

Ref: 9121

March 2, 2022

Mr. William Scanlan
Town Planner
Town of Dudley
71 West Main Street
Dudley MA, 01571

Re: Supplemental Traffic Engineering Peer Review
Stevens Mill Redevelopment – 8 Mill Street
Dudley, Massachusetts

Dear Bill:

Vanasse & Associates, Inc. (VAI) has completed a review of the supplemental materials submitted on behalf of Stevens Mill Owner, LLC (the “Applicant”) in support of the proposed renovation of the Stevens Mill located at 8 Mill Street in Dudley, Massachusetts, to accommodate a multifamily residential development (hereafter referred to as the “Project”). This information was prepared in response to the comments that were raised in our October 20, 2021 review letter and consisted of a memorandum dated February 21, 2022 prepared by VHB, with accompanying attachments.

Based on our review of the supplemental materials, we have determined that the Applicant has been generally responsive to the comments that were raised in our October 20, 2021 review letter pertaining to the August 24, 2021 *Traffic Impact Assessment* (the “August 2021 TIA”). Responses to our comments regarding the Site Layout Plan will be addressed as a part of the revised Site Plan submission and will be reviewed once the plans are received. We have requested that the Applicant confirm the intended use for the amenity space and that consideration be given to implementing specific improvements along Ardlock Place, including providing a pedestrian crossing at the West Main Street/Ardlock Place intersection.

For reference, listed below are the comments that were raised in our letter followed by a summary of the information submitted on behalf of the Applicant, with additional comments indicated in **bolded** text for identification.

August 2021 TIA

Comment T1: *There are inconsistencies with the description of pedestrian facilities within the study area that should be corrected. Sidewalks are provided along the east side of Village Street and along the east side of Mill Street north of Village Street. In addition, pedestrian accommodations are provided at the Mill Street/Village Street (along both Village Street and Mill Street north of the intersection), West Main Street/Mill Street (along West Main Street) and West Main Street/Ardlock Place (along West Main Street) intersections. It is suggested that a graphic be prepared that shows the location of existing and proposed pedestrian facilities and trails be prepared.*

Response: A graphical summary of sidewalk/crossing locations and their conditions was provided. This graphic is informative as to the location and condition of existing pedestrian facilities as they relate to the Project site, and is useful to develop potential improvement strategies to connect the Project to the Main Street/West Main Street corridor and the bus services provided by the Worcester Regional Transit Authority (WRTA). **No further response required.**

Comment T2: *A description of existing and proposed bicycle facilities/accommodations should be provided.*

Response: A description of existing and proposed bicycle facilities was provided, and included a description of the Quinebaug River Bikeway and the French River Greenway, both of which provide connection opportunities for the Project. In addition, a discussion of the recommendations from the 2020 MCRPC Main Street/West Main Street Corridor Study and the Town's 2021 Complete Streets Prioritization Plan was also provided. **No further response required.**

Comment T3: *A review of public transportation services that will be accessible to residents of the Project should be undertaken. We note that the Worcester Regional Transit Authority (WRTA) provides fixed-route bus service to the Town of Dudley by way of the Webster-Dudley-Southbridge Shuttle, which includes service along West Main Street and will be accessible to residents of the Project.*

Response: A description of the WRTA Webster-Dudley-Southbridge Shuttle service was provided, which includes a stop at the Main Street/Davis Street intersection, an approximate 5 minute walking distance of the Project site. **No further response required.**

Comment T4: *U.S. Census Journey-to-Work data should be reviewed to validate the trip distribution pattern that was used for the Project.*

Response: The trip-distribution pattern for the Project was revised to reflect an increased assignment of Project-generated traffic to Mill Street north of the Project site. The revised trip assignment assumes that 50 percent of the trips generated by the Project will be oriented to/from the north on Mill Street, with the remaining trips assigned to Main Street (20 percent) to/from the east and West Main Street (30 percent) to/from the West. **No further response required.**

Comment T5: *The trip distribution pattern for the Project should be reviewed given the constrained operating conditions and extended delay that are predicted along Ardlock Place, and the traffic operations analysis for the Build condition should be revised accordingly.*

Response: The trip-distribution pattern was revised to reflect the constrained operating conditions at the West Main Street/Ardlock Place intersection and the development of a shared access with Tri-Valley, Inc. that will intersect Mill Street north of Flaxfield Road. The revised analysis reflects increased use of Mill Street to/from the north and Village Street for trips to/from Main Street and West Main Street.

A revised traffic operations analysis was provided for 2028 Build conditions (with the Project) that reflects the revised trip-distribution pattern. The revised analysis continues to indicate that the Project will not result in a significant increase in motor delays or vehicle queuing over No-Build conditions, with reduced impacts along Ardlock Place and at the West Main Street/Ardlock Place intersection. Impacts at the West Main Street/Schofield Avenue/Village Street



intersection with the shift in traffic from Ardlock Place were defined as an increase in motorist delay of less than 5.0 seconds and in vehicle queuing of up to one (1) vehicle.

Impacts along Mill Street to the north of the shared (with Tri-Valley, Inc.) driveway was identified to be the addition of 27 vehicles during the weekday morning peak-hour and 35 vehicles during the weekday evening peak-hour, or approximately one (1) additional vehicle every two-minutes, a level of impact that should not result in a significant increase in motorist delays or vehicle queuing over existing conditions.

The findings above are predicted on the amenity space being accessory to the residential use and not open to the public. If that is not the case, revised trip-generation calculations and supporting analyses will need to be provided that reflect the intended use of the amenity space.

Comment T6: *An assessment of both stopping sight distance and intersection sight distance should be provided for the Project site driveway intersections with Ardlock Place performed in accordance with the standards of the American Association of State Highway and Transportation Officials (AASHTO)¹ and using the posted (or statutory) speed limit or the measured 85th percentile vehicle travel speed along Ardlock Place at the Project site driveways, whichever is higher. In addition, the stopping sight distance evaluation should consider the grade of Ardlock Place when establishing the required minimum sight distance for safe operation.*

Response: With the planned removal of the existing chain-link fence that is located within the Project site along Ardlock Place and the construction of the sidewalk that is proposed in conjunction with the Project, clear lines of sight will be provided for the Project site driveways to/from both Village Street/Mill Street and West Main Street.

We are in agreement with the sight line assessment for the Ardlock Place driveways with consideration of our comments pertaining to sight line maintenance (Site Layout Plan Comment S6). A sight distance assessment was not provided for the shared access driveway on Mill Street. Our review of Mill Street at the location of the proposed driveway indicates no apparent sight line restrictions. This will be confirmed upon receipt of the revised Site Layout Plan.

Comment T7: *The Applicant should commit to implementing the improvements that are listed on the “Draft” exhibit titled “Planned and Proposed Traffic Improvements near the Stevens Mill Redevelopment Project” that were listed as “To be implemented by Stevens Mill Owners (before 2024)”. That being said, these improvements are necessary to afford safe and efficient access to the Project and should be completed prior to the issuance of a Certificate of Occupancy for the Project.*

Response: The Applicant has agreed to implement the majority of the improvements that are listed on the draft “Planned and Proposed Traffic Improvements near the Stevens Mill Redevelopment Project”, with the following exceptions:

¹A Policy on Geometric Design of Highway and Streets, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018.



- Reconstruct/widen the Village Street approach to West Main Street and increase the separation between opposing left-turn lanes on West Main Street
- Install an overhead flashing yellow/red signal at the West Main Street/Ardlock Place intersection

In addition, it was noted that the widening of Ardlock Place will likely be a longer-term improvement "...that could be considered as a separate project".

We agree that the scope of widening of the approaches to the West Main Street/Schofield Avenue/Village Street intersection is disproportionate to the predicted impact of the Project at the intersection; however, the widening of Ardlock Place and providing safe pedestrian accommodations to access and cross West Main Street should be advanced as a part of the Project. It is likely that widening Ardlock Place will be necessary to support construction vehicle access to the Project site and, as such, should be advanced commensurate with initial building renovations and site work.

Providing a safe crossing for residents of the Project to access the businesses along West Main Street should also be advanced as a part of the Project. The closest pedestrian crossings of West Main Street to Ardlock Place are located at the Main Street/Pleasant Street/Chase Avenue intersection to the east and at the West Main Street/Schofield Avenue/Village Street intersection to the west, which are over 600 feet from Ardlock Place and would not be considered proximate. We would recommend that the Applicant explore the installation of a crosswalk with accompanying wheelchair ramps, pedestrian actuated Rectangular Rapid Flashing Beacon (RRFB) and pedestrian crossing warning signs at the West Main Street/Ardlock Place intersection.

We would recommend that the aforementioned improvements be evaluated by the Applicant and that they should become a condition of any approvals that may be granted for the Project, subject to receipt of all necessary rights, permits and approvals.

Comment T8: *The transportation improvement program for the Project should be expanded to include the following improvements:*

1. *"Intersection Ahead" warning signs (graphic symbol) should be installed on Mill Street in advance (north) of the Mill Street/Village Street intersection.*
2. *Install "Do Not Block" signs and accompanying pavement markings on West Main Street at Mill Street and at Ardlock Place.*
3. *Design and implement an optimal traffic signal timing and phasing plan for the West Main Street/Village Street/Schofield Avenue intersection prior to achieving 50 percent occupancy of the Project so that the timing changes reflect the traffic patterns resulting from the Project.*
4. *Implement a Transportation Demand Management (TDM) program inclusive of the following elements:*
 - *A transportation coordinator should be assigned for the Project to coordinate the TDM program;*



- *Information regarding public transportation services, maps, schedules and fare information should be posted in a central location and/or otherwise made available to residents;*
- *A “welcome packet” should be provided to residents detailing available public transportation services, bicycle and walking alternatives, and commuting options;*
- *Pedestrian accommodations should be incorporated within the Project site and extend to the planned sidewalks on Mill Street and Ardlock Place;*
- *Secure bicycle parking should be provided consisting of both weather protected bicycle parking and exterior bicycle racks; and*
- *A central mail drop should be provided within the Project.*

Response: The Applicant has agreed to implement the elements of the expanded transportation improvement program and to review the suggested TDM measures for implementation as a part of the Project.

We would recommend that the elements of the expanded transportation improvement program, including all elements of the TDM program, be included as a condition of any approvals that may be granted for the Project, subject to receipt of all necessary rights permits and approvals. No further response required.

Site Layout Plan

Responses to our comments pertaining to the July 9, 2021 *Site Layout Plan* prepared by Bohler will be addressed as a part of the revised Site Plan submission. For reference, our initial comments are provided below.

- S1. *A vehicle turning analysis should be provided using the AutoTurn© software for a single-unit truck (SU-30 design vehicle) and the Dudley Fire Department design vehicle. The turning analysis should depict all maneuvers required to enter and exit the Project site, as well as those required to access the location for trash/recycling and service/loading, and should demonstrate that the subject vehicles can access the Project site and circulate in an unimpeded manner.*
- S2: *A STOP-sign and marked STOP-line should be added to the Project site driveways.*
- S3: *Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided for crossing the Project site driveways and at pedestrian crossings within the Project site. As an alternative for crossing the Project site driveways, the proposed sidewalk can be designed so as to be flush across the driveways (i.e., pan-type driveway).*
- S4: *A note should be added stating: “All Signs and pavement markings to be installed within the Project site shall conform to the applicable specifications of the Manual on Uniform Traffic Control Devices (MUTCD).²”*
- S5. *Bicycle rack(s) should be provided at an appropriate location(s) within the Project site and weather protected bicycle parking should be provided within the building. The Zoning Bylaw requires that*

²Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, DC; 2009.



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0.05 bicycle parking spaces be provided for every vehicle parking space required under the Zoning Bylaw, with a minimum of one (1) and a maximum of 20.

- S6. *The sight triangle areas for the Project site driveway intersections should be shown along with a note to indicate: "Signs, landscaping and other features located within sight triangle areas shall be designed, installed and maintained so as not to exceed 2.5-feet in height. Snow accumulation (windrows) located within sight triangle areas that exceed 3.5-feet in height or that would otherwise inhibit sight lines shall be promptly removed."*
- S7. *Consideration should be given to installing electric vehicle (EV) charging stations for use by residents of the Project.*

This concludes our review of the materials that have been submitted to date in support of the Project. If you should have any questions regarding our review, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.

Jeffrey S. Dirk

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