DATE 10/03/2008

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT
000027401

APPLICANT JOHN HARRINGTON PHONE 352-316-5320

ADDRESS 24113 NW OLD BELLAMY RD HIGH SPRINGS FL 32643

OWNER JEFF TYRE PHONE 462-5323

ADDRESS 5813 NW LAKE JEFFERY RD LAKE CITY FL 32055

CONTRACTOR HOUSE CRAFT HOMES PHONE 386-462-2401

LOCATION OF PROPERTY 90 E, R LAKE JEFFERY, GO LEFT JUST PAST OLD HUNTSVILLE
STORE AT NEXT DRIVE ON RIGHT TO THE END

TYPE DEVELOPMENT SFD,UTILITY ESTIMATED COST OF CONSTRUCTION 131850.00

HEATED FLOOR AREA 2497.00 TOTAL AREA 2637.00 HEIGHT 18.00 STORIES 1

FOUNDATION CONCRETE WALLS FRAMED ROOF PITCH 5/12 FLOOR SLB

LAND USE & ZONING AG-3 MAX. HEIGHT 35

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

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

PARCEL ID 09-3S-16-02045-104 SUBDIVISION

LOT BLOCK PHASE UNIT TOTAL ACRES 5.00

Culvert Permit No.	Culvert Waiver	Contractor's License Number	Applicant/Owner/Contractor
		CRC058087	John O Harrington

Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident
EXISTING	08-0650	BK	RJ	N

COMMENTS: NOC ON FILE, FLOOR ONE FOOT ABOVE THE ROAD

Check # or Cash 1150

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

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

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

Framing date/app. by — 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 $ 660.00 CERTIFICATION FEE $ 13.19 SURCHARGE FEE $ 13.19

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

FLOOD DEVELOPMENT FEE $ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ **TOTAL FEE** 761.38

INSPECTORS OFFICE CLERKS OFFICE

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

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

EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS THE WORK AUTHORIZED BY SUCH PERMIT IS COMMENCED WITHIN 180 DAYS AFTER ITS ISSUANCE, OR IF THE WORK AUTHORIZED BY SUCH PERMIT IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AFTER THE TIME THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED TO BE IN ACTIVE PROGESS WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS.

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

STAFF * 2ND PAGE WILL BE SUBMITTED PRIOR TO PERMITTING

Columbia County Building Permit Application

For Office Use Only Application # 0809-59 Date Received 9/26 By JW Permit # 27401

Zoning Official BLK Date 01.10.08 Flood Zone X Land Use A-3 Zoning A-3

FEMA Map # N/A Elevation N/A MFE 1ft above ?? Rd River N/A Plans Examiner [signature] Date 9/30/08

Comments [illegible]

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

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

IMPACT FEES: EMS $29.88 Fire $78.63 Corr $409.16 Road/Code $1,046.00 /210

School $1,500.00 = TOTAL $3,063.67

Septic Permit No. 08-0650 Fax ______

Name Authorized Person Signing Permit John Harrington Phone 352-316-5320

Address ~~12501 US Hwy 441 Alachua FL 32615~~ 24113 NW OLD BELLAMY RD HIGH SPRINGS FL 32643

Owners Name Jeff Tyre Phone 386-462-5323

911 Address 5813 NW LAKE JEFFERY RD LAKE CITY 32055

Contractors Name HOUSE CRAFT HOMES Phone 386-462-2401

Address 12501 US HWY 441 Alachua FL 32615

Fee Simple Owner Name & Address Jeff Tyre

Bonding Co. Name & Address ______

Architect/Engineer Name & Address Mark Disosway PO BOX 868 LAKE CITY

Mortgage Lenders Name & Address FIRST FEDERAL SAVINGS LAKE CITY

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

Property ID Number [illegible] 09-3S-16 R02045-[illegible] 104 Estimated Cost of Construction 175,000

Subdivision Name ______ Lot ____ Block ____ Unit ____ Phase ____

Driving Directions EAST ON 90 TO LAKE Jeffery rd make left ~~go to~~ Just past the old Huntfield Jiffy store next drive on R to end.

Number of Existing Dwellings on Property (0)

Construction of SFD Total Acreage 5 Lot Size ______

Do you need a - Culvert Permit or Culvert Waiver or (Have an Existing Drive) Total Building Height 18'

Actual Distance of Structure from Property Lines - Front 130 Side 230 Side 257 Rear 450

Number of Stories 1 Heated Floor Area 2497 Total Floor Area 2637 Roof Pitch 5/12

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.

Page 1 of 2 (Both Pages must be submitted together.) Revised 1-10-08

JW called & spoke w/ J. D. Harrington, Sr. 10.1.08

Columbia County Building Permit Application

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

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

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

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

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

Owners Signature

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

Contractor's Signature (Permitee)

Contractor's License Number CRC058087
Columbia County
Competency Card Number _____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 3rd **day of** October **20** 0

Personally known _____ **or Produced Identification** FDL H652-464-73-303-0

State of Florida Notary Signature (For the Contractor)

SEAL

DEBORAH MORRISON
Notary Public - State of Florida
My Commission Expires Sep 17, 2011
Commission # DD 715174
Bonded Through National Notary Assn.

Revised 1-10-08

FORM 600A-2004R EnergyGauge® 4.5.2

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Community Affairs

Residential Whole Building Performance Method A

Project Name:	**TYRE RESIDENCE**	Builder:	**House Craft Homes**
Address:	**5813 NW Lake Jeffery Rd**	Permitting Office:	Columbia County
City, State:	**Lake City, Fl 32055-**	Permit Number:	27401
Owner:	**JEFF AND GIGI TYRE**	Jurisdiction Number:	221500
Climate Zone:	**North**		

1. New construction or existing	New	12. Cooling systems	
2. Single family or multi-family	Single family	a. Central Unit	Cap: 48.0 kBtu/hr
3. Number of units, if multi-family	1		SEER: 13.00
4. Number of Bedrooms	4	b. N/A	
5. Is this a worst case?	Yes	c. N/A	
6. Conditioned floor area (ft²)	2497 ft²	13. Heating systems	
7. Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)		a. Electric Heat Pump/Package	Cap: 48.0 kBtu/hr
a. U-factor: (or Single or Double DEFAULT)	Description Area 7a. (Dble Default) 177.0 ft²		HSPF: 8.30
b. SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 177.0 ft²	b. N/A	
8. Floor types		c. N/A	
a. Stem Wall	R=0.0, 2497.0ft²	14. Hot water systems	
b. N/A		a. Electric Resistance	Cap: 40.0 gallons
c. N/A			EF: 0.92
9. Wall types		b. N/A	
a. Concrete, Int Insul, Exterior	R=5.0, 1365.0 ft²	c. Conservation credits (HR-Heat recovery, Solar DHP-Dedicated heat pump)	
b. N/A		15. HVAC credits (CF-Ceiling fan, CV-Cross ventilation, HF-Whole house fan, PT-Programmable Thermostat, MZ-C-Multizone cooling, MZ-H-Multizone heating)	CF,
c. N/A			
d. N/A			
e. N/A			
10. Ceiling types			
a. Under Attic	R=30.0, 2497.0 ft²		
b. N/A			
c. N/A			
11. Ducts			
a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 129.0 ft		
b. N/A			

Glass/Floor Area: 0.07 Total as-built points: 29349 Total base points: 32351 **PASS**

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

PREPARED BY: John Hunyt

DATE: 9-21-08

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

OWNER/AGENT: John Hunyt

DATE: 9-21-08

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.

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-** 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.	NA
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.	✓

WATER HEATING & CODE COMPLIANCE STATUS

Residential Whole Building Performance Method A - Details

ADDRESS: **5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-** 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		40.0	0.92	4	1.00	2635.00	1.00	10540.0	
				As-Built Total:						**10540.0**	

CODE COMPLIANCE STATUS

BASE				AS-BUILT			
Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points	Cooling Points	+ Heating Points	+ Hot Water Points	= Total Points
10084	**11727**	**10540**	**32351**	**7051**	**11758**	**10540**	**29349**

PASS

Code Compliance Checklist

Residential Whole Building Performance Method A - Details

ADDRESS: **5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-** PERMIT #:

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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.	NA
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.	✓

SUMMER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-** PERMIT #:

BASE			AS-BUILT					
Summer Base Points: 31026.8			**Summer As-Built Points: 25092.5**					
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 48000btuh ,SEER/EFF(13.0) Ducts:Unc(S),Unc(R),Int(AH),R6.0(INS)					
31026.8	0.3250	10083.7	25092 **25092.5**	1.00 **1.00**	(1.09 x 1.147 x 0.91) **1.138**	0.260 **0.260**	0.950 **0.950**	7051.3 **7051.3**

WINTER CALCULATIONS

Residential Whole Building Performance Method A - Details

ADDRESS: **5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-** 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	2497.0	20.17	9066.0	1.Double, Clear	E	2.0	5.3	51.0	18.79	1.07	1029.0	
				2.Double, Clear	W	2.0	5.3	34.0	20.73	1.05	742.0	
				3.Double, Clear	W	2.0	5.3	50.0	20.73	1.05	1091.0	
				4.Double, Clear	S	2.0	3.7	8.0	13.30	1.76	186.0	
				5.Double, Clear	S	2.0	5.3	17.0	13.30	1.34	303.0	
				6.Double, Clear	N	2.0	5.3	17.0	24.58	1.01	420.0	
				As-Built Total:				**177.0**			**3771.0**	
WALL TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =		Points	
Adjacent	0.0	0.00	0.0	1. Concrete, Int Insul, Exterior			5.0	1365.0	5.70		7780.5	
Exterior	1365.0	3.70	5050.5									
Base Total:	**1365.0**		**5050.5**	**As-Built Total:**				**1365.0**			**7780.5**	
DOOR TYPES	Area X	BWPM =	Points	Type				Area X	WPM =		Points	
Adjacent	0.0	0.00	0.0	1.Exterior Insulated				23.0	8.40		193.2	
Exterior	82.0	12.30	1008.6	2.Exterior Insulated				36.0	8.40		302.4	
				3.Exterior Insulated				23.0	8.40		193.2	
Base Total:	**82.0**		**1008.6**	**As-Built Total:**				**82.0**			**688.8**	
CEILING TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM X WCM =		Points	
Under Attic	2497.0	2.05	5118.9	1. Under Attic			30.0	2497.0	2.05 X 1.00		5118.9	
Base Total:	**2497.0**		**5118.9**	**As-Built Total:**				**2497.0**			**5118.9**	
FLOOR TYPES	Area X	BWPM =	Points	Type			R-Value	Area X	WPM =		Points	
Slab	0.0(p)	0.0	0.0	1. Stem Wall			0.0	2497.0	3.50		8739.5	
Raised	2497.0	0.96	2397.1									
Base Total:			**2397.1**	**As-Built Total:**				**2497.0**			**8739.5**	
INFILTRATION	Area X	BWPM =	Points					Area X	WPM =		Points	
	2497.0	-0.59	-1473.2					2497.0	-0.59		-1473.2	

WINTER CALCULATIONS

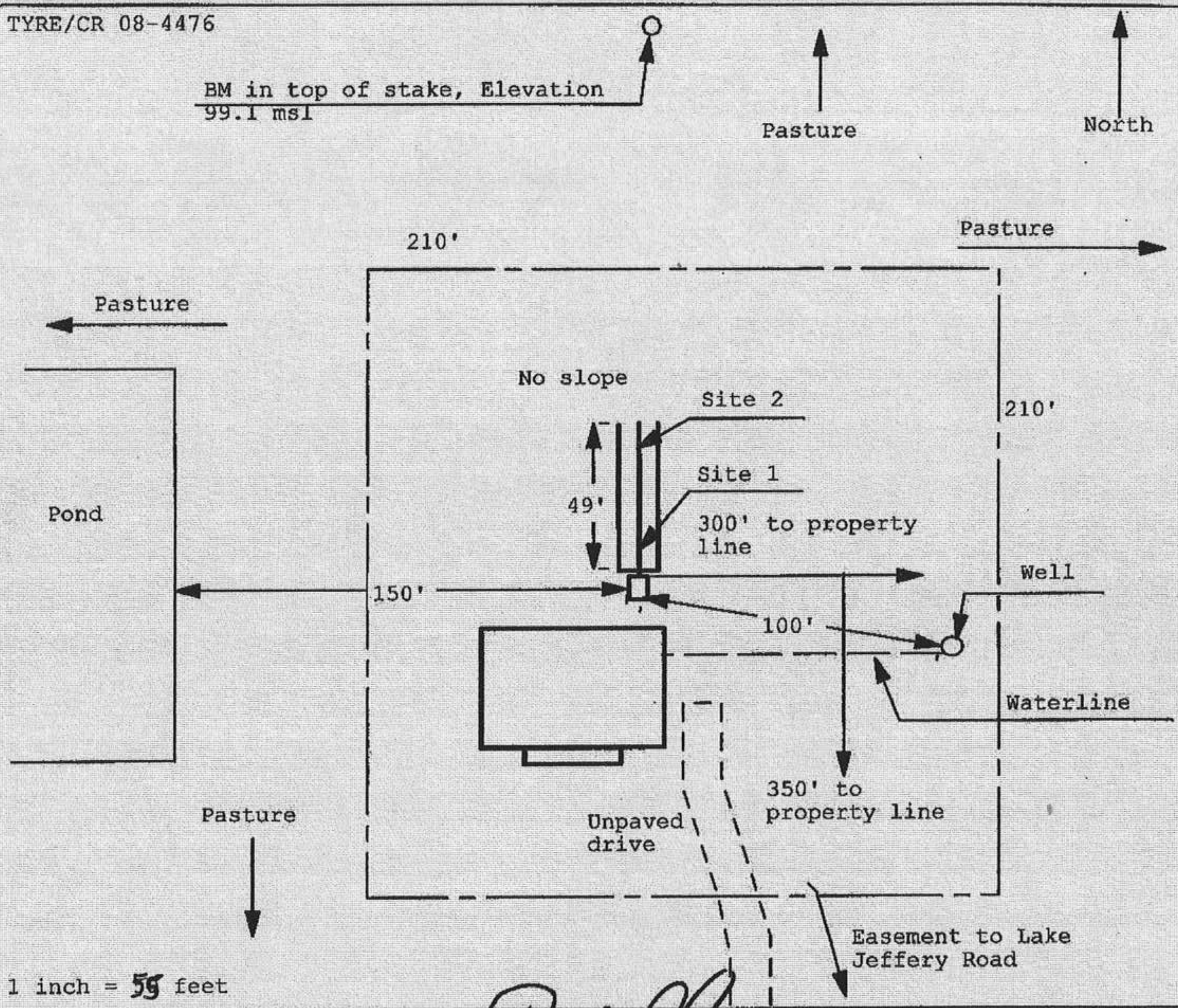
Residential Whole Building Performance Method A - Details

ADDRESS: **5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-** PERMIT #:

BASE			AS-BUILT					
Winter Base Points:		**21167.8**	**Winter As-Built Points:**					**24625.4**
Total Winter Points	X System Multiplier	= Heating Points	Total Component (System - Points)	X Cap Ratio	X Duct Multiplier (DM x DSM x AHU)	X System Multiplier	X Credit Multiplier	= Heating Points
			(sys 1: Electric Heat Pump 48000 btuh ,EFF(8.3) Ducts:Unc(S),Unc(R),Int(AH),R6.0					
			24625.4	1.000	(1.069 x 1.169 x 0.93)	0.411	1.000	11758.0
21167.8	**0.5540**	**11727.0**	**24625.4**	**1.00**	**1.162**	**0.411**	**1.000**	**11758.0**

Application for Onsite Sewage Disposal System Construction Permit. Part II Site Plan
Permit Application Number: 08-0650

ALL CHANGES MUST BE APPROVED BY THE COUNTY HEALTH UNIT



Site Plan Submitted By ______________ **Date** 9/12/08

Plan Approved ✓ **Not Approved** ______ **Date** 9/30/08

By ______________ Columbia **CPHU**

Notes: ______________

THIS INSTRUMENT WAS PREPARED BY:

TERRY McDAVID 02-455
POST OFFICE BOX 1328
LAKE CITY, FL 32056-1328

RETURN TO:

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

Property Appraiser's
Identification Number Part of R02045-000

Inst:2002014888 Date:07/29/2002 Time:09:36:06
Doc Stamp-Deed : 343.70
DC,P.DeWitt Cason,Columbia County B:958 P:237

WARRANTY DEED

THIS INDENTURE, made this 26th day of July, 2002, BETWEEN BRUCE D. MARKHAM and GLORIA J. MARKHAM, Husband and Wife whose post office address is Route 8, Box 384, Lake City, FL 32055, of the County of Columbia, State of Florida, grantor*, and JEFFREY R. TYRE and GIGI F. TYRE, Husband and Wife whose post office address is 403 Brady Circle, Lake City, FL 32055, of the County of Columbia, State of Florida, grantee*.

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

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

SUBJECT TO: Restrictions, easements and outstanding mineral rights of record, if any, and taxes for the current year.

SUBJECT TO RESTRICTIONS AS DESCRIBED IN EXHIBIT "B" ATTACHED HERETO AND MADE A PART HEREOF.

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

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

IN WITNESS WHEREOF, grantor has hereunto set grantor's hand and seal the day and year first above written.

Inst:200201488B Date:07/ 2002 Time:09:36:06
Doc Stamp-Deed : 343.70
MCK DC,P.DeWitt Cason,Columbia County B:958 P

Signed, sealed and delivered
in our presence:

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

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

Bruce D. Markham (SEAL)
Grantor
BRUCE D. MARKHAM
Printed Name

Gloria J. Markham (SEAL)
Grantor
GLORIA J. MARKHAM
Printed Name

STATE OF Florida
COUNTY OF Columbia

The foregoing instrument was acknowledged before me this 26th day of July, 2002, by BRUCE D. MARKHAM and GLORIA J. MARKHAM, Husband and Wife who are personally known to me or who have produced _____ as identification and who did not take an oath.

My Commission Expires:

Notary Public
Printed, typed, or stamped name:

TERRY MCDAVID
MY COMMISSION EXPIRES
January 16, 2006
#DD 079305
Bonded thru
Notary Public Underwriters
NOTARY PUBLIC, STATE OF FLORIDA

Inst:200201488 Date:07/2[illegible]02 Time:09:36:06
Doc Stamp-Deed : 343.70
DC,P.DeWitt Cason,Columbia County B:958 P

EXHIBIT "A"

TOWNSHIP 3 SOUTH - RANGE 16 EAST

SECTION 9: Commence at the Northeast corner of the Southeast 1/4 of the Northeast 1/4 of Section 9, Township 3 South, Range 16 East, Columbia County, Florida and run South 88 deg. 40'07" West along the North line of the Southeast 1/4 of the Northeast 1/4 of Section 9 a distance of 571.03 feet to the Point of Beginning; thence South 19 deg. 38'48" West a distance of 738.68 feet; thence North 47 deg. 40'33" West a distance of 587.72 feet to a point on the West line of the Southeast 1/4 of the Northeast 1/4 of Section 9; thence continue North 47 deg. 40'33" West a distance of 118.13 feet to a rebar and cap stamped Occupation Corner on an existing fence line; thence North 00 deg. 45'20" West along said existing fence line a distance of 202.49 feet to a concrete monument stamped Occupation Corner; thence North 88 deg. 40'07" East along the Westerly extension of the North line of the Southeast 1/4 of the Northeast 1/4 a distance of 82.53 feet to the Northwest corner of the Southeast 1/4 of the Northeast 1/4; thence continue North 88 deg. 40'07" East along said North line of the Southeast 1/4 of the Northeast 1/4 of Section 9 a distance of 688.80 feet to the Point of Beginning. Columbia County, Florida.

TOGETHER WITH an Easement 30.00 feet in width, for utilities, ingress and egress, lying 30.00 feet West of and adjacent to the following described line:

Commence at the Northeast corner of the Southeast 1/4 of the Northeast 1/4 of Section 9, Township 3 South, Range 16 East, Columbia County, Florida and run South 01 deg. 12'24" East along the East line of Section 9 a distance of 1192.48 feet; thence South 88 deg. 35'02" West a distance of 815.40 feet; thence South 01 deg. 32'45" East a distance of 759.91 feet to a point on the Northeasterly right-of-way line of County Road 250 (Lake Jeffery Road); thence North 39 deg. 28'06" West along said Northeasterly right-of-way line of County Road 250 (Lake Jeffery Road) a distance of 345.70 feet to the Point of Beginning; thence North 09 deg. 44'35" East a distance of 1011.75 feet to the Terminal Point of herein described line.

Inst:2002014888 Date:07/29/2002 Time:09:36:06
Doc Stamp-Deed : 343.70
DC,P.DeWitt Cason,Columbia County B:958 P:2374

EXHIBIT "B"

For the period of time ending 20 years from the date of the Warranty Deed the property described in Exhibit "A" shall be subject to the following restrictions:

1. Only homes of not less than 1,500 sq feet of heated area my be built on the property.

2. No Mobile Homes may be placed on the property.

3. The property may not be used as a poultry farm.

4. No swine or goats may be kept on the property.

5. Horses and cattle may be kept on the property, but the total of both shall not exceed seven head plus their offspring until weaning age.

6. No junk vehicles or other abandoned personal property may be allowed on the property.

7. A travel trailer may be used as living quarters while a home is being constructed, but not after one (1) year.

0805-59

Columbia County Property Appraiser

DB Last Updated: 8/5/2008

2008 Proposed Values

Tax Record | Property Card | Interactive GIS Map | Print

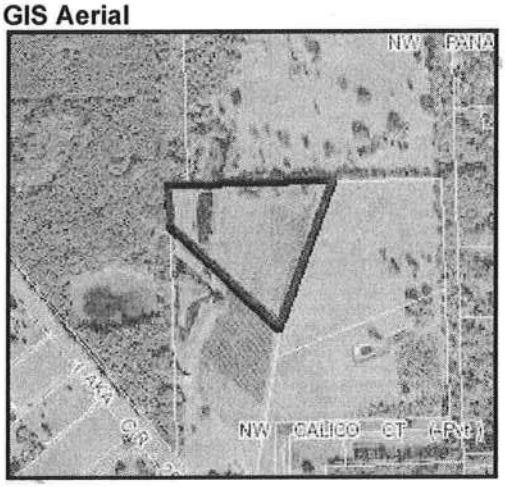
Parcel: 09-3S-16-02045-104

Search Result: 1 of 2 Next >>

Owner & Property Info

Owner's Name	TYRE JEFFREY R & GIGI F		
Site Address			
Mailing Address	708 NW BRADY CIRCLE LAKE CITY, FL 32055		
Use Desc. (code)	NO AG ACRE (009900)		
Neighborhood	9316.00	**Tax District**	3
UD Codes	MKTA01	**Market Area**	01
Total Land Area	7.310 ACRES		
Description	COMM NE COR OF SE1/4 OF NE1/4, RUN W 571.03 FT FOR POB, RUN S 19 DEG W 738.68 FT, N 47 DEG W 587.72 FT TO W LINE OF SE1/4 OF NE1/4, CONT N 47 DEG W 118.13 FT TO A PT ON AN OCCUPATION LINE OF AN EXISTING FENCE, RUN N 202.49 FT, E 82.53 FT TO NW COR OF SE1/4 OF NE1/4, CONT E 688.80 FT TO POB. ORB 958-2371		

GIS Aerial



Property & Assessment Values

Mkt Land Value	cnt: (1)	$58,333.00
Ag Land Value	cnt: (0)	$0.00
Building Value	cnt: (0)	$0.00
XFOB Value	cnt: (0)	$0.00
Total Appraised Value		$58,333.00

Just Value	$58,333.00
Class Value	$0.00
Assessed Value	$58,333.00
Exempt Value	$0.00
Total Taxable Value	$58,333.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale Vlmp	Sale Qual	Sale RCode	Sale Price
7/26/2002	958/2371	WD	V	U	03	$49,100.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
NONE						

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
NONE						

Land Breakdown

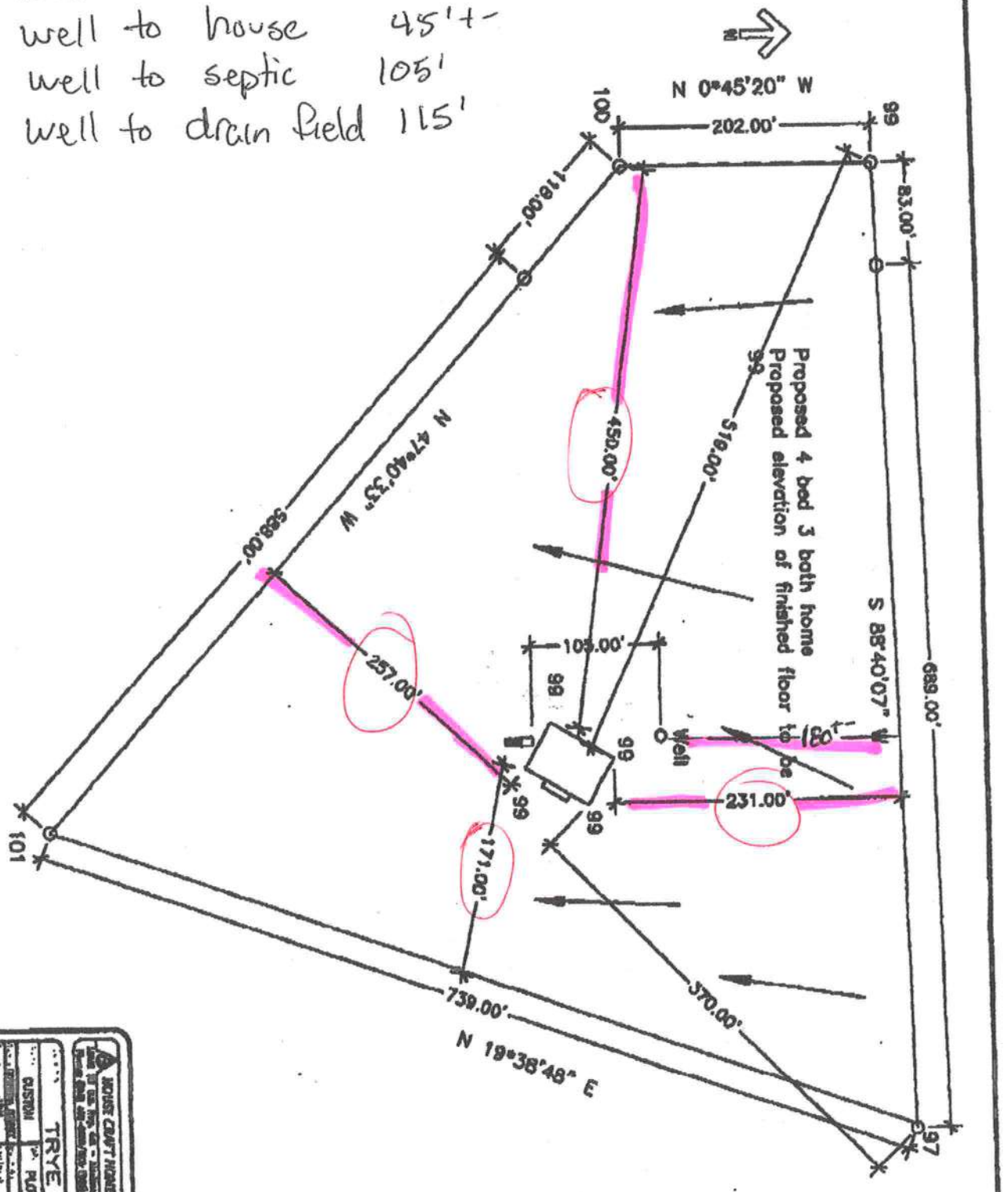
Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
009900	AC NON-AG (MKT)	7.310 AC	1.00/1.00/1.00/1.00	$7,980.00	$58,333.00

Columbia County Property Appraiser

DB Last Updated: 8/5/2008

PLOT PLAN

well to Lot Line 180'+-
well to house 45'+-
well to septic 105'
well to drain field 115'



TRYE
CUSTOM
PLOT PLAN

Borrowers: Jeff & Gigi Tyre
Prop. Address: 5813 NW Lake Jeffery Rd.
Lake City, Fl. 32055
Columbia County
Tax Parcel # R00116-104

Date: 8/28/08
Preparer: John Harrington
Title: Builder

Re: Letter of Authorization
6/30/08

Please allow my father John D. Harrington Sr. to apply and pick up permits for House Craft Homes.

Thank you

John D. Harrington Jr.
CRC 058087

Vicki Summers

VICKI SUMMERS
Notary Public - State of Florida
My Commission Expires Jan 12, 2010
Commission # DD 506323
Bonded By National Notary Assn.

Standard System:

4" Well

1 HP Submersible Pump

60 Gallon Captive Air Tank with Cycle Stop Valve

OR

260 Gallon Tank with No Cycle Stop Valve

1 1/4" Schedule #80 PVC Drop Pipe

All Wiring to Electrical Code

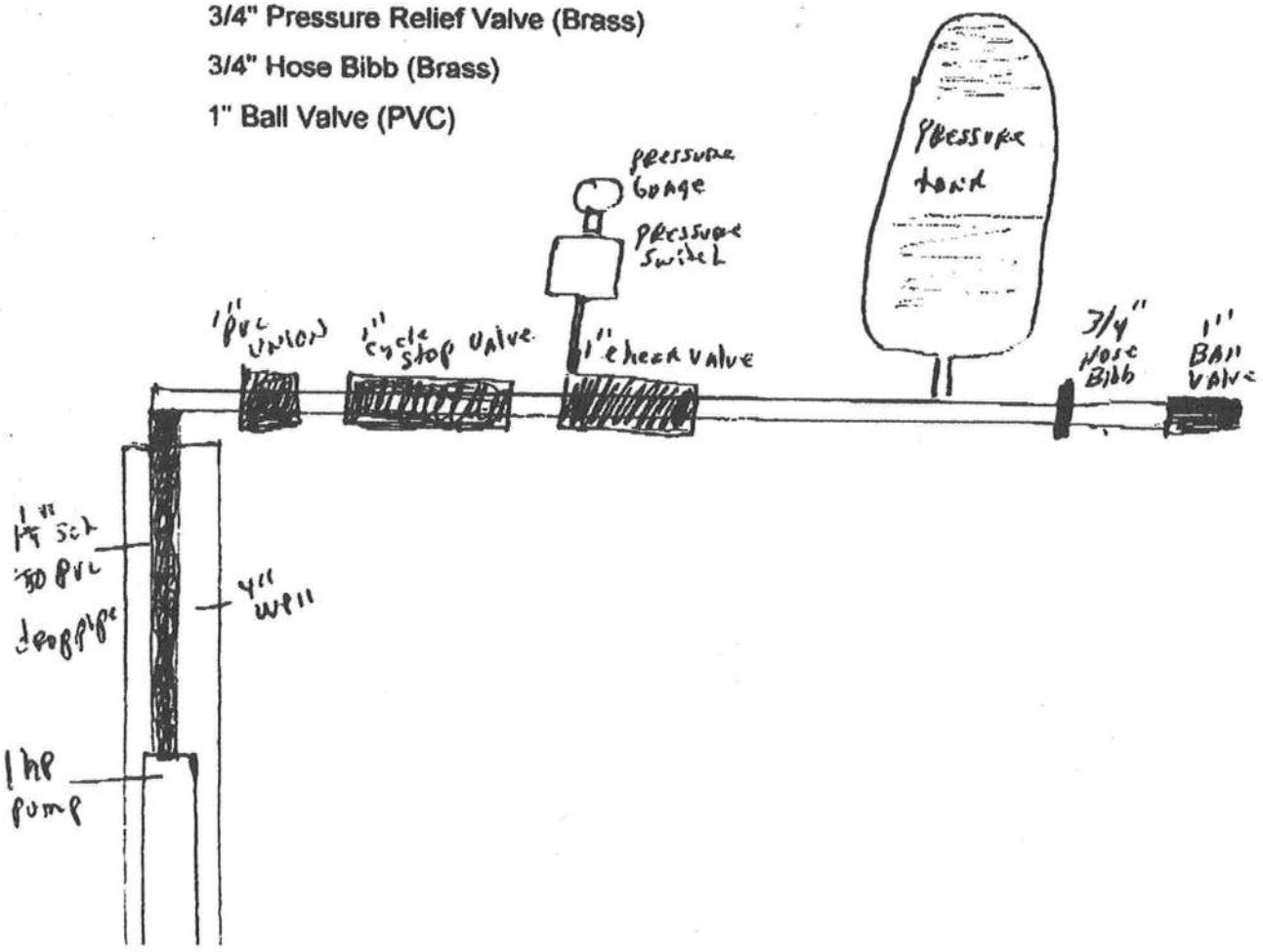
1" Union (PVC)

1" Check Valve (Brass)

3/4" Pressure Relief Valve (Brass)

3/4" Hose Bibb (Brass)

1" Ball Valve (PVC)



ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE SCORE* = 87.4

The higher the score, the more efficient the home.

JEFF AND GIGI TYRE, 5813 NW Lake Jeffery Rd, Lake City, Fl, 32055-

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	4	
5.	Is this a worst case?	Yes	
6.	Conditioned floor area (ft²)	2497 ft²	
7.	Glass type[1] and area: (Label reqd. by 13-104.4.5 if not default)		
	a. U-factor: (or Single or Double DEFAULT)	7a. (Dble Default) 177.0 ft²	
	b. SHGC: (or Clear or Tint DEFAULT)	7b. (Clear) 177.0 ft²	
8.	Floor types		
	a. Stem Wall	R=0.0, 2497.0ft²	
	b. N/A		
	c. N/A		
9.	Wall types		
	a. Concrete, Int Insul, Exterior	R=5.0, 1365.0 ft²	
	b. N/A		
	c. N/A		
	d. N/A		
	e. N/A		
10.	Ceiling types		
	a. Under Attic	R=30.0, 2497.0 ft²	
	b. N/A		
	c. N/A		
11.	Ducts		
	a. Sup: Unc. Ret: Unc. AH: Interior	Sup. R=6.0, 129.0 ft	
	b. N/A		
12.	Cooling systems		
	a. Central Unit	Cap: 48.0 kBtu/hr	
		SEER: 13.00	
	b. N/A		
	c. N/A		
13.	Heating systems		
	a. Electric Heat Pump/Package	Cap: 48.0 kBtu/hr	
		HSPF: 8.30	
	b. N/A		
	c. N/A		
14.	Hot water systems		
	a. Electric Resistance	Cap: 40.0 gallons	
		EF: 0.92	
	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)	CF,	

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: 9-21-08

Address of New Home: 5813 NW Lake Jeffery RD City/FL Zip: Lake City

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.

17270

Inst:200812017730 Date:9/26/2008 Time:2:54 PM
DC,P.DeWitt Cason,Columbia County Page 1 of 2 B:1159 P:289

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

NOTICE OF COMMENCEMENT

TO WHOM IT MAY CONCERN:

The undersigned hereby give notice that improvements will be made to certain real property and in accordance with Chapter 713, Florida Statues, the following is provided in this Notice of Commencement:

1. Description of Property: See Exhibit "A" attached hereto and by this reference made a part thereof
2. General Description of Improvement: Construction of Dwelling
3. Owner Information:
   a. Name and Address: Jeffrey R. Tyre and Gigi F. Tyre, 708 NW Brady Circle, Lake City, FL 32055
   b. Interest in property: Fee Simple
   c. Name and address of fee simple title holder (if other than Owner): NONE
4. Contractor (name and address): House Craft Homes LLC, 12523 Highway 441, Alachua, FL 32615
5. Surety:
   a. Name and Address: N/A
   b. Amount of Bond: N/A
6. LENDER: First Federal Savings Bank of Florida
   4705 West US Highway 90
   PO Box 2029
   Lake City, FL 32056
7. Persons within the State of Florida designated by Owner upon whom notices of other documents may be served as provided in Section 713.13(1)(a)7., Florida Statutes: NONE
8. In addition to himself, Owner designates PAULA HACKER, of FIRST FEDERAL SAVINGS BANK OF FLORIDA at 4705 WEST US HIGHWAY 90 / PO BOX 2029, LAKE CITY, FL 32056, 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).

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 Diana Fogle Deputy Clerk
Date 09-25-2008

CLERK CIRCUIT COURT COLUMBIA COUNTY, FLORIDA

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART 1 SECTION 713. 13, FLORIDA STATUTES AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU NEED TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.
***Owner is used for singular or plural as context requires.**

Signed, sealed and delivered in the presence:

Donna Cox
WITNESS DONNA COX

Traci Landry
WITNESS Traci Landry

Jeffrey R. Tyre

Gigi F. Tyre

STATE OF FLORIDA
COUNTY OF COLUMBIA

Before me, personally appeared Jeffrey R. Tyre, and his wife, Gigi F. Tyre, to me known to be the person(s) described in and who executed the foregoing instrument, and they acknowledged to and before me that they executed said instrument for the purpose therein expressed.

Witness my hand and official seal this 24th day of September, 2008.

(SEAL)

DONNA COX
Notary Public, State of Florida
My Comm. Expires Jan. 18, 2010
Comm. No. DD 597691
Bonded Thru Notary Public Underwriters

Donna Cox
NOTARY PUBLIC

My Commission Expires:

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

Signature of Natural Person Signing Above

Tyre
HVAC Load Calculations

for

House Craft Homes
12523 N.W US HWY 441
Alachua Florida 32615

Elite Software

RHVAC RESIDENTIAL HVAC LOADS

Prepared By:

Chuck Fischer
North Central Florida Air Conditioning I
P. O. Box 700
High Springs Fl 32655-0700
(386) 454-4767
Saturday, September 13, 2008

Project Report

General Project Information

Project Title:	Tyre
Designed By:	Chuck Fischer
Project Date:	August 19th 2008
Client Name:	House Craft Homes
Client Address:	12523 N.W US HWY 441
Client City:	Alachua Florida 32615
Client Phone:	386-465-5323
Client Fax:	386-462-1509
Company Name:	North Central Florida Air Conditioning I
Company Representative:	Chuck Fischer
Company Address:	P. O. Box 700
Company City:	High Springs Fl 32655-0700
Company Phone:	(386) 454-4767
Company Fax:	(386) 454-4854
Company Comment:	heat load for addition

Design Data

Reference City:		Gainesville, Florida
Daily Temperature Range:		Medium
Latitude:	29	Degrees
Elevation:	152	ft.
Altitude Factor:	0.995	
Elevation Sensible Adj. Factor:	1.000	
Elevation Total Adj. Factor:	1.000	
Elevation Heating Adj. Factor:	1.000	
Elevation Heating Adj. Factor:	1.000	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	31	0	50	72	38
Summer:	93	77	50	75	50

Check Figures

Total Building Supply CFM:	1,845	CFM Per Square ft.:	0.739
Square ft. of Room Area:	2,497	Square ft. Per Ton:	572
Volume (ft³) of Cond. Space:	25,350	Air Turnover Rate (per hour):	4.4

Building Loads

Total Heating Required With Outside Air:	54,559 Btuh	54.559	MBH
Total Sensible Gain:	40,369 Btuh	85	%
Total Latent Gain:	7,332 Btuh	15	%
Total Cooling Required With Outside Air:	47,701 Btuh	3.98	Tons (Based On Sensible + Latent)
		4.37	Tons (Based On 77% Sensible Capacity)

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

Load Preview Report

Scope	Area	Sens Gain	Lat Gain	Net Gain	Sens Loss	Win CFM	Sum CFM	Sys CFM	Duct Size
Building: 3.98 Net Tons, 4.37 Recommended Tons, 572 ft.²/Ton, 54.56 MBH Heating									
Building	2,497	40,369	7,332	47,701	54,559	712	1,845	1,845	
System 1: 3.98 Net Tons, 4.37 Recommended Tons, 572 ft.²/Ton, 54.56 MBH Heating									
System 1	2,497	40,369	7,332	47,701	54,559	712	1,845	1,845	19x18
AED Excursion		106		106					
Zone 1	2,497	40,263	7,332	47,595	54,559	712	1,845	1,845	
1-Master Bedroom	270	4,495	1,329	5,824	8,131	106	206	206	2-6
2-His W.i.c	38	810	158	968	1,322	17	37	37	1-4
3-Her W.i.c	37	566	0	566	125	2	26	26	1-3
4-Master Bath	144	1,936	254	2,190	2,558	33	89	89	1-6
5-Laundry Room	150	2,447	660	3,107	5,664	74	112	112	1-6
6-Nook	86	2,540	254	2,794	2,959	39	116	116	1-6
7-Kitchen	159	3,352	230	3,582	318	4	154	154	1-7
8-Dining Room	186	2,300	288	2,588	3,112	41	105	105	1-6
9-Foyer	96	1,553	148	1,701	1,523	20	71	71	1-5
10-Great Room	484	5,044	601	5,645	6,053	79	231	231	2-6
11-Study	132	3,847	702	4,549	4,315	56	176	176	1-8
12-Bedroom 4	189	3,161	896	4,057	5,977	78	145	145	1-7
13-Bath 2	67	853	148	1,001	1,312	17	39	39	1-4
14-Bedroom 3	192	2,634	547	3,181	3,216	42	121	121	1-7
15-Bedroom 2	195	3,367	969	4,336	6,588	86	154	154	1-7
16-Bath 3	45	1,298	148	1,446	1,277	17	59	59	1-4
17-Hall	27	55	0	55	109	1	3	3	1-1

Total Building Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	105	2,800	0	2,942	2,942
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	11	293	0	253	253
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.32, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	20	534	0	462	462
10B-b: Glazing-French door, double pane clear glass, metal frame with break, ground reflectance = 0.23	35.4	1,088	0	1,676	1,676
1D-cm-o: Glazing-Double pane, operable window, clear, metal frame no break, ground reflectance = 0.32, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	22	784	0	586	586
11P: Door-Polyurethane Core	40.8	486	0	344	344
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish	1498.8	7,682	0	3,429	3,429
16B-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, Dark Asphalt Shingles or Dark Metal, Tar and Gravel or Membrane, R-30 insulation	2497.3	3,276	0	4,235	4,235
22A-ph: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy moist soil	206	11,469	0	0	0
Subtotals for structure:		28,412	0	13,927	13,927
People:	7		1,610	2,100	3,710
Equipment:			0	1,926	1,926
Lighting:	3600			12,276	12,276
Ductwork:		9,093	0	6,709	6,709
Infiltration: Winter CFM: 380, Summer CFM: 169		17,054	5,722	3,325	9,047
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
AED Excursion:		0	0	106	106
Total Building Load Totals:		54,559	7,332	40,369	47,701

Check Figures

Total Building Supply CFM:	1,845	CFM Per Square ft.:	0.739
Square ft. of Room Area:	2,497	Square ft. Per Ton:	572
Volume (ft³) of Cond. Space:	25,350	Air Turnover Rate (per hour):	4.4

Building Loads

Total Heating Required With Outside Air:	54,559 Btuh	54.559 MBH	
Total Sensible Gain:	40,369 Btuh	85 %	
Total Latent Gain:	7,332 Btuh	15 %	
Total Cooling Required With Outside Air:	47,701 Btuh	3.98 Tons (Based On Sensible + Latent)	
		4.37 Tons (Based On 77% Sensible Capacity)	

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1 Main Floor Summary Loads

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	105	2,800	0	2,942	2,942
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	11	293	0	253	253
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.32, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	20	534	0	462	462
10B-b: Glazing-French door, double pane clear glass, metal frame with break, ground reflectance = 0.23	35.4	1,088	0	1,676	1,676
1D-cm-o: Glazing-Double pane, operable window, clear, metal frame no break, ground reflectance = 0.32, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	22	784	0	586	586
11P: Door-Polyurethane Core	40.8	486	0	344	344
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish	1498.8	7,682	0	3,429	3,429
16B-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, Dark Asphalt Shingles or Dark Metal, Tar and Gravel or Membrane, R-30 insulation	2497.3	3,276	0	4,235	4,235
22A-ph: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy moist soil	206	11,469	0	0	0
Subtotals for structure:		28,412	0	13,927	13,927
People:	7		1,610	2,100	3,710
Equipment:			0	1,926	1,926
Lighting:	3600			12,276	12,276
Ductwork:		9,093	0	6,709	6,709
Infiltration: Winter CFM: 380, Summer CFM: 169		17,054	5,722	3,325	9,047
Ventilation: Winter CFM: 0, Summer CFM: 0		0	0	0	0
AED Excursion:		0	0	106	106
System 1 Main Floor Load Totals:		54,559	7,332	40,369	47,701

Check Figures

Supply CFM:	1,845	CFM Per Square ft.:	0.739
Square ft. of Room Area:	2,497	Square ft. Per Ton:	572
Volume (ft³) of Cond. Space:	25,350	Air Turnover Rate (per hour):	4.4

System Loads

Total Heating Required With Outside Air:	54,559 Btuh	54.559 MBH	
Total Sensible Gain:	40,369 Btuh	85 %	
Total Latent Gain:	7,332 Btuh	15 %	
Total Cooling Required With Outside Air:	47,701 Btuh	3.98 Tons (Based On Sensible + Latent)	
		4.37 Tons (Based On 77% Sensible Capacity)	

Notes

Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1, Zone 1 Summary Loads (Average Load Procedure for Rooms)

Component Description	Area Quan	Sen Loss	Lat Gain	Sen Gain	Total Gain
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	105	2,800	0	2,942	2,942
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.23, outdoor insect screen with 50% coverage, light color blinds at 45° with 25% coverage, external shade screen coefficient of 0.45 and 50% coverage	11	293	0	253	253
1D-cb-o: Glazing-Double pane, operable window, clear, metal frame with break, ground reflectance = 0.32, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	20	534	0	462	462
10B-b: Glazing-French door, double pane clear glass, metal frame with break, ground reflectance = 0.23	35.4	1,088	0	1,676	1,676
1D-cm-o: Glazing-Double pane, operable window, clear, metal frame no break, ground reflectance = 0.32, outdoor insect screen with 50% coverage, external shade screen coefficient of 0.45 and 50% coverage	22	784	0	586	586
11P: Door-Polyurethane Core	40.8	486	0	344	344
13A-5ocs: Wall-Block, board insulation only, R-5 board insulation, open core, siding finish	1498.8	7,682	0	3,429	3,429
16B-30: Roof/Ceiling-Under attic or knee wall, Vented Attic, No Radiant Barrier, Dark Asphalt Shingles or Dark Metal, Tar and Gravel or Membrane, R-30 insulation	2497.3	3,276	0	4,235	4,235
22A-ph: Floor-Slab on grade, No edge insulation, no insulation below floor, any floor cover, passive, heavy moist soil	206	11,469	0	0	0
Subtotals for structure:		28,412	0	13,927	13,927
People:	7		1,610	2,100	3,710
Equipment:			0	1,926	1,926
Lighting:	3600			12,276	12,276
Ductwork:		9,093	0	6,709	6,709
Infiltration: Winter CFM: 380, Summer CFM: 169		17,054	5,722	3,325	9,047
System 1, Zone 1 Load Totals:		54,559	7,332	40,263	47,595

Check Figures			
Supply CFM:	1,845	CFM Per Square ft.:	0.739
Square ft. of Room Area:	2,497	Square ft. Per Ton:	573
Volume (ft³) of Cond. Space:	25,350	Air Turnover Rate (per hour):	4.4

Zone Loads			
Total Heating Required:	54,559 Btuh	54.559 MBH	
Total Sensible Gain:	40,263 Btuh	85 %	
Total Latent Gain:	7,332 Btuh	15 %	
Total Cooling Required:	47,595 Btuh	3.97 Tons (Based On Sensible + Latent)	
		4.36 Tons (Based On 77% Sensible Capacity)	

Notes
Calculations are based on 8th edition of ACCA Manual J.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads.

System 1 Room Load Summary

No	Room Name	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Run Duct Vel	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Air Sys CFM
---Zone 1---										
1	Master Bedroom	270	8,131	106	2-6	525	4,495	1,329	206	206
2	His W.i.c	38	1,322	17	1-4	425	810	158	37	37
3	Her W.i.c	37	125	2	1-3	529	566	0	26	26
4	Master Bath	144	2,558	33	1-6	452	1,936	254	89	89
5	Laundry Room	150	5,664	74	1-6	571	2,447	660	112	112
6	Nook	86	2,959	39	1-6	593	2,540	254	116	116
7	Kitchen	159	318	4	1-7	575	3,352	230	154	154
8	Dining Room	186	3,112	41	1-6	537	2,300	288	105	105
9	Foyer	96	1,523	20	1-5	522	1,553	148	71	71
10	Great Room	484	6,053	79	2-6	589	5,044	601	231	231
11	Study	132	4,315	56	1-8	505	3,847	702	176	176
12	Bedroom 4	189	5,977	78	1-7	542	3,161	896	145	145
13	Bath 2	67	1,312	17	1-4	448	853	148	39	39
14	Bedroom 3	192	3,216	42	1-7	452	2,634	547	121	121
15	Bedroom 2	195	6,588	86	1-7	577	3,367	969	154	154
16	Bath 3	45	1,277	17	1-4	682	1,298	148	59	59
17	Hall	27	109	1	1-1	462	55	0	3	3
	AED Excursion						106			
	System 1 total	2,497	54,559	712			40,369	7,332	1,845	1,845

System 1 Main Trunk Size:	19x18	in.
Velocity:	846	ft./min
Loss per 100 ft.:	0.066	in.wg

Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	3.98	85% / 15%	40,369	7,332	47,701
Recommended:	4.37	77% / 23%	40,369	12,058	52,427
Actual:	4.63	72% / 28%	40,000	15,500	55,500

Equipment Data

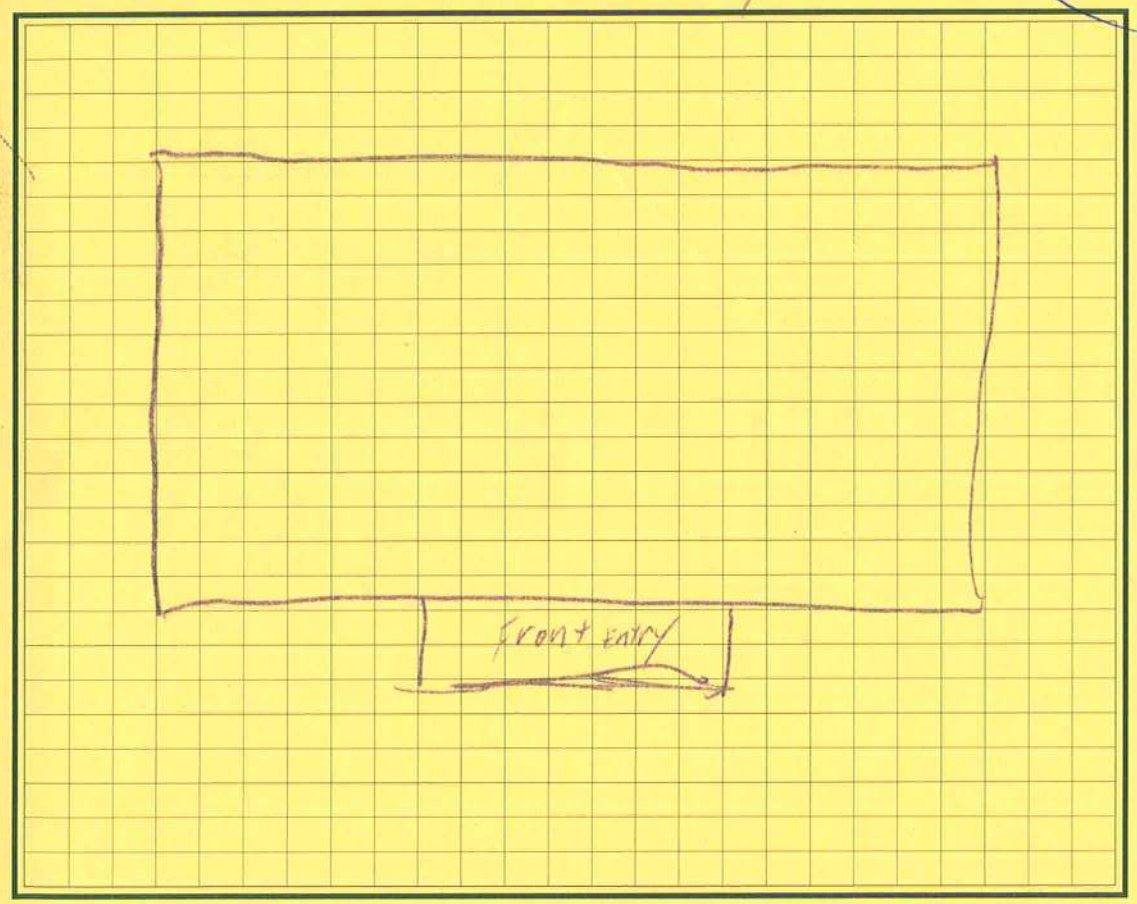
	Heating System	Cooling System
Type:	air source heat pump	Air Source Heat Pump
Model:	GSH130601+ARUF486016+HKR-10	GSH130601+ARUF486016
Brand:	Goodman	Goodman
Efficiency:	8.5 HSPF	13 seer
Sound:	0	
Capacity:	55.500	55.500
Sensible Capacity:	n/a	40,000 Btuh
Latent Capacity:	n/a	15,500 Btuh

Turner Pest Control
What's Bugging You?

Jacksonville, Florida Main Office
480 Edgewood Avenue, South • Jacksonville, Florida 32205 • **904-355-5300** • 904-353-1488 (Facsimile)
St. Marys, Ga. – 912-576-1300 • Daytona Beach, Fla. – 386-788-8303 • Melbourne, Fla. – 321-951-3325
Ocala, Fla. 352-351-4386 • Port St. Lucie, Fla. – 772-621-7905 • Tampa, Fla. – 813-681-6381
Toll Free: 800-225-5305 • www.turnerpest.com

PRE-TREAT REQUEST
(Soil Treatment)

Date: 10/20/08	Builder: Housecraft Home	Price:
Contact:	Nextel:	Cell:
[X] RESIDENTIAL	[ ] COMMERCIAL	Plan#
Subdivision: Lake City	Project:	
Lot#	Building#	
Address: 5813 NW. Lake Jeffery Rd		Permit # 27401



Date Ready:

Date
Siding / Insulation

Type of Construction:
- [ ] Basement
- [ ] Crawl
- [X] Slab
  - ( ) Mono
  - (X) Floating
  - ( ) Supported
  - ( ) Other

Foundation Walls:
- [ ] Poured
- [X] Block
- [ ] Other

Date Completed:

TERMITICIDE USED: Premise Pro
SQUARE FOOTAGE: 2637 LINEAR FOOTAGE: 184
CONCENTRATION% .12% VOLUME:
TOTAL GALLONS OF SOLUTIONS APPLIED: 188
APPLICATION TYPE: Pressure Spray
TYPE OF TREATMENT: Pretreat

Comments:

Technician Signature: [signature]

Reorder from Rush To Excellence Printing
904-367-0100 Form No. 7427 Rev. 11-07

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 09-3S-16-02045-104 **Building permit No.** 000027401

Use Classification SFD,UTILITY **Fire:** 51.36

Permit Holder HOUSE CRAFT HOMES **Waste:** 134.00

Owner of Building JEFF TYRE **Total:** 185.36

Location: 5813 NW LAKE JEFFERY RD., LAKE CITY, FL

Date: 02/20/2009

Harry Dicks

Building Inspector

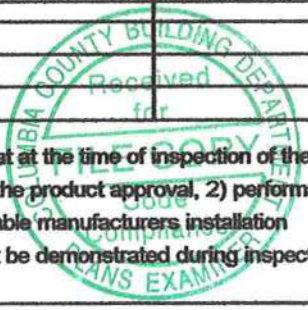
POST IN A CONSPICUOUS PLACE
(Business Places Only)

Permit # _____
User ID _____

PRODUCT APPROVAL SPECIFICATION SHEET

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

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)	X
1. EXTERIOR DOORS				
A. SWINGING	Masonite	Entry Door	FL. 4940.4	
B. SLIDING	HR Danvid	502 SGD	FI 6396.5	
C. SECTIONAL/ROLL UP	Overhead Door	Garage door	FL 674	
D. OTHER				
2. WINDOWS				
A. SINGLE/DOUBLE HUNG	Kinco	M50 SH Alum. Window	FI. 123	
B. HORIZONTAL SLIDER				
C. CASEMENT				
D. FIXED	Kinco	M50 PC Window	FI. 125	
E. MULLION	HR	340	FL 5872	
F. SKYLIGHTS				
G. OTHER / GLASS BLOCK	Hy-Lite	Glass Block window	FL 1956.3	
3. PANEL WALL				
A. SIDING				
B. SOFFITS	Kaycan	Aluminum soffits	FL 1146.5	
C. STOREFRONTS				
D. GLASS BLOCK				
F. OTHER				
4. ROOFING PRODUCTS				
A. ASPHALT SHINGLES	Tamko	Heritage 38-R	FL. 7154	
B. NON-STRUCT METAL				
C. ROOFING TILES				
D. SINGLE PLY ROOF				
E. OTHER				
5. STRUCT COMPONENTS				
A. WOOD CONNECTORS				
B. WOOD ANCHORS	Simpson	Truss anchors	1901.17 1901.45	
C. TRUSS PLATES			1901.25 1901.21	
D. INSULATION FORMS				
E. LINTELS	Cenemt Precast	Concrete lintels	FL. 4569	
F. TRUSSES	Thomas E. Miller	engineer	PE 56877	
6. NEW EXTERIOR ENVELOPE PRODUCTS				
A.				



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

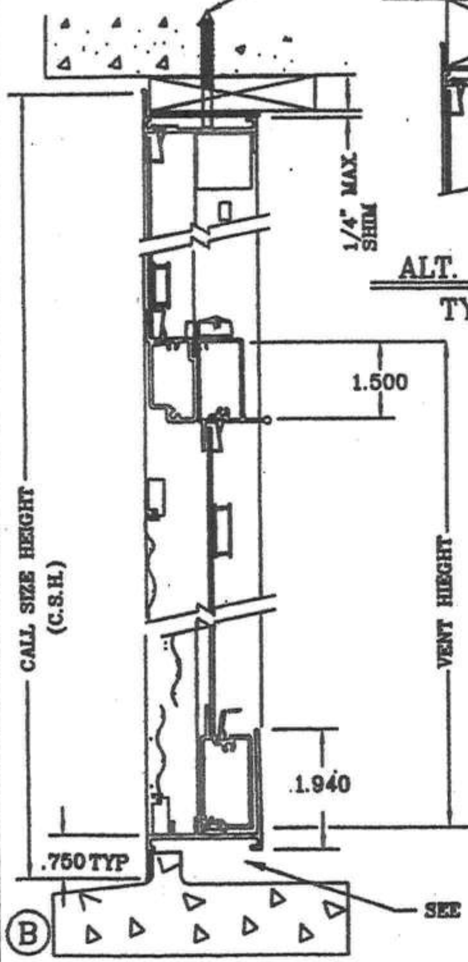
_____

_____

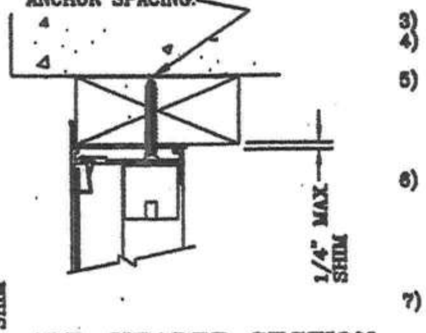
_____ _____

APPLICANT SIGNATURE DATE

WINDOWS, DOORS, AND MULL BARS INFORMATION



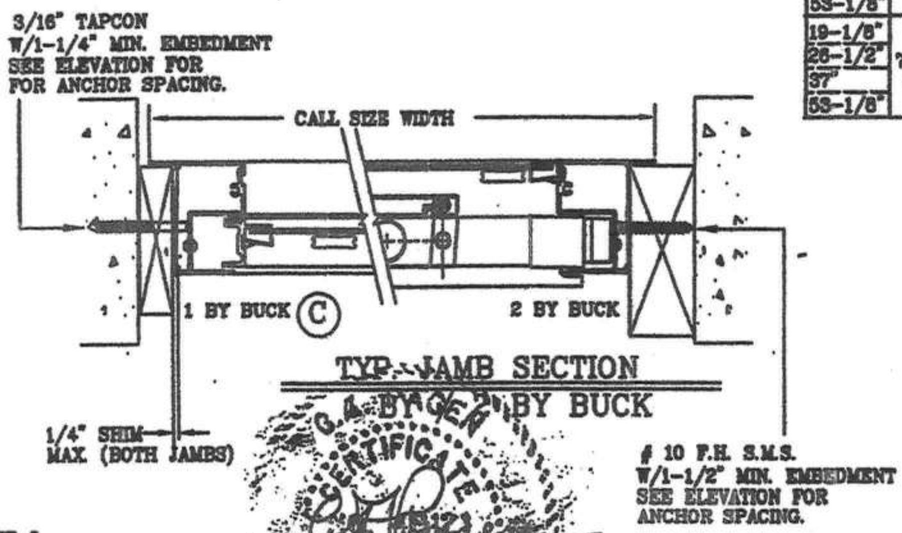
HEADER AND SILL SECTION
TYP. 1 BY BUCK



ALT. HEADER SECTION
TYP. 2 BY BUCK

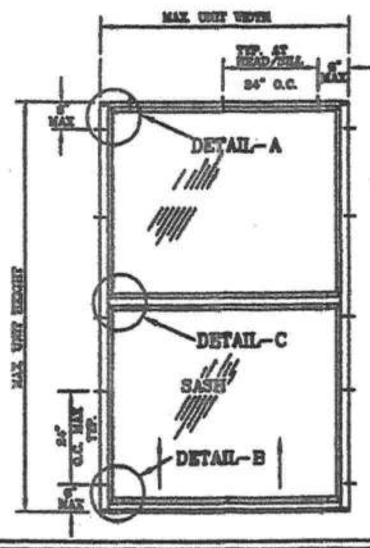
NOTES:
1) SHIM AS REQUIRED, MAX. SHIM STACK 1/4".
2) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063-T5 OR T6 WITH TYPICAL WALL THICKNESS OF 0.62".
3) USE HIGH QUALITY CAULK BEHIND WINDOW FLANGE.
4) GLASS THICKNESS BASED ON TABLE E1300 GLASS CHARTS, AND MAY VARY DEPENDING ON SIZE.
5) THE RESPONSIBILITY FOR SELECTION OF NORANDEX PRODUCTS TO MEET ANY APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES OR OTHER SAFETY REQUIREMENTS REST SOLELY WITH THE ARCHITECT, BUILDING OWNER OR CONTRACTOR.
6) A PRESSURE TREATED WOODEN BUCK OR MARBLE SILL SHALL BE ADDED UNDER THE PRODUCT TO FULLY SUPPORT UNIT. THIS SUPPORT SHALL BE FIRMLY ATTACHED INTO MASONARY AND SUPPORT THE PRODUCT OVER ITS FULL LENGTH (SUPPLIED BY OTHERS).
7) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

WINDOW DIMENSIONS		FASTENER SCHEDULE	
WIDTH (INCHES)	HEIGHT (INCHES)	NO. ANCHORS HEAD 35 AND 45 (PSF) (PSF)	NO. ANCHORS JAMB 35 AND 45 (PSF) (PSF)
19-1/8"	26"	2	2
26-1/2"		2	2
37"		2	2
53-1/8"		3	2
19-1/8"	38-1/4"	2	3
26-1/2"		2	3
37"		2	3
53-1/8"		3	3
19-1/8"	50-5/8"	2	3
26-1/2"		2	3
37"		2	3
53-1/8"		3	3
19-1/8"	63"	2	3
26-1/2"		2	3
37"		2	3
53-1/8"		3	3
19-1/8"	76-3/4"	2	4
26-1/2"		2	4
37"		2	4
53-1/8"		3	4



TYP. JAMB SECTION
TYP. 2 BY BUCK

CHARLES A. PAGEN, P.E.
FL. REG. ENG.
DATE



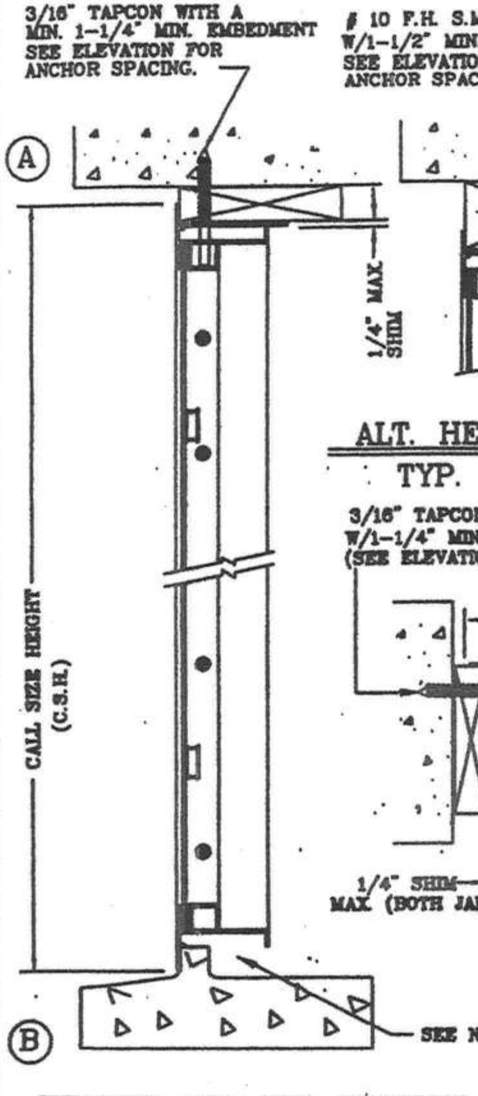
437 SINGLE HUNG INSTALLATION DETAIL AND FASTENER SCHEDULE

SERIES: 437
ALUMINUM SINGLE HUNG

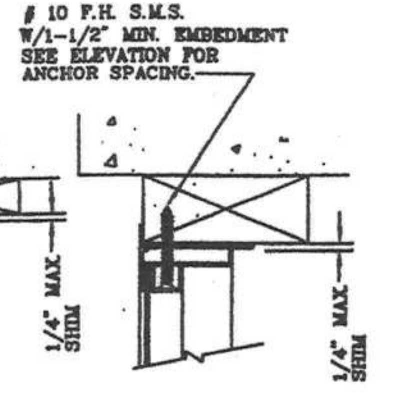
NORANDEX
4606 30th STREET WEST
BRADENTON, FL 34207
PHONE: (941) 758-1691

NO.	DATE	REVISIONS DESCRIPTION

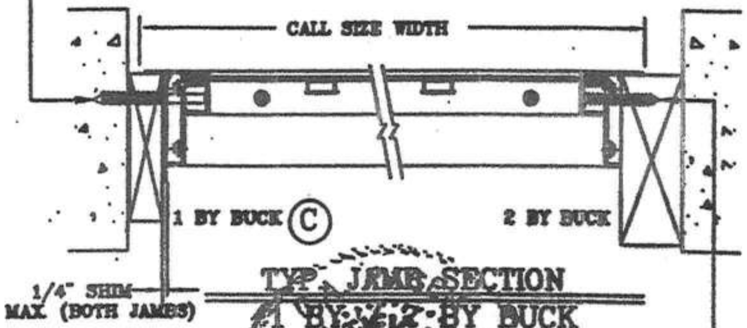
DATE: 12/28/01
SCALE: N.T.S.
DWG. BY: J.R.M.
CHK. BY: RLF
DWG. NO.: FBC-009



HEADER AND SILL SECTION
TYP. 1 BY BUCK



ALT. HEADER SECTION
TYP. 2 BY BUCK

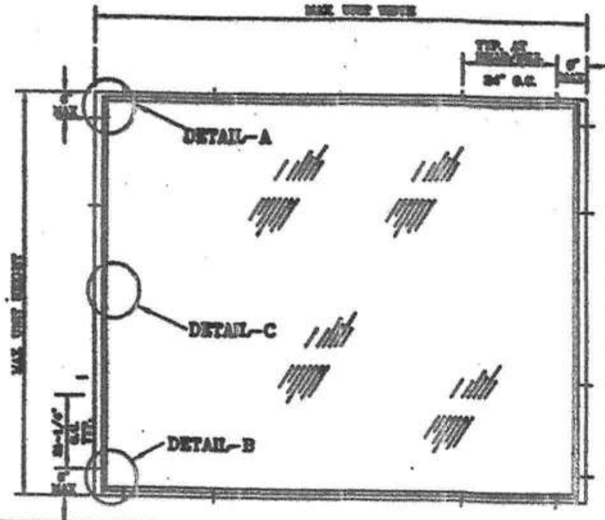


TYP. JAMB SECTION
1 BY & 2 BY BUCK

CERTIFICATE
CHARLES A. PAGEN
FL. REG.

NOTES:
1) SHIM AS REQUIRED, MAX. SHIM STACK 1/4".
2) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063-T5 OR T6 WITH TYPICAL WALL THICKNESS OF 0.62".
3) USE HIGH QUALITY CAULK BEHIND WINDOW FLANGE.
4) GLASS THICKNESS BASED ON TABLE E1300 GLASS CHARTS, AND MAY VARY DEPENDING ON SIZE.
5) THE RESPONSIBILITY FOR SELECTION OF NORANDEX PRODUCTS TO MEET ANY APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES OR OTHER SAFETY REQUIREMENTS REST SOLELY WITH THE ARCHITECT, BUILDING OWNER OR CONTRACTOR.
6) A PRESSURE TREATED WOODEN BUCK OR MARBLE SILL SHALL BE ADDED UNDER THE PRODUCT TO FULLY SUPPORT UNIT. THIS SUPPORT SHALL BE FIRMLY ATTACHED INTO MASONARY AND SUPPORT THE PRODUCT OVER ITS FULL LENGTH (SUPPLIED BY OTHERS).
7) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.
8) NOTE * INDICATES THAT EQUAL FASTENERS AT HEAD AND SILL ARE REQUIRED.

WINDOW DIMENSIONS		FASTENER SCHEDULE			
		NO. ANCHORS HEAD/SILL SEE NOTE 8		NO. ANCHORS JAMB	
WIDTH (INCHES)	HEIGHT (INCHES)	35 (PSF)	45-60 (PSF)	35 (PSF)	45-60 (PSF)
19-1/8"	26"	2	2*	2	2
26-1/2"		2	2*	2	2
37"		2	3*	2	2
53-1/8"		3	3*	2	2
19-1/8"	38-1/4"	2	2*	2	3
26-1/2"		2	2*	2	3
37"		2	3*	2	3
53-1/8"		3	4*	2	3
19-1/8"	50-5/8"	2	2*	3	3
26-1/2"		2	2*	3	3
37"		2	3*	3	3
53-1/8"		3	4*	3	3
19-1/8"	63"	2	2*	3	4
26-1/2"		2	2*	3	4
37"		2	3*	3	4
53-1/8"		3	4*	3	4
19-1/8"	76-3/4"	2	2*	3	4
26-1/2"		2	2*	3	4
37"		2	3*	3	4
53-1/8"		3	4*	3	4



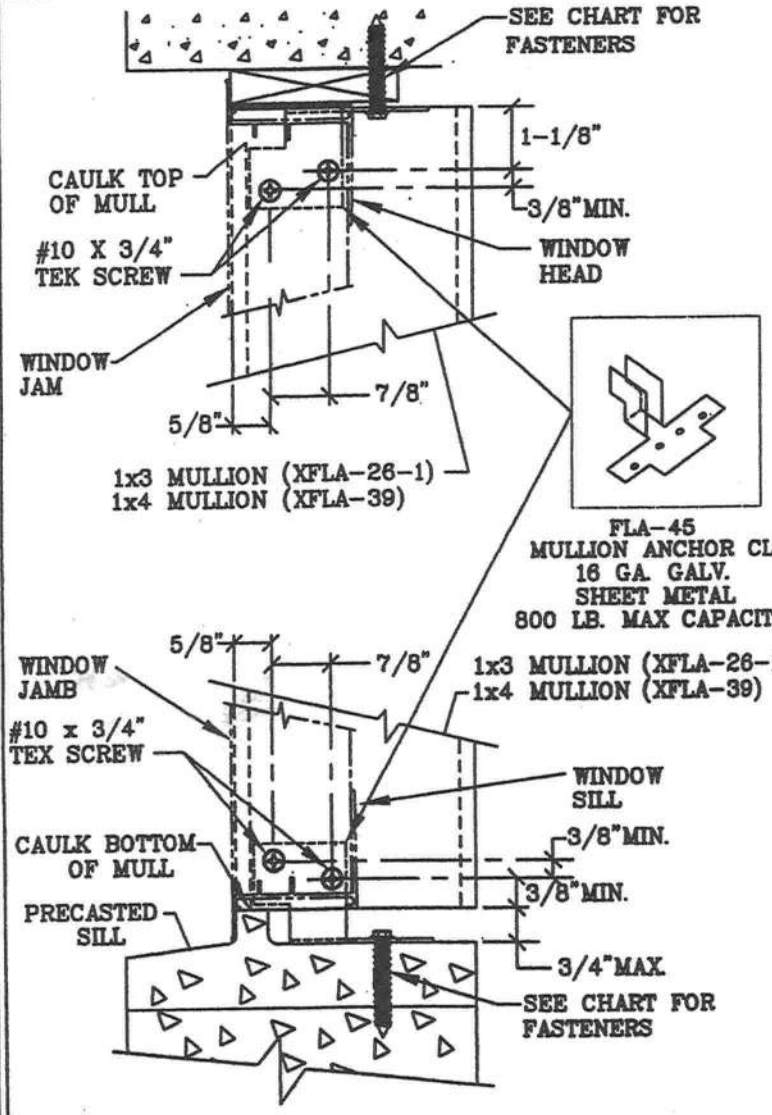
437 FIXED WINDOW INSTALLATION DETAIL AND FASTENER SCHEDULE

SERIES: 437
ALUMINUM FIXED WINDOW

NORANDEX
4906 30th STREET WEST
BRADENTON, FL 34207
PHONE: (941) 756-1691

NO.	DATE	REVISIONS DESCRIPTION

DATE: 12/22/91
SCALE: N.T.S.
DWG. BY: J.R.L.
CHK. BY: RLK
DWG. NO.: F30-031



VERTICAL MULLION SCHEDULE

SINGLE UNIT		TYPE OF MULLION	TYPE OF CLIP	NUMBER AND TYPE OF FASTENERS
WINDOW WIDTH INCH	WINDOW HEIGHT INCH	DESIGN PRESSURE 35 PSF	FLA-45	
19-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
26-1/2"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
37"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(4) 1/4ø" x 1-1/2" TAPCONS
53-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS

NOTES:
1) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063 T6, OR 6063 T5.
2) WHEN THERE IS ONE TAPCON (1/4ø" X 1-1/2") ON EACH ANGLE LEG, THE TAPCON SHALL BE PLACED ON MULLION CLIP CENTERLINE.
3) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

VERTICAL MULLION
FLA-45 ANCHOR CLIP
INSTALLATION DETAIL AND
FASTENER SCHEDULE

SERIES: MULLION
ALUMINUM SINGLE HUNG

NORANDEX
4606 60th STREET WEST
BRADENTON, FL. 34207
PHONE: (941) 792-1691

NO.	DATE	REVISIONS DESCRIPTION

3/11/02
SCALE: N.T.S.
DWG. BY: RAF
CHK. BY: RLK
DWG. NO.: FRC-629

Masonite®

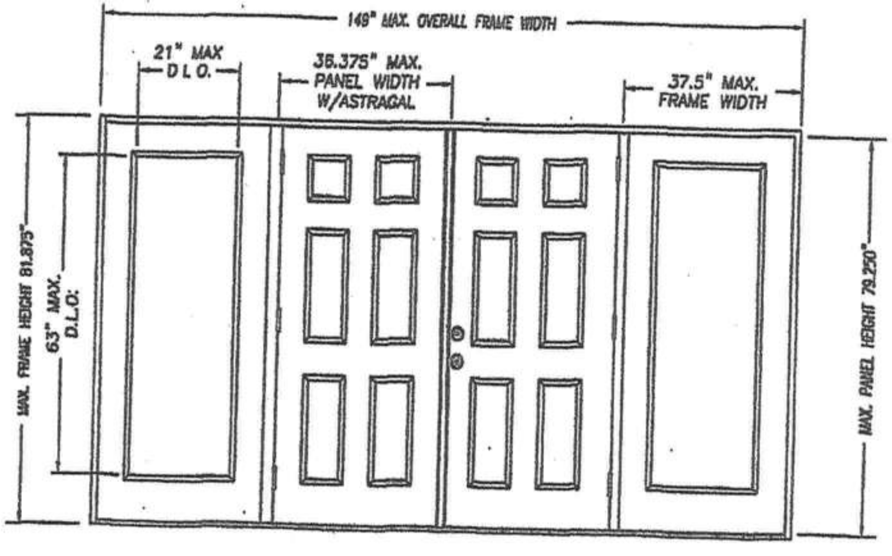
SIDE-HINGED METAL-EDGE STEEL DOOR UNIT
6'-8" DOUBLE DOOR WITH / WITHOUT SIDELITES

GENERAL NOTES

1. EVALUATED FOR USE IN LOCATIONS ADHERING TO THE FLORIDA BUILDING CODE AND WHERE PRESSURE REQUIREMENTS AS DETERMINED BY ASCE 7, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, DOES NOT EXCEED THE DESIGN PRESSURES LISTED.
2. HURRICANE PROTECTIVE SYSTEM (SHUTTERS) IS NOT REQUIRED ON OPAQUE PANELS, BUT IS REQUIRED ON GLAZED SIDELITES
3. POLYURETHANE CORE FLAME SPREAD INDEX OF 50 AND SMOKE DEVELOPED INDEX OF 60 PER ASTM E84.
4. PLASTICS TESTING OF LITE FRAME MATERIAL:

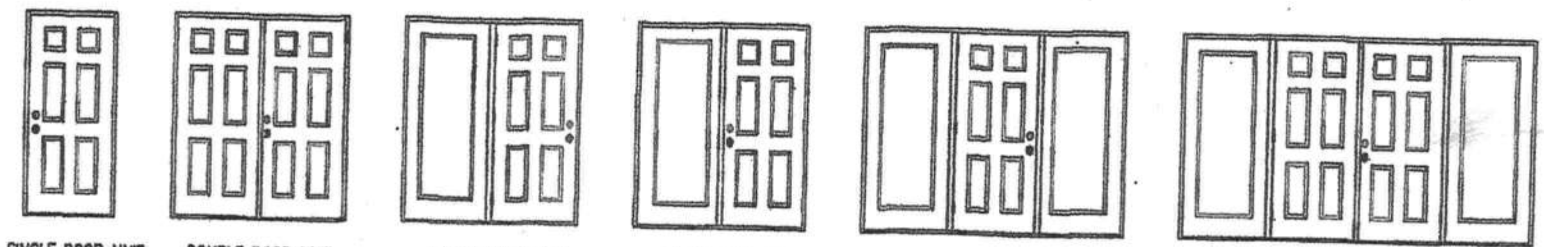
TEST DESCRIPTION	DESIGNATION	RESULT
SELF IGNITION TEMP	ASTM D1929	680 °F > 650 °F
RATE OF BURNING	ASTM D635	1.10 IN/MIN
SMOKE DENSITY	ASTM D2843	69.6%
TENSILE STRENGTH*	ASTM D638	-7.48% DIFF

* COMPARATIVE TENSILE STRENGTH AFTER WEATHERING 4500 HOURS XENON ARC METHOD 1



DOUBLE INSWING UNIT W/SIDELITES

Addendum to NAMI
Certification No.: NT006115
Reviewed By:
Date Reviewed: 8/12/05



SINGLE DOOR UNIT — DOUBLE DOOR UNIT — SINGLE DOOR UNIT WITH SIDELITE — SINGLE DOOR UNIT WITH SIDELITE — SINGLE DOOR UNIT W/SIDELITES — DOUBLE DOOR UNIT W/SIDELITES

TABLE OF CONTENTS

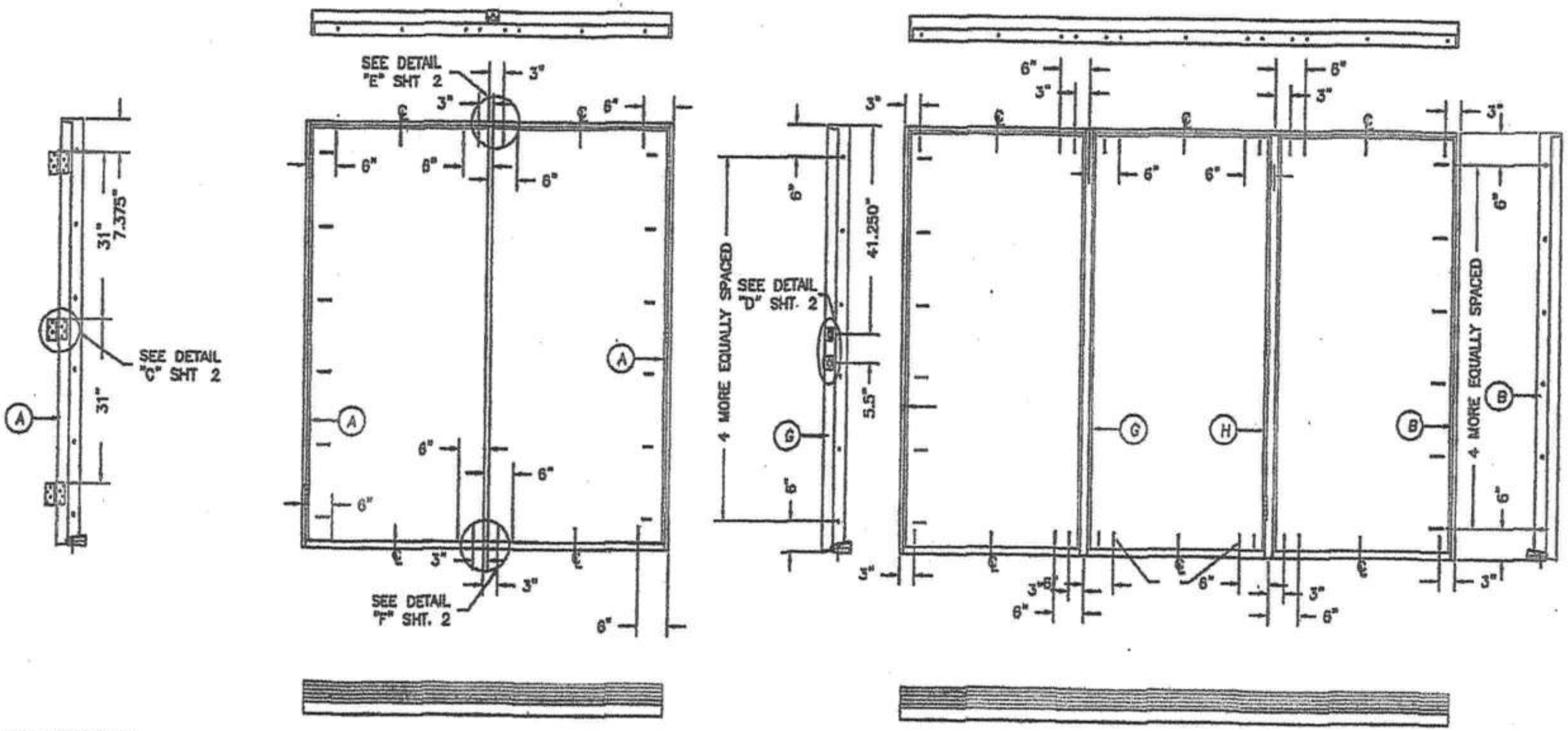
CONFIG	MAX WIDTH	DESIGN PRESSURE RATING INSWING	DESIGN PRESSURE RATING OUTSWING	WHERE WATER INFILTRATION PERFORMANCE IS REQUIRED TO BE 15% OF DESIGN PRESSURE INSWING	WHERE WATER INFILTRATION PERFORMANCE IS REQUIRED TO BE 15% OF DESIGN PRESSURE OUTSWING
X	37.5"	+76.0 / -76.0	+76.0 / -76.0	+19.0 / -19.0	+55.0 / -55.0
XX	74"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OX or XO	75"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OXO	112.5"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0
OXXO	149"	+55.0 / -55.0	+55.0 / -55.0	+19.0 / -19.0	+55.0 / -55.0

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'8" OPAQUE METAL-EDGE STEEL DOOR
PART OR ASSEMBLY: TYPICAL ELEVATIONS & GENERAL NOTES

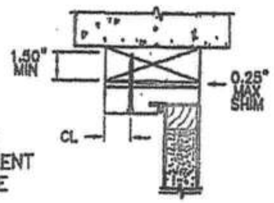
REVISIONS		
NO.	DATE	BY

DATE: 7/25/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0132-05
SHEET 1 OF 3



ATTACHMENT DETAIL

1. ANCHOR ANALYSIS FOR LOADING CONDITIONS PREPARED, SIGNED AND SEALED BY HAROLD E. RUPP, PE (FLORIDA #15935) WITH THE LOWEST (LEAST) FASTENER RATING FROM THE DIFFERENT FASTENERS BEING CONSIDERED FOR USE. JAMB, HEAD, AND THRESHOLD FASTENERS ANALYZED FOR THIS UNIT INCLUDE #10 WOOD SCREWS OR 3/16" TAPCONS. A PHYSICAL SHIM MUST BE PLACED IN SHIM SPACE AT EACH ANCHOR LOCATION.
2. THE WOOD SCREW SINGLE SHEAR DESIGN VALUES COME FROM ANSI/AF&PA NDA FOR SOUTHERN PINE LUMBER AND ACHEIVEMENT OF 1-1/2" MINIMUM EMBEDMENT. THE TAPCON MUST ACHIEVE MINIMUM EMBEDMENT OF 1-1/4".
3. WOOD BUCKS BY OTHERS MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO STRUCTURE.
4. MINIMUM DESIGN VALUE STRENGTH OF ANCHORS 171 LBS.



TYPICAL ANCHOR INSTALLATION

HARDWARE SCHEDULE

1.	KWIKSET OR SCHLEGE ANSI/BHMA GRADE 3 OR BETTER CYLINDRICAL AND DEADLOCK HARDWARE TO BE INSTALLED AT 5-1/2" CENTERLINE.
2.	4" X 4" FULL MORTISE BUTT HINGES

Addendum to NAMI
Certification No.: NT006115
Reviewed By:
Date Reviewed: 8/12/05

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

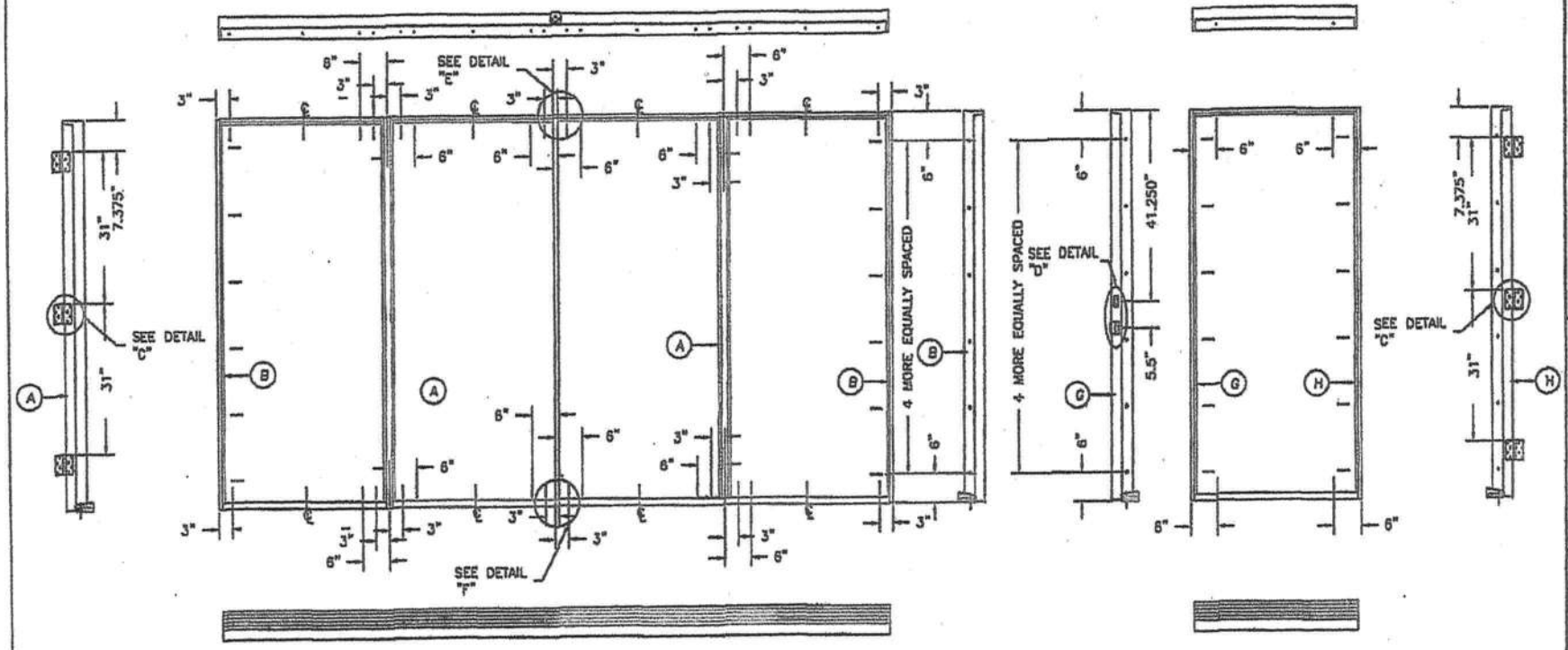
PRODUCT: "EXTERIOR DOOR PRODUCT" 6'-0" METAL-EDGE STEEL OPAQUE DOUBLE DOOR UNIT

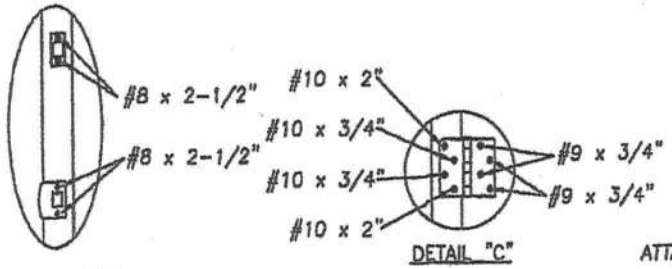
PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

REVISIONS

NO.	DATE	BY

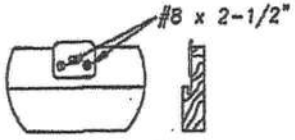
DATE: 7/25/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FL0132-05
SHEET 3 OF 3





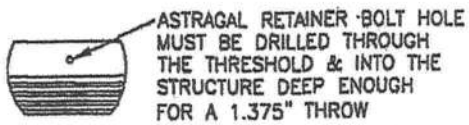
DETAIL "D"

DETAIL "C"

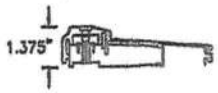


DETAIL "E" ASTRAGAL

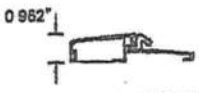
ATTACH ASTRAGAL RETAINER BOLT STRIKE PLATE TO FRAME AS SHOWN.



DETAIL "F" ASTRAGAL



INSWING THRESHOLD



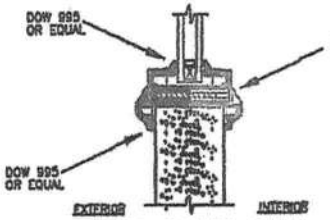
OUTSWING THRESHOLD

Addendum to NAFS

Certification No: NT006115

Reviewed By:

Date Reviewed: 8/12/05



TYPICAL GLAZING DETAIL

MASONITE INTERNATIONAL CORP.
7300 REAMES RD.
CHARLOTTE, NC 28216

PRODUCT: "EXTERIOR DOOR PRODUCT" DOUBLE 6'-8" CANADIAN MEDIUM-EDGE STEEL DOOR

PART OR ASSEMBLY: ANCHORING LOCATIONS & DETAILS

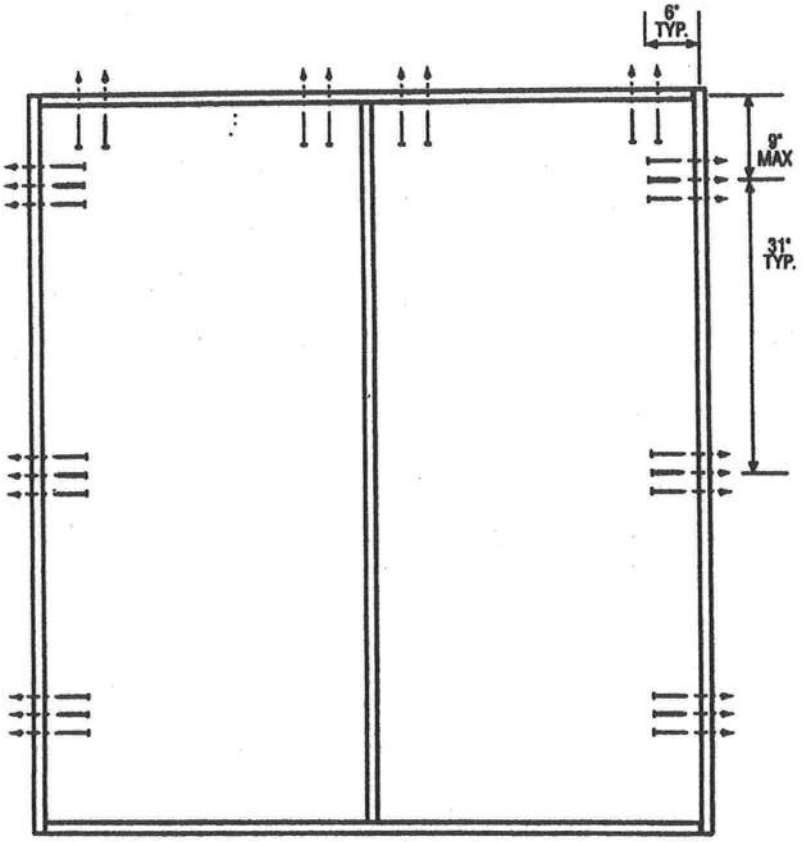
NO.	DATE	BY
REVISIONS		

DATE: 7/25/05
SCALE: N.T.S.
DWG. BY: SWS
CHK. BY:
DRAWING NO.: DWG-MA-FLD132-05
SHEET 2 OF 3

XX
Unit

MID-WL-MA0002-02

DOUBLE DOOR



Minimum Fastener Count

- 6 per vertical framing member for 7'0" heights and smaller
- 8 per vertical framing member for heights greater than 7'0"
- 8 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"

Test Data Review Certificate #3028447A; #3028447B; #3028447C and COP/Test Report Validation Matrix #3028447A-001, 002, 003, 004; #3028447B-001, 002, 003, 004; #3028447C-001, 002, 003, 004 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 6247*, 6267*, 3242*, 3247, 3262* or 3267**
  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 fastener rating from the different fasteners being considered for use. Jamb and head fasteners analyzed for this unit include #8 wood screws and 10d common nails. Threshold fasteners analyzed for this unit include Liquid Nails Builders Choice 490 (or equal structural adhesive).
2. The wood screw and common nail single shear design values come from ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment of 1-1/4".
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

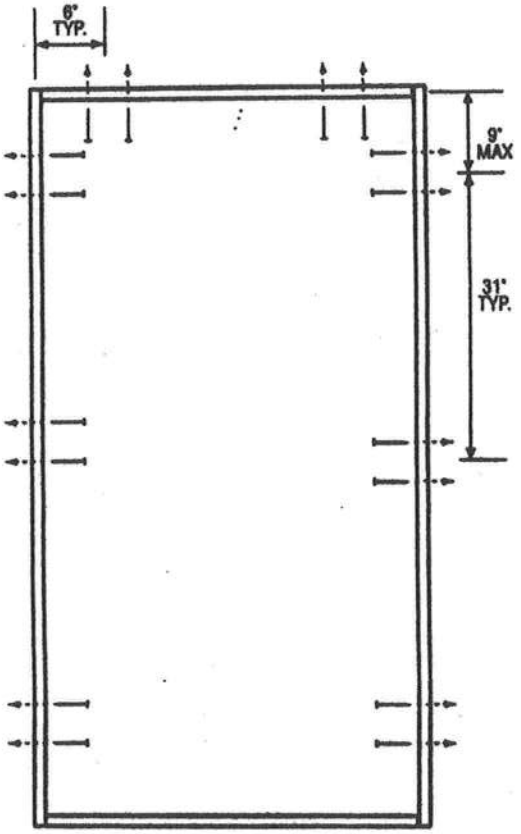
March 10, 2003

Masonite

X
Unit

MID-WL-MA0001-02

SINGLE DOOR



Minimum Fastener Count

- 6 per vertical framing member for 7'0" height and smaller
- 8 per vertical framing member for heights greater than 7'0"
- 4 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"

Test Data Review Certificate #30264478; #30264478; #30264478 and COP/Test Report Validation Matrix #30264478-001, 002, 003, 004; #30264478-001, 002, 003, 004; #30264478-001, 002, 003, 004 provides additional information - available from the ITS/WH website (www.atsemko.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 6248*, 6288*, 3241*, 3248, 3281* or 3288**
  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.

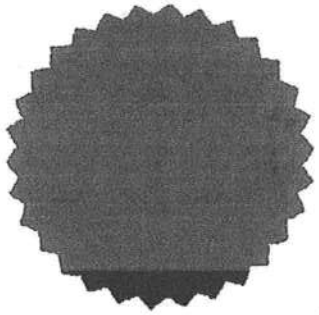
Notes:

1. Anchor calculations have been carried out with the fastener rating from the different fasteners being considered for use. Jamb and head fasteners analyzed for this unit include 10d common nails. Threshold fasteners analyzed for this unit include Liquid Nails Builders Choice 490 (or equal structural adhesive).
2. The common nail single shear design values come from ANSI/AF & PA NDS for southern pine lumber with a side member thickness of 1-1/4" and achievement of minimum embedment of 1-1/4".
3. Wood bucks by others, must be anchored properly to transfer loads to the structure.

March 10, 2003

Masonite

NOTICE OF PRODUCT CERTIFICATION



CERTIFICATION NO: NI006592
DATE: 06/16/2006
CERTIFICATION PROGRAM: Structural
COMPANY: Atrium
CODE: A-447-1

The "Notice of Product Certification" is valid only when Administrator's Seal is applied to the upper left hand portion of this form and a certification label is applied to the product. This certification seal represents product conformity to the applicable specification and that all certification criteria has been satisfied.

The product described below is approved for listing in the Directory of Certified Products at www.NAMICertification.com . Please review, and advise NAMI immediately if data, as shown, requires corrections.

COMPANY NAME AND ADDRESS	PRODUCT DESCRIPTION
Atrium Windows & Doors-Florida 3600 Port Jacksonville Parkway Jacksonville, FL 32226	"Mark 40/50 Premium" Aluminum Single Hung Standard Flange Frame Window Configuration: OX Glazing: O-3/16"Annealed Glass/X-5/32" Annealed Glass STP PSF Frame: W-4'5" Sash: W-4'2" Pos+60.0 H-8'1" H-3'3" Neg-67.5

SPECIFICATION	PRODUCT RATING
AAMA/NWWDA 101/I.S.2-97/ AAMA 1302.5-76 Glass Complies to ASTM E1300-02	H-LC35 FER-Passed

Product Tested By: Certified Testing Laboratories
Report No: CTLA-1049W (Structural/FER)
Expiration Date: March 31, 2007

Administrator's Signature: _____

NATIONAL ACCREDITATION AND MANAGEMENT INSTITUTE, INC.
11870 Merchants Walk Suite 202
Newport News, VA 23606
TEL: (757) 594-8658
FAX: (757) 594-8659

GARAGE DOORS INFORMATION

COMMERCIAL & RESIDENTIAL GARAGE DOOR DIVISION

TECHNICAL DATA SHEET #155o

GARAGE DOOR WIND LOAD GUIDE
BASED ON THE 2001 FLORIDA BUILDING CODE (ASCE 7-98) EXPOSURE B

Mean Roof Height	Door Size	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	140 MPH	150 MPH
Less than 30 Feet	Single 9' x 7'	-14.5	-17.9	-21.6	-25.8	-30.2	-35.1	-40.2
	Double 16' x 7'	-13.7	-16.9	-20.4	-24.3	-28.5	-33.1	-38.0

Design pressures above are in Pounds per Square Foot (PSF)

Testing, if required by local authority, may be performed to ASTM E-330, or preferably DASMA 108.
Impact and cyclic wind pressure testing on glazed doors may be performed to ASTM E-1886, or preferably DASMA 115.

Test conditions:

1. Garage doors shall be tested to both negative and positive pressures. Doors shall be installed simulating normal conditions (i.e., top roller in track radius, other rollers in tracks, all hinges in place, reinforcing hardware in place)
2. Total test duration for each test direction shall be as follows:
   A. Total of 3600/V seconds, at design pressure; where V is fastest-mile design wind speed.
   B. Pressure equal to 1.5 times the design pressure shall be included for 10 seconds during each test.

The door successfully passes the test if it remains safely operable through the full travel up and down, and recovers at least 75% of its maximum deflection. Standard engineering principles may be used to interpolate or extrapolate test results to door sizes not specifically tested. Doors shall include a manufacturer's label certifying compliance to specific load.

This guide is provided for reference purposes only. In all cases the local building authority is the sole and final determiner of the structural and safety requirements, and suitability of the garage door.

Notes

- Basic Wind Speeds above are three second peak-gust values
- Negative pressures assume door has 2 feet of width in building's end zone.
- Garage doors evaluated as attached to enclosed buildings with a Use Factor of 1.0
- Doors larger than 100 square feet should use the 16 x 7 loads. Doors less than 100 square feet may be interpolated.
- Garage doors evaluated as Components and Cladding
- Installation details vary. Consult manufacturer's instructions.

For more information, contact DASMA, 1300 Sumner Avenue, Cleveland OH 44115-2851
Phone (216) 241-7333 E-mail: dasma@dasma.com Fax (216) 241-0105 URL: www.dasma.com

2

LTR	DESCRIPTION	DATE	APPROVAL
-	REV PER EN 10083	8/19/98	JDF
A	REV PER DI 10332	9/3/98	JDF
B	REV PER DI 10880	10/18/00	RHH

NOTES

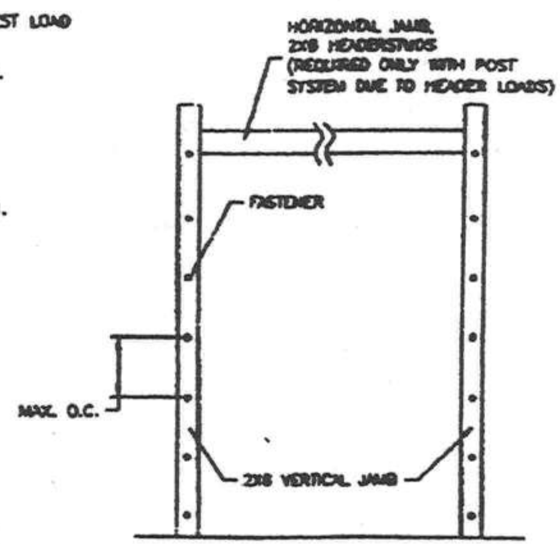
1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE TRACK AND THEN FROM THE TRACK TO THE VERTICAL JAMBS (SPF STUD GRADE OR BETTER). NO LOAD FROM THE DOOR IS TRANSFERRED TO THE HORIZONTAL (TOP) JAMB WITH STANDARD WINDLOAD SYSTEM. WITH VERTICAL WINDLOAD POST, PART OF THE FORCE IS TRANSFERRED TO THE HORIZONTAL GARAGE DOOR HEADER.
2. EACH VERTICAL JAMB SEES A MAXIMUM DESIGN LOAD OF +2980 LB & -2980 LB AND A MAXIMUM TEST LOAD OF +4480 LB & -4480 LB. THE HORIZONTAL GARAGE DOOR HEADER SEES A MAX TEST LOAD OF 1200# FOR SINGLE POST, AND MAX COMBINED LOAD OF 2970# FOR MULTIPLE POSTS.
3. ALL JAMB FASTENERS MAY BE (BUT NOT REQUIRED) COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.

WOOD FRAME BUILDINGS

STUD WALLS OF DOOR OPENING SHALL BE FRAMED SOLID BY NOT LESS THAN 2 FULL LENGTH STUDS AND 2 HEADERSTUDS USING SPF STUD GRADE OR BETTER WOOD. STUD WALLS TO BE CONTINUOUS FROM FOOTING TO TIE BEAMS AND IN ACCORDANCE WITH SFBC SECTION 2905.1. INSTALLATION IN ACCORDANCE WITH DWG 409783 IS AN ACCEPTABLE ALTERNATIVE.

BLOCK WALL OR CONCRETE

2X6 MIN. WOOD JAMB SHALL BE ANCHORED TO GROUT REINFORCED BLOCK WALL OR CONCRETE COLUMN. BLOCK WALL CELLS SHALL BE FILLED WITH CONCRETE AND REINFORCED WITH #5 BAR EXTENDING INTO THE FOOTING AND INTO THE BEAMS. (STRENGTH IS ASSUMED TO BE 2500 PSI). ALL BARS SHALL BE CONTINUOUS FROM THE TIE BEAMS TO FOOTING PER BLOCK WALL OR CONCRETE COLUMN. BLOCK WALLS AND CONCRETE COLUMNS TO BE DESIGNED BY BUILDING PROFESSIONAL OF RECORD AND IN ACCORDANCE WITH SFBC SECTION 2704.2.



2X6 JAMB TO SUPPORTING STRUCTURE ATTACHMENT

(NOT TO BE USED FOR ATTACHMENT OF TRACK BRACKETS TO 2X8 VERTICAL JAMBS OR SUPPORTING STRUCTURE)

BUILDING TYPE	FASTENER TYPE	MIN. NO. OF FASTENERS PER VERTICAL JAMB 7' HIGH	MIN. NO. OF FASTENERS PER VERTICAL JAMB 8' HIGH	MAXIMUM ON CENTER DISTANCE BETWEEN FASTENERS	STEEL WASHERS REQUIRED?
WOOD FRAME (SPF)	5/16" X 3" LAG SCREW (ASTM A307, GRADE A), 1-5/8" MIN. EMBED.	7	8	16"	YES
C-90 BLOCK (2,500 PSI GROUT)	1/4" x 4" ITW TAPCON CONCRETE ANCHOR, 1-3/4" MIN. EMBED.*	7	8	16"	YES
C-90 BLOCK (2,500 PSI GROUT)	3/8" X 4" RAWL LOK/BOLT ANCHOR BOLT, 1-5/8" MIN. EMBED.*	8	7	16"	NO
CONCRETE COLUMN (2,500 PSI)	3/8" X 4" RAWL LOK/BOLT ANCHOR BOLT, 1-5/8" MIN. EMBED.*	6	7	16"	NO

* - TAPCONS/ANCHOR BOLTS CAN BE INSTALLED DIRECTLY THROUGH TRACK BRACKETS/ANGLE IN LIEU OF 5/16" X 1-5/8" LAG SCREWS. RAWL LOK/BOLT SHALL BE TORQUED AS SPECIFIED BY THE RAWL DRILLING AND ANCHORING SYSTEMS DESIGN MANUAL.

APPROVED

MATERIAL N/A	DRAWN BY G. FINEMAN	8/12/98
	CHECKED BY PE VESSELS	8/19/98
N/A	APPROVED BY DAVID FAW	8/19/98

RESIDENTIAL JAMB DETAIL

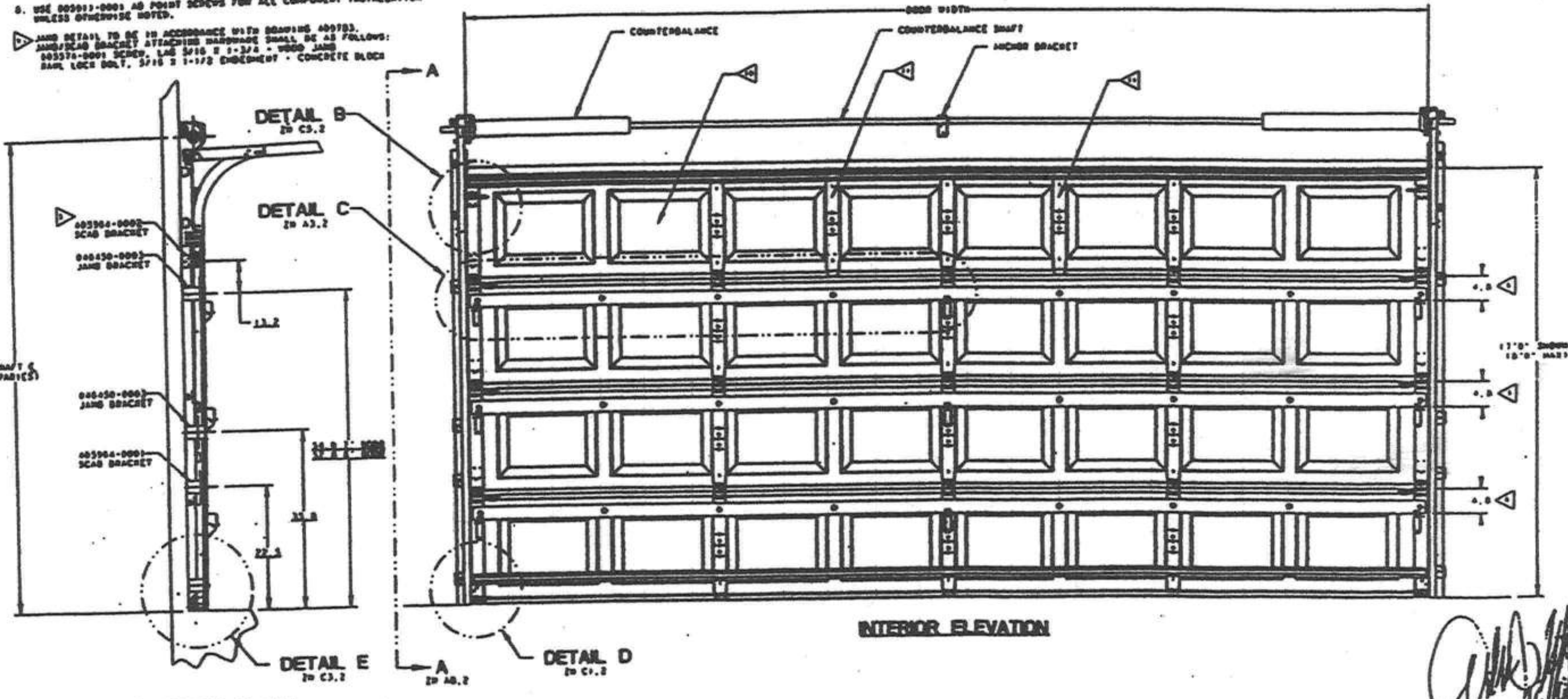
DRAWING NUMBER O-409431

SCALE FULL — SHEET 1 OF 1

NOTES:
1. TESTED IN ACCORDANCE WITH DASMA 108.
2. FOUR SECTION 7' TALL DOOR SHOWN. 8' DOORS HAVE 5 SECTIONS. SECTION HEIGHTS OF 20.00, 19.00 AND 16.75 ARE AVAILABLE AND MAY BE USED IN COMBINATION TO ACHIEVE VARIOUS DOOR HEIGHTS.
3. EMBOSSMENT PATTERN OF 14.5 X 20.4 SHOWN. ALTERNATE PATTERNS OF 12.5 X 43.4 AND 12.5 X 20.4 MAY BE USED.
4. ADVANTAGE/REVOLUTION COUNTERBALANCE SHOWN. TORSION AND EXTENSION COUNTERBALANCE SYSTEMS AVAILABLE. 403964-0002 REQUIRED AT TRACK INTERFACE ON TORSION AND EXTENSION SYSTEMS.
5. USE THIS BRACKET 403964-0002 ON 8' HIGH DOORS ONLY.
6. LOCATE 409517 CHANNELS AS SHOWN. VERTICAL PLACEMENT CAN VARY PLUS/MINUS 3 INCHES.
7. ON THE MIDDLE CENTER STILE THERE IS NO TOOL CLEARANCE HOLE FOR THE UPPER 003013-0001 SCREW. INSTALL FROM BELOW.
8. USE 003013-0001 AS POINT SCREWS FOR ALL COMPONENT INSTALLATION UNLESS OTHERWISE NOTED.
9. JAMB DETAIL TO BE IN ACCORDANCE WITH DRAWING 409783. JAMB/SCAB BRACKET ATTACHING HARDWARE SHALL BE AS FOLLOWS: 003374-0001 SCREW, LAG 5/16 X 1-3/4 - WOOD JAMB; BARL LOCK BOLT, 5/16 X 1-1/2 EMBEDMENT - CONCRETE BLOCK
10. WINDOW INSTALLATION ALLOWED. WINDOWS MUST BE INSTALLED IN TOP SECTION.
11. EXTRA CENTER STILES ARE NOT REQUIRED ON DOORS WITHOUT A WINDOW SECTION.
12. USE 18 GAUGE CHANNEL.

REVISIONS				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	A	RLSE FOR PRE-PRODUCTION	[illegible]	[illegible]
[illegible]	B	RLSE FOR PRODUCTION	[illegible]	[illegible]

OHD/GENIE DOOR EQUIVALENCY CHART		
OHD DOOR SERIES No.	GENIE DOOR SERIES No.	PAN STEEL THICKNESS
SERIES 180	SERIES 600300	24 GA
SERIES 189	SERIES 600300	24 GA
SERIES 201	SERIES 602700	25 GA
SERIES 200	SERIES 605300	25 GA

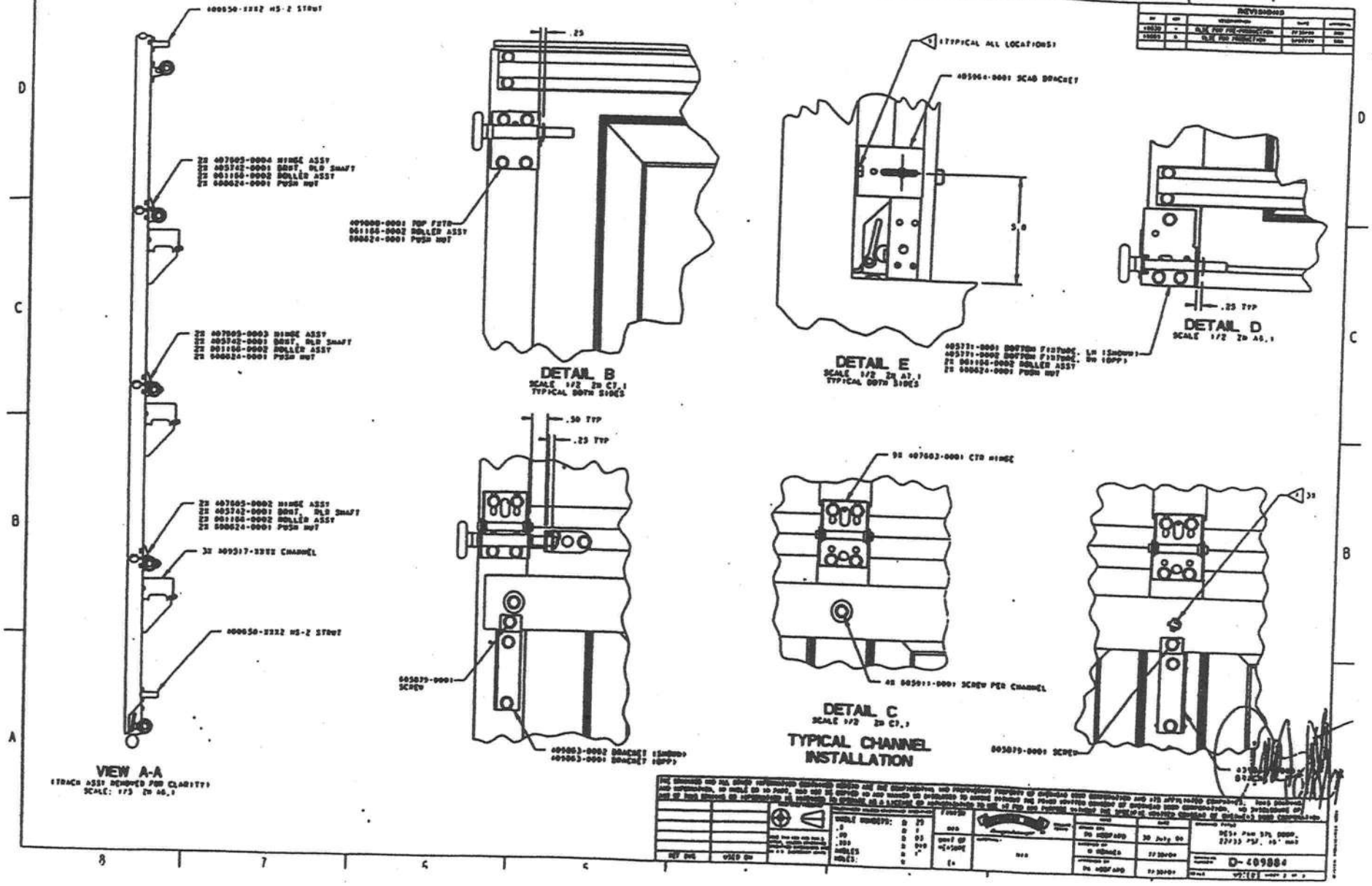


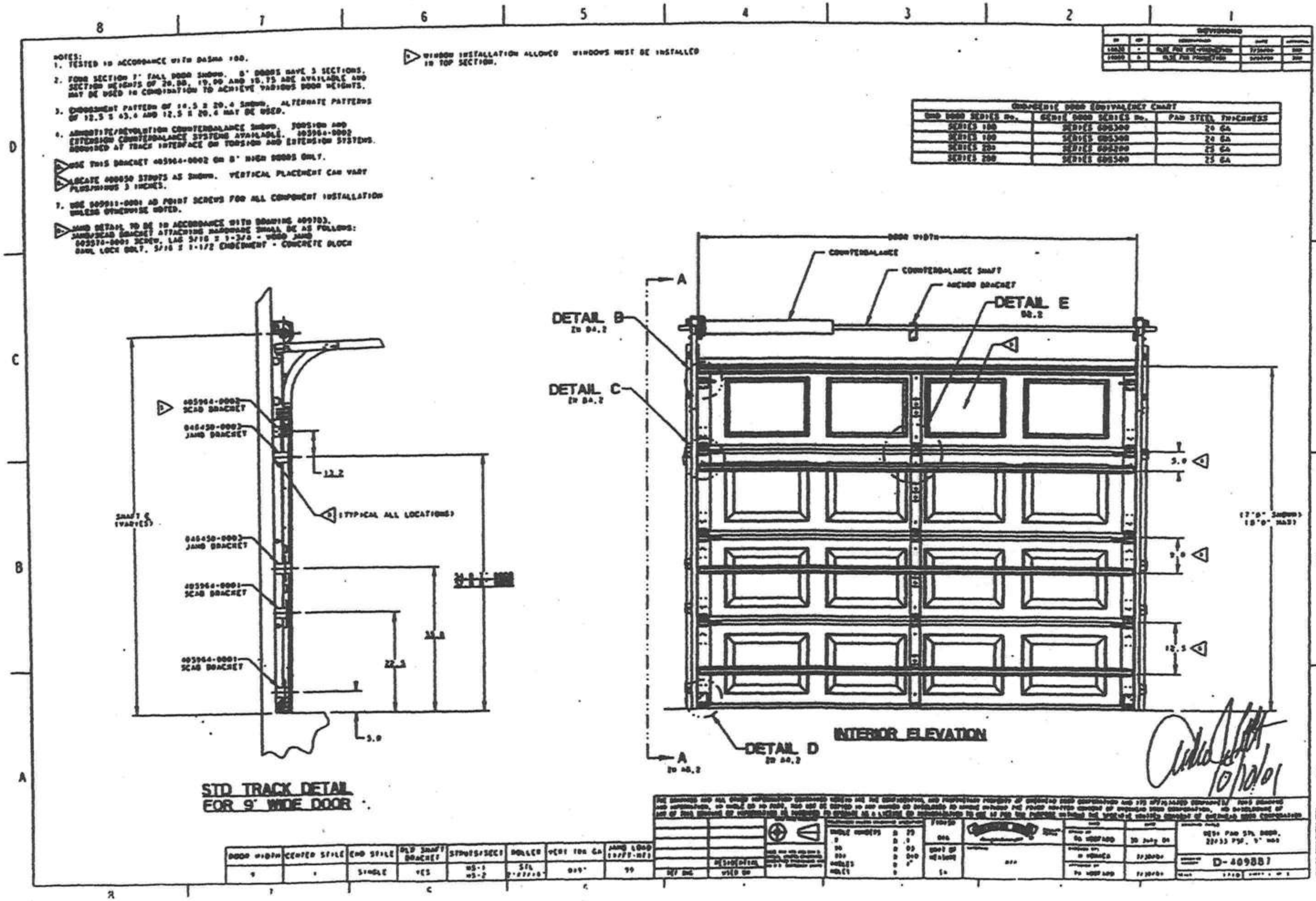
STD TRACK DETAIL
FOR 16' WIDE DOOR

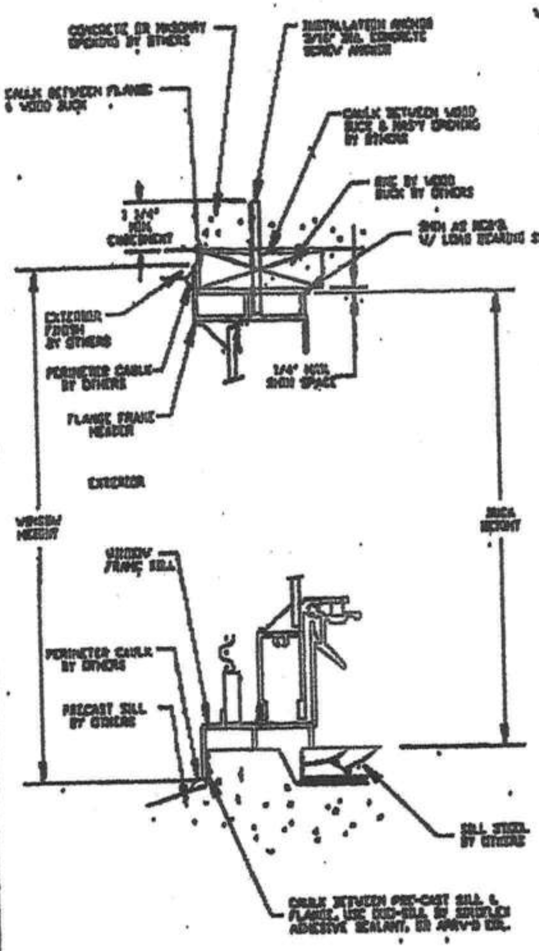
DOOR WIDTH	CENTER STILE	END STILE	OLD SHAFT BRACKET	STRUTS/SECT	ROLLER	VERT FOR GA	JAMB LOAD (OFF-L-MF)
16'	7	SINGLE	YES	2" + 2 3" C-H S-2	STL 2"-3/4-B"	005"	176

RES: PAN STL DOOR, 22/33 PSF, 16' WIDE

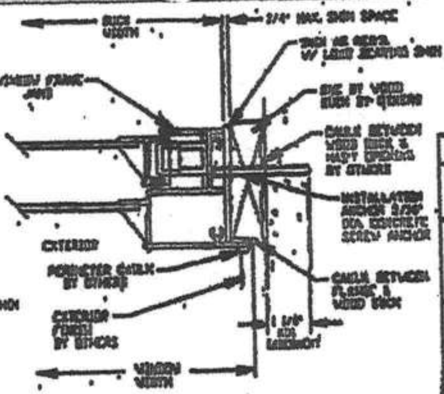
D-40988C


VIEW A-A
DETAIL B
DETAIL C
TYPICAL CHANNEL INSTALLATION
DETAIL D
DETAIL E

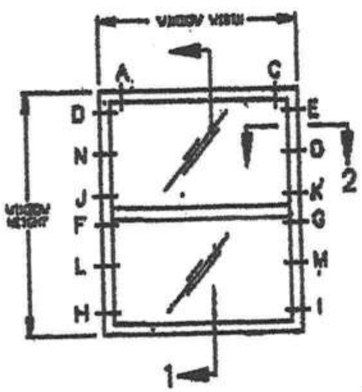

NOTES:
1. TESTED IN ACCORDANCE WITH DASMA 108.
WINDOW INSTALLATION ALLOWED. WINDOWS MUST BE INSTALLED IN TOP SECTION.
USE THIS BRACKET 405964-0002 ON 8' HIGH DOORS ONLY.
UNLESS OTHERWISE NOTED.
SERIES 100
SERIES 200
20 GA
24 GA
25 GA
SCAB BRACKET
JAMB BRACKET
(TYPICAL ALL LOCATIONS)
SHAFT ℄ (VARIES)
13.2
22.5
5.0
12.5
COUNTERBALANCE
COUNTERBALANCE SHAFT
ANCHOR BRACKET
DOOR WIDTH
DETAIL B
DETAIL C
DETAIL D
DETAIL E
INTERIOR ELEVATION
STD TRACK DETAIL FOR 9' WIDE DOOR
DOOR WIDTH
CENTER STILE
END STILE
OLD SHAFT BRACKET
STRUTS/SECT
ROLLER
SINGLE
YES
D-409887



SECTION 1



SECTION 2



ELEVATION
VIEWED FROM EXTERIOR

ANCHOR LOCATION CHART

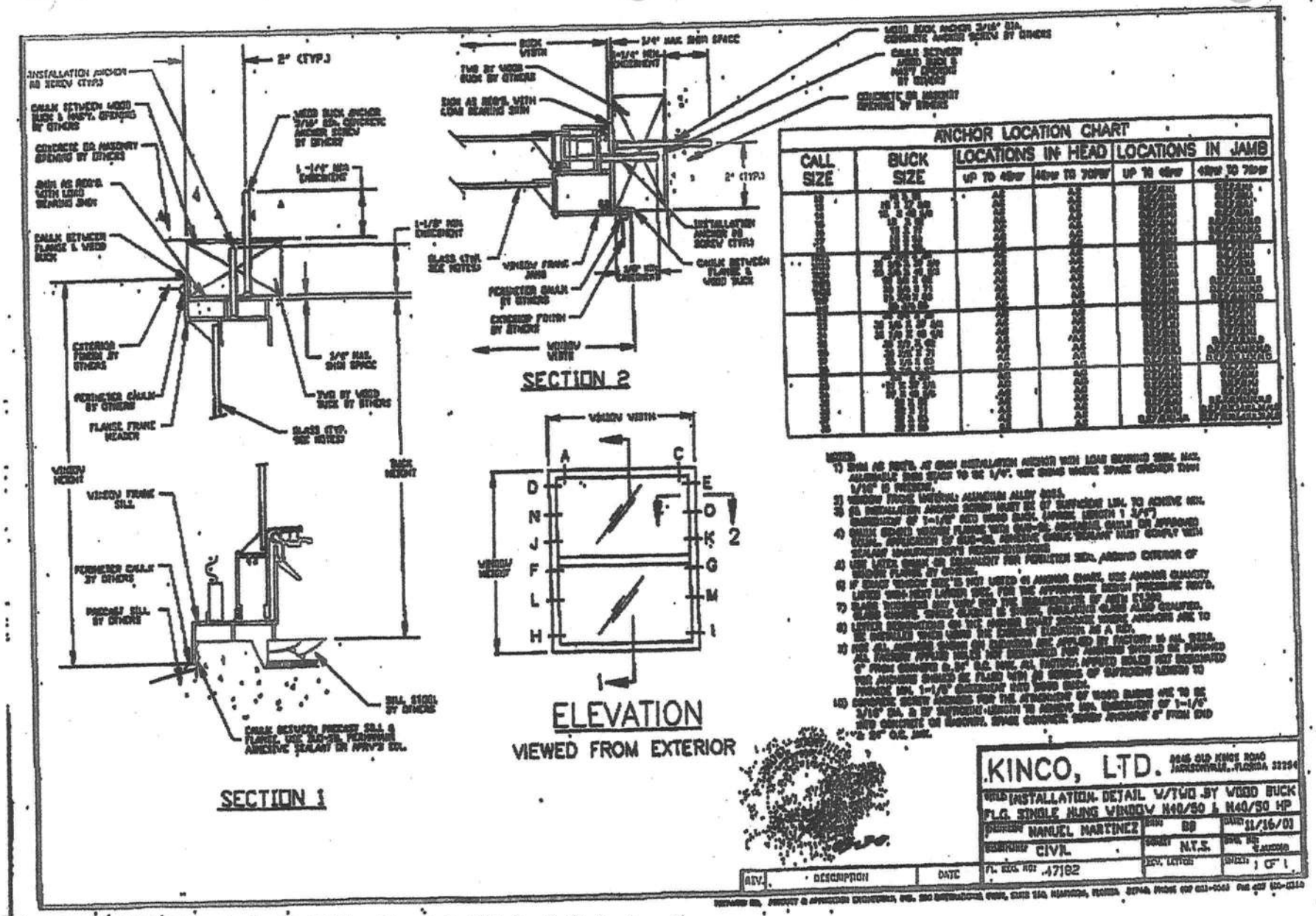
CALL SIZE	BUCK SIZE	LOCATIONS IN HEAD		LOCATIONS IN JAMB	
		UP TO 40psf	40psf TO 70psf	UP TO 40psf	40psf TO 70psf
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTES:

1) [illegible]
2) [illegible]
3) [illegible]
4) [illegible]
5) [illegible]
6) [illegible]
7) [illegible]
8) [illegible]
9) [illegible]

KINCO, LTD.	5245 OLD KINGS ROAD JACKSONVILLE, FLORIDA 32254
TITLE: INSTALLATION DETAIL W/ONE BY WOOD BUCK FLG. SINGLE HUNG WINDOW M40/50 & M40/50 IP	
ENGINEER: MANUEL MARTINEZ	DRN: BB — DATE: 11/05/01
DISCIPLINE: CIVIL	SCALE: N.T.S.
FL. ENG. NO. 47182	SHEET: 1 OF 1

REV.	DESCRIPTION	DATE

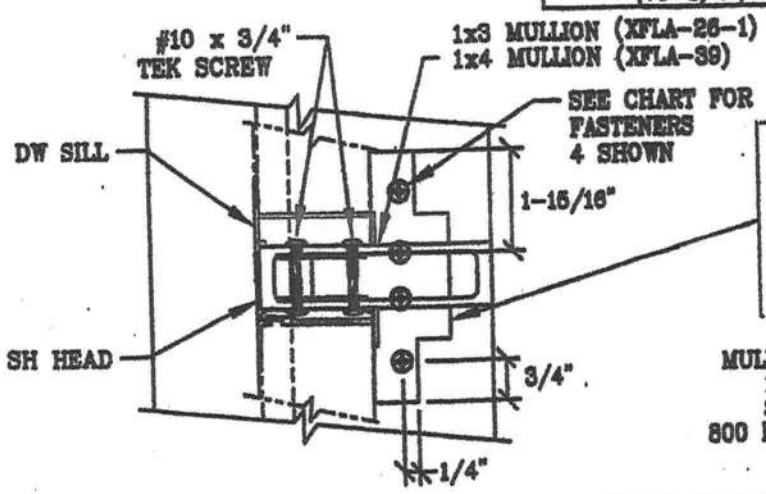

SECTION 1
SECTION 2
ELEVATION
VIEWED FROM EXTERIOR
ANCHOR LOCATION CHART
CALL SIZE
BUCK SIZE
LOCATIONS IN HEAD
LOCATIONS IN JAMB
UP TO 48W
48W TO 70W
UP TO 48W
48W TO 70W
KINCO, LTD.
INSTALLATION DETAIL W/TWO BY WOOD BUCK
F.G. SINGLE HUNG WINDOW H40/50 & H40/50 HP
MANUEL MARTINEZ
CIVIL
11/16/01
N.T.S.
FL. REG. NO: 47182
DESCRIPTION
DATE

NOTES:

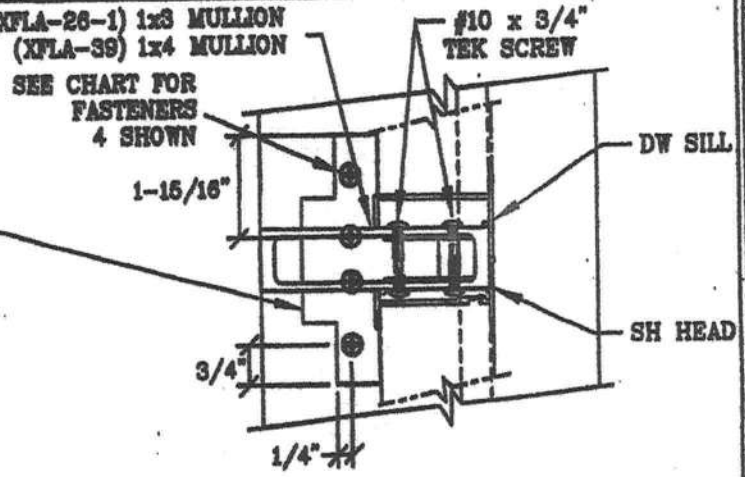
1) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063 T6, OR 6063 .T5.
2) WHEN THERE IS ONE TAPCON (1/4" X 1-1/2") ON EACH ANGLE LEG, THE TAPCON SHALL BE PLACED ON MULLION CLIP CENTERLINE.
3) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

HORIZONTAL MULLION SCHEDULE

SINGLE UNIT WINDOW WIDTH INCH	SINGLE UNIT WINDOW HEIGHT INCH	TYPE OF MULLION DESIGN PRESSURE 35 PSF	TYPE OF CLIP FLA-45	NUMBER AND TYPE OF FASTENERS
19-1/8"	26"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
26-1/2"	26"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
37"	26"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
53-1/8"	26"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(3) 1/4" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(2) 1/4" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(2) 1/4" x 1-1/2" TAPCONS



FLA-45
MULLION ANCHOR CLIP
16 GA. GALV.
SHEET METAL
800 LB. MAX CAPACITY



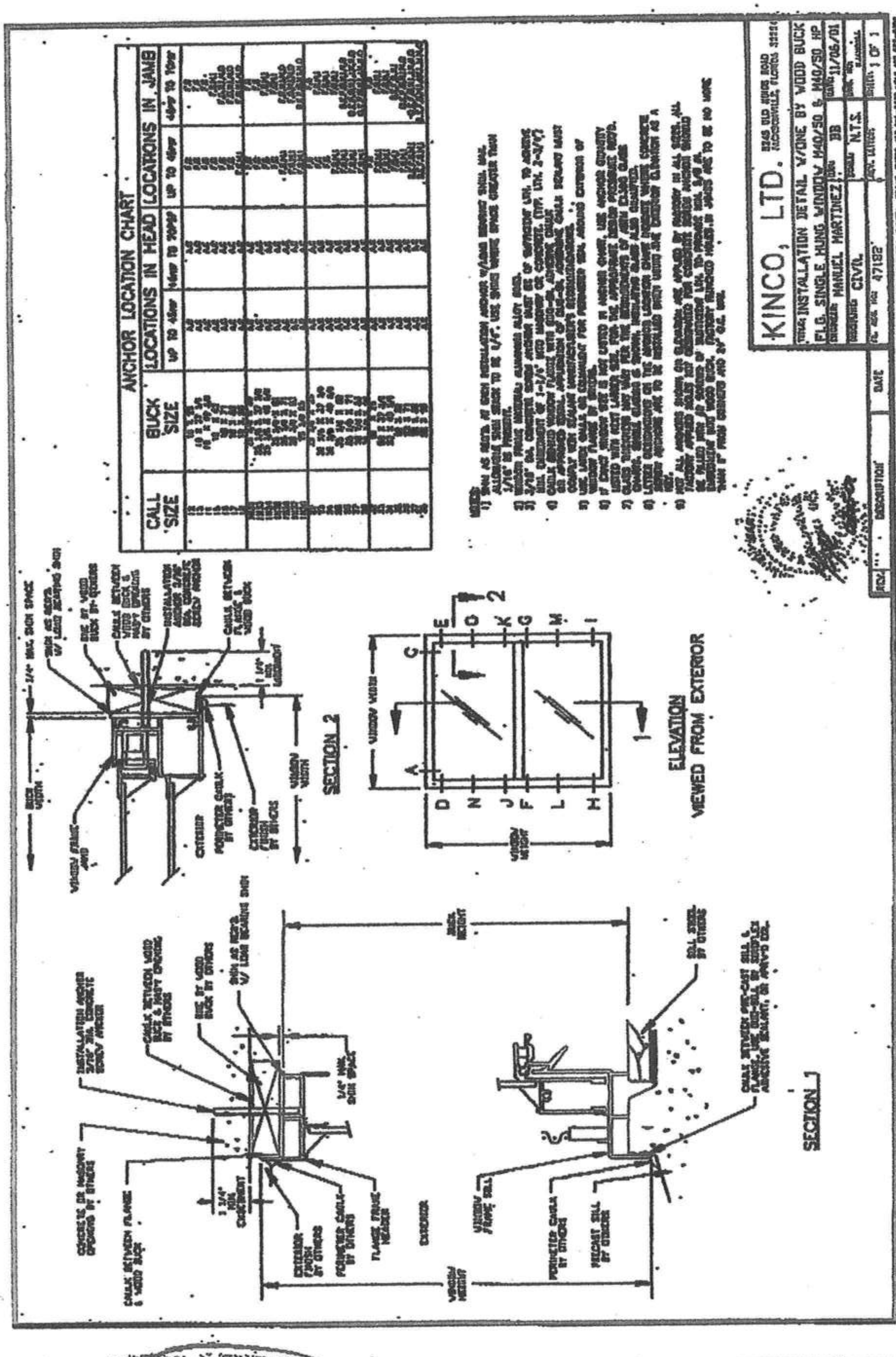
HORIZONTAL MULLION
FLA-45 ANCHOR CLIP
INSTALLATION DETAIL AND
FASTENER SCHEDULE

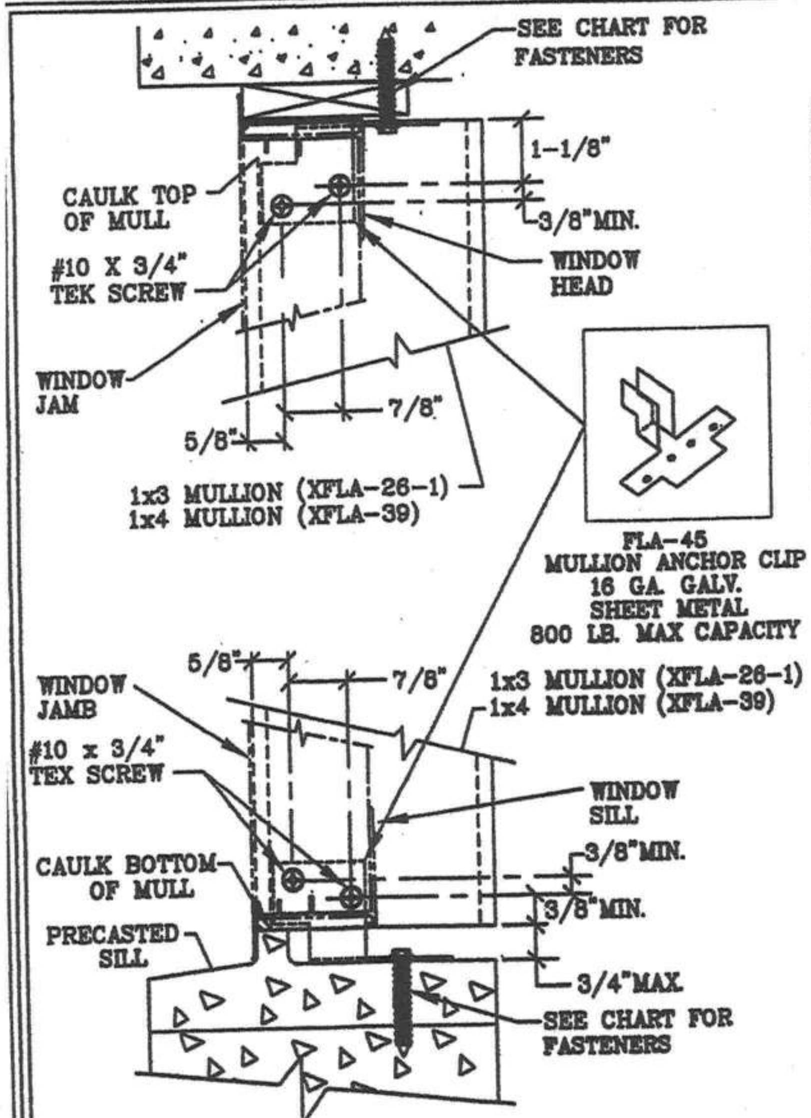
SERIES: MULLION
ALUMINUM SINGLE HUNG

NORANDEX
4501 30th STREET WEST
BRADENTON, FL. 34207
PHONE: (941) 756-4591

REVISIONS DESCRIPTION

DWG. NO.: FSC-030


ANCHOR LOCATION CHART
CALL SIZE
BUCK SIZE
LOCATIONS IN HEAD
LOCATIONS IN JAMB
SECTION 2
SECTION 1
ELEVATION
VIEWED FROM EXTERIOR
WINDOW WIDTH
WINDOW HEIGHT
BUCK HEIGHT
EXTERIOR
NOTES:
KINCO, LTD.
INSTALLATION DETAIL W/ONE BY WOOD BUCK
FLG. SINGLE HUNG WINDOW M40/50 & M40/50 HP
MANUEL MARTINEZ
BB
11/06/01
CIVIL
N.T.S.
47182
1 OF 1
REV.
DESCRIPTION
DATE



VERTICAL MULLION SCHEDULE

SINGLE UNIT WINDOW WIDTH INCH	SINGLE UNIT WINDOW HEIGHT INCH	TYPE OF MULLION DESIGN PRESSURE 35 PSF	TYPE OF CLIP FLA-45	NUMBER AND TYPE OF FASTENERS
19-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
26-1/2"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
37"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(4) 1/4ø" x 1-1/2" TAPCONS
53-1/8"	26"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	38-1/4"	1.0 x 3.0	OK	(4) 3/16ø" x 1-1/2" TAPCONS
	50-5/8"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	63"	1.0 x 3.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS
	76-3/4"	1.0 x 4.0	OK	(2) 1/4ø" x 1-1/2" TAPCONS

G.A. PAGEN
CERTIFIC...
CHARLES A. PAGEN, P.E.

NOTES:

1) ALL ALUMINUM EXTRUSIONS ARE ALLOY 6063 T6, OR 6063 T5.
2) WHEN THERE IS ONE TAPCON (1/4ø" X 1-1/2") ON EACH ANGLE LEG, THE TAPCON SHALL BE PLACED ON MULLION CLIP CENTERLINE.
3) CONCRETE COMPRESSIVE STRENGTH = 3,000 PSI AT 28 DAYS.

VERTICAL MULLION FLA-45 ANCHOR CLIP INSTALLATION DETAIL AND FASTENER SCHEDULE

SERIES: MULLION
ALUMINUM SINGLE HUNG

NORANDEX

REVISIONS DESCRIPTION

Jax Apex Technology, Inc.
4745 Sutton Park Court, Suite 402
Jacksonville, FL 32224

All products listed in this report are currently approved for state use under the provisions of Florida Product Approval Rule 9B-72 and/or 61G15-36. Reference product approval number FL1901. All substantiating data submitted for the original application has been reviewed for compliance with the 2004 Florida Building and Residential Codes.

Evaluation reports are the opinion of the engineer who prepared the report, based on the findings, and in no way constitute or imply approval by a local building authority. The engineer, in review of the data submitted, finds that, in his opinion, the product, material, system, or method of construction specifically identified in this report conforms with or is a suitable alternate to that specified in the Florida Building Code, SUBJECT TO THE LIMITATIONS IN THIS REPORT

Jeffrey P. Ameson, P.E., a licensed Florida professional engineer and employee of Jax Apex Technology, Inc. (Apex Technology) has reviewed the data submitted for compliance with the Florida Building Code. Neither Jeffrey P. Ameson, nor Apex Technology, are responsible for any errors or omissions to any documents, calculations, drawings, specifications, tests, or summaries prepared and submitted by the design professional or preparer of record who are listed in the Substantiating Data section of this report.

REPORT NO: SIM200401-R2

EXPIRES: October 1st, 2008

CATEGORY: Metal Connectors

SUBMITTED BY:
SIMPSON STRONG-TIE COMPANY, INC.
4120 DUBLIN BLVD., SUITE 400
DUBLIN, CA 94568

1. PRODUCT NAME

Strap Ties

LSTA9, LSTA12, LSTA15, LSTA18, LSTA21, LSTA24, LSTA30, LSTA36, MSTA9, MSTA12, MSTA15, MSTA18, MSTA21, MSTA24, MSTA30, MSTA36, MSTC28, MSTC40, MSTC52, MSTC66, MSTC78, MST27, MST37, MST48, MST60, MST72, LSTI49, LSTI73, MSTI26, MSTI36, MSTI48, MSTI60, MSTI72, RPS18, RPS22, RPS28, ST2115, ST292, ST2122, ST2215, ST6215, ST6224, ST6236, ST9, ST12, ST18, ST22, FHA6, FHA9, FHA12, FHA18, FHA24, FHA30.

Coiled Strap Ties

CMST12, CMST14, CMSTC16, CS16, CS18, CS20, CS22

Wood to Masonry Strap Ties

MSTAM24, MSTAM36, MSTCM40

Pre-bent Strap Ties

MSTC48B3, MSTC66B3

Heavy Straps

HRS6, HRS8, HRS12

ROOFING INFORMATION

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

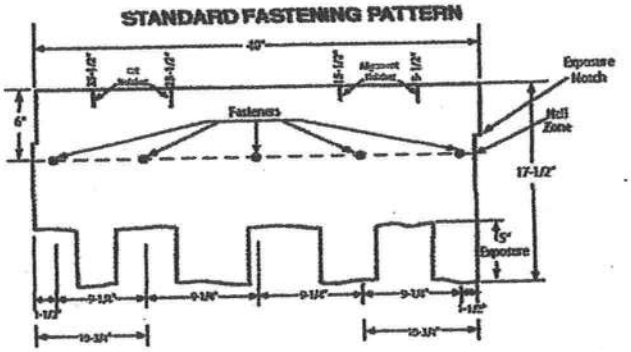
WIND CAUTION: Extreme wind velocities can damage these shingles after application when proper sealing of the shingles does not occur. This can especially be a problem if the shingles are applied in cooler months or in areas on the roof that do not receive direct sunlight. These conditions may impede 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)

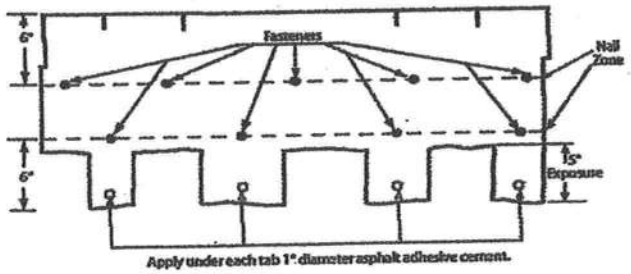
(CONTINUED from Pg. 1)

TAMKO BUILDING PRODUCTS

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

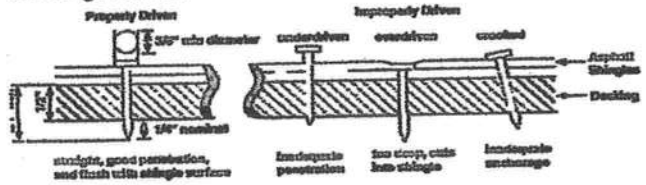
Each shingle tab must be sealed underneath with quick setting asphalt adhesive cement immediately upon installation. Spots of cement must be equivalent in size to a $.25 piece and applied to shingles with a 5 in. exposure, use 9 fasteners per shingle.

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.

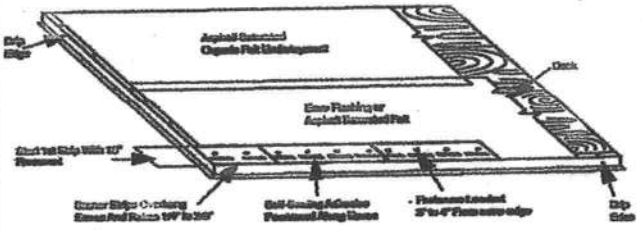
Products which are acceptable for use as underlayment are:

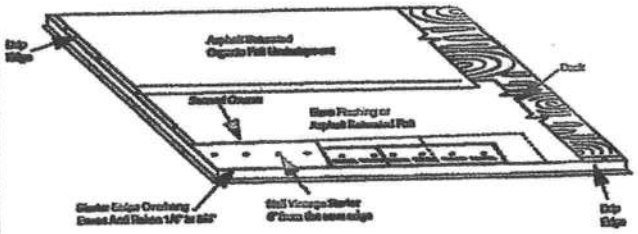
- TAMKO No. 15 Asphalt Saturated Organic Felt
- A non-perforated asphalt saturated organic felt which meets ASTM: D226, Type I or ASTM D4869, Type I
- Any TAMKO non-perforated asphalt saturated organic felt
- TAMKO TW Metal and Tile Underlayment, TW Underlayment and Moisture Guard Plus® (additional ventilation 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

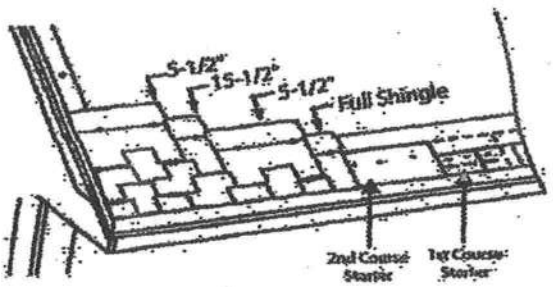
(Continued)

(CONTINUED from Pg. 2)

TAMKO BUILDING PRODUCTS

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

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 at 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)

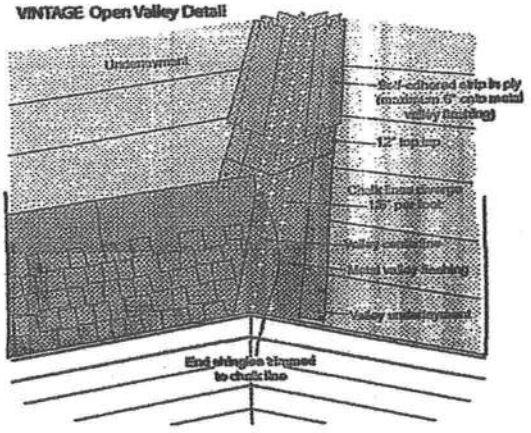
- Snap two chalk lines, one on each side of the valley centerline over the full length of the valley flashing. Locate the upper ends of the chalk lines 3" to either side of the valley centerline.
- The lower end should diverge from each other by 1/8" per foot. Thus, for an 8' long valley, the chalk lines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

VINTAGE Open Valley Detail



- **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.

(Continued)

(CONTINUED from Pg. 3)

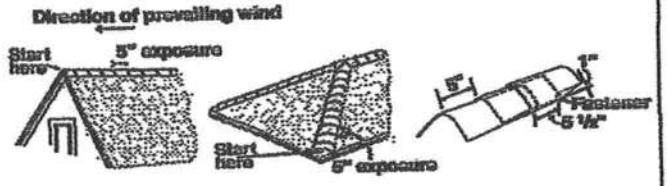
TAMKO BUILDING PRODUCTS

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

9. 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.



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.

INTERIOR WALL INSULATION INFORMATION

R-Matte® Plus-3

Sheathing Insulation

07212/RMRP

MANUFACTURER

Rmax, Inc.
13924 Welch Road; Dallas, Texas 75244-5291
Phone - 972-387-4500 800-627-0690 (Central)
800-845-4455 (Eastern) 800-762-8462 (Western)
Email: rmax@rmaxinc.com
Web Site: http://www.rmaxinc.com

PRODUCT DESCRIPTION

R-Matte® Plus-3 is a rigid foam plastic thermal insulation board composed of polyisocyanurate foam bonded to a durable white-matte non-glare aluminum facer and a reflective reinforced aluminum facer.

R-Matte® Plus-3 utilizes a new and environmentally friendly blowing agent. This sheathing insulation is suitable for use in wall applications in new residential, commercial, agricultural and industrial buildings and in thermal retrofit construction within existing buildings.

R-Matte® Plus-3 is available in standard four (4) foot wide panels. Standard panel lengths are eight (8) and nine (9) feet. Custom length panels are available for special orders. See "Thermal Properties" for standard thicknesses and thermal resistance values of R-Matte® Plus-3.

R-Matte® Plus-3 is shipped in bundles that are approximately 48 inches high and wrapped in plastic for easy handling.

NOTE: All Rmax products must be tarped, placed on skids, and kept dry before and throughout construction.

Technical Data

TYPICAL PHYSICAL PROPERTIES:		
Property	Test Method	Results
Density, Overall, Nominal	ASTM D1622	2.0 pcf
Compressive Strength	ASTM D1621	30 psi (Avg.)
Flame Spread, Core	ASTM E84	35 or less
Smoke Developed	ASTM E84	45 - 110
Water Vapor Transmission	ASTM E96	< 1 perm
Water Absorption	ASTM C209	< 1% Vol.
Dimensional Stability	ASTM D2126 7 days, 158°F, 95% rh	<2% Linear Change
Service Temperatures		-40°F to +250°F

Note: Physical Properties shown are based on data obtained under controlled conditions and are subject to normal manufacturing tolerances. Flame spread numbers are shown for comparison purposes only and are not intended to represent the performance of R-Matte® Plus-3 and related components under actual fire conditions.

APPLICABLE STANDARDS

R-Matte® Plus-3 is manufactured to meet the physical property requirements of Product Specification ASTM C1289, Type I.

R-Matte® Plus-3 is accepted as a nonstructural insulative sheathing board by the following major model building codes: National Building Code (BOCA), Section 2603; Standard Building Code (SBCCI), Section 2603; Uniform Building Code (ICBO), Section 2602.

APPLICATION / INSTALLATION

Applications - This product is designed to be covered with siding materials of wood, wood-based products, hardboard, aluminum, vinyl, brick or stucco veneers. The white-matte finished (non-glare) side of this sheathing panel is installed facing to the outside of the wall structure when the exterior siding will be either wood, wood-based products, hardboard, aluminum or vinyl sidings. The reflective aluminum side of the sheathing panel is installed to the outside of the wall when the exterior finish will be either brick or stucco.

Stud Wall Construction - R-Matte® Plus-3 is applied to the exterior face of wood or metal studs to cover all studs, sills, plates and header constructions in order to provide insulation over details not normally covered by insulation products. R-Matte® Plus-3 may be secured to the studs with bugle-head screws, galvanized roofing nails, or common nails driven through cap washers. The interior of the stud wall system should be protected with a suitable vapor retarder.

R-Matte® Plus-3 may be applied to the interior face of studs, metal or wood, to cover the interior face of these framing members. R-Matte® Plus-3 may be secured with bugle-head screws, galvanized roofing nails, or construction adhesives. The interior of the stud wall system should be protected with a suitable vapor retarder and thermal barrier.

Cavity Wall Construction - R-Matte® Plus-3 is secured to the dry face of the masonry block wall with a high grade adhesive. R-Matte® Plus-3 can be cut by simple methods to fit between masonry joint reinforcements placed to tie the brick veneer to the concrete block back-up. R-Matte® Plus-3 is an excellent cavity insulation product fitting between the masonry block and finished brick veneer of any residential or commercial product.

Masonry Wall Construction - R-Matte® Plus-3 is applied to either the exterior face or interior face of concrete or concrete masonry walls to provide an insulation layer over the entire surface. R-Matte® Plus-3 may be secured to the inside face of a concrete or concrete masonry wall, either over or under the furring members, and covered with a minimum 1/2 inch gypsum wallboard interior finish. Adhesives may be used to hold the R-Matte® Plus-3 in place against the wall temporarily. However, permanent attachment of the R-Matte® Plus-3, furring, or gypsum wallboard with adhesives is not acceptable. The gypsum wallboard must be secured with suitable screws or nails.

Re-Siding Construction - R-Matte® Plus-3 is applied over existing sound and solid siding. It is then covered with a suitable new siding of aluminum, vinyl, wood or wood fiber based products. The R-Matte® Plus-3 is secured with galvanized nails of sufficient length to penetrate the old sidings and sheathings below by at least one inch into the existing wall studs.

Exterior Stucco Construction - R-Matte® Plus-3 may be used as the insulative sheathing under hard coat stucco finishes. First, cover the R-Matte® Plus-3 with a suitable separation layer such as an organic or inorganic felt. Then, attach conventional metal wire lath and expansion joints with appropriate fasteners as dictated by the local building code. R-Matte® Plus-3 may be secured to the studs with bugle-head screws, galvanized roofing nails, or common nails driven through cap washers. The interior of the stud wall system should be protected with a suitable vapor retarder. Rmax does not recommend the direct attachment of stucco, portland cement or polymer-modified types, directly to the face of the insulation product. Consult stucco manufacturers for details.

WARRANTY

See "Sales Policy" for warranty conditions. Rmax does not assume any responsibility or liability for the performance of any products other than those manufactured by Rmax.

AVAILABILITY

Rmatte® Plus-3 is available through an extensive distribution network. Contact Rmax Sales for product availability, pricing information, and the nearest distribution center.

WARNING

DO NOT leave R-Matte® Plus-3 exposed. Polyisocyanurate foam is an organic material which will burn when exposed to an ignition source of sufficient heat and intensity, and may contribute to flames spreading. Installations utilizing Rmax R-Matte® Plus-3 must be fully protected on the interior side of walls and roofs by a minimum of 1/2 inch gypsum board or equivalent. Masonry or concrete that is a minimum of one-inch thick or plywood that is a minimum of 1/2 inch thick or wood that is a minimum of one-inch nominal thickness is recognized as a suitable thermal barrier. Consult the Local Building Official for specific governing codes and requirements.

LIMITATIONS

R-Matte® Plus-3 is not recommended, nor warranted, for use as a commercial roofing insulation for use directly under membrane systems. See Rmax, Inc. for suitable commercial roofing insulation products.

R-Matte® Plus-3 is not a structural panel. Stud walls insulated with R-Matte® Plus-3 must be properly braced for lateral loads according to the requirements of the local building codes.

THERMAL PROPERTIES/PRODUCT DATA "R" means resistance to heat flow. The higher the R-value, the greater the insulating power

Nominal Thickness	Thermal* R-Value	Bundle Data (48" x 96")		Truckload Data (48" x 96")	
		Pieces	Sq. Ft.	Pieces	Sq. Ft.
0.5"	3.2	96	3,072	2,304	73,728
0.625"	4.0	76	2,432	1,824	58,368
0.75"	5.0	60	1,920	1,440	46,080
1.0"	6.4	48	1,536	1,152	36,864

*Thermal values are determined by using ASTM C518 test method at 75°F mean temperature on material conditioned according to PIMA Technical Bulletin No. 101.

Embedded Truss Anchors

META12, META14, META16, META18, META20, META22, META24, META40, HETA12, HETA16, HETA20, HETA24, HETA40, HETAL12, HETAL16, HETAL20, HHETA12, HHETA16, HHETA20, HHETA24, HHETA40

2. SCOPE OF EVALUATION

Load Evaluation as a Structural Component using the requirements of the Florida Building and Residential Codes

3.11 MSTCB3 Pre-bent Strap Tie. The MSTC48B3 and MSTC66B3 Pre-bent Strap Ties are designed to transfer a heavy tension load from framing on an upper story wall to a beam or header on the story below. For example, this could be from shearwall overturning or a large girder truss uplift load. They are installed with 10d common nails, with a minimum of four nails in the bottom of the beam or header. Allowable loads are shown in Table 8. The straps are manufactured from 14 ga. steel meeting ASTM A-653 SS Grade 50, Class 1. They are coated with a G90 galvanized finish.

3.12 META, HETA, HETAL, HHETA Embedded Truss Anchors. Embedded Truss Anchors are used to anchor a wood member (usually a truss) to a masonry or concrete wall. Embedded truss anchors fasten to a single-ply wood truss with 10d×1½ nails or to a multiple-ply truss with 16d common nails. They are embedded in the masonry or concrete wall to a depth indicated on the side of the anchor (4" for META, HETA, and HETAL, and $5^{1}/_{16}$" for HETAL). The strap portion of the anchor is 1⅛" wide. Allowable loads are shown in Table 9 for single installations and Table 10 for double installations. The anchors are manufactured from steel meeting ASTM A-653 SS Grade 50, Class 1, with the exception of the truss seat of the HETAL which is manufactured from steel meeting ASTM A-653 SS Grade 33. Steel thickness is as specified in Table 9. The Embedded Truss Anchors are coated with a G90 galvanized finish.

4. MATERIALS

4.1 Steel. Steel specifications for each product listed in this evaluation report shall be as indicated in the previous section. In addition to the standard G90 finish, some products are available with a G185 finish, indicated as Z-Max. Allowable loads published in this report will apply to G185 products as well as G90 products.

4.2 Wood. Wood members to which these connectors are fastened shall be solid sawn lumber, glued-laminated lumber, or structural composite lumber having dimensions consistent with the connector dimensions shown in Tables1 through 4. Unless otherwise noted, lumber shall be Southern Pine or Douglas Fir-Larch having a minimum specific gravity of 0.50. Where indicated by SPF, lumber shall be Spruce-Pine-Fir having a minimum specific gravity of 0.42.

4.3 Nails and Bolts. Unless noted otherwise, nails shall be common nails. Nails shall comply with ASTM F 1667 and shall have the minimum bending yield strengths F_{yb}:

Nail Pennyweight	Nail Shank Diameter (inch)	F_{yb} (psi)
10d Common	0.148	90,000
16d Sinker	0.148	90,000
16d Common	0.162	90,000

Fasteners for galvanized connectors in pressure-preservative treated wood shall be hot-dipped zinc coated galvanized steel, except where otherwise permitted by the treatment manufacturer. Fasteners for stainless steel connectors shall be stainless steel.

4.4 Concrete/Masonry. Concrete and Masonry design specifications shall be the stricter of the specifications by the engineer of record, the Florida Building Code minimum standards, or the following:

Material	Specification	Minimum Compressive Strength
Concrete, f'c	-	2500 psi
Masonry, f'm	ASTM E447	1500 psi
Masonry Unit	ASTM C90	1900 psi
Mortar	ASTM C270 Type S	1800 psi (or by proportions)
Grout	ASTM C476	2000 psi (or by proportions)

5. INSTALLATION

Installation shall be in accordance with this report and the most recent edition of the Simpson Strong-Tie *Wood Construction Connectors* catalog. Information in this report supersedes any conflicting information between information provided in this report and the catalogue, the information in this report supersedes the catalogue.

6. SUBSTANTIATING DATA

Test data submitted by Testing Engineers Inc. and Product Testing, Inc., and signed and sealed calculations performed by Jeremy Gilstrap, P.E. in accordance with the 2004 Florida Building and Residential Codes.

7. FINDINGS

Upon review of the data submitted by Simpson Strong-Tie, it is my opinion that the connectors as described in this report conform with or are a suitable alternative to the standards and sections in the 2004 Florida Building and Residential Code editions listed in section 10 of this report. Connectors shall be installed in accordance with this report. Maximum allowable loads shall not exceed the allowable loads listed in this report.

8. LIMITATIONS

1. Maximum allowable loads shall not exceed the allowable loads listed in this report. Allowable loads listed in this report are based on allowable stress design. The loads in this report are not applicable to Load and Resistance Factor Design.
2. Capacity of wood members is not covered by this report. Capacity of wood members must be checked by the building designer.
3. Allowable loads for more than one direction for a single connection cannot be added together. A design load which can be divided into components in the directions given must be evaluated as follows:
   (Design Uplift/Allowable Uplift) + (Design Lateral Parallel to Plate/Allowable Lateral Parallel to Plate) + (Design Lateral Perp. to Plate/Allowable Lateral Perp. to Plate) < 1.0

9. ALLOWABLE LOADS

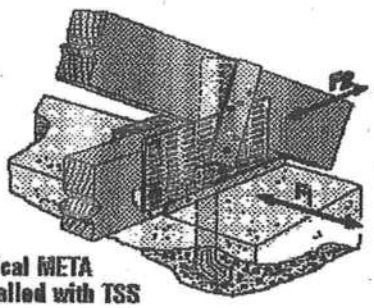
The tables that follow provide the allowable loads for the aforementioned products.

TABLE 9 ALLOWABLE LOADS

Model No.	Ga	H	Fasteners and Uplift								Lateral Loads	
			160 Load Duration Increase				133 Load Duration Increase				133/160	
			1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		F_1 (parallel to wall)	F_2 (perpen. to wall)
			Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load		
META12	18	8	7-10d×1½	1450	6-16d	1450	7-10d×1½	1240	7-16d	1450	280	725
META14		10	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META16		12	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META18		14	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META20		16	6-10d×1½	1270	5-16d	1245	8-10d×1½	1415	6-16d	1250	280	725
			7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META22		18	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META24		20	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
META40		36	7-10d×1½	1450	6-16d	1450	9-10d×1½	1450	7-16d	1450	280	725
HETA12	16	8	7-10d×1½	1520	7-16d	1780	7-10d×1½	1265	7-16d	1475	280	725
HETA16		12	9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HETA20		16	8-10d×1½	1735	7-16d	1780	9-10d×1½	1630	8-16d	1690	280	725
			9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HETA24		20	9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HETA40		36	9-10d×1½	1810	8-16d	1810	10-10d×1½	1810	9-16d	1810	280	725
HHETA12	14	8	7-10d×1½	1565	7-16d	1820	7-10d×1½	1305	7-16d	1520	435	815
HHETA16		12	10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HHETA20		16	9-10d×1½	2010	8-16d	2080	11-10d×1½	2050	10-16d	2170	435	815
			10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HHETA24		20	10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HHETA40		36	10-10d×1½	2235	9-16d	2235	12-10d×1½	2235	11-16d	2235	435	815
HETAL12	16	7	10-10d×1½	1085	10-16d	1270	10-10d×1½	905	10-16d	1055	415	1100
HETAL16		11	14-10d×1½	1810	13-16d	1810	15-10d×1½	1810	14-16d	1810	415	1100
HETAL20		15	14-10d×1½	1810	13-16d	1810	15-10d×1½	1810	14-16d	1810	415	1100

Notes:

1. Loads do not include a stress increase on the strength of the steel. No further increases are permitted. Reduce loads where other loads govern.
2. Five nails must be installed into the truss seat of the HETAL
3. Parallel-to-plate load towards face of HETAL is 1975 lbs.
4. Except for HETAL straps, lateral loads are based on a minimum installation of 12 nails and the strap wrapped over the heel
5. Minimum f'c is 2,000psi
6. It is acceptable to use a reduced number of fasteners in a product provided that there is a reduction in load capacity. The load per nail can be approximated by dividing the allowable load by the number of fasteners. This concept applies to all member sizes. There should be a minimum of 4 nails installed in the strap.



Typical META Installed with TSS

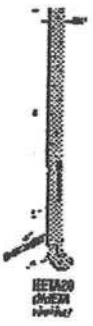
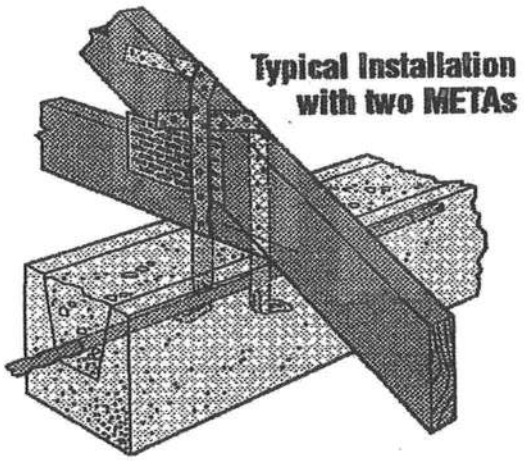


TABLE 10 ALLOWABLE LOADS FOR DOUBLE EMBEDDED TRUSS ANCHORS										
Double Embedded Anchor Installation Into Grouted CMU Bond Beam										
Model No.	Uplift - 160 Load Duration Increase				Uplift - 133 Load Duration Increase				Lateral Loads 133/160	
	1 Ply Southern Pine Truss		2 or 3 Ply Southern Pine Truss		1 Ply Southern Pine Truss		2 or 3 Ply Southern Pine Truss		F_1 (parallel to wall)	F_2 (perpen. to wall)
	Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load		
META	10-10d×1½	1985	14-16d	1900	12-10d×1½	1985	14-16d	1900	1210	1160
HETA	10-10d×1½	2035	12-16d	2500	12-10d×1½	2035	14-16d	2500	1225	1520
HHETA	10-10d×1½	2035	12-16d	2500	12-10d×1½	2035	14-16d	2500	1225	1520

Notes:

1. Minimum f'c is 2,500psi.
2. Install with spoons facing outward and spaced no more than 1/8" wider than the truss width.
3. Install half of the required number of fasteners in each strap.
4. For uplift loads for poured concrete tie beam applications with 2 or 3 ply trusses, increase the META load by 35%, the HETA load by 8%, and the HHETA load by 34%. Listed lateral loads apply to concrete applications.
5. Lateral loads apply only to anchors spaced a minimum of 3" apart.



Typical Installation with two METAs

10. CODE REFERENCES:

Florida Building Code 2004 Edition

Section 104.11	Alternate Materials and Methods
Chapter 1714.2	Load Test Procedure Specified
Chapter 21	Masonry
Chapter 22	Steel
Chapter 23	Wood

Florida Residential Code 2004 Edition

R101.2.1	Scope
R4407	HVHZ Masonry
R4408	HVHZ Steel
R4409	HVHZ Wood

11. IDENTIFICATION:

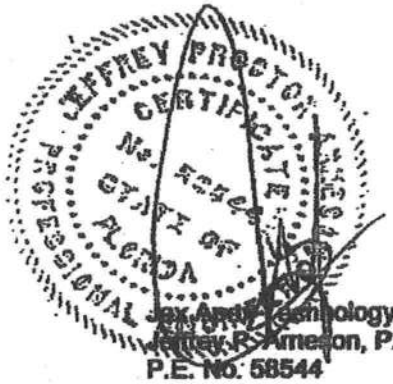
Each connector covered by this report shall be stamped with the manufacturer's name and/or trademark and the product name.

12. PERIOD OF ISSUANCE:

The content of this report expires on October 1st, 2008. For information on this report, contact Apex Technology. (904) 821-5200

13. CERTIFICATION OF INDEPENDENCE:

Jeffrey P. Ameson, the Florida engineer who prepared this report, and Apex Technology have no financial interest in the manufacturing, sales, or distribution of the products included in this report. Jeffrey P. Ameson and Apex Technology comply with all criteria as stated in Florida Administrative Code Chapter 9B-72.110.



Apex Technology, Inc.
Jeffrey P. Ameson, P.E.
P.E. No. 58544
August 5, 2005

META/HETA/HHETA/HETAL/TSS

EMBEDDED TRUSS ANCHORS AND TRUSS SEAT SNAP-IN

The embedded truss anchor series provides an engineered method to properly attach roof trusses to concrete and masonry walls. The products are designed with staggered nail patterns for greater uplift resistance. New to this year's catalog is information regarding the use of two anchors on single- and multi-ply trusses.

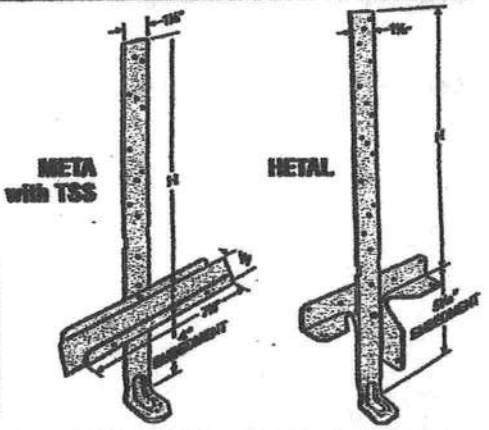
The TSS, a companion product of the META, provides a moisture barrier between the concrete and truss. The preassembled unit is riveted with no height adjustment.

MATERIAL: HHETA–14 gauge; HETA–16 ga; HETAL strap 16 gauge, truss seat 18 gauge; META–18 gauge; TSS–22 gauge.

FINISH: Galvanized. Some products available in Z-MAX; see Corrosion Resistance, page 5.

INSTALLATION:
- Use all specified fasteners. See General Notes.
- The META, HETA and HHETA are embedded 4" into a concrete beam or grouted block wall; HETAL is embedded 5⅛".
- Do not drive nails through the truss plate on the opposite side of the truss, which could force the plate off the truss.
- The TSS moisture barrier may be preattached to the truss using 6d commons.

CODES: See page 10 for Code Listing Key Chart.



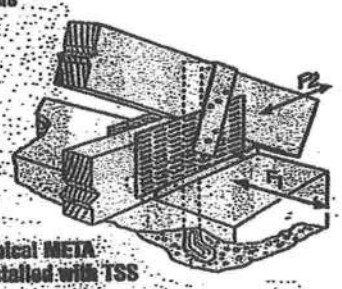
Model No.	W
TSS2	1⅞
TSS2-2	3⅛
TSS4	3⅝

Model No.	H	Fasteners and Uplift (133 Load Duration Increase)				Fasteners and Uplift (160 Load Duration Increase)				Lateral Loads (133 & 160)				Code Ref.
		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		DF/SP		SP/MP		
		Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load	F_1	F_2	F_1	F_2	
META12	8	7-10dx1½	1240	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	160
META14	10	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	
META16	12	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	
META18	14	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	
META20 ×	16	8-10dx1½	1415	6-16d	1250	6-10dx1¼	1270	5-16d	1245	335	695	270	545	
		9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	
META22 ⁄	18	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	
META24	20	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	335	695	270	545	
META40	36	9-10dx1½	1450	7-16d	1450	7-10dx1½	1450	6-16d	1450	—	—	—	—	
HETA12	8	7-10dx1½	1265	7-16d	1475	7-10dx1½	1520	7-16d	1780	335	730	270	625	8, 62
HETA16	12	10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	335	730	270	625	
HETA20	16	9-10dx1½	1630	8-16d	1690	8-10dx1½	1785	7-16d	1780	335	730	270	625	
		10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	335	730	270	625	
HETA24	20	10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	9-16d	1810	335	730	270	625	170
HETA40	36	10-10dx1½	1810	9-16d	1810	9-10dx1½	1810	8-16d	1810	—	—	—	—	
HHETA12	8	7-10dx1½	1305	7-16d	1520	7-10dx1½	1565	7-16d	1820	335	730	270	625	160
HHETA16	12	12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	335	730	270	625	
HHETA20	16	11-10dx1½	2050	10-16d	2170	9-10dx1½	2010	8-16d	2080	335	730	270	625	
		12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	335	730	270	625	
HHETA24	20	12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	335	730	270	625	
HHETA40	36	12-10dx1½	2235	11-16d	2235	10-10dx1½	2235	9-16d	2235	—	—	—	—	
HETAL12	7	10-10dx1½	905	10-16d	1055	10-10dx1½	1085	10-16d	1270	415	1100	365	945	8, 62
HETAL16	11	15-10dx1½	1810	14-16d	1810	14-10dx1½	1810	13-16d	1810	415	1100	365	945	
HETAL20	15	15-10dx1½	1810	14-16d	1810	14-10dx1½	1810	13-16d	1810	415	1100	365	945	

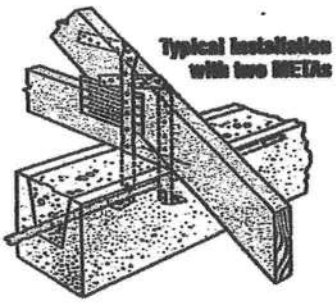
1. Loads include a 33% or 60% load duration increase on the fasteners for seismic or wind loading, but do not include a 33% stress increase on the steel capacity. Refer to page 12 for further explanation.
2. Five nails must be installed into the truss seat of the HETAL.
3. Parallel-to-plate load towards face of HETAL is 1975 lbs.
4. Lateral loads are based on a minimum installation of 12 nails and the strap wrapped over the heel.
5. Minimum f'c is 2,000psi.
6. It is acceptable to use a reduced number of fasteners in a product provided that there is a reduction in load capacity. The load per nail can be approximated by dividing the allowable load by the number of fasteners. This concept applies to all member sizes. There should be a minimum of 4 nails installed in the strap.

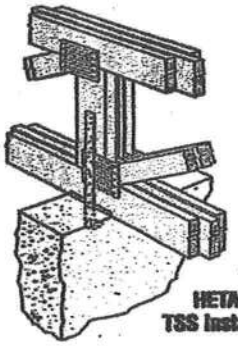
Model No.	Double Embedded Anchor Installation into Grouted CMU Bond Beam (133 Load Duration Increase)				(160 Load Duration Increase)				Lateral Loads (133 & 160)				Code Ref.
	1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		1 Ply So. Pine Truss		2 or 3 Ply So. Pine Truss		DF/SP		SP/MP		
	Fasteners	Load	Fasteners	Load	Fasteners	Load	Fasteners	Load	F_1	F_2	F_1	F_2	
META	12-10dx1½	1985	14-16d	1900	10-10dx1½	1985	14-16d	1900	1210	1160	1040	1000	160
HETA	12-10dx1½	2035	14-16d	2500	10-10dx1½	2035	12-16d	2500	1225	1520	1055	1305	

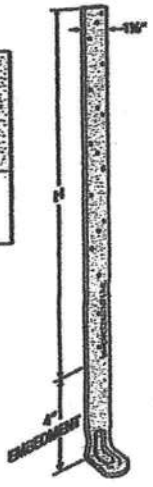
1. For concrete tie beam applications for 2 or 3 ply trusses, increase the META load 35% and the HETA load 8%.
2. Divide total number of fasteners equally between both straps.
3. Minimum f'c is 2,500 psi.
4. See Instruction to the Designer page 9 for loads in multiple directions.
5. Lateral loads are based on a minimum installation of 12 nails and the strap wrapped over the heel.



Typical META Installed with TSS


Typical Installation with two META's


Typical HETA20 with TSS Installation



HETA20 (HHETA similar)

/MGT/HGT *HEAVY GIRDER TIEDOWNS*

SIMPSON Strong-Tie

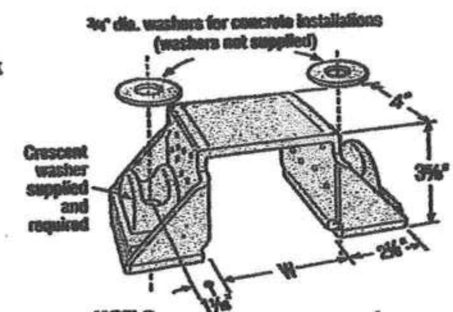
GT provide lighter load alternatives for The HGT-4 is sized for 4-2x widths. This series uplift resistance for wood frame and concrete block n. The HGT can be installed on trusses and beams chord slopes from 3:12 to 8:12. Available in 2-ply, and 4-ply widths.

MATERIAL: LGT—14 ga; MGT—12 ga; HGT—7 ga.

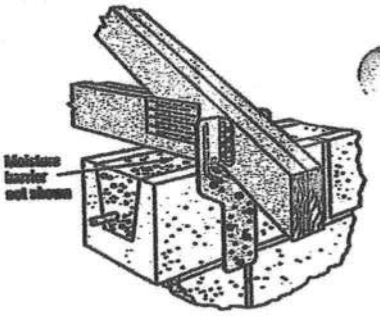
FINISH: HGT—Simpson gray paint; LGT, MGT— galvanized

INSTALLATION:
- When the HGT-3 is used with a 2-ply girder or beam, shimming is required. Fasten to act as one unit.
- Attach to grouted concrete block with a minimum one #5 rebar horizontal in the top lintel block.
- Minimum f'_c = 2500 psi maximum aggregate ⅜".

CODES: See page 10 for Code Listing Key Chart.



HGT-2
(HGT-3 and HGT-4 similar)

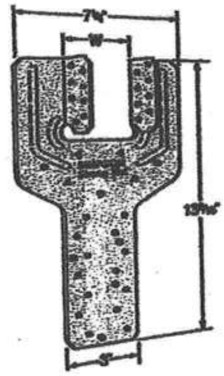


Typical LGT2 Installation into Masonry

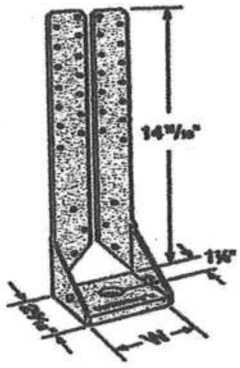
Model No.	W	O.C. Dim Between Anchors	Fasteners: Anchor Dia. Concrete	Fasteners: Girder	Avg Ult	DFL/SP Allowable Loads (133/160)	SPF Allowable Loads (133/160)	Code Ref.
MGT	3¾	—	1-⅝	22-10d	13005	3965	3330	160
HGT-2	3⁹⁄₁₆	5¾	2-¾	16-10d	35400	10980	6485	6,38, 62
HGT-3	4¹⁵⁄₁₆	7⅜	2-¾	16-10d	35580	10530	9035	
HGT-4	6⁹⁄₁₆	9	2-¾	16-10d	28605	9250	9250	

Masonry Application

Model No.	W	O.C. Dim Between Anchors	Fasteners: CMU	Fasteners: Concrete	Fasteners: Girder	Avg Ult	DFL/SP Allowable Loads (133/160)	SPF Allowable Loads (133/160)	Code Ref.
LGT2	3¼	—	7-¼x2¼ Titen	7-¼x1¾ Titen	16-16d Sinker	6533	2150	1850	160

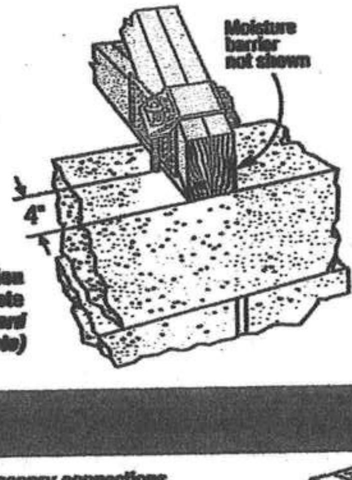


LGT2

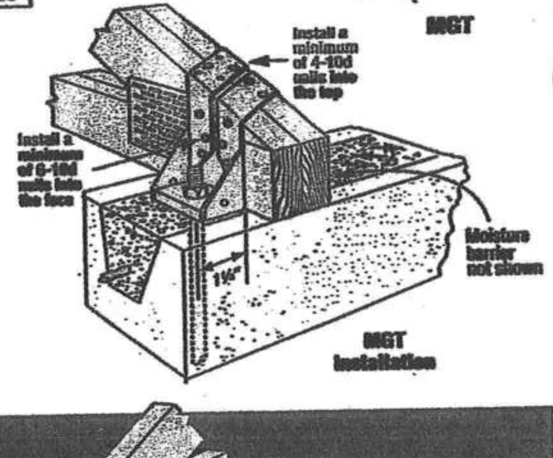


MGT

ttached members must be designed to sist applied loads.
 achieve the loads listed, anchorage into a ncrete block bond beam shall be designed y the building designer.
3. To achieve the loads listed for the HGT, anchorage into a 8" wide concrete tie-beam can be made using Simpson SET epoxy with a ⅝" diameter anchor and a minimum embedment depth of 12".
4. Allowable loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed; reduce where other loads govern.



Typical HGT-2 Installation into Concrete
(⅝" diameter standard washers required for concrete)



MGT Installation

MTSM/HTSM *TWIST STRAPS*

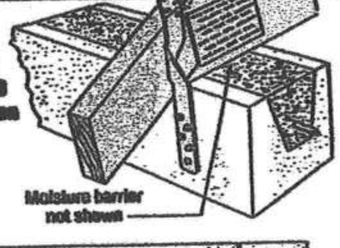
The MTSM and HTSM offer high strength truss to masonry connections.

MATERIAL: MTSM–16 gauge; HTSM–14 gauge

FINISH: Galvanized. Some products available in stainless steel and Z-MAX; see Corrosion-Resistance, page 5.

INSTALLATION:
- Use all specified fasteners. See General Notes.
- Attach to grouted concrete block with a minimum one #5 rebar horizontal.
- Minimum f'_c = 2500 psi maximum aggregate ⅜".

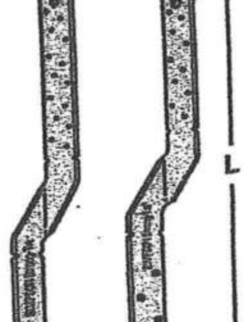
CODES: See page 10 for Code Listing Key Chart.



Typical MTSM20 Installation

Model No.	L	Fasteners[2]: Truss	Fasteners[2]: CMU	Fasteners[2]: Concrete	Doug-Fir-Larch/So Pine Allowable Uplift Loads[1]: 10d (133/160)	Doug-Fir-Larch/So Pine: 10dx1½" (133)	Doug-Fir-Larch/So Pine: 10dx1½" (160)	Spruce-Pine-Fir Allowable Uplift Loads[1]: 10d (133/160)	Spruce-Pine-Fir: 10dx1½" (133)	Spruce-Pine-Fir: 10dx1½" (160)	Code Ref.
MTSM16	16	7-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	860	840	860	750	730	750	160
MTSM20	20	7-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	860	640	860	750	730	750	
HTSM16	16	8-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	1175	1045	1175	1020	905	1020	
HTSM20	20	10-10d	4-¼x2¼ Titen	4-¼x1¾ Titen	1175	1045	1175	1020	1020	1020	

1. Loads have been increased 33% and 60% for earthquake or wind loading; no further increase allowed; reduced where other loads govern.
2. Twist straps do not have to be wrapped over the truss to achieve the allowable load.
3. Minimum edge distance for Titens is 1½".



MTSM16

MTSM20

ALUM FASICA & SOFFIT

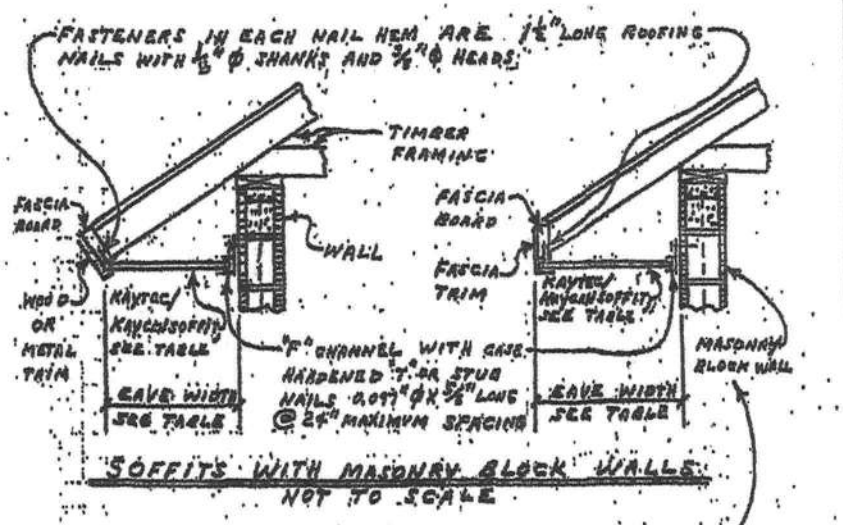
ALLOWABLE DESIGN WIND PRESSURES IN PSF

KAYTEC/KAYCAN SOFFIT TYPE	EAVE WIDTH IN INCHES				
	12"	15"	18"	21"	24"
SP-600 (ALUMINUM) 16" VENTED CATALOG # 0605	+/- 72.6	+/- 58.1	+/- 48.4	+/- 41.5	+/- 36.3
SP-600 (ALUMINUM) 16" SOLID CATALOG # 0606	+/- 72.2	+/- 57.7	+/- 48.1	+/- 41.2	+/- 36.1
VENTED PANEL 12" (ALUMINUM) CATALOG # 9509	+/- 76.6	+/- 77.2	+/- 64.5	+/- 55.2	+/- 48.3
SOLID PANEL 12" (ALUMINUM) CATALOG # 9510	+/- 96.0	+/- 76.8	+/- 64.0	+/- 54.9	+/- 48.0
FULL O-VENT T4 (12") VINYL PRODUCT CODE: 0628	+/- 47.5	+/- 36.5	+/- 29.7	+/- 25.2	+/- 21.6
ECO SOLID, CENTER VENT & FULL VENT T4 (12") VINYL PROD. CODES 0625, 0626, 0627	+/- 45.3	+/- 34.1	+/- 28.4	+/- 23.9	+/- 20.6
SOLID, CENTER VENT & FULL VENT T4 (12") VINYL PROD. CODES 0625, 0626, 0627	+/- 45.3	+/- 34.1	+/- 28.4	+/- 23.9	+/- 20.6
SOLID & VENTED O5 (10") VINYL PROD. CODES 0624, 0628	+/- 54.4	+/- 41.2	+/- 34.0	+/- 28.6	+/- 24.7
BEADED, SOLID AND VENTED T2.67 (8") VINYL PROD. CODES: 0622, 0623	+/- 62.0	+/- 52.3	+/- 42.6	+/- 35.3	+/- 30.9

GENERAL NOTES

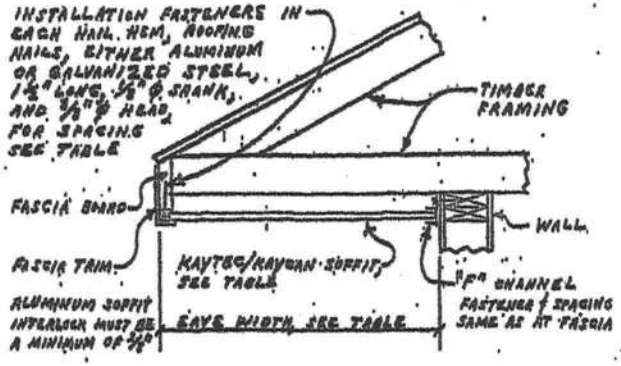
1. DESIGN PRESSURES LISTED IN TABLE ARE BASED ON A RATIONAL ANALYSES FOR ALUMINUM SOFFITS DONE IN HR ENGINEERING PROJECT 04020002, AND A COMPARATIVE ANALYSES FOR VINYL SOFFITS DONE IN 04050001 THAT ARE IN CONFORMANCE WITH FLORIDA BUILDING CODE 2004 SECTION 1609 "WIND LOADS".

2. FLORIDA BUILDING CODE 2004 DOES NOT DIRECTLY MANDATE WIND LOAD DESIGN PRESSURES ON SOFFITS.



SOFFITS WITH MASONRY BLOCK WALLS
NOT TO SCALE

ALTERNATE WALL DETAIL
NOT TO SCALE



SOFFIT WITH WOOD FRAMED WALL
NOT TO SCALE

HR Engineering, Inc.	DATE: 14 JULY 2005	PROJECT NO. 050700005 SHEET 1 OF 1	Allen N. Reeves 14 July 2005
CLIENT: KAYTEC INC.	BY: A. REEVES	PROJECT NAME: KAYTEC/KAYCAN SOFFITS	

Accessories

Technical

Fax 206 454-3622

Tapcon.

Concrete Anchors

PULLOUT IN CONCRETE (3145 PSI, cured 40 days)

Anchor Diameter	Depth of Embedment in Solid Material (inches) 1	1-1/4	1-1/2	1-3/4
3/16"	341 lbs.	581 lbs.	883 lbs.	1050 lbs.
1/4"	718 lbs.	1136 lbs.	1537 lbs.	1880 lbs.

Test Number CH3932/Pittsburgh Testing Laboratories

PULLOUT IN HOLLOW BLOCK

Anchor Diameter	Depth of Embedment in Solid Material (inches) 1	1-1/4	1-1/2	1-3/4
3/16"	280 lbs.	357 lbs.	468 lbs.	547 lbs.
1/4"	406 lbs.	616 lbs.	851 lbs.	984 lbs.

Test Number CH3748/Pittsburgh Testing Laboratories

SHEAR STRENGTH

Anchor Diameter	Anchor Embedment	Shear Strength in 3145 PSI [illegible] Concrete	Shear Strength in [illegible] Hollow Block
3/16"	1-1/4"	852 lbs.	731 lbs.
1/4"	1-1/4"	1804 lbs.	1058 lbs.

Test Number CH3932/Pittsburgh Testing Laboratories

Fixture Thickness	Recommended Anchor Length	Drill Bit Length
0" to 1/4"	1-3/4"	3-1/2"
1/4" to 3/4"	1-3/4"	3-1/2"
3/4" to 1-1/4"	2-1/4"	4-1/2"
1-1/4" to 1-3/4"	2-3/4"	4-1/2"
1-3/4" to 2-1/4"	3-1/4"	5-1/2"
2-1/4" to 2-3/4"	3-3/4"	5-1/2"
2-1/2" to 3"	4"	5-1/2"

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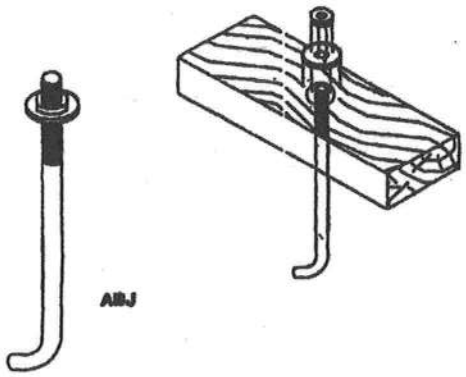
ANCHOR BOLT WITH NUT & 1" WASHER

Design Features:
- Bolt only with code minimum embedment with 3000 PSI concrete will resist 4,800 lbs, see washer capacity below.

Materials: Black and galvanized steel

Footnotes: Other sizes available on request. All references to bolts or MB's are structural quality through bolts equal to or better than ASTM Standard A307.



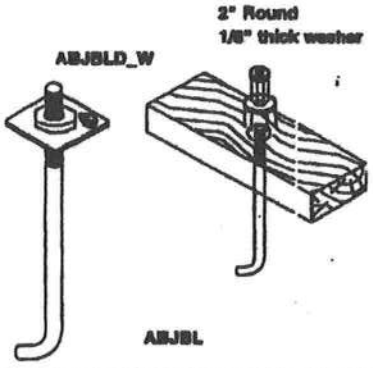
SIZE	PRODUCT CODE	DESCRIPTION	PER CTN
1/2 X8	ABJBL8C	Black	50
5/8 X8	ABJBL8C	Black	50
1/2 X10	ABJBL10C	Black	50
5/8 X10	ABJBL10C	Black	50
1/2 X14	ABJBL14C	Black	50
5/8 X14	ABJBL14C	Black	50
1/2 X18	ABJBL18C	Black	50
5/8 X18	ABJGA8	Galv.	50
1/2 X8	ABJGA8	Galv.	50
5/8 X10	ABJBL10D	Black	50
5/8 X12	ABJBL12D	Black	50

ANCHOR BOLT (WITH NUT & 2"X2"X1/8" WASHER)

Design Features:
- 6" minimum embedment with 3000 PSI concrete will resist 1,635 lbs.

Materials: Black steel

Footnotes: *Supplied with a 2" round washer 1/8" thick.
Wind uplift loads are based on the shear capacity of No. 2 Southern Pine. Compression perpendicular to grain 565 (psi).



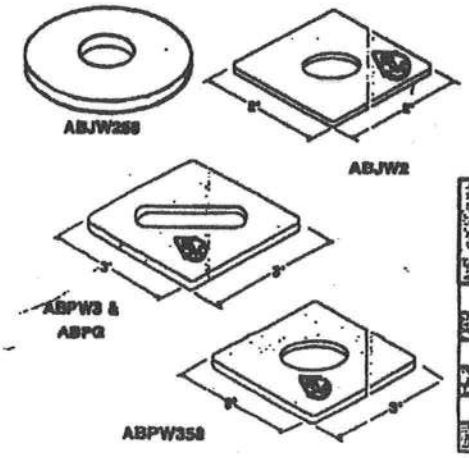
SIZE	PRODUCT CODE	DESCRIPTION	PER CTN
1/2x8	ABJBL8W	Black	60
5/8x8	ABJBL8W	Black	60
1/2x10	ABJBL10W	Black	50
5/8x10	ABJBL10W*	Black	50
5/8x12	ABJBL12DW*	Black	50

ANCHOR BOLT WASHER/PLATE

Design Features:
- The washer/plate adds increased resistance to wind uplift for bottom sill plate anchor bolt.

Materials: 10 Gauge Galvanized & 1/8 & 1/4 Black steel

Footnotes: *Also available in 50# ctn:approximately 345 pcs.
Wind uplift loads are based on the shear capacity of No. 2 Southern Pine. Compression perpendicular to grain 565 (psi).
+Round hole in washer.



SIZE	GAUGE	PRODUCT CODE	ANCHOR BOLT DIAMETER	ALLOWABLE LOAD WIND / EARTHQUAKE UPLIFT 160%	UPLIFT 100%	PER CTN
2x2	1/8	ABJW2*	1/2"	1635	1635	50
2x2	1/8	ABJW2SS*	5/8"	1470	1470	50
3x3	10	ABPG12	1/2"	3675	3675	40
3x3	10	ABPG12SS	5/8"	3675	3675	40
3x3	1/4	ABPW3	1/2"	4800	4800	40
3x3	1/4	ABPW3SS	5/8"	4800	4800	40

LINTEL
INFORMATION

Cement Precast Products, Inc.

INSTALLATION INSTRUCTIONS

Version 1.0

February 28, 2005

Cement Precast Products, Inc.

PRECAST LINTELS
(6", 8" AND 12" WIDE)

In order for proper installation of precast and prestressed lintels, DANSCO Engineering, LLC, has prepared this installation instructions to be used in conjunction with quality control methods of the contractor and good construction practices.

Preparation

1. All reinforcements shall be cleaned by removing mud, oil, or other materials that will adversely affect or reduce bond at the time mortar or grout is placed. Reinforcement with rust, mill scale, or a combination of both will be accepted as being satisfactory without cleaning or brushing provided the dimensions and weights, including heights of deformations, of a cleaned sample are not less than required by the ASTM specification covering this reinforcement in this Specification.

2. Prior to placing masonry, remove laitance, loose aggregate, and anything else that would prevent mortar from bonding to the lintel.

3. Debris – Construct grout spaces free of mortar dropping, debris, loose aggregates, and any material deleterious to masonry grout.

Lintel / masonry erection

1. Placing lintel – Length of bearing of lintels on their support shall be a minimum of 4 inches for filled lintels and 6 ½ inches for unfilled lintels in the direction of span. Provide a temporary support for lintels that are greater than 14' – 0"; the temporary support shall not be removed until 2 days after the grout placement.

2. Placing mortar and units (for composite lintels only)
   - Bed and head joints – Unless otherwise required, construct 3/8 inches thick bed and head joints. Construct joints that also conform to the following:
   a) Unless otherwise required, tool joint with a round jointer when the mortar is thumbprint hard.
   b) Remove masonry protrusions extending ½ inches or more into cells or cavities to be grouted.

   - Place hollow units so:
   a) Face shells of bed joints are fully mortared.
   b) Head joints are mortared, a minimum distance from each face equal to the face shell thickness of the unit.

INSTALLATION INSTRUCTIONS

c) Vertical cells to be grouted are aligned and unobstructed openings for grout are provided in accordance with the Project Drawings.

- Place clean units while the mortar is soft and plastic. Remove and relay in fresh mortar any unit disturbed to the extend that initial bond is broken after initial positioning.

Reinforcement installation

a) Support and fasten reinforcement together to prevent displacement beyond the tolerances allowed by construction loads or by placement of grout or mortar.
b) Completely embed reinforcing bars in grout in accordance with ACI530-02 Article 3.5.
c) Maintain clear distance between reinforcing bars and any face of masonry unit or formed surface, but not less than ¼ inches for fine grout or ½ inches for coarse grout.
d) Splice only where indicated on the Project Drawings, unless otherwise acceptable.
e) Unless accepted by the Architect/ Engineer, do not bend reinforcement after it is embeded in grout or mortar.
f) Place joint reinforcement so that longitudinal wires are embeded in mortar with a minimum cover of ½ inches when not exposed to weather or earth and 5/8 inches when exposed to weather or earth.

Grout placement

a) Placing time – Place grout within 1½ hours from introducing water in the mixture and prior to initial set.
b) Confinement – Confine grout to the areas indicated on the Project Drawings. Use material to confine grout that permits bond between masonry units and mortar.
c) Grout pour height – Do not exceed the maximum grout pour height given in the ACI530-02 Table 7.
d) Grout lift height – Place grout in lifts not exceeding 5 feet.
e) Consolidation – Consolidate grout at the time of placement.
   - Consolidate grout pours 12 inches or less in height by mechanical vibration or by puddling.
   - Consolidate pours exceeding 12 inches in height by mechanical vibration and reconsolidate by mechanical vibration after initial water loss and settlement has occurred.

Field quality control

a) Verify masonry unit strength, f'm in accordance with the ACI530-02 Article 1.6.
b) Sample and test grout as required by the ACI530-02 Articles 1.4B and 1.6.

DE
DANSCO ENGINEERING, LLC

P.O. Box 3400
Apollo Beach, FL 33572

Telephone (813) 645-0166
Facsimile (813) 645-9698

E-mail: dengine1@danscoengineering.com
CA25948

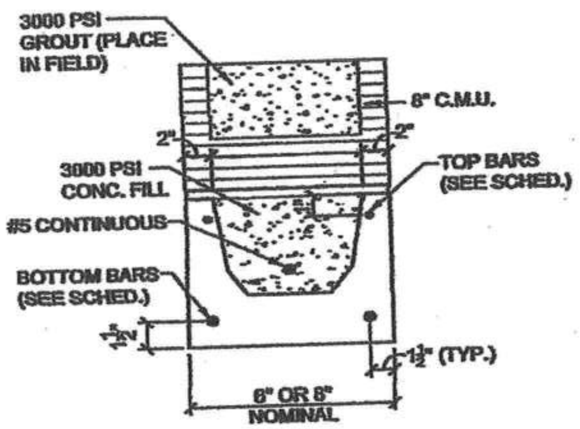
Cement Precast Products, Inc.

Precast concrete lintels 6", 8" and 12" wide have been reviewed by our office for compliance with the following codes:

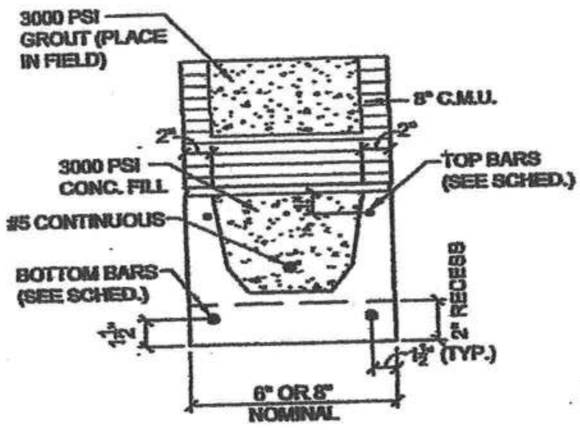
- Florida Building Code 2004 Residential, sections R402.2 and R606.
- Florida Building Code 2004 Building, sections 1901.2 and 2107.

Our review is limited to the precast concrete lintels together with verification that they are accurate and appropriate for use according to the requirements of the above-referenced codes. Only Cement Precast Products, Inc. lintels may be used for the work depicted herein.

cp
Cement Precast Products, Inc.
2033 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-0953 - Fax (352) 378-4611
www.cementprecast.com



TYPICAL LINTEL SECTION
(6" OR 8"x16" LINTEL IS SHOWN)



TYPICAL RECESS LINTEL SECTION
(6" OR 8"x16" LINTEL IS SHOWN)

ENGINEERING SPECIFICATIONS:

1.) SAFE LOADS ARE TOTAL SUPERIMPOSED ALLOWABLE LOADS.
2.) DESIGNER MAY EVALUATE CONCENTRATED LOADS FROM THE SAFE LOAD TABLES BY CALCULATING MAX. RESISTING SHEAR AND MOMENT FOR THE LISTED LINTELS.
3.) SAFE LOADS LISTED ON ALL TABLES ARE IN UNITS OF POUND PER LINEAR FOOT.

GENERAL NOTES:

1.) CODES:
- 1.1 FLORIDA BUILDING CODE 2004 RESIDENTIAL, SECTIONS R402.2, & R606.
- 1.2 FLORIDA BUILDING CODE 2004 BUILDING, SECTIONS 1901.2 & 2107.
- 1.3 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-02).
- 1.4 AMERICAN SOCIETY OF CIVIL ENGINEERS MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES(ASCE 7-98).

2.) CONCRETE:
- 2.1 CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:
  - 2.1.1 CONCRETE FILL (PLACE IN FIELD) - 3000 PSI
  - 2.1.2 PRECAST W/ STANDARD REINFORCEMENT - 5000 PSI
  - 2.1.3 GROUT PER ASTM C476 - 3000 PSI W/ MAX. 3/8" AGGERATE, 8" TO 11" SLUMP.
- 2.2 REINFORCING BARS:
  - 2.2.1 STEEL IN LINTEL AND KNOCKOUT BLOCK (PLACED IN FIELD) ASTM A615 (GRADE 40).
- 2.3 DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315.
- 2.4 CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.

3) MASONRY:
- 3.1 DESIGN AND CONSTRUCTION SHALL CONFORM TO THE SPECIFICATION OF THE NATIONAL CONCRETE MASONRY ASSOCIATION AND ACI 530-02.
- 3.2 MINIMUM MASONRY UNIT STRENGTH: F'M 1500 PSI.
- 3.3 MORTAR SHALL BE TYPE S.

4) STRUCTURAL:
- 4.1 SAFE LOAD VALUES ARE BASED ON LINTELS HAVING A BEARING OF 4".
- 4.2 FOR LINTELS THAT ARE GREATER THAN 14'-0" CLEAR SPAN THEY SHALL BE PROVIDED A TEMPORARY SUPPORT, AND THE TEMPORARY SUPPORT SHALL NOT BE REMOVED UNTIL 2 DAYS AFTER GROUT PLACEMENT.

THUY H. HUYNH
LICENSE
No. 60122
STATE OF FLORIDA
PROFESSIONAL ENGINEER
APR 0 6 2005

☐ SAMUEL A. GREENBERG, P.E. #34245
☐ IRISH J. BENSON, P.E. #45159
☒ THUY H. HUYNH, P.E. #60122

DANSCO ENGINEERING, L.L.C.

GENERAL NOTES & DETAILS		
CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.H.
		SCALE: N.T.S.
DE# 24-4547		SK1

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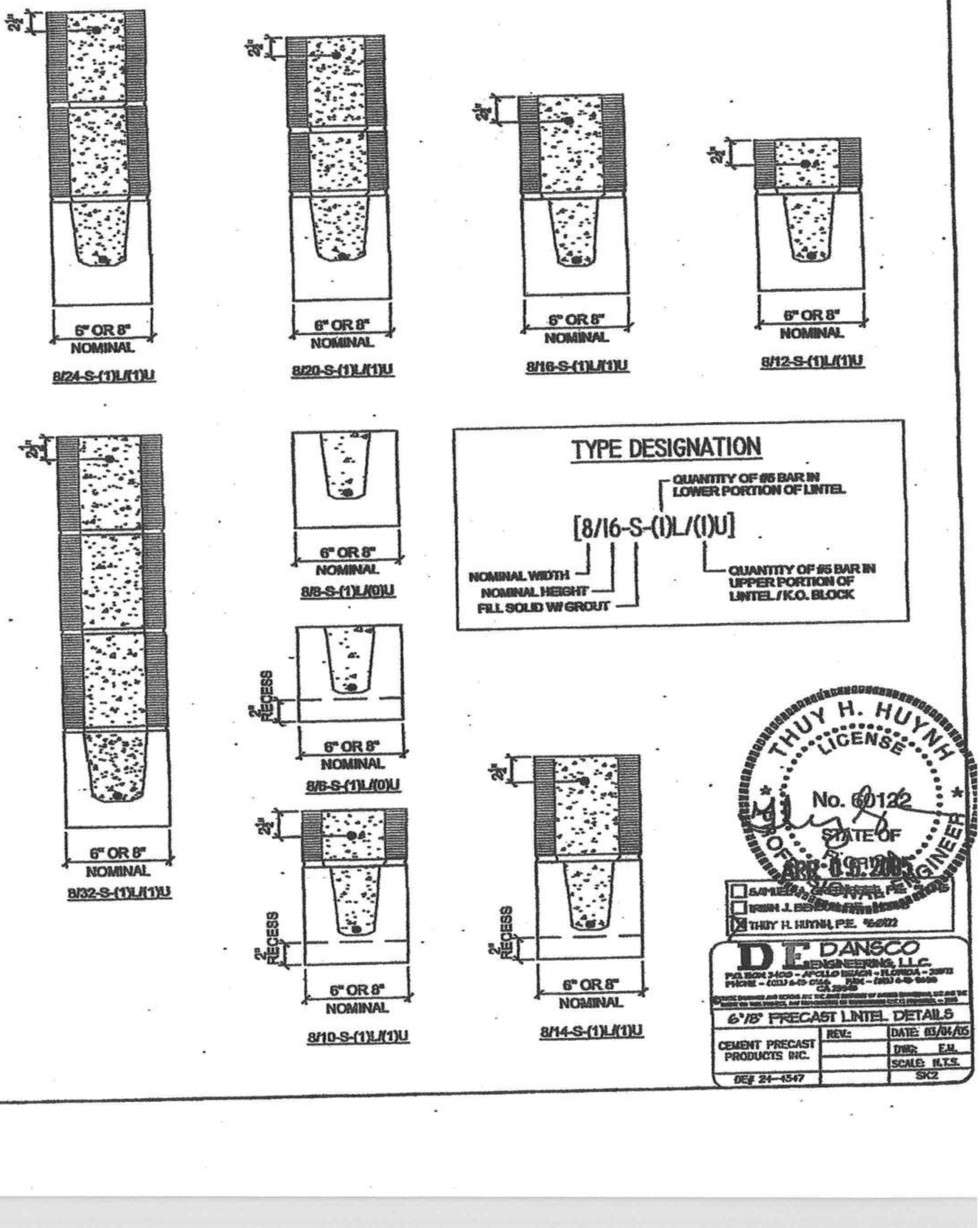
Cement Precast Products, Inc.

2033 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-0953 - Fax: (352) 378-4611
www.cementprecast.com



2½"
6" OR 8" NOMINAL
8/24-S-(1)L/(1)U
8/20-S-(1)L/(1)U
8/16-S-(1)L/(1)U
8/12-S-(1)L/(1)U
8/32-S-(1)L/(1)U
8/8-S-(1)L/(0)U
2" RECESS
8/6-S-(1)L/(0)U
8/10-S-(1)L/(1)U
8/14-S-(1)L/(1)U
TYPE DESIGNATION
QUANTITY OF #5 BAR IN LOWER PORTION OF LINTEL
[8/16-S-(1)L/(1)U]
NOMINAL WIDTH
NOMINAL HEIGHT
FILL SOLID W/GROUT
QUANTITY OF #5 BAR IN UPPER PORTION OF LINTEL / K.O. BLOCK
THUY H. HUYNH
LICENSE
No. 60122
STATE OF
THUY H. HUYNH, P.E.
DANSCO ENGINEERING, LLC.
6"/8" PRECAST LINTEL DETAILS
CEMENT PRECAST PRODUCTS INC.
REV.:
DATE: 03/04/05
DWG: F.H.
SCALE: N.T.S.
SK2

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cp
Cement Precast Products, Inc.
2833 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-6553 - Fax: (352) 378-4611
www.cementprecast.com

LINTEL				8" LINTEL SAFE GRAVITY LOADS (PLF)					
TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/8-S-(0)L 8/8-S-(1)L	8/12-S-(0)L 8/12-S-(1)L	8/16-S-(0)L 8/16-S-(1)L	8/20-S-(0)L 8/20-S-(1)L	8/24-S-(0)L 8/24-S-(1)L	8/32-S-(0)L 8/32-S-(1)L
3'-0"	1'-8"	None	(2)#3	3859 3859	8159 10000	10000 10000	10000 10000	10000 10000	10000 10000
3'-6"	2'-2"	None	(2)#3	2861 2861	5757 7219	8114 10000	10000 10000	10000 10000	10000 10000
4'-0"	2'-8"	None	(2)#3	2270 2270	4279 5183	6034 10000	7791 10000	9550 10000	10000 10000
4'-6"	3'-2"	None	(2)#3	1879 1879	3301 4037	4658 [illegible]	6015 10000	7375 10000	10000 10000
4'-8"	3'-4"	None	(2)#3	1776 1776	3048 [illegible]	4301 [illegible]	5556 10000	6811 10000	9324 10000
5'-4"	4'-0"	None	(2)#3	1340 1467	2275 2948	3213 4895	4153 8224	5093 10000	5744 10000
5'-10"	4'-6"	None	(2)#3	1101 1282	1875 2529	2844 4055	3418 6408	4193 [illegible]	6975 10000
6'-4"	5'-0"	(2)#2	(2)#4	1178 1178	2258 2258	3513 3513	5083 5323	6245 [illegible]	8570 10000
6'-6"	5'-2"	(2)#2	(2)#4	1166 1166	2167 2167	3347 3347	4808 5015	5907 [illegible]	8107 10000
6'-8"	5'-4"	(2)#2	(2)#4	1098 1098	2084 [illegible]	3196 [illegible]	4554 4741	5595 [illegible]	7680 10000
7'-6"	6'-2"	(2)#2	(2)#4	938 938	1745 1745	2604 2604	3539 3719	4349 5281	5972 10000
7'-8"	6'-4"	(2)#3	(2)#4	912 912	1690 1690	2511 [illegible]	3376 3555	4150 5020	5699 9974
8'-0"	6'-8"	(2)#3	(2)#4	852 852	1589 1589	2342 2342	3082 [illegible]	3789 4567	5204 9115
8'-8"	7'-4"	(2)#3	(2)#4	778 778	1407 1448	2001 2063	2596 2850	3193 3889	4387 7207
9'-4"	8'-0"	(2)#3	(2)#5	718 718	1292 1292	1856 1856	2527 2527	3461 3368	5859 5914
10'-4"	9'-0"	(2)#3	(2)#5	632 632	1125 1125	1597 1597	2141 [illegible]	2800 2800	4669 4669
11'-4"	10'-0"	(2)#3	(2)#5	563 [illegible]	995 [illegible]	1399 1399	1854 1854	2391 2391	3837 3837
12'-0"	10'-8"	(2)#3	(2)#5	524. [illegible]	923 [illegible]	1291 1291	1701 1701	2178 2178	3427 3427
12'-8"	11'-4"	(2)#3	(2)#5	490 490	861 861	1198 [illegible]	1570 1570	1998 [illegible]	3056 [illegible]
13'-4"	12'-0"	(2)#3	(2)#5	460 460	806 803	1117 [illegible]	1457 1457	1932 [illegible]	2748 2817
14'-0"	12'-8"	(2)#3	(2)#5	434 434	757 757	1046 [illegible]	1359 [illegible]	1712 1712	2475 2585
14'-8"	13'-4"	(2)#4	(2)#6	412 [illegible]	716 [illegible]	985 985	1275 [illegible]	1600 1600	2391 [illegible]
15'-8"	14'-4"	(2)#4	(2)#6	377 [illegible]	658 658	903 903	1163 [illegible]	1452 1452	2142 2142
17'-4"	16'-0"	(2)#4	(2)#6	263 [illegible]	579 [illegible]	780 [illegible]	1012 [illegible]	1255 1255	1822 1822
19'-4"	18'-0"	(2)#4	(2)#6	157 [illegible]	505 [illegible]	686 [illegible]	874 [illegible]	1076 1076	1540 [illegible]
20'-0"	18'-8"	(2)#5	(2)#6	132 [illegible]	484 [illegible]	656 [illegible]	835 [illegible]	1027 [illegible]	1463 [illegible]
21'-4"	20'-0"	(2)#5	(2)#6	95 105	372 [illegible]	604 [illegible]	766 [illegible]	939 [illegible]	1329 [illegible]
22'-0"	20'-8"	(2)#5	(2)#6	80 [illegible]	323 [illegible]	580 [illegible]	735 [illegible]	901 [illegible]	1271 [illegible]
24'-0"	22'-8"	(2)#5	(2)#6	N.R. [illegible]	214 [illegible]	493 [illegible]	656 [illegible]	800 [illegible]	1120 [illegible]

N.R. = NOT RECOMMENDED

THUY H. HUYNH
LICENSE
No. 60182
STATE OF FLORIDA
PROFESSIONAL ENGINEER
APR 06 2009

- [ ] SAMUEL A. GREENBERG, P.E. #34345
- [ ] ROBIN J. BENSON, P.E. #49156
- [x] THUY H. HUYNH, P.E. #60182

DE DANSCO ENGINEERING, L.L.C.

8" LINTEL SAFE GRAVITY LOADS		
CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: F.H.
		SCALE: N.T.S.
DE# 24-4547		SK7

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Cement Precast Products, Inc.

2033 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-0953 - Fax: (352) 378-4611

www.cementprecast.com

LINTEL				8" LINTEL SAFE UPLIFT LOADS (PLF)						LATERAL LOADS (PLF)	
TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/8-S-(1)U	8/12-S-(1)U	8/16-S-(1)U	8/20-S-(1)U	8/24-S-(1)U	8/32-S-(1)U	8/8-P	8/8-S
				8/8-S-(2)U	8/12-S-(2)U	8/16-S-(2)U	8/20-S-(2)U	8/24-S-(2)U	8/32-S-(2)U		
3'-0"	1'-8"	None	(2)#3	3369	9999	10000	10000	10009	10000	811	2089
				[illegible]	10000	10000	10000	10000	10000		
3'-6"	2'-2"	None	(2)#3	2539	6508	10000	10000	10009	10000	575	1461
				2599	10000	10000	10000	10000	10000		
4'-0"	2'-8"	None	(2)#3	2038	4763	7739	10000	10000	10000	429	1105
				2038	4763	10803	10000	10000	10000		
4'-6"	3'-2"	None	(2)#3	1701	3756	5993	7894	9796	10000	332	855
				1701	3758	6916	10000	10000	10000		
4'-8"	3'-4"	None	(2)#3	1613	3508	5541	7298	9057	10000	307	791
				1613	3508	6268	10000	10000	10000		
5'-4"	4'-0"	None	(2)#3	1334	2401	4162	5481	6803	9448	230	594
				[illegible]	2401	[illegible]	7739	10000	10000		
5'-10"	4'-6"	None	(2)#3	1182	2350	3439	4530	5622	7808	190	491
				1182	2777	3874	6101	10000	10000		
6'-4"	5'-0"	(2)#2	(2)#4	1110	1975	2890	3906	4724	6561	333	894
				1110	2115	3325	5036	7760	10000		
6'-6"	5'-2"	(2)#2	(2)#4	1083	1669	2736	3603	4472	6211	316	847
				1083	2055	3175	4750	7213	10000		
6'-8"	5'-4"	(2)#2	(2)#4	1048	1772	2594	3416	4240	5888	289	803
				1048	1980	3038	4511	6739	10000		
7'-6"	6'-2"	(2)#2	(2)#4	802	1384	2025	2663	3311	4598	233	627
				802	1655	2780	3579	[illegible]	[illegible]		
7'-8"	6'-4"	(2)#3	(2)#4	916	1322	1834	2548	3162	4392	273	742
				968	1605	[illegible]	3498	[illegible]	[illegible]		
8'-0"	6'-8"	(2)#3	(2)#4	823	1209	1770	2331	2893	4018	249	679
				[illegible]	1518	2239	3164	4413	7953		
8'-8"	7'-4"	(2)#3	(2)#4	746	1023	1498	1973	2449	3410	205	575
				746	1359	2002	2776	3789	6791		
9'-4"	8'-0"	(2)#3	(2)#5	721	877	1294	1694	2099	2916	175	653
				721	1239	[illegible]	2460	3284	5752		
10'-4"	9'-0"	(2)#3	(2)#5	639	711	1049	1370	1700	2362	125	529
				639	1083	1569	2403	2751	4570		
11'-4"	10'-0"	(2)#3	(2)#5	573	587	859	1132	1405	1952	92	437
				[illegible]	985	1376	1893	2869	3780		
12'-0"	10'-8"	(2)#3	(2)#5	536	522	784	1006	1249	1735	N.R	389
				537	900	[illegible]	1691	2188	[illegible]		
12'-8"	11'-4"	(2)#3	(2)#5	479	467	684	900	1118	1552	N.R	348
				505	[illegible]	[illegible]	1569	[illegible]	[illegible]		
13'-4"	12'-0"	(2)#3	(2)#5	431	420	615	810	1006	1397	N.R	313
				[illegible]	793	[illegible]	1482	[illegible]	[illegible]		
14'-0"	12'-8"	(2)#3	(2)#5	388	380	557	733	910	1264	N.R	283
				451	741	1088	1370	[illegible]	2602		
14'-8"	13'-4"	(2)#4	(2)#6	432	346	506	667	827	1149	N.R	447
				[illegible]	[illegible]	[illegible]	[illegible]	1619	2275		
15'-8"	14'-4"	(2)#4	(2)#6	353	302	442	582	723	1004	N.R	357
				400	[illegible]	[illegible]	1148	1427	[illegible]		
17'-4"	16'-0"	(2)#4	(2)#6	258	246	360	474	588	817	N.R	251
				[illegible]	379	[illegible]	993	1180	[illegible]		
19'-4"	18'-0"	(2)#4	(2)#6	169	195	288	379	471	654	N.R	169
				[illegible]	[illegible]	[illegible]	748	929	[illegible]		
20'-0"	18'-8"	(2)#5	(2)#6	181	183	269	354	439	610	N.R	166
				[illegible]	[illegible]	537	[illegible]	881	1208		
21'-4"	20'-0"	(2)#5	(2)#6	141	161	235	310	385	535	N.R	131
				152	[illegible]	402	[illegible]	760	1050		
22'-0"	20'-8"	(2)#5	(2)#6	126	151	221	291	362	503	N.R	116
				135	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
24'-0"	22'-8"	(2)#5	(2)#6	101	134	196	259	321	446	N.R	80
				108	218	[illegible]	509	[illegible]	[illegible]		

N.R. = NOT RECOMMENDED

THUY H. HUYNH LICENSE No. 60122 STATE OF FLORIDA PROFESSIONAL ENGINEER

APR 06 2005

☐ SAMUEL A. GREENBERG, P.E. #34245
☐ IRBIN J. BENSON, P.E. #49759
☒ THUY H. HUYNH, P.E. #60122

DE DANSCO ENGINEERING, L.L.C.
P.O. BOX 3480 - APOLLO BEACH - FLORIDA - 33572
PHONE - (813) 645-2314 FAX - (813) 645-5638
CA 29510

8" LINTEL SAFE UPLIFT LOADS		
CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: F.H.
		SCALE: N.T.S.
DE# 24-4547		SK8

cp
Cement Precast Products, Inc.
2033 N.E. 27th Avenue Gainesville, Fl 32609 - (352) 372-0953 - Fax: (352) 378-4611
www.cementprecast.com

LINTEL				8" RECESS LINTEL SAFE GRAVITY LOADS (PLF)		
TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/6-S-(0)L 8/6-S-(1)L	8/10-S-(0)L 8/10-S-(1)L	8/14-S-(0)L 8/14-S-(1)L
3'-6"	2'-2"	None	(2)#3	1530 1530	4400 4400	6931 10000
4'-0"	2'-8"	None	(2)#3	1250 1250	3351 [illegible]	5155 [illegible]
4'-4"	3'-0"	None	(2)#3	1113 1113	2851 2890	4322 5483
4'-6"	3'-2"	None	(2)#3	1005 1005	2624 2703	3979 5010
4'-8"	3'-4"	None	(2)#3	1003 1003	2422 [illegible]	3674 4612
5'-8"	4'-4"	None	(2)#3	764 774	1584 1856	2406 [illegible]
6'-8"	5'-4"	(2)#2	(2)#4	652 652	1491 1491	2401 2401
7'-8"	6'-4"	(2)#3	(2)#4	546 546	1225 1225	1919 1919

THUY H. HUYNH LICENSE No. 60122 STATE OF FLORIDA PROFESSIONAL ENGINEER

APR 06 2005

THUY H. HUYNH, P.E. #60122

DANSCO ENGINEERING, LLC.

8" RECESS LINTEL SAFE GRAVITY LOADS

CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.M.
		SCALE: N.T.S.
DE# 24-4547		SK9

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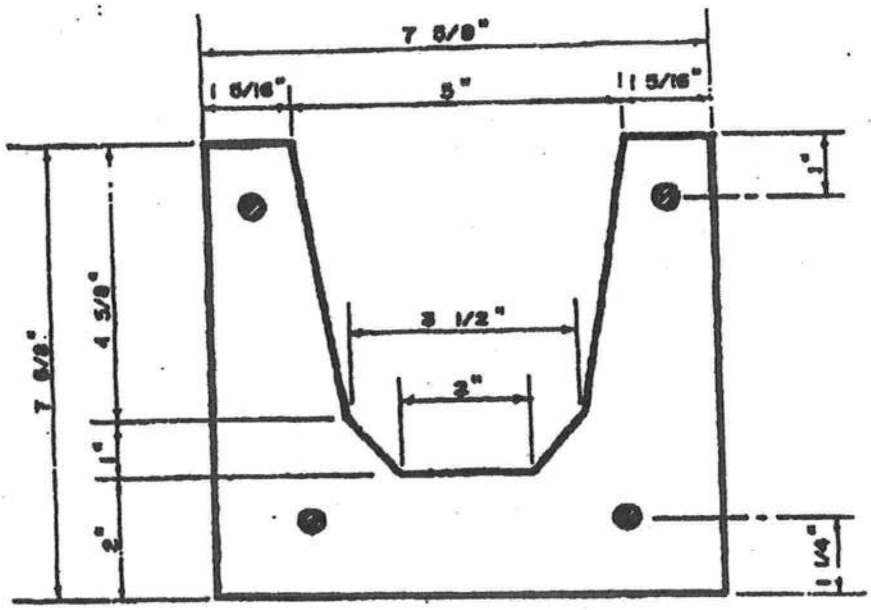

Lintel Concrete Strength = 4000 psi
Fill Concrete Strength = 3000 psi
Steel Strength = Grade 60 (#6), Grade 40 (#2 - #5)

TYPE	TOP BARS	BOTTOM BARS
A	NONE	2 - #3
B	2 - #2	2 - #4
C	2 - #3	2 - #4
D	2 - #3	2 - #5
E	2 - #4	2 - #6

Cement Precast Products, Inc.
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www. cementprecast.com

LINTEL				8" RECESS LINTEL SAFE UPLIFT LOADS (PLF)		
TOTAL LENGTH	CLEAR SPAN	TOP REINF.	BOTTOM REINF.	8/6-S-(1)U 8/6-S-(2)U	8/10-S-(1)U 8/10-S-(2)U	8/14-S-(1)U 8/14-S-(2)U
3'-6"	2'-2"	None	(2)#3	2571	3866	8716
				2571	3986	9281
4'-0"	2'-8"	None	(2)#3	2063	3063	6237
				2063	3083	6237
4'-4"	3'-0"	None	(2)#3	1823	2860	5122
				1823	2860	5122
4'-6"	3'-2"	None	(2)#3	1723	2496	4701
				1723	2496	4701
4'-8"	3'-4"	None	(2)#3	1633	2350	4345
				1633	2350	4345
5'-8"	4'-4"	None	(2)#3	1244	1742	2986
				1224	1742	2986
6'-8"	5'-4"	(2)#2	(2)#4	1005	1358	2179
				1005	[illegible]	2225
7'-8"	6'-4"	(2)#3	(2)#4	708	1013	1625
				842	[illegible]	1837

THUY H. HUYNH LICENSE No. 60122 STATE OF FLORIDA PROFESSIONAL ENGINEER

APR 04 2005

☐ SAMUEL ...
☐ ERWIN ...
☑ THUY H. HUYNH, P.E. 60122

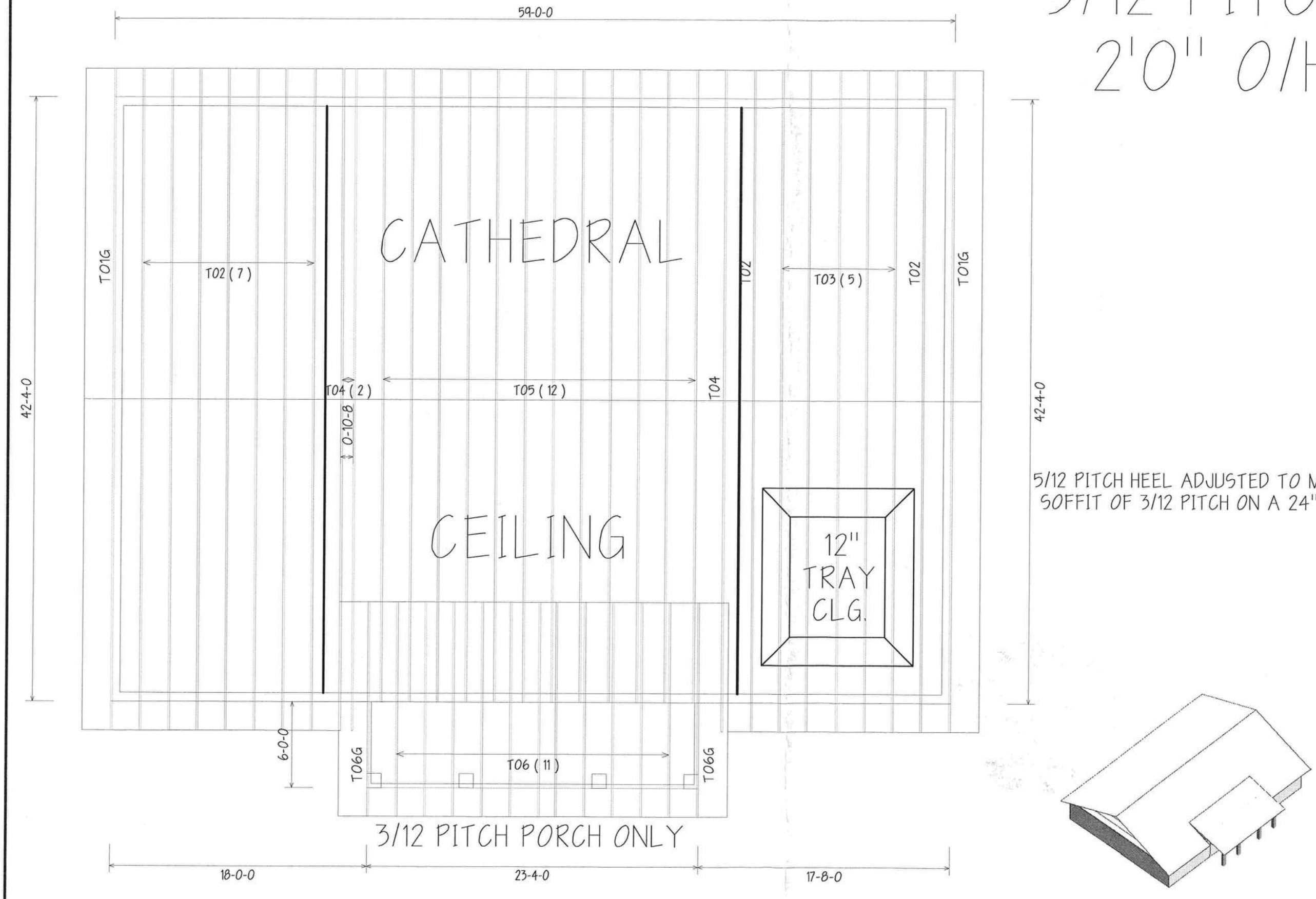
DANSCO ENGINEERING, L.L.C.
P.O. BOX 3460 - APOLLO BEACH - FLORIDA - 33572

8" RECESS LINTEL SAFE UPLIFT LOADS

CEMENT PRECAST PRODUCTS INC.	REV.:	DATE: 03/04/05
		DWG: E.M.
		SCALE: N.T.S.
DE# 24-4547		SK10

G:\data\engineering\CEMENT PRECAST PRODUCTS\244547\8.5x11\SK10.dwg, 3/15/2005 2:09:35 PM, EMontanez

5/12 PITCH
2'0" O/H



5/12 PITCH HEEL ADJUSTED TO MATCH SOFFIT OF 3/12 PITCH ON A 24" O.H.

BEARING HEIGHT SCHEDULE	
	8'-1 1/8"

NOTES:

1) REFER TO HIB 91 (RECOMMENDATIONS FOR HANDLING INSTALLATION AND TEMPORARY BRACING.) REFER TO ENGINEERED DRAWINGS FOR PERMANENT BRACING REQUIRED.
2) ALL TRUSSES (INCLUDING TRUSSES UNDER VALLEY FRAMING) MUST BE COMPLETELY DECKED OR REFER TO DETAIL V105 FOR ALTERNATE BRACING REQUIREMENTS.
3) ALL VALLEYS ARE TO BE CONVENTIONALLY FRAMED BY BUILDER.
4) ALL TRUSSES ARE DESIGNED FOR 2' o.c. MAXIMUM SPACING, UNLESS OTHERWISE NOTED.
5) ALL WALLS SHOWN ON PLACEMENT PLAN ARE CONSIDERED TO BE LOAD BEARING, UNLESS OTHERWISE NOTED.
6) SY42 TRUSSES MUST BE INSTALLED WITH THE TOP BEING UP.
7) ALL ROOF TRUSS HANGERS TO BE SIMPSON HTU26 UNLESS OTHERWISE NOTED. ALL FLOOR TRUSS HANGERS TO BE SIMPSON THA422 UNLESS OTHERWISE NOTED.
8) BEAM/HEADER/LINTEL (HDR) TO BE FURNISHED BY BUILDER.

SHOP DRAWING APPROVAL

THIS LAYOUT IS THE SOLE SOURCE FOR FABRICATION OF TRUSSES AND VOIDS ALL PREVIOUS ARCHITECTURAL OR OTHER TRUSS LAYOUTS. REVIEW AND APPROVAL OF THIS LAYOUT MUST BE RECEIVED BEFORE ANY TRUSSES WILL BE BUILT. VERIFY ALL CONDITIONS TO INSURE AGAINST CHANGES THAT WILL RESULT IN EXTRA CHARGES TO YOU.

Requested Delivery Date : _____

Approved By: _____ Date: _____

Builders FirstSource

Bunnell
PHONE: 904-437-3349 FAX: 904-437-3994

Jacksonville
PHONE: 904-772-6100 FAX: 904-772-1973

Lake City
PHONE: 386-755-6894 FAX: 386-755-7973

Sanford
PHONE: 407-322-0059 FAX: 407-322-5553

BUILDER: HOUSECRAFT		
LEGAL ADDRESS: TYRE RES.		
MODEL: CUSTOM		REVISION: SCALE: NTS
DATE: 8-20-08	DRAWN BY: K.L.H.	JOB #: L286784