CR# 5650 + 5651

Columbia County Building Permit Application

Revised 9-23-04

For Office Use Only Application # 0603-47 Date Received 3/16/06 By G Permit # 1033/24322

Application Approved by - Zoning Official BLK Date 29.03.06 Plans Examiner OK JTH Date 3-27-06

Flood Zone X Development Permit N/A Zoning RSF-2 Land Use Plan Map Category Res. Lo. Den.

Comments ~~Need Plot Plan~~

755-2826-(Cari)

FAX 752-0078

Applicants Name Jimmy Johnston/Cari Chandler Phone 365-5999

Address

Owners Name Richard Keen Phone 623-4629

911 Address 257 SE Forest Terrace, L.C. FL 32025

Contractors Name Jimmy Johnston Phone 365-5999

Address ~~257 SE Forest Terrace~~

Fee Simple Owner Name & Address ~~Columbia County Bank~~ Richard Keen

Bonding Co. Name & Address

Architect/Engineer Name & Address Mark Disosway

Mortgage Lenders Name & Address Columbia County BAnk

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

Property ID Number 16-4-17-08382-412 Estimated Cost of Construction 100,000.00

Subdivision Name Century OAKS S/D Lot 13 Block B Unit ____ Phase ____

Driving Directions 41 S to CR 252 turn Left go to Forest LAne turn Left, about 600 yards down on right

Type of Construction SFD Number of Existing Dwellings on Property 0

Total Acreage ____ Lot Size 108x138 Do you need a - Culvert Permit or (Culvert Waiver) or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 30 26 Side 28 Side 23 Rear 434

Total Building Height 16.5' Number of Stories 1 Heated Floor Area 1508 Roof Pitch 6/12

Porch 75 Garage 462 Total 2045

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

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

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

Owner Builder or Agent (Including Contractor)

Contractor Signature

Contractors License Number CRC1328128

Competency Card Number

NOTARY STAMP/SEAL

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me this 10th day of March 2006.

Personally known X or Produced Identification ____

Carey F Chandler

Notary Signature

CAREY F. CHANDLER
MY COMMISSION #DD432023
EXPIRES: MAY 22, 2009
Bonded through 1st State Insurance

Tr advised RK - 3.29.06

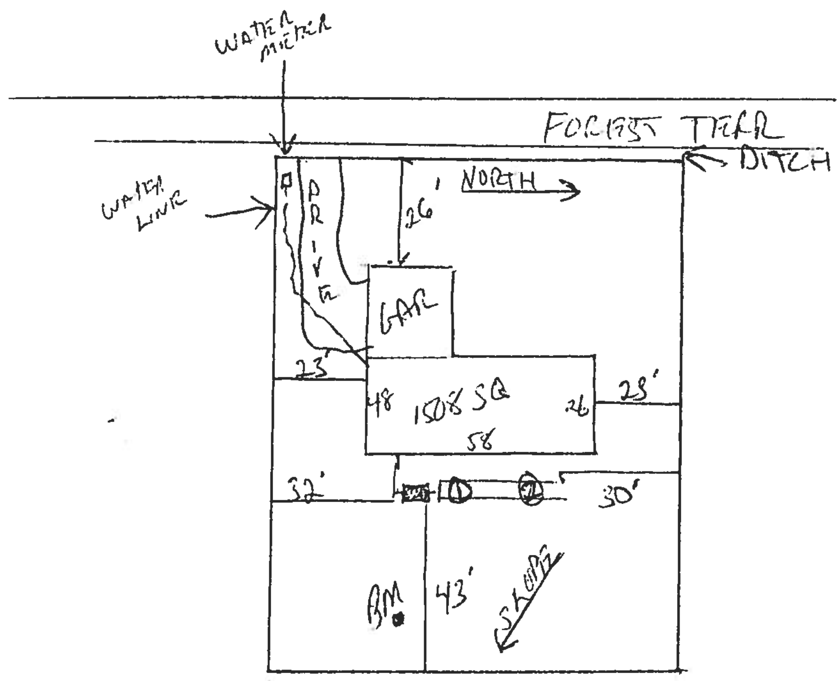
STATE OF FLORIDA
DEPARTMENT OF HEALTH
APPLICATION FOR ONSITE SEWAGE DISPOSAL SYSTEM CONSTRUCTION PERMIT

Permit Application Number 04-0206N

--------------------------- PART II - SITEPLAN ---------------------------

Scale: 1 inch = 50 feet.

Lot 14



Notes: ______

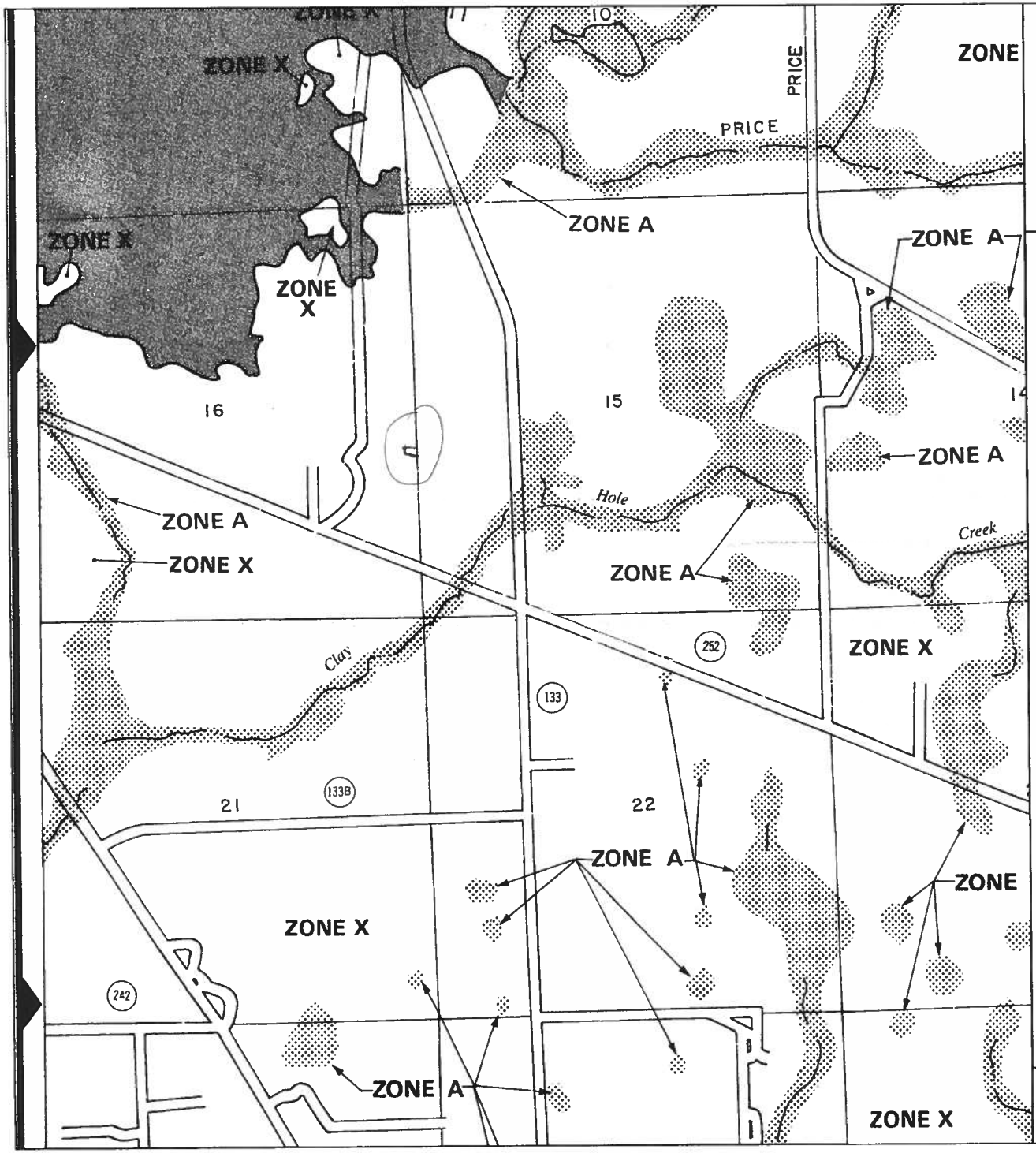
Site Plan submitted by: [signature] MASTER CONTRACTOR

Plan Approved ✓ Not Approved_____ Date 3-13-06

By [signature] Columbia County Health Department

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH DEPARTMENT

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



N

APPROXIMATE SCALE IN FEET

2000 0 2000

NATIONAL FLOOD INSURANCE PROGRAM

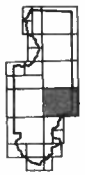
FIRM

FLOOD INSURANCE RATE MAP

COLUMBIA COUNTY, FLORIDA
(UNINCORPORATED AREAS)

PANEL 200 OF 300

PANEL LOCATION



COMMUNITY-PANEL NUMBER
120070 0200 B

EFFECTIVE DATE:
JANUARY 6, 1988

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT Version 1.0. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. Futher information about National Flood Insurance Program flood hazard maps is available at www.fema.gov/mit/tsd.

Print Date: 3/15/2006 (printed at scale and type A)

3)

THIS INSTRUMENT WAS PREPARED BY:
TERRY McDAVID 06-49
POST OFFICE BOX 1328
LAKE CITY, FL 32056-1328

PERMIT NO._____ TAX FOLIO NO.: R08382-413

NOTICE OF COMMENCEMENT

STATE OF FLORIDA
COUNTY OF COLUMBIA

The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. Description of property:

   Lot 13, Block B, CENTURY OAK, a subdivision according to the plat thereof as recorded in Plat Book 4, Page 68 of the public records of Columbia County, Florida.

2. General description of improvement: Construction of Dwelling

3. Owner information:
   a. Name and address: RICHARD KEEN and MARY M. KEEN
      1256 SW County Road 240, Lake City, FL 32025

   b. Interest in property: Fee Simple

   c. Name and address of fee simple title holder (if other than Owner): None

4. Contractor: RICHARD KEEN
   1256 SW County Road 240, Lake City, FL 32025

5. Surety n/a
   a. Name and address:
   b. Amount of bond:

6. Lender: COLUMBIA COUNTY BANK
   4785 West U.S. Highway 90
   Lake City, FL 32055

CLERK CIRCUIT COURT COLUMBIA COUNTY, FLORIDA

STATE OF FLORIDA, COUNTY OF COLUMBIA
I HEREBY CERTIFY, that the above and foregoing is a true copy of the original filed in this office
P. DeWITT CASON, CLERK OF COURTS
By Shaun Teagle Deputy Clerk
Date 2-27-06

7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by Section 713.13(1)(a)7., Florida Statutes: NONE

8. In addition to himself, Owner designates Nedra Horton of Columbia County Bank, 4785 West U.S. Highway 90, Lake City, FL 32055 to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes.

9. Expiration date of notice of commencement (the expiration date is 1 year from the date of recording unless a different date is specified). February 24, 2007.

STATE OF FLORIDA
COUNTY OF COLUMBIA

RICHARD KEEN

MARY M. KEEN

The foregoing instrument was acknowledged before me this 24th day of February, 2006, by RICHARD KEEN and MARY M. KEEN, who are personally known to me and who did not take an oath.

Notary Public
My commission expires:_____

TERRY MCDAVID
MY COMMISSION # DD 500788
EXPIRES: January 16, 2010
Bonded Thru Notary Public Underwriters

Inst:2006004726 Date:02/27/2006 Time:13:53
_____DC,P.DeWitt Cason,Columbia County B:1075 P:998

THIS INSTRUMENT WAS PREPARED BY:

TERRY McDAVID 06-49
POST OFFICE BOX 1328
LAKE CITY, FL 32056-1328

RETURN TO:

TERRY McDAVID
POST OFFICE BOX 1328
LAKE CITY, FL 32056-1328

Property Appraiser's
Identification Number R08382-413

Inst:2006004724 Date:02/27/2006 Time:13:53
Doc Stamp-Deed : 238.00
DC,P.DeWitt Cason,Columbia County B:1075 P:9

WARRANTY DEED

THIS INDENTURE, made this 24th day of February, 2006, BETWEEN ANNE M. GUYOT, whose post office address is Post Office Box 729, Lake City, FL 32056, of the County of Columbia, State of Florida, grantor*, and RICHARD KEEN and MARY M. KEEN, Husband and Wife whose post office address is 1256 SW County Road 240, Lake City, FL 32025, of the County of Columbia, State of Florida, grantee*.

WITNESSETH: that said grantor, for and in consideration of the sum of Ten Dollars ($10.00), and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in Columbia County, Florida, to-wit:

> Lot 13, Block B of CENTURY OAK, a subdivision according to the plat thereof as recorded in Plat Book 4, Page 68 of the public records of Columbia County, Florida.
>
> SUBJECT TO: Restrictions, easements and outstanding mineral rights of record, if any, and taxes for the current year.
>
> N.B.: Neither the Grantor nor any member of her family live on or reside on the property described herein or any adjacent land thereto or claim any part hereof or any adjacent land thereto as their homestead.

and said grantor does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

*"Grantor" and "grantee" are used for singular or plural, as context requires.

IN WITNESS WHEREOF, grantor has hereunto set grantor's hand

Signed, sealed and delivered
in our presence:

(Signature of First Witness)
Terry McDavid
(Typed Name of First Witness)

(Signature of Second Witness)
Crystal L. Brunner
(Typed Name of Second Witness)

Grantor (SEAL
ANNE M. GUYOT
Printed Name

STATE OF Florida
COUNTY OF Columbia

The foregoing instrument was acknowledged before me this 24t
day of February, 2006, by ANNE M. GUYOT, who is personally known t
me or who has produced _____ as identification and wh
did not take an oath.

My Commission Expires:

Notary Public
Printed, typed, or stamped name

TERRY MCDAVID
MY COMMISSION # DD 500788
EXPIRES: January 16, 2010
Bonded Thru Notary Public Underwriters

Inst:2006004724 Date:02/27/2006 Time:13:53
Doc Stamp-Deed : 238.00
DC,P.DeWitt Cason,Columbia County B:1075 P:990

3)

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TERRY McDAVID 06-49
POST OFFICE BOX 1328
LAKE CITY, FL 32056-1328

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b. Interest in property: Fee Simple

c. Name and address of fee simple title holder (if other than Owner): None

4. Contractor: RICHARD KEEN
1256 SW County Road 240, Lake City, FL 32025

5. Surety n/a
a. Name and address:
b. Amount of bond:

6. Lender: COLUMBIA COUNTY BANK
4785 West U.S. Highway 90
Lake City, FL 32055

CLERK CIRCUIT COURT COLUMBIA COUNTY, FLORIDA

STATE OF FLORIDA, COUNTY OF COLUMBIA
I HEREBY CERTIFY, that the above and foregoing is a true copy of the original filed in this office.
P. DeWITT CASON, CLERK OF COURTS
By Shawn Teagle
Deputy Clerk
Date 2-27-06

7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by Section 713.13(1)(a)7., Florida Statutes: NONE

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STATE OF FLORIDA
COUNTY OF COLUMBIA

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Notary Public
My commission expires:_____

TERRY MCDAVID
MY COMMISSION # DD 500788
EXPIRES: January 16, 2010
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Inst:2006004726 Date:02/27/2006 Time:13:53
_____DC,P.DeWitt Cason,Columbia County B:1075 P:998

FORM 600A-2004 EnergyGauge® 4.1

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**602177KeenRichard**	Builder:	Columbia Co.
Address:	**Lot: 13, Sub: Century Oaks, Plat:**	Permitting Office:	24322
City, State:	**, FL**	Permit Number:	
Owner:	**Keen Richard**	Jurisdiction Number:	22000
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 30.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 10.00
4. Number of Bedrooms	3	b. N/A	
5. Is this a worst case?	Yes		
6. Conditioned floor area (ft²)	1508 ft²	c. N/A	
7. Glass type [1] and area: (Label reqd. by 13-104.4.5 if not default)			
a. U-factor:	Description Area	13. Heating systems	
(or Single or Double DEFAULT) 7a.	(Dble Default) 140.0 ft²	a. Electric Heat Pump	Cap: 30.0 kBtu/hr
b. SHGC:			HSPF: 7.20
(or Clear or Tint DEFAULT) 7b.	(Clear) 140.0 ft²	b. N/A	
8. Floor types			
a. Slab-On-Grade Edge Insulation	R=0.0, 167.0(p) ft	c. N/A	
b. N/A			
c. N/A		14. Hot water systems	
9. Wall types		a. Electric Resistance	Cap: 40.0 gallons
a. Frame, Wood, Exterior	R=13.0, 1168.0 ft²		EF: 0.92
b. Frame, Wood, Adjacent	R=13.0, 168.0 ft²	b. N/A	
c. N/A			
d. N/A		c. Conservation credits	
e. N/A		(HR-Heat recovery, Solar	
10. Ceiling types		DHP-Dedicated heat pump)	
a. Under Attic	R=30.0, 1706.0 ft²	15. HVAC credits	
b. N/A		(CF-Ceiling fan, CV-Cross ventilation,	
c. N/A		HF-Whole house fan,	
11. Ducts		PT-Programmable Thermostat,	
a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 128.0 ft	MZ-C-Multizone cooling,	
b. N/A		MZ-H-Multizone heating)	

Glass/Floor Area: 0.09

Total as-built points: 22652
Total base points: 24137

PASS

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

PREPARED BY: [signature]

DATE: 2-22-06

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

OWNER/AGENT: _____

DATE: _____

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

BUILDING OFFICIAL: _____

DATE: _____

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

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , **FL, 32024-** PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points
.18	1508.0	20.04	5439.7	Double, Clear	E	1.5	5.5	75.0	42.06	0.90	2827.4
				Double, Clear	E	1.5	8.0	20.0	42.06	0.96	805.5
				Double, Clear	S	1.5	1.5	5.0	35.87	0.52	93.4
				Double, Clear	W	1.5	5.5	40.0	38.52	0.90	1382.1
				As-Built Total:				**140.0**			**5108.4**
WALL TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points
Adjacent	168.0	0.70	117.6	Frame, Wood, Exterior			13.0	1168.0	1.50		1752.0
Exterior	1168.0	1.70	1985.6	Frame, Wood, Adjacent			13.0	168.0	0.60		100.8
Base Total:	**1336.0**		**2103.2**	**As-Built Total:**				**1336.0**			**1852.8**
DOOR TYPES	Area X	BSPM =	Points	Type				Area X	SPM =		Points
Adjacent	20.0	1.60	32.0	Exterior Insulated				20.0	4.10		82.0
Exterior	40.0	4.10	164.0	Adjacent Insulated				20.0	1.60		32.0
				Exterior Insulated				20.0	4.10		82.0
Base Total:	**60.0**		**196.0**	**As-Built Total:**				**60.0**			**196.0**
CEILING TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM X SCM =		Points
Under Attic	1508.0	1.73	2608.8	Under Attic			30.0	1706.0	1.73 X 1.00		2951.4
Base Total:	**1508.0**		**2608.8**	**As-Built Total:**				**1706.0**			**2951.4**
FLOOR TYPES	Area X	BSPM =	Points	Type			R-Value	Area X	SPM =		Points
Slab	167.0(p)	-37.0	-6179.0	Slab-On-Grade Edge Insulation			0.0	167.0(p	-41.20		-6880.4
Raised	0.0	0.00	0.0								
Base Total:			**-6179.0**	**As-Built Total:**				**167.0**			**-6880.4**
INFILTRATION	Area X	BSPM =	Points					Area X	SPM =		Points
	1508.0	10.21	15396.7					1508.0	10.21		15396.7

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32024-	PERMIT #:

BASE				AS-BUILT						
Summer Base Points: 19565.4				**Summer As-Built Points:**						**18624.8**
Total Summer Points	X System Multiplier	= Cooling Points		Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points	
				(sys 1: Central Unit 30000 btuh ,SEER/EFF(10.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)						
				18625	1.00	(1.09 x 1.147 x 0.91)	0.341	1.000	7232.0	
19565.4	**0.4266**	**8346.6**		**18624.8**	**1.00**	**1.138**	**0.341**	**1.000**	**7232.0**	

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , **FL, 32024-** PERMIT #:

BASE				AS-BUILT							
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points
.18	1508.0	12.74	3458.1	Double, Clear	E	1.5	5.5	75.0	18.79	1.04	1467.7
				Double, Clear	E	1.5	8.0	20.0	18.79	1.02	383.3
				Double, Clear	S	1.5	1.5	5.0	13.30	2.73	181.6
				Double, Clear	W	1.5	5.5	40.0	20.73	1.03	852.4
				As-Built Total:				**140.0**			**2885.1**

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	168.0	3.60	604.8	Frame, Wood, Exterior	13.0	1168.0	3.40	3971.2
Exterior	1168.0	3.70	4321.6	Frame, Wood, Adjacent	13.0	168.0	3.30	554.4
Base Total:	**1336.0**		**4926.4**	**As-Built Total:**		**1336.0**		**4525.6**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	20.0	8.00	160.0	Exterior Insulated	20.0	8.40	168.0
Exterior	40.0	8.40	336.0	Adjacent Insulated	20.0	8.00	160.0
				Exterior Insulated	20.0	8.40	168.0
Base Total:	**60.0**		**496.0**	**As-Built Total:**	**60.0**		**496.0**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X	WCM =	Points
Under Attic	1508.0	2.05	3091.4	Under Attic	30.0	1706.0	2.05 X	1.00	3497.3
Base Total:	**1508.0**		**3091.4**	**As-Built Total:**		**1706.0**			**3497.3**

FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Slab	167.0(p)	8.9	1486.3	Slab-On-Grade Edge Insulation	0.0	167.0(p	18.80	3139.6
Raised	0.0	0.00	0.0					
Base Total:			**1486.3**	**As-Built Total:**		**167.0**		**3139.6**

INFILTRATION	Area X	BWPM	= Points	Area X	WPM	= Points
	1508.0	-0.59	-889.7	1508.0	-0.59	-889.7

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32024-	PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**12568.5**	**Winter As-Built Points:**					**13653.9**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 30000 btuh ,EFF(7.2) Ducts:Unc(S),Unc(R),Int(AH),R6.0					
			13653.9	1.000	(1.069 x 1.169 x 0.93)	0.474	1.000	7515.4
12568.5	**0.6274**	**7885.5**	**13653.9**	**1.00**	**1.162**	**0.474**	**1.000**	**7515.4**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32024-	PERMIT #:

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

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points +	Heating Points +	Hot Water Points =	Total Points	Cooling Points +	Heating Points +	Hot Water Points =	Total Points
8347	**7885**	**7905**	**24137**	**7232**	**7515**	**7905**	**22652**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , , FL, 32024- PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Maximum:.3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-22 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 612.1.ABC.3.2. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 min. insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings-Min. R-19. Common walls-Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 83.9

The higher the score, the more efficient the home.

Keen Richard, , , FL, 32024-

1.	New construction or existing	New	12.	Cooling systems	
2.	Single family or multi-family	Single family		a. Central Unit	Cap: 30.0 kBtu/hr
3.	Number of units, if multi-family	1			SEER: 10.00
4.	Number of Bedrooms	3		b. N/A	
5.	Is this a worst case?	Yes			
6.	Conditioned floor area (ft²)	1508 ft²		c. N/A	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)				
	a. U-factor:	Description Area	13.	Heating systems	
	(or Single or Double DEFAULT) 7a.	(Dble Default) 140.0 ft²		a. Electric Heat Pump	Cap: 30.0 kBtu/hr
	b. SHGC:				HSPF: 7.20
	(or Clear or Tint DEFAULT) 7b.	(Clear) 140.0 ft²		b. N/A	
8.	Floor types				
	a. Slab-On-Grade Edge Insulation	R=0.0, 167.0(p) ft		c. N/A	
	b. N/A				
	c. N/A		14.	Hot water systems	
9.	Wall types			a. Electric Resistance	Cap: 40.0 gallons
	a. Frame, Wood, Exterior	R=13.0, 1168.0 ft²			EF: 0.92
	b. Frame, Wood, Adjacent	R=13.0, 168.0 ft²		b. N/A	
	c. N/A				
	d. N/A			c. Conservation credits	
	e. N/A			(HR-Heat recovery, Solar	
10.	Ceiling types			DHP-Dedicated heat pump)	
	a. Under Attic	R=30.0, 1706.0 ft²	15.	HVAC credits	
	b. N/A			(CF-Ceiling fan, CV-Cross ventilation,	
	c. N/A			HF-Whole house fan,	
11.	Ducts			PT-Programmable Thermostat,	
	a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 128.0 ft		MZ-C-Multizone cooling,	
	b. N/A			MZ-H-Multizone heating)	

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

Builder Signature: _____ Date: _____

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

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

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

Columbia County Building Department **Waiver No.**
Culvert Waiver Permit / Application

APPLICANT Jimmy Johnston PHONE 365-5999

ADDRESS _____

OWNER Richard Keen PHONE 758-8999

ADDRESS 1256 SW CR 240

CONTRACTOR Jimmy Johnston PHONE 365-5999

LOCATION OF PROPERTY 41 S to CR 252 turn Left, go down to Forest Glen turn Left, about 600 yards down on right

PARCEL ID # 16-4S-17-08382-412

SUBDIVISION (Lot/Block/Phase/Unit) Lot 13 Block B Century Oaks S/D

I HEREBY CERTIFY THAT I UNBERSTAND AND WILL FULLY COMPLY WITH THE DECISION OF THE COLUMBIA COUNTY PUBLIC WORKS DEPARTMENT IN CONNECTION WITH THE HEREIN PROPOSED APPLICATION.

SIGNED: _____ DATE: _____

FEE: $ 50.00 A SEPARATE CHECK IS REQUIRED.
MAKE CHECKS PAYABLE TO BCC.

Public Works Department Use Only

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS APPLICATION AND DETERMINE THAT THE CULVERT WAIVER IS:

_____ APPROVED _____ NOT APPROVED – NEEDS A CULVERT PERMIT

COMMENTS _____

SIGNED: _____ DATE: _____

ANY QUESTIONS PLEASE CONTACT THE PUBLIC WORKS DEPARTMENT AT 386-752-5955.

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

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 16-4S-17-08382-412 **Building permit No.** 000024322

Use Classification SFD/UTILITY **Fire:** 54.51

Permit Holder JAMES H. JOHNSTON,III. **Waste:** 0.00

Owner of Building RICHARD KEEN **Total:** 54.51

Location: 257 SE FOREST TERRACE(CENTURY OAKS,LOT 13)

Date: 07/24/2006

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

Columbia County Building Department
Culvert Waiver

Culvert Waiver No. 000001033

DATE: 03/30/2006 BUILDING PERMIT NO. 24322

APPLICANT CARY CHANDLER PHONE 755.2826

ADDRESS 640 SW MAIN BLVD LAKE CITY FL 32025

OWNER RICHARD KEEN PHONE 623.4629

ADDRESS 257 SE FOREST TERRACE LAKE CITY FL 32025

CONTRACTOR JAMES H. JOHNSTON,III. PHONE 755.2826

LOCATION OF PROPERTY 41-S TO C-252 BY HIGH SCHOOL,TL GO TO FOREST LANE,TL IT'S ABOUT 600 YARDS ON THE R.

SUBDIVISION/LOT/BLOCK/PHASE/UNIT CENTURY OAKS 13 B

PARCEL ID # 16-4S-17-08382-412

I HEREBY CERTIFY THAT I UNDERSTAND AND WILL FULLY COMPLY WITH THE DECISION OF THE COLUMBIA COUNTY PUBLIC WORKS DEPARTMENT IN CONNECTION WITH THE HEREIN PROPOSED APPLICATION.

SIGNATURE: Cary J Chandler

A SEPARATE CHECK IS REQUIRED
MAKE CHECKS PAYABLE TO BCC

Amount Paid 50.00

PUBLIC WORKS DEPARTMENT USE ONLY

I HEREBY CERTIFY THAT I HAVE EXAMINED THIS APPLICATION AND DETERMINED THAT THE CULVERT WAIVER IS:

✓ APPROVED _____ NOT APPROVED - NEEDS A CULVERT PERMIT

COMMENTS: _____

SIGNED: _____ DATE: 4/3/06

ANY QUESTIONS PLEASE CONTACT THE PUBLIC WORKS DEPARTMENT AT 386-752-5955.

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

RECEIVED
APR 08 2006
BY: _____

COLUMBIA COUNTY GATEWAY TO FLORIDA

UNIVERSAL
ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences • Construction Materials Testing

4475 S.W. 35th Terrace • Gainesville, Florida 32608 • (352) 372-3392

REPORT ON IN-PLACE DENSITY TESTS

Permit # 000024322

CLIENT: Richard Keen Contractor

PROJECT: Contrail Oak Lot #11 Lake City, Fl.
257 S.E. Forest Terr.

AREA TESTED: Fill & Prop Bldg. Pad & Found.

COURSE: F/G

DEPTH OF TEST: 0-1'

TYPE OF TEST: D-2922

DATE TESTED: 4/12/06

NOTE: The below tests DO / ~~DO NOT~~ meet the minimum 95 % compaction requirements of maximum density.

REMARKS:

LOCATION OF TESTS	DRY DEN.	MAX. DEN.	% MAX. DEN.	% MOIST.	OPT. MOIST.
		112.0			12.0
App. Cntr. of Pad	109.5		97.8	6.2	
App. Cntr. of N. Found	107.6		96.1	6.0	
App. Cntr. of W. Found	107.5		96.0	6.1	

4404

TECH. FE

COLUMBIA COUNTY BUILDING DEPARTMENT

RESIDENTIAL MINIMUM PLAN REQUIREMENTS AND CHECKLIST FOR FLORIDA BUILDING CODE 2001 ONE (1) AND TWO (2) FAMILY DWELLINGS

ALL REQUIREMENTS ARE SUBJECT TO CHANGE
EFFECTIVE MARCH 1, 2002

ALL BUILDING PLANS MUST INDICATE THE FOLLOWING ITEMS AND INDICATE COMPLIANCE WITH CHAPTER 1606 OF THE FLORIDA BUILDING CODE 2001 BY PROVIDING 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 SPEED AS PER FIGURE 1606 SHALL BE USED.

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

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

APPLICANT – PLEASE CHECK ALL APPLICABLE BOXES BEFORE SUBMITTAL

GENERAL REQUIREMENTS; Two (2) complete sets of plans containing the following:

Applicant	Plans Examiner	
☑	☐	All drawings must be clear, concise and drawn to scale ("Optional " details that are not used shall be marked void or crossed off). Square footage of different areas shall be shown on plans.
☑	☐	Designers name and signature on document (FBC 104.2.1). If licensed architect or engineer, official seal shall be affixed.
☑	☐	**Site Plan including:** a) Dimensions of lot b) Dimensions of building set backs c) Location of all other buildings on lot, well and septic tank if applicable, and all utility easements. d) Provide a full legal description of property.
☑	☑	**Wind-load Engineering Summary, calculations and any details required** a) Plans or specifications must state compliance with FBC Section 1606 b) The following information must be shown as per section 1606.1.7 FBC a. Basic wind speed (MPH) b. Wind importance factor (I) and building category c. Wind exposure – if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated d. The applicable internal pressure coefficient e. Components and Cladding. The design wind pressure in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifically designed by the registered design professional
☑	☑	**Elevations including:**
☑	☑	a) All sides
☑	☑	b) Roof pitch
☑	☑	c) Overhang dimensions and detail with attic ventilation
☑	☐	N/A d) Location, size and height above roof of chimneys
☑	☐	N/A e) Location and size of skylights
☑	☑	f) Building height
☑	☑	e) Number of stories

Floor Plan including:

- a) Rooms labeled and dimensioned
- b) Shear walls
- c) Windows and doors (including garage doors) showing size, mfg., approval listing and attachment specs. (FBC 1707) and safety glazing where needed (egress windows in bedrooms to be shown)
- d) Fireplaces (gas appliance) (vented or non-vented) or wood burning with hearth
- e) Stairs with dimensions (width, tread and riser) and details of guardrails and handrails
- f) Must show and identify accessibility requirements (accessible bathroom)

Foundation Plan including:

- a) Location of all load-bearing wall with required footings indicated as standard Or monolithic and dimensions and reinforcing
- b) All posts and/or column footing including size and reinforcing
- c) Any special support required by soil analysis such as piling
- d) Location of any vertical steel

Roof System:

- a) Truss package including:
  1. Truss layout and truss details signed and sealed by Fl. Pro. Eng.
  2. Roof assembly (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
- b) Conventional Framing Layout including:
  1. Rafter size, species and spacing
  2. Attachment to wall and uplift
  3. Ridge beam sized and valley framing and support details
  4. Roof assembly (FBC 104.2.1 Roofing systems, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)

Wall Sections including:

- a) Masonry wall
  1. All materials making up wall
  2. Block size and mortar type with size and spacing of reinforcement
  3. Lintel, tie-beam sizes and reinforcement
  4. Gable ends with rake beams showing reinforcement or gable truss and wall bracing details
  5. All required connectors with uplift rating and required number and size of fasteners for continuous tie from roof to foundation
  6. Roof assembly shown here or on roof system detail (FBC 104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with resistance rating)
  7. Fire resistant construction (if required)
  8. Fireproofing requirements
  9. Shoe type of termite treatment (termicide or alternative method)
  10. Slab on grade
      a. Vapor retardant (6mil. Polyethylene with joints lapped 6 inches and sealed)
      b. Must show control joints, synthetic fiber reinforcement or Welded fire fabric reinforcement and supports
  11. Indicate where pressure treated wood will be placed
  12. Provide insulation R value for the following:
      a. Attic space
      b. Exterior wall cavity
      c. Crawl space (if applicable)

☑ ☑ **b) Wood frame wall**

1. All materials making up wall
2. Size and species of studs
3. Sheathing size, type and nailing schedule
4. Headers sized
5. Gable end showing balloon framing detail or gable truss and wall hinge bracing detail
6. All required fasteners for continuous tie from roof to foundation (truss anchors, straps, anchor bolts and washers)
7. Roof assembly shown here or on roof system detail (FBC104.2.1 Roofing system, materials, manufacturer, fastening requirements and product evaluation with wind resistance rating)
8. Fire resistant construction (if applicable)
9. Fireproofing requirements
10. Show type of termite treatment (termicide or alternative method)
11. Slab on grade
    a. Vapor retardant (6Mil. Polyethylene with joints lapped 6 inches and sealed
    b. Must show control joints, synthetic fiber reinforcement or welded wire fabric reinforcement and supports
12. Indicate where pressure treated wood will be placed
13. Provide insulation R value for the following:
    a. Attic space
    b. Exterior wall cavity
    c. Crawl space (if applicable)

☐ ☐ c) Metal frame wall and roof (designed, signed and sealed by Florida Prof. Engineer or Architect)

Floor Framing System:

☐ ☐ a) Floor truss package including layout and details, signed and sealed by Florida Registered Professional Engineer

☐ ☐ b) Floor joist size and spacing

☐ ☐ c) Girder size and spacing

☐ ☐ d) Attachment of joist to girder

☐ ☐ e) Wind load requirements where applicable

☑ ☐ **Plumbing Fixture layout**

Electrical layout including:

☑ ☑ a) Switches, outlets/receptacles, lighting and all required GFCI outlets identified

☑ ☐ b) Ceiling fans

☑ ☐ c) Smoke detectors

☑ ☐ d) Service panel and sub-panel size and location(s)

☑ ☐ e) Meter location with type of service entrance (overhead or underground)

☑ ☐ f) Appliances and HVAC equipment

☑ ☐ g) Arc Fault Circuits (AFCI) in bedrooms

HVAC information

☑ ☐ a) Manual J sizing equipment or equivalent computation

☑ ☐ b) Exhaust fans in bathroom

☑ ☐ **Energy Calculations** (dimensions shall match plans)

☐ ☐ **Gas System** Type (LP or Natural) Location and BTU demand of equipment

☐ ☐ **Disclosure Statement for Owner Builders**

☑ ☐ ***Notice Of Commencement Required Before Any Inspections Will Be Done**

☑ ☐ **Private Potable Water**

a) Size of pump motor
b) Size of pressure tank
c) Cycle stop valve if used

Water System

THE FOLLOWING ITEMS MUST BE SUBMITTED WITH BUILDING PLANS

1. **Building Permit Application:** A current Building Permit Application form is to be completed and submitted for all residential projects.

2. **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.

3. **Environmental Health Permit or Sewer Tap Approval:** A copy of the Environmental Health permit, existing septic approval or sewer tap approval is required before a building permit can be issued.
   (386) 758-1058 **(Toilet facilities shall be provided for construction workers)**

4. **City Approval:** If the project is to be located within the city limits of the Town of Fort White, prior approval is required. The Town of Fort White approval letter is required to be submitted by the owner or contractor to this office when applying for a Building Permit. (386) 497-2321

5. **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 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 8.8 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 8.7 of the Columbia County Land Development Regulations.
   CERTIFIED FINISHED FLOOR ELEVATIONS WILL BE REQUIRED ON ANY PROJECT WHERE THE BASE FLOOD ELEVATION (100 YEAR FLOOD) HAS BEEN ESTABLISHED.
   A development permit will also be required. Development permit cost is **$50.00**

6. **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.

7. **911 Address:** If the project is located in an area where the 911 address has been issued, then the proper paperwork from the 911 Addressing Department must be submitted. (386) 752-8787

ALL REQUIRED INFORMATION IS TO BE SUBMITTED FOR REVIEW. YOU WILL BE NOTIFIED WHEN YOUR APPLICATION AND PLANS ARE APPROVED AND READY TO PERMIT. PLEASE DO NOT EXPECT OR REQUEST THAT PERMIT APPLICATIONS BE REVIEWED OR APPROVED WHILE YOU ARE HERE – TIME WILL NOT ALLOW THIS –PLEASE DO NOT ASK

From:	The Columbia County Building Department Plans Review 135 NE Hernando Av. P. O Box 1529 Lake City Florida, 32056-1529

Reference to a building permit application Number: 0603-47

Jimmy Johnson Owner Richard Keen lot 13 Block B of Century Oaks Subdivision

On the date of March 15, 2006 application 0603-47 and plans for construction of a single family dwelling were reviewed and the following information or alteration to the plans will be required to continue processing this application. If you should have any question please contact the above address, or contact phone number (386) 758-1163 or fax any information to (386) 754-7088.

Please include application number 0603-47 when making reference to this application.

1. Please provide a copy of a signed released site plan from the Columbia County Environmental Health Department which confirms approval of the waste water disposal system.
2. Please show the method the HVAC & WH appliances will be protected as required by the FMC-2004 sections 303.4 Protection from damage. Appliances shall not be installed in a location where subject to mechanical damage unless protected by approved barriers.
3. Please show compliance with the FRC-2004 sections R309 Garage: R309.1 A: Opening protection: Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches

(35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors.

B: R309.1.1 Duct penetration. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other approved material and shall have no openings into the garage.

C: R309.2 Separation required. The garage shall be separated from the residence and its attic area by not less than ½-inch (12.7 mm) gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8-inch (15.9 mm) Type X gypsum board or equivalent. Where the separation is a floor-ceiling assembly, the structure supporting the separation shall also be protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.

4. The attic Access door will be required to have the same fire rating as the door described in section R309.1 of the FRC-2004.
5. On the electrical plan show the location of the electrical panel and include the total amperage rating of the electrical service panel also show the overcurrent protection device which shall be installed on the exterior of structures to serve as a disconnecting means. 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.

Thank you,

Joe Haltiwanger
Plan Examiner
Columbia County Building Department

Residential System Sizing Calculation

Summary

Keen Richard

, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

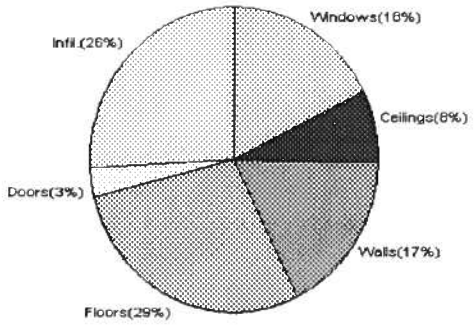
2/22/2006

Location for weather data: Gainesville - Defaults: Latitude(29) Altitude(152 ft.) Temp Range(M) Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(54gr.)					
Winter design temperature	33	F	Summer design temperature	92	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	37	F	Summer temperature difference	17	F
Total heating load calculation	**25488**	**Btuh**	**Total cooling load calculation**	**18722**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	117.7	30000	Sensible (SHR = 0.75)	143.9	22500
Heat Pump + Auxiliary(0.0kW)	117.7	30000	Latent	243.0	7500
			Total (Electric Heat Pump)	160.2	30000

WINTER CALCULATIONS

Winter Heating Load (for 1508 sqft)

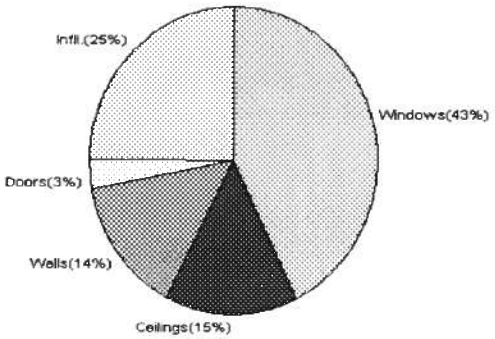
Load component			Load	
Window total	140	sqft	4507	Btuh
Wall total	1336	sqft	4387	Btuh
Door total	60	sqft	777	Btuh
Ceiling total	1706	sqft	2010	Btuh
Floor total	167	sqft	7291	Btuh
Infiltration	161	cfm	6516	Btuh
Duct loss			0	Btuh
Subtotal			**25488**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**25488**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1508 sqft)

Load component			Load	
Window total	140	sqft	7962	Btuh
Wall total	1336	sqft	2690	Btuh
Door total	60	sqft	588	Btuh
Ceiling total	1706	sqft	2825	Btuh
Floor total			0	Btuh
Infiltration	84	cfm	1572	Btuh
Internal gain			0	Btuh
Duct gain			0	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Total sensible gain			**15636**	**Btuh**
Latent gain(ducts)			0	Btuh
Latent gain(infiltration)			3086	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			0	Btuh
Total latent gain			**3086**	**Btuh**
TOTAL HEAT GAIN			**18722**	**Btuh**



For Florida residences only

EnergyGauge® System Sizing
PREPARED BY:
DATE: 2-22-06

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Keen Richard
, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

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

2/22/2006

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

Component Loads for Whole House

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	NW	75.0	32.2	2414 Btuh
2	2, Clear, Metal, 0.87	NW	20.0	32.2	644 Btuh
3	2, Clear, Metal, 0.87	NE	5.0	32.2	161 Btuh
4	2, Clear, Metal, 0.87	SE	40.0	32.2	1288 Btuh
	Window Total		140(sqft)		4507 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	1168	3.3	3836 Btuh
2	Frame - Wood - Adj(0.09)	13.0	168	3.3	552 Btuh
	Wall Total		1336		4387 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exterior		20	12.9	259 Btuh
2	Insulated - Adjacent		20	12.9	259 Btuh
3	Insulated - Exterior		20	12.9	259 Btuh
	Door Total		60		777Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	1706	1.2	2010 Btuh
	Ceiling Total		1706		2010Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	167.0 ft(p)	43.7	7291 Btuh
	Floor Total		167		7291 Btuh
			Zone Envelope Subtotal:		18973 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.80	12064	160.9	6516 Btuh
Ductload	Average sealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #1			**Sensible Zone Subtotal**		**25488 Btuh**

WHOLE HOUSE TOTALS

	Subtotal Sensible	25488 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	25488 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Keen Richard

, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

For Florida residences only

Key: Window types (SHGC - Shading coefficient of glass as SHGC numerical value or as clear
(Frame types - metal, wood or insulated metal)
(U - Window U-Factor or 'DEF' for default)
(HTM - ManualJ Heat Transfer Multiplier)

Key: Floor size (perimeter(p) for slab-on-grade or area for all other floor types)

System Sizing Calculations - Winter

Residential Load - Room by Room Component Details

Keen Richard
, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

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

2/22/2006

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

Component Loads for Zone #1: Main

Window	Panes/SHGC/Frame/U	Orientation	Area(sqft) X	HTM=	Load
1	2, Clear, Metal, 0.87	NW	75.0	32.2	2414 Btuh
2	2, Clear, Metal, 0.87	NW	20.0	32.2	644 Btuh
3	2, Clear, Metal, 0.87	NE	5.0	32.2	161 Btuh
4	2, Clear, Metal, 0.87	SE	40.0	32.2	1288 Btuh
	Window Total		140(sqft)		4507 Btuh
Walls	Type	R-Value	Area X	HTM=	Load
1	Frame - Wood - Ext(0.09)	13.0	1168	3.3	3836 Btuh
2	Frame - Wood - Adj(0.09)	13.0	168	3.3	552 Btuh
	Wall Total		1336		4387 Btuh
Doors	Type		Area X	HTM=	Load
1	Insulated - Exterior		20	12.9	259 Btuh
2	Insulated - Adjacent		20	12.9	259 Btuh
3	Insulated - Exterior		20	12.9	259 Btuh
	Door Total		60		777Btuh
Ceilings	Type/Color/Surface	R-Value	Area X	HTM=	Load
1	Vented Attic/D/Shin)	30.0	1706	1.2	2010 Btuh
	Ceiling Total		1706		2010Btuh
Floors	Type	R-Value	Size X	HTM=	Load
1	Slab On Grade	0	167.0 ft(p)	43.7	7291 Btuh
	Floor Total		167		7291 Btuh
			Zone Envelope Subtotal:		18973 Btuh
Infiltration	Type	ACH X	Zone Volume	CFM=	
	Natural	0.80	12064	160.9	6516 Btuh
Ductload	Average sealed, R6.0, Supply(Attic), Return(Attic)			(DLM of 0.00)	0 Btuh
Zone #1			**Sensible Zone Subtotal**		**25488 Btuh**

WHOLE HOUSE TOTALS

	Subtotal Sensible	25488 Btuh
	Ventilation Sensible	0 Btuh
	Total Btuh Loss	25488 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Keen Richard
, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

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

For Florida residences only

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Keen Richard
, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F 2/22/2006

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

Component Loads for Whole House

	Type*		Overhang		Window Area(sqft)			HTM		Load
Window	Pn/SHGC/U/InSh/ExSh/IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded	
1	2, Clear, 0.87, None,N,N	NW	1.5ft.	5.5ft.	75.0	0.0	75.0	29	60	4503 Btuh
2	2, Clear, 0.87, None,N,N	NW	1.5ft.	8ft.	20.0	0.0	20.0	29	60	1201 Btuh
3	2, Clear, 0.87, None,N,N	NE	1.5ft.	1.5ft.	5.0	0.0	5.0	29	60	300 Btuh
4	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	40.0	16.2	23.8	29	63	1958 Btuh
	Window Total				140 (sqft)					7962 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	1168.0	2.1	2436 Btuh
2	Frame - Wood - Adj	13.0/0.09	168.0	1.5	253 Btuh
	Wall Total		1336 (sqft)		2690 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	9.8	196 Btuh
2	Insulated - Adjacent	20.0	9.8	196 Btuh
3	Insulated - Exterior	20.0	9.8	196 Btuh
	Door Total	60 (sqft)		588 Btuh

Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	1706.0	1.7	2825 Btuh
	Ceiling Total		1706 (sqft)		2825 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	167 (ft(p))	0.0	0 Btuh
	Floor Total		167.0 (sqft)		0 Btuh

				Zone Envelope Subtotal:	14065 Btuh

Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.42	12064	84.4	1572 Btuh

Internal gain	Occupants	Btuh/occupant	Appliance	Load
	0	X 230 +	0	0 Btuh

Duct load	Average sealed, R6.0, Supply(Attic), Return(Attic)	DGM = 0.00	0.0 Btuh
		Sensible Zone Load	**15636 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Keen Richard

, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

2/22/2006

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	**15636 Btuh**
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	**15636 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
Whole House	**Total sensible gain**	**15636 Btuh**
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	3086 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (0 people @ 200 Btuh per person)	0 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**3086 Btuh**
	TOTAL GAIN	**18722 Btuh**

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

For Florida residences only

System Sizing Calculations - Summer

Residential Load - Room by Room Component Details

Keen Richard
, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

Reference City: Gainesville (Defaults) Summer Temperature Difference: 17.0 F 2/22/2006
This calculation is for Worst Case. The house has been rotated 315 degrees.

Component Loads for Zone #1: Main

Window	Type*	Ornt	Overhang Len	Overhang Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	HTM Unshaded	Load
1	2, Clear, 0.87, None,N,N	NW	1.5ft.	5.5ft.	75.0	0.0	75.0	29	60	4503 Btuh
2	2, Clear, 0.87, None,N,N	NW	1.5ft.	8ft.	20.0	0.0	20.0	29	60	1201 Btuh
3	2, Clear, 0.87, None,N,N	NE	1.5ft.	1.5ft.	5.0	0.0	5.0	29	60	300 Btuh
4	2, Clear, 0.87, None,N,N	SE	1.5ft.	5.5ft.	40.0	16.2	23.8	29	63	1958 Btuh
	Window Total				140 (sqft)					7962 Btuh

Walls	Type	R-Value/U-Value	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	13.0/0.09	1168.0	2.1	2436 Btuh
2	Frame - Wood - Adj	13.0/0.09	168.0	1.5	253 Btuh
	Wall Total		1336 (sqft)		2690 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	9.8	196 Btuh
2	Insulated - Adjacent	20.0	9.8	196 Btuh
3	Insulated - Exterior	20.0	9.8	196 Btuh
	Door Total	60 (sqft)		588 Btuh

Ceilings	Type/Color/Surface	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/DarkShingle	30.0	1706.0	1.7	2825 Btuh
	Ceiling Total		1706 (sqft)		2825 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	167 (ft(p))	0.0	0 Btuh
	Floor Total		167.0 (sqft)		0 Btuh

			Zone Envelope Subtotal:		14065 Btuh
Infiltration	Type	ACH	Volume(cuft)	CFM=	Load
	SensibleNatural	0.42	12064	84.4	1572 Btuh
Internal gain		Occupants	Btuh/occupant	Appliance	Load
		0	X 230 +	0	0 Btuh
Duct load	Average sealed, R6.0, Supply(Attic), Return(Attic)			DGM = 0.00	0.0 Btuh
			Sensible Zone Load		**15636 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Keen Richard
, FL 32024-

Project Title:
602177KeenRichard

Class 3 Rating
Registration No. 0
Climate: North

2/22/2006

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	**15636 Btuh**
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	**15636 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
Whole House	**Total sensible gain**	**15636 Btuh**
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	3086 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (0 people @ 200 Btuh per person)	0 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**3086 Btuh**
	TOTAL GAIN	**18722 Btuh**

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

For Florida residences only

Residential Window Diversity

MidSummer

Keen Richard

, FL 32024-

Project Title:
602177KeenRichard

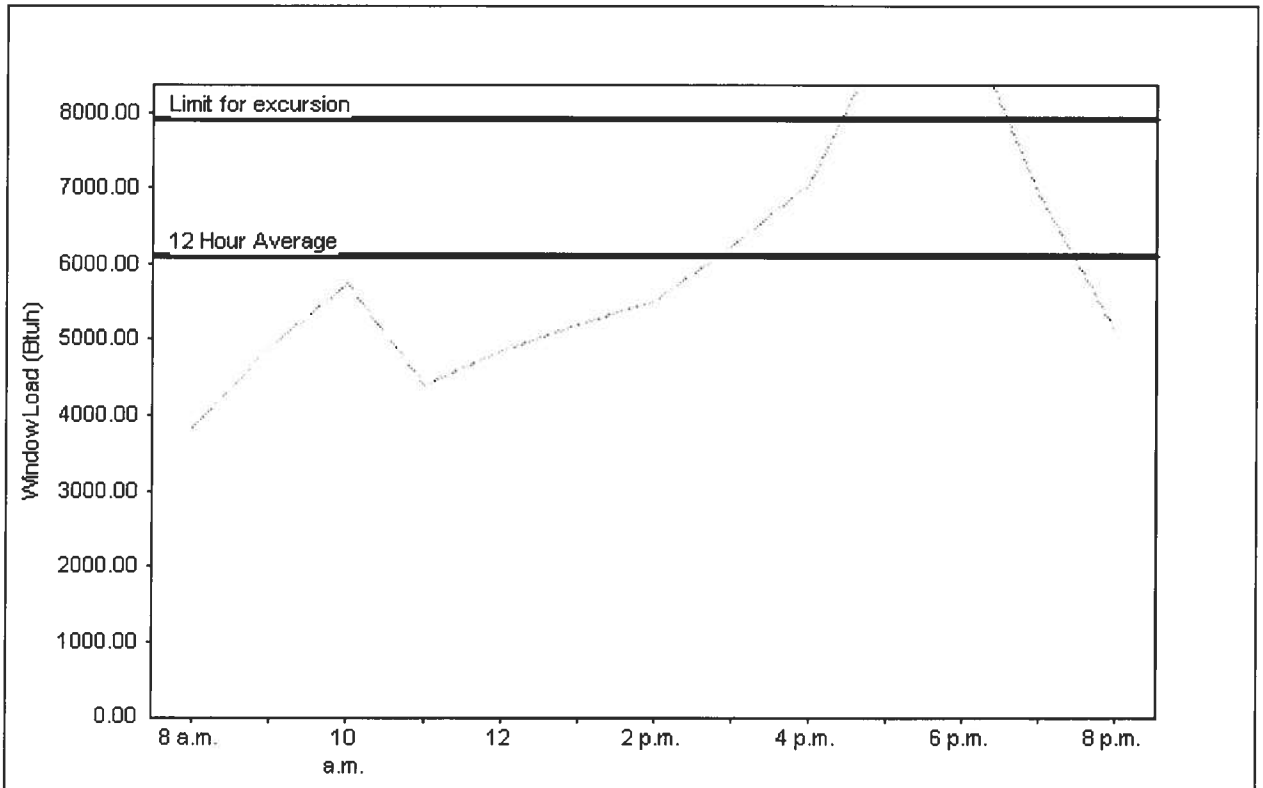
Class 3 Rating
Registration No. 0
Climate: North

2/22/2006

Weather data for: Gainesville - Defaults

Summer design temperature	92 F	Average window load for July	6095 Btuh
Summer setpoint	75 F	Peak window load for July	9269 Btuh
Summer temperature difference	17 F	Excusion limit(130% of Ave.)	7924 Btuh
Latitude	29 North	Window excursion (July)	1345 Btuh

WINDOW Average and Peak Loads



Total July Window Load(Radiation and conduction)

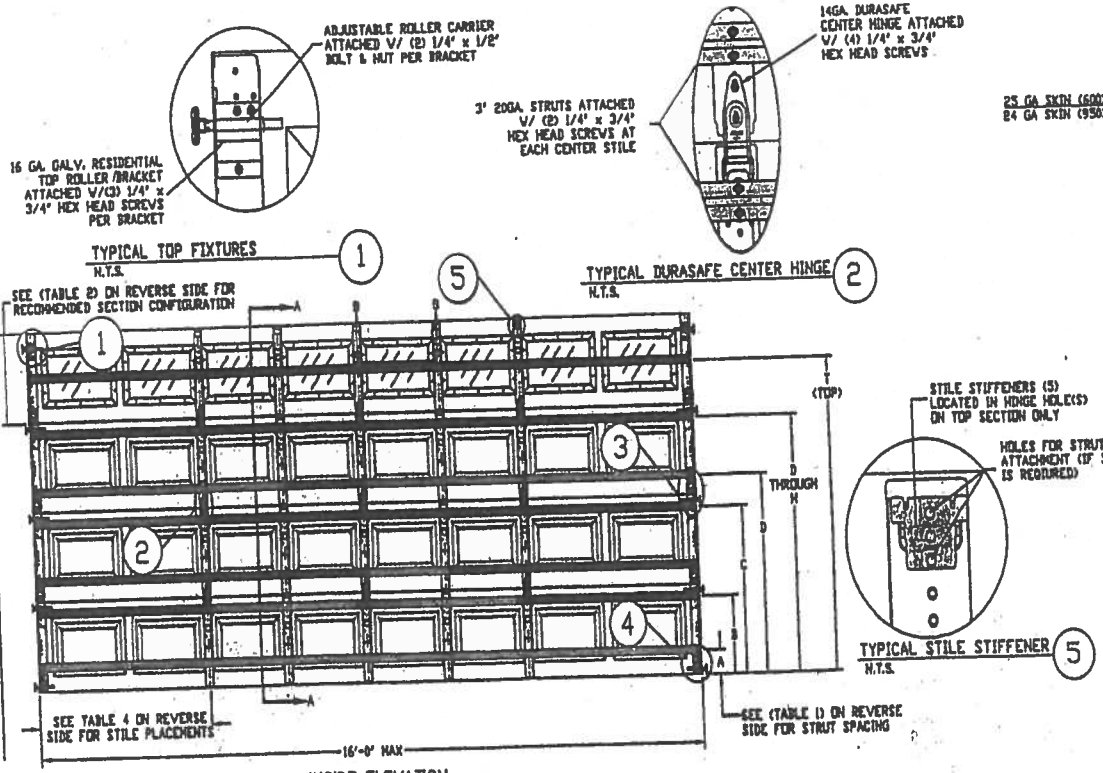
This application has glass areas that produce large heat gains for part of the day. Variable air volume devices are required to overcome spikes in solar gain for one or more rooms. Install a zoned system or provide zone control for problem rooms. Single speed equipment may not be suitable for the application.

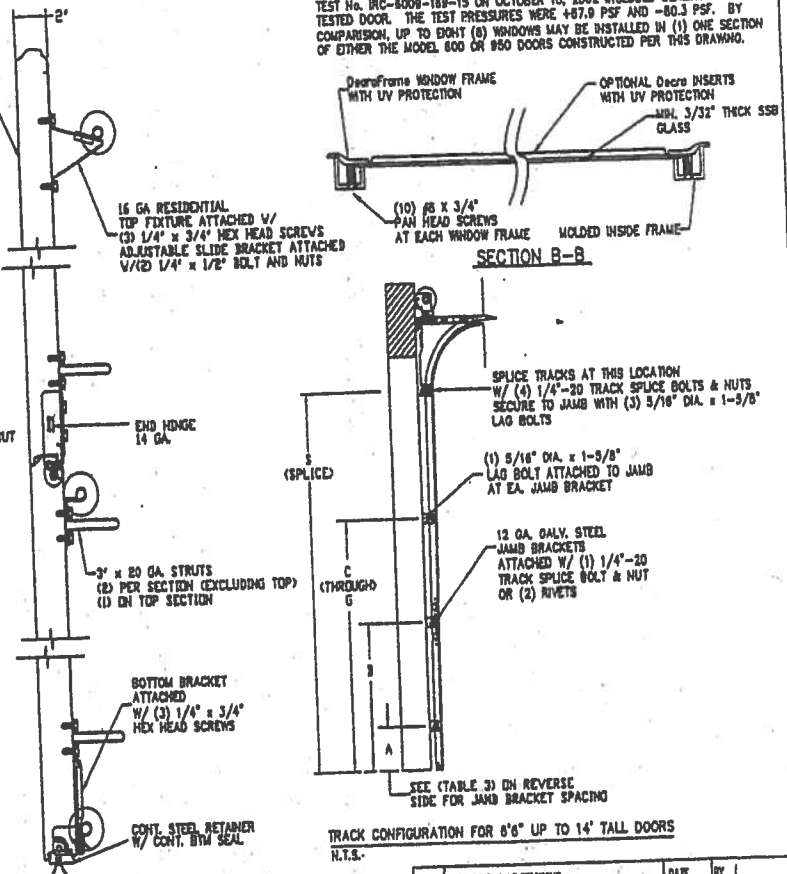
EnergyGauge® System Sizing for Florida Residences only
PREPARED BY: Keen Richard
DATE: 2-22-06

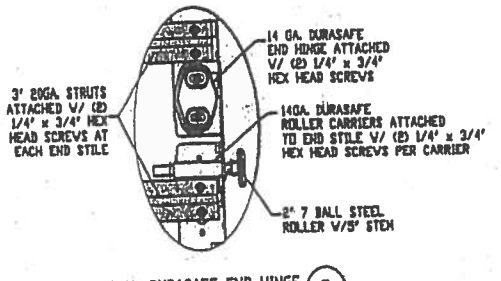
GLAZING OPTION CROSS SECTION

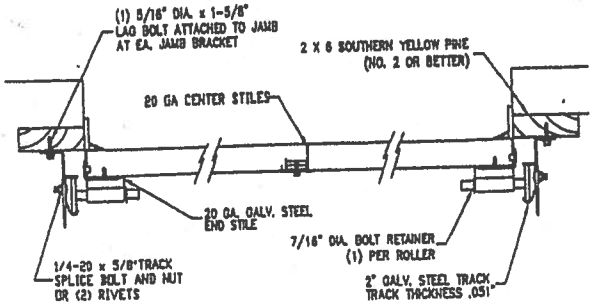
GLAZING NOT AVAILABLE IN WIND-BORNE DEBRIS REGION

TEST No. IRC-6009-169-15 ON OCTOBER 10, 2002 INCLUDED GLAZING IN THE TESTED DOOR. THE TEST PRESSURES WERE +87.9 PSF AND -80.3 PSF. BY COMPARISON, UP TO EIGHT (8) WINDOWS MAY BE INSTALLED IN (1) ONE SECTION OF EITHER THE MODEL 800 OR 950 DOORS CONSTRUCTED PER THIS DRAWING.









WOOD JAMB ATTACHMENT TO STRUCTURE

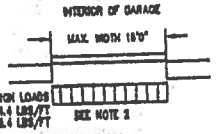
RATED FOR 120 MPH PEAK GUST) EXPOSURE B; 30' OR LESS MEAN ROOF HEIGHT

2 X 8 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO C-30 BLOCK
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
ITW/RAMSET TAPCON 1/4" X 2-3/4" STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 16" O.C.(1 1/4" EMBEDMENT)

*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.
*PREPARATION OF WOOD JAMBS BY OTHERS



SPECIFICATIONS AND NOTES

1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK, FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
2. EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +174.4 LBS/FT & -198.4 LBS/FT
3. DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 25 GA. MIN. (.018") ROLLED FORMED LIGHT COMMERCIAL QUALITY, G-40 GALVANIZATION
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
6. THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN DASMA 108, ASTM E330, AND THE SOUTHERN BUILDING CODE SECTION 1606 WIND LOAD DESIGN CRITERIA THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98 WITH THE FOLLOWING PARAMETERS:
   A. BASIC WIND SPEED OF 120 MPH (PEAK GUST)
   B. DOOR CAN BE INSTALLED WITH 5 FEET OF DOORS WIDTH INSIDE THE EDGE STRIP.
   C. 30' OR LESS MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0
   E. EXPOSURE RATING OF B
7. REFER TO TABLES ON THE REVERSE SIDE FOR ADDITIONAL DOOR WIDTHS AND THEIR DESIGN PRESSURES

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 16' x 14'

DESIGN LOADS +21.8 PSF -24.8 PSF

TEST LOADS +32.7 PSF -37.2 PSF

JUN 03 2003

Amarr GARAGE DOORS

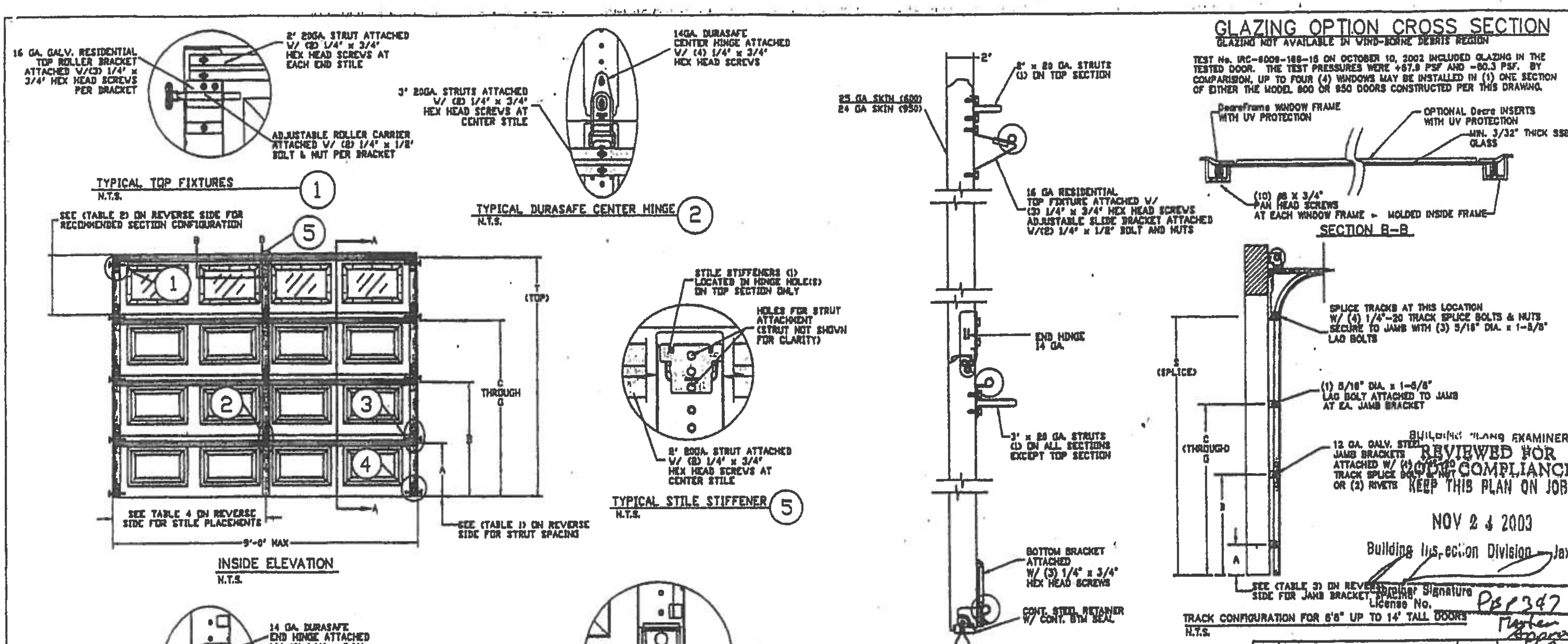
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

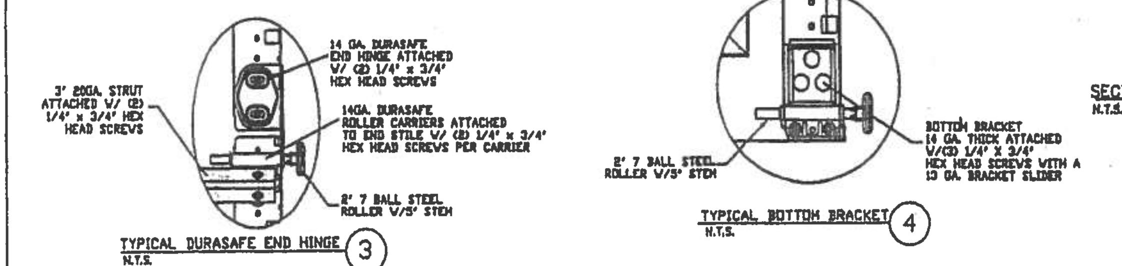
MODEL #800 STRATFORD w/DuraSafe
MODEL 950 HERITAGE w/DuraSafe
Short Panel, Long Panel, and Flush Panel

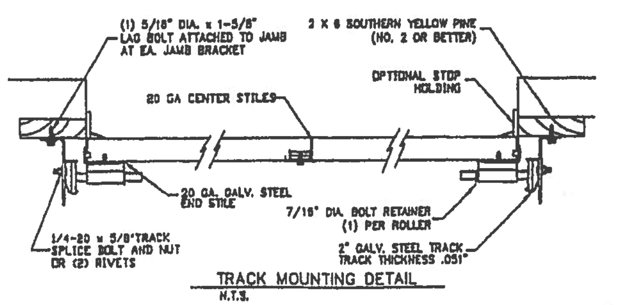
SIZE	DRAWN BY	DATE	DRAWING NUMBER
B	CHECKED BY AAE	DATE 04/15/03	IRC-6016-120-15

ENGINEER: THOMAS L. SALMERON P.E. LIC. No. 0043579 | SHEET 1 OF 1

9x7







WOOD JAMB ATTACHMENT TO STRUCTURE

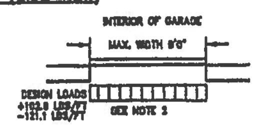
RATED FOR 120 MPH PEAK GUST; EXPOSURE B; 30' OR LESS MEAN ROOF HEIGHT

2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO C-90 BLOCK
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)
ITW/RAMSET TAPCON 1/4" X 2-3/4" STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 24" O.C.(1 1/4" EMBEDMENT)

*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.
*PREPARATION OF WOOD JAMBS BY OTHERS



SPECIFICATIONS AND NOTES

1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK, FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
2. EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +102.8 LBS/FT & -121.1 LBS/FT
3. DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 25 GA. MIN. (.019") ROLLED FORMED LIGHT COMMERCIAL QUALITY, G-40 GALVANIZATION
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
6. THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN DASMA 108, ASTM E330, AND THE SOUTHERN BUILDING CODE SECTION 1606 WIND LOAD DESIGN CRITERIA THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98 WITH THE FOLLOWING PARAMETERS:
   A. BASIC WIND SPEED OF 120 MPH (PEAK GUST)
   B. DOOR CAN BE INSTALLED WITH 5 FEET OF DOORS WIDTH INSIDE THE EDGE STRIP.
   C. 30' OR LESS MEAN ROOF HEIGHT AT ANY SLOPE
   D. USE FACTOR OF 1.0
   E. EXPOSURE RATING OF B
7. REFER TO TABLES ON THE REVERSE SIDE FOR ADDITIONAL DOOR WIDTHS AND THEIR DESIGN PRESSURES

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
9' x 14'

DESIGN LOADS
+22.8 PSF
-26.9 PSF

TEST LOADS
+34.2 PSF
-40.4 PSF

JUN 17 2003

Amarr GARAGE DOORS
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

MODEL #600 STRATFORD w/DuraSafe
MODEL 950 HERITAGE w/DuraSafe
Short Panel, Long Panel, and Flush Panel

SIZE	DRAWN BY	DLJ	DATE 05/14/03	DRAWING NUMBER
B	CHECKED BY	AAE	DATE 05/14/03	IRC-6009-120-15

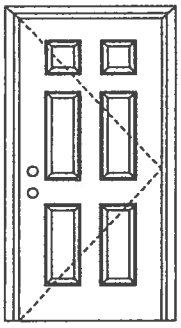
ENGINEER: THOMAS L. SHLMERDINE P.E. LIC. No. 0046579 | SHEET 1 OF 1

X
Opaque Inswing Unit

COP-WL-MA0101-02

FIBERGLASS DOORS

APPROVED ARRANGEMENT:



Note:
Units of other sizes are covered by this report as long as the panel used does not exceed 3'0" x 6'8".

Warnock Hersey

Test Data Review Certificate #3026447A; #3026447B; #3026447C and COP/Test Report Validation Matrix #3026447A-001, 002, 003; #3026447B-001, 002, 003; #3026447C-001, 002, 003 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Single Door
Maximum unit size = 3'0" x 6'8"

Design Pressure
+76.0/-76.0
limited water unless special threshold design is used.

Large Missile Impact Resistance
Hurricane protective system (shutters) is REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

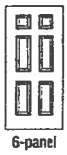
Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0001-02.

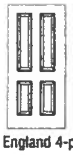
MINIMUM INSTALLATION DETAIL:

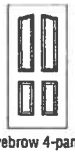
Compliance requires that minimum installation details have been followed – see MID-WL-MA0001-02.

APPROVED DOOR STYLES:

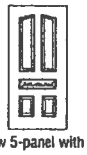

Flush


6-panel


New England 4-panel


Eyebrow 4-panel


9-panel


Eyebrow 5-panel with scroll

Oakcraft Wood-grain Textured FIBERGLASS ENTRY DOORS

ARTEK™ Non-Textured Fiberglass Entry Doors

PREMDOR Collection Premium Quality Doors

Exclusively from Masonite® Masonite International Corporation

June 17, 2002

X
Opaque Inswing Unit

COP-WL-MA0101-02

FIBERGLASS DOORS

CERTIFIED TEST REPORTS:

NCTL 210-1973-1, 2, 3

Certifying Engineer and License Number: Ramesh Patel, P.E./20224

Unit Tested in Accordance with Miami-Dade BCCO PA202.

Door panels constructed from 0.075" minimum thick fiberglass skins. Both stiles constructed of 1-5/8" laminated lumber. Top end rails constructed of 31/32" wood. Bottom end rails constructed of 31/32" wood composite. Interior cavity of slab filled with rigid polyurethane foam core.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN
ACCORDANCE WITH
MIAMI-DADE BCCO PA202

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

Kurt L Balthazor

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Warnock Hersey

Test Data Review Certificate #3026447A; #3026447B; #3026447C and COP/Test Report Validation Matrix #3026447A-001, 002, 003; #3026447B-001, 002, 003; #3026447C-001, 002, 003 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Oakcraft™ Wood-grain Textured FIBERGLASS ENTRY DOORS

ARTEK™ Non-Textured Fiberglass Entry Doors

PREMDOR Collection Premium Quality Doors

Exclusively from Masonite®
Masonite International Corporation

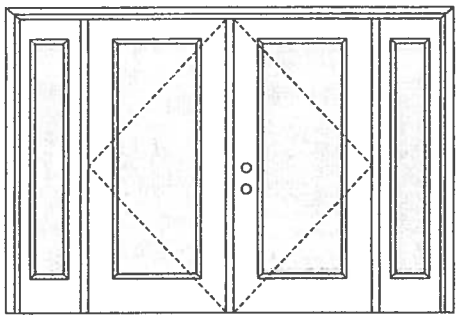
June 17, 2002

OXXO
Glazed Inswing Unit

COP-WL-MA0145-02

FIBERGLASS DOORS

APPROVED ARRANGEMENT:



Warnock Hersey

Test Data Review Certificate #3026447A; #3026447B; #3026447C and COP/Test Report Validation Matrix #3026447A-001, 002, 003; #3026447B-001, 002, 003; #3026447C-001, 002, 003 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Note:
Units of other sizes are covered by this report as long as the panels used do not exceed 3'0" x 6'8".

Double Door with 2 Sidelites
Maximum unit size = 12'0" x 6'8"

Design Pressure
+52.0/-52.0
Limited water unless special threshold design is used.

Large Missile Impact Resistance
Hurricane protective system (shutters) is REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

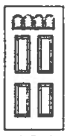
Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0005-02 or MAD-WL-MA0008-02 and MAD-WL-MA0041-02.

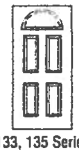
MINIMUM INSTALLATION DETAIL:

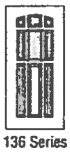
Compliance requires that minimum installation details have been followed – see MID-WL-MA0005-02.

APPROVED DOOR STYLES:

1/4 GLASS:

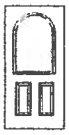

100 Series

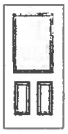

133, 135 Series


136 Series


822 Series

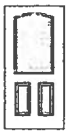
1/2 GLASS:

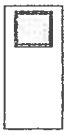

105 Series

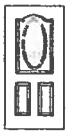

106, 160 Series*


129 Series*


12 R/L, 23 R/L, 24 R/L Series*


107 Series*


108 Series


304 Series

*This glass kit may also be used in the following door style: Eyebrow 5-panel with scroll.

Oakcraft Wood-grain Textured FIBERGLASS ENTRY DOORS

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June 17, 2002

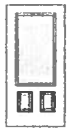
OXXO
Glazed Inswing Unit

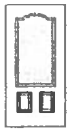
COP-WL-MA0145-02

FIBERGLASS DOORS

APPROVED DOOR STYLES:

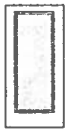
3/4 GLASS:

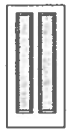

404 Series


410 Series

FULL GLASS:


109 Series


114, 120, 122 Series


152 Series


149 Series


300 Series

APPROVED SIDELITE STYLES:

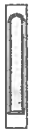

129 Series


200 Series


12R, 12L, 23R, 23L, 24R, 24L Series


450 Series


152 Series


149 Series


109 Series


120, 122 Series


300 Series

CERTIFIED TEST REPORTS:

CTLA-805W-2

Certifying Engineer and License Number: Ramesh Patel, P.E./20224

Unit Tested in Accordance with Miami-Dade BCCO PA202.

Door panels constructed from 0.075" minimum thick fiberglass skins. Both stiles constructed of 1-5/8" laminated lumber. Top end rails constructed of 31/32" wood. Bottom end rails constructed of 31/32" wood composite. Interior cavity of slab filled with rigid polyurethane foam core. Slab glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN
ACCORDANCE WITH
MIAMI-DADE BCCO PA202

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

Kurt L Balthy

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Warnock Hersey

Test Data Review Certificate #3026447A; #3026447B; #3026447C and COP/Test Report Validation Matrix #3026447A-001, 002, 003; #3026447B-001, 002, 003; #3026447C-001, 002, 003 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Oakcraft Wood-grain Textured FIBERGLASS ENTRY DOORS

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Masonite International Corporation

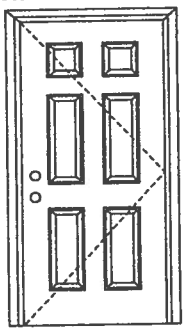
June 17, 2002

X
Opaque Inswing Unit

COP-WL-JH4101-02

WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Note:
Units of other sizes are covered by this report as long as the panel used does not exceed 3'0" x 6'8".

Warnock Hersey

Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Single Door
Maximum unit size = 3'0" x 6'8"

Design Pressure
+66.0/-66.0
limited water unless special threshold design is used.

Large Missile Impact Resistance
Hurricane protective system (shutters) is NOT REQUIRED.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

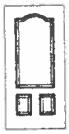
Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0001-02.

MINIMUM INSTALLATION DETAIL:

Compliance requires that minimum installation details have been followed – see MID-WL-MA0001-02.

APPROVED DOOR STYLES:


Flush

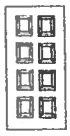

Arch Top 3-panel


3-panel


6-panel


New England 4-panel

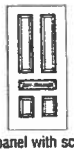

Eyebrow 4-panel


8-panel


9-panel


15-panel


5-panel


5-panel with scroll


Eyebrow 5-panel


Eyebrow 5-panel with scroll

Johnson™ EntrySystems

June 17, 2002
Our continuing program of product improvement makes specifications, design and product detail subject to change without notice.

PREMDOR Collection Premium Quality Doors

Exclusively from Masonite®
Masonite International Corporation

X
Opaque Inswing Unit

COP-WL-JH4101-02

WOOD-EDGE STEEL DOORS

CERTIFIED TEST REPORTS:

NCTL 210-2185-1, 2, 3

Certifying Engineer and License Number: Barry D. Portney, P.E. / 16258.

Unit Tested in Accordance with Miami-Dade BCCO PA201, PA202 and PA203.

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.041" steel. Bottom end rails constructed of 0.021" steel. Interior cavity of slab filled with rigid polyurethane foam core.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN ACCORDANCE WITH
MIAMI-DADE BCCO
PA201, PA202 & PA203

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

Kurt L Balthy

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Warnock Hersey

Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

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PREMDOR Collection Premium Quality Doors

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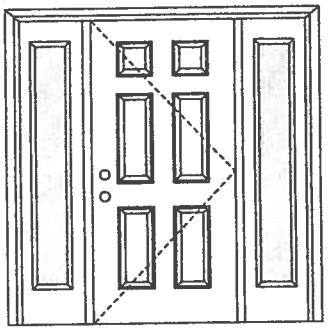
Masonite International Corporation

OXO
Opaque Inswing Unit

COP-WL-JH4104-02

WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



Single Door with 2 Sidelites
Maximum unit size = 9'0" x 6'8"

Note:
Units of other sizes are covered by this report as long as the panels used do not exceed 3'0" x 6'8".

Warnock Hersey

Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Design Pressure

+57.0/-57.0 with maximum sidelite panel width of 1'2"
+45.0/-45.0 with maximum sidelite panel width of 3'0"
limited water unless special threshold design is used.

Large Missile Impact Resistance

Hurricane protective system (shutters) is NOT REQUIRED on opaque panels, but is required on glazed panels.

Actual design pressure and impact resistant requirements for a specific building design and geographic location is determined by ASCE 7-national, state or local building codes specify the edition required.

MINIMUM ASSEMBLY DETAIL:

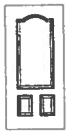
Compliance requires that minimum assembly details have been followed – see MAD-WL-MA0004-02 or MAD-WL-MA0007-02 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

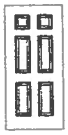
Compliance requires that minimum installation details have been followed – see MID-WL-MA0004-02.

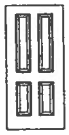
APPROVED DOOR STYLES:

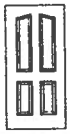

Flush

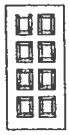

Arch Top 3-panel


3-panel


6-panel

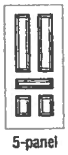

New England 4-panel

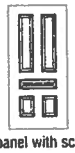

Eyebrow 4-panel


8-panel


9-panel


15-panel


5-panel


5-panel with scroll


Eyebrow 5-panel


Eyebrow 5-panel with scroll

Johnson™ EntrySystems

June 17, 2002
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PREMDOR Collection Premium Quality Doors

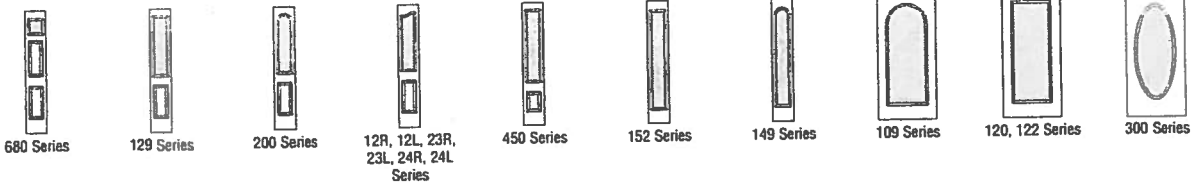
Exclusively from Masonite®
Masonite International Corporation

OXO
Opaque Inswing Unit

COP-WL-JH4104-02

WOOD-EDGE STEEL DOORS

APPROVED SIDELITE STYLES:



680 Series | 129 Series | 200 Series | 12R, 12L, 23R, 23L, 24R, 24L Series | 450 Series | 152 Series | 149 Series | 109 Series | 120, 122 Series | 300 Series

CERTIFIED TEST REPORTS:

NCTL 210-1905-7, 8, 9, 10, 11, 12; NCTL 210-1861-4, 5, 6, 10, 11, 12; NCTL-210-1880-7, 9, 10, 12; NCTL 210-2185-1, 2, 3

Certifying Engineer and License Number: Barry D. Portney, P.E. / 16258.

Unit Tested in Accordance with Miami-Dade BCCO PA201, PA202 and PA203.

Evaluation report NCTL-210-2794-1

Door panels constructed from 26-gauge 0.017" thick steel skins. Both stiles constructed from wood. Top end rails constructed of 0.041" steel. Bottom end rails constructed of 0.021" steel. Interior cavity of slab filled with rigid polyurethane foam core. Sidelite panels glazed with insulated glass mounted in a rigid plastic lip lite surround.

Frame constructed of wood with an extruded aluminum threshold.

PRODUCT COMPLIANCE LABELING:

TESTED IN ACCORDANCE WITH
MIAMI-DADE BCCO
PA201, PA202 & PA203

COMPANY NAME
CITY, STATE

To the best of my knowledge and ability the above side-hinged exterior door unit conforms to the requirements of the 2001 Florida Building Code, Chapter 17 (Structural Tests and Inspections).

Kurt L Balthy

State of Florida, Professional Engineer
Kurt Balthazor, P.E. – License Number 56533

Warnock Hersey

Test Data Review Certificate #3026447A and COP/Test Report Validation Matrix #3026447A-001 provides additional information - available from the ITS/WH website (www.etlsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Johnson™ EntrySystems

June 17, 2002
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PREMDOOR Collection Premium Quality Doors

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AAMA/NWWDA 101/I.S.2-97
TEST REPORT SUMMARY

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 650 Fin
TYPE: Aluminum Single Hung Window

Title of Test	Results
Rating	H-R40 52 x 72
Overall Design Pressure	+45.0 psf -47.2 psf
Operating Force	11 lb max.
Air Infiltration	0.13 cfm/ft^2
Water Resistance	6.00 psf
Structural Test Pressure	+67.5 psf -70.8 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 01-41134.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Mark A. Hess, Technician

MAH:nlb

ALLEN M. REEVES
CERTIFICATE
NO. 18354
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Architectural Testing

AAMA/NWWDA 101/I.S.2-97 TEST REPORT

Rendered to

MI HOME PRODUCTS, INC.
650 West Market Street
P.O. Box 370
Gratz, Pennsylvania 17030-0370

Report No: 01-41134.01
Test Date: 03/07/02
Report Date: 03/26/02
Expiration Date: 03/07/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to perform tests on Series/Model 650 Fin, aluminum single hung window at their facility located in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for a H-R40 52 x 72 rating.

Test Specification: The test specimen was evaluated in accordance with AAMA/NWWDA 101/I.S.2-97, *Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.*

Test Specimen Description:

Series/Model: 650 Fin

Type: Aluminum Single Hung Window

Overall Size: 4' 4-1/4" wide by 6' 0-3/8" high

Active Sash Size: 4' 1-3/4" wide by 3' 0-5/8" high

Daylight Opening Size: 3' 11-3/8" wide by 2' 9-1/2" high

Screen Size: 4' 0-1/4" wide by 2' 11-1/8" high

Finish: All aluminum was white.

Glazing Details: The active and fixed lites utilized 5/8" thick, sealed insulating glass constructed from two sheets of 1/8" thick, clear annealed glass and a metal reinforced butyl spacer system. The active sash was channel glazed utilizing a flexible vinyl wrap around gasket. The fixed lite was interior glazed against double-sided adhesive foam tape and secured with PVC snap-in glazing beads.

130 Derry Court
York, PA 17402-9805
phone: 717.764.7700
fax: 717.764.4129
www.architest.com

Allen N. Reeves

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No. 19354
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Test Specimen Description: (Continued)

Weatherstripping:

Description	Quantity	Location
0.230" high by 0.270" backed polypile with center fin	1 Row	Fixed meeting rail
0.250" high by 0.187" backed polypile with center fin	2 Rows	Active sash stiles
1/2" x 1/2" dust plug	4 Pieces	Active sash, top and bottom of stiles
1/4" foam-filled vinyl bulb seal	1 Row	Active sash, bottom rail

Frame Construction: The frame was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1" screws through the head and sill into each jamb screw boss. End caps were utilized on the ends of the fixed meeting rail and secured with two 1-1/4" screws per cap. Meeting rail was secured to the frame utilizing two 1-1/4" screws.

Sash Construction: The sash was constructed of extruded aluminum with coped, butted, and sealed corners fastened with two #8 x 1-1/2" screws through the rails into each jamb screw boss.

Screen Construction: The screen was constructed from roll-formed aluminum with keyed corners. The fiberglass mesh was secured with a flexible spline.

Hardware:

Description	Quantity	Location
Metal cam lock with keeper		Midspan, active meeting rail with keeper adjacent on fixed meeting rail
Plastic tilt latch	2	Active sash, meeting rail ends
Metal tilt pin	2	Active sash, bottom rail ends
Balance assembly	2	One in each jamb
Screen plunger	2	4" from rail ends on top rail

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FLORIDA
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Allen N. Reeves

Test Specimen Description: (Continued)

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood test buck with #8 x 1-5/8" drywall screws every 8" on center around the nail fin. Polyurethane was used as a sealant under the nail fin and around the exterior perimeter.

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
2.2.1.6.1	Operating Force	11 lbs	30 lbs max
	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.13 cfm/ft^2	0.3 cfm/ft^2 max
	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 2.86 psf	No leakage	No leakage
2.1.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 33 seconds)		
	@ 25.9 psf (positive)	0.42"*	0.26" max.
	@ 34.7 psf (negative)	0.43"*	0.26" max.
2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)		
	@ 38.9 psf (positive)	0.02"	0.18" max.
	@ 52.1 psf (negative)	0.02"	0.18" max.

Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.

**Exceeds L/175 for deflection, but passes all other test requirements.*

Allen N. Reeves
1 APRIL 2002

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NO. 1[illegible]
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PROFESSIONAL ENGINEER

Test Specimen Description: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
2.2.1.6.2	Deglazing Test (ASTM E 987)		
	In operating direction at 70 lbs		
	Meeting rail	0.12"/25%	0.50"/100%
	Bottom rail	0.12"/25%	0.50"/100%
	In remaining direction at 50 lbs		
	Left stile	0.06"/12%	0.50"/100%
	Right stile	0.06"/12%	0.50"/100%
	Forced Entry Resistance (ASTM F 588-97)		
	Type: A Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Tests A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry
Optional Performance			
4.3	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 6.00 psf	No leakage	No leakage
	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 33 seconds)		
	@ 45.0 psf (positive)	0.47"*	0.26" max.
	@ 47.2 psf (negative)	0.46"*	0.26" max.

**Exceeds L/175 for deflection, but passes all other test requirements.*

Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the meeting rail) (Loads were held for 10 seconds)		
@ 67.5 psf (positive)	0.05"	0.18" max.
@ 70.8 psf (negative)	0.05"	0.18" max.

Allen N. Reeves
1 APRIL 2002

ALLEN N. REEVES
CERTIFICATE NO. 19356
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. This report does not constitute certification of this product, which may only be granted by the certification program administrator.

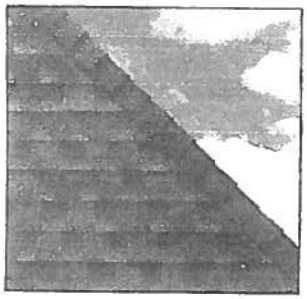
For ARCHITECTURAL TESTING, INC:

Mark A. Hess
Technician

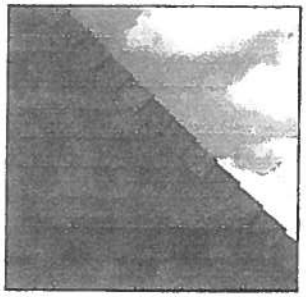
Allen N. Reeves, P.E.
Director - Engineering Services
1 APRIL 2002

MAH:nlb
01-41134.01

ELK Roofing Products Specifications – Tuscaloosa, AL



PRESTIQUE®
HIGH DEFINITION®



RAISED PROFILE™

Prestique Plus *High Definition* and Prestique Gallery Collection™

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/98.5 sq.ft.
Squares/Pallet	11

50-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

Raised Profile

Product size	13¼"x 38¾"
Exposure	5⅝"
Pieces/Bundle	22
Bundles/Square	3/100 sq.ft.
Squares/Pallet	16

30-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

Prestique I *High Definition*

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/98.5 sq.ft.
Squares/Pallet	14

40-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

Prestique *High Definition*

Product size	13¼"x 38¾"
Exposure	5⅝"
Pieces/Bundle	22
Bundles/Square	3/100 sq.ft.
Squares/Pallet	16

30-year limited warranty period: non-prorated coverage for shingles and application labor for the initial 5 years, plus an option for transferability*; prorated coverage for application labor and shingles for balance of limited warranty period; 5-year limited wind warranty*.

HIP AND RIDGE SHINGLES

Seal-A-Ridge® w/*FLX*™

Size: 12"x 12"
Exposure: 6⅓"
Pieces/Bundle: 45
Coverage: 4 Bundles = 100 linear feet

Elk Starter Strip

52 Bundles/Pallet
18 Pallets/Truck
936 Bundles/Truck
19 Pieces/Bundle
1 Bundle = 120.33 linear feet

Available Colors: Antique Slate, Weatheredwood, Shakewood, Sablewood, Hickory, Barkwood**, Forest Green, Wedgewood**, Birchwood**, Sandalwood. *Gallery Collection:* Balsam Forest™, Weathered Sage™, Sienna Sunset™.

All Prestique, Raised Profile and Seal-A-Ridge roofing products contain Elk WindGuard® sealant. WindGuard activates with the sun's heat, bonding shingles into a wind and weather resistant cover that resists blow-offs and leaks.

Check for availability with built-in StainGuard® treatment to inhibit the discoloration of roofing granules caused by the growth of certain types of algae. Not available in Sablewood.

All Prestique and Raised Profile shingles meet UL® Wind Resistant (UL 997) and Class "A" Fire Ratings (UL 790); and ASTM Specifications D 3018, Type-I; D 3161, Type-I; E 108 and the requirements of ASTM D 3462.

All Prestique and Raised Profile shingles meet the latest Metro Dade building code requirements.

***See actual limited warranty for conditions and limitations.**
****Check for product availability.**

SPECIFICATIONS

SCOPE: Work includes furnishing all labor, materials and equipment necessary to complete installation of (name) shingles specified herein. Color shall be (name of color). Hip and ridge type to be Elk Seal-A-Ridge with formula *FLX*.

All exposed metal surfaces (flashing, vents, etc.) to be painted with matching Elk roof accessory paint.

PREPARATION OF ROOF DECK: Roof deck to be dry, well-seasoned 1" x 6" (25.4mm x 152.4mm) boards; exterior-grade plywood (exposure 1 rated sheathing) at least 3/8" (9.525mm) thick conforming to the specifications of the American Plywood Association; 7/16" (11.074mm) oriented strandboard; or chipboard. Most fire retardant plywood decks are NOT approved substrates for Elk shingles. Consult Elk Field Service for application specifications over other decks and other slopes.

MATERIALS: Underlayment for standard roof slopes, 4" per foot (101.6/304.8mm) or greater: apply non-perforated No. 15 or 30 asphalt-saturated felt underlayment. For low slopes [4" per foot (101.6/304.8mm) to a minimum of 2" per foot (50.8/304.8mm)], use two plies of underlayment overlapped a minimum of 19". Fasteners shall be of sufficient length and holding power for securing material as required by the application instructions printed on shingle wrapper.

For areas where algae is a problem, shingles shall be (name) with StainGuard treatment, as manufactured by the Elk Tuscaloosa plant. Hip and ridge type to be Seal-A-Ridge with formula *FLX* with StainGuard treatment.

Complete application instructions are published by Elk and printed on the back of every shingle bundle. All warranties are contingent upon the correct installatior as shown on the instructions. These instructions are the minimum required to meet Elk application requirements In some areas, building codes may require additiona application techniques or methods beyond ou instructions. In these cases, the local code must b followed. Under no circumstances will Elk accep application requirements less than those contained in it application instructions.

For specifications in CSI format, call 800.354.SPEC (7732 or e-mail specinfo@elkcorp.com.

SOUTHEAST & ATLANTIC OFFICE:
800.945.5551

CORPORATE HEADQUARTERS:
800.354.7732

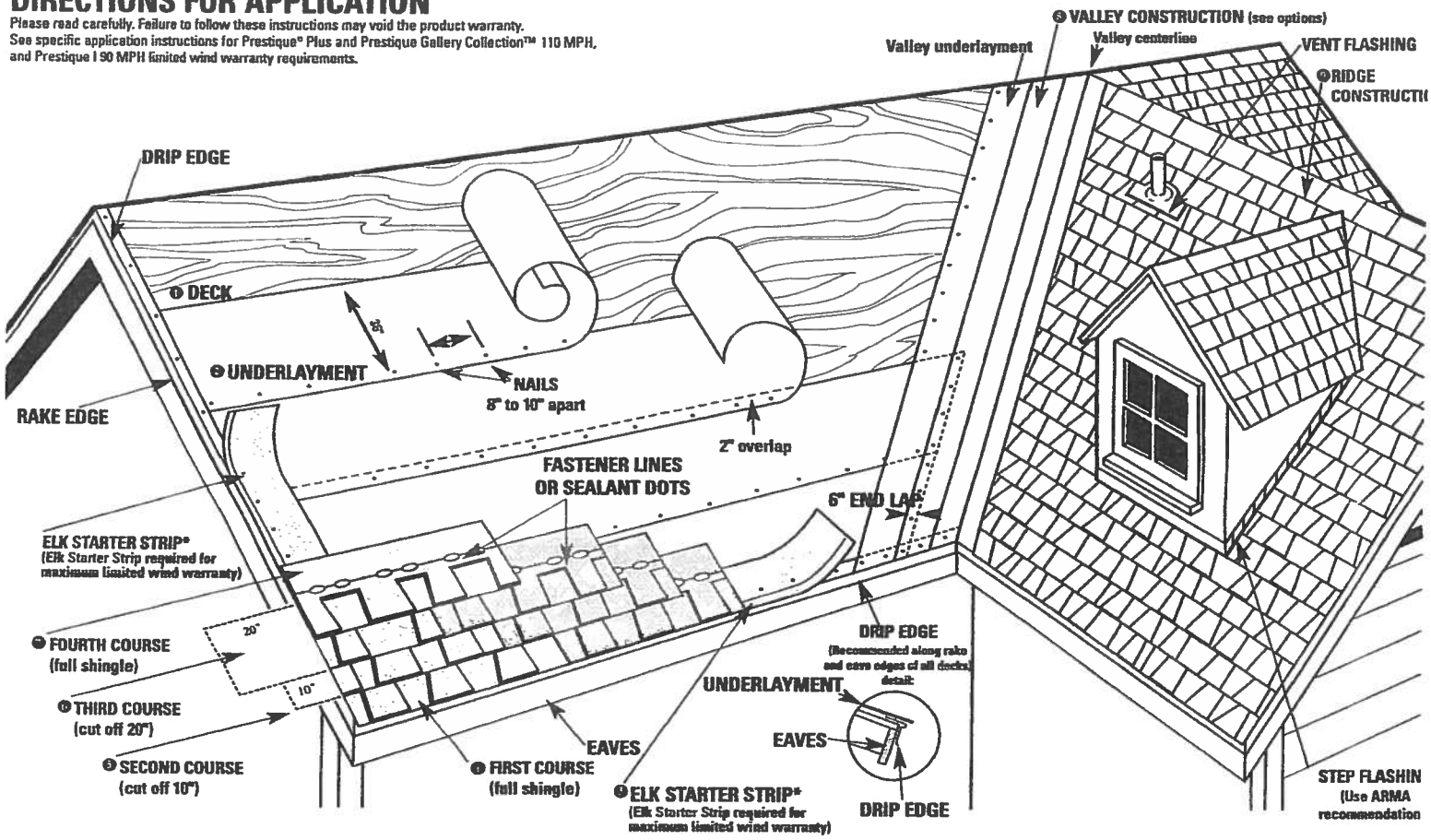
PLANT LOCATION:
800.945.5545

ELK
www.elkcorp.com

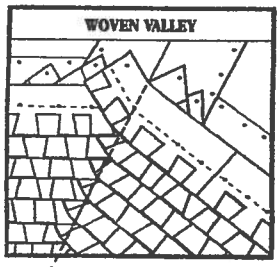
SSOOT 01/02

DIRECTIONS FOR APPLICATION

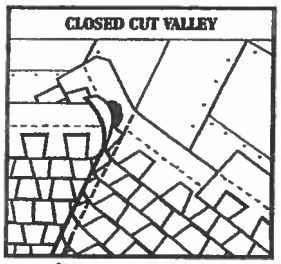
Please read carefully. Failure to follow these instructions may void the product warranty.
See specific application instructions for Prestique® Plus and Prestique Gallery Collection™ 110 MPH, and Prestique I 90 MPH limited wind warranty requirements.



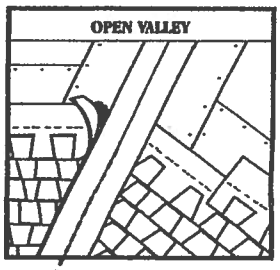
⑤ **VALLEY CONSTRUCTION OPTION** (California Open and California Closed are also acceptable) NOTE: For complete ARMA valley installation details, see ARMA Residential Asphalt Roofing Manu



VALLEY CENTER LINE



VALLEY CENTER LINE



VALLEY CENTER LINE

DIRECTIONS FOR APPLICATION

These application instructions are the minimum required to meet Elk's application requirements. Your failure to follow these instructions may void the product warranty. In some areas, the building codes may require additional application techniques or methods beyond our instructions. In these cases, the local code must be followed. Under no circumstances will Elk accept application requirements that are less than those printed here. Shingles should not be jammed tightly together. All attics should be properly ventilated. Note: It is not necessary to remove tape on back of shingle.

❶ DECK PREPARATION

Roof decks should be dry, well-seasoned 1" x 6" boards or exterior grade plywood minimum 3/8" thick and conform to the specifications of the American Plywood Association or 7/16" oriented strandboard, or 7/16" chipboard.

❷ UNDERLAYMENT

Apply underlayment (Non-Perforated No. 15 or 30 asphalt saturated felt). Cover drip edge at eaves only.

For low slope (2/12 up to 4/12), completely cover the deck with two plies of underlayment overlapping a minimum of 19". Begin by fastening a 19" wide strip of underlayment placed along the eaves. Place a full 36" wide sheet over the starter, horizontally placed along the eaves and completely overlapping the starter strip.

EAVE FLASHING FOR ICE DAMS (ASK A ROOFING CONTRACTOR, REFER TO ARMA MANUAL OR CHECK LOCAL CODES)

For standard slope (4/12 to less than 21/12), use coated roll roofing of no less than 50 pounds over the felt underlayment extending from the eave edge to a point at least 24" beyond the inside wall of the living space below or one layer of a self-adhered eave and flashing membrane.

For low slope (2/12 up to 4/12), use a continuous layer of asphalt plastic cement between the two plies of underlayment from the eave edge up roof to a point at least 24" beyond the inside wall of the living space below or one layer of a self-adhered eave and flashing membrane.

Consult the Elk Field Service Department for application specifications over other decks and other slopes.

❸ STARTER SHINGLE COURSE

USE AN ELK STARTER STRIP OR A STRIP SHINGLE INVERTED WITH THE HEADLAP APPLIED AT THE EAVE EDGE. With at least 4" trimmed from the end of the first shingle, start at the rake edge overhanging the eave 1/2" to 3/4". Fasten 2" from the lower edge and 1" from each side.

❹ FIRST COURSE

Start at rake and continue course with full shingles laid flush with the starter course. Shingles may be applied with a course alignment of 45° on the roof.

❺ SECOND COURSE

Start at the rake with the shingle having 10" trimmed off and continue across roof with full shingles.

❻ THIRD COURSE

Start at the rake with the shingle having 20" trimmed off and continue across roof with full shingles.

❼ FOURTH COURSE

Start at the rake and continue with full shingles across roof.

FIFTH AND SUCCEEDING COURSES.

Repeat application as shown for second, third, and fourth courses. Do not rack shingles straight up the roof.

❽ VALLEY CONSTRUCTION

Open, woven and closed cut valleys are acceptable when applied by Asphalt Roofing Manufacturing Association (ARMA) recommended procedures. For metal valleys, use 36" wide vertical underlayment prior to applying 18" metal flashing (secure edge with nails). No nails are to be within 6" of valley center.

❾ RIDGE CONSTRUCTION

For ridge construction use Class "A" Seal-A-Ridge® with formula *FLX*™ (See ridge package for installation instructions.)

FASTENERS

While nailing is the preferred method for Elk shingles, Elk will accept fastening methods according to the following instructions.

Always nail or staple through the fastener line or on products without fastener lines, nail or staple between and in line with sealant dots.

NAILS: Corrosive resistant, 3/8" head, minimum 12-gauge roofing nails. Elk recommends 1-1/4" for new roofs and 1-1/2" for roof-overs. In cases where you are applying shingles to a roof that has an exposed overhang, for new roofs only, 3/4" ring shank nails are allowed to be used from the eave's edge to a point up the roof that is past the outside wall line. 1" ring shank nails allowed for re-roof.

STAPLES: Corrosive resistant, 16-gauge minimum, crown width minimum of 15/16". Note: An improperly adjusted staple gun can result in raised staples that can cause a fish-mouthed appearance and can prevent sealing.

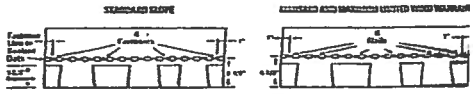
Fasteners should be long enough to obtain 3/4" deck penetration or penetration through deck, whichever is less.

MANSARD APPLICATIONS

Correct fastening is critical to the performance of the roof. For slopes exceeding 60° (or 21/12) use six fasteners per shingle. Locate fasteners in the fastener area 1" from each side edge with the remaining four fasteners equally spaced along the length of the double thickness (laminated) area. Only fastening methods according to the above instructions are acceptable.

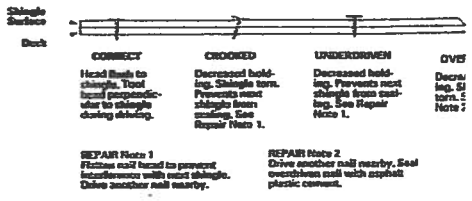
LIMITED WIND WARRANTY

- For a Limited Wind Warranty, all Prestique and Raised Profile™ shingles must be applied with 4 properly placed fasteners, or in the case of mansard applications, 6 properly placed fasteners per shingle.
- For a Limited Wind Warranty up to 110 MPH for Prestique Gallery Collection or Prestique Plus or 90 MPH for Prestique I, shingles must be applied with 6 properly placed NAILS per shingle. SHINGLES APPLIED WITH STAPLES WILL NOT QUALIFY FOR THIS ENHANCED LIMITED WIND WARRANTY. Also, Elk Starter Strip shingles must be applied at the eaves and rake edges to qualify Prestique Plus, Prestique Gallery Collection and Prestique I shingles for this enhanced Limited Wind Warranty. Under no circumstances should the Elk Shingles or the Elk Starter Strip overhang the eaves or rake edge more than 3/4 of an inch.



HELP STOP BLOW-OFFS AND CALL-BACKS

A minimum of four fasteners must be driven into the DOU THICKNESS (laminated) area of the shingle. Nails or ste must be placed along – and through – the "fastener line" o products without fastener lines, nail or staple between al line with sealant dots. CAUTION: Do not use fastener lin shingle alignment.



Refer to local codes which in some areas may require spe application techniques beyond those Elk has specified. All Prestique and Raised Profile shingles have a U.L.® Resistance Rating when applied in accordance with t instructions using nails or staples on re-roofs as well as construction.

CAUTION TO WHOLESALER: Careless and impro storage or handling can harm fiberglass shing Keep these shingles completely covered, reasonably cool, and protected from the weat Do not store near various sources of heat. Do store in direct sunlight until applied. DO N DOUBLE STACK. Systematically rotate all stock that the material that has been stored the long will be the first to be moved out.

ELK

www.elkcorp.c

THE RENAISSANCE SERIES

Colonial

VENT-FREE GAS FIREPLACES

V32/36/42/50 Model Series

Warm Up To A High-Efficiency Colonial

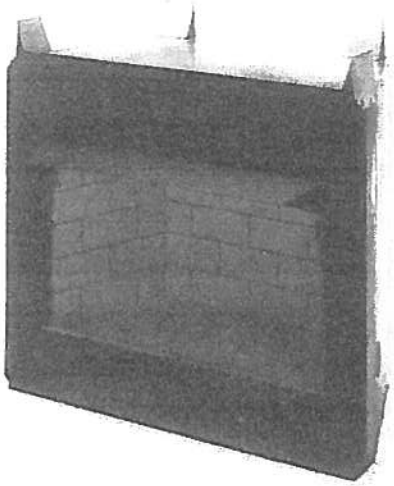
There's a growing demand for vent-free gas fireplaces because they're 99 percent energy-efficient and can be installed virtually anywhere. FMI's *Colonial* vent-free models deliver these benefits and more. They're part of our exciting new Renaissance Series, which offers a consistent look, sizing and construction across the entire line...plus beautiful new features homeowners will love!

Homeowner Highlights:

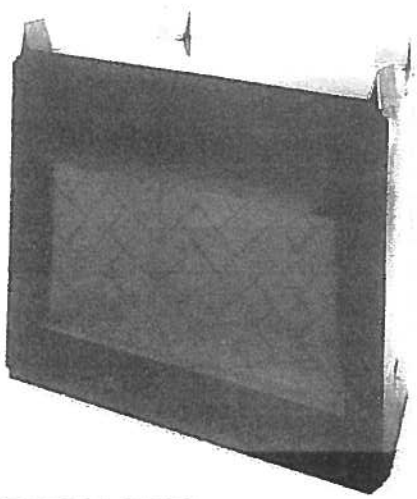
- **Visual appeal**—The industry's finest textured refractory brick liner (except 32") offers the attractive look of a true masonry fireplace.
- **Many luxury features are standard**—The Colonial comes standard with a heat deflection hood, hidden screen pockets (except 50"), stamped steel louvered panels, and other distinctive features.
- **Dollar-saving efficiency**—Paired with an Fmi vent free gas log heater, the systems 99% energy efficiency can provide dramatic energy savings.

Builder Benefits:

- **Straight, secure installation**—We've added full-length nailing flanges, and drywall stops.
- **Flexibility in the field**—You can quickly convert from louvered to clean face at any time (except 50").
- **Economical and versatile**—There's no chimney required. Can be installed virtually anywhere.



V36 is our louver-faced 36" fireplace with textured refractory brick-lined interior.

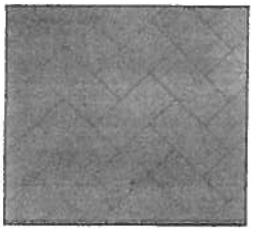


V42 is FMI's 42" louvered-face fireplace shown with optional herringbone textured refractory brick-lined interior.

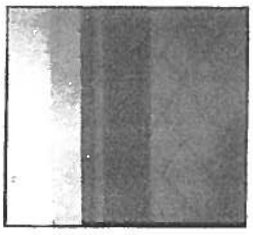
Colonial Vent-Free Fireplace Product Offering Summary

32", 36", 42" & 50" Vent-Free Fireplace Models Available With The Following:

- Clean or Louver (Circulating) Faced Models Available (Clean Faced only on 50")
- Traditional Stacked and Herringbone Pattern Refractory Brick-Lined Interiors
- Solid wrap or Outside Air Ready Models



The Colonial features the industry's finest textured refractory brick lining.

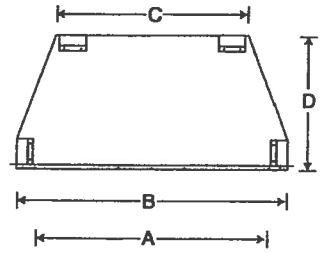


You get straight, solid installation, thanks to our full-length nailing flanges and drywall stops.

Accessory Offering Summary

- Rolled Black Louver Panels
- Louver Trim (Brushed Brass & Platinum)
- Decorative Filigree Panels (Black, Brushed Brass & Platinum)
- Perimeter Trim Kits (Black, Brushed Brass & Platinum)
- Heat Deflection Hoods (Brushed Brass & Platinum)
- Fan Kits
- Standard & Herringbone Refractory Brick Liners

Dimensions (For reference only. Not for Installation)



	32"	36"	42"	50"
A	29 1/2	35	42	50
B	34 1/2	41	48	59
C	22 3/8	29	36 1/16	38 1/2
D	16 3/4	21	23 1/16	28 1/2
X	18 1/4	21	24	30
Y	32 1/4	36	40	49
Z	36 1/2	40 5/8	44 1/4	54 3/4

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For more information, call (866) 328-4537