FORM 600A-2004R Tested sealed ducts must be certified in this house. EnergyGauge® 4.5.2

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**Mark & Elizabeth Cook**	Builder:	**Aaron Simque Homes**
Address:	**Lot: 1, Sub: The Cove, Plat:**	Permitting Office:	Columbia
City, State:	**Lake City, FL 32024-**	Permit Number:	26525
Owner:	**Cook Residence**	Jurisdiction Number:	221000
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 46.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 15.00
4. Number of Bedrooms	4	b. Central Unit	Cap: 46.0 kBtu/hr
5. Is this a worst case?	No		SEER: 15.00
6. Conditioned floor area (ft²)	3094 ft²	c. N/A	
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)			
a. U-factor:	Description Area	13. Heating systems	
(or Single or Double DEFAULT)	7a (Sngle Default) 577.7 ft²	a. Electric Heat Pump	Cap: 46.0 kBtu/hr
b. SHGC:			HSPF: 8.00
(or Clear or Tint DEFAULT)	7b. (Clear) 577.7 ft²	b. Electric Heat Pump	Cap: 46.0 kBtu/hr
8. Floor types			HSPF: 8.00
a. Slab-On-Grade Edge Insulation	R=5.0, 314.0(p) ft	c. N/A	
b. N/A			
c. N/A		14. Hot water systems	
9. Wall types		a. Electric Resistance	Cap: 80.0 gallons
a. Frame, Wood, Exterior	R=13.0, 2286.3 ft²		EF: 0.90
b. Frame, Wood, Adjacent	R=13.0, 250.0 ft²	b. Electric Resistance	Cap: 80.0 gallons
c. N/A			EF: 0.90
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, 3300.0 ft²	15. HVAC credits	PT, CF,
b. N/A		(CF-Ceiling fan, CV-Cross ventilation,	
c. N/A		HF-Whole house fan,	
11. Ducts(Leak Free)		PT-Programmable Thermostat,	
a. Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 50.0 ft	MZ-C-Multizone cooling,	
b. Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 50.0 ft	MZ-H-Multizone heating)	

Glass/Floor Area: 0.19

Total as-built points: 38499

Total base points: 39233

PASS

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

PREPARED BY: _____

DATE: _____

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.

GREAT SEAL OF THE STATE OF FLORIDA * IN GOD WE TRUST *

BUILDING OFFICIAL: _____

DATE: _____

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

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BSPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	SPM X	SOF	= Points	
.18	3094.0	18.59	10353.0	1.Single, Clear	W	1.5	10.0	90.0	43.84	0.98	3862.0	
				2.Single, Clear	N	1.5	10.0	24.0	21.73	0.98	512.0	
				3.Single, Clear	N	13.5	10.0	63.0	21.73	0.67	913.0	
				4.Single, Clear	W	20.0	10.0	48.0	43.84	0.41	861.0	
				5.Single, Clear	N	25.0	10.0	35.0	21.73	0.60	458.0	
				6.Single, Clear	W	20.0	10.0	42.0	43.84	0.41	753.0	
				7.Single, Clear	W	10.0	10.0	18.7	43.84	0.53	434.0	
				8.Single, Clear	W	8.5	10.0	42.0	43.84	0.57	1042.0	
				9.Single, Clear	N	1.5	10.0	28.0	21.73	0.98	597.0	
				10.Single, Clear	N	1.5	10.0	12.0	21.73	0.98	256.0	
				11.Single, Clear	E	1.5	10.0	8.0	47.92	0.98	375.0	
				12.Single, Clear	E	1.5	11.0	24.0	47.92	0.99	1133.0	
				13.Single, Clear	E	10.5	12.0	16.0	47.92	0.55	420.0	
				14.Single, Clear	E	1.5	12.0	32.0	47.92	0.99	1519.0	
				15.Single, Clear	E	1.5	12.0	27.0	47.92	0.99	1282.0	
				16.Single, Clear	S	1.5	10.0	36.0	40.81	0.96	1410.0	
				17.Single, Clear	S	1.5	10.0	8.0	40.81	0.96	313.0	
				18.Single, Clear	S	1.5	10.0	24.0	40.81	0.96	940.0	
				As-Built Total:				**577.7**			**17080.0**	

WALL TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM	= Points
Adjacent	250.0	0.70	175.0	1. Frame, Wood, Exterior	13.0	2286.3	1.50	3429.5
Exterior	2286.3	1.70	3886.7	2. Frame, Wood, Adjacent	13.0	250.0	0.60	150.0
Base Total:	**2536.3**		**4061.7**	**As-Built Total:**		**2536.3**		**3579.5**

DOOR TYPES	Area X	BSPM	= Points	Type	Area X	SPM	= Points
Adjacent	20.0	2.40	48.0	1.Exterior Insulated	20.0	4.10	82.0
Exterior	20.0	6.10	122.0	2.Adjacent Insulated	20.0	1.60	32.0
Base Total:	**40.0**		**170.0**	**As-Built Total:**	**40.0**		**114.0**

CEILING TYPES	Area X	BSPM	= Points	Type	R-Value	Area X	SPM X SCM =	Points
Under Attic	3094.0	1.73	5352.6	1. Under Attic	30.0	3300.0	1.73 X 1.00	5709.0
Base Total:	**3094.0**		**5352.6**	**As-Built Total:**		**3300.0**		**5709.0**

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-** PERMIT #:

BASE					AS-BUILT					
FLOOR TYPES	Area X	BSPM	= Points		Type	R-Value	Area X	SPM	= Points	
Slab	314.0(p)	-37.0	-11618.0		1. Slab-On-Grade Edge Insulation	5.0	314.0(p	-36.20	-11366.8	
Raised	0.0	0.00	0.0							
Base Total:			**-11618.0**		**As-Built Total:**		**314.0**		**-11366.8**	
INFILTRATION	Area X	BSPM	= Points				Area X	SPM	= Points	
	3094.0	10.21	31589.7				3094.0	10.21	31589.7	
Summer Base Points: 39909.1					**Summer As-Built Points:**					**46705.4**
Total Summer Points	X System Multiplier	= Cooling Points			Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Cooling Points
					(sys 1: Central Unit 46000btuh ,SEER/EFF(15.0) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
					46705	0.50	(1.09 x 1.000 x 1.11)	0.228	0.902	5802.0
					(sys 2: Central Unit 46000btuh ,SEER/EFF(15.0) Ducts:Unc(S),Unc(R),Att(AH),R6.0(INS)					
					46705	0.50	(1.09 x 1.000 x 1.11)	0.228	0.902	5802.0
39909.1	**0.3250**	**12970.4**			**46705.4**	**1.00**	**1.210**	**0.228**	**0.902**	**11604.0**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-** PERMIT #:

BASE				AS-BUILT								
GLASS TYPES .18 X Conditioned Floor Area	X BWPM	= Points		Type/SC	Overhang Ornt	Len	Hgt	Area X	WPM X	WOF	= Points	
.18	3094.0	20.17	11233.0	1.Single, Clear	W	1.5	10.0	90.0	28.84	1.01	2610.0	
				2.Single, Clear	N	1.5	10.0	24.0	33.22	1.00	797.0	
				3.Single, Clear	N	13.5	10.0	63.0	33.22	1.02	2138.0	
				4.Single, Clear	W	20.0	10.0	48.0	28.84	1.22	1692.0	
				5.Single, Clear	N	25.0	10.0	35.0	33.22	1.03	1193.0	
				6.Single, Clear	W	20.0	10.0	42.0	28.84	1.22	1480.0	
				7.Single, Clear	W	10.0	10.0	18.7	28.84	1.17	629.0	
				8.Single, Clear	W	8.5	10.0	42.0	28.84	1.15	1393.0	
				9.Single, Clear	N	1.5	10.0	28.0	33.22	1.00	930.0	
				10.Single, Clear	N	1.5	10.0	12.0	33.22	1.00	398.0	
				11.Single, Clear	E	1.5	10.0	8.0	26.41	1.01	213.0	
				12.Single, Clear	E	1.5	11.0	24.0	26.41	1.01	640.0	
				13.Single, Clear	E	10.5	12.0	16.0	26.41	1.25	528.0	
				14.Single, Clear	E	1.5	12.0	32.0	26.41	1.01	852.0	
				15.Single, Clear	E	1.5	12.0	27.0	26.41	1.01	719.0	
				16.Single, Clear	S	1.5	10.0	36.0	20.24	1.01	737.0	
				17.Single, Clear	S	1.5	10.0	8.0	20.24	1.01	163.0	
				18.Single, Clear	S	1.5	10.0	24.0	20.24	1.01	491.0	
				As-Built Total:				**577.7**			**17603.0**	

WALL TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	= Points
Adjacent	250.0	3.60	900.0	1. Frame, Wood, Exterior	13.0	2286.3	3.40	7773.4
Exterior	2286.3	3.70	8459.3	2. Frame, Wood, Adjacent	13.0	250.0	3.30	825.0
Base Total:	**2536.3**		**9359.3**	**As-Built Total:**		**2536.3**		**8598.4**

DOOR TYPES	Area X	BWPM	= Points	Type	Area X	WPM	= Points
Adjacent	20.0	11.50	230.0	1.Exterior Insulated	20.0	8.40	168.0
Exterior	20.0	12.30	246.0	2.Adjacent Insulated	20.0	8.00	160.0
Base Total:	**40.0**		**476.0**	**As-Built Total:**	**40.0**		**328.0**

CEILING TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM X WCM	= Points
Under Attic	3094.0	2.05	6342.7	1. Under Attic	30.0	3300.0	2.05 X 1.00	6765.0
Base Total:	**3094.0**		**6342.7**	**As-Built Total:**		**3300.0**		**6765.0**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-** PERMIT #:

BASE				AS-BUILT					
FLOOR TYPES	Area X	BWPM	= Points	Type	R-Value	Area X	WPM	=	Points
Slab	314.0(p)	8.9	2794.6	1. Slab-On-Grade Edge Insulation	5.0	314.0(p	7.60		2386.4
Raised	0.0	0.00	0.0						
Base Total:			**2794.6**	**As-Built Total:**		**314.0**			**2386.4**
INFILTRATION	Area X	BWPM	= Points			Area X	WPM	=	Points
	3094.0	-0.59	-1825.5			3094.0	-0.59		-1825.5
Winter Base Points:			**28380.2**	**Winter As-Built Points:**					**33855.4**
Total Winter Points	X System Multiplier	= Heating Points		Total Component Points	X Cap Ratio (System - Points)	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
				(sys 1: Electric Heat Pump 46000 btuh ,EFF(8.0) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
				33855.4	0.500	(1.069 x 1.000 x 1.10)	0.426	0.950	8060.4
				(sys 2: Electric Heat Pump 46000 btuh ,EFF(8.0) Ducts:Unc(S),Unc(R),Att(AH),R6.0					
				33855.4	0.500	(1.069 x 1.000 x 1.10)	0.426	0.950	8060.4
28380.2	**0.5540**	**15722.6**		**33855.4**	**1.00**	**1.176**	**0.426**	**0.950**	**16120.8**

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-** PERMIT #:

BASE				AS-BUILT							
WATER HEATING											
Number of Bedrooms	X	Multiplier	= Total	Tank Volume	EF	Number of Bedrooms	X Tank Ratio	X Multiplier	X Credit Multiplier	= Total	
4		2635.00	10540.0	80.0	0.90	4	0.50	2693.56	1.00	5387.1	
				80.0	0.90	4	0.50	2693.56	1.00	5387.1	
				As-Built Total:						**10774.2**	

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points +	Heating Points +	Hot Water Points =	Total Points	Cooling Points +	Heating Points +	Hot Water Points =	Total Points
12970	**15723**	**10540**	**39233**	**11604**	**16121**	**10774**	**38499**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-** PERMIT #:

6A-21 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

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

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

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 612.1.ABC.3.2. Switch or clearly marked cir 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.	

Tested sealed ducts must be certified in this house.

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 85.3

The higher the score, the more efficient the home.

Cook Residence, Lot: 1, Sub: The Cove, Plat: , Lake City, FL, 32024-

1.	New construction or existing	New		12.	Cooling systems	
2.	Single family or multi-family	Single family			a. Central Unit	Cap: 46.0 kBtu/hr
3.	Number of units, if multi-family	1				SEER: 15.00
4.	Number of Bedrooms	4			b. Central Unit	Cap: 46.0 kBtu/hr
5.	Is this a worst case?	No				SEER: 15.00
6.	Conditioned floor area (ft²)	3094 ft²			c. N/A	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)					
	a. U-factor:	Description Area		13.	Heating systems	
	(or Single or Double DEFAULT) 7a.	(Sngle Default) 577.7 ft²			a. Electric Heat Pump	Cap: 46.0 kBtu/hr
	b. SHGC:					HSPF: 8.00
	(or Clear or Tint DEFAULT) 7b.	(Clear) 577.7 ft²			b. Electric Heat Pump	Cap: 46.0 kBtu/hr
8.	Floor types					HSPF: 8.00
	a. Slab-On-Grade Edge Insulation	R=5.0, 314.0(p) ft			c. N/A	
	b. N/A					
	c. N/A			14.	Hot water systems	
9.	Wall types				a. Electric Resistance	Cap: 80.0 gallons
	a. Frame, Wood, Exterior	R=13.0, 2286.3 ft²				EF: 0.90
	b. Frame, Wood, Adjacent	R=13.0, 250.0 ft²			b. Electric Resistance	Cap: 80.0 gallons
	c. N/A					EF: 0.90
	d. N/A				c. Conservation credits	
	e. N/A				(HR-Heat recovery, Solar DHP-Dedicated heat pump)	
10.	Ceiling types			15.	HVAC credits	PT, CF,
	a. Under Attic	R=30.0, 3300.0 ft²			(CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	
	b. N/A					
	c. N/A					
11.	Ducts(Leak Free)					
	a. Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 50.0 ft				
	b. Sup: Unc. Ret: Unc. AH: Attic	Sup. R=6.0, 50.0 ft				

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

Builder Signature: _____ Date: _____

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

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

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

Energy Code Compliance

Duct System Performance Report

Project Name:	Mark & Elizabeth Cook	Builder:	Aaron Simque Homes
Address:		Permitting Office:	
City, State:	Lake City, FL 32024-	Permit Number:	
Owner:	Cook Residence	Jurisdiction Number:	
Climate Zone:	North		

Total Duct System Leakage Test Results

CFM25 Total Duct Leakage Test Values			
Line	System	Duct Leakage Total	Duct Leakage to Outdoors
1	System1	_____ cfm25(tot)	_____ cfm25(out)
2	System2	_____ cfm25(tot)	_____ cfm25(out)
3	System3	_____ cfm25(tot)	_____ cfm25(out)
4	System4	_____ cfm25(tot)	_____ cfm25(out)
5	**Total House Duct System Leakage**	Sum lines 1-4 _____ Divide by _____ (Total Conditioned Floor Area) = _____ **(Q_n,tot)** ☐ **Receive credit if Q_n,tot≤ 0.03**	Sum lines 1-4 _____ Divide by _____ (Total Conditioned Floor Area) = _____ **(Q_n,out)** ☐ **Receive credit if Q_n,out≤ 0.03 AND Q_n,tot≤ 0.09**

I hereby certify that the above duct testing performance results demonstrate compliance with the Florida Energy Code requirements in accordance with Section 610.1.A.1, Florida Building Code, Building Volume, Chapter 13 for leak free duct system credit.

Signature: _____

Printed Name: _____

Florida Rater Certification #: _____

DATE: _____

Florida Building Code requires that testing to confirm leak free duct systems be performed by a Class 1 Florida Energy Gauge Certified Energy Rater. Certified Florida Class 1 raters can be found at: http://energygauge.com/search.htp

BUILDING OFFICIAL: _____

DATE: _____

Columbia County Building Department
Culvert Permit

Culvert Permit No.
000001499

DATE 12/19/2007 PARCEL ID # 01-5S-16-03397-201

APPLICANT MELANIE RODER PHONE 623-7829

ADDRESS 387 SW KEMP COURT LAKE CITY FL 32024

OWNER MARK COOK PHONE 755-4184

ADDRESS 121 SW EMORYWOOD GLEN LAKE CITY FL 32024

CONTRACTOR AARON SIMQUE HOMES PHONE 867-0692

LOCATION OF PROPERTY 47S, TL ON WALTER AVE, TL ON EMORYWOOD GLEN, 1ST LOT ON LEFT

CORNER OF WALTER AND EMORYWOOD

SUBDIVISION/LOT/BLOCK/PHASE/UNIT COVE AT ROSE CREEK 1

SIGNATURE Melanie Roder

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

The Florida Department of Community Affairs

Building Code Information System

FLORIDA BUILDING CODE

Overview | User Registration | Organization Registration | User Authentication | Organization Search | Organization Accreditation

Select the organization type, status, or name to find an organization

Organization Type: Product Manufacturer

Manufact. Buildings

Approval Status: (ALL)

Organization Name: General American Door - Product Manufacturer

Cancel Search

Result List for Organizations

Displaying 1-1 of 1

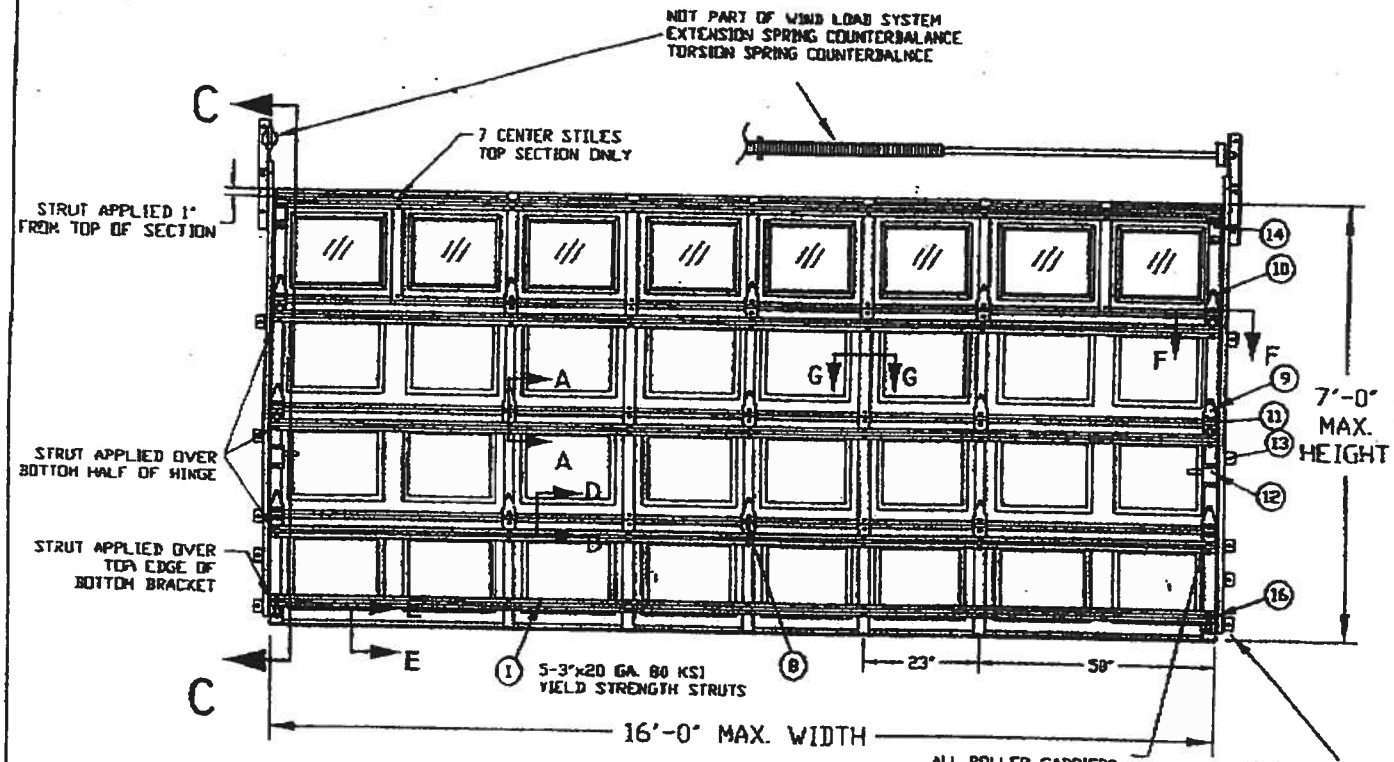
Name	City	Contact	Phone	Type	Expire	Status
General American Door	Montgomery	James Campbell	6308593000	Product Manufacturer	01/01/2099	Approved
Org Code: PDM System ID: 3585			Site Link: www.gadco.com			

Displaying 1-1 of 1

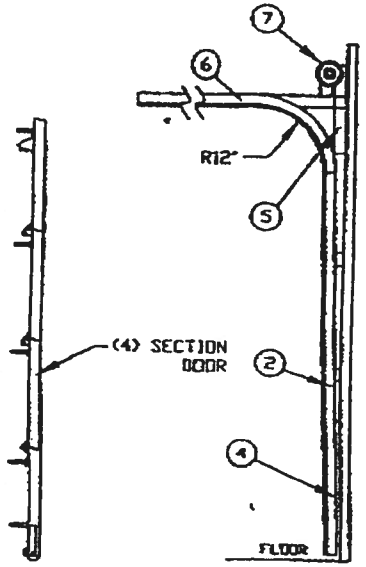
REV.	DATE	BY	DESCRIPTION
A-A	11-10-00	DW	SEE E.C.N. 831

NOTES:

1. TESTED TO POSITIVE AND NEGATIVE 20 PSF DESIGN AND POSITIVE AND NEGATIVE 30 PSF TEST PRESSURES PER ASTM E-330
2. MAXIMUM SECTION HEIGHT= 21"
3. SECTION HEIGHTS OF 21.00" AND 19.50" ARE AVAILABLE AND MAY BE USED IN ANY COMBINATION TO ACHIEVE VARIOUS DOOR HEIGHTS.
4. WINDOWS MAY BE INSTALLED IN THE TOP SECTION, (AS TESTED WITH 1/8" DSB GLASS OR EQUIVALENT) OR IN THE SECTION IMMEDIATELY BELOW THE TOP SECTION.
5. MINIMUM LENGTH OF ROLLER STEM IS 5½" (7" AS TESTED)
6. THE STRUT PLACEMENT ON DOOR MUST BE CONSISTENT WITH THE DOOR SHOWN.
7. STRUTS SECURED AT ALL LOCATIONS WITH TEK SCREWS.
8. QUANTITY OF SIDE LOCKS CAN BE 0,1, OR 2 AS TESTED.
9. ⚠ DROP IN TYPE OF INSULATION IS OPTIONAL



INSIDE ELEVATION



SEC C-C
VERTICAL TRACK, (16 GA.)

The seal on this drawing only certifies that the product(s) illustrated and described herein represent the configurations and dimensions and installation(s) of the door as tested.

SEAL
PE No. 024280
NORTH CAROLINA PROFESSIONAL ENGINEER
WALTER R. TEVYAN

LISTED SBCCI PST-9-ESI
REPORT No. 2202

TEST REPORTS ON FILE: VIDEO 10/19/00 000293

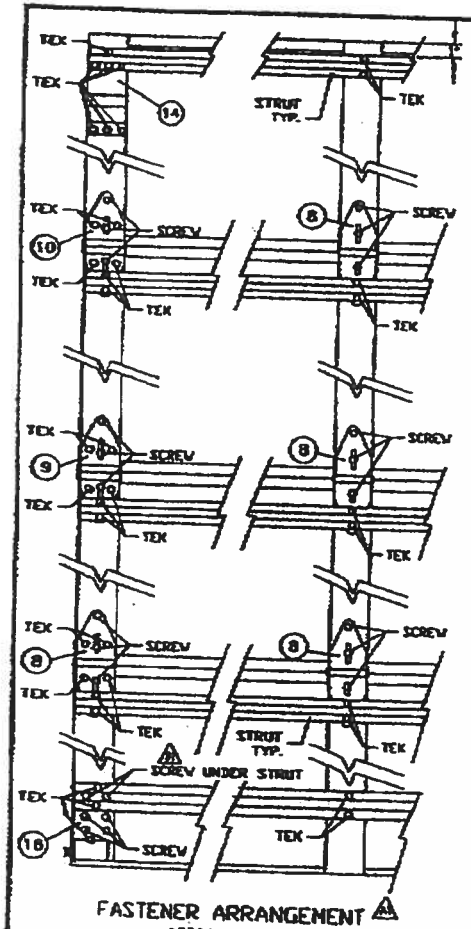
DESIGN LOAD +20.0 PSF & -20.0 PSF
TEST LOAD +30.0 PSF & -30.0 PSF

GADCO DOORS
SERIES 7400, EXTERIOR STEEL =.017 MIN (AS TESTED)
SERIES 7825, EXTERIOR STEEL =.019" MIN ⚠
SERIES 7524, EXTERIOR STEEL =.024" MIN ⚠
(TESTED WITH WINDOWS

MAXIMUM DOOR WIDTH	MAXIMUM DOOR HEIGHT	TYPICAL CTR. STILE SPACING	STRUTS 80 KSI SIZE	STRUTS 80 KSI QTY.	VERTICAL TRACK
16'	7'	23"	3'	5	2 IN.

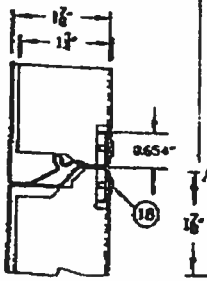
GENERAL AMERICAN DOOR COMPANY
5050 BASELINE ROAD
MONTGOMERY, IL 60538

SCALE: 1/3 | APPROVED BY: | DRAWN BY: D. WEDMAN
DATE: 10-20-00 | REVISED (A) 11-10-00
DESCRIPTION: 16' X 7' MAX. RAISED PANEL STEEL DOOR -WINDLOAD ±20 PSF
PART NUMBER: PAGE 1 OF 2 | DRAWING NUMBER: W13220-1

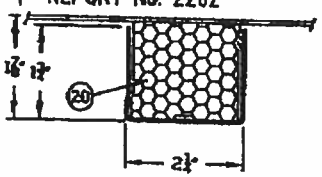


FASTENER ARRANGEMENT

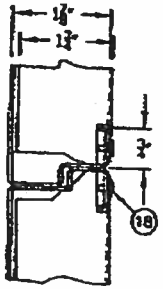
LISTED
SBCI PST & ESI
REPORT No. 2202



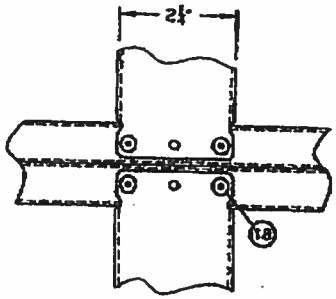
SEC D-D
PAN ATTACHMENT TO STILE (OPTIONAL)



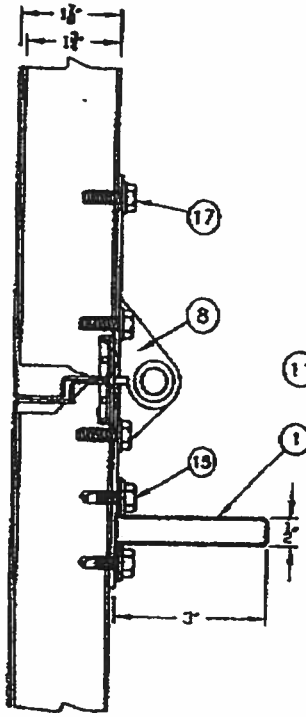
SEC G-G
CENTER STILE
20 GA GALVANIZED



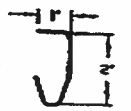
SEC D-D
PAN ATTACHMENT TO STILE (AS TESTED)



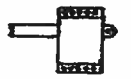
PAN ATTACHMENT TO STILE



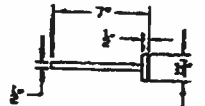
SEC A-A



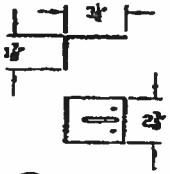
TRACK
16 GA. COSS MIN.



12 SIDE LOCK



11 ROLLER W/ BALLS



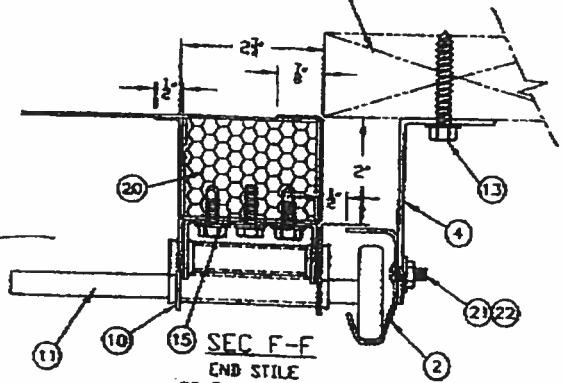
4 #6 JAMB BRACKET

5-3"x20 GA. 80 KSI YIELD STRENGTH HEMMED STRUT APPLIED WITH 2 TEK SCREWS PER HINGE OR STILE LOCATION (14 PER STRUT, MINIMUM)

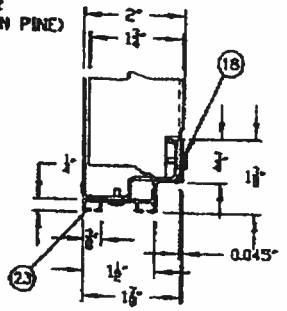
SCREW
17
¼-20 x ¾ HEX WASHERHEAD SCREW

TEK
15
¼-20 x ¾ HWH TEK SCREW WITH #2 REDUCED POINT

ITEM	PART NO.	DESCRIPTION
23	3485	ROTTOM RAIL 6063 T6 ALUM EXT.
22	1391	1/4"-20 X 5/8" RIBBED NECK SCREW
21	4844	1/4"-20 SERRATED FLANGE NUT
20		L.D.E. DENSITY FILLER BLOCK EPS
19		
18	4385	POP RIVET, 5/32" STEEL
17	4229	HEX WASHERHEAD SCREW 1/4"-20 X 3/4"
16	L29PLUR	BOTTOM ROLLER BRACKET
15	0138	HWH TEK SCREW 1/4-20 X 3/4 W/ REDUCED PT.
14	3875	TOP SUPPORT BRACKET
13	4043	5/16" X 1-3/8" LAG SCREW
12	4718	SIDE LOCK
11	4306	LONG STEM ROLLER 2"
10	4203	ROLLER CARRIER HINGE #3 (14 GA)
9	4202	ROLLER CARRIER HINGE #2 (14 GA)
8	4201	ROLLER CARRIER HINGE #1 (14 GA)
7		COUNTER BALANCE (TORSION BAR & SPRINGS)
6		HORIZONTAL TRACK & ANGLE (16 GA)
5		VERTICAL FLAG ANGLE
4	4585-6	TRACK BRACKET #6 (12 GA)
3		
2		VERTICAL TRACK (16 GA)
1		3" HEMMED STRUT(20 GA) MIN. YIELD STR. 80KSI



SEC F-F
END STILE
20 GA. PAINTED STEEL



SEC E-E

NORTH CAROLINA PROFESSIONAL SEAL PE No. 024280 ENGINEER

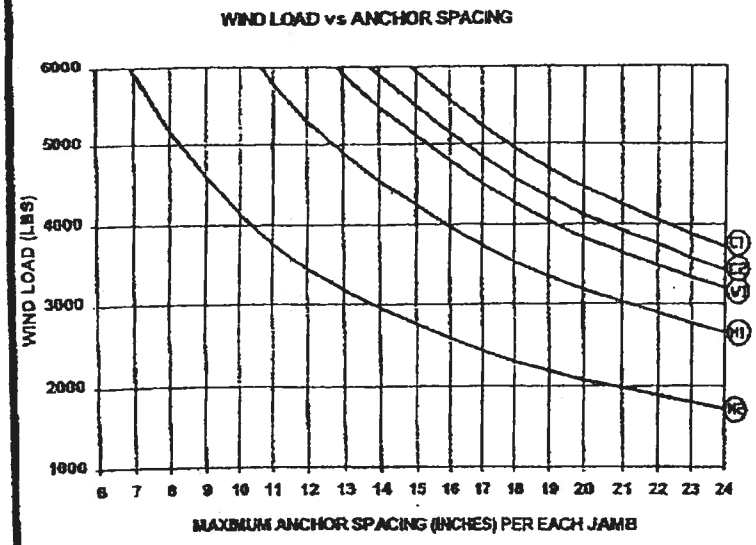
The seal on this drawing only certifies that the product(s) illustrated and described herein represent the configuration(s), dimensions and installation(s) of the door as tested.

GADCO
GENERAL AMERICAN DOOR COMPANY
3050 BASELINE ROAD
MONTGOMERY, IL 60538

SCALE NONE | APPROVED BY | DRAWN BY D. VIEDMAN
DATE 11-7-00 | REVISED (B) 12-1-00

DESCRIPTION
16' X 7' MAX. RAISED PANEL STEEL DOOR-WINDLOAD ±20 PSF

PAGE 2 OF 2 | DRAWING NUMBER V13220-2



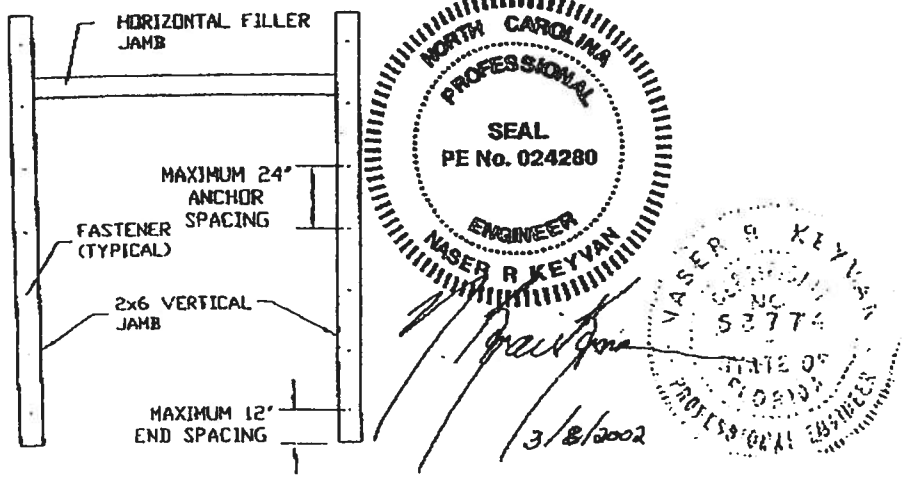
DESIGN LOAD (LBS/FT²) X GARAGE DOOR AREA(WIDTH-FT X HEIGHT-FT) = WIND LOAD(LBS)

EXAMPLE

30 LBS/FT² X (16 FT WIDE X 8 FT HIGH) = 3840 LBS

- C1 USE 22" SPACING
- C2 USE 21" SPACING
- W USE 19" SPACING
- M1 USE 16" SPACING
- M2 USE 10" SPACING

SEE NOTE 11 FOR ADDITIONAL REQUIRED 2X6 WOOD JAMB ANCHORS



2x6 JAMB TO SUPPORTING STRUCTURE ATTACHMENT

2x6 PRESSURE TREATED (GRADE #2 OR BETTER SOUTHERN PINE) WOOD JAMB SHALL BE ANCHORED TO BUILDING WOOD FRAME, GROUTED AND REINFORCED CONCRETE MASONRY UNIT (CMU) WALLS OR COLUMNS, OR REINFORCED CONCRETE COLUMNS.

NOTES:

1) ALL DOOR OPENING SURROUNDING STRUCTURE TO BE DESIGNED BY REGISTERED ENGINEER OR ARCHITECT WITH DUE CONSIDERATION GIVEN TO INSTALLATIONS USING CENTER "HURRICANE" POSTS.

2) ALL DOOR OPENING STRUCTURE AND FASTENERS TO COMPLY WITH ALL APPLICABLE CODES INCLUDING SBCCI "STANDARD FOR HURRICANE RESISTANT RESIDENTIAL CONSTRUCTION: SSTD 10," CURRENT EDITION.

3) ALL FASTENERS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, INSTRUCTIONS AND RECOMMENDATIONS.

4) WOOD FRAME BUILDINGS: STUDS AT EACH SIDE OF DOOR OPENING SHALL BE PROPERLY DESIGNED, CONNECTED, ANCHORED AND SHALL CONSIST OF A MINIMUM OF THREE (3) LAMINATIONS OF 2X6 PRESSURE TREATED SOUTHERN PINE (#2 GRADE OR BETTER) WALL STUDS CONTINUOUS FROM FOOTING TO DOUBLE TOP PLATE.

5) REINFORCED CMU OR CONCRETE: 2X6 WOOD JAMB SHALL BE ANCHORED TO SOLIDLY GROUTED AND REINFORCED CONCRETE MASONRY UNIT (CMU) WALLS OR COLUMNS, OR REINFORCED CONCRETE COLUMNS. ANCHOR SPACING AND EMBEDMENT IS BASED ON CONCRETE MASONRY UNITS COMPLYING WITH ASTM C90 WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2150 PSI, GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI, REINFORCED CONCRETE COLUMNS WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

6) EMBEDMENTS LISTED ARE THE MINIMUM ALLOWABLE EMBEDMENTS.

7) ANCHORS FOR CONCRETE AND CONCRETE MASONRY UNITS (CMU) SHALL HAVE A MINIMUM 3" EDGE DISTANCE FROM ALL EDGES OF CONCRETE OR CONCRETE MASONRY UNITS. ANCHORS FOR CONCRETE AND CMU SHALL HAVE A MINIMUM SPACING OF 3-3/4".

8) LAG SCREWS SHALL BE CENTERED IN ONE OF THE 1-1/2" DIMENSION FACES OF THE TRIPLE 2X6 WALL STUDS.

9) WASHERS ARE REQUIRED ON ALL FASTENERS.

10) THE WIND LOAD VS. ANCHOR SPACING CHART IS FOR A MAXIMUM DOOR SIZE OF 18' X 8' AT A MAXIMUM 42 PSF DESIGN WIND LOAD.

11) FOR THE UPPER THREE INDIVIDUAL STEEL JAMB BRACKETS, BRACKETS SHALL BE CENTERED BETWEEN THE TWO CLOSEST 2X6 WOOD JAMB ANCHORS. IF THE STEEL JAMB BRACKET IS NOT CENTERED BETWEEN THE TWO CLOSEST 2X6 WOOD JAMB ANCHORS, ADD AN ADDITIONAL 2X6 WOOD JAMB ANCHOR NEAR THAT STEEL BRACKET TO INSURE THAT THE LOAD FROM THE STEEL BRACKET IS EQUALLY TRANSFERRED TO TWO WOOD JAMB ANCHORS.

GADCO

GENERAL AMERICAN DOOR COMPANY
5050 BASELINE ROAD
MONTGOMERY, IL 60538

SCALE NONE	APPROVED BY	DRAWN BY DV
DATE 8-30-99		REVISED

DESCRIPTION: JAMB TO STRUCTURE ATTACHMENT FOR WIND LOADED GARAGE DOORS

MASTER DRAWING NUMBER A10560

FLORIDA DEPARTMENT OF Community Affairs

Community Affairs

Product Approval
USER: Public User

FL #	FL5108
Application Type	New
Code Version	2004
Application Status	Approved
Comments	
Archived	

Product Manufacturer	MI Windows and Doors
Address/Phone/Email	650 W Market St Gratz, PA 17030 (717) 365-3300 ext 2101 surich@miwd.com
Authorized Signature	Steven Urich surich@miwd.com
Technical Representative	
Address/Phone/Email	
Quality Assurance Representative	
Address/Phone/Email	

(1) window

A·L·I
(Validator / Operations Administrator)

AAMA
CERTIFICATION PROGRAM

AUTHORIZATION FOR PRODUCT CERTIFICATION

MI Windows & Doors, Inc.
P.O. Box 370
Gratz, PA 17030-0370

Attn: Bill Emley

The product described below is hereby approved for listing in the next issue of the AAMA Certified Products Directory. The approval is based on successful completion of tests, and the reporting to the Administrator of the results of tests, accompanied by related drawings, by an AAMA Accredited Laboratory.

1. The listing below will be added to the next published AAMA Certified Products Directory.

SPECIFICATION	RECORD OF PRODUCT TESTED				LABEL ORDER NO.
AAMA/NWWDA 101/I.S. 2-97 H-R55*-36x62					
COMPANY AND PLANT LOCATION	CODE NO.	SERIES MODEL & PRODUCT DESCRIPTION	MAXIMUM SIZE TESTED		
			FRAME	SASH	
MI Windows & Doors, Inc. (Didsmar, FL) MI Windows & Doors, Inc. (Smyrna, TN)	MTL-8 MTL-9	185/3185 SH (Fin) (AL)(O/X)(DG) (ASTM)	3'0" x 5'2"	2'10" x 2'7"	By Request

2. This Certification will expire May 14, 2008 and requires validation until then by continued listing in the current AAMA Certified Products Directory.

3. Product Tested and Reported by: Architectural Testing, Inc.

   Report No.: 01-50360.02

   Date of Report: June 14, 2004

NOTE: PLEASE REVIEW, AND ADVISE ALI IMMEDIATELY IF DATA, AS SHOWN, NEEDS CORRECTION.

Date: August 1, 2005

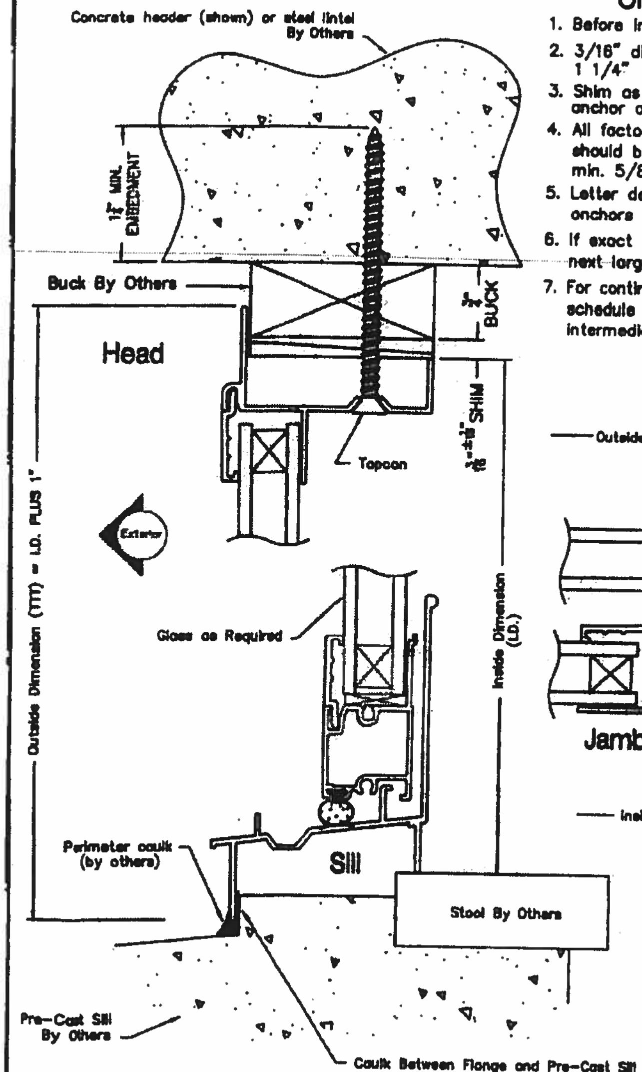
Validated for Certification:

Associated Laboratories, Inc.

Authorized for Certification:

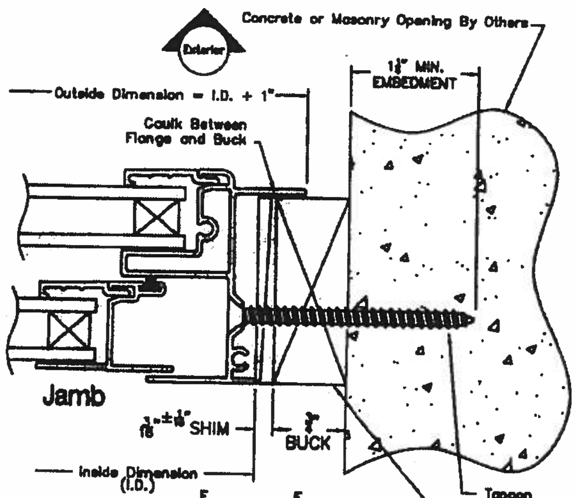
American Architectural Manufacturers Association

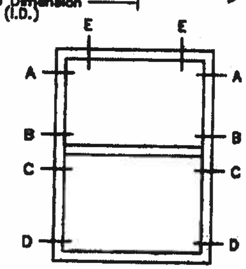
cc: AAMA
JGS/df
ACP-04 (Rev. 5/03)



"ONE BY" (3/4") BUCKS (SHOWN)

1. Before installation, caulk back of flange, or face of buck.
2. 3/16" dia. masonry Tapcon must be of a length to have 1 1/4" embedment into masonry or concrete.
3. Shim as required with load bearing shims at each installation anchor as shown.
4. All factory applied holes not designated for Tapcon anchor should be filled with #10 screws of sufficient length to provide min. 5/8" embedment into wood buck.
5. Letter designations on the Tapcon location chart indicate where anchors are to be installed using the elevation as a key.
6. If exact window size is not given, use anchor quantity for next larger window in chart.
7. For continuous head and sill twins & triples, use the same fastener schedule for each unit in the main frame except ignore the intermediate jamb.





"TWO BY" (1 1/2") BUCKS

"TWO BY" bucks are engineered and fastened to the masonry opening BY OTHERS.

Follow the same instructions and fastener requirements for "one by" bucks except use #10 screws of sufficient length for 1 1/4" minimum embedment into buck.

MI HOME PRODUCTS
BetterBilt / Capitol

* TAPCON LOCATION CHART

CODE SIZE	WINDOW ID SIZE	FASTENER LOCATIONS UP TO DP35	DP35.1 TO DP55	DP55.1 TO DP69.3
12	18 1/8 x 25	A, D & E	A, D & E	A, D & E
13	18 1/8 x 37 3/8	A, D & E	A, D & E	A, D & E
14	18 1/8 x 49 5/8	A, D & E	A, D & E	A, D & E
15	18 1/8 x 62	A, D & E	A, D & E	A, D & E
16	18 1/8 x 71	A, D & E	A, D & E	A, D & E
17	18 1/8 x 83	A, D & E	A, D & E	A, D & E
1/2 32	25 1/2 x 25	A, D & E	A, D & E	A, D & E
1/2 33	25 1/2 x 37 3/8	A, D & E	A, D & E	A, D & E
1/2 34	25 1/2 x 49 5/8	A, D & E	A, D & E	A, D & E
1/2 35	25 1/2 x 62	A, D & E	A, D & E	A, D & E
1/2 36	25 1/2 x 71	A, D & E	A, D & E	A, D & E
1/2 37	25 1/2 x 83	A, D & E	A, D & E	A, C, D & E
22	36 x 25	A, D & E	A, D & E	A, D & E
23	36 x 37 3/8	A, D & E	A, D & E	A, D & E
24	36 x 49 5/8	A, D & E	A, D & E	A, D & E
25	36 x 62	A, D & E	A, D & E	A, D & E
26	36 x 71	A, D & E	A, D & E	A, C, D & E
27	36 x 83	A, D & E	A, C, D & E	A, C, D & E
32	52 1/8 x 25	A, D & E	A, D & E	A, D & E
33	52 1/8 x 37 3/8	A, D & E	A, D & E	A, D & E
34	52 1/8 x 49 5/8	A, D & E	A, D & E	A, D & E
35	52 1/8 x 62	A, D & E	A, C, D & E	A, C, D & E
36	52 1/8 x 71	A, D & E	A, C, D & E	A, B, C, D & E
37	52 1/8 x 83	A, D & E	A, C, D & E	A, B, C, D & E
2040	23 3/8 x 47 5/8	A, D & E	A, D & E	A, D & E
2050	23 3/8 x 59 5/8	A, D & E	A, D & E	A, D & E
2060	23 3/8 x 71 5/8	A, D & E	A, D & E	A, D & E
2070	23 3/8 x 83 5/8	A, D & E	A, D & E	A, D & E
3040	35 3/8 x 47 5/8	A, D & E	A, D & E	A, D & E
3050	35 3/8 x 59 5/8	A, D & E	A, D & E	A, D & E
3060	35 3/8 x 71 5/8	A, D & E	A, D & E	A, D & E
3070	35 3/8 x 83 5/8	A, D & E	A, D & E	A, C, D & E
4040	47 3/8 x 47 5/8	A, D & E	A, C, D & E	A, C, D & E
4050	47 3/8 x 59 5/8	A, D & E	A, D & E	A, D & E
4060	47 3/8 x 71 5/8	A, D & E	A, D & E	A, C, D & E
4070	47 3/8 x 83 5/8	A, D & E	A, C, D & E	A, C, D & E
4450	51 3/8 x 59 5/8	A, D & E	A, C, D & E	A, B, C, D & E
4460	51. 3/8 x 71 5/8	A, D & E	A, D & E	A, C, D & E
4470	51 3/8 x 83 5/8	A, D & E	A, C, D & E	A, B, C, D & E

*"TAPCON" TYPE HARDENED MASONRY SCREWS INCLUDE TAPCON, RAWL, & SIMPSON

SYM	REVISION	DATE	BY
A	REMOVED SILL INSTALLATION ANCHOR SCREWS	7/16/04	[illegible]

Winter Park, Florida 32789

MI HOME PRODUCTS
GRATZ, PA

TITLE: 185/3185 SINGLE HUNG FLANGE FRAME INSTALLATION DETAILS & FASTENER SCHEDULE

PREPARED BY: PTC Product Technology Corporation
Phone 407.622.6334 Fax 407.622.6335

DRAWN BY: DRL
DATE: 08/15/04
SCALE: N.T.S.
DWG. NO.: MIHP0059
REV. LETTER: A
SHEET: 1 OF 1

FLORIDA DEPARTMENT OF Community Affairs

DCA HOME | ABOUT DCA | DCA PROGRAMS | CONTACT DCA

Community Affairs

- COMMUNITY PLANNING
- HOUSING & COMMUNITY DEVELOPMENT
- EMERGENCY MANAGEMENT
- OFFICE OF THE SECRETARY

Product Approval
USER: Public User

FL #	FL1956-R1
Application Type	Revision
Code Version	2004
Application Status	Approved
Comments	
Archived	

Product Manufacturer	TAMKO Building Products, Inc.
Address/Phone/Email	PO Box 1404 Joplin, MO 64802 (800) 641-4691 ext 2394 fred_oconnor@tamko.com
Authorized Signature	Frederick O'Connor fred_oconnor@tamko.com
Technical Representative	Frederick J. O'Connor
Address/Phone/Email	PO Box 1404 Joplin, MO 64802 (800) 641-4691 fred_oconnor@tamko.com

Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Asphalt Shingles
Compliance Method	Certification Mark or Listing
Certification Agency	Underwriters Laboratories Inc.

Referenced Standard and Year (of Standard)	**Standard**	**Year**
	ASTM D 3462	2001

Equivalence of Product Standards Certified By	
Product Approval Method	Method 1 Option A
Date Submitted	06/09/2005
Date Validated	06/20/2005
Date Pending FBC Approval	06/25/2005
Date Approved	06/29/2005

Summary of Products

FL #	Model, Number or Name	Description

slopes of 2:12 or greater. Not approved for use in HVHZ.	

Back Next

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

Product Approval Accepts:

4

Underwriters Laboratories Inc.®

Northbrook Division
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel 1 847 272 8800

June 17, 2005

Tamko Roofing Products
Ms. Kerri Eden
P.O. Box 1404
220 W. 4th Street
Joplin, MO 64802-1404

Our Reference: R2919

This is to confirm that "Elite Glass-Seal AR", "Heritage 30 AR", "Heritage 50 AR", "Glass-Seal AR" manufactured at Tuscaloosa, AL and "Elite Glass-Seal AR", "Heritage 30 AR", "Heritage XL AR", "Heritage 50 AR" manufactured at Frederick, MD and "Heritage 30 AR", "Heritage XL AR", and "Heritage 50 AR" manufactured in Dallas, TX are UL Listed asphalt glass mat shingles and have been evaluated in accordance with ANSI/UL 790, Class A (ASTM E108), ASTM D3462, ASTM D3161 or UL 997 modified to 110 mph when secured with four nails.

Let me know if you have any further questions.

Very truly yours,

Alpesh Patel (Ext. 42522)
Engineer Project
Fire Protection Division

Reviewed by,

R. K. Laymon

Randall K. Laymon (Ext. 42687)
Engineer Sr Staff
Fire Protection Division

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TAMKO BUILDING PRODUCTS

Application Instructions for

• HERITAGE® VINTAGE™ AR – Phillipsburg, KS
LAMINATED ASPHALT SHINGLES

THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR THE ROOFING CONDITIONS DESCRIBED. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER ROOFING DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS.

THIS PRODUCT IS COVERED BY A LIMITED WARRANTY, THE TERMS OF WHICH ARE PRINTED ON THE WRAPPER.

IN COLD WEATHER (BELOW 40°F), CARE MUST BE TAKEN TO AVOID DAMAGE TO THE EDGES AND CORNERS OF THE SHINGLES.

IMPORTANT: It is not necessary to remove the plastic strip from the back of the shingles.

1. ROOF DECK

These shingles are for application to roof decks capable of receiving and retaining fasteners, and to inclines of not less than 2 in. per foot. For roofs having pitches 2 in. per foot to less than 4 in. per foot, refer to special instructions titled "Low Slope Application". Shingles must be applied properly. TAMKO assumes no responsibility for leaks or defects resulting from improper application, or failure to properly prepare the surface to be roofed over.

NEW ROOF DECK CONSTRUCTION: Roof deck must be smooth, dry and free from warped surfaces. It is recommended that metal drip edges be installed at eaves and rakes.

PLYWOOD: All plywood shall be exterior grade as defined by the American Plywood Association. Plywood shall be a minimum of 3/8 in. thickness and applied in accordance with the recommendations of the American Plywood Association.

SHEATHING BOARDS: Boards shall be well-seasoned tongue-and-groove boards and not over 6 in. nominal width. Boards shall be a 1 in. nominal minimum thickness. Boards shall be properly spaced and nailed.

TAMKO does not recommend re-roofing over existing roof.

2. VENTILATION

Inadequate ventilation of attic spaces can cause accumulation of moisture in winter months and a build up of heat in the summer. These conditions can lead to:

1. Vapor Condensation
2. Buckling of shingles due to deck movement.
3. Rotting of wood members.
4. Premature failure of roof.

To insure adequate ventilation and circulation of air, place louvers of sufficient size high in the gable ends and/or install continuous ridge and soffit vents. FHA minimum property standards require one square foot of net free ventilation area to each 150 square feet of space to be vented, or one square foot per 300 square feet if a vapor barrier is installed on the warm side of the ceiling or if at least one half of the ventilation is provided near the ridge. If the ventilation openings are screened, the total area should be doubled.

IT IS PARTICULARLY IMPORTANT TO PROVIDE ADEQUATE VENTILATION.

3. FASTENERS

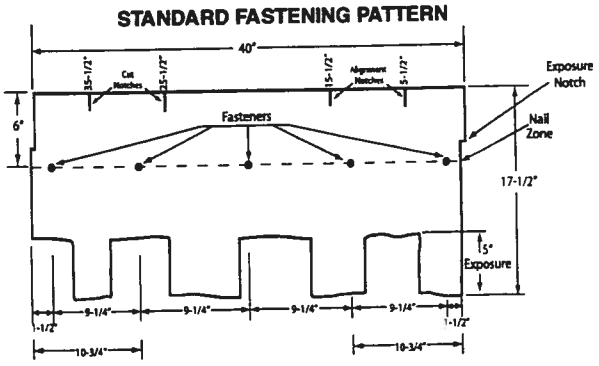
WIND CAUTION: Extreme wind velocities can damage these shingles after application when proper sealing of the shingles does not occur. This can especially be a problem if the shingles are applied in cooler months or in areas on the roof that do not receive direct sunlight. These conditions may impede the sealing of the adhesive strips on the shingles. The inability to seal down may be compounded by prolonged cold weather conditions and/or blowing dust. In these situations, hand sealing of the shingles is recommended. Shingles must also be fastened according to the fastening instructions described below.

Correct placement of the fasteners is critical to the performance of the shingle. If the fasteners are not placed as shown in the diagram and described below, this will result in the termination of TAMKO's liabilities under the limited warranty. TAMKO will not be responsible for damage to shingles caused by winds in excess of the applicable miles per hour as stated in the limited warranty. See limited warranty for details.

FASTENING PATTERNS: Fasteners must be placed 6 in. from the top edge of the shingle located horizontally as follows:

1) Standard Fastening Pattern. (For use on decks with slopes 2 in. per foot to 21 in. per foot.) One fastener 1-1/2 in. back from each end, one 10-3/4 in. back from each end and one 20 in. from one end of the shingle for a total of 5 fasteners. (See standard fastening pattern illustrated below).

STANDARD FASTENING PATTERN



2) Mansard or Steep Slope Fastening Pattern. (For use on decks with slopes greater than 21 in. per foot.) Use standard nailing instructions with four additional nails placed 6 in. from the butt edge of the shingle making certain nails are covered by the next (successive) course of shingles.

(Continued)

TAMKO BUILDING PRODUCTS

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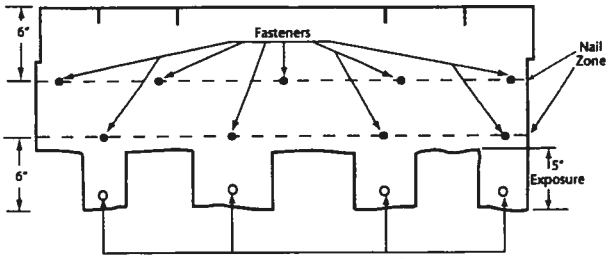
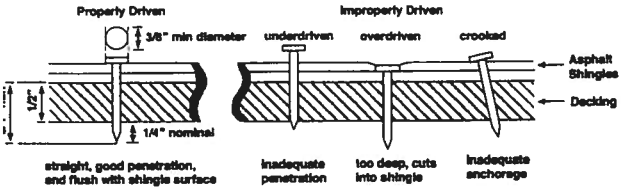
Each shingle tab must be sealed underneath with quick setting asphalt adhesive cement immediately upon installation. Spots of cement must be equivalent in size to a $.25 piece and applied to shingles with a 5 in. exposure, use 9 fasteners per shingle.

MANSARD FASTENING PATTERN



Apply under each tab 1" diameter asphalt adhesive cement.

NAILS: TAMKO recommends the use of nails as the preferred method of application. Standard type roofing nails should be used. Nail shanks should be made of minimum 12 gauge wire, and a minimum head diameter of 3/8 in. Nails should be long enough to penetrate 3/4 in. into the roof deck. Where the deck is less than 3/4 in. thick, the nails should be long enough to penetrate completely through plywood decking and extend at least 1/8 in. through the roof deck. Drive nail head flush with the shingle surface.



4. UNDERLAYMENT

UNDERLAYMENT: An underlayment consisting of asphalt saturated felt must be applied over the entire deck before the installation of TAMKO shingles. Failure to add underlayment can cause premature failure of the shingles and leaks which are not covered by TAMKO's limited warranty. Apply the felt when the deck is dry. On roof decks 4 in. per foot and greater apply the felt parallel to the eaves lapping each course of the felt over the lower course at least 2 in. Where ends join, lap the felt 4 in. If left exposed, the underlayment felt may be adversely affected by moisture and weathering. Laying of the underlayment and the shingle application must be done together.

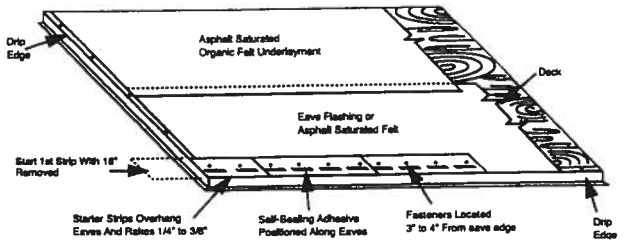
Products which are acceptable for use as underlayment are:

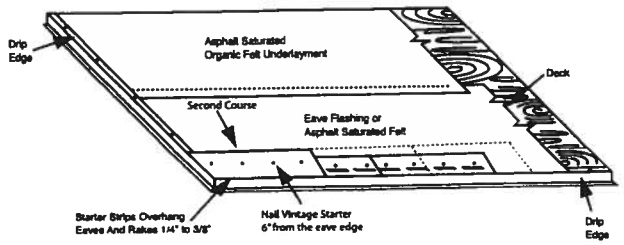
- TAMKO No. 15 Asphalt Saturated Organic Felt
- A non-perforated asphalt saturated organic felt which meets ASTM: D226, Type I or ASTM D4869, Type I
- Any TAMKO non-perforated asphalt saturated organic felt
- TAMKO TW Metal and Tile Underlayment, TW Underlayment and Moisture Guard Plus® (additional ventilation maybe required. Contact TAMKO's technical services department for more information)

In areas where ice builds up along the eaves or a back-up of water from frozen or clogged gutters is a potential problem, TAMKO's Moisture Guard Plus® waterproofing underlayment (or any specialty eaves flashing product) may be applied to eaves, rakes, ridges, valleys, around chimneys, skylights or dormers to help prevent water damage. Contact TAMKO's Technical Services Department for more information. TAMKO does not recommend the use of any substitute products as shingle underlayment.

5. APPLICATION INSTRUCTIONS

STARTER COURSE: Two starter course layers must be applied prior to application of Heritage Vintage AR Shingles.
The first starter course may consist of TAMKO Shingle Starter, three tab self-sealing type shingles or a 9 inch wide strip of mineral surface roll roofing. If three tab self-sealing shingles are used, remove the exposed tab portion and install with the factory applied adhesive adjacent to the eaves. If using three tab self-sealing shingles or shingle starter, remove 18 in. from first shingle to offset the end joints of the Vintage Starter. Attach the first starter course with approved fasteners along a line parallel to and 3 in. to 4 in. above the eave edge. The starter course should overhang both the eave and rake edge 1/4 in. to 3/8 in. Over the first starter course, install Heritage Vintage Starter AR and begin at the left rake edge with a full size shingle and continue across the roof nailing the Heritage Vintage Starter AR along a line parallel to and 6 in. from the eave edge.





Note: Do not allow Vintage Starter AR joints to be visible between shingle tabs. Cutting of the starter may be required.

HERITAGE VINTAGE STARTER AR
12 1/2" x 36" 20 PIECES PER BUNDLE
60 LINEAL FT. PER BUNDLE

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TAMKO BUILDING PRODUCTS

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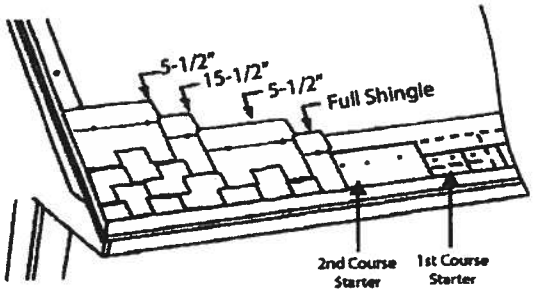
SHINGLE APPLICATION: Start the first course at the left rake edge with a full size shingle and overhang the rake edge 1/4 in. to 3/8 in.. To begin the second course, align the right side of the shingle with the 5-1/2 in. alignment notch on the first course shingle making sure to align the exposure notch. (See shingle illustration on next page) Cut the appropriate amount from the rake edge so the overhang is 1/4" to 3/8". For the third course, align the shingle with the 15-1/2 in. alignment notch at the top of the second course shingle, again being sure to align the exposure notch. Cut the appropriate amount from the rake edge. To begin the fourth course, align the shingle with the 5-1/2 in. alignment notch from the third course shingle while aligning the exposure notch. Cut the appropriate amount from the rake edge. Continue up the rake in as many rows as necessary using the same formula as outlined above. Cut pieces may be used to complete courses at the right side. As you work across the roof, install full size shingles taking care to align the exposure notches. Shingle joints should be no closer than 4 in.



6. LOW SLOPE APPLICATION

On pitches 2 in. per foot to 4 in. per foot cover the deck with two layers of underlayment. Begin by applying the underlayment in a 19 in. wide strip along the eaves and overhanging the drip edge by 1/4 to 3/4 in. Place a full 36 in. wide sheet over the 19 in. wide starter piece, completely overlapping it. All succeeding courses will be positioned to overlap the preceding course by 19 in. If winter temperatures average 25°F or less, thoroughly cement the laps of the entire underlayment to each other with plastic cement from eaves and rakes to a point of a least 24 in. inside the interior wall line of the building. As an alternative, TAMKO's Moisture Guard Plus self-adhering waterproofing underlayment may be used in lieu of the cemented felts.

7. VALLEY APPLICATION

TAMKO recommends an open valley construction with Heritage Vintage AR shingles.

To begin, center a sheet of TAMKO Moisture Guard Plus, TW Underlayment or TW Metal & Tile Underlayment in the valley.

After the underlayment has been secured, install the recommended corrosion resistant metal (26 gauge galvanized metal or an equivalent) in the valley. Secure the valley metal to the roof deck. Overlaps should be 12" and cemented.

Following valley metal application; a 9" to 12" wide strip of TAMKO Moisture Guard Plus, TW Underlayment or TW Metal & Tile Underlayment should be applied along the edges of the metal valley flashing (max. 6" onto metal valley flashing) and on top of the valley underlayment. The valley will be completed with shingle application.

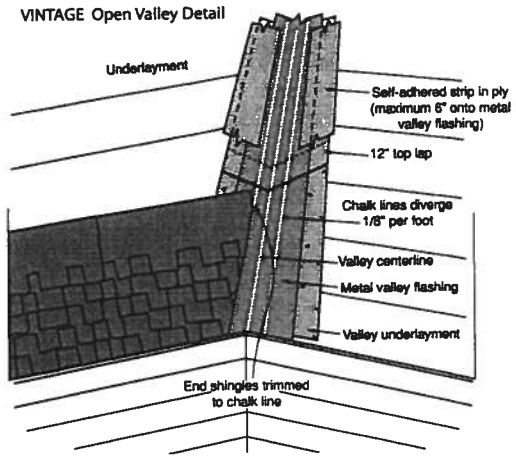
SHINGLE APPLICATION INSTRUCTIONS (OPEN VALLEY)

- Snap two chalk lines, one on each side of the valley centerline over the full length of the valley flashing. Locate the upper ends of the chalk lines 3" to either side of the valley centerline.
- The lower end should diverge from each other by 1/8" per foot. Thus, for an 8' long valley, the chalk lines should be 7" either side of the centerline at the eaves and for a 16' valley 8".

As shingles are applied toward the valley, trim the last shingle in each course to fit on the chalk line. Never use a shingle trimmed to less than 12" in length to finish a course running into a valley. If necessary, trim the adjacent shingle in the course to allow a longer portion to be used.

- Clip 1" from the upper corner of each shingle on a 45° angle to direct water into the valley and prevent it from penetrating between the courses.

- Form a tight seal by cementing the shingle to the valley lining with a 3" width of asphalt plastic cement (conforming to ASTM D 4586).



• **CAUTION:**
Adhesive must be applied in smooth, thin, even layers.

Excessive use of adhesive will cause blistering to this product.

TAMKO assumes no responsibility for blistering.

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TAMKO® BUILDING PRODUCTS

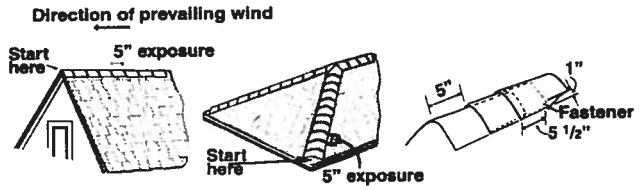
• HERITAGE® VINTAGE™ AR – Phillipsburg, KS
LAMINATED ASPHALT SHINGLES

8. HIP AND RIDGE FASTENING DETAIL

Apply the shingles with a 5 in. exposure beginning at the bottom of the hip or from the end of the ridge opposite the direction of the prevailing winds. Secure each shingle with one fastener on each side, 5-1/2 in. back from the exposed end and 1 in. up from the edge. TAMKO recommends the use of TAMKO Heritage Vintage Hip & Ridge shingle products.

Fasteners should be 1/4 in. longer than the ones used for shingles.

IMPORTANT: PRIOR TO INSTALLATION, CARE NEEDS TO BE TAKEN TO PREVENT DAMAGE WHICH CAN OCCUR WHILE BENDING SHINGLE IN COLD WEATHER.



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