



# CIVIC DESIGN REVIEW

Sustainability Discussion

# Why re-examine sustainability?

Our current CDR sustainability submission requirement:

"A written summary of intended sustainable design elements."

Concerns: Too vague.

- The requirement does not do enough to encourage applicants to explore and promote sustainable practices in building design and site design.
- PCPC staff cannot evaluate submission in a consistent and objective manner.

# Submissions to date are difficult to assess

## **Example 1 – Descriptive, But Lacking Measurement**

“All apartments are naturally ventilated, and will have ample daylight, as well as views of Center City, the Ben Franklin Bridge, or the Delaware River.”

## **Example 2 – Qualitative, But Lacking a Standard**

1.3 Enhanced landscaping requires low irrigation.

## **Example 3 – Descriptive, But May Miss Some Concerns**

“Native, flood-resistant vegetation will be selected to create low maintenance, sustainable, and attractive public spaces.”

# Why utilize an objective, third party standard?

- Quality of Standard
  - Created by qualified peers and tested over time
- Measurable
  - Clear understanding if standard is or is not achieved
- Consistency of review
  - Clear expectations and reduction of unintentional bias

# Is the LEED rating system appropriate for CDR submissions?



## LEED v4 for BD+C: New Construction and Major Renovation Project Checklist

Project Name:  
Date:

Y ? N

Y	?	N	Credit	Points
			Integrative Process	1
<b>0 0 0 Location and Transportation 16</b>				
			LEED for Neighborhood Development Location	16
			Sensitive Land Protection	1
			High Priority Site	2
			Surrounding Density and Diverse Uses	5
			Access to Quality Transit	5
			Bicycle Facilities	1
			Reduced Parking Footprint	1
			Green Vehicles	1
<b>0 0 0 Sustainable Sites 10</b>				
Y			Construction Activity Pollution Prevention	Required
			Site Assessment	1
			Site Development - Protect or Restore Habitat	2
			Open Space	1
			Rainwater Management	3
			Heat Island Reduction	2
			Light Pollution Reduction	1
<b>0 0 0 Water Efficiency 11</b>				
Y			Outdoor Water Use Reduction	Required
Y			Indoor Water Use Reduction	Required
Y			Building-Level Water Metering	Required
			Outdoor Water Use Reduction	2
			Indoor Water Use Reduction	6
			Cooling Tower Water Use	2
			Water Metering	1
<b>0 0 0 Energy and Atmosphere 33</b>				
Y			Fundamental Commissioning and Verification	Required
Y			Minimum Energy Performance	Required
Y			Building-Level Energy Metering	Required
Y			Fundamental Refrigerant Management	Required
			Enhanced Commissioning	6
			Optimize Energy Performance	18
			Advanced Energy Metering	1
			Demand Response	2
			Renewable Energy Production	3
			Enhanced Refrigerant Management	1
			Green Power and Carbon Offsets	2

Y	?	N	Prereq	Credit	Points
<b>0 0 0 Materials and Resources 13</b>					
Y			Storage and Collection of Recyclables	Required	
Y			Construction and Demolition Waste Management Planning	Required	
			Building Life-Cycle Impact Reduction	Credit	5
			Building Product Disclosure and Optimization - Environmental Product Declarations	Credit	2
			Building Product Disclosure and Optimization - Sourcing of Raw Materials	Credit	2
			Building Product Disclosure and Optimization - Material Ingredients	Credit	2
			Construction and Demolition Waste Management	Credit	2
<b>0 0 0 Indoor Environmental Quality 16</b>					
Y			Minimum Indoor Air Quality Performance	Required	
Y			Environmental Tobacco Smoke Control	Required	
			Enhanced Indoor Air Quality Strategies	Credit	2
			Low-Emitting Materials	Credit	3
			Construction Indoor Air Quality Management Plan	Credit	1
			Indoor Air Quality Assessment	Credit	2
			Thermal Comfort	Credit	1
			Interior Lighting	Credit	2
			Daylight	Credit	3
			Quality Views	Credit	1
			Acoustic Performance	Credit	1
<b>0 0 0 Innovation 6</b>					
			Innovation	Credit	5
			LEED Accredited Professional	Credit	1
<b>0 0 0 Regional Priority 4</b>					
			Regional Priority: Specific Credit	Credit	1
			Regional Priority: Specific Credit	Credit	1
			Regional Priority: Specific Credit	Credit	1
			Regional Priority: Specific Credit	Credit	1
<b>0 0 0 TOTALS Possible Points: 110</b>					
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110					

Up to 50 categories on the checklist

LEED certification can be very thorough, but LEED certification is NOT a code requirement and might not be appropriate for all projects.

# Is There a Middle Ground?

## USGBC - LEED

LEED v4 for BD+C: New Construction and Major Renovation  
Project Checklist

Project Name: \_\_\_\_\_  
Date: \_\_\_\_\_

Y	Y	N	Integrative Process	Points
Y	Y	N	Integrative Process	1
<b>0 0 0 Location and Transportation 16</b>				
Y	Y	N	LEED for Neighborhood Development Location	16
Y	Y	N	Site Near Land Protector	1
Y	Y	N	High Priority Site	2
Y	Y	N	Sitewatching Density and Diverse Uses	5
Y	Y	N	Access to Quality Transit	5
Y	Y	N	Bicycle Facilities	1
Y	Y	N	Reduced Parking Footprint	1
Y	Y	N	Green Vehicle	1
<b>0 0 0 Sustainable Sites 10</b>				
Y	Y	N	Construction Activity Pollution Prevention	10
Y	Y	N	Site Assessment	1
Y	Y	N	Soil Erosion Control - Protect or Restore H2O2	2
Y	Y	N	Open Space	1
Y	Y	N	Rainwater Management	1
Y	Y	N	Heat Island Reduction	2
Y	Y	N	Light Pollution Reduction	1
<b>0 0 0 Water Efficiency 11</b>				
Y	Y	N	Water Use Reduction	11
Y	Y	N	Indoor Water Use Reduction	1
Y	Y	N	Building Level Water Metering	1
Y	Y	N	Outdoor Water Use Reduction	2
Y	Y	N	Indoor Water Use Reduction	1
Y	Y	N	Cooling Tower Water Use	2
Y	Y	N	Water Metering	1
<b>0 0 0 Energy and Atmosphere 33</b>				
Y	Y	N	Fundamental Commissioning and Verification	10
Y	Y	N	Systems Energy Performance	10
Y	Y	N	Building Level Energy Metering	1
Y	Y	N	Fundamental Refrigerant Management	1
Y	Y	N	Enhanced Commissioning	3
Y	Y	N	Optimize Energy Performance	16
Y	Y	N	Advanced Energy Metering	1
Y	Y	N	Demand Response	2
Y	Y	N	Renewable Energy Production	3
Y	Y	N	Enhanced Refrigerant Management	1
<b>0 0 0 Materials and Resources 13</b>				
Y	Y	N	Storage and Collection of Recyclables	13
Y	Y	N	Construction and Demolition Waste Management Planning	1
Y	Y	N	Building Life-Cycle Impact Reduction	5
Y	Y	N	Building Product Disclosure and Optimization - Environmental Product Declarations	2
Y	Y	N	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
Y	Y	N	Building Product Disclosure and Optimization - Material Ingredients	2
Y	Y	N	Construction and Demolition Waste Management	2
<b>0 0 0 Indoor Environmental Quality 16</b>				
Y	Y	N	Minimum IAQ Quality Performance	16
Y	Y	N	Environmental Tobacco Smoke Control	1
Y	Y	N	Enhanced Indoor Air Quality Strategies	2
Y	Y	N	Low-Emitting Materials	2
Y	Y	N	Construction Indoor Air Quality Management Plan	1
Y	Y	N	Indoor Air Quality Assessment	1
Y	Y	N	Thermal Comfort	1
Y	Y	N	Interior Lighting	2
Y	Y	N	Daylight	1
Y	Y	N	Quality Views	1
Y	Y	N	Acoustic Performance	1
<b>0 0 0 Innovation 6</b>				
Y	Y	N	Innovation	6
Y	Y	N	LEED Accredited Professional	1
<b>0 0 0 Regional Priority 4</b>				
Y	Y	N	Regional Priority Specific Credit	1
Y	Y	N	Regional Priority Specific Credit	1
Y	Y	N	Regional Priority Specific Credit	1
Y	Y	N	Regional Priority Specific Credit	1
<b>0 0 0 TOTALS Possible Points: 110</b>				
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110				

## Other City Agencies



There are 10-15 LEED categories that could apply to the public realm for the purposes of Civic Design Review.

Other city agencies and programs have sustainable design aspirations beyond the minimum requirements found within zoning and building codes.

# How were categories and technical standards selected?

- Internal Philadelphia City Planning Commission Staff review of LEED standards and current zoning code requirements.
- Input and guidance from other city agencies, such as the Philadelphia Water Department.

# Summary of Checklist – Details on Spreadsheet

	Category	Summary of Benchmark
<b>Location and Transportation</b>	<b>Access to Quality Transit</b>	Primary entry within ¼ Mile of Transit
	<b>Reduced Parking Footprint</b>	Parking located in rear yard, side yard, or under building
	<b>Pervious Surfaces</b>	20% or more of site area is pervious and/or vegetated, including green and vegetated roofs
<b>Sustainable Sites</b>	<b>Rainwater Management</b>	Rainwater management per PWD standard and Green Street creation or management from off-site sources
	<b>Heat Island Reduction</b>	50% or more of hardscapes meet LEED standards for reflectance and/or shading of site
<b>Water Efficiency</b>	<b>Outdoor Water Use</b>	No on-site irrigation or 50% reduction from peak use
	<b>Energy Commissioning</b>	Provide energy modeling and post-occupancy energy consumption assessment per LEED standard
<b>Energy and Atmosphere</b>	<b>Optimize Energy performance</b>	10% or more energy reduction from established baseline based on ASHRAE standard 90.1-2007
	<b>On-Site Renewable Energy</b>	On-site generation of renewable energy that meets at least 3% of projected project energy needs
<b>Green Infrastructure</b>	<b>Solid Waste Management (Recycling)</b>	Recycling collection and storage throughout project.
<b>Innovation</b>	<b>Innovation</b>	Additional sustainable measures not mentioned above or already required by zoning and building codes

# A CDR Sustainability Checklist Might Look Like:

## 3 Columns

Categories

Benchmarks/  
Standards

Applicant's  
Response

DRAFT- FOR REVIEW ONLY

Civic Design Review, Philadelphia		Sustainability Questionnaire
Categories	Benchmark	Meets or Exceeds the Benchmark (yes or no)? If yes, please describe how or reference the applicable document in the CDR submission.
<b>Location and Transportation</b>		
Access to Quality Transit	Locate a functional entry of the project within a ¼-mile (400-meter) walking distance of existing or planned bus, streetcar, or rideshare stops, bus rapid transit stops, light or heavy rail stations.	
Reduced Parking Footprint	All new parking areas to be located in the rear yard of the property or under the building, and unenclosed or uncovered parking spaces shall be located on the site area.	
<b>Sustainable Sites</b>		
Pervious Site Surfaces	Provides vegetated and/or pervious open space that is 20% or greater of the site's area. Vegetated and/or green roofs can be included in this calculation.	
Rainwater Management	Conform to the stormwater requirements of the Philadelphia Water Department(PWD) and either: A) Develop a green street and donate it to PWD, designed and constructed in accordance with the PWD Green Streets Design Manual, OR B) Manage additional runoff from adjacent streets on the development site, designed and constructed in accordance with specifications the PWD Stormwater Management Regulations	
Heat Island Reduction (excluding roofs)	Reduce the heat island effect through either of the following strategies for 50% or more of all on-site hardscapes: A) Hardscapes that have a high reflectance, an SRI>29. B) Shading by trees, structures, or solar panels.	



# Will the checklist create new requirements?

## **For submission materials? Yes**

The development team will be required to respond to the questions on the checklist questionnaire.

## **For project design? No**

Civic Design Review remains an advisory process. The development team is not required to meet any of the benchmarks on the sustainability checklist.



# What if the development team is already pursuing LEED certification?

**Language will be added to the regulation to:**

Excuse the development team from filling out the Philadelphia Civic Design Review Sustainability Checklist.

**BUT, the language will also require:**

The development team to submit a draft checklist of LEED credits that will be applied for.

# Process for Adopting Sustainability Checklist

- 1 PCPC Staff Review and Coordination with City Agencies
- 2 Public review of proposal by Civic Design Review Committee
- 3 Revisions of proposed regulation (repeat as needed)
- 4 Adoption by Civic Design Review Committee members
- 5 Presentation of proposed regulatory change to the Philadelphia City Planning Commission for their deliberation and vote
- 6 Amendment is sent to the Records Department and posted for a thirty (30) day waiting period. After that period has lapsed, the amendment is effectively a part of the Regulation.

# CDR Committee Discussion

Notes:



**THANK YOU!**

Next Civic Design Review Meeting

**NOVEMBER 24, 2015**