CHAPTER 4

We Are Moving Forward

The strategies presented on the following pages were developed as part of the subsequent Moving Forward 2050 plan and have been reassessed and refined as part of this planning update. It is important to note that these strategies continue to lay the groundwork for a new approach to transportation in Buffalo Niagara, one that harnesses technology and innovation to strengthen our economy, our communities and our environment.

Image Source: GBNRTC (2022)

Strategies in Action

We are taking steps to create a transportation network that connects our region with a variety of convenient options to promote opportunity, health and safety for all. We are focusing transportation investments in strategic areas to spur development and reinvigorate the places we live and work today, while deterring development on open spaces and reducing infrastructure maintenance costs. We are embracing new technologies and emerging trends to build a transportation system that works better for our environment and our health.

New Mobility & Transit	A fully connected region with more options and opportunities.
Regional Highway System	Enhancing our highway system with Next Generation freeways, commuter expressways, and connections to other regions.
Smartly Enhanced Multi-Modal Arterials	Transforming key corridors into Smartly Enhanced Multi-modal Arterials.
Secondary Corridors	Revitalizing car-dependent corridors with new mobility upgrades.
Infrastructure for Reconsideration	Adapting underutilized infrastructure.
Regional Cycle Network	Promoting bicycling with a modern cycle network.
Future Freight Network	Strengthening our economy with a smart, efficient and diverse freight network.
Smaller Cities & Village Centers	Maximizing access and mobility in village centers and small cities.
Rural Roadways	Upgrading our rural roadways and bridges.

As a Region, we are moving forward many of the adopted strategies described in the 2018 Moving Forward 2050 plan.

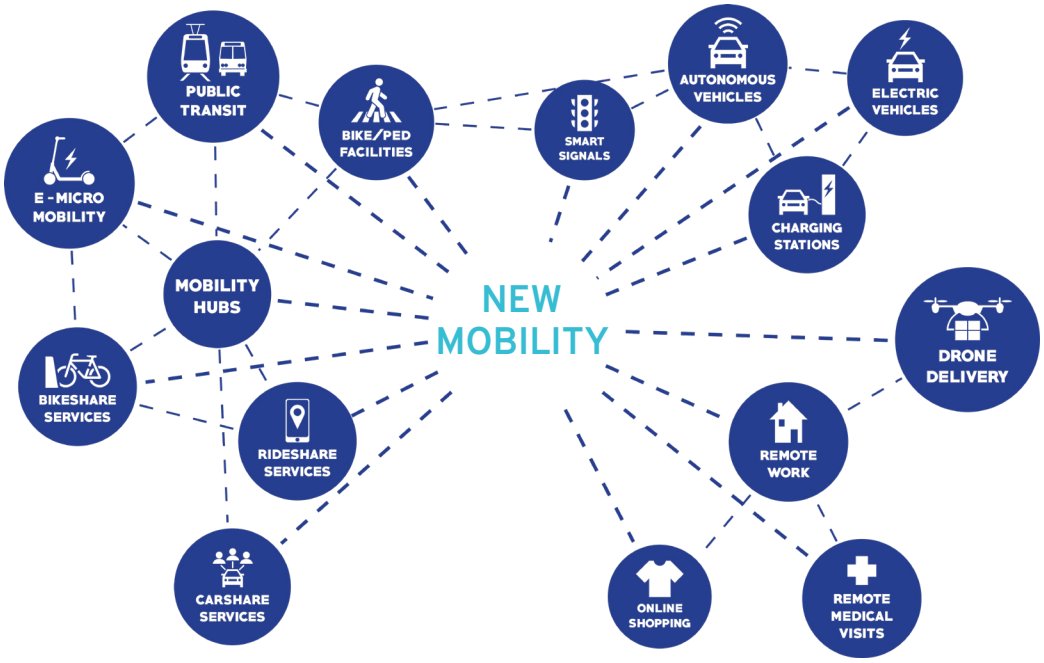
Strategies to Move Us Forward

New Mobility & Transit

Why new mobility and transit?

New mobility can revitalize communities by reconnecting residents to opportunities with multiple modes of transportation. Strategic reinvestments will improve walkability, transit access, and bike infrastructure to keep communities active and healthy. By improving access to multiple modes of transportation, and shifting to electric vehicles, new mobility will reduce private vehicle ownership, which would limit greenhouse gas emissions. Improving worker access to job centers with multiple modes and new transportation services, enhancing freight movement, and promoting investments in targeted areas while limiting the costs of system maintenance, new mobility will benefit our economy.

Innovation is at the heart of new mobility. Technology is used to integrate transportation modes, improve available options, and create a more reliable transportation network. New mobility and transit integrates technology advances to improve safety and increase mobility for the elderly and people with disabilities. It also increases access to parks and could also free up land for green space as autonomous vehicles are expected to require fewer parking spaces. New mobility also relies new partnerships to help finance and manage these initiatives.



Enhancing our mobility and transit options in the Buffalo Niagara Region

NFTA Metro Expansion Project

NFTA is proposing to expand high quality transit in the Buffalo Amherst-Tonawanda Corridor. An Environmental Impact Statement (EIS) is underway to evaluate the potential benefits and impacts to expand Metro's Metro Rail system in Buffalo to Amherst and Tonawanda. Both light-rail transit and bus-rapid transit alternative are being considered. The project would serve existing Metro riders, attract new transit patrons, and improve regional connections between Buffalo, Amherst, and Tonawanda, and support redevelopment and other economic development opportunities. Additionally, the project would improve livability by increasing mobility and accessibility in communities throughout the region.

DL+W Multimodal Study

NFTA is leading an effort to establish a safe, inviting multi-modal network adjacent to the Delaware, Lackawanna and Western (DL+W) Terminal that facilitates activity to and from the station, connects people to the Buffalo River and creates a unique recreational experience along the waterfront.

Bailey Avenue

The GBNRTC, in collaboration with the City of Buffalo and NFTA, commissioned the Bailey Avenue Corridor Transportation Study. This study focuses on a 7.5-mile section of Bailey Avenue from Main Street to South Park Avenue. The purpose of the study is to analyze existing transportation infrastructure along Bailey Avenue and identify long-term approaches to streetscape and transit enhancements. Recommendations are intended to enhance multi-modal mobility options and improve the corridor's sense of place to facilitate economic development along Bailey Avenue and its surrounding neighborhoods.

DL+W Station

This project will reuse and reactivate the former DL&W Trainshed in the Cobblestone/ Canalside districts of the city, which now serves as the NFTA-Metro Rail yard and shop facility. The trainshed will be a new commercial activity center on the Buffalo River waterfront and a new Metro Rail station enhancing public access to the Canalside and Cobblestone districts. This project will extend Metro Rail revenue service from the current terminus at Special Events Station into the DL&W Trainshed where a new Metro Rail Station will be built.

Concept rendering for NFTA LRRT extension at the University at Buffalo's North Campus. Source: NFTA.

Equitable Transit-Oriented Development (eTOD)

Transit-oriented development (TOD) promotes the development of vibrant, walkable, mixed-use communities in and around transit corridors and transit stations. Equitable transit-oriented development (eTOD) provides the benefits of access, mobility, employment, entrepreneurship, housing, and economic development that come along with TOD to everyone. Good TOD projects seek to embrace and empower the local community by building human capital and reversing the forces of socio-economic disinvestment.

The NFTA's Comprehensive Transit-Oriented Development Plan demonstrates that Metro Rail expansion has the opportunity to not only enhance regional mobility, but to serve as a part of a regional investment strategy to leverage economic and community development opportunities associated with transit investment. Developing equitable, mixed-use, vibrant communities around transit will help the Buffalo Niagara region sustain itself in the long-term.

GBNRTC and NFTA are conducting a housing assessment, including household vulnerability to displacement and opportunities and challenges for affordable housing development along the Metro Rail corridor. The results of this analysis will set the stage for the development of a Regional TOD fund to provide financing opportunities along the corridor for affordable housing and community facilities.

LaSalle Station

The LaSalle Station property, including the building and the adjacent Park-and-Ride lot, covers six parcels along Main Street corridor. Three are owned by the City of Buffalo and three by NFTA. In seeking the Requests for Proposals, the City of Buffalo is looking to advance the development activity along Main Street, put the acreage to more active use and take advantage of the proximity to public transportation.

201 Ellicott

201 Ellicott is a mixed-use affordable housing and fresh food market project in downtown Buffalo. A number of new mobility hub amenities are being added including wider sidewalks to encourage walking, a "pull up zone" for ride hailing services, interior long-term bike storage and a fix-it station. Bike stations with e-Bikes will also be installed as well as additional Complete Streets strategies and introduces bike-pedestrian safety features (including bike lanes).

Braymiller Market on the corner of Clinton St and Ellicott St in the City of Buffalo, part of the 201 Ellicott mixed-use development. Photo by GBNRTC (2022).

BuffALLo All Access

The BuffALLo All Access project, formally ITS4US, aims to solve mobility challenges for all travelers with a specific focus on underserved communities, including people with disabilities, older adults, low-income individuals, rural residents, veterans, and limited English proficiency travelers by deploying an integrated set of travel support services and systems within neighborhoods surrounding the Buffalo Niagara Medical Campus (BNMC). Central to the project is a complete trip platform that is able to factor in travelers' preferences and accessibility-related needs in providing comprehensive trip planning and execution support to registered users. The platform, accessed both offline and online via multiple interfaces including an app, will integrate with multiple enabling technologies and services including fixed route transit, community shuttles, smart intersections that use tactile and mobile technologies that assist travelers with disabilities navigate intersections safely, and wayfinding Infrastructure such as smart signs and information hubs to support outdoor and indoor navigation. Through the deployment, the BuffALLo All Access project seeks to address the challenges facing communities in the area by:

- Providing transit access to healthcare and jobs to underserved residents including persons with disabilities and allowing them to share in the economic development in downtown Buffalo.

- Leveraging technology to work in support for accessible transportation, integrating accessible transportation technology, transit, and connected automation to solve a transportation need.

- Developing a scalable model for considering accessibility and universal design in transportation technology projects.

GBNRTC Electric Vehicle Planning

To support the transition to a cleaner transportation system and facilitate the creation of a more comprehensive Electric Vehicle (EV) charging network in the region, GBNRTC is developing an electric vehicle planning website to serve as a resource to help provide information to a broad variety of regional stakeholders on EVs, EV incentive programs, EV chargers in terms of types and locations, EV siting recommendations and other EV planning related information. The EV website will be hosted under GBNRTC's main website and is scheduled to be launched by summer 2023.

Strategies to Move Us Forward

Regional Highway System

Why improve our regional highway system?

Incorporating technology upgrades on the region's highway system will make travel more efficient and cost-effective, expanding access to jobs and making people and businesses more productive. Enhancing our connections to other regions, particularly by making the flow of freight across the border more efficient, will increase trade, help grow local businesses and bring new employment and workforce development opportunities to the region.

Leveraging vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications on expressways will improve transportation safety and efficiency, and enhance access to employment, education and other opportunities for all residents, particularly in rural and suburban communities. Promoting autonomous vehicles by adding dedicated lanes and V2I communications will improve transportation safety and efficiency while improving the flow of traffic and enhancing access to opportunities.

Technology upgrades to improve the flow of traffic on the regional highway system will decrease congestion and the environmental impacts of transportation. Adding dedicated lanes and charging stations will promote the use of autonomous and electric vehicles to further reduce fossil fuel use and improve air quality. Applying innovative, sustainable materials for road surfaces will minimize stormwater runoff.

Technology advances are expected to facilitate better flow of vehicle traffic through dynamic routing, lane management, and border clearance. The region's highway system relies on technological innovation to make transportation highways more efficient, safe and cost-effective. Communications technology will allow vehicles to communicate to one another and relay traffic information back to integrated transportation management systems. Innovative traffic management strategies like variable speed limits and ramp-metering will also improve travel on the highway system. Trucks will likely become the first autonomous fleet, allowing more efficient flow of freight into and out of the region. Creating a strong bi-national border requires innovative partnerships and governance arrangements to facilitate the efficient movement of people and goods.

Here's how we're improving our regional highway system

Smart Signal System Deployment

The Town of Amherst and the Town of Tonawanda have recently deployed smart signals along several corridors. This hardware and software utilizes the latest in traffic signal artificial intelligence. The system incorporates camera-based video detection with extreme weather reliability, full-scale remote management, automated traffic signal performance, real-time telemetry, and 24/7/365 data for planning and network optimization. The smart signal deployment has the ability to reduce congestion, increase safety, and reduce emissions, making the existing transportation system more efficient and improving overall mobility in the region.

The Advanced Transportation Congestion Management Technology Deployment (ATCMTD) - All Roads

The ATCMTD Grant was awarded to Niagara International Transportation Technology Coalition (NITTEC) by the Federal Highway Administration. The $7.8 Million award is targeted specifically to fund model deployment sites for large-scale installation and operation of advanced transportation technologies. Building upon recent Integrated Corridor Management (ICM AMS) efforts, the Phase I (Planning) and Phase II (Implementation) approach from industry-led teams are focusing efforts on system integration and collaboration, enhancements of mobility and safety, dynamic information dissemination, and Active Traffic Management (ATM). This will be accomplished through means of a fully-integrated Decision Support System (DSS) and performance measure modules, interfacing external traffic and weather information services with existing ATM, integration of vehicle and infrastructure communication (V2I and I2V), and sophisticated parking/ wayfinding and incident management systems.

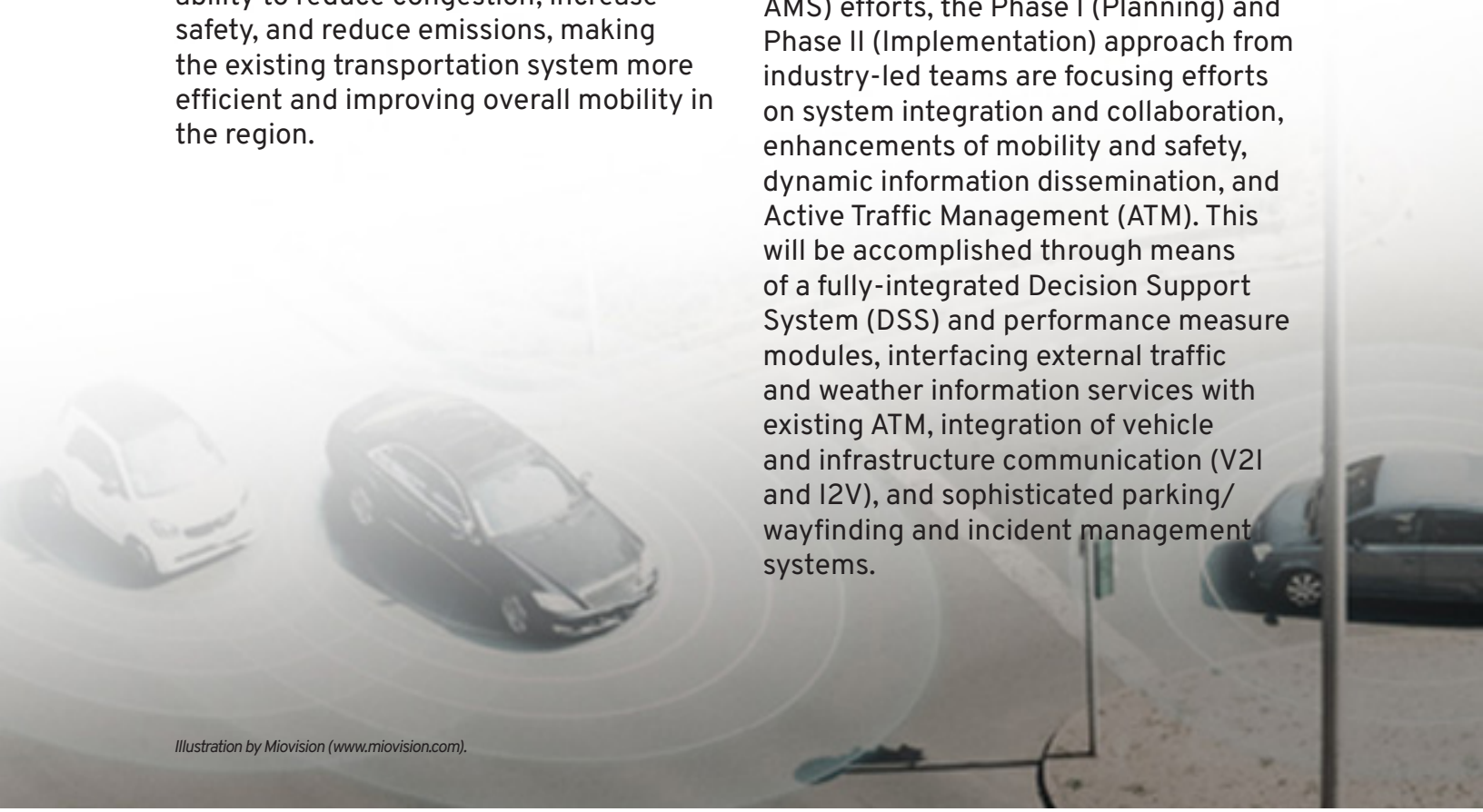


Illustration by Miovision (www.miovision.com).

Strategies to Move Us Forward

7 Smartly Enhanced Multimodal Arterials (SEMA)

Why SEMAs?

SEMAs represent the convergence of modern street design standards, connected vehicle technologies, and multi-modal mobility services. Making these improvements and repurposing underused roadway space for pedestrians, bicycles and transit, where feasible, will optimize travel along these corridors.

Focusing investments in key areas along major corridors will maximize revenues for local governments while limiting new infrastructure costs. Linking reliable transportation options along major corridors will enable multi-modal trip planning and expand access to opportunities while promoting revitalization of key areas. Adding electric vehicle charging stations, limiting congestion and promoting alternatives to personal vehicle ownership can limit transportation's impact on the environment and air quality. SEMAs will integrate existing and emerging technologies to create a seamless system for safely navigating between various transportation modes. SEMAs will also transform existing rights-of-way to create a sense of place and spur investment in key corridors to strengthen the overall region.

Niagara Street in the City of Buffalo. Photo by GBNRTC (2022).

Bringing SEMAs to the Buffalo Niagara Region

Niagara Street Corridor

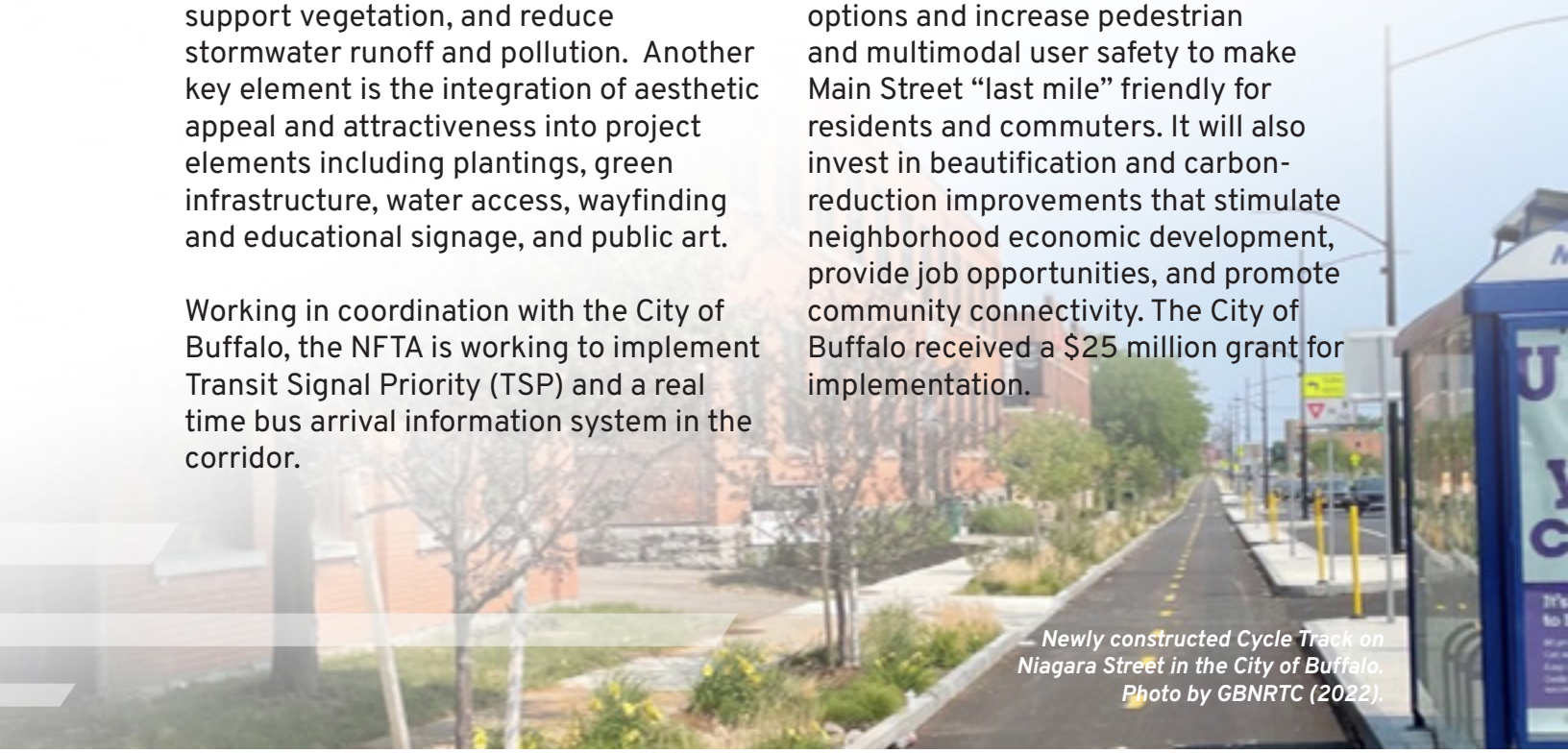
The Niagara Street corridor is in the midst of a transformative process from industrial corridor to a vibrant destination that befits its waterfront proximity and recent increased level of private investment. The City of Buffalo is leading the effort to transform Niagara Street into a multimodal corridor that serves pedestrians, bicycles, transit, and motor vehicles in a safe and functional manner by use of traffic calming, pavement rehabilitation, curb bump-outs, improved crosswalks and signals, and LED street lighting. The project incorporates responsible stormwater management elements that increase infiltration, support vegetation, and reduce stormwater runoff and pollution. Another key element is the integration of aesthetic appeal and attractiveness into project elements including plantings, green infrastructure, water access, wayfinding and educational signage, and public art.

Working in coordination with the City of Buffalo, the NFTA is working to implement Transit Signal Priority (TSP) and a real time bus arrival information system in the corridor.

Main Street BEAMS

Transforming Main Street: Building Equity and Assuring Mobility through Sustainability ("Main Street BEAMS") is a people-centered, multimodal surface infrastructure improvement project that will be a catalyst for transforming east-west social, economic, and transportation connections in the City of Buffalo. Main Street BEAMS is a complete streets project that will revitalize a 2.5-mile corridor of Main Street corridor from Goodell Street to Kensington Avenue in the City of Buffalo adjacent to the Masten Park neighborhood.

The project will enhance mobility options and increase pedestrian and multimodal user safety to make Main Street "last mile" friendly for residents and commuters. It will also invest in beautification and carbon-reduction improvements that stimulate neighborhood economic development, provide job opportunities, and promote community connectivity. The City of Buffalo received a $25 million grant for implementation.



Newly constructed Cycle Track on Niagara Street in the City of Buffalo. Photo by GBNRTC (2022).

Strategies to Move Us Forward

Secondary Corridors

Why improve our secondary corridors?

Concentrating development along key locations of corridors will revitalize and strengthen our first ring suburbs. Adding bike lanes and pedestrian amenities can help make existing communities more active and healthy. By reducing or repurposing excess road capacity, adding electric vehicle charging stations and amenities for bicycles and pedestrians, secondary multi-modal corridors improve our environment. Innovative retrofits of secondary arterials can create flexible use of the right-of-way. Rethinking the infrastructure along these secondary corridors will make these communities more walkable, livable and attractive for reinvestment.

Union Road in the Town of Cheektowaga, NY.
Source: Google Earth (2023).

Strategies to Move Us Forward

Infrastructure for Reconsideration

Why reconsider how we use our infrastructure?

Taking a critical look at some of the region's roadways—how much they cost to maintain and how much traffic they typically carry today compared to the volume of traffic they were originally built for—reveals opportunities to reduce existing infrastructure to accommodate future land use and travel patterns. Reconfiguring some portions of the system will reduce the costs of maintaining and repairing our infrastructure while still enhancing mobility and the overall efficiency of our transportation system.

Major roads or highways potentially suited for reconsideration may have the following characteristics:

- Built based on previous forecasts of significant growth and travel demand in an area where those forecasts have not been reached.
- Traffic levels below what would justify the size and nature of the existing road.
- Areas where travel patterns have shifted resulting in less reliance on the road.
- Out of context with their surrounding land uses.

The Scajaquada Expressway (NY RT 198) bisects Delaware Park in the City of Buffalo. Image Source: Google Earth (2023)

Infrastructure for reconsideration in our region

The current alignment of the Scajaquada Expressway (NY RT 198) divides Buffalo neighborhoods. Image Source : Google Earth (2023)

Region Central

The GBNRTC has taken the lead in the Region Central effort to reimagine the future of the Scajaquada Corridor. This project includes developing a comprehensive planning process to reimagine the Scajaquada Expressway corridor and surrounding neighborhoods. The project will identify future land use and community development vision and develop a data-driven mobility assessment and set of recommendations to create a better future for all who live work and play in Region Central.

Reimagining the Twin Cities Memorial Highway

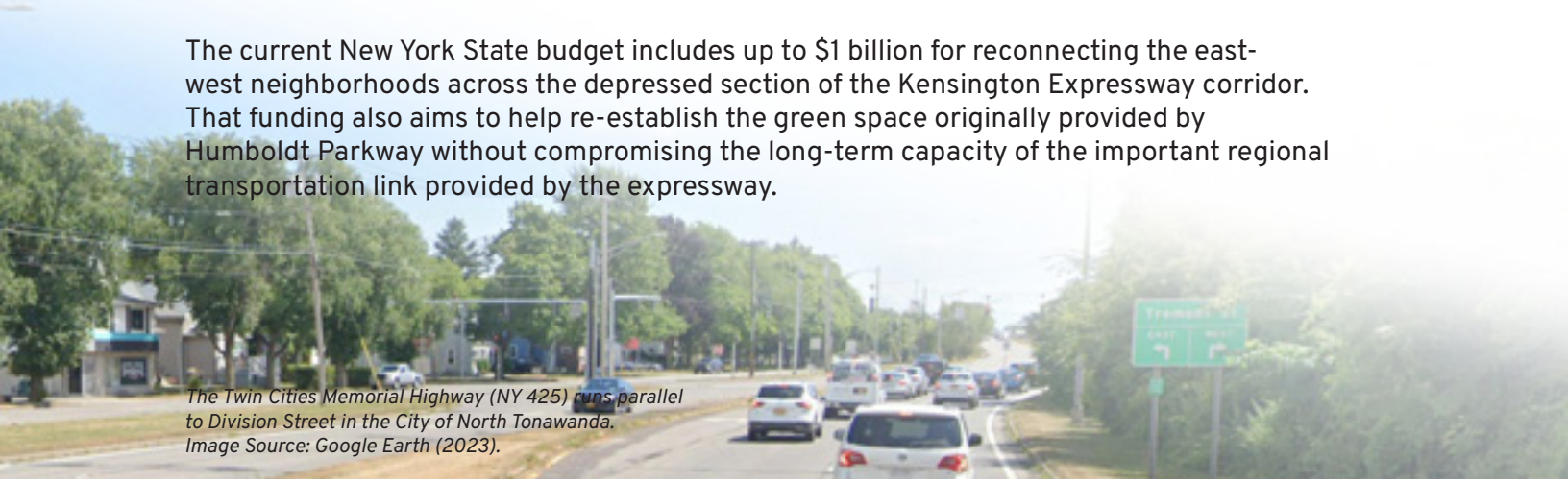
The Twin Cities Memorial Highway, NYS Route 425, located in the City of Tonawanda and North Tonawanda has long created significant barriers to mobility, access, or economic development to the area and presents an opportunity to reconnect, improve safety and access to the community.

The purpose of the planning initiative is to develop and evaluate mobility options and advance recommendations for the redesign of the highway, which may include reducing the number of travel lanes or removal of the highway all together.

Re-Connecting Humboldt Parkway

Constructed during the 1950s and 1960s, the Kensington Expressway replaced what had been a tree-lined boulevard – the Humboldt Parkway, designed by Frederick Law Olmsted – with a below-grade highway that severed the connection between the surrounding neighborhoods. The original boulevard connected Humboldt Park (now Martin Luther King, Jr. Park) with Delaware Park.

The current New York State budget includes up to $1 billion for reconnecting the east-west neighborhoods across the depressed section of the Kensington Expressway corridor. That funding also aims to help re-establish the green space originally provided by Humboldt Parkway without compromising the long-term capacity of the important regional transportation link provided by the expressway.



The Twin Cities Memorial Highway (NY 425) runs parallel to Division Street in the City of North Tonawanda. Image Source: Google Earth (2023).

Strategies to Move Us Forward

Regional Cycle Network

Making bicycling a viable transportation option for the region starts with carrying out the plans we have in place while exploring other ways to connect more communities and destinations with the regional bicycle network.

Why invest in our regional cycle network?

Expanding and upgrading the regional cycle network will increase multi-modal access to employment centers and support tourism by providing recreational opportunities that connect with tourist destinations on both sides of the border.

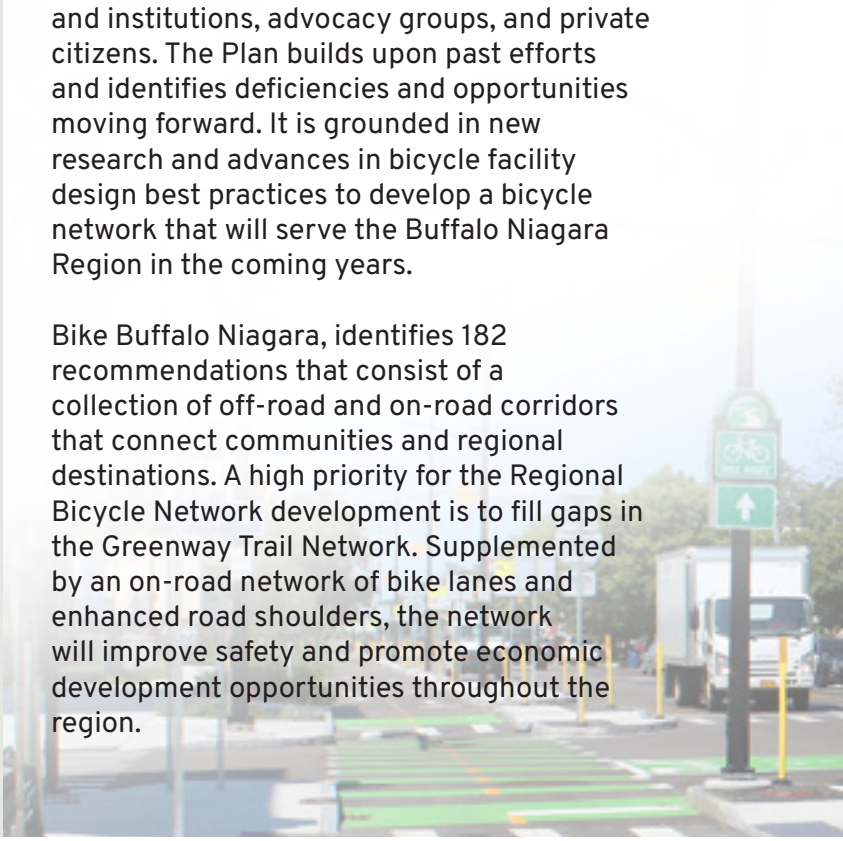
A modernized, safe and convenient regional cycle network bolsters communities throughout the region by enhancing multi-modal access to employment, services and recreational opportunities. Linking bikes with other modes and services at mobility hubs could also spur reinvestment in key centers of urban, suburban and rural communities. Connect bicycling with transit services to improve transit accessibility by providing a solution for the first and last mile.

Supporting bicycling with improvements to the regional cycle network, like electric bike charging stations, and connections with other modes can reduce the use of motorized vehicles and limit greenhouse gas emissions. Bicycle improvements would also increase access to parks and recreational opportunities promoting active, healthy lifestyles.

Bike Buffalo Niagara

Bike Buffalo Niagara, the Regional Bicycle Master Plan is one step in the overarching goal to make the region's bicycle network safer and more accessible for residents and visitors. This Plan, adopted in 2020, was developed in consultation with local, county, state representatives, public organizations and institutions, advocacy groups, and private citizens. The Plan builds upon past efforts and identifies deficiencies and opportunities moving forward. It is grounded in new research and advances in bicycle facility design best practices to develop a bicycle network that will serve the Buffalo Niagara Region in the coming years.

Bike Buffalo Niagara, identifies 182 recommendations that consist of a collection of off-road and on-road corridors that connect communities and regional destinations. A high priority for the Regional Bicycle Network development is to fill gaps in the Greenway Trail Network. Supplemented by an on-road network of bike lanes and enhanced road shoulders, the network will improve safety and promote economic development opportunities throughout the region.



Strategies to Move Us Forward

Future Freight Network

Why invest in our future freight network?

A modernized and diversified freight network will improve the flow of goods and bolster our economy, particularly by improving exports and increasing the amount of cargo and containers processed in the region. Making transportation more cost effective will allow people and businesses to be more productive, which will support all industries in the region, including target employment sectors. Improving the local business climate could also create spin-off economic benefits for our communities. Reducing border delays and promoting alternative fuels would improve fuel efficiency and reduce the environmental impact of our freight network.

Technology advances are expected to facilitate better flow of vehicle traffic through dynamic routing, lane management, and border clearance. Trucks will likely become the first AV fleet, facilitating efficient flow of freight in and out of the region. Creating robust and secure bi-national bridges requires innovative partnerships and governance arrangements to facilitate safe and efficient movement of people and goods across the border.

Buffalo Niagara Regional Freight Plan

Freight planning is an important component of metropolitan transportation planning processes. Input from a variety of public and private stakeholders—State DOTs, MPOs, freight modes, general public must be considered to successfully integrate freight planning into these existing transportation planning processes. Adopted in 2021, the Buffalo Niagara Regional Freight Plan seeks to connect different modes of transportation and/or transferring freight from one mode to another at facilities such as airports, terminals, and stations and coordinate public-private, state-local, and state-federal freight transportation investment decisions and activities.

The primary objective of the Plan was to develop quality freight projects and policy recommendations that will encourage growth in the industry and economic development opportunities for the WNY region.

New technologies, emerging transportation services and shifting consumer preferences are changing how goods get to market. Our regional freight network will have to anticipate and adapt to these shifts in order for the region to remain competitive in an increasingly global marketplace.

Buffalo Niagara International Airport
Image Source: Google Earth (2023).

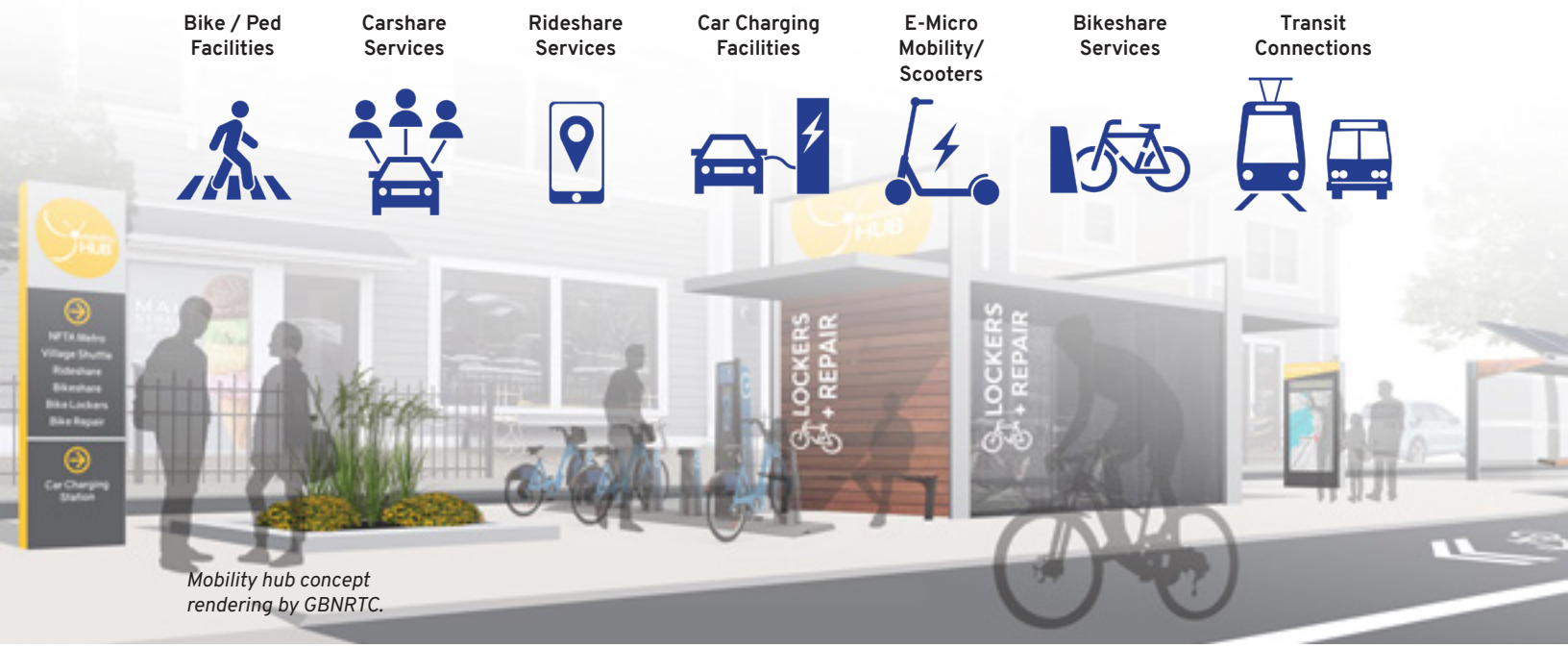
Strategies to Move Us Forward

Smaller Cities & Village Centers

How should we invest in our smaller cities and village centers?

While our region's village centers and small cities range in size, they all share a desire to be the focal point for local residents, businesses and other services, and to be safe, walkable and easily accessible communities. The focus needs to be on creating complete streets in these communities with walkable neighborhoods and downtown centers, bicycle and pedestrian facilities, mobility hubs, green infrastructure and smart parking.

Mobility hubs are places in a community that bring together public transit, bike share, car share and other ways for people to get where they want to go without a private vehicle. Built around frequent and high-capacity transit, mobility hubs offer a safe, comfortable, convenient and accessible space to seamlessly transfer from one type of transportation to another. GBNRTC is working with the Villages of Hamburg and Lancaster in the development and implementation of mobility hubs in these communities.



Mobility hub concept rendering by GBNRTC.

Strategies to Move Us Forward

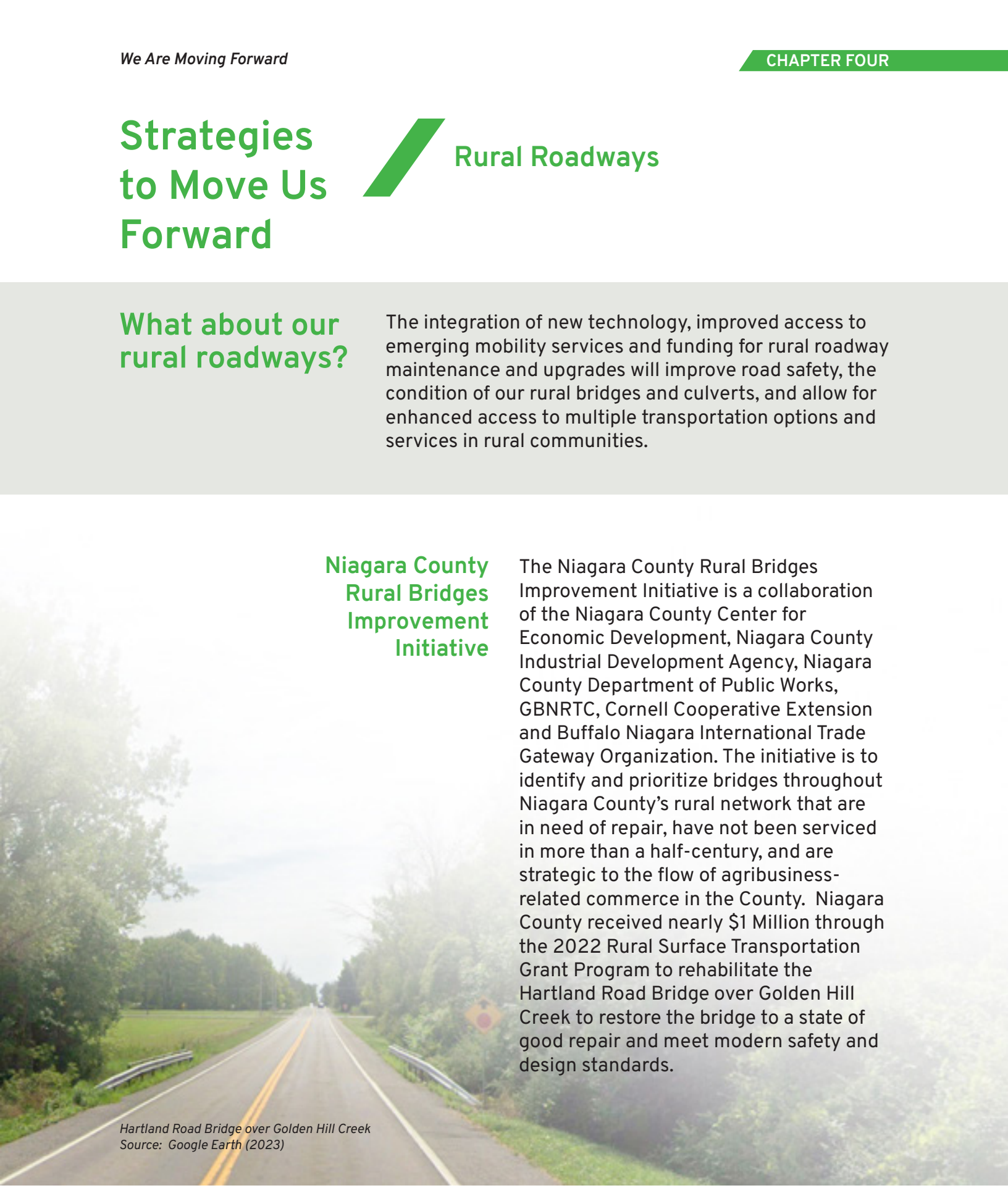
Rural Roadways

What about our rural roadways?

The integration of new technology, improved access to emerging mobility services and funding for rural roadway maintenance and upgrades will improve road safety, the condition of our rural bridges and culverts, and allow for enhanced access to multiple transportation options and services in rural communities.

Niagara County Rural Bridges Improvement Initiative

The Niagara County Rural Bridges Improvement Initiative is a collaboration of the Niagara County Center for Economic Development, Niagara County Industrial Development Agency, Niagara County Department of Public Works, GBNRTC, Cornell Cooperative Extension and Buffalo Niagara International Trade Gateway Organization. The initiative is to identify and prioritize bridges throughout Niagara County's rural network that are in need of repair, have not been serviced in more than a half-century, and are strategic to the flow of agribusiness-related commerce in the County. Niagara County received nearly $1 Million through the 2022 Rural Surface Transportation Grant Program to rehabilitate the Hartland Road Bridge over Golden Hill Creek to restore the bridge to a state of good repair and meet modern safety and design standards.



Hartland Road Bridge over Golden Hill Creek
Source: Google Earth (2023)