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EXCEPTIONAL CARE. WITHOUT EXCEPTION.

For all new major construction projects occurring at BMC, BMC requires that as a minimum new major additions and/or buildings incorporate the Leadership in Energy and Environmental Design-Health Care ("LEED-HC") and Green Guide for Health Care ("GGHC") green building standards. This embracement and commitment to designing/constructing 'Green Building's is due to:

Massachusetts Department of Public Health Requirements:

- The requirement Massachusetts Department of Public Health (DPH) that a healthcare facility to obtain a DoN Application (Determination of Need) application that the proposed healthcare project must demonstrate a plan that a major healthcare project will take all 'feasible measures .. to avoid or minimize damage to the environment.' The means to achieve this has been identified that the Massachusetts DPH DoN application package must have any new healthcare project demonstrate their consideration of and commitment to" LEED-HC and GGHC standards and be certifiable as a "silver level" green building. The Guidelines are organized around (7) factors for review under LEED-HC or GGHC (the "Green Building Factors"). Each Green Building Factor consists of a standard that the Massachusetts DPH uses to evaluate the DoN application and a series of measures that establish specific criteria for determining if a proposed healthcare project meets the standard.
- As part of the DoN requirement, the project must display a plan of the likely strategies to be employed to meet the silver level certification, i.e., achieving at least 50% of the possible number of credits available under LEED-HC or GGHC with final approval based on a review by the Massachusetts DPH.
- By having this requirement to meet the silver rating of the LEED-HC and GGHC credit, BMC has developed for its current major healthcare project LEED Checklists (attached at the end of this narrative) that achieve the DoN requirements. Additionally, this LEED requirement has included for current BMC projects mitigation options that would not otherwise be discussed, such as Brownfields redevelopment, alternative transportation infrastructures, reclaimed water use, and on-site power generation. In similar fashion, environmental such as stormwater discharge and air quality management, this allows BMC to consider approaches that go beyond what is required by local water or air regulations.

City of Boston Green Building Standard:

- In 2007, Boston adopted Article 37 into their municipal zoning code, which requires all large-scale projects to meet the U.S. Green Building Council's LEED certification standards with the silver rating as the minimum criteria level.

Boston Green Ribbon Commission:

- As a member committed to the mission statement of the Boston Ribbon Commission, BMC has used the LEED silver certifiable rating of its major projects as a means to be committed to reducing their Carbon Footprint.

BMC Projects that have or will achieve LEED Silver Rating equivalent:

- **BMC Shapiro Ambulatory Care Building** - completed in 2011/2012, this building was a pilot project with the Green Guide for Healthcare, achieved a Green Building Council LEED silver rating equivalent.
- **New Moakley Addition** – completed in 2015, this building addition was designed and constructed to achieve LEED 2009 for Healthcare Silver Rating
- **Yawkey Renovations** – scheduled to be completed in early 2016, this building addition was designed and is being constructed to achieve LEED 2009 for Healthcare Silver Rating
- **New Menino Addition** - scheduled to be completed in spring/summer 2016, this building addition was designed and is being constructed to achieve LEED 2009 for Healthcare Silver Rating

Attachments following:

- *BMC Moakley Addition Project LEED 2009 Healthcare, New Construction &Major Renovations Checklist*
- *BMC Yawkey Renovations Project LEED 2009 Healthcare, New Construction &Major Renovations Checklist*
- *BMC Menino Addition & Renovations Project LEED 2009 Healthcare, New Construction &Major Renovations Checklist*



# LEED 2009 for Healthcare: New Construction and Major Renovations

Project Checklist

MCCA

October 8, 2015

Achievable  
Possible Points  
Not Achievable  
Not Applicable

## 15 0 3 0 Sustainable Sites Possible Points: 18

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
Y			Prereq 2	Environmental Site Assessment	
1			Credit 1	Site Selection	1
1			Credit 2	Development Density and Community Connectivity	1
1			Credit 3	Brownfield Redevelopment	1
3			Credit 4.1	Alternative Transportation—Public Transportation Access	3
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
1			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	1
1			Credit 4.4	Alternative Transportation—Parking Capacity	1
1			Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
		1	Credit 6.1	Stormwater Design—Quantity Control	1
		1	Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
		1	Credit 8	Light Pollution Reduction	1
1			Credit 9.1	Connection to the Natural World—Places of Respite	1
1			Credit 9.2	Connection to the Natural World—Direct Exterior Access for Patients	1

## 4 0 1 4 Water Efficiency Possible Points: 9

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
Y			Prereq 2	Minimize Potable Water Use for Medical Equipment Cooling	
1			Credit 1	Water Efficient Landscaping—No Potable Water Use or No Irrigation	1
		2	Credit 2	Water Use Reduction: Measurement & Verification	1 to 2
2		1	Credit 3	Water Use Reduction	1 to 3
1			Credit 4.1	Water Use Reduction—Building Equipment	1
		1	Credit 4.2	Water Use Reduction—Cooling Towers	1
		1	Credit 4.3	Water Use Reduction—Food Waste Systems	1

## 4 0 25 10 Energy and Atmosphere Possible Points: 39

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
		14	Credit 1	Optimize Energy Performance	1 to 24
		8	Credit 2	On-Site Renewable Energy	1 to 8
1		1	Credit 3	Enhanced Commissioning	1 to 2
1			Credit 4	Enhanced Refrigerant Management	1
1			Credit 5	Measurement and Verification	2
		1	Credit 6	Green Power	1
1			Credit 7	Community Contaminant Prevention—Airborne Releases	1

Achievable  
Possible Points  
Not Achievable  
Not Applicable

## 11 0 5 0 Materials and Resources Possible Points: 16

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
Y			Prereq 2	PBT Source Reduction—Mercury	
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
		1	Credit 1.2	Building Reuse—Maintain Interior Non-Structural Elements	1
2			Credit 2	Construction Waste Management	1 to 2
3		1	Credit 3	Sustainably Sourced Materials and Products	1 to 4
1			Credit 4.1	PBT Source Reduction—Mercury in Lamps	1
2			Credit 4.2	PBT Source Reduction—Lead, Cadmium, and Copper	2
2			Credit 5	Furniture and Medical Furnishings	1 to 2
1			Credit 6	Resource Use—Design for Flexibility	1

## 11 0 7 0 Indoor Environmental Quality Possible Points: 18

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
Y			Prereq 3	Hazardous Material Removal or Encapsulation	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1		1	Credit 2	Acoustic Environment	1 to 2
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
4			Credit 4	Low-Emitting Materials	1 to 4
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
		1	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7	Thermal Comfort—Design and Verification	1
		2	Credit 8.1	Daylight and Views—Daylight	2
		3	Credit 8.2	Daylight and Views—Views	1 to 3

## 6 0 0 0 Innovation in Design Possible Points: 6

Y	?	N			
Y			Prereq 1	Integrative Project Planning and Design	
1			Credit 1.1	Innovation in Design: Integrated Pest Management Plan	1
1			Credit 1.2	Innovation in Design: Material Ingredient Reporting	1
1			Credit 1.3	Innovation in Design: Modern Mobility	1
1			Credit 1.4	Innovation in Design: Green Cleaning Plan	1
1			Credit 2	LEED Accredited Professional	1
1			Credit 3	Integrative Project Planning and Design	1

## 3 0 1 0 Regional Priority Credits Possible Points: 4

Y	?	N			
1			Credit 1.1	Regional Priority: SSc3	1
1			Credit 1.2	Regional Priority: SSc7.1	1
1			Credit 1.3	Regional Priority: SSc7.2	1
		1	Credit 1.4		1

## 54 0 42 14 Total Possible Points: 96



**LEED 2009 for Healthcare: New Construction and Major Renovation**  
Project Checklist

Project Name: BMC - Yawkey  
Project Address: Harrison Ave, Boston  
Date: 9/17/15 Updated

TOTAL			
59	8	7	40

Items in purple type will be attempted through the BMC Master Site project

Achievable	Possible	Not Achievable	Not Applicable	Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points
10	0	0	8	<b>Sustainable Sites 18 Resp.</b>

Y				Prereq 1 Construction Activity Pollution Prevention	Shawmut
Y				Prereq 2 Environmental Site Assessment	TGE/BMC
1				Credit 1 Site Selection	1 TGE
1				Credit 2 Development Density and Community Connectivity	1 TGE
1				Credit 3 Brownfield Redevelopment	1 TGE/BMC/SDC
3				Credit 4.1 Alt Transportation—Public Transportation Access	3 TGE
1				Credit 4.2 Alt Transportation—Bike Storage & Changing Rooms	1 TGE/LWDA
1				Credit 4.3 Alt Transportation—Low-Emitting & Fuel-Efficient Vehicles	1 TGE/BMC
1				Credit 4.4 Alternative Transportation—Parking Capacity	1 TGE
			1	Credit 5.1 Site Development—Protect or Restore Habitat	1
			1	Credit 5.2 Site Development—Maximize Open Space	1
			1	Credit 6.1 Stormwater Design—Quantity Control	1
			1	Credit 6.2 Stormwater Design—Quality Control	1
			1	Credit 7.1 Heat Island Effect—Non-roof	1
			1	Credit 7.2 Heat Island Effect—Roof	1
1				Credit 8 Light Pollution Reduction	1 LWDA/TCI
			1	Credit 9.1 Connection to the Natural World—Places of Respite	1
			1	Credit 9.2 Connection to the Natural World—Direct Exterior Access for Patients	1

Achievable	Possible	Not Achievable	Not Applicable	<b>Water Efficiency 9 Resp.</b>
5	1	0	3	

Y				Prereq 1 Water Use Reduction	TGE
Y				Prereq 2 Minimize Potable Water Use for Medical Equipment Cooling	TCI
			1	Credit 1 Water Efficient Landscaping—No Potable Water Use or No Irrigation	1
1	1			Credit 2 Water Use Reduction—Measurement & Verification, 2 Measures (1), 3 Measure (2)	1 to 2 TCI
2			1	Credit 3 Water Use Reduction, 30% (1), 35% (2), 40% (3)	1 to 3 TCI
1				Credit 4.1 Water Use Reduction—Building Equipment	1 TCI
			1	Credit 4.2 Water Use Reduction—Cooling Towers	1
1				Credit 4.3 Water Use Reduction—Food Waste Systems	1 LWDA

Achievable	Possible	Not Achievable	Not Applicable	<b>Energy and Atmosphere 39 Resp.</b>
15	5	3	20	

Y				Prereq 1 Fundamental Commissioning of Building Energy Systems	ESI
Y				Prereq 2 Minimum Energy Performance	ESI
Y				Prereq 3 Fundamental Refrigerant Management	TGE
14			10	Credit 1 Optimize Energy Performance, 12% (1), 14% (2), 16% (3) ... 48%+ (24)	1 to 24 ESI
			8	Credit 2 On-Site Renewable Energy, 1% (1), 3% (2), 10% (5), 20% (6), 30% (7), 40% (8)	1 to 8
1	1			Credit 3 Enhanced Commissioning	1 to 2 ESI
			1	Credit 4 Enhanced Refrigerant Management	1

		2		Credit 5	Measurement and Verification	2	ESI
		1		Credit 6	Green Power	1	BMC
			1	Credit 7	Community Contaminant Prevention—Airborne Releases	1	

Achievable	Possible	Not Achievable	Not Applicable				
12	0	4	0	Materials and Resources		16	Resp.
Y				Prereq 1	Storage and Collection of Recyclables		TGE/BMCI/LWDA
Y				Prereq 2	PBT Source Reduction—Mercury		SDC
3				Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof. 55% (1), 75% (2), 95% (3)	1 to 3	LWDA
		1		Credit 1.2	Building Reuse—Maintain Interior Non-Structural Elements	1	
2				Credit 2	Construction Waste Management, 50% (1), 75% (2)	1 to 2	SDC
2	1	1		Credit 3	Sustainably Sourced Materials and Products, 10% (1), 20% (2), 30% (3), 40% (4),	1 to 4	SDC
1				Credit 4.1	PBT Source Reduction—Mercury in Lamps	1	SDC
2				Credit 4.2	PBT Source Reduction—Lead, Cadmium and Copper	2	SDC
2		1		Credit 5	Furniture & Medical Furnishings, 30% (1), 40% (2)	1 to 2	LWDA
		1		Credit 6	Resource Use—Design for Flexibility	1	

Achievable	Possible	Not Achievable	Not Applicable				
11	1	0	6	Indoor Environmental Quality		18	Resp.
Y				Prereq 1	Minimum Indoor Air Quality Performance		TCI
Y				Prereq 2	Environmental Tobacco Smoke (ETS) Control		BMC
Y				Prereq 3	Hazardous Material Removal or Encapsulation		n/a
1				Credit 1	Outdoor Air Delivery Monitoring	1	TCI/ESI
1	1			Credit 2	Acoustic Environment	1 to 2	LWDA
1				Credit 3.1	Construction IAQ Management Plan—During Construction	1	SDC
			1	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1	
4				Credit 4	Low-Emitting Materials	1 to 4	SDC
1				Credit 5	Indoor Chemical and Pollutant Source Control	1	TCI/LWDA
1				Credit 6.1	Controllability of Systems—Lighting	1	TCI
1				Credit 6.2	Controllability of Systems—Thermal Comfort	1	TCI
1				Credit 7	Thermal Comfort—Design and Verification	1	TCI/BMC
			2	Credit 8.1	Daylight and Views—Daylight	2	
			3	Credit 8.2	Daylight and Views—Views	1 to 3	

Achievable	Possible	Not Achievable	Not Applicable				
4	1	0	1	Innovation in Design		6	Resp.
Y				Prereq 1	Integrative Project Planning & Design		LWDA
1				Credit 1.1	Innovation in Design: Exemplary Performance SSc4.1	1	Team
1				Credit 1.2	Innovation in Design: TBD	1	Team
	1			Credit 1.3	Innovation in Design: Material Ingredient reporting	1	Team
1				Credit 1.4	Innovation in Design: Green Cleaning/Low Mercury Lighting	1	Team
1				Credit 2	LEED Accredited Professional	1	Team
			1	Credit 3	Integrative Project Planning & Design	1	Team

Achievable	Possible	Not Achievable	Not Applicable				
2	0	0	2	Regional Priority Credits		4	Resp.
			1	Credit 1.1	Regional Priority: SSc7.2	1	
			1	Credit 1.2	Regional Priority: SSc6.2	1	
1				Credit 1.3	Regional Priority: SSc3	1	
1				Credit 1.4	Regional Priority: MRc1 (75%)	1	

LEED-for Healthcare RP credits for 02115: SSc3, SSc6.2, SSc7.1, SSc7.2, EA2 (1%), MRc1 (75%)							
59	8	7	40	<b>Total</b>		110	

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points



**LEED 2009 for Healthcare: New Construction and Major Renovation**  
Project Checklist

Project Name: BMC - Menino Addition & Renovation  
Project Address: Harrison Ave, Boston  
Date: 2/11/16 **Updated**

TOTAL

58	10	10	36
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Items in purple type will be attempted through the BMC Master Site project

TOTAL				Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points		
Achievable	Possible	Not Achievable	Not Applicable	<b>Sustainable Sites 18 Resp.</b>		
11	2	1	4			
Y				Prereq 1	Construction Activity Pollution Prevention	Civil/CM
Y				Prereq 2	Environmental Site Assessment	Env Eng
1				Credit 1	Site Selection	1 TGE
1				Credit 2	Development Density and Community Connectivity	1 TGE
1				Credit 3	Brownfield Redevelopment	1 n/a
3				Credit 4.1	Alt Transportation—Public Transportation Access	3 TGE
1				Credit 4.2	Alt Transportation—Bike Storage & Changing Rooms	1 TGE/TRO_IB
1				Credit 4.3	Alt Transportation—Low-Emitting & Fuel-Efficient Vehicles	1 TGE/BMC
1				Credit 4.4	Alternative Transportation—Parking Capacity	1 TGE
			1	Credit 5.1	Site Development—Protect or Restore Habitat	1 n/a
		1		Credit 5.2	Site Development—Maximize Open Space	1 LA
	1			Credit 6.1	Stormwater Design—Quantity Control	1 Civil
	1			Credit 6.2	Stormwater Design—Quality Control	1 Civil
1				Credit 7.1	Heat Island Effect—Non-roof	1 BMC
1				Credit 7.2	Heat Island Effect—Roof	1 TRO_IB
			1	Credit 8	Light Pollution Reduction	1 TRO_IB
			1	Credit 9.1	Connection to the Natural World—Places of Respite	1 TRO_IB/BMC
			1	Credit 9.2	Connection to the Natural World—Direct Exterior Access for Patients	1 TRO_IB

Achievable	Possible	Not Achievable	Not Applicable	<b>Water Efficiency 9 Resp.</b>		
1	1	3	4			
Y				Prereq 1	Water Use Reduction	TRO_IB
Y				Prereq 2	Minimize Potable Water Use for Medical Equipment Cooling	TRO_IB
		1		Credit 1	Water Efficient Landscaping—No Potable Water Use or No Irrigation	1 TRO_IB/LA
			2	Credit 2	Water Use Reduction—Measurement & Verification, 2 Measures (1), 3 Measure (2)	1 to 2 TRO_IB
		2	1	Credit 3	Water Use Reduction, 30% (1), 35% (2), 40% (3)	1 to 3 TRO_IB/BMC
1				Credit 4.1	Water Use Reduction—Building Equipment	1 TRO_IB
			1	Credit 4.2	Water Use Reduction—Cooling Towers	1 TRO_IB
	1			Credit 4.3	Water Use Reduction—Food Waste Systems	1 TRO_IB

Achievable	Possible	Not Achievable	Not Applicable	<b>Energy and Atmosphere 39 Resp.</b>		
19	5	2	17			
Y				Prereq 1	Fundamental Commissioning of Building Energy Systems	CxA
Y				Prereq 2	Minimum Energy Performance	TRO_IB
Y				Prereq 3	Fundamental Refrigerant Management	TRO_IB
16			8	Credit 1	Optimize Energy Performance, 12% (1), 14% (2), 16% (3) ... 48%+ (24)	1 to 24 TRO_IB
			8	Credit 2	On-Site Renewable Energy, 1% (1), 3% (2), 10% (5), 20% (6), 30% (7), 40% (8)	1 to 8
1	1			Credit 3	Enhanced Commissioning	1 to 2 CxA

			1		Credit 4	Enhanced Refrigerant Management	1	TRO_IB
1			1		Credit 5	Measurement and Verification	2	TRO_IB
				1	Credit 6	Green Power	1	BMC
1					Credit 7	Community Contaminant Prevention—Airborne Releases	1	

Achievable	Possible	Not Achievable	Not Applicable					
10	0	4	2		<b>Materials and Resources</b>		<b>16</b>	<b>Resp.</b>
Y					Prereq 1	Storage and Collection of Recyclables		TRO_IB
Y					Prereq 2	PBT Source Reduction—Mercury		TRO_IB
2		1			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof, 55% (1), 75% (2), 95% (3)	1 to 3	TRO_IB
		1			Credit 1.2	Building Reuse—Maintain Interior Non-Structural Elements	1	n/a
2					Credit 2	Construction Waste Management, 50% (1), 75% (2)	1 to 2	TRO_IB
1		1	2		Credit 3	Sustainably Sourced Materials and Products, 10% (1), 20% (2), 30% (3), 40% (4),	1 to 4	TRO_IB
1					Credit 4.1	PBT Source Reduction—Mercury in Lamps	1	TRO_IB
2					Credit 4.2	PBT Source Reduction—Lead, Cadmium and Copper	2	TRO_IB
2					Credit 5	Furniture & Medical Furnishings, 30% (1), 40% (2)	1 to 2	TRO_IB
		1			Credit 6	Resource Use—Design for Flexibility	1	n/a

Achievable	Possible	Not Achievable	Not Applicable					
10	1	0	7		<b>Indoor Environmental Quality</b>		<b>18</b>	<b>Resp.</b>
Y					Prereq 1	Minimum Indoor Air Quality Performance		TRO_IB
Y					Prereq 2	Environmental Tobacco Smoke (ETS) Control		BMC
Y					Prereq 3	Hazardous Material Removal or Encapsulation		n/a
1					Credit 1	Outdoor Air Delivery Monitoring	1	TRO_IB
			2		Credit 2	Acoustic Environment	1 to 2	Acoustics Consult
1					Credit 3.1	Construction IAQ Management Plan—During Construction	1	TRO_IB
1					Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1	TRO_IB
4					Credit 4	Low-Emitting Materials	1 to 4	TRO_IB
1					Credit 5	Indoor Chemical and Pollutant Source Control	1	TRO_IB
1					Credit 6.1	Controllability of Systems—Lighting	1	TRO_IB
			1		Credit 6.2	Controllability of Systems—Thermal Comfort	1	TRO_IB
1					Credit 7	Thermal Comfort—Design and Verification	1	TRO_IB/BMC
			2		Credit 8.1	Daylight and Views—Daylight	2	TRO_IB
	1		2		Credit 8.2	Daylight and Views—Views	1 to 3	TRO_IB

Achievable	Possible	Not Achievable	Not Applicable					
4	1	0	1		<b>Innovation in Design</b>		<b>6</b>	<b>Resp.</b>
Y					Prereq 1	Integrative Project Planning & Design		Team
1				1	Credit 1.1	Innovation in Design: Exemplary Performance SSc4.1	1	Team
				1	Credit 1.2	Innovation in Design: TBD	1	Team
				1	Credit 1.3	Innovation in Design: Low Mercury Lighting	1	Team
	1				Credit 1.4	Innovation in Design: Green Cleaning	1	Team
1					Credit 2	LEED Accredited Professional	1	Team
1					Credit 3	Integrative Project Planning & Design	1	Team

Achievable	Possible	Not Achievable	Not Applicable					
3	0	0	1		<b>Regional Priority Credits</b>		<b>4</b>	<b>Resp.</b>
1					Credit 1.1	Regional Priority: SSc7.2	1	
			1		Credit 1.2	Regional Priority: SSc6.2	1	
1					Credit 1.3	Regional Priority: SSc3	1	
1					Credit 1.4	Regional Priority: MRc1 (75%)	1	

LEED-for Healthcare RP credits for 02115: SSc3, SSc6.2, SSc7.1, SSc7.2, EAcl2 (1%), MRc1 (75%)								
<b>58</b>	<b>10</b>	<b>10</b>	<b>36</b>	<b>Total</b>			<b>110</b>	

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points