

SCOTIA DOWNTOWN CONNECTIONS PLAN

Final Concept Report
May 2022



Engineering and
Land Surveying, P.C.



Acknowledgements

Study Advisory Committee:

Andrew Tracy	CDTC
Christian Bauer, AICP	CDTC
Tom Gifford	Mayor, Village of Scotia
Ryan Kedzior	DPW Superintendent, Village of Scotia
Erik Buskirk	Village of Scotia Planning Board
Justin Cook	Village of Scotia Trustee
Daniel Harrigan	Village of Scotia
Cathy Gatta	Scotia BID
Tom Gallant	Scotia BID, Property Owner
Harold Bryant	Scotia BID
Audrey Burneson	NYS DOT
Brian Kirch	NYS DOT
Steve Feeney	Schenectady County
Melissa Cherubino	Town of Glenville
Keith Jewell	Scotia Resident
Brent Irving	CDTA

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The Scotia Downtown Connections Concept Plan is intended to provide a framework for advancing Complete Streets implementation and connectivity for all modes of transportation in the Mohawk Avenue corridor consistent with the Village's vision for the Central Business District. The Concept Plan recommendations are conceptual in nature, and do not commit the Village of Scotia, CDTC, or New York State Department of Transportation to funding any improvements. The concepts presented in this report may need to be investigated in more detail before any funding commitment is made. Undertaking additional engineering or other follow up work will be based upon funding availability.



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CHAPTER 1 Introduction

The Scotia Downtown Connections Linkage Study is being conducted by the Capital District Transportation Committee (CDTC) and the Village of Scotia to improve the pedestrian, bicycle, and transit experience in the Village's Central Business District along Mohawk Avenue (NY Route 5). The Scotia Downtown Connections Plan will explore how to best incorporate Complete Streets elements along the Mohawk Avenue corridor and implement potential gateway treatments at the intersection of Mohawk Avenue, Glen Avenue, and Schonowee Avenue.

The purpose of this study is to develop recommendations of alternative design concepts for Mohawk Avenue that would contribute toward a more welcoming built environment that will accommodate the needs of all roadway users. This study will provide opinion of probable costs for the recommended concepts that can be used by the Village to prioritize improvements and apply for funding to ultimately design and construct the recommended improvements. The study and the concepts developed will expand upon the recommendations suggested for Mohawk Avenue from multiple studies previously conducted. A literature review of the previous studies was conducted to provide a summary of the studies. The studies identified potential improvements to the Mohawk Avenue corridor that could potentially enhance its walkability and bikeability, calm traffic, and improve its appearance, making the area more appealing to everyone.

What is a Complete Street?

A Complete Street is a roadway planned and designed to consider the safe, convenient access and mobility of all roadway users of all ages and abilities. This includes pedestrians, bicyclists, public transportation riders, and motorists; it includes children, the elderly, and persons with disabilities.

- NYSDOT

Study Approach

The main tasks for this Study include:

- Data collection and review of previous studies
- Study Advisory Committee (SAC) meetings
- Development of a project website
- Existing conditions inventory and assessment
- Public engagement (workshops, pop-up events, etc.)
- Development of alternate concept plans

The study was conducted with input and direction from the SAC, which is comprised of representatives from the Village of Scotia, CDTC, Capital District Regional Planning Commission (CDRPC), Capital District Transit Authority (CDTA), New York State Department of Transportation (NYSDOT), Schenectady County, and local citizens. The purpose of the SAC was the following:



- Provide input and guidance during the life of the Study
- Meet with the consultant on, at a minimum, six occasions as described below:
 - Confirm understanding of the scope of work and study area boundaries
 - Confirm study principles and objectives
 - Provide guidance on expected outcomes and measures of effectiveness
 - Provide oversight on the overall study process including the roles and responsibilities of the study partners
 - Review and comment on public information materials
 - Review and comment on recommendations
- Participate in one public input session and the final public workshop
- Review and comment on study deliverables
- Serve as a two-way information conduit for groups they represent

Study Objectives

At the beginning of the Study, the SAC developed the following objectives that were reviewed and refined with the committee and the public. These objectives establish the framework for the Study, and the resulting conclusions and recommendations.

The main objectives of the Scotia Downtown Connections Study are to:

- Improve pedestrian, bicycle, and transit experience in the Village's Central Business District along Mohawk Avenue
- Preserve the quick and efficient movement of commuters and freight through the Village
- Enhance the safety, accessibility, and enjoyment of the area for all user groups
- Improve connections to the Mohawk Avenue corridor from points throughout the Village

The overall goal of the Study is to develop a plan, endorsed by the Village, that will be used to pursue funding opportunities and guide implementation of improvements.

Study Area

The study area consists of a 0.7-mile segment of Mohawk Avenue in the Village of Scotia and includes the intersections of Mohawk Avenue with Reynolds Street, Sacandaga Road (NY Route 147), Center Street, Ten Broeck Street, Ballston Avenue (NY Route 50), Collins Street, Glen Avenue, and Schonowee Avenue. See **Figure 1.1** for a Study Area Map with select points of interest identified.

Mohawk Avenue within this study area is a state-owned roadway that is a highly traveled route within the Village of Scotia and provides vital links between the City of Schenectady and the Town of Glenville. Glen Avenue is a parallel route that is often utilized to access the rear parking facilities of many businesses along the south side of Mohawk Avenue and is a common route for the local community



The map displays the Scotia Study Area, outlined in red. Key streets include Vine St, N Reynolds St, Sacandaga Rd, Center St, Catherine St, James St, N Ten Broeck St, Bevis St, Church St, N Ballston Ave, Collins St, Wyman St, S Reynolds St, S Ten Broeck St, Glen Ave, Sanders Ave, S Ballston Ave, Riverside Ave, Larkin St, and Western Gateway Brg. Landmarks and points of interest are marked with symbols: Our Redeemer Lutheran Church (orange star), Scotia Post Office (blue star), Village Hall and Police Dept. (blue star), Scotia Fire Department (orange star), City View Church (green star), Scotia Cinema (green star), Scotia Branch Library (blue star), and Collins Park (green star). A legend in the bottom left corner defines the symbols for the Study Area, Village Boundary, State Routes, Local Roads, and Points of Interest (Community Services, Recreation, Religious). A north arrow is located in the top right corner.

LEGEND

- Study Area
- Village Boundary
- State Routes
- Local Roads

Point of Interest

- Community Services
- Recreation
- Religious

Figure 1.1
Study Area Map



CHAPTER 2: Existing Conditions

Data Collection

An inventory of the physical characteristics was performed along with a parking inventory (specific to Mohawk Avenue) along the length of the study corridor. Site visits were performed on March 30, 2021 and April 23, 2021 to document existing conditions along Mohawk Avenue and note conditions for vehicles, transit users, pedestrians, and bicyclists. Utilization of public parking was observed during each visit, as well as at 11:00 am and 4:00 pm on June 15, 2021 and June 17, 2021.

Additional existing conditions information was obtained from readily available sources as described throughout the following sections.





Zoning

Zoning along the Mohawk Avenue corridor and the north side of Glen Avenue is primarily Retail Commercial (RC) and General Business (GB). Zoning along the south side of the Glen Avenue corridor is primarily Multiple Residence (MR) with a small segment of Single-Family Residence (SFR) at the western end. The entire study area is also within the Central Business District overlay, which includes the two Retail Commercial Districts, the General Business District and the Waterfront District that run along Mohawk Avenue. The Central Business District overlay includes design standards that must be applied during site plan and subdivision review for any development project involving undeveloped land. The design standards take into consideration land use type, building height, landscaping, lighting, parking lot design, setback requirements, sidewalks, façade design, architectural design, signage, and mobility and connectivity among other elements.

Mohawk Avenue, which is a state route, is located entirely within NYSDOT right-of-way. The highway boundary is located approximately 25-30 ft from the center of the road on either side and opens up on the eastern end right before the Western Gateway Bridge.

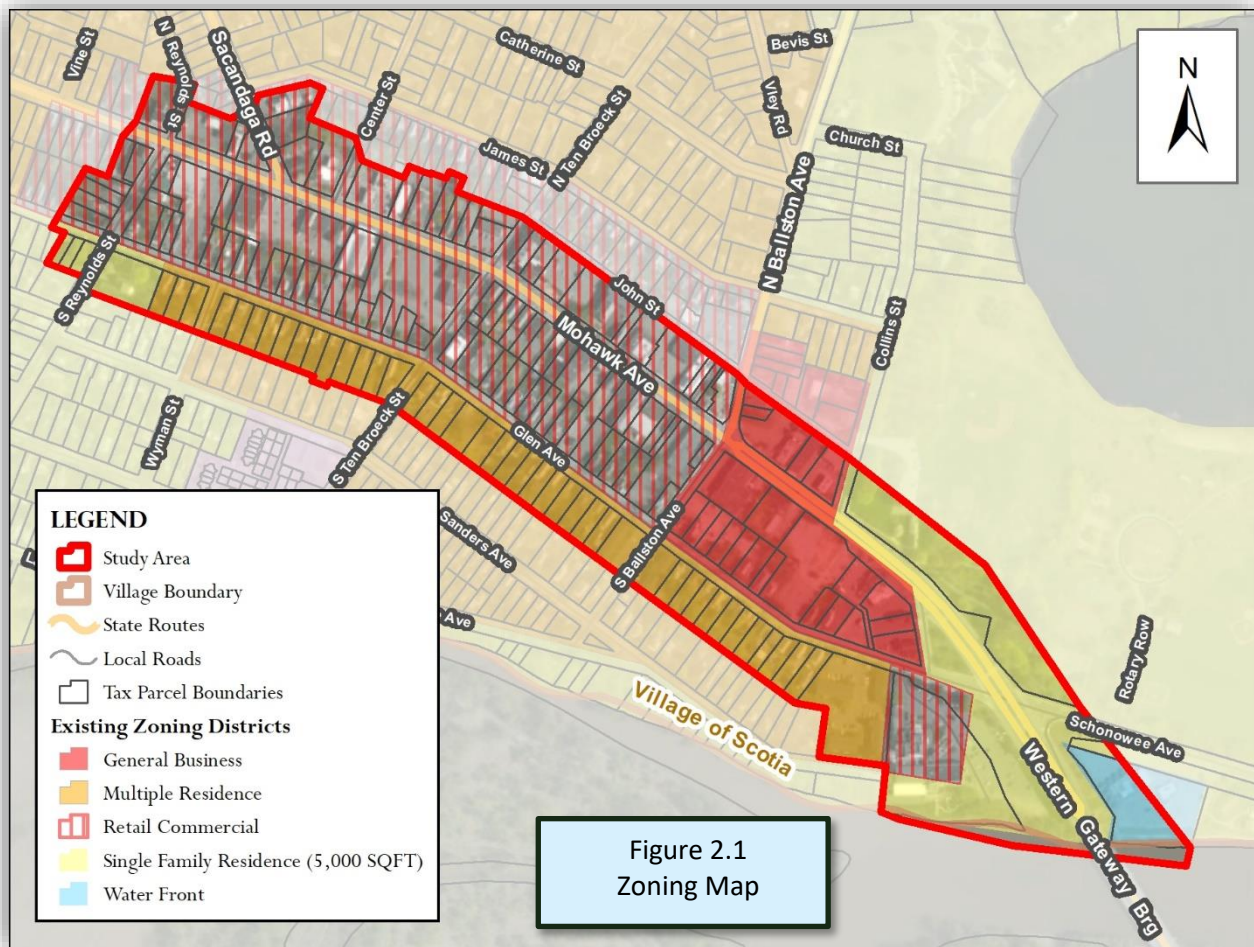


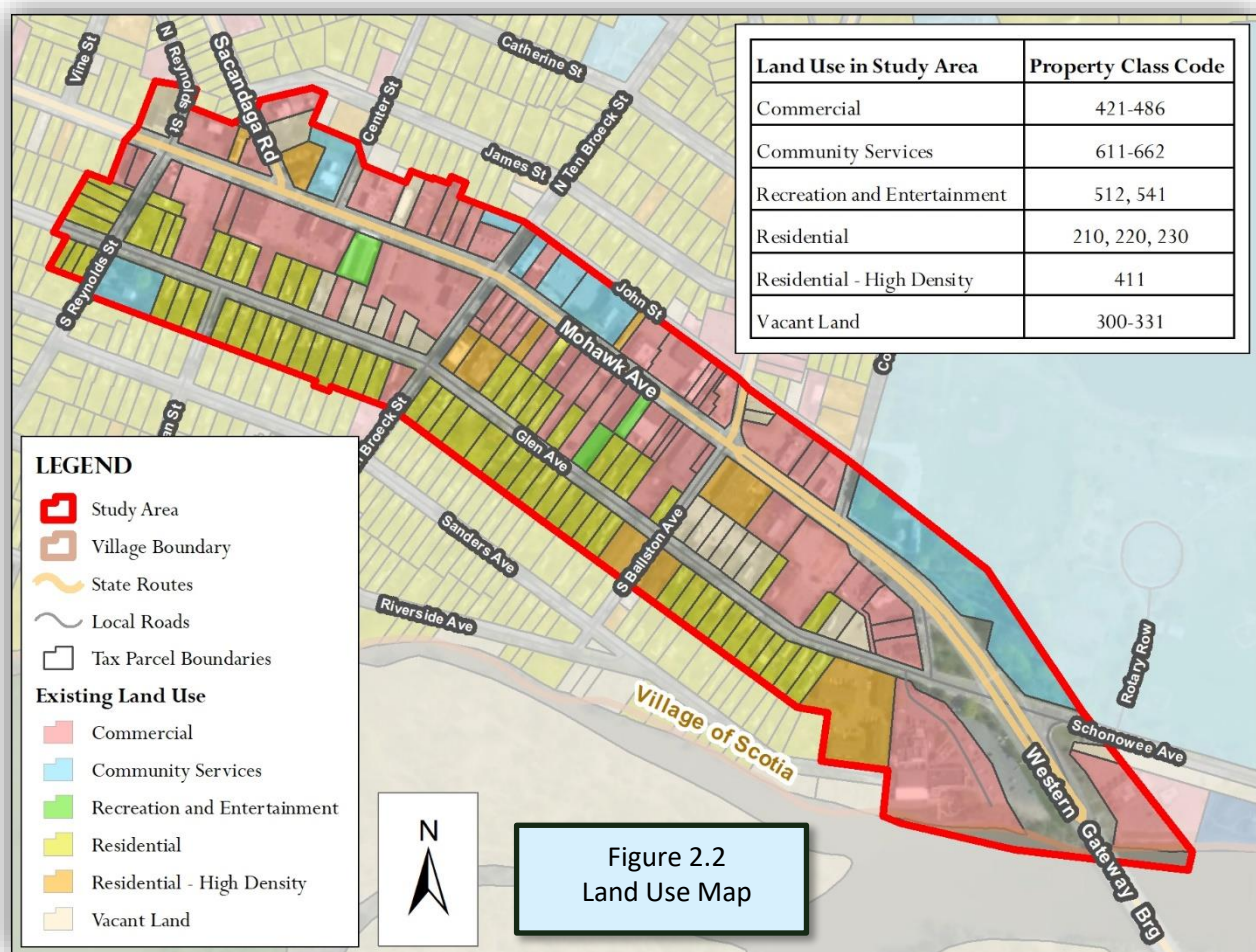
Figure 2.1
Zoning Map



Land Use

As expected within a Business District, land uses along the corridor are primarily commercial with some religious and residential uses interspersed. Businesses, restaurants, gas stations and other retail establishments are the primary land uses found along the corridor. Community Service parcels are also present, most notably being Collins Park near the eastern project limit. The vacant parcels shown in the map are primarily used as private parking lots for adjacent businesses and apartments.

Based on the current property use observed, some parcels along the corridor do not conform to the current permitted or special uses.



Property Ownership

Properties along the Mohawk Avenue corridor are primarily residential except for a few parcels that are owned by the Village and the Post Office. There are a total of 59 parcels that front Mohawk Avenue within the study area and a total of 36 individual property owners. The ownership is illustrated on the Property Ownership Map in **Appendix A**.



Roadway Physical Characteristics

Mohawk Avenue Corridor

The Mohawk Avenue corridor is in an urban area in the Village of Scotia and serves as a primary route for northwest-southeast travel. Mohawk Avenue is a state highway and has a NYS Department of Transportation functional classification of Urban Principal Arterial. Of the seven (7) intersections in the study area, five (5) are signalized and two (2) are stop-controlled on the side street. A description of each intersection is provided at the end of this section.

Urban Principal Arterial

Roadways classified as an Urban Principal Arterial typically serve the major centers of activity of a metropolitan area, may be the highest traffic volume corridors; and carry a high proportion of the total urban area travel on a minimum mileage. The principal arterial system should carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city, or “downtown”. Almost all fully and partially controlled access facilities will be part of this functional system.

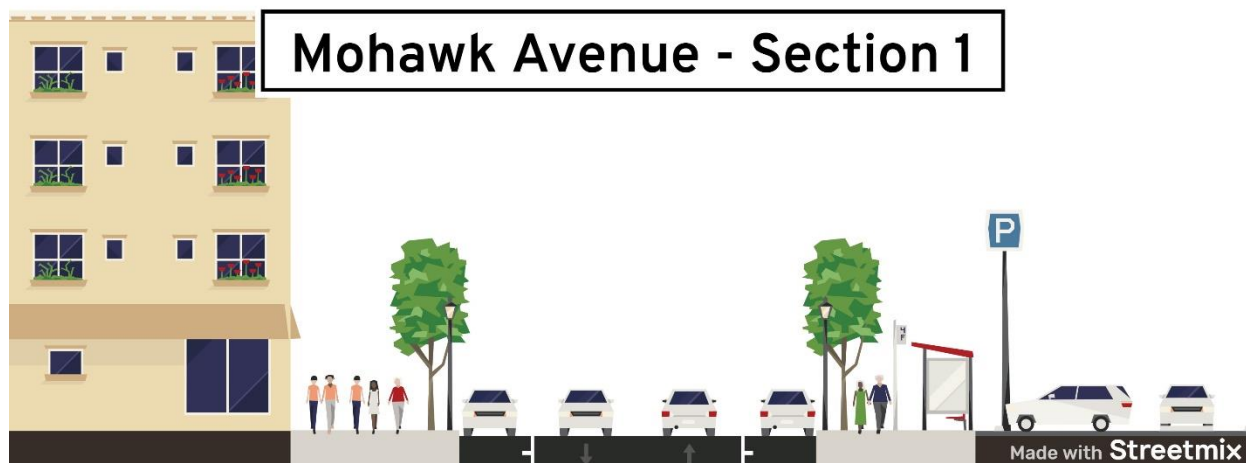
- NYSDOT

Since the Mohawk Avenue corridor consists of varying street sections, the discussion of roadway characteristics below has been divided into three (3) sections.

Section 1 (Reynolds Street to Ballston Avenue)

The right-of-way width generally varies from 50 to 62 feet. Most existing buildings include commercial storefronts, restaurants, and gas stations. Sidewalks are present along both sides for the entire length of the segment. A double yellow center pavement marking is present. The intersections within the study area have pavement markings for turning lanes, as well as stop bars and crosswalks.

Parking lanes are not delineated with pavement markings along this segment. To determine the width of travel lanes, parking lanes were assumed to be 8 feet wide. From South Reynolds Street / North Reynolds Street to North Ballston Avenue / South Ballston Avenue where parking lanes are present, the travel lanes are approximately 11 feet on each side of the roadway. Sidewalk widths vary from 4 feet to 14 feet with wider sidewalks present in front of the storefronts.



There are multiple curb cuts for residential and commercial driveways along this section. Refer to **Table 2.3** below for a summary:

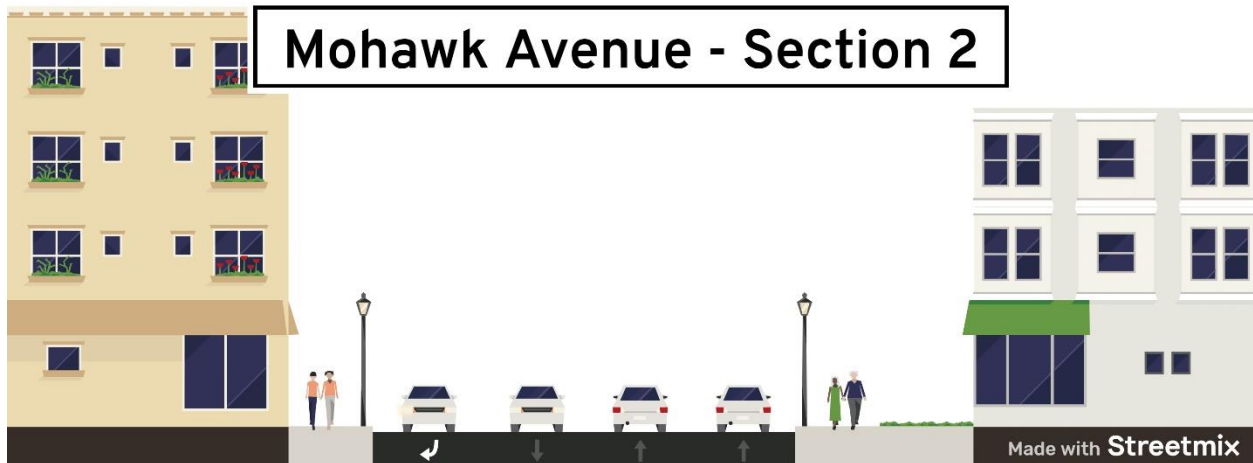
Table 2.3: Summary of Curb Cuts within Section 1		
Segment of Mohawk Avenue	No. of Curb Cuts (NB)	No. of Curb Cuts (SB)
S Ballston Ave / N Ballston Ave to S Ten Broeck St / N Ten Broeck St	7	13
S Ten Broeck St / N Ten Broeck St to Center St	7	3
Center St to Sacandaga Rd	0	0
Sacandaga Rd to S Reynolds St / N Reynolds St	3	3

Section 2 (Ballston Avenue to Collins Street)

The right-of-way width is approximately 60 feet. The existing buildings include commercial storefronts, an apartment building, a restaurant, and a gas station. A double yellow center pavement marking is present, as well as a broken white pavement marking to separate travel lanes going eastbound. The intersections within the study area have pavement markings and symbols for turning lanes, as well as stop bars and crosswalks.

For this segment, no parking lanes are present, and the travel lanes are approximately 11 feet on either side of the roadway with 3-foot shoulders. Sidewalk widths vary from 4 feet to 14 feet with wider sidewalks present in front of the storefronts.

The average annual daily traffic counts double from Section 1 to Section 2 due to traffic entering and exiting Mohawk Avenue via North Ballston Avenue.



There are multiple curb cuts for residential and commercial driveways along this section. Refer to **Table 2.4** below for a summary:

Table 2.4: Summary of Curb Cuts within Section 2		
Segment of Mohawk Avenue	No. of Curb Cuts (NB)	No. of Curb Cuts (SB)
Collins St to S Ballston Ave / N Ballston Ave	3	2

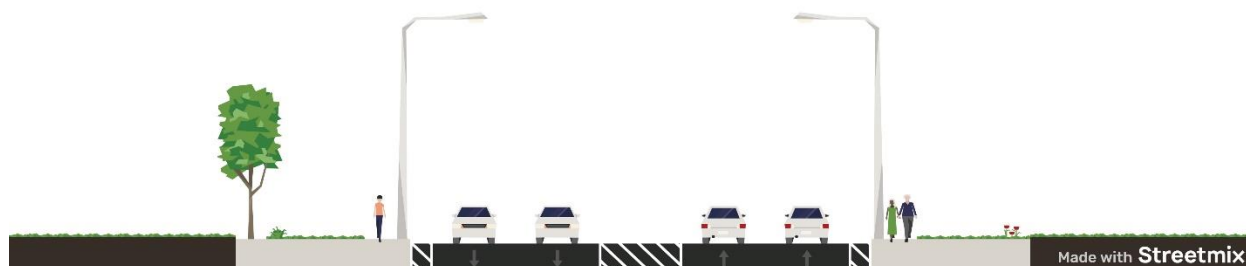
Section 3 (Collins Street to the Western Gateway Bridge)

The right-of-way width generally varies from a minimum of 65 feet to a maximum of 102 feet at the southern limits of the segment. Most existing buildings include commercial storefronts and restaurants. Sidewalks are present along both sides for the entire length of the study area. A double yellow center pavement marking is present, as well as a broken white pavement marking to separate the two travel lanes in either direction. The intersections within the study area have pavement markings and symbols for turning lanes, as well as stop bars and crosswalks.

No parking lanes are present, and the travel lanes are approximately 11 feet on either side of the roadway with 3-foot shoulders. Sidewalk widths are approximately 4 feet on either side of Mohawk Avenue.



Mohawk Avenue - Section 3



There are multiple curb cuts for residential and commercial driveways along this section. Refer to **Table 2.5** below for a summary:

Table 2.5: Summary of Curb Cuts within Section 3		
Segment of Mohawk Avenue	No. of Curb Cuts (NB)	No. of Curb Cuts (SB)
Glen Ave / Schonowee Ave to Collins St	0	4

Intersection 1: Mohawk Avenue, Glen Avenue, and Schonowee Avenue



The Mohawk Avenue / Glen Avenue / Schonowee Avenue intersection is a signalized intersection located at the southern limit of the study area.

The southbound approach consists of two 11-foot through lanes and a crosswalk. The westbound approach consists of a 12-foot through/left lane, an 11-foot right turn lane, and a crosswalk. The northbound approach consists of a 13-foot left turn lane and two 11-foot through lanes. An 18-foot right turn slip ramp is located just before the intersection. The eastbound approach consists of a 12-foot through/left lane, an 11.5-foot right turn lane, and a crosswalk.



Intersection 2: Mohawk Avenue and Collins Street



Mohawk Ave / Collins St Intersection

The Mohawk Avenue / Collins Street intersection is an unsignalized intersection located at the southern limit of the study area, with Collins Street being stop-controlled.

The northbound and southbound approaches on Mohawk Avenue consist of two 11-foot lanes in either direction. The Collins Street approach is 30 feet wide. There are no existing crosswalks at this intersection.

Intersection 3: Mohawk Avenue, South Ballston Avenue, and North Ballston Avenue



Mohawk Ave / N. Ballston Ave / S. Ballston Ave Intersection

The Mohawk Avenue / South Ballston Avenue / North Ballston Avenue intersection is a signalized intersection located in the middle of the study area.

The southbound approach consists of an 11-foot through/left turn/right turn lane and a crosswalk. The westbound approach consists of a 10-foot left turn lane, an 11-foot shared through/left turn/right turn



lane, and a crosswalk. The northbound approach consists of an 11-foot shared through/left turn lane and a 12-foot right turn lane. There is no eastbound approach for this intersection as South Ballston Avenue is a one-way street in the westbound direction. The South Ballston Avenue leg of the intersection has a crosswalk.

Intersection 4: Mohawk Avenue, South Ten Broeck Street, and North Ten Broeck Street



Mohawk Ave / S Ten Broeck St / N. Ten Broeck St Intersection

The Mohawk Avenue / South Ten Broeck Street / North Ten Broeck Street intersection is a signalized intersection located in the middle of the study area.

The southbound approach is 30 feet wide. The westbound approach is 20 feet wide from centerline to curb. The northbound approach is 30 feet wide. The eastbound approach is 16 feet wide. All approaches have a crosswalk.

Intersection 5: Mohawk Avenue and Center Street

The Mohawk Avenue / Center Street intersection is an unsignalized intersection located in the middle of the study area. Center Street is stop-controlled.

The eastbound and westbound approaches on Mohawk Avenue consist of one 11-foot lane in either direction. The Center Street approach is 24 feet wide. There are no existing crosswalks striped at this intersection.



Mohawk Ave / Center St Intersection



Intersection 6: Mohawk Avenue and Sacandaga Road



Mohawk Ave / Sacandaga Rd Intersection

The Mohawk Avenue / Sacandaga Road intersection is a signalized intersection located at the northern end of the study area.

The southbound approach consists of a 15-foot shared through/left turn/right turn lane. The westbound approach consists of a 10-foot shared through/left turn lane and a 10-foot right turn lane. The eastbound approach consists of an 11-foot shared through/left turn/right turn lane. All approaches have crosswalks.

Intersection 7: Mohawk Avenue, South Reynolds Street, and North Reynolds Street



Mohawk Ave / N. Reynolds St / S. Reynolds St Intersection

The Mohawk Avenue / South Reynolds Street / North Reynolds Street intersection is a signalized intersection located at the northern end of the study area.

The southbound approach consists of an 18-foot shared through/left turn/right turn lane and a crosswalk. The westbound approach consists of an 11-foot shared through/left turn lane. The



northbound approach consists of a 28-foot roadway and a crosswalk. The eastbound approach consists of an 11-foot shared through /right turn lane and a crosswalk.

A summary of the roadways within the study area is provided in **Table 2.6** below.

Roadway Name	Functional Class¹	Number of Lanes	Lane Width (ft)	Shoulder Width (ft)
Mohawk Avenue	14	2-4	11	0 – 4
South Reynolds Street	19	2	10	0
North Reynolds Street	19	1	18	0
Sacandaga Road	16	2	14 – 16	0
Center Street	19	1	12	0
Ten Broeck Street	19	2	10	0
South Ballston Avenue	19	1	18	0
North Ballston Avenue	14	2	15	0
Collins Street	19	2	15	0
Glen Avenue	19	2	16	0
Schonowee Avenue	19	2	12	0

Notes:

1. Functional Classes: 14 – Urban Principal Arterial, 16 – Urban Minor Arterial, 19 – Urban Local Road

Pedestrian Accommodations

Sidewalks and Crosswalks

In general, concrete sidewalks are located on both sides of Mohawk Avenue throughout the entire study area. The widths vary between 4 feet and 5 feet. Between the intersections of Mohawk Avenue / Sacandaga Road and Mohawk Avenue / Collins Street the concrete sidewalk on both sides of the road has an approximate 8-inch decorative stamped asphalt inlay that has settled and begun to separate from the sidewalk. The sidewalk in many locations is also exceeding the maximum two (2) percent cross slope per American Disabilities Act (ADA) Standards. Curb ramps are present at each intersection pedestrian crossing location. The majority of the existing ramps do not meet ADA Standards for at least one design element, including running grade, cross slope, detectable warning units, and/or the grade of the roadway adjacent to the ramp exceeds ¼-inch.

Striped pedestrian crosswalks are present and are in satisfactory condition at each crossing except for Collins Street, where the striping has worn and is no longer reflective.

Pedestrian Signal Equipment

All existing signal appurtenances are non-standard because the system is lacking pedestrian signal heads or is not accessible and would require replacement to properly accommodate pedestrian traffic at these intersections. The pedestrian signal equipment at each signalized intersection varies and is summarized below:



Mohawk Avenue, Glen Avenue, and Schonowee Avenue: Pedestrian signals with push buttons and signs have been installed for all crossings at this intersection. Depending on the location, push buttons and signs are either installed on the same dedicated pedestrian signal pole or mounted on a traffic signal pole.

Mohawk Avenue and Ballston Avenue: Accessible Pedestrian Signals (APS) with push button and signs mounted to the traffic signal poles have been installed at the east side of the Ballston Avenue crossing and western Mohawk Avenue crossing. Two (2) pedestrian signals with push buttons and one (1) sign on the same pedestrian signal pole have been installed at the northwest quadrant to cross either Ballston Avenue or Mohawk Avenue. No pedestrian signal equipment is installed for the South Ballston Avenue crossing.

Mohawk Avenue and Ten Broeck Street: Each of the four (4) crossing locations at this intersection have one (1) push button and sign on push button post with no pedestrian signal heads. At the northwest and southeast quadrants, the push button and signs are mounted on the traffic signal pole.

Mohawk Avenue and Sacandaga Road:

APS equipment has been installed on dedicated pedestrian signal poles for the eastern Mohawk Avenue crossing. Push buttons and signs with no signal heads have been installed to cross Sacandaga Road and Mohawk Avenue on the west side of the intersection.

Mohawk Avenue and Reynolds Street: Push buttons and signs have been installed for the Mohawk Avenue crossings, mounted on the traffic signal pole or a dedicated post. Pedestrian signal heads are not present. No pedestrian signal equipment is installed at the North or South Reynolds Street crossings.

Pedestrian Amenities

Along Mohawk Avenue within the study area there are decorative benches in four (4) locations for public use as well as numerous public trash receptacles placed on both sides of the road. In addition, decorative pedestrian lighting runs on both sides of the road through the entire corridor.

Bicycle Routes and Accommodations

The minimal shoulder width and presence of on-street parking along Mohawk Avenue requires bicyclists to share the road in the travel lane. The existing lane widths are less than recommended for shared use. Bicycle travel adjacent to on-street parking lanes may create conflicts with people exiting parked vehicles. East of the intersection of Mohawk Avenue and Collins Street there is a striped 3.5-foot shoulder that does not meet the minimum 5-foot recommended width to safely accommodate bicyclists.



Bicycle Amenities

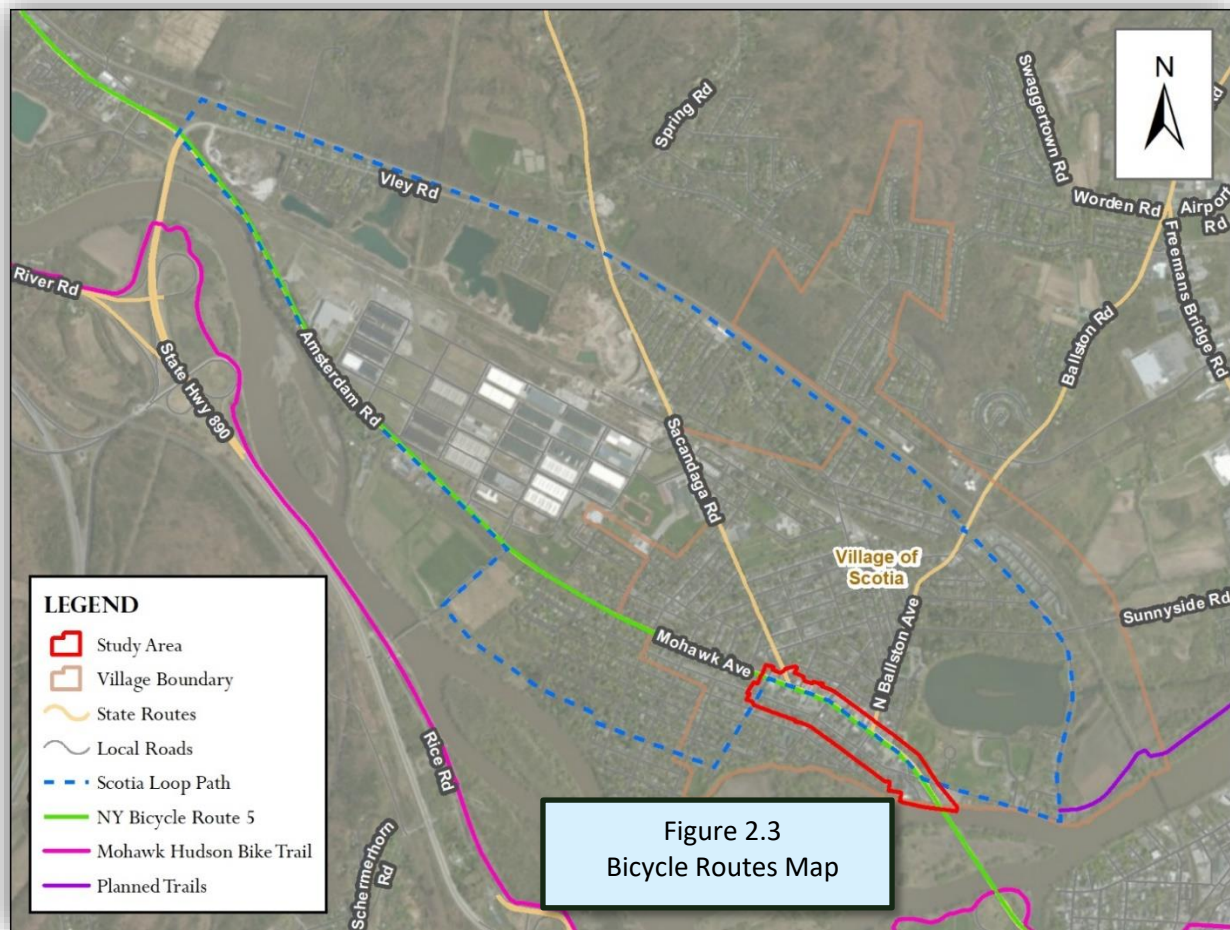
CDTA in conjunction with CDPHP Cycle Program has two (2) bike-share hubs able to provide six (6) bikes per hub located in front of the Village Parking Lot for the public to rent and return. During a site visit conducted on April 23rd, 2021 only two (2) bikes were available in the rack. A full map of CDTA bike-share hubs can be found at <https://cdphpcycle.com/>.



Bicycle Routes

Mohawk Avenue is designated as part of NY Bicycle Route 5. NY Bicycle Route 5 is a signed on-road bicycle route that extends 365 miles from Niagara Falls across New York to the Massachusetts state line. This segment of NY Bicycle Route 5 has no designated bicycle lanes, so motorists are expected to share the travel lanes with bicyclists. The route parallels the Erie Canal and the New York State Canalway Trail. It intersects with NY Bicycle Routes 9, 11, 14, 19 and 517, as well as the New York State Seaway Trail. Also located within the study area is Schenectady County Bicycle Route 50, which begins at Mohawk Avenue in the Village of Scotia and terminates at NY Route 9 in the City of Saratoga Springs.

CDTC's Capital District Trails Plan details a bike route local to the Village of Scotia. The Scotia Loop Path consists of 8.2 miles of combined on-road bike paths and off-road trails. This proposed on-and-of-road route would connect the existing Scotia Glenville Trail to the Mohawk-Hudson Bike-Hike Trail (F), providing a loop around the Village of Scotia. Beginning in the vicinity of the Washington Avenue and Schonowee Avenue intersection, the northern segment of this trail is envisioned to proceed north along Washington Avenue, continuing across Ballston Avenue to follow the existing utility line right-of-way which runs parallel to the railroad tracks. In the vicinity of Sacandaga Road, it would connect with Vley Road, turning south along the Thruway Bridge Interchange (Route 890) across the Mohawk River to the Mohawk-Hudson Bike-Hike Trail. The southern leg of this loop is conceptually planned to follow Route 5 along the Mohawk River, turning onto Maalwyck Park Road down to the river. From the park, it could proceed east connecting along local residential streets in the vicinity of Dongan Avenue and Engleman Avenue, connecting back with Schonowee Avenue in the vicinity of Glen Sanders Mansion and Freedom Park.



Freight

Mohawk Avenue from the intersection of North Ballston Avenue heading west is listed under the National Highway System as an Access Highway.

Along Mohawk Avenue from the intersection at North Ballston Avenue to the intersection at Sacandaga Road, the average truck percentage is 5%. From the intersection at Sacandaga Road heading west past the study limits, the truck percentage is 10%. Mohawk Avenue serves as a very crucial connection for freight heading either East or West towards I-890 which serves I-90 and I-89. In addition, on Mohawk Ave approximately one (1) mile west of our study limits is Glenville Business and Technology Park consisting of multiple businesses that solely rely on freight as a mode of transportation for their distribution.

Access Highway

A highway designated for use by STAA vehicles and 53 ft trailers. These vehicle combinations may not travel off the access highway for any distance.

- NYSDOT



Transit

The Capital District Transportation Authority (CDTA) operates two (2) bus routes that pass through the study area, CDTA Route 353 and CDTA Route 450. CDTA does not have any known plans to modify the transit schedule or stop locations.

CDTA Route 353 runs from the Walmart in Glenville to the Price Chopper on Altamont Avenue in Schenectady. On the eastbound route, the bus stops at the intersection of Mohawk Avenue and Sacandaga Road, 207 Mohawk Avenue, 101 Mohawk Avenue, and the intersection of Mohawk Avenue and Glen Avenue. On the westbound route, the bus stops at the Scotia Library, Mohawk Avenue and North Ballston Avenue, 208 Mohawk Avenue, and the intersection of Mohawk Avenue and Sacandaga Road. It should be noted that the closest crossing of Mohawk Avenue for the westbound Scotia Library stop is 450 feet west at the intersection with North Ballston Avenue. The closest crossing for the eastbound stop at 207 Mohawk Avenue is 200 feet east at the intersection with Ten Broeck Street. Pedestrians were observed crossing Mohawk Avenue ahead of marked crosswalks to access bus stops that were not located next to an existing crossing. This route begins running at 6:00 am Monday through Saturday and 8:40 am on Sundays. For this route, buses run approximately every 20-30 Monday through Saturday and every 40 minutes on Sundays.

CDTA Route 450 runs from the Gateway Plaza in Schenectady to Target on NY Route 50 in Glenville and then to the Price Chopper Plaza on Ballston Ave in Saratoga. On the northbound route, the bus stops at the Scotia Library at 14 Mohawk Avenue and the intersection of Mohawk Avenue and Collins Street. On the southbound route, the bus stops at the intersection of Mohawk Avenue and Glen Avenue. This route begins running northbound at 4:55 am, southbound at 6:00 am Monday through Saturday, and does not run in either direction on Sundays. Buses run approximately every 30-50 minutes.

Ridership data obtained from CDTA for Route 353 and Route 450 is located in **Tables 2.7 & 2.8** below and a map of the transit routes and stops along Mohawk Avenue are depicted in **Figure 2.4** below. The data is from November 10, 2019 to January 22, 2020, and November 8, 2020 to January 20, 2021. The two time periods of data provide an opportunity to see how the pre-COVID-19 pandemic ridership compares to the COVID-19 pandemic period ridership. The change in overall activity decreased by upwards of 60% at certain stop locations.

Table 2.7: CDTA Route 450 Ridership by Stop

	Stop	Stop No.	2019-2020 T.A.	2020-2021 T.A.	T.A. Change (Count)	T.A. Change (%)
N.B.	Scotia Library	12810	15.3	6.1	-9	-60%
	Mohawk Avenue and Collins Street	3610	8.6	5.5	-3	-36%
S.B.	Mohawk Avenue and Glen Avenue	12467	11.1	6.8	-4	-39%

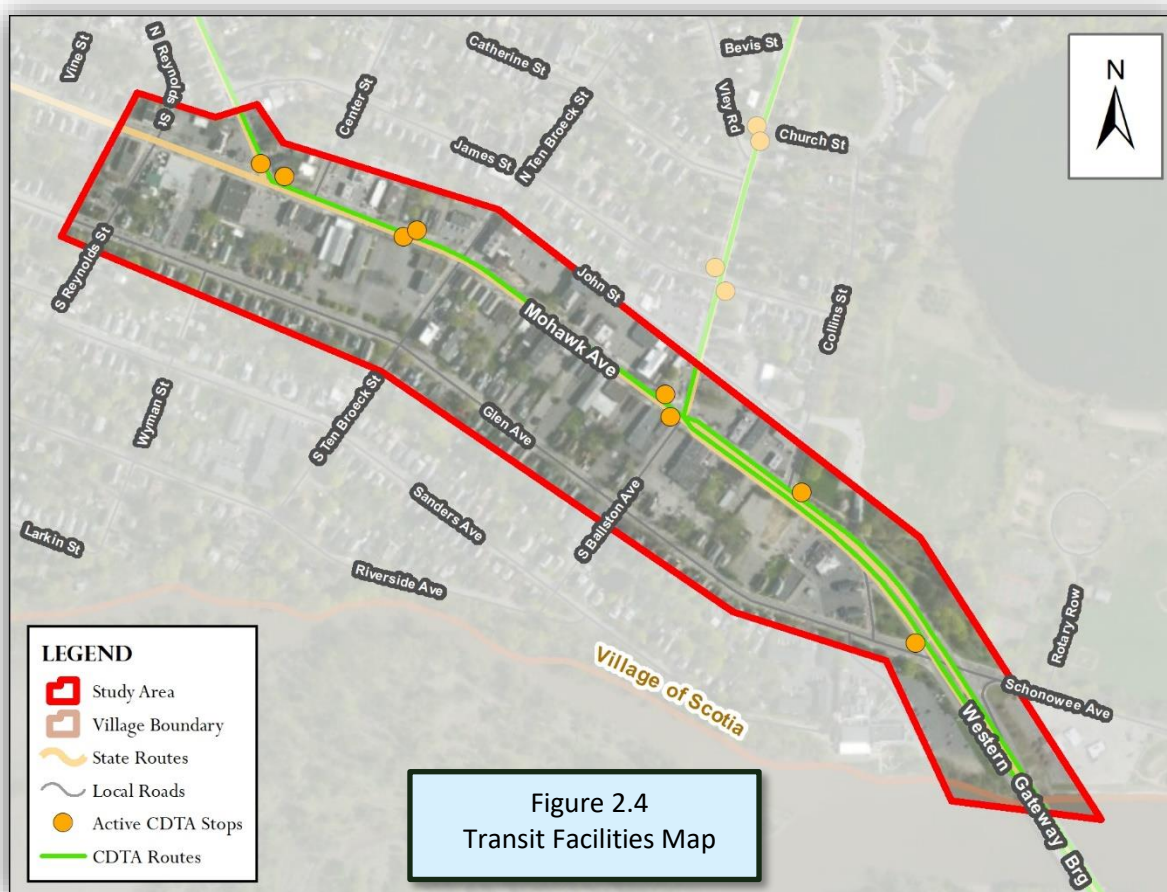
T.A. = Total Activity (Daily boardings and daily alightings combined)



Table 2.8: CDTA Route 353 Ridership by Stop

	Stop	Stop No.	2019-2020 T.A.	2020-2021 T.A.	T.A. Change (Count)	T.A. Change (%)
E.B.	Sacandaga Road & Mohawk Avenue	1704	10.7	8.0	-3	-25%
	207 Mohawk Avenue	3572	27.9	24.6	-3	-12%
	101 Mohawk Avenue (Ballston Avenue)	12380	14.3	11.0	-3	-23%
	Mohawk Avenue & Glen Avenue	12467	11.1	6.8	-4	-39%
	Scotia Library	12810	15.3	6.1	-9	-60%
W.B.	Mohawk Avenue & Ballston Avenue	12196	9.4	9.0	0	-4%
	208 Mohawk Avenue	12387	25.4	18.1	-7	-29%
	Sacandaga Road & Mohawk Avenue	1700	27.7	15.3	-12	-45%

T.A. = Total Activity (Daily boardings and daily alightings combined)



**Figure 2.4
Transit Facilities Map**



Parking

Parking Overview

Parking on and adjacent to the Mohawk Avenue corridor is available in a combination of private lots, a municipal lot, and on-street spaces. Several businesses own and maintain private parking lots, primarily at the rear of each building. Along the south side of Mohawk Avenue, many of the parking lots have a rear entrance onto Glen Avenue. The Village of Scotia operates a public parking lot on the north side of Mohawk Avenue and adjacent to Village Hall, immediately east of North Ten Broeck Street.

The municipal parking lot is primarily for use by the public, except that six (6) parking spots are designated for municipal use only and six (6) parking spots are designated for use by the First Baptist Church only. There is a total of 63 parking spaces in this parking lot. Parking is prohibited in the lot between the hours of 1:00 am and 6:00 am.





On-street parking is permitted on both sides of Mohawk Avenue west of Sacandaga Road and generally between Center Street and North Ballston Avenue. Per Village Code § 240-40, parking is prohibited at all times in front of the Scotia Fire Station and per § 240-40, parking is prohibited as shown on the map below. Where parking is permitted, vehicles must not block driveways or fire hydrants. Areas where on-street parking is permitted are identified on the map below within the green areas, as well as the Village's municipal parking lot.

Overnight curbside parking is not allowed per Village code between the hours of 3:00 am and 6:00 am. Daytime parking on Mohawk Avenue is limited as noted in Village Code § 240-45, the schedule for "No Standing" hours, as follows:

- North curb line from Ballston Avenue to 153 feet to the west of Ballston Avenue: No Standing 3:30 pm to 6:00 pm Monday through Friday
- South curb line from Ballston Avenue to Short Mohawk Avenue: No Standing 7:00 am to 8:00 am Monday through Friday
- South curb line from Ballston Avenue to 100 feet to the west of Ballston Avenue: No Standing 3:30 pm to 6:00 pm all days

During inclement weather, the Village Mayor may activate a snow emergency per Village Code § 240-25.2, during which parking is not permitted on any Village streets to allow for better snow removal and increased safety.

Parking Amenities

The Village of Scotia has installed four (4) L2 and one (1) L3 electrical vehicle charging stations. The L3 (Level 3) station is a larger unit, capable of charging approximately 7 to 8 times faster than the other stations. The charging stations have been installed in compliance with the 2015 New York State Energy Plan. The parking stalls are marked with signage and pavement markings to denote that only parking for electric vehicles is permitted.



Parking Utilization

An inventory of the parking utilization along Mohawk Avenue was performed at different times of the day between April 2021 and June 2021. Parking spaces are not delineated with pavement markings and there are approximately 85 existing on-street parking spaces between Reynolds Street and Ballston Avenue; these were determined by dividing the available parking length by 20 feet (the average length of a space). It should be noted that due to COVID-19 restrictions for businesses, parking utilization may not be representative of a normal weekday.

Most of the parked vehicles were identified near the North Ten Broeck Street intersection. This is assumed to be due to a combination of the proximity to Village Hall, the police and fire stations, and multiple businesses and restaurants and the parking limitations nearby. The results are summarized in **Table 2.9** below.



Table 2.9: Parking Inventory

Location	Available Spaces	Friday April 23, 2021 2:00 pm		Tuesday June 15, 2021 11:00 am		Tuesday June 15, 2021 4:00 pm		Thursday June 17, 2021 11:00 am		Thursday June 17, 2021 4:00 pm	
		Utilized Spaces	% Util.	Utilized Spaces	% Util.	Utilized Spaces	% Util.	Utilized Spaces	% Util.	Utilized Spaces	% Util.
South Reynolds St to Sacandaga Rd	9	0	0%	2	23%	2	23%	1	12%	2	23%
North Reynolds St to Sacandaga Rd	12	1	8%	2	17%	2	17%	0	0%	0	0%
Tartan Lanes to S. Ten Broeck St	14	1	8%	0	0%	1	8%	0	0%	2	15%
Center St to N. Ten Broeck St	13	1	7%	5	39%	3	24%	5	39%	3	24%
S. Ten Broeck St to S. Ballston Ave	17	9	53%	3	18%	5	30%	4	24%	8	48%
N. Ten Broeck St to N. Ballston Ave	20	6	30%	4	20%	7	35%	6	30%	12	60%
Entire Study Area	85	18	21%	16	18%	20	23%	16	18%	27	29%

Traffic, Pedestrian and Bicycle Data

Existing traffic data for the corridor was obtained from the NYSDOT Traffic Data Viewer and is summarized in **Table 2.10** below. If information was not available at a particular street or intersection, it has been omitted from the table.

Table 2.10: Traffic Summary of Roadways within Study Area

Roadway Name	Functional Class ²	AADT ¹	Calculation Year	Truck AADT ¹	Truck Percentage
Mohawk Avenue – Western Gateway Bridge to Ballston Avenue	14	23,265	2019	829	4%
Mohawk Avenue – Ballston Avenue to Sacandaga Road	14	12,232	2019	599	5%
Mohawk Avenue – Sacandaga Road to I-890	14	4,540	2019	470	10%
Sacandaga Road	16	7,588	2019	386	5%
North Ballston Avenue	14	14,838	2019	708	5%

Notes:



1. AADT – Average Annual Daily Traffic
2. FC 14 – Urban Principal Arterial, FC 16 – Urban Minor Arterial.

In addition, in 2019 as part of the CDTC and Capital District Regional Planning Commission (CDRPC) Technical Assistance Program, a traffic analysis was performed for the intersection of Mohawk Avenue and North Ballston Avenue as part of a complete streets case study.

Existing speed data for the corridor was obtained from the NYSDOT Traffic Data Viewer and is summarized in **Table 2.11** below.

Table 2.11: Speed Data				
Roadway Segment	Posted Speed Limit	Average Speed	85th Percentile Speed¹	Year Data Was Obtained
Mohawk Avenue – Western Gateway Bridge to Ballston Avenue	30	30	39	2017
Mohawk Avenue – Ballston Avenue to Sacandaga Road	30	21	29	2015
Mohawk Avenue – Sacandaga Road to I-890	45	44	50	2018

Notes:

1. The 85th percentile speed is defined as the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions past a monitored point.

According to the NYSDOT Traffic Data Viewer, a speed study was performed in 2015 for Mohawk Avenue from County Route 30 to Sacandaga Road, which has a posted speed limit of 45 mph from County Route 30 to 7th Street (Glenville Business & Technology Park), 40 mph from 7th Street to Bradbury Street, and 30 mph from Bradbury Street to Sacandaga Road. This study showed the average speed is 44 mph and the 85th percentile speed is 50 mph.

The Village of Scotia performed pedestrian and bicycle counts in December 2021 at three (3) intersections during the mid-day peak (11am to 1pm) and the evening peak (4pm to 6pm). The results are summarized in Table 2.12 below.

Table 2.12: Pedestrian and Bicycle Counts (December 2021)		
Intersection	Mid-Day Peak (11am to 1pm)	Evening Peak (4pm to 6pm)
Mohawk Avenue at Ballston Avenue	10 Pedestrians 4 Bicyclists	4 Pedestrians 13 Bicyclists
Mohawk Avenue at Ten Broeck Street	67 Pedestrians 4 Bicyclists	74 Pedestrians 4 Bicyclists
Mohawk Avenue at Sacandaga Road	72 Pedestrians 10 Bicyclists	54 Pedestrians 7 Bicyclists

The counts confirm more significant pedestrian traffic near the mid-day peak, that could likely be associated with business patrons.

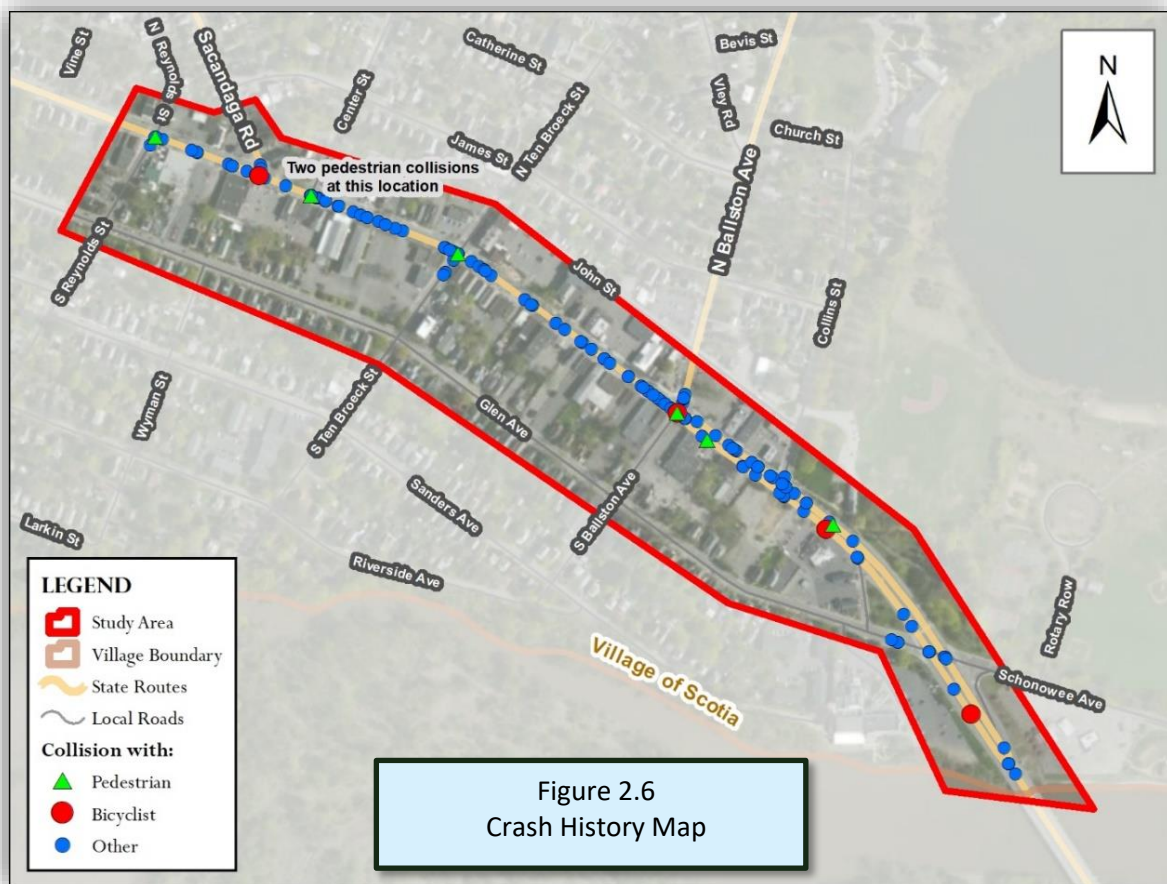


Crash History

Crash data was provided by the CDTC for the most recent five years of available data (January 1, 2016 to December 31, 2020). Crash data was examined on Mohawk Ave, from Reynolds Street to the Western Gateway Bridge. Crashes on side streets that occurred within 100 feet of the intersections were also examined.

Of the 266 reported crashes within the study area, four (4) crashes involved bicyclists and seven (7) involved pedestrians. Of these eleven (11) accidents, there were six (6) crashes with reported injuries and one (1) fatal crash. The fatal crash occurred on November 28th, 2018 and involved a vehicle striking a pedestrian. The pedestrian was reported to be crossing Mohawk Avenue mid-block between Ballston Ave and Collins Street, approximately 200 feet east of Ballston Ave. The crash occurred at 6:37 PM in dark conditions.

For the undivided two-lane section of Mohawk Avenue, the crash rate was 21.28 ACC/MVM, which is much higher than the NYSDOT average crash rate of 3.73 ACC/MVM. For the undivided four-lane section of Mohawk Avenue, the crash rate was 8.83 ACC/MVM, which is slightly higher than the NYSDOT average crash rate of 6.41 ACC/MVM. A full analysis of this data is located in **Appendix B**.





In 2016, Mohawk Ave from Vine Street to the Western Gateway Bridge was a Priority Investigation Location (PIL). PILs are more severe crash sites. They comprise all locations and intersections on the State Highway System which (1) have experienced an established threshold of a set number of crashes in the most recent two-year period, and (2) have experienced crash rates exceeding a statistical upper control limit for the particular highway type corresponding to a confidence level of 99.9 percent. PIL locations comprise approximately 5 percent of State Highway mileage, and account for one-third of all crashes occurring on the System. These locations are used in the Highway Safety Investigation (HIS) program which requires that a detailed engineering analysis be conducted for these locations.

In addition, a segment of North Ballston Ave north of Mohawk Ave was a PIL. In 2017, the segment of Mohawk Ave from Vine Street to North Ballston Avenue was a PIL, and North Ballston Avenue was once again a PIL north of Mohawk Ave. In 2018, the segment of Mohawk Ave from Eagle Street to North Ballston Avenue was a PIL. In 2019 and 2020, no PILs were present on Mohawk Ave.

In 2016, 2017, and 2018, a portion of Mohawk Ave east of North Ballston Avenue and approaching the Western Gateway Bridge was classified as a Safety Deficient Location (SDL). SDLs are a combination of PILs and High Crash Locations (HALs) and experience somewhat lower crash rates than PILs. They must meet two less demanding selection criteria: (1) they must have experienced a lower established threshold of a set number of crashes in the most recent two-year period; and (2) they must have experienced crash rates exceeding a statistical upper control limit for the particular highway type corresponding to a confidence level of 90 percent.

Environmental Resources

The Mohawk Avenue corridor was screened for environmental resources that may be present within or adjacent to the study limits using available online state and federal databases.

Wetlands

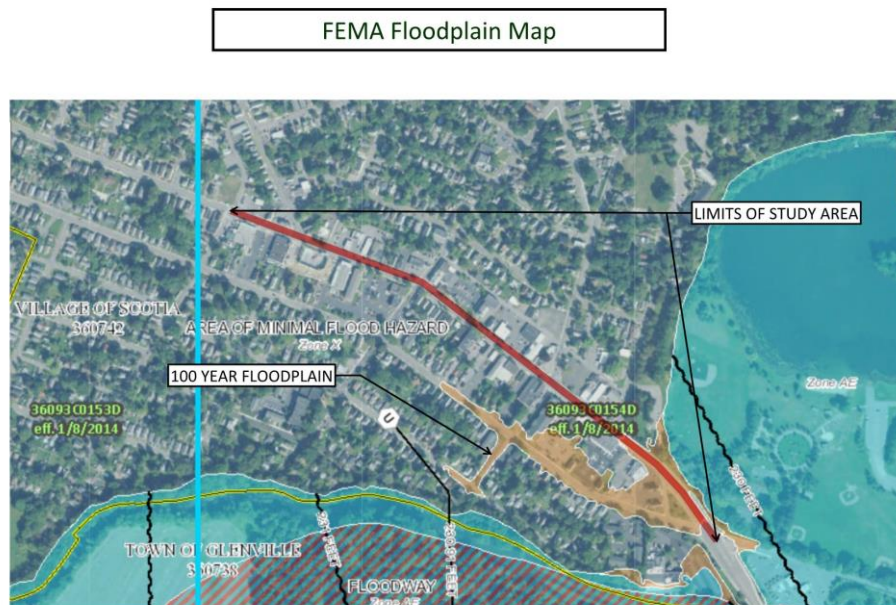
Based on a review of the New York State Department of Environmental Conservation (NYSDEC) Environmental Resource Mapper (ERM), state-regulated wetlands associated with the Mohawk River are located approximately 580 feet west of Mohawk Avenue. Another state-regulated wetland associated with Collins Lake is located approximately 800 feet east of Mohawk Avenue. The study area does not contain areas classified as wetlands.



Source: NYSDEC Environmental Resource Mapper

Floodplains

The southern portion of the study area is within the 100-year floodplain of the Mohawk River, as indicated by the Federal Emergency Management Agency (FEMA) on the GIS database. Due to the existing topography, the floodplain extends along Glen Avenue from Mohawk Avenue to beyond South Ballston Avenue.



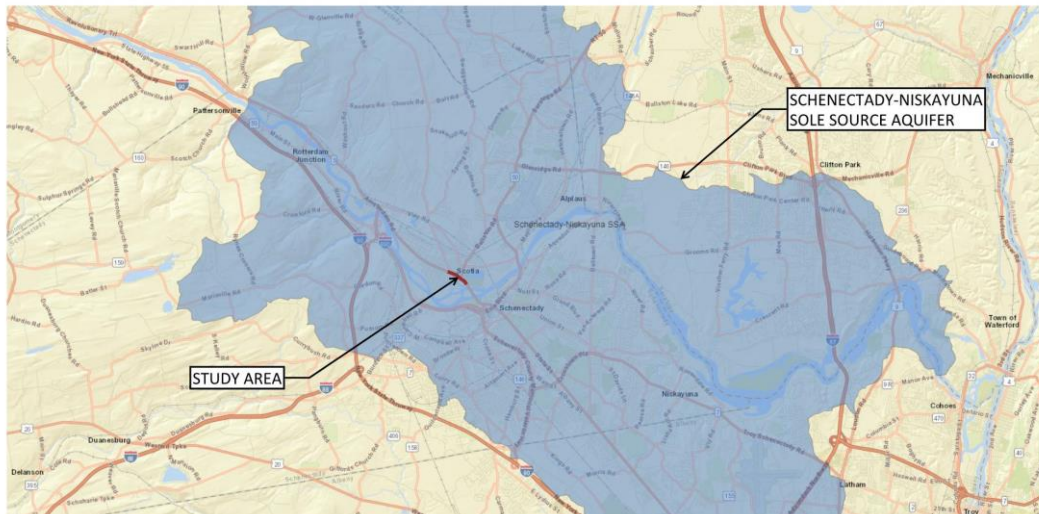
Source: FEMA Flood Map Service Center



Aquifers

NYSDEC aquifer GIS data files have been reviewed and it has been determined that the study area is located within the limits of the Schenectady-Niskayuna Sole Source Aquifer.

Aquifer Map



Source: US EPA GIS Sole Source Aquifer Database

Endangered and Threatened Species

The project area was reviewed for state and federal rare, endangered, or threatened species. The NYSDEC Environmental Resource Map suggests that the eastern portion of the study corridor has the potential to contain rare dragonflies and damselflies, as well as a listed endangered or threatened species. Information obtained from the United States Fish and Wildlife Service (USFWS) Information, Planning and Conservation (IPaC) system shows that a Bald Eagle habitat may be located within or near the study area. Although the Bald Eagle has been removed from the State and Federal endangered species lists, it is afforded protection under the Bald and Golden Eagle Protection Act (BGEPA).

Historic and Cultural Resources

The study area contains historic resources that have been identified on the NYS Office of Parks, Recreation and Historic Preservation's (OPRHP) Cultural Resource Information System (CRIS). Two historic properties listed on the National Register are located along Mohawk Avenue.



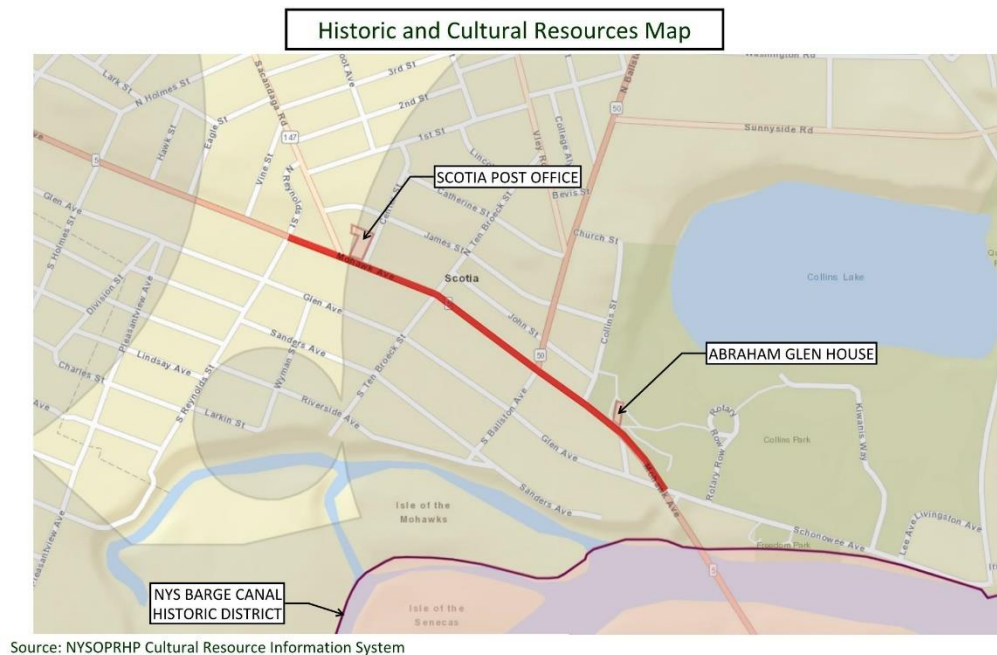
The Abraham Glen House, constructed in 1730, is historically and architecturally significant as a rare, substantially intact example of mid-18th century Dutch, wood frame residential architecture. This structure is currently being utilized as the Scotia Branch of the Schenectady Public Library and was added to the National Register in 2004.



The United States Post Office, built in 1940, is an example of a detailed Colonial Revival structure containing a historical mural depicting a confrontation between Native Americans and the Glen Family during the 1690 Schenectady Massacre. The building was added to the National Register in 1989.



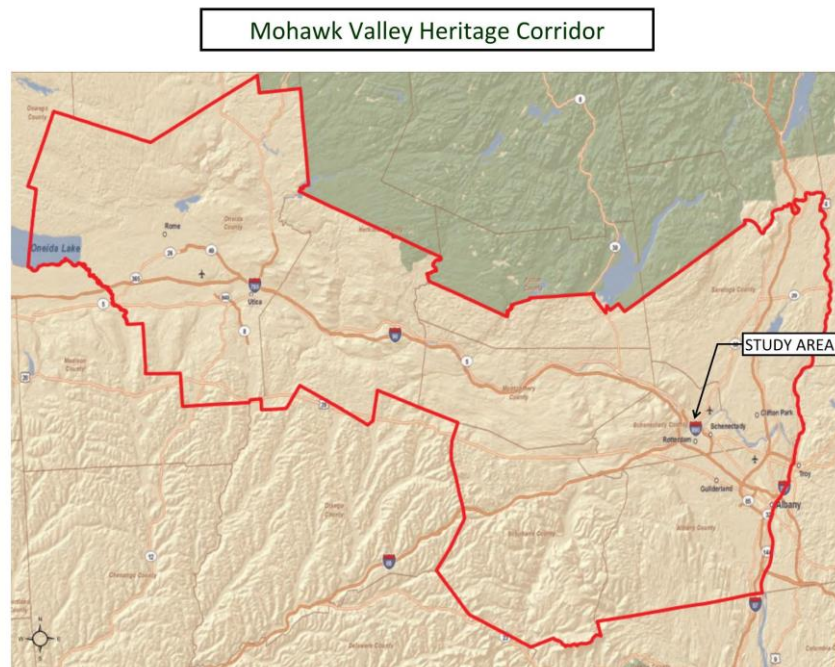
The study area is located in the vicinity of the New York State Barge Canal Historic District, which is composed of the Erie Canal, the Champlain Canal, the Oswego Canal, and the Cayuga-Seneca Canal. The Erie Canal East crosses underneath the Western Gateway Bridge (NY Route 5), Lock E-13, and is considered a non-contributing feature within the district. The study area also lies within an area that has the potential to contain archaeological resources.





State Heritage Area

The study area is located within the New York State Mohawk Valley Heritage Corridor. The corridor was established in 1997 and stretches 130 miles from the Hudson River to Oneida Lake. The corridor is up to 70 miles wide and encompasses 203 communities within 8 counties.



Resources Not Present

A desktop analysis of the study area also included a review of the following resources, and it has been determined that the resource is not present within the study area:

- Surface Waterbodies and Watercourses
- Wild, Scenic, and Recreational Rivers
- Navigable Waters
- Coastal Resources
- Critical Environmental Areas
- Farmlands

Environmental Justice & Limited English Proficiency

An Environmental Justice scan and a Limited English Proficiency scan was performed by the CDTC using data from the 2013-2017 American Community Survey (ACS). The Village of Scotia is covered by two Census Tracts, neither of which met the threshold for Environmental Justice populations. A full analysis of the data obtained, as well as figures illustrating the Environmental Justice Populations and the Limited English Proficiency populations, is located in **Appendix C**.



CHAPTER 3: Past Planning Efforts

The Village of Scotia, in cooperation with State and local agencies, has completed a series of planning efforts that support revitalization and community growth in the Village. The studies and plans summarized below, are relevant to the Scotia Downtown Connections project area.

Eastern Gateway Study (Village of Scotia, 2001)

The Scotia Eastern Gateway Enhancement Project, which was part of the Transportation Enhancement Program for the Village of Scotia, recommends enhancements to Mohawk Avenue and adjacent streets in the Village. A “gateway” is proposed at the intersection of Mohawk Avenue, Glen Avenue, and Schonowee Avenue that includes landscaping upgrades, ornamental lighting, interpretive signs, and a curbed median on Mohawk Avenue. Pedestrian upgrades such as new curb ramps, new sidewalks, and safer pedestrian mid-block crossings are proposed along the project corridor.

Relevant Recommendations:

- Upgrade existing landscaping, lighting, and other amenities to provide a “gateway” entrance for vehicular traffic.
- Create a safe network that would connect restaurants and storefronts for easy access by pedestrians.

Village of Scotia Complete Streets Workshop (CDTC & Village of Scotia, 2018)

This workshop was held to provide attendees with an overview of completed and potential Complete Streets implementation efforts, as well as to foster an open discussion of implementation obstacles and ideas to overcome them. The workshop primarily focused on potential future project opportunities, design options and opportunities, coordination opportunities, and a review of prior studies. The intersection of Mohawk Avenue, Schonowee Avenue, and Glen Avenue was specifically discussed during this workshop. Conceptual recommendations were developed during the workshop to be considered for further evaluation.



Relevant Recommendations:

- A gateway treatment would better alert drivers that there has been a change in corridor conditions as they enter the Village.
- A new crossing at the south leg of the intersection as well as upgraded landscaping and sidewalks is highly desirable as it will improve the pedestrian aesthetic environment as well as accessibility.



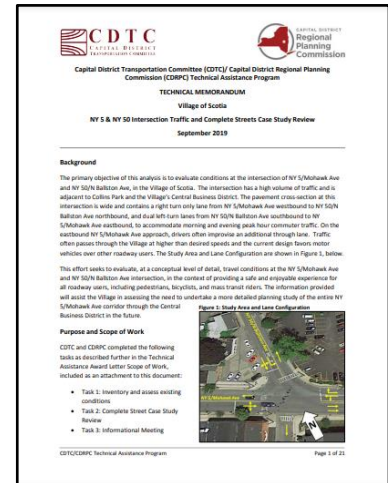
- Bicycle facilities should be considered on Glen Avenue to remove bicycle traffic from Mohawk Avenue.

NY 5 & NY 50 Intersection Traffic & Complete Streets Case Study Review (CDTC & CDRPC, 2019)

The primary objective of this study was to evaluate the conditions at the intersection of Mohawk Avenue (NY 5) and North Ballston Avenue (NY 50) in the Village of Scotia. The purpose was to evaluate travel conditions at the intersection, in the context of providing a safe and enjoyable experience for all roadway users, including motorists, pedestrians, bicyclists, and mass transit riders. Conceptual recommendations were developed as part of the study to be considered for further evaluation.

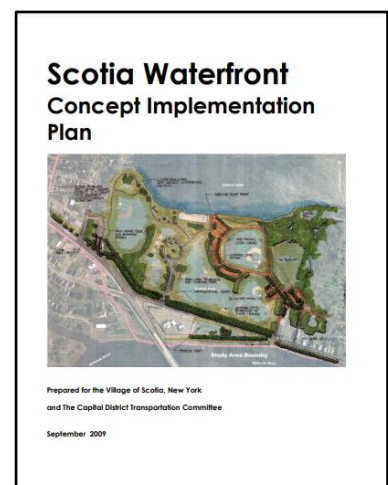
Relevant Recommendations:

- Install curb extensions to narrow the roadways to help lower vehicular speeds and shorten pedestrian crossings.
- Study the removal of the dual left turn lane on North Ballston Avenue southbound to potentially shorten the pedestrian crossing.
- Relocate the Mohawk Avenue eastbound approach CDTA bus stop to the far side of the intersection to allow for more on-street parking, minimize sight distance problems, encourage pedestrians to cross behind the bus, and shorten acceleration distances for the buses.
- Re-time the signal to account for peak hour traffic increases.
- Add pedestrian infrastructure where needed.



Scotia Waterfront Concept Implementation Plan (CDTC & Village of Scotia, 2009)

The purpose of this study was to identify potential improvements to the Scotia waterfront area that would enhance resources and improve traffic flow (vehicle, pedestrian, and bicycle) and parking. The study boundaries include the Town of Glenville line to the east, Collins Lake and Sunnyside Road to the north, North Ballston Avenue to the west, and the Mohawk River to the south. The Mohawk Avenue Corridor was specifically mentioned as having a persistent conflict between business access and through traffic in the corridor. This corridor is a designated segment of the Mohawk-Hudson Bike/Hike Trail System; however, the high vehicular traffic volume on this road makes it very unappealing to pedestrians and bicyclists.





Relevant Recommendations:

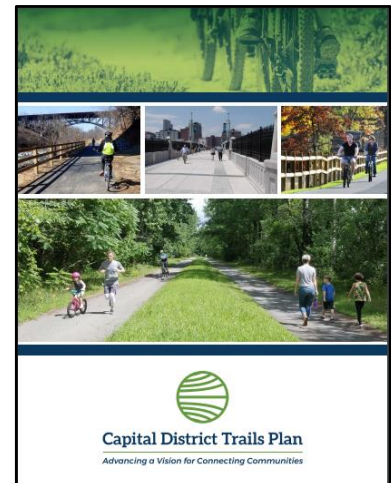
- Utilize the Washington Avenue approach as the main access road to the Waterfront, Collins Parks and Freedom Park area to mitigate some of the congestion at the Schonowee Avenue / Glen Avenue / Mohawk Avenue intersection during major events.
- Explore the possibility of utilizing Collins Park and the Scotia-Glenville Central School campuses to alleviate parking issues during major events.
- Identify measures to clarify pedestrian movements for improved safety and distinction between public and private space (i.e., additional crosswalks and transition from the existing tree-lined walk on Schonowee Avenue to a new promenade through Collins Park).
- Consider enhancements to the library entrance to emphasize this important public resource.

Capital District Trails Plan (CDTC, 2019)

This plan was developed to provide a safe space for walking and bicycling, protect the environment, improve quality of life, conserve energy, and promote tourism and economic development. The overall goal of the plan is to develop an updated vision for a seamless regional transportation network that connects cities, towns, and villages throughout the Capital District.

Relevant Recommendations:

- Identify the economic benefits of a local trail system and project how these benefits might affect the Capital District as part of an expanded network.
- Provide trail connections with areas of concentrated residential and business activity to help support commuting travel





CHAPTER 4: Public Outreach

Public involvement is critical for this study to understand the issues that the public faces within the Mohawk Avenue corridor. The study included two (2) public workshops and two (2) pop-up events to provide members of the public, staff, stakeholders, and other agencies with opportunities to learn about and comment on the study. The final step in the public involvement process is a third and final presentation to the Village Board.

Public Interest

After the first Public Workshop, it became apparent that attendees were largely made up of two interest groups, Village of Scotia residents and people that commute to the area for work, entertainment, etc.

In addition to the meeting-style and pop-up outreach events, information was shared, and comments received via the study website: <https://www.scotiaconnections.com/>. The comments received via the website and during the public meetings and pop-up events have been summarized and included in the **Appendix D** of the study. These comments have all been considered in the development of the study and in many cases resulted in changes to the concept design.

Summary of Pop-Up Event #1

The first pop-up event took place on August 3, 2021. A booth was set up along Schonowee Avenue during a U.S. Water Ski show that generates pedestrian traffic from both Village of Scotia residents and frequent visitors of the project corridor. Representatives from MJ Engineering & Land Surveying were present before the show to provide information on the Study, notify the community of Public Meeting #1, and answer questions.

A total of three (3) people stopped by the booth to provide feedback on what they would want to see improved along the Study corridor. Improved bicycle and pedestrian amenities were the main concerns among the public. Patrons mentioned that they believed there was a safety issue for bicycles that wanted to utilize Mohawk Avenue.

Summary of Public Workshop #1

The purpose of Public Workshop #1 was to inform the public about the corridor study and provide them with an understanding of existing conditions and potential traffic from future development ideas. It also provided the opportunity to obtain input from the public on their concerns and the existing needs of the corridor as well as any ideas for improvements that should be considered as the study progresses.

The first public involvement meeting for the Scotia Downtown Connections Plan was held virtually on August 12, 2021. The meeting was attended by residents, stakeholders, and study advisory committee members. The meeting included a PowerPoint presentation with several poll questions throughout the presentation to gather public input. See **Appendix D** for the PowerPoint presentation and a detailed summary of the meeting.

Meeting attendees had several opportunities to provide input, ask questions, and offer comments. This included an open forum question/comment feature that was available to participants throughout the



presentation. Attendees were also given the study website address and encouraged to review the material on the website and provide comments via the website email.

During the presentation, the public was invited to provide their input on specific questions via text or directly in the presentation itself in real time on the screen using “Poll Everywhere”. The questions were multiple-choice. The results of the “Poll Everywhere” survey showed that the majority of the attendees believe that the study area is nice but that the condition of it has significantly degraded, it is not safe for bicyclists, and that they would not mind a reduction of on-street parking to implement complete streets features. For Mohawk Avenue, attendees favored complete streets elements such as curb extensions, improved pedestrian signals, bicycle lanes, shared-use lanes, and bus pull outs.

Summary of Public Workshop #2

The purpose of Public Workshop #2 was to briefly review the information presented at Public Workshop #1, and present the concepts developed for the Mohawk Avenue corridor. The workshop was held virtually on March 23, 2022. The meeting was attended by residents, stakeholders, and study advisory committee members. See **Appendix D** for the PowerPoint presentation and a summary of the meeting.

Meeting attendees were provided different opportunities with different media to provide input, ask questions, and offer comments. During the Workshop, attendees were able to use the Q&A function within the Zoom Webinar platform to type questions. Attendees were also able to use the raise hand function to ask a live question at the conclusion of the presentation. Lastly, after the meeting the Draft Scotia Downtown Connection Plan and concepts were posted to the study website and the public was encouraged to take a closer look at the materials and leave comments via the website.

Summary of Pop-Up Event #2

The second pop-up event took place on April 13, 2022. A booth was set up along Schonowee Avenue during the evening dinner and rush hour near Jumpin’ Jacks. Representatives from MJ Engineering & Land Surveying were present to discuss the study with the public and answer questions. Large display boards were put up to provide information related to the Study objectives and general information, and to display a plot of the concept plan. Although pedestrians were nearby, no one stopped to discuss the study.



CHAPTER 5: Alternatives Evaluation

Corridor Needs

Based on public feedback, input from the SAC, and previous studies conducted, transportation improvement alternative concepts were developed to address needs within the corridor and to enhance the character of the corridor. In many instances, the public concerns were related to safety and quality of life. The transportation improvement alternative concepts were developed considering the following needs and objectives, at a minimum:

- Vehicular speed reduction
- Improve deteriorating pedestrian and bicycle facilities along the corridor
- Improve safety for pedestrians, bicyclists, and vehicular traffic, particularly at locations with elevated crash rates
- Provide pedestrian and bicycle accommodations, particularly marked crossings near the eastern end of the project
- Provide pedestrian and bicyclist amenities
- Make connections to existing multi-modal infrastructure
- Implement access management strategies to evaluate curb cuts
- Provide a gateway treatment for the corridor at the eastern limit of the study area

Evaluation Approach

Complete streets design alternative concepts were evaluated for the ability to address needs identified for the Mohawk Avenue corridor. Each alternative concept was evaluated using the following criteria:

Intersection and/or Corridor Operation

Ability to maintain or improve the level of service for vehicles, pedestrians, bicyclists, transit and freight

Safety

Ability to provide crash reduction measures

Bicycle Accommodations

Bicycle safety improvements made, bicycle amenities provided, and improved connectivity to existing bicycle infrastructure provided

Pedestrian Accommodations

Pedestrian safety improvements made in accordance with the NYS Pedestrian Safety Action Plan, walkability enhanced, and improved connectivity to existing pedestrian infrastructure provided

Livability Consideration

General improvement to, or reduction of quality of life for residents, visitors, and commuters



Design alternative concepts have been evaluated by identifying the benefits and trade-offs associated with each alternative concept and utilizing that information to assess how effectively the alternative concept addresses the corridor's needs. The design alternative concepts below are intended to be integrated throughout the corridor. The following rating system was used to depict the measure of effectiveness for each criterion:



Design Alternatives Concepts

Raised Median

A curbed, landscaped median is proposed within the four (4)-lane section of Mohawk Avenue, between Schonowee Avenue and North Ballston Avenue. The installation of a raised median will visibly decrease the width of the roadway, which will inherently cause motorists to reduce speeds while traveling into and through the Village.

Installation of the raised median would restrict left turning movements on and off Mohawk Avenue. The installation of the median would eliminate left turns to, and from short Mohawk Avenue, which would improve safety for motorists. The crash mitigation factor for a raised median is up to 31%, if a barrier is installed within the median, such as a fence. The median would provide improved pedestrian safety by shortening the unprotected crossing distance at the Mohawk Avenue and Schonowee Avenue intersection.

Operation	Safety	Bicycles	Pedestrians	Livability
Elimination of left turns will improve the flow of traffic through this section	The crash reduction factor for a raised median of up to 31%	Existing condition maintained	Improved pedestrian accessibility with shorter unprotected street crossings	Accessibility to commercial properties on the south side of Mohawk Ave is reduced

Reconstruction of Sidewalks, Curbs & Curb Ramps

Currently, sidewalks and curb ramps exist on both sides of the road within the corridor. However, most of the sidewalks and curb ramps are not ADA compliant due to vertical surface discontinuities and steep slopes. The existing brick inlay that is located in the middle of the pedestrian access way has settled and was mentioned as an area of concern during the first public information meeting. This, combined with



sidewalk heaving due to mature tree root structures along the corridor, has caused non-ADA compliant vertical surface discontinuities. In some instances, there is also insufficient sidewalk widths along the corridor. Additionally, many of the curb ramps within the corridor are non-ADA compliant due to deterioration, steep slopes, and insufficient turning spaces. The existing curb reveal is less than standard in many locations throughout the corridor. Sidewalk reconstruction should also include curb replacement to provide an appropriate curb reveal.

Benefits of new sidewalks and curb ramps include improved connectivity between pedestrian origins and destinations along the corridor, particularly access to Collins Park, the Scotia Library, Scotia Cinema, and retail destinations. In addition, increased pedestrian accommodations would enhance the existing transit service along the corridor. A brick-imprinted hardscape buffer area is proposed between the road and the sidewalks where new tree species would be planted, and all existing pedestrian lighting would be relocated. Per the Village of Scotia, all existing lighting will need to be rewired to a common electrical source as they currently connect to adjacent buildings.

Operation	Safety	Bicycles	Pedestrians	Livability
No effect on vehicular traffic operations, existing condition maintained	The reconstruction of sidewalks will improve safety for pedestrians walking along the corridor.	Existing condition maintained	Improved pedestrian accessibility with new sidewalks and curb ramps	Improved walkability, upgrade is desirable for the residences along and adjacent to the corridor

Shared Use Lanes

Mohawk Avenue is a part of NY Bicycle Route 5 that begins in Niagara Falls and terminates at the Massachusetts state line. This segment of the route has no designated bicycles lanes, and the existing shoulder is not wide enough to accommodate bicyclists. Currently, bicyclists and motorists are expected to share the 12 ft wide travel lanes.

To provide accommodations for bicyclists, shared-use lanes could be introduced within the corridor between Ballston Avenue and Glen Avenue / Schonowee Avenue. To provide a standard 13 ft shared-use lane, the inside travel lanes would be reduced to 11 ft, still providing for the minimum lane width for Mohawk Avenue. Shared-use lanes would also be provided along Glen Avenue from South Reynolds Street to South Ballston Avenue. At Ballston Avenue, a 10 ft wide multi-use path would be provided along South Ballston Avenue to provide a connection to the shared-use lanes on Glen Avenue and Mohawk Avenue. The concept of shared-use lanes on Mohawk Avenue was shared with CDTA to solicit feedback. CDTA stated that the likelihood of conflict between bicyclists and buses at the existing bus stop locations is low due to the infrequent bus stops and level of bicycle activity.





A second design alternative centered around providing bicycle accommodations within the study area involves installation of shared-use pavement markings and signage along Glen Avenue from Mohawk Avenue to Reynolds Street. Improvements to the crosswalk and sidewalks at the Schonowee Avenue / Glen Avenue intersection would need to accommodate bicycle traffic.

Operation	Safety	Bicycles	Pedestrians	Livability
Limited effect on vehicular traffic operations, right lanes shared with bicyclists	The shared-use markings and signs will increase driver awareness for bicycle users	Accommodations provided where there is no formal existing infrastructure	Existing condition maintained	Improved bikeability, upgrade is desirable for residents and cyclists

Midblock Crossings

With changes in origins and destinations on both sides of Mohawk Avenue, the demand for pedestrian crossings at existing and new locations has increased. The locations for pedestrian crossings were evaluated based on the guidance in the FHWA and AASHTO recommendations.

Pedestrian Crossings: Spacing Guidance

Based on the NYS Vehicle and Traffic Law, pedestrian crossing demand should be assumed at all intersecting public streets. Pedestrian crossings during busy times can be a challenge at unmarked locations and walking distances to the nearest protected pedestrian crossing can be long.

“Based on FHWA research and AASHTO guidance, 1 mile is recognized as the maximum walking distance that most healthy/able-bodied people would be willing to undertake. However, the research also states that the majority of pedestrian trips are 0.25 miles in length. Subject to good engineering judgment, 0.25 miles is an appropriate average distance for accommodating “most” pedestrians of all abilities, outside of high-pedestrian traffic zones. In high-pedestrian traffic zones, or central business/walking districts, pedestrian crossings spaced between 330 feet and 500 feet apart would be reasonable and may correspond with the typical block lengths in high-pedestrian traffic zones. Suggested spacing of crossings are as follows:

- *Central business/walking districts – from 330 feet to 500 feet apart*
- *Urban or suburban residential/retail areas – not to exceed 0.25 miles.*
- *The maximum distance that people with disabilities should reasonably be expected to divert from their intended path would be between 165 feet and 250 feet.”*

- New York State Highway Design Manual Section 18.7.1
Pedestrian Street Crossing Dynamics

The following locations have been identified as potential concept midblock crossings:



100-Block Crossing – Residents and visitors that utilize on-street parking between Ballston Avenue and Ten Broeck Street (the 100 block) often cross the roadway at unmarked locations to reach the intended destination. Two (2) locations were considered for a new mid-block crossing; first by the Scotia Cinema, and second near the Village’s public parking lot. A crossing at the cinema created concerns with visitors potentially using the private parking lot across Mohawk Avenue as public parking. A crossing immediately east of the existing public parking lot is proposed, with curb extension to shorten the unprotected crossing distance. This crossing would be approximately 350 ft from Ten Broeck Street and 530 ft from Ballston Avenue. The crossing would consist of a high-visibility striped crosswalk, ADA compliant curb ramps, and potentially include Rectangular Rapid Flashing Beacons (RRFB’s). Refer to a discussion of additional improvements at this location within the Curb Extension portion of **Chapter 5**.



Mohawk Avenue, looking east

Collins Street Crossing – A mid-block crossing at the Collins Street intersection would be located approximately 810 ft from the crossing at Schonowee Avenue and 390 ft from the crossing at North Ballston Avenue. This is also the location of a CDTA bus stop, near the Scotia Library, Collins Park and other pedestrian generators. The new mid-block crossing would include a high-visibility striped crosswalk, ADA compliant curb ramps, and potentially RRFB’s.



Mohawk Avenue, looking east

Crossing Between Collins Street & Glen Avenue / Schonowee Avenue – An alternative location for the Collins Street crossing would be to shift the crossing east to the short Mohawk Avenue intersection. The crossing would be located approximately 450 ft from the Schonowee Avenue crossing and 750 ft from the North Ballston Avenue crossing. The crossing would include a high-visibility striped crosswalk, ADA compliant curb ramps, and potentially RRFB’s. This crossing location would be located within the limits of the center curbed median, providing pedestrians with a refuge between vehicular travel lanes.



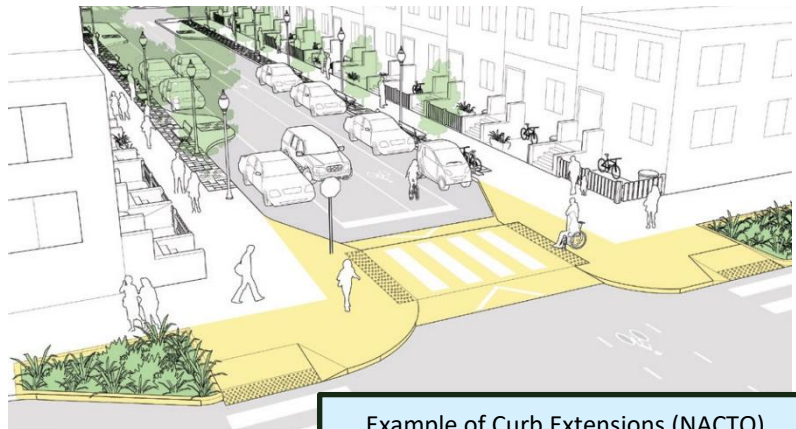
Mohawk Avenue, looking east

An engineering study must be conducted during preliminary design of recommended improvements to confirm that RRFB's are warranted at each proposed location.

Operation	Safety	Bicycles	Pedestrians	Livability
Existing condition maintained; potential short-term delays anticipated if RRFBs are introduced	Improvements compliant with the Pedestrian Safety Action Plan (PSAP)	Existing condition maintained	Improved pedestrian accessibility	Additional crossing(s) would result in more direct pedestrian routes

Curb Extensions

The installation of curb extensions will visibly decrease the width of the roadway at intersections, causing drivers to slow while traveling through them. The installation of curb extensions also creates better sight distances for drivers by bringing pedestrians closer to the roadway, unobscured by roadside obstacles. Additionally, curb extensions shorten unprotected crossing lengths for pedestrians.



Example of Curb Extensions (NACTO)

Curb extensions at all or select quadrants of the intersection may be appropriate for the intersection of Mohawk Avenue with South Ballston Avenue, N/S Ten Broeck Avenue, Sacandaga Road, and N/S Reynolds Street. A curb extension at the proposed mid-block crossing near the Scotia Cinema should also be considered.

Curb extensions are not recommended for the intersections of Mohawk Avenue with Schonowee Avenue, Glen Avenue, Collins Street, North Ballston Avenue and Center Street. At these locations,



intersection geometry, street width, and the need to accommodate large service vehicles limit the feasibility of modifying the curb lines.

With the existing travel lane configuration, the northwest corner of the Mohawk Avenue / North Ballston Avenue intersection does not appropriately support the turning movement of WB-67 trailers turning right off of North Ballston Avenue to travel westbound on Mohawk Avenue. To accommodate the truck movements that are permitted on the intersecting roadways, curb extensions are not desirable in this location and significant geometric changes would be required to correct this deficiency. The concept of installing a mountable curb extension was considered; however, the concept was dismissed. A mountable curb extension would give pedestrians the right to stand out on the mountable area while waiting to cross, which would put the pedestrian in danger of being hit by a turning vehicle or truck.

Curb extensions at signalized intersections will require the relocation or replacement of existing pedestrian signals and pull boxes in the sidewalk. New conduit would need to be installed to facilitate relocation of pedestrian signals. The geometric modifications associated with curb extensions would provide additional space for snow storage, but in turn have a negative impact on the ease of snow removal operations. The Village could consider implementing a training program for snow removal crews.

Operation	Safety	Bicycles	Pedestrians	Livability
Existing condition maintained for motorists; challenge with snow removal, but increased snow storage	Increased visibility of pedestrians intending to cross the traveled way	No improved accommodations	Improved pedestrian accessibility with shorter street crossings	Improved as upgrade is desirable by the residences along and adjacent to the corridor

Pedestrian / Bicyclist Amenities

The installation of amenities such as bicycle racks and benches would make traveling the corridor more desirable to pedestrians and bicyclists. Making the corridor more appealing to pedestrians and bicyclists has the potential to decrease dependency on vehicular travel, reducing congestion at peak hours.

Operation	Safety	Bicycles	Pedestrians	Livability
Existing condition maintained	No safety improvements	Bikeability improved with amenities, e.g. places to safely leave bikes	Walkability improved with amenities, e.g. places to rest	Walking and biking experience enhanced with amenities

Upgraded Pedestrian Signals



Upgrading the existing pedestrian signals and ensuring that all signalized crossings are ADA compliant will create a safer environment for pedestrians to travel the corridor.

As discussed in **Chapter 2**, many of the intersection crossings within the study area require pedestrian signal upgrades to conform with current design standards. Based on a visual inspection of the corridor, the minimum required upgrades are required:

Mohawk Avenue, Glen Avenue, and Schonowee Avenue: Separate push buttons to cross Glen Avenue and Mohawk Avenue onto dedicated posts.

Mohawk Avenue and Ballston Avenue: Install APS with push buttons and signs for the South Ballston Avenue crossing and the south side of the Mohawk Avenue crossing. Install a separate push button at the northwest quadrant.

Mohawk Avenue and Ten Broeck Street: Install APS with push buttons and signs for all four (4) crossings.

Mohawk Avenue and Sacandaga Road: Install APS with push buttons and signs for the Sacandaga Road crossing and western Mohawk Avenue crossing.

Mohawk Avenue and Reynolds Street: Install APS with push buttons and signs for all four (4) crossings.

Operation	Safety	Bicycles	Pedestrians	Livability
Longer delays at signalized intersections	Increased pedestrian safety at signalized intersections	No improved accommodations	Improved accessibility at crossings	Walking experience enhanced with pedestrian signal phases

Bus Lanes & Bus Turnouts

Several CDTA bus stops are located within the corridor, where buses typically utilize the rightmost travel lane when stopped. Potential improvements have been considered for the eastbound bus stop at the corner of Mohawk Avenue and Ballston Avenue. Instead of a curb extension, a painted bus lane is proposed. This configuration aligns with CDTA's policy to stay in the lane, since a bus would pull out directly into the right eastbound lane on the east side of the intersection, without any competition. This new configuration would also formalize the wide single lane eastbound on that approach.

Installation of a painted bus lane would prevent the possibility of a curb extension at this location to increase safety for pedestrians. An alternative concept could be to install the curb extension at the southwest quadrant of the intersection and relocate the bus stop and painted bus lane to the southeast quadrant of the intersection.



Operation	Safety	Bicycles	Pedestrians	Livability
Flow of traffic would remain uninterrupted when a bus stops	Potential for crash reduction when bus/vehicle conflict is removed	No improved accommodations	No improved accommodations	Improvement to vehicular traffic delays

This study considered the feasibility of installing bus turnouts along Mohawk Avenue. A bus turnout is often considered to permit buses to safely exit the travel lane at stops without impeding the flow of traffic; however, insufficient street width is available between Ballston Avenue and Reynolds Street to construct bus turnouts while maintaining an appropriate sidewalk width. Between Ballston Avenue and Schonowee Avenue, CDTA has been consulted and the installation of bus turnouts in a four-lane section is not preferred. Wait times associated with merging back into traffic impede the transit schedule. Since a bus turnout is not preferred by CDTA, installation of that facility is not considered further using the evaluation criteria.

Landscaping, Streetscape and Gateway Improvements

Mohawk Avenue is lined with street trees of varying species and maturity. Some of the existing trees are not an appropriate species for an urban corridor and have outgrown the space available. Large trees have created heaved sidewalk and pavement and require large tree pits that impede the pedestrian clear pathway. Streetscape improvements should include an evaluation of the existing trees, the species and size at full maturity. If the root structures have the potential to impact infrastructure, larger trees should be removed and replaced with a more appropriate street tree species. Preferred tree species shall be as specified in the current version of the [Village Design Guidelines Document](#).

Additionally, landscape improvements in the form of plantings, planters and signage at each end of the study corridor would create a gateway-like feel when entering the Village of Scotia from the Western Gateway Bridge or from points west.

Landscaping improvements would provide an opportunity to implement green infrastructure techniques, such as tree pits, rain gardens, and stormwater planters.

Operation	Safety	Bicycles	Pedestrians	Livability
No improved accommodations	Not a known crash reduction technique	No improved accommodations	Improved pedestrian accessibility	Upgrade would improve the visual landscape and walkability of Mohawk Avenue



Access Management

Reducing the number of access points from adjacent properties to and from Mohawk Avenue would decrease the opportunity for pedestrian/vehicular conflict. Additionally, moving the access points away from intersections reduces potential conflict points between vehicles turning onto Mohawk Avenue and through traffic. Potential conflict points between vehicles turning onto Mohawk Avenue and pedestrians using marked crosswalks would also be reduced. Opportunities exist for several Mohawk Avenue properties to be accessed from the rear parallel street, Glen Avenue on the south side and John Street on the north side.

Access to the commercial property at 9 Mohawk Avenue presents a design challenge when considering a raised median. Rear and side access is not permitted, as the parcel is surrounded by privately-owned parcels. A curbed median would prevent westbound traffic from entering the driveway. The existing curb cut for this parcel is also very wide, especially when combined with the intersection of Short Mohawk Street. Recommended corridor improvements must consider ease of access to businesses at this location, and throughout the corridor.

Planned development must be considered when assessing the feasibility of implementing access management strategies. Stewarts, located at 204 Mohawk Avenue, is currently in the preliminary design phase of redevelopment and plans to purchase adjacent properties to facilitate expansion. Coordination is required to confirm driveway locations and proposed sidewalk designs, and to promote curb cut consolidation. The vacant property at 102 Mohawk Avenue currently exhibits wide curb cuts with little to no driveway definition, and no defined sidewalks along North Ballston Avenue. Coordination with the future property owner or developer should be pursued to improve the streetscape along the property's frontage.

Although outside of the study limits, the Study Advisory Committee voiced support for access management and pedestrian safety improvements on the east side of Schonowee Avenue, along the Jumpin' Jacks parking lot. Future improvements to the sidewalks and multi-use paths along Schonowee should consider providing a dedicated pedestrian space along the east side of Schonowee Avenue, and consolidation of the parking lot access points.

Operation	Safety	Bicycles	Pedestrians	Livability
Reducing the number of points where vehicles can enter/exit Mohawk Avenue would improve the flow of traffic	Increased safety for vehicles due to reduction of potential conflict points	No improved accommodations	Increased safety for pedestrians due to reduction of potential conflict points	Upgrade would improve the walkability of Mohawk Avenue



CHAPTER 6: Recommended Improvements

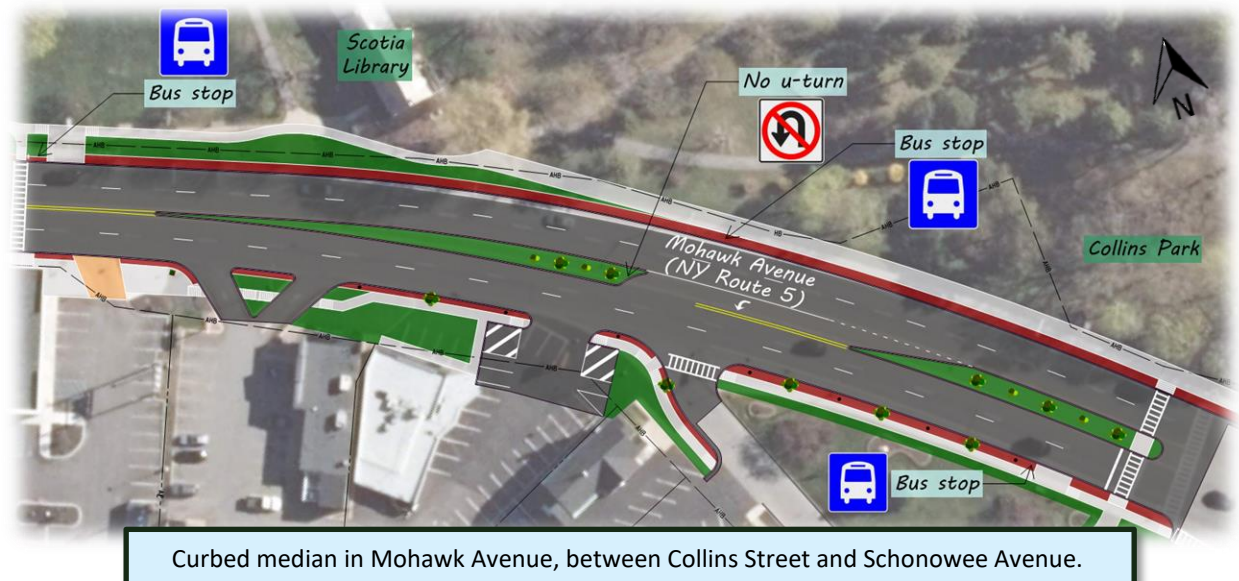
The design alternatives discussed in **Chapter 5** were presented to the Village of Scotia, CDTC, the SAC, NYSDOT, and CDTA. Each entity was allowed to review the alternatives and provide feedback.

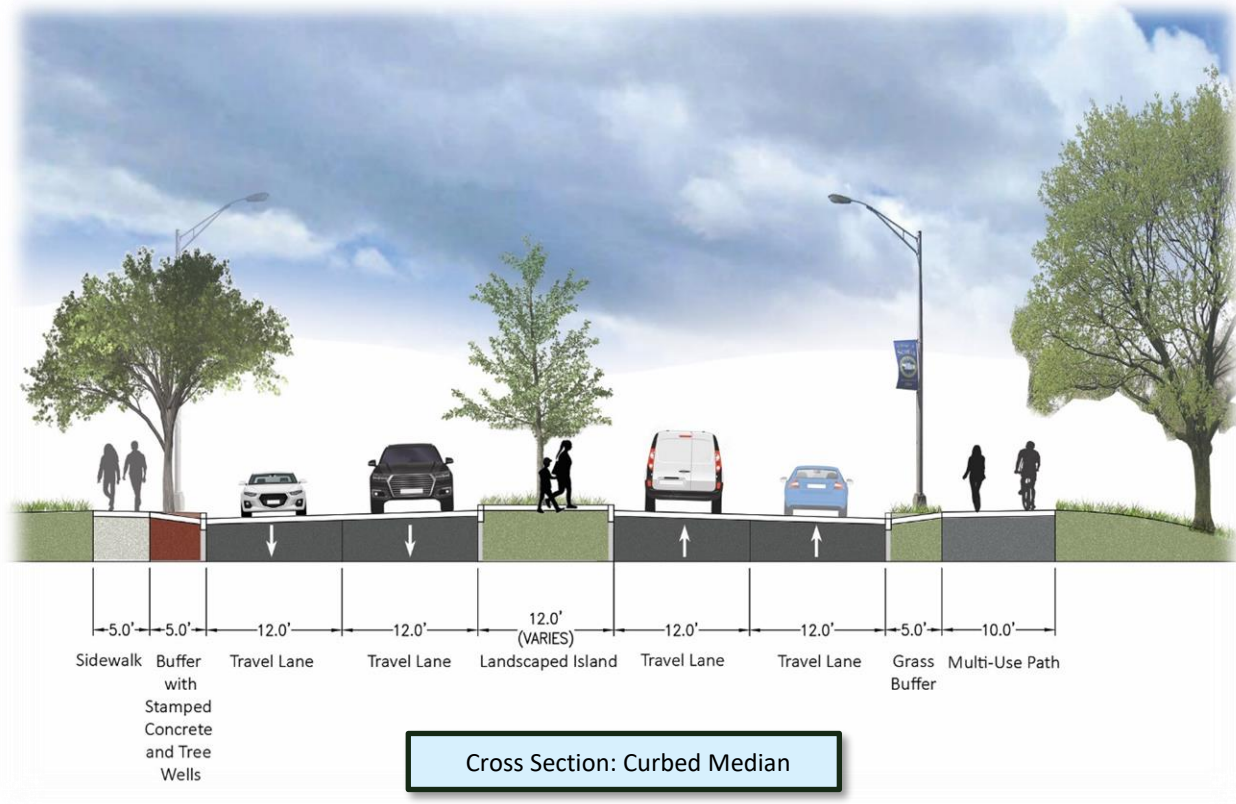
Recommended improvements have been identified for the Mohawk Avenue corridor, as well as specific intersections throughout the corridor. The recommended improvements satisfy the study objectives and have been developed utilizing feedback from the involved municipal agencies, businesses, and the public. Images of the concept-level improvements are provided within the subsections of this Chapter; however, full Concept Plans are available in **Appendix E**.

Mohawk Avenue Corridor Improvements

Mohawk Avenue is a unique thoroughfare due to the need to prioritize several modes of transportation, including vehicles, pedestrians, bicyclists, transit, and freight. In many segments, the existing street section is confined between buildings, which precludes the possibility of widening the roadway to create dedicated space for specific user groups. On-street parking is permitted in several segments along Mohawk Avenue, which is primarily used for short-term parking for business patrons. The distance between marked pedestrian crossings is more than recommended for some segments, making removal of on-street parking undesirable. The following corridor improvements have been identified with these constraints in mind.

Installation of a **curbed, landscaped median** is recommended between Schonowee Avenue and Collins Street. The curbed median is a gateway element, inherently working to slow traffic entering the Village from points east by visibly narrowing the roadway. The introduction of this curbed median would provide pedestrians a refuge when using the lengthy crossing Mohawk Avenue at the Schonowee Avenue and Glen Avenue intersection. Installation of a decorative fence may be considered to deter pedestrians from crossing in unmarked locations. Refer to Dwg. No. CP-04 in **Appendix E** for additional details.





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Reconstruction of sidewalks and curb ramps is recommended throughout the corridor based on the current condition and ADA compliance audit results. A brick-imprinted hardscape buffer area between the sidewalk and the road would replace the existing brick inlay and provide space for pedestrian level



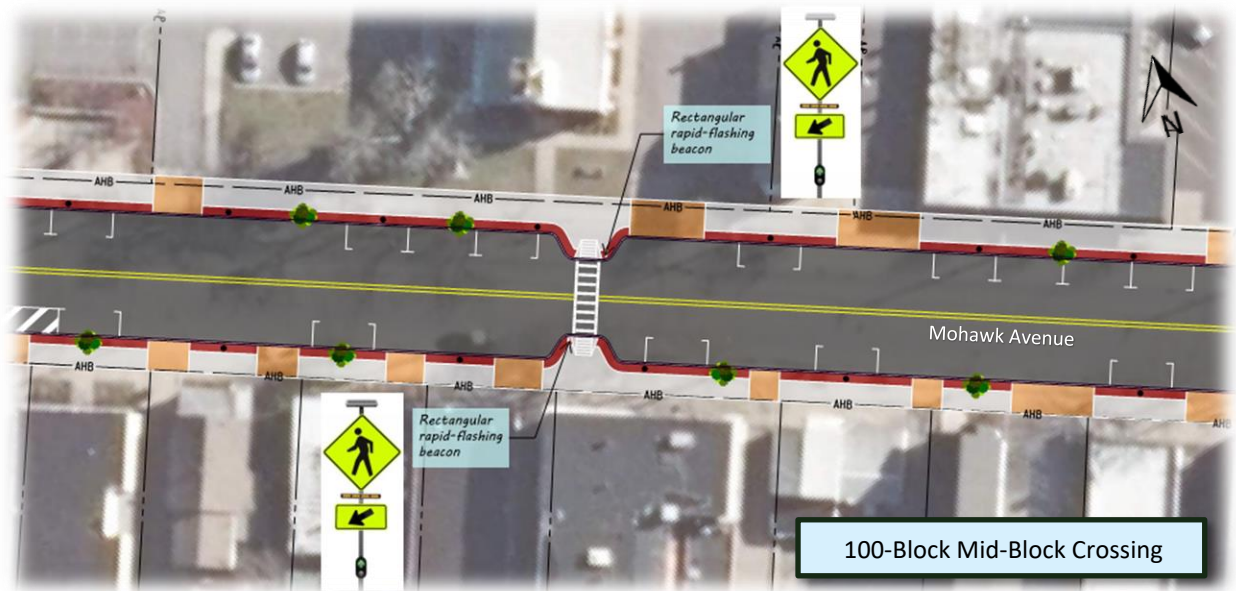
Existing sidewalks with brick inlay and tree pit protrusion

lighting, street trees, and snow storage outside of the pedestrian access way. The proposed sidewalk layout must provide a minimum of 5 ft clear pedestrian path free of appurtenances. Existing streetlights are powered via a connection to the adjacent building throughout the corridor. While the light posts are in good condition, sidewalk reconstruction should include relocation of the light posts to the buffer area and installation of new foundations and conduit connecting the lights to a single power

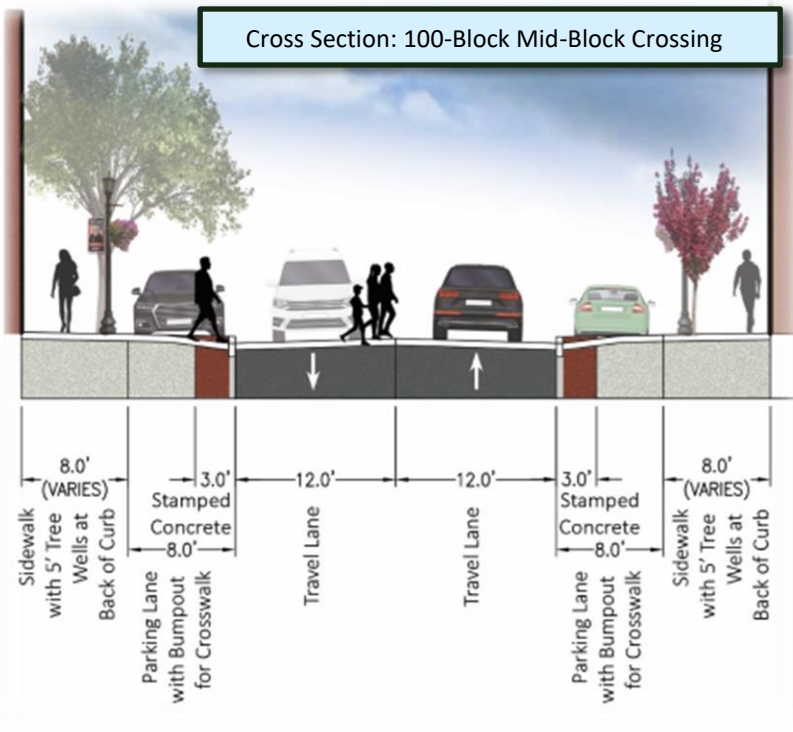


source. Coordination is required to determine the financial responsibility of powering the streetlights.

Two (2) **mid-block crossings** are recommended to lessen the length between street crossings in areas where pedestrians are likely to cross to reach a destination. Midblock crossings are proposed on Mohawk Avenue near the Village's public parking lot and the Collins Street intersection. Both crossings shall have high-visibility striped crosswalks and ADA-compliant curb ramps. Refer to Dwg. Nos. CP-02 and CP-03 in **Appendix E** for additional details.



An engineering study is recommended for these crossings to determine whether a rectangular rapid-flashing beacon is warranted in accordance with the NYS PSAP.



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To provide formal accommodation of bicycles within the Village, it is recommended that **Glen Avenue** be **signed and marked as shared-use for bicyclists and motorists** in both the eastbound and westbound directions from the intersection with Schonowee Avenue and Mohawk Avenue to the intersection of South Reynolds Street. By introducing 10-foot sidewalks throughout the Mohawk Avenue / Schonowee Avenue / Glen Avenue intersection, bicyclists can safely access Glen Avenue without having to travel in line with vehicular traffic along Mohawk Avenue.



It is anticipated that pedestrian and bicycle traffic within and surrounding the Village will increase given implementation of the recommendations discussed within. To provide a more enjoyable experience for the bicycle and pedestrian user groups, **installation of bicycle and pedestrian-related amenities** such as

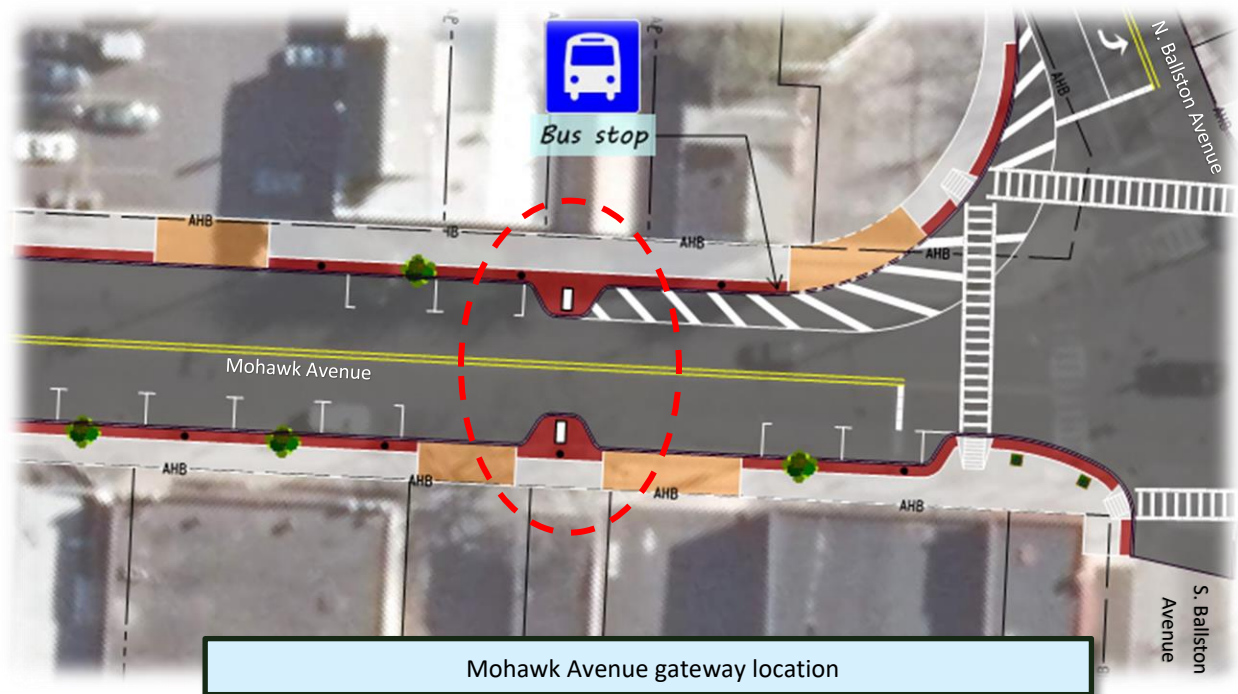


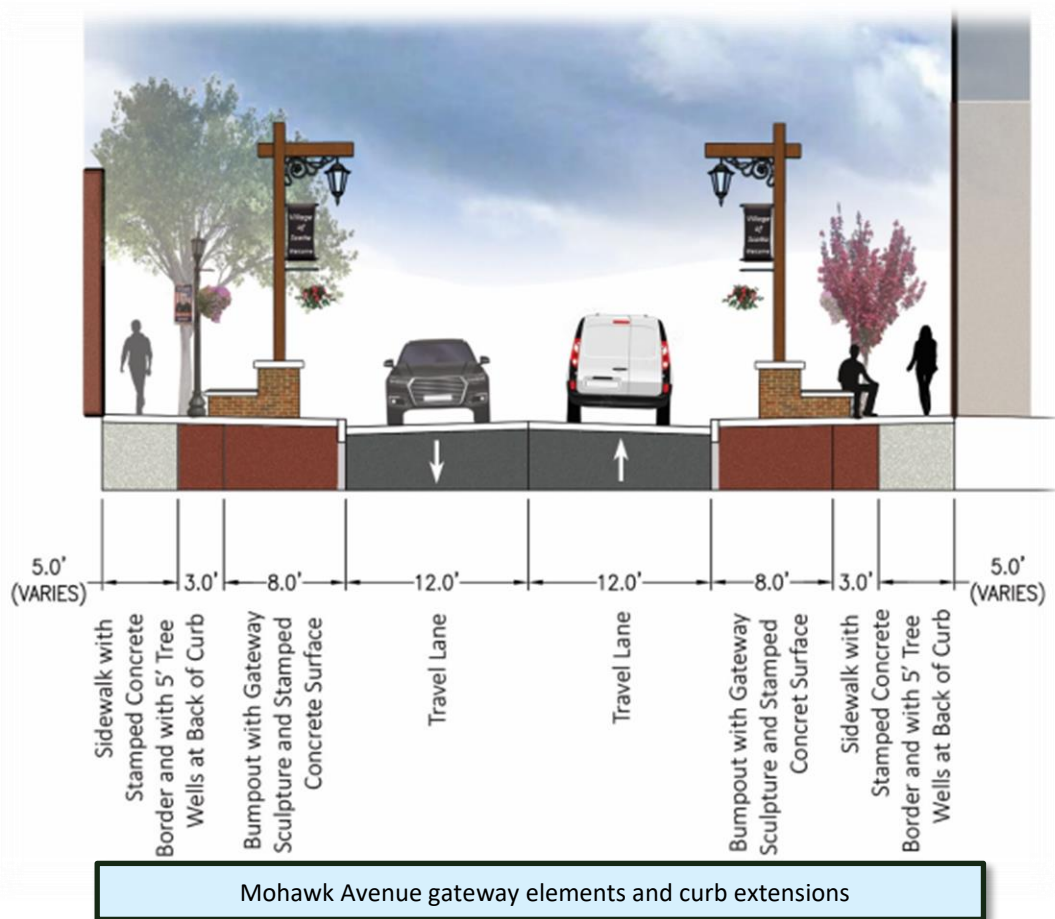
bicycle racks, bicycle repair stations, and benches be installed along the corridor near pedestrian generators such as Gabriel's Market, CVS, post office, Scotia Cinema, library, and various restaurants along the corridor. Bicycle racks should be located near intersecting streets since bicycle traffic will likely originate from the Glen Avenue shared-use corridor.

Proposed streetscape improvements should ensure that consistent and appropriate lamp post spacing is provided based on a light spread analysis. Pedestrian amenities, street furniture and lamp posts must be specified in accordance with the Village Design Guidelines. The lamp posts reflect the historic nature of Scotia and are a requirement for any new development within the Village.

The concept design includes several **landscaping improvements** intended to enhance the visual atmosphere and promote a sustainable streetscape design. In addition to the landscaping elements described at intersections in the following sections, a thorough review of existing street tree species, condition and maturity is recommended. Street trees should be planted at consistent intervals to create visual uniformity. Existing large trees should be evaluated for removal if the root structure is likely to create maintenance and safety issues. If tree removal is required, trees can be removed in a phased approach to make for a less dramatic change.

An overhead structure or **entrance feature** is recommended immediately west of the Ballston Avenue intersection, as westbound traffic enters the 100 block of Mohawk Avenue. The entrance feature depicted in the rendering below has been developed to account for the height of permitted vehicles and trucks. The concept of the structures is consistent with the historic nature of the Village. Refer to Dwg. No. CP-04 in **Appendix E** for additional details.

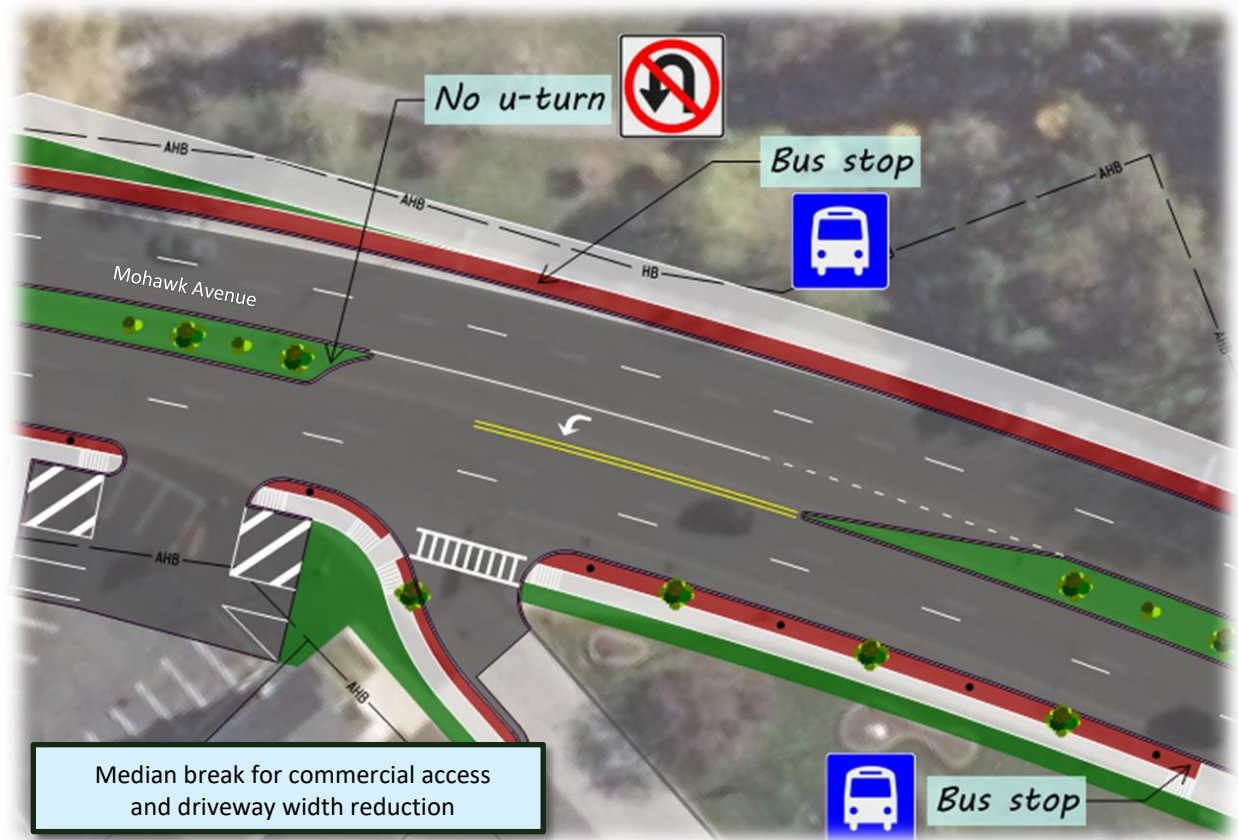




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The installation of curb extensions and other streetscape improvements throughout the corridor will result in a reduction of approximately four (4) **on-street parking spaces**. Based on the low parking utilization rates observed during this study, the corridor currently has sufficient parking available. Should future commercial or residential development require additional parking, the use of nearby vacant lots could be considered by the Village or project sponsor.

Access to the commercial property at 9 Mohawk Avenue has been modified in the concept plan to reduce the driveway width along Mohawk Avenue, which results in a shorter pedestrian crossing and reduces motorist confusion in the vicinity of the driveway and the adjacent Short Mohawk Avenue intersection. Reducing the overall driveway with requires a modification to the current parking layout on the property. Since the property cannot be accessed from the rear, coordination with the property owner during design is imperative to ensure that daily operations, such as delivery truck and other access, is not negatively impacted. In terms of accessibility from Mohawk Avenue, a left turn lane is incorporated into the median to permit a left turn into the property for westbound traffic. Refer to Dwg. No. CP-04 in **Appendix E** for additional details.



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Based on the parcel layouts and existing access points on Mohawk Avenue and Glen Avenue, opportunity exists to **reduce the number of curb cuts** on Mohawk Avenue. It is recommended that the Village pursue the feasibility of implementing access agreements between property owners on Mohawk Avenue and the property owners immediately adjacent to the rear of the property, particularly where vehicular access already exists between Mohawk Avenue and Glen Avenue. Assuming an agreement can be reached by both owners stating that both properties would be accessed from Glen Avenue, there is a potential to permanently remove up to five (5) curb cuts on Mohawk Avenue. Removing curb cuts would result in the addition of on-street parking spaces.

The asphalt pavement on Mohawk Avenue is aging and the wearing surface appears to be nearing the end of the intended pavement design life. A mill and overlay of the corridor, with limited areas of full-depth reconstruction to repair issues extending deeper into the pavement section, may be warranted. A **pavement condition assessment** is recommended for this corridor to define the pavement needs at the time of design.

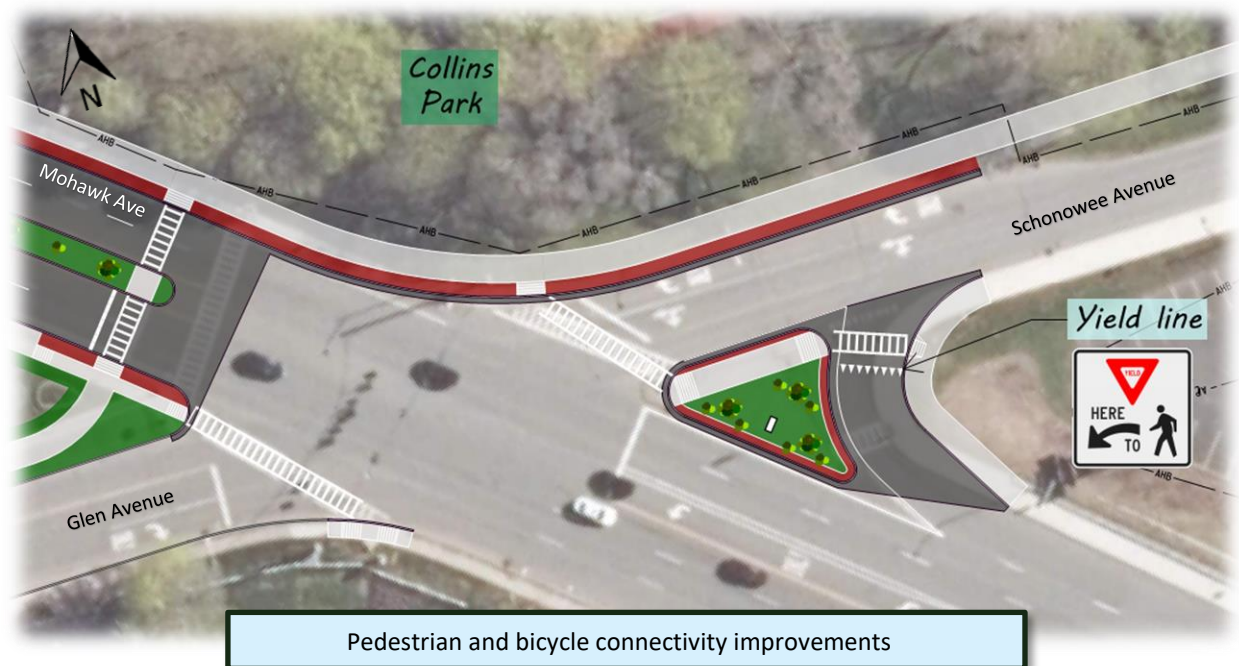




Mohawk / Schonowee / Glen Avenue Intersection Improvements

This expansive intersection serves as the gateway into downtown Scotia. The curb-to-curb width of the intersection is significant to accommodate traffic volumes, turning movements and the skew of the intersecting roadways. The concept proposes to re-construct the curbed island between Mohawk Avenue and the slip ramp to Schonowee Avenue as a landscaped feature, contributing to the gateway feel of this intersection. A Village of Scotia gateway structure and sign is proposed in the island, as well as low maintenance landscaping.

Bicycle traffic from the Western Gateway Bridge, potentially traveling to or from the Mohawk-Hudson Bike Trail or the Empire State Trail, will be routed through this island to the signalized Schonowee Avenue crossing. The curb ramp at the southern side of the intersection will be replaced with an ADA-compliant ramp. Accessible pedestrian signal equipment will be updated to meet current design standards and be modified for the proposed sidewalk and path layout. Refer to Dwg. No. CP-04 in **Appendix E** for additional details.



The concrete path on the east side of the ramp has been pushed back to reduce the radius and improve turning movements for both passenger vehicles, buses and delivery trucks. The curb-to-curb width of the ramp is 24'-0" to accommodate turning movements, but the visual lane has been narrowed with left edge of travel striping. The final configuration of the ramp and crosswalk at the ramp shall be modified if needed pending the results of a sight distance analysis during final design, and an analysis of existing topography. Since the existing grade between the multi-use path and Jumpin'Jacks parking lot is steep, a retaining wall may be required to avoid impacts to the parking lot due to ramp widening.



Rendering of improvements at Mohawk Ave / Glen Ave / Schonowee Ave intersection

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Concurrent with the intersection improvements at Schonowee Avenue, it is recommended that the Village consider extending a sidewalk or path along the south side of Schonowee Avenue. While outside the limits of this study, it should be noted that a dedicated pedestrian space would significantly improve pedestrian safety in this heavily-traveled area, and would also provide a connection to the existing multi-use path that begins at Freedom Park.

The existing island between Mohawk Avenue, short Mohawk Avenue and Glen Avenue includes well-maintained landscaping and amenities and serves as a pocket park. Proposed modifications include routing bicycle traffic along the south edge of the pocket park via a 10 ft wide multi-use path and replacing the sidewalks along Mohawk Avenue.



Existing pocket park between Mohawk Ave and Glen Ave



Mohawk Avenue and Ballston Avenue Intersection Improvements

The intersection with North and South Ballston Avenue sees a high volume of vehicular and heavy truck traffic, and also has stops for eastbound and westbound CDTA Route 353. The concept plan has been developed assuming that changes to the traffic pattern and travel lane geometry will remain as it currently exists. To accommodate truck turns within the roadway and avoid damage to adjacent signs and street lights, the northwest quadrant curb would need to be pulled back as depicted in the concept. A striped shoulder area is recommended at this location to visually decrease the size of the intersection and deter vehicles from using the wide shoulder as a travel lane. The striped curb extension could be in the form of white hatching, a solid color, or colored stamped asphalt to match the adjacent hardscape. The traffic and pedestrian signal timing must be coordinated to provide an appropriate pedestrian interval for the length of crosswalk.

Physical raised curb extensions are not desirable at this location due to the turning movements of heavy trucks. Additional improvements to the northwest quadrant must be coordinated with the owner and future developer of the adjacent property as noted in **Chapter 5**. Installation of a sidewalk and driveway consolidation is recommended, but is dependent on the future use of this parcel and support from the property owner. Refer to **Chapter 7** for a discussion regarding right-of-way.

Heavy Trucks

The Transportation Research Board's Highway Capacity Manual defines heavy vehicles as vehicles having more than four tires touching the pavement, and include trucks, buses, and recreational vehicles.





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The concept plan proposes to relocate the existing CDTA bus stop along the south side of Mohawk Avenue to the east side of S. Ballston Avenue. The stop should be delineated with a painted or hatched pattern to deter parking near the intersection. After loading is complete, the bus would be able to advance straight ahead since a second travel lane is added in the eastbound direction. Relocating the bus stop to the east side of the intersection provides an additional two (2) on-street parking spaces in front of commercial businesses. A curb extension is proposed on the west side of the intersection to decrease the pedestrian crossing length across Mohawk Avenue and will also help to prevent two lanes of eastbound traffic forming at the traffic signal, as frequently is observed in the existing condition.

The concept design includes new pedestrian signals with push buttons and signs for the South Ballston Avenue crossing and the south side of the Mohawk Avenue crossing. All equipment, including new separated push buttons, are required at the northwest quadrant.

Due to pedestrian safety concerns at the eastern leg of this intersection related to the right turn lane from Mohawk Avenue to northbound Ballston Avenue, a striped crosswalk is not recommended at this location.

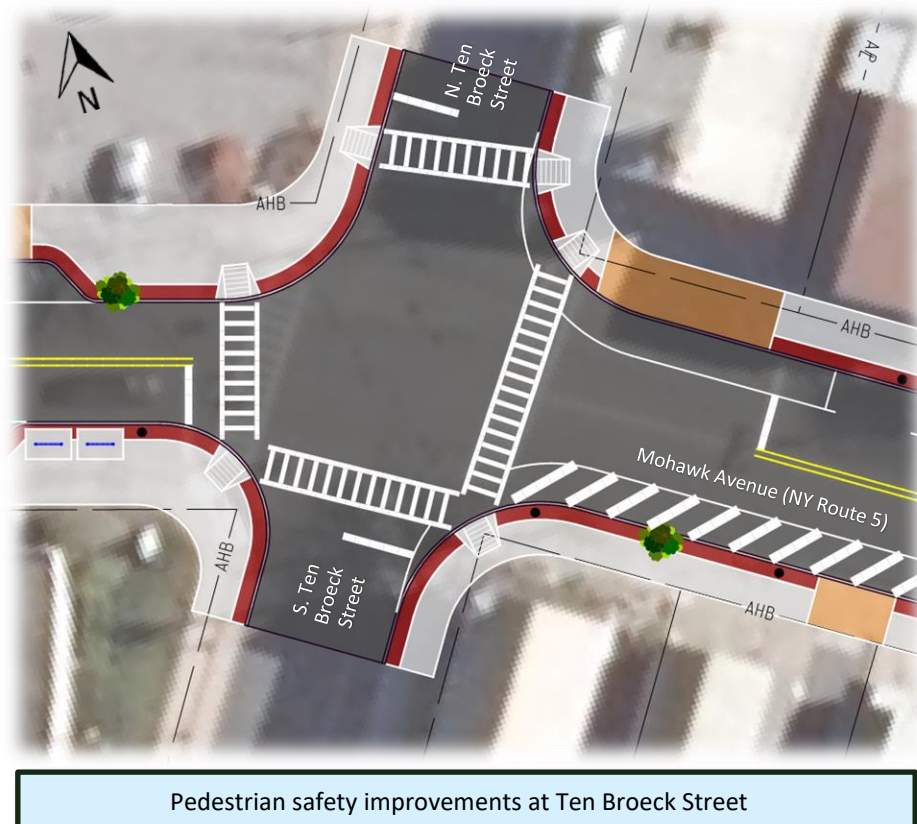


Mohawk Avenue and Ten Broeck Avenue Intersection Improvements

This intersection is central to the downtown business district, with Village Hall, the current location of the Scotia Fire Department, restaurants, and shops nearby. The highest utilization of on-street parking and highest pedestrian volume was observed in the vicinity of this intersection.

The turning movements associated with fire trucks at the intersection limit the extent of viable streetscape improvements. A painted curb extension is proposed across from the firehouse to visually deter on-street parking in this location. Curb extensions are proposed on both sides of the Mohawk Avenue west leg crossing. The concept includes new pedestrian signal equipment at all four (4) crossings, including conduits and wire connecting the equipment.

As noted in **Chapter 5**, coordination with the redevelopment of Stewart's in the NY quadrant of the intersection is recommended to plan for different driveway locations, sidewalk configurations and landscaping. Bicycle racks are proposed at the intersection to provide cyclists traveling along Glen Avenue a location to safely leave their bicycle while visiting shops or other points of interest. Improvements designed at this intersection must also be coordinated with the Village's effort to construct a new Fire Station in the vicinity.



The recommendations in this study are conceptual in nature and do not commit the Village of Scotia, CDTC, or NYSDOT to the proposed project(s). The concepts presented in these illustrations may need to be investigated in more detail before any funding commitment is made. Undertaking additional engineering or other follow up work will be based upon funding availability.



Mohawk Avenue and Sacandaga Road Intersection Improvements

Options to modify the Sacandaga Road intersection are limited due to the volume of truck traffic traveling through the intersection. Sacandaga Road intersects Mohawk Avenue at a significant skew angle, which requires added width to complete turning movements. The Sacandaga Road pedestrian crossing is long and sight distance between westbound Mohawk Avenue traffic in the dedicated right turn lane to pedestrians in the crosswalk is poor due to several utility poles and signs at the curb line.

This study recommends the installation of curb extensions along the south side of Mohawk Avenue to shorten the unprotected crosswalk length for pedestrians crossing Mohawk Avenue. Turning movement templates should be utilized to determine the final placement of the stop bar for westbound Mohawk Avenue traffic; however, modification of the stop bar location is likely needed to accommodate turning buses and long wheel-base trucks. Accessible pedestrian signals are proposed for the Sacandaga Road and western Mohawk Avenue crossings.

On-street parking is prohibited along the south side of Mohawk Avenue alongside the CVS. The Study Advisory Committee noted that the parking restriction was necessary due to frequent crashes with parked vehicles along that curb line. The proposed intersection plan includes an elongated raised curb extension to deter on-street parking near the intersection. Instead of the curb extending out to the travel lane, a narrow shoulder is shown to provide additional space for turning vehicles. Alternatively, a painted hatch pattern could be installed in addition to “No Parking” signs. If it can be determined during design that turning movements can be accommodated with parking along the front of the CVS property, the Village would prefer to safely add parking spaces.



The recommendations in this study are conceptual in nature and do not commit the Village of Scotia, CDTC, or NYSDOT to the proposed project(s). The concepts presented in these illustrations may need to be investigated in more detail before any funding commitment is made. Undertaking additional engineering or other follow up work will be based upon funding availability.



Mohawk Avenue and Reynolds Street Intersection Improvements

The Reynolds Street intersection is where Mohawk Avenue land use transitions between the commercial district and a residential area. From points west, this intersection is the gateway into the “downtown” commercial district.

This study recommends the installation of curb extensions to visually narrow the roadway width, which is likely to reduce the speed of vehicles traveling east into the Village. Installation of curb extensions at all four (4) quadrants of this intersection would shorten the unprotected crosswalk length for pedestrians crossing Mohawk Avenue. Accessible pedestrian signals are proposed at all four (4) quadrants.

A minimum travel lane width of 11 ft must be maintained. Except for delivery trucks, truck traffic is not permitted on North or South Reynolds Street. The curbed extensions would also prevent vehicles from parking near the intersection.

A reduction of curb cut width is proposed for the parcels at the northeast and southeast quadrants of the intersection. Each parcel currently has two (2) access points, and the curb modifications will result in removal of the driveway access closest to the intersection.

Several opportunities for landscape improvements are desirable at this intersection, including planters and/or small street trees within the extended curb area, tree pits along the North Reynolds Street curb lines would add to the stormwater collection effort along the steep grade. Depending on the future development of the vacant parcel at 302 Mohawk Avenue, a bench or bicycle racks would be an added improvement to this corner.



Pedestrian safety and gateway improvements at Reynolds Street

The recommendations in this study are conceptual in nature and do not commit the Village of Scotia, CDTC, or NYSDOT to the proposed project(s). The concepts presented in these illustrations may need to be investigated in more detail before any funding commitment is made. Undertaking additional engineering or other follow up work will be based upon funding availability.



CHAPTER 7: Implementation Strategies

This chapter provides information to assist the Village of Scotia with implementation of the Downtown Connections Concept Plan. Included below is a list of potential funding sources, a breakout of major elements of the Concept Plan, the anticipated timeframe to develop each element, and anticipated project partners.

Potential Funding Sources

There are many potential funding sources that the Village of Scotia can pursue to help with implementation of the Downtown Connections Concept Plan. The potential funding sources vary between federal, state and local sources. It is important for the Village to submit applications for funding to the appropriate program, at the right time for the project, and with ample project information and support to show why the project is important to the Village.

Federal Funding Programs:

Transportation Improvement Program (TIP): The Federal Highway Administration manages funding for all projects eligible under the National Highway Performance Plan (NHPP), the Surface Transportation Block Grant Program (STBG), and the Highway Safety Improvement Program (HSIP). These reimbursement programs cover up to 80% of the project cost and the project Sponsor is responsible for the remaining 20%.



- **National Highway Performance Plan (NHPP):** The NHPP provides support for the condition and performance of the National Highway System (NHS) and ensures that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a State's asset management plan for the NHS. NY Route 5 (Mohawk Avenue) is on the NHS and improvements to the roadway would be eligible under the NHPP.
- **Surface Transportation Block Grant Program (STBG):** The STBG program provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Mohawk Avenue is a Federal-aid highway and would be eligible under this program.
- **Highway Safety Improvement Program (HSIP):** Program that provides funds for projects that aim to achieve significant reduction in traffic fatalities and serious injuries on all public roads. The HSIP fund source will reimburse up to 80-90% of the project cost for eligible improvements.



State Funding Programs

NYSDOT TAP-CMAQ Program (TAP/CMAQ): Funding is available through NYSDOT to support bicycle, pedestrian, multi-use path, and non-motorized transportation-related projects and programs that support the goals of New York's national-led Climate Leadership and Community Protection Act (CLCPA). Although these programs are administered by NYSDOT, the fund sources are ultimately federal and require a 20% local match. Municipalities may request funding from two different fund sources:



- **Transportation Alternatives Program (TAP):** TAP funding helps communities deliver safe, transformative, and innovative transportation projects which expand, enhance and modernize walking and biking options and connections to transit. These programs and projects are alternatives to single occupancy vehicle (SOV) transportation and contribute to the revitalization of local and regional economies. Projects are expected to improve mobility, accessibility, and the community's transportation character such that the street network is more vibrant, walkable, and safer for all transportation mode users, pedestrians, bicyclists, transit users, and drivers.
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ):** The CMAQ program provides funding to State and local entities for transportation projects that reduce vehicle emissions and traffic congestion in areas where air quality does not meet or previously did not attain the National Ambient Air Quality Standards.

NYSDEC Climate Smart Communities Program (CSC): The Climate Smart Communities Grant program was established in 2016 to provide 50/50 matching grants to cities, towns, villages, and counties of the State of New York for eligible climate change mitigation, adaptation, and planning and assessment projects. Municipalities need not be a registered or certified as a Climate Smart Community to apply for a grant. Implementation projects for which funding can be sought are those related to the reduction of greenhouse gas (typically transportation alternatives) and climate change adaptation.



NYSDOT Multi-Modal Program (MM): The Multi-Modal Program is managed through NYSDOT's Local Programs Bureau and provides reimbursement funding for five (5) specifically authorized transportation capital project "modes" found in State Transportation Law 14-k and NYSDOT Program Policy - Rail, Port, Fixed Ferry Facilities, Airport, and State and Local Highway and Bridge projects. The program does not have a required local match.

Empire State Development Grants (ESD): Available through the Consolidated Funding Application process, ESD provides funds for infrastructure investments under certain programs. Funds may be used to finance infrastructure investments with a goal of attracting new



businesses and expand existing businesses, thereby fostering further investment. Infrastructure projects



may include transportation, water and sewer, and parking, among other investments. Depending on the applicable program, a funding match may be required.

Local Funding Partners and Programs

Schenectady Metroplex Development Authority (SMDA): Public benefit corporation established to institute a comprehensive, coordinated program of economic development activities in the Route 5 and Route 7 corridors of Schenectady County.



National Grid Grants (GRID): National Grid Economic Development offers grant assistance for many different phases of economic development and community revitalization projects. National Grid may be able to help with staff assistance and resources from their Public Service Commission approved Economic Development Plan. These grants could be explored for assisting with relocation of existing utility poles and infrastructure, and installation of energy efficient site lighting.



The Capital District Transportation Committee (CDTC) is the Capital Region's Metropolitan Planning Organization (MPO). CDTC has partnered with the Capital District Regional Planning Commission (CDRPC) to provide the **Technical Assistance Program (Tech Assist)**. The Tech Assist Program is intended to fill gaps in local level planning needs and to enhance capacity to advance projects that resonate with one or more of the Quality Region Principles of the New Visions 2040 Regional Transportation Plan. The program offers CDTC and CDRPC staff time and expertise to local governments undertaking small scale community planning initiatives. The Tech Assist Program requires a minimum of a 25% local match for the total project cost. This program could be used to further study the level of service and capacity needs for the NY Route 50 and Mohawk Avenue intersection.



Implementation

The recommendations identified in Chapter 6 together meet the project objectives; however, phasing of those improvements may be required to accommodate funding acquisition and approval processes. The Village may opt to seek funding for the design and construction of corridor improvements for a portion of Mohawk Avenue, as opposed to the entire corridor. Alternatively, select elements could be implemented corridor-wide without implementing all recommended improvements. Many elements of the recommended corridor improvements are dependent on one another and specific work elements cannot be broken into separate projects. For example, curb extensions, pedestrian signals, curb ramps and high-visibility crossings could be installed at Ten Broeck Street prior to the sidewalks being reconstruction on either side of the intersection. In addition, improvements to the Ten Broeck Street intersection must be coordinated with the Village's efforts to provide a new fire station.



The following table details the recommendations identified during the Concept Plan development process. It includes potential implementation partners, potential funding sources, and the rough timeline for implementation. The funding sources are defined below the table.

Table 7.1: Implementation Plan				
Recommended Improvement	Anticipated Time Frame	Potential Funding Sources	Potential Project Partners	Coordinated Projects
Pedestrian Signal Upgrades / Curb Extensions, Crosswalks	Near-Term	TAP, Village, NYSDOT	Village of Scotia, NYSDOT	
Mid-Block Crossings	Near-Term	TIP, TAP, Village	Village of Scotia, NYSDOT	Coordinated with Curb Extensions or Median Installation (depending on location); other Village Projects
Curbed Median / Driveway Access	Medium-Term	TIP, TAP, Village, NYSDOT, SMDA	Village of Scotia, NYSDOT	
Shared-Use Lanes (Glen Avenue)	Near-Term	TIP, CMAQ, TAP	Village of Scotia	
Sidewalks and Curb Ramps	Near-Term to Longer-Term	TAP, TIP, CFA, Property Owners	Property Owners, Village of Scotia, NYSDOT	Street tree program, lighting
Bicycle / Pedestrian Amenities, Lighting	Medium-Term	CFA, TIP, SMDA, GRID	Scotia BID and Village of Scotia	
Landscaping Improvements	Longer-Term, coordinate with sidewalk reconstruction	CFA, TIP, TAP	Scotia BID and Village of Scotia	
Gateway Treatments	Medium-Term	TIP, SMDA	Village of Scotia, NYSDOT, Metroplex	Sidewalks, bicycle infrastructure (path)
Pavement Rehabilitation	Longer-Term	NYSDOT, TIP	NYSDOT	Sidewalks (curbs)
Access Consolidation	Longer-Term	CFA, TIP, TAP	Village of Scotia, Property Owners	

Anticipated time frames have been assigned based on observed need for the improvement, funding availability and/or application schedules, breadth of improvement and required level of coordination with outside agencies or stakeholders. The anticipated time frames noted in the table above are generally defined as follows:

Near-Term:

1-2 years

Medium-Term:

2-4 years

Long-Term:

5+ years



Planning-Level Cost Estimates

Order-of-magnitude cost estimates have been prepared for the recommended improvements as summarized below. These estimates are based on recent unit pricing available through the NYSDOT's Pay Item Catalog for Region 1 projects and are intended to give a sense of potential costs for major elements proposed. Further refinement through design and engineering will refine these planning-level cost estimates.

Table 7.2: Cost Estimate Summary

Mohawk Avenue Corridor Improvements		Planning-Level Costs (2022 Dollars*)
Pedestrian and General Improvements	Pedestrian Signal Upgrades / Curb Extensions, Crosswalks	\$384,000
	Mid-Block Crossings	\$192,000
	Sidewalks and Curb Ramps	\$2,878,000
	Bicycle / Pedestrian Amenities, Lighting	\$222,000
	Landscaping Improvements	\$154,000
	Gateway Treatments	\$96,000
	Pavement Rehabilitation	\$768,000
	Curbed Median / Driveway Access	\$288,000
	Access Consolidation	\$288,000
Mohawk Avenue / Schonowee Avenue / Glen Avenue Intersection & Glen Avenue	Bicycle Infrastructure: multi-use path segments near Glen Avenue / Schonowee Avenue Intersection, shared-use lane signs and pavement markings on Glen Avenue, bicycle amenities	\$576,000

*Totals includes work zone traffic control, survey, mobilization, contingencies, construction inspection, and design costs.

A more detailed summary of estimated costs is provided in **Appendix F** that breaks up the costs based on dividing implementation of the improvements into two phases, one between N/S Reynolds Street and N/S Ballston Avenue, and the second between N/S Ballston Avenue and Glen Avenue.



Public Education

In addition to the physical design and construction of the recommended improvements, a public education component is needed to ensure the public is aware of the laws and recommended pedestrian safety best practices associated with pedestrian travel in urban corridors. With the new bicycle infrastructure in place, cyclists and pedestrians need to be educated on where the infrastructure is located and the regulations of the infrastructure to ensure the safety of vehicular users, pedestrians, and bicyclists alike. Education programs can include public workshops, school-based programs, and the distribution of educational materials to Village residents via websites, social media platforms, and mailings.



Village Code Modifications

Throughout the development process of the concept plan, two (2) areas of the Village Code were identified to conflict with elements of the concept plan.

Sidewalks: Village Code Section 210-20.1 requires that new or replacement sidewalks within the Central Business District must be constructed of concrete and brick pavers, per specifications required by the Superintendent of Public Works. Should the Village choose to move forward with design and construction of the sidewalks and buffer strip as shown in this Plan, the Village Code would need to be modified to remove the brick paver inlay requirement. In terms of timing, a realistic implementation plan should be discussed by the Village. If sidewalks will not be replaced in the near future, a property owner within the Central Business District will need direction from the Village via the permit process regarding the design sidewalk design.



Lighting: Currently, the existing streetlights are powered via a connection to the adjacent buildings throughout the corridor, with the financial responsibility falling on the property owner. The light posts and foundations are currently located in line with the existing brick inlay.

The Village is interested in creating a lighting district within the Central Business District. It is recommended that the lighting district be vetted and created prior to implementation of the corridor-wide sidewalk replacement effort.

Lighting Districts

The municipality where the lighting district is located within is responsible for the design, construction, operation, and maintenance of the streetlights within the district. The associated costs would then be rolled into the district property owner's annual property tax bill.

Maintenance

Per the Village code, it is the adjacent property owner's responsibility to clear snow and ice from sidewalks adjacent to their property, maintain grass areas between their property and the roadway, and to maintain all water service curb boxes at ground level. It is also the property's owner's responsibility to maintain the adjacent sidewalks in good repair and in a safe condition for public use at all times.

Coordination and Approvals

Due to the Village's ongoing effort to upgrade pedestrian infrastructure to meet ADA standards, all existing curb ramps shall be re-evaluated at the time of final design to determine the need for reconstruction.

It should be noted that the right-of-way boundaries depicted on the concept plans are based on a tax map accuracy and will need to be confirmed before construction. If work is to be proposed outside of the highway boundary, right-of-way will need to be acquired from the adjacent property owners. Property access releases may also be required to perform the work proposed, such as sidewalk replacement to the face of existing buildings.

Since Mohawk Avenue is a state-owned roadway, coordination with the New York State Department of Transportation (NYSDOT) is required. A highway work permit will be needed from the NYSDOT to perform any work within their right-of-way, including preliminary investigations.