

**APPENDIX A – Article 22.000 Green Building Submission**



**15 Wilson Road**

**(aka 40 Smith Place/45 & 55 Wilson Road)**

**Article 22.000 Green Building Project: Special Permit Phase Submission**

**01 | V2**

**February 22, 2022**

**The Davis Companies**

**L1003909**

## Green Building Requirements

### 15 Wilson Road Green Building Report – Certification for Special Permit Stage

**Status:** The Community Development Department (CDD) received the Green Building Report (GBR) for the Special Permit stage for 15 Wilson Road. Pursuant to Section 22.25.1 of the Zoning Ordinance, CDD staff have reviewed the project’s GBR and provide the following Determination, Summary of Compliance, and Comments.

**CDD Determination: The documentation provided by the Applicant is adequate and demonstrates compliance with the Green Building Requirements applicable to the Special Permit stage.**

**Project Summary:** This project is subject to the City’s Green Building requirements, which mandate that projects meet the LEED Gold requirements. Based on the documents submitted, the project is expected to achieve LEED Gold certification with 61 points. The project is seeking LEED certification with USGBC under the LEED v4 Building Design + Construction for Core & Shell rating system.

#### Summary of Compliance:

##### Green Building Professional Affidavit Certification

Krysta Levandowski, LEED AP BD+C, has been identified as the Green Building Professional for the project. The affidavit states that this professional has reviewed all relevant documents for this project and confirm to the best of their knowledge that those documents indicate that the project has been planned and designed to meet the LEED requirements of Section 22.24 under Article 22.20 of the Cambridge Zoning Ordinance. The applicant also provided the following relevant information during the design review process:

- As the project moves through design development and construction documents, life cycle assessment tools such as Tally & EC3 will be used to address embodied carbon with an analysis and focus on building envelope, structure, specifically on concrete and structural steel. There will also be a focus on interior finishes.
- The project team will also prioritize building products and materials that are manufactured locally and maximizing pre- and post-consumer recycled content where possible and accounting for LCA and sustainable materials--harvesting and sourcing.
- The project team is also assessing the use of natural refrigerants or with low global warming potential.
- The team will also be considering enhancing the energy and cost performance while reducing carbon emissions through a wholistic approach offered in the LEED pilot credit during the next project phase.

LEED Rating System Checklist, LEED, and Net Zero Narrative

- Rating System: LEED v4 BD+C: New Construction. LEED Baseline standard used is ASHRAE 90.1-2010.
  - Energy cost saving = 10% over the LEED baseline standard (ASHRAE 90.1-2010).
  - Energy use reduction = 10% reduction below the Stretch code baseline (ASHRAE 90.1-2013).
  - Energy use savings = 12% reduction in energy use relative to ASHRAE 90.1-2010 baseline.
  - Site EUI (Stretch Code standards) = 139 kBTU/SF-yr.
  - Source EUI (Stretch Code standards) = 300 kBTU/SF-yr.
  - GHG emissions reduction = 12% reduction.
  - Building Envelope:
    - Window-to-Wall Ratio: 35%
    - Triple-glazing used with U-value of 0.36
  - Indoor Water Use Reduction below LEED Baseline: 40%
  - Outdoor Water Use Reduction below LEED Baseline: 75%
  - LEED categories and their credit points (reported as of 3/16/2022):
    - Integrative Process – 1 point
    - Location and Transportation – 16 points
    - Sustainable Sites – 7 points
    - Water Efficiency – 8 points
    - Energy and Atmosphere – 11 points
    - Materials and Resources – 6 points
    - Indoor Environmental Quality – 5 points
    - Innovation – 5 points
    - Regional Priority – 2 points
- Total credit points = 61 points**

**Comments:**

1. Staff are expecting to receive additional information from the applicant to confirm LEED credit points awarded in the design and construction review by USGBC as we move to the next project stage.
2. As we move through the process, provide material information updates on list of proposed/selected materials/products information, specifically their EPDs and which have resulted from using LCA tools i.e., Tally and or EC3.
3. Provide information on roof materials and site/hardscape surfaces specifically about solar reflectance information SR/SRI that is relevant to reducing heat island effect.



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## 15 Wilson Road

Project No: L1003909  
Document Title: Article 22.000 Green Building Project: Special Permit Phase Submission  
Document No.: 01  
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Date: February 22, 2022  
Client Name: The Davis Companies  
Client No: L1003909  
Project Manager: Sandy Carroll  
Author: Krysta Levandowski  
File Name: L1003909\_15 Wilson\_Article 22 Special Permit Filing

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## 1. Project Team

### APPLICANT / DEVELOPER

The Davis Companies, on behalf of  
Quad 40 Smith Place, LLC  
125 High Street  
Boston, MA 02110  
617-225-0311

### ARCHITECT

Jacobs  
120 Saint James Ave  
Boston, MA 02116  
617.242.9222

### LEGAL

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Adams & Rafferty  
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617.492.4900

### MEP/FP ENGINEER

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617.864.2987

### TRANSPORTATION ENGINEER

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617.728.7777

### STRUCTURAL ENGINEER

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Boston, MA 0211  
617.737.0040

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Sudbury, MA 01776  
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120 Saint James Ave  
Boston, MA 02116  
617.242.9222

### LANDSCAPE ARCHITECT

BSC Group  
803 Summer St  
Boston, MA 02127

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## 2. Introduction

15 Wilson Road, formerly known as 40 Smith Place/45 & 55 Wilson Road, is a core and shell construction project located in Cambridge that will accommodate laboratory and office program components. It will be registered with the U.S. Green Building Council under the LEED v4 Building Design + Construction for Core & Shell projects, and is targeting LEED Gold Certification.

This report includes the documentation requested to show the project's conformance with Article 22 Green Building Requirements of the Cambridge Zoning Ordinance, and consists of the completed Green Building Project Checklist for projects in the Special Permit phase of documentation, LEED Checklist, LEED Certification Narrative, Green Building Professional Credentials and Affidavit, and the Net Zero Narrative, as well as project team information and supporting initial study information in the appendices. The team has also included the Green Building Database Project Information Form and the Cool Factor Score Sheet as requested.

Together the project team has developed the narrative and supporting documentation provided herein, and can confirm that the project shows sufficient potential to reach a minimum of Gold level certification with at least 61 verifiable points and an additional 9 likely points as required under Article 22.20 of the Cambridge Zoning Ordinance. This shall be accomplished through various qualities attributed to both the project context, as well as its design merits and client initiatives described in the following sections.

### 3. Article 22.000 Green Building Project Checklist

GREEN BUILDING PROJECT CHECKLIST • ARTICLE 22.000 • GREEN BUILDING REQUIREMENTS

#### Green Building Project Checklist

Green Building  
Project Location: 15 Wilson Road, Cambridge, MA

**Applicant**  
Name: The Davis Companies, on behalf of Quad 40 Smith Place, LLC  
Address: 125 High Street, Suite 2111, Boston, MA 02110  
Contact Information  
Email Address: GMcGill@TheDavisCompanies.com  
Telephone #: (617) 936-4812

**Project Information (select all that apply):**  
 New Construction – GFA: 267,430 sf GFA  
 Addition – GFA of Addition: \_\_\_\_\_  
 Rehabilitation of Existing Building – GFA of Rehabilitated Area: \_\_\_\_\_  
 Existing Use(s) of Rehabilitated Area: \_\_\_\_\_  
 Proposed Use(s) of Rehabilitated Area: \_\_\_\_\_  
 Requires Planning Board Special Permit approval  
 Subject to Section 19.50 Building and Site Plan Requirements  
 Site was previously subject to Green Building Requirements

**Green Building Rating Program/System:**  
 Leadership in Energy and Environmental Design (LEED) – Version: v4  
 Building Design + Construction (BD+C) – Subcategory: Core & Shell  
 Residential BD+C – Subcategory: \_\_\_\_\_  
 Interior Design + Construction (ID+C) – Subcategory: \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Passive House – Version: \_\_\_\_\_  
 PHIUS+  
 Passivhaus Institut (PHI)  
 Other: \_\_\_\_\_  
 Enterprise Green Communities – Version: \_\_\_\_\_



GREEN BUILDING PROJECT CHECKLIST • ARTICLE 22.000 • GREEN BUILDING REQUIREMENTS

**Project Phase**

**SPECIAL PERMIT**

Before applying for a building permit, submit this documentation to CDD for review and approval.

**Required Submissions**

All rating programs:

- Rating system checklist
- Rating system narrative
- Net zero narrative (see example template for guidance)
- Affidavit signed by Green Building Professional with attached credentials – use City form provided (Special Permit)



## Project Phase

### BUILDING PERMIT

Before applying for a building permit, submit this documentation to CDD for review and approval.

## Required Submissions

All rating programs:

- Rating system checklist – updated from any prior version
- Rating system narrative – updated from any prior version with additional supporting information from construction documents
- Net zero narrative – updated from any prior version (see example template for guidance)
- Energy Simulation Tool results demonstrating compliance with selected rating system. *[Note: For Passive House rating program, must use WUFI Passive, Passive House Planning Package (PHPP), or comparable software tool authorized by Passive House.]*
- Credentials of Green Commissioning Authority (or copy of contract between developer and Commissioning Authority if an independent consultant or subcontractor), including documentation of Green Commissioning process experience on at least two building projects with a scope of work similar to the proposed project extending from early design phase through at least ten (10) months of occupancy
- Affidavit signed by Green Building Professional with attached credentials – use City form provided (Building Permit)

Passive House rating program only:

- Letter of intent from Passive House rater/verifier hired for on-site verification, with credentials of rater/verifier
- Credentials of Certified Passive House Consultant who has provided design, planning, or consulting services (if different from the Green Building Professional for the project)
- Construction drawings and specifications



## Project Phase

### CERTIFICATE OF OCCUPANCY

Before applying for a certificate of occupancy, submit this documentation to CDD for review and approval.

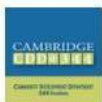
## Required Submissions

All rating programs:

- Rating system checklist – updated from any prior version
- Rating system narrative – updated from any prior version with additional supporting information from as-built conditions
- Net zero narrative – updated from any prior version (see example template for guidance)
- Energy Simulation Tool results demonstrating compliance with selected rating system, updated to as-built conditions. *[Note: For Passive House rating program, must use WUFI Passive, Passive House Planning Package (PHPP), or comparable software tool authorized by Passive House.]*
- Affidavit with schedule of commissioning requirements signed by Green Commissioning Authority, with attached credentials – use City form provided (Certificate of Occupancy)
- Affidavit signed by Green Building Professional with attached credentials – use City form provided (Certificate of Occupancy)

Passive House rating program only:

- Pressure Test Verification
- Ventilation Commissioning
- Quality Assurance Workbook
- Final testing and verification report from rater/verifier





## 4. LEED Checklist



### LEED v4 for BD+C: Core & Shell Project Checklist

Project Name: 15 Wilson Road  
Date: 2.22.2022

Y	Y1	N1	N		
1	0	0	0	Credit	Integrative Process
16	0	0	4		<b>Location and Transportation</b>
0	0	0	0	Credit 1	LEED for Neighborhood Development Location
2	0	0	0	Credit 2	Sensitive Land Protection
3	0	0	0	Credit 3	High Priority Site
6	0	0	0	Credit 4	Surrounding Density and Diverse Uses
2	0	0	4	Credit 5	Access to Quality Transit
1	0	0	0	Credit 6	Bicycle Facilities
1	0	0	0	Credit 7	Reduced Parking Footprint
1	0	0	0	Credit 8	Green Vehicles
7	0	3	1		<b>Sustainable Sites</b>
Y				Prereq 1	Construction Activity Pollution Prevention
1	0	0	0	Credit 1	Site Assessment
1	0	1	0	Credit 2	Site Development - Protect or Restore Habitat
1	0	0	0	Credit 3	Open Space
0	0	2	1	Credit 4	Rainwater Management
2	0	0	0	Credit 5	Heat Island Reduction
1	0	0	0	Credit 6	Light Pollution Reduction
1	0	0	0	Credit 7	Tenant Design and Construction Guidelines
8	0	1	2		<b>Water Efficiency</b>
Y				Prereq 1	Outdoor Water Use Reduction
Y				Prereq 2	Indoor Water Use Reduction
Y				Prereq 3	Building-Level Water Metering
2	0	0	0	Credit 1	Outdoor Water Use Reduction
4	0	0	2	Credit 2	Indoor Water Use Reduction
1	0	1	0	Credit 3	Cooling Tower Water Use
1	0	0	0	Credit 4	Water Metering
11	4	5	13		<b>Energy and Atmosphere</b>
Y				Prereq 1	Fundamental Commissioning and Verification
Y				Prereq 2	Minimum Energy Performance
Y				Prereq 3	Building-Level Energy Metering
Y				Prereq 4	Fundamental Refrigerant Management
5	0	0	1	Credit 1	Enhanced Commissioning
5	4	3	6	Credit 2	Optimize Energy Performance
0	0	0	1	Credit 3	Advanced Energy Metering
0	0	0	2	Credit 4	Demand Response
0	0	0	3	Credit 5	Renewable Energy Production
1	0	0	0	Credit 6	Enhanced Refrigerant Management
0	0	2	0	Credit 7	Green Power and Carbon Offsets

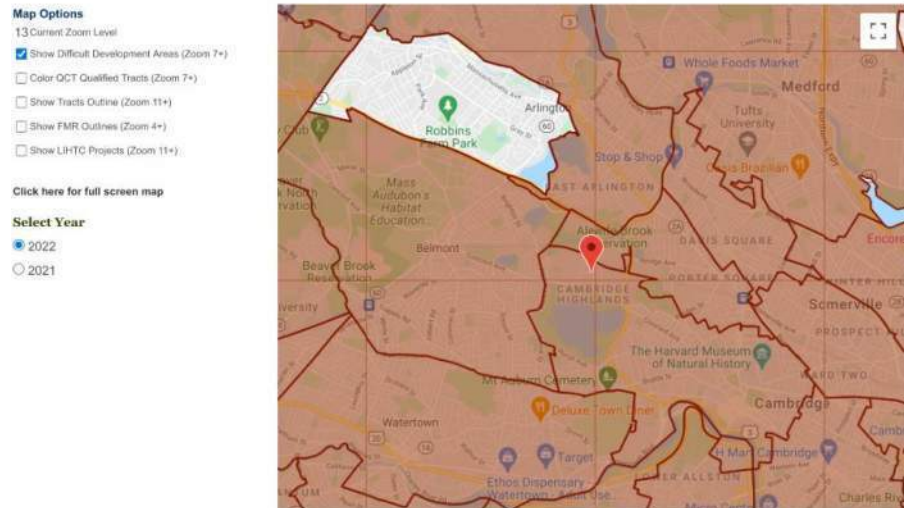
Y	Y1	N1	N		
6	0	2	5		<b>Materials and Resources</b>
Y				Prereq 1	Storage and Collection of Recyclables
Y				Prereq 2	Construction and Demolition Waste Management Planning
1	0	2	2	Credit 1	Building Life-Cycle Impact Reduction
1	0	0	1	Credit 2	Building Product Disclosure and Optimization - Environmental Product Declarations
1	0	0	1	Credit 3	Building Product Disclosure and Optimization - Sourcing of Raw Materials
1	0	0	1	Credit 4	Building Product Disclosure and Optimization - Material Ingredients
2	0	0	0	Credit 5	Construction and Demolition Waste Management
5	3	2	0		<b>Indoor Environmental Quality</b>
Y				Prereq 1	Minimum Indoor Air Quality Performance
Y				Prereq 2	Environmental Tobacco Smoke Control
2	0	0	0	Credit 1	Enhanced Indoor Air Quality Strategies
2	1	0	0	Credit 2	Low-Emitting Materials
1	0	0	0	Credit 3	Construction Indoor Air Quality Management Plan
0	1	2	0	Credit 4	Daylight
0	1	0	0	Credit 5	Quality Views
5	1	0	0		<b>Innovation</b>
4	1	0	0	Credit 1	Innovation
1	0	0	0	Credit 2	LEED Accredited Professional
2	1	1	0		<b>Regional Priority</b>
0	0	1	0	Credit 1	Regional Priority: Building Life-Cycle Reduction
1	0	0	0	Credit 2	Regional Priority: Indoor Water Use Reduction
1	0	0	0	Credit 3	Regional Priority: High Priority Site
0	1	0	0	Credit 4	Regional Priority: Optimize Energy Performance
61	9	14	25	<b>TOTALS</b>	Possible Points: <b>110</b>

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



has been identified on site, which will be remediated, also qualifying the project for three points under Option 3.

The 2022 Qualified Census Tracts (QCTs) and Difficult Development Areas (DDAs) are effective January 1, 2022. The 2022 designations use data from the 2010 Decennial census. The designation methodology is explained in the federal Register notice published September 9, 2021.



**LTc4**  
Surrounding Density and Diverse Uses

The project site is in a dense urban Cambridge neighborhood, was previously developed, is adjacent to residential areas, and is close to many basic services, all connected with pedestrian and bicycle access. The project is pursuing six points under both Options 1 and 2. [See Appendix A for a site map identifying the densities and diverse uses of the area.](#)

**LTc5**  
Access to Quality Transit

The planned front entrance of the project is 0.20 miles from the Concord Avenue opposite Smith Place MBTA bus stop, and is served by buses 74 and 78. The two bus lines provide 105 stops per weekday, and 82 stops per weekend. Additionally, the project site will be serviced by the Alewife TMA Shuttle service, which connects the Alewife subway and commuter rail station with office parks and buildings in the neighboring area. Under v4.1 updated requirements, the project is eligible for 2 points. [See Appendix B for a site map identifying the qualifying transit options and frequency.](#)

**LTc6**  
Bicycle Facilities

The project is located adjacent to an existing bicycle network via shared streets, which connects many diverse uses as well as multiple public transportation routes. The project will provide numerous bicycle racks for short- and long-term storage both inside and outside of the project building for occupants' and visitors' use. Additionally, the building shall contain adequate shower and changing facilities for its regular occupants.

A secure bicycle storage room inside the building on the ground floor will provide 88 secure bicycle rack spaces for full-time building occupants. Locker/changing rooms, with a total of four showers, are immediately adjacent to the bicycle storage room.

Also provided within the LEED Project boundary is a total of 20 outdoor secure bicycle racks.

LTc7  
Reduced Parking  
Footprint

The project has two levels of parking garage located below the building, and no surface parking. With a current total of 323 parking spaces, this is a 64.5% reduction from the requirements in the Institute of Transportation Engineers' Transportation Planning Handbook, 3<sup>rd</sup> edition, Tables 18-2 through 18-4.

LTc8  
Green Vehicles

Per v4.1 updated requirements, 2% of all spaces are required to have charging stations and to be designated for use by plug-in electric vehicles only. Per zoning requirements, we will exceed these requirements by providing 25% of spaces with LEED compliant EV charging stations, and all remaining spaces will be EV ready.

### **Sustainable Sites**

SSp1  
Construction Activity  
Pollution Prevention

A project-specific erosion and sedimentation control plan will be created and monitored with the objective of preventing loss of soil during construction, sedimentation of storm sewers, and pollution of the air with dust and particulate matter. The contractor shall be required to document compliance with the ESC throughout the construction process.

SSc1  
Site Assessment

A site assessment including topography, hydrology, climate, vegetation, soils, human uses, and human health effects will be performed and will inform the design of the project as appropriate. The team will document findings via the Site Assessment Worksheet provided by USGBC.

SSc2  
Site Development –  
Protect or Restore  
Habitat

The project is built on a site with no greenfield area. Greenspace with a variety of native or adaptive vegetation and soil restoration will be provided on at least 15% of the site area for 1 point under version 4.1.

SSc3  
Open Space

The project will provide a minimum of 30% of open space within the site area. A minimum of 25% of that outdoor space will be vegetated. The outdoor space will be physically accessible and includes pedestrian-oriented paving with physical site elements that accommodate outdoor social activities.

SSc4  
Rainwater Management

The proposed stormwater management system will be designed to comply with the City of Cambridge standards and the MA DEP Stormwater Management Policy for new construction projects. This includes the management of stormwater for the difference between the 2-year 24-hour pre-construction runoff hydrograph and the post-construction 25-year 24-hour runoff hydrograph. The final design will incorporate facilities to reduce phosphorus on-site by 65 percent compared to the existing conditions, in compliance with DPW standards.

SSc5  
Heat Island Reduction

The solar reflectance index on the light-colored and reflective low low-sloped roofing, which will cover more than 75% of the overall building roof surface, will exceed an initial SRI of 82 and a 3-year SRI of 64. In addition, pedestrian-oriented site hardscape shall have high reflectivity values, the



weighted average of which will allow the project to earn the two points associated with this credit under Option 1.

All parking is under cover in a garage under the building, with no surface parking included in the project scope. This complies with Option 2, and qualifies us for an additional point for Exemplary Performance for this credit, which is shown in the Innovation credit category.

SSc6  
Light Pollution  
Reduction

All exterior lighting shall automatically turn off when sufficient daylight is available. All building façade/landscape lighting shall be automatically shut off between midnight/business closing, and 6am/business opening or between times established by the AHJ. All other exterior lightings shall be reduced by 50% between midnight or within one hour of end of business operations, whichever is later until 6am or business opening, whichever is earlier.

Exterior lighting power densities will be below the ASSI/ASHRAE/IESNA Standard 90.1-2007 for Lighting Zone 3 (Business zone district; commercial mixed-use) considering allowable light trespass on the three sides of the site abutting public ways.

SSc7  
Tenant Design and  
Construction Guidelines

Tenant design and construction guidelines will be issued to all building tenants to educate tenants about implementing sustainable design and construction features in their tenant improvement fit-out. These guidelines will encourage building tenants to earn LEED ID+C v4 Certification for their interior fit-out.

### Water Efficiency

WEp1 / c1  
Outdoor Water Use  
Reduction

Plant selection and an efficient irrigation system will reduce the potable water used for irrigation by at least 75% from a calculated midsummer baseline case as delineated under Option 2 for Reduced Irrigation. This will achieve 2 points under v4.1.

WEp2 / c2  
Indoor Water Use  
Reduction

Water-efficient plumbing fixtures will reduce domestic water use by at least 40% below the LEED water use baseline, shown through the usage-based calculations (Compliance Path 2).

- All toilets will utilize 1.1 gpf low flush valves
- All urinals will utilize 0.125 gpf ultra low flow flush valves
- All lavatories will utilize 0.35 gpm with metering tempering faucets
- All showers will utilize 1.5 gpm low flow shower heads
- All kitchen sinks will utilize 1.5 gpm faucets

A Water use calculation will be performed to confirm a 40% reduction below baseline in indoor water use for 4 LEED points.

WEp3 / c4  
Building – Level Water  
Metering & Water  
Metering

Permanent water meters will be installed which will measure the total potable water use for the building and its associated grounds. The client shall share data with USGBC as required. Permanent water meters will be

installed to monitor water subsystems in the building in addition to the whole building potable water use, including irrigation and reclaimed water.

WEc3  
Cooling Tower Water  
Use

The cooling tower water makeup requirement is 970,000 gallons annually. We have a rainwater harvesting system and have allocated a minimum of 20% of this for cooling tower water makeup. We are also investigating using cooling coil condensate as water makeup for the cooling tower. The cooling towers will be constructed of 316 stainless steel – this reduces the amount of chloride in the water and increases the number of cycles. With this we will be targeting 10 cycles of concentration. We targeting 2 credits for WEc3.

### Energy and Atmosphere

EAp1 / c1  
Fundamental  
Commissioning  
And Verification &  
Enhanced  
Commissioning

A third-party Commissioning Agent (CxA) will be engaged before the end of the design development phase, and will review and comment on the project Owner's Project Requirements (OPR), Basis of Design, draft Design Development & Construction Documents. Additionally, he/she will develop and implement a Commissioning Plan for the building HVAC, plumbing, lighting systems and envelope, review construction submittals, and then issue a summary Commissioning Report. Finally, the CxA will participate in training for the building operational staff.

In addition to the Fundamental scope listed above, the CxA will verify the following for mechanical, electrical, plumbing, energy systems, and building envelope; these tasks shall be included in the OPR and BOD:

- Review contractor submittals.
- Verify Inclusion of systems manuals and operator training requirements in the construction documents
- Verify systems manual updates and delivery
- Verify operator and occupant training delivery and effectiveness
- Verify seasonal testing
- Review building operations 10 months after substantial completion.
- Develop an on-going commissioning plan

At this time, the project is planning to pursue Option 1, Path 1 and Option 2, but is not planning to pursue the Monitoring-Based commissioning point under Option 1, Path 2.

EAp2 / c2  
Minimum Energy  
Performance & Optimize  
Energy Performance

An energy model (calculated according to the building performance method described in Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2013) is being developed to describe how an energy-efficient building envelope and base building mechanical systems will reduce the building design performance rating by at least 8% below the baseline building performance

rating under Option 1 for Whole-Building Energy Simulation. This will continue to evolve through the design phase and align with the project design and any additional energy savings we are able to confirm as the design further develops.

EAp3 / c3  
Building-Level Energy  
Metering

Permanently installed meters will measure total building energy consumption. The client shall share data with USGBC as required.

EAp4 / c6  
Fundamental  
Refrigerant  
Management &  
Enhanced Refrigerant  
Management

Building refrigerants will be selected to minimize the emission of compounds that contribute to ozone depletion and global climate change. Building refrigerants will not exceed maximum threshold allowances for contributions to ozone depletion and global warming potential. Our core and shell project will likely not include all HVAC associated with anticipated work by the tenant; if the core/shell design team plans to include those systems to achieve the credit, we will provide appropriate supporting documentation from the tenant sales or lease agreement. It is anticipated that our systems will not exceed the credit threshold limits.

EAc7  
Green Power and Carbon  
Offsets

The Davis Companies *is investigating options* to engage in a contract to purchase an equivalent of 100% of the building's energy from green power, carbon offsets, or renewable energy certificates for a minimum of five years. The purchase amount, *if this credit is pursued*, shall be calculated from the building's total energy use as delineated in EAc2.

### Materials and Resources

MRp1  
Storage and Collection  
of  
Recyclables

A Recycling Staging Room at the building loading dock will support a building-wide recycling program for paper, corrugated cardboard, glass, plastic, and metal. A zone for the safe collection, storage, and disposal of batteries, mercury-containing lamps, and electronic waste will also be provided.

MRp2 / c5  
Construction and  
Demolition  
Waste Management  
Planning (and  
execution)

A construction and demolition waste management plan will be developed prior to the start of construction which will identify at least five materials targeted for diversion, whether these materials will be separated or comingled, and will approximate a percentage of the overall project waste that these will represent. In pursuit of Option 1 of the credit, at least 75% of the construction and demolition debris and a minimum of four material streams will be diverted from landfill and incineration facilities and redirected instead for recycling to the manufacturing process and reusable materials to appropriate sites.

MRC1  
Life-Cycle Impact  
Reduction

The project will perform a Whole-Building Life-Cycle Assessment under Option 2 of this credit, assessing the project's structure and enclosure, and making us eligible for 1 point under Option 2, Path 1 in version v4.1. We will investigate other options and our eligibility for additional points under the other pathways included in Option 2 as the design progresses.

MRC2, 3, & 4

The design team shall proactively seek and track materials and products that comprehensively address these three MR credits during the design phase.

Building Product Disclosure and Optimization (BPDO): Environmental Product Declarations, Sourcing of Raw Materials, and Material Ingredients	Priority will be given to those items that comprise a high percentage of the project's overall material cost, and those that can demonstrate achievement across multiple credit requirements, including those associated with EQc2 for Low-Emitting Materials. By performing the early product identification work, the design team shall enable the contractor to meet the requirements of these three credits as part of the project's integrative team. The project will likely utilize the v4.1 credit updates for all three BPDO credits.
<b>Indoor Environmental Quality</b>	
IEQp1 Minimum Indoor Air Quality Performance	Building HVAC systems will meet the minimum requirements of Sections 4 through 7 of ASHRAE Standard 62.1-2010 - Ventilation for Acceptable Indoor Air Quality, based on anticipated future tenant requirements.
IEQp2 Environmental Tobacco Smoke (ETS) Control	Smoking will be prohibited inside the building and within 25 feet of the entire building perimeter.
IEQc1 Enhanced Indoor Air Quality Strategies	To promote a healthy indoor air quality, permanent entryway systems or appropriate roll-up mats will be installed at all regularly used building entrances; any room with hazardous gases or chemicals will be negatively pressured to contain such elements. MERV 13 or higher filters will be provided in all ventilation systems providing outdoor air to occupied spaces. The project is pursuing both Options 1 and 2.
IEQc2 Low-Emitting Materials	Similar to the MR BPDO credits, the design team shall proactively seek and track products that comply with the low-emitting requirements during the design phase. By performing the early product identification work, the design team shall enable the contractor to meet the requirements of this credit to the greatest extent possible as part of the project's integrative team. The project will utilize the lower compliance thresholds allowed through the v4.1 credit updates for this credit.
IEQc3 Construction IAQ Management Plan	An indoor air quality plan during construction will require the builder to follow industry best-practices such as SMACNA IAQ Guidelines for Occupied Buildings Under Construction, protecting absorptive materials stored on site from moisture damage, and replacing air-handling equipment media prior to occupancy.
IEQc4 Daylight	The project will provide window shading devices, and prioritize daylighting strategies for regularly occupied spaces. This credit will continue to be evaluated through the design process.
IEQc5 Quality Views	The design of the building envelope and floor plan is exploring prioritizing quality view strategies that would allow tenants to design their fit-out with a direct line of sight to the outdoors in at least 75% of all regularly occupied areas. The project shall develop a speculative tenant test fit to verify



compliance and determine the final percentage of space that meets requirements.

## Innovation

### IDc1.1 – 1.5

The project will target at least 4 points available in this category by pursuing and combination of Innovation and Pilot Credits recognized by USGBC. The strategies listed below are currently being considered:

- Innovation: [Purchasing – Lamps](#) – The based building lighting shall be selected to focus on low- or no mercury-containing lamps. A purchasing plan will be implemented for both indoor and outdoor fixtures.
- Exemplary Performance: [Heat Island Reduction](#) – The project will pursue both options for the Heat Island Reduction credit, qualifying us for exemplary performance.
- Pilot: [Bird Collision Deterrence](#) – To reduce bird injuries and mortality from in-flight collisions with buildings, the project team is evaluating the design criteria associated with this Pilot credit. The team feels that the current design complies with the criteria and will likely pursue this strategy for an ID point. Design aspects that are contributing to compliance include specific window-to-wall ratio considerations and glazing surface attributes. Building height ratios are also being evaluated.
- Innovation: [Green Education](#). The project will consider utilizing the building's sustainable feature as an opportunity to educate tenants and visitors on the value of green building.

### IDc2 LEED Accredited Professional

The project team includes several LEED Accredited Professionals and will be able to document this credit without issue.

## Regional Priority Credits

### RPc1.1 – 1.4

The project currently anticipates potentially earning at least three of the four available points for the Regional Priority category:

- High Priority Site – The required threshold is two points; the project should be able to earn this credit through documenting the site either as a brownfield or as a DDA as described in the credit narrative above.
- Indoor Water Use Reduction – The required threshold is four points for earning 40% indoor water use reduction. The project currently anticipates being able to earn the four points (40%) required for this credit.

- Optimize Energy Performance – The required threshold is eight points for earning 17% energy use reduction. The project initially estimates at least five points (11%) for this credit, but further confirmation through energy modeling is required as the design progresses, and additional energy savings is possible and strived for.

## 6. Green Building Professional Affidavit

GREEN BUILDING PROJECT CHECKLIST • ARTICLE 22.000 • GREEN BUILDING REQUIREMENTS

---

### Affidavit Form for Green Building Professional Special Permit

Green Building  
Project Location: 15 Wilson Road, Cambridge, MA

**Green Building Professional**  
Name: Krysta Levandowski  
 Architect  
 Engineer  
License Number: 50867  
Company: Jacobs  
Address: 120 St James Avenue, Boston, MA 02116

Contact Information  
Email Address: krysta.levandowski@jacobs.com  
Telephone Number: (617) 963-3027

I, Krysta Levandowski, as the Green Building Professional for this Green Building Project, have reviewed all relevant documents for this project and confirm to the best of my knowledge that those documents indicate that the project is being designed to achieve the requirements of Section 22.24 under Article 22.20 of the Cambridge Zoning Ordinance.



(Signature) 1/14/22 (Date)

Attach either:

Credential from the applicable Green Building Rating Program indicating advanced knowledge and experience in environmentally sustainable development in general as well as the applicable Green Building Rating System for this Green Building Project.

If the Green Building Rating Program does not offer such a credential, evidence of experience as a project architect or engineer, or as a consultant providing third-party review, on at least three (3) projects that have been certified using the applicable Green Building Rating Program.

---

  Last Updated: May, 2020  
City of Cambridge, MA 1

## 7. LEED Administrator Credentials

The project team includes several LEED accredited professionals, and the LEED Administrator is also an accredited professional, credentials as shown below.



GREEN BUSINESS CERTIFICATION INC. CERTIFIES THAT

**Krysta Levandowski**

HAS ATTAINED THE DESIGNATION OF

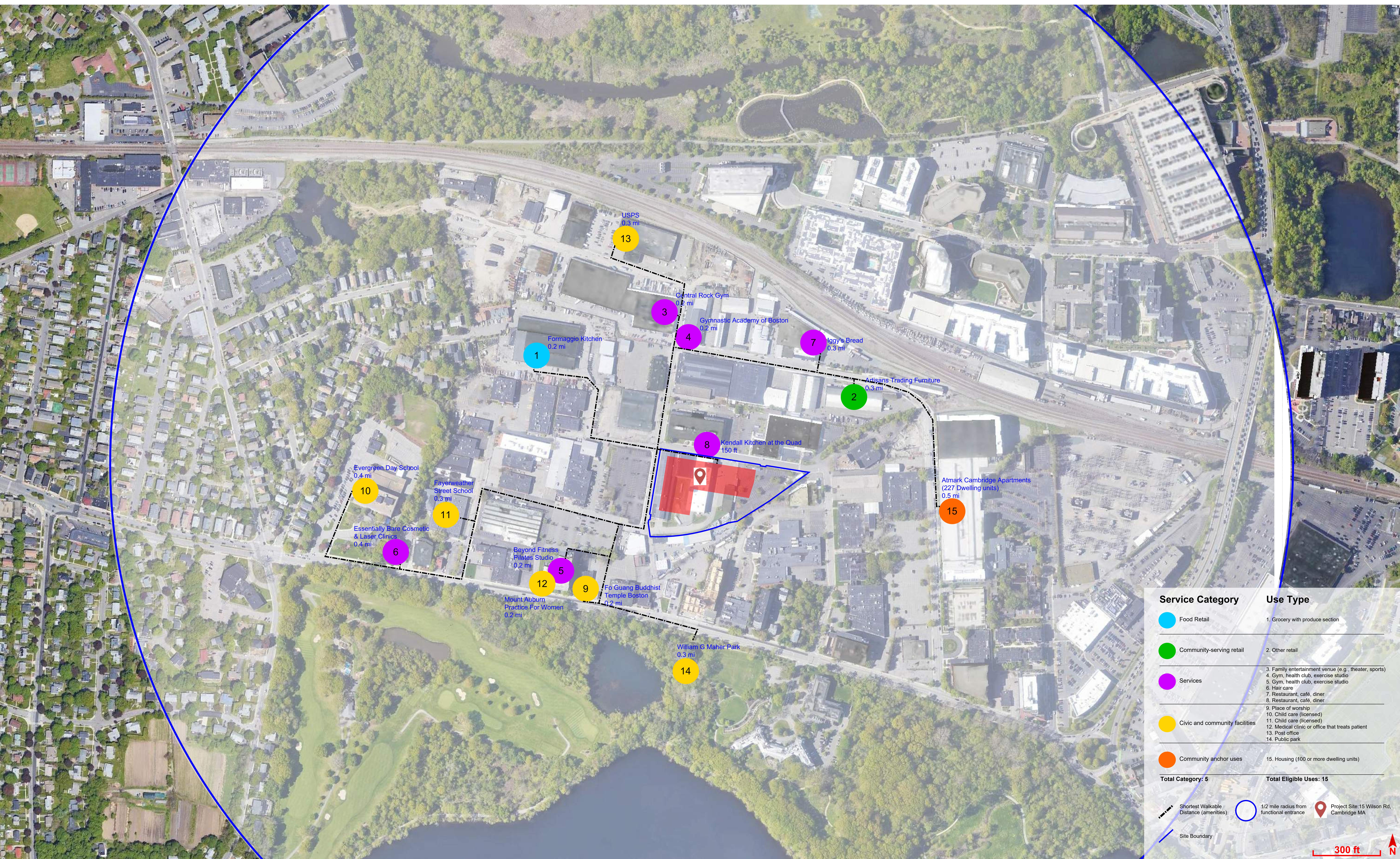
**LEED AP<sup>®</sup> Building Design + Construction**

by demonstrating the knowledge and understanding of green building practices and principles needed to support the use of the LEED<sup>®</sup> green building program.

PETER TEMPLETON  
PRESIDENT & CEO  
U.S. GREEN BUILDING COUNCIL & GREEN BUSINESS CERTIFICATION INC.

## **Appendix A. Surrounding Density and Diverse Uses Information**





Service Category	Use Type
<span style="color: cyan;">●</span> Food Retail	1. Grocery with produce section
<span style="color: green;">●</span> Community-serving retail	2. Other retail
<span style="color: magenta;">●</span> Services	3. Family entertainment venue (e.g., theater, sports) 4. Gym, health club, exercise studio 5. Gym, health club, exercise studio 6. Hair care 7. Restaurant, café, diner 8. Restaurant, café, diner
<span style="color: yellow;">●</span> Civic and community facilities	9. Place of worship 10. Child care (licensed) 11. Child care (licensed) 12. Medical clinic or office that treats patient 13. Post office 14. Public park
<span style="color: orange;">●</span> Community anchor uses	15. Housing (100 or more dwelling units)
<b>Total Category: 5</b>	<b>Total Eligible Uses: 15</b>

--- Shortest Walkable Distance (amenities)     ○ 1/2 mile radius from functional entrance     📍 Project Site: 15 Wilson Rd, Cambridge MA  
— Site Boundary

**300 ft**





TOTAL FLOOR AREA:  
5,857,739 SF

TOTAL BUILDABLE LAND:  
6,760,903 SF (155.21 ACRES)

COMBINED DENSITY:  
37,740.73

 Commercial Buildings	 Residential Buildings	 Buildable Area
 1/4 mile radius from the site boundary	 Site Boundary	 Project Site: 15 Wilson Rd, Cambridge MA

300 ft 



## 15 Wilson Rd (Cambridge) Location: Surrounding Density Uses

TOTAL FLOOR AREA (SQ FT)				
BUILDING	Address	FOOTPRINT	FLOORS	Total Area
1	67 Smith Pl	55,118	1	55,118
2	767 Concord Ave	10,105	2	20,210
3	764 Concord Ave	20,020	1	20,020
4	57 Smith Pl	13,572	1	13,572
5	53 Smith Pl	6,642	1	6,642
6	36 Spinelli Pl	10,050	2	20,100
7	30 Spinelli Pl	10,050	1	10,050
8	31R Smith Pl	47,024	1	47,024
9	101 Smith Pl		3	145,711
10	10 Wilson Rd	26,301	3	78,903
11	100 Smith Pl	46,666	1	46,666
12	155 Fawcett St	37,086	1	37,086
13	75 Moulton St	36,405	1	36,405
14	125 Fawcett St	43,694	1	43,694
15	130 Fawcett St	33,426	1	33,426
16	127 Smith Pl	84,308	1	84,308
17	50 Mooney St	16,320	1	16,320
18	799 Concord Ave		6	161,348
19	45 Spinelli Pl		1	6,050
20	39 Spinelli Pl		1	10,020
21	25 Spinelli Pl		1	20,463
22	765 Concord Ave		1	30,237
23	671-675 Concord Ave		5	108,519
24	777 Concord Ave	6,231	3	18,693
25	24 Spinelli Pl		2	44,048
26	755 Concord Ave		2	26,147
27	725 Concord Ave	16,500	6	99,000
28	701 Concord Ave	10,434	2	20,868
29	671-675 Concord Ave	28,500	4	114,000
30	665 Concord Ave	15,250	1	15,250
31	651-655 Concord Ave	6,749	7	47,243
32	33 Moulton St	52,700	1	52,700
33	625 Concord Ave	14,000	7	98,000
34	12, 24, 36 Moulton St			100,279
35	77 Fawcett St	34,482	1	34,482
36	80-90 Fawcett St	100,170	5	500,850
37	130 Cambridgepark Dr		6	224,115
38	100 Cambridgepark Dr		5	145,839
39	150 Cambridgepark Dr		10	270,080
40	160 Cambridgepark Dr		5	479,953
41	125 Cambridgepark Dr		6	218,825
42	165 Cambridgepark Dr		4	283,554
43	200 Cambridgepark Dr		6	218,250
44	176 Fawcett St		1	21,525
45	160 Fawcett St		2	22,832
46	13 Mooney St		1	35,151
47	45 Mooney St			22,900
48	61 Mooney St		2	19,739
49	640 Concord Ave		3	41,072



50	650 Concord Ave		3	134,025
51	88 Cambridgepark Dr	11,007	6	66,042
52	80 Cambridgepark Dr	40,880	6	245,280
53	402 Rindge Ave	12,000	21	252,000
54	364 Rindge Ave	11,400	21	239,400
55	185 Alewife Brook Pkwy	16,722	4	66,888
56	205 Alewife Brook Pkwy	16,022	2	32,044
57	211 Alewife Brook Pkwy	29,930	1	29,930
58	25, 27, 29, 31 Wheeler St	22,980	4	91,920
59	591 Concord Ave		6	145,293
60	30 Cambridgepark Dr	54,605	6	327,630
			<b>Total</b>	<b>5,857,739</b>

<b>TOTAL BUILDABLE LAND (SF)</b>		<b>TOTAL BUILDABLE LAND (ACRES)</b>	
<b>Total</b>	6,760,903.00	<b>Total</b>	<b>155.21</b>

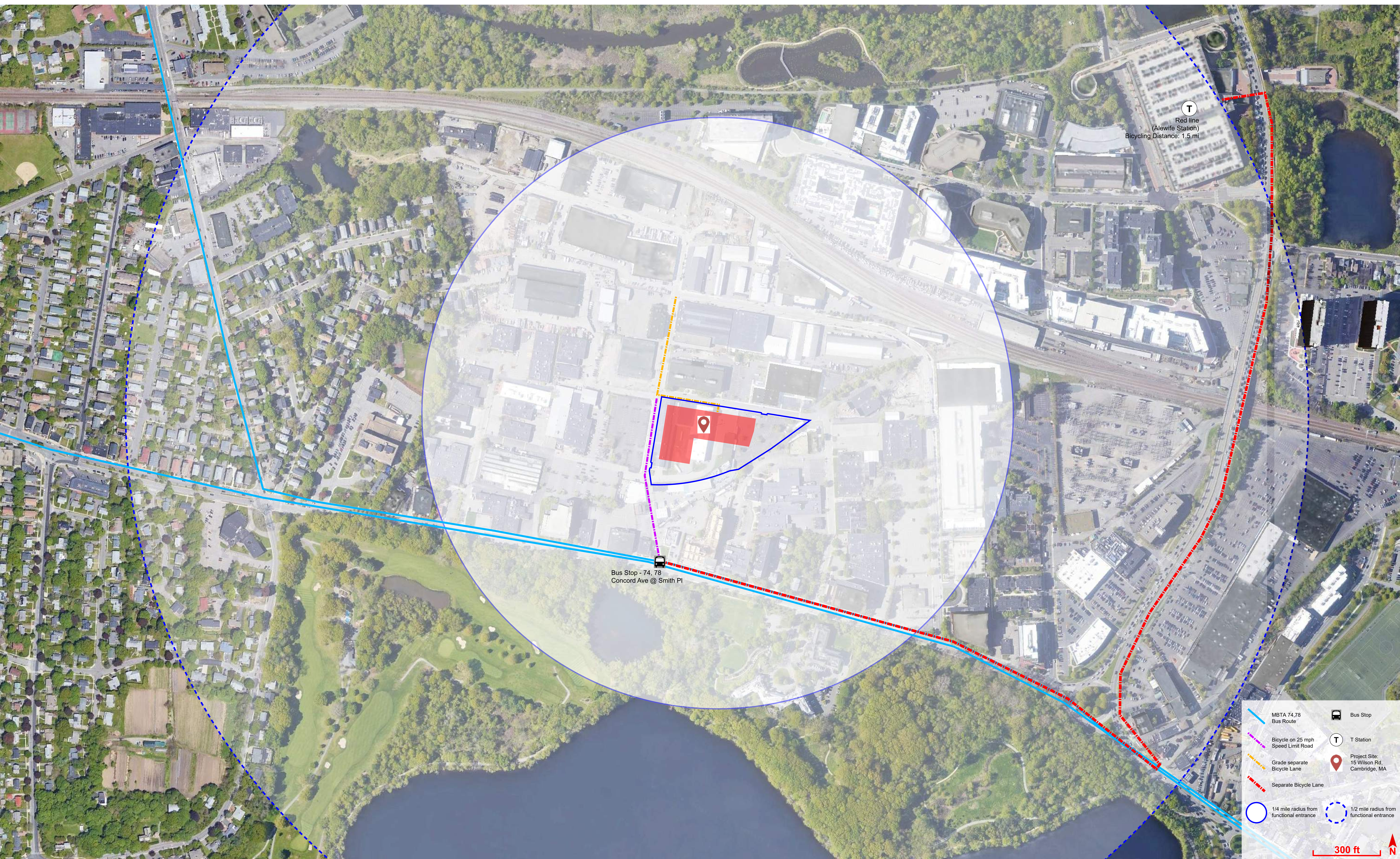
<b>COMBINED DENSITY = TOTAL FLOOR AREA / TOTAL BUILDABLE LAND</b>	
<b>Total</b>	<b>37,740.73</b>

\* Information listed was obtained from Property Database City of Cambridge:  
<https://www.cambridgema.gov/propertydatabase>

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## **Appendix B. Nearby Alternative Transportation Information**





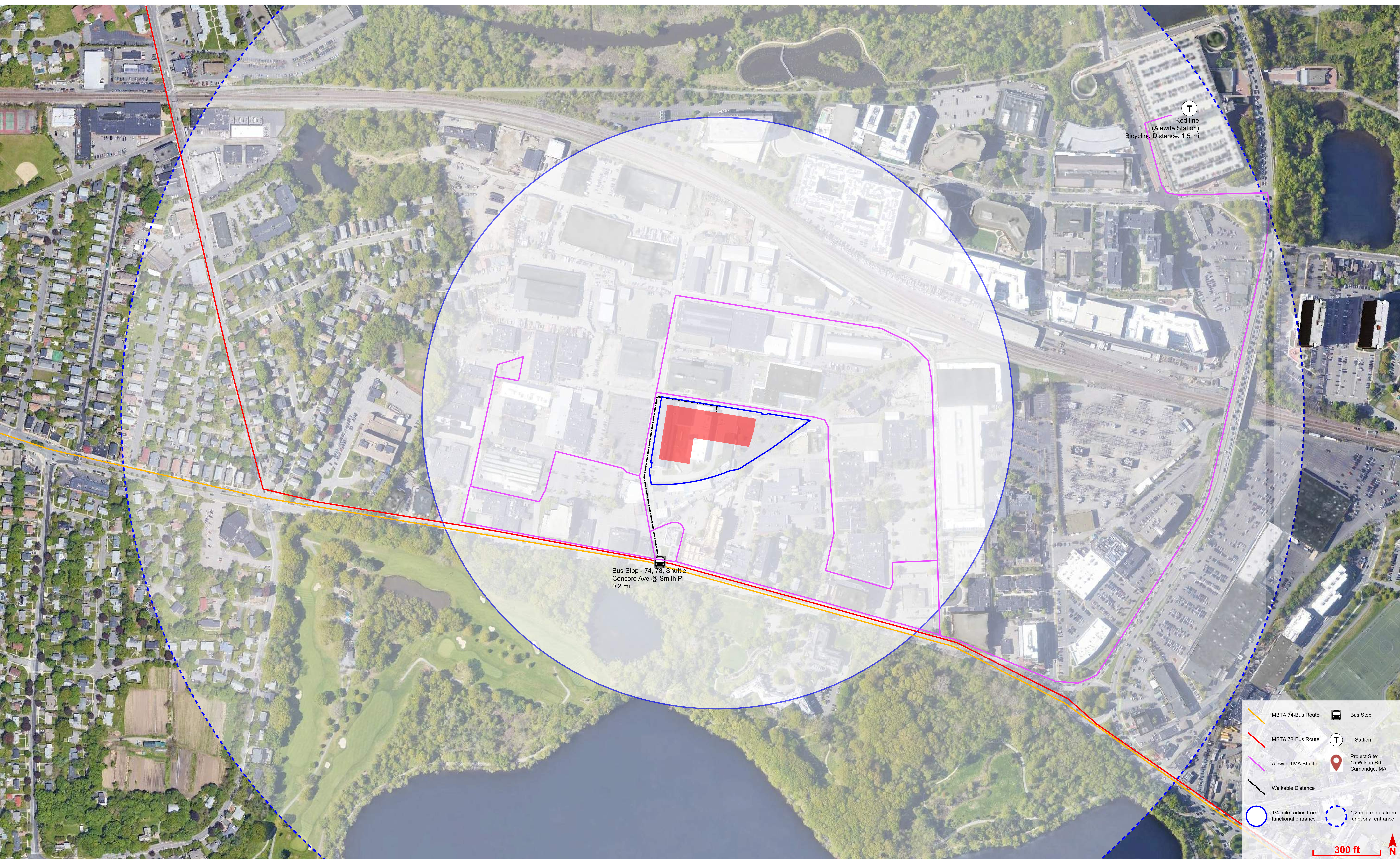
T  
Red line  
(Alewife Station)  
Bicycling Distance: 1.5 mi

Bus Stop - 74, 78  
Concord Ave @ Smith Pl

	MBTA 74,78 Bus Route		Bus Stop
	Bicycle on 25 mph Speed Limit Road		T Station
	Grade separate Bicycle Lane		Project Site: 15 Wilson Rd, Cambridge, MA
	Separate Bicycle Lane		
	1/4 mile radius from functional entrance		1/2 mile radius from functional entrance

300 ft





T  
Red line  
(Alewife Station)  
Bicycling Distance: 1.5 mi

Bus Stop - 74, 78, Shuttle  
Concord Ave @ Smith Pl  
0.2 mi

- MBTA 74-Bus Route
- MBTA 78-Bus Route
- Alewife TMA Shuttle
- Walkable Distance
- 1/4 mile radius from functional entrance
- 1/2 mile radius from functional entrance
- Bus Stop
- T Station
- Project Site: 15 Wilson Rd, Cambridge, MA



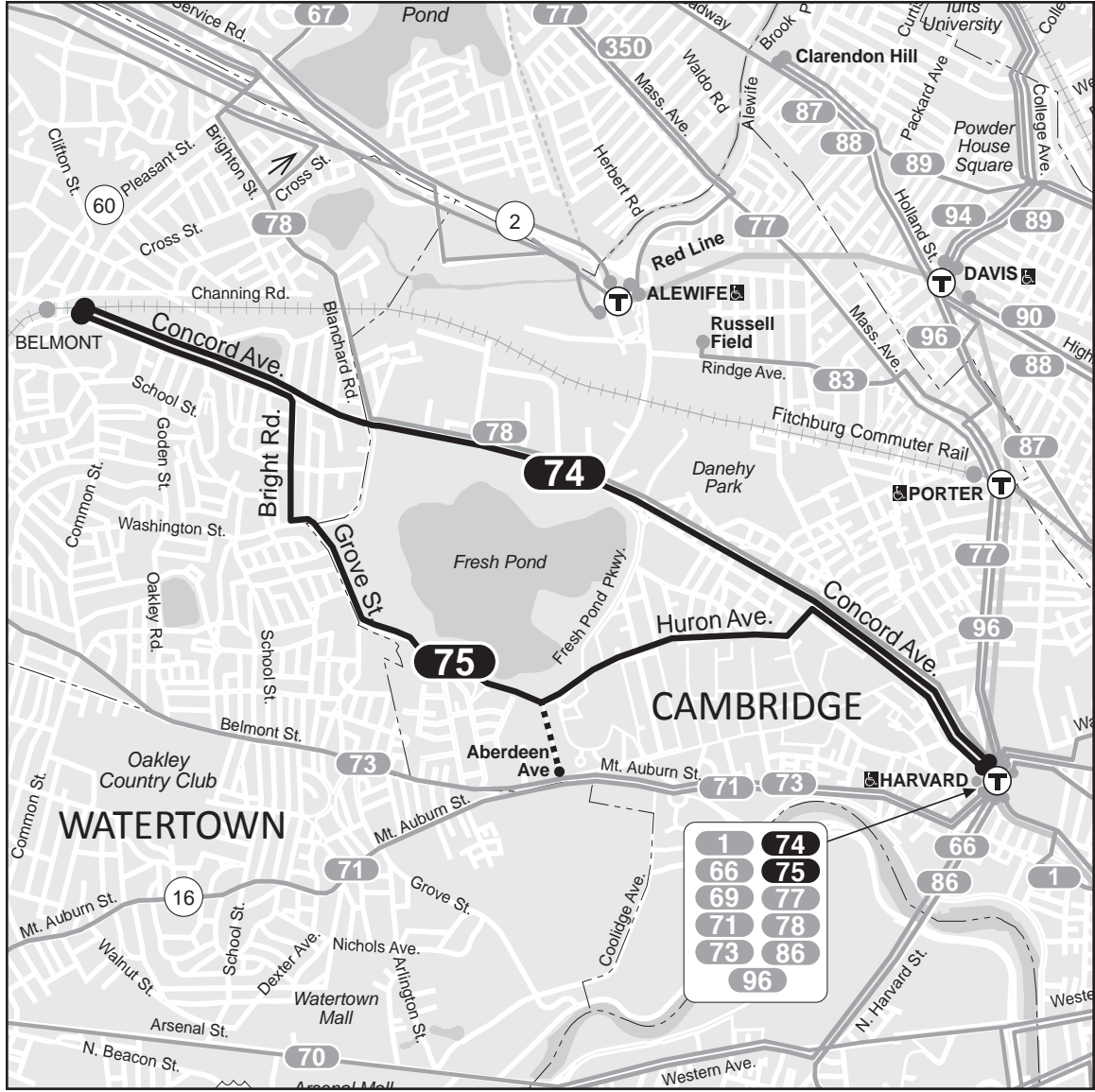
15 Wilson Rd, Cambridge, MA

**TRANSIT SUMMARY**

TRANSIT LINE	WEEKDAY RIDES	WEEKEND RIDES
Route 74 Bus	70	63
Route 78 Bus	35	19
<b>Total MBTA Bus</b>	<b>105</b>	<b>82</b>
Alewife TMA Shuttle	15	0
<b>TOTAL RIDES</b>	<b>120</b>	<b>82</b>

NOTE:

1. Each MBTA bus lines above runs in both directions from the same stop. The number of rides listed above is the number in one direction.
2. The Alewife Transportation Management Association (TMA) is a non-profit organization. The Alewife Loop Shuttle takes commuters from Alewife Station to nearby businesses and residence.



Effective Aug 29, 2021

**Schedule Change** 74·75

- 74** Belmont - Harvard Station  
via Concord Ave
- 75** Belmont - Harvard Station  
via Huron Ave



[mbta.com](http://mbta.com)  
 617-222-3200  
 617-222-5146 (TTY)  
**Lost & Found**  
 617-222-5560



Information in this timetable is subject to change without notice. Traffic conditions and weather can affect running time.

74/75

Weekday

Table with columns: Inbound (Leave Belmont Center, Arrive Concord Ave. at Huron Ave., Arrive Harvard Station) and Outbound (Leave Harvard Station, Arrive Concord Ave. at Huron Ave., Arrive Belmont Center). Rows show departure times from 5:10A to 12:55.

(6 Trips)

every 30 mins until

every 30 mins or better until

70 TOTAL WEEKDAY TRIPS

74/75

Saturday

Table with columns: Inbound (Leave Belmont Center, Arrive Concord Ave. at Huron Ave., Arrive Harvard Station) and Outbound (Leave Harvard Station, Arrive Concord Ave. at Huron Ave., Arrive Belmont Center). Rows show departure times from 5:37A to 1:20.

63 TOTAL TRIPS

75

Sunday

Table with columns: Inbound (Leave Belmont Center, Arrive Concord Ave. at Huron Ave., Arrive Harvard Station) and Outbound (Leave Harvard Station, Arrive Concord Ave. at Huron Ave., Arrive Belmont Center). Rows show departure times from 6:35A to 11:50.

a - Route 75 trip
b - to/from Aberdeen Ave & Mt. Auburn St
w - Waits for last train to arrive at Harvard Station.

All buses are accessible to persons with disabilities

Fare table with columns: Fare, Local Bus, Bus + Bus, Subway, Bus + Subway. Rows include CharlieCard, CharlieTicket, Cash-on-Board, Student/Youth, Senior/TAP.

FREE FARES: Children 11 and under ride free when accompanied by a paying customer; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.



Information in this timetable is subject to change without notice. Traffic conditions and weather can affect running time.

Effective Aug 29, 2021

**Schedule Change**

**78**

**Arlmont Village - Harvard Station**



[mbta.com](http://mbta.com)  
617-222-3200  
617-222-5146 (TTY)  
**Lost & Found**  
617-222-5560





78 Weekday					
Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Harvard Square	Leave Harvard Square	Arrive Pleasant Street	Arrive Arlmont Village
5:35A	5:43A	5:59A	5:50A	6:02A	6:16A
6:00	6:08	6:24	6:05	6:17	6:31
6:25	6:33	6:49	6:30	6:42	6:56
6:50	6:58	7:20	6:55	7:08	7:22
7:15	7:24	7:46	7:27	7:41	7:55
7:40	7:49	8:11	7:52	8:06	8:20
8:05	8:14	8:36	8:20	8:34	8:48
8:30	8:39	9:00	8:50	9:04	9:18
9:00	9:08	9:25	9:15	9:28	9:42
9:30	9:38	9:55	9:48	10:01	10:15
9:49	9:57	10:14	10:18	10:31	10:45
10:19	10:27	10:44	10:51	11:04	11:18
10:49	10:57	11:14	11:21	11:34	11:48
11:22	11:30	11:47	11:54	12:07P	12:21P
11:52	12:00N	12:17P			
			12:24P	12:37	12:51
12:25P	12:33	12:50	12:57	1:10	1:24
12:55	1:03	1:20	1:27	1:40	1:54
1:28	1:36	1:53	2:00	2:13	2:27
2:01	2:09	2:26	2:30	2:49	3:03
2:31	2:39	3:00	3:10	3:29	3:44
3:11	3:19	3:40	3:40	3:59	4:15
3:51	3:59	4:20	4:10	4:30	4:46
4:30	4:38	4:59	4:40	5:00	5:16
5:05	5:13	5:35	5:10	5:30	5:46
5:35	5:43	6:03	5:40	6:00	6:16
6:05	6:13	6:31	6:10	6:30	6:46
6:30	6:38	6:56	6:50	7:03	7:18
6:55	7:03	7:20	7:25	7:38	7:53
7:25	7:33	7:50	7:55	8:08	8:23
8:03	8:11	8:28	8:20	8:33	8:48
8:30	8:38	8:55	8:50	9:03	9:18
9:05	9:13	9:29	9:35	9:47	10:01
10:05	10:13	10:27	10:35	10:46	11:00
11:05	11:13	11:27	11:35	11:46	12:00M
12:04A	12:12A	12:26A	12:30A	12:41A	12:55


**35 TOTAL WEEKDAY TRIPS**

78 Saturday					
Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Harvard Square	Leave Harvard Square	Arrive Pleasant Street	Arrive Arlmont Village
6:55A	7:02A	7:17A	6:25A	6:37A	6:49A
7:50	7:57	8:12	7:20	7:32	7:44
8:50	8:57	9:12	8:16	8:28	8:40
9:50	9:57	10:15	9:20	9:32	9:44
10:50	10:57	11:16	10:18	10:33	10:46
11:52	12:00N	12:19P	11:20	11:35	11:48
12:56P	1:04	1:23	12:25P	12:40P	12:53P
1:59	2:07	2:26	1:27	1:42	1:55
3:00	3:08	3:27	2:29	2:44	2:57
4:00	4:08	4:27	3:30	3:45	3:58
5:00	5:08	5:27	4:30	4:45	4:58
6:00	6:08	6:26	5:30	5:44	5:57
7:00	7:08	7:26	6:30	6:44	6:57
8:00	8:08	8:26	7:30	7:44	7:57
9:00	9:08	9:26	8:30	8:44	8:57
10:00	10:07	10:25	9:30	9:44	9:57
11:05	11:12	11:30	10:30	10:44	10:57
12:05A	12:12A	12:27A	11:35	11:47	12:00M
			12:35A	12:47A	1:00

**18 TOTAL TRIPS**

78 Sunday					
Inbound			Outbound		
Leave Arlmont Village	Arrive Pleasant Street	Arrive Harvard Square	Leave Harvard Square	Arrive Pleasant Street	Arrive Arlmont Village
6:40A	6:48A	7:01A	6:10A	6:21A	6:33A
7:35	7:43	7:56	7:05	7:16	7:28
8:35	8:43	8:59	8:05	8:16	8:28
9:35	9:43	9:59	9:05	9:16	9:28
10:35	10:42	11:01	10:05	10:19	10:31
11:35	11:42	12:01P	11:05	11:19	11:31
12:37P	12:44P	1:03	12:07P	12:23P	12:35P
1:39	1:46	2:05	1:08	1:24	1:36
2:41	2:48	3:06	2:10	2:26	2:38
3:43	3:50	4:08	3:11	3:27	3:39
4:44	4:51	5:09	4:12	4:26	4:38
5:45	5:52	6:10	5:13	5:27	5:39
6:45	6:52	7:08	6:13	6:27	6:39
7:45	7:52	8:06	7:10	7:24	7:36
8:45	8:52	9:06	8:10	8:23	8:35
9:45	9:52	10:06	9:10	9:23	9:35
10:45	10:52	11:06	10:10	10:23	10:35
11:45	11:52	12:06A	11:10	11:23	11:35
12:40A	12:47A	1:01	12:10A	12:23A	12:35A

**19 TOTAL TRIPS**

 All buses are accessible to persons with disabilities

Fare	Local Bus	Bus + Bus	Subway	Bus + Subway
CharlieCard	\$1.70	\$1.70	\$2.40	\$2.40
CharlieTicket	\$1.70	\$1.70	\$2.40	\$4.10*
Cash-on-Board	\$1.70	\$3.40	\$2.40	\$4.10
Student/Youth**	\$0.85	\$0.85	\$1.10	\$1.10
Senior/TAP***	\$0.85	\$0.85	\$1.10	\$1.10

**FREE FARES:** Children 11 and under ride free when accompanied by a paying customer; Blind Access CharlieCard holders ride free and if using a guide, the guide rides free.  
 \* Transfers Subway to Silver Line SL4 or SL5 pay \$2.40  
 \*\* Requires Student CharlieCard or Youth CharlieCard. Student CharlieCards available to students through participating middle and high schools. Youth CharlieCards available through community partners across Greater Boston.  
 \*\*\* Requires Senior/TAP CharlieCard, available to Medicare cardholders, seniors 65+, and persons with disabilities.

**Saturday**  
 Christmas Eve; NY Eve; MLK Day; President's Day  
**Sunday**  
 Labor Day; Thanksgiving; Christmas Day; NY Day

# MOBILE SHUTTLE TRACKER

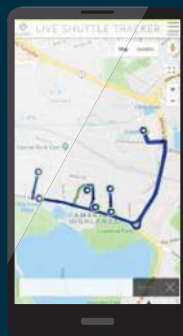
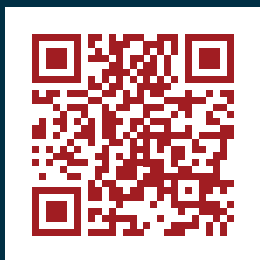


Download the App



Ride Systems  
Ride Systems

- > Download the free mobile app, available in Google Play and the App Store.
- > Select 'Alewife Connect' for the Transit Agency.
- > See the route and your nearest stop.
- > Access the schedule on your phone.



Track the Shuttle Online  
[AlewifeConnect.com](http://AlewifeConnect.com)

## AlewifeTMA

[AlewifeTMA.org](http://AlewifeTMA.org)



### QUESTIONS & FEEDBACK

[Director@AlewifeTMA.org](mailto:Director@AlewifeTMA.org)

Alewife TMA managed by  
 **TransAction Associates**  
[TransActionAssoc.com](http://TransActionAssoc.com)

Shuttles operated by  
 **TransAction Corporate Shuttles**  
[tcshuttles.com](http://tcshuttles.com) | 781.895.1100

Updated as of June 23, 2020

## Alewife Station Shuttle Schedule



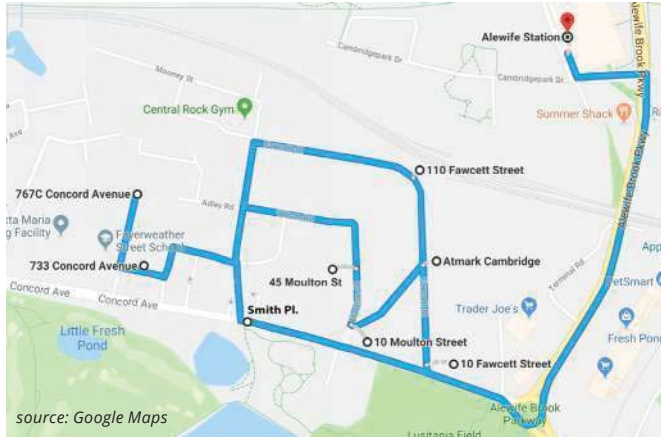
### Shuttle Stops:

<i>Alewife Station</i>	<i>45 Moulton St</i>	<i>733 Concord Ave</i>
<i>10 Fawcett St</i>	<i>75 Moulton St</i>	<i>MBTA Bus Stop at Smith Pl</i>
<i>110 Fawcett St</i>	<i>10 Wilson Rd</i>	
<i>10 Moulton St</i>	<i>767C Concord Ave</i>	<i>80 Fawcett St</i>

## AlewifeTMA

[AlewifeTMA.org](http://AlewifeTMA.org)

# Shuttle Route



# Morning Commute



Passengers boarding at Alewife Station, please tell the driver which of the below stops is your final destination.

PICKUP ONLY MBTA Smith Pl	PICKUP ONLY 80 Fawcett St	Alewife Station
6:43	6:45	7:00
7:09	7:10	7:30
7:39	7:40	8:00
8:09	8:10	8:30
8:39	8:40	9:00
9:09	9:10	9:30
9:39	9:40	10:00
10:09	10:10	10:20*

10 Fawcett St    75 Moulton St    MBTA Bus Stop at Smith Pl  
 110 Fawcett St    10 Wilson Rd  
 10 Moulton St    767C Concord Ave    80 Fawcett St  
 45 Moulton St    733 Concord Ave

# Rider Guide

8 TOTAL TRIPS

Finch passengers connect to the shuttle at the MBTA bus stops at Smith Pl.

AM pickup: on the opposite side of Concord Ave from Finch (heading in the direction of Alewife Station).

PM stop: same side of the road as Burger King.

# Afternoon Commute

## Morning Commute: Shuttle Pickups & Stops

In the morning, the Shuttle typically travels directly from Finch (MBTA Bus Stop at Smith Pl) and Atmark Apartments (80 Fawcett St) to Alewife Station.

Call 781-895-1100 to request an AM pickup from another stop location to go to Alewife Station.

7 TOTAL TRIPS

Afternoon Commute: 110 Fawcett is Upon Request Only, Call 781-895-1100.

Shuttle is not able to wait for late riders. Please be outside 5 minutes before listed time.

All scheduled times are approximate due to traffic and weather conditions in the area.

DROPOFF ONLY 80 Fawcett St	MBTA Smith Pl	767C Concord Ave	733 Concord Ave	10 Wilson Rd	75 Moulton St	45 Moulton St	10 Moulton St	PICKUP ONLY 80 Fawcett St	10 Fawcett St	Alewife Station
--	--	3:00	3:00	3:01	3:01	3:02	3:04	3:08	3:09	3:30
3:40	3:41	3:42	3:42	3:43	3:43	3:44	3:46	3:50	3:51	4:02
4:12	4:13	4:14	4:14	4:15	4:15	4:16	4:18	4:22	4:23	4:34
4:44	4:45	4:46	4:46	4:47	4:47	4:48	4:50	4:54	4:55	5:06
5:16	5:17	5:18	5:18	5:19	5:19	5:20	5:22	5:26	5:27	5:38
5:48	5:49	5:50	5:50	5:51	5:51	5:52	5:54	5:58	5:59	6:10
6:20	6:21	6:22	6:22	6:23	6:23	6:24	6:26	6:30	6:31	6:42
7:02	7:03	7:04	7:04	7:05	7:05	7:06	7:08	7:12	7:13	7:24

No shuttle service on weekends and the following Holidays:

- New Year's Day
- President's Day
- Memorial Day
- 4<sup>th</sup> of July
- Labor Day
- Thanksgiving (and the day after)
- Christmas Day

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TCSshuttles.com | 781.895.1100

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## Appendix C. Net Zero Narrative

# Fifteen Wilson

(aka 40 Smith Place / 45 & 55 Wilson Road)

Cambridge, MA

Net Zero Narrative

Reference:

Revision 2 | February 16, 2022

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 285297

**Arup USA, Inc.**  
60 State Street  
Boston, MA 02109  
USA  
[arup.com](http://arup.com)

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Figure 3: HVAC Analysis GHG Results

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# 1. Project Profile

## 1.1 Development Characteristics

Table 1: Development Characteristics

Lot Area [ft <sup>2</sup> ]	113,246
Existing Land Use(s) and Gross Floor Area [ft <sup>2</sup> ], by use	58,696, Warehouse/Office buildings
Proposed Land Use(s) and Gross Floor Area [ft <sup>2</sup> ], by use	267,430, Lab/Office building
Proposed Building Height(s) [ft and stories]	69' 7", 4 stories
Proposed Dwelling Units [#]	0
Proposed Open Space [ft <sup>2</sup> ]	32,501 (28.7%)
Proposed Parking Spaces [#]	323, below grade
Proposed Bicycle Parking Spaces (Long-term and Short-term)	88/20

## 1.2 Green Building Rating System

Table 2: Selected Rating System Details

LEED (Leadership in Energy & Environmental Design) – U.S. Green Building Council			
Rating System & Version:	LEED v4	Seeking Certification?	Yes
Rating Level:	Gold	# of Points:	60

## 2. Proposed Project Design Characteristics

### 2.1 Building Envelope

The building envelope will at a minimum meet the performance criteria described in the tables below. Therefore, the curtain wall assembly will use a thermally broken system to minimize conduction. Similarly, there is an overall trend of higher SHGC and lower energy usage, which suggests the overall energy is very heating dominated. Further study into each façade will be completed during schematic design to determine the ideal solar gain on each façade to the finalize the glazing selection accounting for both summer and winter based on glazing orientation.

#### Assembly Descriptions

**Table 3: Assembly Descriptions**

<b>Roof:</b>	EPDM (90mil) atop tapered rigid insulation
<b>Foundation:</b>	Framed structural hydrostatic slab
<b>Exterior Walls:</b>	Cold-formed stud wall with exterior glass (Spandrel)
<b>Windows:</b>	Triple-glazed with Argon fill curtain wall with Shadow Box
<b>Window-to-Wall Ratio</b>	Approximately 35%

#### Envelope Performance

**Table 4: Envelope Performance**

	MA Stretch Code Baseline		Proposed	
	Area [ft <sup>2</sup> ]	U-Value	Area [ft <sup>2</sup> ]	U-Value
<b>Window</b>	33,721	0.42	33,721	0.36
<b>Wall</b>	62,626	0.055	62,626	0.055
<b>Roof</b>	69,126	0.032	69,126	0.032

\*Note the areas above are derived from the energy model.

#### Commissioning Process

Commissioning agents have not yet been contracted, but plan to be during schematic design. However, the BECx agent will adhere to the BECx process summarized below as required by code and LEED. The project will achieve LEED credit EAc1 Option 2. The components to be tested and the corresponding test criteria include:

- Waterproofing of below-grade construction including foundations, basements, and slab-on-grade that functions as part of the exterior enclosure system.
- Superstructure floor and roof construction that functions as part of the exterior enclosure system.
- Exterior enclosure construction, above grade, including exterior opaque walls, windows, and doors including sheathing, framing, and insulation, and interior finish materials attached to the exterior wall.
- Roofing, including roofing system, roofing insulation, and skylights, hatches, and other roof openings.

**Table 5: Envelope Commissioning Test Criteria**

<i>Component</i>	<i>Test Criteria</i>
<i>Fenestration &amp; Curtain Wall</i>	Any significant leakage identified will be assessed to determine if a specific cause can be identified and addressed to prevent during full-scale installation.
	Maximum air leakage of 0.10 cfm/ft at an air pressure differential of 6.24 psf.
	No uncontrolled water leakage when tested under a pressure difference of 8.0 lbf/sq. ft.
<i>Air Barrier Assemblies</i>	No major air leaks. A major leak is defined as air and smoke are visible and easily detectable by hand within one inch of the leak location(s). Pass/fail criteria shall be no bubbles observed in the leak detection liquid at 1.57 psf.
	<i>Sealant</i> Sealant pull testing shall be performed on sealant joints installed through the building enclosure. Pass/fail criteria shall require all sealants fail cohesively within themselves at or above the minimum manufacturer’s anticipated elongation percentage.
<i>Dynamic Water</i>	575 Pa (12.0 psf). Failure Criteria will need to be determined prior to testing.
<i>Dynamic Water</i>	Water infiltration
<i>Whole Building Performance</i>	LEED NC

## 2.2 Building Mechanical Systems

### Systems Descriptions

**Table 6: Mechanical Systems Summary**

Space Heating	Condensing boilers
Space Cooling	Water cooling chillers with water-side heat recovery
Heat Rejection	Cooling towers
Pumps & Auxiliary	Distribution pumping for HHW and CHW
Ventilation	Run-around energy recovery (Konvekta or similar high effectiveness)
Domestic Hot Water	TBD between separate condensing water heater loop or served by HHW loop
Interior Lighting	Lighting designed to exceed the efficiency requirements prescribed by Massachusetts Stretch Energy Code 780 CMR Chapter 13 and MIT Design Standards, all LED
Exterior Lighting	Lighting designed to exceed the efficiency requirements prescribed by Massachusetts Stretch Energy Code 780 CMR Chapter 13 and MIT Design Standards, all LED and timeclock controlled
Other Equipment	[if applicable]

### Commissioning Process

Commissioning agents have not yet been contracted, but plan to be during schematic design. However, the BECx agent will adhere to the BECx process summarized below as required by code and LEED. The project will achieve LEED credit EAc1 Option 1 Path 2. The HVAC commissioning process will cover the following components and phases, with all pre-functional testing, functional testing, and reporting to be carried out by a dedicated commissioning agent (CxA).

**Table 7: Mechanical Commissioning Test Criteria**

<b>Component / Phase</b>	<b>Scope</b>
<i>Air handling units (Exhaust and outside air)</i>	<ul style="list-style-type: none"> <li>• Controls</li> <li>• Associated supply, transfer, return and exhaust fans</li> <li>• Terminal units</li> </ul>
<i>Supply and exhaust fans</i>	<ul style="list-style-type: none"> <li>• Controls</li> <li>• Terminal equipment</li> </ul>
<i>Terminal units</i>	<ul style="list-style-type: none"> <li>• Constant volume and VAV boxes w/and w/o reheat coils (supply and exhaust)</li> <li>• Laboratory supply and exhaust flow controls</li> <li>• Fan coil units (FCU, FCW, FCH, FCA)</li> <li>• Radiation (FTR)</li> <li>• Unit heaters (UH, CUH, RR, PR)</li> </ul>

<b>Component / Phase</b>	<b>Scope</b>
<i>Chilled water systems</i>	<ul style="list-style-type: none"> <li>• In duct heating coils (RHC)</li> <li>• Return air systems</li> <li>• Heat Exchanger and Pumps (HW)</li> </ul>
	<ul style="list-style-type: none"> <li>• Chilled water</li> <li>• Condenser Water</li> <li>• Pumps</li> <li>• VFDs</li> <li>• Distribution Equipment (AHU, AC, FCU, FCW, FCH, FCA)</li> </ul>
<i>Hot water systems</i>	<ul style="list-style-type: none"> <li>• Space heating</li> <li>• Heat exchangers</li> <li>• Pumps, AD, ET</li> <li>• VFD</li> <li>• Distribution Equipment (UH, CUH, RR, PR, RHC)</li> </ul>
<i>Control systems</i>	<ul style="list-style-type: none"> <li>• Building automation system (BAS)</li> <li>• Fume hood control &amp; laboratory control</li> <li>• HVAC and Exhaust systems</li> <li>• AHU and conference room CO2 sensing and control</li> <li>• Energy meters</li> </ul>
<i>Testing and balancing (TAB) phase</i>	<ul style="list-style-type: none"> <li>• TAB water-side</li> <li>• TAB air-side</li> <li>• TAB equipment and systems</li> <li>• TAB plumbing</li> </ul>

## 3. Building Energy Performance Measures

### 3.1 Overview

**Table 8: Energy Performance Measure Descriptions**

<b>Land Uses:</b>	<p>The project is built on a site with no greenfield area. Greenspace with a variety of native or adaptive vegetation and soil restoration will be provided on at least 25% of the site area for 2 points.</p> <p>The project will provide a minimum of 30% of open space within the site area. A minimum of 25% of that outdoor space will be vegetated. The outdoor space will be physically accessible and includes pedestrian-oriented paving with physical site elements that accommodate outdoor social activities.</p>
<b>Building Orientation and Massing:</b>	<p>The general building massing is along an ideal east-west axis, however for architectural reasons there is a north-south oriented wing on the west. Solar analysis is being performed to reduce loads and energy and maximize thermal comfort with glass selection and shading. The orientation is somewhat constrained by the site.</p>
<b>Envelope Systems:</b>	<p>Tripled-glazed argon-filled curtain walls with thermally broken frames. Spandrel areas are being optimized for views, daylighting, occupant comfort, and energy.</p>
<b>Mechanical Systems:</b>	<p>The base scheme includes air-side energy recovery and a heat recovery chiller.</p> <p>We are studying an option for a partially electrified system with a heat pump sized for most of the normal heating loads in combination with condensing boilers.</p>
<b>Renewable Energy Systems:</b>	<p>Solar photovoltaic systems are under consideration as applicable in available roof space. The electrical systems will be designed to be solar-ready.</p>
<b>District-Wide Energy Systems:</b>	N/A

### 3.2 Integrative Design Process

Sustainability focused workshop have been led by the sustainability consultant (Jacobs) and included participation from the owner (The Davis Companies), architects (Jacobs), MEP engineers (Arup), and Civil engineers (VHB). Sustainability discussions are also brought up at weekly design collaboration meetings consisting of the same project team and have fed into the development of the architectural and MEP basis of design reports. As this is a core and shell project, input is limited to the structure and building level systems.

### 3.3 Green Building Incentive Program Assistance

No incentive programs have officially been engaged for pursuit, however the project team is discussing MassSave, and EverSource will be engaged during schematic design.

## 4. Net Zero Scenario Transition

This building is being designed to maximize future potential for electrification and net zero GHG operation. Therefore, it is expected that only an HVAC retrofit would be necessary to transition in the future, with no additional adjustments to the massing, façade, lighting, etc. – pending any unforeseeable advances in technologies.

The electrical service and dedicated mechanical bus riser have been sized to accommodate a future ‘all-electric’ mechanical system. The service/bus riser/switchboard will be sized with placeholders sufficient to install additional capacity to handle the future electric building load. The circuit breaker in the switchboard can be adjusted to mechanical equipment installation in the future as needed.

**Table 9: Net Zero Transition Steps**

	<b>Net Zero Condition</b>	<b>Transition Process</b>
<b>Building Envelope:</b>	As constructed	The building is being designed with a high-performance envelope that will be maintained throughout its useful life.  It is not anticipated that the building envelope will play a significant role in transitioning to Net Zero.
<b>HVAC Systems:</b>	Conversion to heat pumps	Standard replacement, ideally at equipment end of life to reduce embodied carbon waste.
<b>Domestic Hot Water:</b>	Conversion to heat pumps	Standard replacement, ideally at equipment end of life to reduce embodied carbon waste
<b>Lighting:</b>	As constructed	None expected
<b>Renewable Energy Systems:</b>	The roof is being designed to be PV-ready roof. PV analysis identified that a maximum 270 kW system could be installed which is a small percentage of the predicted annual energy consumption of the highly energy efficient building.	Offsite renewable purchases should be increased as needed as the building loads increase (or decrease)



## 5. Energy Systems Comparison

### 5.1 Overview

A parametric series of reduced fossil fuel and no fossil fuel HVAC options have been conducted. The BOD system is effectively a higher efficiency version of an ASHRAE/IECC/Code baseline system of a water-cooled chiller plant and a condensing boiler plant with the inclusion of air-side and water-side heat recovery. The reduced carbon options are as follows:

- **Partial Electrification:** an air-source heat pump sized to approximately 30% of the boiler capacity will serve the majority of the normal winter heating needs with the gas boilers providing heating on a design winter day.
- **Full Electrification Option 1:** The entire boiler plant is replaced with an air-source heat pump plant
- **Full Electrification Option 2:** The entire boiler and chiller plant is replaced with a bank of reversible heat pumps to serve both needs.

### 5.2 Assumptions

	Included in Analysis?	Describe the systems for which this was analyzed or explain why it was not included in the analysis:
<i>Solar Photovoltaics</i>	Yes	A solar feasibility analysis has been completed to determine the maximum potential array size. A costing exercise will be completed in Schematic Design.
<i>Solar Hot Water</i>	No	Solar hot water is more appropriate for residential buildings with high DHW requirements, and so was not considered on this project. Additionally, modern PV pricing and efficiency makes it more attractive than solar hot water on the same roof or façade area in most cases.
<i>Ground-Source Heat Pumps</i>	No	The design team has discussed and does not have interest in this system based upon the costs and civil requirements.
<i>Water-Source Heat Pumps</i>	No	Water-source heat pumps have not yet been directly modeled, however will be considered in more detail during schematic design to determine if they are more attractive than air-source heat pumps due to their higher efficiency.
<i>Air-Source Heat Pumps</i>	Yes	Air source heat pumps have been analyzed as a potential electrified replacement for condensing boilers.
<i>Non-Carbon Fuel District Energy</i>	No	No such systems are available nearby
<i>Other Non-Carbon-Fuel Systems</i>	NA	NA

### 5.3 Non-Carbon-Fuel Scenario

The baseline BOD system remains, however the partial electrification option will be analyzed to determine if it has a life cycle cost benefit and is therefore a strategy that The Davis Companies want to pursue. The full

electrification option 1 also remains viable, however the option 2 is not likely to be adopted due to its reduction in cooling efficiency.

Option 1 (preferred) maintains the BOD cooling system of a water-cooled chiller plant but replaces the condensing boiler plant with heating only heat pumps for space heating and DHW.

Option 2 replaces the entire plant with a bank of reversible heat pumps, minimizing plant space, but reducing the overall cooling efficiency.

## 5.4 Solar-Ready Roof Assessment

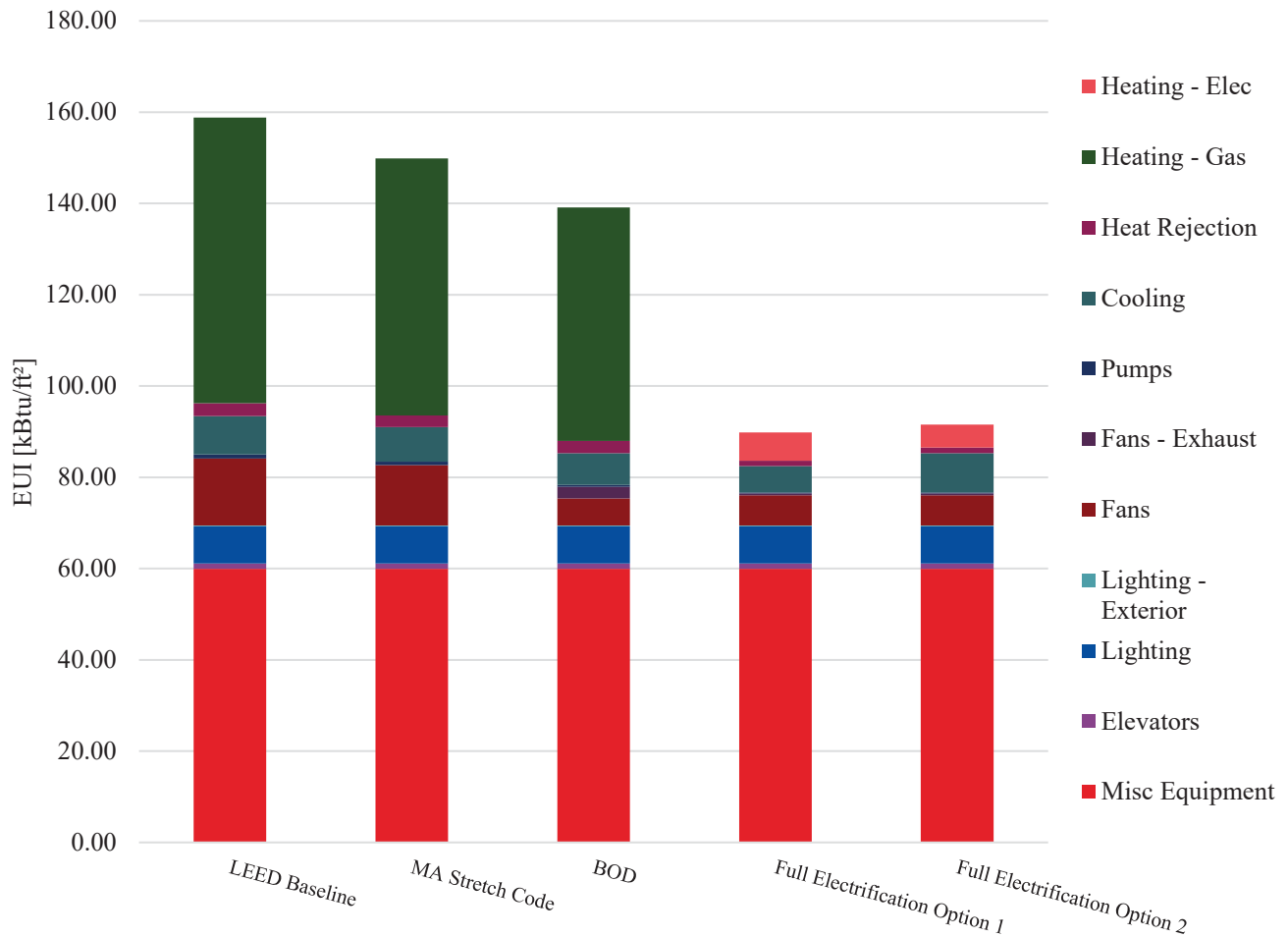
The roof consists of a mechanical penthouse in the center with open roof space surrounding it on the perimeter. Most of this perimeter roof space is required to be green roof, and so there is little potential for solar. However approximately 50% of the mechanical penthouse roof could potentially be used for on-site renewable generation. This represents ~20,000ft<sup>2</sup> of area which would roughly generate 360 MWh of electricity per year is designed well. The roof will be at minimum design as solar-ready with appropriate structural capacity, conduit runs, and interconnection breakers. Determination of incorporating a PV system during initial construction is pending a LCCA that will be conducted during schematic design.

**Table 10: Rooftop PV Assessment**

<b>Total Roof Area [ft<sup>2</sup>]</b>	69,126
<b>Unshaded Roof Area [ft<sup>2</sup>]</b>	~40,000
<b>Structural Support</b>	The majority of the unshaded roof space consists of the mechanical penthouse roof
<b>Electrical Infrastructure</b>	Conduit and interconnection breakers to be provided in main electrical switchgear.
<b>Other Roof Appurtenances</b>	Most of the center of the roof consists of a mechanical penthouse with its own roof. The remaining perimeter of the primary roof is earmarked for at least 90% green roof
<b>Solar-Ready Roof Area [ft<sup>2</sup>]</b>	~20,000
<b>Capacity of Solar Array</b>	270 kW/360 MWh/year
<b>Financial Incentives</b>	TBD
<b>Cost Feasibility</b>	LCCA will be completed during schematic design

## 5.5 Results

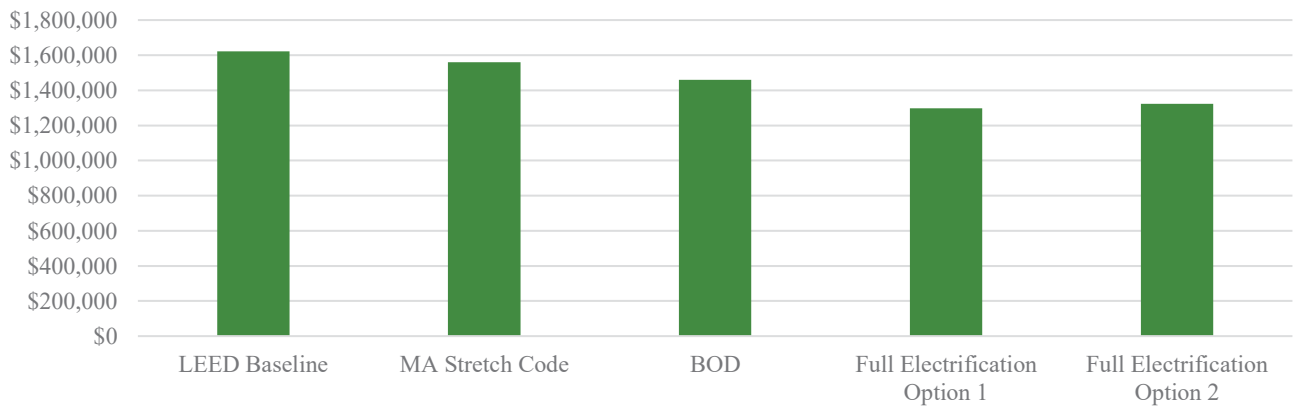
The simulation results of the HVAC options show a clear benefit of efficiency simply from adhering to the MA stretch code, and further by increasing system efficiency with air and water-side heat recovery. The electrification options each show a small subsequent reduction in total energy by replacing combustion equipment with heat pumps.



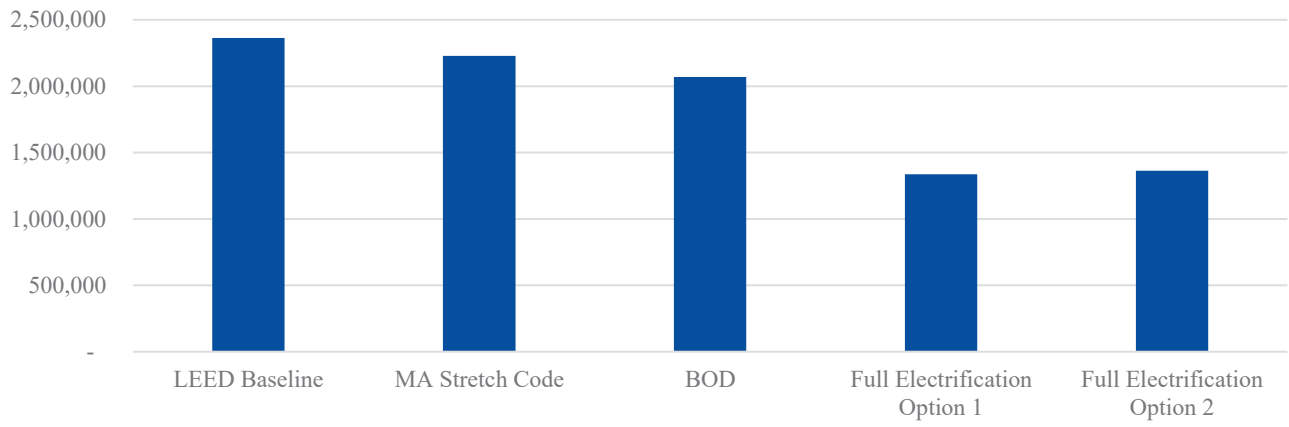
**Figure 1: HVAC Analysis Energy Results**

However, the fully electrified options both result in an increase in energy cost and associated GHG (based on current utility estimates and emissions factors), suggesting that a partially electrified solution may be optimum initially.

This of course ignores the source of all electricity. Were 100% of the electricity to be met with onsite PV and purchased renewable energy credits, the emissions would drop to zero for both fully electrified options, though the cost would likely increase.



**Figure 2: HVAC Analysis Cost Results**



**Figure 3: HVAC Analysis GHG Results**

## 6. Anticipated Energy Loads and Greenhouse Gas Emissions

### 6.1 Assumptions

This initial phase of concept level modeling was completed in alignment with ASHRAE 209 using IES-VE 2021 software. Specifically, the massing has been incorporated following the architectural modeling to date and is split floor by floor with core and 15ft perimeter zones by orientation. The model uses a ‘whole building’ approach, assigning thermal properties evenly throughout. These thermal properties are taken from MA code and assume a split of 60% lab, 40% office.

### 6.2 Annual Projected Energy Consumption and Greenhouse Gas (GHG) Emissions

This simulation summary compares the pathway from the MA stretch code, to the BOD, and finally to a potential future NZE and fully electrified buildings. In this analysis, the Future NZE scenario is assumed to be a combination of an electrified non-carbon-fuel design with additional on site and purchased renewable energy.

This analysis also serves as a preliminary LEED assessment for the Optimize Energy Performance Credit. The average energy cost savings is 10%, GHG savings is 9%, with 12% overall energy savings. Based upon these results and the early nature of the project, we anticipate 5 ‘yes’ points in this category, 4 ‘maybe yes’, 3 ‘maybe no’ and 6 ‘definitely no’ points.

The future NZE option in the table below assumes a REC cost of \$35/MWh, and an annual total of \$238,383.

**Table 11: Summary Table**

	MA Stretch Code Baseline Building		Proposed Building		Future NZE Scenario		Non-Carbon-Fuel Scenario	
	kWh	% of Total	kWh	% of Total	kWh	% of Total	kWh	% of Total
Space Heating	4,517,258	38%	4,101,972	37%	496,267	7%	496,267	7%
Space Cooling	608,951	5%	559,649	5%	464,515	6%	464,515	6%
Heat Rejection	202,017	2%	212,906	2%	93,569	1%	93,569	1%
Pumps & Aux.	61,469	1%	33,558	0%	16,436	0%	16,436	0%
Ventilation (Fans)	1,060,585	9%	475,373	4%	532,369	7%	532,369	7%
Domestic Hot Water	-	0%	-	0%	-	0%	-	0%
Interior Lighting	655,603	5%	655,603	6%	655,603	9%	655,603	9%
Exterior Lighting	11,347	0%	11,347	0%	11,347	0%	11,347	0%
Misc. Equipment	4,900,831	41%	4,900,831	45%	4,900,831	68%	4,900,831	68%
	kBTU/sf, kBTU, \$US		kBTU/sf, kBTU, \$US	% Reduction from Baseline	kBTU/sf, kBTU, \$US	% Reduction from Baseline	kBTU/sf, kBTU, \$US	% Reduction from Baseline
Site EUI	149.9		136.6	9%	89.4	40%	89.4	40%
Source EUI	321.1		292.9	9%	250.4	22%	250.4	22%
Total Energy Use	41,007,327		37,367,182	9%	24,468,250	40%	24,468,250	40%
Total Energy Cost	\$1,621,174		\$1,459,262	10%	\$1,535,767	5%	\$1,297,384	20%
	kWh	% Total Energy	kWh	% Total Energy	kWh	% Total Energy	kWh	% Total Energy
On-Site Renewable Energy Generation	0	0%	0	0%	360,000	5%	0	0%
Off-Site Renewable Energy Generation	0	0%	0	0%	6,810,936	95%	0	0%
	Tons CO2[/sf]		Tons CO2[/sf]	% Reduction from Baseline				
GHG Emissions	1,181		1,035					
GHG Emissions per SF	0.004		0.004	12%				

---

## Appendix D. Green Building Database Project Information

Item	Unit	Project Information
ASHRAE Version (Stretch Code standards)	Standard-Year	2013
Improved energy performance of baseline standard used compared to ASHRAE standard 90.1-2013	%	10%
Energy Cost Savings (LEED project - compared to baseline reported in EA)	%	10%
Energy Use Savings (LEED project - reduction compared to baseline reported in EA)	%	12%
Total energy cost/year	\$	1,459,262
Site EUI (Stretch Code standards)	kBTU/SF-yr	139
Source EUI (Stretch Code standards)	kBTU/SF-yr	300
GHG intensity	kg CO2/sf	3
GHG emissions reduction proposed	%	12%
GHG emissions total	mtCO2e	1,035
Solar Ready	Yes / No	Yes
Solar Capacity	kW	270
Solar (renewable energy cost) contribution	%	3%
Solar Ready (Roof area)	SF	20,000
Any Green Roof (Type:extensive or intensive)	yes / No (SF)	Yes
Any Bio-Solar Roof (using green roof and solar)	yes/No (SF)	No
Building Envelope commissioning	yes or no	Yes
District energy	yes or no	No
Fossil Fuel use	yes or no	Yes
Envelope Commissining used	Yes / No	Yes
Window-to-wall	%	35%
Triple-glazing used	Yes / No	Yes
U value of glazing used	u value	0.36
VLT for vertical glazing at ground level uses	%	NFRC 300
Water use reduction below LEED baseline (Indoor)	%	40%
Water use reduction below LEED baseline (outdoor)	%	75%
Lighting design/plug load reduction	%	0%
Number of EV ready spaces	% of total paking	25%
C & D waste diverted from landfill	%	75% targeted
LEED certifiability	Platinum, gold, or silver	Gold
LEED Credit points (number pursued or verified)	points	61 minimum
Life-cycle/embodied carbon assesement tools used	Yes/Not yet/Not used	Not Yet
Total square footage	sf	280,046
# Residential units (if residential use included)	units	0
Home Energy Rating System (HERS) (Residential Projects)	HERS Score	N/A



---

## Appendix E. Cool Factor Score Sheet

Project Address 15 Wilson Road	Special Permit Number PB-XXX	Total Lot Area (SF) 113246	
Applicant Name The Davis Companies, on behalf of Quad 40 Smith Place, LLC	Phone Number 617-936-4812	Open Space Requirement (%) 20%	
Applicant Contact / Address 125 High Street, Suite 2111, Boston, MA 02110	Email Address GMcGill@TheDavisCompanies.com	Includes High SRI Roof <input checked="" type="checkbox"/> Yes	SRI Value 82
Project Description Sample run to demonstrate how the form works.		Result Pass	

Enter minimum required open space ratio. If the ratio is less than 20%, enter 20 here.

Low slope roofs (i.e. ≤ 2:12) must have a minimum SRI of 82. Steep slope roofs (i.e. > 2:12) must have a minimum SRI of 39.

		Outside 20' of PROW	Value Factor		Within 20' of PROW	Value Factor	Contributing Area	
<b>Trees</b> Enter the number of trees in each category. Count each tree only once on this form.	<b>Preserved Existing Trees</b>							
	A1	Understory tree currently <10' canopy spread	0	0.80	+	0	1.60	-
	A2	Understory tree currently >10' canopy spread	0	1.00	+	0	2.00	-
	A3	Canopy tree currently <15' canopy spread	0	0.80	+	0	1.60	-
	A4	Canopy tree currently between 15' and 25' canopy spread	0	1.00	+	0	2.00	-
	A5	Canopy tree currently >25' canopy spread	0	1.20	+	0	2.40	-
	<b>New or Transplanted Trees</b>							
A6	Understory tree	13	0.60	+	0	1.20	1,170	
A7	Canopy tree	43	0.70	+	25	1.40	45,570	
<b>Planting Areas</b> Enter area in square feet of each component in the box provided	B1	Lawn	8583	0.30	+	0	0.60	2,575
	B2	Low Planting	13719	0.40	+	0	0.80	5,488
	B3	Planting	10804	0.50	+	0	1.00	5,402
<b>Green Roofs &amp; Facades</b> For definitions, see reference document.	C1	Green Façade	0	0.10	+	0	0.20	-
	C2	Living Wall	0	0.30	+	0	0.60	-
	C3	Green Roof	0	0.30	+	0	0.60	-
	C4	Short Intensive Green Roof	27845	0.50	+	0	1.00	13,923
	C5	Intensive Green Roof	0	0.60	+	0	1.20	-
<b>Paving &amp; Structures</b>	D1	High-SRI Roof	Required	N/A				
	D2	High-SRI Paving	18851	0.1				1,885
	D3	High-SRI Shade Structure	0	0.2	+	0	0.40	-
<b>Project Summary</b>	Portion of lot area utilizing green strategies . . . . .		65%		Total Contributing Area		76,012	
	Portion of score from green strategies . . . . .		98%		Total Area Goal		22,649	
	Portion of score from trees . . . . .		61%		<b>COOL FACTOR SCORE</b>		<b>3.36</b>	
	Portion of score contributing to public realm cooling . . . . .		32%					

When entering strategies that are within 20' of the public right of way (column L), do not also enter them in column H.

High-SRI roofs are a prerequisite of the Cool Factor and therefore are not assigned a point value.

If your project scores 1 or above, you have successfully met the requirements of the Cool Factor.