DATE 04/14/2004

Columbia County Building Permit

This Permit Expires One Year From the Date of Issue

PERMIT
000021736

APPLICANT AMY ATKINS PHONE 754-5555

ADDRESS 248 NW KELLY LAKE COURT LAKE CITY FL 32025

OWNER MATTHEW ERKINGER PHONE 754-5555

ADDRESS 231 NW KELLY LAKE COURT LAKE CITY FL 32055

CONTRACTOR MATTHEW ERKINGER PHONE

LOCATION OF PROPERTY 90W, TR ON BROWN RD, TL EMERALD LAKES DR., TR ON ZACK, TL ON KELLY LAKE COURT, HOUSE ON BOTTOM OF HILL ON LEFT

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 109350.00

HEATED FLOOR AREA 2187.00 TOTAL AREA 3142.00 HEIGHT .00 STORIES 1

FOUNDATION CONC WALLS FRAMED ROOF PITCH 7/12 FLOOR SLAB

LAND USE & ZONING RSF-2 MAX. HEIGHT 19

Minimum Set Back Requirments: STREET-FRONT 25.00 REAR 15.00 SIDE 10.00

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

PARCEL ID 28-3S-16-02372-902 SUBDIVISION KELLY LAKE

LOT 2 BLOCK PHASE UNIT TOTAL ACRES 2.78

000000271	N	RR0067135	Amy Atkins	
Culvert Permit No.	Culvert Waiver	Contractor's License Number	Applicant/Owner/Contractor	
PERMIT	04-0071-N	BK	JK	Y
Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident

COMMENTS: ONE FOOT ELEVATION LETTER RECEIVED, NOC ON FILE

Check # or Cash 13505

FOR BUILDING & ZONING DEPARTMENT ONLY

Temporary Power ____ date/app. by

Foundation ____ date/app. by

Monolithic (footer/Slab) ____ date/app. by

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

Slab ____ date/app. by

Sheathing/Nailing ____ date/app. by

Framing ____ date/app. by

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

Electrical rough-in ____ date/app. by

Heat & Air Duct ____ date/app. by

Peri. beam (Lintel) ____ date/app. by

Permanent power ____ date/app. by

C.O. Final ____ date/app. by

Culvert ____ date/app. by

M/H tie downs, blocking, electricity and plumbing ____ date/app. by

Pool ____ date/app. by

Reconnection ____ date/app. by

Pump pole ____ date/app. by

Utility Pole ____ date/app. by

M/H Pole ____ date/app. by

Travel Trailer ____ date/app. by

Re-roof ____ date/app. by

BUILDING PERMIT FEE $ 550.00 CERTIFICATION FEE $ 15.71 SURCHARGE FEE $ 15.71

MISC. FEES $ .00 ZONING CERT. FEE $ 50.00 FIRE FEE $ WASTE FEE $

FLOOD ZONE DEVELOPMENT FEE $ CULVERT FEE $ 25.00 **TOTAL FEE** 656.42

INSPECTORS OFFICE ____ CLERKS OFFICE CH

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

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

This Permit Must Be Prominently Posted on Premises During Construction

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

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

656.42 CR 13 305

Columbia County Building Permit Application

For Office Use Only Application # 0404-06 4/1/04 Permit # 271 / 21736

Application Approved by - Zoning Official BLK Date 3.04.04 Plans Examiner _____ Date _____

Flood Zone X per plat + S.I. plan Development Permit N/A Zoning RSF-2 Land Use Plan Map Category RES. Low Den

Comments _____

Applicants Name ~~Erkinger Home Builders, Inc~~ Amy Atkins Phone (386) 754-5555

Address 248 SE Nassau St. Lake City, FL 32025

Owners Name Erkinger Home Builders, Inc Phone (386) 754-5555

911 Address 231 NW Kelly lake Ct LakeCity, FL 32055

Contractors Name Erkinger Home Builders, Inc City Phone (386) 754-5555

Address 248 SE Nassau St. Lake City, FL 32025

Fee Simple Owner Name & Address N/A

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address Mark Disosway, P.E. PO Box 868, Lake City, FL 320

Mortgage Lenders Name & Address CNB

Property ID Number 28-3S-16-02372-902 Estimated Cost of Construction _____

Subdivision Name Kelly Lake Subdivision Lot 2 Block ____ Unit ____ Phase ____

Driving Directions Brown Rd to Emerald lakes Dr turn left to Zacks turn right to Kellylake Ct turn left house on bottom of hill on left.

Type of Construction ~~Brick & frame~~ SFD Number of Existing Dwellings on Property 0

Total Acreage 2.78 Lot Size _____ Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 50 ✓ Side 75 ✓ Side 150+ ✓ Rear 80 ✓

Total Building Height 19 feet Number of Stories 1 Heated Floor Area 2,082 Roof Pitch 7/12

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

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

ERKINGER HOME BUILDERS, INC.
Reg # RR0067135
248 Southeast Nassau Street
Lake City, Florida 32025
386-754-5555

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 RR0067135

Competency Card Number _____

STATE OF FLORIDA
COUNTY OF COLUMBIA

Sworn to (or affirmed) and subscribed before me

this _____ day of _____ 20____.

Personally known_____ or Produced Identification_____

NOTARY STAMP/SEAL

Notary Signature

#0404-06

THIS INSTRUMENT WAS PREPARED BY:

TERRY McDAVID 04-178
POST OFFICE BOX 1328
LAKE CITY, FL 32056-1328

Inst:2004007814 Date:04/06/2004 Time:14:59
DC,P.DeWitt Cason,Columbia County B:1011 P:2355

PERMIT NO._____ **TAX FOLIO NO.:**_____

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 2, KELLY LAKE SUBDIVISION, a subdivision according to the plat thereof recorded in Plat Book 7, Page 81, a Replat of Lot 151, of EMERALD LAKES PHASE FOUR, a subdivision according to the plat thereof as recorded in Plat Book 6, Pages 151 and 152, both of the public records of Columbia County, Florida.

2. General description of improvement: Construction of Dwelling

3. Owner information:
   a. Name and address: MATTHEW A. ERKINGER, SR. and KELLY G. ERKINGER, 248 SE Nassau Street, 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: ERKINGER HOME BUILDERS, INC.
   248 SE Nassau Street, Lake City, FL 32025

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

6. Lender: CNB NATIONAL BANK
   187 Southwest Baya Drive, Lake City, FL 32025

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 CLARENCE CANNON, CNB NATIONAL BANK, 187 Southwest Baya Drive, Lake City, FL 32025 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). April 5, 2005.

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 _____ Deputy Clerk
4-6-04

MATTHEW A. ERKINGER, SR.

KELLY G. ERKINGER

The foregoing instrument was acknowledged before me this 5th day of April, 2004, by MATTHEW A. ERKINGER, SR. and KELLY G. ERKINGER, Husband and wife, who are personally known to me and who did not take an oath.

CLERK CIRCUIT COURT COLUMBIA COUNTY, FLORIDA

TERRY McDAVID MY COMMISSION EXPIRES January 10, 2006 #DD 079305 Bonded thru Atlantic Bonding Co., Inc. NOTARY PUBLIC STATE OF FLORIDA

Notary Public
My commission expires:_____

COLUMBIA COUNTY 9-1-1 ADDRESSING

263 NW Lake City Ave. * P. O. Box 2949 * Lake City, FL 32056-2949
PHONE: (386) 752-8787 * FAX: (386) 758-1365 * Email: ron_croft@columbiacountyfla.com

Addressing Maintenance

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

DATE ISSUED: October 30, 2003

ENHANCED 9-1-1 ADDRESS:

231 NW KELLY LAKE CT (LAKE CITY, FL 32055)

Addressed Location 911 Phone Number: NOT AVAIL.

OCCUPANT NAME: NOT AVAIL.

OCCUPANT CURRENT MAILING ADDRESS:

PROPERTY APPRAISER MAP SHEET NUMBER: 44

PROPERTY APPRAISER PARCEL NUMBER: 28-3S-16-02372-902

Other Contact Phone Number (If any):

Building Permit Number (If known):

Remarks: LOT 2, KELLY LAKE S/D, REPLAT OF LOT 151, EMERALD LAKES, PHASE 4, S/D

Address Issued By: _____
Columbia County 911 Addressing Department

COLUMBIA COUNTY
9-1-1 ADDRESSING
APPROVED

FORM 600A-2001

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**231 NW Kelly Lake Ct**	Builder:	**Erkinger Homes**
Address:		Permitting Office:	
City, State:	**Lake City, Fl**	Permit Number:	21734
Owner:	**Erkinger Homes**	Jurisdiction Number:	221000
Climate Zone:	**North**		

1. New construction or existing	New	__	
2. Single family or multi-family	Single family	__	
3. Number of units, if multi-family	1	__	
4. Number of Bedrooms	3	__	
5. Is this a worst case?	No	__	
6. Conditioned floor area (ft²)	2082 ft²		
7. Glass area & type		__	
a. Clear - single pane	0.0 ft²	__	
b. Clear - double pane	376.0 ft²	__	
c. Tint/other SHGC - single pane	0.0 ft²	__	
d. Tint/other SHGC - double pane	0.0 ft²		
8. Floor types		__	
a. Slab-On-Grade Edge Insulation	R=0.0, 192.0(p) ft	__	
b. N/A		__	
c. N/A		__	
9. Wall types		__	
a. Frame, Wood, Exterior	R=11.0, 876.0 ft²	__	
b. Frame, Wood, Adjacent	R=11.0, 295.0 ft²	__	
c. N/A		__	
d. N/A		__	
e. N/A		__	
10. Ceiling types		__	
a. Under Attic	R=30.0, 2082.0 ft²	__	
b. N/A		__	
c. N/A		__	
11. Ducts		__	
a. Sup: Unc. Ret: Con. AH: Interior	Sup. R=6.0, 185.0 ft	__	
b. N/A			

12. Cooling systems		
a. Central Unit	Cap: 42.0 kBtu/hr	__
	SEER: 10.00	__
b. N/A		__
c. N/A		__
		__
13. Heating systems		
a. Electric Heat Pump	Cap: 42.0 kBtu/hr	__
	HSPF: 7.00	__
b. N/A		__
c. N/A		__
		__
14. Hot water systems		
a. Electric Resistance	Cap: 40.0 gallons	__
	EF: 0.91	__
b. N/A		__
c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)		__
15. HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)		__

Glass/Floor Area: 0.18

Total as-built points: 28907

Total base points: 28983

PASS

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

PREPARED BY: _____

DATE: 1-20-04

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: _____

FORM 600A-2001

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , **Lake City, Fl,**

PERMIT #:

BASE

GLASS TYPES

.18 X	Conditioned Floor Area	X BSPM	= Points
.18	**2082.0**	**20.04**	**7510.2**

WALL TYPES	Area X	BSPM	= Points
Adjacent	295.0	0.70	206.5
Exterior	876.0	1.70	1489.2
Base Total:	**1171.0**		**1695.7**

DOOR TYPES	Area X	BSPM	= Points
Adjacent	19.0	2.40	45.6
Exterior	40.0	6.10	244.0
Base Total:	**59.0**		**289.6**

CEILING TYPES	Area X	BSPM	= Points
Under Attic	2082.0	1.73	3601.9
Base Total:	**2082.0**		**3601.9**

FLOOR TYPES	Area X	BSPM	= Points
Slab	192.0(p)	-37.0	-7104.0
Raised	0.0	0.00	0.0
Base Total:			**-7104.0**

INFILTRATION	Area X	BSPM	= Points
	2082.0	10.21	21257.2

AS-BUILT

Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points
Double, Clear	N	1.5	8.0	37.0	19.22	0.97	687.8
Double, Clear	E	1.5	8.0	131.0	40.22	0.96	5045.5
Double, Clear	S	1.5	8.0	38.0	34.50	0.92	1210.4
Double, Clear	W	1.5	8.0	170.0	36.99	0.96	6024.2
As-Built Total:				**376.0**			**12967.9**

Type	R-Value	Area X	SPM	= Points
Frame, Wood, Exterior	11.0	876.0	1.70	1489.2
Frame, Wood, Adjacent	11.0	295.0	0.70	206.5
As-Built Total:		**1171.0**		**1695.7**

Type	Area X	SPM	= Points
Exterior Wood	40.0	6.10	244.0
Adjacent Wood	19.0	2.40	45.6
As-Built Total:	**59.0**		**289.6**

Type	R-Value	Area X	SPM X	SCM =	Points
Under Attic	30.0	2082.0	1.73 X	1.00	3601.9
As-Built Total:		**2082.0**			**3601.9**

Type	R-Value	Area X	SPM	= Points
Slab-On-Grade Edge Insulation	0.0	192.0(p	-41.20	-7910.4
As-Built Total:		**192.0**		**-7910.4**

	Area X	SPM	= Points
	2082.0	10.21	21257.2

FORM 600A-2001

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **, Lake City, Fl,**

PERMIT #:

BASE

Summer Base Points: 27250.6

Total Summer Points	X	System Multiplier	=	Cooling Points
27250.6		**0.4266**		**11625.1**

AS-BUILT

Summer As-Built Points: 31901.8

Total Component	X	Cap Ratio	X	Duct Multiplier (DM x DSM x AHU)	X	System Multiplier	X	Credit Multiplier	=	Cooling Points
31901.8 **31901.8**		1.000 **1.00**		(1.081 x 1.147 x 0.91) **1.128**		0.341 **0.341**		1.000 **1.000**		12285.2 **12285.2**

FORM 600A-2001

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , **Lake City, Fl,**

PERMIT #:

BASE			
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points	
.18	**2082.0**	**12.74**	**4774.4**
WALL TYPES	Area X	BWPM =	Points
Adjacent	295.0	3.60	1062.0
Exterior	876.0	3.70	3241.2
Base Total:	**1171.0**		**4303.2**
DOOR TYPES	Area X	BWPM =	Points
Adjacent	19.0	11.50	218.5
Exterior	40.0	12.30	492.0
Base Total:	**59.0**		**710.5**
CEILING TYPES	Area X	BWPM =	Points
Under Attic	2082.0	2.05	4268.1
Base Total:	**2082.0**		**4268.1**
FLOOR TYPES	Area X	BWPM =	Points
Slab	192.0(p)	8.9	1708.8
Raised	0.0	0.00	0.0
Base Total:			**1708.8**
INFILTRATION	Area X	BWPM =	Points
	2082.0	-0.59	-1228.4

AS-BUILT							
Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF =	Points
Double, Clear	N	1.5	8.0	37.0	14.30	1.00	529.7
Double, Clear	E	1.5	8.0	131.0	9.09	1.02	1214.5
Double, Clear	S	1.5	8.0	38.0	4.03	1.04	159.5
Double, Clear	W	1.5	8.0	170.0	10.77	1.01	1850.5
As-Built Total:				**376.0**			**3754.2**
Type			R-Value	Area X	WPM	=	Points
Frame, Wood, Exterior			11.0	876.0	3.70		3241.2
Frame, Wood, Adjacent			11.0	295.0	3.60		1062.0
As-Built Total:				**1171.0**			**4303.2**
Type				Area X	WPM	=	Points
Exterior Wood				40.0	12.30		492.0
Adjacent Wood				19.0	11.50		218.5
As-Built Total:				**59.0**			**710.5**
Type			R-Value	Area X	WPM X WCM =		Points
Under Attic			30.0	2082.0	2.05 X 1.00		4268.1
As-Built Total:				**2082.0**			**4268.1**
Type			R-Value	Area X	WPM	=	Points
Slab-On-Grade Edge Insulation			0.0	192.0(p	18.80		3609.6
As-Built Total:				**192.0**			**3609.6**
				Area X	WPM	=	Points
				2082.0	-0.59		-1228.4

FORM 600A-2001

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: , **Lake City, Fl,**

PERMIT #:

BASE

Winter Base Points: **14536.7**

Total Winter Points	X	System Multiplier	=	Heating Points
14536.7		**0.6274**		**9120.3**

AS-BUILT

Winter As-Built Points: **15417.2**

Total Component	X	Cap Ratio	X	Duct Multiplier (DM x DSM x AHU)	X	System Multiplier	X	Credit Multiplier	=	Heating Points
15417.2 **15417.2**		1.000 **1.00**		(1.060 x 1.169 x 0.93) **1.152**		0.487 **0.487**		1.000 **1.000**		8655.0 ~~8655.0~~

FORM 600A-2001

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: , **Lake City, Fl,**

PERMIT #:

BASE

AS-BUILT

WATER HEATING

Number of Bedrooms	X	Multiplier	=	Total	Tank Volume	EF	Number of Bedrooms	X	Tank Ratio	X	Multiplier	X	Credit Multiplier	=	Total
3		2746.00		8238.0	40.0	0.91	3		1.00		2655.47		1.00		7966.4
					As-Built Total:										**7966.4**

CODE COMPLIANCE STATUS

BASE

Cooling Points	+	Heating Points	+	Hot Water Points	=	Total Points
11625		**9120**		**8238**		**28983**

AS-BUILT

Cooling Points	+	Heating Points	+	Hot Water Points	=	Total Points
12285		**8655**		**7966**		**28907**

PASS

FORM 600A-2001

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: , **Lake City, Fl,** PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

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

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

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 6-12. 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* = 82.3

The higher the score, the more efficient the home.

Erkinger Homes, , Lake City, Fl,

1.	New construction or existing	New	12.	Cooling systems	
2.	Single family or multi-family	Single family	a.	Central Unit	Cap: 42.0 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?	No			
6.	Conditioned floor area (ft²)	2082 ft²	c.	N/A	
7.	Glass area & type				
a.	Clear - single pane	0.0 ft²	13.	Heating systems	
b.	Clear - double pane	376.0 ft²	a.	Electric Heat Pump	Cap: 42.0 kBtu/hr
c.	Tint/other SHGC - single pane	0.0 ft²			HSPF: 7.00
d.	Tint/other SHGC - double pane	0.0 ft²	b.	N/A	
8.	Floor types				
a.	Slab-On-Grade Edge Insulation	R=0.0, 192.0(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=11.0, 876.0 ft²			EF: 0.91
b.	Frame, Wood, Adjacent	R=11.0, 295.0 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, 2082.0 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: Con. AH: Interior	Sup. R=6.0, 185.0 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: _____

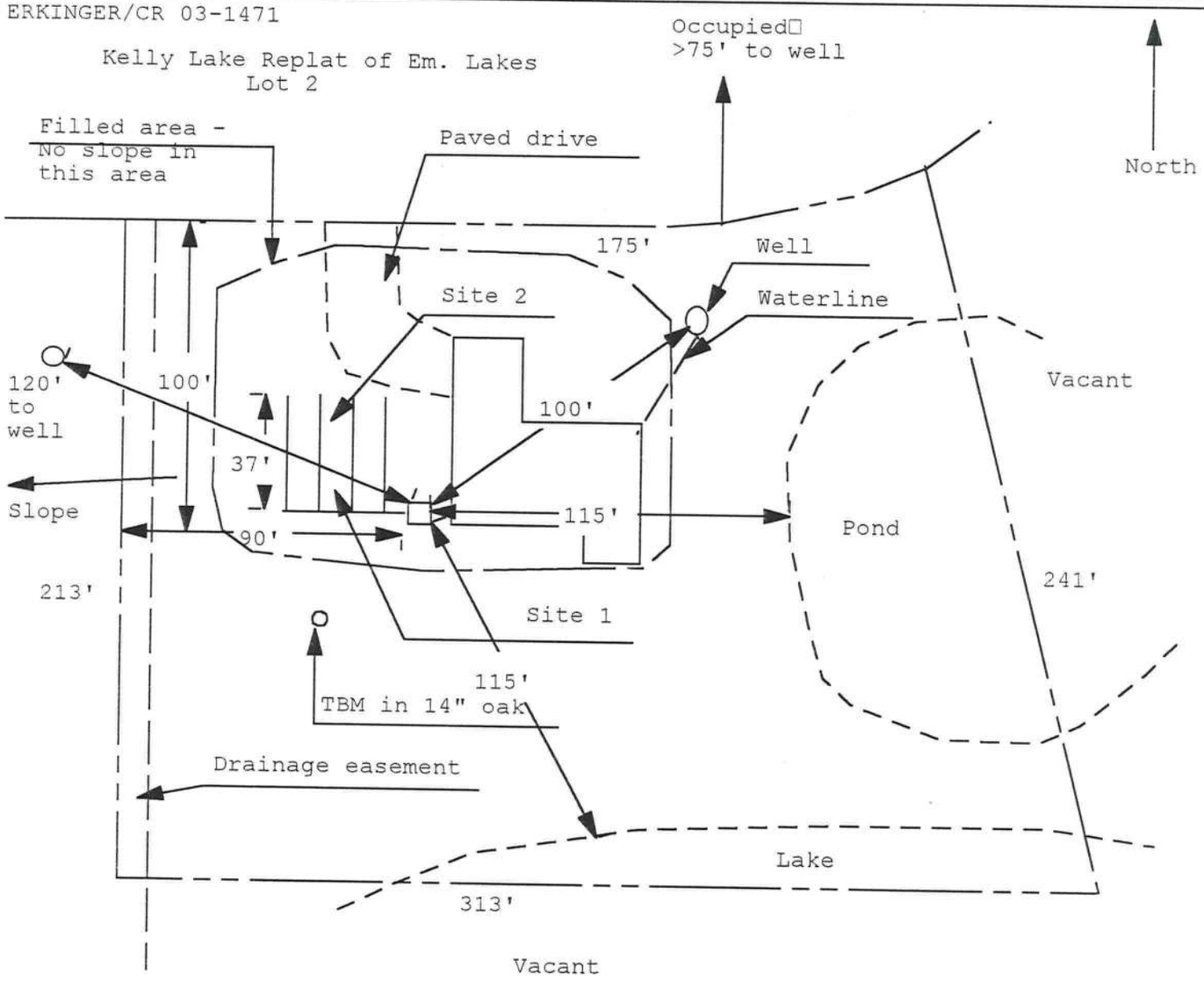
**NOTE: The home's estimated energy performance score is only available through the FLA/RES computer program. This is not a Building Energy Rating. If your score is 80 or greater (or 86 for a US EPA/DOE EnergyStar™ designation), your home may qualify for energy efficiency mortgage (EEM) incentives if 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.*

Application for Onsite Sewage Disposal System Construction Permit. Part II Site Plan

Permit Application Number: 04-0071N

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH UNIT

ERKINGER/CR 03-1471



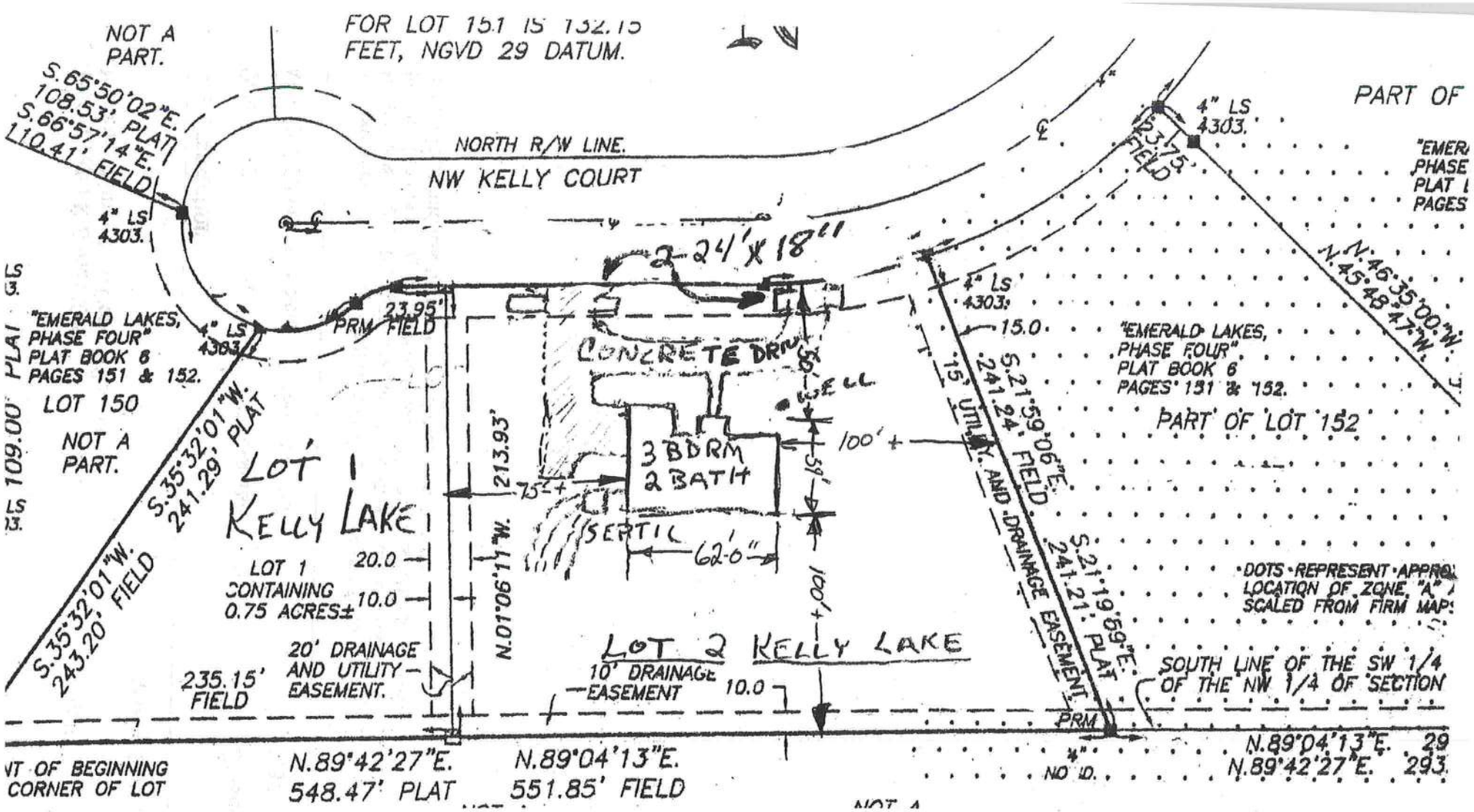
Site Plan Submitted By Paul Lloyd Date 10/24/03

Plan Approved ✓ Not Approved ___ Date 10/24/03

By Paul Lloyd C CPHU

1-26-04

Notes: _____



PLOT PLAN

231 NW KELLY LAKE COURT

ONE FOOT RISE CERTIFICATION

PROPERTY DESCRIPTION: LOT 152 Emerald Lakes Phase IV

T3S S28 R16E

BASE FLOOD ELEVATION: 132.15

Builder Matt Erkinger

PROJECT: Min. Finished Floor 133.15
House on slab

I hereby certify that construction of the proposed residence will increase flood elevations less than one foot in the project location.

Dale C. Johns, P.E
PE# 45263
Date: 11/8/00
ROUTE 15 BOX 3834
LAKE CITY, FL 32024

BASE FLOOD ELEVATION = 132.15.0

RIVER AREA AT BASE FLOOD ELEVATION >> 40 ACRES

PROPOSED BUILDING TYPE = House 2000 sf

PROPOSED BUILDING ENCROACHMENT = 2000 SF

FILL OF FLOODPLAIN = 2000 SF X 0.5' = 1000 CF

GROUND ELEVATION AT BUILDING = 132.65

This project is in the staging area a isolated pond and no step backwater calculations are necessary. The calculations are based on the on the removal of floodplain volume due to construction of the fill.

$$\text{PERCENT FLOODPLAIN AREA REMOVED} = \frac{2000/43560}{40} = 0.114\%$$

$$\text{FLOODPLAIN LEVEL INCREASE} = \frac{2000 \times 0.5}{40 \times 43560} = 0.0006 \text{ FT.}$$

If you have any questions, please call Leroy Marshall II at 386.362.1001, or toll free at 800.226.1066.

Sincerely,

John Hastings, P.E.
Water Resource Engineer

JH/rl

SUWANNEE RIVER WATER MANAGEMENT DISTRICT

July 8, 2003

Mr. Mathew Erkinger
Erkinger Home Builders
248 Southeast Nassau Street
Lake City, Florida 32025

Subject: Requested Environmental Resource Permit (ERP) Exemption for an alteration to ERP93-0177, Emerald Lakes Subdivision, Columbia County

Dear Mr. Erkinger:

The above mentioned proposed alteration of a permitted project in Emerald Lakes Subdivision, in Columbia County, does not require a new permit or a modification to the existing permit by the Suwannee River Water Management District (SRWMD). This decision was based on the existing permit and the letter received on July 7, 2003. It has been determined that the proposed alteration follows subsection 40B-4.2010(2), Florida Administrative Code (F.A.C.), and provides reasonable assurance that the:

1. Change will not increase the amount of impervious authorized by the issuance of the permit.
2. Design change will not increase the surfacewater system outflow and/or decrease percolation values.
3. The alteration will be included in the as-built certifications to be submitted upon completion of the project.

If this project does not comply with these terms, a permit modification will be required.

This exemption, however, does not exempt you from obtaining permits from any other regulatory and proprietary agency. Also, this exemption does not give you the authority to excavate soil on lands not owned by you nor disturb and/or alter lands that are not owned by you. Any other modification to the approved plans that may be required shall require reconsideration by the SRWMD prior to commencement of construction.

To Whom It May Concern:

I, Palmer Daughtry, III, and DDP Corporation, located at 5012 US 90 West, Lake City, Florida 32055, give permission to Erkinger Home Builders, Inc. and Matthew Erkinger to dig in the 4.0413 acre retention area located in my lot in Arbor Green at Emerald Lakes Subdivision. The exact digging will take place adjacent to Mr. Erkinger's 2.79 acres located on Kelly Lake Court and at the rear of my Lot 11 Arbor Green located on Heritage Court.

Palmer Daughtry, III

SUWANNEE RIVER WATER MANAGEMENT DISTRICT

July 14, 2003

Mr. Mathew Erkinger
Erkinger Home Builders
248 Southeast Nassau Street
Lake City, Florida 32025

Subject: Requested Environmental Resource Permit (ERP) Exemption for an alteration to ERP93-0177, Emerald Lakes Subdivision, Columbia County

Dear Mr. Erkinger:

The above mentioned proposed alteration of a permitted project in Emerald Lakes Subdivision, in Columbia County, does not require a new permit or a modification to the existing permit by the Suwannee River Water Management District (SRWMD). This decision was based on the existing permit and the letter received on July 7, 2003. It has been determined that the proposed alteration follows subsection 40B-4.2010(2), Florida Administrative Code (F.A.C.), and provides reasonable assurance that the:

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If you have any questions, please call Leroy Marshall II at 386.362.1001, or toll free at 800.226.1066.

Sincerely,

John Hastings, P.E.
Water Resource Engineer

JH/rl

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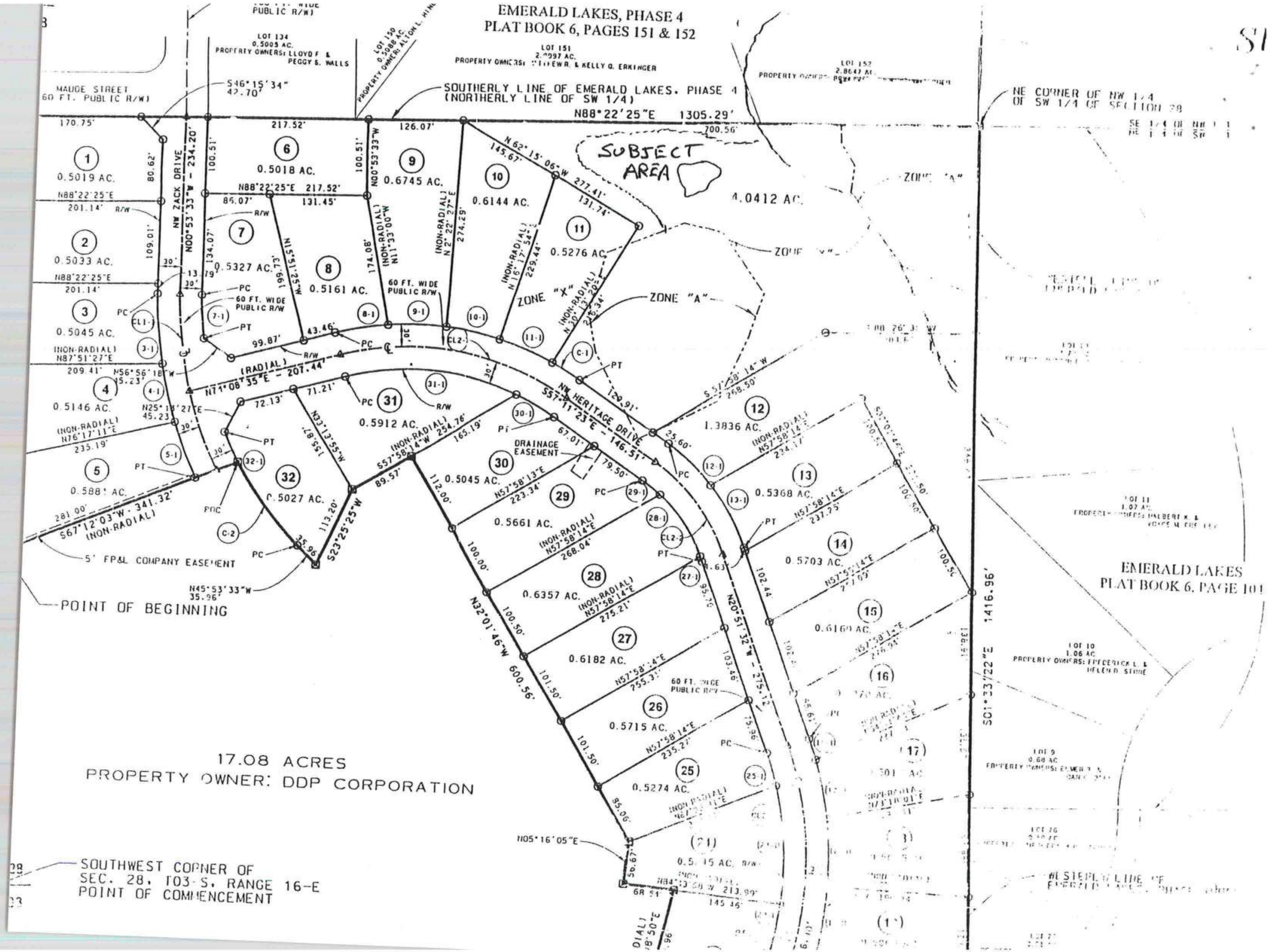
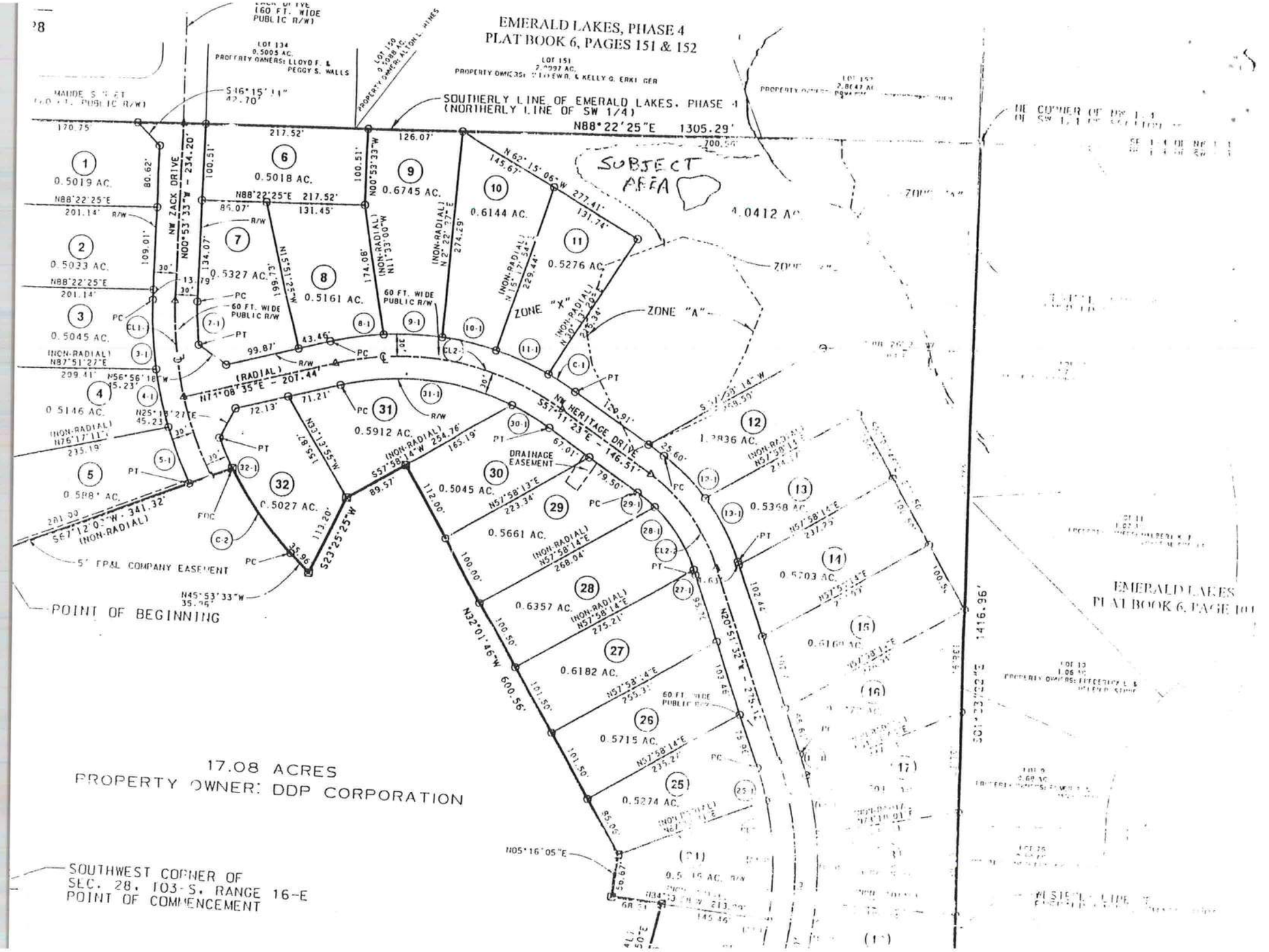
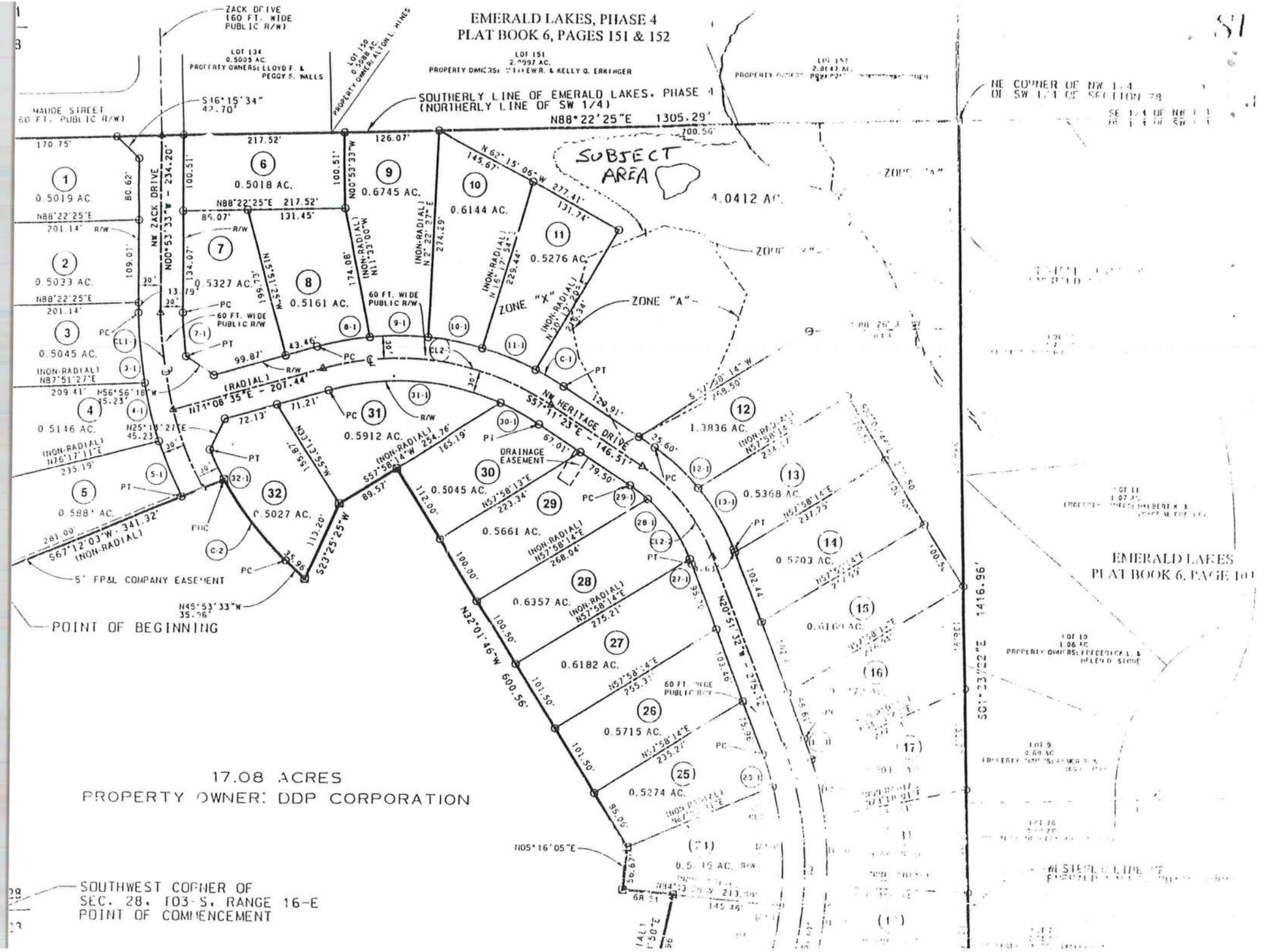
Palmer Daughtry, III



EMERALD LAKES, PHASE 4
PLAT BOOK 6, PAGES 151 & 152
SOUTHERLY LINE OF EMERALD LAKES, PHASE 4
(NORTHERLY LINE OF SW 1/4)
N88°22'25"E 1305.29'
NE CORNER OF NW 1/4
OF SW 1/4 OF SECTION 28
MAUDE STREET
60 FT. PUBLIC R/W)
S46°15'34"
42.70'
LOT 134
0.5005 AC.
PROPERTY OWNERS: LLOYD F. &
PEGGY S. WALLS
LOT 151
2.0997 AC.
NW ZACK DRIVE
N00°53'33"W - 234.20'
NW HERITAGE DRIVE
S57°11'23"E - 146.51'
N71°08'35"E - 207.44'
(RADIAL)
SUBJECT
AREA
4.0412 AC.
ZONE "X"
ZONE "A"
60 FT. WIDE
PUBLIC R/W
DRAINAGE
EASEMENT
0.5019 AC.
0.5033 AC.
0.5045 AC.
0.5146 AC.
0.588' AC.
0.5018 AC.
0.5327 AC.
0.5161 AC.
0.6745 AC.
0.6144 AC.
0.5276 AC.
1.3836 AC.
0.5368 AC.
0.5703 AC.
0.6160 AC.
0.5912 AC.
0.5027 AC.
0.5045 AC.
0.5661 AC.
0.6357 AC.
0.6182 AC.
0.5715 AC.
0.5274 AC.
N32°01'46"W 600.56'
N20°51'32"W - 275.12'
S01°33'22"E 1416.96'
S67°12'03"W - 341.32'
(NON-RADIAL)
5' FP&L COMPANY EASEMENT
N45°53'33"W
35.96'
S23°25'25"W
N05°16'05"E
POINT OF BEGINNING
17.08 ACRES
PROPERTY OWNER: DDP CORPORATION
SOUTHWEST CORNER OF
SEC. 28, T03-S, RANGE 16-E
POINT OF COMMENCEMENT
EMERALD LAKES
PLAT BOOK 6, PAGE 101


EMERALD LAKES, PHASE 4
PLAT BOOK 6, PAGES 151 & 152
SOUTHERLY LINE OF EMERALD LAKES, PHASE 4
(NORTHERLY LINE OF SW 1/4)
N88°22'25"E 1305.29'
SUBJECT AREA
4.0412 AC.
ZONE "X"
ZONE "A"
NW ZACK DRIVE
NW HERITAGE DRIVE
60 FT. WIDE PUBLIC R/W
DRAINAGE EASEMENT
5' FP&L COMPANY EASEMENT
POINT OF BEGINNING
17.08 ACRES
PROPERTY OWNER: DDP CORPORATION
SOUTHWEST CORNER OF
SEC. 28, 103-S, RANGE 16-E
POINT OF COMMENCEMENT
EMERALD LAKES
PLAT BOOK 6, PAGE 101
1416.96'


EMERALD LAKES, PHASE 4
PLAT BOOK 6, PAGES 151 & 152
ZACK DRIVE (60 FT. WIDE PUBLIC R/W)
MAUDE STREET 60 FT. PUBLIC R/W
SOUTHERLY LINE OF EMERALD LAKES, PHASE 4 (NORTHERLY LINE OF SW 1/4)
N88°22'25"E 1305.29'
NE CORNER OF NW 1/4 OF SW 1/4 OF SECTION 28
SUBJECT AREA
4.0412 AC.
ZONE "X"
ZONE "A"
NW HERITAGE DRIVE
60 FT. WIDE PUBLIC R/W
DRAINAGE EASEMENT
5' FP&L COMPANY EASEMENT
POINT OF BEGINNING
17.08 ACRES
PROPERTY OWNER: DDP CORPORATION
SOUTHWEST CORNER OF SEC. 28, T03-S, RANGE 16-E POINT OF COMMENCEMENT
EMERALD LAKES PLAT BOOK 6, PAGE 101
1416.96'
S01°33'22"E

Columbia County Building Department
Culvert Permit

Culvert Permit No.
000000271

DATE 04/14/2004 PARCEL ID # 28-3S-16-02372-902

APPLICANT AMY ATKINS PHONE 754-5555

ADDRESS 248 SE NASSAU STREET LAKE CITY FL 32025

OWNER MATTHEW ERKINGER PHONE 754-5555

ADDRESS 231 NW KELLY LAKE COURT LAKE CITY FL 32055

CONTRACTOR MATTHEW ERKINGER PHONE 754-5555

LOCATION OF PROPERTY 90W, TR ON BROWN RD, TL ON EMERALD LAKES DRIVE, TR ON ZACK, TL ON KELLY LAKE, BOTTOM OF HILL ON LEFT

SUBDIVISION/LOT/BLOCK/PHASE/UNIT KELLY LAKE 2

SIGNATURE Amy Atkins

INSTALLATION REQUIREMENTS

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

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

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

[ ] Department of Transportation Permit installation approved standards.

[ ] Other _____

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

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

Amount Paid 25.00

COLUMBIA COUNTY GATEWAY TO FLORIDA

Cal-Tech Testing, Inc.
• Engineering
• Geotechnical
• Environmental
LABORATORIES

P.O. Box 1625 • Lake City, FL 32056-1625
6919 Distribution Avenue S., Unit #5 • Jacksonville, FL 32257

Tel. (386) 755-3633 • Fax (386) 752-5456
Tel. (904) 262-4046 • Fax (904) 262-4047

#21736

JOB NO.: 04-196
DATE TESTED: 04/26/04
DATE REPORTED: 04/27/04

REPORT OF IN-PLACE DENSITY TEST

PROJECT:	Lot #2, Kelly Subdivision, Parcel # 28-35-16-02372-902 / Permit # 21736
CLIENT:	Erkinger Home Builders, 248 S.E. Nassua St., Lake City, FL 32025
GENERAL CONTRACTOR:	Erkinger Home Builders
EARTHWORK CONTRACTOR:	Erkinger Home Builders
INSPECTOR:	Corbett Reynolds

ASTM METHOD	SOIL USE
(D-2922) Nudear	TRENCH BACKFILL

SPECIFICATION REQUIREMENTS: 95%

TEST NO.	TEST LOCATION	TEST DEPTH	WET DENSITY (lb/ft³)	MOISTURE PERCENT	DRY DENSITY (lb/ft³)	PROCTOR TEST NO.	PROCTOR VALUE	% MAXIMUM DENSITY
3 A	Approx. Center of S.W. Corner Footing	0-12"	117.5	7.1	109.7	1	114.2	96.1% **

REMARKS: ** Denotes Passing Retest After Further Compaction.

PROCTORS

PROCTOR NO.	SOIL DESCRIPTION	MAXIMUM DRY UNIT WEIGHT (lb/ft³)	OPT. MOIST.	TYPE
1	Fine Brown Sand with Trace of Clay	114.2	8.5	MODIFIED (ASTM D-1557)

Respectfully Submitted,
CAL-TECH TESTING, INC.
cm

Linda M. Creamer
President - CEO

Reviewed By:

Date: 4/27/04
Florida Registration No: 52612

The test results presented in this report are specific only to the samples tested at the time of testing. The tests were performed in accordance with generally accepted methods and standards. Since material conditions can vary between test locations and change with time, sound judgement should be exercised with regard to the use and interpretation of the data.

"Excellence in Engineering & Geoscience"

Cal-Tech Testing, Inc.
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6919 Distribution Avenue S., Unit #5 • Jacksonville, FL 32257

Tel. (386) 755-3633 • Fax (386) 752-5456
Tel. (904) 262-4046 • Fax (904) 262-4047

JOB NO.: 04-196
DATE TESTED: 04/20/04

REPORT OF IN-PLACE DENSITY TEST

PROJECT:	Lot #2, Kelly Subdivision Parcel # 28-35-16-02372-902 / Permit # 21736
CLIENT:	Erkinger Home Builders, 248 S.E. Nassua St., Lake City, FL 32025
GENERAL CONTRACTOR:	Erkinger Home Builders
EARTHWORK CONTRACTOR:	Erkinger Home Builders
INSPECTOR:	Jody Beggs

ASTM METHOD	SOIL USE
(D-2922) Nuclear	TRENCH BACKFILL

SPECIFICATION REQUIREMENTS: 95%

TEST NO.	TEST LOCATION	TEST DEPTH	WET DENSITY (lb/ft³)	MOISTURE PERCENT	DRY DENSITY (lb/ft³)	PROCTOR TEST NO.	PROCTOR VALUE	% MAXIMUM DENSITY
1	E. Footing, 25' From S. End	0 - 12"	118.5	8.9	108.8	1	114.2	95.3%
2	N. Footing, 12' E. of W. End	0 - 12"	119.1	9.1	109.2	1	114.2	95.6%
3	Approx. Center of S.W. Corner Footing	0 - 12"	109.2	7.2	101.9	1	114.2	89.2% *
4	S. Inside Footing, 30' From E. Side	0 - 12"	118.3	8.9	108.6	1	114.2	95.1%
5	W. Footing, 30' From N. Corner	0 - 12"	117.2	7.2	109.3	1	114.2	95.7%

REMARKS: * Denotes Failing Density Test.

PROCTORS

TEST NO.	SOIL DESCRIPTION	MAXIMUM DRY UNIT WEIGHT (lb/ft³)	OPT. MOIST.	TYPE
1	Fine Brown Sand with Trace of Clay	114.2	8.5	MODIFIED (ASTM D-1557)

Respectfully Submitted,
CAL-TECH TESTING, INC.

Linda Creamer

Linda M. Creamer
President - CEO

Reviewed By:

Date: 4/27/04
Florida Registration No.: 52612

cm

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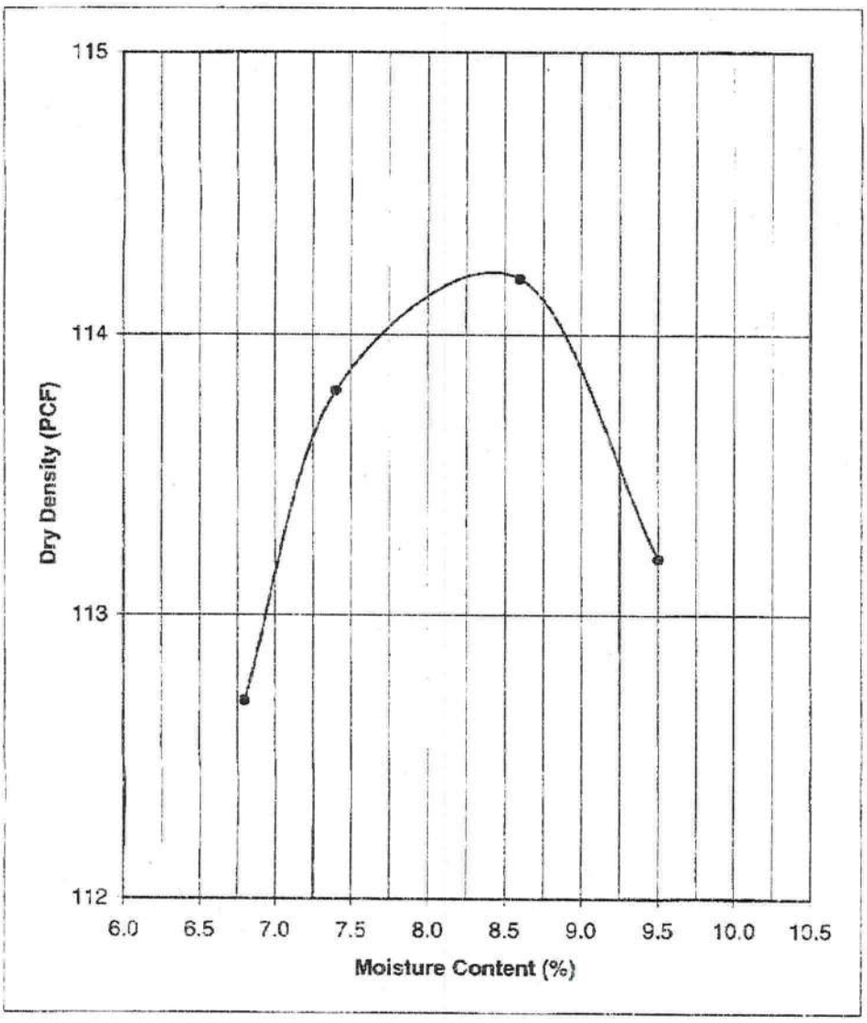
Cal-Tech Testing, Inc.
• Engineering
• Geotechnical
• Environmental
Laboratories
P.O. Box 1625 • Lake City, FL 32056-1625 • Tel(386)755-3633 • Fax(386)752-5456
6919 Distribution Ave. S., Unit #5, Jacksonville, FL 32257 • Tel(904)262-4046 • Fax(904)4047

REPORT OF LABORATORY COMPACTION TEST

Client:	Erkinger Home Builders, 248 S.E. Nassua St., Lake City, FL 32025	**File No:**	04-196
Project Name:	Lot #2, Kelly Subdivision Parcel # 28-35-16-02372-9027 Permit # 21736	**Date:**	04/27/04
Project Location:	Lake City, Florida	**Lab No:**	6431
Contractor:	Erkinger Home Builders		



PROCTOR DATA

Proctor No.: 1

Modified Proctor (ASTM D-1557) ☑

Standard Proctor (ASTM D-698) ☐

Maximum Dry Dens. Pcf: 114.2

Optimum Moisture Percent: 8.5

The test results presented in this report are specific only to the samples tested at the time of testing. The test was performed in accordance with generally accepted methods and standards. Since material conditions can vary between test locations and change with time, sound judgement should be exercised with regard to the use and interpretation of the data.

Sample Description:	Fine Brown Sand with Trace of Clay		
Sample Location:	Existing Material		
Proposed Use:	Building Fill		
Sampled By:	Jody Beggs	**Date:**	4/20/2004
Tested By:	Don Taylor	**Date:**	4/21/2004
Remarks:	1cc: Client		
cm	1cc: File		

Linda Creamer
Linda M. Creamer
President - CEO
Reviewed By:
Date: 4/27/04
FL Registration No: 52612

PERMIT # 21736

CAL-TECH TESTING, INC.
ENGINEERING & TESTING
LABORATORY
P.O. Box 1625 • Lake City, FL 32056 • (386) 755-3633 • Fax (386) 752-5456

1655 Acme Street • Orlando, FL 32805
PH (407) 872-7690 • FAX (407) 872-7659
6919 Distribution Avenue S., Unit #5
Jacksonville, FL 32257
(904) 262-4046 • FAX (904) 262-4047

REPORT OF DAILY CONSTRUCTION TESTING AND MONITORING

Client ERLANGER Home Builders
Project L.T. #2 Kellys Subdivision
Contractor S.A.C
Date 4-29-04
Job. No 04-186
Technician J. Beckers

WORK ORDER:

☑ DENSITY
Spec's: 98 %
Test No.: 1-2-3-4-5
Inches: 6

☐ CONCRETE
☐ Cylinders
☐ Beams
☐ Prisms
☐ Pick-Up
Set No.

☑ Pick-Up Proctor 06431

☐ Pick-Up LBR

DESCRIPTION OF DAYS ACTIVITIES:

performed 5 in place Densities
all test are pending Lab Results!

P/U 1 Proctor

Time Out: 4:15
Time In: 5:15

FDT's Performed 5
Cyls Cast/Cal-Tech
Cyls Cast/Client
Beams Cast/Cal-Tech:

Weather:
Hours Worked: 1.50
Other Tests:

Hours Travel: 1.50
Miles Travel:
Hours Standby:
Hours O.T.:

FIELD REPRESENTATIVE

CLIENT REPRESENTATIVE

New Construction Subterranean Termite Soil Treatment Record

OMB Approval No. 2502-0525
(exp. 10/31/2005)

This form is completed by the licensed Pest Control Company

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This information is mandatory and is required to obtain benefits. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB control number.

Section 24 CFR 200.926d(b)(3) requires that the sites for HUD insured structures must be free of termite hazards. This information collection requires the builder to certify that an authorized Pest Control company performed all required treatment for termites, and that the builder guarantees the treated area against infestation for one year. Builders, pest control companies, mortgage lenders, homebuyers, and HUD as a record of treatment for specific homes will use the information collected. The information is not considered confidential.

This report is submitted for informational purposes to the builder on proposed (new) construction cases when soil treatment for prevention of subterranean termite infestation is specified by the builder, architect, or required by the lender, architect, FHA, or VA.

21736

All contracts for services are between the Pest Control Operator and builder, unless stated otherwise.

Section 1: General Information (Treating Company Information)

Company Name: Aspen Pest Control, Inc.

Company Address 301 NW Cole Terrace City Lake City State FL Zip 32055

Company Business License No. JB109476 Company Phone No. 386-755-3611

FHA/VA Case No. (if any) _____

Section 2: Builder Information

Company Name Matthew Ewbinger Phone No. _____

Section 3: Property Information 271 N.W Hickory Court Lake City

Location of Structure (s) Treated (Street Address or Legal Description, City, State and Zip)

Type of Construction (More than one box may be checked) [X] Slab [ ] Basement [ ] Crawl [ ] Other _____

Approximate Depth of Footing: Outside 12 Inside 12 Type of Fill dirt

Section 4: Treatment Information

Date(s) of Treatment(s) 5-14-04

Brand Name of Product(s) Used Surrender

EPA Registration No. 70907-7-53943

Approximate Finai Mix Solution % 0.5 %

Approximate Size of Treatment Area: Sq. ft. 3142 Linear ft. 245 Linear ft. of Masonry Voids 245

Approximate Total Gallons of Solution Applied 565

Was treatment completed on exterior? [ ] Yes [X] No

Service Agreement Available? [X] Yes [ ] No

Note: Some state laws require service agreements to be issued. This form does not preempt state law.

Attachments (List) _____

Comments _____

Name of Applicator(s) [signature]

Certification No. (if required by State law) JF104376

The applicator has used a product in accordance with the product label and state requirements. All treatment materials and methods used comply with state and federal regulations.

Authorized Signature [signature] Date 5-4-04

Warning: HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010. 1012; 31 U.S.C. 3729, 3802)

Form NPCA-99-B may still be used

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 28-3S-16-02372-902 **Building permit No.** 000021736

Use Classification SFD,UTILITY **Fire:** 68.00

Permit Holder MATTHEW ERKINGER **Waste:** 147.00

Owner of Building MATTHEW ERKINGER **Total:** 215.00

Location: 231 NW KELLY LAKE COURT(KELLY LAKE,LOT 2)

Date: 10/13/2004

Harry Dicks

Building Inspector

POST IN A CONSPICUOUS PLACE
(Business Places Only)

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 specifally designed by the registered design professional
☐	☐	**Elevations including:**
☐	☐	a) All sides
☐	☐	b) Roof pitch
☐	☐	c) Overhang dimensions and detail with attic ventilation
☐	☐	d) Location, size and height above roof of chimneys
☐	☐	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 (termiticide or alternative method)
10. Slab on grade
    a. Vapor retarder (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 (termiticide or alternative method)
11. Slab on grade
    a. Vapor retarder (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

N/A

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

N/A

N/A

Disclosure Statement for Owner Builders

Notice Of Commencement

Private Potable Water

a) Size of pump motor

b) Size of pressure tank

c) Cycle stop valve if used

GAF®

GAF MATERIALS CORPORATION

TIMBERLINE® SHINGLES

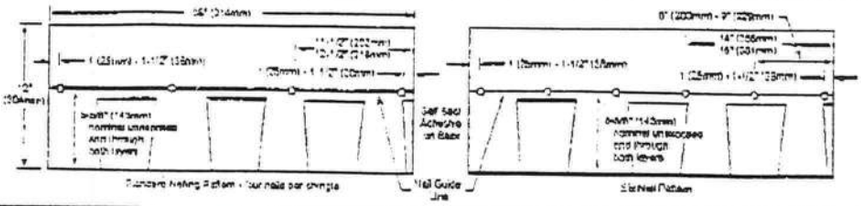
TIMBERLINE Ultra® SHINGLES

TIMBERLINE 30® SHINGLES

APPLICATION INSTRUCTIONS

Timberline® Series shingles come in either 36" (914mm) or 36-15/16" (938mm) lengths, depending on shingle brand. Application instructions apply to both.

These shingles must be nailed a nominal 5-5/8" (143mm) from bottom of shingles, as shown, to allow for penetration through the double ply area just above the tabs. Nails should remain unexposed.



GENERAL INSTRUCTIONS

• **ROOF DECKS:** For use on new or reroofing work over well-fastened, supported wood deck, tightly-constructed with maximum 6" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Plywood decks for Class A installations must be 3/8" (10mm) thick or greater with underlayments as noted below. Shingles must not be fastened directly to insulation or insulated deck unless authorized in writing by GAF Materials Corporation. Roof decks and existing surfacing material must be dry prior to application of shingles.

• **UNDERLAYMENT:** Underlayment beneath shingles has many benefits, including preventing wind driven rain from reaching the interior of the building and preventing sap in some wood decking from reacting with asphalt shingles. Underlayment is also required by many code bodies. Consult your local building department for its requirements. Where an underlayment is to be installed, a breather-type underlayment such as GAFNC's Shingle-Mate® underlayment is recommended. Underlayment must be installed flat, without wrinkles.

• **FASTENERS:** Use of nails is recommended. (Staple specifications and application instructions are available from GAF Materials Corporation, Commercial Services Dept., 1361 Alps Road, Wayne, NJ 07470.) Use only zinc coated steel or aluminum, 10-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (10mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. For normal installation, four fasteners must be installed per shingle, a nominal 5-5/8" (143mm) up from the bottom of the shingle, to penetrate both layers of the shingle. Fasteners must be installed approximately 1" + 1 1/2" (25-38mm) and 11-1/2"+12+1/2" (292-318mm) from each side.

• **WIND RESISTANT:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealing strip is dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 4 quarter-sized dabs of shingle tab adhesive on the back of the shingle 1" (25mm) and 13" (330mm) in from each side and 1" (25mm) up from bottom of the shingle. The shingle must be pressed firmly into the adhesive.

NOTE: Application of excess tab adhesive can cause blistering of the shingle.

For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.

NOTE: The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. They remove is NOT required during application.

• **CANADIAN COLD WEATHER APPLICATIONS:** CSA A123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant for GAF Materials Corporation's recommendations for the application of this adhesive.

• **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical face walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 4 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.

• **EXPOSURE:** 5" (127mm)

• **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.

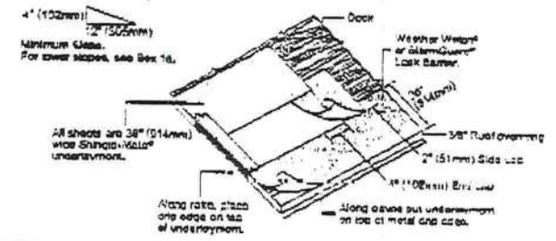
• **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.

• **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope—4/12 (333mm/m) or more

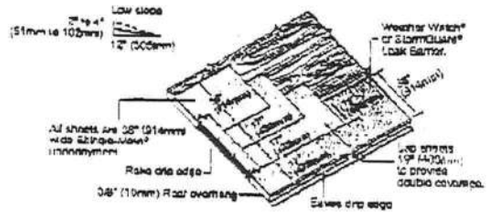
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



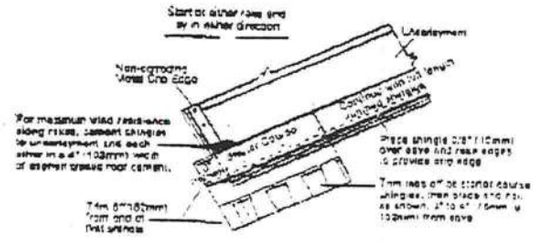
1a Underlayment: Low Slope 2/12-4/12 (167mm-333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 ply of Shingle-Mate® underlayment.



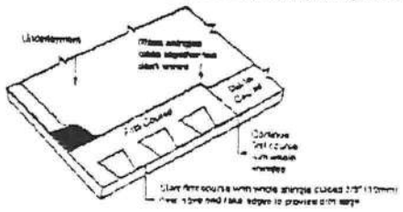
2 Starter Course

Apply as shown.

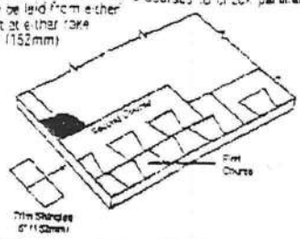


3 First Course

Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.

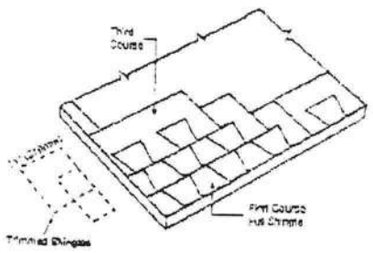


Start and continue second course as shown. Trim 6" (152mm) from the end of the shingle. Position the shingles in the second and subsequent courses flush with the tops of the wide cutouts. This results in a 5" (127mm) stepdown. Continue with full width shingles across the roof. Strike a chalk line about every 5 courses to check parallel alignment with eaves. NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.



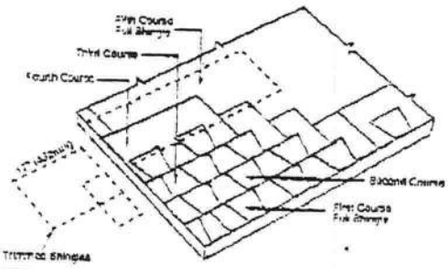
5 Third Course

Shift 12" (305mm) from the first shingle in the course then continue with full shingles across the roof.



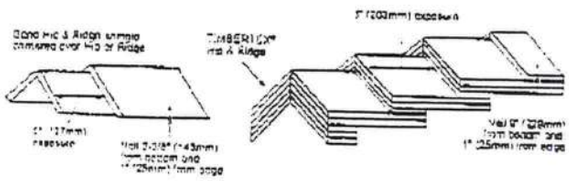
6 Fourth Course and Remaining Courses

Trim 12" (305 mm) from first shingle in the course, then continue with full shingles across the roof. Fifth and subsequent courses repeat full shingle instructions from Step 3.

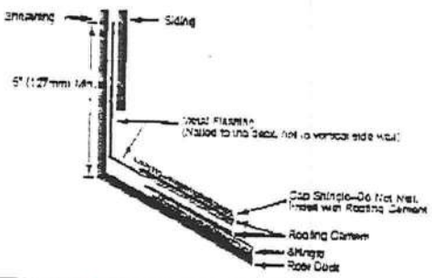


7 Hip and Ridge

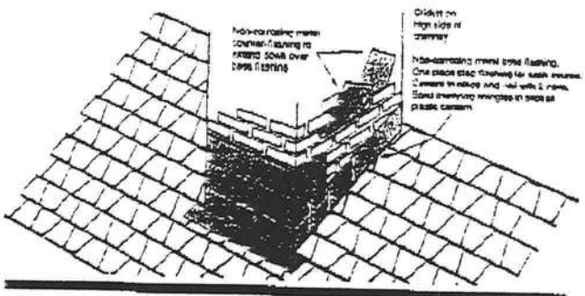
For single layer application, use hip and ridge shingles and apply as shown. To enhance appearance, use GAF TIMBERTEX® or a double layer application of Universal Hip & Ridge. (One bundle of TIMBERTEX® Hip & Ridge covers 20 lineal ft.–6.1 meters.) For double application, start with triple thickness of precut Hip & Ridge shingles and continue remainder with double thickness. Fasten in same manner as single application shown. Apply laps away from prevailing wind direction.



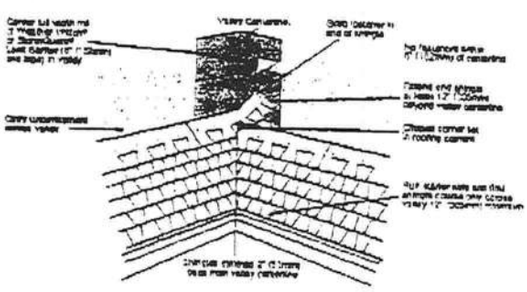
8 Wall Flashing (Sloped Roof to Vertical Wall)



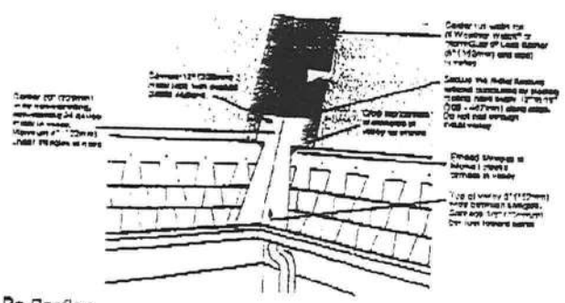
9 Chimney Flashing



10 Valley Construction–Closed Cut



11 Valley Construction–Open



Precautionary Notes

Timbertex® Series shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Bundles should not be dropped on edge nor should attempt be made to separate shingles by "breaking" over ridge or other bundles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Storage should be in a covered, ventilated area–maximum temperature 110°F (43°C). Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant Instructions.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application.

Note: Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes furring back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use covered wood strips if necessary. Install #30 underlayment to maintain Class A rating.

This product is sold with an express LIMITED WARRANTY only. A copy of the LIMITED WARRANTY stating its terms and restrictions is printed on the product wrapper or may be obtained from the distributor of this product or directly from GAF Materials Corporation. Any deviation from printed instructions shall be the responsibility of applicator and/or specifier.

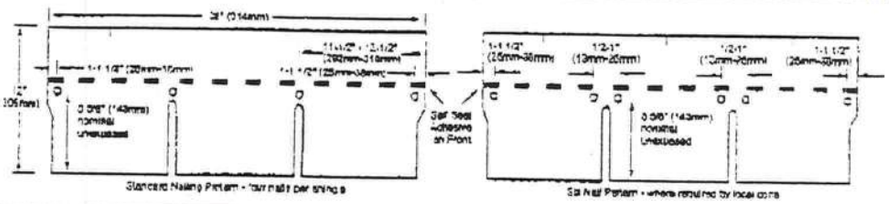
ENGLISH 12/'20

GAF
GAF MATERIALS CORPORATION

WeatherMax SHINGLES
ROYAL SOVEREIGN® SHINGLES
SENTINEL® SHINGLES

APPLICATION INSTRUCTIONS

Note: These shingles must be nailed a nominal 5 5/8" (143mm) from bottom of shingles, not in or above self seal, as shown. Nails should remain unexposed.



GENERAL INSTRUCTIONS

• **ROOF DECKS:** For use on new or reroofing work over well-seasoned, supported wood deck, tightly-constructed with maximum 6" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Plywood decks for Class A installations must be 3/8" (10mm) thick or greater with underlayments as noted below. Shingles must not be fastened directly to insulation or insulated deck unless authorized in writing by GAF Materials Corporation. Roof decks and existing surfacing material must be dry prior to application of shingles.

• **UNDERLAYMENT:** Underlayment is required on new construction and required for reroofing when old roof is removed from the deck. Use only "breather type" material like GAF Materials Corporation Shingle-Mate® underlayment or equivalent. Underlayments must be installed flat, without wrinkles.

• **FASTENERS:** Use of nails is recommended. (Staple specifications and application instructions are available from GAF Materials Corporation, Contractor Services Dept., 1361 Alps Road, Wayne, NJ 07470.) Use only zinc coated steel or aluminum, 12-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. For normal installation, four fasteners must be installed per shingle, a nominal 5 5/8" (143mm) up from the bottom of the shingle. Fasteners must be installed approximately 1"-1 1/2" (25-38mm) and 11 1/2"-12 1/2" (292-318mm) from each side.

• **WIND RESISTANT:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 2 quarter-sized dabs of shingle tab adhesive on the back of each tab, approximately 1" (25mm) from end and 1" (25mm) up from bottom of each tab corner. The shingle must be pressed firmly into the adhesive.

NOTE: Application of excess tab adhesive can cause blistering of the shingle.

For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.

NOTE: The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. Their removal is NOT required during application.

• **CANADIAN COLD WEATHER APPLICATIONS:** CSA A123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant for GAF Materials Corporation's recommendations for the application of that adhesive.

• **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical side walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 2 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.

• **EXPOSURE:** 5" (127mm)

• **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.

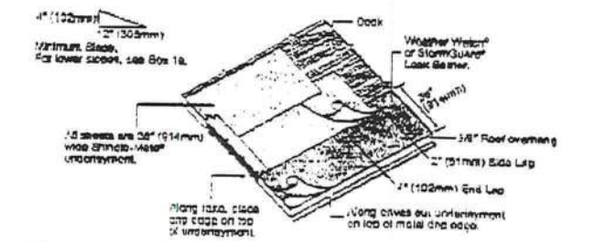
• **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.

• **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope–4/12 (333mm/m) or more

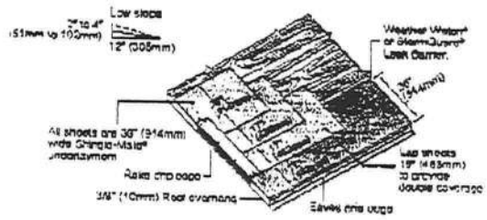
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



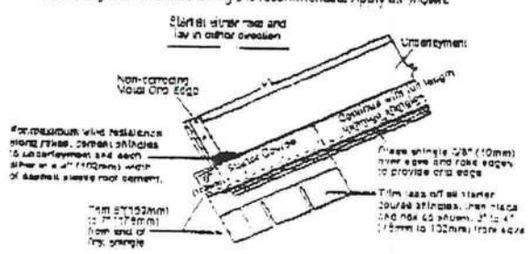
1a Underlayment: Low Slope 2/12–4/12 (167mm–333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of Shingle-Mate® underlayment.



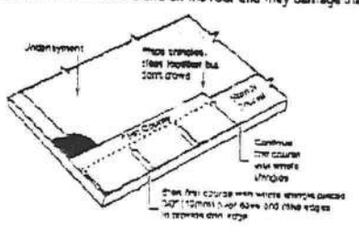
2 Starter Course

Use of any GAF MC 3-tab Shingle is recommended. Apply as shown.



3 First Course

Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.



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FAX No (847) 272-8129
Internet: www.ul.com

March 4, 2002

GAF Materials Corporation
Mr Randall Ziegler
1361 Alps Road
Wayne, NJ 07470

Our Reference: R21

Subject: UL Listed products

Dear Mr Ziegler:

This is is response to your request to identify some of the products that are currently Listed with Underwriters Laboratories relating to various Standards. Following are those products:

Royal Sovereign®
Marquis®/Marquis® WeatherMax®
SLATELINE®
Grand canyon™
Grand Sequoia®
Country Mansion™
Country Estate™
Timberline 30™
Timberline Select™ 40
Timberline Ultra™
Sentinel®
The above products have been tested to ASTM D3462, Class A UL790/ASTM E108 and UL 997/ ASTM D3161(secured with 4 nails)with velocities up to 110 mph and have successfully met those test criteria.

If you have any questions please feel free to contact the writer.

Very truly yours,

Roger Anderson (Ext. 43283)
Senior Engineering Associate
Conformity Assessment Services- 3011E-NBK

Reviewed by,

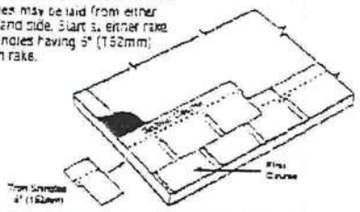
Douglas C. Miller (Ext. 43262)
Engineering Group Leader
Conformity Assessment Services- 3011E-NBK

** TOTAL PAGE.01 **

4 Second Course

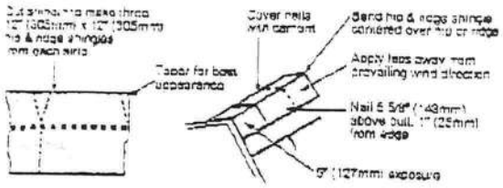
Start and continue second course and all even numbered courses as shown. Position the shingle on the top of the cutouts of the underlying shingle so that there will be 5" (127mm) of each shingle exposed. Strike a chalk line about every 6 courses to check parallel alignment with eaves. Factory applied self-sealing dots on lower courses are designed to seal down the shingle tabs in an upper course.

NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.

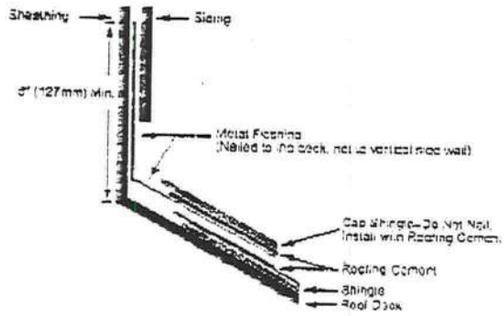


5 Hip and Ridge

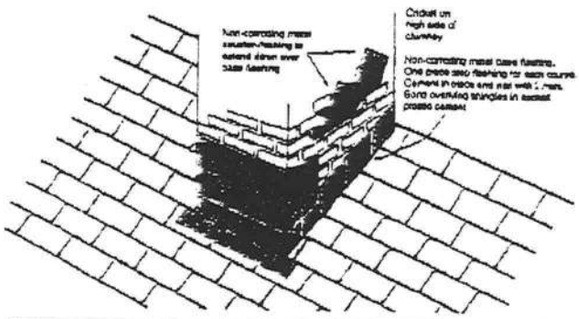
Use GAF hip & ridge shingles, or cut hip & ridge shingles from these full shingles, and apply as shown. Position laps away from prevailing wind direction.



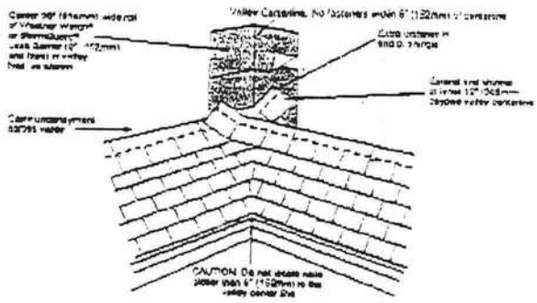
6 Wall Flashing (Sloped Roof to Vertical Wall)



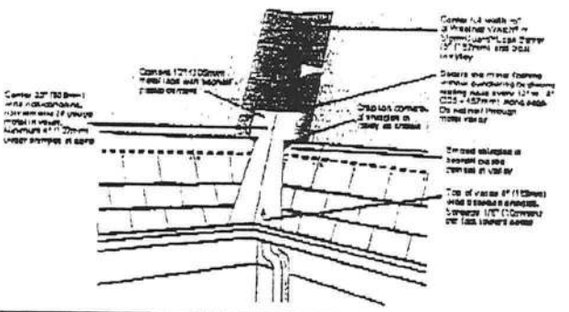
7 Chimney Flashing



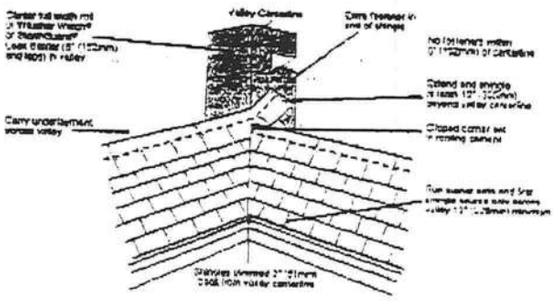
8 Valley Construction - Closed or Woven Valley



9 Valley Construction–Open Cut



10 Valley Construction–Closed Cut



Precautionary Notes

These shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Bundles should not be dropped on edge nor should attempt be made to separate shingles by "breaking" over ridge or other bundles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Storage should be in a covered, ventilated area—maximum temperature 110°F (43°C.) Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant Instructions.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application.

Note: Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes cutting back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use beveled wood strips if necessary. Install #30 underlayment to maintain Class A rating.

ENGLISH 113600

GAF

GAF MATERIALS CORPORATION

TIMBERLINE Ultra SHINGLES

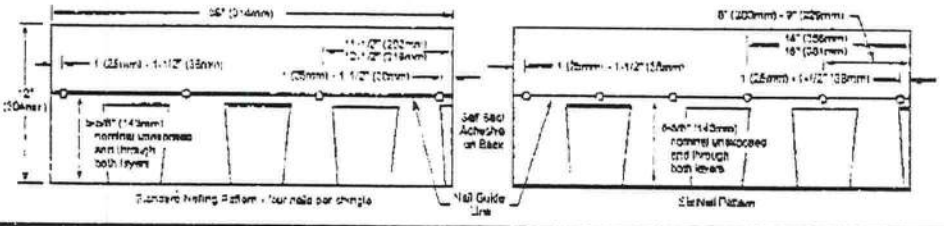
TIMBERLINE SHINGLES

TIMBERLINE 30 SHINGLES

APPLICATION INSTRUCTIONS

Timberline® Series shingles come in either 36" (914mm) or 36-15/16" (938mm) lengths, depending on shingle brand. Application instructions apply to both.

These shingles must be nailed a nominal 5-5/8" (143mm) from bottom of shingles, as shown, to allow for penetration through the double ply area just above the tabs. Nails should remain unexposed.



GENERAL INSTRUCTIONS

• **ROOF DECKS:** For use on new or reroofing work over well-fastened, supported wood deck, tightly-constructed with maximum 8" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Plywood decks for Class A installations must be 3/8" (10mm) thick or greater with underlayments as noted below. Shingles must not be fastened directly to insulation or insulated deck unless authorized in writing by GAF Materials Corporation. Roof decks and existing surfacing material must be dry prior to application of shingles.

• **UNDERLAYMENT:** Underlayment beneath shingles has many benefits, including preventing wind driven rain from reaching the interior of the building and preventing sap in some wood decking from reacting with asphalt shingles. Underlayment is also required by many code bodies. Consult your local building department for its requirements. Where an underlayment is to be installed, a breather-type underlayment such as GAFMC's Shingle-Mate® underlayment is recommended. Underlayment must be installed flat, without wrinkles.

• **FASTENERS:** Use of nails is recommended. (Staple specifications and application instructions are available from GAF Materials Corporation, Commercial Services Dept., 1361 Alps Road, Wayne, NJ 07470.) Use only zinc coated steel or aluminum, 10-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. For normal installation, our fasteners must be installed per shingle, a nominal 5-5/8" (143mm) up from the bottom of the shingle, to penetrate both layers of the shingle. Fasteners must be installed approximately 1" - 1 1/2" (25-38mm) and 11-1/2"-12-1/2" (292-318mm) from each side.

• **WIND RESISTANT:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 4 quarter-sized dabs of shingle tab adhesive on the back of the shingle 1" (25mm) and 13" (330mm) in from each side and 1" (25mm) up from bottom of the shingle. The shingle must be pressed firmly into the adhesive.

NOTE: Application of excess tab adhesive can cause blistering of the shingle.

For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 4" (102mm) width of asphalt plastic roof cement.

NOTE: The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. Their removal is NOT required during application.

• **CANADIAN COLD WEATHER APPLICATIONS:** CSA A123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant, for GAF Materials Corporation's recommendations for the application of that adhesive.

• **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical side walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 4 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.

• **EXPOSURE:** 5" (127mm)

• **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.

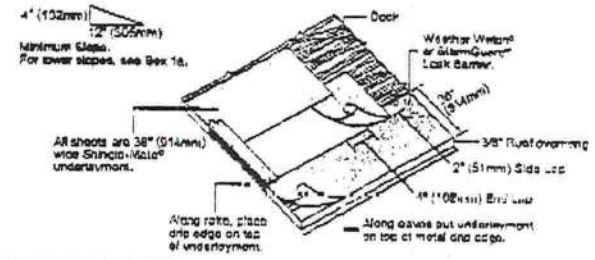
• **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.

• **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope—4/12 (333mm/m) or more

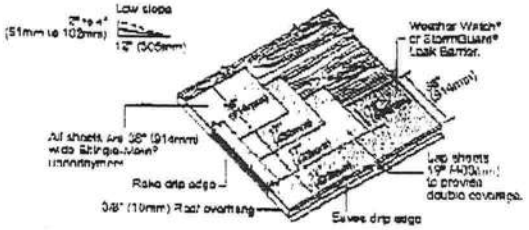
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



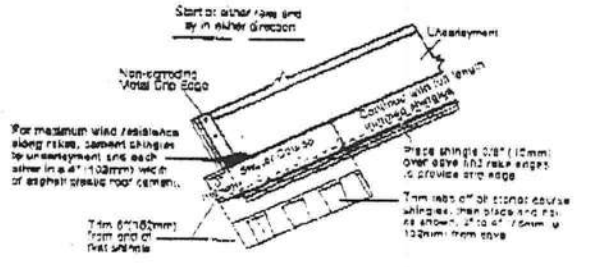
1a Underlayment: Low Slope 2/12-4/12 (167mm-333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAF Materials Corporation Weather Watch® or StormGuard® Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of Shingle-Mate® underlayment.



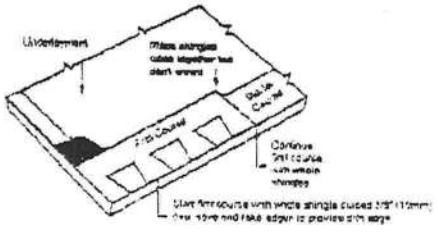
2 Starter Course

Apply as shown.

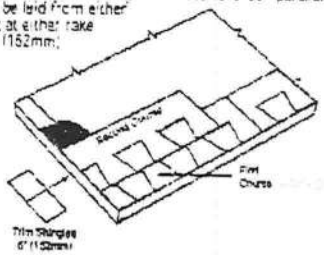


3 First Course

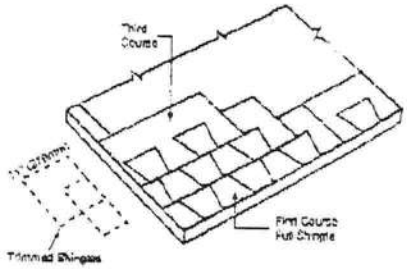
Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.



4 Start and continue second course as shown. Trim 5" (152mm) from the end of the shingle. Position the shingles in the second and subsequent courses flush with the tops of the wide cutouts. This results in a 5" (127mm) exposure. Continue with full width shingles across the roof. Snap a chalk line about every 6 courses to check parallel alignment with eaves. NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.

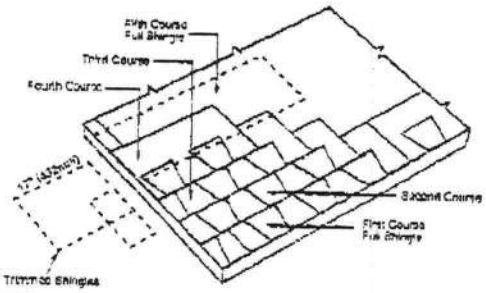


5 Third Course
Trim 11" (279mm) from the first shingle in the course then continue with full shingles across the roof.



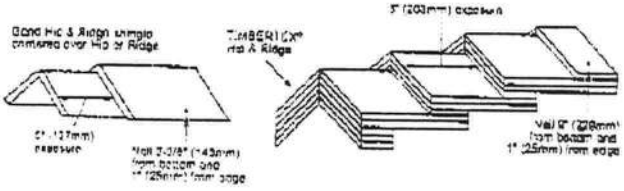
6 Fourth Course and Remaining Courses

Trim 17" (432 mm) from first shingle in the course, then continue with full shingles across the roof. Fifth and subsequent courses repeat full shingle instructions from Step 3.

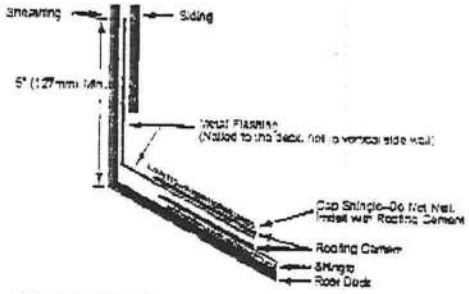


7 Hip and Ridge

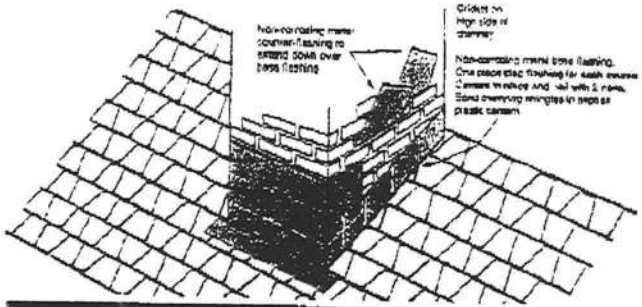
For single layer application, use hip and ridge shingles and apply as shown. To enhance appearance, use GAF TIMBERTEX® or a double layer application of Universal Hip & Ridge. (One bundle of TIMBERTEX® Hip & Ridge covers 20 lineal ft.–6.1 meters.) For double application, start with triple thickness of precut Hip & Ridge shingles and continue remainder with double thickness. Fasten in same manner as single application shown. Apply laps away from prevailing wind direction.



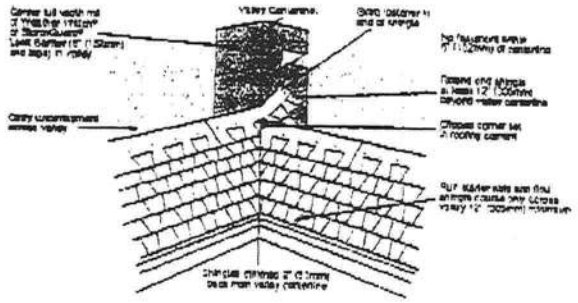
8 Wall Flashing (Sloped Roof to Vertical Wall)



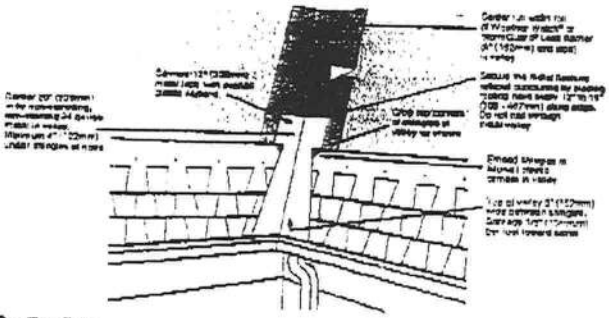
9 Chimney Flashing



10 Valley Construction–Closed Cut



11 Valley Construction–Open



Precautionary Notes

Timbertex® Series shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Bundles should not be dropped on edge nor should attempt be made to separate shingles by "breaking" over ridge or other bundles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Storage should be in a covered, ventilated area–maximum temperature 110°F (43°C.) Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant Instructions.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application.
Note: Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes butting back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use beveled wood strips if necessary. Install #30 underlayment to maintain Class A rating.

ENGLISH 12/'201

GAF®

GAF MATERIALS CORPORATION

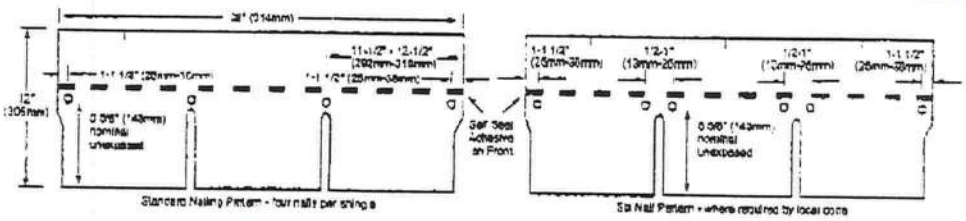
WeatherMax® SHINGLES

ROYAL SOVEREIGN® SHINGLES

SENTINEL® SHINGLES

APPLICATION INSTRUCTIONS

Note: These shingles must be nailed a nominal 5 5/8" (143mm) from bottom of shingles, not in or above self seal, as shown. Nails should remain unexposed.



GENERAL INSTRUCTIONS

- **ROOF DECKS:** For use on new or reroofing work over well-seasoned, supported wood deck, tightly-constructed with maximum 6" (152mm) wide lumber, having adequate nail-holding capacity and smooth surface. Plywood decking as recommended by The Engineered Wood Assn. is acceptable. Plywood decks for Class A installations must be 3/8" (10mm) thick or greater with underlayments as noted below. Shingles must not be fastened directly to insulation or insulated deck unless authorized in writing by GAF Materials Corporation. Roof decks and existing surfacing material must be dry prior to application of shingles.
- **UNDERLAYMENT:** Underlayment is required on new construction and required for reroofing when old roof is removed from the deck. Use only "breather type" material like GAF Materials Corporation Shingle-Mate® Underlayment or equivalent. Underlayments must be installed flat, without wrinkles.
- **FASTENERS:** Use of nails is recommended. (Staple specifications and application instructions are available from GAF Materials Corporation, Contractor Services Dept., 1361 Alps Road, Wayne, NJ 07470.) Use only zinc coated steel or aluminum, 10-12 gauge, barbed, deformed or smooth shank roofing nails with heads 3/8" (10mm) to 7/16" (12mm) in diameter. Fasteners should be long enough to penetrate at least 3/4" (19mm) into wood decks or just through the plywood decks. Fasteners must be driven flush with the surface of the shingle. Over driving will damage the shingle. Raised fasteners will interfere with the sealing of the shingles. For normal installation, four fasteners must be installed per shingle, a nominal 5 5/8" (143mm) up from the bottom of the shingle. Fasteners must be installed approximately 1"-1 1/2" (25-38mm) and 11 1/2"-12 1/2" (292-318mm) from each side.
- **WIND RESISTANT:** These shingles have a special thermal sealant that firmly bonds the shingles together after application when exposed to sun and warm temperatures. Shingles installed in Fall or Winter may not seal until the following Spring. If shingles are damaged by winds before sealing or are not exposed to adequate surface temperatures, or if the self-sealant gets dirty, the shingles may never seal. Failure to seal under these circumstances results from the nature of self-sealing shingles and is not a manufacturing defect. To insure immediate sealing, apply 2 quarter-sized dabs of shingle tab adhesive on the back of each tab, approximately 1" (25mm) from end and 1" (25mm) up from bottom of each tab corner. The shingle must be pressed firmly into the adhesive.

NOTE: Application of excess tab adhesive can cause blistering of the shingle.

For maximum wind resistance along rakes, cement shingles to underlayment and each other in a 1" (102mm) width of asphalt plastic roof cement.

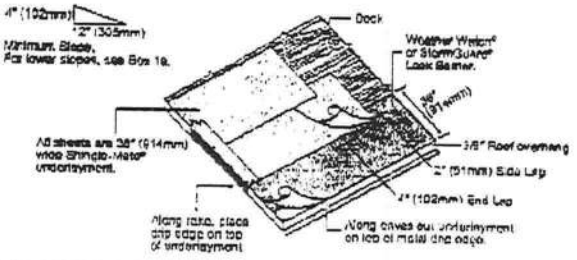
NOTE: The film strips on the back of each shingle are to prevent sticking together of the shingles while in the bundle. Their removal is NOT required during application.

- **CANADIAN COLD WEATHER APPLICATIONS:** CSA A123.5-M90 mandates that shingles applied between September 1 and April 30 shall be adhered with a compatible field-applied adhesive. See Wind Resistant for GAF Materials Corporation's recommendations for this application of that adhesive.
- **MANSARD AND STEEP SLOPE APPLICATIONS:** For roof slopes greater than 21" (1750mm/m) per foot (do NOT use on vertical side walls), shingle sealing must be enhanced by hand sealing. After fastening the shingle in place, apply 2 quarter-sized dabs of shingle tab adhesive as indicated in Wind Resistant above. The shingle must be pressed firmly into the adhesive.
- **EXPOSURE:** 5" (127mm)
- **THROUGH VENTILATION:** All roof structures must be provided with through ventilation to prevent entrapment of moisture laden air behind roof sheathing. Ventilation provisions must at least meet or exceed current F.H.A., H.U.D. or local code minimum requirements.
- **NON-CORRODING METAL DRIP EDGES:** Recommended along rake and eave edges on all decks, especially plywood decks.
- **ASPHALT PLASTIC CEMENT:** For use as shingle tab adhesive. Must conform to ASTM D4586 Type I or II.

1 Underlayment: Standard Slope—4/12 (333mm/m) or more

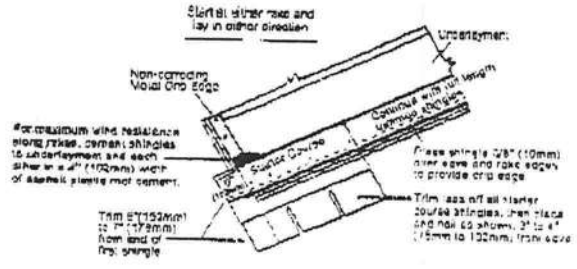
Application of underlayment: Cover deck with one layer of underlayment installed without wrinkles. Use only enough nails to hold underlayment in place until covered by shingles.

Application of eave flashing: Install eave flashing such as GAF Materials Corporation Weather Watch™ or StormGuard® Leak Barrier in localities where leaks may be caused by water backing up behind ice or debris dams. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line.



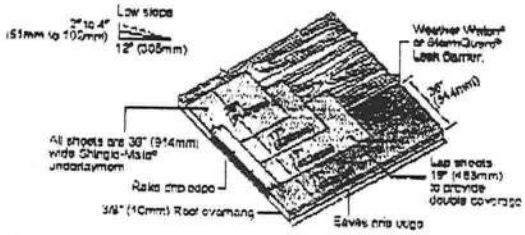
2 Starter Course

Use of any GAF MC 3-tab Shingle is recommended. Apply as shown.



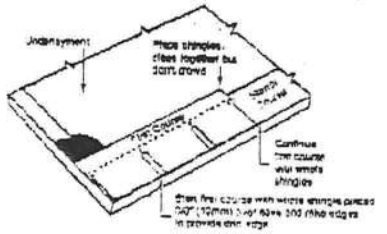
1a Underlayment: Low Slope 2/12-4/12 (167mm-333mm/m)

Application of underlayment and eave flashing: Completely cover the deck with two layers of underlayment as shown. Use only enough nails to hold underlayment in place until covered by shingles. Use blind nailing for eave flashings. At eaves and where ice dams can be expected, use one layer of GAF Materials Corporation Weather Watch™ or StormGuard™ Leak Barrier. Eave flashing must overhang the roof edge by 3/8" (10mm) and extend 24" (610mm) beyond the inside wall line. Where ice dams or debris dams are not expected, install 2 plies of Shingle-Mate® underlayment.



3 First Course

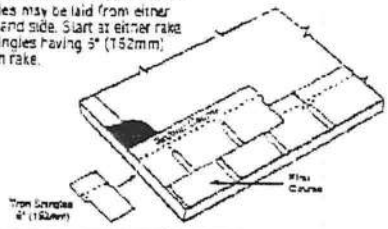
Start and continue with full shingles laid flush with the starter course. Shingles may be laid from left to right or right to left. DO NOT lay shingles straight up the roof since this procedure can cause an incorrect color blend on the roof and may damage the shingles.



4 Second Course

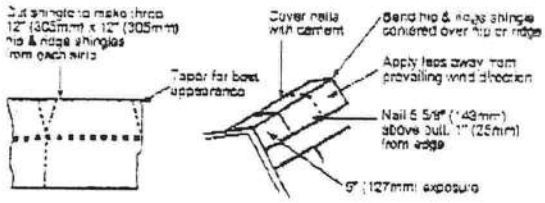
Start and continue second course and all even numbered courses as shown. Position the shingle on the top of the cutouts of the underlying shingle so that there will be 5" (127mm) of each shingle exposed. Strike a chalk line about every 6 courses to check parallel alignment with eaves. Factory applied self-sealing dots on lower courses are designed to seal down the shingle tabs in an upper course.

NOTE: Shingles may be laid from either left or right hand side. Start at either rake edge with shingles having 6" (152mm) trimmed from rake.

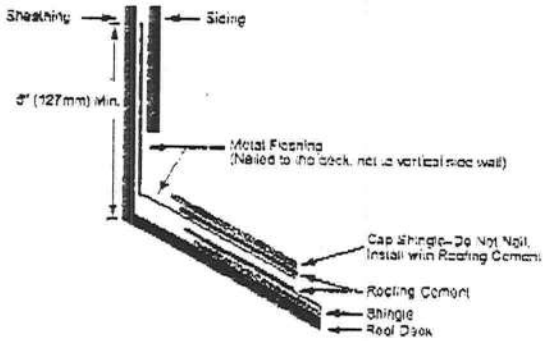


5 Hip and Ridge

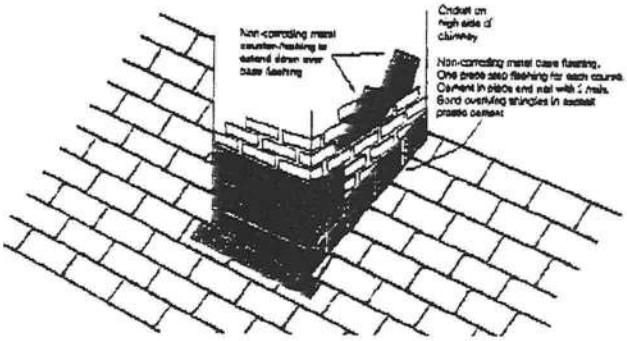
Use GAF hip & ridge shingles, or cut hip & ridge shingles from these full shingles, and apply as shown. Position laps away from prevailing wind direction.



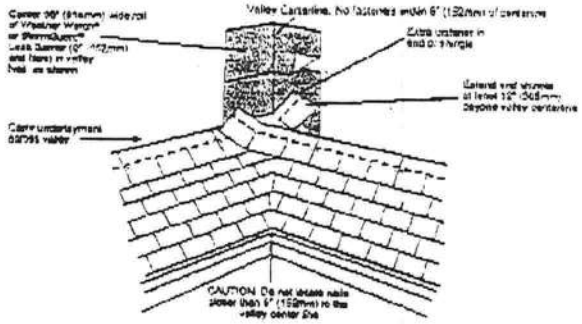
6 Wall Flashing (Sloped Roof to Vertical Wall)



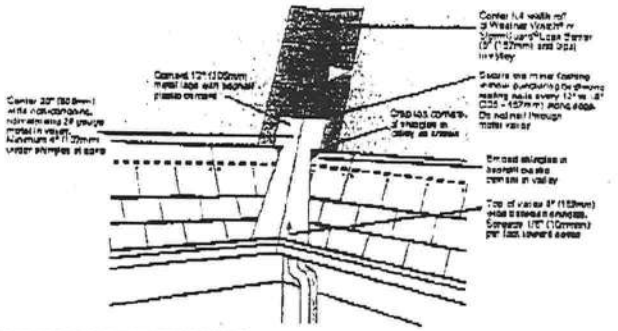
7 Chimney Flashing



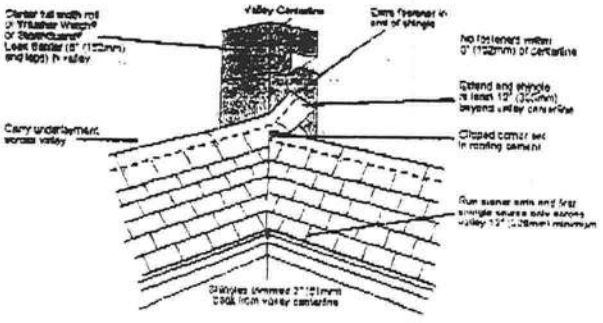
8 Valley Construction - Closed or Woven Valley



9 Valley Construction–Open Cut



10 Valley Construction–Closed Cut



Precautionary Notes

These shingles are fiberglass, self-sealing asphalt shingles. Because of the natural characteristics of the high quality waterproofing material used, these shingles will be stiff in cold weather and flexible in hot weather.

1. Bundles should not be dropped on edge nor should attempt be made to separate shingles by "breaking" over ridge or other bundles.
2. Handle carefully. Shingles can easily be broken in cold weather or their edges damaged in hot weather.
3. All exposed materials must be of Class A type.
4. Storage should be in a covered, ventilated area–maximum temperature 110°F (43°C.) Store on flat surface and use weight equalization boards if pallets are to be double stacked. Shingles must be protected from weather when stored at job site. Do not store near steam pipes, radiators, etc., or in sunlight. All rolled product must be stored on ends.
5. If shingles are to be applied during PROLONGED COLD periods or in areas where airborne dust or sand can be expected before sealing occurs, the shingles MUST be hand sealed. See Wind Resistant Instructions.

Re-Roofing

If old asphalt shingles are to remain in place, nail down or cut away all loose, curled or lifted shingles; replace with new; and just before applying the new roofing, sweep the surface clean of all loose debris. Since any irregularities may show through the new shingles, be sure the underlying shingles provide a smooth surface. Fasteners must be of sufficient length to penetrate the wood deck at least 3/4" (19mm) or just through plywood. Follow other above instructions for application. *Note:* Shingles can be applied over wood shingles when precautions have been taken to provide an acceptable smooth surface. This includes cutting back old shingles at eaves and rakes and installing new wood edging strips as needed. Make surface smooth and use beveled wood strips if necessary. Install #30 underlayment to maintain Class A rating.

333 Pfingsten Road
Northbrook, Illinois 60062-2096
United States Country Code (1)
(847) 272-8800
FAX No. (847) 272-8129
http://www.ul.com

Underwriters Laboratories Inc.®

March 4, 2002

GAF Materials Corporation
Mr Randall Ziegler
1361 Alps Road
Wayne, NJ 07470

Our Reference: R21

Subject: UL Listed products

Dear Mr Ziegler:

This is is response to your request to identify some of the products that are currently Listed with Underwriters Laboratories relating to various Standards. Following are those products:

Royal Sovereign®
Marquis®/Marquis® WeatherMax®
SLATELINE®
Grand canyon™
Grand Sequoia®
Country Mansion™
Country Estate™
Timberline 30™
Timberline Select™ 40
Timberline Ultra™
Seminole®
The above products have been tested to ASTM D3462, Class A UL790/ASTM E108 and UL 997/ ASTM D3161(secured with 4 nails)with velocities up to 110 mph and have successfully met those test criteria.

If you have any questions please feel free to contact the writer.

Very truly yours,

Roger Anderson (Ext. 43283)
Senior Engineering Associate
Conformity Assessment Services- 3011E-NBK

Reviewed by,

Douglas C. Miller (Ext. 43262)
Engineering Group Leader
Conformity Assessment Services- 3011E-NBK

** TOTAL PAGE.01 **

ELK
Premium Roofing

March 6, 2002

Subject: Elk Product Approval Information

All Prestique® and Capstone® products manufactured in Tuscaloosa, AL are certified under the Miami – Dade County Building Code Office (BCCO). These products also meet the requirements for the Florida Building Code since they are MD approved. The following test protocols must be passed by each of the products in order for MD product certification:
ASTM D3462
PA 100 (110 mph uplift and wind driven rain resistance)
PA 107 (Modified ASTM D3161 - 110 mph wind uplift resistance)

The nailing patterns that were used during the PA 100 and PA 107 wind test protocols for the Prestique and Capstone products are listed below. Also listed below are the Miami – Dade Notice of Acceptance Numbers (NOA).

Raised Profile, Prestique High Definition, Prestique 25, or Prestique 30 –
PA 100 = 4 nails
PA 107 = 5 nails
MD NOA# = 01-1226.04

Prestique I 35 or Prestique I* –
PA 100 = 4 nails
PA 107 = 5 nails
MD NOA# = 01-1226.05

Prestique Plus or Prestique Gallery Collection* –
PA 100 = 4 nails
PA 107 = 4 nails
MD NOA# = 01-1226.03

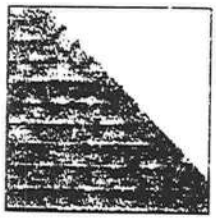
Capstone*
PA 100 = 4 Nails
PA 107 = 4 Nails
MD NOA# = 01-0523.01
* As per the Elk Limited Warranty, six nails are required for the Elk high wind warranty.

If there are any questions please contact:

Mike Reed – Technical Manager
(205) 342-0287

or

Daniel DeJarnette – QA Engineer
(205) 342-0298



PRESTIQUE®
HIGH DEFINITION®

RAISED PROFILE™

High Definition

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/99.6 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**.

Product size	13¼"x 38⅝"
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**.

High Definition

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/99.6 sq.ft.
Squares/Pallet	11

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**.

High Definition

Product size	13¼"x 38⅝"
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

Size: 12"x 12"
Exposure: 5⅝"
Pieces/Bundle: 45
Coverage: 4 Bundles = 100 linear feet

52 Bundles/Pallet
12 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 Sepiewood.

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 installation as shown on the instructions. These instructions are the minimum required to meet Elk application requirements. In some areas, 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 less than those contained in its application instructions.

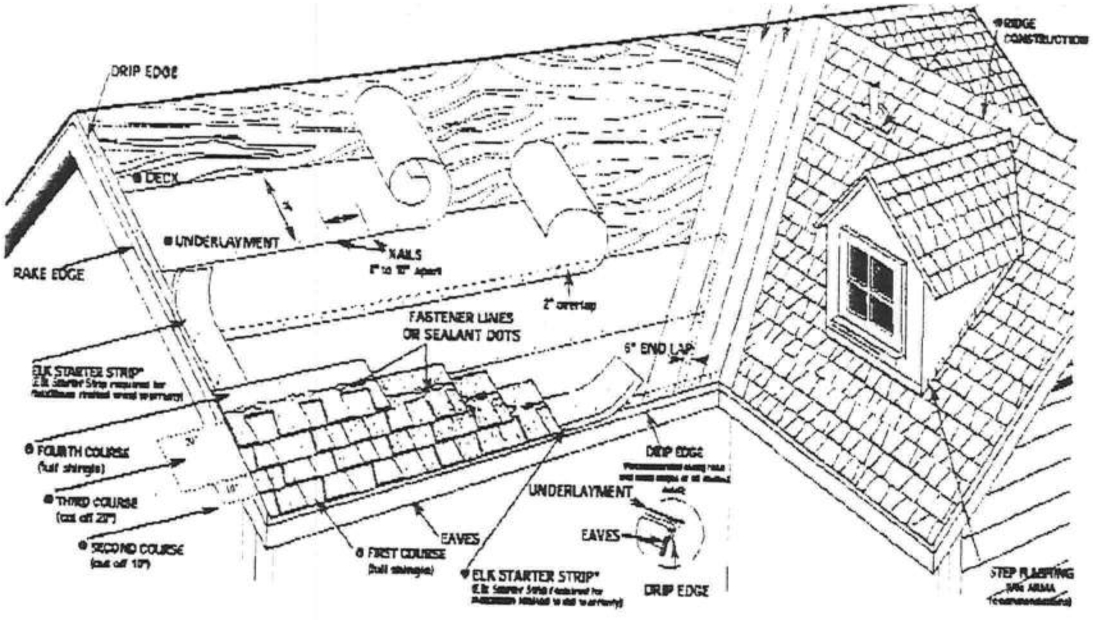
For specifications in CSI format, call 800.354.SPEC (7732) or e-mail specinfo@elkcorp.com.

SOUTHEAST & ATLANTIC OFFICE:
800.945.5551

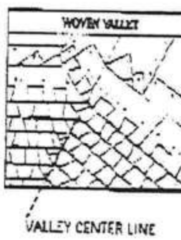
CORPORATE HEADQUARTERS:
800.354.7732

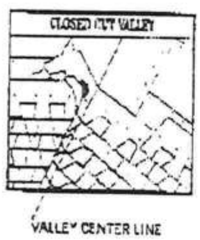
PLANT LOCATION:
800.945.5545

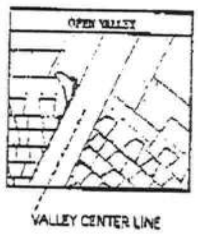
ELK
www.elkcorp.com



VALLEY CONSTRUCTION OPTION (California Open and California Closed are also Acceptable) NOTE: For complete ARMA valley installation details, see ARMA Residential Asphalt Roofing Manual.







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.

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.

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.

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. Shingles may be applied with a course alignment of 45" on the roof.

FIRST COURSE

Start at rake and continue course with full shingles laid flush with the starter course.

SECOND COURSE

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

THIRD COURSE

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

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.

VALLEY CONSTRUCTION

Open, woven and closed cut valleys are acceptable when applied by Asphalt Roofing Manufacturers Association (ARMA) recommended procedures. For metal valleys, use 36" wide vertical underlayment prior to applying 16" metal flashing (secure edge with nails). No nails are to be within 6" of valley center.

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 over to pass 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

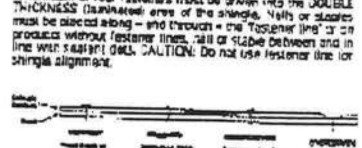
Correct fastening is critical to the performance of the roof. For slopes exceeding 60° (or 21/12) use six fasteners per shingle. Locate fasteners in the fastener area 1" from each side edge with the remaining four fasteners equally spaced along the length of the double thickness (laminated) area. Only 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 DOUBLE THICKNESS (laminated) area of the shingle. Nails or staples must be placed along – and through – the "fastener line" or on products without fastener lines, nail or staple between and in line with sealant dots. CAUTION: Do not use fastener line for shingle alignment.



Refer to local codes which in some areas may require specific application techniques beyond those Elk has specified.

All Prestique and Raised Profile shingles have a UL® Wind Resistance Rating when applied in accordance with these instructions using nails or staples on re-roofs as well as new construction.

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

www.elkcorp.com

ELK
Premium Roofing

March 6, 2002

Subject: Elk Product Approval Information

All Prestique® and Capstone® products manufactured in Tuscaloosa, AL are certified under the Miami – Dade County Building Code Office (BCCO). These products also meet the requirements for the Florida Building Code since they are MD approved. The following test protocols must be passed by each of the products in order for MD product certification:
ASTM D3462
PA 100 (110 mph uplift and wind driven rain resistance)
PA 107 (Modified ASTM D3161 - 110 mph wind uplift resistance)

The nailing patterns that were used during the PA 100 and PA 107 wind test protocols for the Prestique and Capstone products are listed below. Also listed below are the Miami – Dade Notice of Acceptance Numbers (NOA).

Raised Profile, Prestique High Definition, Prestique 25, or Prestique 30 –
PA 100 = 4 nails
PA 107 = 5 nails
MD NOA# = 01-1226.04

Prestique I 35 or Prestique I* –
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Prestique Plus or Prestique Gallery Collection* –
PA 100 = 4 nails
PA 107 = 4 nails
MD NOA# = 01-1226.03

Capstone*
PA 100 = 4 Nails
PA 107 = 4 Nails
MD NOA# = 01-0523.01
* As per the Elk Limited Warranty, six nails are required for the Elk high wind warranty.

If there are any questions please contact:

Mike Reed – Technical Manager (205) 342-0287
or
Daniel DeJarnette – QA Engineer (205) 342-0298

PRESTIQUE®
HIGH DEFINITION®

RAISED PROFILE™

High Definition

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/98.6 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*.

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*.

High Definition

Product size	13¼"x 39⅜"
Exposure	5⅝"
Pieces/Bundle	16
Bundles/Square	4/98.6 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*.

High Definition

Product size	13¼"x 38¾"
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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*.

HIP AND RIDGE SHINGLES

Size: 12"x 12"
Exposure: 5⅝"
Pieces/Bundle: 45
Coverage: 4 Bundles = 100 linear feet

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

Available Colors: Antique Slate, Weatherwood, Shakewood, Sablewood, Hickory, Barkwood**, Forest Green, Wedgewood**, Birchwood**, Sandalwood, Gallery Collection: Balsam Forest*, Weathered Sage*, Sierra 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 blowoffs 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 installation as shown on the instructions. These instructions are the minimum required to meet Elk application requirements. In some areas, 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 less than those contained in its application instructions.

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

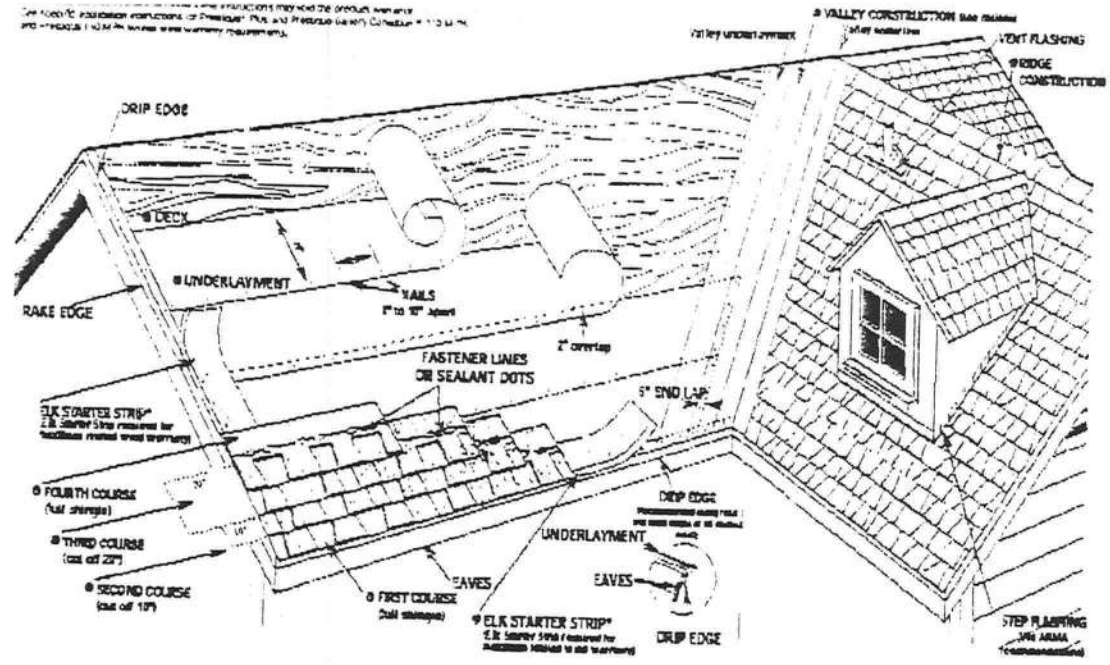
SOUTHEAST & ATLANTIC OFFICE:
800.945.5551

CORPORATE HEADQUARTERS:
800.354.7732

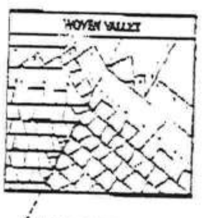
PLANT LOCATION:
800.945.5545

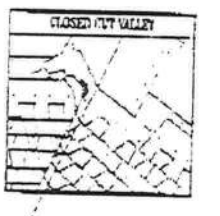
ELK
www.elkcorp.com

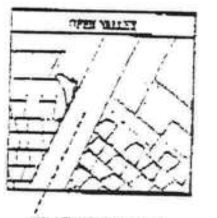
[illegible] instructions may void the product warranty. See specific application instructions for Prestique Plus and Prestique Gallery Collection [illegible] and Prestique I [illegible] MPH [illegible] warranty requirements.



VALLEY CONSTRUCTION OPTION (California Open and California Closed are also Acceptable) NOTE: For complete ARMA valley installation details, see ARMA Residential Asphalt Roofing Manual.







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 decks should be properly ventilated. Note: It is not necessary to remove tape on back of shingle.

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.

UNDERLAYMENT

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

For low slopes (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.

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. Shingles may be applied with a course alignment of 45° on the roof.

FIRST COURSE

Start at rake and continue course with full shingles laid flush with the starter course.

SECOND COURSE

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

THIRD COURSE

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

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.

VALLEY CONSTRUCTION

Open, woven and closed cut valleys are acceptable when applied by Asphalt Roofing Manufacturers 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.

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: Corrosion 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 over the outside wall line. 1" ring shank nails allowed for re-roof.

STAPLES: Corrosion 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

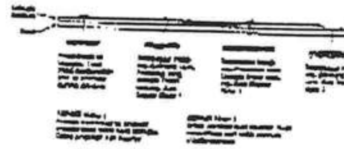
Correct fastening is critical to the performance of the roof. For slopes exceeding 60° (or 21/12) use six fasteners per shingle. Locate fasteners in the fastener area 1" from each side edge with the remaining four fasteners equally spaced along the length of the double thickness (laminated) area. Only 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 DOUBLE THICKNESS (laminated) area of the shingle. Nails or staples must be placed along – and through – the "fastener line" or on products without fastener lines, nail or staple between and in line with sealant dots. CAUTION: Do not use fastener line for shingle alignment.



Refer to local codes which in some areas may require specific application techniques beyond those Elk has specified.

All Prestique and Raised Profile shingles have a UL® Wind Resistance Rating when applied in accordance with these instructions using nails or staples on re-roofs as well as new construction.

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

ELK

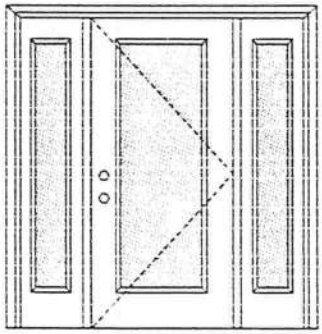
www.elkcorp.com

OXO
Glazed Inswing Unit

COP-WL-JH4144-02

WOOD-EDGE STEEL DOORS

APPROVED ARRANGEMENT:



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

Design Pressure
+40.5/-40.5
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.

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.etisemko.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".

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:

1/4 GLASS:


100 Series

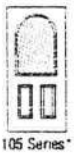

133, 135 Series

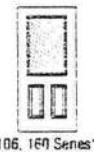

136 Series


680 Series


822 Series

1/2 GLASS:

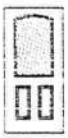

105 Series*


106, 160 Series*


129 Series*


200 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 styles: 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 details subject to change without notice.

PREMDOOR Premium Quality Doors

Exclusively from Masonite®
Masonite International Corporation

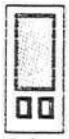
OXO
Glazed Inswing Unit

COP-WL-JH4144-02

WOOD-EDGE STEEL DOORS

APPROVED DOOR STYLES:

3/4 GLASS:


404 Series

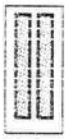

410 Series

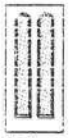

450 Series

FULL GLASS:


109 Series


114, 120, 122 Series


152 Series


149 Series


300 Series

APPROVED SIDELITE STYLES:


680 Series


129 Series


200 Series


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

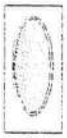

450 Series


152 Series


149 Series


109 Series


120, 122 Series


300 Series

CERTIFIED TEST REPORTS:

NCTL 210-1897-7, 8, 9, 10, 11, 12; NCTL 210-1861-4, 5, 6, 10, 11, 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 PA202.

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

Johnson EntrySystems

June 17, 2002
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PREMDOOR (Premium Quality Doors)

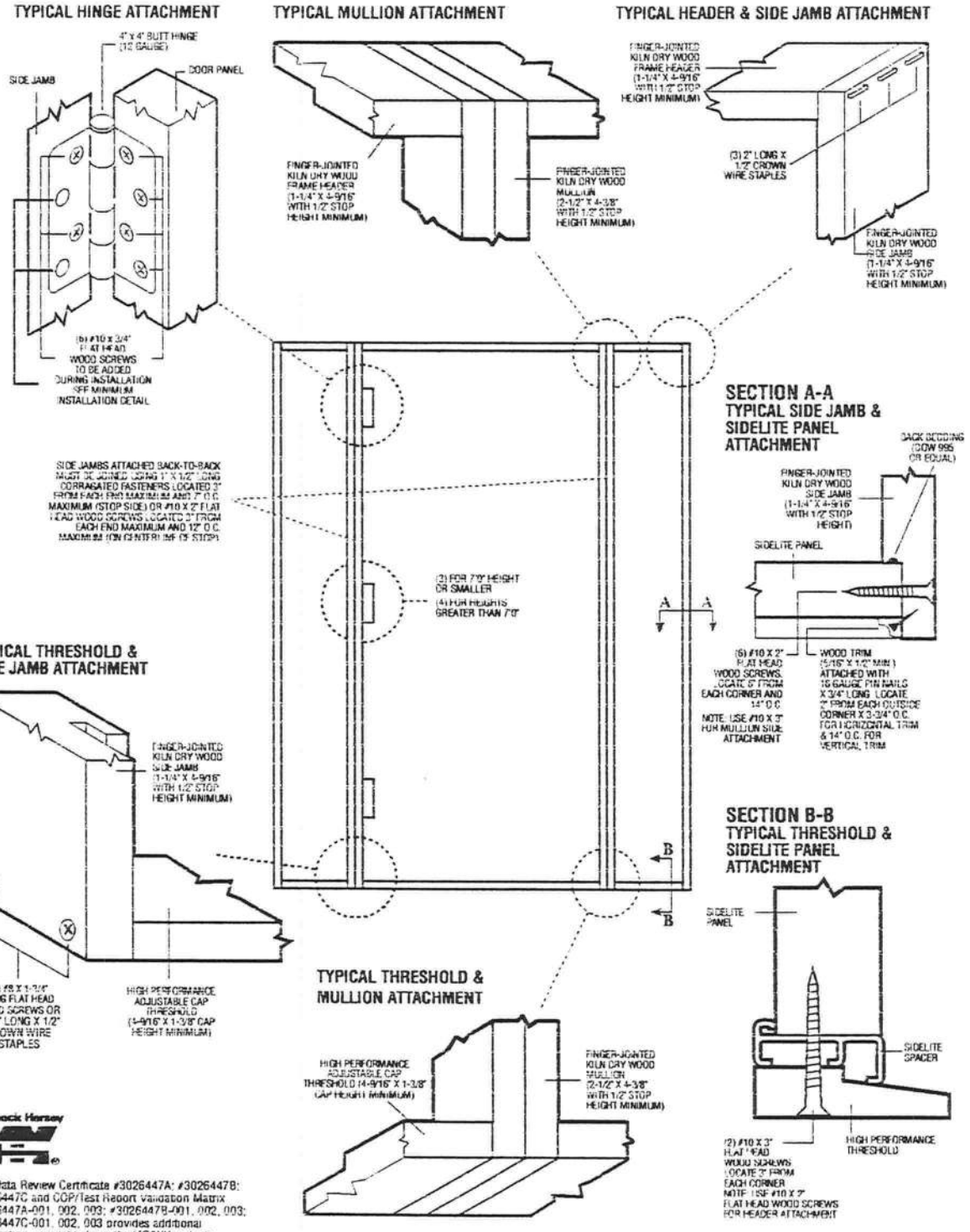
Exclusively from Masonite

Masonite International Corporation

OXO
Unit

MAD-WL-MA0007-02

INSWING UNIT WITH SINGLE DOOR & TWO SIDELITES (BOXED CONSTRUCTION)



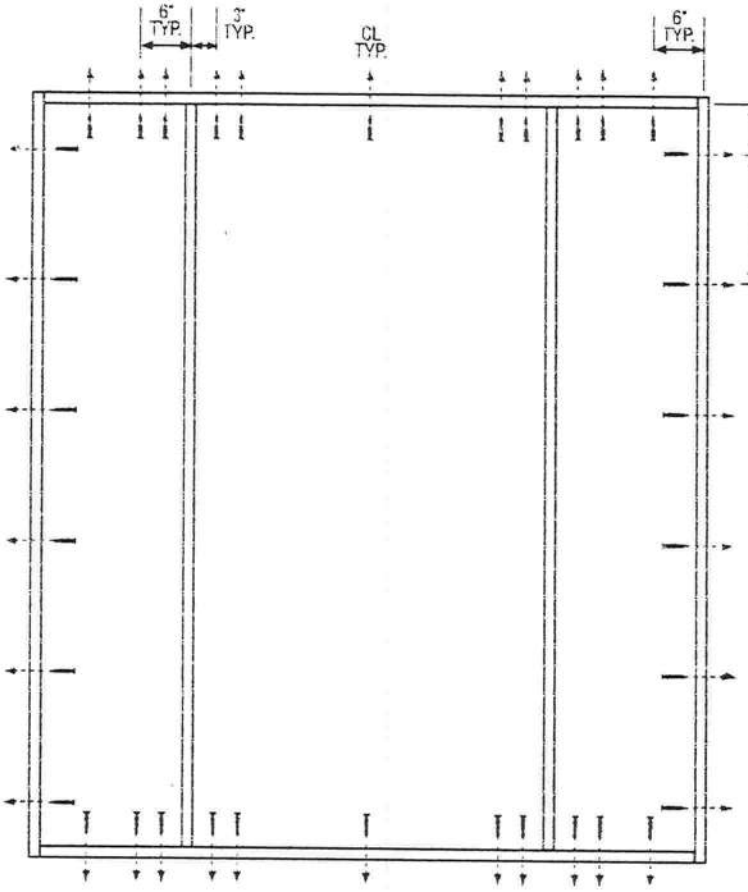
Warnock Hersey

Test Data Review Certificate #3026447A; #3026447B; #3026447C and QCP/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.intertek.com), the Masonite website (www.masonite.com) or the Masonite technical center.

OXO
Unit

MID-WE-MA0004-02

SINGLE DOOR WITH 2 SIDELITES



Minimum Fastener Count

- 6 per vertical framing member
- 11 per horizontal framing member

Hinge and strike plates require two 2-1/2" long screws per location.

Rough Opening (RO)

- Width of door unit plus 1/2"
- Height of door unit plus 1/4"

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.etsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Latching Hardware:

- Compliance requires that GRADE 3 or better (ANSI/BHMA A156.2) cylindrical and deadlock hardware be installed.
- **UNITS COVERED BY COP DOCUMENT 3244*, 3249, 3264* or 3269**
  Compliance requires that 8" GRADE 1 (ANSI/BHMA A156.16) surface bolts be installed on latch side of active door panel – (1) at top and (1) at bottom.

*Based on required Design Pressure – see COP sheet for details.

Notes:

1. Anchor calculations have been carried out with the lowest (least) fastener rating from the different fasteners being considered for use. Fasteners analyzed for this unit include #8 and #10 wood screws or 3/16" Tapcons.
2. The wood screw single shear design values come from Table 11.3A of ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment. The 3/16" Tapcon single shear design values come from the ITW and ELCO Dade Country approvals respectively, each with minimum 1-1/4" embedment.
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

PREMDOR Member

Exclusively from Masonite®
Masonite International Corporation

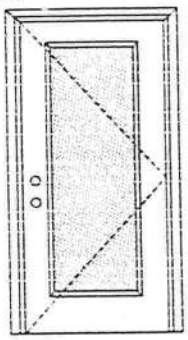
X

Glazed Inswing Unit

COP-WL-JH4141-02

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

+40.5/-40.5

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 and MAD-WL-MA0041-02.

MINIMUM INSTALLATION DETAIL:

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

APPROVED DOOR STYLES:

1/4 GLASS:


100 Series

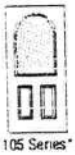

133, 135 Series

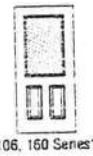

136 Series

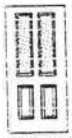

680 Series


822 Series

1/2 GLASS:


105 Series*


106, 160 Series*


129 Series*


200 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 styles: 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.

PREMDOOR Premium Quality Doors

Exclusively from Masonite®

Masonite International Corporation

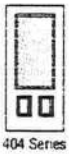
X
Glazed Inswing Unit

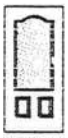
COP-WE-JH4141-02

WOOD-EDGE STEEL DOORS

APPROVED DOOR STYLES:

3/4 GLASS:


404 Series


410 Series

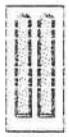

450 Series

FULL GLASS:


109 Series


114, 120, 122 Series


152 Series


149 Series


300 Series

CERTIFIED TEST REPORTS:

NCTL 210-1897-7, 8, 9, 10, 11, 12; NCTL 210-1861-4, 5, 6, 10, 11, 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 PA202.

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. 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 Balthazor

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.etsemko.com), the Masonite website (www.masonite.com) or the Masonite technical center

Johnson EntrySystems

June 17, 2002
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PREMDOR Collection Premium Quality Doors

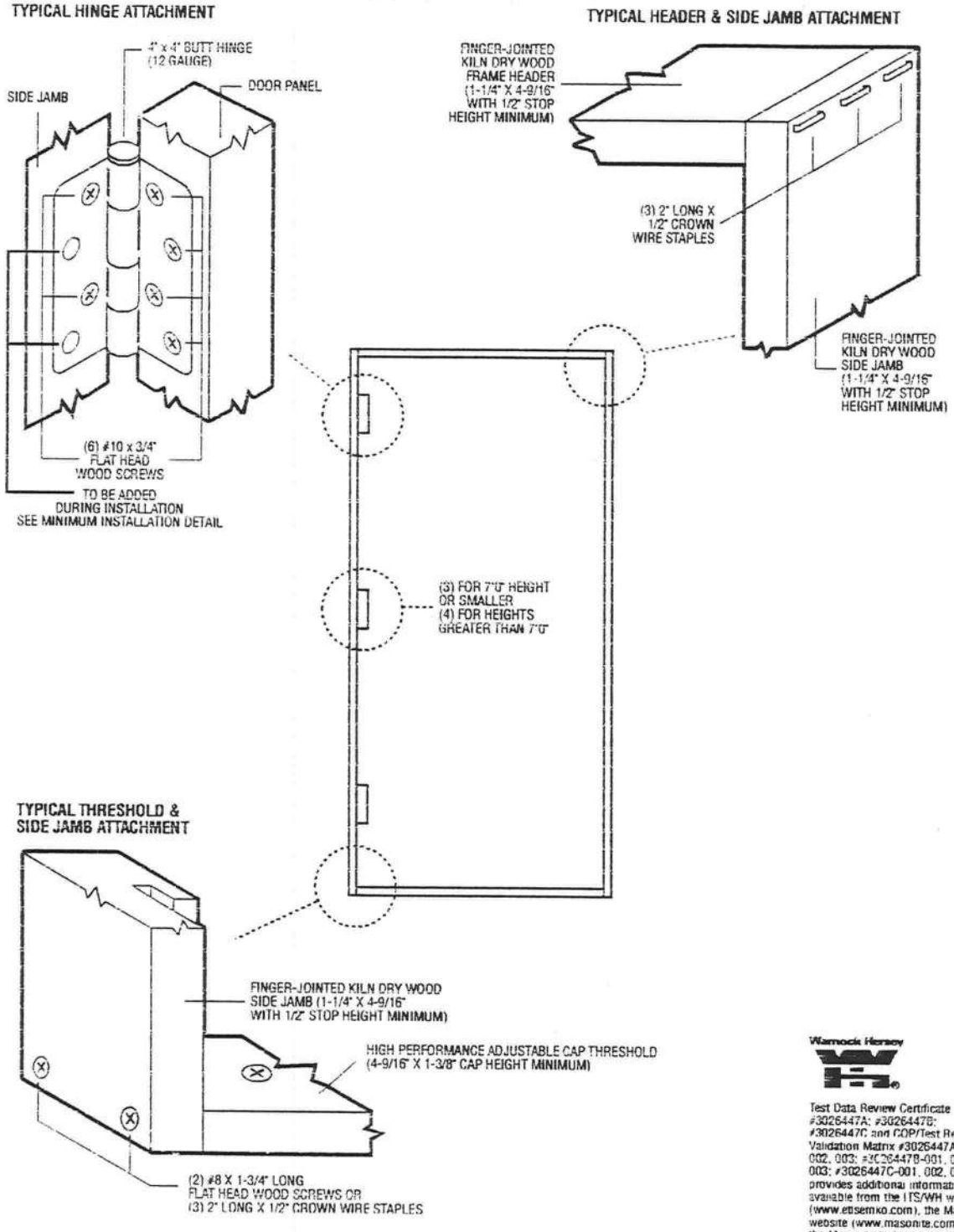
Exclusively from Masonite

Masonite International Corporation

X
Unit

MAD-WL-MA0001-02

INSWING UNIT WITH SINGLE DOOR



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

PREMDOOR Premium Quality Doors

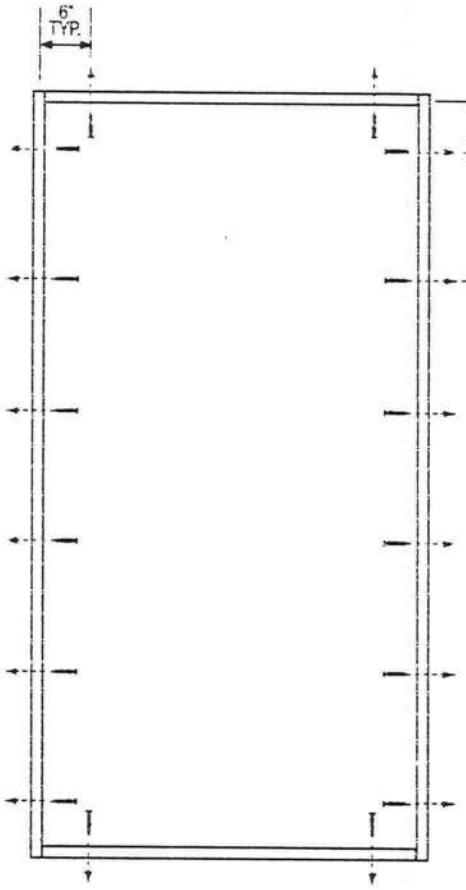
Exclusively from Masonite

Masonite International Corporation

X
Unit

MID-WL-MA0001-02

SINGLE DOOR



Minimum Fastener Count

- 6 per vertical framing member
- 2 per horizontal framing member

Hinge and strike plates require two 2-1/2" long screws per location.

Rough Opening (RO)

- Width of door unit plus 1/2"
- Height of door unit plus 1/4"

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.etsamko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

Latching Hardware:

- Compliance requires that GRADE 3 or better (ANSI/BHMA A156.2) cylindrical and deadlock hardware be installed.
- **UNITS COVERED BY COP DOCUMENT 3146, 3166, 3241*, 3246, 3261* or 3266**
  Compliance requires that 8" GRADE 1 (ANSI/BHMA A156.16) surface bolts be installed on latch side of active door panel – (1) at top and (1) at bottom.

*Based on required Design Pressure – see COP sheet for details.

Notes:

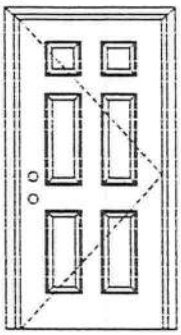
1. Anchor calculations have been carried out with the lowest (least) fastener rating from the different fasteners being considered for use. Fasteners analyzed for this unit include #8 and #10 wood screws or 3/16" Tapcons.
2. The wood screw single shear design values come from Table 11.3A of ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment. The 3/16" Tapcon single shear design values come from the ITW and ELCO Dade Country approvals respectively, each with minimum 1-1/4" embedment.
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

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.etsemko.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

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June 17, 2002
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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.etisemko.com), the Masonite website (www.masonite.com) or the Masonite technical center.

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

Rendered to:

MI HOME PRODUCTS, INC.

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

Title	Summary of Results
AAMA Rating	H-R35 112 x 72
Operating Force	25 lb max.
Air Infiltration	0.16 cfm/ft²
Water Resistance Test Pressure	5.25 psf
Uniform Load Deflection Test Pressure	35.3 psf / 35.9 psf
Uniform Load Structural Test Pressure	-53.0 psf / -52.5 psf
Deglazing	Passed
Forced Entry Resistance	Grade 10

Reference should be made to ATI Report No. 01-41641.02 for complete test specimen description and data.

Architectural Testing

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

Rendered to:

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

Report No: 01-41641.02
Test Dates: 05/13/02
And: 05/16/02
Report Date: 11/12/02
Expiration Date: 05/16/06

Project Summary: Architectural Testing, Inc. (ATI) was contracted by MI Home Products, Inc. to witness testing on a Series/Model 650, aluminum triple single hung window at their facility located in Elizabethville, Pennsylvania. The sample tested successfully met the performance requirements for a H-R35 112 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

Type: Aluminum Triple Single Hung Window

Overall Size: 9' 3-1/2" wide by 5' 11-11/16" high

Active Sash Size (3): 3' 0-1/4" wide by 2' 10-3/4" high

Fixed Daylight Opening Size (3): 2' 8-1/4" wide by 2' 9-1/8" high

Screen Size (3): 2' 9-1/8" wide by 2' 11" high

Finish: All aluminum was painted white.

[illegible] Derry Court
York, PA [illegible]
phone: [illegible]
fax: [illegible]
www.[illegible]test.com

Test Specimen Description: (Continued)

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.

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" by 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. The meeting rail was secured to the frame utilizing two 1-1/4" screws. The mullions were secured utilizing four #8 x 1-1/4" screws through the head and sill into the mullion screw boss.

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 stiles' screw boss.

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

Test Specimen Description: (Continued)

Hardware:

Description	Quantity	Location
Metal cam lock with keeper	1	Midspan of each active meeting rail with adjacent keepers
Plastic tilt latch	2	Each active sash meeting rail ends
Metal tilt pin	2	Each active sash bottom rail ends
Balance assembly	2	Each active sash contained one in each jamb
Screen plunger	2	Each screen contained two 4" from rail ends on top rail

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood 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	25 lbs	30 lbs max.
2.1.2	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.16 cfm/ft^2	0.3 cfm/ft^2 max.

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

Paragraph	Title of Test - Test Method	Results	Allowed
2.1.3	Water Resistance (ASTM E 547-00) (with and without screen) WTP = 2.86 psf	No leakage	No leakage

Test Results: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
2.1.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the mullion) (Loads were held for 52 seconds)		
	@ 15.0 psf (positive)	0.15"	0.41" max.
	@ 15.0 psf (negative)	0.29"	0.41" max.
2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the mullion) (Loads were held for 10 seconds)		
	@ 22.5 psf (positive)	0.01"	0.29" max.
	@ 22.5 psf (negative)	0.01"	0.29" max.
2.2.1.6.2	Deglazing Test (ASTM E 987-88) In operating direction at 70 lbs		
	Right sash, meeting rail	0.12"/25%	0.50"/100%
	Right sash, bottom rail	0.12"/25%	0.50"/100%
	Middle sash, meeting rail	0.12"/25%	0.50"/100%
	Middle sash, bottom rail	0.12"/25%	0.50"/100%
	Left sash, meeting rail	0.12"/25%	0.50"/100%
	Left sash, bottom rail	0.12"/25%	0.50"/100%
	In remaining direction at 50 lbs		
	Right sash, right stile	0.06"/12%	0.50"/100%
	Right sash, left stile	0.06"/12%	0.50"/100%
	Middle sash, right stile	0.06"/12%	0.50"/100%
	Middle sash, left stile	0.06"/12%	0.50"/100%
	Left sash, right stile	0.06"/12%	0.50"/100%
	Left sash, left stile	0.06"/12%	0.50"/100%
2.1.8	Forced Entry Resistance (ASTM F 588-97)		
	Type: A Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Test A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry

Test Results: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
Optional Performance			
4.3	Water Resistance (ASTM E 547-00) (With and without screen) WTP = 5.25 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the mullion) (Loads were held for 52 seconds)		
	@ 35.3 psf (positive)	0.46"	See Note #2
	@ 35.0 psf (negative)	0.41"	See Note #2

Note #2: The Uniform Load Deflection test is not an AAMA NWWDA 101/I.S.2-97 requirement for this product designation. The data is recorded in this report for information only.

4.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the mullion) (Loads were held for 10 seconds)		
	@ 53.0 psf (positive)	0.03"	0.29" max.
	@ 52.5 psf (negative)	0.02"	0.29" max.

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. This report may not be reproduced, except in full, without written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC:

Mark A. Hess
Technician

David A. Kranz
Director - Product Physical Testing

MAH/dm
01-41641.02

Architectural Testing

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

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 450
TYPE: Aluminum Single Hung Window
RATING: H-C30 54 x 90; H-C45 52 x 72*

	Results	
Title of Test	Test Specimen #1	Test Specimen #2
Overall Design Pressure	30 psf	47 psf
Operating Force	20 lb max.	N/A
Air Infiltration	0.27 cfm/ft^2	N/A
Water Resistance	5.25 psf	6.0 psf
Structural Test Pressure	±45.0 psf	±70.5 psf
Deglazing	Passed	N/A
Forced Entry Resistance	Grade 10	N/A

Reference should be made to Report No. 01-37589.01 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Adam A. Fodor, Technician

AAF:tjp

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.testati.com

Architectural Testing

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

Rendered to:

MI HOME PRODUCTS, INCORPORATED
650 West Market Street
Gratz, Pennsylvania 17030-0370

Report No: 01-37589.01
Test Date: 06/29/00
Report Date: 09/11/00
Expiration Date: 06/29/04

Project Summary: Architectural Testing, Inc. (ATI) was contracted to witness tests on a Series/Model 450, aluminum single hung window at the MI Home Products in-plant test facility in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for the following ratings: Test Specimen #1 H-C30 54 x 90; Test Specimen #2 H-C40 52 x 72*. Test specimen descriptions and results are reported herein.

General Note: An asterisk (*) next to the performance grade indicates that the size tested for optional performance was smaller than the minimum test size for the product type and class.

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: 450

Type: Aluminum Single Hung Window

Test Specimen #1 H-C30 54 x 90

Overall Size: 4' 6-1/2" wide by 7' 6-1/2" high

Sash Size: 4' 4" wide by 3' 9-3/4" high

Fixed Daylight Opening Size: 4' 1-1/2" wide by 3' 6-1/2" high

Screen Size: 4' 2-1/4" wide by 3' 8-1/2" high

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.testati.com

Test Specimen Description: (Continued)

Test Specimen #2: H-C40 52 x 72*

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

Sash Size: 4' 2" wide by 3' 0-1/2" high

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

Screen Size: 4' 0" wide by 2' 11" high

The following descriptions apply to all specimens.

Finish: All aluminum was painted.

Glazing Details: The lites utilized 5/8" thick sealed insulating glass units fabricated from two sheets of 3/32" thick clear annealed glass and an Intercept™ spacer system. The sash was channel glazed with a flexible gasket. The fixed lite was interior glazed onto single-sided adhesive foam tape and secured with extruded PVC glazing beads.

Weatherstripping:

Description	Quantity	Location
0.210" high by 0.270" backed polypile with center fin	Row	Fixed meeting rail
0.250" high by 0.187" backed polypile with center fin	2 Rows	Stiles
0.300" diameter by 0.187" backed foam-filled vinyl bulb gasket	Row	Bottom rail
0.400' high by 1/2" square polypile dust plug	4	One on each sash corner

Frame Construction: The main frame was constructed of thermally-broken extruded aluminum members with coped, butted and sealed corners. The fixed meeting rail was constructed of an extruded aluminum member with coped, butted and sealed ends fastened with two screws each.

Test Specimen Description: (Continued)

Sash Construction: The sash members were constructed of thermally-broken extruded aluminum members with coped, butted and sealed corners fastened with one screw each.

Screen Construction: The screen was constructed of rolled aluminum members with plastic keyed corners. The fiberglass mesh was secured with a flexible spline.

Hardware:

Description	Quantity	Location
Plastic snap latch	1	Midspan of bottom rail
Block and tackle balance system	2	One per jamb
Plastic tilt latch	2	One on each end of sash meeting rail
Metal pivot bar	2	One on each end of bottom rail

Drainage: Sloped sill

Reinforcement: No reinforcement was utilized.

Installation: The test unit was installed into the nominal 2" x 8" Spruce-Pine-Fir #2 wood test buck utilizing the integral nailing fin secured with 1" long galvanized roofing nails, 6" from each corner and every 18" on center. The nailing fin was also bedded in polyurethane. The exterior perimeter was blindstopped with wood members and secured with #8 x 3" screws every 24" on center.

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
Test Specimen #1: H-C30 54 x 90			
2.2.1.6.1	Operating Force	20 lbs	45 lbs max.
	Air Infiltration per ASTM E 283 (See Note #1) @ 1.57 psf (25 mph)	0.27 cfm/ft^2	0.3 cfm/ft^2 max.
	Water Resistance per ASTM E 547 (with and without screen) WTP = 4.5 psf	No leakage	No leakage
2.1.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail)		
	@ 45.0 psf (exterior)	0.03"	0.22" max.
	@ 45.0 psf (interior)	0.04"	0.22" max.
2.2.1.6.2	Deglazing Test per ASTM E 987 In operating direction at 70 lbs		
	Meeting rail	0.06"/12%	0.50"/100%
	Bottom rail	0.06"/12%	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 per ASTM F 588-97		
	Type: A Grade: 10		
	Lock Manipulation Test	No entry	No entry
	Test A1 through A5	No entry	No entry
	Test A7	No entry	No entry
	Lock Manipulation Test	No entry	No entry

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

Test Results:

Paragraph	Title of Test - Test Method	Results	Allowed
Test Specimen #1: (Continued)			
Optional Performance			
4.3	Water Resistance per ASTM E 547 (with and without screen) WTP = 5.25 psf	No leakage	No leakage
Test Specimen #2: H-C40 52 X 72*			
Optional Performance			
4.3	Water Resistance per ASTM E 547 and 331 (with and without screen) WTP – 6.0 psf	No leakage	No leakage
4.4.2	Uniform Load Structural per ASTM E 330 (Measurements reported were taken on the fixed meeting rail) (Loads held for 33 seconds)		
	@ 47.0 psf (exterior)	0.04"	N/A
	@ 47.0 psf (interior)	0.03"	N/A
	(Loads held for 10 seconds)		
	@ 70.5 psf (exterior)	0.07"	0.21" max.
	@ 70.5 psf (interior)	0.04"	0.21" max.

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:

Adam A. Fodor
Technician

Bruce W. Croak
Director – Product/Physical Testing

AAF:
01-37589.01

NATIONAL CERTIFIED TESTING LABORATORIES

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STRUCTURAL PERFORMANCE TEST REPORT

Report No: NCTL-210-2065-1
Test Date: 06-21-00
Report Date: 09-25-00
Expiration Date: 09-25-04
Revision Date: 01/31/02

Client: MI Home Products, Inc.
650 West Market Street
Gratz, PA 17030-0370

Test Specimen: MI Home Products Product's Series "420" Type OXX Aluminum Sliding Glass Door. (SGD-C35)(Single Glazed)(Steel Reinforced)(with and without sill riser).

Test Method: AAMA/NWWDA 101/I.S.2-97, "Voluntary Specifications for Aluminum, Vinyl (PVC), and Wood Windows and Glass Doors."

Revision Note: Sill leg extension was revised from 1-1/8" to 1-1/4"

TEST SPECIMEN DESCRIPTION

General: The sample tested was a three (3) panel type OXX aluminum sliding glass door measuring 15-1-3/ 1" wide x 8'0-1/8" high overall. The active panel measured 5'0-1/2" wide by 7'11-1/8" high; the fixed panel measured 5'0-7/8" wide by 7'11-1/8" high. Frame and panel member s were not thermally broken. A plastic spacer/guide was used at each panel head/stile corner. The fixed panel was secured to the jamb with two (2) 3" long aluminum angle retainers each fastened to the jamb stile with two (2) (#8 x 3/4") pan head screws. One (1) claw type door lock assembly was located at 40" from the bottom of each active panel lock stile each with two (2) screws. One (1) adjustable metal roller assembly was used at each end of the active bottom rails. The frame was of double screw coped corner construction. Panel corners were of single screw at bottom rail and double screw at the top rail. The interior vertical sill leg employed an extruded aluminum 1-1/4" high extension; an overall height of 2.031. One (1) aluminum panel retainer was fastened at 2" from each of the active panel bottom rail. One (1) extruded aluminum female panel adapter was fastened to the fixed panel but stile with five (5) (#8 x 1/2") screws. One extruded aluminum screen adapter was fastened to the butt stile using five (5) (#8 x 1/2") screws

Installation: The main frame was fastened to the wood test buck using forty-eight (48) (# 8 x 1-1/2") FHS. (See fastener diagram.)

Reinforcement: One (1) U-shaped glavanized steel reinforcing channel measuring 1-3/4" x 3/4" x 1/16" thick filled the length of the panel adapter stile. One (1) U-shaped galvanized steel reinforcing channel measuring 3/4" x 7/8" x 1/16" thick filled the length of each interlock stile.

Glazing: *All panels were channel glazed using 3/16" thick clear tempered glass with a flexible vinyl glazing bead.*

Weatherseal: *Double strips of centerfin weatherstrip (0.270" high) were located at each jamb, stile and lock stile. A double strip of centerfin weatherstrip (0.180" high) was located at each interlock stile. A double strip of centerfin weatherstrip (0.250" high) was located at each panel top rail. A double strip of side fin weathrstrip (0.430" high) was located at each panel bottom rail. An adhesive back polypile dust plug measuring 1-3/16" x 13/16" x 0.420" was located on the head and sill at each end of the vertical stile exterior track.*

Weeps: *One (1) weep notch measuring 1-1/2" x leg height was located at each end of the interior sill roller leg, exterior sill roller leg and screen sill roller leg.*

Interior & Exterior Surface Finish: *Non-painted aluminum*

Sealant: *Frame and panel bottom rail corners were sealed with a small-joint sealant.*

Insect Screen: *Two (2) insect screens, one (1) center insect screen measuring 5'0-1/4" wide by 7'11" high: Both were of coped corner construction. The screen employed fiberglass mesh cloth with a hollow vinyl spline. One (1) roller assembly was located at each end of the bottom rails. One (1) claw type lock assembly.*

TEST RESULTS

Par. No.	*Title of Test & Method*		*Measured*	*Allowed*
2.2.1.6.1	*Operating Force*			
	Center Active Panel			
		To open	*20 lbf*	*30 lbf*
		In Motion	*5 lbf*	*30 lbf*
	Right Active Panel			
		To open	*18 lbf*	*30 lbf*
		In Motion	*3 lbf*	*30 lbf*
2.2.1.6.2	*Deglazing - ASTM E987*			
	Center Active Panel			
	Top Rail (50 lbf)		*10.2 % (0.051")*	*<100%*
	Bottom Rail (50 lbf)		*7.8 % (0.039")*	*<100%*
	Left Stile (70 lbf)		*6.0 % (0.030")*	*<100%*
	Right Stile (70 lbf)		*5.4 % (0.027")*	*<100%*
	Right Active Panel			
	Meeting Rail (50 lbf)		*8.4 % (0.042")*	*<100%*
	Bottom Rail (50 lbf)		*8.4 % (0.042")*	*<100%*
	Left Stile (70 lbf)		*8.0 % (0.040")*	*<100%*
	Right Stile (70 lbf)		*6.2 % (0.031")*	*<100%*

TEST RESULTS (Continued)

Par. No.	Title of Test & Method	Measured	Allowed
2.1.2	Air Infiltration 1.57 psf(25mph)	Passed	0.30cfm/ft2
2.1.3	Water Resistance – ASTM E547 5.0 gph/ft² WTP=4.50 psf	No entry	No entry
2.1.4.2	Uniform Load Structural - ASTM E330		
	45.0 psf Exterior	0.245"	0.381"
	45.0 psf Interior	0.258"	0.381"

OPTIONAL PERFORMANCE

Par. No.		Title of Test & Method	Measured	Allowed
4.3	*	Water Resistance - ASTM E547 & E331 5.0 gph/ft² WTP =5.25 psf	No Entry	No Entry

Note: *At this point in testing, an additional sill riser was attached to the existing main sill's interior vertical leg with the following results being obtained:*

Par. No.		Title of Test & Method	Measured	Allowed
4.3	*	Water Resistance - ASTM E547 & E331 5.0 gph/ft² WTP =6.00 psf	No Entry	No Entry
4.4.2		Uniform Load Structural - ASTM E330		
		52.5 psf Exterior	0.379"	0.381"
		52.5 psf Interior	0.380"	0.381"

* *Test performed with and without screen*

TEST COMPLETED: 06/21/00

Note: *In addition, MI Home Products' Series "430" and "440" also received an SGD-C35 rating being identical in panel construction and interior sill leg heights.*

The tested specimen meets (or exceeds) the performance levels specified in Table 2.1 of AAMA/ NWWDA 101/I.S.2 97 for air infiltration. The listed results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification paragraphs for the SGD-C35 product designation.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn from this test. This report does not constitute certification of the product which may only be granted by a certification program validator.

MICHAEL E. LANE
Division Manager

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: 01-41135.01
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, aluminum picture window at their facility located in Elizabethville, Pennsylvania. The samples tested successfully met the performance requirements for a F-R45 60 x 80 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

Type: Aluminum Picture Window

Overall Size: 5' 0" wide by 6' 8" high

Daylight Opening Size: 4' 9-1/4" wide by 6' 5-1/4" high

Finish All aluminum was white.

Glazing Details: The test specimen utilized 7/8" thick, sealed insulating glass constructed from two sheets of 3/16" thick, clear annealed glass and a metal reinforced butyl spacer system. The glass was interior glazed against double-sided adhesive foam tape and secured with aluminum snap-in glazing beads.

130 Derry Court
York, PA 17402-9405
phone: 717.764.7700
fax: 717.764.4129
www.archtest.com

Allen M. Reeves
1 APR 12 2002

STATE OF FLORIDA PROFESSIONAL ENGINEER

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

Rendered to:

MI HOME PRODUCTS, INC.

SERIES/MODEL: 650
TYPE: Aluminum Picture Window

Title of Test	Results
Rating	F-R45 60 x 80
Overall Design Pressure	+45.0 psf -47.2 psf
Air Infiltration	0.04 cfm/ft^2
Water Resistance	8.25 psf
Structural Test Pressure	+67.5 psf -70.8 psf
Forced Entry Resistance	Grade 10

Reference should be made to Report No. 01-41135.01 dated 03/26/02 for complete test specimen description and data.

For ARCHITECTURAL TESTING, INC.

Mark A. Hess

Mark A. Hess, Technician

MAH:nlb

Allen N. Reeves
1 APRIL 2002

ALLEN N. REEVES
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Test Specimen Description: (Continued)

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.

Reinforcement: No reinforcement was utilized.

Installation: The test specimen was installed into a 2 x 8 #2 Spruce-Pine-Fir wood test buck. #8 x 2-1/2" installation screws were utilized 18" on center around the interior perimeter. Polyurethane was utilized to seal the exterior.

Test Results:

The results are tabulated as follows:

Paragraph	Title of Test - Test Method	Results	Allowed
	Air Infiltration (ASTM E 283-91) @ 1.57 psf (25 mph)	0.04 cfm/ft^2	0.3 cfm/ft^2 max.
	Note #1: The tested specimen meets the performance levels specified in AAMA/NWWDA 101/I.S. 2-97 for air infiltration.		
	Water Resistance (ASTM E 547-00) 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 jamb) (Loads were held for 33 seconds)		
	@ 25.9 psf (positive)	0.01"	0.41" max.
	@ 34.7 psf (negative)	0.01"	0.41" max.
2.1.4.2	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the jamb) (Loads were held for 10 seconds)		
	@ 38.9 psf (positive)	0.0"	0.29" max.
	@ 52.1 psf (negative)	0.01"	0.29" max.

Allen N. Reeves
1 APRIL 2002

Test Results: (Continued)

Paragraph	Title of Test - Test Method	Results	Allowed
	Forced Entry Resistance (ASTM F 588-97)		
	Type: D Grade: 10		
	Hand and Tool Manipulation Test	No entry	No entry
Optional Performance			
4.3	Water Resistance (ASTM E 547-00) WTP = 8.25 psf	No leakage	No leakage
	Uniform Load Deflection (ASTM E 330-97) (Measurements reported were taken on the jamb) (Loads were held for 33 seconds)		
	@ 45.0 psf (positive)	0.02"	0.41" max.
	@ 47.2 psf (negative)	0.02"	0.41" max.
	Uniform Load Structural (ASTM E 330-97) (Measurements reported were taken on the jamb) (Loads were held for 10 seconds)		
	@ 67.5 psf (positive)	0.01"	0.29" max.
	@ 70.8 psf (negative)	0.02"	0.29" max.

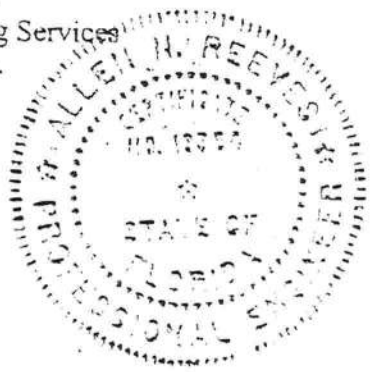
Detailed drawings, representative samples of the test specimen, and a copy of this report will be retained by ATI for a period of four years. The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the above referenced specification. 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

MAH:nlb
01-41135.01

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



MI HOME PRODUCTS

- PRIME ALUMINUM WINDOWS -

INSTALLATION INSTRUCTIONS FOR "NAIL FIN" PRODUCTS

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

1. Handle units one at a time in the closed and locked position and take care not to scratch frame or glass or to bend the nailing fin.

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

3. Use # 8 sheet metal or wood screws with a minimum of 1" penetration into the framing (stud). Place first screws (two at each corner) 3" from end of fin. For positive and negative DPs (design pressures) up to 35, do not exceed 24" spacing of additional screws. For DPs from 35.1 to 50, do not exceed 18". Install load bearing shim adjacent to each anchor. Use shim where space exceeds 1/16".

4. Flash over head and caulk outside perimeter in accordance with code requirements and good installation practices.

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

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

- CAUTION -

MI Home Products or its representatives are unable to control and cannot assume responsibility for the selection and placement of their products in a building or structure in a manner required by laws, statutes, and/or building codes. The purchaser is solely responsible for knowledge of and adherence to the same. MI Home Products window products are not provided with safety glazing unless specifically ordered with such. Many laws and codes require safety glazing near doors, bathtubs, and shower enclosures. Also be aware of emergency egress code requirements.

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

STRUCTURAL HORIZONTAL MULLION - NAIL FIN type 650 SH / PW

NOTE: If you are stacking a single unit over another single unit, such as a roundhead over a single hung, NO HORIZONTAL MULL IS REQUIRED.

IMPORTANT ‖ Before you begin, 1/4" must be sawed off the top end of the vertical mullion before the lower windows are twinned. Follow all steps on vertical mull instruction sheet first.

Note: Overall length of mull is to be the same as the overall frame to frame dimension of the mulled units below, including the vertical mull. EXAMPLE: For twin 3'-0", mull length will be 35 1/8" window + 1 1/4" mull + 35 1/8" window = 71 1/2".

Step 1. Strip fins from head of windows to be mounted below transom.

Step 2. Place windows and mulls together as shown below.

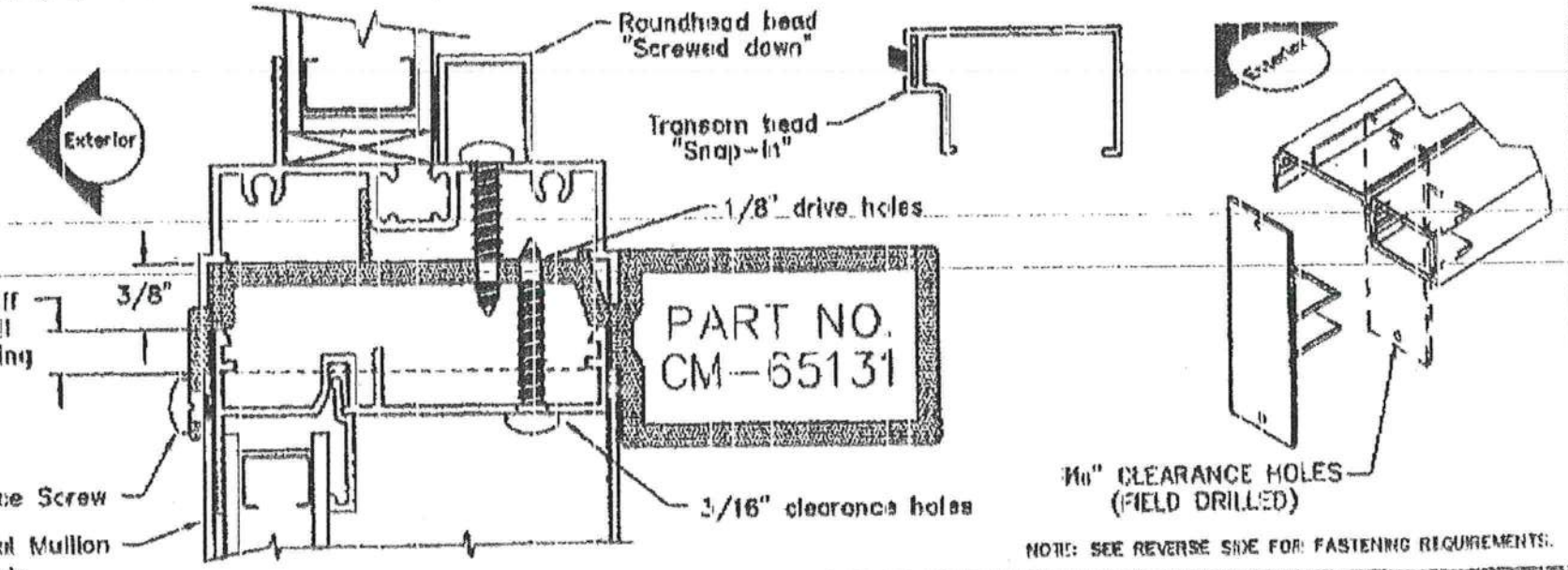
Step 3. Remove bottom glazing bead from transom / roundhead. With a 1/8" drill bit, pre-drill down through the sill and into the mullion. Re-drill sill hole only to 3/16". Fasten with #8 X 1" sheet metal screws (not included)

Step 4. Again with the 1/8" drill, drill up through the heads of the lower units into the mull. Re-drill heads of lower unit with 3/16" drill and fasten with #8 x 1" sheet metal screws.

PLACE SCREWS 3" FROM EACH END AND DO NOT EXCEED 18" SPACING OF REMAINING SCREWS.

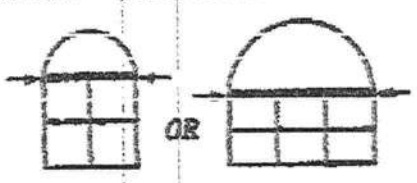
Step 5. The vertical mull "telescopes" 3/8" into the underside of the horizontal mull to lock it in place structurally. To fasten, drill a 1/8" hole, as shown below, through the horizontal mull and vertical mull. Re-drill the horizontal mull only with 3/16" bit and fasten with a "face" screw. For best appearance, countersink and use a flathead screw.

Step 6. Before lifting into rough opening, drill two holes in each clip and insert into each end of mull as shown below with tabs pointing up and down. Fasten each clip tab to construction with two #10 X 1 1/2" screws for structural integrity.



NOTE: SEE REVERSE SIDE FOR FASTENING REQUIREMENTS.

650 SERIES - HORIZONTAL MULL - FIN



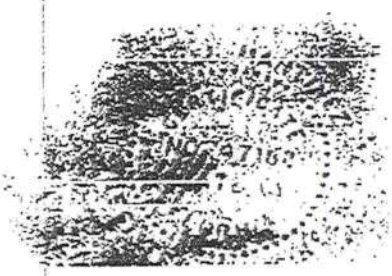
MI HOME PRODUCTS

HORIZONTAL MULLION DESIGN LOAD CAPACITIES
FOR EXTRUDED ALUMINUM TUBE MULLION (C38-65131)
WHEN USED FOR MULLING TRANSOM

MULL SPAN > WDW. HGT. V	48.000	53.000	72.000	74.000	96.000	106.250	108.000
26.000	338	260	115	107	53	37	35
36.000	309	235	103	96	48	33	31
38.375	305	231	101	94	47	33	31
48.000	298	222	94	87	43	30	28
50.825	296	221	93	86	43	30	28
60.000	298	221	90	83	40	28	26
63.000	298	221	89	82	40	28	26
72.000	298	221	86	81	39	27	26
72.250	298	221	86	81	39	27	25

NOTES:
- CHART APPLIES ONLY TO EXTRUDED ALUMINUM MULLION (C38-65131) USED HORIZONTALLY.
- CHART ASSUMES TRANSOM HEIGHT TO BE ONE HALF MULLION SPAN.
- WINDOW HEIGHTS SHOWN ON "V" AXIS OF CHART DESIGNATE HEIGHT OF WINDOWS BELOW MULLION AND DO NOT INCLUDE TRANSOM HEIGHT.
- READ MULLION SPAN AND WINDOW HEIGHT IN INCHES.
- DESIGN PRESSURE VALUES ON THIS CHART ARE IN PSF.
- DESIGN LOAD CAPACITIES SHOWN ON THIS CHART DO NOT CONSIDER ANY STRENGTH WHICH MAY BE OBTAINED FROM FRAME MEMBERS OF ADJACENT WINDOWS.
- Deflection = L / 175
- INSTALLATION OF MULLION: MULLION MUST BE ANCHORED TO SUBSTRATE. CONNECTION MUST BE DESIGNED TO ADEQUATELY TRANSFER LOAD TO THE STRUCTURE. SEE MANUFACTURER'S MULLION INSTALLATION DETAILS.

PREPARED BY:
[illegible]
250 INTERNATIONAL PARKWAY
SUITE 250
HEATHROW, FLORIDA 32746
PHONE 407 936-0365 / FAX 407 995-0369



CLYATT WELL DRILLING, INC.

Established in 1971
Post Office Box 180
Worthington Springs, Florida 32697
Phone (386)496-2488 FAX (386)496-4640

INVOICE DATE	INVOICE NUMBER
3/31/2003	WELL SPECS

DUE AND PAYABLE UPON RECEIPT

CUSTOMER NAME AND ADDRESS	DESCRIPTION OF WORK
Erkinger Home Builders Attn.: Matthew A. Erkinger 248 Southeast Nassau Street Lake City, Florida 32025	4" Well and Pump

QTY	DESCRIPTION	PRICE	SUB-TOTAL
	Feet 4" Well 1 HP Submersible Pump 1-1/4" Galvanized Pipe 14/3 Submersible Pump Wire With Ground WF255 (220 Gallon Equivalent) Tank 4 X 1-1/4 Well Seal Pressure Relief Valve Controls & Fittings		

Architectural Testing

STRUCTURAL TEST REPORT

Rendered to:

JORDAN COMPANIES

Series/Model: 8500
Type: 3-Wide Mulled PVC Single Hung Window

587 First Street SW
New Brighton, MN 55112
phone: 651.636.3835
fax: 651.636.3843
www.archtest.com

Report No: 02-33516.01
Test Date: 10/04/01
Report Date: 11/13/01
Expiration Date: 10/04/05

STRUCTURAL TEST REPORT

Rendered to:

JORDAN COMPANIES
4661 Burbank Road, Box 18377
Memphis, Tennessee 38118

Report No: 02-33516.01
Test Date: 10/04/01
Report Date: 11/13/01
Expiration Date: 10/04/05

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Jordan Companies to witness performance testing on Jordan Series 8500 3-wide mulled PVC single hung windows. Test specimen description(s) and results are reported herein.

Test Procedure: The test specimens were evaluated in accordance ASTM E 330-97, *"Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference."*

Test Specimen Description:

Series/Model: 8500

Type: 3-wide mulled PVC single hung window

Overall Size: 8' 11-5/8" wide by 5' 11-5/8" high

Individual Window Size (3): 2' 11-5/8" wide by 5' 11-5/8" high

Finish: All PVC was white.

Glazing Details: The window utilized nominal 3/4" insulating glass comprised of two single-strength annealed sheets and a desiccant-filled spacer system. The glass for the sash was set from the exterior against a bed of silicone with PVC stops used on the exterior.

Test Specimen Description (Continued)

Weatherstripping:

Description	Quantity	Location
0.230" high by 0.187" backed pile with center fin	1 Row	Sash top and bottom rails
0.230" high by 0.187" backed pile with center fin	2 Rows	Sash stiles

Frame Construction: Frame corners were miter-cut and welded. Aluminum mullion reinforcement was fastened to one jamb using three #8 by 1-1/4" screws, one at midpoint and one approximately 8" to 12" from each end at the jambs. Silicone was used on the exterior only to seal between the reinforcement and the jambs. PVC mullion couplings were snap-fit onto the interior and exterior.

Sash Construction: Sash corners were miter-cut and welded. Sash meeting rail utilized aluminum reinforcement.

Hardware:

Metal cam locks with keepers	6	6" from ends on meeting rail
Plastic tilt latches	6	Sash top rail corners
Metal tilt pins	6	Sash bottom rail corners
Block-and-tackle balances	6	One per jamb

Drainage:

3/16" by 5/8" slots	6	1-3/4" from ends in sill pocket to hollow below
3/16" by 5/8" slots	6	Ends of sill through interior wall
1/8" by 1/2" slot	6	1-3/4" from ends through sill exterior face

Installation: The unit was installed into a Grade 2 SPF 2" by 6" wood test buck and secured with screws and silicone.

Test Results

Title of Test – Test Method	Results	Allowed
Uniform Load Structural per ASTM E 330-97 (Permanent set measurements reported were taken on the intermediate mullion)		
@ 52.5 psf (positive)	0.05"	0.4% L = 0.286" max.
@ 52.5 psf (negative)	0.06"	0.4% L = 0.286" max.

A copy of this report will be retained by ATI for a period of four years. This report is the exclusive property of the client so named herein and is applicable to the sample tested. Results obtained are tested values and do not constitute an opinion or endorsement by this laboratory.

For ARCHITECTURAL TESTING, INC.

Paul L. Spiess
Project Manager

Daniel A. Johnson
Regional Manager

PLS/jb
02-33516.01

DOCUMENT CONTROL ADDENDUM 02-33516.00

Current Issue Date: 11/13/01

Report No. 02-33516.01

Requested by: Darrel Booth
Purpose: Structural testing on 8500 3-wide mulled PVC single hung windows
Issue Date: 11/13/01

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

Rendered to:

JORDAN COMPANIES

SERIES/MODEL: Series 8900
TYPE: PVC Fixed Window

Title of Test	Results
AAMA Rating	F-C50 60 x 78
Uniform Load Deflection Test Pressure	±50.0 psf
Air Infiltration	<0.01 cfm/ft^2
Water Resistance Test Pressure	7.5 psf
Uniform Load Structural Test Pressure	±75.0 psf
Corner Weld Test	Pass
Forced Entry Resistance	Grade 40

Reference should be made to full report for test specimen description and data.

Report No: 02-46046.01
Report Date: 07/23/03
Expiration Date: 07/17/07

Architectural Testing

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

Rendered to:

JORDAN COMPANIES
4661 Burbank Road, P.O. Box 18377
Memphis, Tennessee 38118

Report No:	02-46046.01
Test Date:	07/17/03
Report Date:	07/23/03
Expiration Date:	07/17/07

Project Summary: Architectural Testing, Inc. (ATI) was contracted by Jordan Companies, to perform testing on Series 8900 PVC Fixed window. The sample tested successfully met the performance requirements for a F-C50 60 x 78 rating. Test specimen description and results are reported herein.

Test Procedure: The test specimens were evaluated in accordance with AAMA/WDMA 101/I.S. 2-97, *"Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors."*

Test Specimen Description:

Series/Model: Series 8900

Type: PVC Fixed Window

Overall Size: 4' 11-3/4" wide by 6' 5-3/4" high

Area: 32.3 ft²

Finish: All vinyl was white.

Glazing Details: The window utilized a nominal 3/4" thick insulating glass unit fabricated from two nominal double strength sheets of annealed glass separated by a desiccant filled metal spacer system. The glass was set from the interior against a silicone sealant backbedding. PVC glazing stops were utilized on the interior.

Frame Construction: The frame corners were miter cut and welded.

Installation: The window was installed within a nominal 2" by 8" SPF wood test buck. The window was anchored to the buck with #8 by 1-5/8" wood screws spaced 6" from each corner and 8" to 10" on center. Silicone sealant was used to seal the window to the test buck.

849 Western Avenue North
Saint Paul, MN 55117-5245
phone: 651.636.3835
fax: 651.636.3843
www.archtest.com

Test Results: The results are tabulated as follows:

Paragraph	Title of Test – Test Method	Results	Allowed
2.1.2	Air Infiltration per ASTM E 283-91 (See Note #1)		
	@ 1.57 psf (25 mph)	<0.01 cfm/ft^2	0.30 cfm/ft^2 max.
	@ 6.24 psf (50 mph)	<0.01 cfm/ft^2	--

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

2.1.3	Water Resistance per ASTM E 547-00 (See Note #2)		
2.1.4.1	Uniform Load Deflection per ASTM E 330-97 (See Note #2)		
2.1.4.2	Uniform Load Structural per ASTM E 330-97 (See Note #2)		

Note #2: The client opted to start at a pressure higher than the minimum required. Those results are listed under "Optional Performance."

2.1.7	Welded Corner Test	Pass	<100% break on weld
2.1.8	Forced Entry Resistance per ASTM F 588-97		
	Type D		
	Grade 40		
	Lock Manipulation Test	No entry	No entry

Optional Performance:

4.3	Water Resistance per ASTM E 547-00 and 331-00		
	WTP = 7.5 psf	No leakage	No leakage
4.4.1	Uniform Load Deflection per ASTM E 330-97 (See Note #3)		
	(Measurements reported were taken in between the anchor points)		
	(Loads were held for 60 seconds)		
	@ 50.0 psf (positive)	0.04"	No Damage
	@ 50.0 psf (negative)	0.03"	No Damage
4.4.2	Uniform Load Structural per ASTM E 330-97		
	(Measurements reported were taken in between the anchor points)		
	(Loads were held for 10 seconds)		
	@ 75.0 psf (positive)	<0.01"	0.16" max.
	@ 75.0 psf (negative)	<0.01"	0.16" max.

Note #3: The Uniform Load Deflection test is not an AAMA/WDMA 101/I.S. 2-97 requirement for this product designation. The data is recorded in this report for information only.

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. This report may not be reproduced, except in full, without the approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

Eric J. Schoenthaler
Technician

Daniel A. Johnson
Regional Manager

EJS/mb
02-46046.01