



City of Cambridge  
Department of Public Works

*Owen O'Riordan, Commissioner*

147 Hampshire Street  
Cambridge, MA 02139  
theworks@cambridgema.gov

Voice: 617 349 4800  
TDD: 617 499 9924

August 29, 2017

TO: Planning Board

FROM: Katherine F. Watkins, PE  
City Engineer

**RE: 55 Wheeler Street Special Permit Application**

We are in receipt of the Planning Board Special Permit submission for 55 Wheeler Street, dated June 29<sup>th</sup>, 2017. The DPW has met with the Applicant and their consultant team to review the proposal for the work. The Applicant and their consultant team have demonstrated a general understanding our Department's requirements for development projects and have indicated a willingness to work with the DPW to meet the requirements and to address our concerns.

Generally, the DPW, based on the provided documentation, does not anticipate the project having any issue meeting all of the requirements of the DPW with the understanding that the project will be subject to a through and complete engineering review at the time of the Building Permit Application. Issues that have been discussed have been highlighted below.

**Flood Plain Overlay District:**

A portion of the Development Parcel sits in the Flood Plain Overlay district. City Ordinance and State Regulations require that:

- Compensatory storage for any displacement of water retention capacity within the 100-year flood plain.
- Documentation that encroachment of the floodway shall not result in any increase in flood levels during the occurrence of the 100-year flood.
- Review of plans by Conservation Commission and the City Engineer.

The Applicant has indicated that these requirements are being addressed and will be submitted for review to the Conservation Commission through a Notice of Intent Filing. The Conservation Commission reviews, permits and inspects projects in the floodplain. The Commission will review the compensatory storage requirement, landscape restoration and may impose additional conditions.

**Stormwater Management:**

Under the City Land Disturbance Regulations because the project requires a Special Permit from the Planning Board, the Applicant will need to obtain a Stormwater Control Permit from the

Department of Public Works. The Project also is located in the Alewife Overlay District and therefore subject to all requirements of that district outlined in the City Ordinance.

The City requirements cover the design standards and long term operation and maintenance of a management system for the project site, as well as the construction phase erosion and sedimentation control plans. The Applicant acknowledges the Stormwater Control Permit Requirements in the Special Permit Application and makes a commitment to the following:

1. Design a system that will meet the City of Cambridge standard to reduce the peak rate of runoff from the post development 25-year storm event to the rate of the existing 2-year event.
2. Treat a water quality volume of 1” of Runoff over the proposed impervious area.

The DPW will review the Stormwater Control Permit and work with the Applicant to make sure that all permit requirements, including but not limited to those listed below, are also met.

Additional requirements of the permit include:

1. Provide a plan for erosion and sedimentation controls and BMP’s for the construction phase of the new development.
2. Make improvements to the quality of the stormwater runoff including an 80% reduction in the amount of Total Suspended Solids and 65% reduction in the Phosphorus load.
3. Provide a plan outlining the long term operation and maintenance procedures of the designed system to ensure sustained operation of the system into the buildings future.

**Climate Change / Resiliency:**

The Applicant has been asked to address flood level impacts and building resiliency associated with increased flood elevations presented in the November 2015 *Climate Change Vulnerability Assessment*. Flood Elevations associated with the 2030 100-year storm events and projected 2070 1% Sea Level Rise have been provided to the Applicant and are also provided below.

Location Name	2030 100 yr precip	2070 100yr precip	2070 1% SLR/SS
55 Wheeler St Property	20.49 CCB	20.56 CCB	22.49 CCB

Discussion included in the Special Permit Application acknowledge the provided elevations and commit to designing a facility that is consistent the goals of the study. Some of the proposed mitigation measures committed to include:

1. The building entrances to occupied spaces will be designed above the projected 2070 SLR / SS 1% event elevation minimize potential for impacts from future conditions.
2. Mechanicals will be elevated to minimize potential impacts.

3. Garages will be equipped with flood controls entrances.
4. Project will reduce heat island effect by reducing impervious coverage of the site.

The DPW will continue to work with the Applicant to ensure the final design is meeting the City requirements for building resiliency.

**Other Public Infrastructure:**

The Applicant commits to working with the City of Cambridge DPW and other departments as the design specifics for the development are progressed. DPW will review and evaluate all proposed work and impacts in the public right of way, as the design is developed. Some additional items worth noting include:

1. The Development will be required to remove inflow/infiltration (I/I) from the City sewer system at a rate of 4 times the projects added wastewater generation. The Applicant is estimating that the project will generate 78,750 gallons per day. That volume, less the sewer generation from the existing on-site uses, will be used to determine the I/I mitigation requirement. The DPW will work with the Applicant to confirm this volume and coordinate the I/I mitigation effort.
2. The Development plans to extend existing roadways to connect Wheeler Street to Fawcett Street. The roadway extensions will include facilities for vehicles, bicycles and pedestrians. It is the intent of the Applicant to convey the newly created roadway to the City upon completion of the construction. The DPW will continue to work closely with the Applicant and their design team on the specifics of the roadway design and the conveyance procedures.
3. The Applicant has met with City Staff to review existing and proposed trees, both on and off-site. The Applicant should continue to coordinate with the DPW on the placement of all trees, specifically street trees proposed adjacent to the existing drainage infrastructure in the Wheeler Street Extension.

We look forward to working with the Applicant and other City Departments on this project. Please feel free to contact me with any questions or concerns related to the comments or information provided above.

Sincerely,



Katherine F. Watkins, P.E.  
City Engineer

Cc: Jennifer Letourneau, Conservation Commission