



Interior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**

Project Title : Danforth on High

Construction Site:
81 Danforth Street
Portland, ME 04101

Owner/Agent:
Danforth on High, LP
309 Cumberland Ave.
Suite 203
Portland, ME 04101
207 882-8349

Designer/Contractor:
Bartlett Design, Inc.
942 Washington Street
Bath, ME 04530
207 443-5447
bartlettdesigninc@comcast.net

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B x C)
Elderly Housing (Multifamily)	25586	0.7	17910
Total Allowed Watts =			17910

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Elderly Housing (Multifamily 25586 sq.ft.)				
Linear Fluorescent 1: Type J1: 48"x4" surf clg strip light / 48" T8 32W / Premium efficiency	2	1	55	55
Linear Fluorescent 2: Type J2: 50"x12" dec surf cltg mtd / 48" T8 32W / Premium efficiency	2	4	55	220
Compact Fluorescent 1: Type C1: 13" dia surface clg mtd / Quad 2-pin 26W / Electronic	2	52	54	2808
Compact Fluorescent 2: Type C2: 16" dia flush mtd dec surf clg / Quad 2-pin 26W / Electronic	2	42	54	2268
Compact Fluorescent 3: Type C3: semi-flush verion of Type C2 / Quad 2-pin 26W / Electronic	2	76	54	4104
Compact Fluorescent 4: Type C4: 12" sq surface clg / Quad 2-pin 18W / Electronic	2	37	38	1406
Compact Fluorescent 5: Type C5: 16" dia flush mtd dec clg mtd / Quad 2-pin 18W / Electronic	2	19	38	722
Compact Fluorescent 6: Type L1: lensed surf wall mtd elev pit / Quad 2-pin 13W / Electronic	1	1	16	16
Linear Fluorescent 3: Type W1: 27" lensed surf wall mtd / 24" T8 17W / Premium efficiency	2	64	32	2048
Linear Fluorescent 4: Type W2: 22.5" dec glass surf wall mtd / 24" T8 17W / Premium efficiency	2	28	32	896
Compact Fluorescent 7: Type W3: 11"x7" dec surf wall sconce / Quad 2-pin 13W / Electronic	2	26	29	754
Linear Fluorescent 5: Type W4: 25" dec surf wall mtd vanity lt / 24" T8 17W / Premium efficiency	2	31	32	992
Linear Fluorescent 6: Type W5: 48" damp location wall mtd / 48" T8 32W / Premium efficiency	1	6	28	168
Linear Fluorescent 7: Type G1: 48" damp location surf clg mtd / 48" T8 32W / Premium efficiency	2	22	55	1210
Total Proposed Watts =			17667	

Section 4: Requirements Checklist

Interior Lighting PASSES: Design 1% better than code.

Lighting Wattage:

1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
17910	17667	YES

Controls, Switching, and Wiring:

2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
3. Daylight zones have individual lighting controls independent from that of the general area lighting.

Exceptions:

- Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

4. Independent controls for each space (switch/occupancy sensor).

Exceptions:

- Areas designated as security or emergency areas that must be continuously illuminated.
- Lighting in stairways or corridors that are elements of the means of egress.

5. Master switch at entry to hotel/motel guest room.
6. Individual dwelling units separately metered.
7. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

Exceptions:

- Only one luminaire in space.
- An occupant-sensing device controls the area.
- The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
- Areas that use less than 0.6 Watts/sq.ft.

9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

Exceptions:

- Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.

10. Photocell/astronomical time switch on exterior lights.

Exceptions:

- Lighting intended for 24 hour use.

11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:

- Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COMcheck Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title

Signature

Date

Project Notes:



Exterior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**

Project Title : Danforth on High

Exterior Lighting Zone: **2 (Residentially zoned area)**

Construction Site:

81 Danforth Street
Portland, ME 04101

Owner/Agent:

Danforth on High, LP
309 Cumberland Ave.
Suite 203
Portland, ME 04101
207 882-8349

Designer/Contractor:

Bartlett Design, Inc.
942 Washington Street
Bath, ME 04530
207 443-5447
bartlettdesigninc@comcast.net

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Entry canopy	232 ft2	0.25	Yes	58	84
Other door (not main entry)	3 ft of door width	20	Yes	60	28
				Total Tradable Watts* =	118
				Total Allowed Watts =	118
				Total Allowed Supplemental Watts** =	600

* Wattage tradeoffs are only allowed between tradable areas/surfaces.

** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)	
Entry canopy (232 ft2): Tradable Wattage					
Compact Fluorescent 1: Type S2: 13"dia glass surf clg mtd / Quad 2-pin 26W / Electronic	1	3	28	84	
Other door (not main entry) (3 ft of door width): Tradable Wattage					
Compact Fluorescent 2: Type S3: 12"x5.75" cut off surf wall mtd / Quad 2-pin 26W / Electronic	1	1	28	28	
				Total Tradable Proposed Watts =	112

Section 4: Requirements Checklist

Lighting Wattage:

1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.

Compliance: Passes.

Controls, Switching, and Wiring:

2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.

- 3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.
- 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
- 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

Exterior Lighting Efficacy:

- 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

Exceptions:

- Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
- Lighting that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
- Emergency lighting that is automatically off during normal building operation.
- Lighting that is controlled by motion sensor.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COMcheck Version 3.9.1 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title

Signature

Date