

TECHNICAL MEMORANDUM

Date: September 12, 2019

To: Joseph Colangelo, Hanover Town Manager

From: Charles Kilmer, AICP, Assistant Director / Transportation Program Manager

Subject: Winter Street Traffic Study

Per the Town's request, the Old Colony Planning Council has completed an assessment of traffic conditions on Winter Street, with specific focus on travel speeds, heavy vehicle traffic, and potential traffic calming measures. This traffic study was completed through the Old Colony Metropolitan Planning Organization's Local Highway Technical Assistance Program.

Traffic Volumes, Prevailing Speeds, and Heavy Vehicles

Traffic counts on Winter Street were conducted using automatic traffic recorders in October 2018. In addition to mainline traffic data, turning movement counts were collected manually at the intersections of Broadway at Winter Street and Circuit Street at Winter Street. As a follow-up to the original request, traffic counts were collected on Myrtle Street in December 2018, along with manual turning movement counts at the intersections of Center Street at Myrtle Street and Circuit Street at Myrtle Street. The results of this data collection is summarized in Table 1.

Intersection Traffic Operations

Manual turning movement counts were conducted at the following intersections:

- Broadway at Winter Street
- Circuit Street at Winter Street
- Center Street at Myrtle Street
- Circuit Street at Myrtle Street

Table 2 summarizes the results of the level of service analyses at each intersection.

Table 1: Existing Traffic Volumes, Speeds, and Percentage of Heavy Vehicles

Location	Average Daily Volume			85th %tile Speed	% Heavy Vehicles
	EB	WB	Total		
Winter Street, west of Broadway	1,749	1,763	3,512	38 MPH	18.8%
Location	Average Daily Volume			85th %tile Speed	% Heavy Vehicles
	NB	SB	Total		
Winter Street, South of Circuit Street	1,726	1,730	3,456	39 MPH	16.6%
Location	Average Daily Volume			85th %tile Speed	% Heavy Vehicles
	EB	WB	Total		
Myrtle Street, west of Center Street	1,522	1,409	2,931	44 MPH	13.5%
Myrtle Street, east of Circuit Street	1,536	1,420	2,956	17 MPH	15.5%

Table 2: Existing levels of Service

Intersection	AM Peak LOS	PM Peak LOS
Broadway at Winter Street	E	D
Circuit Street at Winter Street	D	B
Center Street at Myrtle Street	B	B
Circuit Street at Myrtle Street	C	C

Improvement Options

The Town may consider the following options for establishing traffic-calming measures and improving safety on Winter Street:

Heavy Commercial Vehicle Exclusion (HCVE): The Town may consider applying for either a 24-hour or Nighttime Only Heavy Commercial Vehicle Exclusion (HCVE) for Winter Street. However, as it is believed that much of the truck traffic currently using Winter Street is generated by existing businesses on Winter Street, this may have a minimal impact on reducing traffic.

Convert a portion of Winter Street to One-Way: Converting Winter Street to one-way in the southbound direction between Pat Road and Broadway would reduce overall traffic volume by eliminating any “cut-through” traffic in the northbound direction. Traffic would be prohibited from entering Winter Street from Broadway. Existing southbound traffic would not be impacted by this traffic pattern change. It is estimated that most of the detoured traffic from this one-way would use Myrtle Street as an alternate northbound route. Analysis of the Myrtle Street intersections suggests there is adequate capacity to

accommodate additional traffic demand. This one-way option may be tested on a temporary basis with the use of police details and/or removable barriers.

Speed Zoning: Per Chapter 90 Section 17C of the Massachusetts General Laws allows municipalities in the interest of public safety and without further authority to establish a 25 mile per hour speed limit on municipal owned roadways in thickly settled or business districts that do not otherwise have a permitted special speed regulation. The Town of Hanover may choose to “opt in” to Chapter 90 Section 17C to establish this 25-mile per hour speed limit on Winter Street and other similar roadways within the Town.

Sidewalks: During field visits, it was noted that Winter Street does not have sidewalks. Construction of a sidewalk should be considered as a long-term improvement to provide safe mobility for pedestrians.

Should you have any questions about this traffic study or should the Town of Hanover require additional technical assistance, please contact Bill McNulty at wmcnulty@ocpcrpa.org.

Attachments

- A. Recorded Traffic Data for Winter Street and Myrtle Street
- B. Turning Movement Counts for Winter Street and Myrtle Street intersections
- C. Level of Service Reports for Winter Street and Myrtle Street intersections
- D. Procedures of Establishing a Heavy Commercial Vehicle Exclusion in Massachusetts

Cc:

Mr. Justin DeBruin, Director, Community Development and Municipal Inspections

Ms. Michele Grenier, Town Planner

Mr. Victor Diniak, Director, Hanover Department of Public Works

Ms. Mary-Joe Perry, District Highway Director, MassDOT District Five

Mr. Ben Muller, MassDOT Office of Transportation Planning, Old Colony MPO Liaison