

December 2, 2025

Ashland Zoning Board of Appeals
Attn: Mr. John F. Trefethen, Chair
Ashland Town Hall
101 Main Street
Ashland, MA 01721
zba@ashlandmass.com

Re: 40B Comment Letter, 55 West Union Street, Ashland MA

Dear Board Members:

Thank you for the opportunity to provide the Ashland Zoning Board of Appeals with this peer review. This letter presents our findings related to the peer review of the 55 West Union Street Comprehensive Permit, specifically related to the water and wastewater capacity analysis. Additional comments regarding the sewer easement location are included in our review on behalf of the Department of Public Works.

These findings are based on review of the following submittal documents:

1. 55 West Union Street – Proposed Site Plans (updated through 10/9/2025, sheets 1, 2, and 4 of 9)
2. 55 West Union Architectural Narrative (no date)
3. DPW comment letter to Mass Housing & associated plan markups, (dated 5/27/25)
4. Hydrant Flow test, completed by Allen & Major Associates (dated 6/11/2025)

Summary of relevant existing conditions and proposed development

The applicant is proposing a single water connection to the 12-inch ductile iron water main on Memorial Drive.

The applicant is proposing one sewer connection and relocation of the existing cross country sewer easement, with an outlet on the easement at Memorial Drive. The 3/17/25 site plan proposed a sewer parallel to Memorial Drive in the slope easement, which was later moved into the site with multiple sharp angle manholes, routing the easement through the parking area, with inverts over 28 feet deep.

Relative to potential water demand and sewer flows, the development is proposed with 116 rental units. The Architectural Narrative further tallies the units as a mix of 1-, 2-, and 3- bedroom units, with a proposed total bedroom count of 172 rooms.



The applicant has not provided projected daily water or sewer flows. We have evaluated the projected water demand and sewer flow ranges using typical assumptions based on Massachusetts Title V regulations, MassDEP typical daily per capita water demands, and standard engineering practice.

Projected Water Demand

This projected water demand is intended to address the available capacity of the Ashland water system to provide water to the site for consumption, but not for fire protection.

Domestic water demand has been projected using two approaches: one utilizes the projected sewer flows for the development and is based on the number of bedrooms. The second approach applies a MassDEP standard per capita use and is based on the projected number of occupants in the development.

Applying the sewer flow based projection, water use is typically about 110% of average daily sewer use. Using the sewer use from the Massachusetts Title V guidelines (310 CMR 15.203) puts the water average daily demand at 80 gpd/bedroom, or 14,000 gpd. Alternatively, applying a typical MassDEP recommended planning value of 65 gallons per capita day, assuming up to 2 occupants per room, puts the water average daily demand at nearly 22,500 gpd.

Table 1. Projected Water Demand

Water Demand Scenarios	Title V flows ¹	MassDEP per capita demand ²
Average Daily Demand (ADD)	14,000 gpd 9.7 gpm	22,500 gpd 16 gpm
Maximum Daily Demand (PF=3) (ADD x3)	42,000 gpd 29 gpm	67,000 GPD 48 gpm

1. 172 rooms x 80 gallons per day per bedroom (GPDPB)
2. 344 persons x 65 gallons per capita per day (GPCD)

Water Capacity

A recent evaluation of Ashland's historical water use indicates a theoretical capacity of 290,000 gpd and may be available under Ashland's permitted and registered water capacity limits. Recent applications for developments at 10-60 Main Street and 61



Waverly Street reduce this available capacity to 193,950 gpd. The range of water demand projections for this project could consume 7-12% of this available water capacity but is well within the theoretical available capacity for Ashland's water supplies.

The applicant has provided hydrant flow test information showing that there is adequate capacity and pressure at the 12-inch main in Memorial Drive to meet the projected domestic demand.

The applicant has proposed a single feed for water to the proposed building. A water main looped around the building and additional fire hydrants at the rear of the building should be considered for better water supply access during a fire.

Projected Sewer Flow

This analysis is intended to evaluate the available capacity of Ashland's wastewater system to receive wastewater generated from the proposed site and is based on Ashland's existing agreements and discharge limits. It does not address the capacity of the gravity sewers that will receive the proposed wastewater flows directly.

The application presents the estimated sewer flows at 110 gallons per bedroom per day. This aligns with the multi-family dwelling flow rates in Title V (310 CMR 15.203). No increase for peaking or max day flows were presented.

Based on Title V guidelines, we use the 110 gpd per bedroom as the max day flow rate, and apply a peaking factor of 3, and an average daily flow of 2/3 max daily flow. A peaking factor of 3 is appropriate for typical gravity sewer flows under residential conditions.

Table 2. Wastewater Flow Projections for 61 Waverly Street 40B

Wastewater flow scenarios	Projected Flow GPD	Projected Flow Gpm
Maximum Daily Flow (MDF) (110 gpdpb x 172 bedrooms)	18,920	13
Average Daily Flow (ADF) (MDF x 2/3 ^{rds})	12,500	8.6
Peak Daily Flow (PF=3) (MDF x3)	56,760	39



Wastewater Capacity

Ashland's wastewater discharge is regulated by two separate bodies, the Water Resources Commission (WRC) and the Town of Framingham. The Residences at Ashland proposed wastewater flows will flow (by gravity) out to the Chestnut Street pump station via East Union Street, and therefore the flow limits are regulated by the Intermunicipal Agreement (IMA) with Framingham.

Haley Ward completed a wastewater capacity evaluation, entitled "Wastewater Capacity Report" dated May 2025. This report identifies the theoretically available wastewater capacity within each of the two major pump stations, Chestnut Street and Bracket Road. The following table was pulled from this report and presents the theoretical capacity through the Chestnut Street pump station, which discharges to Framingham and is regulated by the IMA.

Table 3. IMA Flow Limit Theoretical Capacity (from 2025 Wastewater Capacity report)

IMA Flow Limit	Avail. Capacity MGD	Potential Residential Bedrooms	Potential Residential Houses
Average Daily 2.1 mgd	1.147	10,430	2,980
Maximum Daily 3.5 mgd	1.352	4,096	1,170

The capacity at this location is further reduced by recent proposed developments at 10-60 Main Street and 61 Waverly Street, both currently under review by the Town, which will also discharge to the same pump station. This reduces the available capacity to 1.091 MGD average daily and 1.268 MGD max daily flow.

Table 4. Remaining IMA Flow Capacity

IMA Flow Limit	Avail. Capacity MGD	Projected flow from Main St & Waverly St Developments MGD	Remaining capacity MGD
Average Daily 2.1 mgd	1.147	0.0562	1.091
Maximum Daily 3.5 mgd	1.352	0.843	1.268



The projected flows from the 55 West Union Street proposed development are well within this capacity and would consume approximately 1.5% of the available average and max daily flow capacities.

This analysis evaluates Ashland's capacity for additional sewer flows based on the regulated flow limits at the Chestnut Street pump station through the Framingham IMA. It does not evaluate the capacity and condition of Ashland's gravity sewers to carry this additional flow from the proposed project site to the Chestnut Street pump station.

The gravity sewer segments that are proposed to receive the wastewater flows from the proposed development are known as the West Union Transmission Main, including multiple cross country sections between West Union Street at Voyagers Lane and Chestnut Street at Brook Street, and then discharges to the Chestnut Street pump station. This section of sewer main had been evaluated in the past for developments in the area, many of which were under the same original ownership as the current parcel at 55 West Union Street. The West Union Transmission Main was enlarged in 2016 to accommodate the flow projections for these projects, based on a 2015 sewer capacity study. Based on these projections and the approvals for developments in the Cirrus Apartment complex, the projected flows from the proposed development at 55 West Union appear to be within the 60% pipe capacity of the West Union Transmission Main route. However, Haley Ward recommends the applicant install wastewater flow meters to obtain existing capacity data including low, average, and maximum daily rates for each segment of the gravity sewer from the proposed development to the Chestnut Street pump station, primarily to confirm the existing flow rates for this area are in fact comparable to those that were projected for the projects estimated in the 2015 flow capacity flow study. The applicant should also inspect the pipes along this same route to identify and document existing conditions and defects, to confirm what improvements may be required for the pipes to carry this additional proposed flow.

Proposed Sewer Easement

The existing sewer easement through the property serves hundreds of current and future residents, including the neighborhoods of Lorraine Drive, Wilbur Drive, Cirrus Apartments, and future build out at the approved Arbella project off Memorial Drive. The proposed easement is routed through the proposed parking area, with inverts over 28 feet deep and within 30 feet of the proposed building footprint, and sharp angles at the manholes to route through the parking area. This configuration poses many challenges and risks, including access to manholes around parked cars, access for the town's vac truck through the parking area for routine maintenance, and excavation challenges for emergency maintenance or repairs. The depth of the proposed sewer and close



proximity to the proposed building could prevent future excavation to repair the sewer main. The existing sewer easement runs under the proposed building, so the sewer must be relocated to construct the proposed building. The applicant should consider moving this sewer into Memorial Drive to provide adequate access for maintenance and repair.

Recommendations:

- 1- (Water) The applicant should provide a looped water main around the building and additional fire hydrants at the rear of the building for better water supply access during a fire.
- 2- (Wastewater) The applicant should provide existing sewer flow rates. Metering with SmartCover meters is recommended, as the town already uses these meters in the system.
- 3- (Wastewater) The applicant should provide a CCTV inspection of the existing gravity sewers to confirm the existing pipes are in good condition with no defects that currently or potentially reduces capacity.
- 4- (Wastewater) The applicant should move the proposed sewer into Memorial Drive to improve accessibility for maintenance.

Please let us know if you have any questions on this review letter.

Sincerely,
Haley Ward, Inc.

Bethany J. Ordung, PE
Vice President/Regional Manager

BJO/amf