

MEMORANDUM

Date: March 31, 2022

To Ms. Sue Brown, Town Planner
Town Hall
10 Central Street
Manchester-by-the-Sea, MA 01944

From Greg E. Lucas, PE, PTOE, RSP

CC James D. Fitzgerald, PE, LEED AP – EP, Director of Transportation
Zoning Board of Appeals – Manchester-by-the-Sea

Subject The Sanctuary at Manchester-by-the-Sea – Transportation Peer Review
Review of Response to Comments #3

Environmental Partners (EP) has reviewed the responses prepared by Vanasse & Associates, Inc. (VAI) dated March 28, 2022 in response to review comments raised by EP in our March 4, 2022 memorandum for the proposed Multifamily Residential Development to be known as “The Sanctuary at Manchester-by-the-Sea”, located on School Street in Manchester-by-the-Sea, MA. It is understood that the proposed project is an affordable housing development under the Chapter 40B state statute that allows local Zoning Board of Appeals approval with flexible rules if at least 20-25% of the units have long-term affordability restrictions.

EP has provided a response (“EP Response 3/31/2022” to the VAI responses (“VAI Response 3/28/2022”) for all outstanding comments included in the most recent VAI response letter. For ease of understanding, the prior comment and response history is included. In some instances, comments received from the Applicant’s architect, Embarc, are included in the comment resolution history (“Embarc Response 1/25/2022”).

Traffic Operations

Comment 9

EP Comment 1/10/2022:

Analysis results suggest that study area intersections are at or near capacity presently and in need of mitigation to support additional traffic load.

VAI Response 1/27/2022:

The Project includes measures that are intended to support improvements along School Street that are desirable and justified independent of the Project to address existing or predicted capacity constraints.

The measures are proportionate to the identified impact of the Project and include the preparation of a study, conceptual design plans and associated cost estimates for improvements for the Route 128 north and southbound ramp intersections with School Street. With specific regard to the Project, the regulations under M.G.L. Chapter 40B and the related case law confirm that an Applicant is not expected to solve existing traffic issues, only to mitigate the incremental change that is associated with the development.

EP Response 2/2/2022:

The impact of the project as illustrated in Table 6A associated with comment 8 is notable. The suggested studies and conceptual design do not address construction of potential improvements, which would be required for project mitigation to be realized.

VAI Response 2/28/2022:

As a condition to the Comprehensive Permit, the Applicant has committed to conduct an improvement study for the Route 128 north and southbound ramp intersections with School Street, the results of which will be provided to the Town. In addition, the Applicant will agree to provide a financial contribution to the Town for the design of the identified improvement measures in the context of the overall mitigation package for the Project, with said contribution to be proportionate to the incremental impact of the Project within the interchange area over No-Build conditions (i.e., a "fair-share" cost contribution).

For discussion purposes, the estimated cost to design and construct traffic control signals at the Route 128 north and southbound ramp intersections with School Street is estimated to be \$590,000. The Project is expected to increase peak-hour traffic volumes within the interchange area by approximately 5 percent over No-Build conditions. As such, the fair-share cost allocation to the Project to design and construct the improvements is \$29,500 ($5\% \times \$590,000 = \$29,500$). The Applicant would fund that money to the Town designated account as a condition of receiving a building permit.

EP Response 3/4/2022:

EP encourages the Applicant and the Town to continue coordination to establish a "fair-share" contribution. We note that the \$590,000 cost cited is likely to be inadequate for both design and construction of two separate signalized intersections meeting MassDOT design standards.

VAI Response 3/28/2022:

In furtherance of refining the "fair-share" contribution toward the improvements for the Route 128 north and southbound ramp intersections with School Street, a conceptual improvement plan has been prepared and is attached that illustrates the improvements that form the basis of the cost estimate. The estimated cost to design and construct the improvements that are depicted on the concept plan is estimated to be \$890,000, higher than the previous estimate due to the expended work that is shown to include the addition of left-turn lanes and pedestrian accommodations. Based on the new estimate, the fair-share cost allocation to the Project to design and construct the improvements is \$44,500 ($5\% \times \$890,000 = \$44,500$).

EP Response 3/31/2022:

No further response required. EP encourages the Applicant and the Town to continue coordination to establish a "fair-share" contribution to be included as a condition of approval.

Site Access

Comment 11

EP Comment 1/10/2022:

The offset distance of 135 feet between the proposed site driveway and Atwater Avenue introduces the potential for conflicts between turning vehicles between the two intersections. EP notes that the project site lot provides frontage along School Street in the vicinity of Atwater Avenue; the Applicant should provide justification as to why the site driveway was not located opposite Atwater Avenue.

VAI Response 1/27/2022:

The Project site driveway has been purposely located along School Street in order to: i) avoid a wetland resource area that is located opposite Atwater Avenue which prevents any disturbance and a defined riverfront area to the north of the current driveway location; and ii) to be sufficiently removed from Atwater Avenue so as to limit the interaction between the two intersections. As identified in the December 2021 TIA, lines of sight at the Project site driveway intersection exceed the recommended minimum distances for the intersection to operate in a safe and efficient manner.

EP Response 2/2/2022:

Clarification provided. EP confirms the presence of a wetland resource area that would require disturbance if the proposed site drive were to be located opposite Atwater Avenue. We note that the distance between the proposed site drive and Atwater Avenue is a function of the property size; additional offset could not be provided without acquiring additional property.

VAI Response 2/28/2022:

EP has confirmed the limitations that have resulted in the driveway location, and have also noted that lines of sight at the Project site driveway intersection with School Street meet the recommended distance for the intersection to operate in a safe manner.

EP Response 3/4/2022:

As a point of clarity, EP's confirmation regarding sight distance provided at the Project site driveway intersection does not address safety as it relates to the offset between the site driveway at Atwater Avenue. EP's prior comment remains valid, noting that the offset distance of 135 feet between the proposed site driveway and Atwater Avenue introduces the potential for conflicts between turning vehicles between the two intersections.

VAI Response 3/28/2022:

MassDOT guidelines suggest minimum spacing between off-set intersections of 75 feet for a design speed of between 35 and 40 mph, and a spacing of 150 feet for a design speed of between 45 and 50 mph. The posted speed limit along School Street in the vicinity of the Project site is 35 mph and the measured 85th percentile vehicle travel speed was found to be 43 mph. As such, the off-set is consistent with MassDOT guidelines.

EP Response 3/31/2022:

EP reviewed and confirmed that the offset spacing provided meets minimum guidelines provided in MassDOT's Project Development and Design Guide. **Comment 11 closed.**

Comment 12

EP Comment 1/10/2022:

The length of the driveway well exceeds Zoning By-Law requirements. Section 6.2.8 of the by-laws states that common driveways should have a maximum length of 500 feet. The proposed site driveway is approximately 1,800 feet from School Street to the parking garage entrance.

VAI Response 1/27/2022:

The Fire Chief submitted a formal letter for the record dated January 21, 2022. The Chief confirmed that he has reviewed the design of the Project, including the Project site access and internal circulation, and has determined that the Project, as designed, provides the appropriate accommodations for fire protection and life safety access.

EP Response 2/2/2022:

EP has reviewed the letter dated January 21, 2022 from Chief Cleary as the Authority Having Jurisdiction (AHJ) determining that the proposed single driveway is acceptable. Comment 12 was intended to note non-conformance with the Zoning By-Laws; the proposed response does not provide justification for this non-conforming design element, nor does it address whether alternative designs were considered which can provide conformance with Zoning By-Law requirements.

VAI Response 2/28/2022:

Response to be provided by others under separate cover.

EP Response 3/4/2022:

EP is in receipt of a memorandum dated March 3, 2022 by Allen & Major Associates, Inc. providing a narrative for driveway design for the Project site. The narrative does not provide a description of alternative designs considered but describes known site constraints that essentially force the design elements included in the proposed site design.

VAI Response 3/28/2022:

The design constraints documents in the Allen & Major Associates, Inc. memorandum provides the justification and design approach that was used for the driveway design that is being advanced as a part of the Project. Once the design constraints were established, alternative designs that would not meet engineering standards for driveway grade and vehicle maneuvering were excluded, resulting in the proposed driveway design and location.

EP Response 3/31/2022:

Defer to Board discussion on whether the Allen & Major memorandum satisfies the Board's request for "Explanation of need for an 1,800 foot long driveway with no emergency egress, curvature to the road, including alternate designs considered" as stated in the Board's February 18, 2022 letter to Mr. Geoffrey Engler. No further comment.

Parking

Comment 14

EP Comment 1/10/2022:

The proposed project is in deficit for proposed parking spaces in comparison with the Zoning By-Law requirements. Additional analysis must be provided to justify the proposed parking supply.

VAI Response 1/27/2022:

The Project will provide 242 parking spaces to support 136 residential units, or a parking ratio of 1.78 parking spaces per unit. This parking ratio exceeds the parking ratios for multifamily residential communities in similar settings and those documented by the Institute of Transportation Engineers (ITE). Both the ITE data and the parking demand observations indicate that the peak parking demand for a multifamily residential community ranges from 1.13 to 1.47 spaces per residential unit, with 1.5 parking spaces per unit the typical design value. The ITE parking demand data and parking observations conducted by VAI are attached.

For context, we offer the following as a brief list of the many examples of multifamily projects that provide a parking supply that is representative of the 1.5 parking space per unit parking ratio:

- *Waltham/Winter Street Residences: 315 units with 473 spaces (1.5 spaces/unit)*
- *Winchester/416 Cambridge Street: 96 units with 144 spaces (1.5 spaces/unit)*
- *Winchester/River Street Residences: 147 units with 225 spaces (1.53 spaces/unit)*
- *Needham/The Kendrick: 390 units with 585 spaces (1.5 spaces/unit)*
- *Hingham/The Cove: 220 units with 344 spaces (1.56 spaces per unit)*
- *Billerica/The Val: 200 units with 290 spaces (1.45 spaces per unit)*
- *Medway/Toll Residential: 190 units with 304 spaces (1.6 spaces per unit)*

EP Response 2/2/2022:

Information provided. EP confirms that the ITE *Parking Generation* manual provides data frequently referenced when contemplating proposed parking ratios of residential communities however continues to note the proposed parking does not meet the local Zoning By-Law requirements. EP also cautions that data provided by ITE is based on complexes of varying size with variances in bedrooms per unit as well as proximity to transit. EP requests additional data on the comparable sites provided, including total number of bedrooms, availability of transit, and proximity to transit. The proposed project is not served by transit; residents who patronize the MBTA commuter rail at the Manchester-by-the-Sea Station are still highly likely to drive to the station given the 1.7 mile distance to the station.

VAI Response 2/28/2022:

As requested by EP, the number of bedrooms and availability and proximity to transit for each of the multifamily residential communities that were identified in the January 2022 RTC has been obtained. The requested information is summarized in Table 1 and in the paragraphs that follow the table with regard to transit access and proximity. (This information has been excluded for brevity)

EP Response 3/4/2022:

The comparable site data provided reveals parking ratios on a per unit basis that are comparable to or lower than the proposed Project site, and ratios on a per bedroom basis that are lower than the

proposed Project site. (EP notes that studio apartments at comparable sites were considered as one bedroom units; the proposed Project does not propose any studio units.)

A review of transit access and proximity reveals that six of the seven sites have MBTA commuter rail, local transit bus, or fixed route shuttle service within reasonable walking distance of the sites. As such, supplied data does not provide an accurate comparison to the Project site.

VAI Response 3/28/2022:

A number of the residential communities that were provided are not located proximate to public transportation and, similar to the Project, require residents to drive to a Commuter Rail Station. Further, the walking distance to bus service for some of the comparable locations is also outside of what would be considered reasonable to be defined as transit accessible. That being said and based on a review of the comparable sites and the parking demand data from the Institute of Transportation Engineers (ITE) for multifamily residential communities that are not located proximate to transit, the parking ratio that is being provided for the Project (1.78 parking spaces per unit) exceeds the ITE average (1.31 parking spaces per unit) and typical design value (1.47 parking spaces per unit) for parking for multifamily residential communities inclusive of g(u)est parking.

EP Response 3/31/2022:

EP's March 4th response and VAI's March 28th response differ in their determination of reasonable walking distance to transit. FHWA's *Pedestrian Safety Guide for Transit Agencies* states that most people are willing to walk "five to ten minutes, or approximately ¼ to ½ mile to a transit stop", but that people may be willing to walk longer to access heavy rail services (such as MBTA commuter rail). The seven comparable locations provided in VAI's February 28th response were revisited to determine their proximity to transit. One site has fixed shuttle service directly adjacent to the site; one has local bus access on an intersecting street opposite the site; two have MBTA bus service within ¼ mile of the site; two have MBTA bus service within 0.6 miles of the site (an 11-minute walk); one has fixed route shuttle service within 1.0 mile of the site. In summary, four of the seven comparable sites have transit accommodation within a distance meeting the FHWA's guideline for reasonable walking distance; two more slightly exceed this guideline, resulting in six of seven sites with transit within an 11-minute walk, all far more convenient to transit than the Sanctuary site. EP maintains our prior conclusion that the supplied data does not provide an accurate comparison to the project site.

[Comment 16](#)

EP Comment 1/10/2022:

Details should be provided regarding garage access and the parking supply expected to be available to visitors and service providers.

VAI Response 1/27/2022:

Please refer to the letter submitted by Embarc dated 1/21/2022 and titled "MBTS EP Letter Response" for a response specific to the parking space dimension.

Embarc Response 1/25/2022:

All visitors, guests, and service providers will approach the building via the 2-way entry drive. Guests will then have access to the 16 surface parking spaces provided adjacent to the main entry door of the building. These spaces are located proximate to the main entrance to the building and are easily visible

and identifiable. Mail and package delivery, shuttle service, and moving vehicles will all have access to the loading area situated directly South of the main entry. All guest and service vehicles will have the ability to utilize the turn-around situated directly north of the amenity courtyard to change directions without the need of a U-turn.

Passenger pickup, via rideshare, Uber or private vehicle, will also utilize the loading zone adjacent to the front entry. This space is sized to accommodate 1 box-truck vehicle or 2-regular size vehicles simultaneously.

Trash pickup will occur off the circular turn-around, which has ample room to facilitate a trash truck without negatively impacting any vehicles entering or exiting the parking garage. The covered garage parking area itself is restricted exclusively for residents of the development. Moreover, residents will have assigned parking spaces and will have familiarity with the location of their space(s) and the necessary turning movements.

EP Response 2/2/2022:

Information provided. The Applicant should provide information on guest parking from comparable sites cited in response to comment 14. Garaged parking may also need to be made available to guests if surface parking is occupied.

VAI Response 2/28/2022:

Guest parking is reflected in the parking supply for the properties identified in Table 1.

EP Response 3/4/2022:

Response does not provide an assessment of the quantity or availability of guest parking at comparable sites. Furthermore, as noted in response to comment 14, the supplied data does not provide an accurate comparison to the Project site.

VAI Response 3/28/2022:

Parking at the cited locations is not typically differentiated between residents and guests, and is considered as "open" parking. The same is true for the ITE data, which does not differentiate between residents and guests, and demonstrates that peak parking demands for similar multifamily residential communities that are not located proximate to public transportation range from an average of 1.31 parking spaces per unit to a design value (85th percentile) of 1.47 parking spaces per unit, well below the 1.78 parking spaces per unit that are proposed.

EP Response 3/31/2022:

EP confirms that ITE data does not differentiate between residents and guests, and that demand includes both residents and guests. The clarification that parking at the cited locations is "open" and is not differentiated between residents and guests supports EP's statement in our February 2nd response that garaged parking may need to be made available to guests if surface parking is occupied. No information presented to date provides justification that demand for guest parking at the project site will be satisfied by the 16 surface spaces provided adjacent to the main entry door of the building.

Evaluation of Recommendations

Comment 18

EP Comment 1/10/2022:

A review of site plans for the Project site shows no pedestrian or bicycle focused connections between the site and the study area roadways, limiting the effectiveness of TDM measures intended to promote pedestrian and bicycle activity in the area. EP recommends consideration of off-site pedestrian improvements, potentially in connection with intersection improvements to be considered at School Street and the Route 128 ramps. Additionally, focused pedestrian improvements at study area intersections would benefit residents and the abutting neighborhoods, specifically at the intersection of School Street and Pleasant Street, which serves pedestrian connections to Manchester Essex Regional Middle and High School.

VAI Response 1/27/2022:

The Project proponent will consider providing funds to the Town for pedestrian focused improvements at the study area intersections in the context of the overall mitigation package for the Project, with said contribution to be proportionate to the incremental impact of the Project within the interchange area over No-Build conditions (i.e., a "fair-share" cost contribution).

EP Response 2/2/2022:

EP encourages the Applicant to engage with the Town to establish a "fair-share" cost contribution to potential pedestrian-focused improvements in the near-term.

VAI Response 2/28/2022:

The existing sidewalk along School Street ends at the Route 128 southbound on-ramp and would need to be extended approximately 1,500 linear feet (lf) north to serve Atwater Avenue and the Project site. The approximate cost to construct 1,500 lf of sidewalk between the Route 128 southbound on-ramp and Atwater Avenue with the associated curbing and drainage would be \$250,000. Based on a preliminary civil engineering and environmental review of that section of School Street, it seems unlikely a sidewalk can be constructed in that area due to the presence of vernal pools and wetland resource areas. Nevertheless, following the similar methodology to establishing a fair-share contribution for the School Street improvements at the Route 128 ramp intersections, the Project represents an approximate 12 percent increase in average weekday traffic over 2029 No-Build conditions on School Street between the Project site and the Route 128 southbound ramps. As such, the fair-share cost allocation to the Project to design and construct a sidewalk within the subject limits is \$30,000 ($12\% \times \$250,000 = \$30,000$). The Applicant would fund that money to the Town designated account as a condition of receiving a building permit.

EP Response 3/4/2022:

EP encourages the Applicant and the Town to continue coordination to establish a "fair-share" contribution. A determination of the fair-share cost based on traffic volume increases on School Street does not properly assess the specific benefit to the Project of a sidewalk extension, nor does it consider the importance of both on-site and off-site pedestrian infrastructure improvements to realize the effectiveness of TDM measures proposed by the Applicant.

VAI Response 3/28/2022:

The Applicant will continue to coordinate with the Town to establish the “fair-share” contribution for the construction of a sidewalk along School Street, with the \$30,000 contribution serving as the basis for subsequent discussions with the Town pertaining to this contribution.

EP Response 3/31/2022:

No further response required. EP encourages the Applicant and the Town to continue coordination to establish a “fair-share” contribution to be included as a condition of approval.

Comment 19**EP Comment 1/10/2022:**

Off-site improvements should consider traffic calming elements to reduce travel speeds. Recorded speeds well exceed posted speed limits for the School Street corridor.

VAI Response 1/27/2022:

The Project proponent will consider the installation of traffic calming elements, including radar speed feedback signs along School Street, in the context of the overall mitigation package for the Project.

EP Response 2/2/2022:

EP encourages the Applicant to engage with the Town to establish proposed traffic calming elements in the near-term.

VAI Response 2/28/2022:

As a condition to the Comprehensive Permit, to the extent desired by the Town in the near-term, the Applicant will purchase and install two (2) radar speed feedback signs to be installed on School Street north of the Project site driveway (for southbound motorists) and south of Atwater Avenue (for northbound motorists).

EP Response 3/4/2022:

EP encourages the Board to include this condition.

VAI Response 3/28/2022:

The Applicant takes no exception to this being added as a condition of the approval granting a Comprehensive Permit for the Project.

EP Response 3/31/2022:

No further response required.

Additional Review

The Zoning Board of Appeals has requested additional information from the Applicant in a letter to Mr. Geoffrey Engler dated February 18, 2022. EP’s resolution of comments contained herein are based on comments originally provided on the initial traffic study and site plan review, and do not imply resolution of additional information requested in the Board’s February 18th letter.