

City of Alexandria, Virginia

**Transportation and Environmental
Services**

King/Quaker/Braddock
Intersection Improvement Project

February 9, 2012



Study Area



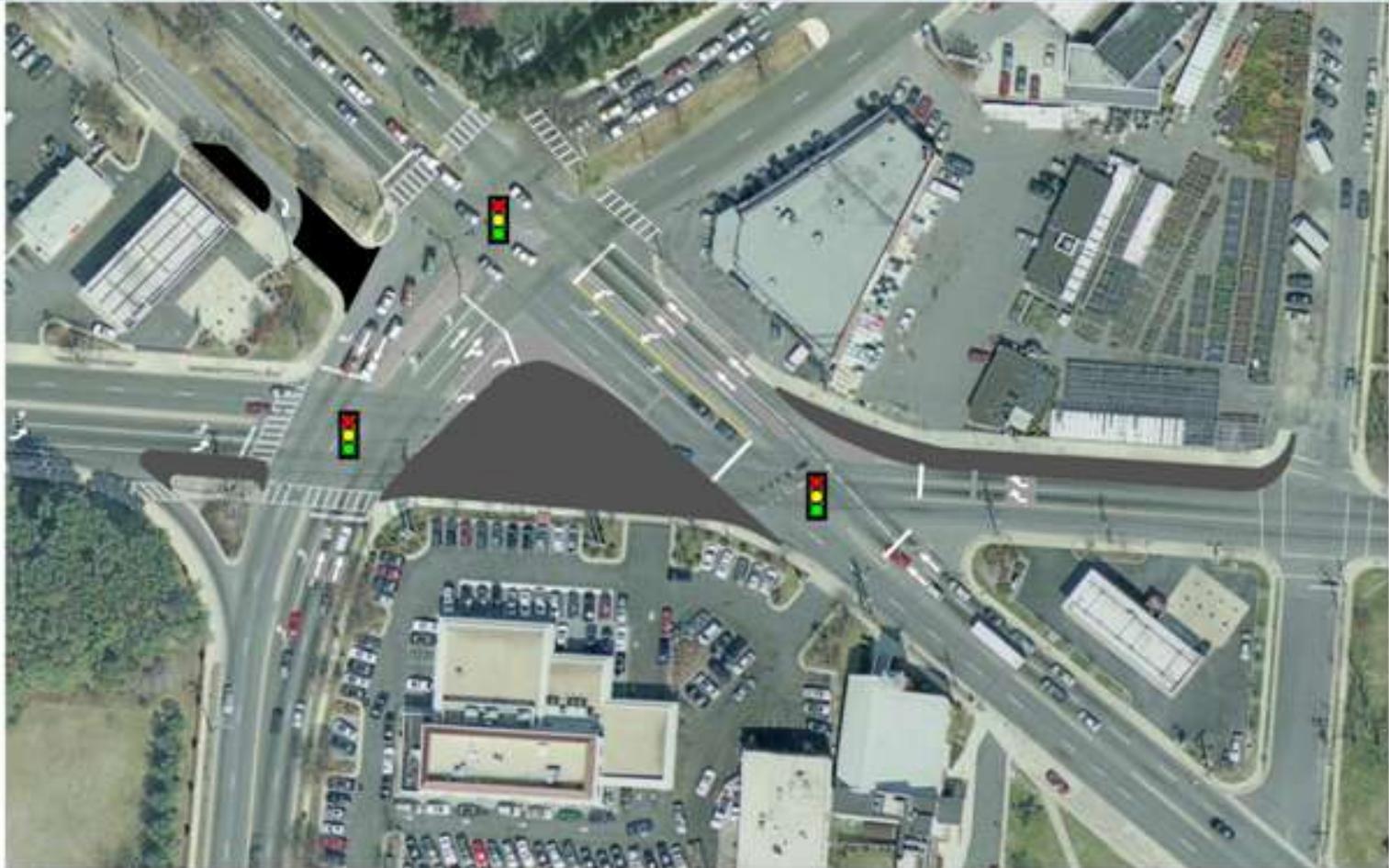
Previous Study

- * Completed in 2009
- * Goals
 - Improve Pedestrian Safety
 - Improve Pedestrian & Traffic Operations
- * Three Public meetings

Previous Study

- * Evaluated Several Intersection Concepts
- * Developed Traffic and Safety Improvements
- * Transit Improvements

Alternative 2



Alternative 3



Alternative 4



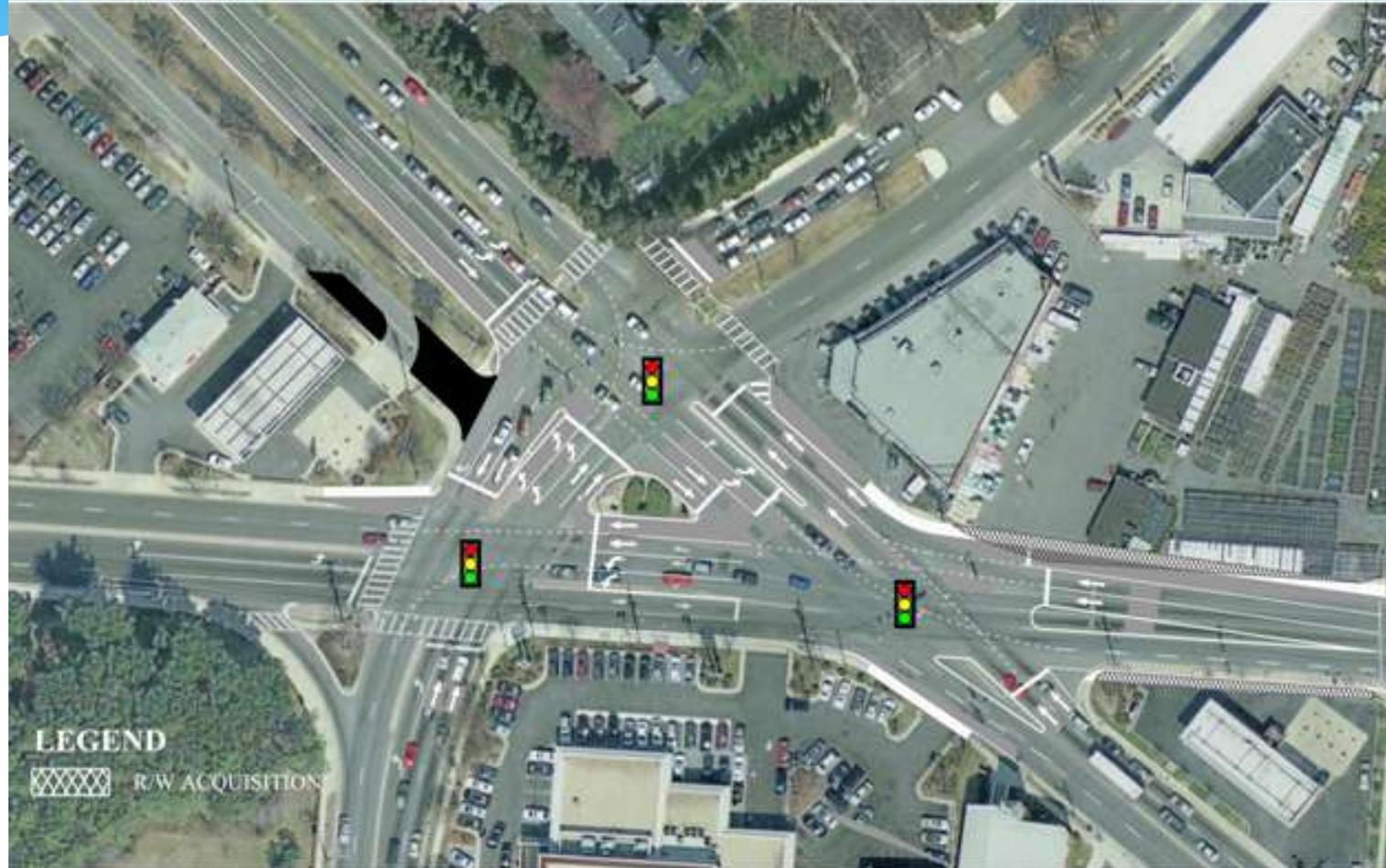
Alternative 5



Alternative 6



Alternative 1 – Recommended



Transit Center Improvements



Supplemental Analysis

- * Existing conditions
- * Safety
- * Traffic operations
- * Transit needs
- * Evaluation of options
- * Revised recommendations

Recommended Improvements

1. Additional left turns:
 - EB King Street at Quaker Ln
 - EB King Street at Braddock Rd
 - WB Braddock Road at Quaker Lane
 - NB Quaker Ln at King St
2. Partial closure of Service Road at Quaker Lane
3. Traffic signal at Bradlee Shopping Center Driveway
4. Enhanced bus shelters at Bradlee Shopping Center and Safeway

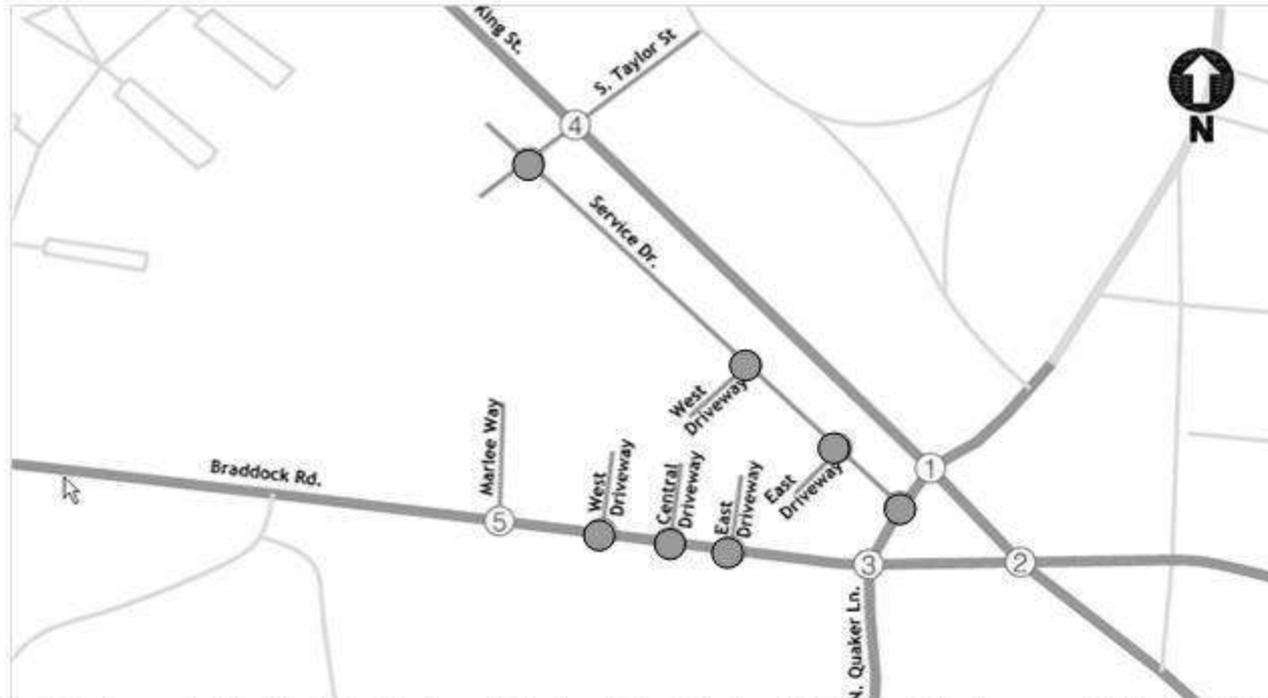
Recommended Improvements

1. New Turn Lanes
2. Partial Closure of Service Road
3. Service Road Signalization
4. New Bus Shelters



Existing PM Peak

Existing PM Period LOS and Traffic Volumes ((VISSIM))

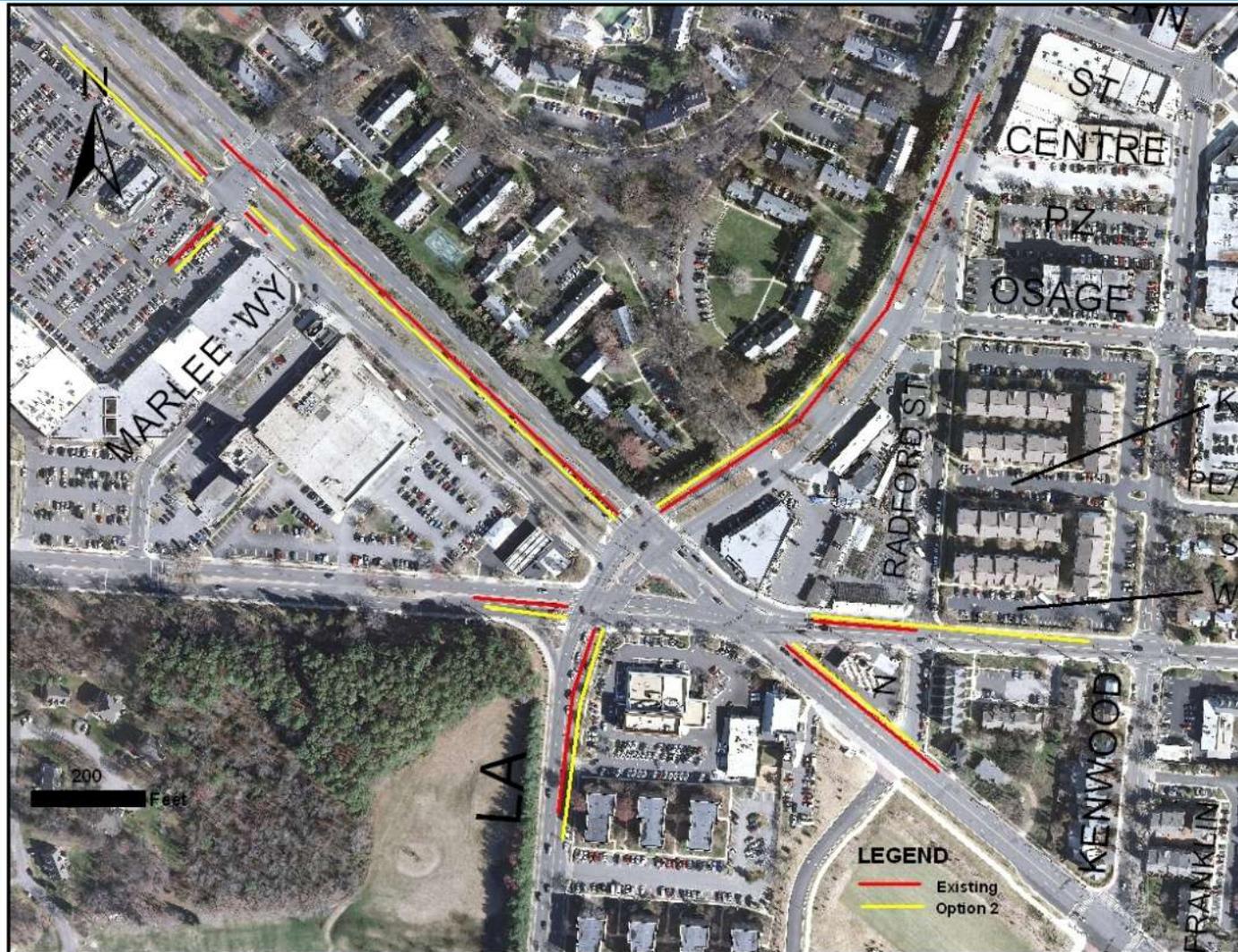


① King & Quaker	② King & Braddock	③ Braddock & Quaker	④ King & Taylor	⑤ Braddock & Marlee Way
Level of Service: F / 145.8	Level of Service: D / 44.1	Level of Service: D / 42.4	Level of Service: D / 39.8	Level of Service: A / 5.0

VISSIM Analysis for PM Peak Conditions

Intersection	Existing (delay in sec./LOS.)	Recommendation with Dual Lefts (delay in sec./LOS)
King Street and N. Quaker Lane	145.8/F	56.9/E
King Street and W. Braddock Road	44.1/D	65.9/E
W. Braddock Road and N. Quaker Lane	42.4/D	37.5/D
King Street and Taylor Street/ Bradlee shopping center	39.8/D	37.1/D
Service Road and Bradlee Shopping Center	6.7/A	32/C

VISSIM Queue lengths – PM peak



Recommended Alternative

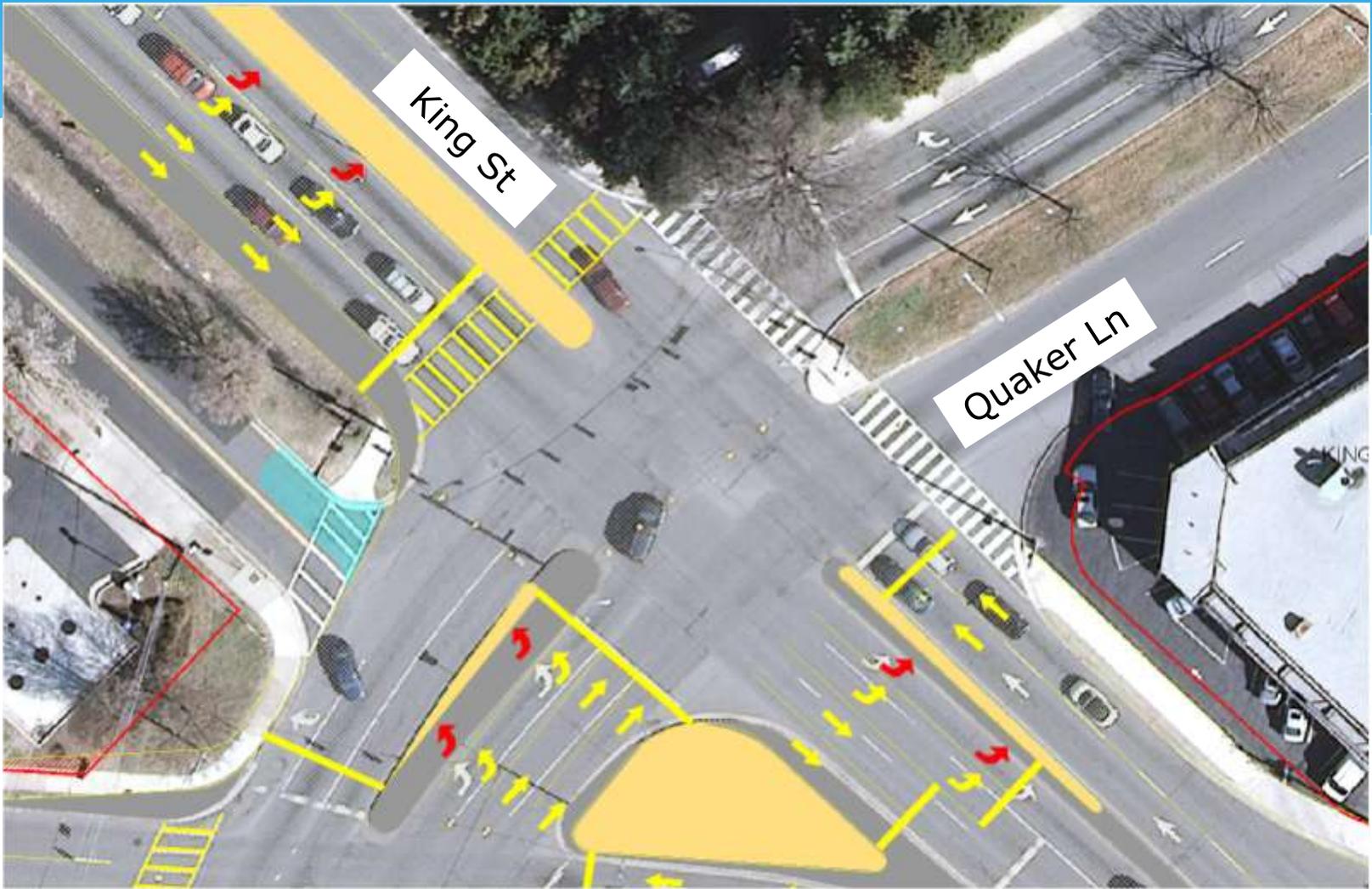


Preliminary Assessment of Right of Way Impacts

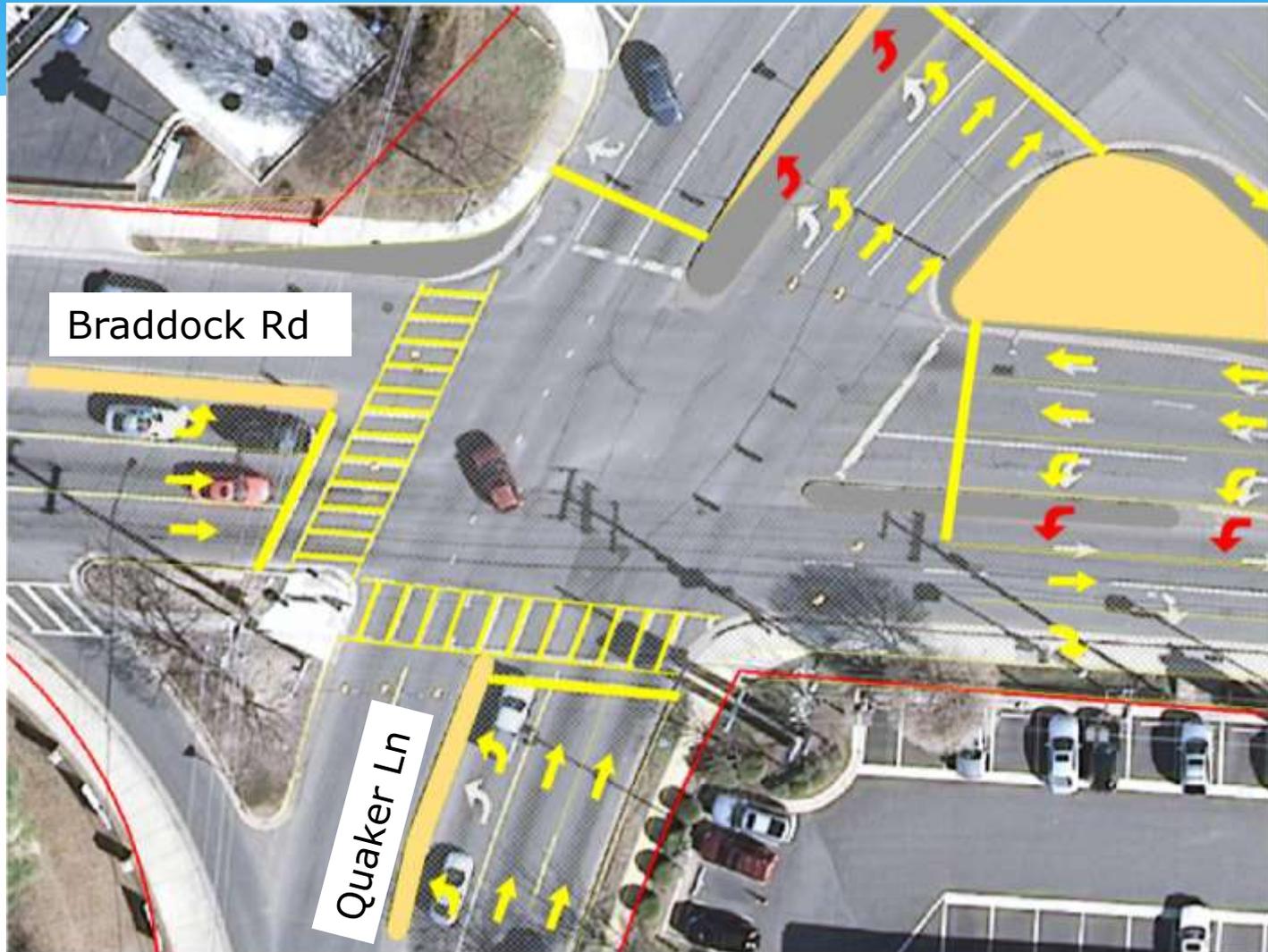


- Preliminary assessment of right-of-way impacts based on concept plan and subject to adjustments based on more detailed design

Close Up – King/Quaker Intersection



Close Up – Braddock/Quaker Intersection



Preliminary Project Schedule

- * Feb. 2012 – Select Design Consultant
- * July 2012 – 30% Plan Submission
- * Feb. 2013 – 60% Plan Submission
- * March 2013 – Public Meeting
- * July 2013 to April 2014 – Right of Way Acquisition
- * April 2014 – 100% Plan Submission
- * Oct. 2014 – Advertisement for Construction
- * Jan. 2015 – Begin Construction (12 months)

Questions