Form # P 04	DISPLA	/ THIS	CARD	ON	PRINCIPA		FRONT	AGE OF	WORK	
Please Read Application An Notes, If Any, Attached	d			ILDI	F POR	CTI			mber: 081349	
This is to certify	y that <u>KAT</u>	Z JAMES &	CHARLOT	TE KAS	SSABJTS/Ryan-C	rosby	donstr			
has permission	to repla	ce existing de	eck & Rails a	nd fix-r	ubber f needed					
AT99_SILVE	ER ST #501					(СВ1 029-С	001501		
of the prov	visions of t uction, ma	he Statu	tes of Ma	ine a	r composition nd of the Off uildings and	dina	nces of t	he City o	of Portland re	gulating
	ublic Works for if nature of wo nation.		give befo	n and w ue this en or	n of inspection vritten permission building or part otherwise close TICE IS REQUIP	i proc there ed-in	eof is	procured b	te of occupancy y owner before thereof is occup	this build-
<u></u>		Rovals MAX	4 2009 PORTLAN				Já	MMU H	Dorufe - ng & Inspectión Services	5 4 05
			PENALT	Y FO	R REMOVING	THT	IS C'ARD			

SCANNED

City of Por	tland, Maine	- Building or Use	Permit	t Applicatio	n ^{Per}	mit No:	Issue Date:		CBL:		
•	,	Tel: (207) 874-8703				08-1349			029 00	01501	
Location of Con	struction:	Owner Name:			Owner	· Address:			Phone:		
99 SILVER S	T #501	KATZ JAMES	S & CH	ARLOTTE K	99 SI	ILVER ST #	5-1				
Business Name:		Contractor Name	:		Contra	actor Address:			Phone		
		Ryan Crosby G	Construc	ction	4 Cra	anberry Lane	Saco		2074232	60	
Lessee/Buyer's N	lame	Phone:				t Type: rations - Cor	nmoroiol			Zone:	
Past Use:	A. 1.1 1. 1	Proposed Use:	1 6 1 4		Permi	it Fee:	Cost of Work		EO District:		
				nit condo		\$220.00	\$20,00				
		#501 - replace Rails and fix r			FIRE	DEPT:	Approved Denied	INSPECTI Use Group		Type:SB	
								TH	R-2 -200	3	
Proposed Project Description: replace existing deck & Rails and fix rubber if needed			d		_	ture:	GASS VITIES DIST	Signature: RICT (P.A	AMB3	5/4/09	
					Action			roved w/Co		, Denied	
					Signa	ture:		D	ate:		
Permit Taken B ldobson	y: `	Date Applied For: 10/22/2008				Zoning	g Approva	1			
1. This peri	nit application de	bes not preclude the	Special Zone or Reviews			vs Zoning Appeal			Historic Preservation		
	t(s) from meeting	g applicable State and	Sh	Shoreland		Variance			Not in District or Landm		
	permits do not ir electrical work.	iclude plumbing,	🗆 w	Wetland		Miscellaneous			Does Not Require Review		
3. Building	permits are void	if work is not started ne date of issuance.	🗌 Fl	ood Zone		Conditional Use			Requires Review		
False inf	• /	validate a building	🗌 🗌 Su	ıbdivision		🗌 🗌 Interpre	tation		Approved		
			Si	te Plan			ed	V] Approved w	/Conditions	
	PERMITI	SSUED	Maj Date:	Minor MM		Denied		Dete] Denied :: (9 (02) (TU-	
	CITY OF PO	2009 RTLAND	Date:	~ 10 	23/0	J. G.					

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE

Deck francing on Roof ollar) 06/08/09 6/18/09 Deck platforms in place - Black metal railing installed to code with Adequate angle brackets for load reinforcement. Inspected w/ Rodney & Ben W. - Gas grills need to be removed

BUILDING PERMIT INSPECTION PROCEDURES Please call 874-8703 or 874-8693 (ONLY) to schedule your inspections as agreed upon Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

X Framing inspection prior to completion of decking

X Final inspection required at completion of work.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects <u>DO</u> require a final inspection.

If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED.

Signature of Applicant/Designee

Signature of Inspections Official

Date 5/4/09

City of Portland, Maine - Buil	ding or Use Permit	t	Permit No:	Date Applied For:	CBL:
389 Congress Street, 04101 Tel: (2	0		08-1349	10/22/2008	029 O001501
Location of Construction:	Owner Name:		Jwner Address:		Phone:
99 SILVER ST #501	KATZ JAMES & CHA	ARLOTTE K	99 SILVER ST # 5	-1	
Business Name:	Contractor Name:		Contractor Address:		Phone
	Ryan Crosby Construc	ction	4 Cranberry Lane S	aco	(207) 423-2160
Lessee/Buyer's Name	Phone:	1	ermit Type:		L
			Alterations - Comm	nercial	
Proposed Use:		Propose	l Project Description:	WAR CONTRACTOR	
Commercial / Multi-unit condo #501 and fix rubber if needed	- replace existing deck δ	& Rails replace	existing deck & R	ails and fix rubber if	needed
Dept: Historic Status: A	pproved with Condition	ns Reviewer:	Scott Hanson	Approval Da	te: 11/19/2008
Note:					Ok to Issue: 🗹
1) New iron railing design submitted	11/13 is approved.				
· · · · · · · · · · · · · · · · · · ·					•
Dept: Zoning Status: A	pproved with Condition	ns Reviewer:	Marge Schmuckal	Approval Da	te: 10/23/2008
Note:					Ok to Issue: 🗹
 ANY exterior work requires a sep District. 	arate review and approv	al thru Historic l	Preservation. This p	roperty is located wi	thin an Historic
 This is NOT an approval for an ac not limited to items such as stoves 					including, but
 This property shall remain a thirty application for review and approv 		condominium bui	lding. Any change	of use shall require a	a separate permit
 This permit is being approved on work. 	the basis of plans submi	tted. Any deviat	ions shall require a	separate approval be	fore starting that
Dept: Building Status: A	pproved with Condition	ns Reviewer:	Jeanine Bourke	Approval Da	te: 05/04/2009
Note:					Ok to Issue: 🗹
 Your guardrail system installed ar Code. 	ound your deck must me	eet the loading re	quirements of section	on 1607.7.1 of the IE	BC 2003 Building
2) Application approval based upon and approrval prior to work.	information provided by	y applicant. Any	leviation from appr	oved plans requires s	separate review
Dept: Fire Status: A	pproved	Reviewer:	Capt Greg Cass	Approval Da	te: 11/19/2008
Note:				-	Ok to Issue: 🗹
				· · · · · · · · · · · · · · · · · · ·	

Comments:

11/4/2008-sth: Contractor is waiting for owner to decide what material and design they want for the deck railings, he will submit additional information when they decide. He understands that HP cannot sign off until we know what we're signing off on.

11/19/2008-gg: received permit from historic as of 11/19/08. /gg

11/25/2008-jmb: Left voicemsg for Ryan C. For details on approved wrought iron style railing from historic, at 5" oc it may not meet the < 4" spacing requirement. Also need fastening and structural integrity details.

Location of Construction:	Owner Name:		Owner Address:	Phone:	
99 SILVER ST #501	KATZ JAMES & CH	ARLOTTE K	99 SILVER ST # 5-1		
Business Name:	Contractor Name:		Contractor Address:	Phone	
	Ryan Crosby Construc	ction	4 Cranberry Lane Saco	(207) 423-2160	
Lessee/Buyer's Name	Phone:	Permit Type:			
			Alterations - Commercial		

1/26/2009-jmb: Have not received response from November, spoke with Ryan C., he is no longer involved with the project and gave me Brian w/Emerald Management # 329-0427. Spoke with Brian, he thought it was approved, so he will come in and submit required details within a couple days.

3/30/2009-jmb: Brian from Emerald Mngmt came in to address the changes for this permit. Instead of replacing the deck, they want to replace the rubber membrane, lay down a mat and use patio blocks. They want to do the rail in wood. They will submit details for approval, I gave them Scott H. # for historic approval as this railing was formerly wrought iron.

5/4/2009-jmb: Rodney Baxter came in and submitted the plans and specs for a black metal railing system as historic is requiring this. They will also rebuild the existing wood deck, not use patio blocks, ok to issue.



General Building Permit Application

FILE Y you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 99	Silver St. Brtlinud	
Total Square Footage of Proposed Structure/A GLO Sq 44.		Number <u>of</u> Stories
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Applicant * <u>must</u> be owner, Lessee or Bu Name JAMES KATZ Address 99 5: Iver St. City, State & Zip B-HAND ME	yer* Telephone: 423 -2160
Lessee/DBA (If Applicable) DEPT OF BUIL OF BUIL CITY OF FOUL AND ME OCT 2 2 2008	Owner (if different from Applicant) Name Address City, State & Zip	Cost Of Work: \$ 20,000 C of O Fee: \$ Total Fee: \$
Proposed Specific use: <u>Deck</u> Is property part of a subdivision? <u>NU</u> Project description: <i>IEPIACE Existing Deck</i>	ERAils and Fix Rubber	
Contractor's name: <u>Ryan CROSBY Con</u> Address: <u>I LRAWBERTY IAN</u> City, State & Zip <u>SAIC MIE</u> Who should we contact when the permit is reac Mailing address: <u>I CRAWBERTY IANE</u>	4072 Iy: RYAN Crosh Y	Telephone: <u>423</u> -2160

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at <u>www.portlandmaine.gov</u>, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature:	Date: 0ct 22, 2008
This past a powerity was not as	

This is not a permit; you may not commence ANY work until the permit is issue



1. Set your Posts or Wall Brackets. Posts are standard 42" height.

1. Fije sus postes o soportes de pared. Los postes son de 42" de altura estándar.

Note: when pickets are used, rails should not exceed 8 ft. without post or brace. When using glass panels, post spacing should not exceed 6 ft. (braces are recommended at each post) Glass panels require black gasket and rubber spacer blocks.

2. Select and cut the lengths of Rails needed. Standard Rail lengths are 6', 8', 10', & 12'.

2. Seleccione y corte las longitudes de la barandilla necesarias. Las longitudes estándar de las barandillas son 6', 8', 10', 12'

Noto: Al usar barandas, las barandillas no deben exceder 8 pies sin poste o refuerzo. Al usar el cristal el espacio del poste no debe exceder 6 pies (los refuerzos se recomiendan en cada poste). La aplicación del cristal requiere junta negras de GVIL y bloques de aislamiento de coucho

3. Choice of Straight or Wide Pickets or Glass Panels or any Combination. Glass panels come in widths of 24" to 66" in 3" Increments.

3. Opción de barandas rectas u onduladas o de páneles de cristal o de cualquier otra combinación. Los páneles de cristal vienen en anchuras de 24" a 66" en incrementos de 3".

TOOLS REQUIRED/HERRAMIENTAS REQUERIDAS

- Drill with 3/8" hex Bit
- #2 Square Drive Bit 'acksaw or Mitre saw
- **3 STYLES/3 ESTILOS**

AVAILABLE IN 4 COLORS/DISPONIBLE EN 4 COLORES

COLORS MAY VARY SLIGHTLY • Tape Measure Rubber Mallet Level WHITE BLACK GREY ARCHITECTURAL TFAI Tempered Glass

('ACC	10	Date:	 Cl	lassic C	Custom	er:						:			
CLASS		Market:		St	ore#:		 	 C	ilass [Wie	le 🗌	Strai	ght	
NALLI		Contact:													
Project Plan															-
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Scale: 1/4"= 1'0"		-	-							1					1

A. Determine position of all posts. Pre-drill Pilot Holes and secure loosely with only one fastener Use #14 x 2 1/2" Lag screws or stainless steel screws.

B. Install wall brackets as shown if required. Measure up from floor 42-1/8" to the top of upper bracket sleeve and 4 3/4" to the top of bottom bracket sleeve and secure with screws or lags.

R.

Support Leg

C. Measure distance between posts ("x"). Mark both top and bottom rail and cut to required length. Cut top rail 1/2" shorter than bottom rail. (*Note: Install support leg in bottom rail every 48"). Install bottom rail in bottom bracket attached to posts. Set top rail in post brackets. Attach both top and bottom rails to brackets with #10 x 3/4" self tapping or stainless steel screws as

shown. Drill 3/16" holes through bottom rail every 24" for water drainage. Level all posts and secure with remaining lag screws.

D. Picket Installation

Start against one post, snap a spacer onto top and bottom rails using rubber mallet. Insert picket and tap it tight to spacer. Repeat until you have 3-4 pickets remaining. Install remaining pickets as a group, spread out and snap in remaining spacers. Cut last spacer to fit, using hacksaw. (Option) Snap first spacer in centre of top & bottom and work outwards for equal end spacing.

E. Tempered Glass Installation

Discard clear PVC liner from top and bottom rails, replace with black gasket. Place rubber blocks in bottom rail only, 2-4 blocks per panel. Glass then slides up into top rail and down into bottom rail and rests on rubber blocks.

A. Determine la posición de todos los postes. Pretaladre los agujeros experimentales y asegúrelos libremente con solamente un sujetador. Utilize tornillos No. 14 x 2 1/2" los tornillos de retraso o tornillos de acero inoxidable.

B. Instale los soportes de Pared según lo mostrado, si es necesario. Mida para arriba desde el suelo 42 1/8" hasta la parte superior de la funda del soporte y 4 3/4" desde el suelo hasta la parte interior del . soporte.

C. Mida la distancia entre los postes. Marcar barandilla superior e inferior y cortar a la longitud requerida. Cortar barandilla superior 1/2" más corto que la barandilla inferior. (Nota: instalar

postes en la barandilla inferior cada 48"). Instalar barandilla inferior en el soporte inferior el cual está sujetado a los postes. Fije la barandilla superior en soportes del poste. Juntar barandilla superiores e inferiores a los soportes con golpecitos o con tornillos de acero inoxidable No. 10 x 3/4" como está demostrado. Perforar agujeros de 3/16" a través de la barandilla inferior cada 24"

para desague. Nivele todos los postes y asegúrelos con el resto de tornillos de retraso.

D. Instalación de la Baranda

Comience contra un poste, encajar a presión un espaciador sobre la barandilla superior e inferior usando un martillo de goma. Insertar la baranda y golpearla

igeramente apretada al espaciador, repítalo hasta que tenga 3-4 barandas solamente. Instale las barandas restantes en un grupo. Sepárelas y encájelas a presión en los espacios restantes. Usando una sierra corte el iltimo espaciador para que encaje. (Opcional) encaje a presión primer espaciador en el centro de la parte superior e inferior y trabaje hacia afuera para tener los espacios finales iguales

F. Instalación del Cristal

Descartar el trazador de líneas claro del PVC de las barandillas superiores e inferiores, reeemplazar con juntas Darandillas superiores e interiores, recenipazar Conjuntas negras. Poner bloques de caucho en la barandilla inferior solamente, 2-4 bloques por panel. El Cristal se desliza dentro de la barandilla superior y abajo dentro de la barandilla inferior y se posa sobre los bloques de caucho.



Classic Universal Angle Brackets accommodate any stair, angle Classic Universal Angle Brackets accuming a stan, angle or incline. Mount top and bottom posts at desired locations on step treads. Mount CUB Brackets to posts while maintaining 27 5/8" between round backing plates. Use #10 x 3/4" self-tapping or stainless steel screws. Measure and cut top and bottom rails as shown("x"). Install pickets and spaces. as per illustration.

CLASSIC UNIVERSAL ANGLE BRACKET (CUB) FOR STAIR & ANGLE APPLICATIONS/ Soportes de ángulo universal para cualquier clase de escaleras

> Note: Location of top & bottom posts on stair treads will determine overall height of top rail. Top rail height shall not be less than 34" or greater than 38" above tread nosing.

> Soportes de ángulo universal acomodan cualquier clase de escaleras, ángulo o inclinación. Montar poste superior e inferior en la posición deseada en los escalones. Ajustar soportes CUB a los postes manteniendo 27 5/8" entre las placas de refuerzo redondas. Deservation de la contra adhesiva o tornillos inoxidables de acero. Usar #10 por 3/4 de cinta adhesiva o tornillos inoxidables de acero. Mida y corte la baranda superior e inferior como indicado. Instalar barandillas y espaciarlas como en la ilustración.

Nota: La posicion de los postes superiores e inferiores en los escalones determinará la altura de la baranda superior. La altura de la baranda superior no debe ser menos de 34" o más de 38" por encima del escalón.

CUSTOM POST/ANGLE APPLICATION USING CLASSIC UNIVERSAL ANGLE BRACKET/

Postes a la medida/Aplicaciones en Ángulo usando Soportes de Ángulo Universal

Measure up from post base plate 2 3/4" to bottom of round backing

Maintain 34 3/4" between backing plates. Attach top round plate as

Mida para arriba desde la placa del poste 2 3/4" hasta la placa

redonda de refuerzo. Ajustar al poste. Mantener 34 3/4" entre las

placas de refuerzo. Ajustar placa redonda superior como indicado

indicated using #10 X 3/4" self drilling or stainless steel screws.

usando tornillos de acero inoxidable del No. 10 3/4"

JER

(CUB)

F.

INSTALL BOTTOM RAIL FIRST AND WORK UP.



GATE INSTALLATION/ Instalación de la puerta

plate. Attach to post.

Gate fits 48" wide opening. For smaller openings, cut top and bottom rails of gate to desired size before assembling, allowing 2" for hinges and 2" for latch.

La avertura ancha de la verja mide 48". Para averturas pequeñas, corte lo de arriba y abajo de las tablas de la verja para el tamaño deseado antes de armarla, dejando 2" para la bisagra y 2" para el pazador.











Image Gallery | Products | Installation Guide | About Us | Contact Us

Specifications

ALUMINUM MATERIALS

- All aluminum rail parts are tempered
- Classic Top Rail wall thickness 2.00 mm using 6065 T5 alloys
- Classic Bottom Rail wall thickness 1.65 mm using 6060 T5 alloys
- Classic Posts wall thickness 1.90 mm using 6063 T54 alloys

PAINT

- All Classic Railing is powder coated with a durable polyester finish
- Coating is applied to a minimum of 1.3 mm to 1.8 mm thickness

GLASS

Clear tempered glass products are warranted to meet:

1. The quality and strength requirements of ASTM C 1048 and the safety requirements of CPSC 18 and C (categories 1 and 11)

ALUMINUM

Our products are constructed of 100% high strength aluminum and will meet or exceed national building code

PAINT

Classic superior powder coating finish allows for maximum durability in all climates and will not rust, fade, peel

COLORS

White is the classic standard stocking color. Black, grey and architectural teal are also available at no extra co 15 working days for delivery of color.

STANDARD HEIGHTS

Classic standard railings are 42" in height to meet national building code standards.

DELIVERY

For classic and standard color white allow approximately 7 working days. Other colors allow approximately 15 Note: Delivery may vary during peak seasons.

ESTIMATING

Although we do encourage our dealers to familiarize themselves with estimating their packages, we are availa anytime if required. Simply fax to our dealer the applicable information and we will provide you with a cost estimithin 24 hours.

GLASS

Clear tempered glass panels are in stock in widths from 24" to 66", in 3" increments.

FREIGHT

Classic Railing shipments are prepared FOB destination on orders exceeding \$4,000.00.

WARRANTY

Classic Railing is guaranteed by Classic Railing 20 Year Limited Warranty.

Copyright © 2001-2003 Classic Railings. All Rights Reserved.



2840 West Valley Hwy N Unit 102, Auburn, WA 98001 Phone 800-819-4344 Fax 604-952-4206

FAX

Verma	Phone: Date:	06-April-09
	Date:	06-April-09
nonrin - Succes		
neering Specs	Pages:	10
4 For Review 🛛 Pleas	e Comment	🗆 Please Reply 🗆 Please R
	x	

Please do not hesitate to call our customer service at 800 364 5245 if you require any further

information.

Thanks

Anu Verma





Rubber Roof Framing 99 Silver St. 5/4 Procell Vynal Decking 2×4 Double of slappers Rails section -- 2×4 3 boor -2×4 LY space 42" Rubber Roofing 5″ QC ledger Boilding 3" Revent Book 4877 4x4 6' o.C. 2×4 Page 210 99 Silver Warship 68 Rupp 6 SIL FrAming 16 OC $\uparrow \leftarrow 30' \rightarrow$ fo 42" composit Anils 5"OC Edge 2x4- ledger 6' slider Stepters [] hxh 2x4 Double on \leftrightarrow hu [] 5/4 Procell Decking 2 9' 3" w/ 55 screws \mathcal{C} Composit 42" Rails ____ yxy I vty D UX4 EDGE Roof 16" r 2×4 Double Rim BANd ON sleeppers

REPORT

Intertek

REPORT NUMBER: 3134212COQ-004 ORIGINAL ISSUE DATE: February 20, 2009

EVALUATION CENTER

Intertek Testing Services NA Ltd. 1500 Brigantine Drive Coquitlam, B,C, V3K 7C1

RENDERED TO

Regal Aluminum Products Inc. 102-2840 West Valley Highway, N Auburn WA, 98001 United States

PRODUCT EVALUATED:

Classic Handrail and Guardrail Glass and Picket Sections, Regal Handrail and Guardrail Glass and Picket Sections

EVALUATION PROPERTY: Structural Tests

Report of testing for compliance with the applicable requirements of the following criteria: ICC Evaluation Service, Inc. AC 273, Acceptance Criteria for Handrails and Guards, approved February 2008

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by that the material, product, or service is or has ever been under an Intertek certification program.

REGAL:

Regal Aluminum Products Inc. Report No. 3134212COQ-004

February 20, 2009 Page 2 of 9

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4 Te	Sample and Assembly Description
4.1.	sting and Evaluation Methods
4.2.	Conditioning
4.3,	General (Clause 4.2.1)
4.4.	In-Fill Load Test (Clause 4.2.2)
4.5.	Uniform Load Test (Clause 4.2.3)
5 Tes	Concentrated Load Test (Clause 4.2.4),
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6 Con	Results and Observations
Appendix	A Test Data
Appendix	33 0300
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, 1	C Drawings



February 20, 2009 Page 3 of 9

2 Introduction

Intertek Testing Services NA (Intertek) has conducted testing for Regal Aluminum Products Inc., on Regal and Classic Railing Products, to evaluate structural performance. Testing was conducted in accordance with ICC Evaluation Service, Inc. AC 273, Acceptance Criteria for Handrails and Guards, approved February 2008 (ICC-ES AC 273). The connection of the railing system to the structure was not evaluated. The testing was conducted at Intertek Testing Services Ltd., Building T52-8, 1201 Guiqiao Rd, Jinqiao Development Zone, Pudong, Shanghai, China, 201206. This evaluation began on May 14, 2008 and was completed on September 10, 2008.

3 Test Samples

3.1. SAMPLE SELECTION

Samples were randomly selected on February 22, 2008 and July 8, 2008 by Intertek representative John Qiao and Craig Lawson respectively. The samples were received at the Evaluation Center on April 28, 2008 and July 30, 2008 respectively...

The subject test specimens were traceable samples selected from the manufacturer's facility. Intertek selected the specimens and has verified the composition, manufacturing techniques and quality assurance procedures.

3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Three production samples of each guardrail system were prepared for testing. The guardrail system components were summarized in Table 1 below.

Table 1. Guardrail System Components						
Component	Material					
Bottom Bracket						
Bottom Rail						
Base Plate						
Post						
Top Bracket	A6061-T6 15°±1°aluminum					
Top Rail						
Spacer						
Pickets						
UAB Classic Top Bracket						
UAB Clam Back						
UAB Regal Top Bracket	YL102 aluminum					
UAB Bottom Bracket						
Screws	A1018 steel					
Glass	Tempered Glass					
Glass Track	Poly-Vinyl Chloride (PVC)					



February 20, 2009 Page 4 of 9

4 Testing and Evaluation Methods

4.1. CONDITIONING

The samples were tested in ambient conditions. No specific conditioning parameters were required before testing.

4.2. GENERAL (Clause 4.2.1)

One complete railing system, consisting of two posts, was tested at maximum spacing and in the worst-case scenario. The test specimen was loaded at a rate to achieve the specified loads between 10 seconds and 5 minutes. The specified test loads were held for one minute before the load was released.

4.3. IN-FILL LOAD TEST (Clause 4.2.2)

A load consisting of 125 lbf was applied over 1 sq. ft. (0.0929 m²) normal to the in-fill in a worstcase scenario, including standard picket, wide picket, and basket picket. The factored load included a safety factor of 2.5 for general and 4 for glass, as detailed in section 1714.3.1 and section 2407.1.1 of the 2006 International Building Code (IBC). After release of the load, the system was examined for any evidence of disengagement of any component and visible cracks in any component.

4.4. UNIFORM LOAD TEST (Clause 4.2.3)

The top rail of the system was subjected to a single test where a uniform load of 125 lbf/ft was applied in a downward direction and at an angle of 45° from the horizontal. The factored load included a safety factor of 2.5, as detailed in section 1714.3.1 of the IBC. The load was applied using quarter point loads calculated to impose an equivalent moment to the uniform load specified. After release of the load, the system was examined for any evidence of disengagements of any component and visible cracks in any component.

4.5. CONCENTRATED LOAD TEST (Clause 4.2.4)

Two separate tests were conducted where the proof load of 500 lbf was applied horizontally to the top-rail at mid-span and directly adjacent to the post to evaluate the connection capacity. The factored load included a safety factor of 2.5, as detailed in section 1714.3.1 of the IBC. After release of the load, the system was examined for any evidence of disengagements of any component and visible cracks in any component When the applied load reached 200 lbf, the deflection at the point of loading was recorded as per clause 4.2.4.a and 4.2.4.b of ICC-ES AC 273.

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5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

The product test results are shown in Table 2-12 below. Test data sheets and photographs can be found in Appendix A and B respectively.

Table 2. Test Results	of Classic 8 ft Stand	ard Picket Section	
Test Description	Test Result	Requirement	Pass/Fail
In-fill Load, Ibf	125 held for 1 minute	125 held for 1 minute	Pass
45° Uniform Load, Ibf	1000 held for 1 minute	1000 held for 1 minute	Pass
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass
Top of Post Concentrated Load, ibf	500 held for 1 minute	500 held for 1 minute	Pass

Table 3. Test Results	of Classic & ft Stand	lard Glass Section		
Test Description	Test Result	Requirement	Pass/Fail	
In-fill Load, Ibf	200 held for 1 minute	200 held for 1 minute	Pass	
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass	
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	

Table 4. Test Result	s of Regal 8 ft Standa	ard Picket Section	
Test Description	Test Result	Requirement	Pass/Fail
In-fill Load, Ibf	125 held for 1 minute	125 held for 1 minute	Pass
45° Uniform Load, Ibf	1000 held for 1 minute	1000 held for 1 minute	Pass
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass



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Table 5. Test Result	s of Regal 6 ft Standa	ard Glass Section	1003.11
Test Description	Test Result	Requirement	Pass/Fail
In-fill Load, Ibf	200 held for 1 minute	200 held for 1 minute	Pass
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass
Top of Post Concentrated Load, lbf	500 held for 1 minute	500 held for 1 minute	Pass

Table 6. Test Resu	Its of Classic 6 ft Sta	ir Picket Section		
Test Description	Test Result	Requirement	Pass/Fall	
In-fill Load, Ibf	125 heid for 1 125 held for 1 minute		Pass	
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass	
Midspan Concentrated Load, lbf	500 held for 1 minute	500 held for 1 minute	Pass	
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	

Table 7. Test Resu	Its of Classic 6 ft Sta	ir Glass Section	
Test Description	Test Result	Requirement	Pass/Fai
In-fill Load, Ibf	200 held for 1 minute	200 held for 1 minute	Pass
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass

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Table 8. Test Res	Its of Regal 6 ft Stai	r Picket Section		
Test Description	Test Result	Requirement	Pass/Fail	
In-fill Load, Ibf	125 held for 1 minute	125 held for 1 minute	Pass	
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass	
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	

Test Description	Test Result	Requirement	Pass/Fail	
In-fill Load, Ibf	200 held for 1 minute	200 held for 1 minute	Pass	
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass	
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	

Test Description	Test Result	Requirement	Pass/Fai	
In-fill Load, Ibf	125 held for 1 minute	125 held for 1 minute	Pass	
45° Uniform Load, Ibf	1000 held for 1 minute	1000 held for 1 minute	Pass	
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	
Top of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass	



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	ults of Regal 6 ft Ang	le Picket Section	
Test Description	Test Result	Requirement	Pass/Fai
In-fill Load, Ibf	125 held for 1 minute	125 heid for 1 minute	Pass
45° Uniform Load, Ibf	750 held for 1 minute	750 held for 1 minute	Pass
Midspan Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass
Гор of Post Concentrated Load, Ibf	500 held for 1 minute	500 held for 1 minute	Pass

Table 12.	Test Results of Picket fo	r In-fill load		
Picket Type	Test Result	Requirement	Pass/Fail	
Standard	125 held for 1 minute	125 held for 1 minute	Pass	
Wide	125 held for 1 minute	125 held for 1 minute	Pass	
Basket	125 held for 1 minute	125 held for 1 minute	Pass	





PLUMBING	APPLICATIC	N			Department of Health Division of Environmen.	
Town or	Y ADDRESS			ing-	524-	
Plantation \OF Ho	IM -1 -	AN IL				
Subdivision Lot #	OWNERS NAME	m 1100v	PORTLAND PERMIT # 10832 TOWN COPY			
PROPERTY	OWNERS NAME	and the second	Permit 12 3 8 FEE Charged			
Last: Katz	First:		Local Plumbing Inspector Signatu		P.I.# <u>219 %</u>	
Applicant Name: Jum Mailing Address of	God Low	Pott Inc.		Q	1-1501	
Owner/Applicant (If Different)	OK 365 BA	Herel M	4			
Owner/Ap	oplicant Statement	'vice	5 Cau	ition: Inspection author	tion Required prized above and found it to be in	
I certify that the information so knowledge and understand th	at any falsification is reas	on for the Local	compliance with the	Maine Plumbing	Rules.	
Plumbing Inspectors to deny	a Permit.	A 1-540			and the second sec	
Signature of Own	er/Applicant	Date	Local Plumbing In:	spector Signature	Date Approved	
	F	ERMIT	INFORMATION	N		
This Application is for	Τνο	e of Structure	To Be Served:	Plur	mbing To Be Installed By:	
		FAMILY DWEL		1. TAMAS	TER PLUMBER	
1. A NEW PLUMBING		DULAR OR M		~	BURNERMAN	
2. RELOCATED PLUMBING		E FAMILY DWI			D. HOUSING DEALER/MECHANIC	
	2	- SPECIFY				
	4. 🖸 Officient				PERTY OWNER	
				LICENSE	= # 05,9,9,3	
Hook-Up & Piping Maximum of 1 H		Number	Column 2 Type of Fixture	Number	Column1 Type of Fixture	
HOOK-UP: to pu	blic sewer in re the connection	Н	losebib / Sillcock	1	Bathtub (and Shower)	
is not regulated a the local Sanitary	and inspected by	F	loor Drain		Shower (Separate)	
OR		ι	Jrinal		Sink	
HOOK-UP: to ar	existing subsurface		Drinking Fountain		Wash Basin	
wastewater disp			ndirect Waste		Water Closet (Toilet)	
lines, drains, and	<u>ATION:</u> of sanitary d piping without	V	Vater Treatment Softener, Filter, etc		Clothes Washer	
new fixtures.			Grease / Oil Separator		Dish Washer	
		F	Roof Drain		Garbage Disposal	
	OR	E	Bidet		Laundry Tub	
	TRANSFER FEE		Other:		Water Heater	
	[\$6.00]		Fixtures (Subtotal) Column 2	5	Fixtures (Subtotal) Column 1	
				• · · · · · · · · · · · · · · · · · · ·	Fixtures (Subtotal) Column 2	
	SEE PERM	MIT FEE SCH	EDULE	5	Total Fixtures	
		LCULATING		_	Fixture Fee	
				·	Transfer Fee	
			STADSFOR FAL	~	Hook-Up & Relocation Fee	
Page 1 of 1			TOWN COPY S 3 C CEA	1.00	Permit Fee (Total)	
HHE-211 Rev. 08/05			BLOOF ALLON FRAN	Tow	(TOTCH)	

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