Ref	Description	Drawing#	Date
1	36854--A		09042002	02/11/09
2	36855--A1		09042003	02/11/09
3	36856--A2		09042004	02/11/09
4	36857--A3		09042005	02/11/09
5	36858--A4		09042006	02/11/09
6	36859--G		09042007	02/11/09

(5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , ** - A)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

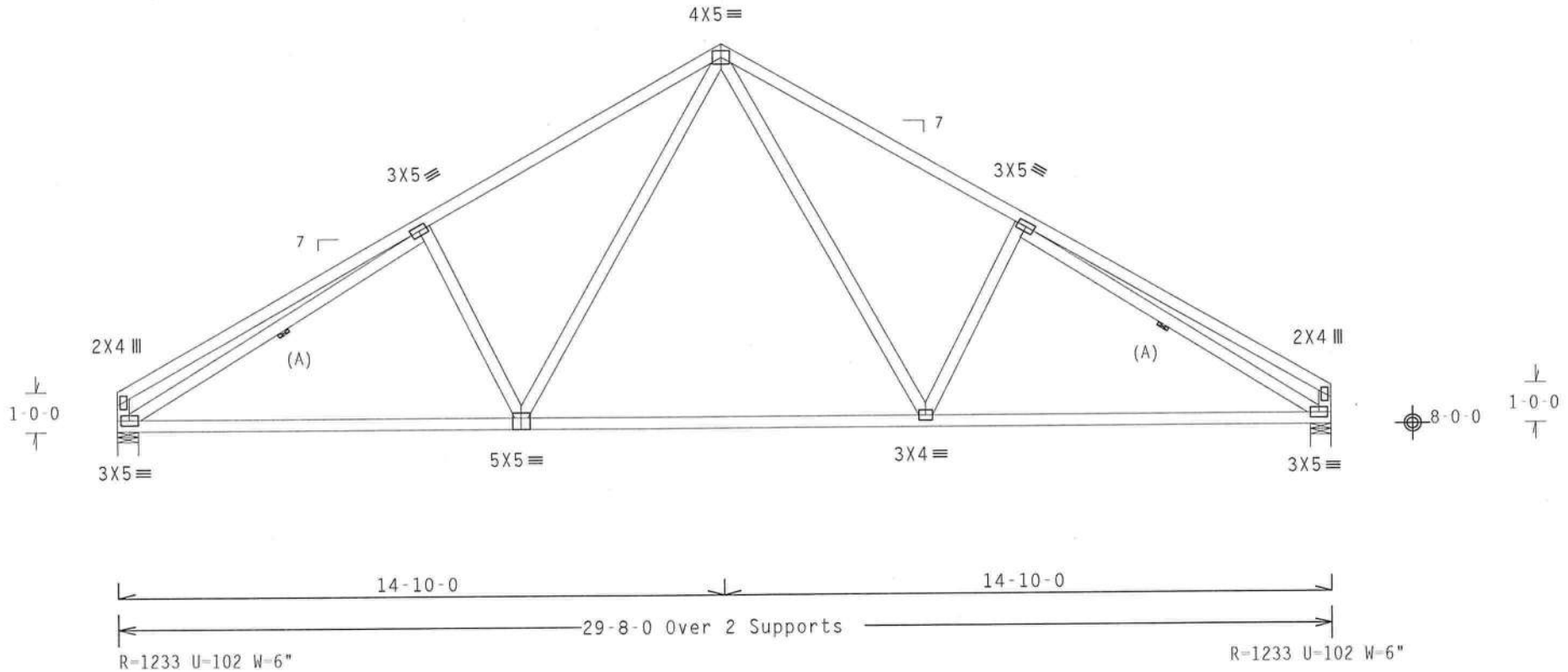
(A) Continuous lateral bracing equally spaced on member.

Deflection meets L/240 live and L/180 total load.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Wind reactions based on MWFRS pressures.

The overall height of this truss excluding overhang is 9-7-13.



Design Crit: FBC CODE/TPI-2002(STD)
FT/RT=20%(0%)/10(0)

7.38.00.0810.02 QTY:1 FL/-/5/-/-/R/- Scale =.25"/Ft.

PLT TYP. Wave

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

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

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

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

TC LL	20.0 PSF	REF R215-- 36854
TC DL	10.0 PSF	DATE 02/11/09
BC DL	10.0 PSF	DRW HCUSR215 09042002
BC LL	0.0 PSF	HC-ENG JB/AP *
TOT.LD.	40.0 PSF	SEQN- 171363
DUR.FAC.	1.25	FROM CDM
SPACING	24.0"	JREF- 1TP3215_Z02

(5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , ** - A1)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

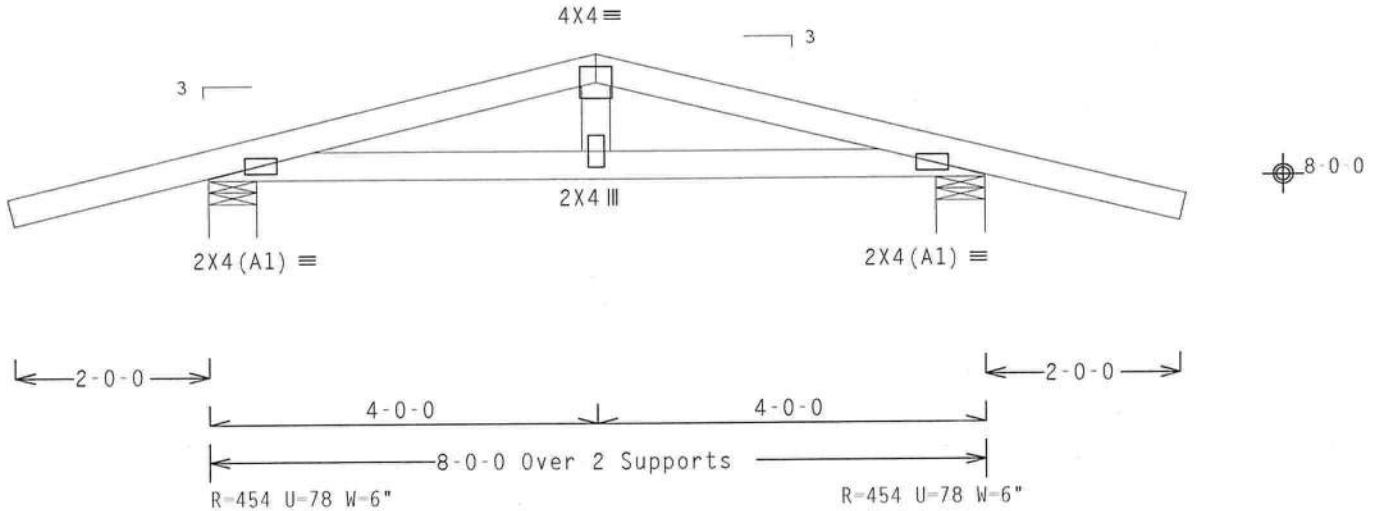
Roof overhang supports 2.00 psf soffit load.

Deflection meets L/240 live and L/180 total load.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Wind reactions based on MWFRS pressures.

The overall height of this truss excluding overhang is 1-3-14.



Design Crit: FBC CODE/TPI-2002(STD)
FT/RT=20%(0%)/10(0)

PLT TYP. Wave

7.38.00 0814 02

QTY:6 FL/-/5/-/-/R/-

Scale =.5"/Ft.

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

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

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

TC LL	20.0 PSF	REF R215-- 36855
TC DL	10.0 PSF	DATE 02/11/09
BC DL	10.0 PSF	DRW HCUSR215 09042003
BC LL	0.0 PSF	HC-ENG JB/AP *
TOT.LD.	40.0 PSF	SEQN- 171327
DUR.FAC.	1.25	FROM CDM
SPACING	24.0"	JREF- 1TP3215_Z02

(5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , ** - A2)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

Roof overhang supports 2.00 psf soffit load.

Gable end supports 8" max rake overhang.

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

+ MEMBER TO BE LATERALLY BRACED FOR OUT OF PLANE WIND LOADS. BRACING SYSTEM TO BE DESIGNED AND FURNISHED BY OTHERS.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Wind reactions based on MWFRS pressures.

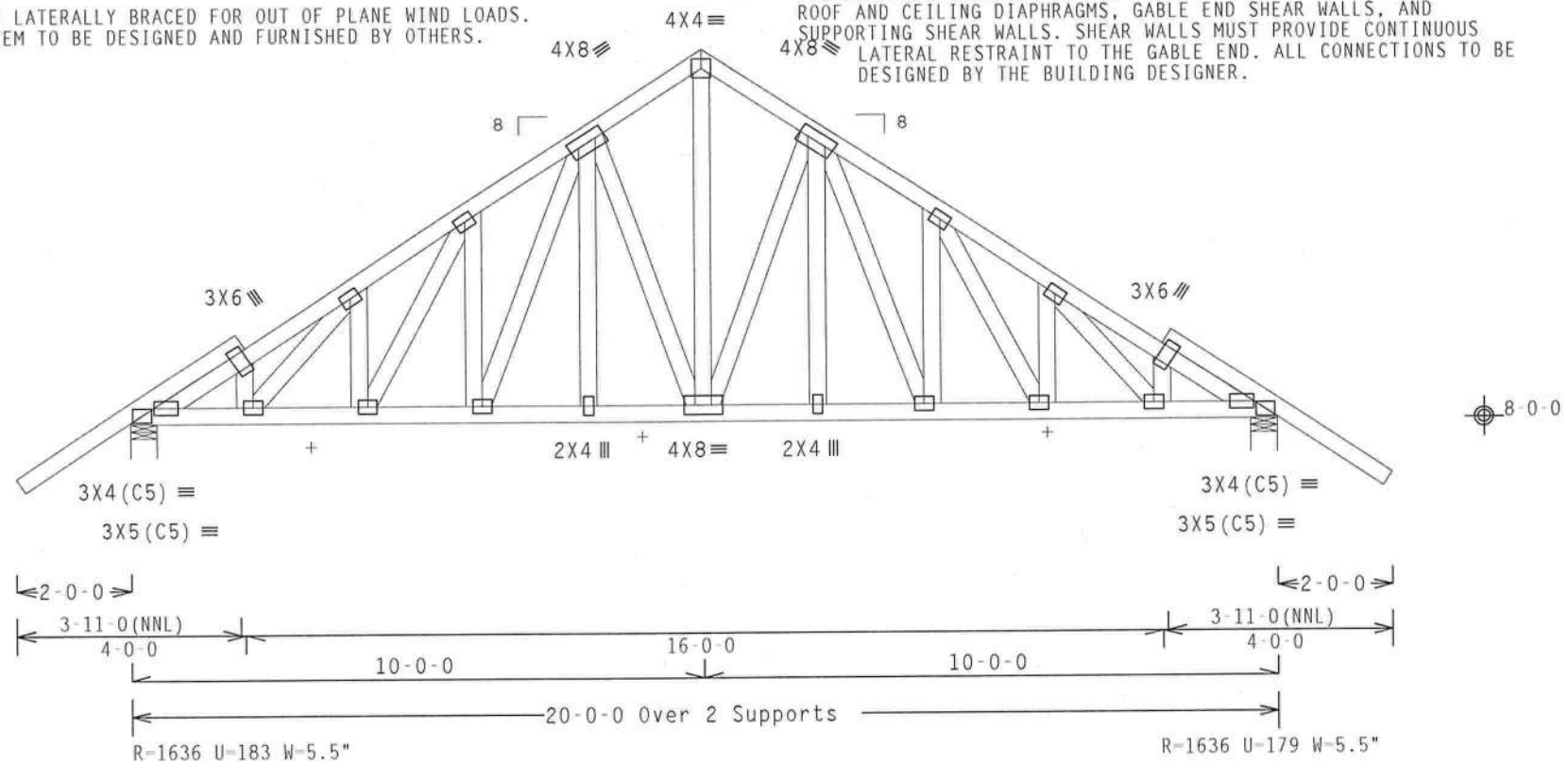
See DWGS A11015020109 & GBLLETIN0109 for more requirements.

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

Deflection meets L/240 live and L/180 total load.

The overall height of this truss excluding overhang is 6-8-4.

THE BUILDING DESIGNER IS RESPONSIBLE FOR THE DESIGN OF THE ROOF AND CEILING DIAPHRAGMS, GABLE END SHEAR WALLS, AND SUPPORTING SHEAR WALLS. SHEAR WALLS MUST PROVIDE CONTINUOUS LATERAL RESTRAINT TO THE GABLE END. ALL CONNECTIONS TO BE DESIGNED BY THE BUILDING DESIGNER.



Note: All Plates Are 3X4 Except As Shown.

Design Crit: FBC CODE/TPI-2002(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 7.38.00.0810.02 QTY:2 FL/-/5/-/-/R/- Scale =.3125"/Ft.

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

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

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

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

TC LL	20.0 PSF	REF	R215-- 36856
TC DL	10.0 PSF	DATE	02/11/09
BC DL	10.0 PSF	DRW	HCUSR215 09042004
BC LL	0.0 PSF	HC-ENG	JB/AP
TOT.LD.	40.0 PSF	SEQN-	171345
DUR.FAC.	1.25	FROM	CDM
SPACING	24.0"	JREF-	1TP3215_Z02

(5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , ** - A3)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

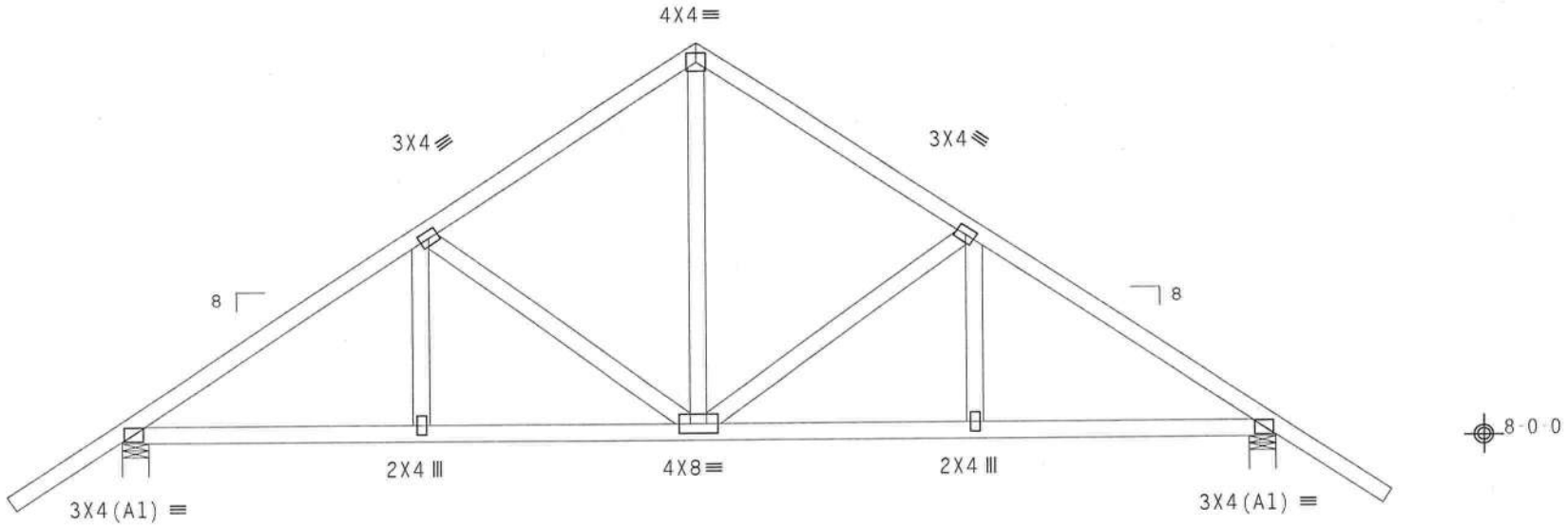
Roof overhang supports 2.00 psf soffit load.

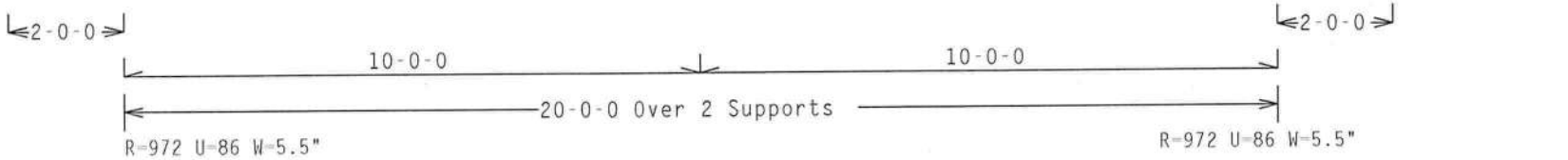
Deflection meets L/240 live and L/180 total load.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Wind reactions based on MWFRS pressures.

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





Design Crit: FBC CODE/TPI-2002(STD)
FT/RT=20%(0%)/10(0)

PLT TYP. Wave

7.38.00.0810-02 QTY:7 FL/-/5/-/-/R/- Scale =.3125"/Ft.

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

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

TC LL	20.0 PSF	REF	R215-- 36857
TC DL	10.0 PSF	DATE	02/11/09
BC DL	10.0 PSF	DRW	HCUSR215 09042005
BC LL	0.0 PSF	HC-ENG	JB/AP *
TOT.LD.	40.0 PSF	SEQN-	171339
DUR.FAC.	1.25	FROM	CDM
SPACING	24.0"	JREF-	1TP3215_Z02

(5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , ** - A4)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP #2 N
Webs 2x4 SP #2 N

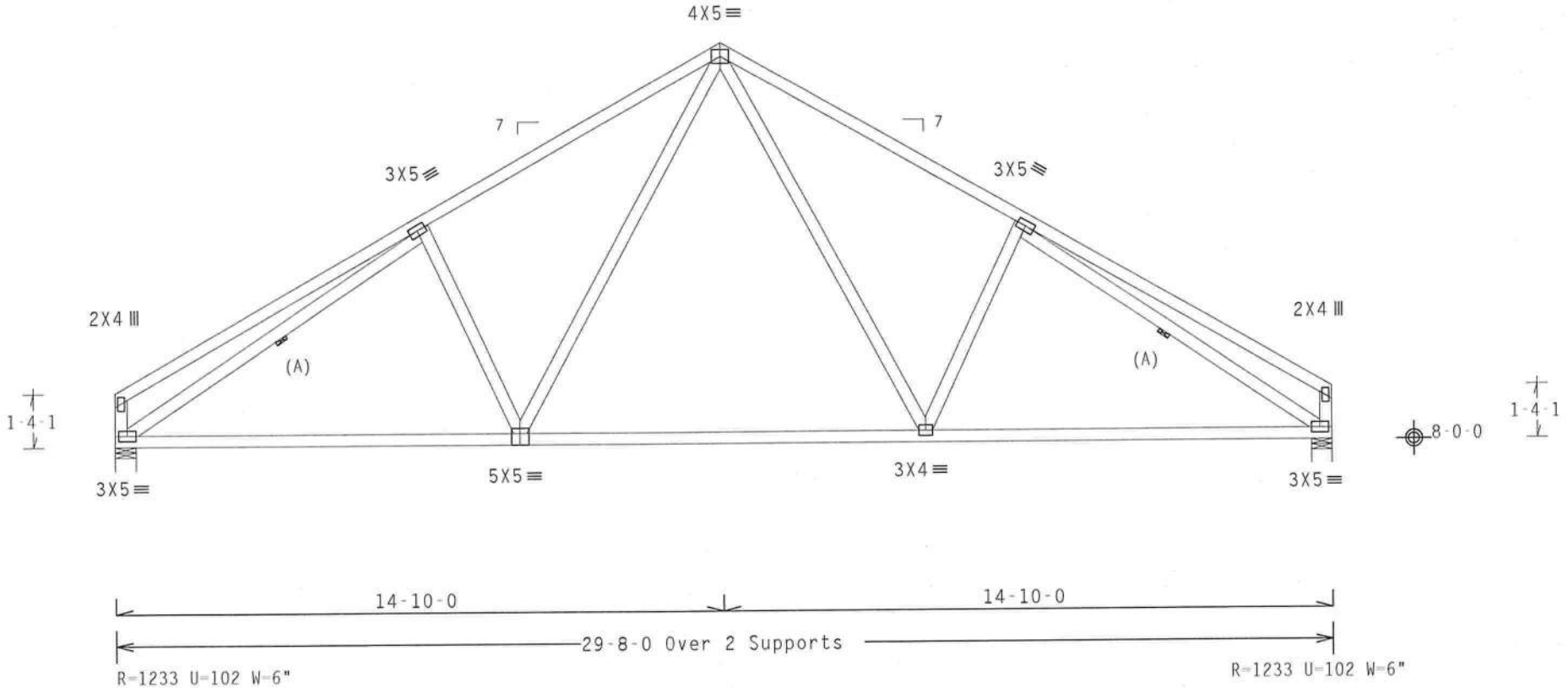
(A) Continuous lateral bracing equally spaced on member.

Deflection meets L/240 live and L/180 total load.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf. Iw=1.00 GCpi(+/-)=0.18

Wind reactions based on MWFRS pressures.

The overall height of this truss excluding overhang is 9-11-14.



Design Crit: FBC CODE/TPI-2002(STD)
FT/RT=20%(0%)/10(0)

PLT TYP. Wave

7.38.00.0816.02

QTY:16 FL/-/5/-/-/R/-

Scale =.25"/Ft.

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

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

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

TC LL	20.0 PSF	REF	R215-- 36858
TC DL	10.0 PSF	DATE	02/11/09
BC DL	10.0 PSF	DRW	HCUSR215 09042006
BC LL	0.0 PSF	HC-ENG	JB/AP *
TOT.LD.	40.0 PSF	SEQN-	171357
DUR.FAC.	1.25	FROM	CDM
SPACING	24.0"	JREF-	1TP3215_Z02

(5996-/Knapp /SUWANNEE RIVER LOG HOMES -- , ** - G)

Top chord 2x4 SP #2 N
Bot chord 2x4 SP SS
Webs 2x4 SP #2 N

Gable end supports 8" max rake overhang.

See DWGS A11015020109 & GBLLETIN0109 for more requirements.

Deflection meets L/240 live and L/180 total load.

+ MEMBER TO BE LATERALLY BRACED FOR OUT OF PLANE WIND LOADS. BRACING SYSTEM TO BE DESIGNED AND FURNISHED BY OTHERS.

110 mph wind, 15.00 ft mean hgt, ASCE 7-02, CLOSED bldg, Located anywhere in roof, CAT II, EXP B, wind TC DL=5.0 psf, wind BC DL=5.0 psf, Iw=1.00 GCpi(+/-)=0.18

Wind reactions based on MWFRS pressures.

(A) Continuous lateral bracing equally spaced on member.

The overall height of this truss excluding overhang is 9-7-13.

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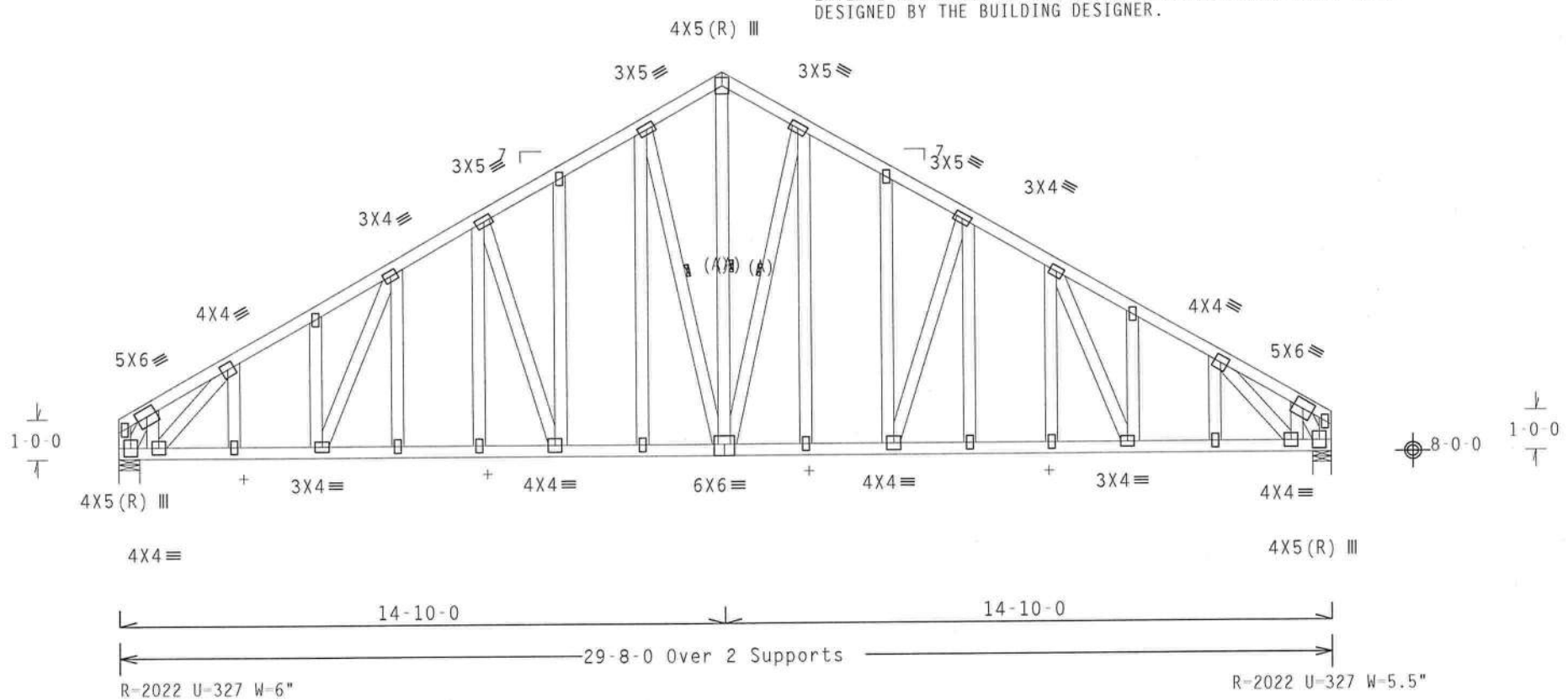

Note: All Plates Are 2X4 Except As Shown.

Design Crit: FBC CODE/TPI-2002(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 7.38.00.0810.02 QTY:1 FL/-/5/-/-/R/- Scale =.25"/Ft.

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

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

TC LL	20.0 PSF	REF R215-- 36859
TC DL	10.0 PSF	DATE 02/11/09
BC DL	10.0 PSF	DRW HCUSR215 09042007
BC LL	0.0 PSF	HC-ENG JB/AP
TOT.LD.	40.0 PSF	SEQN- 171372
DUR.FAC.	1.25	FROM CDM
SPACING	24.0"	JREF- 1TP3215_Z02

CLB WEB BRACE SUBSTITUTION

THIS DETAIL IS TO BE USED WHEN CONTINUOUS LATERAL BRACING (CLB) IS SPECIFIED ON A TRUSS DESIGN BUT AN ALTERNATIVE WEB BRACING METHOD IS DESIRED.

NOTES:

THIS DETAIL IS ONLY APPLICABLE FOR CHANGING THE SPECIFIED CLB SHOWN ON SINGLE PLY SEALED DESIGNS TO T-BRACING OR SCAB BRACING.

ALTERNATIVE BRACING SPECIFIED IN CHART BELOW MAY BE CONSERVATIVE. FOR MINIMUM ALTERNATIVE BRACING, RE-RUN DESIGN WITH APPROPRIATE BRACING.

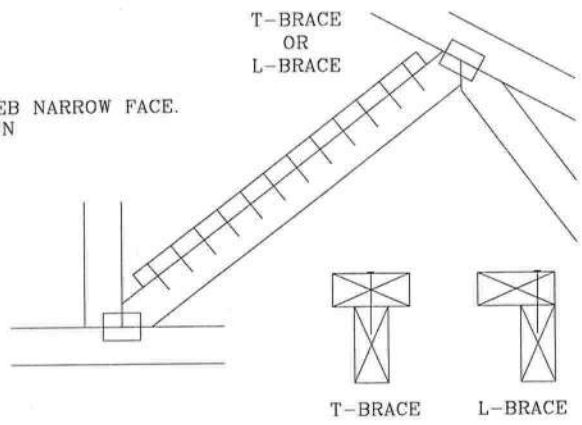
WEB MEMBER SIZE	SPECIFIED CLB BRACING	ALTERNATIVE BRACING T OR L-BRACE	ALTERNATIVE BRACING SCAB BRACE
2X3 OR 2X4	1 ROW	2X4	1-2X4
2X3 OR 2X4	2 ROWS	2X6	2-2X4
2X6	1 ROW	2X4	1-2X6
2X6	2 ROWS	2X6	2-2X4(*)
2X8	1 ROW	2X6	1-2X8
2X8	2 ROWS	2X6	2-2X6(*)

T-BRACE, L-BRACE AND SCAB BRACE TO BE SAME SPECIES AND GRADE OR BETTER THAN WEB MEMBER UNLESS SPECIFIED OTHERWISE ON ENGINEER'S SEALED DESIGN.

(*) CENTER SCAB ON WIDE FACE OF WEB. APPLY (1) SCAB TO EACH FACE OF WEB.

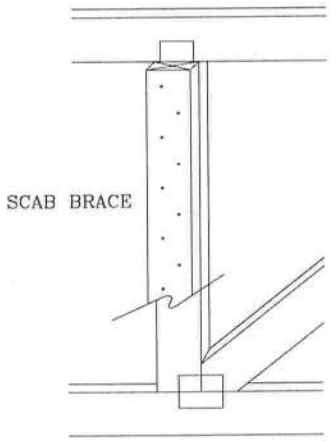
T-BRACING OR L-BRACING:

APPLY TO EITHER SIDE OF WEB NARROW FACE.
ATTACH WITH 10d BOX OR GUN
(0.128"x 3.",MIN) NAILS.
AT 6" O.C.
BRACE IS A
MINIMUM 80% OF WEB
MEMBER LENGTH



SCAB BRACING:

APPLY SCAB(S) TO WIDE FACE OF WEB.
NO MORE THAN (1) SCAB PER FACE.
ATTACH WITH 10d BOX OR GUN
(0.128"x 3.",MIN) NAILS.
AT 6" O.C.
BRACE IS A MINIMUM
80% OF WEB MEMBER LENGTH



Building Components Group Inc.

Earth City, MO 63045

WARNING READ AND FOLLOW ALL NOTES ON THIS SHEET!
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow BCSI (Building Component Safety Information, by TPI and WTCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural panels and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3 & B7. See this job's general notes page for more information.

IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR.
ITW Building Components Group Inc. (ITWBCG) shall not be responsible for any deviation from this design, any failure to build the truss in conformance with TPI, or fabricating, handling, shipping, installing & bracing of trusses. ITWBCG connector plates are made of 20/18/16GA (W,H/S/K) ASTM A653 grade 37/40/80 (K/W/H,S) galv. steel. Apply plates to each face of truss, positioned as shown above and on Joint Details. A seal on this drawing or cover page indicates acceptance and professional engineering responsibility solely for the truss component design shown. The suitability and use of this component for any building is the responsibility of the Building Designer per ANST/TPI 1 Sec. 2.
ITW-BCG: www.itwbcg.com; TPI: www.tpinst.com; WTCA: www.sbcindustry.com; ICC: www.iccsafe.org

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

TC LL	PSF	REF CLB SUBST.
TC DL	PSF	DATE 1/1/09
BC DL	PSF	DRWG BRCLBSUB0109
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		

GABLE STUD REINFORCEMENT DETAIL

ASCE 7-02: 110 MPH WIND SPEED, 15' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C, Kzt = 1.00

MAX GABLE VERTICAL LENGTH

2X4 GABLE VERTICAL SPACING	SPECIES	BRACE GRADE	NO BRACES	(1) 1X4 "L" BRACE * GROUP A	(1) 1X4 "L" BRACE * GROUP B	(1) 2X4 "L" BRACE * GROUP A	(1) 2X4 "L" BRACE * GROUP B	(2) 2X4 "L" BRACE ** GROUP A	(2) 2X4 "L" BRACE ** GROUP B	(1) 2X6 "L" BRACE * GROUP A	(1) 2X6 "L" BRACE * GROUP B	(2) 2X6 "L" BRACE ** GROUP A	(2) 2X6 "L" BRACE ** GROUP B
24" O.C.	SPF HF	#1 / #2	3' 10"	6' 8"	6' 10"	7' 11"	8' 1"	9' 5"	9' 8"	12' 5"	12' 9"	14' 0"	14' 0"
		#3	3' 9"	6' 0"	6' 0"	7' 11"	7' 11"	9' 5"	9' 5"	12' 4"	12' 4"	14' 0"	14' 0"
		STUD	3' 9"	6' 0"	6' 0"	7' 11"	7' 11"	9' 5"	9' 5"	12' 3"	12' 3"	14' 0"	14' 0"
		STANDARD	3' 9"	5' 2"	5' 2"	6' 9"	6' 9"	9' 1"	9' 1"	10' 7"	10' 7"	14' 0"	14' 0"
	SP DFL	#1	4' 3"	6' 8"	7' 2"	7' 11"	8' 6"	9' 5"	10' 2"	12' 5"	13' 5"	14' 0"	14' 0"
		#2	4' 2"	6' 8"	7' 2"	7' 11"	8' 6"	9' 5"	10' 2"	12' 5"	13' 5"	14' 0"	14' 0"
		#3	4' 0"	6' 2"	6' 2"	7' 11"	8' 1"	9' 5"	9' 11"	12' 5"	12' 8"	14' 0"	14' 0"
		STUD	4' 0"	6' 1"	6' 1"	7' 11"	8' 0"	9' 5"	9' 11"	12' 5"	12' 6"	14' 0"	14' 0"
		STANDARD	3' 10"	5' 3"	5' 3"	6' 11"	6' 11"	9' 4"	9' 4"	10' 10"	10' 10"	14' 0"	14' 0"
16" O.C.	SPF HF	#1 / #2	4' 5"	7' 8"	7' 10"	9' 1"	9' 4"	10' 10"	11' 1"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 4"	7' 4"	7' 4"	9' 1"	9' 1"	10' 10"	10' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 4"	7' 4"	7' 4"	9' 1"	9' 1"	10' 10"	10' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 4"	6' 4"	6' 4"	8' 4"	8' 4"	10' 10"	10' 10"	12' 11"	12' 11"	14' 0"	14' 0"
	SP DFL	#1	4' 10"	7' 8"	8' 3"	9' 1"	9' 9"	10' 10"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	4' 9"	7' 8"	8' 3"	9' 1"	9' 9"	10' 10"	11' 8"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 6"	7' 7"	7' 7"	9' 1"	9' 6"	10' 10"	11' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 6"	7' 6"	7' 6"	9' 1"	9' 6"	10' 10"	11' 4"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 5"	6' 5"	6' 5"	8' 6"	8' 6"	10' 10"	11' 1"	13' 3"	13' 3"	14' 0"	14' 0"
12" O.C.	SPF HF	#1 / #2	4' 11"	8' 5"	8' 8"	10' 0"	10' 3"	11' 11"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	4' 9"	8' 5"	8' 5"	10' 0"	10' 0"	11' 11"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	4' 9"	8' 5"	8' 5"	10' 0"	10' 0"	11' 11"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 9"	7' 3"	7' 3"	9' 7"	9' 7"	11' 11"	11' 11"	14' 0"	14' 0"	14' 0"	14' 0"
	SP DFL	#1	5' 4"	8' 5"	9' 1"	10' 0"	10' 9"	11' 11"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		#2	5' 3"	8' 5"	9' 1"	10' 0"	10' 9"	11' 11"	12' 10"	14' 0"	14' 0"	14' 0"	14' 0"
		#3	5' 0"	8' 5"	8' 5"	10' 0"	10' 6"	11' 11"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		STUD	5' 0"	8' 5"	8' 7"	10' 0"	10' 6"	11' 11"	12' 6"	14' 0"	14' 0"	14' 0"	14' 0"
		STANDARD	4' 11"	7' 5"	7' 5"	9' 10"	9' 10"	11' 11"	12' 3"	14' 0"	14' 0"	14' 0"	14' 0"

BRACING GROUP SPECIES AND GRADES:

GROUP A:

SPRUCE-PINE-FIR	
#1 / #2	STANDARD
#3	STUD

HEM-FIR	
#2	STUD
#3	STANDARD

DOUGLAS FIR-LARCH
#3
STUD
STANDARD

SOUTHERN PINE
#3
STUD
STANDARD

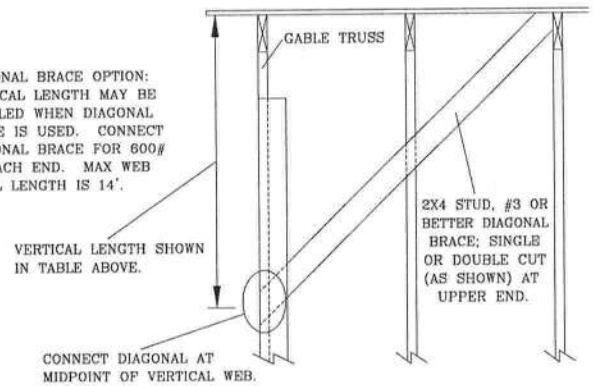
GROUP B:

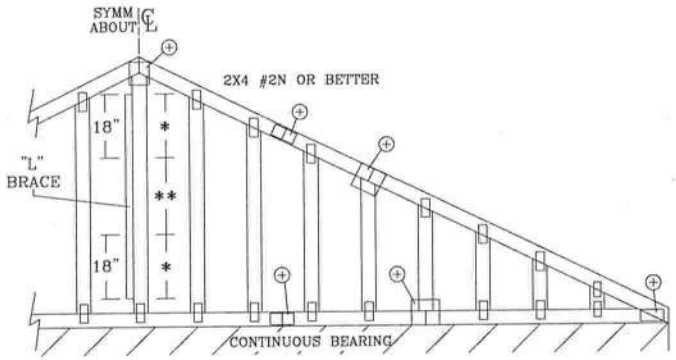
HEM-FIR
#1 & BTR
#1

SOUTHERN PINE
#1
#2

DOUGLAS FIR-LARCH
#1
#2

DIAGONAL BRACE OPTION: VERTICAL LENGTH MAY BE DOUBLED WHEN DIAGONAL BRACE IS USED. CONNECT DIAGONAL BRACE FOR 600# AT EACH END. MAX WEB TOTAL LENGTH IS 14'.





REFER TO CHART ABOVE FOR MAX GABLE VERTICAL LENGTH.

GABLE TRUSS DETAIL NOTES:

LIVE LOAD DEFLECTION CRITERIA IS L/240.

PROVIDE UPLIFT CONNECTIONS FOR 80 PLF OVER CONTINUOUS BEARING (5 PSF TC DEAD LOAD).

GABLE END SUPPORTS LOAD FROM 4' 0" OUTLOOKERS WITH 2' 0" OVERHANG, OR 12" PLYWOOD OVERHANG.

ATTACH EACH "L" BRACE WITH 10d NAILS. (0.128"x3" min)

* FOR (1) "L" BRACE: SPACE NAILS AT 2" O.C. IN 18" END ZONES AND 4" O.C. BETWEEN ZONES.

** FOR (2) "L" BRACES: SPACE NAILS AT 3" O.C. IN 18" END ZONES AND 6" O.C. BETWEEN ZONES.

"L" BRACING MUST BE A MINIMUM OF 80% OF WEB MEMBER LENGTH.

GABLE VERTICAL PLATE SIZES

VERTICAL LENGTH	NO SPLICE
LESS THAN 4' 0"	1X4 OR 2X3
GREATER THAN 4' 0", BUT LESS THAN 11' 6"	2.5X4
GREATER THAN 11' 6"	3X4

+ REFER TO COMMON TRUSS DESIGN FOR PEAK, SPLICE, AND HEEL PLATES.

ITW Building Components Group Inc.

Earth City, MO 63045

WARNING READ AND FOLLOW ALL NOTES ON THIS SHEET!
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow BCSI (Building Component Safety Information, by TPI and WTCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural panels and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3 & B7. See this job's general notes page for more information.

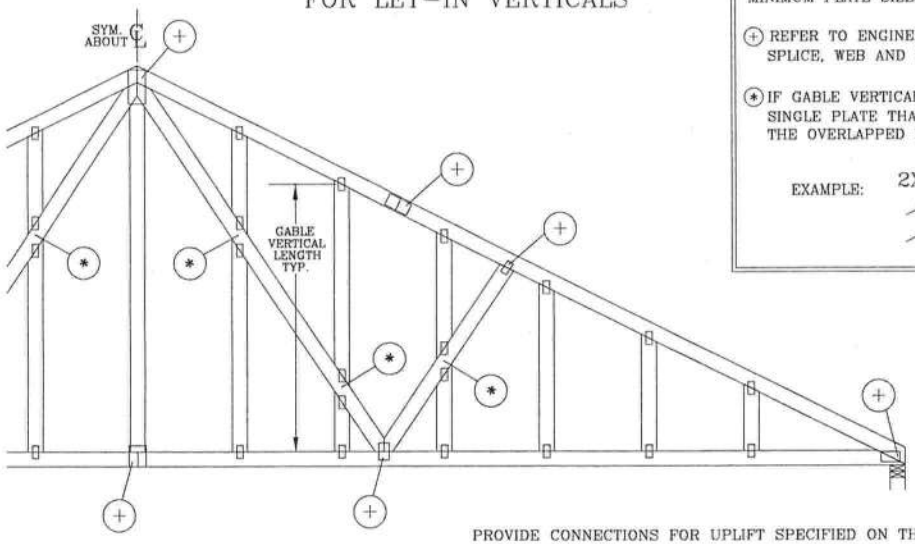
IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR.
ITW Building Components Group Inc. (ITWBCG) shall not be responsible for any deviation from this design, any failure to build the truss in conformance with TPI, or fabricating, handling, shipping, installing & bracing of trusses. ITWBCG connector plates are made of 20/18/16GA (W,H/S/K) ASTM A653 grade 37/40/60 (K/W/H,S) galv. steel. Apply plates to each face of truss, positioned as shown above and on Joint Details. A seal on this drawing or cover page indicates acceptance and professional engineering responsibility solely for the truss component design shown. The suitability and use of this component for any building is the responsibility of the Building Designer per ANST/TPI 1 Sec. 2.
ITW-BCG: www.itwbcg.com; TPI: www.tpinst.com; WTCA: www.sbcindustry.com; ICC: www.iccsafe.org

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF ASCE7-02-GAB11015
DATE 1/1/09
DRWG A11015020109

GABLE DETAIL
FOR LET-IN VERTICALS



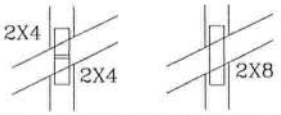
GABLE TRUSS PLATE SIZES

REFER TO APPROPRIATE ITW GABLE DETAIL FOR MINIMUM PLATE SIZES FOR VERTICAL STUDS.

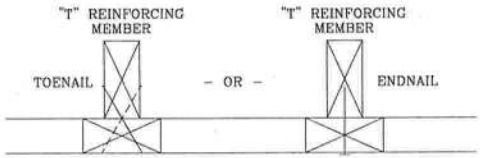
(+) REFER TO ENGINEERED TRUSS DESIGN FOR PEAK, SPLICE, WEB AND HEEL PLATES.

(*) IF GABLE VERTICAL PLATES OVERLAP, USE A SINGLE PLATE THAT COVERS THE TOTAL AREA OF THE OVERLAPPED PLATES TO SPAN THE WEB.

EXAMPLE:



"T" REINFORCEMENT ATTACHMENT DETAIL



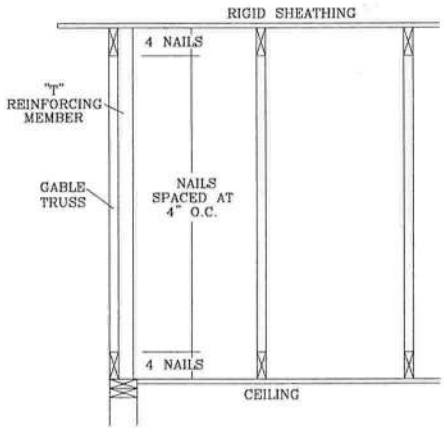
TO CONVERT FROM "L" TO "T" REINFORCING MEMBERS, MULTIPLY "T" INCREASE BY LENGTH (BASED ON APPROPRIATE ITW GABLE DETAIL).

MAXIMUM ALLOWABLE "T" REINFORCED GABLE VERTICAL LENGTH IS 14' FROM TOP TO BOTTOM CHORD.

WEB LENGTH INCREASE W/ "T" BRACE

WIND SPEED AND MRH	"T" REINF. MBR. SIZE	"T" INCREASE
140 MPH	2x4	10 %
15 FT	2x6	50 %
140 MPH	2x4	10 %
30 FT	2x6	50 %
130 MPH	2x4	10 %
15 FT	2x6	50 %
130 MPH	2x4	10 %
30 FT	2x6	50 %
120 MPH	2x4	10 %
15 FT	2x6	50 %
120 MPH	2x4	10 %
30 FT	2x6	40 %
110 MPH	2x4	10 %
15 FT	2x6	40 %
110 MPH	2x4	10 %
30 FT	2x6	50 %
100 MPH	2x4	20 %
15 FT	2x6	30 %
100 MPH	2x4	10 %
30 FT	2x6	40 %
90 MPH	2x4	20 %
15 FT	2x6	20 %
90 MPH	2x4	20 %
30 FT	2x6	30 %

EXAMPLE:
ASCE WIND SPEED = 100 MPH
MEAN ROOF HEIGHT = 30 FT, Kzt = 1.00
GABLE VERTICAL = 24" O.C. SP #3
"T" REINFORCING MEMBER SIZE = 2X4
"T" BRACE INCREASE (FROM ABOVE) = 10% = 1.10
(1) 2X4 "L" BRACE LENGTH = 6' 7"
MAXIMUM "T" REINFORCED GABLE VERTICAL LENGTH
1.10 x 6' 7" = 7' 3"



PROVIDE CONNECTIONS FOR UPLIFT SPECIFIED ON THE ENGINEERED TRUSS DESIGN.

ATTACH EACH "T" REINFORCING MEMBER WITH
END DRIVEN NAILS:
10d COMMON (0.148"X 3.",MIN) NAILS AT 4" O.C. PLUS
(4) NAILS IN TOP AND BOTTOM CHORD.
TOENAILED NAILS:
10d COMMON (0.148"x3",MIN) TOENAILS AT 4" O.C. PLUS
(4) TOENAILS IN TOP AND BOTTOM CHORD.

THIS DETAIL TO BE USED WITH THE APPROPRIATE ITW GABLE DETAIL FOR ASCE WIND LOAD.
ASCE 7-98 GABLE DETAIL DRAWINGS
A13015980109, A12015980109, A11015980109, A10015980109,
A13030980109, A12030980109, A11030980109, A10030980109
ASCE 7-02 GABLE DETAIL DRAWINGS
A13015020109, A12015020109, A11015020109, A10015020109, A14015020109,
A13030020109, A12030020109, A11030020109, A10030020109, A14030020109
ASCE 7-05 GABLE DETAIL DRAWINGS
A13015050109, A12015050109, A11015050109, A10015050109, A14015050109,
A13030050109, A12030050109, A11030050109, A10030050109, A14030050109

SEE APPROPRIATE ITW GABLE DETAIL FOR MAXIMUM UNREINFORCED GABLE VERTICAL LENGTH.

ITW
Building Components Group Inc.
Earth City, MO 63045

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IMPORTANT FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR.
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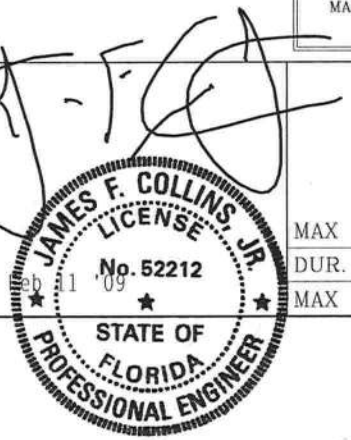
ITW-BCG: www.itwbcg.com; TPI: www.tpinst.com; WTCA: www.sbcindustry.com; ICC: www.iccsafe.org



Feb 11 '09

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

REF LET-IN VERT
DATE 1/1/09
DRWG GBLLETIN0109

Cal-Tech Testing, Inc.

• Engineering
• Geotechnical
• Environmental
Laboratories

P.O. Box 1625 • Lake City, FL 32056-1625 • Tel(386)755-3633 • Fax(386)752-5456

4784 Rosselle St., Jacksonville, FL 32254 • Tel(904)381-8901 • Fax(904)381-8902

#27659

REPORT OF IN-PLACE DENSITY TEST

JOB NO.: 09-00269-01
DATE TESTED: 7/13/09
DATE REPORTED: 7/17/09

PROJECT:	Jack Knapp Residence (permit # 000027659)
CLIENT:	Jordan's Concrete, 9081 NW CR 241, Lake Butler, FL 32054
GENERAL CONTRACTOR:	Jordan's Concrete
EARTHWORK CONTRACTOR:	Donald Thomas
INSPECTOR:	Chad Day

ASTM METHOD	**SOIL USE**
(D-2922) Nuclear	BUILDING FILL

SPECIFIED REQUIREMENTS: 95%

TEST NO.		TEST LOCATION	TEST DEPTH	WET DENSITY (lb/ft^3)	MOISTURE PERCENT	DRY DENSITY (lb/ft^3)	PROCTOR TEST NO.	PROCTOR VALUE	MAXIMUM DENSITY
1		SE Corner 12' West x 12' North	12"	115.3	7.9	106.9	1	113.0	95%
2		Approx. Center of Pad	12"	121.9	7.4	113.5	1	113.0	100%
3		NW Corner 12' East x 12' South	12"	115.5	8.1	106.8	1	113.0	95%

REMARKS: The Above Tests Meet Specified Requirements.

PROCTORS

PROCTOR NO.		SOIL DESCRIPTION	MAXIMUM DRY UNIT WEIGHT (lb/ft^3)	OPT. MOIST.	TYPE
1		Light Brown Fine Sand	113.0	10.0	MODIFIED (ASTM D-1557)

Respectfully Submitted,
CAL-TECH TESTING, INC.

Linda Creamer, CEO, DBE

Linda M. Creamer
President - CEO

ee

FILE COPY

Reviewed By:

Date: 7/20/09
Licensed, Florida No: 57842

The test results presented in this report are specific only to the samples tested at the time of testing. The tests were performed in accordance with generally accepted methods and standards. Since material conditions can vary between test locations and change with time, sound judgement should be exercised with regard to the use and interpretation of the data.

FLOOD INSURANCE RATE MAP EFFECTIVE:
JANUARY 6, 1988

FLOOD INSURANCE RATE MAP REVISIONS:

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET
1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAI

FIRM
FLOOD INSURANCE RATE MAP

COLUMBIA
COUNTY,
FLORIDA
(UNINCORPORATED AREAS)

PANEL 60 OF 290

PANEL LOCATION

COMMUNITY-PANEL NUMBER

M188
M186
M185
BOUNDARY
BRANCH
SUWANNEE RIVER
COLUMBIA
HAMILTON
RM11
98
97
R
Q
36
31
32
33
1
6
5
4
T1N
T1S
R16E
R17E
ZONE A
ZONE AE
ZONE X
47
441

Notice of Treatment

Applicator: Florida Pest Control & Chemical Co. (www.flapest .com)
Address: 536 SE Baya Ave
City Lake City, FL Phone 752-1703

Site Location: Subdivision N/A
Lot # _____ Block# _____ Permit # 27659
Address 1734 N US Hwy 441

Product used	Active Ingredient	% Concentration
☑ Premise	Imidacloprid	0.1%
☐ Termidor	Fipronil	0.12%
☐ Bora-Care	Disodium Octaborate Tetrahydrate	23.0%

Type treatment: ☑ Soil ☐ Wood

Area Treated	Square feet	Linear feet	Gallons Applied
Dwl/Porches/Garage	7800	290	260

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

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

7/20/09 (Date) 1200 (Time) James Parton (Print Technician's Name)

Remarks: _____

Applicator - White Permit File - Canary Permit Holder - Pink

10/05 ©