TRAFFIC AND PARKING BOARD

June 27, 2016

KING STREET COMPLETE STREETS PROJECT

Agenda Item 11

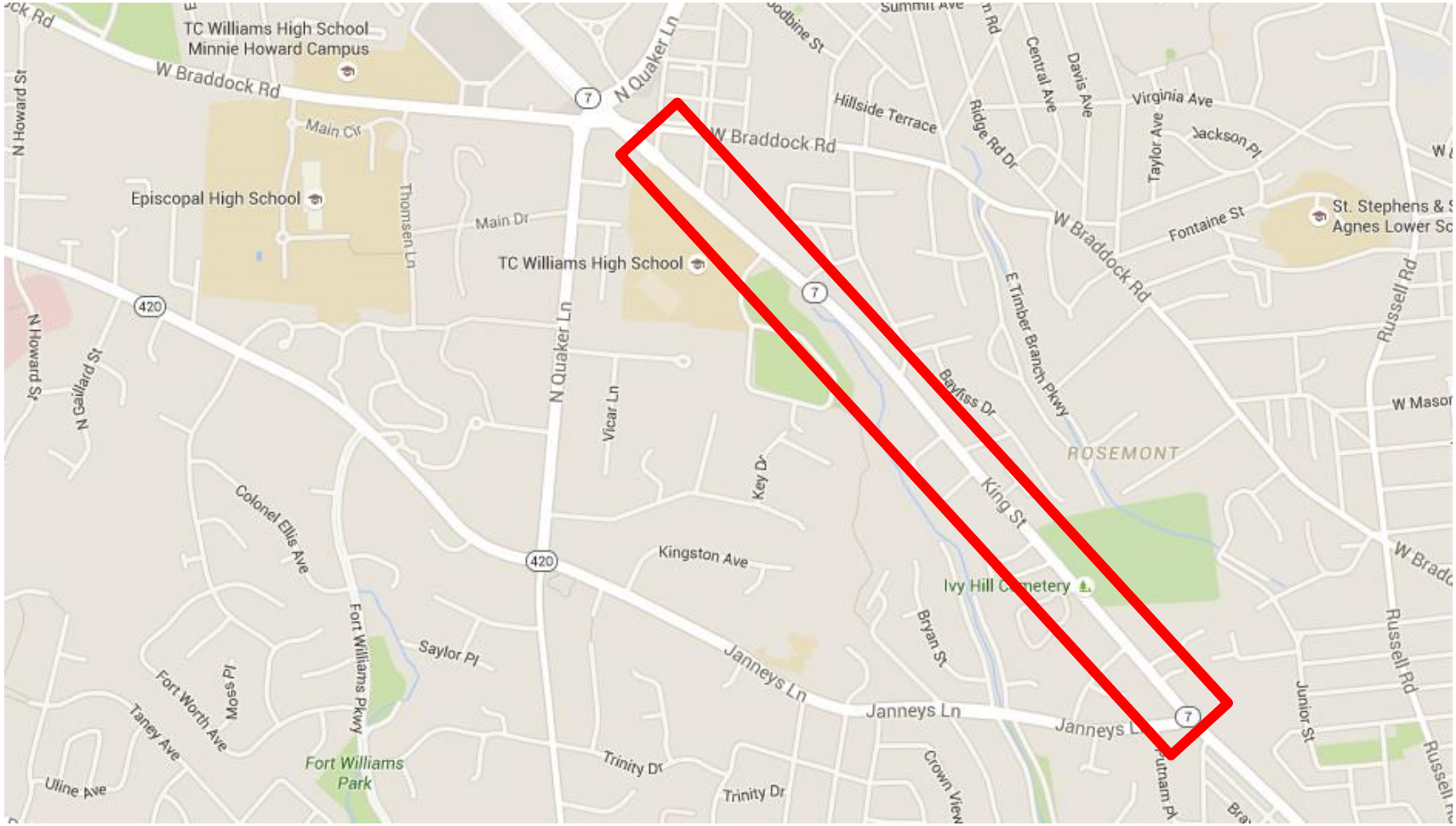
Staff Recommendation

- Recommend to the Director of T&ES to remove an eastbound travel lane on King Street between Chinquapin Drive and Janney's Lane and a westbound travel lane on King Street between Kenwood Avenue and Janney's Lane

- Recommend to the Director of T&ES to install "No Right Turn on Red" signs at southbound Kenwood Avenue at King Street

- Recommend to the City Manager to reduce the speed limit from 35mph to 25mph on King Street between Chinquapin Drive and Melrose Street

Project Limits: Radford Street to Janney's Lane



Why King Street?

- Complete Streets Policy
- Resurfacing Schedule
- Requests from residents and TC Williams High School
- Transportation Master Plan priority project

Project Process

- Collect data
- Community Engagement
- Develop Options
- Refine and Propose final options

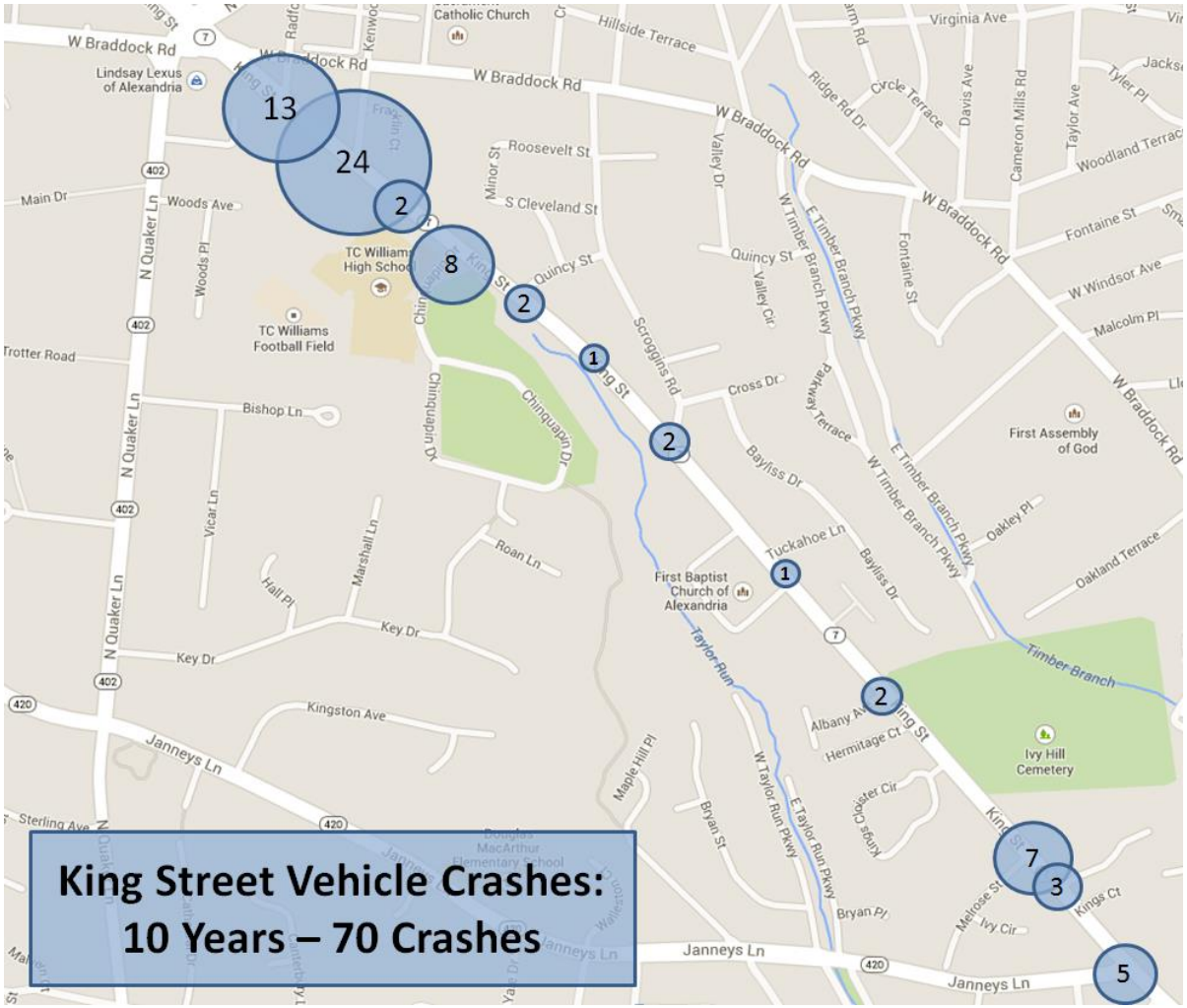
Project Goals

- **Provide facilities** for people who walk, bike, ride transit or drive cars
- Improve the **safety** and convenience for all street users
- **Implement** City Council adopted plans and policies

Traffic and Parking Board updates

- January 2016 – Spring 2016 project
- March 2016 – Project update

Data Collection

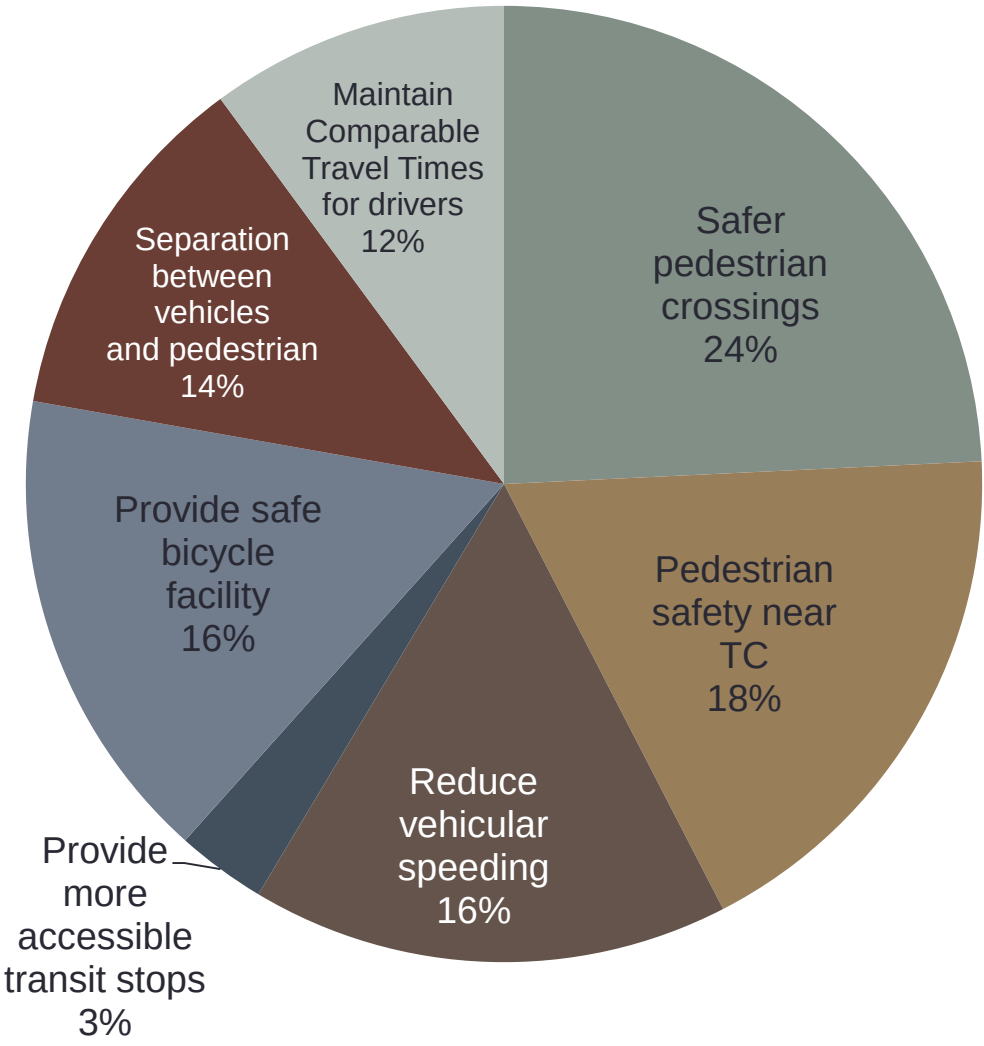


*No bicycle or pedestrian crashes reported

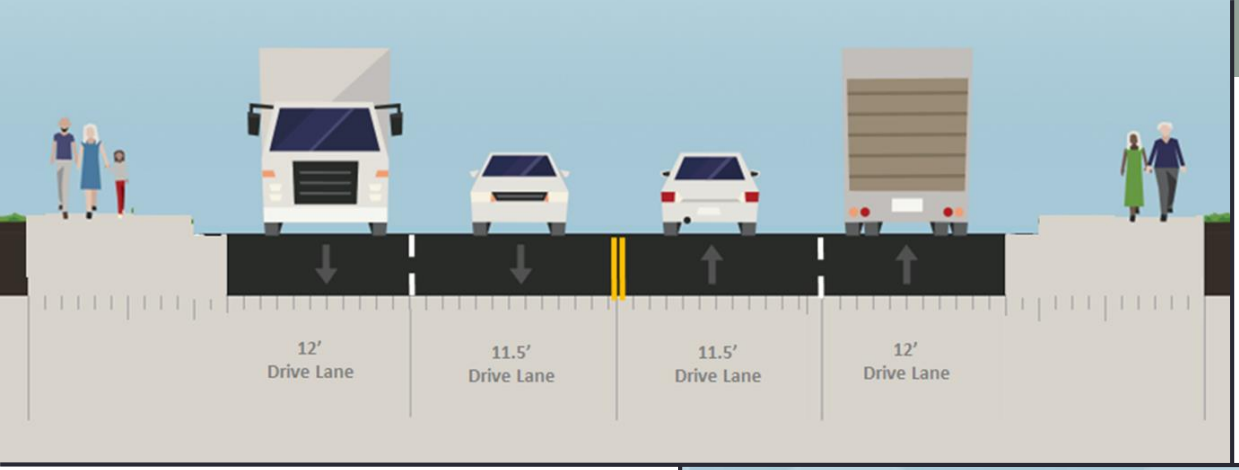
- Average 85th percentile speeds:
  35mph=42
  25mph=33
- AM Peak ~750vph
- PM Peak ~650vph
- Traffic Study

Summary - What we heard

What We Heard – main themes
Difficult to cross King Street
Pedestrian safety concerns near school
Vehicle speeds along King Street are high
Street crossings are long
Not enough time to cross at lights
Maintain travel times
Unsafe for people who bike
Difficult to access bus stops
Improvements needed at intersections
Need to change character of the roadway



*Over 250 comments regarding this project submitted

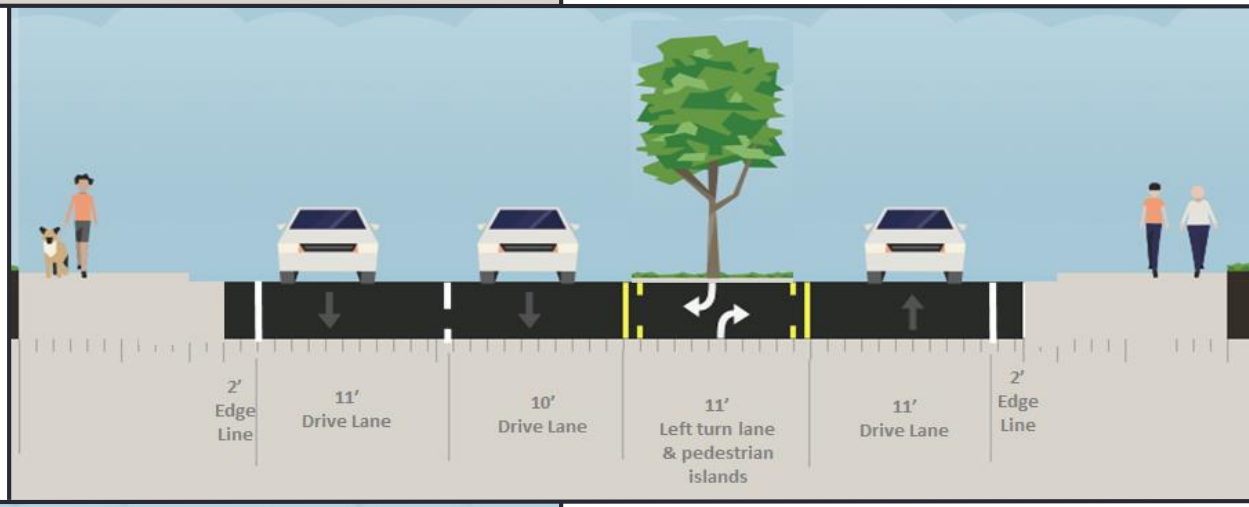


Option 1

Complete Street Maintenance

Option 2

Pedestrian & Accessibility Intersection Enhancements

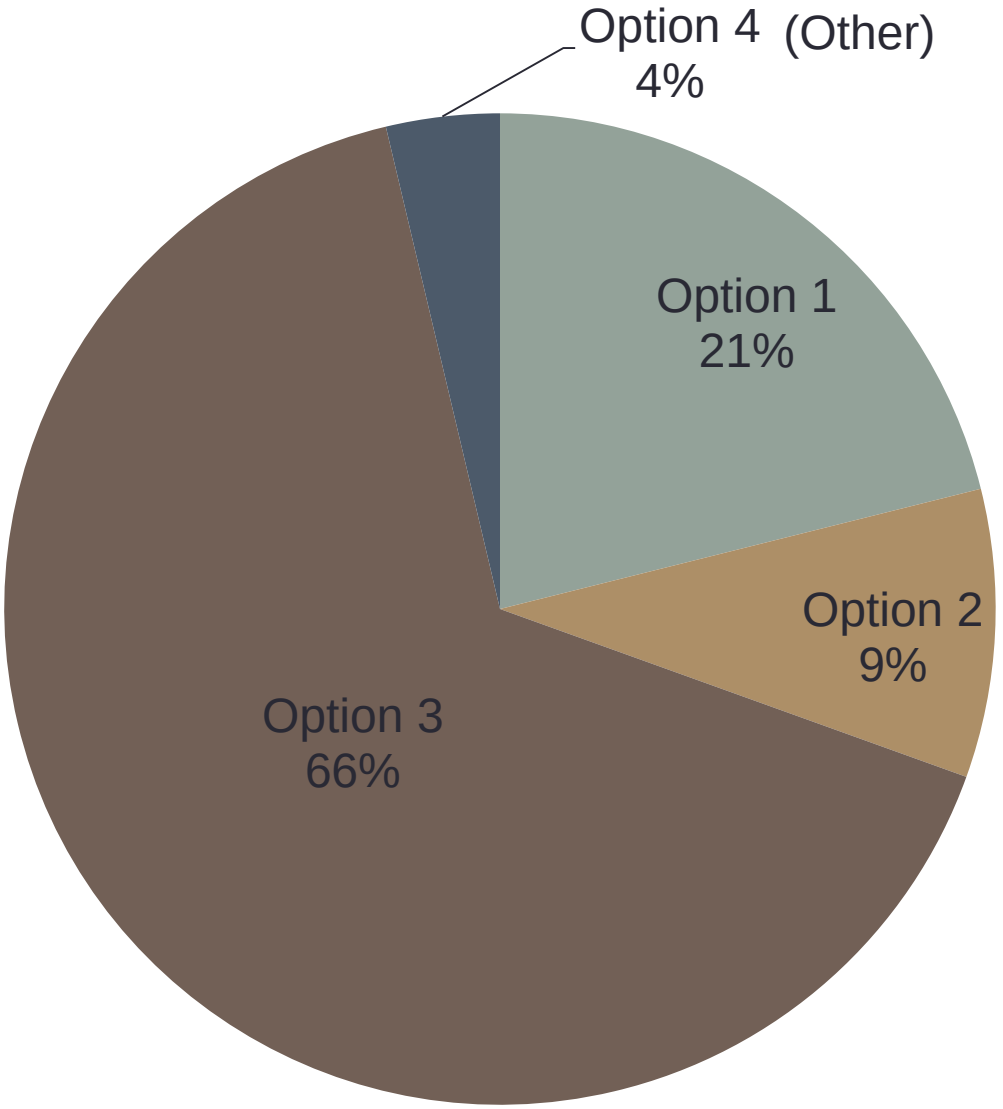


Option 3

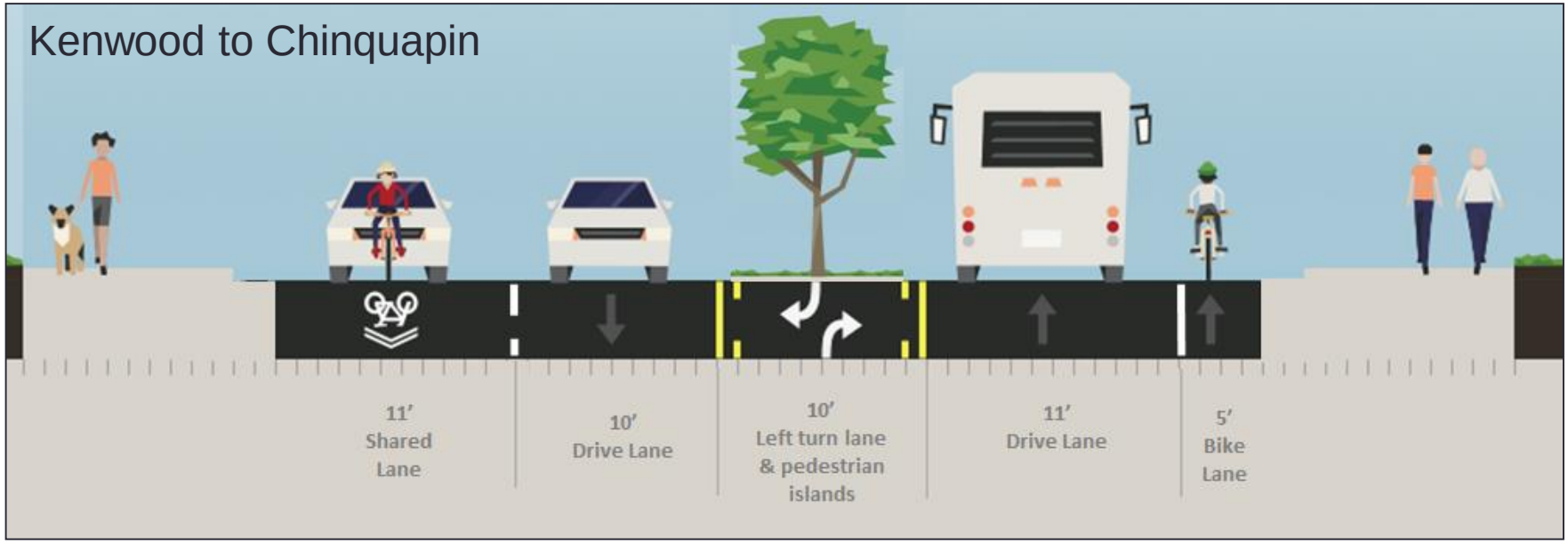
Complete Street Corridor Improvements

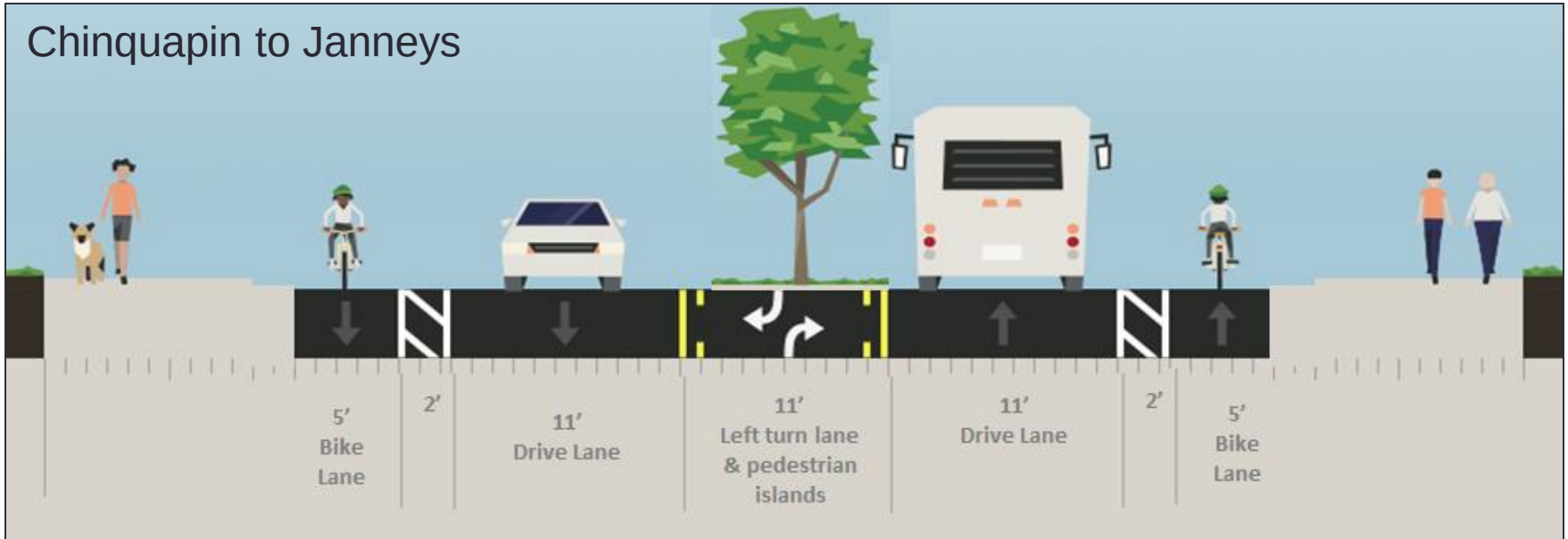
AlexEngage Results

- 760 people responded to survey
- 200 people who live “in area” responded
- 215 additional comments



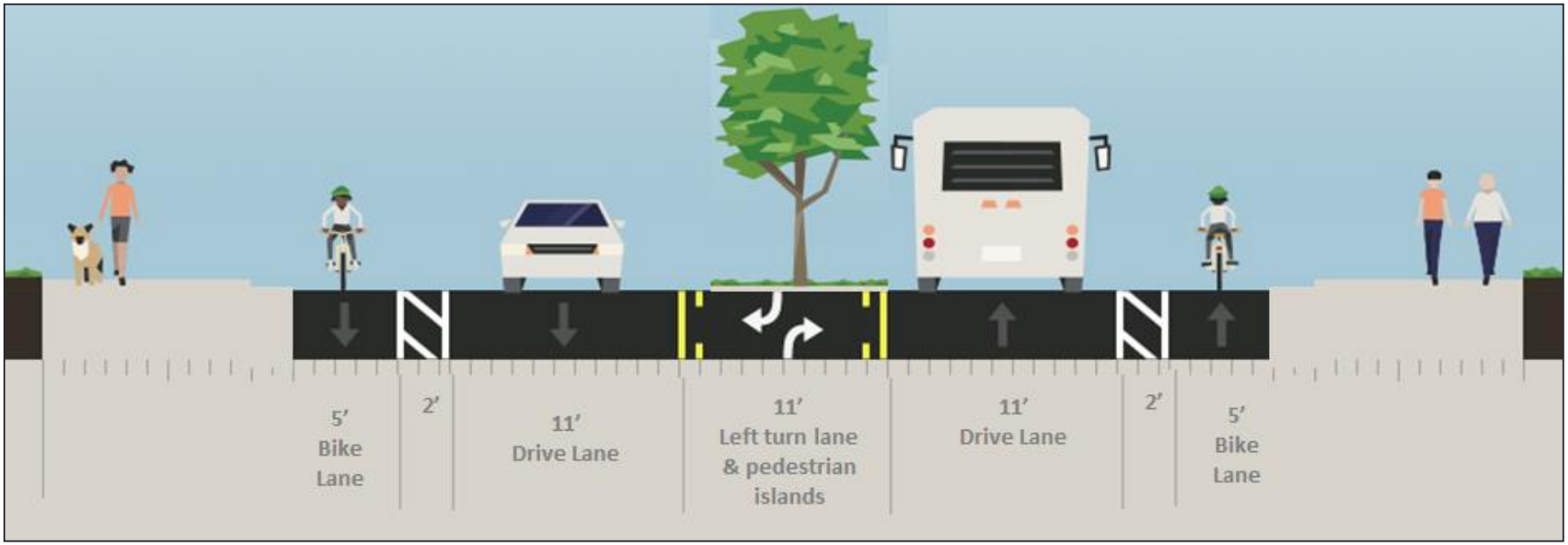
Complete Street Design: Complete Street Corridor





Complete Street Design Benefits

- Provides separation between vehicles and sidewalk
- Provides designated space on street for all users for most of corridor
- Changes character of the corridor
- Provides major pedestrian improvements at intersections with bus stops
- Provides center and left turn lanes

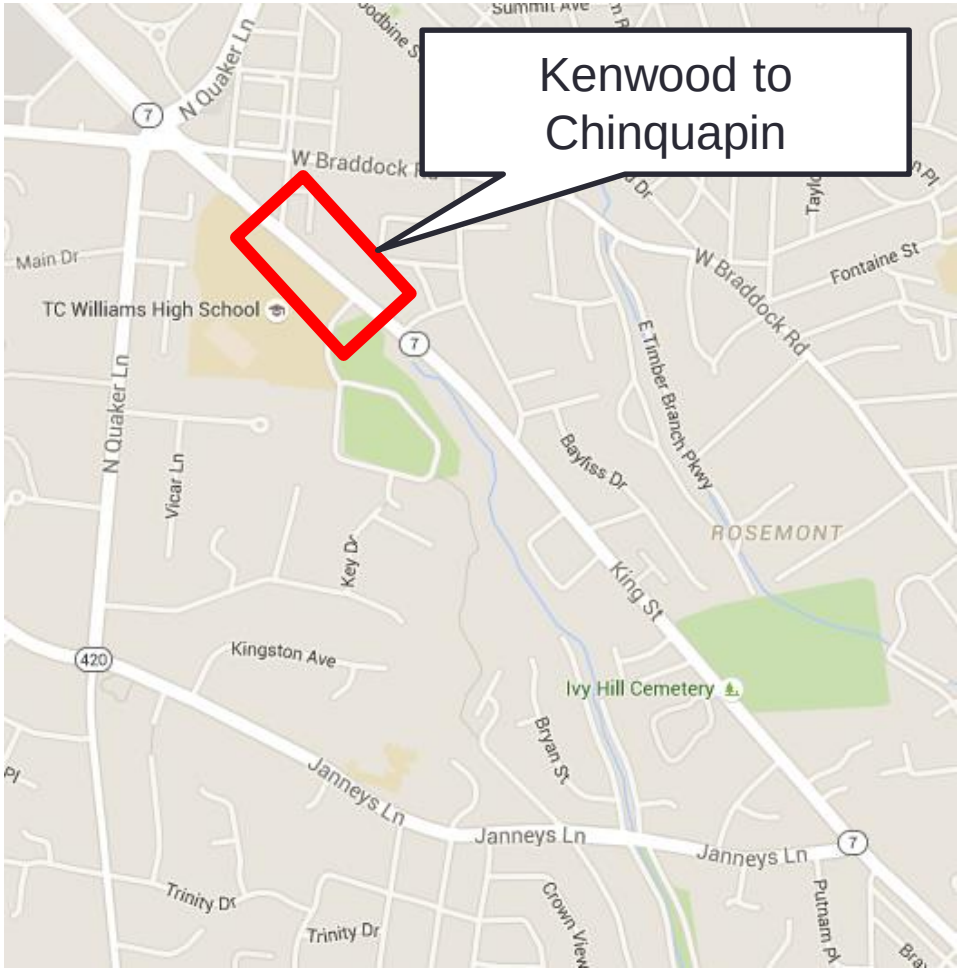


Traffic Analysis

- Eastbound Delay: 12 seconds in the PM peak and 4 seconds AM peak
- Westbound Delay: 7 seconds in the PM peak and 6 seconds AM peak
- Speed limit change adds an addition 33 seconds to travel times along the corridor but provide safety benefits
- Delays are considered for the highest peak hour of the day
- Signal timing changes are being made to optimize traffic flow

Detailed Street Section – Kenwood to Chinquapin

- 2 Eastbound Lanes
- 1 Westbound Lane with bike lane
- Westbound left turn lanes into TC at Kenwood and Chinquapin



- Two pedestrian refuge islands at Kenwood
- New lane designation at Kenwood and Chinquapin
- Improved signal timing

- No Right Turn on Red from Kenwood onto King Street

- Maintain two eastbound travel lanes with right turn lanes into TC and Chinquapin
- Provide one westbound turn lane with left lanes into TC and Chinquapin
- Provide Westbound bike lane to Kenwood

Detailed Street Section – Chinquapin to Kings Cloister

- One lane eastbound and westbound with center/left turn lane
- Planted pedestrian islands with crosswalks at Quincy, Tuckahoe & Albany
- Buffered bike lanes

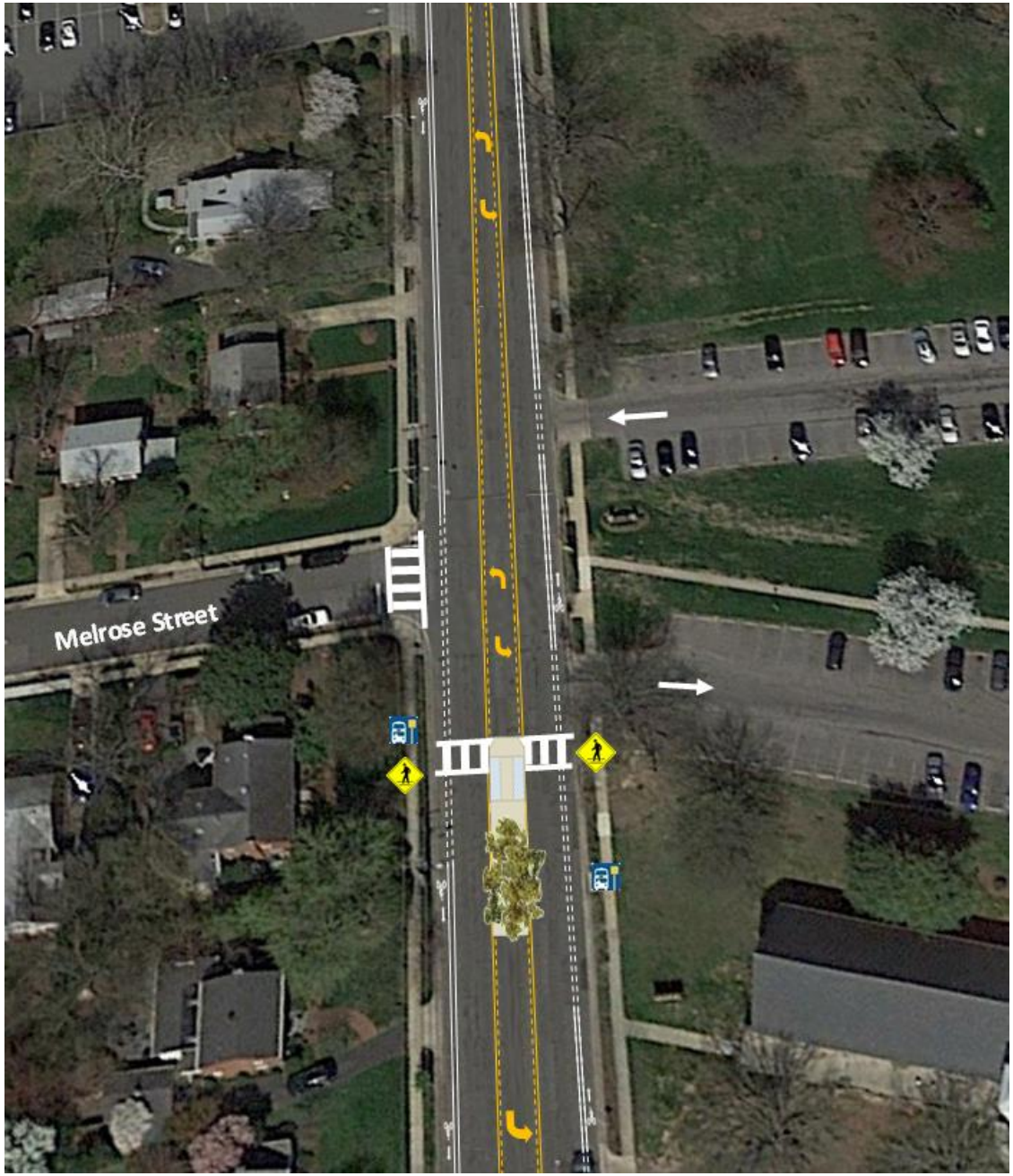
Scroggins Road

Detailed Street Section – Melrose to Janneys

- One lane eastbound and westbound with center/left turn lane
- Buffered bike lanes
- Planted pedestrian islands and crosswalks at intersection with bus stops

Melrose Street

- Replace two existing crosswalks with one
- Provide planted pedestrian refuge island and rapid flashing beacon
- Relocate EB bus stop
- Provide left turn lanes to get in and out of driveways and side streets



Janneys Lane

- Maintain right turn lane beginning at Kings Court
- Provide adequate queue length for right turns
- Remove bike lane buffer

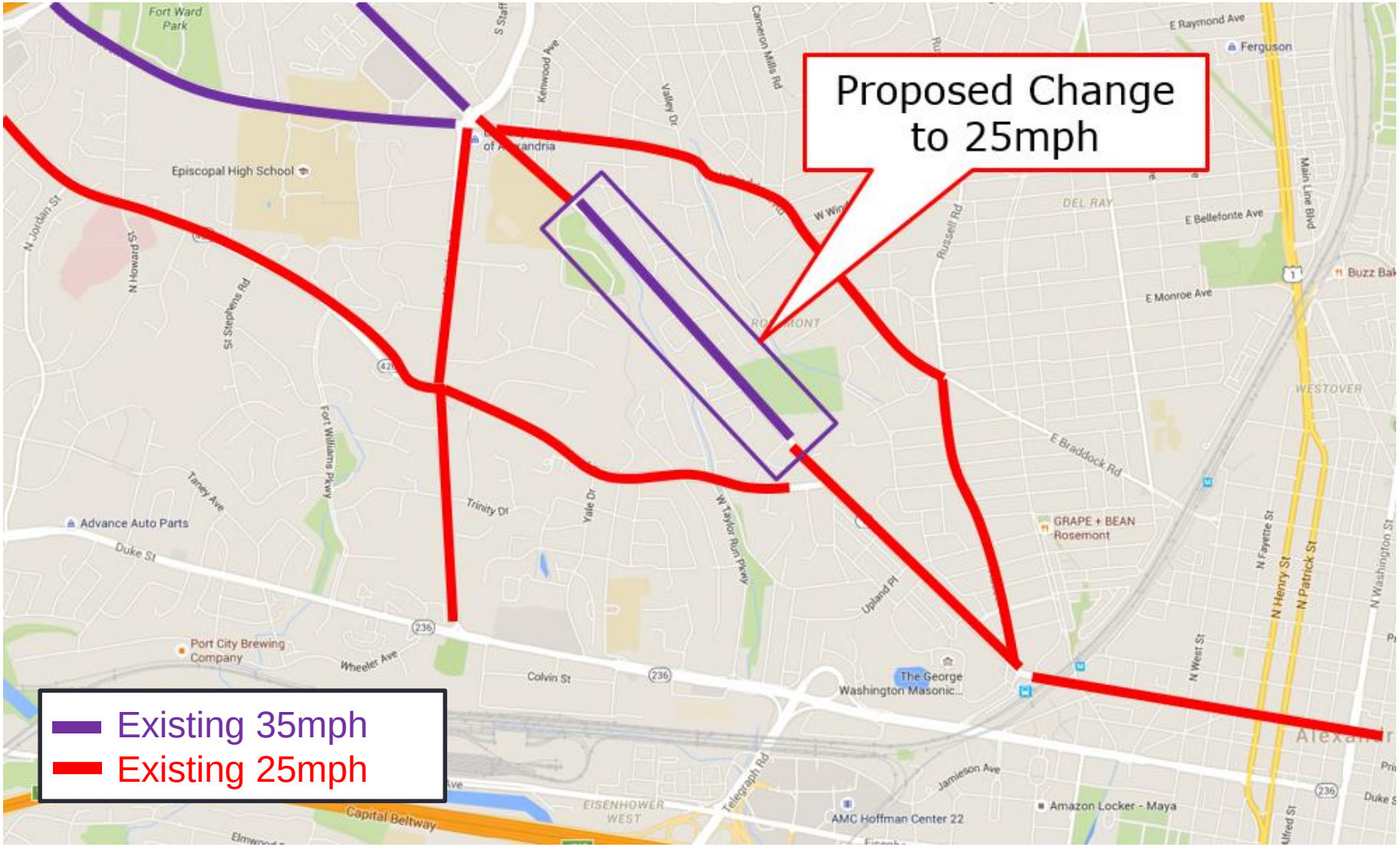
Safety Benefits of Complete Street Design

- **Pedestrians**
  - Shorter, safer distances to cross the street
  - Lower vehicular speeds
  - Greater buffer from moving vehicles
  - Accessible crossings and bus stops
- **Bicyclists**
  - Dedicated space to ride on the street
  - Lower vehicular speeds
  - Reduced conflicts with pedestrians and vehicles
  - Provides missing link in citywide bike network
- **Drivers**
  - Lower vehicular speeds
  - Center turn lane reduces rear-end crashes
  - Center turn lane eliminates the need to change lanes and reduces sideswipe crashes
  - Increases sight distance and reduces left-turn turn crashes
  - Easier to exit side streets and driveways

Safety Benefits of Complete Street Design

- **Operational**
  - Separates left-turning traffic and reduces delays
  - Provides opportunity for vehicular traffic to pass buses at stops
- **Other**
  - Pedestrian refuge islands provide opportunity for streetscape
  - Creates a more residential character to the street
  - Lower vehicle speeds encourage more pedestrian and bicycle activity and safer driver behavior
  - Minimal travel time delays to drivers

Speed Limit Reduction



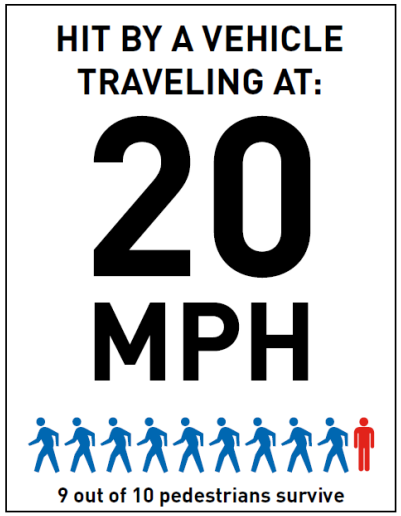
Speed Limit Reduction

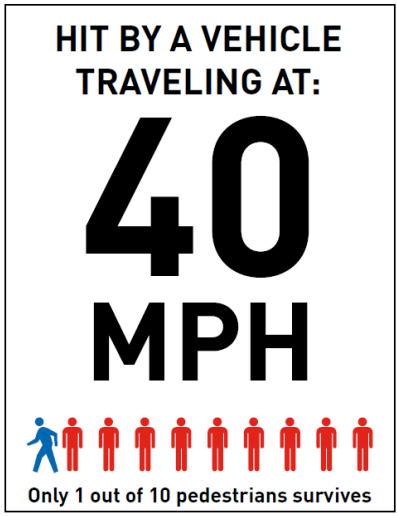
- Proposal to reduce speed to 25mph from 35mph
- Community requests throughout project process
- Polling results at 3rd Community Meeting

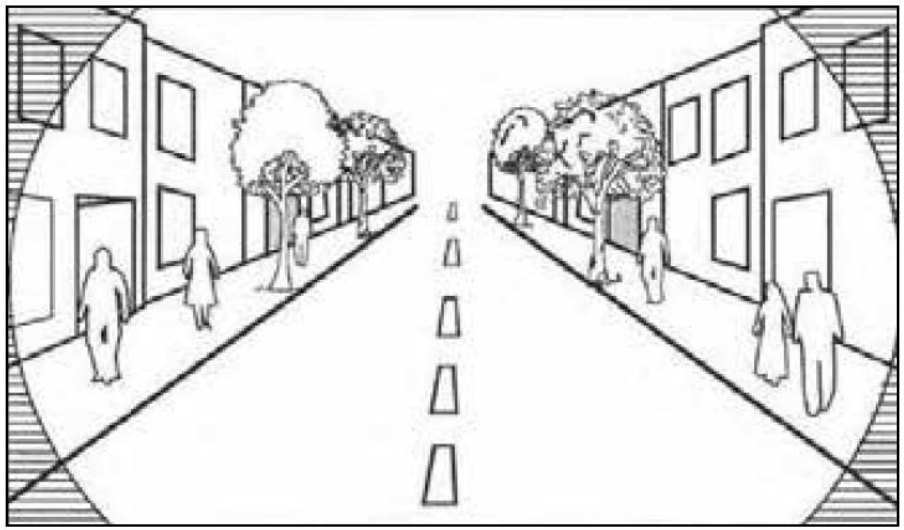
Speed Limits	
Maintain 35mph speed limit	17
Propose 25mph speed limit with project	25
Change to 25mph if post–implementation evaluation shows that street is appropriate for 25mph speed limit	8
No opinion	2

- Street designed for 25mph speed limit
- Travel time along corridor increases by 33 additional seconds (includes intersection delay)
- Consistency along corridor and within area

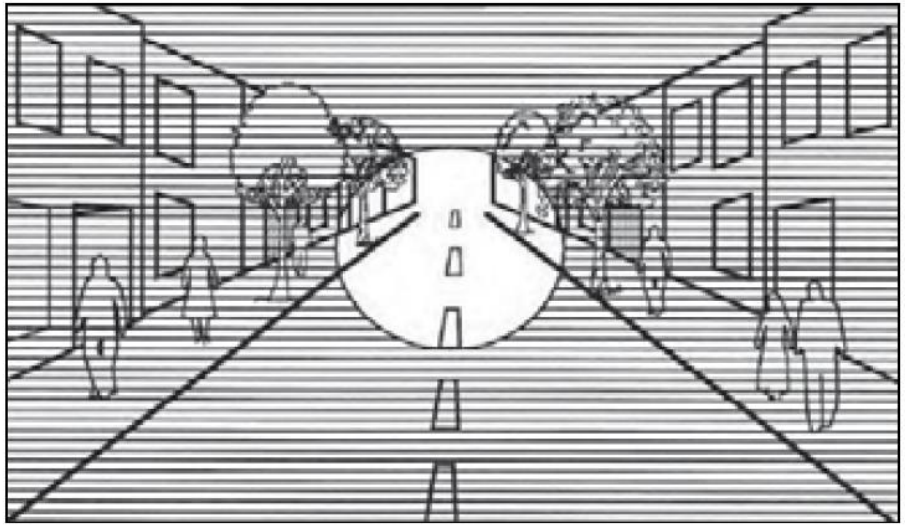
Why Speed Matters







Field of vision at 15 MPH



Field of vision at 30 to 40 MPH

A driver's field of vision increases as speed decreases. At lower speeds, drivers can see more of their surroundings and have more time to see and react to potential hazards.

Public Outreach Process

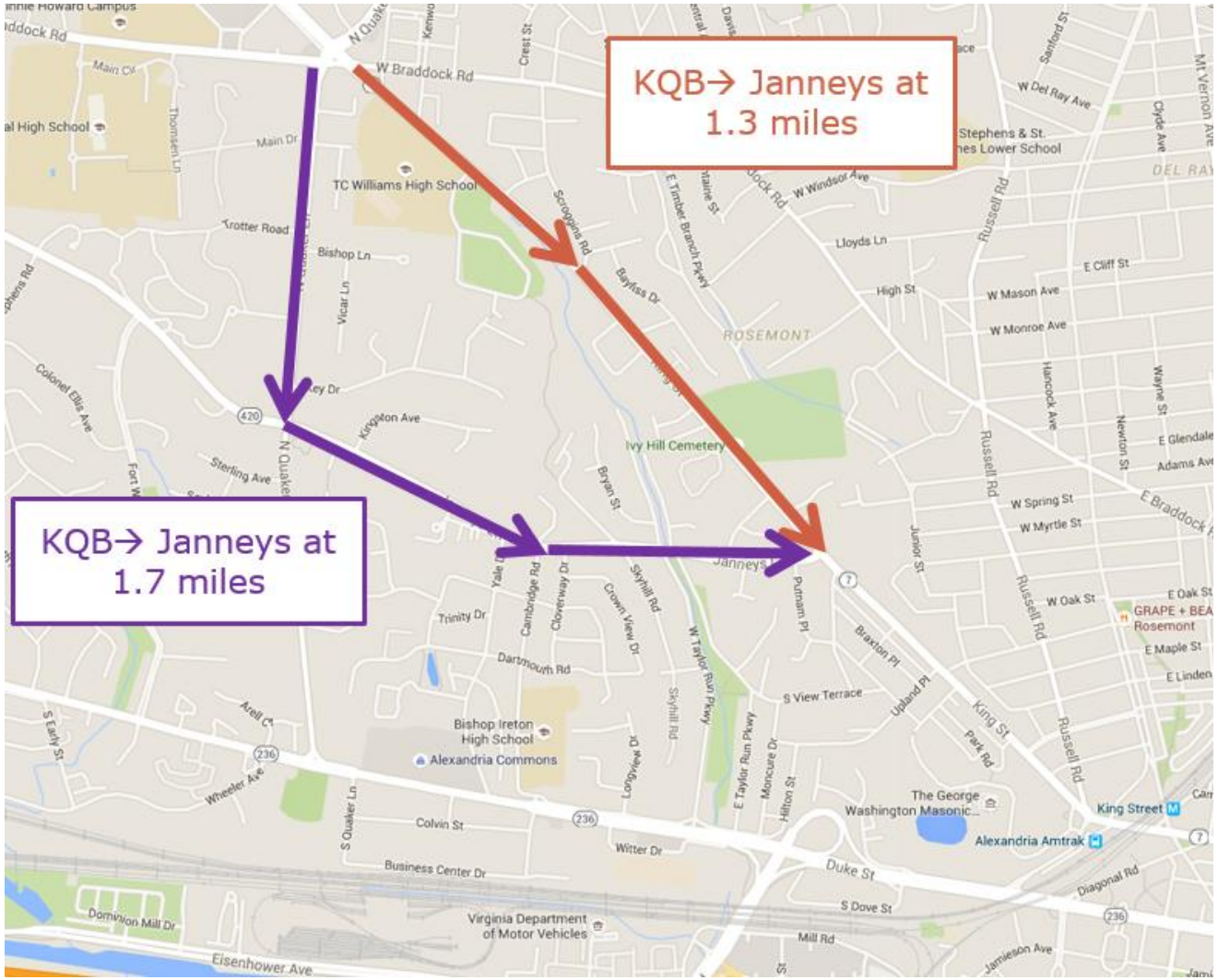
- November 17, 2015 – Public Meeting #1
- January 15, 2016 – Meeting with TC Williams PTA
- February 11, 2016 – Public Meeting #2
- February 12th – 29th – AlexEngage Poll Open
- February 15, 2016 – Alexandria BPAC Meeting
- February 23, 2016 – Meeting with Melrose Area residents
- March 8, 2016 – Meeting with Kings Cloister Area Residents
- March 16, 2016 – Transportation Commission Update
- March 28, 2016 – Traffic and Parking Board Update
- April 11, 2016 – North Ridge & Taylor Run Citizens Associations
- April 21, 2016 – Public Meeting #3
- May 11, 2016 – Clover College Park Civic Association
- May 12, 2016 – Seminary Hill Civic Association

Letters of Support for proposed plan

- Alexandria Transportation Commission
- Alexandria Bicycle and Pedestrian Advisory Committee
- TC Williams High School PTSA
- Coalition for Smarter Growth
- Residents of Melrose Street area (28 signatures)
- Residents of Kings Cloister area (26 signatures)

Community Concerns – Traffic Diversion

- No connections to King Street to the south between Quaker and Janney's Lanes and to the north between Scroggins Road and Cedar Street
- Even with speed limit changes, not faster to go any other route
- Traffic study south of Quaker Lane to Duke Street



Evaluation

- As with all Complete Streets projects, staff will collect vehicle volumes, speeds and crashes to monitor the impacts of the proposed plan after it is implemented.
- Traffic flow will be monitored to determine if any modifications to the plan need to be made.

Implementation

- Maintenance work, including sidewalk repairs and upgrading curb ramps and bus stops to be ADA compliant will begin in July 2016.
- Roadway resurfacing will begin in August 2016, the striping and islands would be installed in conjunction with the repaving.

Staff Recommendation

- Recommend to the Director of T&ES to remove an eastbound travel lane on King Street between Chinquapin Drive and Janney's Lane and a westbound travel lane on King Street between Kenwood Avenue and Janney's Lane

- Recommend to the Director of T&ES to install "No Right Turn on Red" signs at southbound Kenwood Avenue at King Street

- Recommend to the City Manager to reduce the speed limit from 35mph to 25mph on King Street between Chinquapin Drive and Melrose Street