## Signal & Geometric Improvement Recommendations

## St. John's Lane Option 0 Signal Timing Optimization (detection)

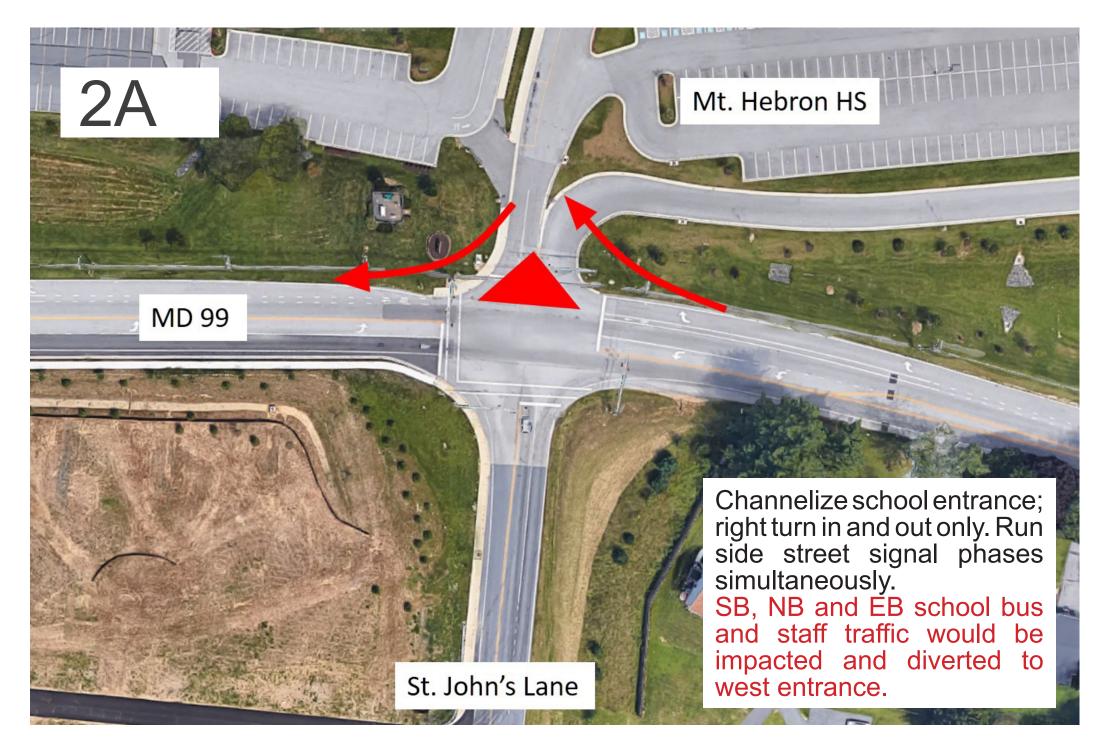


Minor or No improvement expected to LOS or queuing

Option 1
Signal Phasing Revisions and Turn Restrictions

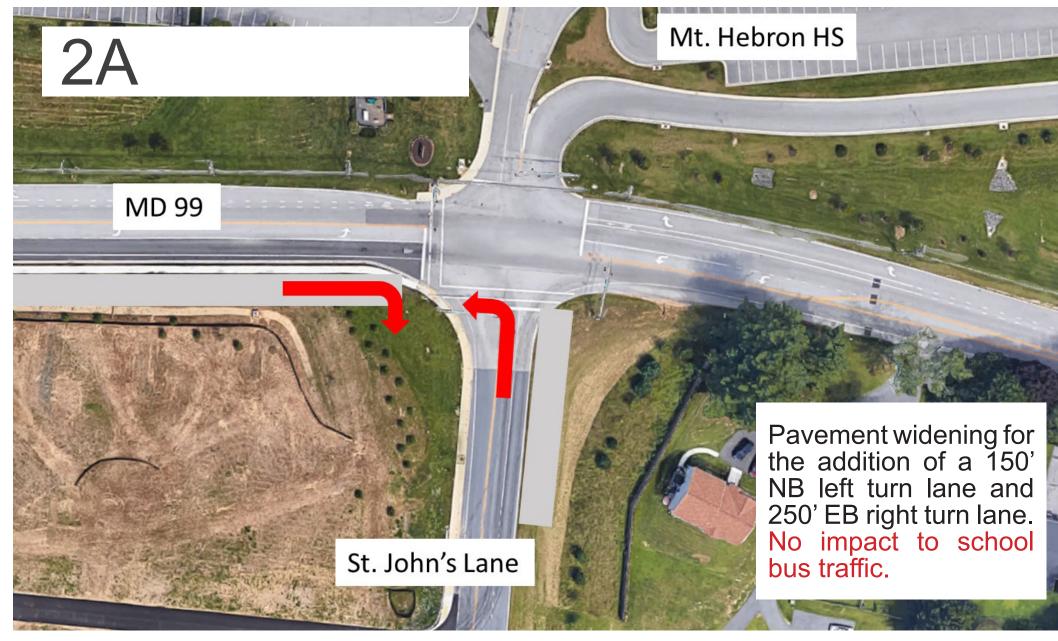


- Passive restrict NB and SB through movements except school buses
- Improves from LOS F to D, reduces EB max queue from ½ mile to a ¼ mile

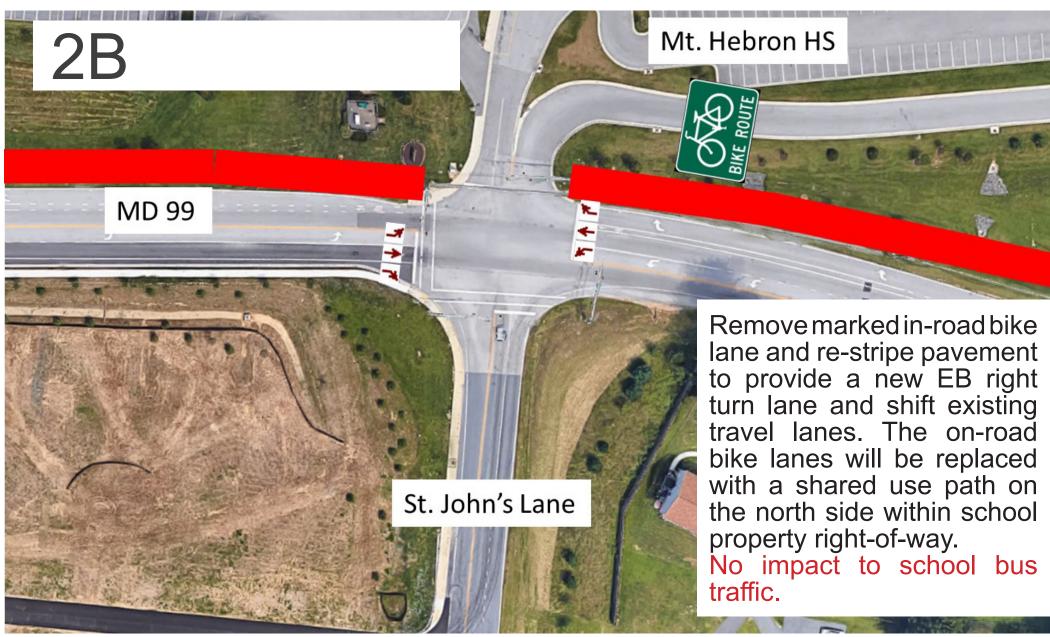


- Active channelize school entrance as right-in and right-out only
- Improves from LOS F to D, reduces EB max queue from ½ mile to a ¼ mile

Option 2
Add turn lanes (150' NB Left and 250' EB Right Turn Lane)



- Pavement widening
- Improves from LOS F to LOS D, reduces EB max queue from ½ mile to 1/4 mile



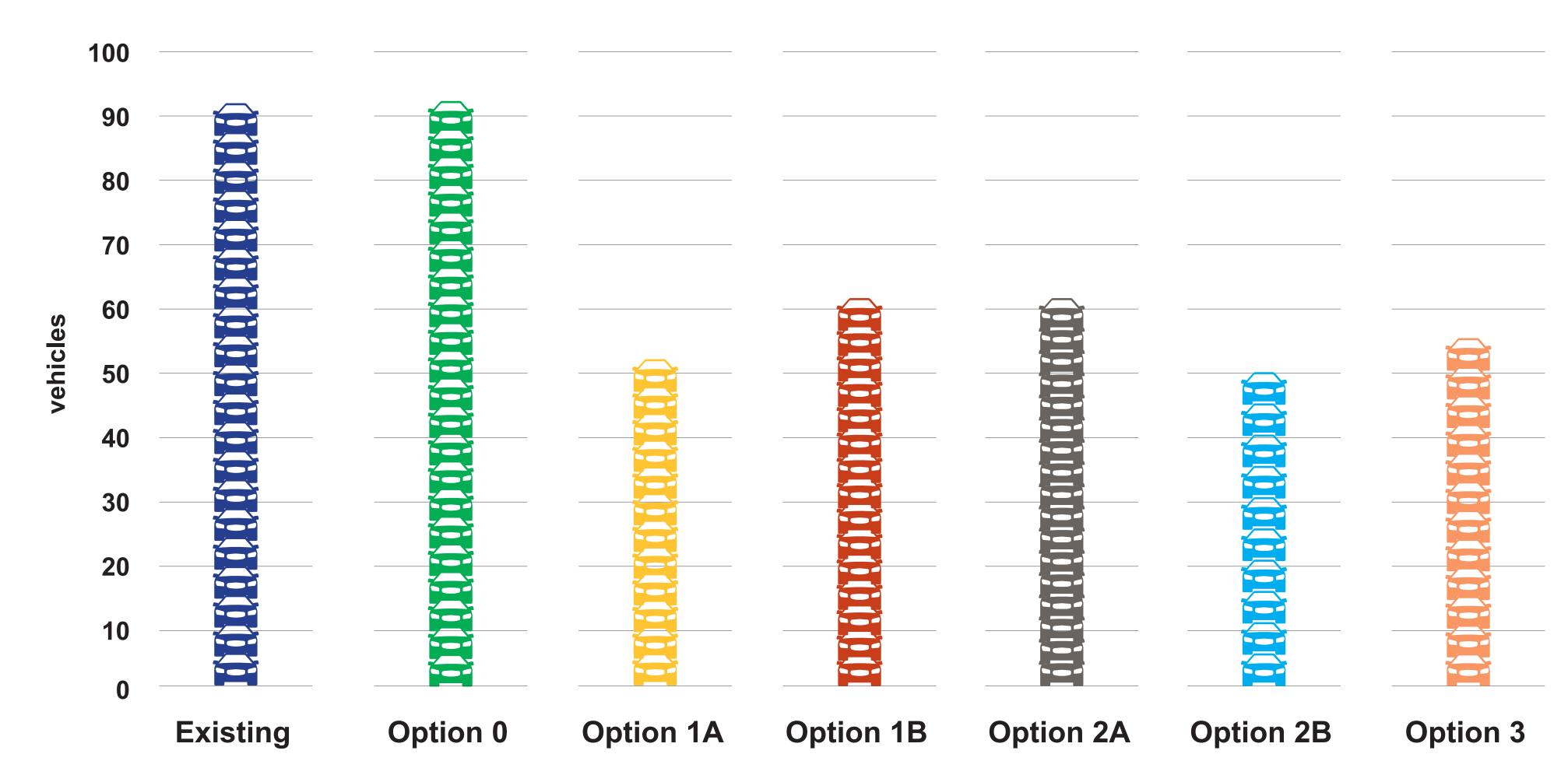
- Remove bike lane/ restriping and add new shared use path
- Improves from LOS F to LOS D, reduces EB max queue from ½ mile to 1/4 mile

### Option 3

Hybrid – add NB turn lane, remove split phasing and close slip lane from drop –off lot to staff/ bus loop.



### MD 99/ St. John's Lane/ Mount Hebron High School Entrance

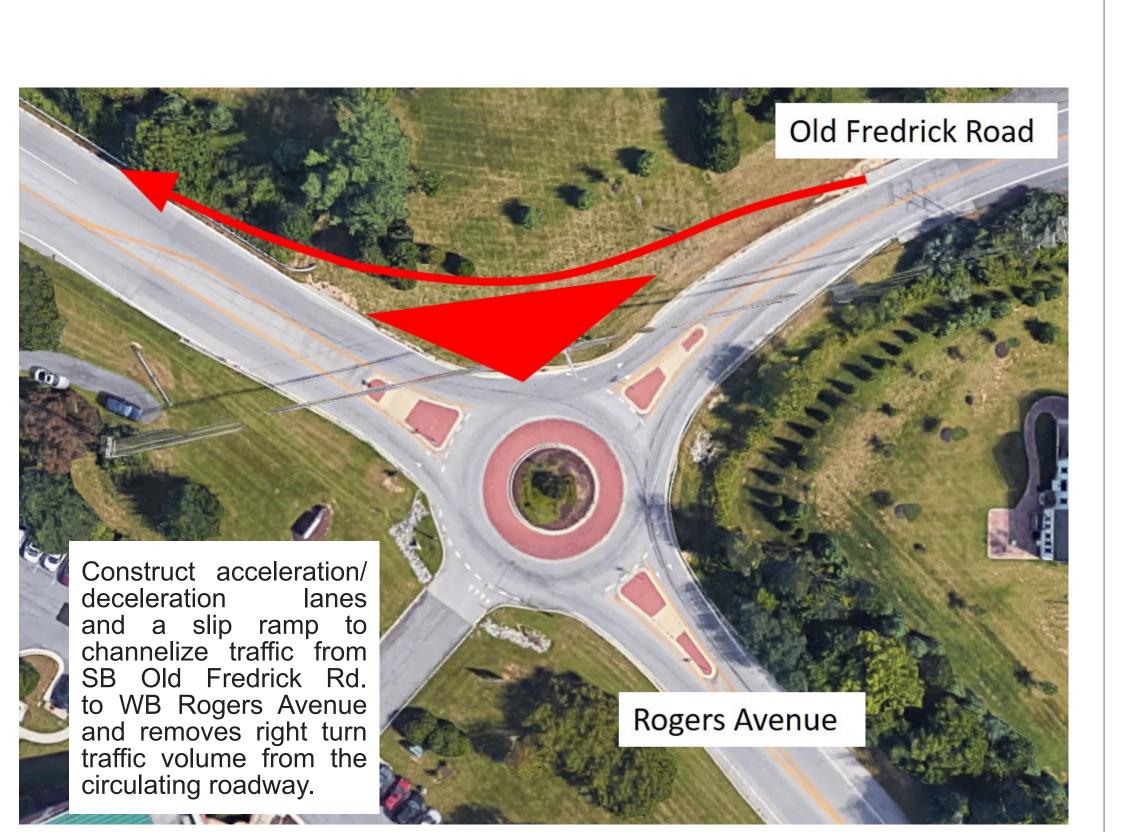


- **Existing**
- Option 0 Coption 1A
- Option 1B
- Option 2A
- Option 2B
- Option 3

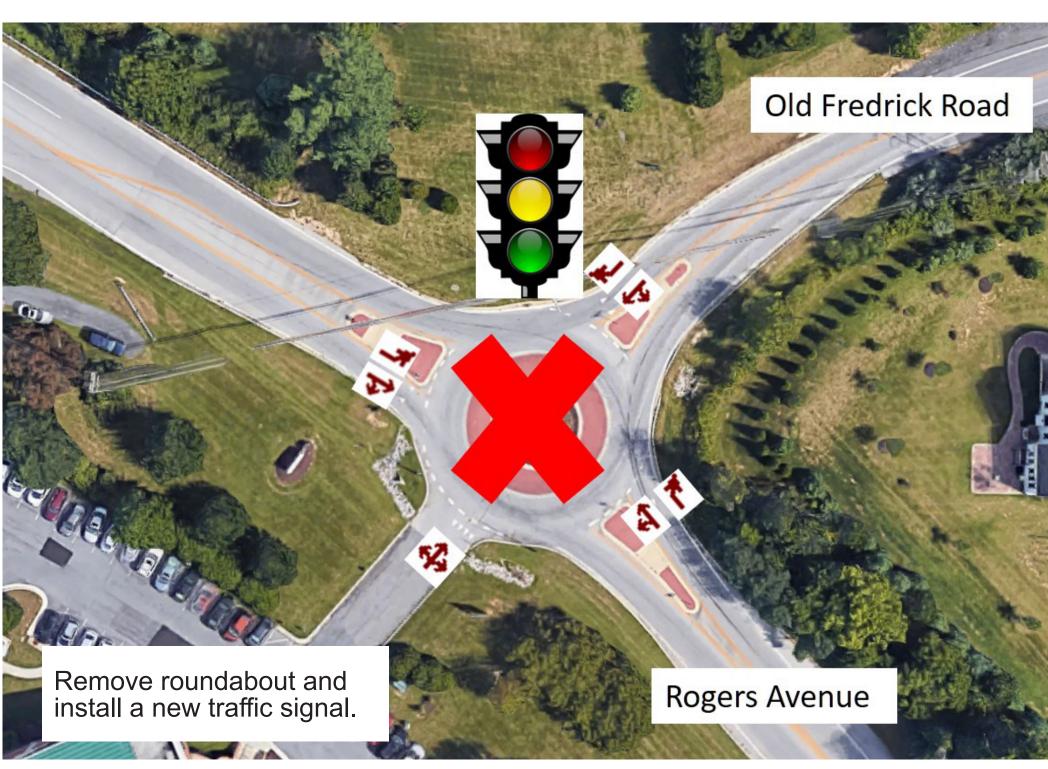
## Signal & Geometric Improvement Recommendations

### Rogers Ave. / Old Frederick Rd. Option 1 Option 2

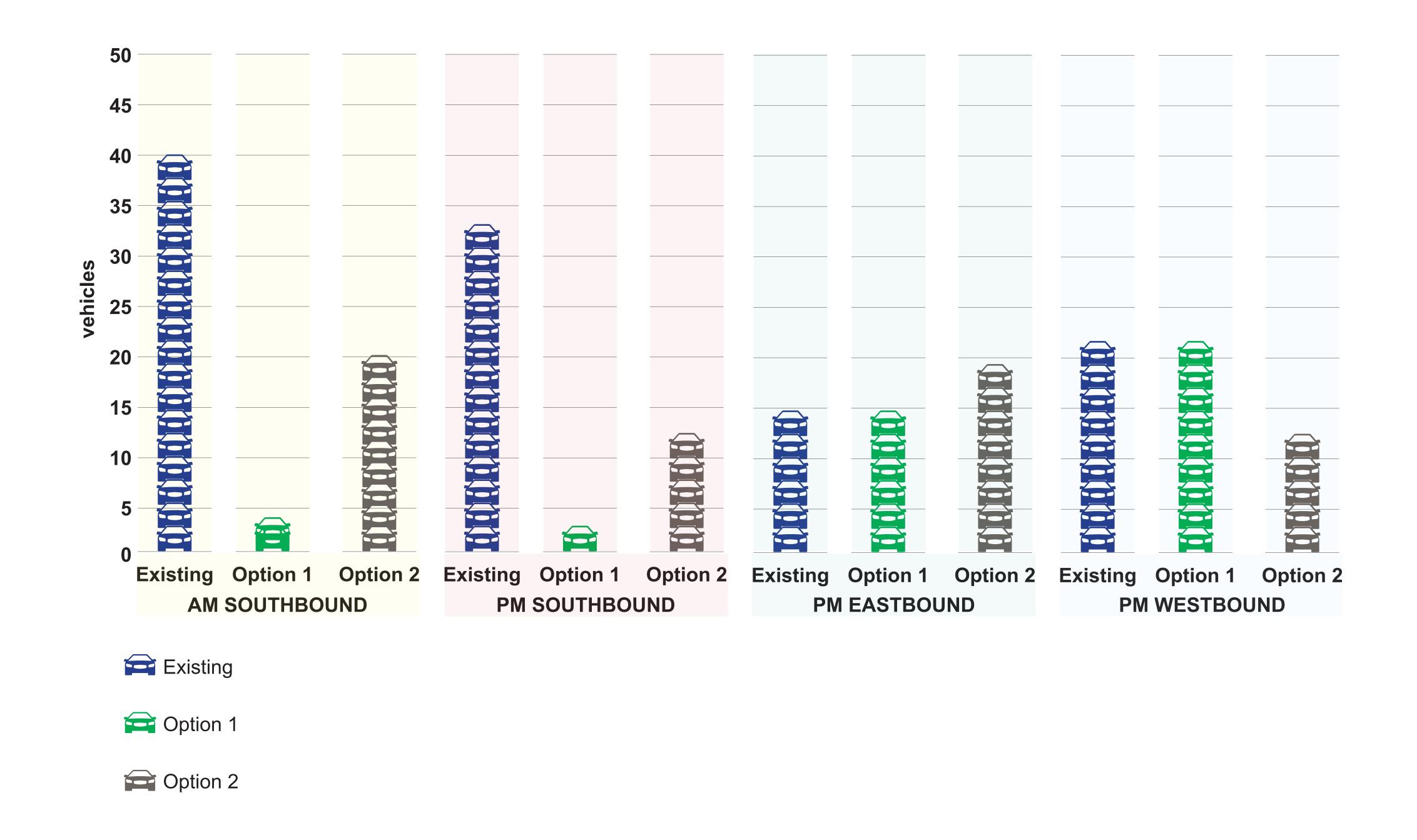
Construct slip ramp to channelize and remove SB to WB traffic from roundabout. Improves LOS from F to C(AM) and E(PM).



Remove roundabout and construct traffic signal. Improves LOS from F to D(AM) and C(PM).



Rogers Avenue/ Old Frederick Road



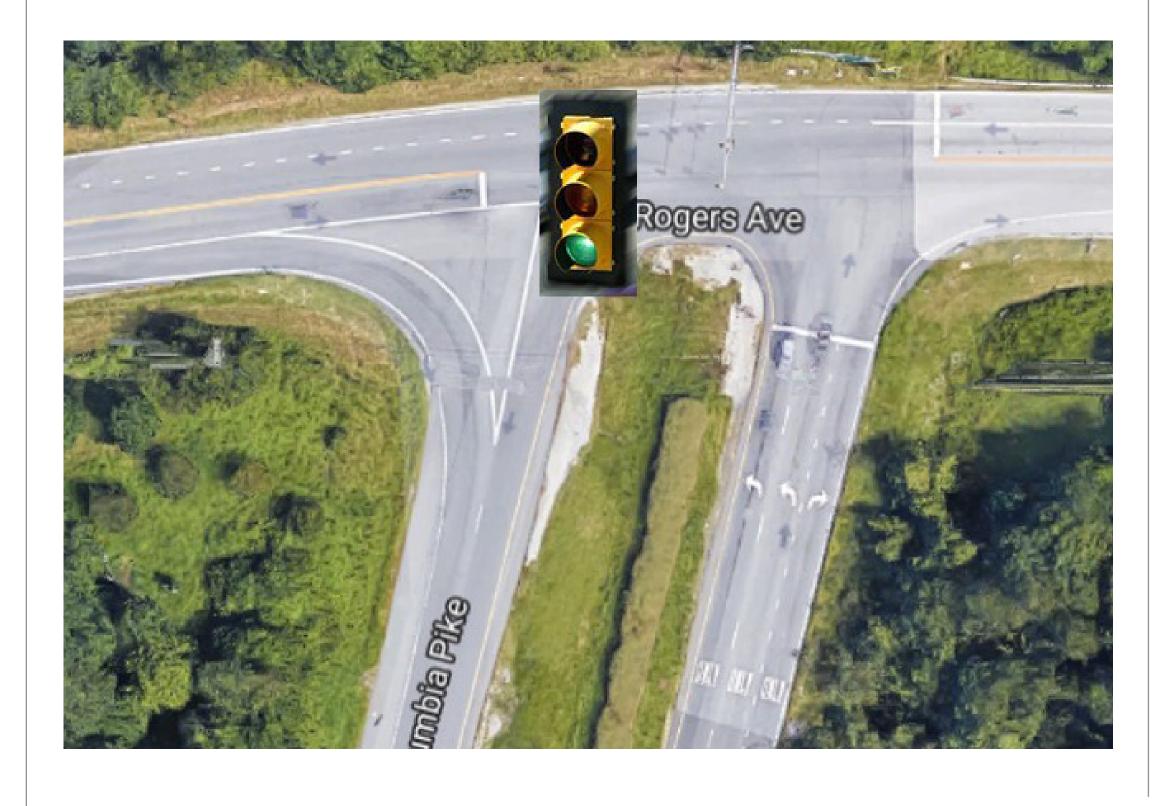
# MD 99 / US 29

Option 1

Improve Shoulder along SB US 29 to provide a continuous.



Reduced cycle length and add a right turn arrow for northbound US 29.





### Signal & Geometric Improvement Recommendations

### Other Improvements

