Element Materials Technology
115 S 84th Avenue
Wausau, WI
54401-8434 USA

P 715 848 3935
F 715 848 0837
T 888 786 7555
info.wausau@element.com
element.com

Summary of Test Results

Product Manufacturer:	Taylor Entrance Systems
Product Type:	Wood Frame Double Inswing Entry Doors
Product Series/Model:	Steel Edge Entry Door 6068
Test Completion Date:	04/30/14
Air Infiltration:	0.08 cfm/ft^2
Water Penetration:	0 psf
Uniform Load Deflection:	±30 psf
Uniform Load Structural:	+37.50 / -45 psf
Purchase Order Number:	T KB 031914 60

Reference must be made to Report No.ESP016471P-1554.1, dated 05/14/14 for complete test specimen description and detailed test results.

EAR-CONTROLLED DATA

LABORATORY TESTING OF WOOD FRAME DOUBLE STEEL EDGE ENTRY DOOR 6068

MANUFACTURED BY
TAYLOR ENTRANCE SYSTEMS

Prepared for:
TAYLOR ENTRANCE SYSTEMS
Attn: Mr. Kevin Bulow
631 North First Street
West Branch, MI 48661

Test Date: 04/16/14 - 04/30/14

Prepared By:

Gary Norenberg
Technician
Product Testing Department
Telephone: (715) 848-3935

Reviewed By:

Dan Wadzinski
Technician
Product Testing Department
Telephone: (715) 848-3935

The test results contained in this report pertain only to the specimens tested and not necessarily to all similar products.

EAR-CONTROLLED DATA

INTRODUCTION:

This report presents the results of laboratory testing conducted on a Double Steel Edge Entry Door manufactured by Taylor Entrance Systems of West Branch, Michigan. This work was requested and authorized by Mr. Kevin Bulow of Taylor Entrance Systems, with testing conducted on April 16 - 30, 2014 at Element Materials Technology facilities. The purpose of the testing was to determine the performance of the door for air infiltration, water resistance and structural integrity.

TEST RESULTS SUMMARY:

The door assembly described herein meets or exceeds the following specifications:

Air Infilration ASTM: E283: +75 Pa (+1.57 psf) = 0.41 L/s/m^2 (.08 cfm/ft^2)

Water Penetration ASTM: E547: 0 Pa (0 psf)

Uniform Load Deflection ASTM: E330: +1440 Pa (+30 psf) / -1440 Pa (-30 psf)

Structural Load Test ASTM: E330: +1800 Pa (+37.50 psf) / -2160 Pa (-45 psf)

Forced Entry Resistance AAMA 1304-02: Pass

Vertical Loading Resistance AAMA 925-13: Pass

Operation/Cycling Test AAMA 920-11: Pass

SAMPLE DESCRIPTION:

Unit Size:	1905mm (75.00”) wide x 2076mm (81.75”) high
Unit Area:	3.96m^2 (42.58 ft^2)
Panel Size:	908mm (35.75”) wide x 2005mm (78.94”) high
Panel Crack Length:	9.72m (31.87’)
Finish:	Interior and exterior was steel clad.

Frame Construction: The door frame was constructed of molded finger jointed pine members at the head and sides. The sill was a standard adjustable Endura inswing threshold consisting of extruded aluminum with composite insert and threshold. The frame corners were butted at the head and sill fastened utilizing five 16GA x 11mm (7/16”) crown x 51mm (2”) long staples per corner. No brickmould was applied.

Panel Construction: The door panel employed a 24ga galvanized steel embossed skin at the interior and exterior snap fit together containing a composite lock block and hinge reinforcement plates. The core of the door was filled with expanded polyurethane foam. An extruded aluminum astragal was attached to the inactive panel with #8 x 51mm (1”) PFH SS screws spaced 178mm – 203mm (7” - 8”) on center.

Hardware Description:	Quantity	Location
4” x 4” Stainless steel butt hinges	3 ea panel	Located from the top down 9-5/8”, 39-9/16 and”, 69-1/2” on center
Endura shoot bolts top and bottom	2	Astragal of inactive panel
Schlage dead bolt lock with strike	1	39-5/8” down from top rail on center, active pnl
Schlage operating handle set with strike	1	45-1/8” down from top rail on center, active pnl

EAR-CONTROLLED DATA

SAMPLE DESCRIPTION CON'T:

Weatherstrip Description	Quantity	Location
0.500" high Q-Lon QEBD-650 leaf with leg	1 row	Perimeter of door frame and astragal
1.750" x 2" Closed cell corner pads	4 ea. panel	Door frame corners, top and bottom of astragal
Vinyl Bottom Door Sweep (Item #26)	1 per panel	Bottom rail of active and inactive panels

Installation: The door was installed into a nominal 51mm x 254mm (2" x 10") SPF wood test buck with a shimmed 13mm (1/2") rough opening gap around the entire perimeter. Two #8 x 2-3/4" PFH screws were placed thru each hinge plate and into the buck, and one 102mm (4") each side of the astragal location at head. The gap between the door frame and test buck was filled in with backer rod and silicone sealant. The gap below the sill was covered with 1/2" x 1-1/2" plywood strip fastened with staples to the buck and sealed with silicone sealant.

TEST RESULTS:

Method		ACTUAL	REQUIREMENTS
E283	**Air Infiltration**		
	Chamber Pressure, Pa (psf)	+75 (+1.57)	+75 (+1.57)
	L/s/m2 (cfm/ft2)	0.41 (0.08)	1.5 (.30) maximum
E331	**Static Water Penetration**		
	Chamber Pressure, Pa (psf)	+0 (0)	0 (0)
	Unpressurized Duration, min.	15.0	15.0
	Cycles	1	1
	Water Penetration	NONE	No water shall flow over the interior face.
E330	**Uniform Load Deflection**		
	Chamber Pressure, Pa (psf)	+1440 (+30)	----
	Duration, sec.	10.00	10.00
	Astragal Span, mm (in.)	1969 (77.50)	----
	Deflection, mm (in.)	11.66 (0.459)	Sustained the load
	Chamber Pressure, Pa (psf)	-1440 (-30)	----
	Duration, sec.	10.00	10.00
	Deflection, mm (in.)	7.06 (0.278)	Sustained the load
E330	**Structural Load Test**		
	Chamber Pressure, Pa (psf)	+1800 (+37.50)	----
	Duration, sec.	10.00	10.00
	Permanent Set, mm (in.)	1.24 (0.049)	Sustained the load
	Chamber Pressure, Pa (psf)	-2160 (-45)	----
	Duration, sec.	10.00	10.00
	Permanent Set, mm (in.)	0.61 (0.024)	Sustained the load

EAR-CONTROLLED DATA

TEST RESULTS CON'T:

Method		ACTUAL	REQUIREMENTS
AAMA 1304-02	**Resistance To Forced Entry Test**		
	Load, kg (lbs.)	135 (300)	135 (300)
	Duration, sec.	30.00	30.00
	Active Panel	No Entry	No Entry
	Passive Panel	No Entry	No Entry
AAMA 925-13	**Vertical Loading Resistance**		
	Diagonal Dimension of leaf, mm (in.)	2200 (86.63)	Report
	Vertical Deflection after Preload, mm (in.)	1.02 (0.040)	Report
	Diagonal Dimension of leaf, mm (in.)	2200 (86.63)	Report
	Test Load, N (lbf)	675 (150)	675 (150)
	Max Vertical Deflection, mm (in.)	2.03 (0.080)	Report
	Permanent Vertical Deflection, mm (in.)	0.76 (0.030)	Report
	Diagonal Dimension of leaf, mm (in.)	2200 (86.63)	Report
	Forced to latch N (lbf)	27 (6.0)	Reported
	Forced to latch Deadbolt	4 (1)	Reported
AAMA 920-11	**Operation/Cycling Test**		
	Cycles	25,270	25000 Cycles minimum
		Pass	Operable with no permanent deformation

TEST PROCEDURE:

The tests were conducted in accordance with ASTM and AAMA test procedures and the results were compared to the performance requirements.

Air Infiltration
ASTM:E283, Standard Test Methods for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors

Water Penetration
ASTM:E331, Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Static Air Pressure Difference

Physical Load Testing
ASTM:E330, Standard Test Methods for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Differences.

Forced Entry Resistance
AAMA 1304-02: Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems

Vertical Loading Resistance
AAMA 925-13: Specification for determining the Vertical Loading Resistance of Side-Hinged Doors

EAR-CONTROLLED DATA

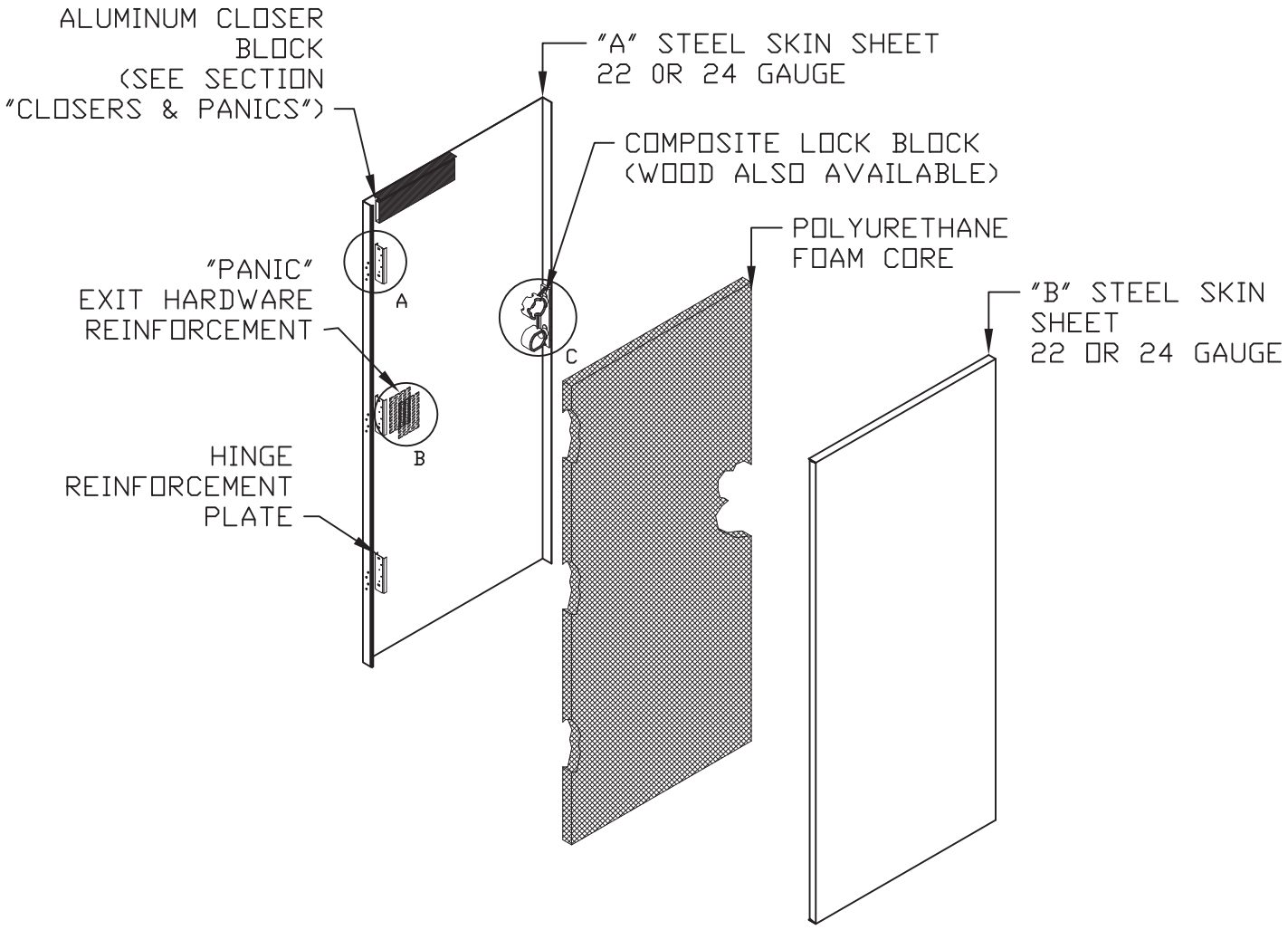
TEST PROCEDURE:

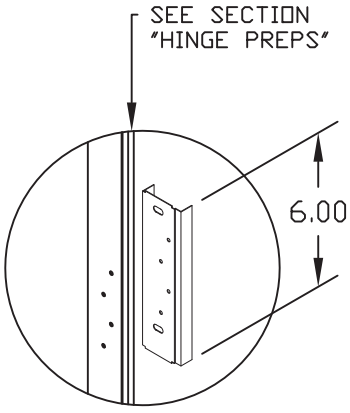
Operation /Cycling Test
AAMA 920-11: Specification for Operating Cycle Performance of Side-Hinged Exterior Door Systems

REMARKS:

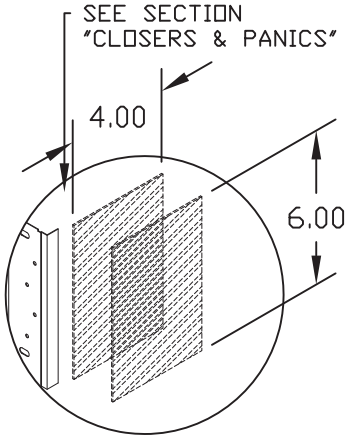
The above results were secured by using the designated test methods and they do indicate compliance with the performance requirements of the referenced specifications. This report does not constitute certification of this product which may only be granted by the Validator.

The representative samples of the tested specimen will be held in the laboratory for a period of four (4) years. Element will maintain this test report and retain test records such as detailed drawings, data sheets or other pertinent project documentation for a period of ten (10) years.





DETAIL "A"
SCALED 4X



DETAIL "B"
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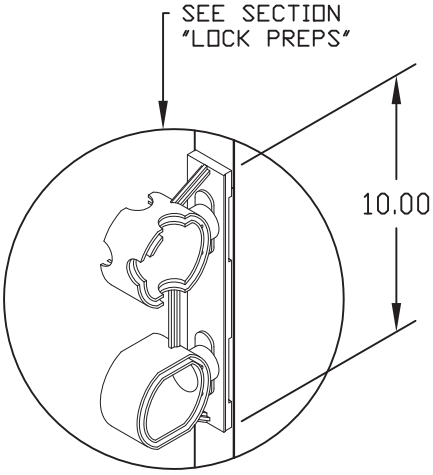


DETAIL "C"
SCALED 4X

NOTE: FOR ILLUSTRATION ONLY

TAYLOR Entrance Systems™
AMERICA'S DOORMAKER

STEEL DOOR CONSTRUCTION DETAIL

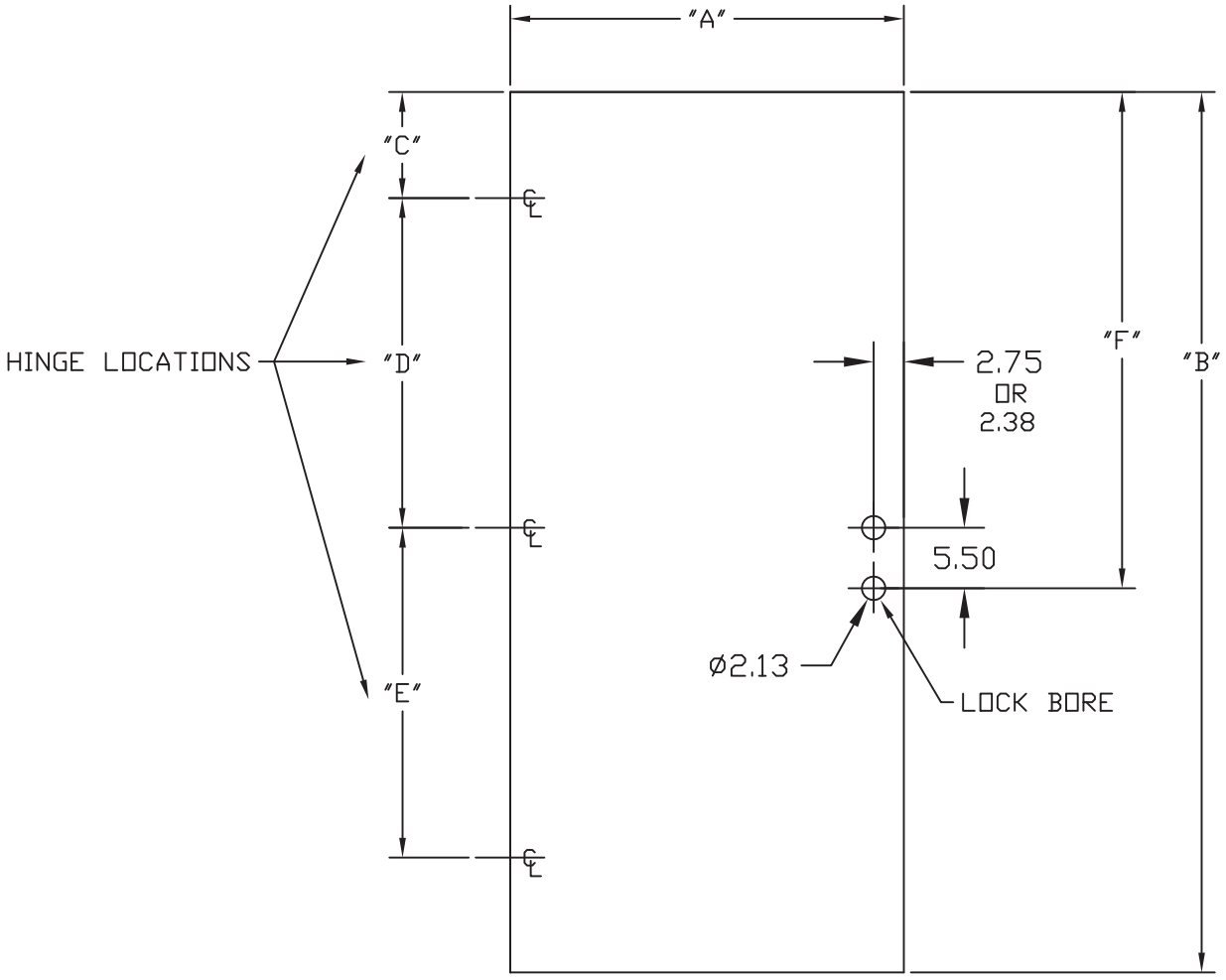
DWG#	II-1
DATE	1-17-05
NAME	MJP
SECTION	II
PAGE	1

CRITICAL DIMENSIONS +.03 -.03 (+1/32 -1/32)

DOOR WIDTH	A
2'0"	23.75
2'2"	25.75
2'4"	27.75
2'6"	29.75
2'8"	31.75
2'10"	33.75
3'0"	35.75
3'6"	41.75

DOOR HEIGHT	B	C	D	E	F
6'6"	76.94	9.63	29.94	29.94	45.13
6'8"	78.94	9.63	29.94	29.94	45.13
7'0"	82.94	11.63	29.94	29.94	47.13

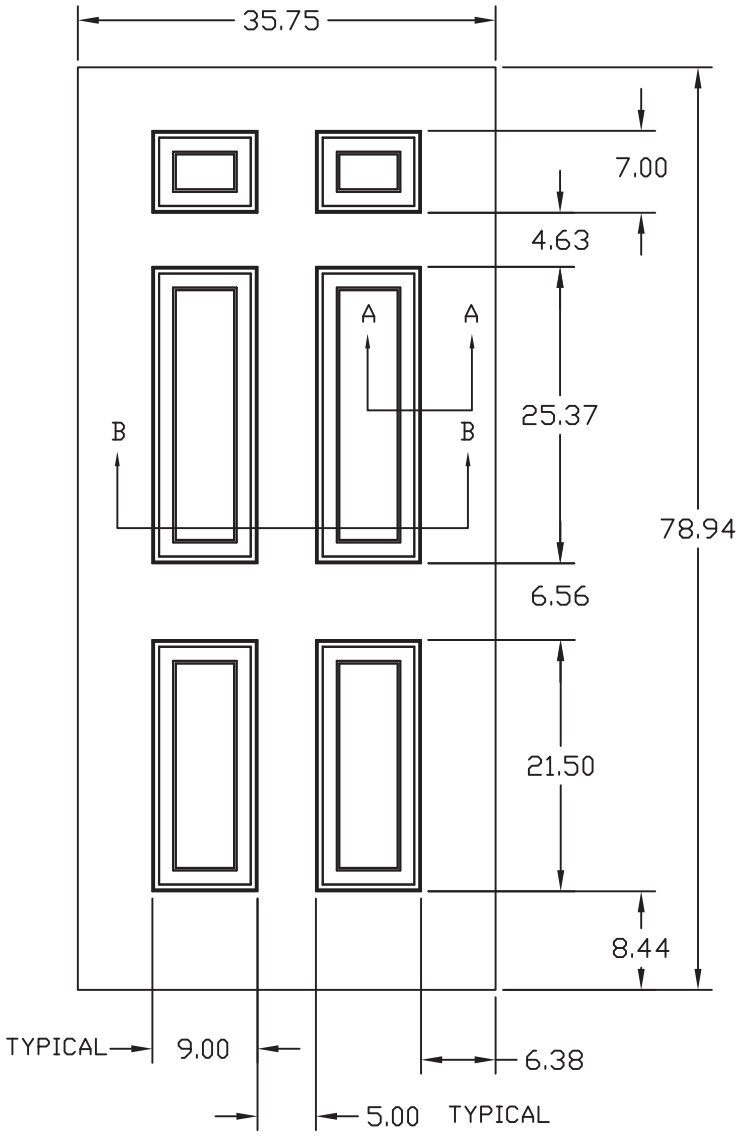
NOTE: DOOR TOLERANCES
WIDTH: __.75" +/-0.031" (__3/4" +/- 1/32")
HEIGHT: 78.938" +/-0.062" (78 15/16" +/-1/16")
THICKNESS: 1.720" +/-0.031" (Nominal 1 3/4" +/- 1/32")



TAYLOR Entrance Systems™
AMERICA'S DOORMAKER

RESIDENTIAL ENTRY DOOR NEW CONSTRUCTION STANDARD DIMENSIONS

DWG#	II-2
DATE	6-5-13
NAME	KRB
SECTION	II
PAGE	2

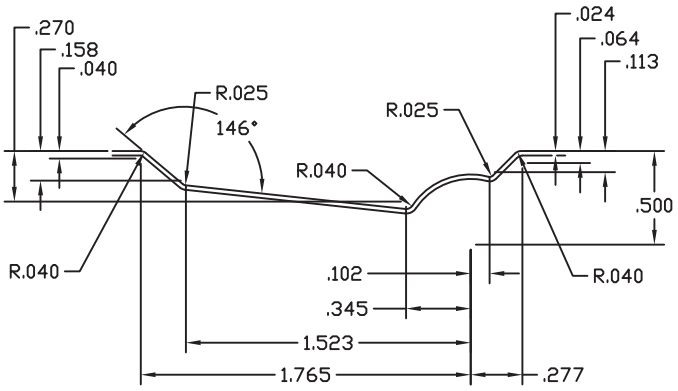


NOTE:
1/16" TOLERANCE
ALLOWED FROM CENTERLINE
FOR EMBOSSMENT LOCATIONS
TOP TO BOTTOM
AND SIDE TO SIDE.

NOTE:
THIS LAYOUT BASED ON:
3'0" X 6'8" EMBOSSED DOOR
FOR 7'0
EMBOSSMENT LOCATION
DIFFERENCE IS SPLIT BETWEEN
TOP AND BOTTOM RAILS

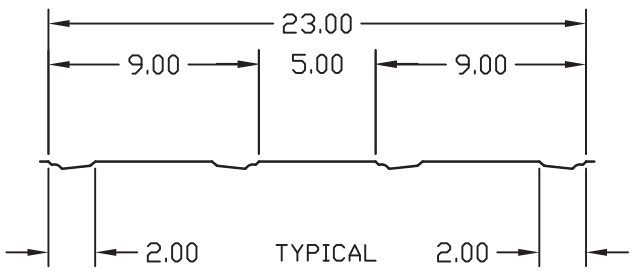
EMBOSSMENT PROFILE
SECTION A-A

SCALE 16X



EMBOSSMENT
SECTION B-B

SCALE 2X
ALL DIMENSIONS (T.S.C.) TO SHARP CORNER



TAYLOR Entrance Systems™
AMERICA'S DOORMAKER

TAYLOR 6 PANEL EMBOSSMENT OPTION FOR STEEL DOORS

AVAILABLE IN STAINABLE STEEL

DWG#	II-12
DATE	1-18-05
NAME	MJP
SECTION	II
PAGE	12