



# FIRST STREET

## PUD & PROJECT REVIEW SPECIAL PERMIT APPLICATION

JULY 24<sup>TH</sup>, 2015

APPLICANT     First Street - US, LLC

ARCHITECT     Perkins Eastman

PLANNING     Boyes-Watson Architects





## INTRODUCTION

This is an application to amend PUD Special Permit 231A by expanding the Development Parcel to include all of the area previously contained in PUD Special Permit 297. On March 5, 2015 the applicant submitted a PUD Special Permit application (297) to the Planning Board seeking approval to construct a mixed use development on three contiguous blocks along First Street in the PUD 4B District. Since a portion of the Development Parcel included an area that was previously contained within the Development Parcel of PUD Special Permit 231A, an application for a Major Amendment to PB 231A was submitted with PB 297. Both applications were heard by the Planning Board on March 24, 2015. The board voted that evening to approve the Development Proposal and issued a Preliminary Determination identifying issues to be addressed in the Final Development Plan.

Since the issuance of the Preliminary Determination, the applicant has re-examined the manner in which it elected to modify PUD 231A by removing a portion from the originally approved Development Parcel. For a variety of reasons, the applicant is now seeking to modify the Major Amendment to 231A and amend that PUD Development Parcel by not removing any area from that Development Parcel and instead, expand that Development Parcel to include all of the area previously submitted as the Development Parcel for PUD Special Permit 297.

The effect of this change is largely procedural since the mixed use development proposed in PUD 297 is unchanged but for the design revisions suggested by the Board in its Preliminary Determination and the ongoing design consultations the applicant has been engaging in with Community Development Department staff.

In preparing this modified application for a Major Amendment to PUD 231A, the applicant has addressed the issues identified in the Planning Board's Preliminary Determination in PUD Special Permit 297. For ease of reference, the Development Parcel formerly identified in PUD Special Permit 297 is referred to in this submittal as the EXPANDED AREA of PUD 231A. A revised dimensional form has also been submitted reflecting the changes resulting from combining both PUDs into a single Development Parcel.



**b. SPECIAL PERMIT APPLICATION – SUMMARY OF APPLICATION**

<b>Project Name:</b> <b>Address of Site:</b> <b>Applicant:</b> <b>Planning Board Project Number: (CDD)</b>
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**Hearing Timeline (CDD)**

Application Date: \_\_\_\_\_

Planning Board 1<sup>st</sup> Hearing Date: \_\_\_\_\_ \*

*(PUD Development Proposal, other special permit)*

Planning Board Preliminary Determination: \_\_\_\_\_ \*

*(PUD Development Proposal)*

Second Submission Date: \_\_\_\_\_ \*

*(PUD Final Development Plan)*

Planning Board 2<sup>nd</sup> Hearing Date: \_\_\_\_\_ \*

*(PUD Final Development Plan)*

Final Planning Board Action Date: \_\_\_\_\_ \*

*(PUD Final Development Plan, other special permit)*

Deadline for Filing Decision: \_\_\_\_\_ \*

*\*Subject to extension by mutual agreement of the Applicant and the Planning Board*

**Requested Relief: (include other boards and commissions)**

- Sec. 12.30 PUD Special Permit; Sec. 19.20 Project Review Special Permit;
- Sec. 6.35.1 Reduction in required parking; Sec. 10.40 Special Permit

**Project Description** The applicant seeks to construct a 118 unit multi-family dwelling with ground floor retail on the same parcel as an 18 unit multi-family dwelling and a 46,010 square foot office building with ground floor retail on two blocks along First Street between Hurley Street and Bent Street. A one story retail building will be designed for the 85 First development parcel.

**Project Size:** Expanded Planning Board #231A

- Total GFA: 200,176
- Non-residential uses GFA: 78,931
- Site Area (acres and SF): 182,663
- # of Parking Spaces: 202

**Proposed Uses:**

- # of Dwelling Units: 136
- Other Uses: Office and Retail
- Open Space (% of the site and SF) 27,698 (per Section 13.55) 29.8% of the total area of the Development Parcel

**Proposed Dimensions:**

- Height: Office and Residential Max: 65'-0"
- FAR: 2.25 Total

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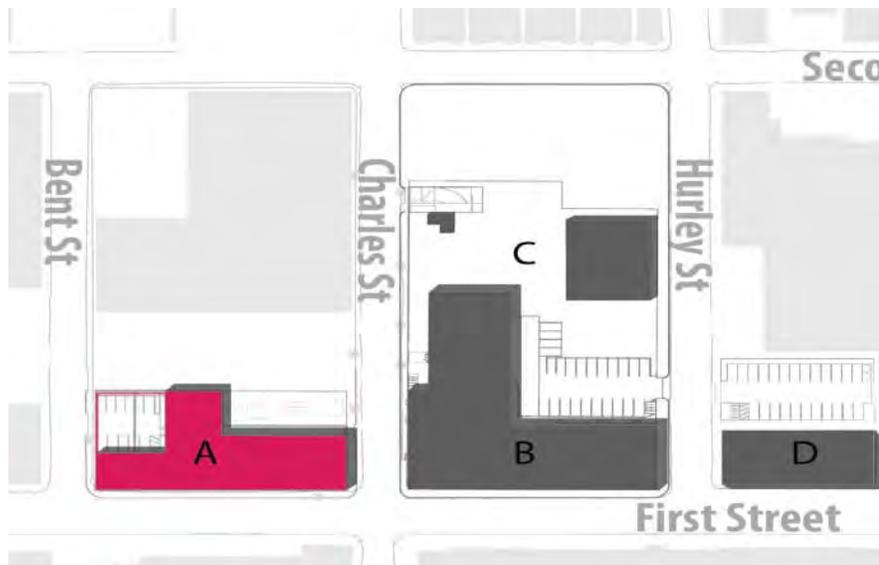


## **I – PUD DEVELOPMENT PROPOSAL**

**A. DEVELOPMENT PARCEL**

**Parcel A** – 121 - 139 First Street (16,473 sf)

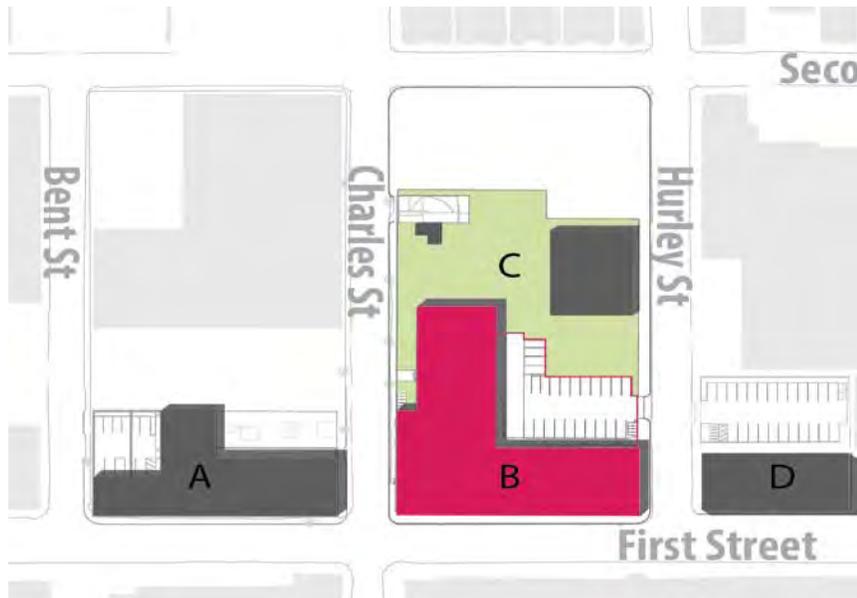
Located along the entire block of First Street between Bent Street and Charles Street, this parcel currently contains a vacant two-story windowless warehouse formerly occupied by Big John’s Mattress Factory and a surface parking lot for 22 vehicles. The existing building is proposed to be razed and replaced with an approximate 56,000 square foot office building. The building is proposed at five stories closest to Bent Street and steps down to four stories closest to Charles Street. The building will contain a roof deck atop the four story section. The ground floor of the building will contain 9,800 square feet of retail space along with an office lobby and an additional 570 square foot space at the corner of Bent Street and First Street that will accommodate an active use. The site will include 10 surface parking spaces for retail customers which will be accessed from Bent Street.



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**Parcel B** – 107 – 119 First Street (33,055 sf)

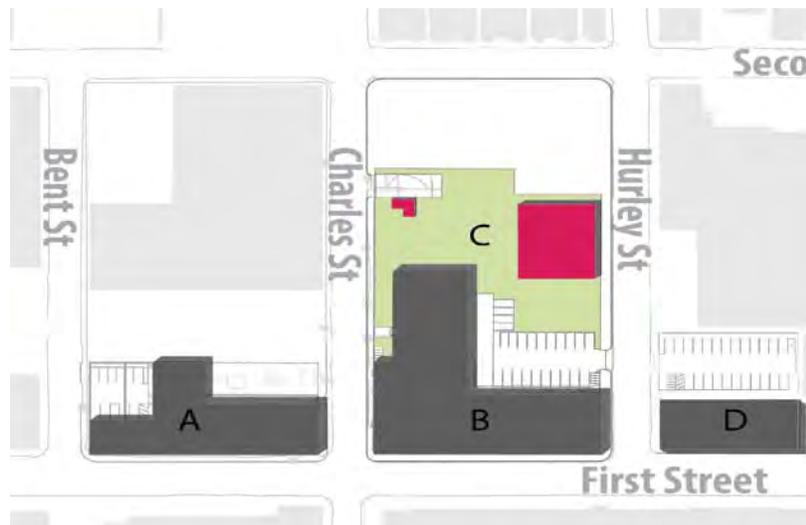
Located along the block of First Street between Charles Street and Hurley Street, this parcel presently contains one and two story buildings containing retail, office, and vacant light industrial space. There is also a surface parking lot at the corner of Charles Street that accommodates the patrons of Petco, which is located in the adjacent single story windowless masonry building along Charles Street. Both buildings will be razed and replaced with a 118 unit multifamily dwelling. The building will contain 14,800 square feet of ground floor retail space along the entire First Street edge. The site will also contain 26 surface parking spaces for retail customers accessed from Hurley Street and not visible from First Street. The principal residential entry will be located on Charles Street where the building will be set back 18 feet from the property line.



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**Parcel C** – 14 - 26 Hurley Street and 29 Charles Street (26,949 sf)

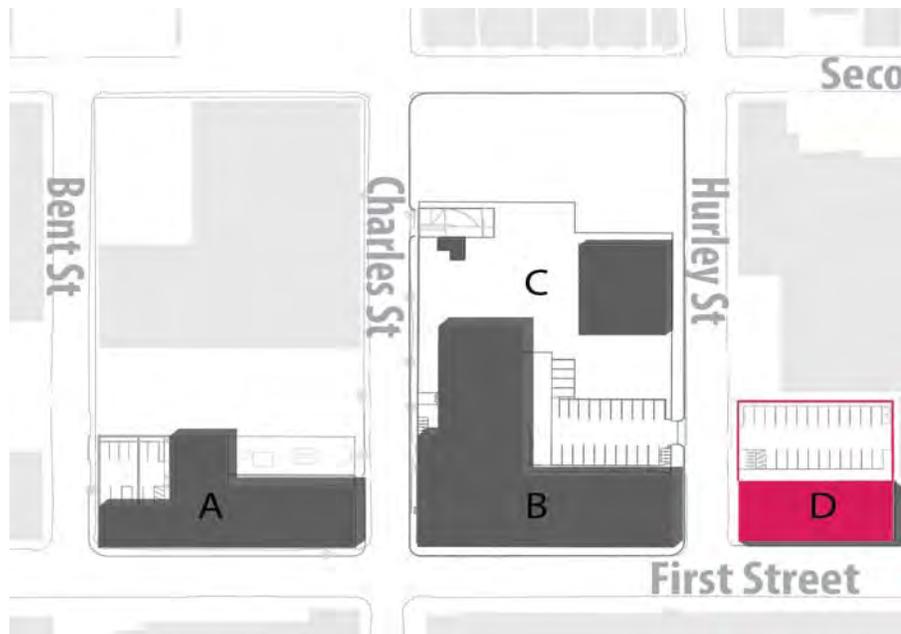
This mid-block parcel has frontage on both Charles Street and Hurley Street. It presently consists of a 65 vehicle parking lot with curb cuts on both streets and a three-story structure at 18 Hurley Street. The existing structure will be razed and replaced with a four story residential building containing 18 dwelling units. The remaining portion of the parcel will contain approximately 23,000 square feet of on grade open space, with frontage on both Charles Street and Hurley Street. A prominent feature of this publicly accessible space will be a multi-modal path that will connect Charles Street and Hurley Street and will serve as an inviting approach to First Street. The parcel will also contain a head house and garage ramp on the Charles Street edge to a below grade parking garage that will accommodate 142 motor vehicles and 160 bicycles. The garage will extend under both Parcels B and C and accommodate vehicle and bicycle parking for all of the residential dwelling units on both parcels, as well as the office building on Parcel A.



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**Parcel D** – 85 First Street (16,250 sf)

This parcel consists of an existing single-story retail building with 42 parking spaces in the rear at the corner of Hurley Street which extends for approximately half of the block toward Spring Street. The proposal calls for razing the existing 6,400 square foot structure and replacing it with a similarly sized retail building of approximately 7,750 square feet with an increased height of approximately 20 to 25 feet, allowing for space to accommodate today's retailers. Vehicle and bicycle parking for retail customers will continue to be provided in the rear of the lot with access from Hurley Street.



## **B. DEVELOPMENT CONCEPT**

### **Planning Objective**

The proposed development pursues the four major urban design goals framed by the Eastern Cambridge Planning Study (ECaPS) and the PUD 4B guidelines:

- 1) Provide significant housing
- 2) Reinforce and enhance the residential quality of Charles Street and pedestrian experience on the block between Second Street and First Street
- 3) Create a lively active experience on First Street with continuous retail frontage and appropriately scaled buildings
- 4) Provide significant open space and mid-block connections.

Through negotiations and cooperation of multiple landowners, the Applicant has been able to create a development proposal that accomplishes all four major goals.

### **Character of Development**

The proposed development is uniquely positioned to support residential, retail, and office opportunities along First Street.

Existing established transportation infrastructure, including the MBTA's Red Line Kendall station and Green Line Lechmere station, walkways, bike lanes, and shuttle services provides convenient access to the site for residents, office workers, and retail patrons.

The proposed development will provide much needed housing in the area. The expanding life science companies in Kendall Square are anticipated to create approximately 15,000 new jobs over the next few years. It is estimated that 13- 18% of employees choose to live within walking distance of their workplace, which would translate into a demand for 2,500 new housing units in greater Eastern Cambridge.

Presently, the retail market in/around the First Street corridor is dominated by the Galleria Mall. The proposed development intends to expand retail opportunities for quality retailers, extending the retail experience to both sides of First Street. With First Street retail still in its nascent stage, the Applicant has created a strategic partnership with established retail owner and operator, Linear Retail Properties, LLC ("Linear Retail"), to plan and design retail spaces within the proposed development that have the potential to flourish.

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The retail component of the proposed development addresses the developing multi-modal customer base by providing ample bicycle spaces, a dramatically improved pedestrian experience and a limited number of convenient parking spaces as demanded by the desired class of retail operators.

Regarding the office component, despite the recent significant increase in newly constructed space, the overall office availability rate has reached its lowest level since the fourth quarter of 2000. Much of the area's office space has been built-to-suit for big companies requiring large footprints. The proposed development is designed to capture currently underserved middle market office tenants looking for Class A space.

**C. DEVELOPMENT SCHEDULE**

The office building proposed for Parcel A will be the first building to be constructed. Construction will commence shortly after approval of the Special Permits and is currently anticipated for the fourth quarter of 2015.

It is expected that the single-story retail building proposed for Parcel D will be constructed concurrently with the office building on Parcel A.

Upon completion of the Parcel A office building, the tenant (Petco) in the existing retail building located on Parcel B (will relocate to the newly-constructed ground floor retail space in the office building. This will allow for the removal of the existing structures on Parcel B and the commencement of construction of the residential buildings proposed for Parcels B and C.

In summary, estimated time frames for construction are:

	Commence Construction	Complete Construction
Parcel A	Q4-2015	Q4-2016
Parcel B	Q4-2016	Q1-2018
Parcel C	Q4-2016	Q1-2018
Parcel D	Q4-2015	Q4-2016

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**D. DEVELOPMENT OWNERSHIP**

The various parcels that comprise the Development Parcel are owned by multiple entities, but Parcels A, B, and C will be controlled by the Applicant through fee simple ownership or long-term ground leases. Parcel D is owned by an affiliate of Linear Retail and is the subject of a Development Agreement with the Applicant.

Listed below is the current ownership structure of each of the parcels:

<b>Parcel</b>	<b>Address</b>	<b>Owner</b>	<b>Control</b>	<b>Lot Size (SF)</b>
231A	65 Bent	Bent Associates, LLC	N/A	29,978
231A	159 First	Bent Associates, LLC	N/A	59,958
				89,936
A	121 First	Bent Associates, LLC	Ground Lease	6,489
A	131-137 First	Eldor Realty Trust	Ground Lease	6,903
A	139 First	Applicant	Fee Simple	3,081
				16,473
B	107 First	Linear Realty	To be conveyed to Applicant	16,000
B	14-26 Hurley	Applicant	Fee Simple	6,944
B	119 First	B&D Realty Trust	Ground Lease	17,055
				39,999
C	29 Charles	Bent Associates, LLC	Ground Lease	20,005
				20,005
D	85 First	Linear Retail	Development Agreement	16,250
<b>TOTAL PUD</b>				<b>182,663</b>

## **E. DEVELOPMENT FINANCING**

The Applicant has funded 100% of all pre-development costs, including master planning, development management, architectural design, engineering, legal, and other related expenses. To further develop the property, the Applicant will utilize a combination of debt and equity capital. Total construction cost for the Development Proposal, including the four buildings, open space, and below-grade parking garage, is currently estimated at between \$55 and \$65 million.

## **F. DEVELOPMENT INFRASTRUCTURE**

Please refer to **Appendix B** for the *Preliminary Stormwater Drainage, Water and Sewer Impact Statement*.

## **G. DEVELOPMENT IMPACTS**

A detailed analysis of the development impacts are set forth in the following:

- **Appendix B** - *Preliminary Stormwater Drainage, Water and Sewer Impact Statement*, prepared by Stantec Consulting, Ltd.
- **Appendix C** - *Noise Emissions Evaluation*, prepared by Acentech.
- **Appendix D** - *LEED Narrative and Checklist*, prepared by Conservation Services Group, Inc. and Integrated Eco Strategy.
- **Appendix E** - *Transportation Impact Study*, prepared by Vanasse & Associates, Inc.

**H. DEVELOPMENT DATA (EXPANDED DEVELOPMENT PARCEL; EXCLUDING 159 FIRST STREET AND 65 BENT STREET)**

1. *Parcel size:* 92,727 sf
  
2. *Proposed lot coverage of structures:* 47,083 (51%)
  
3. *Project bulk:*
  - A. *Total floor area of all structures in the PUD:*  
231,555 sf not including 58,783 sf of underground parking
  - B. *Gross floor area as defined by Article 2.000 of the Ordinance*  
GFA = 208,848; see attached diagrammatic summary of GFA calculations
  - C. *Floor area ratio*  
2.5 FAR, calculated as 208,848 sf GFA / 92,727 sf land area
  
4. *Project height:*
  - A. *Parcel A office building:* 55 - 65 feet
  - B. *Parcel B residential building:* 55 - 65 feet
  - C. *Parcel C residential building:* 45 feet
  - D. *Parcel D retail building:* 20 - 25 feet
  - E. *Greatest vertical distance between lowest elevation at the perimeter and the tallest structural element:*  
75 feet inclusive of mechanical penthouses and roof screens designed to minimize the visual and acoustical impact of rooftop mechanicals.
  
5. *Total amount of usable open space:* 27,698 sf

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6. *Total number of dwelling units by number of bedrooms:*

	Parcel B	Parcel C	
Studio	50	2	
One-bedroom	44	6	
Two-bedroom	18	10	
Three-bedroom	<u>6</u>	<u>0</u>	
Total	118*	18*	*Preliminary and subject to change.

7. *Projected rent levels for each type of use in the development :*

Residential	\$29 - \$44 psf NNN
Office	\$33 - \$38 psf NNN
Retail	\$30 - \$45 psf NNN

8. *Approximate gross residential densities:*

The total Development Parcel is 92,727 sf. The residential building proposed for Parcel B is 118 units and is situated on 39,999 sf of land, representing 2.95 dwelling units per 1,000 sf of land area. The residential building proposed for Parcel C is 18 units and is situated on 20,005 sf of land, representing 0.90 dwelling units per 1,000 sf of land area.

9. *Total area of each type of use in the development and percentage of total gross floor area of the development:*

	GFA	% of Total
Residential	130,488	62.48%
Office	46,010	22.03%
Retail	<u>32,350</u>	<u>15.49%</u>
Total	208,848	100.00%

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10. *Number of parking spaces to be provided (by use):*

	Surface	Underground	Total
Residential	0	100 <sup>Note 1</sup>	100
Office	0	40 <sup>Note 2</sup>	40
Retail	<u>62</u>	<u>0</u>	<u>62</u>
Total	62	142	204

Note 1: 0.74 parking spaces per residential unit

Note 2: 36 of the 40 underground office parking spaces will be shared with residential for nights and weekend use

11. *Total length of streets to be conveyed to the City:* None

12. *Total length of streets to be held as private ways within the development:* None

13. *Total length by type of other public works to be conveyed to the City:* None

14. *Number and types of public facilities:* None

15. *Estimated number of people coming to the development daily by type of use:*

Per the requirements of Cambridge’s Zoning Ordinance, the Applicant engaged a professional transportation engineer, Vanasse & Associates, to project the volume of transportation activity that the proposed development will generate. Please refer to the *Transportation Impact Study*.

16. *Estimated traffic volume generated by type of use:*

Please refer to the *Transportation Impact Study*.

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17. *Estimate of the average amount of money to be spent daily at the site:*

The retail activity on the Development Parcel will take place in the 9,800 square feet retail space proposed for the ground floor of the office building on Parcel A, the 14,800 square feet retail space proposed for the ground floor of the residential building on Parcel B, and in the 7,750 square feet retail space proposed for the retail building on Parcel D. We anticipate that the retail space on Parcel A will be occupied by a single tenant (Petco) and that the retail spaces on Parcels B and D will be occupied by multiple retail tenants. Based on data extrapolated from National Research Bureau Inc.'s statistical model, we estimate annual retail sales of \$6 – 8 million.

18. *Estimated total energy consumption and cost per month and per square foot:*

At this early stage, the Applicant has not yet engaged the project engineers to develop a comprehensive energy model. However, energy related studies have been performed by Conservation Services Group, Inc. and Integrated Eco Strategy. Please see LEED Narrative and Checklist at Appendix D.

19. *Were alternate energy sources investigated such as district heating and cooling? What were your findings?*

The Applicant has explored the use of photovoltaic, natural gas co-generation, and small rooftop wind turbines and may choose to implement some/all of these alternative energy sources.

20. *Prepare and submit graphic information concerning the proposed development:*

See Graphics Package attached.



## **II – ARTICLE 19 PROJECT REVIEW SPECIAL PERMIT**

**Conformance with the Eastern Cambridge Design Guidelines**

**A. GOALS**

THE PROJECT FALLS IN TO A TRANSITION AREA WHERE THE GOALS ARE AS FOLLOWS

1. *Goal: Encourage new residential development and conversions of existing buildings to residential use but allow existing commercial uses to remain.*

The Development Proposal combines the creation of substantial new housing and retail for the full length of the parcel along First Street.

The overall PUD favors residential uses, with approximately sixty percent of the total proposed floor area dedicated to residential use, with a total of 136 units.

The existing retail tenant, Petco, will be preserved.

2. *Goal: Use finely graduated heights to create transitions in scale from Kendall Square to residential neighborhoods.*

Since the four Parcels forming the Development Parcel are located between First and Second Street, the primary transition in scale occurs in a graduated manner from the taller 65' high buildings on First Street toward the 45' heights of the existing buildings on Second Street. The location of the new open space further contributes to this transition. Additionally, the modulation of the larger residential building on Parcel B steps down to 55' in the direction of the residential neighborhood as it approaches the newly created open space. The smaller residential building at 22 Hurley building is closest to Second Street and its height is 45'.

3. *Goal: Create better pedestrian and bicycle connections between residential neighborhoods, Kendall Square, Central Square, and the Charles River.*

The Development Proposal contributes positively to two major ECAPS goals 1) A pedestrian friendly retail corridor along First Street, and 2) Enhanced pedestrian connections from the Charles River to the neighborhood. The continuous retail frontage proposed along First Street creates a lively and continuous pedestrian friendly street for nearly the entire length of First Street. On Charles Street, through the introduction of a nearly half acre open space, the development provides a rich and well landscaped pedestrian environment for the community heading towards the entry to the Galleria Mall on Charles Street and the Charles River beyond. Further, the thru block connection

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between Charles and Hurley Streets provides a new inviting route for pedestrians between Kendall Square and Lechmere Square.

**B. BUILT FORM**

AS A MIXED USE BLOCK (BENT CHARLES AND HURLEY), THE PROPOSAL IS REVIEWED IN THIS SECTION UNDER BOTH THE GUIDELINES FOR MIXED USE BLOCKS AND RETAIL BLOCKS.

1. *GUIDELINES FOR STREET LEVEL USES AND DESIGN, MIXED USE BLOCKS:*

- i. *Street-level Uses and Design. New development on mixed-use blocks should be consistent with the following principles:*

*Street-level facades should include active uses such as: – Residential entrances, Shops, restaurants, and cafes, Services for the public or for commercial offices such as fitness centers, cafeterias, daycare centers, etc., Community spaces, such as exhibition or meeting space, Art exhibition space/display windows, Commercial lobbies and front doors*

The proposal contains street level facades consisting of retail, office entry and residential common areas exclusively. The residential building at 21 Charles (Parcel B) has its main entrance on Charles Street. The residential common areas and lobby are located so as to directly benefit both Charles Street and also to overlook the new open space. The residential building at 22 Hurley (Parcel C) also abuts the new open space, with ground floor entrances designed to activate both the open space and the Hurley Street sidewalk. A continuous retail frontage is proposed throughout the PUD at the ground floor of all the buildings that face First Street, punctuated only by the 107 First Street office building lobby (Parcel A.)

- ii. *Office/ R&D uses are discouraged from occupying extensive ground-floor frontage. Where these uses do occur, they should occupy no more than 200 to 250 feet of continuous frontage along public streets.*

At the proposed office building at 121 First Street (Parcel A) only the lobby area (less than 20 linear feet) occupies the First Floor. The balance of the first floor is given over to publicly accessible (retail) uses.

- iii. *Major entrances should be located on public streets, and at or near corners wherever possible. Entrances should relate well to crosswalks and pathways that lead to bus stops and transit stations.*

Each of the new buildings is designed so that the ground floor uses enhance the street life with retail entrances sited at or near the corners.

The office lobby (Parcel A) is appropriately located on First Street to serve the office space located on the upper floors. This central location divides retail storefronts and allows both retail spaces corner locations.

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The 21 Charles (Parcel B) residential entrance is located on Charles Street to reinforce the connection to the residential neighborhood, as are some of the stoop style entrances of the 22 Hurley (Parcel C) residential building that activate Hurley Street.

- iv. Transparent materials and interior lighting should be used to maximize visibility of street level uses. Ground floor facades should be at least 30 to 50 percent transparent surface to permit a clear view from the sidewalk to the interior space of the building.*

The project meets and exceeds the transparency recommendations the full length of First Street and in the residential lobby on Charles Street.

- v. Blank walls should be avoided along all streets and pedestrian walkways.*

The project consist of highly active facades on all street frontages and has avoided blank walls facing the sidewalks.

*Retail blocks are blocks that include both commercial and residential uses on upper floors, with retail strongly encouraged on the ground floor. Retail blocks are intended to have a high volume of pedestrian traffic, and to support public activity throughout the day and evening.*

*New development on retail blocks should be consistent with the following principles:*

- i. At least 75 percent of the street frontage should be occupied by retail uses, including cafes and restaurants.*

More than 75% of the ground floor along First Street in the proposal contains retail uses.

- ii. Major entrances should be located on public streets, and on corners wherever possible. Entrances should relate to crosswalks and pathways that lead to bus stops and transit stations.*

All major building entrances have been located to be accessed directly from the streets (See description above). Retail entries are projected to be at or near each of the building corners as they intersect First Street (retail tenants are not yet known so retail entry points may vary in number and location.) At the 107 First Street retail (Parcel B) there are entries both on First Street and at the parking lot in the rear.

2. GUIDELINES FOR BUILDING HEIGHT AND ORIENTATION:

1. *Guidelines regarding major public streets (First Street)*

- i. *Set back any portion of the building above 65 feet by at least 10 feet from the principal facade.*

The proposed buildings do not exceed 65'-0" in height. The building heights are carefully modulated to enhance the streetscapes.

- ii. *For retail and office uses, build to the lot line or provide small setbacks (5 to 15 feet) from the right-of-way for café seating, benches, or small open spaces. Setbacks used exclusively for ornamental landscaping are not permitted but may be allowed to accommodate street furniture, street trees, or generous sidewalks. Awnings and canopies are encouraged to provide shelter and enliven the ground floor facade.*

On First Street the retail buildings and office building are generally built out to the back of sidewalk. At the office building at 121 First Street (Parcel A) the building comes to the back of sidewalk but provides for recessed entry points for the office lobby entrance and retail storefront. At the multi-family building at 21 Charles Street (Parcel B) the building is set back from the property line along First Street allowing for an 11'-0" sidewalk on the block between Hurley and Charles Street. At Parcel D the new retail building will also be set back to allow for a consistent 11'-0" sidewalk providing the opportunity for seating or easier pedestrian flow.

- iii. *For residential uses, provide small setbacks (5 to 10 feet) for stoops, porches, and front gardens.*

The small residential building at 22 Hurley (Parcel C) is setback 10 feet from Hurley Street which allows space for multiple entry stoops and projecting balconies above.

At the larger multi-family building at 21 Charles (Parcel B) the setback is enlarged to 20 feet so that the plantings in front of the building can aggregate with the new open space on Parcel C.

- iv. *Driveway turnaround and vehicle drop-off facilities are strongly discouraged along public streets.*

The project proposes to eliminate all the current curb cuts along First Street, providing a better environment for both the shopping public and eliminating conflicts with the newly constructed bike lane.

Short term retail parking that is essential for the retail viability is located in a single aisle behind the retail stores, which also serve as off street loading areas for the retail uses. This location shields these uses from view from First Street, and consolidates the, loading, trash

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removal and parking to have the least possible impact on the sidewalks and the overall development. The total number of curb cuts is reduced to four, one for each development parcel.

*v. Locate loading docks on side streets or service alleys, and away from residential areas.*

The loading areas are accessed off the side streets (Hurley Street and Bent Street.) They are located so as to be as far as possible from Second Street and the residential neighborhood without impacting the First Street retail frontage.

*vi. In use, design, and entry, orient buildings towards corners.*

In each of the buildings the building massing and design emphasizes and enhances the corners. Four of the five street corners in the proposal have retail entries.

### ***3. GUIDELINES FOR SCALE AND MASSING***

*a. For new development sites, the block size should be similar to the existing East Cambridge blocks. An attempt should be made to reduce the distance that pedestrians have to walk to a crosswalk in order to safely cross the street.*

The development does not alter existing block sizes along First Street. It provides a new mid block connection between Hurley Street and Charles Street.

*b. Buildings should avoid continuous massing longer than 100 feet facing residential streets and 200 feet facing mixed-use and retail streets. If massing extends beyond this length, it should be made permeable and visibly articulated as several smaller masses using different materials or colors, vertical breaks, bays, or other architectural elements.*

The PUD parcels are all facing either mixed use or retail streets so are measured against the 200'-0" standard. At both the office (Parcel A) and buildings residential (Parcel B and C) the proposed massing is varied. Where originally the Parcel A building stepped down as it approached the prominent corner at First Street and Charles Street the building now presents a more uniform and consistent massing along First Street, with a celebrated upper floor at the Charles Street corner. Facades other than those facing First Street itself are

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either kept short (no more than 100 feet, or are significantly broken down with setbacks so as to present no more than 200 feet to the street in a single unarticulated massing. On Parcels B and C, the breaking of the residential component into two structures (22 Hurley and 21 Charles) contributes significantly to the creation of a variety of scale and form and provides an appropriate transition in massing to the East Cambridge neighborhood to the North.

- c. *In addition to the above limits, buildings should reflect a rhythm and variation appropriate to the urban context. For example, this can be achieved by expressing bay widths of 16 to 25 feet along residential streets and 25 to 50 feet along mixed-use and retail streets.*

The proposed buildings use a variety of materials, height changes and fenestration changes to create a varied streetscape. At the multi-family building at 21 Charles Street (Parcel B), the architectural expression shifts from a residential clapboard style horizontality on Charles Street to a more mill building style brick on First Street, recalling historic precedents in the area. While continuous as a material, it varies in detail, texture and setback. The design of the office building (Parcel A) breaks strongly in to a bay rhythm, recalling the industrial history of East Cambridge and modulating the façade.

- d. *Buildings should have a clearly expressed base, middle, and top. This may be achieved through changes in material, fenestration, architectural detailing, or other elements.*

The multi-family building at 21 Charles (Parcel B) has a defined base that is largely glazed reflecting the retail uses on First Street and common areas of the housing on Charles Street. The First Street top is differentiated by the use of brick setback details, texture changes and window detailing. Before reaching Charles Street the building is visually broken and separated into separate masses through the use of a dark metal panel. At Charles Street, the material of the sixth floor shifts entirely to create a distinctive top,

At the office building (Parcel A), the base is also articulated by retail glazing, with a larger and more textured stone between these glass bays giving way to a smoother stone at the upper floors. At the top of the building, visual interest is created by an accentuated upper floor clad in vertical metal panels and larger expanses of ribbon windows and at the West end by a metal material emphasizing the deliberately attenuated thin corner.

The 22 Hurley residential building (Parcel C) stands only 4 stories. Brick is used at the building base and elaborated by piers and pergolas to reinforce the base and street edge, creating a material connection to the 21 Charles multi-family building (Parcel B). The building is articulated by metal bays and balconies.



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- e. *Use variations in height and architectural elements such as parapets, cornices and other details to create interesting and varied rooflines and to clearly express the tops of buildings.*

As discussed above the silhouette of each of the buildings is characterized by a variation in massing specific to place.

- f. *Emphasize corners using taller elements such as towers, turrets, and bays*

At the 21 Charles Street multi-family structure (Parcel B), the articulation of the two wings that are now visually broken and separated from each other serves to create a distinctive vertical element at the corner of Charles and First Streets. The office building at Parcel A is reciprocally “softened” at the corner of Charles Street and First Street through its attention to scale. The lower floor is clad with textured stone and the upper most floor with a darker metal paneling. At the office building (Parcel A) the fifth floor corner is emphasized by a material change at the corner of Bent and First Streets.

- g. *Taller buildings should be articulated to avoid a monolithic appearance: Taller buildings should be point towers instead of slabs, and should have smaller floor plates instead of larger floor plates.*

The proposed buildings are heavily articulated and do not exceed 65’ in height.

## **4. GUIDELINES REGARDING ARCHITECTURAL CHARACTER**

### *a. Residential Guidelines*

- i. *Create varied architecture and avoid flat facades by using bays, balconies, porches, stoops, and other projecting elements.*

The breaking of the residential structures in to two separate structures and the appearance of at least three distinctly designed buildings naturally creates a varied architecture

Along First Street, the façade of the multi-family building (Parcel B) is broken down in scale by the use of varied brick texturing details, which articulates the façade in to a bay rhythm. There is also a large indentation at the upper floors that punctuates the façade. Where this setback previously introduced the architectural language that would be visible on Charles Street, it now serves to visual separate the two distinct style and masses through the use of a dark metal panel pattern. This separation acts as a void, and a moment of pause before

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introducing the new domestic vocabulary along Charles Street. Contrasting the urbanity of the First Street treatment, the Charles Street facade is strongly setback from the street, which allows for greater expression of domesticity through the introduction of balconies and bays that occupy much of the façade

At 22 Hurley (Parcel C), the residential building is not only smaller, but also contains bays and balconies which reinforce its residential quality. Brick remains as a primary material in order to establish continuity with the 21 Charles Street multi-family building.

*ii. Maximize the number of windows facing public streets to increase safety.*

As previously discussed, most of the first floor residential facades facing Charles Street are lobby areas and are glazed providing excellent visibility to the streets and open spaces. At the small building at 22 Hurley the building has rich but generous fenestration at the first floor units, including entry doors.

*b. Commercial Guidelines*

*i. Create varied architecture and avoid flat facades by using recessed or projected entryways, bays, canopies, awnings, and other architectural elements.*

At the office and retail, recessed entries are employed to vary the sidewalk experience along the length of First Street

*ii. Vary the architecture of individual buildings to create architecturally diverse districts.*

As discussed above, the buildings character is differentiated and dictated by the differing street adjacencies and the character of the streets. The office building takes on the distinct character of a simple treated façade recalling industrial buildings, while the residential is brick with punched windows. As the upper stories vary though, the consistent glazed facades that form a vibrant retail base are maintained.

*iii. Where buildings are set back at upper stories, lower roofs may be used as balconies, balustrades, and gardens.*

The multi-family building at Parcel B steps down in height to potential occupiable roof deck at the penultimate story to combined with the 2<sup>nd</sup> level green roofs and multiple residential balconies.

**5. *Environmental Guidelines***

- a. *Design buildings to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building. Buildings on a lot should be sited to allow construction on adjacent lots to do the same. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards is encouraged.*

Refer to LEED Narrative at Appendix D

- b. *Rooftop mechanical equipment should be sited and shielded to protect neighboring uses from noise impacts.*

Refer to Noise Narrative at Appendix C

**6. *Parking Design Guidelines***

- a. *While underground parking is preferable everywhere, if above ground parking is to be built it should be designed so as not to be visible from public streets or pathways.*

100% of the residential and office parking is accommodated in an underground structure under Parcel B and C. However, in order to allow for viable and sustainable retail, single aisle surface parking is provided on Parcels A, B and D located behind the buildings but shielded from view from First Street. See *Transportation Impact Study* for the detailed parking breakdown.

- b. *Locate vehicular parking entrances on side streets and alleys and provide safe pedestrian access from public streets.*

All curb cuts on First Street have been eliminated. The four curb cuts proposed are all on the secondary streets.

- c. *All parking garages must provide direct pedestrian access to the street.*

Pedestrians will have direct access from the underground parking garage to both residential buildings. A head house located in the proposed open space will allow office tenants using the parking garage to have direct access to the sidewalk on Charles Street.

- d. *The primary pedestrian exit/access to all garages serving non-residential uses should be to the street or a public area.*

As described above, the office building tenants will have direct access from the underground parking to Charles Street.

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- e. Design and locate lighting fixtures in surface parking lots and garages to enhance safety while minimizing light spillover onto adjacent properties.*

The lighting will be designed to the appropriate standards and baffled to avoid spillover.

***C. PUBLIC REALM***

***1. Guidelines for Open Space***

*a. Public Open Space*

- i. The provision of open space of diverse sizes and use is encouraged to enhance the public environment in the study area.*

See below

- ii. The provision of interconnected series of open spaces is encouraged to provide connections to neighborhoods and to encourage pedestrian movement.*

The proposed project is not required to have Public Open Space per se, but in meeting the required private open space requirements, the applicant has taken into account the guidelines that call for diverse sizes of open space that enhance the public environment. Careful attention has been paid to the guideline that suggests that developments provide an interconnected series of open spaces.

The project proposes replacing an existing surface parking lot at 29 Charles Street (Parcel C), with a publicly accessible green open space built over a below-grade parking structure. This grade level green space will create a focal point for not only the adjacent elements of the PUD but also the surrounding structures on Hurley and Charles Streets that are not in the PUD. The open space provides pedestrian and bicycle access as well as a mid-block connections between Charles and Hurley Streets. The primary path through this space relates to a pedestrian desire line connecting the new Lechmere Green Line Station and Kendal Square. It aggregates with the other semi private front yards and stoops provided in front of both the 21 Charles Street (Parcel B) and 22 Hurley Street (Parcel C) residential buildings.

*b. Semi-private open space*

- i. For residential development, create semi-private open spaces (e.g. front and rear yards, porches, stoops, and patios) that create a transition from public sidewalks and courts to private interior spaces*

The building at 22 Hurley Street (Parcel C) and 21 Charles Street (Parcel B) set back from Hurley Street and Charles Street respectively to create a front yard. 22 Hurley also includes front entries and patios.

**2. Guidelines for Streets and Sidewalks**

*a. Character*

- i. Use streetscape elements such as trees, benches, signage, and lighting to support active pedestrian uses and reinforce the character and identity of each district.*

At the existing streets the applicant will work with the city arborist and the DPW to add street trees to the existing sidewalks around the development parcel, and to have a smooth interface to the new publicly accessible open space that includes benches and lighting for a safe and successful pedestrian experience.

- ii. Design streets to encourage pedestrian and cycle activity, and to control vehicle speed in residential areas.*

The residential building along First Street will be set back from the property line by 1 ½', resulting in a wider sidewalk and enhanced pedestrian experience. The addition of retail the full length of First Street will be a major improvement to the pedestrian experience. Throughout the development new short-term bike storage has been added to service the various uses (see bicycle parking plan).

*b. Views: Guideline Not Applicable*

*c. New Streets: Guideline Not Applicable*

- d. In the design of new streets, pathways, and parks, provide pedestrian scale lighting to enhance pedestrian safety.*

The new mid block open space between Charles Street and Hurley Street will include a primary pedestrian route that will be provided with appropriately scaled lighting.

- e. Refer to the Cambridge Pedestrian Plan and Cambridge Bicycle Plan for additional guidance on creating a safe and pleasant environment for pedestrians and bicyclists and for guidance on sidewalk widths and street trees:*

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The applicant will work with the DPW and City Arborist to establish new sidewalk scope and materials, and to determine new street tree locations.

### **3. Connections**

- a. *Provide safe pedestrian and bicycle connections to future regional pathways (Grand Junction Railroad, North Point path)*

The proposal enhances both pedestrian and bicycle connections. The new landscape path provides a cut through from Charles Street to Hurley Street in mid block, following a diagonal desire line running from Kendal Square to Lechmere and the new North Point pathway system and the new Green Line station at Lechmere. Closing of multiple curb cuts along First Street positively contributes to increased bicycle safety on the newly installed First Street bike path.

- b. *Provide strong pedestrian, bicycle and visual connections to the Charles River and public parks through view corridors, signage, and or art installations*

The proposed development enhances the pedestrian connections to the Charles River from the East Cambridge neighborhood by majorly enhancing the landscaping and street experience on all three secondary streets, Bent, Charles and Hurley that connect the neighborhood to the River and the parks along it and at the Galleria Mall.

- c. *Provide safe pedestrian and bicycle connections to existing and new bus and transit*

The street level experience on First Street will be greatly improved by the addition of continuous retail throughout the development parcel. The development will enhance the connectivity of Lechmere, with its new station, and Kendal Square. Further, the mid block connection between Charles Street and Hurley Street will provide enhanced pedestrian experience and connectivity.

### **4. Transportation**

- a. *Transit*

Not applicable

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*b. Pedestrian*

- i. Provide pedestrian crossings/phases at all major intersections.*

The applicant will work with DPW and Traffic and Parking to establish appropriate crossings at impacted junctions.

*c. Bicycle / other non-motorized vehicles*

- i. Provide bicycle lanes on major streets.*

First Street has an established bike lane. The applicant will work with DPW on any changes necessitated by curb cut closings.

- ii. Provide sheltered bicycle racks in all new commercial and multi-family residential buildings.*

The development provides a central secure bicycle storage facility for residential and office users, in the below grade garage. A headhouse from the garage provides direct access to Charles Street and is served by an elevator. Further, short-term bike parking, including covered bike storage is strategically located to service the different project components (See Bicycle Parking Plan at Exhibit 7 for specifics).

- iii. Provide bicycle racks along streets in retail areas.*

The Bicycle Parking Plan includes bike parking on the side streets for retail. As authorized in Section 6.104.2b, the applicant will also contribute to the provision of street and or sidewalk short-term bike parking directly on First Street.

**Conformance with City-Wide Urban Design Objectives**

The Development Proposal complies with the policy objectives of the Eastern Cambridge Planning Study and Design Guidelines and the dimensional requirements of the PUD-4B district. The Plan will result in residential, office, and retail uses that will contribute positively to the current mixed-use environment. The Development Proposal is designed to be consistent with the urban design objectives set forth in Section 19.30 of the Ordinance. This section focuses on reviewing compliance with the Article 19 City wide Urban Design Objectives

**Section 19.31** New projects should be responsive to the existing or anticipated pattern of development.

### **Design Approach**

The four parcels comprising the Development Proposal primarily face First Street, but also have frontage on Hurley Street, Charles Street and Bent Street. The development proposal contains two overarching design principles; 1) to reinforce and strengthen the emergence of First Street as a vibrant retail street through the consistent introduction of viable first floor retail along all First Street facades; and 2) to carefully calibrate the building massing and location of green open space to establish much better transitions to the established lower density in the East Cambridge residential neighborhood.

*(1) Heights and setbacks provide suitable transition to abutting or nearby residential zoning districts that are generally developed to low scale residential uses.*

The Development Proposal contains 45' heights and lower densities closest to the existing housing on Second Street. At 22 Hurley Street (Parcel C), a relatively modest 45' four story residential structure containing eighteen dwelling units is set back 10' from the street. On the Charles Street side of the block, a new open space is introduced creating a tranquil amenity contrasting the busy retail oriented First Street and mitigating impacts on the existing residential building on Second Street. The larger six story (65') residential building proposed on Parcel B steps down to five stories (55') as it approaches the new open space. The Charles Street residential facade is set back from the Charles Street sidewalk edge allowing approximately 18'-0" of plantings between the building and the sidewalk, differentiating the urban feel of First Street from the more residential feel of Charles Street. Combined with the new proposed through block connection, a leafy interlude is provided as pedestrians walk east towards First Street, the Galleria Mall and the River.

The office building at 121 First Street (Parcel A) now presents a uniform and consistent mass along First Street with a dramatic thin corner at the intersection of Bent and First Streets.

*(2) New buildings are designed and oriented on the lot so as to be consistent with the established streetscape on those streets on which the project lot abuts. Streetscape is meant to refer to the pattern of building setbacks and heights in relationship to public streets.*

The four proposed buildings are designed and located to respect the character of the streetscapes and adjacent uses. Planning for the area is targeted at reinforcing First Street as a retail street, so each of the three buildings proposed on First is designed with retail space that directly abuts the sidewalks.

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*(3) In mixed-use projects, uses are to be located carefully to respect the context, e.g. retail should front onto a street, new housing should relate to any adjacent existing residential use, etc.*

At the side streets of Charles and Hurley, setbacks are introduced and building massing broken down. All the residential entries are located on the side streets that lead to the neighborhood, with an entirely residential building at 22 Hurley closest to Second Street and the neighborhood.

*(4) Where relevant, historical context are respected, e.g. special consideration should be given to buildings on the site or neighboring buildings that are preferably preserved.*

There are no historically significant buildings in the Development Proposal.

**Section 19.32 Development should be pedestrian and bicycle friendly, with a positive relationship to its surroundings**

*(1) Ground floors, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people, such as retail stores, consumer service businesses and restaurants where they are allowed, or general office, educational or residential uses and building lobbies. Windows and doors that normally serve such inhabited spaces are encouraged to be a prominent aspect of the relevant building facades. Where a mix of activities are accommodated in a building, the more active uses are encouraged facing public streets, parks and pathways.*

*In commercial districts, such active space consists of retail and consumer service stores and building lobbies that are oriented toward the street and encourage pedestrian activity on the sidewalk. However, in all cases such ground floor spaces should be occupied by uses (a) permitted in the zoning district within which the building is located, (b) consistent with the general character of the environment within which the structure is located, and (c) compatible with the principal use for which the building is designed.*

The residential structures on the side streets are designed to activate the street and open space. The 22 Hurley Building (Parcel C) has ground level entries facing both Hurley Street and the new open space. The 21 Charles Street building (Parcel B) places all its common areas and functions, as well as its main entrance, along Charles Street with the lobby and exercise room also turning the building corner and engaging the new open space.

The facades of the three buildings on First Street prioritize activating the street and are almost entirely glazed at the ground floor and contain retail entries and the primary office entry at 121 First Street (Parcel A).

*(2) Covered parking on the lower floors of a building and on-grade open parking, particularly where located in front of a building, is discouraged where a building faces a public street or public park, and publicly accessible pathways.*

The project is carefully designed so as not to locate parking on the first floor of any building, and to avoid parking between the primary building entries and the street. To this end, the majority of parking for the project is concealed in an underground parking garage that will sit below Parcels B and C and provide 142 vehicle parking spaces and 160 bicycle parking spaces. The underground garage will service the 136 residential units (Parcel B and C) as well as the office tenants on Parcel A. The project also provides small pockets of surface parking as an essential ingredient to the viability of the first floor retail, which is treated as a primary use on First Street, not as accessory to the uses above. This parking is carefully positioned behind the buildings so that it does not impact the pedestrian realm of First Street. Parcel A will contain 10 surface parking spaces to service the ground floor retail tenant. Parcel B provides 26 surface parking spaces for the first floor retail. Since these spaces also abut the through-block pedestrian connection, this is heavily

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screened and landscaped, and spatially aggregates with the adjacent open space while being visually shielded from it. Parcel D will provide 24 surface parking spaces for its retail use.

*(3) Ground floors should be generally 25-50% transparent. The greatest amounts of glass would be expected for retail uses with lesser amounts for office, institutional or residential use.*

The standards for glazing in the Eastern Cambridge Planning Study exceed the citywide guidelines. As reviewed in the prior section, the project exceeds the required ECaPS standard.

*(4) Entries to buildings are located so as to ensure safe pedestrian movement across streets, encourage walking as a preferred mode of travel within the city and to encourage the use of public transit for employment and other trips. Relating building entries as directly as possible to crosswalks and to pathways that lead to bus stops and transit stations is encouraged; siting buildings on a lot and developing site plans that reinforce expected pedestrian pathways over the lot and through the district is also encouraged.*

The primary building entries engage the residential side streets. The office and retail entries address and activate First Street. The garage head house is located in the new open space but provides direct access to Charles Street. The headhouse is set back from the sidewalk edge to allow for better site lines, safe passage, as well as encouraging interaction with the open space itself. Visitor bicycle parking is distributed throughout the Development Parcel including at the residential entries and proximate to retail uses, with some covered spaces available.

*(5) Pedestrians and bicyclists are able to access the site safely and conveniently; bicyclists should have, secure storage facilities conveniently located on-site and out of the weather. If bicycle parking is provided in a garage, special attention must be aid to providing safe access to the facilities from the outside.*

See response below.

**Section 19.33** The building and site design should mitigate adverse environmental impacts of a development upon its neighbors.

### **1. Mechanical equipment**

Special attention has been given to the massing and location of building elements in order to minimize acoustic and visual impacts upon neighbors. The project is being designed to meet the requirements of the Cambridge Noise Ordinance. A visually integrated acoustic and visual barrier is designed for each building. See Noise Emissions Evaluations at Appendix C for further details.

### **2 & 3. Trash and Loading**

The mix of building uses, sizes and parcel configurations anticipated for the project has resulted in a range of solutions for loading and service that ensure that the uses are kept away from neighbors and avoid street impacts as far as feasible. Loading for the office space on Parcel A and retail at parcel D is in the rear of the buildings shielded from First Street. For the retail space on Parcel B, the loading will be accessed via the surface parking area. This allows the loading to be far removed from the street. Separate enclosed trash areas will be maintained for commercial and residential uses.

### **4 & 5. Stormwater Best Management Practices and Landscaped Areas Run-off**

See Preliminary Stormwater Drainage, Water and Sewer Impact Statement at Appendix B for further details.

### **6. Shadow Impacts**

The project's buildings are located and designed to minimize shadow impacts on neighboring properties. At Parcel A most of the building sets back from the narrower Bent Street, while at Charles Street it reduces a story in height. At Parcel B, the residential building shadows are cast primarily on spaces within the Development Proposal. Care has been taken to reduce the scale of the building as it approaches the newly created open space to minimize impacts. At Parcel C the 22 Hurley building is kept to 45' to minimize shadow impacts. At Parcel D, the impacts of the replacement building will be limited since it is a single story structure.

There are no registered PV installations affected by the proposed buildings.

**7. Changes in Grade**

There are no significant grade changes within the Development Parcel.

**8. Building Scale Impact on Residential Neighbors**

Care has been taken to minimize impacts on residential neighbors by locating the smallest of the buildings and the majority of the open space adjacent to the residential neighborhood.

**9. Outdoor Lighting**

The site lighting will be designed according to applicable minimum standards while avoiding light spillage into residential windows through fixture selection and baffling.

**10. Tree protection**

There are no trees on any of the four parcels in the Development Parcel.

**Section 19.34 Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system and sewer system.**

*(1) The building and site design are designed to make use of water-conserving plumbing and minimize the amount of stormwater run-off through the use of best management practices for stormwater management.*

See Preliminary Stormwater Drainage, Water and Sewer Impact Statement at Appendix B

*(2) The capacity and condition of drinking water and wastewater infrastructure systems are shown to be adequate, or the steps necessary to bring them up to an acceptable level are identified.*

The applicant and its consultants have met with the Cambridge Water Department and DPW to discuss plans to provide water service, which will include the installation of new water mains along Hurley Street.

See Preliminary Stormwater Drainage, Water and Sewer Impact Statement at Appendix B

*(3) Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically. The buildings are sited on the lot to allow construction on adjacent lots to do the same. Compliance with Leadership in Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards is encouraged.*

The project will be planned, designed, and constructed to be eligible to achieve at least the level Silver using the applicable LEED Rating System of the United States Green Building Council. A preliminary LEED checklist for all buildings can be found in Appendix D, and a checklist will be completed for each additional building when final Design Review is sought for those buildings.

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**Section 19.35** New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically.

*(1) New educational institutional construction that is focused within the existing campuses.*

Not applicable.

*(2) Where institutional construction occurs in commercial areas, retail, consumer service enterprises, and other uses that are accessible to the general public are provided at the ground (or lower) floors of buildings. Where such uses are not suitable for programmatic reasons, institutional uses that encourage active pedestrian traffic to and from the site.*

Not applicable.

*(3) In large, multiple-building non-institutional developments, a mix of uses, including publicly accessible retail activity, is provided where such uses are permitted and where the mix of uses extends the period of time the area remains active throughout the day.*

The incorporation of a mix of residential and office uses, above continuous retail along First Street, is a key component of the Development Proposal.

*(4) Historic structures and environments are preserved.*

There are no historic structures on the site.

*(5) Preservation or provision of facilities for start-up companies and appropriately scaled manufacturing activities that provide a wide diversity of employment paths for Cambridge residents as a component of the development; however, activities heavily dependent on trucking for supply and distribution are not encouraged.*

The size and configuration of the office building on Parcel A could easily accommodate start-up companies. None of the uses within the Development Proposal will rely heavily on trucking for supply and distribution.

**Section 19.36 Expansion of the inventory of housing in the City is encouraged**

*(1) Housing is a component of any large, multiple building commercial development. Where such development abuts residential zoning districts substantially developed to low-scale residential uses, placement of housing within the development such that it acts as a transition/buffer between uses within and without the development.*

The Development Proposal contains 136 dwelling units. The building with the smallest scale and least density (22 Hurley Street) is located adjacent to the existing residential structure and the East Cambridge Neighborhood.

*(2) Where housing is constructed, providing affordable units exceeding that mandated by the Ordinance. Targeting larger family-sized middle income units is encouraged.*

The project will create approximately 120,000 square feet of new residential development representing 136 residential units and will comply with the City's Inclusionary Housing requirements. A range of unit types is proposed to accommodate varying household sizes.

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**Section 19.37 Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.**

*(1) On large-parcel commercial developments, publicly beneficial open space is provided.*

The PUD proposes a new nearly half acre publicly accessible open space. Further, the development parcel exceeds the open space requirements providing approximately 30% of the lot area as open space. The open space will feature both publicly accessible and private amenity open space.

*(2) Open space facilities are designed to enhance or expand existing facilities or to expand networks of pedestrian and bicycle movement within the vicinity of the development.*

The open space is located so as to track a pedestrian desire line connecting Kendall Square with the soon to be reconstructed Lechmere Green line station.

*(3) A wider range of open space activities than presently found in the abutting area is provided.*

The open space is designed as a tranquil, highly aesthetic oasis, in contrast to the active open space recently created closer to Kendall Square.

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**Conformance with Section 10.43 Special Permit Criteria**

*Granting the Special Permit requested would not be a detriment to the public interest because:*

***A) Requirements of the Ordinance can or will be met for the following reason:***

The proposed development satisfies the requirements of the PUD 4B Zoning District set forth in Section 13.50 and is consistent with the Urban Design Objectives enumerated in Section 19.30.

***B) Traffic generated or pattern of access or egress would not cause congestion hazard, or substantial change in established neighborhood character or the following reasons:***

The proposal is consistent with the anticipated character of the area as reflected in the Eastern Cambridge Planning Study and the Eastern Cambridge Design Guidelines. As demonstrated by the Traffic Impact Study prepared for the project, the development will not result in substantial adverse impact on traffic within the area.

***C) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:***

The introduction of additional residential, office, and retail uses in the district is compatible with surrounding uses.

***D) Nuisance of hazard would not be created to the detriment of the health, safety and/or welfare of the occupants of the proposed use or the citizens of the City for the following reasons:***

The proposed Development will comply with all applicable health, safety, and building code requirements. The proposed Development will also comply with the Cambridge Municipal Noise Ordinance.

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*E) For other reasons, the proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this Ordinance for the following reasons:*

The proposed development is fully consistent with the intent and purpose of the PUD 4-B District zoning requirements and the Eastern Cambridge Design Guidelines.

*F) The new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30:*

As described more fully in the application, the proposed development is consistent with those objectives.

**6.108 Modification of Bicycle Parking Requirements**

Section 13.57.3 of the Ordinance provides that the parking requirements for the PUD 4-B District may be satisfied anywhere in the Development Parcel, notwithstanding anything to the contrary contained in Article 6.000. Accordingly, the below grade parking garage located beneath Parcels B and C will serve all of the residential tenants of the project as well as the tenants of the office building on Parcel A. This pooled parking facility has been designed to accommodate motor vehicles as well as long term bicycle parking. All of the dimensional requirements for bicycle storage set forth in Section 6.100 are satisfied in the proposed development. The only exception being that the distance from the elevator head house from the garage on Charles Street where the bicycle parking is located to the pedestrian entrance of the Office Building on Parcel A exceeds the 200' limitation of Section 6.104.1.

However, Section 6.108.3.b. recognizes that a modification of the location requirement may be appropriate “for a campus master plan or other large development site within which bicycle parking is planned comprehensively across an area”. In the proposed development, a pooled parking facility will be used to accommodate three of the four buildings on the site. Moreover, the distance bicyclists from the office building will need to walk to access their bicycles (approx. 480’) is the very same distance and route of travel that office workers who commute by automobile will be walking.

The bicycle storage facility will be inviting, well maintained, and provide areas for bicycle maintenance and repairs. As required by Section 6.108.2, a Bicycle Parking Plan is included in this application at Exhibit 7 of the Graphics Package.

**Section 19.24.2 – Transportation Impact Study (TIS) – Certification and Executive Summary**

See attached



**Dimensional Form**

See attached

**DIMENSIONAL FORM**

**Project Address:** First Street PUD #231A Major Amendment - Aggregate Dimensional Form

**Application Date:** 7.24.15

	Parcel A (121 First, 131-137 First, 139 First)	Parcel B (107 First, 119 First, 18 Hurley)	* Parcel C (29 Charles)	Parcel D (85 First)	65 Bent (PUD 231A)	* 159 First (PUD 231A)	Proposed	Permitted
Lot Area (SF)	16,473	39,999	20,005	16,250	59,958	29,978	<b>182,663</b>	
Lot Width (SF)	199	199.96		125	199.72	200		
Total Gross Floor Area (SF)	56,691	117,233	18,502	7,750	108,600	126,000	<b>434,776</b>	
Residential Base	0	74,928	18,502	0	0	122,200	<b>215,630.00</b>	
Non-Residential Base	56,691	14,800	0	7,750	108,600	3,800	<b>191,641</b>	
Inclusionary Housing Bonus	0	27,505		0		included above	<b>27,505</b>	
Total Floor Area Ratio	3.1	2.26	0.92	0.47	1.81	4.20	<b>2.127</b>	
Residential Base	0	1.55	0.92	0	0	4.08	<b>1</b>	
Non-Residential Base	3.1	0.24	0	0.47	1.81	0.13	<b>1</b>	
Inclusionary Housing Bonus	0	0.45		0	0	included above	<b>0</b>	
Total Dwelling Units	n/a	118	18	n/a	0	115	<b>251</b>	
Base Units	n/a	91	15	n/a	0	100	<b>106</b>	
Inclusionary Bonus Units	n/a	27	3	n/a	0	15	<b>42</b>	
Base Lot Area / Unit (SF)	n/a	761		n/a	n/a	1,019	<b>761</b>	
Total Lot Area / Unit (SF)	n/a	593		n/a	n/a	886	<b>593</b>	
Building Height(s) (ft)	65'-0"	65'-0"	45'-0"	30'-0"	45'-0"	65'-0"	<b>varies</b>	
Front Yard setback (ft)	0	2'-0"	9'-0"	1'-0"	4'	1'-9"	<b>varies</b>	
Side Yard Setback (ft)	0	18'-0" (on charles street)		0	1'-0"	2'	5'	<b>varies</b>
Side Yard Setback (ft)	0	0	10'-0"	1'-0"	2'	5'	<b>varies</b>	
Rear Yard Setback (ft)	0	2'-0"	126'-0"	70'-0"	45'	2'	<b>varies</b>	
Open Space (% of Lot Area)	1.90%	33%		1.90%	5.30%	4.00%	<b>23%</b>	
Private Open Space	329	20,227		348	11,297	8,021.00	<b>40,222</b>	
Permeable Open Space	329	0		165		316.00	<b>810</b>	
Other Open Space (specify)								
Off-Street Parking Spaces	10	26	142	24	94	64.00	<b>360</b>	
Long-Term Bicycle Parking	*16 located on Parcel C	159		1	28	78.00	<b>266</b>	
Short-Term Bicycle Parking	9	30		5		8.00	<b>52</b>	
Loading Bays	0	1	0	0	2	0.00	<b>3</b>	

CITY OF CAMBRIDGE, MA

PLANNING BOARD

SPECIAL PERMIT APPLICATION

\* Parcel resides within Industry A1 zone. All other parcel without asterisk reside within Business A

**DIMENSIONAL FORM**

**Project Address:**

**Application Date:**

	<b>Existing</b>	<b>Allowed or Required (max/min)</b>	<b>Proposed</b>	<b>Permitted</b>
Lot Area (sq ft)				
Lot Width (ft)				
Total Gross Floor Area (sq ft)	234,600	485,243	427,422	
Residential Base	122,200	390,317	213,885	
Non-Residential Base	112,400	195,158	186,085	
Inclusionary Housing Bonus	included above	64,165.5	27,452	
Total Floor Area Ratio	2.3	2.47	2.35	
Residential Base	1.19	2.136	1.17	
Non-Residential Base				
Inclusionary Housing Bonus				
Total Dwelling Units				
Base Units				
Inclusionary Bonus Units				
Base Lot Area / Unit (sq ft)				
Total Lot Area / Unit (sq ft)				
Building Height(s) (ft)				
Front Yard Setback (ft)				
Side Yard Setback (ft)				
Side Yard Setback (ft)				
Rear Yard Setback (ft)				
Open Space (% of Lot Area)	31%	20%	23%	
Private Open Space	10,266		40,222	
Permeable Open Space	1,370			
Other Open Space (Specify)				
Off-Street Parking Spaces				
Long-Term Bicycle Parking				
Short-Term Bicycle Parking				
Loading Bays				

*Use space below and/or attached pages for additional notes:*

**Comprehensive Summary by Parcel and Phase (at time of this Major Amendment)**

**Completed (PUD 231A)**

Parcel / Address	Lot Area	Res GFA	NR GFA	Retail	D. Units	Pkg	OS
65 Bent St.	59,958	0	108,600	0	0	98	11,297
159 First St.	29,978	122,200	3,800	3,800	115	63	8,021
*29 Charles	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>89,936</b>	<b>122,200</b>	<b>112,400</b>	<b>3,800</b>	<b>115</b>	<b>161</b>	<b>19,318</b>

**Phase 1**

Parcel	Lot Area	Res GFA	NR GFA	Retail	D. Units	Pkg	OS
A	16,473	0	56,691	9,800	0	10	329
D	16,250	0	7,750	7,750	0	24	316
<b>TOTAL</b>	<b>32,723</b>	<b>0</b>	<b>64,441</b>	<b>17,550</b>	<b>0</b>	<b>34</b>	<b>645</b>
<b>cumul.</b>	<b>122,659</b>	<b>122,200</b>	<b>176,841</b>	<b>21,350</b>	<b>0</b>	<b>195</b>	<b>19,963</b>

**Phase 2**

Parcel	Area	Res GFA	NR GFA	Retail	D. Units	Pkg	OS
B	39,999	102,423	14,800	14,800	118	26	20,227
*C	20,005	18,502	0	0	18	142	137
<b>TOTAL</b>	<b>60,004</b>	<b>120,925</b>	<b>14,800</b>	<b>14,800</b>	<b>136</b>	<b>168</b>	<b>20,364</b>
<b>cumul.</b>	<b>182,663</b>	<b>243,125</b>	<b>191,641</b>	<b>36,150</b>	<b>251</b>	<b>363</b>	<b>40,327</b>

\*29 Charles was previously included in PUD231A, the scope of this parcel has been amended and is now summarized within "Parcel C"

Lot Area = lot area of developable blocks only excluding streets (square feet)

GFA = gross floor area (square feet)

OS = public, green area or permeable open space (square feet)

D.Units = dwelling units

Pkg = motor vehicle parking spaces

"Res" refers to residential *minimum* requirements

"NR" refers to non-residential *maximum* limitations

"total" = total allowed or required within that Phase

"cumul." = cumulative development at the end of Phase



**Ownership Certificates**

See attached

**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 121 First Street  
for which the record title stands in the name of: Bent Associates Limited Partnership  
whose address is: c/o Jones Lang Lasalle 1 Rogers St, Cambridge MA

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 55811 Page: 586

OR Registry District of the Land Court,  
Certificate No.:

Book: \_\_\_\_\_ Page: \_\_\_\_\_

*Paul Ognibene* 8/27/2014 (GROUND LESSEE)

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

121 First Street LLC, Ground Lessee

by its Manager, Urban Spaces Holdings, LLC

To be completed by Notary Public:

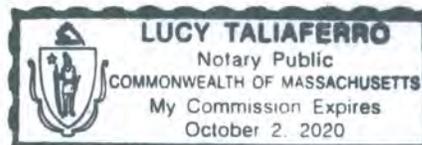
Commonwealth of Massachusetts, County of MIDDLESEX

The above named PAUL OGNIBENE personally appeared before me,

on the month, day and year AUGUST 27, 2014 and made oath that the above statement is true.

Notary: *Lucy Taliaferro* LUCY TALIAFERRO

My Commission expires: OCTOBER 2, 2020



**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 131-137 First Street  
for which the record title stands in the name of: The Eldor First Street Realty Trust  
whose address is: 400 Amherst St. Suite 202, Nashua, NH 03063

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 39889 Page: 307  
*OR* Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

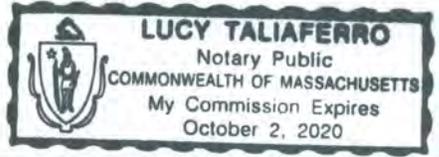
*Paul M. Ognibene* 8/27/2014 (GROUND LESSEE)  
Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)  
First Street - US, LLC, Ground Lessee  
by its Manager, Urban Spaces, LLC

To be completed by Notary Public:

Commonwealth of Massachusetts, County of MIDDLESEX

The above named PAUL OGNIBENE personally appeared before me,  
on the month, day and year AUGUST, 27 2014 and made oath that the above statement is true.

Notary: *Lucy Taliaferro* LUCY TALIAFERRO  
My Commission expires: OCTOBER 2, 2020



**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 139 First Street  
for which the record title stands in the name of: First Street - US  
whose address is: c/o Urban Spaces, LLC 90 Hamilton Street, Cambridge MA

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 63818 Page: 427  
OR Registry District of the Land Court, Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

Paul M. Ognibene, manager  
Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

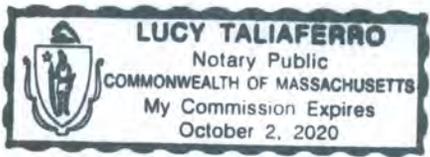
To be completed by Notary Public:

Commonwealth of Massachusetts, County of MIDDLESEX

The above named PAUL OGNIBENE personally appeared before me,  
on the month, day and year AUGUST 27, 2014 and made oath that the above statement is true.

Notary: [Signature] LUCY TALIAFERRO

My Commission expires: OCTOBER 2, 2020



**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 107 First Street  
for which the record title stands in the name of: Linear Retail Cambridge #3 LLC  
whose address is: 5 Burlington Woods Dr, Burlington MA 01803

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 59706 Page: 268  
OR Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

William J. Beck President  
Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

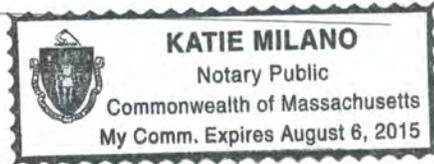
To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named William J. Beck personally appeared before me,  
on the month, day and year February 5, 2015 and made oath that the above statement is true.

Notary: Katie Milano

My Commission expires: Aug. 6, 2015



**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 119 First Street  
for which the record title stands in the name of: Donald Prescott & William Prescott  
whose address is: 266 Main Street, Suite 22 Medfield, MA 02052

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 15786 Page: 476

OR Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

William R. Prescott MANAGING PARTNER B&D REALTY ASSOC. LLC  
Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

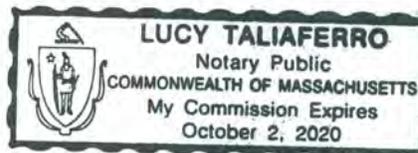
To be completed by Notary Public:

Commonwealth of Massachusetts, County of MIDDLESEX

The above named WILLIAM R. PRESCOTT personally appeared before me,  
on the month, day and year 1/6/2015 and made oath that the above statement is true.

Notary: [Signature]

My Commission expires: 10/2/2020



**OWNERSHIP CERTIFICATE**

**Project Address:**

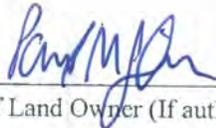
**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 14-26 Hurley Street  
for which the record title stands in the name of: Hurley Corporation  
whose address is: 18 Hurley Street Cambridge, MA 02141

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 28913 Page: 349  
*OR* Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

 1/29/2015

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

To be completed by Notary Public:

Commonwealth of Massachusetts, County of MIDDLESEX

The above named PAUL COGNIBENE personally appeared before me,  
on the month, day and year 1/29/2015 and made oath that the above statement is true.

Notary: 

My Commission expires: 10/2/2020



**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 29 Charles Street  
for which the record title stands in the name of: Bent Associates Limited Partnership  
whose address is: c/o Jones Lang Lasalle 1 Rogers St, Cambridge MA

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 55811 Page: 586  
*OR* Registry District of the Land Court, Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

Paul M. Ognibene 8/27/2014 (GROUND LESSEE)

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

29 Charles Street, LLC, Ground Lessee

To be completed by Notary Public:

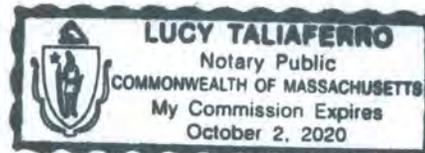
Commonwealth of Massachusetts, County of MIDDLESEX

The above named PAUL OGNIBENE personally appeared before me,

on the month, day and year AUGUST 27, 2014 and made oath that the above statement is true.

Notary: [Signature] LUCY TALIAFERRO

My Commission expires: OCTOBER 29, 2020



**OWNERSHIP CERTIFICATE**

**Project Address:**

**Application Date:**

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: First Street - US, LLC  
at the following address: 90 Hamilton Street  
to apply for a special permit for: a PUD Special Permit  
on premises located at: 85 First Street  
for which the record title stands in the name of: Linear Retail Cambridge #2 LLC  
whose address is: 5 Burlington Woods Dr, Burlington MA 01803

by a deed duly recorded in the:

Registry of Deeds of County: S. Middlesex Book: 59706 Page: 265  
OR Registry District of the Land Court,  
Certificate No.: \_\_\_\_\_ Book: \_\_\_\_\_ Page: \_\_\_\_\_

William J. Be... President

Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

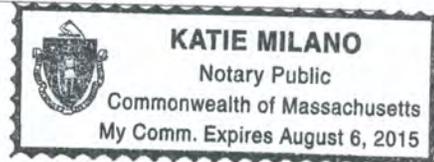
To be completed by Notary Public:

Commonwealth of Massachusetts, County of Middlesex

The above named William J. Be... personally appeared before me,  
on the month, day and year February 5, 2015 and made oath that the above statement is true.

Notary: Katie Milano

My Commission expires: Aug 6, 2015





## V - APPENDICES

**Tree Study**

**See Appendix A**

**Sewer Service Infrastructure Narrative**

**See Appendix B**

**Water Service Infrastructure Narrative**

**See Appendix B**

**Noise Mitigation Narrative**

**See Appendix C**

**LEED Narrative and Project Checklist**

**See Appendix D**



APPENDIX A

TREE STUDY

From: Jeff Hirsch [jhirsch@urbanspacesllc.com]  
Sent: Tuesday, August 19, 2014 1:26 PM  
To: Lefcourt, David; Dan Hart  
Cc: Paden, Liza  
Subject: RE: New Project at First St Cambridge - Upcoming PUD / Special Permit

Thanks David.

We will be working to integrate the existing street trees into the plan. They will be protected and we will review this with you. As soon as the landscape plans are ready I'll send you a copy and we can go over it together.

Regards

-Jeff

-----Original Message-----

From: Lefcourt, David [mailto:dlefcourt@cambridgema.gov]  
Sent: Tuesday, August 19, 2014 1:18 PM  
To: Daniel R. Hart; 'Jeff Hirsch'  
Cc: Paden, Liza  
Subject: RE: New Project at First St Cambridge - Upcoming PUD / Special Permit

Checked out the project area. There are no trees present on private property.

Are there any proposed plans with the street trees? We want to preserve as many as we can.

Liza Paden (Planning Board rep) has been copied.

Thanks,

David Lefcourt  
City Arborist/Tree Warden  
City of Cambridge

Sent from my Verizon Wireless 4G LTE Smartphone

----- Original message -----

From: "Daniel R. Hart"  
Date:08/19/2014 9:46 AM (GMT-05:00)  
To: "Lefcourt, David" , 'Jeff Hirsch'  
Subject: RE: New Project at First St Cambridge - Upcoming PUD / Special Permit

Good morning David –

I believe Jeff is out a meeting this AM, so I have attached a highlighted survey of the project area for your use.

Best,

Dan

From: Lefcourt, David [mailto:dlefcourt@cambridgema.gov]  
Sent: Tuesday, August 19, 2014 7:29 AM  
To: Jeff Hirsch  
Cc: Dan Hart  
Subject: RE: New Project at First St Cambridge - Upcoming PUD / Special Permit

Hi Jeff,

Can you please send me a drawing of the proposed project area? Just want to make a quick inspection of the area to confirm there are no trees present.

Thanks,

David

From: Jeff Hirsch [mailto:jhirsch@urbanspacesllc.com]  
Sent: Monday, August 18, 2014 2:36 PM  
To: Lefcourt, David  
Cc: Dan Hart  
Subject: New Project at First St Cambridge - Upcoming PUD / Special Permit

Hi David:

We are getting ready to apply for a PUD special permit for a project along First St across from the Cambridge Galleria. The cumulative sites do not have any trees on the properties. Properties include:

- 85 First
- 107 First
- 21 Charles
- 121 First
- 131-137 First
- 139 First
- 29 Charles

Article 19.24/3 requires a tree plan certified by the City Arborist. Can we submit a letter stating that there are no trees and have your office certify this?

Thanks

Jeff Hirsch, RA  
Urban Spaces, LLC

90 Hamilton Street  
Cambridge, MA 02139  
Phone: 617-868-5558

Cell Phone: 617-388-0370

EFax: 206-350-0742

EMail: [jhirsch@UrbanSpacesLLC.com](mailto:jhirsch@UrbanSpacesLLC.com)<mailto:jhirsch@UrbanSpacesLLC.com>

\*\*\*\*\*



APPENDIX B

PRELIMINARY STORM WATER  
DRAINAGE, WATER AND SEWER IMPACT STATEMENT

**Preliminary Stormwater  
Drainage, Water and Sewer  
Impact Statement**

Proposed First Street  
Development  
Cambridge, Massachusetts



Prepared for:  
First Street US, LLC  
c/o Urban Spaces, LLC  
90 Hamilton Street  
Cambridge, MA 02139

Prepared by:  
Stantec Consulting Ltd.  
226 Causeway Street, 6th Floor  
Boston, MA 02114

January 5, 2015

**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
IMPACT STATEMENT**

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- APPENDIX 2: DRAINAGE AREA MAPS**
- APPENDIX 3: RATIONAL METHOD CALCULATIONS**
- APPENDIX 4: HYDRANT FLOW TEST SUMMARY**

# PRELIMINARY STORMWATER DRAINAGE, WATER AND SEWER IMPACT STATEMENT

December 23, 2014

## 1.0 INTRODUCTION

The general location of the site is shown on the map included in the attached book of plans and drawings (Fig 1). The site of this proposed development is shown in detail on a survey titled ALTA/ACSM LAND TITLE SURVEY prepared by Hancock Associates, and dated July 7, 2013. The proposed site plan (Fig 2) and context plan, prepared by Perkins Eastman Architects, show the extents of the proposed plan and neighborhood impacts.

A Schematic Utility Site Plan showing the layout of the proposed buildings, parking areas and proposed utility connections is also provided in Appendix 1.

## 2.0 STORMWATER DRAINAGE

In the existing condition, stormwater from all parcels included in the proposed development area, including building roof and paved areas, discharges in three different directions as sheet flow to adjacent streets. Based on City of Cambridge GIS information, the majority of the surface runoff from the parcels flows toward Bent Street, Charles Street and Hurley Street. It is unclear where the roof drain connections are located and where they discharge too, but it is assumed that all surfaces and roof runoff ultimately discharges into the 54-inch drain line within First Street.

For the purpose of this report, Parcel A refers to the 121-139 First Street properties, Parcel B refers to 107-119 First Street and 21 Charles Street properties, Parcel C refers to the 22 Hurley Street parcel and Parcel D refers to the 85 First Street property. Parcels A, B, C and D are all located in watershed Area D2, as described in the City of Cambridge Sewer and Drain Atlas, which is area tributary to the Lechmere Canal.

**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
IMPACT STATEMENT**

December 23, 2014

The parking lot associated with Parcel A drains southerly onto Bent Street. Runoff along Bent Street is collected into a 12-inch separated drain line which conveys water in an easterly direction to a 54-inch drain line in First Street. As mentioned above, this 54-inch separated drain line within First Street eventually discharges into the Lechmere Canal.

The parking lot and buildings associated with Parcels B & C drain onto Charles Street. Runoff along Charles Street is collected into a 54-inch drain line which conveys stormwater in an easterly direction to a 54-inch drain line in First Street. The 54-inch separated drain line in First Street flows in a northerly direction toward Otis Street and then turns east, discharging into the Lechmere Canal.

The parking lot associated with Parcel D drains in a southerly direction onto Hurley Street. Runoff along Hurley Street is collected into an 18-inch drain line which conveys stormwater in an easterly direction to the same 54-inch drain line in First Street as previously mentioned. The tributary area of the 54" outfall is designated as watershed area D2 according to the City of Cambridge Sewer and Drain Atlas.

The Rational Method was used to calculate the peak runoff flow for the existing conditions and a summary of the results is shown below in Table 1-1. Drainage Area maps for the parcels can be found in Appendix 2 and the Rational Method calculations are provided in Appendix 3.

**Table 1-1: Summary of Existing Conditions Peak Flow Rates (cfs)**

	Contributing to drainage area Watershed D2			
	Parcel A	Parcels B & C	Parcel D	Total
2-yr	1.5	5.5	1.5	8.5
10-yr	2.0	7.2	1.9	11.1
25-yr	2.2	8.1	2.2	12.5

The proposed stormwater management system will control the peak rate of runoff as required by the City of Cambridge's requirements, and will treat stormwater to remove Total Suspended Solids and Phosphorus. Stormwater runoff from each parcel will be collected and is ultimately conveyed to the separated 54-inch drain line in First Street. Paved surface parking lots and landscape areas will drain to deep sump catch basins with hoods for stormwater, which will direct stormwater to water quality structures for TSS removal and structural best management practices for phosphorus removal for water quality treatment. After water quality treatment, stormwater will be routed through subsurface tanks for detention prior to discharge to the City's drainage system. Stormwater from roof areas, and areas over structured parking, will also be routed through TSS removal and phosphorus removal best management practices for water quality treatment, and stormwater tanks for detention, prior to discharge to the City's drainage system.

It is noted that the project will result in a reduction in impervious area over the existing condition. In the existing condition, the entire area of the three parcels contains either impervious roof area or parking area. In the proposed condition, 2,750 sf of roof area for Parcel A will be a green roof and Parcel B will contain a park having a total area of

**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
IMPACT STATEMENT**

December 23, 2014

approximately 13,750 sf. These improvements will result in a 16,500 sf reduction in impervious area.

Prior to City of Cambridge DPW approval of plans, a Stormwater Control Permit will be submitted. Any changes to the proposed stormwater system that may be requested will be coordinated with all departments.

**3.0 WATER AND SEWER**

Water meter readings covering the time frame of August 21, 2013 to August 21, 2014 for each water meter in the planned development area were used to determine the existing water and sanitary sewer flows being generated from the site. These existing flows have been subtracted from the projected flows from the proposed buildings to determine a net increase from the proposed development.

The Massachusetts Department of Environmental Protection’s regulation 310 CMR 15.000, Title 5 Section 15.203 has been used to estimate the sewer and water flow demands for the proposed conditions. While Title 5 estimates maximum day, or approximately 200% of average day sewage generation, 50% of the Title 5 rates were used to estimate average day conditions and to compare water use in the proposed condition to the existing conditions.

*A. Existing Conditions Demand*

The average daily flow rate from all properties within the project area was determined to be 1,582 GPD, based on last year’s water meter readings for the properties on each parcel. Table 2-1 shows the daily flow rates for the properties based on the meter readings. Sewage generation was considered to equal water use for the purpose of this evaluation.

**Table 2-1: Existing Average Water and Sewer Daily Flow Rates (GPD)**

	<u>Address</u>	<u>GPD</u>
Parcel A	121 First	100
Parcel B	99 First	207
	105-109 First	115
	111-115 First	0
	10 Hurley	248
	21 Charles	668
Parcel C	18 Hurley	49
Parcel D	89 First	64
	91 First	43
	95 First	88
<b><u>Total</u></b>		<b><u>1,582</u></b>

**PRELIMINARY STORMWATER  
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December 23, 2014

*B. Proposed Conditions Demand*

The estimated average daily flow for the proposed project is 10,015 GPD which is an increase of 8,433 GPD over the existing conditions. The proposed building within Parcel A will contain a 46,000 s.f. of office space and 9,800 s.f. of retail space. The proposed building within Parcel B will contain 118 residential bedroom units and 14,800 s.f. of retail space. The proposed building within Parcel C will contain 18 residential bedrooms. The retail space use for the existing building within Parcel D will remain as it currently exists.

The assumption for sanitary flow is that the flow will be equal to the water usage for each building. Table 3-1 shows the Proposed Water and Sewer Daily Flow Rates for each building proposed. Table 3-2 shows a comparison of the existing and proposed flows for each parcel area.

**Table 3-1: Proposed Water and Sewer Daily Flow Rates (GPD)**

	121-139 First Street (Parcel A)		107-119 First Street (Parcel B)		18 Hurley Street (Parcel C)		Existing 89-95 First Street (Parcel D)		Total
	Units	GPD	Units	GPD	Units	GPD	Units	GPD	
Total Bedrooms @ 110 GPD	-	-	118	6,490	18	990	-	-	7,480
Total Retail Space @ 50 GPD/1000 SF	9,800	245	14,800	370	-	-	-	195	810
Total Office Space @ 75 GPD/ 1000 SF	46,000	1,725	-	-	-	-	-	-	1,725
<b>Total Projected GPD:</b>									<b>10,015</b>

**Table 4-1: Comparison of Existing & Proposed Water and Sewer Daily Flow Rates (GPD)**

	Parcel A		Parcel B		Parcel C		Parcel D
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing
Water/Sewer (GPD)	100	1,970	1,238	6,860	49	990	195

**PRELIMINARY STORMWATER  
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As noted in the above Table 4-1, there will be an increase in sewer flow from Parcel A, B and C to the existing sewer main within Bent Street and Hurley Street. Both sewer mains connect to the sewer service within First Street. As the use in Parcel D is currently envisioned to remain the same as existing use, water demand and sewage generation is not expected to change.

The increase in sewer flow from Parcel A will connect to the existing 12-inch sewer service within Bent Street. The increased flow of the proposed service will be 7,107 GPD or 0.01 cfs. Assuming a peaking factor of 5, the peak flow will be approximately 0.05 cfs. We have also determined the capacity of this 12-inch service to be approximately 4.2 cfs. The proposed flow equates to approximately 1.2-percent of the pipe capacity. We are not aware of any capacity issues of the existing service and presume this is a minor increase.

The increase in sewer flow from Parcels B & C will be 6,563 GPD or 0.01 cfs. Assuming a peaking factor of 5, the peak flow will be approximately 0.05 cfs. It is assumed that the sewer service from Parcel B will tie into the existing 15-inch service within Hurley Street having an approximate capacity of 4.0 cfs. The proposed flow equates to approximately 1.25-percent of the pipe capacity. We are not aware of any capacity issues of the existing service and presume this is a minor increase.

We recognize that the City of Cambridge may require Inflow and Infiltration (I/I) mitigation. The owner will work with the city to identify opportunities within the existing sewer system that can be repaired or upgraded.

*C. Fire Protection*

Fire protection services will be provided to the proposed buildings from Bent Street and Hurley Street. Bent Street and Hurley Street both contain 6-inch water mains. A hydrant flow test along First Street from Bent to Hurley was performed in November of 2014. The results are also shown in Appendix 4.

*D. Water Main Replacement*

The existing water line within Hurley Street is a 6-inch service. As part of the proposed development, the water main within Hurley Street will be upgraded to an 8-inch service from the intersection of First Street to the rear property line of Parcels B and C.

**4.0 CONCLUSIONS**

- A. Stormwater from paved parking surfaces will be treated via deep-sump catch basins with hoods for oil/gas separation routed through Phosphorous and TSS removal structures, and through detention tanks to reduce the peak rate of runoff, prior to connecting into the municipal drainage system. Runoff from roof and landscape areas will also be routed through phosphorus and TSS removal structures and detention tanks.

**PRELIMINARY STORMWATER  
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January 5, 2015

With the incorporation of open space and a green roof, the project will reduce the amount of impervious surfaces help to reduce the rate and volume of stormwater runoff

- B. The total estimated daily water demand and sewage flow will increase by approximately 8,433 GPD as a result of the project. This represents a minor increase to the capacity of the sewage collection system.
- C. Recent hydrant flow tests along First Street suggest that the City's water distribution system has sufficient capacity to provide both domestic and fire protection service to the project.

**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
IMPACT STATEMENT**

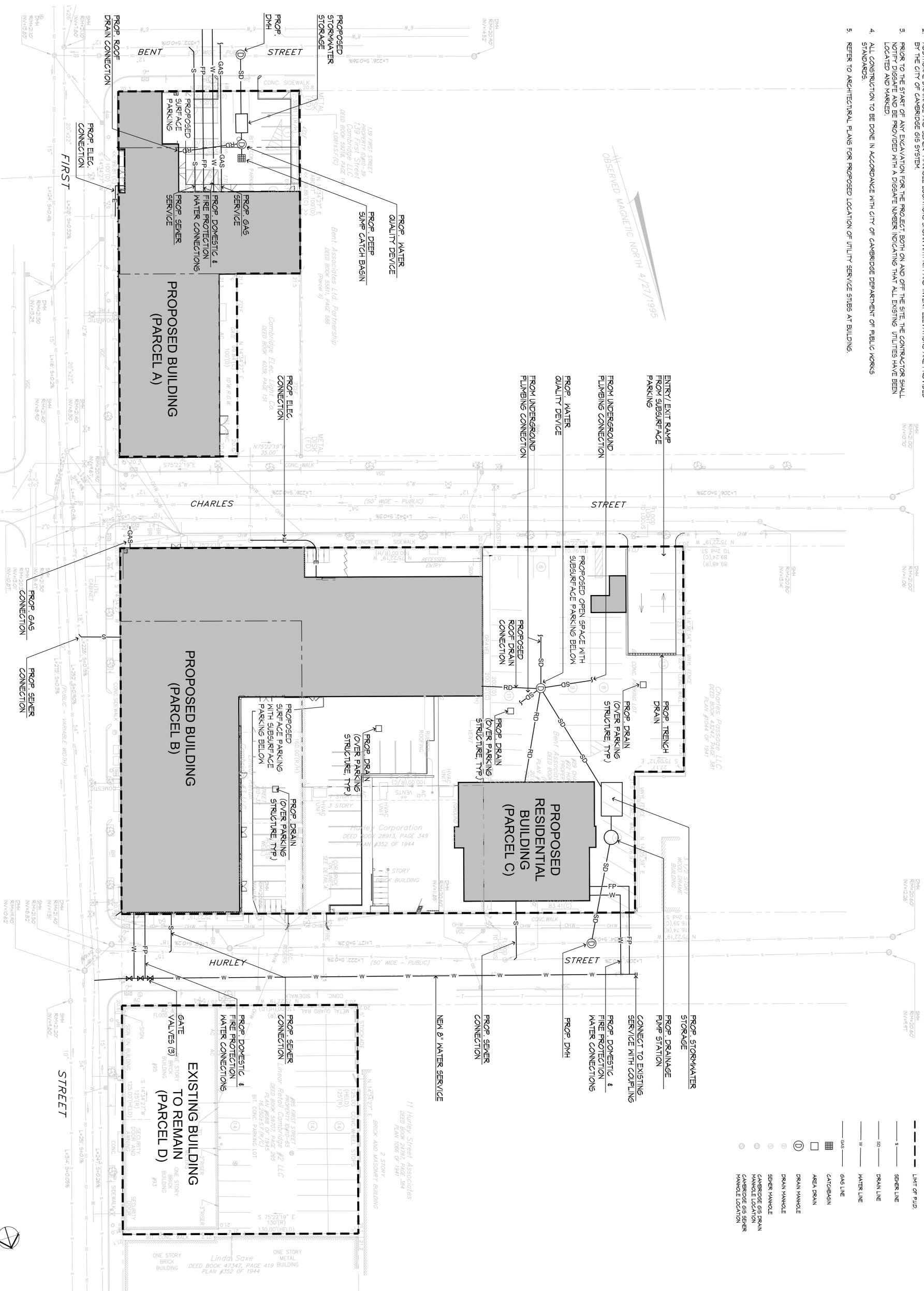
Appendix 1  
December 23, 2014

## **Appendix 1**

Schematic Utility Site Plan

# UTILITY NOTES

- ENGINEERING CONDITIONS INFORMATION IS REPRODUCED FROM THE SURVEY PREPARED BY HANCOCK ASSOCIATES OF DANVERS, MA AND IS DATED JULY 5, 2014.
- ADDITIONAL DRAINAGE AND SEWER MANHOLE LOCATIONS SHOWN WITH RIM AND INVERT ELEVATIONS ARE PROVIDED BY THE CITY OF CAMBRIDGE GIS SYSTEM.
- FROM THE START OF ANY EXCAVATION FOR THE PROJECT BOTH ON AND OFF THE SITE THE CONTRACTOR SHALL NOTIFY DIGSAFE AND BE PROVIDED WITH A DIGSAFE NUMBER INDICATING THAT ALL EXISTING UTILITIES HAVE BEEN LOCATED AND MARKED.
- ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH CITY OF CAMBRIDGE DEPARTMENT OF PUBLIC WORKS STANDARDS.
- REFER TO ARCHITECTURAL PLANS FOR PROPOSED LOCATION OF UTILITY SERVICE STUBS AT BUILDING.



# Perkins Eastman

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 T 617-489-8000 WWW.PERKINSEASTMAN.COM

PROJECT TEAM

OWNER

CONSTRUCTION MANAGER

OWNER'S SITE

Static Consulting

101 Federal Street Suite 502 Boston, MA 02110

617-523-8103

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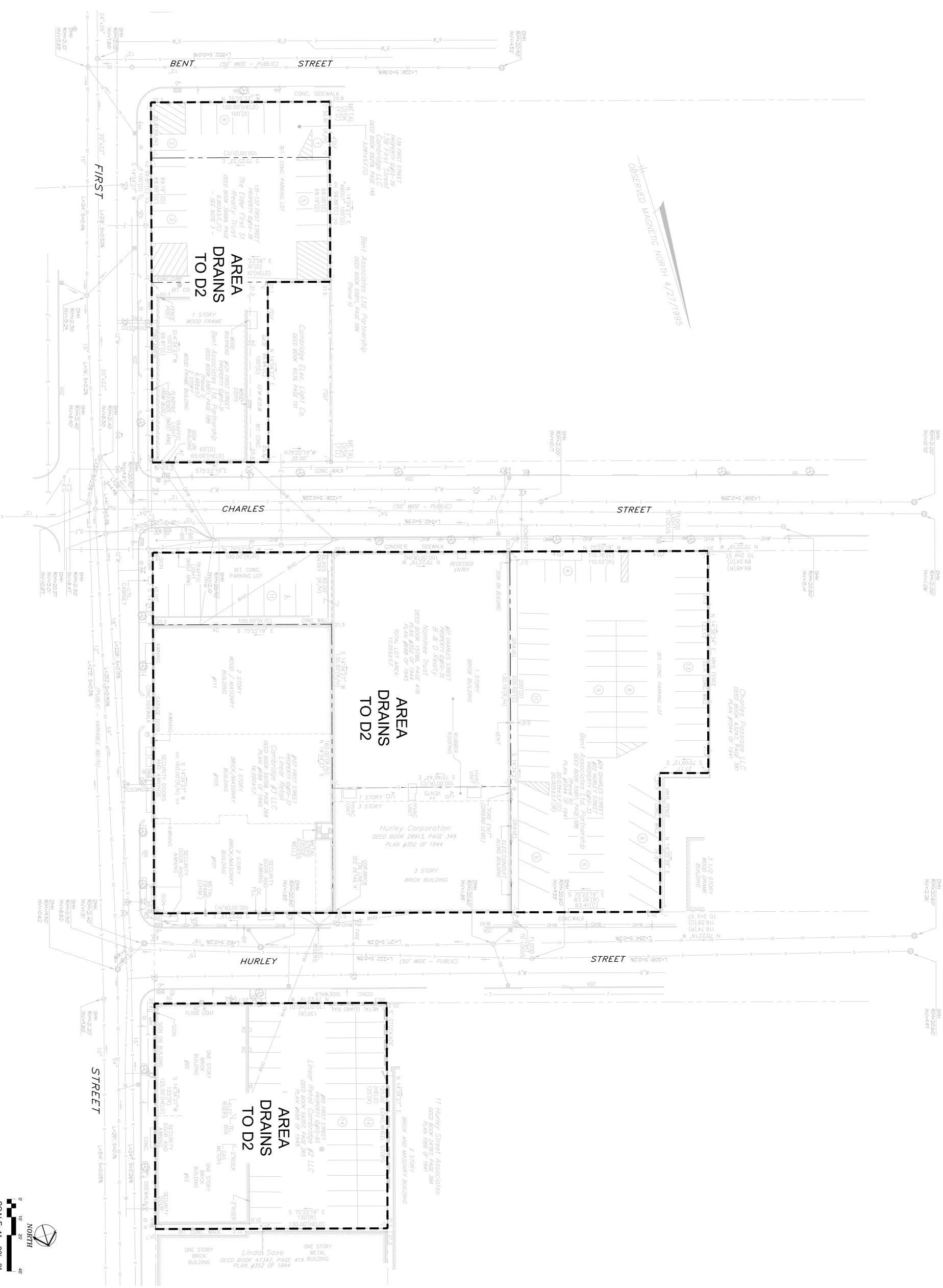
**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
IMPACT STATEMENT**

Appendix 2  
December 23, 2014

## **Appendix 2**

Drainage Area Map

NO.	DATE	DESCRIPTION
1	08/08/14	PUD Permit Submittal



SCALE: 1" = 20' - 0"

**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
IMPACT STATEMENT**

Appendix 3  
December 23, 2014

## **Appendix 3**

Rational Method Calculations



Stantec Consulting Ltd.  
226 Causeway Street, 6th Floor  
Boston, MA 02114  
(617) 523-8103

The Formula for Rational Method is:

$$Q = CIA$$

Where

C - Runoff Coefficient

I - Average rainfall intensity in/hr.

for stormwater duration equal to Time of Concentration Tc.

A - Drainage Area

Pre-Development Parcel A

Drainage Area = 16,647 s.f. (0.38 acres)

For Design Frequency of 2 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 4.12 in/hr

A= 0.38 acres

**Q= 1.53 cfs**

For Design Frequency of 10 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 5.3 in/hr

A= 0.38 acres

**Q= 1.97 cfs**

For Design Frequency of 25 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 6 in/hr

A= 0.38 acres

**Q= 2.23 cfs**



Stantec Consulting Ltd.  
226 Causeway Street, 6th Floor  
Boston, MA 02114  
(617) 523-8103

The Formula for Rational Method is:

$$Q = CIA$$

Where

C - Runoff Coefficient

I - Average rainfall intensity in/hr.

for stormwater duration equal to Time of Concentration Tc.

A - Drainage Area

Pre-Development Parcel B

Drainage Area = 60,026 s.f. (1.38 acres)

For Design Frequency of 2 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 4.1 in/hr

A= 1.38 acres

**Q= 5.54 cfs**

For Design Frequency of 10 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 5.3 in/hr

A= 1.38 acres

**Q= 7.17 cfs**

For Design Frequency of 25 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 6 in/hr

A= 1.38 acres

**Q= 8.11 cfs**



Stantec Consulting Ltd.  
226 Causeway Street, 6th Floor  
Boston, MA 02114  
(617) 523-8103

The Formula for Rational Method is:

$$Q = CIA$$

Where

C - Runoff Coefficient

I - Average rainfall intensity in/hr.

for stormwater duration equal to Time of Concentration Tc.

A - Drainage Area

Pre-Development Parcel C

Drainage Area = 16,255 s.f. (0.37 acres)

For Design Frequency of 2 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 4.1 in/hr

A= 0.37 acres

**Q= 1.49 cfs**

For Design Frequency of 10 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 5.3 in/hr

A= 0.37 acres

**Q= 1.92 cfs**

For Design Frequency of 25 years:

Q-CIA

C= 0.98

Tc= 5 min

I= 6 in/hr

A= 0.37 acres

**Q= 2.18 cfs**

**PRELIMINARY STORMWATER  
DRAINAGE, WATER AND SEWER  
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Appendix 4  
December 23, 2014

## **Appendix 4**

Hydrant Flow Tests Summary

**HYDRANT FLOW TEST SUMMARY SHEET**

The Cambridge Water Department assumes no responsibility for design calculations.

Flow Test Requester: Joey Fonseca, Stanlec

Company Name: Stanlec Consulting

Company Address: 226 Causeway St

City, State, Zip Code Boston, MA 02114

Pressure Hydrant Location Hubert Street ID # 3085

Flow Hydrant Location Port Street ID # 3103

The flow test requestor is liable for all damages to the fire hydrant, water distribution system and adjacent private property. (Cambridge Municipal Code 13.08.080)

Signature: \_\_\_\_\_ Date: Nov. 14, 2014

Water Main Size: 12

Pressure Hydrant                      Static Pressure: 63 PSI  
Residual Pressure: 61 PSI

Flow Hydrant                      Flow Rate: 1250 Pitot Pressure  
Flow Rate: 50 GPM

Time Flowed (minimum of 1 minute): 1 Minutes

Performed By: [Signature]

[Signature]

Amount Paid: 175.00

Check Number: 1795

# UTILITY NOTES

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# UTILITY LEGEND

- — — — — PROPERTY LINE
- — — — — LIMIT OF P.U.D.
- S — SEWER LINE
- SD — DRAIN LINE
- W — WATER LINE
- GAS — GAS LINE
- ▣ CATCHBASIN
- AREA DRAIN
- ⊙ DRAIN MANHOLE
- ⊙ DRAIN MANHOLE
- ⊙ SEWER MANHOLE
- ⊙ CAMBRIDGE GIS DRAIN MANHOLE LOCATION
- ⊙ CAMBRIDGE GIS SEWER MANHOLE LOCATION

# Perkins Eastman

50 FRANKLIN ST., SUITE 203 BOSTON, MA 02110  
T. 617.449.4000 www.perkinseastman.com

PROJECT TEAM:  
OWNER:

CONSTRUCTION MANAGER:

Civil / Site  
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226 Causeway Street, 6th Floor  
Boston, MA 02114  
607-523-8103  
Landscape  
**Wagner Hodgson**  
7 Marble Avenue Burlington, VT 05401  
802-864-0010

Structural  
**L.A. Fuess Partners**  
101 Federal Street Suite 502 Boston, MA 02110  
617-342-7424

MEP / Code  
**R.W. Sullivan**  
529 Main Street, Suite 203 Boston, MA 02129  
617-523-8227

Planning / Zoning  
**Boyes-Watson Architects**  
30 Bow Street Somerville, MA 02143  
617-629-8200

KEY PLAN:

SEAL:

PROJECT INFORMATION:

**121-139 FIRST STREET | FIRST STREET PUD**  
121-139 First Street Cambridge, MA 02141

CITY FILE #:  
PROJECT # 54861  
PROJECT ISSUE DATE: December 23, 2014  
PROJECT STATUS: Schematic Design

DRAWING INFORMATION:

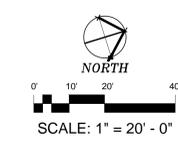
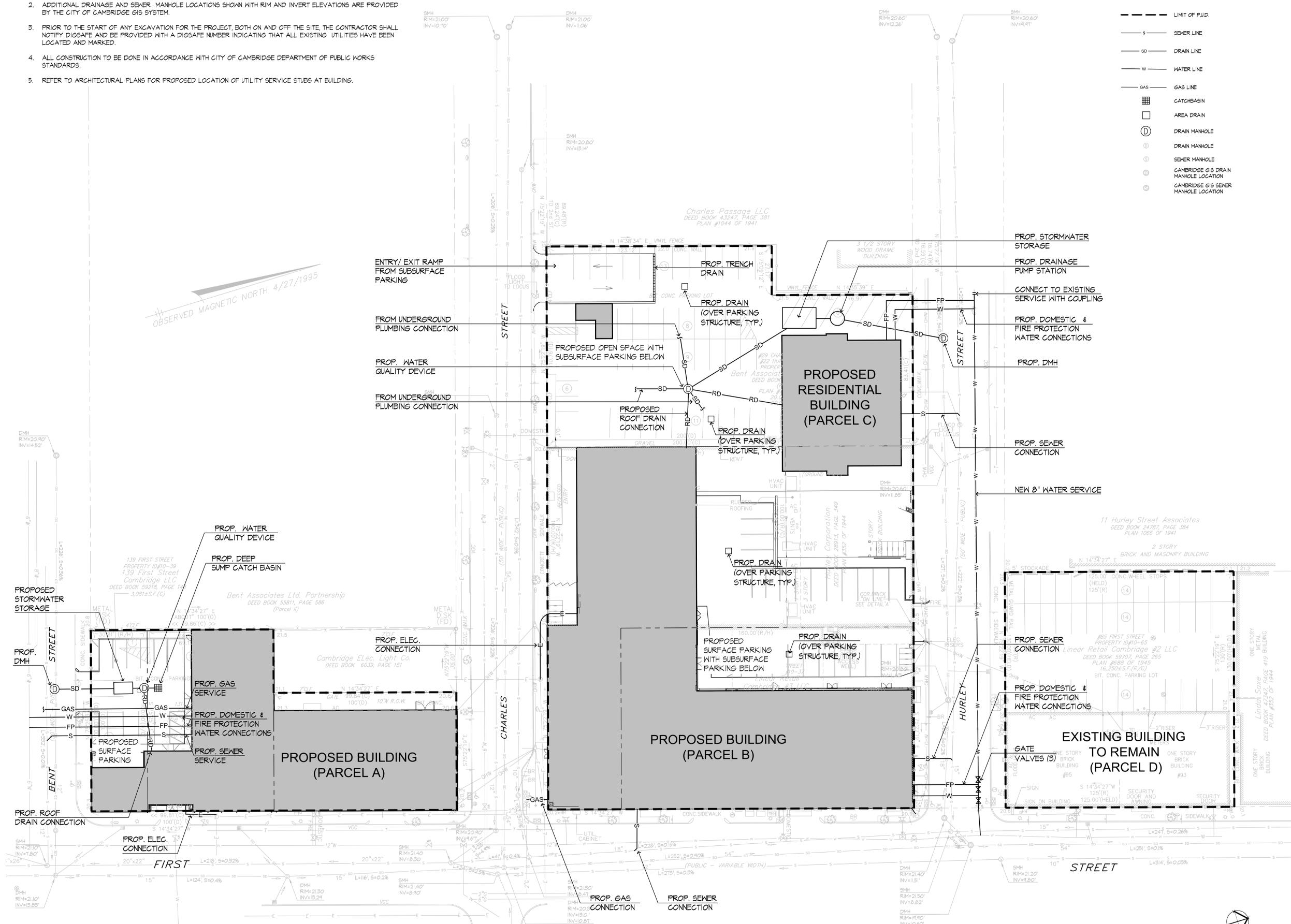
**Utility Site Plan**

DRAWING HISTORY:

NO.	DATE	DESCRIPTION
1	08/08/14	PUD Permit Submittal

SHEET #:

**C-1**



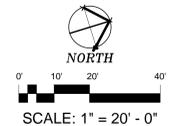
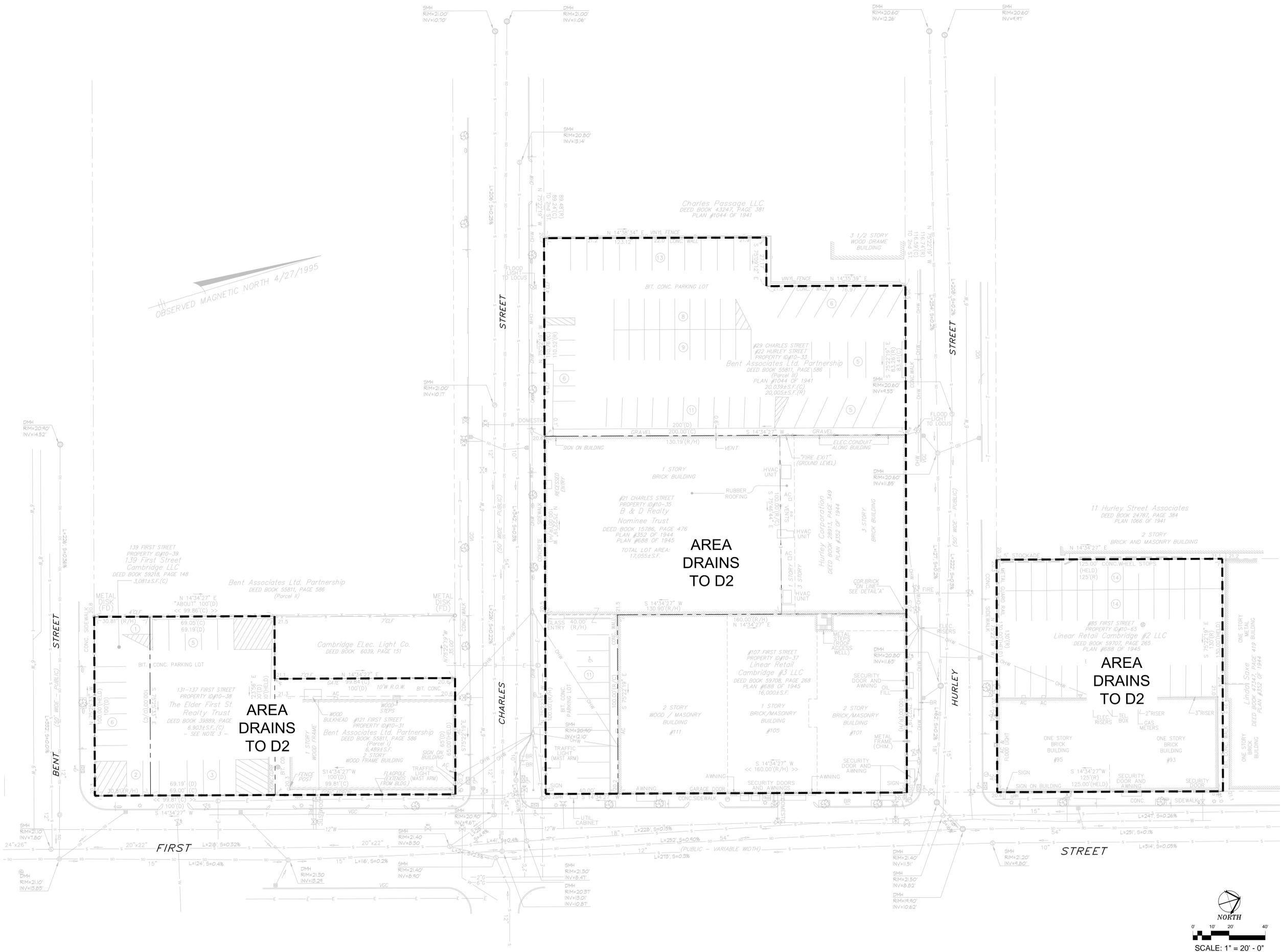
**121-139 FIRST STREET | FIRST STREET PUD**  
121-139 First Street Cambridge, MA 02141

CITY FILE #: 54861  
PROJECT # 08/08/14  
PROJECT ISSUE DATE: December 23, 2014  
PROJECT STATUS: Schematic Design

Pre-Development

Drainage Area Maps

NO.	DATE	DESCRIPTION
1	08/08/14	PUD Permit Submittal





APPENDIX C

NOISE MITIGATION NARRATIVE

January 23, 2015

First Street – US, LLC  
c/o Daniel Hart  
90 Hamilton Street  
Cambridge, MA 02139

Via email: [dhart@hartdev.com](mailto:dhart@hartdev.com)

Subject: Acoustics Recommendations – Revision 2  
101-137 First Street, Cambridge  
Noise Emissions Evaluation  
Acentech Project No. 625256

Dear Dan:

We are pleased to present our evaluation of noise emissions to the community from the proposed development at 101-137 First Street, based on the cutsheets and drawings that the design team sent to us.

Based on this information, we expect that the project will meet the noise regulation requirements at the critical receivers you noted, since the preliminary plan is to install a barrier around the large mechanical units on the office building, and as long as you install the noise control treatments that we suggest in our report for the equipment at 22 Hurley Street.

### ***Regulation***

The City of Cambridge Noise Control Ordinance is the applicable noise ordinance for this project. This ordinance has fixed sound level limits for daytime and nighttime hours for residential, commercial, and industrial-zoned areas. Based on the assumption that the mechanical equipment will run during nighttime hours (after 6pm), the combined sound level emissions from mechanical equipment should not exceed 50 dBA at the closest residential property lines to meet the ordinance.

### ***Results and Recommendations***

#### ***Office Building***

We studied the office building emissions to the community with the understanding that the most critical adjacencies are the multi-unit residential building behind the restaurant directly across Bent Street (A), as well as to the existing residential building across Charles Street (B), see below:

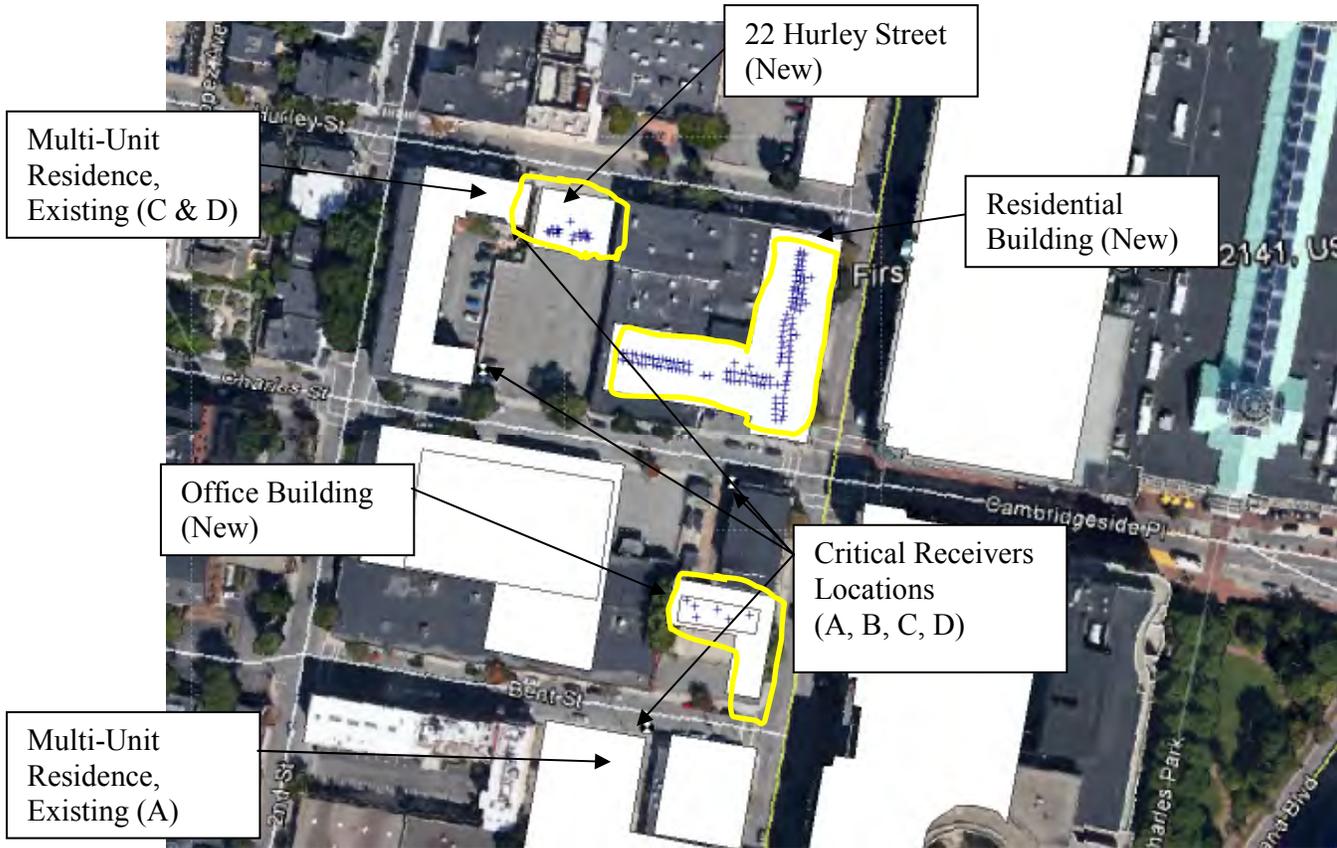


Image One – View of Site, acoustical model

#### Large Proposed Mechanical Equipment

You have two *Greenheck* energy recovery units, a *Trane* packaged rooftop unit, and a *Marley* cooling tower, which contribute the most noise to the critical receivers noted above.

To reduce the noise due to these units to be consistent with the noise regulation, we recommend a 4-sided rooftop barrier around the equipment. Choose a product similar to those manufactured by *IAC*, *Noise Barriers Inc*, *Koch & Sons*, and others, specified with a minimum sound isolation rating of STC 35, with a sound-absorbing face on the side facing the mechanical equipment achieving a minimum sound absorption, NRC of 0.70, and extend the barrier so it is as tall as the cooling tower, including all structural supports below the cooling tower.

#### Exhaust Fan

The *Greenheck* model *SWB* exhaust fan does not contribute significantly to the noise levels at the critical receivers, and is within the bounds of the barrier, and does not need any additional noise control.

#### Air-Cooled Condenser

The ACCU does not contribute significantly to the noise level at the critical receivers, and is within the bounds of the barrier, and does not need any additional noise control.

### *Residential Building*

We studied the new residential building noise emissions to the community with the understanding that the most critical adjacencies are behind the proposed residence to the existing high-rise residence (C), and the existing building next to the new office (B) (see Image One).

### Air-Cooled Condensers

The existing building nearest the office is only 20 feet tall (according to Google Earth), and does not have a line of site view to the group of condensers on the roof. There are many air-cooled condensers on the roof of the building, and even assuming no diversity of operation, and the use of 5-ton units, the noise level at the critical receivers meets the Cambridge noise ordinance.

### Exhaust Fans

The *Greenheck* model *CUE* exhaust fans, as well as the *Greenheck* garage fans, do not contribute significant noise to the critical receivers. These units do not need any additional noise control.

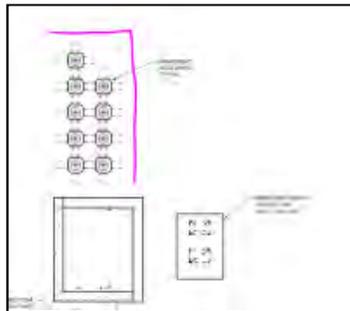
### *22 Hurley Street*

We studied the 22 Hurley Street building noise emissions to the community with the understanding that the most critical adjacencies are to the existing high-rise residence (C and D), (see Image One). We expect that the background sound level at the residence will be 55 dBA at nighttime due to mechanical noise emissions from 22 Hurley Street and recommend noise control for selected mechanical units.

### Energy Recovery Unit & Air-Cooled Condensers

The energy recovery unit and the sum of the air-cooled condensers are the most significant noise sources at 22 Hurley. We recommend that you add sound attenuators to the inlet and exhaust outlet of the energy recovery unit similar to a *Vibro Acoustics* model *RD-MV-(lowF number)* that is 36" long. Be sure that the total pressure drop including system effects does not exceed 0.3" w.g.

We recommend a barrier around the condenser batch nearest to the neighbor (west side), similar to the type noted for the office building, which is five feet above the height of the condensing units. This is at minimum a two-sided barrier, see below for a suggested layout.



*Image Two – Suggested condenser barrier layout*

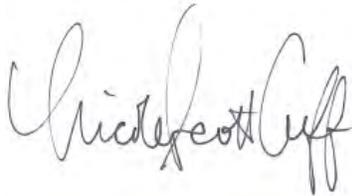
Exhaust Fan

The *Greenheck* model *CUE* exhaust fan, does not contribute significant noise to the critical receivers. This unit does not need any additional noise control.

\* \* \* \* \*

I trust this letter provides you with the information you need at this time. We understand that this project is in the early stages of design, and look forward to working with you as it is completed. Please call (617.499.8070) or e-mail me if you have questions or need additional information.

Sincerely,  
ACENTECH INCORPORATED



Nicole Scott Cuff  
*Consultant in Acoustics*



APPENDIX D

LEED NARRATIVE AND PROJECT CHECKLIST

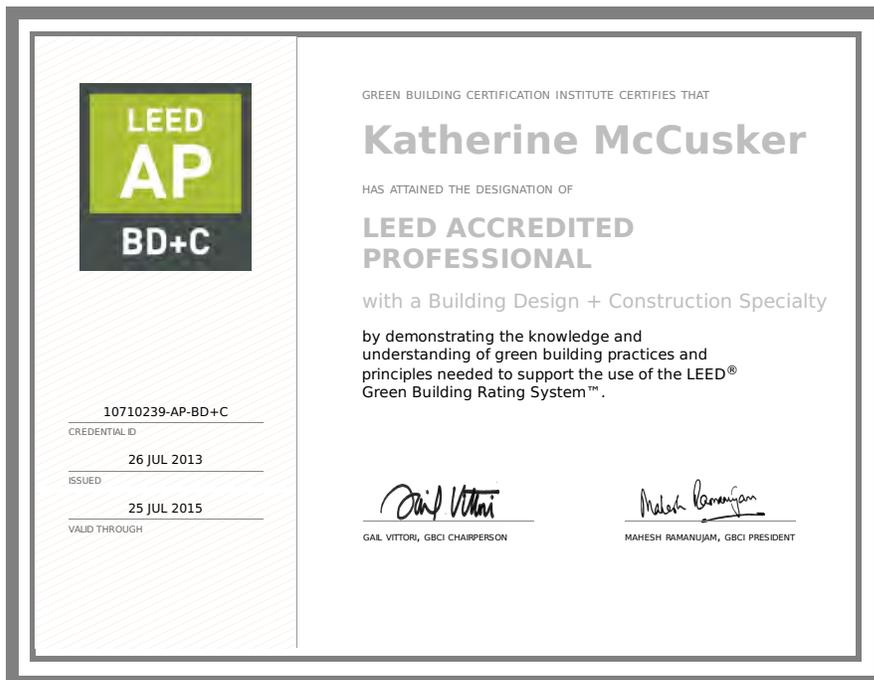
# 121 FIRST STREET LEED NARRATIVE

## I. PROJECT DESCRIPTION

121-139 First Street is expected to meet the City of Cambridge MA green building requirements by achieving a minimum of LEED Silver certification for Core & Shell 2009. The project is currently tracking 45 confirmed points and 33 possible points. LEED Silver requires a minimum of 50 points. The project is currently in the Schematic Design phase. We anticipate at least 5 of these possible 35 points to be achieved over the course of the design development with LEED establishing the goals of the final design. A final checklist and narrative and will be included in the Building Permit application to show how LEED Silver certifiability was achieved.

## II. AFFIDAVIT

I, Katherine McCusker, LEED Administrator and Sustainability Consultant do hereby affirm that I have thoroughly reviewed the supporting documents for LEED for Core & Shell 2009 and confirm that 121 First Street intends to meets the requirement for LEED Silver.



### **III. LEED 2009 for SCHOOLS NEW CONSTRUCTION AND MAJOR RENNOVATIONS CHECKLIST**

A. Please see attached LEED 2009 Core & Shell Checklist for 121 First Street.

B. The project is anticipated to meet the silver certification requirement of achieving 50 points.

Sustainable Sites [21 confirmed points ] [5 possible points]

Water Efficiency [4 confirmed points] [6 possible points]

Energy and Atmosphere [7 confirmed points] [12 possible points]

Materials and Resources [5 confirmed points] [2 possible points]

Indoor Environmental Quality [6 confirmed points] [4 possible points]

Innovation and Design Process [1 confirmed point] [1 possible point]

Regional Priority [1 confirmed point] [3 possible points]

---

**Total 45 confirmed points and 33 possible points.**

### **IV. NARRATIVE FOR LEED CREDITS**

121 First Street will fulfill all the prerequisites for all categories.

#### **A. SUSTAINABLE SITES**

SSp1: Construction Activity Pollution Prevention **[Required]**

a. 121 First Street design documents will include an erosion and sedimentation plan that conforms to the local codes and the EPA Construction General Permit of the National Pollution Discharge Elimination System Program NPDES.

b. A standard engineering practices for erosion and sedimentation control will be implemented on site during construction. A Stormwater Pollution Prevention Plan (SWPPP) is being prepared for the site per the requirements of the United States Environmental Protection Agency National Pollutant Discharge Elimination System Construction General Permit. The SWPPP is also being used to document compliance with the Leadership in Energy and Environmental Design Sustainable Sites Prerequisite for Erosion and Sedimentation Control.

**SSc1: Site Selection [1 point]**

121 First Street has not been developed on these site types:

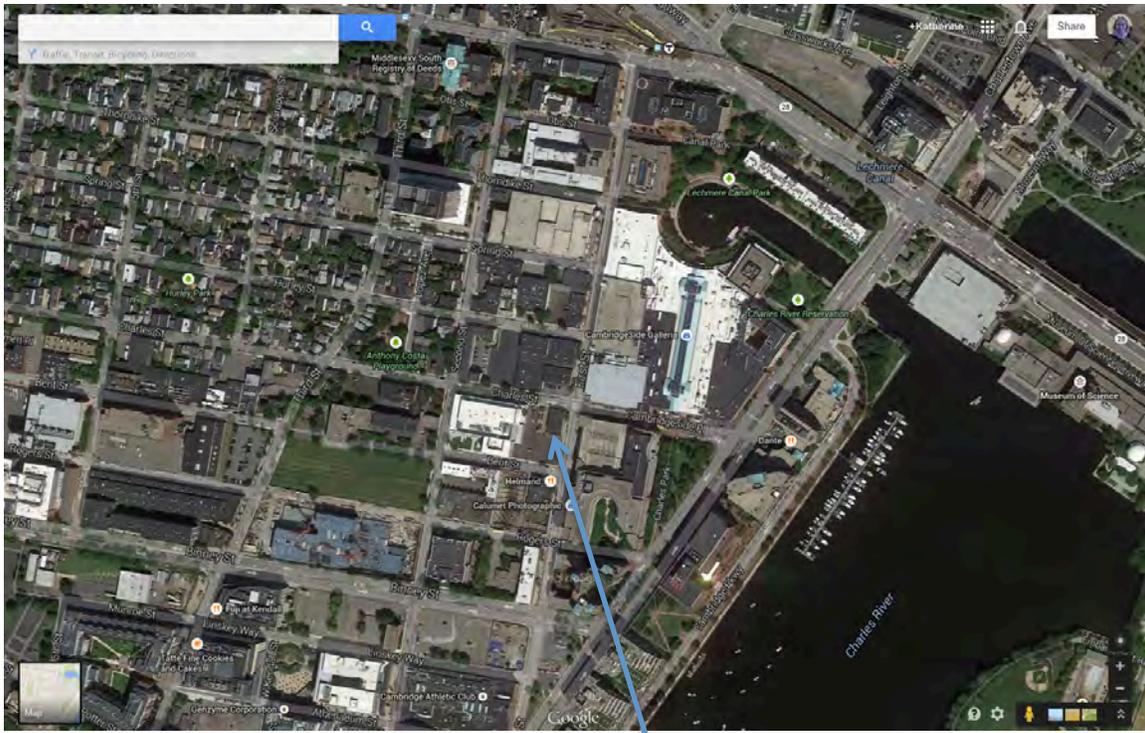
- a. Prime farmland as defined citation in 7CFR657.5.
- b. Previously undeveloped land whose elevation is lower than 5 feet above the elevation of the 100-year flood as defined by FEMA.
- c. Land that is specifically identified as habitat for any species on Federal or State threatened or endangered lists.
- d. Within 100 feet of any wetlands as US Code of Fed. Regulations and isolated wetlands or areas of special concern identified by state or local rule, OR within setback distances from wetlands prescribed in state or local regulations, as defined by local or state rule or law, whichever is more stringent.
- e. Previously undeveloped land that is within 50 feet of a water body that supports or could support fish, recreation or industrial use, consistent with the terminology of the Clean Water Act.
- f. Land which prior to acquisition for the project was public parkland, unless land of equal or greater value as parkland is accepted in trade by the public landowner.

**SSc2: Development Density and Community Connectivity [5 points]**

This project is pursuing Community Connectivity.

- a. The commercial building is located on a previously developed site.
- b. The commercial building is within 0.5 miles of a densely populated residential area.
- c. The commercial building is within 0.5 miles of at least 10 basic services. The services include cafes, groceries, parks, restaurants, banks, pharmacies and a museum. We will provide a complete list of all services with the building permit application.
- d. The commercial building has access between the building and the services.

A community site plan outlining services and walking paths will be included in the LEED Narrative submitted with the building permit application.



Screen Capture from Google Maps.

121 First Street

### SSc3: Brownfield Redevelopment [**1 possible point**]

It is possible that qualifying contaminants will need to be removed from the existing building and/or soils, which would qualify the site as a brownfield and the project as a brownfield redevelopment.

### SSc4.1: Alternative Transportation – public transportation access [**6 points**]

121 First Street achieves this credit by meeting the requirement for option 1, Rail Station Proximity. The site is located within 0.5 mile walking distance from the Green Line T.

### SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms [**2 points**]

This point requires bike storage for 3% of all building occupants and changing rooms with a shower for 0.5% of full time staff equivalents. LEED offers these guidelines for the occupancy of Core & Shell buildings:

250 gross square feet per employee in an office

550 gsf per employee in a retail space

130 gsf per transient in a retail space.

121 First Street has 45,749 gsf of office space and 9,800 gsf of retail space. This translates to 183 FTE in the office spaces as well as 18 FTE and 75 transients in the retail space. With a total of 276 occupants in this building (201 FTE and 75 transients) LEED requires 9 bike storage spaces and 2 changing rooms with a shower. The schematic design plans currently show 10 bike storage spaces. The detailed design plans will include a shower and changing room accessible to all building occupants.

#### SSc4.3: Alternative Transportation-Low-E and Fuel-Efficient Vehicles **[3 points]**

The project plans to achieve this credit by meeting the requirement for option 1. The commercial building will provide 1 parking space for low-emitting and fuel-efficient vehicles at the surface lot. This satisfies the requirement that 5% of the total (10) vehicle parking capacity be designed for high efficiency vehicles. 5% of spaces allocated to 12 First Street in the adjacent sub-surface parking lot will also be reserved for vehicles complying with LEED Low Emitting, Fuel Efficient requirements

#### SSc4.4: Alternative Transportation-Parking Capacity **[2 points]**

This project meets the requirements for case1 opt 1 in that the parking capacity does not exceed local zoning requirements.

#### SSC 6.1 Stormwater Design, Quantity Control **[1 possible point]**

The project's civil engineer will begin work during the detailed design phase of this project. The design team will work towards the goals for stormwater quantity and quality established by LEED.

#### SSc6.2 Stormwater Design, Quality Control **[1 possible point]**

The project's civil engineer will begin work during the detailed design phase of this project. The design team will work towards the goals for stormwater quantity and quality established by LEED.



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**SSc7.1 Heat Island Effect, Non-Roof [1 possible point] RP credit**

This point requires that at least 50% of the project hardscape is reflective, thus designed to reduce heat island effect. By using concrete for the parking lot surface instead of asphalt this credit will be earned.

**SSc7.2 Heat Island Effect, Roof [1 point] RP credit**

This credit will be earned because the roof is comprised of qualifying materials such as a white membrane, a vegetated roof, and pavers with a high solar reflectance index score (minimum of 78).

**SSc8 Light Pollution Reduction [1 possible point]**

The project's lighting designer will begin work during the detailed design phase of this project. The design team will work towards the goals for light pollution reduction established by LEED.

**SSc9 Tenant Design and Construction Guidelines [1 point]**

The owner will write and submit tenant guidelines for the retail and office fit-outs that outline a clear path for compliance with the LEED credits earned by the base building. The project will include these guidelines in the LEED Narrative submitted with the building permit application.

**B. WATER EFFICIENCY**

**WEp1: Water Use Reduction [Required]**

This building will employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation). High efficiency toilets, high efficiency urinals, and flow flow lavatory and shower fixtures will be specified.

**WEc1: Water Efficient Landscaping [2 points, 2 possible points]**

An irrigation system is being designed for the green roof that will reduce the use of potable water (compared to a baseline) by at least 50%. This will earn two points. The team will also explore the option of xeriscaping, which requires no irrigation. If

xeriscaping becomes the final landscape plan the project will earn two more points under this credit.

**WEc1: Innovative Wastewater Technologies [2 possible points]**

A rain water storage tank is planned for this building. During the detailed design phase the design team and civil engineer will determine if the water from this storage tank can be used for irrigation or toilet flushes.

**WEc3: Water Use Reduction [2 points, 2 possible points]**

The project will water use reduction by using high efficient plumbing fixtures, minimum 30% savings. Final fixture selection and corresponding calculations are not complete, therefore we cannot state with certainty that the project will achieve more than a 30% water use reduction. Whether or not an additional 5% or 10% water use reduction can be achieved will be determined in the next design phase.

**C. ENERGY & ATMOSPHERE**

**EAP1: Fundamental Commissioning of Building Energy Systems [Required]**

The project team is hiring a commissioning agent to review and oversee the commissioning process activities including heating, ventilating, air conditioning and refrigeration systems and associated controls, lighting and daylighting controls, and domestic hot water systems.

**EAP2: Minimum Energy Performance [Required]**

The project will have an energy modeler evaluate the energy performance of the base building. The design team is committed to providing 20% energy reduction based on the required Stretch Energy Code, which exceeds the LEED prerequisite savings threshold.

**EAp3: Fundamental Refrigerant Management [Required]**

The building does not use any chlorofluorocarbon based refrigerants.



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**EAc1: Optimize Energy Performance [7 points, 3 possible points]**

The project will have an energy modeler evaluate the energy performance of the base building. The current prediction for energy reduction is 20% based on the required Stretch Energy Code. The design team and energy modeler will work together in the next phase of work to determine if further savings can be achieved.

**EAc3: Enhanced Commissioning [2 possible points]**

The commissioning agent hired for the building's fundamental Cx talks would need to add to their scope of work to include a review of the construction documents, review contractor submittals, write an operations manual, verify a training program and review the building's operations within 10 months of occupancy. The decision about whether to pursue this credit will be made in a subsequent design phase.

**EAc4: Enhanced Refrigerant Management [2 possible points]**

Once heating and cooling systems are fully designed, factoring in enclosure performance, the team will evaluate whether the intent of this credit has been met.

**EAc5.2: Measurement and Verification – Tenant Submetering [3 possible points]**

To achieve this credit the tenant spaces must be submetered or independently metered by the electric utility. Again, the decision to pursue this credit will be based on the final system design.

**EAc6: Green Power [2 possible points]**

Once the energy model for this building is complete we will have the energy budget for the base building. We will then determine whether to pursue this credit and purchase green power for 35% of the base building's needs for 2 years.

**D. MATERIAL & RESOURCES**

**MRp1: Storage and Collection of Recyclables [Required]**

The building will have a dedicated area for the storage and collection of trash and recyclables that is at least 450 sf. This area will be shown on project plans as part of the

Building Permit application.

**MRc2: Construction Waste Management [2 point, 1 possible EP credit]**

The project will have a construction waste management plan that targets to divert at least 75% of the construction waste from landfill. The stretch goal will be to divert 95% for an additional exemplary performance point.

**MRc4: Recycled Content [2 points]**

Steel and concrete are part of this project's material pallet, making the goal of using recycled materials for at least 20% of the total value of the materials in the project feasible.

**MRc5: Regional Materials [1 point, 1 possible point]**

The project documents will specify use of building materials and products that have been extracted manufactured regionally, from raw materials procured within the 500 mile radius required. The final percentage of the value of these materials will be between 10-20%.

**MRc6: Certified Wood [1 possible point]**

The project may be able to achieve the goal of sourcing more than half of all new wood-based materials (on a cost basis) from FSC certified sources.

**E. INDOOR ENVIRONMENTAL QUALITY**

**IEQp1: Minimum IAQ Performance [Required]**

The project will be designed to meet the minimum requirements of ASHRAE 62-2007 Table 6-1, the "Minimum Ventilation Rates in Breathing Zone".

**IEQp2: Environmental Tobacco Smoke (ETS) control [Required]**

The project achieves this credit by meeting the requirement for option 1. Smoking is prohibited inside the building and within 25 ft of entries and air intake areas.

**IEQc1: Outdoor Air Delivery Monitoring [1 possible point]**



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The project would need to install a permanent system for CO2 monitoring and outdoor air measurement within densely occupied spaces. Final determination will be made once mventilation system design is complete.

**IEQc2: Increased Ventilation [1 possible point]**

The decision about whether to pursue this point will be made once the energy model is created. Increased mechanical ventilation is a benefit to building occupants but comes with an energy penalty.

**IEQc 3.1: Construction IAQ Management Plan – during construction [1 point]**

A management plan for the construction and preoccupancy phases of the building will be written and implemented to meet all the requirements of SMACNA IAQ Guidelines, protect materials from moisture damage and use filters with MERV 8 at each air return grill.

**IEQc 4.1 – 4.4: Low-emitting Materials [4 points]**

The project will achieve all of credit 4 – adhesives and sealants, paints and coatings, flooring systems, composite wood and agrifiber products, and furniture and furnishings.

**IEQc8.1 Daylight and Views – Daylight [1 possible point]**

The building design allows for a connection between indoor and outdoor spaces. The methodology for the evaluation of daylight within the building will be determined in the next phase of work.

**IEQc8.1 Daylight and Views –Views [1 possible point]**

This credit requires that the core and shell design incorporate a feasible tenant layout(s) per the default occupancy counts that can be used in the analysis of this credit. The design team will review whether this is a credit they wish to pursue in the next phase of work.

## **F. INNOVATION IN DESIGN**



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**IDc1.1 Construction Waste Management [1 possible point]**

If the project achieves a 95% construction waste diversion rate this point will be achieved.

**IDc1.2 LEED Accredited Professional [1 point]**

The project team includes a LEED AP.

**G. REGIONAL PRIORITY**

**RPc1.1 Brownfield Redevelopment [1 possible point]**

If the project achieves SSc3 it will achieve a regional priority credit.

**RPc1.2 Stormwater Quantity [1 possible point]**

If the project achieves SSc6.1 it will achieve a regional priority credit.

**RPc1.3 Heat Island Effect: Non-Roof [1 point]**

Once the project achieves SSc7.1 it will achieve a regional priority credit.

**RPc1.4 Heat Island Effect: Roof [1 point]**

Earning SSc7.2 will grant this project a regional priority credit.



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 www.csgrp.com

December 16, 2014

City of Cambridge,

Conservation Services Group (CSG) conducted a LEED for Homes preliminary meeting with the project team of the 22 Hurley Street development to create a LEED for Homes checklist. The checklist reflects the 18 unit four story building to be built within the First Street development.

CSG was able to assess that at this point with the intent and decisions made thus far that all the applicable prerequisite items in LEED for Homes are being met. Sufficient optional credits are allowing the project to achieve the LEED Silver threshold. The prerequisite and credit specific information with design choices as they stand now can be seen in Section 1. The full LEED for Homes checklist is shown in Section 2. The LEED for Homes Affidavit is in Section 3.

1. The 16 unit building will comply with the LEED for Homes checklist. The project is currently tracking 61 points and will meet the LEED Silver Certification.

Innovation & Design Process (ID)	[6 points]	
Location & Linkages (LL)	[8 points]	
Sustainable Sites (SS)	[9.5 points]	[2 possible points]
Water Efficiency (WE)	[5 points]	
Energy & Atmosphere (EA)	[17 points]	
Materials & Resources (MR)	[7.5 points]	
Indoor Environmental Quality (EQ)	[7 points]	[2 possible points]
Awareness & Education (AE)	[1 points]	[1 possible points]
<hr/>		
Total Points	[61 points]	[5 possible points]

CSG is one of the 38 Provider organizations of the United States Green Building Council's LEED for Homes program and has served in this capacity since the program's first pilot in late 2005.

Sincerely,

**Mike Schofield** | Senior Project Manager | Consulting and Construction Services  
 Conservation Services Group | 50 Washington Street, Suite 3000 | Westborough, MA 01581 | Fax:  
 508.366.2214 | Cell: 508.365.3204 | LEED AP Homes #10645372 | [mike.schofield@csgrp.com](mailto:mike.schofield@csgrp.com)



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**Section 1: LEED for Homes Checklist 22 Hurley Site Specific Descriptions**

## Conservation Services Group LEED for Homes Checklist Guidance for 22 Hurley St.

Following are LEED for Homes requirements and measures that the 22 Hurley St. project in Cambridge, MA is pursuing as best CSG understands them. If the project scope or design changes occur after our preliminary meeting with the project CSG cannot be held accountable for meeting or not meeting the prerequisite and credit requirements. This is not a complete list of possible credits. Refer to the LEED for Homes Rating System or LEED for Homes Reference Manual for final determinations.

**Average Home Size Adjustment**

### LEED for Homes Multi-family Home Size Adjuster Calculator

This approach can be used to determine an overall home size adjuster for multi-family buildings, but it cannot be used to determine an overall home size adjuster for a complex with multiple multi-family buildings. If a project includes multiple multi-family buildings, each building must have its own home size adjustment. This weighted approach cannot be used for multiple single-family homes.

Please input the floor area for each type of space within the building below. Input the # of units in each building, and the average square footage for units with the corresponding bedroom number. For example, if the building has three 2-bedroom units that are 1300, 1400, and 1500 square feet, insert "3" in cell G24 and "1400" in cell H24. Please leave zeros or blanks where appropriate.

Types of Spaces	Floor area, total square feet
Conditioned	
Unconditioned	
Total	

Areas of the Building	Floor area, total square feet
In-unit	
Common areas, residential	
Non-residential	

	0-Bedroom		1-Bedroom		2-Bedroom		3-Bedroom		4-Bedroom		5-Bedroom		6-Bedroom		Total Units
	# of units	Avg. ft <sup>2</sup>													
LEED Building	2	413	5	760	11	1000									18

	Unit Adjustment						
LEED Building	-10.0	-4.4	-8.7				

Overall average adjustment:	-7.5
-----------------------------	------

Average # of bedrooms per unit:	1.5
---------------------------------	-----

Average square footage per unit:	868.1
----------------------------------	-------

This equates to -7.5 point swing meaning to achieve Silver the project must secure 51.5 points in addition to the other requirements.

ID 1.1 Preliminary Rating: **(Prerequisite)**

- CSG led the project through the LEED for Homes process and determined which credits were reasonable to be pursued at that point in design.
- Silver was determined to be a very reasonable goal.

ID 1.2 Integrated Project Team: **(1 point)**

- This point was determined to be reasonable to achieve as the scale of this project will require the minimum of three expertise's be attending meetings regularly. Copies of meeting minutes, agenda, and list of attendees will be collected.

ID 2.1 Durability planning: **(Prerequisite)**

- The durability evaluation form and durability inspection checklist will be created as design elements are finalized. This is a customized checklist for the project that is required prior to the beginning of construction.

ID 2.2 Durability Management: **(Prerequisite)**

- The builder will use the durability inspection checklist throughout the construction as both an inspection tool and a project meeting item to be reviewed weekly, to ensure those measures are included in the project.

ID 2.3 Third-Party Durability Management Verification: **(3 points)**

- Conservation Services Group will serve as the Green Rater to inspect and verify each measure listed in the Durability Inspection Checklist.

ID 3.1 Innovation 1: **(1 point)**

- SS 07-02 Exemplary Performance: proximity to transit. This is awarded to projects that have over 250 rides per day within ½ mile.

ID 3.2 Innovation 2: **(1 point)**

- SS 06-01 Exemplary Performance: compact development. This is awarded to projects that exceed 40 dwelling units per acre.

LL 3.2 Infill: **(2 points)**

- The project is bordered on by public roads, Charles Street, Second Street and Hurley Street. 75% or more of the perimeter borders previously developed land.

LL 3.3 Previously Developed: **(1 point)**

- The site was built on a previously developed lot.

LL 4 Existing Infrastructure: **(1 point)**

- The lot is within ½ mile of existing water and sewer service lines.

**LL 5.3 Outstanding Community Resources: (3 points)**

- Proximity to Lechmere Station and Kendal Square station offers train and bus rides providing ample transportation to meet the three points for this item as well as the Exemplary Performance point.

**LL 6 Access to Open Space: (1 point)**

- The Charles Park, Anthony Costa Playground, Lechmere Canal Park and Hurley Park are greater than  $\frac{3}{4}$  acre and located within  $\frac{1}{2}$  mile of the project site. Site plan and context map will be provided.

**SS 1.1 Erosion Controls during Construction: (Prerequisite)**

- Project team will develop erosion control plan prior to start of construction

**SS 1.2 Minimize Disturbed Area of Site: (1 point)**

- Calculations of density allow for D to be met, 18 units, within .2 acres is 112.9 units per acre, surpassing the requirement of 40 units per acre.

**SS 2.1 No invasive plants: (Prerequisite)**

- The landscape architect will provide list of plants to be installed and will cross reference a list of invasive plants for the area to ensure no invasive plants are used.  
(<http://www.newfs.org/docs/docs/MIPAG040105.pdf>)

**SS 3 Reduce Roof Heat Island Effects for MID-RISE (1 point)**

- The roof will use high albedo materials on 75% of roof area.

**SS 4.3 Management of Runoff from Roof: (2 points)**

- The lot will be designed by Civil and Landscape professionals to manage runoff from home on-site

**SS 5 Nontoxic Pest Control: (2 points)**

- All exterior wood will be kept 12" or more above the soil, external cracks, joints, etc. will be sealed with caulking and permanent pest-proof screens will be installed. No wood-to-concrete connections.

**SS 6.1 – 6.3 Compact Development: (4 points)**

- 18 Units on 0.2 acres of lot calculates to 112.9 units per acre. This meets the Very High Density requirement of 40 or greater units per acre.

**WE 3.1-3.2 High-Efficiency Fixtures and Fittings (2 points)**

- Shower heads with 2.00 or less GPM, lavatory faucets will use 2.0 or less GPM are planned.

EA 1.1 Optimize Energy Performance: **(Prerequisite)**

- The Energy Star 2.0 requirements will be met. Stretch Code and Energy Star 2.0 requirements align very closely.

EA 1.2 Exceptional Energy Performance **(13 points)**

- The current projection is to achieve a worst case HERS rating of 70 or less which equates to 13 points.

EA 7.1 Efficient Hot Water Distribution System: **(2 points)**

- Compact design of the conventional system will be met and branch lines from the central header to each fixture will be a maximum of ½-inch nominal diameter.

EA 11.1 – Refrigerant Charge Test: **(Prerequisite)**

- All refrigerant lines for air conditioning will be charge tested per manufacturer's standards.

EA 11.2 Appropriate HVAC Refrigerants: **(1 point)**

- R410A refrigerant is anticipated to be used.

MR 1.1 Framing Order Waste Factor: **(Prerequisite)**

- A calculation of the wood necessary to frame the building and orders of the amount of wood purchased will be made. Order must not exceed calculation by more than 10%.

MR 1.5 Off-site Fabrication: **(1 point)**

- The project will use panelized construction.

MR 2.1 FSC Certified Tropical Woods: **(Prerequisite)**

- Suppliers will be sent a notice of preference for FSC products and a request for the country of manufacture for each wood product.

MR 2.2 Environmentally Preferable Products ( **½ point each**)

- The project will use low VOC adhesives and sealants
- The project will use low VOC interior paints
- The project will use local aggregate in all concrete

MR 3.1 Construction Waste Management Planning: **(Prerequisite)**

- The project will investigate any recycling opportunities in the area
- Document the waste diverted from the landfill

MR 3.2 Construction Waste Reduction: **(1.5 points)**

- With stringent recycling protocols, the project will limit the total amounts of waste that will go to the land fill and that were diverted to 50% of the construction waste stream

EQ 2.1 Basic Combustion Venting Measures: **(Prerequisite)**

- The requirements are included in the design as requirements for basic code compliance in our area.

EQ 2.2 Enhanced Combustion Venting Measures: **(Prerequisite)**

- No unvented combustion appliances, carbon monoxide monitors on each floor of each unit, no fireplaces in any of the units and space, water heating equipment designed with closed combustion.

EQ 4.3 Third Party Performance Testing for MID-RISE: **(1 point)**

- The ventilation system in each unit will be tested by Conservation Services Group to document the performance as meeting the ASHRAEA 62.2 -2007 standard.

EQ 5.1 Basic Local Exhaust for MID-RISE: **(Prerequisite)**

- Bath fans will be rated for 80 CFM and kitchen area exhaust fans for greater than 100 CFM to outdoors.

EQ 5.2 Enhanced Local Exhaust: **(1 point)**

- The exhaust fans will run continuously.

EQ 5.3 Third Party Performance Testing: **(1 point)**

- The exhaust fans in each unit will be tested by a third party to document the performance as meeting the ASHRAEA 62.2 air flow requirement

EQ 6.1 Room by Room Load Calculations: **(Prerequisite)**

- Room by room load calculations will be provided by the HVAC engineer or responsible party stating the calculations were performed according to ACCA Manual J and D

EQ 7.1 – 7.3 Air Filtering: **(Prerequisite)**

- MERV 8 level filters will be used to meet the Good Filter requirement.

EQ 8.1 Indoor Contaminant Control During Construction: **(1 point)**

- Ductwork (including exhaust) will be sealed throughout construction so that debris doesn't contaminate.

EQ 9.1 Radon-Resistant Construction in High Risk Areas: (Zone 1) **(Prerequisite)**

- The project is located in EPA Zone 1. Radon resistant construction techniques are planned.

EQ 10.1 No HVAC in Garage: **(Prerequisite)**

- There will be no HVAC equipment located in the garage.

EQ 10.4 Detached Garage or No Garage: **(3 points)**

- The project will not have garages

AE 1.1 Education of the Homeowner: **(Prerequisite)**

- A home owner's manual will be created and provided to all occupants.
- A one hour walk through will be conducted with the occupants in group trainings.

AE 2 Education of the Building Manager **(1 point)**

- An operations and training manual will be created and provided to building manager.
- A one hour walk through will be conducted with the building manager.

Section 2: LEED for Homes Checklist



for Homes

LEED for Homes Simplified Project Checklist

Builder Name:	Urban Spaces
Project Team Leader (if different):	
Home Address (Street/City/State):	22 Hurley Street, Cambridge, MA

Project Description:

Building type: **Multi-family**  
 # of units: **18**

Project type: **Multi-family De**  
 Avg. Home Size Adjustment: **-7.5**

Adjusted Certification Thresholds

Certified: **37.5** Gold: **67.5**  
 Silver: **52.5** Platinum: **82.5**

<b>Project Point Total</b>		<b>Final Credit Category Total Points</b>			
Prelim: 67 + 3 maybe pts	Final: 17	ID: 0	SS: 4	EA: 13	EQ: 0
<b>Certification Level</b>		LL: 0	WE: 0	MR: 0	AE: 0
Prelim: Silver	Final: Not Certified	Minimum Point Thresholds Not Met for Final Rating			

date last updated :  
 last updated by :

		Max Points	Project Points		
			Preliminary	No	Final
<b>Innovation and Design Process (ID)</b> (No Minimum Points Required)		Max	Y/Pts	Maybe	No
1. Integrated Project Planning	1.1 Preliminary Rating	Prereq	Y		
	1.2 Integrated Project Team	1	1	0	0
	1.3 Professional Credentialed with Respect to LEED for Homes	1	0	0	0
	1.4 Design Charrette	1	0	0	0
	1.5 Building Orientation for Solar Design	1	0	0	0
2. Durability Management Process	2.1 Durability Planning	Prereq	Y		
	2.2 Durability Management	Prereq	Y		
	2.3 Third-Party Durability Management Verification	3	3	0	0
3. Innovative or Regional Design	3.1 Innovation #1	1	1	0	0
	3.2 Innovation #2	1	1	0	0
	3.3 Innovation #3	1	0	0	0
	3.4 Innovation #4	1	0	0	0
<i>Sub-Total for ID Category:</i>		<b>11</b>	<b>6</b>	<b>0</b>	<b>0</b>
<b>Location and Linkages (LL)</b> (No Minimum Points Required)		OR	Max	Y/Pts	Maybe
1. LEED ND	1 LEED for Neighborhood Development	LL 2-6	10	0	0
2. Site Selection	2 Site Selection		2	0	0
3. Preferred Locations	3.1 Edge Development	LL 3.2	1	0	0
	3.2 Infill		2	2	0
	3.3 Previously Developed		1	1	0
4. Infrastructure	4 Existing Infrastructure		1	1	0
5. Community Resources/ Transit	5.1 Basic Community Resources / Transit	LL 5.2, 5.3	1	0	0
	5.2 Extensive Community Resources / Transit	LL 5.3	2	0	0
	5.3 Outstanding Community Resources / Transit		3	3	0
6. Access to Open Space	6 Access to Open Space		1	1	0
<i>Sub-Total for LL Category:</i>		<b>10</b>	<b>8</b>	<b>0</b>	<b>0</b>
<b>Sustainable Sites (SS)</b> (Minimum of 5 SS Points Required)		OR	Max	Y/Pts	Maybe
1. Site Stewardship	1.1 Erosion Controls During Construction	Prereq	1	1	0
	1.2 Minimize Disturbed Area of Site				
2. Landscaping	2.1 No Invasive Plants	Prereq	Y		
	2.2 Basic Landscape Design	SS 2.5	2	0	2
	2.3 Limit Conventional Turf	SS 2.5	3	0	0
	2.4 Drought Tolerant Plants	SS 2.5	2	0	0
	2.5 Reduce Overall Irrigation Demand by at Least 20%		6	0	0
3. Local Heat Island Effects	3 Reduce Local Heat Island Effects		1	1	0
4. Surface Water Management	4.1 Permeable Lot		4	0	0
	4.2 Permanent Erosion Controls		1	0	0
	4.3 Management of Run-off from Roof		2	2	0
5. Nontoxic Pest Control	5 Pest Control Alternatives		2	1.5	0
6. Compact Development	6.1 Moderate Density	SS 6.2, 6.3	2	0	0
	6.2 High Density	SS 6.3	3	0	0
	6.3 Very High Density		4	4	0
<i>Sub-Total for SS Category:</i>		<b>22</b>	<b>9.5</b>	<b>2</b>	<b>4</b>

### LEED for Homes Simplified Project Checklist (continued)

				Max Points	Project Points			
				Max	Y/Pts	Maybe	No	Y/Pts
				Max	Y/Pts	Maybe	No	Y/Pts
<b>Water Efficiency (WE)</b> (Minimum of 3 WE Points Required) <span style="float: right;">OR</span>								
1. Water Reuse	1.1	Rainwater Harvesting System	WE 1.3	4	0	0	0	0
	1.2	Graywater Reuse System	WE 1.3	1	0	0	0	0
	1.3	Use of Municipal Recycled Water System		3	0	0	0	0
2. Irrigation System	2.1	High Efficiency Irrigation System	WE 2.3	3	0	0	0	0
	2.2	Third Party Inspection	WE 2.3	1	0	0	0	0
	2.3	Reduce Overall Irrigation Demand by at Least 45%		4	0	0	0	0
3. Indoor Water Use	3.1	High-Efficiency Fixtures and Fittings		3	1	0	0	0
	3.2	Very High Efficiency Fixtures and Fittings		6	4	0	0	0
<i>Sub-Total for WE Category:</i>				<b>15</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Energy and Atmosphere (EA)</b> (Minimum of 0 EA Points Required) <span style="float: right;">OR</span>								
1. Optimize Energy Performance	1.1	Performance of ENERGY STAR for Homes		Prereq	Y			
	1.2	Exceptional Energy Performance		34	13	0	0	13
7. Water Heating	7.1	Efficient Hot Water Distribution		2	2	0	0	0
	7.2	Pipe Insulation		1	1	0	0	0
11. Residential Refrigerant Management	11.1	Refrigerant Charge Test		Prereq	Y			
	11.2	Appropriate HVAC Refrigerants		1	1	0	0	0
<i>Sub-Total for EA Category:</i>				<b>38</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>13</b>
<b>Materials and Resources (MR)</b> (Minimum of 2 MR Points Required) <span style="float: right;">OR</span>								
1. Material-Efficient Framing	1.1	Framing Order Waste Factor Limit		Prereq	Y			
	1.2	Detailed Framing Documents	MR 1.5	1	0	0	0	0
	1.3	Detailed Cut List and Lumber Order	MR 1.5	1	0	0	0	0
	1.4	Framing Efficiencies	MR 1.5	3	0	0	0	0
	1.5	Off-site Fabrication		4	4	0	0	0
2. Environmentally Preferable Products	2.1	FSC Certified Tropical Wood		Prereq	Y			
	2.2	Environmentally Preferable Products		8	2	0	0	0
3. Waste Management	3.1	Construction Waste Management Planning		Prereq	Y			
	3.2	Construction Waste Reduction		3	1.5	0	0	0
<i>Sub-Total for MR Category:</i>				<b>16</b>	<b>7.5</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Indoor Environmental Quality (EQ)</b> (Minimum of 6 EQ Points Required) <span style="float: right;">OR</span>								
1. ENERGY STAR with IAP	1	ENERGY STAR with Indoor Air Package		13	0	0	0	0
2. Combustion Venting	2.1	Basic Combustion Venting Measures	EQ 1	Prereq	Y			
	2.2	Enhanced Combustion Venting Measures	EQ 1	2	0	0	0	0
3. Moisture Control	3	Moisture Load Control	EQ 1	1	0	0	0	0
4. Outdoor Air Ventilation	4.1	Basic Outdoor Air Ventilation	EQ 1	Prereq	Y			
	4.2	Enhanced Outdoor Air Ventilation		2	0	0	0	0
	4.3	Third-Party Performance Testing	EQ 1	1	1	0	0	0
5. Local Exhaust	5.1	Basic Local Exhaust	EQ 1	Prereq	Y			
	5.2	Enhanced Local Exhaust		1	1	0	0	0
	5.3	Third-Party Performance Testing		1	1	0	0	0
6. Distribution of Space Heating and Cooling	6.1	Room-by-Room Load Calculations	EQ 1	Prereq	Y			
	6.2	Return Air Flow / Room by Room Controls	EQ 1	1	0	0	0	0
	6.3	Third-Party Performance Test / Multiple Zones	EQ 1	2	0	0	0	0
7. Air Filtering	7.1	Good Filters	EQ 1	Prereq	Y			
	7.2	Better Filters	EQ 7.3	1	0	0	0	0
	7.3	Best Filters		2	0	0	0	0
8. Contaminant Control	8.1	Indoor Contaminant Control during Construction	EQ 1	1	1	0	0	0
	8.2	Indoor Contaminant Control		2	0	2	0	0
	8.3	Preoccupancy Flush	EQ 1	1	0	0	0	0
9. Radon Protection	9.1	Radon-Resistant Construction in High-Risk Areas	EQ 1	Prereq	Y			
	9.2	Radon-Resistant Construction in Moderate-Risk Areas	EQ 1	1	0	0	0	0
10. Garage Pollutant Protection	10.1	No HVAC in Garage	EQ 1	Prereq	Y			
	10.2	Minimize Pollutants from Garage	EQ 1, 10.4	2	0	0	0	0
	10.3	Exhaust Fan in Garage	EQ 1, 10.4	1	0	0	0	0
	10.4	Detached Garage or No Garage	EQ 1	3	3	0	0	0
<i>Sub-Total for EQ Category:</i>				<b>21</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>Awareness and Education (AE)</b> (Minimum of 0 AE Points Required) <span style="float: right;">OR</span>								
1. Education of the Homeowner or Tenant	1.1	Basic Operations Training		Prereq	Y			
	1.2	Enhanced Training		1	0	0	0	0
	1.3	Public Awareness		1	0	1	0	0
2. Education of Building Manager	2	Education of Building Manager		1	1	0	0	0
<i>Sub-Total for AE Category:</i>				<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>

**Section 3: The LEED for Homes Affidavit**

**Project Site: 22 Hurley St, Cambridge, MA**

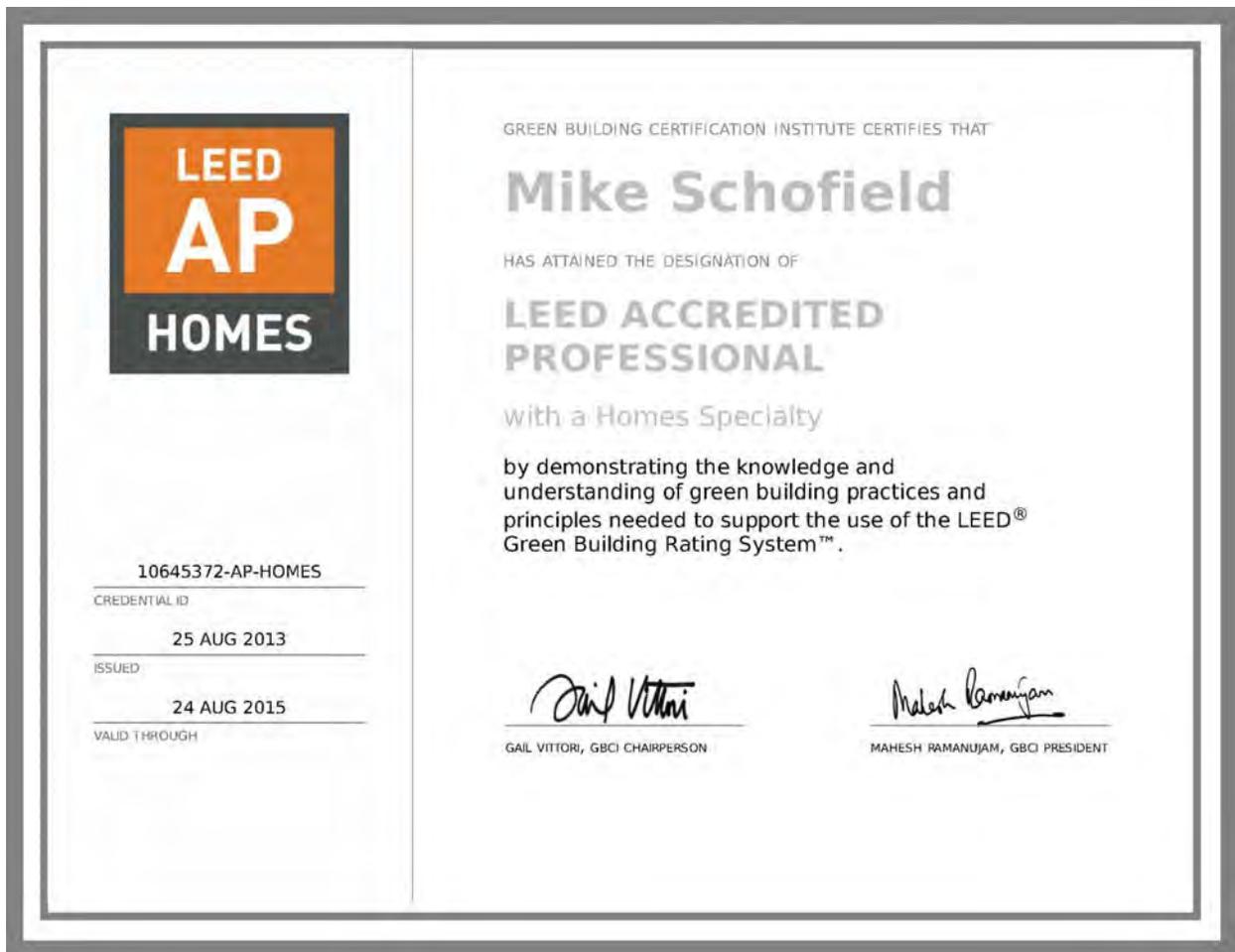
In accordance with Section 22 of the City of Cambridge Zoning Ordinance, I, Michael Schofield, LEED AP and LEED Green Rater hereby certify that to the best of my knowledge the 22 Hurley St, Cambridge, MA project has been designed to meet the green building requirements at Article 22.20 of the Cambridge Zoning Ordinance and to achieve a LEED rating of Silver with 61 points and 5 possible points as indicated on the attached LEED for Homes 2008 Checklist.

Michael Schofield

Print Name



Signature





# LEED 2009 for Core and Shell Development

## Project Checklist

### 21 5 2 Sustainable Sites Possible Points: 28

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
	1		Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
2			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	2
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
	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	Tenant Design and Construction Guidelines	1

### 4 6 Water Efficiency Possible Points: 10

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
2	2		Credit 1	Water Efficient Landscaping	2 to 4
	2		Credit 2	Innovative Wastewater Technologies	2
2	2		Credit 3	Water Use Reduction	2 to 4

### 7 12 18 Energy and Atmosphere Possible Points: 37

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
7	3	11	Credit 1	Optimize Energy Performance	3 to 21
	4		Credit 2	On-Site Renewable Energy	4
	2		Credit 3	Enhanced Commissioning	2
	2		Credit 4	Enhanced Refrigerant Management	2
	3		Credit 5.1	Measurement and Verification—Base Building	3
	3		Credit 5.2	Measurement and Verification—Tenant Submetering	3
	2		Credit 6	Green Power	2

### 5 2 6 Materials and Resources Possible Points: 13

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
		5	Credit 1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 5
2			Credit 2	Construction Waste Management	1 to 2
		1	Credit 3	Materials Reuse	1
2			Credit 4	Recycled Content	1 to 2
1	1		Credit 5	Regional Materials	1 to 2
	1		Credit 6	Certified Wood	1

### 6 4 2 Indoor Environmental Quality Possible Points: 12

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
	1		Credit 1	Outdoor Air Delivery Monitoring	1
	1		Credit 2	Increased Ventilation	1
1			Credit 3	Construction IAQ Management Plan—During Construction	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	1		Credit 5	Indoor Chemical and Pollutant Source Control	1
	1		Credit 6	Controllability of Systems—Thermal Comfort	1
	1		Credit 7	Thermal Comfort—Design	1
	1		Credit 8.1	Daylight and Views—Daylight	1
	1		Credit 8.2	Daylight and Views—Views	1

### 1 1 Innovation and Design Process Possible Points: 6

Y	?	N			
	1		Credit 1.1	Exemplary Performance: Construction Waste Management	1
			Credit 1.2	Innovation in Design: Specific Title	1
			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

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

Y	?	N			
	1		Credit 1.1	Regional Priority: Brownfield Redevelopment	1
	1		Credit 1.2	Regional Priority: Stormwater Quantity	1
	1		Credit 1.3	Regional Priority: Heat Island Effect Non-Roof	1
1			Credit 1.4	Regional Priority: Heat Island Effect Roof	1

### 45 33 28 Total Possible Points: 110

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



APPENDIX E

TRANSPORTATION IMPACT STUDY

*Transportation Impact Study* available upon request at the Community Development Department.