



November 7, 2025

VIA (E-MAIL)

Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS
Director, Municipal Engineer
Department of Engineering
Township of West Orange
25 Lakeside Avenue
West Orange, New Jersey 07052

**Re: All-Way Stop Analysis
Dartmouth Road & Forest Hill Road
West Orange Township, Essex County, New Jersey
BVE Project No.: 251404**

Dear Ms. Carballo:

Bright View Engineering (*BVE here-in*) was tasked by the Township of West Orange (*the Township here-in*) with performing an analysis to determine if an All-Way Stop configuration is appropriate at the intersection of Dartmouth Road & Forest Hill Road.

BVE, in coordination with the Township, collected data during various site visits, reviewed crash information provided by the Township and crash data from NJDOT's Safety Voyager to assess the existing conditions at the project intersection. The collected data and observations were utilized to determine if the existing traffic conditions in the project area justify the implementation of the new traffic pattern. This analysis was performed per the standards set forth within NJSA 39:4-8, 39:4-138 & 39:4-197 (*Title 39*), the applicable requirements of the Manual on Uniform Traffic Control Devices (*MUTCD*) and AASHTO - A Policy on Geometric Design of Highways and Streets (*The Green Book*). The following points were considered within the scope of our study:

- An inventory of the roadway facilities in the project vicinity, including the existing physical and traffic operating characteristics;
- Data collection including traffic volume and crash data;
- All-Way Stop Analysis;
- Summary and Conclusions



I. EXISTING CONDITIONS

Multiple field investigations were conducted to obtain an inventory of existing roadway conditions, posted traffic controls, adjacent land uses, lane configurations of the roadways in the study area, and existing vehicular and pedestrian traffic patterns. The following is a brief description of the roadways:

The intersection of Dartmouth Road & Forest Hill Road is a 4-legged unsignalized intersection. Dartmouth Road is STOP controlled at its intersection with Forest Hill Road. We note that the intersection is approximately 600 feet away from Roosevelt Middle School.

Dartmouth Road is a north-south oriented roadway which spans approximately 0.23 miles between Winding Way & Club Boulevard through West Orange Township. There are no NJDOT Straight Line Diagram for this roadway. There is no posted speed limit for this roadway. It is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. Dartmouth Road provides for a pavement width of 30 feet. On-street parking is permitted on both sides of the roadway. Within the study location, a 5-foot sidewalk is present along the both sides of Dartmouth Road. The land use along Dartmouth Road is generally residential in nature.

Forest Hill Road is an east-west roadway which spans approximately 0.77 miles through West Orange Township between Collamore Terrace and South Valley Road. There are no NJDOT Straight Line Diagram for this roadway. The posted speed limit is 25 MPH. It is our opinion that a 25 MPH speed limit is appropriate and conforms with the guidance set forth within the New Jersey Statutes Title 39. Forest Hill Road provides for an approximate pavement width of 26 feet. On-street parking is permitted along the roadway. In addition, within the study location, a 5-foot sidewalk is present along the south side of the roadway. The land use along Forest Hill Road is generally residential in nature.



Figure 1 – Study Location





II. DATA COLLECTION

CRASH HISTORY DATA

BVE obtained crash data from the Township and through NJDOT's Safety Voyager. There were no crashes reported at the study intersection within a five-year period.

TRAFFIC VOLUME DATA

The traffic volume data was collected using Manual Turning Movement Counts (*MTMC*). Counts were conducted on Thursday, October 9, 2025, from 6:00AM to 7:00PM. **Table 1**, below, indicates the weekday morning, school dismissal and evening peak hour volumes.

Table 1 – 2025 Existing Traffic Volumes – Dartmouth Road & Forest Hill Road

Peak Hour of Operation	Dartmouth Road (NB)					Dartmouth Road (SB)					Forest Hill Road (EB)					Forest Hill Road (WB)				
	L	T	R	P	B	L	T	R	P	B	L	T	R	P	B	L	T	R	P	B
7:45AM-8:45AM	11	23	14	14	0	5	4	0	3	0	1	36	23	69	0	7	26	5	23	0
3:00PM-4:00PM	15	17	10	28	0	4	4	0	1	0	0	22	14	56	0	10	16	6	12	0
5:00PM-6:00PM	7	6	8	1	0	1	0	0	1	0	1	18	4	9	1	9	27	2	4	1

*L – Left, T – Thru, R – Right, P – Pedestrians, B – Bikes

*Evening Peak Hour occurs between (4PM to 7PM)



HCM Capacity Analysis

The study intersection was evaluated during the weekday morning peak hour, and weekday evening peak hours. The results of these analyses provided the Level of Service and average seconds of delay for the intersection movements. Levels of Service (LOS) are briefly detailed for 2025 existing conditions in **Table 2** and the 2025 conditions with an All-Way STOP control implemented in **Table 3** below. Further details regarding the operating level of service and approach delays may be observed within the Synchro Reports found within Appendix A.

Table 2 – 2025 Existing Conditions – LOS/Delay

Roadway	Approach	AM Peak Hour	Dismissal Peak Hour	PM Peak Hour
Dartmouth Road	NB	B/10.1	A/9.9	A/9.0
	SB	A/9.9	A/9.6	A/9.1
Forest Hill Road	EB	A/0.1	A/0.0	A/0.3
	WB	A/1.4	A/2.3	A/1.7
<i>Intersection</i>	Overall	A/4.1	A/4.8	A/3.3

Based on **Table 2**, under the existing conditions, the intersection operates at an overall Level of Service ‘A’ during each of the studied peak hours.

Table 3 – 2025 Proposed Conditions – All-Way STOP Control - LOS/Delay

Roadway	Approach	AM Peak Hour	Dismissal Peak Hour	PM Peak Hour
Dartmouth Road	NB	A/7.4	A/7.3	A/7.0
	SB	A/7.5	A/7.3	A/7.3
Forest Hill Road	EB	A/7.3	A/7.1	A/7.0
	WB	A/7.4	A/7.2	A/7.2
<i>Intersection</i>	Overall	A/7.4	A/7.2	A/7.1

Based on **Table 3**, implementing an All-Way Stop results in all intersection movements operating at a Level of Service ‘A’ during all studied time periods.



III. ALL-WAY STOP ANALYSIS

Table 4 – All-Way Stop Analysis Results

Warrant A – Crash Experience	<i>Not Satisfied</i>
Warrant B – Sight Distance	<i>Not Satisfied</i>
Warrant C – Transition to Signal/Yield Control at Circular Intersection	<i>Not Applicable</i>
Warrant D – 8-Hour Volume	<i>Not Satisfied</i>
Warrant E – Other Factors	<i>Satisfied</i>

Based on **Table 4**, an All-Way Stop is **justified** for the intersection of Dartmouth Road & Forest Hill Road per the MUTCD, 11th Edition guidelines.

We utilized the following criteria in evaluating the study location for the application of an All-Way Stop treatment. The information below is excerpted from the MUTCD, Section 2B.12-17, All-Way Stop Control:

Section 2B.12 All-Way Stop Control

Support:

- 01 *The provisions in the following sections describe warrants for the recommended engineering study to determine all-way stop control. Warrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification to install or not install all-way stop control. Because each intersection will have unique characteristics that affect its operational performance or safety, it is the engineering study for a given intersection that is ultimately the basis for a decision to install or not install all-way stop control.*
- 02 *All-way stop controls at intersections with substantially differing approach volumes can reduce the effectiveness of these devices for all roadway users.*

Guidance:

- 03 *The decision to establish all-way stop control at an unsignalized intersection should be based on an engineering study. The engineering study for all-way stop control should include an analysis of factors related to the existing operation and safety at the intersection, the potential to improve these conditions, and the applicable factors contained in the following all-way stop control warrants:*
 - A. All-Way Stop Control Warrant A: Crash Experience (see Section 2B.13)*
 - B. All-Way Stop Control Warrant B: Sight Distance (see Section 2B.14)*
 - C. All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection (see Section 2B.15)*
 - D. All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles) (see Section 2B.16)*
 - E. All-Way Stop Control Warrant E: Other Factors (see Section 2B.17)*

Option:

- 04 *The decision to install all-way stop control on site roadways open to public travel may be based on engineering judgment.*



Standard:

- 05 *The satisfaction of an all-way stop control warrant or warrants shall not in itself require the installation of all-way stop control at an unsignalized intersection.*

Section 2B.13 All-Way Stop Control Warrant A: Crash Experience

Option:

- 01 *All-way stop control may be installed at an intersection where an engineering study indicates that:*
- A. For a four-leg intersection, there are five or more reported crashes in a 12-month period or six or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control.*
 - B. For a three-leg intersection, there are four or more reported crashes in a 12-month period or five or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control.*

Based on the provided crash data, the intersection reports no correctable crashes that are susceptible to correction by installing an All-Way Stop control within a five-year period. **The warrant was not satisfied.**

Section 2B.14 All-Way Stop Control Warrant B: Sight Distance

Option:

- 01 *All-way stop control may be installed at an intersection where an engineering study indicates that sight distance on the minor-road approaches controlled by a STOP sign is not adequate for a vehicle to turn onto or cross the major (uncontrolled) road.*

Support:

- 02 *At such a location, a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop.*

We conducted a sight distance analysis for the intersection of Dartmouth Road & Forest Hill Road. This analysis was performed as per the standards set forth within the 2018 AASHTO - A Policy on Geometric Design of Highways and Streets (*The Green Book*). Dartmouth Road & Forest Hill Road has a posted speed limit of 25 MPH. Based on Table 3-1 & 9-7 of the AASHTO standards, a design speed of 30 MPH (5 MPH over the posted speed limit) with a leveled roadway will require an intersection sight distance of 335 feet and a stopping sight distance of 200 feet.



Figure 2 – Sight Distance – Dartmouth Road & Forest Hill Road



Based on the existing geometry of the intersection, we find that the intersection sight distance (335 feet) for a stopped vehicle on the minor road (Dartmouth Road) to be insufficient. We observed overgrown foliage are conflicting with the intersection sight triangle. We observed that if vehicles stop closer to the mainline on Dartmouth Road, then they would have clear visibility of the traffic conditions at the intersection and would be able to safely make a turn onto Forest Hill Road. We note that stopping sight distance on the major road (Forest Hill Road) to be sufficient.

It is our opinion that clear sight lines should be maintained by properly maintaining trees and foliage and prohibiting parking at the corners and within the sight triangle of the study intersection. We recommend that the Township cooperate with its residents to trim overgrown foliage and clear obstruction from sight triangles, as reasonable. **The warrant was not satisfied.**

Section 2B.15 All-Way Stop Control Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection

Option:

01 All-way stop control may be installed at locations where all-way stop control is an interim measure that can be installed to control traffic while arrangements are being made for the installation of a traffic control signal (see Chapter 4C) at the intersection or for the installation of yield control at a circular intersection.

The study location is not a circular intersection nor is a traffic signal currently planned. **This warrant is not applicable.**



Section 2B.16 All-Way Stop Control Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)

Option:

- 01 *All-way stop control may be installed at an intersection where an engineering study indicates:*
- A. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the major street approaches is at least 300 units per hour for each of any 8 hours of a typical day; and*
 - B. The combined motor vehicle, bicycle, and pedestrian volume entering the intersection from the minor street approaches is at least 200 units per hour for each of any of the same 8 hours.*
- 02 *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants may be reduced to 70 percent of the values given in Items A and B in Paragraph 1 of this Section.*

We identified Forest Hill Road as the Major Street, and Dartmouth Road is identified as the Minor Street. The approach speed of both the major street and minor street is 25 MPH which is less than the 40 MPH MUTCD guideline, thus the minimum vehicular warrants of at least 300 vehicles per hour for any 8 hours of an average day from the major street approach (*total of both approaches*) and at least 200 combined vehicles and pedestrian volume per hour for the same 8 hours from the minor street approach (*total of both approaches*) apply. The volumes used for an All-Way Stop analysis are detailed in **Table 5** below:

Table 5 – Traffic Volume Analysis for Dartmouth Road & Forest Hill Road

Approach		Major	Minor	Major	Minor
Time		Forest Hill Road	Dartmouth Road	>300 MUTCD 16.1.A	>200 MUTCD 16.1.B
1	6:45AM-7:45AM	37	23	NO	NO
2	7:45AM-8:45AM	190	74	NO	NO
3	8:45AM-9:45AM	47	32	NO	NO
4	9:45AM-10:45AM	24	13	NO	NO
5	10:45AM-11:45AM	25	8	NO	NO
6	11:45AM-12:45PM	36	18	NO	NO
7	12:45PM-1:45PM	29	14	NO	NO
8	1:45PM-2:45PM	41	27	NO	NO
9	2:45PM-3:45PM	132	76	NO	NO
10	3:45PM-4:45PM	70	33	NO	NO
11	4:45PM-5:45PM	69	28	NO	NO
12	5:45PM-6:45PM	57	21	NO	NO

From this data we observe that Forest Hill Road (Major) approach hourly volumes does not meet the requirements (*300 veh*), and the Dartmouth Road (Minor) approach hourly volumes do not meet the hourly volume requirements (*200 veh*) for at least eight hours during a single day. The warrant is **not satisfied**. However, we note that there is an increase in vehicular volume on the minor road (Dartmouth Road) during the school morning and dismissal peak hours.



Section 2B.17 All-Way Stop Control Warrant E: Other Factors

Option:

01 All-way stop control may be installed at an intersection where an engineering study indicates that all-way stop control is needed due to other factors not addressed in the other all-way stop control warrants. Such other factors may include, but are not limited to, the following:

- A. The need to control left-turn conflicts,*
- B. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where all-way stop control would improve traffic operational characteristics of the intersection, or*
- C. Where pedestrian and/or bicyclist movements support the installation of all-way stop control.*

We observed that the two through streets of Dartmouth Road & Forest Hill Road are of similar design and operating characteristics where an All-Way STOP control would improve traffic conditions in the area.

We also observed that the intersection of Dartmouth Road & Forest Hill Road experienced high pedestrian activity with 109 pedestrians during the morning peak hour and 97 pedestrians during the school dismissal peak hour. We observed the majority of pedestrians are students walking to and from Roosevelt Middle School, which is located within 600 feet of the intersection. Implementing an All-Way Stop will improve pedestrian safety and the overall intersection operation for all roadway users. Based on Warrant E, conditions B & C, we find that this **warrant is satisfied.**



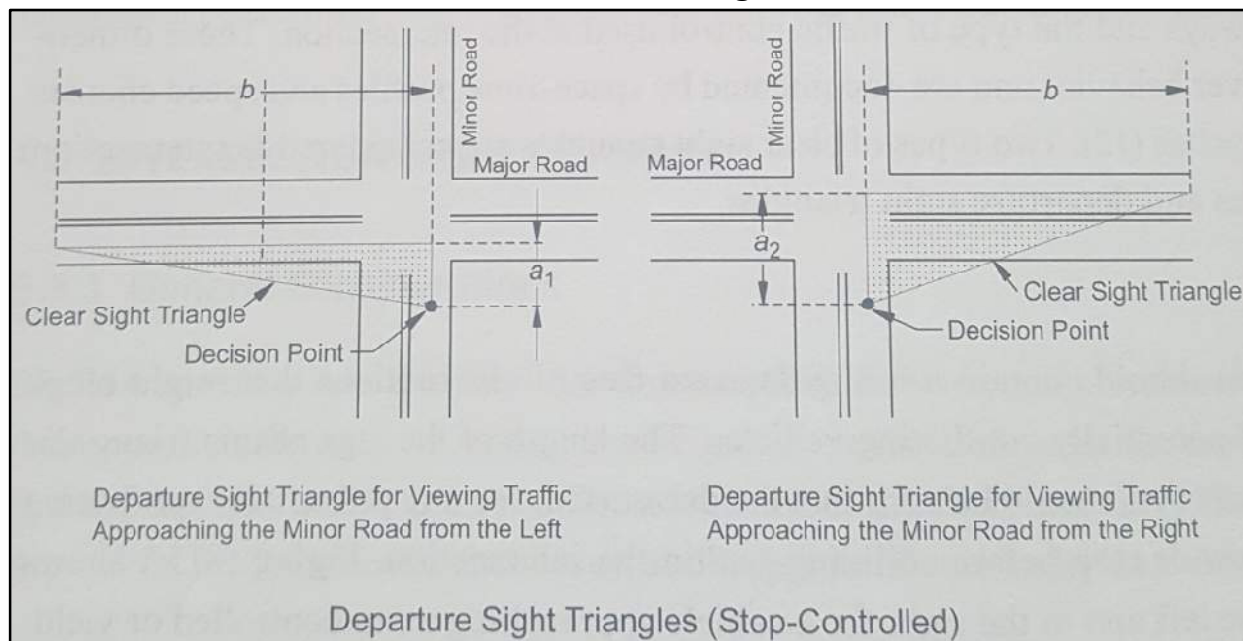
IV. TRAFFIC CALMING RECOMMENDATIONS

It is our recommendation that alternative traffic calming measures be studied along Dartmouth Road & Forest Hill Road to improve the safety and operation of the roadway and pedestrian facilities. Treatments which can be considered include but are not limited to:

Sight Distance Improvements – At the intersection Dartmouth Road & Forest Hill Road, the line of sight of approaching vehicles was found to be obstructed due to objects within the sight triangle. We did observe, however, that if stopped vehicles pulled up closer to the mainline along the controlled approach, that they would have improved visibility of traffic conditions at the intersection and would also be more visible themselves.

It is our opinion that if trees and other foliage near the corners are removed and parking is prohibited back from the corners of the intersection, then the sight distance can be improved. We recommend that the Township of West Orange continue to collaborate with its residents to trim overgrown foliage back and remove obstructions from sight triangles, as reasonable.

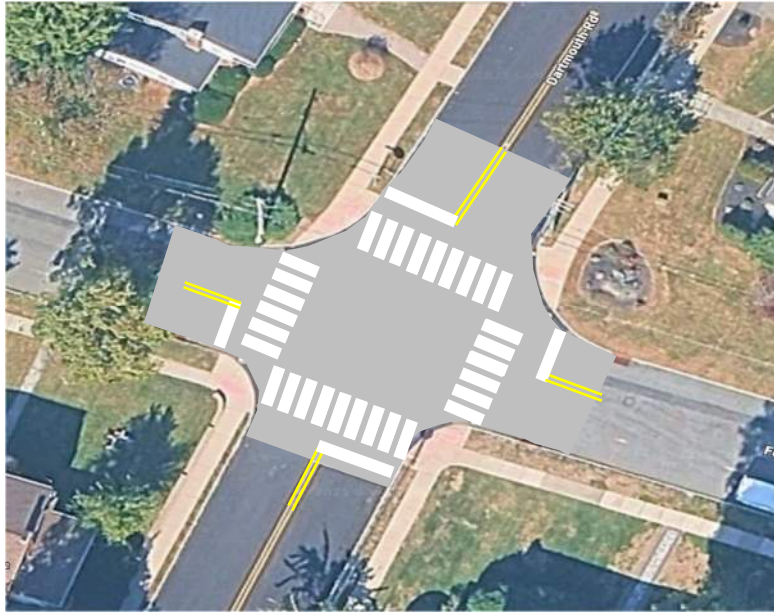
FIGURE 4 – Intersection Sight Distance





International Pattern Crosswalks – It is our experience that this striping pattern provides high visibility for motorists of pedestrians in the crosswalk and may provide reduced maintenance costs. Should it be implemented at the study location we recommend that a minimum of 8 feet tall, 24-inch-wide bars 4 feet on center, white thermoplastic crossing be installed.

FIGURE 5 – International Pattern Crosswalks



Update Striping– We recommend that the Township of West Orange consider restriping faded markings to better define the lanes and to encourage motorists to travel at lower speeds and prevent crashes. The striping of road markings will allow the motorists to see the lanes carefully and follow the signs presence better. This treatment will improve the sight distance, pedestrian safety and prohibit parking along the intersection.

Update Signage – We recommend the Township of West Orange consider replace and update all signs to meet current MUTCD standards. Ensuring that signage meets current regulations will improve visibility and enhance road safety for motorists.

Speed Limit Signs - We recommend the Township of West Orange consider the installation of additional speed limit signs along Dartmouth Road & Forest Hill Road. We observed that minimal to no speed limits signs are posted along Dartmouth Road & Forest Hill Road.

Additional Improvements

We recommend that the following proposed improvements be considered to improve the overall safety and quality of the roadway for both pedestrians and motorists in the area:

- Enhance the landscape of streets by maintaining the curb and sidewalk paths; and
- Install additional lighting at the intersection.



V. SUMMARY & CONCLUSIONS

BVE has concluded that an All-Way Stop condition at this intersection is justified based on 2B.17 Warrant E: Other Factors of the 2023 MUTCD.

It is our recommendation that the Township of West Orange consider traffic calming measures and work with its residents to improve the safety and operational characteristics at the intersection of Dartmouth Road & Forest Hill Road. Based upon our observations, it is our opinion that the study intersection warrants the implementation of an All-Way STOP Control based on the guidelines within the MUTCD. We present the following in support of this recommendation as well as other traffic treatments which may be considered:

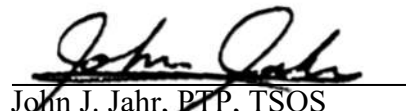
- The intersection of Dartmouth Road & Forest Hill Road reported no crashes within a five-year period.
- We observed that Dartmouth Road & Forest Hill Road are through streets of similar design and operating characteristics where an All-Way STOP control would improve traffic conditions in the area.
- We observed that the intersection of Dartmouth Road & Forest Hill Road had 109 pedestrians during the morning peak hour, 97 pedestrians during the school dismissal peak hour and 15 pedestrians during evening peak hour. We note that the pedestrians during the morning and school dismissal peak hour were mostly students traveling to and from Roosevelt Middle School.
- We note that the existing conditions of the intersection of Dartmouth Road & Forest Hill Road operate at an overall Level of Service 'A' during each of the studied peak hours.
- Implementing an All-Way STOP condition at the intersection of Dartmouth Road & Forest Hill Road will maintain an overall Level of Service 'A' during each of the studied peak hours.
- We observed that the intersection sight distance of Dartmouth Road at Forest Hill Road was not adequate based on horizontal sight lines blocked by overgrown foliage. We recommend that the Township of West Orange collaborate with its residents to trim overgrown foliage back, remove obstructions, and enforce parking restrictions from sight triangles, as reasonable.



- It is our recommendation that the Township consider implementing an international crosswalk pattern throughout all of its pedestrian crossings. This striping pattern should be comprised of white 24" thick bars, set 4' on center, and no less than 8' wide. We recommend an 8' wide crosswalk for this area where school crossing signs are present. This pattern provides greater visibility for both pedestrians and motorists who approach the facility, greater painted surface area provides greater reflectivity during nighttime lighting conditions, and due to how the pattern is laid out it may require less upkeep costs for the Township due to reduced wear and tear.
- We recommend the Township of West Orange consider refreshing the striping along Dartmouth Road & Forest Hill Road to give motorists better travel lane definition. All striping should be implemented per the guidance presented within the MUTCD;
- We recommend the Township of West consider replacing older and faded signs along Dartmouth Road & Forest Hill Road with MUTCD compliant signs with newer retroreflective materials for improved visibility;
- We recommend the Township of West Orange consider implementing additional speed limit signs throughout Dartmouth Road & Forest Hill Road.
- Based upon our analysis, it is our engineering judgement that the implementation of an All Way STOP control will improve operation and safety for all travel modes at the intersection.

Should you have any questions or require additional information please do not hesitate to contact me at (732) 236-7557.

Very truly yours,
Bright View Engineering


John J. Jahr, PTP, TSOS
Principal
(732) 236-7557


Aaron J. Schrager, PE, PP, CME
Principal

JJJ/as/am
<https://bvengr.sharepoint.com/sites/bvengr/proj/251404-WOT-Darhmouth-Forest-AWS/Dartmouth-Road-Forest-Hill-Road-All-Way-Stop.docx>
Enclosures: Technical Appendix



Bright View Engineering
Moving you forward

BRIGHT VIEW ENGINEERING
70 SOUTH ORANGE AVE, SUITE 109
LIVINGSTON, NEW JERSEY 07039

Count Name: Forest-Hill-Rd-Dartmouth-Rd
BVE proje. #: 251404
Start Date: Thursday, 10/09/2025

251404-West-Orange-Forest-Hill-Rd-Dartmouth-Rd																									
Township of West Orange New Jersey																									
Thursday, October 9, 2025																									
Time	Southbound Dartmouth Road						Westbound Forest Hill Road						Northbound Dartmouth Road						Eastbound Forest Hill Road						Total
	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	
6:00 AM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	1	0	1	0	0	0	0	0	0	3
6:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	2	1	3	0	0	1	0	0	1	5
6:30 AM	0	1	0	0	0	1	0	1	0	0	2	1	0	0	0	2	0	2	0	0	0	0	0	0	4
6:45 AM	0	0	0	0	2	0	0	1	0	0	0	1	0	1	0	3	1	4	0	0	3	0	0	3	8
Hourly Total	0	1	0	1	2	2	0	3	1	0	2	4	0	2	0	8	2	10	0	0	4	0	0	4	20
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	4	0	0	4	6
7:15 AM	0	0	0	0	0	0	0	0	6	1	0	7	0	0	0	4	0	4	0	0	3	1	0	4	15
7:30 AM	0	1	0	1	0	2	0	2	0	0	1	2	0	0	1	1	5	2	0	0	6	0	9	6	12
7:45 AM	0	4	0	0	0	4	0	0	14	4	9	18	0	1	4	2	4	7	0	0	13	4	29	17	46
Hourly Total	0	5	0	1	0	6	0	2	20	5	10	27	0	1	5	9	10	15	0	0	26	5	38	31	79
8:00 AM	0	1	1	0	2	2	0	0	7	1	7	8	0	2	3	1	1	6	0	0	7	3	4	10	26
8:15 AM	0	0	2	0	0	2	0	1	3	0	5	4	0	5	3	3	8	11	0	0	9	5	19	14	31
8:30 AM	0	0	1	0	1	1	0	6	2	0	2	8	0	3	13	8	1	24	0	1	7	11	17	19	52
8:45 AM	0	2	0	0	0	2	0	3	5	0	0	8	0	6	8	5	2	19	0	0	6	1	2	7	36
Hourly Total	0	3	4	0	3	7	0	10	17	1	14	28	0	16	27	17	12	60	0	1	29	20	42	50	145
9:00 AM	0	0	0	0	0	0	0	1	5	0	0	6	0	0	2	1	1	3	0	0	3	1	1	4	13
9:15 AM	0	0	0	0	0	0	0	1	2	0	3	3	0	0	0	2	2	2	0	0	4	0	0	4	9
9:30 AM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	1	0	1	0	1	5	1	0	7	10
9:45 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	0	0	2	0	0	1	0	0	1	5
Hourly Total	0	0	0	0	0	0	0	3	10	0	3	13	0	0	4	4	3	8	0	1	13	2	1	16	37
10:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	3	1	0	0	1	0	1	1	3
10:15 AM	0	0	0	0	0	0	0	1	4	1	0	6	0	0	0	0	4	0	0	0	3	0	2	3	9
10:30 AM	0	0	1	0	0	1	0	1	2	0	1	3	0	0	1	1	0	2	0	0	3	0	0	3	9
10:45 AM	0	0	0	0	1	0	0	0	2	1	1	3	0	0	0	0	0	0	0	0	2	0	0	2	5
Hourly Total	0	0	1	0	1	1	0	2	9	2	2	13	0	0	1	2	7	3	0	0	9	0	3	9	26
11:00 AM	0	0	0	0	0	0	0	2	2	0	1	4	0	2	0	1	0	3	0	0	2	1	0	3	10
11:15 AM	0	0	0	0	0	0	0	0	2	1	0	3	0	1	0	0	0	1	0	0	1	0	0	1	5
11:30 AM	0	0	0	1	0	1	0	2	3	0	0	5	0	1	0	1	0	2	0	0	2	0	0	2	10
11:45 AM	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	4	1	5	0	0	1	0	3	1	12
Hourly Total	0	0	0	1	0	1	0	5	12	1	1	18	0	5	0	6	1	11	0	0	6	1	3	7	37



251404-West-Orange-Forest-Hill-Rd-Dartmouth-Rd																									
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12:00 PM	0	0	1	0	0	1	0	0	3	1	0	4	0	0	3	3	3	6	0	0	3	0	0	3	14
12:15 PM	0	0	0	0	1	0	0	0	2	1	3	3	0	0	1	0	0	1	0	0	2	1	1	3	7
12:30 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	4	0	3	4	6
12:45 PM	0	0	0	0	0	0	0	1	3	0	0	4	0	1	2	1	1	4	0	0	5	0	0	5	13
Hourly Total	0	0	1	0	1	1	0	2	9	2	3	13	0	1	6	4	4	11	0	0	14	1	4	15	40
1:00 PM	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	2	2	2	0	0	1	0	1	1	5
1:15 PM	0	0	0	0	0	0	1	1	4	0	1	6	0	0	1	1	1	2	0	1	0	0	1	1	9
1:30 PM	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	2	0	2	0	0	2	0	1	2	8
1:45 PM	0	0	0	0	2	0	0	3	1	0	3	4	0	1	0	3	0	4	0	0	3	0	0	3	11
Hourly Total	0	0	0	0	2	0	1	5	10	0	4	16	0	1	1	8	3	10	0	1	6	0	3	7	33
2:00 PM	0	0	0	1	0	1	0	1	7	0	0	8	0	0	0	3	2	3	0	0	2	0	0	2	14
2:15 PM	0	1	1	0	0	2	0	1	5	0	0	6	0	0	0	2	3	2	0	0	3	0	1	3	13
2:30 PM	0	0	0	1	0	1	0	2	4	2	0	8	0	3	1	2	1	6	0	1	1	1	0	3	18
2:45 PM	0	0	0	0	0	0	0	2	5	1	0	8	0	2	1	0	0	3	0	0	6	0	2	6	17
Hourly Total	0	1	1	2	0	4	0	6	21	3	0	30	0	5	2	7	6	14	0	1	12	1	3	14	62
3:00 PM	0	2	2	0	1	4	0	3	6	1	4	10	0	0	2	1	16	3	0	0	9	8	41	17	34
3:15 PM	0	1	2	0	0	3	0	3	4	3	1	10	0	5	2	3	4	10	0	0	3	4	4	7	30
3:30 PM	0	1	0	0	0	1	0	3	1	1	3	5	0	6	12	5	8	23	0	0	5	1	8	6	35
3:45 PM	0	0	0	0	0	0	0	1	5	1	4	7	0	4	1	1	0	6	0	0	5	1	3	6	19
Hourly Total	0	4	4	0	1	8	0	10	16	6	12	32	0	15	17	10	28	42	0	0	22	14	56	36	118
4:00 PM	0	0	0	0	0	0	0	1	4	2	0	7	0	1	0	3	4	4	0	0	5	1	13	6	17
4:15 PM	0	1	3	0	0	4	0	3	3	1	0	7	0	1	0	1	3	2	0	0	3	0	3	3	16
4:30 PM	0	1	0	0	0	1	0	1	4	1	0	6	0	2	2	4	1	8	0	0	1	1	3	2	17
4:45 PM	0	1	1	0	0	2	0	0	2	0	0	2	0	4	0	2	0	6	0	0	6	1	2	7	17
Hourly Total	0	3	4	0	0	7	0	5	13	4	0	22	0	8	2	10	8	20	0	0	15	3	21	18	67



251404-West-Orange-Forest-Hill-Rd-Dartmouth-Rd Township of West Orange New Jersey Thursday, October 9, 2025																									
Time	Southbound Dartmouth Road						Westbound Forest Hill Road						Northbound Dartmouth Road						Eastbound Forest Hill Road						Total
	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	
5:00 PM	1	0	0	0	0	1	0	3	7	1	0	11	0	1	2	2	0	5	0	0	3	1	6	4	21
5:15 PM	0	1	0	0	0	1	1	2	5	1	3	9	0	1	2	1	0	4	0	0	6	0	3	6	20
5:30 PM	0	0	0	0	1	0	0	2	5	0	2	7	0	2	2	3	1	7	0	0	5	2	0	7	21
5:45 PM	0	0	0	0	0	0	0	2	10	0	0	12	0	3	0	2	0	5	0	1	4	1	1	6	23
Hourly Total	1	1	0	0	1	2	1	9	27	2	5	39	0	7	6	8	1	21	0	1	18	4	10	23	85
6:00 PM	0	0	0	0	0	0	0	0	7	0	0	7	0	1	1	1	1	3	0	0	3	0	1	3	13
6:15 PM	0	1	1	0	0	2	0	3	4	0	0	7	0	0	0	2	0	2	0	0	3	0	1	3	14
6:30 PM	0	1	0	0	0	1	0	2	5	2	4	9	0	1	0	3	3	4	0	0	2	1	0	3	17
6:45 PM	0	1	0	0	1	1	0	2	5	0	1	7	0	2	2	1	0	5	0	0	4	1	1	5	18
Hourly Total	0	3	1	0	1	4	0	7	21	2	5	30	0	4	3	7	4	14	0	0	12	2	3	14	62
DAILY TOTAL	1	21	16	5	12	43	2	69	186	28	61	285	0	65	74	100	89	239	0	5	186	53	187	244	811
Cars	1	20	16	4	12	41	2	65	180	28	60	275	0	65	74	97	89	236	0	5	179	47	186	231	783
Heavy Vehicles	0	1	0	1	0	2	0	4	6	0	0	10	0	0	0	3	0	3	0	0	7	6	0	13	28
Heavy Vehicle %	0.0%	4.8%	0.0%	20.0%	0.0%	4.7%	0.0%	5.8%	3.2%	0.0%	0.0%	3.5%	0.0%	0.0%	0.0%	3.0%	0.0%	1%	0.0%	0.0%	3.8%	11.3%	0.0%	5.3%	3.5%
Bicycles	0	0	0	0	-	-	0	0	0	0	-	-	0	1	2	0	-	-	0	0	1	0	-	-	4
Pedestrians	-	-	-	-	12	-	-	-	-	-	60	-	-	-	-	-	89	-	-	-	-	-	186	-	347
Bikes on CW	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	2



251404-West-Orange-Forest-Hill-Rd-Dartmouth-Rd
Township of West Orange New Jersey
Thursday, October 9, 2025

AM Peak Hour																									
Time	Southbound Dartmouth Road						Westbound Forest Hill Road						Northbound Dartmouth Road						Eastbound Forest Hill Road						Total
	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	
7:45 AM	0	4	0	0	0	4	0	0	14	4	9	18	0	1	4	2	4	7	0	0	13	4	29	17	46
8:00 AM	0	1	1	0	2	2	0	0	7	1	7	8	0	2	3	1	1	6	0	0	7	3	4	10	26
8:15 AM	0	0	2	0	0	2	0	1	3	0	5	4	0	5	3	3	8	11	0	0	9	5	19	14	31
8:30 AM	0	0	1	0	1	1	0	6	2	0	2	8	0	3	13	8	1	24	0	1	7	11	17	19	52
Peak Hour Total	0	5	4	0	3	9	0	7	26	5	23	38	0	11	23	14	14	48	0	1	36	23	69	60	155
PHF	0.00	0.31	0.50	0.00	0.38	0.56	0.00	0.29	0.46	0.31	0.64	0.53	0.00	0.55	0.44	0.44	0.44	0.50	0.00	0.25	0.69	0.52	0.59	0.79	0.75
Cars	0	5	4	0	-	9	0	7	25	5	-	37	0	11	23	14	-	48	0	1	33	22	-	56	150
Heavy Vehicles	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	3	1	-	4	5
Heavy Vehicle %	0	0.0%	0.0%	0.0%	-	0.0%	0	0.0%	3.8%	0%	-	2.6%	0	0.0%	0.0%	0.0%	-	0.0%	0	0.0%	8%	4.3%	-	6.7%	3.2%
Pedestrians	-	-	-	-	3	-	-	-	-	-	23	-	-	-	-	-	14	-	-	-	-	-	69	-	109
Bikes on CW	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

Afternoon Peak Hour																										
Time	Southbound Dartmouth Road						Westbound Forest Hill Road						Northbound Dartmouth Road						Eastbound Forest Hill Road						Total	
	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total		
3:00 PM	0	2	2	0	1	4	0	3	6	1	4	10	0	0	2	1	16	3	0	0	9	8	41	17	34	
3:15 PM	0	1	2	0	0	3	0	3	4	3	1	10	0	5	2	3	4	10	0	0	3	4	4	7	30	
3:30 PM	0	1	0	0	0	1	0	3	1	1	3	5	0	6	12	5	8	23	0	0	5	1	8	6	35	
3:45 PM	0	0	0	0	0	0	0	1	5	1	4	7	0	4	1	1	0	6	0	0	5	1	3	6	19	
Peak Hour Total	0	4	4	0	1	8	0	10	16	6	12	32	0	15	17	10	28	42	0	0	22	14	56	36	118	
PHF	0.00	0.50	0.50	0.00	0.25	0.50	0.00	0.83	0.67	0.50	0.75	0.80	0.00	0.63	0.35	0.50	0.44	0.46	0.00	0.00	0.61	0.44	0.34	0.53	0.84	
Cars	0	3	4	0	-	7	0	10	16	6	-	32	0	15	17	10	-	42	0	0	21	13	-	34	115	
Heavy Vehicles	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	1	-	2	3	
Heavy Vehicle %	0	25.0%	0%	0.0%	-	12.5%	0	0.0%	0.0%	0.0%	-	0.0%	0	0.0%	0.0%	0.0%	-	0.0%	0	0.0%	4.5%	7.1%	-	5.6%	2.5%	
Pedestrians	-	-	-	-	1	-	-	-	-	-	12	-	-	-	-	-	28	-	-	-	-	-	56	-	97	
Bikes on CW	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0	



Bright View Engineering
Moving you forward

BRIGHT VIEW ENGINEERING
70 SOUTH ORANGE AVE, SUITE 109
LIVINGSTON, NEW JERSEY 07039

Count Name: Forest-Hill-Rd-Dartmouth-Rd
BVE proje. #: 251404
Start Date: Thursday, 10/09/2025

PM Peak Hour																									
Time	Southbound Dartmouth Road						Westbound Forest Hill Road						Northbound Dartmouth Road						Eastbound Forest Hill Road						Total
	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	UT	LT	TH	RT	Peds/ Bikes	App. Total	
5:00 PM	1	0	0	0	0	1	0	3	7	1	0	11	0	1	2	2	0	5	0	0	3	1	6	4	21
5:15 PM	0	1	0	0	0	1	1	2	5	1	3	9	0	1	2	1	0	4	0	0	6	0	3	6	20
5:30 PM	0	0	0	0	1	0	0	2	5	0	2	7	0	2	2	3	1	7	0	0	5	2	0	7	21
5:45 PM	0	0	0	0	0	0	0	2	10	0	0	12	0	3	0	2	0	5	0	1	4	1	1	6	23
Peak Hour Total	1	1	0	0	1	2	1	9	27	2	5	39	0	7	6	8	1	21	0	1	18	4	10	23	85
PHF	0.25	0.25	0.00	0.00	0.25	0.50	0.25	0.75	0.68	0.50	0.42	0.81	0.00	0.58	0.75	0.67	0.25	0.75	0.00	0.25	0.75	0.50	0.42	0.82	0.92
Cars	1	1	0	0	-	2	1	9	26	2	-	38	0	7	6	8	-	21	0	1	18	4	-	23	84
Heavy Vehicles	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
Heavy Vehicle %	0	0.0%	0%	0.0%	-	0.0%	0	0.0%	3.7%	0.0%	-	2.6%	0	0.0%	0.0%	0.0%	-	0.0%	0	0.0%	0.0%	0.0%	-	0.0%	1.2%
Pedestrians	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	9	-	15
Bikes on CW	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	2



Total Vehicles On Leg			151		
Vehicles Entering Intersection 43			Vehicles Exiting Intersection 108		
Southbound					
Cars	4	16	20	1	12
Heavy	1	0	1	0	0
Total	5	16	21	1	12



Total Vehicles on Leg 500	Vehicles Entering Intersection 244	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 256		186	0	186
			0	0	0
			5	0	5
			179	7	186
			47	6	53



Daily Volumes

	Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 285	Total Vehicles on Leg 594
	28	0	28			
	180	6	186			
	65	4	69			
	2	0	2			
	60	0	60			



Cars	89	0	65	74	97
Heavy	0	0	0	0	3
Total	89	0	65	74	100
Northbound					
Vehicles Entering Intersection 239			Vehicles Exiting Intersection 138		
Total Vehicles On Leg			377		

