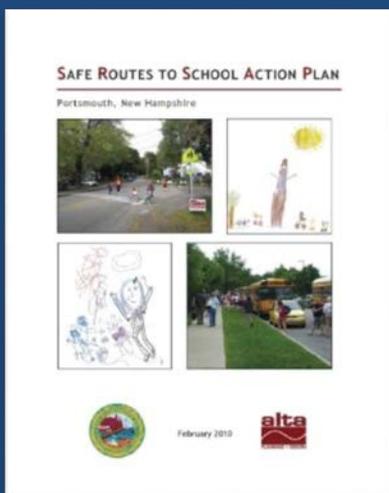


Middle St / Lafayette Rd Bicycle Route

City Council Update

April 6, 2015

How did we get here?

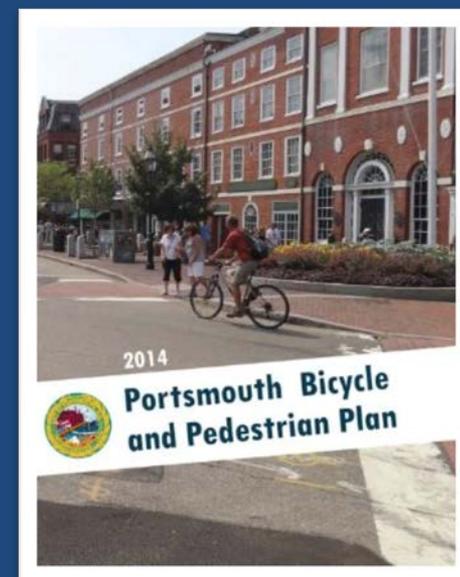


“Walk Friendly Community Policy”

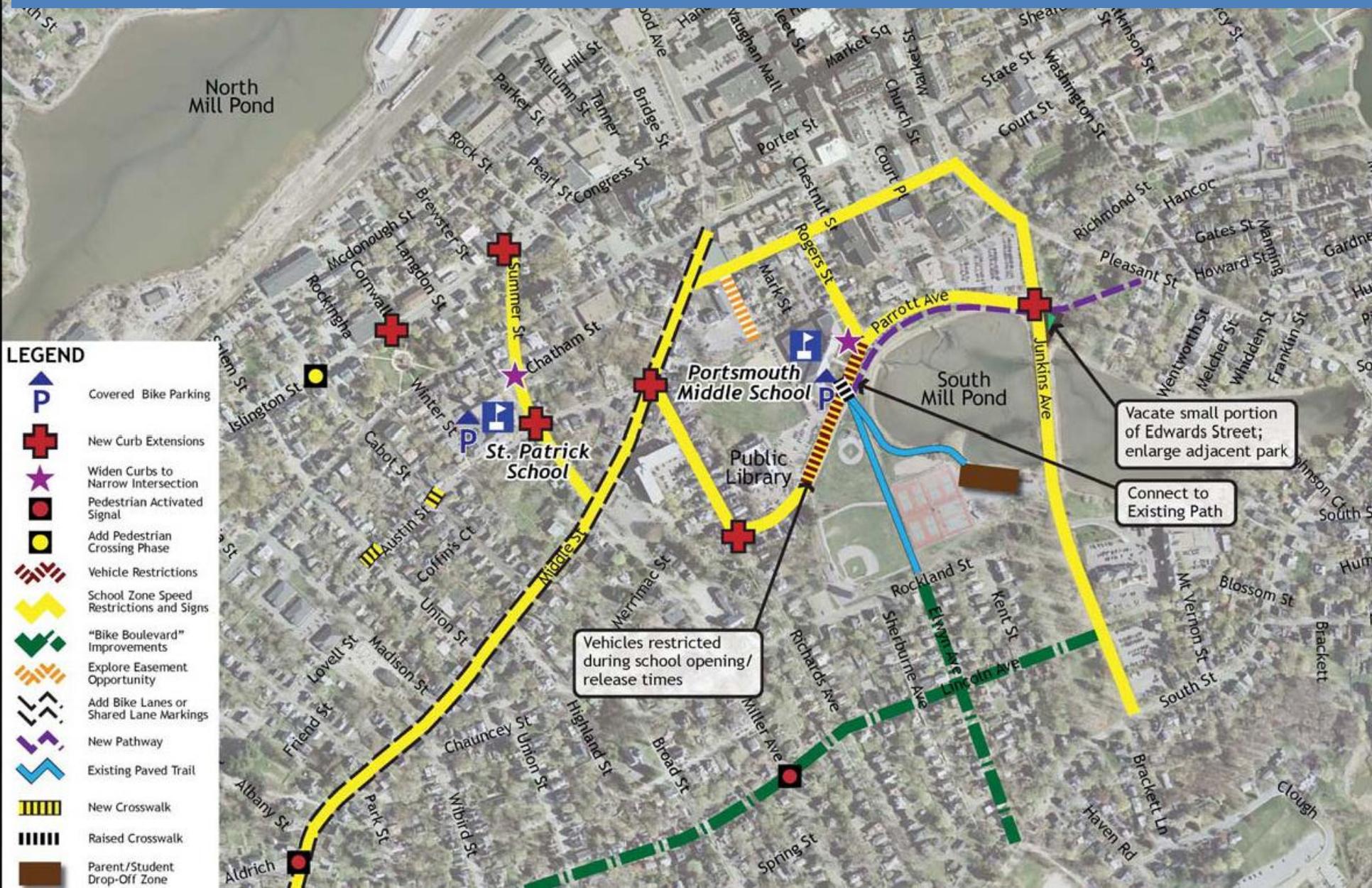
“Bicycle Friendly Community Policy”

“Complete Street Policy”

Streets and roadways in the City of Portsmouth will be convenient, safe and accessible for all transportation users, including pedestrians, bicyclists, transit vehicles and riders, children, the elderly, and people with disabilities.



2010 Safe Routes to School Action Plan, illustrated here, identified this corridor for an on-road bike route in order to increase utilization by school age children to get to and from school and other activities.



- LEGEND**
- Covered Bike Parking
 - New Curb Extensions
 - Widen Curbs to Narrow Intersection
 - Pedestrian Activated Signal
 - Add Pedestrian Crossing Phase
 - Vehicle Restrictions
 - School Zone Speed Restrictions and Signs
 - "Bike Boulevard" Improvements
 - Explore Easement Opportunity
 - Add Bike Lanes or Shared Lane Markings
 - New Pathway
 - Existing Paved Trail
 - New Crosswalk
 - Raised Crosswalk
 - Parent/Student Drop-Off Zone

Vacate small portion of Edwards Street; enlarge adjacent park

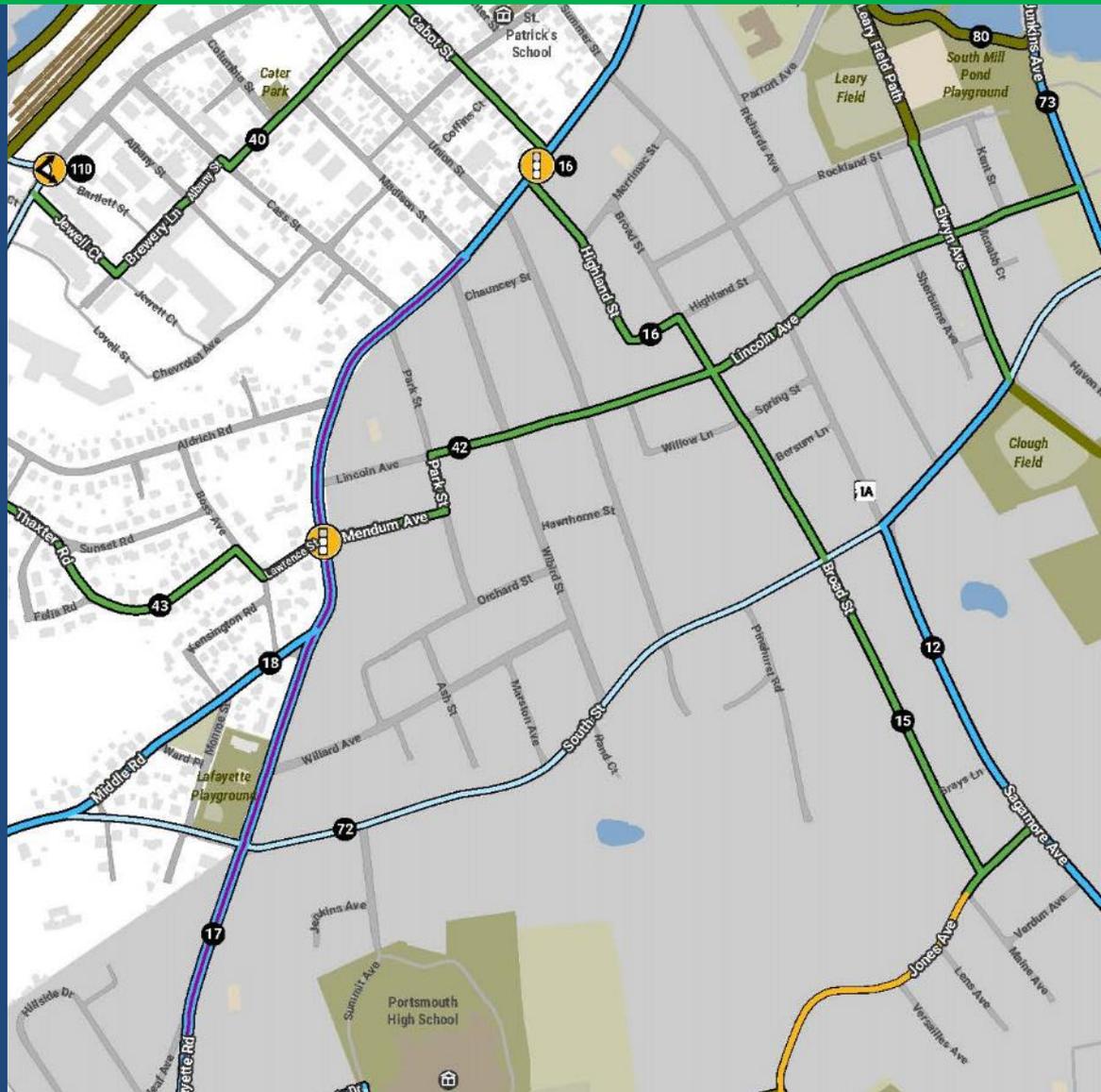
Connect to Existing Path

Vehicles restricted during school opening/release times

2014 Bicycle and Pedestrian Plan, illustrated on this slide, reiterated this recommendation indicating that such improvements could improve safety for all travelers and connect gaps in the bicycle and pedestrian network. This plan also suggested that the City consider buffered bicycle lanes rather than simply traditional bicycle lanes due to the motor vehicle volume and traffic speeds along this roadway.

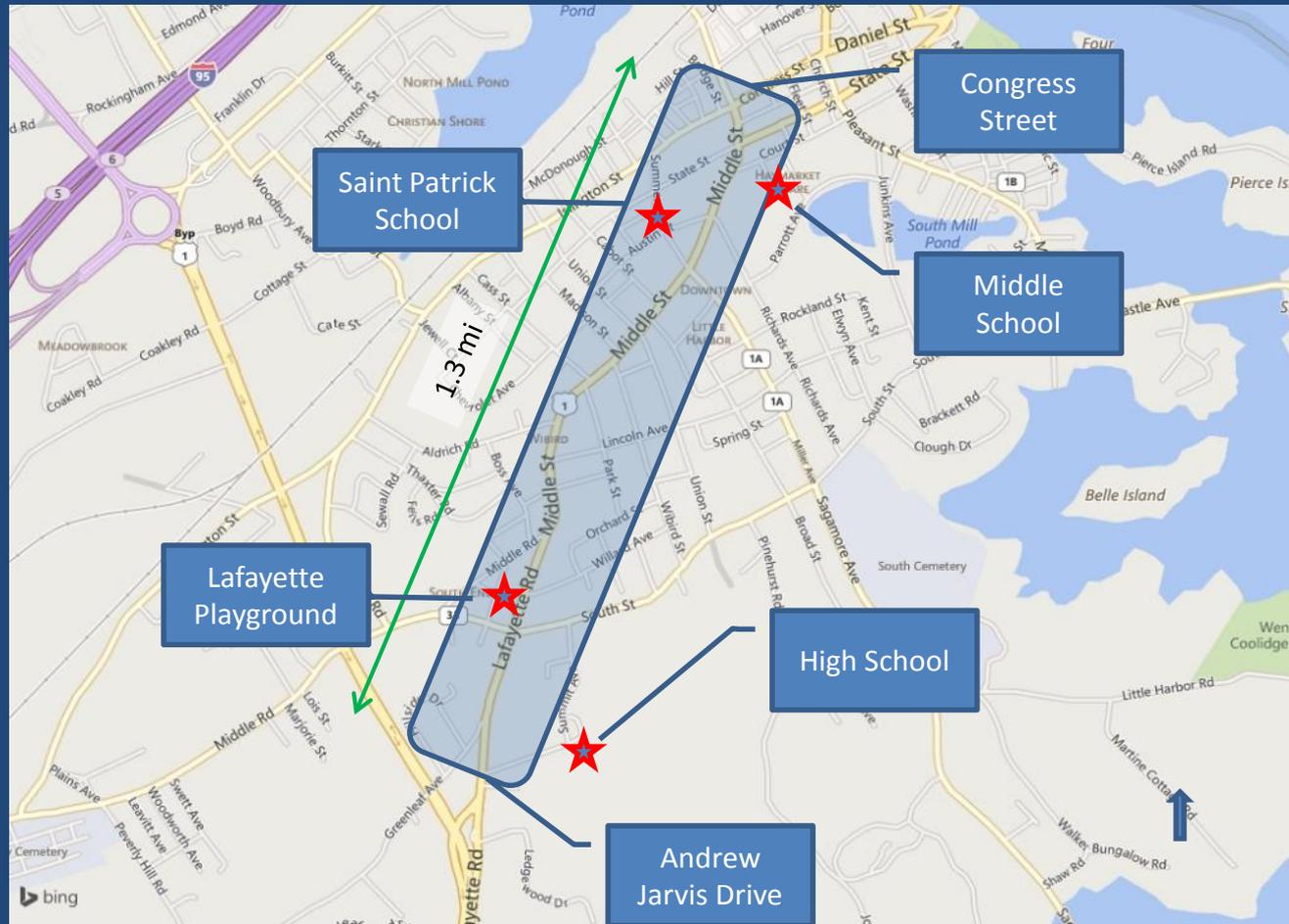
PROPOSED BIKE IMPROVEMENTS

- Shared-Use Path
- Side Path
- Cycle Track
- Buffered Bike Lane
- Bike Lane
- Contraflow Bike Lane
- Shared-Lane Marking
- Shared Street
- Pedestrian Street
- Bike Boulevard
- Signed Route



Project Scope

“In addition to connecting neighborhoods to the middle school and St. Patrick School, students in grades K through 8 and their families will likely use all or portions of this route to travel to the public library, athletic facilities at the high school, and the Lafayette Park and Playground.” (NHDOT SRTS Grant Application, 2013)



Existing Conditions

- Cars...11,000 ADT
- Pedestrians
- Bicycles
- Residential & Commercial
- Schools & Civic Uses
- Entry to Downtown
- On-Street Parking



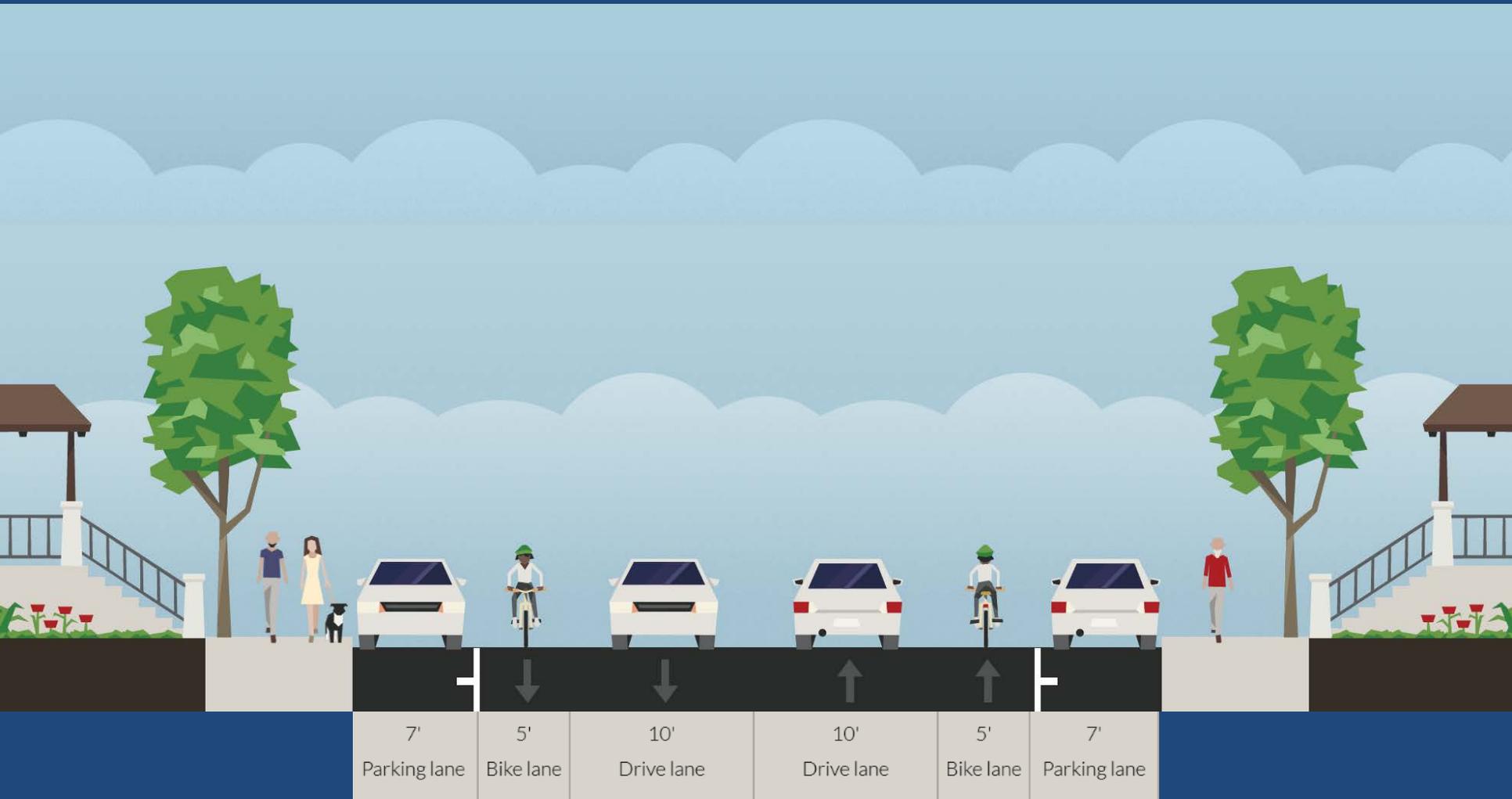
Key Issues

- Provide a safe and desirable route for kids to and from schools and nearby destinations
- Slow traffic speeds
- Improve pedestrian crossings
- Maintain on-street parking
- Maintain emergency response ability

Alternatives Considered

- Traditional Bike Lanes
- Buffered and Protected Bike Lanes
- Two-Way Cycle Track

Alternative A: Traditional Bike Lanes

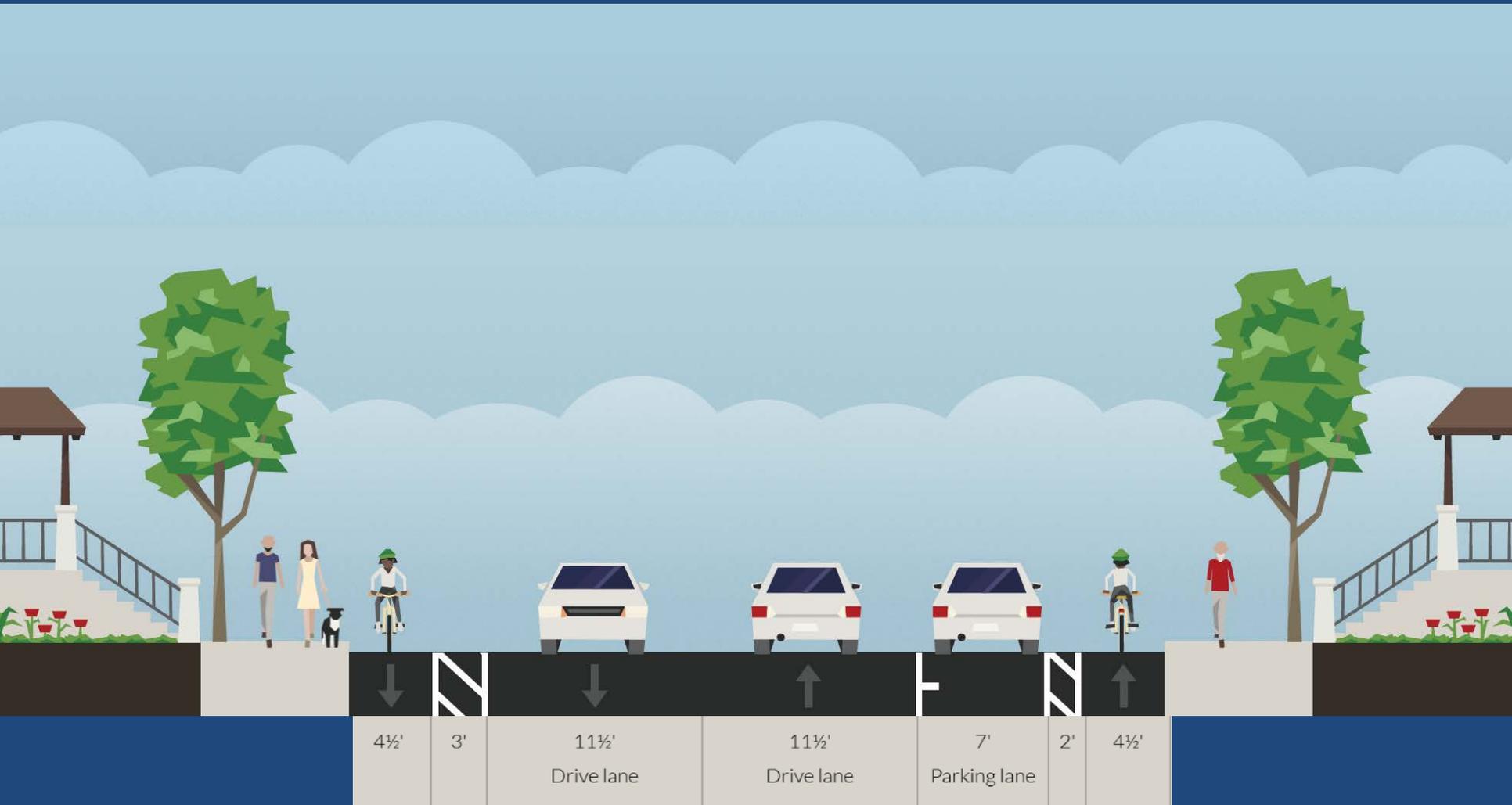


Traditional Bike Lanes

- An exclusive lane for bicyclists designated with pavement markings and signage
- Located adjacent to travel lanes
- Advantages
 - Provides separate travel lane for bicycles
 - Bicycles travel in same direction as motor vehicle traffic
- Challenges
 - Lacks protection from “door zone” next to parked cars
 - May be uncomfortable for less confident bicyclists
 - Requires bicyclists to use motor vehicle travel lanes to pass
 - Enforcement often required to keep motorists from parking or stopping in bike lanes



Alternative B: Protected and Buffered Bike Lanes



Protected and Buffered Bike Lanes

- Buffered -- a bicycle lane with additional lateral separation from motor vehicle travel ways
- Protected – a bicycle lane with vertical separation (parked cars, flexible bollards, plantings, or curbing) from motor vehicle travel ways

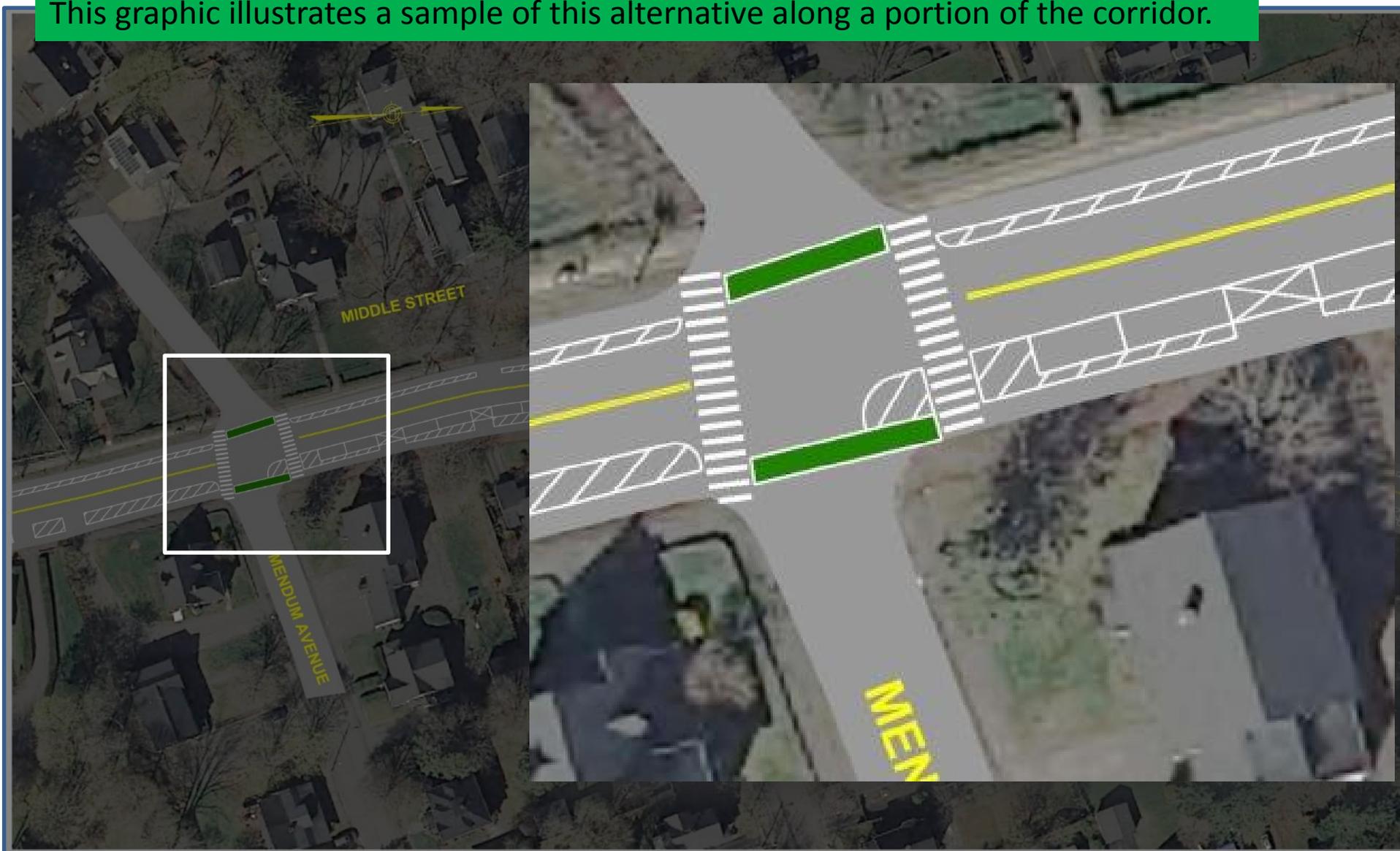


Protected and Buffered Bike Lanes

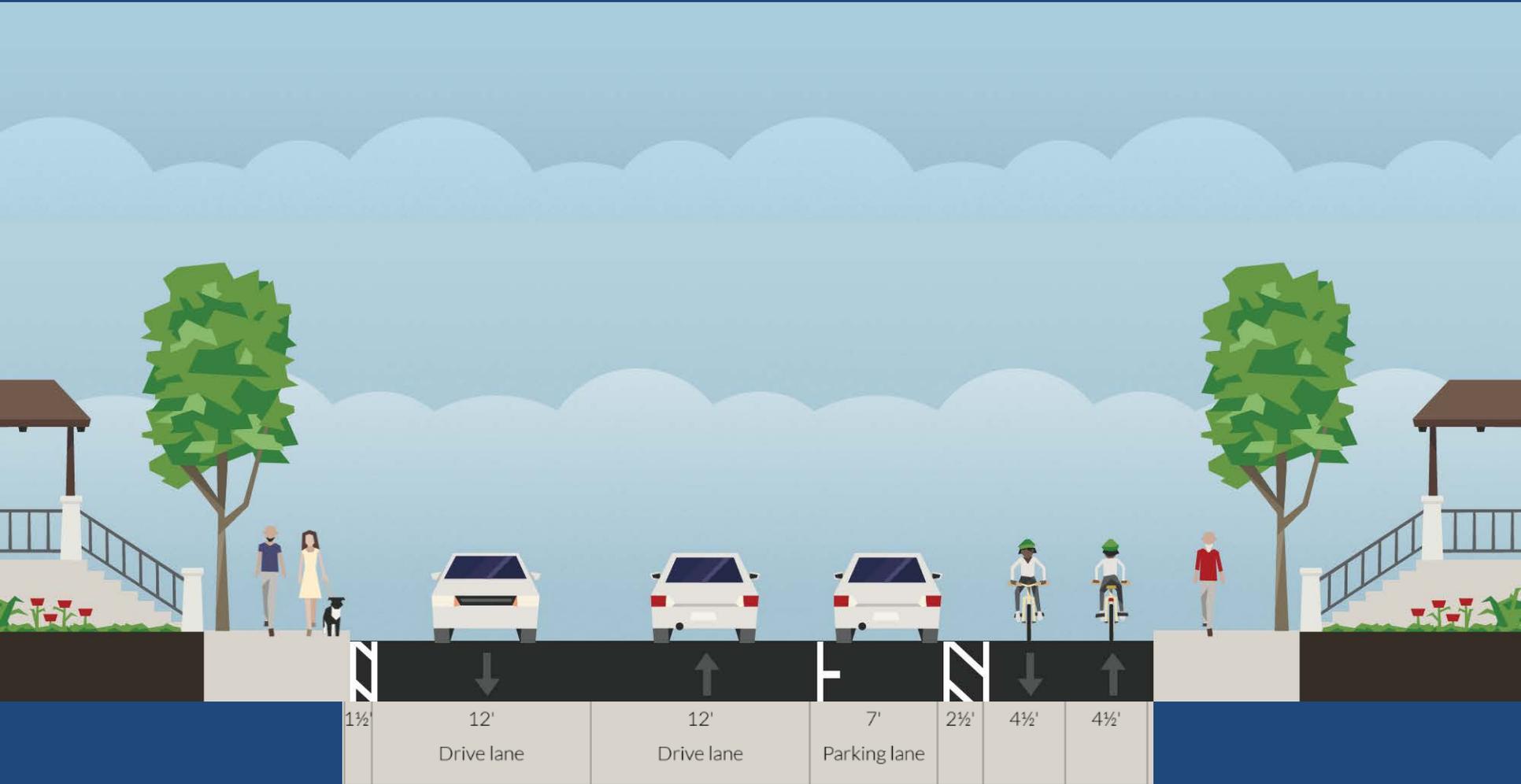
- Advantages
 - Increases space and comfort for bicyclists
 - Provides passing space for bicyclists
 - Bicyclists travel same direction as motor vehicle traffic
- Challenges
 - Requires more space than a standard bike lane
 - Higher installation and maintenance costs
 - Specialized intersection treatments may be necessary
 - Potential parking restrictions to maintain sight lines
 - Education / Learning curve



This graphic illustrates a sample of this alternative along a portion of the corridor.



Alternative C: Two-Way Cycle Track

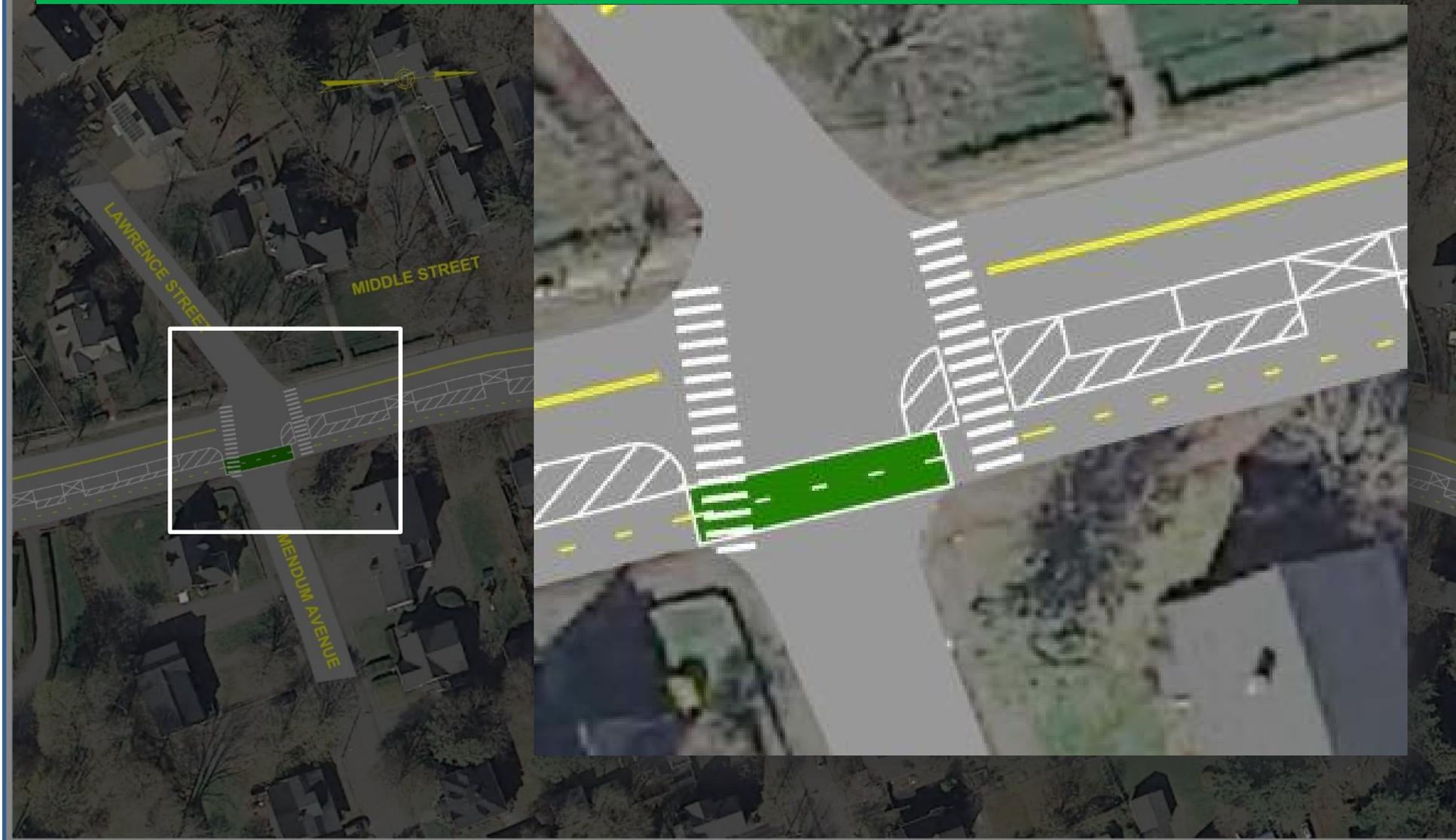


Two-Way Cycle Track

- Two-way bicycle lanes with vertical separation from motor vehicle traffic
- Advantages
 - Increases space and comfort for bicyclists
 - Provides passing space for bicyclists
- Challenges
 - Requires more space than standard bike lane
 - Bicyclists have to cross motor vehicle travel ways to access points on other side of street
 - Higher installation and maintenance costs
 - Specialized intersection treatments may be necessary
 - Bicyclists traveling opposite direction as motor vehicle traffic
 - Education / Learning curve



This graphic illustrates a sample of this alternative along a portion of the corridor.



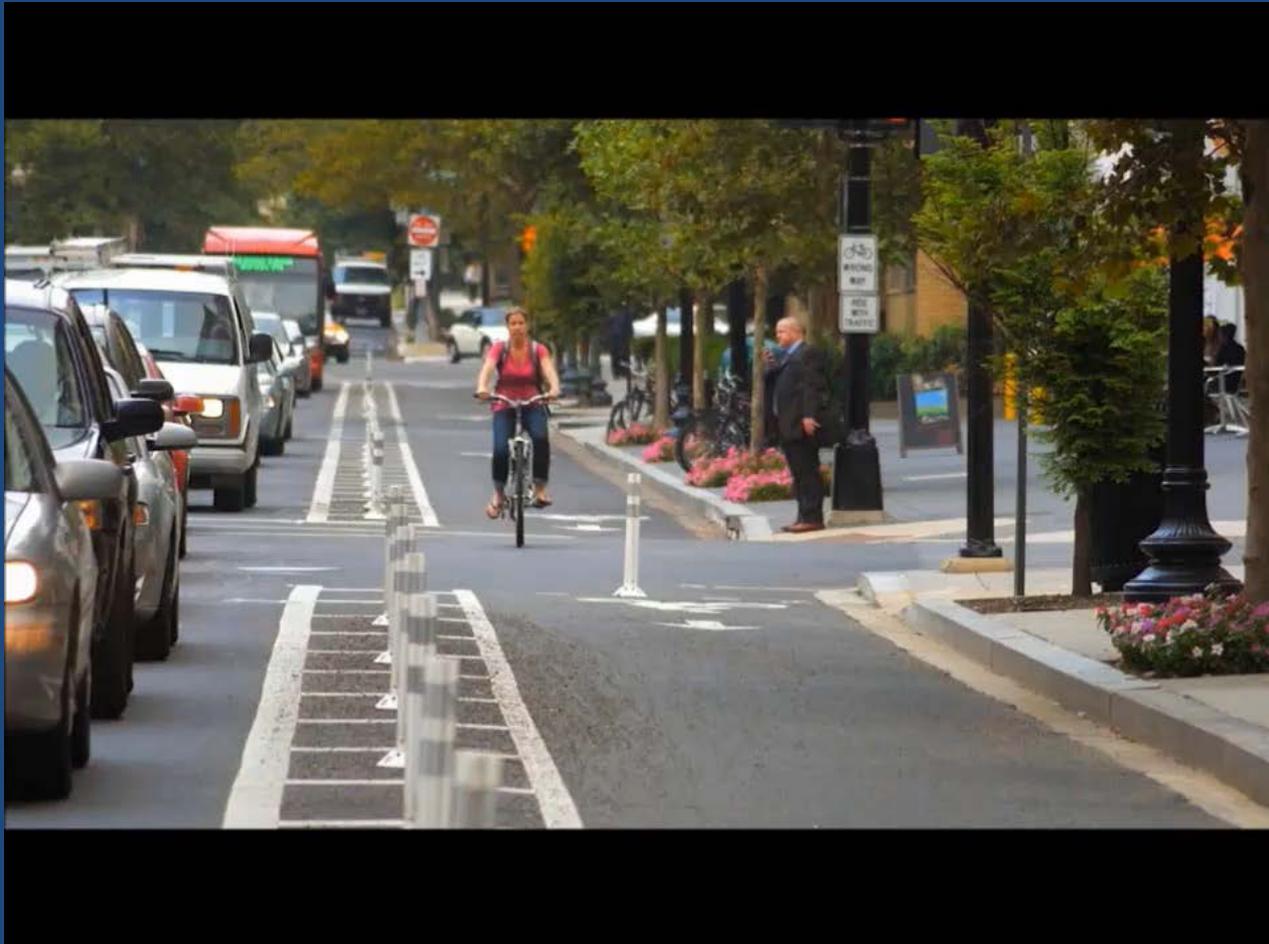
Examples of Protected Bicycle Lanes



Who are we designing for?



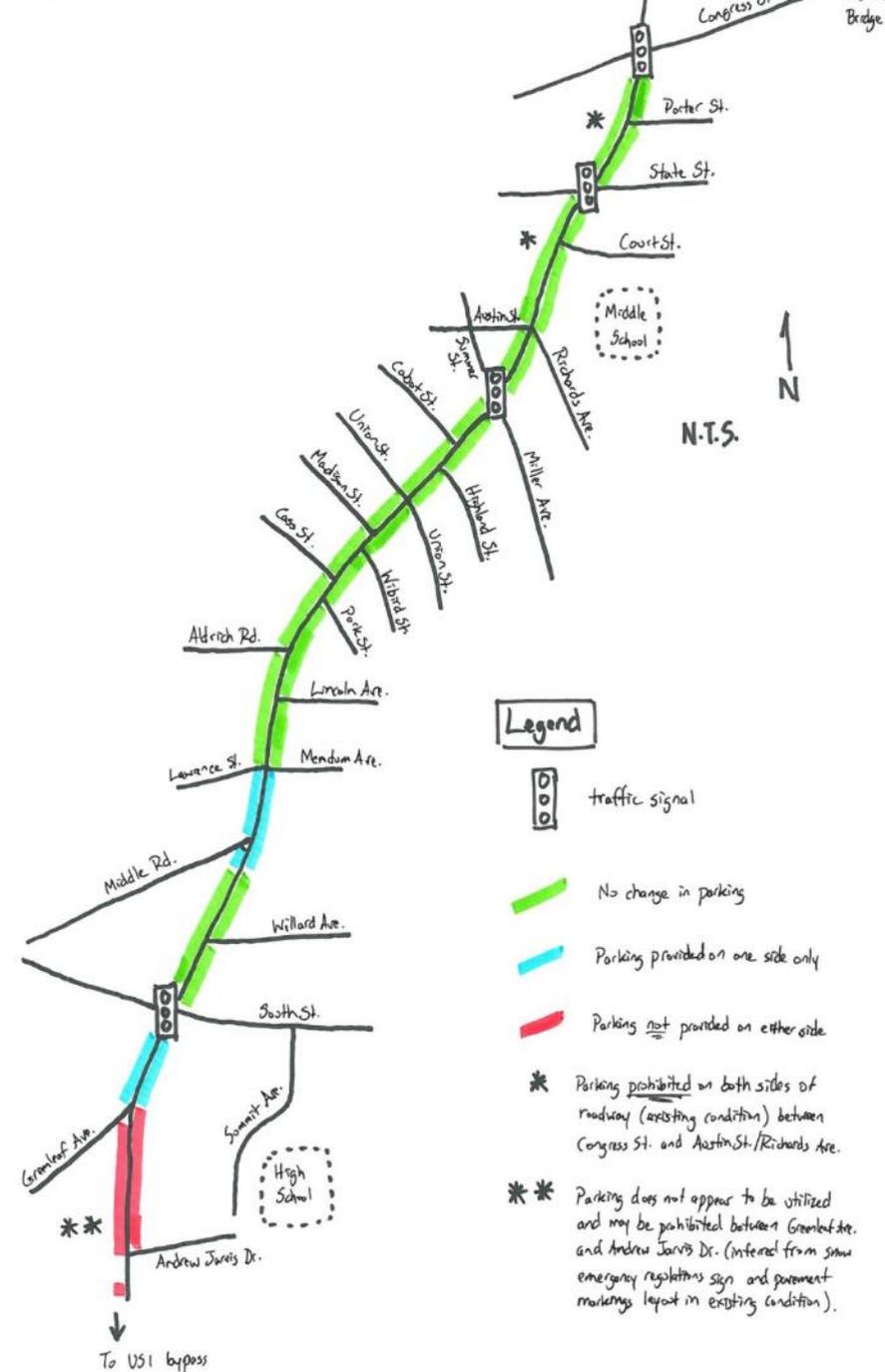
This video gives you a quick glimpse of some examples of protected or buffered bicycle lanes in other communities.



On-Street Parking

• Alternative A: Traditional Bike Lanes

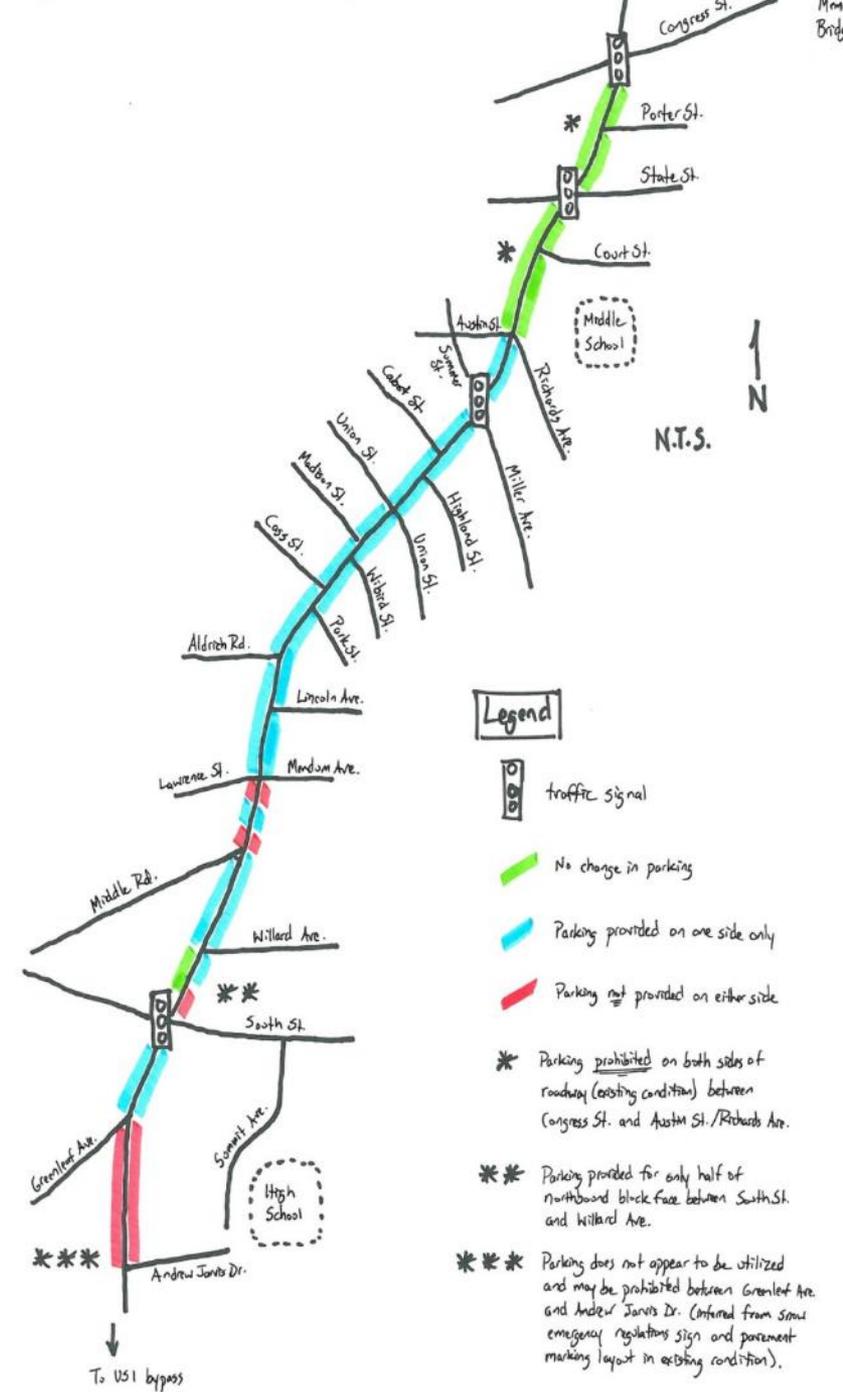
- Each of these options will have some impact on on-street parking, the specifics of which we'll know more when we proceed to the next part of the design phase.
- What we do know is that the highest existing demand for on-street parking is between Summer St and Austin St, then between Cass St and Summer St.
- South of Cass St, on-street parking usage is low.
- Traditional bike lanes would impact parking, although less than the other alternatives.
- This graphic shows potential impact to parking – green is no change, blue is parking on one side only, and red is no on-street parking.



On-Street Parking

- Alternative B: Buffered and Protected Bike Lanes

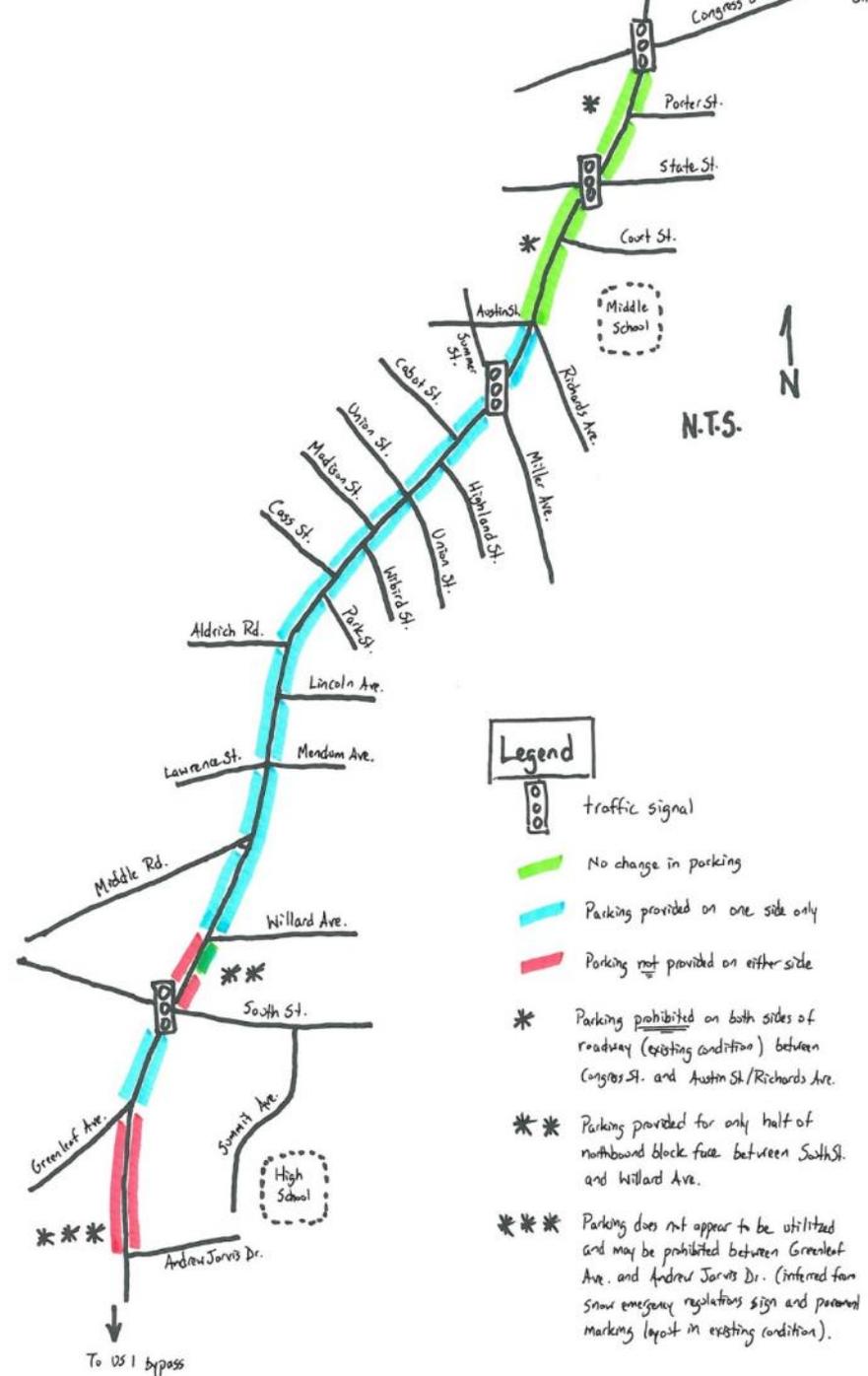
- Buffered bike lanes on both sides would require some modification to on-street parking.
- This graphic shows potential impact to parking – green is no change, blue is parking on one side only, and red is no on-street parking.



On-Street Parking

- Alternative C: Two-Way Cycle Track

- A two-way cycle track bike lanes on one side would require some modification to on-street parking.
- This graphic shows potential impact to parking – green is no change, blue is parking on one side only, and red is no on-street parking.



Public Input

- 86% of public responses supported moving forward with the protected / buffered bike lanes or the two-way cycle track

Summary of Alternatives

(- challenge, + advantage)

	Traditional Bike Lanes	Buffered / Protected Bike Lanes	Two-Way Cycle Track
Estimated Cost	\$	\$\$	\$\$
Traffic Calming	+	+ +	+ +
Pedestrian Safety	+ / -	+ +	+ +
Bicycle Safety	+	+ +	+ +
Traffic Safety	+	+	+
Mode Shift	+	+ +	+ +
Parking Supply	+ / -	-	-
Emergency Response	+	+ / -	-
Traveler Learning Curve	+	+ / -	-

Recommended Alternative

- Alternative B
- Combine Buffered and Protected Bike Lanes
 - Flexibility to meet all users of this road corridor
 - Dedicated, safe facility that could encourage increased biking for less confident bicyclists
 - Improves safety for pedestrians
 - Minimal impact on emergency response time
 - Public support
 - Demonstrates City's commitment to being a Bicycle and Walk Friendly Community

Next Steps

- Engineering study submittal to NHDOT for approval (with preferred alternative identified)
- Preliminary Engineering Design Phase
 - Public input, neighborhood meetings
- Final Engineering Design
- Construction