DATE 08/24/2009

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT
000028028

APPLICANT DELANO STEINACKER SR. PHONE 352 239-3934

ADDRESS 2457 SE 18TH CIRCLE OCALA FL 34471

OWNER WILLIAM & SELINE/SEALY PRICE PHONE 954 434-5478

ADDRESS 354 SW CROWNHILL COURT FT. WHITE FL 32038

CONTRACTOR DELANO STEINACKER SR PHONE 352 239-3934

LOCATION OF PROPERTY 47S, TL ON HERLONG, TR ON SKYLINE LOOP,TR ON CROWNHILL CT.,
3RD LOT ON RIGHT

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 271150.00

HEATED FLOOR AREA 3621.00 TOTAL AREA 5423.00 HEIGHT ____ STORIES 1

FOUNDATION CONC WALLS FRAMED ROOF PITCH 5/12 FLOOR SLAB

LAND USE & ZONING A-3 MAX. HEIGHT ____

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

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

PARCEL ID 11-6S-16-03815-130 SUBDIVISION CARDINAL FARMS

LOT 30 BLOCK ____ PHASE ____ UNIT ____ TOTAL ACRES 12.50

000001752			Delano Steinacker Sr
Culvert Permit No.	Culvert Waiver	Contractor's License Number	Applicant/Owner/Contractor

CULVERT	09-386	BK	RJ	Y
Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident

COMMENTS: ONE FOOT ABOVE THE ROAD, NOC on file

Check # or Cash 1056

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power ____ date/app. by Foundation ____ date/app. by Monolithic ____ date/app. by

Under slab rough-in plumbing ____ date/app. by Slab ____ date/app. by Sheathing/Nailing ____ date/app. by

Framing ____ date/app. by Insulation ____ date/app. by

Rough-in plumbing above slab and below wood floor ____ date/app. by Electrical rough-in ____ date/app. by

Heat & Air Duct ____ date/app. by Peri. beam (Lintel) ____ date/app. by Pool ____ date/app. by

Permanent power ____ date/app. by C.O. Final ____ date/app. by Culvert ____ date/app. by

Pump pole ____ date/app. by Utility Pole ____ date/app. by M/H tie downs, blocking, electricity and plumbing ____ date/app. by

Reconnection ____ date/app. by RV ____ date/app. by Re-roof ____ date/app. by

BUILDING PERMIT FEE $ 1360.00 CERTIFICATION FEE $ 27.12 SURCHARGE FEE $ 27.12

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

FLOOD DEVELOPMENT FEE $ ____ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ 25.00 **TOTAL FEE** 1514.24

INSPECTORS OFFICE Gale Teckla CLERKS OFFICE CH

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

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

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

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

28028

Columbia County Building Department
Culvert Permit

Culvert Permit No.
000001752

DATE 08/24/2009 PARCEL ID # 11-6S-16-03815-130

APPLICANT DELANO STEINACKER SR. PHONE 352 239-3934

ADDRESS 2457 SE 18TH CIRCLE OCALA FL 34471

OWNER WILLIAM & SELINE/SEALY PRICE PHONE 954 434-5478

ADDRESS 354 SW CROWNHILL COURT FT. WHITE FL 32038

CONTRACTOR DELANO STEINACKER SR PHONE 352 239-3934

LOCATION OF PROPERTY 47S, TL ON HERLONG, TR ON SKYLINE LOOP,TR ON CROWNHILL CT.,

3TH LOT ON RIGHT

SUBDIVISION/LOT/BLOCK/PHASE/UNIT CARDINAL FARMS 30

SIGNATURE Delano Steinacker SR

INSTALLATION REQUIREMENTS

[X] Culvert size will be 18 inches in diameter with a total lenght of 32 feet, leaving 24 feet of driving surface. Both ends will be mitered 4 foot with a 4 : 1 slope and poured with a 4 inch thick reinforced concrete slab.

INSTALLATION NOTE: Turnouts will be required as follows:
a) a majority of the current and existing driveway turnouts are paved, or;
b) the driveway to be served will be paved or formed with concrete.
Turnouts shall be concrete or paved a minimum of 12 feet wide or the width of the concrete or paved driveway, whichever is greater. The width shall conform to the current and existing paved or concreted turnouts.

[ ] Culvert installation shall conform to the approved site plan standards.

[ ] Department of Transportation Permit installation approved standards.

[ ] Other _____

ALL PROPER SAFETY REQUIREMENTS SHOULD BE FOLLOWED DURING THE INSTALATION OF THE CULVERT.

135 NE Hernando Ave., Suite B-21
Lake City, FL 32055
Phone: 386-758-1008 Fax: 386-758-2160

Amount Paid 25.00

COLUMBIA COUNTY GATEWAY TO FLORIDA

0905-05

"Buy Where the Builders Buy"
Ro-moc LUMBER & SUPPLY Inc.

Ro-Mac Lumber & Supply

312 East Main Street
Leesburg, FL 34748
Phone: (352) 787-5334 * Fax: (352) 326-2404
www.romaclumber.com

Bearing Information Report

Job#: 20044

Date: 8/14/2009

Customer Information:

Name: National Constr. & Restoration
Contact: Fill In later
Address:
City, State, Zip:

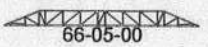
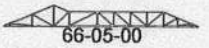
Job Information:

Name: Price Res.
Address:
Region: Dixie Co.
City, State, Zip:

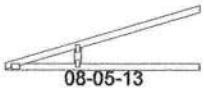
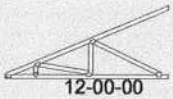
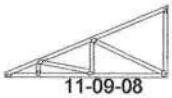
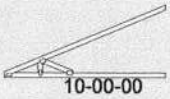
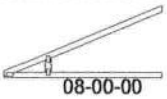
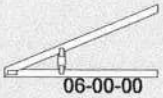
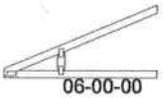
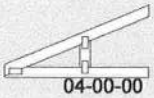
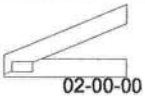
Salesman: John Rutledge
Designer: Mike Perry
Notes:
Loading: 20 TCLL, 15 TCDL, 10 BCDL, 10 BCLL non-concurrent

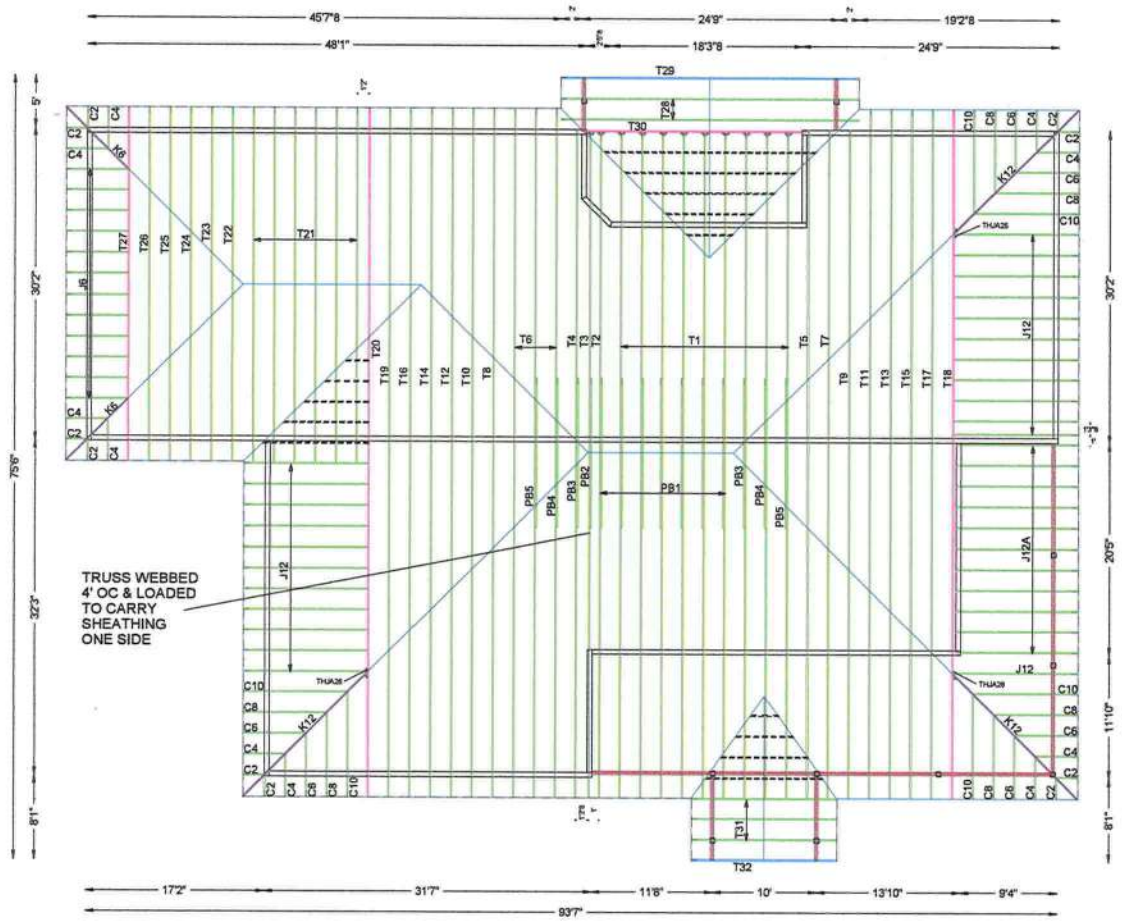
Description	Qty	Span		Size	React.	Uplift	Pitch TC/BC	OH - L OH - R	CANT-L CANT-R	STUB-L STUB-R
T1	9	64-02-00	1.	00-03-00	313.411	162	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	1418.71	417	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	1653.8	486				
			4.	00-03-08	628.197	340				
T2	1	64-02-00	1.	00-03-00	746.697	309	5.00	00-00-00	00-00-00	00-00-00
			2.	00-07-12	581.637	137	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	1511.67	439				
			4.	00-03-08	590.974	328				
T3	1	64-02-00	1.	00-03-00	94.7028	58	5.00	00-00-00	00-00-00	00-00-00
			2.	00-07-12	1914.44	619	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	3257.96	922				
			4.	12-03-08	2409.34	774				
T4	1	64-05-00	1.	00-05-08	880.848	327	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	4404.26	1348	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1266.76	511				
T5	1	64-05-00	1.	00-05-08	1082.9	386	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	3502.45	1084	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	1403.88	413				
			4.	00-03-08	562.638	321				
T6	3	64-05-00	1.	00-05-08	1166.61	484	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	4146.8	1272	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1356.8	540				
T7	1	64-05-00	1.	00-05-08	1154.74	410	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	3380.69	1032	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	1561.78	478				
			4.	00-03-08	544.663	312				
T8	1	64-05-00	1.	00-05-08	1245.17	511	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	4129.16	1242	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1395.88	556				
T9	1	64-05-00	1.	00-05-08	1165.24	419	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	3360.43	1022	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	1573.57	495				
			4.	00-03-08	562.628	315				
T10	1	64-05-00	1.	00-05-08	1289.14	520	5.00	00-00-00	00-00-00	00-00-00
			2.	00-05-08	4038.24	1229	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1472.82	577				

Customer Name:	National Constr. & Restoratio	Job Name:	Price Res.	Date:	8/14/2009

Description	Qty	Span		Size	React.	Uplift	Pitch TC/BC	OH - L OH - R	CANT-L CANT-R	STUB-L STUB-R
			1.	00-05-08	1798.29	694	5.00	00-00-00	02-00-00	00-00-00
T11	1	 66-05-00	2.	00-05-08	1923.98	610	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	2952.76	949				
			4.	00-03-08	230.649	215				
			1.	00-05-08	1311.58	542	5.00	00-00-00	02-00-00	00-00-00
T12	1	 66-05-00	2.	00-05-08	3849.4	1209	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1469.22	591				
			1.	00-05-08	1768.14	694	5.00	00-00-00	02-00-00	00-00-00
T13	1	 66-05-00	2.	00-05-08	1946.19	604	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	3053.69	992				
			4.	00-03-08	227.862	199				
			1.	00-05-08	1334	552	5.00	00-00-00	02-00-00	00-00-00
T14	1	 66-05-00	2.	00-05-08	3837.75	1205	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1491.78	601				
			1.	00-05-08	1779.57	690	5.00	00-00-00	02-00-00	00-00-00
T15	1	 66-05-00	2.	00-05-08	1943.11	609	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	3209.2	1025				
			4.	00-03-08	230.196	191				
			1.	00-05-08	1350.4	562	5.00	00-00-00	02-00-00	00-00-00
T16	1	 66-05-00	2.	00-05-08	3806.24	1202	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1506.9	610				
			1.	00-05-08	1637.64	685	5.00	00-00-00	02-00-00	00-00-00
T17	1	 66-05-00	2.	00-05-08	1934.6	671	2x4 / 2x4	00-00-00	02-03-04	00-00-00
			3.	00-05-08	2451.32	873				
			4.	00-03-08	247.319	236				
			1.	00-05-08	3659.04	1035	5.00	00-00-00	02-00-00	00-00-00
T18	1	 66-05-00	2.	00-05-08	7432.5	2102	2x4 / 2x6	00-00-00	02-03-04	00-00-00
			3.	00-05-08	2660.12	927				
			4.	00-03-08	878.731	250				
			1.	00-05-08	1273.14	565	5.00	00-00-00	02-00-00	00-00-00
T19	1	 66-05-00	2.	00-05-08	3633.4	1235	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	1496.26	613				
			1.	00-05-08	842.043	505	5.00	00-00-00	02-00-00	00-00-00
T20	1	 66-05-00	2.	00-05-08	7691.48	3013	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			3.	00-05-08	3996.81	1614				
			1.	00-05-08	1580.21	602	5.00	00-00-00	02-00-00	00-00-00
T21	6	 34-02-00	2.	00-05-08	1580.21	602	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			1.	00-05-08	1621.76	615	5.00	00-00-00	02-00-00	00-00-00
T22	1	 34-02-00	2.	00-05-08	1622	615	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			1.	00-05-08	1616.14	628	5.00	00-00-00	02-00-00	00-00-00
T23	1	 34-02-00	2.	00-05-08	1627.61	628	2x4 / 2x4	00-00-00	02-00-00	00-00-00
			1.	00-05-08	1625.08	636	5.00	00-00-00	02-00-00	00-00-00
T24	1	 34-02-00	2.	00-05-08	1625.34	636	2x4 / 2x4	00-00-00	02-00-00	00-00-00

Customer Name:	National Constr. & Restoratio	Job Name:	Price Res.	Date:	8/14/2009

Description	Qty	Span		Size	React.	Uplift	Pitch TC/BC	OH - L OH - R	CANT-L CANT-R	STUB-L STUB-R
K6	2	 08-05-13	1.	00-07-12	360.371	122	3.54	00-00-00	02-09-15	00-00-00
			2.	00-01-08	25.7253		2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	129.608	60				
J12	23	 12-00-00	1.	00-05-08	681.62	276	5.00	00-00-00	02-00-00	00-00-00
			2.	00-01-08	259.989	120	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	168.391	135				
J12A	11	 11-09-08	1.	00-03-08	685.948	285	5.00	00-00-00	02-03-04	00-00-00
			2.	00-05-08	404.783	249	2x4 / 2x4	00-00-00	00-00-00	00-00-00
C10	6	 10-00-00	1.	00-05-08	595.182	262	5.00	00-00-00	02-00-00	00-00-00
			2.	00-01-08	139.792	37	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	240.821	193				
C8	6	 08-00-00	1.	00-05-08	526.228	256	5.00	00-00-00	02-00-00	00-00-00
			2.	00-01-08	92.4004	25	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	166.741	175				
J6	12	 06-00-00	1.	00-05-08	459.31	480	5.00	00-00-00	02-00-00	00-00-00
			2.	00-01-08	44.1494	31	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	87.3369	214				
C6	6	 06-00-00	1.	00-05-08	459.314	263	5.00	00-00-00	02-00-00	00-00-00
			2.	00-01-08	42.4477	25	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	87.3438	139				
C4	10	 04-00-00	1.	00-05-08	529.218	570	5.00	00-00-00	02-00-00	00-00-00
			2.	00-01-08	92.7161	46	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	28.0131	78				
C2	10	 02-00-00	1.	00-01-08	92.5073	78	5.00	00-00-00	00-00-00	00-00-00
			2.	00-01-08	62.5392	105	2x4 / 2x4	00-00-00	00-00-00	00-00-00
			3.	00-01-08	39.2134	25				



Ro-Mac Lumber & Supply
312 East Main Street
Leesburg, Florida 34748
(352) 787-5334

THANK YOU!

Roof Plane Sheathing Area = 6619 sq. ft
Gable Sheathing Area = 130 sq. ft
Total Sheathing Area = 6749 sq. ft
Fascia Material = 259 linear ft
Valley Flashing Material = 93 linear ft
Ridge Cap Material = 64 linear ft
Hip Ridge Material = 221 linear ft

BEARING HEIGHTS SHOWN ON THIS TRUSS LAYOUT ARE NOT APPROVED FOR CONSTRUCTION BY ROMAC LUMBER & SUPPLY AND MUST BE AUTHORIZED BY OTHERS.

ANY CHANGES WILL AFFFECT THE TRUSSES, AND MUST BE BROUGHT TO THE ATTENTION OF ROMAC LUMBER & AND SUPPLY BEFORE TRUSSES ARE FABRICATED.

ALL HANGERS ARE SIMPSON HUS26 U.N.O.

090-05

Customer: National Constr. & Restor
Job Name: Price Res.
Designer: Mike Perry
Date: 08-14-2009

JOB NO:
20044

PAGE NO:
1 OF 1

Columbia County Building Permits Application Application #_____

Property ID Number 11-6S-16-03815-130 Septic Permit No. 09-0386-N

Subdivision Name Cardinal Farms Lot 30 Block n/a Unit n/a Phase n/a

Construction of New Single Family Residence Cost of Construction $400,000.00

Mobile Home Permit - New or Used (Circle One) Year _____ Length _____ Width _____

Name of the Authorized Person Signing the Permit Delano Steinacker SR.

Phone 352-239-3934 Fax 1-800-866-8193

Address 2457 SE 18 Circle, Ocala Florida 34471

Owners Name Price, Seline Sealy and William S. Phone 1-954-434-5478

911 Address 354 SW Crownhill Ct. Ft. White, FL 32038

Relationship to Property Owner Owner Is this Home Replacing an Existing Home NO

Contractors Name Delano Steinacker Sr. Phone 1-352-239-3934

Company Name National Construction and Restoration Inc. Fax 1-800-866-8193

Address 2457 Se. 18 Circle, Ocala Florida 34471

Fee Simple Owner Name & Address Price, Seline and William

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address Carlos Restrepo 1515 University Cr. Suite 117 Coral Springs Fl.

Mortgage Lenders Name & Address N/A

Driving Directions to the Property From Lake City go south on hwy 41 to hwy 47 go south to Sw. Herlong (old Itchetucknee rd.) turn left fo to Sw. Skyline Loop turn right follow around to Sw. Crownhill Court Turn right go to property on right (5th lot)

Lot Size 1259x854 Total Acreage 12.5 Building across lot numbers N/A

SITE PLAN ON PLANS

Actual Distance of Structure from Property Lines - Front/Road 366 Left Side 182 Right Side 154 Rear 549

Number of Stories 1 Heated Floor Area 3621 Total Floor Area 5423 Roof Pitch 5/12

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

Progress Energy - Slash Pine Electric

Do you currently have an: Existing Drive (Currently using) or Private Drive (Blue Road Sign) or need a (Culvert Permit (Putting in a Culvert) or Culvert Waiver (No Culvert but do not need a Culvert)

Spoke to John Baker 8/24/09

Both Pages Must be Submitted to obtain a Building Permit.

Revised 12-30-08

Columbia County Building Permits Application Application # 0908-05

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

TIME LIMITATIONS OF *PERMITS*: Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

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

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

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

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

Owners Signature

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

Contractor's Signature (Permitee)

Contractor's License Number CGC 016645
Columbia County
Competency Card Number

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 5 **day of** AUGUST **20**09

Personally known X **or Produced Identification**

State of Florida Notary Signature (For the Contractor)

SEAL:

BETSY J. BOMBOY
Comm# DD0702985
Expires 8/7/2011
Florida Notary Assn., Inc

Both Pages Must be Submitted to obtain a Building Permit.

Revised 12-30-08

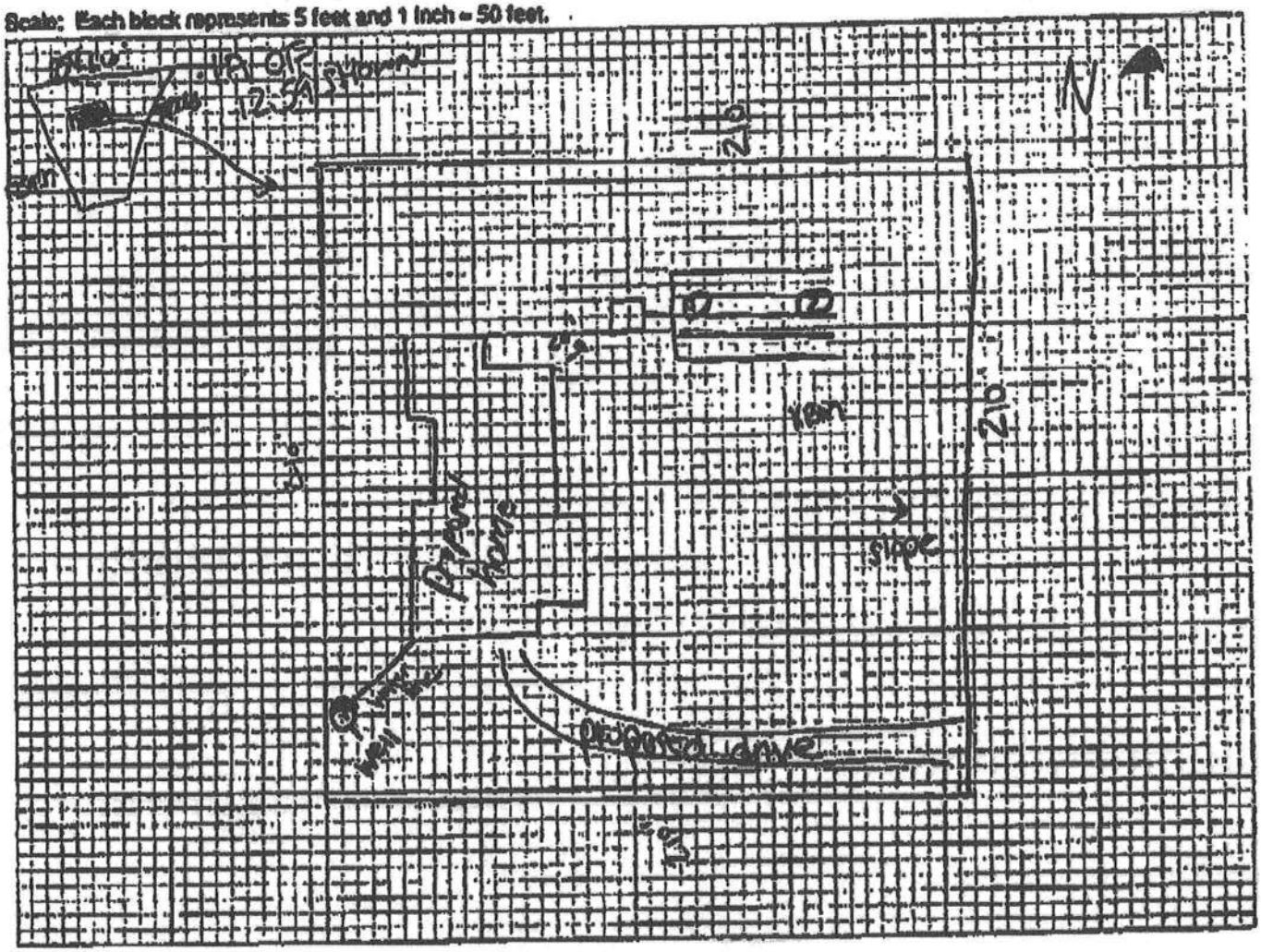
STATE OF FLORIDA
DEPARTMENT OF HEALTH

APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 09-0386-N

PART II - SITE PLAN

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



Notes: See attached survey for full view

Site Plan submitted by: [signature] Signature — Project Mgr. Title

Plan Approved X Not Approved ____ Date 8-4-09

By Sallie Ford EH Director - Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

ATS# 16145

Prepared by:
Michael H. Harrell
Abstract & Title Services, Inc.
283 NW Cole Terrace
Lake City, Florida 32055

Warranty Deed

Individual to Individual

THIS WARRANTY DEED made the 17th day of November, 2006 by

Norman Miller, and his wife, Christine Miller

hereinafter called the grantor, to

Inst:2006027740 Date:11/22/2006 Time:14:48
Doc Stamp-Deed : 875.00
DC,P.DeWitt Cason,Columbia County B:1102 P:2310

Seline Sealy Price, and her husband, William S. Price

whose post office address is: 10441 SW 51 St., Cooper City, Fl 33328
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 corporation)

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: Parcel ID# R03815-130

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

TOGETHER with all 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, 2005.

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:

Clifton Thompson
Witness
Clifton Thompson
Printed Name

Witness
Iris Sims
Printed Name

N. Miller
Norman Miller

Christine Miller

STATE OF Florida
COUNTY OF Broward

The foregoing instrument was acknowledged before me this 17th day of November, 2006 by Norman Miller, and his wife, Christine Miller personally known to me or, if not personally known to me, who produced _____ for identification and who did not take an oath.

(SEAL)

HYLTON GORDON
MY COMMISSION # DD 566234
EXPIRES: August 17, 2010
Bonded Thru Notary Public Underwriters

Notary Public

ATS 16145

Exhibit "A"

Lot 30 of an unrecorded subdivision known as Cardinal Farms. A parcel of land in Section 11, Township 6 South, Range 16 East, Columbia County, Florida, being more particularly described as follows:

Commence at the Southeast corner of Section 11, Township 6 South, Range 16 East, Columbia County, Florida and run thence South 88°19'59" West, along the South line of said Section 11, a distance of 5311.34 feet to the Southwest corner of Section 11, said point also being the Point of Beginning; thence North 01°22'42" West, along the West line of Section 11, a distance of 854.66 feet; thence North 88°38'56" East, a distance of 942.63 feet to a point on a curve concave to the Northeast having a radius of 500.00 feet and a central angle of 27°11'15"; thence Southeasterly along the arc of said curve a distance of 237.26 feet; thence South 57°04'43" West, a distance of 1259.17 feet to the Point of Beginning.

N M.

Inst:2005027740 Date:11/22/2005 Time:14:48
Doc Stamp-Deed : 875.00
DC,P.DeWitt Cason,Columbia County B:1102 P:2311

Columbia Cty 0908-05

Clark Drilling Inc.
2403 N.W. 47 Terrace
Gainesville, FL 32606
(352) 372-9705/PH
(352)372-4013/Fax

To: John Baker
(352) 239-1701

August 10, 2009

We have prepared this proposal upon your request in regards to the projects mentioned below. Please note water well package does not include electrical service or plumbing to well site.

1 hp water well package
1 hp pump
82 gallon tank
[redacted] first hundred feet
$[redacted] per foot after first hundred
This package includes pump, motor, tank and all surface fittings to facilitate hookup.
[redacted] per foot/pvc casing
[redacted] per foot/steel casing
Add $[redacted] to price for 1 1/2 hp pump

The price does not include laying pipe to building. Trenching will be $4.00 per foot. If you have any questions please call me at (352)372-9705.

Sincerely,

Cliff Clark

0908-05

FORM 1100A-08

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs Residential Performance Method A

Project Name:	BILL PRICE RESIDENCE	Builder Name:	mep
Street:	S.W. CROWNHILL ROAD	Permit Office:	FORT WHITE
City, State, Zip:	FORT WHITE , fl , 32038- 00	Permit Number:	
Owner:	BILL PRICE	Jurisdiction:	221200
Design Location:	FL, Fort Lauderdale		

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Single-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	1
5. Is this a worst case?	No
6. Conditioned floor area (ft²)	3621

7. Windows	Description	Area
a. U-Factor:	Sgl, U=0.90	311.60 ft²
SHGC:	SHGC=0.70	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
e. U-Factor:	N/A	ft²
SHGC:		

8. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	3621.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types	Insulation	Area
a. Concrete Block - Int Insul, Exterior	R=11.0	2232.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types	Insulation	Area
a. Under Attic (Vented)	R=30.0	3621.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts
a. Sup: Attic Ret: Attic AH: Interior Sup. R= 6, 1 ft²

12. Cooling systems(combined)
a. Central Unit — Cap: 70.0 kBtu/hr, SEER: 14.8

13. Heating systems(combined)
a. Electric Strip Heat — Cap: 34.0 kBtu/hr, COP: 1

14. Hot water systems
a. Electric — Cap: 90 gallons, EF: 0.92

b. Conservation features
None

15. Credits — Pstat

Glass/Floor Area: 0.086

Total As-Built Modified Loads: 67.58
Total Baseline Loads: 81.63

PASS

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

PREPARED BY: _____
DATE: 08.11.09

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

OWNER/AGENT: _____
DATE: _____

GERALD TODD
PERRODIN
FLORIDA ARCHITECT
No. AR0017261
AUG 11 2009
NOT VALID UNLESS IT BEARS AN ORIGINAL SIGNATURE AND A RAISED EMBOSSED ARCHITECTURAL SEAL

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.

GREAT SEAL OF THE STATE OF FLORIDA
IN GOD WE TRUST

BUILDING OFFICIAL: _____
DATE: _____

PROJECT

Title:	BILL PRICE RESIDENCE	Bedrooms:	1	Adress Type:	Street Address
Building Type:	FLAsBuilt	Bathrooms:	0	Lot #	
Owner:	BILL PRICE	Conditioned Area:	3621	SubDivision:	
# of Units:	1	Total Stories:	1	PlatBook:	
Builder Name:	mep	Worst Case:	No	Street:	S.W. CROWNHILL RO
Permit Office:	FORT WHITE	Rotate Angle:	0	County:	COLUMBIA COUNTY
Jurisdiction:	221200	Cross Ventilation:		City, State, Zip:	FORT WHITE ,
Family Type:	Single-family	Whole House Fan:			fl , 32038- 00
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Fort Lauderdale	FL_FORT_LAUDERDALE	1	43	91	75	70	321.5	60	Low

FLOORS

√	#	Floor Type	Perimeter	R-Value	Area	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	220 ft	0	3621 ft²	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	Tested	Deck Insul.	Pitch
_____	1	Hip	Concrete	3922 ft²	0 ft²	Medium	0.96	No	0	22.6 deg

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	0	3621 ft²	N	N

CEILING

√	#	Ceiling Type	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	30	3621 ft²	0.11	Wood

WALLS

√	#	Ornt	Adjacent To	Wall Type	Cavity R-Value	Area	Sheathing R-Value	Framing Fraction	Solar Absor.
_____	1	NW	Exterior	Concrete Block - Int Insul	11	432 ft²	1	0	0.75
_____	2	SE	Exterior	Concrete Block - Int Insul	11	432 ft²	1	0	0.75
_____	3	NE	Exterior	Concrete Block - Int Insul	11	684 ft²	1	0	0.75
_____	4	SW	Exterior	Concrete Block - Int Insul	11	684 ft²		0	0.75

DOORS

√	#	Ornt	Door Type	Storms	U-Value	Area
_____	1	NW	Wood	None	0.46	48 ft²

WINDOWS

Window orientation below is as entered. Actual orientation is modified by rotate angle shown in "Project" section above.

√	#	Ornt	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	NW	Metal	Low-E Single	Yes	0.9	0.7	N	56 ft²	1 ft 0 in	1 ft 0 in	HERS 2006	None
_____	2	SE	Metal	Low-E Single	Yes	0.9	0.7	N	40 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	3	NE	Metal	Low-E Single	Yes	0.9	0.7	N	91 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	4	SW	Metal	Low-E Single	Yes	0.9	0.7	N	124.6 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None

INFILTRATION & VENTING

√	Method	SLA	CFM 50	ACH 50	ELA	EqLA	— Forced Ventilation — Supply CFM	Exhaust CFM	Run Time Fraction	Fan Watts
_____	Default	0.00036	3419	5.67	187.7	353.0	0 cfm	0 cfm	0	0

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	382.8 ft²	382.8 ft²	64 ft	8 ft	(invalid)

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Ductless
_____	1	Central Unit	None	SEER: 15	42 kBtu/hr	1260 cfm	0.75	False
_____	2	Central Unit	None	SEER: 14.5	28 kBtu/hr	840 cfm	0.75	False

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Ductless
_____	1	Electric Strip Heat	None	COP: 1	17 kBtu/hr	False
_____	2	Electric Strip Heat	None	COP: 1	17 kBtu/hr	False

HOT WATER SYSTEM

√	#	System Type	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	0.92	90 gal	40 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
_____	None	None			ft²		

DUCTS

√	#	Supply Location	Supply R-Value	Supply Area	Return Location	Return Area	Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF
_____	1	Attic	6	1 ft²	Attic	1 ft²	Default Leakage	Interior				

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
Heating	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]
Venting	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

FORM 1100A-08

Code Compliance Cheklist

Residential Whole Building Performance Method A - Details

ADDRESS: S.W. CROWNHILL ROAD FORT WHITE, fl, 32038- 00	PERMIT #:

INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	N1106.AB.1.1	Maximum: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	N1106.AB.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	N1106.AB.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	N1106.AB.1.2.3	Between walls & ceilings; penetrations of ceiling plane to 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	N1106.AB.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 with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	N1106.AB.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	N1106.AB.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	N1112.AB.3	Comply with efficiency requirements in Table N112.ABC.3. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	N1112.AB.2.3	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%. Heat pump pool heaters shall have a minimum COP of 4.0.	
Shower heads	N1112.AB.2.4	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	N1110.AB	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated and installed in accordance with the criteria of Section N1110.AB. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	N1107.AB.2	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	N1104.AB.1 N1102.B.1.1	Ceilings-Min. R-19. Common walls-frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

SYSTEM SIZING SUMMARY

System: A/C-1 BILL PRICE
Location: FORT WHITE, Florida
Prepared by:

Block Load 3.05
August 10, 2009

TABLE 1. SIZING DATA (COOLING)

Total Coil Load	36,810 BTU/hr	Load Occurs	September 16:00
Sensible Coil Load	30,755 BTU/hr	Outdoor Db/Wb	88.6/75.9 F
Total Zone Sensible	30,179 BTU/hr	Coil Conditions:	
Supply Temperature	57.0 F	Entering Db/Wb	75.3/64.4 F
Supply Air (Actual)	1,553 CFM	Leaving Db/Wb	57.0/56.5 F
Supply Air (Standard)	1,552 CFM	Apparatus Dewpoint	56.0 F
Ventilation Air	0 CFM	Bypass Factor	0.050
Direct Exhaust Air	0 CFM	Resulting Zone RH	56.3 %
Reheat Required	0 BTU/hr		
		Total Coil Load	3.07 Ton
Floor Area	2,173 sqft	Sensible Coil Load	2.56 Ton
Overall U-Value	0.110 BTU/hr/sqft/F	SQFT/Ton	708.39
Vent Air	0.00 CFM/sqft	Cooling	16.94 BTU/hr/sqft
Vent Air	0.00 CFM/Person	Cooling	0.71 CFM/sqft

TABLE 2. SIZING DATA (HEATING)

Heating Coil Load	13,478 BTU/hr	Heating	6.20 BTU/hr/sqft
Ventilation Load	0 BTU/hr	Heating	0.71 CFM/sqft
Total Zone Load	13,478 BTU/hr	Floor Area	2,173 sqft
Ventilation Airflow	0 CFM	Overall U-Value	0.110
Supply Airflow	1,553 CFM	Vent Air	0.00 CFM/sqft
		Vent Air	0.00 CFM/Person

TABLE 3. INPUT DATA (WEATHER)

Location	FORT WHITE, Florida		
Data Source	User Defined	Summer Dry-Bulb	91.0 F
Latitude	25.8 Degree	Coincident Wet-Bulb	77.0 F
Elevation	7.0 ft	Daily Range	15.0 F
Atmospheric Clearness #	0.90	Winter Dry-Bulb	44.0 F

TABLE 4. INPUT (HVAC SYSTEM)

System Name	A/C-1 BILL PRICE	THERMOSTAT SETPOINTS	
System Type	Clg and Warm Air Ht	Cooling (Occ.)	75.0 F
System Start	6:00	Cooling (Unocc.)	75.0 F
Duration	24 hrs	Heating	70.0 F
SIZING SPECIFICATIONS		RETURN AIR PLENUM	No
Supply	57.0 F	FAN	
Ventilation	0.00 CFM/person	Configuration	Blow-Thru
Exhaust	0.00 CFM	Static Pressure	0.50 in. wg.
FACTORS			
Coil Bypass	0.050		
Safety (Sens)	0 %		
Safety (Latent)	0 %		
Heating Safety	0 %		

TABLE 5. TOP TEN COOLING COIL LOADS

	Time	Sensible Ton	Total Ton		Time	Sensible Ton	Total Ton
1)	September 16:00	2.56	3.07	6)	September 15:00	2.50	3.00
2)	August 16:00	2.52	3.04	7)	October 15:00	2.50	2.99
3)	October 16:00	2.55	3.04	8)	August 15:00	2.46	2.98
4)	August 17:00	2.50	3.02	9)	July 16:00	2.43	2.95
5)	September 17:00	2.50	3.01	10)	March 16:00	2.48	2.94

SYSTEM SIZING SUMMARY

System: A/C-1 BILL PRICE
Location: FORT WHITE, Florida
Prepared by:

Block Load 3.05
August 10, 2009

TABLE 6. ZONE SIZING DATA

Zone Name	Max. Cooling Sensible (BTU/hr)	Design Airflow Rate (CFM)	Design Time	Max. Heating Load (BTU/hr)	Design Flow Rate (CFM)
A/C-1 PRICE	30,179	1,553	September 16:00	13,478	-
	Total:	1,553		Total:	.00

SYSTEM SIZING SUMMARY

System: A/C-2 BILL PRICE
Location: FORT WHITE, Florida
Prepared by:

Block Load 3.05
August 10, 2009

TABLE 1. SIZING DATA (COOLING)

Total Coil Load	24,259 BTU/hr	Load Occurs	June 17:00
Sensible Coil Load	20,449 BTU/hr	Outdoor Db/Wb	88.5/76.6 F
Total Zone Sensible	19,992 BTU/hr	Coil Conditions:	
Supply Temperature	57.0 F	Entering Db/Wb	72.3/63.2 F
Supply Air (Actual)	1,234 CFM	Leaving Db/Wb	57.0/56.6 F
Supply Air (Standard)	1,234 CFM	Apparatus Dewpoint	56.2 F
Ventilation Air	0 CFM	Bypass Factor	0.050
Direct Exhaust Air	0 CFM	Resulting Zone RH	61.5 %
Reheat Required	0 BTU/hr		
		Total Coil Load	2.02 Ton
Floor Area	1,448 sqft	Sensible Coil Load	1.70 Ton
Overall U-Value	0.110 BTU/hr/sqft/F	SQFT/Ton	716.28
Vent Air	0.00 CFM/sqft	Cooling	16.75 BTU/hr/sqft
Vent Air	0.00 CFM/Person	Cooling	0.85 CFM/sqft

TABLE 2. SIZING DATA (HEATING)

Heating Coil Load	9,280 BTU/hr	Heating	6.41 BTU/hr/sqft
Ventilation Load	0 BTU/hr	Heating	0.85 CFM/sqft
Total Zone Load	9,280 BTU/hr	Floor Area	1,448 sqft
Ventilation Airflow	0 CFM	Overall U-Value	0.110
Supply Airflow	1,234 CFM	Vent Air	0.00 CFM/sqft
		Vent Air	0.00 CFM/Person

TABLE 3. INPUT DATA (WEATHER)

Location	FORT WHITE, Florida		
Data Source	User Defined	Summer Dry-Bulb	91.0 F
Latitude	25.8 Degree	Coincident Wet-Bulb	77.0 F
Elevation	7.0 ft	Daily Range	15.0 F
Atmospheric Clearness #	0.90	Winter Dry-Bulb	44.0 F

TABLE 4. INPUT (HVAC SYSTEM)

System Name	A/C-2 BILL PRICE	THERMOSTAT SETPOINTS	
System Type	Clg and Warm Air Ht	Cooling (Occ.)	72.0 F
System Start	6:00	Cooling (Unocc.)	75.0 F
Duration	24 hrs	Heating	70.0 F
SIZING SPECIFICATIONS		RETURN AIR PLENUM	No
Supply	57.0 F	FAN	
Ventilation	0.00 CFM/person	Configuration	Blow-Thru
Exhaust	0.00 CFM	Static Pressure	0.50 in. wg.
FACTORS			
Coil Bypass	0.050		
Safety (Sens)	0 %		
Safety (Latent)	0 %		
Heating Safety	0 %		

TABLE 5. TOP TEN COOLING COIL LOADS

	Time	Sensible Ton	Total Ton		Time	Sensible Ton	Total Ton
1)	June 17:00	1.70	2.02	6)	June 15:00	1.64	1.95
2)	July 17:00	1.70	2.01	7)	July 15:00	1.63	1.94
3)	June 16:00	1.69	2.00	8)	July 18:00	1.63	1.94
4)	July 16:00	1.69	2.00	9)	May 17:00	1.62	1.92
5)	June 18:00	1.64	1.96	10)	August 17:00	1.61	1.92

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER 0908-05 CONTRACTOR National Construction PHONE 352/239/1701

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name Jay Linkenhelt (Preston Link Electric) License #: EC13001848	Signature [signature] Phone #: 352-373-3516
MECHANICAL/ A/C ___	Print Name License #:	Signature Phone #:
PLUMBING/ GAS	Print Name License #:	Signature Phone #:
ROOFING	Print Name License #:	Signature Phone #:
SHEET METAL	Print Name License #:	Signature Phone #:
FIRE SYSTEM/ SPRINKLER	Print Name License#:	Signature Phone #:
SOLAR	Print Name License #:	Signature Phone #:

Active/Exp 8-31-201[illegible]

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER 0908-05 CONTRACTOR National Construction PHONE 352/237/1201

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is **REQUIRED** that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name _____ License #: _____	Signature _____ Phone #: _____
MECHANICAL/ A/C _____	Print Name _____ License #: _____	Signature _____ Phone #: _____
PLUMBING/ GAS	Print Name Jimmy Eubanks License #: CFC 1425978	Signature Jimmy Eubanks Phone #: 352-622-9145
ROOFING	Print Name _____ License #: _____	Signature _____ Phone #: _____
SHEET METAL	Print Name _____ License #: _____	Signature _____ Phone #: _____
FIRE SYSTEM/ SPRINKLER	Print Name _____ License#: _____	Signature _____ Phone #: _____
SOLAR	Print Name _____ License #: _____	Signature _____ Phone #: _____

Active/Exp 8-31-2010 LH

MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

Contractor Forms Subcontractor Form 6/99

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER 0908-05 CONTRACTOR National Construction PHONE 352/239-1701

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name_____ License #:	Signature_____ Phone #:
MECHANICAL/ A/C _____	Print Name_____ License #:	Signature_____ Phone #:
PLUMBING/ GAS	Print Name_____ License #:	Signature_____ Phone #:
ROOFING	Print Name_____ License #:	Signature_____ Phone #:
SHEET METAL	Print Name_____ License #:	Signature_____ Phone #:
FIRE SYSTEM/ SPRINKLER	Print Name_____ License#:	Signature_____ Phone #:
SOLAR	Print Name_____ License #:	Signature_____ Phone #:

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON	CBC1256782	Charles R- Zimmerman	
CONCRETE FINISHER	CBC1256782	Charles R Zimmerman	
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

Active/Exp. 8/31/2010

F. S. 440.103 Building permits; identification of minimum premium policy.—Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

SUBCONTRACTOR VERIFICATION FORM

239-3934

APPLICATION NUMBER 09-08-05 CONTRACTOR National Construction PHONE 352 [redacted]07

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name_____ License #:	Signature_____ Phone #:
MECHANICAL/ A/C _____	Print Name_____ License #:	Signature_____ Phone #:
PLUMBING/ GAS	Print Name_____ License #:	Signature_____ Phone #:
ROOFING	Print Name_____ License #:	Signature_____ Phone #:
SHEET METAL	Print Name_____ License #:	Signature_____ Phone #:
FIRE SYSTEM/ SPRINKLER	Print Name_____ License#:	Signature_____ Phone #:
SOLAR	Print Name_____ License #:	Signature_____ Phone #:

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER	N/A	Classic Kitchens INC.	John Doyle
PAINTING			
ACOUSTICAL CEILING	Not sure about this one. The Contractor is calling me back with his name to be checked. CH		
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

No License

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

COLUMBIA COUNTY 9-1-1 ADDRESSING

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

Addressing Maintenance

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

DATE REQUESTED: 8/5/2009 **DATE ISSUED:** 8/11/2009

ENHANCED 9-1-1 ADDRESS:

354 SW CROWNHILL CT

FORT WHITE FL 32038

PROPERTY APPRAISER PARCEL NUMBER:

11-6S-16-03815-130

Remarks:

LOT 30 CARDINAL FARMS UNREC

Address Issued By: _____
Columbia County 9-1-1 Addressing / GIS Department

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

1494

NOTICE OF COMMENCEMENT

Inst:200912013804 Date:8/18/2009 Time:2:02 PM
DC,P.DeWitt Cason,Columbia County Page 1 of 1 B:1179 P:675

County Clerk's Office Stamp or Seal

Tax Parcel Identification Number 11-6S-16-03815-130

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):* Lot 30 Cardinal Farms UNREC:
   a) Street *(job)* Address: SW Crownhill Court, Fort White
2. General description of improvements: New Construction of Single Family Residence
3. 0wner Information
   a) Name and address: Price, Seline Sealy & William S.
   b) Name and address of fee simple titleholder (if other than owner)
   c) Interest in property 100%
4. Contractor Information
   a) Name and address: National Construction and Restoration, Inc., 2457 SE 18 Circle, Ocala Florida 34471
   b) Telephone No.: 352-239-1701 Fax No. (Opt.) 1-800-866-8193
5. Surety Information
   a) Name and address: N/A
   b) Amount of Bond:
   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 other documents may be served:
   a) Name and address: N/A
   b) Telephone No.: Fax No. (Opt.)
8. In addition to himself, owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(l)(b), Florida Statutes:
   a) Name and address: 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)**:

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

Seline S Price William S Price
Print Name

The foregoing instrument was acknowledged before me, a Florida Notary, this 18 day of July, 2009, by: Seline S. William Price 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 Adrienne Dowling Notary Stamp or Seal:
---AND---

NOTARY PUBLIC-STATE OF FLORIDA
Adrienne Dowling
Commission # DD507124
Expires: JAN. 31, 2010
Bonded Thru Atlantic Bonding Co., Inc.

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

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

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER 0908-05 CONTRACTOR National Construction PHONE 352/239/1701

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is **REQUIRED** that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name _____ License #: _____	Signature _____ Phone #: _____
MECHANICAL/ A/C _____	Print Name Charles Newmans License #: CA-C058422	Signature Ed Newmans Phone #: 352-375-8555
PLUMBING/ GAS	Print Name _____ License #: _____	Signature _____ Phone #: _____
ROOFING	Print Name _____ License #: _____	Signature _____ Phone #: _____
SHEET METAL	Print Name _____ License #: _____	Signature _____ Phone #: _____
FIRE SYSTEM/ SPRINKLER	Print Name _____ License#: _____	Signature _____ Phone #: _____
SOLAR	Print Name _____ License #: _____	Signature _____ Phone #: _____

Specialty License	License Number	Sub-Contractor Printed Name	Sub-Contractor Signature
MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

Permit # 28028

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER _____ CONTRACTOR National Construction PHONE 352/339-1701

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name Tracy William Scott License #: EC13003783	Signature Phone #: 752 493 7562
MECHANICAL/ A/C _____	Print Name License #:	Signature Phone #:
PLUMBING/ GAS	Print Name License #:	Signature Phone #:
ROOFING	Print Name License #:	Signature Phone #:
SHEET METAL	Print Name License #:	Signature Phone #:
FIRE SYSTEM/ SPRINKLER	Print Name License#:	Signature Phone #:
SOLAR	Print Name License #:	Signature Phone #:

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

Contractor Forms/ Subcontractor form: 6/08

CT 9/24/09

Permit #25028

SUBCONTRACTOR VERIFICATION FORM

APPLICATION NUMBER _____ CONTRACTOR National Construction PHONE 352/249/8701

THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is REQUIRED that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.

ELECTRICAL	Print Name _____ License #:	Signature _____ Phone #:
MECHANICAL/ A/C _____	Print Name _____ License #:	Signature _____ Phone #:
PLUMBING/ GAS	Print Name Wolfe Plumbing Inc License #: CFC051621	Signature (Scott Wolfe) Phone #: 386-935-0616
ROOFING	Print Name _____ License #:	Signature _____ Phone #:
SHEET METAL	Print Name _____ License #:	Signature _____ Phone #:
FIRE SYSTEM/ SPRINKLER	Print Name _____ License#:	Signature _____ Phone #:
SOLAR	Print Name _____ License #:	Signature _____ Phone #:

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			

F. S. 440.103 Building permits; identification of minimum premium policy.--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.

Contractor/Owner Subcontractor Form 6/09

9/24/09

PRODUCT APPROVAL SPECIFICATION SHEET

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and approval numbers on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products.

Statewide approved products are listed online @ www.floridabuilding.org

Category/subcategory	Manufacturer	Product Description	Approval Numbers
1. EXTERIOR DOORS			
A. SWINGING	Therma Tru Corporation	steel, fiberglass exterior doors	FL8852,FL8838,FL245
B. SLIDING	MI Home Products	aluminum frame sliding glass doors	FL11688.1
C. SECTIONAL/ROLL UP	Clopay Building Products	RST4, RST6, WSEW4 garage doors	FL3026R1.4,FL3026R1.6,FL3026R1.9
D. SWINGING	CECO/METAL	STEEL DOORS AND FRAMES	FL 4558.1 & FL4558.2
2. WINDOWS			
A. SINGLE/DOUBLE HUNG	Better Bilt	740 series aluminum frame single hung	FL 8488.2/11980
B. HORIZONTAL SLIDER	PGT Industries	HS 201 aluminum horizontal rollers	FL 243.2
C. CASEMENT	PGT Industries	CA 640 aluminum casement windows	FL 1600 FL248.1
D. FIXED	Better Bilt	740 series aluminum frame transom & special	FL 11980
E. MULLION	Better Bilt	740 series aluminum mull bars	FL 111980
F. SKYLIGHTS	SUN-TEK	fixed, clad & venting skylights	FL 2442
G. OTHER	Hy-Lite Products Inc.	AGS fixed transom	FL 195
H. SINGLE HUNG	PGT INDUSTRIES	SINGLE HUNG	FL 259.1 & 259.2 FL 259.4
3. PANEL WALL			
A. SIDING	CertainTeed/James Hardie	cement siding / vinyl	FL 1578/FL 889
B. SOFFITS			
C. STOREFRONTS			
D. GLASS BLOCK	Pittsburgh Corning Inc.	glass block with mortar	FL 1988
E. OTHER			
4. ROOFING PRODUCTS			
A. ASPHALT SHINGLES	Owens Corning	30 Oakridge Architectural shingles	FL10074.1
B. NON-STRUCT METAL	UNICO METAL PRODS	24, 26, AND 29 GA 8V METAL	FL 4558.1
C. NON-STRUCT METAL	UNICO METAL PRODS	26 & 29 GA ADVANTAGE-LOK	FL 4558.2
D. NON-STRUCT METAL	UNICO METAL PRODS	26 & 29 GA MASTER RIB	FL 4558.3
E. OTHER	Warrior	15# and 30# felt	FL 2949
5. STRUCT COMPONENTS			
A. WOOD CONNECTORS	Simpson Strong Tie	fasteners, connectors, straps, lintel straps	FL10849 110852
B. WOOD ANCHORS	Simpson Strong Tie	epoxy, sleeve anchors, wedge anchors	FL10852
C. TRUSS PLATES	Alpine Engineered Products	structural truss plates	FL 1899
D. INSULATION FORMS			
E. LINTELS			
F. OTHER			
6. NEW EXTERIOR ENVELOPE PRODUCTS			
A.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite: 1) copy of the product approval, 2) performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements. Further, I understand these products may have to be removed if approval cannot be demonstrated during inspection.

Richard Stenzel 8/5/09

APPLICANT SIGNATURE DATE

BetterBilt
DOORS AND WINDOWS

- Series 165/3000 Single Hung and Fixed Windows
- Series 740/744/3740 Single Hung and Fixed Windows
- Series 168/3168 Horizontal Slider and Fixed Windows
- Series 680 Horizontal Slider and Fixed Windows

NOTE: SEE INDIVIDUAL TEST REPORT(S) FOR DP RATINGS AND MAXIMUM ALLOWABLE SIZES.

INSTALLATION INSTRUCTIONS FOR "APPROVED FOR FLORIDA" ALUMINUM FIN WINDOWS

BetterBilt Windows & Doors appreciates your recent purchase of a maintenance free prime window, which will not rust, rot, mildew, or warp. This is a quality product that left our factory in good condition – proper handling and installation are just as important as good design and workmanship. Please follow these recommendations to allow this product to complete its function.

1 Handle units one at a time in the closed and locked position and take care not to scratch frame or glass or to bend the nailing fin. Place a continuous bead of caulk on the back side of nail fin (mounting flange).

2. Set unit plumb and square into opening and make sure that there is 3/16" ± 1/16" clearance around the frame. Fasten unit into opening in the closed and locked position, making sure that fasteners are screwed in straight in order to avoid twisting or bowing of the frame. Make sure that sill is straight and level. Check operation of unit frequently as fasteners are set.

3. Use # 8 sheet metal or wood screws with a minimum of 1" penetration into the framing (stud). Place first screws (two at each corner) 3" from end of fin. For positive and negative DPs (design pressures) up to 35, do not exceed 24" spacing of additional screws. For DPs from 35.1 to 50, do not exceed 18" spacing.

4. Caulk entire perimeter of fin to mounting surface joint and caulk over screw heads.
Note: this step can be eliminated if 4" wide adhesive type flashing is used (sill 1st., jambs 2nd., head 3rd.).

5. Fill voids between frame and construction with loose batten type insulation or non-expanding aerosol foam specifically formulated for windows and doors to eliminate drafts. The use of expanding aerosol type insulating foam, which can bow the frame, waives all stated warranties.

6. Remove plaster, mortar, paint, and debris that has collected on the unit and make sure that sash/vent tracks and interlocks are also clean. Do not use abrasives, solvents, ammonia, vinegar, alkaline, or acid solutions for clean-up, especially with insulated glass units as their use could cause chemical breakdown of the glass seal. Take care not to scratch glass; scratches severely weaken glass and it could eventually break from thermal expansion and contraction. Clean units with water and mild detergent.

- CAUTION -

BetterBilt Windows & Doors or its representatives are unable to control and cannot assume responsibility for the selection and placement of their products in a building or structure in a manner required by laws, statutes, and/or building codes. The purchaser is solely responsible for knowledge of and adherence to the same. BetterBilt window products are not provided with safety glazing unless specifically ordered with such. Many laws and codes require safety glazing (tempered glass) near doors, bathtubs, and shower enclosures. Also be aware of other code requirements such as emergency egress and structural / energy performance.

Corporate Headquarters:
M.I. Home Products
650 West Market St.
Gratz, PA 17030-0370
(717) 365-3300

www.mihp.com

St 221
July 29, 2003

Rev. 7-24-03

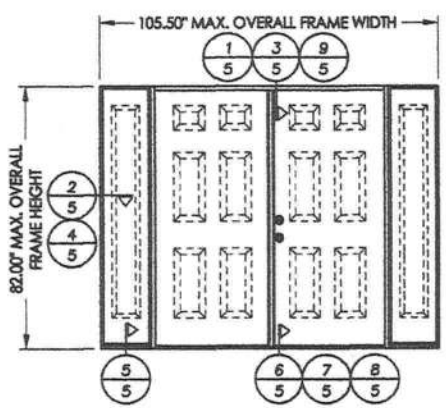
THERMA TRU®

THERMA TRU DOORS
118 INDUSTRIAL DR., EDGERTON, OH 43517
TEL. (419)298-1740

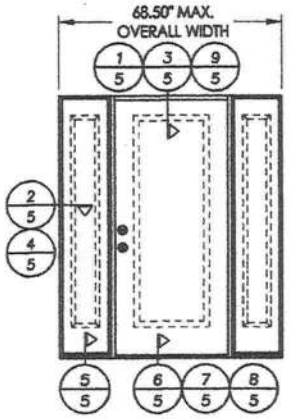
"FIBER CLASSIC"
6'8" SINGLE AND DOUBLE W/& W/OUT SIDELITES
INSWING / OUTSWING
INSULATED FIBERGLASS DOOR WITH WOOD FRAMES.

General Notes

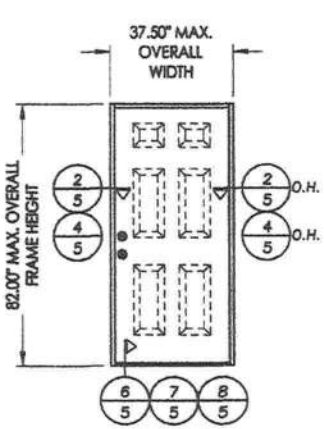
1. This product anchoring drawing has been developed in compliance with the 2007 Florida Building Code (FBC) excluding the "High Velocity Hurricane Zone". See the Certification Agency Certificate for sizes, specifications and ratings.
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base material shall be beyond wall dressing, stucco, foam, brick and other wall coverings.
3. Wood screws shall be installed following installation instructions of ANSI/ AF&PA NDS 2005. All other fastener types to be installed following fastener manufacturer's installation instructions.
4. Fastener embedment depths, edge distances and center-center distances shall be as specified by the fastener manufacturer but in no instance shall they be less than shown in this drawing.
5. Where shims are used, they must be a "rigid / stiff" material that complies with the requirements of the 2007 FBC.
6. Positive and negative design pressure requirements for use with this drawing shall be determined by others for specific jobs in accordance with the governing code.
7. Site conditions not covered by this drawing are subject to further engineering analysis.



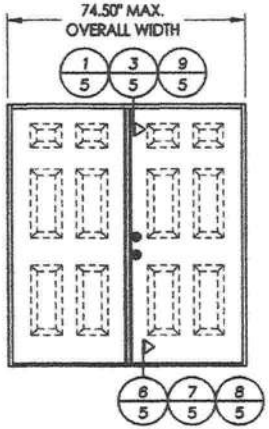
DOUBLE W/ SIDELITES OXXO
MAX DESIGN PRESSURE
+55.0 -55.0



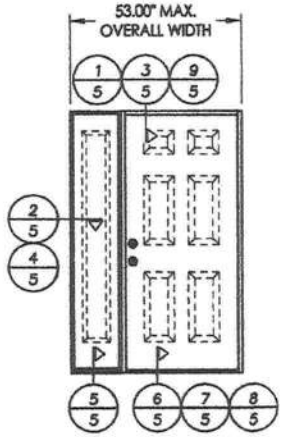
SINGLE W/ SIDELITES OXO
MAX DESIGN PRESSURE
+40.0 -40.0



SINGLE X
MAX DESIGN PRESSURE
+67.0 -67.0



DOUBLE XX
MAX DESIGN PRESSURE
+55.0 -55.0



SINGLE W/SIDELITE OX
MAX DESIGN PRESSURE
+40.0 -40.0

Documents Prepared By:
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL. 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers
Certificate Of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

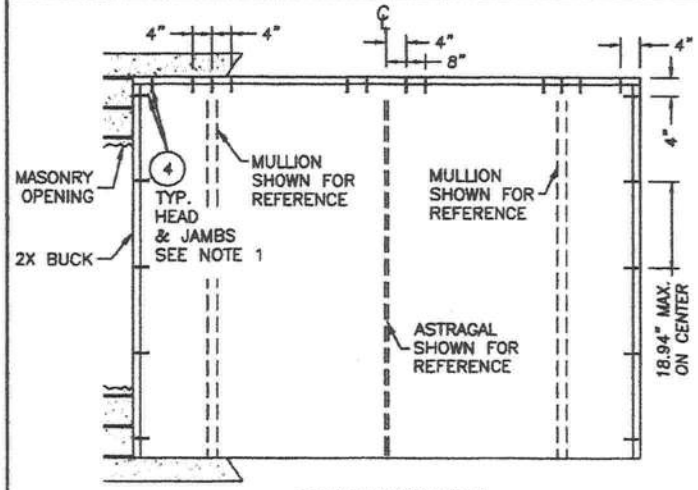
PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

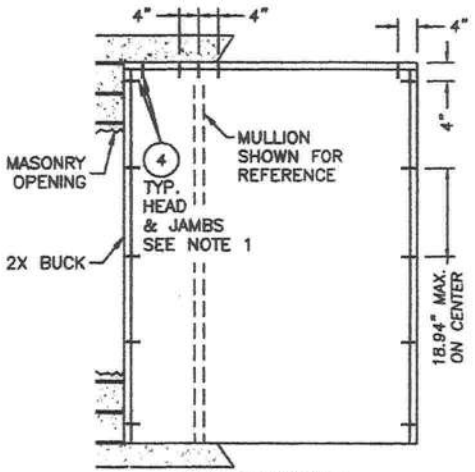
NO.	DATE	BY	REVISIONS

DATE: 06/13/08
SCALE: N.T.S.
DWG. BY: DT
CHK. BY: WWH
DRAWING NO.: FL-5262.3-68
SHEET 1 OF 5

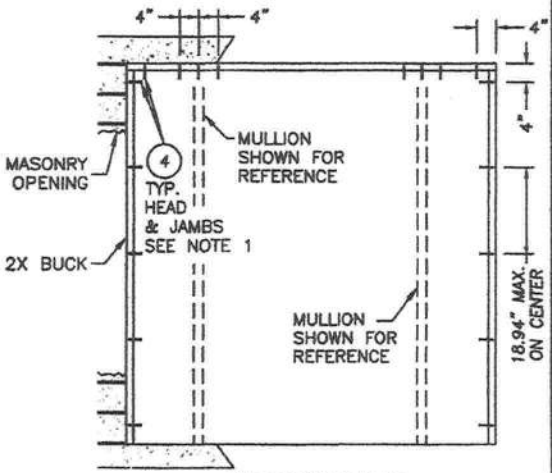
R:\A - Projects\Project Folders\Proj 1201-1300\of 1208\D. RWBC Drawings\FL-5262.3-68\FL-5262.3-68.dwg, Model



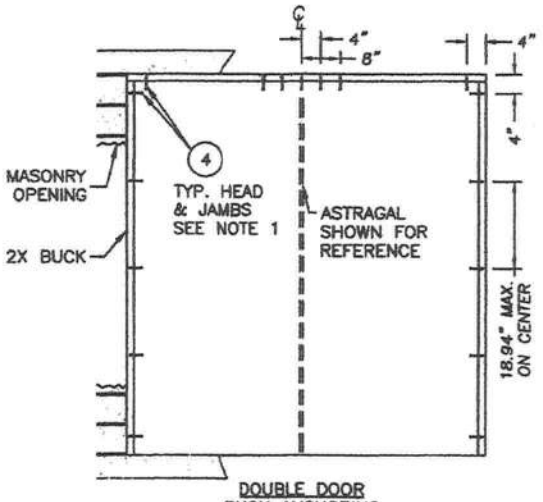
DOUBLE W/SIDELITES
BUCK ANCHORING



SINGLE W/SIDELITE
BUCK ANCHORING



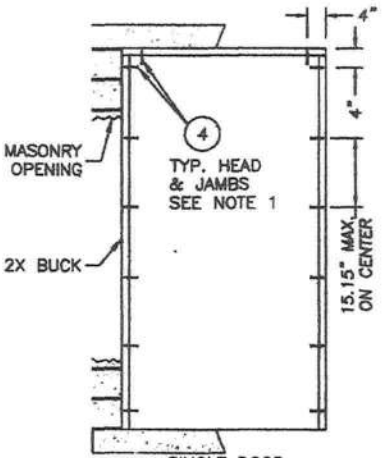
SINGLE W/SIDELITES
BUCK ANCHORING



DOUBLE DOOR
BUCK ANCHORING

NOTES:

1. *1/4" Bco Concrete screws anchoring 2x buck require a minimum 1" clearance to masonry edges, a 1-1/4" minimum embedment and a minimum 4" clearance to adjacent concrete screws. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements. Concrete screw locations at the corners, at mullion locations, and at astragal locations may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain the minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.*



SINGLE DOOR
BUCK ANCHORING

Documents Prepared By:
BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers
Certificate Of Authorization No. 9613
Lyndell F. Schmidt, P.E. No. 43409

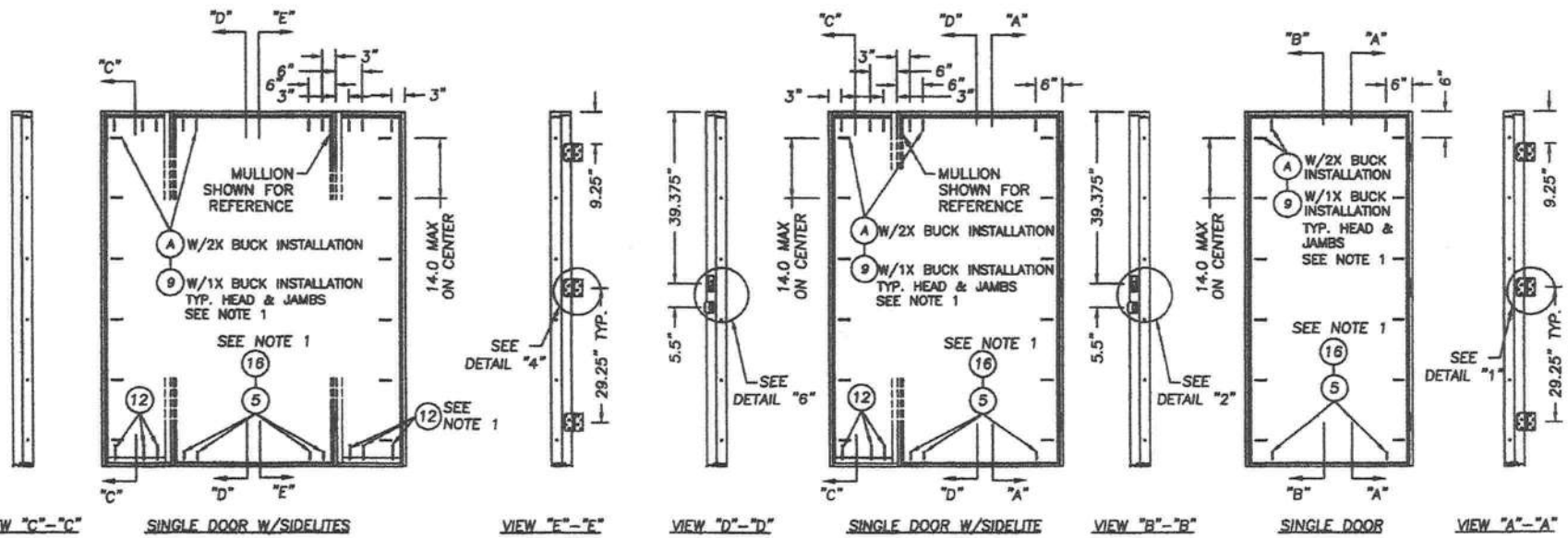
PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: BUCK ANCHORING

NO	DATE	BY
	REVISIONS	

DATE: 06/13/08
SCALE: N.T.S.
DWG. BY: DT
CHK. BY: WWH
DRAWING NO.: FL-5262.3-68
SHEET 2 OF 5

R:\A - Projects\Project Folders\Proj 1201-1300\pf 1206\D. RWBC Drawings\FL-5262.3-68\FL-5262.3-68.dwg, Model

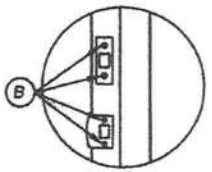


NOTES:

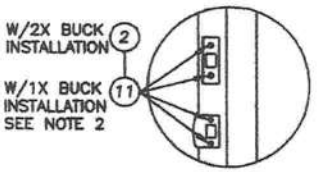
1. *1/4" ITW concrete screws anchoring frame and/or sill require a minimum 2-1/2" clearance to masonry edges, a 1-1/4" minimum embedment and a minimum 3" clearance to adjacent concrete screws. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements. Concrete screw locations at the corners, and at mullion locations locations, may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain the minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.*

2. *3/16" ITW concrete screws anchoring frame and/or sill require a minimum 2-5/8" clearance to masonry edges, a 1-1/4" minimum embedment and a minimum 2-1/4" clearance to adjacent concrete screws unless otherwise noted by concrete screw manufacturer.*

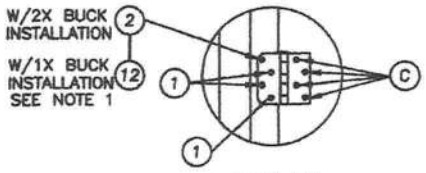
3. *The sidelite is direct set into the jamb with (12) item #43 a #8 x 2" pfh. wood screw. There are (4) at each vertical jamb, from the top down at 13.5", 31", 48.5" & 66". There are (2) at the header at 4" from the outside corners of the frame. there are (2) at the sill, 4" from the outside corners.*



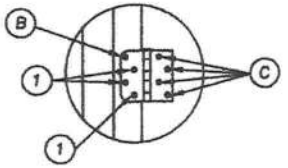
DETAIL "6"



DETAIL "2"



DETAIL "1"



DETAIL "4"

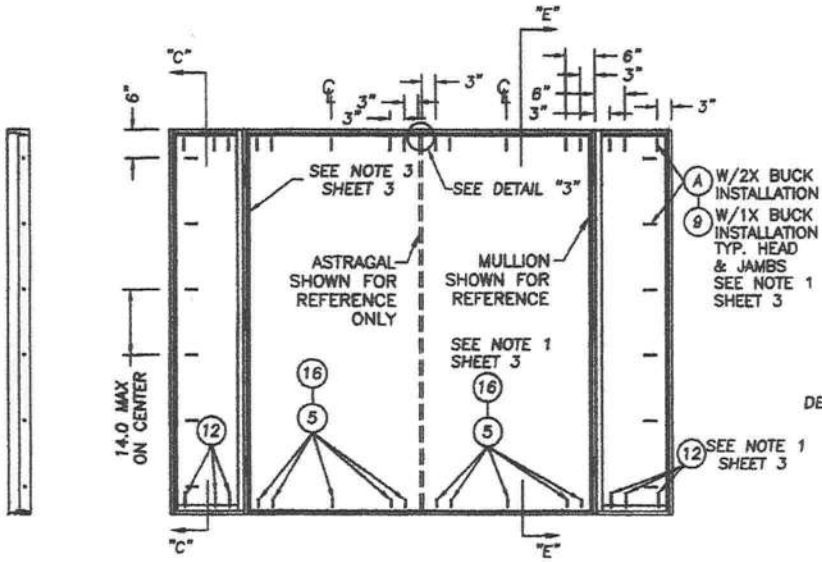
Documents Prepared By:
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.689.9197
Florida Board of Professional Engineers
Certificate Of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409
10-20-08

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: FRAME ANCHORING

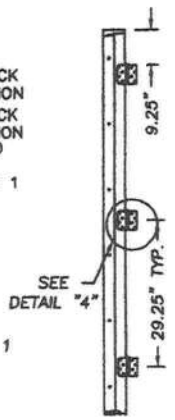
NO.	DATE	BY
REVISIONS		

DATE: 06/13/08
SCALE: N.T.S.
DWG. BY: DT
CHK. BY: WWH
DRAWING NO.: FL-5262.3-68
SHEET 3 OF 5

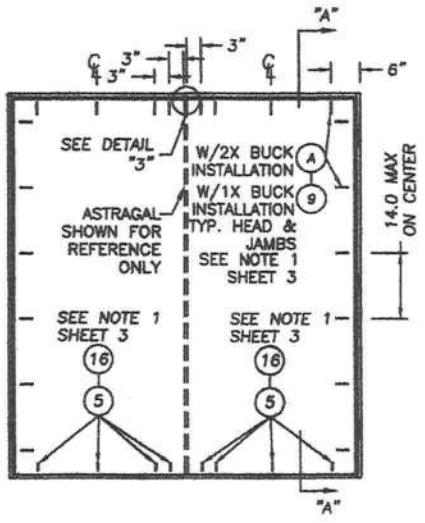


VIEW "C"–"C"

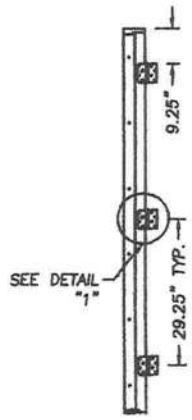
DOUBLE DOOR W/SIDELITES



VIEW "E"–"E"

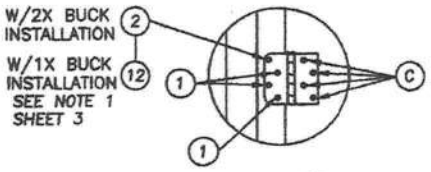


DOUBLE DOOR

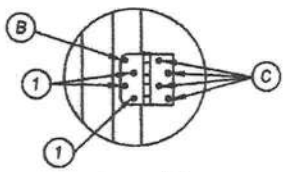


VIEW "A"–"A"

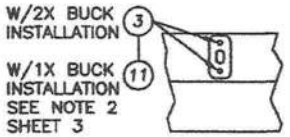
Item	DESCRIPTION	Material
A	#10 x 2-1/2" PFH WOOD SCREW	STEEL
B	#10 X 1-3/4" PFH WOOD SCREW	STEEL
C	#10 X 1" PFH WOOD SCREW	STEEL
1	#10 x 3/4" LG. PFH WOOD SCREW (Hinge to Frame)	STEEL
2	#10 x 2" LG. PFH WOOD SCREW	STEEL
3	#8 x 2-1/2" LG. PFH WOOD SCREW	STEEL
4	1/4" x 2-3/4" PFH ELCO CONCRETE SCREW	STEEL
5	1/4" x 1-3/4" ITW PFH CONCRETE SCREW	STEEL
9	1/4" x 3-3/4" ITW PFH CONCRETE SCREW	STEEL
11	3/16" x 3-1/4" ITW PFH CONCRETE SCREW	STEEL
12	1/4" x 3-1/4" ITW PFH CONCRETE SCREW	STEEL
13	MASONRY – 3,192 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
16	1/4" X 2-1/4" PFH ITW CONCRETE SCREW	STEEL
20	HEADER JAMB (4.656" X 1.25" THERMA-TRU, PINE) SG >= 0.42	WOOD
21	3/4" THK. PRESSURE TREATED SIDELITE PAD	WOOD



DETAIL "1"



DETAIL "4"



DETAIL "3"
ATTACH ASTRAGAL THROW BOLT STRIKE PLATE TO FRAME AS SHOWN.

Documents Prepared By:
R.W. BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
Florida Board of Professional Engineers
Certificate of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409
16.20-08

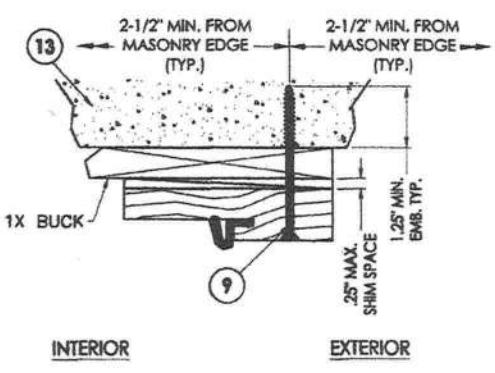
PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: FRAME ANCHORING & BILL OF MATERIALS

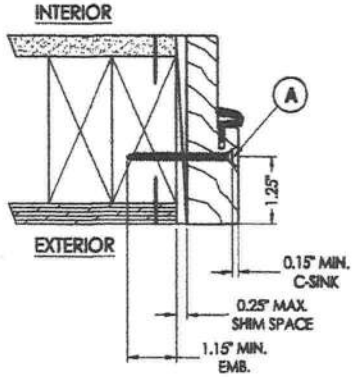
NO.	DATE	REVISIONS	BY

DATE: 06/13/08
SCALE: N.T.S.
DWG. BY: DT
CHK. BY: WWH
DRAWING NO.: FL-5262.3-68
SHEET 4 OF 5

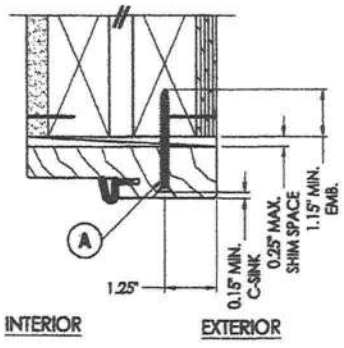
R:\A - Projects\Project Folders\Proj 1201-1300\pf 1206\D. RWBC Drawings\FL-5262.3-68\FL-5262.3-68.dwg, Model



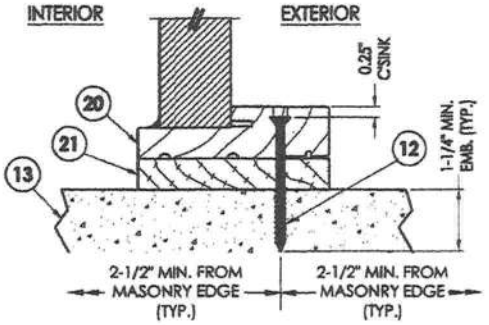
9/5 HEAD JAMB
To 1x sub-buck
Inswing shown



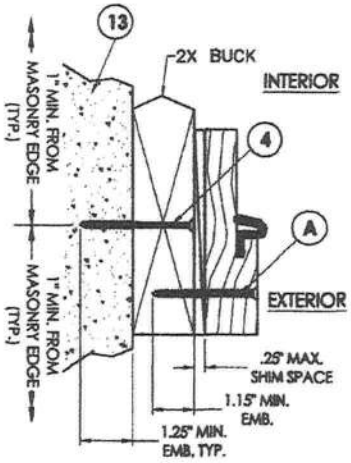
4/5 VERTICAL SIDE JAMB
To wood frame
Inswing shown



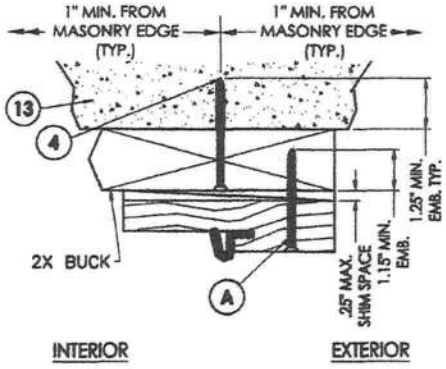
3/5 HEAD JAMB
To wood frame
Inswing shown



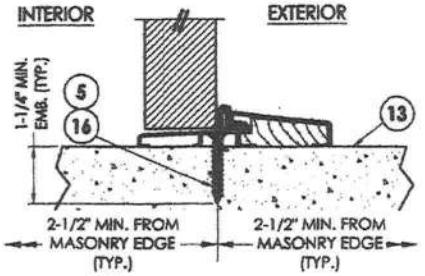
5/5 VERTICAL CROSS SECTION



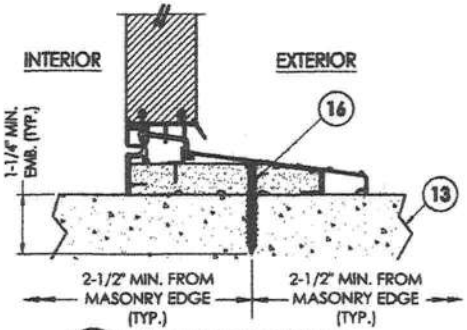
2/5 VERTICAL SIDE JAMB
To 2x sub-buck
Inswing shown



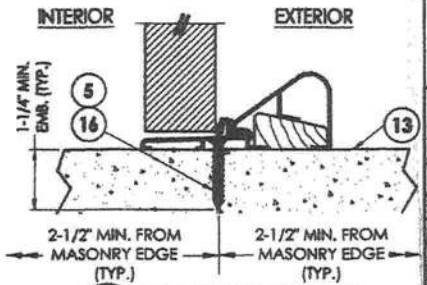
1/5 HEAD JAMB
To 2x sub-buck
Inswing shown



6/5 VERTICAL CROSS SECTION
Inswing configuration



7/5 VERTICAL CROSS SECTION
Inswing configuration



8/5 VERTICAL CROSS SECTION
Outswing configuration

Documents Prepared By:
RW BUILDING CONSULTANTS, INC.
P.O. Box 250 Valrico FL 33595
Phone No.: 813.689.9197
Florida Board of Professional Engineers
Certificate Of Authorization No. 9813
Lyndon F. Schmidt, P.E. No. 43409

PRODUCT: THERMA-TRU FIBERGLASS DOOR

PART OR ASSEMBLY: ANCHOR & VERTICAL CROSS SECTIONS MASONRY/WOOD/STL

NO.	DATE	BY	REVISIONS

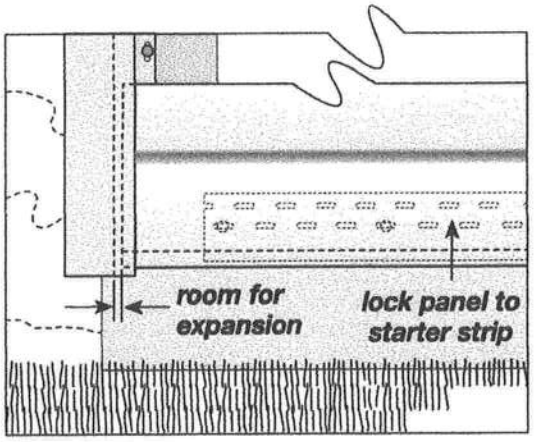
DATE: 06/17/08
SCALE: N.T.S.
DWG. BY: DT
CHK. BY: WWH
DRAWING NO.: FL-5262.3-68
SHEET 5 OF 5

R:\A - Projects\Project Folders\Proj 1201-1300\grf 1208\D. RWBC Drawings\FL-5262.3-68\fl-5262.3-68.dwg, Model

Preparing Wall Surfaces

The key to successful vinyl siding application is proper preparation of the nailing surface. It is essential that you work over a smooth nailing surface. The more level and even the wall surface, the better the finished installation will look.

The steps involved in preparation differ for new homes and old, so choose the instructions (page 20-23) that pertain to your project.



Installing the First Course

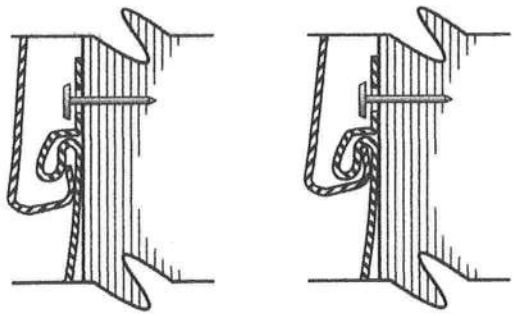
It's important to work with care and planning as you install siding panels. This is especially true when you're installing the first course of siding. (See pages 23-25 for fastening methods.)

For best results, follow these guidelines:

The key to creating a visually attractive installation is to **lap away** from areas where people normally walk or gather. For example, on the front wall, work from the corners to the entrance door (so overlaps face away from door). On side walls, work from the rear corners toward the front. This approach minimizes the effect of lapping and produces the best appearance. Keep lap appearance in mind throughout installation.

NOTE: ***Lap appearance is also improved when you avoid using panels less than 3' long.***

Slide the first panel into the cornerpost recess. Leave room for expansion (see page 25).



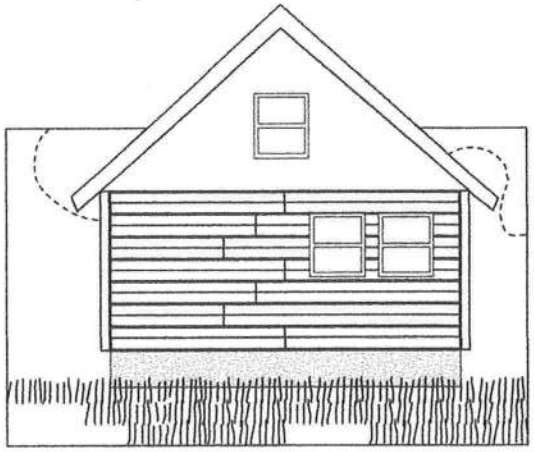
lock not fully engaged ***lock fully engaged***

Hook the bottom lock of the panel into the interlock bead of the starter strip by applying upward pressure.

Before nailing, double check to make certain you've locked the panel along its entire length. A slight upward pressure may be required to snap the interlock securely. Don't force the lock too tightly, however. You may distort your laps. Nail properly. Also, make certain the panel can slide freely. Start at the center of the panel and work out.

Install the remaining starter course panels, overlapping panel ends 1". The last nail should be at least 4" from the end of the panel to allow for a neat lap.

Remember to leave room for expansion when fitting panels into remaining inside and outside cornerposts.



Installing remaining courses

To ensure best appearance, position the laps to avoid unsightly joint patterns. The illustration at left shows a well-planned staggering of panel joints. Follow these guidelines:

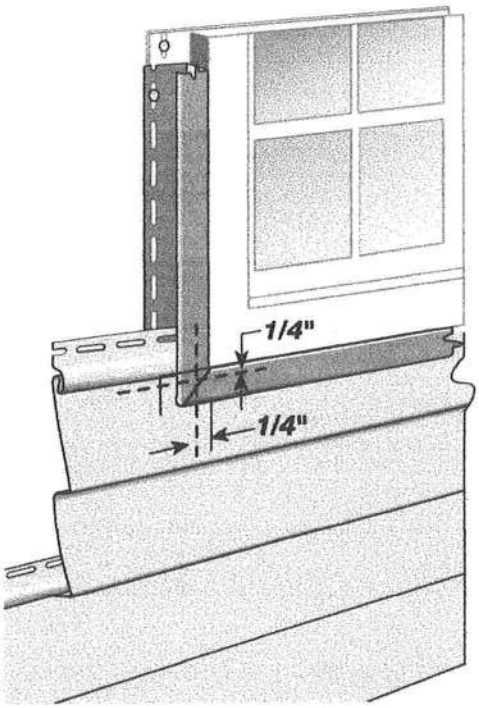
Separate joints by at least two courses.

Avoid joints above and below windows.

Leave at least 3' separating joints on successive courses.

Use short cutoff lengths for fitting at narrow openings between windows.

Follow the planned pattern when applying the next courses of siding.



Fitting under windows

You'll probably have to cut panels to fit under windows. To make this task easier, plan panel positioning as shown at left so a single panel extends beyond both sides of window opening. Follow these steps to measure and cut panels:

Hold panel in place and mark the width of window opening. Add 1/4"-3/8" to both ends to allow for expansion. The resulting marks show location of vertical cuts. Extend marks onto panel using a square.

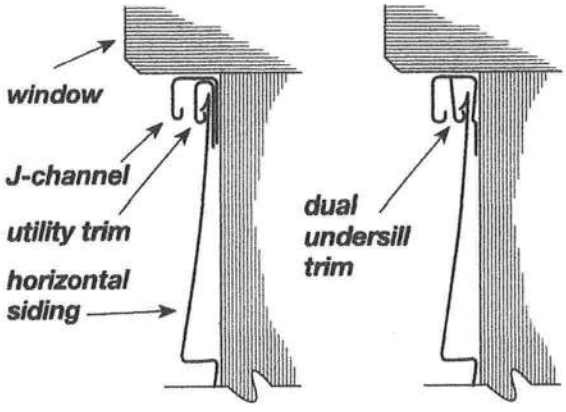
Create a template for horizontal cut using small piece of scrap siding. Lock this piece into the lower panel and mark 1/4" below sill height. This provides clearance for undersill trim. Repeat procedure on opposite side of window. (You can't assume windows will be perfectly level.)

Transfer marks from template to panel. Connect marks using straightedge.

Cut panel, using tin snips to make vertical cuts and a utility knife to make horizontal cut.

Install panel

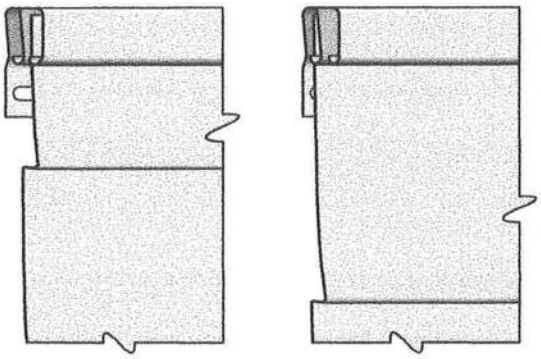
If necessary to maintain slope angle, install furring under sill as described on pages 21-22.



NOTE: ***You can eliminate this step by using dual undersill trim. This trim has two receiving channels. Use the inner channel if you've cut the siding panel near the locking edge. Use the outer channel if the cut has been made near the butt edge.***

Use a snap lock punch to raise tab faces on the outside of the panel. Punch out tab every 6".

Push horizontal edge of cut into utility trim. Slide vertical edges of cut into J-channels at window sides. Make certain the installed panel locks into the panel below.



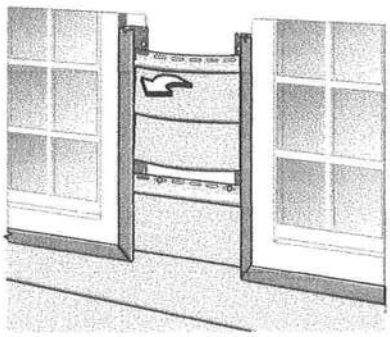
installing trimmed panels with dual undersill trim

Fitting over windows and doors

The procedure for cutting panels for installation over windows and doors is similar to that explained earlier.

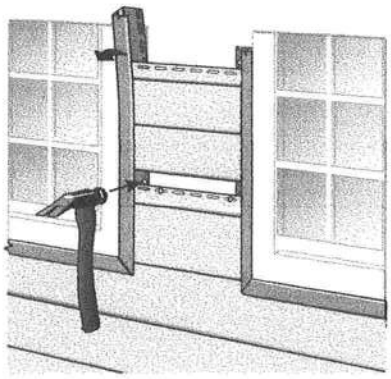
If necessary to maintain slope angle, install furring above window or door as explained on pages 21-22.

Drop panel into position, making certain it fits into undersill trim and J-channel at top and J-channels at sides. Interlock with the siding panels below.

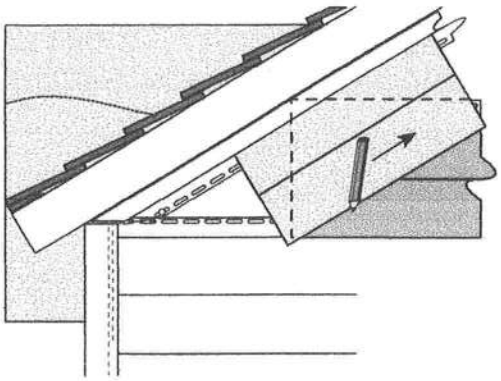


Fitting at narrow openings between windows

To simplify installation in areas such as that shown in the illustration, install J-channels on both sides of opening. Bow the panel toward you and slip into channel.



If the area is very narrow, leave one J-channel unnailed except at lowest point (as shown). Bend this channel out slightly to insert panel. When panel is in place and nailed, nail J-channel immediately above panel and repeat procedure. Be sure to leave adequate tolerances for expansion and contraction.



Fitting at gable ends

Make a pattern duplicating gable slope. Use this pattern to guide cutting of panels to fit gable ends.

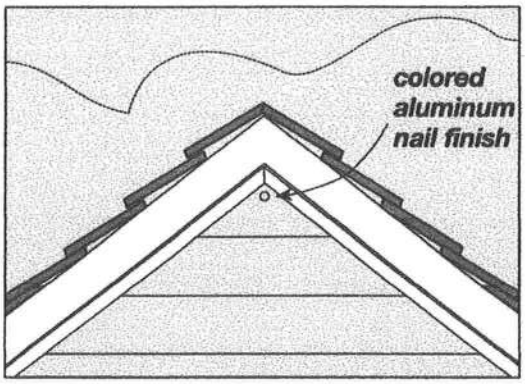
To make pattern:

Lock short piece of siding into panel gable starter course as shown in illustration.

Hold second piece of siding against J-channel at slope. Run pencil along edge of this piece, transferring slope angle to first piece of siding.

Cut along line using power saw or tin snips. Use resulting pattern to mark siding panels before cutting.

NOTE: ***Double-check angle on pattern at every course. If necessary, cut new pattern.***



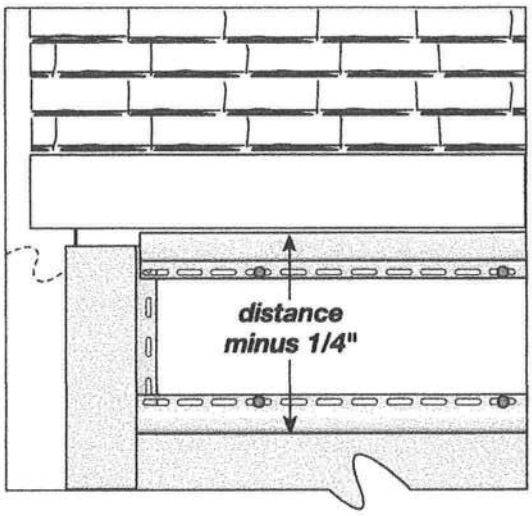
To install cut panels:

Slip angled end of panel into J-channel along gable edge. Leave space for expansion.

Interlock with siding panel below.

If necessary to securely fasten the last panel at gable peak, face nail as shown in illustration. This is the only place you will face nail. Use 1-1/4" to 1-1/2" aluminum nail with painted head.

NOTE: ***Do not cover louvers in gables.***



Fitting under soffit

When you reach the last course of siding, you will probably have to rip cut panels lengthwise to fit under soffit.

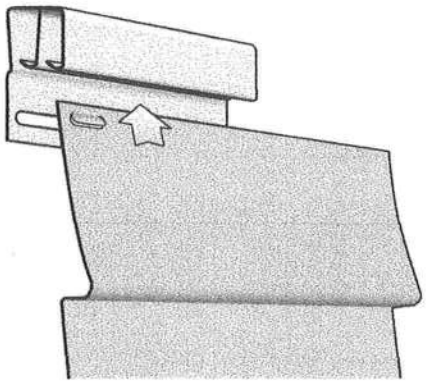
NOTE: ***If necessary to ensure proper panel slope angle, make certain to furr out this area.***

To cut and install this last course:

Install J-channel and undersill trim or dual undersill.

Measure from soffit to base of upper lock on previous course of panels. Subtract 1/4". Mark this dimension on the panel to be cut, taking measurement from bottom edge of panel. For a more precise cut, repeat this procedure at several other points along the span to be covered by the panel.

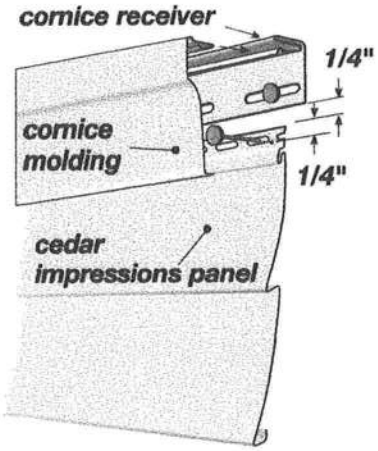
Using a square or straightedge, draw a pencil line connecting these points. Then score along line with utility knife. Bend panel back and forth until it snaps.



Use snap lock punch to create tabs on outside face of panel, 1/4" below cut edge. Space tabs every 6".

To install, lock bottom of cut panel into panel below. Push top edge into J-channel or undersill trim. Tabs will catch in trim and hold panel firmly in place.

NOTE: ***Since you will not nail this last course, it is important that the tabs fit properly in the trim to provide support while allowing movement for expansion.***



Finishing the top course

To finish the top course of siding, attach cornice receiver to the top of the wall under the eave or soffit. Trim the top panel to within 1/4" of the cornice receiver. Using a nail slot punch, punch nail slots 1/4" from the trimmed edge of the siding panel, 16" apart. Nail off the top course, and snap the cornice molding into the cornice receiver. An alternate method is to use J-channel and furring strips.

Completion

Attaching objects to siding

All external products (downspouts, shutters, and lights, for example) are attached to walls after you've applied the vinyl siding.

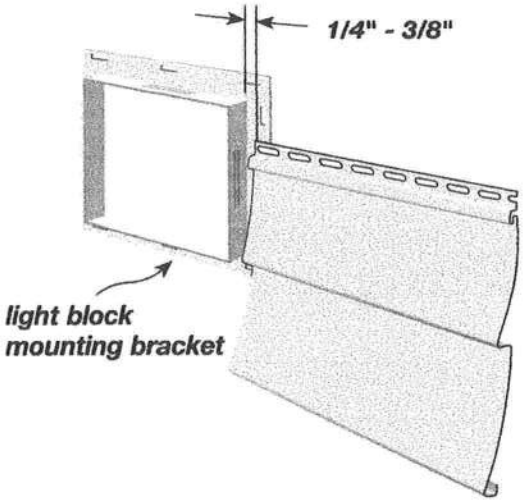
NOTE: ***All external fixtures must be attached to a solid backing (such as 3/4" exterior grade plywood) to provide a secure mounting surface. Never attach a fixture directly to vinyl siding.***

When installing external products, you must allow for expansion and contraction of siding.

You can allow for this movement in two ways:

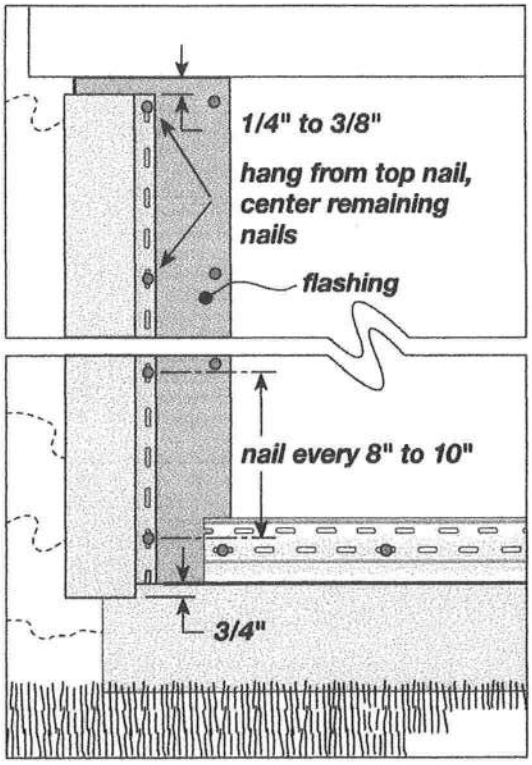
The most convenient way to attach light fixtures is with light blocks. Because they contain receiving channels to hold siding panels, light blocks provide a simple way to allow for expansion.

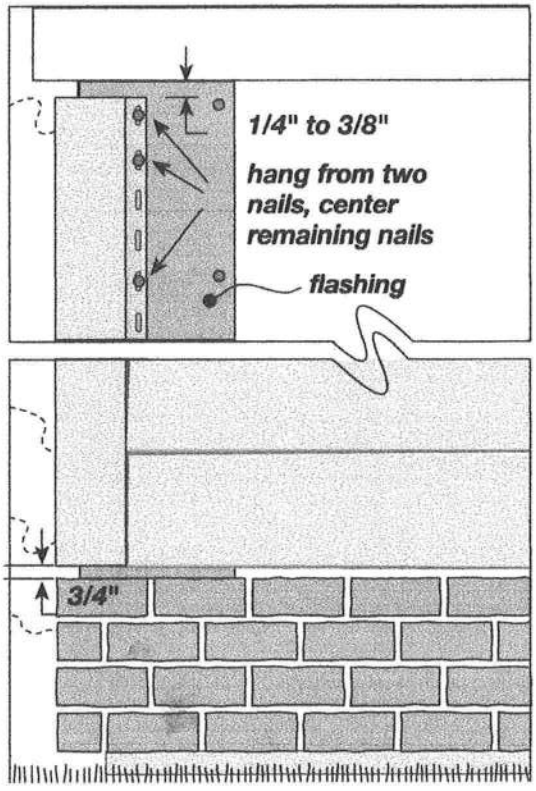
When attaching other fixtures, drill holes in the siding 1/4" larger than the diameter of screws, bolts, or nails being used to fasten objects. This provides adequate clearance so siding **can move freely underneath attached objects.** When attaching objects, do not fasten tightly. It is also recommended that you apply caulk around the screws.



Fitting at light blocks

When cutting panels to fit at a light block, be sure to allow for expansion.





Installing Outside Cornerposts

Flash the corners of the home by bending a 20" wide piece of aluminum trim coil 90° so you have two 10" legs. Cover the entire length of the corner, lapping the upper pieces over the lower pieces. (Self-adhering flashing may be substituted for trim coil. Follow manufacturer's installation instructions and observe local building code requirements.)

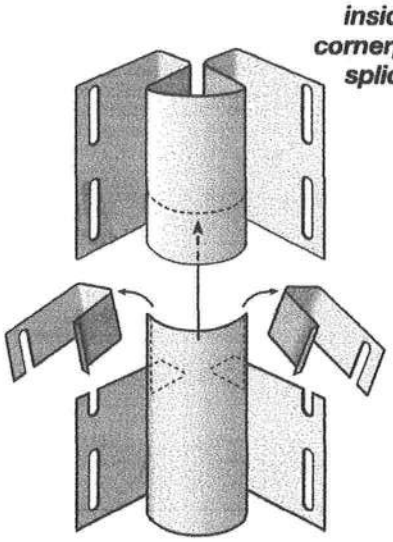
Position outside cornerpost with the top of the post 1/4" from the underside of the eave and the bottom of the cornerpost 3/4" below the starter strip. Remove the bottom 3/4" of the nailing flange so it will not show below the siding when installed.

Make sure posts are straight and true before nailing.

Hang cornerposts by first positioning a nail at the top of the topmost nail slot. Position all remaining nails in the center of nail slots a maximum of every 8" to 10". Leave 1/8" to 1/16" between the nail head and the cornerpost to allow the cornerpost to move during normal expansion and contraction. **(DO NOT NAIL TIGHT.)** This nailing pattern is to be followed on both nail flanges of each post.

NOTE: ***CedarBoards corners install similar to standard outside cornerposts.***

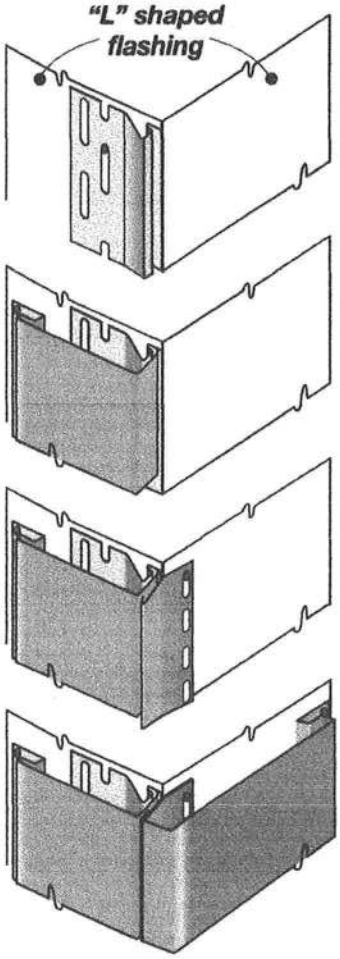
NOTE: ***When installing Traditional, Beaded, and SuperCorners™ or any hanging cornerpost longer than 12', position fasteners at the top two nail slots on each side of the corner.***



If you have to splice the inside cornerpost, cut 1" off all but the outer face of the lower post. Lap 3/4" of the upper post over the lower post, leaving 1/4" for expansion.

If you are using two pieces of J-channel instead of inside cornerpost, flash the corner with a 10" x 10" "L" corner fabricated from aluminum coil stock or any weather-resistant barrier. Hang the J-channel from the top of the eave. The bottom should extend 3/4" below the starter strip. Remove the bottom 3/4" of the nailing flange so that it will not show below the siding. Use the same positioning and nailing guidelines as inside cornerpost.

To create a narrower corner, you can also use a single length of J-channel and flashing. First, install the siding on one wall. Then place the J-channel lightly against the siding and nail it to the substrate on the adjacent wall. Follow the same positioning and nailing guidelines as inside cornerposts.



Federal Corners

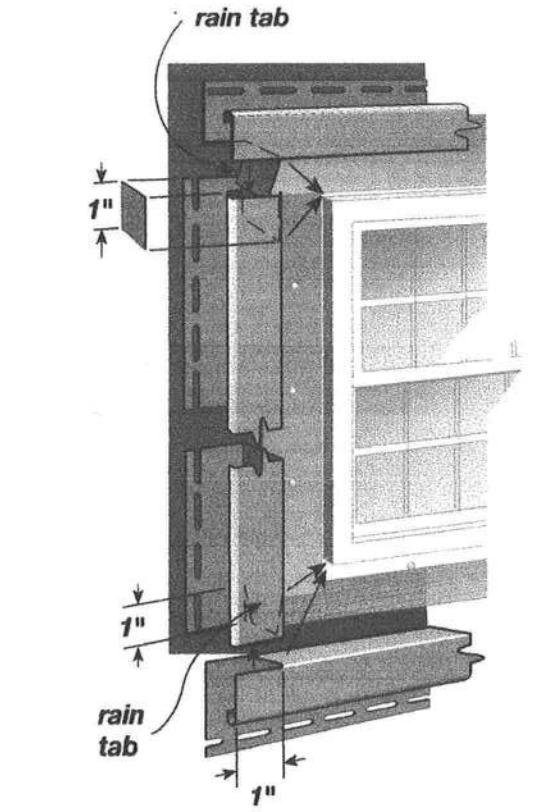
To create a federal-style corner, flash the corner with aluminum trim coil or other flashing materials. Hang a new construction starter strip. Position the top nail in the top of the nailing slot. All other nails should be centered in the slots spaced 8" to 10" apart.

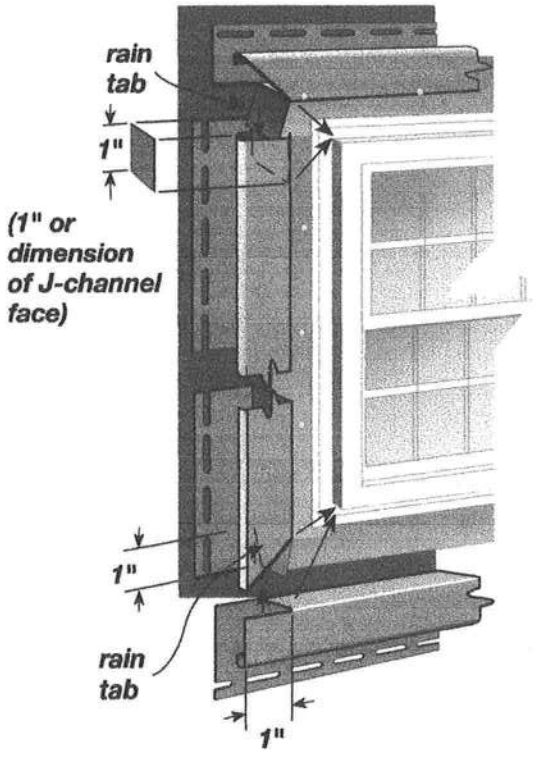
Position and secure the 3-1/2" lineal.

Position and secure an aluminum starter strip.

Position and secure the 5" lineal.

NOTE: ***Aluminum starter can be used for both lineals. If the aluminum starter used for the 5" lineal is not long enough, fashion a starter using a metal brake and coil stock to a length that allows for proper nailing into the substrate.***





Installing Window and Door Trim

Install J-channel along the top and sides of door casings and around windows.

NOTE: ***When installing J-channel around replacement windows that do not have nail flanges, add flashing for greater protection against water infiltration. For an example of completed flashing, see the previous page.***

There are two methods of joining J-channels at corners. The easiest method is to square cut the corners. For a more finished appearance, you can miter the corners. To prevent gaps, do not butt ends. Instead, lap them as shown.

To Square Cut Corners

Install J-channels at the sides of the windows. Notch them as shown.

NOTE: ***For best results, use aviation snips when cutting J-channel.***

Cut the top and bottom J-channels so the ends extend beyond the casing to the width of side J-channels.

Place the top J-channel along the casing shoulder and nail it to the wall.

Make two cuts in the bottom of the upper channel and bend it down to overlap the side J-channel. Repeat for the other side. This forms a water drain and allows the J-channel to receive siding panel.

Nail the bottom J-channel in place. Cut the channel as previously described. Fold the rain tabs into the receiving pockets for a tighter miter joint.

To Miter Cut Corners

For best results, make sure you cut all J-channels to the proper length, leaving the proper allowance for the width of the face of the J-channel.

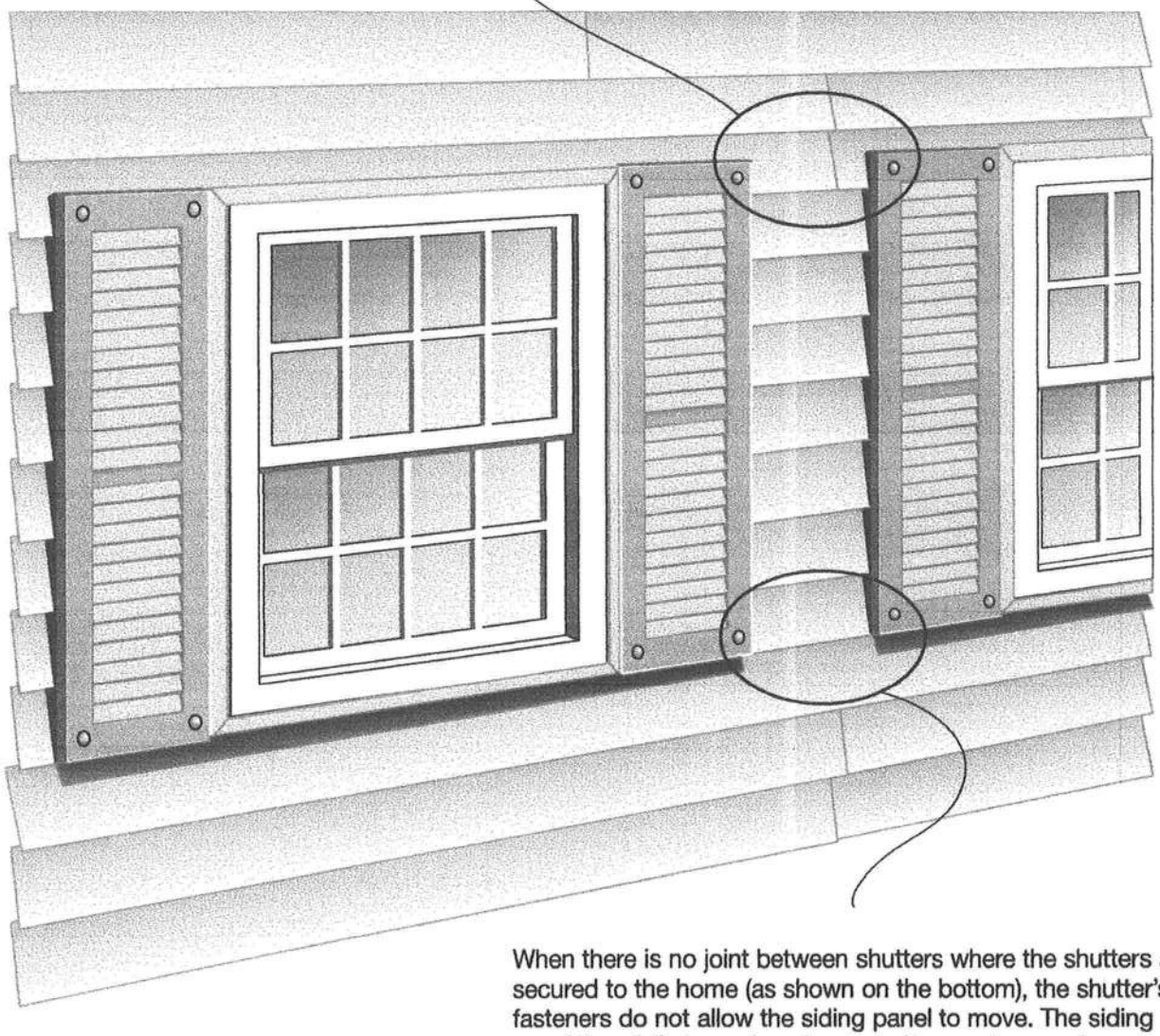
Square cut the bottom J-channel so that its ends extend beyond the window casing to the width of the face of the side J-channels. Notch the ends for clearance. Position and nail the J-channel.

Measure the side J-channels, adding the width of both the top and bottom J-channels. Miter cut (45° angle) the lower ends of both side J-channels. Notch the channel to form a rain tab, position it and nail.

Mark the top J-channel so its ends extend beyond the casing to the width of the side J-channels. Miter cut (45° angle) the ends. Cut and bend rain tabs. Position and nail.

Shutter Installation

The ideal application (shown at the top) has a joint between the two shutters where the shutters are secured to the home. In this way, the siding panel is not "hard nailed" between the two shutters and the siding is allowed free movement.



When there is no joint between shutters where the shutters are secured to the home (as shown on the bottom), the shutter's fasteners do not allow the siding panel to move. The siding panel then fails to perform because it cannot expand or contract with the temperature changes.

Enlarge the hole in the siding for securing the shutter – the hole should be 1/4" larger than the shank of the fastener. If possible, stagger the screws securing the shutter so that they do not line up on the same panel. It is also a good idea to apply caulk around the screws.

Remodeling Projects

Check to be sure the existing ceiling can serve as a solid nailing base. If the existing ceiling is solid, remove all existing moldings and fixtures from the ceiling and begin by nailing inverted J-channels along the perimeter of the ceiling area.

If you plan to use light blocks to attach external light fixtures, install them to adequate backing.

Plan the layout of the ceiling panels to achieve an even balance or to align with adjacent work.

Use the existing ceiling as a nailing base for the panels. Install the first panel into the channels at one end of the porch. Be sure to leave room for expansion. Nail every 12" to 16", positioning the nails in the centers of slots. Do not nail tightly. Install the remaining panels. When cutting the last panel of the first course, be sure to allow room for expansion.

For areas where more than one panel length is needed, use a double channel lineal.

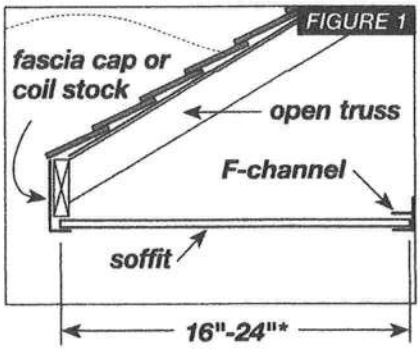
If necessary, rip cut the final panel and use a snap lock punch to create tabs every 8" to 10" along the cut edge. Attach utility trim and insert the panel into the receiving channel.

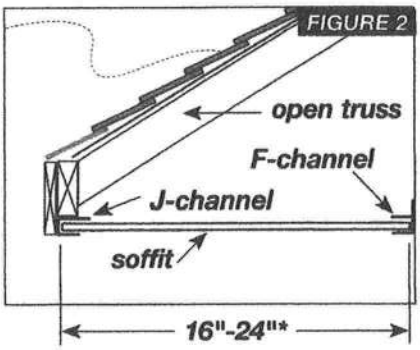
If the existing ceiling is not solid, install nailing strips to provide a secure nailing base. Then install J-channels. You will have to install additional nailing strips if your ceiling panels are to run parallel to the ceiling joists.

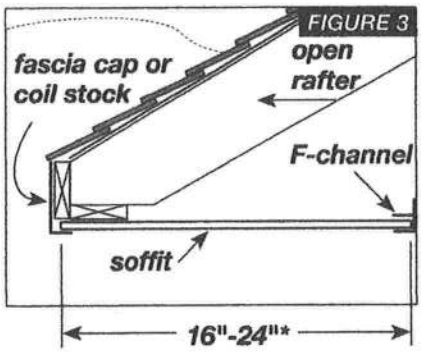
If the ceiling panels will run parallel to the ceiling joists, you will have to install additional 1 x 3 wood furring nailing strips. Install these nailing strips perpendicular to the ceiling joists, placing a strip every 12" to 16".

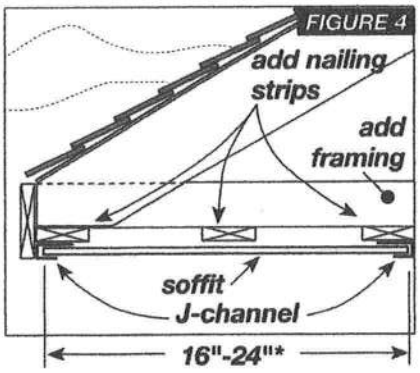
Invert J-channels and nail them to the underside of wood strips along the perimeter of the ceiling area.

Install the panels as explained above.









* *To determine the maximum permissible span, consult individual product specifications and local building codes.*

Soffit

You can use solid vinyl panels or perforated vinyl panels for soffit installations. Perforated panels provide ventilation, which helps to reduce heat buildup in the summer and ice dams in the winter. In buildings with roof ridge vents, you should install ventilated soffit. Check local building codes to determine the amount of ventilation required. In high windload areas, you should also check local building codes to determine if the application methods that are required differ from those described below.

The procedure used to install soffit depends on the construction of the eaves:

- **Open eaves**—eaves with exposed rafters or trusses—are typical of new construction. You will also have to use open eave installation procedures if you have to remove damaged soffit at a remodeling project.
- **Enclosed eaves**—eaves with soffit in place—are typical of remodeling projects.

Installation over Open Eaves

The first step in installing soffit is to install the proper receiving channels. You have several options for receiving channels. You can use accessories such as F-channel or J-channel, or you can make channels using coil stock. The best approach is to select a method that works most effectively with the construction techniques used to create the eave. Examine figures 1-4 and find the one that most closely resembles the construction methods used on your particular project.

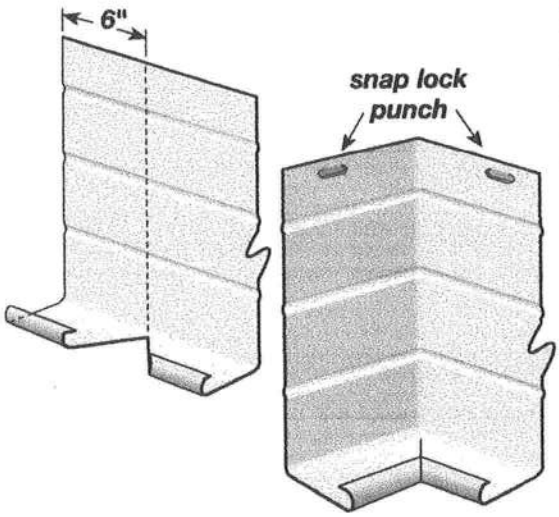
If no F-channel is available, J-channel can be modified to create F-channel. Simply cut slots in the nail flange area where it would be nailed to the wall. After cutting the nail flange, bend the flange back and nail to the wall. When installing Beaded T2" panels, use 3/8" H-bar or 3/8" J-channel.

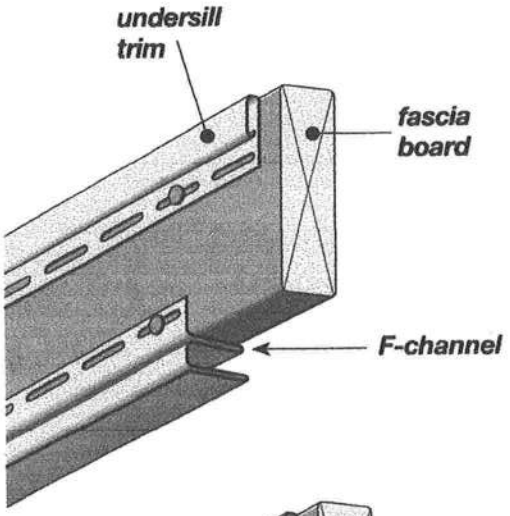
Installing Receiving Channels

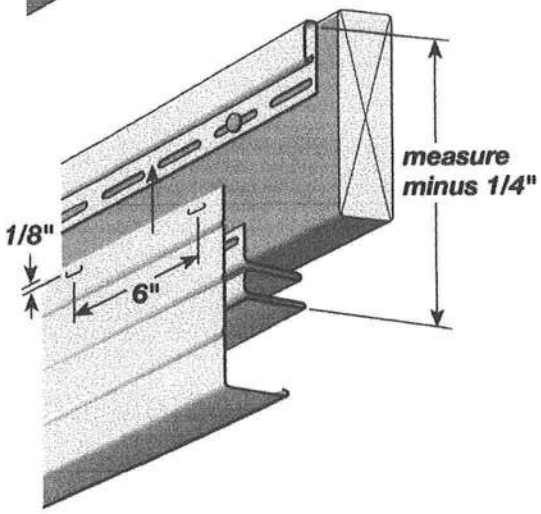
Install the receiving channels following the details shown in figures 1-4. Nail the channels every 16", positioning the nail in the center of the slot. Do not nail tightly.

If the eave span is greater than 16", you will have to install nailing strips (as shown in figure 4) and install the receiving channels on the nailing strips.

If the soffit will turn a corner, cut and install the channel so there is 1/4" for expansion at each of the adjoining walls.







For installations that include soffit

Nail the undersill trim in place along the top of the fascia board. Then nail F-channel along the bottom outside surface of the fascia board (shown).

The fascia panel will have to be rip cut to fit over the fascia board and F-channel. To determine the width of the panel, measure from the slot in the undersill trim to the bottom of the F-channel. Deduct 1/4" and cut (shown).

Use a snap lock punch to create tabs 1/8" below cut edge. Punch tabs every 6", with the tabs raised on the outside face of the panel.

Install the panel by hooking the bottom of the fascia panel under the F-channel and pushing the top into the undersill trim (shown).

Continue to install the fascia as described on page 82.

Aluminum fascia

The techniques used to install aluminum fascia panels are similar to those used with vinyl– with three exceptions. There is no special undersill trim to use with aluminum fascia. Aluminum fascia is made without nail slots, so you have to pay attention to proper nailing techniques. And corners are handled differently.

Install drip edge, gutter, or all-purpose trim along the top of the fascia board to receive the top edge of the fascia panel.

Slip the fascia panel in place. Then nail the underside of the panel. Nail every 24", keeping the nails lined up with the soffit V-grooves.

For best appearance, first drill a slightly oversized hole. Nail the fascia with painted trim nails, using a light touch.

At the outside corners, bend a 1" flange at a 90° angle so it turns the corner. Then cut the overlapping fascia at a 45° angle. Position the panels and nail.

NOTE: ***If you need a piece of nonstandard size fascia, use a portable brake to form it from aluminum trim sheet. Install and nail using the same techniques you used with standard fascia panels.***

ESR-1622
Issued April 1, 2008
This report is subject to re-examination in two years.

ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office # 5360 Workman Mill Road, Whittier, California 90601 # (562) 699-0543
Regional Office # 900 Montclair Road, Suite A, Birmingham, Alabama 35213 # (205) 599-9800
Regional Office # 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 # (708) 799-2305

DIVISION: 06—WOOD AND PLASTICS
Section: 06090—Wood and Plastics Fastenings

REPORT HOLDER:

SIMPSON STRONG-TIE COMPANY, INC.
5956 WEST LAS POSITAS BOULEVARD
PLEASANTON, CALIFORNIA 94588
(800) 925-5099
www.strongtie.com

EVALUATION SUBJECT:

SIMPSON STRONG-TIE POST BASE CONNECTORS FOR WOOD CONSTRUCTION

ADDITIONAL LISTEES:

1.0 EVALUATION SCOPE

Compliance with the following codes:

- # 2006 *International Building Code*® (IBC)
- # 2006 *International Residential Code*® (IRC)
- # Other Codes (see Section 8.0)

Property evaluated:

Structural

2.0 USES

Simpson Strong-Tie post base connectors described in this report are used as wood framing connectors in accordance with Section 2304.9.3 of the IBC, and are used to resist lateral and net induced uplift forces at the bottom end of wood posts in accordance with Section 2304.9.7 of the IBC, and to prevent lateral displacement at the bottom end of wood posts in accordance with Section R407.3 of the IRC. The products may also be used in structures regulated under the IRC when an engineered design is submitted in accordance with Section R301.1.3 of the IRC.

3.0 DESCRIPTION

3.1 General:

The Simpson Strong-Tie post base connectors described in this report are die-formed brackets that connect wood posts to concrete footings complying with the IBC or IRC, as applicable, by using anchor bolts installed during the concrete pour or after the concrete hardens. Since the design of anchor bolts in the concrete footings is not within the scope of this report, a footing larger than the minimum required by IBC Section 1805 or IRC Section R403 may be necessary to meet anchorage to concrete requirements. Untreated wood columns may be supported by the post base connectors described in this report because the connectors provide a metal pedestal projecting minimum 1 inch (25.4 mm) above the concrete footing as required by Section 2304.11.2.7 of the IBC and Section R319.1.4 of the IRC.

3.1.1 AB Adjustable Post Base: The AB adjustable post base has three components: a post base cover fabricated from No. 16 gage galvanized steel; a C-shaped standoff channel fabricated from No. 12 gage galvanized steel; and a rectangular bearing plate fabricated from No. 12 gage galvanized steel, which has a slotted hole to accommodate a $^1/_2$-inch diameter (12.7 mm) anchor bolt. The AB post base cover has an irregular shaped opening that permits lateral adjustment of the wood post, and prepunched holes for 10d nails driven into the side grain of the wood post. The AB post base cover is placed in contact with the concrete footing and the bearing plate is placed on top of the base cover and secured to the anchor bolt using a nut. The standoff channel fits inside the base cover and provides an elevated support for the bottom of the post. See Table 1 for the overall dimensions of the AB post base cover, the fastener schedule, and allowable downloads. See Figure 1 for drawings of the three components of the AB adjustable post base connector and a typical installation.

3.1.2 ABA Post Base Standoff: The ABA post base standoff is a one-piece connector that elevates the supported wood post $1^1/_{16}$ inches (27 mm) above a concrete footing. The ABA44 and ABA44R are formed from No. 16 gage galvanized steel and all other ABA models from No. 14 gage galvanized steel. The sides of the ABA post base connector have prepunched holes for 10d or 16d nails driven into the side grain of the wood post. Type A narrow plain washer, conforming to the dimensions shown in ASME B18.22.1 (R 1998), and a standard cut washer and nut must be used to secure the ABA post base connector to the concrete anchor bolt. See Table 2 for overall dimensions, required fasteners, and allowable uplift loads and downloads. See Figure 2 for drawings of an ABA post base standoff connector and a typical installation.

3.1.3 ABE Adjustable Post Base: The ABE post base consists of three components: a U-shaped galvanized steel channel having an adjustment slot for the anchor bolt, a galvanized steel standoff base that elevates the wood post 1 inch (25.4 mm) above the concrete footing, and a 0.109-inch-thick (2.8 mm) round washer (bearing plate) supplied with the ABE44 connectors and a 0.171-inch-thick (4.3 mm) rectangular washer (bearing plate) supplied with the ABE46 and ABE66 connectors. The round and rectangular bearing plates have a bolt hole diameter of $^9/_{16}$ inch (14.3 mm) and $^{11}/_{16}$ inch (17.5 mm), respectively. The sides of the ABE adjustable post base connector have prepunched holes for 10d or 16d nails driven into the side grain of the wood post. See Table 3 for the overall dimensions of the U-shaped channel, the nominal thickness of the steel channel and standoff base, required fasteners, and allowable uplift loads and downloads.

See Figure 3 for drawings of the components of an ABE adjustable post base connector and a typical installation.

3.1.4 ABU Adjustable Post Base: The ABU44, ABU46, and the ABU66 adjustable post base connectors consist of three components: a U-shaped galvanized steel channel having an adjustment slot for the anchor bolt and prepunched holes for installing bolts or nails, but not both, into the side grain of the wood post; a galvanized steel standoff base that elevates the wood post 1 inch (25.4 mm) above the concrete footing, and a 0.171-inch-thick (4.3 mm) rectangular washer (bearing plate).

The ABU88 adjustable post base connector consists of the following components: a U-shaped galvanized steel channel having two $1^1/_{16}$-inch-wide (27 mm) long-slotted holes for anchor bolts and prepunched holes for installing nails into the side grain of the wood post; a galvanized steel standoff base that elevates the wood post 1 inch (25.4 mm) above the concrete footing, and two nominally $^1/_4$-inch-thick (6.4 mm) square washers (bearing plates).

See Table 4 for the overall dimensions of the U-shaped channel, nominal thickness of the steel channel and standoff base, required fasteners, and allowable uplift loads and downloads. See Figure 4 for drawings of the components of an ABU44 and ABU88 adjustable post base connectors and a typical ABU connector installation.

3.1.5 PBV Post Base: The PBV post base is a single piece post base connector formed from No. 14 gage steel having a powder-coated paint coating. The PBV connector is circular and has a center channel section and two raised semicircular flat portions that provide a 1-inch (25.4 mm) raised bearing surface for a round post. The connector has prepunched holes for installing SDS screws into the end grain of a round post. See Table 5 for the connector dimensions, required fasteners and allowable downloads.

3.2 Materials:

3.2.1 Steel: Unless noted otherwise, the connectors described in this report are manufactured from galvanized steel in accordance with ASTM A 653, SS designation, Grade 33, with a minimum yield strength, F_y, of 33,000 psi (227 MPa) and a minimum tensile strength, F_u, of 45,000 psi (310 MPa). The bearing plates for the ABU88 are ASTM A 36 with a minimum yield strength of 36,000 psi (248 MPa) and a minimum tensile strength of 58,000 psi (400 MPa) and have no coating. Base metal thicknesses for the connectors in this report are as follows:

NOMINAL THICKNESS	MINIMUM BASE METAL THICKNESS (inches)
No. 10 Gage	0.1275
No. 12 Gage	0.0975
No. 14 Gage	0.0685
No. 16 Gage	0.0555
$^1/_4$-inch (Bearing Plate)	0.2145

For **SI:** 1 inch = 25.4 mm.

The connectors have a minimum G90 zinc coating specification per ASTM A 653 unless otherwise noted. Some models (designated with a model number ending with Z) are available with a G185 zinc coating specification in accordance with ASTM A 653. Some models (designated with a model number ending with HDG) are available with a hot-dip galvanization, also known as "batch" galvanization, in accordance with ASTM A 123, with a minimum specified coating weight of 2.0 ounces of zinc per square foot of surface area (610 g/m^2), total for both sides. Model numbers in this report do not include the Z or HDG ending, but the information shown applies. The PBV post base has a "PC" suffix indicating a powder-coated paint coating. The lumber treater and the holder of this report (Simpson Strong-Tie Company) should be contacted for recommendations on the appropriate level of corrosion resistance to specify for use of the steel connectors in contact with the specific proprietary preservative treated or fire retardant treated lumber.

3.2.2 Wood: Wood members with which the connectors are used must be either sawn lumber or engineered lumber having a minimum specific gravity of 0.50 (minimum equivalent specific gravity of 0.50 for engineered lumber), and having a maximum moisture content of 19 percent (16 percent for engineered lumber), except as noted in Section 4.1. The thickness of the supporting wood main member must be equal to or greater than the length of the fasteners specified in the tables in this report, or as required by wood member design, whichever is greater. For installation in engineered wood members, minimum allowable nail spacing and end and edge distances, as specified in the applicable evaluation report for the engineered wood product, must be met.

3.2.3 Fasteners: Nails used for hangers described in this report must comply with the material requirements, physical properties, tolerances, workmanship, protective coating and finishes, certification, and packaging and package marking requirements specified in ASTM F 1667. The nails must have the following minimum fastener dimensions and bending yield strengths (F_{yb}):

FASTENER	SHANK DIAMETER (inches)	FASTENER LENGTH (inches)	F_{yb} (psi)
10d	0.148	3	90,000
16d	0.162	$3^1/_2$	90,000

For **SI:** 1 inch = 25.4 mm, 1 psi = 6.895 kPa.

At a minimum, bolts must comply with ASTM A 36 or A 307. SDS Screws used in contact with preservative treated or fire retardant treated lumber must, as a minimum, comply with ESR-2236. Fasteners used in contact with preservative treated or fire retardant treated lumber must comply with IBC Section 2304.9.5 or IRC Section R319.3, as applicable. For use with treated lumber, the lumber treater or this report holder (Simpson Strong-Tie Company), or both, should be contacted for recommendations on the appropriate coating or material to specify for the fasteners as well as the connection capacities of fasteners used with the specific proprietary preservative treated or fire retardant treated lumber.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The tabulated allowable loads shown in the product tables of this report are based on Allowable Stress Design (ASD) and include the load duration factor, C_D, corresponding with the applicable loads in accordance with the National Design Specification for Wood Construction and its supplement (NDS).

Tabulated allowable loads apply to products connected to wood used under dry conditions and where sustained temperatures are 100°F (37.8°C) or less. When products are installed to wood having a moisture content greater than 19 percent (16 percent for engineered wood products), or where wet service is expected, the allowable loads must be adjusted by the applicable wet service factor, C_M, specified for lateral loads for dowel-type fasteners in the NDS. When connectors are installed in wood that will experience sustained exposure to temperatures exceeding 100°F (37.8°C), the allowable

loads in this report must be adjusted by the applicable temperature factor, C_t, specified in the NDS. Connected wood members must be analyzed for load-carrying capacity at the connection in accordance with the NDS.

4.2 Installation:

Installation of the connectors must be in accordance with this evaluation report and the manufacturer's published installation instructions. Bolts and nails must be installed in accordance with the applicable provisions in the NDS. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

5.0 CONDITIONS OF USE

The Simpson Strong-Tie products described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The connectors must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions. A copy of the instructions must be available at the jobsite at all times during installation.

5.2 Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by a registered design professional where required by the statues of the jurisdiction in which the project is to be constructed

5.3 Adjustment factors noted in Section 4.1 and the applicable codes must be considered, where applicable.

5.4 Connected wood members and fasteners must comply, respectively, with Sections 3.2.2 and 3.2.3 of this report.

5.5 Use of connectors with preservative treated or fire retardant treated lumber must be in accordance with Section 3.2.1 of this report. Use of fasteners with preservative treated or fire retardant treated lumber must be in accordance with Section 3.2.3 of this report.

5.6 The design of anchor bolts and the concrete footings is not within the scope of this report.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Joist Hangers and Similar Devices (AC13), dated October 2006 (corrected March 2007).

7.0 IDENTIFICATION

The products described in this report are identified with a die-stamped label indicating the name of the manufacturer (Simpson Strong-Tie), the model number, and the number of an index evaluation report (ESR-2523) that is used as an identifier for the products recognized in this report.

8.0 OTHER CODES

8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products in this report were evaluated for compliance with the requirements of the following codes:

- # 2003 *International Building Code®* (2003 IBC)
- # 2003 *International Residential Code®* (2003 IRC)
- # 2000 *International Building Code®* (2000 IBC)
- # 2000 *International Residential Code®* (2000 IRC)
- # 1997 *Uniform Building Code™* (UBC)

The products described in this report comply with, or are suitable alternatives to what is specified in, the codes listed above, subject to the provisions of Sections 8.2 through 8.7.

8.2 Uses:

8.2.1 2003 IBC, 2003 IRC, 2000 IBC, and 2000 IRC: See Section 2.0 of this report.

8.2.2 1997 UBC: Replace the information in Section 2.0 with the following: Simpson Strong-Tie post base connectors are used as wood framing connectors in accordance with Section 2318.4.8 of the UBC.

8.3 Description:

8.3.1 2003 IBC and 2003 IRC: The same as Section 3.0 of this report.

8.3.2 2000 IBC and 2000 IRC: See Section 3.0 of this report, except modify Section 3.2.3 of this report to reference IRC Section R323.3.

8.3.3 1997 UBC: See Section 3.0 of this report, except for the following:

! Modify Section 3.1 as follows:

3.1 General:

The Simpson Strong-Tie post base connectors described in this report are die-formed brackets that connect wood posts to concrete footings complying with the UBC, by using anchor bolts installed during the concrete pour or after the concrete hardens. Since the design of anchor bolts in the concrete footings is not within the scope of this report, a footing larger than the minimum required by UBC Section 1806 may be necessary to meet anchorage to concrete requirements. The post base connectors described in this report are used to ensure against uplift and lateral displacement at the bottom end of wood posts in accordance with Section 2314 of the UBC. Additionally, untreated wood columns may be supported by the post base connectors described in this report because the connectors provide a metal pedestal projecting minimum 1 inch (25.4 mm) above the concrete footing as required by Section 2306.5 of the UBC.

! Modify the first sentence in the last paragraph of Section 3.2.3 as follows: Fasteners used in contact with preservative treated or fire retardant treated lumber must, as a minimum, comply with UBC Section 2304.3.

8.4 Design and Installation: 2003 IBC, 2003 IRC, 2000 IBC, 2000 IRC, 1997 UBC:

See Section 4.0 of this report.

8.5 Conditions of Use:

8.5.1 2003 IBC, 2003 IRC 2000 IBC, and 2000 IRC: The Simpson Strong-Tie products described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 8.0, subject to the same conditions of use indicated in Section 5.0 of this report.

8.5.2 UBC: The Simpson Strong-Tie products described in this report comply with, or are suitable alternatives to what is specified in, the UBC, subject to the same conditions of use indicated in Section 5.0 of this report, except the last sentence of Section 5.5 is replaced with the following: Fasteners used in contact with preservative treated or fire retardant treated lumber must, as a minimum, comply with UBC Section 2304.3.

8.6 Evidence Submitted: 2003 IBC, 2003 IRC 2000 IBC, 2000 IRC, and UBC:

See Section 6.0 of this report.

8.7 Identification: 2003 IBC, 2003 IRC 2000 IBC, 2000 IRC, and UBC:

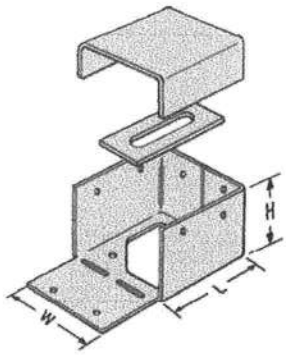
See Section 7.0 of this report.

TABLE 1—AB ADJUSTABLE POST BASE CONNECTORS[1,2]

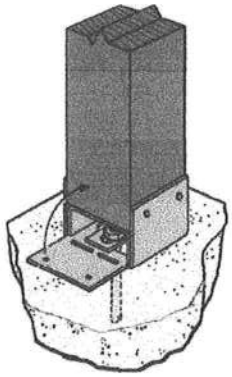
MODEL NO.	DIMENSIONS (inches)			FASTENERS		ALLOWABLE DOWNLOADS (lbs)
	W	L	H	Anchor Bolt Diameter (inches)	Nails into Post (Quantity-Type)	C_D = 1.0 C_D = 1.15 C_D = 1.25
AB44	$3^{9}/_{16}$	$3^{9}/_{16}$	$2^{9}/_{32}$	$^{1}/_{2}$	8-10d	4,065
AB46	$3^{9}/_{16}$	$5^{3}/_{8}$	3	$^{1}/_{2}$	8-10d	4,165
AB44R	4	$4^{1}/_{16}$	$2^{9}/_{16}$	$^{1}/_{2}$	8-10d	4,065
AB46R	4	6	$2^{13}/_{16}$	$^{1}/_{2}$	8-10d	4,165
AB66	5½	$5^{9}/_{16}$	3	$^{1}/_{2}$	8-10d	5,335
AB66R	6	6	$2^{13}/_{16}$	$^{1}/_{2}$	8-10d	5,335

For **SI:** 1 inch = 25.4 mm, 1 lbs = 4.45 N.

[1]The allowable downloads may not be increased for short term loading.
[2]Anchor bolts and the concrete footings must be capable of resisting all loads and forces transferred from the post base connector.



AB Adjustable Post Base



AB Installation

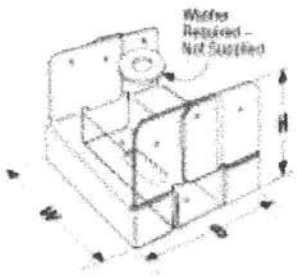
FIGURE 1—AB POST BASE CONNECTOR

TABLE 2—ABA ADJUSTABLE POST BASE CONNECTORS[1,2,3]

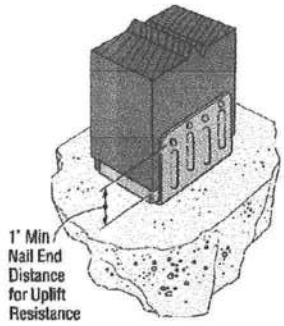
MODEL NO.	DIMENSIONS (inches)			FASTENERS		ALLOWABLE LOADS (lbs)	
						Uplift	Downloads
	W	L	H	Anchor Bolt Diameter (inches)	Nails into Post (Quantity–Type)	C_D=1.33 C_D=1.6	C_D=1.0 C_D=1.15 C_D=1.25
ABA44	$3^{9}/_{16}$	$3^{1}/_{8}$	$3^{1}/_{16}$	$^{1}/_{2}$	6–10d	555	6,000
ABA44R	$4^{1}/_{16}$	$3^{1}/_{8}$	$2^{13}/_{16}$	$^{1}/_{2}$	6–10d	555	8,000
ABA46	$3^{9}/_{16}$	$5^{3}/_{16}$	$3^{1}/_{8}$	$^{5}/_{8}$	8–16d	700	9,435
ABA46R	$4^{1}/_{16}$	$5^{3}/_{16}$	$2^{7}/_{8}$	$^{5}/_{8}$	8–16d	700	12,000
ABA66	$5^{1}/_{2}$	$5^{1}/_{4}$	$3^{1}/_{8}$	$^{5}/_{8}$	8–16d	720	10,665
ABA66R	6	$5^{3}/_{16}$	$2^{7}/_{8}$	$^{5}/_{8}$	8–16d	720	12,665

For **SI:** 1 inch = 25.4 mm, 1 lbs = 4.45 N.

[1]The uplift loads have been increased for wind or earthquake loading with no further increase allowed. Reduce loads when other load durations govern.
[2]The allowable downloads may not be increased for short term loading.
[3]Anchor bolts and the concrete footings must be capable of resisting all loads and forces transferred from the post base connector.



ABA



ABA installation

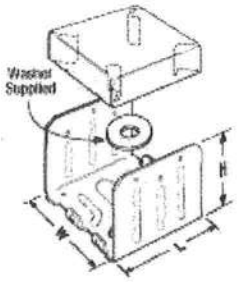
FIGURE 2—ABA ADJUSTABLE POST BASE CONNECTOR

TABLE 3—ABE ADJUSTABLE POST BASE CONNECTORS[1,2,3]

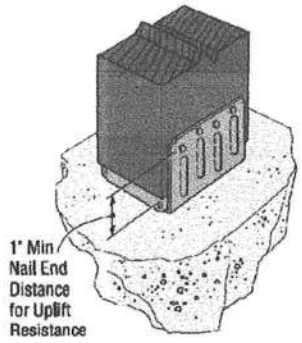
MODEL NO.	DIMENSIONS (Inches)			FASTENERS		ALLOWABLE LOADS	
						Uplift	Download
	W	L	H	Anchor Bolt Diameter (inches)	Nails into Post (Quantity–Type)	C_D=1.33 C_D=1.6	C_D=1.0 C_D=1.15 C_D=1.25
ABE44	$3^{9}/_{16}$	$3^{1}/_{2}$	$2^{25}/_{32}$	$^{1}/_{2}$	6–10d	520	6,665
ABE46	$3^{9}/_{16}$	$5^{7}/_{16}$	$4^{1}/_{16}$	$^{5}/_{8}$	8–16d	810	7,335
ABE66	$5^{1}/_{2}$	$5^{7}/_{16}$	$3^{1}/_{8}$	$^{5}/_{8}$	8–16d	900	12,000

For **SI:** 1 inch = 25.4 mm, 1 lbs = 4.45 N.

[1]The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable loads must be reduced when other load durations govern.
[2]The allowable downloads may not be increased for short term loading.
[3]Anchor bolts and the concrete footings must be capable of resisting all loads and forces transferred from the post base connector.



ABE44



ABE installation

FIGURE 3—ABE ADJUSTABLE POST BASE CONNECTIONS

TABLE 4—ABU ADJUSTABLE POST BASE CONNECTORS[1,2,3,4]

MODEL NO.	CONNECTOR DIMENSIONS					FASTENERS (Quantity-Type)			ALLOWABLE LOADS (lbs)			
	U-Channel				Standoff Base				Uplift			Download
									Nails	Bolts		Nails or Bolts
	W (in.)	L (in.)	H (in.)	Gage No.	Gage No.	Nails into Post	Bolts through Post	Anchor Bolt Diameter (inches)	C_D=1.33 C_D=1.6	C_D=1.33	C_D = 1.6	C_D=1.0 C_D=1.15 C_D=1.25
ABU44	$3^{9}/_{16}$	3	$5^{1}/_{2}$	12	16	12–16d	$2-{}^{1}/_{2}$	$1-{}^{5}/_{8}$	2,200	1,800	2,160	6,665
ABU46	$3^{9}/_{16}$	5	7	12	12	12–16d	$2-{}^{1}/_{2}$	$1-{}^{5}/_{8}$	2,255	2,300	2,300	10,335
ABU66	$5^{1}/_{2}$	5	$6^{1}/_{16}$	10	12	12–16d	$2-{}^{1}/_{2}$	$1-{}^{5}/_{8}$	2,300	2,300	2,300	12,000
ABU88	$7^{1}/_{2}$	7	7	12	14	18–16d	—	$2-{}^{5}/_{8}$	2,320	—	—	24,335

For **SI:** 1 inch = 25.4 mm, 1 lbs = 4.45 N.

[1]The uplift loads have been increased for wind or earthquake loading with no further increase allowed. The allowable loads must be reduced when other load durations govern.
[2]The allowable downloads may not be increased for short term loading.
[3]Anchor bolts and the concrete footings must be capable of resisting all loads and forces transferred from the post base connector.
[4]Allowable uplift loads based on nails and bolts are not cumulative.

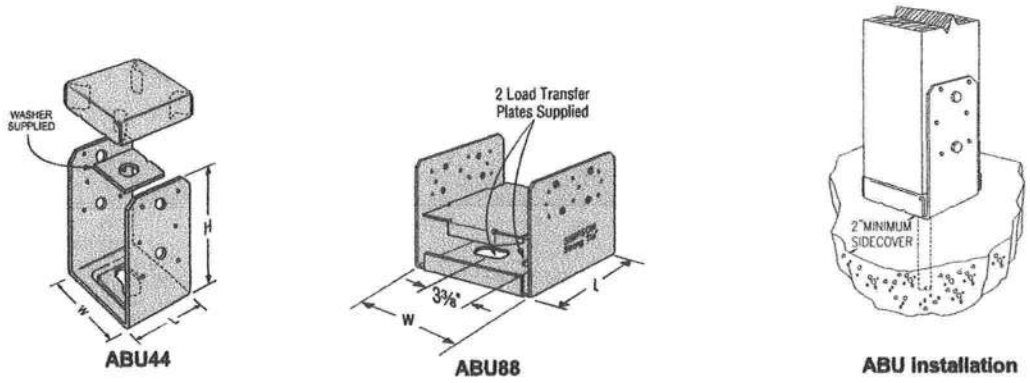


FIGURE 4—ABU ADJUSTABLE POST BASE CONNECTORS

ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

DIVISION: 06—WOOD AND PLASTICS
Section: 06090—Wood and Plastic Fastenings

REPORT HOLDER:

SIMPSON STRONG-TIE COMPANY, INC.
5956 WEST LAS POSITAS BOULEVARD
PLEASANTON, CALIFORNIA 94588
(800) 925-5099
www.strongtie.com

EVALUATION SUBJECT:

SIMPSON TIE STRAPS

1.0 EVALUATION SCOPE

Compliance with the following code:

- 2007 *Florida Building Code—Building* (FBC-B)
- 2007 *Florida Building Code—Residential* (FBC-R)

Property evaluated:

Structural

2.0 PURPOSE OF THIS SUPPLEMENT

This supplement is issued to indicate that the Simpson Strong-Tie FHA, HST, LSTA, LSTI, MST, MSTA, MSTC, MSTI, and ST Series Straight Tie Straps; and CMST and CS Series Coiled Tie Straps; and the CMSTC16 Coiled Tie Strap described in Sections 2.0 through 7.0 and in Tables 1, 2, 3, and 4 of the master report, comply with the 2007 *Florida Building Code—Building*, and the 2007 *Florida Building Code—Residential*, when designed and installed in accordance with the master evaluation report under the following additional conditions:

- The Simpson Tie Straps are selected based on the most critical load combination resulting from the load combinations in Section 1605.3.1 of the FBC.
- For use of the Simpson Tie Straps in the High Velocity Hurricane Zone:
  - The Tie Straps are selected based on the most critical load combination resulting from the load combinations in Section 2.4.1 of ASCE 7.
  - Straps having an assigned allowable tension capacity of less than 700 pounds (3115 N) must be used such that two or more of the straps are installed so that the total allowable tension capacity exceeds the code-prescribed minimum of 700 pounds (3115 N).
  - Nails must be galvanized.

For products falling under Florida Rule 9B-72, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master evaluation report issued on January 1, 2009.

TABLE 4—ALLOWABLE TENSION LOADS FOR THE CS AND CMST SERIES COIL STRAPS AND THE CMSTC16 COIL TIE STRAP

MODEL SERIES	MODEL NO.	TIE STRAP PROPERTIES				NAILS[1] (Quantity–Size)	ALLOWABLE TENSION LOADS[2,3] (lbs.)	
		Thickness (Gage No.)	Length	Min. F_y (ksi)	Min. F_u (ksi)		C_D = 1.6	Based on Steel Strength[5]
CS	CS14	14	Cut to length	50	65	30–10d common	2,985	2,490
						36–8d common	3,005	2,490
	CS16	16	Cut to length	40	55	22–10d common	2,080	1,705
						26–8d common	2,040	1,705
	CS18	18	Cut to length	40	55	18–10d common	1,675	1,370
						22–8d common	1,695	1,370
	CS20	20	Cut to length	40	55	14–10d common	1,280	1,030
						18–8d common	1,370	1,030
	CS22	22	Cut to length	40	55	12–10d common	1,100	845
						14–8d common	1,055	845
CMST	CMST12	12	Cut to length	50	65	84–16d common	10,710	9,215
						98–10d common	10,780	9,215
	CMST14	14	Cut to length	50	65	66–16d common	7,755	6,490
						78–10d common	7,760	6,490
CMSTC	CMSTC16	16	Cut to length	50	65	56–16d sinker	5,375	4,585

For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.45 N.

[1]Total fasteners are the minimum number of nails required to achieve the tabulated allowable loads. One half of the total must be installed in each wood member forming the connection. Fasteners must comply with Section 3.3.3 of this report.
[2]Allowable tension loads are based on the steel straps connected to wood members having an assigned or equivalent minimum specific gravity of 0.50.
[3]Allowable tension loads must be the lesser of the tie strap steel strength or the connection strength.
[4]Allowable tension loads based on connection strength are derived by multiplying the number of nails by the minimum value from the yield mode equations in Section 11.3.1, where the side member (i.e., the steel tie strap) dowel bearing strength, F_{es}, is equal to $2.2F_u/C_D$, where C_D equals 1.6 as shown in the table, and where the minimum specified tensile strength, F_u of the steel strap is as shown in the table. Allowable tension loads governed by connection strength have been multiplied by the load duration factor, C_D, noted in the table.
[5]The tabulated allowable tension loads based on steel strength do not include a one-third stress increase, and are the lesser of yielding at the gross section of the strap, the fracture in the net section away from the connection, or fracture at the connection in accordance with Section C2 of AISI-NAS–01 (North American Specification for the Design of Cold-formed Steel Structural Members, including the 2004 Supplement).

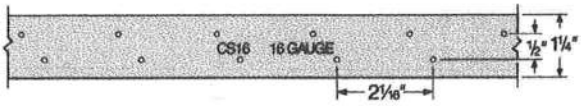


FIGURE 11—CS SERIES TIE STRAP

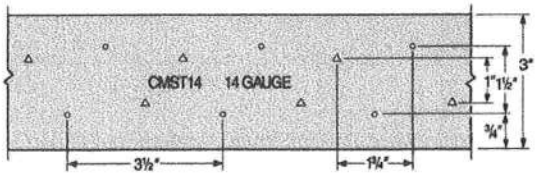


FIGURE 12—CMST14 TIE STRAP

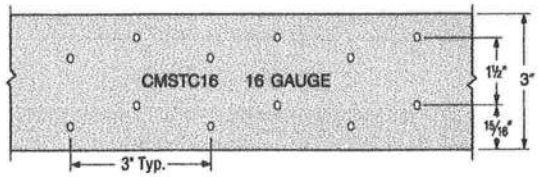


FIGURE 13—CMSTC16 TIE STRAP

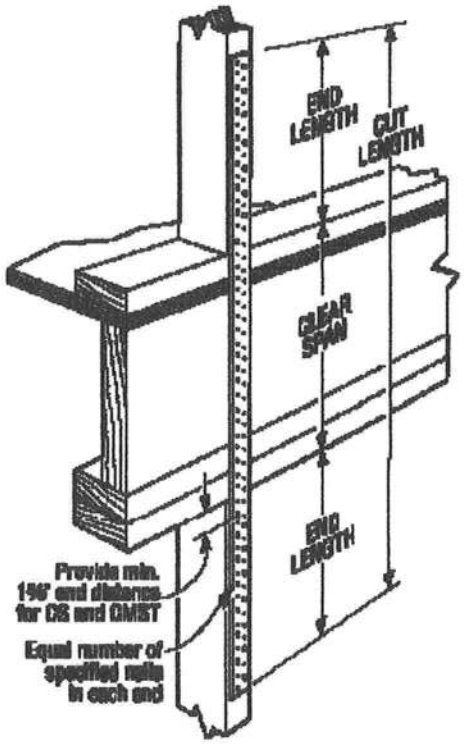


FIGURE 14—TYPICAL INSTALLATION OF CS, CMST, AND CMSTC16 TIE STRAP

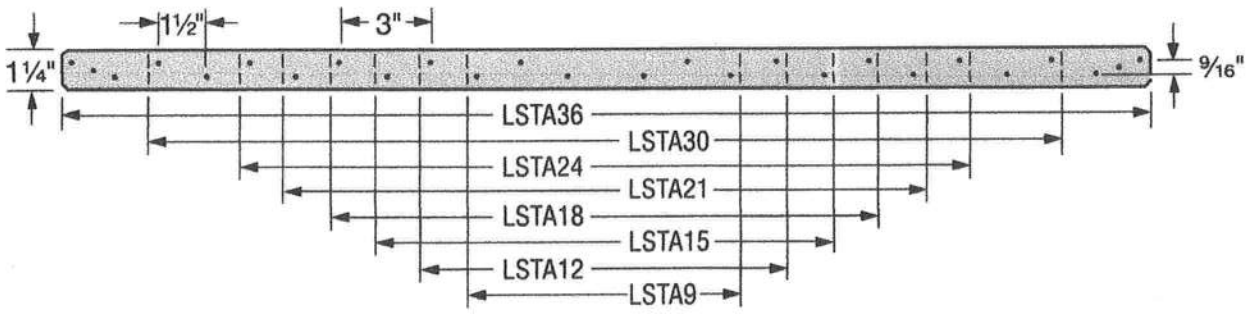


FIGURE 7—LSTA SERIES (MSTA SERIES SIMILAR) TIE STRAP

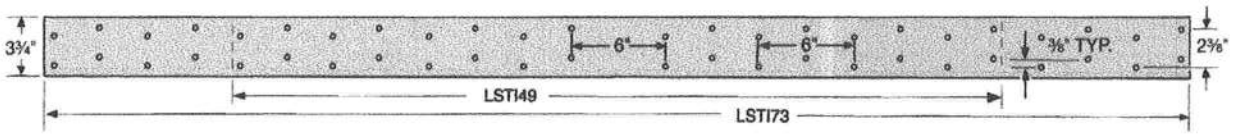


FIGURE 8—LSTI SERIES TIE STRAP

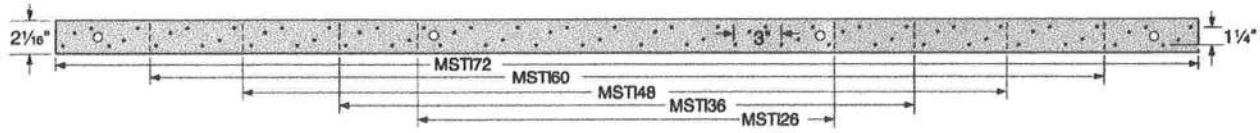


FIGURE 9—MSTI SERIES TIE STRAP

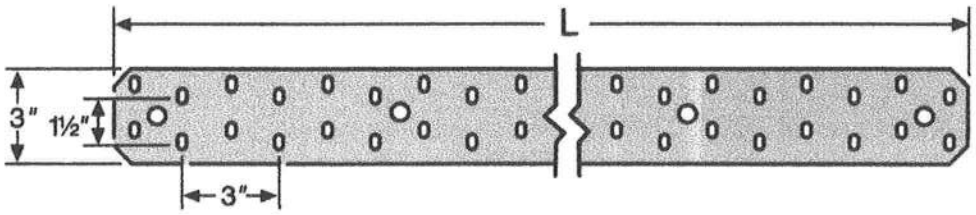


FIGURE 10—MSTC SERIES TIE STRAP

TABLE 3—ALLOWABLE TENSION LOADS FOR THE LSTA, MSTA, LSTI, AND MSTI SERIES TIE STRAPS

MODEL SERIES	MODEL NO.	TIE STRAP PROPERTIES				NAILS[1] (Total Quantity–Size)	ALLOWABLE TENSION LOADS[2,3,4] (lbs.)
		Thickness (Gage No.)	Length (inches)	Min. F_y (ksi)	Min. F_u (ksi)		C_D = 1.6
LSTA	LSTA9	20	9	50	65	8–10d common	740
	LSTA12	20	12	50	65	10–10d common	925
	LSTA15	20	15	50	65	12–10d common	1,110
	LSTA18	20	18	50	65	14–10d common	1,235[5]
	LSTA21	20	21	50	65	16–10d common	1,235[5]
	LSTA24	20	24	50	65	18–10d common	1,235[5]
	LSTA30	18	30	50	65	22–10d common	1,640[5]
	LSTA36	18	36	50	65	24–10d common	1,640[5]
MSTA	MSTA9	18	9	50	65	8–10d common	750
	MSTA12	18	12	50	65	10–10d common	940
	MSTA15	18	15	50	65	12–10d common	1,130
	MSTA18	18	18	50	65	14–10d common	1,315
	MSTA21	18	21	50	65	16–10d common	1,505
	MSTA24	18	24	50	65	18–10d common	1,640[5]
	MSTA30	16	30	50	65	22–10d common	2,050[5]
	MSTA36	16	36	50	65	26–10d common	2,050[5]
	MSTA49	16	49	50	65	26–10d common	2,020[5]
LSTI	LSTI49	18	49	40	55	32–10d×1$^1/_2$ common	2,975
	LSTI73	18	73	40	55	48–10d×1$^1/_2$ common	4,205[5]
MSTI	MSTI26	12	26	40	55	26–10d×1$^1/_2$ common	2,745
	MSTI36	12	36	40	55	36–10d×1$^1/_2$ common	3,800
	MSTI48	12	48	40	55	48–10d×1$^1/_2$ common	5,065
	MSTI60	12	60	40	55	60–10d×1$^1/_2$ common	5,080[5]
	MSTI72	12	72	40	55	72–10d×1$^1/_2$ common	5,080[5]
MSTC	MSTC28	16	28$^1/_4$	50	65	36–16d sinker	3,455
	MSTC40	16	40$^1/_4$	50	65	52–16d sinker	4,745[5]
	MSTC52	16	52$^1/_4$	50	65	62–16d sinker	4,745[5]
	MSTC66	14	65$^3/_4$	50	65	76–16d sinker	5,860[5]
	MSTC78	14	77$^3/_4$	50	65	76–16d sinker	5,860[5]

For **SI**: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

[1]Total fasteners are the minimum number of nails required to achieve the tabulated allowable loads. One half of the total must be installed in each wood member forming the connection. Fasteners must comply with Section 3.3.3 of this report.

[2]Allowable tension loads are based on the steel straps connected to wood members having an assigned or equivalent minimum specific gravity of 0.50.

[3]Allowable tension loads are the lesser of the tie strap steel strength or the connection strength.

[4]Tabulated allowable tension loads are governed by connection strength, unless noted otherwise. Connection strength is derived by multiplying the number of nails by the minimum value from the yield mode equations in Section 11.3.1 from the NDS-05, where the side member (i.e., the steel tie strap) dowel bearing strength, $F_{e,s}$, is equal to $2.2F_y/C_D$, where the load duration factor, C_D, equals 1.6 as shown in the table, and where the minimum specified tensile strength, F_u of the steel strap is as shown in the table. The tabulated allowable tension loads governed by connection strength have been multiplied by the load duration factor, C_D, noted in the table.

[5]The tabulated allowable tension load is governed by steel strength, and does not include a one-third stress increase or the load duration factor, C_D. The steel strength is the lesser of yielding at the gross section of the strap, the fracture in the net section away from the connection, or fracture at the connection in accordance with Section C2 of AISI-NAS–01 (North American Specification for the Design of Cold-formed Steel Structural Members, including the 2004 Supplement).

TABLE 2—ALLOWABLE TENSION LOADS FOR THE HST AND MST SERIES TIE STRAPS

MODEL SERIES	MODEL NO.	TIE STRAP PROPERTIES				FASTENERS[1] (Quantity–Size)		ALLOWABLE TENSION LOADS[2,3,4,5] (lbs.) C_D = 1.6			
		Thick. (Gage No.)	Length (in.)	Min. F_y (ksi)	Min. F_u (ksi)	Nails	Bolts	Nails	Bolts Wood Member Thickness (in.) 3	3½	5½
HST	HST2	7	21¼	40	55	—	6–⅝"	—	5,280	5,260	5,220
	HST5	7	21¼	40	55	—	12–⅝"	—	10,560	10,605	10,650
	HST3	3	25½	33	52	—	6–¾"	—	6,875	7,740	7,680
	HST6	3	25½	33	52	—	12–¾"	—	13,545	15,240	15,475
MST	MST27	12	27	40	55	30–16d	4–½"	3,705	2,175	2,170	2,165
	MST37	12	37½	40	55	42–16d	6–½"	5,080	3,075	3,060	3,030
	MST48	12	48	42	56	50–16d	8–½"	5,310[6]	3,695[6]	3,695[6]	3,675
	MST60	10	60	42	56	68–16d	10–½"	6,730[6]	4,665	4,605	4,490
	MST72	10	72	42	56	68–16d	10–½"	6,730[6]	4,665	4,605	4,490

For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.45 N.

[1]Quantity of fasteners is the total number of common nails or bolts, but not both, required to achieve the tabulated allowable loads. One half of the tabulated quantity must be installed in each wood member forming the connection. Fasteners must comply with Section 3.3.3 of this report.

[2]Allowable tension loads for nailed and bolted connections are not cumulative.

[3]Allowable tension loads are based on the steel straps connected to wood members having an assigned or equivalent minimum specific gravity of 0.50.

[4]Allowable tension loads are the lesser of the tie strap steel strength or the connection strength.

[5]Tabulated allowable tension loads are governed by connection strength, unless noted otherwise. Connection strength is derived by multiplying the number of fasteners by the minimum value from the yield mode equations in Section 11.3.1 from the NDS-05, where the dowel bearing strength, $F_{e\parallel}$, of the side member (i.e., the steel tie strap) is equal to $2.2F_u/C_D$ for nailed and bolted connections, where the load duration factor, C_D, equals 1.6 as shown in the table, and where the minimum specified tensile strength, F_u of the steel strap is as shown in the table. For bolted connections, the tabulated allowable tension loads include the load duration factor, C_D, noted in the table, and the applicable group action factor, C_g.

[6]The tabulated allowable tension load is governed by steel strength, and does not include a one-third stress increase or the load duration factor, C_D. The steel strength is the lesser of yielding at the gross section of the strap, the fracture in the net section away from the connection, or fracture at the connection in accordance with Section C2 of AISI-NAS–01 (North American Specification for the Design of Cold-formed Steel Structural Members, including the 2004 Supplement).

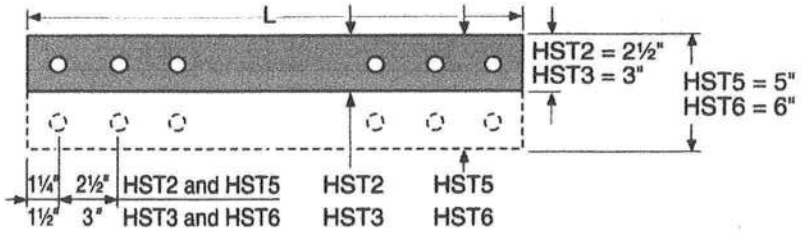


FIGURE 5—HST SERIES TIE STRAP

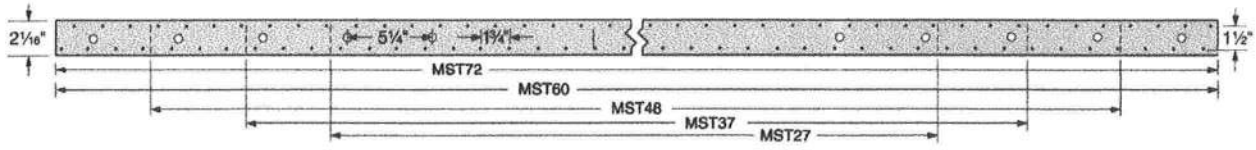


FIGURE 6—MST SERIES TIE STRAP

TABLE 1—ALLOWABLE TENSION LOADS FOR THE ST AND FHA SERIES TIE STRAPS

MODEL SERIES	MODEL NO.	TIE STRAP PROPERTIES				COMMON NAILS[1] (Total Quantity–Size)	ALLOWABLE TENSION LOADS[2,3,4] (lbs.)
		Thickness (Gage No.)	Length (inches)	Minimum F_y (ksi)	Minimum F_u (ksi)		C_D = 1.6
FHA	FHA6	12	$6^{3}/_{8}$	33	45	8–16d	945
	FHA9	12	9	33	45	8–16d	945
	FHA12	12	$11^{5}/_{8}$	33	45	8–16d	945
	FHA18	12	$17^{3}/_{4}$	33	45	8–16d	945
	FHA24	12	$23^{7}/_{8}$	33	45	8–16d	945
	FHA30	12	30	33	45	8–16d	945
ST	ST292	20	$9^{5}/_{16}$	33	45	12–16d	1,265[5]
	ST2122	20	$12^{13}/_{16}$	40	55	16–16d	1,530[5]
	ST2115	20	$16^{5}/_{16}$	50	65	10–16d	660[5]
	ST2215	20	$16^{5}/_{16}$	50	65	20–16d	1,875[5]
	ST6215	16	$16^{5}/_{16}$	33	45	20–16d	2,095[5]
	ST6224	16	$23^{5}/_{16}$	40	55	28–16d	2,540[5]
	ST6236	14	$33^{13}/_{16}$	50	65	40–16d	3,845[5]
	ST9	16	9	33	45	8–16d	885
	ST12	16	$11^{5}/_{8}$	33	45	10–16d	1,105
	ST18	16	$17^{3}/_{4}$	33	45	14–16d	1,420[5]
	ST22	16	$21^{5}/_{8}$	33	45	18–16d	1,420[5]

For **SI**: 1 inch = 25.4 mm, 1 lbf = 4.45 N.

[1]Quantity of fasteners is the minimum number of common nails required to achieve the tabulated allowable loads. One half of the tabulated quantity must be installed in each wood member forming the connection. Fasteners must comply with Section 3.3.3 of this report.
[2]Allowable tension loads are based on the steel straps connected to wood members having an assigned or equivalent minimum specific gravity of 0.50.
[3]Allowable tension loads are the lesser of the tie strap steel strength or the connection strength.
[4]Tabulated allowable tension loads are governed by connection strength, unless noted otherwise. Connection strength is derived by multiplying the number of nails by the minimum value from the yield mode equations in Section 11.3.1 from the NDS-05, where the side member (i.e., the steel tie strap) dowel bearing strength, F_{es}, is equal to $2.2F_u/C_D$, where C_D equals 1.6 as shown in the table, and where F_u equals the minimum specified tensile strength value of the steel shown in the table. The tabulated allowable tension loads governed by connection strength have been multiplied by the load duration factor, C_D, noted in the table, and are not permitted to be adjusted for other load durations.
[5]The tabulated allowable tension load is governed by steel strength, and does not include a one-third stress increase or the load duration factor, C_D. The steel strength is the lesser of yielding at the gross section of the strap, the fracture in the net section away from the connection, or fracture at the connection in accordance with Section C2 of AISI-NAS–01 (North American Specification for the Design of Cold-formed Steel Structural Members, including the 2004 Supplement).

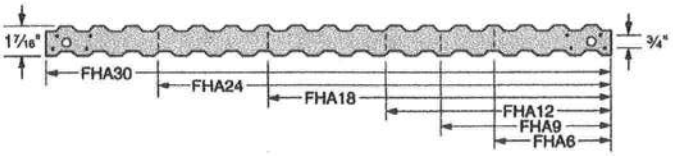


FIGURE 1—FHA SERIES TIE STRAPS

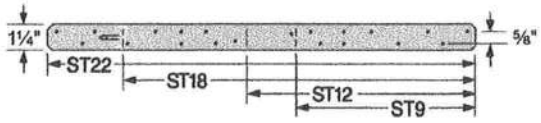


FIGURE 2—ST SERIES TIE STRAPS

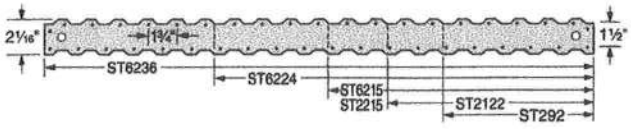


FIGURE 3—ST SERIES TIE STRAPS

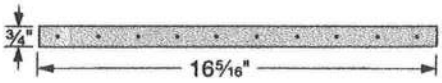


FIGURE 4—ST2115 TIE STRAP

4.0 DESIGN AND INSTALLATION

4.1 Design:

Tabulated allowable tension loads in this evaluation report are based on allowable stress design and are the lesser of the tie strap steel strength or the connection strength. When connection strength governs, the tabulated allowable loads include the load duration factor, C_D, corresponding to design wind and seismic loads in accordance with the NDS.

Tabulated allowable loads are for tie straps connected to wood used under continuously dry interior conditions, and where sustained temperatures are 100°F (37.8°C) or less.

When tie straps are fastened to wood having a moisture content greater than 19 percent (16 percent for engineered wood products), or where wet service is expected, the allowable tension loads based on fastener lateral design values in this evaluation report must be adjusted by the wet service factor, C_M, specified in the NDS.

When tie straps are connected to wood that will experience sustained exposure to temperatures exceeding 100°F (37.7°C), the allowable loads in this evaluation report must be adjusted by the temperature factor, C_t, specified in the NDS.

Connected wood members must be analyzed for load-carrying capacity at the tie strap connection in accordance with the NDS.

4.2 Installation:

Installation of the tie straps must be in accordance with this evaluation report and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

5.0 CONDITIONS OF USE

The Simpson Strong-Tie Straight and Coiled Tie Straps described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The tie straps must be manufactured, identified, and installed in accordance with this report and the manufacturer's published installation instructions. A copy of the instructions must be available at the jobsite at all times during installation.

5.2 Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by a registered design professional where required by the statues of the jurisdiction in which the project is to be constructed.

5.3 Adjustment factors noted in Section 4.1 of this report and the applicable codes must be considered, where applicable.

5.4 Connected wood members and fasteners must comply, respectively, with Sections 3.3.2 and 3.3.3 of this report.

5.5 Use of tie straps with preservative-treated and fire-retardant-treated lumber is outside the scope of this report. Use of fasteners with treated lumber must comply with Section 3.3.3 of this report.

6.0 EVIDENCE SUBMITTED

6.1 Structural calculations.

6.2 Quality documentation.

7.0 IDENTIFICATION

Each tie strap described in this report is identified with a die-stamped label indicating the name of the manufacturer (Simpson Strong-Tie), the model number, and the number of an index evaluation report (ESR-2523) which contains a summary of all the product model numbers in the ICC-ES evaluation reports issued to this manufacturer.

between staggered holes is $^1/_2$ inch (12.7 mm). Both ends of every strap (except for the MSTA49) has one nail hole located between the last two staggered holes. See Figure 7 for a drawing of the LSTA and MSTA Series tie straps. See Table 3 for strap dimensions, fastener schedules, and allowable tension loads.

3.1.6 LSTI Series: The LSTI Series tie straps are either 49 or 73 inches (1244 or 1854 mm) long and $3^3/_4$ inches (95.3 mm) wide. Each strap has two rows of staggered $^5/_{32}$-inch-diameter (4.0 mm) prepunched nail holes. Longitudinal spacing (pitch) of consecutive holes in a row is 3 inches (76 mm), and the transverse distance (gage) between staggered holes in a row is $^3/_8$ inch (9.5 mm). See Figure 8 for a drawing of the LSTI Series tie straps. See Table 3 for strap dimensions, fastener schedules, and allowable tension loads.

3.1.7 MSTI Series: The MSTI Series tie straps are $2^1/_{16}$ inches (52.4 mm) wide and from 26 to 72 inches (660 to 1829 mm) long. Each strap has three rows of $^5/_{32}$-inch-diameter (4.0 mm) prepunched nail holes spaced 3 inches (76 mm) on center. The holes in adjacent rows are offset by 1 inch (25.4 mm), resulting in one nail hole per inch of strap. See Figure 9 for a drawing of the MSTI Series tie straps. See Table 3 for strap dimensions, fastener schedules, and allowable tension loads.

3.1.8 MSTC Series: The MSTC Series tie straps are $28^1/_4$ to $77^3/_4$ inches (718 to 1975 mm) long and 3 inches (76.2 mm) wide. The straps have two rows of staggered prepunched holes spaced $1^1/_2$ inches (38.1 mm), measured from center-to-center of holes. On the nail head side of the strap, the holes are oblong and measure $^{13}/_{64}$ inch wide by $^9/_{32}$ inch long (5.1 mm by 7.1 mm), and are chamfered at 120 degrees. On the wood side of the strap, the holes are $^{11}/_{64}$ inch wide by $^1/_4$ inch long (4.4 mm by 6.4 mm). The long direction of the nail holes is perpendicular to the length of the strap. See Figure 10 for a drawing of the MSTC Series tie straps. See Table 3 for strap dimensions, fastener schedules, and allowable tension loads.

3.2 Coiled Tie Straps:

The CS Series, CMST Series, and CMSTC16 tie straps are supplied in coils and are cut to a specified length at the jobsite for engineered applications where the connected wood members are not abutting each other.

3.2.1 CS Series: The CS14, CS16, CS18, CS20, and CS22 straps are supplied as 100-, 150-, 200-, 250-, and 300-foot-long (30.5, 45.7, 61.0, 76.2, and 91.4 m) coils, respectively. The coiled steel is $1^1/_4$ inches (32 mm) wide and has two rows of prepunched, $^5/_{32}$-inch-diameter (4.0 mm) holes. The longitudinal spacing of the holes in each row is $2^1/_{16}$ inches (52.4 mm). See Figure 11 for a drawing of the CS Series tie straps and Figure 14 for a typical installation. See Table 4 for strap dimensions, fastener schedules, and allowable tension loads.

3.2.2 CMST Series: The CMST12 strap is supplied as a 40-foot-long (12.19 m) coil, and the CMST14 strap is supplied as a $52^1/_2$-foot-long (16.0 m) coil. The coiled steel is 3 inches (76 mm) wide and has two rows of prepunched round holes with $^{11}/_{64}$-inch (4.3 mm) diameters, and two rows of equilateral triangular holes sized to circumscribe an $^{11}/_{64}$-inch-diameter (4.3 mm) hole. The longitudinal spacing of the round and triangular holes in each row is 3.5 inches (88.9 mm). See Figure 12 for a drawing of the CMST14 tie strap, and Figure 13 for a typical installation. See Table 4 for strap dimensions, fastener schedules, and allowable tension loads.

3.2.3 CMSTC16: The CMSTC16 strap is supplied as a 54-foot-long (16.46 m) coil. The width of the coiled steel is 3 inches (76.2 mm). The strap has two rows of staggered prepunched holes spaced $1^1/_2$ inches (38.1 mm), measured from center-to-center of holes. On the nail head side of the strap, the holes are oblong and measure $^1/_4$ inch wide by $^{21}/_{64}$ inch long (6.4 mm by 8.3 mm), and are chamfered at 120 degrees. On the wood side of the strap, the holes are $^{11}/_{64}$ inch wide by $^1/_4$ inch long (4.4 mm by 6.4 mm). See Figure 13 for a drawing of the CMSTC16 tie strap and Figure 13 for a typical installation. See Table 4 for strap dimensions, fastener schedules, and allowable tension loads.

3.3 Materials:

3.3.1 Steel: The tie straps described in this report are manufactured from galvanized steel complying with ASTM A 653, SS designation, and minimum G90 zinc coating specifications, except for the HST3 and HST6 tie straps, which are manufactured from galvanized steel complying with ASTM A 1011. Refer to the tables in this report for the minimum specified yield and tensile strengths, F_y and F_u, respectively, of the steel for each strap described in this report. Some models are available with a G185 continuous sheet galvanization in accordance with ASTM A 653. The model numbers of tie straps with a G185 zinc coating are followed by the letter Z. Some models are available with a batch hot-dip galvanized coating with a minimum specified coating weight of 2.0 ounces of zinc per square foot of surface area (600 g/m^2), total for both sides, in accordance with ASTM A 123. The model numbers of tie straps with a batch hot-dipped zinc coating are followed by the letters HDG.

The galvanized steel tie straps have the following minimum base-metal thicknesses:

GAGE	BASE-METAL THICKNESS (inch)
No. 3	0.2285
No. 7	0.1715
No. 10	0.1275
No. 12	0.0975
No. 14	0.0685
No. 16	0.0555
No. 18	0.0445
No. 20	0.0334

3.3.2 Wood: Wood members with which the tie straps are used must be either sawn lumber or engineered lumber having a minimum specific gravity of 0.50 (minimum equivalent specific gravity of 0.50 for engineered lumber), and having a maximum moisture content of 19 percent (16 percent for engineered lumber). The thickness (depth) of the wood main member must be equal to or greater than the length of the fasteners specified in the tables in this report, unless the reduced penetration effect on the load calculation per the applicable National Design Specification for Wood Construction and its Supplement (NDS) is taken into account, or as required by wood member design, whichever is greater.

3.3.3 Fasteners: Nails must comply with ASTM F 1667 and have minimum bending yield strength, F_{yb}, of 90,000 psi (620.1 MPa). Bolts used with the MST and HST Series tie straps must as a minimum comply with ASTM A 36 or A 307 and have a minimum bending yield strength of 45,000 psi (310.1 MPa).

Fasteners used in contact with preservative-treated or fire-retardant-treated lumber must, as a minimum, comply with IBC Section 2304.9.5 or IRC Section R319.3, as applicable. The lumber treater or report holder should be contacted for recommendations on minimum corrosion resistance and connection capacities of fasteners used with the specific proprietary preservative-treated or fire-retardant-treated lumber.

ESR-2105
Reissued January 1, 2009
This report is subject to re-examination in two years.

ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office ■ 5360 Workman Mill Road, Whittier, California 90601 ■ (562) 699-0543
Regional Office ■ 900 Montclair Road, Suite A, Birmingham, Alabama 35213 ■ (205) 599-9800
Regional Office ■ 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 ■ (708) 799-2305

DIVISION: 06—WOOD AND PLASTICS
Section: 06090—Wood and Plastic Fastenings

REPORT HOLDER:

SIMPSON STRONG-TIE COMPANY, INC.
5956 WEST LAS POSITAS BOULEVARD
PLEASANTON, CALIFORNIA 94588
(800) 925-5099
www.strongtie.com

EVALUATION SUBJECT:

SIMPSON TIE STRAPS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2006 *International Building Code®* (IBC)
- 2006 *International Residential Code®* (IRC)

Property evaluated:

Structural

2.0 USES

The Simpson Strong-Tie FHA, HST, LSTA, LSTI, MST, MSTA, MSTC, MSTI, and ST Series Straight Tie Straps; and CMST and CS Series Coiled Tie Straps; and the CMSTC16 Coiled Tie Strap are used to transfer between wood members wind or seismic loads resulting from the critical load combination in accordance with Section 1605.3 of the IBC where allowable stress equations are used. The straps may also be used in structures regulated by the IRC where an engineered design is submitted in accordance with IRC Section R301.1.3.

3.0 DESCRIPTION

3.1 Straight Tie Straps:

The FHA, HST, LSTA, LSTI, MST,MSTA, MSTC, MSTI, and ST Series straight tie straps are supplied in manufacturer-designated lengths with prepunched holes for nails or bolts.

3.1.1 FHA Series: The FHA Series tie straps are $6^{3}/_{8}$ to 30 inches (162 to 762 mm) long, and have a constant width of $1^{3}/_{16}$ inches (30.2 mm). The total strap width between longitudinal edges is $1^{7}/_{16}$ inches (36.5 mm). The longitudinal edges of the tie straps have $^{1}/_{4}$-inch-deep (6.4 mm) notches that are spaced 2 inches (51 mm) on center. Each end of an FHA strap has four $^{11}/_{64}$-inch-diameter (4.3 mm) prepunched nail holes. See Figure 1 for a drawing of the FHA Series tie straps. See Table 1 for strap dimensions, fastener schedules, and allowable tension loads.

3.1.2 ST Series: The ST9, ST12, ST18, and ST 22 straps are 9 to $21^{5}/_{8}$ inches (229 to 549 mm) long and $1^{1}/_{4}$ inches (31.8 mm) wide. Each strap has unevenly spaced $^{11}/_{64}$-inch-diameter (4.3 mm) prepunched nail holes. One end of each strap has a "speed prong" which is formed from the steel strap. See Figure 2 for a drawing of the ST9, ST12, ST18, and ST 22 tie straps.

The ST292, ST2122, ST2215, ST6215, ST6224, and ST6236 straps are $9^{5}/_{16}$ to $33^{13}/_{16}$ inches (236.5 to 858.8 mm) long, and have a constant width of $1^{13}/_{16}$ inches (46 mm). The total strap width between longitudinal edges is $2^{1}/_{16}$ inches (52.4 mm). Notches are $^{9}/_{32}$ inch (7.1 mm) deep and are spaced $1^{3}/_{4}$ inches (44.5 mm) on center. Each longitudinal edge of an ST strap has a row of $^{11}/_{64}$-inch-diameter (4.3 mm) prepunched nail holes, spaced $1^{3}/_{4}$ inches (44.5 mm) on center. See Figure 3 for a drawing of the ST292, ST2122, ST2215, ST6215, ST6224, and ST6236 tie straps.

The ST2115 strap is $16^{5}/_{16}$ inches (414.3 mm) long and $^{3}/_{4}$ inch (19.1 mm) wide, and has one row of $^{11}/_{64}$-inch-diameter (4.3 mm), prepunched nail holes, spaced $1^{5}/_{8}$ inches (41.3 mm) on center. See Figure 4 for a drawing of the ST2115 tie strap.

See Table 1 for ST Series tie strap dimensions, fastener schedules, and allowable tension loads.

3.1.3 HST Series: The HST Series tie straps are either $21^{1}/_{4}$ or $25^{1}/_{2}$ inches (540 or 648 mm) long and from $2^{1}/_{2}$ to 6 inches (63.5 to 152 mm) wide. Each end of an HST strap has either three or six prepunched holes to accommodate $^{5}/_{8}$-inch- or $^{3}/_{4}$-inch-diameter (15.9 and 19.1 mm) bolts. The spacing and the location of the bolt holes in the strap length comply with the code-required bolt spacing and end distances. See Figure 5 for a drawing of the HST Series tie straps. See Table 2 for strap dimensions, fastener schedules, and allowable tension loads.

3.1.4 MST Series: The MST Series tie straps are 27 to 72 inches (686 to 1829 mm) long and $2^{1}/_{16}$ inches (52.4 mm) wide. Each strap has two rows of $^{11}/_{64}$-inch-diameter (4.3 mm) prepunched nail holes spaced $1^{3}/_{4}$ inches (43.7 mm) on center. Additionally, the straps have $^{5}/_{8}$-inch-diameter (15.9 mm) prepunched bolt holes spaced $5^{1}/_{4}$ inches (133.4 mm) on center. See Figure 6 for a drawing of the MST Series tie straps. See Table 2 for strap dimensions, fastener schedules, and allowable tension loads.

3.1.5 LSTA and MSTA Series: The LSTA and MSTA Series tie straps are 9 to 49 inches (229 to 1245 mm) long and $1^{1}/_{4}$ inches (32 mm) wide. Each strap has one row of staggered $^{11}/_{64}$-inch-diameter (4.3 mm) prepunched nail holes. The MSTA49 has $^{5}/_{32}$-inch-diameter (4.0 mm) prepunched nail holes. Longitudinal spacing (pitch) of consecutive holes is $1^{1}/_{2}$ inches (38 mm), and the transverse distance (gage) between staggered holes is $^{9}/_{16}$ inch (14.3 mm). For the MSTA49, the longitudinal spacing (pitch) of consecutive holes is $1^{17}/_{32}$ inches (38.9 mm), and the transverse distance (gage)

MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Tamko Building Products, Inc.
P.O. Box 1404
Joplin, MO 64802

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: TAMKO Glass-Seal AR, Elite Glass-Seal and Elite Glass-Seal AR Roof Shingles

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This renews NOA# 05-0912.09 and consists of pages 1 through 5.
The submitted documentation was reviewed by Alex Tigera.

ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	07310 3-Tab Shingles
Materials	Asphalt
Deck Type:	Wood

1. SCOPE:

This renews a roofing system using **Tamko Glass-Seal AR, Elite Glass-Seal and Elite Glass-Seal AR** Asphalt Shingles, manufactured by **Tamko Building Products, Inc.** as described in this Notice of Acceptance.

2. PRODUCT DESCRIPTION

Product	Dimensions	Test Specifications	Product Description
Glass-Seal AR, Elite Glass-Seal	12" x 36"	TAS 110	A heavy weight, 200lb/sq, 3-Tab asphalt shingle.
Elite Glass-Seal AR (Tuscaloosa, AL)	12" x 36"	TAS 110	A heavy weight, 220lb/sq, 3-Tab asphalt shingle.
Elite Glass-Seal AR (Frederick, MO)	12-1/4" x 36"	TAS 110	A heavy weight, 220lb/sq, 3-Tab asphalt shingle.

3. EVIDENCE SUBMITTED

Test Agency	Test Identifier	Test Name/Report	Date
Underwriters Laboratories Inc.	TAS-107	02NK9507	03/06/02
		01NK40917	12/04/01
PRI Asphalt Technologies	TAS-100	TAP-050-02-01	12/31/01
		TAP-051-02-01	12/31/01
		TAP-114-02-01	11/10/04
Underwriters Laboratories Inc.	ASTM D3462	04NK24366	11/05/04
		R2919 (Letter)	02/25/02

4. LIMITATIONS

4.1 Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.

4.2 Shall not be installed on roof mean heights in excess of 33 ft.

5. INSTALLATION

5.1 Shingles shall be installed in accordance with Roofing Application Standard RAS 115.

5.2 The manufacturer shall provide clearly written application instructions.

5.3 Exposure and course layout shall be in compliance with Detail 'A', attached.

5.4 Nailing shall be in compliance with Detail 'B', attached.

6. LABELING

6.1 Shingles shall be labeled with the Miami-Dade Logo or the wording "Miami-Dade County-Product Control Approved".

7. BUILDING PERMIT REQUIREMENTS

7.1 Application for building permit shall be accompanied by copies of the following:

7.1.1 This Notice of Acceptance.

7.1.2 Any other documents required by the Building Official or the applicable Building Code in order to properly evaluate the installation of this system.

8. MANUFACTURING PLANTS

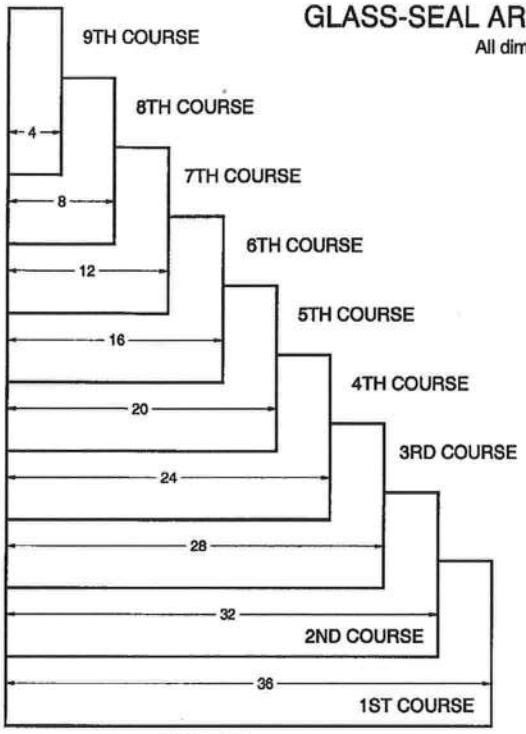
8.1 **Tuscaloosa Plant**
2300 35th St.
Tuscaloosa, AL.

8.2 **Frederick Plant (Elite Glass Seal AR shingle ONLY)**
4500 Tamko Dr.
Frederick, MD.

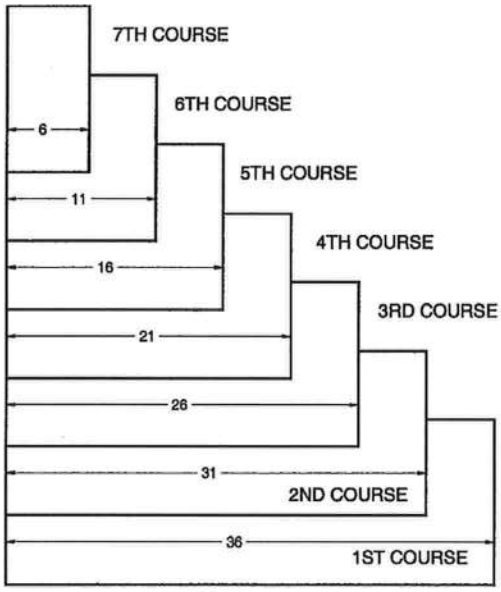
DETAIL A

GLASS-SEAL AR & ELITE GLASS-SEAL AR

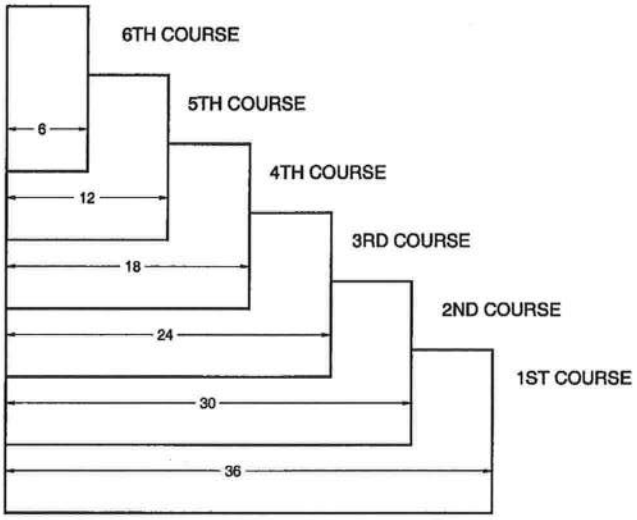
All dimensions are in inches.



4" METHOD

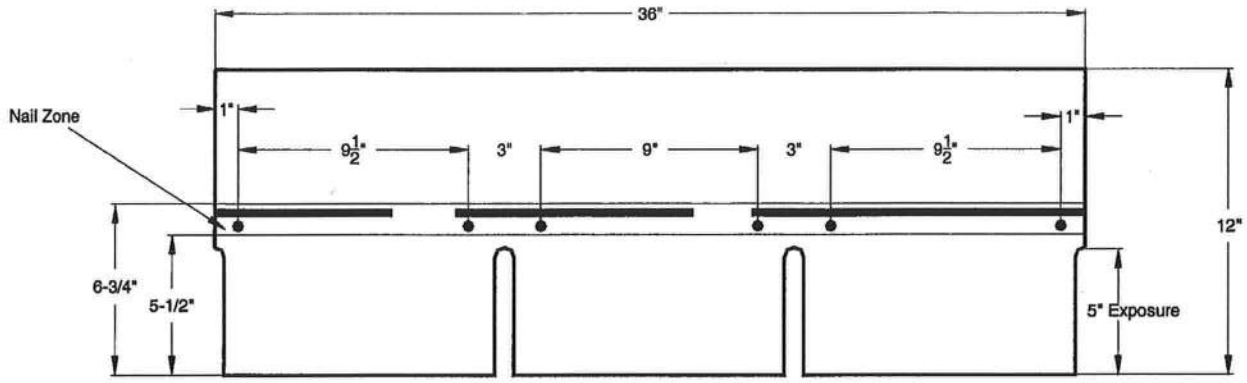


5" METHOD

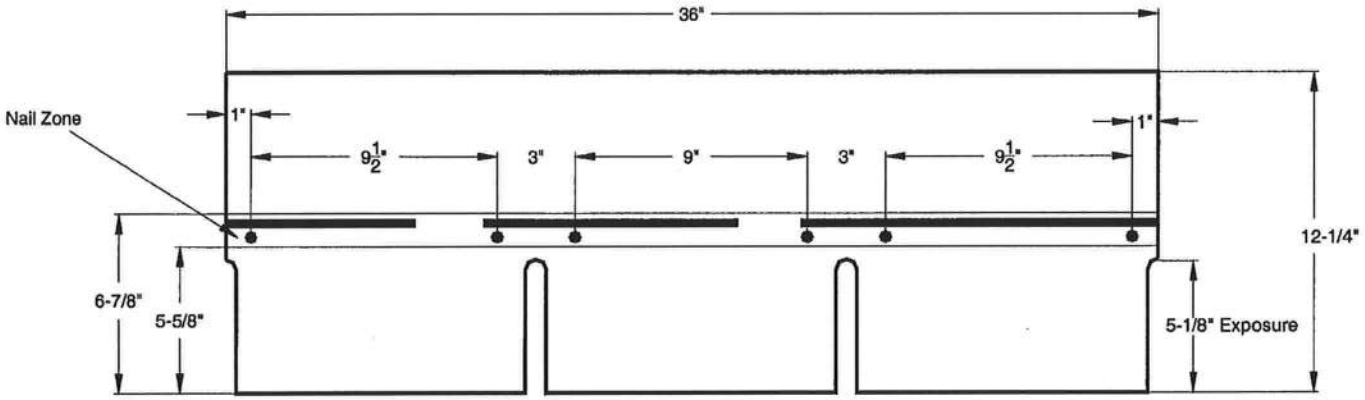


6" METHOD

DETAIL B



GLASS-SEAL AR, ELITE GLASS-SEAL &
ELITE GLASS SEAL AR (TUSCALOOSA)



ELITE GLASS SEAL AR (FREDERICK)

END OF THIS ACCEPTANCE

0908-05

COLUMBIA COUNTY BUILDING DEPARTMENT
RESIDENTIAL CHECK LIST REQUIRMENTS

MINIMUM PLAN REQUIREMENTS FOR THE FLORIDA BUILDING CODE RESIDENTIAL 2007 ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE

ALL BUILDING PLANS MUST INDICATE COMPLIANCE with the Current 2007 FLORIDA BUILDING CODES RESIDENTIAL. ALL PLANS OR DRAWINGS SHALL PROVIDE CALCULATIONS AND DETAILS THAT HAVE THE SEAL AND SIGNATURE OF A CERTIFIED ARCHITECT OR ENGINEER REGISTERED IN THE STATE OF FLORIDA, OR ALTERNATE METHODOLOGIES, APPROVED BY THE STATE OF FLORIDA BUILDING COMMISSION FOR ONE-AND-TWO FAMILY DWELLINGS.

FOR DESIGN PURPOSES THE FOLLOWING BASIC WIND SPEEDS ARE PER FIGURE R301.2(4) of the FLORIDA BUILDING CODES RESIDENTIAL (Florida Wind speed map) **SHALL BE USED.**

WIND SPEED LINE SHALL BE DEFINED AS FOLLOWS: THE CENTERLINE OF INTERSTATE 75.

ALL BUILDINGS CONSTRUCTED EAST OF SAID LINE SHALL BE -------- 100 MPH
ALL BUILDINGS CONSTRUCTED WEST OF SAID LINE SHALL BE --------110 MPH
NO AREA IN COLUMBIA COUNTY IS IN A WIND BORNE DEBRIS REGION

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL			Items to Include- Each Box shall be Circled as Applicable		
				Yes	No	N/A
1	Two (2) complete sets of plans containing the following:					
2	All drawings must be clear, concise, drawn to scale, details that are not used shall be marked void					
3	Condition space (Sq. Ft.) 3621		Total (Sq. Ft.) under roof 5423	IIIIIII	IIIIIII	IIIII

Designers name and signature shall be on all documents and a licensed architect or engineer, signature and official embossed seal shall be affixed to the plans and documents as per the FLORIDA BUILDING CODES RESIDENTIAL R101.2.1

Site Plan information including:

4	Dimensions of lot or parcel of land	X		
5	Dimensions of all building set backs	X		
6	Location of all other structures (include square footage of structures) on parcel, existing or proposed well and septic tank and all utility easements.	X		
7	Provide a full legal description of property.	X		

Wind-load Engineering Summary, calculations and any details required

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable		
8	Plans or specifications must show compliance with FBCR Chapter 3	IIIIII YES	IIIII NO	IIIIII N/A
9	Basic wind speed (3-second gust), miles per hour	X		
10	(Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated)			X
11	Wind importance factor and nature of occupancy	X		
12	The applicable internal pressure coefficient, Components and Cladding	X		
13	The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component, cladding materials not specifally designed by the registered design professional.	X		

Elevations Drawing including:

14	All side views of the structure	X		
15	Roof pitch	X		
16	Overhang dimensions and detail with attic ventilation	X		
17	Location, size and height above roof of chimneys			X
18	Location and size of skylights with Florida Product Approval			X
18	Number of stories	X		
20A	Building height from the established grade to the roofs highest peak			

Floor Plan including:

20	Dimensioned area plan showing rooms, attached garage, breeze ways, covered porches, deck, balconies	X		
21	Raised floor surfaces located more than 30 inches above the floor or grade			X
22	All exterior and interior shear walls indicated	X		
23	Shear wall opening shown (Windows, Doors and Garage doors)	X		
24	Emergency escape and rescue opening shown in each bedroom (net clear opening shown)		X	
25	Safety glazing of glass where needed	X		
26	Fireplaces types (gas appliance) (vented or non-vented) or wood burning with Hearth (see chapter 10 of FBCR)			X
27	Stairs with dimensions (width, tread and riser and total run) details of guardrails, Handrails (see FBCR SECTION 311)	X		
28	Identify accessibility of bathroom (see FBCR SECTION 322)	X		

All materials placed within opening or onto/into exterior walls, soffits or roofs shall have Florida product approval number and mfg. installation information submitted with the pla (see Florida product approval form)

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

FBCR 403: Foundation Plans

		YES	NO	N/A
29	Location of all load-bearing walls footings indicated as standard, monolithic, dimensions, size and type of reinforcing.	X		
30	All posts and/or column footing including size and reinforcing	X		
31	Any special support required by soil analysis such as piling.			X
32	Assumed load-bearing valve of soil 2,500 Pound Per Square Foot	X		
33	Location of horizontal and vertical steel, for foundation or walls (include # size and type)	X		

FBCR 506: CONCRETE SLAB ON GRADE

34	Show Vapor retarder (6mil. Polyethylene with joints lapped 6 inches and sealed)	X		
35	Show control joints, synthetic fiber reinforcement or welded fire fabric reinforcement and Supports			X

FBCR 320: PROTECTION AGAINST TERMITES

36	Indicate on the foundation plan if soil treatment is used for subterranean termite prevention or submit other approved termite protection methods. **Protection shall be provided by registered termiticides**	X		

FBCR 606: Masonry Walls and Stem walls (load bearing & shear Walls)

37	Show all materials making up walls, wall height, and Block size, mortar type			X
38	Show all Lintel sizes, type, spans and tie-beam sizes and spacing of reinforcement			X

Metal frame shear wall and roof systems shall be designed, signed and sealed by Florida Prof. Engineer or Architect

Floor Framing System: First and/or second story

39	Floor truss package shall including layout and details, signed and sealed by Florida Registered Professional Engineer			X
40	Show conventional floor joist type, size, span, spacing and attachment to load bearing walls, stem walls and/or priers			X
41	Girder type, size and spacing to load bearing walls, stem wall and/or priers			X
42	Attachment of joist to girder			X
43	Wind load requirements where applicable	X		X
44	Show required under-floor crawl space			X
45	Show required amount of ventilation opening for under-floor spaces			X
46	Show required covering of ventilation opening			X
47	Show the required access opening to access to under-floor spaces			X
	Show the sub-floor structural panel sheathing type, thickness and fastener schedule on the edges &			X

48	intermediate of the areas structural panel sheathing			X
49	Show Draftstopping. Fire caulking and Fire blocking			X
50	Show fireproofing requirements for garages attached to living spaces, per FBCR section 309			X
51	Provide live and dead load rating of floor framing systems (psf).			X

FBCR CHAPTER 6 WOOD WALL FRAMING CONSTRUCTION

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable YES	NO	N/A
52	Stud type, grade, size, wall height and oc spacing for all load bearing or shear walls	X		
53	Fastener schedule for structural members per table FBCR 602.3 are to be shown	X		
54	Show Wood structural panel's sheathing attachment to studs, joist, trusses, rafters and structural members, showing fastener schedule attachment on the edges & intermediate of the areas structural panel sheathing	X		
55	Show all required connectors with a max uplift rating and required number of connectors and oc spacing for continuous connection of structural walls to foundation and roof trusses or rafter systems	X		
56	Show sizes, type, span lengths and required number of support jack studs, king studs for shear wall opening and girder or header per FBCR Table 502.5 (1)	X		
57	Indicate where pressure treated wood will be placed	X		
58	Show all wall structural panel sheathing, grade, thickness and show fastener schedule for structural panel sheathing edges & intermediate areas	X		
59	A detail showing gable truss bracing, wall balloon framing details or/ and wall hinge bracing detail	X		

FBCR :ROOF SYSTEMS:

60	Truss design drawing shall meet section FBCR 802.10 Wood trusses	X		
61	Include a layout and truss details, signed and sealed by Florida Professional Engineer			
62	Show types of connector's assemblies' and resistance uplift rating for all trusses and rafters	X		
63	Show gable ends with rake beams showing reinforcement or gable truss and wall bracing details	X		
64	Provide dead load rating of trusses	X		

FBCR 802:Conventional Roof Framing Layout

65	Rafter and ridge beams sizes, span, species and spacing	X		
66	Connectors to wall assemblies' include assemblies' resistance to uplift rating	X		
67	Valley framing and support details	X		
68	Provide dead load rating of rafter system	X		

FBCR Table 602,3(2) & FBCR 803 ROOF SHEATHING

69	Include all materials which will make up the roof decking, identification of structural panel sheathing, grade, thickness	X		
70	Show fastener Size and schedule for structural panel sheathing on the edges & intermediate areas	X		

FBCR ROOF ASSEMBLIES FRC Chapter 9

71	Include all materials which will make up the roof assembles covering	X		
72	Submit Florida Product Approval numbers for each component of the roof assembles covering	X		

FBCR Chapter 11 Energy Efficiency Code for residential building

Residential construction shall comply with this code by using the following compliance methods in the FBCR chapter11 Residential buildings compliance methods. *Two of the required forms are to be submitted, showing dimensions condition area equal to the total condition living space area*

	GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable YES	NO	N/A
73	Show the insulation R value for the following areas of the structure	X		
74	Attic space	X		
75	Exterior wall cavity	X		
76	Crawl space			X

HVAC information

77	Submit two copies of a Manual J sizing equipment or equivalent computation study	X		
78	Exhaust fans locations in bathrooms	X		
79	Show clothes dryer route and total run of exhaust duct	X		

Plumbing Fixture layout shown

80	All fixtures waste water lines shall be shown on the foundation plan	X		
81	Show the location of water heater	X		

Private Potable Water

82	Pump motor horse power	X		
83	Reservoir pressure tank gallon capacity	X		
84	Rating of cycle stop valve if used	X		

Electrical layout shown including

85	Switches, outlets/receptacles, lighting and all required GFCI outlets identified	X		
86	Ceiling fans	X		
87	Smoke detectors & Carbon dioxide detectors	X		
88	Service panel, sub-panel, location(s) and total ampere ratings	X		
89	On the electrical plans identify the electrical service overcurrent protection device for the main electrical service. This device shall be installed on the exterior of structures to serve as a disconnecting means for the utility company electrical service. Conductors used from the exterior disconnecting means to a panel or sub panel shall have four-wire conductors, of which one conductor shall be used as an equipment ground. Indicate if the utility company service entrance cable will be of the overhead or underground type.	X		

90	Appliances and HVAC equipment and disconnects	X		
91	Arc Fault Circuits (AFCI) in bedrooms	X		

Disclosure Statement for Owner Builders *If you as the applicant will be acting as an owner builder under section 489.103(7) of the Florida Statutes, submit the required owner builder disclosure statement form.*

Notice Of Commencement

A notice of commencement form **recorded** in the Columbia County Clerk Office is required to be filed with the building department Before Any Inspections can be preformed.

GENERAL REQUIREMENTS: APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL	Items to Include- Each Box shall be Circled as Applicable

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

		YES	NO	N/A
92	**Building Permit Application** A current Building Permit Application form is to be completed and submitted for all residential projects	X		
93	**Parcel Number** The parcel number (Tax ID number) from the Property Appraiser (386) 758-1084 is required. A copy of property deed is also requested	X		
94	**Environmental Health Permit or Sewer Tap Approval** A copy of a approved Columbia County Environmental Health (386) 758-1058	X		
95	**City of Lake City** A permit showing an approved waste water sewer tap			X
96	**Toilet facilities shall be provided for all construction sites**	X		
97	**Town of Fort White** (386) 497-2321 If the parcel in the application for building permit is within the Corporate city limits of Fort White an approval land use development letter issued by the Town of Fort is required to be submitted with the application for a building permit.			X
98	**Flood Information:** All projects within the Floodway of the Suwannee or Santa Fe Rivers shall require permitting through the Suwannee River Water Management District, before submitting a application to this office. Any project located within a flood zone where the base flood elevation (100 year flood) has been established shall meet the requirements of Section 8.5.2 of the Columbia County Land Development Regulations. Any project located within a flood zone where the base flood elevation has not been established (Zone A) shall meet the requirements of Section 8.5.3 of the Columbia County Land Development Regulations			X
99	CERTIFIED FINISHED FLOOR ELEVATIONS will be required on any project where the base flood elevation (100 year flood) has been established			X
100	A development permit will also be required. Development permit cost is **$50.00**			
101	**Driveway Connection:** If the property does not have an existing access to a public road, then an application for a culvert permit (**$25.00**) must be made. If the applicant feels that a culvert is not needed, they may apply for a culvert waiver (**$50.00**). All culvert waivers are sent to the Columbia County Public Works Department for approval or denial.	X		
102	**911 Address:** If the project is located in an area where a 911 address has not been issued, then application for a 911address must be applied for and **received** through the Columbia County Emergency Management Office of 911 Addressing Department (386) 758-1125	X		

Section R101.2.1 of the Florida Building Code Residential:

The provisions of Chapter 1, Florida Building Code, Building shall govern the administration and enforcement of the Florida Building Code, Residential.

Section 105 of the Florida Building Code defines the:

Time limitation of application.

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

Single-family residential dwelling.

Section 105.3.4 A building permit for a single-family residential dwelling must be issued within 30 working days of application therefor unless unusual circumstances require a longer time for processing the applicati or unless the permit application fails to satisfy the Florida Building Code or the enforcing agency's laws or ordinances.

Permit intent.

Section 105.4.1: A permit issued shall be constructed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance a permit prevent the building official from thereafter requiring a correction of errors in plans, constructio or violations of this code. Every permit issued shall become invalid unless the work authorized by such permit is commenced within six months after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of six months after the time the work is commenced.

If work has commenced.

Section 105.4.1.1: If work has commenced and the permit is revoked, becomes null and void, or expires because of lack of progress or abandonment, a new permit covering the proposed construction shall be obtained before proceeding with the work.

New Permit.

Section 105.4.1.2: If a new permit is not obtained within 180 days from the date the initial permit became n and void, the building official is authorized to require that any work which has been commenced or completed be removed from the building site. Alternately, a new permit may be issued on application, providing the work in place and required to complete the structure meets all applicable regulations in effe at the time the initial permit became null and void and any regulations which may have become effective between the date of expiration and the date if issuance of the new permit.

Work Shall Be:

Section 105.4.1.3: Work shall be considered to be in active progress when the permit has received an approved inspection within 180 days. This provision shall not be applicable in case of civil commotion or strike or when the building work is halted due directly to judicial injunction, order or similar process.

The Fee:

Section 105.4.1.4: The fee for renewal reissuance and extension of a permit shall be set forth by the administrative authority.

When the submitted application is approved for permitting the applican will be notified by phone as to the date and time a building permit will b prepared and issued by the Columbia County Building & Zoning Department

CertainTeed

Builders Statement

28028

InsulSafe® SP Fiber Glass Blowing Insulation

National Construction & Restoration Inc
Homeowner Name / Jobsite Name

354 Crownhill court
Home Address

Danny — Installer / Contractor (sign)
Gale — Company Name
3-2-10 — Date

Builder (sign) — Company Name — Date

Inspected By (sign if required) — Date

OPEN ATTIC APPLICATION

R-VALUE	MINIMUM BAGS PER 1000 SQ. FT.	MAXIMUM NET SQ. FT. PER BAG COVERAGE	MINIMUM WEIGHT–POUNDS PER SQ. FT.	MINIMUM INSTALLED THICKNESS	MINIMUM SETTLED THICKNESS
To obtain a thermal resistance (R) of:	Bags per 1000 sq. ft. of net area:	Contents of bag shall not cover more than: (sq. ft.)	Weight per sq. ft. of installed insulation shall not be less than: (lbs.)	Installed insulation shall not be less than: (in.)	Minimum settled insulation shall not be less than: (in.)
60	31.4	31.9	0.972	22.00	22.00
49	25.2	39.7	0.780	18.50	18.50
44	22.4	44.6	0.695	16.75	16.75
38	19.1	52.5	0.591	14.50	14.50
30	14.9	67.1	0.462	11.75	11.75
26	12.8	77.9	0.398	10.25	10.25
22	10.8	92.9	0.334	8.75	8.75
19	9.3	107.4	0.289	7.75	7.75
13	6.2	161.7	0.192	5.25	5.25
11	5.3	190.5	0.163	4.50	4.50

	R-VALUE	THICKNESS	NET AREA (SQ. FT.)	INSULSAFE SP (✓)	BAGS USED	BATTS/ROLLS (✓)
CEILINGS	R-30	11 3/4 inch		✓		
WALLS						
FLOORS						

THERMAL PERFORMANCE—ATTIC BLOWING APPLICATION

- In accordance with the chart above, you must install the minimum number of bags per 1,000 sq. ft. of net area for each R-Value listed.
- The maximum net coverage must not exceed that specified for each R-Value.
- The insulation must be installed at or above the specified installed thickness for each R-Value.
- Failure to install the required minimum weight per sq. ft. of insulation at or above the initial installed thickness will result in reduced R-Value.
- This product should not be mixed with other blown insulations or the thermal claims will become invalid.

DANGER: RECESSED LIGHT FIXTURES—TO PREVENT OVERHEATING, DO NOT INSULATE ON TOP OR WITHIN 3" OF SUCH DEVICES. THIS WARNING DOES NOT APPLY TO TYPE IC LIGHT FIXTURES OR TO FLUORESCENT FIXTURES WITH THERMALLY PROTECTED BALLASTS.

CERTIFICATE OF OCCUPANCY

COLUMBIA COUNTY, FLORIDA

Department of Building and Zoning Inspection

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

Parcel Number 11-6S-16-03815-130 **Building permit No.** 000028028

Use Classification SFD,UTILITY **Fire:** 85.54

Permit Holder DELANO STEINACKER SR **Waste:** 117.25

Owner of Building WILLIAM & SELINE/SEALY PRICE **Total:** 202.79

Location: 354 SW CROWNHILL COURT, FT. WHITE, FL

Date: 03/25/2010

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

Champion
Pest Management, Inc.

369-5677
Fax: 671-1077
2525 NE Jacksonville Rd.
Ocala. Florida 34471

Notice of Treatment

Applicator Name: Leroy Samuel
Address: 2525 NE Jacksonville Road
City, State, Zip: Ocala, FL 34470 Phone: 369-5677
Permit # 0000252028

Site Location

Sub. Cardinal Farms
Lot # 30 Block # _____ Builder: 1st Choice Gmcate
Address: 354 SW Crowhill Ct

AREA TREATED

Date	Time	Gal.	Init.	Area Treated	Retreat Date	Time	Init.
9/6/09	2:18	542	LS	Living	28028		
				Garage			
				Lanai			
				Entry			
				Driveway			
				Front Entry			
				Side Entry #			
				Patio/s #			
				Footer/s #			
				Pool Deck			
				Porch/s #			
				A/C Pad			
				Walk/s #			
				(Other)			

Name of Chemical Applied: Premise % used .05 %
Remarks: Pre Treat 5423 Sq ft

Applicator-White Permit File-Canary Permit Holder-Pink

Champion
Pest Management, Inc.

369-5677
Fax: 671-1077
2525 NE Jacksonville Rd.
Ocala. Florida 34471

Notice of Treatment

Applicator Name: Leroy Samuel
Address: 2525 NE Jacksonville Road
City, State, Zip: Ocala, FL 34470 Phone: 369-5677
Permit # 0000 28028

Site Location

Sub. Cardinal farms
Lot # 30 Block # _____ Builder: 1st Choice Concrete
Address: 354 SW Crowhill Ct

AREA TREATED

Date	Time	Gal.	Init.	Area Treated	Retreat Date	Retreat Time	Retreat Init.
9.16.09	2:18	542	LS	Living			
				Garage			
				Lanai			
				Entry			
				Driveway			
				Front Entry			
				Side Entry #			
				Patio/s #			
				Footer/s #			
				Pool Deck			
				Porch/s #			
				A/C Pad			
				Walk/s #			
				(Other)			

Name of Chemical Applied: Premise % used .05 %
Remarks: Pre Treat 5423 Sq ft

Applicator-White Permit File-Canary Permit Holder-Pink

Columbia County Building Permit Application

For Office Use Only Application # C988-09 Date Received 8/6/09 By CP Permit # 1752/28028

Zoning Official BLK Date 11-08-09 Flood Zone X Land Use A-3 Zoning A-3

FEMA Map # N/A Elevation NA MFE St Johns Rd River N/A Plans Examiner [illegible] Date 8/24/09

Comments Owner to sign application

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

☐ Dev Permit # ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter

IMPACT FEES: EMS Fire Corr Road/Code

School = TOTAL Suspended