

Memo



Raymond L. Willis III

To: Mr. David Hale, Omni Properties, LLC
From: Raymond Willis, P.E.
CC:
Date: July 24, 2023
Re: 55 Summer Street, Walpole – Sewer and Water Demand Updates

The following details the revised/updated sewer and water demand associated with the 55 Summer Street development located in Walpole, Massachusetts. Based on information provided by your office, the overall size of the development was reduced from the original 268 dwelling units with 512 bedrooms in 2021 to present-day proposal of 268 units with 478 bedrooms.

Sewer Demands

The sewer demand of the project is based on design flow criteria established in 310 CMR 15.000, Title 5, which uses a 2 to 1 relationship between the maximum day and average day sewage generation. The table below details the calculated sewer demands associated with the revisions to the build-out schedule associated with the project.

Build-Out Scenario Version	Bedrooms	Title 5 Design Flow Criteria	Title 5 Design Flow (gpd)
Version 1 – Year 2021	512	110 gpd/bedroom	56,320
Version 2 – Year 2023	478	110 gpd/bedroom	52,580

As shown above, the maximum day sewage generation from the newly planned developed decreased by 3,740 gpd from the original approved development.

Estimated Water Demand

Using the bedroom inventory detailed above, similarly the estimated water demands for the development were calculated based on Title 5 design flows, or 110 gallons/bedroom. Using this criteria, the estimated maximum day water usage for the project was reduced from 56,320 gallons to 52,580 gallons. In reality, Title 5 flows represent the maximum day water demand versus the average day demand, which is typically between 50% and 60% of the Title 5 sewer design estimates. Therefore, the average day water demand for the development is now estimated at 31,548 gpd, which corresponds to an estimated reduction of 2,244 gpd.