Seminary Road
Complete Streets Project
T&PB PROJECT
REVIEW/RECOMMENDATION

• Review Staff Recommendation concept, data analysis, and traffic modeling result
  • Staff seeking approval for:
    • Lane reduction for sidewalk segment
    • HAWK Signals at two crossings

• Technical recommendation to the Director of T&ES reflecting Board’s Charter and Council-adopted plans and policies
  • Sec. 5-8-2 - Purpose—Generally. The traffic and parking board shall consider matters concerning substantial changes to traffic and on-street parking regulations, and taxicabs. When reviewing these matters, the board shall prioritize safety of all users when making recommendations.
  • Director of T&ES waives the appeal process for an automatic appeal to Council
PROJECT PROCESS: TODAY THROUGH IMPLEMENTATION

June: Traffic & Parking Board hearing
- Staff Present Recommendation
- Public comments heard by the Board
- T&PB Recommendation to the Director of T&ES
- Automatic Appeal to Council

September: City Council
- Staff Present the T&PB Recommendation
- Public may speak before Council
- Council will make final decision

September: Repave Seminary Road with Council-approved alternative
PROJECT PURPOSE

• 2019 resurfacing schedule

• City’s Complete Streets Policy:
  • Opportunity to evaluate roadway design changes in coordination with repaving

• Consider improvements at minimal cost

• Potential pedestrian and bicycle facilities identified in Pedestrian & Bicycle Master Plan

• Neighborhood requests for better walking conditions
PROJECT OBJECTIVES

- Developed as a result of:
  - Public input
  - Plans
  - Policies
  - Data

- Reduce crashes on the corridor
- Improve mobility, safety, and access for all roadway users
- Provide continuous, safe, and comfortable places for people to walk
- Provide more frequent and safer crossing opportunities along the corridor
- Minimize delay at intersections, and encourage speed limit compliance
- Where excess roadway capacity exists, explore opportunities to reconfigure the corridor to better serve all modes
STUDY AREA

- Alternatives Consideration
- Additional area considered for short-term and mid-term improvements (no lane changes)
Information gathering and data analysis
Community walkabout
Community meeting
Repaving survey on roadway issues
Design alternatives developed

Community meeting to reintroduce project and collect input on design alternatives
Online survey opens

Mar. 2019

Online survey closed April 10
Community feedback summary shared on website

Apr. 2019

Traffic & Parking Board meeting
The staff recommended alternative will be presented to the Traffic and Parking Board at the June meeting with an automatic appeal to Council.

May 2019

Community meeting
Staff recommend preferred alternative
Survey closed June 10th

June 2019

City Council meeting and Seminary Road is repaved

Sep. 2019
INFORMATION GATHERING – MAY 2018

• Gathered and synthesized comments from other recent outreach
  • (Repaving Survey, CATS, Vision Zero Safety Map, Pedestrian Bike Master Plan Wikimap)
• Gathered data on corridor safety, speeds, volumes, etc.
• Determined draft project objectives
• Corridor walk in Early May
• Public meeting May 29, 2018
  • Information and data showing existing conditions and recent history of data and comments
  • Presented potential improvement ideas and asked for others
INFORMATION TO ALTERNATIVES

- October 2018
  - Prepared for Public Meeting in October 2018,
    - On hold because of I-395 HOT lane project
  - Alternatives and preliminary information posted on webpage
- January 2019
  - Need to pave, decision to restart, and reduction of scope
- March 2019
  - Public Meeting - three alternatives with minor changes and scope reduction
ALTERNATIVE 1

- Maintain two through-lanes in each direction
- Upgrade and add new crosswalks where feasible
- Narrow lanes slightly to discourage speeding
ALTERNATIVE 2

- Maintain two through-lanes in the heavier westbound direction
- Install some new crosswalks where safe and feasible
- Bike lanes or sidewalk buffer possible
ALTERNATIVE 3

• One through-lane in each direction
• Center turn lanes for intersections and driveways
• Install new crosswalks with planted median islands
• Buffered bike lanes
WHY CONSIDER A ROAD DIET?

• Federal guidance gives criteria for whether road diets are possible in certain circumstances, recognizing where they are and are not possible:
  

• Reducing the number of lanes and introducing a buffer for the sidewalk improves conditions for people walking and trying to cross the roadway.

<table>
<thead>
<tr>
<th>Average Daily Traffic (ADT)</th>
<th>&lt; 10,000</th>
<th>10,000-15,000</th>
<th>15,000-20,000</th>
<th>&gt;20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great candidate for Road Diets in most instances. Capacity will most likely not be affected.</td>
<td>Good candidate for Road Diets in many instances. Agencies should conduct intersection analysis and consider signal retiming to determine any effect on capacity.</td>
<td>Good candidate for Road Diets in some instances. Agencies should conduct a corridor analysis. Capacity may be affected at this volume depending on the “before” condition.</td>
<td>Agencies should complete a feasibility study to determine whether this is a good location for a Road Diet. There are several examples across the country where Road Diets have been successful with ADTs as high as 26,000. Capacity may be affected at this volume.</td>
<td></td>
</tr>
</tbody>
</table>

Seminary Road (from Quaker to Howard) 15,900-18,600 ADT
ALTERNATIVES TO STAFF RECOMMENDATION

- March/April 2019
  - Two-week comment period on alternatives
  - Online content, narrated presentation, online feedback
  - Main feedback:
    - Strong opinions for Alternatives 1 and 3
    - Crossing
    - Sidewalk Gap
    - Speeding

- April/May 2019
  - Follow-up stakeholder meetings with civic associations, institutional stakeholders, and residents
  - Sketched/showed potential ideas and discussed their ideas
STAFF RECOMMENDATION

Alternative 1 (four lanes)
Alternative 2, modified (3 lanes, sidewalk added)

Signal timing and optimization

Additional area considered for short-term and mid-term intersection improvements
• Maintain two through-lanes in the areas of heavier traffic (ADT is 18,600)
• Install crossing at Chapel Hill/Galliard
• HAWK signal for bus stops
• Shared curbside lanes - people biking can take the lane
## Howard to St. Stephens Data

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Time of Day</th>
<th>Existing Delay (sec)</th>
<th>Staff Recommendation Delay (sec)</th>
<th>Change (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Howard St &amp; Seminary Rd</td>
<td>AM</td>
<td>28.6</td>
<td>30</td>
<td>+1.4</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>28.8</td>
<td>29.5</td>
<td>+0.7</td>
</tr>
<tr>
<td>St. Stephens Rd &amp; Seminary Rd</td>
<td>AM</td>
<td>8.2</td>
<td>8.6</td>
<td>+0.4</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>6.3</td>
<td>5.3</td>
<td>-1</td>
</tr>
</tbody>
</table>

The diagram illustrates the lanes and markings for the road, including a 2' Sharrow, 11' Sharrow, 10' Drive lane, and 10' Drive lane.
ST. STEPHENS TO ZABRISKIE

- Two westbound lanes to accommodate peak direction, peak period traffic volumes. (WB in AM peak hour St. Stephens to Howard sees 1,104 vehicles)
- Install new crosswalks with median islands at bus stops
- Buffer on north side to fill sidewalk gap
- Buffer on south side for pedestrians, occasional event parking
- Shared curbside lanes – people biking can take the lane
ST. STEPHENS TO ZABRISKIE - CROSSING

- Same lane configuration
- Median proposed with Rectangular Rapid Flash Beacons (RRFBs)
- Buffer on north side to fill sidewalk gap
- Shared curbside lanes - people biking can take the lane
### ST. STEPHENS TO ZABRISKIE DATA

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Time of Day</th>
<th>EXISTING</th>
<th>Staff Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Stephens Rd &amp; Seminary Rd</td>
<td>AM</td>
<td>8.2</td>
<td>8.6</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>6.3</td>
<td>5.3</td>
</tr>
<tr>
<td>N Quaker Ln &amp; Seminary Rd</td>
<td>AM</td>
<td>76.5</td>
<td>62.3</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>57.6</td>
<td>43.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Time of Day</th>
<th>Delay (sec)</th>
<th>Delay (sec)</th>
<th>Change (sec)</th>
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</thead>
<tbody>
<tr>
<td>St. Stephens Rd &amp; Seminary Rd</td>
<td>AM</td>
<td>8.2</td>
<td>8.6</td>
<td>+0.4</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>6.3</td>
<td>5.3</td>
<td>-1</td>
</tr>
<tr>
<td>N Quaker Ln &amp; Seminary Rd</td>
<td>AM</td>
<td>76.5</td>
<td>62.3</td>
<td>-14.2</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>57.6</td>
<td>43.2</td>
<td>-14.4</td>
</tr>
</tbody>
</table>
• Maintain four travel lanes
• Convert eastbound lanes
  • Through/right and left-only to right-only and through/left
• All-walk phase converted to LPI and No Turn on Red
SIDEWALK INFORMATION

- **Short term – 1-3 years**
  - Painted sidewalk with separation
  - Flexposts, bumpers, etc.
  - Opportunity to watch change over time

- **Long Term – 3-5 years***
  - Seek grant funding now to build sidewalk
  - Cost **could be up to $1.5 Million**

* Dependent on funding
SIGNAL TIMING IMPROVEMENTS

- Coordinate all signals along the corridor to mitigate queuing concerns
  - St. Stephens Road signal to be coordinated with Quaker and Howard
- Optimize signals
  - Adjust timing to mitigate queueing
- Implement LPIs and No Turn on Red Restrictions at Quaker Lane and Howard Street
Scores were determined both with qualitative and quantitative considerations dependent on the project objective category. For example, scoring for vehicular delay broke down as follows:

“Existing conditions” was considered to be within + or – 5 seconds overall alternative delay
“Minor improvement” was considered to be an overall reduction in intersection delay on the corridor between 5-15 seconds
“More improvement” were considered as greater than an overall reduction in delay on the corridor over 15 seconds
“Minor impacts” was considered as 5-15 seconds more of overall intersection delay
“More impacts” was considered as over 15 seconds of overall intersection delay across the corridor

For quantitative scores like pedestrian safety and comfort, staff determined the level of protection over or under existing conditions that each alternative presented with alternatives featuring more protection or buffer from vehicles scoring better than those without. Other scores are described below in detail.
# DESIGN ALTERNATIVES

<table>
<thead>
<tr>
<th>PERFORMANCE INDICATORS</th>
<th>ALTERNATIVE 1 (4 lanes with minor changes)</th>
<th>ALTERNATIVE 2 (1 eastbound, 2 westbound lanes)</th>
<th>ALTERNATIVE 3 (1 eastbound, 1 westbound, 1 turn lane)</th>
<th>STAFF RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEDESTRIAN SAFETY/COMFORT</td>
<td>0</td>
<td>+1</td>
<td>+2</td>
<td>+1</td>
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<tr>
<td>FILLING THE SIDEWALK GAP</td>
<td>0</td>
<td>+1</td>
<td>+1</td>
<td>+2</td>
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<tr>
<td>CONTROLLING SPEED</td>
<td>0</td>
<td>+1</td>
<td>+2</td>
<td>0</td>
</tr>
<tr>
<td>PREVENTING CRASHES</td>
<td>0</td>
<td>+1</td>
<td>+2</td>
<td>+1</td>
</tr>
<tr>
<td>MINIMIZING VEHICLE DELAY</td>
<td>+2</td>
<td>+1</td>
<td>+1</td>
<td>+2</td>
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<tr>
<td>ACCOMMODATING VEHICLE VOLUMES</td>
<td>+2</td>
<td>0</td>
<td>0</td>
<td>+2</td>
</tr>
<tr>
<td>ADJACENT RESIDENT LIVABILITY</td>
<td>0</td>
<td>+1</td>
<td>+1</td>
<td>+1</td>
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<tr>
<td>BICYCLIST SAFETY/COMFORT</td>
<td>0</td>
<td>+1</td>
<td>+2</td>
<td>0</td>
</tr>
<tr>
<td>Totals (max score +16, min score -16)</td>
<td>+4</td>
<td>+7</td>
<td>+11</td>
<td>+9</td>
</tr>
</tbody>
</table>
# Delay Comparison of Alternatives

The numbers below are the traffic model’s results showing the average seconds of delay and changes under each alternative for the average day in **worst 15 minutes in the peak periods** (morning and evening rush).

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Peak Time</th>
<th>Existing Delay (sec)</th>
<th>Change (sec)</th>
<th>Alternative 1 Change (sec)</th>
<th>Alternative 2 Change (sec)</th>
<th>Alternative 3 Change (sec)</th>
<th>Staff Recommendation Change (sec)</th>
</tr>
</thead>
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<tr>
<td>N Howard St &amp; Seminary Rd</td>
<td>AM</td>
<td>28.6</td>
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<td>+3.9</td>
<td>+6</td>
<td>+1.4</td>
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<td></td>
<td>PM</td>
<td>28.8</td>
<td>0.0</td>
<td>-2</td>
<td>-3.4</td>
<td>+0.7</td>
<td></td>
</tr>
<tr>
<td>St. Stephens Rd &amp; Seminary Rd</td>
<td>AM</td>
<td>8.2</td>
<td>0.0</td>
<td>+4.6</td>
<td>+7.6</td>
<td>+0.4</td>
<td></td>
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<tr>
<td></td>
<td>PM</td>
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<td>0.0</td>
<td>-0.5</td>
<td>-0.3</td>
<td>-1</td>
<td></td>
</tr>
<tr>
<td>N Quaker Ln &amp; Seminary Rd</td>
<td>AM</td>
<td>76.5</td>
<td>0.0</td>
<td>-11.4</td>
<td>-14.5</td>
<td>-14.2</td>
<td></td>
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<tr>
<td></td>
<td>PM</td>
<td>57.6</td>
<td>0.0</td>
<td>-19.5</td>
<td>-13.4</td>
<td>-14.4</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Adjustments were made to the traffic model to optimize the signals and coordinate them across the corridor segment for all alternatives. This allows traffic to flow better and to reduce delays at intersections with north-south streets.
What you’re seeing here:
- Average queue length (in car lengths) for the **worst 15 minutes** of morning rush hour **with a 2% growth factor**
- One car length is assumed as 20' including the vehicle itself and the stopping distance between vehicles.

### QUEUE LENGTHS IN PEAK 15 MIN

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Direction</th>
<th>Peak Time</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Staff Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Distance (Car Lengths)</td>
<td>Distance (Car Lengths)</td>
<td>Distance (Car Lengths)</td>
<td>Distance (Car Lengths)</td>
</tr>
<tr>
<td>N Howard St &amp; Seminary Rd</td>
<td>AM</td>
<td></td>
<td>EB  12</td>
<td>WB  11</td>
<td>EB  15</td>
<td>WB  11</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td></td>
<td>EB  16</td>
<td>WB   5</td>
<td>EB  16</td>
<td>WB   4</td>
</tr>
<tr>
<td>St. Stephens Rd &amp; Seminary Rd</td>
<td>AM</td>
<td></td>
<td>EB  4</td>
<td>WB   4</td>
<td>EB  13</td>
<td>WB   7</td>
</tr>
<tr>
<td>St. Stephens Rd &amp; Seminary Rd</td>
<td>PM</td>
<td></td>
<td>EB  5</td>
<td>WB   2</td>
<td>EB  5</td>
<td>WB   2</td>
</tr>
<tr>
<td>N Quaker Ln &amp; Seminary Rd</td>
<td>AM</td>
<td></td>
<td>EB  14</td>
<td>WB   6</td>
<td>EB  12</td>
<td>WB   7</td>
</tr>
<tr>
<td>N Quaker Ln &amp; Seminary Rd</td>
<td>PM</td>
<td></td>
<td>EB  21</td>
<td>WB   6</td>
<td>EB  35</td>
<td>WB   6</td>
</tr>
</tbody>
</table>
AVERAGE SPEEDS
PEAK 15 MIN

**Eastbound**
- EB to Howard
  - AM: 9 mph
  - PM: 11 mph
- Howard to St. Stephens
  - AM: 20 mph
  - PM: 22 mph
- St. Stephens to Ft. Williams
  - AM: 23 mph
  - PM: 22 mph
- Ft Williams to Quaker
  - AM: 13 mph
  - PM: 15 mph

**Westbound**
- St. Stephens to Howard
  - AM: 17 mph
  - PM: 20 mph
- Ft. Williams to St. Stephens
  - AM: 21 mph
  - PM: 25 mph
- Quaker to Ft Williams
  - AM: 25 mph
  - PM: 24
- WB to Quaker
  - AM: 19 mph
  - PM: 19 mph
• Evaluation 18 months after implementation
  • Speeds
  • Volumes
    • Pedestrian
    • Bicycle
    • Vehicles
  • Crashes
  • Travel times
WHY THIS RECOMMENDATION?

• Public input (we listened)
• Data
• Close a major sidewalk gap
• More ways to safely cross
• Advances many City policies, plans and commitments
  ➢ Improve safety and mobility for all road users
Vehicle Issues

Difficult to turn into side streets and driveways, and back out of driveways onto Seminary Road

Speeding is common along the entire corridor

Mixed opinions on function and character of Seminary Road

Pedestrian Issues

Sidewalks should be wider, continuous, and buffered from moving traffic

The distance between safe crossings is too great

People walking must cross 4 lanes of traffic on Seminary Road without safety measures

Alternatives

Mixed opinions on reducing travel lanes
71% of respondents chose Alternative 2 as their second choice.
70-80% of respondents noted these four items and their top priorities for the project:

- Maintain Comparable Travel times
- Reduce Speeding
- Provide Safer Crossings
- Improve/adding sidewalks

- Somewhat conflicting goals
  - Speed vs. Safety
  - Staff must balance competing objectives

ALTERNATIVES INPUT – TOP 4 PRIORITIES FOR THE PROJECT – MARCH 2019
501 responses to feedback form

New crosswalks:
- 173 people expressed support
- 58 expressed opposition
- 85 indicated that the proposed crossings are insufficient

Open Comments (numbers are counts of people giving the comment)
- 182 - retain four lanes
- 164 – staff recommendation is insufficient, Alternative 3 is preferred
- 146 - desire for better bicycle accommodations
- 123 - support for more pedestrian safety improvements
- 95 - concern about traffic congestion
- 95 - speeding as a problem, either currently or as part of the staff recommendation
- 42 - oppose LPIs and No Turn on Red restrictions; 12 – support LPIs and No Turn on Red restrictions
- 38 - safer access to transit
- 30 - concern about cut-through traffic
- 25 - desire for a center left-turn lane
- 10 - concern about emergency vehicle response times
- 10 - filling the sidewalk gap is unnecessary
TRAFFIC VOLUMES MAP – 2018
AVERAGE DAILY TRAFFIC
TYPICAL MAXIMUM CAPACITY OF A SIMILAR ROADWAY IS >30,000 VEHICLES PER DAY

<table>
<thead>
<tr>
<th>Peak Period</th>
<th>AM 7:30-8:30am</th>
<th>PM 4:15-6:00pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEHICLEStraveling WB</td>
<td>VEHICLEStraveling EB</td>
<td>VEHICLEStraveling WB</td>
</tr>
<tr>
<td>Quaker to Ft. Williams</td>
<td>947</td>
<td>N Howard to St. Stephens</td>
</tr>
<tr>
<td>Ft. Williams to St. Stephens</td>
<td>1019</td>
<td>St. Stephens to Ft. Williams</td>
</tr>
<tr>
<td>St. Stephens to N Howard</td>
<td>1104</td>
<td>Ft. Williams to Quaker</td>
</tr>
<tr>
<td>Quaker to Ft. Williams</td>
<td>699</td>
<td>N Howard to St. Stephens</td>
</tr>
<tr>
<td>Ft. Williams to St. Stephens</td>
<td>630</td>
<td>St. Stephens to Ft. Williams</td>
</tr>
<tr>
<td>St. Stephens to N Howard</td>
<td>684</td>
<td>Ft. Williams to Quaker</td>
</tr>
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</table>
“Multi-lane, high-volume, high-speed roadways are barriers to pedestrian mobility. Some pedestrians may choose not to make a trip that involves crossing a busy roadway, and these roads pose additional safety and mobility issues for children and people with disabilities…On multi-lane undivided roadways, pedestrians must judge gaps in multiple streams of traffic to successfully complete a crossing. On higher speed roadways motorists are less inclined (or less able) to stop for pedestrians in crosswalks — some communities have yielding rates of less than 2 percent at marked and signed mid-block crosswalks.”

HAWK SIGNAL VS. RRFB

• Driver Yield Rate at unsignalized crossings and visibility
  • RRFB’s on average show a 70-85% yield rate, but can vary¹ and can reduce pedestrian crashes by 47%
  • HAWK signals show a >90% yield rate² and reduce pedestrian crash rates by 55%
    • A full signal at an average of 98% yield rate²

• Traffic volumes
  • HAWKs recommended for roads with an ADT over 9,000 (Seminary between Howard and Quaker is 18,600-15,900)

2. Journal of Traffic and Transportation Engineering
   https://doi.org/10.1016/j.jtte.2016.01.007
PLANS AND POLICIES

• Advances many City Council-adopted policies, plans and commitments
  • Improve safety & mobility for all roadway users
  • Top 10 priority sidewalk projects
COUNCIL-ADOPTED PLANS AND POLICIES

City of Alexandria
Comprehensive Transportation Master Plan

March 21, 2008

City of Alexandria
ENVIRONMENTAL ACTION PLAN 2040

Alexandria Complete Streets Design Guidelines
T&PB PROJECT REVIEW/RECOMMENDATION

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QUESTIONS?
FAQS

• Patrick Henry/MacArthur Swing Space
  - ACPS and T&ES are coordinating closely and ACPS is completing a traffic study to determine the impacts. Policy recommendations like staggered school hours and others are being considered to mitigate any potential traffic issues

• Transit Vision Study
  - Buses will still be available on Seminary Road the Alexandria Transit Vision Study is determining policy level decisions now that may affect service on this corridor and others.

• Emergency Vehicle Access (Fire/EMS/Hospital)
  - Department leaders of Fire and EMS have signed off on our Complete Street Design Guidelines, which is being used to develop these alternatives and the staff recommendation.

• Cut-through traffic
  - Signal optimization and synchronization, as well as recommended timing changes improves delay in many cases and is not expected to add cut-through traffic on adjacent streets
  - Maximum capacity of the roadway is over 30,000 Average Daily Traffic, current counts (18,600/16,800/15,900 ADT) indicate the roadway is well under capacity
HAS A STUDY BEEN DONE OF CAUSES OF CRASHES ON SEMINARY FROM HOWARD TO QUAKER?

Yes, from January 2013 to July 2018, there were 31 crashes on Seminary Road between St. Stephens Road and North Quaker Lane. Of those 31 crashes, 11 involved an injury, and 2 involved a severe injury. (DMV TREDs data)

The following is a breakdown of the crash types:

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>10</td>
</tr>
<tr>
<td>Angle</td>
<td>10</td>
</tr>
<tr>
<td>Fixed Object – Off Road</td>
<td>6</td>
</tr>
<tr>
<td>Fixed Object – In Road</td>
<td>2</td>
</tr>
<tr>
<td>Head On</td>
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</tr>
<tr>
<td>Deer</td>
<td>1</td>
</tr>
<tr>
<td>Other (Bicycle)</td>
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</tbody>
</table>

- While the speed limit reduction helped reduce injury crashes, speeds and general number of crashes have stayed consistent.
May 2017 count- 85th percentile:
EB- 34.9 mph
WB- 34.55 mph

95th Percentile:
EB- 38.9 mph
WB- 38.3 mph

On average excessive speeding:
EB-130 drivers per day going over 40 mph
WB- 155 drivers per day going over 40 mph
Morning Rush Hour- Worst 15 Minutes

What you’re seeing here:
Average queue length and speeds for the worst 15 minutes of morning rush with a growth factor of approximately 320 more cars than existing conditions.
What you’re seeing here:
Average queue length and speeds for the worst 15 minutes of evening rush hour with a growth factor of approximately 320 more cars than existing conditions.