

ANDOVER COMPLETE STREETS PUBLIC MEETING #3

January 24th, 2024



COMPLETE STREETS PROJECT TEAM

- Town of Andover
 - Michael Lindstrom – Deputy Town Manager
 - Paul Materazzo – Director of Planning & Land Use
 - Monica Gregoire – Associate Planner
 - Christopher Cronin – Director of Public Works
 - Carlos Jaquez – Deputy Director of Public Works
 - Arthur Martineau – Town Engineer
 - Joseph Assenza – Assistant Town Engineer
 - Glen Ota – Safety Officer

- Environmental Partners Group

- Steering Committee



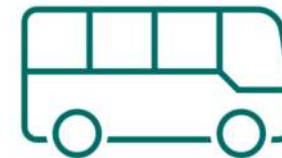
TONIGHT'S AGENDA

- Project Overview & Timeline
- What We've Heard – The Latest
- Vision & Goals
- Draft Bicycle & Pedestrian Networks
- Preferred Typical Sections
- Top-Priority Projects
- Design Tool Kit
- Q&A

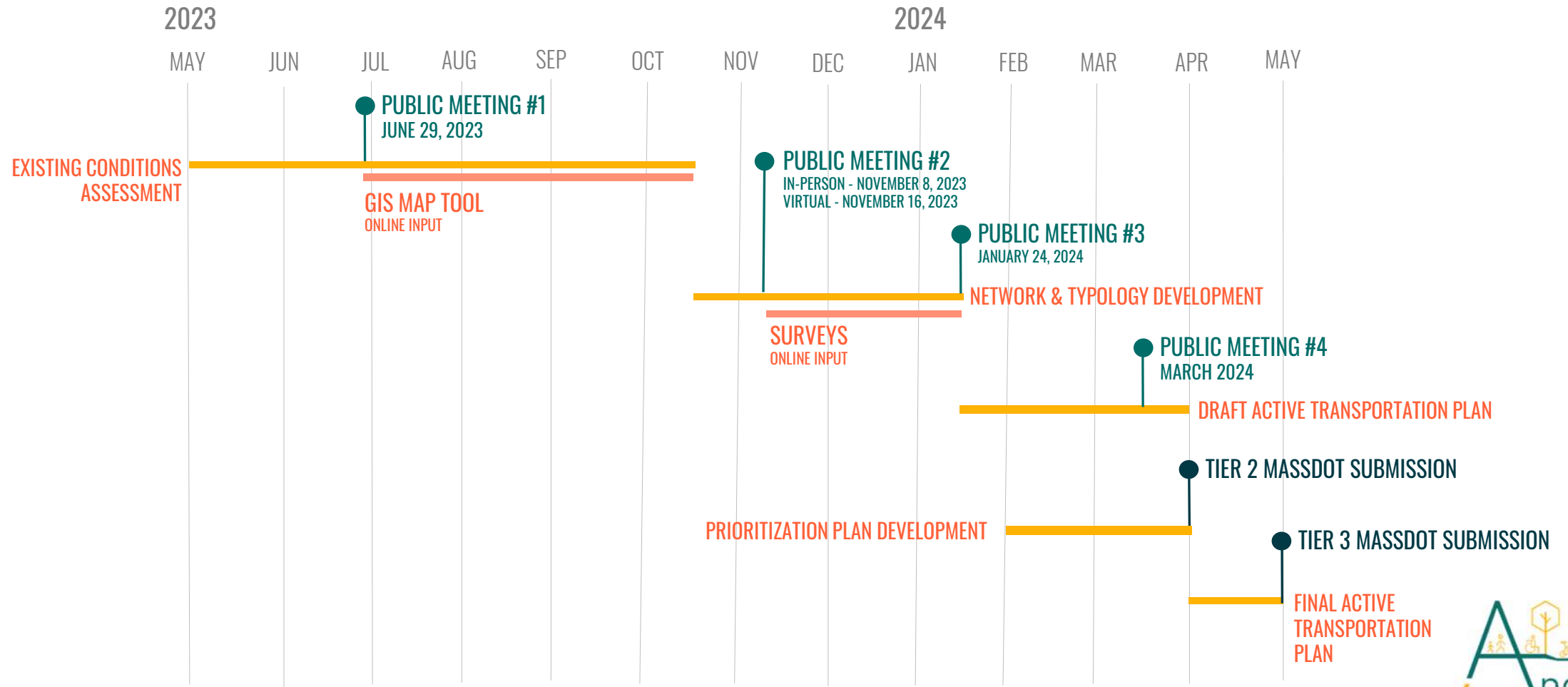
PROJECT OVERVIEW & TIMELINE

PROJECT OVERVIEW

- Complete Streets Prioritization Plan being developed in conjunction with a town-wide Active Transportation Plan
- Active Transportation Plan components:
 - Vision & goals for active transportation in Andover
 - Proposed bicycle & pedestrian networks
 - Preferred typical sections & design toolkit
 - Implementation strategies
- Top-priority projects from the pedestrian & bicycle networks will be incorporated into the Complete Streets Prioritization Plan



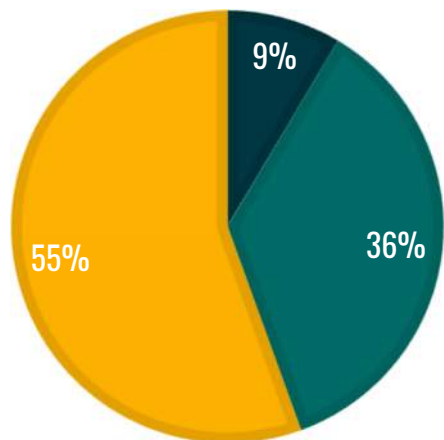
PROJECT TIMELINE



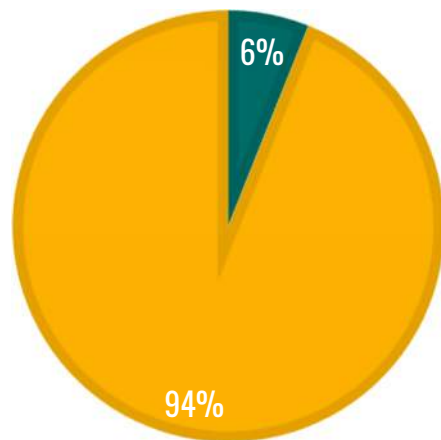
WHAT WE'VE HEARD – THE LATEST

SURVEY RESULTS

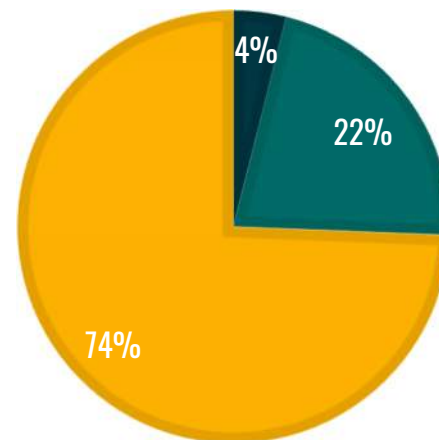
HOW OFTEN DO YOU TRAVEL...



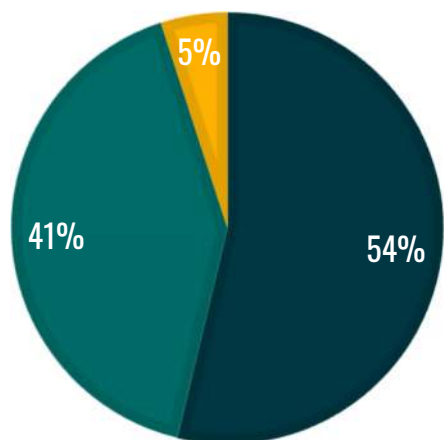
BY BIKE



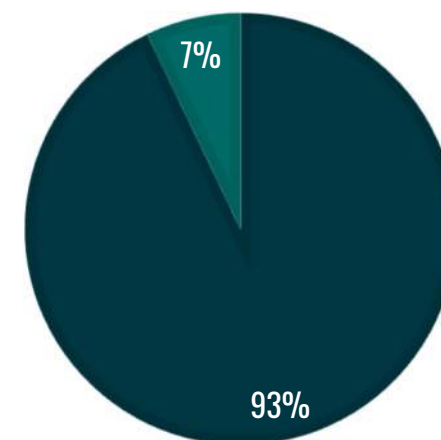
BY BUS



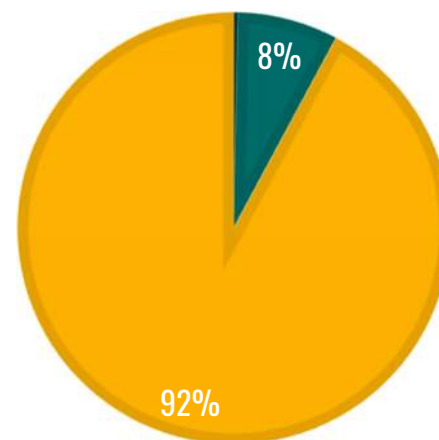
BY CARPOOL



BY FOOT



BY CAR

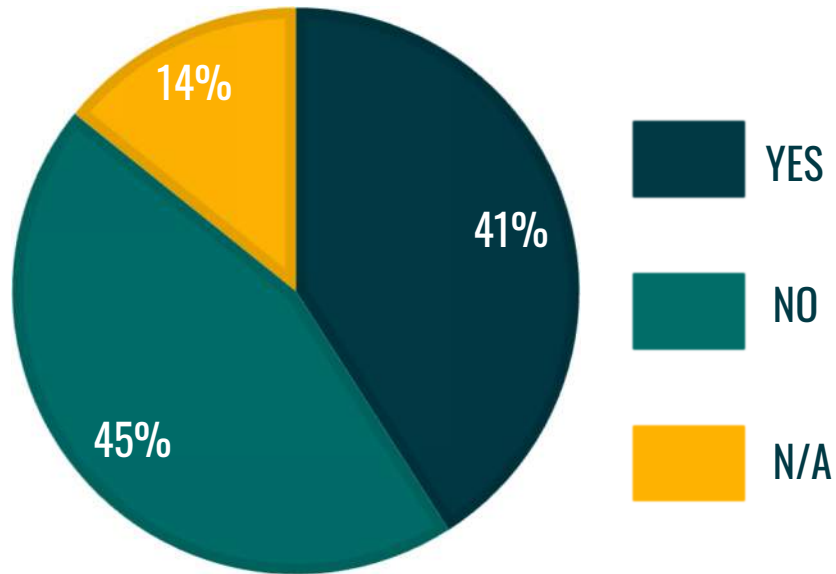


BY RIDESHARE SHUTTLE

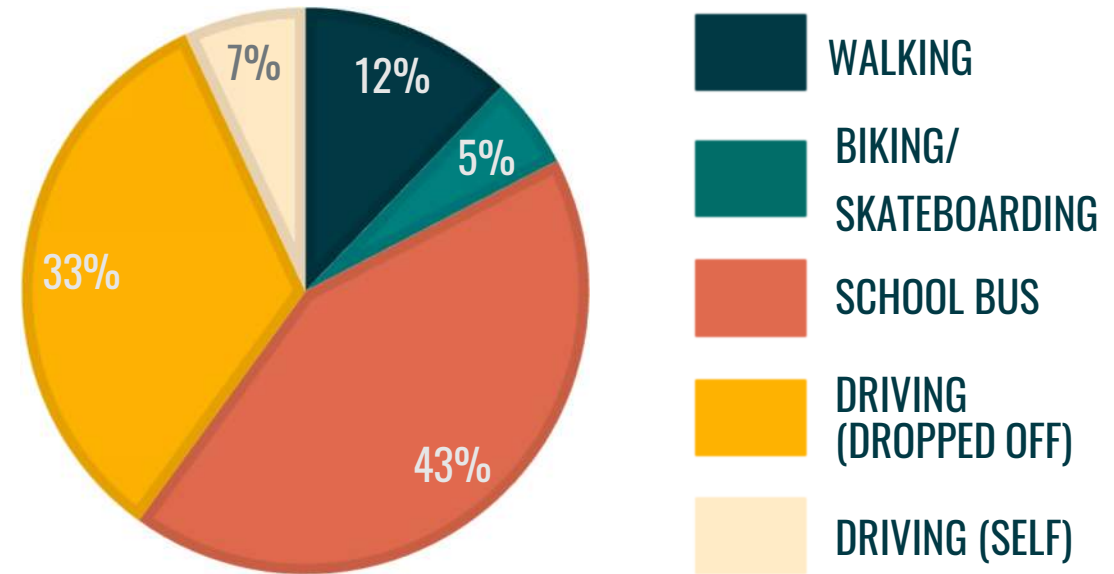


SURVEY RESULTS

SCHOOL TRAVEL



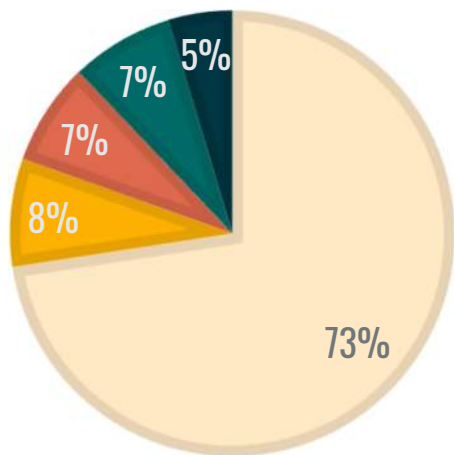
DO YOU OR ANY OF YOUR CHILDREN ATTEND SCHOOL IN ANDOVER?
(281 RESPONSES)



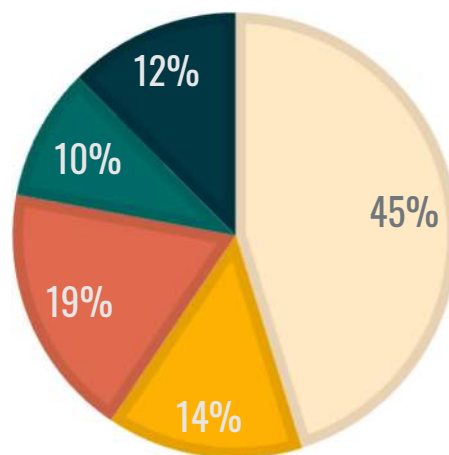
HOW DO YOU (STUDENT) OR YOUR CHILD TYPICALLY TRAVEL TO SCHOOL EACH DAY?
(115 RESPONSES)

SURVEY RESULTS

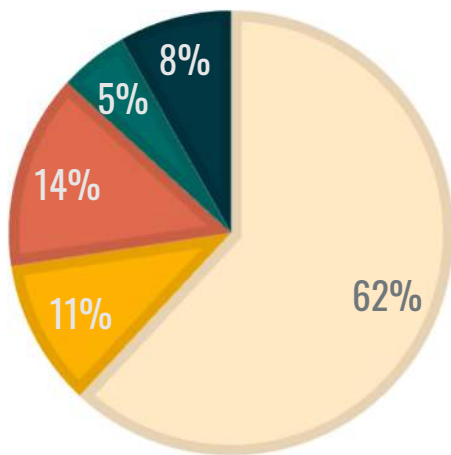
HOW LIKELY WOULD YOU BE TO USE A BICYCLE FOR THE FOLLOWING TYPES OF TRIPS IF APPROPRIATE FACILITIES WERE PRESENT?



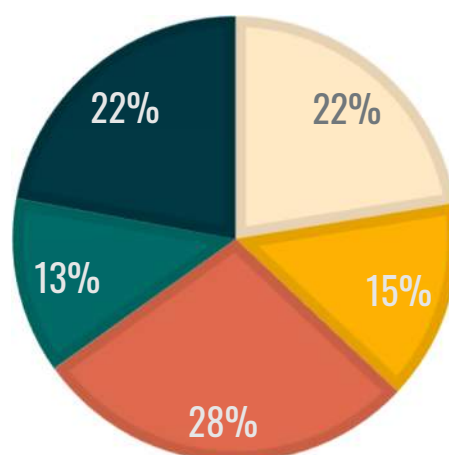
COMMUTING



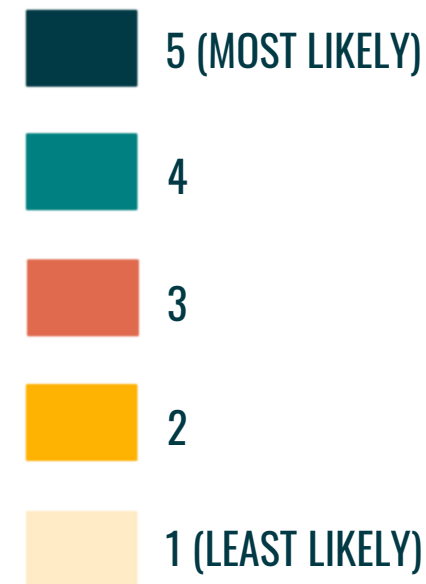
LOCAL DAILY TRIPS



SCHOOL-RELATED TRIPS



RECREATIONAL

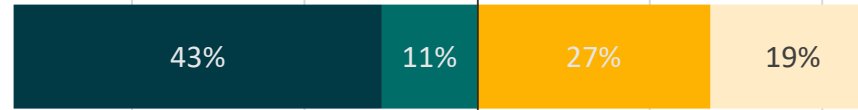


SURVEY RESULTS

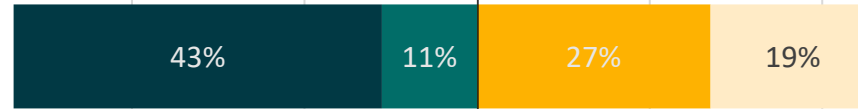
RANK THE FOLLOWING TYPES OF BICYCLE FACILITIES FOR ARTERIAL ROADWAYS



Shared use path (combined bicycle & pedestrian facility)



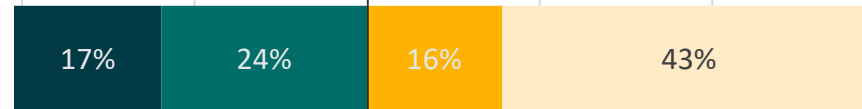
Sidewalk-level one-way bicycle lanes



Sidewalk-level two-way cycle track



Buffered on-road bicycle lanes

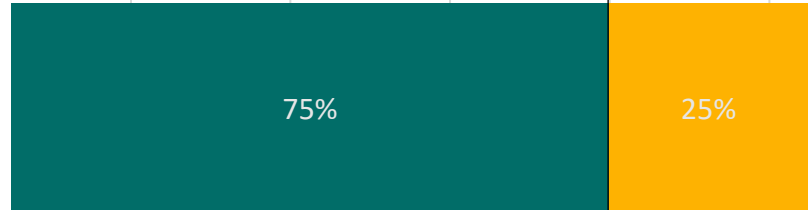


SURVEY RESULTS

RANK THE FOLLOWING TYPES OF BICYCLE FACILITIES FOR COLLECTOR ROADWAYS



Shared use path (combined bicycle & pedestrian facility)

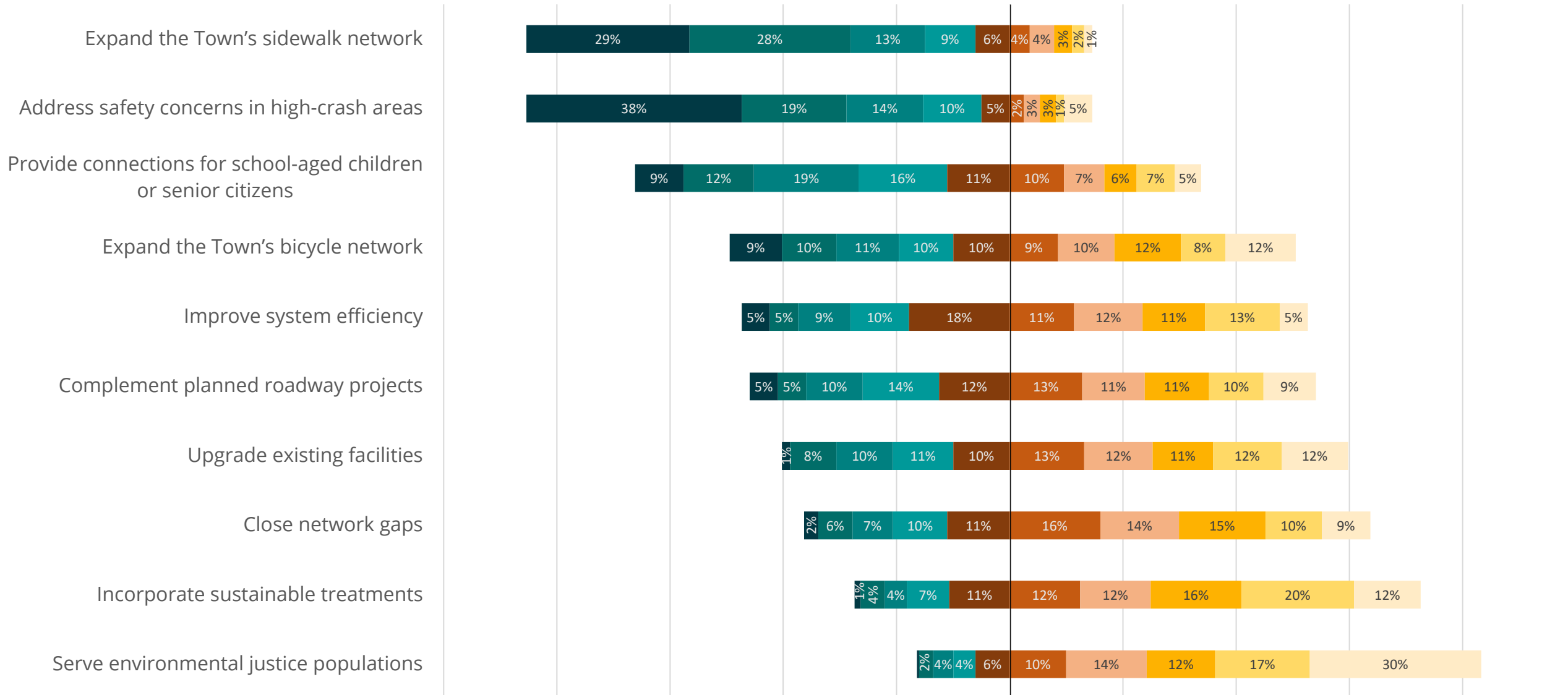


On-road bicycle lanes



SURVEY RESULTS

THE TOWN SHOULD PRIORITIZE COMPLETE STREETS PROJECTS THAT...



VISION & GOALS

VISION

Andover is a healthy, sustainable community that embraces alternative modes of travel and provides safe, comfortable, and convenient ways for residents and visitors of every age and ability to walk, roll, and bike

GOALS

- 1 Increase safety for those who walk, roll, and bike in Andover
- 2 Form comprehensive pedestrian & bicycle networks that can be used by residents & visitors of all ages & abilities
- 3 Support healthy lifestyles & provide quality-of-life benefits
- 4 Provide comfortable & convenient transportation options beyond car use

DRAFT PEDESTRIAN NETWORK

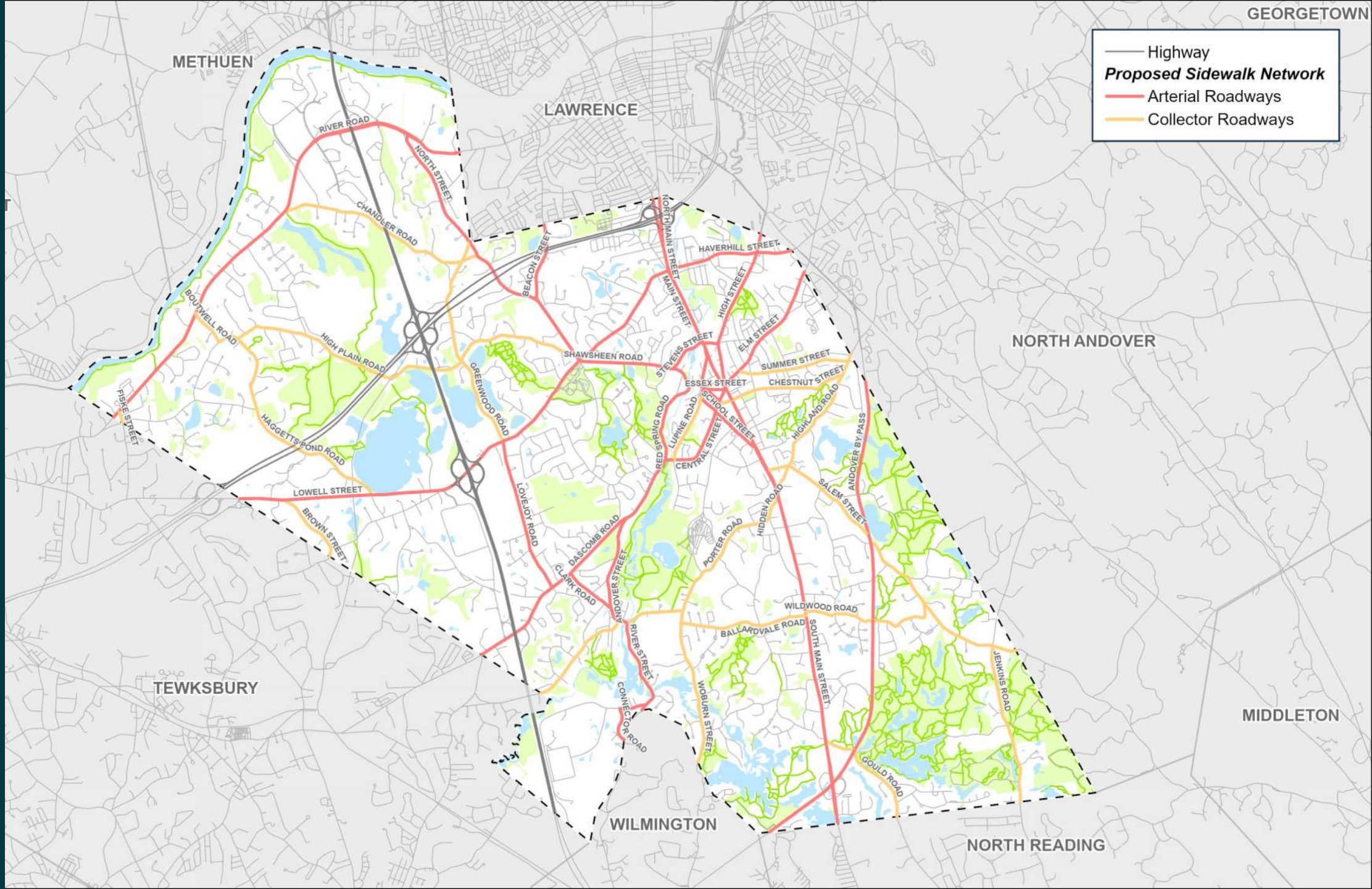
PEDESTRIAN NETWORK METHODOLOGY

The proposed pedestrian network includes sidewalks in the following locations:

- 1 Along arterials & collectors
- 2 Along MeVa bus routes
- 3 Within ½ mile walksheds of main destinations:
 - Community resources
 - Transit – MeVa bus stops & T stations
 - Schools & colleges
 - Recreational areas
- 4 Where public comments indicated that demand for sidewalk exists

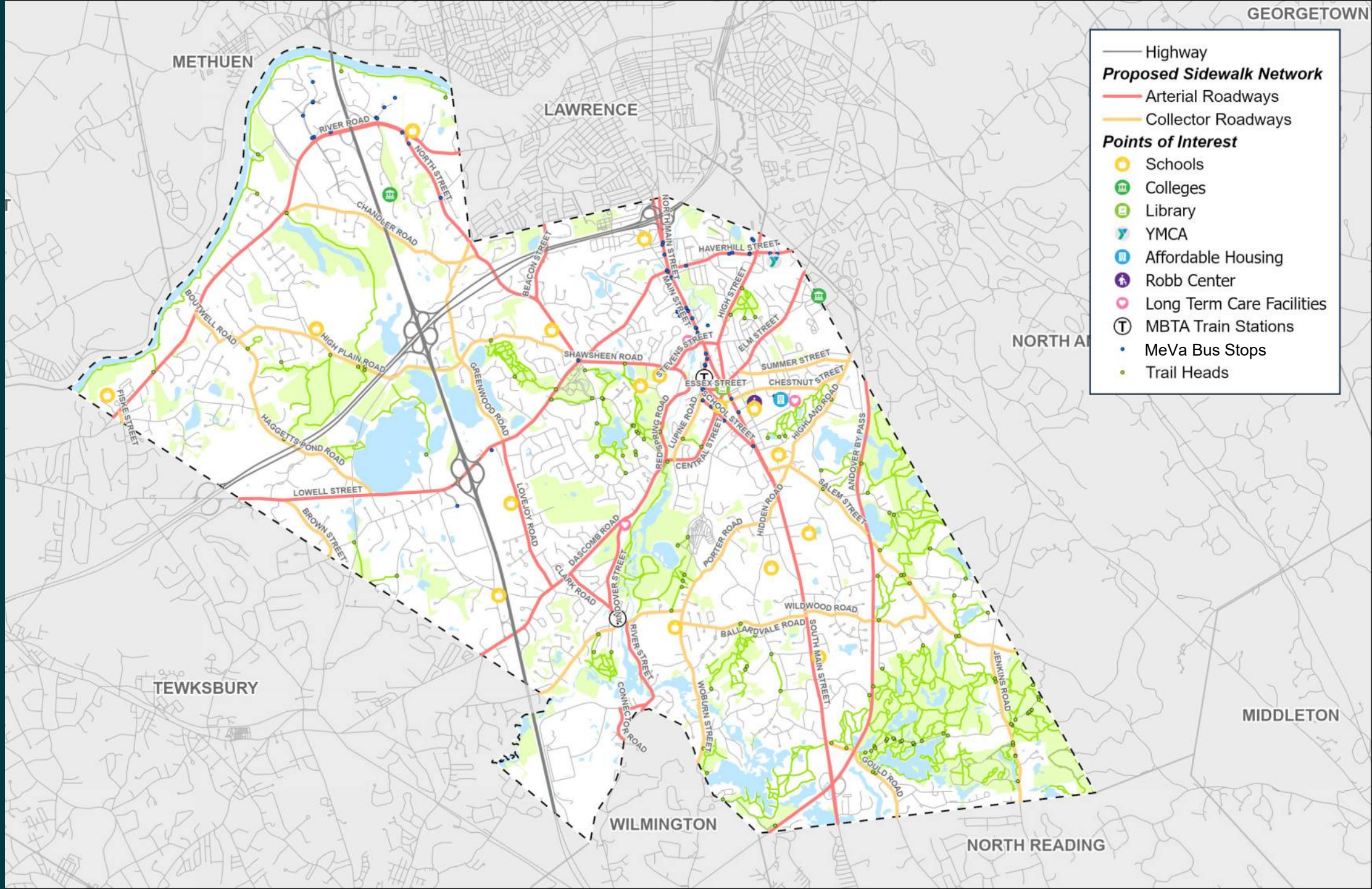
PEDESTRIAN NETWORK: ALONG ARTERIALS & COLLECTORS

1



PEDESTRIAN NETWORK: WITHIN 1/2 MILE OF DESTINATIONS

3



— Highway

Proposed Sidewalk Network

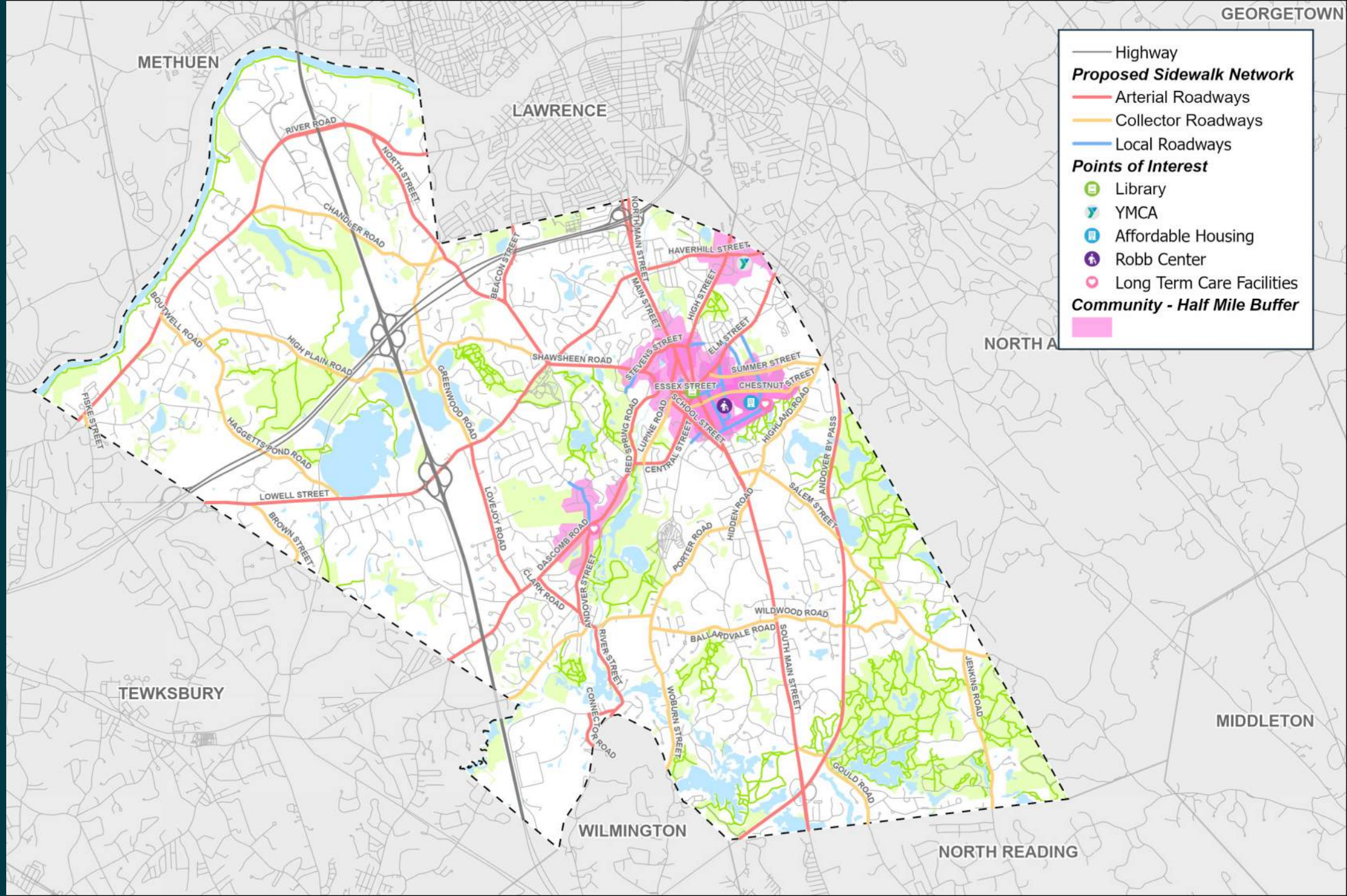
- Arterial Roadways
- Collector Roadways

Points of Interest

- Schools
- Colleges
- Library
- YMCA
- Affordable Housing
- Robb Center
- Long Term Care Facilities
- MBTA Train Stations
- MeVa Bus Stops
- Trail Heads

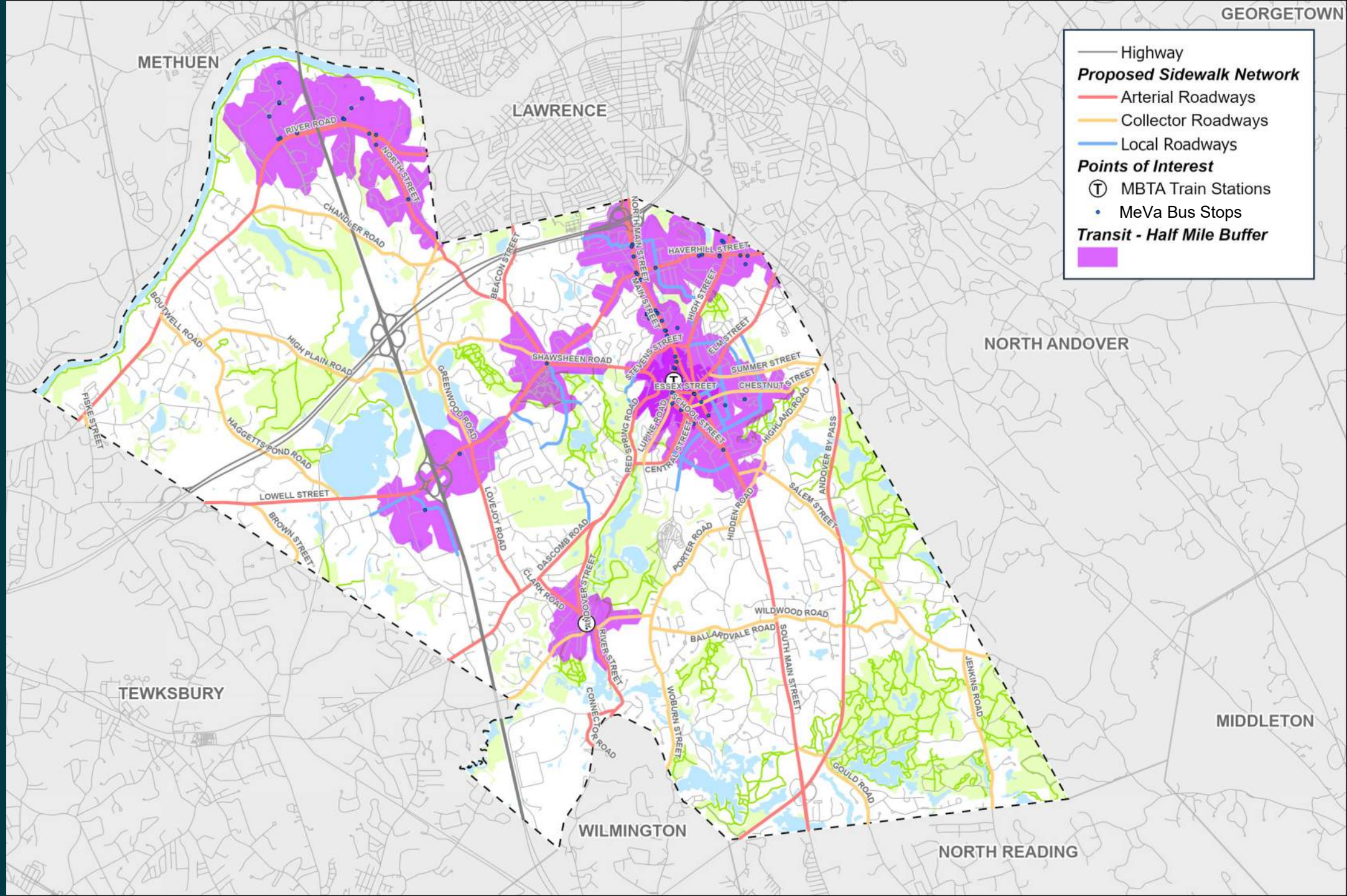
PEDESTRIAN NETWORK: WITHIN 1/2 MILE OF DESTINATIONS – COMMUNITY RESOURCES

3



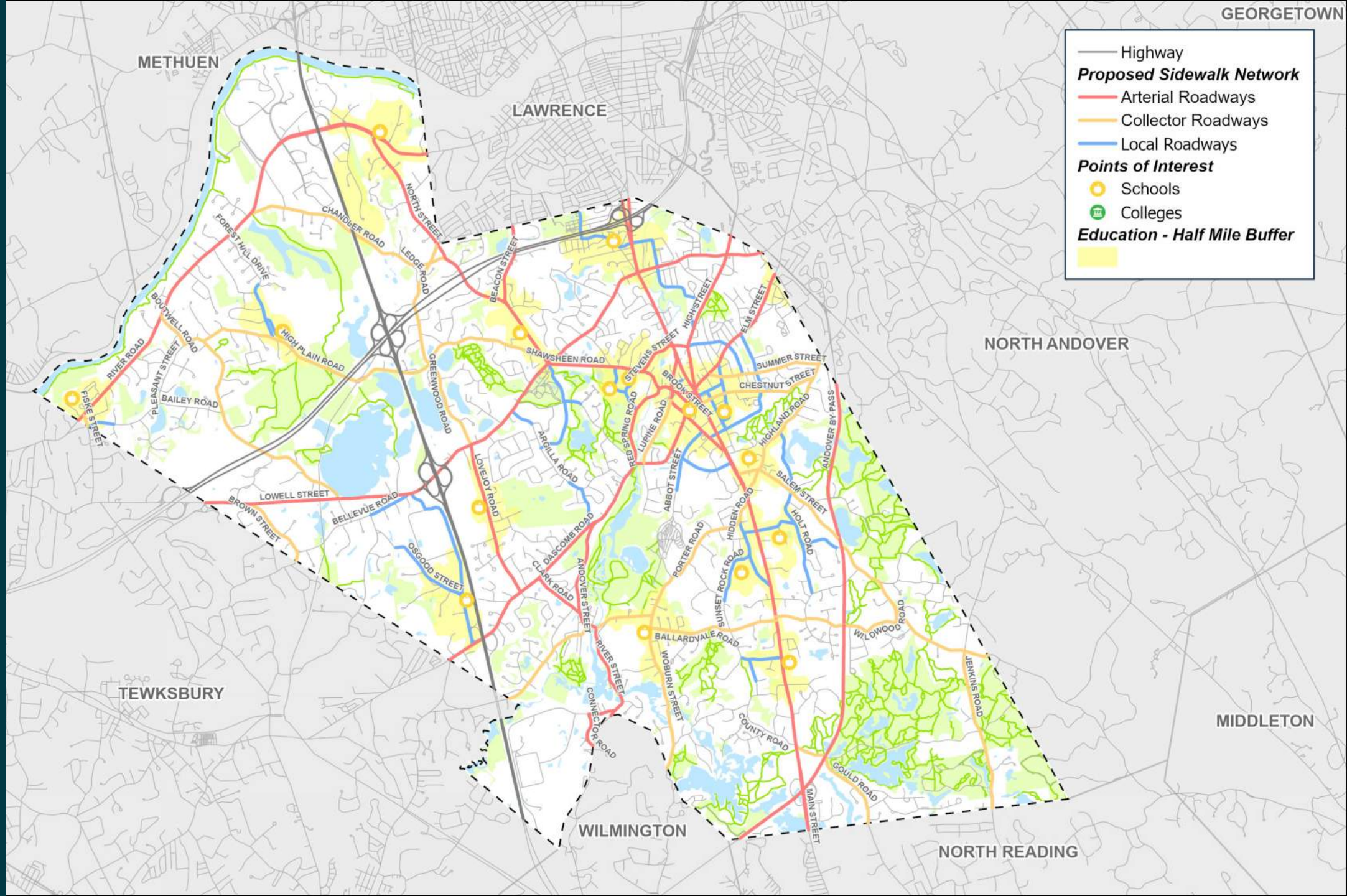
PEDESTRIAN NETWORK: WITHIN 1/2 MILE OF DESTINATIONS – TRANSIT

3



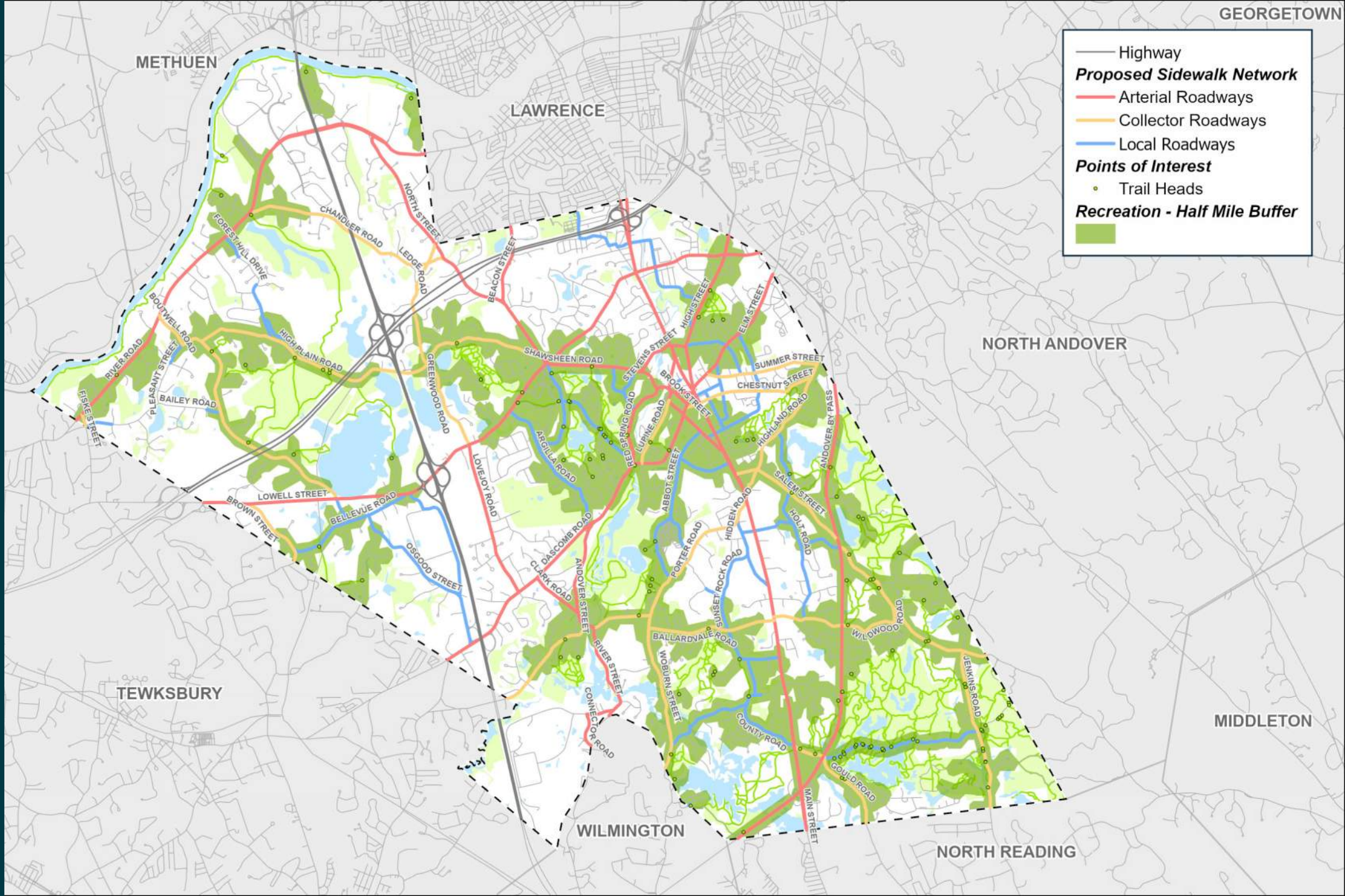
PEDESTRIAN NETWORK: WITHIN 1/2 MILE OF DESTINATIONS – SCHOOLS & COLLEGES

3

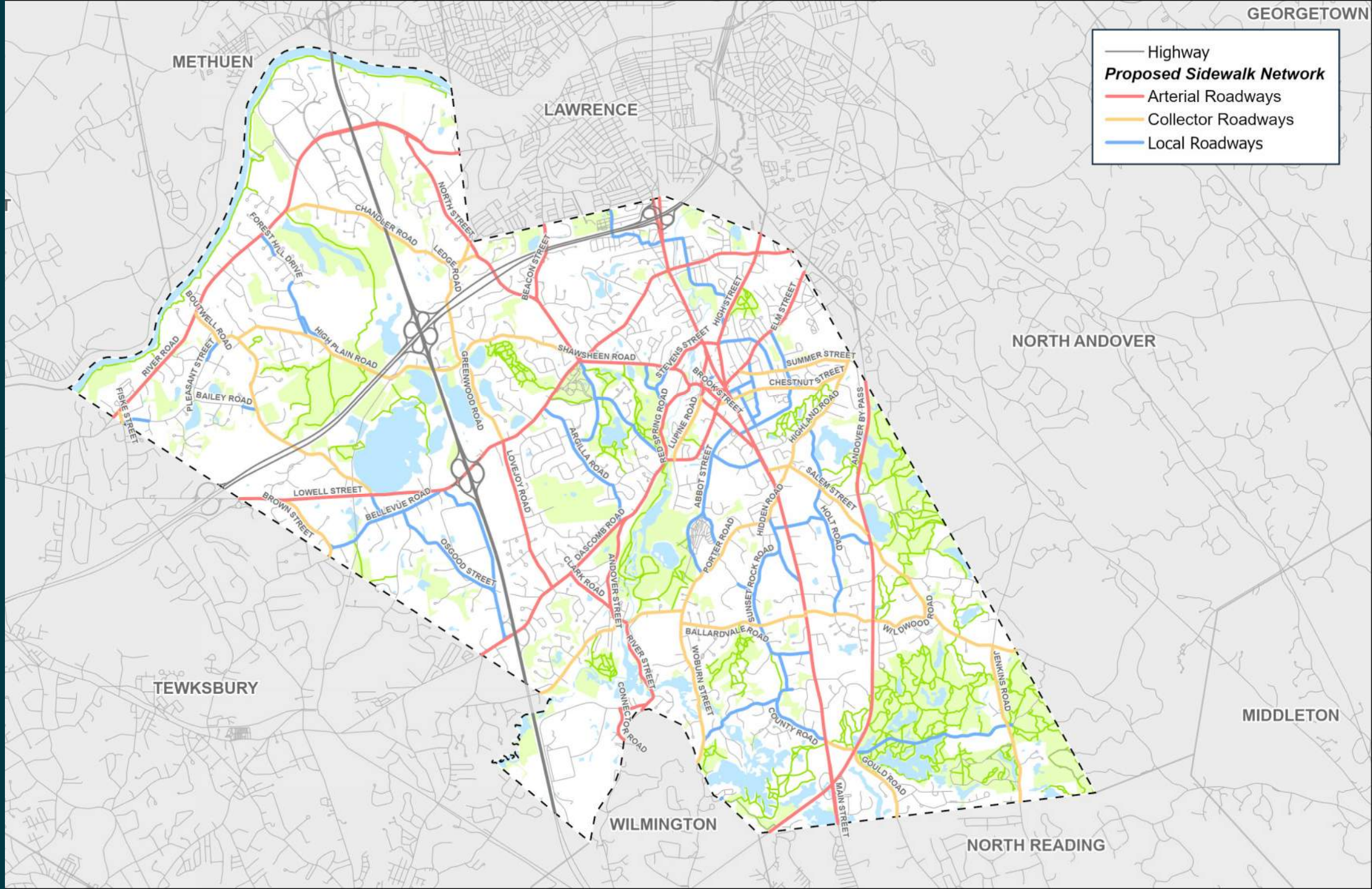


PEDESTRIAN NETWORK: WITHIN 1/2 MILE OF DESTINATIONS – RECREATIONAL AREAS

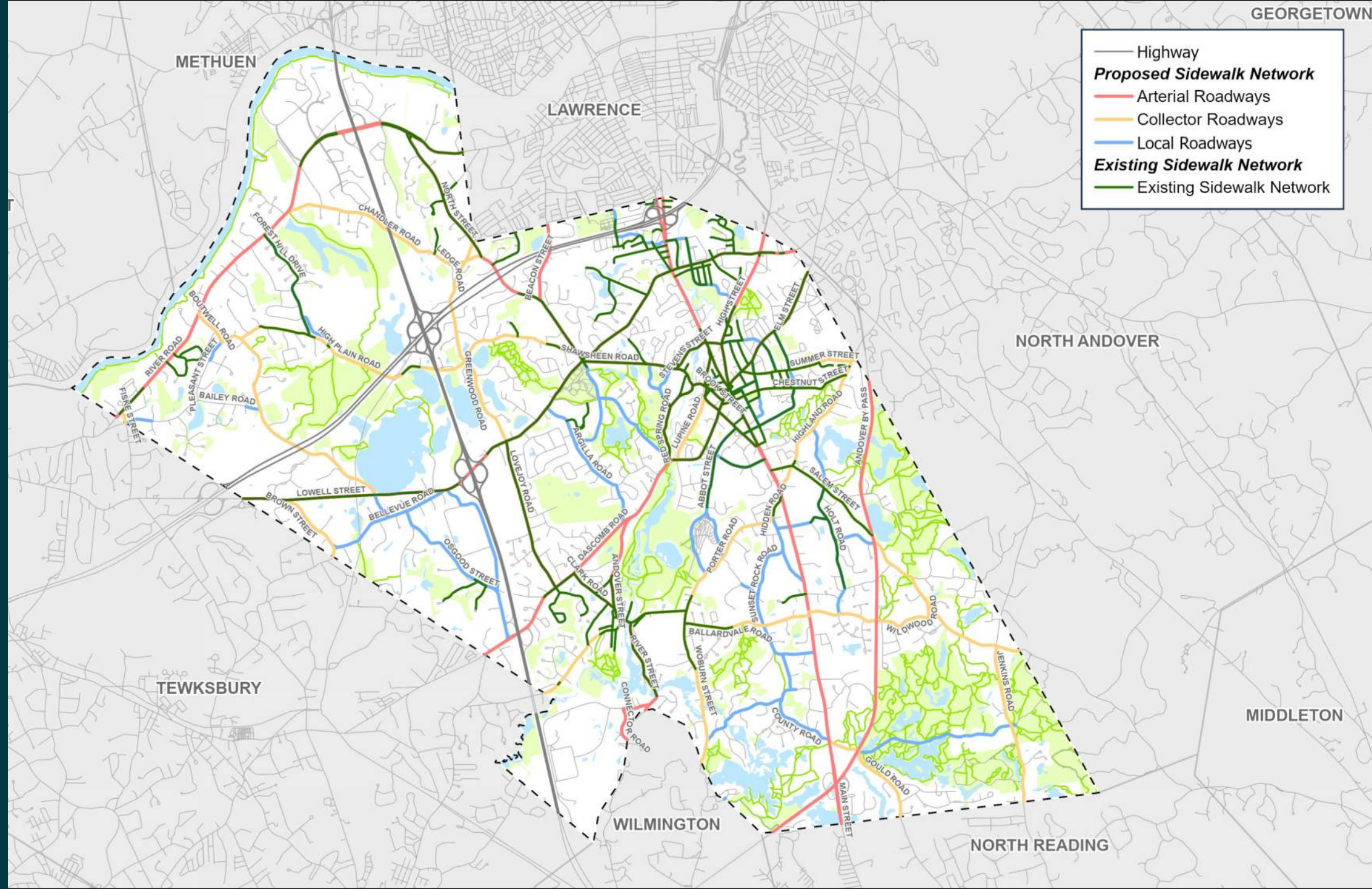
3



PROPOSED PEDESTRIAN NETWORK



PEDESTRIAN NETWORK: COMPARISON WITH EXISTING



DRAFT BICYCLE NETWORK

BICYCLE NETWORK METHODOLOGY

- The bicycle network includes dedicated bicycle facilities in the following locations:

1

Protected (grade-separated) facilities along roadways with:

- Speed limit > 40 miles per hour
- More than one travel lane per direction
- Volumes > 10,000 vehicles per day

2

Dedicated facilities along collector roadways

3

Within 1-mile bikesheds of main destinations:

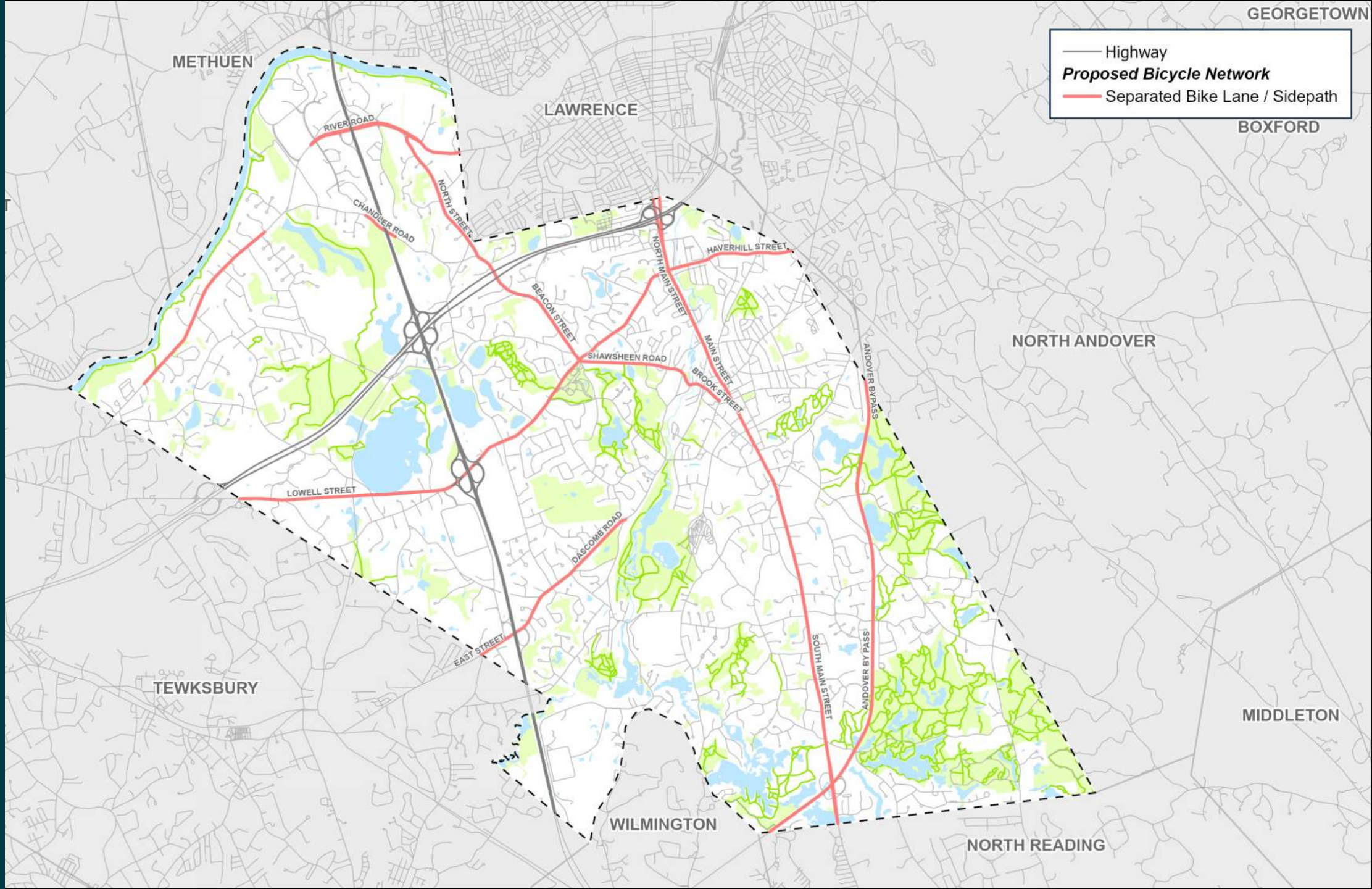
- Rail stations
- Community resources
- Schools & colleges
- Recreational areas

4

Where public comments indicated that demand for bicycle facilities exists

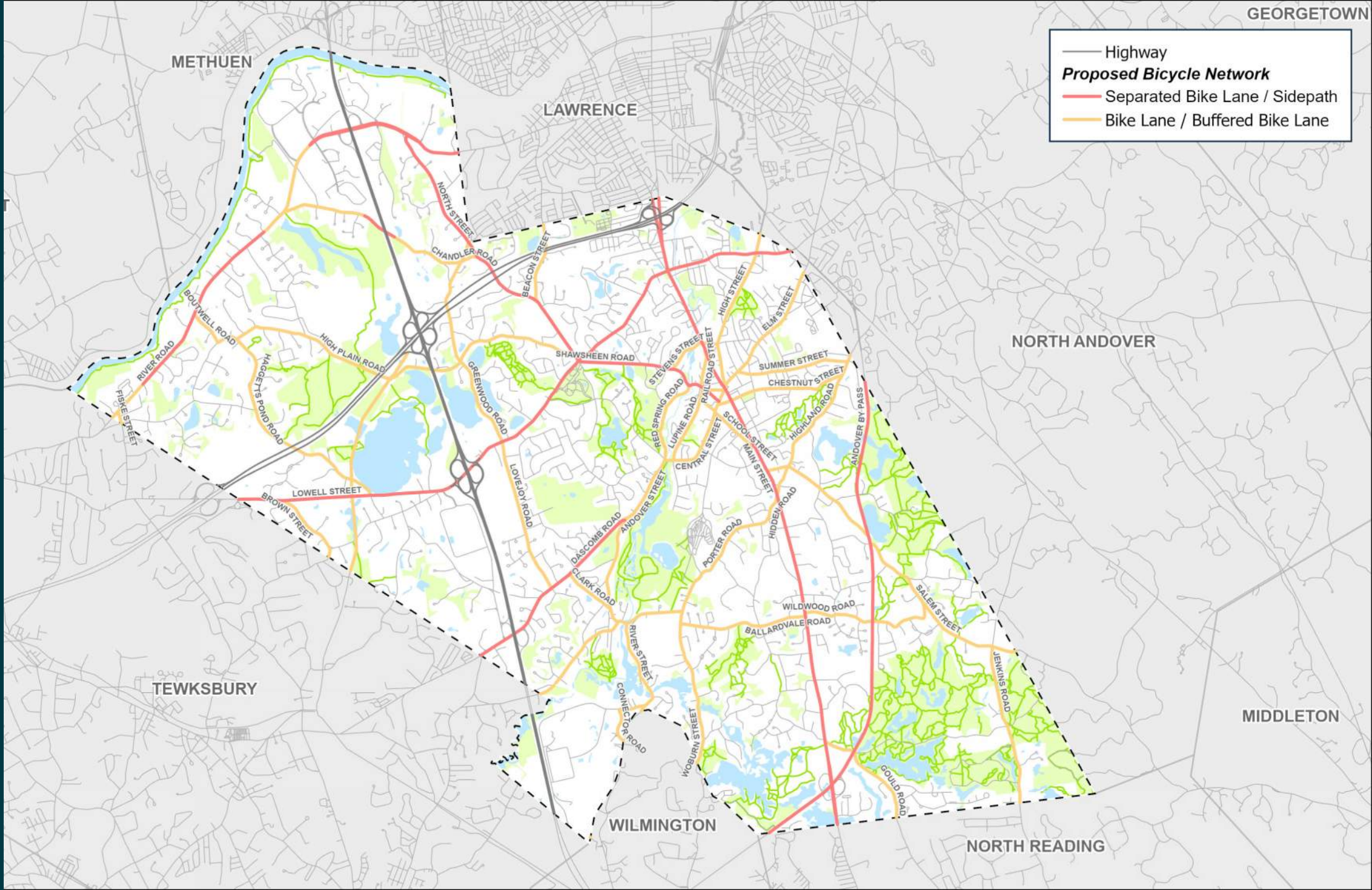
BICYCLE NETWORK: PROTECTED FACILITIES

1

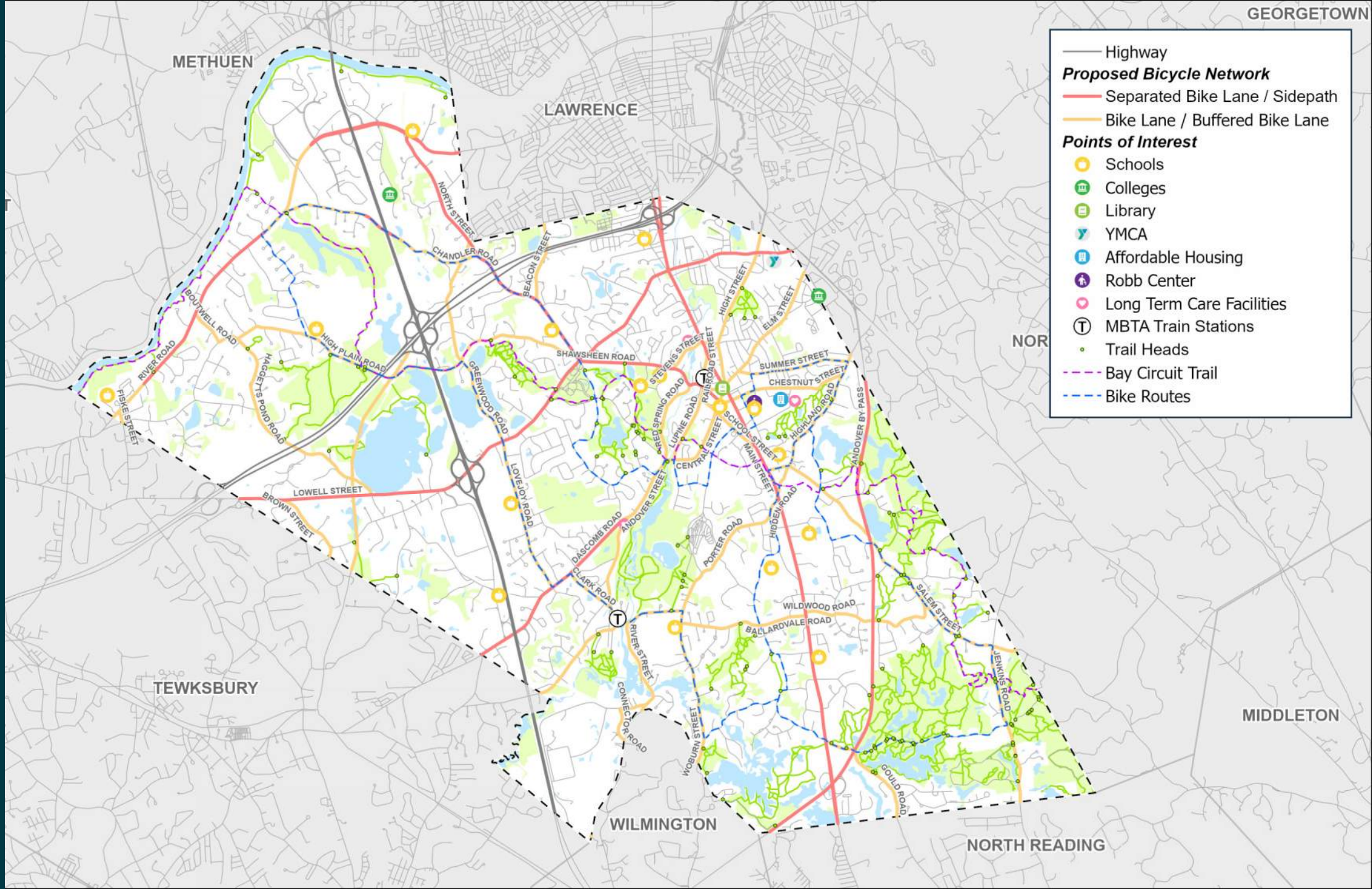


BICYCLE NETWORK: DEDICATED FACILITIES ALONG COLLECTORS

2

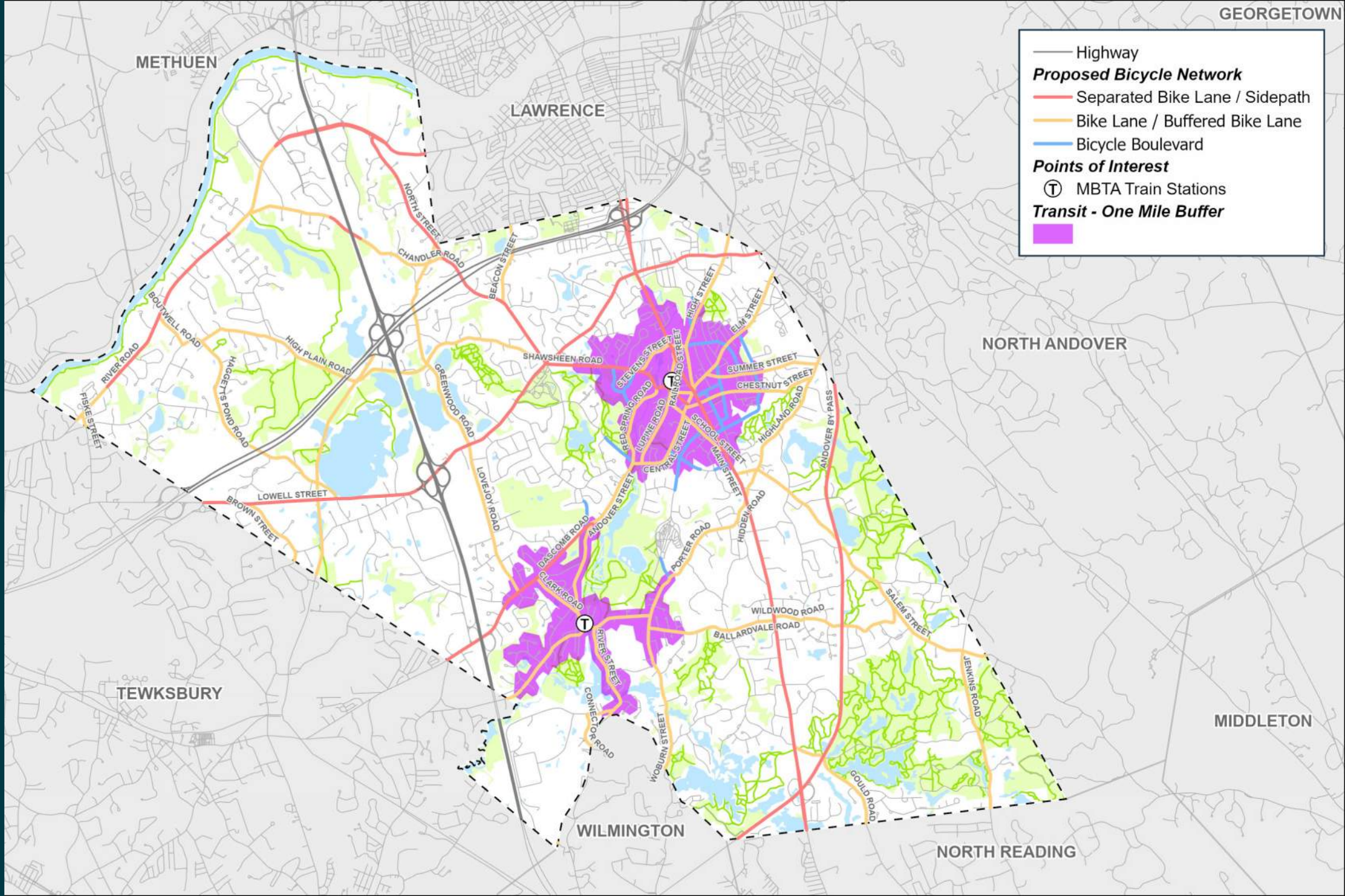


3 BICYCLE NETWORK: WITHIN 1 MILE OF DESTINATIONS



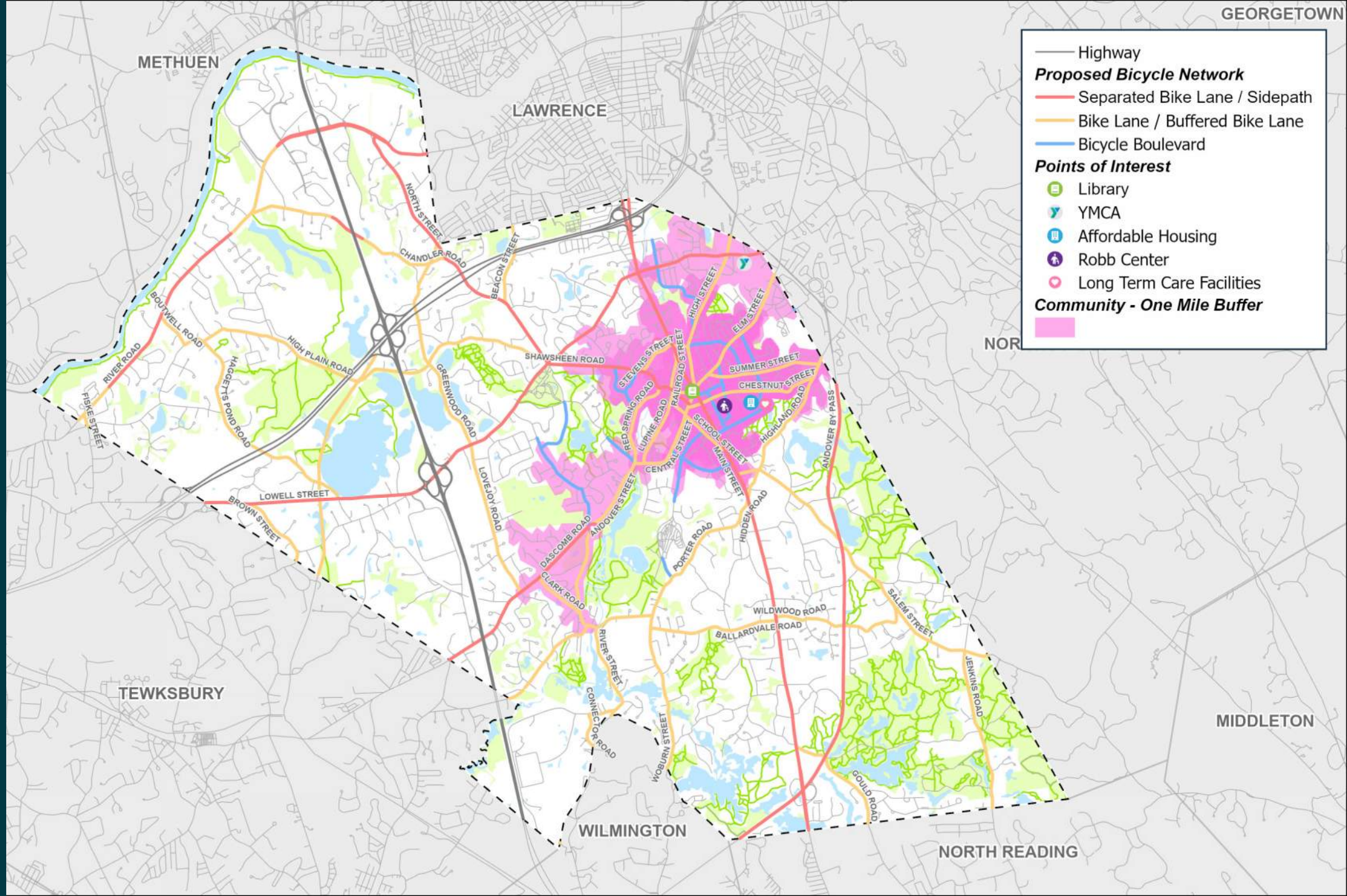
BICYCLE NETWORK: WITHIN 1 MILE OF DESTINATIONS – TRANSIT STATIONS

3



BICYCLE NETWORK: WITHIN 1 MILE OF DESTINATIONS – COMMUNITY RESOURCES

3



— Highway

Proposed Bicycle Network

- Separated Bike Lane / Sidepath
- Bike Lane / Buffered Bike Lane
- Bicycle Boulevard

Points of Interest

- Library
- YMCA
- Affordable Housing
- Robb Center
- Long Term Care Facilities

Community - One Mile Buffer

—

GEORGETOWN

NOR

MIDDLETON

NORTH READING

METHUEN

LAWRENCE

TEWKSBURY

WILMINGTON

RIVER ROAD

FISKE STREET

BOUTWELL ROAD

HIGH PLAIN ROAD

CHANDLER ROAD

NORTH STREET

HAGGETT'S POUD ROAD

BEACON STREET

GREENWOOD ROAD

SHAWSHEN ROAD

STEVENS STREET

RAILROAD STREET

HIGH STREET

ELM STREET

SUMMER STREET

CHESTNUT STREET

HIGHLAND ROAD

ANDOVER BY PASS

ANDOVER STREET

SCHOOL STREET

MAIN STREET

LOVEJOY ROAD

HIDDEN ROAD

PORTER ROAD

CLARK ROAD

DASCOMB ROAD

WILDWOOD ROAD

SALEM STREET

WILLOW ROAD

BALLARDVALE ROAD

SALEM STREET

JENKINS ROAD

GOULD ROAD

WOBURN STREET

CONNETT POOL ROAD

LOVEJOY ROAD

ANDOVER STREET

CLARK ROAD

DASCOMB ROAD

WILDWOOD ROAD

SALEM STREET

JENKINS ROAD

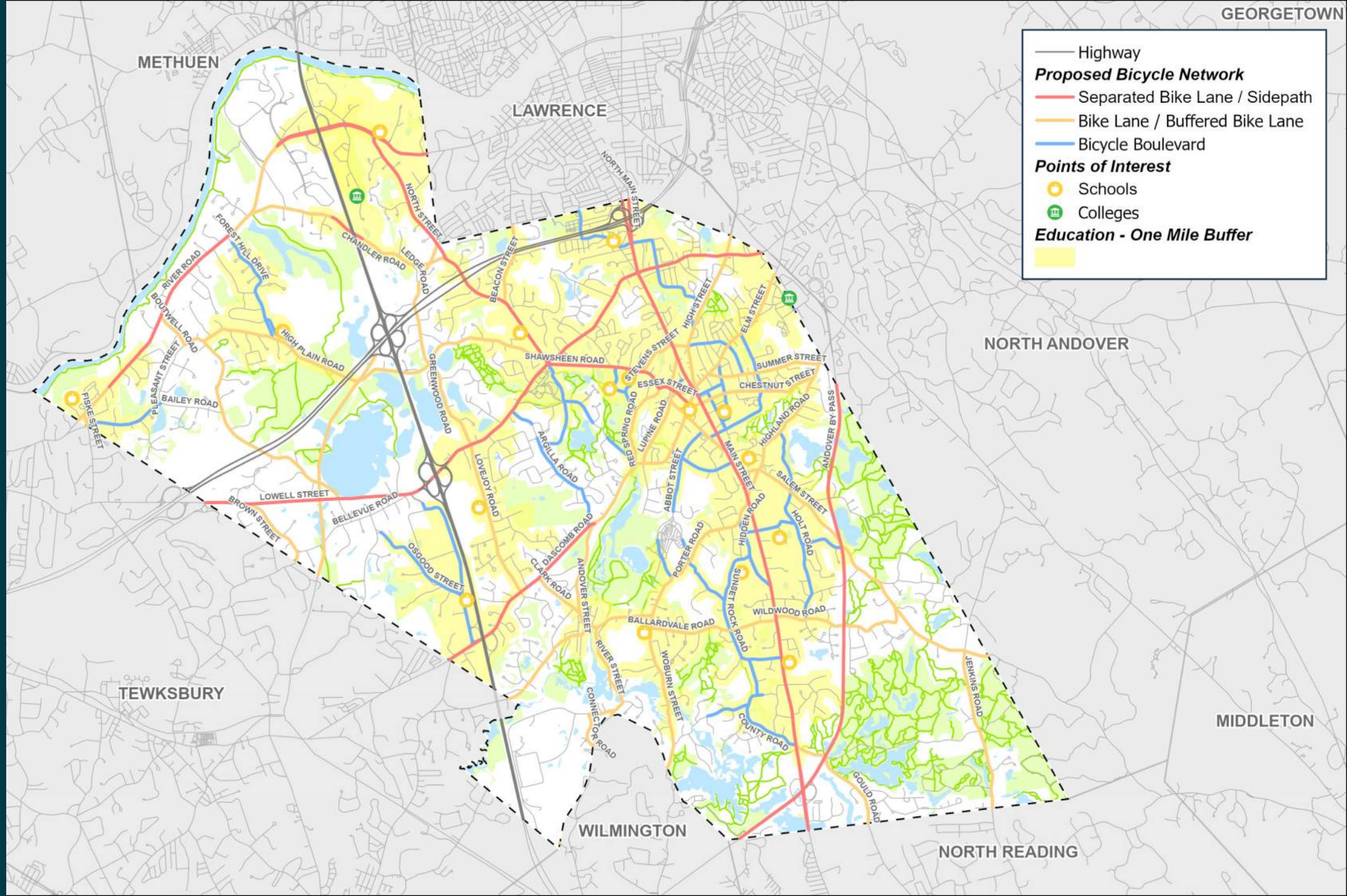
GOULD ROAD

WOBURN STREET

CONNETT POOL ROAD

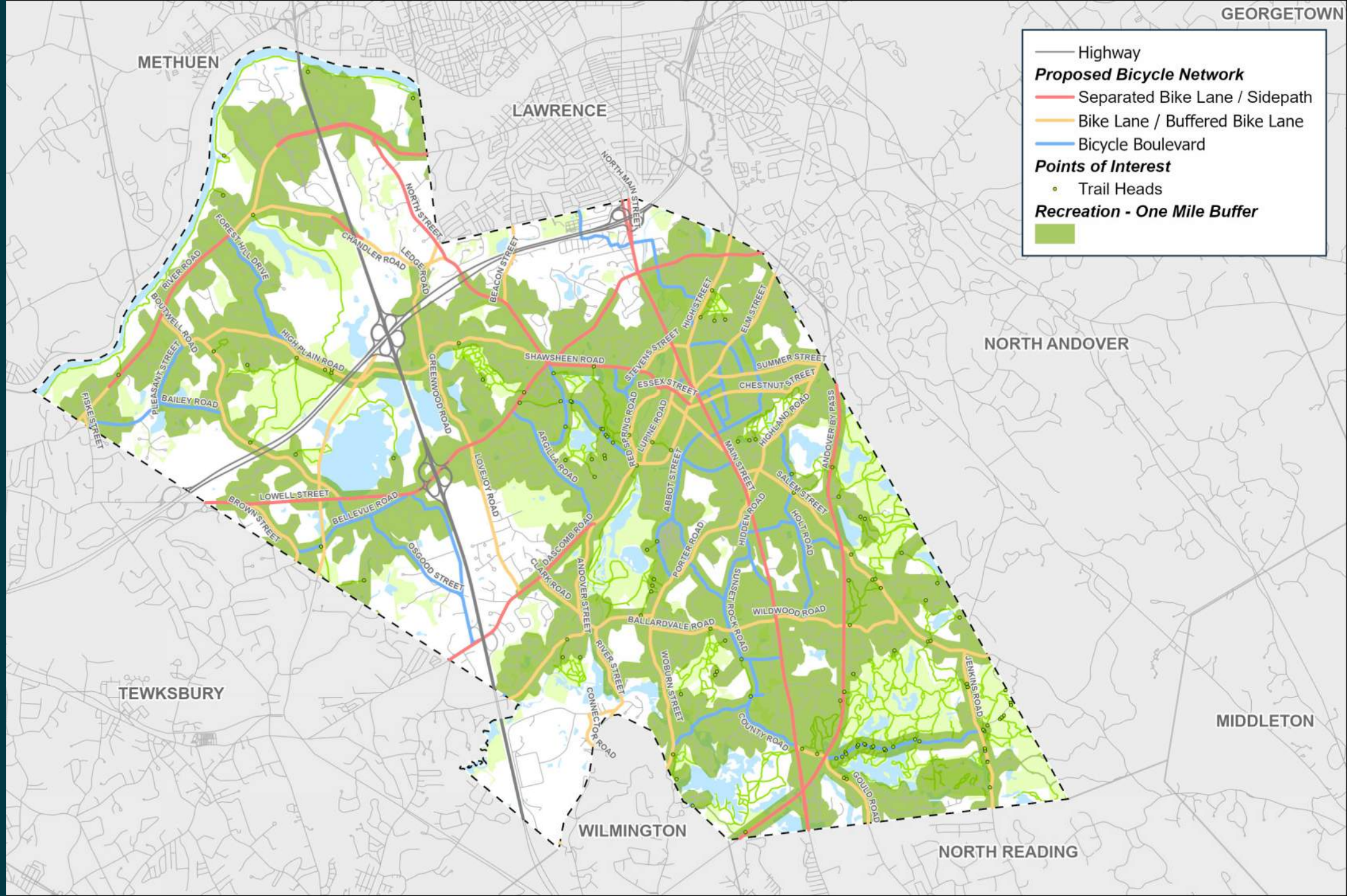
**BICYCLE NETWORK:
WITHIN 1 MILE OF DESTINATIONS –
SCHOOLS & COLLEGES**

3



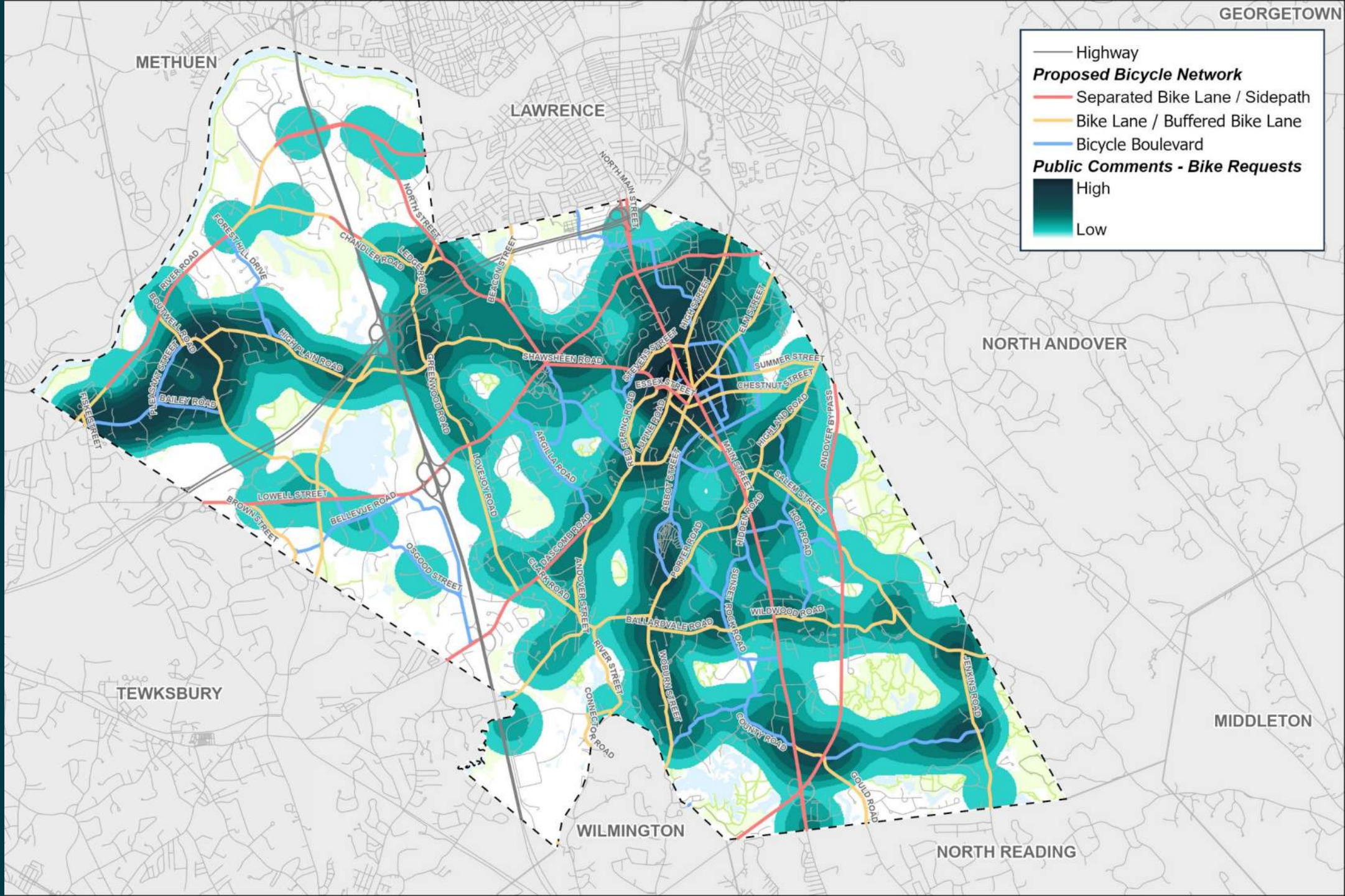
BICYCLE NETWORK: WITHIN 1 MILE OF DESTINATIONS – RECREATIONAL AREAS

3

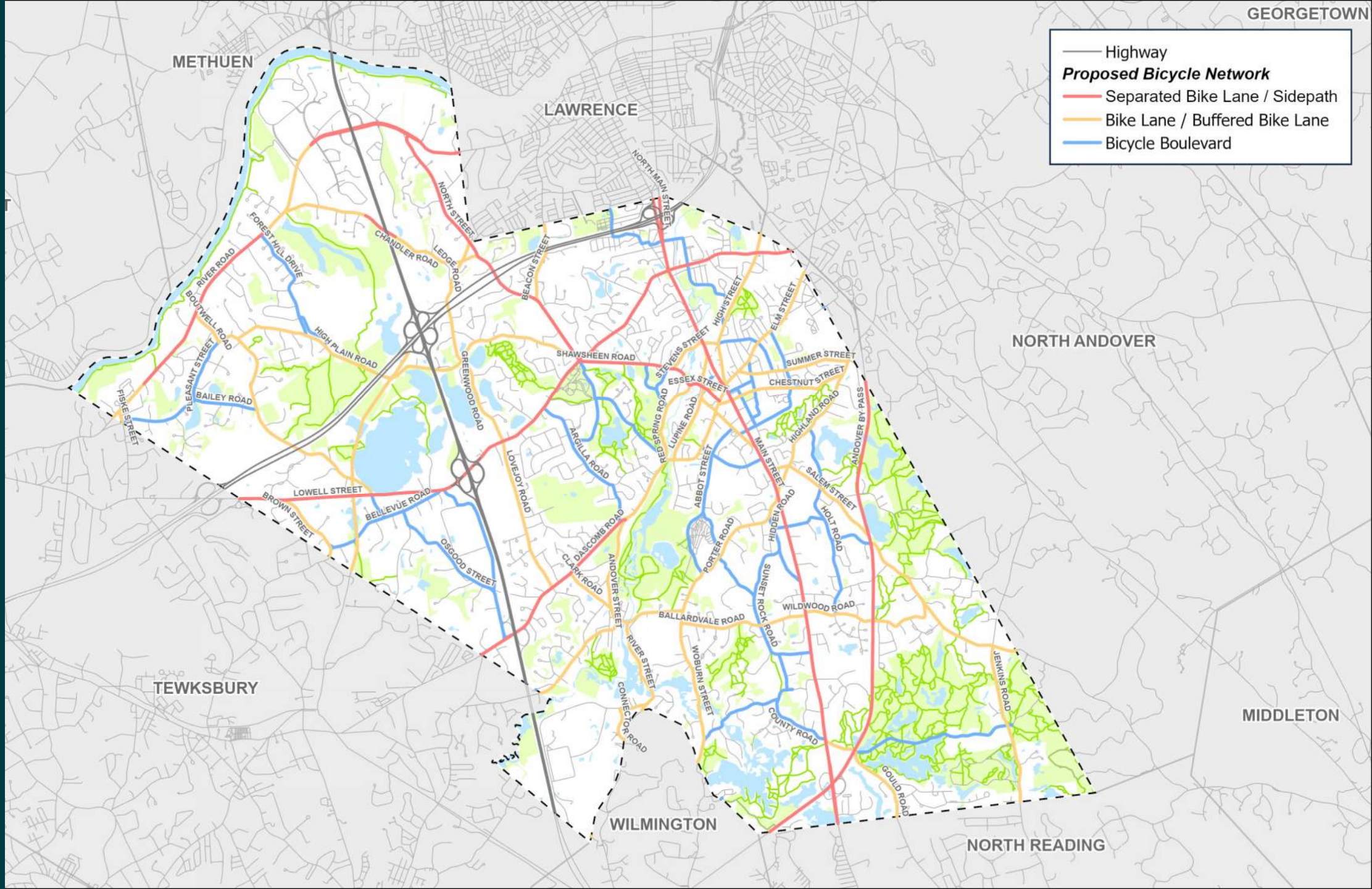


BICYCLE NETWORK: IN "MISSING BICYCLE ACCOMODATIONS" AREAS

4



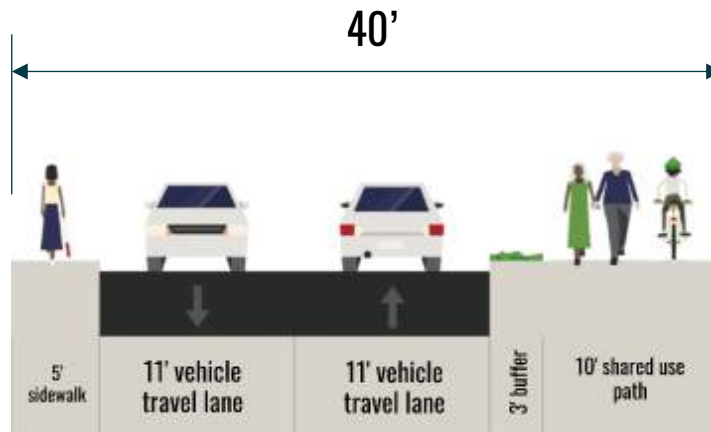
PROPOSED BICYCLE NETWORK



PREFERRED TYPICAL SECTIONS

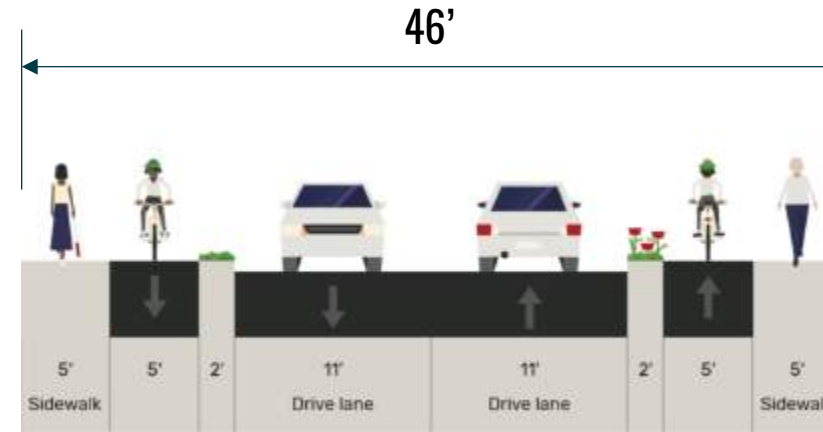
PREFERRED TYPICAL SECTIONS

ARTERIAL ROADWAYS (HIGH SPEED, HIGH VOLUME)



SHARED USE PATH

- Advantages:
 - Relatively narrow cross section
- Disadvantages:
 - Moderate bicycle-pedestrian conflicts
 - Bicycle accommodations only on one side of roadway



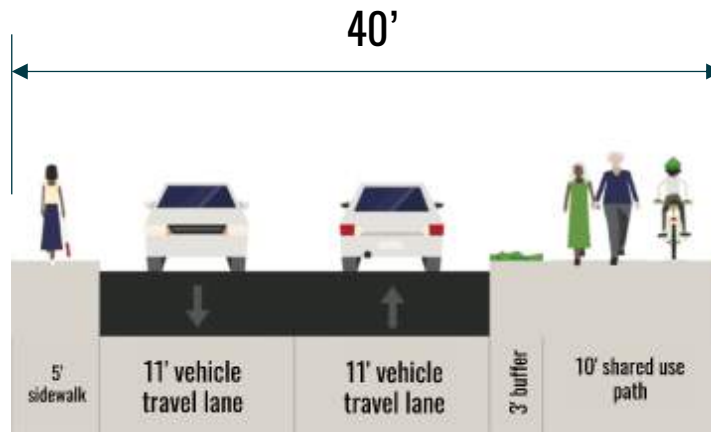
SIDEWALK-LEVEL SEPARATED BIKE LANES

- Advantages:
 - Dedicated facilities for every mode
 - Bicycle facilities on either side of roadway
- Disadvantages:
 - Moderately wide cross-section

PREFERRED TYPICAL SECTIONS

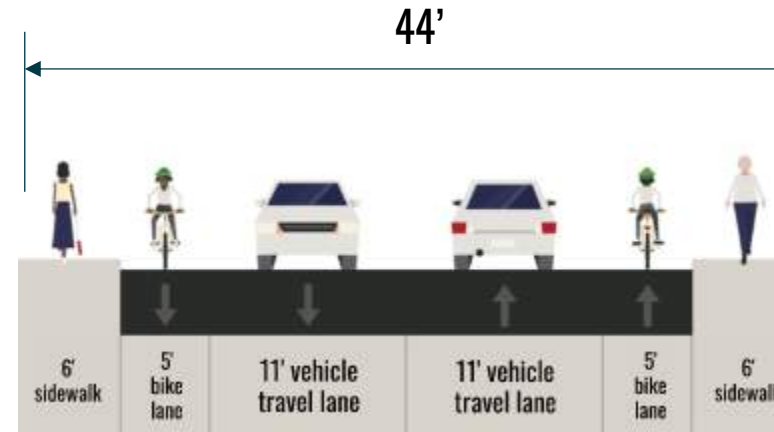
COLLECTOR ROADWAYS (MEDIUM SPEED, MEDIUM VOLUME)

PREFERRED



SHARED USE PATH

- Advantages:
 - Relatively narrow cross section
 - Vertical separation between vehicles and bicyclists
- Disadvantages:
 - Moderate bicycle-pedestrian conflicts
 - Bicycle accommodations only on one side of roadway

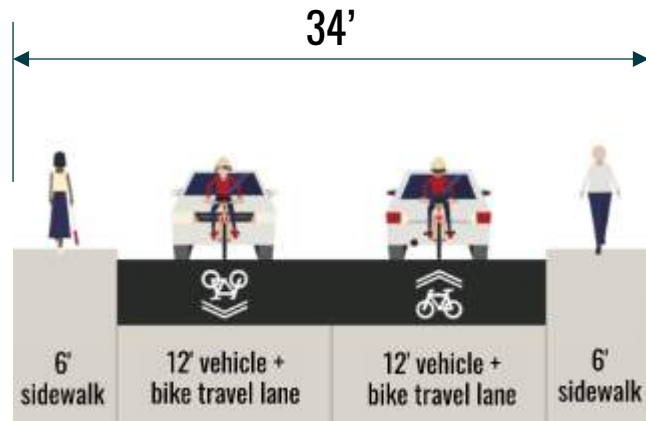


NON-BUFFERED BIKE LANES

- Advantages:
 - Dedicated facilities for every mode
 - Bicycle facilities on either side of roadway
 - Minimal bicycle-pedestrian conflicts
- Disadvantages:
 - Widest cross-section
 - No vertical separation between vehicles and bicyclists

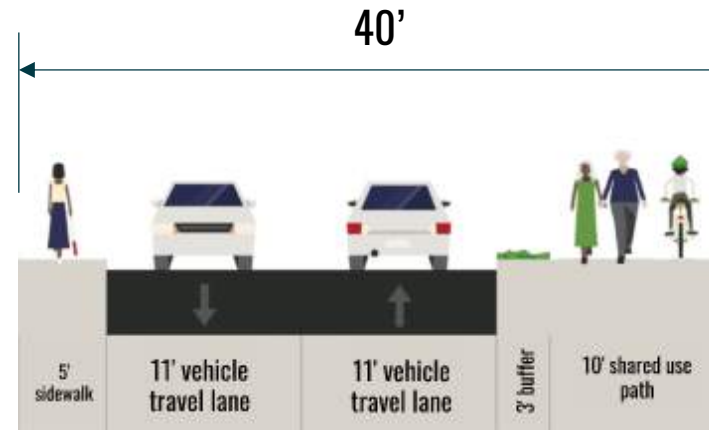
PREFERRED TYPICAL SECTIONS

LOCAL ROADWAYS (LOW SPEED, LOW VOLUME)



SHARED LANES

- Advantages:
 - Narrowest cross section
 - Lowest cost
- Disadvantages:
 - No dedicated bicycle accommodations



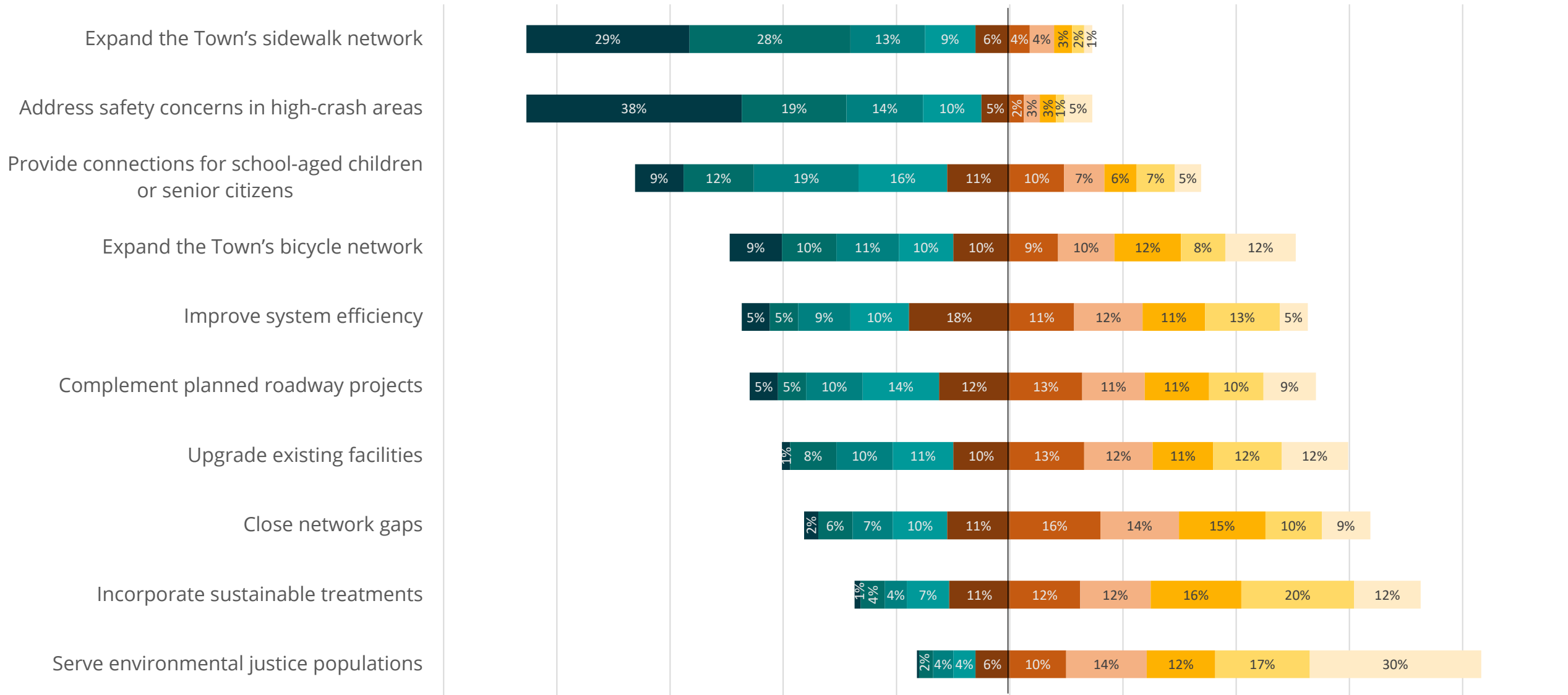
SHARED USE PATH

- Advantages:
 - Relatively narrow cross section
 - Vertical separation between vehicles and bicyclists
- Disadvantages:
 - Moderate bicycle-pedestrian conflicts
 - Bicycle accommodations only on one side of roadway

TOP-PRIORITY PROJECTS

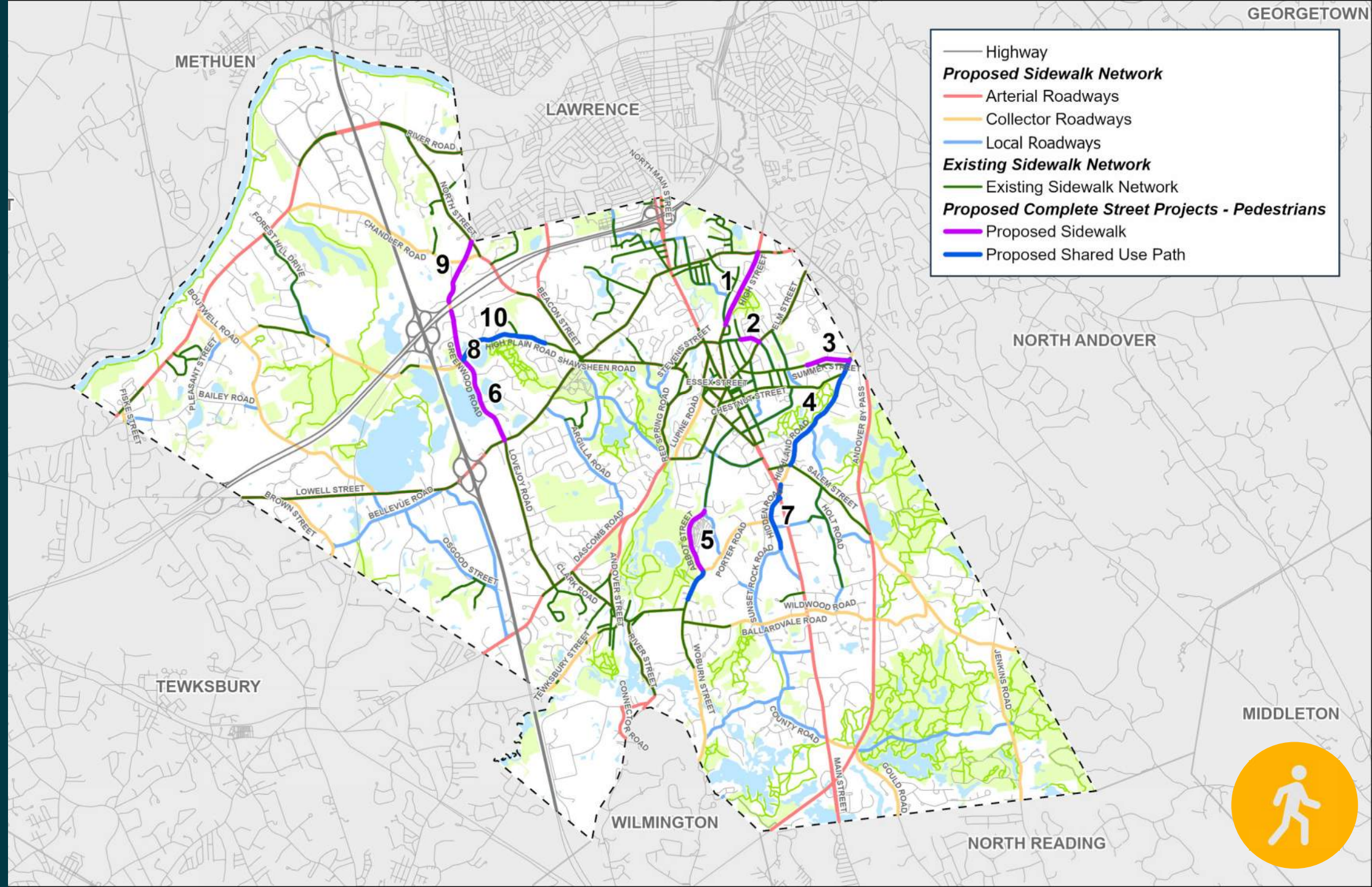
SURVEY RESULTS

THE TOWN SHOULD PRIORITIZE COMPLETE STREETS PROJECTS THAT...



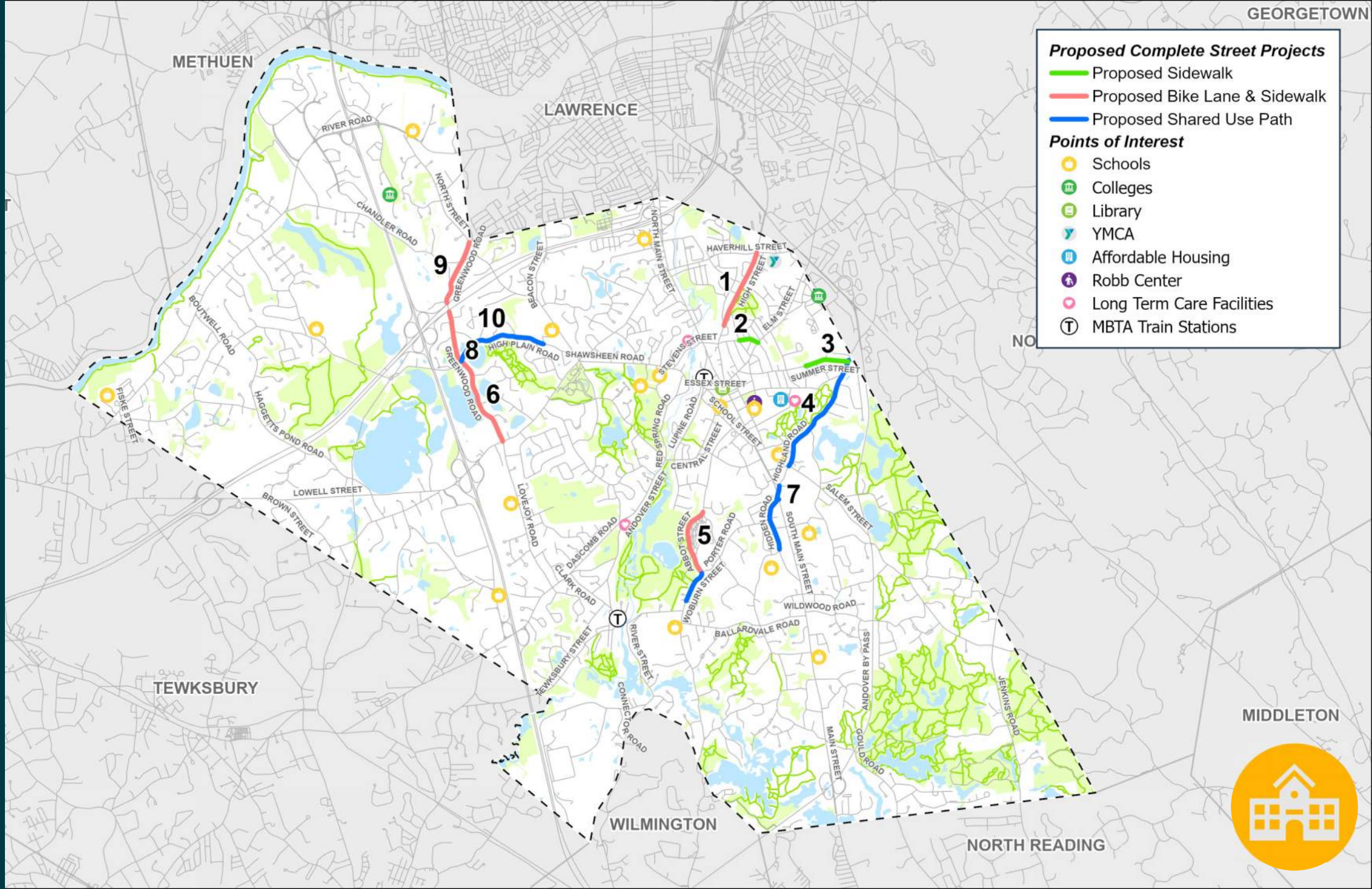
PROPOSED COMPLETE STREETS PROJECTS

EXPAND THE TOWN'S SIDEWALK NETWORK



PROPOSED COMPLETE STREETS PROJECTS

PROVIDE CONNECTIONS FOR SCHOOL AGED CHILDREN OR SENIOR CITIZENS



GEORGETOWN

MIDDLETON



- Proposed Complete Street Projects**
- Proposed Sidewalk
 - Proposed Bike Lane & Sidewalk
 - Proposed Shared Use Path
- Points of Interest**
- Schools
 - Colleges
 - Library
 - YMCA
 - Affordable Housing
 - Robb Center
 - Long Term Care Facilities
 - Ⓣ MBTA Train Stations

NORTH READING

WILMINGTON

TEWKSBURY

METHUEN

LAWRENCE

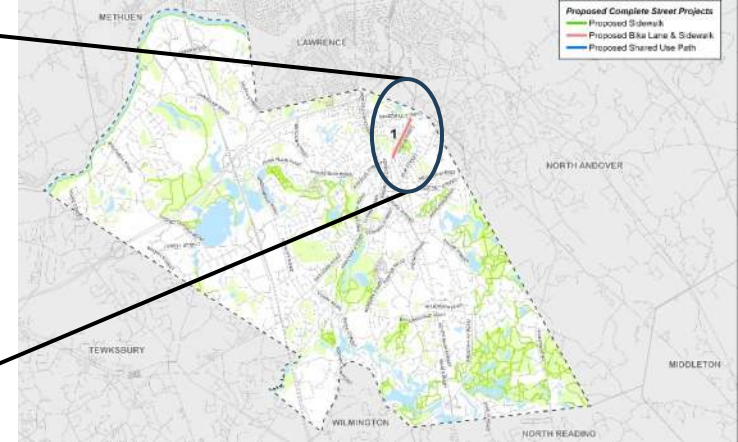
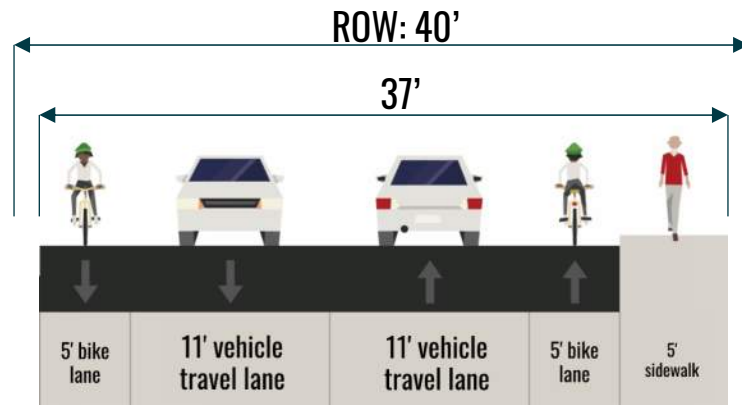
1

HIGH STREET SIDEWALK & BIKE LANES

BURNHAM ROAD TO HAVERHILL STREET



- Connects the Shawsheen neighborhood & downtown
- Provides access to the YMCA & downtown restaurants/shops, among other destinations
- Burnham St intersection can be realigned to reduce vehicular conflicts & improve safety
- Will likely have impacts on utility poles and trees



High Street near Crescent Drive, looking north



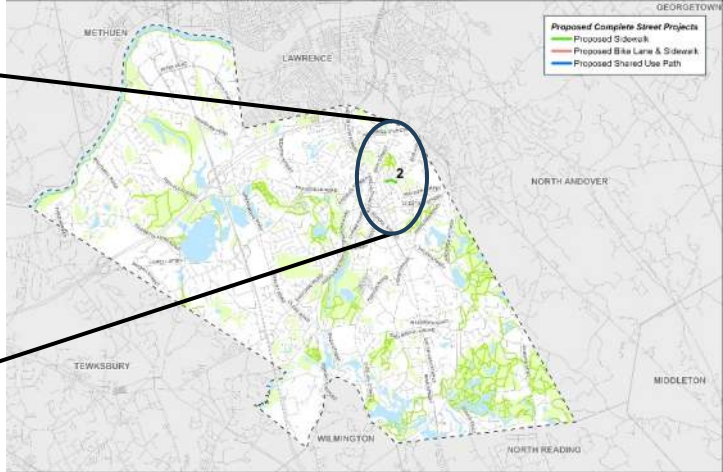
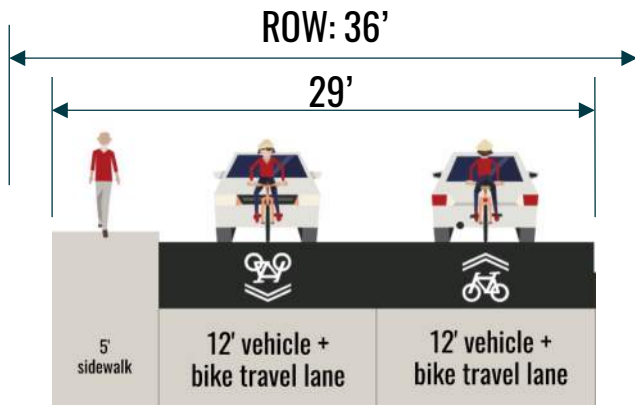
High Street at Burnham Street intersection

2 WALNUT AVENUE SIDEWALK

CARMEL ROAD TO ELM STREET



- Closes a key network gap between Elm Street and Route 28
- Separates pedestrians from fast-moving vehicles in a high-crash area
- Provide crosswalk at Carmel Rd intersection due to frequent crossings by children and other users



Walnut Avenue near Cheever Circle, looking east



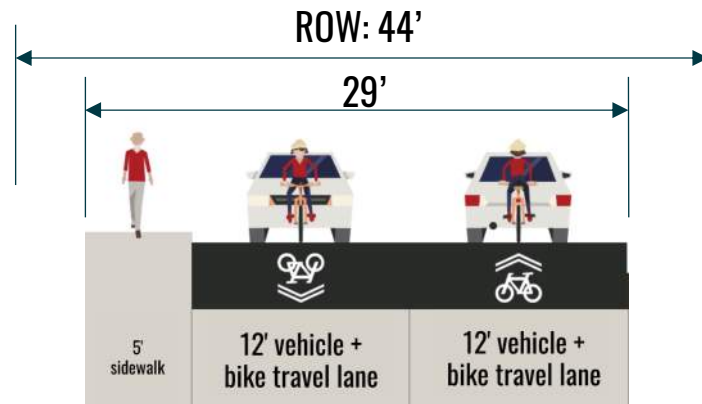
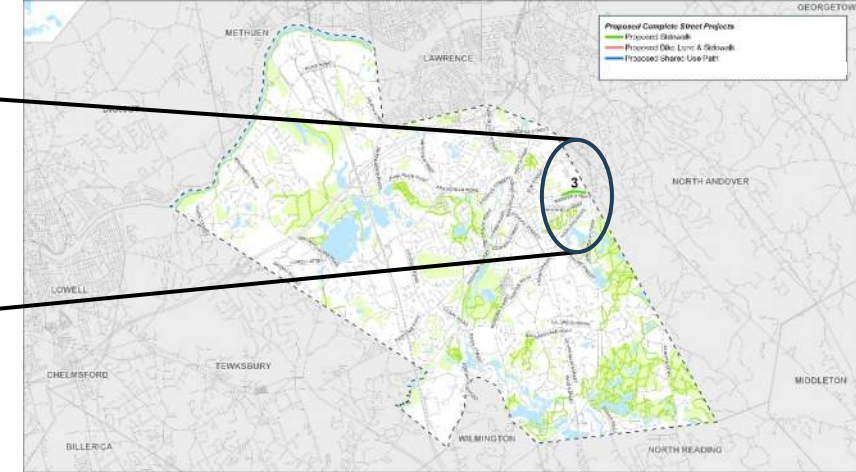
Walnut Avenue at Carmel Road Intersection

3 SUMMER STREET SIDEWALK

STEVENS CIRCLE TO HIGHLAND ROAD



- Connects to existing Summer Street sidewalk to downtown area
- Provides connection between downtown and planned shared use path on Highland Road (Project #4)
- Will likely have impacts on utility poles and trees



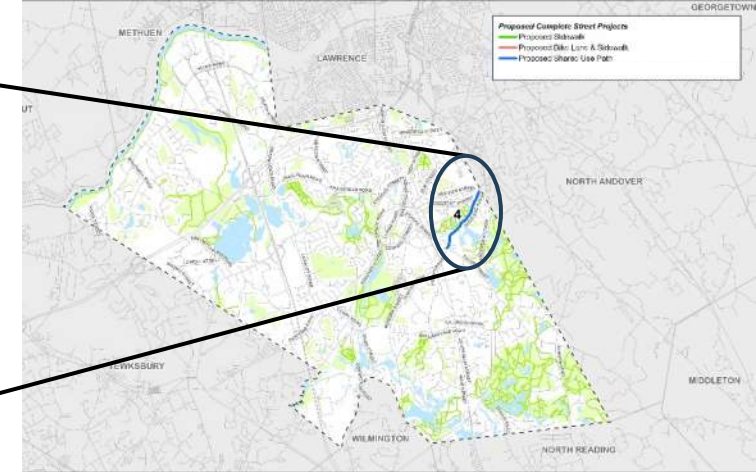
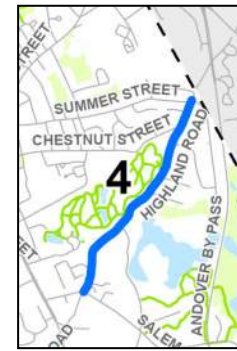
Summer Street near Appleton Drive, looking west

4 HIGHLAND ROAD SHARED USE PATH

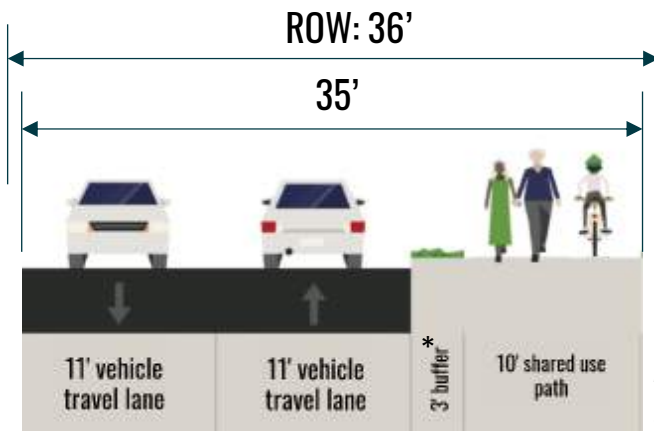
KATHLEEN DRIVE TO SALEM STREET



- Connects to existing sidewalks along Salem Street, Chestnut Street, & Summer Street
- Provides access to Phillips Academy
- Will likely have impacts on utility poles and trees



Highland Road near Woodland Road, looking south



*Grass strip buffer may be reduced or removed due to roadside obstacles

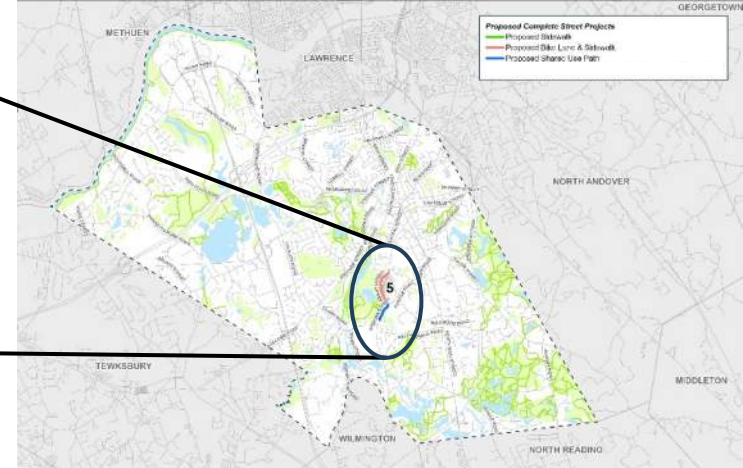
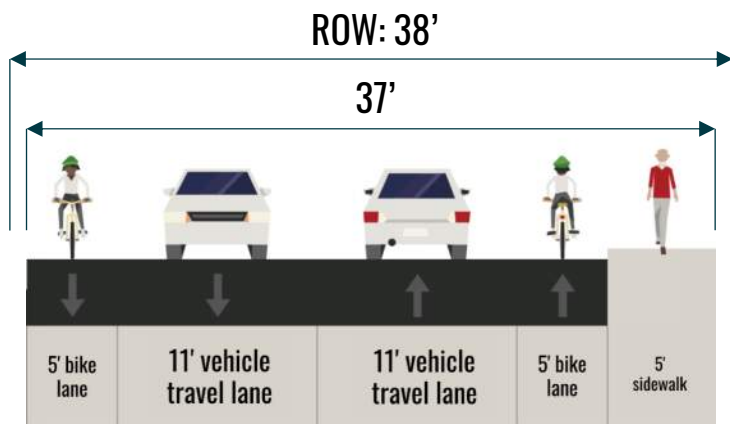
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ABBOT STREET SIDEWALK & BIKE LANES

SPRING GROVE ROAD TO WOBURN STREET



- Combined with Woburn Street improvements, provides connection to Ballardvale train station & South Elementary School
- Provide access to/from Andover Recreation Park
- Spring Grove Rd intersection can be realigned to provide shorter crossing distance & reduce travel speeds
- Will likely have impacts to utility poles and trees



Abbot Street near Pumps Pond Rd, looking south



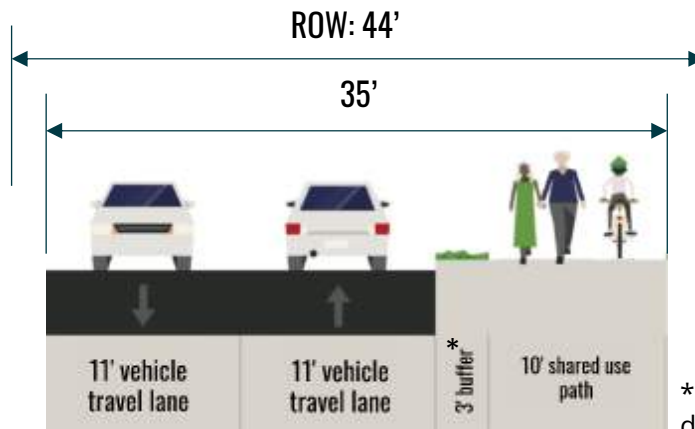
Abbot Street at Spring Grove Road Intersection

5 WOBURN STREET SHARED USE PATH

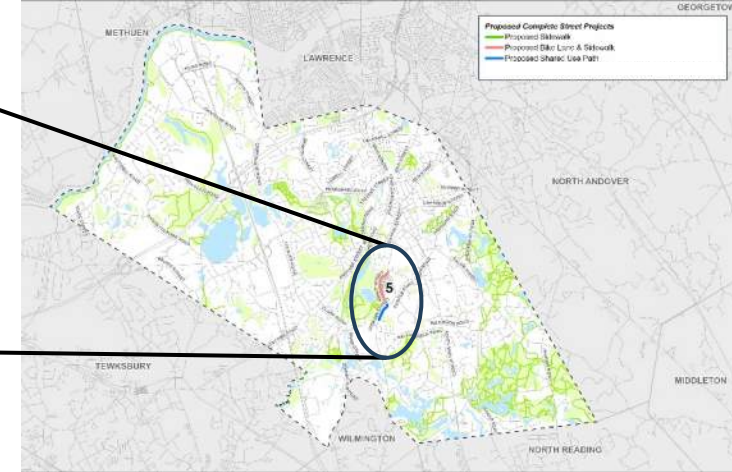
ABBOT STREET TO BAYBERRY LANE



- Combined with Abbot Street improvements, provides access to Andover Recreation Park & South Elementary School
- Closes key network gap along Woburn Street & Abbot Street
- Excess pavement can be removed at Porter Road intersection to provide shorter crossing distance & reduce travel speeds



*Grass strip buffer may be reduced or removed due to roadside obstacles



Woburn Street near Winterberry Lane, looking north



Woburn Street at Porter Road Intersection

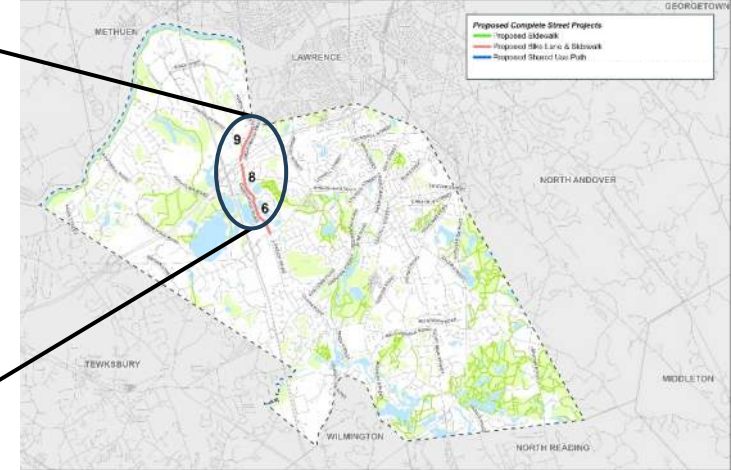
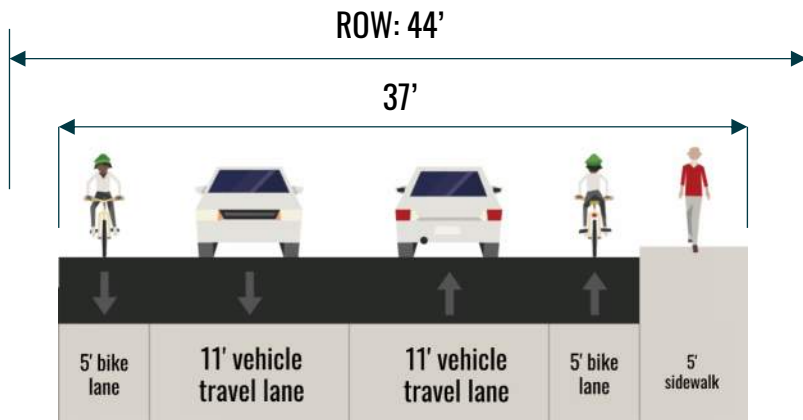
6

GREENWOOD ROAD SIDEWALK & BIKE LANES

LOWELL ST TO HIGH PLAIN ROAD



- Provides continuous connection between existing sidewalks on North Street and Lowell Street / Lovejoy Road
- Provides dedicated facilities for pedestrians & bicyclists in high-crash area
- Excess pavement can be removed at High Plain Road intersection to shorten crossing distances & reduce travel speeds
- Will likely impact utility poles & trees



Greenwood Road near Gleason Street, looking south



Greenwood Road at High Plain Road Intersection

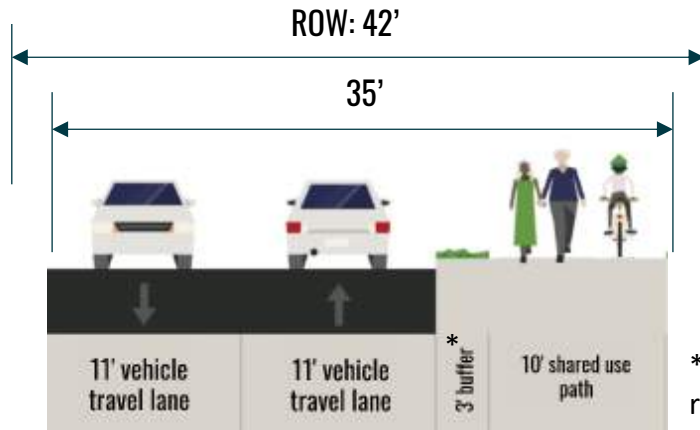
7

HIDDEN ROAD & HIGHLAND ROAD SHARED USE PATH

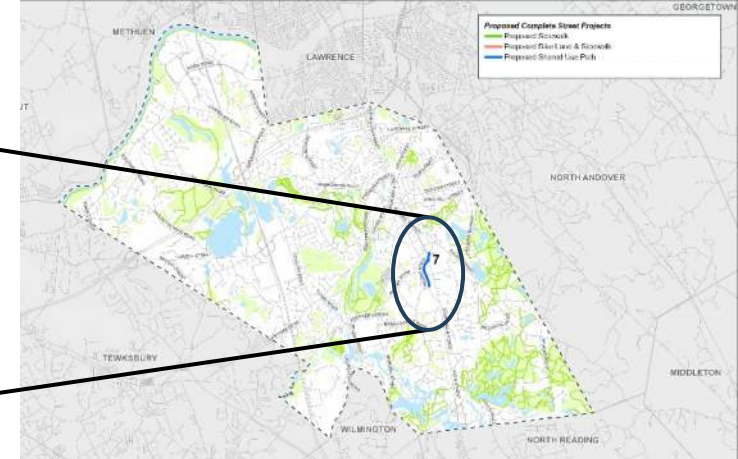
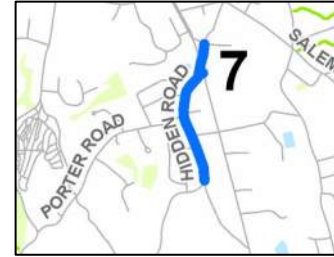
DWIGHT STREET TO SUNSET ROCK ROAD



- Provides dedicated facilities for pedestrians & bicyclists in high-crash area
- Provides access to Phillips Academy
- Porter Road intersection and S. Main Street intersections can be reconfigured to provide shorter crossing distance & reduce travel speeds



*Grass strip buffer may be reduced or removed due to roadside obstacles



Hidden Road near Lantern Rd, looking south



Hidden Road at Porter Road Intersection

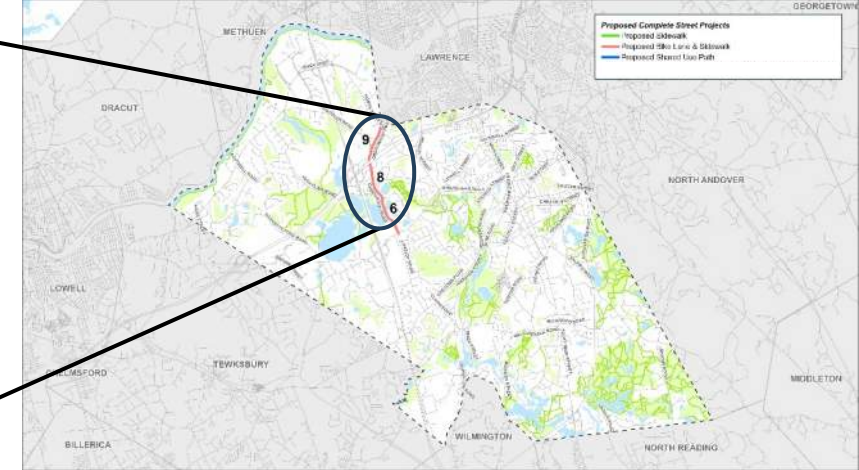
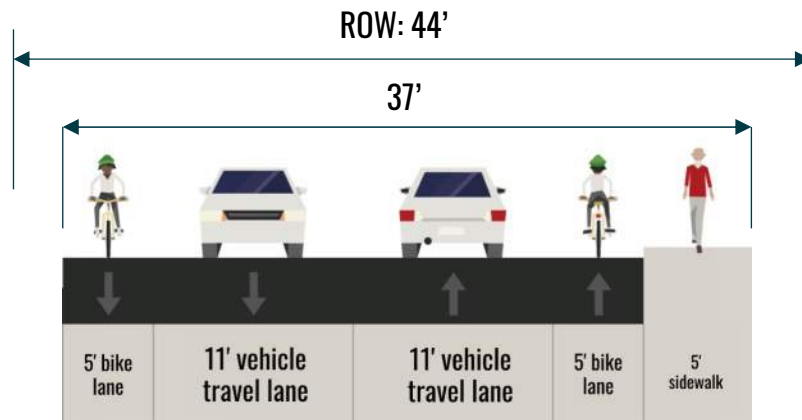
8

GREENWOOD ROAD SIDEWALK & BIKE LANES

HIGH PLAIN ROAD TO I-495



- Provides continuous connection between existing sidewalks on North Street and Lowell Street / Lovejoy Road
- Provides dedicated facilities for pedestrians & bicyclists in high-crash area
- Will likely impact utility poles & trees



Greenwood Road near Gleason Street, looking south

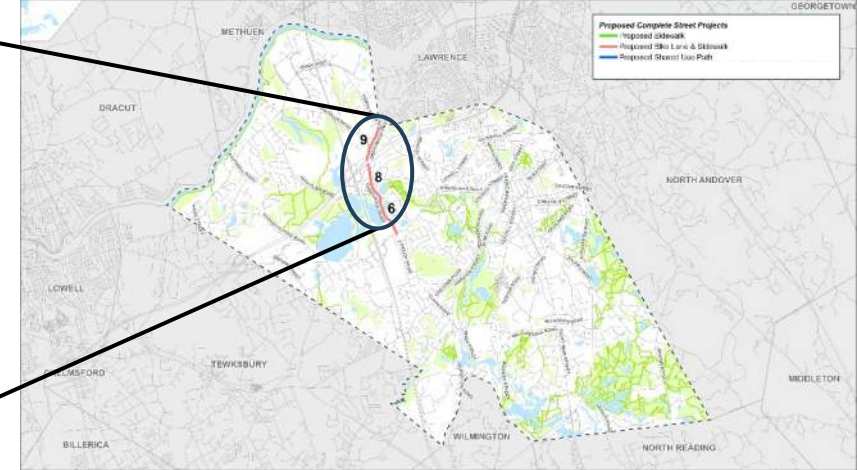
9

GREENWOOD ROAD SIDEWALK & BIKE LANES

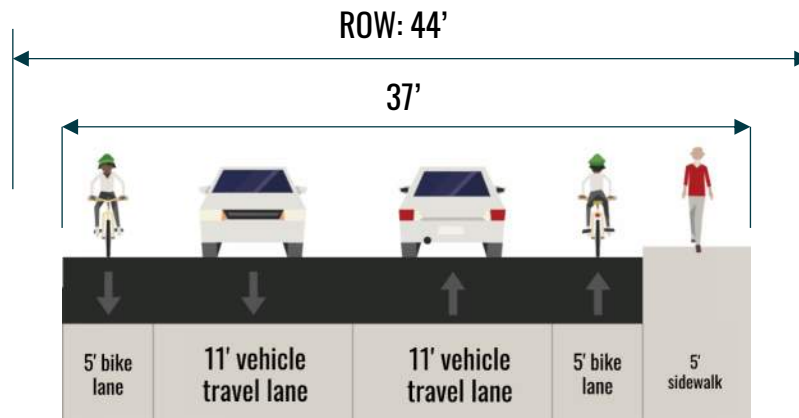
I-495 TO NORTH STREET



- Provides continuous connection between existing sidewalks on North Street and Lowell Street / Lovejoy Road
- Provides dedicated facilities for pedestrians & bicyclists in high-crash area
- Will likely impact utility poles & trees



Greenwood Road near Chandler Road, looking south



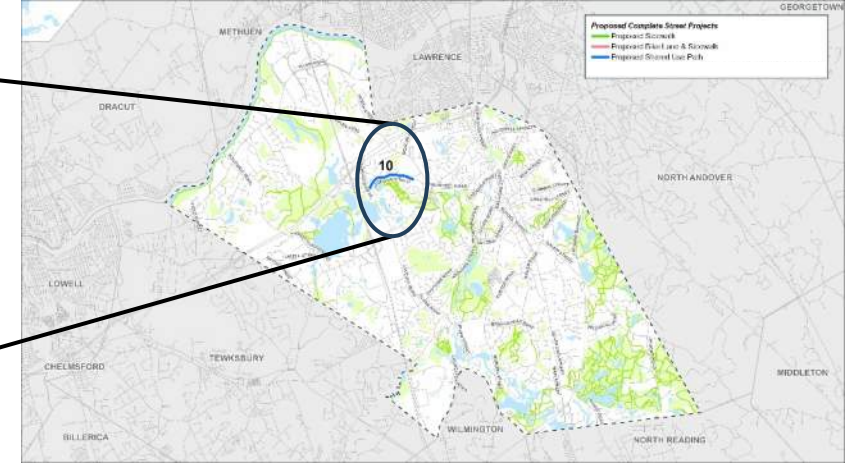
10

HIGH PLAIN ROAD SHARED USE PATH

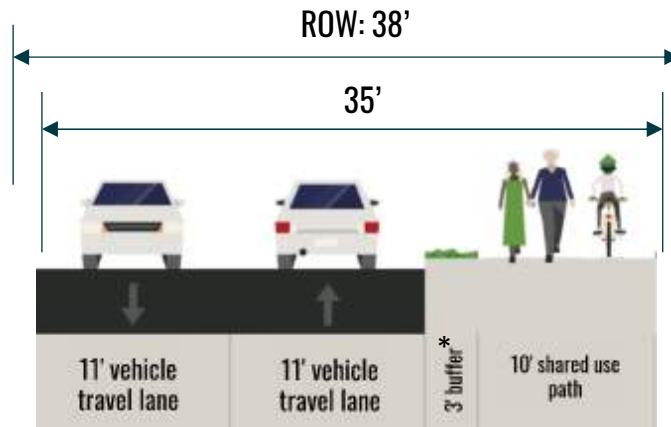
GREENWOOD ROAD TO WEST ELEMENTARY SCHOOL



- Provides access to West Elementary School, Doyle Link Park, & other destinations
- Connects to proposed facilities on Greenwood Road (Project #8) & existing sidewalk further east on High Plain Road
- Will likely impact utility poles & trees



High Plain Road near Spencer Court, looking east

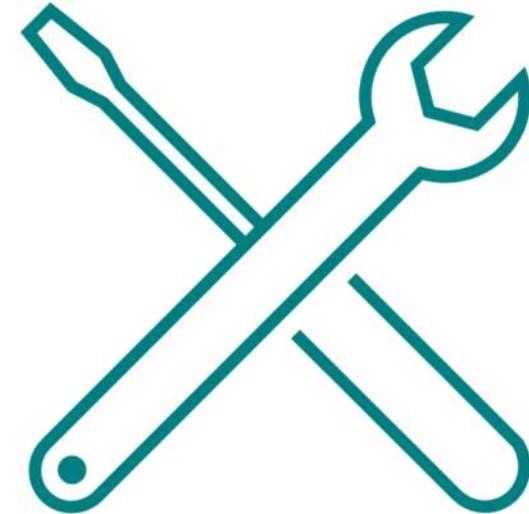


*Grass strip buffer may be reduced or removed due to roadside obstacles

DESIGN TOOLKIT

DESIGN TOOLKIT

- Pedestrian infrastructure
- Bicycle infrastructure
- Speed management



PEDESTRIAN INFRASTRUCTURE

DESIGN ELEMENTS



CURB EXTENSIONS / BULBOUTS



REDUCTIONS IN CURB RADII



REFUGE ISLANDS

PEDESTRIAN INFRASTRUCTURE

DESIGN ELEMENTS



DAYLIGHTING



RECTANGULAR RAPID FLASHING BEACONS (RRFBs)



PEDESTRIAN SIGNAL IMPROVEMENTS

BICYCLE INFRASTRUCTURE

DESIGN ELEMENTS



BICYCLE CROSSWALKS



PROTECTED INTERSECTIONS



BIKE BOXES & TWO-STAGE TURN BOXES

BICYCLE INFRASTRUCTURE

AMENITIES



BIKE PARKING



BIKE SHARE PROGRAMS



BIKE REPAIR STATIONS

SPEED MANAGEMENT TOOLS

HORIZONTAL DEFLECTION



CHICANES



MINI ROUNDABOUTS



MEDIANS / PEDESTRIAN ISLANDS

SPEED MANAGEMENT TOOLS

VERTICAL DEFLECTION



RAISED INTERSECTIONS



RAISED CROSSWALKS

NEXT STEPS

NEXT STEPS

- Finalize pedestrian & bicycle networks
- Draft Active Transportation Plan document
- Draft Complete Streets Prioritization Plan (15-35 projects)

Q&A

Questions or comments? Email us at completestreets@andoverma.us

