
Rolling Road Crosswalk Study

For

ROLLING ROAD WIDENING PROJECT

VDOT PROJECT NO. 0638-029-156

UPC 5559

Fairfax County, Virginia

Prepared for:

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Prepared by:



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INTRODUCTION

As a part of the Rolling Road widening project in Springfield, Virginia, this study evaluates the need for marked crosswalks across Rolling Road at unsignalized intersection locations. The overall project involves widening Rolling Road between Viola Street and Old Keene Mill Road to a four-lane divided roadway. The roadway improvements also include constructing sidewalk on the east side of Rolling Road and a shared use path on the west side of Rolling Road.

The project is expected to be advertised in 2020 and completed in 2022. The design year is 2042, or 22 years past the advertisement year. In 2016 and 2017, VDOT held several Citizen's Information Meetings (CIMs) to share project design options with the area residents and incorporate their requests and recommendations in the future design, where possible. During these meetings, residents expressed concern for safe passage for pedestrians in the area in general, as well as at the transit stops between Greeley Boulevard and Old Keene Mill Road. They requested to retain all existing crosswalks and install additional new crosswalks at unsignalized intersections.

To address citizen concerns, this study analyzes existing and potential crosswalk locations based on the guidelines provided in VDOT TED IIM-TE-384.0, *Pedestrian Crossing Accommodations at Unsignalized Locations*. The following four unsignalized intersections are evaluated:

1. Existing crosswalk on the south side of the Viola Street intersection
2. New crosswalk at the Springfield Village Drive intersection
3. Relocate existing crosswalk to the south side of the Bellamy Avenue intersection
4. New crosswalk at the Taunton Place intersection

Although the pedestrian counts crossing Rolling Road at the existing or new crosswalk locations do not meet the minimum threshold of 20 pedestrians/bicyclist in an hour, the general guidelines provided in Section 5 of the IIM states that presence of a shared use path can justify installation of a marked crosswalk even if the adjacent land uses are not pedestrian-oriented. The Rolling Road widening project involves installing continuous sidewalk on the east side and shared use path on the west side of the road. Based on this general guideline and the following characteristics along Rolling Road, it is recommended that all four locations should be considered for installing high visibility crosswalks across Rolling Road:

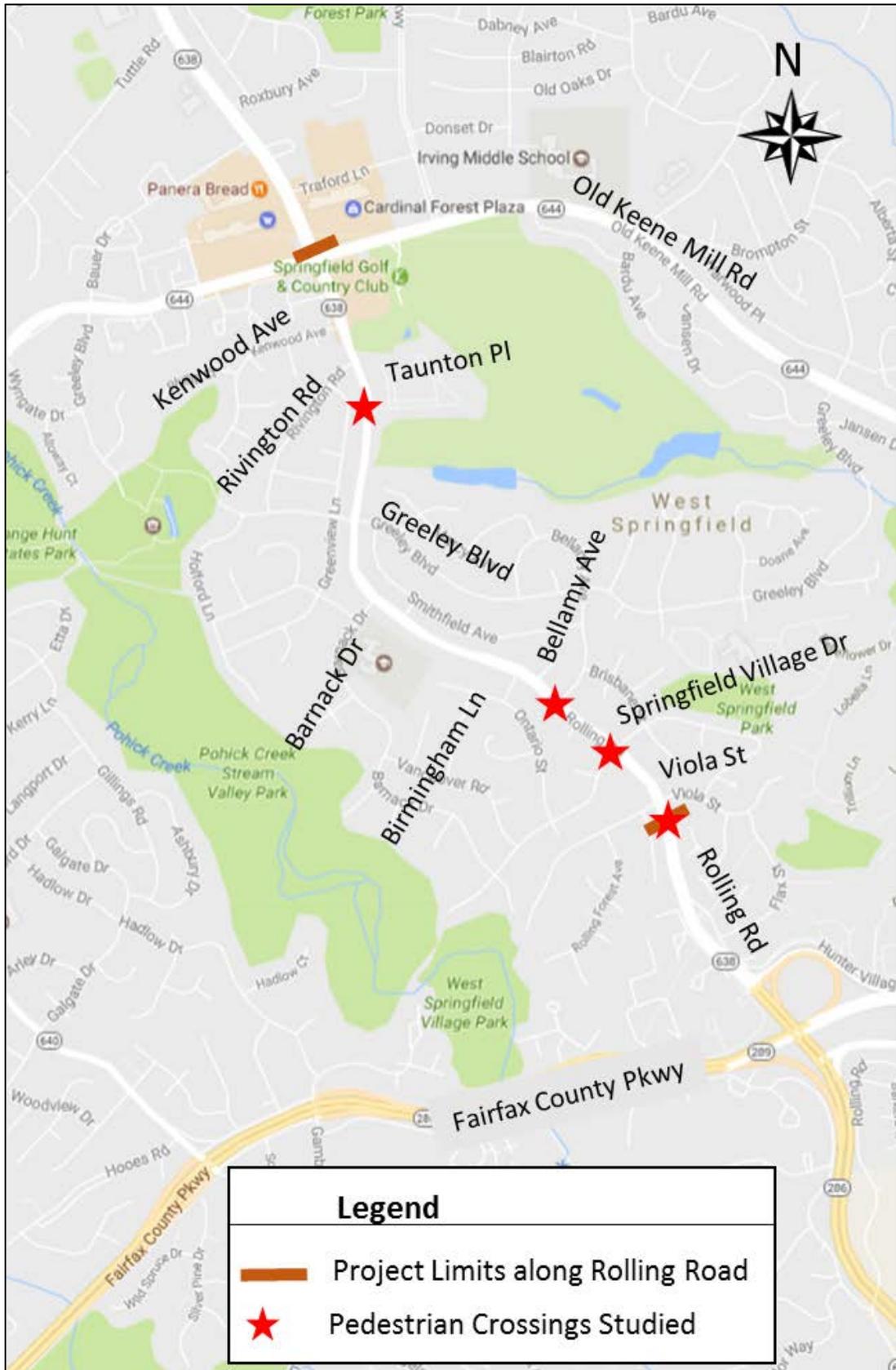
- The average daily traffic volume is more than 15,000 vehicles per day.
- The distance between existing and proposed crosswalks is more than 300 feet.
- There is an adequate stopping sight distance (300 feet) available to the motorists traveling in both directions.
- Due to the layout of road and the proposed design speed of 35 mph, the crosswalks would not produce an unacceptable safety hazard.

Additionally, the project also involves providing following safety measures for pedestrian:

- Pedestrian warning signs in advance of the crosswalks
- Adequate lighting at the crosswalk locations
- Pedestrian refuge island at the crosswalks at the Bellamy Avenue and Taunton Place intersections. Pedestrian refuge island cannot be provided at the Viola Street and Springfield Village Drive intersections due to the right of way constraints.

This report provides a discussion of the existing land uses, crosswalk analysis methodology, results, and recommendations. The project site location is presented in Figure 1.

Figure 1: Site Location



EXISTING ROADWAY CHARACTERISTICS

Within the project limits, Rolling Road is a two-lane divided road between Viola Street to 200 feet north of Birmingham Lane. From Birmingham Lane to Kenwood Avenue, Rolling Road is a two-lane undivided road and from Kenwood Avenue to Old Keene Mill Road, it is a four-lane divided road. Rolling Road connects to Fairfax County Parkway to its southern end and to Braddock Road to its northern end and is considered to be oriented north-south. The existing speed limit along Rolling Road is 30 mph.

According to 2016 average annual daily traffic (AADT) volumes published by VDOT, the AADT along Rolling Road is 19,000 vehicles per day (vpd) from Fairfax County Parkway to Springfield Village Drive, 18,000 vpd from Springfield Village Drive to Greeley Boulevard, and 22,000 vpd from Greeley Boulevard to Old Keene Mill Road.

The land uses along Rolling Road are considered pedestrian-oriented, including residential and institutional developments. The Rolling Forest Recreation Association is located approximately 1,000 feet east of the Rolling Road and Viola Street intersection. The recreation facility has a six-lane swimming pool and holds swim meets during the summer. The existing crosswalk on the south side of the Rolling Road at Viola Street intersection provides access to the pedestrians to the recreation association.

The residential communities of Winter Forest and West Springfield Village are located on the east and west sides of Rolling Road between the Viola Street and Springfield Village Drive intersections. The West Springfield Park is located to the northeast of Rolling Road and Springfield Village Drive intersection. With the installation of sidewalk and shared use path along Rolling Road, the crosswalks at the Viola Street and Springfield Village Drive intersections will provide access to pedestrians and bicyclists on both sides of the road to these developments.

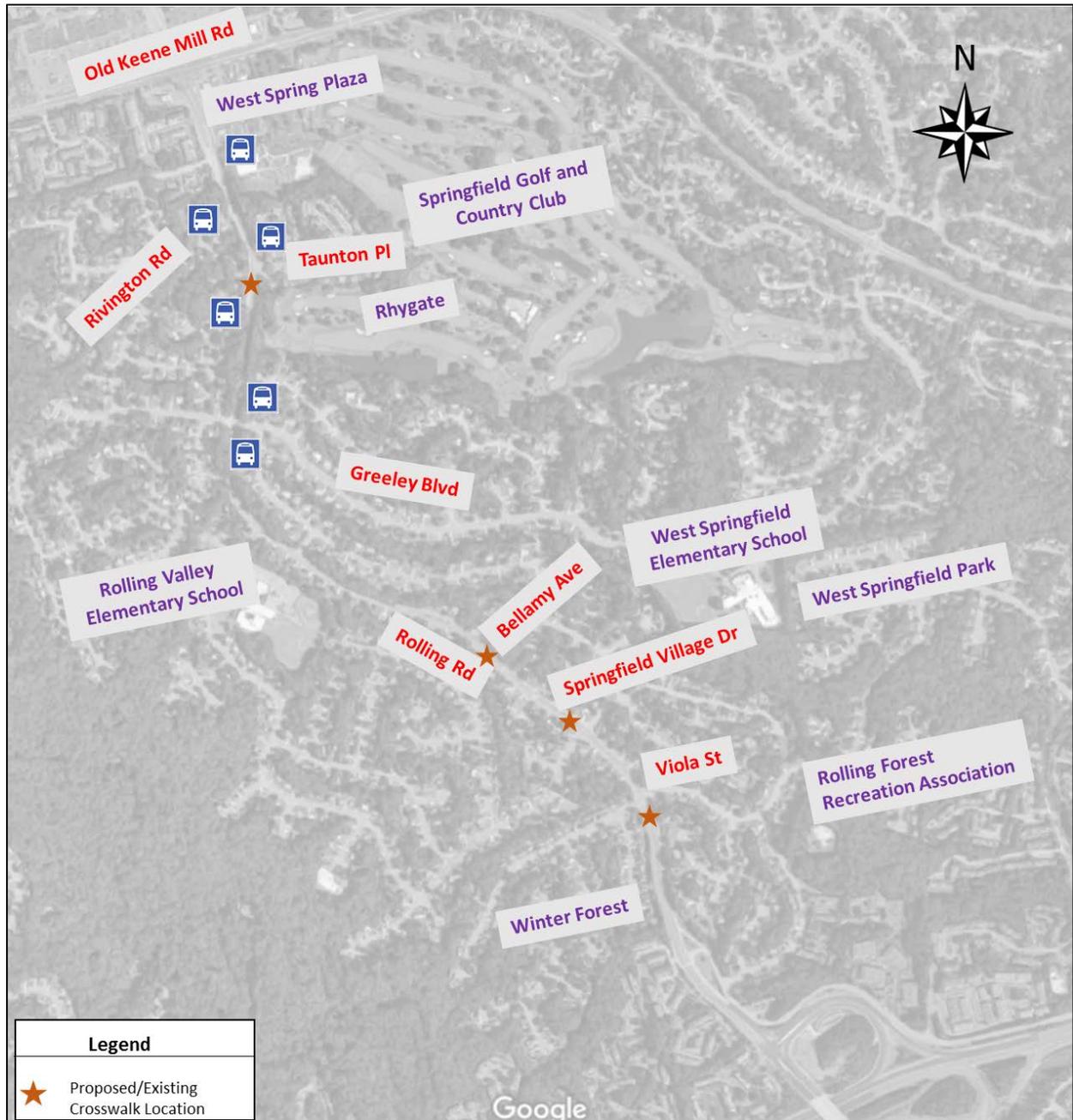
There are two elementary schools in the area. The West Springfield Elementary School is located on the east side of Rolling Road and to the south of Greeley Boulevard. The school is accessible by Springfield Village Drive and Bellamy Avenue. The Rolling Valley Elementary School is located to the southwest of the Rolling Road at Barnack Drive intersection.

The residential community of Rhygate is located to the east of Rolling Road at the Taunton Place intersection. The West Spring Plaza, located in the southeast corner of Rolling Road and Old Keene Mill Road intersection, includes a 7-Eleven store, as well as sit-down and fast food restaurants, and Rolling Road provides direct access these facilities. The residents on the west side of Rolling Road can access Rhygate Community and the commercial developments using the proposed crosswalk at the Taunton Place intersection.

A metro bus service, 18H, provides transportation to the Pentagon and operates along Rolling Road. The bus stops are located on both sides of Rolling Road between Greeley Boulevard and Old Keene Mill Road. There are an average of five northbound bus trips from Rolling Road to the Pentagon in the AM peak period between 5:30 and 8:30 AM. During the PM peak hour, there are an average of seven southbound bus trips from the Pentagon to Rolling Road between 4:00 and 7:00 PM. On average, these bus trips result in a total of four passengers in the AM peak period and 13 passengers in the PM peak period. The proposed crosswalk at the Taunton Place intersection is located in the proximity of the bus stops. The bus ridership information is provided in **Appendix A**.

Figure 2 shows the bus stop and primary pedestrian destination locations along the study segment.

Figure 2: Land Uses along Rolling Road



EXISTING PEDESTRIAN COUNTS

Fourteen-hour (5:00 AM - 7:00 PM) traffic and pedestrian counts were collected by VDOT in September 2014 at the study intersections. Table 1 presents hourly pedestrian counts at the Viola Street intersection.

Table 1: 14-Hour Pedestrian Counts at Rolling Road and Viola Street

Time Period	North (Crossing Rolling Rd)	South (Crossing Rolling Rd)	East (Crossing Side Street)	West (Crossing Side Street)
5:00 AM - 6:00 AM	0	2	0	0
6:00 AM - 7:00 AM	2	0	7	0
7:00 AM - 8:00 AM	0	0	1	2
8:00 AM - 9:00 AM	0	0	1	0
9:00 AM - 10:00 AM	0	3	3	3
10:00 AM - 11:00 AM	0	0	0	2
11:00 AM - 12:00 PM	0	1	1	0
12:00 PM - 1:00 PM	0	1	0	0
1:00 PM - 2:00 PM	0	0	0	2
2:00 PM - 3:00 PM	0	0	0	0
3:00 PM - 4:00 PM	0	2	2	2
4:00 PM - 5:00 PM	1	2	3	3
5:00 PM - 6:00 PM	4	0	3	3
6:00 PM - 7:00 PM	0	0	3	7
Total	7	11	24	24

A total of 18 pedestrians crossed Rolling Road at Viola Street in the 14-hour period, with an average of 1.3 pedestrians/hour and a maximum of 4 peds/hour in a one-hour time period.

Table 2 presents hourly pedestrian counts at the Springfield Village Drive intersection.

Table 2: 14-Hour Pedestrian Counts at Rolling Road and Springfield Village Drive

Time Period	North (Crossing Rolling Rs)	South (Crossing Rolling Rd)	East (Crossing Side Street)	West (Crossing Side Street)
5:00 AM - 6:00 AM	0	0	0	2
6:00 AM - 7:00 AM	0	0	2	3
7:00 AM - 8:00 AM	1	0	3	5
8:00 AM - 9:00 AM	0	1	2	5
9:00 AM - 10:00 AM	0	0	1	9
10:00 AM - 11:00 AM	0	1	1	4
11:00 AM - 12:00 PM	0	0	0	1
12:00 PM - 1:00 PM	0	0	0	1
1:00 PM - 2:00 PM	0	0	1	2
2:00 PM - 3:00 PM	0	0	1	3
3:00 PM - 4:00 PM	0	0	1	0
4:00 PM - 5:00 PM	0	0	1	3
5:00 PM - 6:00 PM	0	0	3	2
6:00 PM - 7:00 PM	2	0	6	3
Total	3	2	22	43

A total of 5 pedestrians crossed Rolling Road at Springfield Village Drive in the 14-hour period, with an average of less than one pedestrians/hour.

Table 3 presents hourly pedestrian counts at the Bellamy Avenue intersection.

Table 3: 14-Hour Pedestrian Counts at Rolling Road and Bellamy Avenue

Time Period	North (Crossing Rolling Rd)	South (Crossing Rolling Rd)	East (Crossing Side Street)	West (Crossing Side Street)
5:00 AM - 6:00 AM	0	0	0	4
6:00 AM - 7:00 AM	1	0	0	3
7:00 AM - 8:00 AM	2	1	2	4
8:00 AM - 9:00 AM	0	0	1	4
9:00 AM - 10:00 AM	0	0	1	10
10:00 AM - 11:00 AM	0	0	1	4
11:00 AM - 12:00 PM	0	0	1	2
12:00 PM - 1:00 PM	1	0	0	1
1:00 PM - 2:00 PM	0	0	0	1
2:00 PM - 3:00 PM	1	0	0	2
3:00 PM - 4:00 PM	0	0	0	0
4:00 PM - 5:00 PM	0	0	0	1
5:00 PM - 6:00 PM	5	0	0	0
6:00 PM - 7:00 PM	0	0	2	3
Total	10	1	8	39

A total of 11 pedestrians crossed Rolling Road at Bellamy Avenue in the 14-hour period, with an average of 1 pedestrian/hour.

Table 4 presents hourly pedestrian counts at the Taunton Place intersection.

Table 4: 14-Hour Pedestrian Counts at Rolling Road and Taunton Place

Time Period	North (Crossing Rolling Rd)	South (Crossing Rolling Rd)	East (Crossing Side Street)	West (Crossing Side Street)
5:00 AM - 6:00 AM	0	0	0	0
6:00 AM - 7:00 AM	0	0	0	0
7:00 AM - 8:00 AM	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0
9:00 AM - 10:00 AM	0	0	0	0
10:00 AM - 11:00 AM	0	1	0	0
11:00 AM - 12:00 PM	0	0	1	0
12:00 PM - 1:00 PM	0	0	1	0
1:00 PM - 2:00 PM	0	0	0	1
2:00 PM - 3:00 PM	0	0	0	0
3:00 PM - 4:00 PM	0	0	3	0
4:00 PM - 5:00 PM	0	0	0	0
5:00 PM - 6:00 PM	0	0	0	0
6:00 PM - 7:00 PM	0	0	0	0
Total	0	1	5	1

A total of 6 pedestrians crossed Rolling Road at Taunton Place in the 14-hour period, with an average of less than one pedestrian/hour and a maximum of 3 peds/hour in a one-hour time period. Raw pedestrian count data is provided in **Appendix B**.

FUTURE CONDITIONS

The Rolling Road widening project involves the following improvements between Viola Street and Old Keene Mill Road:

- Widen Rolling Road to a four-lane divided road with a physically-divided median.
- Provide access management along Rolling by closing direct access to low volume driveways and side streets, including Ashford Court, Glover Court, Taft Drive, and Rivington Road.
- Construct continuous sidewalk on the east side of Rolling Road.
- Construct a shared-use path on the west side of Rolling Road.
- Install dedicated left turn lanes at the median crossover openings.
- Install a traffic signal at the intersection of Rolling Road at Greeley Boulevard.

The posted speed limit will be maintained to 30 mph and design speed will be 35 mph. In the project build-out year (2022), the average daily traffic (ADT) along Rolling Road is projected to be 18,000 vehicles per day (vpd) from Viola Street to Greeley Boulevard and 25,000 vpd from Greeley Boulevard to Old Keene Mill Road.

In the design year (2042), the ADT is projected as 32,000 vpd from Viola Street to Greeley Boulevard and 36,000 vpd from Greeley Boulevard to Old Keene Mill Road.

EVALUATION OF PEDESTRIAN CROSSWALK LOCATIONS

In 2016 and 2017, VDOT held several Citizens Information Meetings (CIMs) and one Public Hearing with area residents. The objective was to share the project's purpose and need, present design options, and collect citizen feedback in order to modify the roadway improvements, if feasible. In these meetings, residents requested VDOT to provide facilities for safe pedestrian crossings across Rolling Road by retaining the existing crosswalks at Viola Street and Bellamy Avenue and installing new crosswalks at Springfield Village Drive and Taunton Place.

T3 evaluated these locations to determine if crosswalks were recommended based on guidelines and criteria provided in VDOT TED IIM-TE 384.0, *Pedestrian Crossing Accommodations at Unsignalized Locations*.

Crosswalk Evaluation Criteria

Section 5.3 of the VDOT TED IIM-TE 384.0 provides criteria for evaluating crosswalk installation across an uncontrolled approach of an unsignalized intersection. According to these guidelines, the crossings of uncontrolled approaches **shall not** be marked unless **all** of the four following criteria are met:

Criterion 1 - The crossing is on a direct route between significant pedestrian generator(s) and attractor(s), where engineering judgment determines that the crosswalk would likely see a minimum of 20 pedestrians/bicyclists using the crosswalk in an hour. The threshold may be reduced to 10 pedestrians per hour if the crossing is expected to be used by a high number of vulnerable pedestrians (pedestrians who are disabled, age 65 and over, or age 15 and under), or if the reduced volume is met for three consecutive hours.

Analysis – Criterion 1 is not met as the maximum number of pedestrians crossing Rolling Road at all four locations are less than the minimum threshold of 20 pedestrians/hour. Even a reduced threshold of 10 pedestrian/hour, if it were applicable, is not met for three e hours at any location.

Criterion 2 - The location is 300 feet or more from another marked crosswalk across the same road, or engineering judgment determines that sufficient demand and pedestrian desire lines exist to justify both crosswalks.

Analysis – Criterion 2 is satisfied since all existing and proposed crosswalks are located at more than 300 feet apart. Based on citizen input, there is also a clear public desire for these crosswalks. The approximate distances between the existing and proposed crosswalks are as follows:

- 670 feet between Viola Street and Springfield Village Drive
- 700 feet between Bellamy Avenue and Springfield Village Drive
- 1,000 feet between Taunton Place and Greely Boulevard

Criterion 3 – Drivers will have an unrestricted view of the entire length of the crosswalk, including the waiting areas at either end of the crosswalk. If possible, this unrestricted view should be equal to or exceed the Stopping Sight Distance (SSD) requirements shown below in Table 5 (the same as Table 1 in the IIM) and as per the latest effective version of VDOT’s Road Design Manual. If the SSD requirements cannot be met and the crosswalk cannot be relocated to a place where SSD requirements will be met, warning signs shall be used.

Table 5: Stopping Sight Distance Requirements Approaching Mid-Block Crosswalks (feet)

Operating Speed *	Level Grade	Downgrades			Upgrades		
		-3%	-6%	-9%	+3%	+6%	+9%
25 mph	155	158	165	173	147	143	140
30 mph	200	205	215	227	200	184	179
35 mph	250	257	271	287	237	229	222
40 mph	305	315	333	354	289	278	269
45 mph	360	378	400	427	344	331	320
50 mph	425	446	474	507	405	388	375
55 mph	<i>Crosswalks should not be marked across uncontrolled approaches with operating speed of 55 mph or greater.</i>						

Analysis – Criterion 3 is met since the stopping sight distance (SSD) along Rolling Road at all four locations is greater than 250 feet which is the required sight distance for a 35 mph design speed road with a level grade. Table 6 presents measured sight distances along Rolling Road at crosswalk locations. The figures indicating available stopping sight distances to the proposed and new sidewalks are provided in **Appendix C**.

Table 6: Available Sight Distance along Rolling Road

Crosswalk Location	Rolling Rd	Sight Distances (ft)
South side of Viola St Int	NB	>800
	SB	>400
South side of Springfield Village Dr Int	NB	>500
	SB	>800
North side of Bellmy Ave Int	NB	>500
	SB	>600
South side of Taunton Pl Int	NB	>1,000
	SB	380

Table 6 indicates that at all locations, the available sight distances to the crosswalks along Rolling Road is greater than 250 feet.

Criterion 4 – The required engineering study determines that the introduction of a marked crosswalk will not produce an unacceptable safety hazard.

Analysis – Criterion 4 is met. Based on the proposed design speed of 35 mph and the roadway layout, the crosswalks are not expected to produce an unacceptable safety hazard. Currently, there are pedestrian crossing signs (W11-2) in advance of the marked crosswalks at the Viola Street and Bellamy Avenue intersections, both in the northbound and southbound directions. Also, there are pedestrian crossing (W11-2) signs combined with (W16-7P) at both crosswalk locations to warn motorists for the potential presence of pedestrians at the crosswalks. Similar pedestrian-related treatments are planned to be installed along Rolling Road to provide safe passage to the pedestrian on both sides of the road.

Crosswalk Evaluation Summary

Three out of the four criteria are met in evaluating the potential installation of marked crosswalks across Rolling Road at Viola Street, Springfield Village Drive, Bellamy Avenue, and Taunton Place. Criterion 1 that requires a minimum of 20 pedestrians crossing Rolling Road during any one hour of the day is not met at any of the four locations. However, the general guidance provided in Section 5 of IIM states that the presence of shared use paths can justify the installation of a marked crosswalk.

Since the existing land uses along Rolling Road are pedestrian oriented and the future improvements involve constructing a sidewalk on the east side and a shared use path on the west side of the road, it is recommended to install marked crosswalks at all four locations with adequate warning signs and additional treatments to provide safe pedestrian passage on both sides of the road. Fairfax County formally requested crosswalks at these locations, and this is in line with citizen feedback requesting these crosswalks.

Decision Making Flow Chart for Crosswalk Markings

In addition to the criteria detailed in the previous section, the IIM also provides a decision-making process for providing crosswalks at uncontrolled locations. Figure 3 (matches IIM Figure C3) on the next page illustrates the decision-making process.

Based on the flow chart, the following conditions are satisfied for the study locations along Rolling Road and are depicted in red in Figure 3.

- In the build-out year (2022), the projected ADT on Rolling Road is 18,000 vpd from Viola Street to Greeley Boulevard and 25,000 vpd from Greeley Boulevard to Old Keene Mill Road.
- The proposed crosswalks at all four locations would be on routes to pedestrian generators, especially with the installation of sidewalks and shared use paths on both sides of road that would attract more pedestrians than existing counts without those facilities.
- The distances between the existing and proposed crosswalks are greater than 300 feet.
- The layout of Rolling Road and the design speed of 35 mph are not expected to produce an unacceptable safety hazard.
- At all four locations the available exceed the stopping sight distance requirement of 250 feet for a 35 mph operating speed and level grade.

The IIM (Figure C3) flowchart then refers to Table 7 (IIM Table 2) for considering marked crosswalks and other pedestrian improvements across uncontrolled approaches. Based on the characteristics of the future improvements along Rolling Road with four lanes and a raised median, an ADT of greater than 15,000 vpd and speed limit of 30 mph, the requirements for **Condition B** are met. Condition B considers all four locations along Rolling Road as candidates for high visibility marked crosswalks.

The advance pedestrian signing is not required for this condition; however, the advance signing would be provided to increase the visibility of the crossings for motorists. Pedestrian safety at the crosswalks at Taunton Place Intersection and Bellamy Avenue intersection will also be enhanced by providing pedestrian refuge in the median. The pedestrian refuge at the Viola Street and Springfield Village Drive intersections are not provided because of the right of way constraints. Adequate lighting will be provided along the corridor to enhance motorist’s visibility of pedestrians in the crosswalk.

Figure 3: Decision Making Flow Chart for Pedestrian Crossing at Unsignalized Locations

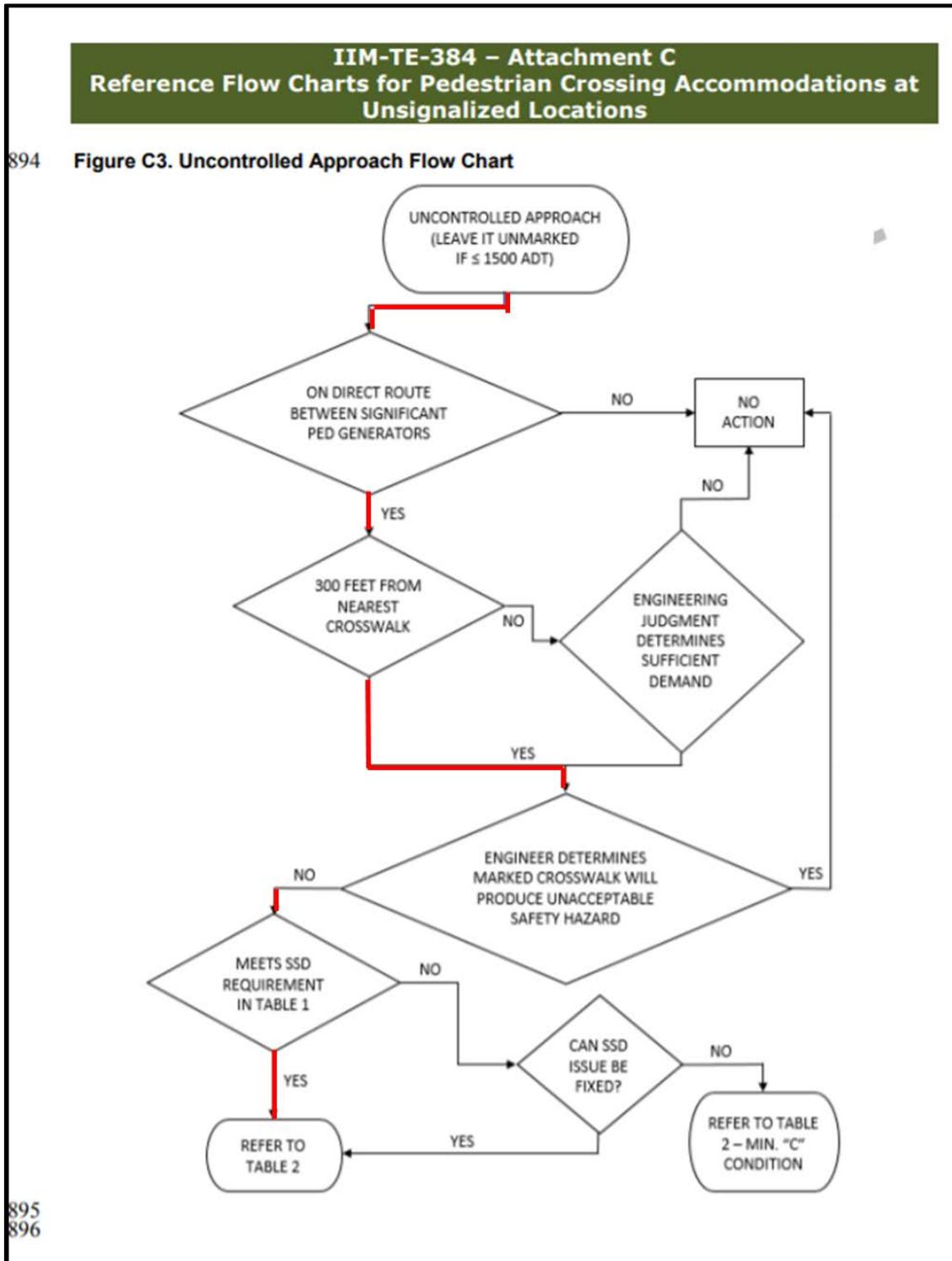


Table 7: Recommended Considerations for Pedestrian Crossing at Unsignalized Locations

452 **Table 2. Recommendations for Considering Marked Crosswalks and Other Needed**
 453 **Pedestrian Improvements Across Uncontrolled Approaches**

Roadway Configuration	Roadway ADT and Speed Limit															
	1,500 to 9,000 VPD				9,000 to 12,000 VPD				12,000 to 15,000 VPD				More than 15,000 VPD			
	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH	≤ 30 MPH	35 MPH	40 MPH	≥ 45 MPH
2 Lanes (undivided two-way street or two-lane one-way street)	A	A	B	B	A	A	B	B	A	A	B	B	B	B	B	C
3 Lanes with refuge island OR 2 Lanes with raised median*	A	A	B	B	A	B	B	B	A	A	B	B	B	B	B	C
3 Lanes (center turn lane)	A	A	B	B	A	B	B	B	A	B	B	C	B	C	C	C
4 Lanes (two-way street with no median)	A	B	C	C	B	B	C	C	B	C	C	D	C	C	C	D
5 Lanes with refuge island OR 4 lanes with raised median*	A	A	B	B	A	B	B	C	B	B	C	C	B	B	C	D
5 Lanes (center turn lane)	A	B	C	C	B	B	C	C	C	C	C	D	C	C	C	D
6 Lanes (two-way street with* or without median)	A	B	D	D	B	B	D	D	D	D	D	D	D	D	D	D

454 Source: *Guidance for Installation of Pedestrian Crosswalks on Michigan State Trunkline Highways* (Michigan Department of
 455 Transportation, 2014)

Condition A	Candidate site for marked crosswalk alone (standard if speed limit is 30 MPH or less, high-visibility if speed limit is 35 MPH or greater). Evaluate need for advance signing
Condition B	Potential candidate site for marked crosswalk. Location should be monitored & consideration given to providing a high-visibility crosswalk and/or warning signs (see Section 7.2)
Condition C	Marked crosswalks alone are insufficient. The crosswalk shall use a high-visibility pattern and other improvements (warning signs and/or geometric/ traffic calming improvements) (see Section 7.2) <u>will likely be necessary.</u>
Condition D	Marked crosswalks shall not be installed

RECOMMENDATIONS

Existing and potential crosswalk locations were evaluated across Rolling Road at the following four intersections:

1. Viola Street
2. Springfield Village Drive
3. Bellamy Avenue
4. Taunton Place

Based on the guidelines provided in VDOT TED IIM 384.0, it is recommended to retain/install high visibility marked crosswalk at all four locations. The project involves providing adequate warning signs in advance of the marked crosswalks, lighting to increase the visibility of the pedestrians in the crosswalk, and installing pedestrian refuge in the median at the Taunton Place and Bellamy Avenue intersections. The pedestrian refuge at the Viola Street and Springfield Village Drive will not be provided due to the right of way constraints.

APPENDIX A – WMATA BUS RIDERSHIP

Washington Metropolitan Area Transit Authority Statistics by Route and Stop

18H Sept 2017

Ridecheck Plus

87:18H

North

Sort	Stop	Dir	Stop ID	Trips	Board	Alight	Load			Dwell (min)	Timepoint Observations		On-time	Served	Load Duration		Ramp Event	TSP Event	Gross Trips
							Avg	Max	Total		On	Early			Late	100%				120%
100	HUNTSMAN BLVD/CORK CO	S	5000133	5	3	0	1	2	3	.	.	.	35%	1.4%	0.2%	.	.	124	
200	FIELD MASTER DR/OLD KEE	S	5000111	5	0	0	1	2	3	.	.	.	1%	1.4%	0.2%	.	.	124	
300	HUCO	X	100961	5	0	0	1	2	3	3	2	65.7%	0%	1.4%	0.2%	.	.	124	
400	FIELD MASTER DR/SILVERVI	S	5000106	5	0	0	1	2	3	.	.	.	0%	1.4%	0.2%	.	.	124	
500	FIELD MASTER DR/SILVERVI	W	5000099	5	0	0	1	2	3	.	.	.	0%	1.4%	0.2%	.	.	124	
600	FIELD MASTER DR/DINA LEI	S	5000084	5	0	0	1	2	3	.	.	.	2%	1.4%	0.2%	.	.	124	
700	CONSERVATION DR/DINA LEI	N	5000081	5	0	0	1	2	3	.	.	.	7%	1.4%	0.2%	.	.	124	
800	CONSERVATION DR/BRIAN	W	5000087	5	0	0	1	2	4	.	.	.	2%	1.4%	0.2%	.	.	124	
900	CONSERVATION DR/#965	S	5000074	5	0	0	1	2	4	.	.	.	0%	1.4%	0.2%	.	.	124	
1000	CONSERVATION DR/COTTO	E	5000066	5	1	0	1	2	4	.	.	.	12%	1.4%	0.2%	.	.	124	
1100	COTTONTAIL CT/#7000	S	5000057	5	0	0	1	2	4	.	.	.	0%	1.4%	0.2%	.	.	124	
1200	COTTONTAIL CT/GAME LOR	S	5000050	5	1	0	1	3	5	.	.	.	11%	1.4%	0.2%	.	.	124	
1300	RESERVATION DR/GAME LO	W	5000039	5	1	0	1	3	6	.	.	.	22%	1.4%	0.2%	.	.	124	
1400	RESERVATION DR/RETREIV	S	5000026	5	1	0	1	4	7	.	.	.	20%	1.4%	0.2%	.	.	124	
1500	RESERVATION DR/CANTERI	S	5000020	5	1	0	2	4	8	.	.	.	17%	1.4%	0.2%	.	.	124	
1600	RESERVATION DR/ELK DR	W	5000016	5	1	0	2	4	9	.	.	.	19%	1.4%	0.2%	.	.	124	
1700	RESERVATION DR/HUNT SQ	S	5000012	5	4	0	3	4	13	.	.	.	22%	1.4%	0.2%	.	.	124	
1800	HUNTSMAN BLVD/FAIRFAX C	N	5000008	5	7	0	4	7	21	.	.	.	60%	1.4%	0.2%	.	.	124	
1900	HUFP	X	100963	5	0	0	4	7	21	0.6	4	86.8%	0%	1.4%	0.2%	.	.	124	
2000	HUNTSMAN BLVD/DOROTHY	E	5000013	5	3	0	5	9	23	.	.	.	38%	1.4%	0.2%	.	.	124	
2100	HUNTSMAN BLVD/GOLDEN B	N	5000027	5	4	0	5	10	27	.	.	.	49%	1.4%	0.2%	.	.	124	
2200	ROCKEFELLER LN/HUNTSM	E	5000044	5	4	0	6	11	31	0.1	.	.	64%	1.4%	0.2%	.	.	124	
2300	ARLEY DR/ROCKEFELLER L	S	5000040	5	3	0	7	12	34	.	.	.	40%	1.4%	0.2%	.	.	124	
2400	ARLEY DR/HANKS PL	E	5000033	5	2	0	7	14	36	.	.	.	29%	1.4%	0.2%	.	.	124	
2500	ARLEY DR/FRESHAIRE DR	E	5000036	5	2	0	8	14	38	.	.	.	28%	1.4%	0.2%	.	.	124	
2600	ARLEY DR/SONTAG WAY	E	5000031	5	1	0	8	14	39	.	.	.	20%	1.4%	0.2%	.	.	124	
2700	ARLEY DR/REDBRIDGE CT	E	5000025	5	2	0	8	15	41	.	.	.	34%	1.4%	0.2%	.	.	124	
2800	ARLEY DR/WHITSON DR	E	5000045	5	1	0	8	15	42	.	.	.	14%	1.4%	0.2%	.	.	124	
2900	SYDE	X	100962	5	0	0	8	15	42	0.3	5	91.7%	0%	1.4%	0.2%	.	.	124	
3000	SYDENSTRICKER RD/ARLEY	N	5000048	5	2	0	9	16	44	.	.	.	29%	1.4%	0.2%	.	.	124	
3100	SYDENSTRICKER RD/KENITF	N	5000053	5	1	0	9	16	45	.	.	.	16%	1.4%	0.2%	.	.	124	

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Washington Metropolitan Area Transit Authority Statistics by Route and Stop

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North

Sort	Stop	Dir	Stop ID	Trips	Board	Alight	Load			Dwell (min)	Timepoint Observations		Ontime	Served	Load Duration		Ramp Event	TSP Event	Gross Trips
							Avg	Max	Total		On	Early			Late	100%				120%
3200	SYDENSTRICKER RD/KERRY	N	5000060	5	4	0	10	17	49	0.1	.	.	.	55%	1.4%	0.2%	.	.	124
3300	HUNTSMAN BLVD/SYDENST	N	5000069	5	9	0	11	20	57	0.1	.	.	.	76%	1.4%	0.2%	.	.	124
3400	HUNTSMAN BLVD/SIDE SAD	N	5000075	5	2	0	12	20	59	.	.	.	.	33%	1.4%	0.2%	.	.	124
3500	HUNTSMAN BLVD/HOUNDWA	E	5000088	5	4	0	13	22	63	.	.	.	.	45%	1.4%	0.2%	.	.	124
3600	HUNTSMAN BLVD/BRIDLE W	N	5000112	5	6	0	14	23	69	0.1	.	.	.	74%	1.4%	0.2%	.	.	124
3700	OLD KEENE MILL RD/HUNTS	E	5000126	5	2	0	14	23	70	.	.	.	.	30%	1.4%	0.2%	.	.	124
3800	OLD KEENE MILL RD/WYNGA	N	5000150	5	2	0	14	23	72	.	.	.	.	32%	1.4%	0.2%	.	.	124
3900	OLD KEENE MILL RD/ENGLIS	E	5000160	5	2	0	15	24	75	.	.	.	.	37%	1.4%	0.2%	.	.	124
4000	OLD KEENE MILL RD/MILLW	E	5000168	5	2	0	15	24	77	.	.	.	.	29%	1.4%	0.2%	.	.	124
4100	KERO	X	100686	5	0	0	15	24	77	0.2	5	.	93.0%	0%	1.4%	0.2%	.	.	124
4200	OLD KEENE MILL RD/ROLLIN	E	5000176	5	1	0	16	24	78	.	.	.	.	20%	1.4%	0.2%	.	.	124
4300	ROLLING RD/OLD KEENE MIL	S	5004591	5	2	0	16	25	80	0.1	.	.	.	33%	1.4%	0.2%	.	.	124
4400	ROLLING RD/RIVINGTON RD	S	5000154	5	1	0	16	25	82	.	.	.	.	19%	1.4%	0.2%	.	.	124
4500	ROLLING RD/TAUNTON PL	S	5000131	5	1	0	17	25	83	.	.	.	.	21%	1.4%	0.2%	.	.	124
4600	GREELEY BLVD/SMITHFIELD	E	5000109	5	10	0	19	27	93	0.1	.	.	.	82%	1.4%	0.2%	.	.	124
4700	GREELEY BLVD/#8133	E	5000104	5	1	0	19	27	94	.	.	.	.	16%	1.4%	0.2%	.	.	124
4800	GREELEY BLVD/BELLAMY A	E	5000094	5	2	0	19	27	96	.	.	.	.	33%	1.4%	0.2%	.	.	124
4900	GREELEY BLVD/BELLAMY A	E	5000100	5	11	0	21	29	107	0.1	.	.	.	94%	1.4%	0.2%	.	.	124
5000	GREELEY BLVD/SETON CT	S	5000095	5	4	0	22	30	111	.	.	.	.	61%	1.4%	0.2%	.	.	124
5100	GREELEY BLVD/DELAND DR	E	5000092	5	3	0	23	31	114	.	.	.	.	48%	1.4%	0.2%	.	.	124
5200	GREELEY BLVD/ANSON CT	N	5000105	5	0	0	23	31	114	.	.	.	.	0%	1.4%	0.2%	.	.	124
5300	GREELEY BLVD/#7823	N	5000114	5	1	0	23	31	115	.	.	.	.	10%	1.4%	0.2%	.	.	124
5400	GREELEY BLVD/JANSEN DR	N	5000132	5	8	0	24	33	122	0.1	.	.	.	72%	1.4%	0.2%	.	.	124
5500	GREELEY BLVD/OLD KEENE	N	5000138	5	3	0	25	34	125	0.1	.	.	.	37%	1.4%	0.2%	.	.	124
5600	OLD KEENE MILL RD/HARWO	E	5000125	5	1	0	25	35	126	.	.	.	.	15%	1.4%	0.2%	.	.	124
5700	KEHU	X	100698	5	0	0	25	35	126	0.5	4	1	80.1%	0%	1.4%	0.2%	.	.	124
5800	OLD KEENE MILL RD/HUNTE	E	5000129	5	11	0	27	36	137	0.1	.	.	.	70%	1.4%	0.2%	.	.	124
5900	OLD KEENE MILL RD/BYRON	E	5000140	5	1	0	28	36	138	.	.	.	.	15%	1.4%	0.2%	.	.	124
6000	OLD KEENE MILL RD/HASTIN	E	5004612	5	0	0	28	36	139	.	.	.	.	3%	1.4%	0.2%	.	.	124
6100	OLD KEENE MILL RD/WESTM	E	5002216	5	2	0	28	36	141	36%	1.4%	0.2%	.	.	124
6200	OLD KEENE MILL RD/LEE VA	E	5000159	5	2	0	29	37	143	26%	1.4%	0.2%	.	.	124

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North

Sort	Stop	Dir	Stop ID	Trips	Board	Alight	Load			Dwell (min)	Timepoint Observations		On-time	Served	Load Duration		Ramp Event	TSP Event	Gross Trips
							Avg	Max	Total		On	Early			Late	100%				120%
6300	OLD KEENE MILL RD/COMME	E	5000165	5	0	0	29	37	143	.	.	.	3%	1.4%	0.2%	.	.	124	
6400	OLD KEENE MILL RD/SPRING	E	5000173	5	7	1	30	39	149	0.2	.	.	66%	1.4%	0.2%	.	.	124	
6500	PENTAGON INBOUND STOP	N	-771	5	0	7	28	35	142	.	.	.	6%	1.4%	0.2%	.	.	124	
6600	KESP	X	100693	5	0	0	28	35	142	0.2	3	2	67.5%	0%	0.2%	.	.	124	
6700	PENT	X	100061	5	0	0	28	35	142	.	4	1	82.7%	0%	0.2%	.	.	124	
6800	PENTAGON TRANSIT CTR/B	W	6000938	5	0	139	1	3	4	.	.	.	92%	1.4%	0.2%	.	.	124	
All Stops					151	147				28.2	0.1	6.5	81.1%						
				Average			13							1.4%	0.2%				
				Maximum			39							1.4%	0.2%				

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Washington Metropolitan Area Transit Authority Statistics by Route and Stop

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South

Sort	Stop	Dir	Stop ID	Trips	Board	Alight	Load			Dwell (min)	Timepoint Observations		Ontime	Served	Load Duration		Ramp Event	TSP Event	Gross Trips
							Avg	Max	Total		On	Early			Late	100%				120%
100	PENTAGON TRANSIT CTR/B	W	6000935	7	148	1	21	29	147	.	.	.	88%	1.0%	0.3%	.	.	251	
200	PENT	X	100061	7	0	0	21	29	147	.	5	2	67.4%	0%	0.3%	.	.	251	
300	PENTAGON OUTBOUND STO	S	-179	7	1	0	21	29	148	.	.	.	1%	1.0%	0.3%	.	.	251	
400	OLD KEENE MILL RD/SPRING	W	5000177	7	21	18	22	34	151	0.1	.	.	85%	1.0%	0.3%	.	.	251	
500	KESP	X	100693	7	0	0	22	34	151	0.2	5	2	73.8%	0%	0.3%	.	.	251	
600	OLD KEENE MILL RD/COMME	W	5000167	7	1	2	21	34	150	.	.	.	19%	1.0%	0.3%	.	.	251	
700	OLD KEENE MILL RD/HANOV	W	5000158	7	1	3	21	34	148	.	.	.	28%	1.0%	0.3%	.	.	251	
800	OLD KEENE MILL RD/HASTIN	W	5000156	7	0	1	21	33	148	.	.	.	7%	1.0%	0.3%	.	.	251	
900	OLD KEENE MILL RD/BYRON	W	5000143	7	0	26	17	24	122	.	.	.	69%	1.0%	0.3%	.	.	251	
1000	KETI	X	100694	7	0	0	17	24	122	0.3	5	2	77.6%	0%	0.3%	.	.	251	
1100	OLD KEENE MILL RD/TIVERT	W	5000130	7	1	7	17	23	116	.	.	.	21%	1.0%	0.3%	.	.	251	
1200	OLD KEENE MILL RD/HARWO	W	5000128	7	0	2	16	23	114	.	.	.	19%	1.0%	0.3%	.	.	251	
1300	GREELEY BLVD/JANSEN DR	E	5000127	7	0	10	15	20	104	0.1	.	.	61%	1.0%	0.3%	.	.	251	
1400	GREELEY BLVD/#7828	S	5000113	7	0	1	15	20	103	.	.	.	12%	1.0%	0.3%	.	.	251	
1500	GREELEY BLVD/ANSON CT	S	5000102	7	0	1	15	20	102	.	.	.	14%	1.0%	0.3%	.	.	251	
1600	GREELEY BLVD/DELAND DR	W	5000097	7	0	2	14	19	100	.	.	.	20%	1.0%	0.3%	.	.	251	
1700	GREELEY BLVD/SETON CT	W	5000091	7	0	4	14	19	96	.	.	.	37%	1.0%	0.3%	.	.	251	
1800	GREELEY BLVD/BELLAMY A	W	5000101	7	0	12	12	17	84	.	.	.	68%	1.0%	0.3%	.	.	251	
1900	GREELEY BLVD/BELLAMY A	W	5000096	7	0	2	12	17	82	0.1	.	.	25%	1.0%	0.3%	.	.	251	
2000	GREELEY BLVD/#1820	W	5000103	7	0	2	11	17	80	.	.	.	21%	1.0%	0.3%	.	.	251	
2100	GREELEY BLVD/ROLLING RD	W	5000110	7	0	5	11	15	75	.	.	.	42%	1.0%	0.3%	.	.	251	
2200	ROLLING RD/TAUNTON PL	N	5000139	7	0	3	10	15	73	.	.	.	29%	1.0%	0.3%	.	.	251	
2300	ROLLING RD/OLD KEENE MIL	N	5000162	7	0	5	10	14	68	.	.	.	34%	1.0%	0.3%	.	.	251	
2400	OLD KEENE MILL RD/ROLLIN	W	-732	7	0	2	9	14	66	.	.	.	20%	1.0%	0.3%	.	.	251	
2500	KERO	X	100686	7	0	0	9	14	66	0.2	5	2	70.5%	0%	0.3%	.	.	251	
2600	OLD KEENE MILL RD/OLD KE	W	5000171	7	0	1	9	14	64	.	.	.	15%	1.0%	0.3%	.	.	251	
2700	OLD KEENE MILL RD/BAUER	W	5000164	7	0	2	9	13	62	.	.	.	18%	1.0%	0.3%	.	.	251	
2800	OLD KEENE MILL RD/HILLSID	S	5000152	7	0	2	9	13	60	.	.	.	16%	1.0%	0.3%	.	.	251	
2900	HUNTSMAN BLVD/BRIDLE W	S	5000108	7	0	7	8	11	54	.	.	.	51%	1.0%	0.3%	.	.	251	
3000	HUNTSMAN BLVD/HOUNDMA	S	5000090	7	0	3	7	11	51	.	.	.	31%	1.0%	0.3%	.	.	251	
3100	HUNTSMAN BLVD/SIDE SAD	W	5000078	7	0	5	7	10	46	0.1	.	.	27%	1.0%	0.3%	.	.	251	

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South

Sort	Stop	Dir	Stop ID	Trips	Board	Alight	Load			Dwell (min)	Timepoint Observations		Ontime	Served	Load Duration		Ramp Event	TSP Event	Gross Trips
							Avg	Max	Total		On	Early			Late	100%				120%
3200	SYDENSTRICKER RD/HUNTS	E	5000068	7	0	7	5	8	38	.	.	.	54%	1.0%	0.3%	.	.	251	
3300	SYDENSTRICKER RD/KERRY	S	5000061	7	0	2	5	8	36	.	.	.	21%	1.0%	0.3%	.	.	251	
3400	SYDENSTRICKER RD/KENITF	S	5000055	7	0	1	5	8	35	.	.	.	14%	1.0%	0.3%	.	.	251	
3500	SYDENSTRICKER RD/ARLEY	S	5000047	7	0	2	5	7	33	.	.	.	16%	1.0%	0.3%	.	.	251	
3600	SYDE	X	100962	7	0	0	5	7	33	0.3	4	2	1	57.4%	0%	1.0%	0.3%	251	
3700	ARLEY DR/SAMPAL PL	W	5000041	7	0	1	5	7	33	.	.	.	8%	1.0%	0.3%	.	.	251	
3800	ARLEY DR/APPLECROSS LA	W	5000030	7	0	1	4	7	31	.	.	.	17%	1.0%	0.3%	.	.	251	
3900	ARLEY DR/SONTAG WAY	W	5000032	7	0	2	4	7	29	.	.	.	20%	1.0%	0.3%	.	.	251	
4000	ARLEY DR/FRESHAIRE DR	W	5000037	7	0	2	4	6	28	.	.	.	16%	1.0%	0.3%	.	.	251	
4100	ARLEY DR/HANKS PL	W	5000035	7	0	3	4	6	25	.	.	.	28%	1.0%	0.3%	.	.	251	
4200	ROCKEFELLER LA/ARLEY D	W	5000042	7	0	1	3	6	24	.	.	.	9%	1.0%	0.3%	.	.	251	
4300	ROCKEFELLER LA/HAMOR L	W	5004609	7	0	1	3	5	23	.	.	.	9%	1.0%	0.3%	.	.	251	
4400	HUNTSMAN BLVD/ROCKEFE	S	5000043	7	0	4	3	5	19	.	.	.	35%	1.0%	0.3%	.	.	251	
4500	HUNTSMAN BLVD/GOLDEN B	S	5000028	7	0	2	2	5	17	.	.	.	20%	1.0%	0.3%	.	.	251	
4600	HUNTSMAN BLVD/DOROTHY	S	5000014	7	0	1	2	5	16	.	.	.	14%	1.0%	0.3%	.	.	251	
4700	HUFP	X	100963	7	0	0	2	5	16	1.5	4	2	1	57.2%	0%	1.0%	0.3%	251	
4800	HUNTSMAN BLVD/FAIRFAX C	S	5000009	7	0	3	2	4	13	0.1	.	.	34%	1.0%	0.3%	.	.	251	
4900	RESERVATION DR/PARK HU	N	5000011	7	0	2	2	3	11	.	.	.	22%	1.0%	0.3%	.	.	251	
5000	RESERVATION DR/ELK DR	E	5000015	7	0	1	1	3	10	.	.	.	8%	1.0%	0.3%	.	.	251	
5100	RESERVATION DR/CANTERI	N	5000019	7	0	1	1	3	10	.	.	.	9%	1.0%	0.3%	.	.	251	
5200	RESERVATION DR/RETREVI	N	5000024	7	0	1	1	3	9	.	.	.	9%	1.0%	0.3%	.	.	251	
5300	RESERVATION DR/GAME LO	E	5000038	7	0	2	1	2	7	.	.	.	17%	1.0%	0.3%	.	.	251	
5400	COTTONTAIL CT/GAME LOR	N	5000051	7	0	0	1	2	7	.	.	.	2%	1.0%	0.3%	.	.	251	
5500	COTTONTAIL CT/#000	N	5000056	7	0	1	1	2	6	.	.	.	9%	1.0%	0.3%	.	.	251	
5600	CONSERVATION DR/COTTO	W	5000067	7	0	1	1	2	6	.	.	.	8%	1.0%	0.3%	.	.	251	
5700	CONSERVATION DR/#6966	N	5000073	7	0	1	1	2	5	.	.	.	10%	1.0%	0.3%	.	.	251	
5800	CONSERVATION DR/BRIAN	E	5000086	7	0	1	1	2	4	.	.	.	12%	1.0%	0.3%	.	.	251	
5900	CONSERVATION DR/ANTELO	S	5000079	7	0	0	0	2	3	.	.	.	6%	1.0%	0.3%	.	.	251	
6000	FIELDMASTER DR/CONSERV	E	5000077	7	0	0	0	2	3	.	.	.	0%	1.0%	0.3%	.	.	251	
6100	FIELD MASTER DR/SYDENST	N	5000085	7	0	0	0	2	3	.	.	.	1%	1.0%	0.3%	.	.	251	
6200	FIELDMASTER DR/SILVERV	E	5000098	7	0	0	0	2	3	.	.	.	0%	1.0%	0.3%	.	.	251	

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South

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							Avg	Max	Total		On	Early			Late	100%			
6300	FIELDMASTER DR/SILVERI	N	5000107	7	0	0	0	2	3	.	.	.	0%	1.0%	0.3%	.	.	251	
6400	OLD KEENE MILL RD/FIELDM	E	5000116	7	0	3	0	0	0	.	.	.	19%	1.0%	0.3%	.	.	251	
6500	OKFE	X	101268	7	0	0	0	0	0	.	5	2	77.2%	0%	1.0%	0.3%	.	251	
All Stops					174	174				33.7	5.1	10.3	68.7%		1.0%	0.3%	.		
Average							8								1.0%	0.3%			
Maximum							34								1.0%	0.3%			

Load duration is percent of stops where the load exceeds a given capacity

APPENDIX B – PEDESTRIAN COUNTS

QUALITY COUNTS REPORT

=====

Intersection: VA-638 Viola St
 City/State: Springfield VA
 QCJobNo: 12766801
 ClientID:
 Date: 10/16/2014

PEDESTRIAN VOLUMES - Rolling Rd at Viola St

Time Period	North	South	East	West	Total
5:00 AM	0	1	0	0	1
5:15 AM	0	1	0	0	1
5:30 AM	0	0	0	0	0
5:45 AM	0	0	0	0	0
6:00 AM	2	0	1	0	3
6:15 AM	0	0	3	0	3
6:30 AM	0	0	0	0	0
6:45 AM	0	0	3	0	3
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	2	2
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	1	1
9:15 AM	0	0	0	0	0
9:30 AM	0	2	3	2	7
9:45 AM	0	1	0	0	1
10:00 AM	0	0	0	1	1
10:15 AM	0	0	0	1	1
10:30 AM	0	0	0	0	0
10:45 AM	0	0	0	0	0
11:00 AM	0	0	1	0	1
11:15 AM	0	1	0	0	1
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	0	0
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	1	0	0	1
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	1	1
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0
1:45 PM	0	0	0	1	1

PEDESTRIAN VOLUMES - Rolling Rd at Viola St

Time Period	North	South	East	West	Total
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	2	0	2
3:15 PM	0	0	0	1	1
3:30 PM	0	1	0	1	2
3:45 PM	0	1	0	0	1
4:00 PM	1	0	0	0	1
4:15 PM	0	1	2	1	4
4:30 PM	0	0	1	1	2
4:45 PM	0	1	0	1	2
5:00 PM	0	0	1	0	1
5:15 PM	3	0	1	1	5
5:30 PM	1	0	1	1	3
5:45 PM	0	0	0	1	1
6:00 PM	0	0	2	1	3
6:15 PM	0	0	0	1	1
6:30 PM	0	0	0	5	5
6:45 PM	0	0	1	0	1

QUALITY COUNTS REPORT

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Intersection: VA-638 Springfield Village Dr

City/State: Springfield VA

QCJobNo: 12766802

ClientID:

Date: 9/9/2014

PEDESTRIAN VOLUMES - Rolling Rd at Springfield Village Dr

Time Period	North	South	East	West	Total
5:00 AM	0	0	0	0	0
5:15 AM	0	0	0	0	0
5:30 AM	0	0	0	0	0
5:45 AM	0	0	0	2	2
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	1	1
6:30 AM	0	0	0	0	0
6:45 AM	0	0	2	2	4
7:00 AM	1	0	2	2	5
7:15 AM	0	0	1	2	3
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1
8:00 AM	0	0	2	0	2
8:15 AM	0	1	0	1	2
8:30 AM	0	0	0	2	2
8:45 AM	0	0	0	2	2
9:00 AM	0	0	1	3	4
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	2	2
9:45 AM	0	0	0	4	4
10:00 AM	0	0	0	1	1
10:15 AM	0	0	0	1	1
10:30 AM	0	0	1	1	2
10:45 AM	0	1	0	1	2
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	0	0	0
11:45 AM	0	0	0	1	1
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	1	1
12:45 PM	0	0	0	0	0
1:00 PM	0	0	1	1	2
1:15 PM	0	0	0	1	1
1:30 PM	0	0	0	0	0

PEDESTRIAN VOLUMES - Rolling Rd at Springfield Village Dr

Time Period	North	South	East	West	Total
1:45 PM	0	0	0	0	0
2:00 PM	0	0	0	1	1
2:15 PM	0	0	0	0	0
2:30 PM	0	0	1	0	1
2:45 PM	0	0	0	2	2
3:00 PM	0	0	1	0	1
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	0	0	1	2	3
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	1	1	2
5:45 PM	0	0	2	0	2
6:00 PM	0	0	3	0	3
6:15 PM	0	0	1	3	4
6:30 PM	1	0	0	0	1
6:45 PM	1	0	2	0	3

QUALITY COUNTS REPORT

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Intersection: VA-638 Bellamy Ave
 City/State: Springfield VA
 QCJobNo: 12766804
 ClientID:
 Date: 9/9/2014

PEDESTRIAN VOLUMES - Rolling Rd at Bellamy Ave

Time Period	North	South	East	West	Total
5:00 AM	0	0	0	1	1
5:15 AM	0	0	0	0	0
5:30 AM	0	0	0	1	1
5:45 AM	0	0	0	2	2
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	0	0
6:30 AM	0	0	0	1	1
6:45 AM	1	0	0	2	3
7:00 AM	0	0	1	2	3
7:15 AM	0	0	1	1	2
7:30 AM	1	0	0	0	1
7:45 AM	1	1	0	1	3
8:00 AM	0	0	1	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	3	3
8:45 AM	0	0	0	1	1
9:00 AM	0	0	1	4	5
9:15 AM	0	0	0	1	1
9:30 AM	0	0	0	2	2
9:45 AM	0	0	0	3	3
10:00 AM	0	0	0	1	1
10:15 AM	0	0	1	1	2
10:30 AM	0	0	0	1	1
10:45 AM	0	0	0	1	1
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	0	0	0
11:45 AM	0	0	1	2	3
12:00 PM	0	0	0	0	0
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	1	0	0	1	2
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	0	0

PEDESTRIAN VOLUMES - Rolling Rd at Bellamy Ave

1:45 PM	0	0	0	1	1
2:00 PM	0	0	0	1	1
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	1	0	0	1	2
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	1	0	0	0	1
5:15 PM	1	0	0	0	1
5:30 PM	1	0	0	0	1
5:45 PM	2	0	0	0	2
6:00 PM	0	0	2	0	2
6:15 PM	0	0	0	3	3
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0

QUALITY COUNTS REPORT

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Intersection: VA-638 Taunton Pl
 City/State: Springfield VA
 QcJobNo: 12766810
 ClientID:
 Date: 9/9/2014

PEDESTRIAN VOLUMES - Rolling Road at Taunton Pl

Time Period	North	South	East	West	Total
5:00 AM	0	0	0	0	0
5:15 AM	0	0	0	0	0
5:30 AM	0	0	0	0	0
5:45 AM	0	0	0	0	0
6:00 AM	0	0	0	0	0
6:15 AM	0	0	0	0	0
6:30 AM	0	0	0	0	0
6:45 AM	0	0	0	0	0
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
9:00 AM	0	0	0	0	0
9:15 AM	0	0	0	0	0
9:30 AM	0	0	0	0	0
9:45 AM	0	0	0	0	0
10:00 AM	0	0	0	0	0
10:15 AM	0	0	0	0	0
10:30 AM	0	1	0	0	1
10:45 AM	0	0	0	0	0
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	1	0	1
11:45 AM	0	0	0	0	0
12:00 PM	0	0	1	0	1
12:15 PM	0	0	0	0	0
12:30 PM	0	0	0	0	0
12:45 PM	0	0	0	0	0
1:00 PM	0	0	0	0	0
1:15 PM	0	0	0	0	0
1:30 PM	0	0	0	1	1
1:45 PM	0	0	0	0	0
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	1	0	1
3:15 PM	0	0	2	0	2
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
6:00 PM	0	0	0	0	0
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	0	0	0	0

APPENDIX B – STOPPING SIGHT DISTANCE SKETCHES

SIGHT DISTANCE AT VIOLA CROSSWALK
Posted Speed Limit = 30 MPH
Design Speed = 35 MPH



Maple Tree Lane

VIOLA STREET

ROLLING ROAD SOUTHBOUND
ROLLING ROAD NORTHBOUND

ROLLING ROAD SOUTHBOUND
ROLLING ROAD NORTHBOUND

SSD > 400'

SSD > 800'

Line of Sight

Line of Sight

Daffodil Court



SIGHT DISTANCE AT SPRINGFIELD VILLAGE DRIVE CROSSWALK
Posted Speed Limit = 30 MPH
Design Speed = 35 MPH



SPRINGFIELD VILLAGE DRIVE

SSD > 800'

Line of Sight

ROLLING ROAD SOUTHBOUND

SSD > 800'

Line of Sight

SSD > 500'

Line of Sight

SSD > 500'

ROLLING ROAD NORTHBOUND

SIGHT DISTANCE AT BELLAMY AVENUE CROSSWALK
Posted Speed Limit = 30 MPH
Design Speed = 35 MPH



Line of Sight

SSD > 600'

ROLLING ROAD SOUTHBOUND

ROLLING ROAD SOUTHBOUND

ROLLING ROAD NORTHBOUND

SSD > 500'

Line of Sight

BELLAMY AVENUE

GLOVER COURT

ASHFORD COURT

SIGHT DISTANCE AT TAUNTON PLACE CROSSWALK
Posted Speed Limit = 30 MPH
Design Speed = 35 MPH

