

**TAS 201, TAS 202, TAS 203 and ASTM E330  
PERFORMANCE TEST REPORT**

**Rendered to:**

**DIAMOND DOOR PRODUCTS**

**SERIES/MODEL: Diamond GEM 130 MPH Series  
PRODUCT TYPE: Out-Swing Steel Entry Door**

**Report No.: 57581.01-801-18  
Test Dates: 05/18/05  
Through: 06/07/05  
Report Date: 06/24/05  
Revision 1: 02/11/13  
Expiration Date: 06/07/15**



## **TAS 201, TAS 202, TAS 203 AND ASTM E330 PERFORMANCE TEST REPORT**

Rendered to:

DIAMOND DOOR PRODUCTS  
6525 Cunningham, Building C  
Houston, Texas 77041

Report No.: 57581.01-801-18  
Test Dates: 05/18/05  
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Report Date: 06/24/05  
Revision 1: 02/11/13  
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**Project Summary:** Architectural Testing, Inc. (ATI) was contracted by Diamond Door Products to perform testing per Florida Building Code Test Protocols for High Velocity Hurricane Zone, Protocols TAS 201-94, TAS 202-94 and TAS 203-94. The samples tested met the performance requirements set forth in each of the protocols for a +27.2/-34.3 psf Design Pressure rating.

**Test Procedure:** The test specimens were evaluated in accordance with the following:

TAS 201-94, *Impact Test Procedures.*

TAS 202-94, *Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure Loading.*

TAS 203-94, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.*

ATM E330, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

**Drawing Reference:** The following drawings have been checked by ATI and are representative of the samples tested: 130MPH 1, 2, & 3, Universal A.S.A Strike Jamb, "CW" Series Insulated Doors, Universal Hinge Jamb, Hurricane Mounting Clip, Sill Anchor Hole Locations, Cylinder Lock Box, Hinge Reinforcement, Parker Leversets, PD-39980199, Cap Trim, Typical 3070 M Door, TH-2.

**Test Specimen Description:**

**Series/Model:** Diamond GEM 130 MPH Series

**Product Type:** Out-Swing Steel Entry Door

**Test Specimen Description:** (Continued)

**Overall Size:** 52-7/8" wide by 86-1/4" high

**Leaf Size:** 46-7/8" wide by 83-1/8" high by 1-3/4" thick

**Finish:** White Painted Steel

**Steel Thicknesses:**

Leaf skin: 0.033"  
Hinge: 0.131"  
Hinge reinforcement: 0.122"  
Leaf top and bottom channel: 0.056"  
Door frame: 0.058"  
Surface bolt strike plate: 0.117"  
Head and jamb flashing: 0.023"  
Wall panel: 0.025"  
Head to jamb Z-bracket: 0.098"  
Head to jamb L-bracket: 0.098"  
Sill to jamb bracket: 0.098"  
Strike plate reinforcement: 0.120"  
2-1/2" x 8" C-channel: 0.058"  
C-channel to buck L-bracket: 0.100"  
Lock box reinforcement: 0.121"

**Weatherstripping:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
1" high one finger rubber	1 Row	Aluminum kerf attached to leaf bottom exterior skin

**Frame Construction:** Frame head and jamb were steel and measured 8-1/4" wide by 3" deep and had a 1-15/16" by 5/8" rabbet at the interior and exterior. The top corners were coped and butted. Two steel Z-shaped brackets were projection welded to the head. A steel angle bracket was projection welded to each jamb at the top and bottom. The head to jamb joint was secured with two (2) 5/16" x 3/4" bolts and nuts. The bottom bracket at each jamb was secured to the buck with two (2) 1/2" x 1-1/2" lag bolts. The strike plate reinforcement was projection welded to the lock jamb. A steel strike plate was secured to the reinforcement with two (2) #12 x 3/4" screws.

**Leaf Construction:** The door leaf was constructed with a top and bottom skin having folded lock edges. The doors contained a bonded polystyrene core. Flush top and bottom channels were welded to both face sheets. One lock box was projection welded to the lock stile of the door leaf.

**Test Specimen Description:** (Continued)

**Flashing Construction:** A 3" by 1-1/2" by 1" J-shaped flashing was located at the head. The flashing was secured to the door frame and C-channel, on the exterior and interior, with three (3) #10 x 1" self-tapping hex head screws located 12" from each end and one at the mid-point. The exterior was also secured with two (2) #12 x 1-1/8" self-tapping hex head screws with integral neoprene washers located 1" from each end, while the interior had two (2) #10 x 1" self-tapping screws in these locations. A 3" by 1-1/2" by 1" J-shaped flashing was located at the jambs. It was secured to the door frame and C-channel with eight (8) #12 x 1-1/8" self-tapping hex head screws with integral neoprene washers located 1" from the sill and 12" on center thereafter on the interior and exterior. The exterior was also secured by two (2) #6 x 1/2" screws located 1/2" from the top and bottom.

**Hardware:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Grade 2 lever lock	1	42" from the bottom of the leaf
Steel strike plate	1	42" from the bottom of the lock jamb
Three barrel ball bearing hinge	3	8-1/2", 41-1/2", and 74-1/2" from the bottom of the leaf

**Drainage:** Sloped sill

**Reinforcement:** Reinforcement was projection welded at the frame jamb strike plate, frame jamb hinge and door leaf hinge.

**Installation:**

**Rough opening:** The test unit was installed into a 2-1/2" by 8" steel C-channel rough opening at the head and jambs. The 2-1/2" by 8" C-channel was secured to a buck constructed of a 2x10 lumber at the sill, head, and jambs. The 2-1/2" by 8" C-channel was secured to a 1-3/4" by 8" by 5-3/4" wide L-shaped bracket at the top and bottom using five (5) #10" x 1" self-tapping hex head screws. The brackets were secured to the buck at the head and the sill with two (2) 1/4" x 1-1/2" lag bolts. The 2-1/2" by 8" C-channel at the head was secured to the buck with eight (8) #8 x 1-1/8" screws in 4 pairs 4-1/2" apart, with each pair located 15" on center.

**Door Frame:** Each door frame jamb was secured at the interior to the 2-1/2" by 8" C-channel with eight (8) 1/4" x 1-1/8" self-tapping hex head screws located 1" from the sill and 12" on center thereafter. Each door frame jamb was secured at the exterior to the 2-1/2" by 8" C-channel with eight (8) #12 x 1-1/8" self-tapping hex head screws with integral neoprene washers located 1" from the sill and 12" on center thereafter. The door frame head was secured at the interior to the 2-1/2" by 8" C-channel with five (5) #10 x 1" self-tapping hex head screws located 1" from the jamb and approximately 12" on center thereafter.

**Test Specimen Description:** (Continued)

**Installation:** (Continued)

Flashing and threshold: The exterior door frame to 2-1/2" by 8" C-channel exterior fasteners also secured the head flashing, jamb flashing, and exterior wall panels to the C-channel. The exterior steel skin was secured to the wood buck with #12 x 1-1/8" self-tapping hex head screws with integral neoprene washers located 1" from each corner and on 12" center thereafter. An aluminum threshold was secured to the buck at the sill with five (5) #10 x 1-3/4" screws located 10" on center.

**Test Results:** The following results have been recorded:

**Protocol TAS 202-94, Static Air Pressure Tests**

**Test Unit #1**

**Design Pressure:** +27.2/-34.3 psf

Title of Test	Results		
	Indicator Readings (inch)		
	#1	#2	#3
ASTM E330			
Structural Loads			
50% of Test Pressure (+20.4 psf)			
Maximum Deflection	0.20"	0.17"	0.32"
Permanent Set	0.02"	0.04"	0.04"
ASTM E330			
Design Pressure (+27.2 psf)			
Maximum Deflection	0.24"	0.17"	0.26"
Permanent Set	<0.01"	<0.01"	<0.01"
ASTM E330			
50% of Test Pressure (-25.7 psf)			
Maximum Deflection	0.13"	0.02"	0.04"
Permanent Set	0.05"	0.02"	0.01"
ASTM E330			
Design Pressure (-34.3 psf)			
Maximum Deflection	0.22"	0.05"	0.04"
Permanent Set	0.05"	0.05"	0.03"
ASTM E330			
Test Pressure (+40.8 psf)			
Maximum Deflection	0.46"	0.22"	0.41"
Permanent Set	0.06"	0.10"	0.13"
ASTM E330			
Test Pressure (-51.5 psf)			
Maximum Deflection	0.40"	0.20"	0.12"
Permanent Set	0.03"	0.05"	0.01"
ASTM E330			
Forced Entry - 300 lb force in opening direction at top, middle and then bottom		Pass	

**Note:** Refer to ATI Sketch #1 for indicator locations.

**Test Results:** (Continued)

**Protocol TAS 201-94, *Impact Test Procedures***

**Missile Weight:** 9.0 lbs

**Muzzle Distance from Test Specimen:** 17 ft.

**Test Unit #1**

**Impact #1:** Missile Velocity: 51.8 fps

**Impact Area:** Center

**Observations:** Dented

**Results:** Pass

**Impact #2:** Missile Velocity: 50.0 fps

**Impact Area:** Hinge stile bottom corner

**Observations:** Dented

**Results:** Pass

**Test Unit #2**

**Impact #1:** Missile Velocity: 51.0 fps

**Impact Area:** Center

**Observations:** Dented

**Results:** Pass

**Impact #2:** Missile Velocity: 50.1 fps

**Impact Area:** Lock stile bottom corner

**Observations:** Outside of target

**Impact #3:** Missile Velocity: 50.0 fps

**Impact Area:** Lock stile bottom corner

**Observations:** Dented

**Results:** Pass

**Test Unit #3**

**Impact #1:** Missile Velocity: 50.2 fps

**Impact Area:** Hinge stile center

**Observations:** Dented

**Results:** Pass

**Impact #2:** Missile Velocity: 50.4 fps

**Impact Area:** Hinge stile top corner

**Observations:** Dented

**Results:** Pass

*Note: Refer to ATI Sketch #1 for impact locations.*

**Test Results:** (Continued)

**Protocol TAS 203-94, Cyclic Wind Pressure Loading**

**Test Unit #1**

**Design Pressure:** +27.2/-34.3 psf

**POSITIVE PRESSURE**

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)		
			#1	#2	#3
0.0 to 13.6	600	2.27	0.15	0.15	0.04
0.0 to 16.3	70	2.47	0.21	0.16	0.04
0.0 to 35.4	1	2.00	0.26	0.21	0.08
			Permanent Set (inch)		
			0.04	0.02	0.02

**NEGATIVE PRESSURE**

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)		
			#1	#2	#3
0.0 to 17.2	600	1.69	0.30	0.12	0.22
0.0 to 20.6	70	1.77	0.36	0.15	0.27
0.0 to 44.6	1	1.70	0.56	0.23	0.56
			Permanent Set (inch)		
			0.10	<0.01	0.03

**Result:** Pass

*Note: Refer to ATI Sketch #1 for indicator locations.*



**Test Results:** (Continued)

**Protocol TAS 203-94, Cyclic Wind Pressure Loading**

**Test Unit #2**

**Design Pressure:** +27.2/-34.3 psf

**POSITIVE PRESSURE**

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)		
			#1	#2	#3
0.0 to 13.6	600	2.06	0.11	0.13	0.04
0.0 to 16.3	70	2.17	0.11	0.13	0.04
0.0 to 35.4	1	2.00	0.12	0.17	0.04
			Permanent Set (inch)		
			0.01	0.02	<0.01

**NEGATIVE PRESSURE**

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)		
			#1	#2	#3
0.0 to 17.2	600	1.69	0.28	0.15	0.24
0.0 to 20.6	70	1.72	0.37	0.20	0.32
0.0 to 44.6	1	1.70	0.77	0.34	0.61
			Permanent Set (inch)		
			0.09	<0.01	0.05

**Result:** Pass

*Note: Refer to ATI Sketch #1 for indicator locations.*

**Test Results:** (Continued)

**Protocol TAS 203-94, Cyclic Wind Pressure Loading**

**Test Unit #3**

**Design Pressure:** +27.2/-34.3 psf

**POSITIVE PRESSURE**

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)		
			#1	#2	#3
0.0 to 13.6	600	1.80	0.14	0.12	0.03
0.0 to 16.3	70	1.81	0.14	0.12	0.03
0.0 to 35.4	1	2.00	0.18	0.21	0.06
			Permanent Set (inch)		
			<0.01	0.01	<0.01

**NEGATIVE PRESSURE**

Pressure Range (psf)	Number of Cycles	Average Cycle Time (sec.)	Maximum Deflection at Indicator (inch)		
			#1	#2	#3
0.0 to 17.2	600	1.63	0.46	0.14	0.18
0.0 to 20.6	70	2.00	0.60	0.18	0.25
0.0 to 44.6	1	2.00	0.80	0.34	0.70
			Permanent Set (inch)		
			0.10	<0.01	<0.01

**Result:** Pass

*Note: Refer to ATI Sketch #1 for indicator locations.*

**Test Equipment:**

**Cannon:** Steel pipe barrel utilizing compressed air to propel the missile.

**Missile:** 2x4 Southern Pine

**Timing Device:** Electronic Beam Type

**Cycling Mechanism:** Computer controlled centrifugal blower with electronic pressure measuring device.

**Deflection Measuring Device:** Linear transducers and 1" dial indicators

**Laboratory Compliance Statements:** The following are provided as required by the protocols for the testing reported herein.

Upon completion of testing, specimens tested for TAS 201-94 met the requirements of Section 1626 of the Florida Building Code, Building (2004).

Upon completion of testing, specimens tested for TAS 202-94 met the requirements of Section 1620 of the Florida Building Code, Building (2004).

Upon completion of testing, specimens tested for TAS 203-94 met the requirements of Section 1609 of the Florida Building Code, Building (2004).

Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

**List of Official Observers:**

<u>Name</u>	<u>Company</u>
Andy Cost.	Architectural Testing, Inc.
Joseph A. Reed, P.E.	Architectural Testing, Inc.
Daniel Horan	Architectural Testing, Inc.

Representative samples of the test specimen and a copy of this report will be retained by ATI for a period of ten years from the original test date. This report is the exclusive property of the client so named herein and is applicable to the sample tested. Results obtained are tested values and do not constitute an opinion or endorsement by this laboratory. This report may not be reproduced, except in full, without the approval of Architectural Testing, Inc..

For ARCHITECTURAL TESTING, INC.

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Andy Cost  
Laboratory Manager

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John H. Waskow, P.E.  
Director – Regional Operations

AC:hd

Attachments (pages):

Appendix-A: Sketch (1)

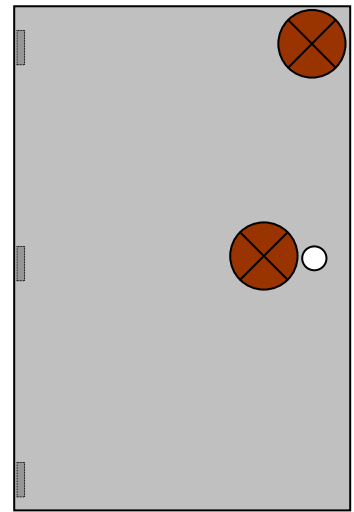
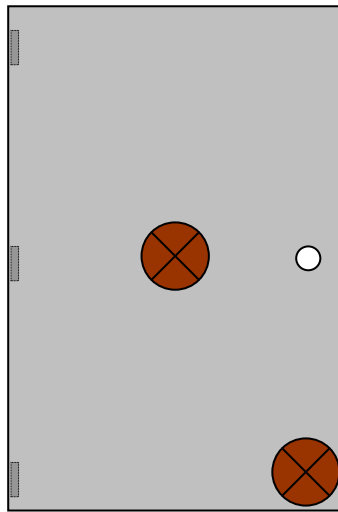
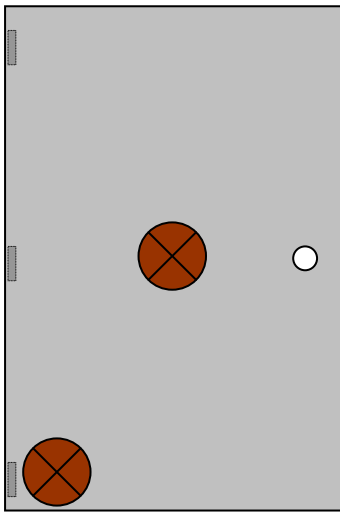
Appendix-B: Drawings (15)



### Revision Log

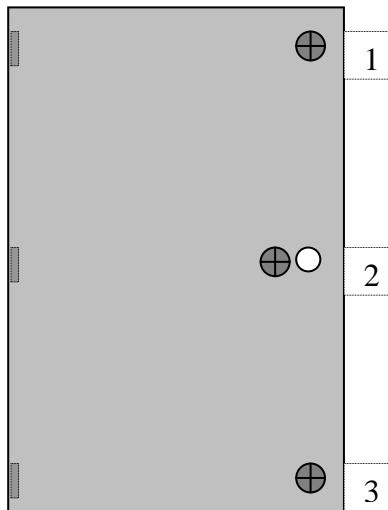
<b><u>Rev. #</u></b>	<b><u>Date</u></b>	<b><u>Page(s)</u></b>	<b><u>Revision(s)</u></b>
0	06/24/05	N/A	Original report issue
1	02/11/13	1, 5, 11	Added ASTM E330 to Test Methods. Changed signature of Joseph Reed to John Waskow, changed signature of Daniel Horan to Andy Cost.

**APPENDIX A**

**Sketches**



-  **Impact Locations**
-  **Indicator Locations**



**ATI Sketch #1 – Impact Locations and Indicator Locations**

## **APPENDIX B**

### **Drawings**

# DIAMOND DOOR PRODUCTS

6525 Cunningham Bldg. C  
Houston, TX 77041

Ph. (713)849-5085



Test sample complies with these details.  
Deviations are noted.

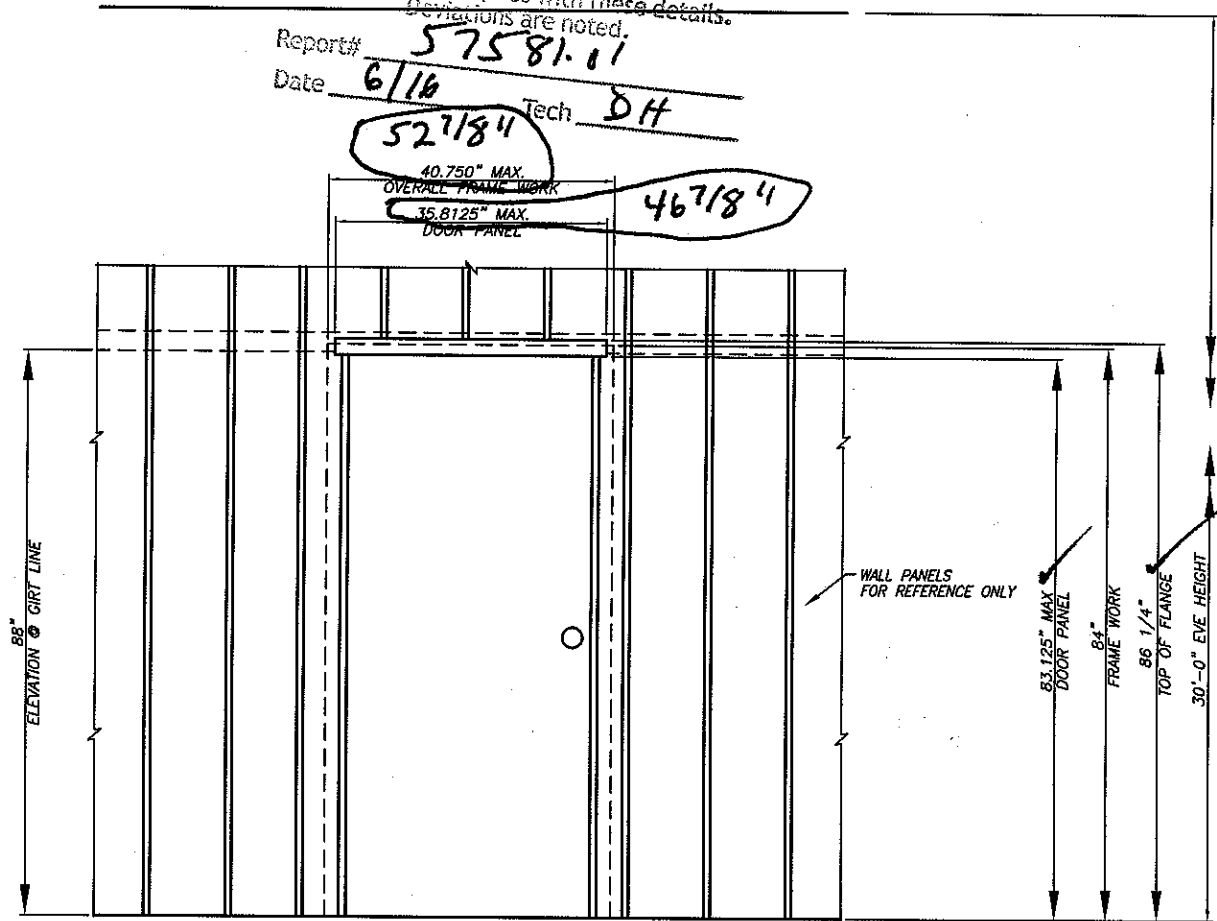
Report# 57581-01  
Date 6/16 Tech DH

527184  
40.750" MAX.  
OVERALL FRAME WORK  
467184  
35.8125" MAX.  
DOOR PANEL

"DIAMOND"  
STEEL DOOR & FRAME SYSTEM  
FOR METAL BUILDINGS  
3'-0" x 7'-0" SINGLE DOOR

**GENERAL NOTES**

1. THIS PRODUCT IS EVALUATED TO COMPLY WITH THE FLORIDA BUILDING CODE AND TEXAS BOARD OF INSURANCE (FOR USE OUTSIDE OF THE "HVHZ" AREA).
2. PRODUCT ANCHORS SHALL BE AS LISTED AND SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING.
3. MAIN WIND FORCE RESISTING SYSTEM (MWFRS) COMPONENT SPACING TO BE DETERMINED BY OTHERS.
4. ENGINEER OF RECORD SHALL EVALUATE THE SUB-JAMB FOR ADDITIONAL WINDLOADS FROM COMPONENTS AND CLADDING ELEMENTS SUCH AS WALL PANELS.

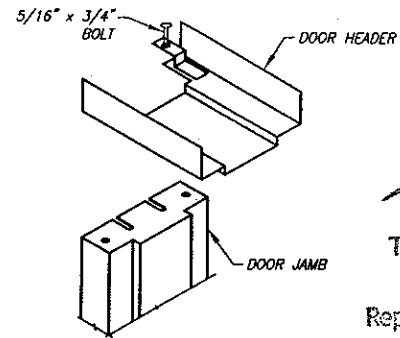
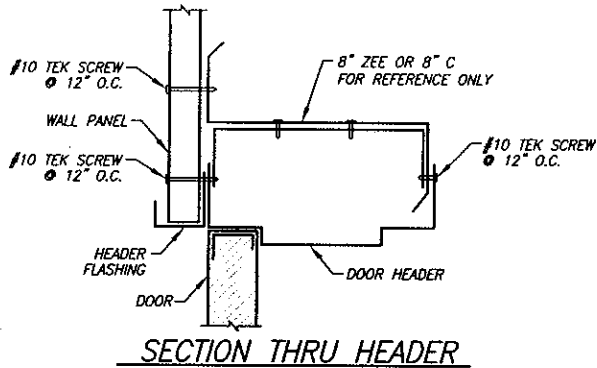



**3'-0" x 7'-0" STEEL DOOR & STEEL FRAME SYSTEM**  
(METAL BUILDING INSTALLATION)

130 mph

DIAMOND DOOR PRODUCTS, LTD.

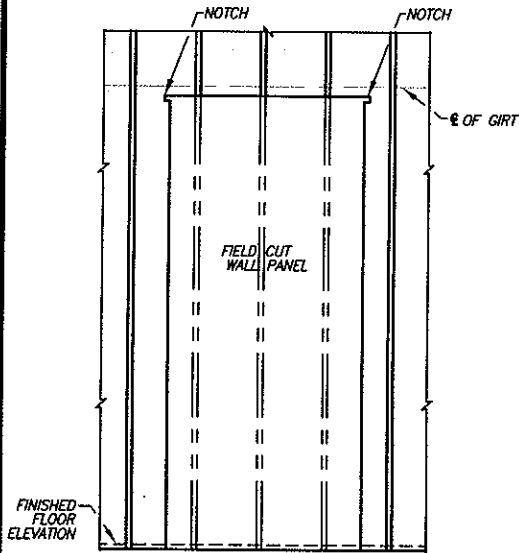




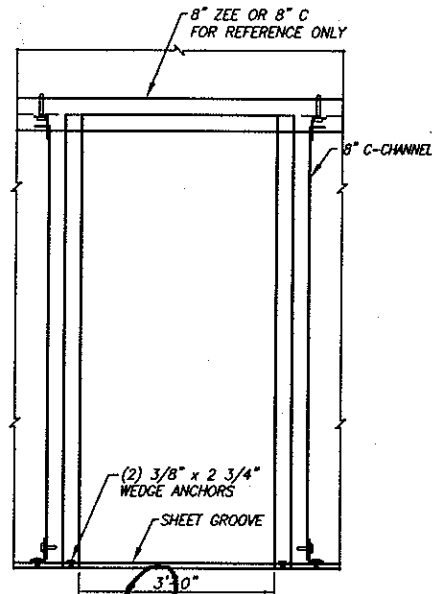

**Architectural Testing**  
 Test sample complies with these details.  
 Deviations are noted.

Report# 57581.01  
 Date 6/16/05 Tech D4

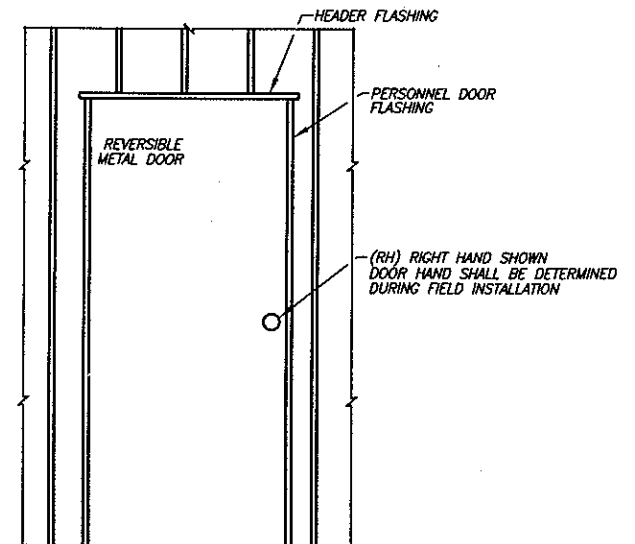
DOOR FRAME ASSEMBLY



CUTOUT WALLPANEL ELEVATION



FRAMING ELEVATION



EXTERIOR ELEVATION OF DOOR

PERSONNEL DOOR SPECIFICATION

DOOR PANELS SHALL BE 3'-0" X 7'-0" X 1 3/4" CONSTRUCTED OF 20 GAUGE STEEL SHEET OVER A ONE PIECE POLYSTYRENE CORE.

DOOR FRAME SHALL BE FABRICATED FROM 16 GAUGE GALVANNEAL

HARDWARE SHALL INCLUDE (3) 4 1/2" X 4 1/2" STANDARD WEIGHT HINGES AND A GRADE 2 TYPE LOCKSET WITH ASA STRIKE.

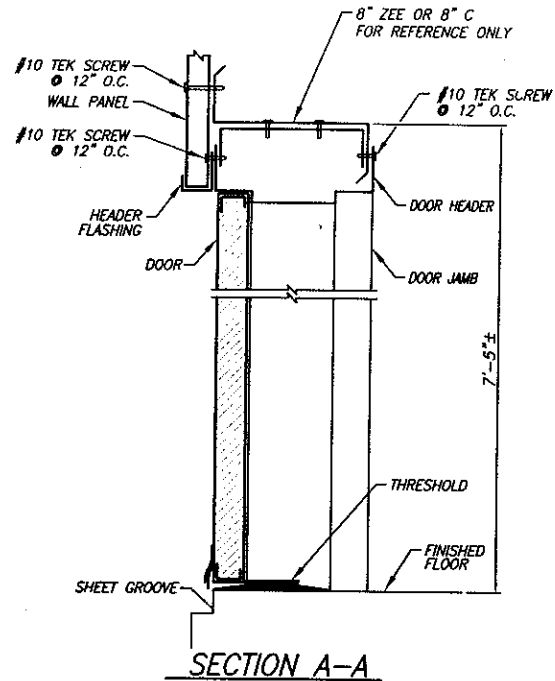
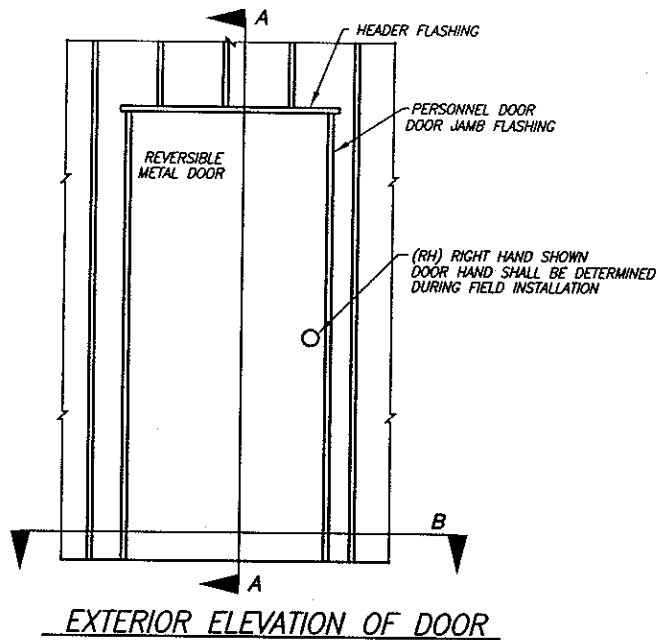
DOOR PANELS AND FRAMES FURNISHED SHALL BE MANUFACTURED BY DIAMOND DOOR PRODUCTS, LTD.

GENERAL NOTES

- 1) FIELD LOCATE DOOR, REMOVE AND CUT NECESSARY GIRTS IN BAY.
- 2) ARRANGE JAMBS ACCORDING TO REQUIRED SWING, THEN FASTEN HEADER TO JAMB.
- 3) AFTER ASSEMBLING FRAME, PLACE IN POSITION, SQUARE AND PLUMB, HANG DOOR PANEL.
- 4) FASTEN DOOR FRAME TO GIRTS WITH SCREWS OR TACK WELDING.
- 5) FASTEN BOTTOM OF DOOR JAMBS WITH 3/8" X 2 3/4" WEDGE ANCHORS.
- 6) INSTALL TRESHOLD AND DOOR HARDWARE.
- 7) INSTALL C CHANNEL W/ L CLIPS
- 8) ANCHOR L CLIP TO FLOOR WITH 3/8" X 2 3/4" WEDGE ANCHORS.
- 9) FASTEN UPPER L CLIP TO GIRT USING #10 TEK SCREWS.
- 10) FLASH ACCORDINGLY.

130 mph

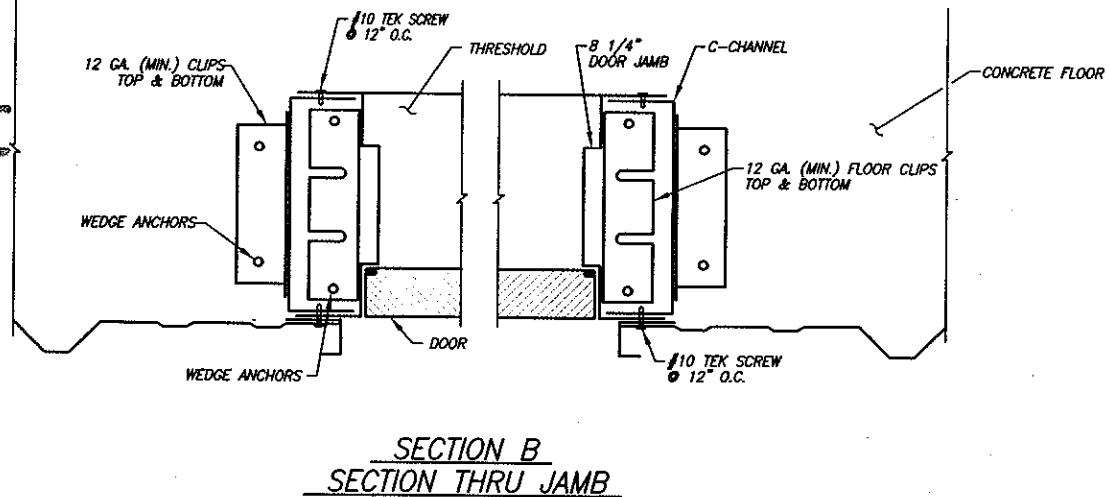
DIAMOND DOOR PRODUCTS, LTD.



**Architectural Testing**

Test sample complies with these details.  
Deviations are noted.

Report# 57581-01  
Date 6/16/05 Tech DH

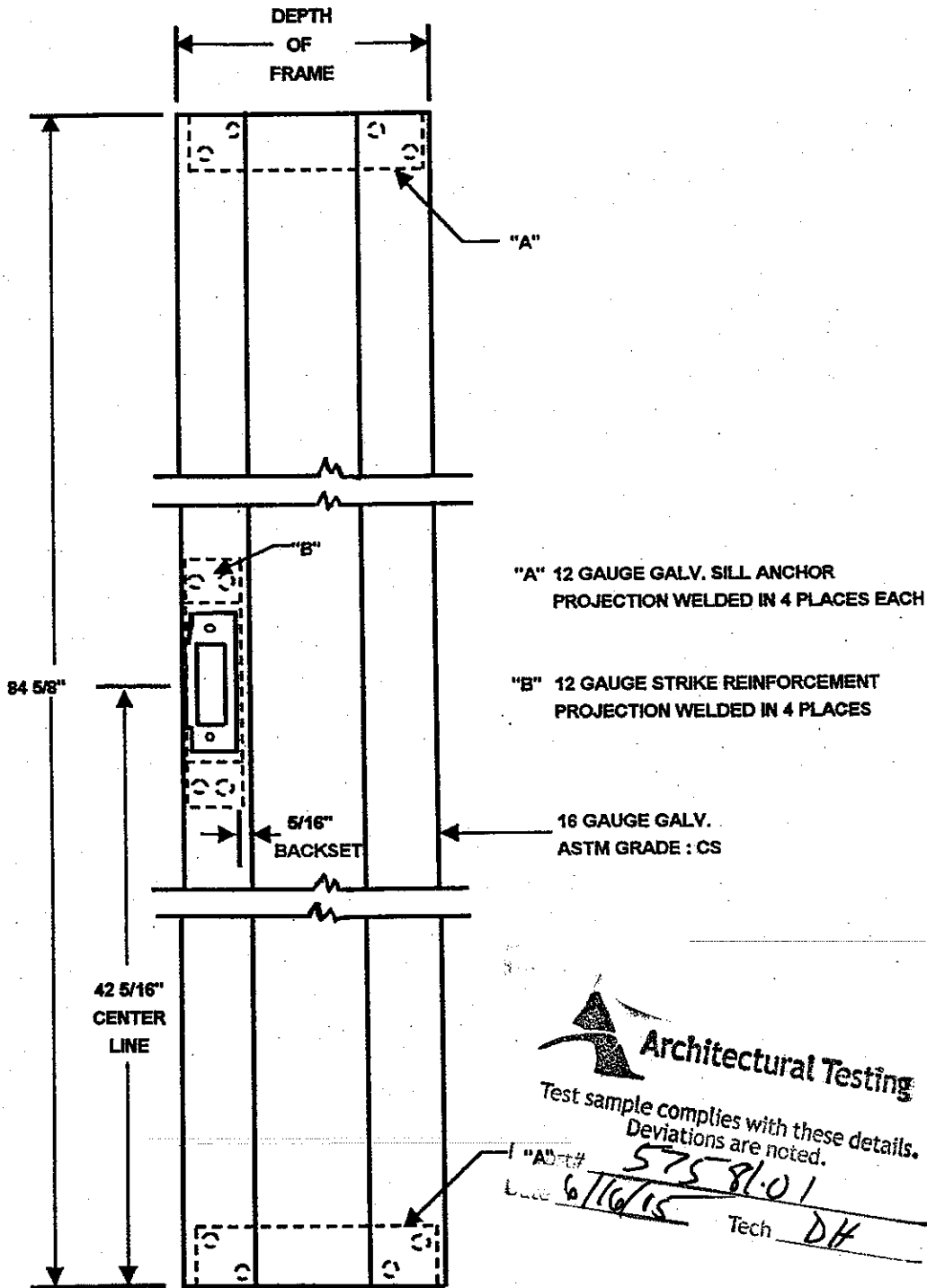


130 mph

DIAMOND DOOR PRODUCTS, LTD.

Diamond Door Products, Ltd.

Universal A.S.A. Strike Jamb



7/12/03

Diamond Knock-Down Strike Jamb



# DIAMOND DOOR PRODUCTS, LTD.

6525 CUNNINGHAM BLDG. C  
HOUSTON, TX 77041  
Phone: 713-849-5085  
Fax: 713-849-5295



## "CW" SERIES INSULATED DOORS

### SPECIFICATIONS

20 GA. GALVINIZED FACE SHEETS  
EMBOSSED OR SMOOTH SURFACES  
MILL BONDERIZED **18 GA. SMOOTH SURFACE ONLY**

FLUSH MOUNTED TOP AND BOTTOM  
CHANNELS WELDED TO BOTH  
FACE SHEETS

POLYSTYRENE CORES BONDED  
TO BOTH FACE SHEETS USING A  
TWO PART EPOXY

FOLDED FULL FLUSH FACE SHEETS  
ALLOWING NO RAW EDGES

LONG LASTING BAKED ON SPRAY  
COATED FINISH

AVAILABLE IN WHITE OR BRONZE  
EMBOSSED OR GRAY SMOOTH  
FINISHES

FULLY CARTONED IN CORUGATED  
BOXES AND POLY BAGGED  
FOR ADDED PROTECTION

### SPECIFICATION COMPLIANCE

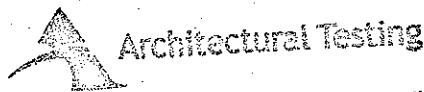
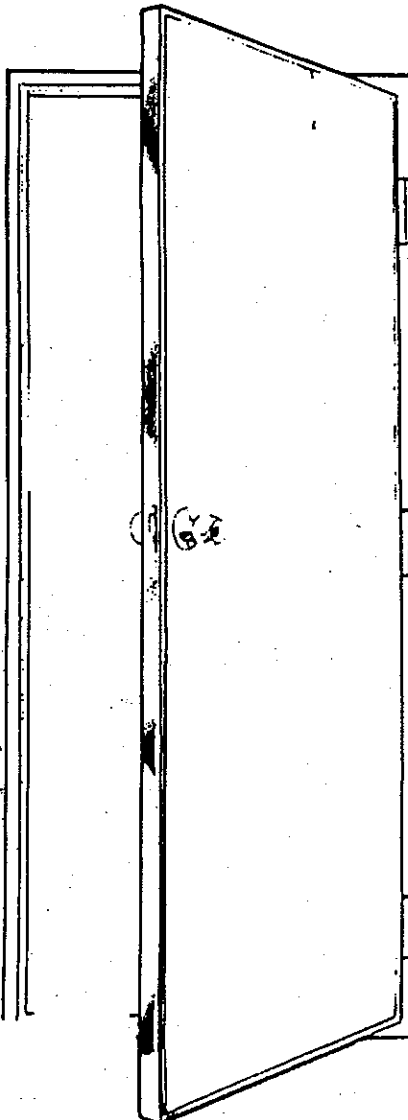
MEETS OR EXCEEDS:  
FED SPEC'S HH-1-524C  
TYPES I, II, & III  
MIL-P-40619A, CLASS II GRADE A  
MIL-P-196644C, TYPE II CLASS I  
DOD4270,1-M  
ASTM-C-578-69, TYPE I & II GRADE II

### BUILDING CODES

ICBO UNIFORM BUILDING CODE  
SECTION 1717  
BOCA-BASIC BUILDING CODE  
SECTION 8765  
SBCCS- STANDARD BUILDING CODE  
SECTION 718  
FHA/HUD-USE OF MATERIALS  
BULLETIN 71

### HIGH POINTS

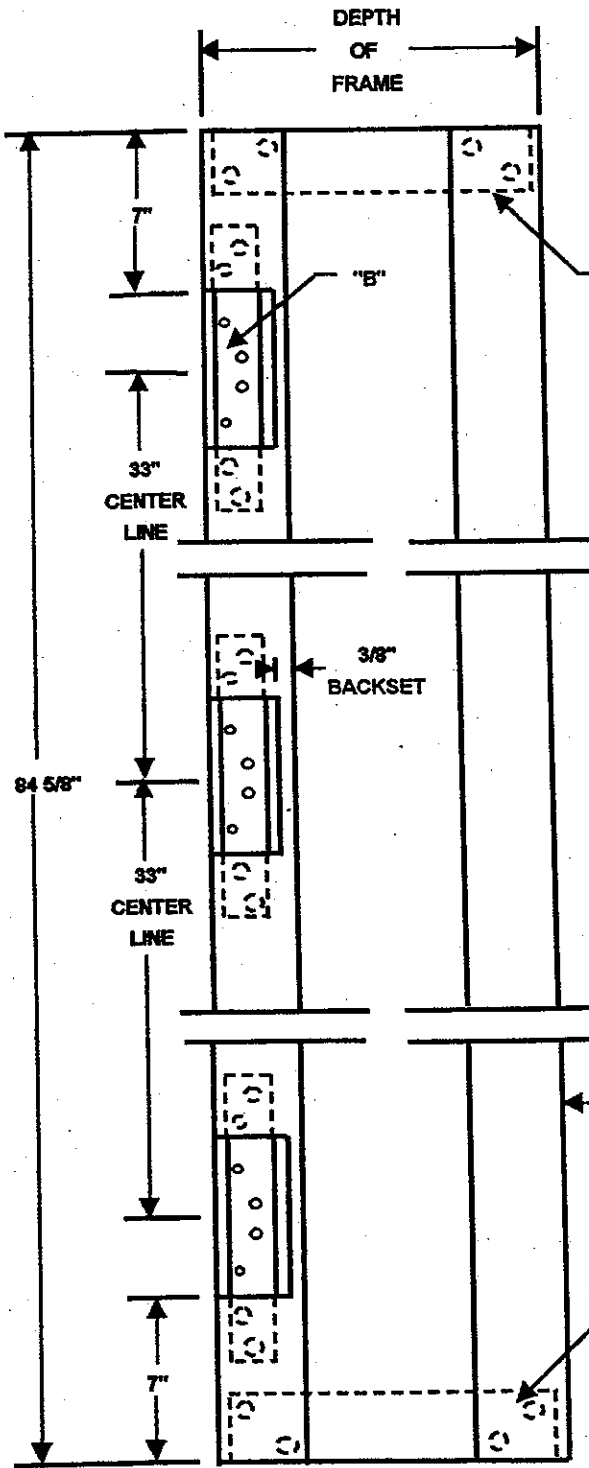
POLYSTRENE CORE  
THERMOPLASTIC POLYMER  
SOUND TRANSMISSION 32  
"U" FACTOR .16  
"R" FACTOR 6.5 OR GREATER



Test sample complies with these details.  
Deviations are noted.

Report# 57581.01  
Date 6/16/05 Tech DH

**Diamond Door Products, Ltd.**  
**Universal Hinge Jamb**



**Architectural Testing**

Test sample complies with these details.  
 Deviations are noted.

Report# 57581.01  
 Date 6/16/05 Tech DH

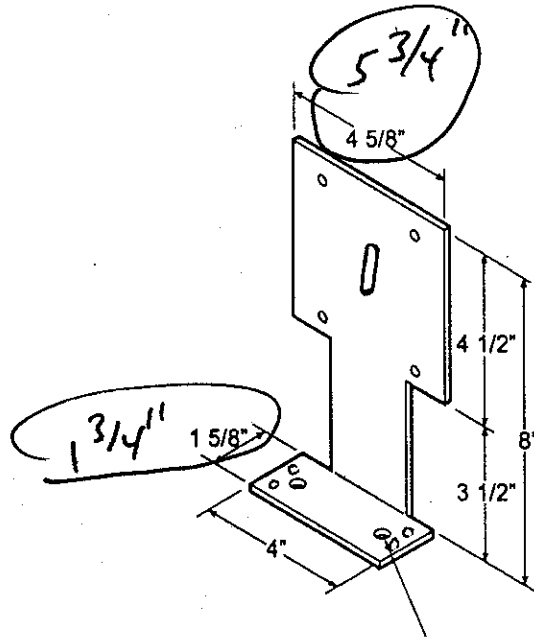
"A" 12 GAUGE GALV. SILL ANCHOR  
 PROJECTION WELDED IN 4 PLACES EACH

"B" 10 GAUGE HINGE REINFORCEMENT  
 PROJECTION WELDED IN 4 PLACES

16 GAUGE GALV.  
 ASTM GRADE : CS

# HURRICANE-MOUNTING-CLIP

12GA.-GALVANIZED-STEEL



Architectural Testing

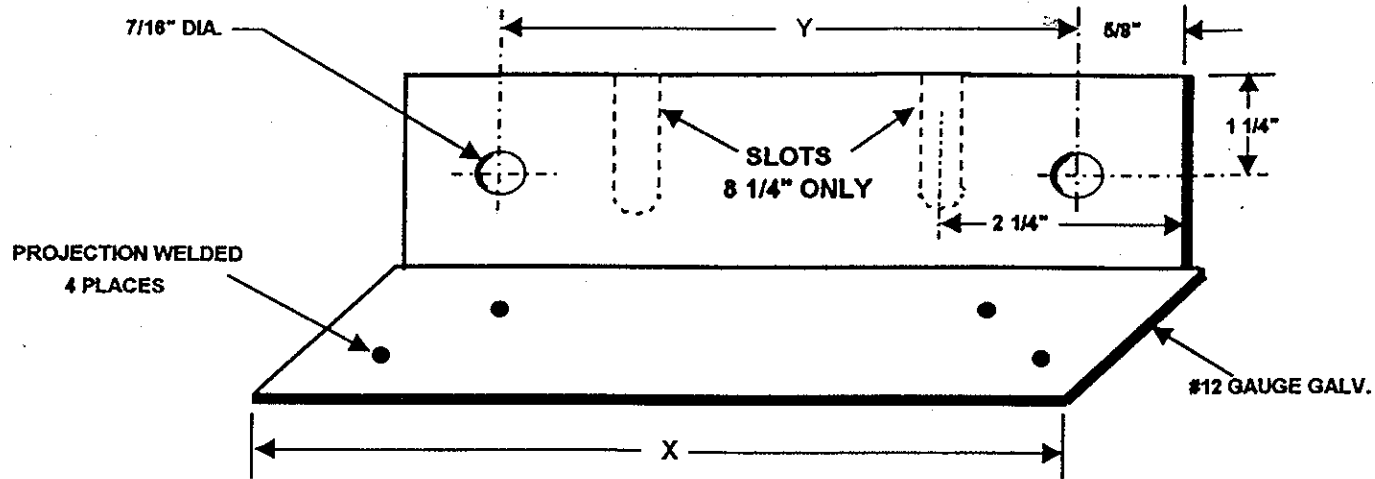
Test sample complies with these details.  
Deviations are noted.

Report# 57581.01

Date 6/16/05

Tech. DH

Diamond Door Products, Ltd.  
Sill Anchor Hole Locations



X = LENGHT	Y = CENTER LINE
4.00"	2 3/4"
6.00"	4 3/4"
7.00"	5 3/4"
8.00"	6 3/4"
10.00"	8 3/4"

 Architectural Testing

Test sample complies with these details.  
Deviations are noted.

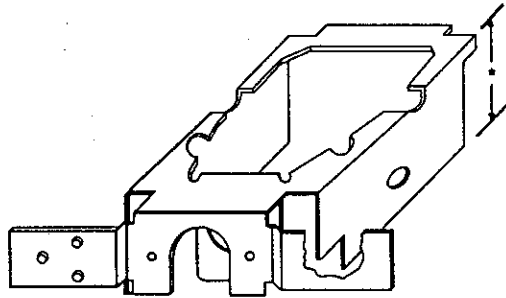
Report# 57581-01  
Date 6/6/05 Tech DH

\*\* NOTE \*\* WHEN LOCATING HOLES FROM OUTSIDE FACE OF FRAME ADD 1/8" TO FIRST HOLE TO ACCOMMODATE FOR MATERIAL THICKNESS AND CLEARANCE OF CLIP.

**CYLINDER LOCK BOX**

**BEVEL, with PROJECTIONS**

**16GA-C.R.S.**



**\*158 = 1 5/8" LEG HEIGHT**



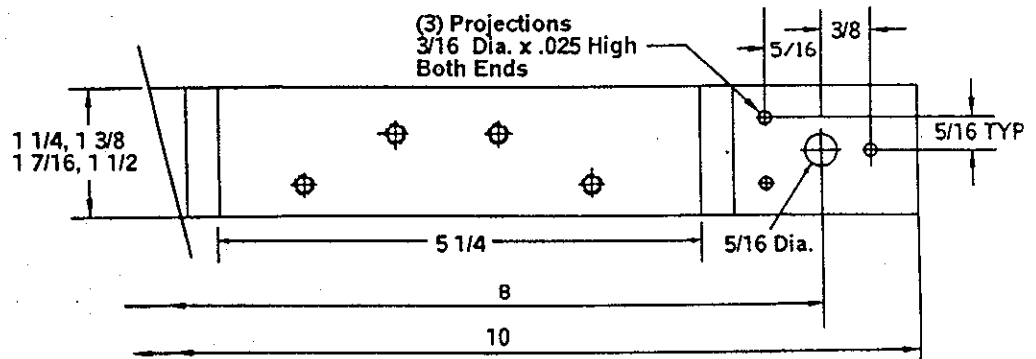
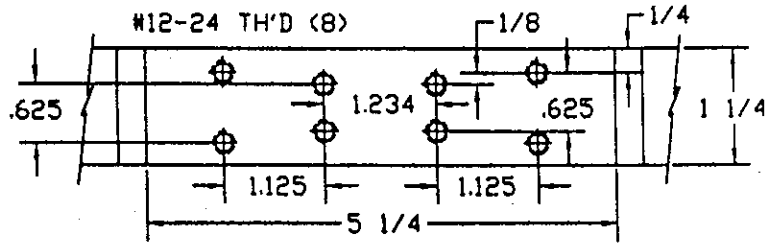
**Architectural Testing**

Test sample complies with these details.  
Deviations are noted.

Report# 57581-01  
Date 6/16/05 Tech DH



# 10GA. HINGE-REINFORCEMENT



Test sample complies with these details.  
Deviations are noted.

Report# 57581-01  
Date 6/16/05 Tech DH

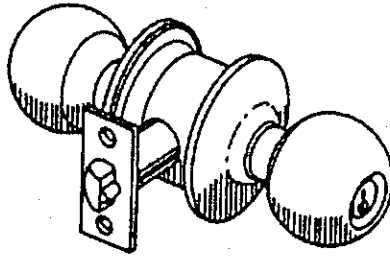


# DIAMOND DOOR PRODUCTS, LTD.

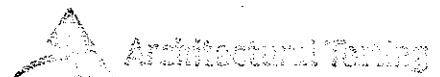
**GRADE 2 BALL KNOB  
DIAMOND PT# HLB2**

S. Parker UL listed entry locks have three hour fire rated latches, and otherwise have all the features of the heavy duty B9160 series.

Additionally, they meet ANSI-A156-2, Series 4000, Grade 2 specifications. The keyway is SC-1 #1145, or Arrow keyway K. The tumbler is six pin keyed to five pins, and the exit from the inside is panic-resistant. The cylindrical lock housing is cold rolled steel that has been line dichromated for corrosion resistance.



S. Parker UL listed locks have 3 hour fire rated latches & 2 spin-on roses. All with 4 7/8" ANSI Strike.



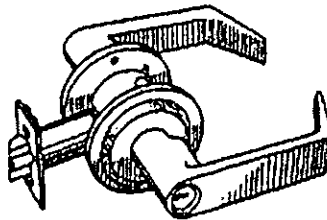
Test sample conforms with (Form) details  
Permitting use of lock.

Report # 57581-01  
Date 6/16/05 Tech DH

**GRADE 2 LEVER LOCK  
DIAMOND PT# HLL2 - P**

SL7160 Series with Two Step Rose is Ideal for Retrofitting

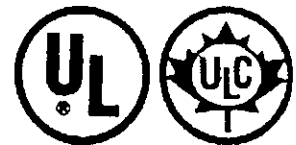
UL listed, ADA approved Grade 2 barrier-free leversets are ready for all ADA and other needs in passage, privacy, storeroom, classroom and dummy functions, in addition to entry models. The customer may provide the lock cylinder and key. Leversets meet ANSI A156.2 Series 4000 Grade standards and more than fulfill ADA requirements. The ANSI Series 4000 standard exceeds 400,000 operating cycles.



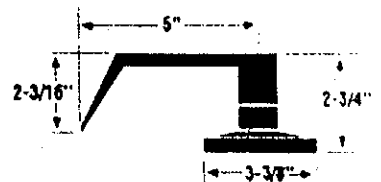
Special keying available (Master & Grand Master)

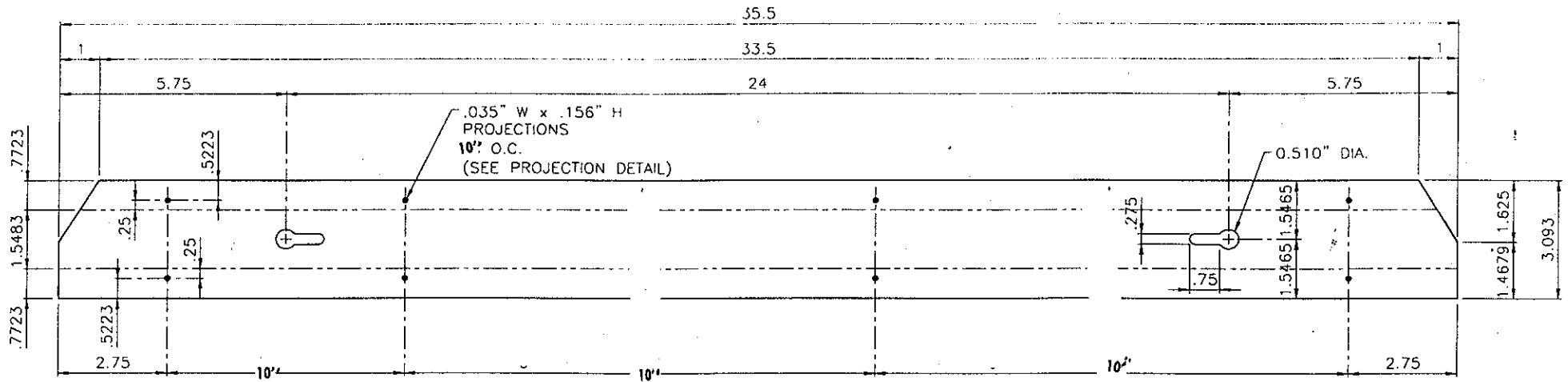
2 3/8" BS available upon request

Grade 2 Leverset with Two Step Rose

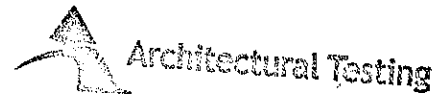


S. Parker Leversets meet all Grade 2 requirements, and are available in boxed or clamshell package.



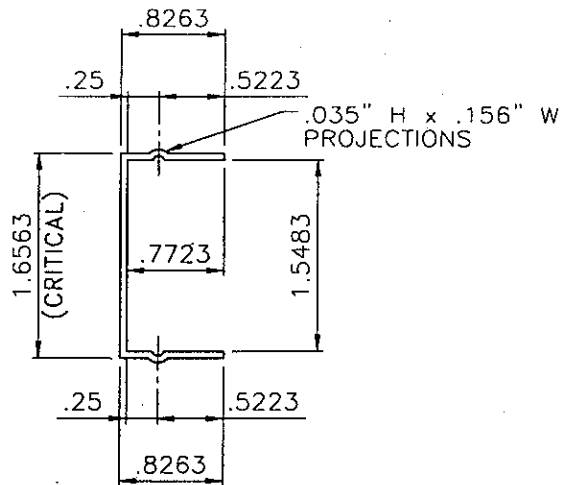


PATTERN - 3'-0 DOOR CHANNEL

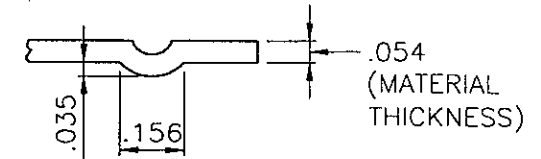
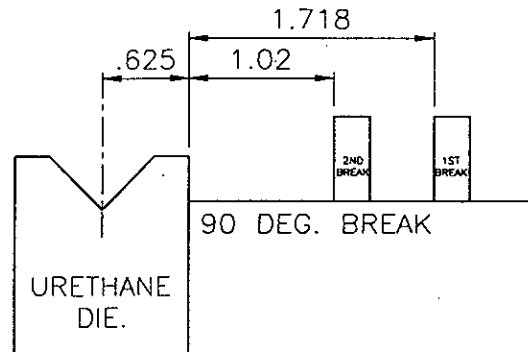


Test sample complies with these details.  
Deviations are noted.

Report# 57581-01  
Date 6/16/05 Tech 24



3'-0 DOOR CHANNEL - SECTION

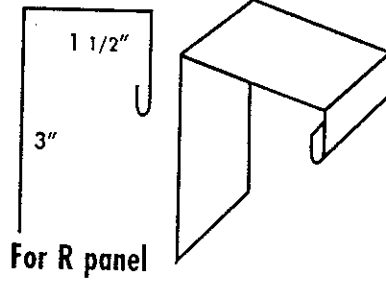


PROJECTION DETAIL



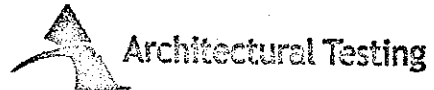
ITEM DESC	ITEM NO.	WT.	REVISION DESC	NEW ISSUE	DRAWING DESC	3'-0 DOOR CHANNEL	DWG SET- DOOR	REV NO.			
	MATERIAL	16 GA. (.054) GGN					FILENAME- CHANNEL	0			
	BLANK SIZE	3.093 x 35.5	FINISH	MILL	REV DATE	REV BY	REV APRVD	DRAWN BY	APRVD BY	DRAWING NO.	SHEET 1 OF 1
							LAS	JWT		PD-39980199	

# CAP TRIM



Sold by Ft.

R Panel

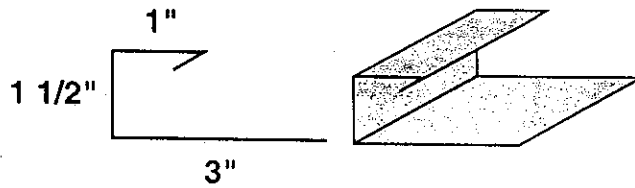


Architectural Testing

Test sample complies with these details.  
Deviations are noted.

Report# 37581-01  
Date 6/16/05 Tech DT

# DOOR JAMB TRIM FOR USE WITH R & U PANEL



Stocked in 88", 120", 146" lengths

R Panel

Diamond Door Products, Ltd.

TYPICAL 3070 M DOOR

46718"

35 13/16"

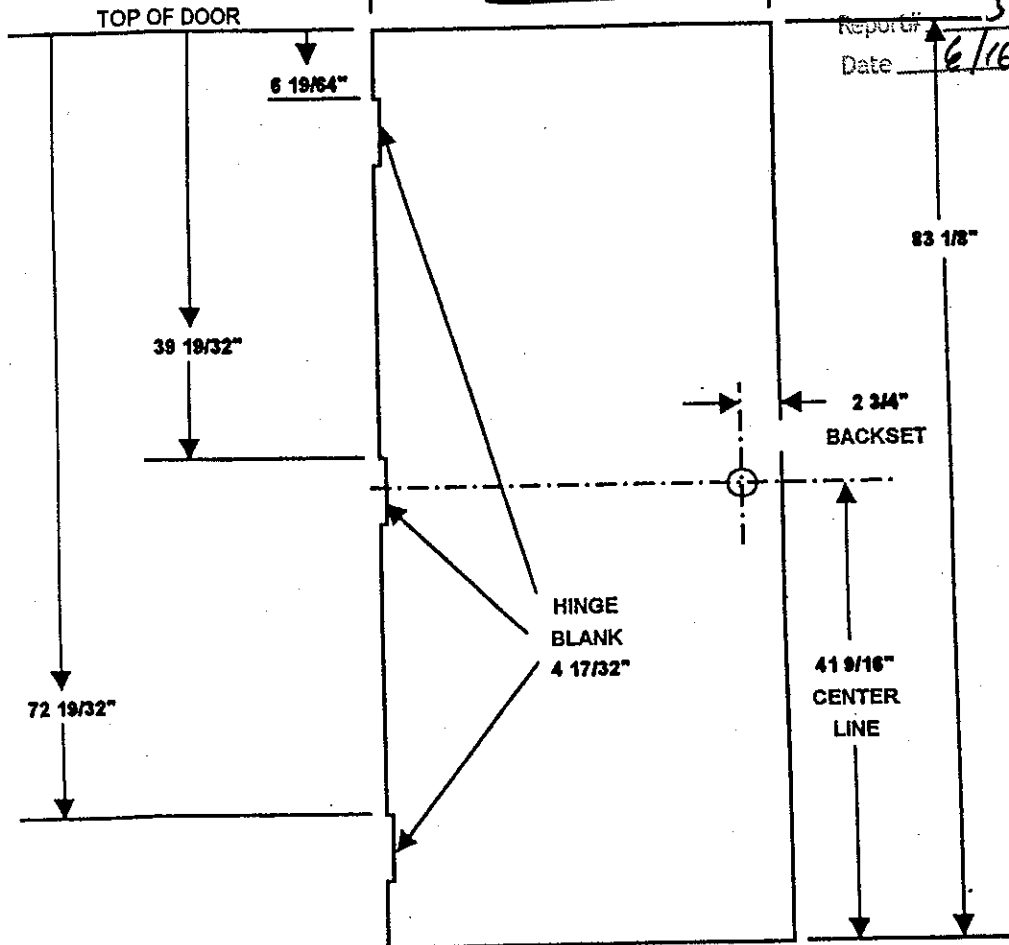


Architectural Testing

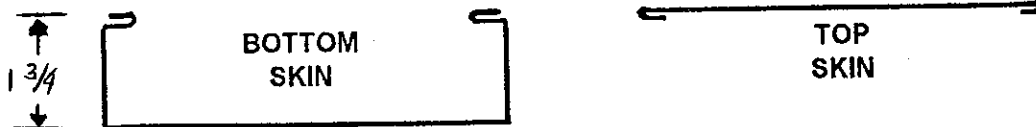
Test sample complies with these details.  
Deviations are noted.

Report # 57581-01

Date 6/16/05 Tech D H



\*\* NOTE \*\* BEVELED EDGE DOORS ARE REVERSIBLE BY FLIPPING LEAF END FOR END.



\*\* LOCK EDGE IS BEVELED 1/8" IN 2" TO ASSURE PROPER FIT.

\*\* LOCK EDGE CAN BE SQUARED FOR USE ON 1/2 GLASS DOORS SO HANDING IS NOT NECESSARY.

\*\* ALL VERTICAL EDGES OF DOOR ARE HEMMED TO ELIMATE RAW EDGE METAL

8/15/03

Diamond Reversible Door

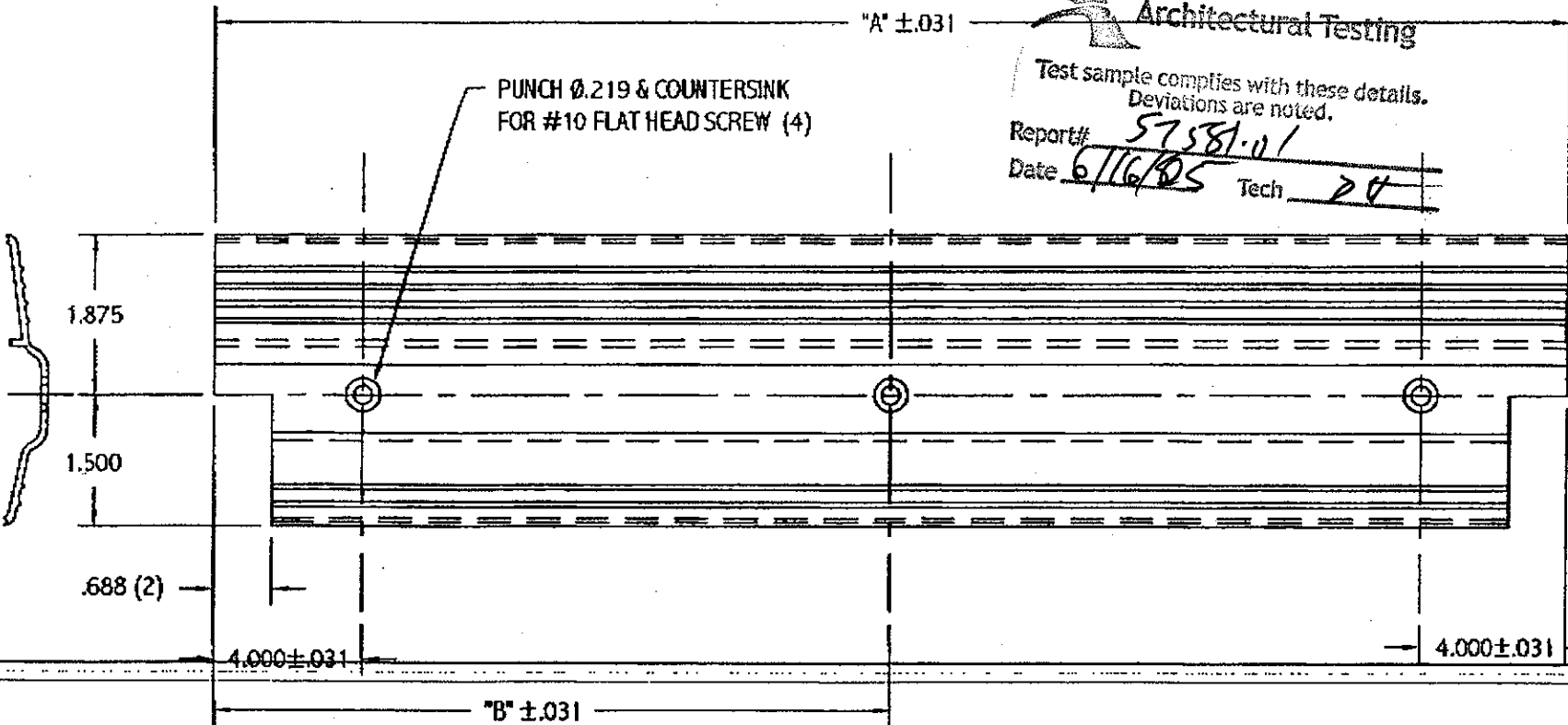
FR: DUC LE @ ATCO

10: QUANT

PART NO. TH-2

SF - AF- FAB3764

FAB3764REV 081500



**Architectural Testing**

Test sample complies with these details.  
Deviations are noted.

Report# 57581-01  
Date 6/16/05 Tech 24

OPENING	DIM. "A"	DIM. "B"
3'0"	36"	18"
4'0"	48"	24"
6'0"	72"	36"

ALUMINUM ASSOCIATION STANDARD TOLERANCES APPLY UNLESS OTHERWISE NOTED

REV.	DESCRIPTION & DATE	REV.	DESCRIPTION & DATE

CUSTOMER:		AFCO ALUMINUM PRODUCTS	
CUST. PART No: TH-2		P.O. BOX 5085	
END USE: SILL		3400 ROY STREET	
		ALEXANDRIA, LA. 71302	
ALLOY: 6063	TEMPER: T-5	TYPE DIE:	
DIE SIZE:	No. OF HOLES:	BACKER:	
BOLSTER:	FEEDER PLT:	BILLET:	
EST. ARCA:	EST. PERIMETER:	FACTOR:	
EST. WT/FT:	CIRCUMSCRIBED CR. DIA:		
FINISH:	RATIO:		
DRAWN BY: DUC LE	DATE: 11/03/00	SCALE: 0.5X	



.080 TYPICAL WALL EXCEPT AS SHOWN

.010R BREAK SHARP CORNERS

31B 443 9288 P.02/02

AFCO INDUSTRIES

HPK-12-2000 10:00

TOTAL P.02