## CHAPTER 2: PROJECT IDENTIFICATION, EVOLUTION, CONDITIONS AND NEEDS, AND OBJECTIVES

### 2.1 Project Identification

### 2.1.1 Project Type

The STC/BOH Project includes road improvements along Route 5/Fuhrmann Boulevard corridor from the Buffalo Skyway touchdown (and Times Beach) to Milestrip Road (Route 179); along Ohio Street from Michigan Avenue to Route 5; and in the vicinity of a former rail corridor extending from I-190 Seneca Street interchange to Tifft Street. The project components include the following project types as identified in NYSDOT's Design Procedure Manual:

- Highway Work, including resurfacing, restoration, and rehabilitation (3R) and reconstruction/new construction;
- Bridge Work, including bridge rehabilitation and new bridge construction; and
- Other Work, including miscellaneous items such as construction of multipurpose trails, in-road transit facilities, and landscape improvements.


Route 5 looking north toward Downtown Buffalo

### 2.1.2 Project Location/Description

Figure 2.1-1 depicts the project area. The boundaries of the project area were based on those used for the 1998 Major Investment Study (MIS) for the STC/BOH Project, revised to include those land uses, transportation facilities, and environmental features that could be directly or indirectly affected by proposed Build Alternatives. This area is generally bounded on the north by I-190, on the east by I-90, on the south by Milestrip Road, and on the west by Lake Erie. Major transportation facilities in the project area include:

- The Buffalo Skyway/Route 5/Fuhrmann Boulevard complex, which provides north and south access (i.e., designated as Route 5 eastbound and westbound, respectively) through the project area;
- Ohio Street, a minor arterial road providing local access between Route 5 and downtown Buffalo, passing through the City of Buffalo's Old First Ward neighborhood;
- US Route 62 (South Park Avenue), which provides local north-south access through the project area, passing through South Buffalo, Lackawanna, Blasdell, and Hamburg;
- A series of east-west roads intersecting with Route 5, including Milestrip Road, Ridge Road, and Tifft Street;
- Portions of major interstate highways administered by the New York State Thruway Authority (i.e., I-90 and I-190);
- A series of north/south rail lines along the CSX Railroad corridor, which provide long haul services and serve industrial sites in the project area; and
- Marine facilities, including Gateway Metroport (i.e., the recently designated Port of Buffalo), the Union Ship Canal, NFTA Small Boat Harbor, and several marina facilities along the Lake Erie waterfront and the Buffalo River.

Whereas the project area's boundaries were established based upon the presumed extent of potential transportation effects, a smaller area has been identified where actual physical improvements are anticipated in selected locations. This area is generally located along Route 5 and Fuhrmann Boulevard (from the Buffalo Skyway touchdown/Times Beach area to Milestrip Road); Tifft Street; Ohio Street (from Michigan Avenue to Route 5); and a former rail corridor in South Buffalo (i.e., passing through the former LTV/Republic Steel site and the Exxon-Mobil facility).

### 2.2 Project Evolution

### 2.2.1 Planning Efforts

The STC/BOH Project was originally considered by NYSDOT through the completion of the Southtowns Connector Feasibility Study in July 1991. It was also included in the Horizons Waterfront Action Plan, prepared by the Horizons Waterfront Commission in January 1992.

The 1991 feasibility study considered the potential economic effects of a parallel "Southtowns Connector" limited-access highway along the CSX railroad corridor (roughly one kilometer [0.6 miles] inland from Route 5). This new highway would have replaced Route 5's role as a


|  | Project <br> Study Area <br> Boundaries |
| :--- | :--- |
|  | Area of <br> Anticipated <br> Improvements |



Figure 2.1-1
Project Location Map
Southtowns Connector/Buffalo Outer Harbor Project
regional through-traffic route, enabling a downgrading and removal of the embanked sections of Route 5 to create a "waterfront boulevard", as well as replacement of the Skyway Bridge with a tunnel connecting Downtown Buffalo and I-190 to the new highway corridor. This concept also included a proposed new highway through the City of Lackawanna (the "Lackawanna Connector") that would connect the Southtowns Connector and Route 5 to I-90 at its US Route 219 interchange.

The overall goal of the project was to facilitate redevelopment of the Lake Erie waterfront, particularly on sites where large-scale industrial establishments had been closed or had significantly declined in the mid- to late 1980s (e.g., Niagara Frontier Transportation Authority's [NFTA's] Port of Buffalo lands along Fuhrmann Boulevard in the Buffalo Outer Harbor, Bethlehem Steel Plant, Hanna Furnace Plant near the Union Ship Canal). The configuration and access system of the Route 5 corridor was viewed as primarily designed for trucks to serve these types of heavy industrial establishments. It was considered that the configuration of Route 5 impedes the ability to recapture waterfront lands for new recreation, entertainment, commercial, and office park/light industrial uses, given that:

- It occupies a significantly wide swath of land along the waterfront;
- The highway blocks views to the water because of the elevated alignment;
- The highway's adjoining local road system provides confusing access to waterfront sites for non-truck users; and
- The corridor lacks any coordinated/safe access for other transportation modes (pedestrian, bicycle, transit) that would serve as a key amenity for facilitating redevelopment for light industrial or non-industrial uses.

The approach considered in 1991 Feasibility Study involved fully "relocating" the entire highvolume transportation system capacity of the Route 5 corridor inland to the CSX railroad corridor to allow for the reconfiguration of roadways providing local access along the Lake Erie waterfront. The creation of a new inland Southtowns Connector highway system also opened opportunities for it to link with other limited access highways in the region, such as I-90, I-190, and Route 219 (i.e., under consideration for extension to serve trade corridor objectives). In this context, the project represented a major reconfiguration of the regional road network.

In 1998, in accordance with the requirements set forth in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), NYSDOT prepared Major Investment Study (MIS) to assess potential alternatives growing from those examined in the 1991 Feasibility Study. The MIS involved an extensive public and local agency involvement process for formulating a series of locally preferred alternatives to be progressed into subsequent analysis/documentation in a DR/EIS. Starting with 29 initial alternatives for improvement, the MIS recommended the
following Build Alternatives be assessed in a DR/EIS (in addition to Null and transportation system management [TSM] alternatives):

- Construction of a new expressway utilizing the CSX Railroad corridor, extending from Milestrip Road to I-190 near the Seneca Street interchange in South Buffalo, construction of a Lackawanna Connector expressway from NYS Route 5 to I-90 near the US Route 219 interchange, and downgrading of Route 5 to a waterfront boulevard;
- Improvement of existing facilities, involving widening of I-190 from Church Street in Downtown Buffalo to the I-90 interchange, and widening of I-90 from the I-190 interchange to the Lackawanna Toll Plaza, as well as construction of the Lackawanna Connector and downgrading of Route 5; and
- Constructing a new transit-way (i.e., exclusive bus-way or light rail extension) utilizing the existing rail corridor and construction of the Lackawanna Connector.

Subsequently, in September 1998, the designated Metropolitan Planning Organization, then the Niagara Frontier Transportation Committee (now known as the Greater Buffalo-Niagara Regional Transportation Council [GBNRTC]) approved these alternatives for inclusion into the region's 2010 Transportation System Plan.

### 2.2.2 1999 Design Report/Environmental Impact Statement Process

The DR/EIS process to assess alternatives remaining from the MIS process began in February 1999 with the publication of a Notice of Intent to Prepare a DR/DEIS in the Federal Register. The DR/EIS Scoping process was initiated to determine the scope of issues to be addressed and to identify and focus on the issues of most importance to the community.

Public Scoping Meetings were held in February 1999 followed by additional public involvement activities through November 1999. All comments received during this scoping process were summarized in a Scoping Report dated December 1999.

### 2.2.3 Refocusing the Project

The 1999 Scoping Report, and in particular the project objectives and alternatives, were the subject of a series of meetings of the established Steering Committee for the STC/BOH Project in early 2000. In addition, public informational meetings on the Build Alternatives to be considered in the DR/DEIS were held in February and May 2000. Comments received from agencies and individuals during this period indicated a growing concern that the project objectives did not focus on the goals of the community; that the Build Alternatives being considered would have unacceptable impacts on neighborhoods and the environment; and that the Build Alternatives were inconsistent with local planning efforts. Local agencies and the public also expressed concern that the estimated costs of the Build Alternatives (between $\$ 750$
million and $\$ 1$ billion) were beyond the ability of the region to successfully fund and implement in a reasonable time frame.

Also during this period, a focused initiative to redevelop what are now referred to as "brownfields" sites along the Lake Erie waterfront began to gain growing importance. Targeted redevelopment sites within the project area had evolved from those considered in 1991, and include the South Buffalo Redevelopment Area (i.e., comprising the former Hanna Furnace site in the Union Ship Canal area and former LTV/Republic Steel site), NFTA's now-former Port of Buffalo lands, and unused portions of the former Bethlehem Steel complex in Lackawanna. Local planning efforts are now focusing on the redevelopment of these areas as part of a U.S. Environmental Protection Agency (EPA) Brownfields pilot initiative to return these sites to economic use. Agencies have insisted that improved road access between these sites and the interstate system is needed to achieve full economic benefits for the community. These agencies contended that construction of a new arterial roadway (rather than a limited-access facility) connecting I-190 (at the Seneca Street interchange) to Tifft Street along with improvements to the NYS Route 5/Fuhrmann Boulevard complex and Ohio Street to make their more amenable to local access and pedestrian/bicycle/transit modes would be sufficient to accomplish the needed access improvements.

In response to these issues, the STC/BOH Project Steering Committee met on May 30, 2000 to discuss refocusing the efforts on the Project to more modest objectives and associated smallerscale alternatives. The consensus of the Committee reached at the meeting is that the STC/BOH Project should refocus its primary objectives to address neighborhood/community concerns and growing importance of brownfields development objectives in the Study Area. In February 2001, NYSDOT issued a report documenting this change in scope, entitled the Southtowns Connector Statement of Purpose, A Re-focusing of Effort (NYSDOT 2001). The report listed the following revised objectives for the DR/DEIS (also see Section 2.4):

- Improving road access to specific redevelopment sites within the corridor as delineated by current local planning efforts and the EPA Brownfields initiative. These sites are the former LTV/Republic Steel site, the Union Ship Canal site, the former Bethlehem Steel site and the NFTA's Buffalo Outer Harbor Lands;
- Reconfiguring the Route 5/Fuhrmann Boulevard/Ohio Street complex along the Buffalo Outer Harbor into a system designed to be more compatible with the proposed land uses included in local plans, consisting of either a wide, at-grade boulevard or a combination arterial/parallel access road system;
- Providing adequate service for commuter/commercial traffic between the Southtowns and Downtown Buffalo; and
- Improving access to the area for other modes including transit, bicycles and pedestrians (possibly including an industrial heritage trail).

It should be noted that the overall goal of the project remains the same as that envisioned in the original 1991 Feasibility Study - that being facilitating economic development of former industrial lands by reconfiguring access along the Route 5 corridor to reduce the impediments to local access to waterfront sites, as well as providing access for multiple transportation modes. However, it did refine the "approach" to how this goal would be achieved, by focusing on changes to the existing road system and selected new facilities, rather than fully relocating the transportation capacity of the Route 5 corridor to an inland location. This change was viewed as providing a opportunity to realize a more affordable, "do-able" project that could be implemented in phases in a reasonable time horizon. In turn, this refined approach recognized that the region's current network of high-volume, limited-access highway corridors in the vicinity of the City of Buffalo (e.g., I-90, I-190, Route 219, etc.) would remain essentially the same and that future investments (as part of efforts separate from this project) would focus on improving capacity of this network. Thus, while the STC/BOH Project would potentially affect certain components of the regional highway network, the report refined the objectives of the project insofar as it would not in itself involve a major addition or a reconfiguration of the regional road network.

Accordingly, the report stated that the following alternatives are not consistent with the project refined approach and objectives, are not consistent with local planning efforts, and would not be further evaluated as part of the DR/DEIS:

- Any new limited-access freeway/expressway facilities;
- A Lackawanna Connector (either as an expressway or arterial road facility);
- A new dedicated transitway (i.e., only in the context of this project and its specific objectives - such an effort could be advanced as a separate and distinct project); and
- Widening of the existing Interstate System (I-90 and I-190).

The report stated that a series of transportation components that are consistent with these revised objectives would be further evaluated. These included:

- A new arterial road through the former LTV/Republic Steel site connecting I-190 (at an improved interchange in the Seneca/Elk/Bailey area) to Tifft Street, aligned east of the existing CSX railroad corridor;
- Improvements/enhancements to Tifft Street between the new arterial and Route 5;
- Reconfiguration of the Route 5/Fuhrmann Boulevard complex into a landscaped lakefront arterial system providing improved local access to waterfront properties from the Buffalo Skyway touchdown to Milestrip Road, while maintaining adequate service between the Southtowns and Downtown Buffalo;
- Reconstruction of Ohio Street as a landscaped riverfront arterial; and
- Improved bus service, park \& ride facilities, and improved bicycle/pedestrian facilities, including an Industrial Heritage Trail.

Aspects of the changes in the Project's objectives and components documented in NYSDOT's February 2001 Statement of Purpose were included in the GBNRTC's 2025 Long Range Transportation Plan (i.e., the update of the agency's 2010 Transportation System Plan), also adopted in February 2001.

Accordingly, FHWA and NYSDOT issued a revised Notice of Intent to prepare a DR/DEIS in September 2001 along with a revised Draft Scoping Report outlining the new focus of the STC/BOH Project. A new round of Public Scoping Meetings was conducted in September and October 2001. Overall, comments received during this process indicated a positive response to the new focus of the STC/BOH Project.

### 2.3 Conditions and Needs

### 2.3.1 Transportation Conditions, Deficiencies, and Engineering Considerations

This section presents information on the existing features and conditions of road/transportation infrastructure in the project area; and presents travel forecasts and associated operations for the future null alternative conditions (i.e., future conditions without proposed improvements under the STC/BOH Project). Only summarized data is presented in this section; Appendix C: Traffic and Accident Report should be referenced for more detailed information on existing transportation elements. Information on planned development in the project area is discussed in detail within Appendix L: Economic Assessment.

### 2.3.1.1 Functional Classification and National Highway System (NHS)

Functional classification is a planning tool that federal, state and local transportation agencies have used since the late 1960's. The FHWA developed this system of classifying all streets, roads, and highways according to their function to serve as a basis for distributing federal transportation funds. Classifications in this system are formulated for both urban and rural roadway systems. All roads in the project area are classified under the urban system in the following categories based upon a descending order of importance:

- Principal arterial expressways;
- Principal arterial roads;
- Minor arterial roads;
- Collector roads, and
- Local roads.

Roads with a classification of collector road or higher are eligible for Federal Aid; all major roads within the project area are Federal Aid eligible. Figure 2.3-1 depicts functional classifications for major roads within the project area.

Route 5 has two functional classifications within the project area. It is classified as an arterial expressway from I-190 to just south of Ridge Road, where it transitions to a principal arterial road. Similarly, Milestrip Road (NYS Route 179) is classified as an arterial expressway between Route 5 and South Park Avenue (US Route 62), where it transitions to a principal arterial road. Other principal arterial roads in the project area include Bailey Avenue and Seneca Street.

Minor arterial roads in the project area include Fuhrmann Boulevard (North and South, which run parallel to Route 5 principal arterial expressway segments), Ohio Street, Louisiana Street, Smith Street, Keating Street, Elk Street (between Keating and Seneca Streets), Tifft Street, and Ridge Road. South Park Avenue is classified as a minor arterial road from Michigan Avenue to Bailey Avenue, where it transitions into a principal arterial south to Milestrip Road.

Collector streets within the project study area include Lake Avenue, Hopkins Street, and Elk Street (between Babcock and Keating Streets). Collector streets provide a less highly developed level of service at lower speeds for shorter distances by collecting traffic from local roads and connecting them with the arterial system.

Route 5 and Milestrip Road are also designated as part of the NHS. The NHS is a system of primary roads that are of national importance. The NHS was created as part of the 1991 ISTEA legislation. FHWA approved the NHS system in September 1993.

Finally, the following highways in the project area are listed as "Access" highways on the National Network of Truck Access Highways:

- I-90;
- I-190;
- US Route 62 (South Park Avenue): Ridge Road to NYS Route 322;
- US Route 219 (Southern Expressway): I-90 to NYS Route 39;
- NYS Route 5: NYS Route 179 (Milestrip Road) to I-190;
- NYS Route 16 (Seneca Street): NYS Rte 33 (Elm Street) to Louisiana Street;


FUNCTIONAL CLASSIFICATION

## $\longrightarrow$ Interstate

Principal Arterial Expressway
— Principal Arterial Street

- Minor Arterial
- Collector

Local Road
FIGURE 2.3-1
Functional Classification

- NYS Route 179 (Milestrip Road): NYS Route 5 to I-90;
- Lake Avenue: NYS Route 5 to a point 3,000 feet east of Route 5;
- Ohio Street: NYS Route 5 to Ganson Street;
- Louisiana Street: Seneca Street to South Park Avenue; and
- South Park Avenue: Louisiana Street to South Michigan Avenue.


### 2.3.1.2 Ownership and Maintenance Jurisdiction

Ownership and maintenance jurisdiction varies among roads in the project area. Route 5 and Milestrip Road are owned and maintained by NYSDOT. Lake Avenue is owned and maintained by Erie County, while the City of Lackawanna owns and maintains Ridge Road. The City of Buffalo owns and maintains Ohio Street, Tifft Street, and other collector streets within the project area. Fuhrmann Boulevard (North and South) is also owned and maintained by the City of Buffalo; but given its interrelationship with Route 5, maintenance responsibilities are coordinated with NYSDOT.

### 2.3.1.3 Culture, Terrain, and Climatic Conditions

## Culture

The Buffalo-Niagara region (and the project area in particular) has enjoyed a rich industrial and shipping history. Buffalo's location at the terminus of the Erie Canal made it a major shipping center for goods moving to and from the Midwest; later in its history the addition of an extensive railroad network supported a thriving metals industry. Shipping activity declined following the opening of the St. Lawrence Seaway in 1954. Meanwhile, changes in industrial location and structure, particularly in the basic metals industries, resulted in significant declines in the region's manufacturing investment and employment. These declines were comparable in magnitude to those in other parts of the Northeast. Since 1969, the Buffalo-Niagara region has lost over half of its heavy manufacturing employment. Industrial disinvestments have left large areas of vacant and/or underutilized land potentially suitable for redevelopment, much of it along the Lake Erie waterfront.

The project area's land use patterns reflect both past development patterns and new emerging uses. The Route 5/Furhmann Boulevard complex passes through a portion of the southern part of the City of Buffalo, the City of Lackawanna, and the Town of Hamburg. A majority of the land within the project area either is currently or was formerly used for heavy industrial and port purposes.

Smaller portions of the project area contain newer, reclaimed land areas used for parks and recreational facilities (e.g., Tifft Nature Preserve, NFTA Small Boat Harbor, Gallagher Beach, Woodlawn Beach State Park). Residential land uses are located in older neighborhoods clustered
near former industrial locations, east of Route 5/Fuhrmann Boulevard corridor (e.g., Lackawanna's $1^{\text {st }}$ Ward and Bethlehem Park neighborhoods), in and around Ohio Street (Buffalo's Old First Ward and Valley neighborhoods), and west of Route 5 in the Woodlawn section of Hamburg. Pockets of commercial development, large tracts of vacant land, and the CSX rail corridor comprise remaining land uses in the project area.

## Terrain

The project area is situated within the Erie Lake Plain physiographic province, which exhibits little significant relief except for narrow ravines carved by the area's streams. Elevations within this physiographic province range from 153 to 275 meters ( 570 to 900 feet) above mean sea level (AMSL). Elevations within the project study area range in general from approximately 177 meters ( 575 feet) to 189 meters ( 620 feet) AMSL.

The immediate project area is considered primarily an urban environment with large areas of vacant land, interspersed with grassed areas. It is part of a considerably flat coastal plain along the Lake Erie shore. There are no significant hills or other similar feature within the project area with the exception of a single portion of the Tifft Nature Preserve located east of Route 5 (i.e., a closed landfill used for recreational purposes), which is similar in form and setting to a bluff.

## Climatic Conditions

The Buffalo-Niagara Region experiences a fairly humid, continental-type climate, but with definite "maritime" characteristics due to strong modification from the Great Lakes (NOAA 2003). The proximity of Lake Erie to the project area makes for cooler summers and more severe winter conditions than the surrounding inland areas. Monthly mean temperatures fall below 1 degrees Celsius ( ${ }^{\circ} \mathrm{C}$ ) ( 30 degrees Fahrenheit [ ${ }^{\circ} \mathrm{F}$ ]) from December through March, and rise above $16^{\circ} \mathrm{C}\left(60^{\circ} \mathrm{F}\right)$ June through September. The study area is subject to the free movement of air across the Lake Erie surface, and thus temperatures could vary by as much as $5.5^{\circ}-10^{\circ} \mathrm{C}$ $\left(10^{\circ}-20^{\circ} \mathrm{F}\right)$ colder during the winter, and $2.5-5.5^{\circ} \mathrm{C}\left(5^{\circ}-10^{\circ} \mathrm{F}\right)$ cooler during the summer.

## Snowfall Conditions

Average annual snowfall accumulation for the Buffalo-Niagara Region is 246 centimeters ( 97 inches), based on records maintained by the National Weather Service since 1885 (NOAA 2003). The months of December through and including February average the highest snowfall amounts ranging from 61 to 43 centimeters ( 24 to 17 inches) through the period. The maximum snowfall accumulation in a single year occurred in the 1976-1977 season when 505 centimeters (199 inches) fell, most of it during the period of December to January; the result mostly of the "Blizzard of ' 77 ". Most recently, during December 2002-03 season, 282 centimeters (111 inches) of snow fell across the Buffalo-Niagara region (NOAA, 2003).

The state of Lake Erie's water temperature and surface conditions have a direct affect upon the total amount of snowfall for adjacent lands in the project area. Lake effect snowfall events can sometimes total up to one meter (three feet) in a single snowfall period, primarily in the late fall/early winter months when the lake's surface has not yet frozen. As winter progresses into
the colder months of January through March, however, snowfall totals begin to diminish with the increase in the area of the lake's frozen surface.

## Potential Problem Areas

Blowing and drifting snow is the dominant factor in determining the variability of winter weather conditions within the project area. Lakefront areas along the Route 5/Fuhrmann Boulevard corridor are particularly susceptible to periodic white out conditions from blowing snow during the course of major snowfall events. NYSDOT has implemented a travel advisory system to reroute traffic from the Buffalo Skyway and Route 5 during severe weather events, particular when white out conditions exist. Real-time advisory signs are posted along all entry points to the Skyway and Route 5 (i.e., along Route 5 within Woodlawn, in Downtown Buffalo, and along I-190) directing travelers to appropriate


Snow Drift on Fuhrmann Boulevard along NFTA Outer Harbor Lands routes during such events.

Areas within the project area are also susceptible to drifting snow or ground blizzards during winter months (NYSDOT, 1987). These are distinguished from whiteout conditions insofar as they tend to occur and continue after a major snow event has ended. Visibility issues and accumulation of drifting snow from such conditions often require NYSDOT and local agencies to undertake more aggressive maintenance activities along the Route 5 corridor, including increased snow removal operations and salt application.

Figure 2.3-2 depicts areas along the Route 5/Fuhrmann Boulevard corridor that are particularly prone to problems from drifting snow. Snow drift or ground blizzard conditions generally occur in areas where there are a lack of large structures or tree stands areas to shield winds off Lake Erie. These conditions exist along Fuhrmann Boulevard along the NFTA's Outer Harbor lands and in areas where the water's edge is relatively close to adjoining roads, such as in the vicinity of the NFTA Boat Harbor and Gallagher Beach. In these areas, small obstructions (e.g., fences, guide rails, railings, and even smaller landscape plantings) tend reduce the velocity of windswept snow, causing them to deposit on the leeward side (i.e. opposite the wind direction) of such obstructions to create drifts.

The severity of adverse conditions in these areas is related existing vertical elevation of roads and availability of sufficient areas to contain deposition of snow outside of road surfaces. Portions of Route 5 itself in the project area are elevated on embankment, intended to allow the road surface to be "scoured" from winds off the lake, reducing problems with snow accumulation. However, along at-grade segments of Fuhrmann Boulevard South that
immediately abut Route 5, the absence of sufficient areas for snow accumulation result in the road surface being periodically subject to snow drift.

It is reasonable to assume that such conditions would diminish somewhat in the future along the northernmost portions of Fuhrmann Boulevard (i.e., along the frontage of the NFTA Outer Harbor lands), as redevelopment activities occur that involves construction of buildings and structures that would further shield the roadway from lake winds (see Section 2.3.1.24). Such is not the case for segments of Fuhrmann Boulevard along the NFTA Boat Harbor and Gallagher Beach. In these segments, the water's edge almost immediately abuts the road edge of Fuhrmann Boulevard and Fuhrmann Boulevard almost directly abuts the edge of Route 5, with little room for creating areas for snow accumulation.

### 2.3.1.4 Control of Access

Access control is present along Route 5 between the I-190 and Ridge Road interchanges, through a system of slip ramps to/from Fuhrmann Boulevard North and South, Tifft Street, and Ridge Road. Access is also controlled from land areas fronting upon slip ramps, particularly in the location of Ridge Road off ramps from Route 5 within the City of Lackawanna. Controlled access is also present along Milestrip Road between Route 5 and South Park Avenue and along the entire lengths of I-90 and I-190.

Uncontrolled access exists along Route 5 between Ridge Road and Milestrip Road interchanges, and along all other road segments in the project area, involving at grade intersections and driveways. Not all Route 5 driveways in the project area conform to NYSDOT's Policy and Standards for Entrances to State Highways (see Section 2.3.1.15).

### 2.3.1.5 Existing Highway Sections

Table 2.3-1 lists descriptive information about the roadways within the project area. Information presented includes: length of each roadway segment; pavement width; number of through lanes; and number of parking lanes. Additional highway information including shoulder width; right-of-way (ROW) width; roadway median type/width; width of clear zone; curb locations; and parking restriction data can be found in Appendix C: Traffic and Accident Report.

Overall, Route 5 is configured as a four-lane, elevated limited-access expressway between the Buffalo Skyway Bridge and Ridge Road, with Fuhrmann Boulevard operating as an intermittent frontage road to provide local access to adjoining properties along this segment. South of Ridge Road, Route 5 (Hamburg Turnpike) is aligned as an at-grade arterial, ranging from five to seven lanes (including a dedicated left-turn lane) through the City of Lackawanna and the Woodlawn section of Hamburg. Milestrip Road is also configured as a four-lane limited-access expressway between Route 5 and South Park Avenue. Other roadways in the project area are configured as at-grade urban streets, varying between two to four through lanes.

2.3.1.6 Abutting Highway Segments and Future Plans for Abutting Highway Segments

Detailed information for intersecting roadways within and adjacent to the project area is included in Appendix C: Traffic and Accident Report. Along the Route 5 corridor, Fuhrmann Boulevard intersects with West Michigan Avenue, Ohio Street, Tifft Street, and Ridge Road; South of Ridge Road, Route 5 intersects with Odell Street, Dona Street, Madison Avenue, and Lake Avenue. Along Ohio Street, intersections exist with Route 5, Ganson Street, Louisiana/St. Clair Street, Chicago Street, Miami Street, and Michigan Avenue.

One NYSDOT road project is scheduled within and extending beyond the project area (PIN 513415 Southtowns Corridor [LaSalle-Kane]). This involves mill and overlay and limited reconstruction on a portion of Route 5 from LaSalle Street in the vicinity of the Ford Motor Plant in Hamburg to Kane Street in the City of Lackawanna.

Other local road improvements are planned for three locations in the project area (see also 2.3.1.24):

- A new internal access road being implemented by the City of Buffalo for the Union Ship Canal Redevelopment Area, extending from Commerce Drive in the City of Lackawanna (in final design);
- NYSDOT's planned in-kind replacement of the Ridge Road Bridge passing over the CSX rail corridor in the City of Lackawanna (preliminary engineering completed); and
- A new truck access road proposed by the Town of Hamburg connecting Lake Avenue with Milestrip Road (programmed improvement, planning/design pending).

| Table 2.3-1 Existing Highway Sections |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Road/ Route | Segment | $\begin{aligned} & \text { Length } \\ & \text { km (miles) } \end{aligned}$ | Pavement Width m (ft) | \# Through Lanes | \# Parking Lanes |
| Route 5 | Milestrip to Lake | 0.57 (0.35) | 23.2 (76) | $\begin{gathered} 7(3 \mathrm{~EB}, 3 \mathrm{WB}, 1 \text { left turn } \\ \text { lane }) \end{gathered}$ | 1 EB any time 1 WB any time |
|  | Lake to Lackawanna City Line | 1.09 (0.68) | 23.2 (76) | 7 (3 EB, $3 \mathrm{WB}, 1$ left turn lane) | 0 EB any time 1 WB any time |
|  | Lackawanna City Line to Ridge | 2.57 (1.60) | 20.1 (66) | Varying from 5 (3 EB, 2 WB ) to 6 (3 EB, $2 \mathrm{WB}, 1$ left turn lane) | 0 any time |
|  | Ridge Road to I-190 | 6.28 (3.90) | 16.5 (54) | 4 (2 EB / 2 WB) | 0 any time |
| Fuhrmann Boulevard | Ridge to Buffalo City Line | 0.48 (0.30) | 15.2 (50) | 4 (2 NB / 2 SB ) | 0 any time |
|  | Buffalo City Line to Tifft | 0.93 (0.58) | 15.2 (50) | 4 (2 NB / 2 SB ) | 0 any time |
|  | Tifft to Ohio | 2.41 (1.50) | 15.2 (50) | 4 (2 NB / 2 SB) | 0 any time |
|  | Ohio to Rte 5 Interchange | 0.48 (0.30) | 15.2 (50) | 4 (2 NB / 2 SB ) | 0 any time |
|  | Rte 5 Interchange to Coast Guard Station | 2.11 (1.31) | 16.5 (54) | 4 (2 NB / 2 SB ) | 0 any time |
| South <br> Park <br> Avenue <br> (US Route <br> 62) | Ridge to Buffalo City Line | 0.16 (0.10) | 14.6 (48) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | $\begin{aligned} & 1 \mathrm{NB} \text { (restricted) } \\ & 1 \mathrm{SB} \text { (restricted) } \end{aligned}$ |
|  | Buffalo City Line to Tifft | 1.77 (1.10) | 14.6 (48) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | $\begin{aligned} & 1 \mathrm{NB} \text { (restricted) } \\ & 1 \mathrm{SB} \text { (restricted) } \end{aligned}$ |
|  | Tifft to Southside | 0.16 (0.10) | 14.3 (47) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | $\begin{aligned} & 1 \mathrm{NB} \text { (restricted) } \\ & 1 \mathrm{SB} \text { (restricted) } \end{aligned}$ |
|  | Southside to Bailey | 0.80 (0.50) | 14.3 (47) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | $\begin{aligned} & 1 \mathrm{NB} \text { (restricted) } \\ & 1 \mathrm{SB} \text { (restricted) } \end{aligned}$ |
|  | Bailey to Bertha | 1.28 (0.80) | 15.2 (50) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | $\begin{aligned} & 1 \mathrm{~EB} \text { (restricted) } \\ & 1 \mathrm{WB} \text { (restricted) } \end{aligned}$ |
|  | Bertha to Smith | 0.48 (0.30) | 15.2 (50) | 4 (2 WB/2 EB) | 0 any time |
|  | Smith to Elk | 0.40 (0.25) | 15.2 (50) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | $\begin{aligned} & 1 \mathrm{~EB} \text { (restricted) } \\ & 1 \mathrm{WB} \text { (restricted) } \\ & \hline \end{aligned}$ |
|  | Elk to Katherine | 0.40 (0.25) | 15.2 (50) | 4 (2 WB / 2 EB ) | 0 any time |
|  | Katherine to Hamburg | 0.16 (0.10) | 15.2 (50) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | $\begin{aligned} & 1 \mathrm{~EB} \text { (restricted) } \\ & 1 \text { WB (restricted) } \end{aligned}$ |
|  | Hamburg to Louisiana | 0.48 (0.30) | 14.9 (49) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | $\begin{aligned} & 1 \mathrm{~EB} \text { (restricted) } \\ & 1 \mathrm{WB} \text { (restricted) } \end{aligned}$ |
|  | Louisiana to Moore | 0.40 (0.25) | 13.1 (43) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 1 EB (restricted) 1 WB (restricted) |
|  | Moore to Michigan | 0.16 (0.10) | 13.1 (43) | 4 (2 WB / 2 EB ) | 0 any time |
| Ohio Street | Fuhrmann to Louisiana | 1.29 (0.80) | 13.1 (43) | 4 (2 NB / 2 SB ) | 0 any time |
|  | Louisiana to Chicago | 0.64 (0.40) | 13.7 (45) | 4 (2 NB / 2 SB) | 0 any time |
|  | Chicago to Michigan | 0.32 (0.20) | 11.6 (38) | 4 (2 NB / 2 SB) | 0 any time |
| Louisiana Street | Ohio to South Park | 0.97 (0.60) | 12.8 (42) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | $\begin{gathered} 1 \mathrm{~EB} \\ 1 \mathrm{WB} \end{gathered}$ |
| Smith <br> Street | South Park to Elk | 0.32 (0.20) | 11.6 (38) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | 0 NB anytime 1 SB (restricted) |
| Keating Street | Seneca to Elk | 0.16 (0.10) | 14.9 (49) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | 0 any time |


| Table 2.3-1 Existing Highway Sections |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Road/ Route | Segment | $\begin{aligned} & \text { Length } \\ & \text { km (miles) } \end{aligned}$ | Pavement Width m (ft) | \# Through Lanes | \# Parking Lanes |
| Bailey Avenue | South Park to McKinley | 0.32 (0.20) | 17.7 (58) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | 0 any time |
|  | McKinley to Elk | 0.48 (0.30) | 12.8 (42) | 4 (2 NB / 2 SB ) | 0 any time |
|  | Elk to Seneca | 0.23 (0.14) | 17.7 (58) | 5 (2 NB, 2 SB, 1 left turn lane) | 0 any time |
|  | Seneca to Clinton | 0.74 (0.46) | 15.8 (52) | 4 (2 NB / 2 SB ) | 0 any time |
| Hopkins Street | Tifft to South Park | 1.29 (0.80) | 12.2 (40) | $2(1 \mathrm{NB} / 1 \mathrm{SB})$ | $\begin{aligned} & 1 \mathrm{NB} \text { (restricted) } \\ & 1 \mathrm{SB} \text { (restricted) } \end{aligned}$ |
| Seneca Street | Elk to Bailey | 0.32 (0.20) | 12.8 (42) | 4 (2 WB / 2 EB ) | 0 any time |
|  | Bailey to Keating/ $\mathrm{I}-190$ | 0.16 (0.10) | 13.1 (43) | 2 (1 WB/1 EB) | 0 any time |
|  | Keating/I-190 to Hayes | 0.16 (0.10) | 14.6 (48) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 0 any time |
|  | Hayes to Babcock | 0.48 (0.30) | 14.6 (48) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 1 EB (restricted) 1 WB (restricted) |
| Elk Street | Babcock to Keating | 0.69 (0.43) | 12.8 (42) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 0 any time |
|  | Keating to Bailey | 0.16 (0.10) | 12.8 (42) | 3 (all EB) | 0 any time |
|  | Bailey to Seneca | 0.32 (0.20) | 12.2 (40) | 3 (all EB) | 0 any time |
| Tifft Street | Fuhrmann to Hopkins | 2.25 (1.40) | 13.4 (44) | 4 (2 WB / 2 EB ) | 0 any time |
|  | Hopkins to S Park | 0.64 (0.40) | 8.5 (28) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 0 WB any time 1 EB (restricted) |
| Ridge Road | Rte 5 to South Park | 2.19 (1.36) | 14.6 (48) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 1 WB (restricted) 1 EB (restricted) |
| Lake Avenue | Rte 5 to Conrail Tracks | 0.80 (0.50) | 9.1 (30) | $2(1 \mathrm{WB} / 1 \mathrm{~EB})$ | 0 any time |
| Milestrip <br> Road <br> (NYS <br> Route 179) | Rte 5 to South Park | 1.77 (1.10) | 13.4 (44) | 4 (2 WB / 2 EB ) | 0 any time |

### 2.3.1.7 Speeds and Delay

Existing travel times and travel speeds vary depending on traffic conditions, highway geometrics, posted speed limits, weather conditions, and stopped delay at traffic control devices, such as traffic signals and stop signs. Posted speeds for each roadway in the project area are listed in Table 2.3-2 and depicted in Figure 2.3-3.

Travel time and delay studies were conducted for Route 5 for weekday periods during three different times of day: morning (7-9 AM), mid-day (11 AM-1 PM), and afternoon (4-6 PM) peak periods. Travel time and delay studies provide data on the amount of time it takes to traverse the Route 5 corridor, the free flow speed, overall average operating speed, magnitude of delay and cause of delay.

| Table 2.3-2 Existing Posted Speed Limits |  |  |
| :--- | :--- | :--- |
| Route |  |  |
|  |  | Posted <br> Speed Limit <br> Kilometers per Hour (kph) <br> (Miles per Hour [mph]) |
| Route 5 |  | $64(40)$ |
|  | Milestrip Road to Ridge Road | $88(55)$ |
|  | Ridge Road to I-190 | $48(30)$ |
| South Park Avenue | Ridge to Coast Guard Station | $48(30)$ |
| Ohio Street | Michigan Avenue to Ridge Road | $48(30)$ |
| Louisiana Street | Michigan Avenue to Fuhrmann Boulevard | $48(30)$ |
| Smith Street | Ohio Street to South Park Avenue | $48(30)$ |
| Keating Street | South Park Avenue to Elk Street | $48(30)$ |
| Bailey Avenue | Clinton Avenue to South Park Avenue | $48(30)$ |
| Hopkins Street | Tifft Street to South Park Avenue | $48(30)$ |
| Seneca Street | Babcock to Elk Street | $48(30)$ |
| Elk Street | Babcock to Seneca Street | $48(30)$ |
| Tifft Street | Fuhrmann Boulevard to South Park Avenue | $48(30)$ |
| Ridge Road | Route 5 to South Park Avenue | $48(30)$ |
| Lake Avenue | Route 5 to CSX Rail Corridor | $64(40)$ |
| Milestrip Road (Route 179) | Route 5 to South Park Avenue | $88(55)$ |

In general, operating speeds on the 88 kilometer-per-hour (kph) (55-mile-per-hour [mph]) section of Route 5 between Church Street and Ridge Road are slower in the eastbound (inbound to Buffalo) direction than the westbound (outbound from Buffalo) direction, regardless of time of day. Traffic is also operating at speeds below the posted speed limit in this section of Route 5. The average operating speed in the eastbound (inbound) direction is $69 \mathrm{kph}(43 \mathrm{mph})$ for the AM peak period; $79 \mathrm{kph}(49 \mathrm{mph})$ for the mid-day off-peak period ${ }^{1}$; and $78 \mathrm{kph}(48 \mathrm{mph})$ for the PM peak period. The average operating speed in the westbound (outbound) direction is 83 kph ( 52 mph ) for the AM peak period; $84 \mathrm{kph}(42 \mathrm{mph})$ for the mid-day off-peak period ${ }^{1}$ and $81 \mathrm{kph}(50$ mph ) for the PM peak period. The greatest delays were experienced between the apex of the Skyway and Church Street in the eastbound (inbound) direction, given that the Skyway terminates along this segment at a signalized intersection at Church Street and Delaware Avenue.

In general, operating speeds are slower during peak hour in the peak direction of flow of the 64 $\mathrm{kph}(40 \mathrm{mph})$ section of Route 5 between Ridge and Milestrip Roads. The average operating speed in the eastbound (inbound) direction is $58 \mathrm{kph}(36 \mathrm{mph})$ for the AM peak period, 64 kph $(40 \mathrm{mph})$ for the mid-day off-peak period ${ }^{1}$, and $65 \mathrm{kph}(40 \mathrm{mph})$ for the PM peak period. The average operating speed in the westbound (outbound) direction is $67 \mathrm{kph}(42 \mathrm{mph})$ for the AM peak period, $66 \mathrm{kph}(41 \mathrm{mph})$ for the mid-day off-peak period ${ }^{1}$, and $56 \mathrm{kph}(35 \mathrm{mph})$ for the PM peak period. No significant delays were experienced in this section of Route 5.

[^0]

Number of Through Lanes

| 2 | 5 |
| :--- | :--- |
| -3 | $=6$ |
| -4 | $=7$ |

## 合 <br> 

3
FIGURE 2.3-3
Speed Limits \& Through Lanes
Southtowns Connector/Buffalo Outer Harbor Proj

### 2.3.1.8 Traffic Volumes

To understand the characteristics and patterns of vehicular traffic within the study area, current traffic volume data were gathered for selected roadway segments and intersections. These data were then used to assess the study area traffic demand for existing year (2001) and the design year (2030). The following traffic data were collected:

- Average Annual Daily Traffic (AADT);
- Peak Hour Directional Traffic Volumes;
- Peak Hour Turning Movements; and
- Vehicle Classifications.

Because the entire project area is within the jurisdiction of a designated Metropolitan Planning Organization (e.g.,GBNRTC) pursuant to federal transportation regulations future design year traffic volumes were forecasted using GBNRTC's regional travel demand model. This model forecasts traffic implications of the region's road network using current and future (2025) demographic characteristics (i.e., total households and employment) by traffic assessment zone (TAZ). Projected demographics by TAZ were adopted by GBNRTC's member agencies in 2000, and the agency's travel demand model is used to assess proposed road network changes in both its long range plan and TIP approval processes, as well as for various local, county, and state road projects in the region. Projected 2025 TAZ-level demographics were reviewed to determine whether they adequately depict anticipated future demographic characteristics in consideration of proposed economic development projects in the corridor (e.g., redevelopment of NFTA Outer Harbor lands, Union Ship Canal area, former LTV/Republic Steel site, former Bethlehem Steel site, etc. - see Section 2.3.1.24). It was concluded that the data included reasonable projected employment and household growth to account for on-going economic development activities, and thus were sufficient as modeling inputs to assess future travel demand conditions on project area roads.

The basis for selecting 2030 as design year involved considering the length of time needed for the completion of planning and environmental review; conducting final roadway design; identification of necessary right-of-way acquisition; and actual construction. NYSDOT determined the estimated time of completion (ETC) as 2010 given time necessary for design phases V and VI and phased construction of improvements. Consistent with the NYSDOT Design Traffic Forecast Policy (Appendix 5 of NYSDOT's Project Development Manual), the design year for this project is "ETC plus 20" years (i.e., 2030), since segments of the project are projected to begin to exhibit congestion levels at, approaching, or exceeding LOS D in this time frame.

## Existing Daily and Peak Hour Traffic Volumes

Existing (2001) AADTs and peak hour directional volumes were calculated for major roadway segments within the project area (see Table 2.3-3).

Aside from interstate segments (I-90 and I-190), Route 5 currently carries the highest volume of traffic among highways in the project area. The roadway, which had provided access to major industrial facilities along the corridor, has evolved as a major commuting route between Downtown Buffalo and suburbanizing Southtowns communities along Lake Erie (e.g., Wanakah, Derby, Dunkirk, etc.). In addition, Route 5 has developed as an alternate to the interstate system for access to Downtown Buffalo from more inland suburbs (e.g., inland portions of Hamburg and Orchard Park, typically via Milestrip Road).

Highest volumes on Route 5 occur along the segment between the Fuhrmann Boulevard interchanges and I-190, with a two-way AADT of 41,800 vehicles and an average peak hour directional volume for AM and PM travel of 2,600 to 2,800 vehicles in each direction (east- and westbound). Other segments of Route 5 have comparable AADTs, with an average two-way volume of 40,000 vehicles. Likewise, peak hour directional volumes are comparable along the entire Route 5 project corridor, with an average of approximately 2,000 vehicles in each direction per each recorded segment.

Existing peak hour turning movements were performed for morning (AM), mid-day, and evening (PM) time periods for select signalized and un-signalized intersections throughout the study area. Actual traffic data and turning movement volumes are presented in Appendix C: Traffic and Accident Report, Figures C2.4-1 through C2.4-20.

| Table 2.3-3 Existing (2001) Traffic Volumes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Route | Segment | $\begin{gathered} \hline \text { Two- } \\ \text { Way } \\ \text { AADT } \end{gathered}$ | Peak Hour <br> Directional Volumes |  |  |
|  |  |  | Direction | AM | PM |
| Route 5 | Milestrip to Lake Avenue | 41,400 | EB | 2800 | 1000 |
|  |  |  | WB | 600 | 2600 |
|  |  |  | TOTAL | 3400 | 3600 |
|  | Lake Avenue to Ridge Road | 37,800 | EB | 3400 | 1000 |
|  |  |  | WB | 800 | 3000 |
|  |  |  | TOTAL | 4200 | 4000 |
|  | Ridge Road to Tifft Street | 41600 | EB | 2900 | 1100 |
|  |  |  | WB | 700 | 2500 |
|  |  |  | TOTAL | 3600 | 3600 |
|  | Tifft Street to Ohio Street | 35,800 | EB | 2900 | 900 |
|  |  |  | WB | 700 | 2300 |
|  |  |  | TOTAL | 3600 | 3200 |
|  | Ohio Street to Fuhrmann Boulevard | 37,800 | EB | 2800 | 1000 |
|  |  |  | WB | 600 | 2300 |
|  |  |  | TOTAL | 3400 | 3300 |
|  | Fuhrmann Boulevard to I-190 | 41,800 | EB | 2800 | 1000 |
|  |  |  | WB | 900 | 2600 |
|  |  |  | TOTAL | 3700 | 3600 |
| South Park Avenue (US Route 62) | Tifft Street to Southside | 13,300 | NB | 500 | 400 |
|  |  |  | SB | 300 | 500 |
|  |  |  | TOTAL | 800 | 900 |
|  | Southside to Bailey Avenue | 6,300 | NB | 200 | 200 |
|  |  |  | SB | 100 | 200 |
|  |  |  | TOTAL | 300 | 400 |
|  | Bailey Avenue to Hopkins Street | 8,000 | WB | 300 | 400 |
|  |  |  | EB | 200 | 300 |
|  |  |  | TOTAL | 500 | 700 |
|  | Hopkins Street to Abby Street | 6,700 | WB | 400 | 300 |
|  |  |  | EB | 200 | 600 |
|  |  |  | TOTAL | 600 | 900 |
|  | Abby Street to Smith Street | 7,900 | WB | 400 | 300 |
|  |  |  | EB | 200 | 500 |
|  |  |  | TOTAL | 600 | 800 |
|  | Smith Street to Katherine Street | 6,700 | WB | 300 | 200 |
|  |  |  | EB | 100 | 300 |
|  |  |  | TOTAL | 400 | 500 |
|  | Chicago Street to Michigan Avenue | 3,500 | WB | 200 | 100 |
|  |  |  | EB | 100 | 200 |
|  |  |  | TOTAL | 300 | 300 |


| Table 2.3-3 Existing (2001) Traffic Volumes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Route | Segment | $\begin{gathered} \text { Two- } \\ \text { Way } \\ \text { AADT } \\ \hline \end{gathered}$ | Peak Hour <br> Directional Volumes |  |  |
|  |  |  | Direction | AM | PM |
| Ohio Street | Fuhrmann Boulevard - North to Louisiana Street | 7,300 | NB | 700 | 200 |
|  |  |  | SB | 100 | 800 |
|  |  |  | TOTAL | 800 | 1000 |
|  | Louisiana Street to Chicago Street | 4,300 | NB | 400 | 100 |
|  |  |  | SB | 100 | 400 |
|  |  |  | TOTAL | 500 | 500 |
|  | Chicago Street to Michigan Avenue | 4,300 | NB | 400 | 100 |
|  |  |  | SB | 100 | 500 |
|  |  |  | TOTAL | 500 | 600 |
| Keating Street | Seneca Street to SB I-190 exit | 1,900 | SB | 100 | 100 |
|  |  |  | NB | NA | NA |
|  |  |  | TOTAL | 100 | 100 |
|  | SB I-190 exit to Elk Street | 7,900 | SB | 500 | 900 |
|  |  |  | NB | NA | NA |
|  |  |  | TOTAL | 500 | 900 |
| Bailey Avenue | South Park Avenue to McKinley Pkwy | 6,900 | NB | 300 | 200 |
|  |  |  | SB | 200 | 300 |
|  |  |  | TOTAL | 500 | 500 |
|  | McKinley Pkwy to Elk Street | 18,600 | NB | 700 | 500 |
|  |  |  | SB | 400 | 900 |
|  |  |  | TOTAL | 1,100 | 1,400 |
|  | Elk Street to Seneca Street | 18,000 | NB | 1,000 | 700 |
|  |  |  | SB | 200 | 500 |
|  |  |  | TOTAL | 1,200 | 1,200 |
| Hopkins Street | Tifft Street to Trowbridge | 6,900 | NB | 400 | 300 |
|  |  |  | SB | 200 | 400 |
|  |  |  | TOTAL | 600 | 700 |
|  | Trowbridge to South Park Avenue | 6,900 | NB | 200 | 200 |
|  |  |  | SB | 200 | 400 |
|  |  |  | TOTAL | 400 | 600 |
| Michigan Avenue | Ohio Street to South Park Avenue | 6,300 | NB | 500 | 300 |
|  |  |  | SB | 300 | 600 |
|  |  |  | TOTAL | 800 | 900 |
|  | South Park Avenue to Perry Street | 9,700 | NB | 600 | 400 |
|  |  |  | SB | 400 | 600 |
|  |  |  | TOTAL | 1,000 | 1,000 |
| Tifft Street | Fuhrmann Boulevard North to CSX RR Corridor | 12,600 | EB | 700 | 400 |
|  |  |  | WB | 300 | 600 |
|  |  |  | TOTAL | 1000 | 1000 |
|  | CSX RR Corridor to Hopkins Street | 12,600 | EB | 700 | 600 |
|  |  |  | WB | 300 | 400 |
|  |  |  | TOTAL | 1,000 | 1,000 |
|  | Hopkins Street to South Park Avenue | 8,000 | EB | 200 | 400 |
|  |  |  | WB | 300 | 200 |
|  |  |  | TOTAL | 500 | 600 |


| Table 2.3-3 Existing (2001) Traffic Volumes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Route | Segment | $\begin{gathered} \text { Two- } \\ \text { Way } \\ \text { AADT } \\ \hline \end{gathered}$ | Peak Hour <br> Directional Volumes |  |  |
|  |  |  | Direction | AM | PM |
| Milestrip Road (Route 179) | Route 5 to RR Tracks | 22,900 | EB | 700 | 1,100 |
|  |  |  | WB | 1,100 | 900 |
|  |  |  | TOTAL | 1,800 | 2,000 |
|  | RR Tracks to South Park Boulevard | 22,900 | EB | 1,400 | 2,300 |
|  |  |  | WB | 2,000 | 2,000 |
|  |  |  | TOTAL | 3,400 | 4,300 |
|  | South Park Boulevard to I-90 | 24,900 | EB | 1,000 | 1,100 |
|  |  |  | WB | 200 | 900 |
|  |  |  | TOTAL | 1,200 | 2,000 |
| I-90 | Milestrip to Route 219 | 47,800 | EB | 900 | 1,500 |
|  |  |  | WB | 1,400 | 1,200 |
|  |  |  | TOTAL | 2,300 | 2,700 |
|  | Ridge Road to Route 400 | 90,400 | EB | 4,800 | 3,500 |
|  |  |  | WB | 2,700 | 5,000 |
|  |  |  | TOTAL | 7,500 | 8,500 |
|  | Route 400 to I-190 | 105,800 | EB | 5,800 | 4,300 |
|  |  |  | WB | 3,300 | 6,100 |
|  |  |  | TOTAL | 9,100 | 10,400 |
| I-190 | Ogden Street to Clinton Street | 64,500 | NB | 3,500 | 1,500 |
|  |  |  | SB | 1,600 | 4,000 |
|  |  |  | TOTAL | 5,100 | 5,500 |
|  | Clinton Street to Seneca Street/ Bailey Avenue | 62,200 | NB | 3,300 | 1,500 |
|  |  |  | SB | 1,400 | 3,800 |
|  |  |  | TOTAL | 4,700 | 5,300 |
|  | Seneca Street/Bailey Avenue to Smith Street | 74,900 | NB | 3,900 | 1,900 |
|  |  |  | SB | 1,500 | 4,500 |
|  |  |  | TOTAL | 5,400 | 6,400 |
|  | Smith Street to Hamburg/Louisiana | 75,500 | NB | 3,600 | 2,100 |
|  |  |  | SB | 1,600 | 4,500 |
|  |  |  | TOTAL | 5,200 | 6,600 |
|  | Hamburg/Louisiana to Elm Street | 74,300 | NB | 3,600 | 2,100 |
|  |  |  | SB | 1,500 | 4,300 |
|  |  |  | TOTAL | 5,100 | 6,400 |
|  | Elm Street to Route 5 | 69,600 | NB | 3,000 | 2,100 |
|  |  |  | SB | 2,500 | 3,500 |
|  |  |  | TOTAL | 5,500 | 5,600 |

## Future Null Alternative Traffic Volumes

Figure 2.3-4 shows 2030 AADTs along roadways within the project area for the design year under future Null Alternative conditions compared to existing conditions. As noted in the previous section, the GBNRTC's regional travel demand model includes estimates of AADTs and AM/PM peak hour traffic for 2025 using approved regional demographic projections. Year 2030 travel forecasts were developed by straight-line extrapolation from Year 2025 forecasts. Existing (2001) volumes were utilized as a base reference for extrapolation.

Under the Null Alternative (i.e., 2030 conditions without improvements associated with STC/BOH project), the current pattern of Route 5 as a primary commuting corridor is projected to increase. The AADT for Route 5 between Fuhrmann Boulevard and I-190 is projected to increase to 54,900 vehicles by 2030. Similarly, AADT on Milestrip Road is projected to grow by 3,000 vehicles to 26,000 . For Ohio Street between Fuhrmann Boulevard and Louisiana Street, AADT is projected to grow to 9,800 . Michigan Avenue between Ohio Street and South Park Avenue is projected at 9,300 and Tifft Street between the intersection with the proposed new arterial and Hopkins Street is estimated at 14,600 AADT.

Estimated future AM and PM (respectively) peak hour directional traffic volumes for select roadways within the project study area are presented in Appendix C. Under 2030 Null Alternative conditions, areas projected to experience the most traffic volume during AM peak travel hours are segments of Route 5 from Lake Avenue to Ridge Road ( 4,000 vehicles traveling eastbound) and from Fuhrmann Boulevard to I-190 (3,200 vehicles traveling eastbound). Ohio Street from Fuhrmann Boulevard northbound to Louisiana Street is estimated at 1,300 vehicles during the AM peak travel hours. AM peak hour directional traffic volumes for Tifft Street from the CSX rail corridor to Hopkins Street is projected to reach 1,200 vehicles, with the greatest number of vehicles heading westbound (from I-190). Along Tifft Street from Fuhrmann Boulevard northbound to the CSX rail corridor, AM peak hour traffic volumes are estimated at 500 each in either the east-or westbound direction.

During PM peak hours, the same segments of Route 5 that are forecasted to experience the most traffic volume in the AM, are projected to experience similar traffic volumes during PM peak hours, however in the opposite direction: 3,600 vehicles heading westbound from Lake Avenue to Ridge Road; and 3,100 vehicles heading westbound from Fuhrmann Boulevard to I-190. Along Ohio Street, the same situation exists where the segment experiencing the most traffic volume during the AM peak travel hours (from Fuhrmann Boulevard to Louisiana Street) is projected to experience the most traffic ( 1,200 vehicles) during the PM peak travel hours, however in the opposite direction (southbound). Tifft Street is estimated to experience comparable traffic volumes during the PM peak hours for the segment from Fuhrmann Boulevard to the CSX rail corridor ( 1,300 combined east-and westbound traffic) and for the segment from CSX rail corridor to Hopkins Street (1,200 combined east-and westbound traffic).


## Vehicle Classification

Vehicle classification data identifies the mix or type of vehicles traveling along highways and streets. Vehicle classification counts, including heavy vehicles, were conducted within the study area at selected roadway segments including: Route 5 from Ridge Road to Smokes Creek; Ohio Street from Louisiana Street to Fuhrmann Boulevard; Tifft Street from Hopkins to Route 5; and Ridge Road from the railroad corridor to Route 5. The data was collected during peak AM, midday, and PM hours. Vehicle classification along interstate segments was obtained from GBNRTC data.

Of the four vehicle classifications (auto \& bikes; pickups \& panel trucks; buses; and heavy trucks), each of the aforementioned non-interstate roadway segments had the greatest percentage of autos and bikes at $80 \%$, with pickups and panel trucks at $14 \%$, heavy trucks at approximately $5 \%$, and buses making up the remaining $1 \%$. Interstate segments (I-190 and I-90) include a higher proportion of heavy trucks, ranging from $6 \%$ to $9 \%$ on I-190 and from $9 \%$ to $10 \%$ on I-90.

### 2.3.1.9 Level of Service

Level of Service (LOS) is a qualitative measure describing operating traffic conditions in terms of factors such as speed, travel time, maneuverability, safety, and delay. It is a measure that describes motorist satisfaction with these factors that influence the degree of traffic congestion. LOS "A" represents the best operating condition, and LOS "F" the worst. An LOS of "A" through "D" is usually considered acceptable and LOS "E" is normally considered representative of conditions where improvements are needed. LOS " $F$ " conditions are highly congested with forced (stop-and-go) flow and substantial delays. These conditions are typically unacceptable and improvements are needed in the form of traffic control, geometric changes or a combination of both.

LOS at intersections is primarily determined by the amount of delay experienced along various approaches to a particular intersection. Freeway segment LOS is identified by vehicle density expressed in terms of passenger cars per mile per lane ( $\mathrm{pc} / \mathrm{mi} / \mathrm{ln}$ ). The flow rate is affected by numerous factors, including free flow speed during non-congested conditions, number of travel lanes, lane widths, shoulder widths, interchange density, grade, and peaking characteristics of traffic volume. LOS for freeways is determined for each direction of traffic.

## Existing Levels of Service

Existing (2001) weekday AM, mid-day, and PM peak hour LOSs were calculated for selected intersections and freeway segments within the project area. A summary of existing LOSs is depicted in Figure 2.3-5. The data collected indicate that all approaches at signalized intersections are presently operating at acceptable LOSs during each peak hour with the exception of Route 5 at Dona Street, which operated at an overall LOS E during the PM peak hour. Of six non-signalized intersections analyzed, controlled approaches of three currently operate at LOS E or LOS F during at least one of the peak hours.

Existing peak hour traffic operations for selected freeways within the project indicate that all segments, excluding interstates, operate within acceptable LOSs during each peak hour.

## Future Null Alternative Levels of Service

Level of service analysis was also performed using Year 2030 peak hour travel forecasts produced by the GBNRTC travel-forecast model (see Figure 2.3-6). Operational analyses were conducted for the morning and afternoon peak hour periods because they represent the two critical hours of an average day for traffic. Congestion is forecasted by 2030 at a series of signalized intersections along Route 5 in Woodlawn and the City of Lackawanna, including:

- Route 5 and Lake Avenue;
- Route 5 and Madison Avenue;
- Route 5 and Dona Street; and
- Route 5 and Odell Street.

Two intersections along the Ohio Street corridor are also projected for congested conditions in 2030, including the intersection of Ohio Street and Michigan Avenues and the intersection of Michigan and South Park Avenues.

With regard to freeway segments, two are projected to reach congested conditions by 2030 under the Null Alternative. These include the segment of Route 5 from I-190 to Ohio Street (including the Buffalo Skyway Bridge) and I-90 between Ridge Road (Interchange 55) and I-190 (Interchange 53) ${ }^{2}$.

### 2.3.1.10 Non-Standard Features and Non-Conforming Features

Roadway geometrics were identified for the existing facilities based on design speed and functional classification of the route. Route 5, Ohio Street, South Park Avenue between the Buffalo River and Bailey Avenue, and Elk Street and Seneca Street as they intersect Bailey Avenue were reviewed. Route 5 is classified as urban arterial expressway between I-190 and Ridge Road, and is characterized by a four-lane divided expressway with grade-separated intersections. Between Ridge Road and Milestrip Road, the roadway is classified as an urban principal arterial and is characterized by an undivided roadway with at-grade intersections, and varies between five and six lanes.

Non-standard features including lateral and vertical clearance of bridges and bridge roadway width, stopping sight distance, lane and shoulder widths, and Interstate system LOS were observed along sections of Route 5. Non-conforming features including guide rail, driveways,

[^1]

- Intersection with LOS of E or F
$=$ Expressway Segments with LOS of E or F

4

| 0 | 0.5 |
| :--- | :--- |
| 0 | 0.5 |
|  | Miles |
|  |  |
|  |  |
|  |  |
| Kilometers |  |

FIGURE 2.3-5
Existing Conditions (2001) Intersection/Segment Level of Service
Southtowns Connector/Buffalo Outer Harbor Proje

intersection LOS, and traffic control devices were observed at various locations along Route 5, Ohio Street, and Bailey Avenue. Specific non-standard and non-conforming features and locations of each are presented in Table 2.3-4.

| Roadway/Segment | Clearance (Horizontal \& Vertical) <br> NonStandard Feature | Roadway Widths <br> NonStandard Feature | LOS: Interstate \& Intersection <br> Non-Standard <br> or NonConforming Feature | Guide Rail <br> NonConforming Feature | Driveways <br> Non- <br> Conforming Feature | Stopping Sight Distance (SSD) <br> Non- <br> Standard <br> Feature |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Route 5 - Milestrip to Ridge Road | N/A | Lanes are 3.3 m (11'); should be $3.6 \mathrm{~m}\left(12^{\prime}\right)$ | Non-Conforming Lake Avenue; Odell St.; Dona St.; Madison Street: LOS E southbound turns (AM/PM) Ridge Road \& Fuhrmann Boulevard: LOS > F (northbound turn) | N/A | 37 driveways exceed max. width ${ }^{1}$ | N/A |
| Route 5 - Bridge over Service Road "C" | N/A | Roadway does not carry full width of approach | N/A | Set-back distance of guide rail exceeds standard maximum of $5 " ;$ vertical posts do not meet design standards | N/A | N/A |
| Route 5 - Skyway to Ridge Road | N/A | Shoulders are 0.6 to $1.8 \mathrm{~m}\left(2^{\prime}\right.$ to $\left.6^{\prime}\right) ;$ should be $3.6 \mathrm{~m}\left(12^{\prime}\right)$ based on truck traffic exceeding DDHV $^{2}$ | N/A | N/A | N/A | Vertical curve at bridge carrying Rt. 5 over Service Road "C" is 155 m (507 '). SSD should be 188 m (607’) |
| Route 5 - Bridge over Service Road "D" | N/A | Roadway does not carry full width of approach | N/A | Set-back distance of guide rail exceeds standard maximum of $5 " ;$ vertical posts do not meet design standards | N/A | N/A |

Table 2.3-4 Existing Non-Standard \& Non-Conforming Features

| Roadway/Segment | Clearance (Horizontal \& Vertical) <br> NonStandard Feature | Roadway Widths <br> NonStandard Feature | LOS: Interstate \& Intersection Non-Standard <br> or NonConforming Feature | Guide Rail <br> Non- <br> Conforming Feature | Driveways <br> Non- <br> Conforming Feature | Stopping Sight Distance (SSD) <br> Non- <br> Standard <br> Feature |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Route 5 - Bridge over Conrail RR | N/A | Roadway does not carry full width of approach | N/A | Set-back distance of guide rail exceeds standard maximum of $5 "$; vertical posts do not meet design standards | N/A | N/A |
| Route 5 - Bridge over Ohio Street | N/A | Roadway does not carry full width of approach | N/A | Set-back distance of guide rail exceeds standard maximum of $5 "$; vertical posts do not meet design standards | N/A | N/A |
| Route 5 - Bridge over CSX Spur Railroad | Does not meet current vertical clearance requirements (22'-0") | N/A | N/A | N/A | N/A | N/A |
| I-90 - Ridge Road to Route 400 | N/A | N/A | Non-Standard LOS D - AM \& PM peak hours Westbound | N/A | N/A | N/A |
| $\begin{aligned} & \text { I-90 - Route } 400 \text { to I- } \\ & 190 \end{aligned}$ | N/A | N/A | Non-Standard LOS E - <br> AM peak hours; LOS D - <br> PM peak hours Westbound | N/A | N/A | N/A |
| I-190 - Bailey Avenue to Smith Street | N/A | N/A | Non-Standard LOS D: <br> Southbound | N/A | N/A | N/A |
| I-190 - Smith Street and Hamburg | N/A | N/A | Non-Standard LOS D: <br> Southbound | N/A | N/A | N/A |
| I-190- Hamburg Street and Elm/Oak Arterial | N/A | N/A | Non-Standard LOS D: <br> Southbound | N/A | N/A | N/A |

## Table 2.3-4 Existing Non-Standard \& Non-Conforming Features

| Roadway/Segment | Clearance (Horizontal \& Vertical) <br> NonStandard Feature | Roadway Widths <br> Non- <br> Standard Feature | LOS: Interstate \& Intersection <br> Non-Standard <br> or Non- <br> Conforming Feature | Guide Rail <br> NonConforming Feature | Driveways <br> NonConforming Feature | Stopping Sight Distance (SSD) <br> Non- <br> Standard <br> Feature |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Route 5 - adjacent to Buffalo Specialty Products \& RR overpass | $\begin{gathered} 0.3 \mathrm{~m}\left(1^{\prime}\right) \text { on } \\ \text { west side } \\ \text { attached to } \\ \text { face of } \\ \text { bridge } \\ \text { abutment } \\ \hline \end{gathered}$ | N/A | N/A | N/A | N/A | N/A |
| Ohio Street Rigidized Metal \& Bulkmatic; project corridor length | N/A | N/A | Non-Conforming <br> At Fuhrmann <br> Boulevard (PM) and Michigan Avenue (AM/PM): LOS F | N/A | 31 comm. driveways exceed max $w_{i d t h}{ }^{2}$ | N/A |
| Ohio Street - Ohio Street Bridge over Conrail (BIN 2-26062-0) to Fuhrmann Blvd. | N/A | Curve radius is 50 meters. Minimum required is 280 meters | N/A | N/A | N/A | N/A |
| Ohio Street near Ganson Street (at 630 Ohio Street) | N/A | Curve radius is 100 meters. Minimum required is 280 meters | N/A | N/A | N/A | N/A |
| Bailey Avenue | N/A | N/A | Non-Conforming <br> At Seneca Street LOS E <br> (Northbound left turn) | N/A | N/A | N/A |

Notes:
${ }^{1}$ According to current design practices as outlined in the Policy and Standards for Entrances to State Highways, February 1998.
2 Directional Design Hourly Volume

### 2.3.1.11 Safety Considerations, Accident History, and Analysis

The New York State Department of Motor Vehicles Police Accident Reports were analyzed for the period from September 1997 to August 1999 for all accidents occurring within the study area. The accident information provided a basis for examination of cause and effect. Detailed accident summaries and collision diagrams during the aforementioned time period are presented in Appendix C. The NYSDOT Regional Traffic Engineer determined that data used for this analysis, while six years old, is still representative of the project corridor and thus recommendations for cluster diagrams for existing conditions is not necessary.

Accident rates for certain types of incidents along I-190 were greater than the statewide average. However, the overall crash rate for each segment is lower than the corresponding statewide average rate (Note: roadway segments were divided between northbound and southbound for a total of 14 segments of I-190 between I-90 and Route 5). Specifically, the northbound segment of I-190 between Smith and Hamburg Street; the southbound segment of I-190 between Route 5 and Elm/Oak; and the segment of I-190 from Smith to Seneca Street experienced crash rates (that involved a fixed object) that were higher than the statewide average.

Accident information and accident rates for the following roadway segments within the project area are presented in Table 2.3-5:

- Route 5, between Church Street and Route 179;
- South Park Avenue, between Michigan Avenue and Tifft Street;
- Bailey Avenue, between Clinton Street and South Park Avenue;
- Ohio Street, between Michigan Avenue and Fuhrmann Boulevard;
- Tifft Street, between South Park Avenue and Fuhrmann Boulevard; and
- Elk Street, between Babcock Street and Bailey Avenue.

Of the above roadway segments, most accidents involved a vehicle and a fixed object, and were most frequent along Route 5, specifically on segments from the Ohio Street overpass to Tifft Street; Ridge Road to Odell Street; Bethlehem Steel to Lake Avenue; Lake Avenue to Old Milestrip Road, and Seventh Street to Route 179. Of these segments and accident types, the roadway segment exhibiting overall crash rates (including wet roadway, fixed object, and injury sustained) that was greater than the statewide average, was along South Park Avenue from: Chicago Street to Louisiana Street; Alabama Street to Hamburg Street; and Bailey Avenue to Southside Street.

A review of crash rates at eleven major intersections within the study area revealed that $61 \%$ of these crash rates were above their corresponding statewide average (see Table 3.2-6). The
intersection of Route 5 and Lake Avenue exhibits a wet road type crash rate six times greater than the statewide average. The rear end type crash rate for this same segment is 2.1 times greater than the state average. The intersection of Bailey Avenue and Seneca Street, at 2.6 times the statewide average, exhibits the highest overall crash rate differential.

Information on causes and effect of crashes was analyzed for a total of forty-six highway segments and eleven intersections within the study area. These roadway segments and intersections were chosen for their individual characteristics in efforts to simplify the crash analysis for the study period from 1997 through 1999. Of the forty-six highway segments examined, three were found to have higher than average overall crash rates. All three were located on South Park Avenue, as discussed above.

Causes for the accidents included: failure to yield right of way (Route 5 and Lake Avenue; South Park Avenue and Michigan; South Park Avenue and Tifft Street; Bailey Avenue and Seneca Street; and Tifft Street and Hopkins Street); unsafe lane changing (South Park Avenue and Hopkins Street; South Park Avenue and Michigan Avenue; and Route 5 and Lake Avenue); and driver inattention and other human factors (South Park Avenue and Michigan; South Park Avenue and Hopkins Street; and South Park Avenue and Tifft Street).

Eleven intersections were examined for overall crash rates. Seven were found to have higher than average overall crash rates and included: Route 5 and Lake Avenue; South Park Avenue and Michigan Avenue, Hopkins Street, and Tifft Street; Bailey Avenue and Seneca Street, and McKinley Parkway; and Tifft Street and Hopkins Street.

A location with an overall crash rate of 2.5 times the statewide average or greater suggests that it may indicate a Priority Investigation Location (PIL) ${ }^{3}$. Two locations in the project area are identified as potential PILs: the intersection of Bailey Avenue and Seneca Street; and the segment of South Park Avenue between Alabama Street and Hamburg Street, which had an overall crash rate 3.4 times the statewide average rate.

Overall, higher than average accident locations on specific road segments that may be affected by the proposed Build Alternatives primarily coincide with locations along the at-grade portion of Route 5, particularly in the vicinity of the Lake Avenue intersection in Woodlawn. This segment of Route 5 , as well as the at-grade segment in the City of Lackawanna, contains numerous driveways and side street intersections. Review of specific collision diagrams presented in Attachment D of Appendix C indicate that a considerable portion of crashes involved conflicting traffic movements originating from such driveways and side streets and also associated with left-turns into such streets/driveways.

[^2]With regard to the limited-access portion of Route 5 from Ridge Road to the Buffalo Skyway Bridge, while several nonstandard/nonconforming features exist along this segment, the accident analysis did not bear out many segments that exhibited higher than average crash rates. Further, review of collision diagrams associated with these limited access segments do not exhibit any patterns that suggest a relationship to existing nonstandard and nonconforming features in this segment.

| Table 2.3-5 - Crash Summary (1997-1999) Non-Interstate Highway Segments |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Description |  |  | Average Crash Rate ( $\mathrm{acc} / \mathrm{mvm}$ ) |  |  |  | Number Of Crashes |  |  |  |
| Route | Segment | \# of Lanes | Total | Wet | Fixed Object | Injury | Total | 1997 | 1998 | 1999 |
| Route 5 | Church to Ohio ${ }^{7}$ | 4 | 0.51 | 0.10 | 0.21 | 0.22 | 54 | 21 | 13 | 20 |
|  | Ohio to Tifft ${ }^{7}$ | 4 | 1.15 | 0.05 | 0.46 | 0.43 | 43 | 13 | 10 | 20 |
|  | Tifft to Ridge ${ }^{7}$ | 4 | 0.47 | 0.17 | 0.22 | 0.30 | 17 | 6 | 6 | 5 |
|  | Ridge to Odell ${ }^{6}$ | 5 | 0.94 | 0.20 | 0.35 | 0.40 | 19 | 5 | 7 | 7 |
|  | Odell to Dona ${ }^{6}$ | 5 | 0.73 | 0.00 | 0.07 | 0.20 | 11 | 2 | 7 | 2 |
|  | Dona to Madison ${ }^{5}$ | 5 | 0.66 | 0.00 | 0.11 | 0.22 | 6 | 2 | 3 | 1 |
|  | Madison to Beth. Steel ${ }^{6}$ | 5 | 0.22 | 0.03 | 0.03 | 0.16 | 7 | 3 | 1 | 3 |
|  | Beth. Steel to Lake ${ }^{6}$ | 6 | 0.73 | 0.18 | 0.09 | 0.18 | 8 | 1 | 7 | 0 |
|  | Lake to Milestrip ${ }^{6}$ | 6 | 0.57 | 0.57 | 0.28 | 0.28 | 2 | 1 | 1 | 0 |
|  | Milestrip to Seventh ${ }^{6}$ | 6 | 1.71 | 0.28 | 0.00 | 0.57 | 12 | 8 | 2 | 2 |
|  | Seventh to Route $179{ }^{6}$ | 6 | 0.73 | 0.27 | 0.27 | 0.27 | 8 | 2 | 2 | 4 |
| South Park Ave | Michigan to Chicago ${ }^{2}$ | 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 |
|  | Chicago to Louisiana ${ }^{2}$ | 2 | 4.34 | 1.45 | 0.00 | 0.00 | 3 | 0 | 2 | 1 |
|  | Louisiana to Alabama ${ }^{2}$ | 2 | 3.13 | 0.00 | 0.00 | 2.35 | 4 | 1 | 3 | 0 |
|  | Alabama to Hamburg ${ }^{1}$ | 2 | 6.52 | 0.00 | 0.00 | 2.61 | 5 | 2 | 2 | 1 |
|  | Hamburg to Elk ${ }^{2}$ | 2 | 3.04 | 0.91 | 0.30 | 1.22 | 10 | 5 | 1 | 4 |
|  | Elk to Abby ${ }^{4}$ | 4 | 0.65 | 0.28 | 0.28 | 0.37 | 7 | 1 | 4 | 2 |
|  | Abby to Hopkins ${ }^{4}$ | 4 | 2.18 | 0.73 | 0.00 | 0.73 | 3 | 0 | 2 | 1 |
|  | Hopkins to Bailey ${ }^{4}$ | 4 | 2.04 | 0.68 | 0.00 | 0.68 | 3 | 1 | 1 | 1 |
|  | Bailey to Southside ${ }^{2}$ | 2 | 7.53 | 1.74 | 0.58 | 2.90 | 26 | 9 | 10 | 7 |
|  | Southside to Tifft ${ }^{2}$ | 2 | 2.75 | 0.00 | 0.00 | 0.92 | 9 | 3 | 2 | 4 |
| Bailey Ave | Clinton to Seneca ${ }^{4}$ | 4 | 1.59 | 0.37 | 0.37 | 0.98 | 13 | 3 | 9 | 1 |
|  | Seneca to Elk ${ }^{3}$ | 4 | 0.77 | 0.00 | 0.00 | 0.00 | 2 | 0 | 1 | 1 |
|  | Elk to McKinley ${ }^{3}$ | 4 | 0.57 | 0.00 | 0.28 | 0.14 | 4 | 2 | 0 | 2 |
|  | McKinley to South Park ${ }^{3}$ | 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 |
| Ohio Street | Michigan to Louisiana ${ }^{2}$ | 2 | 0.99 | 0.33 | 0.33 | 0.66 | 3 | 0 | 2 | 1 |
|  | Louisiana to Ganson ${ }^{1}$ | 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 | 0 |
|  | Ganson to Fuhrmann ${ }^{1}$ | 2 | 0.66 | 0.00 | 0.44 | 0.22 | 3 | 1 | 0 | 2 |
| Tifft Street | Fuhrmann to Hopkins ${ }^{3}$ | 4 | 0.31 | 0.05 | 0.05 | 0.00 | 6 | 3 | 3 | 0 |
|  | Hopkins to South Park ${ }^{2}$ | 2 | 3.54 | 0.54 | 0.54 | 0.54 | 14 | 5 | 4 | 5 |
| Elk Street | Babcock to Keating ${ }^{2}$ | 2 | 0.78 | 0.00 | 0.78 | 0.78 | 1 | 0 | 0 | 1 |
|  | Keating to Bailey ${ }^{1}$ | 2 | 0.94 | 0.00 | 0.00 | 0.00 | 1 | 1 | 0 | 0 |

= Crash rate above statewide average
1 - Free Access Control Urban Undivided 2 Lanes Mainline Crashes Only=Crash rate above statewide average
2 - Free Access Control Urban Undivided 2 Lanes Mainline \& Juncture Crashes
3 - Free Access Control Urban Undivided 4 Lanes Mainline Crashes Only
4 - Free Access Control Urban Undivided 4 Lanes Mainline \& Juncture Crashes
5 - Free Access Control Urban Undivided All Lanes Mainline Crashes Only
6 - Free Access Control Urban Undivided All Lanes Mainline \& Juncture Crashes
7 - Full Access Control Urban Divided 4 Lanes Mainline \& Juncture Crashes

Table 2.3-6 - Crash Summary (1997-1999) - Intersections

| Description |  |  | Average Crash Rate (acc/mvm) |  |  |  | Number Of Crashes |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Route | Segment | $\begin{gathered} \# \text { of } \\ \text { Legs } \end{gathered}$ | Total | Wet | $\begin{aligned} & \text { Rear } \\ & \text { End } \end{aligned}$ | Injury | Total | 1997 | 1998 | 1999 |
| Route 5 | Lake Ave. ${ }^{2}$ | 3 | 0.63 | 0.30 | 0.17 | 0.19 | 30 | 15 | 5 | 10 |
| South Park Ave | Michigan Ave. ${ }^{3}$ | 4 | 0.76 | 0.34 | 0.00 | 0.42 | 9 | 1 | 3 | 5 |
|  | Hopkins St. ${ }^{1}$ | 3 | 0.71 | 0.00 | 0.32 | 0.32 | 9 | 2 | 4 | 3 |
|  | Bailey Ave. ${ }^{3}$ | 4 | 0.53 | 0.13 | 0.13 | 0.13 | 8 | 3 | 2 | 3 |
|  | Tifft St. ${ }^{3}$ | 4 | 1.34 | 0.18 | 0.45 | 0.58 | 30 | 9 | 10 | 11 |
| Bailey Ave | Seneca St. ${ }^{4}$ | 4 | 1.52 | 0.34 | 0.54 | 0.68 | 54 | 19 | 21 | 14 |
|  | Elk St. ${ }^{4}$ | 4 | 0.54 | 0.12 | 0.12 | 0.00 | 14 | 5 | 3 | 6 |
|  | McKinley Pkwy. ${ }^{5}$ | 4 | 0.65 | 0.18 | 0.14 | 0.18 | 14 | 2 | 9 | 3 |
| Ohio Street | Michigan St. ${ }^{3}$ | 4 | 0.19 | 0.00 | 0.00 | 0.10 | 2 | 0 | 1 | 1 |
|  | Louisiana St. ${ }^{3}$ | 4 | 0.33 | 0.11 | 0.11 | 0.00 | 3 | 1 | 1 | 1 |
| Tifft Street | Hopkins St. ${ }^{3}$ | 4 | 0.76 | 0.11 | 0.00 | 0.38 | 14 | 8 | 4 | 2 |

${ }^{1}$ 3-Leg Signal Controlled Intersection with 1-4 Lanes Per Leg.
${ }^{2} 3$-Leg Signal Controlled Intersection with Left Turn Lane and $5 \&>$ Lanes Per Leg.
${ }^{3}$ 4-Leg Signal Controlled Intersection with 1-4 Lanes Per Leg.
${ }^{4} 4$-Leg Signal Controlled Intersection with Left Turn Lane and $5 \&>$ Lanes Per Leg.
${ }^{5} 4$-Leg Signal Controlled Intersection without Left Turn Lane and $5 \&>$ Lanes Per Leg.

### 2.3.1.12 Pavement and Shoulder Considerations

The NYSDOT rating system for pavement surface ranges from 1 (poor - impassable at posted speed) to 10 (excellent - no distress, recently constructed or reconstructed). Existing pavement conditions were evaluated within the project area. Route 5 from I-190 to Ridge Road received a pavement sufficiency rating of 9, and from Ridge Road to Milestrip Road a rating of 6 . Fuhrmann Boulevard received a rating of 6; Ohio Street was rated between 4 and 5, indicating poor condition due to frequent occurrences of distressed pavement; Milestrip Road from Route 5 to South Park was rated 10; and South Park Avenue was rated an average of 5.5 for its length from Michigan Avenue to Ridge Road. Ohio Street received ratings of 4 and 5 along its entire length, indicating deteriorated conditions. All pavement sufficiency ratings were based on 2001 data.

### 2.3.1.13 Guide Railing, Median Barrier, and Impact Attenuators

There are many sections of guide rail along the project corridor at bridges, culverts, and in other necessary locations. Concrete median barrier is only along the entire length of Route 5 from the Buffalo Skyway Bridge to the Ridge Road interchange and is in good condition. The guide rail throughout the project corridor is of varying condition and either is new box beam guide rail, W-beam guide rail, wood posts, 4-rail bridge rail, and/or concrete barrier. Overall the highway guide rail is in generally good condition, however it does not meet current design standards.

### 2.3.1.14 Traffic Control Devices

Traffic control at key selected intersections in the project area is presented in Table 2.3-7. Figure 2.3-7 shows the locations of traffic control devices. Intersections on Route 5, South Park Avenue, Bailey Avenue, and Tifft Street are all signalized. On Fuhrmann Boulevard, all but one intersection, at Route 5 and Tifft Street, are not signalized, however are controlled via stop signs. Ohio Street is signalized at Louisiana Street, however is controlled via stop signs at Michigan Avenue.

| Table 2.3-7 Traffic Control at Selected Intersections |  |  |
| :--- | :--- | :--- |
| Route | Intersection | Type of Control |
| Route 5 (Hamburg <br> Turnpike) | Odell St. | Signalized |
|  | Dona St. | Signalized |
|  | Madison Ave. | Signalized |
|  | Lake Ave. | Signalized |
| Fuhrmann Blvd - NB | Ohio St. | Stop sign on Fuhrmann Blvd NB to make left; <br> yield to make left from Fuhrmann Blvd SB onto <br> Ohio St. |
|  |  | Stop sign from Route 5 exit ramps |
|  | Ridge Rd.(ramps to Route 5) | Stop sign from Route 5 exit ramps |
|  | Ohio St. | Stop sign on Fuhrmann Blvd SB to make left <br> towards Ohio St. |
|  | Tifft \& Route 5 entrance ramp | Signalized |
|  | Ridge Rd (ramps to Route 5) | Stop signs from Fuhrmann Blvd and Ridge Rd. |
| Ohio Street | Michigan Avenue | Stop signs from Ohio St NB and parking lot SB |
|  | Louisiana St. | Signalized |
| Tifft Street | Hopkins St. | Signalized |

### 2.3.1.15 Commercial Driveways

The NYSDOT Policy and Standards for Entrances to State Highways, February 1998 sets forth design requirements for residential and commercial driveways. Commercial driveways are broken down into two categories, major and minor. A major driveway is where the anticipated traffic volume on a typical day is either 100 or more one-way trips during the peak hour for either the adjacent roadway or the development, or, 50 or more one-way trips during the $8^{\text {th }}$ highest hour of annual driveway activity. It was determined that there are no major commercial driveways within the project study area, however, there are a total of 164 minor commercial driveways. A minor commercial driveway is considered to be any commercial driveway where the anticipated traffic volume on a typical day is less than the values stipulated for a major commercial driveway.

Commercial driveway geometry was collected for Route 5 (between Ridge Road and Route 179), Ohio Street (between Michigan Avenue and Fuhrmann Boulevard), Fuhrmann Boulevard (between Michigan Avenue and Ridge Road), Keating (between Seneca and Elk Streets), South

Park Avenue (between the Buffalo River and Hopkins Street); and Tifft Street (between Fuhrmann Boulevard and Hopkins Street. This analysis indicated that of the 164 minor commercial driveways, 128 were found to exceed at least one of the following NYSDOT standards: driveway width; distance between driveways; proximity to nearest intersection; exceeding driveway slope; and proximity to property line. The driveways, however, did not exceed the one inch standard for curb height.

### 2.3.1.16 Structures

Table 2.3-8 presents a summary of existing characteristics of bridge structures in the project area (see Figure 2.3-8). It should be noted that only NYSDOT-owned structures along Route 5 that could be affected by the project are listed. No work will be required on any bridges in the project area except as listed in the table and noted below, including structures that would be potentially used as detour routes.


Route 5 bridge over Tifft Street, looking west toward Lake Erie

Between the touchdown of the Buffalo Skyway and Milestrip Road (not including the Skyway Bridge and Milestrip Road interchange), nine bridges carry Route 5 over various transportation facilities/natural features. Seven of these bridges carry Route 5 over service roads, secondary streets, and existing rail lines, while two carry the roadway over watercourses (i.e., Union Ship Canal, Smokes Creek).

In addition to the aforementioned NYSDOT-owned Route 5 bridges, two other structures exist in the project area that would be affected by anticipated improvements. The first of these is an existing City of Buffalo bridge (BIN 2260780) carrying the southern portion of Fuhrmann Boulevard over a now-abandoned CSX railroad spur leading to the Independent Cement facility, just north of the Union Ship Canal. The other involves an existing South Buffalo Railroad Bridge (i.e., actually two structures - BINs 7001461 and 7001462) spanning Route 5 in the southern portion of the City of Lackawanna.


1 Traffic Signals
FIGURE 2.3-7
Traffic Control Devices


| Table 2.3-8 Bridge Characteristics Summary |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Route 5 Over |  |  |  |  |  |  |  |  |
|  | Service Road "D" | Conrail Railroad | Ohio Street | $\begin{array}{\|c\|} \hline \text { Service Road } \\ \text { "C" } \\ \hline \end{array}$ | Tifft Street | CSX Spur | $\begin{array}{\|c\|} \hline \text { Union Ship } \\ \text { Canal } \\ \hline \end{array}$ | Ridge Road | Smokes Creek |
| BIN | 1001569 | 1001559 | 1001549 | 1001539 | 1074280 | 1074270 | 1001520 | 1074260 | 1001490 |
| General Information |  |  |  |  |  |  |  |  |  |
| Functional Class of Roadway | Urban Principal Arterial Expressway | Urban Principal Arterial Expressway | Urban Principal <br> Arterial <br> Expressway | $\begin{array}{c\|} \hline \text { Urban Principal } \\ \text { Arterial } \\ \text { Expressway } \\ \hline \end{array}$ | Urban Principal Arterial Expressway | Urban Principal Arterial Expressway | $\begin{array}{\|c} \hline \text { Urban Principal } \\ \text { Arterial } \\ \text { Expressway } \\ \hline \end{array}$ | Urban Principal Arterial Expressway | Urban Principal Arterial |
| Year Built | 1955 | 1955 | 1955 | 1955 | 1991 | 1991 | 1991 | 1991 | 1912 <br> (Reconstructed <br> 2001) |
| Owner | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT |
| Maintenance Responsibility | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT | NYSDOT |
| Structure Characteristics |  |  |  |  |  |  |  |  |  |
| Structure Type | Steel, MultiGirder | Steel, MultiGirder | Steel, MultiGirder | Steel, MultiGirder | $\begin{array}{\|c} \hline \text { Prestressed } \\ \text { Concrete Box } \end{array}$ Beams | Prestressed Concrete, Voided Slabs | Steel, MultiGirder | Prestressed Concrete Box Beams | Steel, MultiGirder |
| Utilities | Electric | Electric | Electric | Electric | Electric | None | Gas, Navigation | None | None |
| Structure Geometrics |  |  |  |  |  |  |  |  |  |
| Out-to-Out Width / Culvert Length ( $\mathrm{m}(\mathrm{ft}$ ) $)$ | 20.5 (67.3) | 20.5 (67.3) | 20.4 (67.0) | 20.4 (67.0) | 25.8 (84.6) | 30.4 (99.8) | 25.8 (84.6) | 25.7 (84.6) | 26.9 (88.3) |
| Curb-to-Curb Width (m(ft) ) | 18.8 (62.0) | 18.8 (62.0) | 18.8 (62.0) | 18.0 (59.2) | 24.4 (80.1) | 28.1 (92.3) | 24.8 (81.4) | 24.0 (78.9) | 24.6 (80.7) |
| Bridge length (span length, m (ft) ) | 34.4 (113) | 65.5 (215) | 45.1 (148) | 44.1 (145) | 31.1 (102) | 13.7 (45) | 83.5 (274) | 31.0 (102) | 28.6 (93.8) |
| NB/WB Lanes on Bridge | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 |
| SB/EB Lanes on Bridge | 2 | 2 |  | 2 | 2 | 3 | 2 | 2 | 2 |
| Structural Condition |  |  |  |  |  |  |  |  |  |
| NYSDOT Conditional Rating | $\begin{gathered} 5.233 \\ (2004) \end{gathered}$ | $\begin{aligned} & 4.906 \\ & (2004) \end{aligned}$ | $\begin{aligned} & \hline 4.922 \\ & (2004) \\ & \hline \end{aligned}$ | $\begin{gathered} 5.047 \\ (2004) \end{gathered}$ | $\begin{gathered} 6.4 \\ (2003) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.48 \\ (2003) \\ \hline \end{gathered}$ | $\begin{gathered} 6.887 \\ (2004) \end{gathered}$ | $\begin{aligned} & \hline 6.180 \\ & (2003) \\ & \hline \end{aligned}$ | $\begin{gathered} 7.000 \\ (2003) \\ \hline \end{gathered}$ |
| NYSDOT General Recommendation (Year) | $\begin{gathered} 5 \\ (2004) \end{gathered}$ | $\begin{gathered} 5 \\ (2004) \end{gathered}$ | $\begin{gathered} 5 \\ (2004) \end{gathered}$ | $\begin{gathered} 5 \\ (2004) \end{gathered}$ | $\begin{gathered} 6 \\ (2003) \end{gathered}$ | $\begin{gathered} 7 \\ (2004) \end{gathered}$ | $\begin{gathered} 7 \\ (2003) \end{gathered}$ | $\begin{gathered} 6 \\ (2001) \end{gathered}$ | $\begin{gathered} 7 \\ (2003) \end{gathered}$ |
| FHWA Sufficiency Rating (Year) | $\begin{gathered} 71.9 \\ (2004) \\ \hline \end{gathered}$ | $\begin{gathered} 84.2 \\ (2004) \\ \hline \end{gathered}$ | $\begin{gathered} 82.0 \\ (2004) \end{gathered}$ | $\begin{gathered} 57.1 \\ (2004) \\ \hline \end{gathered}$ | $\begin{gathered} 96.3 \\ (2003) \\ \hline \end{gathered}$ | $\begin{gathered} 97.3 \\ (2003) \\ \hline \end{gathered}$ | $\begin{gathered} 82.1 \\ (2004) \\ \hline \end{gathered}$ | $\begin{gathered} 96.2 \\ (2003) \\ \hline \end{gathered}$ | $\begin{gathered} 89.6 \\ (2003) \\ \hline \end{gathered}$ |

### 2.3.1.17 Hydraulics of Bridges and Culverts

Two of the bridges carry Route 5 over waterways including Union Ship Canal (Father Baker Bridge) and Smokes Creek. The Father Baker Bridge was reconstructed as a low-level structure in 1991, replacing a high-level bridge that spanned from Tifft Street to Ridge Road. The Smokes Creek Bridge was reconstructed and widened in 2001. Both bridges are designed in accordance with current NYSDOT specifications regarding hydraulic requirements.

Route 5 contains one culvert that could be affected by the project (CIN C540009). This subsurface structure carries the North and South Branch of Blasdell Creek under Route 5 via two sets of twin $122-\mathrm{cm}$ ( 48 inch) pipes, south of the South Buffalo Railroad Bridge. Preliminary analysis by NYSDOT indicates that the culvert may need replacement with a box culvert structure to handle seasonal flows.

In addition, there is a outlet connection that crosses under Route 5 connecting Lake Kirsty within Tifft Nature Preserve to Lake Erie. This outlet is 153 cm ( 60 -inch) in diameter and would need to be maintained as part of the project.

### 2.3.1.18 Drainage Systems

For the large majority of roads in the project area, surface water drainage is collected by closed systems that tie to either dedicated storm sewers or to a combined sanitary/storm water runoff system. Limited areas along the Route 5 corridor have man-made drainage ditches and constructed wetlands to assist in stormwater management for frontage uses, including areas in the vicinity of Tifft Nature Preserve and along limited portions of the former Bethlehem Steel facility.

### 2.3.1.19 Soil and Foundation Conditions

The vast majority of the soils in the project study area are Urban Land (Ud) as mapped by the Soil Survey of Erie County, NY (SCS 1986). These soils are typified by urban fill, nearly level and at least $80 \%$ of the soil surface is covered with non-absorbing surfaces, e.g. pavement, buildings, concrete. The soils located just south of Union Ship Canal are nearly level and have at least $60 \%$ impervious cover. These soils may be seasonably wet with a perched water table. The soils located at the southern end of Route 5 are deep, moderately well drained, nearly level, and are urbanized soils resulting from man-made cut/fills. Soils that exhibit wetland conditions exist on limited areas on either side of Route 5 and are generally associated with private development drainage facilities. Consequently, these soils are poorly drained and often have ponded water.

Overall, the soil and foundation conditions in the project area are not highly unusual, allowing standard and construction methods to be employed. Exceptions to this would include:

- Identified areas undergoing hazardous waste remediation (e.g., former LTV/Republic Steel site); and
- Areas associated with the bridge foundations at the Father Baker Bridge (BIN 1001520) where settling has occurred in areas around the foundations of the former high-level bridge when it was replaced with a low-level bridge in 1991 (i.e., areas where there are no former foundations have settled). This has resulted in an uneven driving surface on Route 5 (i.e., "the Father Baker bumps").

Other than these selected issues/locations, there is no soil type exhibited in the project area that would require special attention regarding roadway design.

### 2.3.1.20 Utilities

The project area is served by all major utilities including electric, gas, water, sanitary and storm sewers, and telephone lines. Table 2.3-9 lists the utility services in the project study area. Figure 2.3-9 shows the location of major utility corridors. Public authorities operate the water and sewer systems and private companies supply the remaining utility services.

Overall, arterial road (non-expressway) segments in the project area (e.g., Fuhrmann Boulevard N/S, Ohio Street, Tifft Street, Ridge Road, and Route 5 south of Ridge Road) carry conventional service lines (e.g., overhead electrical, cable, telephone, underground water, and underground combined/separated sewer). No major transmission facilities exist along roads in the project area.

Larger natural gas transmission and fiber optic backbone cable lines run along the rail corridor that passes through the project area (see Section 2.3.1.21). In addition, a series of underground and above ground petroleum pipelines exists in the former rail corridor in the vicinity of the Exxon-Mobil facility in South Buffalo.

| Table 2.3-9 Project Area Utilities |  |  |  |
| :---: | :---: | :---: | :---: |
| Utility | Supplier and Major Facilities |  |  |
|  | City of Buffalo | City of Lackawanna | Town of Hamburg |
| Water Supply | Buffalo Water Authority 8"- 48" mains | Erie County Water Authority 4"- 24" mains | Erie County Water Authority 4"- 24" mains |
| Sanitary <br> Sewers | Buffalo Sewer Authority $6^{\prime \prime}-60^{\prime \prime} \text { combined mains }$ | Erie County Sewer Authority <br> 8"- 30" combined mains | Woodlawn Sewer District <br> 10" - 15" combined mains |
| Storm Sewers | Buffalo Sewer Authority $6^{\prime \prime}-60^{\prime \prime} \text { combined }$ | Erie County Sewer Authority <br> 10"- 60" combined mains | Woodlawn Sewer District <br> 10" - 15" combined mains |
| Electric | Niagara Mohawk | Niagara Mohawk | Niagara Mohawk |
|  | Route 5 Corridor (Fuhrmann Blvd): |  |  |
|  | Above Ground/Underground Service Wire |  |  |
|  | Ohio St Corridor: <br> Above Ground/Underground Service Wire | N/A | N/A |
| Natural Gas | National Fuel $2 "-24 "$ Distribution and Transmission Lines | National Fuel $3 "-16$ " Distribution Lines | National Fuel <br> 3" - 16" Distribution <br> Lines |
| Telephone | Verizon Underground Lines/Conduit | Verizon Underground Lines | Verizon Underground Lines |
| Cable TV | Adelphia <br> Aerial/Underground Cable | Adelphia Aerial Cable | Adelphia Aerial Cable |
| Fiber Optics | De-Tech, Level 3 <br> Fiber Optic Backbones | N/A | N/A |
| Pipelines | Exxon-Mobil <br> Buried Along Former Rail Corridor: <br> 6" Petroleum Pipeline <br> Elevated Pipe Along Former Rail <br> Corridor: <br> 6" \& 12" Diesel <br> $8^{\prime \prime} \& 12^{\prime \prime}$ Gasoline <br> 6" Pipeline (EMPCO) | N/A N/A | N/A <br> N/A |



FIGURE 2.3-9
Major Utility Corridors
Southtowns Connector/Buffalo Outer Harbor Project

### 2.3.1.21 Railroads

Figure 2.3-10 depicts the locations of major rail facilities located within the project study area. The third largest industrial railroad corridor in the nation passes through the project area, containing lines owned by the CSX, Norfolk Southern, Buffalo Southern, and South Buffalo Railroads. CSX operates a large switching facility, the Seneca Rail Yard, along this corridor. It is located east of the Tifft Nature Preserve.

Three railroad lines cross the Route 5 right-of-way, including the following:

- An NFTA-owned spur known as the "Beach Line," which includes a single track that passes under Route 5, crosses Fuhrmann Boulevard at-grade onto the NFTA Outer Harbor Lands just north of Ohio Street. Tenancy of commercial structures on the NFTA Outer Harbor lands do not currently include users requiring rail access. Thus, the line is seldom in use.
- A single-track, CSX-owned spur serving the Independent Cement Facility, crosses under Route 5 (under BIN 1074270) and Fuhrmann Boulevard (under BIN 2260780), immediately north of the Father Baker Bridge. The rail line is fenced off along the front property line and CSX recently terminated its access agreement with the user.
- Two South Buffalo Railroad lines that serve Buffalo Crushed Stone and the Bethlehem Steel site cross over Route 5, via a twin set of railroad bridges (BINs 7001461 and 7001462 - each carrying a single track) near the Lackawanna/Hamburg municipal line. In 2002, the Canadian National (CN) Rail Company established a South Buffalo Distribution Center in the area to the west of Route 5. This center includes a lumber re-load facility and 4 hectares ( 10 acres) of uncovered storage area; thus, these railroad bridges are heavily used in conjunction with this CN facility.


## Visual Environment

The project area passes through portions of South Buffalo, City of Lackawanna, Village of Blasdell, and the Town of Hamburg and its existing visual environment varies among different portions of the Route 5 corridor, along Ohio Street, and in South Buffalo in the vicinity of the LTV/Republic Steel site. Overall though, the most prominent visual feature in the project area is the Route 5/Fuhrmann Boulevard complex (see Figure 2.3-11).

At the northernmost portion of the project area, the Buffalo Skyway Bridge provides panoramic views of Lake Erie, although these are somewhat limited in duration given the geometry of the bridge, the existence of a solid concrete guide rail, and the posted operating speed. South of the Skyway Bridge, the visual character of the elevated expressway portion of Route 5 is characterized by typical highway components --- high-mast lighting fixtures, overhead signage, and concrete median barrier and guide rail defining the center and edge of the right-of-way. The northern portion of the segment consists of views from the highway of the high-/mid-rise buildings of Downtown Buffalo in the distance across the industrial areas and rail yards to the
east and largely vacant lake front sites to the west. Limited views of the lake are provided in this segment as the elevation of Route 5 changes. Further south, the highway provides views of Lake Erie, railroad spurs and waterfront industrial/marine facilities to the west and water bodies/vegetation within the Tifft Nature Preserve to the east.

Images of the existing visual environment of the at-grade portion of Route 5 and other arterial roads in the project are depicted in Figure 2.3-12. Along Fuhrmann Boulevard North and South, the Route 5 embankment and associated structures are the prominent visual features. In fact, near Tifft Nature Preserve on Fuhrmann Boulevard North (i.e., east of Route 5), there are almost no visual indications that the roadway is along a major waterfront, because views to Lake Erie are completely obstructed by the Route 5 embankment. On the Fuhrmann Boulevard South, various plantings/landforms associated with the Route 5 embankment and views of the lakeshore are most predominant, along with items such as overhead utilities. Most of the buildings in this segment are set back from the roadway and their parking areas are often the most prominent features.

Where Route 5 becomes an at-grade roadway south of Ridge Road, its visual character is defined by the roadway edge conditions, which include light poles with overhead utility wires. Commercial and residential uses are intermixed throughout this portion of the study area with local access provided via roadway curb cuts. The setback of adjacent buildings varies considerably along the corridor. There is no strong sense of unity or harmony to the visual environment in this segment due to diversity in building types, materials and scales, and varying densities of development.

The visual character of the Ohio Street corridor consists of a mixture of commercial, industrial, and residential land uses however with an inconsistent presence/condition of sidewalks, overhead utilities and vacant lots. The Old First Ward neighborhood provides some consistency of scale and materials of buildings, and as Ohio Street passes over the Buffalo River, views of the historic grain elevators and other waterfront industrial facilities are prominent. Other elements of Buffalo's industrial heritage include the canals and the lift bridges that cross them to the west. There are areas of open land adjacent to the Buffalo River that provide visual and boat launching access to the water's edge, however entry into this area is not well-defined.

The existing visual environment in the vicinity of the LTV/Republic Steel site is characterized by low density industrial and commercial development with vacant vegetated land consisting of primarily grasses, shrubs, and scrub trees, all leading up to the Buffalo River. A berm exists to the east for the majority of the length of the site that serves as a visual buffer to Abby Street and the adjacent Hickory Woods residential neighborhood.

### 2.3.1.23 Provisions for Pedestrians and Bicyclists

Overall, provisions for pedestrian and bicyclists vary substantially across the project area. The inland urban neighborhoods (e.g., Old First Ward, Seneca-Babcock, Lackawanna $1^{\text {st }}$ Ward, Woodlawn, etc.) provide pedestrians relatively adequate accessibility through a system of




Fuhrmann Boulevard Looking South at NFTA Boat Harbor Entrance (Elevated portion of Route 5 at left)


Route 5 (Hamburg Tumpike) Segment Looking North in City of Lackawanna (5-Travel-Lane Segment)


South Park Avenue Looking South Toward LTV/Republic Steel Site (Abby Street at Left)


Fuhrmann Boulevard Looking North at Tifft Nature Preserve Entrance (Elevated portion of Route 5 at left)


Route 5 (Hamburg Tumpike) Segment in Woodlawn Section of Hamburg (6-Travel-Lane Segment)


Ohio Street Looking North at Louisiana/St. Clair Street Intersection

FIGURE 2.3-12
Existing Visual Settings in the Project Area
sidewalks as part of typical urban street alignments. Similarly, bicyclists are adequately accommodated on local streets in these neighborhoods, although access along selected arterial roads can be impeded somewhat by heavier traffic volumes during peak hours. This contrasts with roads in the vicinity of the Lake Erie and Buffalo River waterfronts, where pedestrian/bicycle access is at best awkward and at worst dangerous. This is consistent with the former industrial nature of these land areas, characterized by a general lack of dedicated pedestrian/bicycle facilities and conflicts with car and truck movements. The waning of industrial development along the waterfront has left a roadway system with wider than average pavement widths encouraging higher vehicular speeds and few if any sidewalks, bike lanes, and/or multi-purpose trails.

Table 2.3-10 lists sidewalk locations and conditions along major roads in the project area. Pedestrians/bicyclists are restricted from using segments of Route 5 (from the Buffalo Skyway Bridge to Ridge Road) and Milestrip Road (from Route 5 to South Park Avenue), because these segments are configured as expressway facilities. South of Ridge Road, sidewalks are provided on the east side of Route 5 in Lackawanna and on both sides of the roadway in Woodlawn. While existing sidewalks are in average condition, the overall width of the roadway and volume/speed of traffic in these segments impedes pedestrian safety and security. Sidewalks do not exist along the entire length of Fuhrmann Boulevard (North and South), and portions of Tifft Street and Lake Avenue. They are also very limited and in poor condition along Ohio Street.

With regard to bicycle access, there are no designated bike lanes in the project area. Route 5 is open to bicycle use on its non-expressway segment through Lackawanna and Woodlawn, however, excess vehicle travel speeds and narrow shoulders make this a less traveled roadway for bicyclists. Bicyclists also must share the paved shoulder area of Fuhrmann Boulevard, Ohio Street, Tifft Street, and Ridge Road.

Some smaller improvements for pedestrian and bicycle access have been realized in the project area over the last five years, primarily associated with recreational projects. As part of the improvements for the creation of Woodlawn Beach State Park, a dedicated multi-purpose trail was constructed from Route 5 into the park to allow safe access around the Milestrip Road Interchange. A new bikeway and pedestrian boardwalk has also been established by NFTA as part of their improvement program for Gallagher Beach. Further, Erie County has installed an interim bike bridge over the Union Ship Canal to provide pedestrian/bike access around the Father Baker Bridge - although the structure will likely need to be realigned and/or replaced given that it impedes some recreational boat access through the canal.

Additional pedestrian and bicycle access improvements are programmed for the project area; all of these focus on enhancing recreational access to and along the Lake Erie waterfront. These projects include (see also Section 2.3.1.24):

- A new greenway along Tifft Street from the Tifft Nature Preserve ball fields to Fuhrmann Boulevard, connecting to Gallagher Beach facilities;
- Pedestrian and recreational improvements around the Union Ship Canal as part of the brownfields redevelopment plan for that site;
- A new waterfront greenbelt along Lake Erie on the NFTA's Outer Harbor Lands, as part of shoreline stabilization activities for remediation of that brownfield site; and
- An Outer Harbor greenway system, involving short and long-term pedestrian/bicycle trail facilities along Fuhrmann Boulevard and Ohio


Interim pedestrian/bicycle bridge over the Union Ship Canal (Father Baker Bridge in background) Street.

| Table 2.3-10 Sidewalk Locations |  |  |  |
| :---: | :---: | :---: | :---: |
| Route | Segment | Location | Condition ${ }^{1}$ |
| Route 5 | Buffalo Skyway to Ridge Road | None (Expressway) | N/A |
|  | Ridge Road to Buffalo Specialty Products Inc. | East side | Average |
|  | Buffalo Specialty Products Inc. to Milestrip Road | Both sides | Average |
| Fuhrmann Boulevard (North/South) | Union Ship Canal to Times Beach | None | N/A |
|  | Tifft Street to Ohio Street | None | N/A |
|  | Service Road "C" to Michigan Avenue | None | N/A |
| Ohio Street | Michigan to Miami | North side | Poor |
|  | Miami Street to Chicago Street | None | N/A |
|  | Chicago Street to South Street | None | N/A |
|  | South Street to Louisiana Street | East side | Poor |
|  | Louisiana Street to Ganson Street | Both sides | Poor |
|  | Ganson Street to Bridge over Railroad | East side | Poor |
|  | Bridge over Railroad to Fuhrmann Boulevard | None | N/A |
| Tifft St | Fuhrmann Boulevard to Tifft Playfields | None | N/A |
|  | Tifft Playfields to Hopkins Street | North side | Average |
|  | Hopkins Street to South Park Avenue | Both sides | Average |
| Louisiana St | South Park Avenue. to Ohio St. | Both sides | Average |
| South Park <br> Avenue | Michigan Avenue to Ridge Road. | Both sides | Average to Good |
| Ridge Road | Fuhrmann Blvd. to Ridge Road Bridge | Both sides | Average to Good |
| Lake Avenue | Route 5 to RR Bridge | South side | Average |
|  | RR Bridge to RR Tracks | South side | Poor |
| Milestrip Road | Route 5 to South Park Avenue | None (Expressway) | N/A |
| Keating St | Seneca St. to Elk St. | Both sides | Average |
| Bailey Avenue | Clinton St. to South Park Avenue. | Both sides | Average to Good |
| Seneca St | Babcock St. to Elk St. | Both sides | Average to Good |
| Hopkins St | South Park Avenue to Tifft Street | Both sides | Average |
|  | Tifft St. to Ladner Avenue | East side | Average |
|  | Ladner Avenue to Larrabee Street | None | N/A |
|  | Larrabee Street to South Park entrance | East side | Average |
| Elk St | Babcock St. to Seneca St. | Both sides | Average |

${ }^{1}$ Key to terms:
Poor - largely discontinuous; missing/heaved/broken sections; and/or extremely narrow.
Average - generally acceptable with no major missing/heaved/broken sections; minimally acceptable width.
Good - no missing/heaved/broken sections; wider than average and/or somewhat more separated from street
Excellent - no missing/heaved/broken sections; wider than average; fully separated from street with snow storage areas, defined crosswalks with curb ramps, etc.

### 2.3.1.24 Planned Development for Area

There have been a number of recent investments that may affect and/or be affected by the STC/BOH Project. These have involved a series of redevelopment and recreational improvements intended to enhance economic activity and increase public waterfront access to begin to take best advantage of Lake Erie waterfront areas for new uses. Public investments made to date total over $\$ 35$ million, and include the following projects:

- Union Ship Canal Redevelopment ${ }^{4}$, for which $\$ 3$ million has been expended for site preparation for mixed-use commercial/industrial development;
- Gallagher Beach (Buffalo Boat Harbor) for which $\$ 2$ million has been expended for boardwalk and site improvements to eventually make the beach part of a larger state park facility;
- Woodlawn Beach State Park, for which acquisition costs totaling $\$ 6.3$ million and construction totaling almost $\$ 4$ million have been expended for nature trails, a new bathhouse, a new nature center, and sewer remediation improvements.
- Erie Canal Harbor Project (formerly referred to as the Buffalo Inner Harbor Development Project), for which Phase I, involving $\sim \$ 20$ million in waterfront park improvements, was completed in July 2003.

As discussed in Section 2.2.3, within the project area there are brownfield redevelopment plans for four (4) "Target Redevelopment Sites," including: NFTA Outer Harbor Lands; Union Ship Canal site; former Bethlehem Steel Site; and former LTV/Republic Steel site. In addition, a series of other economic development, recreational and access improvements are planned in the project area by municipal, county, regional, state, and federal agencies, as well as private interests. Summaries of each planned development project are presented in Table 2.3-11. Figure 2.3-13 shows the location of these projects as they correspond to the project study area.

[^3]

## Planned Development

...... Industrial Heritage Trail
.-. Outer Harbor Greenway/Greenbelt GBNRTC TIP Projects Recreational Project
$\square$ Brownfield Redevelopment Project
(Milometers

FIGURE 2.3-13
Planned Development Projects
Southtowns Connector/Buffalo Outer Harbor Project

| Table 2.3-11 Planned Development |  |  |  |
| :---: | :---: | :---: | :---: |
| Project (Sponsor) | Investment | Location | Summary/Status |
| Brownfield Development Projects |  |  |  |
| Redevelopment of NFTA Outer Harbor Lands (NFTA, City of Buffalo, Erie County - NFTA) | Waterfront Greenbelt: $\$ 2.7$ million Redevelopment: TBD | Former Port of Buffalo area fronting on Fuhrmann Boulevard, south of Times Beach | Mixed-use redevelopment of $\sim 32$ hectares ( 80 acres) with waterfront greenbelt. Greenbelt plan provides a 23-meter (75-foot) setback from water's edge for future development. <br> Est. Completion Date: 2010-2015 <br> Status: NFTA coordinating with selected development team for first phase of planning and redevelopment. |
| Union Ship Canal Redevelopment Project (Buffalo Lakeside Commerce Park) | Site Prep: \$3 Million (Completed) <br> Infrastructure: \$4.5 Million | Bounded by Tifft Street (N), Route 5 (W), City of Buffalo/ Lackawanna line (S); and rail corridor (E). | Redevelopment of $\sim 111$ hectares ( 275 acres) for commercial, light industrial, and office use. Use of canal for recreational uses and small retail space along periphery. Plan would modify City's zoning ordinance for these uses. Initial expenditures for site preparation, new internal access road connecting to Commerce Drive, and other utility and infrastructure improvements. <br> Est. Completion Date: 2010 <br> Status: Initial road/utility infrastructure completed; first phase of new development (CertainTeed) completed. |
| Bethlehem Steel <br> Redevelopment/North <br> American Business Center <br> (Erie County, City of <br> Lackawanna) | TBD | Former Bethlehem Steel Plant along Route 5 from Ridge to Lackawanna City line | Redevelopment of $\sim 465$ hectares ( 1,150 acres) of waterfront property for redevelopment with primary objective of economic development. Varying land uses to reconnect community to the waterfront via recreational areas and open space systems. First phase involves development of North American Business Center fronting on Route 5. <br> Est. Completion Date: 2015 <br> Status: Initial planning continuing; coordinating with new property owner. |


| Table 2.3-11 Planned Development |  |  |  |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \hline \text { Project } \\ \text { (Sponsor) } \end{gathered}$ | Investment | Location | Summary/Status |
| LTV/Republic Steel Site Redevelopment (Steelfields Inc.) | \$18 Million <br> (Clean-up activities under construction) | Bounded by South Park Avenue (N); private uses on Tifft Street (S); Hickory Woods neighborhood (E); and railroad corridor (W) | Private voluntary clean-up and mixed commercial redevelopment of 86hectare (213-acre) site. <br> Est. Completion Date: 2010 <br> Status: Clean-up activities (new landfill cell, soil treatment/ consolidation, groundwater remediation) in construction. Redevelopment activities for light industrial/commercial uses anticipated to be initiated in 2005. |
| Other Economic Development Projects |  |  |  |
| Erie Canal Harbor Project (Federal Transit Administration, Empire State Development, NYS Thruway Authority, Erie County, City of Buffalo) | \$46 Million | Foot of Main Street along Buffalo River, west of Cobblestone District | Redevelopment of $\sim 5$-hectare (12-acre) site along Buffalo River for new mixed-use development, multi-modal transportation improvements, and heritage interpretation area at historic western terminus of Erie Canal. <br> Est. Completion Date: 2007 <br> Status: Record of Decision issued; Construction begins in Summer 2005. |
| Recreational Development Projects |  |  |  |
| Time Beach Restoration (Erie County/US Army Corps of Engineers) | \$1 Million | Former US Army Corps of Engineers dredge disposal area fronting on Fuhrmann Boulevard, south of Coast Guard Station | Remediation of site and reuse as a nature preserve equipped with boardwalk viewing areas. <br> Est. Completion Date: 2006 <br> Status: First phase of access improvements completed - September 2004. |
| Gallagher Beach (Buffalo Beach) Improvements (NFTA/NYS Office of Parks, Recreation, and Historic Preservation [OPHRHP]) | Phase I: \$1 Million <br> Phase II: <br> \$1 Million <br> Conversion to State Park: \$5-10 Million | Fronting on Fuhrmann Boulevard, south of Ohio Street | Shore stabilization, boardwalk, and boat ramp, and bike trail improvements for ultimate conversion of beach area and NFTA Boat Harbor to State Park. <br> Est. Completion Date: 2010 Status: Phase I and II Completed, transfer to OPRHP completed. |


| Table 2.3-11 Planned Development |  |  |  |
| :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Project } \\ \text { (Sponsor) } \\ \hline \end{gathered}$ | Investment | Location | Summary/Status |
| Erie County Park System Master Plan (2002) | \$20 Million (Countywide) | Waterfront parks in Erie County | Outlines a strategy for waterfront parks and greenway systems that will advance economic renewal, public accessibility, recreation opportunities and environmental conservation. Creates a 142 -kilometer ( 88 -mile) Regional Waterfront Trail System connecting parks, waterfront areas, and businesses and neighborhoods. <br> Est. Completion Date: 2015 <br> Status: Initial trail improvements on Outer Harbor in construction. |
| Access Projects |  |  |  |
| Outer Harbor Multi-Purpose Greenway (NFTA/Erie County) | \$3.1 Million | Fuhrmann Boulevard and Ohio Street | Create interim and permanent pedestrian and bicycle access improvements along Fuhrmann (north of Gallagher Beach) and Ohio Street corridors. <br> Est. Completion Date: 2005 <br> Status: First phase completed. |
| Tifft Street Greenway (City of Buffalo) | \$990,000 | Waterfront trail system to include Lake Erie, Buffalo River, Cazenovia Creek, and Scajaquada Creek. | Create interim and permanent pedestrian and bicycle access improvements along Fuhrmann (south of Gallagher Beach) and Tifft Street corridors. <br> Est. Completion Date: 2005 Status: In construction. |
| Ridge Road Bridge Replacement (NYSDOT/City of Lackawanna) | \$13.4 Million | Ridge Road over CSX rail corridor | In-kind structural replacement of bridge over railroad corridor. <br> Est. Completion Date: 2010 <br> Status: Preliminary engineering completed. |
| Lake-Milestrip Access Road (NYSDOT/Town of Hamburg) | \$300,000 | Corridor south of Bethlehem Steel site to Milestrip Road (Route 179) | Construction of new truck access road between Lake Avenue and Old Milestrip Road interchange on Route 179. <br> Est. Completion Date: 2008 <br> Status: Preliminary design pending. |


| Table 2.3-11 |  |  |  |
| :--- | :---: | :--- | :--- |
| Project <br> (Sponsor) | Investment | Location | Summary/Status |
| Industrial Heritage Trail <br> (Industrial Heritage <br> Commission, Inc.) | TBD <br> (not funded) | Ohio Street, Ganson <br> Street, Michigan <br> Avenue, South Park <br> Avenue | Creation of a thematic trail network <br> along the Buffalo River from the Erie <br> Canal Harbor through the Old First <br> Ward with intention of increasing <br> public awareness of City's industrial <br> heritage as major grain and <br> transshipment location. |
| Buffalo Intermodal <br> Transportation Center <br> (City of Buffalo/NFTA) | \$8.1 Million | Donovan State Office <br> Building area, north <br> of Erie Canal Harbor <br> site | Est. Completion Date: N/A <br> Status: N/A |
| Relocation of Amtrak's Exchange <br> Street Station to new site coordinated <br> with NFTA light rail system and Erie <br> Canal Harbor site. |  |  |  |

### 2.3.1.25 Existing Transit Facilities

NFTA Metro provides public transit throughout the STC/BOH project area, available along eight separate fixed bus routes (see Figure 2.3-14). The following lines serve riders on one or multiple route variations:

- Local Bus Routes:
- 14: Abbott
- 15: Seneca
- 16: South Park
- 19: Bailey
- 36: Hamburg
- 42: Lackawanna
- Express Bus Routes:
- 74: Boston
- 76: Lotus Bay

Table 2.3-12 lists service characteristics for each bus route. Service is provided weekdays on all routes and averages 8,974 passengers per day. Varying levels of weekend service are also offered with the exception of the 76: Lotus Bay bus route, which has no weekend service. Operational headways vary by route as well.


FIGURE 2.3-14
NFTA METRO BUS ROUTES

| Table 2.3-12 |  |  |  |  |  |  | Transit Routes |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NFTA <br> Bus Route | Route <br> Variations | Local/ <br> Express | Weekday <br> Ridership | Span of <br> Service | Extent of <br> Service |  |  |
|  | Inbound | Outbound |  |  |  |  |  |
| 14:Abbott | A, B, C | Local | 1502 | $4: 50$ AM-12:42 AM | Buffalo CBD | ECC South <br> Campus |  |
| 15: Seneca | A, B, C | Local | 1514 | $5: 09$ AM -12:25 AM | Buffalo CBD | East Aurora |  |
| 16: South Park | A | Local | 1387 | $4: 40$ AM -1:32 AM | Buffalo CBD | Nason Loop/ <br> Buffalo southern <br> city line |  |
| 19: Bailey | A, B | Local | 3293 | $4: 56$ AM -1:45 AM | South Campus <br> Station | Nason Loop/ <br> Buffalo southern <br> city line |  |
| 36: Hamburg | A, B, M | Local | 682 | $4: 53$ AM -11:33 AM | Buffalo CBD | Village of <br> Hamburg |  |
| 42: Lackawanna | A | Local | 215 | $6: 07$ AM -8:02 PM | Appletree <br> Transit Center | ECC South <br> Campus |  |
| 74: Boston | A, B, C | Express | 265 | AM/PM peak \& one <br> midday trip | Buffalo CBD | Boston |  |
| 76: Lotus Bay | J, S | Express | 116 | AM/PM peak \& one <br> midday trip | Buffalo CBD | Farnham |  |

${ }^{1}$ Indicates variations in routes traveled for each bus route number (e.g., slight differences in path to termini occur on Route 14A vs. 14C)

Figure 2.3-15 illustrates the location of NFTA bus routes and the magnitude of activity at each stop, in terms of number of boarding and lightings. There are roughly 550 bus stops within the project area. Passenger activity tends to concentrate at transfer points between bus routes and along corridors that serve dense residential areas particularly near South Park Avenue, Abbott Road., Seneca Street and the South Park Avenue/Louisiana Street intersection in the Buffalo's Old First Ward/Valley neighborhood.

While transit access is provided throughout the study area, it should be noted there is only one transit stop on Fuhrmann Boulevard in the vicinity of the NFTA Outer Harbor Lands, adjacent to Freezer Queen's manufacturing facility near the intersection of Ohio Street. There are also no transit stops on the at-grade segment of Route 5 north of O'Dell Street in the City of Lackawanna. The former condition is a result of the mere lack of destinations for transit riders along the northern portion of the Route 5 corridor, while the latter is the result of route refinements recently made by NFTA (Gower, 2002). The Authority received comments regarding the safety of the at-grade portion of Route 5 for transit passengers, particularly in the westbound (i.e., traveling south) direction, given that riders are required to cross Route 5 to access residential areas in the City of Lackawanna. Therefore, NFTA adjusted the routes to use parallel residential streets. Similar issues exist south of O'Dell Street; however, there are no suitable parallel streets in this segment.

### 2.3.1.26 System Elements and Conditions

As discussed in Section 2.3.1.8, the nature of the configuration and physical access provided along the Route 5 corridor is related to the overall system of interstate highways. The current configuration of Route 5 was originally designed primarily for local truck access to Port of Buffalo sites and for goods movement to/from now closed industrial establishments (e.g., Bethlehem Steel, Republic Steel, Donner-Hanna Coke, etc.). However, over the last 40 years Route 5 has evolved into a major commuting route between suburban communities in the Southtowns and Downtown Buffalo, accommodating over 40,000 daily trips. Review of GBNRTC data indicate a pattern for some Southtowns commuters of using Route 5 trips in lieu of using interstate facilities (I-90 and I-190) to access Downtown Buffalo. While a portion of these trips likely involves avoidance of tolls along the interstate system, it is more evident of a perceived travel time saving using Route 5, via Milestrip Road.

Thus, it is reasonable to presume that changes to the Route $5 /$ Fuhrmann Boulevard corridor to facilitate economic development, recreational, and local multi-modal access objectives must be conducted in the context of its affects to the overall expressway system serving Downtown Buffalo. Changes to real and/or perceived travel times along Route 5 would likely result in a redistribution of commuting patterns along segments of I-90 and I-190 serving the City of Buffalo.

### 2.3.1.27 Environmental Integration

One of the major objectives of the $\mathrm{STC} / \mathrm{BOH}$ Project is to enhance local access along the Lake Erie waterfront, particularly to existing and planned recreational amenities such as Times Beach, Gallagher Beach, Tifft Nature Preserve, Woodlawn Beach, Union Ship Canal, and access areas along the Buffalo River. Improvements to the road network in the project area present many opportunities for enhancing the natural and built environment in accordance with NYSDOT's Environmental Initiative to create "betterments" for local communities. These would include, but not be limited to:

- Creating a unified network of pedestrian/bicycle trails and small trail head parking areas to link recreation facilities along the Lake Erie waterfront as part of any proposed road construction;
- Creation of road improvements to better facilitate transit access and safety;
- Creating opportunities along Route 5/Fuhrmann Boulevard for future rights-of-way for City of Buffalo sewer extensions to the Union Ship Canal Area (which currently is served via county facilities nearing capacity in the City of Lackawanna); and
- Improving the overall neighborhood streetscape of the Ohio Street corridor in the Old First Ward neighborhood of Buffalo, including enhancement of the existing gateway feature and small park at Ohio Street and Louisiana Street.


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$\begin{array}{llll}\circ & 0 & \bigcirc & 26-50 \\ \circ & 1-15 & \bigcirc & 51-100 \\ \circ & 16-25 & \bigcirc & 101-210\end{array}$
Source- NFTA Fall 2002 Data


Kilometers

FIGURE 2.3-15
AVERAGE WEEKDAY BOARDINGS \& ALIGHTINGS at POSTED BUS STOPS
Southtowns Connector/Buffalo Outer Harbor Project

### 2.3.2 Needs

### 2.3.2.1 Area or Corridor Level Needs

Route 5/Fuhrmann Boulevard is designated as a High Priority Corridor, listed on the NHS by Congress in the 1991 ISTEA legislation. This has allowed NYSDOT to conduct a design study for improving the corridor to an appropriate standard. The following sections summarize the project needs.

## Social Demands and Economic Development

The existing configuration of Route 5 has been regarded for two decades as an obstacle to realizing the full redevelopment potential of the Lake Erie waterfront in Buffalo, Lackawanna, and Hamburg. Indeed, this perception was the basis for the original Southtowns Connector Feasibility Study in 1991. The expressway segment of the roadway, together with Fuhrmann Boulevard, consists of the equivalent width of a 10-lane highway in some locations. The elevated embankment of the expressway is perceived as a wall cutting off visual access to the Lake Erie waterfront.

In addition, the circulation patterns associated with the frontage road characteristics of Fuhrmann Boulevard, while adequate for the system's former role as mainly serving truck access to the Port of Buffalo on NFTA's Outer Harbor Lands, is confusing for non-commercial access. It requires many circuitous movements to access parcels along the roadway (see Figure 2.3-16). This is evident in the following characterizations on the quality of physical access to three of four previously discussed target redevelopment areas along Route 5:

- Access to the NFTA Outer Harbor Lands (as well as sites north, including Times Beach) is provided by a one-way portion of Fuhrmann Boulevard South, requiring a doubling back under the elevated portion of Route 5 to Fuhrmann Boulevard North to access the northern portion of the corridor.
- While visible from Route 5, no direct frontage access is provided to the Union Ship Canal Redevelopment Area; direct access is only provided by internal roads extending from the New Village Industrial Park in the City of Lackawanna.
- While access to the Bethlehem Steel site is adequate from the north, given that the Ridge Road interchange deposits traffic at the front gate of the facility, access from the south requires exiting Route 5 to the east, then doubling back under Route 5 to access the gate. While this was suitable for a single use manufacturing facility, redevelopment of the site for multiple smaller, mixed commercial uses would require more intuitive access to the site. In addition, access controls on the Ridge Road off-ramps cuts off access to smaller redevelopment sites east of Route 5 in the City of Lackawanna.
- Along Ohio Street, the primary local alternative to the Buffalo Skyway in accessing the Lake Erie waterfront, the current alignment and roadway characteristics (e.g., wide pavement
widths, no sidewalks, off-set intersections) encourage faster speeds and cut-through traffic (see Figure 2.3-17). This is particularly the case at the Ohio/Louisiana/St. Clair Street intersection, where the northbound lanes of Ohio Street better align with Louisiana Street, allowing faster, unsafe movements onto Louisiana Street leading to I-190. This overall setting impedes redevelopment of buildings/parcels along the Ohio Street corridor, which has been projected by planning and economic development officials as a natural extension of activities being advanced in the Erie Canal Harbor and Cobblestone Historic District encouraging a dense, urbane development pattern encouraging adaptive reuse of former industrial structures.
- Access to the LTV/Republic Steel site is provided only via South Park Avenue (see Figure 2.3-18). Successful redevelopment of the site for mixed commercial/light industrial use would require easy access to the interstate system. However, access to I-190 or Route 5 is provided via local arterial streets that often pass through residential neighborhoods in the City of Buffalo's Seneca-Babcock neighborhood (e.g., Hopkins Street, Smith Street, and Bailey Avenue). Lack of easy access through non-residential areas will at best limit the redevelopment potential of the site or at worse, result in further problems with on-going issues regarding truck conflicts in these neighborhoods.

Even more important to providing better physical access to specific redevelopment areas, the overall reconfiguration of the Route 5 corridor is needed to facilitate regional economic development objectives by establishing major "quality-of-life" improvements associated with natural/recreational resources on the waterfront. Buffalo and Erie County are now beyond the beginning stages of reclaiming the Lake Erie waterfront as a signature public realm of regional and national scope. This is evidenced by established facilities such as the Tifft Nature Preserve and Woodlawn Beach State Park, and currently-programmed projects to create a new state park at the NFTA Boat Harbor/Gallagher Beach area and a Times Beach Nature Preserve. A transportation system that focuses more on providing logical connections among these emerging facilities, rather than through the corridor at expressway speeds, would significantly contribute to redefining the Lake Erie waterfront as a $21^{\text {st }}$ century resource.

## Modal Interrelationship

As discussed in previous sections, the road system in the project is ill-suited for modes of transportation other than vehicular (particularly heavy truck) access. Except for some limited recreational improvements at the local level, areas along the Route 5/Fuhrmann Boulevard complex, Ohio Street, and Tifft Street are almost devoid of pedestrian or bicycle trails or other facilities. Within the Lackawanna and Woodlawn portions of Route 5, pedestrian and bicycle access is impeded by the wide width of paved areas, traffic volumes and speeds, and the lack of appropriate streetscape and refuge areas to facilitate safe access. Similarly, transit access is impeded by the lack of pedestrian facilities, particularly around staging areas. This has prompted NFTA is adjust certain bus routes off of Route 5 in Lackawanna to respond to passenger concerns.





The project area needs an interconnected network of pedestrian, bicycle, and transit facilities as part of the overall transportation system to address these issues. Such a system could serve as a quality-of-life improvement in itself, but in the context of emerging reuse of waterfront areas for park and natural areas, it could create an almost continuous system of green space stretching from Times Beach to Woodlawn Beach and from inland areas such as Downtown Buffalo, South Buffalo, and Lackawanna to Lake Erie. Further, incorporating such multi-modal facilities as part of road improvements presents the opportunity to realize long-standing plans for new facilities, including:

- The Industrial Heritage Trail, planned as an interpretative trail highlighting Buffalo's early development associated with the Erie Canal and grain milling industry; and
- A waterfront greenway system, planned by both the City of Buffalo and Erie County to improve recreational access along the Lake Erie waterfront.


## System Needs

An alternate route for commercial traffic to access the interstate system from the Southtowns (i.e., via Tifft Street) is needed to provide a new system link in South Buffalo, both to provide access to facilitate redevelopment of the LTV/Republic Steel site, but more so to reduce commercial vehicle conflicts resulting from using streets that pass through residential neighborhoods. A new local arterial street connecting Tifft Street to I-190 at the Seneca Street interchange would alleviate the volume of traffic traversing residential areas of the Old First Ward, Valley, and Seneca-Babcock neighborhoods.

### 2.3.2.2 Project Level Planning Needs

## Safety Needs

Route 5 is an urban arterial expressway (from I-190 to Ridge Road) and an urban principal arterial (from Ridge Road to Milestrip Road) servicing commuters from the Southtowns into downtown Buffalo. Several non-conforming and non-standard features exist along this roadway making it a less than safe highway at certain locations (see Section 2.3.1.10 - Non-Standard and Non Conforming Features). Accident rates exceeding the statewide crash rate (i.e., typically involving a fixed object) are most frequent in the project area along Route 5, specifically on segments from Ohio Street to Tifft Street; Ridge Road to Odell Street; Bethlehem Steel to Lake Avenue; Lake Avenue to Old Milestrip Road, and Seventh Street to Route 179. Implementation of safety improvements to better encourage maintenance of posted speeds and better interface with non-vehicular traffic is needed to address these issues.

## Capacity Needs

Segments of expressway and at-grade portions of Route 5 are projected to reach congested conditions by 2030, as suburbanization trends continue in the Southtowns communities. This is primarily the result of a projected growth in the pattern using Route 5 as an alternative to I-90 and I-190 by residents in inland suburbs such as parts of Hamburg and Orchard Park. Changes
to the configuration of Route 5 would likely result in traffic diverting to the interstate system to access Downtown Buffalo. While such a diversion would create a better setting for local access along Lake Erie, there is a need to maintain adequate commuter/commercial capacity along the Route 5 corridor so as not to significantly impede access for already established travel markets. This would also be needed to avoid significant impacts to the interstate system.

Overall, there is a need to identify an appropriate balance between enhancing local multi-modal access and regional commuter/commercial road capacity.

### 2.3.2.3 Transportation Plans

As discussed in Section 2.2.3, the STC/BOH Project was the subject of an MIS prepared in accordance with ISTEA, and is included on the GBNRTC's 2025 Long Range Transportation Plan, described under the category of Economic Development Projects as the "Southtowns Connector Access/Redevelopment Project." The Long Range Plan states that the project is intended to improve local access for enhancement of economic development, recreation, and tourism. The plan is not specific to the ultimate configuration of the Route 5/Fuhrmann Boulevard complex, stating that this would evolve out of the FDR/FEIS/Section 4(f) process. It does however, assume certain STC/BOH Project components in its planned 2025 road network, including:

- A new access road through the former LTV/Republic Steel site from the 1-190 Seneca Street Interchange to Tifft Street; and
- Widening Route 5 westbound by one lane (i.e., a total of 7 lanes, including the dedicated leftturn lane) from Ridge Road to where it meets the existing 7-lane segment of Route 5 in Woodlawn.

The financially "constrained" portion of the Long Range Plan (i.e., identified projects to receive future federal funding) currently allocates $\$ 60$ million for the improvements under the "Southtowns Connector Access/Redevelopment Project."

It is anticipated that once the FHWA issues a Record of Decision (ROD) for the STC/BOH Project, the GBNRTC will incorporate its findings into its Long Range Plan to include the full specifics of anticipated improvements. As federal funding becomes available for implementation, it is anticipated that all or phased portions of the proposed improvements will be included in GBNRTC's Transportation Improvement Program (TIP).

Federal funding for portions of the $\mathrm{STC} / \mathrm{BOH}$ Project have been requested as part of state, county, and local requests to Buffalo-Niagara's congressional delegation to be included in the pending federal reauthorization of the Transportation Equity Act for the $21^{\text {st }}$ Century (TEA-21). The STC/BOH Project is considered among the region's higher transportation/economic development priorities, given that it is consistent with various state, regional, county, and local policies for redevelopment of the Lake Erie waterfront.

### 2.4 Project Objectives

Based on the needs described in preceding sections and in consideration of federal transportation goals, the following goals and associated objectives were formulated during the scoping process for the STC/BOH Project.

## Goal 1: Support Economic Development and Redevelopment

## Objectives:

- Facilitate brownfields redevelopment initiatives by local, county, state, and federal agencies by creating/improving road access to such areas (e.g., LTV/Republic Steel site, Union Ship Canal site, former Bethlehem Steel site, NFTA Outer Harbor Lands, etc.).
- Support redevelopment of vacant and underutilized land.
- Support development and enhancement of waterfront areas for regional "quality-of-life" improvements (parks, recreational facilities, greenway networks, etc.) as well as waterdependent and water-enhanced activities.
- Promote land value increases and tax base expansion.


## Goal 2: Improve Regional and Local Transportation Service, Performance, and Efficiency

## Objectives:

- Improve local road access directly to/along the Lake Erie waterfront in areas such as along the NFTA's Outer Harbor lands; NFTA Boat Harbor and Gallagher Beach; South Buffalo; City of Lackawanna; and the Woodlawn community in the Town of Hamburg.
- Reconfigure the Route 5/Fuhrmannn Boulevard/Ohio Street complex into a system that would be more consistent with proposed land uses included in local plans for areas along the corridor.
- Maintain adequate service for commuter/commercial traffic between the Southtowns and Downtown Buffalo.
- Maintain and enhance access to the area for other modes including transit (i.e., improved bus access), bicycles and pedestrians (including an Industrial Heritage Trail and waterfront bikeway/greenway system).
- Continue to meet all travel needs (community, trade, recreational) in a balanced, coordinated, and physically continuous manner.
- Improve and/or maintain physical access and accessibility to employment centers and development sites.
- Avoid creation of local bottlenecks and other transportation problems.
- Equitably distribute transportation costs and benefits.


## Goal 3: Improve Mobility, Access, and Safety in a Cost-Effective Manner

## Objectives:

- Promote use of innovative and flexible funding mechanisms.
- Minimize right-of-way acquisition costs.
- Minimize capital costs.
- Phase implementation of new capital investments incrementally.
- Maximize and leverage anticipated private investments along the corridor in phasing public infrastructure expenditures.
- Minimize safety hazards and accident potential.


## Goal 4: Support Local and Regional Planning Policies and Strategies

## Objectives:

- Support and facilitate municipal, county, and state, and quasi-governmental (e.g., NFTA) development plans and projects.
- Support the GBNRTC's regional transportation plans and policies.
- Improve waterfront access by all modes of travel.


## Goal 5: Minimize Adverse Impacts on Communities and the Environment

## Objectives:

- Minimize community disruption and displacements.
- Avoid an inequitable distribution of impacts.
- Maintain neighborhood and community cohesion.
- Maintain and enhance the quality of the living environment.
- Protect, enhance, and create scenic views along and to the waterfront.
- Minimize disturbance of hazardous waste sites.
- Minimize impacts to wetlands and other natural resources.
- Meet federal Clean Air Act requirements.

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[^0]:    ${ }^{1}$ NYSDOT Regional Traffic Engineer concurs that design speed is consistent with anticipated off-peak $85^{\text {th }}$ percentile speeds.

[^1]:    ${ }^{2}$ It should be noted that this forecasted 2030 LOS includes the recently completed widening of I- 90 between Interchange 53 (I-190) and Interchange 54 (NYS Route 400).

[^2]:    ${ }^{3}$ Formal designation as a PIL requires a full statistical analysis of intersection that exceed statewide averages by 2.5 times; data presented involves first step in potential PIL identification.

[^3]:    ${ }^{4}$ Now known as the "Buffalo Lakeside Commerce Park"; for purposes of this document and its appendices, the use of the term "Union Ship Canal Redevelopment" are intended to refer to this new project name.

