

# ECKINGTON YARDS

1611-1625 ECKINGTON PLACE + 1500 HARRY THOMAS WAY, NE WASHINGTON DC 20002  
PUD | POST-HEARING SUBMISSION

<http://www.boundaryco.com/>

June 2, 2016



"ECKINGTON YARDS WEST"  
1611-1625 ECKINGTON PLACE, NE  
SQUARE: 3576 LOT: 0805 (2001-2008)

"ECKINGTON YARDS EAST"  
1500 HARRY THOMAS WAY, NE  
SQUARE: 3576 LOTS: 0814

OWNER/APPLICANT:  
JBG/Boundary 1500 Harry Thomas Way, LLC  
JBG/Boundary Eckington Place, LLC  
Joint Ventures between  
The Boundary Companies  
The JBG Companies

LAND USE COUNSEL:  
Goulston & Storrs PC

ARCHITECT:  
Eric Colbert & Associates

LANDSCAPE ARCHITECT:  
LandDesign

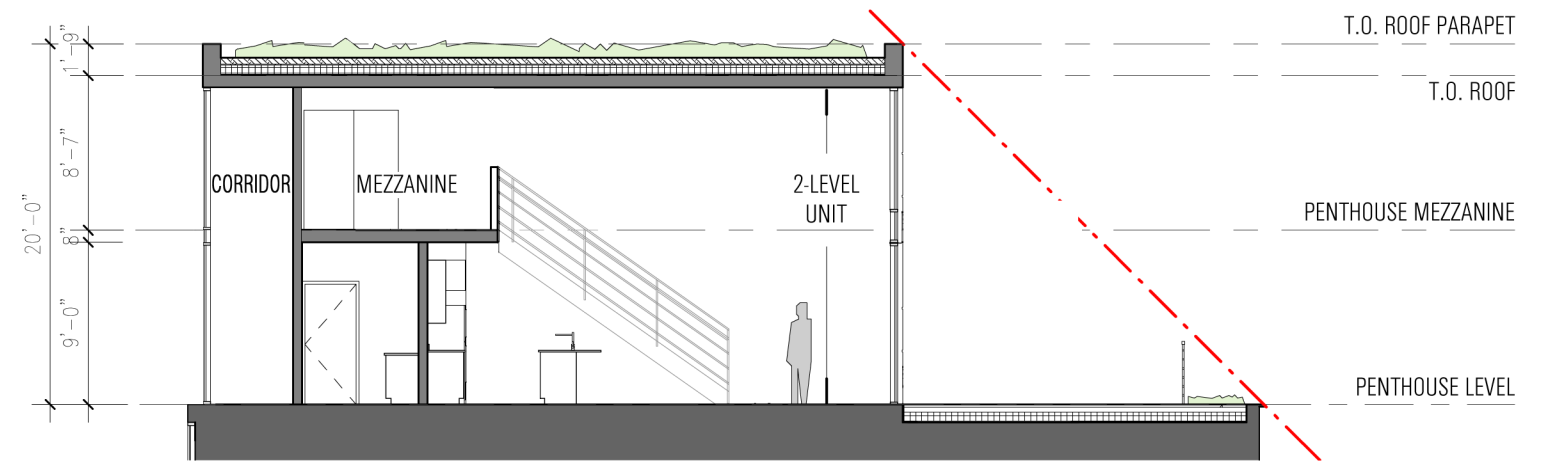
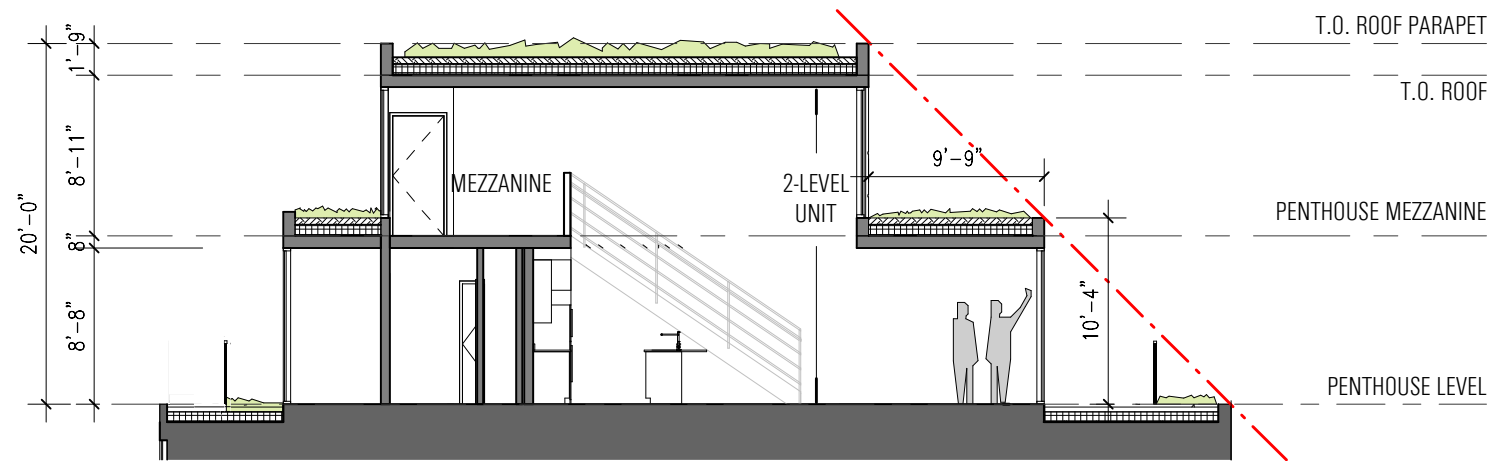
CIVIL ENGINEER:  
Bowman Consulting

TRAFFIC CONSULTANT:  
Gorove/Slade Associates

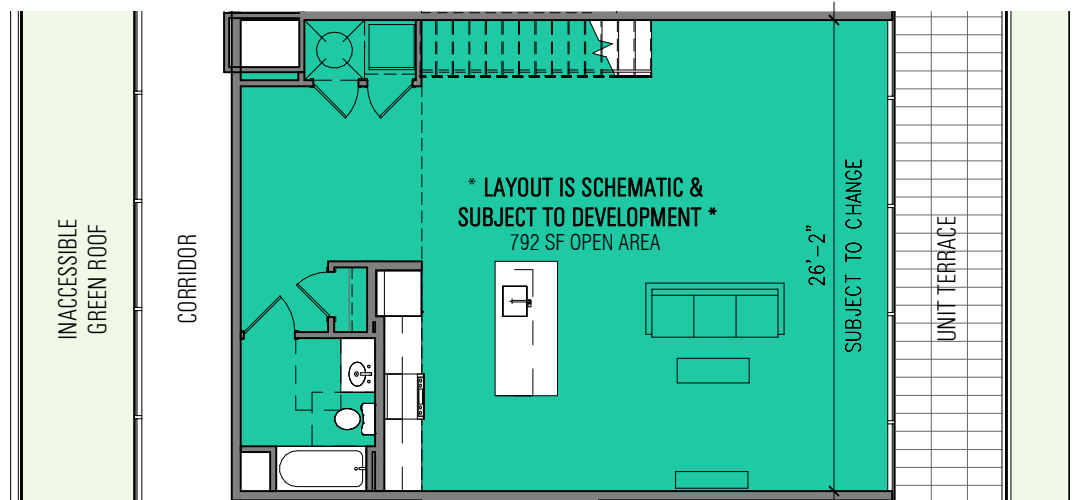
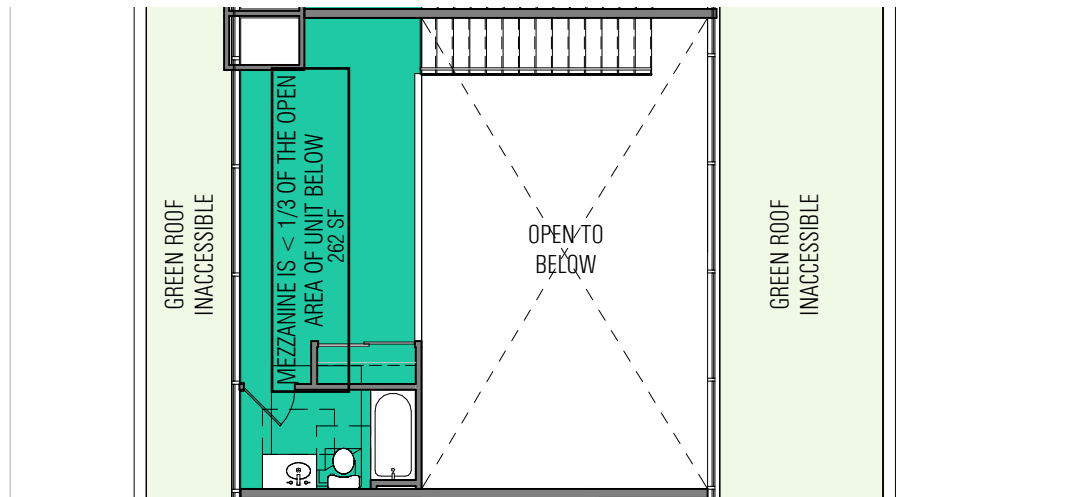
LEED CONSULTANT:  
Sustainable Design Consulting

ZONING COMMISSION  
District of Columbia

POST-HEARING SUBMISSION | CS.01  
EXHIBIT NO. 45A1 06 / 02 / 2016



**PENTHOUSE OPTION B:  
NO SOUTH EXTENSION, LARGER NORTH EXTENSION**

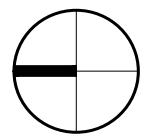


**PENTHOUSE OPTION A:  
LARGER SOUTH EXTENSION, SMALLER NORTH EXTENSION**

*Note:  
The exterior elevations, door & window sizes and locations, interior partition locations & layout, the number, size and location of residential units, stairs, outdoor spaces and balconies are shown for illustrative purposes and are subject to change.*



**PENTHOUSE OPTION A SHOWN IN RENDERING**



SHEET REVISED 06/02/2016

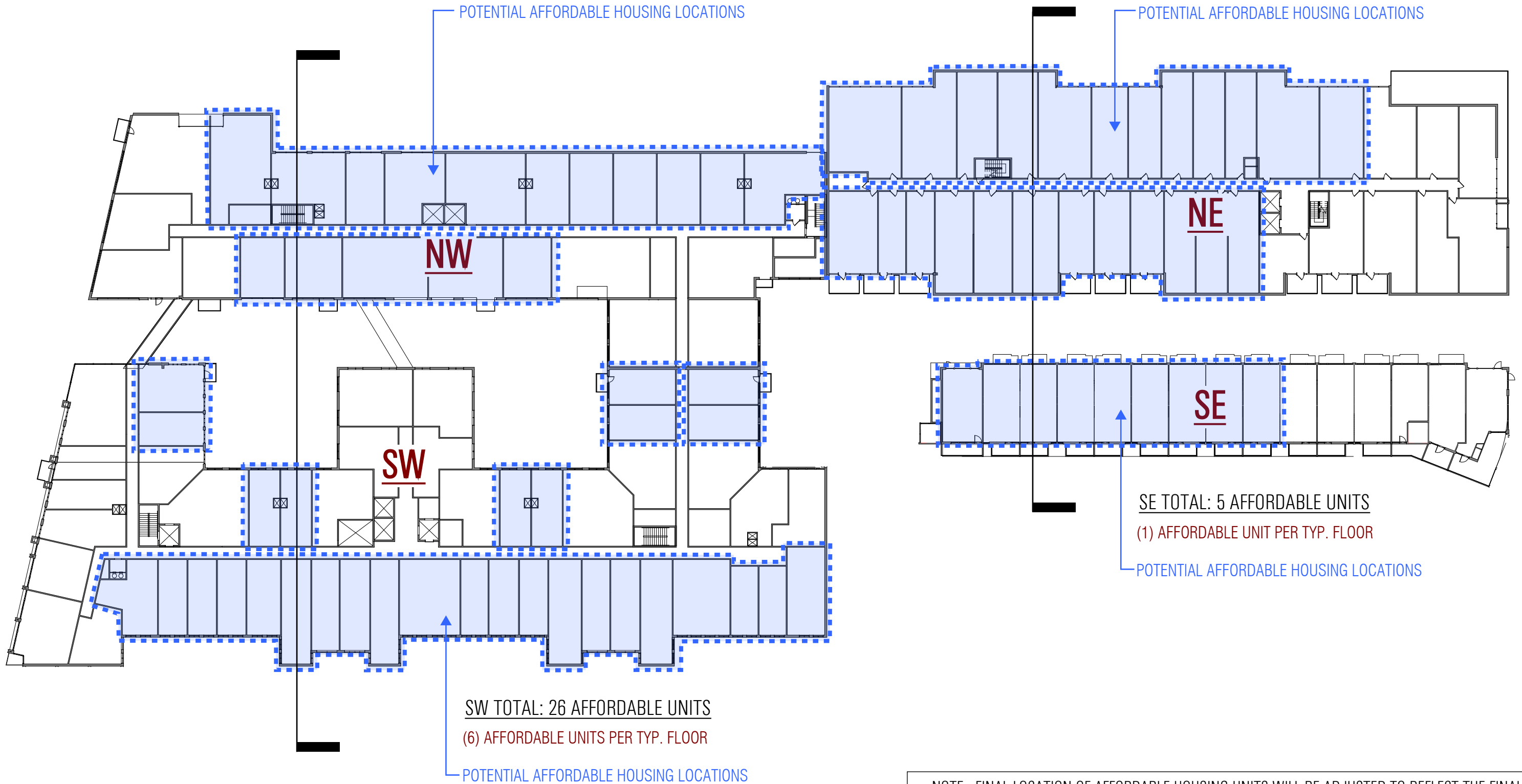
**PENTHOUSE / MEZZANINE STUDIES**

NW TOTAL: 13 AFFORDABLE UNITS  
(2-3) AFFORDABLE UNITS PER TYP. FLOOR

NE TOTAL: 12 AFFORDABLE UNITS  
(3) AFFORDABLE UNITS PER TYP. FLOOR

POTENTIAL AFFORDABLE HOUSING LOCATIONS

POTENTIAL AFFORDABLE HOUSING LOCATIONS



**NW**

**NE**

**SW**

**SE**

SW TOTAL: 26 AFFORDABLE UNITS  
(6) AFFORDABLE UNITS PER TYP. FLOOR

SE TOTAL: 5 AFFORDABLE UNITS  
(1) AFFORDABLE UNIT PER TYP. FLOOR

POTENTIAL AFFORDABLE HOUSING LOCATIONS

POTENTIAL AFFORDABLE HOUSING LOCATIONS

NOTE : FINAL LOCATION OF AFFORDABLE HOUSING UNITS WILL BE ADJUSTED TO REFLECT THE FINAL UNIT COUNT AND UNIT MIX, PROVIDED THAT THE LOCATION OF AFFORDABLE UNITS BY FLOOR AND WITHIN EACH FLOOR WILL REMAIN CONSISTENT WITH THE PLANS AND SECTIONS. THE LOCATION OF THE AFFORDABLE UNITS ARE ILLUSTRATIVE AND SUBJECT TO CHANGE.

# AFFORDABLE UNITS | PLAN DIAGRAM

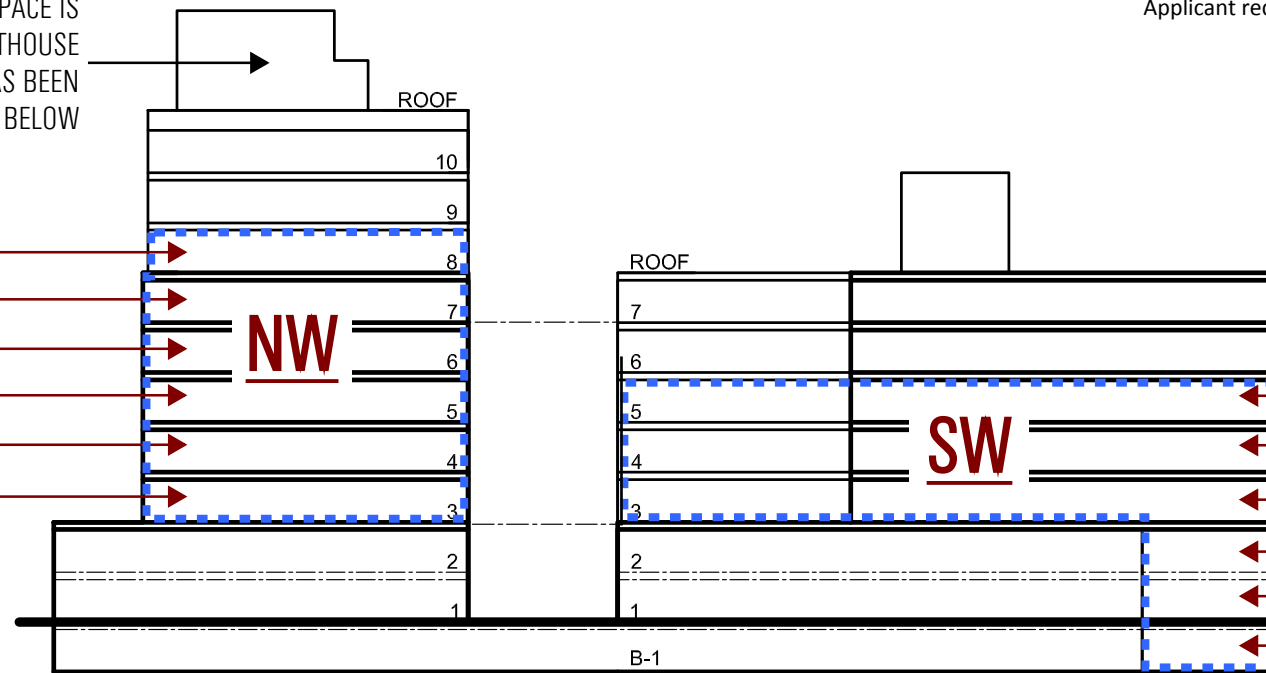
	STUDIO	1-BR JR	1BR	2BR 1-BA	2BR 2-BA	3BR 2-BA	MULTI-LVL	TOTAL
TOTAL UNIT COUNT	48	136	231	111	69	24	76	695
% of Total	7%	20%	33%	16%	10%	3%	11%	
Afford. Units by Type	4	11	18	9	6	2	6	56
Afford. Types % of Total	7%	20%	33%	16%	10%	3%	11%	

Note: Multi-level units are counted at the lowest/entry level only. (These units have 2 or 3 bedrooms.)  
Applicant requests +/- 10% flexibility in unit count due to the schematic nature of the plans.

446 GSF ADDITIONAL 50%AMI UNIT SPACE IS GENERATED BY USE OF THE NW PENTHOUSE HABITABLE SPACE. SUCH UNIT HAS BEEN INCORPORATED BELOW

**NW TOTAL: 13 AFFORDABLE UNITS**

- (1) AFFORDABLE UNITS PER FLOOR (8TH)
- (2) AFFORDABLE UNITS PER FLOOR (7TH)
- (2) AFFORDABLE UNITS PER FLOOR (6TH)
- (3) AFFORDABLE UNITS PER FLOOR (5TH)
- (3) AFFORDABLE UNITS PER FLOOR (4TH)
- (2) AFFORDABLE UNITS PER FLOOR (3RD)



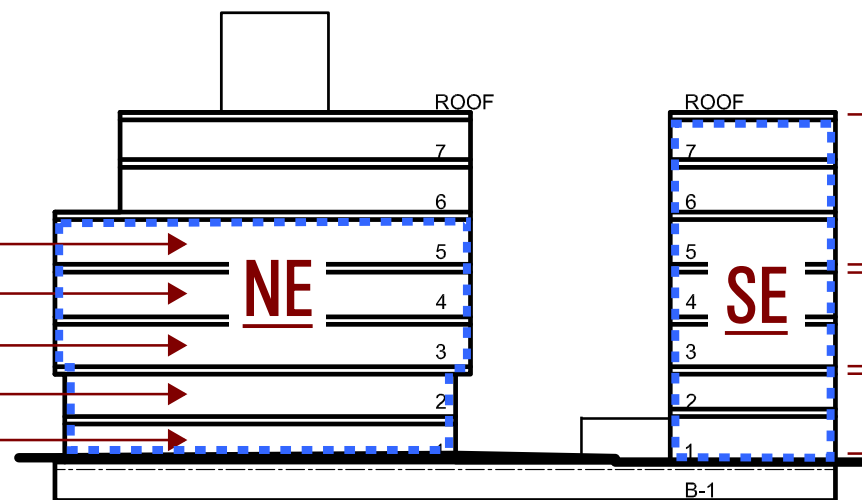
**WEST BUILDINGS SECTION DIAGRAM**

**SW TOTAL: 26 AFFORDABLE UNITS**

- (6) AFFORDABLE UNITS PER FLOOR (5TH)
- (6) AFFORDABLE UNITS PER FLOOR (4TH)
- (6) AFFORDABLE UNITS PER FLOOR (3RD)
- (2) AFFORDABLE UNITS PER FLOOR (2ND)
- (3) AFFORDABLE UNITS PER FLOOR (1ST)
- (3) AFFORDABLE UNITS PER FLOOR (B-1)

**NE TOTAL: 12 AFFORDABLE UNITS**

- (3) AFFORDABLE UNITS PER FLOOR (5TH)
- (3) AFFORDABLE UNITS PER FLOOR (4TH)
- (3) AFFORDABLE UNITS PER FLOOR (3RD)
- (2) AFFORDABLE UNITS PER FLOOR (2ND)
- (1) AFFORDABLE UNITS PER FLOOR (1ST)



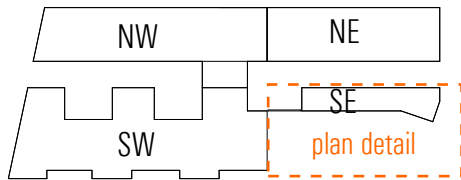
**EAST BUILDINGS SECTION DIAGRAM**

**SE TOTAL: 5 AFFORDABLE UNITS**

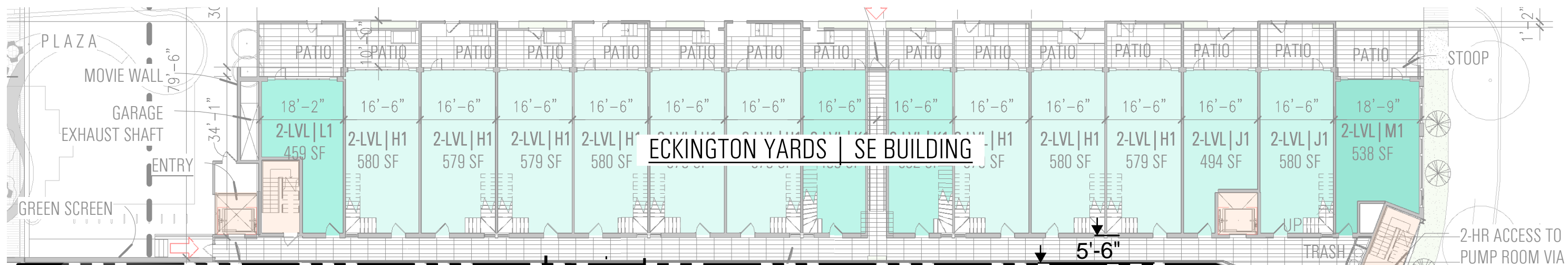
- (1) 3 STORY AFFORDABLE UNIT (5TH-7TH)
- (2) 2 STORY AFFORDABLE UNITS (3RD-4TH)
- (2) 2 STORY AFFORDABLE UNITS (1ST-2ND)

NOTE : FINAL LOCATION OF AFFORDABLE HOUSING UNITS WILL BE ADJUSTED TO REFLECT THE FINAL UNIT COUNT AND UNIT MIX, PROVIDED THAT THE LOCATION OF AFFORDABLE UNITS BY FLOOR AND WITHIN EACH FLOOR WILL REMAIN CONSISTENT WITH THE PLANS AND SECTIONS. THE LOCATION OF THE AFFORDABLE UNITS ARE ILLUSTRATIVE AND SUBJECT TO CHANGE.

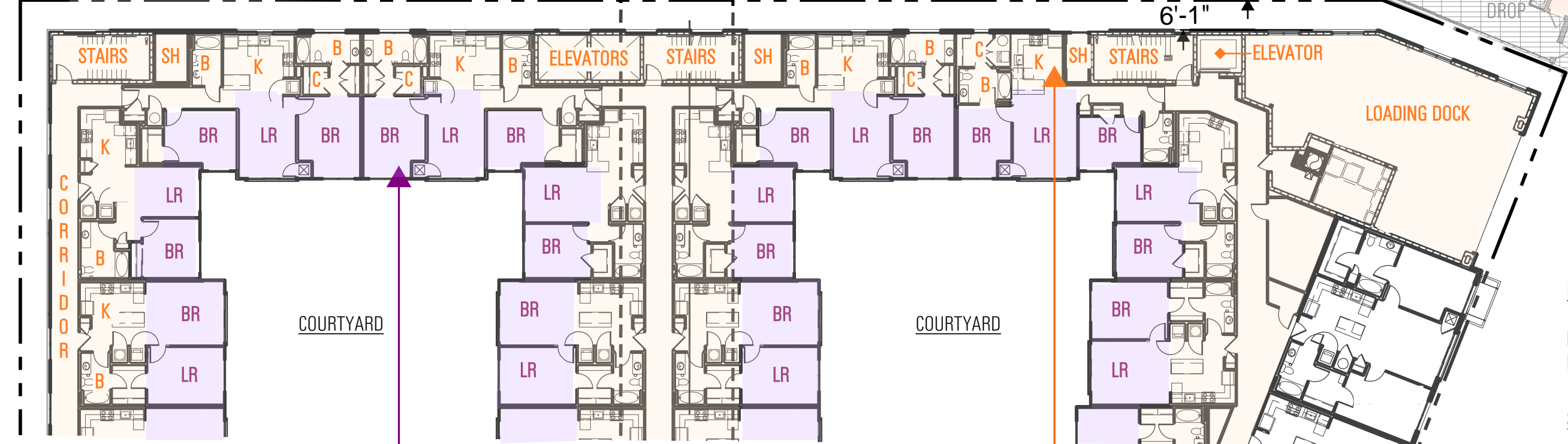
**AFFORDABLE UNITS | SECTION DIAGRAMS**



THIS DIAGRAM MAKES IT CLEAR THAT THE ARCHITECTS OF THE TRILOGY/GALE APARTMENT COMPLEX PLANNED FOR THE FUTURE DEVELOPMENT OF THE ECKINGTON YARDS PROJECT SITE.



ECKINGTON YARDS | SE BUILDING



GALE APARTMENTS | NE BUILDING

ALL PRIMARY HABITABLE SPACES ARE ORIENTED TOWARD THE COURTYARD. THEY ARE GIVEN GENEROUS WINDOW OPENINGS.

ALL SECONDARY/SUPPORT SPACES ARE ORIENTED TOWARD THE PROPERTY LINE. THERE ARE FEW WINDOWS, AND THE OPENINGS ARE SMALL.

**PRIMARY SPACE LEGEND**  
 LR - LIVING ROOM  
 BR - BEDROOM

**SECONDARY SPACE LEGEND**  
 B - BATHROOM  
 C - CLOSET  
 K - KITCHEN  
 SH- SHAFT  
 STAIRS  
 ELEVATORS  
 LOADING DOCK  
 CORRIDOR

GALE APARTMENTS | UNIT PLAN DIAGRAM

# LEED SCORECARD (WEST)

## LEED® 2009 for New Construction and Major Renovation Preliminary Project Checklist



## Eckington Yards - West Eric Colbert & Associates

6/2/16

Y	?Y	?N	N	PIF 1	Certification Agreement & Project Info Forms	Possible Points
23	1	1	1		<b>Sustainable Sites</b>	<b>26</b>
Y				Prereq 1	<b>Construction Activity Pollution Prevention</b>	
1				Credit 1	<b>Site Selection</b>	1
5				Credit 2	<b>Development Density &amp; Community Connectivity</b>	5
	1			Credit 3	<b>Brownfield Redevelopment</b>	1
6				Credit 4.1	<b>Alt. Transportation: Public Transportation Access</b>	6
1				Credit 4.2	<b>Alt. Transportation: Bicycle Storage &amp; Changing Rooms</b>	1
3				Credit 4.3	<b>Alt. Transportation: Low Emitting &amp; Fuel Efficient Vehicles</b>	3
2				Credit 4.4	<b>Alt. Transportation: Parking Capacity (w/Car/Vanpool)</b>	2
			1	Credit 5.1	<b>Site Development: Protect or Restore Habitat</b>	1
1				Credit 5.2	<b>Site Development: Maximize Open Space</b>	1
1				Credit 6.1	<b>Stormwater Design: Quantity Control</b>	1
1				Credit 6.2	<b>Stormwater Design: Quality Control</b>	1
1				Credit 7.1	<b>Heat Island Effect: Non-Roof</b>	1
1				Credit 7.2	<b>Heat Island Effect: Roof</b>	1
		1		Credit 8	<b>Light Pollution Reduction (Alt. LEED v4 'BUG' criteria)</b>	1
6		1	3		<b>Water Efficiency</b>	<b>10</b>
Y				Prereq 1	<b>Water Use Reduction: 20% Reduction</b>	
4				Credit 1	<b>Water Efficient Landscaping</b>	4
			2	Credit 2	<b>Innovative Wastewater Technologies</b>	2
2		1	1	Credit 3	<b>Water Use Reduction: 30%/ 35%/ 40%</b>	4
10	2	1	22		<b>Energy &amp; Atmosphere</b>	<b>35</b>
Y				Prereq 1	<b>Fundamental Commissioning, Bldg. Energy Systems</b>	
Y				Prereq 2	<b>Minimum Energy Performance</b>	
Y				Prereq 3	<b>Fundamental Refrigerant Management</b>	
5	2		12	Credit 1	<b>Optimize Energy Performance: 12%+</b>	19
		1	6	Credit 2	<b>On-Site Renewable Energy: 1%-13%</b>	7
			2	Credit 3	<b>Enhanced Commissioning</b>	2
2				Credit 4	<b>Enhanced Refrigerant Management</b>	2
1			2	Credit 5	<b>Measurement &amp; Verification (1 pt.: ES Portfolio Mgr.)</b>	3
2				Credit 6	<b>Green Power</b>	2
4	2		8		<b>Materials &amp; Resources</b>	<b>14</b>
Y				Prereq 1	<b>Storage &amp; Collection of Recyclables</b>	
			3	Credit 1.1	<b>Building Reuse: Maintain Existing Walls, Floors, and Roof</b>	3
			1	Credit 1.2	<b>Building Reuse: Maintain 50% of Interior Non-Structural</b>	1
2				Credit 2	<b>Construction Waste Management: 50%/ 75%</b>	2
			2	Credit 3	<b>Materials Reuse: 5%/ 10%</b>	2

Y	?Y	?N	N	Materials & Resources, Cont.	Possible Points
1	1			Credit 4 <b>Recycled Content: 10%/ 20%</b>	2
1	1			Credit 5 <b>Regional Materials: 10%/ 20%</b>	2
			1	Credit 6 <b>Rapidly Renewable Materials: 2.5%</b>	1
			1	Credit 7 <b>Certified Wood: 50%</b>	1
7	2	1	5		<b>Indoor Environmental Quality</b>
Y				Prereq 1	<b>Minimum IAQ Performance</b>
Y				Prereq 2	<b>Environmental Tobacco Smoke (ETS) Control</b>
			1	Credit 1	<b>Outdoor Air Delivery Monitoring</b>
			1	Credit 2	<b>Increased Ventilation: 30%</b>
1				Credit 3.1	<b>Construction IAQ Management Plan: During Construction</b>
			1	Credit 3.2	<b>Construction IAQ Management Plan: Before Occupancy</b>
1				Credit 4.1	<b>Low-Emit'tg. Materials: Adhesives, Sealants</b>
1				Credit 4.2	<b>Low-Emit'tg. Materials: Paints</b>
1				Credit 4.3	<b>Low-Emit'tg. Materials: Flooring Systems</b>
		1		Credit 4.4	<b>Low-Emit'tg. Materials: Composite Wd./Agrifiber</b>
			1	Credit 5	<b>Indoor Chemical &amp; Pollutant Source Control</b>
1				Credit 6.1	<b>Controllability of Systems: Lighting</b>
1				Credit 6.2	<b>Controllability of Systems: Thermal Comfort</b>
1				Credit 7.1	<b>Thermal Comfort: Design</b>
			1	Credit 7.2	<b>Thermal Comfort: Verification (not avail. to Residential projects)</b>
	1			Credit 8.1	<b>Daylight &amp; Views: Daylight 75% of Spaces</b>
1				Credit 8.2	<b>Daylight &amp; Views: Views for 90% of Spaces</b>
5	1				<b>Innovation &amp; Design Process</b>
Y				Prereq 1	<b>Exemp. Performance SSc4.1 Public Transport.</b>
1				Credit 1.1	<b>Exemp. Performance SSc4.1 Public Transport.</b>
1				Credit 1.2	<b>Exemp. Performance SSc5.2 Open Space</b>
1				Credit 1.3	<b>Exemp. Performance SSc7.1 Avoid Heat Island Effect</b>
	1			Credit 1.4	<b>Water Reuse at Cooling Tower</b>
1				Credit 1.5	<b>Low-emitting Walls &amp; Ceilings</b>
1				Credit 2	<b>LEED Accredited Professional</b>
1			3		<b>Regional Priority Credits</b>
Y				Prereq 1	<b>SSc5.1, Habitat</b>
1				Credit 1.1	<b>SSc5.1, Habitat</b>
			1	Credit 1.2	<b>SSc6.1, SW Quantity control</b>
			1	Credit 1.3	<b>Wec2, Innovative Wastewater</b>
			1	Credit 1.4	<b>EAc1 (40%), EAc2, MRc1.1</b>
56	8	4	42		<b>Total</b>
Certified 40 to 49 points <b>Silver 50 to 59 points</b> Gold 60 to 79 points Platinum 80 to 110 points					

# SUSTAINABLE APPROACHES

## LEED

The Eckington Yards project has been registered as two distinct LEED®v 2009 New Construction (NC) projects with USGBC. Fifty points are required for the targeted Silver certification level; the team will pursue additional points to demonstrate a commitment to delivering a high-performance mixed-use project. Credits are identified as achievable based on design feasibility and potential environmental benefits. Sustainable strategies being implemented include:

- Significantly reducing or eliminating storm water runoff / pollution
- Providing numerous bike storage spaces
- Reducing heat island effect by employing emissive/reflective materials for hardscape and vegetated roof.
- Reducing potable water usage through irrigation design, use of water conserving fixtures, and reuse of rainwater for cooling tower make-up is proposed.
- Reducing energy consumption by adopting high efficiency HVAC systems
- Reducing impact of transportation and extraction of virgin material by the use of regional materials and those with significant recycled content.
- Improving productivity and occupant health by access to daylight and views
- Meeting ASHRAE 55 standards to ensure thermal comfort and providing thermal controls to ensure accommodation of the individual preferences of its occupants.
- Installing low-emitting paints, adhesives, sealants and flooring systems.
- Installing permanent monitoring systems to ensure adequate ventilation.

## OTHER STRATEGIES

In keeping with The Applicant's vision that the projects address environmental issues "beyond" LEED, the Design Team is exploring several aspects of sustainable strategies. The goal is to go beyond obtaining a LEED plaque; it is to create buildings and spaces that support and nurture both inhabitants and neighbors. Several strategies, including Smart Growth and Biophilic Design, are under consideration to take advantage of the locale and enhance the project environment in keeping with The Applicant's goals.

Smart Growth will be achieved through the project's location, which is in line with urban planning and transportation goals of concentrating growth in walkable, bike-friendly and transit-oriented areas. Eckington Yards will also provide a unique sense of community and place and the innovative retail will enhance cultural resources.

- The Eckington Yards project affords an opportunity to incorporate elements of Biophilic Design in an urban context by creating strong connections between nature and man-made environments.
- Numerous windows affording natural daylight to the interior of the buildings.
  - Multiple-sensory stimulation will be experienced through the project's design scheme, where a variety of materials, as well as textures and patterns, will provide a more immersive experience.
  - Providing information-rich views imparting a sense of openness (the pattern of "prospect") while imparting a sense of safety and control is fulfilled by the projects' orientation and provision of roof terraces with outdoor vistas from an elevated, safe place.
  - Human preference for "refuge" is addressed in the partially enclosed space between the building components, where visual access into the refuge space from the street is limited, where the space can provide a sense of shelter with the ability to view surroundings and landscaping.
  - An exhilarating space arousing attention and curiosity while the user is protected (called "risk/peril" pattern) is afforded by the bridges between the buildings.

## Other strategies include:

- Shared parking between developments to reduce overall parking, construction materials, and excavation.
- Shared loading to reduce space, curb cuts, inefficiency.
- Building design that respects and acknowledges daylight impacts for neighbors.

The Team is beginning analysis of compliance with mandatory requirements ("prerequisites") of the LEED® for Neighborhood Development (LEED-ND) rating system. LEED-ND measures sustainability at a community level by evaluating where to build, what to build, and how to manage environmental impacts. If compliance with LEED-ND prerequisites is confirmed, then LEED-ND certification may also be feasible.

SHEET REVISED 06/02/2016

# LEED SCORECARD (EAST)

## LEED® 2009 for New Construction and Major Renovation

Preliminary Project Checklist



## Eckington Yards - East

Eric Colbert & Associates

6/2/16

### PIF 1 Certification Agreement & Project Info Forms

#### 23 Sustainable Sites Possible Points 26

Y	?Y	?N	N		
Y				Prereq 1	Construction Activity Pollution Prevention
1				Credit 1	Site Selection
5				Credit 2	Development Density & Community Connectivity
		1		Credit 3	Brownfield Redevelopment
6				Credit 4.1	Alt. Transportation: Public Transportation Access
1				Credit 4.2	Alt. Transportation: Bicycle Storage & Changing Rooms
3				Credit 4.3	Alt. Transportation: Low Emitting & Fuel Efficient Vehicles
2				Credit 4.4	Alt. Transportation: Parking Capacity (w/Car/Vanpool)
			1	Credit 5.1	Site Development: Protect or Restore Habitat
1				Credit 5.2	Site Development: Maximize Open Space
1				Credit 6.1	Stormwater Design: Quantity Control
1				Credit 6.2	Stormwater Design: Quality Control
1				Credit 7.1	Heat Island Effect: Non-Roof
1				Credit 7.2	Heat Island Effect: Roof
			1	Credit 8	Light Pollution Reduction (Alt.: LEED v4 BUG criteria)

#### 7 Water Efficiency Possible Points 10

Y	?Y	?N	N		
Y				Prereq 1	Water Use Reduction: 20% Reduction
4				Credit 1	Water Efficient Landscaping
			2	Credit 2	Innovative Wastewater Technologies
3			1	Credit 3	Water Use Reduction: 30%/ 35%/ 40%

#### 9 Energy & Atmosphere Possible Points 35

Y	?Y	?N	N		
Y				Prereq 1	Fundamental Commissioning, Bldg. Energy Systems
Y				Prereq 2	Minimum Energy Performance
Y				Prereq 3	Fundamental Refrigerant Management
4	2		13	Credit 1	Optimize Energy Performance: 12%+
		1	6	Credit 2	On-Site Renewable Energy: 1%-13%
			2	Credit 3	Enhanced Commissioning
2				Credit 4	Enhanced Refrigerant Management
1			2	Credit 5	Measurement & Verification (1 pt.: ES Portfolio Mgr.)
2				Credit 6	Green Power

#### 4 Materials & Resources Possible Points 14

Y	?Y	?N	N		
Y				Prereq 1	Storage & Collection of Recyclables
			3	Credit 1.1	Building Reuse: Maintain Existing Walls, Floors, and Roof
			1	Credit 1.2	Building Reuse: Maintain 50% Interior Non-Structural
2				Credit 2	Construction Waste Management: 50%/ 75%
			2	Credit 3	Materials Reuse: 5%/ 10%

### Materials & Resources, Cont.

Y	?Y	?N	N		
1	1			Credit 4	Recycled Content: 10%/ 20%
1		1		Credit 5	Regional Materials: 10%/ 20%
			1	Credit 6	Rapidly Renewable Materials: 2.5%
			1	Credit 7	Certified Wood: 50%

#### 8 Indoor Environmental Quality Possible Points 15

Y	?Y	?N	N		
Y				Prereq 1	Minimum IAQ Performance
Y				Prereq 2	Environmental Tobacco Smoke (ETS) Control
			1	Credit 1	Outdoor Air Delivery Monitoring
			1	Credit 2	Increased Ventilation: 30%
1				Credit 3.1	Construction IAQ Management Plan: During Construction
			1	Credit 3.2	Construction IAQ Management Plan: Before Occupancy
1				Credit 4.1	Low-Emit'g. Materials: Adhesives, Sealants
1				Credit 4.2	Low-Emit'g. Materials: Paints
1				Credit 4.3	Low-Emit'g. Materials: Flooring Systems
			1	Credit 4.4	Low-Emit'g. Materials: Composite Wd./Agrifiber
			1	Credit 5	Indoor Chemical & Pollutant Source Control
1				Credit 6.1	Controllability of Systems: Lighting
1				Credit 6.2	Controllability of Systems: Thermal Comfort
1				Credit 7.1	Thermal Comfort: Design
			1	Credit 7.2	Thermal Comfort: Verification (not avail. to Residential projects)
		1		Credit 8.1	Daylight & Views: Daylight 75% of Spaces
1				Credit 8.2	Daylight & Views: Views for 90% of Spaces

#### 5 Innovation & Design Process Possible Points 6

Y	?Y	?N	N		
1				Credit 1.1	Exemp. Performance SSc4.1 Public Transportation
1				Credit 1.2	Exemp. Performance SSc5.2 Open Space
1				Credit 1.3	Exemp. Performance SSc7.1 Avoid Heat Island Effect
1				Credit 1.4	Low-emitting Walls & Ceilings
			1	Credit 1.5	TBD: suggest Int. Pest Mgt.
1				Credit 2	LEED Accredited Professional

#### 1 Regional Priority Credits Possible Points 4

Y	?Y	?N	N		
			1	Credit 1.1	SSc5.1, Habitat
1				Credit 1.2	SSc6.1, SW Quantity control
			1	Credit 1.3	WEc2, Innovative Wastewater
			1	Credit 1.4	EAc1 (40%), EAc2, MRc1.1

#### 57 Total Possible Points 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110 points

# DRAFT WATER COMPUTATIONS

Type of Fixture	Quantity	Sanitary			Domestic					
		Each DFU	Total DFU	Each CW SFU	Each HW SFU	Total SFU	Total CW SFU	Total HW SFU	Total Combined SFU	Total Combined GPM
Group (Tank) (1.6 gpf)	886	5	4430	2.7	1.5	3.6	2392.2	1329	3189.6	231
WC Tank (Private)		3		2.2		2.2				
WC Tank (Public)		4		5		5				
Group (Greater than 1.6 gpf)		6		6	3	8				
WC FV (Private)		4		6		6				
WC FV (Public)		7		6		42	10	70	70	35
Public UR (FV) (1 gpf or less)		2		5		5				
Public Lavatory	7	1	7	1.5	1.5	2	10.5	10.5	14	17
Public Lavatory/Bidet		1		0.5	0.5	0.7				
Public Bathtub		2		3	3	4				
Private Bathtub		2		1	1	1.4				
Public Shower	2	2		3	3	4				
Private Shower	187	2		1	1	1.4				
Mop Basin	6	5	30	2.25	2.25	3	13.5	13.5	18	6.5
Service Sink		5		2.25	2.25	3				
Public Kitchen Sink	4	2	8	3	3	4	12	12	16	12.8
Private Kitchen Sin W/ DW	699	2	1398	1	1	2.8	699	699	1957.2	179
Drinking Fountain	8	0.5		0.25		0.25				
Washing Machine (Public)		3		3	3	4				
Washing Machine (Private)	699	2	1398	1	1	1.4	699	699	978.6	106
3" Floor Drain	12	5	60							
4" Floor Drain	8	6	48							
3"/4" FD (emerg)										
Bar Sink		2		1.5	1.5	2				
<b>Sub-Total (DFU):</b>		<b>7421</b>		<b>Sub-Totals (SFU):</b>	<b>3896.2</b>	<b>2763</b>	<b>6243.4</b>	<b>390</b>		
Additional Sanitary Drainage Demands:		Enter Total DFU	Additional Domestic Water Demands:		CW GPM	HW GPM	Enter Total GMP			
HVAC			Hose Bibbs		269	219	15			
Kitchen			HVAC				24			
Laundry			Kitchen							
Pool / Fountain			Laundry							
			Pool / Fountain							
			Irrigation				20			
<b>Total (DFU):</b>		<b>7421</b>		<b>Total (SFU):</b>	<b>5599.2</b>	<b>4416</b>	<b>9227.2</b>	<b>449</b>		

Notes:  
 1. Supply fixture unit (SFU) value based on the 2012 International Plumbing Code table E101B  
 2. Drainage fixture unit (DFU) value based on the 2012 International Plumbing Code table 709.1  
 3. Additional demands for HVAC make-up, pool, fountain, laundry, food service, etc.  
 4. Add 5 GPM for each hose bibb up to a maximum of 15 GPM