



March 11, 2019

Beverly Planning Board
City Hall
191 Cabot Street
Beverly, MA 01915

**Subject: Definitive Subdivision Plan
MJP Properties, Inc. – 53 Williams Street
Adequacy of Way Analysis**

Dear Planning Board Members:

As required by the City of Beverly Rules and Regulations Governing the Subdivision of Land, a field investigation and analysis was conducted on the roadway providing access to the proposed residential subdivision at 53 Williams Street. Sight distance and pavement width and measurements were taken from the proposed subdivision entrance toward the nearest cross street (Guild Road).

The proposed project will create a 40-foot wide by 57-foot long private hammerhead turnaround located at the north end of Williams Street. The proposed turnaround will be constructed in general compliance with subdivision regulations; certain waivers from the Beverly Rules and Regulations Governing the Subdivision of Land are necessary and have been separately requested. The proposed roadway improvements will provide access to two single-family residences in the R-10 zoning district. The existing single-family residence on the property will be removed as part of this development.

This letter summarizes existing traffic conditions on Williams Street and the potential traffic impacts associated with the proposed subdivision.

Existing Conditions

Williams Street is a two-lane local road that provides access to twenty-nine (29) residential homes. It is approximately 800-ft long from Elliott Street to Guild Road and approximately 620-ft long from Guild Road to its dead-end. Williams Street generally runs in a north-south orientation. Stop sign control exists at its intersections with Guild Road and Elliott Street. Observed traffic volumes on Williams Street are very low with no posted speed limits.

Williams Street from Guild Road to the dead-end is a 40-foot wide public right-of-way with approximately 25-foot wide pavement. The existing pavement is in fair to poor condition. There are no curbs or sidewalks along the roadway. Grades are generally moderate to flat. The average existing centerline grade in the vicinity of the proposed subdivision is approximately 3%.

The proposed turnaround is located at the north end of Williams Street. Vehicles can only approach the site from the south. The observed stopping site distance (SSD) at the project location was greater than 300-feet. For an assumed maximum design roadway speed of 20 mph, the minimum required SSD is 115 feet. Therefore, there is adequate SSD provided at the proposed turnaround.

Three photographs are attached showing the existing roadway conditions in the project area.

Project Traffic Impacts

Trip generation estimates were estimated using the Institute of Transportation Engineering (ITE) *Trip Generation, 9th Edition*, 2012 manual, Land Use Code (LUC) 210, Single-Family Detached Housing and LUC 220, Apartments. The proposed development requires removal of a dilapidated existing single-family dwelling and the construction of two new single-family residences. The net increase in traffic generated was estimated to be approximately 10 additional vehicle trips on an average weekday (5 vehicles entering and 5 vehicles exiting). The proposed development will generate approximately one additional vehicle trip during the morning peak hour and one additional vehicle trip during the evening peak hour. This would not be noticeable and would not affect existing traffic operations or any nearby intersection level of service.

Proposed Project Mitigation Measures

Williams Street's existing conditions do not conform to the current City of Beverly design standards due to inadequate pavement width, lack of sidewalks, and no turnaround at the dead-end. The existing roadway construction, however, satisfies standards published for local roads by the American Association of State Highway and Transportation Officials (AASHTO): *A Policy on Geometric Design of Highways and Streets*. The existing roadway width is more than adequate to accommodate the estimated traffic volume (approximately 114 vehicle trips per day including the proposed development). Pedestrian use of the roadway does not appear to constrain traffic movement due to the very low traffic volumes and speeds.

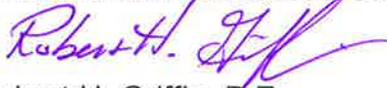
To improve the existing dead-end, a National Fire Protection Association (NFPA) compliant hammerhead turnaround will be constructed. This will significantly improve the ability of delivery and emergency vehicles to turnaround on Williams Street. Currently there is no provision for turning around at the dead-end.

Conclusion

Existing traffic conditions and potential traffic impacts associated with the proposed 53 Williams Street subdivision project have been evaluated. The existing Williams Street roadway does not conform to the City's current design standards. The proposed project will have minimal impact on overall traffic operations in the area. The project is estimated to generate one additional vehicle trip in both the morning and evening peak commuter hours. The proposed hammerhead turnaround will significantly improve maneuverability at the dead-end street.

We trust the above is satisfactory. Please do not hesitate to contact the undersigned with any questions or comments.

Very truly yours,
GRIFFIN ENGINEERING GROUP, LLC



Robert H. Griffin, P.E.

Enc: Photographs (3)

Cc: MJP Properties



Photo #1

**Williams St. @ Proposed Turnaround Centerline
(Looking South Towards Guild Rd)**

Photo Date: 2/25/19



Photo #2
Williams St. @ Proposed Turnaround Centerline
(Looking South Towards Guild Rd)
Photo Date: 2/25/19



Photo #3
Williams St. @ Proposed Turnaround Centerline
(Looking North)
Photo Date: 2/25/19