Columbia County Building Permit Application

For Office Use Only Application # 0710-30 Date Received 10/16/07 By GP Permit # 26351

Application Approved by - Zoning Official BLK Date 10.16.07 Plans Examiner _____ Date _____

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

Comments _____

☐ NOC ☐ EH ☐ Deed or PA ☑ Site Plan ☐ State Road Info ☐ Parent Parcel # ☐ Development Per

Fax _____

Name Authorized Person Signing Permit Gregory A. Bedenbaugh Phone (386) 623-1568

Address 390 SW Bedenbaugh Lane, Lake City, FL 32055

Owners Name Curtis J. Haynes Phone (386) 758-1935

911 Address 519 NW Crawford Court, White Springs, Fl

Contractors Name Top Flight Construction, Inc. Phone (386) 623-1568

Address -

Fee Simple Owner Name & Address N/A

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address Pat Haygood / Marty J. Humphries

Mortgage Lenders Name & Address N/A 7932 240th St. O'Brien, FL 32071

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

Property ID Number 13-2S-16-01603-120 Estimated Cost of Construction 225,000

Subdivision Name N/A Lot ____ Block ____ Unit ____ Phase ____

Driving Directions 41-N, turn (R) on Falling Creek, (L) on Lassie Black, (R) on Crawford Court, 4th Driveway on R.

Type of Construction Addition on SFD Number of Existing Dwellings on Property 1

Total Acreage 10 Lot Size 330X1330 Do you need a - Culvert Permit or Culvert Waiver or Have an Existing

Actual Distance of Structure from Property Lines - Front 90' Side 318' Side 43' Rear 1100'

Total Building Height 3' 2 5/8" Number of Stories 2 Heated Floor Area 3173.84 Roof Pitch 8/12 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 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 COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOU LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Owner Builder or Authorized Person by Notarized Letter

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me

this _____ day of _____ 20____.

Personally known_____ or Produced Identification_____

Notary Signature

Gregory A. Bedenbaugh
Contractor Signature
Contractors License Number CBC026998
Competency Card Number 10180
NOTARY STAMP/SEAL

Joyce L. Spradley

Notary Public State of Florida
Joyce L Spradley
My Commission DD636480
Expires 02/05/2011

(Revised Sept. 20

The called Engineer

WARRANTY DEED
INDIVID TO INDIVID

This Warranty Deed *Made the* 8th *day of* April *A. D. 19* 94 *by*
LENVIL H. DICKS, a married man not residing on the property described herein.

hereinafter called the grantor, to CURTIS J. HAYNES AND DANA L. HAYNES, his wife

whose postoffice address is Rt. 1, Box 215 H, Lake City, Florida 32055
hereinafter called the grantee:
(Wherever used herein the terms "grantor" and "grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

Witnesseth: *That the grantor, for and in consideration of the sum of $* 10.00 *and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee all that certain land situate in* Columbia *County, Florida, viz:* TOWNSHIP 2 SOUTH, RANGE 16 EAST
Section 13: A part of the West ½ of Section 13, Township 2 South, Range 16 East, being more particularly described as follows: Commence at the NE corner of the NW¼ of said Section 13 and run S 89°22'20" W, along the North line thereof, 2658.34 feet ot the NW corner of said Section 13; thence S 00°58'31" W, along the West line thereof, 331.73 feet for a POINT OF BEGINNING; thence N 89°22'06" E, 1330.22 feet; thence S 00°44'46" W, 331.67 feet; thence S 89°22'06" W, 1331.55 feet to the West line of said Section; thence N 00°58'31" E,331.73 feet to the POINT OF BEGINNING, Columbia County, Florida, containing 10.01 acres, more or less, subject to an existing maintained road right-of-way along the West line thereof. Subject to Restrictions as recorded in Official Records Book 728, Pages 723-724, and subject to Power Line Easement.
N.B. Title to the above described property includes such mineral rights as are owned by the Grantor, but title is given subject to the rights of various third parties who own fractional mineral right interests.

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

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

And *the grantor hereby covenants with said grantee that the grantor is lawfully seized of said land in fee simple; that the grantor has good right and lawful authority to sell and convey said land; that the grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 19 93.*

BK 0789 PG 0779

OFFICIAL RECORDS

DOCUMENTARY STAMP # 157.50
INTANGIBLE TAX —
P. DEWITT CASON, CLERK OF COURTS, COLUMBIA COUNTY
BY [signature] D.C.

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

Signed, sealed and delivered in our presence:

Witness [signature] EVA E. TIMMONS — [signature] LENVIL H. DICKS (L.S.)

Witness [signature] Shirley Hitson — (L.S.)

STATE OF Florida
COUNTY OF Columbia

I HEREBY CERTIFY that on this day, before me, an officer duly authorized in the State aforesaid and in the County aforesaid to take acknowledgments, personally appeared LENVIL H. DICKS

to me known to be the person /personally described in and who executed the foregoing instrument and he acknowledged before me that he executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this 8th day of April, A. D. 19 94

NOTARY PUBLIC [signature]
Eva E. Timmons

My Commission Expires
OFFICIAL NOTARY SEAL
EVA E TIMMONS
PUBLIC STATE OF FLORIDA
COMMISSION NO CC...
COMMISSION EXP AUG 7, 199?

SPACE BELOW FOR RECORDER'S USE

5185

FILED AND RECORDED IN PUBLIC RECORDS OF COLUMBIA COUNTY, FL
1994 APR 20 PM 1:55
P. DEWITT CASON, CLERK OF COURTS, COLUMBIA COUNTY
BY [signature] D.C.

This Instrument prepared by: Lenvil H. Dicks
Address: U. S. 90 West, Lake City, Florida 32055

CLERK CIRCUIT COURT — COLUMBIA COUNTY, FLORIDA

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.
DeWITT CASON, CLERK OF COURTS
By [signature] Deputy Clerk
Date October 11, 2007

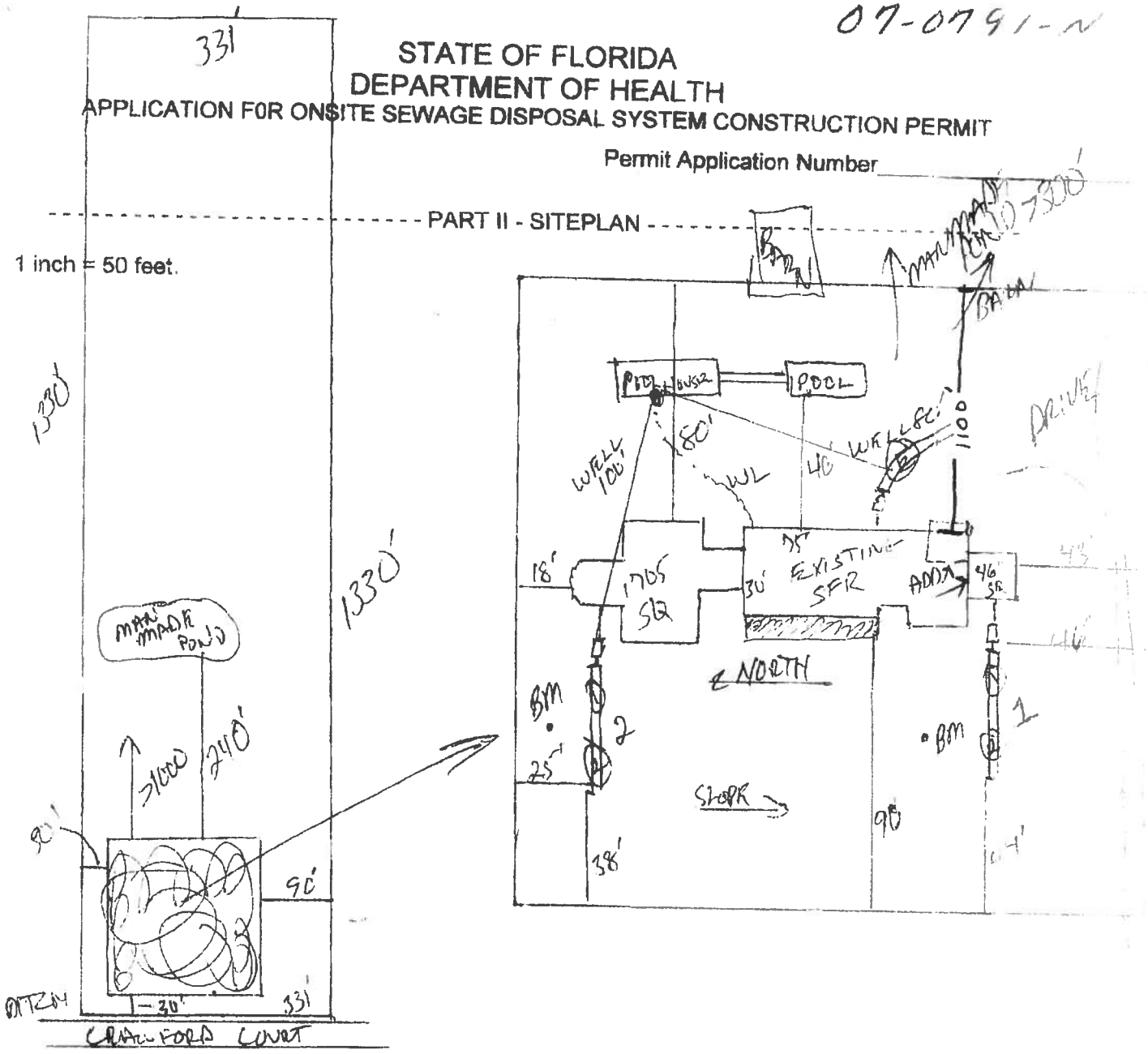
07-0791-N

STATE OF FLORIDA
DEPARTMENT OF HEALTH
APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number _____

PART II - SITEPLAN

Scale: 1 inch = 50 feet.



Notes: 1 of 10 Acres

Site Plan submitted by: Rock [illegible]

Plan Approved ✓ Not Approved _____

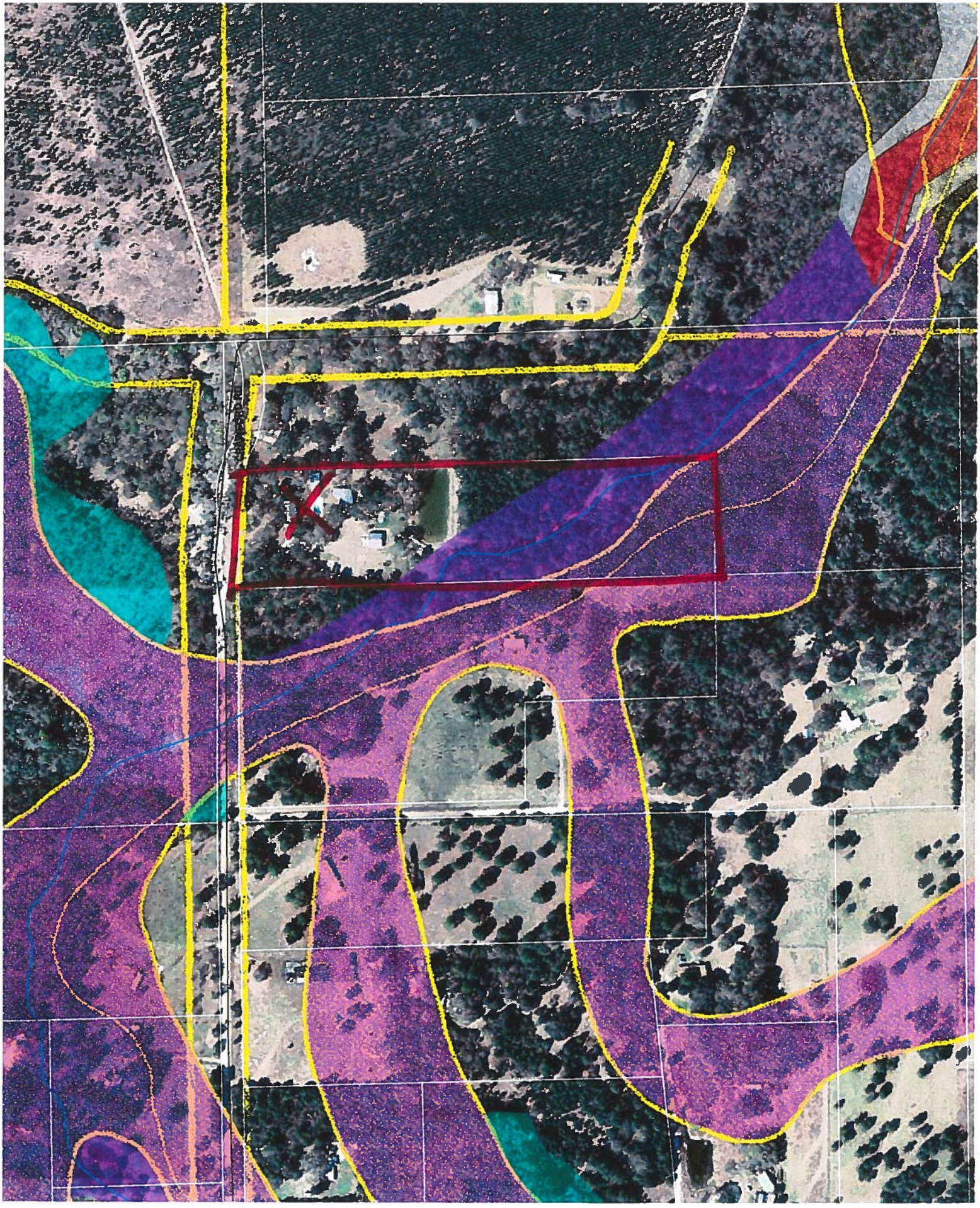
By [illegible] Columbia County Health Department

MASTER CONTRACTOR

Date 10-12-07

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

DH 4015, 10/96 (Replaces HRS-H Form 4016 which may be used)
(Stock Number: 5744-002-4015-6)



0710-30

NOTICE OF COMMENCEMENT

County Clerk's Office Stamp or Seal

Tax Parcel Identification Number 13-2S-16-01603-120

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)*: 13-2S-16-01603-120
   a) Street *(job)* Address: 519 NW Crawford Court
2. General description of improvements: Addition

3. Owner Information
   a) Name and address: Curtis J. & Dana L. Haynes / 519 NW Crawford Ct.
   b) Name and address of fee simple titleholder (if other than owner) N/A
   c) Interest in property N/A
4. Contractor Information
   a) Name and address: Top Flight Construction, Inc. 390 SW Bedenbaugh Lane
   b) Telephone No: 386-623-1568 Fax No. (Opt.)
5. Surety Information
   a) Name and address
   b) Amount of Bond: N/A
   c) Telephone No.: Fax No. (Opt.)
6. Lender
   a) Name and address: N/A
   b) Phone No.
7. Identity of person within the State of Florida designated by owner upon whom notices or
   a) Name and address: N/A
   b) Telephone No.: Fax

Inst:200712022992 Date:10/12/2007 Time:11:32 AM
DC,P.DeWitt Cason,Columbia County Page 1 of 1

8. In addition to himself, owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b) Florida Statutes:
   a) Name and address: N/A
   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)**: 10/11/07

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. Dana Haynes
Signature of Owner or Owner's Authorized Office/Director/Partner/Manager

Dana Haynes
Print Name

The foregoing instrument was acknowledged before me, a Florida Notary, this 12th day of October, 20 07, by:

_____ as _____ **(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 ____ Type _____

Notary Signature Joyce L. Spradley Notary Stamp or Seal:

Notary Public State of Florida
Joyce L Spradley
My Commission DD636480
Expires 02/05/2011

—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

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

Product Approval

USER: Public User

FL #	FL728-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	

Product Manufacturer	Elk Corporation
Address/Phone/Email	4600 Stillman Blvd. Tuscaloosa, AL 35401 (816) 350-1982 bryson.m@sbcglobal.net
Authorized Signature	Daniel DeJarnette daniel.dejarnette@elkcorp.com
Technical Representative	Daniel DeJarnette
Address/Phone/Email	4600 Stillman Blvd Tuscaloosa, AL 35401 (205) 342-0298 daniel.dejarnette@elkcorp.com
Quality Assurance Representative	Daniel DeJarnette
Address/Phone/Email	4600 Stillman Blvd Tuscaloosa, AL 35401 (205) 342-0298 daniel.dejarnette@elkcorp.com
Category	Roofing
Subcategory	Asphalt Shingles
Compliance Method	Certification Mark or Listing
Certification Agency	Miami-Dade BCCO - CER

Referenced Standard and Year (of Standard)	**Standard**	**Year**
	ASTM D3462	2001
	TAS 107	1995
	TAS100	1995

Equivalence of Product Standards Certified By	
Sections from the Code	1523.6.5.1

1523.6.5.1
1523.6.5.1

Product Approval Method	Method 1 Option A
Date Submitted	06/01/2005
Date Validated	06/13/2005
Date Pending FBC Approval	06/14/2005
Date Approved	06/29/2005

Summary of Products

FL #	Model, Number or Name	Description
728.1	Capstone	Laminated Asphalt Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** PTID_728_R1_I_Capstone Metro Dade NOA.pdf PTID_728_R1_I_CapstoneSpecSh1t.pdf PTID_728_R1_I_Prestique 1 Metro Dade NOA.pdf PTID_728_R1_I_Prestique Plus and Gallery NOA.pdf PTID_728_R1_I_Seal-A-Ridge Metro-Dade NOA.pdf PTID_728_R1_I_Starter Strip Metro-Dade NOA.pdf PTID_728_R1_I_Tuscaloosa Spec Sheet.pdf Verified By:
728.2	Prestique I	Laminated Asphalt Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:
728.3	Prestique Plus / Gallery Colle	Laminated Asphalt Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:
728.4	Seal-A-Ridge "SAR"	Accessory - Ridge Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:
728.5	Starter Strip	Accessory - Starter Course
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:

Product Approval

USER: Public User

FL #	FL1378-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	
Product Manufacturer	JORDAN WINDOWS and DOORS
Address/Phone/Email	4661 BURBANK ROAD MEMPHIS, TN 38118 (901) 866-2638 MIKE.DODDS@JORDANCOMPANY.COM
Authorized Signature	Dennis Braddy dkbraddy@gmail.com
Technical Representative	MICHAEL DODDS
Address/Phone/Email	4661 BURBANK ROAD MEMPHIS, TN 38118 (901) 363-2121 MIKE.DODDS@JORDANCOMPANY.COM
Quality Assurance Representative	
Address/Phone/Email	
Category	Windows
Subcategory	Single Hung
Compliance Method	Certification Mark or Listing
Certification Agency	American Architectural Manufacturers Association

Referenced Standard and Year (of Standard)	**Standard**	**Year**
	AAMA/NWWDA 101/I.S. 2-97	1997

Equivalence of Product Standards Certified By	
Sections from the Code	1707.4.2.1
Product Approval Method	Method 1 Option A

Date Submitted	09/16/2005
Date Validated	09/16/2005
Date Pending FBC Approval	09/23/2005
Date Approved	10/11/2005

Summary of Products

FL #	Model, Number or Name	Description
1378.1	2112	FIN FRAME H-LC35=48"X96"
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Per attached manufacturers installation insructions. Not for use HVHZ		**Certification Agency Certificate** **Installation Instructions** PTID_1378_R1_I_FL1378 Single Hung Windows.pdf Verified By:
1378.2	2312	FIN FRAME H-LC50=48"X84"
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Per attached manufacturers installation insructions. Not for use HVHZ		**Certification Agency Certificate** **Installation Instructions** Verified By:
1378.3	8500	FIN FRAME H-R40=44"X81"
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Per attached manufacturers installation insructions. Not for use HVHZ		**Certification Agency Certificate** **Installation Instructions** Verified By:
1378.4	8600	FIN FRAME H-R50=44"X72"
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Per attached manufacturers installation insructions. Not for use HVHZ		**Certification Agency Certificate** **Installation Instructions** Verified By:
1378.5	8600	FIN FRAME H-R55=36"X84"(optional test size)
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Per attached manufacturers installation insructions. Not for use HVHZ		**Certification Agency Certificate** **Installation Instructions** Verified By:

Back Next

DCA Administration

Department of Community Affairs
Florida Building Code Online
Codes and Standards
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100
(850) 487-1824, Suncom 277-1824, Fax (850) 414-8436

Product Approval Accepts:

Product Approval

USER: Public User

FL #	FL728-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	

Product Manufacturer	Elk Corporation
Address/Phone/Email	4600 Stillman Blvd. Tuscaloosa, AL 35401 (816) 350-1982 bryson.m@sbcglobal.net
Authorized Signature	Daniel DeJarnette daniel.dejarnette@elkcorp.com
Technical Representative	Daniel DeJarnette
Address/Phone/Email	4600 Stillman Blvd Tuscaloosa, AL 35401 (205) 342-0298 daniel.dejarnette@elkcorp.com
Quality Assurance Representative	Daniel DeJarnette
Address/Phone/Email	4600 Stillman Blvd Tuscaloosa, AL 35401 (205) 342-0298 daniel.dejarnette@elkcorp.com
Category	Roofing
Subcategory	Asphalt Shingles
Compliance Method	Certification Mark or Listing
Certification Agency	Miami-Dade BCCO - CER

Referenced Standard and Year (of Standard)	**Standard**	**Year**
	ASTM D3462	2001
	TAS 107	1995
	TAS100	1995

Equivalence of Product Standards Certified By	
Sections from the Code	1523.6.5.1

1523.6.5.1
1523.6.5.1

Product Approval Method	Method 1 Option A
Date Submitted	06/01/2005
Date Validated	06/13/2005
Date Pending FBC Approval	06/14/2005
Date Approved	06/29/2005

Summary of Products

FL #	Model, Number or Name	Description
728.1	Capstone	Laminated Asphalt Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** PTID_728_R1_I_Capstone Metro Dade NOA.pdf PTID_728_R1_I_CapstoneSpecSh1t.pdf PTID_728_R1_I_Prestique 1 Metro Dade NOA.pdf PTID_728_R1_I_Prestique Plus and Gallery NOA.pdf PTID_728_R1_I_Seal-A-Ridge Metro-Dade NOA.pdf PTID_728_R1_I_Starter Strip Metro-Dade NOA.pdf PTID_728_R1_I_Tuscaloosa Spec Sheet.pdf Verified By:
728.2	Prestique I	Laminated Asphalt Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:
728.3	Prestique Plus / Gallery Colle	Laminated Asphalt Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:
728.4	Seal-A-Ridge "SAR"	Accessory - Ridge Shingle
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:
728.5	Starter Strip	Accessory - Starter Course
Limits of Use (See Other) **Approved for use in HVHZ:** **Approved for use outside HVHZ:** **Impact Resistant:** **Design Pressure:** +/- **Other:** Mean roof height should not exceed 33 ft.		**Certification Agency Certificate** **Installation Instructions** Verified By:

Product Approval

USER: Public User

FL #	FL4904-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	
Product Manufacturer	Masonite International
Address/Phone/Email	One North Dale Mabry Suite 950 Tampa, FL 33609 (615) 441-4258 sschreiber@masonite.com
Authorized Signature	Steve Schreiber sschreiber@masonite.com
Technical Representative Address/Phone/Email	
Quality Assurance Representative Address/Phone/Email	
Category	Exterior Doors
Subcategory	Swinging Exterior Door Assemblies
Compliance Method	Certification Mark or Listing
Certification Agency	National Accreditation & Management Institute,

Referenced Standard and Year (of Standard)

Standard	Year
ASTM E1300	2002
ASTM E1300	1998
TAS 201	1994
TAS 202	1994
TAS 203	1994

Equivalence of Product Standards Certified By	
Product Approval Method	Method 1 Option A

Date Submitted	08/02/2007
Date Validated	09/11/2007
Date Pending FBC Approval	09/14/2007
Date Approved	10/03/2007

Summary of Products

FL #	Model, Number or Name	Description
4904.1	Wood-edge Steel Side-Hinged Door Units	6'-8" Opaque I/S and O/S Single Door
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +76.0 /-76.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 3'-0" x 6'-8" max nominal size. When large missile impact resistance is required, hurricane protective system is NOT required. See DWG-MA-FL0128-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 68 WE Opaque.pdf Verified By: National Accreditation & Management Institute,
4904.2	Wood-edge Steel Side-Hinged Door Units	8'-0" Opaque I/S and O/S Single Door
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +70.0 /-70.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 3'-0" x 8'-0" max nominal size. When large missile impact resistance is required, hurricane protective system is NOT required. See DWG-MA-FL0129-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 80 WE Opaque.pdf Verified By: National Accreditation & Management Institute,
4904.3	Wood-edge Steel Side-Hinged Door Units	6'-8" Opaque I/S and O/S Door w/ or w/o Sidelites
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +55.0 /-55.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 12'-0" x 6'-8" max nominal size. When large missile impact resistance is required, hurricane protective system is NOT required on opaque panels, but is required on glazed panels. See DWG-MA-FL0128-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 68 WE Opaque.pdf Verified By: National Accreditation & Management Institute,
4904.4	Wood-edge Steel Side-Hinged Door Units	8'-0" Opaque I/S Door w/ or w/o Sidelites

Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +45.0 /-50.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 12'-0" x 8'-0" max nominal size. When large missile impact resistance is required, hurricane protective system is NOT required on opaque panels, but is required on glazed panels. See DWG-MA-FL0129-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 80 WE Opaque.pdf Verified By: National Accreditation & Management Institute,
4904.5	Wood-edge Steel Side-Hinged Door Units	8'-0" Opaque O/S w/ or w/o Sidelites
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** Yes **Design Pressure:** +50.0 /-45.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 12'-0" x 8'-0" max nominal size. When large missile impact resistance is required, hurricane protective system is NOT required on opaque panels, but is required on glazed panels. See DWG-MA-FL0129-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 80 WE Opaque.pdf Verified By: National Accreditation & Management Institute,
4904.6	Wood-edge Steel Side-Hinged Door Units	6'-8" Glazed I/S and O/S Door w/ or w/o Sidelites
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** +50.5 /-50.5 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 12'-0" x 6'-8" max nominal size. When large missile impact resistance is required, hurricane protective system is required. See DWG-MA-FL0130-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 68 WE Glazed.pdf Verified By: National Accreditation & Management Institute,
4904.7	Wood-edge Steel Side-Hinged Door Units	8'-0" Glazed I/S Door w/ or w/o Sidelites
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** +40.0 /-45.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 12'-0" x 8'-0" max nominal size. When large missile		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 80 WE Glazed.pdf Verified By: National Accreditation & Management Institute,

impact resistance is required, hurricane protective system is required. See DWG-MA-FL0131-05 for details.		
4904.8	Wood-edge Steel Side-Hinged Door Units	8'-0" Glazed O/S Door w/ or w/o Sidelites
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** Yes **Impact Resistant:** No **Design Pressure:** +45.0 /-40.0 **Other:** Evaluated for use in locations adhering to the Florida Building Code including the High Velocity Hurricane Zone, and where pressure requirements as determined by ASCE 7, Minimum Design Loads for Buildings and Other Structures, does not exceed the design pressures listed. 12'-0" x 8'-0" max nominal size. When large missile impact resistance is required, hurricane protective system is required. See DWG-MA-FL0131-05 for details.		**Certification Agency Certificate** FL4904_R1_C_CAC_NI006110-R2.pdf **Installation Instructions** FL4904_R1_II_Anchor Detail 80 WE Glazed.pdf Verified By: National Accreditation & Management Institute,

Back Next

Residential System Sizing Calculation

Summary

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

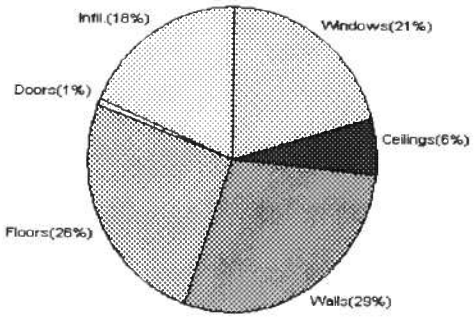
Location for weather data: Gainesville - Defaults: Latitude(29) Altitude(152 ft.) Temp Range(M)
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(54gr.)

Winter design temperature	33	F	Summer design temperature	92	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	37	F	Summer temperature difference	17	F
Total heating load calculation	**38285**	**Btuh**	**Total cooling load calculation**	**30459**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	114.9	44000	Sensible (SHR = 0.75)	126.8	33000
Heat Pump + Auxiliary(0.0kW)	114.9	44000	Latent	247.6	11000
			Total (Electric Heat Pump)	144.5	44000

WINTER CALCULATIONS

Winter Heating Load (for 3174 sqft)

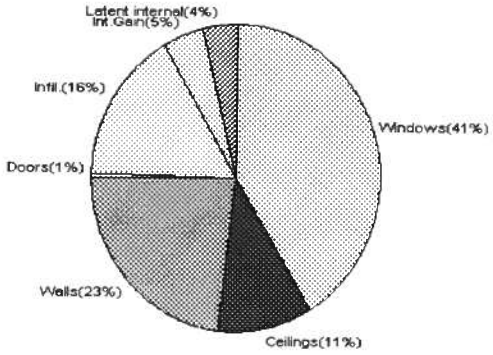
Load component			Load	
Window total	246	sqft	7922	Btuh
Wall total	3352	sqft	11008	Btuh
Door total	20	sqft	259	Btuh
Ceiling total	1972	sqft	2324	Btuh
Floor total	See detail report		9823	Btuh
Infiltration	172	cfm	6949	Btuh
Duct loss			0	Btuh
Subtotal			**38285**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**38285**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 3174 sqft)

Load component			Load	
Window total	246	sqft	12532	Btuh
Wall total	3352	sqft	6991	Btuh
Door total	20	sqft	196	Btuh
Ceiling total	1972	sqft	3266	Btuh
Floor total			0	Btuh
Infiltration	89	cfm	1651	Btuh
Internal gain			1380	Btuh
Duct gain			0	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Total sensible gain			**26016**	**Btuh**
Latent gain(ducts)			0	Btuh
Latent gain(infiltration)			3243	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**4443**	**Btuh**
TOTAL HEAT GAIN			**30459**	**Btuh**



For Florida residences only

EnergyGauge® System Sizing
PREPARED BY:
DATE: 10-5-07

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F

10/5/2007

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Whole House

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	NW	10.0	32.2	322 Btuh
2	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
3	2, Clear, Metal, 0.87	NW	30.0	32.2	966 Btuh
4	2, Clear, Metal, 0.87	NW	11.1	32.2	357 Btuh
5	2, Clear, Metal, 0.87	SE	15.0	32.2	483 Btuh
6	2, Clear, Metal, 0.87	SE	45.0	32.2	1449 Btuh
7	2, Clear, Metal, 0.87	SE	10.0	32.2	322 Btuh
8	2, Clear, Metal, 0.87	S	10.0	32.2	322 Btuh
9	2, Clear, Metal, 0.87	W	10.0	32.2	322 Btuh
10	2, Clear, Metal, 0.87	NW	45.0	32.2	1449 Btuh
11	2, Clear, Metal, 0.87	SE	15.0	32.2	483 Btuh
12	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
13	2, Clear, Metal, 0.87	SE	15.0	32.2	483 Btuh
	Window Total		246(sqft)		7922 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	2950	3.3	9688 Btuh
2	Frame - Wood - Ext(0.09)	13.0	402	3.3	1320 Btuh
	Wall Total		3352		11008 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exterior		20	12.9	259 Btuh
	Door Total		20		259Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	450	1.2	530 Btuh
2	Vented Attic/D/Shin)	30.0	1522	1.2	1793 Btuh
	Ceiling Total		1972		2324Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	48.0 ft(p)	43.7	2096 Btuh
2	Slab On Grade	0	177.0 ft(p)	43.7	7728 Btuh
	Floor Total		225		9824 Btuh
			Zone Envelope Subtotal:		31336 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.58	13697	171.6	6949 Btuh
Ductload	Average sealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #1			**Sensible Zone Subtotal**		**38285 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

WHOLE HOUSE TOTALS

	Subtotal Sensible	38285 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	38285 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(Frame types - metal, wood or insulated metal)
(U - Window U-Factor or 'DEF' for default)
(HTM - ManualJ Heat Transfer Multiplier)
Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)

For Florida residences only

System Sizing Calculations - Winter

Residential Load - Room by Room Component Details

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Winter Temperature Difference: 37.0 F

10/5/2007

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Zone #1: Left Side

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	NW	10.0	32.2	322 Btuh
2	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
3	2, Clear, Metal, 0.87	NW	30.0	32.2	966 Btuh
4	2, Clear, Metal, 0.87	NW	11.1	32.2	357 Btuh
5	2, Clear, Metal, 0.87	SE	15.0	32.2	483 Btuh
6	2, Clear, Metal, 0.87	SE	45.0	32.2	1449 Btuh
7	2, Clear, Metal, 0.87	SE	10.0	32.2	322 Btuh
8	2, Clear, Metal, 0.87	S	10.0	32.2	322 Btuh
9	2, Clear, Metal, 0.87	W	10.0	32.2	322 Btuh
10	2, Clear, Metal, 0.87	NW	45.0	32.2	1449 Btuh
11	2, Clear, Metal, 0.87	SE	15.0	32.2	483 Btuh
	Window Total		216(sqft)		6956 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	2950	3.3	9688 Btuh
	Wall Total		2950		9688 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exterior		20	12.9	259 Btuh
	Door Total		20		259Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	1522	1.2	1793 Btuh
	Ceiling Total		1522		1793Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	177.0 ft(p)	43.7	7728 Btuh
	Floor Total		177		7728 Btuh
			Zone Envelope Subtotal:		26424 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.58	13697	171.6	6116 Btuh
Ductload	Average sealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #1			**Sensible Zone Subtotal**		**32540 Btuh**

Component Loads for Zone #2: Right Side

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
2	2, Clear, Metal, 0.87	SW	15.0	32.2	483 Btuh
3	2, Clear, Metal, 0.87	SE	15.0	32.2	483 Btuh
	Window Total		30(sqft)		966 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	402	3.3	1320 Btuh
	Wall Total		402		1320 Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	450	1.2	530 Btuh
	Ceiling Total		450		530Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	48.0 ft(p)	43.7	2096 Btuh
	Floor Total		48		2096 Btuh
			Zone Envelope Subtotal:		4912 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.58	4050	171.6	833 Btuh
Ductload	Average sealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #2			**Sensible Zone Subtotal**		**5745 Btuh**

SYSTEM GROUPS (BLOCK LOADS)

Heating Loads For System(s):1 Serving Zones: 1	Block load	32540 Btuh

Heating Loads For System(s):2 Serving Zones: 2	Block load	5745 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

WHOLE HOUSE TOTALS

	Subtotal Sensible	38285 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	38285 Btuh

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(Frame types - metal, wood or insulated metal)
(U - Window U-Factor or 'DEF' for default)
(HTM - ManualJ Heat Transfer Multiplier)
Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)

For Florida residences only

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F 10/5/2007

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Whole House

Window	Type* Pn/SHGC/U/InSh/ExSh/IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2, Clear, 0.87, None,N,N	NW	1.5ft.	5.5ft.	10.0	0.0	10.0	29	60	600 Btuh
2	2, Clear, 0.87, None,N,N	SW	1.5ft.	5.5ft.	15.0	6.1	8.9	29	63	734 Btuh
3	2, Clear, 0.87, None,N,N	NW	1.5ft.	0ft.	30.0	0.0	30.0	29	60	1801 Btuh
4	2, Clear, 0.87, None,N,N	NW	1.5ft.	7.33	11.1	0.0	11.1	29	60	666 Btuh
5	2, Clear, 0.87, None,N,N	SE	1.5ft.	0ft.	15.0	15.0	0.0	29	63	434 Btuh
6	2, Clear, 0.87, None,N,N	SE	1.5ft.	0ft.	45.0	45.0	0.0	29	63	1303 Btuh
7	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	10.0	4.0	6.0	29	63	489 Btuh
8	2, Clear, 0.87, None,N,N	S	1.5ft.	5.5ft.	10.0	10.0	0.0	29	34	290 Btuh
9	2, Clear, 0.87, None,N,N	W	1.5ft.	5.5ft.	10.0	1.5	8.5	29	80	720 Btuh
10	2, Clear, 0.87, None,N,N	NW	1.5ft.	5.5ft.	45.0	0.0	45.0	29	60	2702 Btuh
11	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	15.0	6.1	8.9	29	63	734 Btuh
12	2, Clear, 0.87, None,N,N	SW	1.5ft.	0ft.	15.0	15.0	0.0	29	63	434 Btuh
13	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	15.0	6.1	8.9	29	63	734 Btuh
	Excursion									888 Btuh
	Window Total				246 (sqft)					12532 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	2949.9	2.1	6153 Btuh
2	Frame - Wood - Ext	13.0/0.09	402.0	2.1	838 Btuh
	Wall Total		3352 (sqft)		6991 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	9.8	196 Btuh
	Door Total	20 (sqft)		196 Btuh

Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	450.0	1.7	745 Btuh
2	Vented Attic/DarkShingle	30.0	1521.9	1.7	2520 Btuh
	Ceiling Total		1972 (sqft)		3266 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	48 (ft(p))	0.0	0 Btuh
2	Slab On Grade	0.0	177 (ft(p))	0.0	0 Btuh
	Floor Total		225.0 (sqft)		0 Btuh

				Zone Envelope Subtotal:	22985 Btuh
Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.30	13697	88.7	1651 Btuh
Internal gain		Occupants	Btuh/occupant	Appliance	Load
		6	X 230 +	0	1380 Btuh
Duct load	Average sealed, R6.0, Supply(Attic), Return(Attic)			DGM = 0.00	0.0 Btuh
				Sensible Zone Load	**26016 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	**26016 Btuh**
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	**26016 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
Whole House	**Total sensible gain**	**26016 Btuh**
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	3243 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**4443 Btuh**
	TOTAL GAIN	**30459 Btuh**

*Key: Window types (Pn - Number of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(U - Window U-Factor or 'DEF' for default)
(InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(BS - Insect screen: none(N), Full(F) or Half(H))
(Ornt - compass orientation)

For Florida residences only

System Sizing Calculations - Summer

Residential Load - Room by Room Component Details

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F 10/5/2007

This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Zone #1: Left Side

Window	Type* Pn/SHGC/U/InSh/ExSh/IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2, Clear, 0.87, None,N,N	NW	1.5ft.	5.5ft.	10.0	0.0	10.0	29	60	600 Btuh
2	2, Clear, 0.87, None,N,N	SW	1.5ft.	5.5ft.	15.0	6.1	8.9	29	63	734 Btuh
3	2, Clear, 0.87, None,N,N	NW	1.5ft.	0ft.	30.0	0.0	30.0	29	60	1801 Btuh
4	2, Clear, 0.87, None,N,N	NW	1.5ft.	7.33	11.1	0.0	11.1	29	60	666 Btuh
5	2, Clear, 0.87, None,N,N	SE	1.5ft.	0ft.	15.0	15.0	0.0	29	63	434 Btuh
6	2, Clear, 0.87, None,N,N	SE	1.5ft.	0ft.	45.0	45.0	0.0	29	63	1303 Btuh
7	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	10.0	4.0	6.0	29	63	489 Btuh
8	2, Clear, 0.87, None,N,N	S	1.5ft.	5.5ft.	10.0	10.0	0.0	29	34	290 Btuh
9	2, Clear, 0.87, None,N,N	W	1.5ft.	5.5ft.	10.0	1.5	8.5	29	80	720 Btuh
10	2, Clear, 0.87, None,N,N	NW	1.5ft.	5.5ft.	45.0	0.0	45.0	29	60	2702 Btuh
11	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	15.0	6.1	8.9	29	63	734 Btuh
	Window Total				216 (sqft)					10475 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	2949.9	2.1	6153 Btuh
	Wall Total		2950 (sqft)		6153 Btuh
Doors	Type		Area (sqft)	HTM	Load
1	Insulated - Exterior		20.0	9.8	196 Btuh
	Door Total		20 (sqft)		196 Btuh
Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	1521.9	1.7	2520 Btuh
	Ceiling Total		1522 (sqft)		2520 Btuh
Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	177 (ft(p))	0.0	0 Btuh
	Floor Total		177.0 (sqft)		0 Btuh
			Zone Envelope Subtotal:		19344 Btuh

Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.30	13697	88.7	1453 Btuh
Internal gain		Occupants	Btuh/occupant	Appliance	Load
		6	X 230 +	0	1380 Btuh
Duct load	Average sealed, R6.0, Supply(Attic), Return(Attic)			DGM = 0.00	0.0 Btuh
			Sensible Zone Load		**22177 Btuh**

Component Loads for Zone #2: Right Side

Window	Type* Pn/SHGC/U/InSh/ExSh/IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2, Clear, 0.87, None,N,N	SW	1.5ft.	0ft.	15.0	15.0	0.0	29	63	434 Btuh
2	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	15.0	6.1	8.9	29	63	734 Btuh
	Window Total				30 (sqft)					1169 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	402.0	2.1	838 Btuh
	Wall Total		402 (sqft)		838 Btuh
Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	450.0	1.7	745 Btuh
	Ceiling Total		450 (sqft)		745 Btuh
Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	48 (ft(p))	0.0	0 Btuh
	Floor Total		48.0 (sqft)		0 Btuh
			Zone Envelope Subtotal:		2752 Btuh
Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.30	4050	88.7	198 Btuh
Internal gain		Occupants	Btuh/occupant	Appliance	Load
		0	X 230 +	0	0 Btuh
Duct load	Average sealed, R6.0, Supply(Attic), Return(Attic)			DGM = 0.00	0.0 Btuh
			Sensible Zone Load		**2950 Btuh**

The following window Excursion will be assigned to the whole house.

		Excursion Subtotal:	888 Btuh
Duct load	Average sealed, R6.0, Supply(Attic), Return(Attic)	DGM = 0.00	0.0 Btuh
		Sensible Zone Load	**888 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

SYSTEM GROUPS (BLOCK LOADS)

	Sensible Envelope Load	**23066 Btuh**
Cooling Loads	Sensible Duct Load (duct gain multiplier of 0.00)	0 Btuh
	Sensible ventilation	0 Btuh
For System(s):2	**Zone Sensible gain**	**23066 Btuh**
Serving Zones:	Latent infiltration/ventilation gain	2854 Btuh
1	Latent occupant gain	1200 Btuh
	Latent duct gain	0 Btuh
	Latent other gain	0 Btuh
	Total block load	**27120 Btu**

	Sensible Envelope Load	**3839 Btuh**
Cooling Loads	Sensible Duct Load (duct gain multiplier of 0.00)	0 Btuh
	Sensible ventilation	0 Btuh
For System(s):1	**Zone Sensible gain**	**3839 Btuh**
Serving Zones:	Latent infiltration/ventilation gain	389 Btuh
2	Latent occupant gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent other gain	0 Btuh
	Total block load	**4228 Btu**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	**26016**	**Btuh**
	Sensible Duct Load	0	Btuh
	Total Sensible Zone Loads	**26016**	**Btuh**
	Sensible ventilation	0	Btuh
	Blower	0	Btuh
Whole House	**Total sensible gain**	**26016**	**Btuh**
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	3243	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	0	Btuh
	Latent occupant gain (6 people @ 200 Btuh per person)	1200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**4443**	**Btuh**
	TOTAL GAIN	**30459**	**Btuh**

*Key: Window types (Pn - Number of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value or as clear or tint)
(U - Window U-Factor or 'DEF' for default)
(InSh - Interior shading device: none(N), Blinds(B), Draperies(D) or Roller Shades(R))
(ExSh - Exterior shading device: none(N) or numerical value)
(BS - Insect screen: none(N), Full(F) or Half(H))
(Ornt - compass orientation)

For Florida residences only

Residential Window Diversity

MidSummer

Haynes Curtis & Dana Addition
519 NW Crawford Court,
White Springs, FL

Project Title:
710053TopFlightConstruction

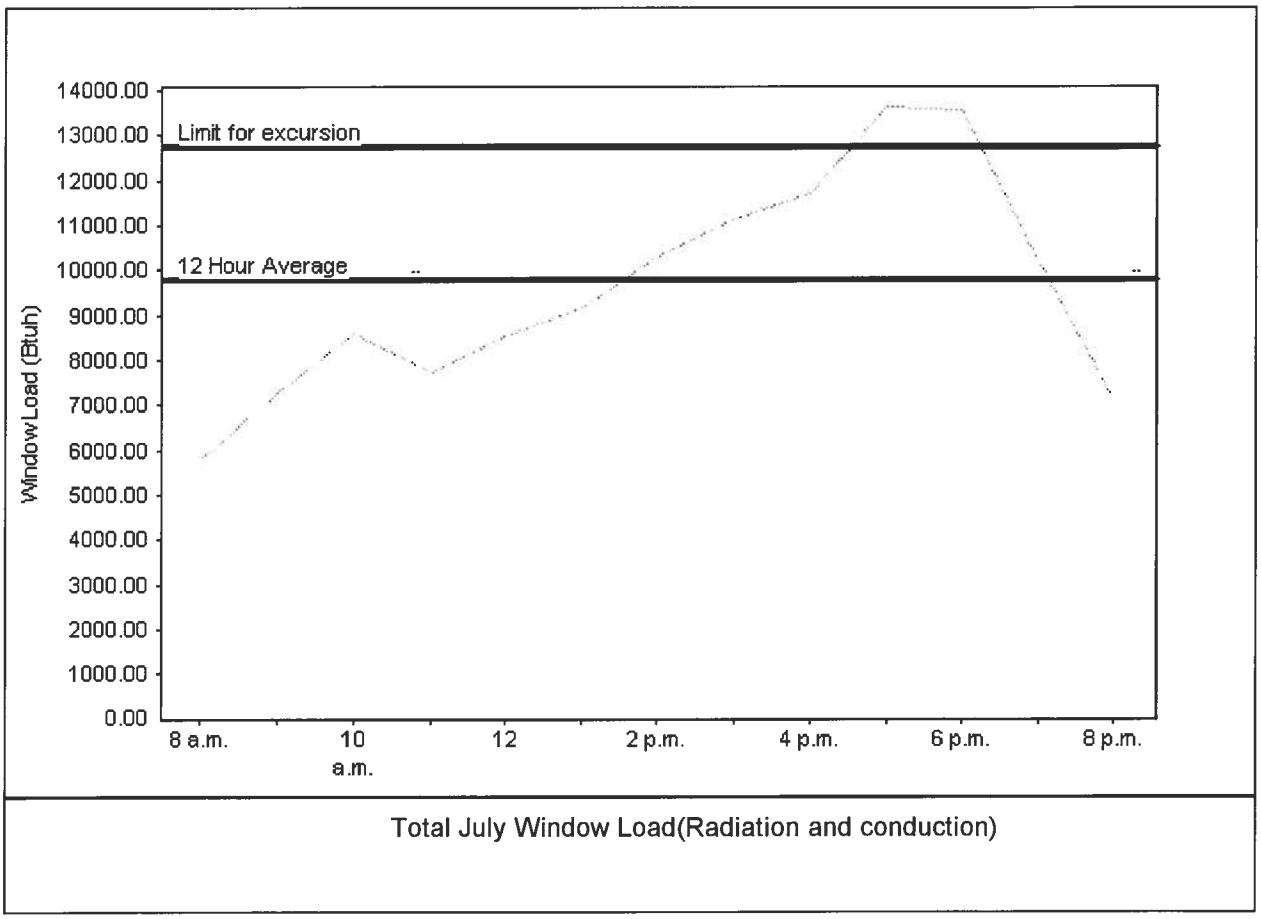
Class 3 Rating
Registration No. 0
Climate: North

10/5/2007

Weather data for: Gainesville - Defaults

Summer design temperature	92 F	Average window load for July	9797 Btuh
Summer setpoint	75 F	Peak window load for July	13624 Btu
Summer temperature difference	17 F	Excusion limit(130% of Ave.)	12736 Btu
Latitude	29 North	Window excursion (July)	888 Btuh

WINDOW Average and Peak Loads



Total July Window Load(Radiation and conduction)

Warning: This application has glass areas that produce relatively large heat gains for part of the day. Variable air volume devices may be required to overcome spikes in solar gain for one or more rooms. A zoned system may be required or some rooms may require zone control.

EnergyGauge® System Sizing for Florida residences only
PREPARED BY:
DATE: 10-5-07

FORM 600A-2004 EnergyGauge® 4.1

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**710053TopFlightConstruction**	Builder:	
Address:	**519 NW Crawford Court,**	Permitting Office:	
City, State:	**White Springs, FL**	Permit Number:	
Owner:	**Haynes Curtis & Dana Addition**	Jurisdiction Number:	
Climate Zone:	**North**		

1.	New construction or existing	Addition	
2.	Single family or multi-family	Single family	
3.	Number of units, if multi-family	1	
4.	Number of Bedrooms	3	
5.	Is this a worst case?	Yes	
6.	Conditioned floor area (ft²)	3173.84 ft²	
7.	Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)		
a.	U-factor: (or Single or Double DEFAULT)	7a. Description Area (Dble Default) 246.1 ft²	
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 246.1 ft²	
8.	Floor types		
a.	Slab-On-Grade Edge Insulation	R=0.0, 177.0(p) ft	
b.	Slab-On-Grade Edge Insulation	R=0.0, 48.0(p) ft	
c.	N/A		
9.	Wall types		
a.	Frame, Wood, Exterior	R=13.0, 2949.9 ft²	
b.	Frame, Wood, Exterior	R=13.0, 402.0 ft²	
c.	N/A		
d.	N/A		
e.	N/A		
10.	Ceiling types		
a.	Under Attic	R=30.0, 1521.9 ft²	
b.	Under Attic	R=30.0, 450.0 ft²	
c.	N/A		
11.	Ducts		
a.	Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 178.0 ft	
b.	Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 50.0 ft	
12.	Cooling systems		
a.	Central Unit	Cap: 22.0 kBtu/hr SEER: 13.00	
b.	Central Unit	Cap: 22.0 kBtu/hr SEER: 13.00	
c.	N/A		
13.	Heating systems		
a.	Electric Heat Pump	Cap: 22.0 kBtu/hr HSPF: 7.90	
b.	Electric Heat Pump	Cap: 22.0 kBtu/hr HSPF: 7.90	
c.	N/A		
14.	Hot water systems		
a.	Electric Resistance	Cap: 40.0 gallons EF: 0.93	
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: 0.08

Total as-built points: 31305
Total base points: 42053

PASS

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

PREPARED BY: _____

DATE: 10-5-07

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

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

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

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	3173.8	20.04	11448.7	Double, Clear	N	1.5	5.5	10.0	19.20	0.93	178.2	
				Double, Clear	W	1.5	5.5	15.0	38.52	0.90	518.3	
				Double, Clear	N	1.5	0.0	30.0	19.20	0.59	341.6	
				Double, Clear	N	1.5	7.3	11.1	19.20	0.96	204.5	
				Double, Clear	S	1.5	0.0	15.0	35.87	0.43	232.4	
				Double, Clear	S	1.5	0.0	45.0	35.87	0.43	697.1	
				Double, Clear	S	1.5	5.5	10.0	35.87	0.83	298.5	
				Double, Clear	SW	1.5	5.5	10.0	40.16	0.86	346.6	
				Double, Clear	NW	1.5	5.5	10.0	25.97	0.91	236.8	
				Double, Clear	N	1.5	5.5	45.0	19.20	0.93	802.0	
				Double, Clear	S	1.5	5.5	15.0	35.87	0.83	447.7	
				Double, Clear	W	1.5	0.0	15.0	38.52	0.37	216.5	
				Double, Clear	S	1.5	5.5	15.0	35.87	0.83	447.7	
				As-Built Total:				**246.1**			**4967.9**	

WALL TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Adjacent	0.0	0.00	0.0	Frame, Wood, Exterior	13.0	2949.9	1.50	4424.8
Exterior	3351.9	1.70	5698.2	Frame, Wood, Exterior	13.0	402.0	1.50	603.0
Base Total:	**3351.9**		**5698.2**	**As-Built Total:**		**3351.9**		**5027.8**

DOOR TYPES	Area X	BSPM	= Points	Type	Area X	SPM	= Points
Adjacent	0.0	0.00	0.0	Exterior Insulated	20.0	4.10	82.0
Exterior	20.0	4.10	82.0				
Base Total:	**20.0**		**82.0**	**As-Built Total:**	**20.0**		**82.0**

CEILING TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM X SCM	= Points
Under Attic	1971.9	1.73	3411.4	Under Attic	30.0	1521.9	1.73 X 1.00	2632.9
				Under Attic	30.0	450.0	1.73 X 1.00	778.5
Base Total:	**1971.9**		**3411.4**	**As-Built Total:**		**1971.9**		**3411.4**

FLOOR TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Slab	225.0(p)	-37.0	-8325.0	Slab-On-Grade Edge Insulation	0.0	177.0(p	-41.20	-7292.4
Raised	0.0	0.00	0.0	Slab-On-Grade Edge Insulation	0.0	48.0(p)	-41.20	-1977.6
Base Total:			**-8325.0**	**As-Built Total:**		**225.0**		**-9270.0**

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT						
INFILTRATION	Area X	BSPM	= Points		Area X	SPM	= Points			
	3173.8	10.21	32404.9		3173.8	10.21	32404.9			
Summer Base Points: 44720.2				**Summer As-Built Points:**						**36624.1**
Total Summer Points	X System Multiplier	= Cooling Points		Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points	
				(sys 1: Central Unit 22000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)						
				36624	0.50	(1.09 x 1.147 x 0.91)	0.263	1.000	5469.7	
				(sys 2: Central Unit 22000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)						
				36624	0.50	(1.09 x 1.147 x 0.91)	0.263	1.000	5469.7	
44720.2	**0.4266**	**19077.7**		**36624.1**	**1.00**	**1.138**	**0.263**	**1.000**	**10939.3**	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points	
.18	3173.8	12.74	7278.3	Double, Clear	N	1.5	5.5	10.0	24.58	1.00	246.5	
				Double, Clear	W	1.5	5.5	15.0	20.73	1.03	319.7	
				Double, Clear	N	1.5	0.0	30.0	24.58	1.03	757.5	
				Double, Clear	N	1.5	7.3	11.1	24.58	1.00	273.2	
				Double, Clear	S	1.5	0.0	15.0	13.30	3.66	730.0	
				Double, Clear	S	1.5	0.0	45.0	13.30	3.66	2190.1	
				Double, Clear	S	1.5	5.5	10.0	13.30	1.15	152.5	
				Double, Clear	SW	1.5	5.5	10.0	16.74	1.07	179.5	
				Double, Clear	NW	1.5	5.5	10.0	24.30	1.00	244.0	
				Double, Clear	N	1.5	5.5	45.0	24.58	1.00	1109.3	
				Double, Clear	S	1.5	5.5	15.0	13.30	1.15	228.8	
				Double, Clear	W	1.5	0.0	15.0	20.73	1.24	384.8	
				Double, Clear	S	1.5	5.5	15.0	13.30	1.15	228.8	
				As-Built Total:				**246.1**			**7044.6**	

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	0.0	0.00	0.0	Frame, Wood, Exterior	13.0	2949.9	3.40	10029.7
Exterior	3351.9	3.70	12402.0	Frame, Wood, Exterior	13.0	402.0	3.40	1366.8
Base Total:	**3351.9**		**12402.0**	**As-Built Total:**		**3351.9**		**11396.5**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	0.0	0.00	0.0	Exterior Insulated	20.0	8.40	168.0
Exterior	20.0	8.40	168.0				
Base Total:	**20.0**		**168.0**	**As-Built Total:**	**20.0**		**168.0**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X WCM	= Points
Under Attic	1971.9	2.05	4042.4	Under Attic	30.0	1521.9	2.05 X 1.00	3119.9
				Under Attic	30.0	450.0	2.05 X 1.00	922.5
Base Total:	**1971.9**		**4042.4**	**As-Built Total:**		**1971.9**		**4042.4**

FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Slab	225.0(p)	8.9	2002.5	Slab-On-Grade Edge Insulation	0.0	177.0(p	18.80	3327.6
Raised	0.0	0.00	0.0	Slab-On-Grade Edge Insulation	0.0	48.0(p)	18.80	902.4
Base Total:			**2002.5**	**As-Built Total:**		**225.0**		**4230.0**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT						
INFILTRATION	Area X	BWPM	= Points		Area X	WPM	= Points			
	3173.8	-0.59	-1872.6		3173.8	-0.59	-1872.6			
Winter Base Points:			**24020.7**	**Winter As-Built Points:**						**25009.0**
Total Winter Points	X System Multiplier	= Heating Points		Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points	
				(sys 1: Electric Heat Pump 22000 btuh ,EFF(7.9) Ducts:Unc(S),Unc(R),Int(AH),R6.0						
				25009.0	0.500	(1.069 x 1.169 x 0.93)	0.432	1.000	6272.9	
				(sys 2: Electric Heat Pump 22000 btuh ,EFF(7.9) Ducts:Unc(S),Unc(R),Int(AH),R6.0						
				25009.0	0.500	(1.069 x 1.169 x 0.93)	0.432	1.000	6272.9	
24020.7	**0.6274**	**15070.6**		**25009.0**	**1.00**	**1.162**	**0.432**	**1.000**	**12545.8**	

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT							
WATER HEATING											
Number of Bedrooms	X	Multiplier	= Total	Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total	
3		2635.00	7905.0	40.0	0.93	3	1.00	2606.67	1.00	7820.0	
				As-Built Total:						**7820.0**	

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points +	Heating Points +	Hot Water Points =	Total Points	Cooling Points +	Heating Points +	Hot Water Points =	Total Points
19078	**15071**	**7905**	**42053**	**10939**	**12546**	**7820**	**31305**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** 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. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 87.8

The higher the score, the more efficient the home.

Haynes Curtis & Dana Addition, 519 NW Crawford Court,, White Springs, FL,

1.	New construction or existing	Addition	
2.	Single family or multi-family	Single family	
3.	Number of units, if multi-family	1	
4.	Number of Bedrooms	3	
5.	Is this a worst case?	Yes	
6.	Conditioned floor area (ft²)	3173.84 ft²	
7.	Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)		
a.	U-factor: (or Single or Double DEFAULT)	7a. Description Area (Dble Default) 246.1 ft²	
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 246.1 ft²	
8.	Floor types		
a.	Slab-On-Grade Edge Insulation	R=0.0, 177.0(p) ft	
b.	Slab-On-Grade Edge Insulation	R=0.0, 48.0(p) ft	
c.	N/A		
9.	Wall types		
a.	Frame, Wood, Exterior	R=13.0, 2949.9 ft²	
b.	Frame, Wood, Exterior	R=13.0, 402.0 ft²	
c.	N/A		
d.	N/A		
e.	N/A		
10.	Ceiling types		
a.	Under Attic	R=30.0, 1521.9 ft²	
b.	Under Attic	R=30.0, 450.0 ft²	
c.	N/A		
11.	Ducts		
a.	Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 178.0 ft	
b.	Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 50.0 ft	
12.	Cooling systems		
a.	Central Unit	Cap: 22.0 kBtu/hr	
		SEER: 13.00	
b.	Central Unit	Cap: 22.0 kBtu/hr	
		SEER: 13.00	
c.	N/A		
13.	Heating systems		
a.	Electric Heat Pump	Cap: 22.0 kBtu/hr	
		HSPF: 7.90	
b.	Electric Heat Pump	Cap: 22.0 kBtu/hr	
		HSPF: 7.90	
c.	N/A		
14.	Hot water systems		
a.	Electric Resistance	Cap: 40.0 gallons	
		EF: 0.93	
b.	N/A		
c.	Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)		
15.	HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)		

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

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

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

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

Haynes Residence Additions, Columbia County FL

Wind Load Analysis Requirements

(In Compliance with the 2004 Florida Building Code and Amendments)

Prepared By: Marty J. Humphries, P.E. # 51976
7932 240th St., O'Brien, FL 32071
(386)935-2406

Description of Additions:

Footprint: Right side single-story addition is 27'8" wide x 28'10" deep overall. Left side two-story addition is 41'6" wide by 44'6" deep overall.(see plan 0704 by Haygood Homes Inc.)

Walls: 2x4-16" O.C. with 7/16" OSB sheathing minimum with hardiboard lap siding and gypsum wall-board interior.

Roof Structure: Pre-engineered roof trusses and 7/16" OSB sheathing minimum

Roof Type: Primarily gable construction with small hips at ends (analyzed for 1'4" eave overhang)

Foundation: footer with stemwall, with slab construction

Windload Data and Exposure:

Basic Wind Speed = 100 mph
Importance Factor = 1.0
Exposure category = B
Height and Exposure Adjustment Coefficient = 1.0
Residential Occupancy = Group R3
Analysis Method = FBC 1609.6 - Simplified Provisions for Low Rise Buildings
(see tables 1609.6A, 1609.6B, 1609.6C and 1609.6E for wind pressure values)
Mean roof height = 26'
Roof Cross Slope = 12:12 primarily with 8:12 at ends
Eave Overhang= (Analyzed for 1'4" overhang)
Wall Height = 9'-1st floor, 9'-2nd floor
Shear Wall locations = exterior walls only(all walls 3' in length or greater
Bracing method for gable locations = framing from wall to roof diaphragm(see attached detail)

Nailing Pattern Requirements:

Wall sheathing:	Shall be 7/16" Oriented Strand Board(OSB) minimum nailed with 8d common nails 3" on center around edges(including around doors and windows) and 6" on center interior. Full depth blocking shall be installed At horizontal joints in sheathing.
Roof sheathing:	Shall be 7/16" OSB minimum nailed with 8d common nails 3" on center at panel ends and eave overhang areas and 6" on center elsewhere.
Top wall plates:	Nail with 1-16d common nail 12" O.C.(average)

Marty J. Humphries
9-23-07

Strapping and Anchor Requirements:

truss to top wall plate — Install one Simpson model H10 hurricane anchor at each truss. At first 4 trusses at gable ends install a Simpson model H5 hurricane anchor in addition to the H10 anchor..

wall strap tie requirements: — At bottom of 1st story wall and top of 2nd story wall - install one Simpson model SP4 at each side of each door and window 4' or less in width, for windows or doors over 4' but less than or equal to 6'6" install 2- SP4's. Mirror top and bottom SP4 straps with 1-CS18 strap connecting 1st floor wall studs to 2nd floor wall studs(strap to span floor truss system). At all other wall locations install 1 –SP4 at the top of the second story wall, the bottom of the first story wall and a CS18 strap connecting the 1st story wall studs to the 2nd story wall studs 32" on center. For single story areas install SP4 straps as indicated above but omit CS18 strap(spacing of straps may be increased to 4' on center) and each side of doors/windows shall be strapped as indicated above..

Lookouts: Install one Simpson model H5 where lookouts connect to end gable truss(see detail).

Gable end: Install one LSTA18 - 4' on center connecting gable end truss to wall framing.

Gable End Bracing Requirements:

At each gable end install one 2x4 SPF 8' stud spaced 6' on center horizontal along top of bottom chord of trusses, nail with 2-12d nails at each truss including end truss. In addition, install a 2x4 brace extending from this stud at the gable end truss approx. 45 degrees to truss at roof sheathing, nail with 2 -12d nails where it crosses truss members and at ends. Gable end trusses shall be built to receive sheathing with vertical members 2' on center. Vertical members of gable end truss greater than 5' in height shall be stiffened with one 2x4 SPF nailed with 12d nails 8" on center to back of vertical member. (See attached detail)

Foundation Requirements:

Stemwall: For two-story areas minimum size of footer shall be 10" x 24" wide with 3-#5 rebar continuous and 1-#5 vertical rebar 48" on center. All cells shall be filled with concrete. ½" anchor bolts with 2" washers shall be installed 3' on center and 9" from corners each way and at each side of door openings. (3000 psi concrete min) For single-story areas minimum size of the footer shall be 10" x 20" wide with 2-#5 rebar continuous with all other requirements the same as above.

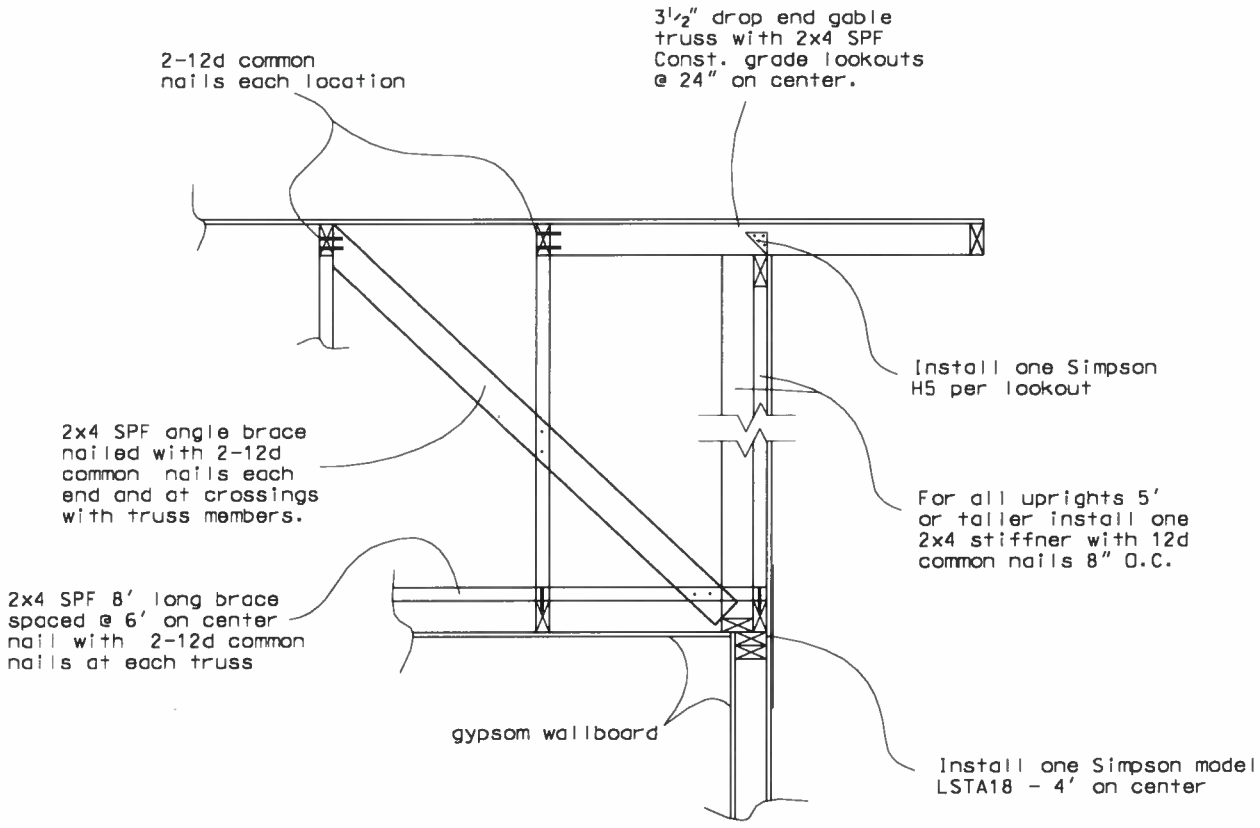
Header Requirements:

Windows & Doors: Header shall be 2 - #2 SYP 2x12's with ½" plywood/OSB between for openings less than or equal to 7' 6".

Note: Equivalent capacity anchors may be substituted, installed in accordance with the manufacturers requirements.

Matthew D. Thompson

9-23-07



GABLE END BRACING DETAIL (N.T.S.)

Marty J. Humphries
9-23-07

Haynes Additions Columbia County, FL	DETAIL PREPARED BY: MARTY J. HUMPHRIES P.E. # 51976 7932 240TH ST., O'BRIEN, FL 32071

NEW! The H2.5A is symetrically designed for easy installation, with higher uplift loads to meet new code requirements. A placement mark allows easy installation on double top plates.

NEW! The H5A has an installed cost benefit, as it only requires 6 nails, to meet lower uplift requirements.

The H connector series provides wind and seismic ties for trusses and rafters.

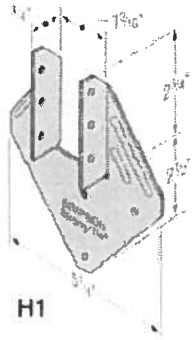
> Allowable loads for more than one direction for a single connection cannot be added together. A design load which can be divided into components in the directions given must be evaluated as follows:
> Design Shear/Allowable Shear + Design Tension/Allowable Tension ≤ 1.0

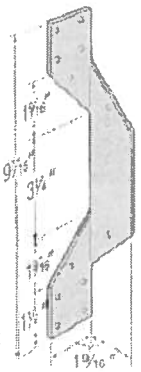
MATERIAL: See table

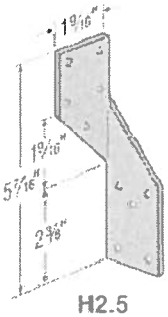
FINISH: Galvanized; H10-2, H11Z–Z-MAX. Other models available in stainless steel or Z-MAX; see Corrosion-Resistance, page 5.

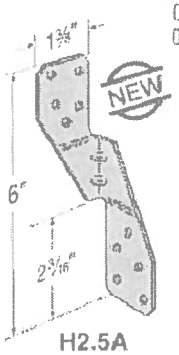
INSTALLATION:
- Use all specified fasteners. See General Notes.
- H1 can be installed with flanges facing outwards (reverse of drawing number 1). When installed inside a wall, a birdsmouth cut is required.
- H2.5, H3, H4, H5 and H6 ties are shipped in equal quantities of rights and lefts.
- Bend the H7 over the top of the truss. Install a minimum of four 8d nails into the truss, including two into the truss side.
- Hurricane Ties do not replace solid blocking.

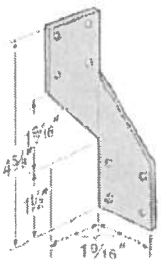
CODES: BOCA, ICBO, SBCCI NER-422, NER-393, NER-432, NER-499; City of L.A. RR 24818; Dade Co., FL 00-0512.11 (H10); 00-0926.01 (H1, H2.5, H3, H4, H5).

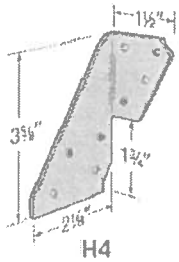

H1

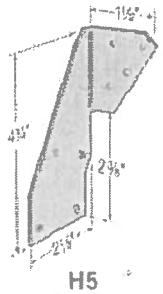

H2

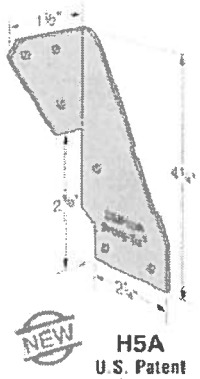

H2.5

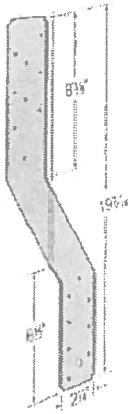

H2.5A

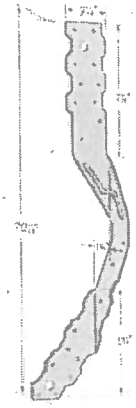

H3

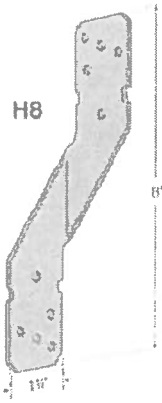

H4
U.S. Patent 4,714,372

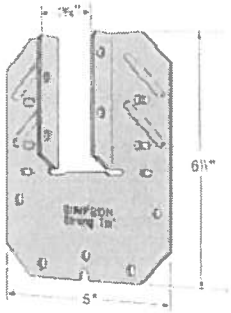

H5
U.S. Patent 4,714,372

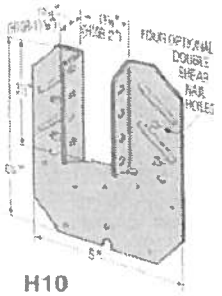

H5A
U.S. Patent 4,714,372


H6

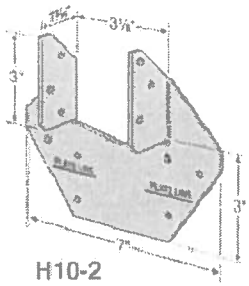

H7

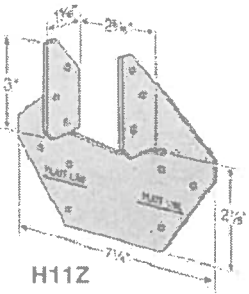

H8


H9


H10
(H10R similar)
U.S. Patents 4,480,941; Canada Patent 1,193,418

Model No.	Ga	Fasteners: To Rafters/ Truss	Fasteners: To Plates	Fasteners: To Studs	Uplift Avg Ult	Douglas-Fir Larch/So. Pine Allowable Loads[1,2]: Uplift (133)	Uplift (160)	Lateral (133/160) F_1	Lateral (133/160) F_2	Uplift Load with 8dx1½ Nails (133 & 160)	Spruce-Pine-Fir Allowable Loads[1,2]: Uplift (133)	Uplift (160)	Lateral (133/160) F_1	Lateral (133/160) F_2	Uplift Load with 8dx1½ Nails (133 & 160)
H1	18	6-8dx1½	4-8d	—	1958	490	585	485	165	455	400	400	415	140	370
H2	18	5-8d	—	5-8d	1040	335	335	—	—	335	230	230	—	—	230
H2.5	18	5-8d	5-8d	—	1300	415	415	150	150	415	365	365	130	130	365
NEW H2.5A	18	5-8d	5-8d	—	1793	600	600	110	110	480	520	535	110	110	480
H3	18	4-8d	4-8d	—	1433	455	455	125	160	415	320	320	105	140	290
H4	20	4-8d	4-8d	—	1144	360	360	165	160	360	235	235	140	135	235
H5	18	4-8d	4-8d	—	1485	455	465	115	200	455	265	265	100	170	265
NEW H5A	18	3-8d	3-8d	—	1500	350	420	115	180	290	245	245	100	120	170
H6	16	—	8-8d	8-8d	3983	915	950	650	—	—	785	820	560	—	—
H7	16	4-8d	2-8d	8-8d	2991	930	985	400	—	—	800	845	345	—	—
H8	18	5-10dx1½	5-10dx1½	—	2422	620	745	—	—	—	530	565	—	—	—
H9KT	18	4-SDS¼x1½	5-SDS¼x1½	—	2812	875	875	680	125	—	755	755	680	125	—
H10	18	8-8dx1½	8-8dx1½	—	3135	905	990	585	525	—	780	850	505	450	—
H10R	18	8-8dx1½	8-8dx1½	—	3135	905	990	585	525	—	780	850	505	450	—
H10-2	18	6-10d	6-10d	—	2447	760	760	455	395	—	655	655	390	340	—
H11Z	18	6-16dx2½	6-16dx2½	—	5097	830	830	525	760	—	715	715	450	655	—


H10-2


H11Z

1. Loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on each side of the joist and on the same side of the plate.
3. Allowable uplift load for stud to bottom plate installation is 400 lbs (H2.5), 390 lbs (H2.5A), 360 lbs (H4) and 310 lbs (H8).
4. The H9KT is sold in 20 piece packs with screws.
5. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
6. Hurricane Ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a Continuous Load Path, connections must be on same side of the wall.

RPS/ST/FHA/PS/HST/LSTA/LSTI/MST/MSTA/MSTC/MSTI

STRAP TIES

The MSTC series has countersunk nail slots for a lower nailing profile. Corned edges ensure safer handling. The RPS meets UBC and City of Los Angeles code requirements for notching plates where plumbing, heating or other pipes are placed in partitions.

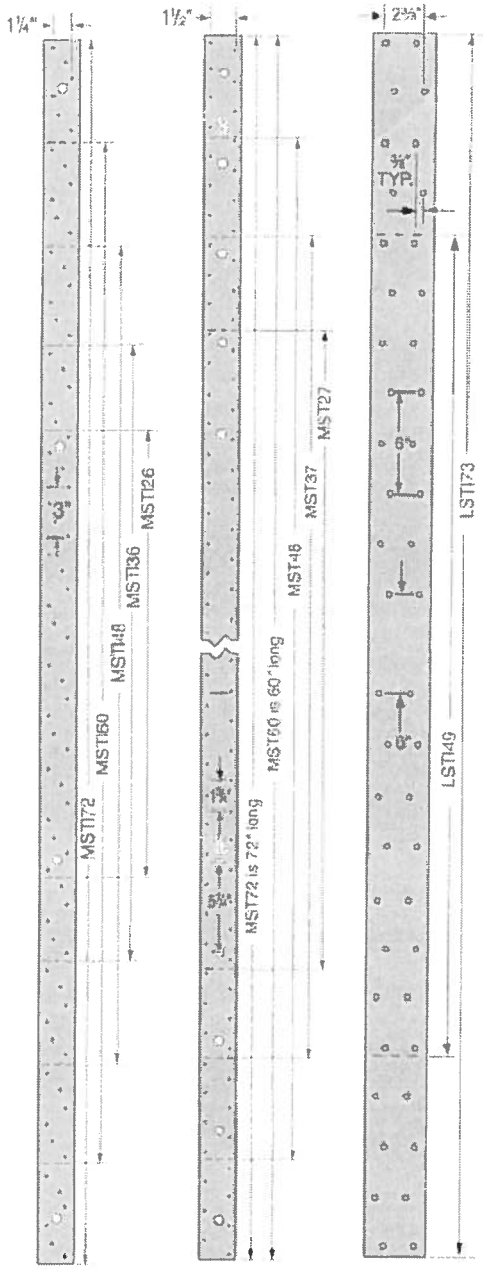
Install Strap Ties where plates or soles are cut, at wall intersections, and as ridge ties. LSTA and MSTA straps are engineered for use on 1½" members. The 3" center-to-center nail spacing reduces the possibility of splitting. For the MST, this may be a problem on lumber narrower than 3½"; either fill every nail hole with 10dx1½" nails or fill every other nail hole with 16d commons. Reduce the allowable load based on the size and quantity of fasteners used. The LSTI light strap ties are suitable where gun-nailing is necessary through diaphragm decking and wood chord open web trusses.

FINISH: HST–Simpson gray paint; PS–HDG; all others–galvanized. Some products are available in stainless steel or Z-MAX; see Corrosion-Resistance, page 5.

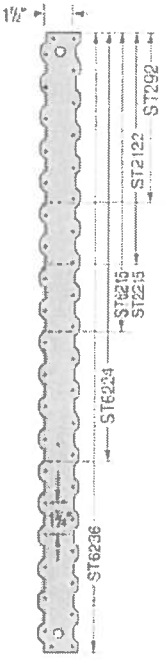
INSTALLATION: Use all specified fasteners. See General Notes.

OPTIONS: Special sizes can be made to order. See also HCST.

CODES: BOCA, ICBO, SBCCI NER-413, NER-443; ICBO 4935, 5357; Dade County, FL 00-1023.05 (MSTA30, MSTA36, ST12, ST18, ST22); City of L.A. RR 25119, RR 25149, RR 25281.

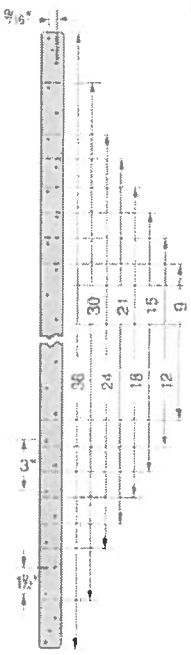


MSTI **MST** **LSTI**

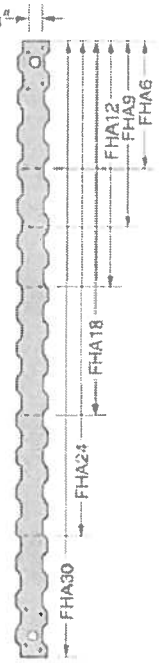


ST
U.S. Patent 4,367,973

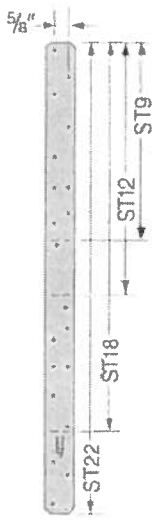
MSTAM36



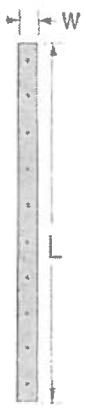
LSTA and MSTA
(pilot holes not shown)



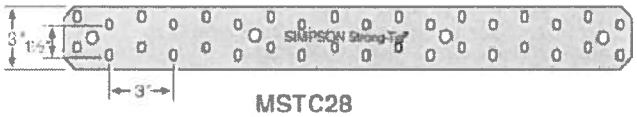
FHA



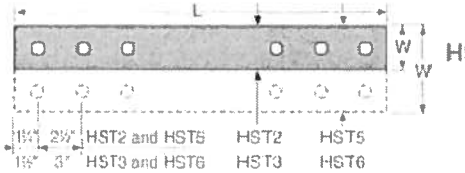
ST9, ST12, ST18, ST22



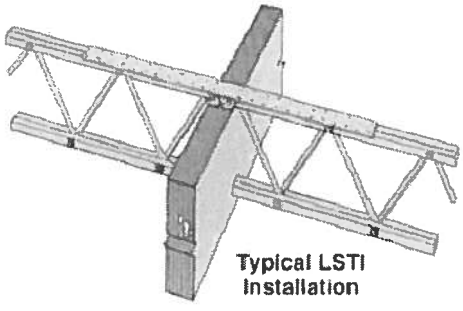
ST2115



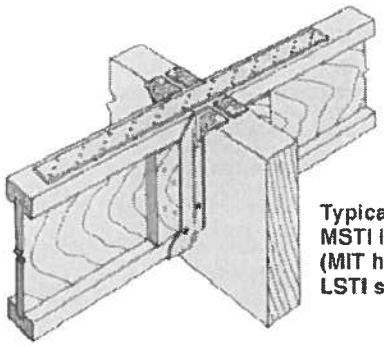
MSTC28



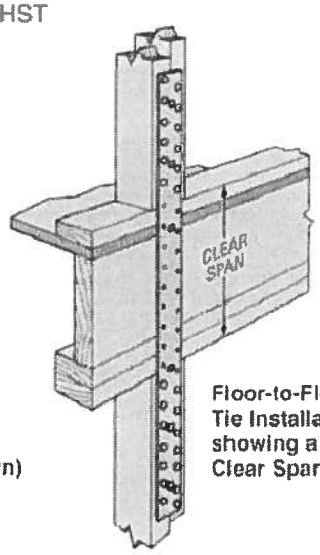
HST



Typical LSTI Installation



Typical MSTI Installation (MIT hanger shown) LSTI similar



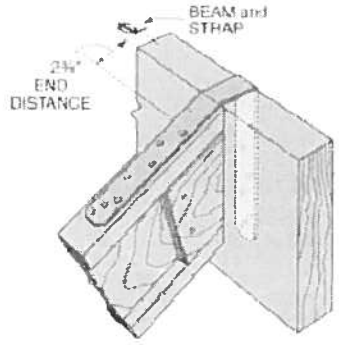
Floor-to-Floor Tie Installation showing a Clear Span

Straps & Ties

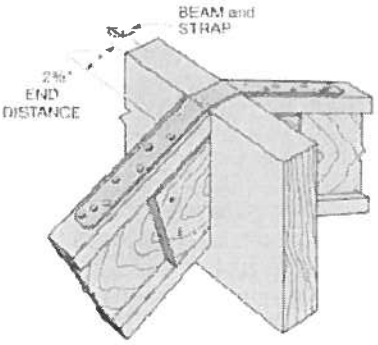
RPS/ST/FHA/PS/HST/LSTA/LSTI/MST/MSTA/MSTC/MSTI

STRAP TIES

Model No.	Ga	Dimensions W	Dimensions L	Fasteners (Total) Nails	Allowable Tension Loads Floor (100)	(133)	(160)
RPS18	16	1½	18⅜	12-16d	810	1080	1295
RPS22		1½	22⅜	16-10d	905	1205	1445
RPS28		1½	28⅜	12-16d	810	1080	1295
LSTA9	20	1¼	9	8-10d	450	605	725
LSTA12		1¼	12	10-10d	565	755	905
LSTA15		1¼	15	12-10d	680	905	1085
LSTA18		1¼	18	14-10d	790	1055	1265
LSTA21		1¼	21	16-10d	905	1205	1295
LSTA24		1¼	24	18-10d	1015	1295	1295
ST292		2⅛	9⅝	12-16d	790	1055	1130
ST2122		2⅛	12⅛	16-16d	1070	1425	1505
ST2115		¾	16⅛	10-16d	450	600	600
ST2215		2⅛	16⅛	20-16d	1270	1695	1695
LSTA30	18	1¼	30	22-10d	1255	1670	1715
LSTA36		1¼	36	26-10d	1480	1715	1715
LSTI49		3½	49	32-10dx1½	1455	1940	2330
LSTI73		3½	73	48-10dx1½	2185	2910	3495
MSTA9		1¼	9	6-10d	455	610	730
MSTA12		1¼	12	10-10d	570	760	910
MSTA15		1¼	15	12-10d	685	910	1095
MSTA18		1¼	18	14-10d	800	1065	1275
MSTA21		1¼	21	16-10d	910	1215	1460
MSTA24		1¼	24	18-10d	1025	1370	1640
MSTA30	16	1¼	30	22-10d	1265	1685	2025
MSTA36		1¼	36	26-10d	1495	1995	2135
ST6215		2⅛	16⅜	20-16d	1330	1775	2130
ST6224		2⅛	23⅜	28-16d	1890	2520	2630
ST9		1¼	9	8-16d	530	705	850
ST12		1¼	11⅜	10-16d	665	885	1065
ST18		1¼	17¾	14-16d	900	1200	1200
ST22		1¼	21⅜	18-16d	1025	1370	1370
MSTC28		3	28¼	36-16d sinkers	2070	2760	3310
MSTC40		3	40¼	52-16d sinkers	2990	3985	4740
MSTC52		3	52¼	62-16d sinkers	3555	4740	4740
MSTC66		3	65¼	76-16d sinkers	4390	5855	5855
MSTC78	14	3	77¼	76-16d sinkers	4390	5855	5855
ST6236		2⅛	33⅜	40-16d	2575	3430	3430
FHA6	12	1⅛	6⅜	8-16d	550	735	885
FHA9		1⅛	9	8-16d	550	735	885
FHA12		1⅛	11⅜	8-16d	550	735	885
FHA18		1⅛	17¾	8-16d	550	735	885
FHA24		1⅛	23⅜	8-16d	550	735	885
FHA30		1⅛	30	8-16d	550	735	885
MSTI26		2⅛	26	26-10dx1½	1130	1510	1810
MSTI36		2⅛	36	36-10dx1½	1565	2090	2505
MSTI48		2⅛	48	48-10dx1½	2135	2850	3420
MSTI60		2⅛	60	60-10dx1½	2760	3680	4415
MSTI72		2⅛	72	72-10dx1½	3310	4415	4725



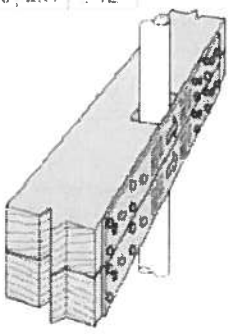
Typical LSTA Installation (hanger not shown)



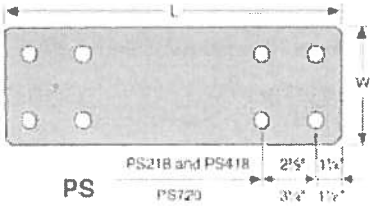
Typical LSTA Installation (hanger not shown)

Model No.	Plate	Notch Width
RPS18	2x4	≤ 5½"
RPS22	2x6	≤ 5½"
RPS28	2x4	≤ 12"

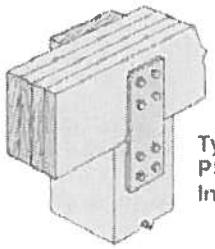
RPS



Typical RPS Installation



PS



Typical PS720 Installation

Model No.	Ga	Dimensions W	Dimensions L	Bolts Qty	Bolts Dia
PS218[7]	7	2	18	4	⅝
PS418[7]		4	18	4	⅝
PS720[7]		6¾	20	8	⅝

Floor-to-Floor Clear Span Table

Model No.	Clear Span	Fasteners (Total)	Allowable Tension Load (133)	(160)
MSTC28	18	12-16d sinker	920	1105
	16	16-16d sinker	1225	1470
MSTC40	18	28-16d sinker	2145	2575
	16	36-16d sinker	2455	2945
MSTC52	18	44-16d sinker	3375	4050
	16	48-16d sinker	3680	4415
MSTC66	18	64-16d sinker	5035	5855
	16	68-16d sinker	5350	5855
MSTC78	18	80-16d sinker	5855	5855
	16	80-16d sinker	5855	5855
MST37	18	20-16d	1905	2285
	16	22-16d	2100	2515
MST48	18	32-16d	3135	3765
	16	34-16d	3330	4000
MST60	18	46-16d	4785	5740
	16	48-16d	4990	5800
MST72	18	56-16d	5800	5800
	16	56-16d	5800	5800
MSTI36	18	14-10dx1½	810	975
	16	16-10dx1½	930	1115
MSTI48	18	26-10dx1½	1545	1855
	16	28-10dx1½	1660	1990
MSTI60	18	38-10dx1½	2330	2800
	16	40-10dx1½	2455	2945
MSTI72	18	50-10dx1½	3065	3680
	16	52-10dx1½	3190	3830

Model No.	Ga	Dimensions W	Dimensions L	Fasteners (Total) Nails	Bolts Qty	Bolts Dia	Allowable Tension Loads Nails Floor (100)	Nails (133)	Nails (160)	Bolts[5] Floor (100)	Bolts[5] (133)	Bolts[5] (160)
MST27	12	2⅝	27	30-16d	4	⅞	2070	2760	2790	1295	1725	2070
MST37		2⅝	37½	42-16d	6	⅞	2860	3815	3815	1825	2435	2920
MST48		2⅝	48	46-16d	8	⅞	3345	4460	4460	2225	2970	3560
MST60	10	2⅝	60	56-16d	10	⅞	4350	5800	5800	2670	3565	4275
MST72		2⅝	72	56-16d	10	⅞	4350	5800	5800	2670	3565	4275
HST2	7	2½	21¼	—	6	⅝	—	—	—	3130	4175	5005
HST5		5	21¼	—	12	⅝	—	—	—	6385	8510	10210
HST3	3	3	25⅜	—	6	¾	—	—	—	4645	6195	7435
HST6		6	25⅜	—	12	¾	—	—	—	9350	12465	14955

1. Loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed. Floor loads may not be increased for other load durations.
2. 10dx1½" nails may be substituted where 16d sinkers are specified at 0.80 of the table loads.
3. 10d commons may be substituted where 16d sinkers are specified at 100% of table loads.
4. 16d sinkers (9 gauge x 3¼") or 10d commons may be substituted where 16d commons are specified at 0.84 of the table loads.
5. Allowable bolt loads are based on parallel-to-grain loading and these minimum member thicknesses: MST–2½"; HST2 and HST5–4", HST3 and HST6–4½".
6. PS strap design loads must be determined by the building designer for each installation. Bolts are installed both perpendicular and parallel-to-grain.
7. Use half of the nails at each member being connected to achieve the listed loads.

Z2 clips secure 2x4 flat blocking between joists or trusses to support sheathing.

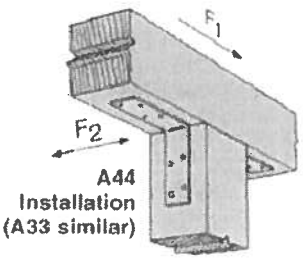
MATERIAL: Z clips–see table. A21 and A23–18 ga.; all other A angles–12 ga.

FINISH: Galvanized

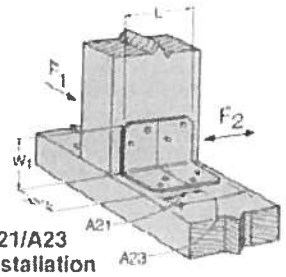
INSTALLATION: • Use all specified fasteners. See General Notes.
• Z clips do not provide lateral stability. Do not walk on stiffeners or apply load until diaphragm is installed and nailed to stiffeners.

CODES: BOCA, ICBO, SBCCI NER-421 (except A33, A44); City of L.A. RR 25076 (except A33, A44); Dade Co. FL 99-0623.04 (A21 and A23).

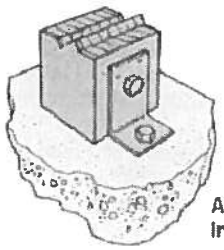
Model No.	Dimensions W1	W2	L	Fasteners Base Bolts	Base Nails	Post Bolts	Post Nails	Avg Ult F2	Allowable Loads[2] DF/SP (133) F1	(133) F2	(160) F1	(160) F2
A21	2	1½	1⅜	—	2-10dx1½	—	2-10dx1½	540	245	175	290	175
A23	2	1½	2¾	—	4-10dx1½	—	4-10dx1½	1767	485	485	585	585
A33	3	3	1½	—	4-10d	—	4-10d	2635	625	330	750	330
A44	4⅜	4⅜	1⅜	—	4-10d	—	4-10d	2490	625	295	750	295
A66	5¼	5¼	1½	2-⅜	—	2-⅜	—	N/A	N/A	N/A	N/A	N/A
A88	8	8	2	3-⅜	—	3-⅜	—	N/A	N/A	N/A	N/A	N/A
A24	3⅛	2	2½	1-½	—	1-½	2-10d	N/A	N/A	N/A	N/A	N/A
A311	11	3⅛	2	1-½	—	1-½	4-10d	N/A	N/A	N/A	N/A	N/A

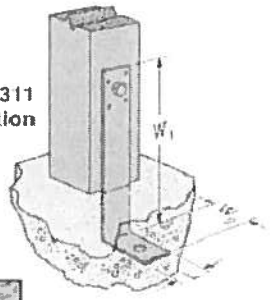


A44 Installation (A33 similar)



A21/A23 Installation

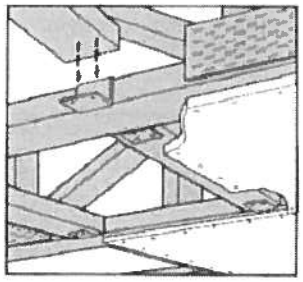

A24 Installation

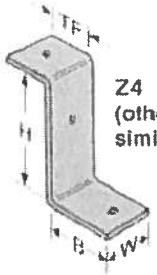


A311 Installation

Model No.	Ga	Dimensions W	H	B	TF	Fasteners[1] (Total)	Avg Ult	Allowable[2] Download (125)
Z2	20	2⅜	1½	1⅜	1⅜	4-10dx1½	1507	465
Z4	12	1½	3½	2⅜	1¾	2-16d	1450	465
Z6	12	1½	5½	2	1¾	2-16d	1517	485
Z28	28	2⅜	1½	1⅜	1⅜	10dx1½[3]	—	—
Z38	28	2⅜	2½	1⅜	1⅜	10dx1½[3]	—	—
Z44	12	2⅜	3½	2	1¾	4-16d	2800	865

1. Z28 and Z38 do not have nail holes. Fastener quantities are as required.
2. Allowable loads have been increased 25% for roof loading (Z clips), 33% and 60% for earthquake or wind loading (A angles), no further increase allowed, reduce for other load durations according to the code.
3. Z4 and Z6 loads apply with a nail into the top and a nail into the seat.


Typical Z2 Installation



Z4 (others similar)

SP/SPH/RSP4 STUD PLATE TIES

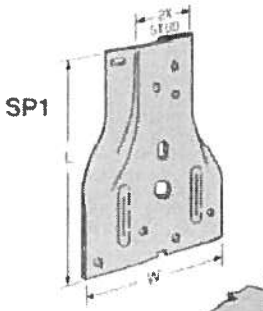
The RSP4 is a reversible stud plate tie with locating tabs, which aid placement on double top plates or a single bottom plate.

MATERIAL: SPH–18 gauge, all others–20 gauge **FINISH**: Galvanized

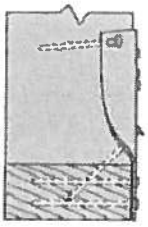
INSTALLATION: • Use all specified fasteners; see General Notes.
• SP–one of the 10d common stud nails is driven at a 45° angle through the stud into the plate.

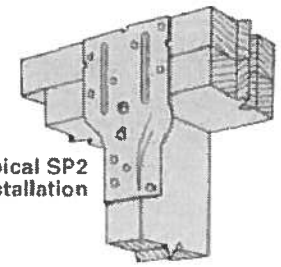
CODES: BOCA, ICBO, SBCCI NER-432, NER-443, NER-499; SBCCI 9603A; City of LA RR 25318 (RSP4); Dade Co. FL 99-0623.04 (SP1, SP2, SP4, SP6, SP8)

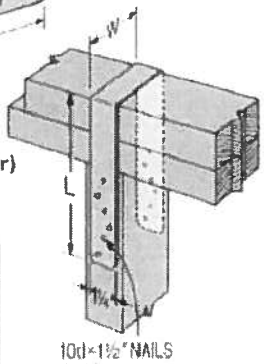
Model No.	Dimensions W	L	Fasteners Stud[1]	Plate	Avg Ult	Allowable Uplift Loads DF/SP (133)[2]	(160)[2]
SP1	3⅛	5⅛	6-10d	4-10d	1950	585	585
SP2	3⅛	6⅝	6-10d	6-10d	3300	890	1065
SP3	4⅛	6⅝	6-10d	6-10d	3467	890	1065
SP4	3⅜	7¼	6-10dx1½	—	2917	735	885
SP5	4⅛	5⅛	6-10d	4-10d	1950	585	585
SP6	5⅜	7¼	6-10dx1½	—	2917	735	885
SP8	7⅝	8⅝	6-10dx1½	—	2917	735	885
SPH4	3⅝	8¼	10-10dx1½	—	3993	1240	1240
			12-10dx1½	—	4470	1360	1360
SPH6	5⅜	9¼	10-10dx1½	—	3993	1240	1240
			12-10dx1½	—	4470	1360	1360
SPH8	7⅝	8⅝	10-10dx1½	—	3993	1240	1240
			12-10dx1½	—	4470	1360	1360
RSP4 (1)	2⅛	4⅛	4-8dx1½	4-8dx1½	1032	315	315
RSP4 (2)	2⅜	4⅛	4-8dx1½	4-8dx1½	1445	450	450



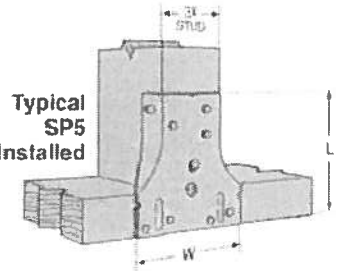
SP1


SP1 Nailing Profile

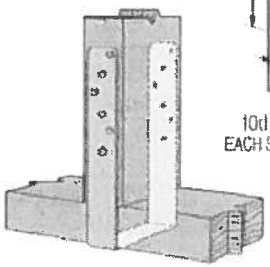

Typical SP2 Installation

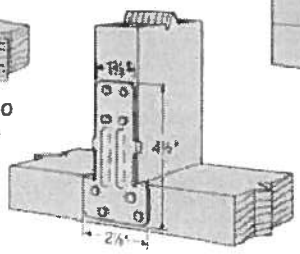


Typical SPH Installation (SP4, 6, 8 similar)

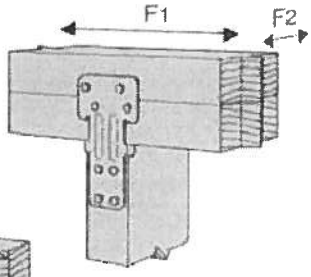


Typical SP5 Installed


Typical SPH4 Stud to Single Bottom Plate



(1) Typical RSP4 Stud to Single Bottom Plate



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

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

U.S. Patent 5,697,725

CMSTC provides nail slots for easy installation and coined edges for safe handling.

CS are continuous utility straps which can be cut to length on the job site. Packaged in a lightweight (about 40 pounds) cartons.

FINISH. Galvanized. Some products available in Z-MAX, contact factory.

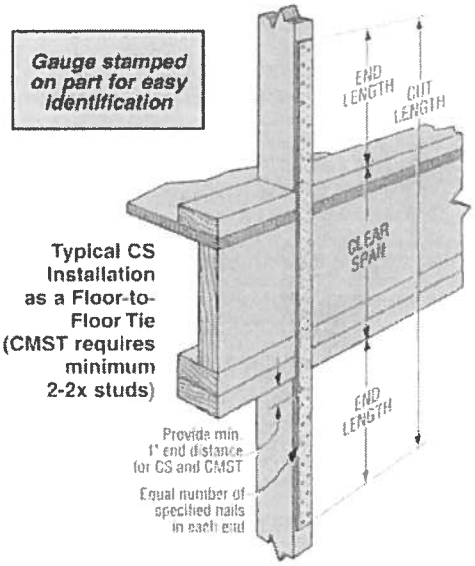
INSTALLATION. • Use all specified fasteners. See General Notes.

- Wood shrinkage after strap installation across horizontal wood members may cause strap to buckle outward.
- Refer to the applicable code for minimum nail penetration and minimum wood edge and end distances.
- The table shows the maximum allowable loads and the nails required to obtain them. Fewer nails may be used; reduce the allowable load by the code lateral load for each nail subtracted from each end.
- CMST only–Use every other triangle hole if the wood tends to split. Use round and triangle holes for comparable MST loads, providing wood does not tend to split.

CODES. BOCA, ICBO, SBCCI NER-413; City of LA RR 25293 (CMST12 and CMST14); Dade Co. 99-0623.04 (CS18 only).

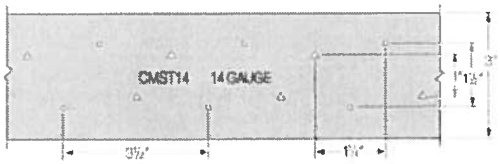
Model No.	Total L (Length of Roll)	End L	Ga	Cut Length	Fasteners (Total)	Allowable Tension Loads (100)[1]	Allowable Tension Loads (133/160)[2]	Nail Spacing D.C. (In a Row)
CMST12	40'	45"	12	clear span + 90"	100-16d	7230	9640	1¾"
		105"		clear span + 210"	118-10d	7230	9640	3½"
CMST14	52½'	34"	14	clear span + 68"	74-16d	5095	6795	1¾"
		78"		clear span + 156"	88-10d	5095	6795	3½"
CMSTC16	54'	25"	16	clear span + 50"	64-16d sinkers	3520	4690	1¾"
		49"		clear span + 98"	64-16d sinkers	3520	4690	3"
CS16	150'	14"	16	clear span + 30"	28-8d	1235	1650	
CS16-R	25'	11"		clear span + 24"	22-10d	1235	1650	
CS18S	100'	11"	18	clear span + 24"	22-8d			
CS18	200'	9"		clear span + 20"	18-10d	950	1270	2½"
CS18-R	25'	9"		clear span + 20"	18-10d			
CS20	250'	9"	20	clear span + 20"	18-8d	750	1005	
CS20-R	25'	7"		clear span + 16"	14-10d	750	1005	
CS22	300'	7"	22	clear span + 16"	14-8d	620	825	
CS22-R	25'	5½"		clear span + 13"	12-10d	620	825	

1. Allowable loads 100% value is the maximum steel capacity and may not be increased for other load durations unless otherwise indicated.
2. 133% and 160% value may be used for earthquake or wind loading.
3. Use half of the nails at each member being connected to achieve the listed loads.

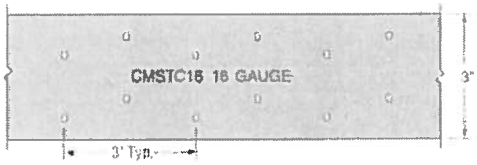


Typical CS Installation as a Floor-to-Floor Tie (CMST requires minimum 2-2x studs)

CS16 Hole Pattern (all other CS straps similar)



CMST14 Hole Pattern (CMST12 similar)



CMSTC16 Hole Pattern

SA/HSA STRAP CONNECTORS

A high value seismic tie for horizontal ties across intervening members.

FINISH. SA36–galvanized; all others–Simpson gray paint.

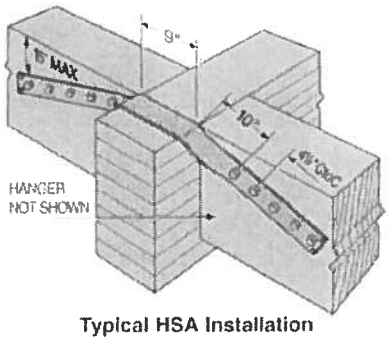
INSTALLATION. • Use all specified fasteners. See General Notes.

- May not be suitable for floor diaphragms which protrude above beams.

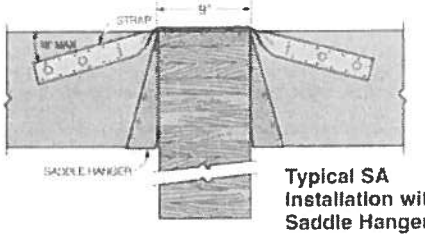
CODES. BOCA, ICBO, SBCCI NER-413; City of L.A. RR 25119.

Model No.	Strap Section	L	Total Fasteners Nails	Total Fasteners Bolts Qty	Total Fasteners Bolts Dia	Avg Ult	Allowable Horizontal Loads Nails (133 & 160)	Allowable Horizontal Loads Bolts (133)	Allowable Horizontal Loads Bolts (160)
SA36	12 ga x 2⅛	36	22-16d	4	½	6767	1900	1605	1900
HSA32	3 ga x 3	32	—	2	¾	13600	—	1910	2290
HSA41	3 ga x 3	41	—	4	¾	17600	—	3770	4520
HSA50	3 ga x 3	50	—	6	¾	21600	—	5470	6400
HSA59	3 ga x 3	59	—	8	¾	30100	—	6940	8330
HSA68	3 ga x 3½	68	—	10	¾	34200	—	8350	10020

1. Allowable loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed.
2. Allowable loads assume a restrained member of 3½" min. thickness with bolts in single shear.
3. Bolt and nail values may not be combined.
4. Only SA36 can be field bent for other intermediate beam widths.



Typical HSA Installation



Typical SA Installation with Saddle Hanger

Haynes Residence Additions, Columbia County FL

Wind Load Analysis Requirements

(In Compliance with the 2004 Florida Building Code and Amendments)

Prepared By: Marty J. Humphries, P.E. # 51976
7932 240th St., O'Brien, FL 32071
(386)935-2406

Description of Additions:

Footprint: Right side single-story addition is 27'8" wide x 28'10" deep overall. Left side two-story addition is 41'6" wide by 44'6" deep overall.(see plan 0704 by Haygood Homes Inc.)

Walls: 2x4-16" O.C. with 7/16" OSB sheathing minimum with hardiboard lap siding and gypsum wall-board interior.

Roof Structure: Pre-engineered roof trusses and 7/16" OSB sheathing minimum

Roof Type: Primarily gable construction with small hips at ends (analyzed for 1'4" eave overhang)

Foundation: footer with stemwall, with slab construction

Windload Data and Exposure:

Basic Wind Speed = 100 mph
Importance Factor = 1.0
Exposure category = B
Height and Exposure Adjustment Coefficient = 1.0
Residential Occupancy = Group R3
Analysis Method = FBC 1609.6 - Simplified Provisions for Low Rise Buildings
(see tables 1609.6A, 1609.6B, 1609.6C and 1609.6E for wind pressure values)
Mean roof height = 26'
Roof Cross Slope = 12:12 primarily with 8:12 at ends
Eave Overhang= (Analyzed for 1'4" overhang)
Wall Height = 9'-1st floor, 9'-2nd floor
Shear Wall locations = exterior walls only(all walls 3' in length or greater
Bracing method for gable locations = framing from wall to roof diaphragm(see attached detail)

Nailing Pattern Requirements:

Wall sheathing:	Shall be 7/16" Oriented Strand Board(OSB) minimum nailed with 8d common nails 3" on center around edges(including around doors and windows) and 6" on center interior. Full depth blocking shall be installed At horizontal joints in sheathing.
Roof sheathing:	Shall be 7/16" OSB minimum nailed with 8d common nails 3" on center at panel ends and eave overhang areas and 6" on center elsewhere.
Top wall plates:	Nail with 1-16d common nail 12" O.C.(average)

Marty J. Humphries
9-23-07

Strapping and Anchor Requirements:

truss to top wall plate — Install one Simpson model H10 hurricane anchor at each truss. At first 4 trusses at gable ends install a Simpson model H5 hurricane anchor in addition to the H10 anchor..

wall strap tie requirements: — At bottom of 1st story wall and top of 2nd story wall - install one Simpson model SP4 at each side of each door and window 4' or less in width, for windows or doors over 4' but less than or equal to 6'6" install 2- SP4's. Mirror top and bottom SP4 straps with 1-CS18 strap connecting 1st floor wall studs to 2nd floor wall studs(strap to span floor truss system). At all other wall locations install 1 –SP4 at the top of the second story wall, the bottom of the first story wall and a CS18 strap connecting the 1st story wall studs to the 2nd story wall studs 32" on center. For single story areas install SP4 straps as indicated above but omit CS18 strap(spacing of straps may be increased to 4' on center) and each side of doors/windows shall be strapped as indicated above..

Lookouts: Install one Simpson model H5 where lookouts connect to end gable truss(see detail).

Gable end: Install one LSTA18 - 4' on center connecting gable end truss to wall framing.

Gable End Bracing Requirements:

At each gable end install one 2x4 SPF 8' stud spaced 6' on center horizontal along top of bottom chord of trusses, nail with 2-12d nails at each truss including end truss. In addition, install a 2x4 brace extending from this stud at the gable end truss approx. 45 degrees to truss at roof sheathing, nail with 2 -12d nails where it crosses truss members and at ends. Gable end trusses shall be built to receive sheathing with vertical members 2' on center. Vertical members of gable end truss greater than 5' in height shall be stiffened with one 2x4 SPF nailed with 12d nails 8" on center to back of vertical member. (See attached detail)

Foundation Requirements:

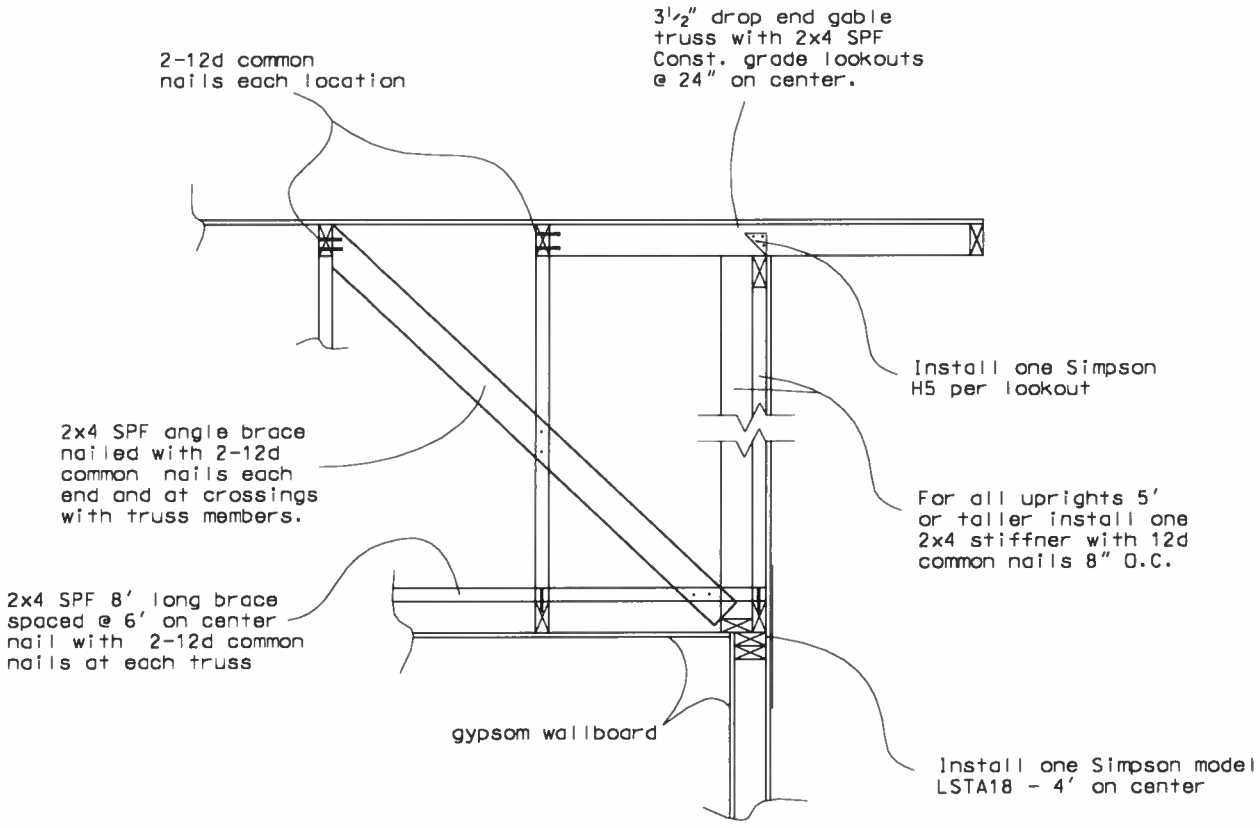
Stemwall: For two-story areas minimum size of footer shall be 10" x 24" wide with 3-#5 rebar continuous and 1-#5 vertical rebar 48" on center. All cells shall be filled with concrete. ½" anchor bolts with 2" washers shall be installed 3' on center and 9" from corners each way and at each side of door openings. (3000 psi concrete min) For single-story areas minimum size of the footer shall be 10" x 20" wide with 2-#5 rebar continuous with all other requirements the same as above.

Header Requirements:

Windows & Doors: Header shall be 2 - #2 SYP 2x12's with ½" plywood/OSB between for openings less than or equal to 7' 6".

Note: Equivalent capacity anchors may be substituted, installed in accordance with the manufacturers requirements.

Marty S. Hyde
9-23-07



GABLE END BRACING DETAIL (N.T.S.)

Marty J. Humphries
9-23-07

Haynes Additions Columbia County. FL	DETAIL PREPARED BY: MARTY J. HUMPHRIES P.E. # 51976 7932 240TH ST.. O'BRIEN. FL 32071

NEW! The H2.5A is symetrically designed for easy installation, with higher uplift loads to meet new code requirements. A placement mark allows easy installation on double top plates.

NEW! The H5A has an installed cost benefit, as it only requires 6 nails, to meet lower uplift requirements.

The H connector series provides wind and seismic ties for trusses and rafters.

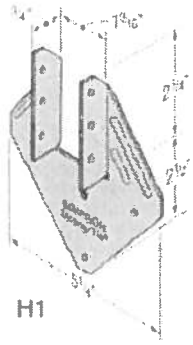
Allowable loads for more than one direction for a single connection cannot be added together. A design load which can be divided into components in the directions given must be evaluated as follows:
Design Shear/Allowable Shear + Design Tension/Allowable Tension ≤ 1.0

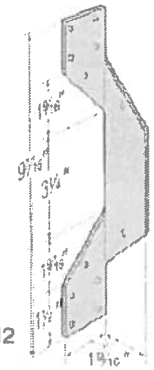
MATERIAL: See table

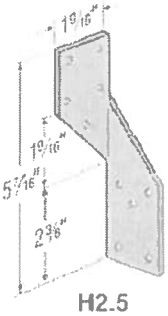
FINISH: Galvanized; H10-2, H11Z–Z-MAX. Other models available in stainless steel or Z-MAX; see Corrosion-Resistance, page 5.

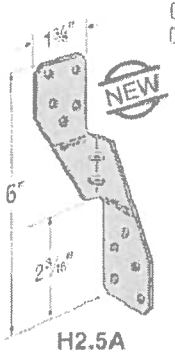
INSTALLATION:
- Use all specified fasteners. See General Notes.
- H1 can be installed with flanges facing outwards (reverse of drawing number 1). When installed inside a wall, a birdsmouth cut is required.
- H2.5, H3, H4, H5 and H6 ties are shipped in equal quantities of rights and lefts.
- Bend the H7 over the top of the truss. Install a minimum of four 8d nails into the truss, including two into the truss side.
- Hurricane Ties do not replace solid blocking.

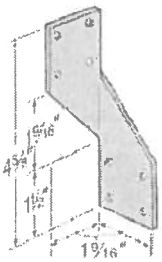
CODES: BOCA, ICBO, SBCCI NER-422, NER-393, NER-432; NER-499; City of L.A. RR 24818; Dade Co., FL 00-0512.11 (H10), 00-0926.01 (H1, H2.5, H3, H4, H5).

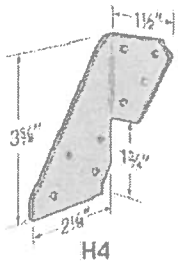

H1

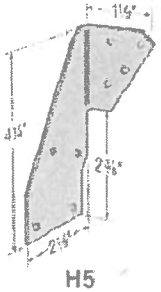

H2

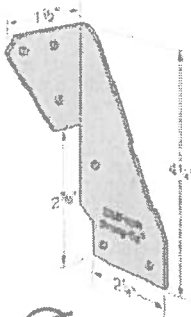

H2.5


H2.5A


H3

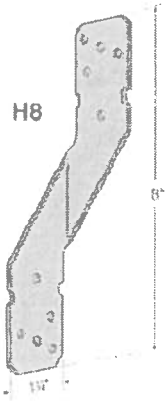

H4
U.S. Patent 4,714,372

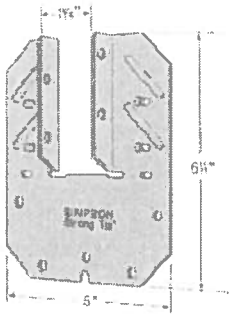

H5
U.S. Patent 4,714,372

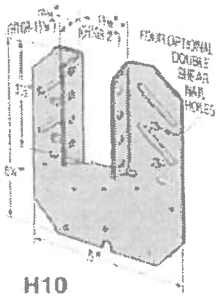

H5A
U.S. Patent 4,714,372


H6

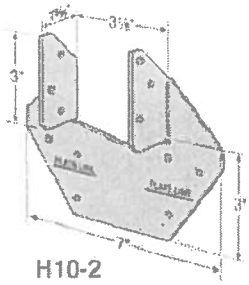

H7

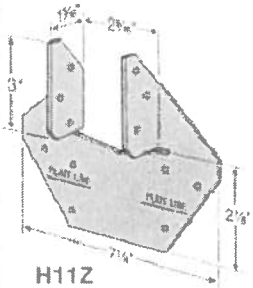

H8


H9


H10
(H10R similar)
U.S. Patents 4,480,941; Canada Patent 1,193,418

Model No.	Ga	Fasteners: To Rafters/ Truss	Fasteners: To Plates	Fasteners: To Studs	Uplift Avg Ult	Doug-Fir Larch/So. Pine Allowable Loads[1,2]: Uplift (133)	Uplift (160)	Lateral (133/160) F_1	Lateral (133/160) F_2	Uplift Load with 8dx1½ Nails (133 & 160)	Spruce-Pine-Fir Allowable Loads[1,2]: Uplift (133)	Uplift (160)	Lateral (133/160) F_1	Lateral (133/160) F_2	Uplift Load with 8dx1½ Nails (133 & 160)
H1	18	6-8dx1½	4-8d	—	1956	490	585	485	165	455	400	400	415	140	370
H2	18	5-8d	—	5-8d	1040	335	335	—	—	335	230	230	—	—	230
H2.5	18	5-8d	5-8d	—	1300	415	415	150	150	415	365	365	130	130	365
NEW H2.5A	18	5-8d	5-8d	—	1793	600	600	110	110	480	520	535	110	110	480
H3	18	4-8d	4-8d	—	1433	455	455	125	160	415	320	320	105	140	290
H4	20	4-8d	4-8d	—	1144	360	360	165	160	360	235	235	140	135	235
H5	18	4-8d	4-8d	—	1485	455	465	115	200	455	265	265	100	170	265
NEW H5A	18	3-8d	3-8d	—	1500	350	420	115	180	290	245	245	100	120	170
H6	16	—	8-8d	8-8d	3983	915	950	650	—	—	785	820	560	—	—
H7	16	4-8d	2-8d	8-8d	2991	930	985	400	—	—	800	845	345	—	—
H8	18	5-10dx1½	5-10dx1½	—	2422	620	745	—	—	—	530	565	—	—	—
H9KT	18	4-SDS¼x1½	5-SDS¼x1½	—	2812	875	875	680	125	—	755	755	680	125	—
H10	18	8-8dx1½	8-8dx1½	—	3135	905	990	585	525	—	780	850	505	450	—
H10R	18	8-8dx1½	8-8dx1½	—	3135	905	990	585	525	—	780	850	505	450	—
H10-2	18	6-10d	6-10d	—	2447	760	760	455	395	—	655	655	390	340	—
H11Z	18	6-16dx2½	6-16dx2½	—	5097	830	830	525	760	—	715	715	450	655	—


H10-2


H11Z

1. Loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on each side of the joist and on the same side of the plate.
3. Allowable uplift load for stud to bottom plate installation is 400 lbs (H2.5), 390 lbs (H2.5A), 360 lbs (H4) and 310 lbs (H8).
4. The H9KT is sold in 20 piece packs with screws.
5. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement to resist such forces should be considered.
6. Hurricane Ties are shown installed on the outside of the wall for clarity. Installation on the inside of the wall is acceptable. For a Continuous Load Path, connections must be on same side of the wall.

RPS/ST/FHA/PS/HST/LSTA/LSTI/MST/MSTA/MSTC/MSTI

STRAP TIES

SIMPSON Strong-Tie CONNECTORS

The MSTC series has countersunk nail slots for a lower nailing profile. Coined edges ensure safer handling. The RPS meets UBC and City of Los Angeles code requirements for notching plates where plumbing, heating or other pipes are placed in partitions.

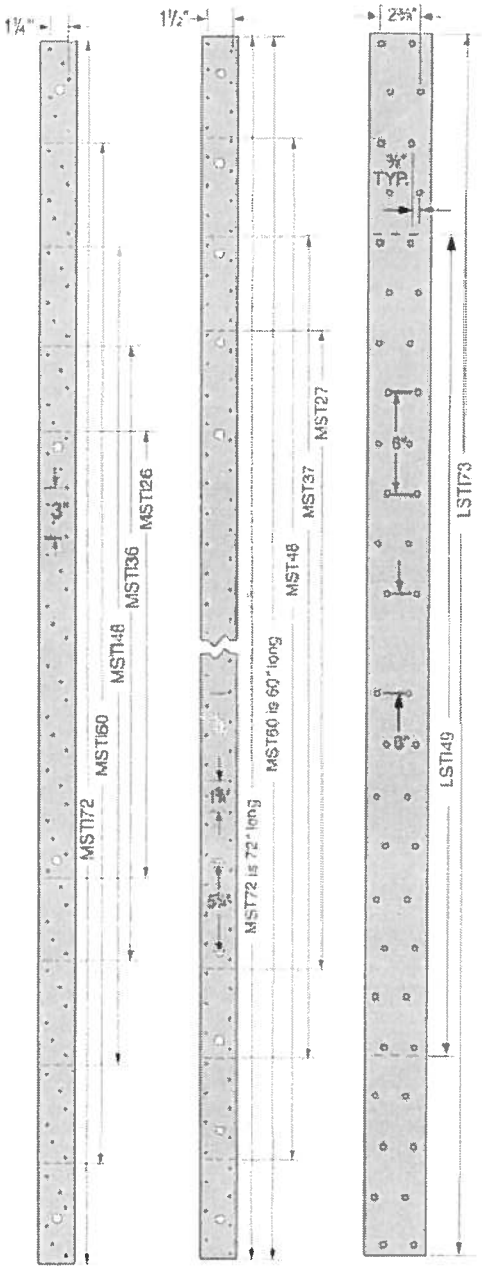
Install Strap Ties where plates or soles are cut, at wall intersections, and as ridge ties. LSTA and MSTA straps are engineered for use on 1½" members. The 3" center-to-center nail spacing reduces the possibility of splitting. For the MST, this may be a problem on lumber narrower than 3½", either fill every nail hole with 10dx1½" nails or fill every other nail hole with 16d commons. Reduce the allowable load based on the size and quantity of fasteners used. The LSTI light strap ties are suitable where gun-nailing is necessary through diaphragm decking and wood chord open web trusses.

FINISH: HST–Simpson gray paint; PS–HDG; all others–galvanized. Some products are available in stainless steel or Z-MAX; see Corrosion-Resistance, page 5.

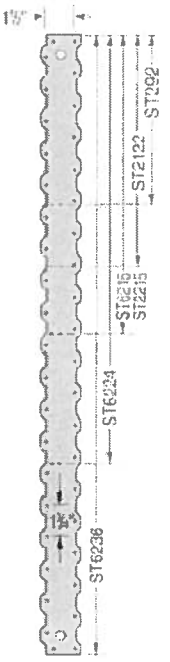
INSTALLATION: Use all specified fasteners. See General Notes.

OPTIONS: Special sizes can be made to order. See also HCST.

CODES: BOCA, ICBO, SBCCI NER-413, NER-443; ICBO 4935, 5357; Dade County, FL, 00-1023.05 (MSTA30, MSTA36, ST12, ST18, ST22); City of L.A. RR 25119, RR 25149, RR 25281.

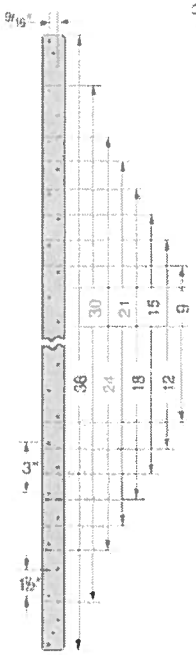


MSTI MST LSTI

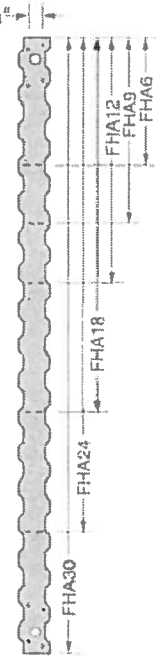


ST
U.S. Patent 4,367,973

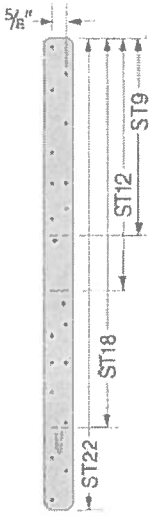
MSTAM36



LSTA and MSTA
(pilot holes not shown)

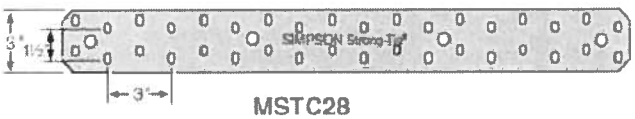


FHA

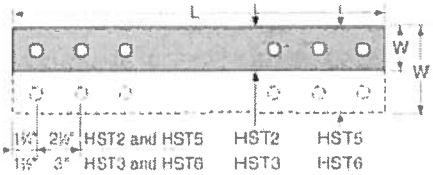


ST9, ST12,
ST18, ST22

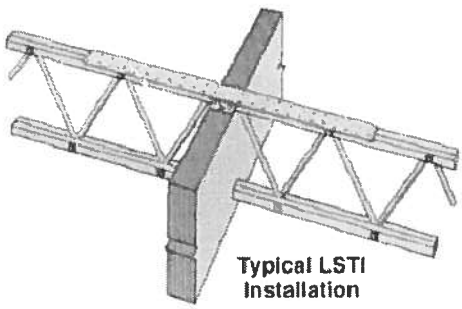
ST2115



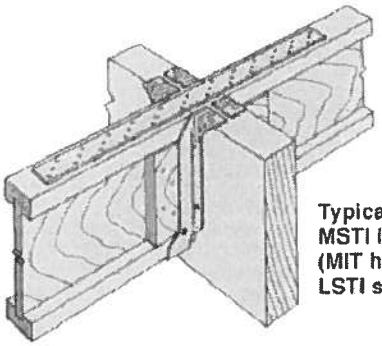
MSTC28



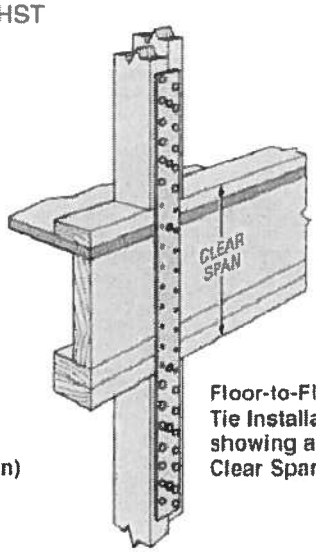
HST



Typical LSTI Installation

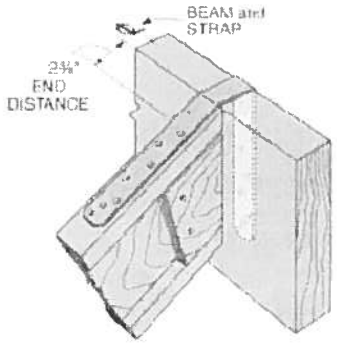


Typical
MSTI Installation
(MIT hanger shown)
LSTI similar

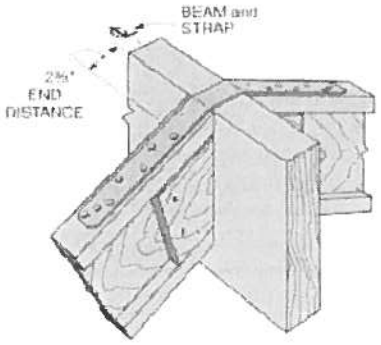


Floor-to-Floor
Tie Installation
showing a
Clear Span

Model No.	Ga	Dimensions W	Dimensions L	Fasteners (Total) Nails	Allowable Tension Loads Floor (100)	(133)	(160)
RPS18	16	1½	18⅜	12-16d	810	1080	1295
RPS22		1½	22⅜	16-10d	905	1205	1445
RPS28		1½	28⅜	12-16d	810	1080	1295
LSTA9	20	1¼	9	8-10d	450	605	725
LSTA12		1¼	12	10-10d	565	755	905
LSTA15		1¼	15	12-10d	680	905	1085
LSTA18		1¼	18	14-10d	790	1055	1265
LSTA21		1¼	21	16-10d	905	1205	1295
LSTA24		1¼	24	18-10d	1015	1295	1295
ST292		2⅛	9⅜	12-16d	790	1055	1130
ST2122		2⅛	12⅜	16-16d	1070	1425	1505
ST2115		¾	16⅜	10-16d	450	600	600
ST2215		2⅛	16⅜	20-16d	1270	1695	1695
LSTA30	18	1¼	30	22-10d	1255	1670	1715
LSTA36		1¼	36	26-10d	1480	1715	1715
LSTI49		3¼	49	32-10dx1½	1455	1940	2330
LSTI73		3¼	73	48-10dx1½	2185	2910	3495
MSTA9		1¼	9	8-10d	455	610	730
MSTA12		1¼	12	10-10d	570	760	910
MSTA15		1¼	15	12-10d	685	910	1095
MSTA18		1¼	18	14-10d	800	1065	1275
MSTA21		1¼	21	16-10d	910	1215	1460
MSTA24		1¼	24	18-10d	1025	1370	1640
MSTA30	16	1½	30	22-10d	1265	1685	2025
MSTA36		1¼	36	26-10d	1495	1995	2135
ST6215		2⅛	16⅜	20-16d	1330	1775	2130
ST6224		2⅛	23⅜	28-16d	1890	2520	2630
ST9		1⅜	9	8-16d	530	705	850
ST12		1½	11⅜	10-16d	665	885	1065
ST18		1½	17¾	14-16d	900	1200	1200
ST22		1½	21⅜	18-16d	1025	1370	1370
MSTC28		3	28¼	36-16d sinkers	2070	2760	3310
MSTC40		3	40¼	52-16d sinkers	2990	3985	4740
MSTC52		3	52¼	62-16d sinkers	3555	4740	4740
MSTC66		3	65¼	76-16d sinkers	4390	5855	5855
MSTC78	14	3	77¼	76-16d sinkers	4390	5855	5855
ST6236		2⅛	33⅜	40-16d	2575	3430	3430
FHA6	12	1⅛	6⅜	8-16d	550	735	885
FHA9		1⅛	9	8-16d	550	735	885
FHA12		1⅛	11⅜	8-16d	550	735	885
FHA18		1⅛	17¼	8-16d	550	735	885
FHA24		1⅛	23⅜	8-16d	550	735	885
FHA30		1⅛	30	8-16d	550	735	885
MSTI26		2⅛	26	26-10dx1½	1130	1510	1810
MSTI36		2⅛	36	36-10dx1½	1565	2090	2505
MSTI48		2⅛	48	48-10dx1½	2135	2850	3420
MSTI60		2⅛	60	50-10dx1½	2760	3680	4415
MSTI72		2⅛	72	72-10dx1½	3310	4415	4725



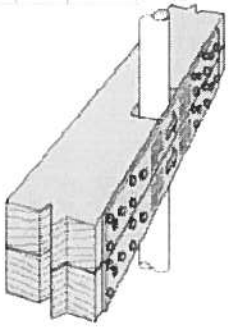
Typical LSTA Installation (hanger not shown)



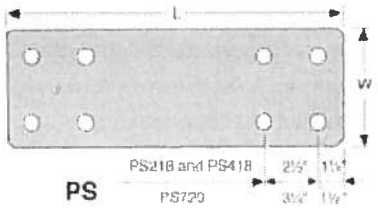
Typical LSTA Installation (hanger not shown)

Model No.	Plate	Notch Width
RPS18	2x4	≤ 5½"
RPS22	2x6	≤ 5½"
RPS28	2x4	≤ 12"

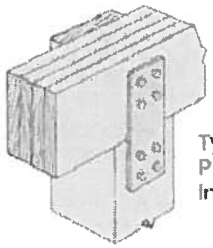
RPS



Typical RPS Installation



PS



Typical PS720 Installation

Model No.	Ga	Dimensions W	Dimensions L	Bolts Qty	Bolts Dia
PS218	7	2	18	4	⅝
PS418		4	18	4	⅝
PS720		6¾	20	8	½

Floor-to-Floor Clear Span Table

Model No.	Clear Span	Fasteners (Total)	Allowable Tension Load (133)	(160)
MSTC28	18	12-16d sinker	920	1105
	16	16-16d sinker	1225	1470
MSTC40	18	28-16d sinker	2145	2575
	16	36-16d sinker	2455	2945
MSTC52	18	44-16d sinker	3375	4050
	16	48-16d sinker	3680	4415
MSTC66	18	64-16d sinker	5035	5855
	16	68-16d sinker	5350	5855
MSTC78	18	80-16d sinker	5855	5855
	16	80-16d sinker	5855	5855
MST37	18	20-16d	1905	2285
	16	22-16d	2100	2515
MST48	18	32-16d	3135	3765
	16	34-16d	3330	4000
MST60	18	46-16d	4785	5740
	16	48-16d	4990	5800
MST72	18	56-16d	5800	5800
	16	56-16d	5800	5800
MSTI36	18	14-10dx1½	810	975
	16	16-10dx1½	930	1115
MSTI48	18	26-10dx1½	1545	1855
	16	28-10dx1½	1660	1990
MSTI60	18	38-10dx1½	2330	2800
	16	40-10dx1½	2455	2945
MSTI72	18	50-10dx1½	3065	3680
	16	52-10dx1½	3190	3830

Model No.	Ga	Dimensions W	Dimensions L	Fasteners (Total) Nails	Bolts Qty	Bolts Dia	Allowable Tension Loads Nails Floor (100)	Nails (133)	Nails (160)	Bolts[5] Floor (100)	Bolts[5] (133)	Bolts[5] (160)
MST27	12	2⅛	27	30-16d	4	¾	2070	2760	2790	1295	1725	2070
MST37		2⅛	37⅛	42-16d	6	¾	2860	3815	3815	1825	2435	2920
MST48		2⅛	48	46-16d	8	¾	3345	4460	4460	2225	2970	3560
MST60	10	2⅛	60	56-16d	10	¾	4350	5800	5800	2670	3565	4275
MST72		2⅛	72	56-16d	10	¾	4350	5800	5800	2670	3565	4275
HST2	7	2½	21¼	—	6	⅝	—	—	—	3130	4175	5005
HST5		5	21¼	—	12	⅝	—	—	—	6385	8510	10210
HST3	3	3	25½	—	6	⅞	—	—	—	4645	6195	7435
HST6		6	25½	—	12	⅞	—	—	—	9350	12465	14955

1. Loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed. Floor loads may not be increased for other load durations.
2. 10dx1½" nails may be substituted where 16d sinkers are specified at 0.80 of the table loads.
3. 10d commons may be substituted where 16d sinkers are specified at 100% of table loads.
4. 16d sinkers (9 gauge x 3¼") or 10d commons may be substituted where 16d commons are specified at 0.84 of the table loads.
5. Allowable bolt loads are based on parallel-to-grain loading and these minimum member thicknesses: MST–2½"; HST2 and HST5–4"; HST3 and HST6–4½".
6. PS strap design loads must be determined by the building designer for each installation. Bolts are installed both perpendicular and parallel-to-grain.
7. Use half of the nails at each member being connected to achieve the listed loads.

Z2 clips secure 2x4 flat blocking between joists or trusses to support sheathing.

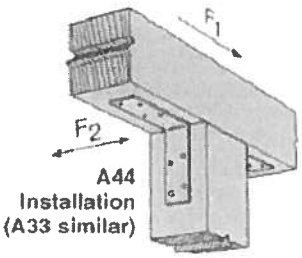
MATERIAL: Z clips–see table. A21 and A23–18 ga.; all other A angles–12 ga.

FINISH: Galvanized

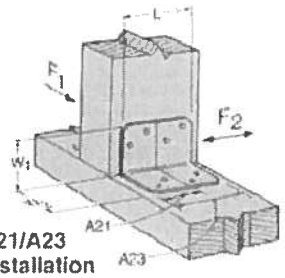
INSTALLATION: • Use all specified fasteners. See General Notes.
• Z clips do not provide lateral stability. Do not walk on stiffeners or apply load until diaphragm is installed and nailed to stiffeners.

CODES: BOCA, ICBO, SBCCI NER-421 (except A33, A44); City of L.A. RR 25076 (except A33, A44); Dade Co. FL 99-0623.04 (A21 and A23).

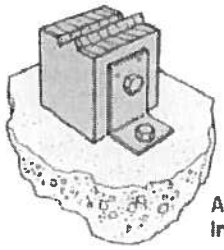
Model No.	Dimensions W1	Dimensions W2	Dimensions L	Fasteners Base Bolts	Fasteners Base Nails	Fasteners Post Bolts	Fasteners Post Nails	Avg Ult F2	Allowable Loads[2] DF/SP (133) F1	(133) F2	(160) F1	(160) F2
A21	2	1½	1⅜	—	2-10dx1½	—	2-10dx1½	540	245	175	290	175
A23	2	1½	2¾	—	4-10dx1½	—	4-10dx1½	1767	485	485	585	565
A33	3	3	1½	—	4-10d	—	4-10d	2635	625	330	750	330
A44	4⅜16	4⅜16	1½	—	4-10d	—	4-10d	2490	625	295	750	295
A66	5⅛	5⅛	1½	2-⅜	—	2-⅜	—	N/A	N/A	N/A	N/A	N/A
A88	8	8	2	3-⅜	—	3-⅜	—	N/A	N/A	N/A	N/A	N/A
A24	3⅛	2	2½	1-½	—	1-½	2-10d	N/A	N/A	N/A	N/A	N/A
A311	11	3⅛	2	1-½	—	1-½	4-10d	N/A	N/A	N/A	N/A	N/A



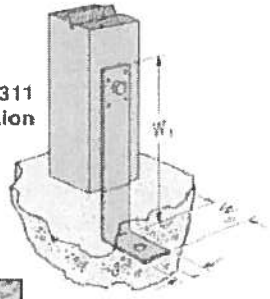
A44 Installation (A33 similar)



A21/A23 Installation



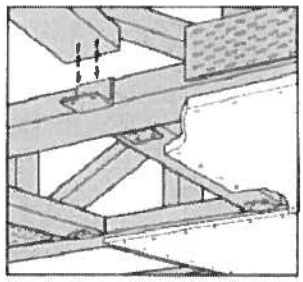
A24 Installation



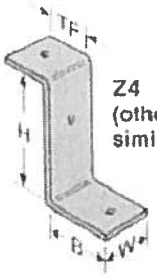
A311 Installation

Model No.	Ga	Dimensions W	Dimensions H	Dimensions B	Dimensions TF	Fasteners[1] (Total)	Avg Ult	Allowable[2] Download (125)
Z2	20	2⅜16	1½	1⅜	1⅜	4-10dx1½	1507	465
Z4	12	1½	3½	2⅛	1¾	2-16d	1450	465
Z6	12	1½	5½	2	1¾	2-16d	1517	485
Z28	28	2⅜16	1⅛	1⅜	1⅜	10dx1½[3]	—	—
Z38	28	2⅜16	2½	1⅜	1⅜	10dx1½[3]	—	—
Z44	12	2½	3½	2	1¾	4-16d	2800	865

1. Z28 and Z38 do not have nail holes. Fastener quantities are as required.
2. Allowable loads have been increased 25% for roof loading (Z clips), 33% and 60% for earthquake or wind loading (A angles); no further increase allowed; reduce for other load durations according to the code.
3. Z4 and Z6 loads apply with a nail into the top and a nail into the seat.



Typical Z2 Installation



Z4 (others similar)

Straps & Ties

SP/SPH/RSP4 STUD PLATE TIES

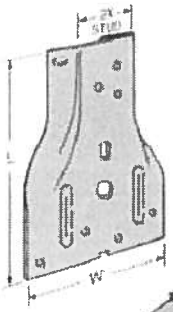
The RSP4 is a reversible stud plate tie with locating tabs, which aid placement on double top plates or a single bottom plate.

MATERIAL: SPH–18 gauge, all others–20 gauge. **FINISH**: Galvanized

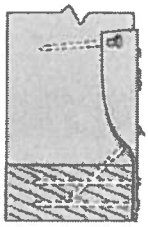
INSTALLATION: • Use all specified fasteners; see General Notes.
• SP–one of the 10d common stud nails is driven at a 45° angle through the stud into the plate.

CODES: BOCA, ICBO, SBCCI NER-432, NER-443, NER-499, SBCCI 9603A; City of LA RR 25318 (RSP4); Dade Co. FL 99-0623.04 (SP1, SP2, SP4, SP6, SP8).

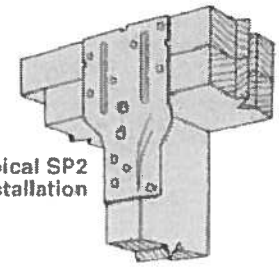
Model No.	Dimensions W	Dimensions L	Fasteners Stud[1]	Fasteners Plate	Avg Ult	Allowable Uplift Loads DF/SP (133)[2]	Allowable Uplift Loads DF/SP (160)[2]
SP1	3½	5⅜16	6-10d	4-10d	1950	585	585
SP2	3½	6⅝	6-10d	6-10d	3300	890	1065
SP3	4½	6⅝	6-10d	6-10d	3467	890	1065
SP4	3⅜16	7¼	6-10dx1½	—	2917	735	885
SP5	4½	5⅜16	6-10d	4-10d	1950	585	585
SP6	5⅜16	7¼	6-10dx1½	—	2917	735	885
SP8	7⅜16	8⅝16	6-10dx1½	—	2917	735	885
SPH4	3⅜16	8⅜	10-10dx1½	—	3993	1240	1240
			12-10dx1½	—	4470	1360	1360
SPH6	5⅜16	9¼	10-10dx1½	—	3993	1240	1240
			12-10dx1½	—	4470	1360	1360
SPH8	7⅜16	8¾	10-10dx1½	—	3993	1240	1240
			12-10dx1½	—	4470	1360	1360
RSP4 (1)	2⅜	4½	4-8dx1½	4-8dx1½	1032	315	315
RSP4 (2)	2⅜	4½	4-8dx1½	4-8dx1½	1445	450	450



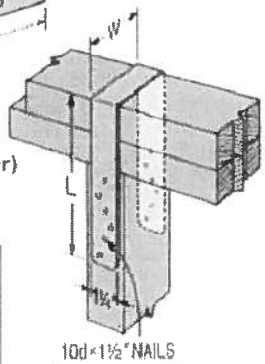
SP1



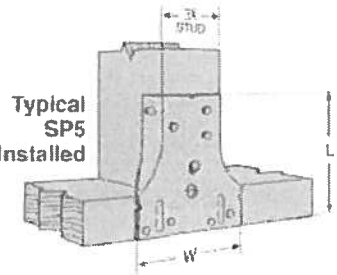
SP1 Nailing Profile



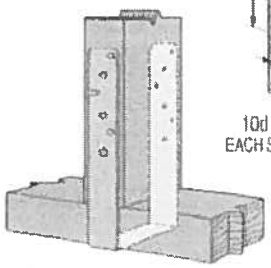
Typical SP2 Installation



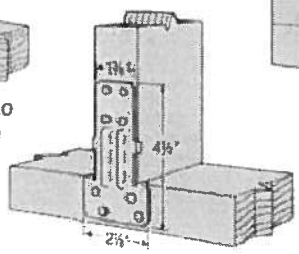
Typical SPH Installation (SP4, 6, 8 similar)



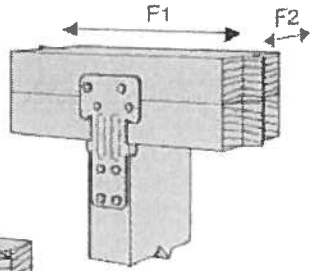
Typical SP5 Installed



Typical SPH4 Stud to Single Bottom Plate



(1) Typical RSP4 Stud to Single Bottom Plate



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

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

U.S. Patent 5,697,725

CMSTC provides nail slots for easy installation and coined edges for safe handling.

CS are continuous utility straps which can be cut to length on the job site. Packaged in a lightweight (about 40 pounds) cartons.

FINISH Galvanized. Some products available in Z-MAX, contact factory.

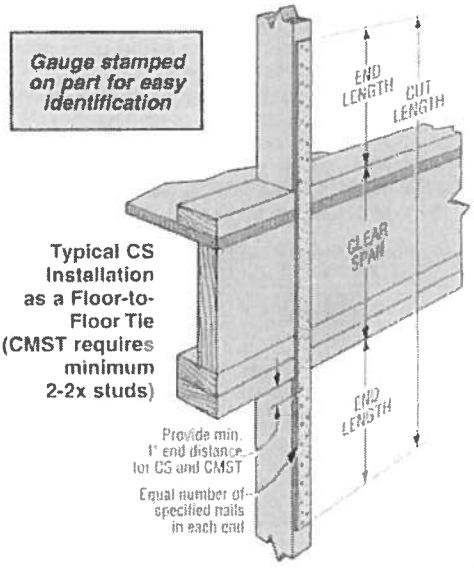
INSTALLATION • Use all specified fasteners. See General Notes.

- Wood shrinkage after strap installation across horizontal wood members may cause strap to buckle outward.
- Refer to the applicable code for minimum nail penetration and minimum wood edge and end distances.
- The table shows the maximum allowable loads and the nails required to obtain them. Fewer nails may be used; reduce the allowable load by the code lateral load for each nail subtracted from each end.
- CMST only–Use every other triangle hole if the wood tends to split. Use round and triangle holes for comparable MST loads, providing wood does not tend to split.

CODES BOCA, ICBO, SBCCI NER-413, City of LA RR 25293 (CMST12 and CMST14), Dade Co. 99-0623.04 (CS18 only).

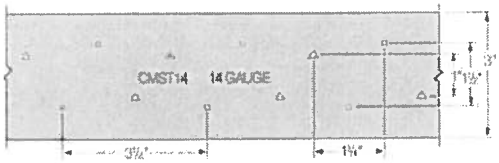
Model No.	Total L (Length of Roll)	End L	Ga	Cut Length	Fasteners (Total)	Allowable Tension Loads (100)[1]	Allowable Tension Loads (133/160)[2]	Nail Spacing o.c. (In a Row)
CMST12	40'	45"	12	clear span + 90"	100-16d	7230	9610	1¼"
		105"		clear span + 210"	118-10d	7230	9640	3½"
CMST14	52½'	34"	14	clear span + 68"	74-16d	5095	6795	1¼"
		78"		clear span + 156"	88-10d	5095	6795	3½"
CMSTC16	54'	25"	16	clear span + 50"	64-16d sinkers	3520	4690	1½"
		49"		clear span + 98"	64-16d sinkers	3520	4690	3"
CS16	150'	14"	16	clear span + 30"	28-8d	1235	1650	2½"
CS16-R	25'	11"		clear span + 24"	22-10d	1235	1650	
CS18S	100'	11"	18	clear span + 24"	22-8d	950	1270	
CS18	200'	9"		clear span + 20"	18-10d			
CS18-R	25'	9"		clear span + 20"	18-10d			
CS20	250'	9"	20	clear span + 20"	18-8d	750	1005	
CS20-R	25'	7"		clear span + 16"	14-10d	750	1005	
CS22	300'	7"	22	clear span + 16"	14-8d	620	825	
CS22-R	25'	5½"		clear span + 13"	12-10d	620	825	

1. Allowable loads 100% value is the maximum steel capacity and may not be increased for other load durations unless otherwise indicated.
2. 133% and 160% value may be used for earthquake or wind loading.
3. Use half of the nails at each member being connected to achieve the listed loads.

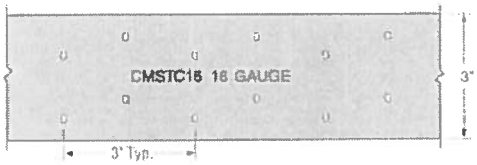


Typical CS Installation as a Floor-to-Floor Tie (CMST requires minimum 2-2x studs)

CS16 Hole Pattern (all other CS straps similar)



CMST14 Hole Pattern (CMST12 similar)



CMSTC16 Hole Pattern

SA/HSA STRAP CONNECTORS

A high value seismic tie for horizontal ties across intervening members.

FINISH SA36–galvanized; all others–Simpson gray paint.

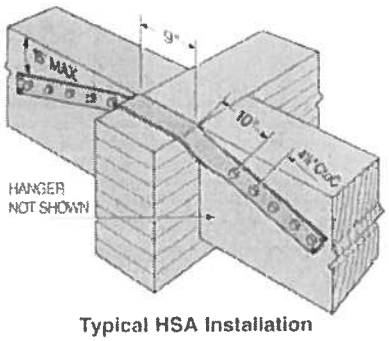
INSTALLATION • Use all specified fasteners. See General Notes.

- May not be suitable for floor diaphragms which protrude above beams.

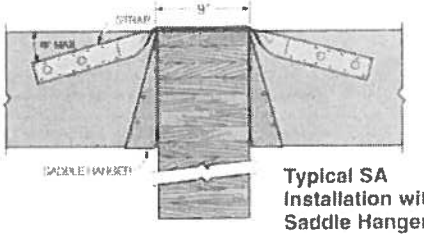
CODES BOCA, ICBO, SBCCI NER-413, City of L.A. RR 25119.

Model No.	Strap Section	L	Total Fasteners: Nails	Total Fasteners: Bolts Qty	Total Fasteners: Bolts Dia	Avg Ult	Allowable Horizontal Loads: Nails (133 & 160)	Allowable Horizontal Loads: Bolts (133)	Allowable Horizontal Loads: Bolts (160)
SA36	12 ga x 2⅛	36	22-16d	4	½	6767	1900	1605	1900
HSA32	3 ga x 3	32	—	2	¾	13600	—	1910	2290
HSA41	3 ga x 3	41	—	4	¾	17600	—	3770	4520
HSA50	3 ga x 3	50	—	6	¾	21600	—	5470	6400
HSA59	3 ga x 3	59	—	8	¾	30100	—	6940	8330
HSA68	3 ga x 3½	68	—	10	¾	34200	—	8350	10020

1. Allowable loads have been increased 33% and 60% for earthquake or wind loading with no further increase allowed.
2. Allowable loads assume a restrained member of 3½" min. thickness with bolts in single shear.
3. Bolt and nail values may not be combined.
4. Only SA36 can be field-bent for other intermediate beam widths.



Typical HSA Installation



Typical SA Installation with Saddle Hanger

FORM 600A-2004 EnergyGauge® 4.1

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**710053TopFlightConstruction**	Builder:	Top Flight
Address:	**519 NW Crawford Court,**	Permitting Office:	Columbia
City, State:	**White Springs, FL**	Permit Number:	26351
Owner:	**Haynes Curtis & Dana Addition**	Jurisdiction Number:	22000
Climate Zone:	**North**		

1.	New construction or existing	Addition	
2.	Single family or multi-family	Single family	
3.	Number of units, if multi-family	1	
4.	Number of Bedrooms	3	
5.	Is this a worst case?	Yes	
6.	Conditioned floor area (ft²)	3173.84 ft²	
7.	Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)		
a.	U-factor: (or Single or Double DEFAULT)	7a. Description Area (Dble Default) 246.1 ft²	
b.	SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 246.1 ft²	
8.	Floor types		
a.	Slab-On-Grade Edge Insulation	R=0.0, 177.0(p) ft	
b.	Slab-On-Grade Edge Insulation	R=0.0, 48.0(p) ft	
c.	N/A		
9.	Wall types		
a.	Frame, Wood, Exterior	R=13.0, 2949.9 ft²	
b.	Frame, Wood, Exterior	R=13.0, 402.0 ft²	
c.	N/A		
d.	N/A		
e.	N/A		
10.	Ceiling types		
a.	Under Attic	R=30.0, 1521.9 ft²	
b.	Under Attic	R=30.0, 450.0 ft²	
c.	N/A		
11.	Ducts		
a.	Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 178.0 ft	
b.	Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 50.0 ft	
12.	Cooling systems		
a.	Central Unit	Cap: 22.0 kBtu/hr SEER: 13.00	
b.	Central Unit	Cap: 22.0 kBtu/hr SEER: 13.00	
c.	N/A		
13.	Heating systems		
a.	Electric Heat Pump	Cap: 22.0 kBtu/hr HSPF: 7.90	
b.	Electric Heat Pump	Cap: 22.0 kBtu/hr HSPF: 7.90	
c.	N/A		
14.	Hot water systems		
a.	Electric Resistance	Cap: 40.0 gallons EF: 0.93	
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: 0.08

Total as-built points: 31305
Total base points: 42053

PASS

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

PREPARED BY: _____

DATE: 10-5-07

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

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

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

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	**3173.8**	**20.04**	**11448.7**	Double, Clear	N	1.5	5.5	10.0	19.20	0.93	178.2	
				Double, Clear	W	1.5	5.5	15.0	38.52	0.90	518.3	
				Double, Clear	N	1.5	0.0	30.0	19.20	0.59	341.6	
				Double, Clear	N	1.5	7.3	11.1	19.20	0.96	204.5	
				Double, Clear	S	1.5	0.0	15.0	35.87	0.43	232.4	
				Double, Clear	S	1.5	0.0	45.0	35.87	0.43	697.1	
				Double, Clear	S	1.5	5.5	10.0	35.87	0.83	298.5	
				Double, Clear	SW	1.5	5.5	10.0	40.16	0.86	346.6	
				Double, Clear	NW	1.5	5.5	10.0	25.97	0.91	236.8	
				Double, Clear	N	1.5	5.5	45.0	19.20	0.93	802.0	
				Double, Clear	S	1.5	5.5	15.0	35.87	0.83	447.7	
				Double, Clear	W	1.5	0.0	15.0	38.52	0.37	216.5	
				Double, Clear	S	1.5	5.5	15.0	35.87	0.83	447.7	
				As-Built Total:				**246.1**			**4967.9**	

WALL TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Adjacent	0.0	0.00	0.0	Frame, Wood, Exterior	13.0	2949.9	1.50	4424.8
Exterior	3351.9	1.70	5698.2	Frame, Wood, Exterior	13.0	402.0	1.50	603.0
Base Total:	**3351.9**		**5698.2**	**As-Built Total:**		**3351.9**		**5027.8**

DOOR TYPES	Area X	BSPM	= Points	Type	Area X	SPM	= Points
Adjacent	0.0	0.00	0.0	Exterior Insulated	20.0	4.10	82.0
Exterior	20.0	4.10	82.0				
Base Total:	**20.0**		**82.0**	**As-Built Total:**	**20.0**		**82.0**

CEILING TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM X SCM	= Points
Under Attic	1971.9	1.73	3411.4	Under Attic	30.0	1521.9	1.73 X 1.00	2632.9
				Under Attic	30.0	450.0	1.73 X 1.00	778.5
Base Total:	**1971.9**		**3411.4**	**As-Built Total:**		**1971.9**		**3411.4**

FLOOR TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Slab	225.0(p)	-37.0	-8325.0	Slab-On-Grade Edge Insulation	0.0	177.0(p	-41.20	-7292.4
Raised	0.0	0.00	0.0	Slab-On-Grade Edge Insulation	0.0	48.0(p)	-41.20	-1977.6
Base Total:			**-8325.0**	**As-Built Total:**		**225.0**		**-9270.0**

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT						
INFILTRATION	Area X	BSPM	= Points		Area X	SPM	= Points			
	3173.8	10.21	32404.9		3173.8	10.21	32404.9			
Summer Base Points: 44720.2				**Summer As-Built Points:**						**36624.1**
Total Summer Points	X System Multiplier	= Cooling Points		Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points	
				(sys 1: Central Unit 22000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)						
				36624	0.50	(1.09 x 1.147 x 0.91)	0.263	1.000	5469.7	
				(sys 2: Central Unit 22000 btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)						
				36624	0.50	(1.09 x 1.147 x 0.91)	0.263	1.000	5469.7	
44720.2	**0.4266**	**19077.7**		**36624.1**	**1.00**	**1.138**	**0.263**	**1.000**	**10939.3**	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points
.18	3173.8	12.74	7278.3	Double, Clear	N	1.5	5.5	10.0	24.58	1.00	246.5
				Double, Clear	W	1.5	5.5	15.0	20.73	1.03	319.7
				Double, Clear	N	1.5	0.0	30.0	24.58	1.03	757.5
				Double, Clear	N	1.5	7.3	11.1	24.58	1.00	273.2
				Double, Clear	S	1.5	0.0	15.0	13.30	3.66	730.0
				Double, Clear	S	1.5	0.0	45.0	13.30	3.66	2190.1
				Double, Clear	S	1.5	5.5	10.0	13.30	1.15	152.5
				Double, Clear	SW	1.5	5.5	10.0	16.74	1.07	179.5
				Double, Clear	NW	1.5	5.5	10.0	24.30	1.00	244.0
				Double, Clear	N	1.5	5.5	45.0	24.58	1.00	1109.3
				Double, Clear	S	1.5	5.5	15.0	13.30	1.15	228.8
				Double, Clear	W	1.5	0.0	15.0	20.73	1.24	384.8
				Double, Clear	S	1.5	5.5	15.0	13.30	1.15	228.8
			--	**As-Built Total:**				**246.1**	--		**7044.6**

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	0.0	0.00	0.0	Frame, Wood, Exterior	13.0	2949.9	3.40	10029.7
Exterior	3351.9	3.70	12402.0	Frame, Wood, Exterior	13.0	402.0	3.40	1366.8
Base Total:	**3351.9**		**12402.0**	**As-Built Total:**		**3351.9**		**11396.5**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	0.0	0.00	0.0	Exterior Insulated	20.0	8.40	168.0
Exterior	20.0	8.40	168.0				
Base Total:	**20.0**		**168.0**	**As-Built Total:**	**20.0**		**168.0**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X WCM	= Points
Under Attic	1971.9	2.05	4042.4	Under Attic	30.0	1521.9	2.05 X 1.00	3119.9
				Under Attic	30.0	450.0	2.05 X 1.00	922.5
Base Total:	**1971.9**		**4042.4**	**As-Built Total:**		**1971.9**		**4042.4**

FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Slab	225.0(p)	8.9	2002.5	Slab-On-Grade Edge Insulation	0.0	177.0(p	18.80	3327.6
Raised	0.0	0.00	0.0	Slab-On-Grade Edge Insulation	0.0	48.0(p)	18.80	902.4
Base Total:			**2002.5**	**As-Built Total:**		**225.0**		**4230.0**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT						
INFILTRATION	Area X	BWPM	= Points		Area X	WPM	= Points			
	3173.8	-0.59	-1872.6		3173.8	-0.59	-1872.6			
Winter Base Points:			**24020.7**	**Winter As-Built Points:**						**25009.0**
Total Winter Points	X System Multiplier	= Heating Points		Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points	
				(sys 1: Electric Heat Pump 22000 btuh ,EFF(7.9) Ducts:Unc(S),Unc(R),Int(AH),R6.0						
				25009.0	0.500	(1.069 x 1.169 x 0.93)	0.432	1.000	6272.9	
				(sys 2: Electric Heat Pump 22000 btuh ,EFF(7.9) Ducts:Unc(S),Unc(R),Int(AH),R6.0						
				25009.0	0.500	(1.069 x 1.169 x 0.93)	0.432	1.000	6272.9	
24020.7	**0.6274**	**15070.6**		**25009.0**	**1.00**	**1.162**	**0.432**	**1.000**	**12545.8**	

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** PERMIT #:

BASE				AS-BUILT							
WATER HEATING											
Number of Bedrooms	X Multiplier	= Total		Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total	
3	2635.00	7905.0		40.0	0.93	3	1.00	2606.67	1.00	7820.0	
				As-Built Total:						**7820.0**	

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points +	Heating Points +	Hot Water Points =	Total Points	Cooling Points +	Heating Points +	Hot Water Points =	Total Points
19078	**15071**	**7905**	**42053**	**10939**	**12546**	**7820**	**31305**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **519 NW Crawford Court,, White Springs, FL,** 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. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 87.8

The higher the score, the more efficient the home.

Haynes Curtis & Dana Addition, 519 NW Crawford Court,, White Springs, FL,

1.	New construction or existing	Addition	12.	Cooling systems	
2.	Single family or multi-family	Single family		a. Central Unit	Cap: 22.0 kBtu/hr
3.	Number of units, if multi-family	1			SEER: 13.00
4.	Number of Bedrooms	3		b. Central Unit	Cap: 22.0 kBtu/hr
5.	Is this a worst case?	Yes			SEER: 13.00
6.	Conditioned floor area (ft²)	3173.84 ft²		c. N/A	
7.	Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)				
	a. U-factor:	Description Area	13.	Heating systems	
	(or Single or Double DEFAULT) 7a.	(Dble Default) 246.1 ft²		a. Electric Heat Pump	Cap: 22.0 kBtu/hr
	b. SHGC:				HSPF: 7.90
	(or Clear or Tint DEFAULT) 7b.	(Clear) 246.1 ft²		b. Electric Heat Pump	Cap: 22.0 kBtu/hr
8.	Floor types				HSPF: 7.90
	a. Slab-On-Grade Edge Insulation	R=0.0, 177.0(p) ft		c. N/A	
	b. Slab-On-Grade Edge Insulation	R=0.0, 48.0(p) ft			
	c. N/A		14.	Hot water systems	
9.	Wall types			a. Electric Resistance	Cap: 40.0 gallons
	a. Frame, Wood, Exterior	R=13.0, 2949.9 ft²			EF: 0.93
	b. Frame, Wood, Exterior	R=13.0, 402.0 ft²		b. N/A	
	c. N/A				
	d. N/A			c. Conservation credits	
	e. N/A			(HR-Heat recovery, Solar	
10.	Ceiling types			DHP-Dedicated heat pump)	
	a. Under Attic	R=30.0, 1521.9 ft²	15.	HVAC credits	
	b. Under Attic	R=30.0, 450.0 ft²		(CF-Ceiling fan, CV-Cross ventilation,	
	c. N/A			HF-Whole house fan,	
11.	Ducts			PT-Programmable Thermostat,	
	a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 178.0 ft		MZ-C-Multizone cooling,	
	b. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 50.0 ft		MZ-H-Multizone heating)	

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

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

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

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