

Greater Buffalo-Niagara Regional Transportation Council



2030 Long-Range Transportation Plan
for the Erie and Niagara Counties Region

Greater Buffalo-Niagara Regional Transportation Council

Policy Committee

Chairman – Commissioner, New York State Department of Transportation

Vice-Chairman – County Executive, Erie County

Members

Niagara County, Chairman

City of Niagara Falls, Mayor

City of Buffalo, Mayor

Niagara Frontier Transportation Authority, Chairman

New York State Thruway Authority, Division Director

Secretary

Greater Buffalo-Niagara Regional Transportation Council, Executive Director

Planning and Coordinating Committee

Chairman – Niagara County, Commissioner Department of Public Works

Members

City of Niagara Falls, City Engineer

City of Buffalo, City Engineer

Erie County, Commissioner Department of Public Works

Niagara Frontier Transportation Authority

New York State Department of Transportation, Planning and Program Manager

New York State Thruway Authority, Deputy Division Director

Secretary

Greater Buffalo-Niagara Regional Transportation Council, Executive Director



Greater Buffalo-Niagara Regional Transportation Council

2030 Long-Range Transportation Plan
for the Erie and Niagara Counties Region

Approved June 2007

This report was prepared with financial assistance of the U.S. Department of Transportation. However, the contents represent only the view of the authors and do not necessarily reflect the review or approval of the U.S. Department of Transportation.



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



RESOLUTION NUMBER 2007-10

2030 LONG RANGE TRANSPORTATION PLAN

WHEREAS, the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) has been designated by the Governor of New York State as the Metropolitan Planning Organization responsible, together with the State, for the comprehensive, continuous, cooperative transportation planning process for the Buffalo/Niagara area, and

WHEREAS, Federal Regulations require that each Metropolitan Planning Organization shall develop a Long Range Transportation Systems Plan as a product of that planning process from which Transportation Improvement Programs and Annual Elements shall be derived, and

WHEREAS, as part of these responsibilities, the Greater Buffalo-Niagara Regional Transportation Council last developed a Long Range Transportation Plan to the Year 2025 planning horizon which was endorsed by the GBNRTC in 2001, with updates in 2004, and

WHEREAS, GBNRTC in cooperation with the New York State Department of Transportation (NYSDOT), has reviewed and documented compliance of the GBNRTC planning process with all existing federal rules and regulations, including Safe Accountable, Flexible, Efficient Transportation Equity Act – Legacy for Users (SAFETEA-LU) requirements; and

WHEREAS, the GBNRTC has approved new demographic data for the 2030 Planning horizon year, and

WHEREAS, this region is still classified as an air quality non-attainment area, and

WHEREAS, the GBNRTC has developed a new Long Range Transportation Plan to the year 2030 Planning horizon based upon this updated data, as documented in a report, *2030 Long Range Transportation Plan*, and

WHEREAS, said Plan has been found to address the critical issues likely to be impacting in the Greater Buffalo-Niagara Region during the planning period, and

WHEREAS, said Plan has been subjected to an extended public review and comment period, and

NOW THEREFORE BE IT RESOLVED, that the GBNRTC does hereby endorse the attached Year 2030 Long Range Transportation Plan, and



BE IT FURTHER RESOLVED, that future work plans and projects for further study and/or capital project action will be based upon the Plan's recommendations and priorities, and

BE IT FURTHER RESOLVED, that the development of the Transportation Improvement Program (TIP) shall reflect the Plan's recommendations and priorities, and

BE IT FURTHER RESOLVED, that the GBNRTC endorses said plan as being in conformity with the State Implementation Plan for Air Quality in accordance with requirements of the Clear Air Act Amendments of 1990 and most current U.S. Department of Transportation, U.S. Environmental Protection Agency, NYSDOT, and NYS Department of Environmental Conservation procedures, and

BE IT FURTHER RESOLVED, that the Plan's relevance and currency shall be maintained through a comprehensive update of this Plan to be completed no later than four years from this Plan's adoption, and

BE IT FURTHER RESOLVED, that the GBNRTC requests the New York State Department of Transportation, acting on its behalf, to forward this 2030 Long Range Transportation Plan to the Federal Highway Administration, Federal Transit Administration, and other appropriate Federal and State agencies to satisfy all current reporting requirements.

Resolved this day, June 22, 2007

By: _____

for Astrid Glynn, Chair, GBNRTC Policy Committee

Recommended by the Greater Buffalo-Niagara Regional Transportation Council Planning and Coordinating Committee on **June 6, 2007**.

By: _____

Kevin P. O'Brien, Chair, GBNRTC-PCC



Table of Contents

Chapter 1	Introduction	1
Chapter 2	Current Conditions	6
Chapter 3	Vision, Goals & Objectives	22
Chapter 4	Policy Guidance Principles	27
Chapter 5	Impact of Other Plans and Initiatives	31
Chapter 6	Planning Assumptions	42
Chapter 7	Transportation Safety	45
Chapter 8	Transportation Security	49
Chapter 9	Congestion Management	58
Chapter 10	Systems Operations	66
Chapter 11	Transportation Disadvantaged	70
Chapter 12	Environmental Planning Considerations	86
Chapter 13	2030 Demographics and Impacts of Past Trends	98
Chapter 14	Financial Resources	108
Chapter 15	2030 Plan Development	117
Chapter 16	Risk Management	131

APPENDICES

Appendix 1: Public Review Program

Appendix 2: Air Quality Conformity Determination Summary



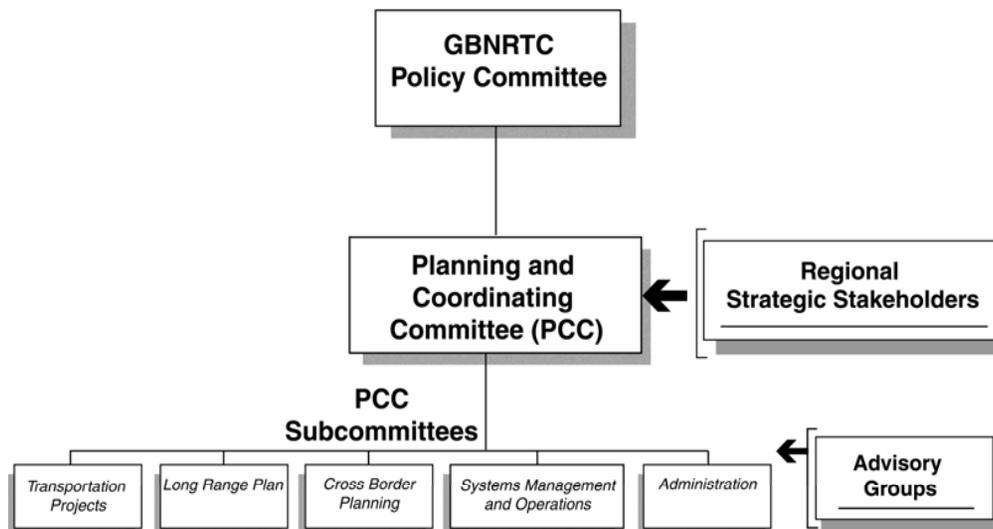
2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



Introduction

The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) is the transportation policy and planning organization for the Erie and Niagara County region of Western New York. Designated as a Metropolitan Planning Organization (MPO) by the Governor of New York, the GBNRTC shares responsibility with the New York State Department of Transportation for cooperatively developing transportation plans and programs that integrate all modes of transportation, to move people and goods in the most economical, efficient, and effective manner possible. The GBNRTC currently consists of the following member agencies: City of Buffalo, City of Niagara Falls, County of Erie, County of Niagara, New York State Thruway Authority (NYSTA), the Niagara Frontier Transportation Authority (NFTA), and the New York State Department of Transportation (NYSDOT). The Seneca Nation of Indians, the Transportation Council of the Buffalo-Niagara Partnership, and the Empire State Development Corporation serve formally as Regional Strategic Stakeholders.

The MPO is a partnership of local and state governments working together to make decisions about transportation planning in this region.



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

The GBNRTC works with the Seneca Nation of Indians on a number of significant transportation planning issues. A few of these issues include providing adequate access to social service and economic opportunities in the region, access to new Seneca economic development initiatives and maintaining roadways on sovereign lands to conditions comparable to roadways outside reservations. The GBNRTC seeks input from the Seneca Nation of Indians and other identified Stakeholders on GBNRTC products including the 25-year Long-Range Transportation Plan (LRP), the five-year Transportation Improvement Program (TIP), and the annual Unified Planning Work Program (UPWP), as well as other business items, as they are developed and prior to approval by the GBNRTC Policy Committee.

GBNRTC Long-Range Transportation Plan Subcommittee

Development of the 2030 Long-Range Transportation Plan was guided by the LRTP Subcommittee, which consisted of representatives from each of the member agencies. This group met regularly to review and comment on issues related to the plan and plan development.

Long-Range Transportation Plan

As an MPO, one of the primary responsibilities of the GBNRTC is the development of a long-range transportation plan for the two-county area. This Plan is a multimodal “blueprint” for transportation systems and services aimed at meeting the transportation demands of existing and future development in Erie and Niagara Counties. It serves as a guide to the development of the Transportation Improvement Program (TIP), which consists of all federally funded roadway, transit, and major transportation projects scheduled within the region over a five-year period. The long-range plan is developed in partnership with both public and private agencies, community groups, interested residents, and other stakeholders.

The eight planning factors identified under SAFETEA-LU are:

- 1) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.*
- 2) Increase the safety of the transportation system for motorized and non-motorized users.*
- 3) Increase the security of the transportation system for motorized and non-motorized users.*
- 4) Increase accessibility and mobility options available to people and for freight.*
- 5) Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.*
- 6) Enhance integration and connectivity of the transportation system, across and between modes for people and freight.*
- 7) Promote efficient system management and operation.*
- 8) Emphasize the preservation of the existing transportation system.*



SAFETEA-LU

Since development of the 2025 Long-Range Transportation Plan and its subsequent update, new transportation legislation known as the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) has been enacted. SAFETEA-LU builds upon previous legislation and includes a number of new requirements related to long-range plan development. These requirements include:

- Discuss with Federal, State, and Tribal land management, wildlife, and regulatory agencies potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the transportation plan.
- Consult with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of transportation plans. Consultation shall compare transportation plans with the plans, maps, inventories, and planning documents developed by other agencies.
- Publish or otherwise make available the long-range transportation plan in electronically accessible format, such as the World Wide Web.
- Consider safety and security elements as separate items in the metropolitan planning process.
- Include operational and management strategies to improve the performance of existing transportation facilities to relieve congestion and maximize the safety and mobility of people and goods.

*The GBNRTC ensures the
planning process is
**comprehensive,
cooperative, & continuing.***

Public Participation

The goal of the GBNRTC public participation process is to ensure that the products of the metropolitan planning process reflect the needs and concerns of Erie and Niagara Counties' residents by involving the public early and continuously throughout the transportation planning process. The GBNRTC has a formal policy that guides the public participation process for the adoption of the regional long-range transportation plan. Direct mailings, e-mailings, paid newspaper notices, community events, public meetings, and the GBNRTC website are a few of the communication channels used to promote awareness of the draft 2030 LRTP and participation opportunities.

Title VI and Environmental Justice

Both federal and state legislation require that the transportation planning process and outcome are fair, equitable and non-discriminatory. Compliance with such regulations is demonstrated through annual planning process certification. Title VI and Environmental Justice concerns are currently addressed in the planning process through proactive public outreach, performance measurement and data analysis. Announcements are placed in publications serving minority communities to ensure there is notification of upcoming outreach activities to these communities. The GBNRTC initiates one-on-one interviews or small group discussions with community leaders and other identified members of the community to discuss the transportation planning process and identify key issues and concerns. Also, a demographic profile of the metropolitan planning area is maintained and updated that includes identification of the locations of socio-economic groups, including low-income and minority populations and is used for analysis purposes.

The Plan Document

This document is organized to highlight key elements of the 2030 Long-Range Transportation Plan development process. It represents the interests of numerous stakeholders including representatives of community-based organizations, public and private agencies, environmental and business groups, and private citizens. It builds

2030 LRTP Highlights

- *Vision, Goals & Objectives*
- *Other Plans & Initiatives*
- *Planning Assumptions*
- *Agency Consultation*
- *Environmental Planning Considerations*
- *Congestion Management Process*
- *Future Demographics & the Impact of Past Trends*
- *Safety & Security*
- *Human Services Transportation Plan*
- *2030 Plan Development*



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

upon other regional Plans and initiatives to ensure consistency among planning activities in the region. The 2030 LRTP is intended to be a flexible and dynamic document and amendable as regional conditions and priorities change. The Plan is reviewed and updated every four years or as required by federal law.



Current Conditions in the Erie-Niagara Counties Region

The GBNRTC is responsible for transportation planning in the Erie and Niagara Counties region. The region is located at the northwestern end of New York State. This area is predominately urban landscape; however, the eastern and southern portions are quite rural. The metropolitan area includes Native American lands of the Seneca Nation of Indians in Erie County and the Tuscarora Nation of Indians and the Tonawanda Band of the Seneca Indians in Niagara County.

Highways

The GBNRTC monitors approximately 1,900 centerline miles of Federal-aid eligible highways. Major highway facilities in the region include the mainline of the New York State Thruway (Interstate 90), and local Interstates 190 and 290. Interstate 190 runs from the I-90 near Buffalo to Lewiston via Niagara Falls. Interstate 290 forms an outer ring around the City of Buffalo, linking I-190 to the mainline NYS Thruway (I-90). Route 198 or the Scajaquada Expressway connects the Kensington Expressway (NY 33) on Buffalo's east side with the Niagara Section of the I-190 in the Black Rock neighborhood of Buffalo. Route 33 is one of the major expressways leading out of downtown and provides direct access to the Buffalo-Niagara Falls International Airport (BNIA). Interstate 990 runs in a roughly north-south direction through the southwest and central part of Amherst, northeast of Buffalo.



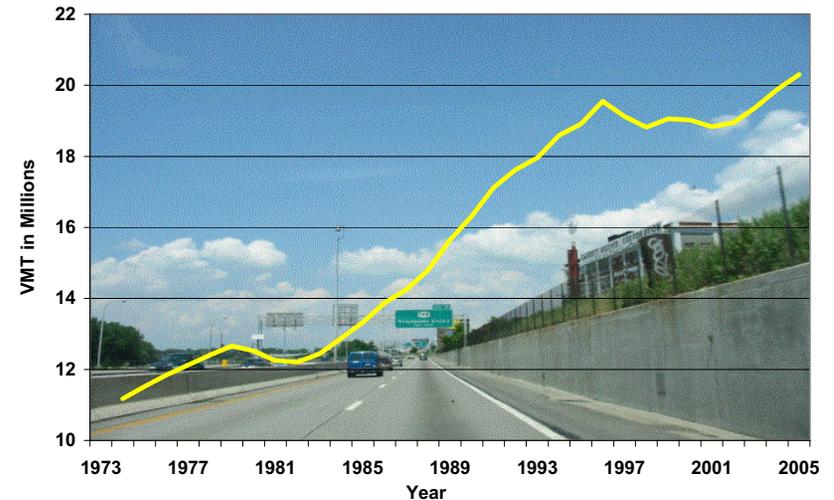
I-290 Looking Westbound at Main Street

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Vehicle Miles of Travel

Vehicle Miles of Travel (VMT)

The VMT in the Erie-Niagara region has been steadily increasing over the past several years. Between 2000 and 2005, VMT increased almost 8% from 18,858,394 to 20,274,561. The table below shows the VMT of centerline miles by functional classification of highways for Erie County, the City of Buffalo, Niagara County, and the City of Niagara Falls.



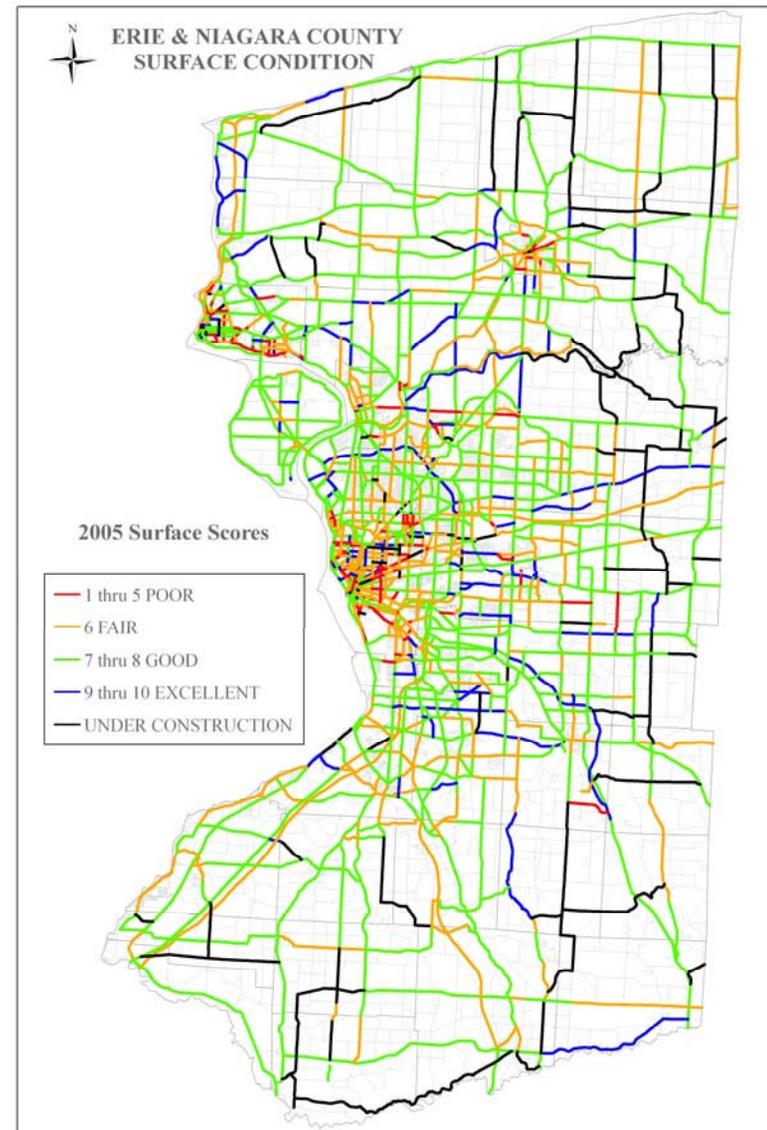
Functional Classification: VMT for 2005	Erie County		Buffalo		Niagara County		Niagara Falls	
	Miles	VMT	Miles	VMT	Miles	VMT	Miles	VMT
PRINCIPAL ARTERIALS								
Interstate	52.06	3,374,135	9.86	585,096	5.4	156,850	4.30	166,040
Expressway	39.44	1,214,191	11.77	682,939	17.54	84,250	9.54	117,612
Streets	190.26	3,740,772	41.41	584,927	59.27	807,791	19.38	231,474
MINOR ARTERIALS	272.60	2,688,796	99.84	787,006	122.29	823,444	17.10	105,159
URBAN COLLECTORS	299.82	1,030,307	39.90	148,028	88.90	252,796	13.84	41,004
RURAL SYSTEM	285.47	2,139,942			191.28	512,002		
TOTAL	1139.65	14,188,143	202.78	2,787,996	484.68	2,637,133	64.16	661,289
REGIONAL TOTAL	Miles	1,891.27						
	VMT	20,274,561						



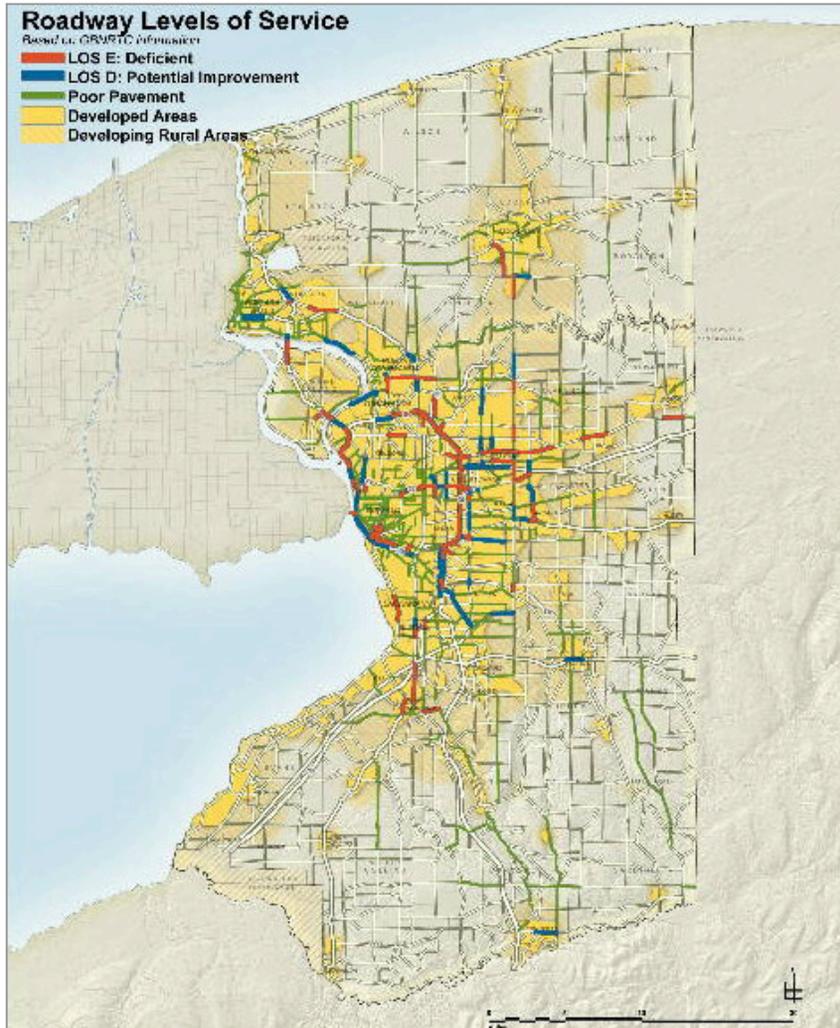
Highway Conditions Infrastructure Assessment

The GBNRTC conducts a biennial evaluation of roadway physical and operating characteristics. This is a comprehensive inventory of the entire Federal-eligible local highway system which, when combined with similar data from the NYS Department of Transportation's annual highway surface condition survey, provides a key measurement of the region's highway infrastructure and provides information critical to making sound and consistent investment planning decisions for that system in the two counties.

One key indicator related to highway infrastructure is the number of lane miles that are considered deficient. This definition relates to a surface score <6 and indicates conditions that need immediate corrective action to prevent further deterioration and the need for complete reconstruction at a significantly higher cost. The entire system showed a 4% decrease in deficient lane miles, which stands at 12% of the total system in 2005. The average score for the entire system was 6.71, compared to 6.44 in 2003.



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



Current Roadway Performance

The map to the left identifies the current highway capacity deficiencies in the region using the most recent traffic count data available. The most pressing problems remain the same as those identified in the 2025 Long-Range Transportation Plan for Erie and Niagara Counties and include capacity problems on the main line Thruway (I-90), the Youngmann Expressway (I-290), and Grand Island Bridges.



Grand Island Bridges

Bi-National Transportation

In the Erie-Niagara Counties region, the U.S. and Canada are separated by the Niagara River, which is crossed by four international bridges and three railroad bridges.

In Buffalo, the Peace Bridge provides access to and from Fort Erie, Ontario. This structure is under the control of the Buffalo and Fort Erie Public Bridge Authority. Farther north are three additional bridges, all under the control of the Niagara Falls Bridge Commission. These are the Rainbow, Whirlpool and Lewiston-Queenston Bridges. The first railroad crossing is just north of the Peace Bridge (Buffalo) and is called the International Railroad Bridge. The upper deck of the Whirlpool Bridge in Niagara Falls provides the second railroad crossing. The third railroad crossing of the Niagara River just south of the Whirlpool Bridge is known as the Michigan Central Bridge, which no longer carries train traffic. All of these bridges are served by a number of U.S. interstates and Canadian highways. In 2005, 14.6 million motor vehicles traveled between the U.S. and Canada through the Buffalo-Niagara Gateway.



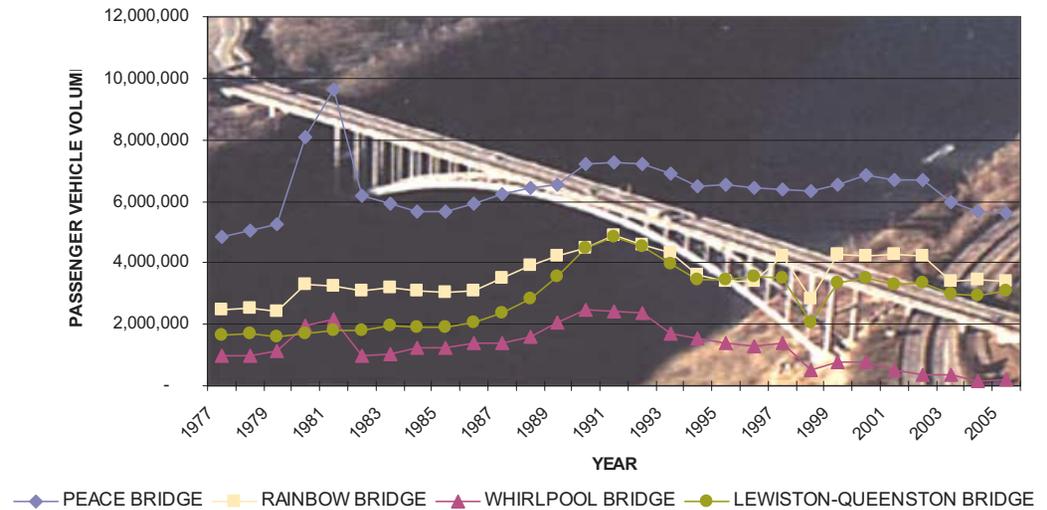
Peace Bridge to U.S.

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

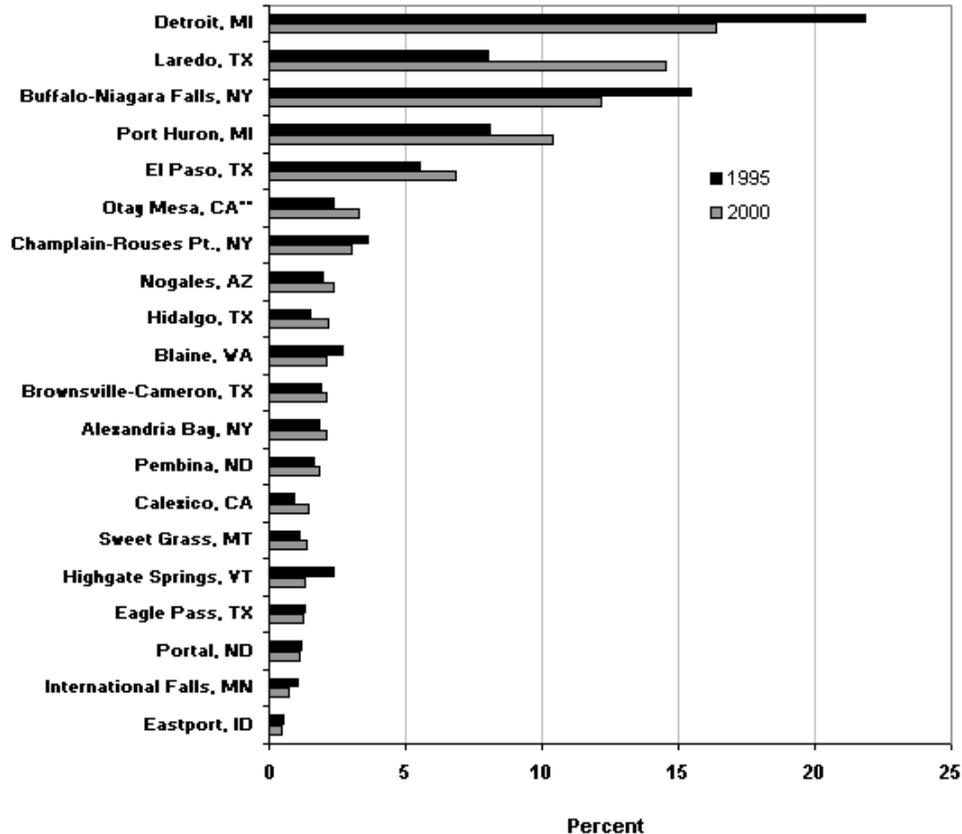
Of the four international crossings, as shown right, the Peace Bridge is the busiest with over 6.9 million crossings annually, or approximately close to 19,000 crossings each day. In 2005, 5.6 million autos and 1.3 million trucks crossed this facility.

The Lewiston-Queenston Bridge is second in overall traffic volume with more than 4 million vehicles using that bridge each year, or over 11,000 daily crossings. In 2005, approximately 3.1 million autos and 962,000 trucks crossed this facility. Also, in 2005 a major project investing \$45 million was completed to expand the bridge from four fixed lanes to five reversible lanes, allowing traffic to be configured according to whichever direction is carrying the heaviest volume.

HISTORICAL TOTAL PASSENGER VEHICLE CROSSINGS



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



Source: Bureau of Transportation Statistics

Commercial traffic is not permitted to use the Whirlpool and Rainbow Bridges, though annual automobile crossings at these bridges were 207,000 and 3.4 million respectively. Even with the additional traffic seen in recent years due to the opening of Casino Gaming in Niagara Falls, Ontario and Niagara Falls, New York, passenger vehicle traffic volumes through the Buffalo-Niagara Gateway have decreased over the past five years while commercial traffic has remained fairly steady.

In terms of value, trade crossing the U.S. and Canada border totals over \$400 billion per year, with the Buffalo-Niagara crossings totaling \$32 billion per year. According to the Bureau of Transportation Statistics, in 2000 10 ports accounted for about 73% of trade by land with Buffalo-Niagara Gateway at about 12% of that, ranking the gateway third to the Michigan-Ontario region and the Texas-Mexico region.



Rail Service

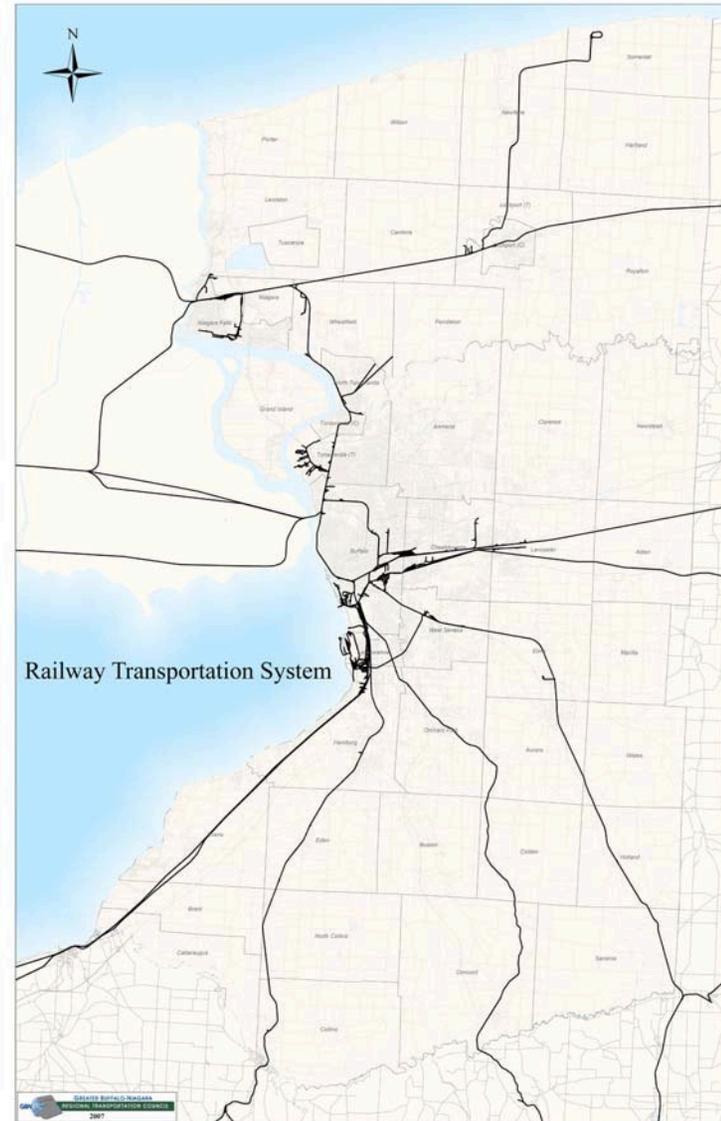
The region has four major rail freight carriers, CSX, Norfolk Southern, Canadian Pacific and Canadian National plus several local short line operators. Amtrak is the sole provider of passenger service in the area. There are three rail passenger stations in the area located in Buffalo, Depew and Niagara Falls. The map to the right shows the major railroad lines in the region.

Freight

The GBNRTC is currently conducting an Urban Area Freight Study. The focus of this study will be to look at current truck, rail, air and sea freight movement; identify freight bottlenecks; and suggest improvements that will benefit the economic development of the region. Freight movement will be projected in five-year increments, up to the year 2030. For each suggested improvement, a cost/benefit analysis will be completed to determine its economic impact on the region.

Intermodal Facilities

In this area intermodal facility locations include the Buffalo and Niagara Falls airports, Gateway Metroport and corporate ports, and rail yards. Discussions with users of these facilities will identify transportation infrastructure projects to improve system connections to and from these locations.



Water

The Niagara River, Lake Erie and Lake Ontario serve as the western boundary of New York State. The Gateway Metroport, or Port of Buffalo, provides an outlet to the Great Lakes System and Atlantic Ocean via the St. Lawrence Seaway.

The Erie Canal traverses the region and connects the Buffalo area with the Port of New York/New Jersey via the Hudson River. The Inner Harbor Project is underway to redevelop Buffalo's waterfront, with restoration of the original commercial slip along with other recreational and employment projects. The City of Lockport is also taking part in the rebirth of the Erie Canal by restoring the Flight of Five canal locks as a major tourist destination.



Lake Erie, Buffalo, NY

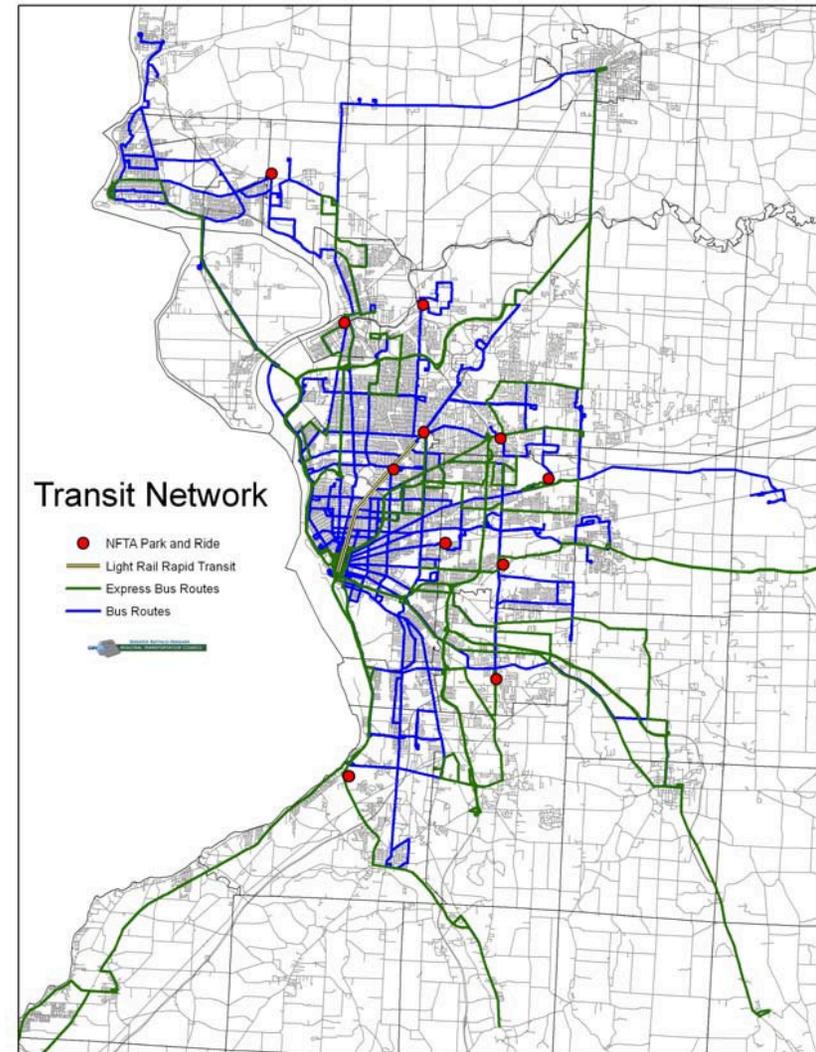


The Niagara River

Public Transportation

The Niagara Frontier Transportation Authority (NFTA) operates public transportation in the Erie and Niagara region. Serving a population of 1.2 million people, annual ridership in 2005 was over 24 million. NFTA provides a variety of transportation services to meet the growing demands of the region. Services offered by the NFTA include:

- **Fixed Route Service**
Bus fixed route service to the Erie and Niagara Counties region with a fleet of 327 buses operating on 71 routes.
- **Metrolink**
Fixed route scheduled service using community circular/access to jobs vans. This service, known as Metrolink, operates using 13 vans on 9 routes.
- **Seasonal/Tourist Service**
Seasonal/tourist-oriented service, using five replica trolley vehicles over a fixed loop route in Niagara Falls.
- **Light Rail**
Light rail system that services the Buffalo area over 6.4 miles between downtown Buffalo and the South Campus of the State University of New York at Buffalo. The light rail system includes a total of 14 stations, six at street-level and eight underground.
- **Paratransit**
Paratransit program for disabled persons using 39 vans.



- **Park and Ride and Transit Centers**
Park and Ride and transit centers serve as intermodal facilities allowing commuters to drive to a nearby-designated location and complete the remainder of their trip by bus, shuttle, or rail.
- **Non-Stop Shuttle Service to the BNIA**
Express non-stop shuttle service between the Buffalo Niagara International Airport and Buffalo's central business district, including the Metro Bus station downtown (Metropolitan Transportation Center).

Hybrid Buses

NFTA Metro has recently introduced a number of hybrid buses to its fleet. These hybrid buses are the same size and shape as its other 40-foot buses and carry 38-seated passengers, with additional room for passengers to stand if needed.

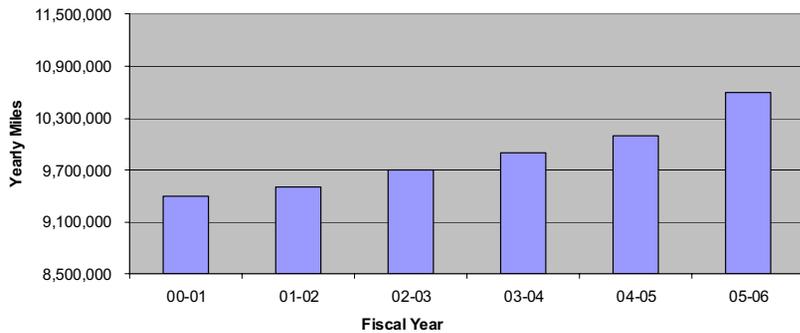
Even before hybrid Metro buses, traditional buses were one of the most economical and environmentally friendly modes of transportation available. For every mile traveled, public transportation uses about one half of the fuel consumed by automobiles, and about a third of that used by sport utility vehicles and light trucks. Metro estimates a 25% to 30% reduction in fuel based on the efficiencies of the hybrid drivetrain. Savings are also anticipated from decreased maintenance costs associated with brakes, engines and transmissions. According to the NFTA website, hybrid buses produce 90% less particulates, 90% less hydrocarbons, 90% less carbon monoxide, and 50% less nitrogen oxides.



Metro Hybrid Bus

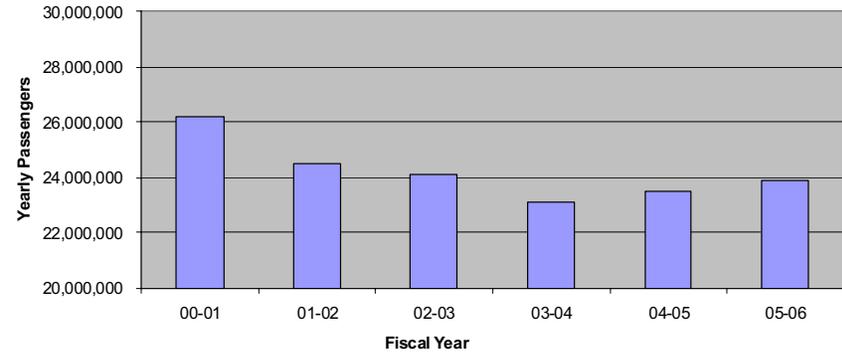
2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Total NFTA Transit Service Revenue Miles



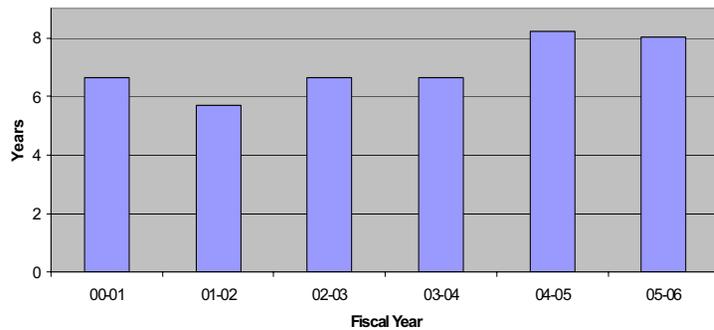
Total NFTA Transit Service Revenue Miles have increased almost 13% from 2000-01 FY reaching 10.6 million miles in 2005-06 FY.

Total NFTA Transit Service Ridership



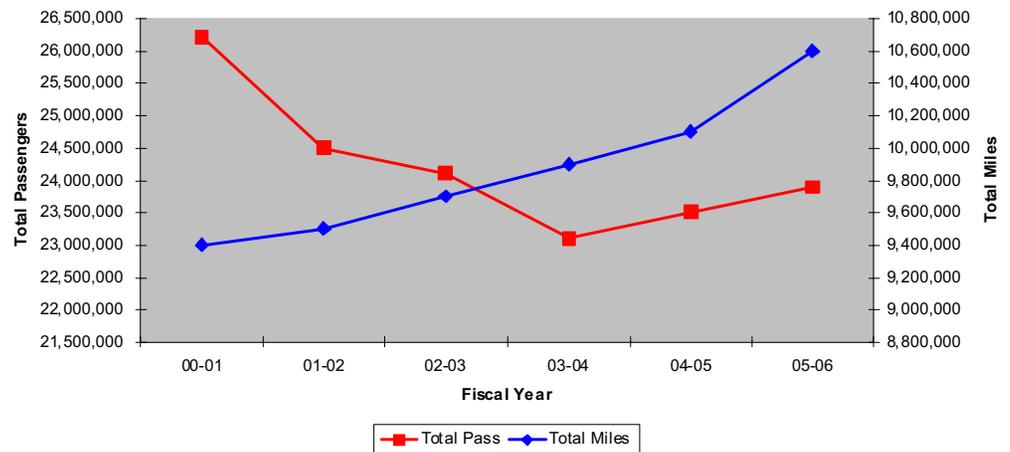
After a few years of decline, ridership has increased by 3.5% since 2003 reaching almost 24 million riders.

Average NFTA Transit Service Bus Fleet Age



The recent investment in Metro buses including hybrid buses has brought the average NFTA Transit Service Bus Fleet age to 8 years.

Total Passengers to Total Miles Traveled Yearly



In current years, the total number of passengers increased as the total number of miles traveled increased.



Air Transportation

Two major airports located in Buffalo and Niagara Falls serve the region.

Buffalo-Niagara International Airport (BNIA), located in Cheektowaga, offers commercial passenger service through eight major and nine regional/commuter airlines. In addition, general aviation services are provided at the airport. Passenger traffic at the airport totaled over 2.4 million enplanements in 2006, as shown in the chart to the right from the Bureau of Transportation Statistics.

In addition, the BNIA serves as a major distribution center for air cargo traffic through four major operators.

The Niagara Falls International Airport (NFIA) operates under a joint agreement with the military. The facility mainly handles international charter and cargo flights and recently began offering twice weekly direct passenger flights to Myrtle Beach, South Carolina. The primary-use runway is the longest in the area and the third longest public-use runway in New York State. The NFTA is moving forward with plans to construct a new terminal and develop an air cargo facility at the NFIA. A new \$27.5M NFIA passenger terminal will be completed in 2009.

In the Regional Airport System Plan (RASP) for Erie and Niagara Counties, commercial aviation needs are to be served by Buffalo Niagara International and Niagara Falls International Airports. In addition to these two public airports, the RASP includes additional general aviation airports that serve smaller general aviation aircraft. Some of these general aviation

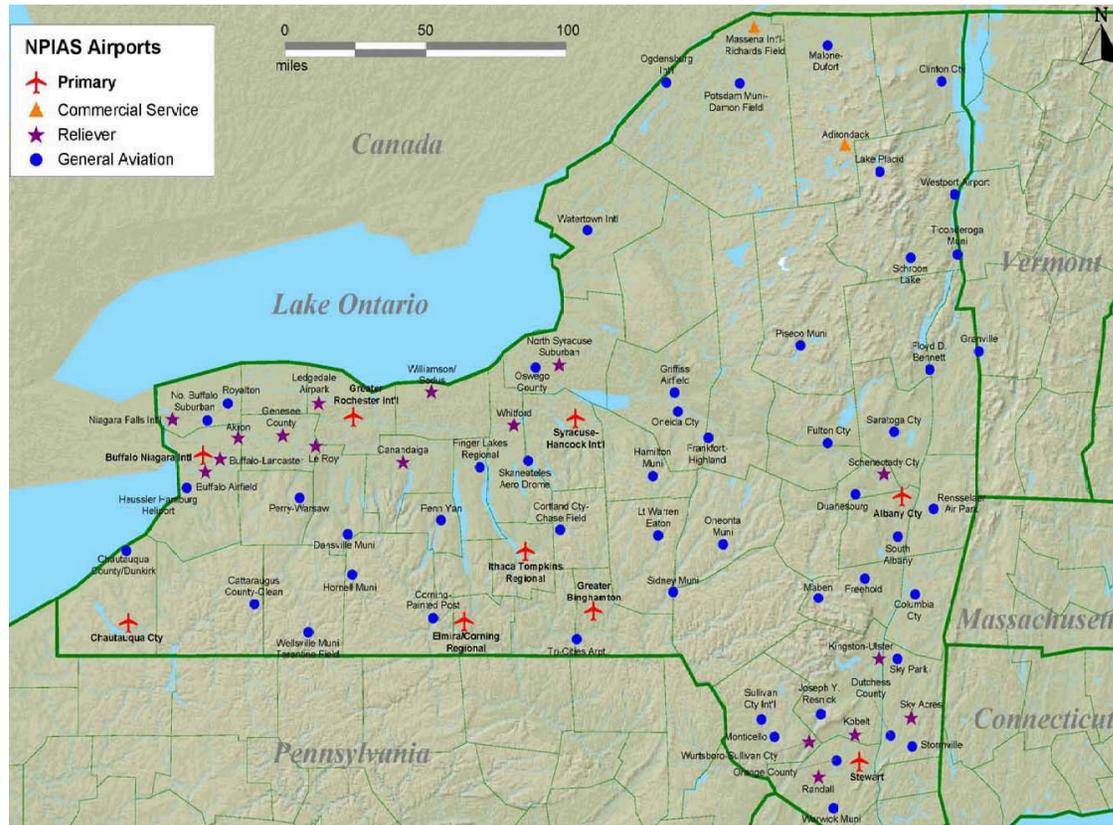
Summary Data (U.S. Flights Only)				
Passengers(000)	2005*	2006*	%Chg	Rank**
Arrival	2,332	2,466	5.75%	60
Departure	2,346	2,475	5.50%	60
Scheduled Flights				
Departures	41,659	39,010	-6.36%	57
Freight/Mail (000 lb.)				
Total	114,671	113,141	-1.33%	65
Carriers				
Scheduled	30	29	-3.33%	
* 12 months ending August of each year.				
** Among all U.S. airports, 12 months ending August 2006				



The Buffalo-Niagara International Airport



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



NPIAS Airports

airports have been designated by FAA as reliever airports, in recognition of their role as alternative landing sites for BNIA general aviation aircraft. By serving this role, these general aviation airports help to relieve congestion at BNIA. While all these airports are privately owned, FAA designates them as public use facilities. As shown in the map to the left and according to the National Plan of Integrated Airport Systems for 2005-2009, Erie and Niagara County airports designated by FAA as reliever airports to BNIA are as follows:

- Akron Airport - Newstead
- Buffalo Airfield - West Seneca
- Buffalo Lancaster Airport - Lancaster
- Niagara Falls International - Niagara Falls



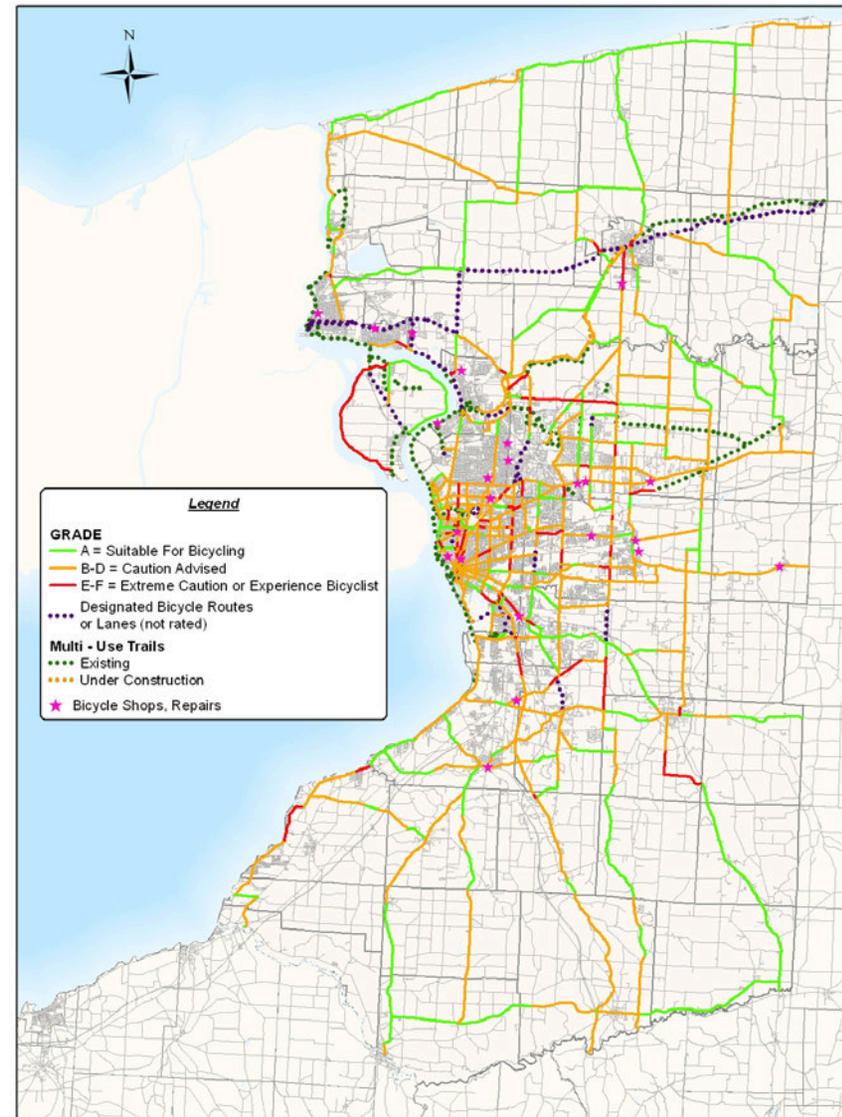
Bicycle and Pedestrian Facilities

The GBNRTC Niagara Frontier Bicycle Master Plan represents one component of a comprehensive long-range transportation planning strategy to improve regional mobility, safety, congestion, and air quality objectives. The Plan provides for a coordinated system that will link existing and proposed bicycle facilities. The GBNRTC Regional Pedestrian Master Plan represents another component of this strategy with respect to pedestrian traffic.

During the past decade, there has been an increased emphasis on integrating bicyclists and pedestrians into the overall transportation system. To achieve this goal the GBNRTC identified five (5) specific regional objectives in these Master Plans, outlined as follows:

1. Increase pedestrian mobility.
2. Improve safety and comfort of pedestrians.
3. Encourage pedestrian activity.
4. Provide pedestrian accessibility to all destinations.
5. Educate bicyclists, pedestrians and motorists.

Coordinated bicycle and pedestrian planning has paid off for the region. From 2001 to 2005 designated off-road bikeway miles have increased by 27%. During that same time frame designated on-road bikeway miles increased 9%. The bicycle level of service has also improved. The map on the right shows the bicycle level of service for roadways in our region in 2005. Roadways rated A or B have increased from 28% in 2001 to 42% in 2005.



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

The GBNRTC maintains a Bicycle and Pedestrian Subcommittee to work on issues related to bicycle and pedestrian transportation facilities. The group is open to the public and meeting notices are sent out to encourage users of bicycle/pedestrian transportation facilities to participate in GBNRTC planning activities.



Vision, Goals & Objectives

Creating a vision for the region and developing appropriate goals and objectives to pursue that vision, provides a framework for the long-range transportation plan by which projects and programs are developed. As part of plan development, these goals and objectives were reexamined to determine their validity and relevance to the issues facing the region. The Vision for the region and subsequent goals and objectives reflect both federal priorities outlined in the SAFETEA-LU planning factors; and address the issues specific to the Erie and Niagara region.

Regional Vision

- *Create an economically healthy region*
 - *Create an environmental healthy region*
 - *Reverse current economic, land use, social, and demographic trends*
 - *Promote growth in areas with existing infrastructure*
 - *Promote equitable regional service for all residents*
-

While transportation is only one component of the overall initiative needed to effectively plan for the region's future, the GBNRTC will provide a transportation system which will assist other comprehensive plans in support of this Vision by meeting the Principles of:

- Providing a safe, efficient, balanced, and environmentally sound transportation system for the movement of people, goods, and services that maximizes overall mobility with fiscal responsibility;
- Joining all modes of travel into a fully interconnected network;
- Serving the entire population including the transportation disadvantaged, elderly, and citizens with disabilities;
- Providing transportation investments to complement economic development activities and enhance regional competitiveness;
- Providing an orderly, efficient, and balanced regional transportation system that maximizes overall mobility with fiscal responsibility;
- Focusing major transportation investments into areas that currently possess other supportive infrastructure;
- Encouraging multi-modal options in conjunction with land use development patterns, which will support these options.



Goals & Objectives

Below are the goals and objectives that will guide the Plan towards the Vision and supporting Principles. Goals chart a direction for improving the overall regional transportation system, currently and into the future. Objectives are the strategic positions and/or methods needed to achieve the goal.

Preservation

Goal: *The Buffalo-Niagara region will focus on transportation projects that preserve and enhance existing transportation facilities.*

Objectives:

- Achieve and maintain adequate pavement conditions on roadway facilities based on functional class.
- Achieve and maintain adequate bridge conditions based on functional class.
- Achieve and maintain adequate transit infrastructure and maintain the system vehicle fleet on a responsible replacement cycle.

Mobility & Accessibility

Goal: *The Buffalo-Niagara region's transportation system will improve user's mobility and accessibility.*

Objectives:

- Create a more balanced transportation system that enhances modal choices.



Roadway Reconstruction

- Enhance mobility for all members of the community including the transportation disadvantaged.
- Provide an integrated multi-modal transportation system which offers: the efficient and safe mobility of people, seamless and overlapping networks for goods movement, and a variety of accessible mode choices to regional activity sites.
- Provide a regional system that will minimize delay times by implementing effective congestion relief techniques such as: transportation system management (TSM), transportation demand management (TDM), intelligent transportation systems (ITS), and selected linear capacity

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

expansion projects emphasizing areas with existing infrastructure.

- Emphasize the development of effective alternatives to single occupant vehicle (SOV) travel.
- Enhance highway safety techniques, incident management plans, and access management techniques.
- Promote increased security of transportation facilities and activities to enhance the region's ability to protect and respond to potential threats and hazards.

Economic Development

Goal: *The Buffalo-Niagara region's transportation system will improve the region's economic competitiveness.*

Objectives:

- Improve the accessibility of the transit-dependent and low-income individuals to employment opportunities.
- Maintain the existing transportation system to support current and future development through the reuse of existing facilities and sites.
- Provide transportation services to promote higher density urban redevelopment and infill development projects in, and adjacent to, existing neighborhoods.
- Encourage the concentration of employment and activity sites within transit corridors to maximize transportation efficiency.

- Promote the efficiency and reliability of freight movement (truck and rail) within and through the region; and improve multi-modal facilities and system connectivity to capitalize on growing international and trans-border trade opportunities.
- Correlate transportation investments to employment growth opportunities.
- Focus transportation system improvements to support and promote tourism.



Variable Message Sign

The Environment

Goal: *The Buffalo-Niagara region will plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources and communities.*

Objectives:

- Enhance the attractiveness, convenience, safety and availability of non-motorized transportation systems.
- Mitigate adverse environmental impacts of transportation projects.
- Protect, enhance, and restore the environment.
- Promote ways to reduce energy consumption.
- Provide transportation services to those areas with existing infrastructure thereby limiting sprawl.

Land Use

Goal: *The Buffalo-Niagara region will achieve better inter-jurisdictional coordination of transportation and land use planning.*

Objectives:

- Promote consistency between transportation improvements and state and local planned growth and economic development patterns.
- Coordinate the regional transportation plan with municipal plans. Ensure that all municipalities in the

region have an adopted master plan (update) or set of planning tools for monitoring or directing physical and economic development in a regionally consistent manner.

- Encourage mixed-use development with multi-modal transportation connections.
- Encourage new development to integrate with existing land use and transportation patterns.



“Shared Roadway” Sign in Lewiston, NY

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

- Support legislative efforts for “smart growth” and “quality communities” initiatives that promote coordinated planning.
- Integrate and strengthen transportation considerations with land use planning by incorporating a land use model within the transportation planning process.
- Establish communication and an informational process with municipalities to emphasize the land use-transportation connection.



Aerial View, Main Street, Williamsville, NY

Policy Guidance Principles

The 2030 Long-Range Transportation Plan adopted a companion set of Policy Guidance Principles to guide the planning for the transportation system throughout the duration of the Plan. These planning and investment principles will guide decision-making by GBNRTC as elements of the Plan are advanced through the Transportation Improvement Program (TIP) capital programming process. As statements of Policy, these Principles provided the framework for transportation investment and funding decisions, projects selection criteria, and corridor-level planning. Adoption of these Policy Guidance Principles will have significant influence on how regional transportation planning will be approached and how and where transportation programming investments will be made in the future.

Principles

Goal: Preservation of Existing Transportation Infrastructure

Policy Guidance Principles:

- **This Long-Range Transportation Plan allocates approximately 70 percent of the total anticipated funds for infrastructure maintenance over the twenty-year plus horizon of this Plan. This level of allocation shall be maintained for future year program funding.**

Consistent with the emphasis placed on this issue as identified through the public outreach process; as well as the emphasis on preservation of the existing transportation system as stated by the SAFETEA-LU planning factors, the priority for programming future improvements will focus on preserving and maintaining all modes of the existing transportation system.

- **As part of future investment decisions, the GBNRTC will adopt a risk assessment policy requirement for project development and implementation of all regional transportation improvements.**

Defining the concept of risk assessment by example, where facilities are traditionally designed to accommodate projected demand at acceptable levels-of-service and accommodate traffic projections throughout the physical design life of the facility, a risk assessment approach will examine the costs and benefits of alternative designs and make capacity treatment an explicit choice. A risk assessment approach to a bridge project will ask questions like: Do 20-plus year traffic projections justify widening the bridge now? What is the projected congestion risk of a replacement in-kind? What would be the additional expense involved in providing the incremental capacity at a later date? The revised design approach reaches a determination of facility design through a risk assessment (tradeoff analysis) that focuses on the opportunity cost of selecting alternative designs.



- **Funding for regional transportation improvements will be based on the function and condition of facilities – not ownership.**

This principle recognizes that all principal arterials and other major transportation facilities in the region play a part in the region's transportation system and are vital to the economic life of the region regardless of ownership; therefore all need equal access to available transportation funding.

Goal: Improve Regional Mobility and Accessibility

Policy Guidance Principles:

- **Establish roadway level-of-service (LOS), congestion/capacity standards that recognize that roadways of various types in different areas provide different functions and serve different volumes of traffic and therefore require different minimum operating LOS standards. These LOS standards shall be established, consistent with appropriate design standards and GBNRTC's Congestion Management Process (CMP), and adopted by the GBNRTC prior to advancement of any capacity expansion project identified by this Plan.**

This Principle recognizes that Interstate/freeway facilities perform a mobility function as opposed to arterial facilities that serve more of an access function. Standards will be established that provide different qualities of level of service

that would be acceptable for different highways and area types. Specifically, roads in rural areas would be expected to operate at better levels of service than in the heart of the urban area and freeway facilities would be expected to operate at better levels of service than arterial type facilities. Therefore roadways serving a higher travel function should be subject to a higher quality LOS standard, reflecting the mobility importance of those roadways. Roadways and corridors constrained from capacity expansion due to restrictions/constraints/barriers such as land use development along the roadway and/or other physical, environmental, historical, archaeological, aesthetic or social impact consideration or policy constraints, will be addressed through ITS, TSM, TDM, multi-modal and other non-expansion actions to maintain facilities at an acceptable LOS.

- **Effective cost efficient operational actions are preferable to physical highway capacity expansion actions, therefore operational actions shall be maximized before capacity expansion alternatives are advanced.**
- **Emphasis will be given to those facilities that serve important national and regional transportation functions.**

Whereas the GBNRTC metropolitan planning area has been identified as a non-attainment Transportation Management Area (TMA) by federal regulations, and is subject to the Congestion Management Plan (CMP) planning requirements, the Guiding Principles and Recommendations shall be fully



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

integrated into the implementation of the GBNRTC 2030 Long-Range Transportation Plan.

- **Identify a dedicated source of funding for operating costs prior to advancing high quality transit projects such as extensions to the rail line.**

While expanding the regional transit system and providing transit service options to the traveling public is desirable and would increase accessibility, it is recognized that fare box revenues do not nearly cover the *cost of service operations*. While federal and state funding sources *may* become available for capital costs to implement new transit facilities and service options, it is recognized that federal operating funds are currently *not* available and state sources may be extremely limited. Therefore, new operational funding sources will need to be established prior to initiating new capital-intensive transit projects.

Goal: Improve the region's economic competitiveness.

Policy Guidance Principles:

- **Infill development will be a priority in economic development transportation project selection.**

A higher priority weighting would be placed on transportation projects that support improved access to developable brownfield and other vacant sites in the urban core areas, over support for new development initiatives in non-developed greenfield locations. This policy principle is intended to

influence and minimize the negative impacts created by urban sprawl. Transportation investments will be utilized to support urban reinvestment and infill development.

- **Priority development areas in the region shall be the regional airports and intermodal activity centers.**

Improved transportation access projects supporting these economic development centers will be given priority in transportation improvement program development.

Goal: Enhance and protect the region's natural environmental quality, cultural and historic resources, and communities

Policy Guidance Principles:

- **Multi-modal solutions will be considered in all alternatives, to correct deficiencies of a roadway facility or corridor.**

Public transit, sidewalks, and bicycle facilities shall be given routine consideration as part of transportation infrastructure improvements.

- **Advancing the provisions and recommendations of the GBNRTC adopted Bicycle Master Plan and Regional Pedestrian Master Plan for Erie and Niagara Counties shall have a high priority in transportation improvement project development.**



- **The needs of the older driver population of the region will be considered as transportation facilities are maintained and rehabilitated.**
- **Not only mitigate adverse environmental impacts but also protect, enhance, and restore the environment.**

Goal: Improve Inter-Jurisdictional Coordination of Transportation and Land Use Planning

Policy Guidance Principles:

- **Need to identify and adopt policies to support smart growth and re-investment in existing developed areas with infrastructure in place, and identify disincentives for developing in areas with insufficient infrastructure.**

Land use planning and management is critical to the maintenance of a good regional transportation system. The land available along many arterials in municipalities in the region can support an amount of development that far exceeds the capacity of these roadways to handle generated traffic. GBNRTC recognizes, through the “home rule” legislation existing in New York State, the rights of municipalities to make land use decisions. Municipal decision makers should be encouraged to consider the impacts and links of local land use decisions on the regional transportation system. GBNRTC will identify and adopt pro-active initiatives and incentives linking transportation investments to land use planning and assist municipalities in identifying impacts on the regional transportation system resulting from local land use decisions.

- **Transportation improvements to increase roadway capacity and address capacity along roadways and corridors impacted by increased traffic generated by local land use decisions will not be programmed unless municipalities adopt access management and corridor management plans to minimize traffic congestion impacts on roadways.**

Land use plans should consider coordination with transportation plans and include corridor protection options in their development.

Impact of Other Plans and Initiatives

Several relevant plans and initiatives have been completed statewide and in the Buffalo-Niagara region that have significant impacts on transportation planning and programming. These plans have been developed in concert with GBNRTC 2030 Long-Range Plan planning activities and the intent is to provide mutually reinforcing strategies for successful implementation of the regional agenda. A brief description of the relevant portions of these plans follows.

Strategies for a New Age: New York State's Transportation Master Plan for 2030 is the State's comprehensive statewide transportation master plan and serves as the Federally recognized, long-range transportation plan for the State of New York. Some important concepts in the Plan include:

- *New York State's Vision for Transportation*
The State's future vision for the transportation system is a seamless system in which travelers can conveniently shift between modes and operators to complete trips that meet their individual and business needs.
- *Planning for New York's Transportation Future*
The transportation planning process includes NYSDOT and the Metropolitan Planning Organizations (MPOs),

and identifies their primary transportation planning products. The State's Plan for 2030 foresees a far more collaborative approach to planning and investment decision-making among local governments, MPOs, transportation operators, and the State.

- *Demographic, Economic, Travel, and Energy Trends and Future Transportation Implications*
Key trends include: modest population increases, continued population growth in the downstate region, a shift in new job locations from cities to established and newer suburbs, and significant increases in freight goods movement.
- *Corridor Based Transportation Management*
Future transportation planning and investments are focused on the State's most critical multimodal corridors. Designation of these transportation corridors as well as future planning and investment decisions will be accomplished in collaboration with local and regional transportation partners and stakeholders.
- *Transportation Financing: 2005-2030*
Highlights the need to establish substantial, sustainable, and predictable funding dedicated to transportation investments. The Plan for 2030 does not presume a



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

specific level of financial support for the period 2005-2030, but instead identifies the broad investment priorities upon which progress within the State's Priority Result Areas (PRAs) depends. In order to compete in the global economy, Transportation Development Partnerships offer an innovative and promising financing mechanism.

Strategies for a New Age: New York State's Transportation Master Plan for 2030 will guide the State's coordination of transportation plans, programs, and planning activities with related planning activities being undertaken within and outside of the 13 designated metropolitan planning areas within New York. The Plan is centered on transportation customers' expectations of the State's transportation system. These expectations are summarized in five distinct but interrelated themes: Mobility and Reliability; Safety; Security; Environmental Sustainability; and Economic Competitiveness. Performance will be measured with respect to each of the five themes in order to effectively manage performance of the statewide transportation system. The five themes, the "Priority Results Areas", are consistent with federal areas of emphasis in SAFETEA-LU and the GBNRTC LRP Planning Objectives.

These areas include:

Mobility and Reliability: The State and its many diverse transportation providers will integrate transportation systems effectively and manage system congestion to adequately maintain predictable, efficient, and safe travel. The focus is on

managing transportation assets with the goal of achieving a state of good repair for all modes. Improvements will emphasize operational and demand management strategies, wherever they are appropriate. System capacity expansions will be limited, carefully targeted and will address both freight and passenger needs.

Safety: One of the primary goals of the statewide transportation master plan is to provide safe travel and reduce system safety deficiencies across all modes of travel for people and goods movement. An emphasis is on improving vehicle operator performance utilizing enforcement and educational tools.

Security: The changes that have occurred in the national dialogue regarding vulnerabilities to transportation infrastructure, users, customers, cargo, and transportation related employees includes planning for the prevention and protection of the transportation system, and the need for emergency plans to mitigate the effects and speed recovery from natural disasters or malicious activities. A key factor will be to attain improved security without unreasonably sacrificing mobility and reliability while being aware of the public's safety.

Environmental Sustainability: Environmental and energy use considerations will be fully integrated with sound transportation planning and investment strategies, in alignment with the goals of the State Energy Plan and Federal clean air requirements. One focus of the Plan will be to implement an enhanced environmental program by going



beyond mitigation and supporting integration of environmental betterments concurrent with transportation improvements.

Economic Competitiveness: Transportation investments can both strengthen the State's competitive economic position and support a sustainable economy and desired quality of life for citizens and communities. One targeted strategy will be to more closely integrate transportation planning with local land use planning.

NYS DOT/MPO Coordination of Transportation Planning in New York State

In New York State, NYS DOT has umbrella responsibility for coordinated, balanced statewide transportation planning that is carried out in collaboration with the State's thirteen MPOs in urban areas, and the many various local officials with responsibility for transportation in rural or non-urbanized areas. In regard to the State's long-range transportation plan, the Federal planning process requires that it be developed in cooperation with the State's MPOs and in consultation with local officials in non-metropolitan areas. MPOs are charged with making decisions on the specific transportation plans and programs that would best serve their metropolitan area and are comprised of local elected officials or their representatives, representatives from transportation agencies including providers of transit, and appropriate state officials including the State Department of Transportation.

The MPOs' and State's long-range plans are each an important part of the overall Federal planning process and as such they each are developed using the same standards and

addressing the same planning factors. The future vitality of the State's economy and overall quality of life depend upon the ability of major corridors to provide the essential connections to local, regional, national, and international economic centers and gateways, as well as within the State itself.

New York and Ontario: BiNational Transportation Strategy

Canada and the United States are the largest trading partners in the world. Their economies are highly integrated with enormous dependence on cross-border trade. A modern border that provides for safe and efficient movement of people and goods is therefore critical to both nations to maintain continued growth in the economy and trade. The increased security demands since September 11, 2001 have resulted in the need to focus even more closely on the operations of our border crossings and approaches, so that efficiency improvements are made in concert with the implementation of enhanced safety and security measures.

The four highway bridges and two active railway bridges across the Niagara River also make the Niagara Frontier the second busiest commercial border crossing on the entire Canada-U.S. border, carrying about 19% of all Canada-U.S. trade. Consequently, the development and continued management of safe and efficient border crossings and approaches at the Niagara Frontier is of vital importance to the region, the province/state and the two nations.





Peace Bridge

Recognizing the close economic ties between the two countries, the Province of Ontario and the State of New York organized a summit conference in June 2001 involving the Premier of Ontario and the Governor of New York. Participants at the Summit acknowledged the critical importance of the Niagara Frontier. This led to the creation of a Bi-National Working Group, comprised of representatives from transportation providers, state/provincial and municipal officials, to oversee and set direction for the development of a bi-national transportation strategy for the Niagara Frontier.

At the working level, a steering committee with representation from NYS Department of Transportation, Ontario Ministry of Transportation (MTO), both federal transportation agencies, local planning bodies and bridge authorities was formed to coordinate the development of the strategy. While originally initiated in an economic context, this transportation strategy has evolved following the events of September 11, 2001 to consider the new complexities of cross-border travel, as understandably, increased security at the border has become the new reality. The Working Group's original mandate with emphasis on economic opportunities and "invisible" borders has been expanded to address safety and security issues while maintaining border-crossing efficiency.

The Vision

People and goods move safely, securely and efficiently within the Bi-National Niagara Region via a transportation system that is unified, provides multi-modal alternatives, is environmentally sensitive and supports economic growth.

This vision is supported by specific goals:

- Commuters and other travelers should enjoy safe, predictable and efficient trips across the Niagara region;
- The national and regional economies will expand and prosper through the rapid, predictable and safe movement of goods and people through the region;
- Ensure the secure flow of people and the security of infrastructure;
- The importance of the environment and the well being of border communities is recognized.

A Strategy for the Niagara Frontier

A total of over 40 separate initiatives or projects relevant to the frontier transportation network were identified. These initiatives can be considered as components of six Strategy Elements, which will:

1. Foster improved coordination between appropriate agencies and stakeholders.
2. Ensure adequacy of approach corridor capacity, connectivity to economic centers and network flexibility.
3. Improve enforcement, processing and plaza infrastructure to enhance efficiency, security and safety.
4. Provide sufficient river crossing capacity and network flexibility to meet demands.
5. Encourage shifts of transportation modes to improve the efficiency of the entire transportation system.
6. Realize unique opportunities for overall border network management including innovative ITS strategies.

The overall vision and sub-tier strategy elements are consistent with the approach identified in GBNRTC's 2030 Long-Range Transportation Plan. Projects included focused on existing LRP projects. A longer term coordinating mechanism has been put into place to guide implementation of the BiNational strategy and ensure continuing cooperation and consultation at all levels of government and with identified stakeholders.

Erie-Niagara Regional Framework Plan

Given the lack of a regional development plan and regional planning commission in the Buffalo-Niagara region, serious coordination of transportation and land use/development

planning has been hampered. A recent initiative has been completed with GBNRTC participation to provide creative and effective ways to identify a plan and work together for plan implementation. In this initiative, Erie and Niagara Counties have partnered to develop the **Framework for Regional Growth** to establish basic policies and principles to guide the future growth and development of the Region. Specifically, the Framework provides:

- A vision for how the region should grow and redevelop over the next 15 years;
- Direction regarding growth and redevelopment matters to county decision-makers and other regional organizations linked to the two counties via funding, membership, or other relationships;
- Information on the ways local governments, private sector, and non-profit actions and initiatives can reinforce the overall regional vision; and
- Mechanisms to insure that the goals, concepts, and recommendations of the Framework for Regional Growth are implemented in an efficient and accountable manner.

The absence of a region-wide vision for conservation, development, and public investment has become an increasingly central concern of the region's leaders. Important decisions regarding the location and pace of development, investments in economic development, the extension of sewer and water service, improvements to parks and major public facilities, and investments in transportation infrastructure have been made without a clear sense of how



individual actions influence the region's livability and economic vitality.

A deeper understanding has been achieved regarding the impacts of previous development patterns on the region's transportation system. Awareness of critical issues affecting transportation expenditures is evident in the discussion of sprawl and travel behavior.

The discussion is highlighted below:

Fewer People, More Miles of Travel

The effects of declining densities in the developed area, low density, single use development in rural areas, and fragmentation of employment centers have increased the region's reliance on motor vehicles, placing ever greater stress on the existing road network. The emerging pattern is especially difficult to serve with public transit, thus decreasing mobility for the transportation disadvantaged and limiting the ability of residents to access jobs and services in suburban locations.

Increases in VMT also result in greater stress on the environment. Pollution from motor vehicles contributes to declines in air quality, paved surfaces increase urban runoff and threaten water quality, and transportation infrastructure can fragment agricultural and forested lands and wildlife habitat. In addition, higher levels of congestion on the region's arterial roads limit both the attractiveness of traditional centers and the revitalization potential of older strip commercial areas.

Regional settlement patterns strongly influence travel behavior. The density, distribution, and interconnectedness of land uses affect a host of individual travel decisions, from mode of travel to number and length of individual trips. These decisions, in turn, affect the region's livability, environmental quality, and economy.

As reported in recent research on environmental quality in Western New York, the number of miles traveled by area residents has increased substantially in the past 10-15 years. As reported in the Institute for Local Governance and Regional Growth's State of the Region report, the average number of daily vehicle miles traveled (VMT) by each person in Western New York increased 50% between 1984 and 1999, from 10 VMT per capita to 15, with Erie and Niagara Counties registering sharp increases between 1997 and 1999. Framework Principles have been developed consistent with the objectives of GBNRTC's 2030 Long-Range Transportation Plan. These include:

Improved Access & Mobility

The region's transportation infrastructure should be designed to promote reinvestment in developed areas, improve interstate and cross-border connectivity, strengthen alternative modes of transportation, and enhance the livability of neighborhoods. The counties favor development that supports transit use, walking, ridesharing, and more efficient commuting patterns.

Efficient Systems & Services

The location, quality and capacity of the region's public infrastructure and facilities have a powerful influence on the

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

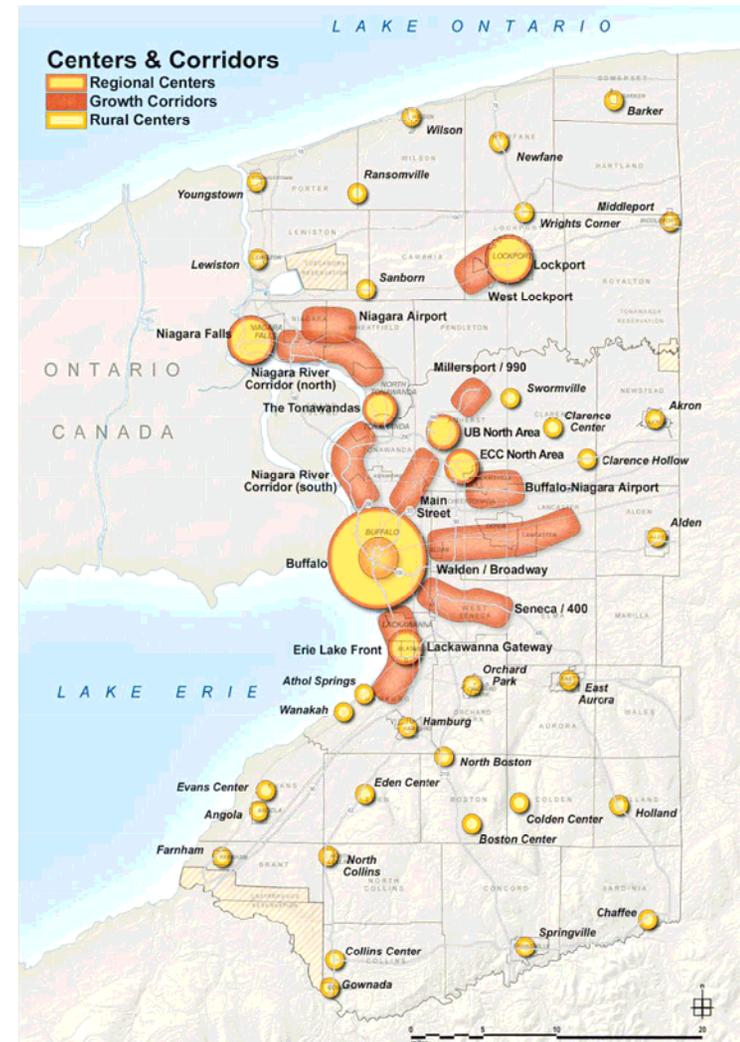
pattern and pace of development. Erie and Niagara Counties support public investment to maximize the use of existing infrastructure and facilities, improve the competitive position of underutilized lands and buildings, promote the reuse of brownfield and grayfield sites, and encourage the preservation and adaptive reuse of historic sites and buildings.

Effective Regional Stewardship

Erie and Niagara Counties recognize as a liability the absence of a forum for addressing the pace and quality of regional development, the fiscal health of county government, the efficiency and effectiveness of infrastructure investment and service delivery, and the conservation of sensitive resources. County and local governments; federal, state, and regional agencies and authorities; property owners and developers; interest groups; and residents are encouraged to work together to support actions consistent with the Framework.

Conserved Natural & Cultural Assets

The region's unique natural, historic, and cultural heritage represents an important though under-appreciated asset. Erie and Niagara Counties support efforts to preserve historic sites and landscapes, conserve and improve access (as appropriate) to natural systems and resources, and interpret history, and celebrate regional culture. The counties encourage the conservation and protection of the region's most sensitive natural systems—the lakefronts and escarpments; rivers, creeks, and streams; wetlands and floodways; and forested lands are recognized as regionally significant resources worthy of protection and conservation.



Center & Corridors: Framework for Regional Growth

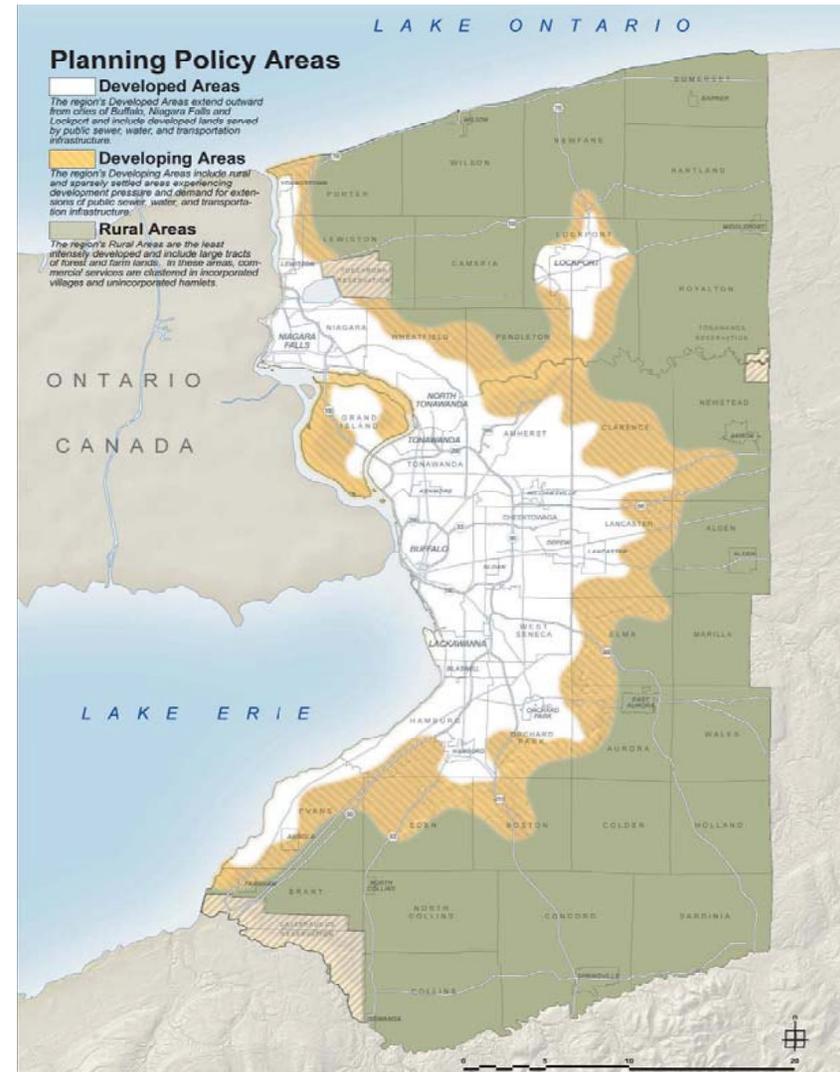


Planning Policy Areas

Developed, Developing & Rural (see map to right) are consistent with the GBNRTC MPO approach to encouraging development in existing serviced areas. The population distributions and projections included in the Framework Plan were prepared by GBNRTC and are the Corridors that will help guide transportation investment policies. Similarly, the conservation overlays are also used in the LRP process and the consultation process.

Alternative Futures

The growth targets were based on an assessment of three alternative concepts for the regional distribution of households—a trend concept, a strategic investment concept, and a reinvestment concept. The three alternative concepts were prepared to reflect different assumptions regarding the distribution and density of development in the planning policy areas and explore differences in the region’s potential urbanized footprint and the costs of infrastructure. As a basis for the concepts, GBNRTC’s forecasts of population and households were used. These forecasts, developed and refined in collaboration with county and local officials, have served as the foundation for a range of local and regional planning studies, including the region’s 2025 Long Range Transportation Plan and many local government comprehensive plans. Each concept was based on a different spatial distribution of the same number of new households. The trend concept was based on an assumption that the distribution will follow the pattern experienced between 1980 and 2000. The strategic investment concept is based on the average distribution under the trend and reinvestment concept. The reinvestment concept



Planning Policy Areas: Framework for Regional Growth

generally follows the distribution pattern employed by GBNRTC in its travel demand modeling work.

Developed Area Policies & Strategies

These policies are designed to spark reinvestment, attract new households and businesses, and improve the livability and economic vitality of the region's existing communities. These policies are consistent with GBNRTC's Long-Range Transportation Plan and are intended to support a) the conservation and stabilization of existing neighborhoods; b) new compact, pedestrian-oriented, mixed use development on vacant and underutilized sites; and c) higher density, employment intensive, mixed use development in Regional Centers and Growth Corridors.

Mobility & Accessibility Strategies

These strategies support GBNRTC's "maintenance first" policies, focusing on the preservation, repair, and restoration of existing infrastructure to provide safe and efficient transport and continued economic development; and do not support major capacity expansions nor the construction of new highway facilities on new right-of-way, unless such projects are identified in GBNRTC's Long Range Plan.

The strategies support efforts to:

- a) Plan and zone for employment-intensive commercial and industrial development on sites with ready access to the region's highway and rail networks,

- b) Recognize existing and planned transit service as catalysts for higher density development and reinvestment in regional centers and growth corridors; and
- c) Improve access to, between, and within regional centers and growth corridors.

To improve local accessibility:

- a) Encourage localities to develop networks of interconnected local streets, sidewalks, and pedestrian/bicycle trails;
- b) Ensure pedestrian facilities and aesthetic enhancements are considered as part of all transportation improvement projects; and
- c) Continue to work with the GBNRTC, NFTA, and localities to promote public transit use, walking, and biking as alternatives to automobile use.
- d) Support efforts to improve the efficiency and reliability of truck and rail freight movements within and through the region and improve multi-modal facilities and system connectivity.
- e) Review criteria for the approval of curb cuts on county roads and revise if necessary to encourage effective access management and parcel-to-parcel connectivity.
- f) Employ context-sensitive design principles for the reconstruction and rehabilitation of county roadways.

GBNRTC Reinvestment Policy

GBNRTC's current policies and practices favoring revitalization, repair, and improvement of existing infrastructure over the construction of new facilities are among the most influential regional initiatives consistent with Framework principles and



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

region. The corridor has taken on significantly increased importance since the initiation of the North America Free Trade Act (NAFTA). Through this trade agreement, economic activity and trade between the US and Canada has increased and is projected to increase substantially. The region is a central component of the greater Golden Horseshoe, encompassing the metropolitan Toronto area through upstate New York, which combined is the third largest population region in North America. The growth of NAFTA trade indicates that north-south corridors will need to be expanded

to carry increased traffic, and border-crossing facilities will need to be improved to handle the increased demands that will be placed on these facilities. The Niagara Corridor concept is illustrated graphically on the previous page. Operational elements to improve overall corridor performance are identified as well as infrastructure needing significant capital investment. Segments are also identified locally in the context of both Trade and Commuter Corridor programs in the Statewide Master Plan.



Planning Assumptions

In order to plan for future transportation needs, the GBNRTC must first consider various assumptions about our region's future. Assumptions about where people will live and work; how goods will be transported; what the fuel supply will be and how much it will cost; and changes to public policy, to name a few. The *Colloquy On the Coming Transformation of Travel* provides a wealth of information gathered from discussions among experts from around the world on the future of travel. The following assumptions are excerpts from a companion product to the Colloquy entitled *Statements of Generally-Held Expectations*. These were considered in developing the 2030 Long-Range Transportation Plan.

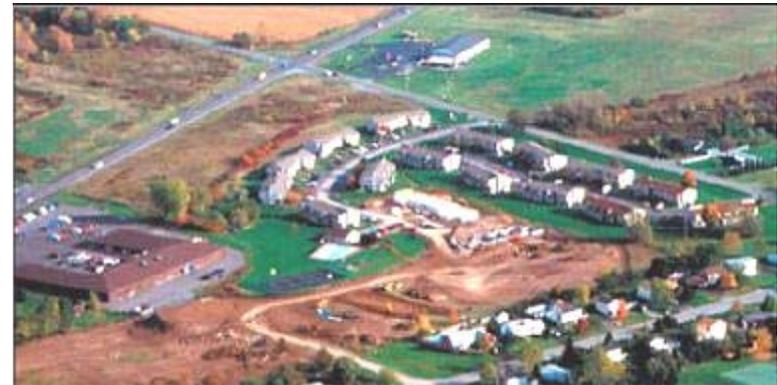
Diversity of Household Forms, Lifestyles, & Changing Nature of Work

The current diversity of household forms, lifestyles, and the changing nature of work will emphasize the need for a more flexible transportation system that is designed not just for traditional 8-to-5-work travel. The need for flexibility will compound the challenges of designing a transportation system with effective non-auto travel options.

Decentralization of Settlement Patterns and Employment Opportunities

Decentralization of settlement patterns and jobs will continue to contribute to a spatial mismatch and economic inequalities in many urban areas. Increasing polarization

of the labor force composition (between skilled/educated on one hand and low-wage service workers on the other hand) will exacerbate the regional jobs housing balance and the job access transportation concerns for lower wage workers.



Subdivision Activity in Erie County's Rural Area

A Growing Elderly Population

An increasing proportion of the population will be old or very old, but also active. This will result in both older drivers and a growing need for transportation system flexibility to meet the needs of the elderly who need to rely increasingly on alternatives modes. This will also increase the need for attention to safety. The need to improve transportation options to better accommodate the needs of seniors will be greatest in auto-dependent areas and in

communities that attract or retain a large number of retirees.

Climate Change

Substantial shifts in public and political sentiment could produce a commitment by the nation, or a collection of serious commitments by states and localities to the issue of global climate change. Serious public policy directed at reducing CO2 emissions would likely involve a change to current incentives for certain fuel and proposition types, increase the public commitment to alternative modes, and accelerate the movement to strategies such as growth management, development practices and other activities. On the other hand, it is not out of the question that public acceptance of CO2's significant contribution to global climate change could be tempered by natural events or scientific discoveries that appear to indicate a weaker relationship between human activity and climate change.

Global climate change itself could introduce significant impacts on the U.S. economy and transportation system, ranging from increased infrastructure damage due to exaggerated weather events, to altered agricultural production.

Fuel Supply and Costs

An interruption to or permanent reduction in the fuel supply is not plausible. However if supply or cost is permanently altered from the modest expectations stated earlier, substantial shift in public policy and market responses could lead to a change in vehicle fleet mix, altered development patterns, and could challenge the strength of

the U.S. economy for at least a transition period, if not longer.

Freight Movement & Globalization

Continued growth in the consumer economy, globalization of the supply chain and a continued shift of manufacturing to lower-wage nations will impact freight transportation. Growth in freight will continue, especially for international and high-speed delivery. Economics will drive the push for increased efficiencies in freight logistics across all modes. Truck traffic will increasingly compete with auto travel for scarce highway capacity, and rail and waterborne freight networks will become increasingly attractive alternatives to truck movements.



Fuel Supply and Cost

Technologies

Three areas of technology: Intelligent Transportation Systems, Vehicle Power Systems, and telecommunications are likely to affect future transportation behavior and travel demand. The application of information technology to vehicles and transportation infrastructure will yield significant benefits in terms of safety and congestion relief. To the extent that intelligent transportation systems increase the effective carrying capacity of highway networks and therefore reduce congestion, they may also reduce the deterrent effect congestion has on some drivers, thereby stimulating more travel. Also rapid advances in active vehicle safety technology may enable people to continue driving later in life than would otherwise be possible. In terms of Vehicle Power Systems, the widespread use of hydrogen fuel cell vehicles is still at least several decades away, but other forms of power may be commercially available sooner, and some alternative fuels are nearing cost-competitiveness with petroleum. It is estimated that hybrid-electric vehicles could constitute nearly one fifth of the U.S. light vehicle market by the end of the decade. Finally, ongoing advances in the quality and flexibility of teleconferencing systems, along with continued reductions in the prices of these systems, are making them an increasingly attractive alternative to some kinds of business travel.

Public Policy

Major public policy initiatives have preceded nearly all the significant transportation system development in the United States. It is reasonable to anticipate that a public initiative may emerge at the federal or state level to achieve a significant change in the form and extent of transportation facilities and services.



Emerging Vehicle Technologies

Transportation Safety

The ultimate goals relative to safety in the 2030 Long-Range Transportation Plan are to:

1. Reduce fatalities and severe injuries on public roadways in the Buffalo-Niagara region.
2. Positively affect transportation system performance through an overall reduction in the number of motor vehicle crashes in the Buffalo-Niagara region.

To accomplish these goals, the GBNRTC will explicitly consider safety as an integral part of capital investment, operations and daily management programs, early in the transportation planning process. Effectively incorporating safety into plans, operations strategies and policies will be an ongoing long-term process. It will require leadership commitments by establishing new institutional partnerships and strengthening existing ones.

Policies

The MPO policies to promote and support safer transportation of people and goods within the Buffalo-Niagara region include:

- Strengthening established state and federal partnerships, with i.e., the Governor's Traffic Safety Committee (GTSC), other New York State metropolitan planning organizations



Automobile Accident

(MPOs), and the National Highway Traffic Safety Administration (NHTSA).

- Building new regional safety coalitions with county traffic safety boards and other stakeholders in the engineering, enforcement, research and educational communities.
- Sharing data, knowledge and resources with partners, while avoiding service duplication.

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

- Determining and communicating the impacts of safety countermeasure investments.
- Incorporating behavioral and infrastructure countermeasure strategies.

The GBNRTC and other metropolitan planning organizations in New York State take a consultative and comprehensive approach to addressing safety through a Safety Working Group (SWG). The SWG strives to build coalitions across organizational boundaries and with other stakeholders in the engineering, enforcement, education and emergency medical services (EMS) disciplines. This coalition of MPO staff also collaborates to advance safety initiatives by sharing information and resources for safety planning research and training.

Objectives

Safety-related objectives relate to continuous, system-wide monitoring to identify potential travel hazards and improvement opportunities to guide investment decisions. Through the core activity of assessing system safety, the GBNRTC will emphasize a measure of safety performance on all projects, and therefore become an integral link in the “chain of responsibility for implementing highway safety programs” established by the National Highway Safety Program in 1966.

Regional Performance Measures

The performance measures for Goal 1 will be based on:

- Fatality rates per 100,000 population

- Mileage death rates (deaths per 100 million VMT)
- Traffic accident injury rates/100 million VMT

The performance measure for Goal 2 will be based on:

- Vehicular traffic accident rates/100 million VMT

Assessment Approach

Regional-level safety screenings, facilitated through GBNRTC member collaboration, are used to routinely monitor and assess transportation system safety. They are primarily quantitative, data-driven statistical analysis processes that indicate locations shown to be experiencing unusual accident experience, both in terms of rate and severity. Accident event data from the NYS Centralized Local Accident Surveillance System (CLASS) is accessed by the GBNRTC to actively monitor local crash data for problem identification on local roadway sections and intersections. The CLASS data for Erie and Niagara Counties is comprehensive and screened similar to the State Accident Surveillance System (SASS) data pertaining to state highways. Local system monitoring results complement NYS monitoring results produced by the Safety Information Management System (SIMS). The approach of combining state and local monitoring results expands the regional safety “picture” and provides a more comprehensive indication of overall transportation safety in the region. State and local screening results are synthesized with other system performance measures, i.e. capacity and condition ratings, for long-range planning and programming purposes; and also to support local, sub-area, corridor, and project planning efforts.



The combination of these parallel monitoring programs allows broader consideration of safety on public roadways throughout the region by allowing a greater number of locations to be readily flagged, as opposed to a limited number of localized studies. Flagged locations are prioritized for detailed investigative study within a safety improvement program to confirm abnormal accident experience, determine specific deficiency hazards/causative factors, and identify appropriate remediation strategies. Interagency coordination also facilitates the development of programs to address safety across modes. The local monitoring program is augmented with unreported transit vehicle crash data that is integrated into regional screening processes. Expanding the local monitoring system is also possible, limited only to the extent of the existing spatial data.

Improvement Strategies

Improvement strategies will take different forms and will be developed at varying levels of cost. They will either be site-specific operational/infrastructure improvements with specific engineering challenges, or be more generalized program initiatives geared to address problems and needs shown to be universal in nature. Any effective combination of engineering, education, enforcement, and/or emergency response-related investments could be used to mitigate identified hazards and avoid potential hazards.

Candidate projects proposed for the Transportation Improvement Program (TIP) will reference emphasis areas outlined by the AASHTO Strategic Highway Safety Plan. These areas are categorized into 6 elements: drivers,

vehicles, highways, special users/non-motorized, emergency services, and management. Improvement projects and programs will follow the strategies recommended for meeting the goals for improving safety relative to these elements.

Data Systems and Analysis

The GBNRTC utilizes Environmental Systems Research Institute (ESRI) Geographic Information System (GIS) and Microsoft Access Database software to monitor and assess transportation system safety. Regional screening processes are separated into three portions, each focusing on a different type of geography: linear roadway segments, roadway intersections, and irregular “anomaly” intersections. Local highway attribute data and DMV accident data is examined against their specific spatial data (local road and intersection networks). The local safety monitoring system is designed to compute accident rates for variable time periods and to compare those rates to statewide averages for similar NYS facilities. Locations are subsequently prioritized for detailed study according to criteria adopted from NYSDOT. This process will determine primary causes for unusual accident activity and will develop recommendations for alternative corrective and preventative safety countermeasures.

The most recent goals and action items for the SWG are summarized below:

1. Incorporate safety planning in the MPO process and use data as a basis for transportation improvements.
 - a) Organize actions over the next 12 months.
 - b) Invite non-MPO partners to participate in the Working



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Group.

2. Establish relationships between MPOs and Traffic Safety Boards (TSBs)
 - a) Invite a NYSTSB representative on SWG.
 - b) Establish communication between Governor's Traffic Safety Committee (GTSC) and NYSMPOs.
 - c) Support TSB public education efforts.
3. Develop a consistent policy to provide access to safety records data.
 - a) Establish a local protocol for data sharing with NYSDOT, including Safety Information Management System (SIMS) data.
4. Support Traffic and Criminal Software (TraCs) as the standard reporting method and establish access to TraCS data for all local municipalities and MPOs.
 - a) Obtain status reports on TraCS.
 - b) Establish MPO/local police agency relationships.
5. Support and advance statewide planning efforts related to safety through input and MPO involvement in the development and implementation of the Strategic Highway Safety Plan (SHSP).
 - a) Appoint MPO representatives to all SHSP working groups and continue MPO involvement during SHSP implementation.
 - b) Advocate for reduced duplication of federal safety planning requirements through one SHSP.
6. Develop a data driven safety improvement program
 - a) Develop a standardized safety audit process for all MPOs.
7. Increase attention to safety on the local system.
 - a) Develop average accident rates for non-state and local highway system facilities throughout New York State.
8. Increase communication about safety to the public and statewide stakeholders
 - a) Participate in the Institute of Transportation Engineers (ITE) Upstate Chapter/NYSMPOs conference on 10/3/06 and the NYS Highway Safety conferences on 10/17/06
 - b) Develop a statewide safety resource library.
 - c) Organize a June 2007 SWG Roundtable.
9. Research and distribute information about funding for safety-related projects.
 - a) Advance the "Safe Routes to School" program.
10. Educate MPO staff and SWG partners about safety planning.
 - a) Conduct National Highway Institute (NHI) Safety Conscious Planning for MPO staff.



Transportation Security

Since the September 11th 2001, terrorist attacks on the World Trade Center and the Pentagon, MPOs have been directed to consider security within the context of transportation planning and programming activities.

The purpose of this discussion is to:

- Review current statewide, regional, and local plans for emergency/security elements
- Review and incorporate the Transit System Security Program Plan
- Define the roles of the public transportation operators/MPO/State in promoting security
- Identify critical facilities and transportation elements
- Identify potential actions the MPO may take to further integrate security into the planning process

State-Level Initiatives

Security is one of five Priority Results Areas (PRAs) identified in NYSDOT's, *Strategies for A New Age: New York's Transportation Plan for 2030*. Specifically mentioned in the plan: security for the traveling public, the State's international entry ports and all cargoes entering or exiting New York State. The State's overall goal in terms of security is to develop, maintain and implement effective incident/emergency management practices that will address preparedness, mitigation, response, and recovery for both natural and

human-cause disasters. The State's plan identifies a number of strategies to meet this goal:



Emergency First Responders

- Develop vulnerability and risk assessments for transportation facilities based upon the potential cost of an event (loss of life, property damage, projected cost of clean-up and recovery, projected cost of long-term health or economic consequences).
- Identify specific facilities that are most essential or critical to the functioning of transportation or other crucial infrastructure sectors.
- Mitigation efforts among and between all transportation operators will be undertaken to implement strategies to minimize risk of damage to their at-risk facilities and vehicles.
- Federal and state agencies with security responsibilities will ensure that all transportation operators and local governments coordinate in planning for the response to an event.
- Real-time information exchange and collaboration will be promoted between and among transportation operators and the public sector.

New York State's plan also identifies examples of specific strategies that the State will pursue to improve security at priority facilities while trying meet the mobility demands of the traveling public.

New York's Transportation Plan for 2030 details security responsibilities at the State's border, ports, waterways and airports. Highlights of this discussion are documented below:

Border Security

Border crossing security is a cooperative and coordinated strategy, including the Canadian and United States Federal governments and the owners of the border facilities. Because truck traffic potentially poses a major threat to security, effort will be directed at pre-clearance programs for freight. This will help to ensure that cargoes are safe while expediting or eliminating processing delays for haulers who do not present a security threat.

Port and Waterways

Major responsibility for ensuring the security of ports and waterways rests with the Federal Government. The Maritime Transportation Security Act of 2002 required high-risk vessels and port facilities to conduct vulnerability assessments and develop security plans that include passenger, vehicle, and baggage screening procedures. In addition, the Act called for security patrols, establishment of restricted areas, personnel identification procedures, and access control measures and installation of surveillance equipment. The ports within New York State are in compliance with the Act and have developed compliance plans, which will draw upon the latest surveillance, screening, and technology strategies to ensure the security of cargoes, vessels, and other vulnerable facilities.

Much of the focus of improving security at the Ports in the future will be on improved coordination between multiple

jurisdictions and ensuring that scarce resources are allocated to the port facilities facing the highest risks.

Airports

While New York State's major commercial airports are providing enhanced security under the Federal Transportation Security Agency, the State's more than 508 public and private use airports (general aviation) also are initiating actions appropriate with their vulnerability to security threats. State law requires that general aviation airports document their security procedures in a written plan that generally follows guidance from the Transportation Security Administration and NYSDOT regarding "best practices". NYSDOT will encourage initiatives that assist municipalities and airport owners in airport security assessment, and will continue to facilitate the development of airport security plans that enhance airport security as an essential element of the Anti-Terrorism Preparedness Act Law.

Regional, County & Local Initiatives

Emergency management and evacuation planning is led by county, municipal and local governments who are responsible for preparing evacuation plans for their respective areas in case of natural and man-made disasters. Both Erie and Niagara Counties have updated comprehensive emergency management plans, which outline emergency preparedness activities. These plans are discussed below:

Erie County

In Erie County, the Civil Defense/Disaster Preparedness Division executes the County's plan for civil defense and

disaster relief before, during and after any type of natural, man-made disaster or war-time situation. State law mandates the activities of this Division, with the County maintaining control over certain levels of services. The Civil Defense/Disaster Preparedness Division works to:

- Identify, assess and prioritize local and regional vulnerabilities to emergencies or disasters and the resources available to mitigate, respond to or recover from them.
- Provide that the County and local governments will take necessary actions to prevent and mitigate the effects of disasters and be prepared to respond to and recover from them when an emergency or disaster occur.
- Provide for the utilization of all available public and private resources to protect against and deal with an emergency or threatening situation.
- Provide for the utilization and coordination of state and federal programs to assist victims of disaster and prioritize responding to the need of the elderly, disabled, poor and other groups that may be especially affected.
- Provide for the utilization and coordination of state and federal programs for recovery from emergency or disaster situations with particular attention to the development of a mitigation action program.



In 2001, following the attacks on the World Trade Center and the Pentagon, Erie County established a Response Readiness Emergency Preparedness Team. The Team's mission is to design and implement plans for training, equipping and positioning the County's emergency responders, as well as the citizens of Erie County and the surrounding areas, for an effective response to natural or man-made disasters of all types. The Team maintains several multi-disciplinary planning subcommittees: Public Health, Emergency Services, Infrastructure Protection, and Law Enforcement. Each subcommittee assesses the county's current capacity in their focus area, identifies needs, and develops strategies and proposals to fill gaps and remedy areas of concern.

Niagara County

In Niagara County, the Niagara County Comprehensive Emergency Management Plan (CEMP) was prepared by county officials working cooperatively with state, federal, and private agencies in a planning effort coordinated by the NYS Emergency Management Office. The purpose of the plan is to minimize or prevent the effects of disasters and to enhance the efficiency of response and recovery operation within Niagara County. The plan outlines actions to be taken by the county before, during and after emergencies and is divided according to three major components of emergency management: disaster prevention and mitigation, disaster response, and disaster recovery.

NFTA Transit Security Plan

The NFTA recently developed a Public Transportation Security Plan. The Plan was developed to assess, document and

improve capabilities for responding to emergency situations, and to better coordinate these efforts with other emergency response organizations in a manner which best protects both the traveling public and transit system facilities and equipment.

NITTEC

The Niagara International Transportation Technology Coalition (NITTEC) is an organization of fourteen agencies in Western New York and Southern Ontario whose goal is to improve regional and international transportation mobility, promote economic competitiveness, and minimize adverse environmental effects related to the regional transportation system. The system includes four international border crossings between Canada and the United States.

The mission of NITTEC is to support member agencies in coordinating, operating and maintaining transportation information systems, integrating technology, and communicating transportation information across all modes of transportation. Information is disseminated among member agencies and to other public and private stakeholders, to enhance the safety and efficiency of the regional bi-national transportation system.

NITTEC provides real time traffic and roadway information to improve traffic flows and enhance emergency assistance for motorists using the transportation system. Real time information reduces secondary incidents and improves response time by police and emergency vehicles.



Regional Asset Inventory

The region contains a number of assets that are critically important to not only the region but also the state and the nation. The City of Buffalo for example, is home to an international border crossing with Canada that provides a port of entry into the United States for 13 million people a year and approximately \$300 million in goods. This commercial and tourist traffic flows across four international bridges – the Peace Bridge, the Rainbow Bridge, the Queenston-Lewiston Bridge and the Whirlpool Bridge – all of which are symbolically significant and present potential terrorist targets.

One of the nation's highest concentrations of hydroelectric power sources is also located in the region, providing a major electricity source for the Eastern United States. The counties of Erie and Niagara and the City of Buffalo combined, contain over 260 facilities that are considered "EPA Tier II" facilities based on the presence of significant hazardous chemicals or materials including chlorine. Finally, the region is home to the iconic Niagara Falls, visited by approximately 14 million people annually.

The maps on the following page identify the location of critical elements of the region's transportation system including airports, bridges, docking facilities, railroad lines and ports in the region.

MPO Roles Relating to Phases of Security Incidents

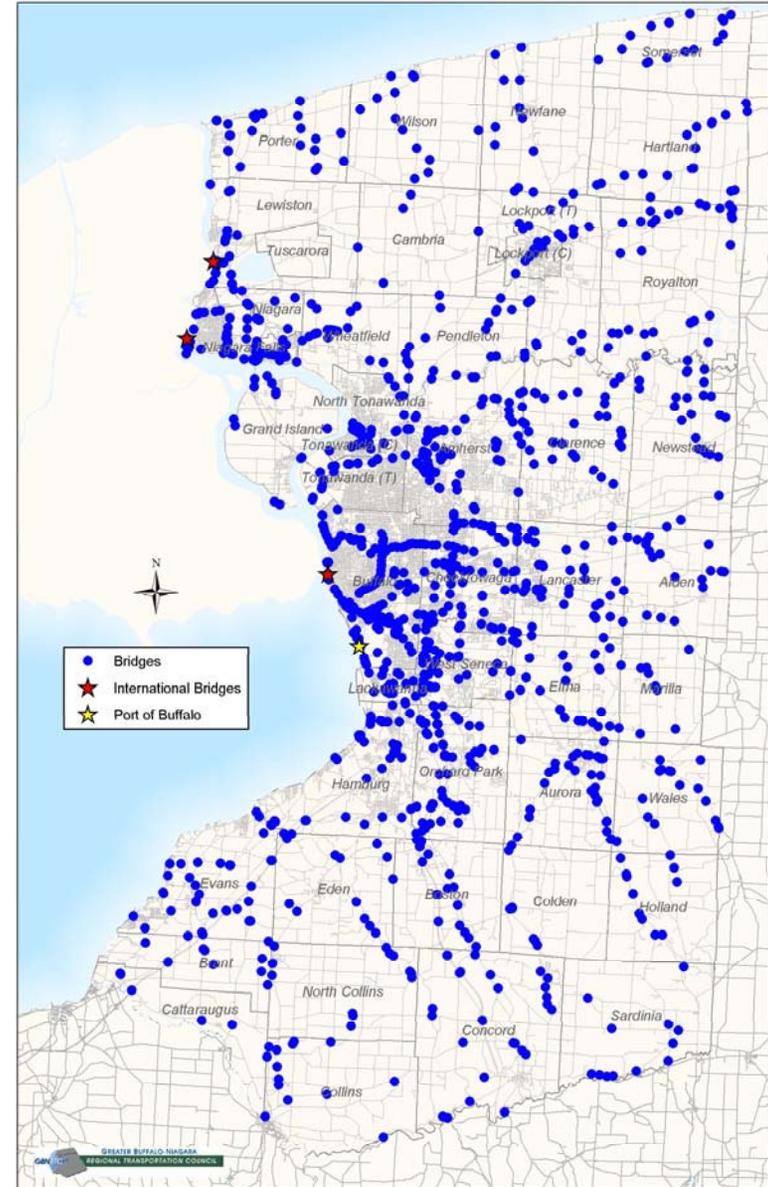
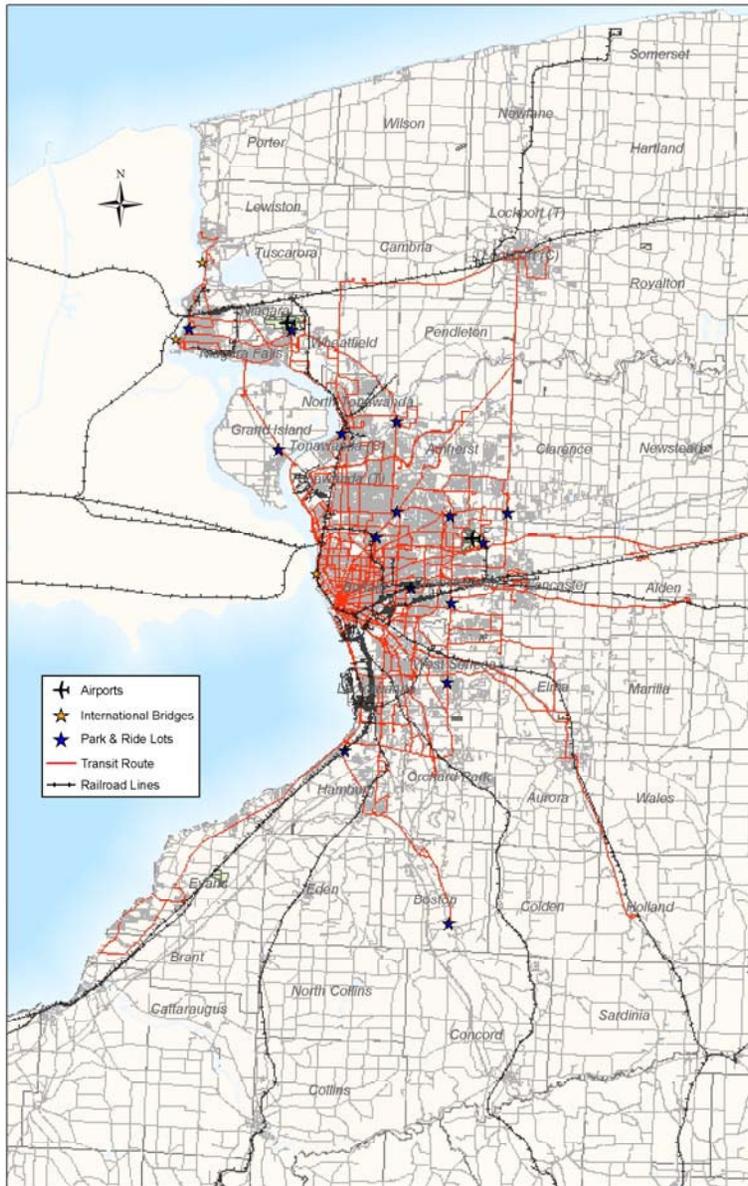
The Role of the Metropolitan Planning Organization (MPO) In Preparing for Security Incidents and Transportation System

Response, prepared by the Georgia Institute of Technology, tackles the question of what the role of the MPO is in security/disaster situations. The report was prepared for the USDOT's Transportation Planning Capacity Building Program and builds upon national research on the subject. The report provides a number of actions an MPO might take to further incorporate transportation security into the planning process at each phase of a security/disaster incident. Those actions are listed in the tables on the last three pages of this Chapter.



Niagara Falls

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



Potential MPO Roles in Security/Disaster Incident Phase

Incident Phase	Possible MPO Role				
	Traditional Role	Convener	Champion	Developer	Operator
Prevention	Minor MPO Role Possible	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components	Minor MPO Role Possible	No Likely MPO Role
Response/Mitigation	Minor MPO Role Possible	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components	Minor MPO Role Possible	Minor MPO Role Possible
Monitoring/Information	Minor MPO Role Possible	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components	Minor MPO Role Possible	No Likely MPO Role
Recovery	Minor MPO Role Possible	Lead MPO Role Possible, Especially For Some Components	Minor MPO Role Possible	No Likely MPO Role	No Likely MPO Role
Investigation	Minor MPO Role Possible	No Likely MPO Role			
Institutional Learning	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components	Lead MPO Role Possible, Especially For Some Components



Lead MPO Role Possible, Especially For Some Components



Minor MPO Role Possible



No Likely MPO Role

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Stage of Incident	Possible MPO Role
Prevention	<ul style="list-style-type: none"> • Funding new strategies/technologies/projects that can help prevent events • Conducting vulnerability analyses on regional transportation facilities and services • Secure management of data and information on transportation system vulnerabilities • Providing forum for security/safety agencies to coordinate surveillance and prevention strategies • Funding and perhaps coordinating regional transportation surveillance system that can identify potential danger prior to its occurring • Coordinating drills and exercises among transportation providers to practice emergency plans • Coordinating with security officials in development of prevention strategies • Hazardous route planning • Disseminating (and possibly coordinating) research on structural integrity in explosion circumstance and standard designs
Mitigation	<ul style="list-style-type: none"> • Analyzing transportation network for redundancies in moving large numbers of people (e.g., modeling person and vehicle flows with major links removed or reversed, accommodating street closures, adaptive signal control strategies, impact of traveler information systems, strategies for dealing with “choke” points such as toll booths) • Analyzing transportation network for emergency route planning/strategic gaps in network • Providing a forum for discussions on coordinating emergency response • Disseminating best practices information in incident-specific engineering design and emergency response to agencies • Disseminating public information on options available for possible response • Funding communications systems and other technology to speed response to incidents



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Stage of Incident	Possible MPO Role
Monitoring	<ul style="list-style-type: none"> • Funding surveillance and detection systems • Proposing protocols for non-security/safety agency response (e.g. local governments) • Coordinating public information dissemination strategies • Funding communications systems for emergency response teams and agencies
Recovery	<ul style="list-style-type: none"> • Conducting transportation network analyses to determine most effective recovery investment strategies • Acting as a forum for developing appropriate recovery strategies • Funding recovery strategies • Coordinate stockpiling of strategic road/bridge components for rapid reconstruction
Investigation	<ul style="list-style-type: none"> • Providing any data collected as part of surveillance/monitoring that might be useful for the investigation
Institutional Learning	<ul style="list-style-type: none"> • Acting as a forum for regional assessment of organizational and transportation systems response • Conducting targeted studies on identified deficiencies and recommending corrective action • Coordinating changes to multi-agency actions that will improve future responses • Funding new strategies/technologies/projects that will better prepare region for next event



Congestion Management

Congestion has been defined by federal regulations as: *“The level at which the transportation system performance is no longer acceptable due to traffic interference. The level of acceptable system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area, sub-area or rural area) and/or time of day.”* Since that time, federal transportation legislation has required the assessment and management of a region’s transportation system prior to the implementation of additional highway capacity.

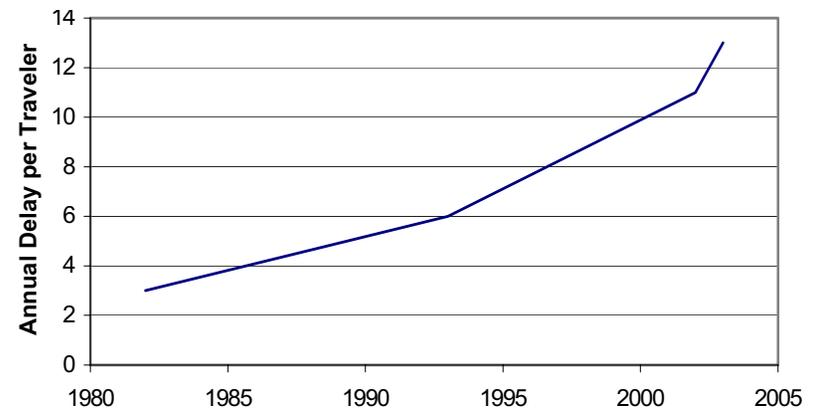
Virtually everyone who has ever traveled America’s roadways, whether in a personal automobile, on a bus, or behind the wheel of a truck hauling goods, has had the experience of sitting in traffic. Congestion is the level at which a transportation system’s performance is no longer acceptable due to traffic interference. The level of acceptable performance can vary by the type of transportation facility, by location within the region, and by time of day. For instance, commuters typically expect and are generally willing to accept a certain amount of traffic delays during their daily trip to and from work. However, they may not be willing to accept that same level of performance in the middle of the day.

In general, highway congestion results when traffic demand approaches or exceeds the available capacity of the highway system. The level of traffic demand can vary significantly depending on the season, the day of the week, and the time of day. Also, the capacity of the highway system, which is usually

thought of as constant, can change because of weather, work zones, traffic incidents, or other non-recurring events.

The Buffalo-Niagara metropolitan region is known for having a relatively quick and easy commute, due in part to its low levels of congestion. According to the Texas Institute of Transportation 2005 Urban Mobility report, Buffalo-Niagara commuters rank 65th out of the 85 largest metro areas in terms of annual delay per traveler. Drivers in Western New York experienced 13 hours of delay in 2003 due to traffic, whereas the average delay in metropolitan areas nationwide was 47 hours.

Despite these numbers there is sufficient cause for concern. Average annual delay in Buffalo-Niagara has quadrupled in the last twenty years, and its rate of increase is growing as shown in the chart below:



Congestion Management Process (CMP)

Federal transportation legislation (SAFETEA-LU) requires that each metropolitan planning area in the United States have a **Congestion Management Process (CMP)**. Under the current authorization law for Federal surface transportation funding, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the provisions for metropolitan transportation planning refer to a 'congestion management process (CMP)' rather than a 'congestion management system (CMS)', as previous laws have. The intent of the congestion management requirement has not changed, so the two terms - CMS and CMP - are interchangeable.

The CMP is a systematic process for managing congestion that provides information on transportation system performance. It also recommends a range of strategies to minimize congestion and enhance the mobility of goods and people. These strategies include, but are not limited to, operational improvements, travel demand management, policy approaches, and capacity additions. For example, the GBNRTC recently initiated a comprehensive demand management program featuring a website called "GoodGoingWNY.com", to allow online matching of potential carpoolers, transit riders, bicyclists and users of park/ride/express bus locations.

The CMP also advances the goals of the Long-Range Transportation Plan and strengthens the connection between the TIP and LRTP. The CMP enhances the existing concept of



Congestion on the Kensington Expressway

a Congestion Management System with emphasis on being an ongoing cycle. It identifies congested corridors and multi-modal strategies to reduce congestion. The CMP then completes the cycle by evaluating the effectiveness of

transportation improvements, coordination with other planning efforts, and providing updated analysis of the transportation system performance as it recycles again. It can be summarized as a regional program to address and manage congestion within the Erie and Niagara County region in order to facilitate the movement of people and goods. It is designed to help manage congestion by:

- Partnering the Metropolitan Planning Organization with other entities in the examination of congestion (NITTEC, NYSDOT, NYSTA, NY State Police, AAA)
- Collecting data related to congestion throughout the region
- Identifying congested corridors
- Recommending multi-modal strategies for congestion mitigation

This process allows the GBNRTC, in partnership with other agencies, to formulate congestion management strategies. Such a process will benefit the region by allowing it to expend federal transportation dollars where they can have the greatest impact.

The goal of an effective Congestion Management Process (CMP) is a systematic procedure for managing congestion that provides information on transportation performance that can then be used in the selection and implementation of cost-effective projects, programs, and alternative strategies to alleviate and/or manage congestion while enhancing the mobility of persons and goods at levels that meet State and local needs. This process has taken on greater importance as the transportation needs (on a cost basis) of

the region continues to increase at a faster rate than available funding.

CMP Methodology

One of the main requirements of a CMP is the establishment of a coordinated program for data collection and system performance to define the extent and duration of congestion. GBNRTC's CMP includes a monitoring program that measures travel time and delay on roadway corridors throughout Erie and Niagara County that meet one of the following conditions:

- Currently experience congestion
- Serve growth areas that are likely to experience congestion in the future
- Have been identified as a major travel corridor in the Erie-Niagara region.

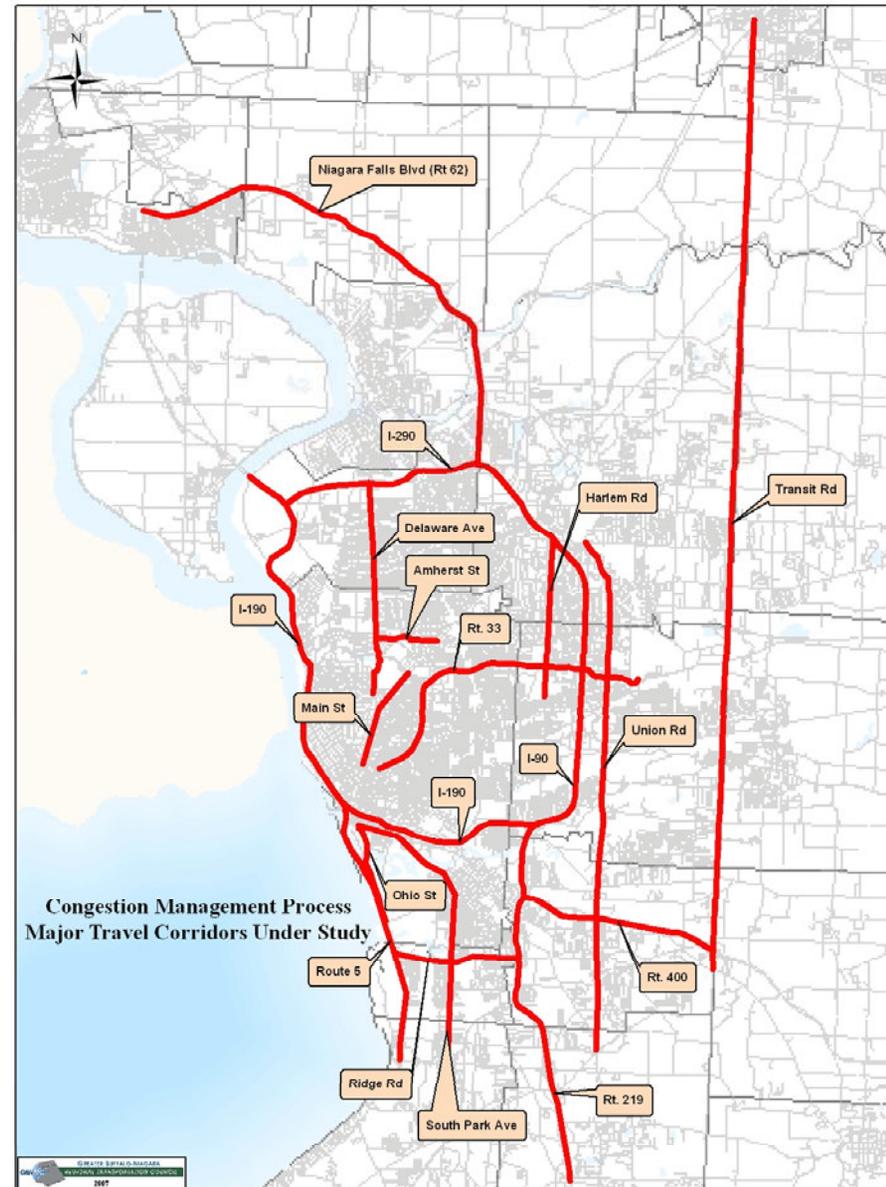
Based on these criteria a series of corridors were identified for data collection as shown on the map on the following page. The selected corridors cover approximately 85 miles of roadway in Western New York and currently meet the above conditions. Following identification of these major travel corridors, the GBNRTC collected relevant data on travel in each corridor.

Travel times and speed data are collected by the "floating vehicle" method, in which a vehicle moves with the flow of traffic during morning and evening peak hours. An on-board computer captures travel times, average speeds and distance measurements, which are then downloaded for analysis. The travel time and speed data are collected between defined

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

points along each corridor. To insure a representative sample of runs, an attempt is made to collect at least seven runs for each analysis segment. An average travel time is then calculated for each segment and compared to the amount of time it would take to traverse each roadway segment at the posted speed limit (ideal travel time). The difference between the ideal travel time and the actual measured travel time is referred to as delay. The basic measures of travel time can be used to calculate a variety of performance measures including Delay per Vehicle, Delay per Vehicle per Mile, Total Delay, and Total Delay per Mile, providing a quantitative measurement of congestion in each corridor. In addition to travel time, the amount of time the vehicle traveled at certain speed ranges is also determined, providing further information on congestion within each corridor.

Summaries of the data collected in each corridor are provided in the tables on the following pages. The base data was collected over a three-year period between 2004 and 2006. By collecting this data on a regular schedule, the GBNRTC will be able to monitor changes in congestion by corridors over time. This will allow the agency to identify corridors where congestion is increasing as well as evaluate any strategies employed to affect congestion. It is also noted that the CMP network will not remain static but will evolve over time to reflect regional changes. The data collection schedule may also be adjusted in order to gather data on certain corridors more frequently and others less frequently. In doing so the GBNRTC can better respond to congestion that is currently being experienced by users of the roadway system.



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Weekday Speed/Delay Analysis – AM Peak Hours

Route	Section	Direction	Date	Travel		# of Stops	Average Speed (mph)	Excess Travel Time (min)	%	%	%	%	%	%	%	%	%	%
				Length(mi)	Time (min)													
384-Delaware Avenue	Mohawk - Lancaster	Northbound	29-Oct-04	2.22	7.10	7.4	18.7	2.71	16%	16%	15%	29%	24%					
		Southbound	29-Oct-04	2.23	6.67	5.5	20.1	2.24	12%	13%	18%	35%	23%					
384-Delaware Avenue	Delavan - Kenmore	Northbound	2-Nov-04	2.58	6.41	4.7	24.2	1.56	16%	10%	10%	16%	32%	16%				
		Southbound	2-Nov-04	2.56	7.65	6.0	20.1	2.83	22%	12%	11%	23%	26%	7%				
384-Delaware Avenue	Kenmore - I290	Northbound	4-Nov-04	2.59	5.73	2.6	27.1	1.91	16%	6%	5%	13%	42%	17%				
		Southbound	4-Nov-04	2.54	5.95	4.3	25.7	2.17	10%	11%	10%	21%	31%	16%				
62-Niagara Falls Blvd	I290 - Nash	Northbound	9-Nov-04	6.08	10.56	4.3	34.5	2.61	10%	6%	6%	7%	15%	43%	13%			
		Southbound	9-Nov-04	6.02	10.98	5.0	32.9	2.98	8%	8%	7%	12%	19%	36%	11%			
62-Niagara Falls Blvd	Nash - NFB Ramps	Northbound	19-Nov-04	6.86	11.09	4.3	37.1	2.16	8%	5%	5%	7%	17%	36%	22%			
		Southbound	19-Nov-04	6.89	10.10	1.8	40.9	1.20	6%	3%	3%	4%	11%	45%	29%			
Ridge Road	Rt.5 - Slade	Eastbound	30-Nov-04	3.22	8.32	6.2	23.3	2.11	15%	9%	9%	21%	38%	6%				
		Westbound	30-Nov-04	3.22	8.27	4.8	23.3	2.23	14%	10%	10%	24%	39%	3%				
Main Street	Edward - Rt. 198	Eastbound	10-Dec-04	2.54	8.23	6.8	18.5	3.20	22%	11%	13%	26%	26%					
		Westbound	10-Dec-04	2.54	8.06	7.2	18.9	2.98	17%	14%	14%	29%	26%					
Main Street	Harlem - Transit	Eastbound	27-Jul-05	4.50	10.40	5.0	26.0	2.96	16%	5%	7%	14%	42%	14%				
		Westbound	27-Jul-05	4.50	10.13	5.0	26.6	2.61	15%	6%	6%	12%	47%	13%				
Amherst Street	Delaware - Bailey	Eastbound	08-Jun-05	2.78	8.26	6.8	20.2	2.69	20%	9%	11%	30%	30%					
		Westbound	08-Jun-05	2.76	7.77	5.6	21.3	2.30	15%	9%	12%	31%	32%					
277-Union Road	Sheridan - Genesee	Northbound	09-Jun-05	3.72	7.71	2.0	28.9	2.09	16%	4%	5%	8%	45%	22%				
		Southbound	09-Jun-05	3.71	9.71	6.5	22.9	4.13	20%	8%	10%	17%	37%	8%				
277-Union Road	Genesee - Losson	Northbound	10-Jun-05	3.09	7.06	2.8	26.3	2.36	15%	5%	8%	17%	42%	13%				
		Southbound	10-Jun-05	3.07	7.23	2.8	25.5	2.61	19%	5%	7%	17%	35%	17%				
277-Union Road	Losson - Rt. 20	Northbound	26-Jul-05	5.93	11.38	5.3	31.2	2.80	15%	6%	5%	7%	17%	48%	1%			
		Southbound	26-Jul-05	5.94	12.86	6.3	27.7	4.08	19%	7%	5%	6%	20%	34%				
I-290/I-190	Exit 3 - Exit 22	WB/NB	21-Jun-06	13.46	14.18	3.3	57.0	0.48	1%	1%	1%	2%	1%	4%	61%	29%		
		SB/EB	21-Jun-06	13.54	14.22	2.8	57.1	0.48	1%	1%	1%	1%	1%	5%	30%	53%		
33 - Kensington Expwy	Oak - Genesee	Eastbound	22-Jun-06	8.46	9.42	1.0	53.9	0.50	2%	1%	1%	1%	4%	5%	62%	22%		
		Westbound	22-Jun-06	8.56	10.62	2.0	48.4	0.89	2%	1%	1%	4%	8%	21%	59%	4%		
Skyway/Hamburg Trpk	Church - Milestrip	Eastbound	23-Jun-06	6.88	8.99	0.8	45.9	0.39	4%	2%	1%	3%	8%	38%	36%	8%		
		Westbound	23-Jun-06	6.82	8.18	0.8	50.0	0.34	1%	1%	2%	2%	5%	35%	34%	20%		
62-South Park Ave	Ridge - Milestrip	Northbound	24-Jun-06	2.53	6.16	4.0	24.6	1.83	16%	8%	7%	13%	48%	7%				
		Southbound	24-Jun-06	2.52	5.93	3.7	25.5	1.59	10%	7%	10%	22%	51%	0%				
Buffalo Ave	Williams - I190-Exit 21	Northbound	28-Jul-05	2.72	5.12	0.8	31.8	0.52	0%	3%	4%	23%	57%	13%				
		Southbound	28-Jul-05	2.73	5.13	0.2	32.0	0.48	1%	1%	4%	19%	67%	7%				
240-Harlem Road	Sheridan - Genesee	Northbound	29-Jul-05	3.88	9.46	4.0	24.6	3.58	18%	7%	7%	15%	50%	4%				
		Southbound	29-Jul-05	3.85	8.88	4.0	25.0	3.78	22%	8%	6%	12%	49%	3%				
US 219 Southern Expwy	Ridge Rd (Exit 55) - New Armor Duells	Northbound	31-Jan-06	5.90	5.82	0.1	60.9	0.04	0%	0%	1%	1%	2%	2%	17%	77%	0%	
		Southbound	31-Jan-06	5.90	5.92	0.0	59.8	0.00	0%	0%	0%	0%	0%	2%	44%	54%	0%	
NY 400 Aurora Expwy	Transit - Willam (Exit 52A)	Northbound	1-Feb-06	7.71	7.45	0.0	62.1	0.20	0%	0%	1%	1%	0%	5%	24%	57%	11%	
		Southbound	1-Feb-06	7.92	7.74	0.4	61.4	0.20	0%	0%	0%	0%	0%	8%	22%	69%	1%	
I-90 NYS Thruway	Ridge (Exit 55) - Willam (Exit 52A)	Northbound	2-Feb-06	4.41	4.53	0.0	58.4	0.09	0%	0%	0%	1%	1%	5%	47%	45%	0%	
		Southbound	2-Feb-06	4.56	4.52	0.0	60.5	0.00	0%	0%	0%	0%	0%	2%	41%	57%	0%	
	Willam (Exit 52A) - Main Street (Exit 7)	Eastbound	27-Apr-06	5.11	6.19	0.8	49.5	0.71	0%	2%	3%	5%	21%	53%	10%	0%		
		Westbound	27-Apr-06	5.10	5.80	0.0	54.7	0.37	0%	0%	2%	5%	4%	10%	42%	37%	0%	
I-190 Niagara Section	Elm/Oak (Exit 6) On/Off - River Rd (Exit 17)	Northbound	13-Apr-06	9.54	9.91	0.0	57.8	0.17	0%	0%	0%	3%	2%	58%	36%	0%		
		Southbound	13-Apr-06	9.43	10.35	0.8	54.7	0.43	0%	1%	2%	3%	7%	61%	24%	0%		
	Willam (Exit 52A) - Elm/Oak (Exit 6)	Northbound	25-Apr-06	6.58	6.71	1.2	49.9	0.80	0%	3%	2%	5%	17%	53%	14%	0%		
		Southbound	25-Apr-06	6.82	6.11	0.0	57.1	0.17	0%	0%	0%	0%	6%	5%	49%	40%	0%	
NY 33 Kensington Expwy	Elm/Oak - Genesee St	Eastbound	5-Apr-06	8.11	7.61	0.0	63.9	0.00	0%	0%	1%	1%	3%	10%	71%	14%		
		Westbound	5-Apr-06	8.48	9.79	1.0	51.9	1.02	1%	2%	5%	6%	9%	32%	36%	2%		
NY 78 Transit Road	Rt. 31 - Millersport Highway	Northbound	11-Apr-06	5.88	8.50	2.2	41.5	1.32	5%	4%	4%	9%	19%	29%	12%	0%		
		Southbound	11-Apr-06	5.86	9.91	4.6	35.5	2.43	9%	7%	8%	14%	17%	18%	11%	0%		
NY 78 Transit Road	Millersport Highway - Main Street	Northbound	06-Apr-06	8.13	11.96	3.8	40.8	1.75	8%	4%	3%	6%	11%	28%	38%	1%	0%	
		Southbound	06-Apr-06	8.06	12.90	3.8	37.5	2.43	8%	4%	5%	9%	29%	29%	0%	0%		
NY 78 Transit Road	Main Street - Como Park Blvd	Northbound	12-Apr-06	5.05	10.95	5.0	27.7	3.52	18%	6%	6%	13%	27%	28%	2%	0%	0%	
		Southbound	12-Apr-06	5.02	11.44	5.0	26.3	4.25	21%	8%	7%	13%	23%	20%	8%	0%	0%	
NY 78 Transit Road	Como Park Blvd - Seneca	Northbound	16-May-06	4.48	7.63	2.8	35.2	1.70	8%	5%	6%	8%	18%	46%	9%	0%	0%	
		Southbound	16-May-06	4.47	6.68	1.4	40.2	0.84	6%	3%	3%	4%	9%	67%	8%	0%	0%	
I-290 Youngmann	Main Street (Exit 7) - Kenmore Ave (Exit 15)	Eastbound	26-Apr-06	9.11	9.03	0.2	60.6	0.23	0%	0%	1%	2%	0%	2%	24%	70%	0%	
		Westbound	26-Apr-06	9.81	10.48	2.2	56.2	1.14	1%	5%	5%	2%	2%	4%	6%	74%	1%	
NY 62 South Park Avenue	Michigan - Tift	Northbound	29-Jun-06	3.25	7.21	3.4	27.1	1.77	11%	6%	6%	19%	48%	9%	0%	0%		
		Southbound	29-Jun-06	3.24	7.10	2.4	27.4	1.64	12%	4%	6%	15%	50%	7%	0%	0%		
NY 62 South Park Avenue	Tift - Milestrip	Northbound	13-Jul-06	3.95	9.74	4.5	24.5	2.15	14%	6%	7%	26%	44%	3%	0%	0%		
		Southbound	13-Jul-06	4.00	9.79	5.0	24.5	2.18	16%	5%	7%	20%	48%	3%	0%	0%		
Ohio Street	Tift - Michigan	Northbound	08-Nov-06	2.44	4.34	1.4	33.8	0.33	2%	5%	7%	12%	37%	35%	2%	0%	0%	
		Southbound	08-Nov-06	2.46	4.25	0.6	34.8	0.12	2%	2%	4%	17%	43%	32%	1%	0%	0%	



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Weekday Speed/Delay Analysis – PM Peak Hours

Route	Section	Direction	Date	Length(mi)	Travel Time (min)	# of Stops	Average Speed (mph)	Excess Travel Time (min)	% <5 mph	% 5-10 mph	% 11-20 mph	% 21-30 mph	% 31-40 mph	% 41-50 mph	% 51-60 mph	% 61-70 mph	% 71-80 mph
384-Delaware Avenue	Mohawk - Lancaster	Northbound	21-Oct-04	2.22	6.94	5.9	19.2	2.53	17%	12%	15%	35%	21%				
		Southbound	21-Oct-04	2.24	6.95	6.6	19.3	2.46	15%	13%	15%	33%	24%				
	Delavan - Kenmore	Northbound	1-Nov-04	2.80	8.47	6.8	18.4	3.30	23%	13%	12%	25%	24%	3%			
62-Niagara Falls Blvd	I290 - Nash	Northbound	3-Nov-04	2.53	6.50	3.1	23.3	2.87	13%	9%	9%	33%	28%	7%			
		Southbound	3-Nov-04	2.56	5.66	2.7	27.1	1.90	9%	8%	9%	25%	33%	16%			
Ridge Road	RT.5 - Slade	Northbound	4-Nov-04	6.02	10.74	4.6	33.7	2.85	7%	7%	6%	9%	24%	37%	9%		
		Southbound	4-Nov-04	6.02	11.86	5.0	30.5	3.87	11%	7%	7%	8%	21%	28%	8%		
Main Street	Edward - Rt. 198	Northbound	17-Nov-04	6.86	12.57	4.0	32.7	3.42	13%	5%	4%	9%	30%	31%	9%		
		Southbound	17-Nov-04	6.90	12.61	4.0	32.8	3.42	12%	4%	5%	10%	24%	34%	10%		
Amherst Street	Delaware - Main	Eastbound	01-Dec-04	3.20	8.67	6.0	22.2	2.41	13%	10%	12%	34%	28%	3%			
		Westbound	01-Dec-04	3.20	8.87	5.6	21.7	2.69	15%	9%	12%	29%	32%	1%			
277-Union Road	Sheridan - Genesee	Eastbound	09-Dec-04	2.53	8.05	6.5	18.8	3.01	18%	11%	15%	34%	22%				
		Westbound	09-Dec-04	2.48	7.62	5.8	19.1	2.68	16%	12%	15%	38%	16%				
	Genesee - Losson	Northbound	10-Jun-05	1.52	4.76	3.5	19.2	1.74	22%	10%	11%	26%	31%				
		Southbound	10-Jun-05	1.52	4.33	2.5	21.0	1.36	20%	7%	12%	26%	35%				
62-South Park Ave	Ridge - Milestrip	Northbound	09-Jun-05	3.72	8.51	5.5	25.9	3.02	18%	7%	9%	11%	30%	26%			
		Southbound	09-Jun-05	3.72	9.79	6.3	22.8	4.17	22%	10%	8%	13%	27%	19%			
		Southbound	21-Jun-05	3.69	8.44	4.4	22.0	3.76	21%	8%	9%	25%	26%	11%			
240-Harlem Road	Shendan - Genesee	Northbound	21-Jun-05	3.07	8.12	5.4	22.7	3.48	19%	8%	10%	22%	31%	10%			
		Southbound	26-Jul-05	5.94	11.72	6.7	30.4	2.97	10%	8%	7%	12%	23%	40%	38%		
US 219 Southern Expwy	Ridge Rd (Exit 55) - New Armor Duells	Northbound	28-Jul-05	5.94	13.35	7.0	26.7	4.48	21%	7%	6%	12%	16%	38%			
		Southbound	24-Aug-05	3.88	11.19	5.3	20.8	5.31	27%	8%	7%	14%	40%	5%			
NY 400 Aurora Expwy	Transit - William (Exit 52A)	Northbound	24-Aug-05	3.86	10.32	4.3	22.4	4.48	24%	7%	6%	15%	41%	6%			
		Southbound	31-Jan-06	5.85	5.78	0.6	60.7	0.01	0%	0%	1%	1%	1%	2%	11%	85%	0%
I-190 NYS Thruway	Ridge (Exit 55) - William (Exit 52A)	Northbound	31-Jan-06	5.89	5.89	0.4	60.1	0.00	0%	0%	0%	0%	0%	0%	4%	26%	89%
		Southbound	1-Feb-06	7.71	7.49	0.0	61.8	0.09	0%	0%	0%	0%	0%	8%	35%	57%	0%
	William (Exit 52A) - Main Street (Exit 7)	Northbound	1-Feb-06	4.42	4.47	0.0	59.3	0.03	0%	0%	0%	0%	0%	3%	54%	43%	0%
		Southbound	2-Feb-06	4.53	4.73	0.0	57.5	0.06	0%	0%	0%	0%	2%	8%	54%	36%	0%
I-190 Niagara Section	Elm/Oak (Exit 6) On/Off - River Rd (Exit 17)	Eastbound	27-Apr-06	5.20	6.68	0.0	46.9	1.03	0%	0%	1%	10%	13%	30%	39%	7%	0%
		Westbound	27-Apr-06	5.08	5.50	0.0	55.4	0.20	0%	0%	0%	2%	5%	9%	54%	30%	0%
NY 33 Kensington Expwy	Elm/Oak - Genesee St	Eastbound	27-Apr-06	5.21	6.97	1.0	44.8	1.36	0%	3%	8%	6%	27%	36%	11%	0%	0%
		Westbound	27-Apr-06	5.09	5.81	0.4	52.5	0.47	2%	1%	1%	2%	5%	19%	51%	20%	0%
NY 78 Transit Road	RT. 31 - Millersport Highway	Northbound	13-Apr-06	9.54	10.40	0.0	55.0	0.24	0%	0%	0%	2%	2%	6%	81%	9%	0%
		Southbound	13-Apr-06	9.39	10.63	1.0	53.0	0.55	0%	2%	1%	2%	2%	7%	20%	6%	0%
	Millersport Highway - Main Street	Northbound	25-Apr-06	5.54	5.88	1.3	56.5	0.42	2%	3%	2%	3%	7%	29%	80%	41%	12%
		Southbound	25-Apr-06	5.87	5.94	0.1	59.3	0.22	1%	1%	0%	0%	4%	8%	27%	54%	5%
I-290 Youngmann	Main Street (Exit 7) - Kenmore Ave (Exit 15)	Eastbound	4-Apr-06	8.10	8.27	0.0	58.8	0.02	0%	0%	0%	1%	2%	4%	42%	50%	0%
		Westbound	4-Apr-06	8.46	8.92	0.5	57.0	0.04	0%	0%	0%	1%	2%	9%	53%	35%	0%
	Como Park Blvd - Seneca	Northbound	11-Apr-06	5.89	11.95	5.5	29.6	4.21	10%	8%	11%	19%	17%	23%	11%	0%	0%
		Southbound	11-Apr-06	5.86	12.16	7.0	28.9	4.53	13%	10%	10%	14%	17%	20%	15%	0%	0%
Ohio Street	Como Park Blvd - Seneca	Northbound	05-Apr-06	8.05	15.25	4.7	31.7	4.63	12%	5%	7%	11%	20%	35%	10%	0%	0%
		Southbound	05-Apr-06	8.08	14.06	3.3	34.5	3.47	13%	4%	4%	8%	14%	46%	11%	0%	0%
	Como Park Blvd - Seneca	Northbound	12-Apr-06	5.02	13.91	8.3	21.6	6.83	20%	13%	11%	21%	30%	6%	0%	0%	0%
		Southbound	12-Apr-06	5.02	17.38	10.3	17.3	9.75	31%	13%	9%	17%	22%	9%	0%	0%	0%
Skyway/Hamburg Tripk	Church - Milestrip	Northbound	16-May-06	4.48	8.08	2.9	33.3	2.22	16%	6%	5%	6%	10%	43%	14%	0%	0%
		Southbound	16-May-06	4.47	7.81	3.1	34.3	1.87	10%	5%	5%	9%	17%	46%	8%	0%	0%
NY 62 South Park Avenue	Michigan - Trift	Eastbound	26-Apr-06	9.12	8.86	0.5	61.8	0.40	0%	1%	2%	2%	5%	3%	8%	62%	17%
		Westbound	26-Apr-06	9.80	9.26	0.0	63.5	0.11	0%	0%	0%	0%	2%	5%	9%	78%	7%
Ohio Street	Trift - Milestrip	Northbound	02-Nov-06	3.26	7.93	3.0	24.7	1.81	13%	5%	10%	28%	38%	6%	0%	0%	0%
		Southbound	02-Nov-06	3.25	7.59	4.4	25.7	1.56	11%	8%	9%	22%	45%	6%	0%	0%	0%
		Southbound	13-Jul-06	3.98	9.49	5.5	25.1	1.88	12%	8%	8%	21%	47%	5%	0%	0%	0%
Ohio Street	Trift - Michigan	Northbound	13-Jul-06	3.96	10.37	5.8	22.9	2.77	15%	7%	11%	30%	35%	3%	0%	0%	0%
		Southbound	13-Jul-06	2.45	4.30	1.3	34.2	0.26	0%	5%	6%	17%	34%	37%	0%	0%	0%
Ohio Street	Trift - Michigan	Northbound	09-Nov-06	2.47	4.16	0.5	35.7	0.13	1%	2%	4%	16%	41%	35%	1%	0%	0%
		Southbound	09-Nov-06	2.47	4.16	0.5	35.7	0.13	1%	2%	4%	16%	41%	35%	1%	0%	0%
Ohio Street	Trift - Michigan	Northbound	16-Nov-06	6.97	8.78	1.0	47.6	0.55	3%	1%	2%	4%	10%	29%	33%	18%	0%
		Southbound	16-Nov-06	6.97	8.96	0.8	46.6	0.72	0%	1%	3%	5%	14%	29%	34%	12%	0%



It is important to note that Federal regulations do not dictate mandatory CMP performance measures for regions to use; rather Metropolitan Planning Organizations are encouraged to develop their CMP to fit the region and available program resources.

Non-recurring congestion

The CMP is designed to measure what is called recurring congestion; that is, normal, everyday congestion that you would experience on a “typical day”. The CMP does not measure non-recurring congestion, which can be caused by special event traffic, traffic accidents, construction or other short-term or temporary occurrences.

Non-recurring congestion is temporary disruptions usually caused by traffic incidents (ranging from disabled vehicles to major crashes), work zones, weather, and special events. As they are frequently unexpected, and in many cases, unpredictable, non-recurring events can dramatically reduce available capacity and reliability of the entire transportation system. Therefore, measuring and dealing with non-recurring congestion can, by its nature, be very difficult since it cannot be predicted when and where it will occur.

The management of non-recurring congestion has received increased attention in recent years, primarily due to the recognition that it often causes more severe problems beyond recurring congestion. While GBNRTC’s CMP does not currently measure non-recurring congestion, there are regional strategies that help address non-recurring congestion. These

strategies include incident management, special event planning, and road weather and work zone management.

Data & Information Limitations

The CMP is a broad, regional-level planning tool designed to help manage congestion by identifying congested corridors and recommending multi-modal strategies for congestion mitigation. The goal of the CMP is to provide information that helps transportation planners, professionals and others to understand traffic flow in individual corridors and the region. This data helps GBNRTC, in partnership with other agencies, to formulate congestion management strategies. The CMP is neither designed nor intended to be used as an engineering tool. CMP data and information should be used for transportation planning purposes only.

As with any data set, there are standard limitations to the CMP. It is not designed to capture travel time data that is statistically significant to the degree required by a detailed engineering analysis. The CMP is designed to measure delay and congestion associated with through movements; therefore, it does not capture delay related to certain turning movements and ramp connections. This more in-depth level of data collection and analysis is typically, and more appropriately, examined as part of detailed corridor studies.

Summary

The travel time and speed delay data collected confirm that the Buffalo-Niagara metropolitan area experiences a relatively low level of congestion in the selected corridors. It is difficult

to compare average speed to posted speed on arterial routes because of the presence of signalized intersections. However, on expressways and intersections, the average speed closely approximates posted speed limits during the AM and PM peak time periods. Excess travel time along most segments is relatively minor as well, again considering the impact of signals (ideal travel time assumes no traffic control devices along a corridor). However, spot congestion problems were observed at the intersection of the I-90 and the I-290 in Amherst (Blue Water Tower) and approaching the South Grand Island Bridge. It is important to note that data results provide the GBNRTC with information which to compare future runs. Changes based on future data collection effort could lead to future studies and/or mitigation projects.

GBNRTC Role in Systems Operations

An effective transportation system requires not only the provision of highway and transit infrastructure for movement of the public and freight, but also the efficient and coordinated operation of the regional transportation network in order to improve system efficiency, reliability, and safety. Linking planning and operations involves actions that build stronger connections between transportation planners and operators. It involves coordination and collaboration that can reveal the role of operational strategies in helping to attain goals and objectives set forth in the planning process, and it integrates operations thinking into the planning of infrastructure projects.

In the Buffalo-Niagara region, coordination and collaboration among planners and operators results in better transportation decisions, with the final beneficiaries being the traveling public and businesses. Better transportation decisions are a product of several factors:

- Consideration of transportation network reliability
- Improved emergency preparedness
- More access to data on system performance
- Consideration of a broader array of potential solutions

Mechanisms To Link Planning and Operations

The GBNRTC provides the overall structure for coordinated transportation planning and decision-making in the

metropolitan area. A regional Traffic Operations Center (TOC) has been developed and put in place in western New York and Southern Ontario to facilitate operations management and integrate ITS systems throughout the area. The TOC is NITTEC. NITTEC is a coalition of fourteen agencies in Western New York and Southern Ontario. NITTEC members have a vision to develop and operate traffic management systems to ensure the safety and efficiency of the regional bi-national transportation system. All GBNRTC members are NITTEC members also, and GBNRTC staff participates in NITTEC activities to maximize coordination between planning and operations. Funding for operation of NITTEC is provided in the TIP, signifying the commitment of the area to operations management.

NITTEC Operations

NITTEC operates the Traffic Operations Center 24-hours a day, 7-days a week to monitor traffic and inform the public, as well as the member agencies of the Coalition, about traffic situations. NITTEC's TOC is co-located with NFTA's Transit Operations Control Center enabling a high level of coordination and information sharing. The information gathered in the TOC is disseminated to the regional Coalition agencies, local police agencies, media outlets, emergency services, and directly to the public via radio and a website. Whether a slowdown may be caused by severe weather,



construction, a public event, or a traffic accident, information regarding transportation issues on the local highways is disseminated through the website.

NITTEC provides real time traffic and roadway information to improve traffic flows and enhance emergency assistance for motorists using the transportation system. Real time information reduces secondary incidents and improves response time by police and emergency vehicles. NITTEC provides real time driving conditions to help motorists make informed decisions so they reach their destinations safely and efficiently.

NITTEC Components

- **Traffic Operations Center (TOC)**
The NITTEC 24-hour centralized operation center that collects and analyzes real-time traffic information for the purpose of distribution to NITTEC members, stakeholders and the public.
- **Closed Circuit Television (CCTV)**
This system of cameras provides the TOC with live images of the highway network to identify traffic congestion and assist in incident detection, verification and clearance.
- **Dynamic Message Signs (DMS)**
A series of signs stationed along the highway network that are capable of displaying various messages that inform motorists of traffic conditions.

- **Highway Advisory Radio (HAR)**
Radio system to advise motorists of traffic conditions that may affect their travel, operating in conjunction with an advisory sign system that notifies motorists when a radio message is playing.
- **TRANSMIT**
A system that gathers vehicle travel time information that can be used for detection of vehicular incidents, traffic congestion, and for notification of existing travel times.
- **Road Weather Information System (RWIS)**
A series of sensors that gather weather and road information that can be used to provide motorists with travel condition forecasts and to assist maintenance crews with the efficient treatment of highway surfaces.
- **Skyway Closing System**
An advanced warning system that alerts motorists to closures on the Buffalo Skyway in an effort to reduce delays and increase safety.
- **Advanced Traffic Controllers (ATC)**
A series of traffic counting stations are in place to transmit real-time traffic information to the TOC; to assist in incident detection and response, and identify traffic congestion.

Regional Approach To Operational Integration

The operational needs of the regional transportation system are reflected in the GBNRTC Long-Range Transportation Plan



and the Transportation Improvement Program. A buildout of the regional ITS system has been underway, with overall coordination occurring through NITTEC. Longer term approaches to better operational coordination focus on a systems approach using the regional decision-making process. The overall approach follows this sequence:

Define Performance Criteria and Data Needs

Performance measures help to determine whether resources are being prioritized properly to meet goals and objectives. Performance measures related to overall objectives for the regional transportation system are identified in the GBNRTC Long-Range Transportation Plan; more specific operational measures are similarly being developed by NITTEC. The availability of data also has a great deal to do with the types of performance measures that can be implemented. Operations data address real time performance of the transportation system, allowing for the development of measures that can better capture the experiences of users (e.g., travel time and travel time reliability). Data available through NITTEC is being reviewed and procedures being developed to archive, store, manage and utilize the data in the decision making process.

Assessment of Deficiencies

The regional transportation planning process involves determining where transportation improvements are most needed. Needs assessments go beyond traditional focus on roadway or transit capacity to improve mobility in particular corridors. As the focus of planning efforts expands beyond mobility to also address travel time reliability and accessibility, management and operations strategies are being built into

MPO plans. The need to better integrate management and operations into regional needs assessment is heightened further by the increased focus on transportation security, which will rely on effective operations planning and response to prepare for and respond to terrorist incidents.

Develop Alternative Scenarios

Alternative scenarios have been considered in development of the Long-Range Transportation Plan. As a significant component of the fiscally constrained LRP is focused on maintenance of the existing infrastructure, better management options become increasingly important. NITTEC and several members have initiated integrated signal corridor integration projects, and GBNRTC is proceeding with an area wide signal systems project to frame longer-term investment. These types of projects form operational scenarios for analysis.

Evaluate Alternatives and Select Superior Options

Modeling techniques are available at GBNRTC to help select capital investment options. This evaluation process leads to improved understanding and raises new coordination steps for subsequent updates to the transportation plan.

Taking Advantage of These Opportunities

Specific consideration of the planning and operations activities linkages is evident in the integrated nature of the projects being developed. A mode neutral demand management initiative is currently underway at GBNRTC, funded with CMAQ resources. This will provide more operationally focused strategies and projects to optimize the existing infrastructure while addressing travel demand.

Regional ITS Architecture

GBNRTC has endorsed the ITS Regional Architecture through official Policy action and it is used to guide project development. The Buffalo-Niagara Bi-National Regional ITS Architecture is a roadmap for transportation systems integration for the metropolitan area of Buffalo, Niagara Falls, and the surrounding municipalities in New York as well as Region Niagara in Ontario, Canada over the next 15 years. The Buffalo-Niagara Bi-National Regional ITS Architecture has been developed through a cooperative effort by the region's transportation agencies, covering all surface transportation modes and all roads in the region.

The Buffalo-Niagara Bi-National Regional ITS Architecture represents a shared vision of how each agencies' systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the region.

The architecture is an important tool that is used by:

- Planning agencies/organizations to better reflect integration opportunities and operational needs into the transportation planning process.
- Operating and implementing agencies to recognize and plan for transportation integration opportunities in the region.
- Other organizations and individuals that use the transportation system in the region.

The architecture provides an overarching framework that spans all of these organizations and individual transportation projects. Using the architecture, each transportation project can be viewed as an element of the overall transportation system, providing visibility into the relationship between individual transportation projects and ways to cost-effectively build an integrated transportation system over time.

Transportation Disadvantaged

A desirable objective of a well-rounded transportation system is the provision of efficient, cost-effective and quality transportation services for the entire regional community. This regional community includes those individuals who are considered transportation disadvantaged: low-income residents; residents without access to cars; the elderly; and persons with disabilities. To better understand and plan for the needs of this community, the GBNRTC undertook a regional assessment of this population subgroup as part of its development of a regional public transit-Human Services Transportation Plan (HSTP).

The purpose of this plan is to improve transportation services for persons with disabilities, older adults, and individuals with lower incomes in the Erie and Niagara Counties region. The plan provides a framework for the development of projects that will address the transportation needs of the target population, by ensuring that this two-county area and its human service agencies coordinate transportation resources offered through multiple Federal Transit Administration (FTA) programs. These include the Elderly and Individuals with Disabilities (Section 5310); Job Access and Reverse Commute (JARC, Section 5316); and New Freedom (Section 5317) programs. All are described in detail in the HSTP, and are the main source of funding for transportation-disadvantaged projects.

The ultimate goal of the HSTP is to identify gaps in transportation service based on a demographic and demand

assessment profile, and to fill those gaps with appropriate transportation projects. The idea, over time, is to gradually build a coordinated, cohesive regional transportation system that can be used by all transportation-disadvantaged individuals.

The plan is also intended to be flexible; the process and information contained in this plan may change over time as federal guidelines become clearer, and as local entities indicate the needs of an effective human services transportation plan. FTA, in guidelines recently released, recognizes that plans will evolve as they mature; and in fact, FTA is still working to clarify program and plan specifics. GBNRTC, in collaboration with its member agencies and various other agencies working to improve transportation access for their member clients, will continue to investigate methods and strategies for coordination that are within the feasibility of implementation.

Key Elements of the HSTP

Key elements, as described by FTA, of a coordinated plan include (1) an assessment of available services; (2) an assessment of needs; and (3) strategies to address identified transportation gaps for target populations, which are based on the assessments of unmet needs and already available services.



Goals & Objectives

Initial goals for the coordinated transportation plan are as follows:

- To improve the delivery of transportation services for the target population
- To generate efficiencies in operation that can lead to increased levels of service
- To encourage cooperation and coordination with a consistent means of project development and selection for allocation of the identified financial resources

These goals may be expanded as appropriate for the region; and will be developed in consultation with stakeholder groups. Specific performance measures for plan effectiveness will be established.

Regional Snapshot

In 2000, there were 135,192 persons in the region living below the federal poverty level, comprising approximately 11.6% of the total population of Erie and Niagara Counties. There were 27,362 families living below the poverty level, with 22,540 in Erie County and 4,822 in Niagara County. The number of persons living below the poverty level in Erie and Niagara Counties increased slightly with the 2003 Census estimates. Poverty among individuals in Erie County increased from 12.2% in 2000 to 13% in 2003. Likewise, Niagara County experienced an increase in persons living below the poverty level from 10.6% in 2000 to 11.4% in 2003.

Also based on 2000 Census data, 185,142 (15.8%) of the population is persons 65 years of age or older; and 207,012 people (17.7%) aged 5 years or older are living with a disability. The Census in its "Disability Status: 2000 Report" noted that persons with disabilities were less likely to be employed and that a substantially higher proportion of disabled persons lived in poverty. While both Erie and Niagara Counties had a lower percentage of disabled persons than the U.S. average (19.3%), the City of Buffalo ranked 10th in places of population greater than 100,000 with people aged 5 and older with disabilities (26.2%).

The 2000 Census identified 66,395 households in the two-county area with no vehicles available, which is 14% of all households. 40% of the 0-vehicle households are classified as living below poverty level. For households comprised of persons 65+, 37.5% do not have access to a vehicle.

Research by social service, educational and other institutions points to a number of trends for the next 20 to 25 years. The Federal Reserve Bank of Buffalo notes that by the Year 2030, 1 in 5 persons in upstate New York will be over the age of 65; due mainly to medical advances that have increased life expectancy, as well as to the continuing trend of 25-to-34-year olds migrating from the region. The Institute for the Future of Aging Services notes the following for the nation by 2030: population on the whole is aging; younger disabled persons are surviving birth and will have extended longevity; and there is an increasing gap between "haves and have-nots."



The assumptions for the Erie and Niagara County region, drawn from the above data and projections, are that the percentages of low-income persons have remained fairly constant over the past two Census decades and will likely remain so for the foreseeable future. The number of elderly persons will continue to increase at least to 2030, and their rates of disability will rise with aging. Disability rates on the whole are likely to increase with improved birth survival rates and increases in life longevity. There will always be a subgroup of population, whether due to age, disability, and/or income levels that will be dependent on transportation service other than the personally owned vehicle. The need to address and resolve transportation issues for the target population will only increase with time.

Needs Assessment

A number of studies and surveys have been conducted in recent years with regard to transportation issues relating to the target population. A review of this material revealed common themes and can be summed up as gaps in public and other transportation service:

- Early morning, evening, and weekend service of any kind is limited or lacking, especially for workers accessing major employment centers in the Main/Transit corridor and the Orchard Park/East Aurora corridor.
- Destinations not adequately served: medical facilities; schools and other educational facilities; employment opportunities, especially those off bus routes and in suburban/rural areas; social/recreation facilities; and shopping areas.
- There are limited public transit routes in many suburban and rural areas.
- There is a mismatch between the bus route/schedule and childcare/job locations.
- There is a need for transportation, both public transit and alternative means, that is affordable to those who are most economically disadvantaged.
- Similarly, public transit becomes costly with transfers and travel beyond the first fare zone; alternative means also can be cost-prohibitive or are not available.
- Current public paratransit is only available within $\frac{3}{4}$ of a mile on either side of a bus route.
- Travel between counties, depending on the service, is not available.
- Some transportation services have geographic limits.
- There are not enough vehicles and drivers to provide service, whether fixed-route or on-demand, for seniors and disabled.
- There are excessive wait and travel times in any kind of transportation service.
- There are restrictive advance notice requirements.
- Route/schedule information is not readily available.
- Evening workers (2nd & 3rd shift workers) may be able to use transit one-way, if available, but need transportation options for the return trip. Taxi costs are high for low-income employees.
- Information about public transit is not available by telephone during evenings after 6:30 pm. Internet-based schedule information is available only to households with Internet access.



Needs Determination

The HSTP identified the following, through maps and the ensuing narratives, in order to more clearly delineate and define transportation service gaps:

- Geographic distribution of low income/TANF (Temporary Assistance for Needy Families) population
- Geographic distribution of disabled and elderly population
- Geographic distribution of employment centers/employment support services
- Geographic distribution of medical centers/support services and/or human service-related activities
- Non-geographic barriers to transportation service use
- Transportation gaps between the client population's residential locations and employment or medical/human service opportunities

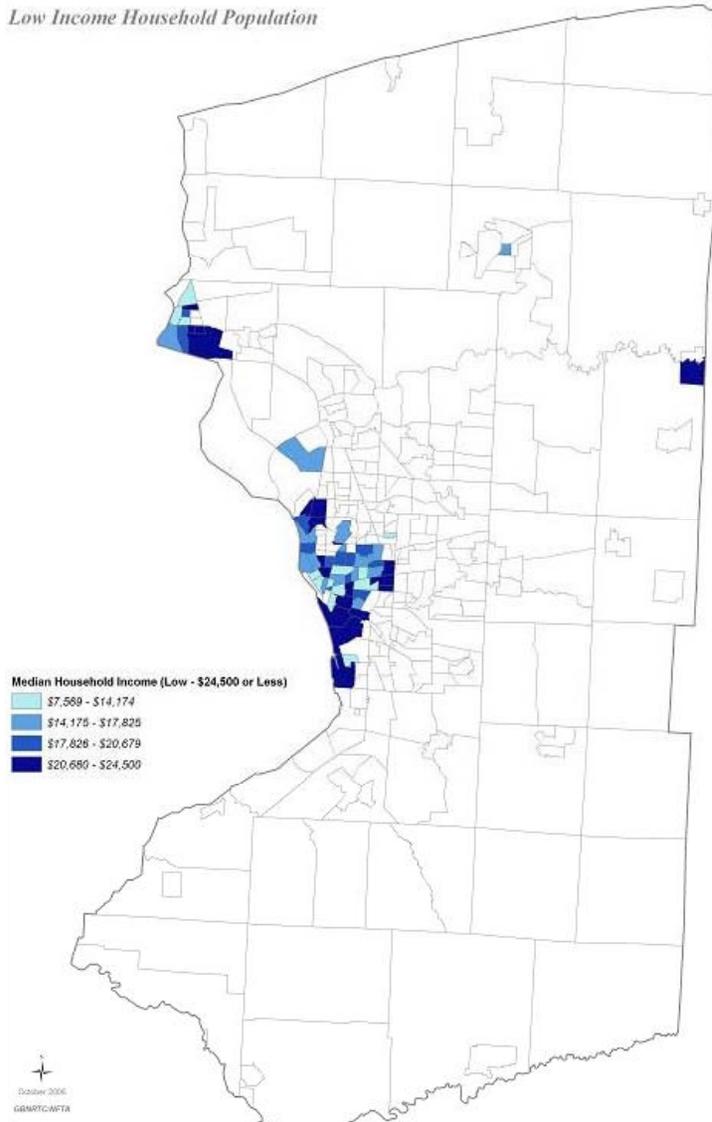
Low Income/TANF Population

The Cities of Buffalo and Niagara Falls have realized increases in the percentages of persons living at poverty level over the past decade. In 2000, 26% or 75,000 individuals lived below the federal poverty level in the City of Buffalo and 19.5% or 10,705 individuals lived below the poverty level in the City of Niagara Falls. As shown in the maps on the next page, there are families, especially within the east and west sides of the City of Buffalo, living well below the federal poverty level. These communities are considered extremely low-income neighborhoods.

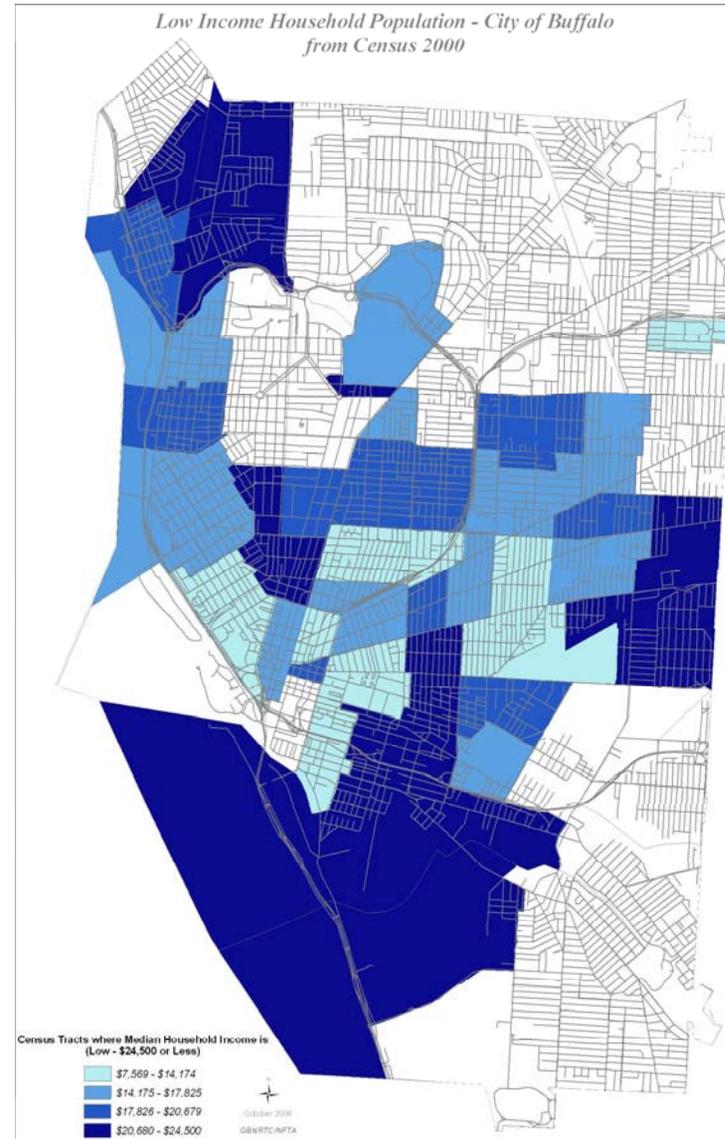


2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Low Income Household Population



Low Income Household Population - City of Buffalo from Census 2000



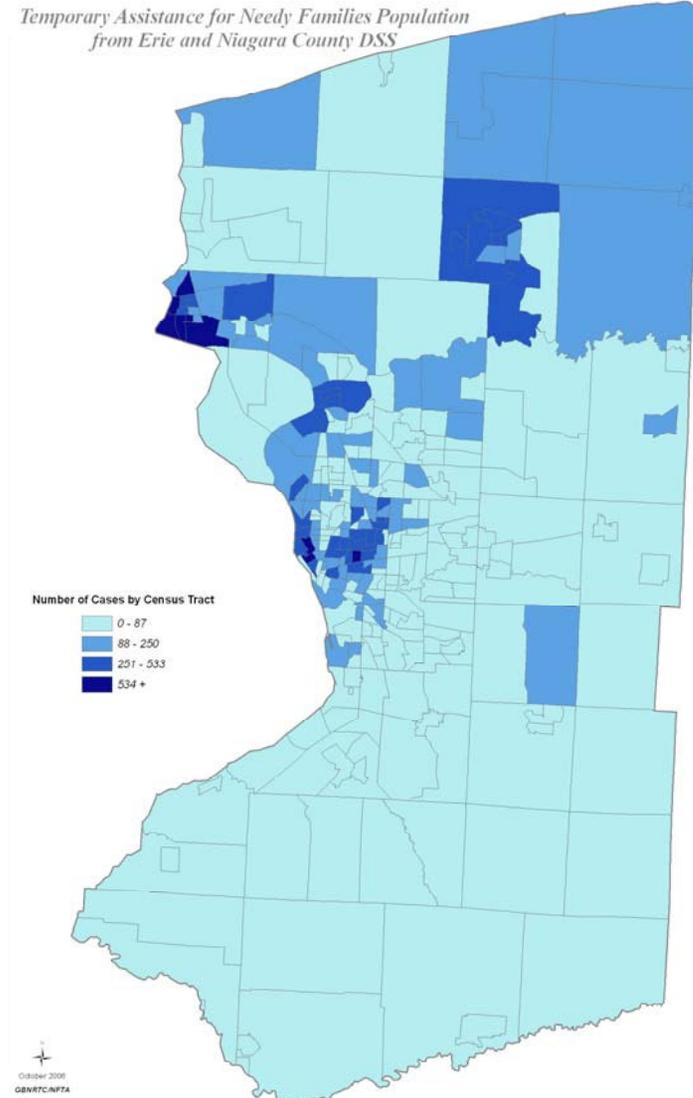
Social Service Assistance Trends

In September 2006, there were approximately 12,500 open TANF (Temporary Assistance for Needy Families) cases in Erie County and 700 in Niagara County. These cases included all forms of public assistance including Family Assistance Cash, Safety-Net (single individuals) Cash and Safety-Net Family Voucher. Further, there are individuals and households in Erie and Niagara Counties receiving other forms of government assistance including Medicaid-SSI, Family Health Plus, childcare, food stamp and energy assistance. These individual and family cases are not included in the TANF case totals for Erie and Niagara County. When all forms of “public assistance” are added, a large percentage of the regional population receives some form of government assistance. The government assistance caseload in the region gives a more complete picture of need in Erie and Niagara Counties. The map on the right shows where current TANF cases are located in the region.

Work Participation Rates

The New York State Office of Temporary and Disability Assistance issues an annual report on the performance of County Departments of Social Services (local social services districts). One relevant measure that describes the Counties’ need for JARC projects is the work force participation rate of TANF and SNA MOE (Safety Net Assistance Maintenance of Effort) recipients (together referred to as TANF All Families).

The TANF reauthorization provisions of the Deficit Reduction Act of 2005 sets a 50% TANF All Families work participation rate for states and local districts. Failure to meet the 50% rate



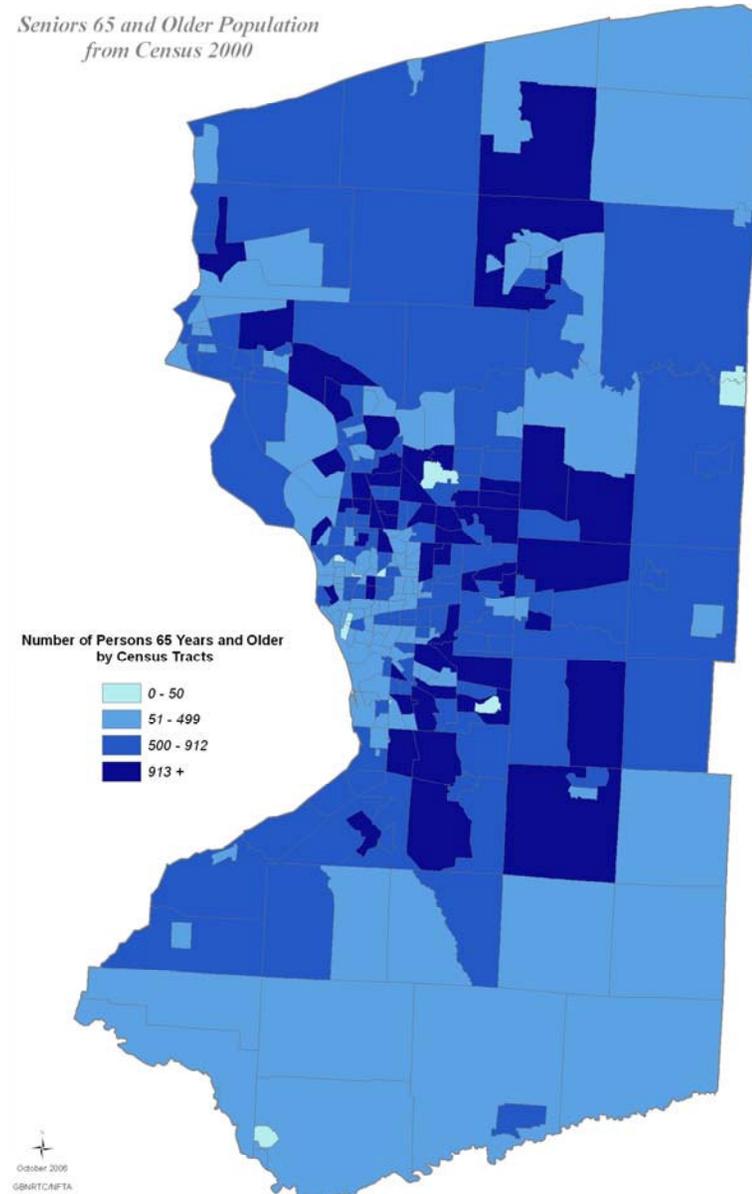
will subject states and local districts to substantial financial penalties. For July-December 2006, Erie County's TANF All Families work participation rate was 45% and Niagara County's rate was 45%, as compared with the state median of 39%.

Erie and Niagara Counties Department of Social Services identified current service gaps in public transportation and the lack of flexible transportation as primary barriers to work. Identifying needs is the first step towards achieving an HSTP goal of improving service for the target population.

Disabled & Senior Population

Transportation is an issue vital to quality of life for older adults and the disabled population. When physical and cognitive impairments prevent this population from driving or using public transportation, caregivers often become primary transportation providers. For most of us, transportation is a link to independence, quality of life and social interaction. This is especially true for older adults and the disabled who no longer or never drove and are therefore reliant on others for their transportation needs. For this reason, it is important to coordinate all forms of transportation alternatives for older persons and people with disabilities in our communities. Through a coordinated effort, the HSTP plan can promote the increased availability of low-cost, flexible transportation options for older adults and the disabled population. The map on the right identifies the location of seniors 65 and over and the map on the following page identifies the location of disabled persons in the region.

Seniors 65 and Older Population
from Census 2000



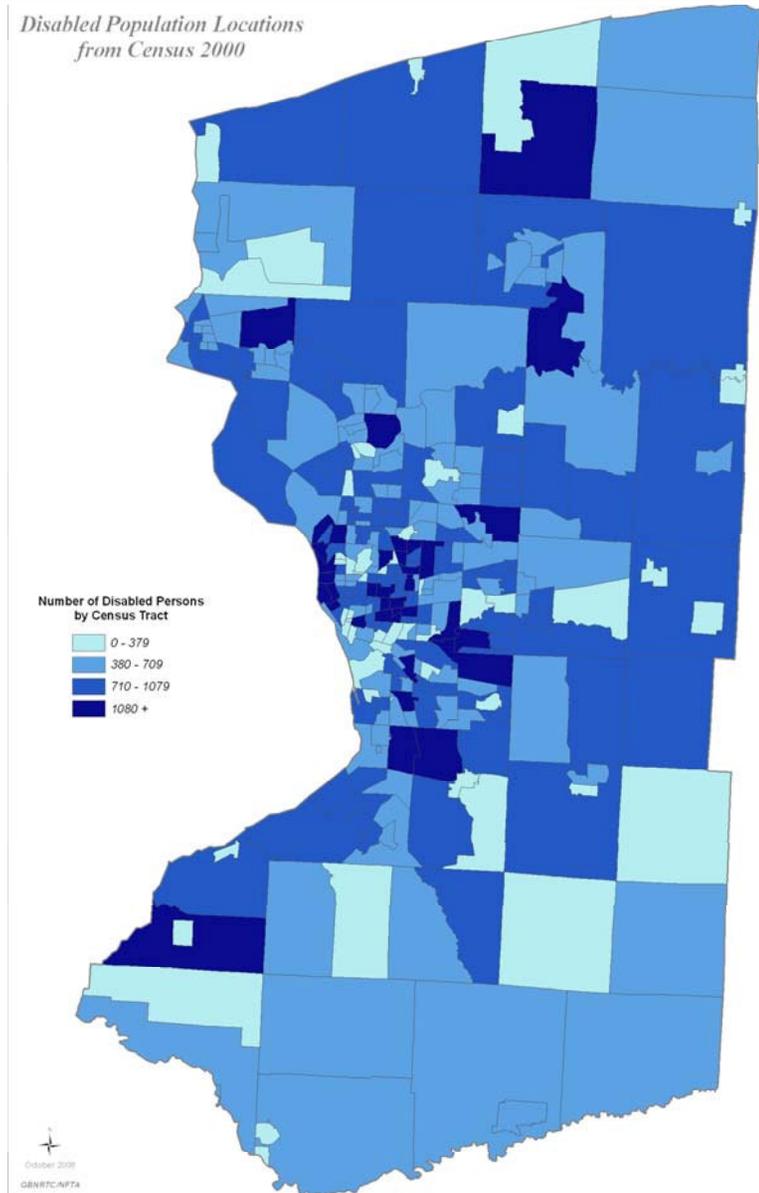
2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

As the maps show, a large percentage of the senior and disabled population lives outside of the City of Buffalo in living-assisted and senior housing complexes that are usually located in suburban and rural settings. While these settings provide calm and quiet environments, they are not located in areas with high levels of public transit service. Van service is available within many of the larger facilities; however, the van service is primarily for emergency and hospital visits. Access to non-emergency and casual visits or shopping with the vans is usually prohibited. The location of independent living facilities for seniors and disabled individuals in the suburbs creates a further transportation barrier: home health aide workers find it difficult to reach these locations to take care of clients. Their services allow senior and disabled persons to live independently and not in more costly, acute care facilities.

The disabled population in the region has transportation options available with NFTA's public paratransit service Paratransit Access Line (PAL), and with non-profit human service agency providers and private service providers. In order to be eligible to use paratransit service, an individual's disability must prevent him or her from using the existing accessible fixed route bus service provided by NFTA Metro.

Providing mobility for the senior and the disabled population in the region, although challenging, is a priority and the need is growing. In fact, there is an increasing demand for PAL paratransit service. Between 2003 and 2006 there was a 20% increase in planned client trips. Requests for paratransit eligibility applications have also increased.

*Disabled Population Locations
from Census 2000*



Private providers and non-profit human service agencies that provide transportation in the region also play a significant role in providing mobility for the disabled population. Door to door service is provided to day treatment programs, adult daycare facilities and rehabilitation programs; however, individuals must be enrolled in specific programs and have adequate funding available to access these programs. As shown on the map on the previous page, the distribution of the disabled population has expanded throughout the region with specific clusters on the north and west sides of Buffalo, Cheektowaga and Lackawanna. Coordination between private and other providers and the public transit system is crucial to the mobility of the disabled and senior population.

Economy and Employment

The overall description of the area's economy and employment from NFTA's original Job Access/Reverse Commute Plan is still valid in 2006. Downtown Buffalo continues to be the area's primary employment center, however, as area employment and population shifts continue to move to suburban areas, mobility becomes a greater need and transportation systems must respond accordingly. Major retail/shopping centers are no longer located within the City of Buffalo. The majority of entry-level service related jobs (health care, "call centers", light manufacturing) are also locating outside the city center.

In the Buffalo/Niagara area alone, the unemployment rate is just over 5.5%. Employment has decreased by nearly 20% in the Central Business District (CBD) and increased nearly 10% in the suburbs during the last fifteen years. Only 10% of all

jobs in the region are located in downtown Buffalo and over 60% of all regional jobs are now located outside the City of Buffalo. Buffalo, like many cities across the nation, is experiencing this same phenomenon as jobs have followed the residential exodus to the suburbs. An increasing number of city residents are becoming "reverse commuters", and there is a potential for more reverse commuting with improved public transportation. This trend has altered urban travel behavior and patterns for the transit dependent population in Erie and Niagara Counties. Traditionally, public transit service was designed to serve densely populated urban areas such as Buffalo and Niagara Falls, as well as providing peak period service for suburban and rural commuters. As area employment and population shifts continue to occur, it is becoming more difficult to provide traditional public transportation in the region.

Major Employment Opportunities

In July 2006, in the Buffalo Niagara Region, there were approximately 564,000 individuals employed, an increase of 3,000 from July 2005. The unemployment rate in the planning area has remained the same in the past year at 4.4%.

Erie County has the largest number of jobs, with Buffalo and the first-ring suburbs making up the largest part of the regional employment area. The majority of large employers are located in Erie County, particularly in the areas of education, government, manufacturing, retail and health care services. Government, education, health & social services jobs dominate 28% of the area's economy. The United States Government and the State of New York are the largest



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

employers in the region. Private employers within the top ten include Tops Market and Kaleida Health. In Niagara County, the largest employers are the Seneca Gaming Corporation and Delphi.

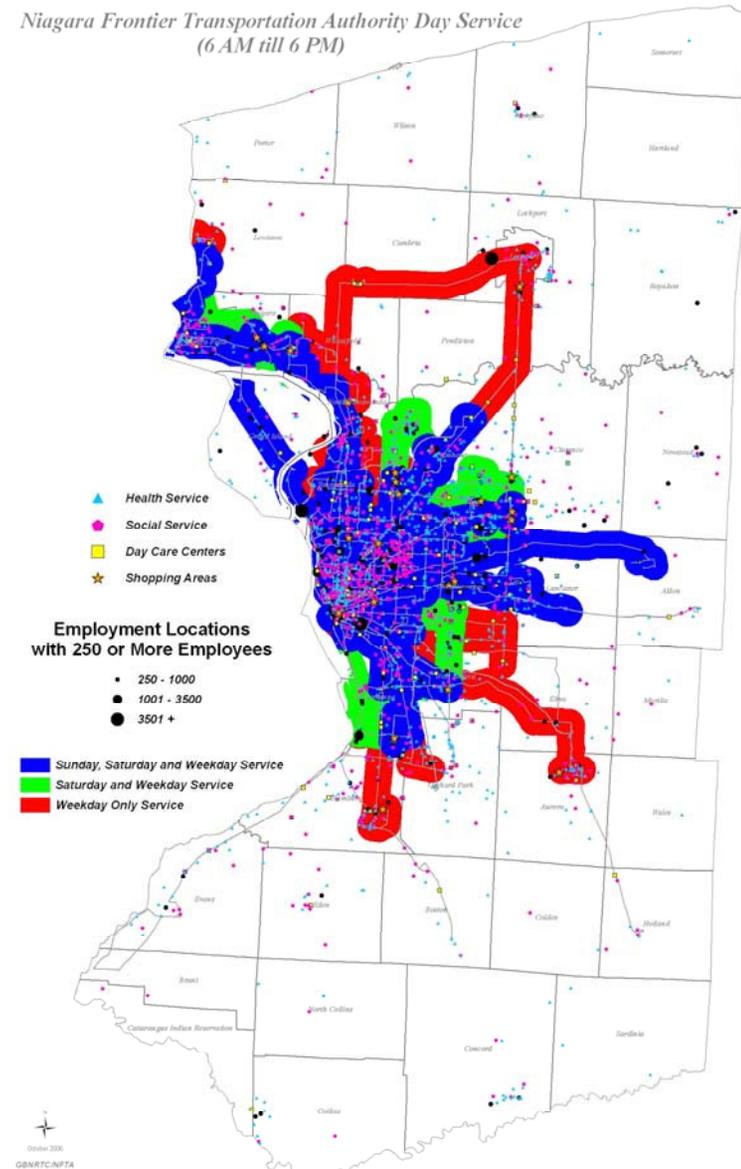
Western New York's economy improved markedly in 2005, resulting in both lower unemployment and improved private sector job figures. Unemployment has trended down in the Western New York region, which includes Allegany, Cattaraugus, Chautauqua, Erie and Niagara counties. In October 2005, the region's unemployment rate was 4.4 percent, its lowest October level since 2000.

Private sector job growth has been steady; with the region experiencing over-the-year increases every month (except March 2005) since February 2004. In October 2005, the region's private sector job count grew over the year by 2,400 to 546,200, its highest level for the month since 2000.

The City of Niagara Falls also recently increased job opportunities within their downtown core with the opening of the new Casino. Jobs growth in areas related to tourism, retail and lodging also continues to increase in Niagara Falls and surrounding communities.

In summary, the Western New York economy has made great strides recently, with financial activities playing a large role in the area's turnaround. A combination of ongoing job growth and lower unemployment rates suggest that the region's economy should continue to do well going into 2006 and beyond. The continued growth in the job sector, especially in

*Niagara Frontier Transportation Authority Day Service
(6 AM till 6 PM)*

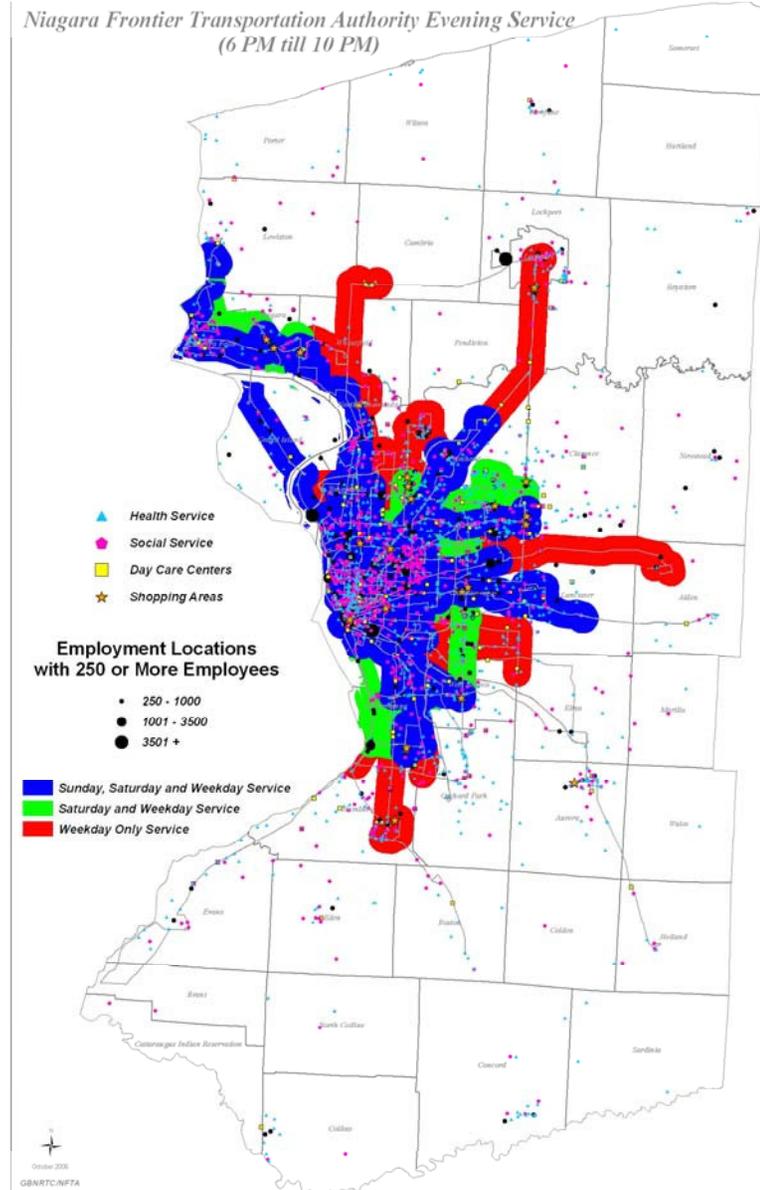


2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

areas of service and manufacturing will allow for job development for TANF and low-income individuals entering the job market for the first time, provided they have an accessible, convenient form of transportation to reach these job opportunities. Having an understanding of how specific business industry sectors are growing will impact travel demands for the regional job seekers.

Analysis of Employment Opportunities

The following maps represent employment centers in the planning area of Western New York with the overlay of the public transportation system. It is clear from these maps that a “spatial mismatch” does exist between available public transit service and specific employment, medical and human service locations. Downtown Buffalo has the highest concentrations of existing jobs with over 45,000 jobs reported in May 2006. Downtown Buffalo also has concentrations of apartments/homes, lodging, restaurants, government/educational institutions, healthcare facilities and tourism destinations. Although Downtown Buffalo has the highest concentration of jobs, other major employment centers with a diverse concentration of support/service, technical, educational and professional employment, also exists within the region. These employment centers include a mix of public/private companies and educational & governmental facilities located in transit corridors throughout the region. Many new job opportunities are locating outside of the city and mobility to these corridors is necessary to obtain and maintain employment. Transit corridors with increases in employment locations include:



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

- Retail
- Food Service
- Health Care
- Laborer
- Cleaning/Maid
- Child Care
- Office/Clerical
- Distribution/Light Manufacturing
- Construction

There are a number of deficiencies including local transportation services that represent significant barriers to moving eligible recipients into permanent employment in an efficient manner. These include such things as:

- **Transportation** - Many Erie County and Niagara County residents receiving TANF/Family Assistance live within the City of Buffalo and the City of Niagara Falls which are areas well served by public transportation, however job opportunities are more than likely located in areas outside of the City of Buffalo and the City of Niagara Falls. In addition, although a high percentage of TANF individuals in the region reside along a bus route, service may be limited, requires several transfers and may not be available at all for second and third shift workers. Transit service in rural towns is limited on weekdays and may not exist on weekends. Most fixed-route service operates during traditional commuter hours during the weekday. Weekday evening suburban service is limited and very limited on the weekends except for specific pre-

arranged service. Affordable taxi service in rural areas is a transportation barrier. Taxi rates for TANF/social service programs are available and regulated. For non-TANF individuals residing in rural areas, taxi service is not an option and can become expensive. Access to information about transit routes, schedules and services has greatly improved in terms of telephone coverage and Internet access. Although all NFTA schedules and a trip planner are on NFTA's website – "<http://www.NFTA.com>" it is not accessible for persons without Internet connections. Households without telephones have difficulty calling for transit information or to arrange taxi service.

- **Childcare** - The location of childcare services and the extent they are accessible to transit is a significant barrier. Care available during non-traditional work shifts hours, sick childcare, special needs care, infant care, employer-provided care, care in isolated rural areas and payment for care for other than employment-related activities (i.e. substance abuse treatment and medical appointments) are all problems facing the public assistance client with children.
- **Educational** – Social and educational skill levels are barriers to obtaining and maintaining employment. Job placement counselors found that employers highlighted deficiencies in the critical major skill areas of written and verbal communication, problem-solving ability and organizational/decision-making. In addition, the ability to work in teams is rapidly becoming a required skill for



even entry-level positions. Many individuals entering the work force for the first time require job coaches to provide support, advice and guidance.

- **Part-time Jobs without Benefits** – A significant number of jobs in the region are in the service sector and many are part time with low wages. This results in a situation where people may be able to find and keep a job but it will not provide the resources to allow them to become self-sufficient. This type of employment also does not provide a sufficient level of resources to sustain a family.
- **Competition from Students and Spouses** - Many of the employment opportunities that would normally be available to TANF individuals are taken up by college students looking for part time employment to supplement their college expenses and by spouses as second wage earners. Given the difference in skill levels between these two groups, the welfare to work candidate often loses.

Public Transit Access

While many employment centers are directly served by the NFTA public transit system, the level of service to each is highly variable. Downtown Buffalo and regions within the first and second ring suburban areas have the highest level of service. Service to far reaching suburban/rural areas of the region will have medium levels of service; and service to rural areas and service on Saturday, Sunday and late night weekdays will have medium to low levels of service. The public transit system does operate bus service directly to a

number of companies in the region and has been working directly with job developers, industrial development agencies and municipal governments to be proactive in providing public transit service for new and relocating companies. However, as tax breaks and low utility incentives are offered for businesses to locate in areas not directly served by the public transit system, it becomes increasingly more difficult to serve new business locations. The public transit system condones, to some degree, urban and rural sprawl as it attempts to stretch its system to serve the new job locations outside of existing public transit service areas.

Public Transportation Resources

The Niagara Frontier Transportation Authority (NFTA) is a regional multi-modal transportation agency responsible for air, water and surface transportation for Erie and Niagara Counties. The cities of Buffalo and Niagara Falls are the urban core of the region. NFTA's public transit operation consists of a regional bus system, a light rail system and complementary paratransit service. With a fleet of 330 buses, 27 rail cars, and 49 paratransit/Metrolink vans providing over 8.7 million miles of revenue service, NFTA carries about 27 million passengers annually. As it stands, where public transit is readily available now, it is the region's most economical travel option; is well-established and subsidized; and has available capacity for additional passengers on almost all routes. It is an option that can be exploited by exploring further human service agency-public transit partnerships (beyond those currently in place) in offering transit voucher programs, tailored service routes or feeder services between in-demand



destinations, or deviated fixed-route service. These are eligible activities for funding under the JARC program.

Other Transportation Resources

An addendum to the HSTP identifies all other known transportation providers in the Erie and Niagara Counties area. This list includes Section 5310 operators, private providers, taxi companies, and human service agencies that offer transportation services. It is expected that this list will evolve as the HSTP incorporates other agency information and/or survey results

Selection of Projects

Projects to resolve identified system gaps for the transportation-disadvantaged will be selected based upon the following criteria:

- **Project needs/goals & objectives:** The project should directly address transportation gaps and/or barriers identified through the HSTP; project goals & objectives should be clearly stated.
- **Implementation:** For projects seeking operating funds, a well-defined service operations plan must be provided. For projects seeking capital funds, solid rationale must be provided for use of the requested funds; and demonstrate that there are no other, or insufficient, sources of funds available to meet this need.
- **Project budget:** A clearly defined budget must be provided.
- **Coordination/program outreach:** The project should demonstrate levels of coordination with other community transportation and/or human service operators/resources.

- **Program effectiveness/performance indicators:** Project sponsors should identify clear performance measures to track the effectiveness of the proposed project.
- **Innovation:** Project will be evaluated with regard to new or innovative service concepts that have the potential for improving mobility and access.

Further/Future Strategies for Coordination

GBNRTC referred to TCRP's report 105, "Strategies to Increase Coordination of Transportation Services for the Transportation Disadvantaged", as a source for identifying strategies that could be used in this region to enhance the coordination of available transportation resources. Among those that seem readily adaptable to this region are:

- **Mobility Management/Transportation Brokerage** – Generally defined, it is "an intermediary organization that contracts with a sponsor agency to provide transportation, and in turn subcontracts with a variety of public, nonprofit, or private carriers to operate the service". The broker or mobility manager may be a public agency, a private nonprofit agency or a professional management company. There are many variations on this general description, and interested parties can tailor mobility management policies to their service needs and purposes. Typical mobility management functions can include carrier procurement; contract management; customer registration; record keeping and accounting; and quality assurance and customer relations. Other mobility management activities can include eligibility determination; scrip-voucher sales; trip reservations; assignment of trips to providers or vehicle



scheduling and dispatching; provision or procurement of vehicles, maintenance, fuel, insurance or training services; drug and alcohol testing; information and referral services; and the operation of vehicles.

- **Coalition Building** – Partnerships organized around transportation issues that include human service agencies; non-profit transportation providers; public transportation providers, both fixed-route and paratransit; private transportation providers; elected officials, MPOs and other government agencies; business organizations; educational institutions; and any other interested stakeholders can be most effective in collaborating on funding opportunities, increasing public awareness of transportation issues and finding solutions, and influencing public policy changes to assist transportation issues.
- **Use of Technology** – Intelligent Transportation Systems (ITS), Geographic Information Systems (GIS) and other technology systems can be useful in coordinating transportation operations and scheduling rides, managing information and improving quality of service for clientele.
- **Nontraditional funding sources** – Beyond traditional

federal and grant funding sources, public and private foundations can be explored as sources for funds to implement coordination activities.

- **New or enhanced public transit/paratransit routes.**
- **Alternate delivery systems for service** – Delivery methods that can be explored as possibilities to enhance service that is already available: feeder services; tailored service routes between major residential areas and in-demand destinations; deviated fixed-route service; subsidized taxi programs; and auto ownership programs.

As a further possibility for the region, GBNRTC is in the process of initiating a website that will offer transportation options/alternatives for interested registrants. While offering potential user options for transit use, bicycling, and walking, the main feature of the website will be a carpool-matching program. Ride seekers will be able to register their trip profile information and then request carpool matches for their commute and/or other rides. GBNRTC could eventually tailor the website to accommodate the transportation needs of the HSTP target population.



Environmental Planning Considerations

SAFETEA-LU includes several provisions intended to enhance the consideration of environmental issues and impacts within the transportation planning process, and encourage the use of the products from planning in the NEPA process. Environmental considerations in planning requires certain elements and activities to be included in the development of long-range transportation plans, including:

- Consultations with resource agencies, such as those responsible for land-use management, natural resources, environmental protection, conservation and historic preservation; which shall involve, as appropriate, comparisons of resource maps and inventories
- Discussion of potential environmental mitigation activities
- Participation plans that identify a process for stakeholder involvement
- Visualization of proposed transportation strategies where practicable

This approach to transportation decision-making considers environmental, community, and economic goals early in the planning stage and carries them through project development, design, and construction. This can lead to a more effective decision-making process that minimizes duplication of effort, promotes environmental stewardship, and reduces delays in project implementation.

To address this new requirement, the GBNRTC developed an agency consultation process that included the following steps:

Step One: Develop Partnerships

The MPO contacted Federal, State, Local, and Tribal agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation to provide them with information regarding the MPO and its activities and request their participation in the agency consultation process.

SAFETEA-LU requires an MPO to discuss with Federal, State, and Tribal land management, wildlife, and regulatory agencies potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the transportation plan.



Step Two: Identify and Integrate Plans

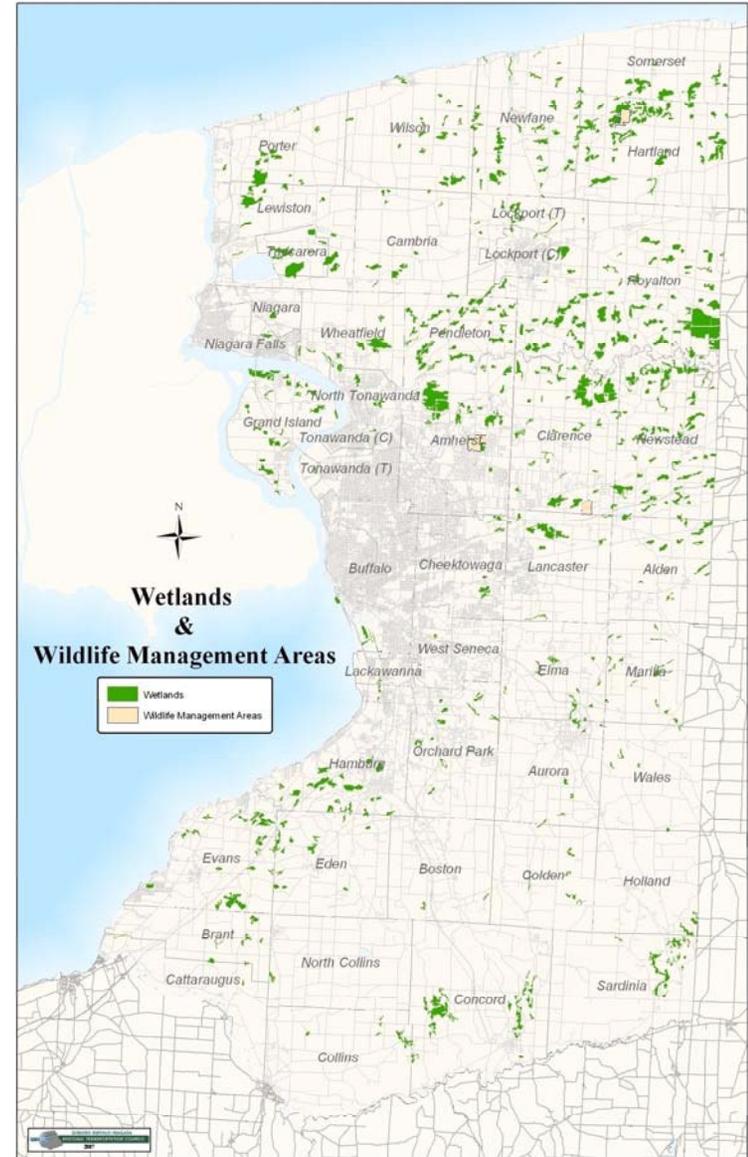
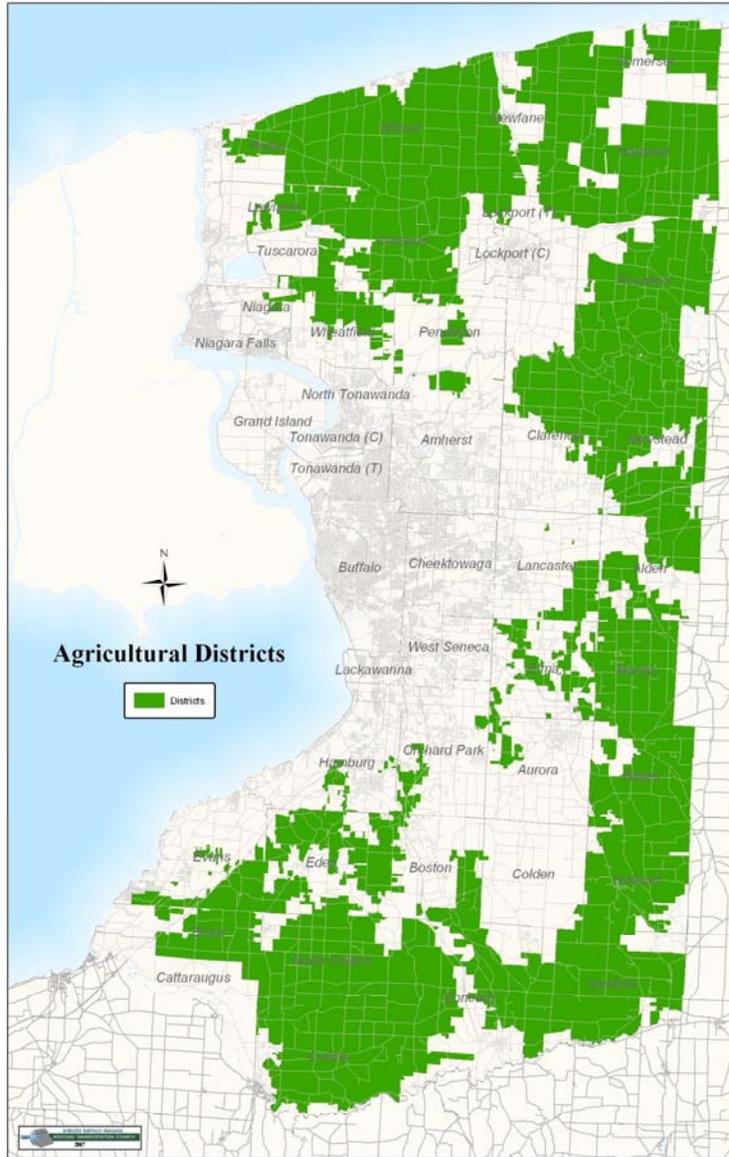
Consulting agencies provided the MPO with available data, maps, and plans as related to cultural, natural, and historic resources in the region. The GBNRTC incorporated this data and produced a number of maps (see following pages) that identified ecologically significant areas including wetlands, agricultural lands, Wildlife Management Areas (WMA), and parks, as well as areas of historic and cultural importance. The materials gathered through this process were documented by the GBNRTC and reviewed by consulting agencies.

Step Three: Mitigation Activities Discussions

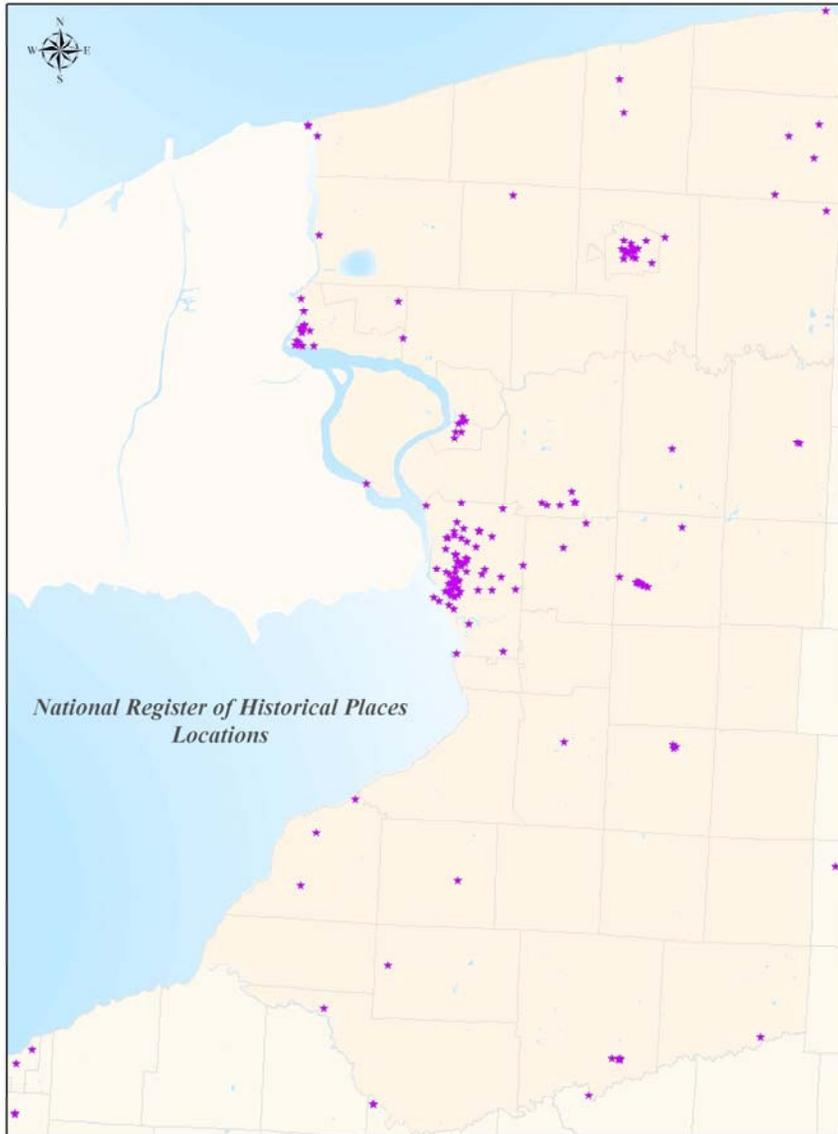
The MPO initiated discussions with consulting agencies regarding possible mitigation activities identified in the *Framework for Regional Growth in Erie and Niagara Counties*. Consulting agencies were asked to review materials and provide feedback to the MPO. Agencies identified for the initial agency consultation include:

- NYS Office of Parks, Recreation, and Historic Preservation
- NYS Department of Environmental Conservation (DEC)
- NYS Department of Agriculture and Markets
- NYS Historic Preservation Office (NYSHPO)
- Department of State - Division of Coastal Resources
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- Niagara County Soil & Water Conservation District (SWCD)
- Erie County Soil & Water Conservation District (SWCD)
- Erie County Environmental Management Council
- Niagara County Environmental Management Council
- Seneca Nation of Indians

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region



Regional Natural and Historic Resources Inventory

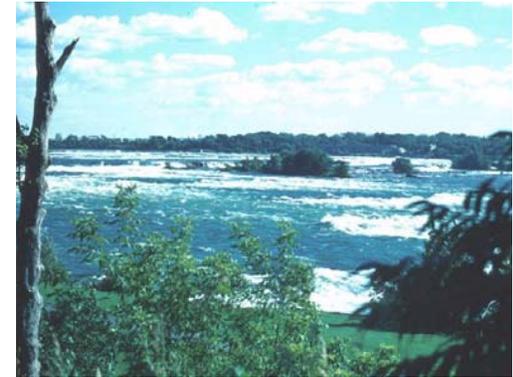
The GBNRTC referenced the *Framework for Regional Growth for the Erie and Niagara Region*, which documents an extensive inventory of the natural and cultural resources in the region. The following descriptions and maps are documented in the Framework Plan.

The Great Lakes: Lake Erie and Lake Ontario are the largest and perhaps the most significant features in the region, next to the Falls. They physically define the northern and southwestern features edges of the region and are also international borders between the US and Canada. While there is not great fluctuation in lake water levels, some shorelines are periodically threatened by erosion and wave activity.

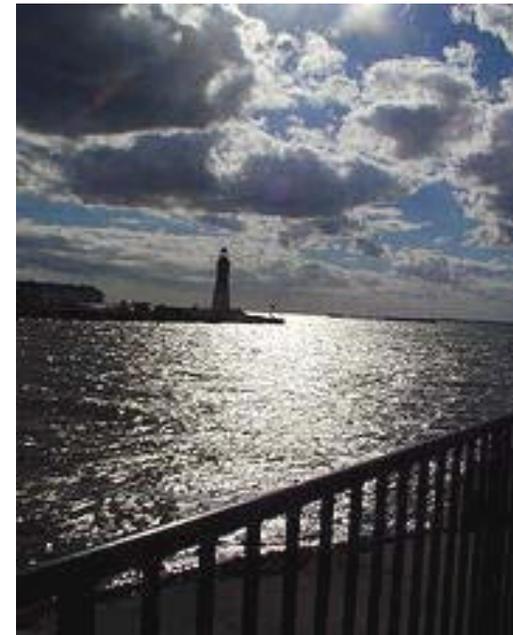
Rivers and streams: The Niagara River is the most significant within the region due to its size and location to the Falls. It flows northward, draining Lake Erie into Lake Ontario, and is also the international border. Cattaraugus Creek bounds Erie County on the south, while Tonawanda Creek separates Erie and Niagara Counties. The Erie Canal, which extends from Tonawanda Creek toward the east, is a series of man-made locks which step the canal down the Niagara Escarpment to Lockport. The construction of this canal interrupted the natural flow of numerous small creek and streams.

Floodplains and Riparian Corridors: Flooding is common along many of the region's rivers and streams. 100-year floodplains occur along every river and stream in the region. Large areas along the eastern stretch of the Tonawanda Creek are particularly prone to flooding. The fluctuating water level can be beneficial for wildlife habitat and poses significant constraints to development; these waterways are sensitive riparian corridors. There are excessive rates of surface storm water runoff.

Steep Slopes: Following the topography of the southeastern portion of Erie County, the pattern of steep slopes (greater than 20% grade) exists within nearly every valley. The only additional site within the region that has significant and continuous areas of steep slopes is along the western portion of the escarpment.



Niagara River



Lake Erie

2030 Long-Range Transportation Plan for the Erie and Niagara Counties Region

Soils: Prime agricultural soils are evident throughout much of the region. Particular locations exist along the Lake Ontario Shore, along the escarpment, on Grand Island, and in a very wide band from Tonawanda Creek, south and west to the foothills in southern Erie County and Lake Erie.

Forest Coverage: Large stands of woods exist in almost every part of the region, with the exception of the most densely urbanized areas, particularly around Buffalo; and throughout rural areas where prime agricultural soils exist. Many flood prone areas and riparian corridors also contain significant areas of forest cover, greater than a quarter mile.

Wetlands: Large expanses of wetlands exist throughout the region. Low-lying areas along streams and creeks, as well as some shoreline areas of Lake Erie and Lake Ontario, contain large expanses of wetlands designated by the US Fish and Wildlife Service and the NYSDEC. In some locations, large continuous wetlands over 150 acres dominate the landscape. Other significant wetland areas exist where numerous clusters of smaller wetlands occur within 150-acre areas. Wetland areas are especially important both for natural flood control and as wildlife habitats.

Cultural/Heritage Assets Inventory

The map on the following page provides a preliminary definition of areas with unique concentrations of natural, recreational, scenic, and cultural resources. These areas include major lake and riverfronts, the Erie Canal Corridor, and the Niagara Escarpment. Such initiatives as the Niagara River Greenway Plan and the Shoreline Plan aim to enhance areas along the Niagara River by



Natural Systems: Framework for Regional Growth



providing greater access to the waterfront and preserving green areas along the Niagara River Corridor.

Historic Resources Inventory

The New York State Office of Parks, Recreation, and Historic Preservation provided the GBNRTC with an inventory of the Historical Places on the National Register that includes over 160 listings. Areas with historic significance in the region include Forest Lawn Cemetery, the Roycroft Campus, the Allentown Historic District, the Colonial Niagara Historic District--Lower Landing Archeological District, and the Lockport Industrial District to name a few.

New York State Open Space Conservation Plan

The 2006 New York State Open Space Conservation Plan prepared by the Department of Environmental Conservation (NYSDEC), the Office of Parks, Recreation and Historic Preservation and the Department of State was reviewed by the GBNRTC for comparison to the transportation plan. The NYS Open Space Conservation Plan identifies a number of projects in our region aimed at protecting and preserving our natural resources. Below is a list of projects and activities identified:

- **Ecological Communities/Habitat Diversity**
This project is intended to provide protection by easement or acquisition of habitats, which are necessary to maintain the ecological diversity of area. The need may be to provide for flora or fauna, significant habitats or geological sites. Specific examples include but are not limited to sites along



Heritage Assets: Framework for Regional Growth