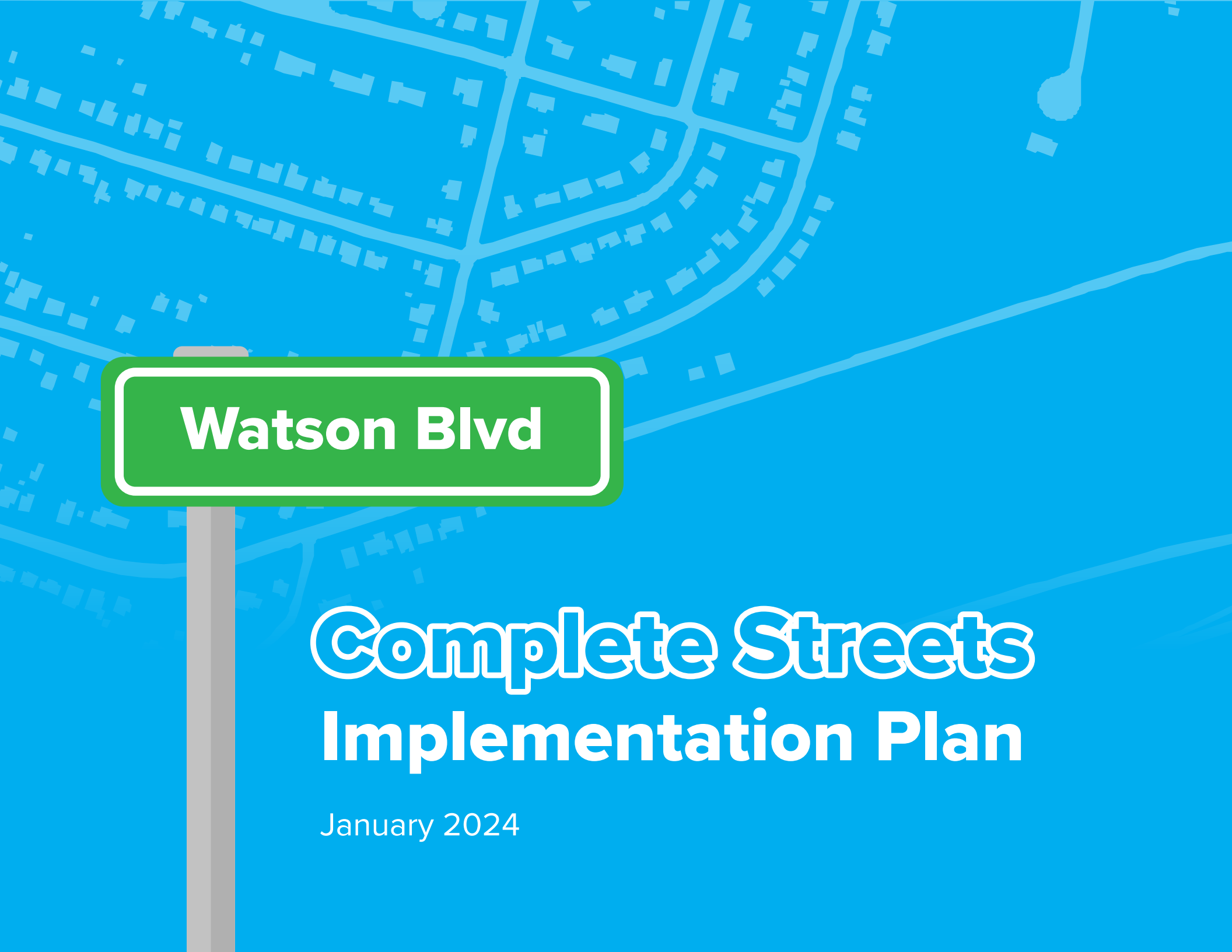




**Watson Blvd**

# **Complete Streets Implementation Plan**

January 2024

---

*This plan was prepared for Broome County and Binghamton Metropolitan  
Transportation Study (BMTS) by Bergmann Associates.*



---

# Contents

## 01

### Introduction

|                    |    |
|--------------------|----|
| Purpose            | 02 |
| Study Area Context | 04 |
| Public Feedback    | 06 |

## 02

### Existing Conditions

|                     |    |
|---------------------|----|
| Roadway             | 10 |
| Crashes             | 12 |
| Multi-modal Transit | 14 |
| Land Use            | 16 |
| Zoning              | 20 |
| Parcel Ownership    | 24 |
| Utilities           | 26 |
| Environment         | 28 |
| Flooding            | 32 |

## 03

### Recommended Design

|          |    |
|----------|----|
| Overview | 38 |
| Zone 1   | 40 |
| Zone 2   | 42 |
| Zone 3   | 44 |
| Zone 4   | 46 |
| Zone 5   | 48 |
| Zone 6   | 52 |
| Zone 7   | 54 |

## 04

### Implementation Plan

|                   |    |
|-------------------|----|
| Phasing           | 58 |
| Next Steps        | 60 |
| Potential Funding | 62 |

## A

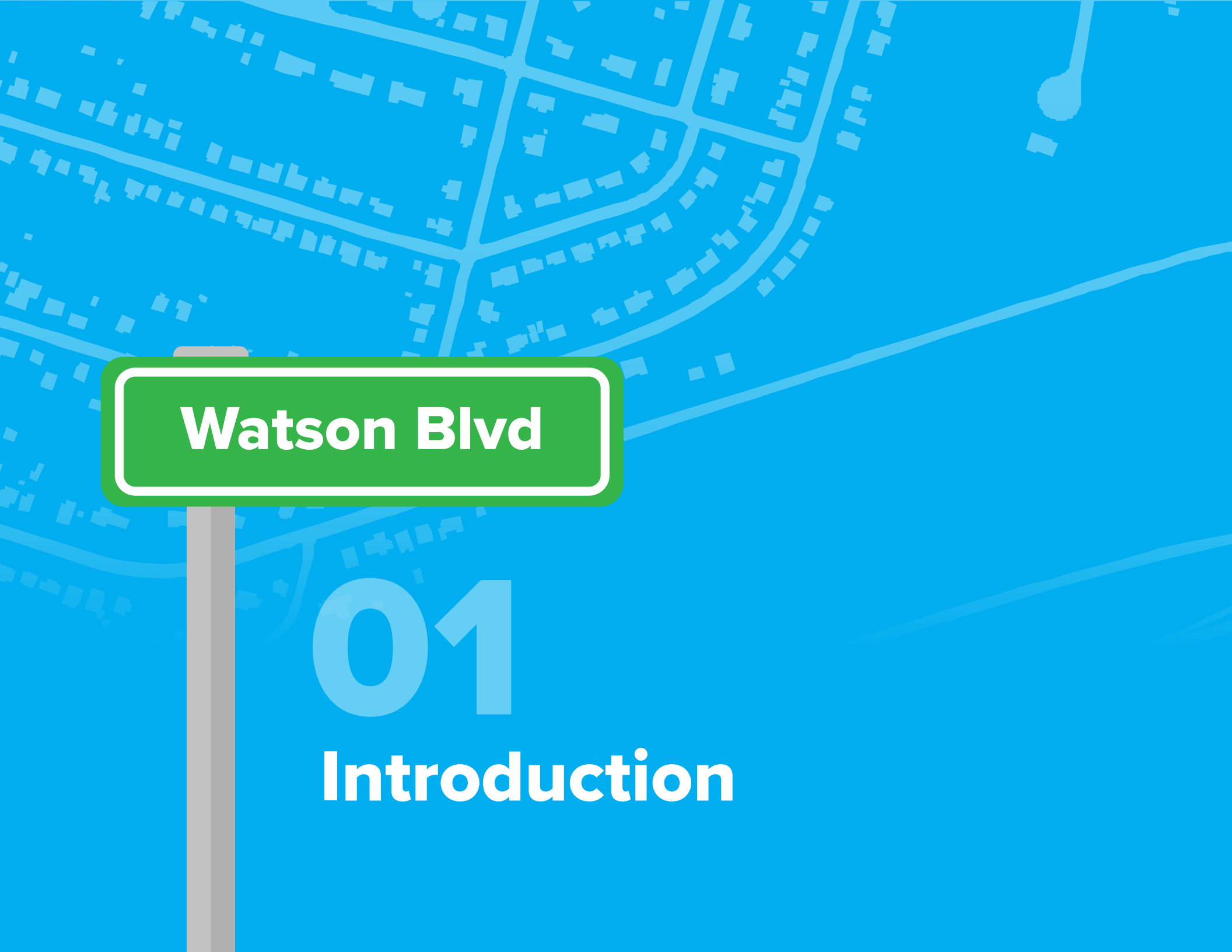
### Appendix A

Concept Plan Design Drawings

## B

### Appendix B

Preliminary Cost Estimates



**Watson Blvd**

**01**

**Introduction**





*Cars travel along Watson Boulevard near the former IBM Country Club.*

# Purpose

An introduction to the purpose and goals of the Watson Boulevard Complete Streets Implementation Plan.

## Purpose

The purpose of this plan is to identify feasible “complete streets” improvements along the 2-mile stretch of Watson Boulevard from Hooper Road to Valley Plaza in the Town of Union. “Complete streets” provide mobility, access, and safety for all users and modes of transportation, from pedestrians and cyclists to drivers and transit riders.

## Process

This plan was developed for Broome County and Binghamton Metropolitan Transportation Study (BMTS) by a Project Team of transportation engineers and planners. The planning process began in March 2023 and concluded in January 2024. The Project Team was advised by a Steering Committee made up of representatives from BMTS, the Broome County Department of Public Works and Department of Planning, and the Town of Union Department of Economic Development. Opportunities for public feedback were provided throughout the planning process. The Project Team conducted several site visits and reviewed available data to evaluate the corridor (*Chapter 02*). Two conceptual designs were produced as part of the planning process. The Steering Committee identified one of these concepts as the preferred alternative. This preferred alternative is the recommended design for the Watson Boulevard Complete Streets corridor, as explained in detail in *Chapter 03*.



*A cyclist rides in the shoulder of Watson Boulevard near Wilkins Way.*

### Outcomes

This plan produced concept-level design drawings (*Appendix A*) and preliminary cost estimates (*Appendix B*) for the recommended multi-modal improvements along the Watson Boulevard corridor. These materials, in addition to this plan, can be used as supporting justification for funding applications to advance the final design and construction of the recommended improvements.

### Next Steps

An implementation plan for the recommended improvements is included in *Chapter 04*. Final design and engineering is required to advance the concept-level design drawings created as part of this planning process to construction-ready documents. Once funding is secured, construction is recommended to be phased in two parts.



### Key Findings

- 01 It's possible.** This plan determined that it is feasible to implement multi-modal improvements along Watson Boulevard in the study area.
- 02 First step complete, more to come...** This plan is the first step in the process of transforming Watson Boulevard. Future phases will finalize and implement the design recommendations included here.





## Study Area Context

An overview of the Watson Boulevard study area and the surrounding context.

### Location

Watson Boulevard is located in the southeastern portion of the Town of Union and is an important connector between the Villages of Endicott (1.0 mile west) and Johnson City (0.9 miles east). The City of Binghamton is also located a short distance from Watson Boulevard (2.2 miles east). Watson Boulevard is paralleled on its south side by the Norfolk Southern Railroad and New York State Routes 17 and 17C. The Susquehanna River is also located south of the corridor.

### Connectivity

Watson Boulevard is a primary east-west connector between Endicott and Johnson City. It is a lower-speed, lesser-trafficked alternative to NYS Route 17 which parallels Watson Boulevard to the south. Watson Boulevard serves drivers making local trips between homes and businesses along the corridor and in Endicott and Johnson City. Nearby destinations include the Oakdale Commons Mall and Wegmans in Johnson City. Drivers can also directly access westbound Route 17C from the corridor. BC Transit Route 35 runs along the corridor providing service from Endicott to Binghamton. Considering its lower speed and lower traffic volumes, Watson Boulevard has the potential to be a better utilized connection for pedestrians and cyclists, especially with targeted multi-modal improvements.



**Map extent**  
For maps on following pages

### Destinations

Destinations along the corridor attract mostly local trips. Businesses on this stretch of Watson Boulevard include a restaurant and bar, a driving range, a canine enrichment center, a sports equipment retailer, a gift shop, and other small businesses and service providers. Community uses along the corridor include a church and a benevolent society. The Traditions at the Glen Hotel and Spa is also located along the corridor, with its main entrance at 4101 Watson Boulevard. Traditions is a larger attraction with a regional draw. The former IBM Country Club site is located on the corridor as well. The country club building has been demolished and redevelopment plans are in progress for the site.

### Planning Context

Improving multi-modal connectivity along this stretch of Watson Boulevard is part of the larger regional vision outlined in BMTS's *Moving our Future Forward 2045*, which envisions a future where people of all ages and abilities can travel safely and access destinations to meet their needs.



### Key Findings

- 01 An important east-west connection.** Watson Boulevard connects Endicott to Johnson City and is an alternative to NYS Route 17 for making local trips.
- 02 Potential to be better.** Although the lower speeds and lower traffic volumes on Watson Boulevard are ideal for pedestrians and cyclists, many feel unsafe on the corridor. Multi-modal improvements can improve the experience and increase pedestrian and cyclist use of the corridor.





# Public Feedback

Feedback from residents and property owners along the Watson Boulevard corridor was used to inform the recommendations included in this plan.

## Feedback Process

An online survey was conducted to gather feedback from residents and property owners adjacent to the Watson Boulevard corridor. To advertise the survey, postcards were distributed to all properties adjacent to the corridor (approximately 155 addresses) and flyers posted at businesses along the corridor.

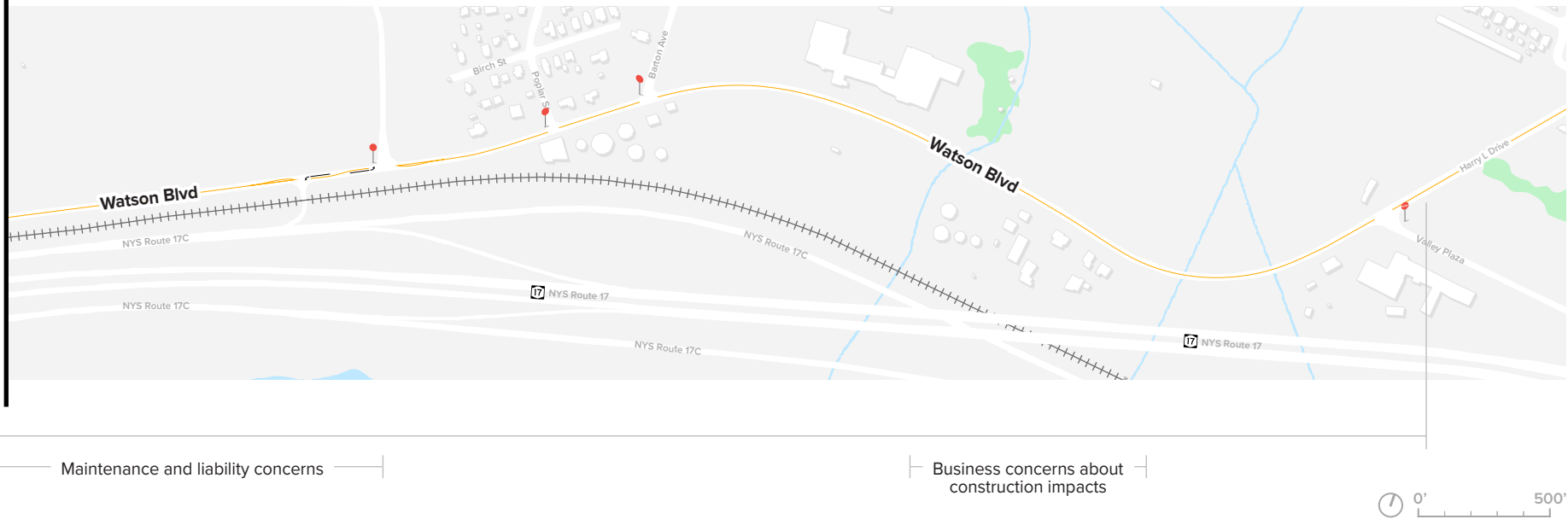
Project Team members also conducted in-person and virtual meetings with multiple stakeholders along the Watson Boulevard corridor including:

- Confluence Running
- Pour House
- Elks Lodge
- Several Valley Plaza businesses
- Walsh Family (owners of Traditions property)
- County Legislator Jason Shaw

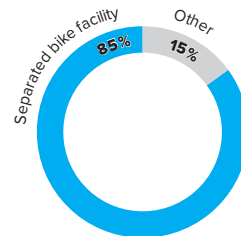
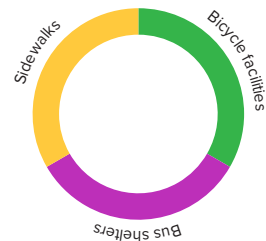
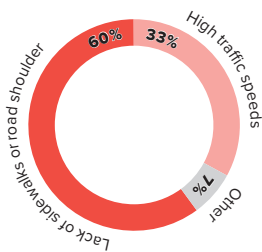
## Key Themes from Public Feedback

Community members are generally supportive of sidewalks along Watson Boulevard and, if space allows, bike facilities as well. Support for sidewalks was stronger east of Groveland Avenue, with less support for sidewalks on the western portion of the corridor. Community members identified traffic calming and improved safety as key priorities, in addition to enhanced pedestrian crossings. Noted concerns included maintenance, snow removal, and liability of installed improvements as well as property takings, potential construction impacts to businesses, and potential for increased foot traffic in residential areas.



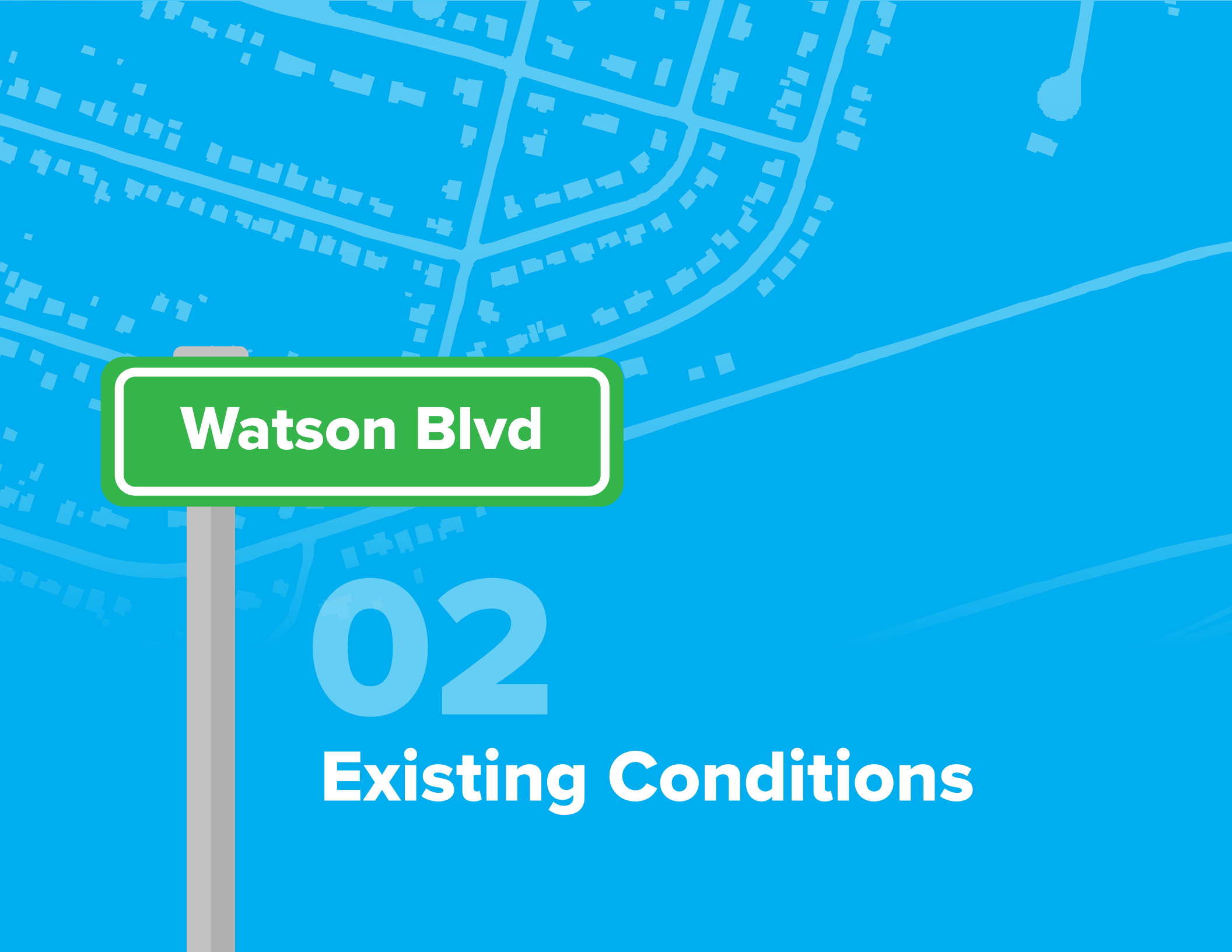


## SURVEY RESULTS



## Key Findings

**01 Community members generally support multi-modal improvements.** There is public support for sidewalks, improved crossings, and bike facilities where possible along Watson Boulevard. These types of improvements can help address community concerns related to safety, high traffic speeds, and lack of dedicated pedestrian space.



**Watson Blvd**

**02**

**Existing Conditions**





# Roadway

A look at the physical conditions of the Watson Boulevard corridor and how traffic moves through it.

## Roadway Description

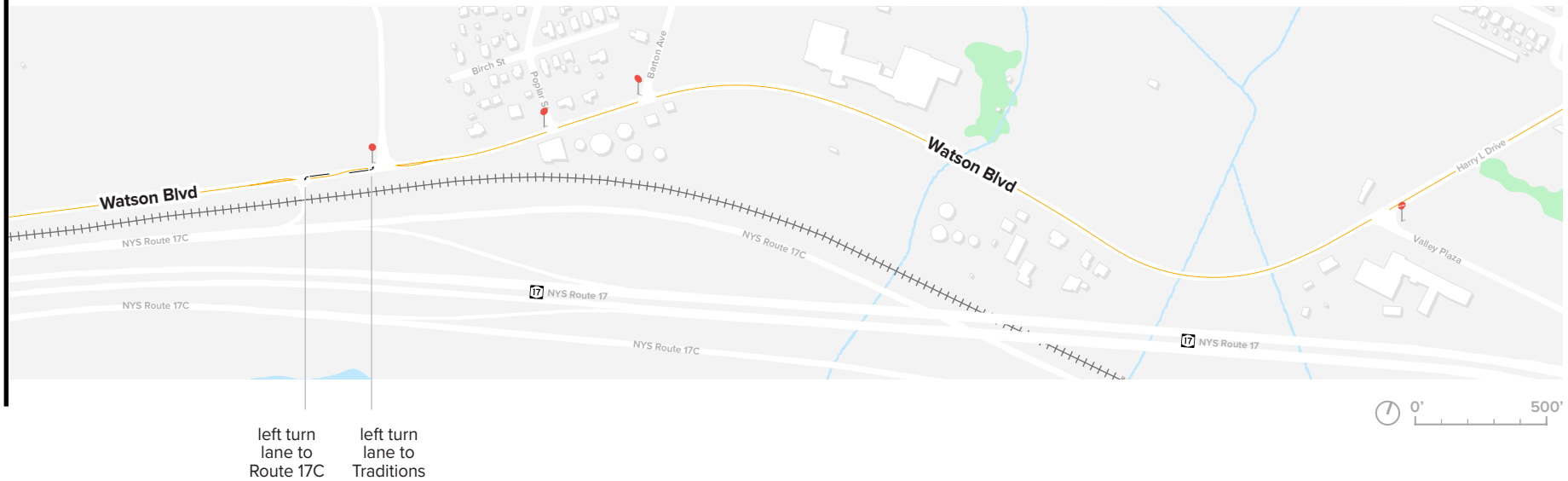
The 2-mile stretch of Watson Boulevard (County Road 56) between Hooper Road and Valley Plaza is an east-west connector between Endicott and Johnson City. The roadway has one travel lane in each direction and a posted speed limit of 30 miles per hour (mph). It is classified as an urban minor arterial by the NYS Department of Transportation (NYSDOT) and is designed to connect drivers into NYS Route 17. The elevation of the roadway is highest in the west end (around 920 feet) and levels out at 830 feet after going over the hill to the west

of Country Club Road. The right-of-way (ROW) varies in width along the corridor, narrowing to 30-40 feet at the west end and widening to over 60 feet at the east end. The roadway itself also widens to include left turn lanes at Hooper Road, the ramp to NYS Route 17C, and the Traditions at the Glen entrance. The existing pavement along the corridor is in “very good condition” according to the BMTS Pavement Condition Ratings Survey dated August 2021.

## Intersections

There are 9 intersections along the corridor. The intersection at Watson Boulevard and Hooper Road is signalized with a dedicated left turn lane. The remaining intersections are unsignalized 3-legged (“T”) intersections at: Valley Street, Groveland Avenue, Country Club Road, the Traditions at the Glen driveway, Poplar Street, Barton Avenue, and Valley Plaza. These side streets are stop-controlled while traffic on Watson Boulevard flows freely. The lack of signals or stop control along this long stretch makes it easier for cars to speed, which decreases safety for all road





users and makes the corridor less friendly to pedestrians and bicyclists. There are also numerous curb cuts for driveways along the corridor. Most of the driveways are in the residential area between Hooper Road and Groveland Avenue. There are also some curb cuts on the north side for residences near Poplar Street and on the south side for businesses between Poplar Street and Valley Plaza.

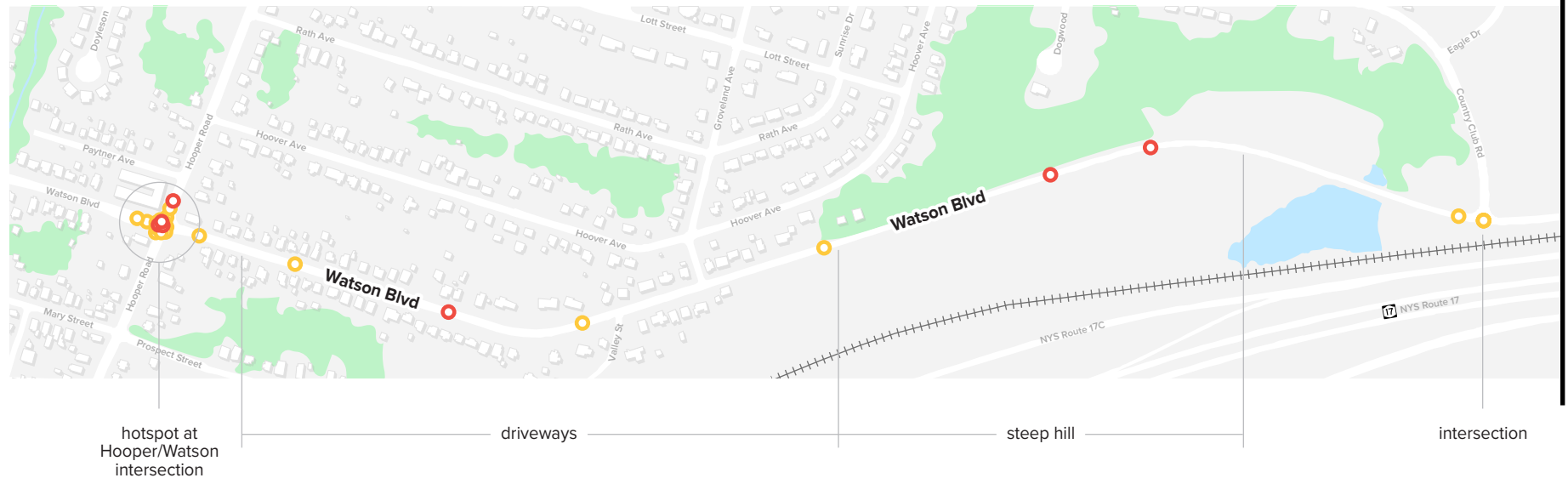
### Traffic

The Average Annual Daily Traffic (AADT) on Watson Boulevard is 3,139 vehicles per day between Hooper Road and Country Club Road and 8,512 vehicles per day from Country Club Road to Valley Plaza. Relatively few trucks use the corridor, with trucks accounting for 3% of total traffic in the western section of the corridor and 2% in the eastern section. Based on data from the NYSDOT Traffic Data Viewer, the average measured speed for vehicles traveling along the Hooper Road to Valley Plaza stretch of the corridor is 39 mph, with an 85th-percentile speed of 44 mph. This is significantly above the posted speed limit of 30 mph.



### Key Findings

- 01 Speeding is an issue.** The lack of signals or stop controls along the corridor makes it easy for vehicles to speed. On average, most vehicles travel 10 mph over the speed limit.
- 02 Available space varies.** Variable right-of-way (ROW) width along the corridor means that some areas can accommodate dedicated space for pedestrians and cyclists while other areas cannot.



# Crashes

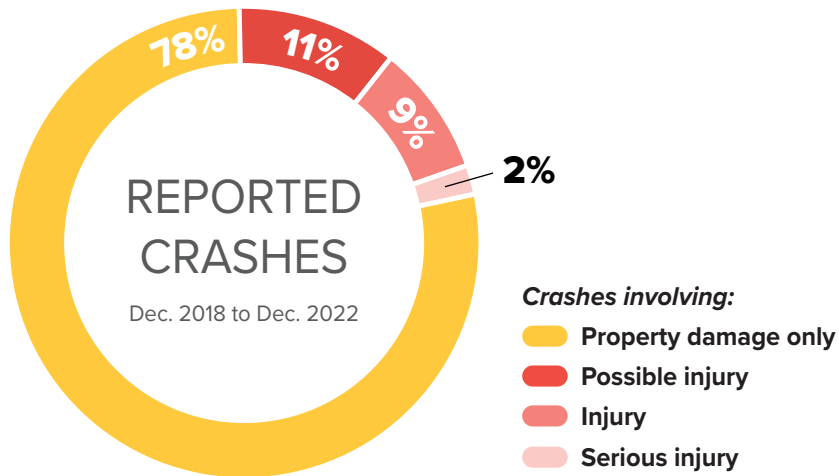
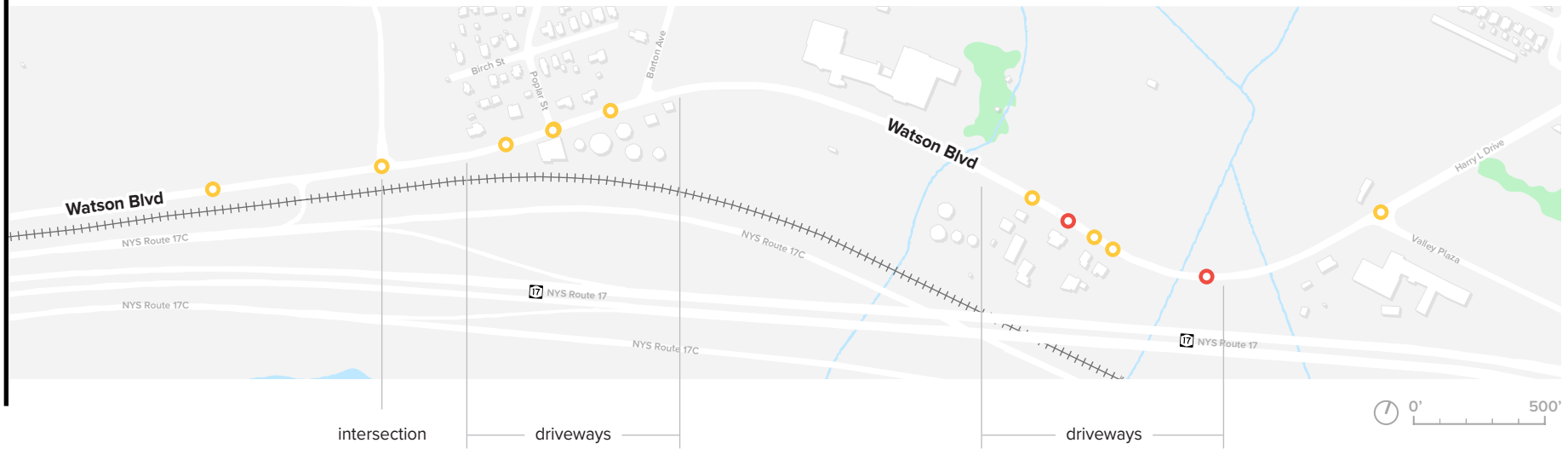
A review of crash history along the corridor and what that means for safety concerns.

## Overview

Crash data for this study covers the 4-year period from December 2018 through December 2022. During this period, there were 45 reported crashes along Watson Boulevard in the study area. This averages to approximately 11 crashes per year. Of the 45 reported crashes, 10 resulted in injury (22%) and the remaining 35 involved only property damage (78%). None of the reported crashes involved pedestrians or cyclists, though this does not rule out the possibility that these types of crashes occurred but were not reported to police.

## Crash Locations

A majority (26 or 57%) of the reported crashes for the study period occurred at the Hooper Road/Watson Boulevard intersection. This is to be expected as intersections often have higher crash rates than roadway stretches. The other crashes reported along Watson Boulevard tended to happen at driveways or at intersections with side streets. The commercial areas near Poplar Street and around the Pour House saw several crashes, as did Watson Boulevard's intersections with Country Club Road, the Traditions driveway, and Valley Plaza. The steep hill east of Groveland Avenue also saw several crashes, including a few with reported injuries.



## Key Findings

- 01 Intersections and driveways are problem areas.** Most reported crashes occurred at intersections or driveways. The Hooper/Watson intersection is a crash hotspot.
- 02 Reported crashes did not involve pedestrians or cyclists.** This finding may suggest that (1) pedestrian and cyclist use on the corridor is low and did not involve any crashes or (2) that these types of crashes were not reported to police.



# Multi-modal Transit

Roads should be useful for more than just cars. Let's see how Watson Boulevard accommodates pedestrians, cyclists, and transit users too.

## Pedestrian Travel

Sidewalks along the stretch of Watson Boulevard from Hooper Road to Valley Plaza are extremely limited. Along the entire 2-mile corridor, there is less than 200 linear feet of sidewalk. There is one short stretch connecting the Hooper Road sidewalk into the BC Transit Hooper Road stop on the south side of Watson Boulevard and another short stretch at the Groveland/Watson intersection on the south side of Watson Boulevard. While pedestrians are permitted to walk in the shoulder,

there are only some stretches along the corridor where the shoulder is actually marked. In other areas, there is no delineated shoulder which forces pedestrians to walk in the road or in the adjacent grass. The lack of sidewalks or marked shoulders along Watson Boulevard, as well as drivers' propensity to speed, makes the corridor feel unsafe and unwelcoming to pedestrians.

## Bicycle Travel

Watson Boulevard is designated as Local Bike Route 1 and is the primary designated bike route that connects Endicott to Johnson City. Bicyclists must share the travel lane with vehicles or utilize the shoulder where one exists. Just to the south of Watson Boulevard, NYS Route 17C is a secondary BMTS-designated bike route. The Route 17C alternative is less welcoming to bicyclists because that roadway has higher vehicle volumes, two lanes of traffic in each direction, and a posted speed limit of 55 mph. Watson Boulevard, by comparison, has the potential



to be an excellent multi-modal connector, with lower speeds and lower traffic volumes than Route 17C, residential areas along the corridor, and commercial nodes at both ends that would likely support the use of dedicated pedestrian and bicycle facilities.

### Public Transit

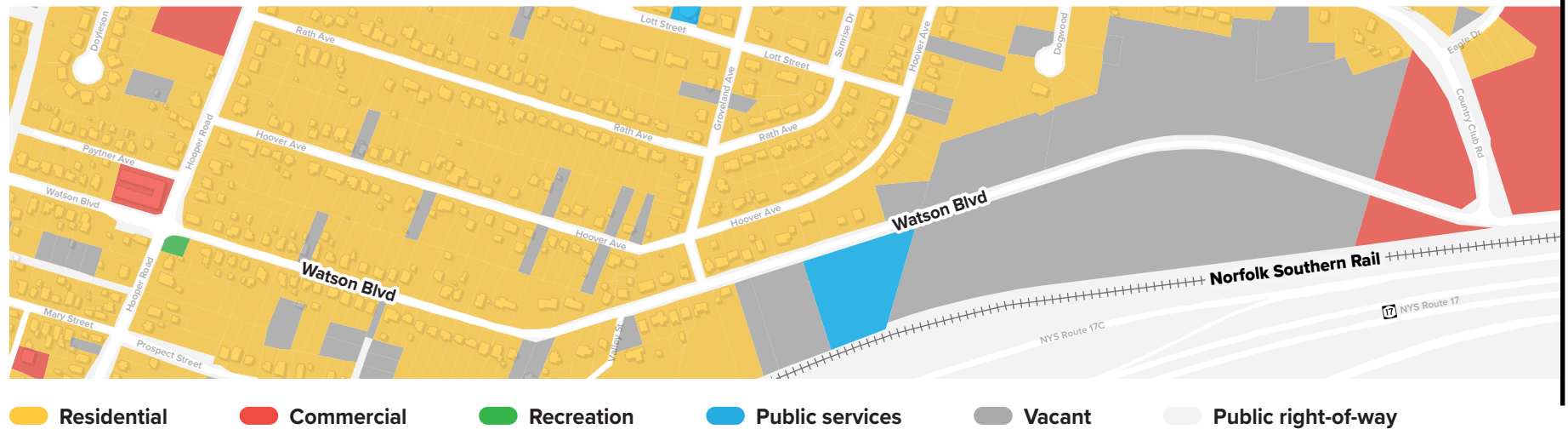
Broome County (BC) Transit operates Bus Route 35 along Watson Boulevard with 8 stops in each direction between Hooper Road and Valley Plaza. The reported ridership in the study area is low, averaging 19 riders per day on weekdays and 15 riders per day on weekends. Hooper Road is the only bus stop that is ADA accessible with a sidewalk connection and bus shelter. It was recently updated by BMTS consistent with the BC Transit Bus Stop Improvement Plan. The rest of the bus stops are denoted by a sign, except for the Heritage Country Club and Heritage Parking Lot stops which are not marked. None of these stops have bus shelters, benches, sidewalk connections, ADA platforms, or crosswalks.



### Key Findings

- 01 Not pedestrian- or cyclist-friendly.**  
The lack of sidewalks and bike lanes and drivers' propensity to speed makes walking and biking feel unsafe.
- 02 Transit amenities are sparse.** Bus stops do not have basic amenities like benches.
- 03 Transit ridership is low, for now.**  
Planned residential developments and improvements to transit stops could increase ridership along the corridor.





# Land Use

Land use patterns tell us how an area functions. Different categories of land use have different transportation needs.

## Residential Land Uses

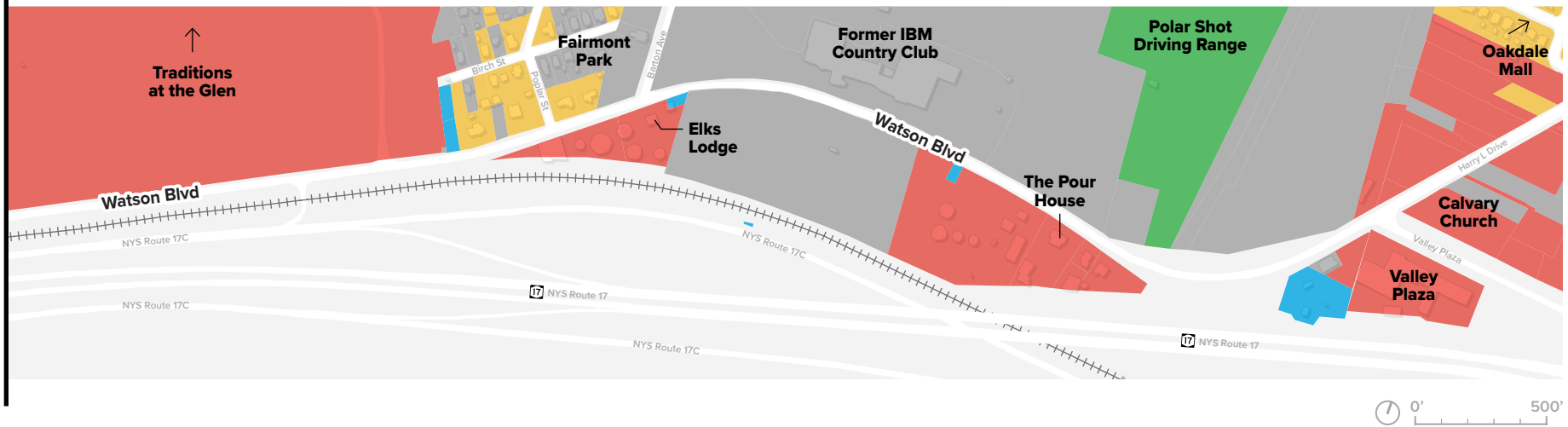
Residential land uses along Watson Boulevard include one- and two-family year-round residences, which are primarily concentrated at the western end of the corridor between Hooper Road and Groveland Avenue. This area is part of the larger North Endwell East Neighborhood in the Town of Union. There is another small residential enclave – the Fairmont Park neighborhood – to the east near Poplar Street. Residential parcels make up more than a quarter (27% or 5,130 feet) of Watson Boulevard's

frontage, giving the corridor a strong residential feel, particularly in the areas noted above. The residential parcels that front Watson Boulevard vary in size from 0.1 acres to 1.5 acres, but the majority are less than a half-acre in size. On average, frontage for residential parcels along Watson Boulevard is 73 feet.

With one- and two-family residences, a significant amount of car trips can be expected as residents commute to and from work and other destinations. Low-density residential areas also tend to see higher rates of pedestrians and cyclists as residents walk, run, and bike in and around their neighborhoods.

## Commercial Land Uses

Commercial land uses are located primarily east of Country Club Road. Most commercial parcels that front Watson Boulevard are large, averaging over 18 acres in size. The largest commercial parcel is 4101



Watson Boulevard, where Traditions at the Glen Hotel and Spa is located. This parcel is 137-acres, with 2,695 feet of Watson Boulevard frontage. Other commercial uses include a canine enrichment center, an equipment restoration and sales company, a restaurant, an electrical distributor, a retail gift shop, storage for landscaping and snow removal business, a parking lot for Valley Plaza shopping center and the Heritage Commons commercial plaza.

Transportation needs associated with commercial land uses include parking as well as infrastructure to connect pedestrians to businesses, like sidewalks and crosswalks.

### Recreation Land Uses

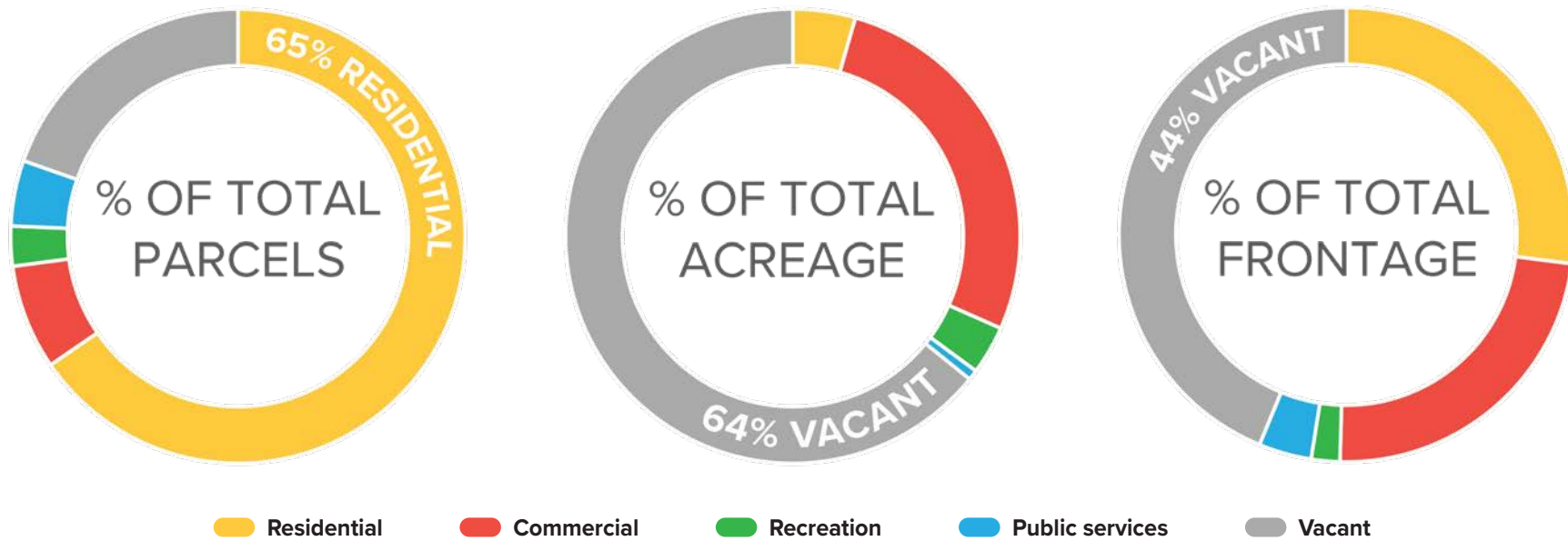
There are three recreation land uses within the Watson Boulevard corridor: Polar Shot (a 17-acre driving range), the Elks Lodge (1 acre), and the pocket park at the corner of Watson and Hooper (0.2 acres).

Recreation uses like parks and open spaces are more likely than some other land uses to attract visitors who arrive by foot or by bike. It's important to create accessible connections to these locations.

### Public Service Land Uses

Public service land uses include four publicly-owned flood control parcels: a 2.7-acre parcel owned by Broome County, two small properties owned by the Town of Union, and a small property owned by the Village of Endicott. Also part of the public services land uses is a privately-owned property next to the Elks Lodge classified as an electric and gas facility.

Public service land tends not to need dedicated transportation facilities, save a few parking spaces for occasional maintenance visits by municipal employees. In some cases, because these parcels are publicly-owned, they can provide opportunities to repurpose some land adjacent to the right-of-way for wider sidewalks or multi-use trail facilities.



## Land Use

Continued

### Vacant Land Uses

Vacant land makes up the largest percentage of Watson Boulevard's frontage, accounting for 44% or 8,300 linear feet. This vacant land includes 13 residential parcels, 7 commercial parcels (concentrated mostly in the eastern end of the corridor), and 1 public utility parcel. Most vacant parcels are large, averaging over 16 acres in size. As noted in the *Parcel Ownership* section, many of these large vacant parcels are owned by a single property owner.

## Upcoming Developments

Several large vacant parcels are proposed for redevelopment, as discussed below. Development of these vacant properties in the future could have a significant impact on the character of the area and transportation needs along Watson Boulevard.

### **4301 Watson Boulevard**

4301 Watson Boulevard is a vacant, 9-acre parcel that formerly hosted the IBM Country Club building. The building was demolished in 2022 and the current site plans include a 75-unit apartment complex with multiple amenities. As of January 2024, the project developers were working to secure additional funding for the project, with groundbreaking expected in late spring or summer of 2024.

### **4311 Watson Boulevard**

4311 Watson Boulevard is a 256-acre site that hosts an 18-hole golf course, formerly part of the IBM Country Club, that is now operated by Traditions at the Glen. In September 2022, the Town of Union Planning Board approved with conditions a special use permit for a large-scale solar project at this site, with approximately 50 acres of solar facilities. The solar facilities would not impact the existing golf course. Plans for the solar installation are still in development.

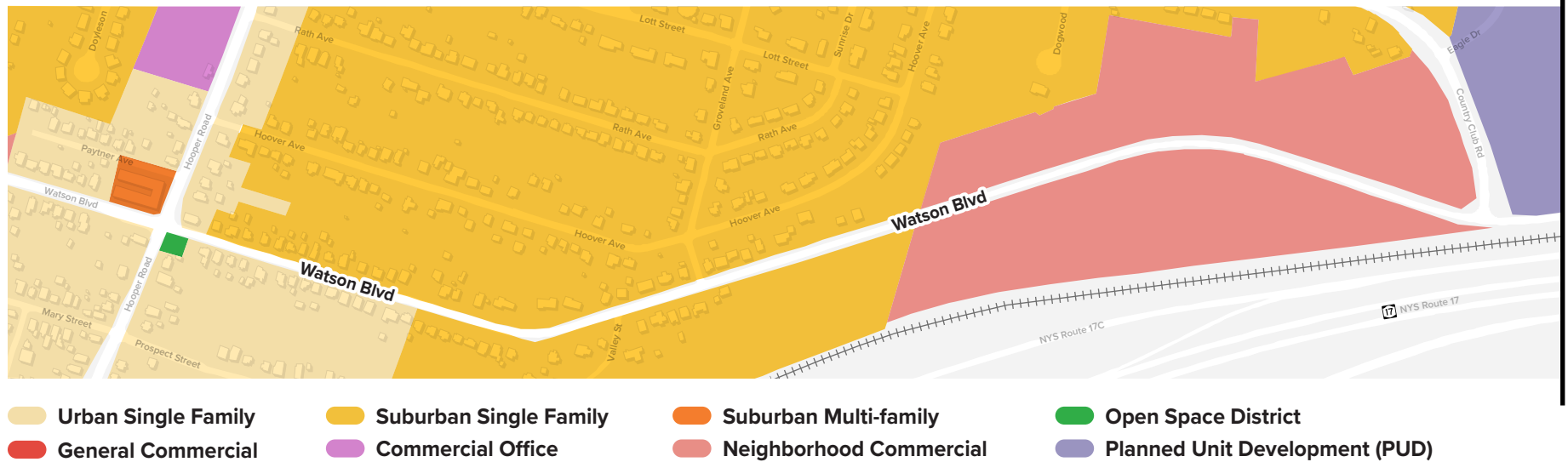
### **3901 Watson Boulevard**

3901 Watson Boulevard is a 26-acre parcel located west of Country Club Road that spans both the north and south sides of the Watson Boulevard corridor. It is currently designated as residential vacant land. In 2022, there was a proposal to rezone the property as the Preliminary Endwell Storage PUD Plan. As of November 2022, the proposal was withdrawn by the developer after residents signed a petition opposed the Storage PUD Plan.



## Key Findings

- 01 A mix of uses.** The mix of land uses along Watson Boulevard creates many different transportation needs, like driving to the grocery store, taking the bus to work, walking the dog, going for a bike ride, or visiting a local business. Improvements along the corridor should consider and support all these needs and users.
- 02 A lot of vacant frontage.** Almost half of Watson Boulevard's linear frontage is made up of vacant parcels. The redevelopment of these parcels presents a significant opportunity to integrate multi-modal transportation improvements into these projects from the beginning.
- 03 Changes are coming.** Several large vacant parcels that front the corridor are proposed for redevelopment that could bring new uses, new residents, and new visitors to the corridor. It's important to consider how these changes will impact transportation needs on Watson Boulevard.



# Zoning

Zoning regulates development. It can be a useful tool for encouraging certain design elements, like multi-modal facilities.

## Overview

The Consolidated Zoning Ordinance of the Town of Union, Village of Johnson City, and Village of Endicott, New York regulates land uses and development standards along Watson Boulevard. Residential districts are concentrated on the western section of the corridor while commercial uses and Planned Unit Development areas make up most of the eastern section of the corridor.

## Urban Single Family (USF) Residential District

The purpose of the Urban Single Family Residential District is to preserve the traditional village neighborhoods and is generally characterized by owner-occupied, single-family, detached homes on lots approximately 4,000 square feet in size. Permitted residential uses include attached and detached single-family residences, accessory uses and home occupations as well as two-family residences by special permit. A minimum front setback of 25 feet is required.

9% of Watson Boulevard's frontage is zoned as USF, primarily in the Fairmont Park neighborhood around Poplar Street and along a southern stretch of the corridor near Hooper Road.



### Suburban Single Family (SSF) Residential District

The Suburban Single Family Residential District is also intended to preserve traditional village neighborhoods, but for larger lot sizes – 9,000 square feet and above. The minimum front setback in this district is increased to 30 feet. Unlike in the USF, single-family attached and two-family residences are prohibited in the SSF.

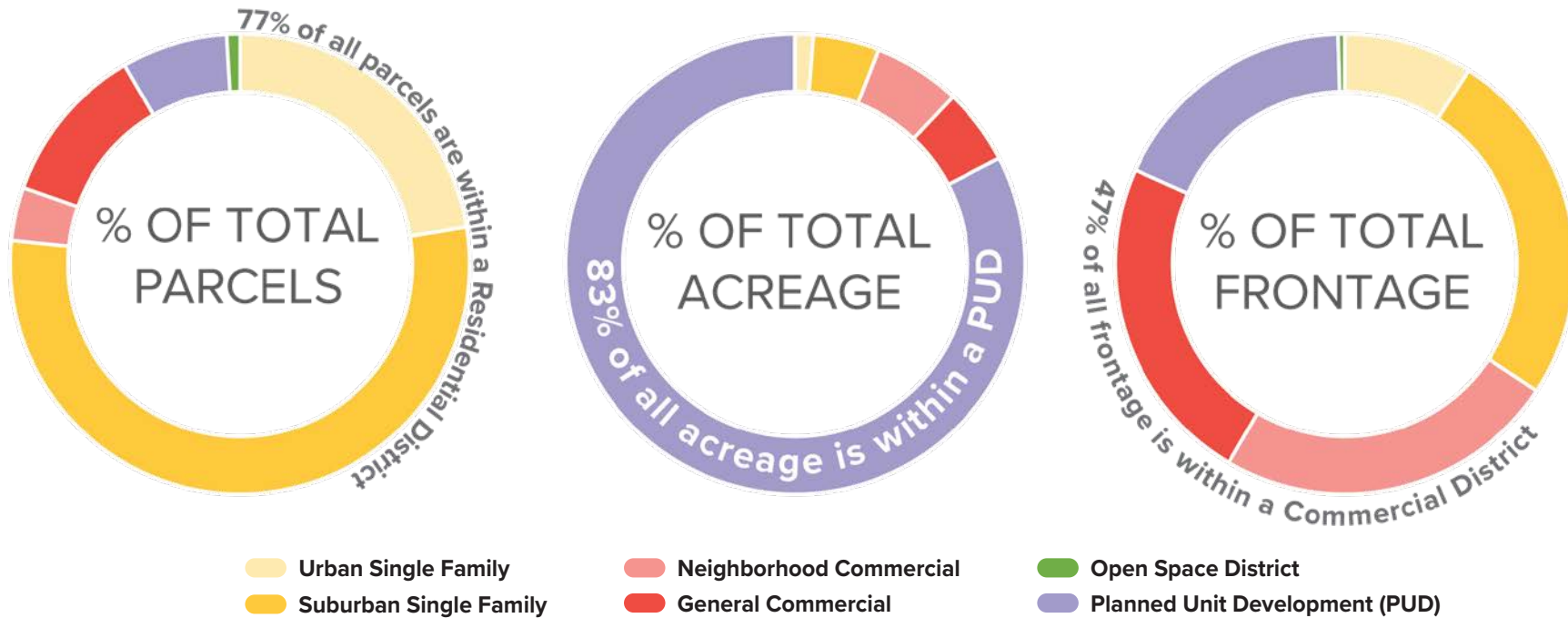
The SSF is the largest zoning district along the corridor, accounting for 25% or 4,800 linear feet of frontage. It is located along the western section of the corridor, from Hooper Road past Groveland Avenue in the North Endwell East Neighborhood.

### Neighborhood Commercial (NC) District

The Neighborhood Commercial District is designed to encourage smaller-scaled commercial development that is compatible with the scale and intensity of adjacent residential and non-commercial sites. Permitted commercial uses include professional, medical or dental offices, dance, art or music studios, bank or financial institutions, retail or personal service stores or shops, and lodging. Setback requirements include a minimum front setback of 20 feet or average of front setbacks on the two adjacent lots (whichever is less).

The NC district accounts for 24% or 4,600 linear feet of Watson Boulevard's frontage. Most of this frontage comes from 3901 Watson Boulevard which fronts the corridor on both the north and south sides.





# Zoning

Continued

## General Commercial (GC) District

The General Commercial district permits various commercial uses including all those within the Neighborhood Commercial district as well as shopping centers, veterinary clinics, laundromats, dry cleaning facilities, drinking establishments or taverns, fast-food, sit-down or take-out restaurants, dance hall, theater and private clubs, bowling alleys, indoor recreation facilities, conference or meeting centers, motor vehicle parking lots, outdoor sales or displays, and drive through establishments. A minimum front setback of 30 feet is required.

Most commercial properties that front Watson Boulevard are zoned GC. They account for 23% or 4,400 linear feet of total frontage. These properties are located in the eastern end of the corridor and include the former IBM Country club, Valley Plaza, and other businesses on the south side of the corridor.

### Open Space District

The Open Space District is a special purpose district that applies to all publicly-owned or accessible parks, squares, residential areas, natural wildlife areas, waterfront areas, and cemeteries. The minimum front yard setback is the average front yard depth of building(s) along the block or 35 feet if no buildings are within 500 feet of the parcel.

The pocket park at the corner of Watson Boulevard and Hooper Road is designated within this Open Space District.

### Planned Unit Development (PUD)

The Consolidated Zoning Ordinance allows for flexibility in zoning requirements through a process called Planned Unit Development. PUD is intended to allow a unified development plan to be applied over a large area, at least 10 contiguous acres in size or greater. Developers propose requirements for area, setback, density, and height that may differ from those in the base zoning code. The proposed requirements as well as the proposed development plan are subject to review and approval by the Planning Board.

The Traditions at the Glen property (4101 Watson Boulevard) as well as several properties east of the former IBM Country Club site are located in a PUD. These properties account for 18% or 3,400 linear feet of Watson Boulevard's frontage.

As noted in the *Land Use* section, several development plans have been proposed for PUD parcels along the corridor. At present, the Homestead Village Preliminary Planned Unit Development Development Plan is approved for 4311 Watson Boulevard (the Former IBM Country Club golf course). The plan proposes a mix uses including: a townhouse residential development, a hotel and conference center including a golf course, dental office use, a public utility facility, and a solar power renewable energy facility.

PUDs are a good way to encourage multi-modal improvements as they give the Planning Board the opportunity to require developers to include certain elements, like multi-modal improvements, as part of their plans.



### Key Findings

- 01 A tale of two corridors.** The character of the Watson Boulevard corridor is markedly different between the east and west sides. The western section of the corridor is primarily residential with smaller lot sizes, while the eastern section has much larger lot sizes and a mix of commercial and PUD districts. As the character of the corridor changes, so to do the types multi-modal facilities that can be accommodated by and fit the needs of these areas.
- 02 PUDs are a major opportunity.** Large PUD areas along the corridor present opportunities for the Planning Board to require multi-modal improvements as part of proposed development plans.
- 03 Planning ahead.** Some of the largest currently-vacant parcels along the corridor are zoned for commercial or Planned Unit Development. It's important to consider and plan for how this type of development at these sites may impact transportation needs along the corridor.



## Parcel Ownership

Parcel ownership impacts where multi-modal improvements can be made and helps us identify partners we'll need to work with for implementation.

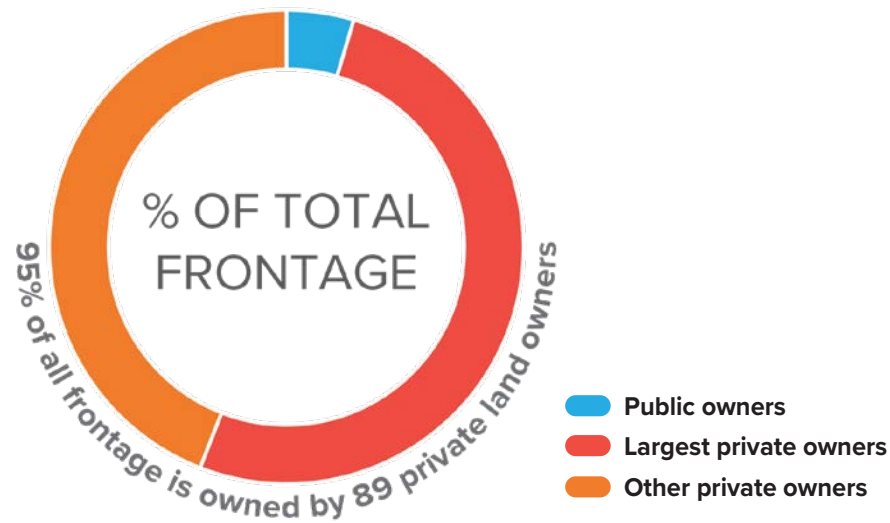
### Privately-Owned Parcels

95% of the parcels that front Watson Boulevard are privately owned. In total, there are 89 different private land owners with frontage along the corridor. Of these private land owners, there are 4 who own more than half of Watson Boulevard's frontage, collectively accounting for 51% or 9,700 linear feet of frontage. These land owners include: Homestead Village Development Group (which owns the Traditions property at 4101 Watson Boulevard as well as 4207, 4300, and 4311 Watson Boulevard);

Walsh Realty LLC (which owns 3901 Watson Boulevard), 4301 Watson Blvd LLC (which owns the former country club site at 4301 Watson Boulevard); and 98 Acres LLC (which owns the Polar Shot driving range site and 4 other adjacent parcels near the levee). The benefit of having a few large private owners along the corridor is that multi-modal improvements can be applied over long stretches without having to coordinate with or get agreements from multiple property owners. It follows that these large land owners will be important partners in implementing and maintaining multi-modal improvements along the corridor.

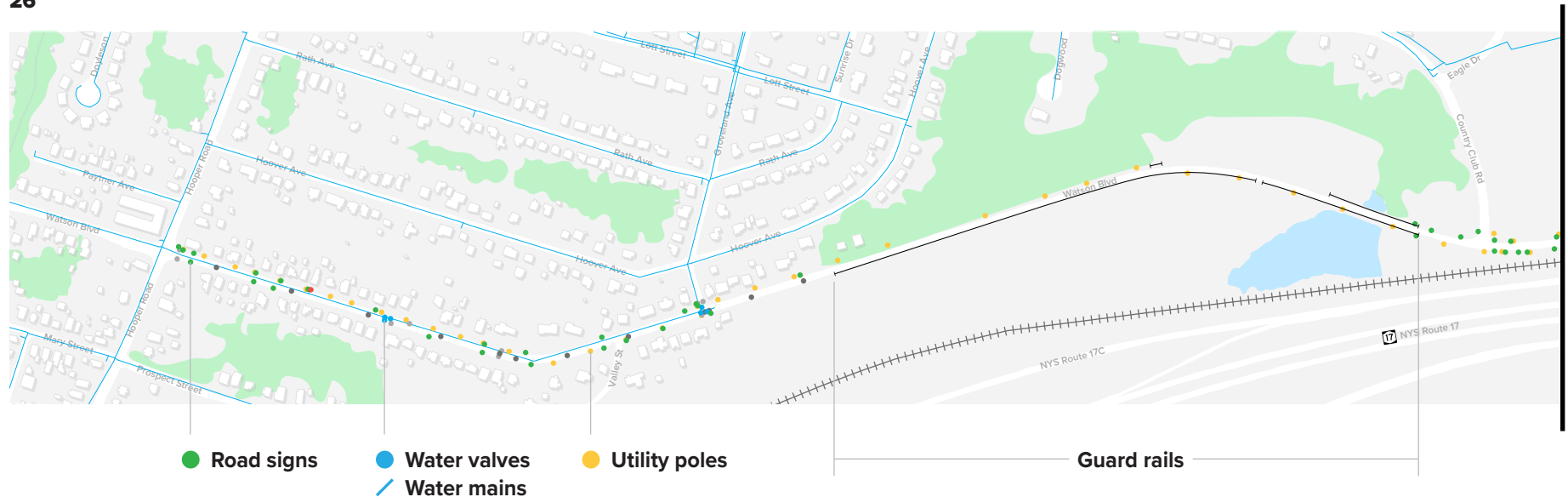
### Publicly-Owned Parcels

Publicly-owned parcels make up 5% or roughly 950 feet of Watson Boulevard's frontage. While public parcel frontage along Watson Boulevard is limited, multi-modal improvements can still be made in the public right-of-way – which has the advantage of being immediately adjacent to the roadway. Ideally, multi-modal improvements would be made entirely within the public right-of-way or adjacent public parcels to limit the need for easements.



## Key Findings

- 01 A few private land owners own most of Watson Boulevard's frontage.** Working with these owners will be critical to ensure improvements can be implemented as continuously as possible while also meeting the needs of adjacent property owners.
- 02 Limited publicly-owned frontage.** This limits opportunities to extend improvements outside the right-of-way, unless private owners are willing to accommodate them.



# Utilities

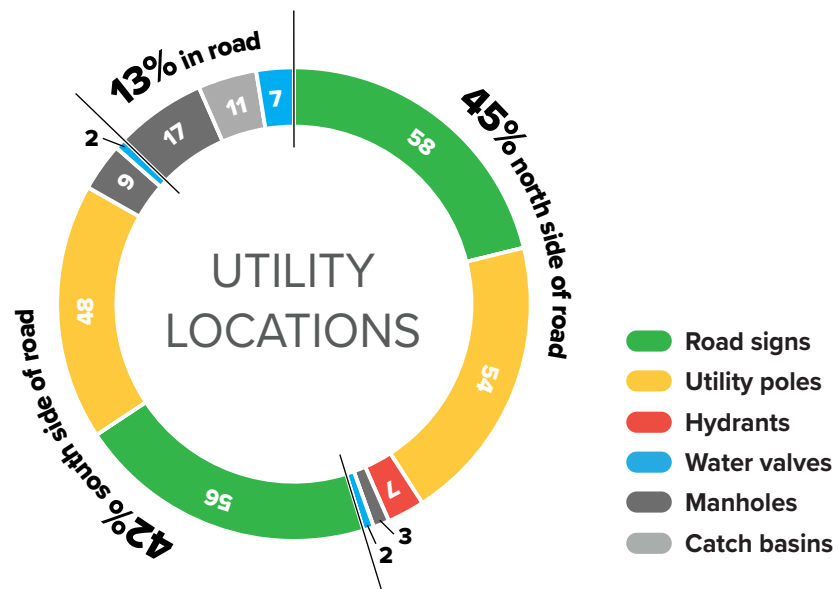
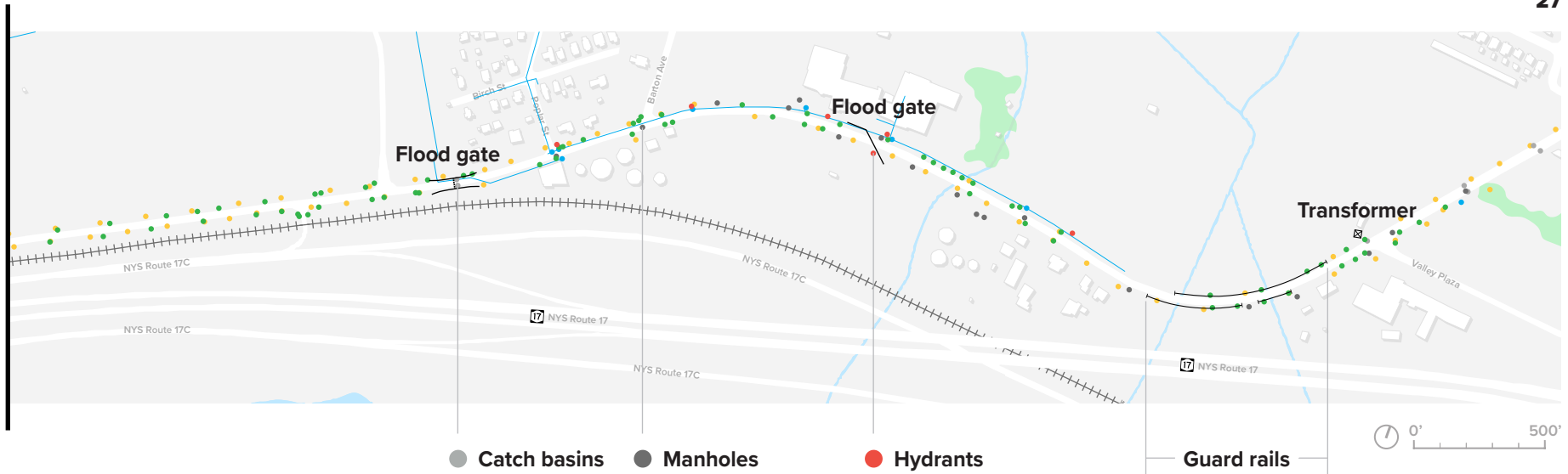
A look at where utilities are located along the corridor and how they could impact multi-modal improvements.

## Overview

A visual field assessment was used to identify pieces of utility infrastructure – like utility poles, manholes, road signs, and water mains – along the Watson Boulevard corridor. Note that a road survey will need to be conducted prior to developing construction drawings for any potential improvements. The most common utilities in the study area are road signs (114 total) and utility poles (102 total).

## Utility Locations

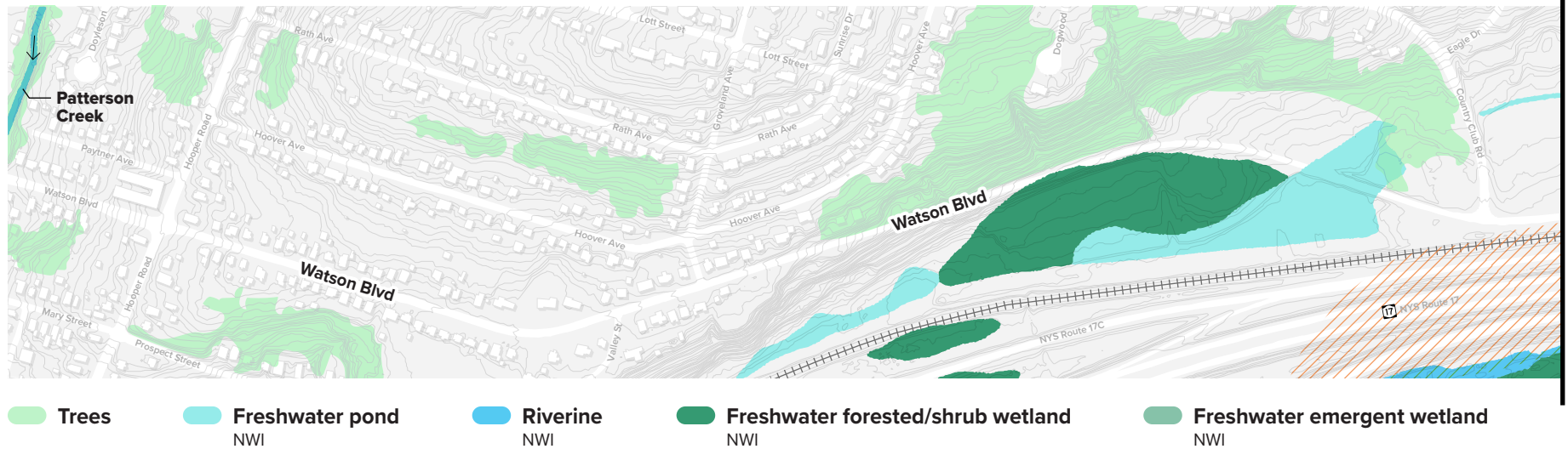
Utility infrastructure is located within the street and on both sides of the street in the adjacent right-of-way. Most utilities are located in the right-of-way, with 45% on the north side of the street and 42% on the south side of the street. Utilities located in the right-of-way limit opportunities to use this space for multi-modal facilities. The right-of-way in some areas of the corridor is also constrained by guard rails, notably on the hill east of Groveland Avenue and at the Johnson City levee. Other utilities that may impact where multi-modal facilities can be located are the two flood gates and the railroad – which is closest to the roadway on the south side of the street between Country Club Road and the Traditions driveway.



## Key Findings

**01 Utility infrastructure constrains both sides of the corridor.** Existing utilities impact where multi-modal facilities can be located. Relocation or modification of utilities may be necessary to accommodate multi-modal improvements. Flood infrastructure, guard rails, and the railroad will be the most challenging infrastructure to work around.





# Environment

Environmental conditions along Watson Boulevard, like wetlands and topography, impact how multi-modal facilities can be located and designed.

## Susquehanna River Watershed

The Watson Boulevard corridor is part of the Susquehanna River Watershed. The watershed drains approximately 27,500 square miles of New York, Pennsylvania, and Maryland before emptying into Chesapeake Bay. The segment of the Susquehanna River located just south of the Watson Boulevard corridor is designated by the NYS Department of Environmental Conservation (NYS DEC) as a Class A waterbody, meaning that it is safe for all forms of recreation, fishing, and drinking water.

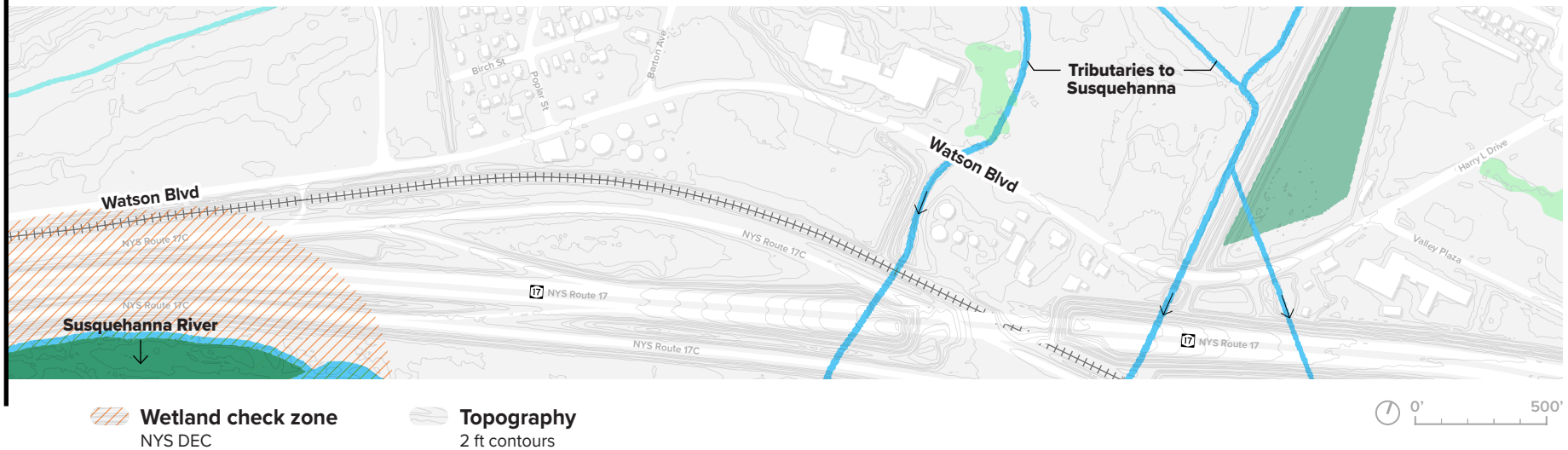
Several tributaries and levee channels cross under Watson Boulevard in the eastern section of the corridor. These tributaries are designated as Class C waterbodies, meaning they are safe for fishing and non-contact recreation activities.

## Wetlands

Wetlands are areas where water covers or saturates the soil. These areas are mapped by NYS DEC and by the U.S. Fish and Wildlife National Wetlands Inventory (NWI).

## NYS DEC Wetlands

Under the Freshwater Wetland Act, New York State maps and regulates wetlands that are 12.4 acres in or larger or that have unusual local significance. A 16.4-acre regulated freshwater water is located south of NYS Route 17. Though this wetland is not located within the Watson Boulevard corridor, the “check zone” that surrounds the wetland does



extend into Watson Boulevard. The check zone is a 500-foot buffer around state regulated wetlands where the actual wetland may occur. Projects that encroach into this check zone should consult with the regional DEC office to determine where the actual wetland boundary is and to mitigate impacts. It follows that multi-modal improvements in this area of the corridor may require field delineation of the wetland boundary.

### ***NWI Wetlands***

The NWI identifies three wetlands along Watson Boulevard. NWI wetlands are not regulatory but they often identify smaller wetlands that might not be included in the State inventory. NWI wetlands along the corridor include a 1.36-acre freshwater pond, a 7.47-acre freshwater forested/shrub wetland, and a 5.57-acre freshwater pond in the western section of the corridor between Watson Boulevard and the railroad tracks. Also along the corridor is a 6.98-acre freshwater emergent wetland north of Watson Boulevard adjacent to the embankment near Valley Plaza. The

NWI also identifies three riverine channels in the eastern portion of the corridor. Channels can be either naturally or artificially created conduits which periodically or continuously contain moving water or form a connecting link between two bodies of standing water. In this case, these channels are tributaries to the Susquehanna River.

### **Topography**

Elevations along Watson Boulevard range from 820 feet above sea level to 920 feet above sea level, with higher elevations in the western end of the corridor that slope down as the roadway travels east. Almost 70% of parcels within the corridor are identified as having steep slopes. A notable area of steeper slopes occurs east of Groveland Avenue; here the land to the north slopes upward and the land to the south slopes downward while Watson Boulevard descends to the east as it approaches Country Club Road. Much of the northern slope in this section is heavily forested.



*Steep forested area east of Groveland Avenue.*

---

# Environment

## Continued

### Soils

According to the U.S. Department of Agriculture (USDA), soils along Watson Boulevard can accommodate but are not particularly well-suited for path and trail development. Between Valley Plaza and Country Club Road, soils are “somewhat limited,” meaning that they have features that are moderately favorable for paths and trails. West of Country Club Road, soils have features that are “very limited” for paths and trails. This area also has steep slopes which may affect soil suitability.

### Forested and Treed Areas

Much of Watson Boulevard is dotted with tree canopy. There is a notable area of forest and natural succession on the north side of Watson Boulevard that extends from Groveland Avenue to Country Club Road.

### Environmental Cleanup and Preservation

There are several areas within the Watson Boulevard corridor where there are environmental concerns. The western portion of the corridor is enrolled in the State’s Superfund Program as part of the Endicott Area-Wide Investigation related to a reported spill at IBM in 1979. Also present along or adjacent to the corridor are four inactive solid waste landfill sites including: the Holcomb Dump at 3624 Watson Boulevard and Holcomb Drive, the Watson Boulevard Underpass at Watson Boulevard and Country Club Road, the Polar Shot driving range site at 4311 and 4423 Watson Boulevard, and Dellapenna Dump #2 at 800 Valley Plaza Drive. These sites were identified as part of a State review of inactive landfill sites and





*NWI-identified freshwater emergent wetland area west of Country Club Road.*

groundwater here may be contaminated by the presence of PFAS compounds. Several chemical bulk storage facilities are also located along the corridor at 4216 and 4324 Watson Boulevard, a petroleum bulk storage facility at 4301 Watson Boulevard, and a reclaimed mine at the Country Club subdivision.

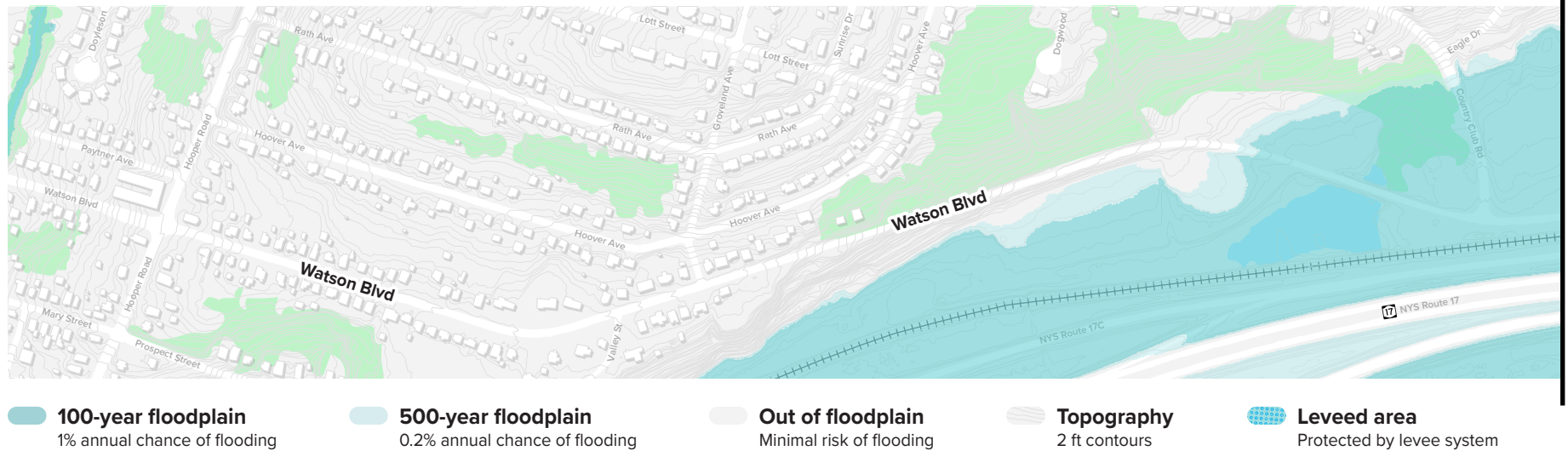
#### **Broome County Hazard Mitigation Plan**

Broome County updated its Hazard Mitigation Plan (HMP) in 2019 to identify potential environmental hazards and proactive strategies for mitigating impacts to these hazards. Recommendations specific to Watson Boulevard include protecting the Watson Boulevard Pump Station up to the 500-year flood level and improving flood protection at Fairmont Park. Since 2019, Fairmont Park flood protection has been improved with the installation of a flood gate near the former IBM Country Club and the elevation of existing levee components.



#### **Key Findings**

- 01 Slopes are steep in some areas.** Steep slopes in some areas may impact where multi-modal facilities can be sited, and whether they can be ADA-accessible.
- 02 Wetlands and historic environmental contamination must be considered.** The presence of these features will require additional permitting, added costs, and environmentally-sensitive construction.



# Flooding

Watson Boulevard is susceptible to flooding. It has several flood control structures that will impact the location and design of any multi-modal improvements.

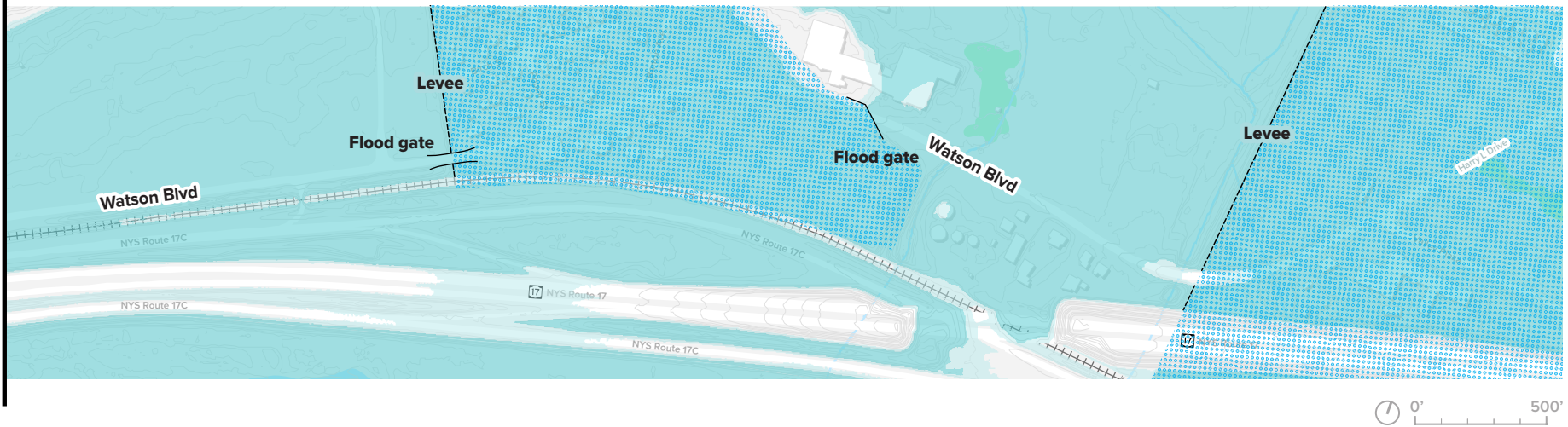
## Flood Insurance Rate Maps

The Federal Emergency Management Agency (FEMA) creates Flood Insurance Rate Maps (FIRMs) to identify areas of high, moderate, and low risk of flooding. Communities use these maps to set minimum building requirements and lenders use them to determine flood insurance requirements. The current effective FIRM for the Town of Union is from 1980. In 2010, the FIRM for the Watson Boulevard area was preliminarily

updated. Although not legally binding, the 2010 preliminary FIRM provides a better picture of flood risk along Watson Boulevard today, and incorporates modeling of the Fairmont Park Levee System which was constructed after the 1980 FIRM was developed. The 2010 FIRM is mapped above and discussed in the following sections.

## Floodplains

A considerable portion of Watson Boulevard, from just west of Country Club Road to Valley Plaza and into Johnson City, is located in the 100-year floodplain. This area is subject to flooding by the 1% annual chance flood (also known as the base flood or the 100-year flood). The 1% annual chance flood has a 1% chance of being equaled or exceeded in any given year. Along this flood-prone stretch of Watson Boulevard, multi-modal facilities should be designed in consideration for flooding and with materials that can handle inundation.



## Flood Control Systems

### ***Fairmont Park Levee System***

The Fairmont Park levee system includes a 0.47-mile long earthen berm embankment at a base flood elevation of 838 feet. It was constructed in 1989 as part of the Fairmont Park Flood Control Project. The structure prevents flooding of the area behind the levee, protecting 157 residents, 44 buildings, and \$19 million in property value according to the National Levee Database. The levee system also includes an overflow channel, a combination of several drainage piles, a pump station, and two stop-log flood gates that cross Watson Boulevard. One of these flood gates is located just west of Poplar Street at the embankment. The other flood gate, which was constructed more recently, is located east of Barton Avenue near the entrance to the former IBM Country Club. In 2020, improvements were made to the levee system to raise the existing levee component to an elevation of 841 feet.

Both of these flood gates constrain the right-of-way and limit the amount of space available to accommodate multi-modal facilities. Multi-modal facilities will likely be more difficult to incorporate near the Poplar Street flood gate because this structure has large walls on both sides of the corridor and steep topography over the embankment. The Barton Avenue flood gate is perhaps more accommodating, with a lower-profile design and more gradual slopes.

### ***Johnson City Levee System***

The Johnson City levee system includes a 1.98-mile long embankment that crosses Watson Boulevard east of Valley Plaza. The embankment was constructed in 1961 as part of the larger Endicott, Johnson City, and Vestal (EJV) system – a federally authorized flood risk management project. According to the National Levee Database, the levee system protects 1,014 residents, 354 buildings, and \$59.5 million in property





*Flood gate west of Poplar Street, part of the Fairmont Park levee system.*

# Flooding

## Continued

value. The leveed area protects property to the east of the levee from floodwaters. Modifications were made to this levee system with the construction of NYS Route 17.

There are guard rails in the area of the embankment near Valley Plaza that limit what multi-modal facilities can be incorporated into the right-of-way.

## Floodplain Management

### ***Town of Union Flood Damage Prevention Ordinance***

All SFHAs in the Town of Union must comply with the Flood Damage Prevention Ordinance which regulates land uses, requires development permits, and outlines standards for construction in these areas. The purpose of the ordinance is to minimize public and private losses due to flooding. Having this ordinance also qualifies the Town to participate in the National Flood Insurance Program (NFIP) – a FEMA-managed program that provides flood insurance to property owners, renters, and businesses and helps them recover faster after flood events.

### ***Town of Union Floodplain Management Plan***

The Town of Union Floodplain Management Plan was last updated in 2011 (but prior to the major flood event that occurred that year). The purpose



*Flood gate east of Barton Avenue, part of the Fairmont Park levee system.*

of the plan is to identify flood hazards that may impact the town and to determine appropriate actions to reduce losses, like preserving open space, educating property owners about preparedness measures, and implementing proper stormwater management techniques. The plan specifically highlights the Fairmont Park neighborhood on Watson Boulevard as susceptible to flooding.

#### **Community Rating System (CRS)**

FEMA's Community Rating System (CRS) is a voluntary, incentive-based program that encourages and rewards local floodplain management activities that exceed the minimum standards of the NFIP. The Town of Union has been a participating CRS community since 2008. As a result, flood insurance policy holders in the town receive a 10% discount on their flood insurance premiums.



### **Key Findings**

**01 Flood control structures in the right-of-way limit space for multi-modal facilities.** The flood gates near Poplar Street and Barton Avenue constrain the right-of-way and may limit the kinds of multi-modal facilities that can be accommodated in this areas. The levee and associated guard rails west of Valley Plaza constrain the right-of-way in this area as well.



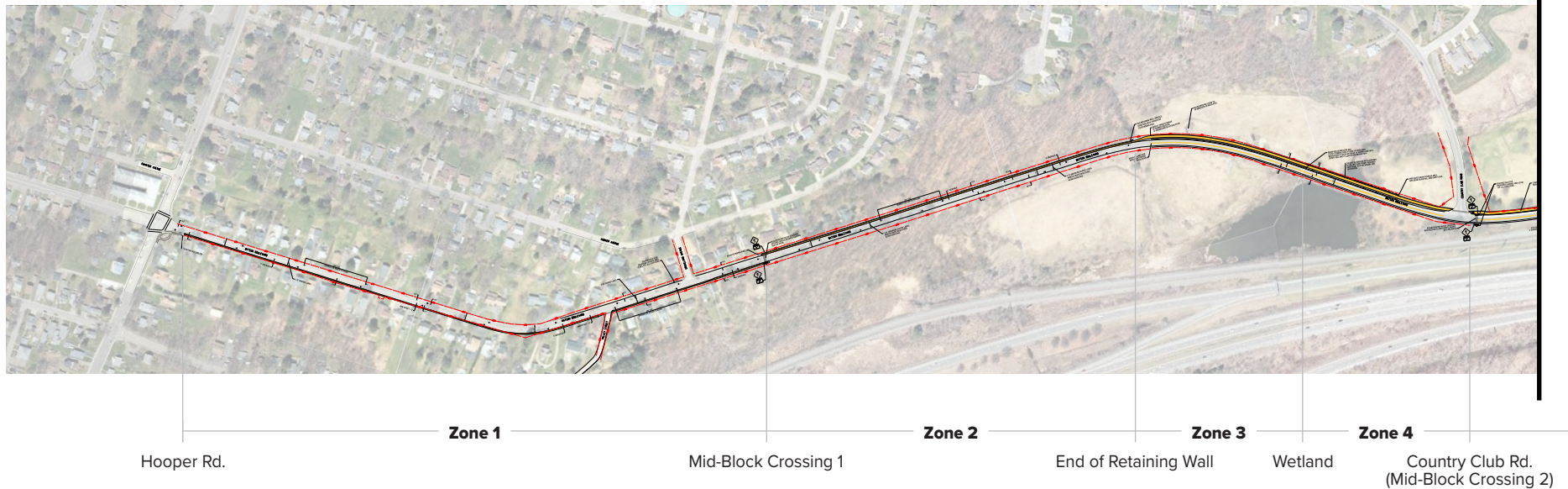
**Watson Blvd**

03

**Recommended Design**







# Overview

An overview of key features of the recommended design for the Watson Boulevard corridor.

## Design Process

Two preliminary concepts were developed as part of the feasibility study process and a preferred concept was identified based on feedback from stakeholders and the Steering Committee as the recommended design for the Watson Boulevard Complete Streets corridor. Each zone of the recommended design is explained in detail on the following pages. The concept-level plan drawings for the recommended design can be found in *Appendix A*.

## Guiding Design Principles

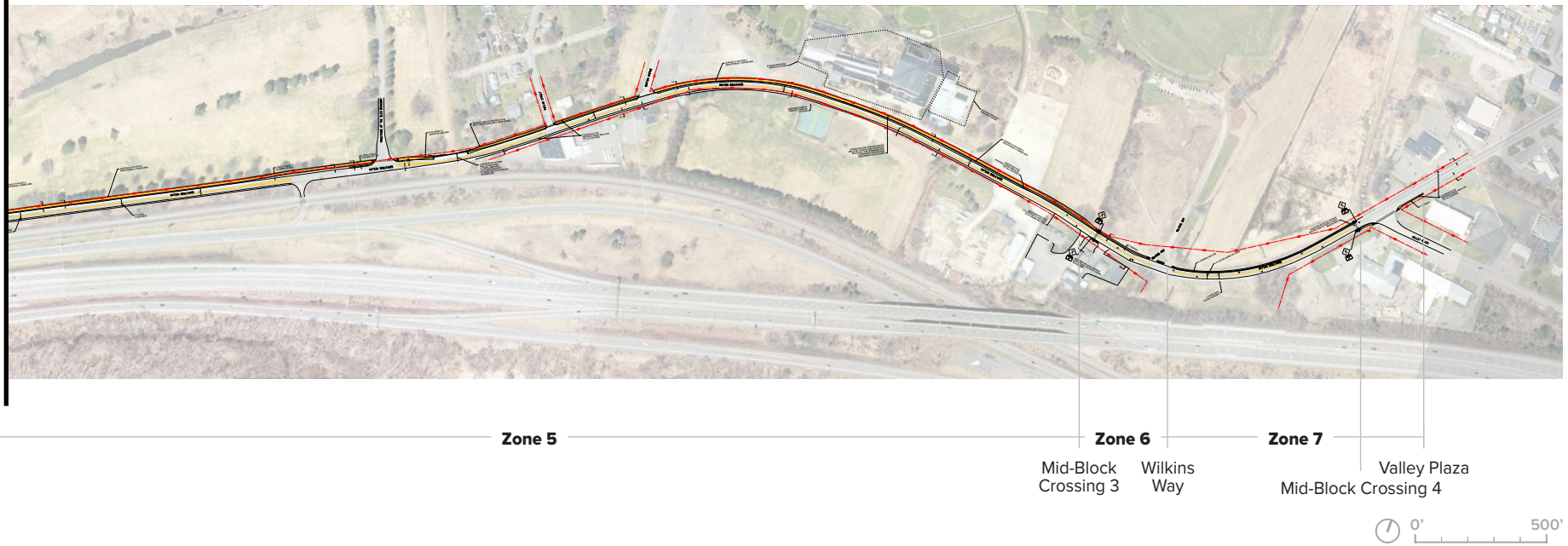
The recommended design for the Watson Boulevard corridor follows several guiding design principles, including:

1. Improving walkability and bikeability as much as possible, by implementing wide shared-use paths where space allows and marking travel lanes with “sharrows” to indicate shared use
2. Creating a continuous connection, by keeping the sidewalk/shared-use path on the same side of the road as much as possible
3. Enhancing pedestrian safety, by improving crosswalks and installing flashing beacons where necessary
4. Improving the transit experience, by upgrading bus stops

## Design Overview

The recommended design changes along the corridor based on available right-of-way space and site conditions. The corridor has been divided into seven zones, each with a different design typology. Zone 1 begins at





Hooper Road at the western edge of the corridor. A 5-foot sidewalk with curbs is proposed on the south side of Watson Boulevard in this zone with 15-foot shared travel lanes. A mid-block crossing transitions the sidewalk to the north side of the roadway just east of Groveland Avenue. Through Zone 2, a 5-foot sidewalk with a retaining wall is proposed on the north side of the road with 13-foot shared travel lanes. Zone 3 begins at the end of the retaining wall where the 5-foot sidewalk transitions to a 10-foot shared-use path that is offset from the road. At this point, the travel lanes narrow to 11-feet with 4-foot shoulders. In Zone 4, the shared use path is protected by guide rails as it crosses the wetland. Through Zone 5, the 10-foot shared-use path remains on the north side of the road. Zone 6 begins just west of Wilkins Way where the shared-use path transitions to a 5-foot sidewalk on the north side offset from the road. Here the travel lanes transition to 13-foot shared lanes. At Wilkins Way, the 5-foot sidewalk shifts adjacent to the road and is protected by a curb. Just west of Valley Plaza, a mid-block crossing transitions the sidewalk to the south side where it extends to the project limits at the end of Zone 7.



## Key Features

- 01 New pedestrian connections.** Wherever possible, a 10-foot-wide shared-use path is provided. Elsewhere, 5-foot sidewalks.
- 02 Improved travel lanes.** Where the shared-use path is provided, travel lanes are re-stripped as 11-foot lanes with 4-foot shoulders. Elsewhere, 13- to 15-foot shared use lanes marked with sharrows.
- 03 Transit stop and pedestrian crossing enhancements.**

# Zone 1

## Hooper Road to Mid-Block Crossing 1

### Recommendations

A new 5-foot-wide sidewalk is proposed along the south side of Watson Boulevard in this zone. The new sidewalk will connect into the limits of the existing sidewalk at the Hooper bus stop. Curbing will be installed along the length of the new sidewalk to buffer the sidewalk from the roadway. A new mid-block crossing will be installed east of Groveland Avenue to transition the sidewalk to the north side of Watson Boulevard in Zone 2. This crossing will be striped with high visibility paint and a flashing beacons (RRFBs) will be installed on both sides of the crossing. When activated, these beacons flash to signal to vehicles that a pedestrian is crossing. Travel lanes in this zone will be marked with “sharrow” symbols to identify the roadway as a shared space between cyclists and vehicles. New bus stop loading area pads will be installed at the Valley and Groveland bus stops to provide a level surface for riders to queue.

### Additional Considerations

#### *Potential Right-of-Way Acquisitions*

There are 13 properties in this zone that will likely require acquisition in fee to allow for the construction of the proposed enhancements. These 13 properties, in addition to one other property, are also likely to require temporary easements during construction for grading behind the sidewalk. Survey may identify other properties that require acquisition in fee or temporary easements during construction.

#### *Drainage Analysis*

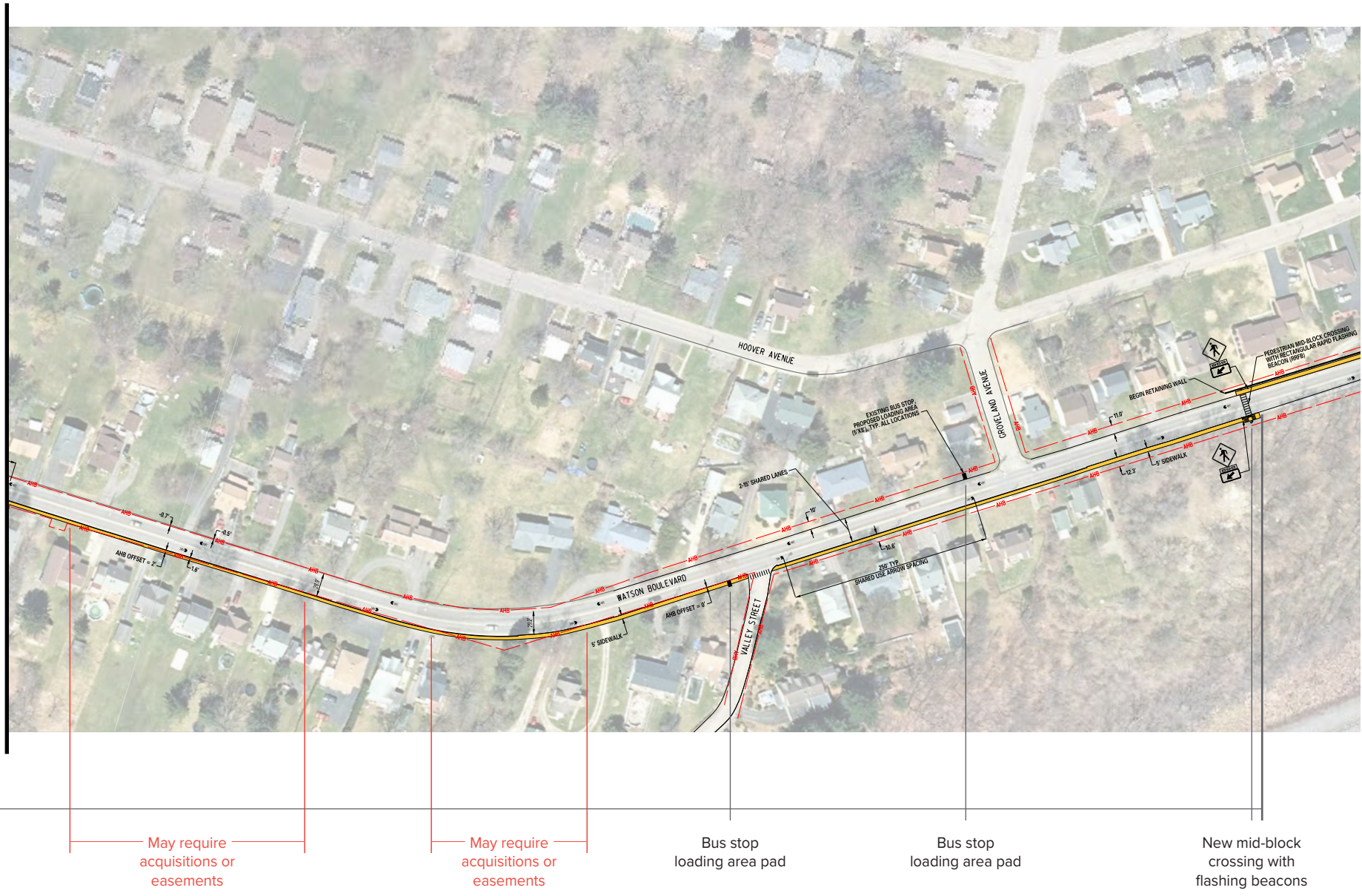
New curbs are proposed for this zone. Additional analysis should be completed prior to the final design phase to ensure proper drainage.

### Estimated Cost

\$875,000 (inclusive of mid-block crossing)







# Zone 2

## Mid-Block Crossing 1 to End of Retaining Wall

### Recommendations

A new 5-foot-wide sidewalk is proposed along the north side of Watson Boulevard in this zone. A retaining wall is required along the north side of the sidewalk due to the slope of the adjacent hillside. Additional survey will be required to verify the height of the retaining wall. Curbing will be installed along the length of the new sidewalk to buffer the sidewalk from the roadway. Travel lanes in this zone will be marked with sharrow symbols to identify the roadway as a shared space between cyclists and vehicles.

### Additional Considerations

#### *Final Design of Retaining Wall*

Geotechnical and structural analyses should be completed to finalize the design and height of the retaining wall and to ensure slope stability for construction. The final design of the retaining wall may require refinements based on the findings of these analyses.

#### *Potential Right-of-Way Acquisitions*

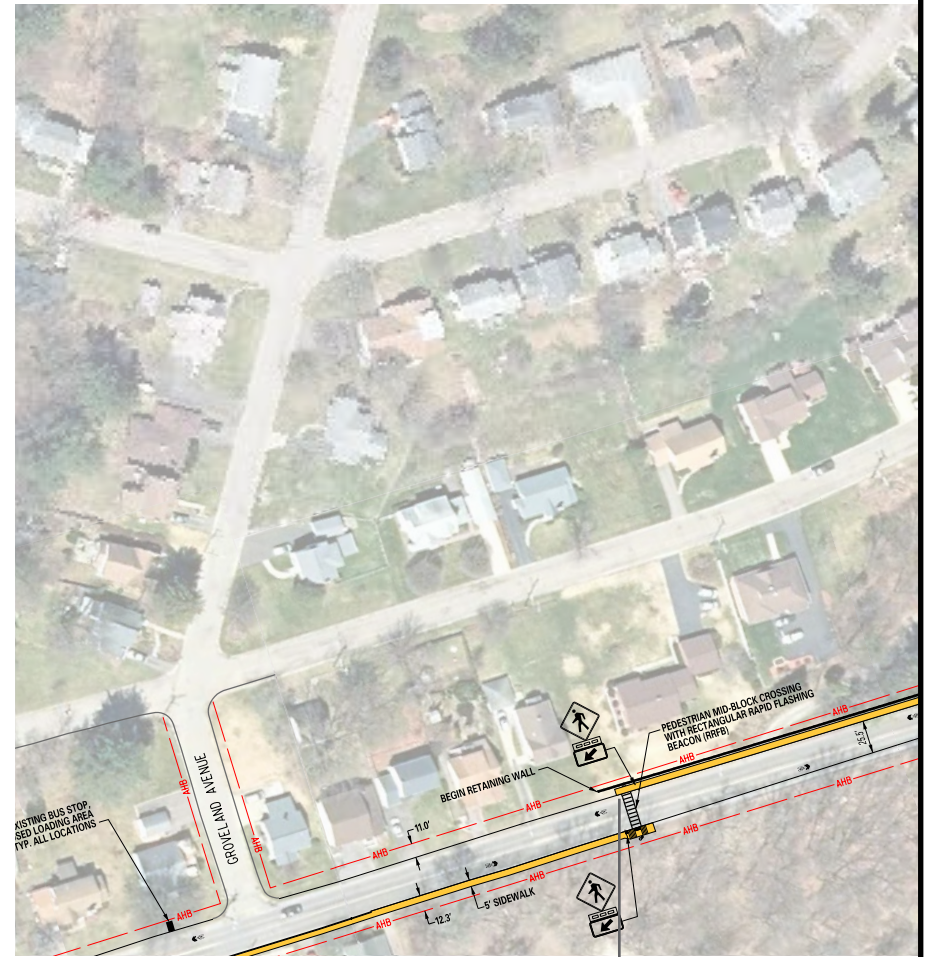
No right-of-way acquisitions or easements have been identified based on approximate highway boundary data. Survey may identify the need for acquisitions or temporary easements to implement the final design. (There are six parcels in this zone that could be impacted.)

#### *Drainage Analysis*

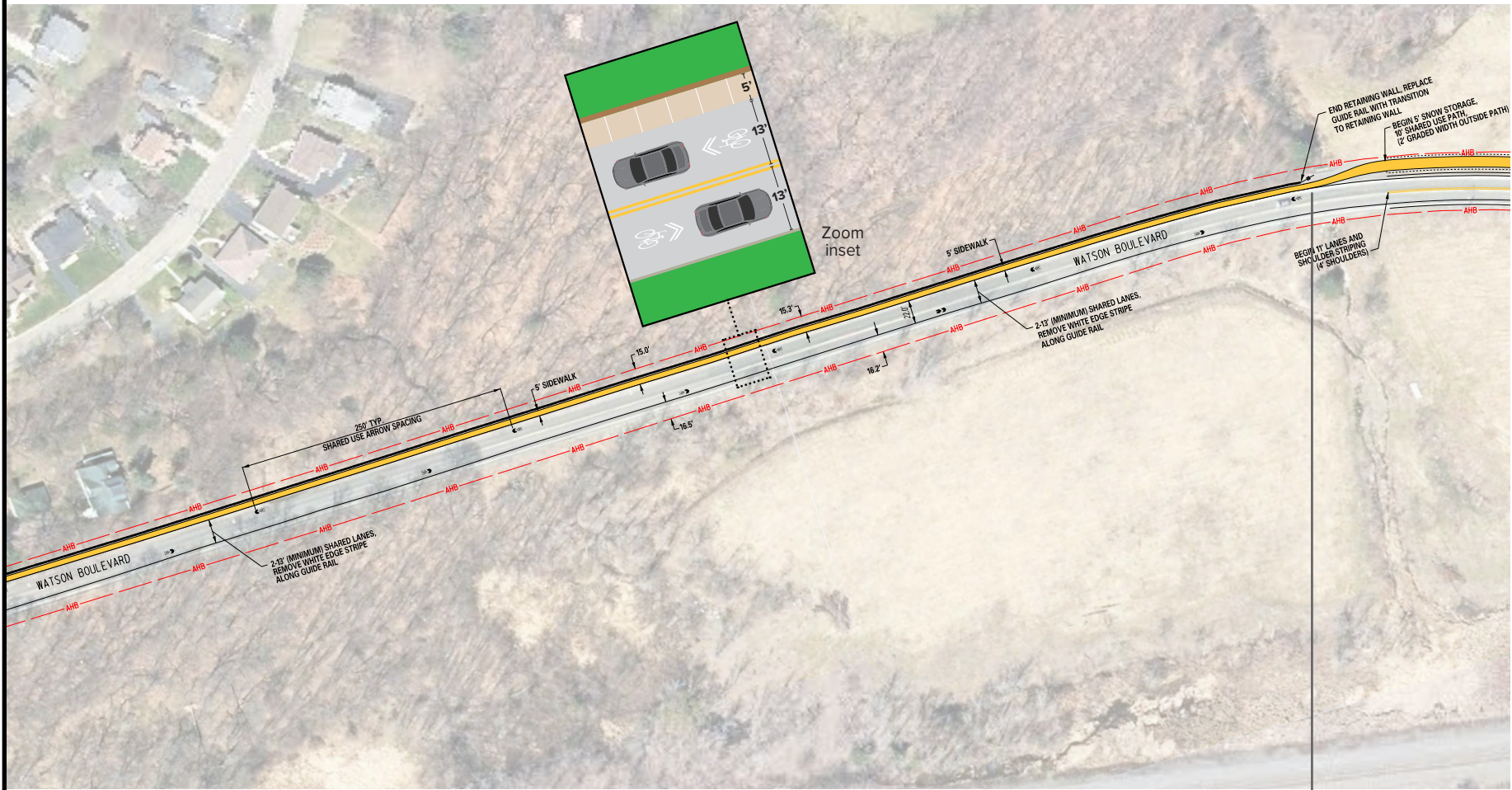
New curbs are proposed for this zone. Additional analysis should be completed prior to the final design phase to ensure proper drainage.

### Estimated Cost

\$4,700,000







### New 5-foot Sidewalk (1,500 ft)

North side of Watson Blvd. with retaining wall behind



# Zone 3

## End of Retaining Wall to Wetland

### Recommendations

A new 10-foot-wide shared-use path is proposed along the north side of Watson Boulevard in this zone. The shared-use path will be buffered from the roadway by a 4' shoulder and 1' grass strip for additional safety and user comfort. The roadway will be re-stripped to create the shoulder. Sharrow markings are not required because the shared-use path is wide enough to accommodate both pedestrians and cyclists.

### Additional Considerations

#### Potential Right-of-Way Acquisitions

No right-of-way acquisitions or easements have been identified based on approximate highway boundary data. Survey may identify the need for a temporary easement to implement the final design. (There is one parcel in this zone that may be impacted.)

#### Environmental Review

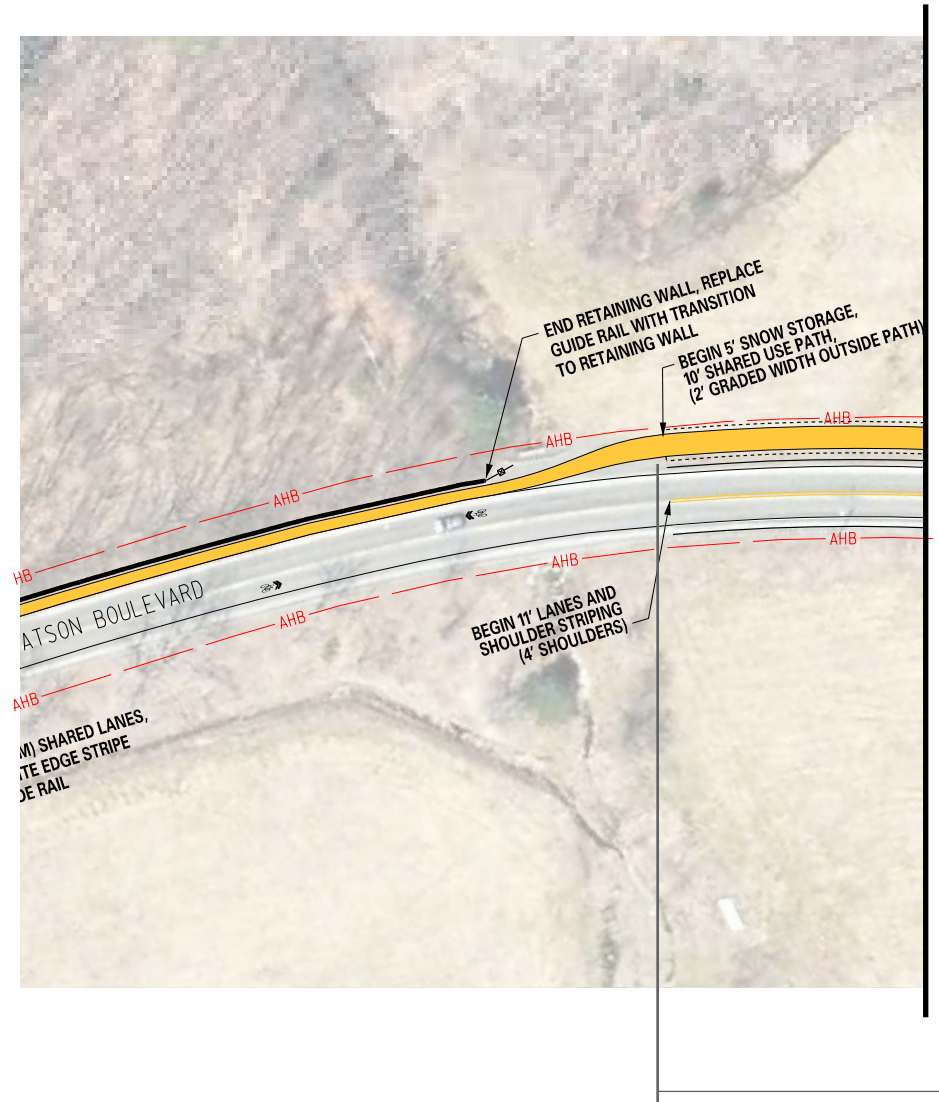
This zone is located in close proximity to identified wetlands. An environmental review should be conducted to identify potential impacts and any necessary permits.

#### Alternative Concept

A 5-foot-wide sidewalk with a 5-foot-wide buffer from the roadway could be implemented as an alternative design for this zone. Travel lanes would need to be marked with “sharrow” symbols. This alternative is less comfortable for cyclists than the recommended shared-use path design, but is less expensive.

### Estimated Cost

\$300,000





# Zone 4

## Wetland to Country Club Road

### Recommendations

A new 10-foot-wide shared-use path is proposed along the north side of Watson Boulevard in this zone. The existing wetland culvert must be extended, the embankment widened, and the roadway re-striped to accommodate the shared-use path. A guide rail will be installed to separate the travel lane from the shared-use path and the existing guide rail will remain between the path and the wetland. Sharrow markings are not required because the shared-use path is wide enough to accommodate both pedestrians and cyclists.

### Additional Considerations

#### *Potential Right-of-Way Acquisitions*

There are 2 properties in this zone that will likely require acquisition in fee to allow for the embankment work and culvert extension. It may be possible to complete this work with only temporary easements depending on the actual highway boundaries determined during survey.

#### *Environmental Review*

This zone is located in close proximity to identified wetlands. An environmental review should be conducted to identify potential impacts and any necessary permits.

#### *Alternative Concept*

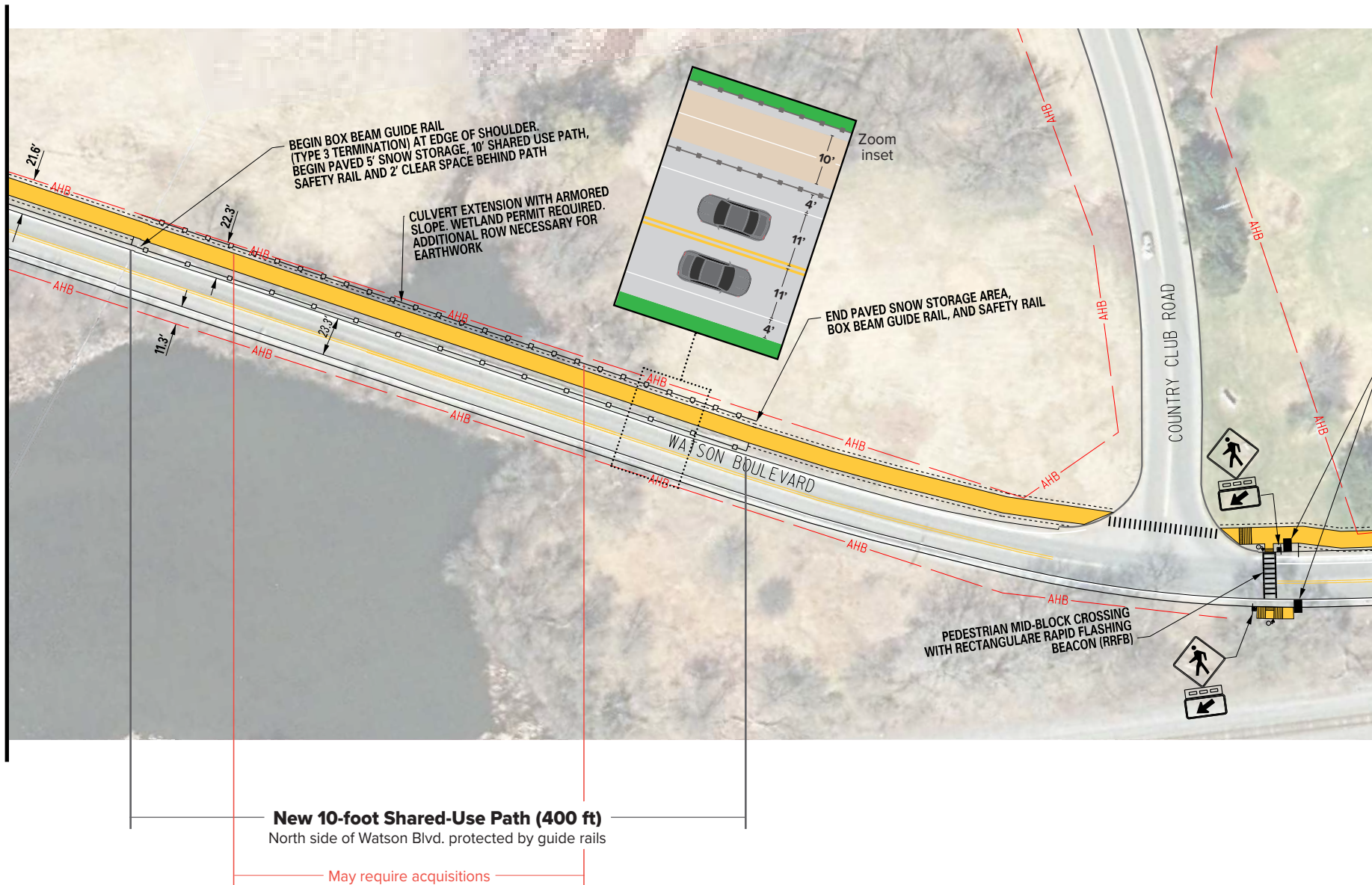
A 5-foot-wide sidewalk with a curb on the road-side and a guide rail on the wetland-side could be implemented as an alternative design for this zone. This alternative would still require culvert extension and embankment widening. Travel lanes would need to be marked with “sharrow” symbols. This alternative is less comfortable for cyclists than the recommended shared-use path design, but is less expensive.

### Estimated Cost

\$800,000









# Zone 5

## Country Club Road to Mid-Block Crossing 3

### Recommendations

A new 10-foot-wide shared-use path is proposed along the north side of Watson Boulevard in this zone. The shared-use path will be buffered from the roadway by a minimum 4' shoulder for additional safety and user comfort. The roadway will be re-stripped to create the shoulder. Sharrow markings are not required because the shared-use path is wide enough to accommodate both pedestrians and cyclists. At the west floodgate, the shared-use path will transition onto the existing roadway surface. A hatched buffer with flexible delineators will buffer the shared-use path from the roadway. New mid-block crossings will be installed to connect pedestrians to the Country Club and Wilkins Way bus stops on the south side of Watson Boulevard. These crossings will be striped with high visibility paint and flashing beacons (RRFBs) will be installed on both sides of the crossings. New bus stop loading area pads will be installed at the Country Club, Poplar, Heritage Country Club, Heritage Parking Lot, and Wilkins Way bus stops to provide a level surface for riders to queue.

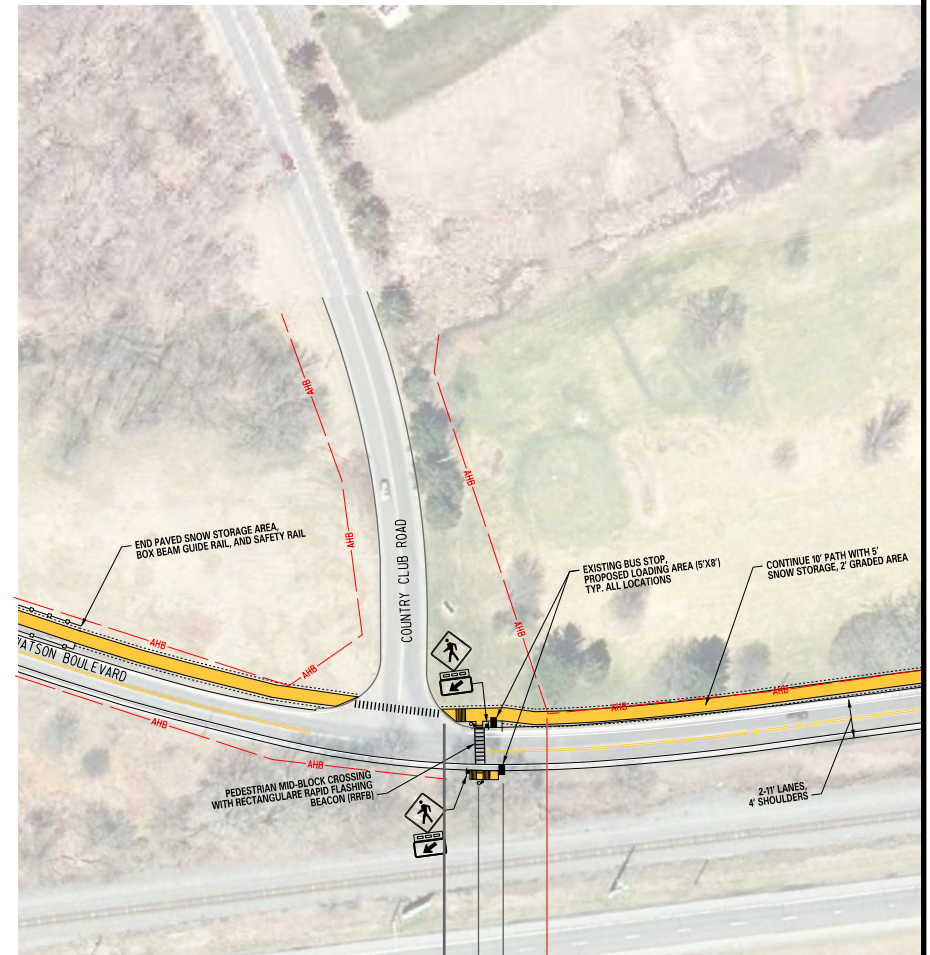
### Additional Considerations

#### Potential Right-of-Way Acquisitions

There are six properties in this zone that will likely require acquisition in fee to allow for the construction of the proposed enhancements. These six properties, in addition to one other property, are also likely to require temporary easements during construction for grading behind the sidewalk. Survey may identify other properties that require acquisition in fee or temporary easements during construction.

### Estimated Cost

\$1,975,000 (inclusive of mid-block crossing)



New mid-block crossing with flashing beacons      Bus stop loading area pads (both sides of road)



### New 10-foot Shared-Use Path (4,590 ft total)

North side of Watson Blvd. offset from road by 5 ft

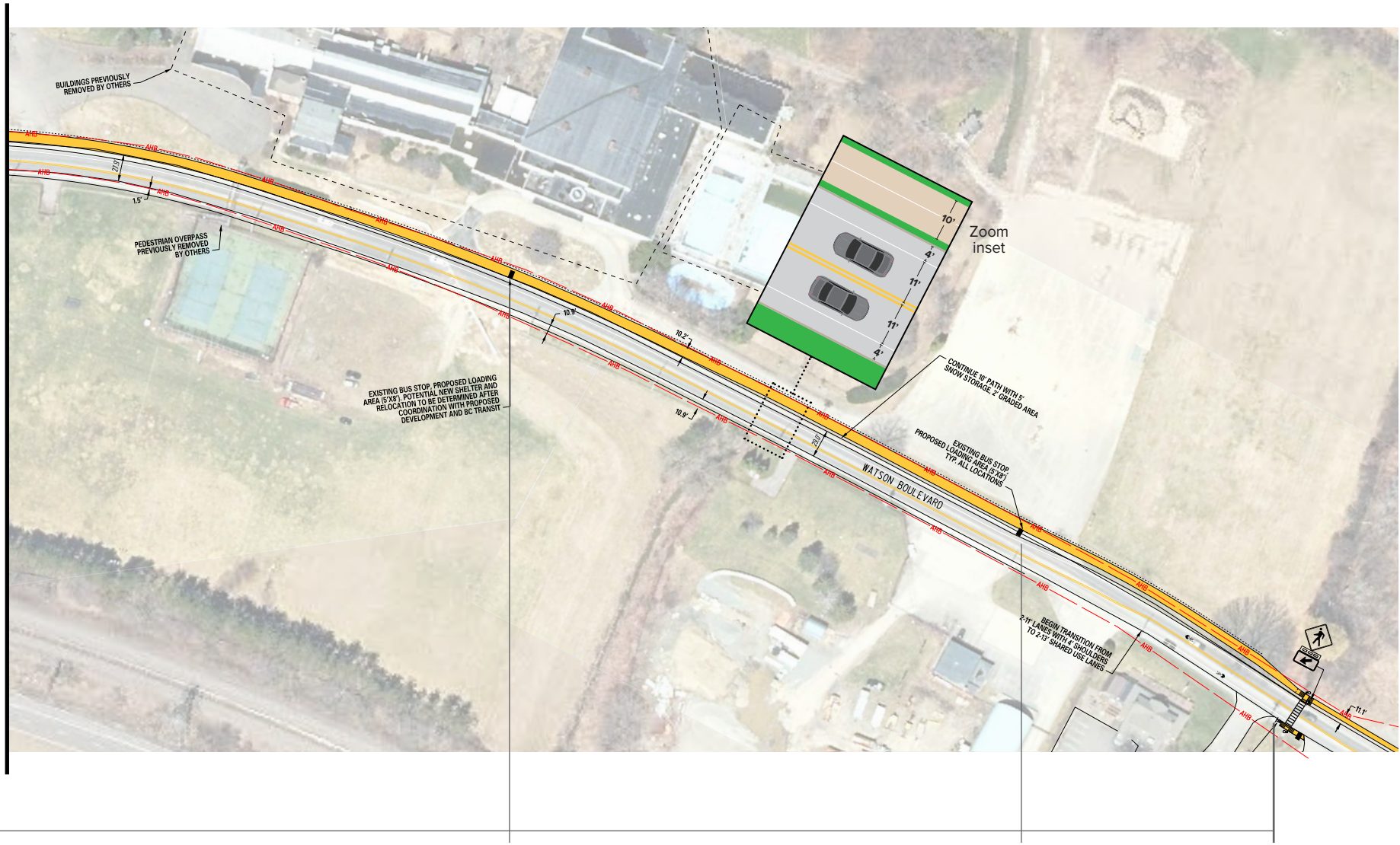
May require acquisitions or easements



North side of Watson Blvd. offset from road by 5 ft

Bus stop  
loading  
area pad

Bus stop  
loading  
area pad



Bus stop  
loading  
area pad

Bus stop  
loading  
area pad



# Zone 6

## Mid-Block Crossing 3 to Wilkins Way

### Recommendations

A new 5-foot-wide sidewalk is proposed along the north side of Watson Boulevard in this zone. The roadway will be re-stripped to create a 3-foot-wide buffer between the roadway and the sidewalk (without a curb). The Wilkins Way bus stop on the south side of Watson Boulevard is proposed to be relocated approximately 150 feet to the east and a new bus stop loading area pad installed at this location. A new mid-block crossing will connect the proposed sidewalk on the north side to the relocated bus stop on the south side. This crossing will be striped with high visibility paint and a flashing beacons (RRFBs) will be installed on both sides of the crossing. An approximately 50-foot-long section of sidewalk and curb will be installed on the south side to connect the bus stop to the businesses on this side of the roadway. Travel lanes in this zone will be marked with “sharrow” symbols to identify the roadway as a shared space between cyclists and vehicles.

### Additional Considerations

#### *Potential Right-of-Way Acquisitions*

There is 1 property in this zone that will likely require acquisition in fee to allow for the construction of the proposed enhancements.

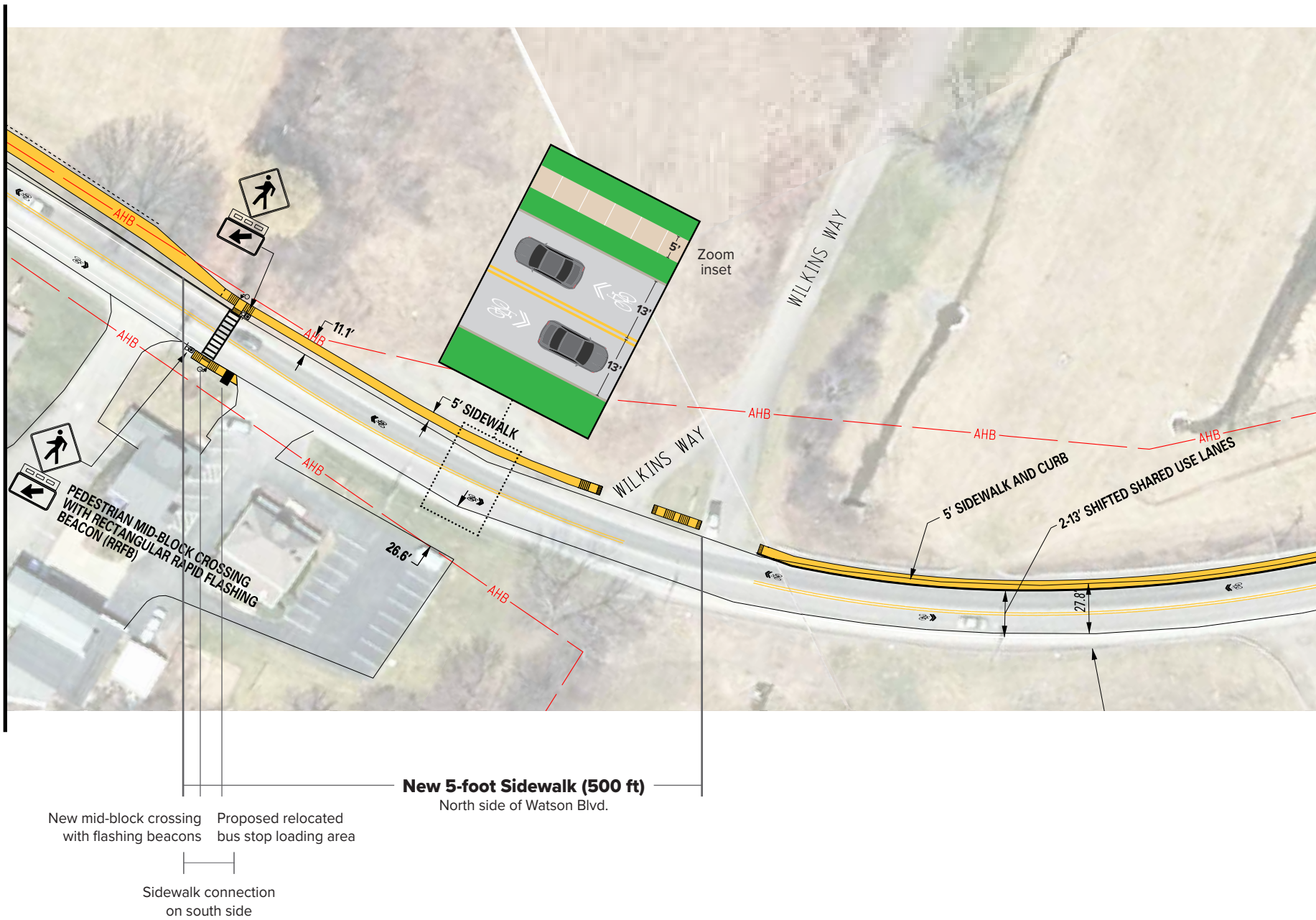
#### *Bus Stop Relocation*

Additional coordination will be required with BMTS to ensure the feasibility of relocating the Wilkins Way bus stop to the east. Relocation of the bus stop will also require user re-education.

### Estimated Cost

\$225,000 (inclusive of mid-block crossing)





# Zone 7

## Wilkins Way to Valley Plaza

### Recommendations

A new 5-foot-wide sidewalk with curb is proposed along the north side of Watson Boulevard to just west of Valley Plaza. At this point, a new mid-block crossing will connect the proposed sidewalk on the north side to the south side of Watson Boulevard. This crossing will be striped with high visibility paint and a flashing beacons (RRFBs) will be installed on both sides of the crossing. The sidewalk will continue on the south side of Watson Boulevard to the project limit. The roadway will be re-striped with minimum 13-foot lanes and the curve shifted south to provide space on the north side of the sidewalk to accommodate the sidewalk within the existing levee guide rail. The travel lanes will be marked with “sharrow” symbols to identify the roadway as a shared space between cyclists and vehicles. New bus stop loading area pads will be installed at the Valley Plaza bus stops to provide a level surface for riders to queue.

### Additional Considerations

#### Potential Right-of-Way Acquisitions

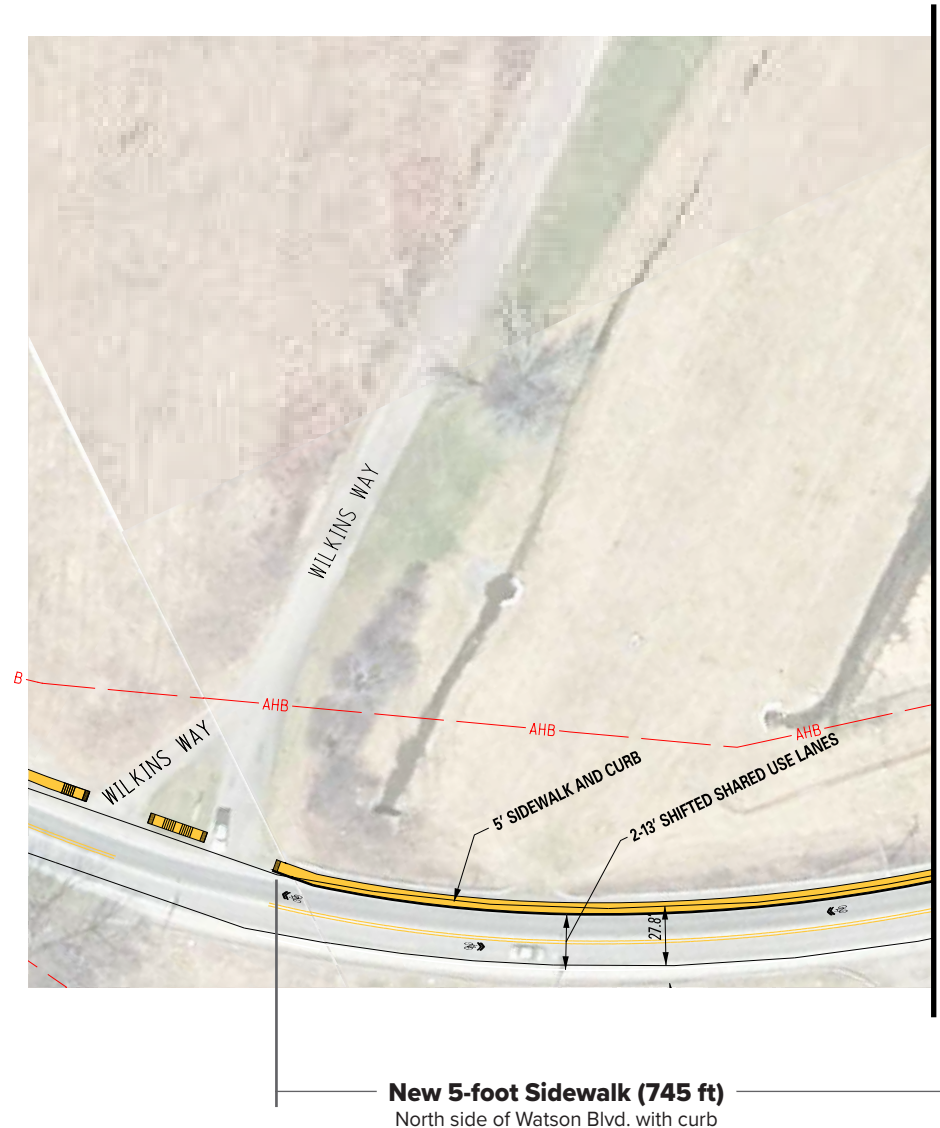
No right-of-way acquisitions or easements have been identified based on approximate highway boundary data. Survey may identify the need for acquisitions or temporary easements to implement the final design.

#### Environmental Review

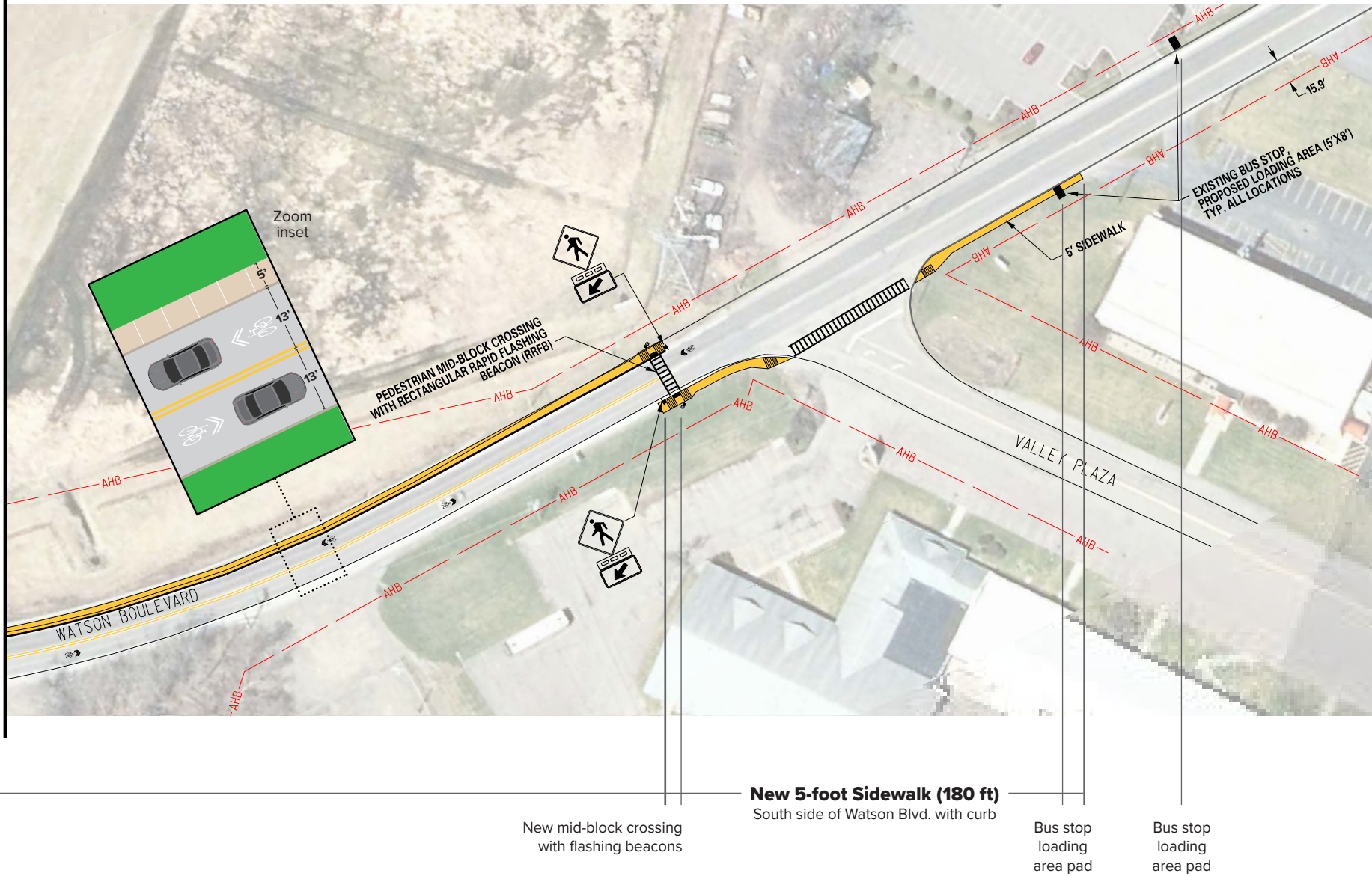
This zone is located in close proximity to a levee. An environmental review should be conducted to identify potential impacts and any necessary permits.

### Estimated Cost

\$575,000 (inclusive of mid-block crossing)











**Watson Blvd**

**04**

**Implementation Plan**





# Phasing

The Watson Boulevard complete streets improvements are recommended to be implemented in two phases.

## Purpose

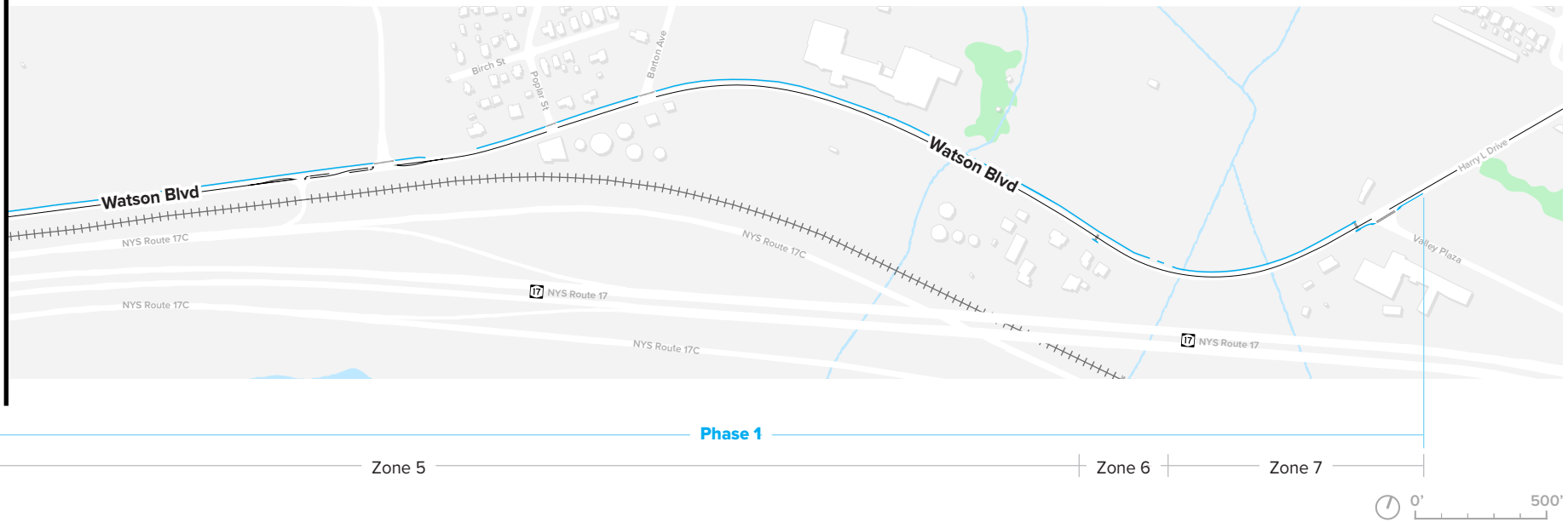
Phased implementation reduces the up-front cost of construction by spreading the total cost of the project over two phases. The higher cost zones are recommended for Phase 2 implementation in order to provide additional time to secure funding. The two-phase approach also allows implementation to move forward immediately in shovel-ready zones (Phase 1), while simultaneously allowing more time for final design and engineering of complex Phase 2 components, like the retaining wall and culvert extension.

## Phase 1

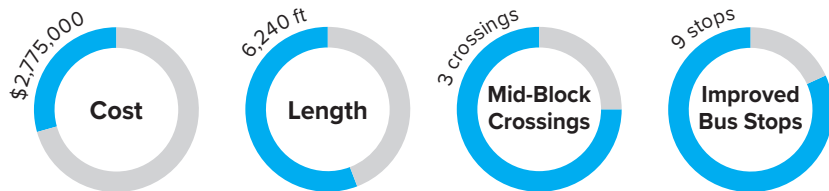
Zones 5, 6, and 7 are recommended for Phase 1 implementation. These zones are located in the eastern edge of the corridor, from Country Club Road to Valley Plaza. Phase 1 implementation would result in significant improvements, including 6,240 feet of shared-use path/sidewalk installation, 3 new mid-block crossings, and 9 improved bus stops. The cost of Phase 1 implementation is \$2,775,000 – approximately 30% of the total project cost.

## Phase 2

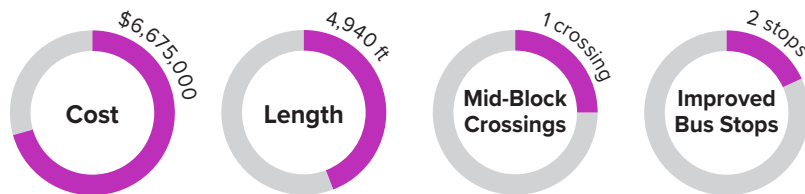
Zones 1, 2, 3, and 4 are recommended for Phase 2 implementation. These zones are located in the western edge of the corridor, from Hooper Road to Country Club Road. Several components of Phase 2 require additional design and engineering before they can be implemented. Phase 2 implementation would result in 4,940 feet of shared-use path/sidewalk installation, 1 new mid-block crossing, and 2 improved bus stops at a cost of \$6,675,000 – approximately 70% of the total project cost.



## PHASE 1



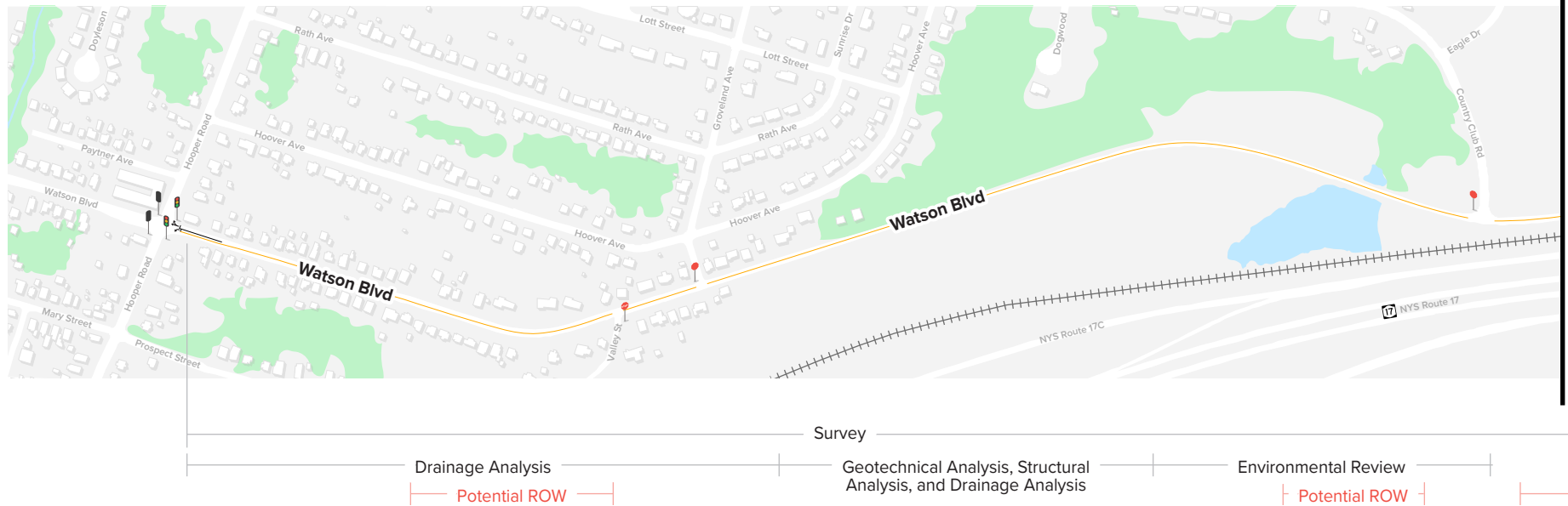
## PHASE 2



## Key Findings

- 01 Big bang for the buck in Phase 1.** Phase 1 implementation brings high-value improvements to Watson Boulevard for only 30% of the total project cost.
- 02 More time and more money needed for Phase 2 implementation.** Several components of Phase 2 require more time for development and more funding before they can be implemented.





## Next Steps

A couple steps must be completed before implementation can begin.

### Survey of Project Corridor

The recommended design produced as part of this feasibility study was developed using approximate highway boundary data. In order to advance this concept design to the final design stage, a survey of the project corridor must be completed to obtain actual highway boundary data. The survey should confirm right-of-way boundaries and utility locations, measure slopes in the area of the proposed retaining wall, and determine wetland conditions including water depth and culvert depth and conditions. Alterations to the recommended design may be required based on the resulting survey data.

### Additional Analyses

#### *Environmental Review*

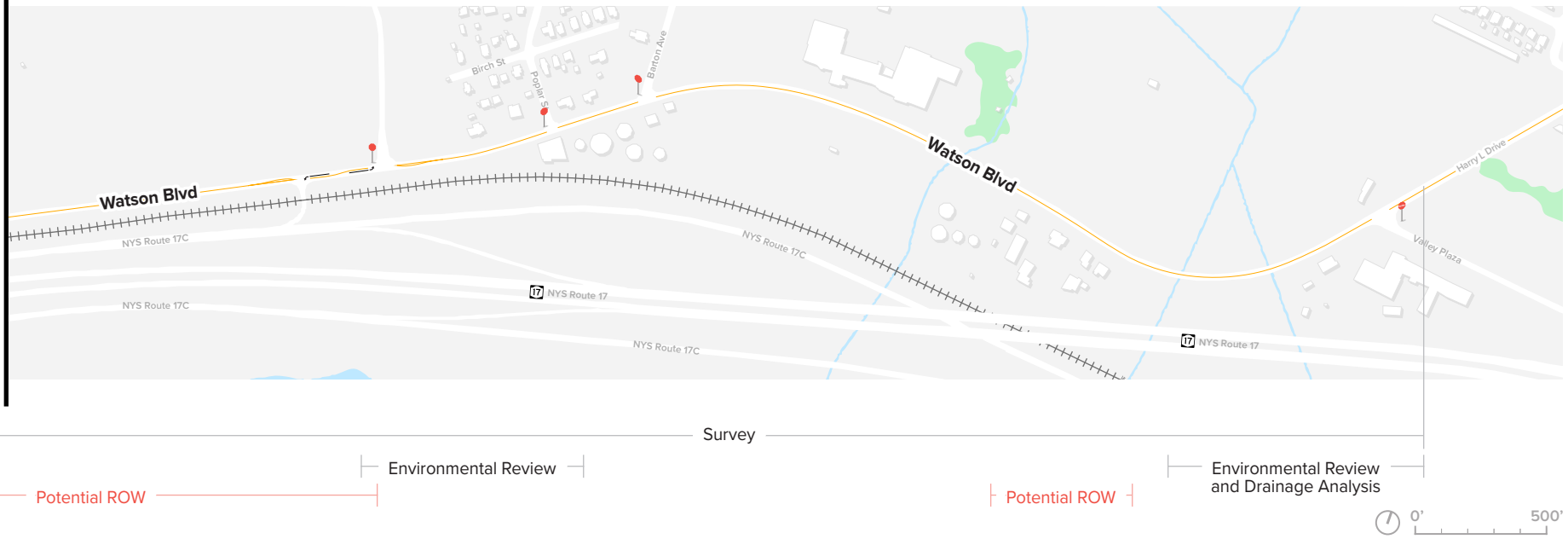
An environmental review should be conducted to identify any potential impacts and permits required to advance implementation. The wetland area and the levees should receive special consideration.

#### *Retaining Wall Geotechnical and Structural Analysis*

Using data from the survey, a geotechnical and structural analysis should be completed in the area of the proposed retaining wall to verify the height of the wall and ensure slope stability for construction.

#### *Drainage Analysis*

In areas where there are existing closed drainage systems or where new curbs will be added based on the proposed design, a hydrologic analysis should be conducted to ensure proper drainage. If drainage is determined to be insufficient, alterations to the recommended design may be required.



### Right-of-Way (ROW) Acquisitions and/or Easements

Survey data should be used to confirm which properties will require acquisition in fee or temporary easements for construction. Discussions should begin with these property owners. Alterations to the recommended design may be required based on the outcomes of these discussions.

### Final Design and Construction

Final design of the Watson Boulevard improvements should be based on the survey data and the findings from the additional analyses. Several components, including the retaining wall and culvert extension, may require modification based on these findings. The final design and construction phases will require additional funding for completion. Preliminary cost estimates are included in *Appendix B*. Potential funding sources are listed on the next page.



### Key Findings

- 01 Survey is a must.** A roadway survey must be completed to advance the recommended concept design to the final design stage.
- 02 The final design may change.** The recommended design may change slightly based on additional data and analysis conducted after the completion of this feasibility study.

# Potential Funding

Several state and federal funding programs are available for complete streets improvements.

## **Transportation Alternatives Program / Air Quality Improvement Program (TAP/CMAQ)**

This program supports bicycle, pedestrian, multi-use path, and non-motorized transportation-related projects. Eligible projects must be related to surface transportation. This program is federally funded but administered by the NYS DOT.

### ***Eligible Project Types***

Construction of pedestrian and bicycle facilities, recreational trails, and safe routes to schools, as well as community improvements, such as projects that reduce congestion and gas emissions.

### ***Award***

Up to 80% of total project costs are eligible, with a 20% local share. Application timing varies year to year.

## **Consolidated Local Street and Highway Improvement Program (CHIPS)**

This program supports the construction and repair of highways, bridges, highway railroad crossings, and other facilities not in the State highway system. Funding is administered through the NYS DOT.

### ***Eligible Project Types***

Funds can be used for resurfacing, shoulder improvements, new drainage systems, sidewalk improvements, traffic calming, and bus shelters.

### ***Award***

Appropriations are defined annually.

## **Surface Transportation Block Grant Program (STBG)**

This program provides flexible funding that may be used by states and localities to preserve and improve the conditions and performance on: any Federal-aid highway, bridge, and tunnel projects; any public road; pedestrian and bicycle infrastructure; and transit capital projects. Funding is provided through the U.S. DOT and the program is competitive at the national level.

### ***Eligible Project Types***

Funds can be used for transportation alternatives and recreational trail projects.

### ***Award***

Available funding varies.

## **Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grants**

This program provides funding for a range of planning and capital transportation improvement projects, with an emphasis on equity and sustainability. Funding is provided through the U.S. DOT. This program is competitive at the national level.

### ***Eligible Project Types***

Funds can be used for capital transportation improvements, including: roads and bridges, public transportation, and intermodal projects. Pre-construction activities (e.g., design) are also eligible.

### ***Award***

Available funding varies. The maximum grant award is \$25 million and no more than \$100 million could be awarded to a state.

### **Recreation Trails Program (RTP)**

This program provides funds to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Funded projects must be identified in, or further a specific goal of, the Statewide Comprehensive Outdoor Recreation Plan. This program is an assistance program of the U.S. DOT's Federal Highway Administration (FHWA) and is administered in New York State by the Office of Parks, Recreation, and Historic Preservation (OPRHP).

#### ***Eligible Project Types***

Funds the maintenance and restoration of existing trails, the purchase and lease of trail construction equipment, acquisition of easements, construction of new trails and assessments. This is the only federal funding source that provides funds for trail maintenance.

#### ***Award***

Funding is through the NYS Consolidated Funding Application (CFA) process. Specific guidelines are provided in association with each grant cycle.

---

### **Safe Streets and Roads for All**

This program provides funding to support local initiatives to prevent death and serious injury on roads and streets. It was created as part of the Bipartisan Infrastructure Law. Funding is provided through the U.S. DOT. This program is competitive at the national level.

#### ***Eligible Project Types***

Development of a comprehensive safety action plan, conducting planning, design, and development activities for projects and strategies identified in a comprehensive safety action plan, and carrying out such projects and strategies.

#### ***Award***

Up to \$5 billion in total funding is available until expended. Cost share is 80% federal, 20% local.

### **Carbon Reduction Program**

This program provides formula grants to states to reduce transportation emissions or the development of carbon reduction strategies. It was created as part of the Bipartisan Infrastructure Law. Funding is provided through the U.S. DOT. This program is competitive at the national level.

#### ***Eligible Project Types***

States may use Carbon Reduction Program funds for projects that support the reduction of transportation emissions, including: the construction, planning, and design of trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation; public transportation projects; and congestion management technologies.

#### ***Award***

Up to \$6.4 billion in total funding is available through 2026. Cost share is 80% federal, 20% local.

---

### **Green Innovation Grant Program (GIGP)**

This program provides grants on a competitive basis to projects that improve water quality and implement green infrastructure in New York State. This program is funded and overseen by the NYS Environmental Facilities Corporation (EFC).

#### ***Eligible Project Types***

A range of green infrastructure-focused installation projects, including the installation of permeable pavements, bioretention and stormwater street trees.

#### ***Award***

Typically funded through the CFA process. Can be used to cover up to 75% - 90% of total project costs.



