

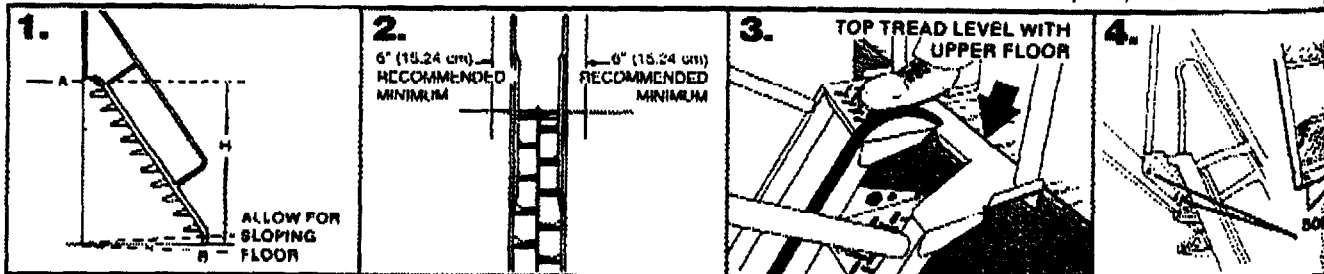
Technical Data

DIMENSIONAL / TECHNICAL DATA	56° STEEL	68° STEEL	68° ALUM
Minimum Height, Floor to Floor	36" (91.44 cm)	42" (106.68 cm)	24" (60.96 cm)
Maximum Height, Floor to Floor**	240" (609.60 cm)	240" (609.60 cm)	216" (548.64 cm)
Overall Height, (Std. Handrails)	H + 42" (106.68 cm)	H + 42" (106.68 cm)	H + 42" (106.68 cm)
Overall Height, (Opt'l Handrails)	H + 5 3/4" (14.61 cm)	H + 5 3/4" (14.61 cm)	H + 3 3/4" (9.53 cm)
Overall Width	23" (58.42 cm)	23" (58.42 cm)	23" (58.42 cm)
Run (within +/- 1 inch (25.4 cm))	0.675 (H-6.42) + 9.5 0.675 (H - 16.301 cm) + 24.13 cm	0.404 (H-7.617) + 9.5 0.404 (H - 19.093 cm) + 24.13 cm	0.404 (H-7.617) + 9.5 0.404 (H - 18.225 cm) + 24.13 cm
Recommended Minimum Floor Opening, Width	35" (88.90 cm)	35" (88.90 cm)	35" (88.90 cm)
Recommended Minimum Floor Opening, Length	70" (177.8 cm) + 2/3 Floor Thickness	62" (157.48 cm) + 2/5 Floor Thickness	62" (157.48 cm) + 2/5 Floor Thickness
Minimum Riser Height	6.417" (16.299 cm)	7.517" (19.093 cm)	7.175" (18.225 cm)
Maximum Riser Height	7.700" (19.558 cm)	9.020" (22.911 cm)	8.566" (21.750 cm)
Approximate Net Weight	1.428(H) + 32 lbs. (H<120") 1.688(H) + 34 lbs. (H≥120") 0.255(H) + 14.52 Kg (H<3.05m) 0.301(H) + 15.42 Kg (H≥3.05m)	1.332(H) + 21 lbs. (H<144") 1.488(H) + 31 lbs. (H≥144") 0.238(H) + 9.53 Kg (H<3.66 m) 0.266(H) + 14.06 Kg (H≥3.66 m)	0.690 (H) 0.1232 (H)

H = height from upper finished floor to lower finished floor in inches (centimeters).
 The above formulas are for estimating purposes and are subject to change without notice. For more complete data, call for a complimentary dimensional print.
 **To reduce vibration, stairs in excess of 15' (4.57 m) may require customer supplied sway bracing. Vertical heights in excess of 15' (4.57 m), Lapeyre recommends an intermediate platform with two stairs of equal height. (Customer supplied bracing required.)

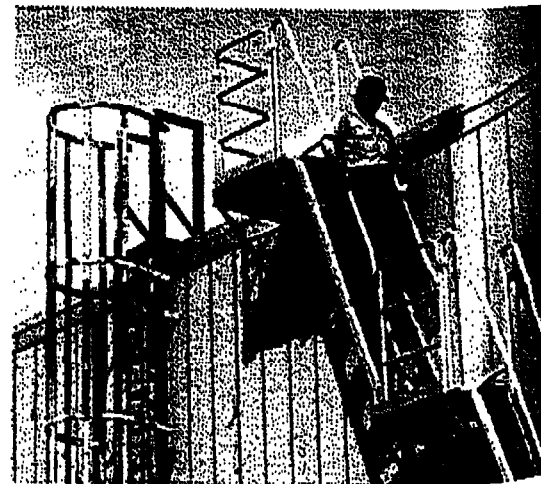
Installation Details

- When ordering, specify the change in elevation (H) between the upper finished floor surface where the top landing will attach (A) and the lower finished floor surface where the foot of the stair will be secured (B). Be sure to take into account the effects of a sloping lower floor.
- A minimum of 6" (15.24 cm) should be provided between the handrails and any other object (a minimum of 12" (30.48 cm) between handrails on two adjacent stairs). More than 6" (15.24 cm) is preferred to allow easier carrying of small objects outside the handrail.
- Always install the stair with the top in same elevation as the upper finished floor surface. For wall parapets, call Lapeyre.
- The stair is secured in place by (included) at top and bottom.



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Lapeyre Stair, Inc.

5117 Toler Street, Harahan, LA 70123
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1-800-535-7631
 U.S. and Canada

389 Congress St. Rm 315
Portland, ME 04101
Phone: (207)874-8700
Fax: (207)874-8716

facsimile transmittal

To: David Lay From: Mike Nugent
Fax: 772-1070 Date: December 22, 2003
Phone 772-3846 Pages: 1
Re: 340 Commercial St.

Urgent For Review Please Comment Please Reply Please Recycle



I have reviewed the submissions for Permit #031067 and have the following questions/comments:

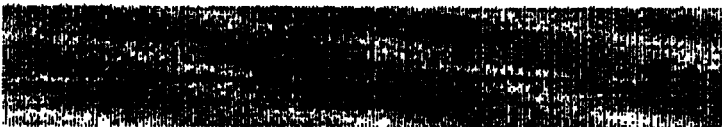
1. I need dimensional detail for the alternating tread stair that shows treads risers width
and guards, please look at Section 1014.6.6 and 1022.0.

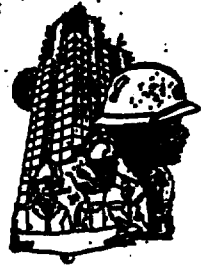
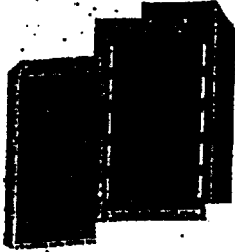
2. How do you classifying the use group of the 4th floor (I assume you are using the openings in
and option in Section 1021.3)?

3. The guards are removable in a portion of this area, I'd like to talk about this from an
operations standpoint.

4. The handrail in fig. E5 on page AE402 is 32", (must be 34")

5. Need space on the smoke removal system space for the atrium.





**CITY OF PORTLAND
BUILDING CODE CERTIFICATE**
389 Congress St., Rm 315
Portland, ME 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: PAUL STEVENS

RE: Certificate of Design

DATE: 3 DECEMBER, 2003

These plans and/or specifications covering construction work on:

THE GULF OF MAINE
RESEARCH LABORATORY

Have been designed and drawn up by the undersigned, a Maine registered architect/engineer according to the BOCA National Building Code/1999 Edition; and local amendments.

(SEAL)

Signature

[Handwritten Signature]

Title

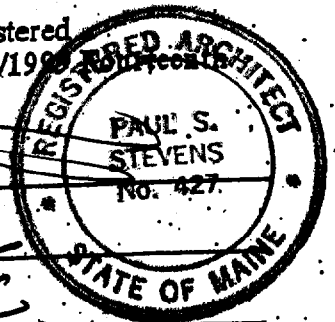
PRINCIPAL

Firm

SMPT, INC.

Address

144 FORD ST. / P.O. BOX 618
PORTLAND, ME 04104



As per Maine State Law:

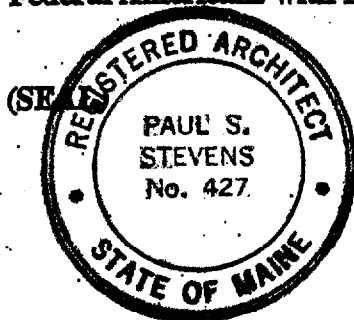
\$50,000.00 or more in new construction, repair, expansion, addition, or modification for Building or Structures, shall be prepared by a registered design Professional.



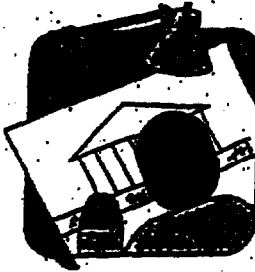
CITY OF PORTLAND
ACCESSIBILITY CERTIFICATE

Designer: PAUL STEVENS
Address of Project 350 COMMERCIAL ST.
Nature of Project OFFICE & LABORATORY
Date 3 DECEMBER 2003

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.



Signature: [Handwritten Signature]
Title: PRINCIPAL
Firm: SMPT, INC.
Address: 144 FORE ST / P.O. BOX 618
PORTLAND, ME 04104
Telephone: 207 772-3846



CITY OF PORTLAND MAINE

389 Congress St., Rm 315

Portland, ME 04101

Tel. - 207-874-8704

Fax - 207-874-8716

TO: Inspector of Buildings City of Portland, Maine
Planning & Urban Development
Division of Housing & Community Services

FROM DESIGNER: PULL STEVENS

DATE: 3 DECEMBER 2003

Job Name: GUILE OF MAINE RESEARCH LABORATORY

Address of Construction: 350 COMMERCIAL STREET

THE BOCA NATIONAL BUILDING CODE/1999 Fourteenth EDITION

Construction project was designed according to the building code criteria listed below:

Building Code and Year BOCA 1999 Use Group Classification(s) B & A3

Type of Construction 2C Bldg. Height 59' 6" ROOF Bldg. Sq. Footage 44,148

Seismic Zone A_v = 0.12, A_s = 0.12 Group Class GROUP 1

Roof Snow Load Per Sq. Ft. P_s = 35 PSF Dead Load Per Sq. Ft. ACTUAL + 5 PSF

Basic Wind Speed (mph) 100 MPH Effective Velocity Pressure Per Sq. Ft. WVS = +17 - 14

Floor Live Load Per Sq. Ft. VARIES, SEE DRAWINGS (100-250 PSF)

Structure has full sprinkler system? Yes No Alarm System? Yes No
Sprinkler & Alarm systems must be installed according to BOCA and NFPA Standards with approval from the Portland Fire Department.

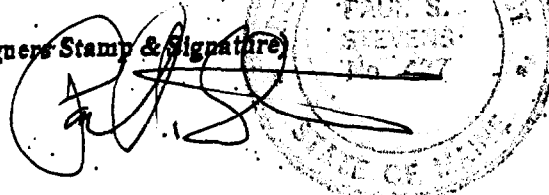
Is structure being considered unlimited area building: Yes No

If mixed use, what subsection of 313 is being considered 313.1.2

List Occupant loading for each room or space, designed into this Project.

SEE ATTACHMENT

(Designer's Stamp & Signature)



THE GULF OF MAINE AQUARIUM
Fire Protection Code Review



ARCHITECTURE
 ENGINEERING
 PLANNING

GENERAL INFORMATION	
CLIENT	The Gulf of Maine Research Institute
PROJECT	Gulf of Maine Research Laboratory, Project No. 03034
DATE PREPARED	August-03
CODES USED FOR SUMMARY	BOCA 1999 edition NFPA 101 2000-ME Fire Marshal (2003 Edition will govern) ADA- ME Fire Marshal for Accessibility Guidelines NEC 1999 edition Plumbing, Maine current edition
BUILDING DESCRIPTION	
BUILDING USE	Laboratory (Testing & Research); Offices; Multi-Media Education/Exhibition
BOCA Building Code	Chapter 3, Sect. 302.2 Mixed Use Chapter 3, Sect. 303.0, para. 303.4 Assembly Group A-3, Exhibition and Lecture Hall primarily w/o fixed seating Chapter 3, Sect. 304.0 Business Use Group Chapter 3, Sect. 302.1.2 Accessory areas include S2 storage incidental to other occupancies.
NFPA 101 2000	Chapter 12-New Assembly Occupancies Para. 12.1.2.1 Mixed Occupancies Chapter 38-New Business Occupancies
TYPE OF CONSTRUCTION	2C Non-Combustible Unprotected, BOCA (Chapter 6, Table 602) Type II (000), NFPA 220, Standard on Types of Building Construction
SPRINKLERED	Fully (In Accordance with BOCA 906.0 and NFPA 13)

THE GULF OF MAINE AQUARIUM

Fire Protection Code Review

HEIGHT AND AREA LIMITATIONS		
Use Group	BOCA: New B-Business and New A-3 Assembly S-2 Storage incidental to other occupancies.	NFPA: New Assembly and New Business
Type of Construction	BOCA: 2C Non-Combustible Unprotected	NFPA: Type II (000)
Allowable Tabular Height	BOCA: Table 503 w/o Sprinklers B-Business/2C: 3 Stories/40' A-3 Assembly/2C: 2 Stories/30'	NFPA: Table 12.1.6 No Limitations Any Assembly 2 Levels above LED Not Permitted
Actual Height	4 Stories Above Grade (49.6 Feet) (59.6 Feet to ridge) (Building Height: Vertical Distance from grade plane to average height of the highest roof surface.) (Grade Plane: Average finished ground level adjoining exterior building walls.)	
Height Modification	BOCA: 504.2 Full Sprinkler System B-Business/2C: 4 Stories/60' A-3 Assembly/2C: 3 Stories/50'	NFPA: Table 12.1.6 No Limitations Any Assembly 2 Levels above LED Not Permitted
Allowable Tabular Area	BOCA: Table 503 B-Business/2C: 14,400 SF A-3 Assembly/2C: 8,400 SF	
Height Reduction	BOCA: Table 506.4: 4 Story Type 2C = 20%	

THE GULF OF MAINE AQUARIUM
Fire Protection Code Review

BUILDING AREA (Area, or "footprint", within inside surface of exterior walls, excluding vent shafts and courts.)				
Level	Description	Phase I	Phase II	Phases I and II
		Square Feet	Square Feet	Square Feet
Basement - Existing		None	None	
Basement - New		None	None	
Subtotal Basement		0	0	0
First Floor - Business		12,078	10,200	22,278
First Floor - Assembly	Multi-Media Classroom Only	2,038	0	2,038
Subtotal First Floor		14,116	10,200	24,316
Second - Business	Less 810 SF open to Atrium	11,287	4,800	16,087
Second - Assembly		555	0	555
Subtotal Second Floor		11,842	4,800	16,642
Third Floor - Business	Less 586 SF open to Atrium	13,882	4,800	18,682
Third Floor - Assembly		0		0
Subtotal Third Floor		13,882	4,800	18,682
Fourth Floor - Mechanical	Lab Wing	3,384	2,155	5,539
Fourth Floor - Mechanical	Core	924	0	924
Subtotal Fourth Floor		4,308	2,155	6,463
SUBTOTAL PHASE I		44,148		
SUBTOTAL PHASE II			21,955	
TOTAL BUILDING AREA				66,103

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Fire Protection Code Review

ALLOWABLE AREA MODIFICATIONS

Open Perimeter Allowable Increase

Total Building Perimeter LF	805
First 25% Perimeter	-201
Obstructed Perimeter LF	0
Total Open Perimeter LF	604
% Open Perimeter	75%
% Area Increase (2 x % Open Perim)	150%
Area Modification Factor to (Table 503)	
% Allowable Tabular Area	100%
% Increase for Open Perimeter (506.2)	150%
% Increase for Automatic Sprinklers(506.3)	100%
% Decrease for Height Table 506.4	-20%
Total % Factor	330%
Conversion Factor	3.3

Business Occupancy (14,400 SF x 3.30) = 47,520 SF
 Assembly Occupancy (8,400 SF x 4.50) = 27,720 SF

First Floor Area:	Second Floor Area:
$\frac{22,278 + 2038}{47,520 + 27,720} =$	$\frac{16642 + 555}{47,520 + 27,720} =$
0.542	0.37
.542 < 1 OK	.37 < 1 OK
Third Floor Area:	Fourth Floor Area:
Not Mixed	Not Mixed

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BUILDING ELEMENTS FIRE RESISTIVE REQUIREMENTS					
Building Element	Remarks	Fire Rating (Hours)	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
Construction Type	Type 2C Unprotected-Fully Sprinklered		Table 602		
	Type II (000)			NFPA 220	
Fire Walls	*Not Applicable-One Building.	NA	Table 602		
Fire Separation Assemblies					
		2	Table 602	Section 7.1.3.2.1 (a)	
		2	BOCA Table 602.	Section 8.2.5.4(2)	
Mixed Use and Fire Area Separations					
	Fire Area Separation between B and A	2	Table 313.1.2	Section 8.2.3.1.2	
		1	Table 1011.4		
		0	Table 602	NFPA 220	
& girders		0	Table 602	NFPA 220	
	Supporting Roof Only	0	Table 602	NFPA 220	

THE GULF OF MAINE AQUARIUM
Fire Protection Code Review

BUILDING ELEMENTS FIRE RESISTIVE REQUIREMENTS (CONTINUED)					
Building Element	Remarks	Fire Rating (Hours)	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
	Fire retardant-treated wood deck required.		715.4		

THE GULF OF MAINE AQUARIUM

Fire Protection Code Review

FIRE RESISTANT MATERIALS AND CONSTRUCTION					
Building Element	Remarks	Fire Rating (Hours)	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
Exterior Walls	Fire Resistance Rating > 30'	0	Table 705.2		
	Max. area unprotected exterior wall openings > 30'	Unlimited	Table 705.3		
Vertical Separation	Not required w/ sprinklers	NA	705.4		
Exterior Opening Protectives		NA	706.0		
Fire Walls	Separation between buildings. NA - One Building	NA	707.0		
Continuity of Fire Walls	Extend 32 inches above roof surface. Make smoke tight with exter. Walls	NA	707.6		
<i>Exception to 32 inch extension.</i>	To underside roof deck @ noncombustible roofs. Note: Combustibility of rigid insulation is questionable and dense deck should be added to rate the roof.	NA	707.6.1		
<i>Other Occupancies Exception.</i>	To underside roof deck @ 2 hour firewalls provided: 1.) Roof Assembly= 1 hour w/in 5 feet. 2.) No roof openings w/in 5 feet. 3.) Min. Class B roof covering.	NA	707.6.3		
Buildings with Differing Roof Heights	Where fire walls separate buildings with a difference in roof levels greater than 30 inches.	NA	707.6.4		

THE GULF OF MAINE AQUARIUM

Fire Protection Code Review

FIRE RESISTANT MATERIALS AND CONSTRUCTION (CONTINUED)					
Building Element	Remarks	Fire Rating (Hours)	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
Fire Walls(Continued)	NA - One Building				
Fire Wall Extension Required	Extend Firewall 30 inches above lower roof and exterior wall above = 1 hour for 15 feet. If upper roof is <= 15 feet, extend 1 hour rating to underside upper roof deck.	NA	707.6.4.1		
Fire Wall Extension Not Required	Terminate Firewall @ underside deck provided lower roof 1 hour rated >= 10 feet from firewall.	NA	707.6.4.2		
Noncombustible Framing	Fireproof columns, beams, bracing to equal rating of firewall.	NA	707.7		
Fire-Resistive Joint Systems	Fire-resistive joints shall equal rating of firewall.	NA	707.8,707.9		
Offset Firewalls	Floor construction and offset supports >= fire rating of firewall.	NA	707.9		
Size Firewall Openings	Unlimited opening size with sprinklers, but aggregate width @ each level <= 25% of wall length	NA	708.2 <i>Exception</i>		
Opening Protectives	Minimum Rating.	NA	708.3		
Fire Penetrations	Maximum width <= 25% of wall length				
Vertical Shafts					
Fire Partitions	Condo Walls & Supporting Structure		711.2 and 711.4		

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FIRE RESISTANT MATERIALS AND CONSTRUCTION (CONTINUED)					
Building Element	Remarks	Fire Rating (Hours)	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
	and outside wall to outside wall				
Doors Cross-Corridor	Pair opposite swinging doors		712.3		
Opening Protectives	Doors: Self-closing; astragals required; vision panels required.	20 Minutes	712.4		
Door Closers	Hold-opens with fail-safe release		712.4.1		
Smoke Dampers	Not required w/ fully ducted system.		712.5, Exception 2		
Smoke Compartments		NA	409.0 and 712.0		
Floor/Ceiling & Roof/ Ceiling Assemblies	Refer to Table 602	0	713.0		
Penetrations			714.0		
Fire Stopping	Required in all fire rated wall, ceiling and floor openings: at curtain wall & floor.	Equal to wall or floor.			
Ducts through Walls	Fire Dampers required except: HVAC fully ducted Walls 1-Hr or less With Sprinklers		714.1.5 Exception 1.3		
Ducts through Floor	Fire damper permitted connecting max. two stories Damper rated to match partition		714.2.5 Table 718.1		
Roof Construction	Fireblocking as per 721.0		715.0		
Fire Resistance Structural Members	Not less than the rating of the assembly supported.		716 and 711.4		
	In Fire Separations for 1 hour Shaft and 1 hour Exit Enclosures	1	716 and 709.4		
		*Required by Table 602			

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Fire Protection Code Review

FIRE RESISTANT MATERIALS AND CONSTRUCTION (CONTINUED)					
Building Element	Remarks	Fire Rating (Hours)	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
Fire Door Assemblies	In Fire Separations for 1 hour Shaft and 1 hour Exit Enclosures	1	Table 717.1		
	In Fire Separations for Other 1 hour Fire Separation Assemblies	3/4	Table 717.1		
Fire Dampers	Fire Damper rating as per Table 718.1 See Exception 1.3 above		718.0 714.1.5		
Fire Window & Shutters	Same rating as partition		719.0		
Wired Glass	1 Hr. & 1 1/2 Hr. doors <= 100 Sq In		721.0, Table 720.1		
	3/4 Hr. doors <= 1296 Sq In		Table 720.1		
	Fire Windows in <= 1 Hr rated walls shall be <= 1296 Sq In with max. 54" height or width dimension.		Table 720.1, 720.3		
Fireblocking and Draftstopping	Fire Blocking locations required per:		721.0 721.6		
	Draftstopping Not Required only type 3,4,5 construction.	NA	721.7		

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MEANS OF EGRESS					
Building Element	Remarks	Rating(Hrs)/ Size	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
ARRANGEMENT OF EGRESS SHALL BE INDICATED ON CD.			1003.1		
EXIT ACCESS PASSAGEWAYS AND CORRIDORS			1011.0		
PROTECTION	With Sprinkler System:				
Enclosure:		0	Table 1011.4		
CORRIDOR WIDTH	Minimum for B-Business	44 inches	1011.3.3		
	Minimum Calculated by 1009.0		1011.3.5		
	Minimum A-Assembly Aisles		1012		
CEILING HEIGHT	7'-6" Min. for min. 2/3 ceiling area			7-1.5	
	Min. 6'-8" for projections & stairs				
	Min. 7'-0" for projections & 2/3 cing. area		1204.1		
PROJECTIONS					
Doors	Shall not reduce the width of corridors to less than 1/2 the required width at any point in its swing and, when fully open doors shall not project more than 7" into thr required corridor width.		1011.4	7-2.1.4.4	
Handrails	Clear space 1 1/2"		1022.2	7.2.2.4.5	
	Max. 3 1/2 inch projection corridor		1022.2.1	7.3.2	
	Max. 3 1/2" projection stairs			Table 7.2.2.1(a)	
COMMON PATH OF TRAVEL	With Sprinklers	Max.100'	1011.2.1		
	B - Business	Max.100'		38.2.5.3 & Table A.7.6.1	
	A - Assembly > 50'	Max. 20'		Table A.7.6.1	
	A - Assembly < 50'	Max. 75'		Table A.7.6.1	
DEAD ENDS	With Sprinklers				
	B-Business	Max.50'	1011.2	38.2.5.2 w/ Exception & Table A.7.6.1	
	A-Assembly	Not permitted			

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MEANS OF EGRESS (CONTINUED)					
Building Element	Remarks	Rating(Hrs)/ Size	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
DISCHARGE FROM EXIT STAIRWAYS			1020.0	7.2.6	
EXIT PASSAGEWAYS	Rated construction from stair to exterior exit discharge.	1	1020.2	7.2.6.3	
	Vestibules: Exit Stairs to exterior at the 1st Floor; min. 1/4 inch thick wired glass in interior vestibule doors; Max. 10' depth x 20' width	1	1020.3.1 & 1020.3.2		
	Lobby at level of exit discharge: Automatic Sprinkler Required.	0	1020.4		
	Required Width-No less than the width required for the capacity of all required exits emptying into lobby or passageway.		1020.5	7.2.6.4	
	Required Height	8 ft. Min.	1020.5		
RAMPS			1016.0	Table 7.2.5.2(a)	
Width	44" minimum width		1016.2.1		
Headroom	6'-8" min.		1016.2.2		
Restrictions	Max. 3 1/2 " handrail projection Doors opening onto landing not reduce clear width min. 42"		1016.2.3		
Rise	Max. vert. Rise 30 " between landings		1016.2.4		ADAG 4.8.4
Max Slope	1:8 with a 3" max. rise				ADAG 4.8.2
	1:10 with a 6" max. rise				ADAG 4.8.2
(when means of egress)	1:12 if > 6" rise		1016.3		
Landings	Same width as ramp; min. 60" by 60" at change in direction		1016.4	7.2.5.3.2	

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MEANS OF EGRESS (CONTINUED)					
Building Element	Remarks	Rating(Hrs)/ Size	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
RAMPS (Continued)					
Handrails	Required both sides ramp > 1 in 20 Required both sides if rise > 6 inch or horizontal projection > 72 inch		1016.5	7.2.5.4	
Edge Protection	Extend 12" beyond inside face handrail Provide curb prevent passage of min. 4 inch diam. Sphere Min. 4" height		1016.6.1 1016.6.2	7.2.5.4	
DISCHARGE FROM EXITS					
	Roof top Exits permitted IAW 7.7.6			7.7 7.7.1, Exception 2	
	Roof construction equal to fire rating of exit enclosure	1		7.7.6 (1) & (2)	

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MEANS OF EGRESS (CONTINUED)					
OCCUPANT LOAD FACTORS	Remarks	Net SF/Person unless noted GSF	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
OCCUPANT LOAD			1008.0		
Maximum Floor Areas per Occupant:	Business	100 GSF	Table 1008.1.2	Table 7.3.1.2	
	Assembly w/ Fixed Seats	Actual #	Table 1008.1.2		
	Assembly w/o Fixed Seats-Standing	3 Net	Table 1008.1.2		
	Assembly w/o Fixed Seats-Chairs	7 Net	Table 1008.1.2		
	Assembly w/o Fixed Chairs/Tables	15 Net	Table 1008.1.2		
	Storage, Mechanical Equip. Rooms	300 GSF	Table 1008.1.2		
CAPACITY OF EGRESS COMPONENTS			1009.0		
			Table 1009.2		
			0.2 inch per person		
			0.15 inch per person		
NUMBER OF EXITS			1010.0		
Min # Exits for any Story:	Over 1,000 occupants	4 Exits	Table 1010.2	Section 7-4	
	501-1,000 occupants	3 Exits			
	500 or less	2 Exits			
	Min. two exits per floor/fire area			18.2.4	
Buildings with One Exit	Max. 30 persons and 75' travel, max. two story above grade	1 Exit	Table 1010.3		
Mezzanine/Balconies	Max. 50 Occupants	1 Exit		12.2.4.3	
	Note: Actual 28' Common Path of Travel > Allowable 20' Max.				
	51-100 Occupants	2 Exits		12.2.4.4	
	> 100 Occupants	IAW 7.4.1		12.2.4.5 & 7.4.1	

THE GULF OF MAINE AQUARIUM
Fire Protection Code Review

MEANS OF EGRESS (CONTINUED)					
OCCUPANT LOAD FACTORS	Remarks	Net SF/Person unless noted GSF	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
TYPES AND LOCATION MEANS OF EGRESS			1006.0		
	Assembly	250'	Table 1006.5		
	Business	300'		12.2.6, Exception 1 & Table A.7.6.1	
MEANS OF EGRESS DOORWAYS			1017.0		
	Swing in direction of exit travel serving area > 50 persons			7.2.1.4.2	
Number of Doorways	2 exits required except where: Max. 10 occupant load Max. 75' travel distance		1017.2, Table 1017.2		
	Panic Hardware required from occupancy > 100 persons			7.2.1.7	
Size of Doors	Min. clear opening width	32"	1017.3		
	Maximum Nominal swinging door leaf	48"			
Door Hardware	Power-operated doors and horizontally sliding doors shall be capable manual operation with loss of power		1017.4.3 & 1017.4.4		

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OCCUPANT LOAD FACTORS	Remarks	Net SF/Person unless noted GSF	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
MECHANICAL EQUIPMENT					
				7.12.2	
EXIT SIGNS	In all spaces that are required to have more than one exit or exit access. Every point in egress corridor within 100 feet of a sign.			7.10.1.4	
MEANS OF EGRESS ILLUMINATION	Minimum 1 foot candle measured at floor.			7.8.1.3	
EMERGENCY ILLUMINATION					
	1 foot candle average with 0.1 min. foot candle for 1 1/2 hr. min. in all spaces required to have more than one exit or exit access.			7.9.2.1	
POWER SUPPLY FOR EXIT SIGNS AND ILLUMINATION				7.10.4	

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MEANS OF EGRESS (CONTINUED)					
Building Element	Remarks	Rating(Hrs)	BOCA 1999	NFPA 101 2000	ADA
		Size	Code Reference	Code Reference	Code Reference
STAIRWAYS			1014.0	7.2.2	
	Stair Rating	1	1014.1		
	Stair Doors and Hardware	1			
	Stair Width	44" Min.	1014.3	Table 7.2.2.2.1(a)	
	Stair Width if part accessible means of egress	48" Min.	1007.2		
	Riser	7" max. 4" min.	1014.6	Table 7.2.2.2.1(a)	
	Tread	11" min.	1014.6	Table 7.2.2.2.1(a)	
	Headroom	80" min.	1014.4	Table 7.2.2.2.1(a)	
	Maximun Height Between Landings	12 feet	1014.5	Table 7.2.2.2.1(a)	
	Landing Minimum Dimension	44"	1014.3.2	Table 7.2.2.2.1(a)	
	*No less than the required width of the stairway				
Egress Doors	Shall not reduce landing width to less than 1/2 the required width throughout its swing. When fully open the door shall not project more than 7" into the required width.		1014.8.2	7.2.1.4.4	

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MEANS OF EGRESS (CONTINUED)					
Building Element	Remarks	Rating(Hrs) Size	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
GUARDS			1021.0	7.2.2.4	
Level change	Required where level change > 30".		1021.2		
Guard Height	Guards 42 inch high, Open Guard detail such that max. 4" sphere not pass through up to 34" height		1021.2 & 1021.3		
Guards Both Sides	Continuous Guards and handrails required on each side and within 30" of all portions of required egress width of stair.			7.2.2.4.2	
HANDRAILS			1022.0	7.2.2.4	
Handrail Details	Clear space 1 1/2" except 2 1/2" stairs 3 1/2" max projection, except 4 1/2" at stairs		1022.2 1022.2.1	7.2.2.4.5	
Height	Handrails 34" to 38" high		1022.2.2		
Handrail Ends	Extend horiz. 12" beyond top riser Continue to slope depth one tread beyond bottom riser		1022.2.3		
SPACE UNDER STAIRS	Rated the same as the stair enclosure. No openings from within the stair.	1		7.2.2.5.3	
SMOKE PROOF STAIR ENCLOSURE	Required where exit floor level >75' above level exit discharge (or from 30' below)	NA	1015.2	7.2.3	
ALTERNATING TREAD STAIRS AS EXIT	Qualifies as second exit from Boiler and Mech. Rooms with Maximum 3 person occupancy.				
ELEVATORS	Elevators:ADA controls;Phone		BOCA 7-4	7.2.13	ASME A17.1-96
ELEVATOR SHAFTWAY	Vent when serving > 3 stories.	NA	BOCA 3007.3		

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FIRE SUPPRESSION SYSTEM					
Building Element	Remarks	Rating(Hrs) Size	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
SPRINKLERS	Required Throughout.		904.6	NFPA 13	
FIRE EXTINGUISHERS (PORTABLE)	Class A,B,C; Max. 75' travel distance to fire extinguisher in egress access. Maximum floor area 11,250 SF per extinguisher.		921.0	NFPA10	
FIRE ALARM SYSTEM					
Building Element	Remarks	Rating(Hrs) Size	BOCA 1999 Code Reference	NFPA 101 2000 Code Reference	ADA Code Reference
	Fire Alarm system required.		918.0 & 918.4.4	NFPA 72	

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