

Columbia County Building Permit Application

For Office Use Only Application # 0712-33 Date Received 12-11-07 By LH Permit # 26562
 Zoning Official BLK Date 12.12.07 Flood Zone X FEMA Map # N/A Zoning RSF/MH-2
 Land Use Residential Elevation N/A MFE N/A River N/A Plans Examiner OKJTH Date 12-13-07
 Comments Existing House to be removed 60 days after CO issued.
☒ NOC ☒ EH ☒ Deed or PA ☒ Site Plan ☐ State Road Info ☐ Parent Parcel # _____
☐ Dev Permit # _____ ☐ In Floodway ☐ Letter of Authorization from Contractor
☐ Unincorporated area ☐ Incorporated area ☐ Town of Fort White ☐ Town of Fort White Compliance letter

Septic Permit No. _____ Fax 365-7086 Ken cell
 Name Authorized Person Signing Permit ANDRE TARDIFF Phone 755-4948
 Address 2325 HWY 441 NORTH LAKE CITY, FLA 32055 P.O. Box 664
 Owners Name ANDRE TARDIFF Phone 755-4948
 911 Address 2325 HWY 441 NORTH
 Contractors Name Owner. Builden Phone _____
 Address _____

Fee Simple Owner Name & Address NONE
 Bonding Co. Name & Address NONE
 Architect/Engineer Name & Address NONE
 Mortgage Lenders Name & Address NONE

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

Property ID Number 20-35-17-05174-002-HX Estimated Cost of Construction \$125,000.00

Subdivision Name _____ Lot _____ Block _____ Unit _____ Phase _____

Driving Directions 2325 HWY 441 NORTH 1.2 miles South of I-10
3rd house past Sunnybrook Rd, on right

Number of Existing Dwellings on Property 1

Construction of New Home (modular) Total Acreage 14.180 Lot Size _____

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

Actual Distance of Structure from Property Lines - Front 200 Side 34' Side 150 Rear 500+

Number of Stories 1 Heated Floor Area 1430 Total Floor Area 1430 Roof Pitch 9/12-12/12

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.

Columbia County Building Permit Application

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

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

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

NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:

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

OWNERS CERTIFICATION: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning. I further understand the above written responsibilities in Columbia County for obtaining this Building Permit.

André Tardif
Owners Signature

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

Contractor's Signature (Permitee)

Contractor's License Number _____
Columbia County
Competency Card Number _____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 11 day of December 2007.
Personally known *[Signature]* or Produced Identification _____

Roland L. Tardif
State of Florida Notary Signature (For the Contractor)

SEAL:

NOTARY PUBLIC-STATE OF FLORIDA
Roland L. Tardif
Commission # DD728674
Expires: OCT. 24, 2011
BONDED THRU ATLANTIC BONDING CO., INC.

Columbia County Building Permit Application

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Owner Builder
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Contractor's License Number _____
Columbia County
Competency Card Number _____

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Personally known X or Produced Identification _____

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Revised 11-30-07



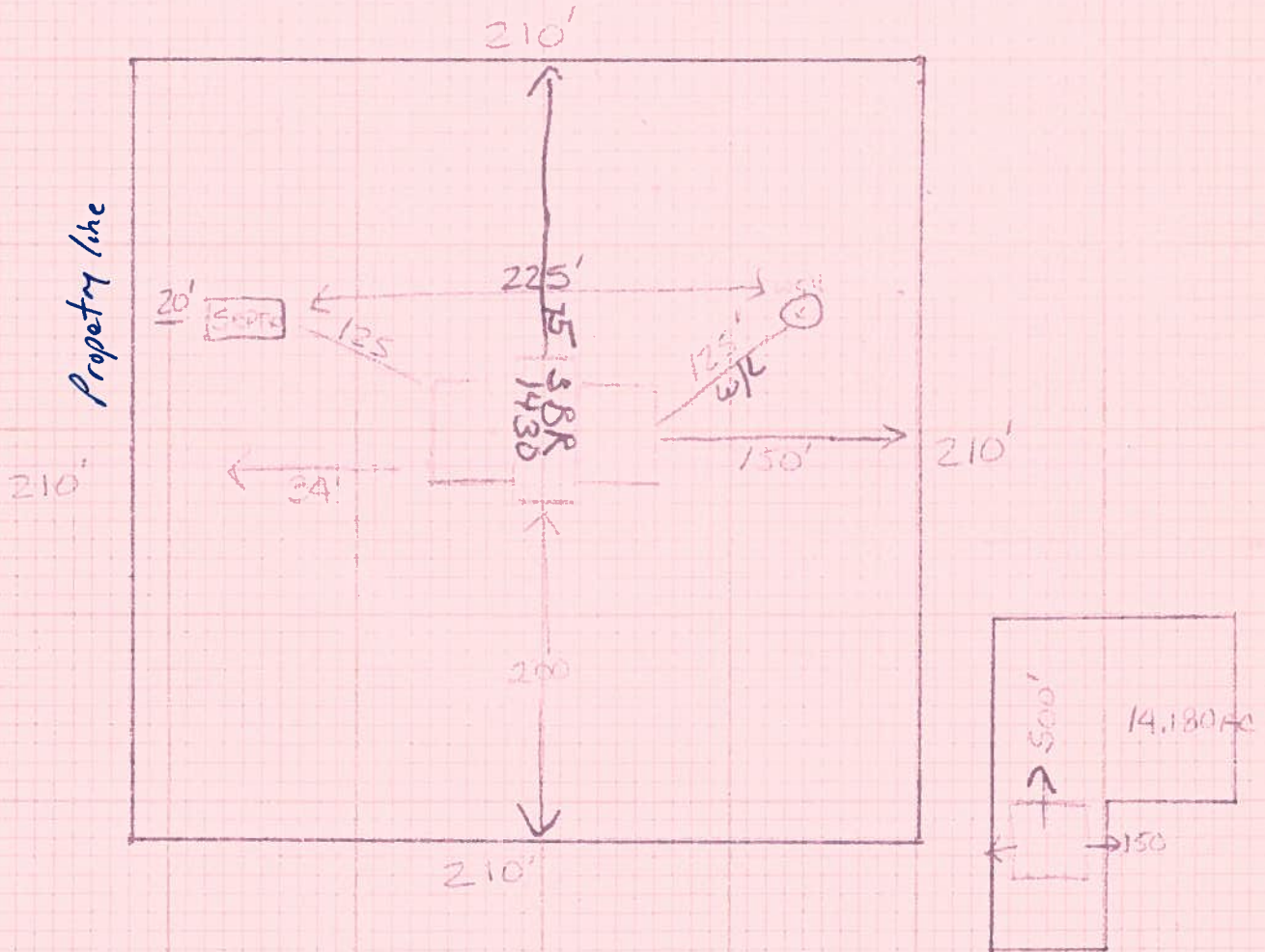
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 07-0962

PART II - SITE PLAN

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



Notes: _____

Site Plan submitted by: Andre Tardif

Signature

12/11/07
Title

Plan Approved _____

Not Approved _____

Date _____

By _____ County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

Columbia County Property Appraiser

DB Last Updated: 11/15/2007

2008 Proposed Values

Tax Record

Property Card

Interactive GIS Map

Print

Parcel: 20-3S-17-05174-002 HX

Owner & Property Info

Search Result: 1 of 1

Owner's Name	TARDIF ANDRE & RITA		
Site Address	---		
Mailing Address	P O BOX 664 LAKE CITY, FL 32056		
Use Desc. (code)	IMPROVED A (005000)		
Neighborhood	20317.00	Tax District	2
UD Codes	MKTA03	Market Area	06
Total Land Area	14.180 ACRES		
Description	ALL OF N1/2 OF NE1/4 OF NW1/4 LYING E OF US-441, EX COMM INTERS OF E R/W US-441 & N LINE FOR POB, RUN S 152.24 FT, E 246.25 FT, N 133 FT, W 226.87 FT TO POB & EX 5.18 AC DESC ORB 1127-980. ORB 492-700		

GIS Aerial



Property & Assessment Values

Mkt Land Value	cnt: (1)	\$6,500.00
Ag Land Value	cnt: (1)	\$2,372.00
Building Value	cnt: (1)	\$50,623.00
XFOB Value	cnt: (0)	\$0.00
Total Appraised Value		\$59,495.00

Just Value	\$123,023.00
Class Value	\$59,495.00
Assessed Value	\$37,345.00
Exempt Value	(code: HX) \$25,000.00
Total Taxable Value	\$12,345.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale VImp	Sale Qual	Sale RCode	Sale Price
NONE						

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
1	SINGLE FAM (000100)	1965	Single Sid (04)	1340	2307	\$50,623.00
Note: All S.F. calculations are based on exterior building dimensions.						

Extra Features & Out Buildings

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

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
006200	PASTURE 3 (AG)	13.180 AC	1.00/1.00/1.00/1.00	\$180.00	\$2,372.00
000100	SFR (MKT)	1.000 AC	1.00/1.00/1.00/1.00	\$6,500.00	\$6,500.00
009910	MKT.VAL.AG (MKT)	13.180 AC	1.00/1.00/1.00/1.00	\$0.00	\$65,900.00

Columbia County Property Appraiser

DB Last Updated: 11/15/2007

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 \$25,000. 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 ☐ Two-Family Residence
☐ Farm Outbuilding ☐ Other _____
☐ New Construction ☐ Addition, Alteration, Modification or other Improvement

NEW CONSTRUCTION OR IMPROVEMENT

I ANDRE TARDIF, 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 _____

Andre Tardif 12/11/07
Signature Date

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 _____ Building Official/Representative _____

NOTICE OF COMMENCEMENT

County Clerk's Office Stamp or Seal

Tax Parcel Identification Number #20-35-17-05174-002 Hx

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

1. Description of property (legal description): ALL OR 1/2 OF NE 1/4 OF NW 1/4 LAYING EAST OF US 441 EX COMM INTERSECTION OF E
a) Street (job) Address: 2325 N 441 LAKE CITY 32025

2. General description of improvements: NEW HOME

3. Owner Information

a) Name and address: ANDRE RITA TARDIF

b) Name and address of fee simple titleholder (if other than owner)

c) Interest in property 100%

4. Contractor Information

a) Name and address: KENT HARRISS CONSTRUCTION INC. 805 SW ALAMO DR L.C. 32025

b) Telephone No.: 386-365-2086 Fax No. (Opt.)

5. Surety Information

a) Name and address: NONE

b) Amount of Bond:

c) Telephone No.: Fax

6. Lender

a) Name and address: NONE

b) Phone No.

Inst: 200712027207 Date: 12/11/2007 Time: 11:39 AM
DC, P. DeWitt Cason, Columbia County Page 1 of 1

7. Identity of person within the State of Florida designated by owner upon whom notices or other documents may be served:

a) Name and address: NONE

b) Telephone No.: Fax No. (Opt.)

8. In addition to himself, owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(l)(b), Florida Statutes:

a) Name and address:

b) Telephone No.: Fax No. (Opt.)

9. Expiration date of Notice of Commencement (the expiration date is one year from the date of recording unless a different date is specified):

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

STATE OF FLORIDA
COUNTY OF COLUMBIA

10. Andre Tardif
Signature of Owner or Owner's Authorized Office/Director/Partner/Manager
ANDRE TARDIF
Print Name

The foregoing instrument was acknowledged before me, a Florida Notary, this 11 day of December, 2007, by:

NOTARY PUBLIC STATE OF FLORIDA
Roland L. Tardif
Commission # DD728674
(type of authority, e.g. officer, trustee, attorney)
fact) for _____ (name of party on behalf of whom instrument was executed).

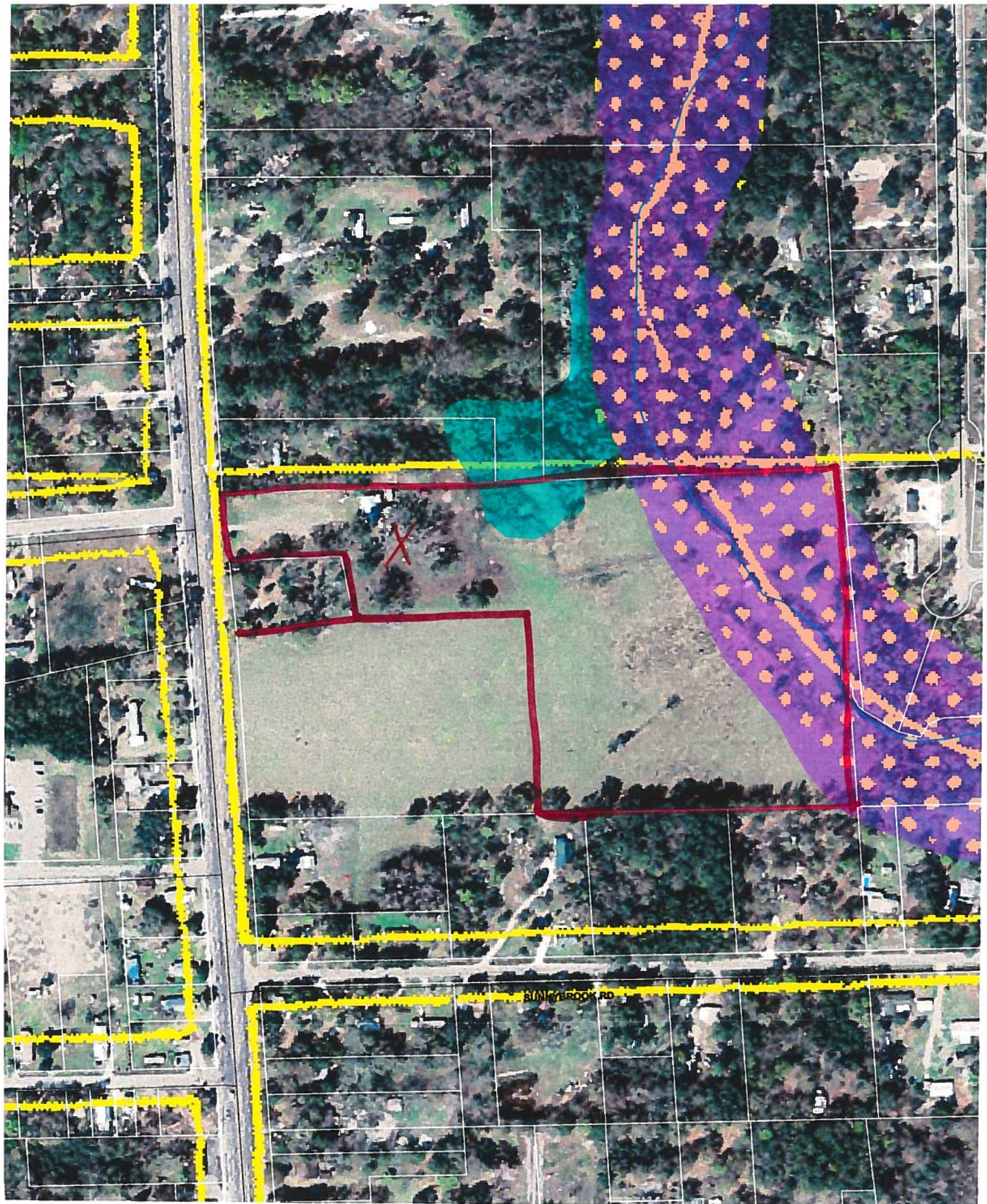
Personally Known ☒ OR Produced Identification ☐ Expires: OCT. 24, 2011
BONDED THRU ATLANTIC BONDING CO., INC.

Notary Signature Roland L. Tardif Notary Stamp or Seal:

—AND—

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

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



0712-33



PFS Corporation

Assurance you can build onSM

An Employee-Owned Company

February 2, 2006

Midwest Region

2402 Daniels Street
Madison, WI 53718

Phone: 608.221.3361
Fax: 608.221.2084

Website
www.pfscorporation.com

Ron Reindl, AIA
Vice President
Midwest Region
rreindl@pfscorporation.com

Headquarters

Madison, WI
608.221.3361

Regional Offices

Northeast
Bloomsburg, PA
570.784.8396

South Central
Dallas, TX
214.221.5585

Western
Los Angeles, CA
310.559.7287

Midwest
Madison, WI
608.221.3361

Southeast
Raleigh, NC
919.845.8450

Sales Office
Mentone, AL
256.634.4071

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: Hickory #91314

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:

Florida Manufactured Building Act and Rules
Rule 9B-72 FAC for Product Approval
2004 FRBC w/2005 Amendments
ASCE 7-98
2002 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:

Michael A. Frey
Engineering Manager
Midwest Region

FL-pb

Enclosures: As Stated

cc: John Self (Nationwide)



Accredited by the National
Voluntary Laboratory
Accreditation Program
for the specific scope of
accreditation under
Lab Code 100421-0

DESIGN INFORMATION

USE GROUP R-3 RESIDENTIAL

CONSTRUCTION TYPE VI UNPROTECTED

FLOOR LOAD(5) 1ST 40/10

ROOF LOAD 20/10

WIND ZONE 160 MPH (3 SEC. GUST)

SEISMIC GROUP 0

CATEGORY C

INFORMATION FACTOR 10 COMPONENTS & CLADDING: SEE PAGES 25 & 26 OF 34

NOTE: ACTUAL CONSTRUCTION OF MODULAR UNITS CONFORM TO 160 MPH (3 SEC. GUST) WIND ZONE CONSTRUCTION. ALL OTHER SITE RELATED CONSTRUCTION IN THESE UNITS MUST BE CONFORMED WITH BUILDING CODES. THE PURCHASER IN ACCORDANCE WITH STATE & LOCAL BLDG. CODES.

NOTICE:
IT IS THE PURCHASER'S RESPONSIBILITY TO INQUIRE THE ATTACHED PLANS CONFORM TO LOCAL ORDINANCES IN RESPECT TO BUILDING SIZE, HEIGHT, SETBACK OR AESTHETICS WHICH IS ENFORCED BY LOCAL JURISDICTIONS.

CODE CONFORMANCE

Manufacturer: Nationwide Homes

Model: Hickory #91314

APPROVED

FLORIDA 2004 FBBC, W2005 AMENDMENTS

Construction Type 2004 FPC

Occupancy 2004 FPC (ENERGY CODE)

Allowable Number of Floors 1 ASCE 7-98

Wind Velocity 2002 NEC

Fire Ratings/Ext. Walls 160

Floor Load 0

Approval Date: 02-02-2006

This document meets or exceeds the requirements of the State of Florida Manufactured Building Rules & Regulations

Signature & License Number

Michael J. Frey SMP-37

NOTE: BASEMENT PLANS, SMOKE DETECTOR WIRE COILED UNDER FLOOR FOR SITE INST. OF SMOKE DETECTOR BY PURCHASER IN THE BASEMENT AREA. SMOKE DETECTORS WIRED FOR SIMULTANEOUS OPERATION.

CERTIFICATION INFORMATION

REFER TO "NOTE 1" ON FLOOR PLAN; CERTIFICATION INFORMATION LOCATED UNDER THE KITCHEN SINK; ON CLOSET WALL

A) DATA PLATE

B) 3RD PARTY INSPECTION LABEL

C) STATE LABEL (IF REQ'D)



NATIONWIDE HOMES MODULAR HOME PLANS AND GENERAL NOTES

LOCATION: 1000 RIVES ROAD / P.O. BOX 531 MARTINSVILLE, VIRGINIA 24115

DE RATINGS:

SINGLE WINDOW INTERIOR 622/635
SINGLE WINDOW EXTERIOR 622/633
TWIN WINDOW / DOOR INTERIOR 244/431
TWIN WINDOW / DOOR EXTERIOR 244/431
DBL. DOOR/GARAGE DOOR INT. 244/431
DBL. DOOR/GARAGE DOOR EXTERIOR 244/431

EXPOSURE CATEGORY C

NOTE: SITE INSTALLED ITEMS REQUIRING COMPLIANCE CERTIFICATION

THE FOLLOWING ITEMS ARE TO BE SUPPLIED & SITE INSTALLED BY THE PURCHASER & CANNOT BE CERTIFIED TO COMPLY FOR COMPONENT PRODUCT APPROVAL AS PER RULE 90-71:
1. HURRICANE SHUTTERS (IF REQUIRED)
2. THE CONNECTION OF ELECTRICAL, WATER & SEWER MODULAR UNITS CONNECTIONS TO COMPLY WITH UNIFORM REQUIREMENTS
3. SITE CONNECTION OF ELECTRICAL, WATER & SEWER
4. STRUCTURE IS NOT TO BE LOCATED CLOSER THAN 3'-0" FROM PROPERTY LINE OR INTERIOR LOT LINE - ORIENTATION OF STRUCTURE PER STATE & LOCAL CODES SUBJECT TO INSPECTION LOCATION JURISDICTION
5. THE RESPONSIBILITY OF THE LOCAL CODE OFFICIAL HAVING JURISDICTION
6. HVAC SYSTEM SUPPLIED & SITE INSTALLED BY PURCHASER

NUMBER OF MODULAR UNITS: 3

TYPICAL FOUNDATION NOTES

FOOTING NOTES:

1. FOOTING DESIGN BASED ON AN ALLOWABLE SOIL BEARING VALUE OF 1500 PSF AND MUST BE REVISED IF SITE CONDITIONS INDICATE A LOWER VALUE.
2. BOTTOM OF ALL FOOTINGS TO BE BELOW FROST LINE AS DETERMINED BY LOCAL BUILDING CODES (NO LESS THAN 12").
3. CONCRETE TO DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSF.

TYPICAL TERRACE NOTES:

1. EXTERIOR CONCRETE TO BE AIR ENTRAINED WITH A MIN. 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (OR LOCAL REQUIREMENT).
2. CONCRETE TO BE PLACED ON 4" MIN. SAND FILL.
3. OFFSET CURB TO 6" EXTERIOR FINISH.
4. INSTALL METAL FLASHING BETWEEN CONC. & WOOD MEMBERS.
5. TERRACES TO BE CONSTRUCTED AFTER HOUSE IS SET ON FOUNDATION.
6. PURCHASER RESPONSIBLE FOR ACCESSIBILITY INTO LIVING UNIT PER STATE AND LOCAL CODE.

OPTIONAL BASEMENT NOTES:

1. ALL BASEMENT DOORS AND WINDOWS ARE SUPPLIED AND INSTALLED BY PURCHASER. OPT. BASEMENT FINISHES ARE SUBJECT TO CHANGE WITHIN BSMT. AREA ACCORDING TO SITE CONDITIONS.
2. BACKFILL TO BE IN AND TAMPED PRIOR TO ARRIVAL OF HOUSE.
3. FOUNDATION WATER PROOFING AND DAMPROOFING TO CONFORM TO 2001 FLORIDA BUILDING CODE SECTIONS 1814.2 & 1814.3
4. ALL ELECTRICAL, PLUMBING AND MECHANICAL INSTALLATION WITHIN THE BASEMENT ARE THE RESPONSIBILITY OF THE PURCHASER AND SUBJECT TO APPROVAL & INSPECTION BY THE LOCAL JURISDICTION.

MODULAR FASTENING REQUIREMENTS:

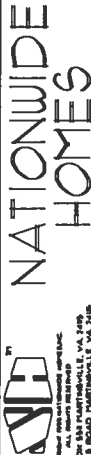
1. PURCHASER TO TOENAIL PERIMETER OF FLOOR RIM TO SILL PLATE W/ 16d NAILS (NON-CORROSIVE TYPE) @ 16" OC ENTIRE PERIMETER OF HOUSE.
2. NATIONWIDE SET CREW TO BOLT PLATING WALL GINDER TOGETHER W/ 1/2" DIA. BOLTS @ 8" SPACING. WHEN CONDITIONS DO NOT PERMIT SET CREW TO INSTALL BOLTS, PURCHASER TO PROVIDE 2" DIA. GINDER CLEARANCE. PURCHASER IS RESPONSIBLE FOR INSTALLATION OF BOLTS.
3. SECOND LEVEL OF 2 STORY MODELS TO BE TOENailed TO THE FIRST LEVEL CEILING PERIMETER PLATE W/ 16d NAILS @ 16" OC ENTIRE PERIMETER OF THE HOUSE.
4. PURCHASER TO REFER TO THE "BUILDER RESPONSIBILITY BULLETIN" FOR INSTRUCTION ON JOB SITE PREPARATION AND EQUIPMENT NEEDS FOR MODULAR UNIT SETTING.

GENERAL FOUNDATION NOTES:

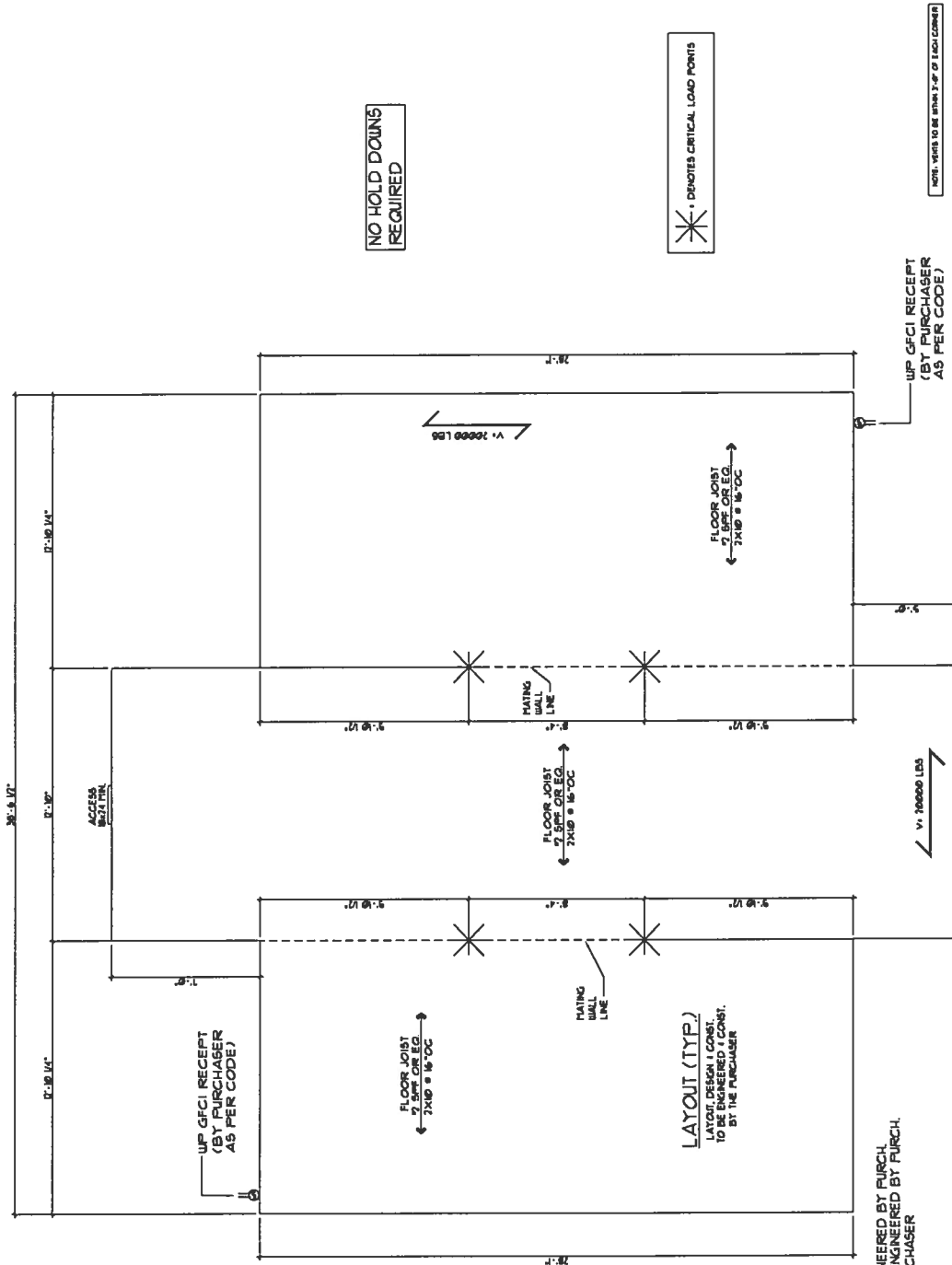
1. PURCHASER TO USE PORTAL TYPES FOR FOUNDATION CONSTRUCTION.
2. GRAIL SPACE VENTILATION SHALL CONFORM TO 2001 FLORIDA BUILDING CODE SECTION 1804.6.3.1
3. ALL FOUNDATION PLANS ARE SUGGESTIVE ONLY AND MUST BE CONST. IN ACCORDANCE WITH STATE AND LOCAL CODE REQUIREMENTS.
4. BRICK CASSED DIMENSION NOTES: (IMPORTANT)
AN ALLOWANCE OF 1/2" MUST BE INCORPORATED TO EACH SIDE OF THE FOUNDATION. FOUNDATION FINISHES ARE NOT TO BE ADJUSTED. NOTE THAT MODULAR LIVING UNIT SIZES ARE NOT ADJUSTED. VERIFY DIMENSIONS W/ NATIONWIDE ENGINEERING DEPARTMENT IF CLARIFICATION OF DIMENSIONS ARE NEEDED PRIOR TO CONSTRUCTION.

TYPICAL PLUMBING NOTES

1. ALL SUPPLY, DRAIN WASTE & VENT LINES TO BE SUPPORTED @ 4'-0" OC.
2. PURCHASER TO SUPPLY & INSTALL ALL DRY & SUPPLY LINE MATERIALS FOR SITE COMPLETION OF PLUMBING CONNECTIONS UNDER FLOOR AND BETWEEN 2 STORY STACK-ON SECTIONS. CONNECTIONS TO BE MADE AT WALL ACCESS ON 2 STORIES AS NOTED ON THE FLOOR PLAN. ALL CONN. SUBJECT TO INSPECTION BY LOCAL JURISDICTION.
3. ALL VENTS SHALL TERMINATE MIN. 17" ABOVE THE ROOF.
4. ALL FITTINGS, DRAIN, WASTE & VENT PIPES SHALL BE INSTALLED TO BOTTOM OF THE FLOOR JOIST. PURCHASER RESPONSIBLE FOR PLUMBING COMPLETION TO CONFORM TO CURRENT STANDARD PLUMBING CODE.
5. ALL PLUMBING (ON 1ST LEVEL) SHALL BE FACTORY INSTALLED TO BOTTOM OF THE FLOOR JOIST. PURCHASER RESPONSIBLE FOR PLUMBING COMPLETION TO CONFORM TO CURRENT STANDARD PLUMBING CODE.
6. ALL CLEAN-OUTS BY PURCHASER PER CURRENT STANDARD PLUMBING CODE.
7. ALL PVC/DWV TO CONFORM TO ASH-1-D7665-89A.
8. ALL SUPPLY LINES SIZED PER CURRENT FLORIDA PLUMBING CODE.
9. ANTI-SCALD FAUCETS INSTALLED ON ALL SHOWER FAUCETS.
10. PURCHASER RESPONSIBLE FOR FIRESTOPPING ALL FLOOR CUTOUTS AT TUB TRAYS.



PLAN NAME: G:\NWH\COVERS\HETS\FLCOVER	PAGE NO. 1
SERIES: ALL SERIES	OF 34
DESIGN DATE: 4-23-99	ENG. BY: J.S.S. CKBY: D.A.
REV. DATE: 3-01-2002	REV. BY: J.S.S.
REV. DATE:	REV. BY:



FUNDATION PLAN SCALE 1/4"=1'-0"

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB	PLAN NAME: HICKORY		PURCHASER: ATLANTIC STRUCTURES		PAGE NO. 11
	COLLECTION/SERIES: STANDARD		JOB NO: 1943-05		OF 34
	DESIGN DATE: 6/19/07		CONTRACT NO. 9314		
	REV. DATE:		DUG. BY: JPS		CHK. BY:
REV. DATE:		CHANGE ORDER DATE:		PRODUCTION DATE:	
REV. DATE:		REV. BY:		DUG. BY:	

NATIONWIDE

Custom Homes
P.O. BOX 5511 MARTINSVILLE, VA 24115
1000 RIVER CHURCH LANE
FAX (773) 637-1181

WWW.NATIONWIDECUSTOMHOMES.COM

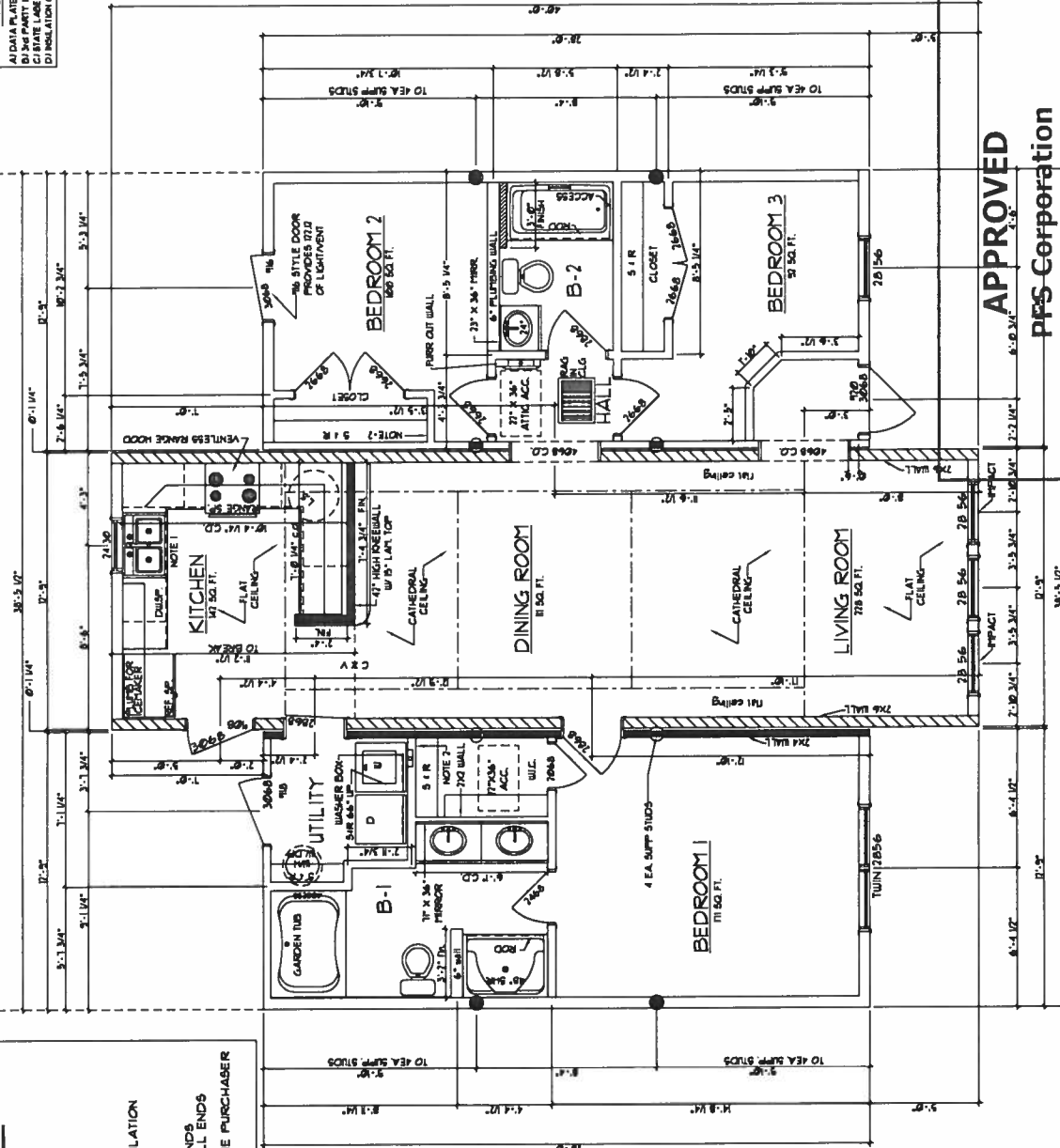


- NOTES:
1. LAYOUT IS SUGGESTIVE ONLY. PURCHASER IS RESPONSIBLE FOR MEETING ALL LOCAL & STATE CODES CONCERNING FOUNDATION REQ.
 2. CRADLE SYSTEM IS TO BE DESIGNED, SUPPLIED, & ENGINEERED BY PURCH.
 3. ALL SPANS SHOWN ON THIS PLAN MUST BE CONFIRMED & ENGINEERED BY PURCH.
 4. FOOTINGS DESIGNED, SUPPLIED, & ENGINEERED BY PURCHASER
 5. ALL OUTSIDE DIMENSIONS ARE TO EXTERIOR SHEATHING OF MODULAR UNITS.
 6. EXTERIOR WALL SHEATHING HAS BEEN FIGURED FOR 1/2" PLYWOOD FOR HIGH WIND ZONE REQUIREMENTS.
 7. MODULAR TO MODULAR & MODULAR TO FOUNDATION CONNECTIONS TO BE ENGINEERED AND SUPPLIED BY PURCHASER
 8. PURCHASER SUPPLIED CONNECTIONS, FASTENERS, STRAPS, PLATES, ETC. IN NON-CONDITIONED AREAS TO MEET STATE AND/OR LOCAL CODES CONCERNING CORROSIVE RESISTANT REQUIREMENTS.
 9. DECKS, PICKETS, RAILINGS, STAIRS AND PORCHES SUPPLIED & SITE CONST. BY THE PURCHASER PER STATE & LOCAL CODES, SUBJECT TO INSPECTION BY LOCAL JURISDICTION

GENERAL PLAN NOTES:

1. THIS UNIT TO MEET 160 MPH HIGH WIND ZONE AS DETAILED ON THE DETAIL SHEETS
2. 1/2" PLYWOOD EXTERIOR SHEATHING
3. 1/2" PLYWOOD EXTERIOR SHEATHING
4. 1/2" PLYWOOD EXTERIOR SHEATHING
5. 1/2" PLYWOOD EXTERIOR SHEATHING
6. 1/2" PLYWOOD EXTERIOR SHEATHING
7. 2X6 EXTERIOR WALLS @ 16" O.C. W/ R-19 INSULATION
8. 2X4 PLATE WALL STUDS @ 16" O.C. ON CENTER
9. SEE 160 MPH STRAPPING DETAIL SHEET
10. SEE 160 MPH STRAPPING DETAIL SHEET
11. PRESSURE TREATED FLOOR JOISTS AND BANDS
12. SEE PRODUCTION PROCEDURE FOR UNIT FULL ENDS
13. 2X6 FLOOR INSULATION
14. 2X6 FLOOR JOISTS @ 16" O.C.
15. 2X6 FLOOR JOISTS @ 16" O.C.
16. 2X6 FLOOR JOISTS @ 16" O.C.

DECK BY THE PURCHASER



SQUARE FOOTAGE:
FIRST LEVEL: 1274 SQ. FT.
TOTAL: 1274 SQ. FT.

DP RATINGS:

SINGLE WINDOW INTERIOR	672/615
SINGLE WINDOW EXTERIOR	672/633
TWIN WINDOW / DOOR INTERIOR	298/61
TWIN WINDOW / DOOR EXTERIOR	298/62
DEL. DOOR/GARAGE DOOR INT.	298/641
DEL. DOOR/GARAGE DOOR EXTERIOR	298/642

EXPOSURE CATEGORY C

APPROVED

PFS-Corporation

Madison, WI

Date: Feb 2, 2006

SHEARWALLS (ALL EXTERIOR WALLS):
1/2" PLYWOOD @ EXTERIOR
1/2" GYPSUM @ INTERIOR

UNIT "A"

UNIT "B"



NOTE: ONLY ONE HOUSE
MAY BE BUILT UTILIZING
THE PLANS THAT ARE
DESIGNATED FOR THIS
CONTRACT JOB

NATIONWIDE

Mobile Home Division

P.O. BOX 2511 MARTINSVILLE, VA 24115

1000 RIVES ROAD, MARTINSVILLE, VA 24115

(776) 633-1100
FAX (776) 633-1101

WWW.NATIONWIDEMOBILEHOMES.COM

PLAN NAME: HICKORY

COLLECTION/SERIES: STANDARD

DESIGN DATE: 6/9/02

REV. DATE:

PURCHASER: ATLANTIC STRUCTURES

JOB NO: 7543-05

PROCESS DATE:

CHANGE ORDER DATE:

CONTRACT NO. 9314

CHK. BY: JMS

DWG. BY: JMS

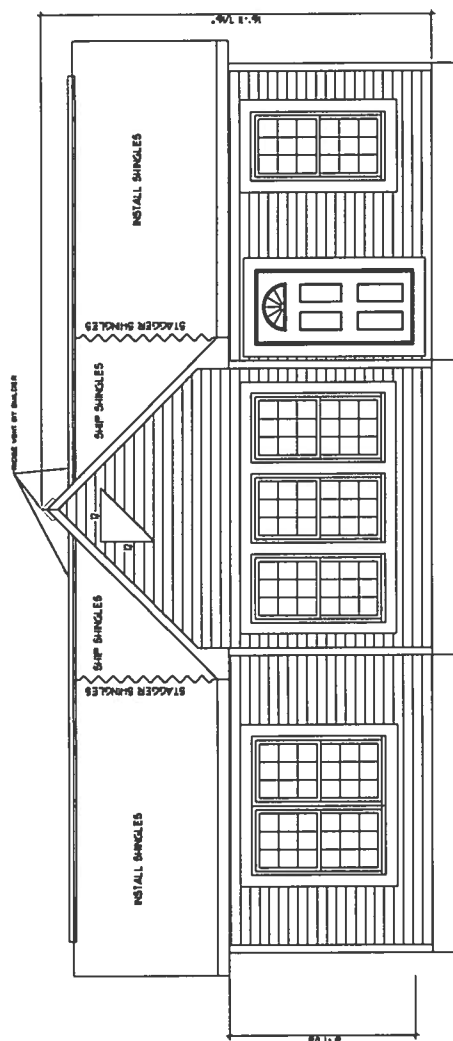
PRODUCTION DATE:

PAGE NO.

2

OF

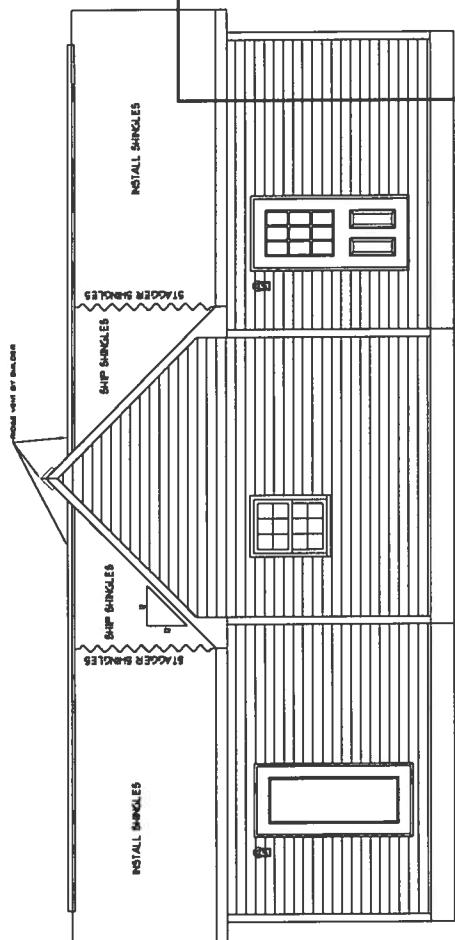
34



FRONT ELEVATION PLAN

SCALE: 1/4" = 1'-0"

VENTILATION CALCULATIONS, PER LIVING UNIT
AIR VENT, INC. • SHINGLEVENT II
RIDGE VENT, 125 NET FREE AIR PER LEFT
54 L.F. x 125 SF. = 17,725 SQ. FT. N.F.A.
GEORGIA PACIFIC, INC.
VENTILATED SOFFIT, 517 NET FREE AIR PER SOFT.
75 L.F. x 517 SF. = 38,775 SQ. IN. N.F.A.



REAR ELEVATION PLAN

SCALE: 1/4" = 1'-0"

APPROVED
PFS Corporation
Madison, WI

Date: Feb 2, 2006

NOTE:
1) 12" OVERHANGS
2) RAFTERS 16" O.C.





PFS Corporation

An Employee-Owned Company

TRACKING # 23391

Assurance you can build on®

Headquarters

1507 Matt Pass
Cottage Grove, WI 53527

Phone: 608.839.1013
Fax: 608.839.1014

Website
www.pfscorporation.com

Michael J. Slifka, PE
President
mslifka@pfscorporation.com

James A. Rothman, PE
Executive Vice President
Senior Vice President, QC
jrothman@pfscorporation.com

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570.784.8396

South Central
Dallas, TX
214.221.5585

Western
Los Angeles, CA
310.559.7287

Midwest
Cottage Grove, WI
608.839.1013

Southeast
Raleigh, NC
919.845.8460

Sales Office
Mentone, AL
256.634.4071

January 15, 2008

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 Hickory II 91670

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:

Rule 9B-72 FAC for Product Approval
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)



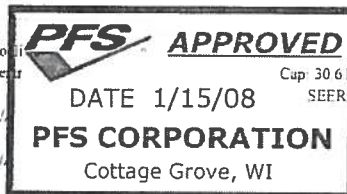
Permit #
26582

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs
Residential Whole Building Performance Method A

Project Name: HICKORY II #91670
Address:
City, State: , FL 32025-
Owner: KENT HARRISS CONSTRUCTION
Climate Zone: North

Builder: KENT HARRISS CONSTRUCT
Permitting Office:
Permit Number:
Jurisdiction Number: 221000



1. New construction or existing ☐ New ☐ Single family
2. Single family or multi-family ☐ Single family
3. Number of units, if multi-family 1
4. Number of Bedrooms 3
5. Is this a worst case? ☐ No
6. Conditioned floor area (ft²) 1518 ft²
7. Glass type¹ and area: (Label reqd. by 13-104.4.5 if not default)
- a. U-factor Description Area
(or Single or Double DEFAULT) 7a. (Dble. U=0.4) 55.2 ft²
- b. SHGC
(or Clear or Tint DEFAULT) 7b. (SHGC=0.33) 123.7 ft²
8. Floor types
- a. Raised Wood, Post or Pier R=19.0, 1518.0 ft²
- b. N/A
- c. N/A
9. Wall types
- a. Frame, Wood, Exterior R=13.0, 1416.0 ft²
- b. N/A
- c. N/A
- d. N/A
- e. N/A
10. Ceiling types
- a. Under Attic R=30.0, 1233.0 ft²
- b. Under Attic R=19.0, 395.0 ft²
- c. N/A
11. Ducts
- a. Sup: Unc. Ret: Con. AH: Interior Sup. R=6.0, 83.0 ft²
- b. N/A

12. Cooling systems
- a. Central Air Conditioning Cap: 30.6 kBtu/hr SEER: 13.00
- b. N/A
- c. N/A
13. Heating systems
- a. Electric Heat Pump Cap: 30.6 kBtu/hr HSPF: 9.70
- b. N/A
- c. N/A
14. Hot water systems
- a. Electric Resistance Cap: 50.0 gallons EF: 0.90
- b. N/A
- c. Conservation credits
(HR-Heat recovery, Solar
DHP-Dedicated heat pump)
15. HVAC credits
(CF-Ceiling fan, CV-Cross ventilation,
HF-Whole house fan,
PT-Programmable Thermostat,
MZ-C-Multizone cooling,
MZ-H-Multizone heating)

Glass/Floor Area: 0.10 Total as-built points: 19434
Total base points: 22593

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: 1/21/07

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: [Signature]
DATE: 1/21/07

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)

[Handwritten signature]
1/13/08
Applies to
p. 12-19

SUMMER CALCULATIONS**Residential Whole Building Performance Method A - Details**

ADDRESS: , , FL, 32025-

PERMIT #

BASE				AS-BUILT										
GLASS TYPES														
.18 X Conditioned X BSPM = Points														
Floor Area				Type/SC	Overhang					Area X SPM X SOF = Points				
					Ornt	Len	Hgt	Area	X	SPM	X	SOF	= Points	
.18	1518.0	18.59	5080.0	1 Double, U=0.38, SHGC= 3	N	1.0	10.8	6.4	9.13	0.99			57.0	
				2 Double, U=0.38, SHGC= 3	N	1.0	6.2	13.8	9.13	0.98			123.0	
				3 Double, U=0.38, SHGC= 3	N	1.0	4.6	5.5	9.13	0.95			47.0	
				4 Double, U=0.38, SHGC=0	W	1.0	8.3	6.4	18.70	0.99			118.0	
				5 Double, U=0.38, SHGC=0	E	1.0	7.8	3.2	20.44	0.99			65.0	
				6 Double, U=0.38, SHGC=0	S	1.0	6.2	27.6	17.37	0.95			455.0	
				7 Double, U=0.38, SHGC=0	S	5.0	6.2	13.8	17.37	0.55			132.0	
				8 Double, U=0.38, SHGC=0	S	1.0	14.2	55.2	17.37	0.99			953.0	
				9 Double, U=0.38, SHGC=0	S	1.0	6.3	17.4	17.37	0.95			267.0	
				As-Built Total:					149.3 2237.0					
WALL TYPES				Area X BSPM = Points										
				Type	R-Value					Area X SPM = Points				
Adjacent	0.0	0.00	0.0	1 Frame, Wood, Exterior				13.0	1416.0	1.50			2124.0	
Exterior	1416.0	1.70	2407.2											
Base Total:				1416.0					2407.2					
DOOR TYPES				Area X BSPM = Points										
				Type	Area X SPM = Points									
Adjacent	0.0	0.00	0.0	1 Exterior Insulated				20.0	4.10				82.0	
Exterior	40.0	6.10	244.0	2 Exterior Insulated				20.0	4.10				82.0	
Base Total:				40.0					244.0					
CEILING TYPES				Area X BSPM = Points										
				Type	R-Value					Area X SPM X SCM = Points				
Under Attic	1512.0	1.73	2615.8	1 Under Attic			30.0	1233.0	1.73 X 1.00				2133.1	
				2 Under Attic			19.0	395.0	2.34 X 1.00				924.3	
Base Total:				1512.0					2615.8					
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	1518.0	0.77				1162.8	
Raised	1518.0	-3.99	-6056.8											
Base Total:				1518.0					-6056.8					
INFILTRATION				Area X BSPM = Points										
				Area X SPM = Points										
				1518.0 10.21 15498.8					1518.0 10.21 15498.8					

#91670

PAGE 17 OF 29

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #

BASE			AS-BUILT					
Summer Base Points: 19788.9			Summer As-Built Points: 24244.0					
Total Summer Points	X Multiplier	= Cooling Points	Total Component (System - Points)	X Cap Ratio (DM x DSM x AHU)	X Duct Multiplier (1.08 x 1.147 x 0.91)	X System Multiplier 0.260	X Credit Multiplier 1.000	= Cooling Points 7112.3
19788.9	0.3250	6431.4	24244.0	1.00	1.128	0.260	1.000	7112.3



DATE 1/15/08

PFS CORPORATION

Cottage Grove, WI

#91670

PAGE 14 OF 29

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			Area X WPM X WOF = Points			
					Ornt	Len	Hgt				
.18	1518.0	20.17	5511.0	1 Double, U=0.38, SHGC=.3	N	1.0	10.8	6.4	12.24	1.00	77.0
				2 Double, U=0.38, SHGC=.3	N	1.0	6.2	13.8	12.24	1.00	159.0
				3 Double, U=0.38, SHGC=.3	N	1.0	4.6	5.5	12.24	1.00	67.0
				4 Double, U=0.38, SHGC=0.	W	1.0	8.3	6.4	10.31	1.00	65.0
				5 Double, U=0.38, SHGC=0.	E	1.0	7.8	3.2	9.40	1.01	30.0
				6 Double, U=0.38, SHGC=0.	S	1.0	6.2	27.6	6.58	1.02	185.0
				7 Double, U=0.38, SHGC=0.	S	5.0	6.2	13.8	6.58	2.40	218.0
				8 Double, U=0.38, SHGC=0.	S	1.0	14.2	55.2	6.58	1.00	362.0
				9 Double, U=0.38, SHGC=0.	S	1.0	6.3	17.4	6.58	1.02	116.0
				As-Built Total:			149.3			1289.0	
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			1416.0	3.40	4814.4	
Exterior	1416.0	3.70	5239.2								
Base Total:				1416.0			5239.2			As-Built Total:	
				1416.0			4814.4				
DOOR TYPES											
Area X BWPM = Points				Type	R-Value			Area X WPM = Points			
Adjacent	0.0	0.00	0.0	1. Exterior Insulated	20.0			8.40	168.0		
Exterior	40.0	12.30	492.0	2. Exterior Insulated	20.0			8.40	168.0		
Base Total:				40.0			492.0			As-Built Total:	
				40.0			336.0				
CEILING TYPES											
Area X BWPM = Points				Type	R-Value			Area X WPM X WCM = Points			
Under Attic	1512.0	2.05	3099.6	1. Under Attic	30.0			1233.0	2.05 X 1.00	2527.6	
				2. Under Attic	19.0			395.0	2.70 X 1.00	1065.5	
Base Total:				1512.0			3099.6			As-Built Total:	
				1512.0			1628.0			3594.1	
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			1518.0	0.88	1329.8	
Raised	1518.0	0.96	1457.3								
Base Total:				1457.3			1518.0			As-Built Total:	
				1457.3			1518.0			1329.8	
INFILTRATION											
Area X BWPM = Points							Area X WPM = Points				
1518.0 -0.59 -895.6							1518.0 -0.59 -895.6				

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #.

BASE			AS-BUILT						
Winter Base Points: 14903.5			Winter As-Built Points: 10467.7						
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points	
14903.5	0.5540	8256.5	(sys 1: Electric Heat Pump 30600 btuh .EFF(9.7) Ducts:Unc(S).Con(R).Int(AH).R6.0 10467.7 1.000 (1.060 x 1.169 x 0.93) 0.352 1.000 4240.7	1.00	1.152	0.352	1.000	4240.7	



DATE 1/15/08

PFS CORPORATION

Cottage Grove, WI

#01670

PAGE 16 OF 29

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32025-

PERMIT #:

BASE				AS-BUILT					
WATER HEATING				Tank	EF	Number of	X	Tank X	Multiplier X Credit = Total
Number of	X	Multiplier	= Total	Volume		Bedrooms		Ratio	Multiplier
3		2635.00	7905.0	50.0	0.90	3		1.00	2693.56 1.00 8080.7
				As-Built Total:					8080.7

CODE COMPLIANCE STATUS									
BASE					AS-BUILT				
Cooling	+	Heating	+	Hot Water	= Total	Cooling	+	Heating	= Total
Points		Points		Points	Points	Points		Points	Points
6431		8257		7905	22593	7112		4241	8081 19434

PASS**PFS APPROVED**

DATE 1/15/08

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 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610.	
HVAC Controls	607.1	Ducts in unconditioned attics: R-6 min. insulation.	
Insulation	604.1, 602.1	Separate readily accessible manual or automatic thermostat for each system. Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

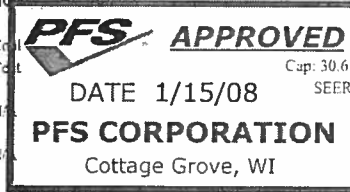
PAGE 18 OF 29

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 87.2

The higher the score, the more efficient the home.

KENT HARRISS CONSTRUCTION, FL 33075



- | | | | |
|--|----------------------------|--|-------------------|
| 1. New construction or existing | New | 12. Cooling systems | |
| 2. Single family or multi-family | Single family | a. Cooling system | Cap: 30.6 kBtu/hr |
| 3. Number of units, if multi-family | 1 | b. N/A | SEER: 13.00 |
| 4. Number of Bedrooms | 3 | c. N/A | |
| 5. Is this a worst case? | No | | |
| 6. Conditioned floor area (ft²) | 1518 ft² | 13. Heating systems | |
| 7. Glass type ¹ and area (Label reqd. by 13-104.4.5 if not default) | | a. Electric Heat Pump | Cap: 30.6 kBtu/hr |
| a. U-factor: | Description Area | b. N/A | HSPF: 9.70 |
| (or Single or Double DEFAULT) | 7a. (Dblc, U=0.4) 55.2 ft² | c. N/A | |
| b. SHGC: | | | |
| (or Clear or Tint DEFAULT) | 7b. (SHGC=0.33) 123.7 ft² | 14. Hot water systems | |
| 8. Floor types | | a. Electric Resistance | Cap: 50.0 gallons |
| a. Raised Wood, Post or Pier | R=19.0, 1518.0 ft² | b. N/A | EF: 0.90 |
| b. N/A | | c. Conservation credits | |
| c. N/A | | (HR-Heat recovery, Solar | |
| 9. Wall types | | DHP-Dedicated heat pump) | |
| a. Frame, Wood, Exterior | R=13.0, 1416.0 ft² | 15. HVAC credits | |
| b. N/A | | (CF-Ceiling fan, CV-Cross ventilation, | |
| c. N/A | | HF-Whole house fan, | |
| d. N/A | | PT-Programmable Thermostat, | |
| e. N/A | | MZ-C-Multizone cooling, | |
| 10. Ceiling types | | MZ-H-Multizone heating) | |
| a. Under Attic | R=30.0, 1233.0 ft² | | |
| b. Under Attic | R=19.0, 395.0 ft² | | |
| c. N/A | | | |
| 11. Ducts | | | |
| a. Sup: Unc. Ret: Con. AH: Interior | Sup. R=6.0, 83.0 ft | | |
| b. N/A | | | |

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: 12/21/07

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)

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

2005

National Electric Code

Electrical Load Calculations

Model = HICFORM IT #91670

General Lighting Load	1,518 Sq Ft at 3 volt-amperes per sq ft	=	4,554 volt-amperes
Small Appliance Load		=	3,000 volt-amperes
Laundry		=	1,500 volt-amperes
Total General Lighting and Small Appliance		=	9,054 volt-amperes
3000 volt-amperes @ 100%		=	3,000 volt-amperes
9,054 - 3000 =	6,054 @ 35%	=	2,119 volt-amperes
Net General Lighting and Small Appliance Load		=	5,119 volt-amperes
Range Load		=	8,640 volt-amperes
Dryer Load		=	5,600 volt-amperes
Dishwasher		=	1,032 volt-amperes
Garbage Disposal		=	504 volt-amperes
Water Heater (4500 / 240 * 125%)		=	5,625 volt-amperes
		=	volt-amperes
		=	volt-amperes
Total Load		=	26,520 volt-amperes

200 Amp Service Panel Installed

For 120/240-volt 3-Wire single phase service or feeder

26,520 / 240 Volt =

#91670

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

PAGE 20 OF 29

VRM
1/13/08

WIND LOAD CALCULATIONS

NATIONWIDE HOMES

DESIGN INPUTS:	MODULE WIDTH:	40 ft	NO. OF STORIES:	1
	STUD SPACING:	16 in	1st FLOOR WALL HEIGHT:	10 ft
	TRUSS SPACING:	24 in	2nd FLOOR WALL HEIGHT:	0 ft
	ROOF PITCH:	12 / 12	3rd FLOOR WALL HEIGHT:	0 ft
	ROOF ANGLE (θ):	45.00 °	WIND SPEED:	130 mph
			WIND EXPOSURE CASE:	B1
	z =	10 ft		
	hr =	20 000 ft		
	hr / 2 =	10 000 ft		
	h =	20 000 ft		
	EFFECTIVE WIND AREA = z x STUD SPACING =	13 333 ft ²		
	EFFECTIVE WIND AREA = h x STUD SPACING =	26 667 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 _z):	0.70	IMPORTANCE FACTOR (I):	1
	MULT. for TOPO. FACTOR (K ₁):	0.09	q _z = 0.0256 x K _z x K ₁ x K _d x V ² x I =	25.74
	MULT. for TOPO. FACTOR (K ₂):	0	q _h = q _h = q _z =	25.74
	MULT. for TOPO. FACTOR (K ₃):	0	GUST EFFECT FACTOR (G):	0.85
	K _{zt} = (1 + K ₁ x K ₂ x K ₃) ² =	1	INTERNAL PRESS. COEF. (GC _{int}):	0.18
				-0.18

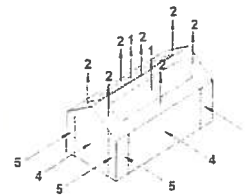
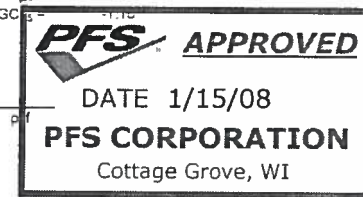
LATERAL LOADS (COMPONENTS AND CLADDING):

EXTERNAL PRESSURE COEFFICIENTS:

SIDE WALL: FIELD: GC_{pf} = -1.01
 EDGE: GC_{pe} = -1.10

LOAD CALCULATIONS:

$$P_{fi} = q_h \times (GC_{pf} - GC_{pi}) \times$$

P_{fi}

EXAMPLE:

$$P_{fi} = q_h \times (GC_{pf} - GC_{pi}) \times$$

P_{fi}

$$= (25.74) \times (-1.01 - 0.18) = -30.66 \text{ psf}$$

$$P_{fi} = q_h \times (GC_{pf} - GC_{pi}) \times$$

P_{fi}

$$= (25.74) \times (-1.01 - 0.18) = -21.39 \text{ psf}$$

FIELD	P _{fi} =	-30.66 psf
FIELD	P _{fi} =	-21.39 psf
EDGE	P _{fi} =	-35.10 psf
EDGE	P _{fi} =	-25.83 psf

USE	-30.66 psf WIND LOAD FOR FIELD.
USE	-35.10 psf WIND LOAD FOR EDGE.

THE MAXIMUM LATERAL LOAD FOR 130 mph WIND (COMPONENTS AND CLADDING) IS -35.10 psf

#91670

PAGE 21 OF 29

4L Rad
2/13/08

WIND LOAD CALCULATIONS

NATIONWIDE HOMES

UPLIFT LOADS (COMPONENTS AND CLADDING):

EXTERNAL PRESSURE COEFFICIENTS:

ROOF:	FIELD	GC_{pf1}	=	-0.86
	EDGE	GC_{pe}	=	-1.11
	OVERHANG	GC_{pf3}	=	-1.91
	DOWNWARD	GC_{e13}	=	0.25

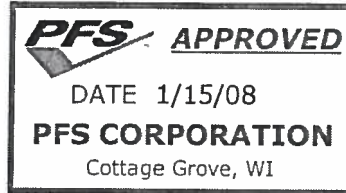
LOAD CALCULATIONS:

$$P_n = q_h \times (GC_{pf1} - GC_{pe1}) \times P_n \text{ psf}$$

EXAMPLE:

$$P_{n1} = q_h \times (GC_{pf1} - GC_{pe1}) \times P_n \text{ psf} = (25.74) \times (-0.86) - (0.18) = -26.80 \text{ psf}$$

$$P_{n1} = q_h \times (GC_{pf1} - GC_{pe1}) \times P_n \text{ psf} = (25.74) \times (-0.86) - (0.18) = -17.53 \text{ psf}$$



FIELD:	P_n	=	-26.80	psf
FIELD:	P_n	=	-17.53	psf
EDGE:	P_n	=	-33.24	psf
EDGE:	P_n	=	-23.97	psf
OVERHANG:	P_n	=	-53.83	psf
OVERHANG:	P_n	=	-44.56	psf
DOWNWARD:	P_{n3}	=	1.72	psf
DOWNWARD:	P_{n3}	=	10.98	psf

USE	-26.80	psf	WIND LOAD FOR FIELD.
USE	-33.24	psf	WIND LOAD FOR EDGE
USE	-53.83	psf	WIND LOAD FOR OVERHANG
USE	10.98	psf	DOWNWARD WIND LOAD

THE MAXIMUM UPLIFT LOAD FOR 130 mph WIND (COMPONENTS AND CLADDING) IS -53.83 psf

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

LATERAL LOADS:

	COMP. & CLADDING (psf)
FIELD	-30.66
EDGE	-35.10

UPLIFT LOADS:

	COMP. & CLADDING (psf)
FIELD	-26.80
EDGE	-33.24
OVERHANG	-53.83

#91670

PAGE 22 OF 29

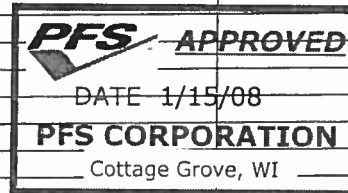
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PRODUCT APPROVAL SCHEDULE

Manufacturer: NATIONWIDE CUSTOM HOMES **Plan #** HICKORY II #91670

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 PGT INDUSTRIES	3068 & 6068 DOORS	FL1170 R1
Swinging		3068 & 6069 DOORS(Impact)	FL253-R3/R-4
Sliding	WEST WINDOW PGT INDUSTRIES	6068 SLIDING GLASS DOOR	FL 4933
Sliding		SLIDING GLASS DOOR(Impact)	FL251-R4
Sectional			
Roll-up			
Automatic			
Other			
WINDOWS			
Single Hung	WEST WINDOW PGT INDUSTRIES	VINYL SINGLE HUNG	FL 5410
Single Hung		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 PGT INDUSTRIES	VINYL FIXED	FL 5064/FL5413
Fixed		ALUMINUM FIXED (IMPACT)	FL 243-R4
Awning			
Pass-through			
Projected			
Mullion			
Wind Breaker			
Dual Action			
Other			
PANEL WALL			
Siding	JAMES HARDIE VARIFORM (GP)	HARDI-PLANK SIDING	FL889-R2
Siding (Vinyl)		VINYL SIDING	FL2224-R1
Soffits			
EIFS			
Storefronts			
Curtain Walls			
Wall Louver			
Glass Block			
Membrane			
Greenhouse			
Other			



#91670

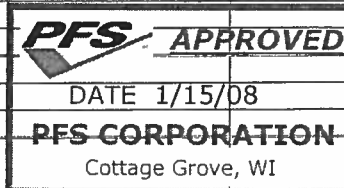
PAGE 23 OF 29

PRODUCT APPROVAL SCHEDULE

Manufacturer: NATIONWIDE CUSTOM HOMES

Plan # HICKORY II #91670

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	SENCO	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			
Accordion	N/A		
Bahama			
Storm Panels			
Colonial			
Roll-up			
Equipment			
Others			
SKYLIGHTS			
Skylight			
Other			
STRUCTURAL COMPONENTS			
Wood Connector/Anchor	SIMPSON	CS22 GA. STRAP LSTA 9 STRAP LSTA12 STRAP LSTA15 STRAP LSTA18 STRAP LSTA21 STRAP LSTA 24 STRAP	FL1901-R3 Ref. 1901.7 Ref. 1901.37 Ref. 1901.30 Ref. 1901.31 Ref. 1901.32 Ref. 1901.33 Ref. 1901.34
Truss Plates			



#91670

PAGE 29 OF 29

Engineered Lumber	GA. PACIFIC	LAMINATED BEAM	FL 1008 R1
Railing			
Coolers & Freezers			
Concrete Admixtures			
Material			

PRODUCT APPROVAL SCHEDULE

Manufacturer: NATIONWIDE CUSTOM HOMES Plan # HICKORY II #91670

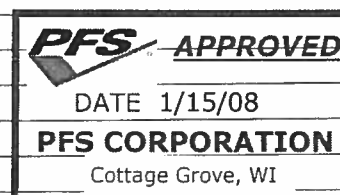
Category	Manufacturer	Product Description	Approval #(s)
STRUCTURAL COMPONENTS (cont.)			
Insulation Forms			
Plastics			
Deck & Roof			
Wall			
Sheds			
Others			
NEW EXTERIOR ENVELOPE PRODUCTS			

#91670

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.

PAGE 25 OF 29



Manufacturer's Authorized Agent Signature

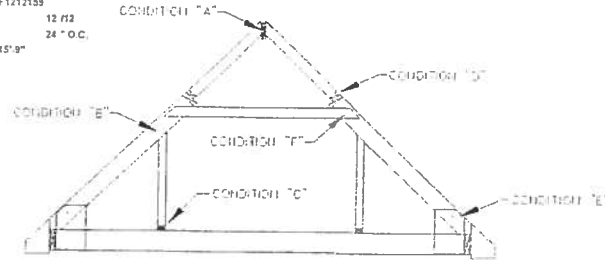
EDWARD WILLIAMS
Printed Name

12/19/07
Date

CONNECTIONS
TRUSS FRAMING

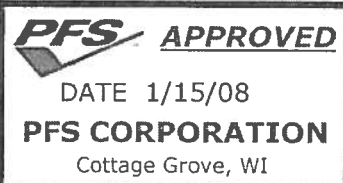
NATIONWIDE CUSTOM HOMES

PROJECT NUMBER: 076632
TRUSS NUMBER: F1212159
TRUSS PITCH: 12 /12
TRUSS SPACING: 24" O.C.
TRUSS SPAN: 15' 9"



DESIGN LOADS:

	2025 PSF	3015 PSF
GSL	GSL	
BALANCED TC LL	113.45	118.84 psf
UNBALANCED TC LL (PER ASCE 7-02)	20.15	20.26 psf
DRIFTING (UNBALANCED SURCHARGE) TC LL (PER ASCE 7-05)	26.88	32.98 psf
OPPOSITE SIDE UNBALANCED TC LL (PER ASCE 7-05)	4.04	5.65 psf
DISTANCE "L" FOR SURCHARGE (PER ASCE 7-05)	4.16	4.68 ft
TC DL	10	psf
BC LL	110/20	psf
BC DL	10	psf
UPLIFT	47.68	psf FOR 130 mph
	* 20 psf MINIMUM USED	
	= 20 psf USED WHERE H > 42"	



CONNECTION SUMMARY 130 MPH WIND		
CONDITION	LOAD (lbs)	FASTENER(S)
"A" RIDGE BEAM		
TC TO RIDGE (N)	147.8	(2) 10 d NAILS INTO END GRAIN OF EACH RAFTER
RIDGE TO RIDGE (N)	147.8	15d AT 18" O.C. THROUGH RIDGE BEAM
TC TO RIDGE (T)	145.8	(2) 10 d NAILS TOE NAILED EACH END
ALT FASTENER TC TO RIDGE (T)	145.8	OR (1) SIMPSON LSTA5 STRAP w/ (8) 10 d NAILS
"B" KNEE WALL TO TOP CHORD	419.3	(4) 16 d NAILS TOE NAILED INTO RAFTER
ALT FASTENER WITH	419.3	OR (1) SIMPSON H8 TYAST STRAP w/ (10) 10 d NAILS
"C" KNEE WALL TO BOTTOM CHORD	414.1	(4) 16 d NAILS TOE NAILED EACH STUD
ALT FASTENER WITH	414.1	OR (1) SIMPSON H8 TYAST STRAP w/ (10) 10 d NAILS
"D" FLIP TO TOP CHORD		
TOP CHORD TO PLATE (N)	147.8	(2) 16 d NAILS THROUGH PLATES INTO TOP CHORDS
PLATE TO PLATE (N)	147.8	15d AT 22" O.C. THROUGH PLATES
TOP CHORD TO PLATE (T)	115.8	(2) 8 d NAILS EA. SIDE THROUGH SHEATHING
ALT FASTENER TOP CHORD TO PLATE (T) WITH	115.8	OR (1) SIMPSON LSTA5 STRAP w/ (8) 10 d NAILS
"E" HEEL		
GUSSET TO TC	776.3	(1) 1/2" BOLT (DOUBLE SHEAR, 1/2" SIDE PLATES)
GUSSET TO BC	854.9	(8) 16 d NAILS EACH SIDE
"F" COLLAR TIE		
COLLAR TIE TO TOP CHORD (T)	595	(4) 16 d NAILS EACH END

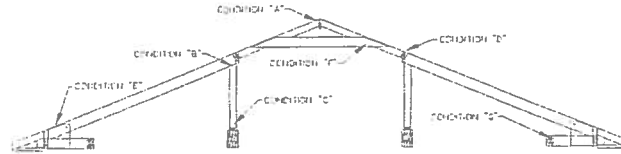
#91670

PAGE 27 OF 29

CONNECTIONS
TRUSS FRAMING

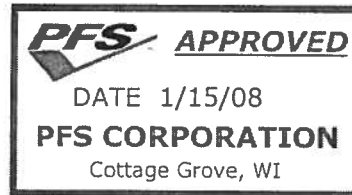
NATIONWIDE CUSTOM HOMES

PROJECT NUMBER 070622
TRUSS NUMBER LS1228
TRUSS PITCH 5 /12
TRUSS SPACING 24 " O.C.
TRUSS SPAN 28'-0"



DESIGN LOADS:

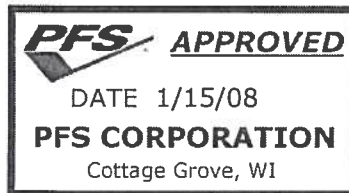
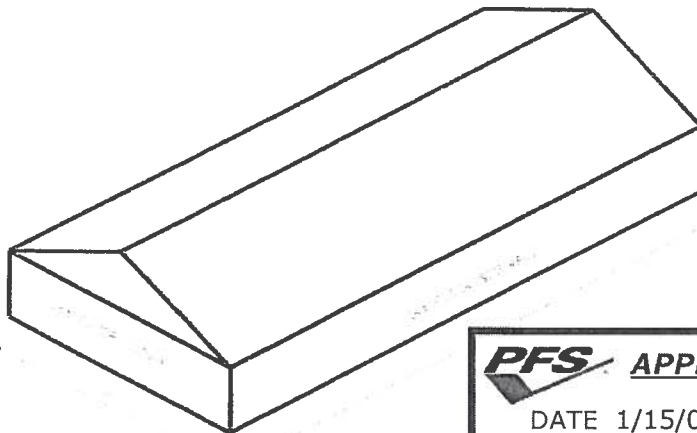
	2005 PSF	3005 PSF
	GSL	GDL
BALANCED TC LL (PER ASCE 7-02)	17.5	24.5
UNBALANCED TC LL (PER ASCE 7-02)	20.24	28.65
DRIFTING UNBALANCED SURCHARGE TC LL (PER ASCE 7-05)	17.25	24.89
OPPOSITE SIDE UNBALANCED TC LL (PER ASCE 7-05)	5.25	7.35
DISTANCE "L" FOR SURCHARGE (PER ASCE 7-05)	6.44	9.13
TC DL	10	psf
BC LL	10/20	psf
BC DL	10	psf
UPLIFT	57.13	psf FOR 130 mph
	* 20 psf MINIMUM USED	
	** 20 psf USED WHERE H ≥ 42"	



CONNECTION SUMMARY 130 MPH WIND			
CONDITION	LOAD (lbs)	FASTENER(S)	
"A" - RIDGE BEAM	TC TO RIDGE (V)	171.9	(3) 10 d NAILS INTO END GRAIN OF EACH RAFTER
	RIDGE TO RIDGE (V)	171.9	10d AT 16 " O.C. THROUGH RIDGE BEAM
	TC TO RIDGE (T)	193.2	(2) 10 d NAILS TOE NAILED EACH END
	ALT FASTENER TC TO RIDGE (T)	193.2	OR (1) SIMPSON LSTA5 STRAP w/ (8) 10 d NAILS
"B" - KNEE WALL TO TOP CHORD		530.8	(4) 16 d NAILS TOE NAILED INTO RAFTER
	ALT FASTENER	530.8	OR (1) SIMPSON HB TWIST STRAP w/ (10) 10 d NAILS
	WITH		(0) 16 d NAILS TOE NAILED IN ADDITION TO STRAPS
"C" - KNEE WALL TO BOTTOM CHORD		528.5	(4) 16 d NAILS TOE NAILED EACH STUD
	ALT FASTENER	528.5	OR (1) SIMPSON HB TWIST STRAP w/ (10) 10 d NAILS
	WITH		(0) 16 d NAILS TOE NAILED IN ADDITION TO STRAPS
"D" - FLIP TO TOP CHORD	TOP CHORD TO PLATE (V)	153.2	(2) 16 d NAILS THROUGH PLATES INTO TOP CHORDS
	PLATE TO PLATE (V)	153.2	16d AT 21 " O.C. THROUGH PLATES
	TOP CHORD TO PLATE (T)	1007.4	(11) 8 d NAILS EA. SIDE THROUGH SHEATHING
	ALT FASTENER TOP CHORD TO PLATE (T)	1007.4	OR (1) SIMPSON LSTA30 STRAP w/ (22) 10 d NAILS
	WITH		(0) 8 d NAILS EACH SIDE IN ADDITION TO STRAP
"E" - HEEL	GUSSET TO TC	399	(1) 1/2" BOLT (DOUBLE SHEAR 3/8" SIDE PLATES)
	GUSSET TO BC	436.5	(0) 16 d NAILS EACH SIDE
"F" - COLLAR TIE		531.5	(4) 16 d NAILS EACH SIDE
	COLLAR TIE TO TOP CHORD (T)	531.5	(5) 16 d NAILS EACH END
"G" - BOTTOM CHORD TO CENTER GIRDER			
	BC TO CENTER GIRDER (T)	426.5	(3) 16 d NAILS TOE NAILED IN ADDITION TO HANDERS
	ALT FASTENER BC TO CG (T)	436.5	OR (1) SIMPSON LSTA5 STRAP w/ (8) 10 d NAILS
	ALT FASTENER BC TO CG (SHEATHING) (T)	429.5	OR (4) 16 d NAILS EA. SIDE OF CENTER GIRDER

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES



BUILDING INFORMATION:

JOB NUMBER = 071343
PLAN NAME = HICKORY II
CONTRACT NUMBER = 91670
FIRST FLOOR LENGTH (W₁) = 47.5 ft
FIRST FLOOR LENGTH (L₁) = 40 ft
TRUSS SPACING (TOC) = 24 in
STUD SPACING (SOC) = 16 in
MAX UNRESTRAINED OPENING HEIGHT = 6.75 ft
WIND SPEED (V_{3S}) = 130 mph
WIND EXPOSURE = B
MEAN ROOF HEIGHT ADJUSTMENT FACTOR (C_{MPD}) = 1
WALL HEIGHT ADJUSTMENT FACTOR (C_{WH}) = H / 8 = 1

SHEARWALL SUMMARY:

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

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

PAGE 29.1 OF 29

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Page 1 of 12
1/7/2008

ALL HIGH WIND ZONE
STRAPS TO BE FLORIDA

Handwritten notes:
1/13/08
Applies to
29.1-29.1

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

CONNECTION SUMMARY: CONNECTIONS TO BE AS SPECIFIED OR EQUIVALENT

UPLIFT CONNECTIONS

REQUIRED TRUSS TIE DOWN USE A SIMPSON H10 EACH TRUSS

1ST FLOOR STUD TO TOP PLATE USE A 1 5" x 26 ga STRAP w/ (12) 16 ga STAPLES EACH END, EACH STUD

1st FLOOR STUD TO FLOOR BAND USE A 1 5" x 26 ga STRAP w/ (12) 16 ga STAPLES EACH END, EACH STUD

FLOOR BAND TO SILL PLATE CONNECTION USE A 1 5" x 26 ga STRAP w/ (12) 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 (5) 0 131" x 2 5" COMMON NAIL (TOENAILED) PER TRUSS

PLATE TO PLATE CONNECTION ATTACH WITH 0 131" x 2 5" COMMON NAIL (FACE NAILED) AT 6" ON CENTER

PLATE TO STUD CONNECTION USE (4) 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 6" ON CENTER

HORIZONTAL FLOOR DIAPHRAGM CONTINUITY

FIRST FLOOR

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND (ALONG MAT
USE A MIN. OF (6) 1/2" DIA THRU BOLTS

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND (AT ENDWALLS)
USE A 1 5" x 20 ga STRAP w/ (23) 16 ga STAPLES EACH END

SHEAR CONNECTIONS

FIRST FLOOR ENDWALL

RIMBAND TO SILL PLATE CONNECTION USE 0 162" x 3 5" COMMON NAIL (TOENAILED) @ 10" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION USE 1/2" ANCHOR BOLTS @ 68" O C
OR USE 5/8" ANCHOR BOLTS @ 72" O C

FIRST FLOOR SIDEWALL

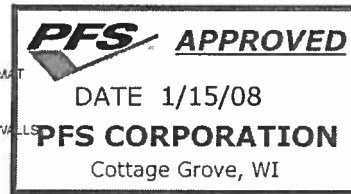
RIMBAND TO SILL PLATE CONNECTION USE 0 162" x 3 5" COMMON NAIL (TOENAILED) @ 7" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION USE 1/2" ANCHOR BOLTS @ 45" 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 @ 37" ON CENTER
OR USE (3) 1/4" DIA. LAG SCREWS



#91670

PAGE 29.2 OF 87

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Page 2 of 12
1/7/2008

ALL HIGH WIND ZONE
STRAPS TO BE FLORIDA

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

APPLICABILITY LIMITATIONS:

MEAN ROOF HEIGHT (MRH) =	28.6 ft
NUMBER OF STORIES =	1
FIRST FLOOR WIDTH (W ₁) =	47.5 ft
FIRST FLOOR LENGTH (L ₁) =	40 ft
BUILDING ASPECT RATIO (L/W) =	0.84
FLOOR JOIST DEPTH =	9.25 in
MAX. VERTICAL FLOOR OFFSET =	0 in
FLOOR ASPECT RATIO (L/W) =	0.84
MAX. FLOOR DIAPHRAGM OPENING WIDTH =	3 ft
MAX. FLOOR DIAPHRAGM OPENING LENGTH =	2 ft
FIRST FLOOR HEIGHT (H ₁) =	8 ft
CEILING ASPECT RATIO (L/W) =	0.84
MIN. SHEARWALL SEGMENT (H / 3.5) =	2.29 ft
ROOF PITCH =	12 / 12



DESIGN MEETS LIMITATIONS OF THE WFCM METHODOLOGY

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/ (48) 16 ga STAPLES EACH END	Z = 2600 lbs

PAGE 29.3 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

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 = 8660 lbs
1/2" DIA. THRU BOLT	
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 =	15.75 ft
TRUSS SPACING (TOC) =	24 in
STUD SPACING (SOC) =	16 in
FIRST FLOOR HEIGHT (H ₁) =	8 ft

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

AT 24" =	323 plf
AT 36" =	459 plf

AT 15.75' (wup) = 230 plf

$$w_{up} = w_{dl} + C_{wtr} + C_{wst} =$$

$$w_{up} = 230 \text{ plf} + 1 =$$

$$w_{up} = 230 \text{ plf}$$

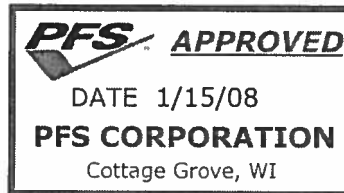
REQUIRED TRUSS TIE DOWN:

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

$$P_{up} = 230 \text{ plf} \times 24 \text{ in} / 12 =$$

$$P_{up} = 459 \text{ lbs}$$

USE A SIMPSON H10 EACH TRUSS
OR CONNECTION TO WITHSTAND AN UPLIFT FORCE OF 459 lbs



#91670

PAGE 29 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

REQUIRED SIDEWALL STUD TIE DOWN LOADING:

1ST FLOOR STUD TO TOP PLATE	$P_{1p} = w_{1p} \cdot \text{SOC} =$	$230 \cdot 16 / 12 =$	306 lbs
1st FLOOR STUD TO FLOOR BAND	$P_{1b} = P_{1p} - 0.6 \cdot \text{WDL} \cdot H_1 \cdot \text{SOC} =$		
	$P_{1b} = 306 \text{ lbs} - 0.6 \cdot 12 \text{ psf} \cdot 8 \text{ ft} \cdot 16 \text{ in} / 12 =$		229 lbs

USE A 1.5" x 26 ga. STRAP w/ (12) 16 ga STAPLES EACH END, EACH STUD OR EQUAL OR CONNECTION TO WITHSTAND AN UPLIFT FORCE OF 306 lbs

SIDEWALL 1st FLOOR BAND TO SILL PLATE CONNECTION:

SIDEWALL UPLIFT AT SILL PLATE	$w_{up} = P_{1b} / \text{SOC} - 0.5 \cdot \text{FDL} \cdot W_1 / 4 =$	
	$w_{up} = 229 \text{ lbs} \cdot 12 / 16 \text{ in} - 0.5 \cdot 10 \text{ psf} \cdot 47.5 \text{ ft} / 4 =$	
	$w_{up} =$	101 plf

CHECK STRAP AT ANCHOR BOLT LOCATIONS:

1/2" ANCHOR BOLT SPACING (BOC) =	45 in
$P_{ap} =$	$w_{up} \cdot \text{BOC} = 101 \text{ plf} \cdot 45 =$
	377 plf

USE A 1.5" x 26 ga. STRAP w/ (12) 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 377 lbs

CHECK BENDING IN RIMBAND:

DBL 2x10 SPF #2 RIMBAND DESIGN VALUES

SECTION MODULUS (S) =	42.66 in ³
ALLOWABLE BENDING (fb) =	875 psi

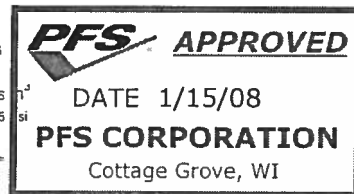
$$M_{MAX} = \frac{w_{up} \cdot \text{BOC}^2}{8} =$$

$M_{MAX} =$	$101 \text{ plf} \cdot (45 / 12)^2 =$	2123 in-lbs
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APPLIED fb =	$\frac{M_{MAX}}{S} = \frac{2123 \text{ in-lbs}}{42.66 \text{ in}^3} =$	50 psi
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ALLOWABLE BENDING (fb) =	875 psi	>	APPLIED fb =	50 psi
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DBL 2x10 SPF #2 RIMBAND IS OK



#91670

PAGE 29.5 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

LATERAL LOAD AT ROOF/CEILING DIAPHRAGM

ROOF SPAN = 15.75 ft
ROOF PITCH = 12 / 12

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

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

AT 15.75' (wl-perp) = 250 plf

$$W_{l-perp} = W_{l-perp} \cdot C_{uRH} \cdot C_{vRH} =$$

$$W_{l-perp} = 250 \text{ plf} \cdot 1 \cdot 1 =$$

$$W_{l-perp} = 250 \text{ plf}$$

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

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

AT 15.75' (wl-para) = 156 plf

$$W_{l-para} = W_{l-para} \cdot C_{uRH} \cdot C_{vRH} =$$

$$W_{l-para} = 156 \text{ plf} \cdot 1 \cdot 1 =$$

$$W_{l-para} = 156 \text{ plf}$$

LATERAL LOAD AT FLOOR DIAPHRAGM

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

FL_{l-perp} = 257 plf

$$FL_{l-perp} = FL_{l-perp} \cdot C_{uRH} \cdot C_{vRH} =$$

$$FL_{l-perp} = 257 \text{ plf} \cdot 1 \cdot 1 =$$

$$FL_{l-perp} = 257 \text{ plf}$$

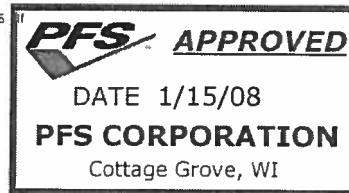
WIND PARALLEL TO RIDGE: (TABLE 2.5B, 2001 WFCM)

FL_{l-para} = 175 plf

$$FL_{l-para} = FL_{l-para} \cdot C_{uRH} \cdot C_{vRH} =$$

$$FL_{l-para} = 175 \text{ plf} \cdot 1 \cdot 1 =$$

$$FL_{l-para} = 175 \text{ plf}$$



Page 6 of 12
1/7/2008

ALL HIGH WIND ZONE
STRAPS TO BE FLORIDA
APPROVED OR EQUIVALENT

#91670

PAGE 29.6 OF 29

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)

$$\begin{aligned} W_{1.000} &= 155 \text{ plf} \\ W_{1.000} &= W_{1.000} \cdot C_{UPH} = 155 \text{ plf} \cdot 1 = 155 \text{ plf} \\ \text{MULTIPLIER @ 24" O.C. (M}_{24}\text{)} &= 2 \\ \text{MULTIPLIER @ 16" O.C. (M}_{16}\text{)} &= 1.33 \end{aligned}$$

TRUSS TO TOP PLATE CONNECTION:

$$P_C = W_{1.000} \cdot M_{24} = 155 \text{ plf} \cdot 2 = 310 \text{ lbs}$$

$$\# \text{ OF } 0.131" \times 2.5" \text{ COMMON NAIL (TOENAILED) REQUIRED} = \frac{P_C}{Z} = \frac{310 \text{ lbs}}{74 \text{ lbs}} = 5 \text{ NAILS}$$

USE (5) 0.131" x 2.5" COMMON NAIL (TOENAILED) PER TRUSS

PLATE TO PLATE CONNECTION:

$$\text{SPACING OF } 0.131" \times 2.5" \text{ COMMON NAIL (FACE NAILED)} = \frac{Z \cdot 12}{W_{1.000}} = \frac{90 \text{ lbs} \cdot 12}{155 \text{ plf}} = 6 \text{ in O.C.}$$

ATTACH WITH 0.131" x 2.5" COMMON NAIL (FACE NAILED) AT 6" ON CENTER

PLATE TO STUD CONNECTION:

$$P_C = W_{1.000} \cdot M_{16} = 155 \text{ plf} \cdot 1.33 = 206 \text{ lbs}$$

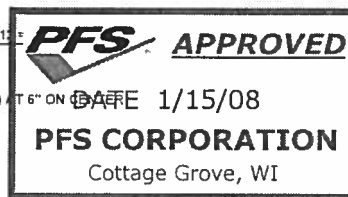
$$\# \text{ OF } 0.131" \times 2.5" \text{ COMMON NAIL (ENDNAILED) REQUIRED} = \frac{P_C}{Z} = \frac{206 \text{ lbs}}{60 \text{ lbs}} = 4 \text{ NAILS}$$

USE (4) 0.131" x 2.5" COMMON NAIL (ENDNAILED) PER STUD

BOTTOM PLATE TO FLOOR CONNECTION:

$$\text{SPACING OF } 0.131" \times 2.5" \text{ COMMON NAIL (FACE NAILED)} = \frac{Z \cdot 12}{W_{1.000}} = \frac{90 \text{ lbs} \cdot 12}{155 \text{ plf}} = 6 \text{ in O.C.}$$

ATTACH WITH 0.131" x 2.5" COMMON NAIL (FACE NAILED) AT 6" ON CENTER



#91670

PAGE 29 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

FIRST FLOOR ENDWALL SHEATHING LENGTH REQUIREMENTS

FIRST FLOOR WIDTH (W_1) = 47.5 ft
 FIRST FLOOR LENGTH (L_1) = 40 ft
 SHEARWALL TYPE 7/16" OSB EXTERIOR (BLOCKED) w/ 1/2" GWS INTERIOR
 SHEATHING EDGE AND NAIL SPACING = 6 in O.C. (8d NAILS OR EQUIVALENT)
 SHEARWALL STRENGTH (V) = 436 plf (TABLE 3.17D, 2001 WFCM)
 MIN. SHEARWALL SEGMENT LENGTH = 2.3 ft
 FULL HEIGHT SHEATHING PROVIDED = 18.95 ft
 1st FL. PERCENT FULL HEIGHT SHEATHING = 40 %
 1st FL. MAX. UNRESTRAINED OPENING HEIGHT = 6.75 ft
 1st FL. PERFORATED ADJUSTMENT FACTOR (C_p) = 1.56 (TABLE 3.17E, 2001 WFCM)
 1st FL. NUMBER OF SHEARWALLS (N_{end}) = 2

$$\text{SHEARWALL REACTION } (R_{end}) = L_1 \cdot W_{1per} / N_{end} = 5004 \text{ lbs}$$

$$R_{end} = 40 \text{ ft} \cdot 250 \text{ plf} / 2 = 5004 \text{ lbs}$$

$$\text{MIN. LENGTH SEGMENTED SHEARWALLS } (L_{seg}) = R_{end} / V = 5004 \text{ lbs} / 436 \text{ plf} = 11.5 \text{ ft}$$

$$\text{PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (ENDWALL)} = C_p \cdot L_{seg} = 11.5 \text{ ft} \cdot 1.56 = 17.9 \text{ ft}$$

PERFORATED FULL HEIGHT SHEATHING REQUIRED = 17.9 ft < PERFORATED FULL HEIGHT SHEATHING PROVIDED = 18.95 ft

ENDWALL SHEARWALLS OK
 ALL EXTERIOR SHEATHING TO BE BLOCKED UNO

FIRST FLOOR HORIZONTAL FLOOR DIAPHRAGM CONTINUITY:

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

$$V_1 = \frac{(3 \cdot F_{1per} / 4) \cdot L}{2} = \frac{3 / 4 \cdot 257 \text{ plf} \cdot 40 \text{ ft}}{2} = 3855 \text{ lbs}$$

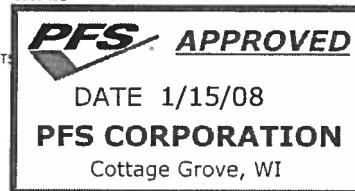
$$\# \text{ 1/2" DIA. THRU BOLT} = \frac{V_1}{Z_{1/2 \text{ BOLT}}} = \frac{3855 \text{ lbs}}{725 \text{ lbs}} = 5.32 \approx 6 \text{ BOLTS}$$

USE A MIN. OF (6) 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)

$$T = \frac{(3 \cdot F_{1per} / 4) \cdot (L / 2)}{4} = \frac{3 / 4 \cdot 257 \text{ plf} \cdot 40 \text{ ft} / 2}{4} = 964 \text{ lbs}$$

USE A 1.5" x 20 ga. STRAP w/ (23) 16 ga. STAPLES EACH END
 TO ATTACH MODULE TO MODULE AT EACH ENDWALL
 OR CONNECTION TO WITHSTAND AN TENSILE FORCE OF 964 lbs



#91670

PAGE 29.8 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

FIRST FLOOR ENDWALL: UPLIFT DUE TO OVERTURNING

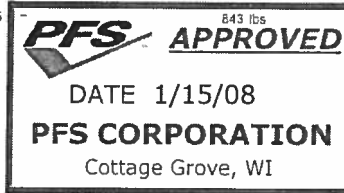
FIRST FLOOR WIDTH (W_1) = 47.5 ft
SHEARWALL REACTION (R_{rest}) = 5004 lbs
WALL HEIGHT (H) = 8 ft

UPLIFT FORCE (U_{E1}) = $R_{\text{rest}} \cdot H / W_1$
 $U_{E1} = 5004 \text{ lbs} \cdot 8 \text{ ft} / 47.5$

SEE PAGE 12 FOR CONNECTION DESIGN

FIRST FLOOR ENDWALL: SHEAR CONNECTIONS

FIRST FLOOR WIDTH (W_1) = 47.5 ft
FIRST FLOOR LENGTH (L_1) = 40 ft
 $FL_{\text{per}} = 257 \text{ plf}$
 $W_{\text{per}} = 250 \text{ plf}$
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:

$LAT = (W_{\text{per}} + 3 \cdot FL_{\text{per}} / 4) = 443 \text{ plf}$
 $LAT = 250 \text{ plf} + 3 \cdot 257 \text{ plf} / 4 = 443 \text{ plf}$
 $V = LAT \cdot L / 2 = 443 \text{ plf} \cdot 40 \text{ ft} / 2 = 8859 \text{ lbs}$
TOENAILS PER FOOT = $V / Z / W = 8859 \text{ lbs} / 159 \text{ lbs} / 47.5 \text{ ft} = 1.2 \text{ NAILS / ft}$
TOENAIL SPACING = $12 / \# = 12 / 1.2 = 10" \text{ O.C.}$

USE 0.162" x 3.5" COMMON NAIL (TOENAILED) @ 10" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION:

1/2" ANCHOR BOLTS = $V / Z = 8859 \text{ lbs} / 1056 \text{ lbs} = 9 \text{ BOLTS}$
BOLT SPACING = $(W - 2) / (N - 1) = (47.5 \text{ ft} - 2) / (9 - 1) = 68 \text{ in}$
USE 1/2" ANCHOR BOLTS @ 68" O.C.
ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS
5/8" ANCHOR BOLTS = $V / Z = 8859 \text{ lbs} / 1488 \text{ lbs} = 6 \text{ BOLTS}$
BOLT SPACING = $(W - 2) / (N - 1) = (47.5 \text{ ft} - 2) / (6 - 1) = 72 \text{ in}$

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

Page 9 of 12
1/7/2008

ALL HIGH WIND ZONE
STRAPS TO BE FLORIDA
APPROVED OR EQUIT.

#91670

PAGE 28.4 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES

FIRST FLOOR SIDEWALL SHEATHING LENGTH REQUIREMENTS

FIRST FLOOR WIDTH (W_1) = 47.5 ft
 FIRST FLOOR LENGTH (L_1) = 49 ft
 SHEARWALL TYPE, 7/16" OSB EXTERIOR (UNBLOCKED) w/ 1/2" GWB INTERIOR
 SHEATHING EDGE 8d NAIL SPACING = 6 in O.C. (8d NAILS OR EQUIVALENT)
 SHEARWALL STRENGTH (V) = 330 plf (TABLE 3.17D, 2001 WFCM)
 MIN. SHEARWALL SEGMENT LENGTH = 2.3 ft
 FULL HEIGHT SHEATHING PROVIDED = 24 ft
 1st FL. PERCENT FULL HEIGHT SHEATHING = 60 %
 1st FL. MAX. UNRESTRAINED OPENING HEIGHT = 2.3 ft
 1st FL. PERFORATED ADJUSTMENT FACTOR (C_p) = 1.54 (TABLE 3.17E, 2001 WFCM)
 1st FL. NUMBER OF SHEARWALLS (N_{side}) = 2

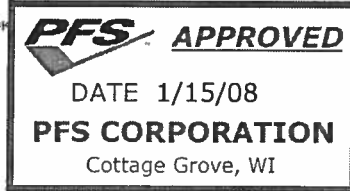
SHEARWALL REACTION (R_{side1}) = $W_1 \cdot W_{1(side)} / N_{side}$
 $R_{side1} = 47.5 \text{ ft} \cdot 156 \text{ plf} / 2 = 3693 \text{ lbs}$

MIN. LENGTH SEGMENTED SHEARWALLS (L_{seg}) = $R_{side1} / V = 3693 \text{ lbs} / 330 \text{ plf} = 11.2 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING LENGTH REQUIRED (SIDEWALL) = $C_p \cdot L_{seg} = 1.54 \cdot 11.2 = 17.2 \text{ ft}$

PERFORATED FULL HEIGHT SHEATHING REQUIRED = 17.23 ft < PERFORATED FULL HEIGHT SHEATHING PROVIDED = 24 ft

SIDEWALL SHEARWALLS OK



FIRST FLOOR SIDEWALL: UPLIFT DUE TO OVERTURNING

FIRST FLOOR WIDTH (W_1) = 47.5 ft
 FIRST FLOOR LENGTH (L_1) = 49 ft
 SHEARWALL REACTION (R_{side1}) = 3693 lbs
 WALL HEIGHT (H) = 8 ft

UPLIFT FORCE (U_{E1}) = $R_{side1} \cdot H / L_1$
 $U_{E1} = 3693 \text{ lbs} \cdot 8 \text{ ft} / 49 \text{ ft} = 739 \text{ lbs}$

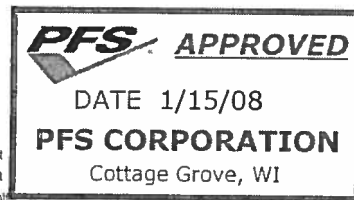
SEE PAGE 12 FOR CONNECTION DESIGN

#91670

PAGE 29 OF 29

SHEARWALL DESIGN
(per 2001 WFCM)

NATIONWIDE CUSTOM HOMES



FIRST FLOOR SIDEWALL: SHEAR CONNECTIONS

FIRST FLOOR WIDTH (W_1) =	47.5 ft
FIRST FLOOR LENGTH (L_1) =	40 ft
FL_{sides} =	257 plf
W_{sides} =	250 plf
1/2" ANCHOR BOLT	Z = 1055 lbs
5/8" ANCHOR BOLT	Z = 1488 lbs
0.162" x 3.5" COMMON NAIL (TOENAIL)	Z = 159 lbs

RIMBAND TO SILL PLATE CONNECTION:

$$LAT = (W_{1sides} + 3 * FL_{sides} / 4) =$$

$$LAT = 250 \text{ plf} + 3 * 257 \text{ plf} / 4 = 450 \text{ plf}$$

$$V = LAT * W_1 / 2 = 450 \text{ plf} * 47.5 \text{ ft} / 2 = 10682 \text{ lbs}$$

$$\# \text{ TOENAILS PER FOOT} = V / Z / L_1 = 10682 \text{ lbs} / 159 \text{ lbs} / 40 \text{ ft} = 1.7 \text{ NAILS / ft}$$

$$\text{TOENAIL SPACING} = 12 / \# = 12 / 1.7 = 7" \text{ O.C.}$$

USE 0.162" x 3.5" COMMON NAIL (TOENAIL) @ 7" ON CENTER

SILL PLATE TO FOUNDATION CONNECTION:

$$\# 1/2" \text{ ANCHOR BOLTS} = V / Z = 10682 \text{ lbs} / 1055 \text{ lbs} = 11 \text{ BOLTS}$$

$$\text{BOLT SPACING} = (L - 2) / (N - 1) = (40 \text{ ft} - 2) / (11 - 1) = 45 \text{ in}$$

USE 1/2" ANCHOR BOLTS @ 45" O.C

ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS

$$\# 5/8" \text{ ANCHOR BOLTS} = V / Z = 10682 \text{ lbs} / 1488 \text{ lbs} = 8 \text{ BOLTS}$$

$$\text{BOLT SPACING} = (L - 2) / (N - 1) = (40 \text{ ft} - 2) / (8 - 1) = 72 \text{ in}$$

USE 5/8" ANCHOR BOLTS @ 72" O.C

ANCHOR BOLTS TO BE A MIN. OF 4" AND A MAX. OF 1'-0" FROM CORNERS

#91670

PAGE 29.11 OF 29

COMBINED CORNER HOLDDOWN REQUIREMENTS

UPLIFT FORCES: (SEE ABOVE FOR CALCULATIONS)

1st FLOOR ENDWALL UPLIFT FORCE (U_{E1}) = 843 lbs
1st FLOOR SIDEWALL UPLIFT FORCE (U_{S1}) = 739 lbs

DEAD LOADS:

FIRST FLOOR WIDTH (W_1) = 47.5 ft
FIRST FLOOR LENGTH (L_1) = 40 ft
FIRST FLOOR HEIGHT (H_1) = 8 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 = $0.6 \cdot RDL \cdot W_1 \cdot L_1 / 8 =$ 2138 lbs
ROOF DEAD LOAD = $0.6 \cdot 15 \text{ psf} \cdot 47.5 \text{ ft} \cdot 40 \text{ ft} / 8 =$
WALL DEAD LOAD = $0.6 \cdot (WDL \cdot H_1 \cdot L_1 / 2) =$
WALL DEAD LOAD = $0.6 \cdot 12 \text{ psf} \cdot 8 \text{ ft} \cdot 40 \text{ ft} / 2 =$ 1152 lbs
TOTAL DEAD LOAD = $1152 + 2138 =$ 3290 lbs

ENDWALL FIRST FLOOR CORNER:

WALL DEAD LOAD = $0.6 \cdot (WDL \cdot H_1 \cdot W_1 / 2) =$
WALL DEAD LOAD = $0.6 \cdot 12 \text{ psf} \cdot 8 \text{ ft} \cdot 47.5 \text{ ft} / 2 =$ 1368 lbs

FIRST FLOOR HOLDDOWNS

UPLIFT FORCE = 843 lbs (MAX. OF FIRST FLOOR UPLIFT FORCES)

FIRST FLOOR DEAD LOAD (DL_1) = $3290 \text{ lbs} + 1368 \text{ lbs} =$ 4658 lbs

HOLDDOWN FORCE = $843 \text{ lbs} - 4658 \text{ lbs} =$ -3815 lbs

NO PHYSICAL HOLDDOWN REQUIRED

FIRST FLOOR CORNER STUD CONNECTION

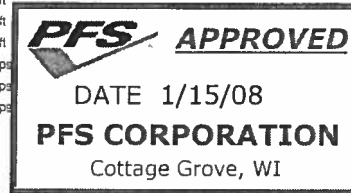
16d COMMON NAIL ALLOWABLE SHEAR (Z) = 159 lbs

UPLIFT FORCE = 843 lbs (MAX. OF FIRST FLOOR UPLIFT FORCES)

NAIL SPACING (2 ROWS) = $\frac{2 \cdot H \cdot Z}{U} = \frac{2 \cdot 8 \text{ ft} \cdot 159 \text{ lbs}}{843 \text{ lbs}} =$ 37 in O.C.

OF 1/4" DIA. LAG SCREW REQUIRED = $\frac{U}{Z} = \frac{843 \text{ lbs}}{320 \text{ lbs}} =$ 3 LAG SCREWS

FASTEN CORNER STUDS 2 ROWS OF 16d COMMON NAILS @ 37" ON CENTER
OR USE (3) 1/4" DIA. LAG SCREWS



#91670

PAGE 29.0 OF 29

HORIZONTAL DIAPHRAM CALCULATION

BUILDING INFORMATION:

JOB NUMBER = 071343
PLAN NAME = HICKORY II
CONTRACT NUMBER = 91670
DIAPHRAM LOCATION = KITCHEN
DIAPHRAM WIDTH (W_i) = 15.75 ft
DIAPHRAM OFFSET (L) = 7 ft
WALL HEIGHT (H) = 8 ft
TRUSS SPAN (W_T) = 15.75 ft
ROOF PITCH = 12 /12

WIND SPEED (V_{3S}) = 130 mph
EXPOSURE CATEGORY = B
MEAN ROOF HEIGHT ADJUSTMENT FACTOR (C_{MRH}) = 1
WALL HEIGHT ADJUSTMENT FACTOR (C_{VWH}) =

LATERAL LOAD AT ROOF/CEILING DIAPHRAGM

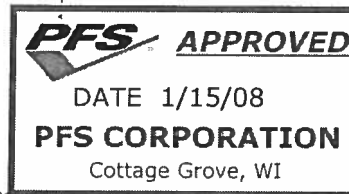
TRUSS SPAN (W_T) = 15.75 ft
ROOF PITCH = 12 /12

WIND : (TABLE 2.5B, 2001 ASCE 7)

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

AT 15.75' (w') = 250 plf

$w = w * C_{MRH} * C_{VWH} =$
 $w = 250 \text{ plf} * 1 * 1 =$
 $w = 250 \text{ plf}$



#91670

PAGE 29.13 OF 29

CHECK FIRST FLOOR CEILING DIAPHRAM

DIAPHRAM ASSEMBLY = 1/2" GVB (UNBLOCKED) w/ 7" EDGE SPACING

DIAPHRAM SHEAR CAPACITY (V)= 70 plf

$$W_{2st} = \frac{W \cdot L}{2 \cdot W} = \frac{250 \text{ plf} \cdot 7 \text{ ft}}{15.75 \text{ ft} \cdot 2}$$

$$W_{2st} = 56 \text{ plf}$$

$$W_{2st} = 56 \text{ plf} < V = 70 \text{ plf}$$

DIAPHRAM OK

INSTALL A DOUBLE BOTTOM CHORD IN LINE WITH EXTERIOR WALL OFFSET

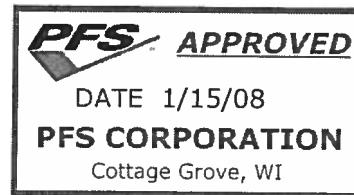
CHECK FIRST FLOOR CEILING MATE WALL CONNECTION

MODULE TO MODULE CONNECTION AT FLOOR RIMBAND: (ALONG MATE LINE)

$$V_f = \frac{W_{2st} \cdot W}{2} = \frac{56 \text{ plf} \cdot 15.75 \text{ ft}}{2} = 438 \text{ lbs}$$

$$\# \text{ 1/4" DIA. LAG BOLT} = \frac{V_f}{Z_{1/4 \text{ BOLT}}} = \frac{438 \text{ lbs}}{320 \text{ lbs}} = 2 \text{ BOLTS}$$

USE A MIN. OF (2) 1/4" DIA. LAG BOLTS
TO ATTACH MODULE TO MODULE ALONG MATE LINE AT KITCHEN
OR A CONNECTION TO WITHSTAND 438 lbs OF SHEAR



MODULAR HOME
CALCULATIONS

BARLOW ENGINEERING, P.C.

COLLECTOR - LIVING ROOM
MEMBER LENGTH 15.75 ft
EXPOSED BEAM

COLLECTOR: 2 x 8 SPF #2
COLLECTOR QUANTITY: 2 per (NO SPLICE ALLOWED)

DESIGN LOADS:

MAXIMUM COLLECTOR LOAD (P) 5004 lbs

DETERMINE HEADER SPAN:	AREA (A)=	21.75 in ²	SECTION MODULUS (S)=	28.282 in ³
	THICKNESS (b)=	3 in	ALLOW BENDING (F _b)=	875 psi
	DEPTH (d)=	7.25 in	ALLOW SHEAR (F _v)=	70 psi
	REPETITION FACTOR (C _r)=	1.15	MOMENT OF INERTIA (I)=	55.27 in ⁴
	SIZE FACTOR (C _t)=	1.05	COL BUCK COEF (K _c E)=	0.3
	MODULUS OF ELASTICITY (E)=	1.40E+06 psi	BEAM BUCK COEF (K _b E)=	0.438
	BUCK/CRUSH INTERACTION FACTOR (C)=	0.8 in	BUCK LGTH COEF (K _e)=	1
	ALLOW COMP PARALLEL (F _c)=	1150 psi	ALLOW COMP-PERP (F _c p)=	425 psi
	DURATION FACTOR (C _d)=	1.15		

DETERMINE THE NUMBER OF COLLECTORS (LATERALLY SUPPORTED) REQUIRED

COLLECTOR LENGTH (L) 189 in

MINIMUM NUMBER OF COLLECTORS (K_e x L)/d = 25.059 in F_c* = F_c x C_d x C_t = 1388.625 psi

F_cE = $\frac{K_c E x E}{(K_e L / D)^2}$ = 618.019 psi F_c' = F_c* x C_p = 546.9376 psi

COLUMN STABILITY FACTOR C_p = $1 - \frac{(F_c E / F_c')}{2C} - \sqrt{\left(\frac{(F_c E / F_c')^2}{2C} \right) (F_c E / F_c')} = 0.394$

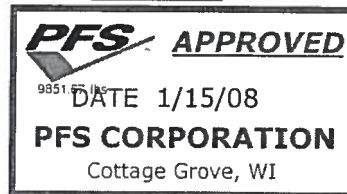
MINIMUM NUMBER OF COLLECTORS:

F_c' = F_c x C_p = 452.950 psi

P_{allow} = F_c' x A = 9851.671 lbs / COLLECTOR

ACT COLLECTOR LOAD (P) = 5004.000 lbs / COLLECTOR

CHECK LOADING (P vs P_{allow}) 5004.000 lbs < OK



#91670

PAGE 2415 OF 29

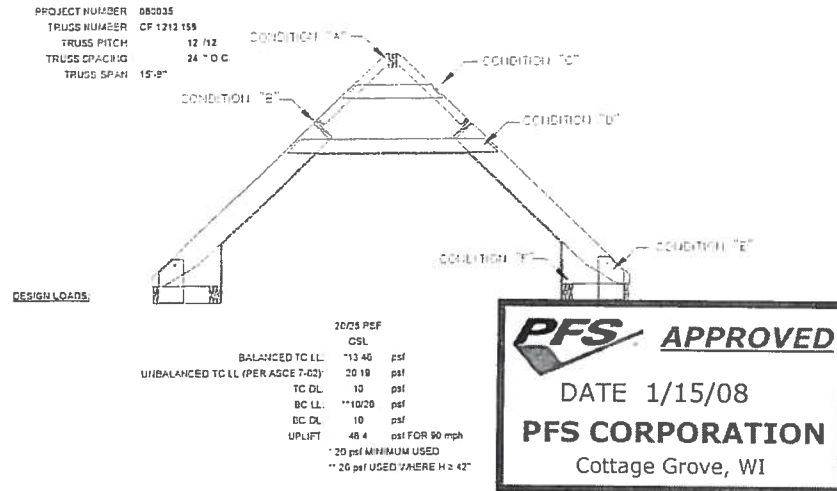
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1 OF 1
1/7/2008
ALL HIGH WIND ZONE
STRAPS TO BE FLORIDA
APPROVED OR EQUAL

Handwritten signature and date: 1/13/08

CONNECTIONS
TRUSS FRAMING

NATIONWIDE CUSTOM HOMES



CONNECTION SUMMARY DL + 130 mph WIND (LOAD14)		
CONDITION	LOAD (lbs)	FASTENER(S)
"A" : RIDGE BEAM	TC TO RIDGE (V)	43.7 (1) 10 d NAIL TOENAILED EACH CHORD INTO RIDGE
	AND	
	RIDGE TO RIDGE (V)	43.7 16d AT 24 " O C THROUGH RIDGE BEAM
	TC TO RIDGE (T)	43.7 (2) 10 d NAIL TOENAILED EACH CHORD INTO RIDGE
	AND	
	RIDGE TO RIDGE (T)	43.7 (2) 15 d NAIL THRU RIDGE MEMBERS AT 24" O C
"B" : TOP CHORDS TO FLIP	TC TO RIDGE (T) OR	
	RIDGE TO RIDGE (T)	43.7 (1) SIMPSON LSTA9 STRAP w/ (8) 10 d NAILS
	ALT FASTENER RIDGE TO RIDGE (T)	
	TC CHORD TO FLIP (T) OR	
"C" : COLLAR TIE UPPER	COLLAR TIE TO TOP CHORD (T)	227.4 (2) 16 d NAIL EACH END
	AND	
	COLLAR TIE TO TOP CHORD (T)	519.8 (3) 16 d NAIL EACH END
	AND	
"D" : COLLAR TIE LOWER	COLLAR TIE TO TOP CHORD (T)	519.8 (3) 16 d NAIL EACH END
	AND	
	COLLAR TIE TO TOP CHORD (T)	519.8 (3) 16 d NAIL EACH END
	AND	
"E" : HEEL	GUSSET TO TC	751.7 (1) 3/4" BOLT (DOUBLE SHEAR, 3/8" SIDE PLATES)
	AND	
	GUSSET TO BC	411.1 (3) 16 d NAIL EACH SIDE
	AND	
"F" : BOTTOM CHORD TO THRUST BEAM	BC TO THRUST BEAM (T) OR	
	ALTERNATE BC TO THRUST BEAM (T)	411.1 (1) SIMPSON LSTA9 STRAP w/ (8) 10 d NAILS
	AND	
	BC TO THRUST BEAM (V)	500.8 (3) 16 d NAIL EA. SIDE OF CONNECTION THRU SHEATHING
	AND	
	BC TO THRUST BEAM (V)	500.8 (1) SIMPSON L70 ANGLE w/ (8) 10 d NAILS EA. SIDE OF JOIST

Handwritten signature and date: 1/13/08