



APPENDIX G

Intersection Analysis

Intersection Analysis

Traffic operational analysis for the existing roadway geometrics and traffic volumes were performed for major intersections of concern for both morning and afternoon peak hour periods using Synchro plus SimTraffic per Highway Capacity Manual procedures. The intersections selected for analyses were those that ranked as the highest crash locations in each of the localities, and/or were of concern due to observed levels of congestion. Analyses were performed that examined both the crash history, per available VDOT records, and also level of service and delay (congestion).

Peak hour level of service (LOS) measures the adequacy of the intersection geometrics and traffic controls of a particular intersection or approach for the given turning movement volumes. Levels of service range from A through F, based on the average control delay experienced by vehicles traveling through the intersection during the peak hour. Control delay represents the portion of total delay attributed to traffic control devices (e.g., signals or stop signs). The engineering profession generally accepts level of service D as an acceptable operating condition for signalized intersections in urban areas and level of service C for rural areas.

At unsignalized intersections, a level of service E is generally considered acceptable only when it is the side street that is encountering the delay, and when queuing is not excessive. Nevertheless, side streets sometimes function at level of service F during peak traffic periods, because the traffic volumes often do not warrant a traffic signal to assist side street traffic. The table below provides a general description of the various LOS categories and delay ranges.

Level of Service Descriptions for Intersections

Level of Service	Description	Signalized Intersection	Unsignalized Intersection
A	Little or no delay	≤ 10 sec.	≤ 10 sec.
B	Short traffic delay	10–20 sec.	10–15 sec.
C	Average traffic delay	20–35 sec.	15–25 sec.
D	Long traffic delay	35–55 sec.	25–35 sec.
E	Very long traffic delay	55–80 sec.	35–50 sec.
F	Unacceptable delay	> 80 sec.	> 50 sec.

The following figures illustrate the findings for each of the study intersections. Note that these intersections were identified through coordination with the Transportation Technical Committee and information about the findings was shared with the public in the third public meeting session.

01-Business 29/Daniels Drive

Daniels Drive provides access to a school located east of Business 29. Potential improvements could include:

- Construct northbound taper, or turn lane, for the right turn onto Daniels Drive
- Conduct a study to see if a school zone speed reduction is warranted in the ingress/egress hours of the school. (i.e create school zone on Business 29)

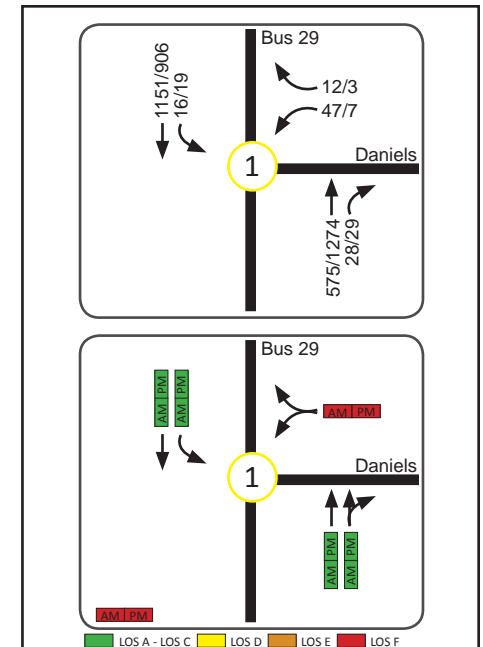


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	1	0	0	0	0	1	0
2011	2	0	0	0	0	2	0
2012	1	0	0	0	0	1	0
3-year Total	4	0	0	0	0	4	0

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	1	0	0	0	0	1

Crash Severity
 POO Property Damage Only

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



02-Dillard Road/Elon Road

Intersection has very high turning volumes and no dedicated turn lanes. Improvements could include:

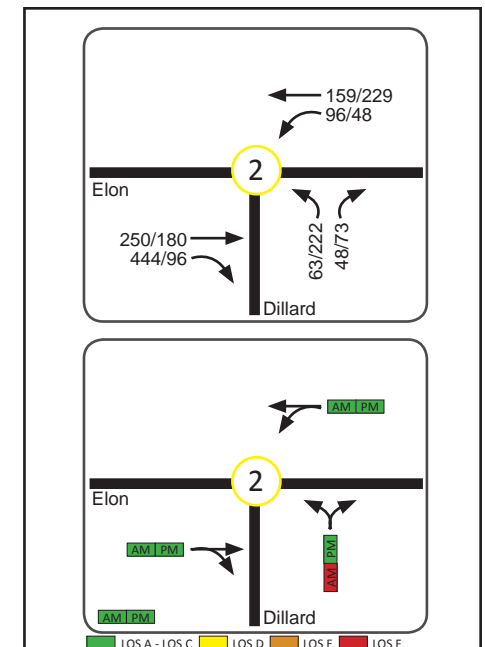
- Turn lanes on all approaches
- Perform formal signal warrant analysis
- Roundabout designed appropriately for truck traffic



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	4	0	1	0	0	3	1
2011	1	0	0	0	0	1	0
2012	0	0	0	0	0	0	0
3-year Total	5	0	1	0	0	4	1

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	0	0	0	0	0	0

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



03-Amelon Road/Amelon Center

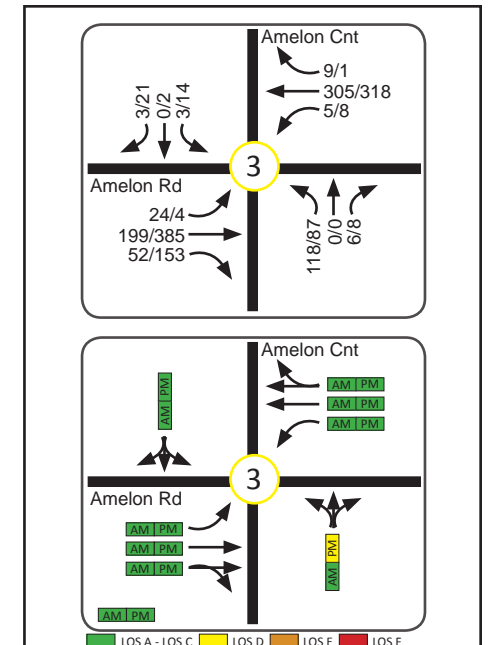
Intersection is adjacent to a growing business park, and also provides access to a significant number of houses. Signal warrants should be conducted as traffic continues to increase. Also, it appears that an eastbound right turn lane is warranted presently.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	1	0	0	0	1	0	1
2011	1	0	1	0	0	0	1
2012	2	0	0	0	0	2	0
3-year Total	4	0	1	0	1	2	2

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	1	0	1	0	0	2

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



04-Elon Road/Berg Drive

This intersection suffers from poor alignment of the sidestreets. Topography and sight distances in each direction make replacement of the intersection with a roundabout configuration difficult, if not infeasible. A potential short term improvement for night time conditions could be to add a luminaire to the power poles that are adjacent to the intersection.

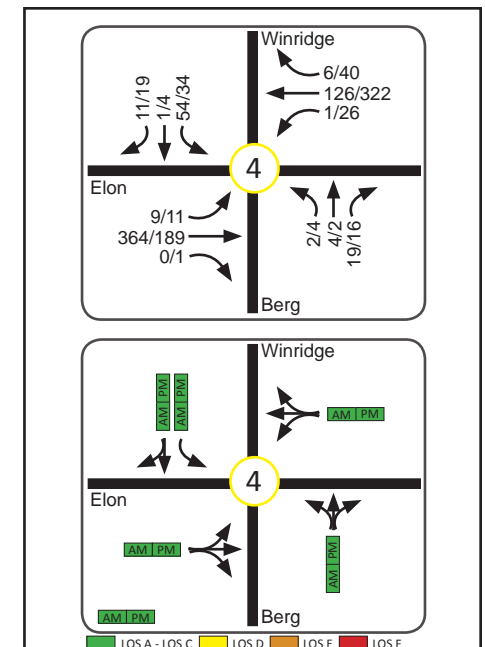


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	2	1	1	0	0	0	2
3-year Total	2	1	1	0	0	0	2

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	2	0	0	0	0	2

Crash Severity
■ K-Fatal Injury
■ A-Incapitating Injury

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



05-S Amherst Highway/N Coolwell Road

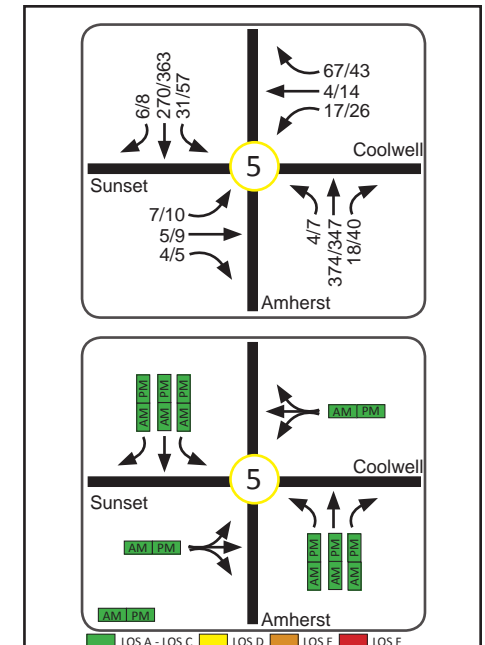
Route 29 has a posted speed limit of 55 mph in this area. Traffic in/out of Coolwell Road has a relatively high percentage of trucks and trailers. Based on the volumes, a full right turn lane for the northbound approach should be considered.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	5	0	0	1	1	3	2
2011	5	0	2	1	0	2	3
2012	1	0	0	0	0	1	0
3-year Total	11	0	2	2	1	6	5

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	0	0	0	1	0	1

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



06-Forest Road/Enterprise Drive

Implement improvements as described in the Route 221 Corridor Plan (2014)

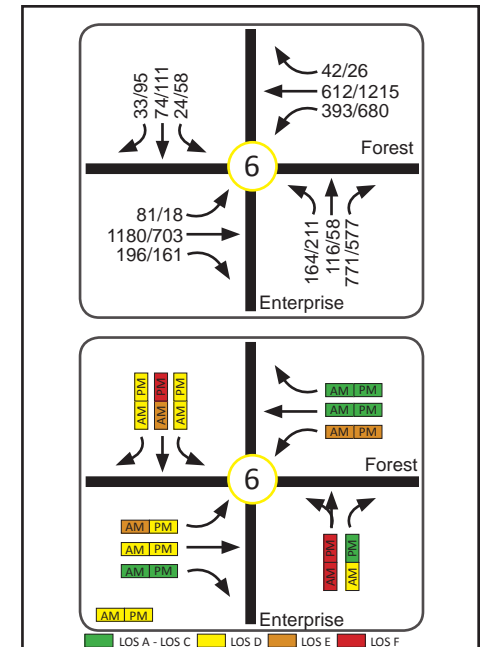


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	15	0	1	0	4	10	5
2011	6	0	0	0	2	4	2
2012	7	0	0	2	1	4	3
3-year Total	28	0	1	2	7	18	10

Crash Severity
 B Non-incapacitating Injury
 C Non-Visible Injury
 PDO Property Damage Only

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	3	0	2	0	0	2	0	7

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



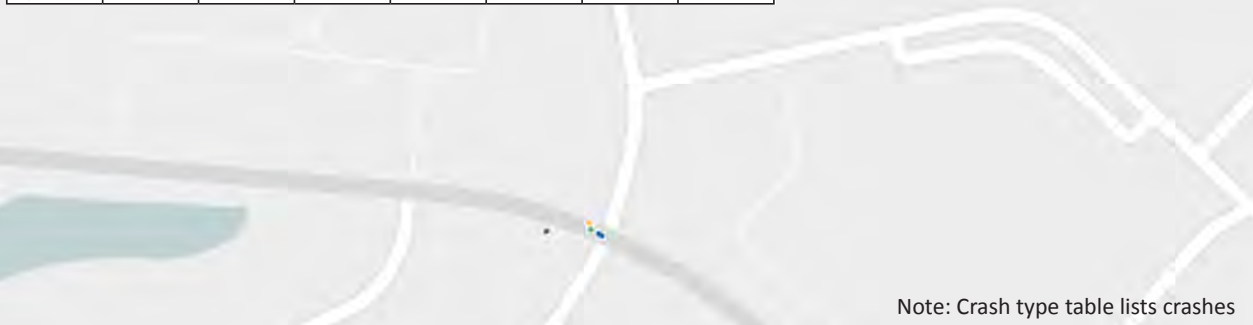
07-Forest Road/Perrowville Road

Potential improvements could include:

- Coordinate the signal operation with both the Hooper signal and the Elkton Farm Road signal.
- Provide pedestrian features at the intersection.
- Add a northbound lane and unsplit the sidestreet phasing.

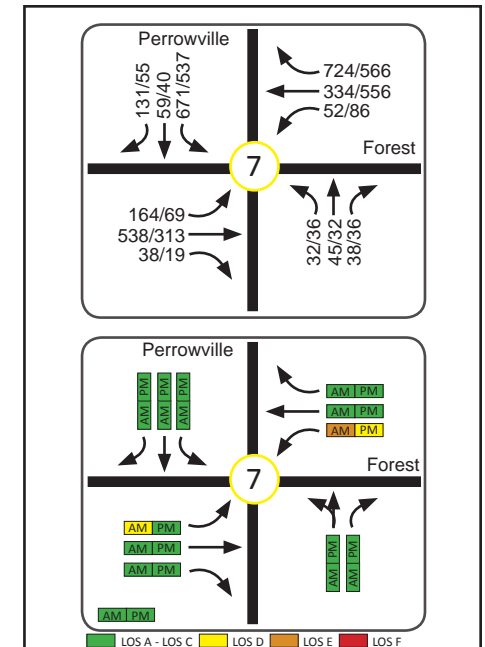


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	6	0	2	1	1	2	4
2011	4	0	1	1	0	2	2
2012	5	0	0	1	1	3	2
3-year Total	15	0	3	3	2	7	8



	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	1	0	3	0	0	0	1	5

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



08-Thomas Jefferson Road at Everett Road

Potential improvement could include:

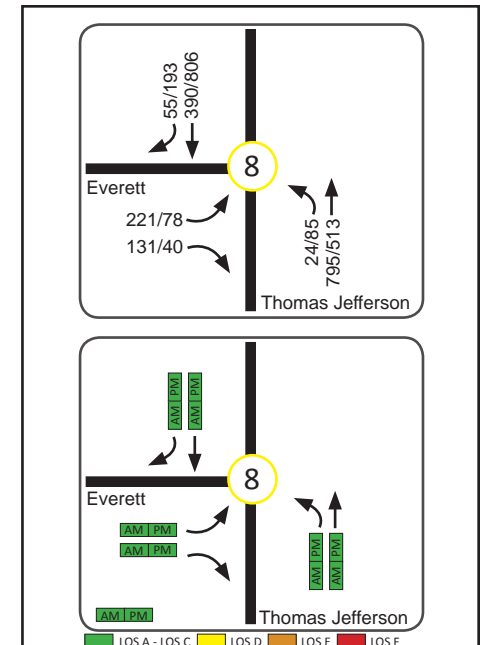
- Consider roundabout intersection to reduce crash severity and frequency



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	1	0	1	0	0	0	1
2011	2	0	1	0	0	1	1
2012	0	0	0	0	0	0	0
3-year Total	3	0	2	0	0	1	2

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	0	0	0	0	0	0

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



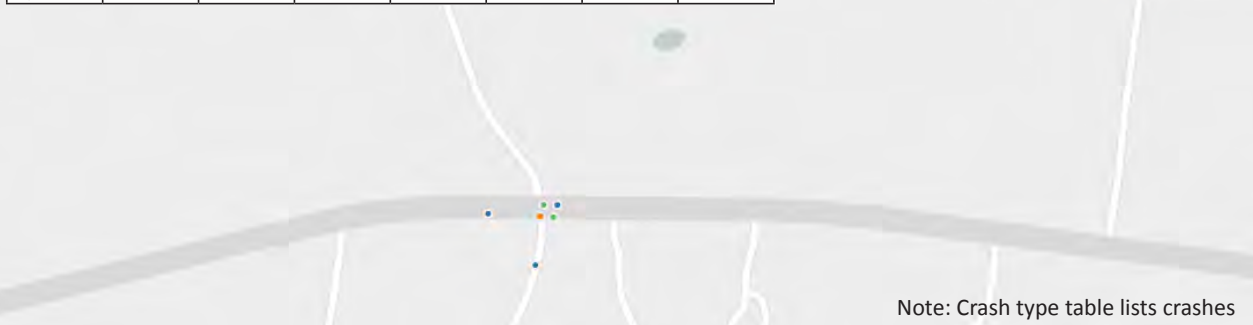
09-Thomas Jefferson Road/Route 460

Potential improvements could include:

- Re-examine signal timing to increase yellow and red clearance intervals.
- Study the Sunday traffic period due to proximity of mega church to the south.
- Extend the westbound left turn lane.
- Modify sight access in the northwest quadrant when/if redevelopment occurs.

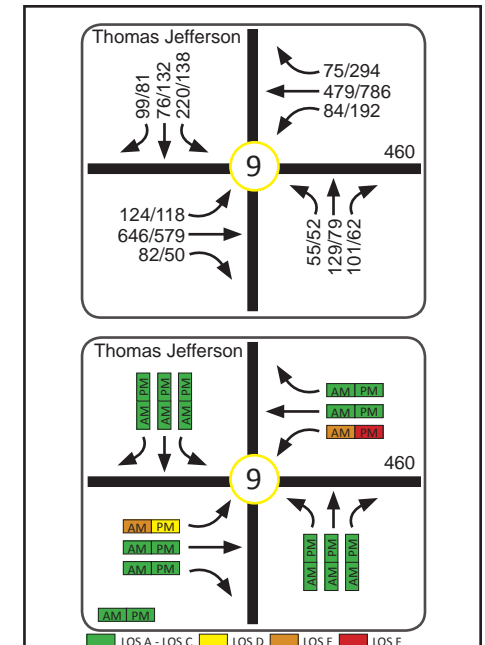


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	7	0	1	0	3	3	4
2011	9	0	1	0	2	6	3
2012	7	0	1	1	2	3	4
3-year Total	23	0	3	1	7	12	11



	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	2	0	3	2	0	0	0	7

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



10-Thomas Jefferson Road/Waterlick Road

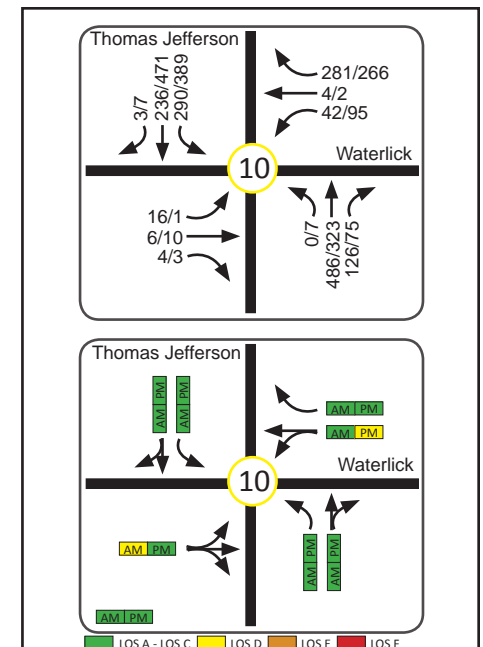
This intersection will be impacted by future development of the parcel in the northeast quadrant. At such time that a development is proposed, the proposed access should be considered with regard to the VDOT access management standards. Waterlick Road has been noted in the long range transportation plan as needing to be widened. At such time that funding is available, additional laneage at the intersection will also be required.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	1	0	0	0	0	1	0
2011	2	0	0	0	0	2	0
2012	0	0	0	0	0	0	0
3-year Total	3	0	0	0	0	3	0

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	0	0	0	0	0	0

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



11-Timberlake Road/Greenview Drive

This intersection and the Laxton intersection interact due to proximity. An intersection study should be performed, perhaps through the VDOT STARS program, to more closely examine traffic operations and operations for improvements. Given the volumes, the intersections should be coordinated, and ultimately additional lanes may be needed, including turn lanes.

Per the LOS diagram, this analysis does not fully consider the actual number of vehicle arrivals, or vehicles denied entry, due to the queueing over the peak periods. Additional traffic counting and measurements of queues should be conducted as part of a future study.



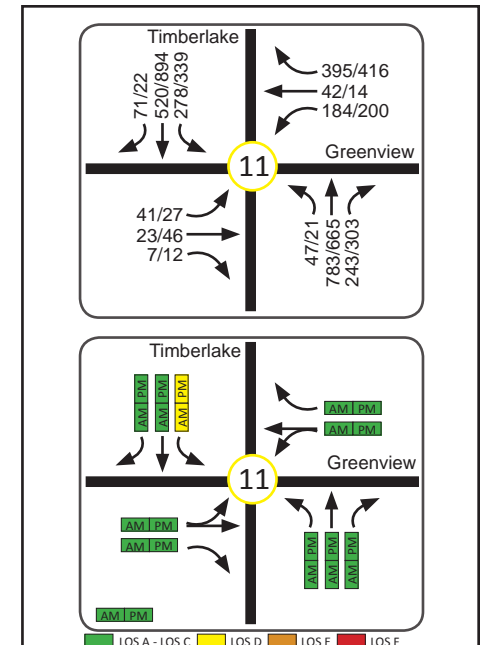
	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	17	0	1	0	5	11	6
2011	12	0	1	3	1	7	5
2012	17	0	2	2	0	13	4
3-year Total	46	0	4	5	6	31	15

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	7	0	7	1	0	0	2	17

Crash Severity

- A Incapacitating Injury
- B Non-Incapacitating Injury
- PDO Property Damage Only

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



12-Timberlake Road/Laxton Road

This intersection and the Greenview intersection interact due to proximity. An intersection study should be performed, perhaps through the VDOT STARS program, to more closely examine traffic operations and operations for improvements. Given the volumes, the intersections should be coordinated, and ultimately additional lanes may be needed, including turn lanes.

Per the LOS diagram, this analysis does not fully consider the actual number of vehicle arrivals, or vehicles denied entry, due to the queueing over the peak periods. Additional traffic counting and measurements of queues should be conducted as part of a future study.



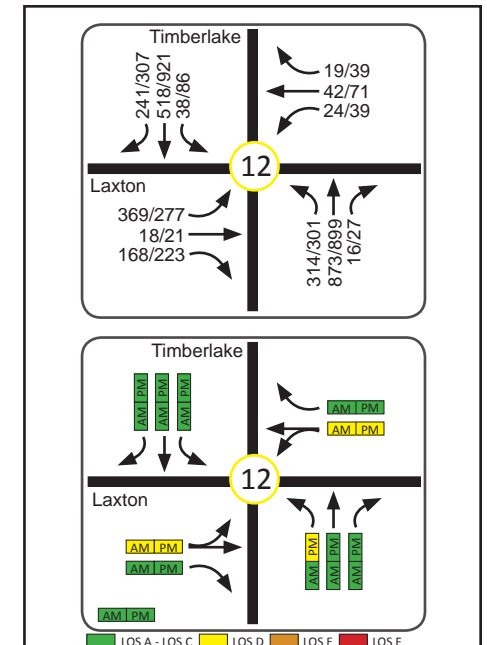
	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	24	0	0	0	8	16	8
2011	16	0	0	0	5	11	5
2012	23	0	0	2	4	17	6
3-year Total	63	0	0	2	17	44	19

Crash Severity

- B Non-incapacitating Injury
- C Non-Visible Injury
- PDO Property Damage Only

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	10	1	11	0	0	0	1	23

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



13-Timberlake Road/Powtan Drive

Potential improvements at this intersection could include:

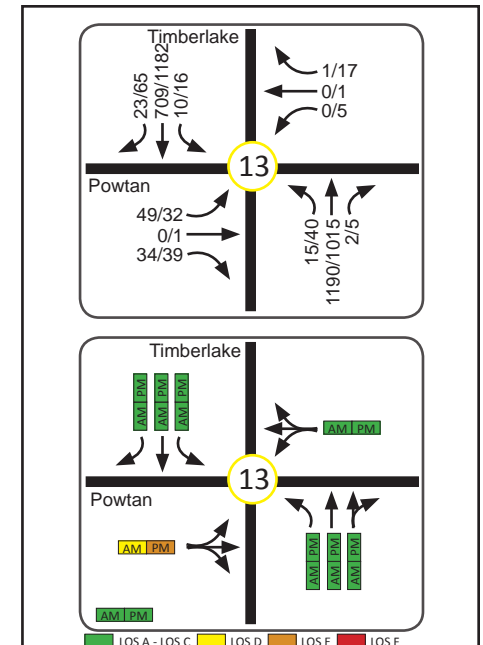
- Reconstruct median crossover to restrict the left turns out of Powtan
- Conduct corridor study to examine access management improvements each side of the intersection and downstream signalized intersections.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	5	0	2	0	1	2	3
2011	5	0	0	0	2	3	2
2012	2	1	0	0	0	1	1
3-year Total	12	1	2	0	3	6	6

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	1	0	0	0	1	2

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



14-Village Highway/Doss Road

Intersection has significant side street traffic since Doss Road is a travel way to US 460. By inspection of the peak hour traffic volumes it does not appear that a signal would be warranted, however consideration could be given to constructing a roundabout to more safely accommodate turning movements while having the side benefit of signaling to the motorists that they are entering the school zone and village area of Concord.

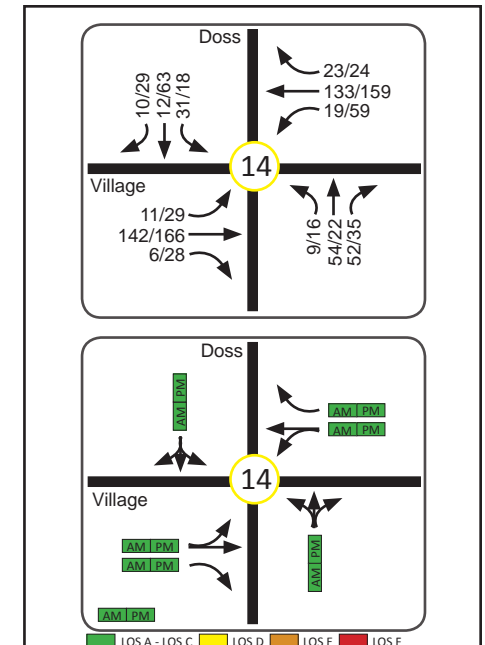


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	3	0	1	0	1	1	2
2011	5	0	1	1	0	3	2
2012	3	0	0	0	0	3	0
3-year Total	11	0	2	1	1	7	4

Crash Severity
 PDO Property Damage Only

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	3	0	0	0	0	3

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



15-Waterlick Road/Woodlawn Circle

Woodlawn Circle appears to be very similar to the other sidestreets that are along Waterlick Road. Note that given the through volume, a left turn lane is warranted at even one turn in an hour. This applies to all sidestreets along Waterlick Road. Waterlick Road is in the MPO's vision list of project for widening, when and if funding becomes available.

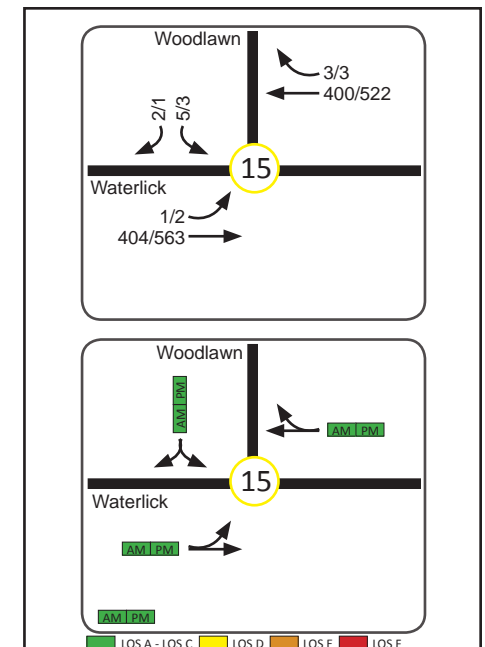


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
3-year Total	0	0	0	0	0	0	0

Crash Severity
 B Non-incapacitating Injury
 PDO Property Damage Only

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	0	0	0	0	0	0

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



16-Campbell Avenue/Florida Avenue

Potential improvements at this intersection could include:

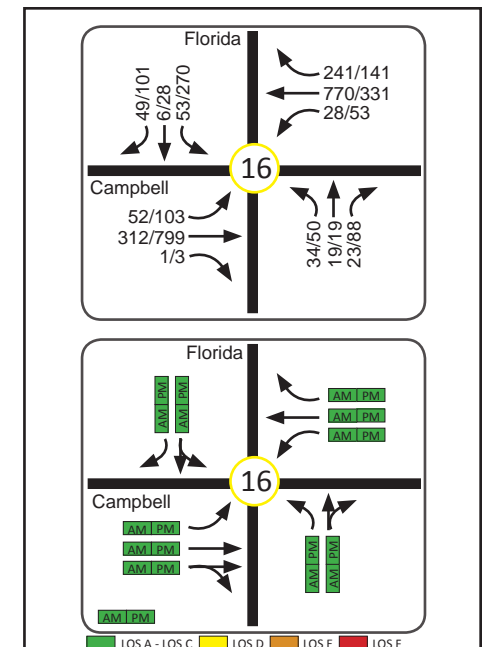
- Add pedestrian features
- Replace with roundabout per the Campbell Avenue Corridor Plan



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	3	1	0	0	2	0	3
2011	5	0	0	0	0	5	0
2012	8	0	0	2	1	5	3
3-year Total	16	1	0	2	3	10	6

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	3	0	4	1	0	0	0	8

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



17-Graves Mill Road/Nationwide Drive

Potential actions and improvements could include:

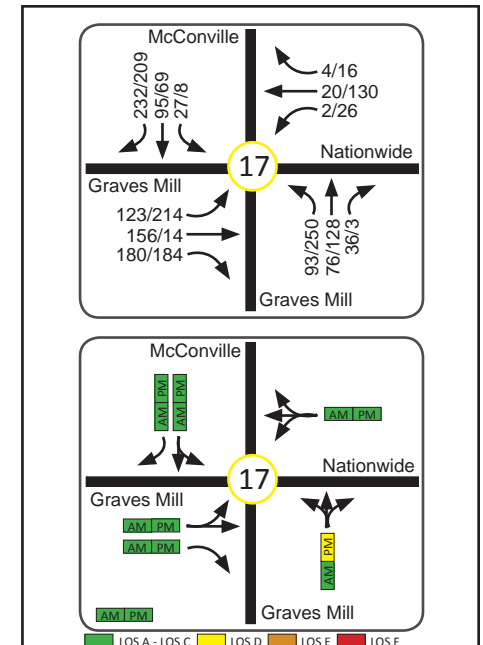
- Monitor volumes against signalization warrants
- Construct roundabout
- By inspection of the turning movements, additional turn lanes, especially on Graves Mill Northbound, could help to alleviate some delay.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	0	0	0	0	0	0	0
2011	2	0	0	1	0	1	1
2012	0	0	0	0	0	0	0
3-year Total	2	0	0	1	0	1	1

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	0	0	0	0	0	0	0	0

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



18-Lakeside Drive/Oakley Avenue

The vertical profile through the intersection creates sight distance concerns. The intersection has no pedestrian features and the amount of pavement could be reduced to shorten crossing distances and better define the travel paths. The existing spanwire signal does not include four or five section heads for the Oakley approaches though does have split phasing. Replacement with mastarms would allow capacity to hang additional signal heads to better indicate the split phase signal operation.

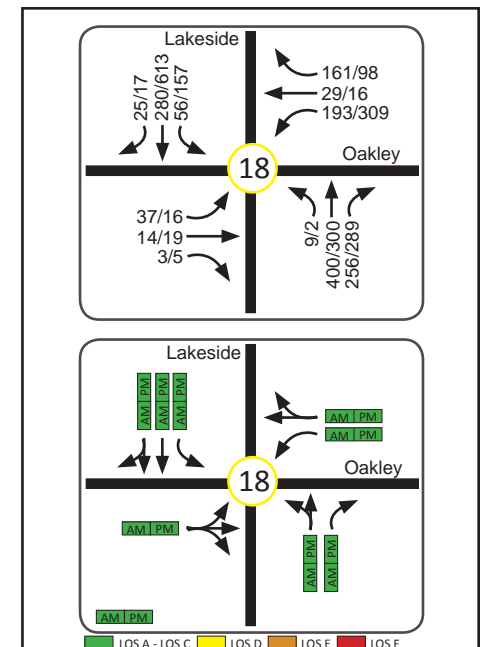


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	0	0	0	0	0	0	0
2011	1	0	0	0	0	1	0
2012	5	0	0	2	1	2	3
3-year Total	6	0	0	2	1	3	3

Crash Severity
 B Non-Incapacitating Injury
 C Non-Visible Injury
 PDO Property Damage Only

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	3	0	2	0	0	0	0	5

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



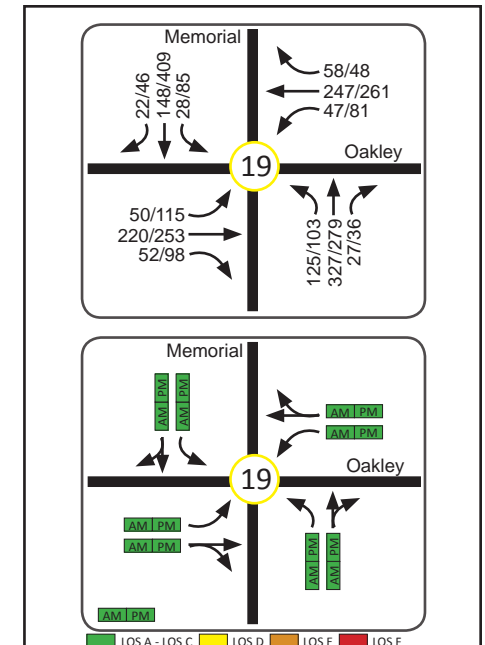
19-Memorial Avenue/Oakley Avenue

Improvements to consider include:

- Add pedestrian features
- Refresh pavement markings
- Improve access management (driveway proximity to intersection) when/if opportunities arise.
- Coordinate signals along Memorial Avenue.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	6	0	1	0	2	3	3
2011	8	0	0	1	2	5	3
2012	4	0	0	1	1	2	2
3-year Total	18	0	1	2	5	10	8



20-Rivermont Avenue/Bedford Avenue

Improvements to consider include:

- Redesign to include curb extensions to shorten ped crossing distances.
- Modify street scaping as opportunities arise with new development. This will signal the commercial context of the abutting land uses such that motorists will be aware to watch for parking maneuvers and pedestrians.
- Conduct signal warrant analysis
- Conduct speed study for Rivermont Ave to determine actual 85th percentile speeds through this neighborhood commercial district.
- Make McDonald Street one way southbound away from the intersection.

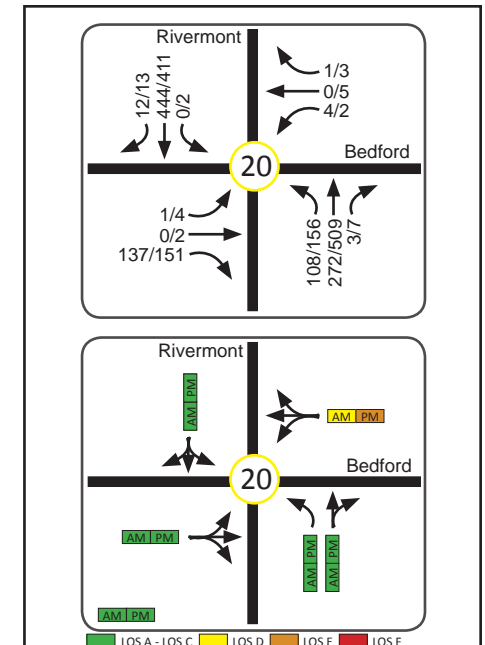


	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	2	0	0	0	0	2	0
2011	3	0	0	0	1	2	1
2012	5	0	0	2	0	3	2
3-year Total	10	0	0	2	1	7	3

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012	3	0	1	0	0	0	1	5

Crash Severity
 ■ B Non-incapacitating injury
 ■ PDO Property Damage Only

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.



21-Waterlick Road/Leesville Road

This intersection will experience increasing volumes and congestion as growth continues to occur in the region. Waterlick Road is an important connector between Route 460, and Business 460 (Timberlake Road), and points north to the Route 811 Corridor.



	Total Crash	(Type K) Fatality	(Type A) Major Visible Injury	(Type B) Minor Visible Injury	(Type C) Complaint of But Not Visible Injury	Property Damage Only Crash	Type KABC Crash
2010	6	0	0	0	1	5	1
2011	8	0	1	0	0	7	1
2012	4	0	0	2	0	2	2
2013	3	0	0	2	0	1	2
2014	4	0	0	0	0	4	0
5-year Total	25	0	1	4	1	19	6

Crash Severity
 B Non-incapacitating Injury
 PDO Property Damage Only

No turning movement count data for this intersection.

ADT on Waterlick Road is 11,000 vpd.

ADT on Leesville Road is 7,500 vpd.

	Rear End	Head On	Angle	Fixed Object - Off Road	Deer	Other	Sideswipe	Total
2012-2014	3	0	4	0	0	3	1	11

Note: Crash type table lists crashes in 2010-2012; crash figure and collision type table illustrates and lists crashes in 2012 only.

Note that the intersections analyzed in this 2040 Long Range Plan update are not the same as those examined in the 2035 plan update. The following table is from the 2035 plan update and is being included in this document so that the earlier analysis can continue to inform considerations for potential intersection improvement needs in the future. Thus, between the 2040 and 2035 plan updates, there is a significant amount of data provided for intersections of concern across the region.

Table 3-5 from the 2035 CVLRTP Update: Level of Service at the Study Intersections (in year 2010)

Intersection	Control	AM LOS	PM LOS
1. Richmond Hwy (US Rt 60) & US Rte 29 SB Ramp	Unsignalized	A (SB-B)	A (SB-B)
2. Richmond Hwy (US Rt 60) & US Rte 29 NB Ramp	Unsignalized	A (SB-B)	A (SB-B)
3. Richmond Hwy (US Rt 60) & Dulwich Dr	Unsignalized	A (NB-B)	A (NB-B)
4. Union Hill Rd (Rt 659) & Dulwich Dr	Unsignalized	A (SB-A)	A (SB-A)
5. Virginia Byway (Rt 130) & Johns Creek Rd (Rt 676)	Unsignalized	B (EB-B)	B (WB-B)
6. Virginia Byway (Rt 130) & River Rd (Rt 685)	Signalized	A (NB-B)	A (NB-B)
7. Forest Rd (Rt 221) & Perrowville Rd (Rt 663)/Ashwood Park Rd	Signalized	B (WB-C)	B (WB-C)
8. Thomas Jefferson Rd (Rt 811) & Waterlick Rd (Rt 622)/Omni Pl	Signalized	B (SB-B)	A (SB-B)
9. Lynchburg Salem Turnpike (US Rt 460) & Thomas Jefferson Rd (Rt 811)/New London Rd	Signalized	B (SB-B)	B (SB-B)
10. Forest Rd (Rt 221) & Enterprise Rd (Rt 1415)/Vista Center Dr (Rt 1427)	Signalized	C (EB-D)	D (EB-D)
11. Timberlake Rd (Rt 460B) & Laxton Rd (Rt 1520)/Lowe's	Signalized	F (SB-F)	F (SB-F)
12. Timberlake Rd (Rt 460B) & Greenview Dr (Rt 739)/Hardee's	Signalized	F (SB-F)	F (SB-F)
13. Timberlake Rd (Rt 460B) & Waterlick Rd (Rt 622)	Signalized	F (SB-F)	F (WB-F)
14. Wards Rd (Rt 163) & Candler's Mountain Rd (Rt 128)/Sheffield Dr	Signalized	C (NB-C)	D (EB-E)
15. Candler's Mountain Rd (Rt 128) & Ridge Field Mall/Murray Pl	Signalized	F (SB-F)	F (SB-F)
16. Candler's Mountain Rd (US Rt 501) & May Flower Dr (Rt 128)/Candler's Mountain Rd (Rt 670)	Signalized	C (WB-F)	F (NB-F)
17. Wards Rd (Rt 29) & Calohan Rd (Rt 685)/Commercial Entrance	Signalized	F (WB-F)	F (WB-F)
18. Richmond Hwy (US Rt 60) & Doss Rd (Rt 646)	Unsignalized	A (NB-D)	A (NB-D)