Town of Bedford
Pedestrian and Bicycle Master Plan

Selectmen's Presentation
September 2015

Toole Design Group

Benefits of Planning for Walking and Biking

- Flexible, convenient, affordable travel option

- Increases safety of all users

- Reduces congestion, emissions

- Supports economic development

- Improves public health

- Compatible with transit

- Low cost, high impact investment

Pedestrian and Bicycle Plan Overview

- Existing Conditions
  - Analyze needs and deficiencies

- Design Guidelines
  - Develop bicycle and pedestrian facilities toolbox

- Recommendations
  - Create plan for walking and bicycle network
  - Identify programs and policies
  - Develop implementation strategy

Community Engagement

- Bedford Day – September 2014

- Open House – November 2014

- Community Meeting – May 2015

- Nearly 100 attendees at each meeting!

- What we heard:
  - More crosswalks townwide
  - Maintenance is key
  - Install sidewalks on all major roads
  - Provide dedicated funding for ped/bike
  - Improved education and enforcement for all users
  - Lower speed limits
  - Separated bike facilities
  - Provide trail connections
  - Complex intersections need improvement

Interactive On-line Wikimap

Existing Conditions (Fall 2014)

- 195 users
- 446 comments received

Recommendations Phase (Spring 2015)

- 600+ users
- 319 comments received
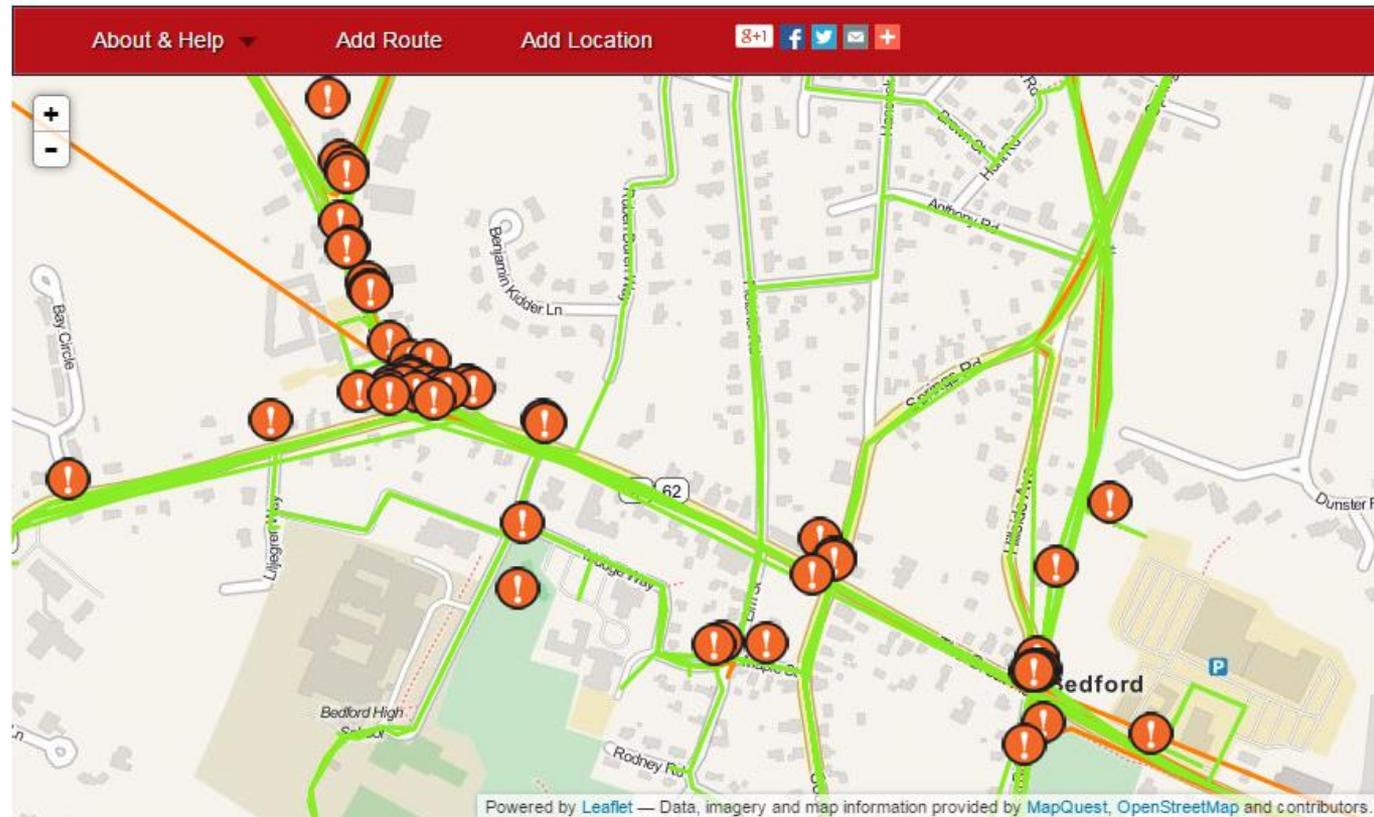
Steering Committee Input

- Input from the committee has been critical throughout the process
  - Consultant selection
  - Kickoff
  - Setting goals and objectives
  - Selecting priority corridors
  - Publicizing community engagement efforts
  - Reviewing draft recommendations and plan documents

- Committee Members:
  - **Margot Fleischman**,
    - Bedford Selectman
  - **Adrienne St. John**
    - Public Works Engineer
  - **Roy Sorenson**
    - Director of Public Works
  - **Sue Baldauf**
    - Director of Youth and Family Services
  - **Carla Olson**
    - Healthy Bedford Coordinator
  - **Terry Gleason**
    - Bedford Bike Committee Chairman
  - **Alyssa Sandoval**
    - Economic Development
  - **Officer Marc Saucier**
    - Traffic Enforcement, Bedford Police Department
  - **Lieutenant James Graham**
    - Bedford Police Department

Vision & Goals

1. **Connectivity**
   - Create a safe and attractive network of pedestrian and bicycle facilities

2. **Comfort and Design**
   - Develop design standards for pedestrian facilities
   - Integrate maintenance plans into existing programs

3. **Culture**
   - Promote a culture of bicycling and walking

4. **Safe School Routes**
   - Prioritize school routes for bicycle and pedestrian improvements

Bedford will be a well-connected community where walking and bicycling are convenient and attractive to residents and visitors alike. Pedestrians and bicyclists will feel safe and respected on Bedford's streets and trails, which will connect residential neighborhoods, shopping, employment centers, public services, and recreational areas.

The well-being and health of Bedford residents will improve from more walking and bicycling. These facilities and the active transportation they inspire will contribute to a vibrant Bedford with healthier residents, safer streets and less congestion. Through active transportation, residents will have more opportunities to engage in their community. The local economy will gain from the benefits associated with public investments in walking and bicycling.

Recommendations – Toolbox

Sidepath

Description

- Two-way path, adjacent to a roadway, open to bicycles, pedestrians, and most other non-motorized uses
- Provides low-stress bicycle and pedestrian connection
- **Typical Dimensions:** 10-14 ft. wide depending on expected user volume plus 5 ft. wide buffer from roadway

Application

- Roads with available ROW on one or both sides
- Roads in areas where pedestrian activity is lower in volume

Considerations

- ROW easement or acquisition may be required
- Path may be easier to maintain and clear snow than a standard sidewalk
- Path should be ADA-compliant

Action Required

- Construction
- Estimated cost: $640K-1.2M per mile

- Toolbox provides readers with an understanding of benefits, applications, cost, and impacts

- Designers understand required elements

- Town staff and elected officials budget for future improvements

- Residents understand what it means for users and abutters

Recommendations – Facility Types

Shared-Use Path, Paved

Shared Use Path, Natural Surface

Sidepath

Sidewalk

Recommendations – Facility Types

Shared Street

Traffic Signal or Beacon

Shared-lane Markings

Bike Lane

Separated Bike Lane

Intersection Geometry
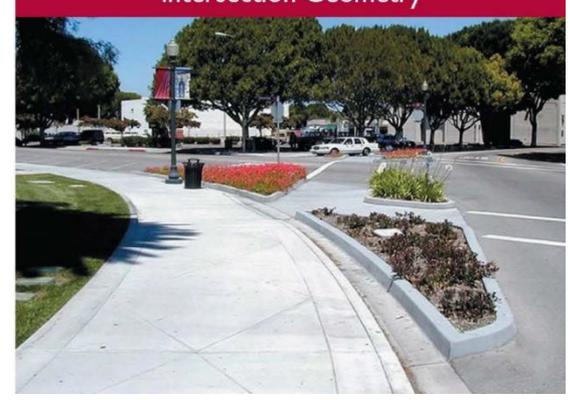
Recommendations - Intersections

Raised Intersection

Curb Extension

Pedestrian Refuge Island

Rapid Flash Beacon

LEGEND

Existing Pedestrian Facilities

- Public Library
- Town Hall
- School
- Popular Destination

- Shared-Use Path, Paved
- Shared-Use Path, Natural Surface
- Sidewalk, 1-side
- Sidewalk, 2-sides

Proposed Spot Improvements

- Crosswalk
- Add Traffic Signal
- Bike/Ped Signal
- Modern Roundabout
- Geometric Improvement
- Crossing Improvement

Proposed Pedestrian Facilities

- Shared-Use Path, Paved
- Sidepath
- Improved Shared-Use Path
- Sidewalk, One-side
- Sidewalk, Two-sides
- Desired Connection

Bedford
Pedestrian + Bicycle Master Plan
Bicycle Network Plan

LEGEND

Existing Bike Facilities
- Public Library
- Town Hall
- School
- Popular Destination
- Shared-Use Path, Paved
- Natural Surface Shared-Use Path
- Bike Lane
- Shared-Lane Markings

Proposed Spot Improvements
- Crosswalk
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- Shared-Lane Markings
- Desired Connection

Bedford
Pedestrian + Bicycle Master Plan

LEGEND

- 🔵 Public Library
- 🔵 Town Hall
- 🔵 School

Existing Bike Facilities
- ━━━ Shared-Use Path, Paved
- ━━━ Natural Surface Shared-Use Path
- ━━━ Shared-Lane Markings

Proposed Bike Facilities
- ━━━ Shared-Lane Markings

Prioritization

|	High	Medium	Low	
Connectivity	Critical connection in Town and/or regional bicycle or pedestrian network	Minor connection in Town and/or regional bicycle or pedestrian network	Not a significant component of the Town or regional bicycle and pedestrian network	*Weight - 150%*
Safety	Addresses serious safety issue	Addresses moderate safety issue	Addresses minor safety issue or does not address safety	*Weight - 200%*
Vulnerable Users	Primary focus is vulnerable or choice-limited users	Indirect impact for vulnerable or choice-limited users	Little impact for vulnerable or choice-limited users	*Weight - 200%*
Right-of-Way	Land wholly owned by the Town of Bedford.	Land mostly owned by the Town of Bedford, additional right-of-way procurement believed to be feasible.	Land primarily owned by private parties, or partially owned by private parties believed not to be amenable to sale or easement.	*Weight - 100%*
Lifecycle Cost	Low cost to implement and maintain	Medium cost to implement and maintain	High cost to implement and maintain	*Weight - 100%*

Priority Corridors

- Priority corridors provide "proof of concept"

- Corridors selected based on input from the steering committee
    - Roadways that are representative of Bedford
    - Locations where existing conditions are challenging

- Five key locations in Bedford selected:
    - Great Road
    - Burlington Road
    - Lane School – Sweetwater Avenue to Fawn Circle
    - Concord Road
    - Page Road @ Old Billerica Road

- Designs are conceptual.

Priority Corridor – Great Road

GREAT ROAD

SHAWSHEEN AVENUE

ONLY

ONLY
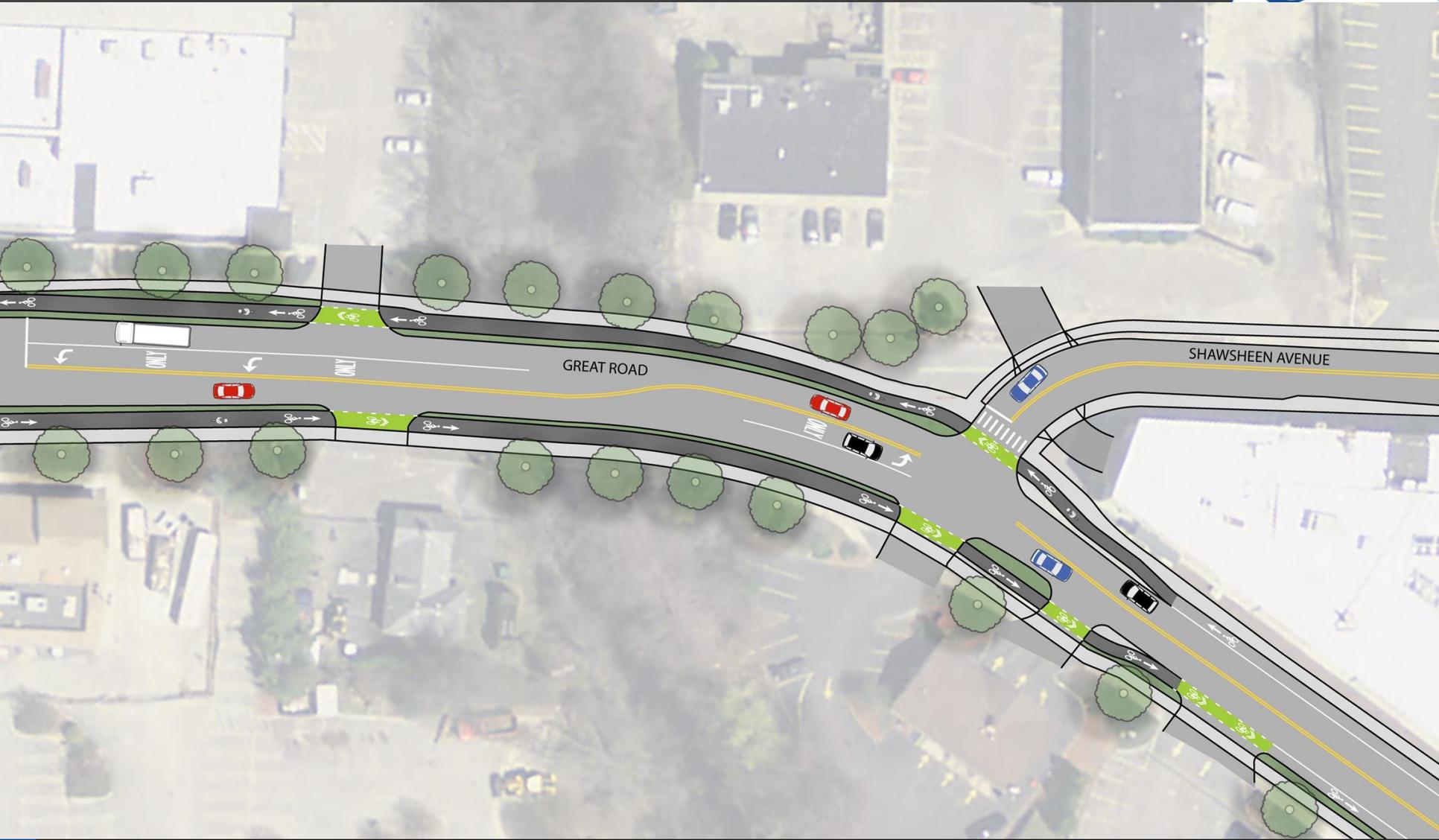
Priority Corridor – Burlington Road
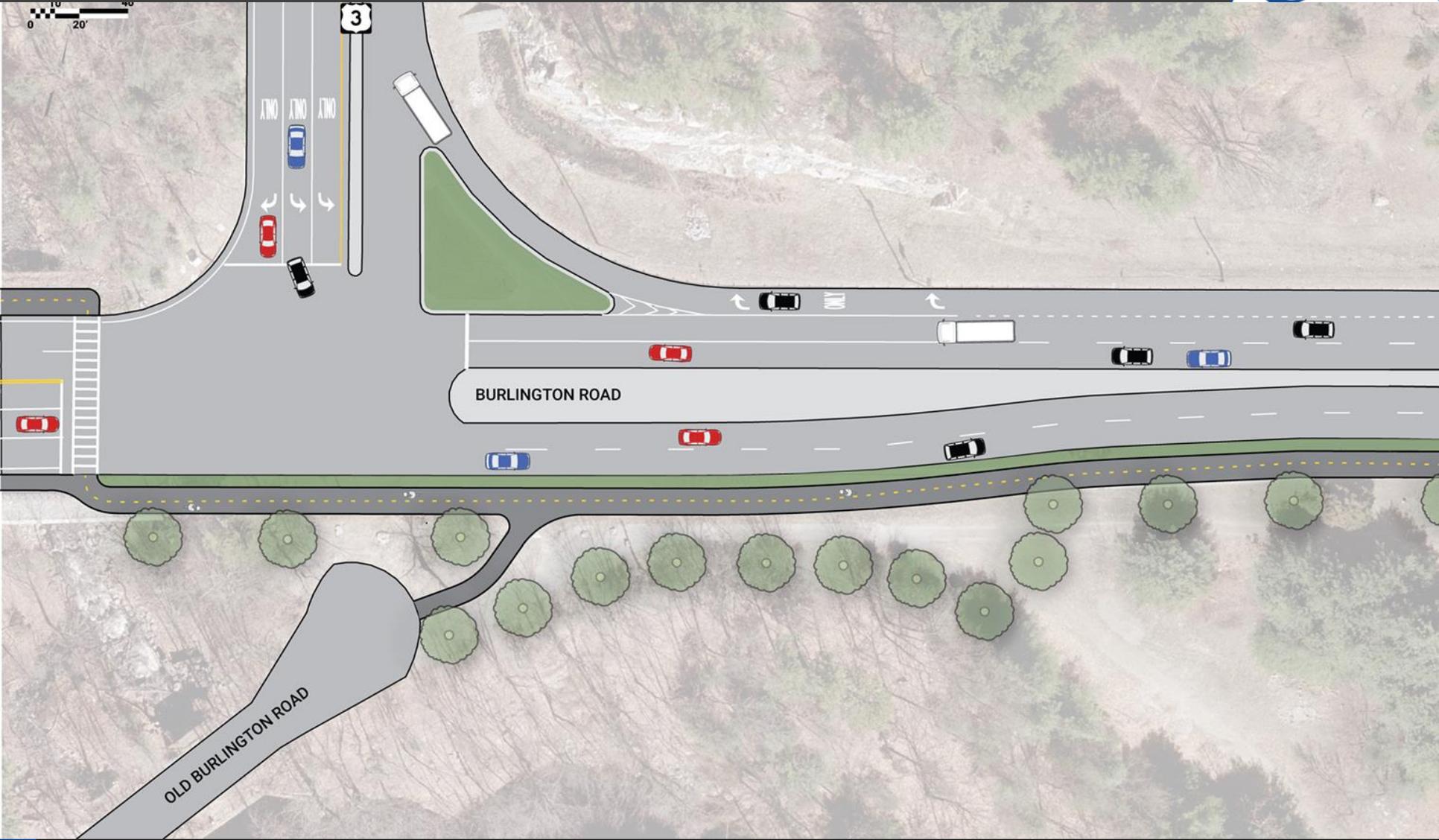
BURLINGTON ROAD

OLD BURLINGTON ROAD

Priority Corridor – Lane School Area

JOB LANE SCHOOL

SWEETWATER AVENUE

HAYDEN LANE

0 10' 20' 40'

Priority Corridor – Lane School Area

Labels visible on image: SPRINGS ROAD, GOULD ROAD, FAWN CIRCLE
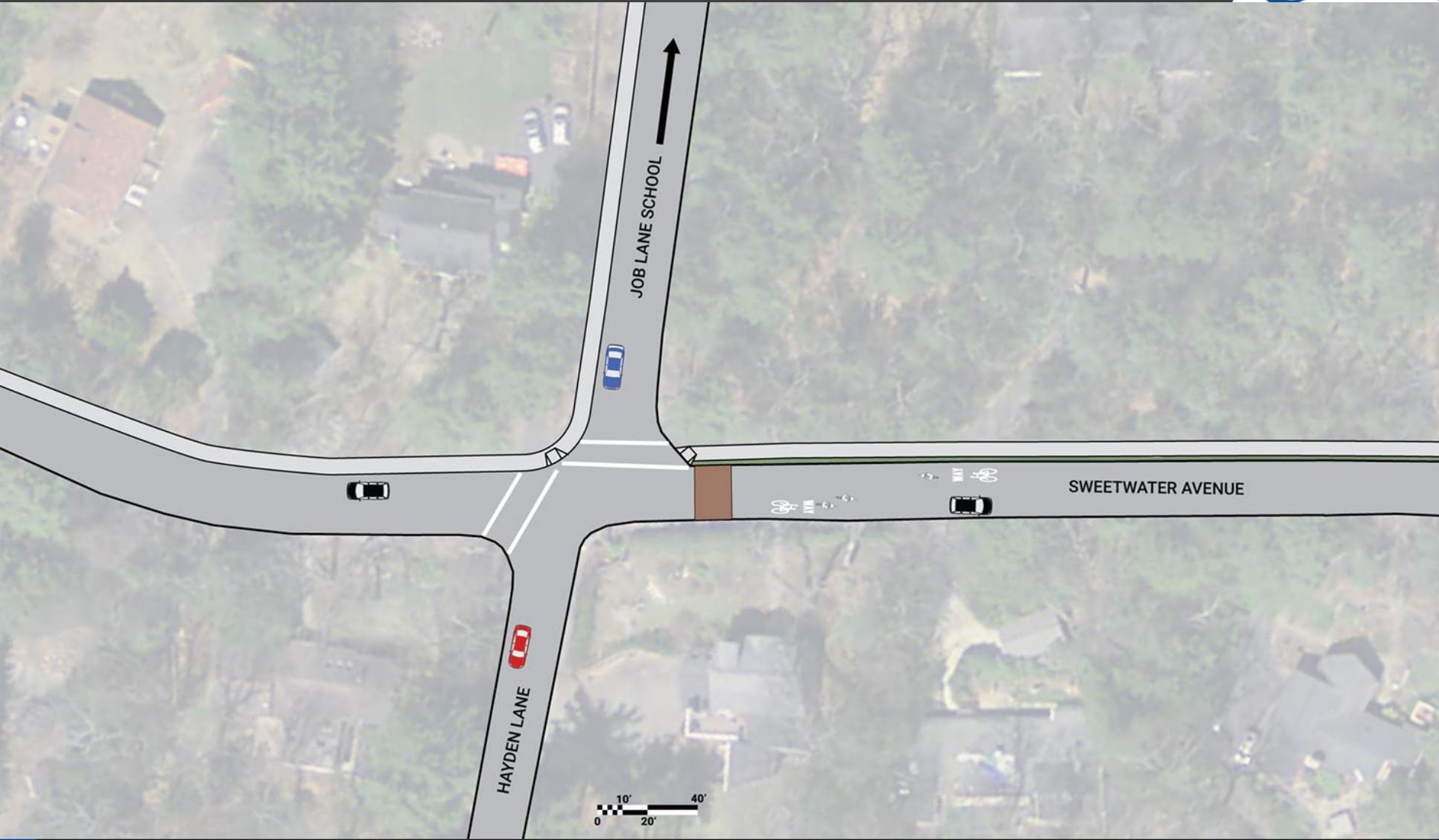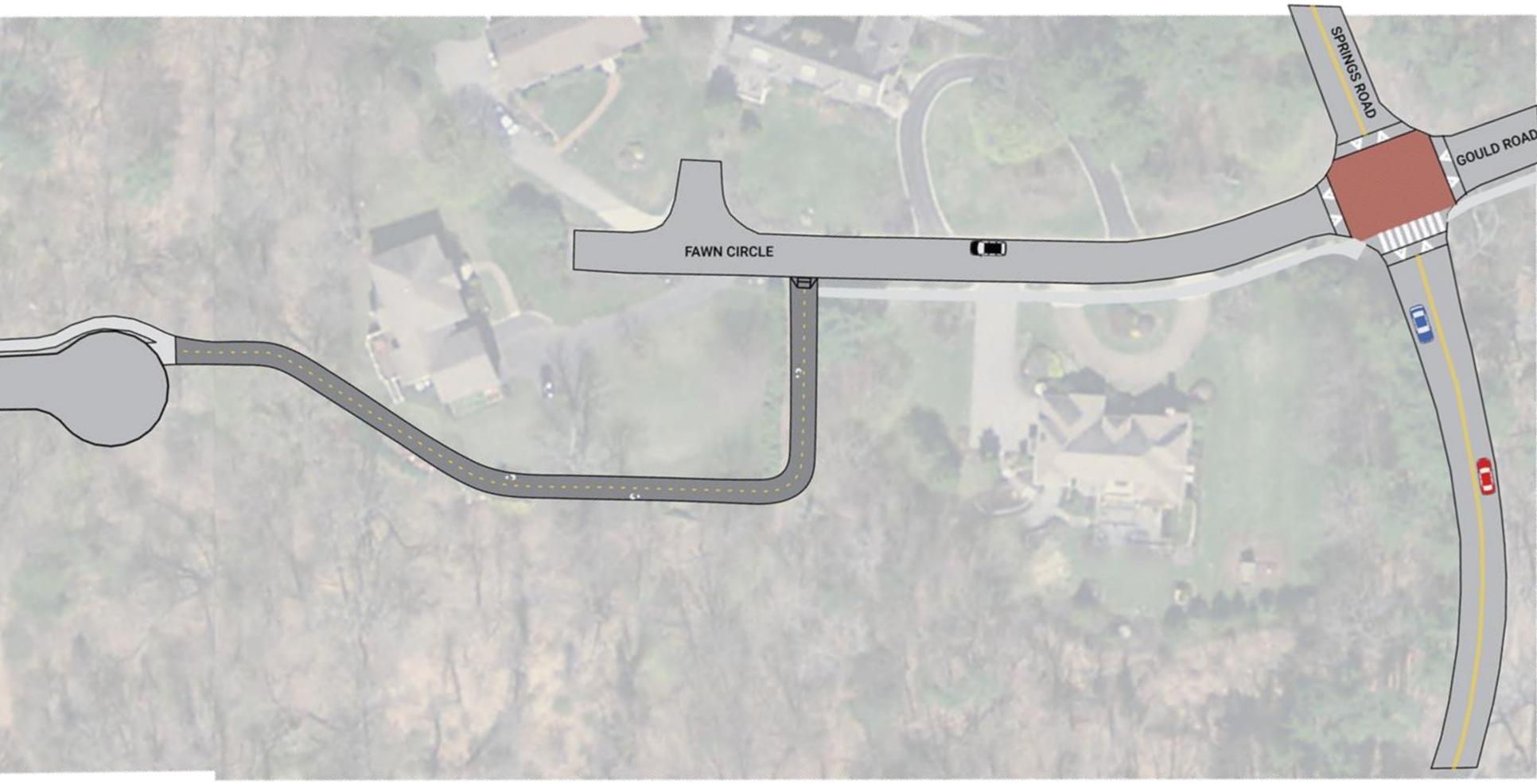
Priority Corridor – Concord Road

DAVIS ROAD

CONCORD ROAD

LAVENDER LANE

0 10' 20' 40'

OLD BILLERICA ROAD

PAGE ROAD

PAGE ROAD

10'   40'
0
20'
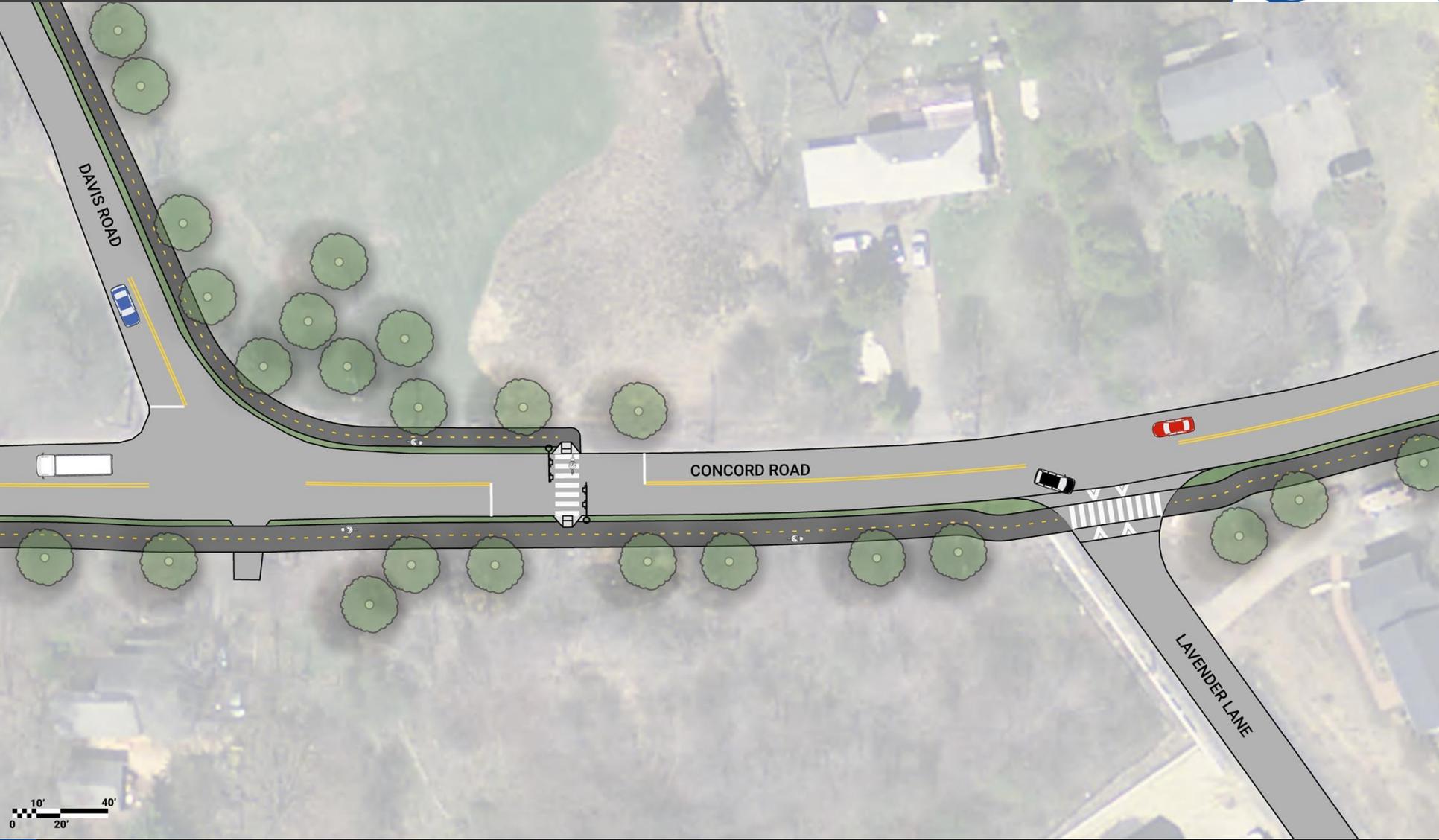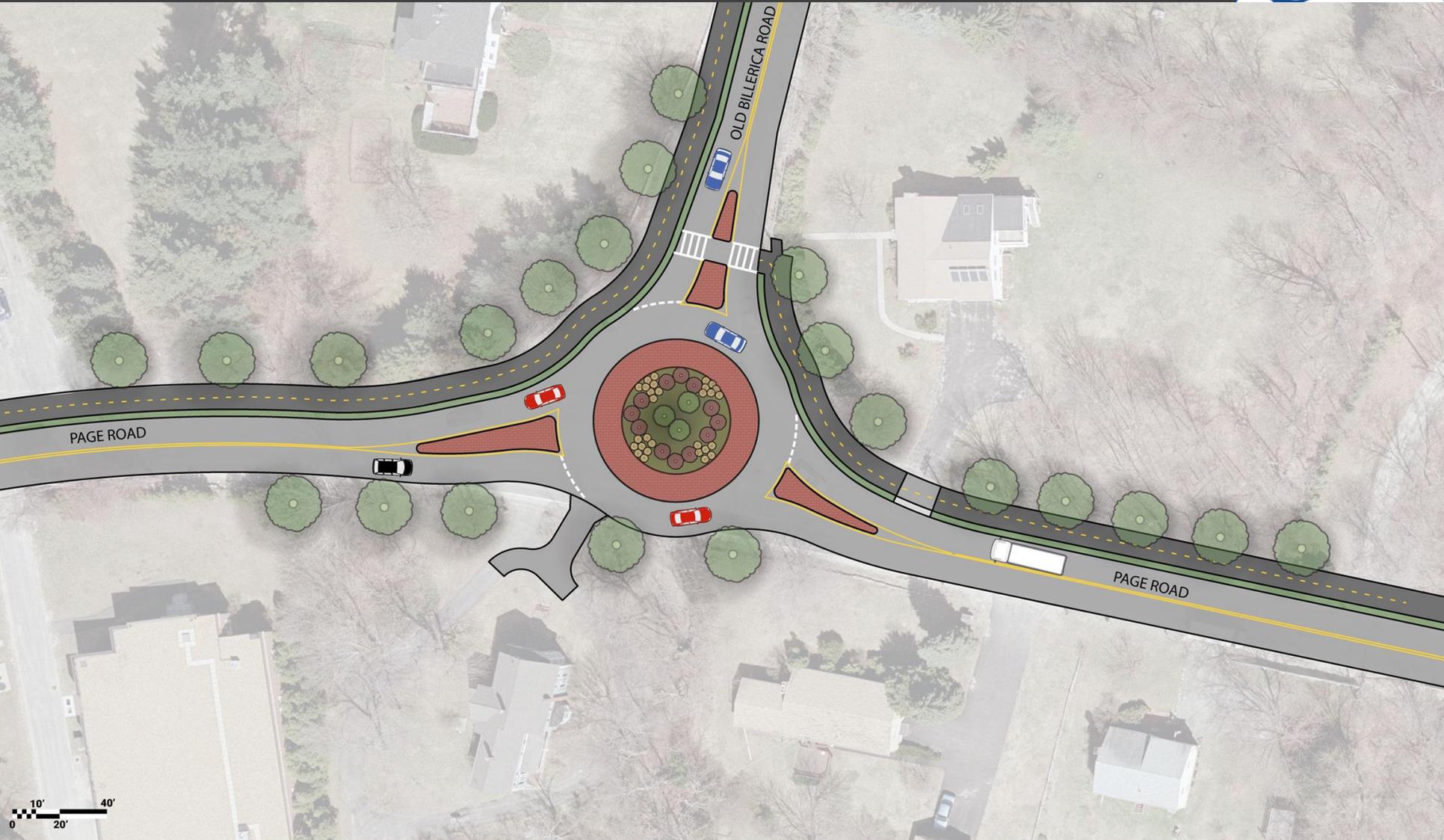
Recommendations – Non-Infrastructure

1. Education

2. Encouragement

3. Enforcement

4. Engineering

5. Evaluation

Recommendation	Priority	Responsible
Require traffic management plans during construction to provide for pedestrian and bicycle travel. The town should review traffic management plans for signs and detours that maintain pedestrian and bicyclist access around construction zones.	High	DPW
Organize volunteer snow clearance program. A volunteer snow clearance program recruits community groups, schools groups, sports teams, or community service minded individuals to assist with snow clearance activities. These groups can supplement the town's snow clearance program, focus on routes to transit, or on off-street paths.	High	HB

Recommendation	Priority	Responsible
Promote Safe Routes to School. Participation in Safe Routes to School (SRTS) programs can take the form of organizing annual walk events (such as International Walk to School Day), data collection, walking school buses, bike trains, walking and biking curricula, free or discounted helmet distribution, and monthly walk to school events. SRTS is a MassDOT program. Information on is available at http://www.commute.com/safe-routes-to-school.	High	BPS
Adopt a Complete Streets Policy A robust Complete Streets policy will reinforce the town's commitment to bicycling and walking by requiring bicycle and pedestrian infrastructure on some or all streets in the town, with some special exceptions.	High	BAC, TAC, HB + PB

Implementation

- How can Bedford use these recommendations?

- How to weigh prioritization in selecting projects?

- Identify projects based on priority and coordination with other efforts.

- Next steps include:
  - Determine annual program
  - Prepare design documents for larger projects
  - Work with community and abutters to work out specific details