

Ref: 8774

November 9, 2020

Ms. Mary F. Savage Dunham, AICP, CFM  
Director of Community Planning  
Town of Hingham  
210 Central Street  
Hingham, MA 02043

Re: Sight Distance Assessment  
Corey's Way Subdivision – 213 Cushing Street  
Hingham, Massachusetts

Dear Mary:

Vanasse & Associates, Inc. (VAI) has completed a sight distance assessment for the proposed Corey's Way Subdivision to located at 213 Cushing Street in Hingham, Massachusetts (hereafter referred to as the "Project"). The Project site encompasses 6.62± acres of land that will be subdivided into two (2) lots upon which two (2) single-family homes will be constructed. Access to the Project site will be provided by way of a new roadway to be known as Corey's Way that will intersect the west side of Cushing Street at the location of an existing driveway apron that serves the subject property.

Sight distance measurements were performed at the intersection of Cushing Street at Corey's Way in accordance with American Association of State Highway and Transportation Officials (AASHTO)<sup>1</sup> requirements and using vehicle travel speed measurements that were performed on Cushing Street in the vicinity of the Project site on Tuesday, October 27<sup>th</sup> and Wednesday, October 28<sup>th</sup>, 2020, inclusive (48-hours). Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 1 presents the measured SSD and ISD at the subject intersection for both the posted speed limit along Cushing Street (30 mph) and the measured 85<sup>th</sup> percentile vehicle travel speed (38 mph).<sup>2</sup>

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<sup>1</sup>*A Policy on Geometric Design of Highway and Streets*, 7<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

<sup>2</sup>The prevailing or 85<sup>th</sup> percentile vehicle travel speed was observed to be 38 miles per hour (mph) in the southbound direction along Cushing Street. The measured travel speed in the northbound direction was found to be in error and was not used.

**Table 1**  
**SIGHT DISTANCE MEASUREMENTS<sup>a</sup>**

Intersection/Sight Distance Measurement	Required Minimum (SSD)		Desirable (ISD) <sup>b</sup>		Measured
	Posted Speed Limit (30 mph)	85 <sup>th</sup> Percentile Travel Speed (38 mph)	Posted Speed Limit (30 mph)	85 <sup>th</sup> Percentile Travel Speed (38 mph)	
<b><i>Cushing Street at Corey's Way</i></b>					
<i>Stopping Sight Distance:</i>					
Cushing Street approaching from the north	200	280	--	--	370+
Cushing Street approaching from the south	200	280	--	--	500+
<i>Intersection Sight Distance:</i>					
Looking to the north from Corey's Way	200	280	290	365	138/156 <sup>c</sup>
Looking to the south from Corey's Way	200	280	335	420	203/351 <sup>c</sup>

<sup>a</sup>Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018.

<sup>b</sup>Values shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

<sup>c</sup>With the selective removal of trees located along the west side of Cushing Street and north and south of Corey's Way.

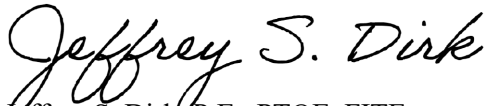
As can be seen in Table 1, the available lines of sight along Cushing Street approaching Corey's Way were found to exceed the recommended minimum sight distances for safe operation for both the posted speed limit and the measured 85<sup>th</sup> percentile vehicle travel speed. Lines of sight for a motorist exiting Corey's Way were found to be **below** the recommended minimum sight distances for both the posted speed limit and measured 85<sup>th</sup> percentile vehicle travel speed. The limiting factors were identified as four (4) large pine trees, an embankment and a block retaining wall to the north, and two (2) large pine trees to the south.

The Project proponent applied for and has received approval to remove the subject trees pursuant to M.G.L. c. 87 § 3, the Public Shade Tree Act. In addition to the tree removal, the Project proponent will need to regrade the embankment situated to the north of Corey's Way and reconstruct a portion of the existing block wall in order to achieve the recommended minimum sight distance (280 feet) looking to the north of the driveway. It appears that the required improvements can be completed within the Project site or the public right-of-way.

If you should have any questions regarding our assessment, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE  
 Managing Partner

*Professional Engineer in CT, MA, ME, NH, RI and VA*

JSD/jsd



**Corey's Way Subdivision Sight Distance Assessment  
October 27, 2020**



**Looking to the North from Corey's Way**



**Looking to the South from Corey's Way**

