

DATE 08/16/2007

Columbia County Building Permit

PERMIT

This Permit Expires One Year From the Date of Issue

000026138

APPLICANT LAURENCE MINK PHONE 45-3790
ADDRESS 22127 S. US HWY 41 #7 HIGH SPRINGS FL 32643
OWNER LAURENCE MINK PHONE 45-3790
ADDRESS 22127 S. US HWY 41 #7 HIGH SPRINGS FL 32643
CONTRACTOR OWNER PHONE
LOCATION OF PROPERTY 441 SOUTH, 2ND DRIVE ON THE LEFT PAST TOUCH OF MINK
MH PARK

TYPE DEVELOPMENT MODULAR HOME ESTIMATED COST OF CONSTRUCTION 0.00
HEATED FLOOR AREA TOTAL AREA HEIGHT 26.00 STORIES 1
FOUNDATION PIERS WALLS FRAMED ROOF PITCH FLOOR
LAND USE & ZONING AG-3 MAX. HEIGHT 35
Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00
NO. EX.D.U. 1 FLOOD ZONE X DEVELOPMENT PERMIT NO.

PARCEL ID 15-7S-17-09995-004 SUBDIVISION
LOT BLOCK PHASE UNIT TOTAL ACRES 2.66

Culvert Permit No. Culvert Waiver Contractor's License Number Applicant/Owner/Contractor
EXISTING 07-0647-E BK JH N
Driveway Connection Septic Tank Number LU & Zoning checked by Approved for Issuance New Resident

COMMENTS: FLOOR ONE FOOT ABOVE THE ROAD, NOC ON FILE, SECT. 2.3.1 LEGAL
NON-CONFORMING LOT OF RECORD & REPLACING EXISTING MH

Check # or Cash 806

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 \$ 0.00 CERTIFICATION FEE \$ 0.00 SURCHARGE FEE \$ 0.00
MISC. FEES \$ 200.00 ZONING CERT. FEE \$ 50.00 FIRE FEE \$ 0.00 WASTE FEE \$
FLOOD DEVELOPMENT FEE \$ FLOOD ZONE FEE \$ 25.00 CULVERT FEE \$ TOTAL FEE 275.00

INSPECTORS OFFICE CLERKS OFFICE

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

This Permit Must Be Prominently Posted on Premises During Construction

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

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

Columbia County Building Permit Application

ck 506

left message
8/13/07

For Office Use Only Application # 6708-16 Date Received 8/7/07 By LH Permit # 26138

Application Approved by - Zoning Official BZK Date 07.08.07 Plans Examiner OKJTH Date 8-13-07

Flood Zone X Development Permit N/A Zoning A-3 Land Use Plan Map Category A-3

Comments sect. 2.3.1 Legal Non-conforming lot of Record + Replat existing mH

☒ NOC ☒ EH ☐ Deed or PA ☐ Site Plan ☒ State Road Info ☐ Parent Parcel # ☐ Development Permit

Fax (386) 454-3790

Name Authorized Person Signing Permit Laurence Martin Mink Phone (386) 454-4553

Address 22127 S. U.S. Hwy. 41 #7 High Springs Fla. 32643

Owners Name Laurence Martin & Kimberly Kay Mink Phone (386) 454-4553

911 Address 22185 S. U.S. Hwy. 41 High Springs, Fl. 32643

Contractors Name Laurence M. Mink Phone (386) 454-4553

Address 22127 S. U.S. Hwy. 41 #7 High Springs, Fla. 32643

Fee Simple Owner Name & Address Laurence M. & Kimberly K Mink 22185 S. U.S. Hwy. 41 High Springs Fl. 32643

Bonding Co. Name & Address _____

Architect/Engineer Name & Address Nationwide Custom Homes Martinsville Va. 24115

Mortgage Lenders Name & Address Merchantile Bank Starke Fl.

Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. - Progressive Energy

Property ID Number R09995-004 Estimated Cost of Construction 170,000

Subdivision Name Gilbert Park Sub. Lot _____ Block _____ Unit _____ Phase _____

Driving Directions 1/4 mi south of SR 778 & Hwy 41 interchange. property on east side of 41 22185 S. U.S. Hwy 41 High Springs. End Drive Past Touch of Mink on (2) off 41 South

Type of Construction modular * Number of Existing Dwellings on Property 0 mH already removed

Total Acreage 2.66 Lot Size IRR Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 354' Side 70' Side 117' Rear 120'

Total Building Height 26' Number of Stories 1 Heated Floor Area 1624 Root Pitch 12/12

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

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

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Laurence M. Mink

Owner Builder or Authorized Person by Notarized Letter

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this

this 7 day of Aug 2007

Personally known / or Produced Identification /



Contractor Signature

Contractors License Number _____

Competency Card Number _____

NOTARY STAMP/SEAL

Notary Signature

(Revised Sept. 2006)

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

NOTICE OF COMMENCEMENT FORM
COLUMBIA COUNTY, FLORIDATHIS DOCUMENT MUST BE RECORDED AT THE COUNTY
CLERKS OFFICE BEFORE YOUR FIRST INSPECTIONTHE UNDERSIGNED hereby gives notice that improvement will be made to certain real property, and
in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of
Commencement.IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE
RECORDING YOUR NOTICE OF COMMENCEMENT.Tax Parcel ID Number # R09995-004

Permit Number _____

1. Description of property: (legal description of the property and street address or 911 address)

22185 South U.S. Highway 41 High Springs Fla. 32643Inst: 200712017891 Date: 8/7/2007 Time: 12:48 PM
DC, P. DeWitt Cason, Columbia County Page 1 of 12. General description of improvement: modular home const.3. Owner Name & Address Lawrence Martin & Kimberly Kay Mink 22127 S.
U.S. Hwy. 41 #7 High Springs Fl. 32643 Interest in Property 100%

4. Name & Address of Fee Simple Owner (if other than owner): _____

5. Contractor Name Lawrence M. Mink Phone Number (386) 454-4553Address 22127 S. U.S. Hwy 41 #7 High Springs Fl. 32643

6. Surety Holders Name _____ Phone Number _____

Address _____

Amount of Bond _____

7. Lender Name Merchantile Bank Phone Number (904) 964-3068Address Starke Fl. Tracy Reichert8. Persons within the State of Florida designated by the Owner upon whom notices or other documents may be
served as provided by section 718.13 (1)(a) 7; Florida Statutes:

Name _____ Phone Number _____

Address _____

9. In addition to himself/herself the owner designates _____ of

_____ to receive a copy of the Lien Notice as provided in Section 713.13 (1) -

(a) 7. Phone Number of the designee _____

10. Expiration date of the Notice of Commencement (the expiration date is 1 (one) year from the date of
recording, (Unless a different date is specified) _____THE OWNER MUST SIGN THE NOTICE OF COMMENCEMENT AND NO ONE ELSE MAY BE PERMITTED TO SIGN
IN HIS/HER STEAD.Lawrence M. Mink
Signature of OwnerSworn to (or affirmed) and subscribed before day of 8-7, 20 07.Laurie Hodson
Signature of Notary

NOTARY STAMP



NOTORIZED DISCLOSURE STATEMENT

FOR OWNER/BUILDER WHEN ACTING AS THEIR 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 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.

TYPE OF CONSTRUCTION

☒ Single Family Dwelling
☐ Farm Outbuilding

☐ Two-Family Residence
☐ Other _____

NEW CONSTRUCTION OR IMPROVEMENT

☒ New Construction

☐ Addition, Alteration, Modification or other Improvement

I Laurence M. Mink, 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 26138

Laurence M. Mink Aug-7-07
Owner Builder Signature Date

The above signer is personally known to me or produced identification _____



Notary Signature L. Hodson Date 8/7/07

(Stamp / Seal)

FOR BUILDING 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 8-16-07 Building Official/Representative L. Hodson

Notice of Treatment

12737

Applicator: Florida Pest Control & Chemical Co. (www.flapest.com)

Address: 3454 Ave

City: Cape City Phone: 7521703

Site Location: Subdivision _____

Lot # _____ Block# _____ Permit # 26138

Address 22185

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

MODULAR
Home

1596

170

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 _____.

Date

Time

Print Technician's Name

Remarks: _____

Applicator - White

Permit File - Canary

Permit Holder - Pink

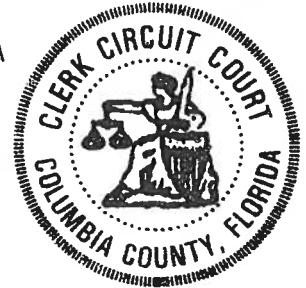
10/05



STATE OF FLORIDA, COUNTY OF COLUMBIA
I HEREBY CERTIFY, that the above and foregoing
is a true copy of the original filed in this office.
P. DeWITT CASON, CLERK OF COURTS

By Sharon Feagle
Deputy Clerk

Date 07-30-2007



Above Space Reserved for Recording

[If required by your jurisdiction, list above the name & address of: 1) where to return this form; 2) preparer; 3) party requesting recording.]

Warranty Deed

Date of this Document: July 25, 2007

Reference Number of Related Documents: Tax ID # R09995-004

Grantor(s):

Name Carol J. Mink
Street Address 21458 S. U.S. Hwy 441
City/State/Zip High Springs, FL. 32643

Grantee(s):

Name Lawrence M. Mink and Kimberly K. Mink
Street Address 22127 S. US Hwy 441 - Lot 7
City/State/Zip High Springs, FL. 32643

Abbreviated Legal Description (i.e., lot, block, plat, or section, township, range, quarter/quarter or unit, building and condo name): 15-75-17

Assessor's Property Tax Parcel/Account Number(s): R09995-004

For good consideration,

Carol J. Mink
of 21458 S. US Hwy 441, County of Columbia

State of Florida, hereby bargain, deed and convey to Lawrence M. Mink +

Kimberly K. Mink of 22127 S. US Hwy 441

County of Columbia, State of Florida, the following described land in

Columbia County, free and clear with WARRANTY COVENANTS; to wit: NONE

Inst: 200712017009 Date: 7/30/2007 Time: 11:03 AM

Doc Stamp Deed: 126.00

17 DC, P. DeWitt Cason, Columbia County Page 1 of 2

Grantor, for itself and its heirs, hereby covenants with Grantee, its heirs, and assigns, that Grantor is lawfully seized in fee simple of the above-described premises; that it has a good right to convey; that the premises are free from all encumbrances; that Grantor and its heirs, and all persons acquiring any interest in the property granted, through or for Grantor, will, on demand of Grantee, or its heirs or assigns, and at the expense of Grantee, its heirs or assigns, execute any instrument necessary for the further assurance of the title to the premises that may be reasonably required; and that Grantor and its heirs will forever warrant and defend all of the property so granted to Grantee, its heirs, and assigns, against every person lawfully claiming the same or any part thereof.

Being the same property conveyed to the Grantor by deed of Warranty, dated August 9th, 1983.

WITNESS the hands and seal of said Grantor this 26th day of July, 2007.

Carol J. Mink
Grantor

Grantor

State of Georgia
County of Crisp

On July 26, 2007, before me, Carol Mink, personally appeared before me, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Yvonne M. Baker

Notary Public, Crisp County, Georgia
My Commission Expires Dec. 7 2009

Affiant Known Unknown
ID Produced Driver License

(Seal)



0708-16

Joe, Copy of Contract - for your Info:



State Certified General Contractor CGC-028003
805 SW Alamo Drive
Lake City, Florida 32025
Office- Fax(386) 752-5415
Mobile- (386) 365-7086

THIS AGREEMENT, made this 15th day of July, 2007 by and

Between Kent Harriss Construction Inc. authorized to do business in Florida hereinafter referred to as "Builder", and Marty and Kim Mink, hereinafter referred to as "Buyers".

1. **Basis of Agreement:** That for the consideration hereinafter set forth, Builder agrees to sell and Buyers agree to purchase upon the terms and conditions set forth in this Agreement, a house to be built on Parcel # 15-7S-17-09995-004 State Highway 441 County of Columbia State of Florida according to Builder's Nationwide / Winston Plan, in workmanship-like manner substantially in accordance with plans and specifications and the attached letter of Buyers and Builders responsibilities dated May 23, 2007 which have been reviewed by Buyers (collectively called "property"). Buyers will obtain local permits and inspections.
2. **Sales Price and Schedule of Payments:** The price of the house without lot is \$ 170,400.00
The sales price is payable as follows:
 - (a) Buyer has made a deposit of \$3600.00 with Builder, receipt of which is hereby acknowledged and such amount shall be applied at settlement to down payment and/or pre-paid items.
 - (b) Additional cash payment of \$ 17,040.00 (10%) is due and payable when loan is approved, prints reviewed and house released for production). House cannot be released for production prior to this payment.
 - (c) Additional payment of \$ 136,320.00 (80%) is paid by cashier's check to builder at time of delivery of the home on the site. Units can not be removed from the carriers prior to this payment, (NOTE: In the event that Buyer's loan amount is less than the total amount of this Agreement, then Buyer agrees that the difference will be paid to Builder as deposit or additional cash payment in items (a) ,(b) and (c) above, before the house is released for production.)
 - (d) Final draw is \$13,440.00 (10% less deposit (a) which is made after clean up of builders trash and completion of all builder responsibilities as listed in attached letter, and acceptance by buyers.

3. **Schedule of Construction:** Construction by Builder shall commence upon completion of loan approval, payment of deposits, construction loan documents, and issuance of required permits, and shall be completed in accordance with Item 1 and settlement shall take place in accordance with Item 2.
- (a) In the event of delays caused by non-delivery of materials or inability to construct on the premises due to acts of God, floods, rain, fire, strikes, bad weather, delays caused by other independent parties such as governmental agencies or utility companies, etc., the time for completion of construction shall be extended for a period of time equal to the length of the delay. Such events do not constitute abandonment and are not included in calculating time frames for payment or performance.
 - (b) Any items determined to require corrective action as a result of the pre-settlement inspection conducted by Builder and Buyer will be completed as soon as is practical, but is not cause of delaying settlement of all other conditions of this contract have been fulfilled.
 - (c) In the event that Builder is unable to obtain the materials specified on the plans or specifications or the items shown on the pre construction conference report through reasonable sources of supply, Builder shall have the right to substitute materials of similar pattern and design and substantially equivalent quality with buyers consent. Contract is subject to Department of Transportation rules and regulations.
 - (d) Builder may remove such trees from the lots as it deems necessary to construct the house: and it shall not be responsible for any damage to or destruction of remaining trees during or resulting from the process of construction.
 - (e) The buyers agree to contact the electric and/or gas utility companies involved in the purchase of the homes as soon as possible to order the utility company to engineer the utilities for the lot. All costs of electrical and utility installation by the public utility will be the responsibility of the Buyer and not Builder. This includes application fees, membership fees, easements, transformer installations or repair of existing deficiencies.
4. **Well:** It is buyer's responsibility to provide the well and all connections to the home.
5. **Septic:** It is Buyers responsibility to provide sewer and all connections to the home.
6. The Buyer shall not be entitled to have physical possession and occupancy of the premises until all sums due the builder are fully paid and satisfied , provided however, that the buyers enter and take possession, then the entire balance due the contractor shall be and become immediately due and payable. Occupation of premises by buyers or the completion of waiver of all claims upon the contractor for further performance, except as to any item which may have been agreed upon in writing or set forth under additional conditions.
7. **Abnormal Conditions:** In the event that rock, water or any other abnormal conditions are encountered during excavation, work shall stop. Builder shall show the conditions to the Buyer and a written agreement shall be made for the extra work necessary to correct the abnormal conditions. The Buyer shall bear the costs of these abnormal conditions. In the event that abnormal soil conditions are encountered on your lot, the Building Codes and/or Building Inspectors may require a soil compaction test. This test may require an Engineer designed footer and/or foundation. In this event, all activity by Builder will stop and we will show and explain the conditions to the Buyer. A written agreement will be made for any and all cost of labor, materials and fees required to correct the abnormal conditions. The Buyer will bear the cost of these abnormal conditions.
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8. **Settlement:** After completion of construction in accordance with this Agreement, settlement shall take place on a date and at a place to be selected by Builder on not less than ten (10) day's notice to Buyers. Upon payment by Buyers of the balance due Builder and expenses of settlement and all proper fees and charges in connection with it, In the event that Buyers refuse to settle at the date specified by Builder, in accordance with this paragraph, Builder at its option, may hold the Buyers in default under Item 11, Buyer may at time of settlement require full waiver of lien. Final payment shall constitute acceptance.
9. **Possession:** Possession shall be given to Buyer only upon Builder's receiving the balance of the purchase price and not prior thereto. Accordingly, Buyer shall not have right to enter upon or occupy the property without the written consent of Builder, and any breach of this provision by Buyer shall constitute a default under the terms of this Agreement. If lender requires a three-day right to rescind on the loan transaction, then Buyer acknowledges that possession will not be granted until funds are released.
10. **Construction Loan Note & Deed of Trust:** If lot is not in the name of Builder, then Buyer agrees to provide construction note and first deed of trust acceptable to Builder, along with any acceptable title opinion.
11. **All work is subject to the lien laws of the State of Florida.** Upon completion of the work and payment therefore, Builder shall waive all lien rights.

Chapter 713 of the Florida statutes (1991), Florida's Construction Lien Law, entitles anyone supplying labor or material on a job to issue property owners a "notice to owner". The "notice to owner" is not a lien on your property.

This provides protection in case of an unscrupulous builder does not pay his bills.

12. **Closing Costs/Settlement Charges/Prepays:** All closing costs/settlement charges (including but not limited to all conveyance fees, recording fees), prepaid items (including but not limited to mortgage insurance premiums, prepaid fire and hazard insurance premiums, prepaid real estate taxes, and prepaid interest on mortgage) and all other lender required fees and charges shall be paid by Buyers.
 13. **Default by Buyers:** Default by Buyers shall be deemed to have occurred upon Buyer's failure (a) to make all cash payments on or before the dates specified herein: (b) on the date appointed, to tender at settlement the amounts called for herein and accept title, or (c) to comply with any other terms of this Agreement. In the event of Buyer's default under this Agreement, all sums of money paid hereunder prior to such default shall be retained by Builder as liquidated damages, or, in the alternative, Builder may seek specific performance of this Agreement or any part thereof in any court of competent jurisdiction.
 14. **Refund:** In the event Buyers are unable to secure necessary financing, Builder shall refund the balance of the down payment remaining, if any, after deducting there from any costs incurred.
-

15. **Cancellation by Builder:** In the event that specific materials or substantially equivalent substitute materials (Items 3-d) cannot be obtained in thirty (30) days or in the event that Builder shall determine, in good faith, and for reasons beyond its control, including all causes specified in Paragraph 3 (a) and including any pending or declared governmental moratorium, that the house purchased hereunder cannot be completed and made available for occupancy prior to the time provide for settlement hereunder or within a reasonable time thereafter, or if Builder shall be unable to deliver good and marketable title to the property this Agreement may be cancelled at the option of Builder upon ten (10) days' written notice to Buyer. In the event of cancellation as provided for in this paragraph, Builder's liability shall be limited to the return of all moneys paid hereunder by Buyers, and upon such return, this Agreement shall be null and void and Builder shall be released from all obligations hereunder.
16. **Lot and Location Surveys:** The Buyers shall be responsible for and shall pay for a current lot and location survey (not older than three years). If the Buyers do not provide these and Builder erects the house at the wrong location or on the wrong property, the Buyers agree to hold harmless and indemnify Builder from any liability and agrees to pay Builder for work completed prior to knowledge of the error and work required to correct the error. Relocation of the home on the lot due to survey, septic permit, local requirements, or setbacks could result in additional costs to Buyers.
17. **Authority:** Only Builder has the authority to execute this Agreement: only a duly authorized officer who shall be specifically authorized in writing to so act shall have the authority to modify this Agreement or execute any supplemental agreements for change orders of any kind or nature whatsoever. If Buyers should deal directly with a subcontractor, he shall assume all extra costs and hereby releases Builder from any liability and/or responsibility for such extra work or changes.
18. **Warranties, Easements and Claims:** Builder hereby warrants to Buyers that the house described in this Agreement shall be in substantial conformity with the specifications set forth in this Agreement and shall be free from material defects in materials and workmanship under normal use and service for a period of twelve (12) months from the date Builder tenders delivery of the house. Warranty claims must be made to Builder in writing. All workmanship shall conform to the guidelines found in the publication *Residential Construction Performance Guidelines – For Professional Builders and Remodelers*, National Association of Home Builders. If an item is not covered in that publication, standard industry practice shall govern. The sole and exclusive remedy for any breach of this express warranty shall be limited to the repair or replacement, at the option of Builder, of any part of such house that is demonstrated, to the reasonable satisfaction of Builder to be defective and which is determined to be Builder's responsibility. Notwithstanding anything in this Agreement to the contrary, Builder hereby disclaims any and all liability to Buyers or any other party, whether arising out of contract, tort (including negligence), strict liability of any other cause or form of action whatsoever, for consequential, incidental, special or punitive damages or lost profits resulting from any defect in materials or workmanship of any house or any part thereof covered by this Agreement. Buyers agree that Builder may make and use photographs of the house.
- The conveyance of the property from Builder to Buyers shall be specifically subject to any restrictive covenants, easements, rights of way and reservations affecting said property and as set forth of record in the land records of Columbia County.
- Hardwood floors, if purchased, normally contract and expand depending on humidity. A humidifier should be used during winter months to reduce joint opening. Hardwood floors are not guaranteed if Buyer uses wood stove of any type. Hairline cracks in Poured Concrete are a normal result of drying and shrinkage. Any bonus rooms are assumed to be for storage unless specified otherwise.

In the event of any dispute or claim, arising out of, or in connection with the design, construction, warranty or repair of any product or component supplied by Nationwide, the condition of the product, the conformity of the product, the merchantability of the product, whether such product is or is not "new" any representations, promises, undertakings or covenants made or allegedly made by Builder in connection with or arising out of any transaction or undertaking between Builder and any direct or subsequent purchaser, Builder and the purchaser of this product agree to submit any such dispute or claim to binding arbitration pursuant to the provisions of 9 USC 1, et. Seq. and according to the Construction Industry Rules of Arbitration of the American Arbitration Association then existing.

19. Assignment: Buyer's interest and obligation hereunder shall not be assignable without written consent of Builder.
20. The builder and each separate sub-contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and other employee benefit acts, from claims for damages because of bodily injury, including death and from claims for damages to property which may arise out of or the result from the builders operations under this contract, whether such operations be by himself or by sub-contractor or anyone directly employed by any of them. This insurance shall be written for not less than any limits of liability as required by law.

The buyers shall purchase and maintain property insurance (builders risk policy) upon the entire work at the site to the full insurable value thereof. This insurance shall include the interest of the buyer, the builder, sub-contractor and sub sub-contractors on the work at the site to fully insure against the perils of Fire, extended coverage, vandalism, malicious mischief and theft. Any insured loss is to be adjusted with the contractor and made payable to the contractor as a trustee for the insured, as their interest may appear, subject to the requirements of any mortgage clause. The buyers and contractor waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance provided under this paragraph.

21. This is the complete Agreement between the parties. There are no written or oral agreements or understandings directly or indirectly connected with this Agreement that are not incorporated herein unless they are put in writing, signed by the parties and attached hereto.
22. This Agreement shall be binding on the parties, their heirs, assigns, and legal representatives.
23. At the discretion of Builder homes, this Agreement shall be null and void and subject to price increase if for any reason the house has not been shipped within 90 days of the date of this Agreement.
24. TIME IS OF THE ESSENCE OF THIS AGREEMENT. THIS IS A LEGALLY BINDING CONTRACT. READ AND UNDERSTAND ALL PROVISIONS PRIOR TO SIGNING. IF NOT UNDERSTOOD, SEEK LEGAL OR OTHER COMPETENT ADVICE.
25. Buyers acknowledge that the plans and specifications for the house described herein and attached hereto have been reviewed as specified in Paragraph 1.

IN WITNESS WHEREOF, BUILDER AND BUYER HAVE HEREUNTO SET THEIR HANDS
AND SEALS THIS DAY AND YEAR FIRST ABOVE WRITTEN.

WITNESS(ES):

BUYER(S):




DATE 7-24-07

DATE 7/24/07

BUILDER:



DATE 7-19-07

WITNESS:

DATE _____

DATE _____

LICENSE # CGC-028003

FLORIDA STATE CERTIFIED GENERAL CONTRACTOR _____

July 25, 07

From: L. Martin & Kimberly Mink
22127 S. U.S. Hwy 441
#7

High Springs, Fl. 32643

Phone (386) 454-4553

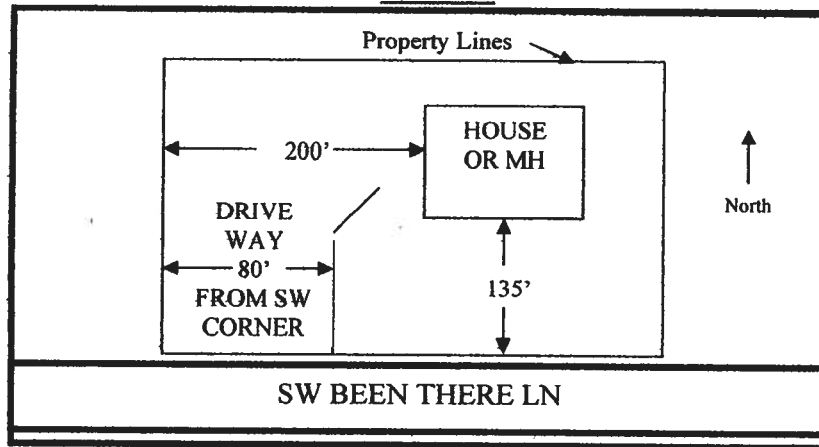
Fax (386) 454-3790

To: Tracy Reichert
Mort. Originator
Merchantile Bank
tax (904) 964-3111

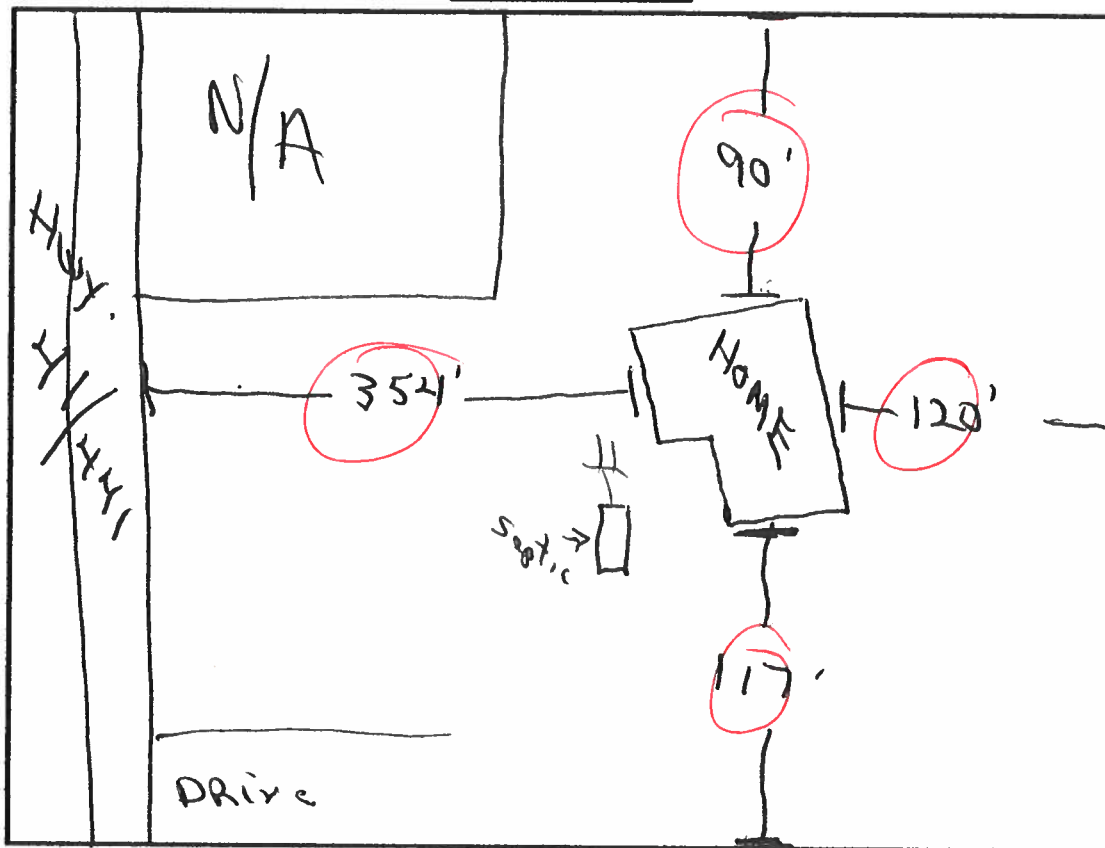
Re: Builders Contract - Kent Harris Const.

1. A PLAT, PLAN, OR DRAWING SHOWING THE PROPERTY LINES OF THE PARCEL.
2. LOCATION OF PLANNED RESIDENT OR BUSINESS STRUCTURE ON THE PROPERTY WITH DISTANCES FROM AT LEAST TWO OF THE PROPERTY LINES TO THE STRUCTURE (SEE SAMPLE BELOW).
3. LOCATION OF THE ACCESS POINT (DRIVEWAY, ETC.) ON THE ROADWAY FROM WHICH LOCATION IS TO BE ADDRESSED WITH A DISTANCE FROM A PARALLEL PROPERTY LINE AND OR PROPERTY CORNER (SEE SAMPLE BELOW).
4. TRAVEL OF THE DRIVEWAY FROM THE ACCESS POINT TO THE STRUCTURE (SEE SAMPLE BELOW).

SAMPLE:



SITE PLAN BOX:

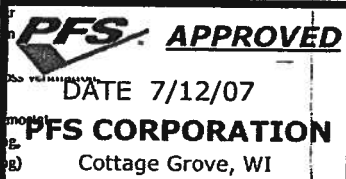


FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs
Residential Whole Building Performance Method A

Project Name:	WINSTON #91636	Builder:	KENT HARRISS CONSTRUCTION
Address:		Permitting Office:	Columbia Co.
City, State:	, FL 32025-	Permit Number:	26138
Owner:	KENT HARRISS CONSTRUCTION	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: 32.6 kBtu/hr SEER: 13.00
3. Number of units, if multi-family	1	b. Central Unit	Cap: 20.2 kBtu/hr SEER: 13.00
4. Number of Bedrooms	2	c. N/A	
5. Is this a worst case?	No	13. Heating systems	
6. Conditioned floor area (ft²)	3173 ft²	a. Electric Heat Pump	Cap: 32.6 kBtu/hr HSPF: 9.70
7. Glass type¹ and area: (Label reqd. by 13-104.4.5 if not default)		b. Electric Heat Pump	Cap: 20.2 kBtu/hr HSPF: 9.70
a. U-factor: Description Area		c. N/A	
(or Single or Double DEFAULT) 7a. (Dble Default) 374.6 ft²		14. Hot water systems	
b. SHGC:		a. Electric Resistance	Cap: 50.0 gallons EF: 0.90
(or Clear or Tint DEFAULT) 7b. (SHGC=0.6) 359.8 ft²		b. N/A	
8. Floor types		c. Conservation credits	
a. Raised Wood, Post or Pier	R=19.0, 1847.0 ft²	(HR-Heat recovery, Solar DHP-Dedicated heat pump)	
b. N/A		15. HVAC credits	
c. N/A		(CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
9. Wall types			
a. Frame, Wood, Exterior	R=13.0, 1802.0 ft²		
b. Frame, Wood, Exterior	R=13.0, 559.0 ft²		
c. Frame, Wood, Exterior	R=19.0, 438.0 ft²		
d. N/A			
e. N/A			
10. Ceiling types			
a. Under Attic	R=30.0, 822.0 ft²		
b. Under Attic	R=19.0, 723.0 ft²		
c. N/A			
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Outdoors	Sup. R=6.0, 107.0 ft		
b. Sup: Unc. Ret: Con. AH: Attic	Sup. R=6.0, 62.0 ft		



Glass/Floor Area: 0.12 Total as-built points: 32855
Total base points: 33310 **PASS**

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.
PREPARED BY: [Signature]
DATE: 7/12/07
I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.
OWNER/AGENT: [Signature]
DATE: 7/12/07

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.
EnergyGauge® (Version: FLRCSB v4.5)

[Signature]
7/19/07
Applies to
0.23-30

ADDRESS: , , FL, 32025- PERMIT #.

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #:

BASE				AS-BUILT			
FLOOR TYPES	Area	X	BSPM = Points	Type	R-Value	Area	X SPM = Points
Slab	0.0(p)	0.0	0.0	1. Raised Wood, Post or Pier	19.0	1847.0	0.77 1414.8
Raised	1847.0	-3.99	-7369.5				
Base Total:			-7369.5	As-Built Total:			1847.0 1414.8
INFILTRATION	Area	X	BSPM = Points	Area X SPM = Points			
	3173.0	10.21	32396.3			3173.0	10.21 32396.3
Summer Base Points: 43071.6				Summer As-Built Points: 51599.7			
Total Summer Points	X	System Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio (DM x DSM x AHU)	X Duct Multiplier	X System Multiplier X Credit Multiplier = Cooling Points
				(sys 1: Central Unit 32600btuh, SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Out(AH),R6.0(INS) 51600 0.62 (1.09 x 1.147 x 1.02) 0.260 1.000 10563.2 (sys 2: Central Unit 20200btuh, SEER/EFF(13.0) Ducts:Unc(S),Cont(R),Att(AH),R6.0(INS) 51600 0.38 (1.08 x 1.147 x 1.11) 0.260 1.000 7064.0 51599.7 1.00 1.312 0.260 1.000 17605.9			
43071.6	0.3250		13998.3	51599.7	1.00	1.312	0.260 1.000 17605.9

9636

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DATE 7/12/07

PFS CORPORATION

Cottage Grove, WI

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #:

BASE				AS-BUILT							
GLASS TYPES											
.18 X Conditioned X BWPM = Points Floor Area											
				Type/SC	Overhang Omt Len Hgt			Area X WPM X WOF = Points			
.18	3173.0	20.17	11520.0	1.Double, SHGC=0.6	N	0.7	5.4	17.6	25.01	1.00	440.0
				2.Double, SHGC=0.6	N	0.7	8.4	25.5	25.01	1.00	638.0
				3.Double, SHGC=0.6	N	0.7	14.3	12.6	25.01	1.00	314.0
				4.Double, SHGC=0.6	N	0.7	16.5	18.0	25.01	1.00	450.0
				5.Double, SHGC=0.6	N	0.7	7.9	18.0	25.01	1.00	450.0
				6.Double, SHGC=0.6	N	0.7	6.3	12.3	25.01	1.00	306.0
				7.Double, SHGC=0.6	W	1.0	20.4	17.3	21.51	1.00	372.0
				8.Double, SHGC=0.6	W	1.0	12.1	21.5	21.51	1.00	462.0
				9.Double, SHGC=0.6	W	0.7	7.7	37.0	21.51	1.00	796.0
				10.Double, SHGC=0.6	E	1.0	21.6	18.0	19.73	1.00	356.0
				11.Double, SHGC=0.6	E	1.0	12.5	18.0	19.73	1.00	357.0
				12.Double, SHGC=0.6	E	1.0	12.1	10.7	19.73	1.01	212.0
				13.Double, SHGC=0.6	S	0.7	7.4	72.1	14.70	1.00	1054.0
				14.Double, Clear	S	5.0	4.5	14.9	13.30	2.91	575.0
				15.Double, SHGC=0.6	S	1.0	11.8	37.0	14.70	1.00	541.0
				16.Double, SHGC=0.6	S	0.5	6.5	10.7	14.70	1.00	157.0
				17.Double, SHGC=0.6	N	0.7	6.3	10.7	25.01	1.00	268.0
				18.Double, SHGC=0.6	S	1.0	7.2	2.6	14.70	1.01	38.0
				As-Built Total:			374.6			7786.0	
WALL TYPES											
Area X BWPM = Points											
				Type	R-Value			Area X WPM = Points			
Adjacent	0.0	0.00	0.0	1. Frame, Wood, Exterior	13.0	1802.0	3.40	6126.8			
Exterior	2799.0	3.70	10356.3	2. Frame, Wood, Exterior	13.0	559.0	3.40	1900.6			
				3. Frame, Wood, Exterior	19.0	438.0	2.20	963.6			
Base Total:				2799.0			10356.3			8991.0	
DOOR TYPES											
Area X BWPM = Points											
				Type	Area X WPM = Points						
Adjacent	0.0	0.00	0.0	1.Exterior Insulated	20.0	8.40	168.0				
Exterior	80.0	12.30	984.0	2.Exterior Insulated	40.0	8.40	336.0				
				3.Exterior Insulated	20.0	8.40	168.0				
Base Total:				80.0			984.0			672.0	
CEILING TYPES											
Area X BWPM = Points											
				Type	R-Value			Area X WPM X WCM = Points			
Under Attic	1261.0	2.05	2585.0	1. Under Attic	30.0	822.0	2.05 X 1.00	1685.1			
				2. Under Attic	19.0	723.0	2.70 X 1.00	1952.1			
Base Total:				1261.0			2585.0			3637.2	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #:

BASE				AS-BUILT				
FLOOR TYPES	Area	X BWPM	= Points	Type	R-Value	Area	X WPM	= Points
Slab	0.0(p)	0.0	0.0	1. Raised Wood, Post or Pier	19.0	1847.0	0.88	1618.0
Raised	1847.0	0.96	1773.1					
Base Total:				As-Built Total:		1847.0		1618.0
INFILTRATION Area X BWPM = Points				Area X WPM = Points				
	3173.0	-0.59	-1872.1			3173.0	-0.59	-1872.1
Winter Base Points: 25346.4				Winter As-Built Points: 20832.1				
Total Winter X Points	System Multiplier	=	Heating Points	Total X Component (System - Points)	Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier = Heating Points
				(sys 1: Electric Heat Pump 32600 btuh ,EFF(9.7) Ducts:Unc(S),Unc(R),Out(AH),R6.0				
				20832.1	0.617	(1.069 x 1.169 x 1.07)	0.352	1.000 6046.1
				(sys 2: Electric Heat Pump 20200 btuh ,EFF(9.7) Ducts:Unc(S),Con(R),Att(AH),R6.0				
				20832.1	0.383	(1.060 x 1.169 x 1.10)	0.352	1.000 3819.0
25346.4	0.5540		14041.9	20832.1	1.00	1.347	0.352	1.000 9862.1



DATE 7/12/07

PFS CORPORATION

Cottage Grove, WI

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #:

BASE				AS-BUILT					
WATER HEATING									
Number of Bedrooms	X	Multiplier	= Total	Tank Volume	EF	Number of Bedrooms	X Tank X Multiplier Ratio	X Credit Multiplier	= Total
2		2635.00	5270.0	90.0	0.90	2	1.00	2693.56	5387.1
As-Built Total:									5387.1

CODE COMPLIANCE STATUS							
BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
13998	14042	5270	33310	17606	9862	5387	32855

9/13/07

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PASS

 **APPROVED**

DATE 7/12/07

PFS CORPORATION

Cottage Grove, WI



Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

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 circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.0 gpm at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenums must be attached, sealed, insulated, and installed in accordance with 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-13 both sides. Common ceiling & floors R-11.	

PFS CORPORATION
 APPROVED
 DATE 7/12/07
 Cottage Grove, WI

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 84.7

The higher the score, the more efficient the home.

KENT HARRISS CONSTRUCTION, , FL, 32025-

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 32.6 kBtu/hr
3. Number of units, if multi-family	1		SEER: 13.00
4. Number of Bedrooms	2	b. Central Unit	Cap: 20.2 kBtu/hr
5. Is this a worst case?	No		SEER: 13.00
6. Conditioned floor area (ft ²)	3173 ft ²	c. N/A	
7. Glass type ¹ and area: (Label reqd. by 13-104.4.5 if not default)		13. Heating systems	
a. U-factor:	Description Area	a. Electric Heat Pump	Cap: 32.6 kBtu/hr
(or Single or Double DEFAULT)	7a. (Dble Default) 374.6 ft ²		HSPF: 9.70
b. SHGC:		b. Electric Heat Pump	Cap: 20.2 kBtu/hr
(or Clear or Tint DEFAULT)	7b. (SHGC=0.6) 359.8 ft ²		HSPF: 9.70
8. Floor types		c. N/A	
a. Raised Wood, Post or Pier	R=19.0, 1847.0 ft ²	14. Hot water systems	
b. N/A		a. Electric Resistance	Cap: 50.0 gallons
c. N/A			EF: 0.90
9. Wall types		b. N/A	
a. Frame, Wood, Exterior	R=13.0, 1802.0 ft ²	c. Conservation credits	
b. Frame, Wood, Exterior	R=13.0, 559.0 ft ²	(HR-Heat recovery, Solar	
c. Frame, Wood, Exterior	R=19.0, 438.0 ft ²	DHP-Dedicated heat pump)	
d. N/A		15. HVAC credits	
e. N/A		(CF-Ceiling fan, C-Cross vent	
10. Ceiling types		HF-Whole house fan,	
a. Under Attic	R=30.0, 822.0 ft ²	PT-Programmable thermostat,	
b. Under Attic	R=19.0, 723.0 ft ²	MZ-C-Multizone cooling,	
c. N/A		MZ-H-Multizone heating)	
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Outdoors	Sup. R=6.0, 107.0 ft		
b. Sup: Unc. Ret: Con. AH: Attic	Sup. R=6.0, 62.0 ft		



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

Builder Signature: [Signature]

Date: 7/2/09

Address of New Home: _____

City/FL Zip: _____



*NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStarTM designation), your home may qualify for energy efficiency mortgage (EEM) incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at 321/638-1492 or see the Energy Gauge web site at www.fsec.ucf.edu for information and a list of certified Raters. For information about Florida's Energy Efficiency Code For Building Construction, contact the Department of Community Affairs at 850/487-1824.

¹ Predominant glass type. For actual glass type and areas, see Summer & Winter Glass output on pages 2&4. EnergyGauge[®] (Version: FLRCSB v4.5)



TRACKING # 22435

PFS Corporation

Assurance you can build on™

An Employee-Owned Company

Headquarters

1507 Matt Pass
Cottage Grove, WI 53527

Phone: 608.839.1013
Fax: 608.839.1014

Website
www.pfscorporation.com

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Senior Vice President, QC
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608.839.1013

Southeast
Raleigh, NC
919.845.8450

Sales Office
Mentone, AL
256.634.4071

July 12, 2007

Mr. Mike Ashworth
Planning Manager, State of Florida
Manufactured Buildings Program
Building Codes and Standards
Florida Dept. of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100

RE: Nationwide Homes
 Arabi, GA
 Approvals: Model Winston 91636

Dear Mr. Ashworth:

Enclosed please find one set of documents for the above-noted models.

PFS Corporation hereby certifies that it has examined the building plan and other documents submitted by the manufacturer for certification and found them to be in compliance with the following codes:

2004 FBC, Residential w/2005 & 2006 & 2007 Supplements
2004 Florida Mechanical Code w/2005 & 2006 & 2007 Supplements
2004 Florida Plumbing Code w/2005 & 2006 & 2007 Supplements
2005 National Electric Code

If you have any questions concerning this submission, please feel free to contact this office at any time. Additionally, a hard copy of these plans with the required engineer's raised seal is on file at PFS.

Approved By:

Virgil (James) Shrock, SMP #31
Staff Engineer

FL-pb

Enclosures: As Stated

cc: John Self (Nationwide)



Nationwide Homes Inc.
1100 RIVES ROAD, MARTINSVILLE, VA. 24115
(276) 632-7100

2005

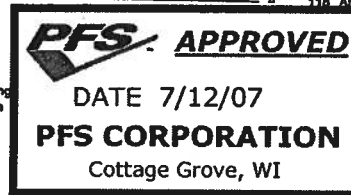
National Electric Code

Electrical Load Calculations

Model = WINSTON #91636

General Lighting Load:	3,173 Sq. Ft. at 3 volt-amperes per sq ft	9,519 volt-amperes
Small Appliance Load		3,000 volt-amperes
Laundry		1,500 volt-amperes
Total General Lighting and Small Appliance		14,019 volt-amperes
3000 volt-amperes @ 100%		3,000 volt-amperes
14,019 - 3000 =	11,019 @ 35%	3,857 volt-amperes
Net General Lighting and Small Appliance Load		6,857 volt-amperes
Range Load:		8,640 volt-amperes
Dryer Load:		5,600 volt-amperes
Dishwasher:		1,032 volt-amperes
Garbage Dispos:		504 volt-amperes
Water Heater: (4500 / 240 * 125%)		5,625 volt-amperes
		volt-amperes
		volt-amperes
Total Load:		28,258 volt-amperes
	200 Amp. Service Panel Installed	
For 120/240-volt 3-Wire single-phase service or feeder		
28,258 / 240 Volt =		118 Amperes

General Notes:
1. Any Site installed circuits i.e. basement, heating/cooling Etc. Not to exceed service panel rating of 200 Amp. If additional loads exceed main panel rating, purchaser responsible for site installation of sub-panel and/or adequate service entry. All installation to meet 2005 NEC subject to inspection by local jurisdiction.



Engineering Department

91636

31 of 41

2/2/07
7/19/07

WIND LOAD CALCULATIONS

NATIONWIDE HOMES

DESIGN INPUTS:	MODULE WIDTH:	28 ft	NO. OF STORIES:	2
	STUD SPACING:	16 in	1st FLOOR WALL HEIGHT:	10 ft
	TRUSS SPACING:	19.2 in	2nd FLOOR WALL HEIGHT:	10 ft
	ROOF PITCH:	12 / 12	3rd FLOOR WALL HEIGHT:	0 ft
	ROOF ANGLE (θ):	45.0 °	WIND SPEED:	130 mph
			WIND EXPOSURE CASE:	B
	z =	20 ft		
	ht =	14,000 ft		
	ht / 2 =	7,000 ft		
	h =	27,000 ft		
	EFFECTIVE WIND AREA = z x STUD SPACING =	13,333 ft ²		
	EFFECTIVE WIND AREA = h x STUD SPACING =	36,000 ft ²		

DETERMINE WIND LOADS PER ASCE 7-02 FOR LOW RISE BUILDINGS:

COMPONENTS AND CLADDING:

CONSTANTS:	WIND VELOCITY (V):	130 mph	DIRECTIONALITY FACTOR (K _d):	0.85
	VEL. PRESS. EXP. COEF. (K _e):	0.70	IMPORTANCE FACTOR (I):	1
	MULT. for TOPO. FACTOR (K _t):	0.09	q _s = .00256 x K _e x K _d x K _t x V ² x I =	25.74
	MULT. for TOPO. FACTOR (K _s):	0	q _e = q _s = q _h =	25.74
	MULT. for TOPO. FACTOR (K _z):	0	GUST EFFECT FACTOR (G):	0.85
	K _z = (1 + K ₁ x K ₂ x K ₃) ² =	1	INTERNAL PRESS. COEF. (GC _{pi}):	0.18
				-0.18

LATERAL LOADS (COMPONENTS AND CLADDING):

EXTERNAL PRESSURE COEFFICIENTS:

SIDE WALL: FIELD: GC_{pf} =
EDGE: GC_{pe} =

LOAD CALCULATIONS:

$$P_{fi} = q_s \times (GC_{pi} - GC_{pf}) \times P_{fi} \text{ psf}$$

EXAMPLE:

$$P_{fi} = q_s \times (GC_{pi} - GC_{pf}) \times P_{fi} \text{ psf} = (25.74) \times (-1.03) - (0.18) = -31.06 \text{ psf}$$

$$P_{fi} = q_s \times (GC_{pi} - GC_{pf}) \times P_{fi} \text{ psf} = (25.74) \times (-1.03) - (-0.18) = -21.79 \text{ psf}$$

FIELD:	P _{fi} =	-31.06 psf
FIELD:	P _{fi} =	-21.79 psf
EDGE:	P _{fi} =	-36.30 psf
EDGE:	P _{fi} =	-27.03 psf

USE	-31.06 psf WIND LOAD FOR FIELD.
USE	-36.30 psf WIND LOAD FOR EDGE.

THE MAXIMUM LATERAL LOAD FOR 130 mph WIND (COMPONENTS AND CLADDING) IS -36.30 psf.

7/19/07

WIND LOAD CALCULATIONS

NATIONWIDE HOMES

UPLIFT LOADS (COMPONENTS AND CLADDING):

EXTERNAL PRESSURE COEFFICIENTS:

ROOF: FIELD: $GC_{pf1} = -0.88$
 EDGE: $GC_{pe2} = -1.13$
 OVERHANG: $GC_{pe3} = -1.93$
 DOWNWARD: $GC_{pi1,3} = 0.26$

LOAD CALCULATIONS:

$$P_u = q_h \times (GC_{pe} - GC_{pi}) \times P_d \text{ psf}$$

EXAMPLE:

$$P_u = q_h \times (GC_{pe1} - GC_{pi1}) \times P_d \text{ psf} = (25.74) \times (-0.88) - (0.18) = -27.20 \text{ psf}$$

$$P_u = q_h \times (GC_{pe1} - GC_{pi1}) \times P_d \text{ psf} = (25.74) \times (-0.88) - (-0.18) = -17.93 \text{ psf}$$



FIELD:	$P_u = -27.20$	psf
FIELD:	$P_u = -17.93$	psf
EDGE:	$P_u = -33.64$	psf
EDGE:	$P_u = -24.37$	psf
OVERHANG:	$P_u = -54.23$	psf
OVERHANG:	$P_u = -44.98$	psf
DOWNWARD:	$P_{1,3} = 1.96$	psf
DOWNWARD:	$P_{1,3} = 11.22$	psf

USE	-27.20	psf WIND LOAD FOR FIELD.
USE	-33.64	psf WIND LOAD FOR EDGE.
USE	-54.23	psf WIND LOAD FOR OVERHANG.
USE	11.22	psf DOWNWARD WIND LOAD.

THE MAXIMUM UPLIFT LOAD FOR 130 mph WIND (COMPONENTS AND CLADDING) IS -54.23 psf.

LOAD SUMMARY:
 FOR 12/12 PITCH, 130 mph WIND, EXPOSURE CASE B1

LATERAL LOADS:

	COMP. & CLADDING (psf)
FIELD	-31.06
EDGE	-36.30

UPLIFT LOADS:

	COMP. & CLADDING (psf)
FIELD	-27.20
EDGE	-33.64
OVERHANG	-54.23

WIND-98-COMP-CLAD

2 OF 2
 6/29/2007

Handwritten signature and date: 7/19/07

PRODUCT APPROVAL SCHEDULE

Manufacturer: NATIONWIDE CUSTOM HOMES **Plan # WINSTON #91636**

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

Category	Manufacturer	Product Description	Approval #(s)
EXTERIOR DOORS			
Swinging	THERMATRU	3068 & 6068 DOORS	FL1170 R1
Swinging	PGT INDUSTRIES	3068 & 6069 DOORS(Impact)	FL253-R3/R-4
Sliding	WEST WINDOW	6068 SLIDING GLASS DOOR	FL 4933
Sliding	PGT INDUSTRIES	SLIDING GLASS DOOR(Impact)	FL251-R4
Sectional			
Roll-up			
Automatic			
Other			
WINDOWS			
Single Hung	WEST WINDOW	VINYL SINGLE HUNG	FL 5410
Single Hung	PGT INDUSTRIES	ALUMINUM S. H. (IMPACT)	FL 239.4/.5/.6
Horizontal Slider			
Casement	WEST WINDOW	VINYL CASEMENT	FL 4934
Double Hung	WEST WINDOW	VINYL DOUBLE HUNG	FL 5055 R1
	WEST WINDOW	VINYL DBL. HUNG (IMPACT)	FL5411
Fixed	WEST WINDOW	VINYL FIXED	FL 5064/FL5413
Fixed	PGT INDUSTRIES	ALUMINUM FIXED (IMPACT)	FL 243-R4
Awning			
Pass-through			
Projected			
Mullion			
Wind Breaker			
Dual Action			
Other			
PANEL WALL			
Siding	JAMES HARDIE	HARDI-PLANK SIDING	FL889-R2
Siding (Vinyl)	VARIFORM (GP)	VINYL SIDING	FL2224-R1
Soffits			
EIFS			
Storefronts			
Curtain Walls			
Wall Louver			
Glass Block			
Membrane			
Greenhouse			
Other			

91636

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PRODUCT APPROVAL SCHEDULE

Manufacturer: **NATIONWIDE CUSTOM HOMES**

Plan # **WINSTON #91636**

Category	Manufacturer	Product Description	Approval #(s)
ROOFING PRODUCTS			
Asphalt Shingles	CERTAINTED	FIBERGLASS SHINGLES	FL 250-R1
Underlayments	WOODLAND IND.	30# FELT	FL 1814-R1
Roofing Fasteners	SESCO	NAILS & STAPLES	FL 5135
Non-structural Metal			
Built-up Roofing			
Modified Bitumen			
Single Ply Roofing Sys.			
Roofing Tiles			
Roofing Insulation	OWENS CORNING	INSULATION	F 6242-R1
Waterproofing			
Wood Shingles / Shakes			
Roofing Slate			
Liquid Applied Roof Sys.			
Cements - Adhesives - Coatings			
Roof Tile Adhesive			
Spray Applied			
Polyurethane Roof			
Other			
SHUTTERS	N/A		
Accordion			
Bahama			
Storm Panels			
Colonial			
Roll-up			
Equipment			
Others			
SKYLIGHTS			
Skylight			
Other			
STRUCTURAL COMPONENTS			
Wood Connector/Anchor	SIMPSON	CS22 GA. STRAP	FL 1901 R3 Ref(1901.7)
Truss Plates			
Engineered Lumber	GA. PACIFIC	LAMINATED BEAM	FL 1008 R1
Railing			
Coolers & Freezers			
Concrete Admixtures			
Material			

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PRODUCT APPROVAL SCHEDULE

Manufacturer: NATIONWIDE CUSTOM HOMES

Plan # WINSTON #91636

Category	Manufacturer	Product Description	Approval #(s)
STRUCTURAL COMPONENTS (cont.)			
Insulation Forms			
Plastics			
Deck & Roof			
Wall			
Sheds			
Others			
NEW EXTERIOR ENVELOPE PRODUCTS			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector at the manufacturing plant: (1) Copy of the product approval from the Local or State Building Commission, or supply all of the information listed on Form No. 9B-72.130(5). (2) Copy of the applicable manufacturers' installation requirements.

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

91636

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Manufacturer's Authorized Agent Signature

EDWARD W. WILLIAMS 6/29/07
Printed Name Date

EDWARD W. WILLIAMS

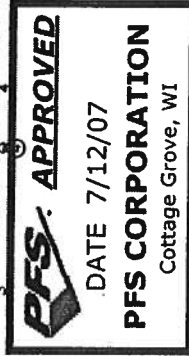
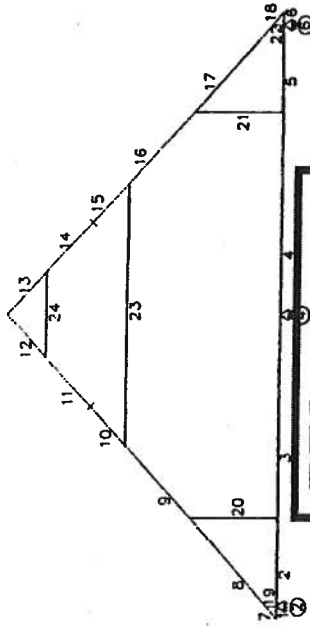
6/29/07

Printed Name

Date _____

STRUCTURAL LUMBER
INTERACTION CALCULATIONS

NATIONWIDE HOMES, INC.



TRUSS NO.: F1212276
JOB NO.: 060310
PITCH: 12/12
SPAN: 27'-8"
TRUSS CENTERS: 19.2"

MEMBER	SIZE & SPECIES
1 - 6	2 x 10 SPF #2
7 - 10 & 15 - 18	2 x 6 SPF #2
11 - 14	2 x 4 SPF #2
19 - 22	2 x 4 SPF #2
23 & 24	2 x 4 SPF #2

30 psf GROUND SNOW
BALANCED TO LL: *17.78 psf
UNBALANCED TO LL: 28.04 psf
10 psf
30 psf BETWEEN KNEE WALLS
10 psf OUTSIDE KNEE WALLS
10 psf
WIND UPLIFT: 45.5 psf AT 130 mph
* 20 psf MINIMUM USED

MAXIMUM SUPPORT REACTIONS (lbs):

	DEAD LOAD	MAX. GRAVITY LOAD	(NOTE 4) DL + 130 mph UPLIFT
EXTERIOR WALL	488.3	1165.2	-573.8
MATING WALL	248.8	692.7	-87.4

MAXIMUM INTERACTION FACTOR:

	MAX. L.F.	MAX. (psi)	11
BOTTOM CHORD	0.85390	0.35019	487
TOP CHORD	0.97871	0.88602	287
WEB	0.13854	0.00	----

- NOTES: 1. MATING WALL LOADS ARE TOTAL FOR BOTH SIDES.
2. WIND PER ASCE 7-02, 130 mph, EXP. C, CAC PRESSURES.
3. SNOW PER ASCE 7-02, 30 psf G.S.L., $C_s = 1.1$, $C_e = 1.0$, $C_d = 1.0$, UNBALANCED FACTOR = 1.5.
4. WIND UPLIFT REACTIONS ARE BASED ON Q & C PRESSURES.
WIND LATERAL AND UPLIFT ANCHORAGE AT SUPPORTS ARE DESIGNED W/ MWFB PRESSURES (SEE CONNECTION SECTION OF MANUAL).

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P. 37-462

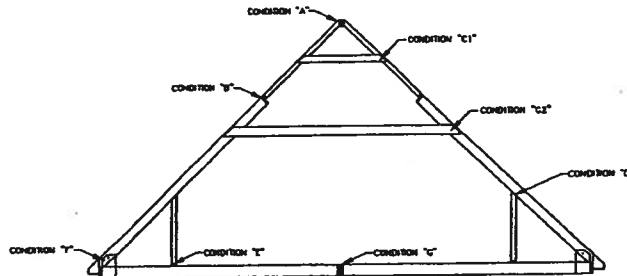
91636

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**CONNECTIONS
TRUSS FRAMING**

NATIONWIDE HOMES, INC.

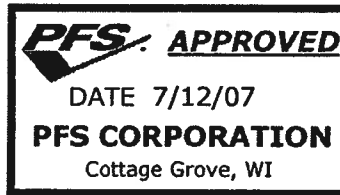
PROJECT NUMBER: 060510
TRUSS NUMBER: F1212276
TRUSS PITCH: 12/12
TRUSS SPACING: 19.2"
TRUSS SPAN: 27'-6"



DESIGN LOADS:

ROOF TC DL:	10 psf
BALANCED ROOF TC LL:	* 17.76 psf
UNBALANCED ROOF TC LL:	26.64 psf
ROOF BC DL:	10 psf
BC LL BETWEEN KNEEWALLS:	30 psf
BC LL OUTSIDE KNEEWALLS:	10 psf
WIND UPLIFT 130 mph:	45.3 psf

* 20 psf MINIMUM USED



NAIL & SPIKE DESIGN VALUES:

FASTENER	LATERAL Z _{max}	BY	WITHDRAWAL (W)
6 d NAILS	0 lbs	IV	18 lbs / in PENETRATION
8 d NAILS	62.92 lbs	IV	21 lbs / in PENETRATION
10 d NAILS	99.81 lbs	IV	23 lbs / in PENETRATION
12 d NAILS	99.81 lbs	IV	23 lbs / in PENETRATION
16 d NAILS	119.59 lbs	IV	27 lbs / in PENETRATION
1/2" BOLT	278.17 lbs	Is	(DOUBLE SHEAR; 3/8" SIDE PLATES)

DURATION FACTOR (C_D) FOR LL = 1.15

DURATION FACTOR (C_D) FOR WIND = 1.6

TOE NAIL FACTOR (C_{tn}) = 0.83

END GRAIN FACTOR (C_{eg}) = 0.67

HANGER / STRAP DESIGN VALUES:

	ALLOWABLE LATERAL LOAD	ALLOWABLE WITHDRAWAL LOAD (1 1/2" PENETRATION)
SIMPSON L30 ANGLE w/ (4) 10 d NAILS	190 lbs	69 lbs
SIMPSON L50 ANGLE w/ (6) 10 d NAILS	290 lbs	103.5 lbs
SIMPSON L70 ANGLE w/ (8) 10 d NAILS	380 lbs	138 lbs
SIMPSON L90 ANGLE w/ (10) 10 d NAILS	480 lbs	172.5 lbs
SIMPSON H2 TWIST STRAP w/ (10) 8 d NAILS	0 lbs	157.5 lbs
SIMPSON H5 TWIST STRAP w/ (8) 8 d NAILS	170 lbs	126 lbs
SIMPSON H3 TWIST STRAP w/ (8) 8 d NAILS	140 lbs	126 lbs
SIMPSON H2.5 TWIST STRAP w/ (10) 8 d NAILS	130 lbs	157.5 lbs
SIMPSON LSTA9 STRAP w/ (8) 8 d NAILS	0 lbs	126 lbs
SIMPSON LSTA12 STRAP w/ (10) 8 d NAILS	0 lbs	157.5 lbs
SIMPSON LSTA15 STRAP w/ (12) 8 d NAILS	0 lbs	189 lbs

230 lbs UPLIFT
265 lbs UPLIFT
320 lbs UPLIFT
365 lbs UPLIFT
605 lbs UPLIFT
755 lbs UPLIFT
905 lbs UPLIFT

**CONNECTIONS
TRUSS FRAMING**

NATIONWIDE HOMES, INC.

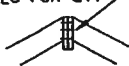
CONDITION "A": RIDGE BEAM

START JOINT OF MEMBER: 13
END JOINT OF MEMBER: 12

SHEAR CONNECTION

MAX SHEAR DESIGN LOAD = 86.1 lbs

PURCHASER TO SITE INST.
10d NAILS THRU RIDGE BOARDS
SEE CALC FOR QTY

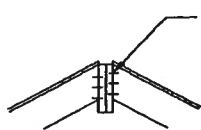


USE 2 10 d NAILS INTO END GRAIN OF EACH RAFTER

USE 10 d NAILS AT 7" O.C THROUGH RIDGE BEAM

TENSION CONNECTION

9/13/06



10 d NAILS TOENAIL
SEE CALC FOR QTY

MAX TENSION DESIGN LOAD = 74.4 lbs

ALTERNATE TENSION CONNECTION



USE 1 10 d NAILS TOE NAIL INTO RIDGE BEAM

PURCHASER TO SUPPLY & INSTALL
TIE-DOWN STRAPS
ON EXT. & INT. OF EACH RAFTER
SEE CALC FOR STRAP & NAIL SPECS



USE (1) SIMPSON LSTAB STRAP w/ (8) 8 d NAILS TOP & BOTTOM TOP & BOTTOM

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**CONNECTIONS
TRUSS FRAMING**

NATIONWIDE HOMES, INC.

CONDITION "B": TOP CHORD FLIPBACK

START JOINT OF MEMBER: 11 / 15
END JOINT OF MEMBER: 10 / 14

MAX TENSION DESIGN LOAD = 295.6 lbs

USE 3 8 d NAILS EACH END OF SHEATHING

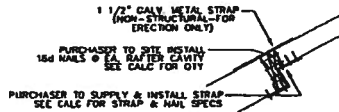
MAX SHEAR DESIGN LOAD = 107.6 lbs

USE 1 16 d NAILS TOE NAILED EACH END

USE 16 d NAILS AT 8 " O.C. THROUGH PLATES

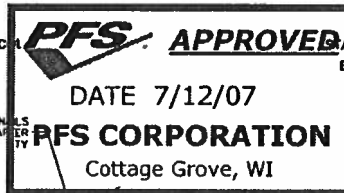


ALTERNATE CONNECTION



USE (1) SIMPSON LSTAS STRAP w/ (8) 8 d NAILS TOP & BOTTOM ON BOTTOM

CONDITION "C1": UPPER CHORD



START JOINT OF MEMBER: 24
END JOINT OF MEMBER: 24

DESIGN LOAD = 389.4 lbs

USE 3 16 d NAILS EACH END

BEARING BLOCK NOT REQUIRED

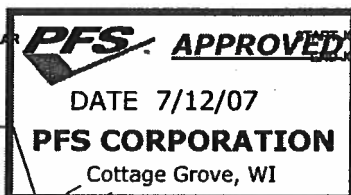
PURCHASER TO INST. 16d NAILS THRU COLLAR TIE INTO RAFTER SEE CALC FOR QTY

PURCHASER TO SUPPLY & INSTALL STRAP SEE CALC FOR STRAP & NAIL SPECS

**CONNECTIONS
TRUSS FRAMING**

NATIONWIDE HOMES, INC.

CONDITION "C2": LOWER COLLAR



PURCHASER TO INST. 16d NAILS
THRU COLLAR TO INTO RAFTER
SEE CALC FOR QTY

START JOINT OF MEMBER: 23
END JOINT OF MEMBER: 23

DESIGN LOAD = 527.5 lbs

USE 3 EACH END

BEARING BLOCK NOT REQUIRED

CONDITION "D": KNEE WALL TO TOP CHORD

START JOINT OF MEMBER: N/A
END JOINT OF MEMBER: 20 / 21

9/16/06

6" STRAP HINGE
W/ 3EA. 10 x 3" OR
16d NAILS EA. LEG
FOR ERECTION ONLY



16d TOENAILS
ON SITE AFTER
ERECTION
SEE CALC FOR QTY

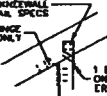
DESIGN LOAD = 411.5 lbs

USE 4 16 d NAILS TOE NAILED INTO RAFTER

ALTERNATE CONNECTION

PURCHASER TO SUPPLY & INSTALL
STRAP HINGE AT EACH RAFTER TO KNEEWALL
SEE CALC FOR STRAP & NAIL SPACE

6" STRAP HINGE
FOR ERECTION ONLY



1 EA. 16d TOENAIL
ON SITE AFTER
ERECTION

USE (2) SIMPSON H2 TWIST STRAP w/ (10) 8 d NAILS WALL STUD TO TOP CHORD

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**CONNECTIONS
TRUSS FRAMING**

NATIONWIDE HOMES, INC.

CONDITION "E": KNEE WALL TO BOTTOM CHORD

START JOINT OF MEMBER: 20 / 21
END JOINT OF MEMBER: NA

DESIGN LOAD = 467 lbs

USE 4 16 d NAILS TOE NAILED INTO PLATE

PURCHASER TO SITE
16d NAILS TOE NAILED
THRU STUD TO PLATE
SEE CALC FOR QTY



ALTERNATE CONNECTION

PURCHASER TO SITE INSTALL
2EA 16d NAILS THRU BOTTOM
PLATE INTO C.G. OF EACH KNEEWALL
SEE CALC FOR STRAP & NAIL SPECS
STRAP TO BE AT EACH KNEEWALL
PURCHASER TO SUPPLY & INSTALL

USE (2) SIMPSON H2 TWIST STRAP w/ (10) 8 d NAILS WALL STUD TO TOP CHORD

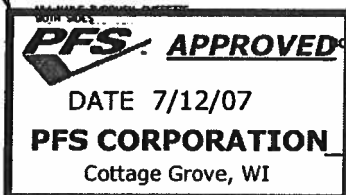
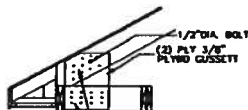
CONDITION "F": KEEL

START JOINT OF MEMBER: 8 START JOINT OF MEMBER: 2
END JOINT OF MEMBER: 7 END JOINT OF MEMBER: 1

TOP CHORD

DESIGN LOAD = 998.8 lbs

USE 1 1/2" BOLT PLUS (6) 16 d NAILS EACH SIDE



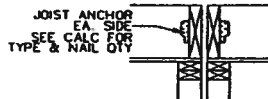
BOTTOM CHORD

DESIGN LOAD = 588.8 lbs

USE 5 16 d NAILS EACH SIDE

CONDITION "G": BOTTOM CHORD TO CENTER GIRDER

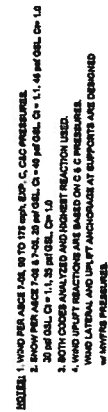
START JOINT OF MEMBER: 4
END JOINT OF MEMBER: 3
MAX SHEAR DESIGN LOAD = 435.8 lbs



USE (1) SIMPSON L50 ANGLE w/ (6) 10 d NAILS EACH SIDE OF JOIST

MAX TENSION DESIGN LOAD = 467.8 lbs

USE AN ADDITIONAL 5 16 d NAILS TOE NAILED INTO EACH SIDE



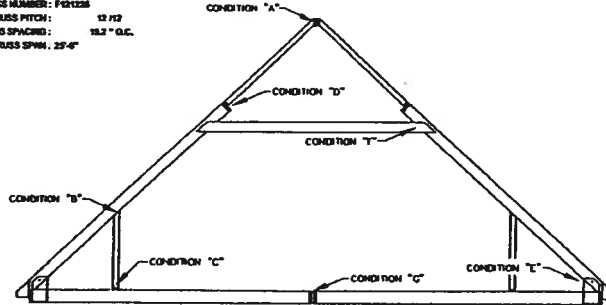
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CONNECTIONS
TRUSS FRAMING

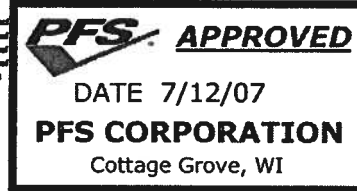
NATIONWIDE CUSTOM HOMES

PROJECT NUMBER: 009189
TRUSS NUMBER: F01235
TRUSS PITCH: 12/12
TRUSS SPACING: 16.2' O.C.
TRUSS SPAN: 25'-4"

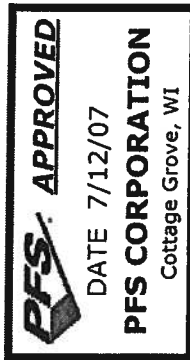


SECTION LLO88

	2005 PSF	2005 PSF	4095 PSF
	CSL	CSL	CSL
BALANCED TC LL:	73.48	78.94	24.22
UNBALANCED TC LL (PER ASIDE 7-40):	23.38	28.73	28.33
DRIFTING (UNBALANCED BURCHANCE) TC LL (PER ASIDE 7-40):	26.88	32.58	38.18
OPPOSITE SIDE UNBALANCED TC LL (PER ASIDE 7-40):	4.04	6.85	7.27
DISTANCE "L" FOR BURCHANCE PER ASIDE 7-40:	4.18	4.88	5.13
TC DL:	18	psf	
BC LL:	9820	psf	
BC DL:	10	psf	
UPLIFT:	47.58	psf FOR 120 mph	
* 20 psf MINIMUM USED			
** 10 psf USED WHERE H < 4"			
*** 20 psf USED WHERE H > 4"			
*** 40 psf USED IN HABITABLE ATTIC			



CONNECTION SUMMARY 130 MPH WIND			
CONDITION	LOAD (lbs)	FASTENERS	
"A": RIDGE BEAM	TC TO RIDGE (N)	233	(4) 10 d NAILS INTO END GRAIN OF EACH RAFTER
	RIDGE TO RIDGE (N)	233	10 d AT 9" O.C. THROUGH RIDGE BEAM
	TC TO RIDGE (T)	194.8	(2) 10 d NAILS TOE NAILED EACH END OR
	ALT FASTENER TC TO RIDGE (T)	194.8	(1) SIMPSON LSTA15 STRAP w/ (8) 10 d NAILS
"B": ROOF HALL TO TOP CHORD	ALT FASTENER WITH	881.1	(4) 10 d NAILS TOE NAILED INTO RAFTER OR
	ALT FASTENER WITH	881.1	(1) SIMPSON H8 TWIST STRAP w/ (18) 10 d NAILS (8) 10 d NAILS TOE NAILED IN ADDITION TO STRAPS
"C": ROOF HALL TO BOTTOM CHORD	ALT FASTENER WITH	881.8	(4) 10 d NAILS TOE NAILED EACH STUD OR
	ALT FASTENER WITH	881.8	(1) SIMPSON H8 TWIST STRAP w/ (18) 10 d NAILS (8) 10 d NAILS TOE NAILED IN ADDITION TO STRAPS
"D": PLIP TO TOP CHORD	TOP CHORD TO PLATE (N)	233	(2) 16 d NAILS THROUGH PLATE INTO TOP CHORDS
	PLATE TO PLATE (N)	233	10 d AT 11" O.C. THROUGH PLATES
	TOP CHORD TO PLATE (T)	154.4	(2) 8 d NAILS EA. SIDE THROUGH SHEATHING OR
	ALT FASTENER TOP CHORD TO PLATE (T)	154.4	(1) SIMPSON LSTA15 STRAP w/ (8) 10 d NAILS (8) 8 d NAILS EACH SIDE IN ADDITION TO STRAP
"E": WEL	GUSSET TO TC	1046.8	(1) 3/4" BOLT (DOUBLE SHEAR: 1 1/2" SIDE PLATES)
	GUSSET TO BC	882.8	(8) 16 d NAILS EACH SIDE (8) 16 d NAILS EACH SIDE
"F": COLLAR TIE	COLLAR TIE TO TOP CHORD (T)	738.1	(4) 16 d NAILS EACH END
"G": HUNTON CHORD TO CENTER GIRDER	"BC TO CENTER GIRDER (T)	882.8	(6) 16 d NAILS TOE NAILED IN ADDITION TO HANGERS OR
	ALT FASTENER BC TO CG (T)	882.8	(1) SIMPSON LSTA15 STRAP w/ (12) 10 d NAILS OR
	ALT FASTENER BC TO CG (SHEATHING) (T)	882.8	(8) 16 d NAILS EA. SIDE OF CENTER GIRDER
	"BC TO CENTER GIRDER (N)	487.8	(1) SIMPSON L80 ANGLE w/ (8) 10 d NAILS EA. SIDE OF JOIST *** HANGERS NOT REQ. WHEN BC HAS 1.5" OF BEARING



Year	2023 POF	2026 POF	4045 POF
2023 POF	2023 POF	2026 POF	4045 POF

UP/LIFT:	(lbs.)
60 mph	22.6
110 mph	34.12
150 mph	47.66
140 mph - FIELD	48.34
140 mph - EDGE	63.38
150 mph - FIELD	53.19
160 mph - EDGE	63.33
160 mph - FIELD	60.82
180 mph - EDGE	72.03
175 mph - FIELD	72.4
175 mph - EDGE	66.16

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MAXIMUM INTERACTION & DEFLECTION

	MAXIMUM DEFLECTION (in)	L /
BOTTOM CHORD	0.0063	610
TOP CHORD	0.78616	697

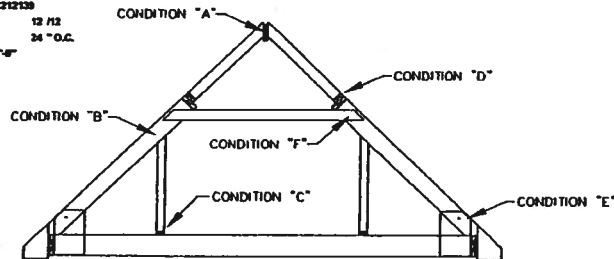
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CONNECTIONS
TRUSS FRAMING

NATIONWIDE CUSTOM HOMES

PROJECT NUMBER : 679160
TRUSS NUMBER : F1212139
TRUSS PITCH : 12 /12
TRUSS SPACING : 24 " O.C.
TRUSS SPAN : 13'-0"



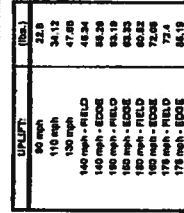
DESIGN LOADS:

	2005 PSF	3005 PSF	4045 PSF
GSL	GSL	GSL	GSL
BALANCED TC LL:	13.48	18.84	24.22
UNBALANCED TC LL (PER ASCE 7-02):	20.19	28.26	36.33
DRIFTING (UNBALANCED SURCHARGE) TC LL (PER ASCE 7-02):	26.89	32.59	38.19
OPPOSITE SIDE UNBALANCED TC LL (PER ASCE 7-02):	4.04	5.65	7.27
DISTANCE "L" FOR SURCHARGE (PER ASCE 7-02):	4.18	4.88	5.13
TC DL:	10	psf	
BC DL:	10	psf	
BC DL:	10	psf	
UPLIFT:	34.12	psf FOR 110 mph	
* 20 psf MINIMUM USED			
** 20 psf USED WHERE H > 42"			



CONNECTION SUMMARY 110 MPH WIND		
CONDITION	LOAD (lbs)	FASTENERS
"A" : RIDGE BEAM	TC TO RIDGE (M)	125.6
	RIDGE TO RIDGE (M)	125.6
	TC TO RIDGE (T)	82.8
	ALT FASTENER TC TO RIDGE (T)	82.8
"B" : ROOF WALL TO TOP CHORD		341.2
	ALT FASTENER WITH	341.2
"C" : ROOF WALL TO BOTTOM CHORD		337
	ALT FASTENER WITH	337
"D" : FLIP TO TOP CHORD	TOP CHORD TO PLATE (M)	125.6
	PLATE TO PLATE (M)	125.6
	TOP CHORD TO PLATE (T)	57.1
	ALT FASTENER TOP CHORD TO PLATE (T) WITH	57.1
"E" : NEEL	GUSSET TO TC	533.7
	GUSSET TO BC	481.6
"F" : COLLAR TIE		388.1
	COLLAR TIE TO TOP CHORD (T)	388.1

PFS **APPROVED**
DATE 7/12/07
PFS CORPORATION
Cottage Grove, WI



TRUSS NO.: P1212120
JOB NO.: 070109
PITCH: 12/12
SPAN: 12'-5"

MEMBER INFORMATION:	MEMBER	SPECIES	AGE & SEX
	1-B	2-B BPP 02	
	0-B	2-B BPP 02	
	10-B 11	2-B BPP 02	
	12-18	2-B BPP 02	
	16-B 19	2-B BPP 02	
	17-B 18	2-B BPP 02	
	20	2-B BPP 02	

NOTES: 1. WIND PRESS. 7.05, 30 TO 70 mph, EXP. C, CLC PRESSURES.
2. SNOW PER AREA 7-22 1.50, 20 psf, CLC = 40 psf, CLC = 1.1, 48 psf, CLC = 1.0
30 psf, CLC = 1.1, 38 psf, CLC = 1.0
3. BOTH COSES ANALYZED AND BASED ON C & D PRESSURES.
4. WIND UPLIFT ANALYSIS ARE BASED ON C & D PRESSURES.
WIND LATERAL AND UPLIFT ANCHORAGE AT SUPPORTS ARE DESIGNED
FOR MAXIMUM PRESSURES.

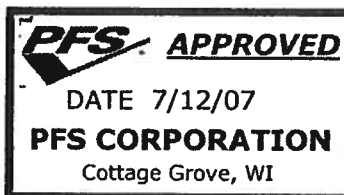
MAXIMUM INTERACTION DEFLECTIONS			
	MAXIMUM CSE	MAXIMUM DEFLECTION (in)	L/ I
BOTTOM CHORD	0.32708	0.01854	3350
TOP CHORD	0.33638	0.07112	3475
WEDS	0.10033	0.06	3445

2. 1990-1999

NATIONWIDE CUSTOM HOMES

A technical diagram of a roof truss system. The truss consists of two main rafters meeting at a peak, supported by vertical posts and horizontal beams. Six specific areas are labeled with arrows pointing to them: CONDITION "A" points to the top joint where the rafters meet; CONDITION "B" points to the left rafter; CONDITION "C" points to the central vertical post; CONDITION "D" points to the right rafter; CONDITION "E" points to the bottom-left support joint; and CONDITION "F" points to the horizontal beam connecting the two central vertical posts. In the upper left corner, there is some small, partially legible text: "12 IN.", "24 \" O.C.", and "12-6\"".

	2025 PEF	2005 PEF	4045 PEF
BALANCED TO LL:			
OSL	OSL	OSL	OSL
UNBALANCED TO LL (PER ASCE 7-05)	*13.66	*16.84	34.22
DRIFTING (UNBALANCED SURCHARGE) TO LL (PER ASCE 7-05)	26.18	28.28	35.33
OPPOSITE SIDE UNBALANCED TO LL (PER ASCE 7-05)	26.68	32.86	38.10
DISTANCE "L" FOR SURCHARGE (PER ASCE 7-05)	4.04	5.05	7.27
	4.18	4.68	6.13
TC DL	10	pdf	
BC LL	*10.83	pdf	
BC DL	10	pdf	
UPLIFT	47.63	pdf FOR 130 mph	
	* 30 psf MINIMUM USED		
	** 20 psf USED WHERE H > 42'		



CONNECTION SUMMARY 130 MPH WIND			
CONDITION	LOAD (lbs)	FASTENERS	
"A": RIDGE BEAM			
TC TO RIDGE (1)	107.7	(2)	10 d NAILS INTO END GRAIN OF EACH RAFTER
RIDGE TO RIDGE (1)	107.7	10d AT 24"	* O.C. THROUGH RIDGE BEAM
TC TO RIDGE (1)	80.3	(1)	10 d NAILS TOE NAILED EACH END
ALT FASTENER TC TO RIDGE (1)	30.3	(1)	SHIMSON LETA STRAP w/ (5) 10 d NAILS
"B": KNEE WALL TO TOP CHORD	443.9	(4)	16 d NAILS TOE NAILED INTO RAFTER
ALT FASTENER	443.9	(1)	SHIMSON HS TWIST STRAP w/ (10) 10 d NAILS
WITH		(8)	16 d NAILS TOE NAILED IN ADDITION TO STRAPS
"C": KNEE WALL TO BOTTOM CHORD	440.1	(4)	16 d NAILS TOE NAILED EACH STUD
ALT FASTENER	440.1	(1)	SHIMSON HS TWIST STRAP w/ (10) 10 d NAILS
WITH		(8)	16 d NAILS TOE NAILED IN ADDITION TO STRAPS
"D": FLIP TO TOP CHORD			
TOP CHORD TO PLATE (1)	107.7	(1)	16 d NAILS THROUGH PLATES INTO TOP CHORDS
PLATE TO PLATE (1)	107.7	16d AT 24"	* O.C. THROUGH PLATES
TOP CHORD TO PLATE (1)	71.8	(7)	8 d NAILS EA. SIDE THROUGH SHEATHING
ALT FASTENER TOP CHORD TO PLATE (1)	71.8	(1)	SHIMSON LETA STRAP w/ (5) 10 d NAILS
WITH		(8)	8 d NAILS EACH SIDE IN ADDITION TO STRAP
"E": NEEL			
GUSSET TO TC	517.9	(1)	1/2" BOLT (DOUBLE SHEAR; 1/2" SIDE PLATES)
GUSSET TO BC	519.3	(8)	16 d NAILS EACH SIDE
"F": COLLAR TIE			
COLLAR TIE TO TOP CHORD (1)	486.8	(4)	16 d NAILS EACH END

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SOFTWARE FOR WOOD DESIGN

COMPANY
BARLOW ENGINEERING, P.C.
6612 SIX FORKS RD
RALEIGH, NC 27615
July 6, 2007 10:30

PROJECT
9'-2" MATE WALL BEAM
RAISED BEAM-1 (PER SIDE)
CONTRACT #91638
NATIONWIDE CUSTOM HOMES
raised-beam-1.www

Design Check Calculation Sheet
Sizer 6.4

LOADS (lbs, psf, or plf) :

Load	Type	Distribution	Magnitude	Location [ft]	Units
			Start End	Start End	
TRUSS DEAD	Dead	Full UDL	488.0		plf
TRUSS LIVE	Live	Full UDL	458.0		plf

MAXIMUM REACTIONS (lbs) and BEARING LENGTHS (in) :



Dead	2279		2279
Live	2099		2099
Total	4379		4379
Bearing:			
Load Comb	#2		#2
Length	1.67		1.67

LVL n-ply, 2.0E, 3100Fb, 1-3/4x9-1/4", 2-Plys

Self-weight of 8.33 plf included in loads;
Lateral support top= at supports, bottom= at supports;

Analysis vs. Allowable Stress (psi) and Deflection (in) using NDS 2001 :

Criterion	Analysis Value	Design Value	Analysis/Design
Shear	$F_v = 169$	$F_v' = 285$	$F_v/F_v' = 0.59$
Bending(+)	$F_b = 2413$	$F_b' = 3101$	$F_b/F_b' = 0.78$
Live Defl'n	$0.16 = L/697$	$0.31 = L/360$	0.52
Total Defl'n	$0.41 = L/265$	$0.46 = L/240$	0.90

ADDITIONAL DATA:

FACTORS:	P	CD	CM	Ct	CL	CV	Cfu	Cr	Cprt	CL	CL	LC
F_v'	285	1.00	-	1.00	-	-	-	-	1.00	-	-	-
F_b'	3100	1.00	-	1.00	0.965	1.04	-	1.00	1.00	-	-	-
F_{cp}'	750	-	-	1.00	-	-	-	-	1.00	-	-	-
E'	2.0 million	-	-	1.00	-	-	-	-	1.00	-	-	-

Shear : LC #2 = D+L, V = 4379, V design = 3642 lbs

Bending(+): LC #2 = D+L, M = 10034 lbs-ft

Deflection: LC #2 = D+L, EI = 231e06 lb-in²/ply

Total Deflection = 1.50 (Dead Load Deflection) + Live Load Deflection

(D=dead L=live S=snow W=wind I=impact C=construction CL=concent)

(All LC's are listed in the Analysis output)

Load combinations: ICC-IBC



DESIGN NOTES:

- Please verify that the default deflection limits are appropriate for your application.
- SCL-BEAMS (Structural Composite Lumber): the attached SCL selection is for preliminary design only. For final member design contact your local SCL manufacturer.
- Size factors vary from one manufacturer to another for SCL materials. They can be changed in the database editor.
- BUILT-UP SCL-BEAMS: contact manufacturer for connection details when loads are not applied equally to all plys.

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5/6 Rad
7/19/07



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SOFTWARE FOR WOOD DESIGN

COMPANY
BARLOW ENGINEERING, P.C.
6612 SIX FORKS RD
RALEIGH, NC 27615
July 6, 2007 10:32

PROJECT
11'-1" MATE WALL BEAM
RAISED BEAM-1 (PER SIDE)
CONTRACT #91636
NATIONWIDE CUSTOM HOMES
raised-beam-2.wvb

Design Check Calculation Sheet
Sizer 6.4

LOADS (lbs, psf, or plf) :

Load	Type	Distribution	Magnitude Start End	Location [ft] Start End	Units
TRUSS DEAD	Dead	Full UDL	488.0		plf
TRUSS LIVE	Live	Full UDL	458.0		plf

MAXIMUM REACTIONS (lbs) and BEARING LENGTHS (in) :



Dead	2782		2782
Live	2538		2538
Total	5320		5320
Bearing:			
Load Comb	#2		#2
Length	1.35		1.35

LVL n-ply, 2.0E, 3100Fb, 1-3/4x9-1/4", 3-Phys
Self-weight of 14.0 plf included in loads;
Lateral support: top= at supports, bottom= at supports;

Analysis vs. Allowable Stress (psi) and Deflection (in) using NDS 2001 :

Criterion	Analysis Value	Design Value	Analysis/Design
Shear	Fv = 141	Fv' = 285	Fv/Fv' = 0.50
Bending(+)	Fb = 2363	Fb' = 3166	Fb/Fb' = 0.75
Live Defl'n	0.22 = L/592	0.37 = L/360	0.61
Total Defl'n	0.47 = L/282	0.55 = L/240	0.85

ADDITIONAL DATA:

FACTORS:	F	CD	CM	Ct	CL	CV	Cfu	Cr	Cft	CI	Cn	LCS
Fv'	285	1.00	-	1.00	-	-	-	-	1.00	-	-	-
Fb'+	3100	1.00	-	1.00	0.986	1.04	-	1.00	1.00	-	-	-
Fcp'	750	-	-	1.00	-	-	-	-	1.00	-	-	-
E'	2.0 million	-	-	1.00	-	-	-	-	1.00	-	-	-

Shear : LC #2 = D+L, V = 5320, V design = 4580 lbs

Bending(+): LC #2 = D+L, M = 14741 lbs-ft

Deflection: LC #2 = D+L EI= 231e06 lb-in²/ply

Total Deflection = 1.00(Dead Load Deflection) + Live Load Deflection

(D=dead L=live S=snow W=wind I=impact C=construction CI=concentrated)

(All LC's are listed in the Analysis output)

Load combinations: ICC-IBC



DESIGN NOTES:

1. Please verify that the default deflection limits are appropriate for your application.
2. SCL-BEAMS (Structural Composite Lumber): the attached SCL selection is for preliminary design only. For final member design contact your local SCL manufacturer.
3. Size factors vary from one manufacturer to another for SCL materials. They can be changed in the database editor.
4. BUILT-UP SCL-BEAMS: contact manufacturer for connection details when loads are not applied equally to all plies.

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Design Check Calculation Sheet

Sizer 6.4

LOADS (lbs, psf, or plf) :

Load	Type	Distribution	Magnitude		Location [ft]		Units
			Start	End	Start	End	
TRUSS DEAD	Dead	Full UDL	104.0				plf
TRUSS LIVE	Live	Full UDL	165.0				plf

MAXIMUM REACTIONS (lbs) and BEARING LENGTHS (in) :



Dead	939	939
Live	1313	1313
Total	2252	2252
Bearing:		
Load Comb	#2	#2
Length	0.57	0.57

LVL n-ply, 2.0E, 3100Fb, 1-3/4x9-1/4", 3-Plys
Self-weight of 14.0 plf included in loads;
Lateral support: top= at supports, bottom= at supports;

Lateral support: top= at supports, bottom= at supports;

0.5 0.4 0.3 0.2 0.1 0

Analysis vs. Allowable Stress (psi) and Deflection (in) using NDS 2001 :

Criterion	Analysis Value	Design Value	Analysis/Design
Shear	$F_v = 63$	$F_v' = 285$	$F_v/F_v' = 0.22$
Bending (+)	$F_b = 1436$	$F_b' = 3138$	$F_b/F_b' = 0.46$
Live Defl'n	$0.34 = L/555$	$0.53 = L/360$	0.65
Total Defl'n	$0.71 = L/267$	$0.80 = L/240$	0.90

ADDITIONAL DATA:

FACTORS:	F	CD	CM	Ct	CL	CV	Cfu	Cx	Cfrt
Fv'	285	1.00	-	1.00	-	-	-	-	1.00
Fb'+	3100	1.00	-	1.00	0.977	1.04	-	1.00	-
Fcp'	750	-	-	1.00	-	-	-	-	1.00
E'	2.0 million	-	-	1.00	-	-	-	-	1.00

Shear : LC #2 = D+L, V = 2252, V design = 2034 lbs

Bending(+): LC #2 = D+L, M = 8962 lbs-ft
Deflection: LC #2 = D+L, FI = 231.26 lb

Deflection: LC #2 = D+L EI= 231e06 lb-in²/ply
Total Deflection = 1.50/Dead Load Deflection = 1.50

Total Deflection = 1.50 (Dead Load Deflection) + Live Load Deflection
(D=dead L=live S=snow W=wind I=impact C=construction G=construction)

(All LC's are listed in the Analysis output)

Load combinations: ICC-IBC

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DATE 7/12/07
PFS CORPORATION
Cottage Grove, WI

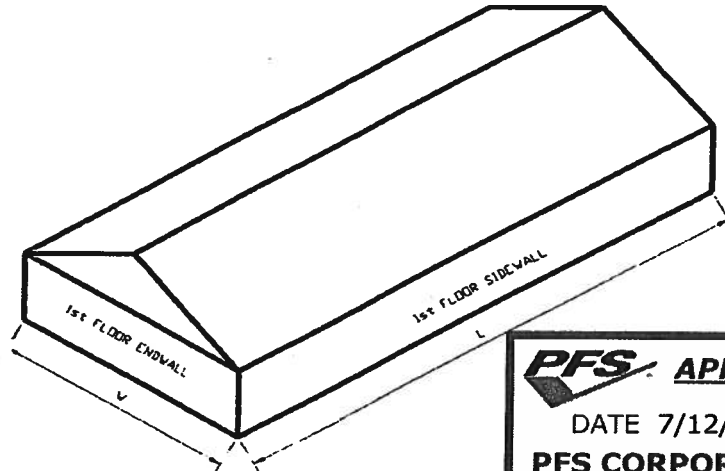
DESIGN NOTES:

1. Please verify that the default deflection limits are appropriate for your application.
2. SCL-BEAMS (Structural Composite Lumber): the attached SCL selection is for preliminary design only. For final member design contact your local SCL manufacturer.
3. Size factors vary from one manufacturer to another for SCL materials. They can be changed in the database editor.
4. BUILT-UP SCL-BEAMS: contact manufacturer for connection details when loads are not applied equally to all plys.

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7/9/07



BUILDING INFORMATION:

JOB NUMBER = 070659
PLAN NAME = WINSTON
CONTRACT NUMBER = 91636
FIRST FLOOR LENGTH (M₁) = 41.5 ft
FIRST FLOOR LENGTH (L₁) = 60 ft
TRUSS SPACING (TOC) = 24 in
STUD SPACING (SOC) = 16 in
MAX. UNRESTRAINED OPENING HEIGHT = 5 ft
WIND SPEED (V_{3S}) = 130 mph
MEAN ROOF HEIGHT ADJUSTMENT FACTOR (C_{me}) = 1.36
WALL HEIGHT ADJUSTMENT FACTOR (C_{we}) = H / 8 = 1.125

91636

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7/19/07
APPLIES TO
2. 466-4620

SHEARWALL SUMMARY:

FIRST FLOOR ENDWALL: 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWB INTERIOR
(BEDROOM #2 / BATH #1 SIDE) WITH 8d COMMON NAILS SPACED AT 2" EDGE
FRAMING AT ADJOINING PANEL EDGES TO BE 3" NOMINAL
OR WIDER AND NAILS SHALL BE STAGGERED

FIRST FLOOR ENDWALL: 7/16" OSB EXTERIOR (BLOCKED) w/ 7/16" OSB INTERIOR
(KITCHEN SIDE) WITH 8d COMMON NAILS SPACED AT 2" EDGE
FRAMING AT ADJOINING PANEL EDGES TO BE 3" NOMINAL
OR WIDER AND NAILS SHALL BE STAGGERED

FIRST FLOOR SIDEWALL: 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWB INTERIOR
(MASTER BEDROOM / KITCHEN SIDE) WITH 8d COMMON NAILS SPACED AT 6" EDGE

FIRST FLOOR SIDEWALL: 7/16" OSB EXTERIOR (BLOCKED) w/ 7/16" OSB INTERIOR
(BEDROOM #2 / LIVING ROOM SIDE) WITH 8d COMMON NAILS SPACED AT 2" EDGE
FRAMING AT ADJOINING PANEL EDGES TO BE 3" NOMINAL
OR WIDER AND NAILS SHALL BE STAGGERED

FIRST FLOOR SIDEWALL: 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWB INTERIOR
(DEN SIDE) WITH 8d COMMON NAILS SPACED AT 6" EDGE

CONNECTION SUMMARY:

CONNECTIONS TO BE AS SPECIFIED OR EQUIVALENT

UPLIFT CONNECTIONS

REQUIRED TRUSS TIE DOWN: USE A (2) 1.5" x 22 ga. STRAP w/ (39) 16 ga. STAPLES EACH END EACH TRUSS

1ST FLOOR STUD TO TOP PLATE: USE A 1.5" x 22 ga. STRAP w/ (20) 16 ga. STAPLES EACH END, EACH STUD

1st FLOOR STUD TO FLOOR BAND: USE A 1.5" x 22 ga. STRAP w/ (20) 16 ga. STAPLES EACH END, EACH STUD

FLOOR BAND TO SILL PLATE CONNECTION: USE A (2) 1.5" x 20 ga. STRAP w/ (46) 16 ga. STAPLES EACH END OR EQUAL
WRAPPED AROUND THE SILL PLATE AT EACH ANCHOR BOLT LOCATION

LATERAL CONNECTIONS

TRUSS TO TOP PLATE CONNECTION: USE (7) 0.131" x 2.5" COMMON NAIL (TOENAIL) PER TRUSS

PLATE TO PLATE CONNECTION: ATTACH WITH 0.131" x 2.5" COMMON NAIL (FACE NAILED) AT 4" ON CENTER

PLATE TO STUD CONNECTION: USE (6) 0.131" x 2.5" COMMON NAIL (ENDNAILED) PER STUD

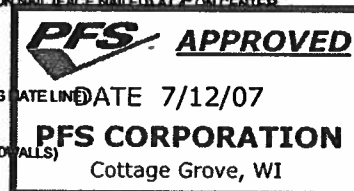
BOTTOM PLATE TO FLOOR CONNECTION: ATTACH WITH 0.131" x 2.5" COMMON NAIL (FACE NAILED) AT 4" ON CENTER

HORIZONTAL FLOOR DIAPHRAGM CONTINUITY

FIRST FLOOR

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG DATE LINE)
USE A MIN. OF (13) 1/2" DIA. THRU BOLTS

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (AT END WALLS)
USE A (2) 1.5" x 20 ga. STRAP w/ (46) 16 ga. STAPLES EACH END



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SHEAR CONNECTIONS

FIRST FLOOR ENDWALL

RIMBAND TO SILL PLATE CONNECTION: USE 0.162" x 3.5" COMMON NAIL (TOENAIL) @ 2" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION: USE 1/2" ANCHOR BOLTS @ 16" O.C.
OR USE 5/8" ANCHOR BOLTS @ 23" O.C.

FIRST FLOOR SIDEWALL

RIMBAND TO SILL PLATE CONNECTION: USE 0.162" x 3.5" COMMON NAIL (TOENAIL) @ 8" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION: USE 1/2" ANCHOR BOLTS @ 53" O.C.
OR USE 5/8" ANCHOR BOLTS @ 72" O.C.

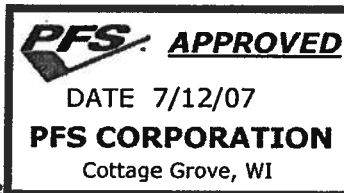
HOLDDOWN CONNECTIONS

FIRST FLOOR CORNER HOLDDOWN: NO PHYSICAL HOLDDOWN REQUIRED

FIRST FLOOR CORNER STUD CONNECTION: FASTEN CORNER STUDS 2 ROWS OF 16d COMMON NAILS @ 8" ON CENTER
OR USE (15) 1/4" DIA. LAG SCREWS

APPLICABILITY LIMITATIONS:

MEAN ROOF HEIGHT (MRH) =	26.8 ft
NUMBER OF STORIES =	1
FIRST FLOOR WIDTH (W ₁) =	41.5 ft
FIRST FLOOR LENGTH (L ₁) =	60 ft
BUILDING ASPECT RATIO (L/W) =	1.45
FLOOR JOIST DEPTH =	9.25 in
MAX. VERTICAL FLOOR OFFSET =	0 in
FLOOR ASPECT RATIO (L/W) =	1.45
MAX. FLOOR DIAPHRAGM OPENING WIDTH =	11.75 ft
MAX. FLOOR DIAPHRAGM OPENING LENGTH =	3.5 ft
FIRST FLOOR HEIGHT (H ₁) =	9 ft
CEILING ASPECT RATIO (L/W) =	1.45
MIN. SHEARWALL SEGMENT (H / 3.5) =	2.57 ft
ROOF PITCH =	12 / 12



DESIGN MEETS LIMITATIONS OF THE WFCM METHODOLOGY

91636

CONNECTION INFORMATION:

TRUSS TO PLATE CONNECTORS

SIMPSON H2.5	Z =	365 lbs
SIMPSON H10	Z =	850 lbs

FLAT STRAPS

1.5" x 26 ga. STRAP w/ (12) 16 ga. STAPLES EACH END	Z =	631 lbs
1.5" x 22 ga. STRAP w/ (20) 16 ga. STAPLES EACH END	Z =	1055 lbs
1.5" x 20 ga. STRAP w/ (23) 16 ga. STAPLES EACH END	Z =	1266 lbs
(2) 1.5" x 22 ga. STRAP w/ (39) 16 ga. STAPLES EACH END	Z =	2165 lbs
(2) 1.5" x 20 ga. STRAP w/ (46) 16 ga. STAPLES EACH END	Z =	2600 lbs

HOLDDOWNS w/ 1 1/2" EDGE DISTANCE

MINIMUM 8" STEM WALL

ASSUME 3000 psi Fc CONCRETE

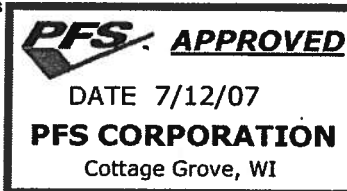
SIMPSON LSTHD8RJ	Z =	1950 lbs
SIMPSON STHD10RJ	Z =	3230 lbs
SIMPSON STHD14RJ	Z =	4430 lbs
(2) SIMPSON STHD14RJ	Z =	8860 lbs

1/2" DIA. THRU BOLT	Z =	725 lbs
1/2" ANCHOR BOLT	Z =	1056 lbs
5/8" ANCHOR BOLT	Z =	1488 lbs
1/4" DIA. LAG SCREW	Z =	320 lbs
0.131" x 2.5" COMMON NAIL (FACE NAILED)	Z =	90 lbs
0.131" x 2.5" COMMON NAIL (TOENAILED)	Z =	74 lbs
0.131" x 2.5" COMMON NAIL (ENDNAILED)	Z =	60 lbs
0.162" x 3.5" COMMON NAIL (TOENAILED)	Z =	159 lbs

NOTE: SIMPSON CONNECTORS & FASTEN VALUES ASSUME SPF FRAMING MATERIAL
ANCHOR BOLT VALUES ASSUME DF/SP VALUES

DESIGN UPLIFT LOADS

ROOF & CEILING ASSEMBLY DEAD LOAD =	15 psf
WALL DEAD LOAD (WDL) =	12 psf
FLOOR DEAD LOAD (FDL) =	10 psf
ROOF SPAN =	41.5 ft
TRUSS SPACING (TOC) =	24 in
STUD SPACING (SOC) =	16 in
FIRST FLOOR HEIGHT (FH) =	9 ft



91636

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

UPLIFT CONNECTION LOAD: (FROM TABLE 2.2A, 2001 WFCM)

AT 24' = 332 plf
AT 36' = 459 plf
AT 41.5' (wrap) = 517 plf

$$w_{up} = w_{up} \cdot C_{up} \cdot C_{wt} =$$

$$w_{up} = 703 \text{ plf} \cdot 1.36 =$$

$$w_{up} = 703 \text{ plf}$$

REQUIRED TRUSS TIE DOWN:

$$P_{up} = w_{up} \cdot TOC =$$

$$P_{up} = 703 \text{ plf} \cdot 24 \text{ in} / 12 =$$

$$P_{up} = 1407 \text{ lbs}$$

USE A (2) 1.5" x 22 ga. STRAP w/ (39) 16 ga. STAPLES EACH END EACH TRUSS
OR CONNECTION TO WITHSTAND AN UPLIFT FORCE OF 1407 lbs

REQUIRED SIDEWALL STUD TIE DOWN LOADING:

1ST FLOOR STUD TO TOP PLATE: $P_{1p} = w_{up} \cdot SOC = 703 \cdot 16 / 12 = 938 \text{ lbs}$

1st FLOOR STUD TO FLOOR BAND: $P_{1b} = P_{1p} - 0.6 \cdot WDL \cdot H_1 \cdot SOC =$
 $P_{1b} = 938 \text{ lbs} - 0.6 \cdot 12 \text{ psf} \cdot 9 \text{ ft} \cdot 16 \text{ in} / 12 = 851 \text{ lbs}$

USE A 1.5" x 22 ga. STRAP w/ (20) 16 ga. STAPLES EACH END, EACH STUD
OR EQUAL OR CONNECTION TO WITHSTAND AN UPLIFT FORCE OF 938 lbs

SIDEWALL 1st FLOOR BAND TO SILL PLATE CONNECTION:

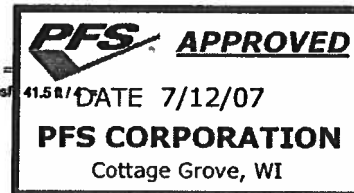
SIDEWALL UPLIFT AT SILL PLATE: $w_{up} = P_{1b} / SOC - 0.6 \cdot FDL \cdot W_1 / 4 =$
 $w_{up} = 851 \text{ lbs} \cdot 12 / 16 \text{ in} - 0.6 \cdot 10 \text{ psf} \cdot 41.5 \text{ ft} / 4 =$
 $w_{up} = 576 \text{ plf}$

CHECK STRAP AT ANCHOR BOLT LOCATIONS:

1/2" ANCHOR BOLT SPACING (BOC) = 53 in

$$P_{up} = w_{up} \cdot BOC = 576 \text{ plf} \cdot 53 = 2546 \text{ plf}$$

USE A (2) 1.5" x 20 ga. STRAP w/ (46) 16 ga. STAPLES EACH END OR EQUAL
WRAPPED AROUND THE SILL PLATE AT EACH ANCHOR BOLT LOCATION
OR CONNECTION TO WITHSTAND AN UPLIFT FORCE OF 2546 lbs



SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

CHECK BENDING IN RIMBAND:

DBL 2x10 SPF #2 RIMBAND DESIGN VALUES:

SECTION MODULUS (S) = 42.66 in³
ALLOWABLE BENDING (fb) = 875 psi

$$M_{MAX} = \frac{W_{MAX} \cdot L^2}{8}$$

$$M_{MAX} = \frac{576 \text{ plf} \cdot (53 / 12)^2}{8} = 16864 \text{ in-lbs}$$

$$\text{APPLIED } f_b = \frac{M_{MAX}}{S} = \frac{16864 \text{ in-lbs}}{42.66 \text{ in}^3} = 395 \text{ psi}$$

ALLOWABLE BENDING (fb) = 875 psi > APPLIED fb = 395 psi

DBL 2x10 SPF #2 RIMBAND IS OK

LATERAL LOAD AT ROOF/CEILING DIAPHRAGM

ROOF SPAN = 41.5 ft
ROOF PITCH = 12 / 12

WIND PERPENDICULAR TO RIDGE: (TABLE 2.5A, 2001 WFCM)

AT 24' = 321 plf
AT 36' = 424 plf

AT 41.5' (int-per) = 471 plf

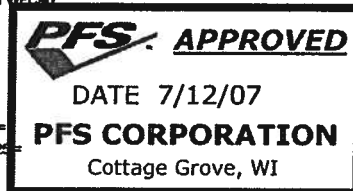
$$W_{per} = W_{per} \cdot C_{DRH} \cdot C_{WH} = 471 \text{ plf} \cdot 1.36 \cdot 1.125 = 721 \text{ plf}$$

WIND PARALLEL TO RIDGE: (TABLE 2.5B, 2001 WFCM)

AT 24' = 194 plf
AT 36' = 250 plf

AT 41.5' (int-par) = 276 plf

$$W_{par} = W_{par} \cdot C_{DRH} \cdot C_{WH} = 276 \text{ plf} \cdot 1.36 \cdot 1.125 = 422 \text{ plf}$$



LATERAL LOAD AT FLOOR DIAPHRAGM

WIND PERPENDICULAR TO RIDGE: (TABLE 2.5A, 2001 WFCM)

$$F_{1,per} = 257 \text{ plf}$$

$$F_{1,per} = F_{1,per} \cdot C_{dwn} \cdot C_{WH} =$$

$$F_{1,per} = 257 \text{ plf} \cdot 1.36 \cdot 1.125 =$$

$$F_{1,per} = 393 \text{ plf}$$

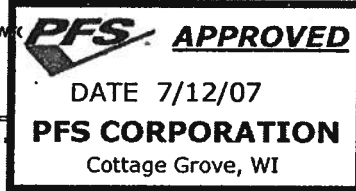
WIND PARALLEL TO RIDGE: (TABLE 2.5B, 2001 WFCM)

$$F_{1,para} = 175 \text{ plf}$$

$$F_{1,para} = F_{1,para} \cdot C_{dwn} \cdot C_{WH} =$$

$$F_{1,para} = 175 \text{ plf} \cdot 1.36 \cdot 1.125 =$$

$$F_{1,para} = 268 \text{ plf}$$



LATERAL FRAMING CONNECTION LOADS FROM WIND: (TABLE 2.1, 2001 WFCM)
(FOR ROOF-TO-PLATE, PLATE-TO-PLATE, PLATE-TO-STUD, AND PLATE-TO-FLOOR)

$$w_{1,roof} = 170 \text{ plf}$$

$$w_{1,roof} = w_{1,roof} \cdot C_{dwn} = 170 \text{ plf} \cdot 1.36 = 231.2 \text{ plf}$$

MULTIPLIER @ 24" O.C. (M_{24}) = 2

MULTIPLIER @ 16" O.C. (M_{16}) = 1.33

TRUSS TO TOP PLATE CONNECTION:

$$P_C = w_{1,roof} \cdot M_{16} = 231 \text{ plf} \cdot 2 = 462.4 \text{ lbs}$$

OF 0.131" x 2.5" COMMON NAIL (TOENAILED) REQUIRED = $\frac{P_C}{Z} = \frac{462 \text{ lbs}}{74 \text{ lbs}} = 7 \text{ NAILS}$

USE (7) 0.131" x 2.5" COMMON NAIL (TOENAILED) PER TRUSS

PLATE TO PLATE CONNECTION:

SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED) = $\frac{Z \cdot 12}{w_{1,roof}} = \frac{90 \text{ lbs} \cdot 12}{231 \text{ plf}} = 4 \text{ in O.C.}$

ATTACH WITH 0.131" x 2.5" COMMON NAIL (FACE NAILED) AT 4" ON CENTER

PLATE TO STUD CONNECTION:

$$P_C = w_{1,roof} \cdot M_{16} = 170 \text{ plf} \cdot 1.33 = 307 \text{ lbs}$$

OF 0.131" x 2.5" COMMON NAIL (ENDNAILED) REQUIRED = $\frac{P_C}{Z} = \frac{307 \text{ lbs}}{60 \text{ lbs}} = 6 \text{ NAILS}$

USE (6) 0.131" x 2.5" COMMON NAIL (ENDNAILED) PER STUD

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SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

BOTTOM PLATE TO FLOOR CONNECTION:

$$\text{SPACING OF 0.131" x 2.5" COMMON NAIL (FACE NAILED)} = \frac{Z \cdot 12}{W_{\text{end}}} = \frac{90 \text{ lbs} \cdot 12}{231 \text{ plf}} = 4 \text{ in O.C.}$$

ATTACH WITH 0.131" x 2.5" COMMON NAIL (FACE NAILED) AT 4" ON CENTER

FIRST FLOOR ENDWALL SHEATHING LENGTH REQUIREMENTS (BEDROOM #2 / BATH #1 SIDE)

FIRST FLOOR WIDTH (W ₁) =	41.5 ft
FIRST FLOOR LENGTH (L ₁) =	60 ft
SHEARWALL TYPE: 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWS INTERIOR	
SHEATHING EDGE 8d NAIL SPACING =	2 in O.C. (8d NAILS OR EQUIVALENT)
SHEARWALL STRENGTH (V) =	940 plf (TABLE 3.17D, 2001 WFCM)
MIN. SHEARWALL SEGMENT LENGTH =	2.6 ft
FULL HEIGHT SHEATHING PROVIDED =	28.5 ft
1st FL. PERCENT FULL HEIGHT SHEATHING =	90 %
1st FL. MAX. UNRESTRAINED OPENING HEIGHT =	5 ft
1st FL. PERFORATED ADJUSTMENT FACTOR(C _p) =	1.05 (TABLE 3.17D, 2001 WFCM)
1st FL. NUMBER OF SHEARWALLS (N _{sw}) =	2

$$\text{SHEARWALL REACTION (R}_{\text{sw}}\text{)} = L_1 \cdot W_{\text{sw}} / N_{\text{sw}} =$$

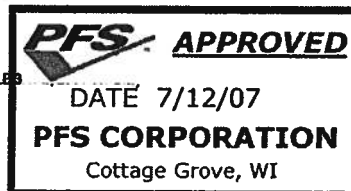
$$R_{\text{sw}} = 60 \text{ ft} \cdot 721 \text{ plf} / 2 =$$

$$\text{MIN. LENGTH SEGMENTED SHEARWALLS (L}_{\text{sw}}\text{)} = R_{\text{sw}} / V = 21628 \text{ lbs} / 940 \text{ plf} = 23.0 \text{ ft}$$

$$\text{PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (ENDWALL)} = C_p \cdot L_{\text{sw}} = 23 \text{ ft} \cdot 1.05 = 24.15 \text{ ft}$$

$$\text{PERFORATED FULL HEIGHT SHEATHING REQUIRED} = 24.15 \text{ ft} < \text{PERFORATED FULL HEIGHT SHEATHING PROVIDED} = 28.5 \text{ ft}$$

ENDWALL SHEARWALLS OK
ALL EXTERIOR SHEATHING TO BE BLOCKED UNO
FRAMING AT ADJOINING PANEL EDGES TO BE 3" NOMINAL
OR WIDER AND NAILS SHALL BE STAGGERED



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SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

FIRST FLOOR ENDWALL SHEATHING LENGTH REQUIREMENTS (KITCHEN SIDE)

FIRST FLOOR WIDTH (W_1) = 41.5 ft
 FIRST FLOOR LENGTH (L_1) = 60 ft
 SHEARWALL TYPE: 7/16" OSB EXTERIOR (BLOCKED) w/ 7/16" OSB INTERIOR
 SHEATHING EDGE 8d NAIL SPACING = 2 in O.C. (8d NAILS OR EQUIVALENT)
 SHEARWALL STRENGTH (V) = 1680 plf (TABLE 3.17D, 2001 WFCM)
 MIN. SHEARWALL SEGMENT LENGTH = 2.6 ft
 FULL HEIGHT SHEATHING PROVIDED = 15.75 ft
 1st FL. PERCENT FULL HEIGHT SHEATHING = 100 %
 1st FL. MAX. UNRESTRAINED OPENING HEIGHT = 0 ft
 1st FL. PERFORATED ADJUSTMENT FACTOR(C_p) = 1 (TABLE 3.17E, 2001 WFCM)
 1st FL. NUMBER OF SHEARWALLS (N_{sw}) = 2

$$\text{SHEARWALL REACTION } (R_{sw}) = L_1 \cdot W_{1,sw} / N_{sw} =$$

$$R_{sw} = 60 \text{ ft} \cdot 721 \text{ plf} / 2 = 21628 \text{ lbs}$$

$$\text{MIN. LENGTH SEGMENTED SHEARWALLS } (L_{seg}) = R_{sw} / V = 21628 \text{ lbs} / 1680 \text{ plf} = 12.9 \text{ ft}$$

$$\text{PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (ENDWALL)} = C_p \cdot L_{seg} = 12.9 \text{ ft} \cdot 1 = 12.9 \text{ ft}$$

PERFORATED FULL HEIGHT SHEATHING REQUIRED = 12.87 ft < PERFORATED FULL HEIGHT SHEATHING PROVIDED = 15.75 ft

ENDWALL SHEARWALLS OK
 ALL EXTERIOR SHEATHING TO BE BLOCKED UNDER
 FRAMING AT ADJOINING PANEL EDGES TO BE 3" NOMINAL
 OR WIDER AND NAILS SHALL BE STAGGERED

FIRST FLOOR HORIZONTAL FLOOR DIAPHRAGM CONTINUITY:

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG MATE LINE)
 (DEEP BEAM HORIZONTAL SHEAR)

$$V_1 = \frac{(3 \cdot F_{1,sw} / 4) \cdot L}{2} = \frac{3/4 \cdot 393 \text{ plf} \cdot 60 \text{ ft}}{2} = 8847.225 \text{ lbs}$$

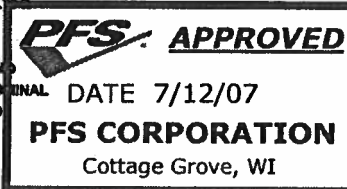
$$\# \text{ 1/2" DIA. THRU BOLT} = \frac{V_1}{Z_{12 \text{ BOLT}}} = \frac{8847 \text{ lbs}}{725 \text{ lbs}} = 13 \text{ BOLTS}$$

USE A MIN. OF (13) 1/2" DIA. THRU BOLTS
 TO ATTACH MODULE TO MODULE ALONG MATE LINE

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (AT ENDWALLS)
 (CHORD FORCE CONTINUITY)

$$T = \frac{(3 \cdot F_{1,sw} / 4) \cdot (L / 2)}{4} = \frac{3/4 \cdot 393 \text{ plf} \cdot 60 \text{ ft} / 2}{4} = 2212 \text{ lbs}$$

USE A (2) 1.5" x 20 ga. STRAP w/ (48) 16 ga. STAPLES EACH END
 TO ATTACH MODULE TO MODULE AT EACH ENDWALL
 OR CONNECTION TO WITHSTAND AN TENSILE FORCE OF 2212 lbs



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FIRST FLOOR ENDWALL: UPLIFT DUE TO OVERTURNING

FIRST FLOOR WIDTH (W_1) = 41.5 ft
SHEARWALL REACTION (R_{wall}) = 21628 lbs
WALL HEIGHT (H) = 9 ft

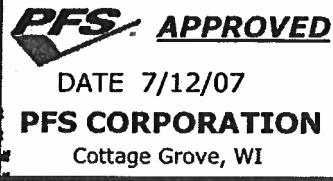
$$UPLIFT\ FORCE\ (U_{L1}) = R_{wall} \cdot H / W_1 =$$

$$U_{L1} = 21628\ lbs \cdot 9\ ft / 41.5\ ft = 4691\ lbs$$

SEE PAGE 15 FOR CONNECTION DESIGN

FIRST FLOOR ENDWALL: SHEAR CONNECTIONS

FIRST FLOOR WIDTH (W_1) = 41.5 ft
FIRST FLOOR LENGTH (L_1) = 60 ft
 F_{Lper} = 393 plf
 W_{Lper} = 721 plf
1/2" ANCHOR BOLT Z = 1056 lbs
5/8" ANCHOR BOLT Z = 1488 lbs
0.162" x 3.5" COMMON NAIL (TOENAILED) Z = 159 lbs



RIMBAND TO SILL PLATE CONNECTION:

$$LAT = (W_{Lper} + 3 \cdot F_{Lper} / 4) =$$

$$LAT = 721\ plf + 3 \cdot 393\ plf / 4 = 1016\ plf$$

$$V = LAT \cdot L / 2 = 1016\ plf \cdot 60\ ft / 2 = 30476\ lbs$$

$$\# TOENAILS\ PER\ FOOT = V / Z / W = 30476\ lbs / 159\ lbs / 41.5\ ft = 4.6\ NAILS / ft$$

$$TOENAIL\ SPACING = 12 / \# = 12 / 4.6 = 2\ " O.C.$$

USE 0.162" x 3.5" COMMON NAIL (TOENAILED) @ 2" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION:

$$\# 1/2" ANCHOR BOLTS = V / Z = 30476\ lbs / 1056\ lbs = 29\ BOLTS$$

$$BOLT\ SPACING = (W - 2) / (N - 1) = (41.5\ ft - 2) / (29 - 1) = 16\ in$$

USE 1/2" ANCHOR BOLTS @ 16" O.C.
ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS

$$\# 5/8" ANCHOR BOLTS = V / Z = 30476\ lbs / 1488\ lbs = 21\ BOLTS$$

$$BOLT\ SPACING = (W - 2) / (N - 1) = (41.5\ ft - 2) / (21 - 1) = 23\ in$$

USE 5/8" ANCHOR BOLTS @ 23" O.C.
ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS

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FIRST FLOOR SIDEWALL SHEATHING LENGTH REQUIREMENTS (MASTER BEDROOM / KITCHEN SIDE)

FIRST FLOOR WIDTH (W_1) = 41.5 ft
 FIRST FLOOR LENGTH (L_1) = 60 ft
 SHEARWALL TYPE: 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWB INTERIOR
 SHEATHING EDGE Bd NAIL SPACING = 6 in O.C. (Bd NAILS OR EQUIVALENT)
 SHEARWALL STRENGTH (V) = 438 plf (TABLE 3.17D, 2001 WFCM)
 MIN. SHEARWALL SEGMENT LENGTH = 2.6 ft
 FULL HEIGHT SHEATHING PROVIDED = 33.5 ft
 1st FL. PERCENT FULL HEIGHT SHEATHING = 58 %
 1st FL. MAX. UNRESTRAINED OPENING HEIGHT = 2.6 ft
 1st FL. PERFORATED ADJUSTMENT FACTOR(C_p) = 1.38 (TABLE 3.17E, 2001 WFCM)
 1st FL. NUMBER OF SHEARWALLS (N_{side}) = 2

SHEARWALL REACTION (R_{side1}) = $W_1 \cdot W_{1,para} / N_{side}$
 $R_{side1} = 41.5 \text{ ft} \cdot 422 \text{ plf} / 2 = 8752 \text{ lbs}$

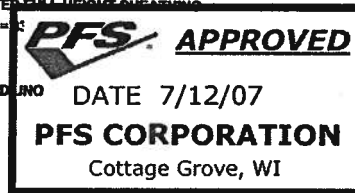
MIN. LENGTH SEGMENTED SHEARWALLS (L_{seg}) = $R_{side1} / V = 8752 \text{ lbs} / 438 \text{ plf} = 20.1 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (SIDEWALL) = $C_p \cdot L_{seg} = 20.1 \cdot 1.38 = 27.3 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING
REQUIRED = 27.3 ft

PERFORATED FULL HEIGHT SHEATHING
PROVIDED = 33.5 ft

SIDEWALL SHEARWALLS OK
ALL EXTERIOR SHEATHING TO BE BLOCKED AND



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SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

FIRST FLOOR SIDEWALL SHEATHING LENGTH REQUIREMENTS (BEDROOM #2/ LIVING ROOM SIDE)

FIRST FLOOR WIDTH (W_1) = 41.5 ft
 FIRST FLOOR LENGTH (L_1) = 60 ft
 SHEARWALL TYPE: 7/16" OSB EXTERIOR (BLOCKED) w/ 7/16" OSB INTERIOR
 SHEATHING EDGE 8d NAIL SPACING = 2 in O.C. (8d NAILS OR EQUIVALENT)
 SHEARWALL STRENGTH (V) = 1680 plf (TABLE 3.17D, 2001 WFCM)
 MIN. SHEARWALL SEGMENT LENGTH = 2.6 ft
 FULL HEIGHT SHEATHING PROVIDED = 12.25 ft
 1st FL. PERCENT FULL HEIGHT SHEATHING = 20 %
 1st FL. MAX. UNRESTRAINED OPENING HEIGHT = 6.8 ft
 1st FL. PERFORATED ADJUSTMENT FACTOR (C_p) = 1.92 (TABLE 3.17E, 2001 WFCM)
 1st FL. NUMBER OF SHEARWALLS (N_{she}) = 2

SHEARWALL REACTION (R_{she1}) = $W_1 \cdot W_{1,perm} / N_{she}$ =
 $R_{she1} = 41.5 \text{ ft} \cdot 422 \text{ plf} / 2 = 8752 \text{ lbs}$

MIN. LENGTH SEGMENTED SHEARWALLS (L_{seg}) = $R_{she1} / V = 8752 \text{ lbs} / 1680 \text{ plf} = 5.2 \text{ ft}$

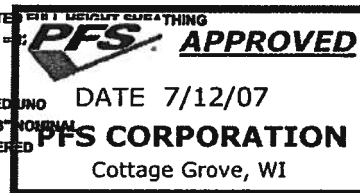
PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (SIDEWALL) = $C_p \cdot L_{seg} = 5.2 \cdot 1.92 = 10.0 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING
 REQUIRED = 10 ft

PERFORATED FULL HEIGHT SHEATHING
 PROVIDED = 12.25 ft

<

SIDEWALL SHEARWALLS OK
 ALL EXTERIOR SHEATHING TO BE BLOCKED AND
 FRAMING AT ADJOINING PANEL EDGES TO BE 3" MINIMUM
 OR WIDER AND NAILS SHALL BE STAGGERED



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FIRST FLOOR SIDEWALL SHEATHING LENGTH REQUIREMENTS (DEN SIDE)

FIRST FLOOR WIDTH (W_1) = 41.5 ft
 FIRST FLOOR LENGTH (L_1) = 60 ft
 TRIBUTARY LENGTH (L_t) = 13.75 ft
 SHEARWALL TYPE: 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWS INTERIOR
 SHEATHING EDGE Bd NAIL SPACING = 6 in O.C. (Bd NAILS OR EQUIVALENT)
 SHEARWALL STRENGTH (V) = 436 plf (TABLE 3.17D, 2001 WFCM)
 MIN. SHEARWALL SEGMENT LENGTH = 2.6 ft
 FULL HEIGHT SHEATHING PROVIDED = 11.5 ft
 1st FL. PERCENT FULL HEIGHT SHEATHING = 44 %
 1st FL. MAX. UNRESTRAINED OPENING HEIGHT = 5.0 ft
 1st FL. PERFORATED ADJUSTMENT FACTOR(C_p) = 1.39 (TABLE 3.17E, 2001 WFCM)
 1st FL. NUMBER OF SHEARWALLS (N_{she}) = 2

SHEARWALL REACTION (R_{shear}) = $L_t \cdot W_{para} / N_{she}$ =
 $R_{shear} = 13.75 \text{ ft} \cdot 422 \text{ plf} / 2 = 2900 \text{ lbs}$

MIN. LENGTH SEGMENTED SHEARWALLS (l_{seg}) = $R_{shear} / V = 2900 \text{ lbs} / 436 \text{ plf} = 6.7 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (SIDEWALL) = $C_p \cdot l_{seg} = 6.7 \cdot 1.39 = 9.2 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING REQUIRED = 9.24 ft < PERFORATED FULL HEIGHT SHEATHING PROVIDED = 11.5 ft

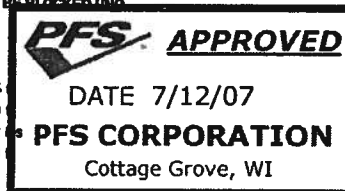
SIDEWALL SHEARWALLS OK
 ALL EXTERIOR SHEATHING TO BE BLOCKED AND

FIRST FLOOR SIDEWALL: UPLIFT DUE TO OVERTURNING

FIRST FLOOR WIDTH (W_1) = 41.5 ft
 FIRST FLOOR LENGTH (L_1) = 60 ft
 SHEARWALL REACTION (R_{shear}) = 8752 lbs
 WALL HEIGHT (H) = 9 ft

UPLIFT FORCE (U_{L1}) = $R_{shear} \cdot H / L_1 =$
 $U_{L1} = 8752 \text{ lbs} \cdot 9 \text{ ft} / 60 \text{ ft} = 1313 \text{ lbs}$

SEE PAGE 15 FOR CONNECTION DESIGN



SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

FIRST FLOOR SIDEWALL: SHEAR CONNECTIONS

FIRST FLOOR WIDTH (W_1) = 41.5 ft
 FIRST FLOOR LENGTH (L_1) = 60 ft
 FL_{para} = 393 plf
 W_{para} = 721 plf
 1/2" ANCHOR BOLT Z = 1056 lbs
 5/8" ANCHOR BOLT Z = 1488 lbs
 0.162" x 3.5" COMMON NAIL (TOENAILED) Z = 159 lbs



RIMBAND TO SILL PLATE CONNECTION:

$LAT = (W_{para} + 3 \cdot FL_{para} / 4) =$
 $LAT = 721 \text{ plf} + 3 \cdot 393 \text{ plf} / 4 = 688 \text{ plf}$
 $V = LAT \cdot W_1 / 2 = 688 \text{ plf} \cdot 41.5 \text{ ft} / 2 = 14278 \text{ lbs}$
 $\# \text{ TOENAILS PER FOOT} = V / Z / L_1 = 14278 \text{ lbs} / 159 \text{ lbs} / 60 \text{ ft} = 1.5 \text{ NAILS / ft}$
 $\text{TOENAIL SPACING} = 12 / \# = 12 / 1.5 = 8" \text{ O.C.}$

USE 0.162" x 3.5" COMMON NAIL (TOENAILED) @ 8" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION:

$\# \text{ 1/2" ANCHOR BOLTS} = V / Z = 14278 \text{ lbs} / 1056 \text{ lbs} = 14 \text{ BOLTS}$
 $\text{BOLT SPACING} = (L - 2) / (N - 1) = (60 \text{ ft} - 2) / (14 - 1) = 53 \text{ in}$
 USE 1/2" ANCHOR BOLTS @ 53" O.C.
 ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS
 $\# \text{ 5/8" ANCHOR BOLTS} = V / Z = 14278 \text{ lbs} / 1488 \text{ lbs} = 10 \text{ BOLTS}$
 $\text{BOLT SPACING} = (L - 2) / (N - 1) = (60 \text{ ft} - 2) / (10 - 1) = 72 \text{ in}$

USE 5/8" ANCHOR BOLTS @ 72" O.C.
 ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS

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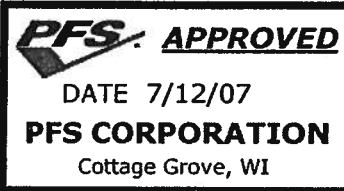
COMBINED CORNER HOLDDOWN REQUIREMENTS

UPLIFT FORCES: (SEE ABOVE FOR CALCULATIONS)

1st FLOOR ENDWALL UPLIFT FORCE (U_{E1}) = 4691 lbs
1st FLOOR SIDEWALL UPLIFT FORCE (U_{S1}) = 1313 lbs

DEAD LOADS:

FIRST FLOOR WIDTH (W_1) = 41.5 ft
FIRST FLOOR LENGTH (L_1) = 60 ft
FIRST FLOOR HEIGHT (H_1) = 9 ft
ROOF & CEILING ASSEMBLY DEAD LOAD (RDL) = 15 psf
WALL DEAD LOAD (WDL) = 12 psf
FLOOR DEAD LOAD (FDL) = 10 psf



SIDEWALL FIRST FLOOR CORNER:

ROOF DEAD LOAD = $0.6 \times \text{RDL} \times W_1 \times L_1 / 8 =$
ROOF DEAD LOAD = $0.6 \times 15 \text{ psf} \times 41.5 \text{ ft} \times 60 \text{ ft} / 8 =$ 2801 lbs
WALL DEAD LOAD = $0.6 \times (\text{WDL} \times H_1 \times L_1 / 2) =$
WALL DEAD LOAD = $0.6 \times 12 \text{ psf} \times 9 \text{ ft} \times 60 \text{ ft} / 2 =$ 1944 lbs
TOTAL DEAD LOAD = $1944 + 2801 =$ 4746 lbs

ENDWALL FIRST FLOOR CORNER:

WALL DEAD LOAD = $0.6 \times (\text{WDL} \times H_1 \times W_1 / 2) =$
WALL DEAD LOAD = $0.6 \times 12 \text{ psf} \times 9 \text{ ft} \times 41.5 \text{ ft} / 2 =$ 1345 lbs

FIRST FLOOR HOLDDOWNS

UPLIFT FORCE = 4691 lbs (MAX. OF FIRST FLOOR UPLIFT FORCES)
FIRST FLOOR DEAD LOAD (DL_1) = $4746 \text{ lbs} + 1345 \text{ lbs} =$ 6091 lbs
HOLDDOWN FORCE = $4691 \text{ lbs} - 6091 \text{ lbs} =$ -1400 lbs

NO PHYSICAL HOLDDOWN REQUIRED

FIRST FLOOR CORNER STUD CONNECTION

16d COMMON NAIL ALLOWABLE SHEAR (Z) = 159 lbs
UPLIFT FORCE = 4691 lbs (MAX. OF FIRST FLOOR UPLIFT FORCES)
NAIL SPACING (2 ROWS) = $\frac{2 \times H \times Z}{U} = \frac{2 \times 9 \text{ ft} \times 159 \text{ lbs}}{4691 \text{ lbs}} =$ 8 in O.C.
OF 1/4" DIA. LAG SCREW REQUIRED = $\frac{U}{Z} = \frac{4691 \text{ lbs}}{320 \text{ lbs}} =$ 15 LAG SCREWS

FASTEN CORNER STUDS 2 ROWS OF 16d COMMON NAILS @ 8" ON CENTER
OR USE (15) 1/4" DIA. LAG SCREWS

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7/6/2007



26138

GTC Design Group, LLC
176 NW Lake Jeffery Road
Lake City, FL 32643
(Phone) 386.719.9985
(Fax) 386.719.8828
cwilliams@gtcdesigngroup.com

Finish Floor Elevation Certification

Owner: L. Martin Mink
22185 S. US Highway 441
High Springs, FL 32643

Parcel Number: 15-7S-17-09995-004

Foundation Requirements:

For protection against water damage, the minimum finish floor elevation of the proposed structure shall be 12 inches above the existing ground at any point along the perimeter of the proposed structure. In no case shall the finish floor elevation be more than 36 inches below the centerline of the adjacent roadway.

The ground around the proposed structure shall be graded such as to convey all stormwater runoff away from the proposed structure.

The above elevations are based on the structure's current staked location, approximately +/-350 feet East from the adjacent state road's right of way.

8/24/07

Chad Williams
P.E. License Number: 63144
August 24, 2007

COLUMBIA COUNTY OFFICE OF CIVIL ENGINEERING

O C C U P A N C Y

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.

Parcel Number 15-7S-17-09995-004

Building permit No. 000026138

Use Classification MODULAR HOME

Fire: 0.00

Permit Holder OWNER

Waste:

Owner of Building LAURENCE MINK

Total: 0.00

Location: 22185 S US HIGHWAY 41, HIGH SPRINGS, FL 32643

Date: 12/20/2007

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

