



COMPREHENSIVE  
ENVIRONMENTAL  
INCORPORATED

March 26, 2018

Mr. David R. Consigli  
Milford Zoning Board of Appeals  
52 Main St  
Milford, MA 01757

- Engineering
- Design
- Construction
- Inspection

Re: Robsham Village Comprehensive Permit Application (40B)  
Review of Parking Requirements

Dear Mr. Consigli:

Responsive  
service,  
cost-effective  
solutions,  
technical  
excellence

In connection with the review of an application for a Comprehensive Permit (40B) for a project entitled Robsham Village, the Applicant has requested a waiver of the requirement for 2.0 parking spaces per unit under Milford's Zoning Bylaw. The Town of Milford has requested Comprehensive Environmental Inc. (CEI) to review the proposed application and information supporting the request for a waiver of the parking standards. Based on our research and review of the Applicant's permit application, CEI cannot verify that the proposed ratio of 1.65 spaces per unit will be sufficient. Based on information that is currently available, CEI believes that the total number of parking spaces should be increased to a minimum of 604 spaces.

- Drainage & Flooding
- Energy & Sustainability
- Hazardous Waste
- Permitting & NEPA
- Stormwater & LID
- Transportation
- Water & Wastewater
- Watershed Restoration

**Comments on Applicant's Proposed Parking**

Per drawing C4.2, of the 529 parking spaces, 181 will be located in the garage and there will be a total of 16 handicapped parking spaces. Since it is not explicitly stated, CEI assumes that garage parking will be provided on a fee basis (e.g., monthly or yearly fee), as is typical of similar housing developments. This limits the number of non-handicapped surface parking spaces to 344. The Applicant has not indicated how many spaces, if any, will be designated for visitors. This may result in scarce surface parking availability during peak periods. The application states that there are 300 units; however, CEI counted 320 units based on review of the architectural drawings A1.1 through A1.5, with a total of 512 bedrooms. Therefore, the proposed parking ratio at Robsham Village is  $529 \text{ spaces} / 320 \text{ units} = 1.65 \text{ parking spaces per unit}$ , and  $529 \text{ spaces} / 512 \text{ bedrooms} = 1.03 \text{ parking spaces per bedroom}$ .



COMPREHENSIVE  
ENVIRONMENTAL  
INCORPORATED

Mr. David R. Consigli  
March 26, 2018  
Page 2 of 6

In an email addressed to Milford Town Counsel, Gerry Moody, from Applicant, Steven Zieff, with subject "Parking Space Requirement", dated February 22, 2018, the Applicant provided a list of various parking ratios for housing developments in and around Interstate 95 (I-95) in the greater Boston area as shown in the below table. CEI has researched these housing developments and commented in the column in the right of the table.

Housing Development	Spaces per Unit	CEI Remarks on Location
Charles River Landing, Needham	1.43	Inside I-95, within 500 feet of Needham shuttle which connects to MBTA Green Line Newton Highlands
Rivers Edge, Medford	1.27	0.5 mile walk to MBTA Orange Line Wellington station
Arbor Point, Newton	1.26	Woodland Station Apartments (formerly Arbor Point) is located across the street from MBTA Green Line Woodland Station.
Reading Commons, Reading	1.37	CEI found that the spaces per unit is 2.09. <sup>1</sup> This complex is located just outside of I-95.
Washington Crossing, Woburn	1.39	0.2 mile walk to MBTA bus stop #354
Watertown Mews, Watertown	1.43	Within 500ft of MBTA bus stop #558
Taylor Pond, Bedford	1.27	Just outside of I-95, 0.2 mile walk from MBTA bus stop #351

Since the above locations are closer to Boston and have better access to public transportation, particularly the MBTA, CEI believes they are not representative of conditions at the proposed Robsham Village development. The closest MBTA service to Milford is the commuter rail station in Franklin. Reading Commons was the only apartment complex referenced by the Applicant which is not located near a MBTA service station. CEI determined that Reading Commons has a parking ratio greater than 2.0 parking spaces per unit rather than the ratio of 1.39 spaces per unit reported by the Applicant.

While the Applicant has provided information on the parking ratios for the project listed above, the Applicant has not included information on whether the parking has proved adequate at these sites. CEI has not received any other justification for the requested waiver to allow 1.65 spaces per unit, such as parking ratios that exist at comparable developments in nearby communities. CEI's review found that

- Engineering
- Design
- Construction
- Inspection

Responsive  
service,  
cost-effective  
solutions,  
technical  
excellence

- Drainage & Flooding
- Energy & Sustainability
- Hazardous Waste
- Permitting & NEPA
- Stormwater & LID
- Transportation
- Water & Wastewater
- Watershed Restoration



COMPREHENSIVE  
ENVIRONMENTAL  
INCORPORATED

Mr. David R. Consigli  
March 26, 2018  
Page 3 of 6

Paddock Estates in Boxborough, MA, an affordable housing development (40B) which opened in late 2017, has a parking ratio of 1.85 spaces per unit<sup>4</sup>.

In addition to the list of housing developments, attached to the aforementioned email was a *Wall Street Journal* article entitled, "Builders Reimagine Future". CEI believes that this article should not be used as a design reference guide for the parking at Robsham Village, since it is not approved or endorsed by any known engineering or planning organization. CEI believes that Robsham Village should be designed for current conditions. The article also mentions that parking garages are being built such that they can be converted to other spaces in the future<sup>2</sup>. We believe that this approach would be more prudent than initially cutting back on parking spaces.

**CEI Review of ITE Reference Manual**

CEI has reviewed the Institute of Transportation Engineer's *Parking Generation* 4<sup>th</sup> edition, Land Use 221 and Land Use 222, and summarized the findings which both support and oppose the Applicant's proposed parking ratio of 1.65. Land Use 221 is for low/midrise suburban apartments up to four floors. Land Use 222 is for high-rise apartments (5 or more floors) in a central city, but not downtown. Though the proposed structure has five floors, CEI believes that Land use 221 is more applicable than Land Use 222, since Robsham Village is not proposed within a central city. However, the data is still presented for Land Use 222 for a thorough presentation of reviewed material.

**Land Use 221 – Low Mid-Rise Apartments, up to 4 floors (Suburban Sites)**

	<b>ITE Surveyed Sites<sup>3</sup></b>	<b>Robsham Village Proposed</b>
Supplied parking ratio (spaces per unit)	1.4 (average)	1.65
Supplied parking ratio (spaces per bedroom)	0.9 (average)	1.03
Number of Units	311 (average)	320

Note: The location and dates from which this data was surveyed and collected is unknown.

The 85<sup>th</sup> percentile peak parking demand for Land Use 221 (12:00am -5:00am) is 1.94 vehicles per unit<sup>3</sup>. This means that 85% of all surveyed low/midrise apartments complexes have a peak parking demand of 1.94 vehicles per unit or less, and 15% of the surveyed apartment complexes had a parking demand greater than 1.94 vehicles per unit. Since there is no alternative parking (street parking,

- Engineering
- Design
- Construction
- Inspection

Responsive  
service,  
cost-effective  
solutions,  
technical  
excellence

- Drainage & Flooding
- Energy & Sustainability
- Hazardous Waste
- Permitting & NEPA
- Stormwater & LID
- Transportation
- Water & Wastewater
- Watershed Restoration



COMPREHENSIVE  
ENVIRONMENTAL  
INCORPORATED

commercial parking garages, open lots, etc.), if the peak parking demand at Robsham village exceeds 1.65 vehicles per unit, then people will be forced to park in areas not designated for parking.

**Land Use 222 – High rise apartments, from 5 floors or greater (Urban)**

	ITE Surveyed Sites <sup>3</sup>	Robsham Village Proposed
Supplied parking ratio (spaces per unit)	2.0 (average)	1.65
Supplied parking ratio (spaces per bedroom)	Not reported	1.03
Number of Units	435 (average)	320

Note: Study years and sites: Chicago, IL (1969); Chicago, IL (1978); San Diego, CA (1996)

The 85<sup>th</sup> percentile peak period parking demand for Land Use 222 (12:00am - 5:00am) is 1.52 vehicles per dwelling unit<sup>3</sup>.

CEI notes that this reference material may also not be representative of the proposed site. For instance, the data is collected from various areas around the country, and is likely dated, not reflecting current vehicle ownership rates in Massachusetts. CEI also reviewed material from MAPC (Metropolitan Area Planning Council) but found that the information was more applicable to more densely developed areas closer to Boston where additional parking space may represent an opportunity cost with regard to space available for businesses or additional housing. The proposed site at Robsham Village is currently open undeveloped land; therefore, additional parking would not likely be at the expense of additional housing units or a new business.

CEI also completed a scan of neighboring town's bylaws. Most communities in the area require approximately 2 spaces per bedroom, with some allowing for reduced parking requirements for studio-type units or for units in mixed-use developments where there is the opportunity to share parking with other complementary land uses. A summary of our findings is shown below.

Neighboring Town	Parking Ratio (spaces per unit)	Town Bylaw Section
Holliston	2, except 1 for 1-bedroom apartments	§V-C.2.a
Medway	1.5 Spaces + 1 visitor space for every two dwelling units	§5.6.4.E
Franklin	2	§185-21
Bellingham	Two or more bedrooms: 2 One bedroom: 1.5 Studio: 1.25	§240-59

- Engineering
- Design
- Construction
- Inspection

Responsive  
service,  
cost-effective  
solutions,  
technical  
excellence

- Drainage & Flooding
- Energy & Sustainability
- Hazardous Waste
- Permitting & NEPA
- Stormwater & LID
- Transportation
- Water & Wastewater
- Watershed Restoration





COMPREHENSIVE  
ENVIRONMENTAL  
INCORPORATED

Mr. David R. Consigli  
March 26, 2018  
Page 5 of 6

**Conclusion and Recommendations**

The Applicant has submitted insufficient data justifying the use of 1.65 spaces per unit for the proposed project in Milford, where access to public transportation is limited. The best information from a comparable development and from ITE reference material suggests that parking ratios in excess of 1.85 spaces per unit should be provided for a project of this type in Milford.

CEI is concerned that the proposed 1.65 spaces per unit will not be sufficient, based on the following four points summarized below:

1. Only 344 of the 529 spaces will be available to all residents and visitors since some of the spaces require handicap and/or garage parking permits.
2. The Applicant appears to have miscalculated the number of units in the application; and therefore, presents the proposed parking as providing a higher level of service than currently designed.
3. No overflow parking is proposed. If the proposed parking is inadequate, residents will be forced to park in areas not designated for parking.
4. The 85<sup>th</sup> percentile peak period parking demand for Land Use 221 (low mid-rise suburban apartments) is 1.95 vehicles per unit<sup>3</sup>.

Ensuring adequate parking for the future residents of Robsham Village will prevent unnecessary accidents, disputes, and use of unauthorized areas for parking during periods of peak demand. If, based on review of the above information, the Board determines that a waiver for parking requirements is acceptable, CEI recommends that the Board require a minimum of 604 parking spaces based on the following calculation:

- Two spaces per unit for 1-bedroom, 2-bedroom, and 3-bedroom apts.;
- 1 space for studios

The above ratios would result in a total of  $(122+132+30) \times 2 + 36 = 604$  spaces, or 1.89 spaces per unit. This ratio is close to both the ITE 85<sup>th</sup> percentile parking demand for Low Mid-Rise Apartment (1.95 vehicles per unit)<sup>3</sup> and the parking ratio at Paddock Estates in Boxborough (1.85 parking spaces per unit)<sup>4</sup>.

- Engineering
- Design
- Construction
- Inspection

Responsive  
service,  
cost-effective  
solutions,  
technical  
excellence

- Drainage & Flooding
- Energy & Sustainability
- Hazardous Waste
- Permitting & NEPA
- Stormwater & LID
- Transportation
- Water & Wastewater
- Watershed Restoration



COMPREHENSIVE  
ENVIRONMENTAL  
INCORPORATED

Mr. David R. Consigli  
March 26, 2018  
Page 6 of 6

If you have any questions or comments regarding this report, please contact Matt Doyon at 508-281-5160.

Sincerely,

COMPREHENSIVE ENVIRONMENTAL, INC.

Matthew P. Doyon, P.E.  
Project Engineer

- Engineering
- Design
- Construction
- Inspection

Responsive  
service,  
cost-effective  
solutions,  
technical  
excellence

cc: Gerry M. Moody, Esq Town of Milford, MA (via email)  
Daniel M. Feeney, P.E., Beals + Thomas, Inc. (via email)  
Steven N. Zeiff, Eden Management, Inc. (via email)

- Drainage & Flooding
- Energy & Sustainability
- Hazardous Waste
- Permitting & NEPA
- Stormwater & LID
- Transportation
- Water & Wastewater
- Watershed Restoration

**References**

1. Apartments.com. (2018). Reading Commons. Retrieved from: <https://www.apartments.com/reading-commons-reading-ma/9kq9k14/>
2. Grant, Peter. (2018, January Wednesday). Builders Reimagine Future. The Wallstreet Journal.
3. ITE. (2010). Parking Generation (4<sup>th</sup> ed.). Washington, DC: Institute of Traffic Engineers.
4. Town of Boxborough MA. (2015, July). Housing and Neighborhoods. Retrieved from Town of Boxborough MA: <http://www.boxborough-ma.gov/boxborough-2015/pages/housing-and-neighborhoods>

225 Cedar Hill Street, Marlborough, Massachusetts 01752 508-281-5160 Fax: 508-281-5136  
21 Depot Street, Merrimack, New Hampshire 03054 603-424-8444 Fax: 603-424-8441  
Gateway Crossing, 1 Hartford Square-East, New Britain, Connecticut 06052 860-224-0442  
[www.celengineers.com](http://www.celengineers.com)