

# COMcheck Software Version 4.0.3.0

## Interior Lighting Compliance Certificate

### Section 1: Project Information

Energy Code: **2009 IECC**

Project Title: Bangor Savings Bank - Marginal Way

Project Type: New Construction

Construction Site:

20 Marginal Way  
Portland, ME 04101

Owner/Agent:

Jason Donovan  
Bangor Savings Bank  
PO Box 930  
Bangor, ME 04402-0930  
207-942-5211  
Jason.Donovan@bangor.com

Designer/Contractor:

Mason Rowell  
Landry/French Construction  
160 Pleasant Hill Road  
Scarborough, ME 04074  
207-730-5566  
mrowell@landryfrenchconstruction.com

### Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft <sup>2</sup> )	C Allowed Watts / ft <sup>2</sup>	D Allowed Watts (B x C)
Office	8495	1	8495
Total Allowed Watts =			8495

### 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)
Office (8495 sq.ft.)				
LED 1: A: LED Panel 33W:	1	24	34	816
LED 2: A4: LED Panel 40W:	1	28	40	1120
LED 2 copy 1: A4D: LED Panel 40W:	1	2	40	80
LED 4: B4: LED Panel 38W:	1	4	38	152
LED 5: C4: LED Panel 33W:	1	2	32	64
LED 6: D: LED PAR 15W:	1	25	14	350
LED 6 copy 1: F: LED PAR 15W:	1	6	14	84
LED 8: G: LED Panel 19W:	1	7	26	182
LED 9: H: LED Panel 19W:	1	2	20	40
LED 10: L: LED Panel 55W:	1	14	56	784
LED 11: M: LED Panel 44W:	1	3	46	138
LED 12: P: LED Linear 33W:	1	5	144	720
LED 13: S: LED Panel 55W:	1	1	25	25
LED 13 copy 1: S1: LED Panel 55W:	1	1	25	25
LED 13 copy 2: S4: LED Panel 55W:	1	13	25	325
LED 16: W4: LED Panel 19W:	1	13	19	247
LED 16 copy 1: W: LED Panel 19W:	1	2	19	38
Compact Fluorescent 1: Z: Twin Tube 24/26/27W: Electronic:	1	1	26	26
LED 18: Y: LED Linear 8W:	1	274	6	1644
Total Proposed Watts =			6860	

### Section 4: Requirements Checklist

**Interior Lighting PASSES:** Design 19% better than code.

**Lighting Wattage:**

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

Allowed Watts	Proposed Watts	Complies
8495	6860	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.

*N/A LED Lighting*

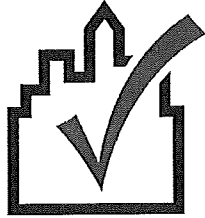
## Section 5: Compliance Statement

*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 4.0.3.0 and to comply with the mandatory requirements in the Requirements Checklist.

Colin C. Hewett, P.E.  
Name - Title

CC Hewett  
Signature

6/6/16  
Date



COMcheck Software Version 4.0.3.0

# Exterior Lighting Compliance Certificate

## Section 1: Project Information

Energy Code: **2009 IECC**

Project Title: Bangor Savings Bank - Marginal Way

Project Type: New Construction

Exterior Lighting Zone: 2 (Neighborhood business district)

Construction Site:

20 Marginal Way  
Portland, ME 04101

Owner/Agent:

Jason Donovan  
Bangor Savings Bank  
PO Box 930  
Bangor, ME 04402-0930  
207-942-5211  
Jason.Donovan@bangor.com

Designer/Contractor:

Mason Rowell  
Landry/French Construction  
160 Pleasant Hill Road  
Scarborough, ME 04074  
207-730-5566  
mrowell@landryfrenchconstruction.com

## 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
Parking (Parking area)	14533 ft2	0.06	Yes	872	280
Teller Windows (Drive-up windows/doors)	2 windows or doors	400	No	800	330
Door (Main entry)	4 ft of door width	20	Yes	80	42
Door (Other door (not main entry))	4 ft of door width	20	Yes	80	42
Patio (Plaza area)	403 ft2	0.14	Yes	56	25
Illuminated length of facade wall or surface	50 ft	2.5	No	125	59
Total Tradable Watts* =				1088	390
Total Allowed Watts =				2013	
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)
Parking ( Parking area 14533 ft2): Tradable Wattage				
LED 1: 9: Pole light: LED Roadway-Parking Unit 54W:	1	5	56	280
Teller Windows ( Drive-up windows/doors 2 windows or doors): Non-tradable Wattage				
LED 2 copy 1: 1a: Down Light: LED PAR 20W:	1	6	55	330
Door ( Main entry 4 ft of door width): Tradable Wattage				
LED 2: 1: Canopy light: LED PAR 20W:	1	1	42	42
Door ( Other door (not main entry) 4 ft of door width): Tradable Wattage				
LED 2 copy 1: 1: Canopy light: LED PAR 20W:	1	1	42	42
Patio ( Plaza area 403 ft2): Tradable Wattage				
LED 5: 2: Mini wallpack: LED A Lamp 8W:	1	3	8.5	25.5
Illuminated length of facade wall or surface (50 ft): Non-tradable Wattage				
LED 6: 3: Mini Wallpack: LED A Lamp 7W:	1	7	8.5	59.5
Total Tradable Proposed Watts =				390

## 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 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 4.0.3.0 and to comply with the mandatory requirements in the Requirements Checklist.

Colin Hewett, P.E.  
Name - Title

LC Hewett  
Signature

6/6/16  
Date